

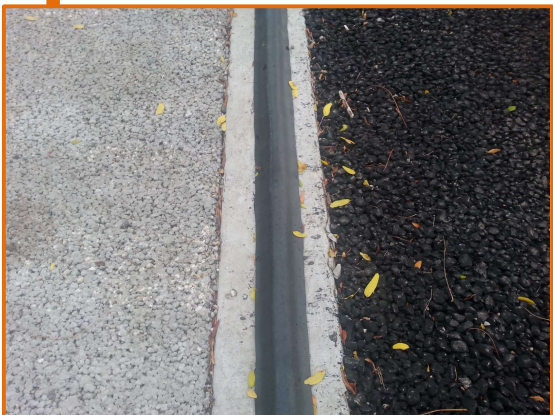
STORMWATER MANAGEMENT PLAN

Seaport Development

St. Francis, Wisconsin

PEG Project Number: 579.10-WI

August 20, 2026



PINNACLE ENGINEERING GROUP

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INTRODUCTION

The proposed project is located south of the intersection of S Packard Ave and S Lake Dr, St. Francis, WI 53235, and encompasses approximately 15.935 acres. The development will consist of two multi-family residential buildings, 2 commercial developments with associated parking areas, a public road, utilities, and stormwater management features. As the project will disturb more than one acre of land, it will require stormwater management measures in accordance with local and state regulations.

To meet MMSD and City of St. Francis stormwater standards, a bioretention basin and a wet pond have been proposed. The project site is located within the Lake Michigan watershed, and stormwater management will be coordinated under the jurisdiction of the City of St. Francis, Milwaukee County, MMSD, and the Wisconsin Department of Natural Resources (WDNR). PEG has prepared a stormwater management plan utilizing the proposed bioretention basin and wet pond to achieve compliance with all applicable stormwater performance standards.

DESIGN CRITERIA

City of Verona: Chapter 393 of the City of St Francis Ordinance

MMSD.....Chapter 13 of MMSD Stormwater code

Wisconsin Department of Natural Resources:..... NR 216 & NR 151

Water Quantity (rate attenuation): In accordance with City of St. Francis and Milwaukee County stormwater management requirements, post-development peak discharge rates shall not exceed pre-settlement peak discharge rates for the 1-year and 2-year, 24-hour design storm events. Additionally, Chapter 13 of the MMSD Rules requires proposed runoff volumes for the 2-year and 100-year, 24-hour storm events to be less than or equal to existing-condition runoff volumes during the critical time period of 11.75 to 13.25 hours. Existing-condition information for the site is provided in **Appendix 2, and the proposed condition in Appendix 3.**

Water Quality: Since the project site will have two discharge points, the site will be viewed as an aggregate of redevelopment and new development. The northern discharge point encompasses 14.638 acres and will be treated as redevelopment. In accordance with Chapter 393 of the City of St. Francis Code, the redevelopment area will be modeled to provide a 40% reduction in the TSS load generated by parking areas and roadways. The other lot is 1.297 AC to the west and is a new development area that will be required to achieve an 80% reduction in the average annual TSS load, consistent with City, Milwaukee County, and Wisconsin DNR requirements. These water-quality requirements have been addressed through the proposed wet detention basin and bioretention basin. The proposed-condition modeling and supporting calculations are provided in **Appendix 4.**

Infiltration: As this site is considered a redevelopment, infiltration is not required and therefore is not included in this plan.

Protective Areas: There are no existing wetlands or protective areas on site, so the site is exempt from these requirements.

Erosion Control: Erosion BMP'S to be used on site include: inlet protection, construction entrance, silt fence, rip rap, straw wattle, hydroseeding, concrete washout area and erosion blanket.

EXISTING CONDITIONS

The project site currently consists of three separate parcels, two of which are vacant. The existing site is divided into three drainage basins that ultimately discharge through two separate drainage points:

- **Basin 14S – Existing West Parking Lot (Western Discharge):** This basin encompasses 1.297 acres and is classified as new development. Runoff generally flows from east to west across the site via overland flow before discharging along the western boundary.
- **Basin 7S – Existing Off-Site Area (Northern Discharge):** Located north of the primary development area, this basin encompasses 2.901 acres of maintained parkland with a walking path and is classified as redevelopment. Runoff generally flows from south to north via overland flow before entering a depression that will hold the water until ultimately flowing to the north stream via overland flow.
- **Basin 1S – Existing Conditions Based on Historical Aerial Imagery (Northern Discharge):** This 11.664-acre basin is classified as redevelopment and consists of 7.701 acres of pavement, 0.220 acres of gravel, and 3.743 acres of grass. Runoff generally flows from the center of the site to the existing storm sewer system, which discharges north to the existing stream to the north.

The project site is ultimately tributary to the Lake Michigan watershed. The existing drainage areas are delineated on the Existing Hydrology Exhibit provided in **Appendix 2**.

POST-DEVELOPMENT CONDITIONS

The proposed site will be divided between two separate discharge locations. The western discharge area will consist primarily of a proposed parking lot. The drainage area will be split into two basins shown below. To meet the applicable stormwater-management requirements, a bioretention basin is proposed to manage both water quality and water quantity for this portion of the site.

Runoff from most of the western drainage area will be collected and conveyed to the bioretention basin through an underground storm sewer system before ultimately discharging west of the site. Due to the existing topography and drainage patterns, several areas will remain undetained. These areas have been accounted for in the overall stormwater analysis to demonstrate compliance with applicable WDNR and City of St. Francis stormwater-management requirements.

- **Basin 3S – Detained (Western Discharge):** This basin encompasses 1.071 acres, consisting of 0.569 acres of pavement and 0.502 acres of grass. It is classified as new development. Runoff will be conveyed through the proposed storm sewer system to the bioretention basin, which will ultimately discharge to the existing drainage system west of the site.
- **Basin 16S – Undetained (Western):** 0.226 Acres of Runoff that generally flows from east to west via overland flow that will not be detained in the proposed Bio-retention basin.

The second discharge location is the northern discharge area, which will consist of two multifamily residential buildings with blue roofs and control drains, commercial lots, and a new public roadway providing access to each development area. This basin has been split into 6 subcatchments that are listed below.

- **Basin 6S – To Blue Roof (Northern Discharge):** This basin encompasses 1.419 acres of proposed blue roof area. Runoff will be conveyed through controlled-flow roof drains to the proposed wet pond before ultimately discharging to the north.
- **Basin 17S – Proposed Residential Conditions (Northern Discharge):** This basin encompasses 5.953 acres of proposed development, including 2.221 acres of pavement, 1.204 acres of roof, 0.627 acres of sidewalk, and 1.901 acres of grass. Runoff will be conveyed through the proposed storm sewer system to the proposed wet pond.
- **Basin 18S – Proposed Commercial Lot Max Buildout (Northern Discharge):** This basin encompasses 3.148 acres of proposed development and has been conservatively modeled as 80% impervious and 20% pervious. Of the proposed impervious area, 70% is assumed to consist of parking and roadway surfaces. These assumptions represent the maximum feasible impervious area and demonstrate that the proposed stormwater management system will function as intended regardless of the final site layout.
- **Basin 9S – Offsite to pond (Northern Discharge):** This 2.974-acre basin encompasses the area north of the site, and where the proposed pond will be placed.
- **Basin 15S – Undetained (Northern Discharge):** This 0.632-acre basin encompasses the areas that will not make it to the pond but will drain to the northern discharge point.
- **Basin 18S – Proposed Commercial Lot Max Buildout undetained (Northern Discharge):** This basin encompasses 0.512 acres of proposed development and has been conservatively modeled as 80% impervious and 20% pervious. Of the proposed impervious area, 70% is assumed to consist of parking and roadway surfaces. These assumptions represent the maximum feasible impervious area and demonstrate that the proposed stormwater management system will function as intended regardless of the final site layout. Runoff from this area will not be conveyed through the proposed storm sewer system and has therefore been modeled as undetained.

To meet the project's stormwater-management requirements, a wet detention pond is proposed as well as blue roofs with control drains. Runoff from most of the northern drainage area will be collected and conveyed to the pond through an underground storm sewer system. The pond will ultimately discharge to the existing stream located north of the site.

Due to the existing topography, the outermost portions of the drainage area will remain undetained and discharge to the existing storm sewer system, which conveys runoff north to the existing stream. These undetained areas have been incorporated into the overall stormwater analysis to demonstrate compliance with applicable WDNR and City of St. Francis stormwater-management requirements.

ANALYSIS METHODS

HydroCAD® (Version 10.00) software was used to analyze stormwater characteristics for this stormwater management plan. HydroCAD uses the accepted TR-55 methodology for determining peak discharge runoff rates. All peak flow calculations used NRCS MSE 3 rainfall distribution and rainfall depths in accordance with City and County Ordinances: 1-year = 2.34 inches, 2-year = 2.64 inches, 10-year = 3.70 inches, and 100-year = 5.97 inches. TSS reduction and infiltration quantities for the proposed water quality facilities and project site were determined using WinSLAMM® (Version 10.5) Source Loading.

SUMMARY OF RESULTS

Existing Conditions

Water quality and quantity requirements for the site will be evaluated independently at the two proposed discharge locations. The western discharge area will be classified as new development, while the northern discharge area will be classified as redevelopment. The calculations provided below demonstrate that the proposed stormwater-management facilities satisfy the applicable performance standards for each discharge area.

Existing Drainage Data – Western Discharge

Area	Area (ac)	CN	Tc (min)	Peak Flows 1-year (cfs)	Peak Flows 2-year (cfs)	Peak Flows 10-year (cfs)	Peak Flows 100-year (cfs)
West parking Lot	1.297	71	13.4	0.59	0.86	2.04	5.09
Total	1.297	-	-	0.59	0.86	2.04	5.09

Existing Drainage Data – Western Discharge (Volumetric AC-FT) (11.75-13.25)

Area	Area (ac)	CN	Tc (min)	Runoff Volume 2-year (AC-FT)	Runoff Volume 100-year (AC-FT)
West parking Lot	1.297	-	-	0.035	0.204

Existing Drainage Data – Northern Discharge

Area	Area (ac)	C N	Tc (min)	Peak Flows 1-year (cfs)	Peak Flows 2-year (cfs)	Peak Flows 10-year (cfs)	Peak Flows 100-year (cfs)
Existing Offsite	2.974	72	30.0	0.98	1.40	3.19	7.91
After existing depression	-	-	-	0.00	0.00	0.00	0.00
Existing Conditions based on aerials	11.664	89	6.1	28.22	33.63	53.02	94.53
Total	14.638	-	-	28.22	33.63	53.02	94.53

Existing Drainage Data – Northern Discharge (Volumetric AC-FT) (11.75-13.25)

Area	Area (ac)	CN	Tc (min)	Runoff Volume 2-year (AC-FT)	Runoff Volume 100-year (AC-FT)
Total Existing	14.638	-	-	0.997	2.825

Proposed Conditions

Proposed Drainage Data – Western discharge

Area	Area (ac)	C N	Tc (min)	Peak Flows 1-year (cfs)	Peak Flows 2-year (cfs)	Peak Flows 10-year (cfs)	Peak Flows 100-year (cfs)
Detained	1.071	87	6.0*	2.35	2.84	4.61	8.45
Undetained	0.226	78	6.0*	0.28	0.37	0.70	1.48
Proposed Total Before Detention	1.297	-	-	2.63	3.21	5.31	9.93
Proposed Total After Detention	1.297	-	-	0.28	0.37	0.97	2.40

* A Tc of 6.0 min is used if the actual computed Tc is less than the minimum allowable Tc of 6.0 min per TR 55.

Proposed Drainage Data – Western Discharge (Volumetric AC-FT) (11.75-13.25)

Area	Area (ac)	CN	Tc (min)	Runoff Volume 2-year (AC-FT)	Runoff Volume 100-year (AC-FT)
Total to west	1.297	-	-	0.028	0.193

Basin Data – Bioretention Basin

Pond	Pond Bottom Elev.	Peak W.S. Elev. 1-year	Peak W.S. Elev. 2-year	Peak W.S. Elev. 10-year	Peak W.S. Elev. 100-year	Spillway Elev.	Pond Top Elev.
Bioretention	42.00	44.41	44.50	44.95	45.83	46.00	47.00

The modeling indicates that the proposed Bioretention Basin will detain the 1-year, 2-year storm event and maintain the 100-year flood elevation one foot below the top of the proposed berm. Supporting calculations for the Bioretention pond are provided in **Appendix 3**.

Proposed Drainage Data – Northern discharge

Area	Area (ac)	CN	Tc (min)	Peak Flows 1-year (cfs)	Peak Flows 2-year (cfs)	Peak Flows 10-year (cfs)	Peak Flows 100-year (cfs)
Proposed Residential	5.953	90	6.0*	15.20	18.00	27.97	49.20
Proposed Commercial Lot Max Buildout	3.148	93	6.0*	9.19	10.68	15.93	27.01
Offsite to Pond	2.974	78	30.0	1.70	2.24	4.37	9.49
To Blue Roof	1.419	98	6.0*	4.87	5.51	7.79	12.64
Proposed Commercial Lot Max Buildout - Undetained	0.512	93	6.0*	1.49	1.74	2.59	4.39
Undetained	0.632	76	6.0*	0.68	0.90	1.78	3.92
Proposed Total Before Detention	14.638	-	-	33.13	39.070	60.430	106.65
Proposed Total After Detention	14.638	-	-	4.21	4.88	18.47	68.07

* A Tc of 6.0 min is used if the actual computed Tc is less than the minimum allowable Tc of 6.0 min per TR 55.

Proposed Drainage Data – Northern Discharge (Volumetric AC-FT) (11.75-13.25)

Area	Area (ac)	CN	Tc (min)	Runoff Volume 2-year (AC-FT)	Runoff Volume 100-year (AC-FT)
Total to North	14.638	-	-	0.387	2.712

Basin Data – North Wet Pond

Pond	Pond Bottom Elev.	Peak W.S. Elev. 1-year	Peak W.S. Elev. 2-year	Peak W.S. Elev. 10-year	Peak W.S. Elev. 100-year	Emergency Str.	Pond Top Elev.
Wet Pond	39.00	41.92	42.43	42.92	43.68	43.70	45.00

The modeling indicates that the proposed Wet Pond will detain the 1-year, 2-year storm event and maintain the 100-year flood elevation one foot below the top of the proposed berm. Supporting calculations for the Wet Basin are provided in **Appendix 3**.

North Basin Data – Blue Roof (Control Flow Roof Drains)

Pond	Bottom Elev.	Peak W.S. Elev. 1-year	Peak W.S. Elev. 2-year	Peak W.S. Elev. 10-year	Peak W.S. Elev. 100-year	Overflow Scupper Elev.
Blue roof	100.00	100.30	100.32	100.40	100.53	100.58

The modeling indicates that the proposed Roof drains will detain the 1-year, 2-year storm event and maintain the 100-year flood elevation. Supporting calculations for the Blue roof are provided in **Appendix 3**.

Runoff Water Quality

Post-development water quality requirements will be addressed through the proposed bioretention basin and Wet Pond. Because the site is both redevelopment and new development an aggregate will be taken. The western discharge area is considered new development and is required to achieve 80% removal of total suspended solids (TSS). The northern discharge area is considered redevelopment and is required to achieve a 40% reduction in the TSS load generated by parking areas and roadways.

In modeling water quality for the City & DNR standard, offsite areas are run through an “other device” which removes all the TSS from calculations but keeps the volume of water intact.

Water Quality Summary - City & DNR Standard

Area	TSS Generated (lbs)	Removal Rate	Min. TSS to be Removed
Offsite to Pond – Non Parking/Road	214.51	0%	0.00
Undetained North	371.53	0%	0.00
Proposed Pond	0.00	0%	0.00
Blue Roof	266.96	0%	0.00
Proposed Residential – Non-Parking/Road	593.35	0%	0.00
Proposed Residential – Parking/Road	1384.80	40%	533.94
Proposed Commercial lot max build – Parking/Road	1101.07	40%	440.43
Proposed Commercial lot max build – Non-Parking/Road	187.21	0%	0.00
Proposed Commercial lot max build – Undetained – Parking/road	14.74	40%	5.896
Proposed Commercial lot max build – Undetained – Non-Parking/road	51.82	0%	0.00
Detained West	392.07	80%	313.66
Undetained West	35.47	80%	28.38
Total for site	-	-	1322.306

Water Quality Summary - City & DNR Standard – Proposed Conditions

Area/Pond	Pounds of TSS Generated	Pounds of TSS Remaining	Pounds Removal	Percent Removal
Total	4778	1179	3,599	75.66%

The Bio-retention Basin and Wet Pond will remove in excess of the minimum TSS required to achieve the TSS removal goals.

Infiltration

As this site is considered a redevelopment, infiltration is not required and therefore is not included in this plan.

Protective Areas

As this site is considered a redevelopment, protective areas are not required per NR 151.125(4)(a) and is not included in this plan.

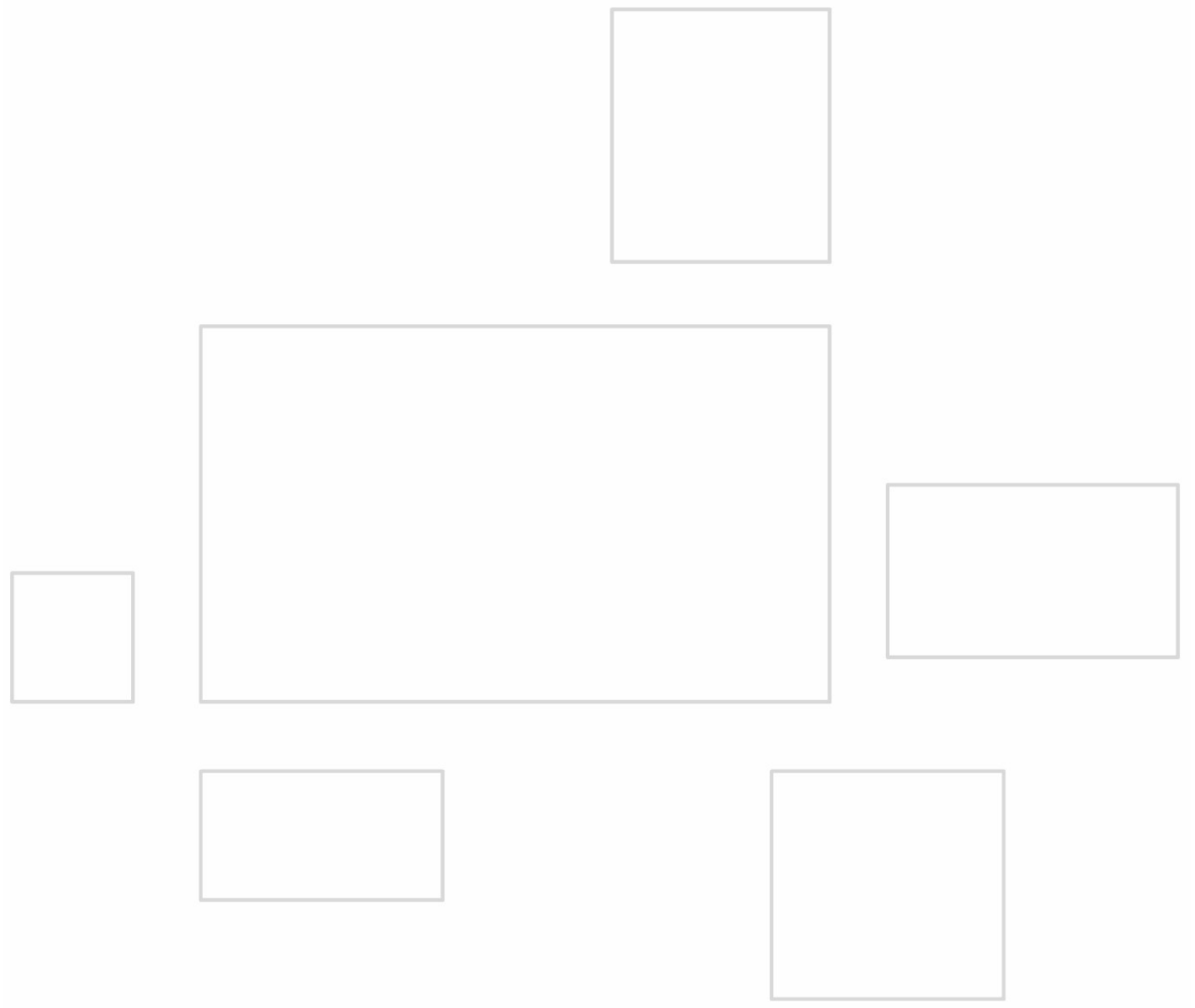
It is important to note that even though protective areas are not required, the proposed development captures and treats stormwater runoff before discharging into the Lake Michigan. Additionally, erosion control and sediment management practices will be used during construction in order to protect the river from disturbance and sediment accumulation from the site.

CONCLUSION

The stormwater management features for the development have been designed to comply with City, County, and WDNR. This includes infiltration. The proposed bioretention basin and Wet Pond will serve to meet and exceed all requirements. Maintenance is expected to occur on a regular basis to maintain a functional stormwater facility. An agreement with the City of St. Francis will be executed to ensure this occurs.

APPENDIX 1

MAPS, DETAILS





Map Title



Legend

Parcels

Tax Parcels



Administrative

Municipal Boundaries



Notes

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ft

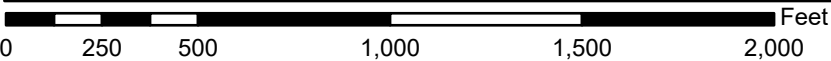
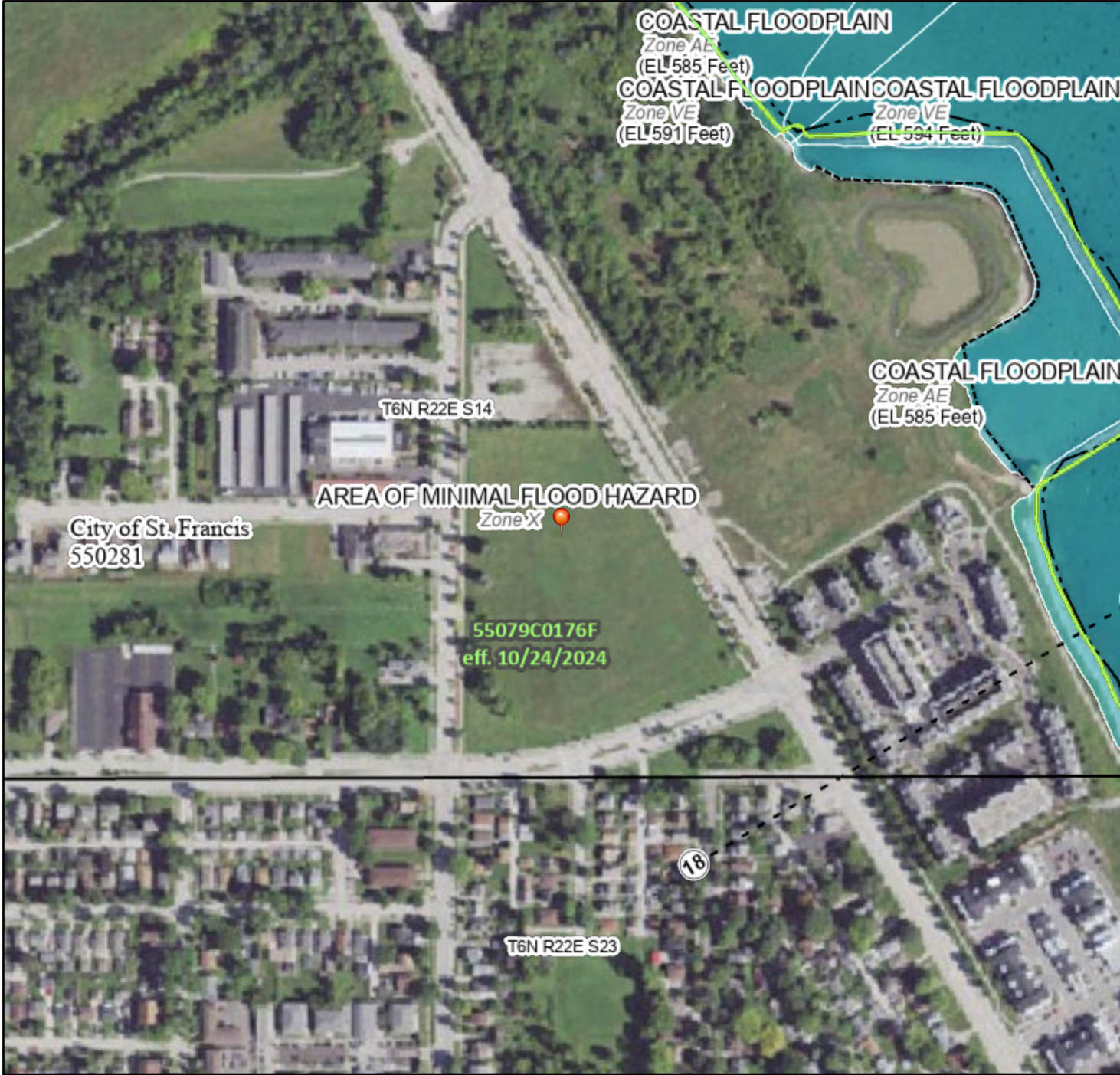
This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

MILWAUKEE COUNTY GIS AND LAND INFORMATION

National Flood Hazard Layer FIRMette



87°51'51"W 42°58'44"N



1:6,000

87°51'13"W 42°58'18"N

Basemap Imagery Source: USGS National Map 2023

Legend

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		Cross Sections with 1% Annual Chance Water Surface Elevation
MAP PANELS		Coastal Transect
		Base Flood Elevation Line (BFE)
OTHER FEATURES		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		Coastal Transect Baseline
		Profile Baseline
OTHER FEATURES		Hydrographic Feature
		Digital Data Available
MAP PANELS		No Digital Data Available
		Unmapped



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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **8/15/2025 at 3:26 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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



Map Title



Legend

Parcels

Tax Parcels



Administrative

Municipal Boundaries



Topographic

Contour_Ln

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Intermediate

Notes

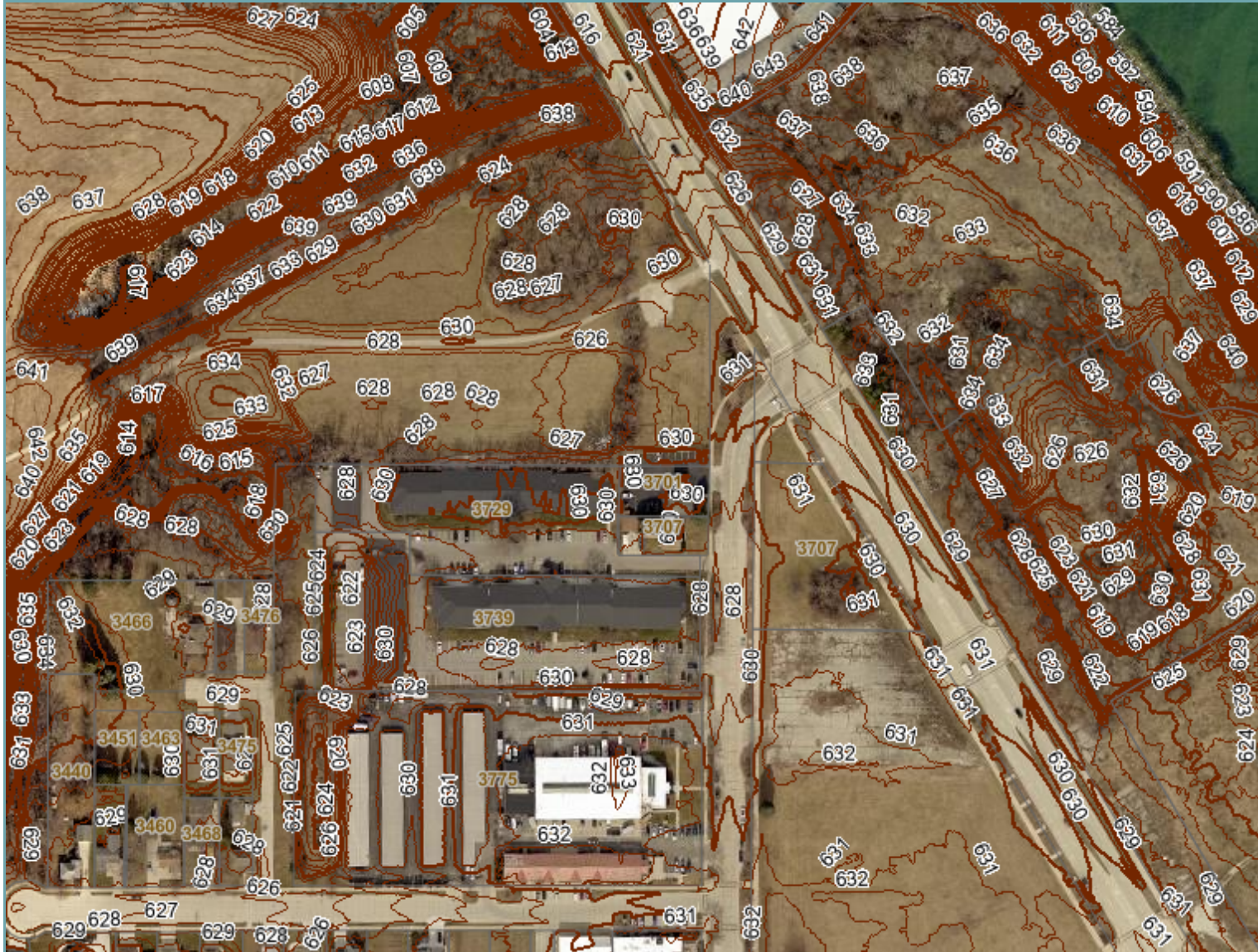
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MILWAUKEE COUNTY GIS AND LAND INFORMATION



Map Title



Legend

Parcels

Tax Parcels



Administrative

Municipal Boundaries



Topographic

Contour_Ln

Index

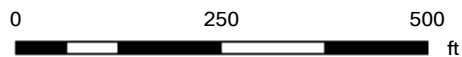
Intermediate

Notes

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ft

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MILWAUKEE COUNTY GIS AND LAND INFORMATION



MILWAUKEE COUNTY GIS AND LAND INFORMATION

— Intermediate

Notes



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for **Milwaukee County, Wisconsin**



August 15, 2025

Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

Custom Soil Resource Report

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

Soil Map

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

Custom Soil Resource Report Soil Map



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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Milwaukee County, Wisconsin
Survey Area Data: Version 3, Dec 10, 2024

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

Date(s) aerial images were photographed: Jul 25, 2022—Aug 24, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
NOTCOM	No Digital Data Available	26.4	100.0%
Totals for Area of Interest		26.4	100.0%

Map Unit Descriptions

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

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

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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

Custom Soil Resource Report

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

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

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

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

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

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

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

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

Milwaukee County, Wisconsin

NOTCOM—No Digital Data Available

Map Unit Composition

Notcom: 100 percent

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

Description of Notcom

Properties and qualities

References

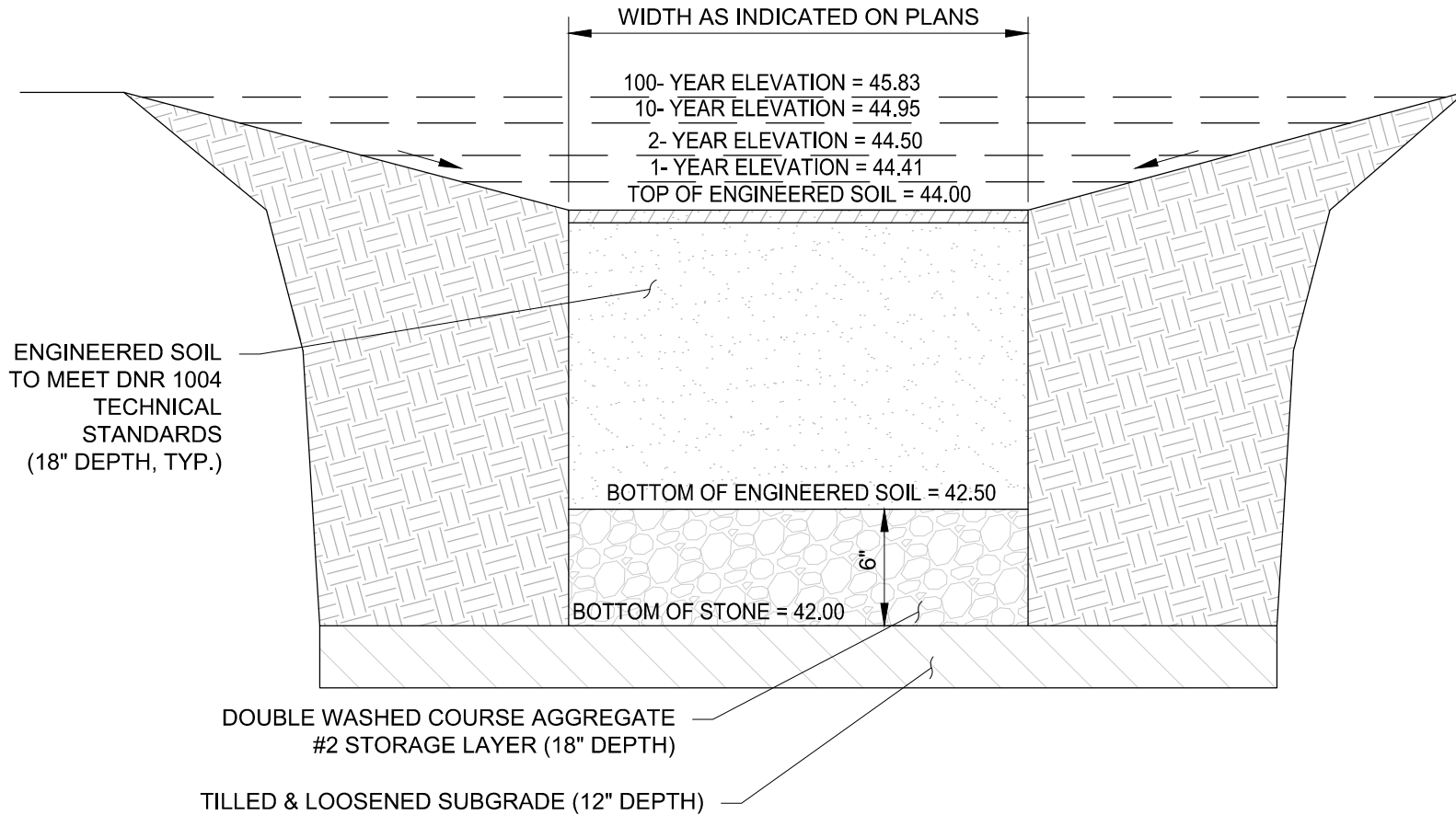
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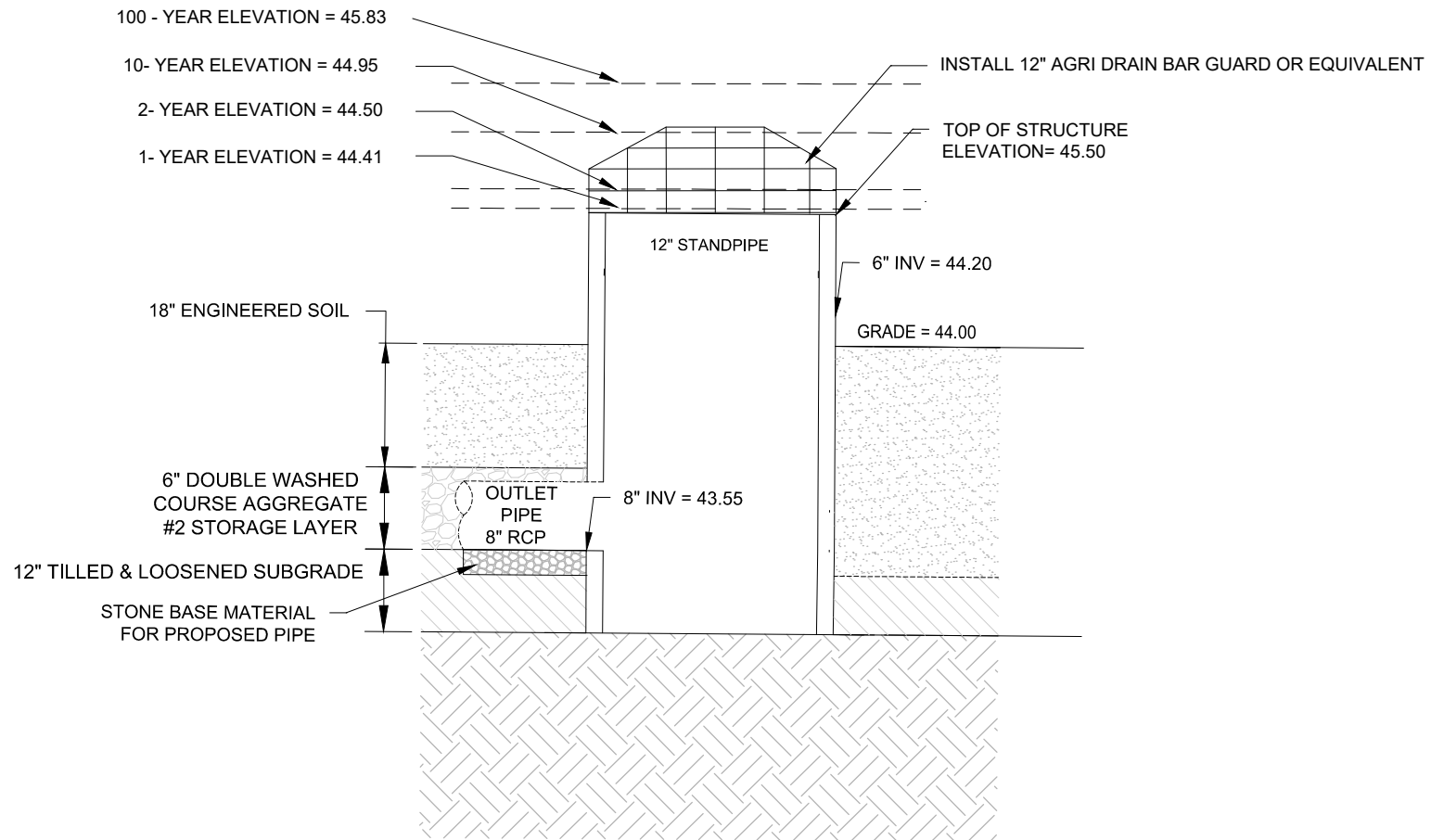
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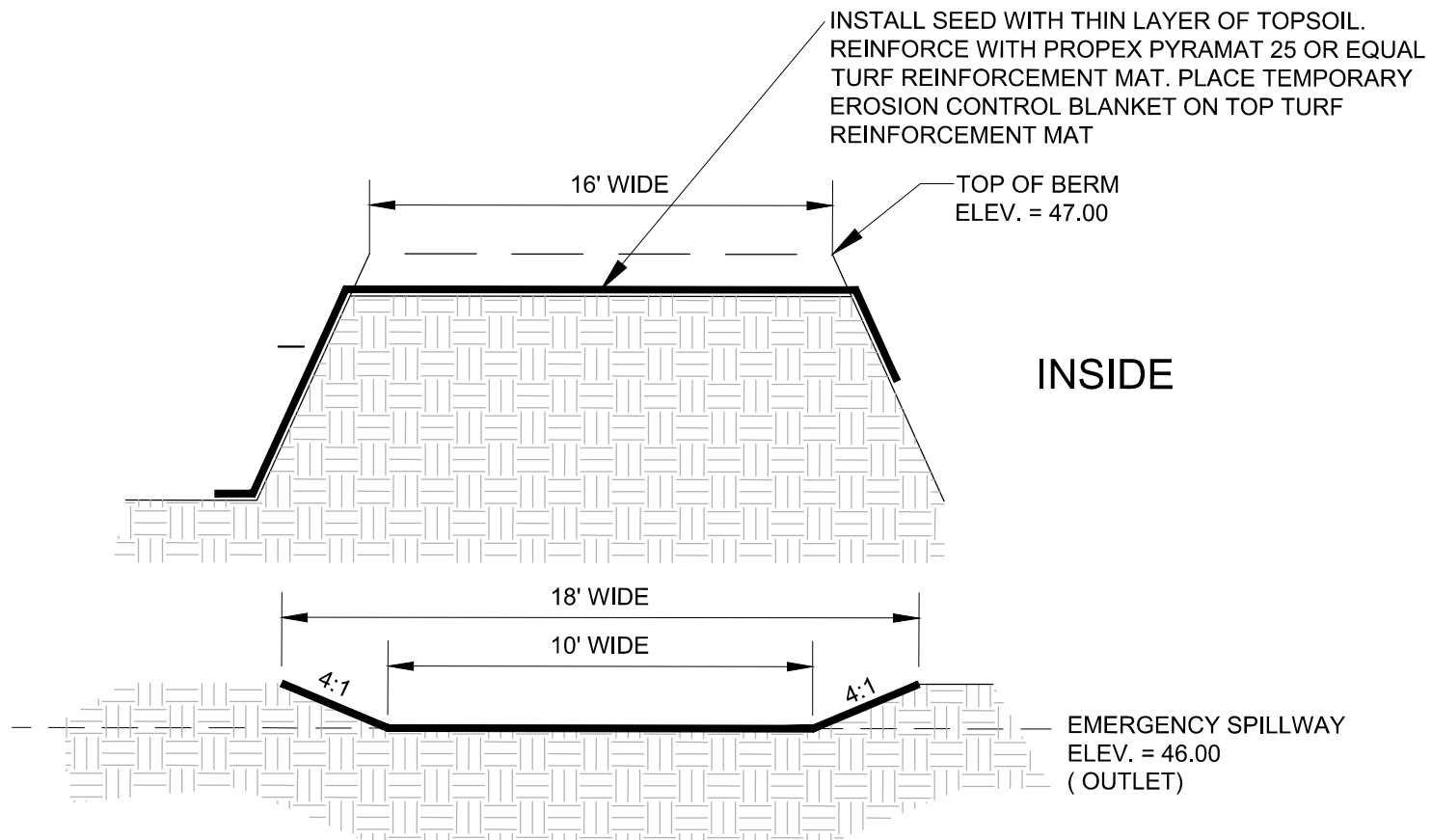
NOTES:

1. SEE LANDSCAPE PLAN FOR BASIN PLANTINGS AND STABILIZATION METHODS NOT SHOWN IN THIS DETAIL.
2. BIORETENTION BASIN TO BE CONSTRUCTED IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1004.

PROPOSED BIORETENTION BASIN DETAIL

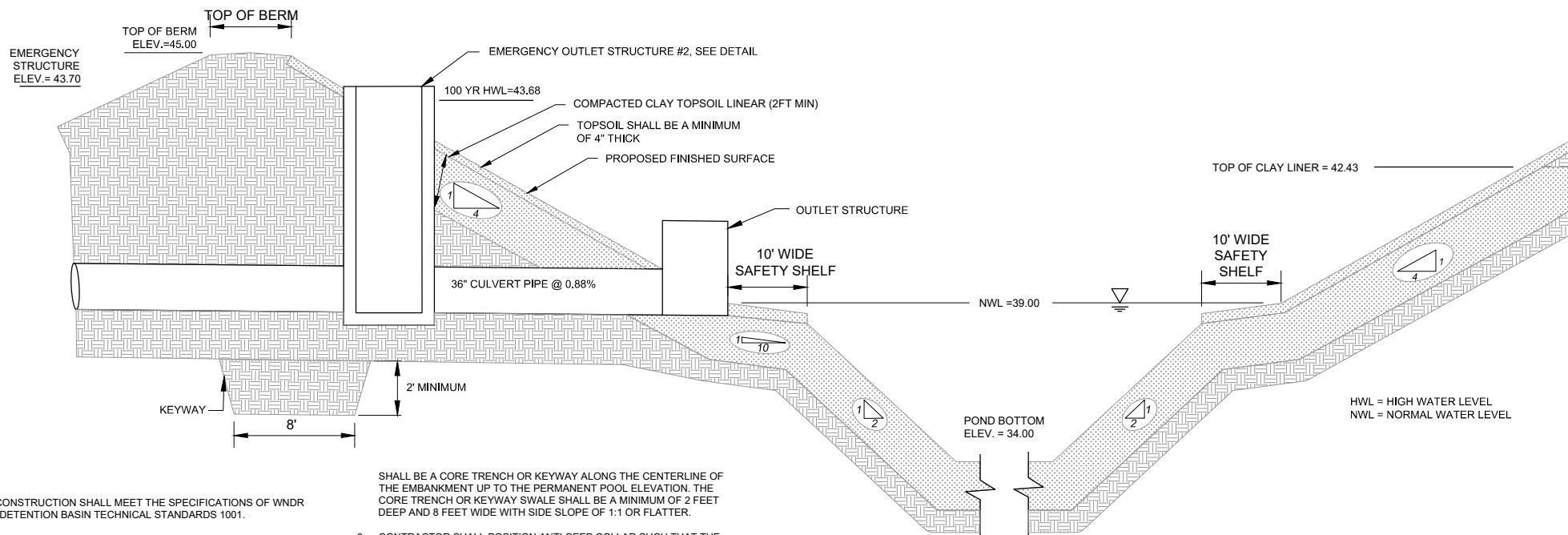


BIORETENTION BASIN OUTLET STRUCTURE



1. TURF REINFORCEMENT MAT MUST COVER ENTIRE BOTTOM OF CHUTE AND EXTEND TO THE TOP OF BERM AND EXTEND DOWN THE OUTSIDE FACE OF THE BERM.

BIORETENTION SPILLWAY DETAIL



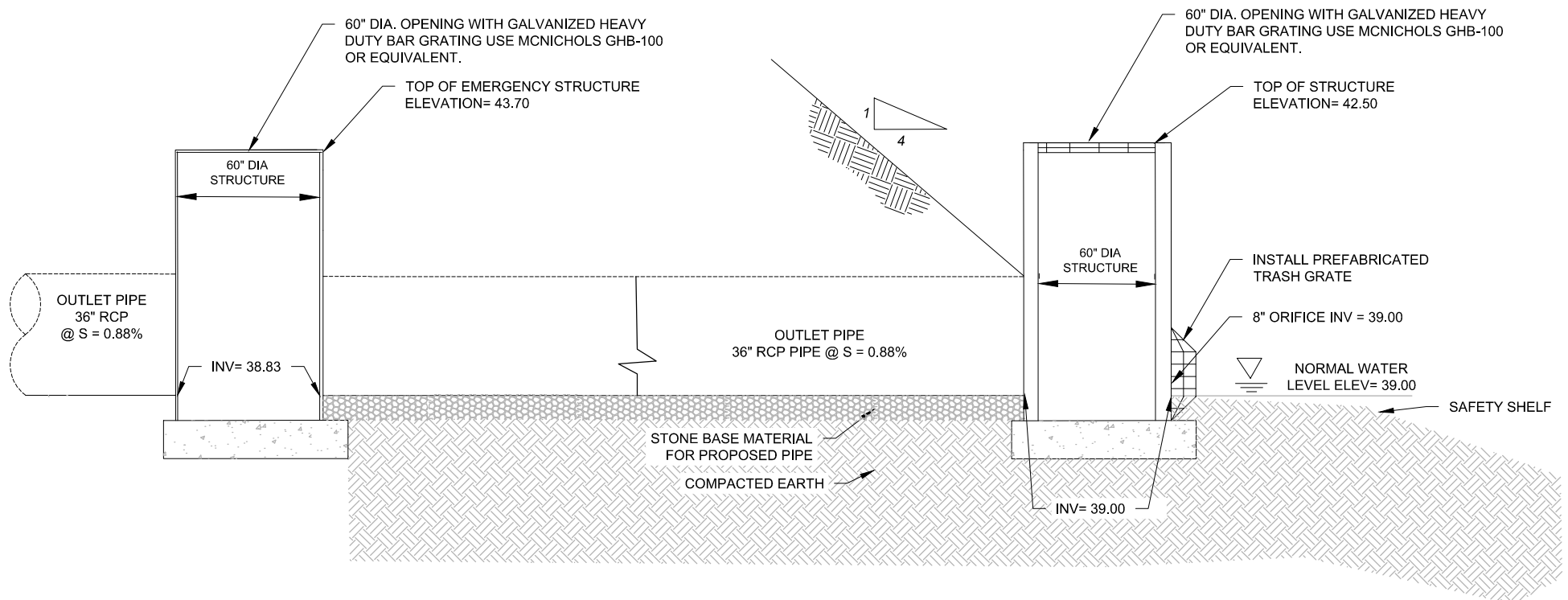
NOTES:

1. ALL CONSTRUCTION SHALL MEET THE SPECIFICATIONS OF WNDR WET DETENTION BASIN TECHNICAL STANDARDS 1001.
2. ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH THE STORM WATER MANAGEMENT PLAN FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER OF RECORD.
3. HDPE PIPING & INSTALLATION WITHIN THE BASIN SHALL BE IN ACCORDANCE WITH ASSTHO M-294 TYPE "S" WITH WATER TIGHT JOINTS.
4. CLAY LINEAR SHALL BE A MINIMUM OF 2 FEET THICK. CLAY SHALL BE COMPACTED AT $\pm 10\%$ OPTIMAL MOISTURE CONTENT TO 90% MODIFIED PROCTOR.
5. FOR CONSTRUCTED EMBANKMENTS WHERE THE PERMANENT POOL IS PONDED 3 FEET OR MORE AGAINST THE EMBANKMENT. THERE

SHALL BE A CORE TRENCH OR KEYWAY ALONG THE CENTERLINE OF THE EMBANKMENT UP TO THE PERMANENT POOL ELEVATION. THE CORE TRENCH OR KEYWAY SWALE SHALL BE A MINIMUM OF 2 FEET DEEP AND 8 FEET WIDE WITH SIDE SLOPE OF 1:1 OR FLATTER.

6. CONTRACTOR SHALL POSITION ANTI-SEEP COLLAR SUCH THAT THE COLLARS ARE COMPLETELY CONTAINED WITHIN THE EMBANKMENT.
7. CONTRACTOR SHALL FIT STANDPIPES WITH REMOVABLE CONSTRUCTION ORIFICE PLATE OVER THE PERMANENT DEWATERING ORIFICE. THE CONSTRUCTION ORIFICE SHALL REMAIN IN PLACE UNTIL 70% VEGETATION IS ESTABLISHED OVER THE CONTRIBUTING AREA OF THE POND.
8. IMMEDIATELY INSTALL FILTER FABRIC OVER ALL OUTLETS TO PREVENT SEDIMENT DEPOSITION IN THE PIPING. (REMOVE FOLLOWING AREA STABILIZATION).
9. TURF REINFORCEMENT MATTING SHALL BE INSTALLED IN ACCORDANCE WITH WDNr TECH STANDARD 1052.

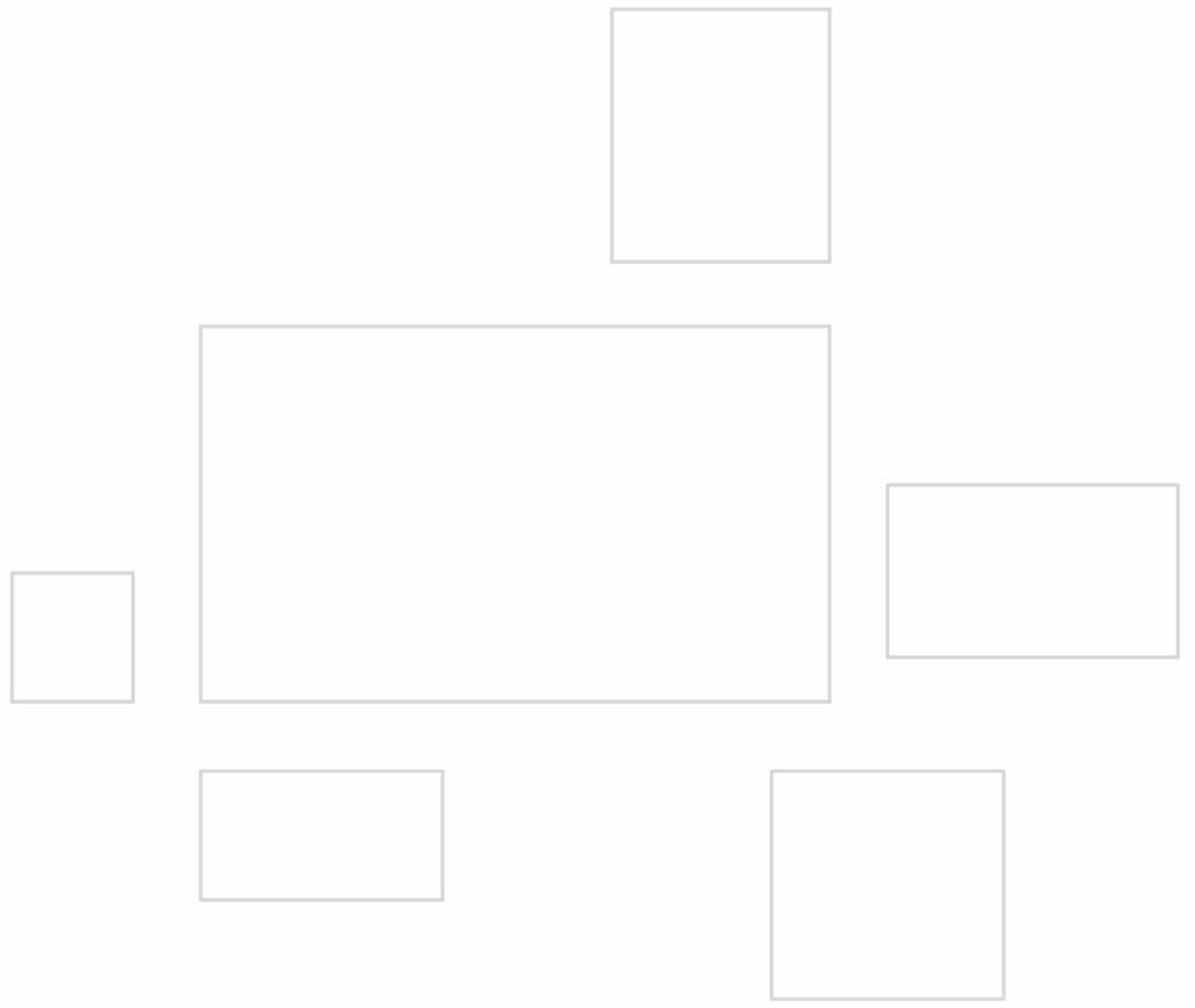
NORTH WET POND CROSS SECTION



NORTH POND OUTLET & EMERGENCY STRUCTURES

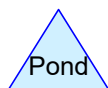
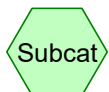
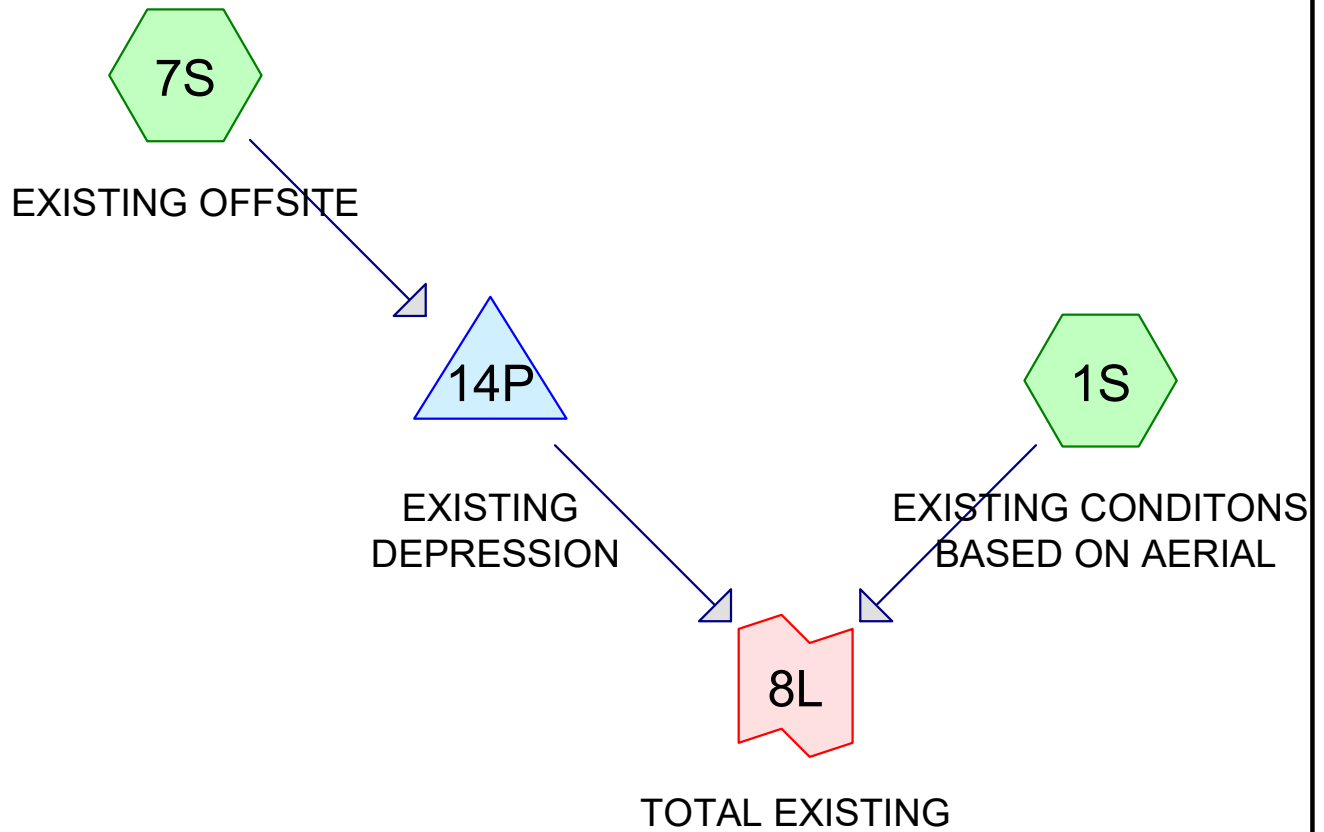
APPENDIX 2

PRE-DEVELOPMENT CONDITIONS



Z:\PROJECTS\2015\579.10-WI\CAD\EXHIBITS\579.10 EXISTING STORMWATER CONDITION - TO POND.DWG 8/19/2026 9:38 PM





2026-08-19 hydrocad

MSE 24-hr 3 1-year Rainfall=2.34"

Prepared by Pinnacle Engineering Group

Printed 8/19/2026

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Page 2

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

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

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

Subcatchment 1S: EXISTING CONDITONS Runoff Area=11.664 ac 66.02% Impervious Runoff Depth=1.32"
Flow Length=492' Tc=6.1 min CN=89 Runoff=28.22 cfs 1.279 af

Subcatchment 7S: EXISTING OFFSITE Runoff Area=2.974 ac 2.08% Impervious Runoff Depth=0.45"
Flow Length=436' Tc=30.0 min CN=72 Runoff=0.98 cfs 0.111 af

Pond 14P: EXISTING DEPRESSION Peak Elev=45.58' Storage=0.097 af Inflow=0.98 cfs 0.111 af
Discarded=0.01 cfs 0.065 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.065 af

Link 8L: TOTAL EXISTING Inflow=28.22 cfs 1.279 af
Primary=28.22 cfs 1.279 af

Total Runoff Area = 14.638 ac Runoff Volume = 1.390 af Average Runoff Depth = 1.14"
46.97% Pervious = 6.875 ac 53.03% Impervious = 7.763 ac

Summary for Subcatchment 1S: EXISTING CONDITONS BASED ON AERIAL

Runoff = 28.22 cfs @ 12.13 hrs, Volume= 1.279 af, Depth= 1.32"

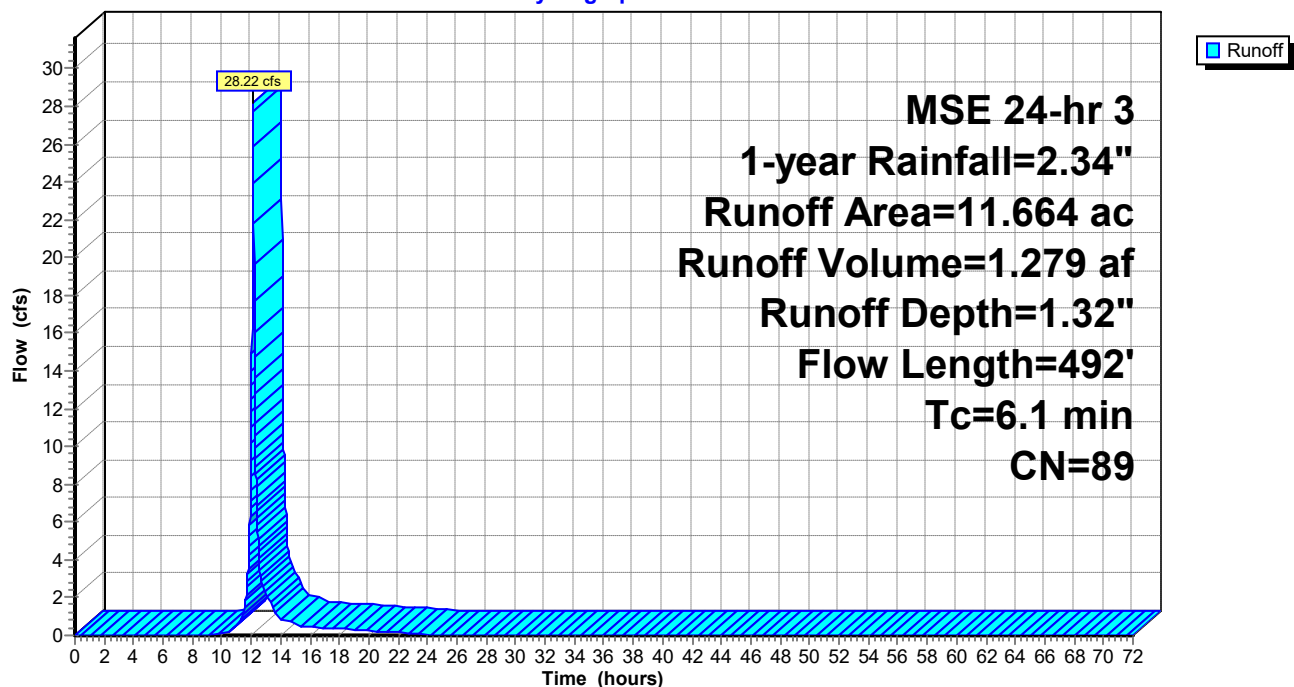
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 1-year Rainfall=2.34"

Area (ac)	CN	Description
* 7.701	98	PAVEMENT
* 0.220	89	GRAVEL
* 3.743	71	GRASS
11.664	89	Weighted Average
3.963		33.98% Pervious Area
7.701		66.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0032	0.60		Sheet Flow, SHEET FLOW
					Smooth surfaces n= 0.011 P2= 2.64"
3.3	392	0.0097	2.00		Shallow Concentrated Flow, SHALLOW FLOW
					Paved Kv= 20.3 fps
6.1	492	Total			

Subcatchment 1S: EXISTING CONDITONS BASED ON AERIAL

Hydrograph



Summary for Subcatchment 7S: EXISTING OFFSITE

Runoff = 0.98 cfs @ 12.50 hrs, Volume= 0.111 af, Depth= 0.45"

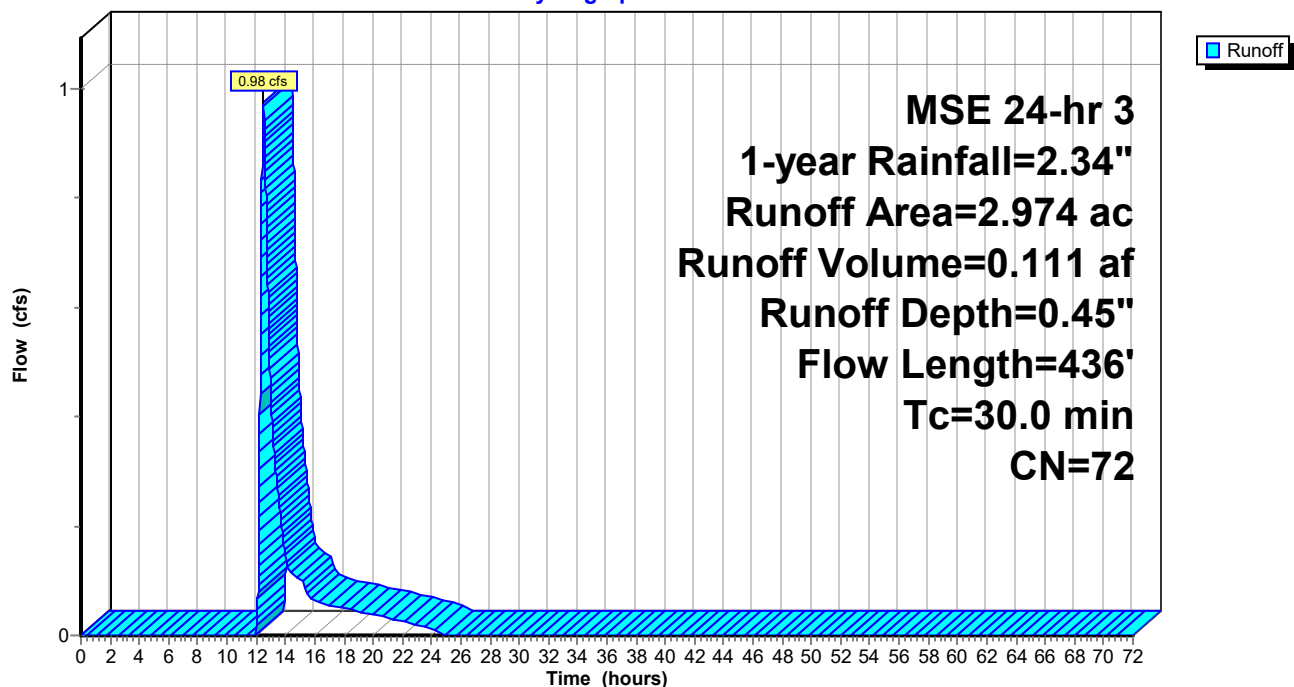
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 1-year Rainfall=2.34"

Area (ac)	CN	Description
* 2.901	71	GRASS
* 0.062	98	PAVEMENT
* 0.011	89	GRAVEL
2.974	72	Weighted Average
2.912		97.92% Pervious Area
0.062		2.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0025	0.07		Sheet Flow, SHEET FLOW
					Grass: Short n= 0.150 P2= 2.64"
5.2	336	0.0052	1.08		Shallow Concentrated Flow, SHALLOW FLOW
					Grassed Waterway Kv= 15.0 fps
30.0	436	Total			

Subcatchment 7S: EXISTING OFFSITE

Hydrograph



Summary for Pond 14P: EXISTING DEPRESSION

Inflow Area = 2.974 ac, 2.08% Impervious, Inflow Depth = 0.45" for 1-year event
 Inflow = 0.98 cfs @ 12.50 hrs, Volume= 0.111 af
 Outflow = 0.01 cfs @ 23.56 hrs, Volume= 0.065 af, Atten= 98%, Lag= 663.3 min
 Discarded = 0.01 cfs @ 23.56 hrs, Volume= 0.065 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 45.58' @ 23.56 hrs Surf.Area= 0.242 ac Storage= 0.097 af

Plug-Flow detention time= 1,686.2 min calculated for 0.065 af (59% of inflow)
 Center-of-Mass det. time= 1,577.4 min (2,452.4 - 875.0)

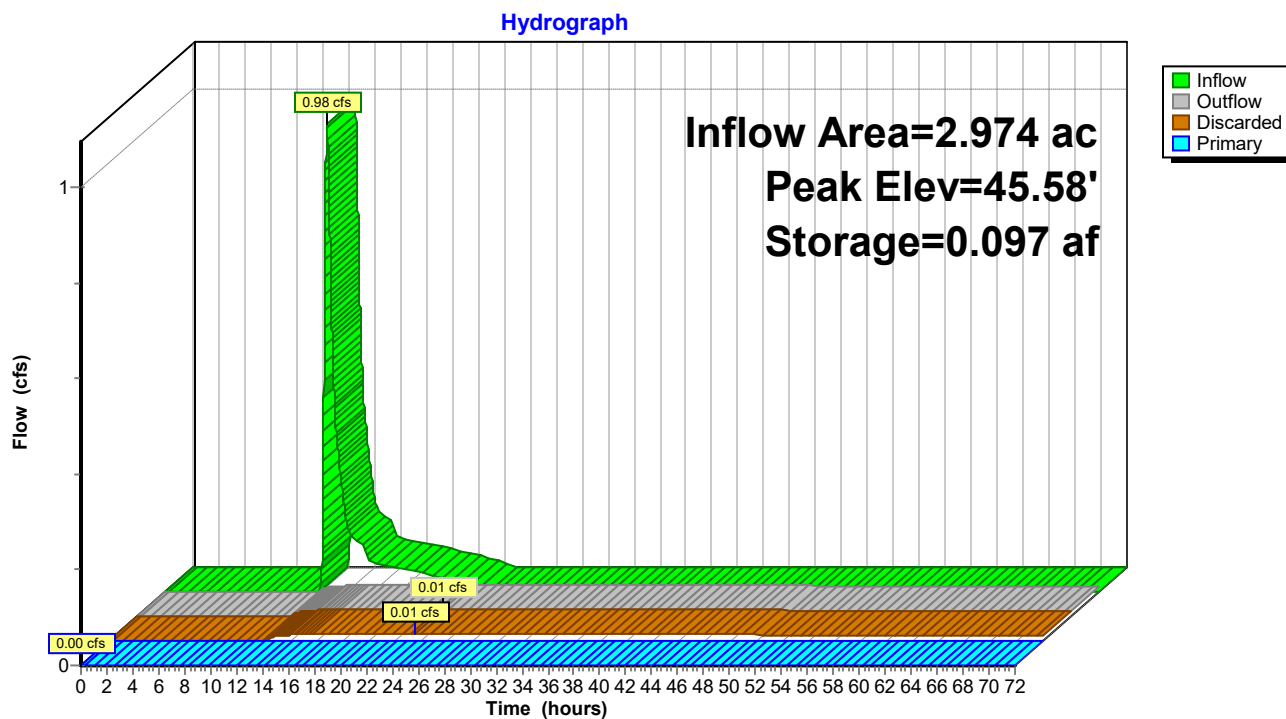
Volume	Invert	Avail.Storage	Storage Description
#1	45.00'	1.042 af	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
45.00	0.091	0.000	0.000
46.00	0.349	0.220	0.220
47.00	1.294	0.821	1.042

Device	Routing	Invert	Outlet Devices
#1	Primary	46.80'	40.0' long x 11.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64
#2	Discarded	45.00'	0.060 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 30.00'

Discarded OutFlow Max=0.01 cfs @ 23.56 hrs HW=45.58' (Free Discharge)
 ↑ **2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.00' (Free Discharge)
 ↑ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 14P: EXISTING DEPRESSION

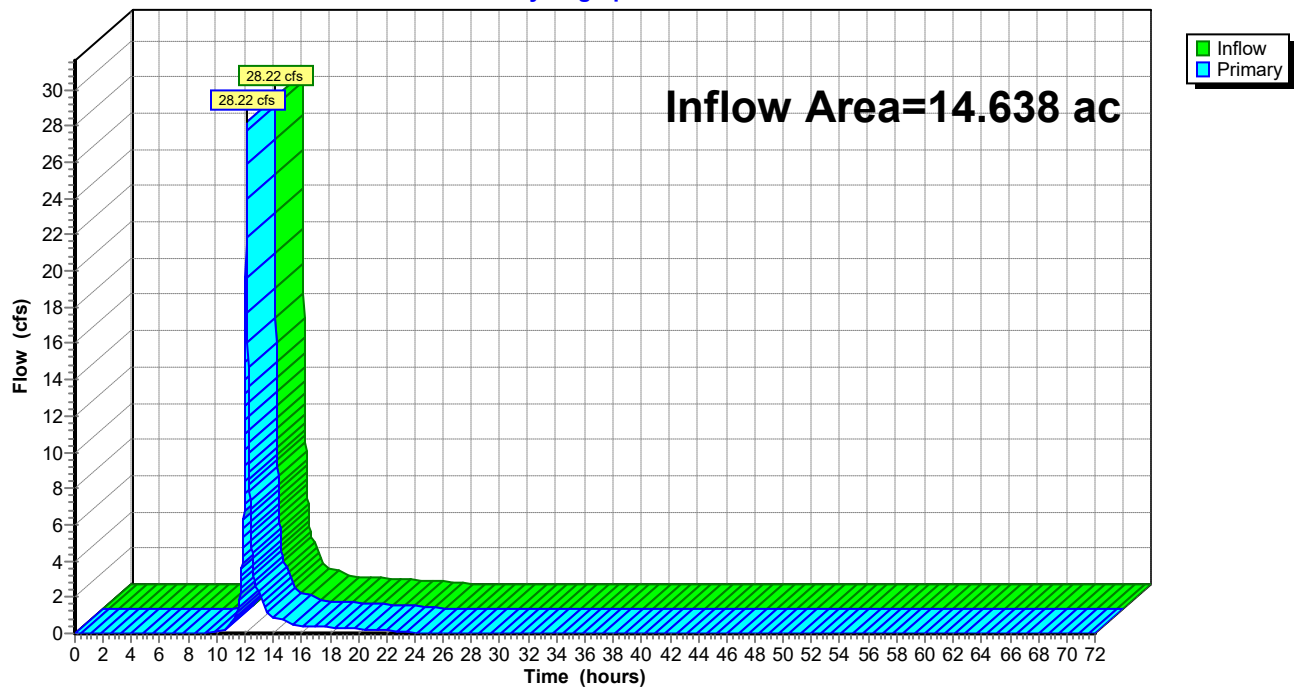
Summary for Link 8L: TOTAL EXISTING

Inflow Area = 14.638 ac, 53.03% Impervious, Inflow Depth = 1.05" for 1-year event
Inflow = 28.22 cfs @ 12.13 hrs, Volume= 1.279 af
Primary = 28.22 cfs @ 12.13 hrs, Volume= 1.279 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 8L: TOTAL EXISTING

Hydrograph



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EXISTING CONDITONS Runoff Area=11.664 ac 66.02% Impervious Runoff Depth=1.58"
Flow Length=492' Tc=6.1 min CN=89 Runoff=33.63 cfs 1.534 af

Subcatchment 7S: EXISTING OFFSITE Runoff Area=2.974 ac 2.08% Impervious Runoff Depth=0.60"
Flow Length=436' Tc=30.0 min CN=72 Runoff=1.40 cfs 0.149 af

Pond 14P: EXISTING DEPRESSION Peak Elev=45.72' Storage=0.133 af Inflow=1.40 cfs 0.149 af
Discarded=0.02 cfs 0.076 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.076 af

Link 8L: TOTAL EXISTING Inflow=33.63 cfs 1.534 af
Primary=33.63 cfs 1.534 af

Total Runoff Area = 14.638 ac Runoff Volume = 1.683 af Average Runoff Depth = 1.38"
46.97% Pervious = 6.875 ac 53.03% Impervious = 7.763 ac

Summary for Subcatchment 1S: EXISTING CONDITONS BASED ON AERIAL

Runoff = 33.63 cfs @ 12.13 hrs, Volume= 1.534 af, Depth= 1.58"

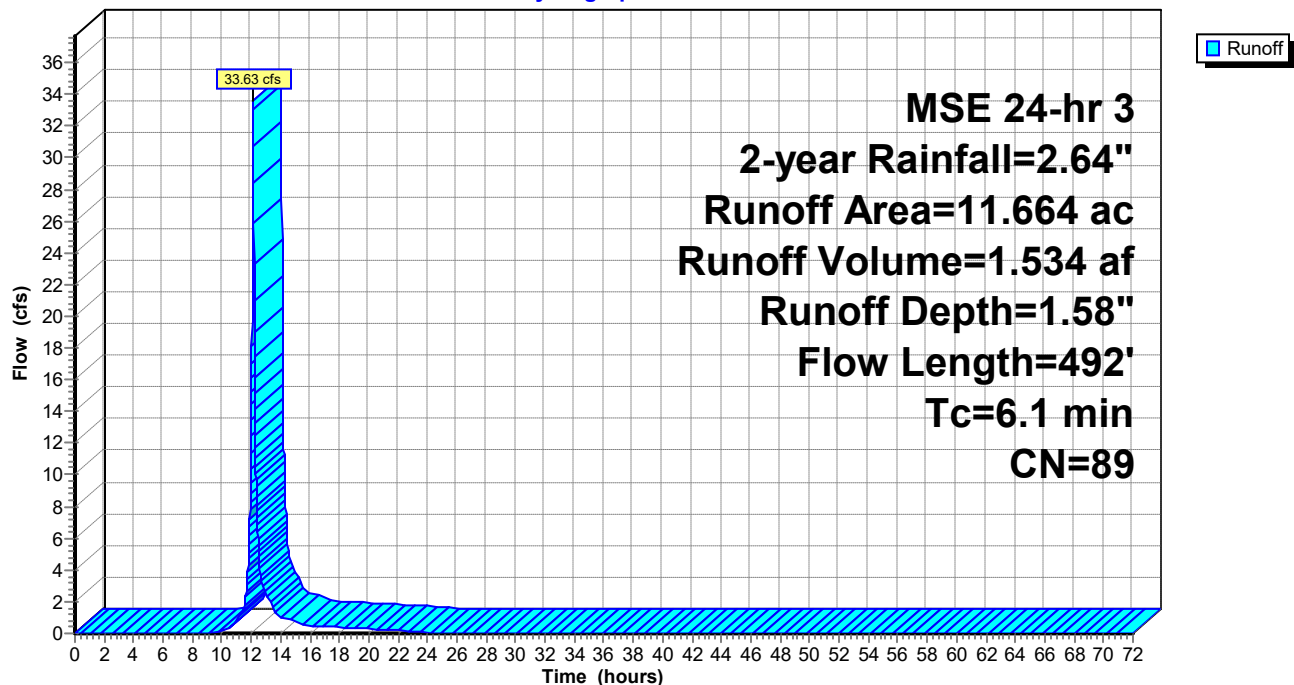
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-year Rainfall=2.64"

Area (ac)	CN	Description
* 7.701	98	PAVEMENT
* 0.220	89	GRAVEL
* 3.743	71	GRASS
11.664	89	Weighted Average
3.963		33.98% Pervious Area
7.701		66.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0032	0.60		Sheet Flow, SHEET FLOW
					Smooth surfaces n= 0.011 P2= 2.64"
3.3	392	0.0097	2.00		Shallow Concentrated Flow, SHALLOW FLOW
					Paved Kv= 20.3 fps
6.1	492	Total			

Subcatchment 1S: EXISTING CONDITONS BASED ON AERIAL

Hydrograph



Summary for Subcatchment 7S: EXISTING OFFSITE

Runoff = 1.40 cfs @ 12.50 hrs, Volume= 0.149 af, Depth= 0.60"

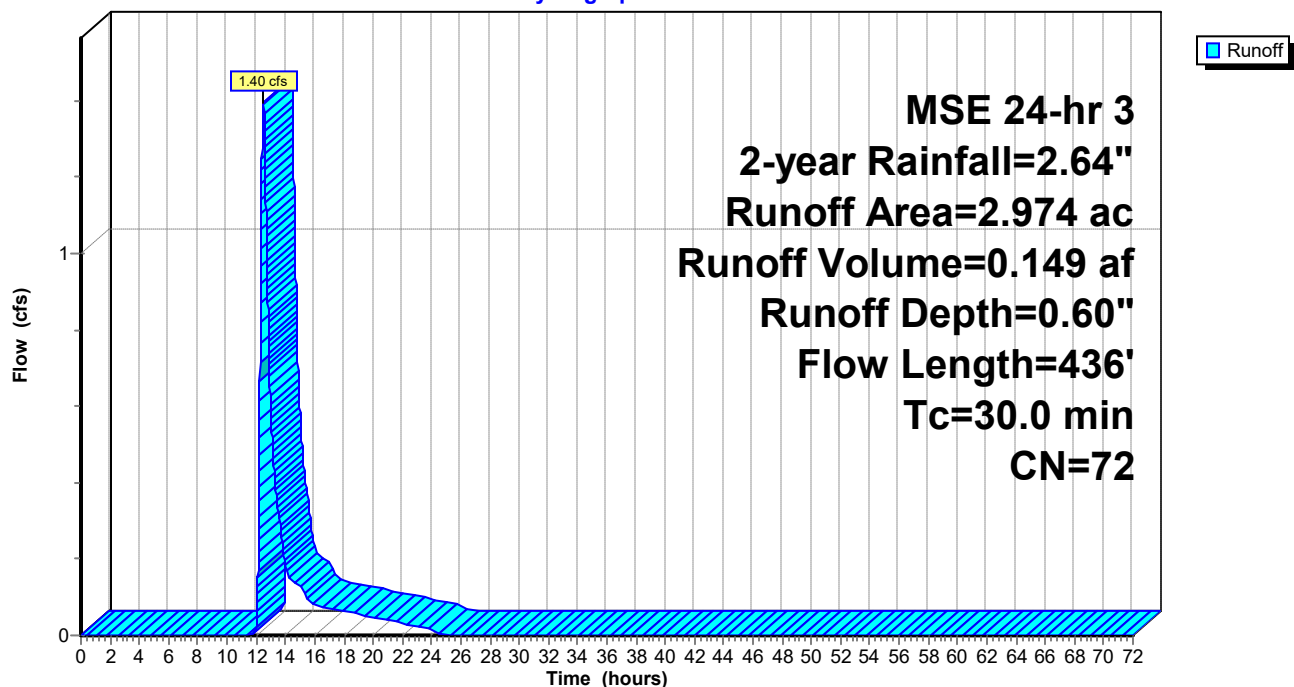
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-year Rainfall=2.64"

Area (ac)	CN	Description
* 2.901	71	GRASS
* 0.062	98	PAVEMENT
* 0.011	89	GRAVEL
2.974	72	Weighted Average
2.912		97.92% Pervious Area
0.062		2.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0025	0.07		Sheet Flow, SHEET FLOW
					Grass: Short n= 0.150 P2= 2.64"
5.2	336	0.0052	1.08		Shallow Concentrated Flow, SHALLOW FLOW
					Grassed Waterway Kv= 15.0 fps
30.0	436	Total			

Subcatchment 7S: EXISTING OFFSITE

Hydrograph



Summary for Pond 14P: EXISTING DEPRESSION

Inflow Area = 2.974 ac, 2.08% Impervious, Inflow Depth = 0.60" for 2-year event
 Inflow = 1.40 cfs @ 12.50 hrs, Volume= 0.149 af
 Outflow = 0.02 cfs @ 23.72 hrs, Volume= 0.076 af, Atten= 99%, Lag= 673.6 min
 Discarded = 0.02 cfs @ 23.72 hrs, Volume= 0.076 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 45.72' @ 23.72 hrs Surf.Area= 0.278 ac Storage= 0.133 af

Plug-Flow detention time= 1,708.6 min calculated for 0.076 af (51% of inflow)
 Center-of-Mass det. time= 1,598.7 min (2,465.4 - 866.7)

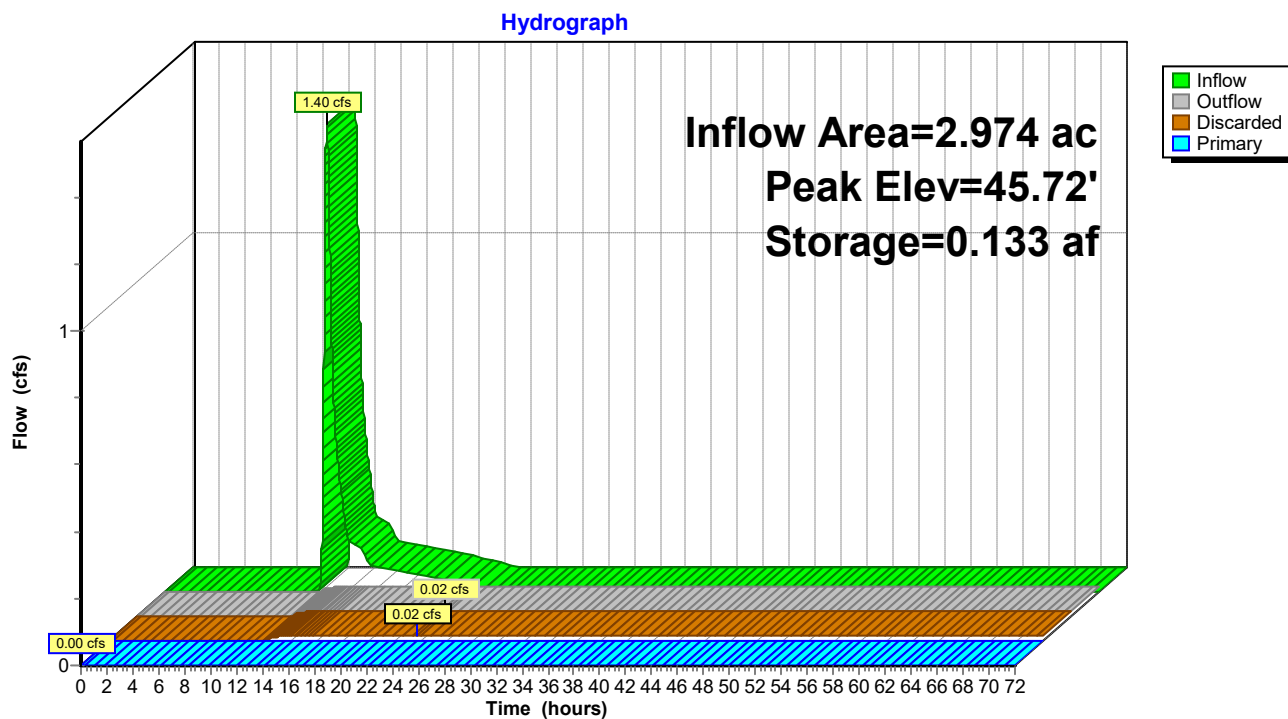
Volume	Invert	Avail.Storage	Storage Description
#1	45.00'	1.042 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
45.00	0.091	0.000	0.000
46.00	0.349	0.220	0.220
47.00	1.294	0.821	1.042

Device	Routing	Invert	Outlet Devices
#1	Primary	46.80'	40.0' long x 11.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64
#2	Discarded	45.00'	0.060 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 30.00'

Discarded OutFlow Max=0.02 cfs @ 23.72 hrs HW=45.72' (Free Discharge)
 ↑ **2=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.00' (Free Discharge)
 ↑ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 14P: EXISTING DEPRESSION



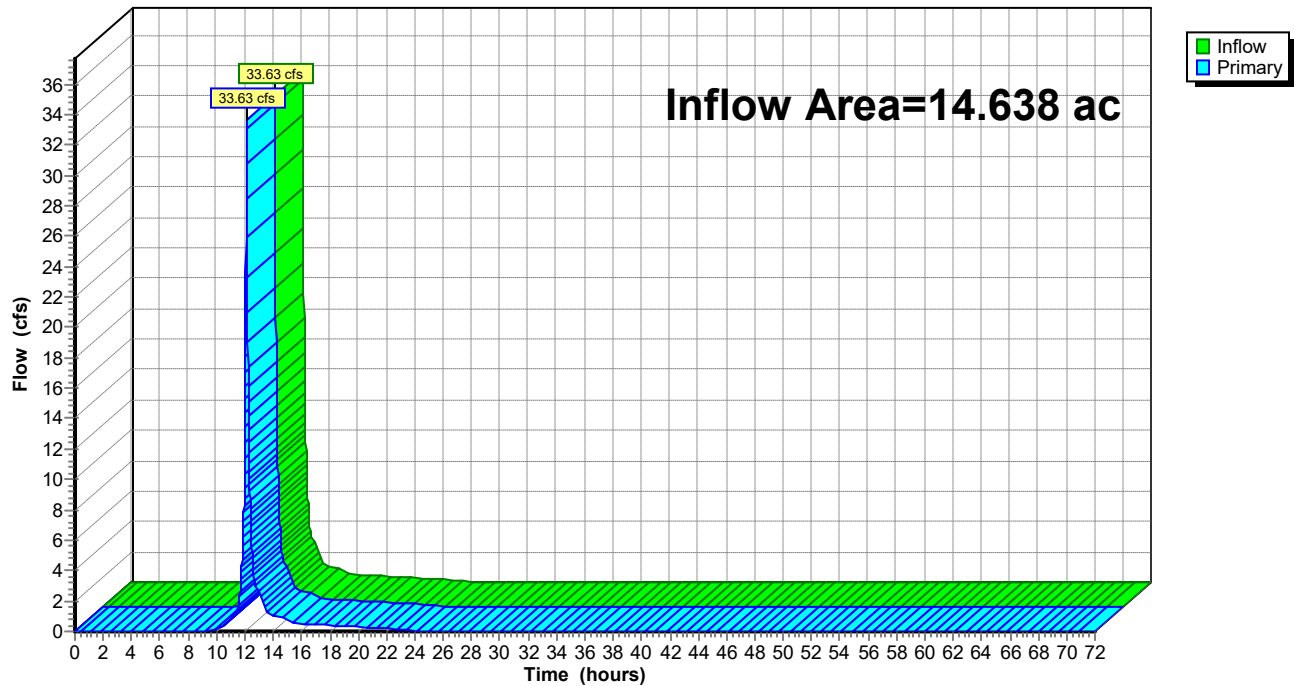
Summary for Link 8L: TOTAL EXISTING

Inflow Area = 14.638 ac, 53.03% Impervious, Inflow Depth = 1.26" for 2-year event
Inflow = 33.63 cfs @ 12.13 hrs, Volume= 1.534 af
Primary = 33.63 cfs @ 12.13 hrs, Volume= 1.534 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 8L: TOTAL EXISTING

Hydrograph



2026-08-19 hydrocad

MSE 24-hr 3 10-year Rainfall=3.70"

Prepared by Pinnacle Engineering Group

Printed 8/19/2026

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

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

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

Subcatchment 1S: EXISTING CONDITONS Runoff Area=11.664 ac 66.02% Impervious Runoff Depth=2.54"
Flow Length=492' Tc=6.1 min CN=89 Runoff=53.02 cfs 2.471 af

Subcatchment 7S: EXISTING OFFSITE Runoff Area=2.974 ac 2.08% Impervious Runoff Depth=1.25"
Flow Length=436' Tc=30.0 min CN=72 Runoff=3.19 cfs 0.311 af

Pond 14P: EXISTING DEPRESSION Peak Elev=46.15' Storage=0.283 af Inflow=3.19 cfs 0.311 af
Discarded=0.03 cfs 0.123 af Primary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.123 af

Link 8L: TOTAL EXISTING Inflow=53.02 cfs 2.471 af
Primary=53.02 cfs 2.471 af

Total Runoff Area = 14.638 ac Runoff Volume = 2.782 af Average Runoff Depth = 2.28"
46.97% Pervious = 6.875 ac 53.03% Impervious = 7.763 ac

Summary for Subcatchment 1S: EXISTING CONDITONS BASED ON AERIAL

Runoff = 53.02 cfs @ 12.13 hrs, Volume= 2.471 af, Depth= 2.54"

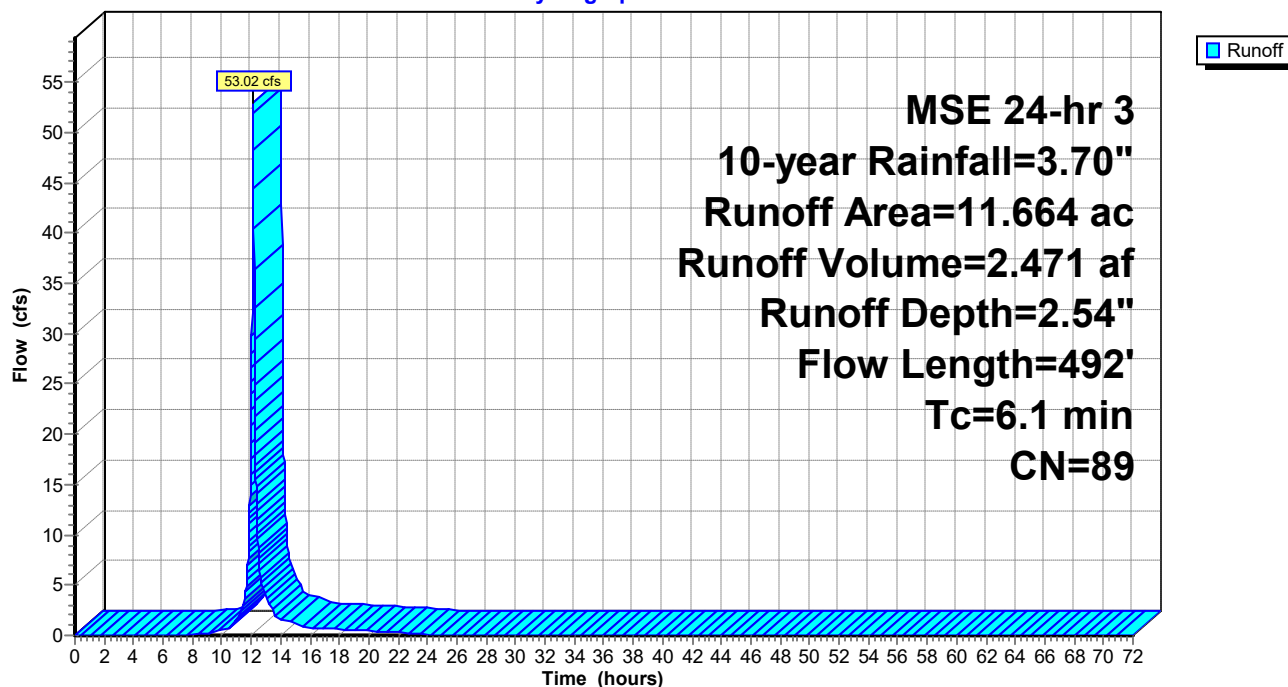
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-year Rainfall=3.70"

Area (ac)	CN	Description
* 7.701	98	PAVEMENT
* 0.220	89	GRAVEL
* 3.743	71	GRASS
11.664	89	Weighted Average
3.963		33.98% Pervious Area
7.701		66.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0032	0.60		Sheet Flow, SHEET FLOW
					Smooth surfaces n= 0.011 P2= 2.64"
3.3	392	0.0097	2.00		Shallow Concentrated Flow, SHALLOW FLOW
					Paved Kv= 20.3 fps
6.1	492	Total			

Subcatchment 1S: EXISTING CONDITONS BASED ON AERIAL

Hydrograph



Summary for Subcatchment 7S: EXISTING OFFSITE

Runoff = 3.19 cfs @ 12.44 hrs, Volume= 0.311 af, Depth= 1.25"

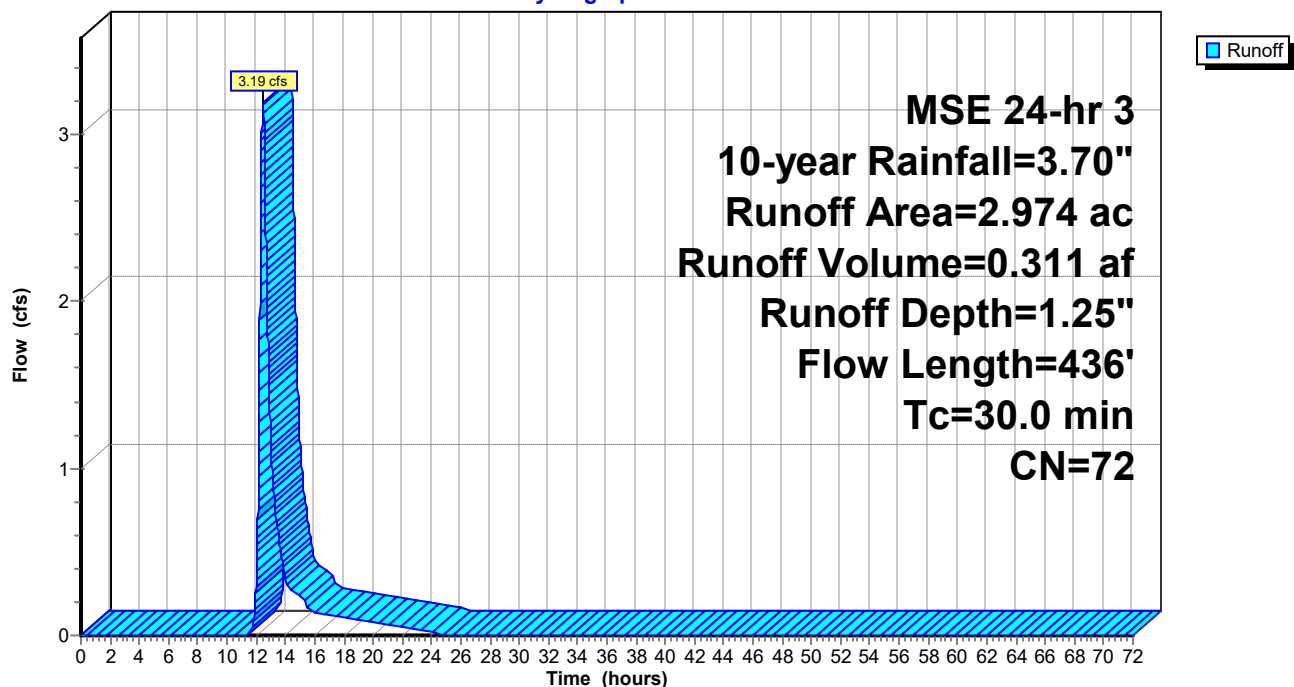
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-year Rainfall=3.70"

Area (ac)	CN	Description
* 2.901	71	GRASS
* 0.062	98	PAVEMENT
* 0.011	89	GRAVEL
2.974	72	Weighted Average
2.912		97.92% Pervious Area
0.062		2.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0025	0.07		Sheet Flow, SHEET FLOW
					Grass: Short n= 0.150 P2= 2.64"
5.2	336	0.0052	1.08		Shallow Concentrated Flow, SHALLOW FLOW
					Grassed Waterway Kv= 15.0 fps
30.0	436	Total			

Subcatchment 7S: EXISTING OFFSITE

Hydrograph



Summary for Pond 14P: EXISTING DEPRESSION

Inflow Area = 2.974 ac, 2.08% Impervious, Inflow Depth = 1.25" for 10-year event
 Inflow = 3.19 cfs @ 12.44 hrs, Volume= 0.311 af
 Outflow = 0.03 cfs @ 23.68 hrs, Volume= 0.123 af, Atten= 99%, Lag= 673.9 min
 Discarded = 0.03 cfs @ 23.68 hrs, Volume= 0.123 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 46.15' @ 23.68 hrs Surf.Area= 0.492 ac Storage= 0.283 af

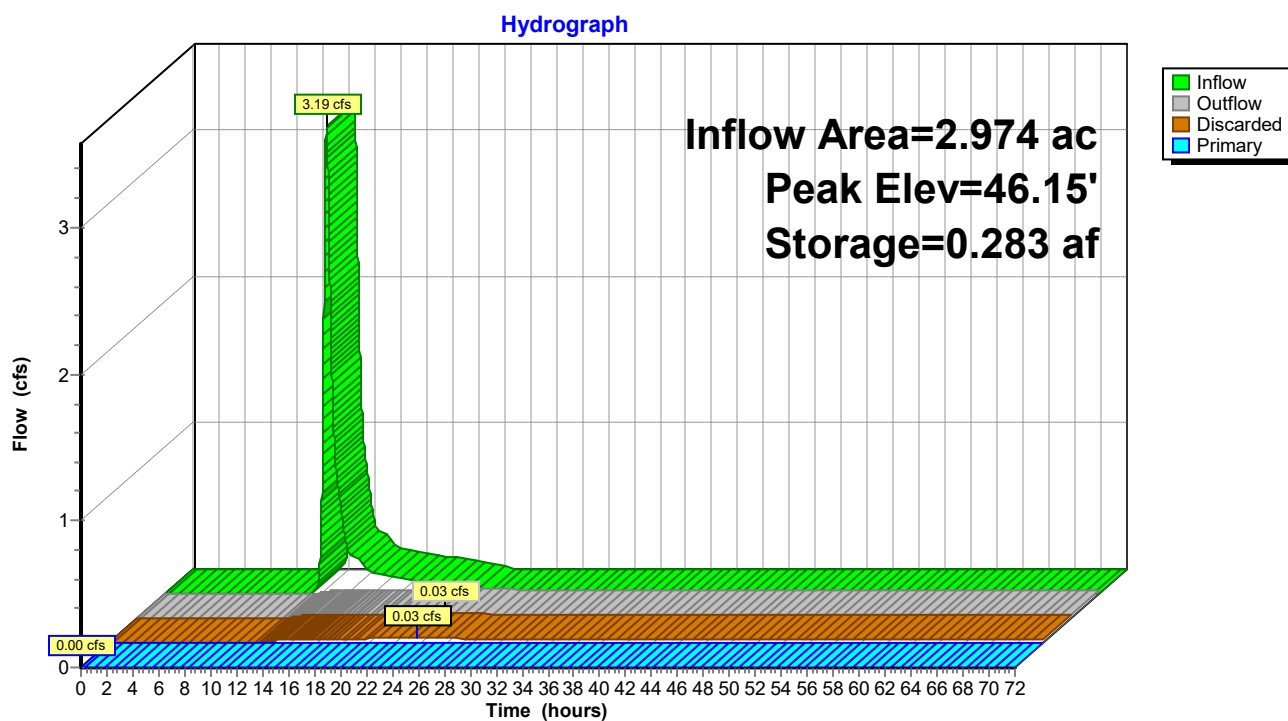
Plug-Flow detention time= 1,671.4 min calculated for 0.123 af (40% of inflow)
 Center-of-Mass det. time= 1,567.5 min (2,416.1 - 848.6)

Volume	Invert	Avail.Storage	Storage Description
#1	45.00'	1.042 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
45.00	0.091	0.000	0.000
46.00	0.349	0.220	0.220
47.00	1.294	0.821	1.042

Device	Routing	Invert	Outlet Devices
#1	Primary	46.80'	40.0' long x 11.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64
#2	Discarded	45.00'	0.060 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 30.00'

Discarded OutFlow Max=0.03 cfs @ 23.68 hrs HW=46.15' (Free Discharge)
 ↑ **2=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.00' (Free Discharge)
 ↑ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 14P: EXISTING DEPRESSION

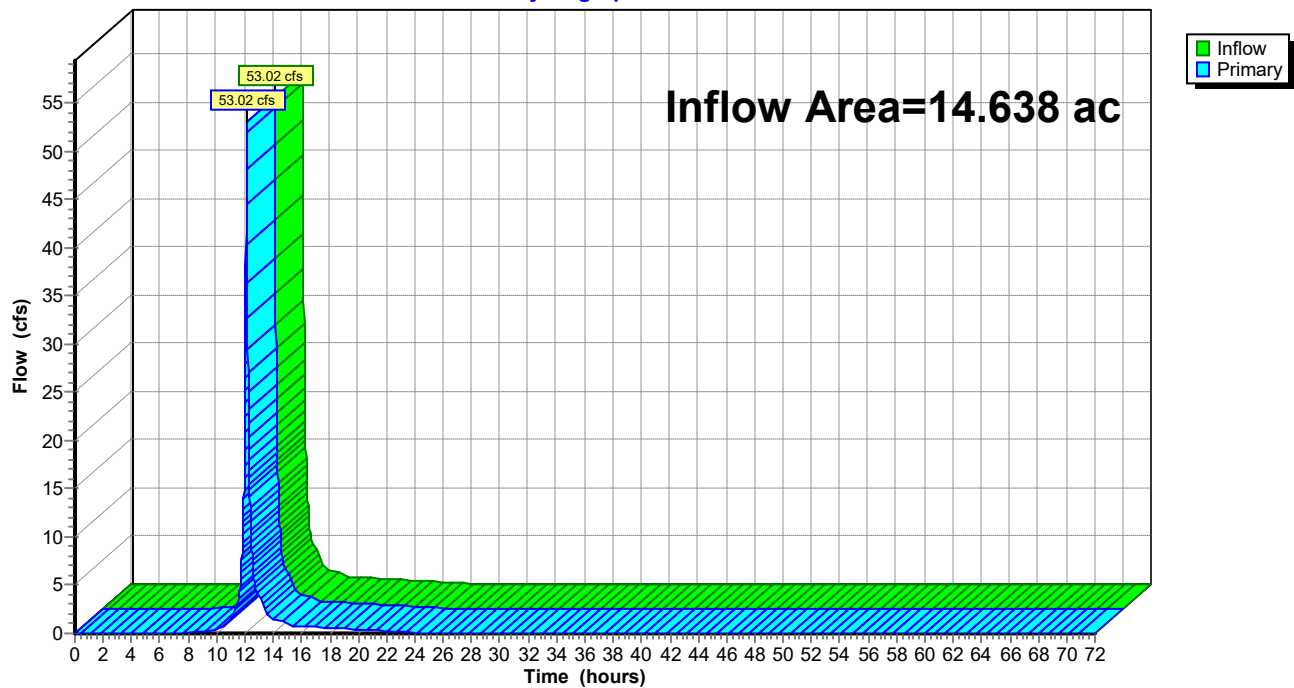
Summary for Link 8L: TOTAL EXISTING

Inflow Area = 14.638 ac, 53.03% Impervious, Inflow Depth = 2.03" for 10-year event
Inflow = 53.02 cfs @ 12.13 hrs, Volume= 2.471 af
Primary = 53.02 cfs @ 12.13 hrs, Volume= 2.471 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 8L: TOTAL EXISTING

Hydrograph



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EXISTING CONDITONS Runoff Area=11.664 ac 66.02% Impervious Runoff Depth=4.71"
Flow Length=492' Tc=6.1 min CN=89 Runoff=94.53 cfs 4.575 af

Subcatchment 7S: EXISTING OFFSITE Runoff Area=2.974 ac 2.08% Impervious Runoff Depth=2.97"
Flow Length=436' Tc=30.0 min CN=72 Runoff=7.91 cfs 0.736 af

Pond 14P: EXISTING DEPRESSION Peak Elev=46.68' Storage=0.677 af Inflow=7.91 cfs 0.736 af
Discarded=0.06 cfs 0.276 af Primary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.276 af

Link 8L: TOTAL EXISTING Inflow=94.53 cfs 4.575 af
Primary=94.53 cfs 4.575 af

Total Runoff Area = 14.638 ac Runoff Volume = 5.310 af Average Runoff Depth = 4.35"
46.97% Pervious = 6.875 ac 53.03% Impervious = 7.763 ac

Summary for Subcatchment 1S: EXISTING CONDITONS BASED ON AERIAL

Runoff = 94.53 cfs @ 12.13 hrs, Volume= 4.575 af, Depth= 4.71"

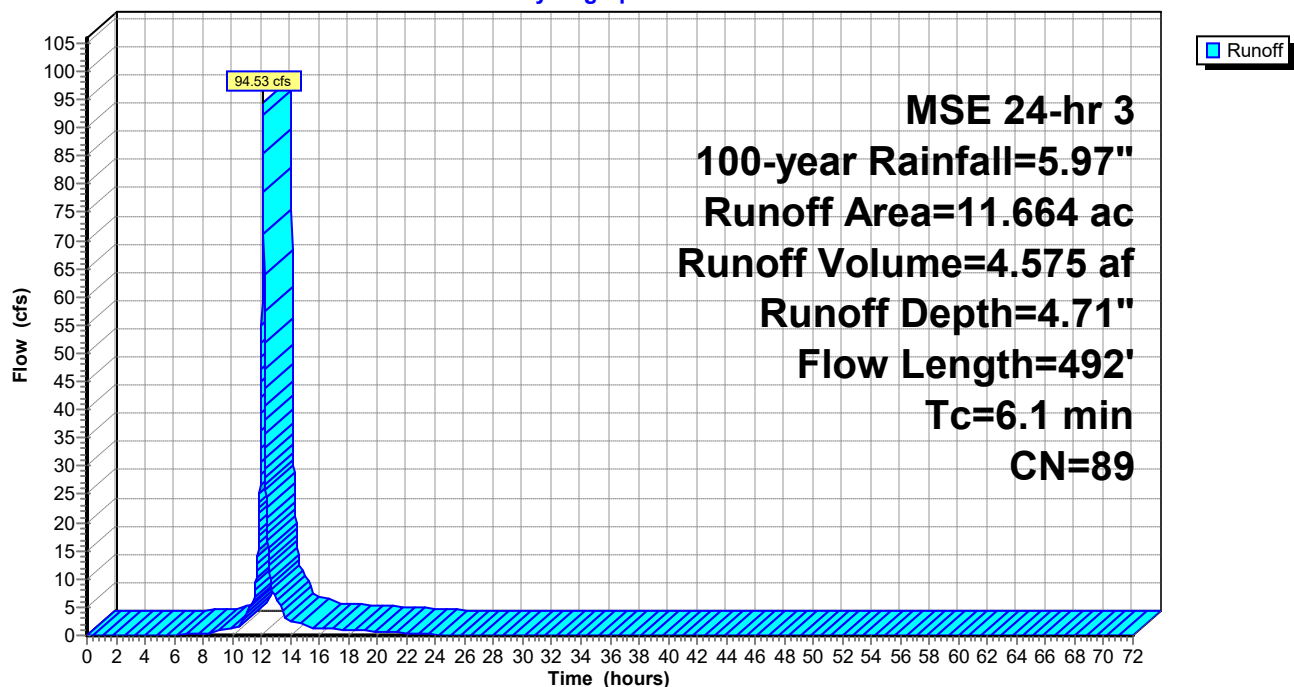
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-year Rainfall=5.97"

Area (ac)	CN	Description
* 7.701	98	PAVEMENT
* 0.220	89	GRAVEL
* 3.743	71	GRASS
11.664	89	Weighted Average
3.963		33.98% Pervious Area
7.701		66.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0032	0.60		Sheet Flow, SHEET FLOW
					Smooth surfaces n= 0.011 P2= 2.64"
3.3	392	0.0097	2.00		Shallow Concentrated Flow, SHALLOW FLOW
					Paved Kv= 20.3 fps
6.1	492	Total			

Subcatchment 1S: EXISTING CONDITONS BASED ON AERIAL

Hydrograph



Summary for Subcatchment 7S: EXISTING OFFSITE

Runoff = 7.91 cfs @ 12.43 hrs, Volume= 0.736 af, Depth= 2.97"

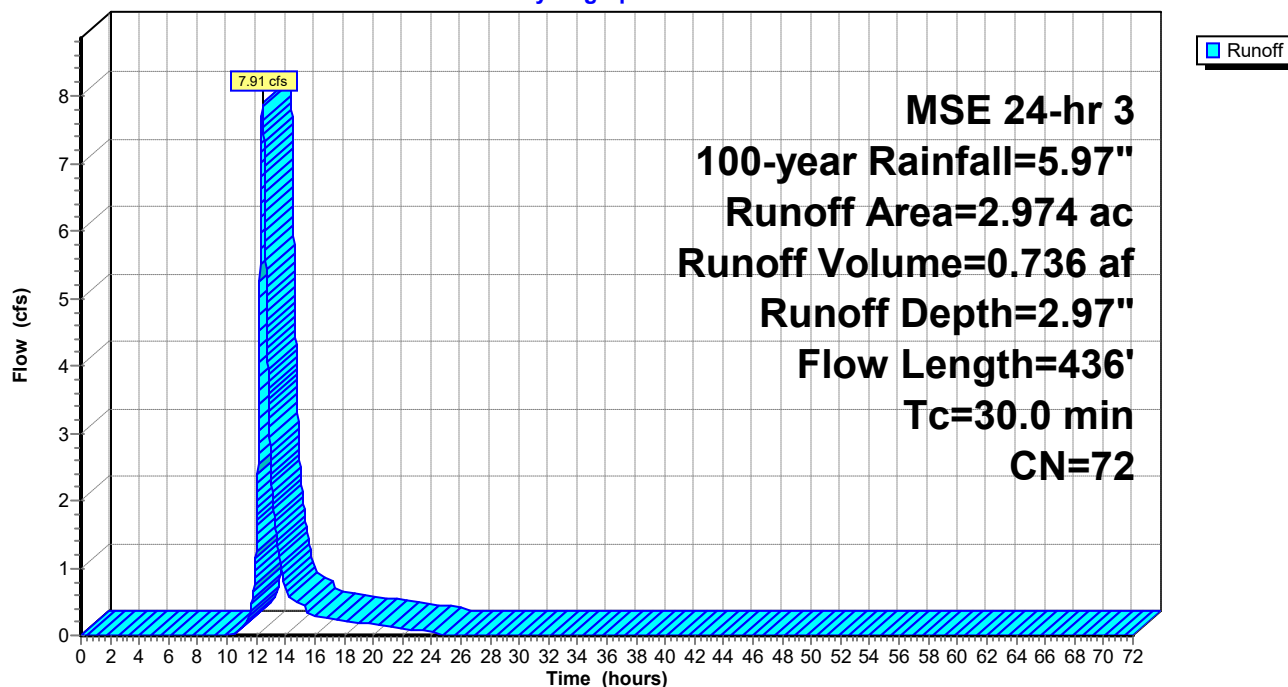
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-year Rainfall=5.97"

Area (ac)	CN	Description
* 2.901	71	GRASS
* 0.062	98	PAVEMENT
* 0.011	89	GRAVEL
2.974	72	Weighted Average
2.912		97.92% Pervious Area
0.062		2.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0025	0.07		Sheet Flow, SHEET FLOW
					Grass: Short n= 0.150 P2= 2.64"
5.2	336	0.0052	1.08		Shallow Concentrated Flow, SHALLOW FLOW
					Grassed Waterway Kv= 15.0 fps
30.0	436	Total			

Subcatchment 7S: EXISTING OFFSITE

Hydrograph



Summary for Pond 14P: EXISTING DEPRESSION

Inflow Area = 2.974 ac, 2.08% Impervious, Inflow Depth = 2.97" for 100-year event
 Inflow = 7.91 cfs @ 12.43 hrs, Volume= 0.736 af
 Outflow = 0.06 cfs @ 23.59 hrs, Volume= 0.276 af, Atten= 99%, Lag= 669.6 min
 Discarded = 0.06 cfs @ 23.59 hrs, Volume= 0.276 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 46.68' @ 23.59 hrs Surf.Area= 0.993 ac Storage= 0.677 af

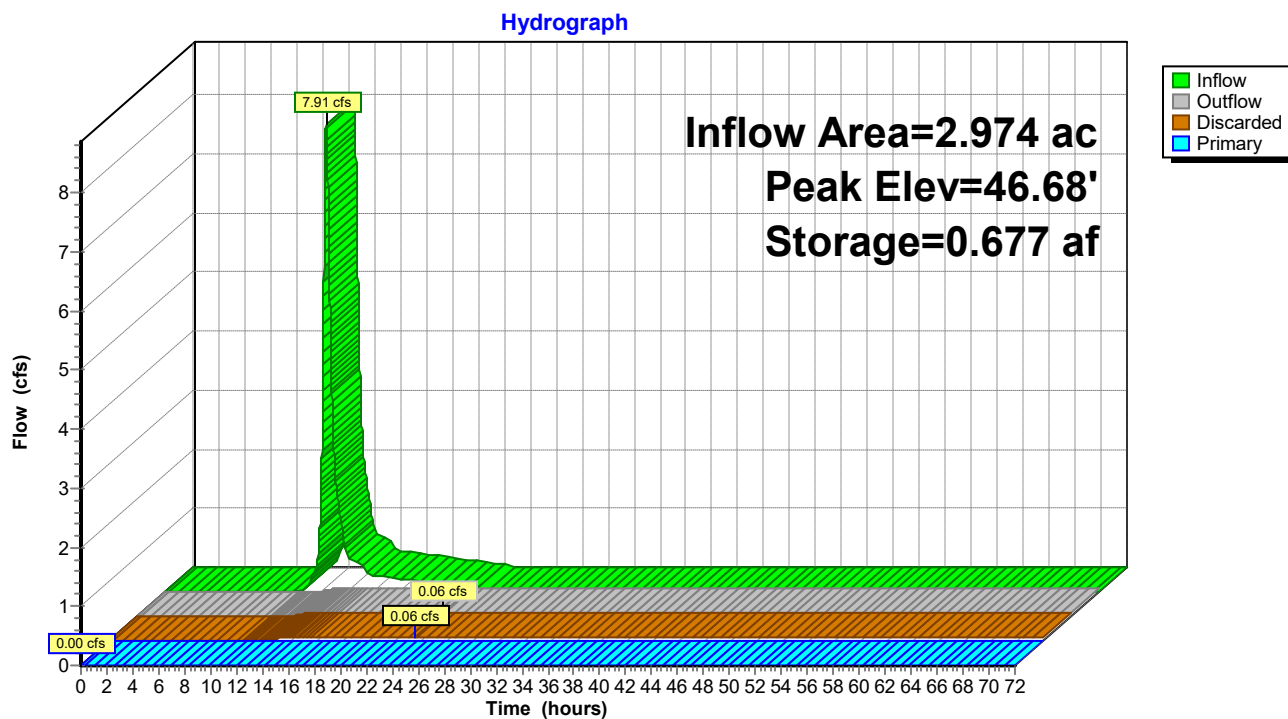
Plug-Flow detention time= 1,725.1 min calculated for 0.276 af (38% of inflow)
 Center-of-Mass det. time= 1,630.0 min (2,460.2 - 830.2)

Volume	Invert	Avail.Storage	Storage Description
#1	45.00'	1.042 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
45.00	0.091	0.000	0.000
46.00	0.349	0.220	0.220
47.00	1.294	0.821	1.042

Device	Routing	Invert	Outlet Devices
#1	Primary	46.80'	40.0' long x 11.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64
#2	Discarded	45.00'	0.060 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 30.00'

Discarded OutFlow Max=0.06 cfs @ 23.59 hrs HW=46.68' (Free Discharge)
 ↑ **2=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.00' (Free Discharge)
 ↑ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 14P: EXISTING DEPRESSION

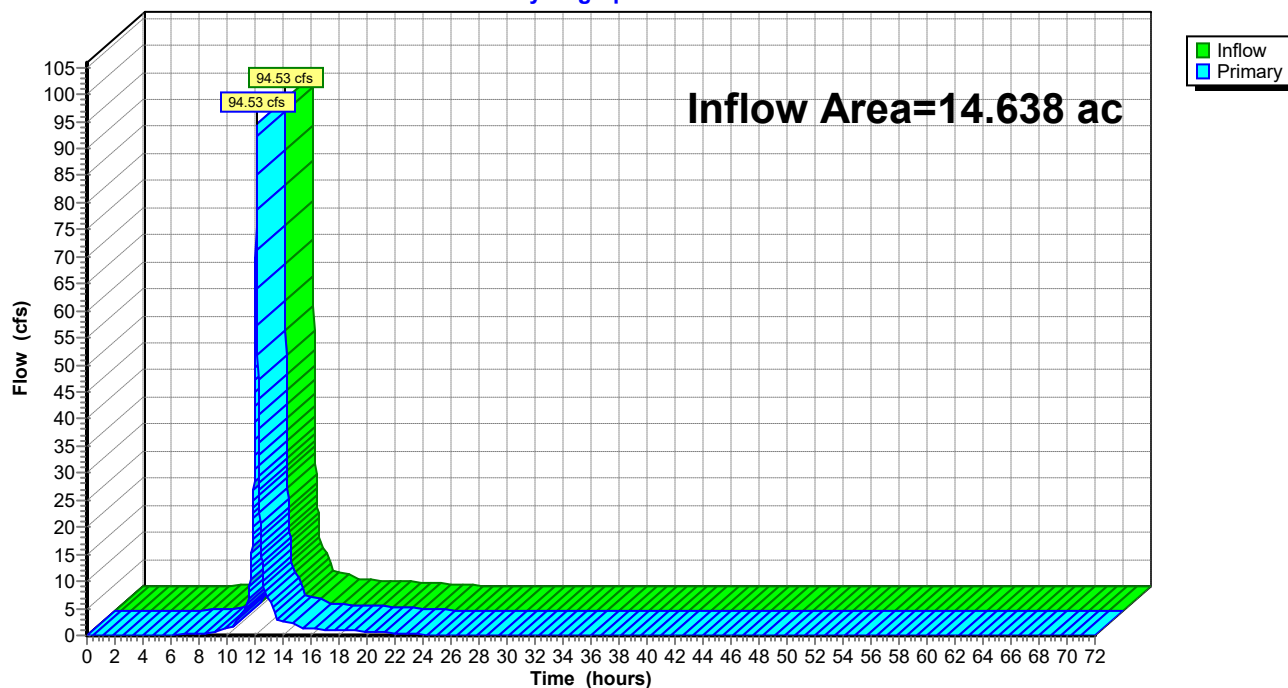
Summary for Link 8L: TOTAL EXISTING

Inflow Area = 14.638 ac, 53.03% Impervious, Inflow Depth = 3.75" for 100-year event
Inflow = 94.53 cfs @ 12.13 hrs, Volume= 4.575 af
Primary = 94.53 cfs @ 12.13 hrs, Volume= 4.575 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 8L: TOTAL EXISTING

Hydrograph



Hydrograph for 2 -YR NORTH EXISTING CONDITION

Time (hours)	Primary (cfs)	Primary-Volume (acre-feet)
0.00	0.00	0.000
0.05	0.00	0.000
0.10	0.00	0.000
0.15	0.00	0.000
0.20	0.00	0.000
0.25	0.00	0.000
0.30	0.00	0.000
0.35	0.00	0.000
0.40	0.00	0.000
0.45	0.00	0.000
0.50	0.00	0.000
0.55	0.00	0.000
0.60	0.00	0.000
0.65	0.00	0.000
0.70	0.00	0.000
0.75	0.00	0.000
0.80	0.00	0.000
0.85	0.00	0.000
0.90	0.00	0.000
0.95	0.00	0.000
1.00	0.00	0.000
1.05	0.00	0.000
1.10	0.00	0.000
1.15	0.00	0.000
1.20	0.00	0.000
1.25	0.00	0.000
1.30	0.00	0.000
1.35	0.00	0.000
1.40	0.00	0.000
1.45	0.00	0.000
1.50	0.00	0.000
1.55	0.00	0.000
1.60	0.00	0.000
1.65	0.00	0.000
1.70	0.00	0.000
1.75	0.00	0.000
1.80	0.00	0.000
1.85	0.00	0.000
1.90	0.00	0.000
1.95	0.00	0.000
2.00	0.00	0.000
2.05	0.00	0.000
2.10	0.00	0.000
2.15	0.00	0.000
2.20	0.00	0.000
2.25	0.00	0.000

2.30	0.00	0.000
2.35	0.00	0.000
2.40	0.00	0.000
2.45	0.00	0.000
2.50	0.00	0.000
2.55	0.00	0.000
2.60	0.00	0.000
2.65	0.00	0.000
2.70	0.00	0.000
2.75	0.00	0.000
2.80	0.00	0.000
2.85	0.00	0.000
2.90	0.00	0.000
2.95	0.00	0.000
3.00	0.00	0.000
3.05	0.00	0.000
3.10	0.00	0.000
3.15	0.00	0.000
3.20	0.00	0.000
3.25	0.00	0.000
3.30	0.00	0.000
3.35	0.00	0.000
3.40	0.00	0.000
3.45	0.00	0.000
3.50	0.00	0.000
3.55	0.00	0.000
3.60	0.00	0.000
3.65	0.00	0.000
3.70	0.00	0.000
3.75	0.00	0.000
3.80	0.00	0.000
3.85	0.00	0.000
3.90	0.00	0.000
3.95	0.00	0.000
4.00	0.00	0.000
4.05	0.00	0.000
4.10	0.00	0.000
4.15	0.00	0.000
4.20	0.00	0.000
4.25	0.00	0.000
4.30	0.00	0.000
4.35	0.00	0.000
4.40	0.00	0.000
4.45	0.00	0.000
4.50	0.00	0.000
4.55	0.00	0.000
4.60	0.00	0.000
4.65	0.00	0.000
4.70	0.00	0.000
4.75	0.00	0.000

4.80	0.00	0.000
4.85	0.00	0.000
4.90	0.00	0.000
4.95	0.00	0.000
5.00	0.00	0.000
5.05	0.00	0.000
5.10	0.00	0.000
5.15	0.00	0.000
5.20	0.00	0.000
5.25	0.00	0.000
5.30	0.00	0.000
5.35	0.00	0.000
5.40	0.00	0.000
5.45	0.00	0.000
5.50	0.00	0.000
5.55	0.00	0.000
5.60	0.00	0.000
5.65	0.00	0.000
5.70	0.00	0.000
5.75	0.00	0.000
5.80	0.00	0.000
5.85	0.00	0.000
5.90	0.00	0.000
5.95	0.00	0.000
6.00	0.00	0.000
6.05	0.00	0.000
6.10	0.00	0.000
6.15	0.00	0.000
6.20	0.00	0.000
6.25	0.00	0.000
6.30	0.00	0.000
6.35	0.00	0.000
6.40	0.00	0.000
6.45	0.00	0.000
6.50	0.00	0.000
6.55	0.00	0.000
6.60	0.00	0.000
6.65	0.00	0.000
6.70	0.00	0.000
6.75	0.00	0.000
6.80	0.00	0.000
6.85	0.00	0.000
6.90	0.00	0.000
6.95	0.00	0.000
7.00	0.00	0.000
7.05	0.00	0.000
7.10	0.00	0.000
7.15	0.00	0.000
7.20	0.00	0.000
7.25	0.00	0.000

7.30	0.00	0.000
7.35	0.00	0.000
7.40	0.00	0.000
7.45	0.00	0.000
7.50	0.00	0.000
7.55	0.00	0.000
7.60	0.00	0.000
7.65	0.00	0.000
7.70	0.00	0.000
7.75	0.00	0.000
7.80	0.00	0.000
7.85	0.00	0.000
7.90	0.00	0.000
7.95	0.00	0.000
8.00	0.00	0.000
8.05	0.00	0.000
8.10	0.00	0.000
8.15	0.00	0.000
8.20	0.00	0.000
8.25	0.00	0.000
8.30	0.00	0.000
8.35	0.00	0.000
8.40	0.00	0.000
8.45	0.00	0.000
8.50	0.00	0.000
8.55	0.00	0.000
8.60	0.00	0.000
8.65	0.00	0.000
8.70	0.00	0.000
8.75	0.01	0.000
8.80	0.01	0.000
8.85	0.01	0.000
8.90	0.01	0.000
8.95	0.02	0.000
9.00	0.02	0.000
9.05	0.02	0.000
9.10	0.04	0.001
9.15	0.05	0.001
9.20	0.05	0.001
9.25	0.06	0.001
9.30	0.07	0.001
9.35	0.07	0.002
9.40	0.08	0.002
9.45	0.09	0.002
9.50	0.10	0.003
9.55	0.10	0.003
9.60	0.11	0.004
9.65	0.12	0.004
9.70	0.13	0.005
9.75	0.13	0.005

9.80	0.14	0.006
9.85	0.15	0.006
9.90	0.16	0.007
9.95	0.16	0.008
10.00	0.17	0.008
10.05	0.18	0.009
10.10	0.19	0.010
10.15	0.20	0.011
10.20	0.20	0.011
10.25	0.21	0.012
10.30	0.22	0.013
10.35	0.23	0.014
10.40	0.24	0.015
10.45	0.24	0.016
10.50	0.25	0.017
10.55	0.28	0.018
10.60	0.35	0.020
10.65	0.41	0.021
10.70	0.46	0.023
10.75	0.50	0.025
10.80	0.56	0.027
10.85	0.61	0.030
10.90	0.67	0.032
10.95	0.72	0.035
11.00	0.79	0.038
11.05	0.85	0.042
11.10	0.92	0.045
11.15	0.98	0.049
11.20	1.06	0.054
11.25	1.13	0.058
11.30	1.22	0.063
11.35	1.30	0.068
11.40	1.39	0.074
11.45	1.47	0.080
11.50	1.57	0.086
11.55	1.75	0.093
11.60	2.21	0.101
11.65	2.61	0.111
11.70	3.21	0.124
11.75	3.78	0.138
11.80	4.79	0.156
11.85	5.75	0.178
11.90	7.39	0.206
11.95	9.49	0.241
12.00	14.43	0.292
12.05	19.66	0.364
12.10	29.93	0.470
12.15	32.56	0.606
12.20	20.99	0.713
12.25	14.14	0.780

12.30	10.52	0.829
12.35	8.78	0.868
12.40	7.18	0.900
12.45	6.27	0.927
12.50	5.31	0.951
12.55	4.68	0.971
12.60	3.82	0.988
12.65	3.38	1.003
12.70	3.17	1.016
12.75	3.06	1.029
12.80	2.95	1.042
12.85	2.87	1.054
12.90	2.76	1.065
12.95	2.68	1.076
13.00	2.57	1.087
13.05	2.49	1.098
13.10	2.38	1.108
13.15	2.30	1.117
13.20	2.19	1.126
13.25	2.11	1.135
13.30	1.99	1.144
13.35	1.91	1.152
13.40	1.80	1.159
13.45	1.72	1.167
13.50	1.60	1.173
13.55	1.48	1.180
13.60	1.22	1.185
13.65	1.08	1.190
13.70	1.03	1.194
13.75	1.02	1.198
13.80	1.01	1.203
13.85	1.01	1.207
13.90	1.00	1.211
13.95	0.99	1.215
14.00	0.99	1.219
14.05	0.98	1.223
14.10	0.97	1.227
14.15	0.97	1.231
14.20	0.96	1.235
14.25	0.96	1.239
14.30	0.95	1.243
14.35	0.95	1.247
14.40	0.94	1.251
14.45	0.93	1.255
14.50	0.93	1.259
14.55	0.93	1.263
14.60	0.92	1.266
14.65	0.91	1.270
14.70	0.91	1.274
14.75	0.90	1.278

Hydrograph for NORTH EXISTING 100YR

Time (hours)	Primary (cfs)	Primary-Volume (acre-feet)
0.00	0.00	0.000
0.05	0.00	0.000
0.10	0.00	0.000
0.15	0.00	0.000
0.20	0.00	0.000
0.25	0.00	0.000
0.30	0.00	0.000
0.35	0.00	0.000
0.40	0.00	0.000
0.45	0.00	0.000
0.50	0.00	0.000
0.55	0.00	0.000
0.60	0.00	0.000
0.65	0.00	0.000
0.70	0.00	0.000
0.75	0.00	0.000
0.80	0.00	0.000
0.85	0.00	0.000
0.90	0.00	0.000
0.95	0.00	0.000
1.00	0.00	0.000
1.05	0.00	0.000
1.10	0.00	0.000
1.15	0.00	0.000
1.20	0.00	0.000
1.25	0.00	0.000
1.30	0.00	0.000
1.35	0.00	0.000
1.40	0.00	0.000
1.45	0.00	0.000
1.50	0.00	0.000
1.55	0.00	0.000
1.60	0.00	0.000
1.65	0.00	0.000
1.70	0.00	0.000
1.75	0.00	0.000
1.80	0.00	0.000
1.85	0.00	0.000
1.90	0.00	0.000
1.95	0.00	0.000
2.00	0.00	0.000
2.05	0.00	0.000
2.10	0.00	0.000
2.15	0.00	0.000
2.20	0.00	0.000

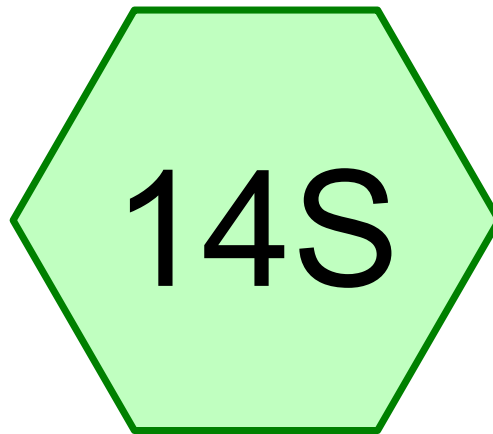
2.25	0.00	0.000
2.30	0.00	0.000
2.35	0.00	0.000
2.40	0.00	0.000
2.45	0.00	0.000
2.50	0.00	0.000
2.55	0.00	0.000
2.60	0.00	0.000
2.65	0.00	0.000
2.70	0.00	0.000
2.75	0.00	0.000
2.80	0.00	0.000
2.85	0.00	0.000
2.90	0.00	0.000
2.95	0.00	0.000
3.00	0.00	0.000
3.05	0.00	0.000
3.10	0.00	0.000
3.15	0.00	0.000
3.20	0.00	0.000
3.25	0.00	0.000
3.30	0.00	0.000
3.35	0.00	0.000
3.40	0.00	0.000
3.45	0.00	0.000
3.50	0.00	0.000
3.55	0.00	0.000
3.60	0.00	0.000
3.65	0.00	0.000
3.70	0.00	0.000
3.75	0.00	0.000
3.80	0.00	0.000
3.85	0.00	0.000
3.90	0.00	0.000
3.95	0.00	0.000
4.00	0.00	0.000
4.05	0.00	0.000
4.10	0.00	0.000
4.15	0.00	0.000
4.20	0.00	0.000
4.25	0.00	0.000
4.30	0.00	0.000
4.35	0.00	0.000
4.40	0.00	0.000
4.45	0.00	0.000
4.50	0.00	0.000
4.55	0.00	0.000
4.60	0.00	0.000
4.65	0.00	0.000
4.70	0.00	0.000

4.75	0.00	0.000
4.80	0.00	0.000
4.85	0.00	0.000
4.90	0.00	0.000
4.95	0.00	0.000
5.00	0.00	0.000
5.05	0.00	0.000
5.10	0.00	0.000
5.15	0.00	0.000
5.20	0.00	0.000
5.25	0.00	0.000
5.30	0.00	0.000
5.35	0.00	0.000
5.40	0.00	0.000
5.45	0.01	0.000
5.50	0.01	0.000
5.55	0.02	0.000
5.60	0.02	0.000
5.65	0.03	0.000
5.70	0.04	0.000
5.75	0.04	0.001
5.80	0.05	0.001
5.85	0.06	0.001
5.90	0.06	0.001
5.95	0.07	0.002
6.00	0.07	0.002
6.05	0.08	0.002
6.10	0.09	0.003
6.15	0.09	0.003
6.20	0.10	0.003
6.25	0.11	0.004
6.30	0.12	0.004
6.35	0.12	0.005
6.40	0.13	0.005
6.45	0.14	0.006
6.50	0.14	0.006
6.55	0.15	0.007
6.60	0.16	0.008
6.65	0.17	0.008
6.70	0.17	0.009
6.75	0.18	0.010
6.80	0.19	0.011
6.85	0.20	0.011
6.90	0.20	0.012
6.95	0.21	0.013
7.00	0.22	0.014
7.05	0.23	0.015
7.10	0.23	0.016
7.15	0.24	0.017
7.20	0.25	0.018

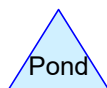
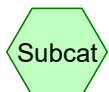
7.25	0.26	0.019
7.30	0.27	0.020
7.35	0.28	0.021
7.40	0.28	0.022
7.45	0.29	0.023
7.50	0.30	0.025
7.55	0.31	0.026
7.60	0.32	0.027
7.65	0.32	0.029
7.70	0.33	0.030
7.75	0.34	0.031
7.80	0.35	0.033
7.85	0.36	0.034
7.90	0.37	0.036
7.95	0.38	0.037
8.00	0.38	0.039
8.05	0.39	0.040
8.10	0.40	0.042
8.15	0.41	0.044
8.20	0.42	0.045
8.25	0.43	0.047
8.30	0.44	0.049
8.35	0.45	0.051
8.40	0.45	0.053
8.45	0.46	0.055
8.50	0.47	0.056
8.55	0.48	0.058
8.60	0.49	0.060
8.65	0.50	0.063
8.70	0.51	0.065
8.75	0.52	0.067
8.80	0.53	0.069
8.85	0.54	0.071
8.90	0.54	0.073
8.95	0.55	0.076
9.00	0.56	0.078
9.05	0.61	0.080
9.10	0.80	0.083
9.15	0.90	0.087
9.20	0.95	0.091
9.25	0.98	0.095
9.30	1.01	0.099
9.35	1.03	0.103
9.40	1.06	0.107
9.45	1.08	0.112
9.50	1.10	0.116
9.55	1.12	0.121
9.60	1.15	0.126
9.65	1.17	0.130
9.70	1.19	0.135

9.75	1.21	0.140
9.80	1.24	0.145
9.85	1.26	0.151
9.90	1.29	0.156
9.95	1.31	0.161
10.00	1.33	0.167
10.05	1.35	0.172
10.10	1.38	0.178
10.15	1.40	0.184
10.20	1.42	0.189
10.25	1.45	0.195
10.30	1.47	0.201
10.35	1.49	0.208
10.40	1.51	0.214
10.45	1.54	0.220
10.50	1.56	0.227
10.55	1.69	0.233
10.60	2.09	0.241
10.65	2.36	0.250
10.70	2.61	0.261
10.75	2.79	0.272
10.80	3.02	0.284
10.85	3.20	0.297
10.90	3.44	0.311
10.95	3.62	0.326
11.00	3.88	0.341
11.05	4.07	0.358
11.10	4.33	0.375
11.15	4.53	0.394
11.20	4.81	0.413
11.25	5.02	0.433
11.30	5.30	0.455
11.35	5.52	0.477
11.40	5.80	0.501
11.45	6.03	0.525
11.50	6.33	0.551
11.55	6.91	0.578
11.60	8.55	0.611
11.65	9.88	0.649
11.70	11.91	0.695
11.75	13.70	0.749
11.80	16.90	0.813
11.85	19.73	0.889
11.90	24.64	0.983
11.95	30.65	1.097
12.00	44.98	1.260
12.05	58.95	1.477
12.10	86.05	1.787
12.15	90.67	2.170
12.20	57.42	2.464

12.25	38.11	2.648
12.30	28.02	2.778
12.35	23.19	2.881
12.40	18.85	2.966
12.45	16.40	3.037
12.50	13.85	3.098
12.55	12.18	3.152
12.60	9.91	3.196
12.65	8.76	3.234
12.70	8.19	3.269
12.75	7.91	3.302
12.80	7.60	3.334
12.85	7.39	3.364
12.90	7.10	3.394
12.95	6.89	3.423
13.00	6.59	3.451
13.05	6.39	3.478
13.10	6.09	3.503
13.15	5.88	3.528
13.20	5.59	3.551
13.25	5.38	3.574
13.30	5.09	3.595
13.35	4.88	3.616
13.40	4.58	3.635
13.45	4.37	3.654
13.50	4.07	3.671
13.55	3.77	3.687
13.60	3.09	3.701
13.65	2.75	3.713
13.70	2.63	3.724
13.75	2.58	3.735
13.80	2.56	3.745
13.85	2.55	3.756
13.90	2.53	3.766
13.95	2.52	3.777
14.00	2.50	3.787
14.05	2.49	3.797
14.10	2.47	3.808
14.15	2.45	3.818
14.20	2.44	3.828
14.25	2.43	3.838
14.30	2.41	3.848
14.35	2.40	3.858
14.40	2.38	3.868
14.45	2.36	3.878
14.50	2.35	3.887
14.55	2.34	3.897
14.60	2.32	3.907
14.65	2.30	3.916
14.70	2.29	3.926



EXISTING - WEST PARKING LOT



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.297	71	GRASS (14S)
1.297	71	TOTAL AREA

Summary for Subcatchment 14S: EXISTING - WEST PARKING LOT

Runoff = 0.59 cfs @ 12.25 hrs, Volume= 0.045 af, Depth= 0.41"

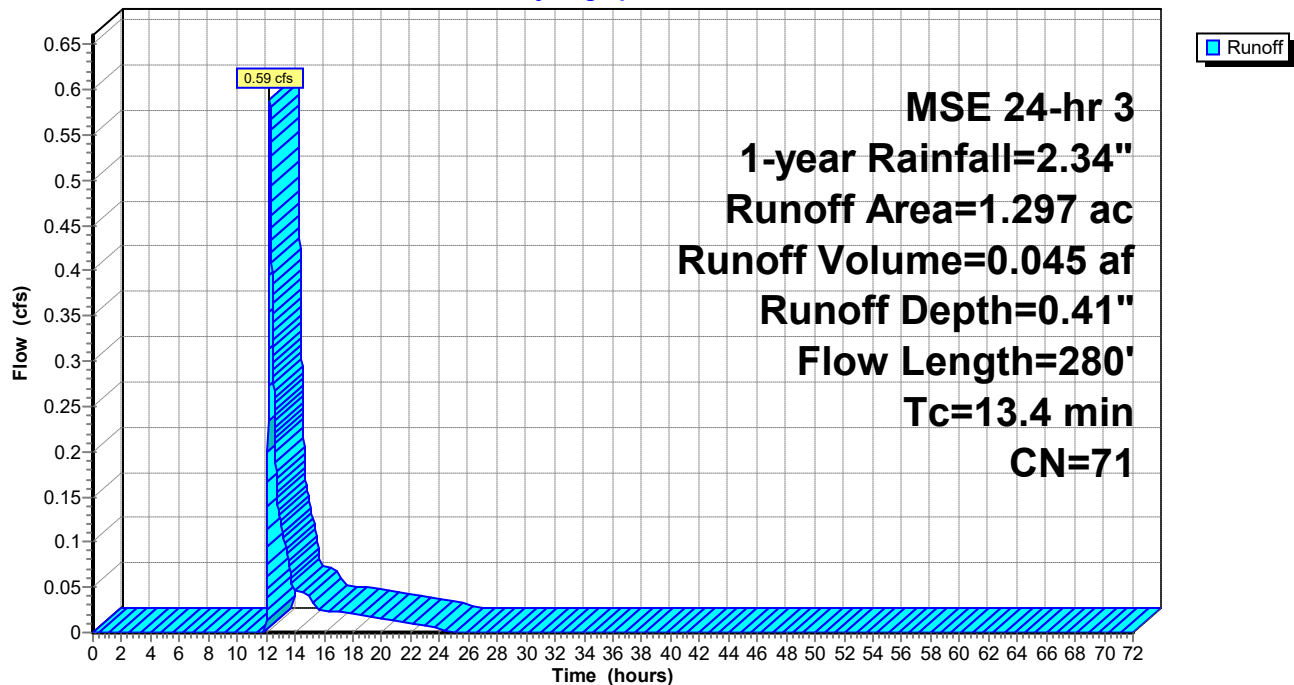
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 1-year Rainfall=2.34"

Area (ac)	CN	Description
* 1.297	71	GRASS
1.297		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	100	0.0190	0.15		Sheet Flow, SHEET FLOW
					Grass: Short n= 0.150 P2= 2.64"
2.4	180	0.0067	1.23		Shallow Concentrated Flow, SHALLOW FLOW
					Grassed Waterway Kv= 15.0 fps
13.4	280	Total			

Subcatchment 14S: EXISTING - WEST PARKING LOT

Hydrograph



Summary for Subcatchment 14S: EXISTING - WEST PARKING LOT

Runoff = 0.86 cfs @ 12.24 hrs, Volume= 0.061 af, Depth= 0.56"

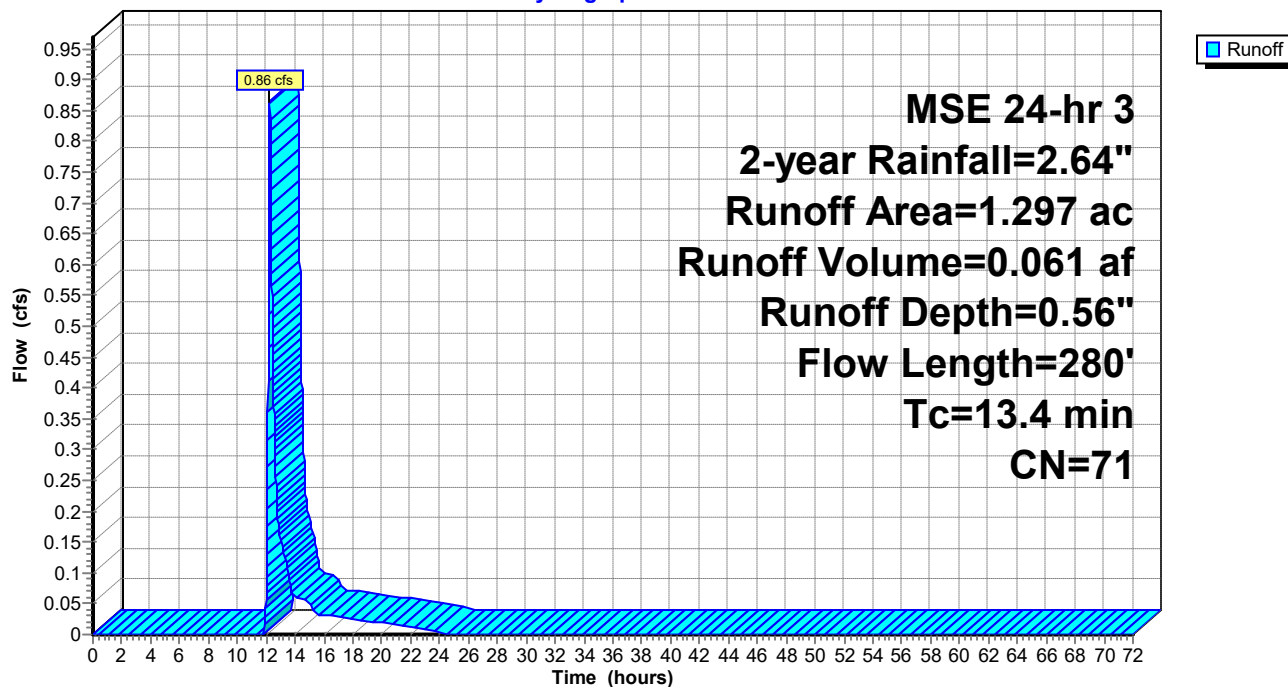
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-year Rainfall=2.64"

Area (ac)	CN	Description
* 1.297	71	GRASS
1.297		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	100	0.0190	0.15		Sheet Flow, SHEET FLOW Grass: Short n= 0.150 P2= 2.64"
2.4	180	0.0067	1.23		Shallow Concentrated Flow, SHALLOW FLOW Grassed Waterway Kv= 15.0 fps
13.4	280	Total			

Subcatchment 14S: EXISTING - WEST PARKING LOT

Hydrograph



Summary for Subcatchment 14S: EXISTING - WEST PARKING LOT

Runoff = 2.04 cfs @ 12.23 hrs, Volume= 0.129 af, Depth= 1.19"

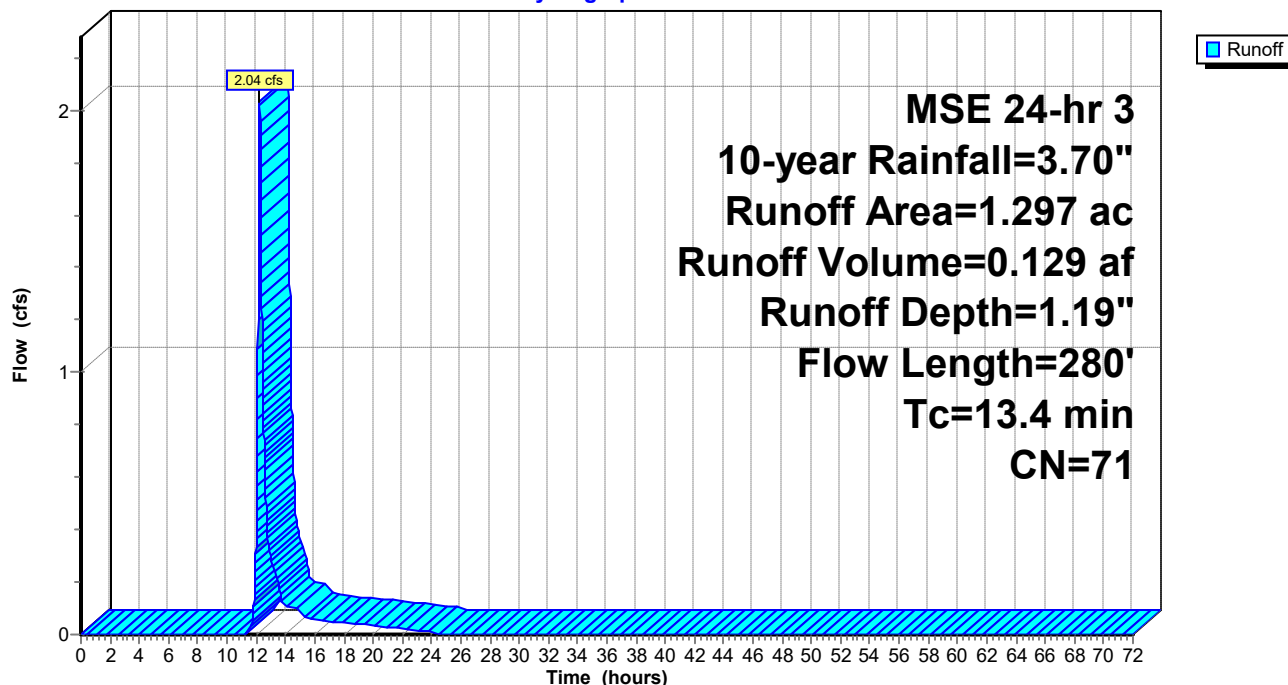
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-year Rainfall=3.70"

Area (ac)	CN	Description
* 1.297	71	GRASS
1.297		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	100	0.0190	0.15		Sheet Flow, SHEET FLOW
					Grass: Short n= 0.150 P2= 2.64"
2.4	180	0.0067	1.23		Shallow Concentrated Flow, SHALLOW FLOW
					Grassed Waterway Kv= 15.0 fps
13.4	280	Total			

Subcatchment 14S: EXISTING - WEST PARKING LOT

Hydrograph



Summary for Subcatchment 14S: EXISTING - WEST PARKING LOT

Runoff = 5.09 cfs @ 12.22 hrs, Volume= 0.311 af, Depth= 2.87"

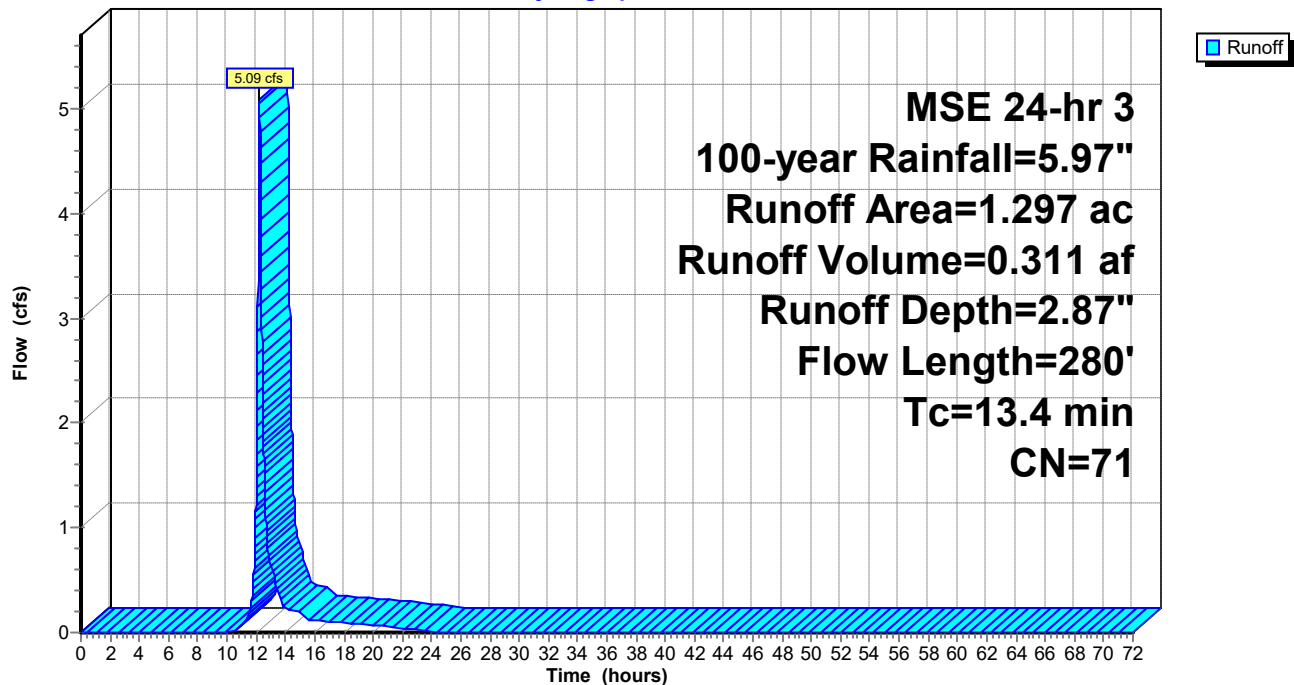
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-year Rainfall=5.97"

Area (ac)	CN	Description
* 1.297	71	GRASS
1.297		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	100	0.0190	0.15		Sheet Flow, SHEET FLOW
					Grass: Short n= 0.150 P2= 2.64"
2.4	180	0.0067	1.23		Shallow Concentrated Flow, SHALLOW FLOW
					Grassed Waterway Kv= 15.0 fps
13.4	280	Total			

Subcatchment 14S: EXISTING - WEST PARKING LOT

Hydrograph



Hydrograph for EXISTING - WEST 2YR

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
0.00	0.00	0.000
0.05	0.00	0.000
0.10	0.00	0.000
0.15	0.00	0.000
0.20	0.00	0.000
0.25	0.00	0.000
0.30	0.00	0.000
0.35	0.00	0.000
0.40	0.00	0.000
0.45	0.00	0.000
0.50	0.00	0.000
0.55	0.00	0.000
0.60	0.00	0.000
0.65	0.00	0.000
0.70	0.00	0.000
0.75	0.00	0.000
0.80	0.00	0.000
0.85	0.00	0.000
0.90	0.00	0.000
0.95	0.00	0.000
1.00	0.00	0.000
1.05	0.00	0.000
1.10	0.00	0.000
1.15	0.00	0.000
1.20	0.00	0.000
1.25	0.00	0.000
1.30	0.00	0.000
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1.45	0.00	0.000
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1.55	0.00	0.000
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1.65	0.00	0.000
1.70	0.00	0.000
1.75	0.00	0.000
1.80	0.00	0.000
1.85	0.00	0.000
1.90	0.00	0.000
1.95	0.00	0.000
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2.20	0.00	0.000

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11.90	0.01	0.000
11.95	0.03	0.000
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12.15	0.58	0.004
12.20	0.81	0.007

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12.35	0.65	0.016
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12.70	0.23	0.028
12.75	0.20	0.029
12.80	0.19	0.029
12.85	0.17	0.030
12.90	0.17	0.031
12.95	0.16	0.031
13.00	0.16	0.032
13.05	0.15	0.033
13.10	0.15	0.033
13.15	0.14	0.034
13.20	0.14	0.035
13.25	0.13	0.035
13.30	0.13	0.036
13.35	0.12	0.036
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13.50	0.11	0.037
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13.95	0.06	0.040
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14.10	0.06	0.041
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14.60	0.06	0.043
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14.70	0.06	0.044

14.75	0.06	0.044
14.80	0.05	0.044
14.85	0.05	0.045
14.90	0.05	0.045
14.95	0.05	0.045
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15.05	0.05	0.045
15.10	0.05	0.046
15.15	0.05	0.046
15.20	0.04	0.046
15.25	0.04	0.046
15.30	0.04	0.046
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15.40	0.03	0.047
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16.05	0.03	0.048
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16.15	0.03	0.049
16.20	0.03	0.049
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17.20	0.03	0.051

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20.90	0.02	0.058
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22.10	0.01	0.059
22.15	0.01	0.059
22.20	0.01	0.059

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23.60	0.01	0.061
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23.70	0.01	0.061
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64.15	0.00	0.061
64.20	0.00	0.061
64.25	0.00	0.061
64.30	0.00	0.061
64.35	0.00	0.061
64.40	0.00	0.061
64.45	0.00	0.061
64.50	0.00	0.061
64.55	0.00	0.061
64.60	0.00	0.061
64.65	0.00	0.061
64.70	0.00	0.061

64.75	0.00	0.061
64.80	0.00	0.061
64.85	0.00	0.061
64.90	0.00	0.061
64.95	0.00	0.061
65.00	0.00	0.061
65.05	0.00	0.061
65.10	0.00	0.061
65.15	0.00	0.061
65.20	0.00	0.061
65.25	0.00	0.061
65.30	0.00	0.061
65.35	0.00	0.061
65.40	0.00	0.061
65.45	0.00	0.061
65.50	0.00	0.061
65.55	0.00	0.061
65.60	0.00	0.061
65.65	0.00	0.061
65.70	0.00	0.061
65.75	0.00	0.061
65.80	0.00	0.061
65.85	0.00	0.061
65.90	0.00	0.061
65.95	0.00	0.061
66.00	0.00	0.061
66.05	0.00	0.061
66.10	0.00	0.061
66.15	0.00	0.061
66.20	0.00	0.061
66.25	0.00	0.061
66.30	0.00	0.061
66.35	0.00	0.061
66.40	0.00	0.061
66.45	0.00	0.061
66.50	0.00	0.061
66.55	0.00	0.061
66.60	0.00	0.061
66.65	0.00	0.061
66.70	0.00	0.061
66.75	0.00	0.061
66.80	0.00	0.061
66.85	0.00	0.061
66.90	0.00	0.061
66.95	0.00	0.061
67.00	0.00	0.061
67.05	0.00	0.061
67.10	0.00	0.061
67.15	0.00	0.061
67.20	0.00	0.061

67.25	0.00	0.061
67.30	0.00	0.061
67.35	0.00	0.061
67.40	0.00	0.061
67.45	0.00	0.061
67.50	0.00	0.061
67.55	0.00	0.061
67.60	0.00	0.061
67.65	0.00	0.061
67.70	0.00	0.061
67.75	0.00	0.061
67.80	0.00	0.061
67.85	0.00	0.061
67.90	0.00	0.061
67.95	0.00	0.061
68.00	0.00	0.061
68.05	0.00	0.061
68.10	0.00	0.061
68.15	0.00	0.061
68.20	0.00	0.061
68.25	0.00	0.061
68.30	0.00	0.061
68.35	0.00	0.061
68.40	0.00	0.061
68.45	0.00	0.061
68.50	0.00	0.061
68.55	0.00	0.061
68.60	0.00	0.061
68.65	0.00	0.061
68.70	0.00	0.061
68.75	0.00	0.061
68.80	0.00	0.061
68.85	0.00	0.061
68.90	0.00	0.061
68.95	0.00	0.061
69.00	0.00	0.061
69.05	0.00	0.061
69.10	0.00	0.061
69.15	0.00	0.061
69.20	0.00	0.061
69.25	0.00	0.061
69.30	0.00	0.061
69.35	0.00	0.061
69.40	0.00	0.061
69.45	0.00	0.061
69.50	0.00	0.061
69.55	0.00	0.061
69.60	0.00	0.061
69.65	0.00	0.061
69.70	0.00	0.061

69.75	0.00	0.061
69.80	0.00	0.061
69.85	0.00	0.061
69.90	0.00	0.061
69.95	0.00	0.061
70.00	0.00	0.061
70.05	0.00	0.061
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70.75	0.00	0.061
70.80	0.00	0.061
70.85	0.00	0.061
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71.70	0.00	0.061
71.75	0.00	0.061
71.80	0.00	0.061
71.85	0.00	0.061
71.90	0.00	0.061
71.95	0.00	0.061
72.00	0.00	0.061

Hydrograph for EXISTING - WEST 100YR

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
0.00	0.00	0.000
0.05	0.00	0.000
0.10	0.00	0.000
0.15	0.00	0.000
0.20	0.00	0.000
0.25	0.00	0.000
0.30	0.00	0.000
0.35	0.00	0.000
0.40	0.00	0.000
0.45	0.00	0.000
0.50	0.00	0.000
0.55	0.00	0.000
0.60	0.00	0.000
0.65	0.00	0.000
0.70	0.00	0.000
0.75	0.00	0.000
0.80	0.00	0.000
0.85	0.00	0.000
0.90	0.00	0.000
0.95	0.00	0.000
1.00	0.00	0.000
1.05	0.00	0.000
1.10	0.00	0.000
1.15	0.00	0.000
1.20	0.00	0.000
1.25	0.00	0.000
1.30	0.00	0.000
1.35	0.00	0.000
1.40	0.00	0.000
1.45	0.00	0.000
1.50	0.00	0.000
1.55	0.00	0.000
1.60	0.00	0.000
1.65	0.00	0.000
1.70	0.00	0.000
1.75	0.00	0.000
1.80	0.00	0.000
1.85	0.00	0.000
1.90	0.00	0.000
1.95	0.00	0.000
2.00	0.00	0.000
2.05	0.00	0.000
2.10	0.00	0.000
2.15	0.00	0.000
2.20	0.00	0.000

2.25	0.00	0.000
2.30	0.00	0.000
2.35	0.00	0.000
2.40	0.00	0.000
2.45	0.00	0.000
2.50	0.00	0.000
2.55	0.00	0.000
2.60	0.00	0.000
2.65	0.00	0.000
2.70	0.00	0.000
2.75	0.00	0.000
2.80	0.00	0.000
2.85	0.00	0.000
2.90	0.00	0.000
2.95	0.00	0.000
3.00	0.00	0.000
3.05	0.00	0.000
3.10	0.00	0.000
3.15	0.00	0.000
3.20	0.00	0.000
3.25	0.00	0.000
3.30	0.00	0.000
3.35	0.00	0.000
3.40	0.00	0.000
3.45	0.00	0.000
3.50	0.00	0.000
3.55	0.00	0.000
3.60	0.00	0.000
3.65	0.00	0.000
3.70	0.00	0.000
3.75	0.00	0.000
3.80	0.00	0.000
3.85	0.00	0.000
3.90	0.00	0.000
3.95	0.00	0.000
4.00	0.00	0.000
4.05	0.00	0.000
4.10	0.00	0.000
4.15	0.00	0.000
4.20	0.00	0.000
4.25	0.00	0.000
4.30	0.00	0.000
4.35	0.00	0.000
4.40	0.00	0.000
4.45	0.00	0.000
4.50	0.00	0.000
4.55	0.00	0.000
4.60	0.00	0.000
4.65	0.00	0.000
4.70	0.00	0.000

4.75	0.00	0.000
4.80	0.00	0.000
4.85	0.00	0.000
4.90	0.00	0.000
4.95	0.00	0.000
5.00	0.00	0.000
5.05	0.00	0.000
5.10	0.00	0.000
5.15	0.00	0.000
5.20	0.00	0.000
5.25	0.00	0.000
5.30	0.00	0.000
5.35	0.00	0.000
5.40	0.00	0.000
5.45	0.00	0.000
5.50	0.00	0.000
5.55	0.00	0.000
5.60	0.00	0.000
5.65	0.00	0.000
5.70	0.00	0.000
5.75	0.00	0.000
5.80	0.00	0.000
5.85	0.00	0.000
5.90	0.00	0.000
5.95	0.00	0.000
6.00	0.00	0.000
6.05	0.00	0.000
6.10	0.00	0.000
6.15	0.00	0.000
6.20	0.00	0.000
6.25	0.00	0.000
6.30	0.00	0.000
6.35	0.00	0.000
6.40	0.00	0.000
6.45	0.00	0.000
6.50	0.00	0.000
6.55	0.00	0.000
6.60	0.00	0.000
6.65	0.00	0.000
6.70	0.00	0.000
6.75	0.00	0.000
6.80	0.00	0.000
6.85	0.00	0.000
6.90	0.00	0.000
6.95	0.00	0.000
7.00	0.00	0.000
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7.15	0.00	0.000
7.20	0.00	0.000

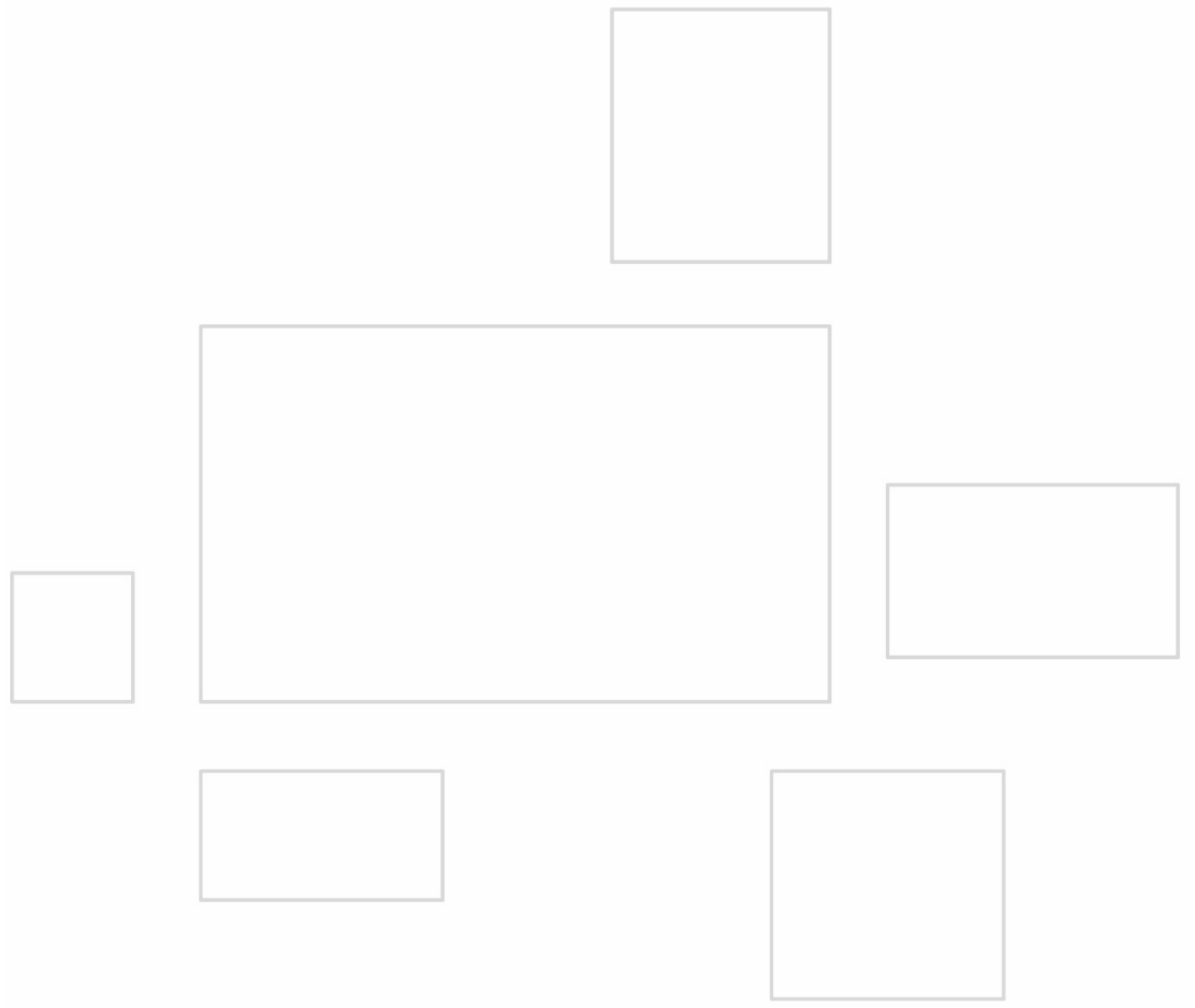
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7.50	0.00	0.000
7.55	0.00	0.000
7.60	0.00	0.000
7.65	0.00	0.000
7.70	0.00	0.000
7.75	0.00	0.000
7.80	0.00	0.000
7.85	0.00	0.000
7.90	0.00	0.000
7.95	0.00	0.000
8.00	0.00	0.000
8.05	0.00	0.000
8.10	0.00	0.000
8.15	0.00	0.000
8.20	0.00	0.000
8.25	0.00	0.000
8.30	0.00	0.000
8.35	0.00	0.000
8.40	0.00	0.000
8.45	0.00	0.000
8.50	0.00	0.000
8.55	0.00	0.000
8.60	0.00	0.000
8.65	0.00	0.000
8.70	0.00	0.000
8.75	0.00	0.000
8.80	0.00	0.000
8.85	0.00	0.000
8.90	0.00	0.000
8.95	0.00	0.000
9.00	0.00	0.000
9.05	0.00	0.000
9.10	0.00	0.000
9.15	0.00	0.000
9.20	0.00	0.000
9.25	0.00	0.000
9.30	0.00	0.000
9.35	0.00	0.000
9.40	0.00	0.000
9.45	0.00	0.000
9.50	0.00	0.000
9.55	0.00	0.000
9.60	0.00	0.000
9.65	0.00	0.000
9.70	0.00	0.000

9.75	0.00	0.000
9.80	0.00	0.000
9.85	0.00	0.000
9.90	0.00	0.000
9.95	0.00	0.000
10.00	0.00	0.000
10.05	0.00	0.000
10.10	0.00	0.000
10.15	0.00	0.000
10.20	0.00	0.000
10.25	0.00	0.000
10.30	0.00	0.000
10.35	0.01	0.000
10.40	0.01	0.000
10.45	0.01	0.000
10.50	0.01	0.000
10.55	0.01	0.000
10.60	0.01	0.000
10.65	0.02	0.000
10.70	0.02	0.000
10.75	0.03	0.000
10.80	0.03	0.001
10.85	0.04	0.001
10.90	0.05	0.001
10.95	0.05	0.001
11.00	0.06	0.001
11.05	0.07	0.002
11.10	0.08	0.002
11.15	0.09	0.002
11.20	0.10	0.003
11.25	0.12	0.003
11.30	0.13	0.004
11.35	0.14	0.004
11.40	0.16	0.005
11.45	0.17	0.006
11.50	0.19	0.006
11.55	0.21	0.007
11.60	0.23	0.008
11.65	0.28	0.009
11.70	0.34	0.011
11.75	0.41	0.012
11.80	0.51	0.014
11.85	0.64	0.016
11.90	0.81	0.019
11.95	1.04	0.023
12.00	1.39	0.028
12.05	1.97	0.036
12.10	2.88	0.046
12.15	4.14	0.061
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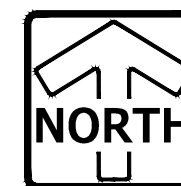
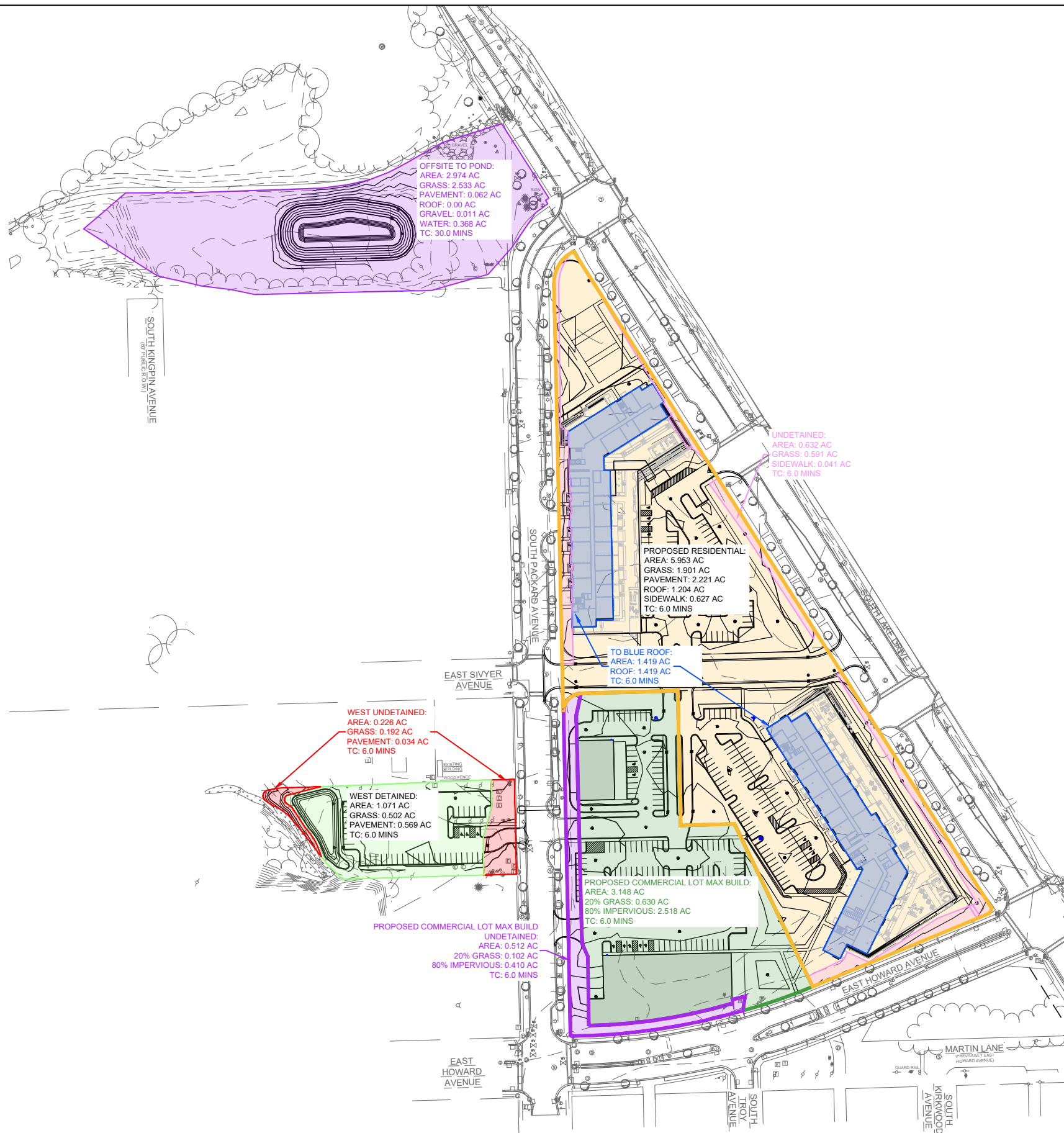
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12.50	1.83	0.164
12.55	1.54	0.171
12.60	1.31	0.177
12.65	1.11	0.182
12.70	0.96	0.186
12.75	0.84	0.190
12.80	0.76	0.193
12.85	0.71	0.196
12.90	0.68	0.199
12.95	0.65	0.202
13.00	0.62	0.204
13.05	0.60	0.207
13.10	0.58	0.209
13.15	0.56	0.212
13.20	0.54	0.214
13.25	0.51	0.216
13.30	0.49	0.218
13.35	0.47	0.220
13.40	0.45	0.222
13.45	0.43	0.224
13.50	0.41	0.225
13.55	0.39	0.227
13.60	0.36	0.229
13.65	0.32	0.230
13.70	0.29	0.231
13.75	0.26	0.232
13.80	0.25	0.233
13.85	0.24	0.234
13.90	0.23	0.235
13.95	0.23	0.236
14.00	0.23	0.237
14.05	0.22	0.238
14.10	0.22	0.239
14.15	0.22	0.240
14.20	0.22	0.241
14.25	0.22	0.242
14.30	0.22	0.243
14.35	0.22	0.244
14.40	0.21	0.245
14.45	0.21	0.245
14.50	0.21	0.246
14.55	0.21	0.247
14.60	0.21	0.248
14.65	0.21	0.249
14.70	0.21	0.250

APPENDIX 3

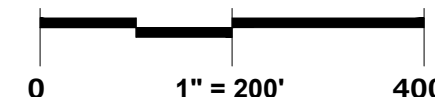
POST-DEVELOPMENT CONDITIONS



Z:\PROJECTS\2015\579.10-W\CAD\EXHIBITS\PROPOSED HYDROLOGY - TO POND.DWG 8/20/2026 3:42 PM



GRAPHICAL SCALE (FEET)



SEAPORT - PROPOSED HYDROLOGY

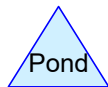
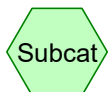
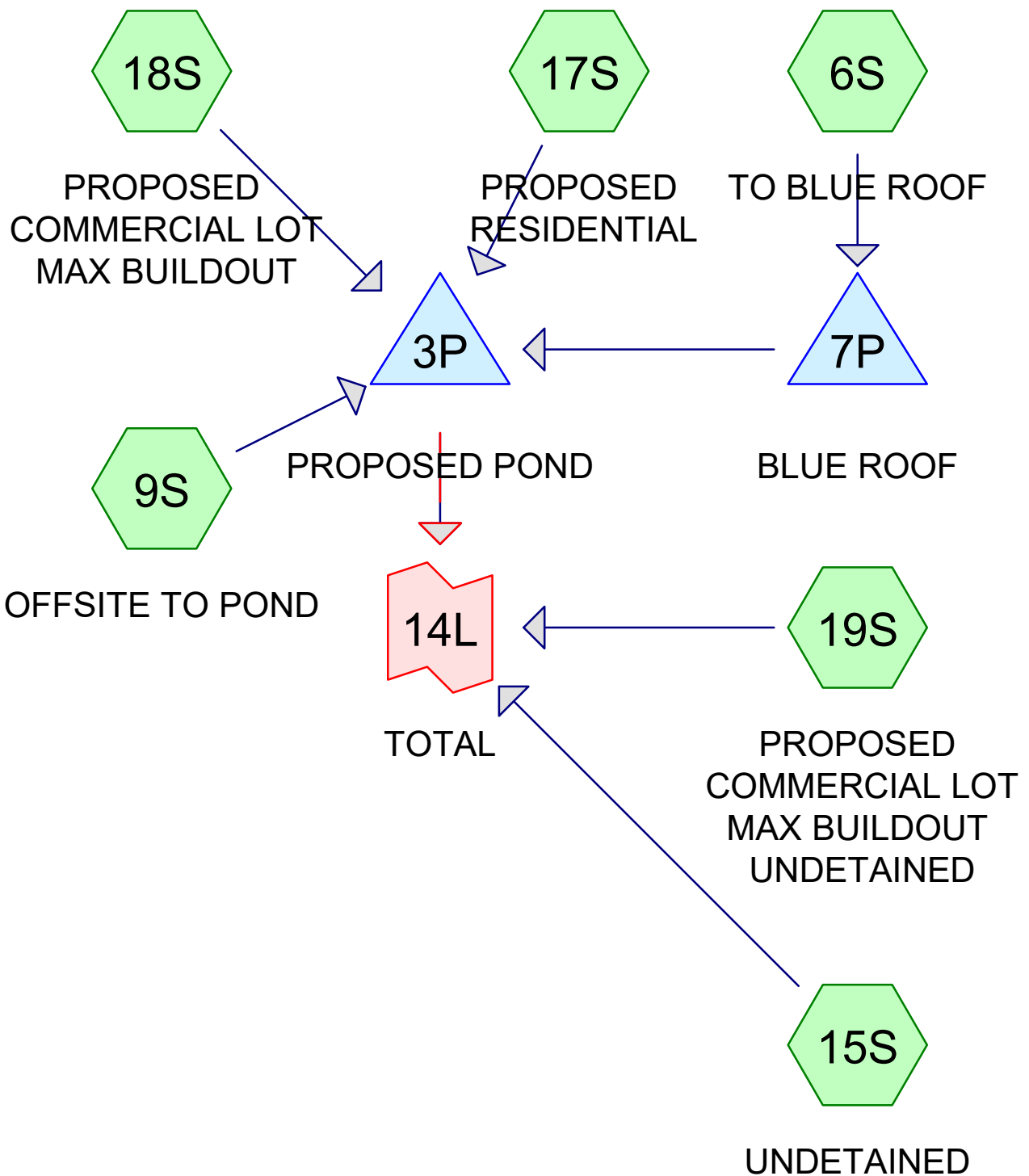
PINNACLE ENGINEERING GROUP

20725 WATERTOWN ROAD | SUITE 100 | BROOKFIELD, WI 53186 | WWW.PINNACLE-ENGR.COM

PLAN | DESIGN | DELIVER

PEG JOB# 579.10

08/19/26



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.434	74	GRASS (9S, 17S)
0.732	74	GRASS (20% OF SITE) (18S, 19S)
0.011	89	GRAVEL (9S)
0.591	74	Grass (15S)
2.928	98	IMPERVIOUS (80% OF SITE) (18S, 19S)
2.221	98	PAVEMENT (17S)
2.623	98	ROOF (6S, 17S)
0.689	98	SIDEWALK (9S, 17S)
0.041	98	Sidewalk (15S)
0.368	98	WATER (9S)
14.638	89	TOTAL AREA

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	3P	39.00	36.79	250.0	0.0088	0.013	36.0	0.0	0.0

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: TO BLUE ROOF Runoff Area=1.419 ac 100.00% Impervious Runoff Depth=2.11"
Tc=6.0 min CN=98 Runoff=4.87 cfs 0.250 af

Subcatchment 9S: OFFSITE TO POND Runoff Area=2.974 ac 14.46% Impervious Runoff Depth=0.69"
Flow Length=436' Tc=30.0 min CN=78 Runoff=1.70 cfs 0.170 af

Subcatchment 15S: UNDETAINED Runoff Area=0.632 ac 6.49% Impervious Runoff Depth=0.60"
Tc=6.0 min CN=76 Runoff=0.68 cfs 0.032 af

Subcatchment 17S: PROPOSED Runoff Area=5.953 ac 68.07% Impervious Runoff Depth=1.39"
Tc=6.0 min CN=90 Runoff=15.20 cfs 0.689 af

Subcatchment 18S: PROPOSED Runoff Area=3.148 ac 79.99% Impervious Runoff Depth=1.63"
Tc=6.0 min CN=93 Runoff=9.19 cfs 0.427 af

Subcatchment 19S: PROPOSED Runoff Area=0.512 ac 80.08% Impervious Runoff Depth=1.63"
Tc=6.0 min CN=93 Runoff=1.49 cfs 0.070 af

Pond 3P: PROPOSED POND Peak Elev=41.92' Storage=30,099 cf Inflow=25.09 cfs 1.536 af
Primary=2.70 cfs 1.536 af Secondary=0.00 cfs 0.000 af Outflow=2.70 cfs 1.536 af

Pond 7P: BLUE ROOF Peak Elev=100.30' Storage=0.130 af Inflow=4.87 cfs 0.250 af
Outflow=0.41 cfs 0.250 af

Link 14L: TOTAL Inflow=4.21 cfs 1.637 af
Primary=4.21 cfs 1.637 af

Total Runoff Area = 14.638 ac Runoff Volume = 1.637 af Average Runoff Depth = 1.34"
39.40% Pervious = 5.768 ac 60.60% Impervious = 8.870 ac

Summary for Subcatchment 6S: TO BLUE ROOF

Runoff = 4.87 cfs @ 12.13 hrs, Volume= 0.250 af, Depth= 2.11"

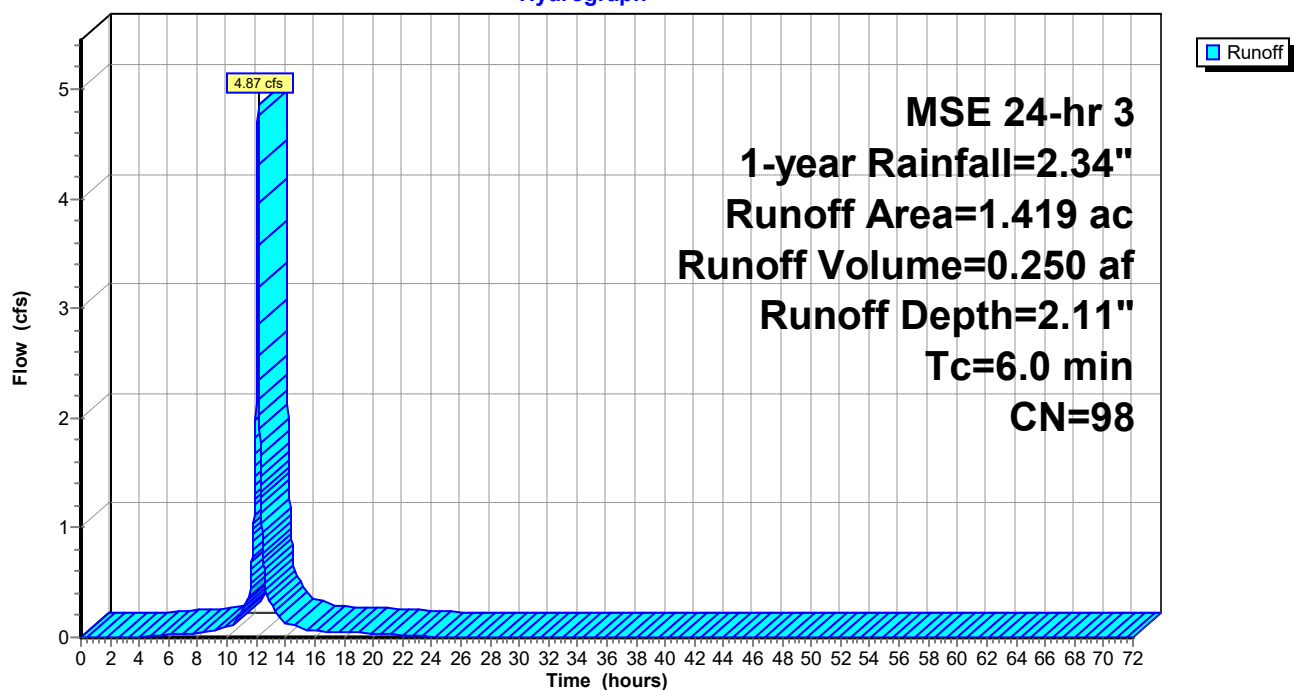
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 1-year Rainfall=2.34"

Area (ac)	CN	Description
* 1.419	98	ROOF
1.419		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 6S: TO BLUE ROOF

Hydrograph



Summary for Subcatchment 9S: OFFSITE TO POND

Runoff = 1.70 cfs @ 12.47 hrs, Volume= 0.170 af, Depth= 0.69"

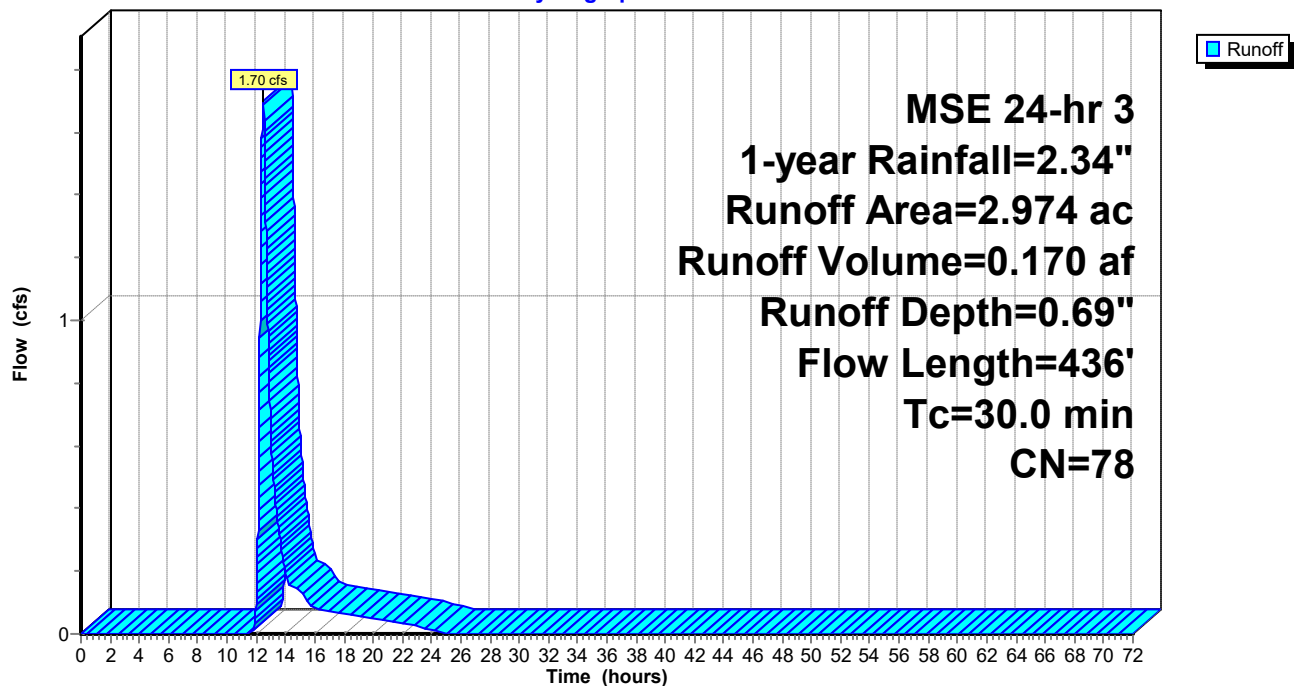
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 1-year Rainfall=2.34"

Area (ac)	CN	Description
* 2.533	74	GRASS
* 0.062	98	SIDEWALK
* 0.011	89	GRAVEL
* 0.368	98	WATER
2.974	78	Weighted Average
2.544		85.54% Pervious Area
0.430		14.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0025	0.07		Sheet Flow, SHEET FLOW
					Grass: Short n= 0.150 P2= 2.64"
5.2	336	0.0052	1.08		Shallow Concentrated Flow, SHALLOW FLOW
					Grassed Waterway Kv= 15.0 fps
30.0	436	Total			

Subcatchment 9S: OFFSITE TO POND

Hydrograph



Summary for Subcatchment 15S: UNDETAINED

Runoff = 0.68 cfs @ 12.14 hrs, Volume= 0.032 af, Depth= 0.60"

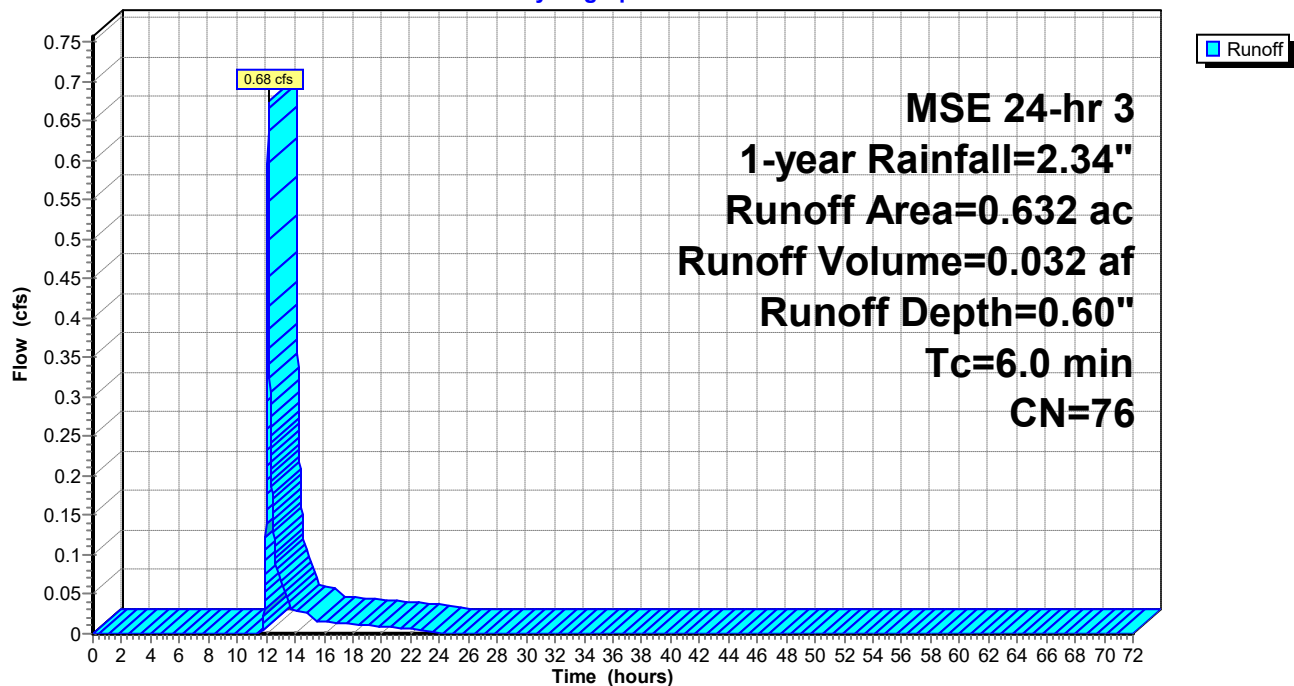
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 1-year Rainfall=2.34"

Area (ac)	CN	Description
* 0.591	74	Grass
* 0.041	98	Sidewalk
0.632	76	Weighted Average
0.591		93.51% Pervious Area
0.041		6.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 15S: UNDETAINED

Hydrograph



Summary for Subcatchment 17S: PROPOSED RESIDENTIAL

Runoff = 15.20 cfs @ 12.13 hrs, Volume= 0.689 af, Depth= 1.39"

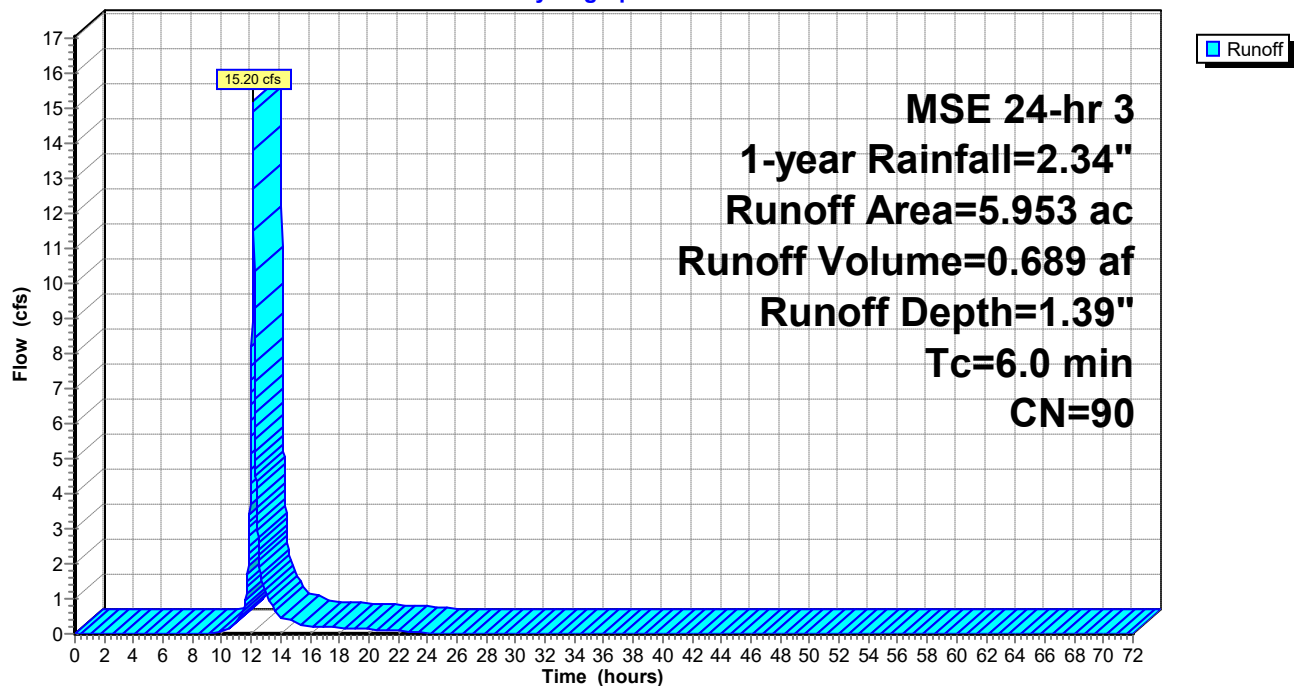
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 1-year Rainfall=2.34"

Area (ac)	CN	Description
* 1.901	74	GRASS
* 2.221	98	PAVEMENT
* 1.204	98	ROOF
* 0.627	98	SIDEWALK
5.953	90	Weighted Average
1.901		31.93% Pervious Area
4.052		68.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 17S: PROPOSED RESIDENTIAL

Hydrograph



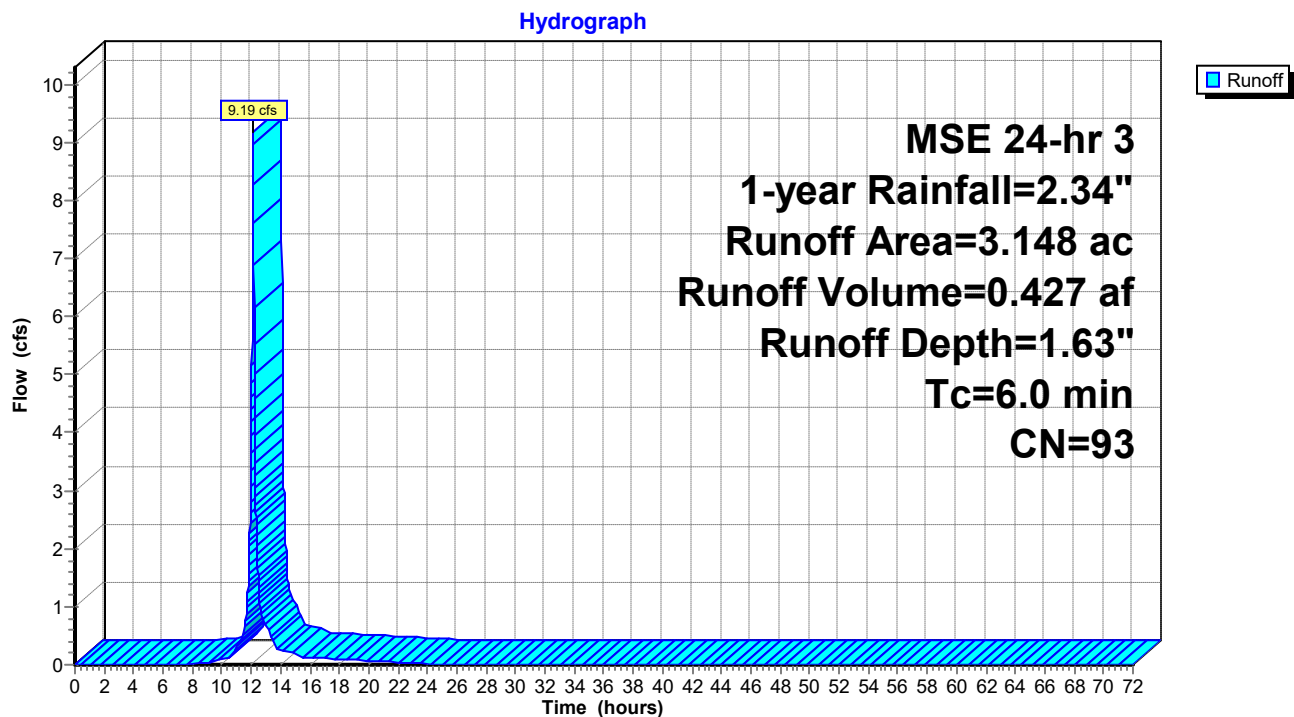
Summary for Subcatchment 18S: PROPOSED COMMERCIAL LOT MAX BUILDOUT

Runoff = 9.19 cfs @ 12.13 hrs, Volume= 0.427 af, Depth= 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 1-year Rainfall=2.34"

Area (ac)	CN	Description
* 0.630	74	GRASS (20% OF SITE)
* 2.518	98	IMPERVIOUS (80% OF SITE)
3.148	93	Weighted Average
0.630		20.01% Pervious Area
2.518		79.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 18S: PROPOSED COMMERCIAL LOT MAX BUILDOUT

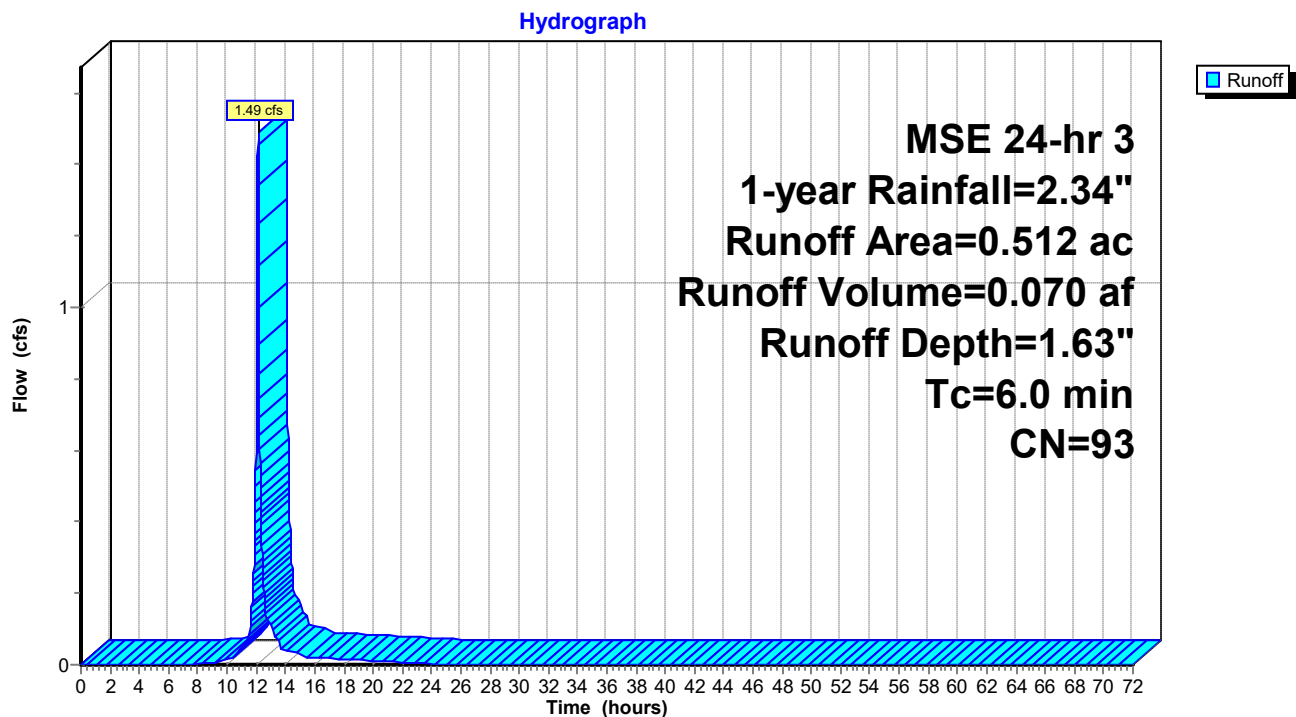
Summary for Subcatchment 19S: PROPOSED COMMERCIAL LOT MAX BUILDOUT UNDETAINED

Runoff = 1.49 cfs @ 12.13 hrs, Volume= 0.070 af, Depth= 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 1-year Rainfall=2.34"

Area (ac)	CN	Description
* 0.102	74	GRASS (20% OF SITE)
* 0.410	98	IMPERVIOUS (80% OF SITE)
0.512	93	Weighted Average
0.102		19.92% Pervious Area
0.410		80.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 19S: PROPOSED COMMERCIAL LOT MAX BUILDOUT UNDETAINED

Summary for Pond 3P: PROPOSED POND

Inflow Area = 13.494 ac, 62.39% Impervious, Inflow Depth = 1.37" for 1-year event
 Inflow = 25.09 cfs @ 12.13 hrs, Volume= 1.536 af
 Outflow = 2.70 cfs @ 13.07 hrs, Volume= 1.536 af, Atten= 89%, Lag= 56.3 min
 Primary = 2.70 cfs @ 13.07 hrs, Volume= 1.536 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 41.92' @ 13.07 hrs Surf.Area= 12,799 sf Storage= 30,099 cf

Plug-Flow detention time= 152.2 min calculated for 1.536 af (100% of inflow)
 Center-of-Mass det. time= 152.5 min (971.8 - 819.3)

Volume	Invert	Avail.Storage	Storage Description
#1	39.00'	78,627 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
39.00	7,969	0	0
40.00	9,527	8,748	8,748
41.00	11,186	10,357	19,105
42.00	12,945	12,066	31,170
43.00	14,805	13,875	45,045
44.00	16,766	15,786	60,831
45.00	18,827	17,797	78,627

Device	Routing	Invert	Outlet Devices
#1	Primary	39.00'	36.0" Round Culvert L= 250.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 39.00' / 36.79' S= 0.0088 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf
#2	Device 1	39.00'	8.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	42.50'	60.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	43.70'	60.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.70 cfs @ 13.07 hrs HW=41.92' (Free Discharge)

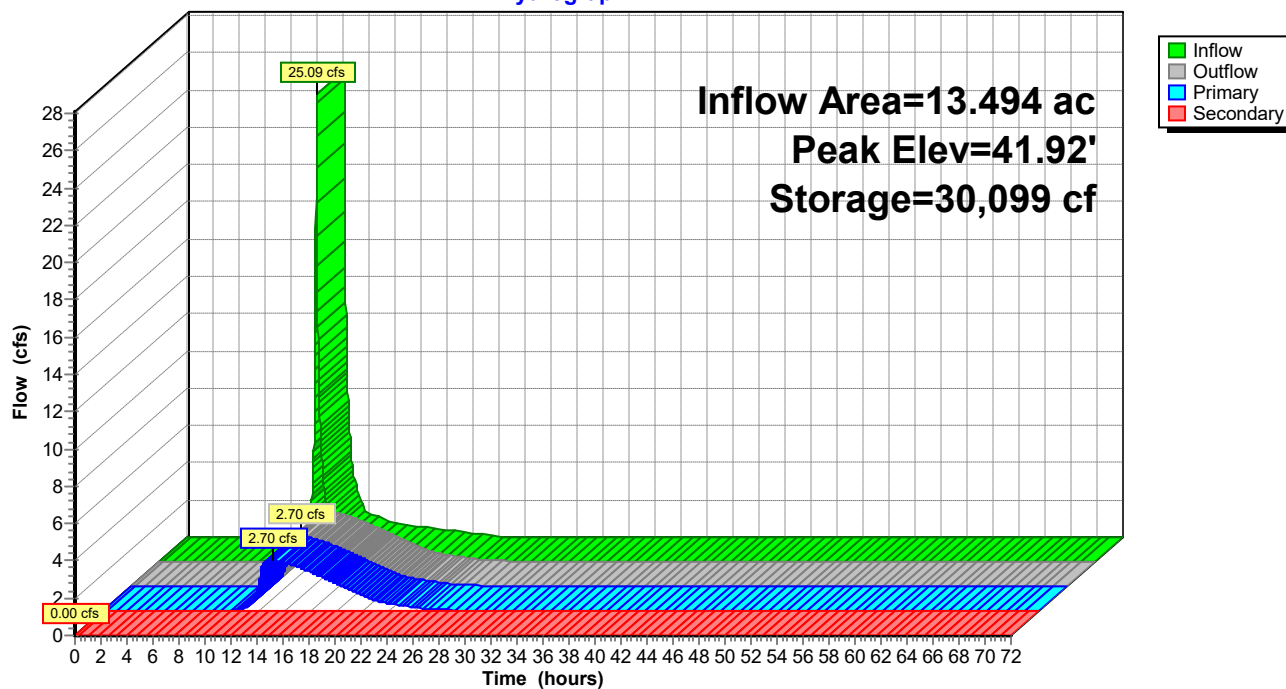
↑ **1=Culvert** (Passes 2.70 cfs of 40.78 cfs potential flow)
 ↑ **2=Orifice/Grate** (Orifice Controls 2.70 cfs @ 7.74 fps)
 ↑ **3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=39.00' (Free Discharge)

↑ **4=Orifice/Grate** (Controls 0.00 cfs)

Pond 3P: PROPOSED POND

Hydrograph



Summary for Pond 7P: BLUE ROOF

Inflow Area = 1.419 ac, 100.00% Impervious, Inflow Depth = 2.11" for 1-year event
 Inflow = 4.87 cfs @ 12.13 hrs, Volume= 0.250 af
 Outflow = 0.41 cfs @ 12.70 hrs, Volume= 0.250 af, Atten= 92%, Lag= 34.1 min
 Primary = 0.41 cfs @ 12.70 hrs, Volume= 0.250 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 100.30' @ 12.70 hrs Surf.Area= 0.858 ac Storage= 0.130 af

Plug-Flow detention time= 151.7 min calculated for 0.250 af (100% of inflow)
 Center-of-Mass det. time= 151.7 min (909.0 - 757.3)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	0.469 af	Custom Stage Data (Prismatic) Listed below (Recalc) x 20

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
100.00	0.000	0.000	0.000
100.50	0.071	0.018	0.018
100.58	0.071	0.006	0.023

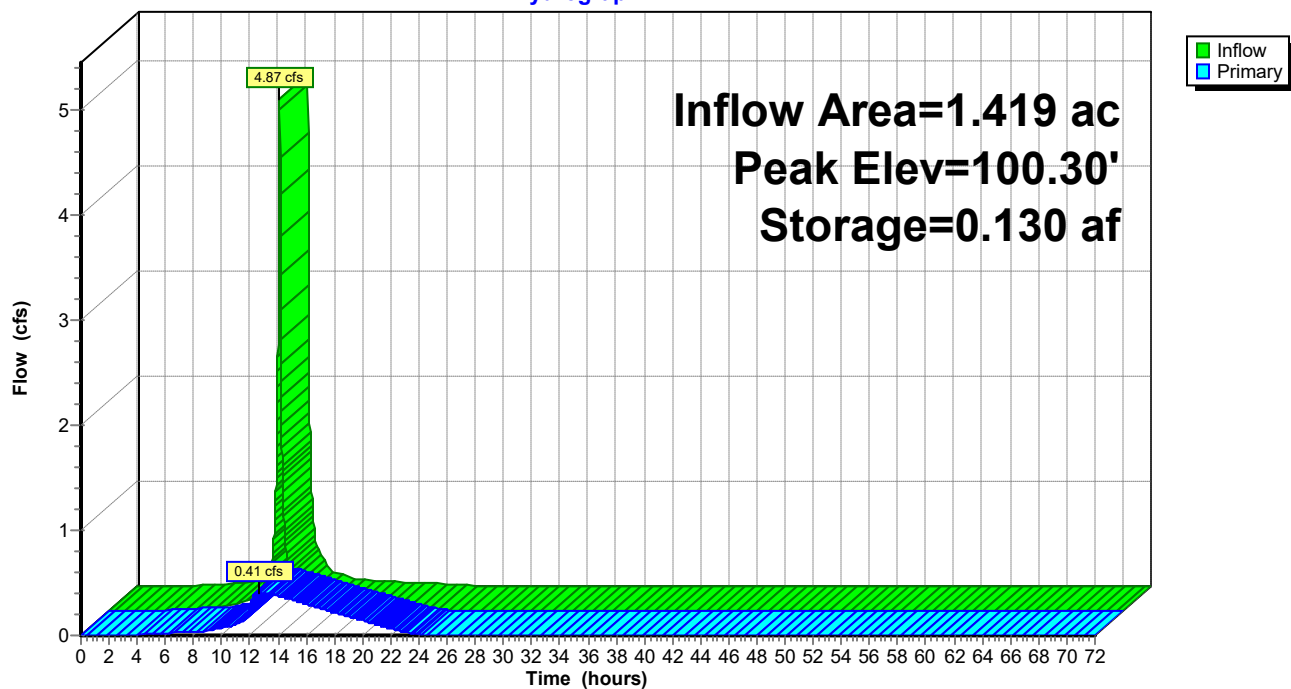
Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	Special & User-Defined
			Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58
			Disch. (cfs) 0.000 0.111 0.223 0.334 0.446 0.557 0.668 0.780

Primary OutFlow Max=0.41 cfs @ 12.70 hrs HW=100.30' (Free Discharge)

↑1=Special & User-Defined (Custom Controls 0.41 cfs)

Pond 7P: BLUE ROOF

Hydrograph



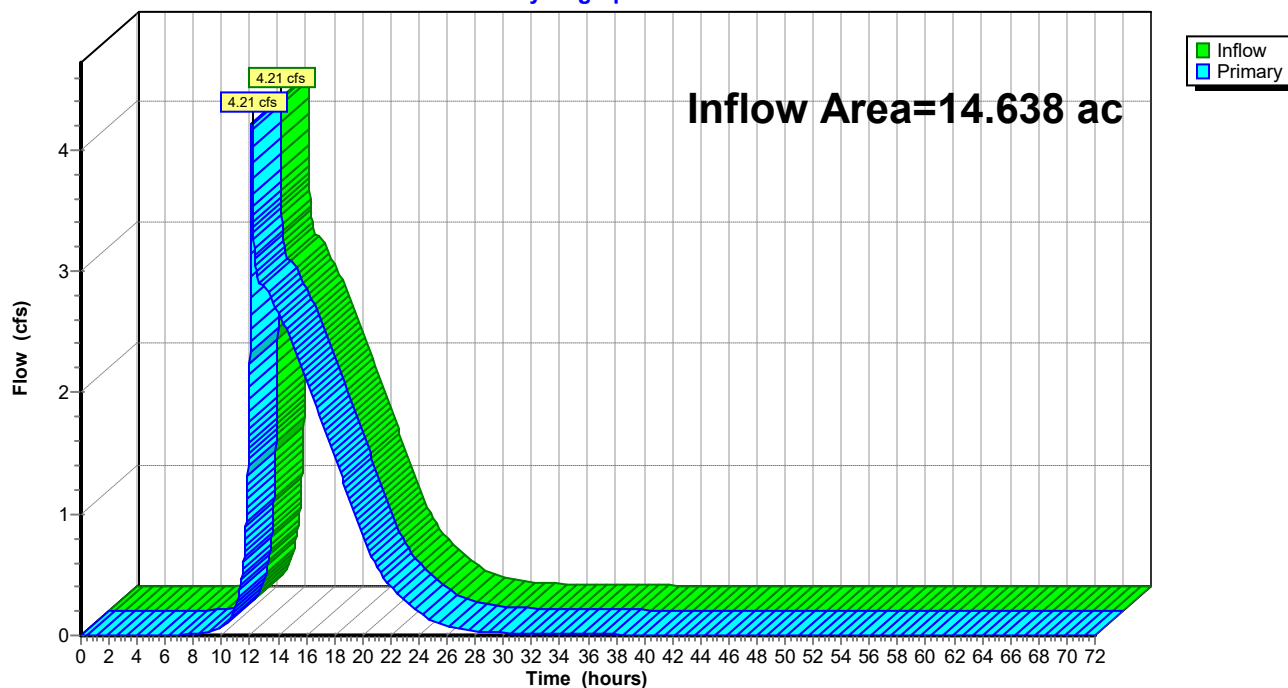
Summary for Link 14L: TOTAL

Inflow Area = 14.638 ac, 60.60% Impervious, Inflow Depth = 1.34" for 1-year event
Inflow = 4.21 cfs @ 12.14 hrs, Volume= 1.637 af
Primary = 4.21 cfs @ 12.14 hrs, Volume= 1.637 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 14L: TOTAL

Hydrograph



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: TO BLUE ROOF Runoff Area=1.419 ac 100.00% Impervious Runoff Depth=2.41"
Tc=6.0 min CN=98 Runoff=5.51 cfs 0.285 af

Subcatchment 9S: OFFSITE TO POND Runoff Area=2.974 ac 14.46% Impervious Runoff Depth=0.88"
Flow Length=436' Tc=30.0 min CN=78 Runoff=2.24 cfs 0.218 af

Subcatchment 15S: UNDETAINED Runoff Area=0.632 ac 6.49% Impervious Runoff Depth=0.78"
Tc=6.0 min CN=76 Runoff=0.90 cfs 0.041 af

Subcatchment 17S: PROPOSED Runoff Area=5.953 ac 68.07% Impervious Runoff Depth=1.66"
Tc=6.0 min CN=90 Runoff=18.00 cfs 0.822 af

Subcatchment 18S: PROPOSED Runoff Area=3.148 ac 79.99% Impervious Runoff Depth=1.91"
Tc=6.0 min CN=93 Runoff=10.68 cfs 0.501 af

Subcatchment 19S: PROPOSED Runoff Area=0.512 ac 80.08% Impervious Runoff Depth=1.91"
Tc=6.0 min CN=93 Runoff=1.74 cfs 0.082 af

Pond 3P: PROPOSED POND Peak Elev=42.43' Storage=36,914 cf Inflow=29.60 cfs 1.826 af
Primary=2.96 cfs 1.826 af Secondary=0.00 cfs 0.000 af Outflow=2.96 cfs 1.826 af

Pond 7P: BLUE ROOF Peak Elev=100.32' Storage=0.150 af Inflow=5.51 cfs 0.285 af
Outflow=0.44 cfs 0.285 af

Link 14L: TOTAL Inflow=4.88 cfs 1.949 af
Primary=4.88 cfs 1.949 af

Total Runoff Area = 14.638 ac Runoff Volume = 1.949 af Average Runoff Depth = 1.60"
39.40% Pervious = 5.768 ac 60.60% Impervious = 8.870 ac

Summary for Subcatchment 6S: TO BLUE ROOF

Runoff = 5.51 cfs @ 12.13 hrs, Volume= 0.285 af, Depth= 2.41"

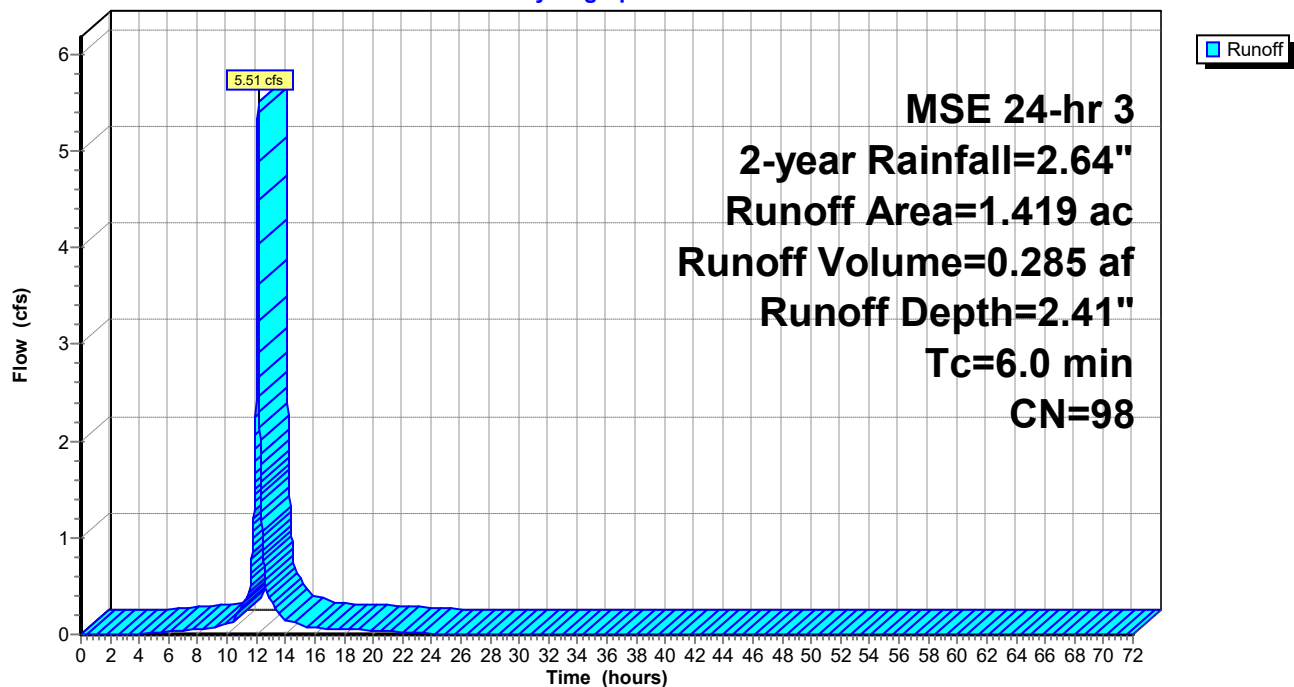
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-year Rainfall=2.64"

Area (ac)	CN	Description
* 1.419	98	ROOF
1.419		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 6S: TO BLUE ROOF

Hydrograph



Summary for Subcatchment 9S: OFFSITE TO POND

Runoff = 2.24 cfs @ 12.44 hrs, Volume= 0.218 af, Depth= 0.88"

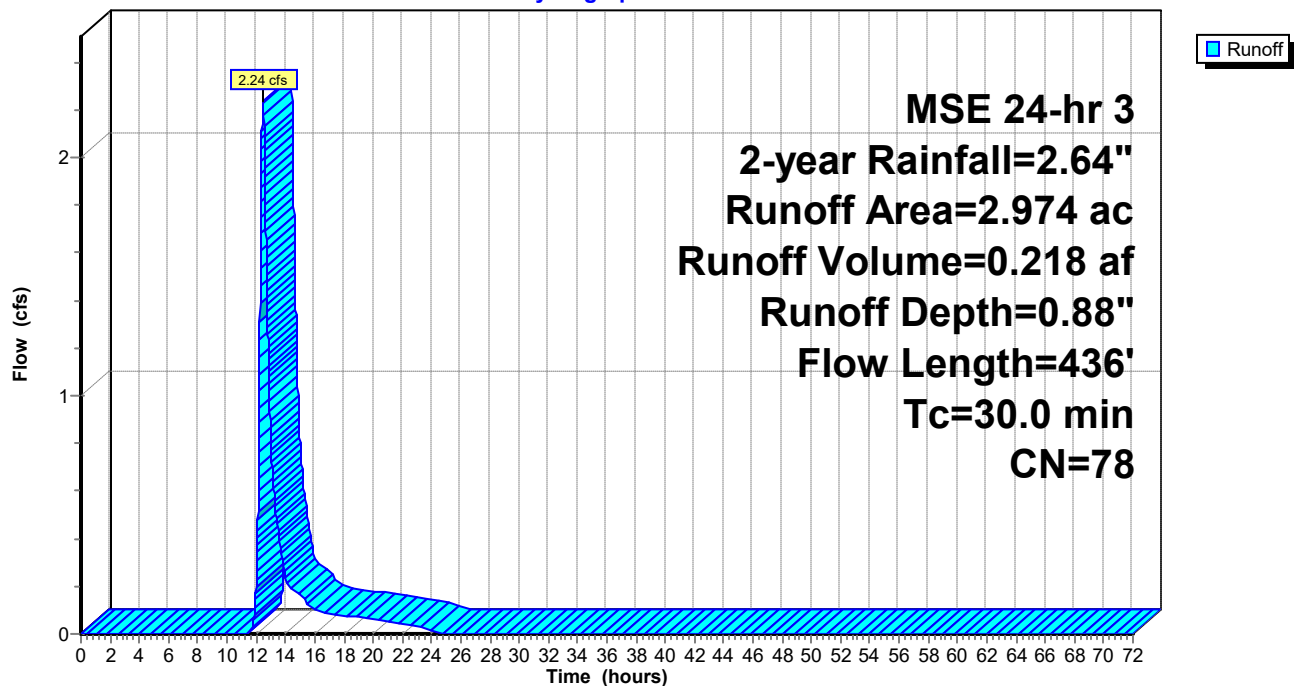
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-year Rainfall=2.64"

Area (ac)	CN	Description
* 2.533	74	GRASS
* 0.062	98	SIDEWALK
* 0.011	89	GRAVEL
* 0.368	98	WATER
2.974	78	Weighted Average
2.544		85.54% Pervious Area
0.430		14.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0025	0.07		Sheet Flow, SHEET FLOW
					Grass: Short n= 0.150 P2= 2.64"
5.2	336	0.0052	1.08		Shallow Concentrated Flow, SHALLOW FLOW
					Grassed Waterway Kv= 15.0 fps
30.0	436	Total			

Subcatchment 9S: OFFSITE TO POND

Hydrograph



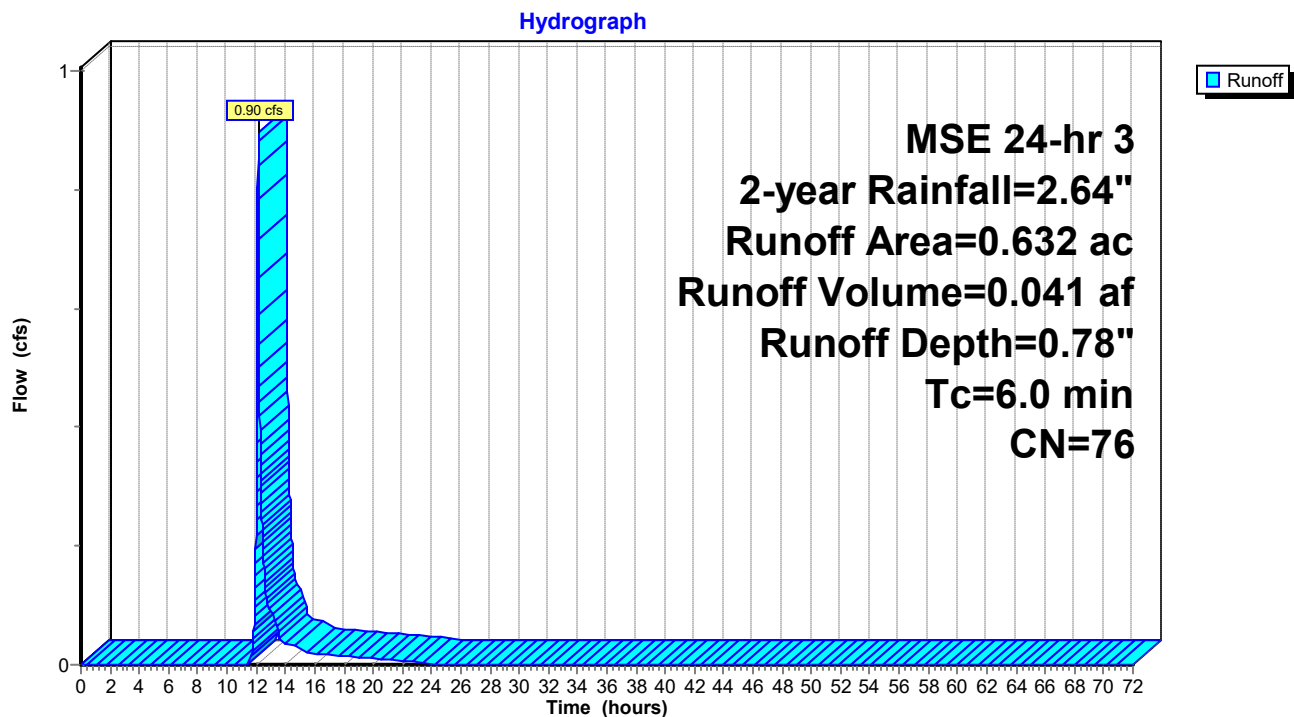
Summary for Subcatchment 15S: UNDETAINED

Runoff = 0.90 cfs @ 12.14 hrs, Volume= 0.041 af, Depth= 0.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-year Rainfall=2.64"

Area (ac)	CN	Description
* 0.591	74	Grass
* 0.041	98	Sidewalk
0.632	76	Weighted Average
0.591		93.51% Pervious Area
0.041		6.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 15S: UNDETAINED

Summary for Subcatchment 17S: PROPOSED RESIDENTIAL

Runoff = 18.00 cfs @ 12.13 hrs, Volume= 0.822 af, Depth= 1.66"

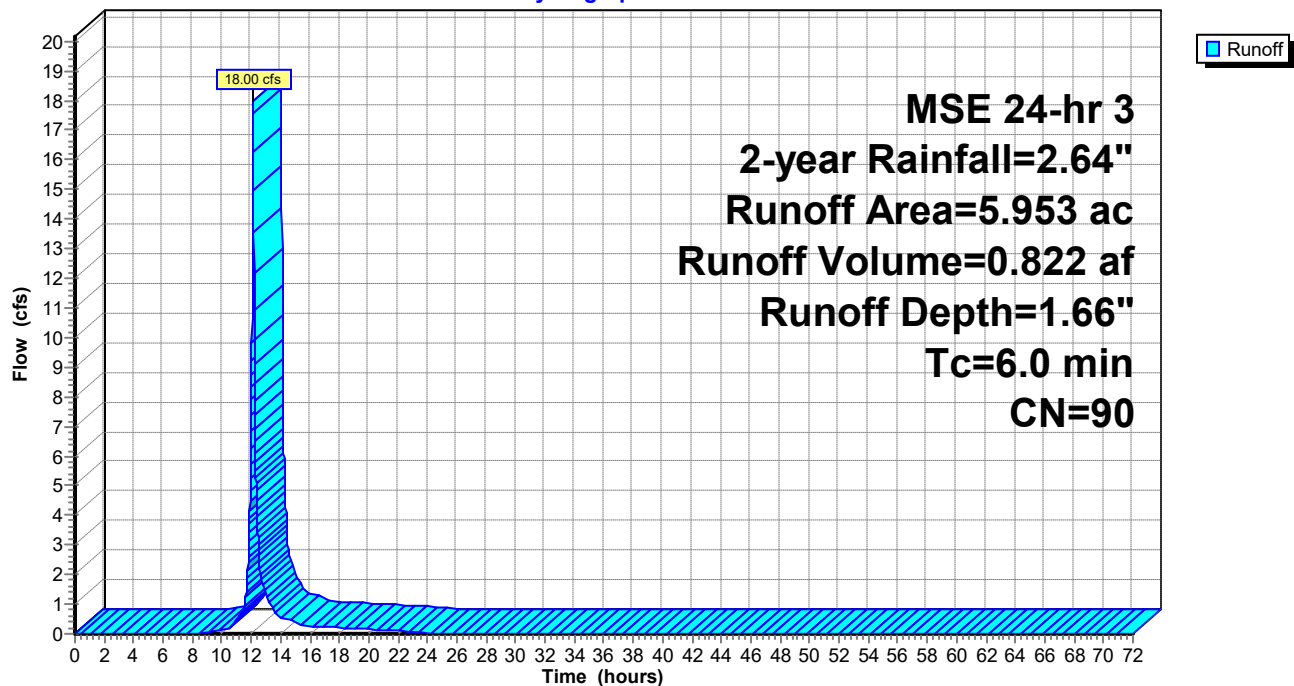
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-year Rainfall=2.64"

Area (ac)	CN	Description
* 1.901	74	GRASS
* 2.221	98	PAVEMENT
* 1.204	98	ROOF
* 0.627	98	SIDEWALK
5.953	90	Weighted Average
1.901		31.93% Pervious Area
4.052		68.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 17S: PROPOSED RESIDENTIAL

Hydrograph



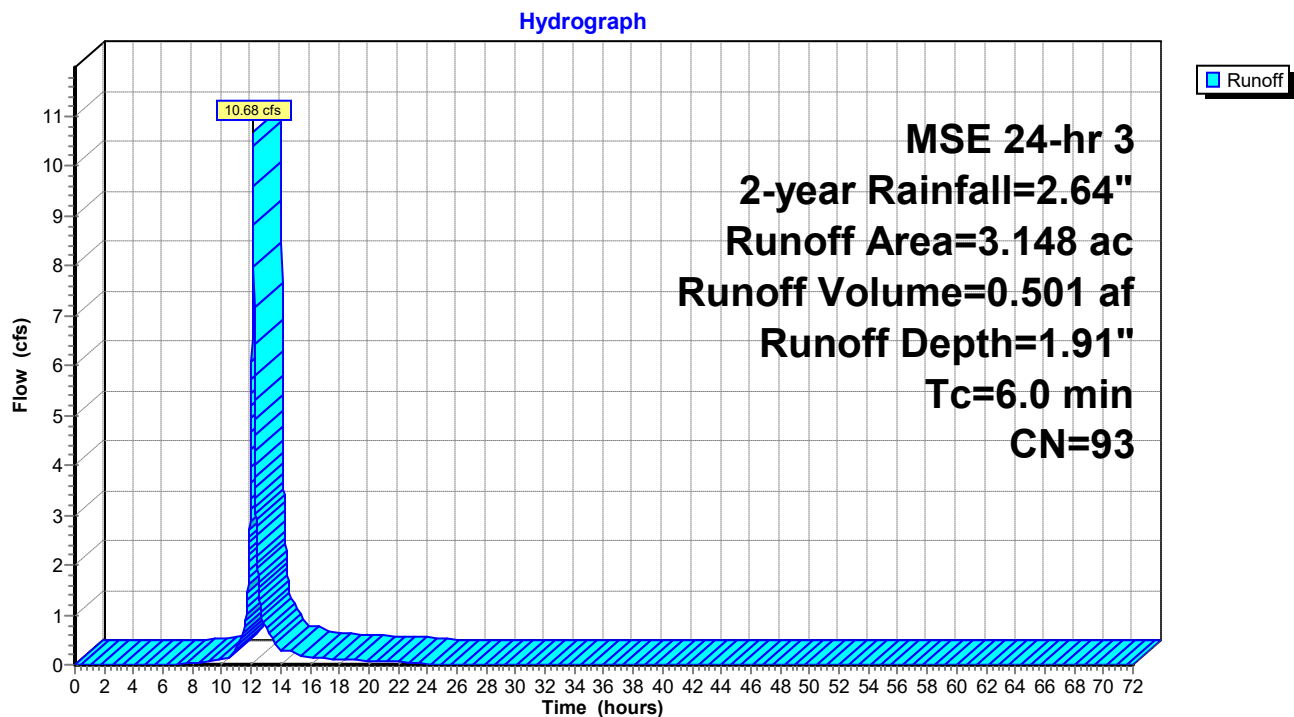
Summary for Subcatchment 18S: PROPOSED COMMERCIAL LOT MAX BUILDOUT

Runoff = 10.68 cfs @ 12.13 hrs, Volume= 0.501 af, Depth= 1.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-year Rainfall=2.64"

Area (ac)	CN	Description
* 0.630	74	GRASS (20% OF SITE)
* 2.518	98	IMPERVIOUS (80% OF SITE)
3.148	93	Weighted Average
0.630		20.01% Pervious Area
2.518		79.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 18S: PROPOSED COMMERCIAL LOT MAX BUILDOUT

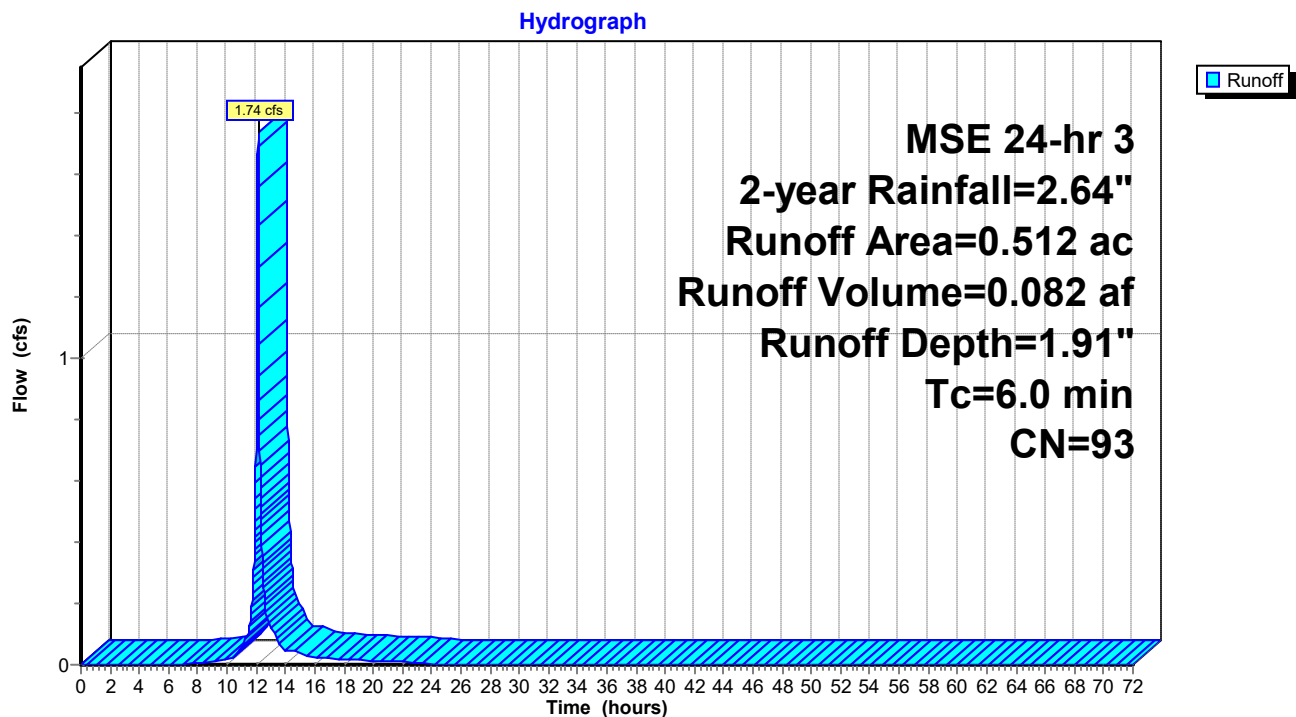
Summary for Subcatchment 19S: PROPOSED COMMERCIAL LOT MAX BUILDOUT UNDETAINED

Runoff = 1.74 cfs @ 12.13 hrs, Volume= 0.082 af, Depth= 1.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-year Rainfall=2.64"

Area (ac)	CN	Description
* 0.102	74	GRASS (20% OF SITE)
* 0.410	98	IMPERVIOUS (80% OF SITE)
0.512	93	Weighted Average
0.102		19.92% Pervious Area
0.410		80.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 19S: PROPOSED COMMERCIAL LOT MAX BUILDOUT UNDETAINED

Summary for Pond 3P: PROPOSED POND

Inflow Area = 13.494 ac, 62.39% Impervious, Inflow Depth = 1.62" for 2-year event
 Inflow = 29.60 cfs @ 12.13 hrs, Volume= 1.826 af
 Outflow = 2.96 cfs @ 13.15 hrs, Volume= 1.826 af, Atten= 90%, Lag= 60.9 min
 Primary = 2.96 cfs @ 13.15 hrs, Volume= 1.826 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 42.43' @ 13.15 hrs Surf.Area= 13,746 sf Storage= 36,914 cf

Plug-Flow detention time= 163.4 min calculated for 1.826 af (100% of inflow)
 Center-of-Mass det. time= 163.7 min (981.2 - 817.5)

Volume	Invert	Avail.Storage	Storage Description
#1	39.00'	78,627 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
39.00	7,969	0	0
40.00	9,527	8,748	8,748
41.00	11,186	10,357	19,105
42.00	12,945	12,066	31,170
43.00	14,805	13,875	45,045
44.00	16,766	15,786	60,831
45.00	18,827	17,797	78,627

Device	Routing	Invert	Outlet Devices
#1	Primary	39.00'	36.0" Round Culvert L= 250.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 39.00' / 36.79' S= 0.0088 ' / Cc= 0.900 n= 0.013, Flow Area= 7.07 sf
#2	Device 1	39.00'	8.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	42.50'	60.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	43.70'	60.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.96 cfs @ 13.15 hrs HW=42.43' (Free Discharge)

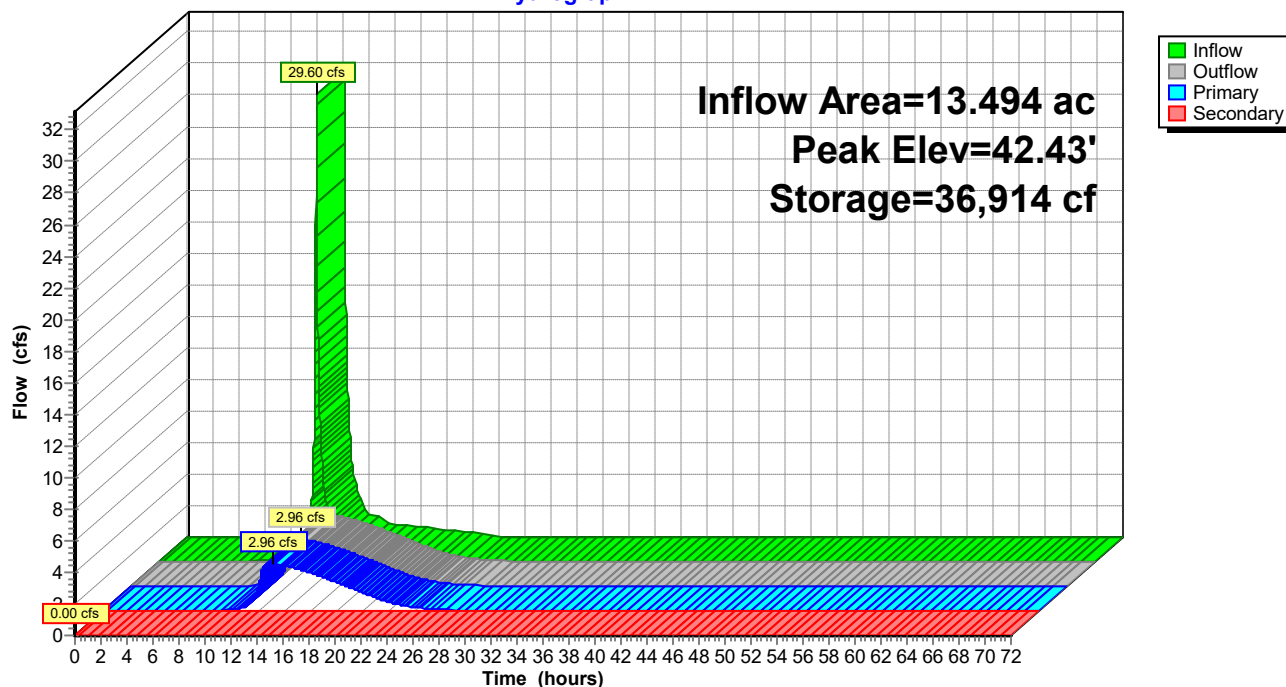
↑ **1=Culvert** (Passes 2.96 cfs of 47.29 cfs potential flow)
 ↑ **2=Orifice/Grate** (Orifice Controls 2.96 cfs @ 8.47 fps)
 ↑ **3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=39.00' (Free Discharge)

↑ **4=Orifice/Grate** (Controls 0.00 cfs)

Pond 3P: PROPOSED POND

Hydrograph



Summary for Pond 7P: BLUE ROOF

Inflow Area = 1.419 ac, 100.00% Impervious, Inflow Depth = 2.41" for 2-year event
 Inflow = 5.51 cfs @ 12.13 hrs, Volume= 0.285 af
 Outflow = 0.44 cfs @ 12.76 hrs, Volume= 0.285 af, Atten= 92%, Lag= 37.9 min
 Primary = 0.44 cfs @ 12.76 hrs, Volume= 0.285 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 100.32' @ 12.76 hrs Surf.Area= 0.923 ac Storage= 0.150 af

Plug-Flow detention time= 163.7 min calculated for 0.285 af (100% of inflow)
 Center-of-Mass det. time= 163.7 min (918.8 - 755.1)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	0.469 af	Custom Stage Data (Prismatic) Listed below (Recalc) x 20

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
100.00	0.000	0.000	0.000
100.50	0.071	0.018	0.018
100.58	0.071	0.006	0.023

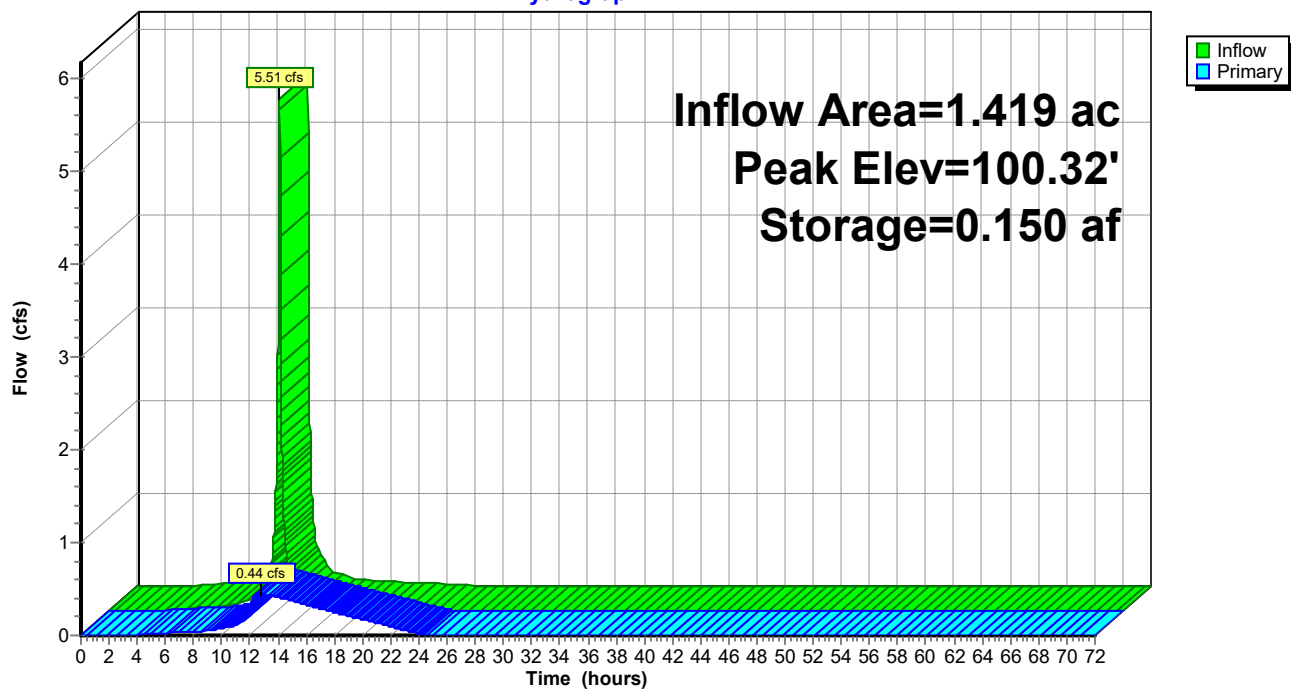
Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	Special & User-Defined
			Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58
			Disch. (cfs) 0.000 0.111 0.223 0.334 0.446 0.557 0.668 0.780

Primary OutFlow Max=0.44 cfs @ 12.76 hrs HW=100.32' (Free Discharge)

↑1=Special & User-Defined (Custom Controls 0.44 cfs)

Pond 7P: BLUE ROOF

Hydrograph



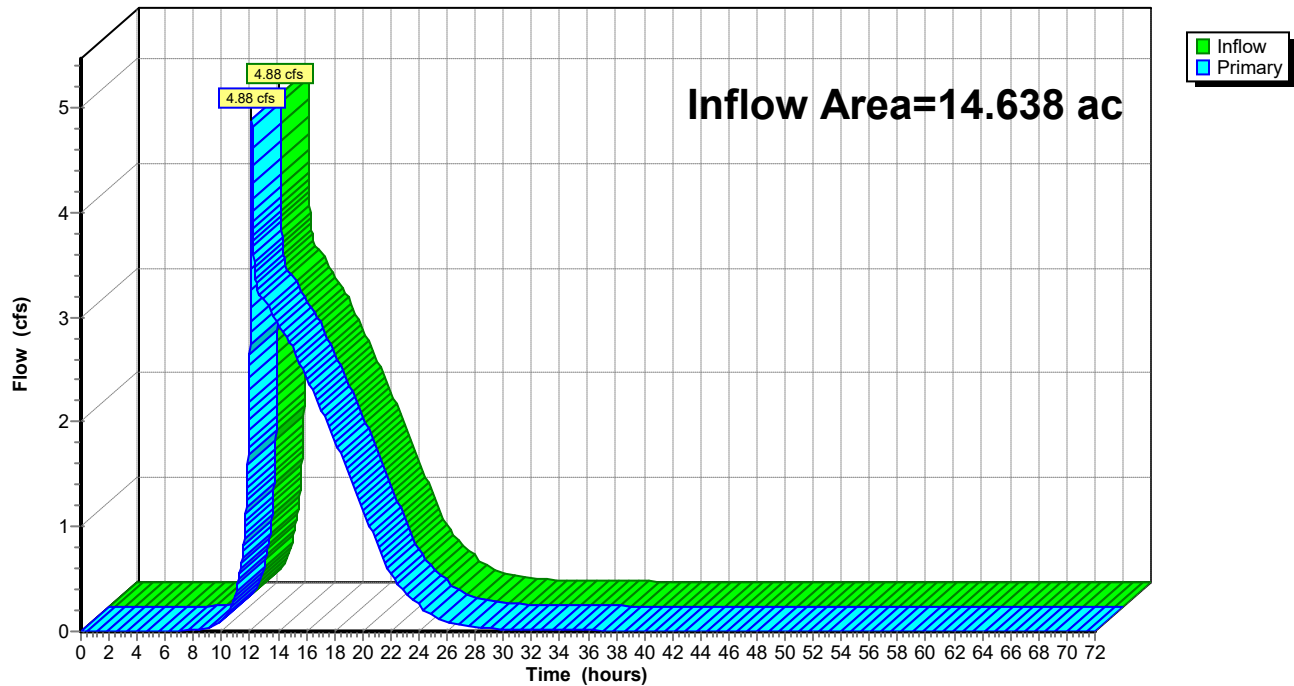
Summary for Link 14L: TOTAL

Inflow Area = 14.638 ac, 60.60% Impervious, Inflow Depth = 1.60" for 2-year event
Inflow = 4.88 cfs @ 12.14 hrs, Volume= 1.949 af
Primary = 4.88 cfs @ 12.14 hrs, Volume= 1.949 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 14L: TOTAL

Hydrograph



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: TO BLUE ROOF Runoff Area=1.419 ac 100.00% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=98 Runoff=7.79 cfs 0.410 af

Subcatchment 9S: OFFSITE TO POND Runoff Area=2.974 ac 14.46% Impervious Runoff Depth=1.65"
Flow Length=436' Tc=30.0 min CN=78 Runoff=4.37 cfs 0.409 af

Subcatchment 15S: UNDETAINED Runoff Area=0.632 ac 6.49% Impervious Runoff Depth=1.51"
Tc=6.0 min CN=76 Runoff=1.78 cfs 0.080 af

Subcatchment 17S: PROPOSED Runoff Area=5.953 ac 68.07% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=90 Runoff=27.97 cfs 1.308 af

Subcatchment 18S: PROPOSED Runoff Area=3.148 ac 79.99% Impervious Runoff Depth=2.93"
Tc=6.0 min CN=93 Runoff=15.93 cfs 0.768 af

Subcatchment 19S: PROPOSED Runoff Area=0.512 ac 80.08% Impervious Runoff Depth=2.93"
Tc=6.0 min CN=93 Runoff=2.59 cfs 0.125 af

Pond 3P: PROPOSED POND Peak Elev=42.92' Storage=43,833 cf Inflow=45.73 cfs 2.895 af
Primary=17.07 cfs 2.895 af Secondary=0.00 cfs 0.000 af Outflow=17.07 cfs 2.895 af

Pond 7P: BLUE ROOF Peak Elev=100.40' Storage=0.225 af Inflow=7.79 cfs 0.410 af
Outflow=0.53 cfs 0.410 af

Link 14L: TOTAL Inflow=18.47 cfs 3.099 af
Primary=18.47 cfs 3.099 af

Total Runoff Area = 14.638 ac Runoff Volume = 3.099 af Average Runoff Depth = 2.54"
39.40% Pervious = 5.768 ac 60.60% Impervious = 8.870 ac

Summary for Subcatchment 6S: TO BLUE ROOF

Runoff = 7.79 cfs @ 12.13 hrs, Volume= 0.410 af, Depth= 3.47"

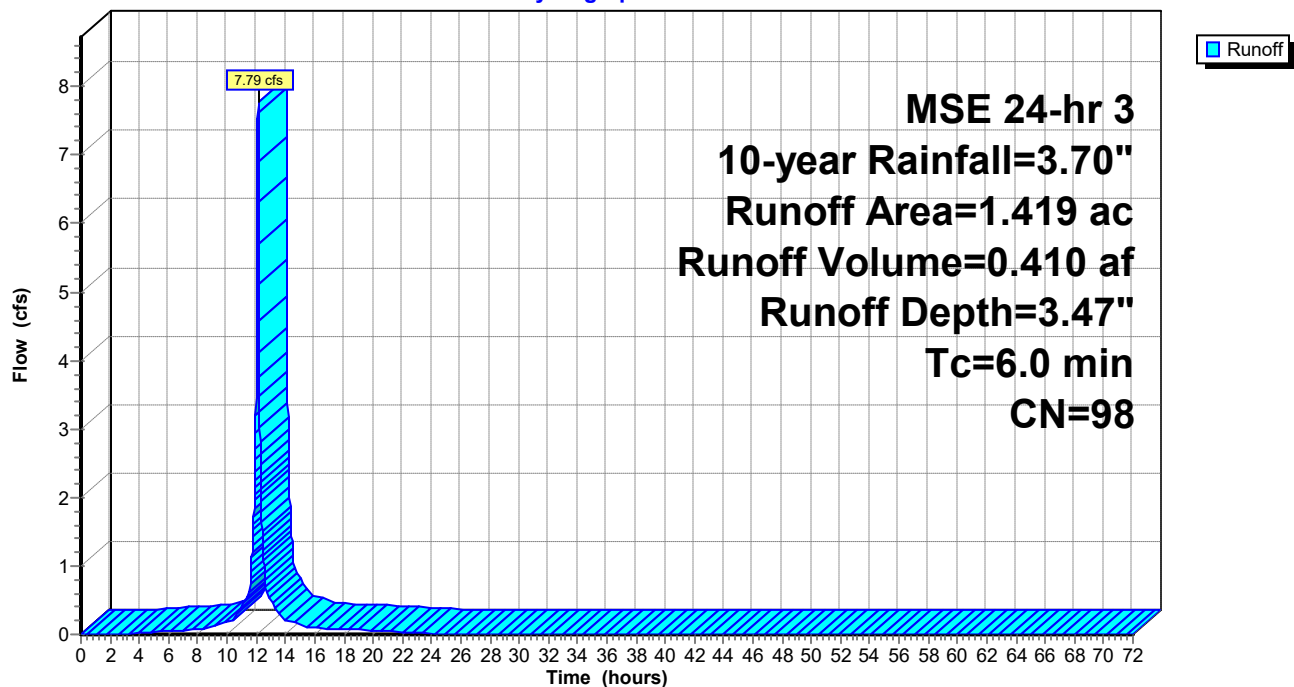
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-year Rainfall=3.70"

Area (ac)	CN	Description
* 1.419	98	ROOF
1.419		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 6S: TO BLUE ROOF

Hydrograph



Summary for Subcatchment 9S: OFFSITE TO POND

Runoff = 4.37 cfs @ 12.43 hrs, Volume= 0.409 af, Depth= 1.65"

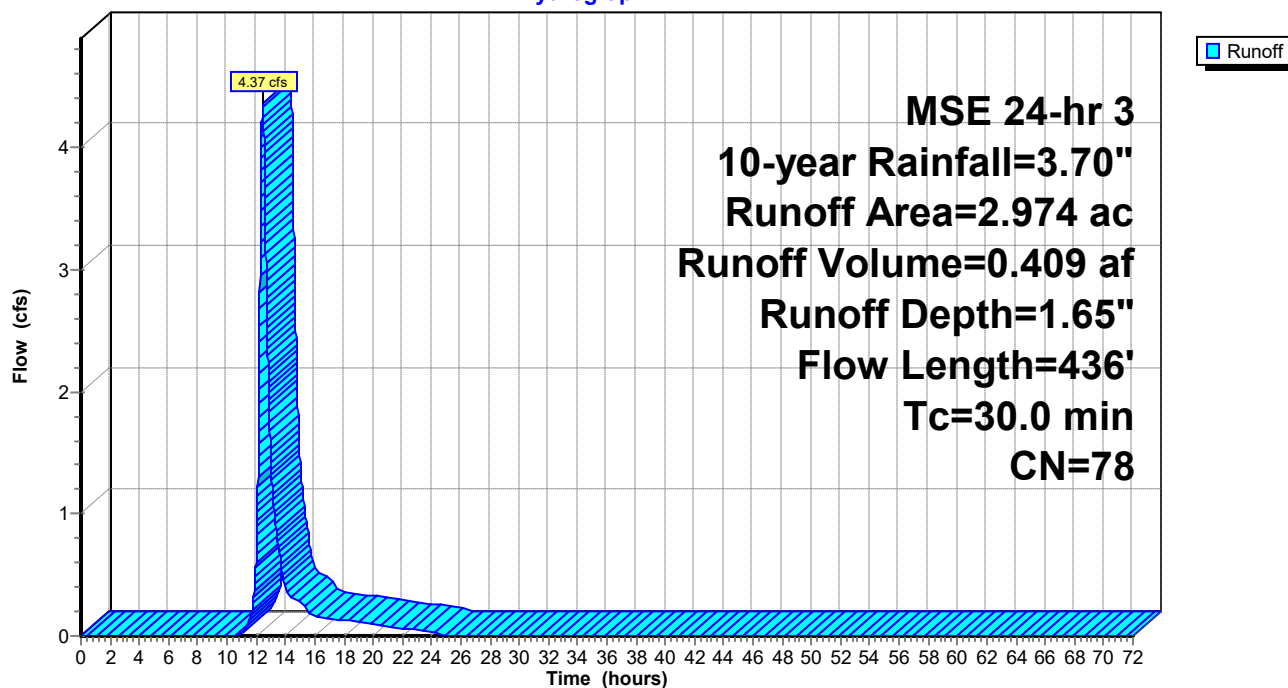
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-year Rainfall=3.70"

Area (ac)	CN	Description
* 2.533	74	GRASS
* 0.062	98	SIDEWALK
* 0.011	89	GRAVEL
* 0.368	98	WATER
2.974	78	Weighted Average
2.544		85.54% Pervious Area
0.430		14.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0025	0.07		Sheet Flow, SHEET FLOW
					Grass: Short n= 0.150 P2= 2.64"
5.2	336	0.0052	1.08		Shallow Concentrated Flow, SHALLOW FLOW
					Grassed Waterway Kv= 15.0 fps
30.0	436	Total			

Subcatchment 9S: OFFSITE TO POND

Hydrograph



Summary for Subcatchment 15S: UNDETAINED

Runoff = 1.78 cfs @ 12.14 hrs, Volume= 0.080 af, Depth= 1.51"

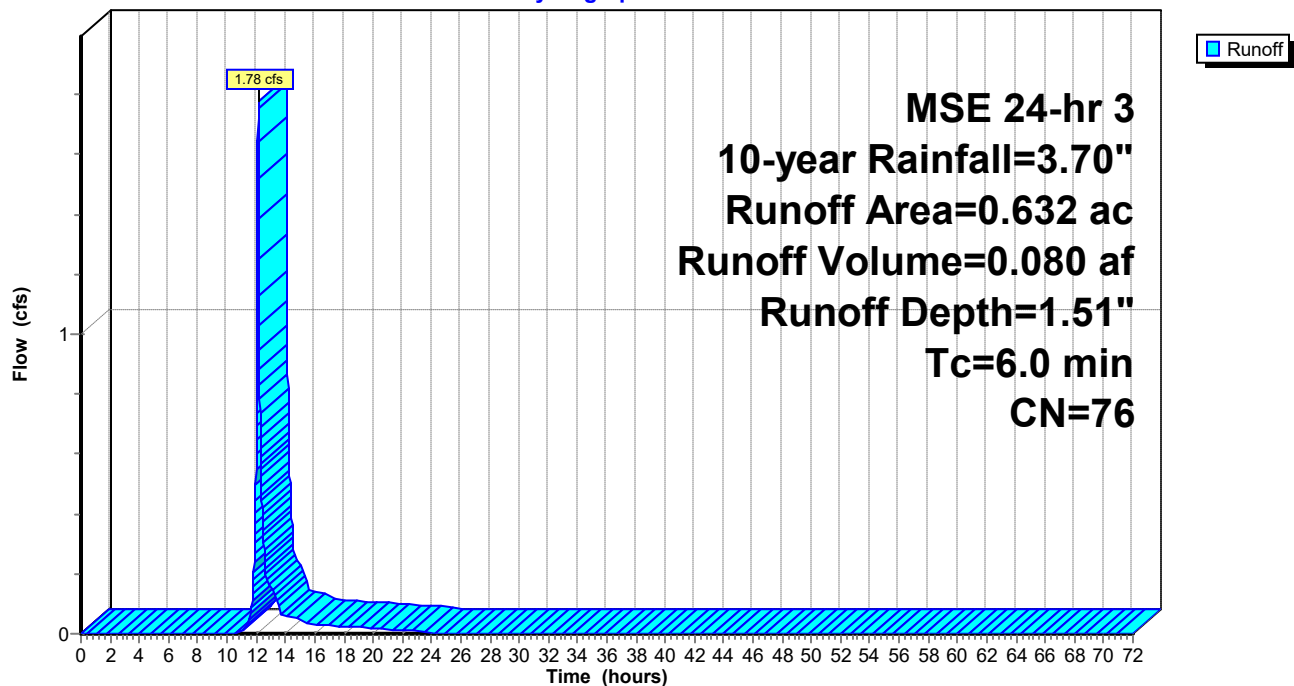
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-year Rainfall=3.70"

Area (ac)	CN	Description
* 0.591	74	Grass
* 0.041	98	Sidewalk
0.632	76	Weighted Average
0.591		93.51% Pervious Area
0.041		6.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 15S: UNDETAINED

Hydrograph



Summary for Subcatchment 17S: PROPOSED RESIDENTIAL

Runoff = 27.97 cfs @ 12.13 hrs, Volume= 1.308 af, Depth= 2.64"

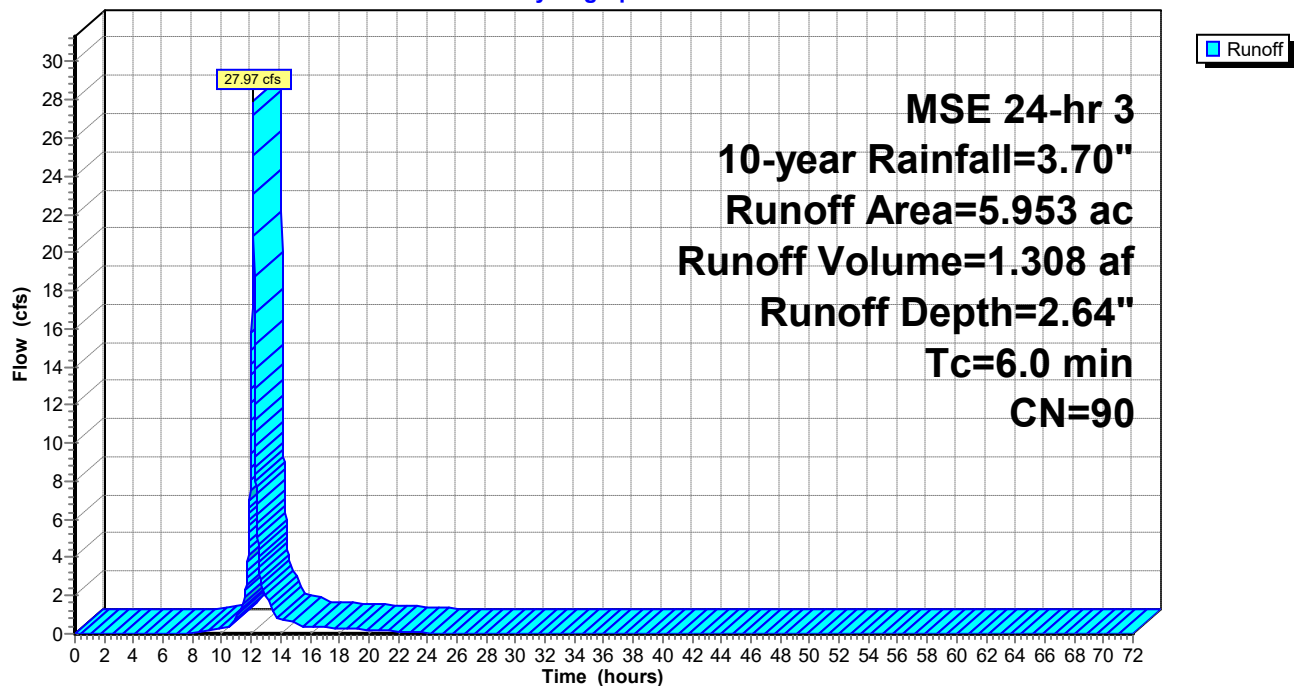
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-year Rainfall=3.70"

Area (ac)	CN	Description
* 1.901	74	GRASS
* 2.221	98	PAVEMENT
* 1.204	98	ROOF
* 0.627	98	SIDEWALK
5.953	90	Weighted Average
1.901		31.93% Pervious Area
4.052		68.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 17S: PROPOSED RESIDENTIAL

Hydrograph



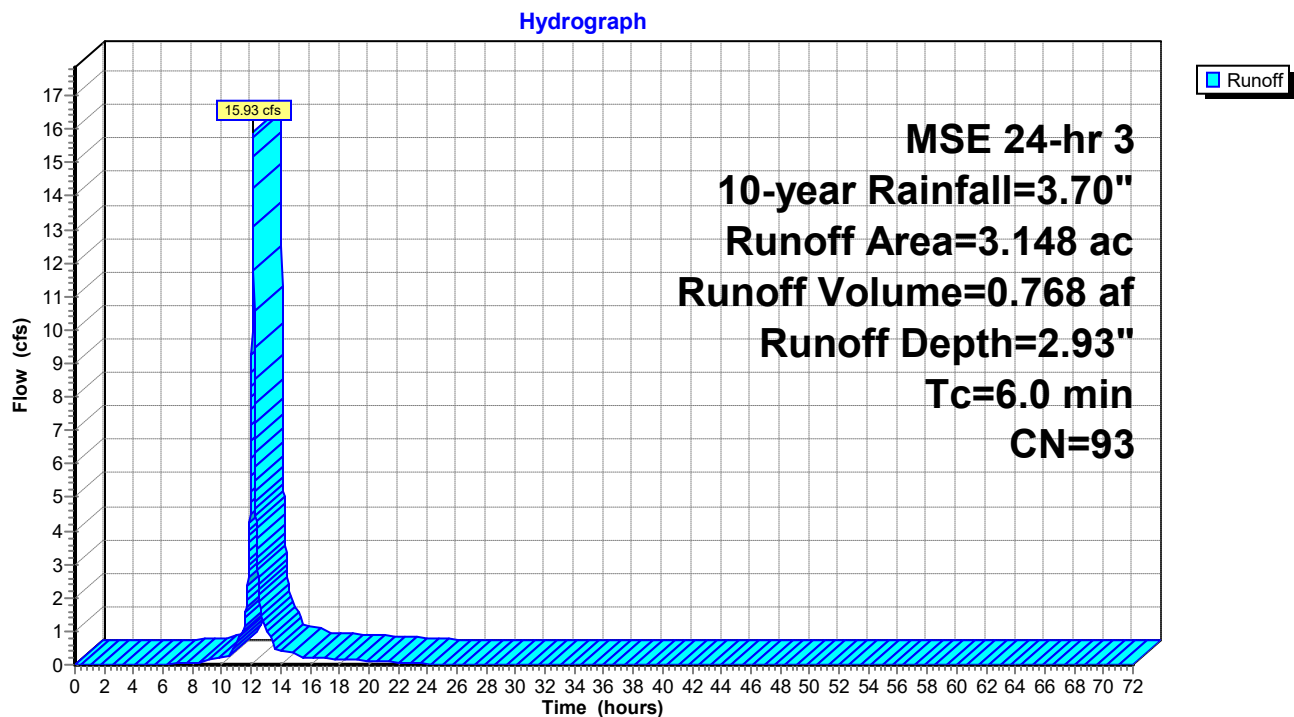
Summary for Subcatchment 18S: PROPOSED COMMERCIAL LOT MAX BUILDOUT

Runoff = 15.93 cfs @ 12.13 hrs, Volume= 0.768 af, Depth= 2.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-year Rainfall=3.70"

Area (ac)	CN	Description
* 0.630	74	GRASS (20% OF SITE)
* 2.518	98	IMPERVIOUS (80% OF SITE)
3.148	93	Weighted Average
0.630		20.01% Pervious Area
2.518		79.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 18S: PROPOSED COMMERCIAL LOT MAX BUILDOUT

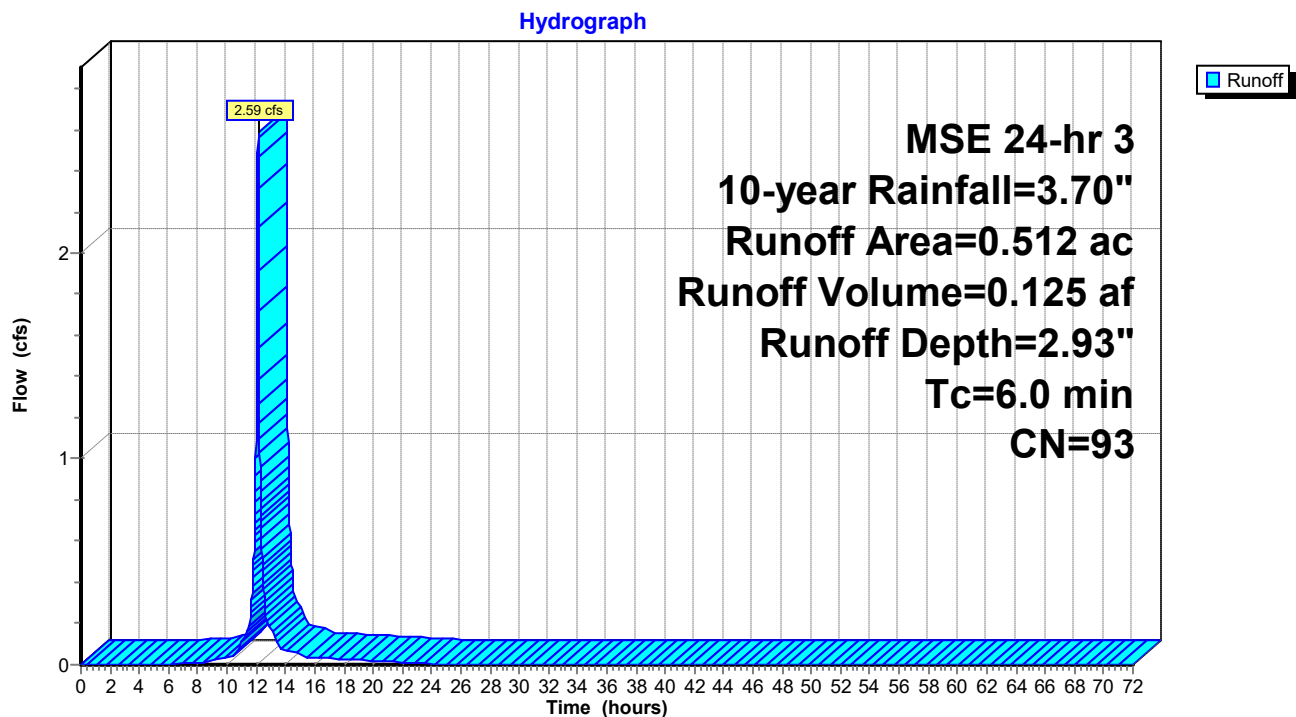
Summary for Subcatchment 19S: PROPOSED COMMERCIAL LOT MAX BUILDOUT UNDETAINED

Runoff = 2.59 cfs @ 12.13 hrs, Volume= 0.125 af, Depth= 2.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-year Rainfall=3.70"

Area (ac)	CN	Description
* 0.102	74	GRASS (20% OF SITE)
* 0.410	98	IMPERVIOUS (80% OF SITE)
0.512	93	Weighted Average
0.102		19.92% Pervious Area
0.410		80.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 19S: PROPOSED COMMERCIAL LOT MAX BUILDOUT UNDETAINED

Summary for Pond 3P: PROPOSED POND

Inflow Area = 13.494 ac, 62.39% Impervious, Inflow Depth = 2.57" for 10-year event
 Inflow = 45.73 cfs @ 12.13 hrs, Volume= 2.895 af
 Outflow = 17.07 cfs @ 12.30 hrs, Volume= 2.895 af, Atten= 63%, Lag= 10.0 min
 Primary = 17.07 cfs @ 12.30 hrs, Volume= 2.895 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 42.92' @ 12.30 hrs Surf.Area= 14,652 sf Storage= 43,833 cf

Plug-Flow detention time= 132.9 min calculated for 2.895 af (100% of inflow)
 Center-of-Mass det. time= 132.9 min (946.3 - 813.5)

Volume	Invert	Avail.Storage	Storage Description
#1	39.00'	78,627 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
39.00	7,969	0	0
40.00	9,527	8,748	8,748
41.00	11,186	10,357	19,105
42.00	12,945	12,066	31,170
43.00	14,805	13,875	45,045
44.00	16,766	15,786	60,831
45.00	18,827	17,797	78,627

Device	Routing	Invert	Outlet Devices
#1	Primary	39.00'	36.0" Round Culvert L= 250.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 39.00' / 36.79' S= 0.0088 ' S= 0.0088 ' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf
#2	Device 1	39.00'	8.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	42.50'	60.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	43.70'	60.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=17.05 cfs @ 12.30 hrs HW=42.92' (Free Discharge)

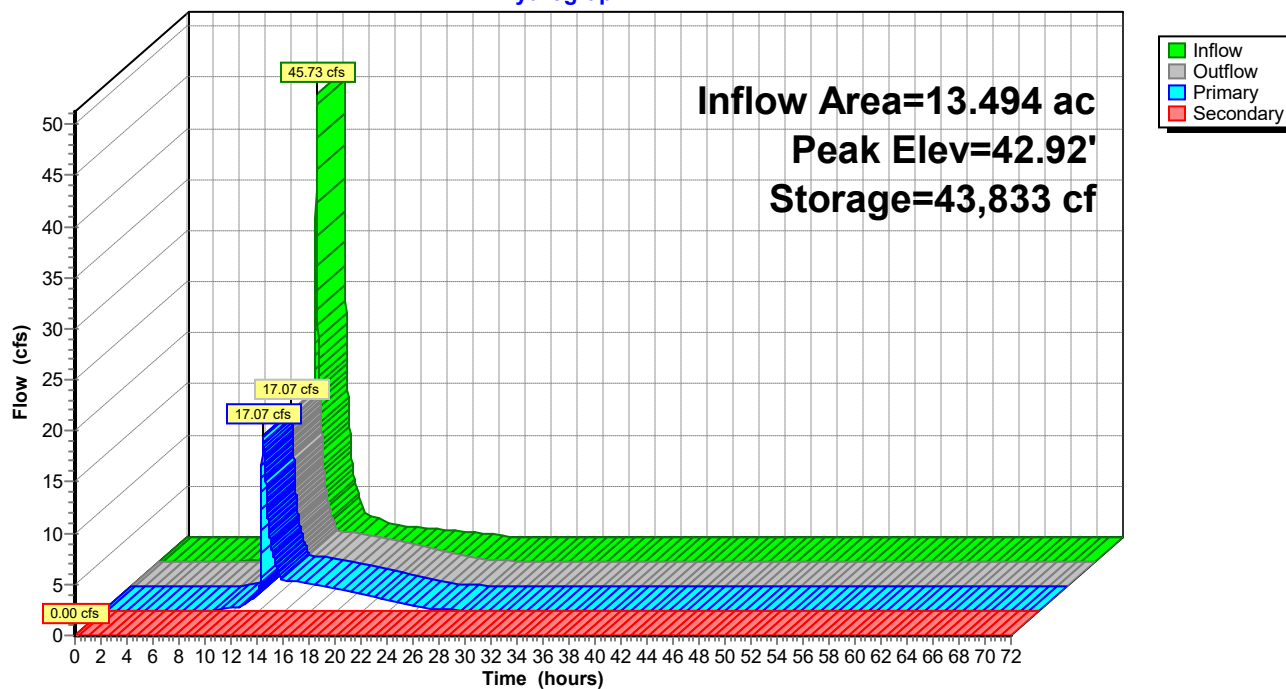
↑ **1=Culvert** (Passes 17.05 cfs of 52.92 cfs potential flow)
 ↑ **2=Orifice/Grate** (Orifice Controls 3.18 cfs @ 9.12 fps)
 ↑ **3=Orifice/Grate** (Weir Controls 13.86 cfs @ 2.11 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=39.00' (Free Discharge)

↑ **4=Orifice/Grate** (Controls 0.00 cfs)

Pond 3P: PROPOSED POND

Hydrograph



Summary for Pond 7P: BLUE ROOF

Inflow Area = 1.419 ac, 100.00% Impervious, Inflow Depth = 3.47" for 10-year event
 Inflow = 7.79 cfs @ 12.13 hrs, Volume= 0.410 af
 Outflow = 0.53 cfs @ 12.98 hrs, Volume= 0.410 af, Atten= 93%, Lag= 50.8 min
 Primary = 0.53 cfs @ 12.98 hrs, Volume= 0.410 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 100.40' @ 12.98 hrs Surf.Area= 1.130 ac Storage= 0.225 af

Plug-Flow detention time= 203.4 min calculated for 0.410 af (100% of inflow)
 Center-of-Mass det. time= 203.4 min (952.9 - 749.5)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	0.469 af	Custom Stage Data (Prismatic) Listed below (Recalc) x 20

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
100.00	0.000	0.000	0.000
100.50	0.071	0.018	0.018
100.58	0.071	0.006	0.023

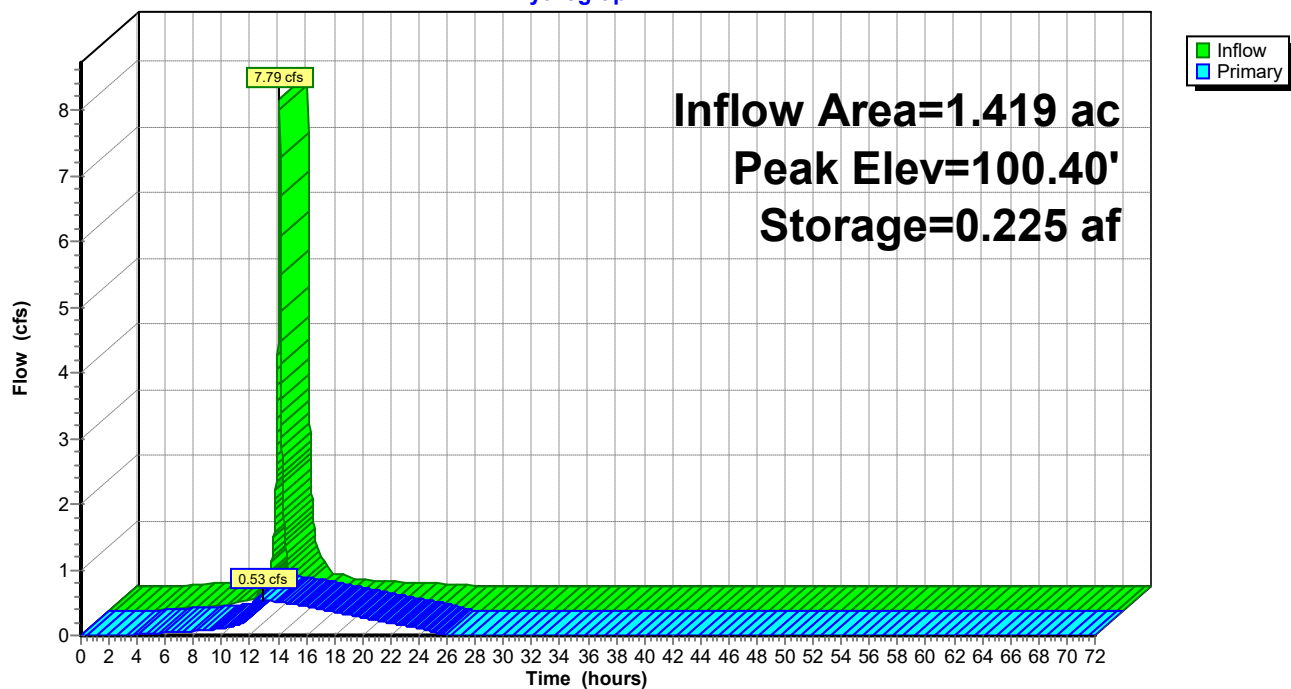
Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	Special & User-Defined
			Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58
			Disch. (cfs) 0.000 0.111 0.223 0.334 0.446 0.557 0.668 0.780

Primary OutFlow Max=0.53 cfs @ 12.98 hrs HW=100.40' (Free Discharge)

↑1=Special & User-Defined (Custom Controls 0.53 cfs)

Pond 7P: BLUE ROOF

Hydrograph



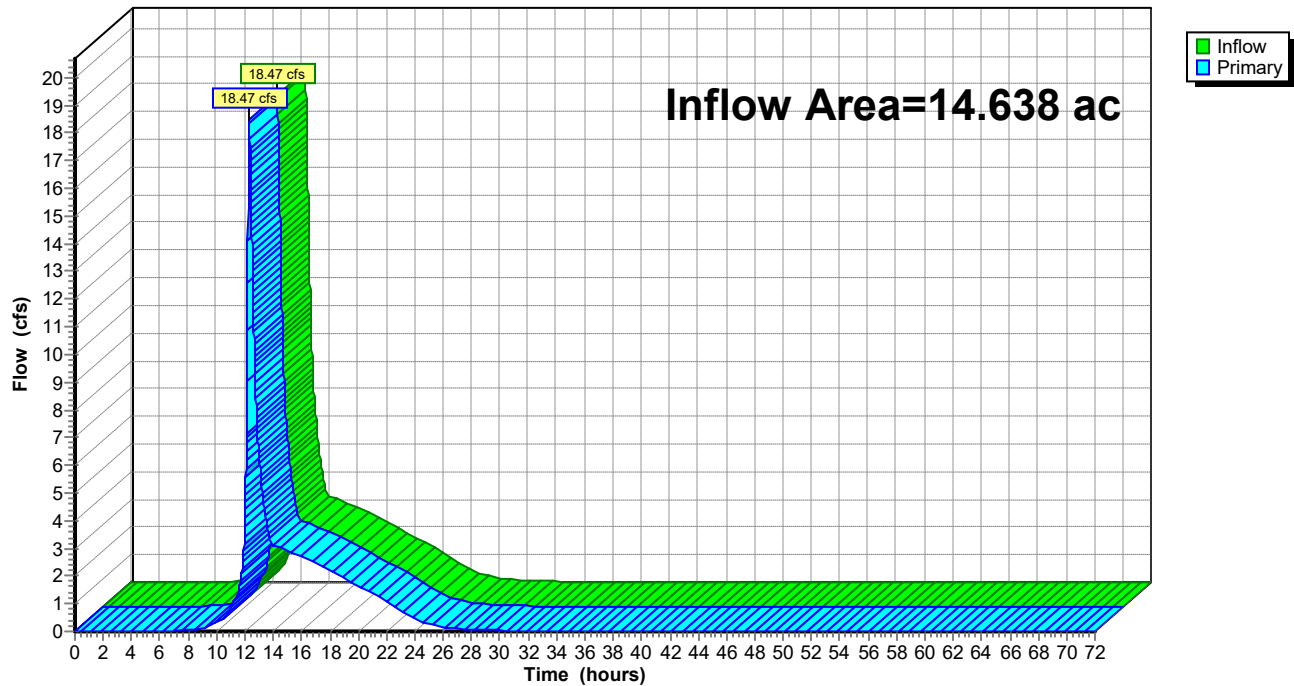
Summary for Link 14L: TOTAL

Inflow Area = 14.638 ac, 60.60% Impervious, Inflow Depth = 2.54" for 10-year event
Inflow = 18.47 cfs @ 12.29 hrs, Volume= 3.099 af
Primary = 18.47 cfs @ 12.29 hrs, Volume= 3.099 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 14L: TOTAL

Hydrograph



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: TO BLUE ROOF Runoff Area=1.419 ac 100.00% Impervious Runoff Depth=5.73"
 Tc=6.0 min CN=98 Runoff=12.64 cfs 0.678 af

Subcatchment 9S: OFFSITE TO POND Runoff Area=2.974 ac 14.46% Impervious Runoff Depth=3.55"
 Flow Length=436' Tc=30.0 min CN=78 Runoff=9.49 cfs 0.880 af

Subcatchment 15S: UNDETAINED Runoff Area=0.632 ac 6.49% Impervious Runoff Depth=3.35"
 Tc=6.0 min CN=76 Runoff=3.92 cfs 0.177 af

Subcatchment 17S: PROPOSED Runoff Area=5.953 ac 68.07% Impervious Runoff Depth=4.82"
 Tc=6.0 min CN=90 Runoff=49.20 cfs 2.389 af

Subcatchment 18S: PROPOSED Runoff Area=3.148 ac 79.99% Impervious Runoff Depth=5.15"
 Tc=6.0 min CN=93 Runoff=27.01 cfs 1.352 af

Subcatchment 19S: PROPOSED Runoff Area=0.512 ac 80.08% Impervious Runoff Depth=5.15"
 Tc=6.0 min CN=93 Runoff=4.39 cfs 0.220 af

Pond 3P: PROPOSED POND Peak Elev=43.68' Storage=55,607 cf Inflow=80.36 cfs 5.299 af
 Primary=60.72 cfs 5.299 af Secondary=0.00 cfs 0.000 af Outflow=60.72 cfs 5.299 af

Pond 7P: BLUE ROOF Peak Elev=100.53' Storage=0.393 af Inflow=12.64 cfs 0.678 af
 Outflow=0.71 cfs 0.678 af

Link 14L: TOTAL Inflow=68.07 cfs 5.696 af
 Primary=68.07 cfs 5.696 af

Total Runoff Area = 14.638 ac Runoff Volume = 5.696 af Average Runoff Depth = 4.67"
39.40% Pervious = 5.768 ac 60.60% Impervious = 8.870 ac

Summary for Subcatchment 6S: TO BLUE ROOF

Runoff = 12.64 cfs @ 12.13 hrs, Volume= 0.678 af, Depth= 5.73"

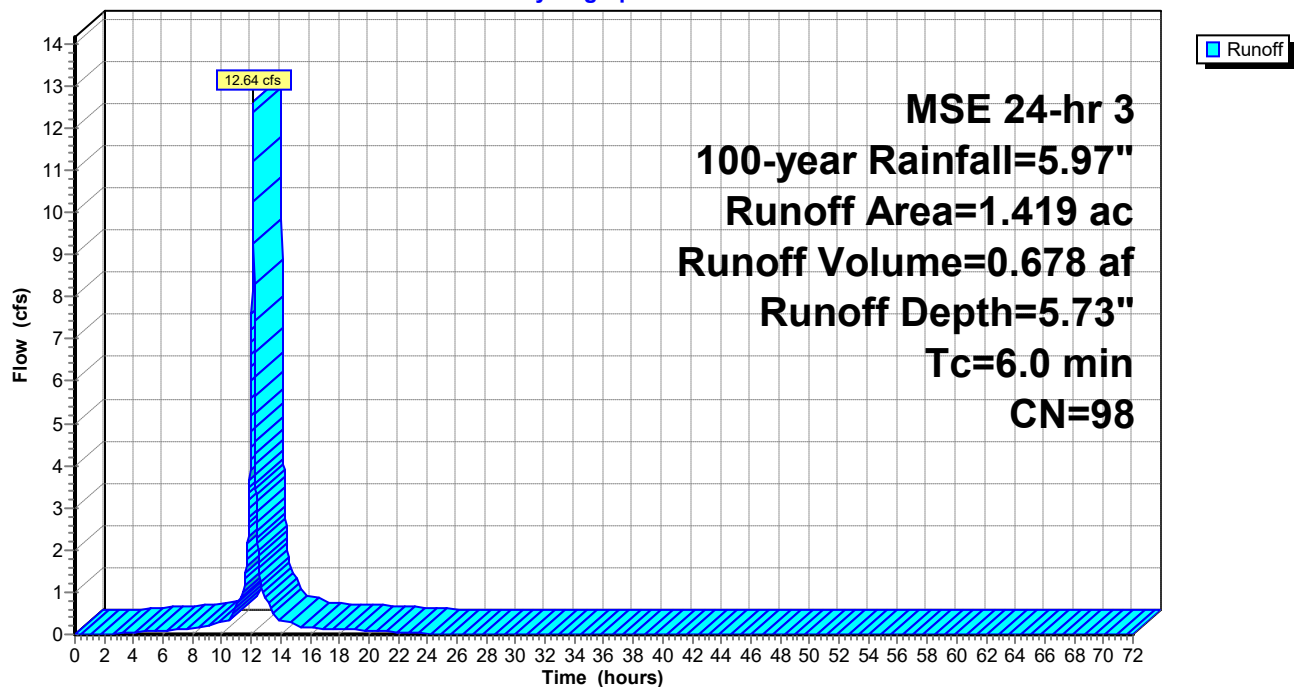
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-year Rainfall=5.97"

Area (ac)	CN	Description
* 1.419	98	ROOF
1.419		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 6S: TO BLUE ROOF

Hydrograph



Summary for Subcatchment 9S: OFFSITE TO POND

Runoff = 9.49 cfs @ 12.43 hrs, Volume= 0.880 af, Depth= 3.55"

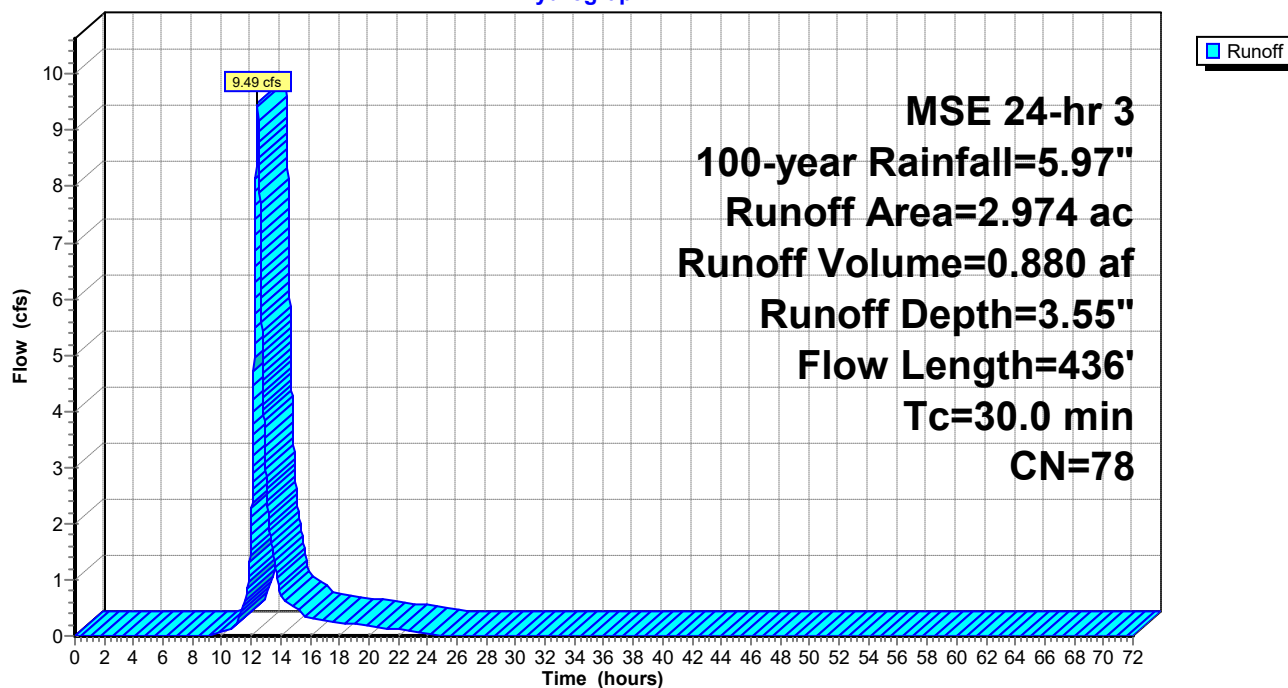
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-year Rainfall=5.97"

Area (ac)	CN	Description
* 2.533	74	GRASS
* 0.062	98	SIDEWALK
* 0.011	89	GRAVEL
* 0.368	98	WATER
2.974	78	Weighted Average
2.544		85.54% Pervious Area
0.430		14.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0025	0.07		Sheet Flow, SHEET FLOW
					Grass: Short n= 0.150 P2= 2.64"
5.2	336	0.0052	1.08		Shallow Concentrated Flow, SHALLOW FLOW
					Grassed Waterway Kv= 15.0 fps
30.0	436	Total			

Subcatchment 9S: OFFSITE TO POND

Hydrograph



Summary for Subcatchment 15S: UNDETAINED

Runoff = 3.92 cfs @ 12.13 hrs, Volume= 0.177 af, Depth= 3.35"

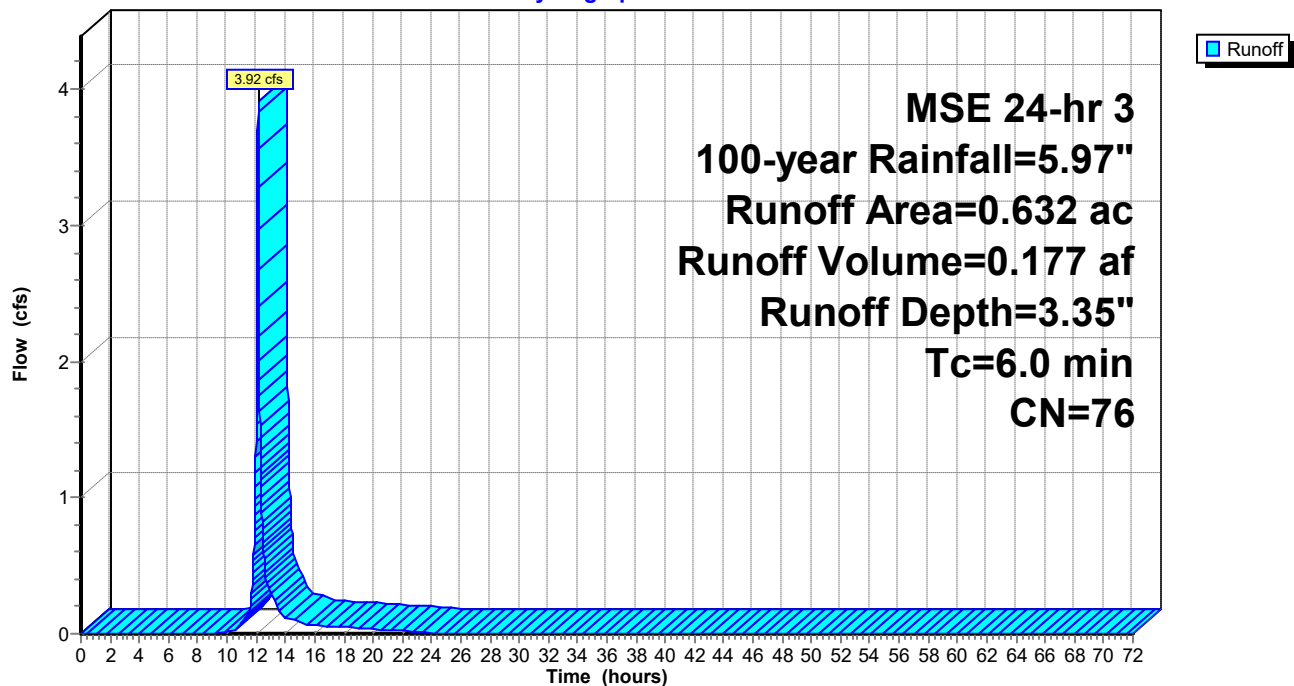
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-year Rainfall=5.97"

Area (ac)	CN	Description
* 0.591	74	Grass
* 0.041	98	Sidewalk
0.632	76	Weighted Average
0.591		93.51% Pervious Area
0.041		6.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 15S: UNDETAINED

Hydrograph



Summary for Subcatchment 17S: PROPOSED RESIDENTIAL

Runoff = 49.20 cfs @ 12.13 hrs, Volume= 2.389 af, Depth= 4.82"

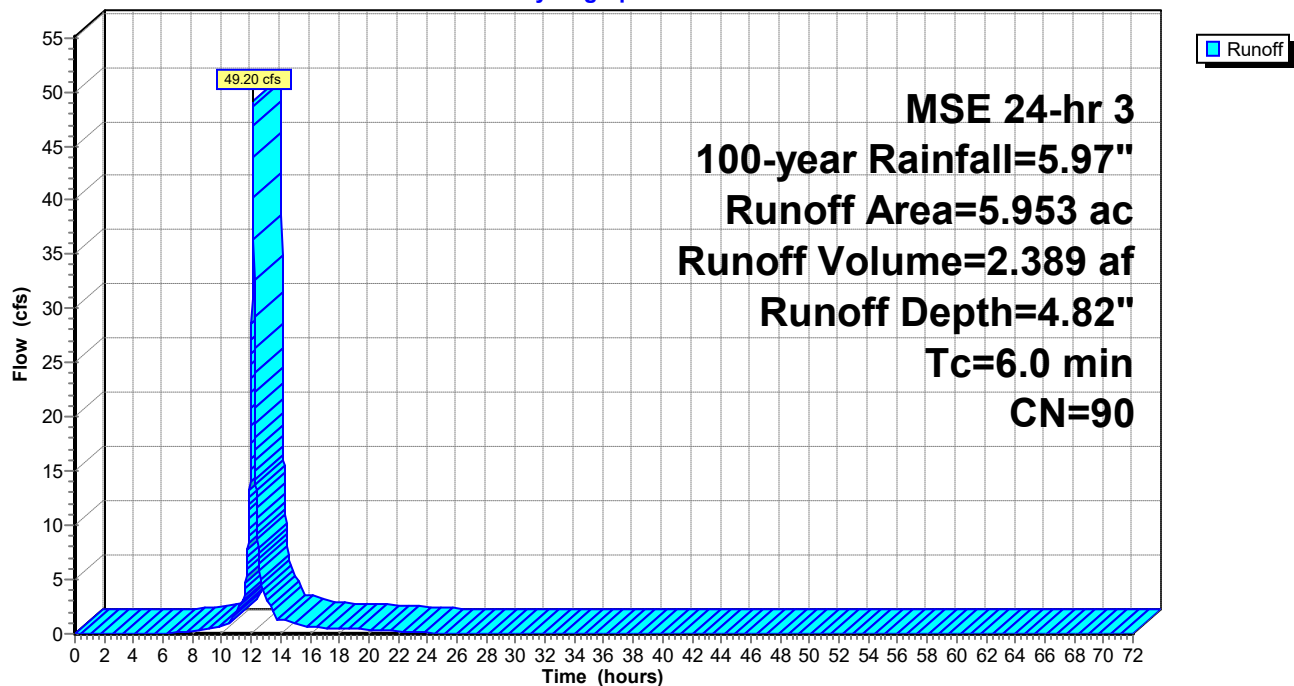
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-year Rainfall=5.97"

Area (ac)	CN	Description
* 1.901	74	GRASS
* 2.221	98	PAVEMENT
* 1.204	98	ROOF
* 0.627	98	SIDEWALK
5.953	90	Weighted Average
1.901		31.93% Pervious Area
4.052		68.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 17S: PROPOSED RESIDENTIAL

Hydrograph



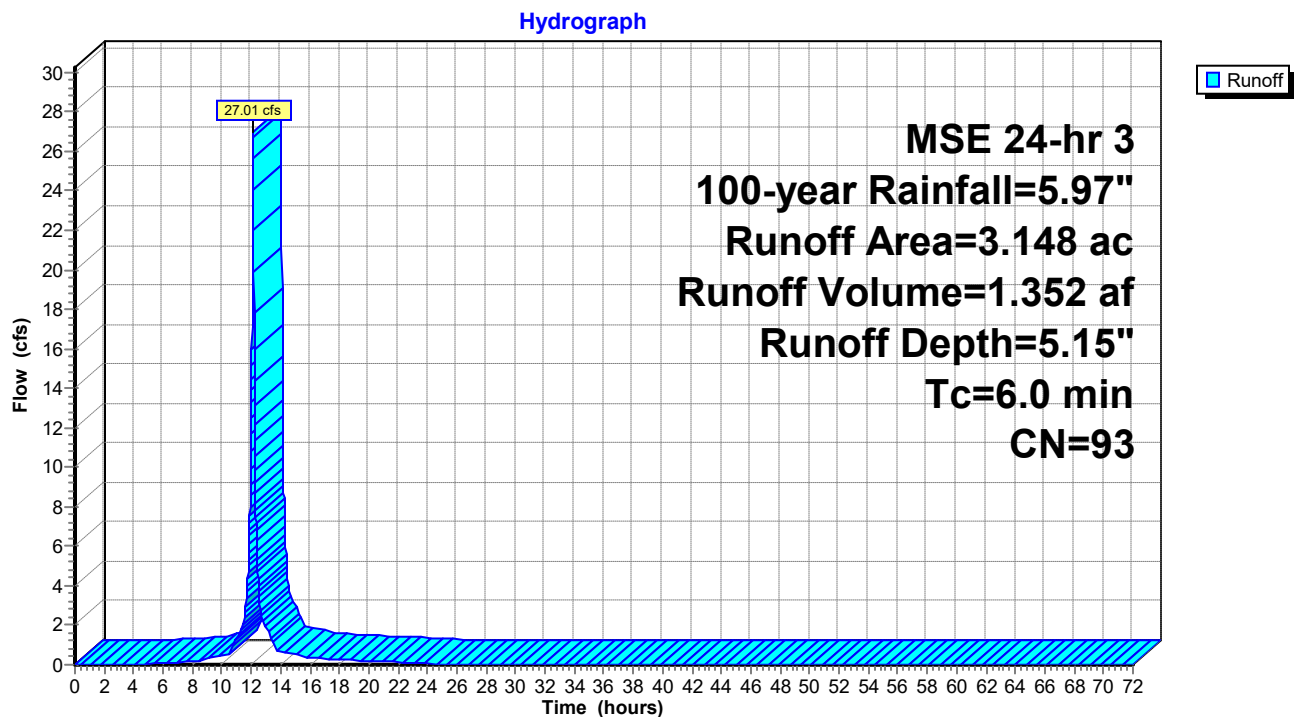
Summary for Subcatchment 18S: PROPOSED COMMERCIAL LOT MAX BUILDOUT

Runoff = 27.01 cfs @ 12.13 hrs, Volume= 1.352 af, Depth= 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-year Rainfall=5.97"

Area (ac)	CN	Description
* 0.630	74	GRASS (20% OF SITE)
* 2.518	98	IMPERVIOUS (80% OF SITE)
3.148	93	Weighted Average
0.630		20.01% Pervious Area
2.518		79.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 18S: PROPOSED COMMERCIAL LOT MAX BUILDOUT

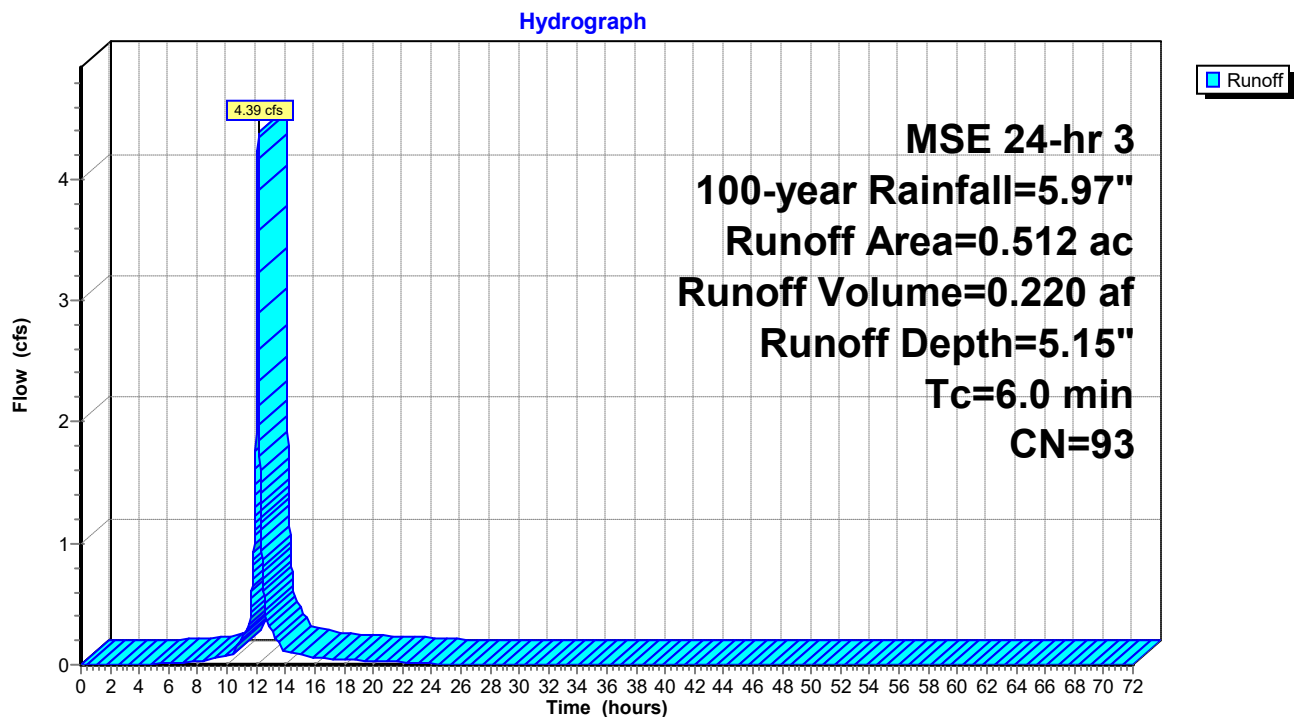
Summary for Subcatchment 19S: PROPOSED COMMERCIAL LOT MAX BUILDOUT UNDETAINED

Runoff = 4.39 cfs @ 12.13 hrs, Volume= 0.220 af, Depth= 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-year Rainfall=5.97"

Area (ac)	CN	Description
* 0.102	74	GRASS (20% OF SITE)
* 0.410	98	IMPERVIOUS (80% OF SITE)
0.512	93	Weighted Average
0.102		19.92% Pervious Area
0.410		80.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 19S: PROPOSED COMMERCIAL LOT MAX BUILDOUT UNDETAINED

Summary for Pond 3P: PROPOSED POND

Inflow Area = 13.494 ac, 62.39% Impervious, Inflow Depth = 4.71" for 100-year event
 Inflow = 80.36 cfs @ 12.13 hrs, Volume= 5.299 af
 Outflow = 60.72 cfs @ 12.18 hrs, Volume= 5.299 af, Atten= 24%, Lag= 3.0 min
 Primary = 60.72 cfs @ 12.18 hrs, Volume= 5.299 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 43.68' @ 12.18 hrs Surf.Area= 16,143 sf Storage= 55,607 cf

Plug-Flow detention time= 100.4 min calculated for 5.298 af (100% of inflow)
 Center-of-Mass det. time= 100.6 min (910.5 - 809.9)

Volume	Invert	Avail.Storage	Storage Description
#1	39.00'	78,627 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
39.00	7,969	0	0
40.00	9,527	8,748	8,748
41.00	11,186	10,357	19,105
42.00	12,945	12,066	31,170
43.00	14,805	13,875	45,045
44.00	16,766	15,786	60,831
45.00	18,827	17,797	78,627

Device	Routing	Invert	Outlet Devices
#1	Primary	39.00'	36.0" Round Culvert L= 250.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 39.00' / 36.79' S= 0.0088 ' / Cc= 0.900 n= 0.013, Flow Area= 7.07 sf
#2	Device 1	39.00'	8.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	42.50'	60.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	43.70'	60.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=60.71 cfs @ 12.18 hrs HW=43.68' (Free Discharge)

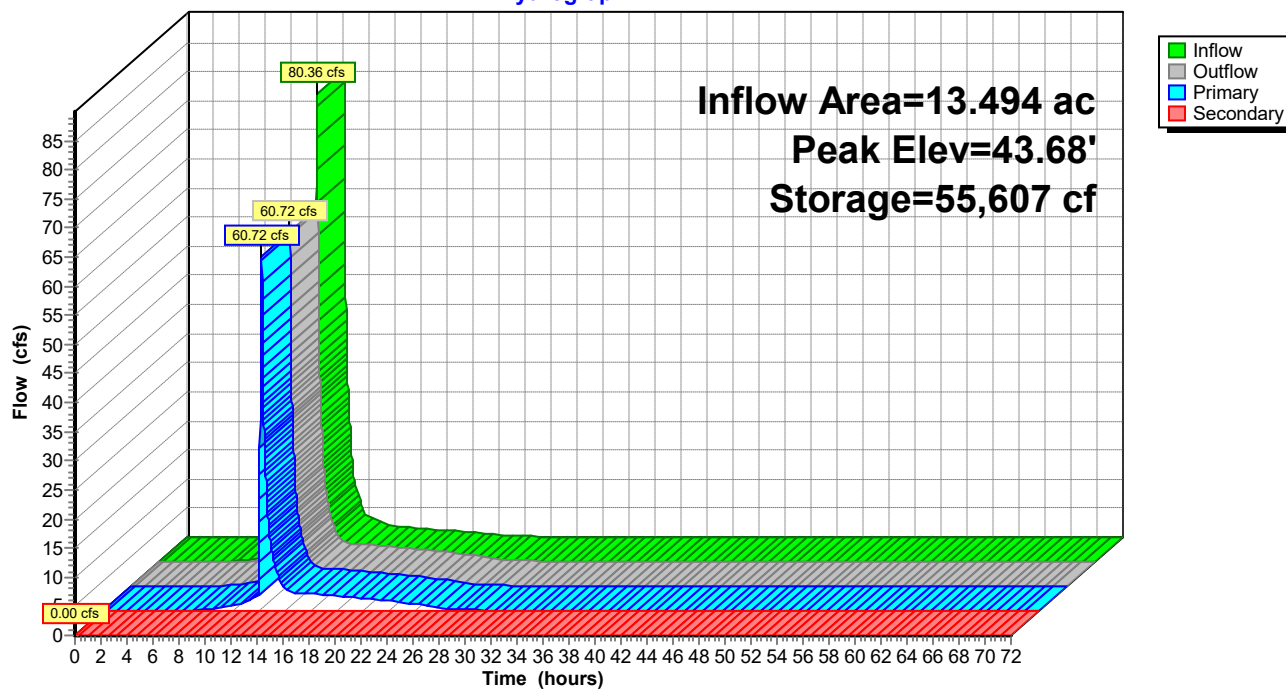
↑ **1=Culvert** (Inlet Controls 60.71 cfs @ 8.59 fps)
 ↑ **2=Orifice/Grate** (Passes < 3.50 cfs potential flow)
 ↑ **3=Orifice/Grate** (Passes < 65.98 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=39.00' (Free Discharge)

↑ **4=Orifice/Grate** (Controls 0.00 cfs)

Pond 3P: PROPOSED POND

Hydrograph



Summary for Pond 7P: BLUE ROOF

Inflow Area = 1.419 ac, 100.00% Impervious, Inflow Depth = 5.73" for 100-year event
 Inflow = 12.64 cfs @ 12.13 hrs, Volume= 0.678 af
 Outflow = 0.71 cfs @ 13.21 hrs, Volume= 0.678 af, Atten= 94%, Lag= 64.7 min
 Primary = 0.71 cfs @ 13.21 hrs, Volume= 0.678 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 100.53' @ 13.21 hrs Surf.Area= 1.420 ac Storage= 0.393 af

Plug-Flow detention time= 273.1 min calculated for 0.678 af (100% of inflow)
 Center-of-Mass det. time= 273.1 min (1,016.0 - 742.9)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	0.469 af	Custom Stage Data (Prismatic) Listed below (Recalc) x 20
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
100.00	0.000	0.000	0.000
100.50	0.071	0.018	0.018
100.58	0.071	0.006	0.023

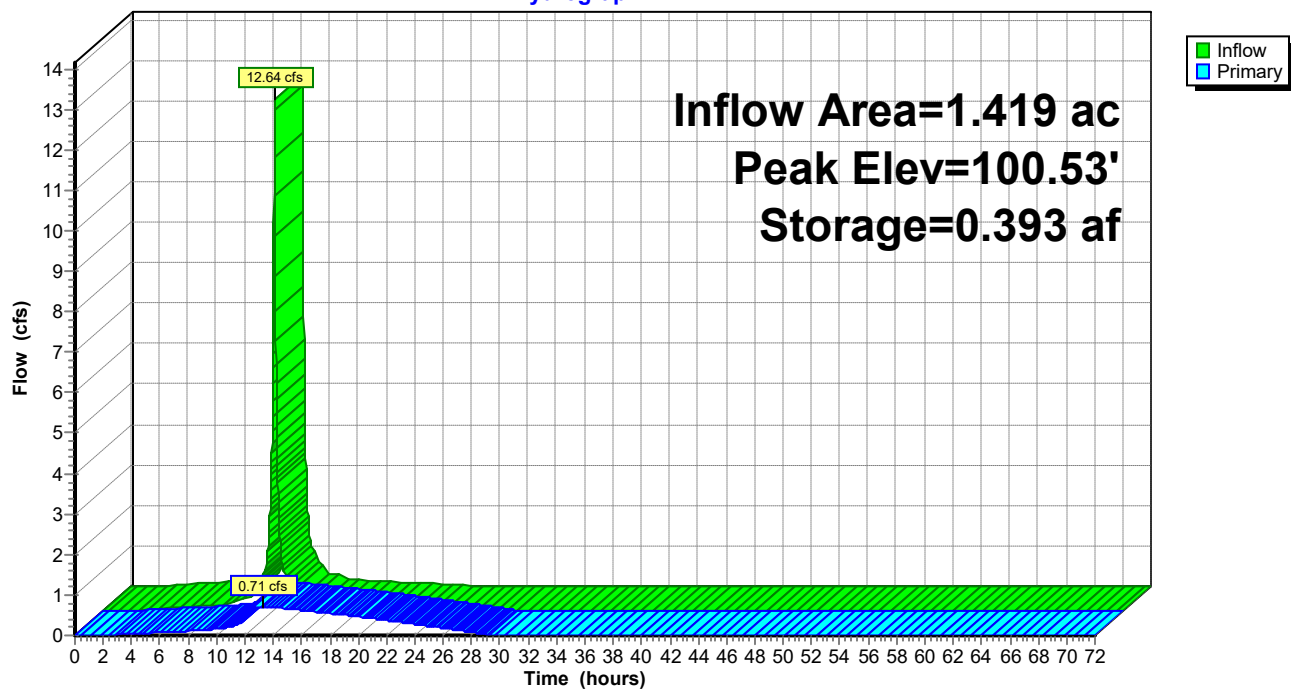
Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	Special & User-Defined
Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58			
Disch. (cfs) 0.000 0.111 0.223 0.334 0.446 0.557 0.668 0.780			

Primary OutFlow Max=0.71 cfs @ 13.21 hrs HW=100.53' (Free Discharge)

↑1=Special & User-Defined (Custom Controls 0.71 cfs)

Pond 7P: BLUE ROOF

Hydrograph



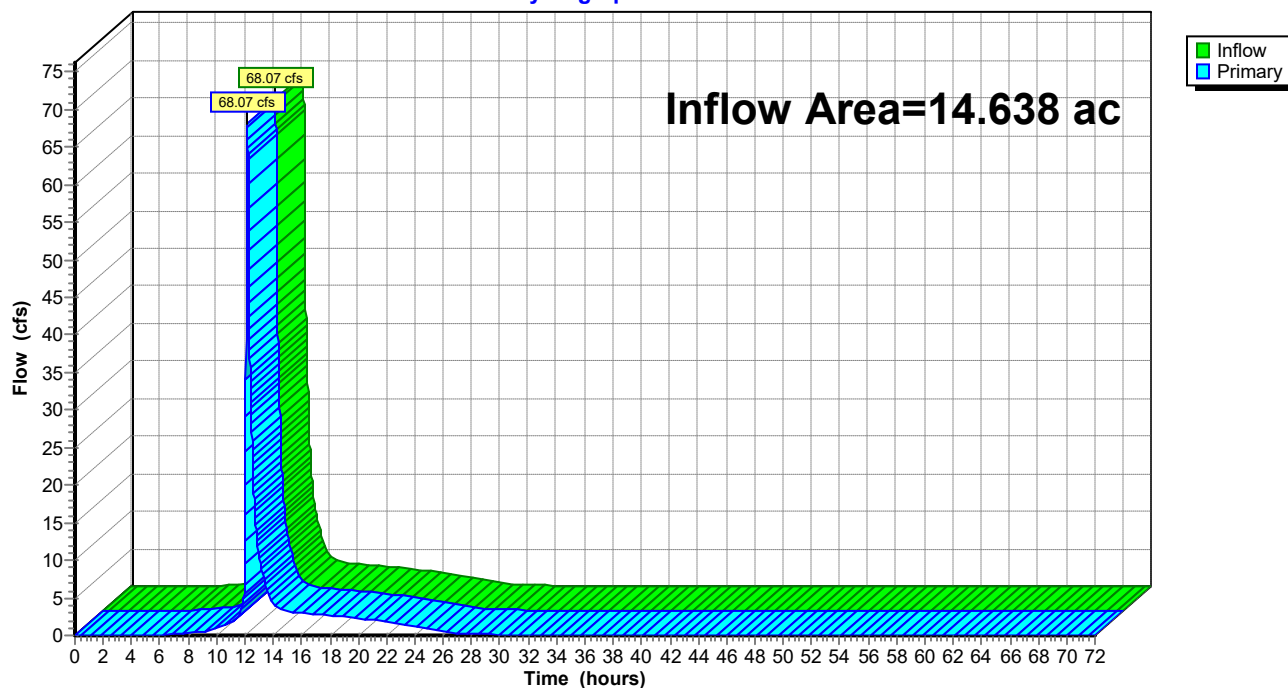
Summary for Link 14L: TOTAL

Inflow Area = 14.638 ac, 60.60% Impervious, Inflow Depth = 4.67" for 100-year event
Inflow = 68.07 cfs @ 12.15 hrs, Volume= 5.696 af
Primary = 68.07 cfs @ 12.15 hrs, Volume= 5.696 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 14L: TOTAL

Hydrograph



Hydrograph for NORTH PROPOSED 2YR

Time (hours)	Primary (cfs)	Primary-Volume (acre-feet)
0.00	0.00	0.000
0.05	0.00	0.000
0.10	0.00	0.000
0.15	0.00	0.000
0.20	0.00	0.000
0.25	0.00	0.000
0.30	0.00	0.000
0.35	0.00	0.000
0.40	0.00	0.000
0.45	0.00	0.000
0.50	0.00	0.000
0.55	0.00	0.000
0.60	0.00	0.000
0.65	0.00	0.000
0.70	0.00	0.000
0.75	0.00	0.000
0.80	0.00	0.000
0.85	0.00	0.000
0.90	0.00	0.000
0.95	0.00	0.000
1.00	0.00	0.000
1.05	0.00	0.000
1.10	0.00	0.000
1.15	0.00	0.000
1.20	0.00	0.000
1.25	0.00	0.000
1.30	0.00	0.000
1.35	0.00	0.000
1.40	0.00	0.000
1.45	0.00	0.000
1.50	0.00	0.000
1.55	0.00	0.000
1.60	0.00	0.000
1.65	0.00	0.000
1.70	0.00	0.000
1.75	0.00	0.000
1.80	0.00	0.000
1.85	0.00	0.000
1.90	0.00	0.000
1.95	0.00	0.000
2.00	0.00	0.000
2.05	0.00	0.000
2.10	0.00	0.000
2.15	0.00	0.000
2.20	0.00	0.000

2.25	0.00	0.000
2.30	0.00	0.000
2.35	0.00	0.000
2.40	0.00	0.000
2.45	0.00	0.000
2.50	0.00	0.000
2.55	0.00	0.000
2.60	0.00	0.000
2.65	0.00	0.000
2.70	0.00	0.000
2.75	0.00	0.000
2.80	0.00	0.000
2.85	0.00	0.000
2.90	0.00	0.000
2.95	0.00	0.000
3.00	0.00	0.000
3.05	0.00	0.000
3.10	0.00	0.000
3.15	0.00	0.000
3.20	0.00	0.000
3.25	0.00	0.000
3.30	0.00	0.000
3.35	0.00	0.000
3.40	0.00	0.000
3.45	0.00	0.000
3.50	0.00	0.000
3.55	0.00	0.000
3.60	0.00	0.000
3.65	0.00	0.000
3.70	0.00	0.000
3.75	0.00	0.000
3.80	0.00	0.000
3.85	0.00	0.000
3.90	0.00	0.000
3.95	0.00	0.000
4.00	0.00	0.000
4.05	0.00	0.000
4.10	0.00	0.000
4.15	0.00	0.000
4.20	0.00	0.000
4.25	0.00	0.000
4.30	0.00	0.000
4.35	0.00	0.000
4.40	0.00	0.000
4.45	0.00	0.000
4.50	0.00	0.000
4.55	0.00	0.000
4.60	0.00	0.000
4.65	0.00	0.000
4.70	0.00	0.000

4.75	0.00	0.000
4.80	0.00	0.000
4.85	0.00	0.000
4.90	0.00	0.000
4.95	0.00	0.000
5.00	0.00	0.000
5.05	0.00	0.000
5.10	0.00	0.000
5.15	0.00	0.000
5.20	0.00	0.000
5.25	0.00	0.000
5.30	0.00	0.000
5.35	0.00	0.000
5.40	0.00	0.000
5.45	0.00	0.000
5.50	0.00	0.000
5.55	0.00	0.000
5.60	0.00	0.000
5.65	0.00	0.000
5.70	0.00	0.000
5.75	0.00	0.000
5.80	0.00	0.000
5.85	0.00	0.000
5.90	0.00	0.000
5.95	0.00	0.000
6.00	0.00	0.000
6.05	0.00	0.000
6.10	0.00	0.000
6.15	0.00	0.000
6.20	0.00	0.000
6.25	0.00	0.000
6.30	0.00	0.000
6.35	0.00	0.000
6.40	0.00	0.000
6.45	0.00	0.000
6.50	0.00	0.000
6.55	0.00	0.000
6.60	0.00	0.000
6.65	0.00	0.000
6.70	0.01	0.000
6.75	0.01	0.000
6.80	0.01	0.001
6.85	0.01	0.001
6.90	0.01	0.001
6.95	0.01	0.001
7.00	0.01	0.001
7.05	0.01	0.001
7.10	0.01	0.001
7.15	0.01	0.001
7.20	0.01	0.001

7.25	0.01	0.001
7.30	0.01	0.001
7.35	0.01	0.001
7.40	0.01	0.001
7.45	0.01	0.001
7.50	0.01	0.001
7.55	0.01	0.001
7.60	0.01	0.001
7.65	0.01	0.001
7.70	0.01	0.001
7.75	0.01	0.001
7.80	0.01	0.001
7.85	0.01	0.001
7.90	0.01	0.001
7.95	0.01	0.001
8.00	0.01	0.001
8.05	0.01	0.002
8.10	0.01	0.002
8.15	0.02	0.002
8.20	0.02	0.002
8.25	0.02	0.002
8.30	0.02	0.002
8.35	0.02	0.002
8.40	0.02	0.002
8.45	0.02	0.002
8.50	0.02	0.002
8.55	0.02	0.002
8.60	0.02	0.002
8.65	0.02	0.002
8.70	0.02	0.002
8.75	0.02	0.003
8.80	0.03	0.003
8.85	0.03	0.003
8.90	0.03	0.003
8.95	0.03	0.003
9.00	0.03	0.003
9.05	0.03	0.003
9.10	0.04	0.003
9.15	0.04	0.004
9.20	0.04	0.004
9.25	0.05	0.004
9.30	0.05	0.004
9.35	0.05	0.004
9.40	0.05	0.005
9.45	0.06	0.005
9.50	0.06	0.005
9.55	0.06	0.005
9.60	0.07	0.006
9.65	0.07	0.006
9.70	0.08	0.006

9.75	0.08	0.007
9.80	0.09	0.007
9.85	0.09	0.007
9.90	0.10	0.008
9.95	0.10	0.008
10.00	0.11	0.008
10.05	0.11	0.009
10.10	0.12	0.009
10.15	0.12	0.010
10.20	0.13	0.010
10.25	0.13	0.011
10.30	0.14	0.012
10.35	0.15	0.012
10.40	0.16	0.013
10.45	0.16	0.013
10.50	0.17	0.014
10.55	0.18	0.015
10.60	0.20	0.016
10.65	0.21	0.017
10.70	0.23	0.017
10.75	0.24	0.018
10.80	0.26	0.019
10.85	0.29	0.021
10.90	0.31	0.022
10.95	0.33	0.023
11.00	0.36	0.025
11.05	0.39	0.026
11.10	0.42	0.028
11.15	0.45	0.030
11.20	0.49	0.032
11.25	0.53	0.034
11.30	0.57	0.036
11.35	0.61	0.039
11.40	0.66	0.041
11.45	0.70	0.044
11.50	0.75	0.047
11.55	0.81	0.050
11.60	0.90	0.054
11.65	1.00	0.058
11.70	1.12	0.062
11.75	1.24	0.067
11.80	1.39	0.073
11.85	1.56	0.079
11.90	1.81	0.086
11.95	2.10	0.094
12.00	2.65	0.104
12.05	3.26	0.116
12.10	4.36	0.132
12.15	4.86	0.152
12.20	4.14	0.171

12.25	3.72	0.186
12.30	3.52	0.201
12.35	3.44	0.216
12.40	3.36	0.230
12.45	3.32	0.243
12.50	3.28	0.257
12.55	3.25	0.270
12.60	3.20	0.284
12.65	3.18	0.297
12.70	3.18	0.310
12.75	3.18	0.323
12.80	3.18	0.336
12.85	3.18	0.350
12.90	3.17	0.363
12.95	3.17	0.376
13.00	3.17	0.389
13.05	3.16	0.402
13.10	3.15	0.415
13.15	3.15	0.428
13.20	3.14	0.441
13.25	3.13	0.454
13.30	3.12	0.467
13.35	3.11	0.480
13.40	3.10	0.493
13.45	3.09	0.505
13.50	3.07	0.518
13.55	3.06	0.531
13.60	3.03	0.543
13.65	3.01	0.556
13.70	3.00	0.568
13.75	2.99	0.580
13.80	2.98	0.593
13.85	2.97	0.605
13.90	2.96	0.617
13.95	2.95	0.630
14.00	2.94	0.642
14.05	2.93	0.654
14.10	2.92	0.666
14.15	2.91	0.678
14.20	2.90	0.690
14.25	2.89	0.702
14.30	2.88	0.714
14.35	2.87	0.726
14.40	2.86	0.738
14.45	2.85	0.749
14.50	2.84	0.761
14.55	2.83	0.773
14.60	2.82	0.785
14.65	2.81	0.796
14.70	2.80	0.808

Hydrograph for NORTH 100 YR

Time (hours)	Primary (cfs)	Primary-Volume (acre-feet)
0.00	0.00	0.000
0.05	0.00	0.000
0.10	0.00	0.000
0.15	0.00	0.000
0.20	0.00	0.000
0.25	0.00	0.000
0.30	0.00	0.000
0.35	0.00	0.000
0.40	0.00	0.000
0.45	0.00	0.000
0.50	0.00	0.000
0.55	0.00	0.000
0.60	0.00	0.000
0.65	0.00	0.000
0.70	0.00	0.000
0.75	0.00	0.000
0.80	0.00	0.000
0.85	0.00	0.000
0.90	0.00	0.000
0.95	0.00	0.000
1.00	0.00	0.000
1.05	0.00	0.000
1.10	0.00	0.000
1.15	0.00	0.000
1.20	0.00	0.000
1.25	0.00	0.000
1.30	0.00	0.000
1.35	0.00	0.000
1.40	0.00	0.000
1.45	0.00	0.000
1.50	0.00	0.000
1.55	0.00	0.000
1.60	0.00	0.000
1.65	0.00	0.000
1.70	0.00	0.000
1.75	0.00	0.000
1.80	0.00	0.000
1.85	0.00	0.000
1.90	0.00	0.000
1.95	0.00	0.000
2.00	0.00	0.000
2.05	0.00	0.000
2.10	0.00	0.000
2.15	0.00	0.000
2.20	0.00	0.000

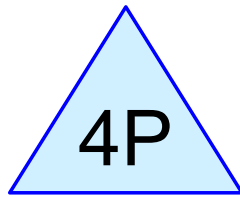
2.25	0.00	0.000
2.30	0.00	0.000
2.35	0.00	0.000
2.40	0.00	0.000
2.45	0.00	0.000
2.50	0.00	0.000
2.55	0.00	0.000
2.60	0.00	0.000
2.65	0.00	0.000
2.70	0.00	0.000
2.75	0.00	0.000
2.80	0.00	0.000
2.85	0.00	0.000
2.90	0.00	0.000
2.95	0.00	0.000
3.00	0.00	0.000
3.05	0.00	0.000
3.10	0.00	0.000
3.15	0.00	0.000
3.20	0.00	0.000
3.25	0.00	0.000
3.30	0.00	0.000
3.35	0.00	0.000
3.40	0.00	0.000
3.45	0.00	0.000
3.50	0.00	0.000
3.55	0.00	0.000
3.60	0.00	0.000
3.65	0.00	0.000
3.70	0.00	0.000
3.75	0.00	0.000
3.80	0.00	0.000
3.85	0.00	0.000
3.90	0.00	0.000
3.95	0.00	0.000
4.00	0.00	0.000
4.05	0.00	0.000
4.10	0.00	0.000
4.15	0.01	0.000
4.20	0.01	0.000
4.25	0.01	0.000
4.30	0.01	0.000
4.35	0.01	0.000
4.40	0.01	0.000
4.45	0.01	0.000
4.50	0.01	0.000
4.55	0.01	0.001
4.60	0.01	0.001
4.65	0.01	0.001
4.70	0.01	0.001

4.75	0.01	0.001
4.80	0.01	0.001
4.85	0.01	0.001
4.90	0.01	0.001
4.95	0.01	0.001
5.00	0.02	0.001
5.05	0.02	0.001
5.10	0.02	0.001
5.15	0.02	0.001
5.20	0.02	0.001
5.25	0.02	0.001
5.30	0.02	0.001
5.35	0.02	0.002
5.40	0.02	0.002
5.45	0.02	0.002
5.50	0.03	0.002
5.55	0.03	0.002
5.60	0.03	0.002
5.65	0.03	0.002
5.70	0.04	0.002
5.75	0.04	0.002
5.80	0.04	0.003
5.85	0.04	0.003
5.90	0.05	0.003
5.95	0.05	0.003
6.00	0.05	0.003
6.05	0.05	0.004
6.10	0.06	0.004
6.15	0.06	0.004
6.20	0.06	0.004
6.25	0.07	0.005
6.30	0.07	0.005
6.35	0.08	0.005
6.40	0.08	0.006
6.45	0.09	0.006
6.50	0.09	0.006
6.55	0.10	0.007
6.60	0.10	0.007
6.65	0.11	0.008
6.70	0.11	0.008
6.75	0.12	0.009
6.80	0.12	0.009
6.85	0.13	0.010
6.90	0.14	0.010
6.95	0.14	0.011
7.00	0.15	0.011
7.05	0.16	0.012
7.10	0.16	0.013
7.15	0.17	0.013
7.20	0.18	0.014

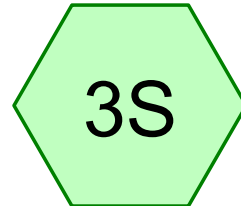
7.25	0.18	0.015
7.30	0.19	0.016
7.35	0.20	0.016
7.40	0.21	0.017
7.45	0.21	0.018
7.50	0.22	0.019
7.55	0.23	0.020
7.60	0.24	0.021
7.65	0.25	0.022
7.70	0.26	0.023
7.75	0.27	0.024
7.80	0.27	0.025
7.85	0.28	0.026
7.90	0.29	0.027
7.95	0.30	0.029
8.00	0.31	0.030
8.05	0.32	0.031
8.10	0.33	0.033
8.15	0.34	0.034
8.20	0.35	0.035
8.25	0.36	0.037
8.30	0.36	0.038
8.35	0.37	0.040
8.40	0.38	0.041
8.45	0.39	0.043
8.50	0.40	0.045
8.55	0.41	0.046
8.60	0.42	0.048
8.65	0.43	0.050
8.70	0.44	0.052
8.75	0.45	0.053
8.80	0.46	0.055
8.85	0.47	0.057
8.90	0.48	0.059
8.95	0.49	0.061
9.00	0.50	0.063
9.05	0.51	0.065
9.10	0.54	0.068
9.15	0.56	0.070
9.20	0.59	0.072
9.25	0.61	0.075
9.30	0.64	0.077
9.35	0.66	0.080
9.40	0.69	0.083
9.45	0.72	0.086
9.50	0.74	0.089
9.55	0.76	0.092
9.60	0.79	0.095
9.65	0.82	0.098
9.70	0.84	0.102

9.75	0.86	0.105
9.80	0.89	0.109
9.85	0.91	0.113
9.90	0.93	0.117
9.95	0.96	0.120
10.00	0.98	0.124
10.05	1.00	0.129
10.10	1.02	0.133
10.15	1.04	0.137
10.20	1.06	0.141
10.25	1.08	0.146
10.30	1.09	0.150
10.35	1.11	0.155
10.40	1.13	0.159
10.45	1.15	0.164
10.50	1.17	0.169
10.55	1.20	0.174
10.60	1.25	0.179
10.65	1.30	0.184
10.70	1.35	0.190
10.75	1.40	0.195
10.80	1.46	0.201
10.85	1.51	0.208
10.90	1.57	0.214
10.95	1.63	0.221
11.00	1.70	0.228
11.05	1.76	0.235
11.10	1.83	0.242
11.15	1.89	0.250
11.20	1.97	0.258
11.25	2.03	0.266
11.30	2.11	0.275
11.35	2.18	0.284
11.40	2.26	0.293
11.45	2.33	0.302
11.50	2.41	0.312
11.55	2.51	0.322
11.60	2.71	0.333
11.65	2.89	0.345
11.70	3.15	0.357
11.75	3.39	0.371
11.80	3.77	0.386
11.85	4.13	0.402
11.90	4.69	0.421
11.95	5.38	0.442
12.00	7.20	0.468
12.05	24.37	0.536
12.10	50.39	0.699
12.15	68.07	0.962
12.20	65.52	1.238

12.25	56.94	1.494
12.30	44.36	1.696
12.35	36.87	1.860
12.40	31.90	1.999
12.45	28.41	2.122
12.50	25.53	2.232
12.55	23.04	2.331
12.60	20.55	2.420
12.65	18.28	2.500
12.70	16.44	2.570
12.75	15.01	2.635
12.80	13.83	2.694
12.85	12.87	2.748
12.90	12.01	2.799
12.95	11.26	2.847
13.00	10.61	2.892
13.05	10.02	2.934
13.10	9.48	2.974
13.15	8.99	3.012
13.20	8.56	3.048
13.25	8.18	3.083
13.30	7.79	3.116
13.35	7.44	3.147
13.40	7.08	3.177
13.45	6.76	3.205
13.50	6.47	3.233
13.55	6.17	3.259
13.60	5.76	3.283
13.65	5.35	3.306
13.70	5.00	3.327
13.75	4.76	3.347
13.80	4.58	3.366
13.85	4.42	3.385
13.90	4.27	3.403
13.95	4.15	3.420
14.00	4.03	3.437
14.05	3.94	3.453
14.10	3.85	3.469
14.15	3.77	3.485
14.20	3.70	3.500
14.25	3.64	3.515
14.30	3.61	3.530
14.35	3.59	3.545
14.40	3.56	3.560
14.45	3.53	3.575
14.50	3.50	3.589
14.55	3.47	3.604
14.60	3.45	3.618
14.65	3.42	3.632
14.70	3.40	3.646



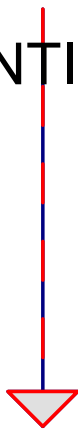
4P



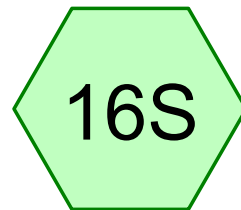
3S

BIORETENTION BASIN

WEST DETAINED



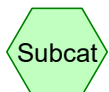
4L



16S

TOTAL TO WEST

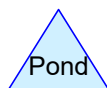
WEST UNDETAINED



Subcat



Reach



Pond



Link

Routing Diagram for 2026-08-19 hydrocad

Prepared by Pinnacle Engineering Group, Printed 8/19/2026
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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.694	74	GRASS (3S, 16S)
0.603	98	PAVEMENT (3S, 16S)
1.297	85	TOTAL AREA

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	4P	43.55	43.50	34.0	0.0015	0.013	8.0	0.0	0.0

2026-08-19 hydrocad

MSE 24-hr 3 1-year Rainfall=2.34"

Prepared by Pinnacle Engineering Group

Printed 8/19/2026

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Page 4

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

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

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

Subcatchment 3S: WEST DETAINED

Runoff Area=1.071 ac 53.13% Impervious Runoff Depth=1.18"

Tc=6.0 min CN=87 Runoff=2.35 cfs 0.105 af

Subcatchment 16S: WEST UNDETAINED

Runoff Area=0.226 ac 15.04% Impervious Runoff Depth=0.69"

Tc=6.0 min CN=78 Runoff=0.28 cfs 0.013 af

Pond 4P: BIORETENTION BASIN

Peak Elev=44.41' Storage=0.067 af Inflow=2.35 cfs 0.105 af

Discarded=0.01 cfs 0.051 af Primary=0.12 cfs 0.040 af Secondary=0.00 cfs 0.000 af Outflow=0.13 cfs 0.091 af

Link 4L: TOTAL TO WEST

Inflow=0.28 cfs 0.053 af

Primary=0.28 cfs 0.053 af

Total Runoff Area = 1.297 ac Runoff Volume = 0.118 af Average Runoff Depth = 1.09"

53.51% Pervious = 0.694 ac 46.49% Impervious = 0.603 ac

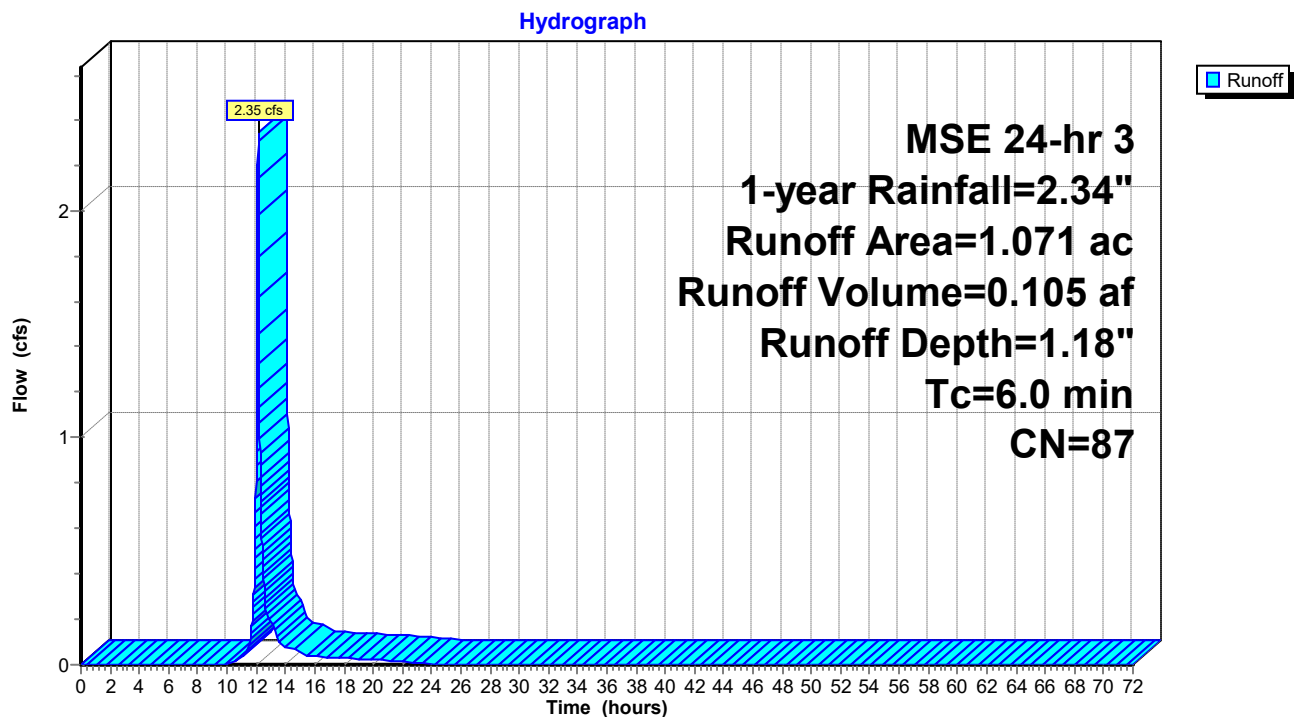
Summary for Subcatchment 3S: WEST DETAINED

Runoff = 2.35 cfs @ 12.13 hrs, Volume= 0.105 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 1-year Rainfall=2.34"

Area (ac)	CN	Description
* 0.502	74	GRASS
* 0.569	98	PAVEMENT
1.071	87	Weighted Average
0.502		46.87% Pervious Area
0.569		53.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 3S: WEST DETAINED

Summary for Subcatchment 16S: WEST UNDETAINED

Runoff = 0.28 cfs @ 12.14 hrs, Volume= 0.013 af, Depth= 0.69"

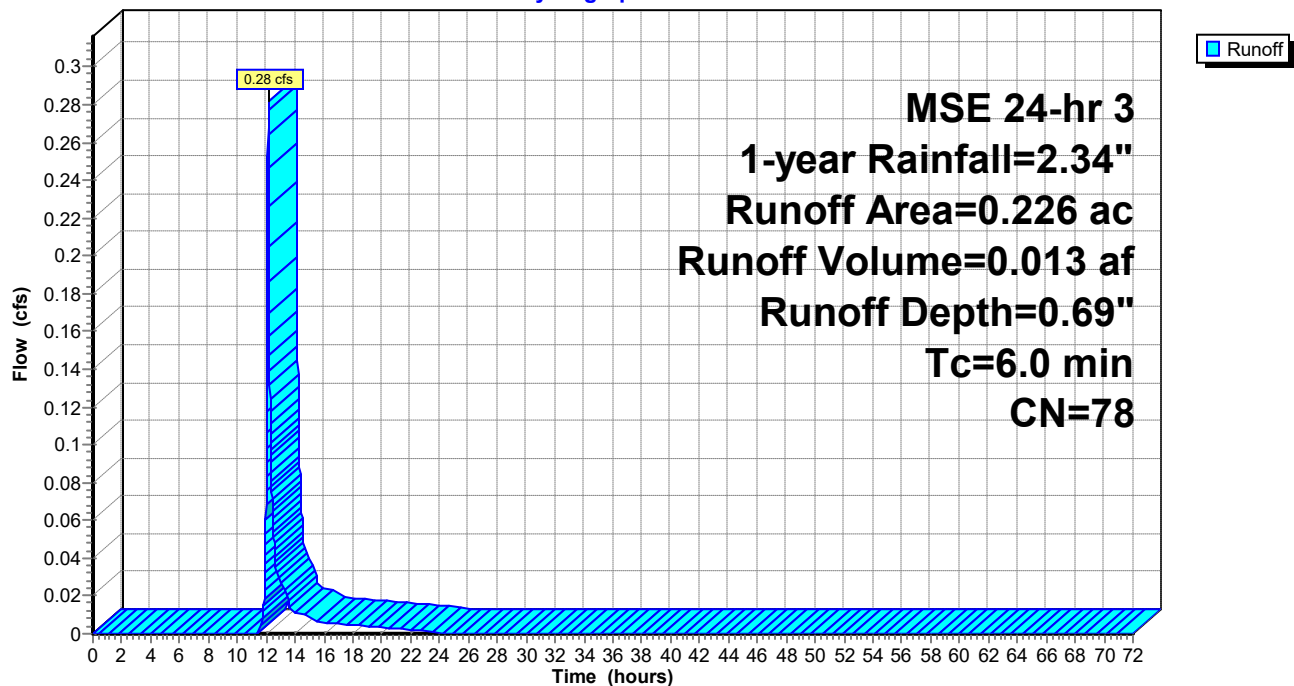
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 1-year Rainfall=2.34"

Area (ac)	CN	Description
* 0.192	74	GRASS
* 0.034	98	PAVEMENT
0.226	78	Weighted Average
0.192		84.96% Pervious Area
0.034		15.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 16S: WEST UNDETAINED

Hydrograph



Summary for Pond 4P: BIORETENTION BASIN

Inflow Area = 1.071 ac, 53.13% Impervious, Inflow Depth = 1.18" for 1-year event
 Inflow = 2.35 cfs @ 12.13 hrs, Volume= 0.105 af
 Outflow = 0.13 cfs @ 13.39 hrs, Volume= 0.091 af, Atten= 94%, Lag= 75.2 min
 Discarded = 0.01 cfs @ 13.39 hrs, Volume= 0.051 af
 Primary = 0.12 cfs @ 13.39 hrs, Volume= 0.040 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 44.41' @ 13.39 hrs Surf.Area= 0.077 ac Storage= 0.067 af

Plug-Flow detention time= 1,031.2 min calculated for 0.091 af (86% of inflow)
 Center-of-Mass det. time= 977.4 min (1,784.6 - 807.3)

Volume	Invert	Avail.Storage	Storage Description	
#1	42.00'	0.344 af	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (acres)	Voids (%)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
42.00	0.069	0.0	0.000	0.000
43.00	0.069	27.0	0.019	0.019
44.00	0.069	27.0	0.019	0.037
45.00	0.089	100.0	0.079	0.116
46.00	0.114	100.0	0.101	0.218
47.00	0.139	100.0	0.126	0.344

Device	Routing	Invert	Outlet Devices
#1	Discarded	42.00'	0.130 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 20.00'
#2	Primary	43.55'	8.0" Round Culvert L= 34.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 43.55' / 43.50' S= 0.0015 ' / Cc= 0.900 n= 0.013, Flow Area= 0.35 sf
#3	Device 2	44.20'	6.0" Vert. Orifice/Grate C= 0.600
#4	Device 2	45.50'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	46.00'	10.0' long x 16.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

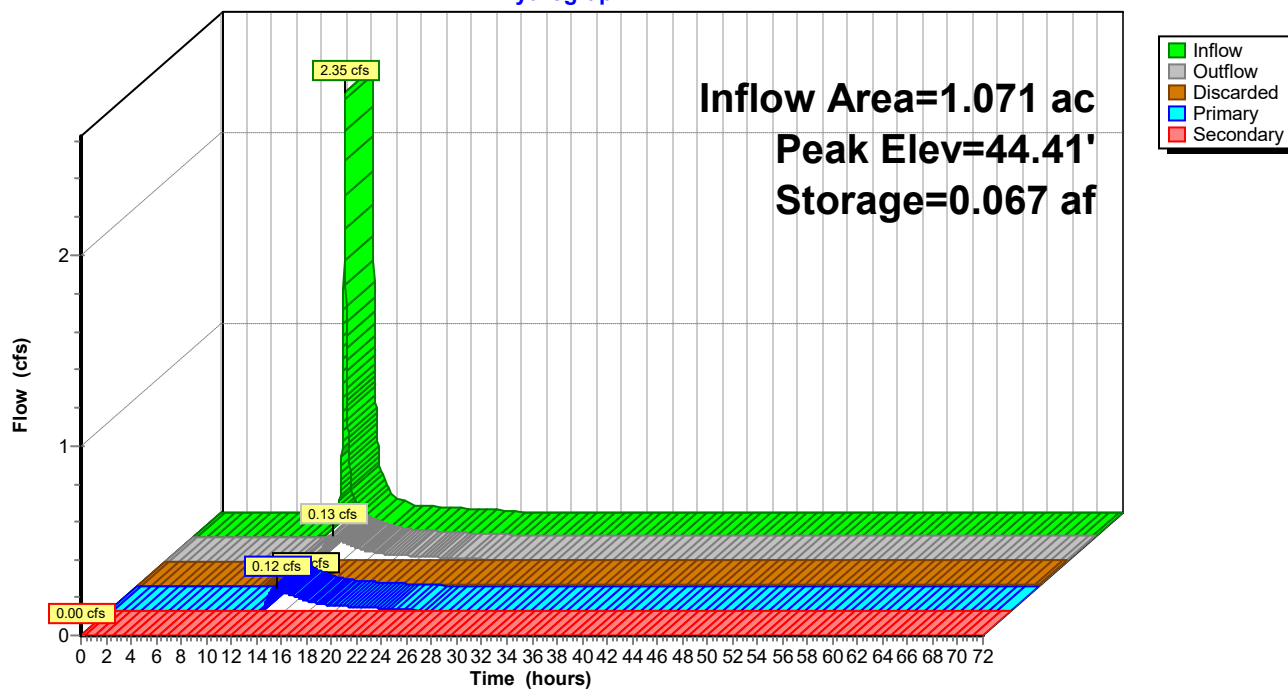
Discarded OutFlow Max=0.01 cfs @ 13.39 hrs HW=44.41' (Free Discharge)
 ↑ **1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.12 cfs @ 13.39 hrs HW=44.41' (Free Discharge)
 ↑ **2=Culvert** (Passes 0.12 cfs of 0.81 cfs potential flow)
 ↑ **3=Orifice/Grate** (Orifice Controls 0.12 cfs @ 1.56 fps)
 ↑ **4=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)
 ↑ **5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 4P: BIORETENTION BASIN

Hydrograph



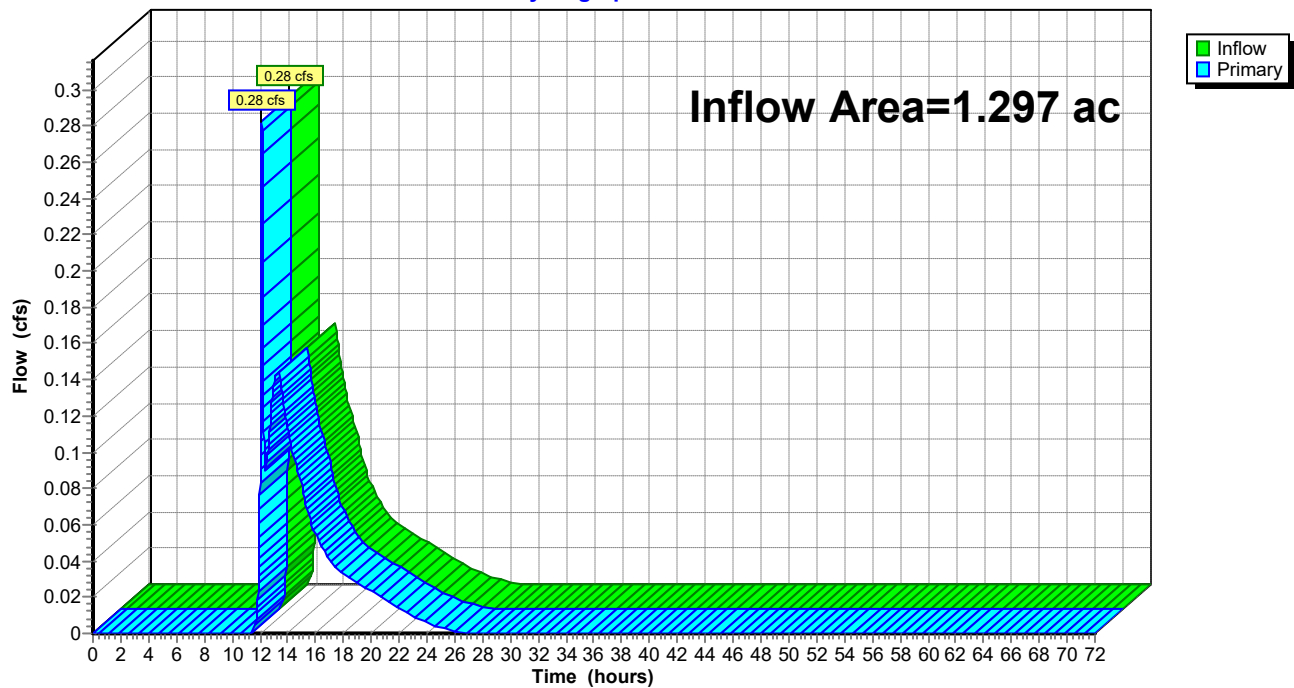
Summary for Link 4L: TOTAL TO WEST

Inflow Area = 1.297 ac, 46.49% Impervious, Inflow Depth = 0.49" for 1-year event
Inflow = 0.28 cfs @ 12.14 hrs, Volume= 0.053 af
Primary = 0.28 cfs @ 12.14 hrs, Volume= 0.053 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 4L: TOTAL TO WEST

Hydrograph



2026-08-19 hydrocad

MSE 24-hr 3 2-year Rainfall=2.64"

Prepared by Pinnacle Engineering Group

Printed 8/19/2026

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

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

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

Subcatchment 3S: WEST DETAINED

Runoff Area=1.071 ac 53.13% Impervious Runoff Depth=1.43"

Tc=6.0 min CN=87 Runoff=2.84 cfs 0.128 af

Subcatchment 16S: WEST UNDETAINED

Runoff Area=0.226 ac 15.04% Impervious Runoff Depth=0.88"

Tc=6.0 min CN=78 Runoff=0.37 cfs 0.017 af

Pond 4P: BIORETENTION BASIN

Peak Elev=44.50' Storage=0.074 af Inflow=2.84 cfs 0.128 af

Discarded=0.01 cfs 0.051 af Primary=0.23 cfs 0.062 af Secondary=0.00 cfs 0.000 af Outflow=0.24 cfs 0.113 af

Link 4L: TOTAL TO WEST

Inflow=0.37 cfs 0.078 af

Primary=0.37 cfs 0.078 af

Total Runoff Area = 1.297 ac Runoff Volume = 0.144 af Average Runoff Depth = 1.33"

53.51% Pervious = 0.694 ac 46.49% Impervious = 0.603 ac

Summary for Subcatchment 3S: WEST DETAINED

Runoff = 2.84 cfs @ 12.13 hrs, Volume= 0.128 af, Depth= 1.43"

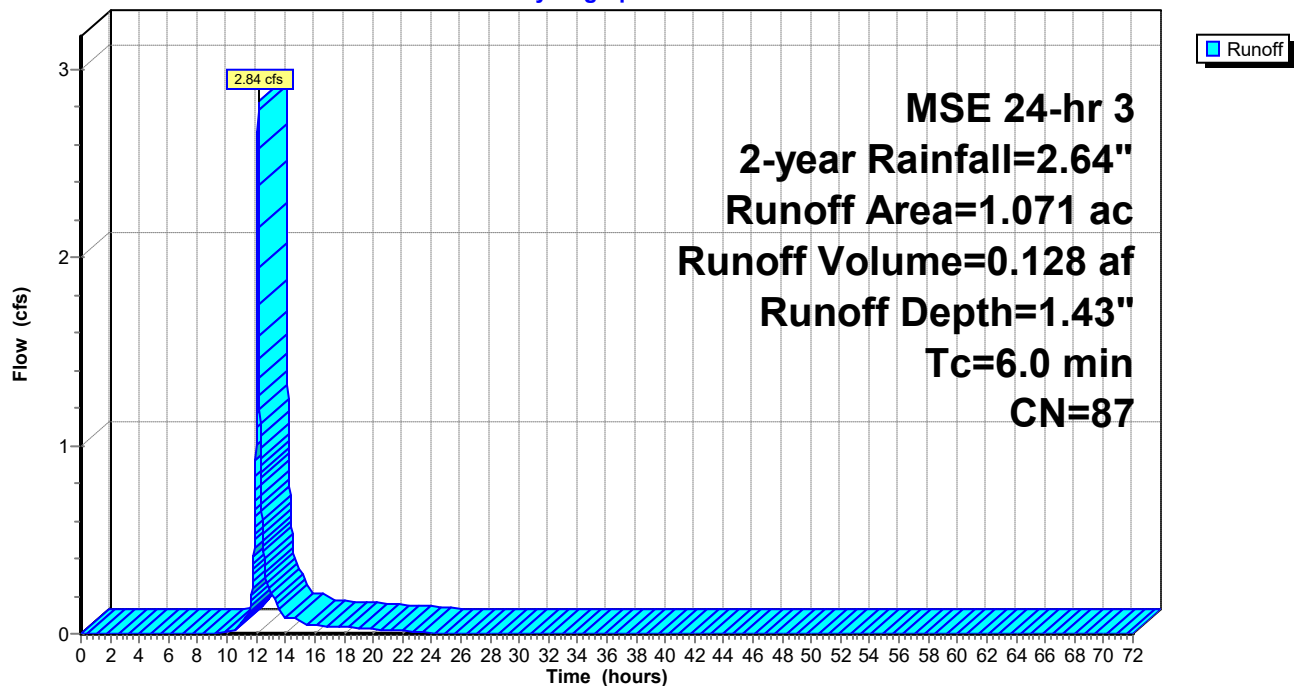
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-year Rainfall=2.64"

Area (ac)	CN	Description
* 0.502	74	GRASS
* 0.569	98	PAVEMENT
1.071	87	Weighted Average
0.502		46.87% Pervious Area
0.569		53.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 3S: WEST DETAINED

Hydrograph



Summary for Subcatchment 16S: WEST UNDETAINED

Runoff = 0.37 cfs @ 12.14 hrs, Volume= 0.017 af, Depth= 0.88"

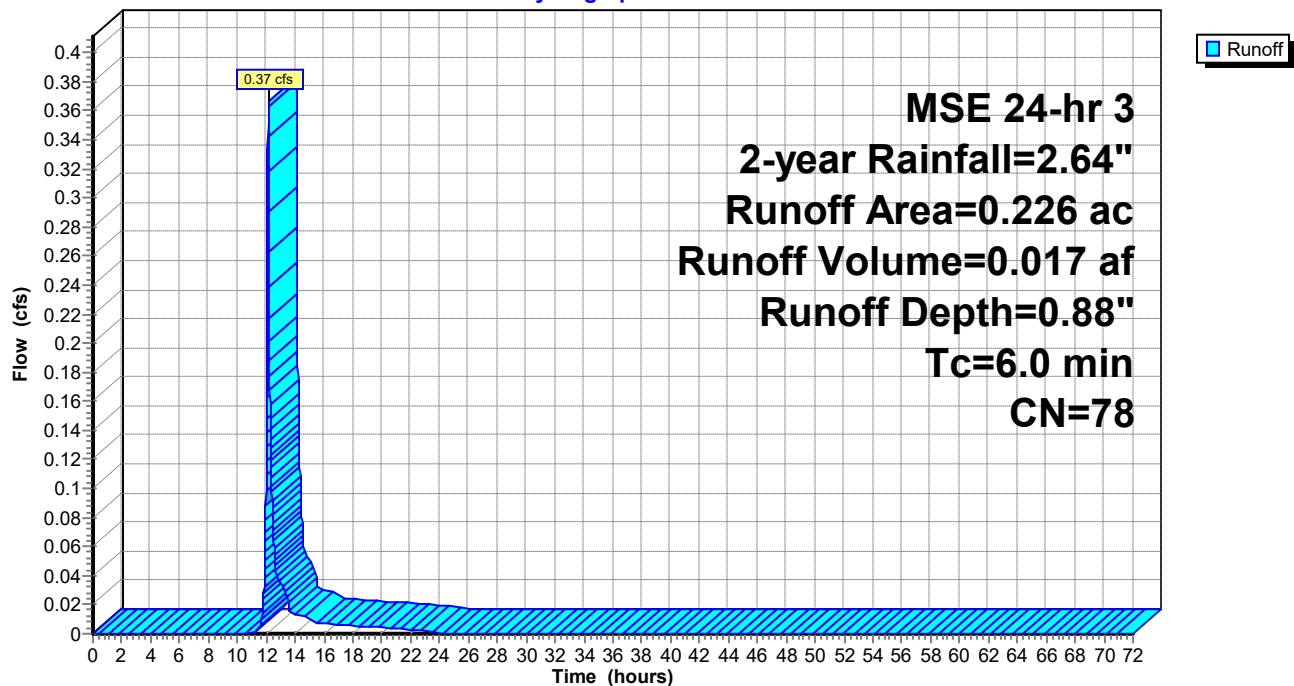
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-year Rainfall=2.64"

	Area (ac)	CN	Description
*	0.192	74	GRASS
*	0.034	98	PAVEMENT
	0.226	78	Weighted Average
	0.192		84.96% Pervious Area
	0.034		15.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 16S: WEST UNDETAINED

Hydrograph



Summary for Pond 4P: BIORETENTION BASIN

Inflow Area = 1.071 ac, 53.13% Impervious, Inflow Depth = 1.43" for 2-year event
 Inflow = 2.84 cfs @ 12.13 hrs, Volume= 0.128 af
 Outflow = 0.24 cfs @ 12.88 hrs, Volume= 0.113 af, Atten= 91%, Lag= 45.0 min
 Discarded = 0.01 cfs @ 12.88 hrs, Volume= 0.051 af
 Primary = 0.23 cfs @ 12.88 hrs, Volume= 0.062 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 44.50' @ 12.88 hrs Surf.Area= 0.079 ac Storage= 0.074 af

Plug-Flow detention time= 845.8 min calculated for 0.113 af (88% of inflow)
 Center-of-Mass det. time= 798.5 min (1,601.8 - 803.3)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	0.344 af	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Voids (%)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
42.00	0.069	0.0	0.000	0.000
43.00	0.069	27.0	0.019	0.019
44.00	0.069	27.0	0.019	0.037
45.00	0.089	100.0	0.079	0.116
46.00	0.114	100.0	0.101	0.218
47.00	0.139	100.0	0.126	0.344

Device	Routing	Invert	Outlet Devices
#1	Discarded	42.00'	0.130 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 20.00'
#2	Primary	43.55'	8.0" Round Culvert L= 34.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 43.55' / 43.50' S= 0.0015 ' / Cc= 0.900 n= 0.013, Flow Area= 0.35 sf
#3	Device 2	44.20'	6.0" Vert. Orifice/Grate C= 0.600
#4	Device 2	45.50'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	46.00'	10.0' long x 16.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

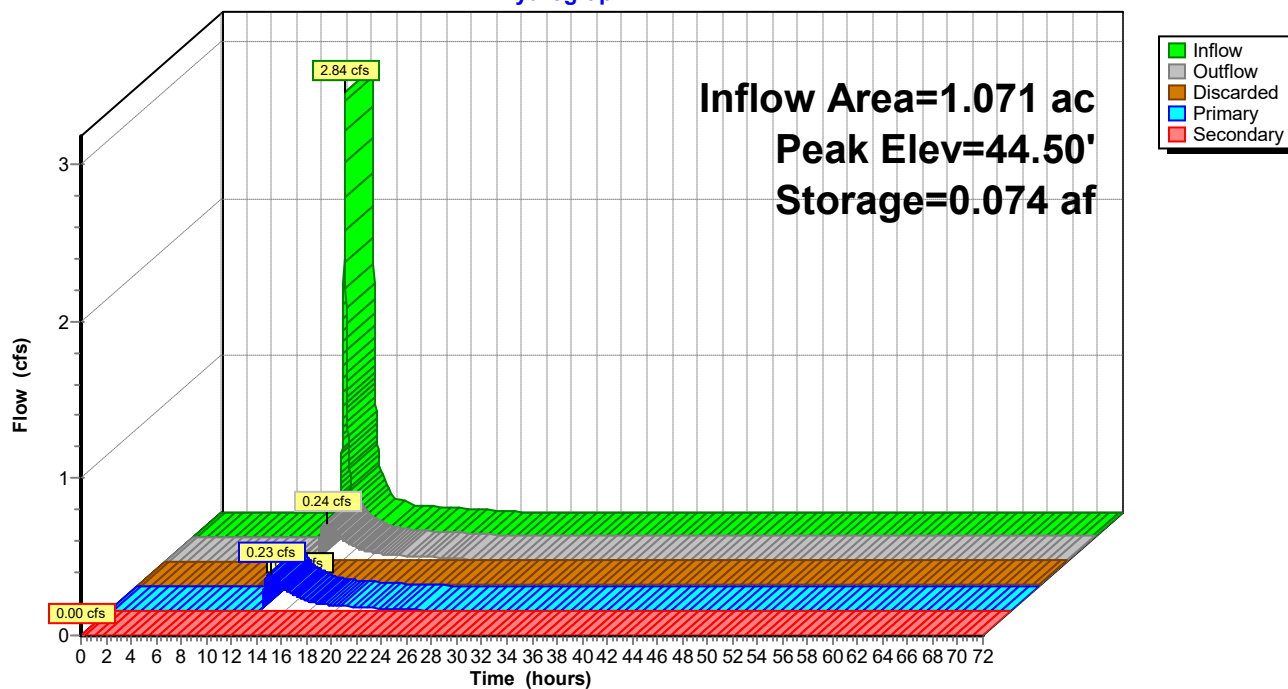
Discarded OutFlow Max=0.01 cfs @ 12.88 hrs HW=44.50' (Free Discharge)
 ↑ **1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.23 cfs @ 12.88 hrs HW=44.50' (Free Discharge)
 ↑ **2=Culvert** (Passes 0.23 cfs of 0.89 cfs potential flow)
 ↑ **3=Orifice/Grate** (Orifice Controls 0.23 cfs @ 1.87 fps)
 ↑ **4=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)
 ↑ **5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 4P: BIORETENTION BASIN

Hydrograph



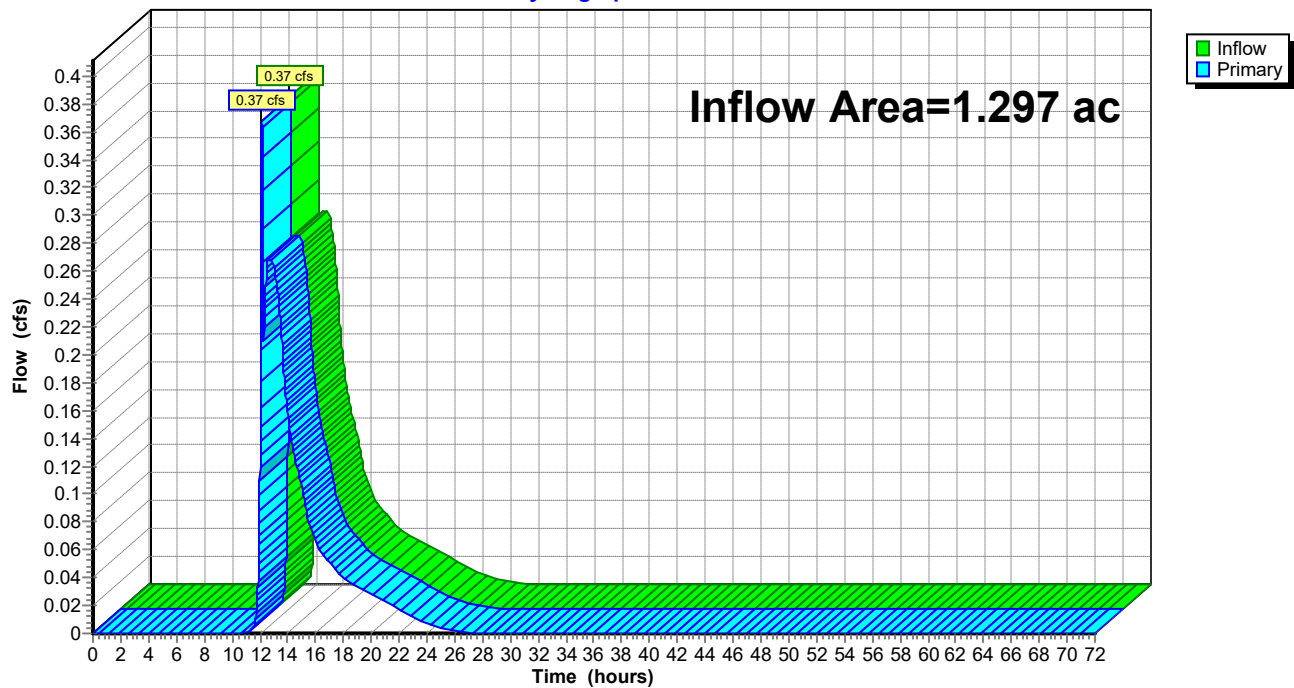
Summary for Link 4L: TOTAL TO WEST

Inflow Area = 1.297 ac, 46.49% Impervious, Inflow Depth = 0.72" for 2-year event
Inflow = 0.37 cfs @ 12.14 hrs, Volume= 0.078 af
Primary = 0.37 cfs @ 12.14 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 4L: TOTAL TO WEST

Hydrograph



2026-08-19 hydrocad

MSE 24-hr 3 10-year Rainfall=3.70"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

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

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

Subcatchment 3S: WEST DETAINED

Runoff Area=1.071 ac 53.13% Impervious Runoff Depth=2.36"
Tc=6.0 min CN=87 Runoff=4.61 cfs 0.211 af

Subcatchment 16S: WEST UNDETAINED

Runoff Area=0.226 ac 15.04% Impervious Runoff Depth=1.65"
Tc=6.0 min CN=78 Runoff=0.70 cfs 0.031 af

Pond 4P: BIORETENTION BASIN

Peak Elev=44.95' Storage=0.112 af Inflow=4.61 cfs 0.211 af
Discarded=0.01 cfs 0.052 af Primary=0.67 cfs 0.143 af Secondary=0.00 cfs 0.000 af Outflow=0.68 cfs 0.195 af

Link 4L: TOTAL TO WEST

Inflow=1.05 cfs 0.174 af
Primary=1.05 cfs 0.174 af

Total Runoff Area = 1.297 ac Runoff Volume = 0.242 af Average Runoff Depth = 2.24"
53.51% Pervious = 0.694 ac 46.49% Impervious = 0.603 ac

Summary for Subcatchment 3S: WEST DETAINED

Runoff = 4.61 cfs @ 12.13 hrs, Volume= 0.211 af, Depth= 2.36"

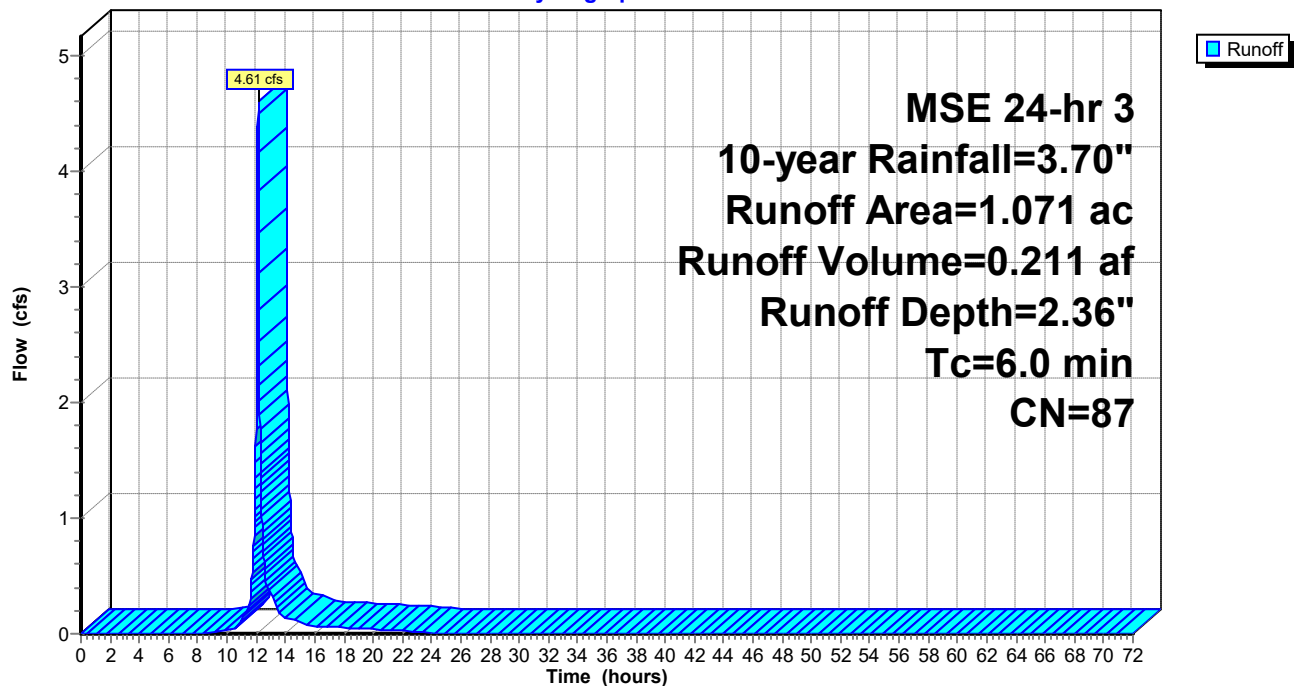
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-year Rainfall=3.70"

Area (ac)	CN	Description
* 0.502	74	GRASS
* 0.569	98	PAVEMENT
1.071	87	Weighted Average
0.502		46.87% Pervious Area
0.569		53.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 3S: WEST DETAINED

Hydrograph



Summary for Subcatchment 16S: WEST UNDETAINED

Runoff = 0.70 cfs @ 12.14 hrs, Volume= 0.031 af, Depth= 1.65"

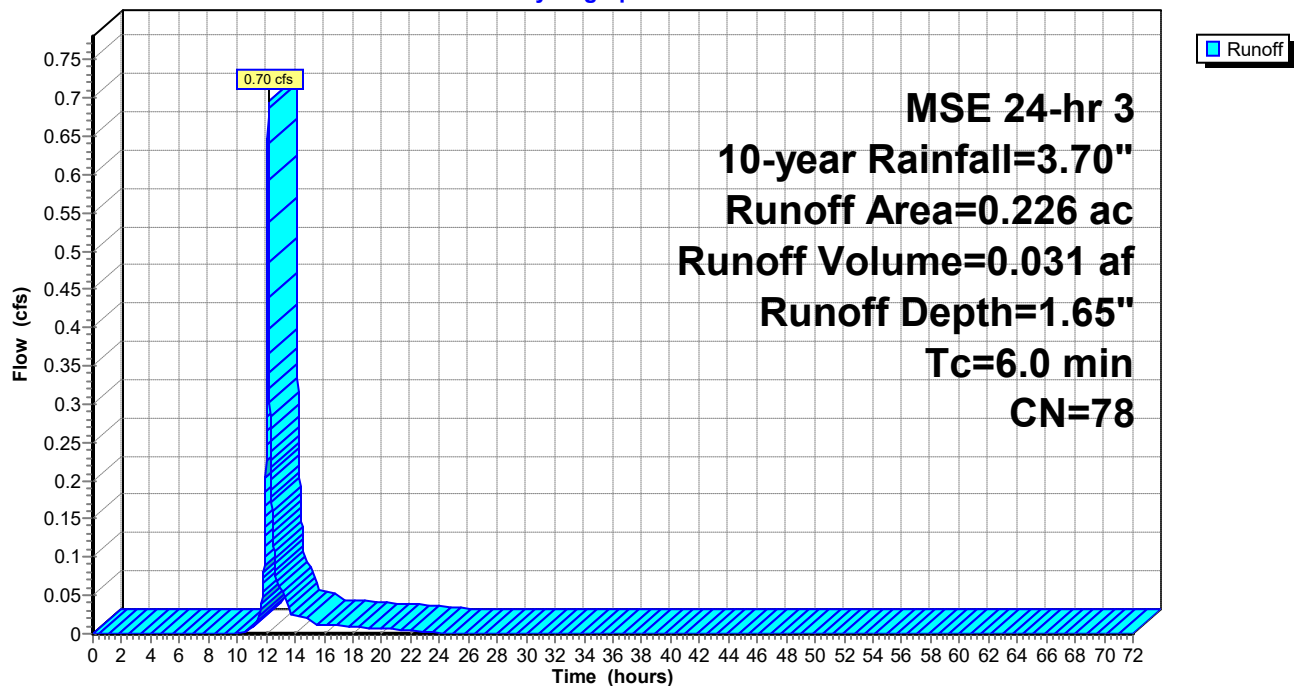
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-year Rainfall=3.70"

Area (ac)	CN	Description
* 0.192	74	GRASS
* 0.034	98	PAVEMENT
0.226	78	Weighted Average
0.192		84.96% Pervious Area
0.034		15.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 16S: WEST UNDETAINED

Hydrograph



Summary for Pond 4P: BIORETENTION BASIN

Inflow Area = 1.071 ac, 53.13% Impervious, Inflow Depth = 2.36" for 10-year event
 Inflow = 4.61 cfs @ 12.13 hrs, Volume= 0.211 af
 Outflow = 0.68 cfs @ 12.51 hrs, Volume= 0.195 af, Atten= 85%, Lag= 22.9 min
 Discarded = 0.01 cfs @ 12.51 hrs, Volume= 0.052 af
 Primary = 0.67 cfs @ 12.51 hrs, Volume= 0.143 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 44.95' @ 12.51 hrs Surf.Area= 0.088 ac Storage= 0.112 af

Plug-Flow detention time= 521.2 min calculated for 0.195 af (93% of inflow)
 Center-of-Mass det. time= 487.7 min (1,281.0 - 793.3)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	0.344 af	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Voids (%)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
42.00	0.069	0.0	0.000	0.000
43.00	0.069	27.0	0.019	0.019
44.00	0.069	27.0	0.019	0.037
45.00	0.089	100.0	0.079	0.116
46.00	0.114	100.0	0.101	0.218
47.00	0.139	100.0	0.126	0.344

Device	Routing	Invert	Outlet Devices
#1	Discarded	42.00'	0.130 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 20.00'
#2	Primary	43.55'	8.0" Round Culvert L= 34.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 43.55' / 43.50' S= 0.0015 ' / Cc= 0.900 n= 0.013, Flow Area= 0.35 sf
#3	Device 2	44.20'	6.0" Vert. Orifice/Grate C= 0.600
#4	Device 2	45.50'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	46.00'	10.0' long x 16.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

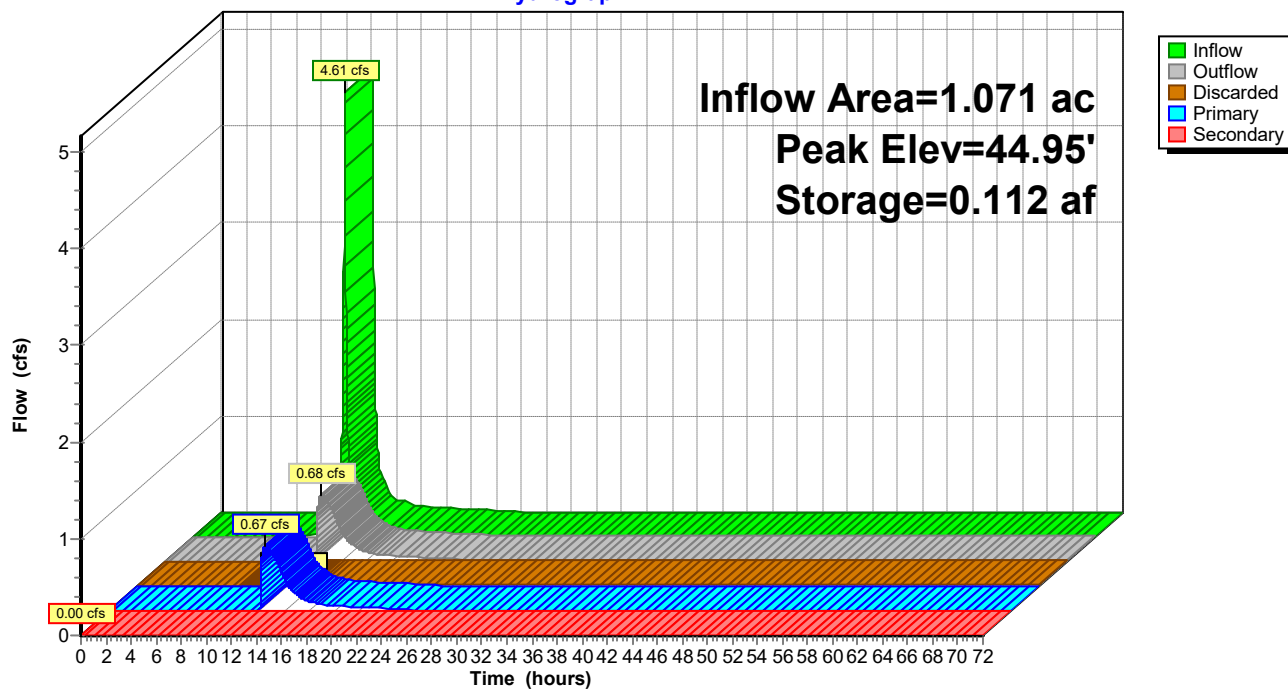
Discarded OutFlow Max=0.01 cfs @ 12.51 hrs HW=44.95' (Free Discharge)
 ↑ **1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.67 cfs @ 12.51 hrs HW=44.95' (Free Discharge)
 ↑ **2=Culvert** (Passes 0.67 cfs of 1.36 cfs potential flow)
 ↑ **3=Orifice/Grate** (Orifice Controls 0.67 cfs @ 3.41 fps)
 ↑ **4=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)
 ↑ **5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 4P: BIORETENTION BASIN

Hydrograph



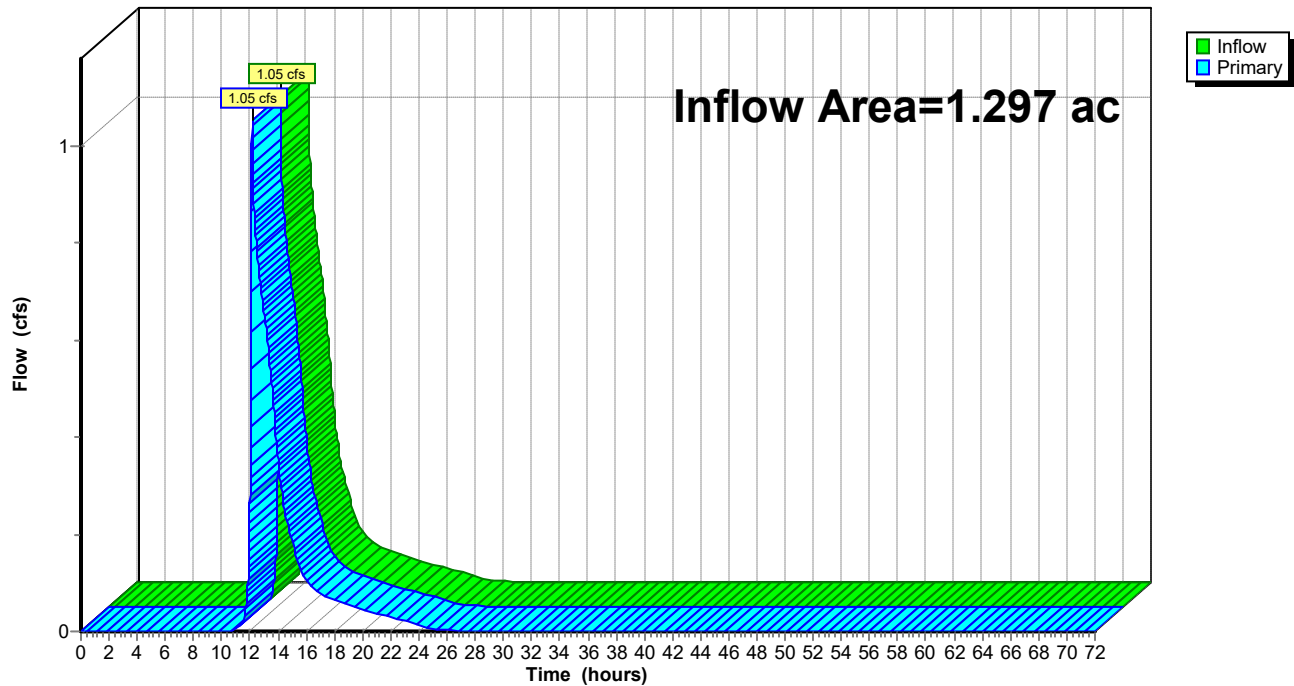
Summary for Link 4L: TOTAL TO WEST

Inflow Area = 1.297 ac, 46.49% Impervious, Inflow Depth = 1.61" for 10-year event
Inflow = 1.05 cfs @ 12.16 hrs, Volume= 0.174 af
Primary = 1.05 cfs @ 12.16 hrs, Volume= 0.174 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 4L: TOTAL TO WEST

Hydrograph



2026-08-19 hydrocad

MSE 24-hr 3 100-year Rainfall=5.97"

Prepared by Pinnacle Engineering Group

Printed 8/19/2026

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 3S: WEST DETAINED

Runoff Area=1.071 ac 53.13% Impervious Runoff Depth=4.49"
Tc=6.0 min CN=87 Runoff=8.45 cfs 0.401 af

Subcatchment 16S: WEST UNDETAINED

Runoff Area=0.226 ac 15.04% Impervious Runoff Depth=3.55"
Tc=6.0 min CN=78 Runoff=1.48 cfs 0.067 af

Pond 4P: BIORETENTION BASIN

Peak Elev=45.83' Storage=0.199 af Inflow=8.45 cfs 0.401 af
Discarded=0.02 cfs 0.055 af Primary=1.98 cfs 0.330 af Secondary=0.00 cfs 0.000 af Outflow=2.00 cfs 0.385 af

Link 4L: TOTAL TO WEST

Inflow=2.81 cfs 0.397 af
Primary=2.81 cfs 0.397 af

Total Runoff Area = 1.297 ac Runoff Volume = 0.468 af Average Runoff Depth = 4.33"
53.51% Pervious = 0.694 ac 46.49% Impervious = 0.603 ac

Summary for Subcatchment 3S: WEST DETAINED

Runoff = 8.45 cfs @ 12.13 hrs, Volume= 0.401 af, Depth= 4.49"

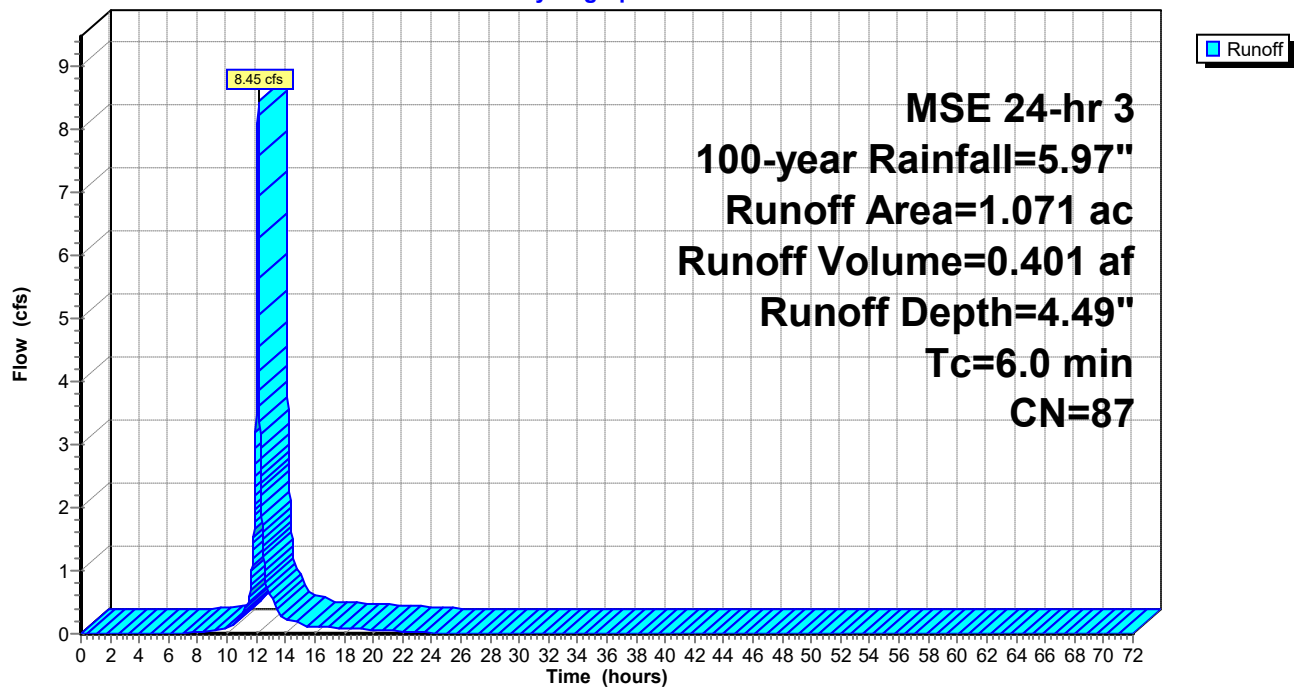
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-year Rainfall=5.97"

Area (ac)	CN	Description
* 0.502	74	GRASS
* 0.569	98	PAVEMENT
1.071	87	Weighted Average
0.502		46.87% Pervious Area
0.569		53.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 3S: WEST DETAINED

Hydrograph



Summary for Subcatchment 16S: WEST UNDETAINED

Runoff = 1.48 cfs @ 12.13 hrs, Volume= 0.067 af, Depth= 3.55"

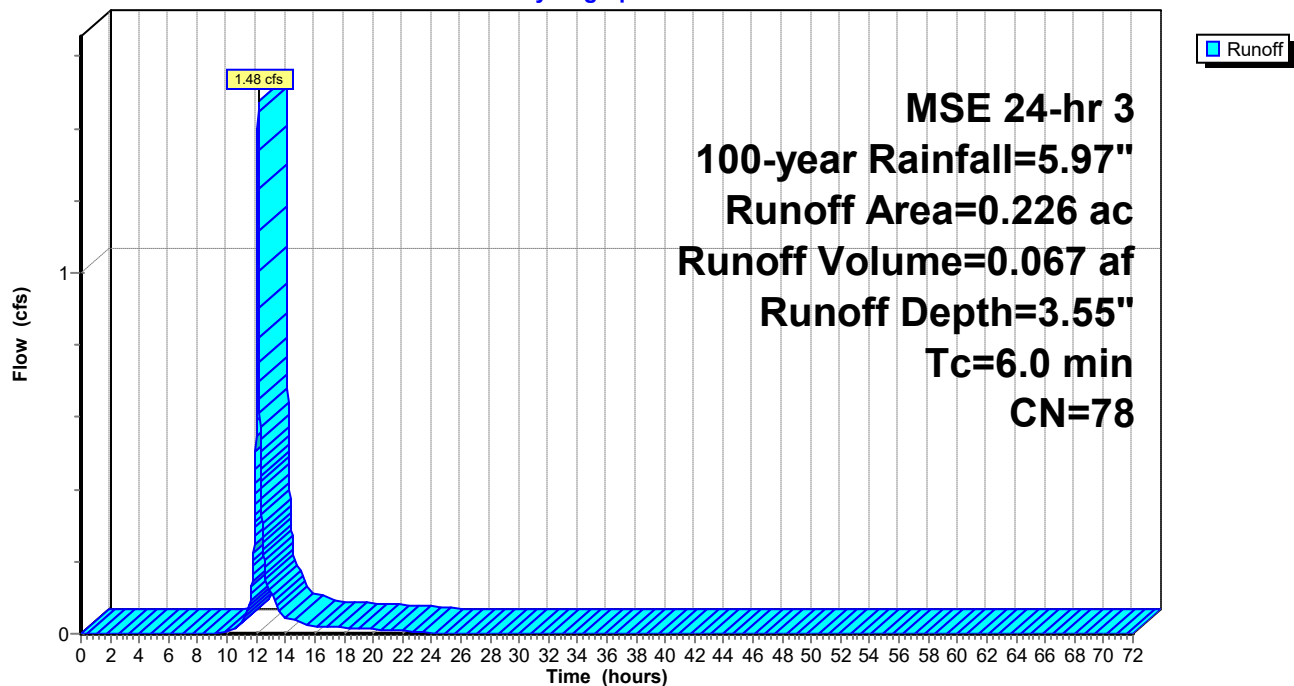
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-year Rainfall=5.97"

Area (ac)	CN	Description
* 0.192	74	GRASS
* 0.034	98	PAVEMENT
0.226	78	Weighted Average
0.192		84.96% Pervious Area
0.034		15.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 16S: WEST UNDETAINED

Hydrograph



Summary for Pond 4P: BIORETENTION BASIN

Inflow Area = 1.071 ac, 53.13% Impervious, Inflow Depth = 4.49" for 100-year event
 Inflow = 8.45 cfs @ 12.13 hrs, Volume= 0.401 af
 Outflow = 2.00 cfs @ 12.36 hrs, Volume= 0.385 af, Atten= 76%, Lag= 13.7 min
 Discarded = 0.02 cfs @ 12.36 hrs, Volume= 0.055 af
 Primary = 1.98 cfs @ 12.36 hrs, Volume= 0.330 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 45.83' @ 12.36 hrs Surf.Area= 0.110 ac Storage= 0.199 af

Plug-Flow detention time= 305.6 min calculated for 0.384 af (96% of inflow)
 Center-of-Mass det. time= 285.0 min (1,065.5 - 780.5)

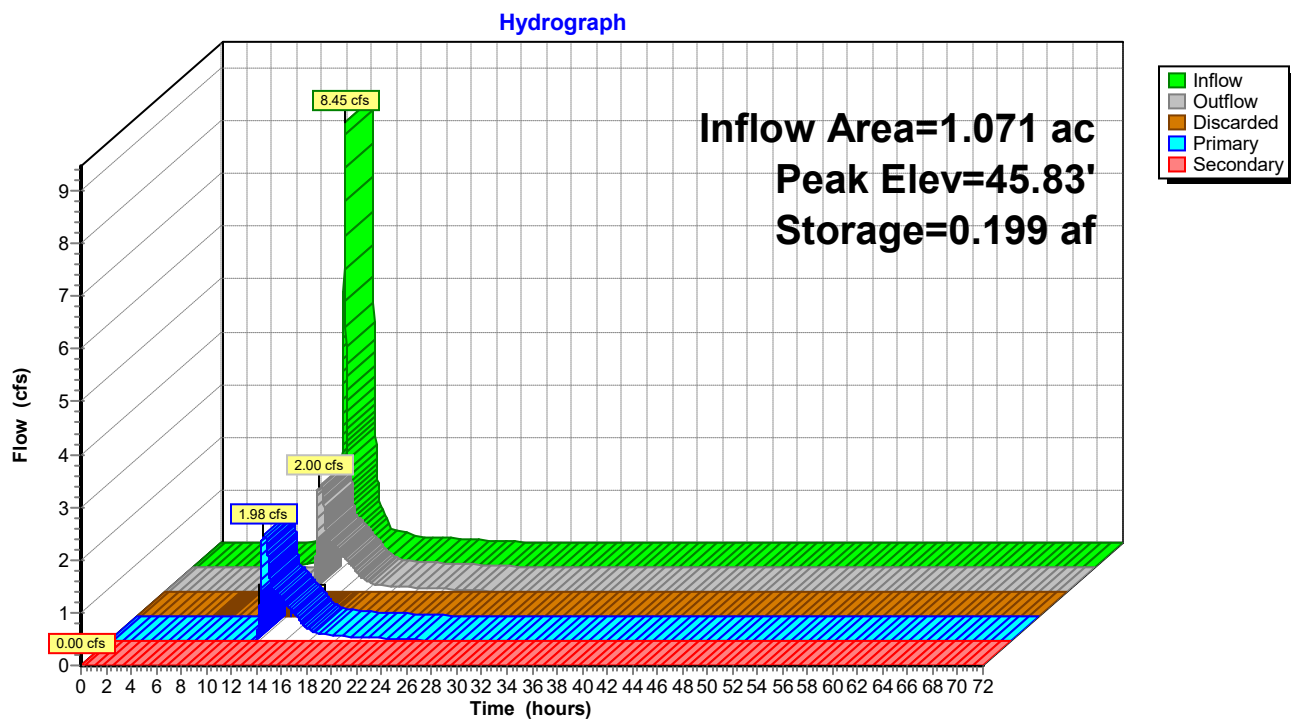
Volume	Invert	Avail.Storage	Storage Description	
#1	42.00'	0.344 af	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (acres)	Voids (%)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
42.00	0.069	0.0	0.000	0.000
43.00	0.069	27.0	0.019	0.019
44.00	0.069	27.0	0.019	0.037
45.00	0.089	100.0	0.079	0.116
46.00	0.114	100.0	0.101	0.218
47.00	0.139	100.0	0.126	0.344

Device	Routing	Invert	Outlet Devices
#1	Discarded	42.00'	0.130 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 20.00'
#2	Primary	43.55'	8.0" Round Culvert L= 34.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 43.55' / 43.50' S= 0.0015 ' / Cc= 0.900 n= 0.013, Flow Area= 0.35 sf
#3	Device 2	44.20'	6.0" Vert. Orifice/Grate C= 0.600
#4	Device 2	45.50'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	46.00'	10.0' long x 16.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Discarded OutFlow Max=0.02 cfs @ 12.36 hrs HW=45.83' (Free Discharge)
 ↑ **1=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=1.98 cfs @ 12.36 hrs HW=45.83' (Free Discharge)
 ↑ **2=Culvert** (Barrel Controls 1.98 cfs @ 5.68 fps)
 ↑ **3=Orifice/Grate** (Passes < 1.11 cfs potential flow)
 ↑ **4=Orifice/Grate** (Passes < 1.98 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)
 ↑ **5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 4P: BIORETENTION BASIN

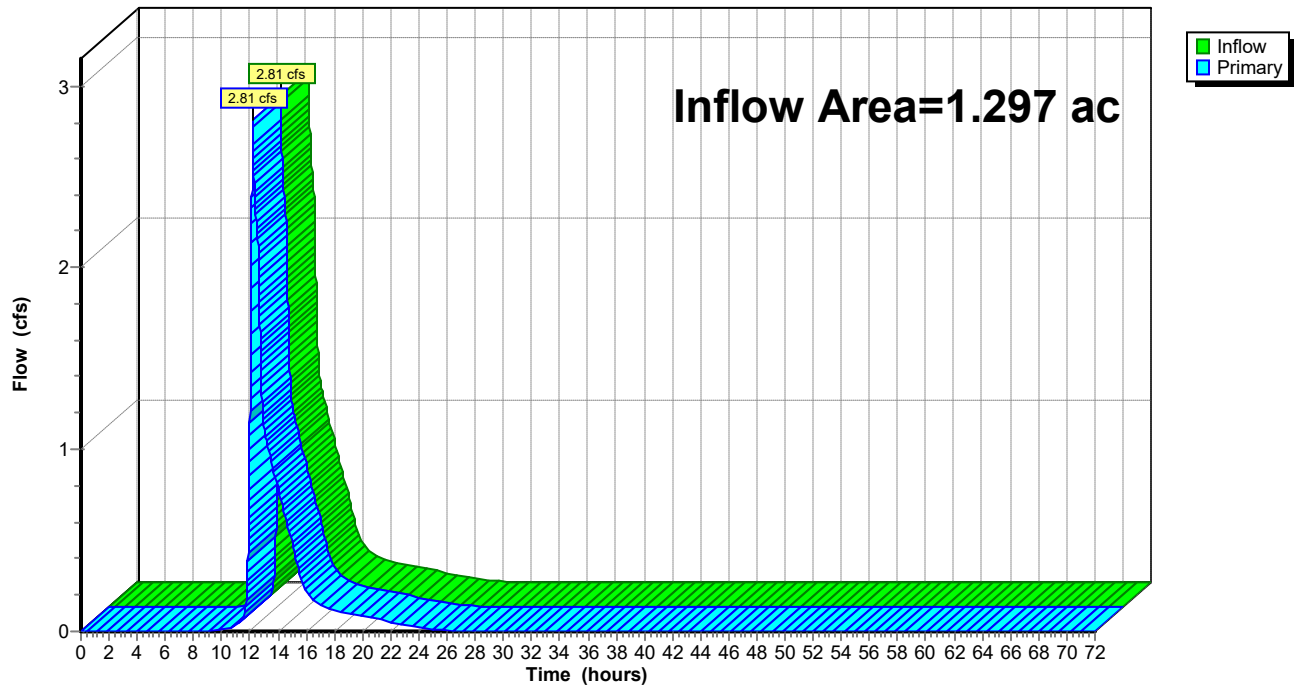
Summary for Link 4L: TOTAL TO WEST

Inflow Area = 1.297 ac, 46.49% Impervious, Inflow Depth = 3.67" for 100-year event
Inflow = 2.81 cfs @ 12.20 hrs, Volume= 0.397 af
Primary = 2.81 cfs @ 12.20 hrs, Volume= 0.397 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link 4L: TOTAL TO WEST

Hydrograph



Hydrograph for WEST PROPOSED 2YR

Time (hours)	Primary (cfs)	Primary-Volume (acre-feet)
0.00	0.00	0.000
0.05	0.00	0.000
0.10	0.00	0.000
0.15	0.00	0.000
0.20	0.00	0.000
0.25	0.00	0.000
0.30	0.00	0.000
0.35	0.00	0.000
0.40	0.00	0.000
0.45	0.00	0.000
0.50	0.00	0.000
0.55	0.00	0.000
0.60	0.00	0.000
0.65	0.00	0.000
0.70	0.00	0.000
0.75	0.00	0.000
0.80	0.00	0.000
0.85	0.00	0.000
0.90	0.00	0.000
0.95	0.00	0.000
1.00	0.00	0.000
1.05	0.00	0.000
1.10	0.00	0.000
1.15	0.00	0.000
1.20	0.00	0.000
1.25	0.00	0.000
1.30	0.00	0.000
1.35	0.00	0.000
1.40	0.00	0.000
1.45	0.00	0.000
1.50	0.00	0.000
1.55	0.00	0.000
1.60	0.00	0.000
1.65	0.00	0.000
1.70	0.00	0.000
1.75	0.00	0.000
1.80	0.00	0.000
1.85	0.00	0.000
1.90	0.00	0.000
1.95	0.00	0.000
2.00	0.00	0.000
2.05	0.00	0.000
2.10	0.00	0.000
2.15	0.00	0.000
2.20	0.00	0.000

2.25	0.00	0.000
2.30	0.00	0.000
2.35	0.00	0.000
2.40	0.00	0.000
2.45	0.00	0.000
2.50	0.00	0.000
2.55	0.00	0.000
2.60	0.00	0.000
2.65	0.00	0.000
2.70	0.00	0.000
2.75	0.00	0.000
2.80	0.00	0.000
2.85	0.00	0.000
2.90	0.00	0.000
2.95	0.00	0.000
3.00	0.00	0.000
3.05	0.00	0.000
3.10	0.00	0.000
3.15	0.00	0.000
3.20	0.00	0.000
3.25	0.00	0.000
3.30	0.00	0.000
3.35	0.00	0.000
3.40	0.00	0.000
3.45	0.00	0.000
3.50	0.00	0.000
3.55	0.00	0.000
3.60	0.00	0.000
3.65	0.00	0.000
3.70	0.00	0.000
3.75	0.00	0.000
3.80	0.00	0.000
3.85	0.00	0.000
3.90	0.00	0.000
3.95	0.00	0.000
4.00	0.00	0.000
4.05	0.00	0.000
4.10	0.00	0.000
4.15	0.00	0.000
4.20	0.00	0.000
4.25	0.00	0.000
4.30	0.00	0.000
4.35	0.00	0.000
4.40	0.00	0.000
4.45	0.00	0.000
4.50	0.00	0.000
4.55	0.00	0.000
4.60	0.00	0.000
4.65	0.00	0.000
4.70	0.00	0.000

4.75	0.00	0.000
4.80	0.00	0.000
4.85	0.00	0.000
4.90	0.00	0.000
4.95	0.00	0.000
5.00	0.00	0.000
5.05	0.00	0.000
5.10	0.00	0.000
5.15	0.00	0.000
5.20	0.00	0.000
5.25	0.00	0.000
5.30	0.00	0.000
5.35	0.00	0.000
5.40	0.00	0.000
5.45	0.00	0.000
5.50	0.00	0.000
5.55	0.00	0.000
5.60	0.00	0.000
5.65	0.00	0.000
5.70	0.00	0.000
5.75	0.00	0.000
5.80	0.00	0.000
5.85	0.00	0.000
5.90	0.00	0.000
5.95	0.00	0.000
6.00	0.00	0.000
6.05	0.00	0.000
6.10	0.00	0.000
6.15	0.00	0.000
6.20	0.00	0.000
6.25	0.00	0.000
6.30	0.00	0.000
6.35	0.00	0.000
6.40	0.00	0.000
6.45	0.00	0.000
6.50	0.00	0.000
6.55	0.00	0.000
6.60	0.00	0.000
6.65	0.00	0.000
6.70	0.01	0.000
6.75	0.01	0.000
6.80	0.01	0.001
6.85	0.01	0.001
6.90	0.01	0.001
6.95	0.01	0.001
7.00	0.01	0.001
7.05	0.01	0.001
7.10	0.01	0.001
7.15	0.01	0.001
7.20	0.01	0.001

7.25	0.01	0.001
7.30	0.01	0.001
7.35	0.01	0.001
7.40	0.01	0.001
7.45	0.01	0.001
7.50	0.01	0.001
7.55	0.01	0.001
7.60	0.01	0.001
7.65	0.01	0.001
7.70	0.01	0.001
7.75	0.01	0.001
7.80	0.01	0.001
7.85	0.01	0.001
7.90	0.01	0.001
7.95	0.01	0.001
8.00	0.01	0.001
8.05	0.01	0.002
8.10	0.01	0.002
8.15	0.02	0.002
8.20	0.02	0.002
8.25	0.02	0.002
8.30	0.02	0.002
8.35	0.02	0.002
8.40	0.02	0.002
8.45	0.02	0.002
8.50	0.02	0.002
8.55	0.02	0.002
8.60	0.02	0.002
8.65	0.02	0.002
8.70	0.02	0.002
8.75	0.02	0.003
8.80	0.03	0.003
8.85	0.03	0.003
8.90	0.03	0.003
8.95	0.03	0.003
9.00	0.03	0.003
9.05	0.03	0.003
9.10	0.04	0.003
9.15	0.04	0.004
9.20	0.04	0.004
9.25	0.05	0.004
9.30	0.05	0.004
9.35	0.05	0.004
9.40	0.05	0.005
9.45	0.06	0.005
9.50	0.06	0.005
9.55	0.06	0.005
9.60	0.07	0.006
9.65	0.07	0.006
9.70	0.08	0.006

9.75	0.08	0.007
9.80	0.09	0.007
9.85	0.09	0.007
9.90	0.10	0.008
9.95	0.10	0.008
10.00	0.11	0.008
10.05	0.11	0.009
10.10	0.12	0.009
10.15	0.12	0.010
10.20	0.13	0.010
10.25	0.13	0.011
10.30	0.14	0.012
10.35	0.15	0.012
10.40	0.16	0.013
10.45	0.16	0.013
10.50	0.17	0.014
10.55	0.18	0.015
10.60	0.20	0.016
10.65	0.21	0.017
10.70	0.23	0.017
10.75	0.24	0.018
10.80	0.26	0.019
10.85	0.29	0.021
10.90	0.31	0.022
10.95	0.33	0.023
11.00	0.36	0.025
11.05	0.39	0.026
11.10	0.42	0.028
11.15	0.45	0.030
11.20	0.49	0.032
11.25	0.53	0.034
11.30	0.57	0.036
11.35	0.61	0.039
11.40	0.66	0.041
11.45	0.70	0.044
11.50	0.75	0.047
11.55	0.81	0.050
11.60	0.90	0.054
11.65	1.00	0.058
11.70	1.12	0.062
11.75	1.24	0.067
11.80	1.39	0.073
11.85	1.56	0.079
11.90	1.81	0.086
11.95	2.10	0.094
12.00	2.65	0.104
12.05	3.26	0.116
12.10	4.36	0.132
12.15	4.86	0.152
12.20	4.14	0.171

12.25	3.72	0.186
12.30	3.52	0.201
12.35	3.44	0.216
12.40	3.36	0.230
12.45	3.32	0.243
12.50	3.28	0.257
12.55	3.25	0.270
12.60	3.20	0.284
12.65	3.18	0.297
12.70	3.18	0.310
12.75	3.18	0.323
12.80	3.18	0.336
12.85	3.18	0.350
12.90	3.17	0.363
12.95	3.17	0.376
13.00	3.17	0.389
13.05	3.16	0.402
13.10	3.15	0.415
13.15	3.15	0.428
13.20	3.14	0.441
13.25	3.13	0.454
13.30	3.12	0.467
13.35	3.11	0.480
13.40	3.10	0.493
13.45	3.09	0.505
13.50	3.07	0.518
13.55	3.06	0.531
13.60	3.03	0.543
13.65	3.01	0.556
13.70	3.00	0.568
13.75	2.99	0.580
13.80	2.98	0.593
13.85	2.97	0.605
13.90	2.96	0.617
13.95	2.95	0.630
14.00	2.94	0.642
14.05	2.93	0.654
14.10	2.92	0.666
14.15	2.91	0.678
14.20	2.90	0.690
14.25	2.89	0.702
14.30	2.88	0.714
14.35	2.87	0.726
14.40	2.86	0.738
14.45	2.85	0.749
14.50	2.84	0.761
14.55	2.83	0.773
14.60	2.82	0.785
14.65	2.81	0.796
14.70	2.80	0.808

14.75	2.79	0.819
14.80	2.77	0.831
14.85	2.76	0.842
14.90	2.75	0.854
14.95	2.74	0.865
15.00	2.73	0.876
15.05	2.72	0.888
15.10	2.69	0.899
15.15	2.67	0.910
15.20	2.66	0.921
15.25	2.64	0.932
15.30	2.63	0.943
15.35	2.62	0.953
15.40	2.60	0.964
15.45	2.59	0.975
15.50	2.58	0.986
15.55	2.56	0.996
15.60	2.55	1.007
15.65	2.54	1.017
15.70	2.52	1.028
15.75	2.51	1.038
15.80	2.49	1.048
15.85	2.48	1.059
15.90	2.47	1.069
15.95	2.45	1.079
16.00	2.44	1.089
16.05	2.42	1.099
16.10	2.41	1.109
16.15	2.39	1.119
16.20	2.38	1.129
16.25	2.37	1.139
16.30	2.35	1.148
16.35	2.34	1.158
16.40	2.32	1.168
16.45	2.31	1.177
16.50	2.29	1.187
16.55	2.28	1.196
16.60	2.26	1.206
16.65	2.25	1.215
16.70	2.23	1.224
16.75	2.22	1.233
16.80	2.20	1.243
16.85	2.19	1.252
16.90	2.17	1.261
16.95	2.16	1.270
17.00	2.14	1.278
17.05	2.13	1.287
17.10	2.11	1.296
17.15	2.10	1.305
17.20	2.08	1.313

17.25	2.07	1.322
17.30	2.05	1.330
17.35	2.04	1.339
17.40	2.02	1.347
17.45	2.01	1.356
17.50	1.99	1.364
17.55	1.97	1.372
17.60	1.96	1.380
17.65	1.94	1.388
17.70	1.93	1.396
17.75	1.91	1.404
17.80	1.90	1.412
17.85	1.88	1.420
17.90	1.86	1.427
17.95	1.85	1.435
18.00	1.83	1.443
18.05	1.82	1.450
18.10	1.80	1.458
18.15	1.78	1.465
18.20	1.77	1.472
18.25	1.75	1.480
18.30	1.74	1.487
18.35	1.72	1.494
18.40	1.70	1.501
18.45	1.69	1.508
18.50	1.67	1.515
18.55	1.65	1.522
18.60	1.64	1.529
18.65	1.62	1.535
18.70	1.61	1.542
18.75	1.59	1.549
18.80	1.57	1.555
18.85	1.56	1.562
18.90	1.54	1.568
18.95	1.52	1.574
19.00	1.51	1.581
19.05	1.49	1.587
19.10	1.47	1.593
19.15	1.46	1.599
19.20	1.44	1.605
19.25	1.42	1.611
19.30	1.41	1.617
19.35	1.39	1.622
19.40	1.37	1.628
19.45	1.36	1.634
19.50	1.34	1.639
19.55	1.32	1.645
19.60	1.31	1.650
19.65	1.29	1.656
19.70	1.27	1.661

19.75	1.26	1.666
19.80	1.24	1.671
19.85	1.22	1.676
19.90	1.21	1.681
19.95	1.19	1.686
20.00	1.17	1.691
20.05	1.16	1.696
20.10	1.14	1.701
20.15	1.12	1.705
20.20	1.11	1.710
20.25	1.09	1.715
20.30	1.07	1.719
20.35	1.06	1.723
20.40	1.04	1.728
20.45	1.03	1.732
20.50	1.01	1.736
20.55	0.99	1.740
20.60	0.98	1.744
20.65	0.96	1.748
20.70	0.95	1.752
20.75	0.93	1.756
20.80	0.91	1.760
20.85	0.90	1.764
20.90	0.88	1.767
20.95	0.86	1.771
21.00	0.85	1.775
21.05	0.83	1.778
21.10	0.81	1.781
21.15	0.79	1.785
21.20	0.78	1.788
21.25	0.76	1.791
21.30	0.75	1.794
21.35	0.73	1.797
21.40	0.71	1.800
21.45	0.70	1.803
21.50	0.68	1.806
21.55	0.67	1.809
21.60	0.66	1.812
21.65	0.64	1.814
21.70	0.63	1.817
21.75	0.62	1.819
21.80	0.60	1.822
21.85	0.59	1.824
21.90	0.58	1.827
21.95	0.57	1.829
22.00	0.56	1.831
22.05	0.55	1.834
22.10	0.53	1.836
22.15	0.52	1.838
22.20	0.51	1.840

22.25	0.50	1.842
22.30	0.49	1.844
22.35	0.49	1.846
22.40	0.48	1.848
22.45	0.47	1.850
22.50	0.46	1.852
22.55	0.45	1.854
22.60	0.44	1.856
22.65	0.43	1.858
22.70	0.42	1.860
22.75	0.42	1.861
22.80	0.41	1.863
22.85	0.40	1.865
22.90	0.39	1.866
22.95	0.39	1.868
23.00	0.38	1.870
23.05	0.37	1.871
23.10	0.36	1.873
23.15	0.36	1.874
23.20	0.35	1.876
23.25	0.34	1.877
23.30	0.34	1.878
23.35	0.33	1.880
23.40	0.32	1.881
23.45	0.32	1.882
23.50	0.31	1.884
23.55	0.31	1.885
23.60	0.30	1.886
23.65	0.29	1.887
23.70	0.29	1.889
23.75	0.28	1.890
23.80	0.28	1.891
23.85	0.27	1.892
23.90	0.27	1.893
23.95	0.26	1.894
24.00	0.26	1.895
24.05	0.25	1.896
24.10	0.24	1.897
24.15	0.23	1.898
24.20	0.22	1.899
24.25	0.22	1.900
24.30	0.21	1.901
24.35	0.21	1.902
24.40	0.20	1.903
24.45	0.19	1.904
24.50	0.19	1.904
24.55	0.18	1.905
24.60	0.18	1.906
24.65	0.17	1.907
24.70	0.17	1.907

24.75	0.16	1.908
24.80	0.16	1.909
24.85	0.15	1.909
24.90	0.15	1.910
24.95	0.14	1.910
25.00	0.14	1.911
25.05	0.14	1.912
25.10	0.13	1.912
25.15	0.13	1.913
25.20	0.13	1.913
25.25	0.12	1.914
25.30	0.12	1.914
25.35	0.12	1.915
25.40	0.11	1.915
25.45	0.11	1.916
25.50	0.11	1.916
25.55	0.10	1.917
25.60	0.10	1.917
25.65	0.10	1.917
25.70	0.10	1.918
25.75	0.10	1.918
25.80	0.09	1.919
25.85	0.09	1.919
25.90	0.09	1.919
25.95	0.09	1.920
26.00	0.09	1.920
26.05	0.08	1.920
26.10	0.08	1.921
26.15	0.08	1.921
26.20	0.08	1.921
26.25	0.08	1.922
26.30	0.08	1.922
26.35	0.07	1.922
26.40	0.07	1.923
26.45	0.07	1.923
26.50	0.07	1.923
26.55	0.07	1.924
26.60	0.07	1.924
26.65	0.06	1.924
26.70	0.06	1.924
26.75	0.06	1.925
26.80	0.06	1.925
26.85	0.06	1.925
26.90	0.06	1.925
26.95	0.06	1.926
27.00	0.06	1.926
27.05	0.05	1.926
27.10	0.05	1.926
27.15	0.05	1.926
27.20	0.05	1.927

27.25	0.05	1.927
27.30	0.05	1.927
27.35	0.05	1.927
27.40	0.05	1.928
27.45	0.05	1.928
27.50	0.05	1.928
27.55	0.05	1.928
27.60	0.05	1.928
27.65	0.04	1.928
27.70	0.04	1.929
27.75	0.04	1.929
27.80	0.04	1.929
27.85	0.04	1.929
27.90	0.04	1.929
27.95	0.04	1.930
28.00	0.04	1.930
28.05	0.04	1.930
28.10	0.04	1.930
28.15	0.04	1.930
28.20	0.04	1.930
28.25	0.04	1.931
28.30	0.04	1.931
28.35	0.04	1.931
28.40	0.04	1.931
28.45	0.04	1.931
28.50	0.04	1.931
28.55	0.03	1.931
28.60	0.03	1.932
28.65	0.03	1.932
28.70	0.03	1.932
28.75	0.03	1.932
28.80	0.03	1.932
28.85	0.03	1.932
28.90	0.03	1.932
28.95	0.03	1.933
29.00	0.03	1.933
29.05	0.03	1.933
29.10	0.03	1.933
29.15	0.03	1.933
29.20	0.03	1.933
29.25	0.03	1.933
29.30	0.03	1.933
29.35	0.03	1.933
29.40	0.03	1.934
29.45	0.03	1.934
29.50	0.03	1.934
29.55	0.03	1.934
29.60	0.03	1.934
29.65	0.03	1.934
29.70	0.03	1.934

29.75	0.03	1.934
29.80	0.02	1.934
29.85	0.02	1.935
29.90	0.02	1.935
29.95	0.02	1.935
30.00	0.02	1.935
30.05	0.02	1.935
30.10	0.02	1.935
30.15	0.02	1.935
30.20	0.02	1.935
30.25	0.02	1.935
30.30	0.02	1.935
30.35	0.02	1.936
30.40	0.02	1.936
30.45	0.02	1.936
30.50	0.02	1.936
30.55	0.02	1.936
30.60	0.02	1.936
30.65	0.02	1.936
30.70	0.02	1.936
30.75	0.02	1.936
30.80	0.02	1.936
30.85	0.02	1.936
30.90	0.02	1.936
30.95	0.02	1.936
31.00	0.02	1.937
31.05	0.02	1.937
31.10	0.02	1.937
31.15	0.02	1.937
31.20	0.02	1.937
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31.30	0.02	1.937
31.35	0.02	1.937
31.40	0.02	1.937
31.45	0.02	1.937
31.50	0.02	1.937
31.55	0.02	1.937
31.60	0.02	1.937
31.65	0.01	1.937
31.70	0.01	1.937
31.75	0.01	1.938
31.80	0.01	1.938
31.85	0.01	1.938
31.90	0.01	1.938
31.95	0.01	1.938
32.00	0.01	1.938
32.05	0.01	1.938
32.10	0.01	1.938
32.15	0.01	1.938
32.20	0.01	1.938

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32.45	0.01	1.938
32.50	0.01	1.938
32.55	0.01	1.938
32.60	0.01	1.938
32.65	0.01	1.939
32.70	0.01	1.939
32.75	0.01	1.939
32.80	0.01	1.939
32.85	0.01	1.939
32.90	0.01	1.939
32.95	0.01	1.939
33.00	0.01	1.939
33.05	0.01	1.939
33.10	0.01	1.939
33.15	0.01	1.939
33.20	0.01	1.939
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33.30	0.01	1.939
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33.40	0.01	1.939
33.45	0.01	1.939
33.50	0.01	1.939
33.55	0.01	1.939
33.60	0.01	1.939
33.65	0.01	1.939
33.70	0.01	1.940
33.75	0.01	1.940
33.80	0.01	1.940
33.85	0.01	1.940
33.90	0.01	1.940
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34.35	0.01	1.940
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34.45	0.01	1.940
34.50	0.01	1.940
34.55	0.01	1.940
34.60	0.01	1.940
34.65	0.01	1.940
34.70	0.01	1.940

34.75	0.01	1.940
34.80	0.01	1.940
34.85	0.01	1.941
34.90	0.01	1.941
34.95	0.01	1.941
35.00	0.01	1.941
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36.90	0.01	1.942
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37.65	0.01	1.943
37.70	0.01	1.943
37.75	0.01	1.943
37.80	0.01	1.943
37.85	0.01	1.943
37.90	0.01	1.943
37.95	0.01	1.943
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38.05	0.01	1.943
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38.90	0.01	1.943
38.95	0.01	1.943
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39.70	0.01	1.944

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39.80	0.01	1.944
39.85	0.01	1.944
39.90	0.01	1.944
39.95	0.01	1.944
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40.75	0.01	1.944
40.80	0.01	1.944
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40.95	0.01	1.944
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41.05	0.01	1.944
41.10	0.01	1.944
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41.45	0.01	1.945
41.50	0.01	1.945
41.55	0.01	1.945
41.60	0.01	1.945
41.65	0.01	1.945
41.70	0.01	1.945
41.75	0.01	1.945
41.80	0.01	1.945
41.85	0.01	1.945
41.90	0.01	1.945
41.95	0.00	1.945
42.00	0.00	1.945
42.05	0.00	1.945
42.10	0.00	1.945
42.15	0.00	1.945
42.20	0.00	1.945

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43.10	0.00	1.945
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46.95	0.00	1.946
47.00	0.00	1.946
47.05	0.00	1.946
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47.85	0.00	1.947
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48.80	0.00	1.947
48.85	0.00	1.947
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49.70	0.00	1.947

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67.85	0.00	1.949
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69.75	0.00	1.949
69.80	0.00	1.949
69.85	0.00	1.949
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69.95	0.00	1.949
70.00	0.00	1.949
70.05	0.00	1.949
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70.75	0.00	1.949
70.80	0.00	1.949
70.85	0.00	1.949
70.90	0.00	1.949
70.95	0.00	1.949
71.00	0.00	1.949
71.05	0.00	1.949
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71.45	0.00	1.949
71.50	0.00	1.949
71.55	0.00	1.949
71.60	0.00	1.949
71.65	0.00	1.949
71.70	0.00	1.949
71.75	0.00	1.949
71.80	0.00	1.949
71.85	0.00	1.949
71.90	0.00	1.949
71.95	0.00	1.949
72.00	0.00	1.949

Hydrograph for PROPOSED WEST 100 YR

Time (hours)	Primary (cfs)	Primary-Volume (acre-feet)
0.00	0.00	0.000
0.05	0.00	0.000
0.10	0.00	0.000
0.15	0.00	0.000
0.20	0.00	0.000
0.25	0.00	0.000
0.30	0.00	0.000
0.35	0.00	0.000
0.40	0.00	0.000
0.45	0.00	0.000
0.50	0.00	0.000
0.55	0.00	0.000
0.60	0.00	0.000
0.65	0.00	0.000
0.70	0.00	0.000
0.75	0.00	0.000
0.80	0.00	0.000
0.85	0.00	0.000
0.90	0.00	0.000
0.95	0.00	0.000
1.00	0.00	0.000
1.05	0.00	0.000
1.10	0.00	0.000
1.15	0.00	0.000
1.20	0.00	0.000
1.25	0.00	0.000
1.30	0.00	0.000
1.35	0.00	0.000
1.40	0.00	0.000
1.45	0.00	0.000
1.50	0.00	0.000
1.55	0.00	0.000
1.60	0.00	0.000
1.65	0.00	0.000
1.70	0.00	0.000
1.75	0.00	0.000
1.80	0.00	0.000
1.85	0.00	0.000
1.90	0.00	0.000
1.95	0.00	0.000
2.00	0.00	0.000
2.05	0.00	0.000
2.10	0.00	0.000
2.15	0.00	0.000
2.20	0.00	0.000

2.25	0.00	0.000
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2.35	0.00	0.000
2.40	0.00	0.000
2.45	0.00	0.000
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2.55	0.00	0.000
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2.65	0.00	0.000
2.70	0.00	0.000
2.75	0.00	0.000
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2.90	0.00	0.000
2.95	0.00	0.000
3.00	0.00	0.000
3.05	0.00	0.000
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3.40	0.00	0.000
3.45	0.00	0.000
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3.55	0.00	0.000
3.60	0.00	0.000
3.65	0.00	0.000
3.70	0.00	0.000
3.75	0.00	0.000
3.80	0.00	0.000
3.85	0.00	0.000
3.90	0.00	0.000
3.95	0.00	0.000
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4.05	0.00	0.000
4.10	0.00	0.000
4.15	0.00	0.000
4.20	0.00	0.000
4.25	0.00	0.000
4.30	0.00	0.000
4.35	0.00	0.000
4.40	0.00	0.000
4.45	0.00	0.000
4.50	0.00	0.000
4.55	0.00	0.000
4.60	0.00	0.000
4.65	0.00	0.000
4.70	0.00	0.000

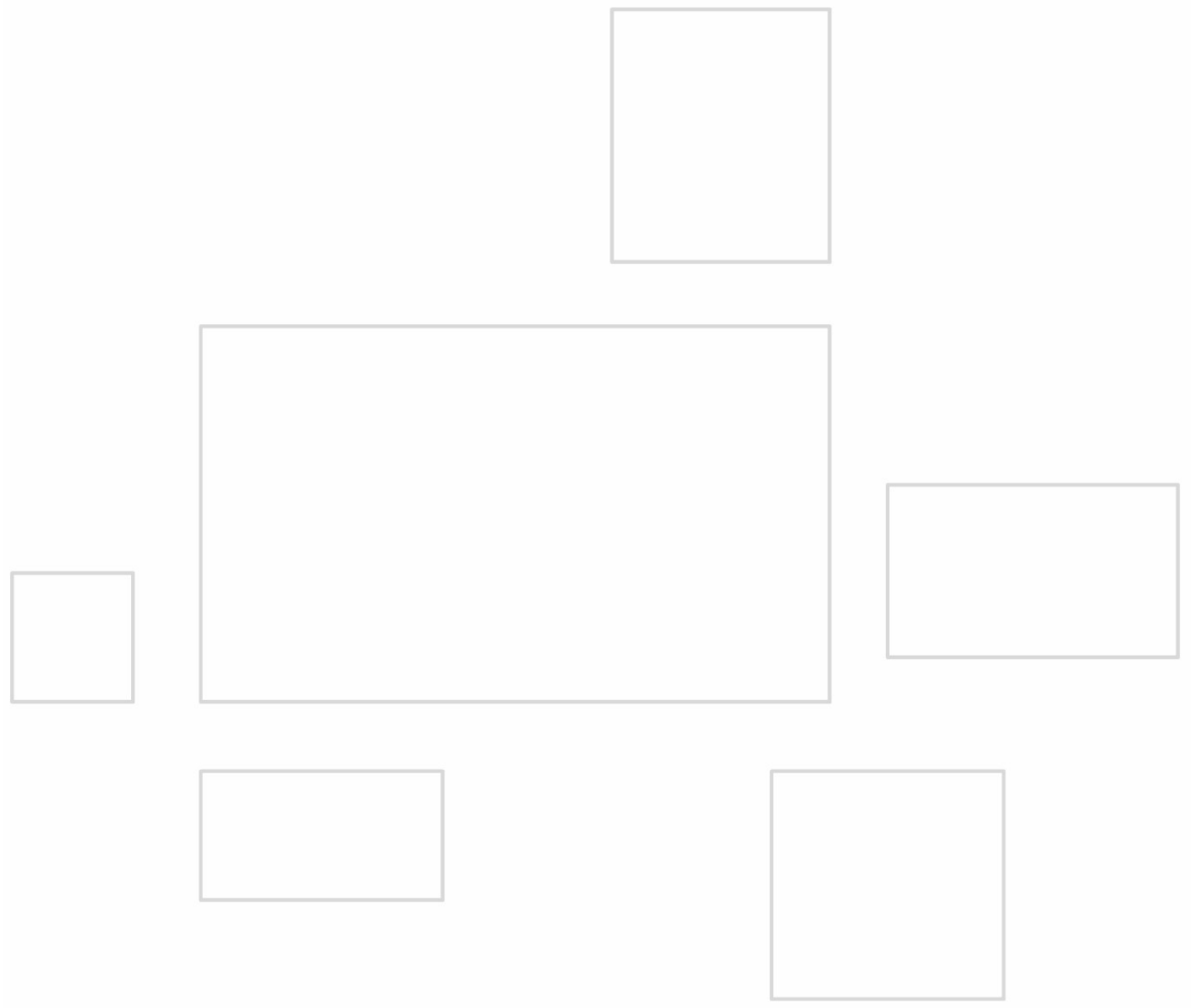
4.75	0.00	0.000
4.80	0.00	0.000
4.85	0.00	0.000
4.90	0.00	0.000
4.95	0.00	0.000
5.00	0.00	0.000
5.05	0.00	0.000
5.10	0.00	0.000
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5.70	0.00	0.000
5.75	0.00	0.000
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6.55	0.00	0.000
6.60	0.00	0.000
6.65	0.00	0.000
6.70	0.00	0.000
6.75	0.00	0.000
6.80	0.00	0.000
6.85	0.00	0.000
6.90	0.00	0.000
6.95	0.00	0.000
7.00	0.00	0.000
7.05	0.00	0.000
7.10	0.00	0.000
7.15	0.00	0.000
7.20	0.00	0.000

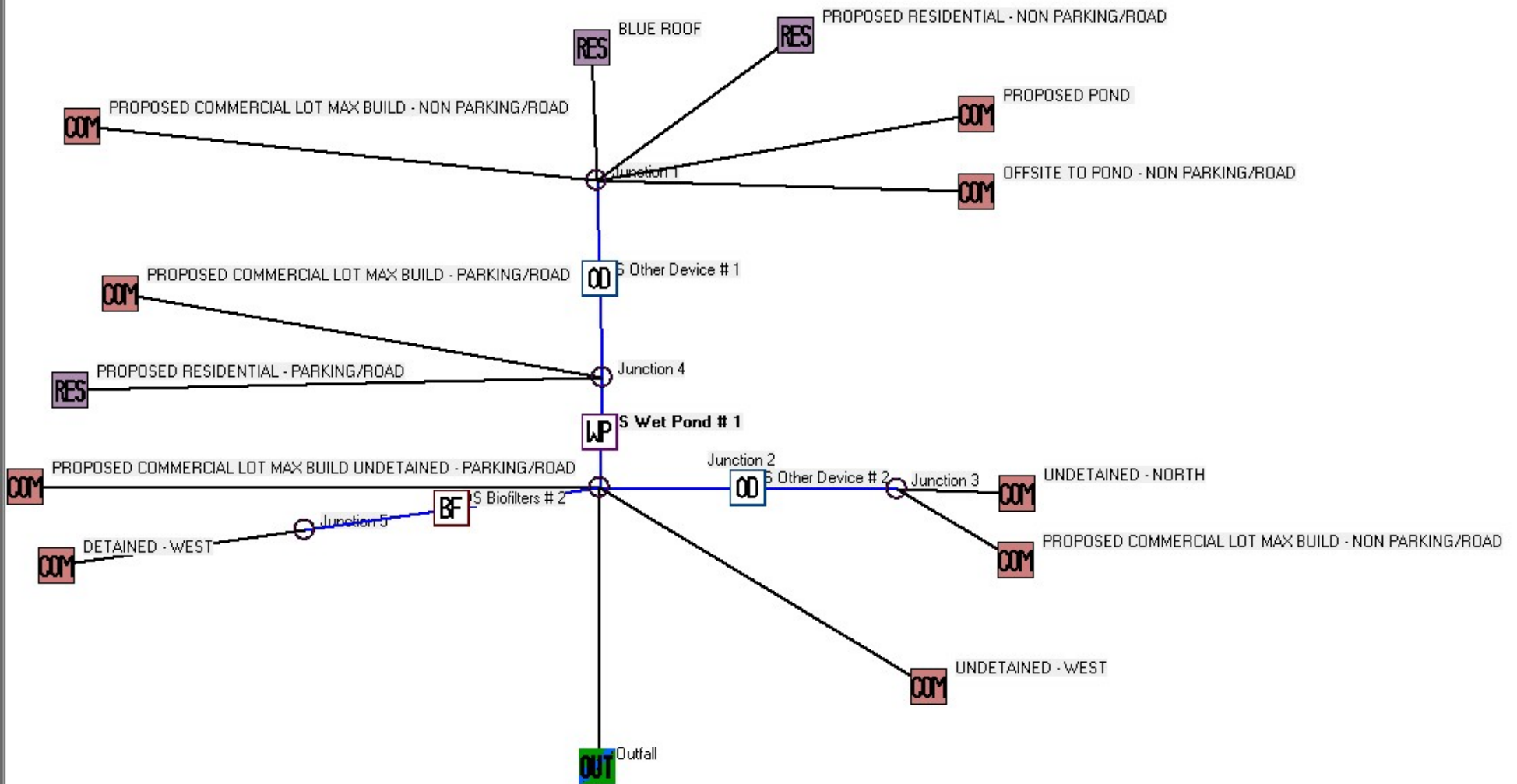
7.25	0.00	0.000
7.30	0.00	0.000
7.35	0.00	0.000
7.40	0.00	0.000
7.45	0.00	0.000
7.50	0.00	0.000
7.55	0.00	0.000
7.60	0.00	0.000
7.65	0.00	0.000
7.70	0.00	0.000
7.75	0.00	0.000
7.80	0.00	0.000
7.85	0.00	0.000
7.90	0.00	0.000
7.95	0.00	0.000
8.00	0.00	0.000
8.05	0.00	0.000
8.10	0.00	0.000
8.15	0.00	0.000
8.20	0.00	0.000
8.25	0.00	0.000
8.30	0.00	0.000
8.35	0.00	0.000
8.40	0.00	0.000
8.45	0.00	0.000
8.50	0.00	0.000
8.55	0.00	0.000
8.60	0.00	0.000
8.65	0.00	0.000
8.70	0.00	0.000
8.75	0.00	0.000
8.80	0.00	0.000
8.85	0.00	0.000
8.90	0.00	0.000
8.95	0.00	0.000
9.00	0.00	0.000
9.05	0.00	0.000
9.10	0.00	0.000
9.15	0.00	0.000
9.20	0.00	0.000
9.25	0.00	0.000
9.30	0.00	0.000
9.35	0.00	0.000
9.40	0.00	0.000
9.45	0.00	0.000
9.50	0.00	0.000
9.55	0.00	0.000
9.60	0.00	0.000
9.65	0.00	0.000
9.70	0.01	0.000

9.75	0.01	0.000
9.80	0.01	0.000
9.85	0.01	0.000
9.90	0.01	0.000
9.95	0.01	0.000
10.00	0.01	0.000
10.05	0.01	0.000
10.10	0.01	0.000
10.15	0.01	0.000
10.20	0.01	0.000
10.25	0.01	0.001
10.30	0.01	0.001
10.35	0.01	0.001
10.40	0.01	0.001
10.45	0.01	0.001
10.50	0.01	0.001
10.55	0.01	0.001
10.60	0.02	0.001
10.65	0.02	0.001
10.70	0.02	0.001
10.75	0.02	0.001
10.80	0.02	0.001
10.85	0.03	0.001
10.90	0.03	0.001
10.95	0.03	0.002
11.00	0.03	0.002
11.05	0.04	0.002
11.10	0.04	0.002
11.15	0.04	0.002
11.20	0.05	0.002
11.25	0.05	0.003
11.30	0.05	0.003
11.35	0.06	0.003
11.40	0.06	0.003
11.45	0.06	0.003
11.50	0.07	0.004
11.55	0.08	0.004
11.60	0.10	0.004
11.65	0.11	0.005
11.70	0.14	0.005
11.75	0.17	0.006
11.80	0.26	0.007
11.85	0.37	0.008
11.90	0.55	0.010
11.95	0.78	0.013
12.00	1.15	0.017
12.05	1.52	0.023
12.10	2.14	0.031
12.15	2.40	0.040
12.20	2.81	0.051

12.25	2.56	0.062
12.30	2.43	0.073
12.35	2.36	0.082
12.40	2.29	0.092
12.45	2.24	0.101
12.50	2.18	0.110
12.55	2.14	0.119
12.60	2.08	0.128
12.65	1.94	0.136
12.70	1.73	0.144
12.75	1.54	0.151
12.80	1.40	0.157
12.85	1.30	0.162
12.90	1.21	0.167
12.95	1.16	0.172
13.00	1.10	0.177
13.05	1.07	0.181
13.10	1.06	0.186
13.15	1.05	0.190
13.20	1.04	0.194
13.25	1.02	0.199
13.30	1.01	0.203
13.35	1.00	0.207
13.40	0.98	0.211
13.45	0.97	0.215
13.50	0.95	0.219
13.55	0.93	0.223
13.60	0.91	0.227
13.65	0.89	0.230
13.70	0.87	0.234
13.75	0.86	0.237
13.80	0.84	0.241
13.85	0.83	0.244
13.90	0.81	0.248
13.95	0.80	0.251
14.00	0.78	0.254
14.05	0.77	0.258
14.10	0.75	0.261
14.15	0.74	0.264
14.20	0.72	0.267
14.25	0.71	0.270
14.30	0.70	0.273
14.35	0.68	0.276
14.40	0.67	0.278
14.45	0.65	0.281
14.50	0.64	0.284
14.55	0.62	0.286
14.60	0.61	0.289
14.65	0.59	0.291
14.70	0.58	0.294

APPENDIX 4 POST-DEVELOPMENT CONDITIONS (WINSLAMM)





Data file name: Z:\Projects\2015\579.10-WI\DESIGN\SWMP\SLAMM\Seaport to pond 2026-08-19.mdb
WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WI Milwaukee 69.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 01/05/69 Study period ending date: 12/31/69
Start of Winter Season: 12/06 End of Winter Season: 03/28
Date: 08-19-2026 Time: 21:14:24
Site information: Seaport Parking Lot

LU# 1 - Commercial: OFFSITE TO POND - NON PARKING/ROAD Total area (ac): 2.606
31 - Sidewalks 1: 0.073 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 2.533 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Commercial: UNDETAINED - NORTH Total area (ac): 0.632
13 - Paved Parking 1: 0.591 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.041 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Commercial: PROPOSED POND Total area (ac): 0.368
70 - Water Body Areas: 0.368 ac. PSD File: Source Area PSD File:

LU# 4 - Residential: BLUE ROOF Total area (ac): 1.419
1 - Roofs 1: 1.419 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Residential: PROPOSED RESIDENTIAL - NON PARKING/ROAD Total area (ac): 3.732
1 - Roofs 1: 1.204 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.627 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
51 - Small Landscaped Areas 1: 1.901 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 6 - Residential: PROPOSED RESIDENTIAL - PARKING/ROAD Total area (ac): 2.221
13 - Paved Parking 1: 2.221 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 7 - Commercial: DETAINED - WEST Total area (ac): 1.071
13 - Paved Parking 1: 0.569 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.502 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 8 - Commercial: UNDETAINED - WEST Total area (ac): 0.226
13 - Paved Parking 1: 0.034 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.192 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 9 - Commercial: PROPOSED COMMERCIAL LOT MAX BUILD - PARKING/ROAD Total area (ac): 1.766
13 - Paved Parking 1: 1.766 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 10 - Commercial: PROPOSED COMMERCIAL LOT MAX BUILD - NON PARKING/ROAD Total area (ac): 1.382
1 - Roofs 1: 0.678 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.074 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.630 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 11 - Commercial: PROPOSED COMMERCIAL LOT MAX BUILD UNDETAINED - PARKING/ROAD Total area (ac): 0.287
13 - Paved Parking 1: 0.287 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 12 - Commercial: PROPOSED COMMERCIAL LOT MAX BUILD - NON PARKING/ROAD Total area (ac): 0.225
31 - Sidewalks 1: 0.123 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
51 - Small Landscaped Areas 1: 0.102 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Other Device CP# 1 (DS) - DS Other Device # 1
Fraction of drainage area served by device (ac) = 1.00
Particulate Concentration reduction fraction = 1.00
Filterable Concentration reduction fraction = 1.00
Runoff volume reduction fraction = 0

Control Practice 2: Other Device CP# 2 (DS) - DS Other Device # 2
Fraction of drainage area served by device (ac) = 1.00
Particulate Concentration reduction fraction = 1.00
Filterable Concentration reduction fraction = 1.00
Runoff volume reduction fraction = 0

Control Practice 3: Wet Detention Pond CP# 1 (DS) - DS Wet Pond # 1

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 5

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 0.66
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 10
2. Weir crest width (ft): 20
3. Height from datum to bottom of weir opening: 10.99

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 5
2. Stand pipe height above datum (ft): 8.5

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0595	0.00	0.00
2	1.00	0.0743	0.00	0.00
3	2.00	0.0897	0.00	0.00
4	3.00	0.1057	0.00	0.00
5	4.00	0.1222	0.00	0.00
6	5.00	0.2138	0.00	0.00
7	11.00	0.4921	0.00	0.00

Control Practice 4: Biofilter CP# 1 (DS) - DS Biofilters # 2

1. Top area (square feet) = 6051
2. Bottom area (square feet) = 2994
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.06
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 1
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 0
10. Porosity of rock filled volume = 0
11. Engineered soil infiltration rate: 13
12. Engineered soil depth (ft) = 2
13. Engineered soil porosity = 0.38
14. Percent solids reduction due to flow through engineered soil = 0
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

Sand 1.000

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 16
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 4

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 1
2. Stand pipe height above datum (ft): 3.5

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 0.5
2. Pipe invert elevation above datum (ft): 2.2
3. Number of surface pipe outlets: 1

Data file name: Z:\Projects\2015\579.10-WI\DESIGN\SWMP\SLAMM\Seaport to pond 2026-08-19.mdb
WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WI Milwaukee 69.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppd
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 01/05/69 Study period ending date: 12/31/69
Start of Winter Season: 12/06 End of Winter Season: 03/28
Model Run Start Date: 01/05/69 Model Run End Date: 12/31/69
Date of run: 08-19-2026 Time of run: 21:15:16
Total Area Modeled (acres): 15.935
Years in Model Run: 0.99

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	827563	-	92.48	4778	-
Outfall Total with Controls:	790578	4.47%	23.56	1163	75.66%
Annualized Total After Outfall Controls:	801559			1179	

Biofilter # 1 is expected to clog in 19.38 years.. Percent Solids Reduction due to Engineered Media Not Used

Rain File: WI Milwaukee 69.RAN

Date: 08-19-26 Time: 8:56:12 PM

Site Description: Seaport Parking Lot

Commercial: OFFSITE TO POND - NON PARKING/ROAD Areas - Particulate Solid

Start Date	Rain Total (in.)	Land Use Totals	Sidewalks 1	Large Landscaped Areas 1	
01/05/69	-	-	-	-	
01/06/69	-	-	-	-	
01/08/69	-	-	-	-	
01/15/69	-	-	-	-	
01/17/69	-	-	-	-	
01/23/69	-	-	-	-	
01/24/69	-	-	-	-	
01/28/69	-	-	-	-	
01/29/69	-	-	-	-	
02/06/69	-	-	-	-	
02/06/69	-	-	-	-	
02/22/69	-	-	-	-	
03/06/69	-	-	-	-	
03/20/69	-	-	-	-	
03/20/69	-	-	-	-	
03/21/69	-	-	-	-	
03/24/69	-	-	-	-	
03/28/69	0.08	0.04383	0.04383	0	
04/01/69	0.29	0.5906	0.2151	0.3755	
04/04/69	0.43	1.616	0.3464	1.270	
04/08/69	0.71	4.078	0.6292	3.449	
04/14/69	0.52	2.248	0.4336	1.814	
04/16/69	0.10	0.05794	0.05794	0	
04/16/69	1.26	9.885	1.282	8.603	
04/21/69	0.04	0.01744	0.01744	0	
04/27/69	0.01	0.001103	0.001103	0	
04/28/69	0.06	0.02957	0.02957	0	
05/01/69	0.01	0.001103	0.001103	0	
05/05/69	0.18	0.1217	0.1217	0	
05/06/69	0.02	0.004412	0.004412	0	
05/06/69	0.06	0.02957	0.02957	0	
05/08/69	0.26	0.4172	0.1889	0.2282	
05/08/69	0.22	0.2262	0.1554	0.07079	
05/10/69	0.02	0.004412	0.004412	0	
05/13/69	0.18	0.1217	0.1217	0	
05/17/69	1.33	10.51	1.368	9.143	
05/20/69	0.03	0.009927	0.009927	0	
05/21/69	0.55	2.481	0.4638	2.017	
05/24/69	0.06	0.02957	0.02957	0	
05/26/69	0.01	0.001103	0.001103	0	
05/31/69	0.12	0.07320	0.07320	0	

06/01/69	0.04	0.01744	0.01744	0
06/02/69	0.05	0.02322	0.02322	0
06/03/69	0.02	0.004412	0.004412	0
06/04/69	0.40	1.428	0.3184	1.110
06/06/69	0.09	0.05073	0.05073	0
06/07/69	0.83	5.350	0.7607	4.589
06/11/69	0.07	0.03648	0.03648	0
06/11/69	0.03	0.009927	0.009927	0
06/12/69	0.01	0.001103	0.001103	0
06/12/69	0.24	0.3159	0.1720	0.1440
06/17/69	0.36	1.096	0.2797	0.8164
06/18/69	0.16	0.1047	0.1047	0
06/19/69	0.09	0.05073	0.05073	0
06/21/69	0.02	0.004412	0.004412	0
06/22/69	0.36	1.096	0.2797	0.8164
06/22/69	0.05	0.02322	0.02322	0
06/25/69	1.68	22.17	1.809	20.36
06/27/69	0.68	3.739	0.5975	3.141
06/29/69	0.38	1.267	0.2991	0.9674
06/29/69	1.96	52.44	2.163	50.27
06/30/69	0.01	0.001103	0.001103	0
07/02/69	0.31	0.7207	0.2331	0.4876
07/04/69	0.04	0.01744	0.01744	0
07/10/69	0.47	1.884	0.3845	1.500
07/11/69	0.07	0.03648	0.03648	0
07/16/69	0.52	2.248	0.4336	1.814
07/17/69	0.85	5.505	0.7833	4.722
07/17/69	1.44	11.51	1.506	10.00
07/18/69	0.01	0.001103	0.001103	0
07/23/69	0.11	0.06547	0.06547	0
07/26/69	1.37	10.87	1.418	9.454
07/27/69	1.38	10.96	1.430	9.532
07/31/69	0.04	0.01744	0.01744	0
08/04/69	0.03	0.009927	0.009927	0
08/07/69	0.10	0.05794	0.05794	0
08/09/69	0.08	0.04383	0.04383	0
08/16/69	0.32	0.7900	0.2422	0.5478
09/04/69	0.36	1.096	0.2797	0.8164
09/05/69	0.74	4.433	0.6614	3.771
09/14/69	0.01	0.001103	0.001103	0
09/15/69	0.03	0.009927	0.009927	0
09/16/69	0.03	0.009927	0.009927	0
09/23/69	0.16	0.1047	0.1047	0
09/25/69	0.01	0.001103	0.001103	0
09/29/69	0.84	5.427	0.7719	4.655
10/06/69	0.01	0.001103	0.001103	0
10/06/69	0.01	0.001103	0.001103	0
10/09/69	0.05	0.02322	0.02322	0
10/10/69	0.14	0.08849	0.08849	0

10/10/69	1.34	10.60	1.380	9.220	
10/12/69	1.63	17.56	1.748	15.82	
10/15/69	0.16	0.1047	0.1047	0	
10/19/69	0.44	1.681	0.3558	1.325	
10/19/69	0.35	1.015	0.2702	0.7451	
10/21/69	0.02	0.004412	0.004412	0	
10/24/69	0.01	0.001103	0.001103	0	
10/30/69	0.32	0.7900	0.2422	0.5478	
11/02/69	0.77	4.802	0.6940	4.107	
11/11/69	0.05	0.02322	0.02322	0	
11/11/69	0.04	0.01744	0.01744	0	
11/13/69	0.03	0.009927	0.009927	0	
11/17/69	0.15	0.09647	0.09647	0	
11/18/69	0.02	0.004412	0.004412	0	
11/19/69	0.01	0.001103	0.001103	0	
11/26/69	0.07	0.03648	0.03648	0	
12/07/69	-	-	-	-	
12/11/69	-	-	-	-	
12/16/69	-	-	-	-	
12/21/69	-	-	-	-	
12/23/69	-	-	-	-	
12/24/69	-	-	-	-	
12/24/69	-	-	-	-	
12/27/69	-	-	-	-	
12/28/69	-	-	-	-	
12/31/69	-	-	-	-	
Summary for All Events					
	Rain Total (in.)	Land Use Totals	Sidewalks 1	Large Landscaped Areas 1	
Minimum:	0.00	0.00	0	0	
Maximum:	1.96	52.44	2.163	50.27	
Flow Wt Avg	N/A	18.89	1.071	20.48	
Total:	29.02	214.51	26.26	188.2	
Commercial: UNDETAINED - NORTH Areas - Particulate Solids Yield (lbs)					
Start Date	Rain Total (in.)	Land Use Totals	Paved Parking 1	Large Landscaped Areas 1	
01/05/69	-	-	-	-	
01/06/69	-	-	-	-	
01/08/69	-	-	-	-	
01/15/69	-	-	-	-	
01/17/69	-	-	-	-	
01/23/69	-	-	-	-	
01/24/69	-	-	-	-	
01/28/69	-	-	-	-	
01/29/69	-	-	-	-	
02/06/69	-	-	-	-	

02/06/69	-	-	-	-
02/22/69	-	-	-	-
03/06/69	-	-	-	-
03/20/69	-	-	-	-
03/20/69	-	-	-	-
03/21/69	-	-	-	-
03/24/69	-	-	-	-
03/28/69	0.08	0.6151	0.6151	0
04/01/69	0.29	3.025	3.019	0.006078
04/04/69	0.43	4.881	4.860	0.02055
04/08/69	0.71	8.885	8.830	0.05583
04/14/69	0.52	6.114	6.085	0.02936
04/16/69	0.10	0.8131	0.8131	0
04/16/69	1.26	18.13	17.99	0.1393
04/21/69	0.04	0.2448	0.2448	0
04/27/69	0.01	0.01548	0.01548	0
04/28/69	0.06	0.4149	0.4149	0
05/01/69	0.01	0.01548	0.01548	0
05/05/69	0.18	1.708	1.708	0
05/06/69	0.02	0.06191	0.06191	0
05/06/69	0.06	0.4149	0.4149	0
05/08/69	0.26	2.655	2.651	0.003694
05/08/69	0.22	2.182	2.181	0.001146
05/10/69	0.02	0.06191	0.06191	0
05/13/69	0.18	1.708	1.708	0
05/17/69	1.33	19.34	19.19	0.1480
05/20/69	0.03	0.1393	0.1393	0
05/21/69	0.55	6.541	6.509	0.03265
05/24/69	0.06	0.4149	0.4149	0
05/26/69	0.01	0.01548	0.01548	0
05/31/69	0.12	1.027	1.027	0
06/01/69	0.04	0.2448	0.2448	0
06/02/69	0.05	0.3258	0.3258	0
06/03/69	0.02	0.06191	0.06191	0
06/04/69	0.40	4.486	4.468	0.01796
06/06/69	0.09	0.7119	0.7119	0
06/07/69	0.83	10.75	10.67	0.07428
06/11/69	0.07	0.5119	0.5119	0
06/11/69	0.03	0.1393	0.1393	0
06/12/69	0.01	0.01548	0.01548	0
06/12/69	0.24	2.416	2.413	0.002330
06/17/69	0.36	3.939	3.926	0.01321
06/18/69	0.16	1.469	1.469	0
06/19/69	0.09	0.7119	0.7119	0
06/21/69	0.02	0.06191	0.06191	0
06/22/69	0.36	3.939	3.926	0.01321
06/22/69	0.05	0.3258	0.3258	0
06/25/69	1.68	25.72	25.39	0.3296
06/27/69	0.68	8.435	8.384	0.05085

06/29/69	0.38	4.213	4.197	0.01566	
06/29/69	1.96	31.16	30.35	0.8137	
06/30/69	0.01	0.01548	0.01548	0	
07/02/69	0.31	3.279	3.271	0.007892	
07/04/69	0.04	0.2448	0.2448	0	
07/10/69	0.47	5.420	5.396	0.02427	
07/11/69	0.07	0.5119	0.5119	0	
07/16/69	0.52	6.114	6.085	0.02936	
07/17/69	0.85	11.07	10.99	0.07643	
07/17/69	1.44	21.29	21.13	0.1619	
07/18/69	0.01	0.01548	0.01548	0	
07/23/69	0.11	0.9187	0.9187	0	
07/26/69	1.37	20.05	19.89	0.1530	
07/27/69	1.38	20.22	20.07	0.1543	
07/31/69	0.04	0.2448	0.2448	0	
08/04/69	0.03	0.1393	0.1393	0	
08/07/69	0.10	0.8131	0.8131	0	
08/09/69	0.08	0.6151	0.6151	0	
08/16/69	0.32	3.408	3.399	0.008867	
09/04/69	0.36	3.939	3.926	0.01321	
09/05/69	0.74	9.342	9.281	0.06104	
09/14/69	0.01	0.01548	0.01548	0	
09/15/69	0.03	0.1393	0.1393	0	
09/16/69	0.03	0.1393	0.1393	0	
09/23/69	0.16	1.469	1.469	0	
09/25/69	0.01	0.01548	0.01548	0	
09/29/69	0.84	10.91	10.83	0.07536	
10/06/69	0.01	0.01548	0.01548	0	
10/06/69	0.01	0.01548	0.01548	0	
10/09/69	0.05	0.3258	0.3258	0	
10/10/69	0.14	1.242	1.242	0	
10/10/69	1.34	19.52	19.37	0.1492	
10/12/69	1.63	24.78	24.53	0.2560	
10/15/69	0.16	1.469	1.469	0	
10/19/69	0.44	5.014	4.993	0.02145	
10/19/69	0.35	3.804	3.792	0.01206	
10/21/69	0.02	0.06191	0.06191	0	
10/24/69	0.01	0.01548	0.01548	0	
10/30/69	0.32	3.408	3.399	0.008867	
11/02/69	0.77	9.806	9.739	0.06649	
11/11/69	0.05	0.3258	0.3258	0	
11/11/69	0.04	0.2448	0.2448	0	
11/13/69	0.03	0.1393	0.1393	0	
11/17/69	0.15	1.354	1.354	0	
11/18/69	0.02	0.06191	0.06191	0	
11/19/69	0.01	0.01548	0.01548	0	
11/26/69	0.07	0.5119	0.5119	0	
12/07/69	-	-	-	-	
12/11/69	-	-	-	-	

12/16/69	-	-	-	-	-
12/21/69	-	-	-	-	-
12/23/69	-	-	-	-	-
12/24/69	-	-	-	-	-
12/24/69	-	-	-	-	-
12/27/69	-	-	-	-	-
12/28/69	-	-	-	-	-
12/31/69	-	-	-	-	-
Summary for All Events					
	Rain Total (in.)	Land Use Totals	Paved Parking 1	Large Landscaped Areas 1	
Minimum:	0.00	0.00	0	0	
Maximum:	1.96	31.16	30.35	0.8137	
Flow Wt Avg	N/A	15.22	15.02	0.3314	
Total:	29.02	371.53	368.5	3.047	
Commercial: PROPOSED POND Areas - Particulate Solids Yield (lbs)					
Start Date	Rain Total (in.)	Land Use Totals	Water Body Areas		
01/05/69	-	-	-		
01/06/69	-	-	-		
01/08/69	-	-	-		
01/15/69	-	-	-		
01/17/69	-	-	-		
01/23/69	-	-	-		
01/24/69	-	-	-		
01/28/69	-	-	-		
01/29/69	-	-	-		
02/06/69	-	-	-		
02/06/69	-	-	-		
02/22/69	-	-	-		
03/06/69	-	-	-		
03/20/69	-	-	-		
03/20/69	-	-	-		
03/21/69	-	-	-		
03/24/69	-	-	-		
03/28/69	0.08	0	0		
04/01/69	0.29	0	0		
04/04/69	0.43	0	0		
04/08/69	0.71	0	0		
04/14/69	0.52	0	0		
04/16/69	0.10	0	0		
04/16/69	1.26	0	0		
04/21/69	0.04	0	0		
04/27/69	0.01	0	0		
04/28/69	0.06	0	0		
05/01/69	0.01	0	0		

05/05/69	0.18	0	0		
05/06/69	0.02	0	0		
05/06/69	0.06	0	0		
05/08/69	0.26	0	0		
05/08/69	0.22	0	0		
05/10/69	0.02	0	0		
05/13/69	0.18	0	0		
05/17/69	1.33	0	0		
05/20/69	0.03	0	0		
05/21/69	0.55	0	0		
05/24/69	0.06	0	0		
05/26/69	0.01	0	0		
05/31/69	0.12	0	0		
06/01/69	0.04	0	0		
06/02/69	0.05	0	0		
06/03/69	0.02	0	0		
06/04/69	0.40	0	0		
06/06/69	0.09	0	0		
06/07/69	0.83	0	0		
06/11/69	0.07	0	0		
06/11/69	0.03	0	0		
06/12/69	0.01	0	0		
06/12/69	0.24	0	0		
06/17/69	0.36	0	0		
06/18/69	0.16	0	0		
06/19/69	0.09	0	0		
06/21/69	0.02	0	0		
06/22/69	0.36	0	0		
06/22/69	0.05	0	0		
06/25/69	1.68	0	0		
06/27/69	0.68	0	0		
06/29/69	0.38	0	0		
06/29/69	1.96	0	0		
06/30/69	0.01	0	0		
07/02/69	0.31	0	0		
07/04/69	0.04	0	0		
07/10/69	0.47	0	0		
07/11/69	0.07	0	0		
07/16/69	0.52	0	0		
07/17/69	0.85	0	0		
07/17/69	1.44	0	0		
07/18/69	0.01	0	0		
07/23/69	0.11	0	0		
07/26/69	1.37	0	0		
07/27/69	1.38	0	0		
07/31/69	0.04	0	0		
08/04/69	0.03	0	0		
08/07/69	0.10	0	0		
08/09/69	0.08	0	0		

08/16/69	0.32	0	0		
09/04/69	0.36	0	0		
09/05/69	0.74	0	0		
09/14/69	0.01	0	0		
09/15/69	0.03	0	0		
09/16/69	0.03	0	0		
09/23/69	0.16	0	0		
09/25/69	0.01	0	0		
09/29/69	0.84	0	0		
10/06/69	0.01	0	0		
10/06/69	0.01	0	0		
10/09/69	0.05	0	0		
10/10/69	0.14	0	0		
10/10/69	1.34	0	0		
10/12/69	1.63	0	0		
10/15/69	0.16	0	0		
10/19/69	0.44	0	0		
10/19/69	0.35	0	0		
10/21/69	0.02	0	0		
10/24/69	0.01	0	0		
10/30/69	0.32	0	0		
11/02/69	0.77	0	0		
11/11/69	0.05	0	0		
11/11/69	0.04	0	0		
11/13/69	0.03	0	0		
11/17/69	0.15	0	0		
11/18/69	0.02	0	0		
11/19/69	0.01	0	0		
11/26/69	0.07	0	0		
12/07/69	-	-	-		
12/11/69	-	-	-		
12/16/69	-	-	-		
12/21/69	-	-	-		
12/23/69	-	-	-		
12/24/69	-	-	-		
12/24/69	-	-	-		
12/27/69	-	-	-		
12/28/69	-	-	-		
12/31/69	-	-	-		
Summary for All Events					
	Rain Total (in.)	Land Use Totals	Water Body Areas		
Minimum:	0.00	0.00	0		
Maximum:	1.96	0.00	0		
Flow Wt Avg	N/A	0	0		
Total:	29.02	0.00	0		
Residential: BLUE ROOF Areas - Particulate Solids Yield (lbs)					

Start Date	Rain Total (in.)	Land Use Totals	Roofs 1		
01/05/69	-	-	-		
01/06/69	-	-	-		
01/08/69	-	-	-		
01/15/69	-	-	-		
01/17/69	-	-	-		
01/23/69	-	-	-		
01/24/69	-	-	-		
01/28/69	-	-	-		
01/29/69	-	-	-		
02/06/69	-	-	-		
02/06/69	-	-	-		
02/22/69	-	-	-		
03/06/69	-	-	-		
03/20/69	-	-	-		
03/20/69	-	-	-		
03/21/69	-	-	-		
03/24/69	-	-	-		
03/28/69	0.08	0.1519	0.1519		
04/01/69	0.29	2.421	2.421		
04/04/69	0.43	3.958	3.958		
04/08/69	0.71	6.879	6.879		
04/14/69	0.52	4.843	4.843		
04/16/69	0.10	0.3712	0.3712		
04/16/69	1.26	12.95	12.95		
04/21/69	0.04	0.001142	0.001142		
04/27/69	0.01	0	0		
04/28/69	0.06	0.05611	0.05611		
05/01/69	0.01	0	0		
05/05/69	0.18	1.284	1.284		
05/06/69	0.02	0	0		
05/06/69	0.06	0.05611	0.05611		
05/08/69	0.26	2.109	2.109		
05/08/69	0.22	1.715	1.715		
05/10/69	0.02	0	0		
05/13/69	0.18	1.284	1.284		
05/17/69	1.33	13.73	13.73		
05/20/69	0.03	0	0		
05/21/69	0.55	5.143	5.143		
05/24/69	0.06	0.05611	0.05611		
05/26/69	0.01	0	0		
05/31/69	0.12	0.6490	0.6490		
06/01/69	0.04	0.001142	0.001142		
06/02/69	0.05	0.02409	0.02409		
06/03/69	0.02	0	0		
06/04/69	0.40	3.668	3.668		
06/06/69	0.09	0.2525	0.2525		

06/07/69	0.83	8.218	8.218		
06/11/69	0.07	0.09719	0.09719		
06/11/69	0.03	0	0		
06/12/69	0.01	0	0		
06/12/69	0.24	1.909	1.909		
06/17/69	0.36	3.203	3.203		
06/18/69	0.16	1.049	1.049		
06/19/69	0.09	0.2525	0.2525		
06/21/69	0.02	0	0		
06/22/69	0.36	3.203	3.203		
06/22/69	0.05	0.02409	0.02409		
06/25/69	1.68	17.70	17.70		
06/27/69	0.68	6.539	6.539		
06/29/69	0.38	3.440	3.440		
06/29/69	1.96	20.98	20.98		
06/30/69	0.01	0	0		
07/02/69	0.31	2.636	2.636		
07/04/69	0.04	0.001142	0.001142		
07/10/69	0.47	4.349	4.349		
07/11/69	0.07	0.09719	0.09719		
07/16/69	0.52	4.843	4.843		
07/17/69	0.85	8.426	8.426		
07/17/69	1.44	14.96	14.96		
07/18/69	0.01	0	0		
07/23/69	0.11	0.5081	0.5081		
07/26/69	1.37	14.17	14.17		
07/27/69	1.38	14.29	14.29		
07/31/69	0.04	0.001142	0.001142		
08/04/69	0.03	0	0		
08/07/69	0.10	0.3712	0.3712		
08/09/69	0.08	0.1519	0.1519		
08/16/69	0.32	2.746	2.746		
09/04/69	0.36	3.203	3.203		
09/05/69	0.74	7.223	7.223		
09/14/69	0.01	0	0		
09/15/69	0.03	0	0		
09/16/69	0.03	0	0		
09/23/69	0.16	1.049	1.049		
09/25/69	0.01	0	0		
09/29/69	0.84	8.322	8.322		
10/06/69	0.01	0	0		
10/06/69	0.01	0	0		
10/09/69	0.05	0.02409	0.02409		
10/10/69	0.14	0.8375	0.8375		
10/10/69	1.34	13.84	13.84		
10/12/69	1.63	17.12	17.12		
10/15/69	0.16	1.049	1.049		
10/19/69	0.44	4.056	4.056		
10/19/69	0.35	3.086	3.086		

10/21/69	0.02	0	0		
10/24/69	0.01	0	0		
10/30/69	0.32	2.746	2.746		
11/02/69	0.77	7.572	7.572		
11/11/69	0.05	0.02409	0.02409		
11/11/69	0.04	0.001142	0.001142		
11/13/69	0.03	0	0		
11/17/69	0.15	0.9404	0.9404		
11/18/69	0.02	0	0		
11/19/69	0.01	0	0		
11/26/69	0.07	0.09719	0.09719		
12/07/69	-	-	-		
12/11/69	-	-	-		
12/16/69	-	-	-		
12/21/69	-	-	-		
12/23/69	-	-	-		
12/24/69	-	-	-		
12/24/69	-	-	-		
12/27/69	-	-	-		
12/28/69	-	-	-		
12/31/69	-	-	-		
Summary for All Events					
	Rain Total (in.)	Land Use Totals	Roofs 1		
Minimum:	0.00	0.00	0		
Maximum:	1.96	20.98	20.98		
Flow Wt Avg	N/A	10.75	10.75		
Total:	29.02	266.96	267.0		
Residential: PROPOSED RESIDENTIAL - NON PARKING/ROAD Areas - Particulat					
Start Date	Rain Total (in.)	Land Use Totals	Roofs 1	Sidewalks 1	Small Landscaped Areas 1
01/05/69	-	-	-	-	-
01/06/69	-	-	-	-	-
01/08/69	-	-	-	-	-
01/15/69	-	-	-	-	-
01/17/69	-	-	-	-	-
01/23/69	-	-	-	-	-
01/24/69	-	-	-	-	-
01/28/69	-	-	-	-	-
01/29/69	-	-	-	-	-
02/06/69	-	-	-	-	-
02/06/69	-	-	-	-	-
02/22/69	-	-	-	-	-
03/06/69	-	-	-	-	-
03/20/69	-	-	-	-	-
03/20/69	-	-	-	-	-

03/21/69	-	-	-	-	-
03/24/69	-	-	-	-	-
03/28/69	0.08	0.5054	0.1289	0.3765	0
04/01/69	0.29	4.183	2.054	1.848	0.2818
04/04/69	0.43	7.286	3.359	2.975	0.9528
04/08/69	0.71	13.83	5.836	5.404	2.588
04/14/69	0.52	9.195	4.109	3.724	1.361
04/16/69	0.10	0.8126	0.3150	0.4977	0
04/16/69	1.26	28.46	10.99	11.01	6.457
04/21/69	0.04	0.1508	0.000969	0.1498	0
04/27/69	0.01	0.009474	0	0.009474	0
04/28/69	0.06	0.3015	0.04761	0.2539	0
05/01/69	0.01	0.009474	0	0.009474	0
05/05/69	0.18	2.135	1.089	1.045	0
05/06/69	0.02	0.03789	0	0.03789	0
05/06/69	0.06	0.3015	0.04761	0.2539	0
05/08/69	0.26	3.583	1.789	1.623	0.1713
05/08/69	0.22	2.843	1.455	1.335	0.05313
05/10/69	0.02	0.03789	0	0.03789	0
05/13/69	0.18	2.135	1.089	1.045	0
05/17/69	1.33	30.26	11.65	11.75	6.862
05/20/69	0.03	0.08526	0	0.08526	0
05/21/69	0.55	9.861	4.363	3.984	1.514
05/24/69	0.06	0.3015	0.04761	0.2539	0
05/26/69	0.01	0.009474	0	0.009474	0
05/31/69	0.12	1.179	0.5507	0.6288	0
06/01/69	0.04	0.1508	0.000969	0.1498	0
06/02/69	0.05	0.2199	0.02044	0.1994	0
06/03/69	0.02	0.03789	0	0.03789	0
06/04/69	0.40	6.679	3.112	2.735	0.8327
06/06/69	0.09	0.6500	0.2142	0.4357	0
06/07/69	0.83	16.95	6.973	6.533	3.444
06/11/69	0.07	0.3958	0.08247	0.3133	0
06/11/69	0.03	0.08526	0	0.08526	0
06/12/69	0.01	0.009474	0	0.009474	0
06/12/69	0.24	3.205	1.620	1.477	0.1080
06/17/69	0.36	5.733	2.717	2.403	0.6127
06/18/69	0.16	1.789	0.8901	0.8990	0
06/19/69	0.09	0.6500	0.2142	0.4357	0
06/21/69	0.02	0.03789	0	0.03789	0
06/22/69	0.36	5.733	2.717	2.403	0.6127
06/22/69	0.05	0.2199	0.02044	0.1994	0
06/25/69	1.68	45.84	15.02	15.54	15.28
06/27/69	0.68	13.04	5.548	5.132	2.358
06/29/69	0.38	6.214	2.919	2.569	0.7260
06/29/69	1.96	74.10	17.80	18.58	37.73
06/30/69	0.01	0.009474	0	0.009474	0
07/02/69	0.31	4.605	2.237	2.002	0.3659
07/04/69	0.04	0.1508	0.000969	0.1498	0

07/10/69	0.47	8.118	3.690	3.303	1.126
07/11/69	0.07	0.3958	0.08247	0.3133	0
07/16/69	0.52	9.195	4.109	3.724	1.361
07/17/69	0.85	17.42	7.149	6.728	3.544
07/17/69	1.44	33.14	12.69	12.93	7.508
07/18/69	0.01	0.009474	0	0.009474	0
07/23/69	0.11	0.9934	0.4311	0.5623	0
07/26/69	1.37	31.30	12.03	12.18	7.095
07/27/69	1.38	31.56	12.12	12.28	7.154
07/31/69	0.04	0.1508	0.000969	0.1498	0
08/04/69	0.03	0.08526	0	0.08526	0
08/07/69	0.10	0.8126	0.3150	0.4977	0
08/09/69	0.08	0.5054	0.1289	0.3765	0
08/16/69	0.32	4.822	2.330	2.080	0.4111
09/04/69	0.36	5.733	2.717	2.403	0.6127
09/05/69	0.74	14.64	6.128	5.681	2.830
09/14/69	0.01	0.009474	0	0.009474	0
09/15/69	0.03	0.08526	0	0.08526	0
09/16/69	0.03	0.08526	0	0.08526	0
09/23/69	0.16	1.789	0.8901	0.8990	0
09/25/69	0.01	0.009474	0	0.009474	0
09/29/69	0.84	17.19	7.061	6.630	3.494
10/06/69	0.01	0.009474	0	0.009474	0
10/06/69	0.01	0.009474	0	0.009474	0
10/09/69	0.05	0.2199	0.02044	0.1994	0
10/10/69	0.14	1.471	0.7106	0.7601	0
10/10/69	1.34	30.52	11.74	11.85	6.920
10/12/69	1.63	41.41	14.53	15.01	11.87
10/15/69	0.16	1.789	0.8901	0.8990	0
10/19/69	0.44	7.492	3.441	3.056	0.9947
10/19/69	0.35	5.499	2.619	2.321	0.5592
10/21/69	0.02	0.03789	0	0.03789	0
10/24/69	0.01	0.009474	0	0.009474	0
10/30/69	0.32	4.822	2.330	2.080	0.4111
11/02/69	0.77	15.47	6.424	5.961	3.083
11/11/69	0.05	0.2199	0.02044	0.1994	0
11/11/69	0.04	0.1508	0.000969	0.1498	0
11/13/69	0.03	0.08526	0	0.08526	0
11/17/69	0.15	1.627	0.7979	0.8286	0
11/18/69	0.02	0.03789	0	0.03789	0
11/19/69	0.01	0.009474	0	0.009474	0
11/26/69	0.07	0.3958	0.08247	0.3133	0
12/07/69	-	-	-	-	-
12/11/69	-	-	-	-	-
12/16/69	-	-	-	-	-
12/21/69	-	-	-	-	-
12/23/69	-	-	-	-	-
12/24/69	-	-	-	-	-
12/24/69	-	-	-	-	-

12/27/69	-	-	-	-	-
12/28/69	-	-	-	-	-
12/31/69	-	-	-	-	-
Summary for All Events					
	Rain Total (in.)	Land Use Totals	Roofs 1	Sidewalks 1	Small Landscaped Areas 1
Minimum:	0.00	0.00	0	0	0
Maximum:	1.96	74.10	17.80	18.58	37.73
Flow Wt Avg	N/A	27.01	9.117	9.196	15.37
Total:	29.02	593.35	226.5	225.5	141.3
Residential: PROPOSED RESIDENTIAL - PARKING/ROAD Areas - Particulate Soli					
Start Date	Rain Total (in.)	Land Use Totals	Paved Parking 1		
01/05/69	-	-	-		
01/06/69	-	-	-		
01/08/69	-	-	-		
01/15/69	-	-	-		
01/17/69	-	-	-		
01/23/69	-	-	-		
01/24/69	-	-	-		
01/28/69	-	-	-		
01/29/69	-	-	-		
02/06/69	-	-	-		
02/06/69	-	-	-		
02/22/69	-	-	-		
03/06/69	-	-	-		
03/20/69	-	-	-		
03/20/69	-	-	-		
03/21/69	-	-	-		
03/24/69	-	-	-		
03/28/69	0.08	2.312	2.312		
04/01/69	0.29	11.34	11.34		
04/04/69	0.43	18.27	18.27		
04/08/69	0.71	33.18	33.18		
04/14/69	0.52	22.87	22.87		
04/16/69	0.10	3.056	3.056		
04/16/69	1.26	67.60	67.60		
04/21/69	0.04	0.9198	0.9198		
04/27/69	0.01	0.05817	0.05817		
04/28/69	0.06	1.559	1.559		
05/01/69	0.01	0.05817	0.05817		
05/05/69	0.18	6.419	6.419		
05/06/69	0.02	0.2327	0.2327		
05/06/69	0.06	1.559	1.559		
05/08/69	0.26	9.963	9.963		
05/08/69	0.22	8.196	8.196		

05/10/69	0.02	0.2327	0.2327		
05/13/69	0.18	6.419	6.419		
05/17/69	1.33	72.13	72.13		
05/20/69	0.03	0.5235	0.5235		
05/21/69	0.55	24.46	24.46		
05/24/69	0.06	1.559	1.559		
05/26/69	0.01	0.05817	0.05817		
05/31/69	0.12	3.860	3.860		
06/01/69	0.04	0.9198	0.9198		
06/02/69	0.05	1.225	1.225		
06/03/69	0.02	0.2327	0.2327		
06/04/69	0.40	16.79	16.79		
06/06/69	0.09	2.675	2.675		
06/07/69	0.83	40.11	40.11		
06/11/69	0.07	1.924	1.924		
06/11/69	0.03	0.5235	0.5235		
06/12/69	0.01	0.05817	0.05817		
06/12/69	0.24	9.069	9.069		
06/17/69	0.36	14.75	14.75		
06/18/69	0.16	5.520	5.520		
06/19/69	0.09	2.675	2.675		
06/21/69	0.02	0.2327	0.2327		
06/22/69	0.36	14.75	14.75		
06/22/69	0.05	1.225	1.225		
06/25/69	1.68	95.41	95.41		
06/27/69	0.68	31.51	31.51		
06/29/69	0.38	15.77	15.77		
06/29/69	1.96	114.1	114.1		
06/30/69	0.01	0.05817	0.05817		
07/02/69	0.31	12.29	12.29		
07/04/69	0.04	0.9198	0.9198		
07/10/69	0.47	20.28	20.28		
07/11/69	0.07	1.924	1.924		
07/16/69	0.52	22.87	22.87		
07/17/69	0.85	41.31	41.31		
07/17/69	1.44	79.42	79.42		
07/18/69	0.01	0.05817	0.05817		
07/23/69	0.11	3.453	3.453		
07/26/69	1.37	74.76	74.76		
07/27/69	1.38	75.42	75.42		
07/31/69	0.04	0.9198	0.9198		
08/04/69	0.03	0.5235	0.5235		
08/07/69	0.10	3.056	3.056		
08/09/69	0.08	2.312	2.312		
08/16/69	0.32	12.77	12.77		
09/04/69	0.36	14.75	14.75		
09/05/69	0.74	34.88	34.88		
09/14/69	0.01	0.05817	0.05817		
09/15/69	0.03	0.5235	0.5235		

09/16/69	0.03	0.5235	0.5235		
09/23/69	0.16	5.520	5.520		
09/25/69	0.01	0.05817	0.05817		
09/29/69	0.84	40.71	40.71		
10/06/69	0.01	0.05817	0.05817		
10/06/69	0.01	0.05817	0.05817		
10/09/69	0.05	1.225	1.225		
10/10/69	0.14	4.667	4.667		
10/10/69	1.34	72.79	72.79		
10/12/69	1.63	92.17	92.17		
10/15/69	0.16	5.520	5.520		
10/19/69	0.44	18.76	18.76		
10/19/69	0.35	14.25	14.25		
10/21/69	0.02	0.2327	0.2327		
10/24/69	0.01	0.05817	0.05817		
10/30/69	0.32	12.77	12.77		
11/02/69	0.77	36.60	36.60		
11/11/69	0.05	1.225	1.225		
11/11/69	0.04	0.9198	0.9198		
11/13/69	0.03	0.5235	0.5235		
11/17/69	0.15	5.087	5.087		
11/18/69	0.02	0.2327	0.2327		
11/19/69	0.01	0.05817	0.05817		
11/26/69	0.07	1.924	1.924		
12/07/69	-	-	-		
12/11/69	-	-	-		
12/16/69	-	-	-		
12/21/69	-	-	-		
12/23/69	-	-	-		
12/24/69	-	-	-		
12/24/69	-	-	-		
12/27/69	-	-	-		
12/28/69	-	-	-		
12/31/69	-	-	-		
Summary for All Events					
	Rain Total (in.)	Land Use Totals	Paved Parking 1		
Minimum:	0.00	0.00	0		
Maximum:	1.96	114.10	114.1		
Flow Wt Avg	N/A	56.46	56.46		
Total:	29.02	1384.80	1385		
Commercial: DETAINED - WEST Areas - Particulate Solids Yield (lbs)					
Start Date	Rain Total (in.)	Land Use Totals	Paved Parking 1	Large Landscaped Areas 1	
01/05/69	-	-	-	-	
01/06/69	-	-	-	-	

01/08/69	-	-	-	-
01/15/69	-	-	-	-
01/17/69	-	-	-	-
01/23/69	-	-	-	-
01/24/69	-	-	-	-
01/28/69	-	-	-	-
01/29/69	-	-	-	-
02/06/69	-	-	-	-
02/06/69	-	-	-	-
02/22/69	-	-	-	-
03/06/69	-	-	-	-
03/20/69	-	-	-	-
03/20/69	-	-	-	-
03/21/69	-	-	-	-
03/24/69	-	-	-	-
03/28/69	0.08	0.5922	0.5922	0
04/01/69	0.29	2.981	2.906	0.07442
04/04/69	0.43	4.931	4.680	0.2516
04/08/69	0.71	9.184	8.501	0.6835
04/14/69	0.52	6.218	5.858	0.3595
04/16/69	0.10	0.7828	0.7828	0
04/16/69	1.26	19.02	17.32	1.705
04/21/69	0.04	0.2356	0.2356	0
04/27/69	0.01	0.01490	0.01490	0
04/28/69	0.06	0.3994	0.3994	0
05/01/69	0.01	0.01490	0.01490	0
05/05/69	0.18	1.644	1.644	0
05/06/69	0.02	0.05961	0.05961	0
05/06/69	0.06	0.3994	0.3994	0
05/08/69	0.26	2.598	2.552	0.04523
05/08/69	0.22	2.114	2.100	0.01403
05/10/69	0.02	0.05961	0.05961	0
05/13/69	0.18	1.644	1.644	0
05/17/69	1.33	20.29	18.48	1.812
05/20/69	0.03	0.1341	0.1341	0
05/21/69	0.55	6.666	6.266	0.3998
05/24/69	0.06	0.3994	0.3994	0
05/26/69	0.01	0.01490	0.01490	0
05/31/69	0.12	0.9890	0.9890	0
06/01/69	0.04	0.2356	0.2356	0
06/02/69	0.05	0.3137	0.3137	0
06/03/69	0.02	0.05961	0.05961	0
06/04/69	0.40	4.522	4.302	0.2199
06/06/69	0.09	0.6854	0.6854	0
06/07/69	0.83	11.19	10.28	0.9095
06/11/69	0.07	0.4928	0.4928	0
06/11/69	0.03	0.1341	0.1341	0
06/12/69	0.01	0.01490	0.01490	0
06/12/69	0.24	2.352	2.323	0.02853

06/17/69	0.36	3.941	3.779	0.1618	
06/18/69	0.16	1.414	1.414	0	
06/19/69	0.09	0.6854	0.6854	0	
06/21/69	0.02	0.05961	0.05961	0	
06/22/69	0.36	3.941	3.779	0.1618	
06/22/69	0.05	0.3137	0.3137	0	
06/25/69	1.68	28.48	24.44	4.035	
06/27/69	0.68	8.695	8.072	0.6226	
06/29/69	0.38	4.233	4.041	0.1917	
06/29/69	1.96	39.18	29.22	9.963	
06/30/69	0.01	0.01490	0.01490	0	
07/02/69	0.31	3.246	3.149	0.09663	
07/04/69	0.04	0.2356	0.2356	0	
07/10/69	0.47	5.492	5.195	0.2972	
07/11/69	0.07	0.4928	0.4928	0	
07/16/69	0.52	6.218	5.858	0.3595	
07/17/69	0.85	11.52	10.58	0.9359	
07/17/69	1.44	22.33	20.35	1.983	
07/18/69	0.01	0.01490	0.01490	0	
07/23/69	0.11	0.8845	0.8845	0	
07/26/69	1.37	21.03	19.15	1.874	
07/27/69	1.38	21.21	19.32	1.889	
07/31/69	0.04	0.2356	0.2356	0	
08/04/69	0.03	0.1341	0.1341	0	
08/07/69	0.10	0.7828	0.7828	0	
08/09/69	0.08	0.5922	0.5922	0	
08/16/69	0.32	3.381	3.272	0.1086	
09/04/69	0.36	3.941	3.779	0.1618	
09/05/69	0.74	9.683	8.936	0.7474	
09/14/69	0.01	0.01490	0.01490	0	
09/15/69	0.03	0.1341	0.1341	0	
09/16/69	0.03	0.1341	0.1341	0	
09/23/69	0.16	1.414	1.414	0	
09/25/69	0.01	0.01490	0.01490	0	
09/29/69	0.84	11.35	10.43	0.9226	
10/06/69	0.01	0.01490	0.01490	0	
10/06/69	0.01	0.01490	0.01490	0	
10/09/69	0.05	0.3137	0.3137	0	
10/10/69	0.14	1.196	1.196	0	
10/10/69	1.34	20.47	18.65	1.827	
10/12/69	1.63	26.75	23.61	3.135	
10/15/69	0.16	1.414	1.414	0	
10/19/69	0.44	5.070	4.807	0.2627	
10/19/69	0.35	3.798	3.651	0.1477	
10/21/69	0.02	0.05961	0.05961	0	
10/24/69	0.01	0.01490	0.01490	0	
10/30/69	0.32	3.381	3.272	0.1086	
11/02/69	0.77	10.19	9.377	0.8140	
11/11/69	0.05	0.3137	0.3137	0	

11/11/69	0.04	0.2356	0.2356	0	
11/13/69	0.03	0.1341	0.1341	0	
11/17/69	0.15	1.303	1.303	0	
11/18/69	0.02	0.05961	0.05961	0	
11/19/69	0.01	0.01490	0.01490	0	
11/26/69	0.07	0.4928	0.4928	0	
12/07/69	-	-	-	-	
12/11/69	-	-	-	-	
12/16/69	-	-	-	-	
12/21/69	-	-	-	-	
12/23/69	-	-	-	-	
12/24/69	-	-	-	-	
12/24/69	-	-	-	-	
12/27/69	-	-	-	-	
12/28/69	-	-	-	-	
12/31/69	-	-	-	-	
Summary for All Events					
	Rain Total (in.)	Land Use Totals	Paved Parking 1	Large Landscaped Areas 1	
Minimum:	0.00	0.00	0	0	
Maximum:	1.96	39.18	29.22	9.963	
Flow Wt Avg	N/A	16.98	14.47	4.058	
Total:	29.02	392.07	354.8	37.31	
Commercial: UNDETAINED - WEST Areas - Particulate Solids Yield (lb					
Start Date	Rain Total (in.)	Land Use Totals	Paved Parking 1	Large Landscaped Areas 1	
01/05/69	-	-	-	-	
01/06/69	-	-	-	-	
01/08/69	-	-	-	-	
01/15/69	-	-	-	-	
01/17/69	-	-	-	-	
01/23/69	-	-	-	-	
01/24/69	-	-	-	-	
01/28/69	-	-	-	-	
01/29/69	-	-	-	-	
02/06/69	-	-	-	-	
02/06/69	-	-	-	-	
02/22/69	-	-	-	-	
03/06/69	-	-	-	-	
03/20/69	-	-	-	-	
03/20/69	-	-	-	-	
03/21/69	-	-	-	-	
03/24/69	-	-	-	-	
03/28/69	0.08	0.03539	0.03539	0	
04/01/69	0.29	0.2021	0.1737	0.02846	
04/04/69	0.43	0.3759	0.2796	0.09624	

04/08/69	0.71	0.7694	0.5080	0.2614	
04/14/69	0.52	0.4876	0.3501	0.1375	
04/16/69	0.10	0.04678	0.04678	0	
04/16/69	1.26	1.687	1.035	0.6521	
04/21/69	0.04	0.01408	0.01408	0	
04/27/69	0.01	0.000890	0.000890	0	
04/28/69	0.06	0.02387	0.02387	0	
05/01/69	0.01	0.000890	0.000890	0	
05/05/69	0.18	0.09826	0.09826	0	
05/06/69	0.02	0.003562	0.003562	0	
05/06/69	0.06	0.02387	0.02387	0	
05/08/69	0.26	0.1698	0.1525	0.01730	
05/08/69	0.22	0.1308	0.1255	0.005366	
05/10/69	0.02	0.003562	0.003562	0	
05/13/69	0.18	0.09826	0.09826	0	
05/17/69	1.33	1.797	1.104	0.6930	
05/20/69	0.03	0.008014	0.008014	0	
05/21/69	0.55	0.5273	0.3744	0.1529	
05/24/69	0.06	0.02387	0.02387	0	
05/26/69	0.01	0.000890	0.000890	0	
05/31/69	0.12	0.05910	0.05910	0	
06/01/69	0.04	0.01408	0.01408	0	
06/02/69	0.05	0.01875	0.01875	0	
06/03/69	0.02	0.003562	0.003562	0	
06/04/69	0.40	0.3412	0.2571	0.08410	
06/06/69	0.09	0.04095	0.04095	0	
06/07/69	0.83	0.9619	0.6141	0.3479	
06/11/69	0.07	0.02945	0.02945	0	
06/11/69	0.03	0.008014	0.008014	0	
06/12/69	0.01	0.000890	0.000890	0	
06/12/69	0.24	0.1497	0.1388	0.01091	
06/17/69	0.36	0.2877	0.2258	0.06188	
06/18/69	0.16	0.08450	0.08450	0	
06/19/69	0.09	0.04095	0.04095	0	
06/21/69	0.02	0.003562	0.003562	0	
06/22/69	0.36	0.2877	0.2258	0.06188	
06/22/69	0.05	0.01875	0.01875	0	
06/25/69	1.68	3.004	1.461	1.543	
06/27/69	0.68	0.7205	0.4823	0.2381	
06/29/69	0.38	0.3148	0.2415	0.07333	
06/29/69	1.96	5.557	1.746	3.811	
06/30/69	0.01	0.000890	0.000890	0	
07/02/69	0.31	0.2251	0.1882	0.03696	
07/04/69	0.04	0.01408	0.01408	0	
07/10/69	0.47	0.4241	0.3104	0.1137	
07/11/69	0.07	0.02945	0.02945	0	
07/16/69	0.52	0.4876	0.3501	0.1375	
07/17/69	0.85	0.9903	0.6323	0.3579	
07/17/69	1.44	1.974	1.216	0.7583	

07/18/69	0.01	0.000890	0.000890	0	
07/23/69	0.11	0.05285	0.05285	0	
07/26/69	1.37	1.861	1.144	0.7166	
07/27/69	1.38	1.877	1.155	0.7225	
07/31/69	0.04	0.01408	0.01408	0	
08/04/69	0.03	0.008014	0.008014	0	
08/07/69	0.10	0.04678	0.04678	0	
08/09/69	0.08	0.03539	0.03539	0	
08/16/69	0.32	0.2371	0.1955	0.04152	
09/04/69	0.36	0.2877	0.2258	0.06188	
09/05/69	0.74	0.8198	0.5339	0.2858	
09/14/69	0.01	0.000890	0.000890	0	
09/15/69	0.03	0.008014	0.008014	0	
09/16/69	0.03	0.008014	0.008014	0	
09/23/69	0.16	0.08450	0.08450	0	
09/25/69	0.01	0.000890	0.000890	0	
09/29/69	0.84	0.9761	0.6232	0.3529	
10/06/69	0.01	0.000890	0.000890	0	
10/06/69	0.01	0.000890	0.000890	0	
10/09/69	0.05	0.01875	0.01875	0	
10/10/69	0.14	0.07144	0.07144	0	
10/10/69	1.34	1.813	1.114	0.6989	
10/12/69	1.63	2.610	1.411	1.199	
10/15/69	0.16	0.08450	0.08450	0	
10/19/69	0.44	0.3877	0.2872	0.1005	
10/19/69	0.35	0.2746	0.2181	0.05648	
10/21/69	0.02	0.003562	0.003562	0	
10/24/69	0.01	0.000890	0.000890	0	
10/30/69	0.32	0.2371	0.1955	0.04152	
11/02/69	0.77	0.8716	0.5603	0.3113	
11/11/69	0.05	0.01875	0.01875	0	
11/11/69	0.04	0.01408	0.01408	0	
11/13/69	0.03	0.008014	0.008014	0	
11/17/69	0.15	0.07788	0.07788	0	
11/18/69	0.02	0.003562	0.003562	0	
11/19/69	0.01	0.000890	0.000890	0	
11/26/69	0.07	0.02945	0.02945	0	
12/07/69	-	-	-	-	
12/11/69	-	-	-	-	
12/16/69	-	-	-	-	
12/21/69	-	-	-	-	
12/23/69	-	-	-	-	
12/24/69	-	-	-	-	
12/24/69	-	-	-	-	
12/27/69	-	-	-	-	
12/28/69	-	-	-	-	
12/31/69	-	-	-	-	
Summary for All Events					

	Rain Total (in.)	Land Use Totals	Paved Parking 1	Large Landscaped Areas 1	
Minimum:	0.00	0.00	0	0	
Maximum:	1.96	5.56	1.746	3.811	
Flow Wt Avg	N/A	1.966	0.8644	1.552	
Total:	29.02	35.47	21.20	14.27	
Commercial: PROPOSED COMMERCIAL LOT MAX BUILD - PARKING/ROAD Area					
Start Date	Rain Total (in.)	Land Use Totals	Paved Parking 1		
01/05/69	-	-	-		
01/06/69	-	-	-		
01/08/69	-	-	-		
01/15/69	-	-	-		
01/17/69	-	-	-		
01/23/69	-	-	-		
01/24/69	-	-	-		
01/28/69	-	-	-		
01/29/69	-	-	-		
02/06/69	-	-	-		
02/06/69	-	-	-		
02/22/69	-	-	-		
03/06/69	-	-	-		
03/20/69	-	-	-		
03/20/69	-	-	-		
03/21/69	-	-	-		
03/24/69	-	-	-		
03/28/69	0.08	1.838	1.838		
04/01/69	0.29	9.020	9.020		
04/04/69	0.43	14.52	14.52		
04/08/69	0.71	26.38	26.38		
04/14/69	0.52	18.18	18.18		
04/16/69	0.10	2.430	2.430		
04/16/69	1.26	53.75	53.75		
04/21/69	0.04	0.7314	0.7314		
04/27/69	0.01	0.04625	0.04625		
04/28/69	0.06	1.240	1.240		
05/01/69	0.01	0.04625	0.04625		
05/05/69	0.18	5.104	5.104		
05/06/69	0.02	0.1850	0.1850		
05/06/69	0.06	1.240	1.240		
05/08/69	0.26	7.922	7.922		
05/08/69	0.22	6.517	6.517		
05/10/69	0.02	0.1850	0.1850		
05/13/69	0.18	5.104	5.104		
05/17/69	1.33	57.36	57.36		
05/20/69	0.03	0.4163	0.4163		

05/21/69	0.55	19.45	19.45		
05/24/69	0.06	1.240	1.240		
05/26/69	0.01	0.04625	0.04625		
05/31/69	0.12	3.070	3.070		
06/01/69	0.04	0.7314	0.7314		
06/02/69	0.05	0.9737	0.9737		
06/03/69	0.02	0.1850	0.1850		
06/04/69	0.40	13.35	13.35		
06/06/69	0.09	2.127	2.127		
06/07/69	0.83	31.90	31.90		
06/11/69	0.07	1.530	1.530		
06/11/69	0.03	0.4163	0.4163		
06/12/69	0.01	0.04625	0.04625		
06/12/69	0.24	7.211	7.211		
06/17/69	0.36	11.73	11.73		
06/18/69	0.16	4.389	4.389		
06/19/69	0.09	2.127	2.127		
06/21/69	0.02	0.1850	0.1850		
06/22/69	0.36	11.73	11.73		
06/22/69	0.05	0.9737	0.9737		
06/25/69	1.68	75.87	75.87		
06/27/69	0.68	25.05	25.05		
06/29/69	0.38	12.54	12.54		
06/29/69	1.96	90.69	90.69		
06/30/69	0.01	0.04625	0.04625		
07/02/69	0.31	9.773	9.773		
07/04/69	0.04	0.7314	0.7314		
07/10/69	0.47	16.12	16.12		
07/11/69	0.07	1.530	1.530		
07/16/69	0.52	18.18	18.18		
07/17/69	0.85	32.84	32.84		
07/17/69	1.44	63.15	63.15		
07/18/69	0.01	0.04625	0.04625		
07/23/69	0.11	2.745	2.745		
07/26/69	1.37	59.44	59.44		
07/27/69	1.38	59.97	59.97		
07/31/69	0.04	0.7314	0.7314		
08/04/69	0.03	0.4163	0.4163		
08/07/69	0.10	2.430	2.430		
08/09/69	0.08	1.838	1.838		
08/16/69	0.32	10.16	10.16		
09/04/69	0.36	11.73	11.73		
09/05/69	0.74	27.73	27.73		
09/14/69	0.01	0.04625	0.04625		
09/15/69	0.03	0.4163	0.4163		
09/16/69	0.03	0.4163	0.4163		
09/23/69	0.16	4.389	4.389		
09/25/69	0.01	0.04625	0.04625		
09/29/69	0.84	32.37	32.37		

10/06/69	0.01	0.04625	0.04625		
10/06/69	0.01	0.04625	0.04625		
10/09/69	0.05	0.9737	0.9737		
10/10/69	0.14	3.711	3.711		
10/10/69	1.34	57.88	57.88		
10/12/69	1.63	73.29	73.29		
10/15/69	0.16	4.389	4.389		
10/19/69	0.44	14.92	14.92		
10/19/69	0.35	11.33	11.33		
10/21/69	0.02	0.1850	0.1850		
10/24/69	0.01	0.04625	0.04625		
10/30/69	0.32	10.16	10.16		
11/02/69	0.77	29.10	29.10		
11/11/69	0.05	0.9737	0.9737		
11/11/69	0.04	0.7314	0.7314		
11/13/69	0.03	0.4163	0.4163		
11/17/69	0.15	4.045	4.045		
11/18/69	0.02	0.1850	0.1850		
11/19/69	0.01	0.04625	0.04625		
11/26/69	0.07	1.530	1.530		
12/07/69	-	-	-		
12/11/69	-	-	-		
12/16/69	-	-	-		
12/21/69	-	-	-		
12/23/69	-	-	-		
12/24/69	-	-	-		
12/24/69	-	-	-		
12/27/69	-	-	-		
12/28/69	-	-	-		
12/31/69	-	-	-		
Summary for All Events					
	Rain Total (in.)	Land Use Totals	Paved Parking 1		
Minimum:	0.00	0.00	0		
Maximum:	1.96	90.69	90.69		
Flow Wt Avg	N/A	44.90	44.90		
Total:	29.02	1101.07	1101		
Commercial: PROPOSED COMMERCIAL LOT MAX BUILD - NON PARKING/ROAD					
Start Date	Rain Total (in.)	Land Use Totals	Roofs 1	Sidewalks 1	Large Landscaped Areas 1
01/05/69	-	-	-	-	-
01/06/69	-	-	-	-	-
01/08/69	-	-	-	-	-
01/15/69	-	-	-	-	-
01/17/69	-	-	-	-	-
01/23/69	-	-	-	-	-

01/24/69	-	-	-	-	-
01/28/69	-	-	-	-	-
01/29/69	-	-	-	-	-
02/06/69	-	-	-	-	-
02/06/69	-	-	-	-	-
02/22/69	-	-	-	-	-
03/06/69	-	-	-	-	-
03/20/69	-	-	-	-	-
03/20/69	-	-	-	-	-
03/21/69	-	-	-	-	-
03/24/69	-	-	-	-	-
03/28/69	0.08	0.1092	0.06474	0.04443	0
04/01/69	0.29	1.343	1.031	0.2181	0.09339
04/04/69	0.43	2.354	1.687	0.3511	0.3158
04/08/69	0.71	4.427	2.931	0.6378	0.8578
04/14/69	0.52	2.955	2.064	0.4395	0.4512
04/16/69	0.10	0.2169	0.1582	0.05873	0
04/16/69	1.26	8.959	5.520	1.299	2.140
04/21/69	0.04	0.01817	0.000487	0.01768	0
04/27/69	0.01	0.001118	0	0.001118	0
04/28/69	0.06	0.05388	0.02391	0.02997	0
05/01/69	0.01	0.001118	0	0.001118	0
05/05/69	0.18	0.6704	0.5470	0.1234	0
05/06/69	0.02	0.004472	0	0.004472	0
05/06/69	0.06	0.05388	0.02391	0.02997	0
05/08/69	0.26	1.147	0.8987	0.1915	0.05676
05/08/69	0.22	0.9061	0.7309	0.1576	0.01761
05/10/69	0.02	0.004472	0	0.004472	0
05/13/69	0.18	0.6704	0.5470	0.1234	0
05/17/69	1.33	9.511	5.850	1.387	2.274
05/20/69	0.03	0.01006	0	0.01006	0
05/21/69	0.55	3.163	2.192	0.4702	0.5017
05/24/69	0.06	0.05388	0.02391	0.02997	0
05/26/69	0.01	0.001118	0	0.001118	0
05/31/69	0.12	0.3508	0.2766	0.07421	0
06/01/69	0.04	0.01817	0.000487	0.01768	0
06/02/69	0.05	0.03381	0.01027	0.02354	0
06/03/69	0.02	0.004472	0	0.004472	0
06/04/69	0.40	2.162	1.563	0.3228	0.2760
06/06/69	0.09	0.1590	0.1076	0.05142	0
06/07/69	0.83	5.414	3.502	0.7711	1.141
06/11/69	0.07	0.07840	0.04142	0.03698	0
06/11/69	0.03	0.01006	0	0.01006	0
06/12/69	0.01	0.001118	0	0.001118	0
06/12/69	0.24	1.024	0.8135	0.1743	0.03580
06/17/69	0.36	1.851	1.365	0.2836	0.2031
06/18/69	0.16	0.5532	0.4471	0.1061	0
06/19/69	0.09	0.1590	0.1076	0.05142	0
06/21/69	0.02	0.004472	0	0.004472	0

06/22/69	0.36	1.851	1.365	0.2836	0.2031
06/22/69	0.05	0.03381	0.01027	0.02354	0
06/25/69	1.68	14.44	7.541	1.834	5.064
06/27/69	0.68	4.173	2.786	0.6057	0.7813
06/29/69	0.38	2.010	1.466	0.3032	0.2406
06/29/69	1.96	23.64	8.940	2.192	12.50
06/30/69	0.01	0.001118	0	0.001118	0
07/02/69	0.31	1.481	1.123	0.2363	0.1213
07/04/69	0.04	0.01817	0.000487	0.01768	0
07/10/69	0.47	2.616	1.853	0.3898	0.3730
07/11/69	0.07	0.07840	0.04142	0.03698	0
07/16/69	0.52	2.955	2.064	0.4395	0.4512
07/17/69	0.85	5.559	3.591	0.7940	1.174
07/17/69	1.44	10.39	6.375	1.527	2.488
07/18/69	0.01	0.001118	0	0.001118	0
07/23/69	0.11	0.2829	0.2165	0.06637	0
07/26/69	1.37	9.829	6.040	1.437	2.351
07/27/69	1.38	9.909	6.088	1.450	2.371
07/31/69	0.04	0.01817	0.000487	0.01768	0
08/04/69	0.03	0.01006	0	0.01006	0
08/07/69	0.10	0.2169	0.1582	0.05873	0
08/09/69	0.08	0.1092	0.06474	0.04443	0
08/16/69	0.32	1.552	1.170	0.2455	0.1362
09/04/69	0.36	1.851	1.365	0.2836	0.2031
09/05/69	0.74	4.686	3.078	0.6704	0.9379
09/14/69	0.01	0.001118	0	0.001118	0
09/15/69	0.03	0.01006	0	0.01006	0
09/16/69	0.03	0.01006	0	0.01006	0
09/23/69	0.16	0.5532	0.4471	0.1061	0
09/25/69	0.01	0.001118	0	0.001118	0
09/29/69	0.84	5.487	3.546	0.7825	1.158
10/06/69	0.01	0.001118	0	0.001118	0
10/06/69	0.01	0.001118	0	0.001118	0
10/09/69	0.05	0.03381	0.01027	0.02354	0
10/10/69	0.14	0.4466	0.3569	0.08970	0
10/10/69	1.34	9.590	5.898	1.399	2.293
10/12/69	1.63	13.00	7.296	1.772	3.934
10/15/69	0.16	0.5532	0.4471	0.1061	0
10/19/69	0.44	2.419	1.728	0.3607	0.3296
10/19/69	0.35	1.774	1.315	0.2739	0.1853
10/21/69	0.02	0.004472	0	0.004472	0
10/24/69	0.01	0.001118	0	0.001118	0
10/30/69	0.32	1.552	1.170	0.2455	0.1362
11/02/69	0.77	4.952	3.227	0.7035	1.022
11/11/69	0.05	0.03381	0.01027	0.02354	0
11/11/69	0.04	0.01817	0.000487	0.01768	0
11/13/69	0.03	0.01006	0	0.01006	0
11/17/69	0.15	0.4986	0.4008	0.09779	0
11/18/69	0.02	0.004472	0	0.004472	0

11/19/69	0.01	0.001118	0	0.001118	0
11/26/69	0.07	0.07840	0.04142	0.03698	0
12/07/69	-	-	-	-	-
12/11/69	-	-	-	-	-
12/16/69	-	-	-	-	-
12/21/69	-	-	-	-	-
12/23/69	-	-	-	-	-
12/24/69	-	-	-	-	-
12/24/69	-	-	-	-	-
12/27/69	-	-	-	-	-
12/28/69	-	-	-	-	-
12/31/69	-	-	-	-	-
Summary for All Events					
	Rain Total (in.)	Land Use Totals	Roofs 1	Sidewalks 1	Large Landscaped Areas 1
Minimum:	0.00	0.00	0	0	0
Maximum:	1.96	23.64	8.940	2.192	12.50
Flow Wt Avg	N/A	8.471	4.579	1.085	5.093
Total:	29.02	187.21	113.8	26.62	46.82
Commercial: PROPOSED COMMERCIAL LOT MAX BUILD UNDETAINED - PARK					
Start Date	Rain Total (in.)	Land Use Totals	Paved Parking 1		
01/05/69	-	-	-		
01/06/69	-	-	-		
01/08/69	-	-	-		
01/15/69	-	-	-		
01/17/69	-	-	-		
01/23/69	-	-	-		
01/24/69	-	-	-		
01/28/69	-	-	-		
01/29/69	-	-	-		
02/06/69	-	-	-		
02/06/69	-	-	-		
02/22/69	-	-	-		
03/06/69	-	-	-		
03/20/69	-	-	-		
03/20/69	-	-	-		
03/21/69	-	-	-		
03/24/69	-	-	-		
03/28/69	0.08	0.2987	0.2987		
04/01/69	0.29	1.466	1.466		
04/04/69	0.43	2.360	2.360		
04/08/69	0.71	4.288	4.288		
04/14/69	0.52	2.955	2.955		
04/16/69	0.10	0.3948	0.3948		
04/16/69	1.26	8.736	8.736		

04/21/69	0.04	0.1189	0.1189		
04/27/69	0.01	0.007516	0.007516		
04/28/69	0.06	0.2015	0.2015		
05/01/69	0.01	0.007516	0.007516		
05/05/69	0.18	0.8295	0.8295		
05/06/69	0.02	0.03007	0.03007		
05/06/69	0.06	0.2015	0.2015		
05/08/69	0.26	1.287	1.287		
05/08/69	0.22	1.059	1.059		
05/10/69	0.02	0.03007	0.03007		
05/13/69	0.18	0.8295	0.8295		
05/17/69	1.33	9.321	9.321		
05/20/69	0.03	0.06765	0.06765		
05/21/69	0.55	3.161	3.161		
05/24/69	0.06	0.2015	0.2015		
05/26/69	0.01	0.007516	0.007516		
05/31/69	0.12	0.4989	0.4989		
06/01/69	0.04	0.1189	0.1189		
06/02/69	0.05	0.1582	0.1582		
06/03/69	0.02	0.03007	0.03007		
06/04/69	0.40	2.170	2.170		
06/06/69	0.09	0.3457	0.3457		
06/07/69	0.83	5.184	5.184		
06/11/69	0.07	0.2486	0.2486		
06/11/69	0.03	0.06765	0.06765		
06/12/69	0.01	0.007516	0.007516		
06/12/69	0.24	1.172	1.172		
06/17/69	0.36	1.906	1.906		
06/18/69	0.16	0.7132	0.7132		
06/19/69	0.09	0.3457	0.3457		
06/21/69	0.02	0.03007	0.03007		
06/22/69	0.36	1.906	1.906		
06/22/69	0.05	0.1582	0.1582		
06/25/69	1.68	12.33	12.33		
06/27/69	0.68	4.072	4.072		
06/29/69	0.38	2.038	2.038		
06/29/69	1.96	14.74	14.74		
06/30/69	0.01	0.007516	0.007516		
07/02/69	0.31	1.588	1.588		
07/04/69	0.04	0.1189	0.1189		
07/10/69	0.47	2.620	2.620		
07/11/69	0.07	0.2486	0.2486		
07/16/69	0.52	2.955	2.955		
07/17/69	0.85	5.338	5.338		
07/17/69	1.44	10.26	10.26		
07/18/69	0.01	0.007516	0.007516		
07/23/69	0.11	0.4461	0.4461		
07/26/69	1.37	9.660	9.660		
07/27/69	1.38	9.746	9.746		

07/31/69	0.04	0.1189	0.1189		
08/04/69	0.03	0.06765	0.06765		
08/07/69	0.10	0.3948	0.3948		
08/09/69	0.08	0.2987	0.2987		
08/16/69	0.32	1.651	1.651		
09/04/69	0.36	1.906	1.906		
09/05/69	0.74	4.507	4.507		
09/14/69	0.01	0.007516	0.007516		
09/15/69	0.03	0.06765	0.06765		
09/16/69	0.03	0.06765	0.06765		
09/23/69	0.16	0.7132	0.7132		
09/25/69	0.01	0.007516	0.007516		
09/29/69	0.84	5.260	5.260		
10/06/69	0.01	0.007516	0.007516		
10/06/69	0.01	0.007516	0.007516		
10/09/69	0.05	0.1582	0.1582		
10/10/69	0.14	0.6030	0.6030		
10/10/69	1.34	9.406	9.406		
10/12/69	1.63	11.91	11.91		
10/15/69	0.16	0.7132	0.7132		
10/19/69	0.44	2.425	2.425		
10/19/69	0.35	1.841	1.841		
10/21/69	0.02	0.03007	0.03007		
10/24/69	0.01	0.007516	0.007516		
10/30/69	0.32	1.651	1.651		
11/02/69	0.77	4.730	4.730		
11/11/69	0.05	0.1582	0.1582		
11/11/69	0.04	0.1189	0.1189		
11/13/69	0.03	0.06765	0.06765		
11/17/69	0.15	0.6574	0.6574		
11/18/69	0.02	0.03007	0.03007		
11/19/69	0.01	0.007516	0.007516		
11/26/69	0.07	0.2486	0.2486		
12/07/69	-	-	-		
12/11/69	-	-	-		
12/16/69	-	-	-		
12/21/69	-	-	-		
12/23/69	-	-	-		
12/24/69	-	-	-		
12/24/69	-	-	-		
12/27/69	-	-	-		
12/28/69	-	-	-		
12/31/69	-	-	-		
Summary for All Events					
	Rain Total (in.)	Land Use Totals	Paved Parking 1		
Minimum:	0.00	0.00	0		
Maximum:	1.96	14.74	14.74		

Flow Wt Avg	N/A	7.296	7.296		
Total:	29.02	178.94	178.9		
Commercial: PROPOSED COMMERCIAL LOT MAX BUILD - NON PARKING/ROAD					
Start Date	Rain Total (in.)	Land Use Totals	Sidewalks 1	Small Landscaped Areas 1	
01/05/69	-	-	-	-	
01/06/69	-	-	-	-	
01/08/69	-	-	-	-	
01/15/69	-	-	-	-	
01/17/69	-	-	-	-	
01/23/69	-	-	-	-	
01/24/69	-	-	-	-	
01/28/69	-	-	-	-	
01/29/69	-	-	-	-	
02/06/69	-	-	-	-	
02/06/69	-	-	-	-	
02/22/69	-	-	-	-	
03/06/69	-	-	-	-	
03/20/69	-	-	-	-	
03/20/69	-	-	-	-	
03/21/69	-	-	-	-	
03/24/69	-	-	-	-	
03/28/69	0.08	0.07385	0.07385	0	
04/01/69	0.29	0.3776	0.3624	0.01512	
04/04/69	0.43	0.6347	0.5836	0.05112	
04/08/69	0.71	1.199	1.060	0.1389	
04/14/69	0.52	0.8036	0.7306	0.07305	
04/16/69	0.10	0.09763	0.09763	0	
04/16/69	1.26	2.506	2.160	0.3464	
04/21/69	0.04	0.02939	0.02939	0	
04/27/69	0.01	0.001858	0.001858	0	
04/28/69	0.06	0.04982	0.04982	0	
05/01/69	0.01	0.001858	0.001858	0	
05/05/69	0.18	0.2051	0.2051	0	
05/06/69	0.02	0.007434	0.007434	0	
05/06/69	0.06	0.04982	0.04982	0	
05/08/69	0.26	0.3275	0.3183	0.009190	
05/08/69	0.22	0.2647	0.2619	0.002851	
05/10/69	0.02	0.007434	0.007434	0	
05/13/69	0.18	0.2051	0.2051	0	
05/17/69	1.33	2.673	2.305	0.3682	
05/20/69	0.03	0.01673	0.01673	0	
05/21/69	0.55	0.8627	0.7815	0.08123	
05/24/69	0.06	0.04982	0.04982	0	
05/26/69	0.01	0.001858	0.001858	0	
05/31/69	0.12	0.1233	0.1233	0	
06/01/69	0.04	0.02939	0.02939	0	

06/02/69	0.05	0.03912	0.03912	0	
06/03/69	0.02	0.007434	0.007434	0	
06/04/69	0.40	0.5812	0.5365	0.04468	
06/06/69	0.09	0.08547	0.08547	0	
06/07/69	0.83	1.466	1.282	0.1848	
06/11/69	0.07	0.06146	0.06146	0	
06/11/69	0.03	0.01673	0.01673	0	
06/12/69	0.01	0.001858	0.001858	0	
06/12/69	0.24	0.2956	0.2898	0.005797	
06/17/69	0.36	0.5042	0.4713	0.03288	
06/18/69	0.16	0.1764	0.1764	0	
06/19/69	0.09	0.08547	0.08547	0	
06/21/69	0.02	0.007434	0.007434	0	
06/22/69	0.36	0.5042	0.4713	0.03288	
06/22/69	0.05	0.03912	0.03912	0	
06/25/69	1.68	3.868	3.049	0.8199	
06/27/69	0.68	1.133	1.007	0.1265	
06/29/69	0.38	0.5429	0.5040	0.03896	
06/29/69	1.96	5.668	3.644	2.024	
06/30/69	0.01	0.001858	0.001858	0	
07/02/69	0.31	0.4123	0.3927	0.01963	
07/04/69	0.04	0.02939	0.02939	0	
07/10/69	0.47	0.7083	0.6479	0.06039	
07/11/69	0.07	0.06146	0.06146	0	
07/16/69	0.52	0.8036	0.7306	0.07305	
07/17/69	0.85	1.510	1.320	0.1902	
07/17/69	1.44	2.940	2.537	0.4028	
07/18/69	0.01	0.001858	0.001858	0	
07/23/69	0.11	0.1103	0.1103	0	
07/26/69	1.37	2.769	2.389	0.3807	
07/27/69	1.38	2.793	2.410	0.3838	
07/31/69	0.04	0.02939	0.02939	0	
08/04/69	0.03	0.01673	0.01673	0	
08/07/69	0.10	0.09763	0.09763	0	
08/09/69	0.08	0.07385	0.07385	0	
08/16/69	0.32	0.4302	0.4081	0.02206	
09/04/69	0.36	0.5042	0.4713	0.03288	
09/05/69	0.74	1.266	1.114	0.1519	
09/14/69	0.01	0.001858	0.001858	0	
09/15/69	0.03	0.01673	0.01673	0	
09/16/69	0.03	0.01673	0.01673	0	
09/23/69	0.16	0.1764	0.1764	0	
09/25/69	0.01	0.001858	0.001858	0	
09/29/69	0.84	1.488	1.301	0.1875	
10/06/69	0.01	0.001858	0.001858	0	
10/06/69	0.01	0.001858	0.001858	0	
10/09/69	0.05	0.03912	0.03912	0	
10/10/69	0.14	0.1491	0.1491	0	
10/10/69	1.34	2.697	2.326	0.3713	

10/12/69	1.63	3.582	2.945	0.6369	
10/15/69	0.16	0.1764	0.1764	0	
10/19/69	0.44	0.6529	0.5995	0.05337	
10/19/69	0.35	0.4853	0.4553	0.03000	
10/21/69	0.02	0.007434	0.007434	0	
10/24/69	0.01	0.001858	0.001858	0	
10/30/69	0.32	0.4302	0.4081	0.02206	
11/02/69	0.77	1.335	1.169	0.1654	
11/11/69	0.05	0.03912	0.03912	0	
11/11/69	0.04	0.02939	0.02939	0	
11/13/69	0.03	0.01673	0.01673	0	
11/17/69	0.15	0.1625	0.1625	0	
11/18/69	0.02	0.007434	0.007434	0	
11/19/69	0.01	0.001858	0.001858	0	
11/26/69	0.07	0.06146	0.06146	0	
12/07/69	-	-	-	-	
12/11/69	-	-	-	-	
12/16/69	-	-	-	-	
12/21/69	-	-	-	-	
12/23/69	-	-	-	-	
12/24/69	-	-	-	-	
12/24/69	-	-	-	-	
12/27/69	-	-	-	-	
12/28/69	-	-	-	-	
12/31/69	-	-	-	-	
Summary for All Events					
	Rain Total (in.)	Land Use Totals	Sidewalks 1	Small Landscaped Areas 1	
Minimum:	0.00	0.00	0	0	
Maximum:	1.96	5.67	3.644	2.024	
Flow Wt Avg	N/A	2.288	1.804	0.8246	
Total:	29.02	51.82	44.25	7.580	