STORMWATER MANAGEMENT REPORT

Prepared for:

American Properties at North Brunswick, LLC

Block 230, Lot 15
1661-1689 Route 130

Township of North Brunswick
Middlesex County, New Jersey

Prepared by:

BOHLER

N.J. Certificate of Authorization 24GA28161700

30 Independence Blvd., Suite 200
Warren, NJ 07059
908-668-8300

BENJ File No. NJA240262.00

Tung-To Lam, P.E.
New Jersey Professional Engineer License No. 47863

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1. Introduction

The subject property is located at 1661-1689 Route 130 in the Township of North Brunswick, Middlesex County, New Jersey. The property is identified as Block 230, Lot 15 on the Township of North Brunswick tax maps and is a total of 3.51 acres in size and will hereafter be referred to as "the site". The site is bordered to the northwest by a residential neighborhood; to the northeast by a motel with residential dwellings beyond; to the southeast by U.S. Route 130 with retail establishments beyond; and to the southwest by U.S. Route 130 with commercial establishments and residential dwellings beyond. A tax map and aerial map are included at the beginning of Appendix G for reference.

The site is currently vacant land within the R-2 Zone. The proposed development consists of a QuickChek food store with fuel sales with ancillary parking, sidewalks, driveways, stormwater and utility improvements. This project is a major development due to proposing greater than one acre of disturbance and proposing greater than one-quarter acre of combined regulated impervious area and regulated motor vehicle surface area.

This report summarizes the design objectives, methodology, and calculations for the conveyance, attenuation, treatment, and discharge of stormwater runoff leaving the site and is meant to accompany the Site Plan documents prepared by Bohler. Pre-development and post-development conditions are examined for analysis of the stormwater quantity, water quality, and groundwater recharge based on the *NJDEP Stormwater Management Regulations (NJAC 7:8)* and soil erosion and sediment control based on *The Standards for Soil Erosion and Sediment Control in New Jersey*.

2. Stormwater Management Design Methodology

In accordance with the *NJDEP Stormwater Management Regulations*, the proposed development must meet the requirements, if appropriate, for stormwater quantity reductions, water quality, groundwater recharge, etc. The assessment of stormwater runoff has been based upon the Soil Conservation Service Method (SCS) Unit Hydrograph as described in Chapters 7, 9, 10, 15 and 16, Part 630 Hydrology, National Engineering Handbook (NEH) (previously described in Technical Release Number 55 (TR55), "Urban Hydrology for Small Watersheds"). Theoretical storms are modeled with the 24-Hour SCS Unit Dimensionless Hydrograph using the NOAA Atlas 14 Type D rainfall distribution and recurrence intervals of 2, 10, and 100 years. Hydrograph creation and routings are accomplished using the HydroCAD stormwater modeling program by HydroCAD Software Solutions, LLC.

2.1 Rainfall Data

Rainfall data used in the stormwater calculations of this report are obtained from different sources based on the latest NJ stormwater management regulations *(NJAC 7:8)*. The Water Quality storm event is based on the NJ BMP Manual Chapter 5 definition of having a total rainfall depth of 1.25 inches and a total duration of two (2) hours. Twenty-four-hour rainfall frequency data specific to the site for all other storms has been obtained from the NOAA Atlas 14 NWS Precipitation Frequency Data Server Website (see in Appendix). Per amended NJ stormwater management regulations dated July 17, 2023, the precipitation depths for the 2-, 10-, and 100-year storm events are determined using adjustment factors applied to the NOAA Atlas 14 rainfall estimates. The rainfall depth values used in this project are listed in Table 2.1 and 2.2.

TABLE 2.1 – Current Adjusted, 24-Hour Rainfall Frequency Data

Event (year)	2	10	100
NOAA Atlas 14 Rainfall (inches)	3.32	5.08	8.54
Adjustment Factor	1.00	1.01	1.03
Current Adjusted Rainfall (inches)	3.32	5.13	8.80

TABLE 2.2 – Future Adjusted, 24-Hour Rainfall Frequency Data

Event (year)	2	10	25**	100
NOAA Atlas 14 Rainfall (inches)	3.32	5.08	6.30	8.54
Adjustment Factor	1.19	1.21	1.24	1.33
Future Adjusted Rainfall (inches)	3.95	6.15	7.81	11.36

** NJAC 7:8 does not contain adjustment factors for the 25-year storm. The factors listed have been obtained from NJ Extreme Precipitation Projection Tool (https://njprojectedprecipitationchanges.com/) in order to estimate the increased rainfall.

2.2 Site Soils

Site soil information has been obtained from the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey database. The soil types present within the studied watershed are shown in Table 2.2. The soils consist of hydrologic soil groups (HSG) Type B/D and Type C. However, per the results of the Hydrologic Soil Group Evaluation prepared by GZA GeoEnvironmental, Inc., dated May 23, 2023, and further verified in the Report of Subsurface Exploration & Geotechnical Engineering Assessment prepared by French & Parrello Associates, dated April 24, 2025 (see Appendix), the soils present onsite were determined to be Hydrologic Group Type 'D' soils with poor infiltration rates. For the purpose of calculations, soils with undefined HSG are assumed to by Type D, therefore the CN values used in calculations are those associated with Type D soils.

TABLE 2.3 - Site Soil Properties

Soil Symbol	Soil Name	Characteristics	Hydrologic Soil Group Rating
FavAr	**Fallsington bedrock substratum variant loam**	**0-2% slopes, rarely flooded**	**D**
NktB	**Nixon moderately well drained variant-Urban land complex**	**0-5% slopes**	**D**

2.3 Curve Numbers

For determining the runoff flows, the cover types in combination with the HSG rating must be determined for each drainage area. These are used to determine the runoff curve number (CN) values that are used in the hydraulic calculations. The CN values used in this project are listed in Table 2.3.

TABLE 2.4 - CN Values

Land Cover Description	HSG D
Open space, Good Condition (grass cover >75%)	80
Woods, Good Condition	77
Impervious Surfaces	98

2.4 Time of Concentration

The time of concentration (Tc) is calculated in accordance with Chapter 15 of the NRCS National Engineering Handbook and has been calculated separately for the pervious and impervious areas within each drainage area. Where there is a long stretch of sheet flow in the proposed condition, the McCuen-Spiess formula is used to determine the appropriate length, not to exceed 100 feet. McCuen-Spiess sheet flow length calculations are provided in the beginning of Appendices A & B, and full Tc calculations for each drainage area can be found in the HydroCAD summaries in Appendices A & B.

3. Pre-Development Site Conditions.

The studied watershed area is a total of 2.503 acres in size and consists of four unique drainage areas: Existing Drainage Areas #1A, #1B, Off-Site Drainage Area #1C, #2, #3, and #4 which are described in more detail below. In the pre-development condition, the site is vacant, forested land with isolated wetlands dispersed across. Currently, the runoff generated on site outfalls to the Nimitz Place right-of-way, the Route-130 right-of-way, and into the neighboring lot to the west, and ultimately flows southwest to the Lawrence Brook Tributary, a tributary to Farrington Lake. The Existing Drainage Area Map in Appendix G illustrates the limits of each existing drainage area and how they relate to the existing site conditions.

3.1 Point of Analysis #1

Existing Drainage Area #1A, #1B and Off-Site Drainage Area #1C flow to Point of Analysis #1 located at an inlet located downstream of the site, on the opposite side of U.S. Route 130. The Existing Drainage Area Map in Appendix G illustrates the identified point of analysis and how it relates to the existing topography on the site.

3.1.1 Existing Drainage Area #1A

Existing Drainage Area #1A contains 0.910 acres of land, all of which is wooded land, which includes a significant portion of the center of the site and ultimately discharges to a downstream inlet within the property, located north of the inlet located along U.S. Route 130. This inlet is back-pitched from the previously mentioned inlet located along the U.S. Route 130 frontage, though runoff likely

pools up before overflowing through the inlet and discharging into the U.S. Route 130 network. The remainder area of Existing Drainage Area #1 reaches Point of Analysis #1 via overland flow, where a majority pools up before overflowing across the topography and into the Point of Analysis. The topography of the area is very flat with high points and low points dispersed across the studied area, with elevations ranging from 110 to 109 and slopes ranging from 0% to 2%.

3.1.2 Existing Drainage Area #1B (Depression)

Existing Drainage Area #1B contains 0.292 acres of the Drainage Area, all of which is wooded, and pools into a low point before ultimately overflowing and continuing with the path of travel to Point of Analysis #1. This pooled area is shown on the Pre-Development Drainage Area Map and modeled accordingly in HydroCAD.

3.1.3 Off-Site Drainage Area #1C

Existing Drainage Area #1C contains 0.032 acres of land, 0.004 acres of which is impervious area, which includes the limit of work being performed on the grass median island on U.S. Route 130 located directly south of the site. Runoff from this median island is captured by inlets and ultimately discharges into Point of Analysis #1.

3.2 Point of Analysis #2

Existing Drainage Area #2 flows to Point of Analysis #2 located at an inlet along the Nimitz Place Frontage. The Existing Drainage Area Map in Appendix G illustrates the identified point of analysis and how it relates to the existing topography on the site.

3.2.1 Existing Drainage Area #2

Existing Drainage Area #2 contains 0.682 acres of land, all of which is wooded land, which includes the easterly portion of the site and ultimately discharges to the inlet located along the Nimitz Place Frontage, which is a part of a different storm system than the inlet previously noted in Point of Analysis #1. Similar to Existing Drainage Area #1, Existing Drainage Area #2 is very flat with high points and low points dispersed across the studied area, with elevations ranging from 110 to 109 and slopes ranging from 0% to 2%.

3.3 Point of Analysis #3

Existing Drainage Areas #3A and #3B flow to Point of Analysis #3 located at an inlet located on U.S. Route 130 along the frontage of the neighboring property to the west, a part of a separate storm system than that of the previously two noted Points of Analyses. The Existing Drainage Area Map in Appendix G illustrates the identified point of analysis and how it relates to the existing topography on the site.

3.3.1 Existing Drainage Area #3A

Existing Drainage Area #3A contains 0.179 acres of land, 0.120 acres of which is wooded and the remainder pervious grass, which includes the southwesterly corner of the site and ultimately discharges to the inlet located along U.S. Route 130 fronting the neighboring property to the west. Existing Drainage Area #3A is very flat with elevations ranging from 110 to 108 and slopes ranging from 0% to 2%.

3.3.2 Existing Drainage Area #3B

Existing Drainage Area #3B is the area located within U.S. Route 130 that will be disturbed due to the traffic improvements proposed by Stonefield Engineering and Design, LLC that proposes an additional Left-In Only Lane into the proposed access drive. Under existing conditions, the studied area contains 0.093 acres of land, 0.042 acres of which is impervious surface, and is captured by an inlet within the grass median that discharges into the same network as the inlet noted above for Existing Drainage Area #3A. Existing Drainage Area #3B is relatively flat within the pavement regions of U.S. Route 130, with slopes ranging from 0% to 1%, and steeper in the existing grass median, with slopes ranging from 0 to 5%.

3.4 Point of Analysis #4

Existing Drainage Area #4 flows to Point of Analysis #4 located within the northwesterly portion of the site ultimately discharges runoff to the neighboring properties to the west of the site. The Existing Drainage Area Map in Appendix G illustrates the identified point of analysis and how it relates to the existing topography on the site.

3.4.1 Existing Drainage Area #4

Existing Drainage Area #4 contains 0.315 acres of land, all of which is wooded, that includes the northwesterly portion of the site and ultimately discharges via overland flow to the neighboring residential and retail properties located to the west of the site. Runoff generally runs from east to northwest. Existing Drainage Area #4 is very flat with elevations ranging from 110 to 109 and slopes ranging from 0% to 2%.

4. Post-Development Site Conditions.

The post-development condition for the site includes the construction of a 5,670 SF QuickChek food store with fuel sales and a U.S. Route 130 Left-In Only Lane addition. The proposed site is designed in a manner that generally maintains the existing drainage patterns. The studied watershed area in the post-development condition contains the same 2.503-acre area that was studied in the pre-development condition and consists of four unique drainage areas, Proposed Drainage Areas #1, #2, #3 and #4 which are described in more detail below.

A proposed stormwater conveyance system will collect the runoff from the proposed building and impervious areas via pervious asphalt pavement, GI-Manufactured Treatment Devices, inlets, manholes, and stormwater piping and redirect it to the proposed Extended Detention Constructed Wetlands. The construction of the proposed improvements will disturb approximately 2.50 acres of land and will create approximately 1.62 acres of impervious coverage on the site in the post-development condition. The Proposed Drainage Area Map in Appendix G illustrates the limits of each proposed drainage area and how they relate to the proposed site conditions.

4.1 Point of Analysis #1

The four sub-drainage areas in the post development condition flow to the same Point of Analysis #1 identified in the existing condition, located at the inlet along the U.S. Route 130 Frontage of the site. The Drainage Area has been split into three (3) unique drainage

areas: Proposed Drainage Area #1A, Proposed Drainage Area #1 Bypass #1, and Proposed Drainage Area #1 Bypass #2. The proposed runoff to Point of Analysis #1 meets the stormwater management criteria set forth in *NJDEP Stormwater Management Regulations* by designing the stormwater management measures so that the peak post-construction runoff rates from the disturbed areas are 50 75, and 80 percent of the peak pre-construction runoff rates for the 2-, 10- and 100-year design storms respectively. Refer to Section 4.3 Stormwater Quantity Controls for a summary of the pre-construction, allowable, and post-construction flows.

4.1.1 Proposed Drainage Area #1

Proposed Drainage Area #1 is greater in size in the post-development condition than it was in the pre-development condition. The overall area is 2.064 acres, 1.487 acres of which is impervious area, causing a net increase of 0.862 acres in size.

4.1.1.1 Proposed Drainage Area #1

Proposed Drainage Area #1A contains 1.836 acres of land, 1.477 acres of which are impervious area, which contains a significant portion of the area within the proposed development that discharges into the Extended Detention Constructed Wetlands before ultimately discharging into the inlet located at Point of Analysis #1 via pipe conveyance.

4.1.1.2 Proposed Drainage Area #1 Bypass #1

Proposed Drainage Area #1 Bypass #1 contains 0.079 acres of land, none of which is impervious, located at the rear of the site and discharges directly into the inlet at the rear of the site which conveys to the inlet located at Point of Analysis #1.

4.1.1.3 Proposed Drainage Area #1 Bypass #2

Proposed Drainage Area #1 Bypass #2 contains 0.117 acres of land, 0.046 acres of which is impervious, located in the landscaped area in the front of the site and discharges via overland flow into the inlet located at Point of Analysis #1.

4.1.1.4 Off-Site Drainage Area #1C

Proposed Drainage Area #1C is the same size in the post-development condition as in the pre-development condition. There is a net increase in impervious area by 0.023 acres. The runoff from Proposed Drainage Area #1C flows to the same inlets along the grass median island as in the pre-development condition and ultimately flows to Point of Analysis #1.

4.2 Point of Analysis #2

The one drainage area in the post development condition flows to the same Point of Analysis #2 identified in the existing condition, located at the inlet along the U.S. Route 130 Frontage of the site at the southeasterly property corner. The proposed runoff to Point of Analysis #2 meets the stormwater management criteria set forth in *NJDEP Stormwater Management Regulations* by designing the Constructed Wetlands so that the peak post-construction runoff rates from the disturbed areas are 50, 75 and 80 percent of the peak pre-construction runoff rates for the 2-, 10- and 100-year design storms respectively. Refer to Section 4.3 Stormwater Quantity Controls for a summary of the pre-construction, allowable, and post-construction flows.

4.2.1 Proposed Drainage Area #2

Proposed Drainage Area #2 is less in size in the post-development condition than it was in the existing conditions. The overall area is 0.209 acres, 0.034 acres of which are impervious, causing a net decrease in area by 0.472 acres.

4.3 Point of Analysis #3

The two drainage areas in the post development condition flows to the same Point of Analysis #3 identified in the existing condition, located at the inlet along the U.S. Route 130 Frontage of the neighboring property to the west. The proposed runoff to Point of Analysis #3 meets the stormwater management criteria set forth in *NJDEP Stormwater Management Regulations* by having the post-construction hydrograph not exceed the pre-construction hydrograph at any point for the two-, 10-, and 100-year storm. Refer to Section 4.3 Stormwater Quantity Controls for a summary of the pre-construction, allowable, and post-construction flows.

4.3.1 Proposed Drainage Area #3A

Proposed Drainage Area #A is less in size in the post-development condition than it was in the pre-development condition. The total area is 0.022 acres in size, all of which is impervious area, and is a net decrease in overall area by 0.157 acres compared to the pre-development condition. Existing Drainage Area #3 flows to the same inlet as in the pre-development condition via overland flow.

4.3.2 Proposed Drainage Area #3B

Proposed Drainage Area #3B is the same in size in the post-development condition as it was in the pre-development condition. There is an additional net increase in impervious area by 0.21 acres. The runoff from Proposed Drainage Area #3B flows to the same inlet as in the pre-development condition and ultimately to Point of Analysis #3.

4.4 Point of Analysis #4

The one drainage area in the post development condition flows to the same Point of Analysis #4 identified in the existing condition, located at the inlet along the U.S. Route 130 Frontage of the site. the southeastern property corner. The proposed runoff to Point of Analysis #4 meets the stormwater management criteria set forth in NJDEP Stormwater Management Regulations by designing the stormwater management measures so that the peak post-construction runoff rates from the disturbed areas are 50, 75 and 80 percent of the peak pre-construction runoff rates for the 2-, 10- and 100-year design storms respectively. Refer to Section 4.3 Stormwater Quantity Controls for a summary of the pre-construction, allowable, and post-construction flows.

4.4.1 Proposed Drainage Area #4

Proposed Drainage Area #4 is less in size in the post-development condition than it was in the pre-development condition. The total area is 0.115 acres, 0.003 acres of which is impervious, and there is a net decrease in overall area by 0.20 acres.

The runoff from Proposed Drainage Area #4 flows to the same area as defined in the pre-development condition.

4.5 Proposed Structural Stormwater Management Strategies

The eight drainage areas in the post development condition flow to the same points of analysis identified in the existing condition. Proposed Drainage Area #1A flows through the proposed on-site stormwater management system, which is described in more detail below. Drain time specified below is for the 100-year future adjusted storm.

4.5.1 Manufactured Treatment Devices

Manufactured treatment devices are proposed that will treat the runoff from motor vehicle surface areas for the water quality design storm. These units are certified by the NJDEP to meet the requirements for Green Infrastructure, and a copy of the certification is attached in Appendix F.

Table 4.1 - Manufactured Treatment Device Summary

Manufactured Treatment Device #	1	2	3
Device	8’ x 8’ Modular Wetland	8’ x 20’ Modular Wetland	8’ x 6’ Modular Wetland
Drainage Area (Acres)	0.175	0.444	0.113
Max. Drainage Area for Device (Acres)	2.07	5.19	1.32
Water Quality Flow (CFS)	0.37	1.36	0.35
Max. Water Quality Flow for Device (CFS)	0.56	1.39	0.35
TSS Removal Rate (%)	80	80	80

4.5.2 Pervious Paving Systems

Pervious paving materials have been proposed as part of the overall site design and stormwater management system to reduce the impervious surface on site, provide 80% TSS removal for motor vehicle surfaces, and reduce the flow of runoff. The pervious paving systems have been designed to have a maximum ratio of additional inflow area to the pavement surface area of less than 3:1, a maximum surface slope of 5%, a storage bed that fully contains the water quality design storm runoff volume, and to discharge the design storm within 72 hours of a rain event.

Table 4.2 - Pervious Paving Systems Summary

Pervious Paving System #	1	2	3	4	5	6 (Pervious Concrete)
Pervious Area (Acres)	0.062	0.084	0.031	0.008	0.073	0.135
Additional Drainage Area (Acres)	0.99	0.290	0.096	0.019	0.256	0.174
Drainage Area Ratio	1.6:1	2.5:1	2.1:1	1.4:1	2.5:1	0.3:1
Surface Slope (%)	1.5	1.5	1.6	2.5	4.8	2.8
Underdrain Size (Inches)	15 (Perforated Conveyance)	15 (Perforated Conveyance)	4	4	15 (Perforated Conveyance)	8
Drain Time (Hours)	12.5	12.5	12.5	5	12.5	12.5

4.5.3 Standard Constructed Wetlands

This project proposes constructed wetland areas and meets the minimum requirements of a constructed wetland. Pretreatment is provided to prevent heavy particles and floatables from entering the constructed wetlands. The constructed wetland has less than 10 acres of drainage area (see appendix for water budget), an outlet structure with the lowest orifice set at or above the normal water surface elevation, a mechanism that allows for the maintenance of the basin by draining the water from the basin, and water depths controlled by the outlet structure associated with the different zones of the constructed wetlands that conform to the NJ Stormwater Best Management Practices Manual. Additionally, the constructed wetlands have been designed with two safety ledges that are 4 to 6 feet in width. The first ledge is located between 12 and 18 inches above the permanent pool elevation and the second ledge is constructed approximately 2.5 feet below the permanent pool elevation.

Table 4.3 - Standard Constructed Wetlands Summary

Constructed Wetlands #	1
Drainage Area (Acres)	1.836
Wetlands Type	Extended Detention
Pretreatment	Pervious Pavement, MTD's

Semi-wet Zone (%) (1)	912%
High Marsh Zone (%) (1)	77%
Low Marsh Zone (%) (1)	181%
Pool Zone (%) (1)	200%
Standing Water in High Marsh Zone (Inches)	6
Standing Water in Low Marsh Zone (Inches)	18
Standing Water in Pool Zone (Feet)	6
Outlet Type	Grated
Permanent Pool Water Elevation	104.00
High Safety Ledge Elevation	105.00
Low Safety Ledge Elevation	101.50

(1) As a percentage of the Water Quality Design Storm volume.

4.5.4 Pipe Sizing

Calculations for sizing the stormwater pipe networks associated with the proposed stormwater management conveyance system can be found in Appendix E of this report. The Rational Method has been used to size the storm piping for the 100-year storm event, with calculations found in Appendix E. The calculations are based on a minimum time of concentration of 10 minute to any inlet. An Inlet Area Map is included in Appendix G.

4.5.5 Emergency Spillway

The emergency spillways associated with the proposed basins are evaluated based on whether the basin classifies as a Class IV dam or not. Class IV dams raise the water level by five feet or more, has a drainage area of less than 150 acres, a storage volume less than 15 acre-feet, and a dam height of less than 15-feet. Basins that are classified as Class IV dams have their spillways designed to handle 150% of the future adjusted 100-year design storm. Basins that do not qualify as Class IV dams have their spillways designed to handle the future adjusted 100-year design storm. The Outlet Control Structure Culvert has been oversized as the emergency spillway. In addition, a minimum of one-foot of freeboard is provided above the peak water elevation while the secondary emergency spillway is operating, which is a low spot in the retaining wall. Additional calculations are found in Appendix D.

Table 4.4 - Emergency Spillways Summary

Emergency Spillway #	1
Basin is a Class IV Dam	No
Basin's Drainage Area (Acres)	1.836
Spillway Design Storm	150% of 100-Year
Spillway Elevation	108.25 (Grate)

Spillway Peak Water Elevation	108.83
Top of Berm Elevation	110.00
Discharge Rate over spillway (cfs)	29.87

4.6 Stormwater Quantity Controls

The following stormwater quantity standard techniques from the *NJDEP Stormwater Management Regulations* is being applied to each drainage area as noted in Sections 4.1 through 4.3:

1. The post-development peak runoff rates for the current and future/projected 2-, 10- and 100-year storm events are reduced to 50, 75 and 80 percent, respectively, of the pre-development peak runoff rates. These reductions only apply to portions of the site that are proposed to be developed, and reductions are not required for undisturbed areas.
2. For stormwater runoff leaving the site, the post-development runoff hydrographs for the current and future/projected 2-, 10- and 100-year storms do not exceed, at any point in time, the pre-development runoff hydrographs for the same storm events. This technique is applied to drainage areas that, under proposed conditions, will remain unchanged or have a net decrease in impervious coverage.

To Point of Analysis #1, the project's proposed stormwater management facilities will consist of an Extended Detention Constructed Wetland system to attenuate the flows from Proposed Drainage Area #1A outlined in Section 4.1 utilizing the above referenced technique #1. Tables 4.5-4.6 summarizes the existing, permitted, and proposed flow rates from the site to Point of Analysis #1, and detailed calculations can be found in Appendices A & B.

To Point of Analysis #2, and Point of Analysis #4, the net reduction in overall area from each Drainage Area outlined in Section 4.1 discharging into their respective Points of Analyses allows each Point of Analysis to meet water quantity requirements utilizing the above referenced technique #1. Point of Analysis #3 will utilize the above referenced technique #2. Tables 4.7 - 4.12 summarize the existing, permitted, and proposed flow rates from the site to Points of Analysis #2-#4, and detailed calculations can be found in Appendices A & B.

Table 4.5 - Point of Analysis #1 Existing vs. Proposed Flow Summary
Current Adjusted Precipitation Depths

	Existing Peak Flow	Maximum Permitted Peak Flow		Proposed Peak Flow
	CFS	% of Existing	CFS[(1)]	CFS
2-Year Storm	1.25	50%	0.62	0.62
10-Year Storm	3.17	75%	2.37	1.07
100-Year Storm	6.86	80%	5.48	4.38

[(1)] Maximum Permitted Peak Flow is the permitted percentage of existing peak flow plus off-site peak flow.

Table 4.6 - Point of Analysis #1 Existing vs. Proposed Flow Summary Future Adjusted Precipitation Depths

	Existing Peak Flow	Maximum Permitted Peak Flow		Proposed Peak Flow
	CFS	% of Existing	CFS[(1)]	CFS
2-Year Storm	2.08	50%	1.04	0.78
10-Year Storm	4.30	75%	3.22	1.69
100-Year Storm	9.76	80%	7.80	6.16

(1) Maximum Permitted Peak Flow is the permitted percentage of existing peak flow plus off-site peak flow.

Table 4.7 - Point of Analysis #2 Existing vs. Proposed Flow Summary Current Adjusted Precipitation Depths

	Existing Peak Flow	Maximum Permitted Peak Flow		Proposed Peak Flow
	CFS	% of Existing	CFS[(1)]	CFS
2-Year Storm	0.72	50%	0.36	0.25
10-Year Storm	1.55	75%	1.16	0.67
100-Year Storm	3.36	80%	2.68	1.02

Table 4.8 - Point of Analysis #2 Existing vs. Proposed Flow Summary Future Adjusted Precipitation Depths

	Existing Peak Flow	Maximum Permitted Peak Flow		Proposed Peak Flow
	CFS	% of Existing	CFS[(1)]	CFS
2-Year Storm	1.02	50%	0.52	0.48
10-Year Storm	2.08	75%	1.56	0.91
100-Year Storm	4.74	80%	3.79	1.45

Table 4.9 – Point of Analysis #3 Existing vs. Proposed Comparison Current Adjusted Precipitation Depths

	Existing Peak Flow	Proposed Peak Flow
	CFS	CFS
2-Year Storm	0.4	0.3
10-Year Storm	0.8	0.5
100-Year Storm	1.7	0.9

See Appendix A for Comparison Hydrographs.

Table 4.10 – Point of Analysis #3 Existing vs. Proposed Comparison Future Adjusted Precipitation Depths

	Existing Peak Flow	Proposed Peak Flow
	CFS	CFS
2-Year Storm	0.6	0.4
10-Year Storm	1.1	0.6
100-Year Storm	2.4	1.2

See Appendix A for Comparison Hydrographs.

Table 4.11 - Point of Analysis #4 Existing vs. Proposed Flow Summary Current Adjusted Precipitation Depths

	Existing Peak Flow	Maximum Permitted Peak Flow		Proposed Peak Flow
	CFS	% of Existing	CFS[(1)]	CFS
2-Year Storm	0.36	50%	0.18	0.18
10-Year Storm	0.77	75%	0.57	0.36
100-Year Storm	1.68	80%	1.34	0.74

Table 4.12 - Point of Analysis #4 Existing vs. Proposed Flow Summary Future Adjusted Precipitation Depths

	Existing Peak Flow	Maximum Permitted Peak Flow		Proposed Peak Flow
	CFS	% of Existing	CFS[(1)]	CFS
2-Year Storm	0.51	50%	0.26	0.25
10-Year Storm	1.05	75%	0.79	0.48
100-Year Storm	2.37	80%	1.90	1.03

4.7 Water Quality Controls

Water quality analysis is based on the requirements of *NJDEP Stormwater Management Regulations*, which requires the use of green infrastructure to provide 80% TSS removal of post-development runoff from new regulated motor vehicle surfaces generated from the water quality design storm before discharging the runoff. Pervious asphalt pavement areas and green infrastructure manufactured treatment devices proposed on-site each provide 80% TSS removal. To be considered as green infrastructure, the pervious asphalt pavement areas are proposed with a maximum additional inflow area of three times the area occupied by the pervious asphalt pavement. The Water Quality Map can be found in the Appendix.

Motor Vehicle Surface Areas:
Existing Motor Vehicle Surface Area: 0.023 Acres
Proposed Motor Vehicle Surface Area: 1.236 Acres
Net Increase in Motor Vehicle Surface Area: 1.213 Acres

Required:

Net Increase in Motor Vehicle Surface Area – 80% TSS Removal Treatment required 80% (1.213) / 1.213Acres = 80%

Proposed:

0.422 Acres of Motor Vehicle Surface Area treated in Series with two (2) 80% TSS BMP's: TSS = 80% + 80% - (80% X 80%/100) = 96% TSS provided.

[80% (0.707 Acres)] +96% (0.422 Acres)] / 1.213 Acres = 80.03%

80.03 % Weighted Proposed TSS Removal Rate > 80% Required TSS Removal Rate

As calculated the weighted proposed TSS removal rate is greater than the required rate; the project, as designed, meets the water quality requirement for the proposed development. Refer to water quality drainage area map in appendix F.

4.8 Groundwater Recharge

The *NJDEP Stormwater Management Regulations* require that a proposed land development site utilize green infrastructure to comply with either of the following groundwater recharge requirements:

1. Demonstrate that 100% of the site's average annual pre-developed groundwater recharge volume will be maintained after development; or

2. Demonstrate that 100 percent of the difference between the site's pre-development and post-development future adjusted 2-year runoff volume is infiltrated.

Based on the Hydrologic Soil Group Evaluation prepared by GZA GeoEnvironmental, Inc., dated May 23, 2023, and further verified in the Report of Subsurface Exploration & Geotechnical Engineering Assessment prepared by French & Parrello Associates, Dated April 24, 2025 (see Appendix), the soils present onsite were determined to be Hydrologic Group Type 'D' soils with poor infiltration rates. It is our assumption from this report that the soils do not infiltrate into the groundwater and therefore the proposed development will not generate a deficit in the groundwater recharge. Refer to the NJDEP Annual Groundwater Recharge Analysis spreadsheet in Appendix D for quantifications of the pre- vs. post-development recharge volumes.

4.9 Soil Erosion and Sediment Control

The Soil Erosion and Sediment Control plans and details are included within the Site Plan documents prepared by Bohler and must be followed throughout construction. Silt fences, stabilized construction entrances, a temporary stockpile and inlet filters are proposed

during construction. This report and the Site Plan documents prepared by Bohler are being submitted to the Freehold Soil Conservation District for approval.

Conduit outlet protection is provided in the form of rip-rap aprons to prevent scour and provide a stable area for water exiting the stormwater systems to reduce velocity. Additionally, off-site stability has been reviewed in accordance with the *Standards for Soil Erosion and Sediment Control in New Jersey (SESC Standards)*. Calculations for rip-rap apron sizing can be found in Appendix E.

Proposed on-site stormwater facilities discharge to an existing stormwater conveyance network. The rate of runoff at the discharge point has been maintained or decreased.

The downstream off-site stability is met by decreasing the peak flows leaving the site by at least 50% for the 2-year storm and 75% for the 10-year storm for the areas to be disturbed. In the case of Point of Analysis #3, the post-construction hydrograph does not exceed the pre-construction graph at any point for the 2-, 10-, and 100-year storms.

4.10 Low-Impact Development and Nonstructural Stormwater Management Facilities

In accordance with the NJDEP regulations (NJAC 7:8-2.4) and the latest *New Jersey Stormwater Best Management Practices Manual*, several nonstructural stormwater management strategies have been incorporated into the design of the site and are listed below:

1. **Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss.**

   The footprint of the improvements has been minimized. The limit of disturbance within the wooded areas has been minimized. Stormwater runoff will be discharged in a similar manner of existing conditions. Wetland disturbance has been minimized to continue providing water quality benefits.

2. **Minimize impervious surfaces and break up or disconnect the flow of runoff over impervious surfaces.**

   The overall impervious coverage is less than 50% and is below the municipal ordinance requirement of 50% maximum impervious coverage. As part of the proposed site design, the minimum allowable parking and drive aisle sizes, in accordance with local ordinances, are used in lieu of larger stalls and aisles to reduce the amount of impervious surface in the post-development condition. Pervious asphalt pavement and pervious concrete has been proposed at all parking space locations.

3. **Maximize the protection of natural drainage features and vegetation.**

   The footprint of the improvements has been minimized. Most of the existing wooded areas remain undisturbed. Stormwater runoff will be discharged in a similar manner of existing conditions. Wetland disturbance has been minimized to continue providing water quality benefits. Soil erosion measures are proposed to be utilized during construction to protect the adjoining wetlands and undisturbed vegetation.

4. **Minimize the decrease in the "time of concentration" from pre-construction to postconstruction.**

   Pervious asphalt pavement, pervious concrete and the constructed wetlands have been included within the project's stormwater design to achieve maximized times of concentration. Unretained stormwater runoff from rear yards are discharged through the undisturbed forested areas and are conveyed into the inlet located at the rear of the site.

5. **Minimize land disturbance, including clearing and grading.**

   The design of the improvements proposed on the site has preserved critical natural areas as part of the development. Areas that are forested, within riparian corridors, or that have demonstrated high groundwater recharge capabilities have been identified on site and are specifically left outside the limits of disturbance of the proposed development. The natural areas will be protected during construction through the use of silt fence and tree-protection fencing.

6. **Minimize soil compaction.**

   Soil compaction has been minimized within the project limits. The site is subject to decompaction requirements from the Soil Erosion & Sediment Control Standard. Details and the locations requiring compaction testing and/or remediation are shown on the Soil Erosion and Sediment Control Plan and Details sheet.

7. **Provide low-maintenance landscaping that encourages retention and planting of native vegetation and minimizes the use of lawns, fertilizers, and pesticides.**

   A comprehensive landscape plan has been incorporated into the design of the proposed improvements which includes low maintenance landscaping. The use of lawn areas has been minimized where applicable and fertilizers and pesticides are to be used sparingly. Native plants, including ground cover, shrubs and trees, are proposed. The native plantings will also require little or no irrigation once they are established.

8. **Provide vegetated open-channel conveyance systems discharging into and through stable vegetated areas.**

   Conveyance systems will discharge to constructed wetlands and into the NJDOT Drainage System, thus minimizing disturbance to the existing vegetation.

   The stormwater and grading design for the site minimizes disturbance within the wooded regions to the north of the site and reduces the amount of runoff that discharges into said region.

9. **Provide other source controls to prevent or minimize the use or exposure of pollutants from development sites in order to prevent or minimize the release of those pollutants into stormwater runoff. These source controls include, but are not limited to:**

   i. Development design features that help to prevent accumulation and discharge of trash and debris in drainage systems.

      Proposed stormwater inlets have been specified with "eco" type curb pieces indicating the text "Dump No Waste, Drains to Waterways" and trash racks are specified for installation at the outlet control structure. In addition, a "Stormwater Management Facilities Operation & Maintenance Manual" has been prepared for use by contractors and the owners that specify that street sweeping must occur on a bi-monthly schedule. Dumpster areas and trash receptacles are

proposed throughout the site at key points. Additionally, floatables and total suspended solids are routinely eliminated using pervious systems and water quality devices between the last inlet in the pipe network and the constructed wetlands, thereby intercepting floating debris.

ii. Development design features that help to prevent and/or contain spills or other harmful accumulations of pollutants at industrial or commercial developments.

Spill mitigation procedures are in place in the event of a spill associated with the gasoline facility. The proposed stormwater system shall be maintained regularly to avoid accumulation of pollutants which may enter the System. Proposed stormwater management facilities intercept stormwater from the impervious surfaces and the proposed roadways, which will provide a collection point for vehicular pollutants. The proposed Green Infrastructure Manufactured Treatment Devices, Pervious Asphalt Pavement, and Pervious Concrete will improve water quality from vehicular surfaces by 80.03%. In the event of an emergency oil spill in the underground storage tanks, Hydrodynamic Separator Devices have been proposed to collect floatables within the runoff generated by the Underground Storage Tank and Canopy area.

iii. When establishing vegetation after land disturbance, applying fertilizer in accordance with the requirements established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., and implementing rules.

The soil erosion and sediment control plans address the requirement for establishing vegetation. Preventative source controls include the use of “eco” inlet curb pieces, storm drain inlets, and trash racks on outlet control structures. Pollution prevention techniques such as water quality treatment through Green Infrastructure Manufactured Treatment Devices, Pervious Asphalt Pavement, Pervious Pavement and minimized clearing have been implemented in the design. The soil erosion and sediment control plan addresses re-stabilizing vegetation and implementing soil erosion and sediment control protection measures. Prevention and maintenance are also addressed in the Stormwater Operations and Maintenance Manual prepared for the project.

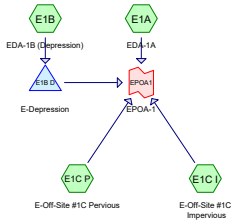
5. Conclusions

As demonstrated in the above sections, the stormwater management plan for the proposed development meets the current *NJDEP Stormwater Management Regulations* and *Standards for Soil Erosion and Sediment Control in New Jersey,* the Township of North Brunswick and Middlesex County Requirements and addresses the requirements for stormwater quantity reductions, water quality, groundwater recharge, and soil erosion and sediment control. As a result of the design calculations contained herein, Bohler anticipates that the stormwater design will not have a negative impact to surrounding areas.

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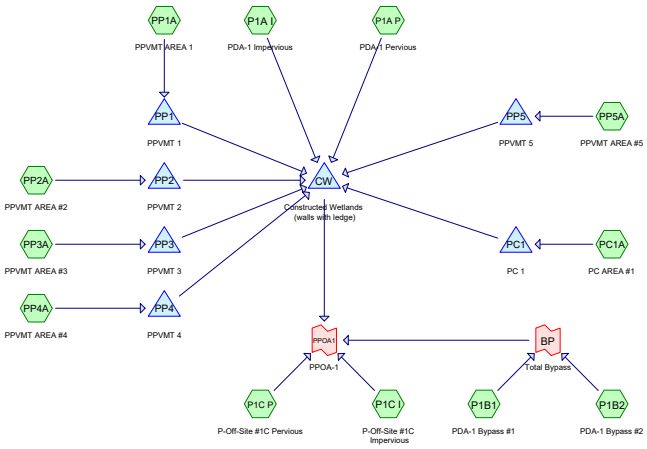
A. PRE- vs. POST-DEVELOPMENT HYDROGRAPHS - Current Adjusted Precipitation Depths

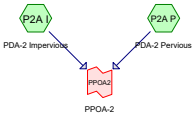
- **2-Year Storm Event**
- **10-Year Storm Event**
- **100-Year Storm Event**
- **Pre- vs. Post Comparison (POA#3)**













Subcat Reach Pond Link

Routing Diagram for NJA240262.00 - Pre vs Post
Prepared by Bohler, Printed 6/12/2025
HydroCAD® 10.20-5c s/n 03478 © 2023 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.829	80	>75% Grass cover, Good, HSG D (E1C P, P1A P, P1B1, P1B2, P1C P, P2A P, P4A, PP2A)
1.591	98	Paved parking, HSG D (E1C I, P1A I, P1B2, P1C I, P2A I, P4A, PC1A, PP1A, PP2A, PP3A, PP4A, PP5A)
2.199	77	Woods, Good, HSG D (E1A, E1B, E2A, E4A)

2-Year Storm Event
(Current Adjusted Precipitation Depth)

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

SubcatchmentE1A: EDA-1A Runoff Area=0.910 ac 0.00% Impervious Runoff Depth=1.30"
Flow Length=296' Slope=0.0500 '/' Tc=11.5 min CN=77 Runoff=1.11 cfs 0.098 af

SubcatchmentE1B: EDA-1B (Depression) Runoff Area=0.292 ac 0.00% Impervious Runoff Depth=1.30"
Flow Length=118' Slope=0.0200 '/' Tc=11.1 min CN=77 Runoff=0.36 cfs 0.032 af

SubcatchmentE1C I: E-Off-Site #1C Runoff Area=0.004 ac 100.00% Impervious Runoff Depth=3.09"
Flow Length=77' Slope=0.0450 '/' Tc=0.7 min CN=98 Runoff=0.01 cfs 0.001 af

SubcatchmentE1C P: E-Off-Site #1C Runoff Area=0.028 ac 0.00% Impervious Runoff Depth=1.49"
Flow Length=77' Slope=0.0450 '/' Tc=5.6 min CN=80 Runoff=0.05 cfs 0.003 af

SubcatchmentE2A: EDA-2 Runoff Area=0.682 ac 0.00% Impervious Runoff Depth=1.30"
Flow Length=253' Tc=16.4 min CN=77 Runoff=0.72 cfs 0.074 af

SubcatchmentE4A: EDA-4 Runoff Area=0.315 ac 0.00% Impervious Runoff Depth=1.30"
Flow Length=158' Tc=13.5 min CN=77 Runoff=0.36 cfs 0.034 af

SubcatchmentP1A I: PDA-1 Impervious Runoff Area=0.488 ac 100.00% Impervious Runoff Depth=3.09"
Flow Length=266' Tc=2.2 min CN=98 Runoff=1.69 cfs 0.126 af

SubcatchmentP1A P: PDA-1 Pervious Runoff Area=0.352 ac 0.00% Impervious Runoff Depth=1.49"
Flow Length=48' Slope=0.0200 '/' Tc=5.3 min CN=80 Runoff=0.64 cfs 0.044 af

SubcatchmentP1B1: PDA-1 Bypass #1 Runoff Area=0.079 ac 0.00% Impervious Runoff Depth=1.49"
Flow Length=330' Tc=7.4 min CN=80 Runoff=0.13 cfs 0.010 af

SubcatchmentP1B2: PDA-1 Bypass #2 Runoff Area=0.117 ac 39.32% Impervious Runoff Depth=2.12"
Flow Length=127' Slope=0.0100 '/' Tc=4.7 min CN=WQ Runoff=0.28 cfs 0.021 af

SubcatchmentP1C I: P-Off-Site #1C Runoff Area=0.027 ac 100.00% Impervious Runoff Depth=3.09"
Flow Length=366' Slope=0.0020 '/' Tc=7.9 min CN=98 Runoff=0.08 cfs 0.007 af

SubcatchmentP1C P: P-Off-Site #1C Runoff Area=0.005 ac 0.00% Impervious Runoff Depth=1.49"
Flow Length=366' Slope=0.0020 '/' Tc=7.9 min CN=80 Runoff=0.01 cfs 0.001 af

SubcatchmentP2A I: PDA-2 Impervious Runoff Area=0.034 ac 100.00% Impervious Runoff Depth=3.09"
Flow Length=92' Slope=0.0100 '/' Tc=1.5 min CN=98 Runoff=0.12 cfs 0.009 af

SubcatchmentP2A P: PDA-2 Pervious Runoff Area=0.175 ac 0.00% Impervious Runoff Depth=1.49"
Flow Length=90' Slope=0.0050 '/' Tc=15.4 min CN=80 Runoff=0.22 cfs 0.022 af

SubcatchmentP4A: PDA-4 Runoff Area=0.115 ac 2.61% Impervious Runoff Depth=1.54"
Flow Length=96' Slope=0.0110 '/' Tc=9.5 min CN=WQ Runoff=0.18 cfs 0.015 af

SubcatchmentPC1A: PC AREA #1 Runoff Area=0.174 ac 100.00% Impervious Runoff Depth=3.09"
Tc=1.0 min CN=98 Runoff=0.60 cfs 0.045 af

Subcatchment PP1A: PPVMT AREA 1 Runoff Area=0.161 ac 100.00% Impervious Runoff Depth=3.09"
Tc=1.0 min CN=98 Runoff=0.56 cfs 0.041 af

Subcatchment PP2A: PPVMT AREA #2 Runoff Area=0.290 ac 97.59% Impervious Runoff Depth=3.05"
Tc=1.0 min CN=WQ Runoff=0.99 cfs 0.074 af

Subcatchment PP3A: PPVMT AREA #3 Runoff Area=0.096 ac 100.00% Impervious Runoff Depth=3.09"
Tc=1.0 min CN=98 Runoff=0.33 cfs 0.025 af

Subcatchment PP4A: PPVMT AREA #4 Runoff Area=0.019 ac 100.00% Impervious Runoff Depth=3.09"
Tc=1.0 min CN=98 Runoff=0.07 cfs 0.005 af

Subcatchment PP5A: PPVMT AREA #5 Runoff Area=0.256 ac 100.00% Impervious Runoff Depth=3.09"
Tc=1.0 min CN=98 Runoff=0.89 cfs 0.066 af

Pond CW: Constructed Wetlands (walls Peak Elev=105.55' Storage=10,729 cf Inflow=4.29 cfs 0.383 af
Outflow=0.18 cfs 0.352 af

Pond E1B D: E-Depression Peak Elev=109.24' Storage=371 cf Inflow=0.36 cfs 0.032 af
Outflow=0.26 cfs 0.024 af

Pond PC1: PC 1 Peak Elev=110.64' Storage=1,060 cf Inflow=0.60 cfs 0.045 af
8.0" Round Culvert n=0.010 L=32.0' S=0.0100 '/' Outflow=0.14 cfs 0.032 af

Pond PP1: PPVMT 1 Peak Elev=110.29' Storage=127 cf Inflow=0.56 cfs 0.041 af
18.0" Round Culvert x 3.00 n=0.010 L=29.0' S=0.0031 '/' Outflow=0.47 cfs 0.041 af

Pond PP2: PPVMT 2 Peak Elev=109.12' Storage=1,636 cf Inflow=0.99 cfs 0.074 af
15.0" Round Culvert n=0.010 L=10.0' S=0.0030 '/' Outflow=0.43 cfs 0.049 af

Pond PP3: PPVMT 3 Peak Elev=109.00' Storage=0 cf Inflow=0.33 cfs 0.025 af
15.0" Round Culvert n=0.010 L=14.0' S=0.0100 '/' Outflow=0.33 cfs 0.025 af

Pond PP4: PPVMT 4 Peak Elev=108.36' Storage=4 cf Inflow=0.07 cfs 0.005 af
15.0" Round Culvert n=0.010 L=6.3' S=0.1032 '/' Outflow=0.07 cfs 0.005 af

Pond PP5: PPVMT 5 Peak Elev=108.87' Storage=689 cf Inflow=0.89 cfs 0.066 af
15.0" Round Culvert n=0.010 L=114.0' S=0.0099 '/' Outflow=0.62 cfs 0.061 af

Link BP: Total Bypass Inflow=0.41 cfs 0.031 af
Primary=0.41 cfs 0.031 af

Link EPOA1: EPOA-1 Inflow=1.25 cfs 0.127 af
Primary=1.25 cfs 0.127 af

Link EPOA2: EPOA-2 Inflow=0.72 cfs 0.074 af
Primary=0.72 cfs 0.074 af

Link EPOA4: EPOA-4 Inflow=0.36 cfs 0.034 af
Primary=0.36 cfs 0.034 af

Link PPOA1: PPOA-1 Inflow=0.62 cfs 0.390 af
Primary=0.62 cfs 0.390 af

Link PPOA2: PPOA-2 Inflow=0.25 cfs 0.031 af
Primary=0.25 cfs 0.031 af

Link PPOA4: PPOA-4 Inflow=0.18 cfs 0.015 af
Primary=0.18 cfs 0.015 af

Summary for Subcatchment E1A: EDA-1A

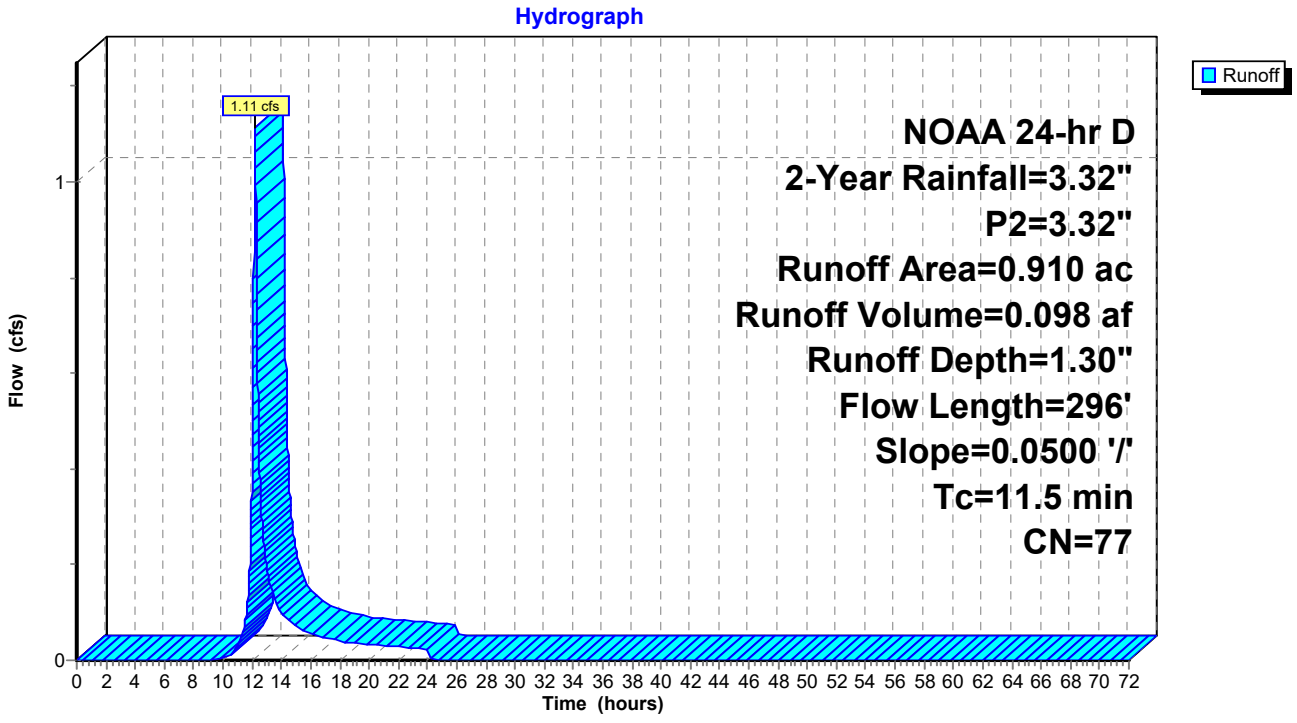
Runoff = 1.11 cfs @ 12.20 hrs, Volume= 0.098 af, Depth= 1.30"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.910	77	Woods, Good, HSG D
0.910	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	56	0.0500	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
1.9	130	0.0500	1.12		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	110	0.0500	4.54		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
11.5	296	Total			

Subcatchment E1A: EDA-1A



Summary for Subcatchment E1B: EDA-1B (Depression)

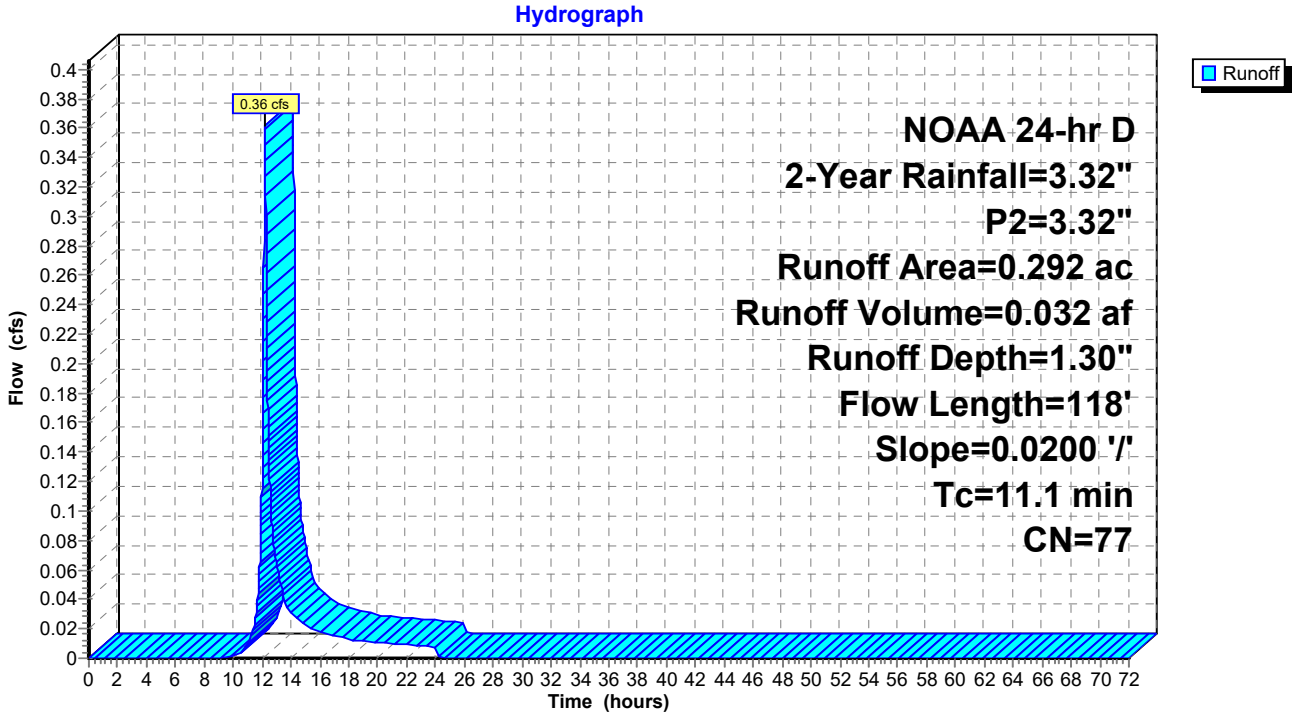
Runoff = 0.36 cfs @ 12.19 hrs, Volume= 0.032 af, Depth= 1.30"
Routed to Pond E1B D : E-Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.292	77	Woods, Good, HSG D
0.292	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	35	0.0200	0.06		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
2.0	83	0.0200	0.71		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
11.1	118	Total			

Subcatchment E1B: EDA-1B (Depression)



Summary for Subcatchment E1C I: E-Off-Site #1C Impervious

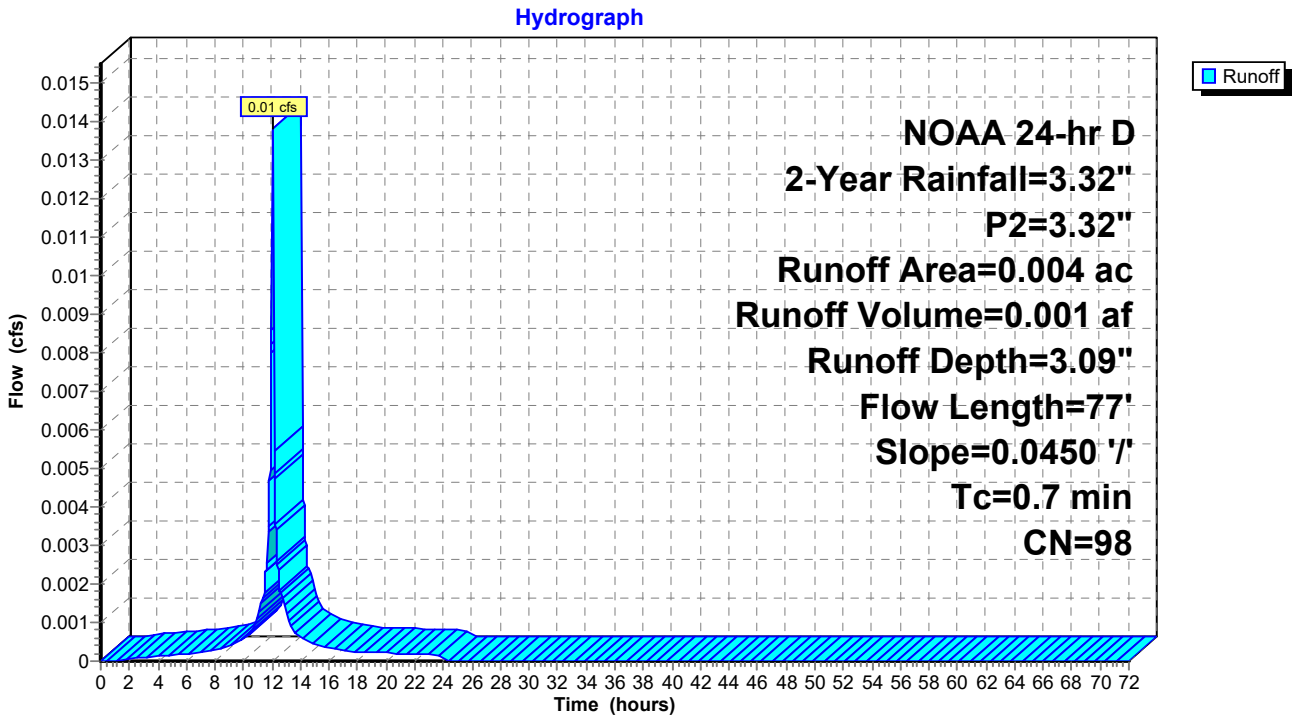
Runoff = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af, Depth= 3.09"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.004	98	Paved parking, HSG D
0.004	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	77	0.0450	1.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"

Subcatchment E1C I: E-Off-Site #1C Impervious



Summary for Subcatchment E1C P: E-Off-Site #1C Pervious

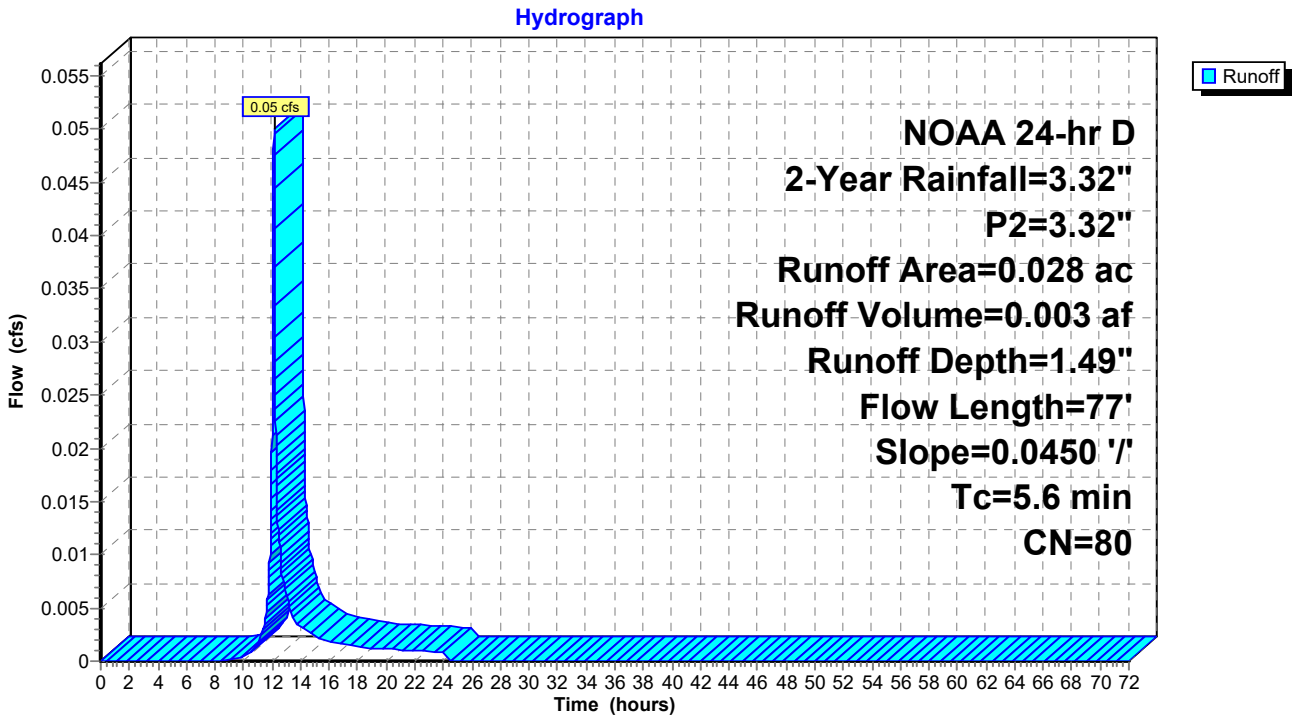
Runoff = 0.05 cfs @ 12.13 hrs, Volume= 0.003 af, Depth= 1.49"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.028	80	>75% Grass cover, Good, HSG D
0.028	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	77	0.0450	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"

Subcatchment E1C P: E-Off-Site #1C Pervious



Summary for Subcatchment E2A: EDA-2

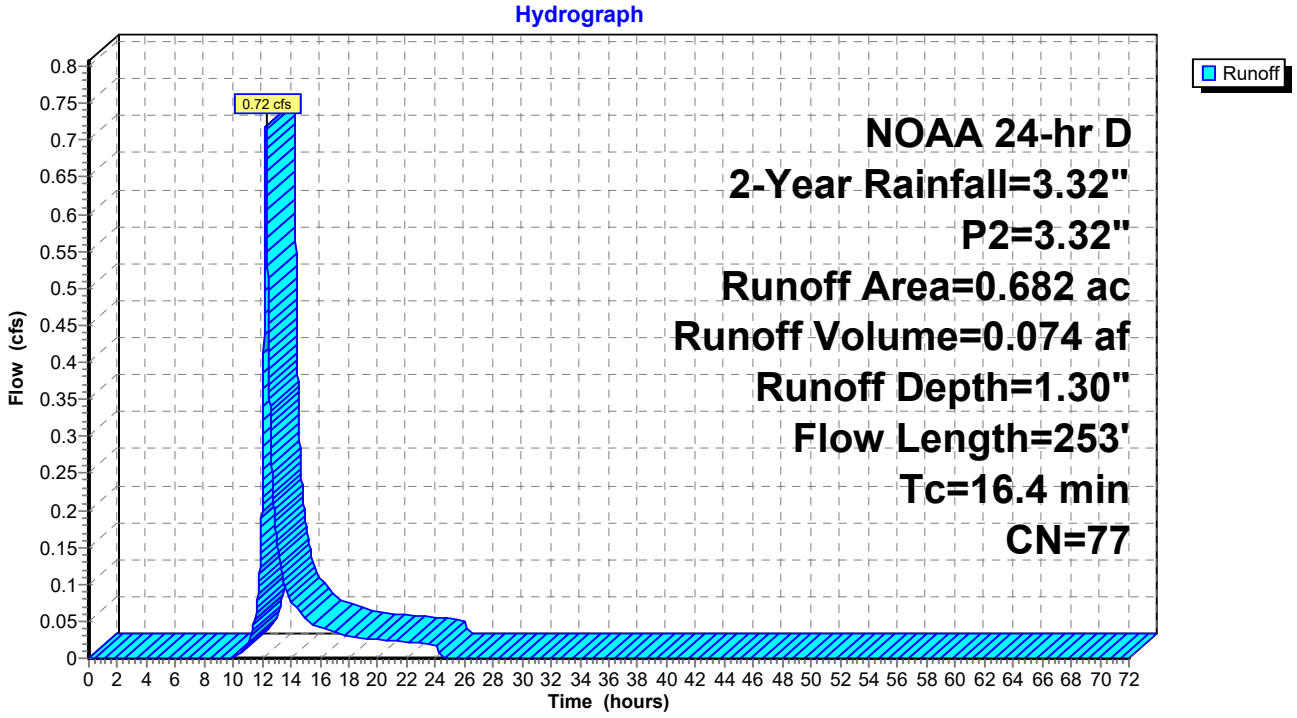
Runoff = 0.72 cfs @ 12.26 hrs, Volume= 0.074 af, Depth= 1.30"
Routed to Link EPOA2 : EPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.682	77	Woods, Good, HSG D
0.682	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	35	0.0200	0.06		**Sheet Flow, E-F** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
7.3	218	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
16.4	253	Total			

Subcatchment E2A: EDA-2



Summary for Subcatchment E4A: EDA-4

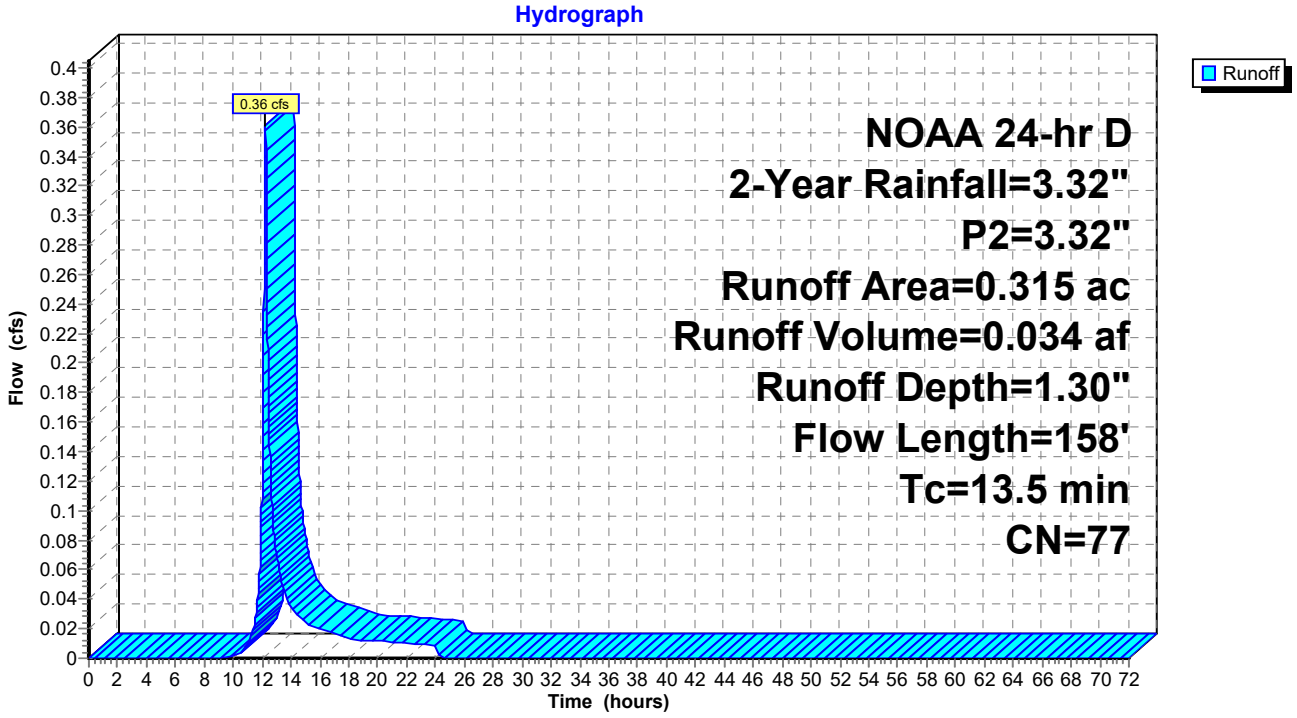
Runoff = 0.36 cfs @ 12.22 hrs, Volume= 0.034 af, Depth= 1.30"
Routed to Link EPOA4 : EPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.315	77	Woods, Good, HSG D
0.315	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	31	0.0150	0.06		**Sheet Flow, Q-R** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
4.2	127	0.0100	0.50		**Shallow Concentrated Flow, R-S** Woodland Kv= 5.0 fps
13.5	158	Total			

Subcatchment E4A: EDA-4



Summary for Subcatchment P1A I: PDA-1 Impervious

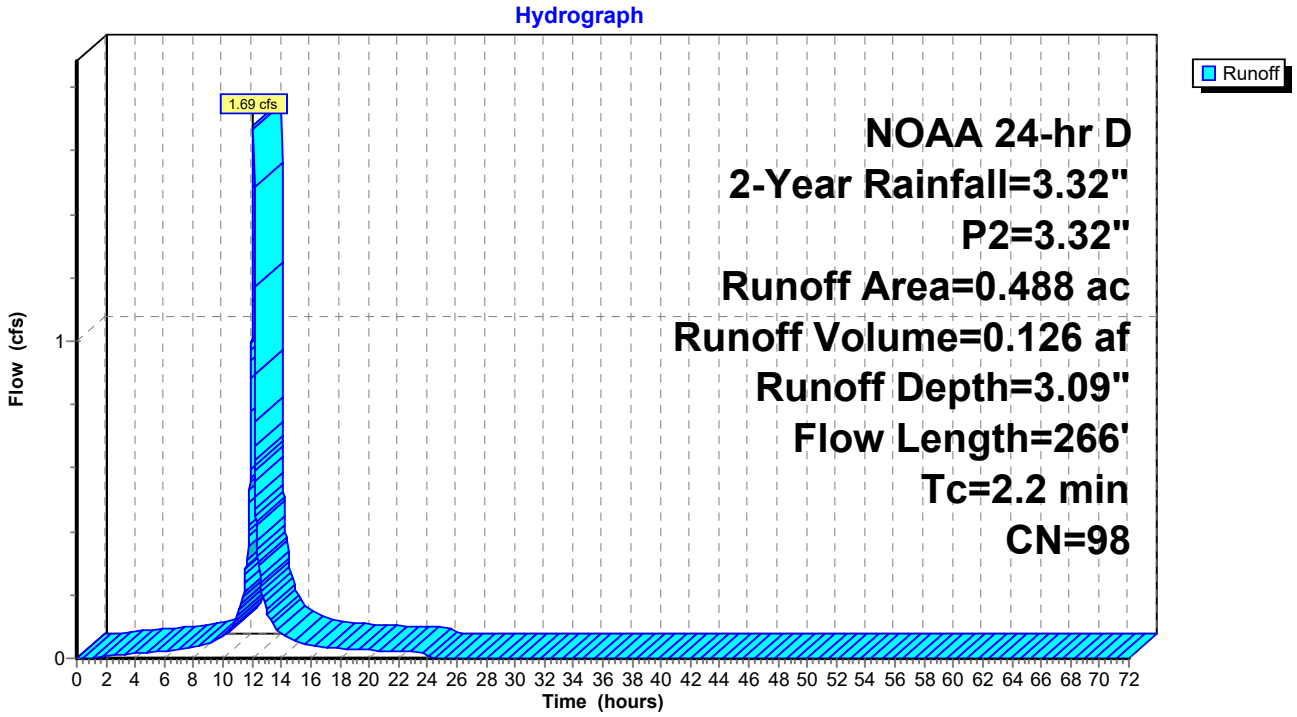
Runoff = 1.69 cfs @ 12.10 hrs, Volume= 0.126 af, Depth= 3.09"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.488	98	Paved parking, HSG D
0.488	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	100	0.0100	1.06		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.32"
0.4	80	0.0230	3.08		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.0	3	0.0030	3.75	4.60	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.2	66	0.0051	4.89	6.00	**Pipe Channel, D-E** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.0	17	0.0127	10.55	33.14	**Pipe Channel, E-F** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.010 PVC, smooth interior
2.2	266	Total			

Subcatchment P1A I: PDA-1 Impervious



Summary for Subcatchment P1A P: PDA-1 Pervious

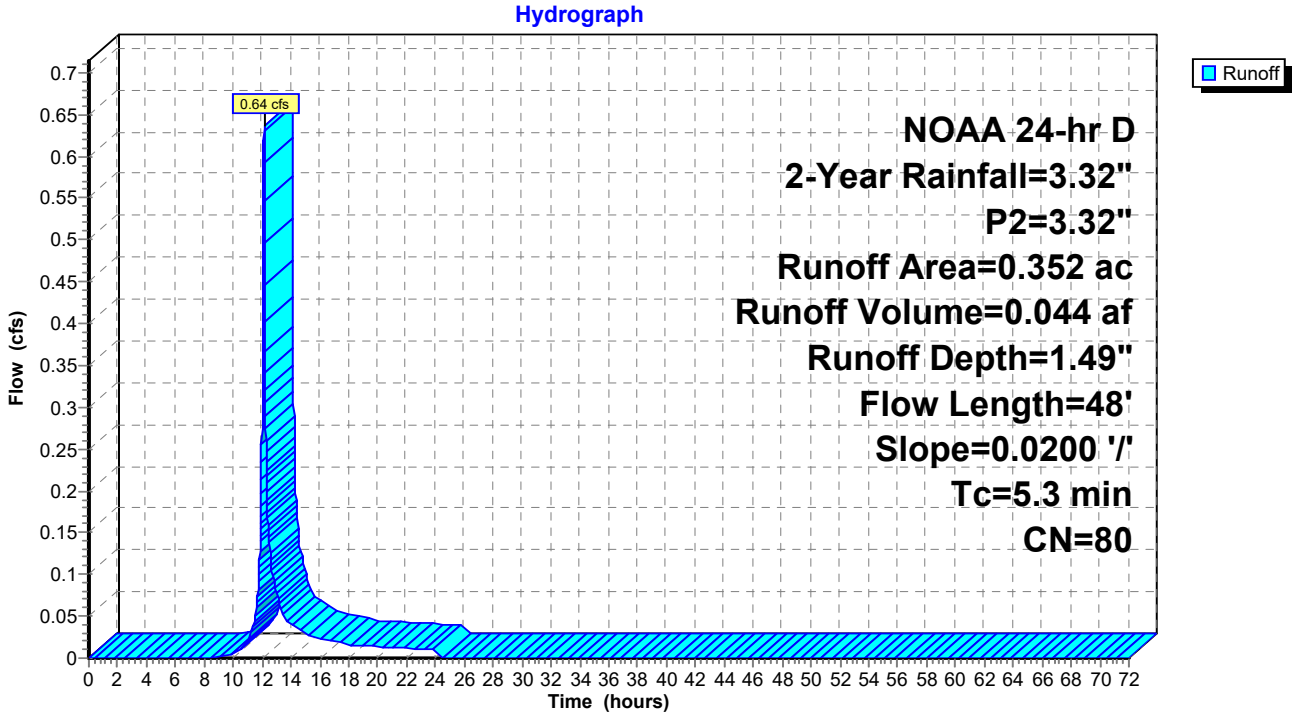
Runoff = 0.64 cfs @ 12.13 hrs, Volume= 0.044 af, Depth= 1.49"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.352	80	>75% Grass cover, Good, HSG D
0.352	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	48	0.0200	0.15		**Sheet Flow, G-H** Grass: Short n= 0.150 P2= 3.32"

Subcatchment P1A P: PDA-1 Pervious



Summary for Subcatchment P1B1: PDA-1 Bypass #1

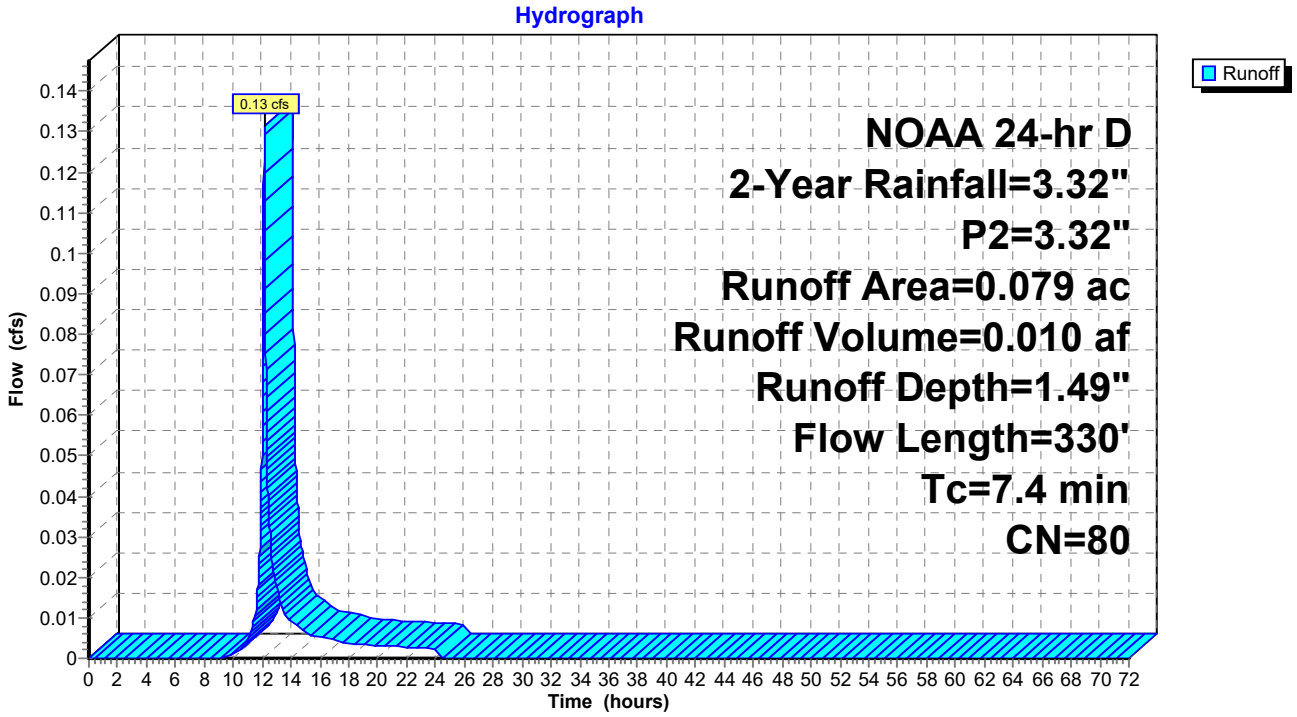
Runoff = 0.13 cfs @ 12.15 hrs, Volume= 0.010 af, Depth= 1.49"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.079	80	>75% Grass cover, Good, HSG D
0.079	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	33	0.0500	0.20		**Sheet Flow, I-J** Grass: Short n= 0.150 P2= 3.32"
0.2	45	0.0013	3.07	9.64	**Pipe Channel, J-K** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
1.2	60	0.0001	0.85	2.67	**Pipe Channel, K-L** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
2.1	105	0.0001	0.85	2.67	**Pipe Channel, L-M** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.9	63	0.0002	1.20	3.78	**Pipe Channel, M-N** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.3	24	0.0002	1.20	3.78	**Pipe Channel, N-O** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
7.4	330	Total			

Subcatchment P1B1: PDA-1 Bypass #1



Summary for Subcatchment P1B2: PDA-1 Bypass #2

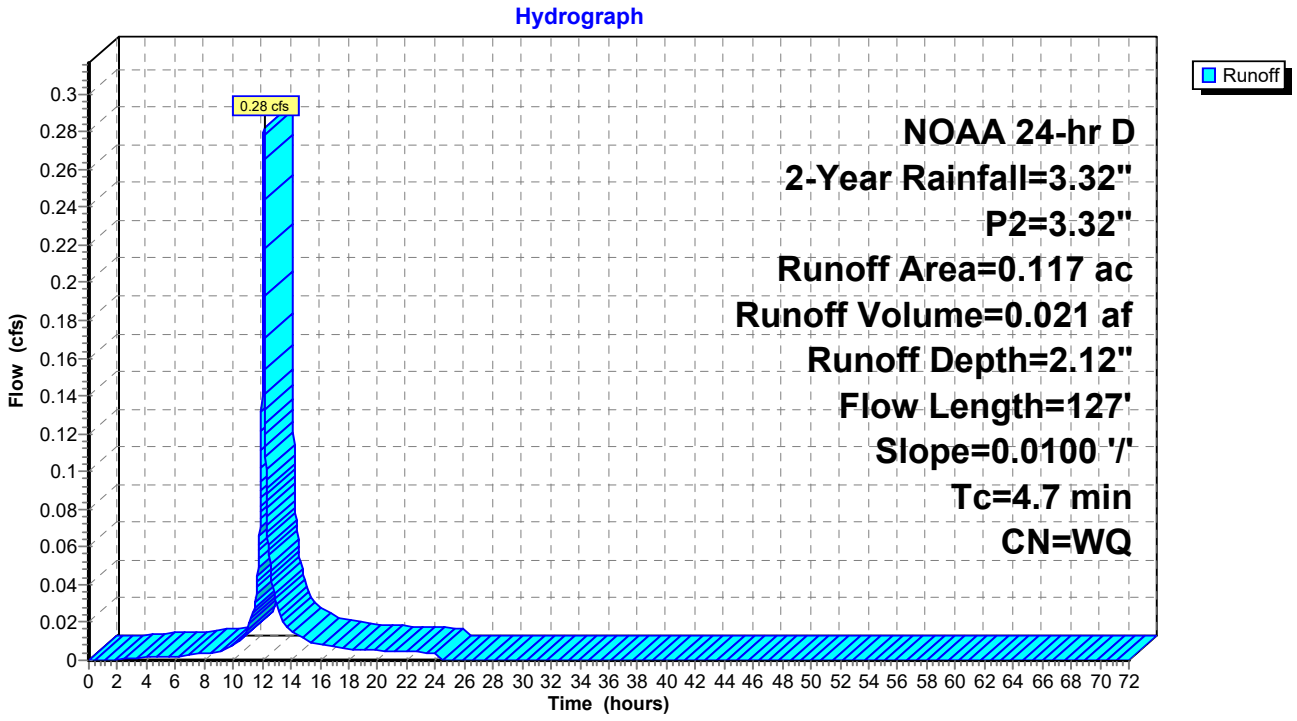
Runoff = 0.28 cfs @ 12.12 hrs, Volume= 0.021 af, Depth= 2.12"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.071	80	>75% Grass cover, Good, HSG D
0.046	98	Paved parking, HSG D
0.117		Weighted Average
0.071	80	60.68% Pervious Area
0.046	98	39.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	22	0.0100	0.10		**Sheet Flow, P-Q** Grass: Short n= 0.150 P2= 3.32"
0.9	105	0.0100	2.03		**Shallow Concentrated Flow, Q-O** Paved Kv= 20.3 fps
4.7	127	Total			

Subcatchment P1B2: PDA-1 Bypass #2



Summary for Subcatchment P1C I: P-Off-Site #1C Impervious

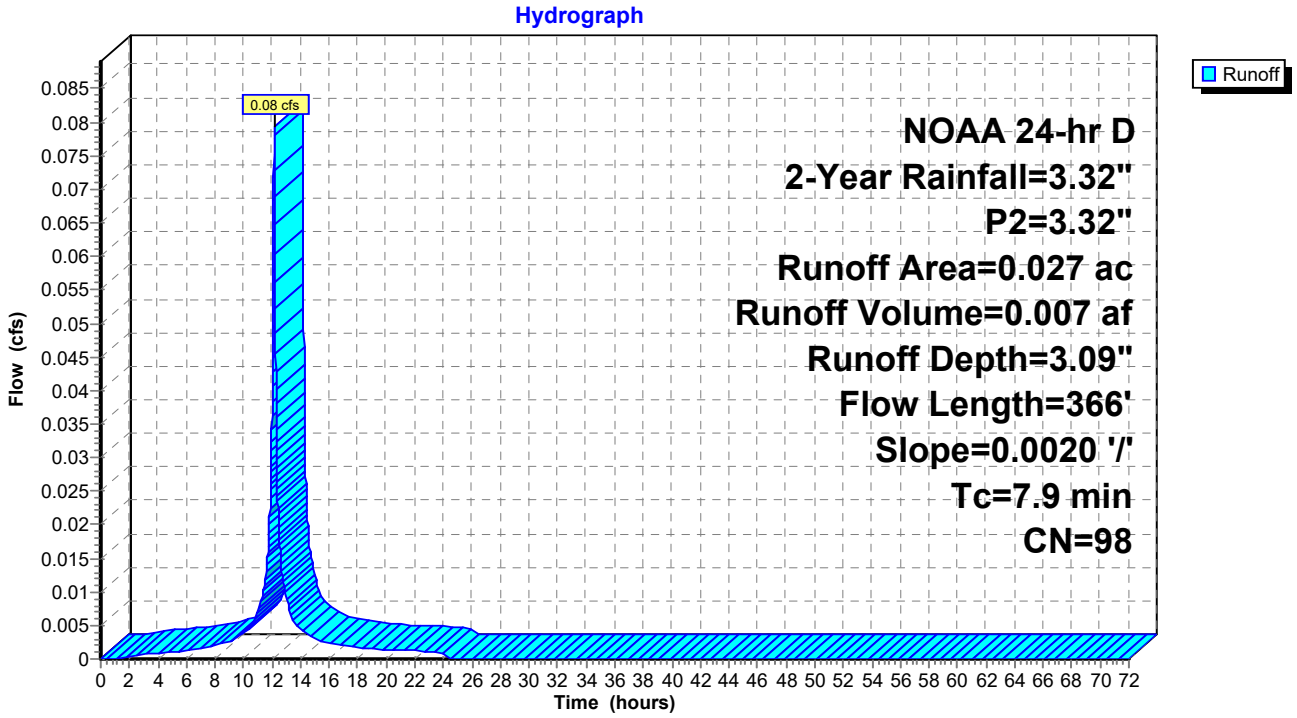
Runoff = 0.08 cfs @ 12.15 hrs, Volume= 0.007 af, Depth= 3.09"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.027	98	Paved parking, HSG D
0.027	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	100	0.0020	0.56		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.32"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.9	366	Total			

Subcatchment P1C I: P-Off-Site #1C Impervious



Summary for Subcatchment P1C P: P-Off-Site #1C Pervious

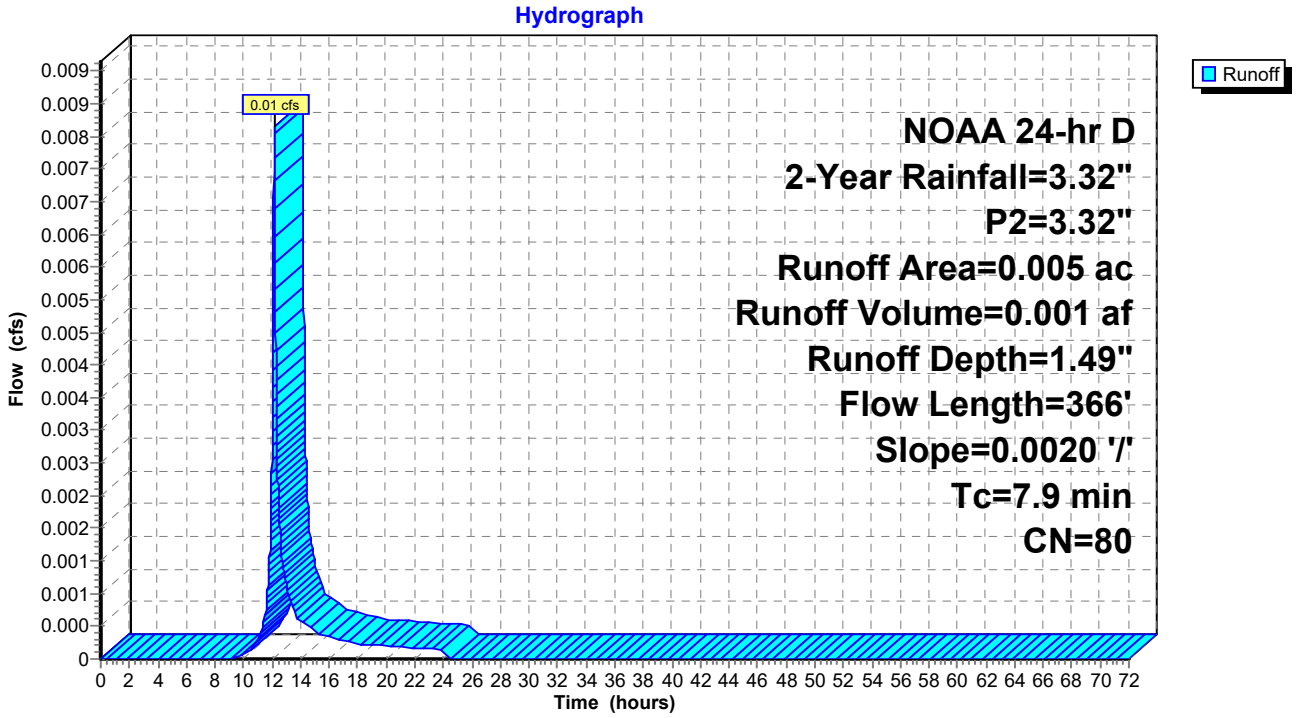
Runoff = 0.01 cfs @ 12.15 hrs, Volume= 0.001 af, Depth= 1.49"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.005	80	>75% Grass cover, Good, HSG D
0.005	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	100	0.0020	0.56		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.32"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.9	366	Total			

Subcatchment P1C P: P-Off-Site #1C Pervious



Summary for Subcatchment P2A I: PDA-2 Impervious

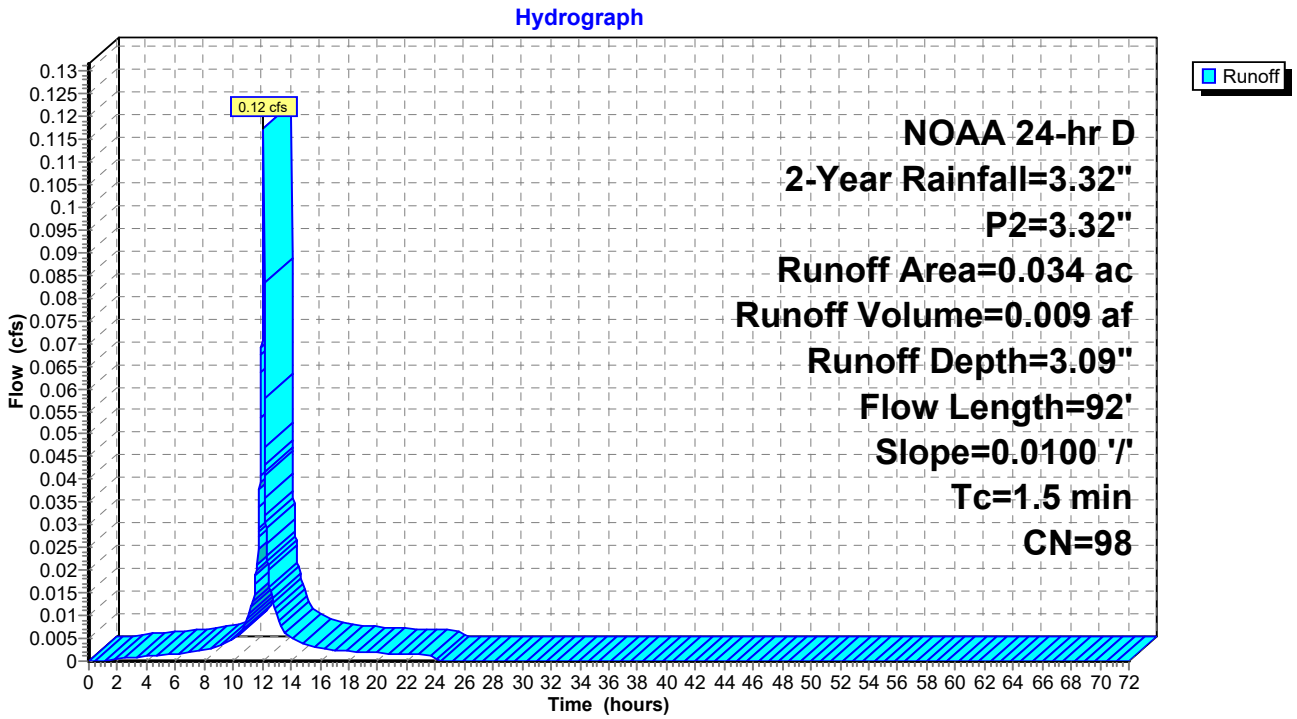
Runoff = 0.12 cfs @ 12.10 hrs, Volume= 0.009 af, Depth= 3.09"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.034	98	Paved parking, HSG D
0.034	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	92	0.0100	1.04		**Sheet Flow, R-S** Smooth surfaces n= 0.011 P2= 3.32"

Subcatchment P2A I: PDA-2 Impervious



Summary for Subcatchment P2A P: PDA-2 Pervious

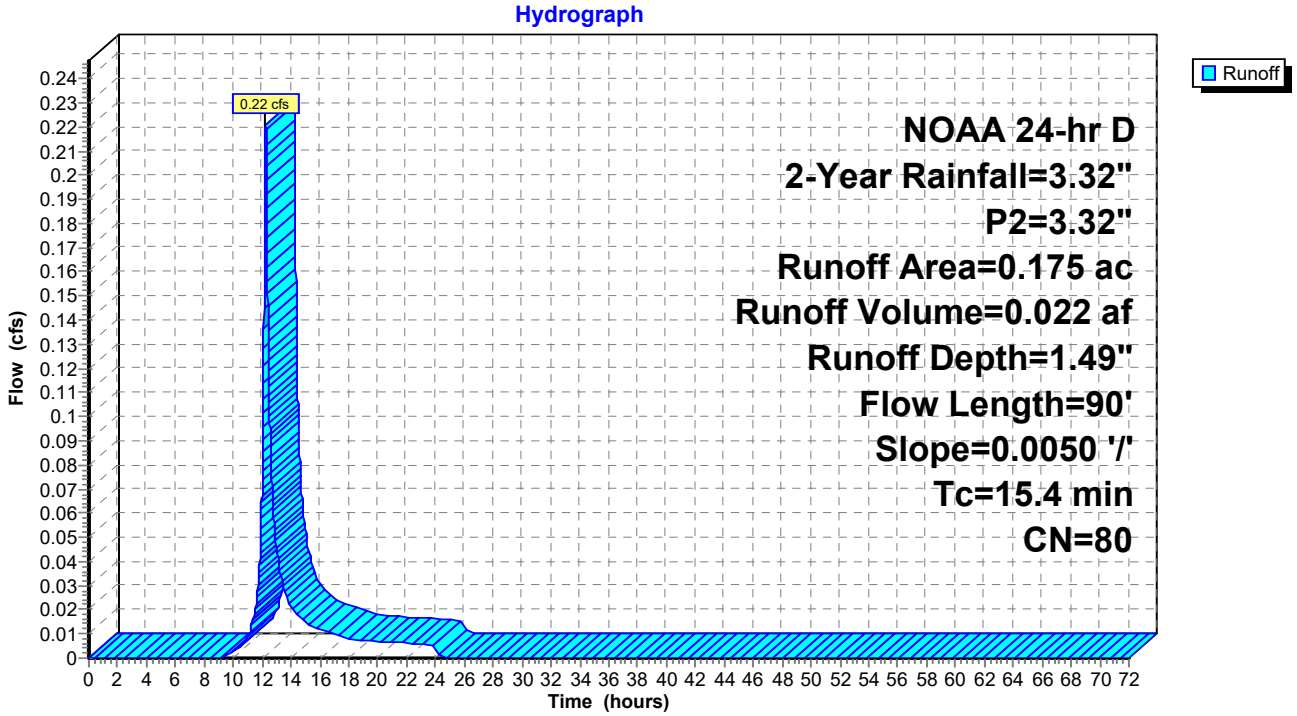
Runoff = 0.22 cfs @ 12.24 hrs, Volume= 0.022 af, Depth= 1.49"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.175	80	>75% Grass cover, Good, HSG D
0.175	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	90	0.0050	0.10		**Sheet Flow, T-U** Grass: Short n= 0.150 P2= 3.32"

Subcatchment P2A P: PDA-2 Pervious



Summary for Subcatchment P4A: PDA-4

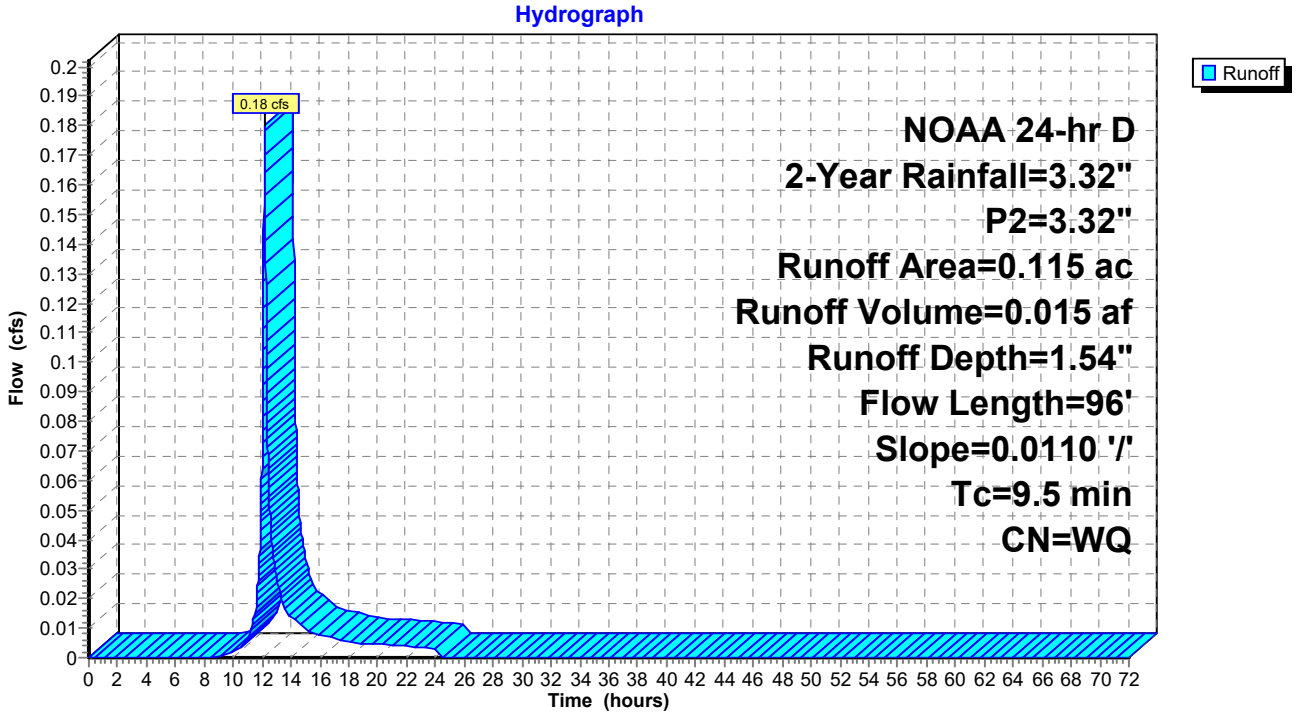
Runoff = 0.18 cfs @ 12.17 hrs, Volume= 0.015 af, Depth= 1.54"
Routed to Link PPOA4 : PPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.112	80	>75% Grass cover, Good, HSG D
0.003	98	Paved parking, HSG D
0.115		Weighted Average
0.112	80	97.39% Pervious Area
0.003	98	2.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	70	0.0110	0.13		**Sheet Flow, V-X** Grass: Short n= 0.150 P2= 3.32" Using McCuen-Spiess flow length
0.3	26	0.0110	1.57		**Shallow Concentrated Flow, X-Y** Grassed Waterway Kv= 15.0 fps
9.5	96	Total			

Subcatchment P4A: PDA-4



Summary for Subcatchment PC1A: PC AREA #1

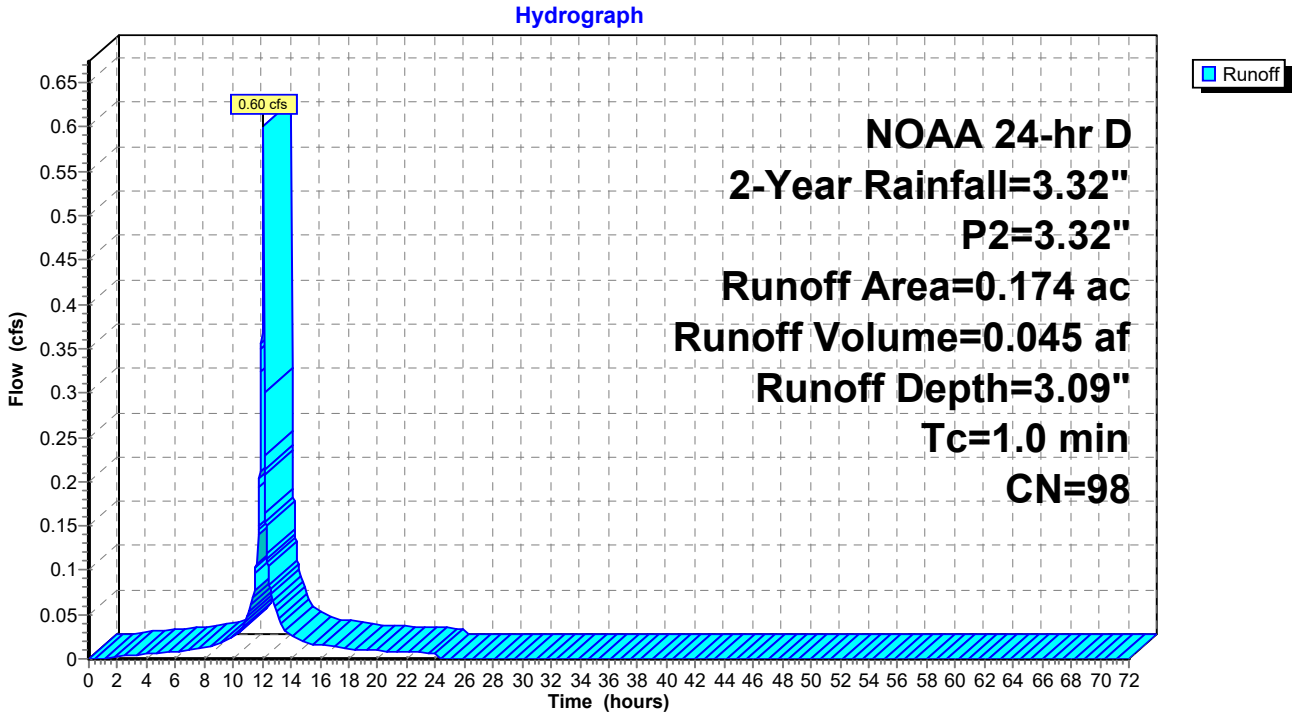
Runoff = 0.60 cfs @ 12.09 hrs, Volume= 0.045 af, Depth= 3.09"
Routed to Pond PC1 : PC 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.174	98	Paved parking, HSG D
0.174	98	100.00% Impervious Area

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

Subcatchment PC1A: PC AREA #1



Summary for Subcatchment PP1A: PPVMT AREA 1

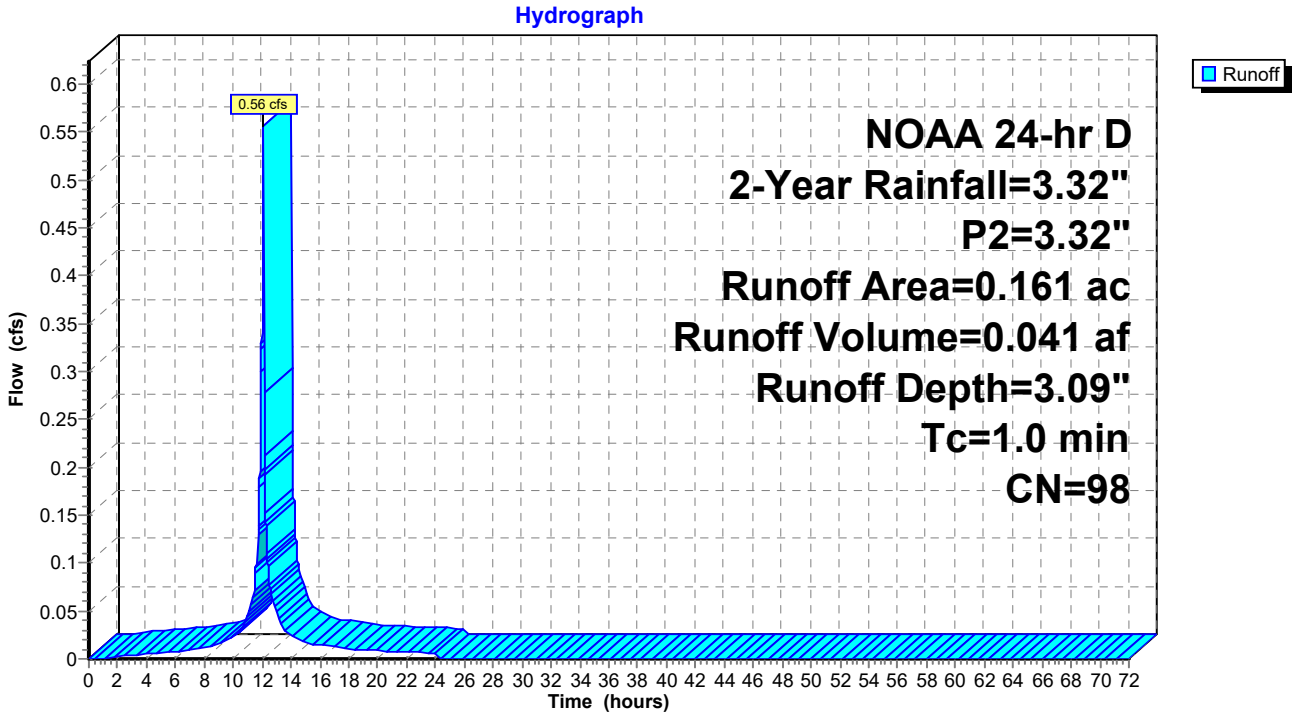
Runoff = 0.56 cfs @ 12.09 hrs, Volume= 0.041 af, Depth= 3.09"
Routed to Pond PP1 : PPVMT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.161	98	Paved parking, HSG D
0.161	98	100.00% Impervious Area

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

Subcatchment PP1A: PPVMT AREA 1



Summary for Subcatchment PP2A: PPVMT AREA #2

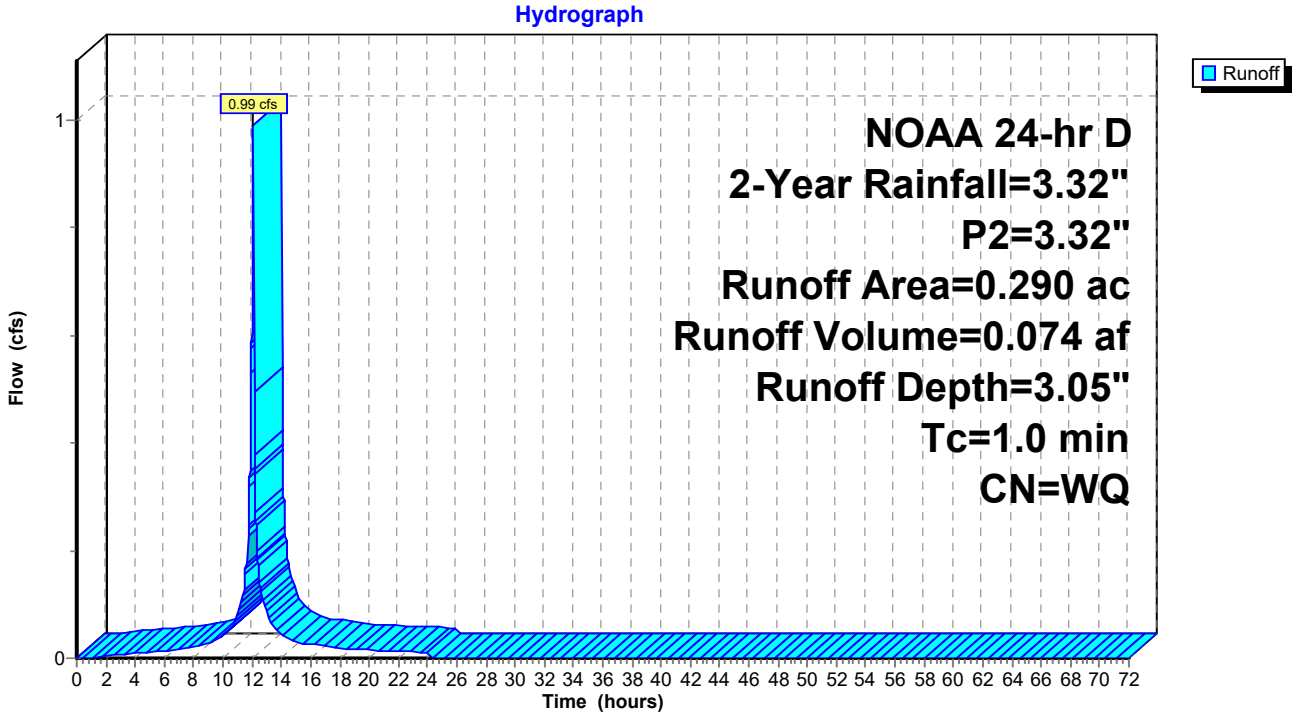
Runoff = 0.99 cfs @ 12.09 hrs, Volume= 0.074 af, Depth= 3.05"
Routed to Pond PP2 : PPVMT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.007	80	>75% Grass cover, Good, HSG D
0.283	98	Paved parking, HSG D
0.290		Weighted Average
0.007	80	2.41% Pervious Area
0.283	98	97.59% Impervious Area

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

Subcatchment PP2A: PPVMT AREA #2



Summary for Subcatchment PP3A: PPVMT AREA #3

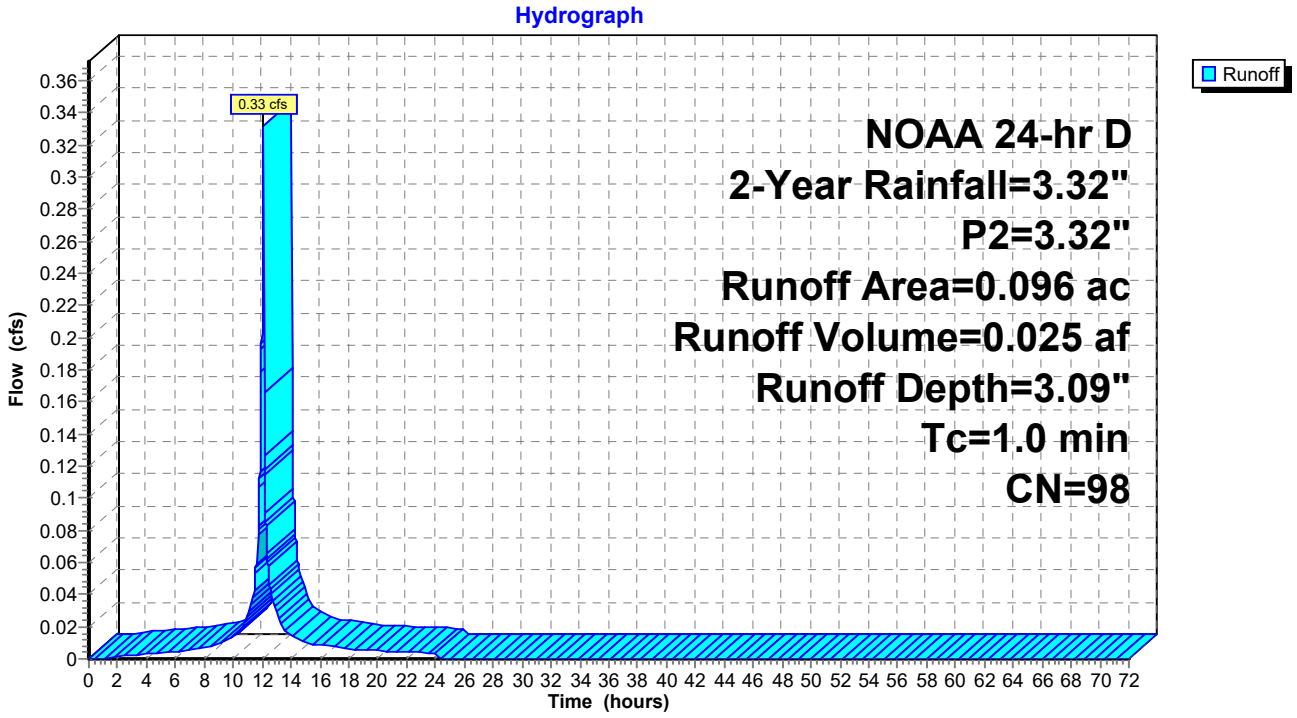
Runoff = 0.33 cfs @ 12.09 hrs, Volume= 0.025 af, Depth= 3.09"
Routed to Pond PP3 : PPVMT 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.096	98	Paved parking, HSG D
0.096	98	100.00% Impervious Area

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

Subcatchment PP3A: PPVMT AREA #3



Summary for Subcatchment PP4A: PPVMT AREA #4

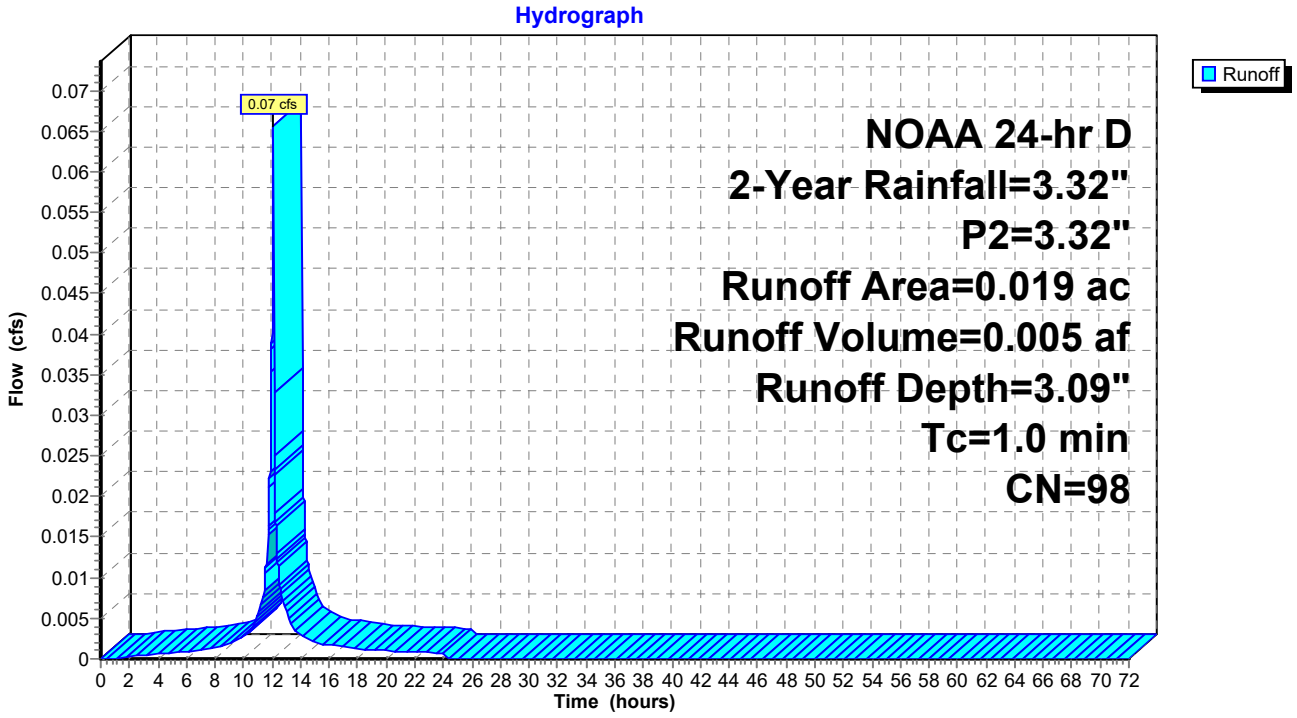
Runoff = 0.07 cfs @ 12.09 hrs, Volume= 0.005 af, Depth= 3.09"
Routed to Pond PP4 : PPVMT 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.019	98	Paved parking, HSG D
0.019	98	100.00% Impervious Area

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

Subcatchment PP4A: PPVMT AREA #4



Summary for Subcatchment PP5A: PPVMT AREA #5

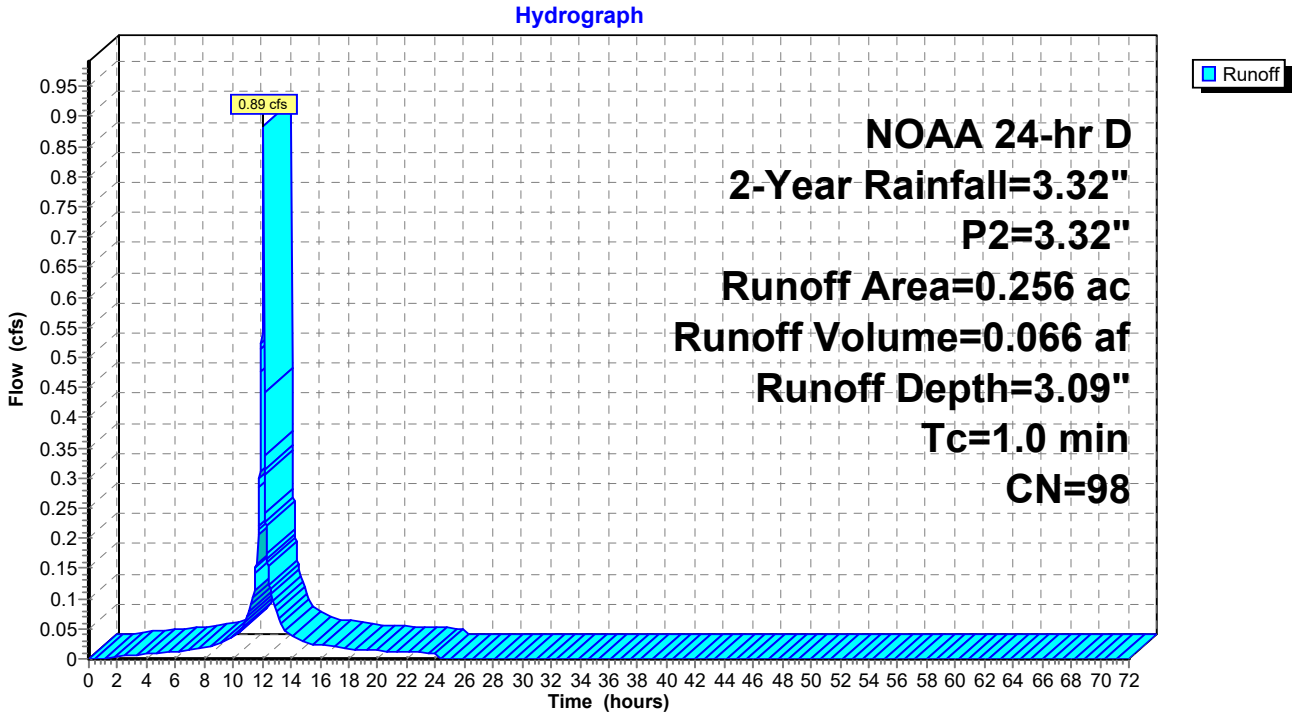
Runoff = 0.89 cfs @ 12.09 hrs, Volume= 0.066 af, Depth= 3.09"
Routed to Pond PP5 : PPVMT 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year Rainfall=3.32", P2=3.32"

Area (ac)	CN	Description
0.256	98	Paved parking, HSG D
0.256	98	100.00% Impervious Area

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

Subcatchment PP5A: PPVMT AREA #5



Summary for Pond CW: Constructed Wetlands (walls with ledge)

Inflow Area = 1.836 ac, 80.45% Impervious, Inflow Depth = 2.50" for 2-Year event
Inflow = 4.29 cfs @ 12.11 hrs, Volume= 0.383 af
Outflow = 0.18 cfs @ 15.62 hrs, Volume= 0.352 af, Atten= 96%, Lag= 211.1 min
Primary = 0.18 cfs @ 15.62 hrs, Volume= 0.352 af
Routed to Link PPOA1 : PPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 105.55' @ 15.62 hrs Surf.Area= 8,108 sf Storage= 10,729 cf

Plug-Flow detention time= 752.2 min calculated for 0.352 af (92% of inflow)
Center-of-Mass det. time= 700.9 min (1,516.6 - 815.7)

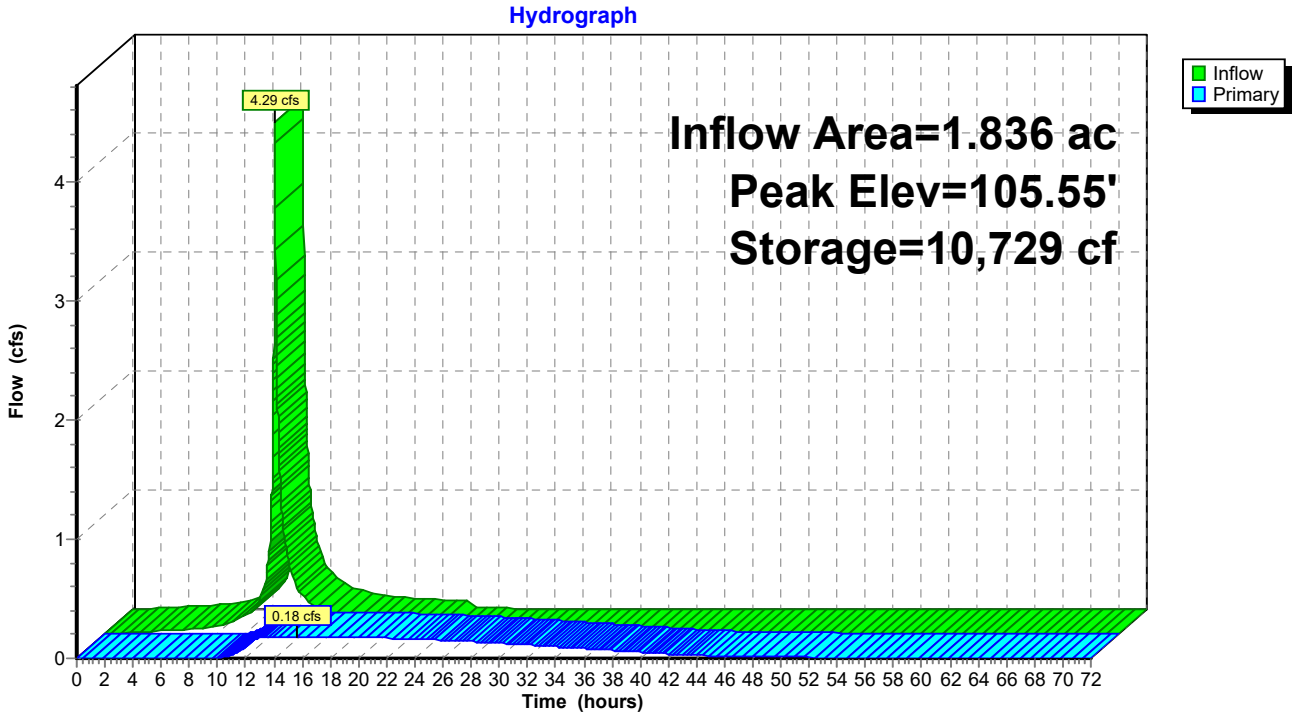
Volume	Invert	Avail.Storage	Storage Description
#1	104.00'	45,333 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
104.00	5,936	0	0
105.00	6,640	6,288	6,288
105.01	8,059	73	6,361
106.00	8,149	8,023	14,384
107.00	8,249	8,199	22,583
108.00	8,349	8,299	30,882
109.00	8,449	8,399	39,281
109.70	8,840	6,051	45,333

Device	Routing	Invert	Outlet Devices
#1	Primary	104.00'	**15.0" Round Culvert** L= 300.0' Ke= 0.500 Inlet / Outlet Invert= 104.00' / 103.10' S= 0.0030 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	104.20'	**2.5" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	105.92'	**12.2" W x 7.7" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	108.00'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.18 cfs @ 15.62 hrs HW=105.55' (Free Discharge)
└**1=Culvert** (Passes 0.18 cfs of 4.30 cfs potential flow)
  ├**2=Orifice** (Orifice Controls 0.18 cfs @ 5.37 fps)
  ├**3=Orifice/Grate** (Controls 0.00 cfs)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond CW: Constructed Wetlands (walls with ledge)



Summary for Pond E1B D: E-Depression

Inflow Area = 0.292 ac, 0.00% Impervious, Inflow Depth = 1.30" for 2-Year event
Inflow = 0.36 cfs @ 12.19 hrs, Volume= 0.032 af
Outflow = 0.26 cfs @ 12.30 hrs, Volume= 0.024 af, Atten= 29%, Lag= 6.2 min
Primary = 0.26 cfs @ 12.30 hrs, Volume= 0.024 af
Routed to Link EPOA1 : EPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.24' @ 12.30 hrs Surf.Area= 2,090 sf Storage= 371 cf

Plug-Flow detention time= 145.6 min calculated for 0.024 af (77% of inflow)
Center-of-Mass det. time= 52.1 min (919.0 - 867.0)

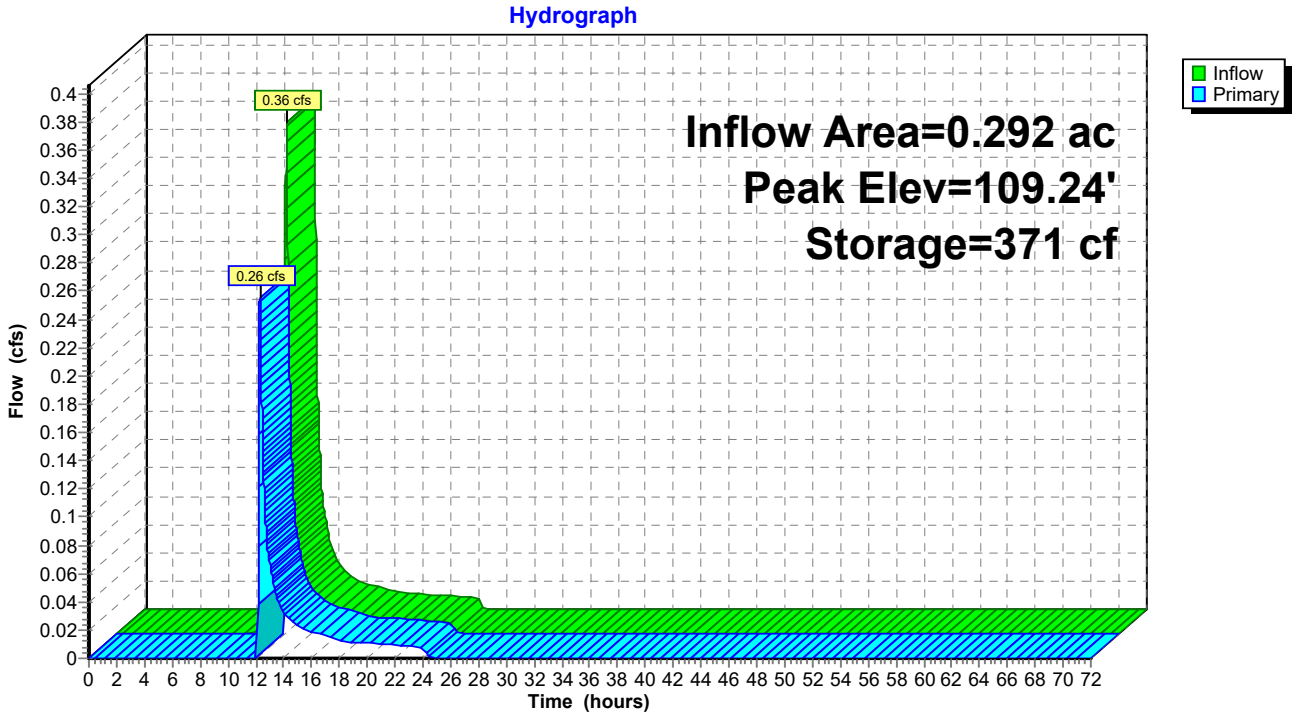
Volume	Invert	Avail.Storage	Storage Description
#1	108.80'	998 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.80	11	0	0
109.00	540	55	55
109.34	2,737	557	612
109.45	4,282	386	998

Device	Routing	Invert	Outlet Devices
#1	Primary	109.21'	**21.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.25 cfs @ 12.30 hrs HW=109.24' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 0.25 cfs @ 0.40 fps)

Pond E1B D: E-Depression



Summary for Pond PC1: PC 1

Inflow Area = 0.174 ac,100.00% Impervious, Inflow Depth = 3.09" for 2-Year event
Inflow = 0.60 cfs @ 12.09 hrs, Volume= 0.045 af
Outflow = 0.14 cfs @ 12.31 hrs, Volume= 0.032 af, Atten= 76%, Lag= 13.0 min
Primary = 0.14 cfs @ 12.31 hrs, Volume= 0.032 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 110.64' @ 12.31 hrs Surf.Area= 5,616 sf Storage= 1,060 cf

Plug-Flow detention time= 321.7 min calculated for 0.032 af (71% of inflow)
Center-of-Mass det. time= 220.6 min (973.5 - 752.9)

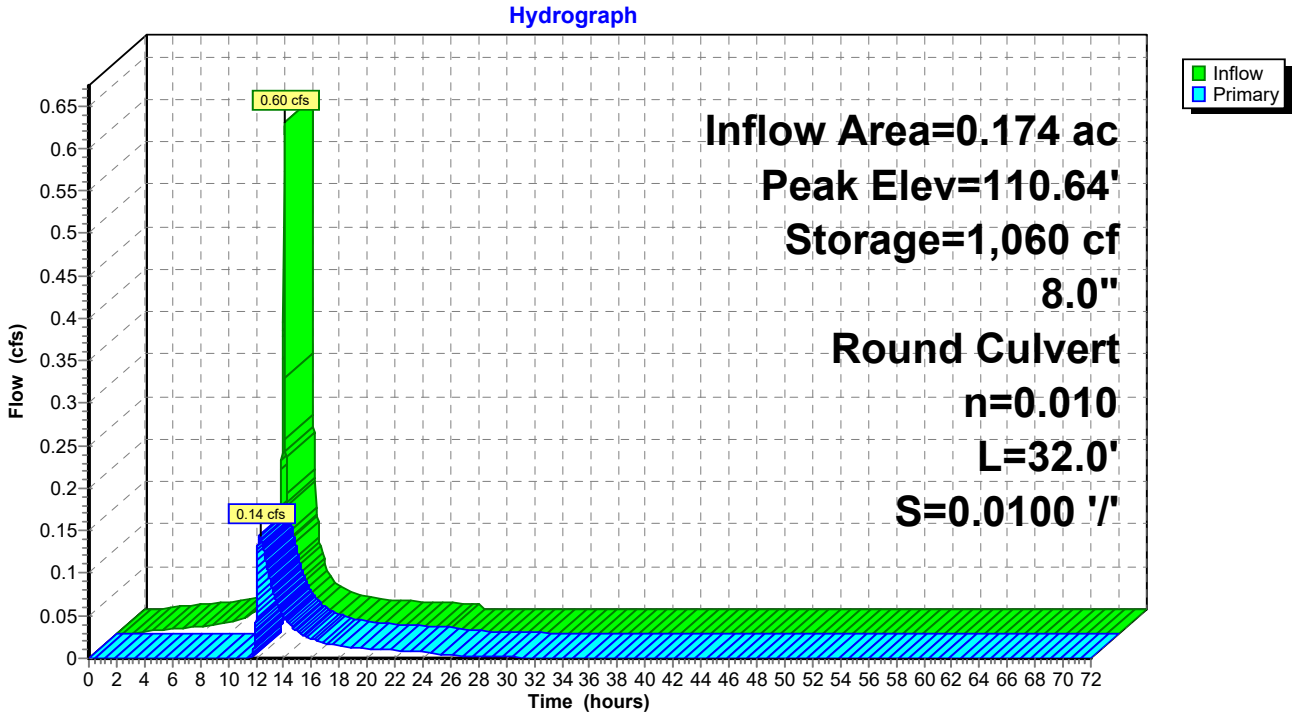
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	6,043 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 15,107 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	5,616	0	0
111.17	5,616	5,616	5,616
112.17	5,616	5,616	11,232
112.86	5,616	3,875	15,107

Device	Routing	Invert	Outlet Devices
#1	Primary	110.42'	**8.0" Round Culvert** L= 32.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.42' / 110.10' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.14 cfs @ 12.31 hrs HW=110.64' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.14 cfs @ 1.42 fps)

Pond PC1: PC 1


Hydrograph
Inflow
Primary
0.60 cfs
0.14 cfs
Inflow Area=0.174 ac
Peak Elev=110.64'
Storage=1,060 cf
8.0"
Round Culvert
n=0.010
L=32.0'
S=0.0100 '/'
Flow (cfs)
0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6 0.65
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

Summary for Pond PP1: PPVMT 1

Inflow Area = 0.161 ac,100.00% Impervious, Inflow Depth = 3.09" for 2-Year event
Inflow = 0.56 cfs @ 12.09 hrs, Volume= 0.041 af
Outflow = 0.47 cfs @ 12.11 hrs, Volume= 0.041 af, Atten= 15%, Lag= 1.1 min
Primary = 0.47 cfs @ 12.11 hrs, Volume= 0.041 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 110.29' @ 12.11 hrs Surf.Area= 2,680 sf Storage= 127 cf

Plug-Flow detention time= 3.1 min calculated for 0.041 af (100% of inflow)
Center-of-Mass det. time= 3.1 min (756.0 - 752.9)

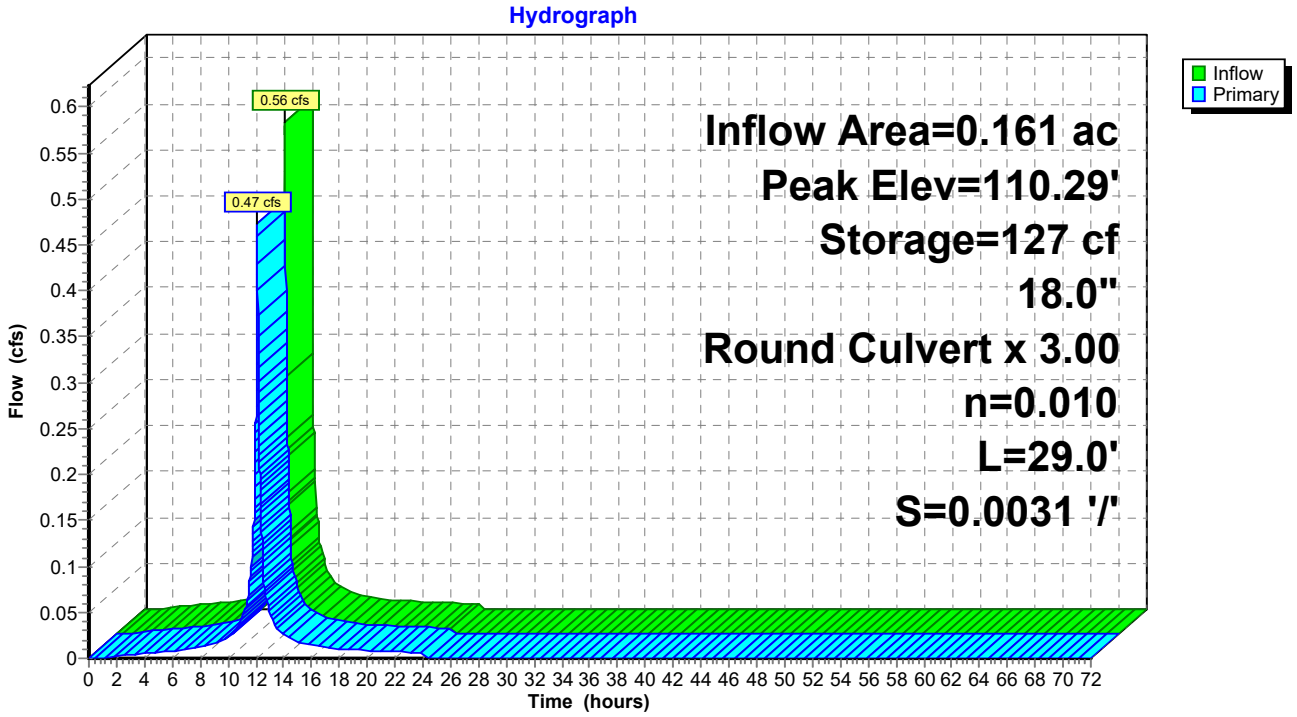
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	1,940 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 4,851 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	2,680	0	0
111.17	2,680	2,680	2,680
111.98	2,680	2,171	4,851

Device	Routing	Invert	Outlet Devices
#1	Primary	110.08'	**18.0" Round Culvert X 3.00** L= 29.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.08' / 109.99' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.47 cfs @ 12.11 hrs HW=110.29' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.47 cfs @ 1.61 fps)

Pond PP1: PPVMT 1



Summary for Pond PP2: PPVMT 2

Inflow Area = 0.290 ac, 97.59% Impervious, Inflow Depth = 3.05" for 2-Year event
Inflow = 0.99 cfs @ 12.09 hrs, Volume= 0.074 af
Outflow = 0.43 cfs @ 12.13 hrs, Volume= 0.049 af, Atten= 57%, Lag= 2.2 min
Primary = 0.43 cfs @ 12.13 hrs, Volume= 0.049 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.12' @ 12.13 hrs Surf.Area= 3,642 sf Storage= 1,636 cf

Plug-Flow detention time= 266.8 min calculated for 0.049 af (66% of inflow)
Center-of-Mass det. time= 157.3 min (911.3 - 754.0)

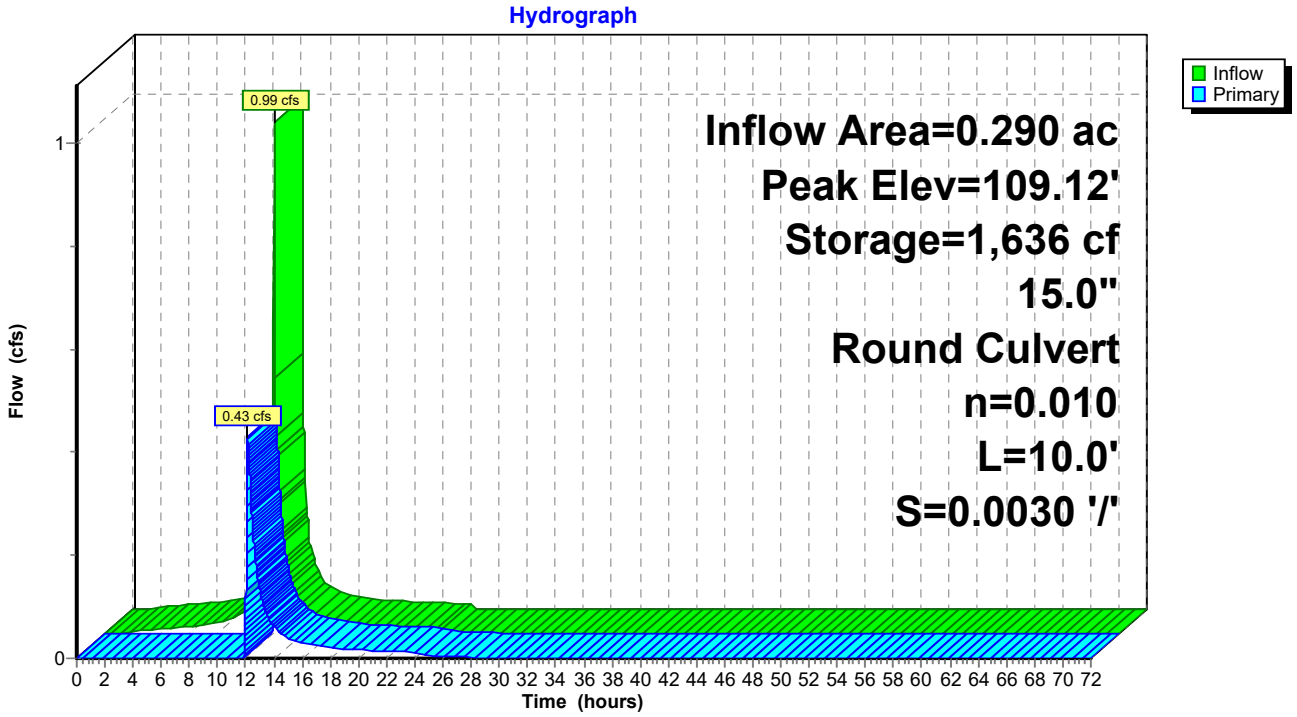
Volume	Invert	Avail.Storage	Storage Description
#1	108.00'	5,434 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 13,585 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	3,642	0	0
109.00	3,642	3,642	3,642
110.00	3,642	3,642	7,284
111.00	3,642	3,642	10,926
111.73	3,642	2,659	13,585

Device	Routing	Invert	Outlet Devices
#1	Primary	108.74'	**15.0" Round Culvert** L= 10.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.74' / 108.71' S= 0.0030 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.43 cfs @ 12.13 hrs HW=109.12' (Free Discharge)
1=Culvert (Barrel Controls 0.43 cfs @ 2.01 fps)

Pond PP2: PPVMT 2



Summary for Pond PP3: PPVMT 3

Inflow Area = 0.096 ac,100.00% Impervious, Inflow Depth = 3.09" for 2-Year event
Inflow = 0.33 cfs @ 12.09 hrs, Volume= 0.025 af
Outflow = 0.33 cfs @ 12.09 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min
Primary = 0.33 cfs @ 12.09 hrs, Volume= 0.025 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.00' @ 12.09 hrs Surf.Area= 1,332 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.025 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (752.9 - 752.9)

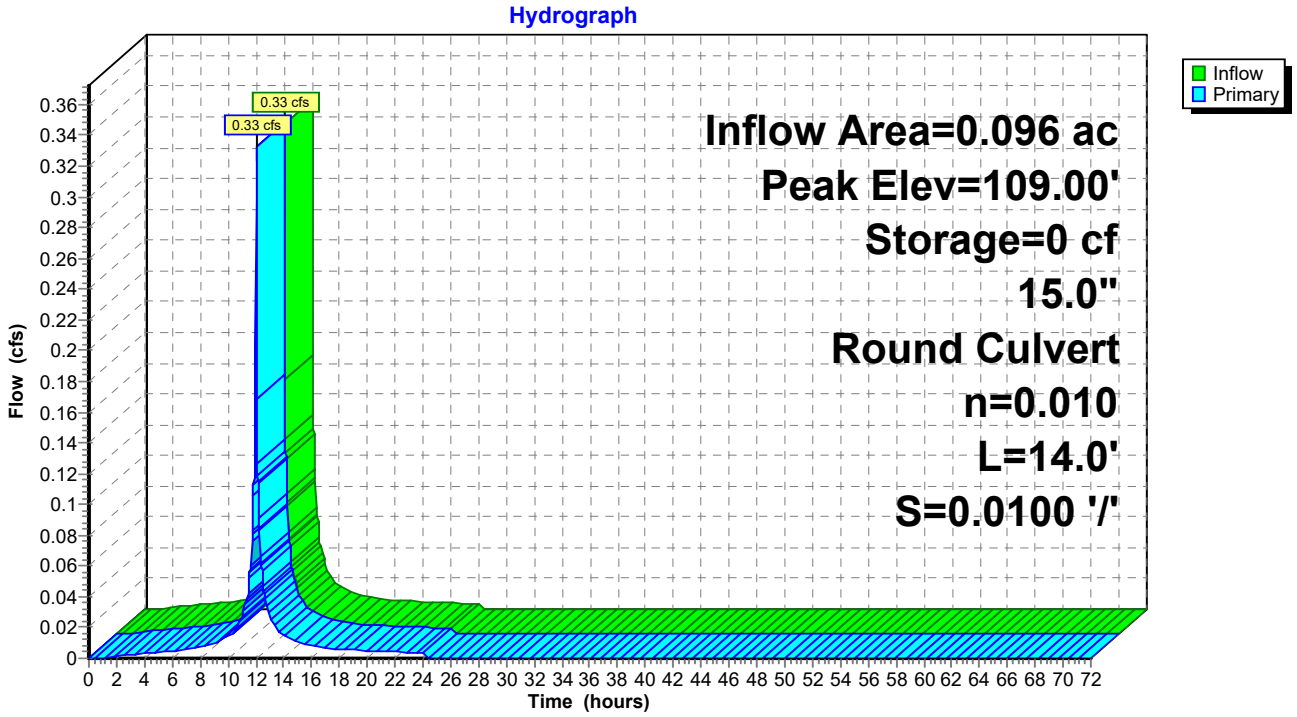
Volume	Invert	Avail.Storage	Storage Description
#1	109.00'	1,108 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 2,771 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
109.00	1,332	0	0
110.00	1,332	1,332	1,332
111.00	1,332	1,332	2,664
111.08	1,332	107	2,771

Device	Routing	Invert	Outlet Devices
#1	Primary	104.14'	**15.0" Round Culvert** L= 14.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 104.14' / 104.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=10.73 cfs @ 12.09 hrs HW=109.00' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 10.73 cfs @ 8.74 fps)

Pond PP3: PPVMT 3



Summary for Pond PP4: PPVMT 4

Inflow Area = 0.019 ac,100.00% Impervious, Inflow Depth = 3.09" for 2-Year event
Inflow = 0.07 cfs @ 12.09 hrs, Volume= 0.005 af
Outflow = 0.07 cfs @ 12.10 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.3 min
Primary = 0.07 cfs @ 12.10 hrs, Volume= 0.005 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 108.36' @ 12.10 hrs Surf.Area= 360 sf Storage= 4 cf

Plug-Flow detention time= 1.1 min calculated for 0.005 af (100% of inflow)
Center-of-Mass det. time= 1.1 min (754.0 - 752.9)

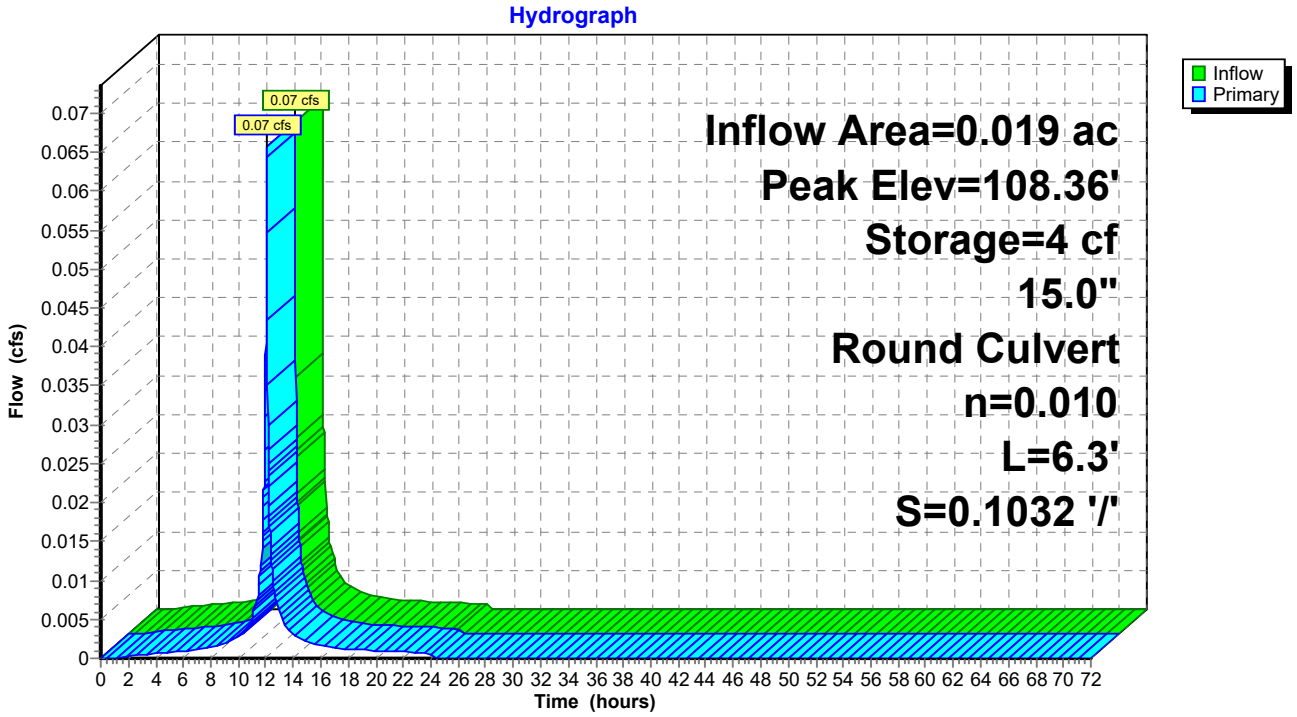
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	511 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 1,278 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	360	0	0
109.33	360	360	360
110.33	360	360	720
111.33	360	360	1,080
111.88	360	198	1,278

Device	Routing	Invert	Outlet Devices
#1	Primary	108.23'	**15.0" Round Culvert** L= 6.3' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.23' / 107.58' S= 0.1032 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.07 cfs @ 12.10 hrs HW=108.36' (Free Discharge)
1=Culvert (Inlet Controls 0.07 cfs @ 1.08 fps)

Pond PP4: PPVMT 4



Summary for Pond PP5: PPVMT 5

Inflow Area = 0.256 ac,100.00% Impervious, Inflow Depth = 3.09" for 2-Year event
Inflow = 0.89 cfs @ 12.09 hrs, Volume= 0.066 af
Outflow = 0.62 cfs @ 12.11 hrs, Volume= 0.061 af, Atten= 30%, Lag= 1.4 min
Primary = 0.62 cfs @ 12.11 hrs, Volume= 0.061 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 108.87' @ 12.11 hrs Surf.Area= 3,168 sf Storage= 689 cf

Plug-Flow detention time= 114.4 min calculated for 0.061 af (93% of inflow)
Center-of-Mass det. time= 76.0 min (828.9 - 752.9)

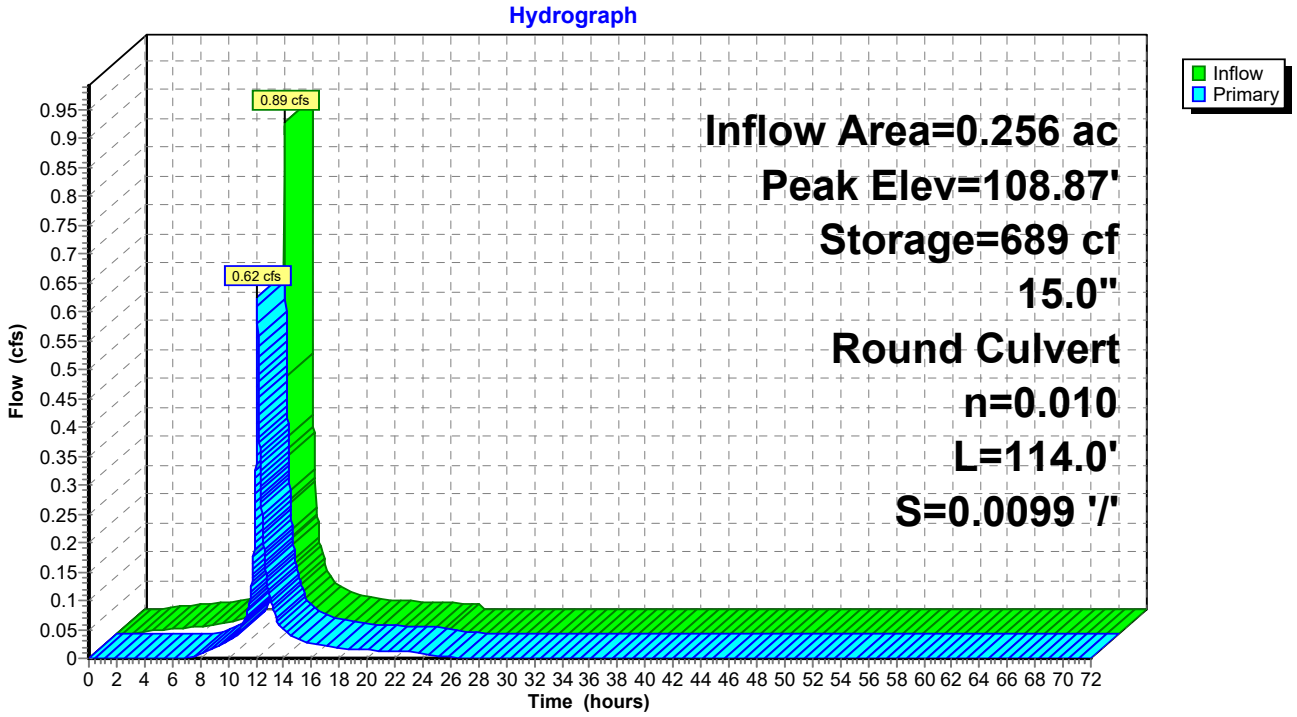
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	3,421 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 8,554 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	3,168	0	0
109.33	3,168	3,168	3,168
110.33	3,168	3,168	6,336
111.00	3,168	2,123	8,459
111.03	3,168	95	8,554

Device	Routing	Invert	Outlet Devices
#1	Primary	108.48'	**15.0" Round Culvert** L= 114.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.48' / 107.35' S= 0.0099 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.62 cfs @ 12.11 hrs HW=108.87' (Free Discharge)
1=Culvert (Inlet Controls 0.62 cfs @ 1.88 fps)

Pond PP5: PPVMT 5

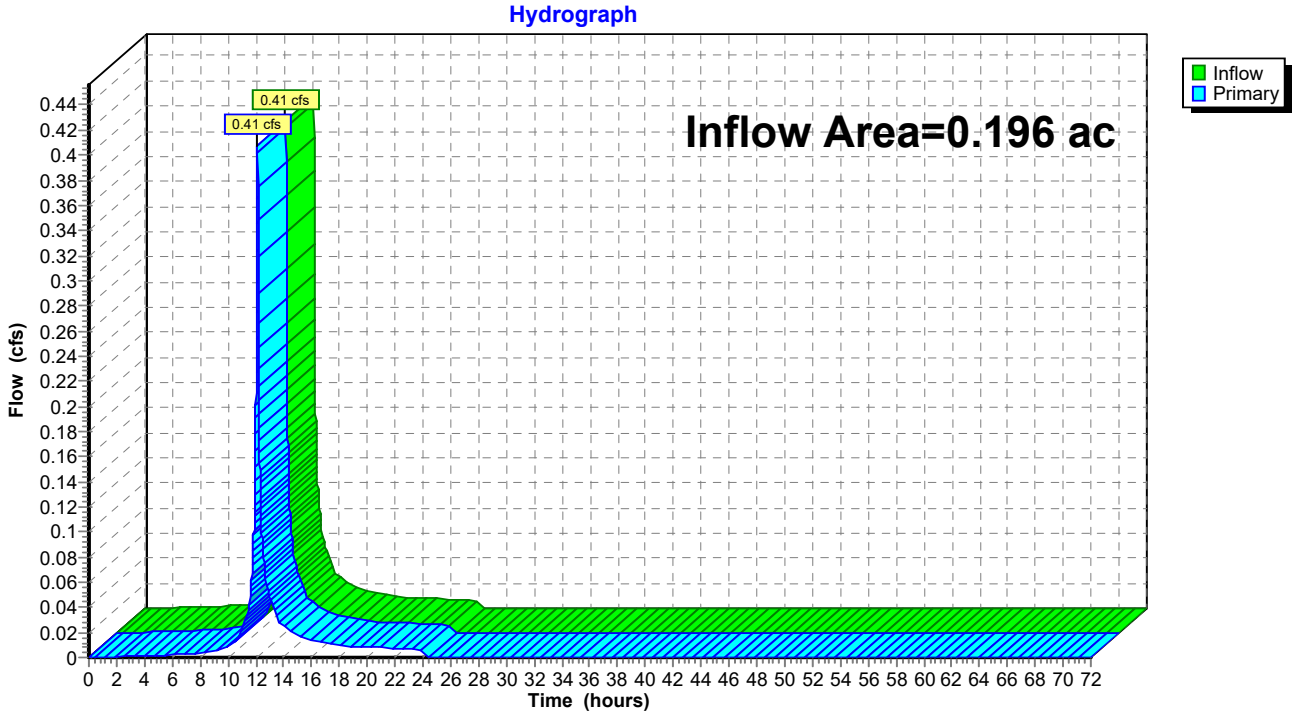


Summary for Link BP: Total Bypass

Inflow Area = 0.196 ac, 23.47% Impervious, Inflow Depth = 1.87" for 2-Year event
Inflow = 0.41 cfs @ 12.13 hrs, Volume= 0.031 af
Primary = 0.41 cfs @ 12.13 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min
Routed to Link PPOA1 : PPOA-1

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

Link BP: Total Bypass

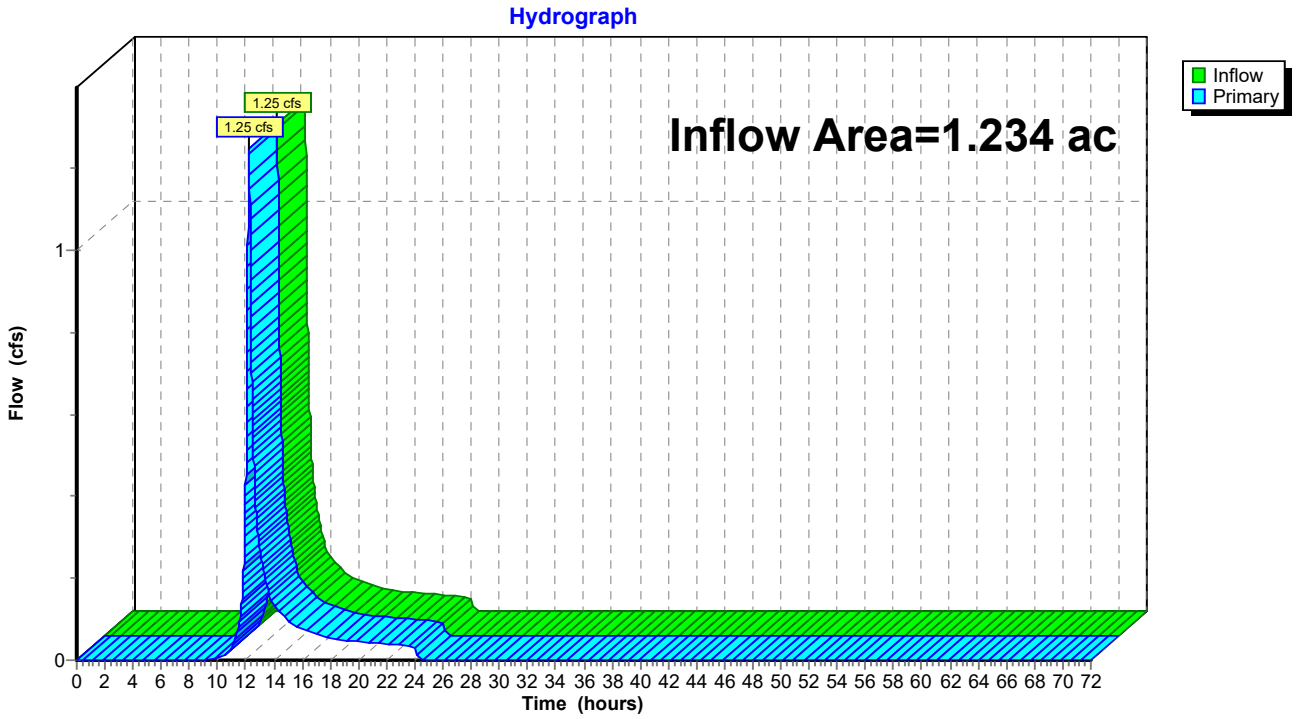


Summary for Link EPOA1: EPOA-1

Inflow Area = 1.234 ac, 0.32% Impervious, Inflow Depth = 1.24" for 2-Year event
Inflow = 1.25 cfs @ 12.23 hrs, Volume= 0.127 af
Primary = 1.25 cfs @ 12.23 hrs, Volume= 0.127 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA1: EPOA-1

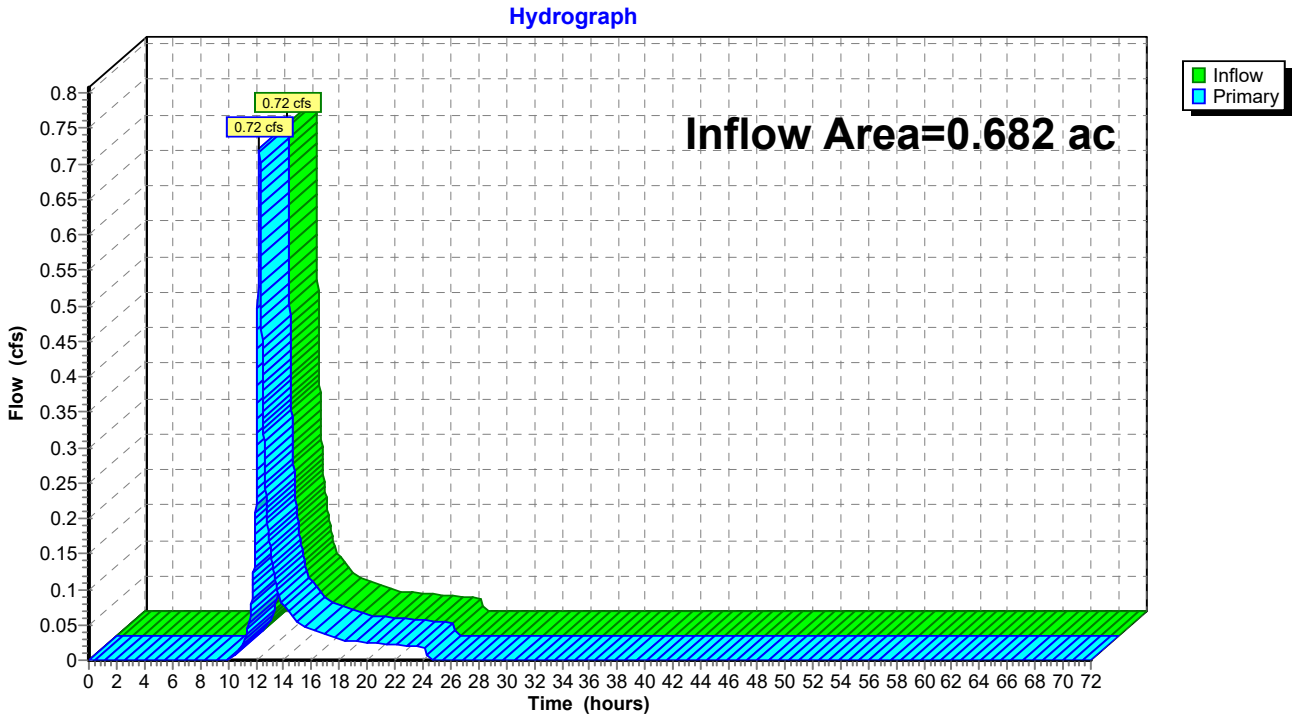


Summary for Link EPOA2: EPOA-2

Inflow Area = 0.682 ac, 0.00% Impervious, Inflow Depth = 1.30" for 2-Year event
Inflow = 0.72 cfs @ 12.26 hrs, Volume= 0.074 af
Primary = 0.72 cfs @ 12.26 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA2: EPOA-2

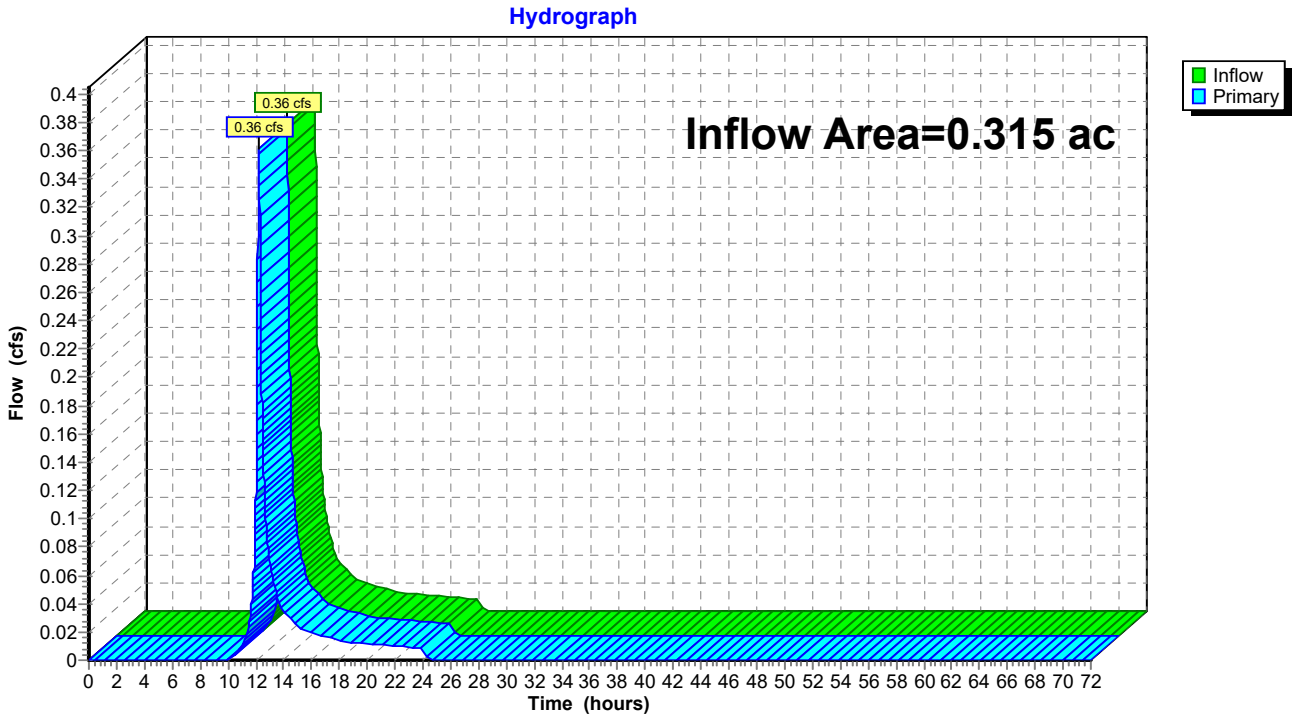


Summary for Link EPOA4: EPOA-4

Inflow Area = 0.315 ac, 0.00% Impervious, Inflow Depth = 1.30" for 2-Year event
Inflow = 0.36 cfs @ 12.22 hrs, Volume= 0.034 af
Primary = 0.36 cfs @ 12.22 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA4: EPOA-4

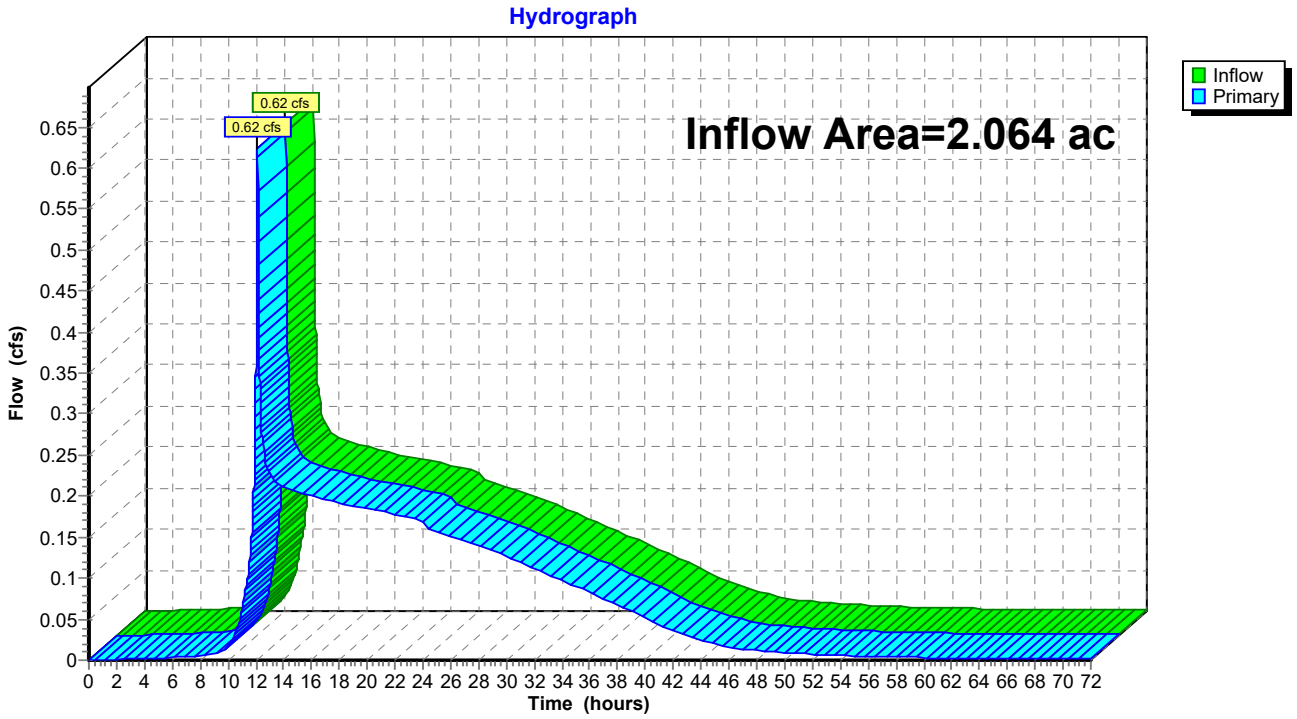


Summary for Link PPOA1: PPOA-1

Inflow Area = 2.064 ac, 75.10% Impervious, Inflow Depth > 2.27" for 2-Year event
Inflow = 0.62 cfs @ 12.13 hrs, Volume= 0.390 af
Primary = 0.62 cfs @ 12.13 hrs, Volume= 0.390 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA1: PPOA-1

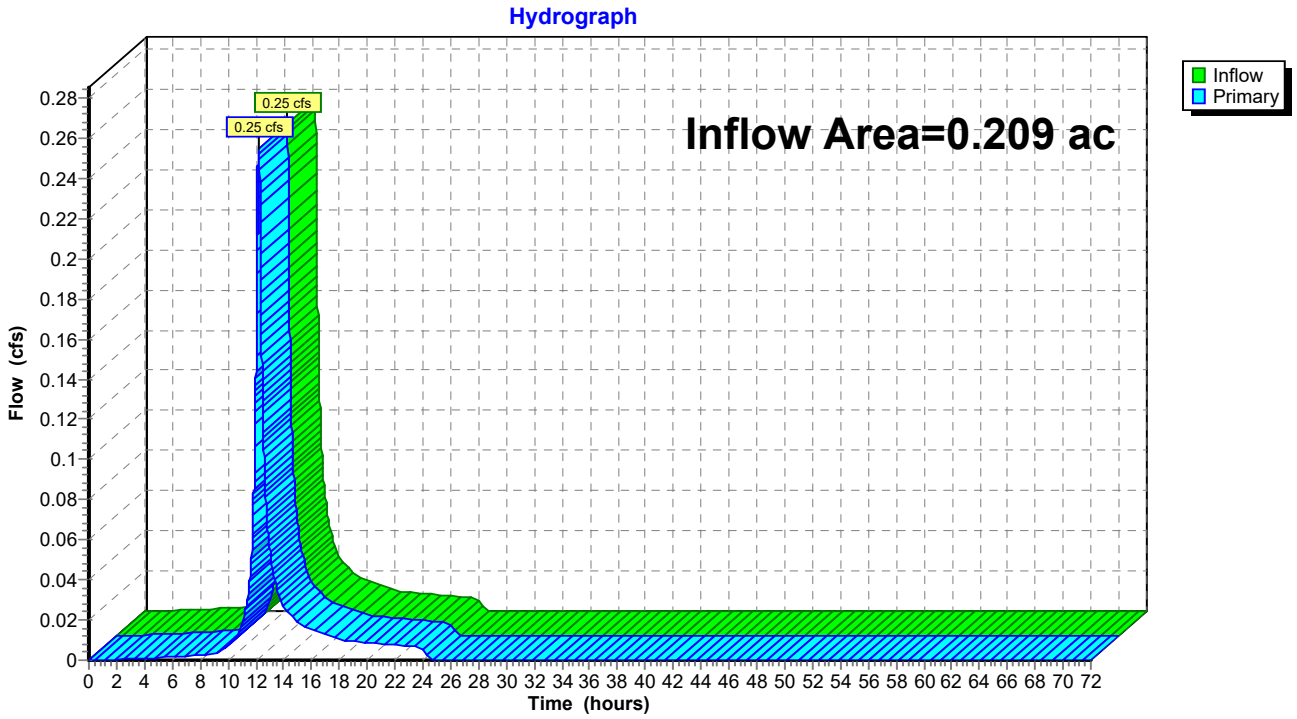


Summary for Link PPOA2: PPOA-2

Inflow Area = 0.209 ac, 16.27% Impervious, Inflow Depth = 1.75" for 2-Year event
Inflow = 0.25 cfs @ 12.21 hrs, Volume= 0.031 af
Primary = 0.25 cfs @ 12.21 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA2: PPOA-2

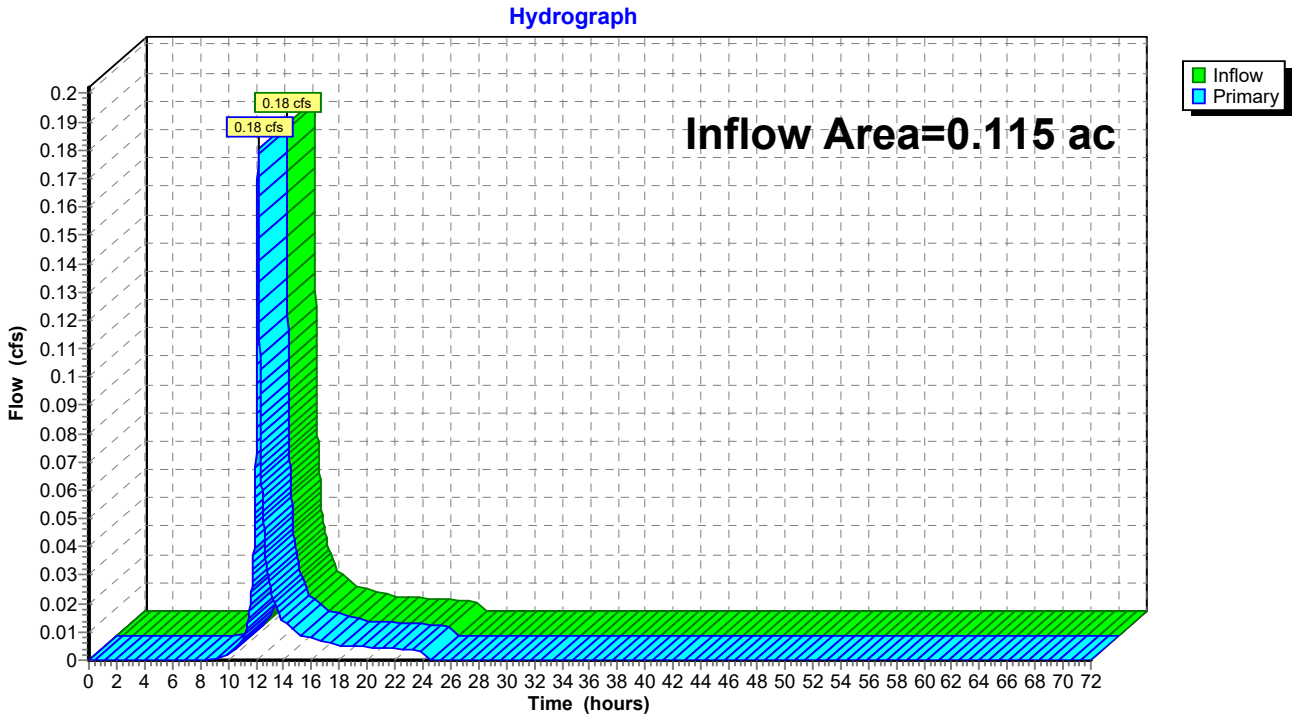


Summary for Link PPOA4: PPOA-4

Inflow Area = 0.115 ac, 2.61% Impervious, Inflow Depth = 1.54" for 2-Year event
Inflow = 0.18 cfs @ 12.17 hrs, Volume= 0.015 af
Primary = 0.18 cfs @ 12.17 hrs, Volume= 0.015 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA4: PPOA-4



10-Year Storm Event
(Current Adjusted Precipitation Depth)

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

SubcatchmentE1A: EDA-1A Runoff Area=0.910 ac 0.00% Impervious Runoff Depth=2.73"
Flow Length=296' Slope=0.0500 '/' Tc=11.5 min CN=77 Runoff=2.38 cfs 0.207 af

SubcatchmentE1B: EDA-1B (Depression) Runoff Area=0.292 ac 0.00% Impervious Runoff Depth=2.73"
Flow Length=118' Slope=0.0200 '/' Tc=11.1 min CN=77 Runoff=0.77 cfs 0.066 af

SubcatchmentE1C I: E-Off-Site #1C Runoff Area=0.004 ac 100.00% Impervious Runoff Depth=4.89"
Flow Length=77' Slope=0.0450 '/' Tc=0.7 min CN=98 Runoff=0.02 cfs 0.002 af

SubcatchmentE1C P: E-Off-Site #1C Runoff Area=0.028 ac 0.00% Impervious Runoff Depth=3.01"
Flow Length=77' Slope=0.0450 '/' Tc=5.6 min CN=80 Runoff=0.10 cfs 0.007 af

SubcatchmentE2A: EDA-2 Runoff Area=0.682 ac 0.00% Impervious Runoff Depth=2.73"
Flow Length=253' Tc=16.4 min CN=77 Runoff=1.55 cfs 0.155 af

SubcatchmentE4A: EDA-4 Runoff Area=0.315 ac 0.00% Impervious Runoff Depth=2.73"
Flow Length=158' Tc=13.5 min CN=77 Runoff=0.77 cfs 0.072 af

SubcatchmentP1A I: PDA-1 Impervious Runoff Area=0.488 ac 100.00% Impervious Runoff Depth=4.89"
Flow Length=266' Tc=2.2 min CN=98 Runoff=2.62 cfs 0.199 af

SubcatchmentP1A P: PDA-1 Pervious Runoff Area=0.352 ac 0.00% Impervious Runoff Depth=3.01"
Flow Length=48' Slope=0.0200 '/' Tc=5.3 min CN=80 Runoff=1.27 cfs 0.088 af

SubcatchmentP1B1: PDA-1 Bypass #1 Runoff Area=0.079 ac 0.00% Impervious Runoff Depth=3.01"
Flow Length=330' Tc=7.4 min CN=80 Runoff=0.26 cfs 0.020 af

SubcatchmentP1B2: PDA-1 Bypass #2 Runoff Area=0.117 ac 39.32% Impervious Runoff Depth=3.75"
Flow Length=127' Slope=0.0100 '/' Tc=4.7 min CN=WQ Runoff=0.50 cfs 0.037 af

SubcatchmentP1C I: P-Off-Site #1C Runoff Area=0.027 ac 100.00% Impervious Runoff Depth=4.89"
Flow Length=366' Slope=0.0020 '/' Tc=7.9 min CN=98 Runoff=0.12 cfs 0.011 af

SubcatchmentP1C P: P-Off-Site #1C Runoff Area=0.005 ac 0.00% Impervious Runoff Depth=3.01"
Flow Length=366' Slope=0.0020 '/' Tc=7.9 min CN=80 Runoff=0.02 cfs 0.001 af

SubcatchmentP2A I: PDA-2 Impervious Runoff Area=0.034 ac 100.00% Impervious Runoff Depth=4.89"
Flow Length=92' Slope=0.0100 '/' Tc=1.5 min CN=98 Runoff=0.18 cfs 0.014 af

SubcatchmentP2A P: PDA-2 Pervious Runoff Area=0.175 ac 0.00% Impervious Runoff Depth=3.01"
Flow Length=90' Slope=0.0050 '/' Tc=15.4 min CN=80 Runoff=0.45 cfs 0.044 af

SubcatchmentP4A: PDA-4 Runoff Area=0.115 ac 2.61% Impervious Runoff Depth=3.06"
Flow Length=96' Slope=0.0110 '/' Tc=9.5 min CN=WQ Runoff=0.36 cfs 0.029 af

SubcatchmentPC1A: PC AREA #1 Runoff Area=0.174 ac 100.00% Impervious Runoff Depth=4.89"
Tc=1.0 min CN=98 Runoff=0.94 cfs 0.071 af

Subcatchment PP1A: PPVMT AREA 1 Runoff Area=0.161 ac 100.00% Impervious Runoff Depth=4.89"
Tc=1.0 min CN=98 Runoff=0.87 cfs 0.066 af

Subcatchment PP2A: PPVMT AREA #2 Runoff Area=0.290 ac 97.59% Impervious Runoff Depth=4.85"
Tc=1.0 min CN=WQ Runoff=1.55 cfs 0.117 af

Subcatchment PP3A: PPVMT AREA #3 Runoff Area=0.096 ac 100.00% Impervious Runoff Depth=4.89"
Tc=1.0 min CN=98 Runoff=0.52 cfs 0.039 af

Subcatchment PP4A: PPVMT AREA #4 Runoff Area=0.019 ac 100.00% Impervious Runoff Depth=4.89"
Tc=1.0 min CN=98 Runoff=0.10 cfs 0.008 af

Subcatchment PP5A: PPVMT AREA #5 Runoff Area=0.256 ac 100.00% Impervious Runoff Depth=4.89"
Tc=1.0 min CN=98 Runoff=1.38 cfs 0.104 af

Pond CW: Constructed Wetlands (walls Peak Elev=106.23' Storage=16,255 cf Inflow=7.61 cfs 0.650 af
Outflow=0.79 cfs 0.619 af

Pond E1B D: E-Depression Peak Elev=109.27' Storage=438 cf Inflow=0.77 cfs 0.066 af
Outflow=0.74 cfs 0.059 af

Pond PC1: PC 1 Peak Elev=110.79' Storage=1,404 cf Inflow=0.94 cfs 0.071 af
8.0" Round Culvert n=0.010 L=32.0' S=0.0100 '/' Outflow=0.37 cfs 0.058 af

Pond PP1: PPVMT 1 Peak Elev=110.35' Storage=191 cf Inflow=0.87 cfs 0.066 af
18.0" Round Culvert x 3.00 n=0.010 L=29.0' S=0.0031 '/' Outflow=0.77 cfs 0.066 af

Pond PP2: PPVMT 2 Peak Elev=109.36' Storage=1,981 cf Inflow=1.55 cfs 0.117 af
15.0" Round Culvert n=0.010 L=10.0' S=0.0030 '/' Outflow=1.05 cfs 0.092 af

Pond PP3: PPVMT 3 Peak Elev=109.00' Storage=1 cf Inflow=0.52 cfs 0.039 af
15.0" Round Culvert n=0.010 L=14.0' S=0.0100 '/' Outflow=0.52 cfs 0.039 af

Pond PP4: PPVMT 4 Peak Elev=108.38' Storage=7 cf Inflow=0.10 cfs 0.008 af
15.0" Round Culvert n=0.010 L=6.3' S=0.1032 '/' Outflow=0.10 cfs 0.008 af

Pond PP5: PPVMT 5 Peak Elev=109.00' Storage=852 cf Inflow=1.38 cfs 0.104 af
15.0" Round Culvert n=0.010 L=114.0' S=0.0099 '/' Outflow=1.06 cfs 0.100 af

Link BP: Total Bypass Inflow=0.75 cfs 0.056 af
Primary=0.75 cfs 0.056 af

Link EPOA1: EPOA-1 Inflow=3.17 cfs 0.275 af
Primary=3.17 cfs 0.275 af

Link EPOA2: EPOA-2 Inflow=1.55 cfs 0.155 af
Primary=1.55 cfs 0.155 af

Link EPOA4: EPOA-4 Inflow=0.77 cfs 0.072 af
Primary=0.77 cfs 0.072 af

Link PPOA1: PPOA-1 Inflow=1.07 cfs 0.687 af
Primary=1.07 cfs 0.687 af

Link PPOA2: PPOA-2 Inflow=0.50 cfs 0.058 af
Primary=0.50 cfs 0.058 af

Link PPOA4: PPOA-4 Inflow=0.36 cfs 0.029 af
Primary=0.36 cfs 0.029 af

Summary for Subcatchment E1A: EDA-1A

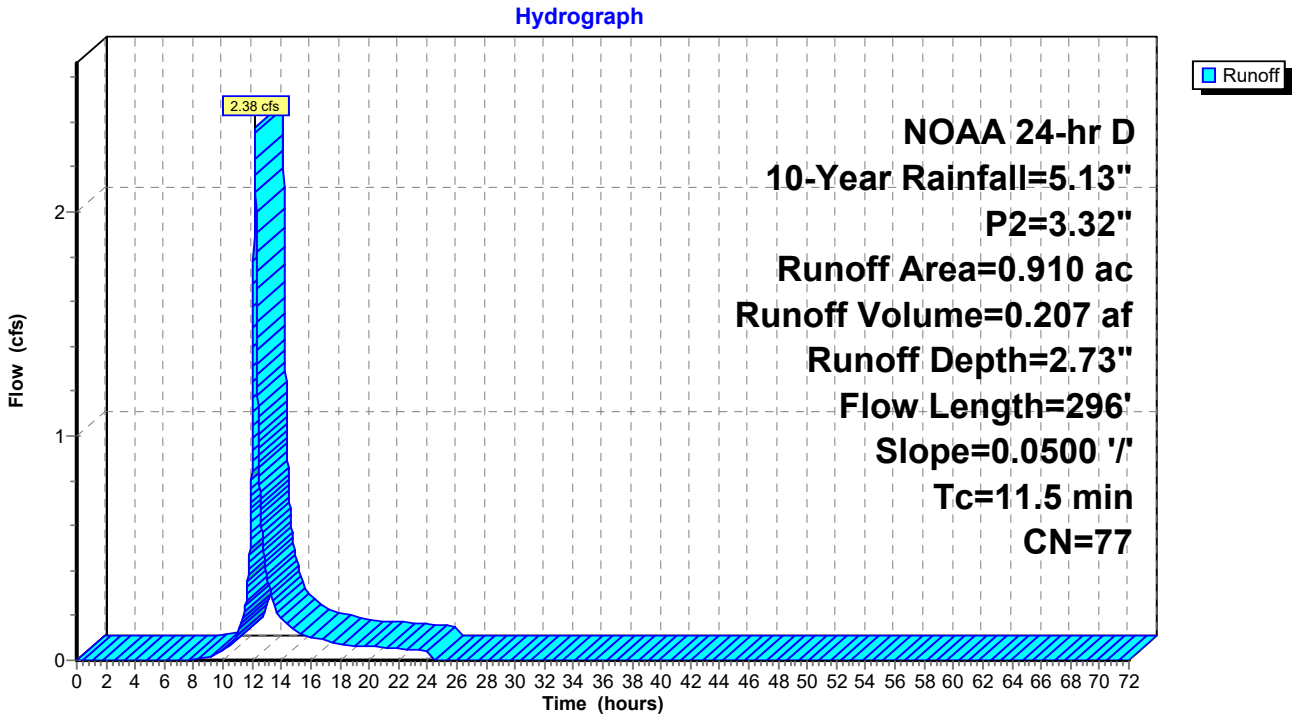
Runoff = 2.38 cfs @ 12.19 hrs, Volume= 0.207 af, Depth= 2.73"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.910	77	Woods, Good, HSG D
0.910	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	56	0.0500	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
1.9	130	0.0500	1.12		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	110	0.0500	4.54		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
11.5	296	Total			

Subcatchment E1A: EDA-1A



Summary for Subcatchment E1B: EDA-1B (Depression)

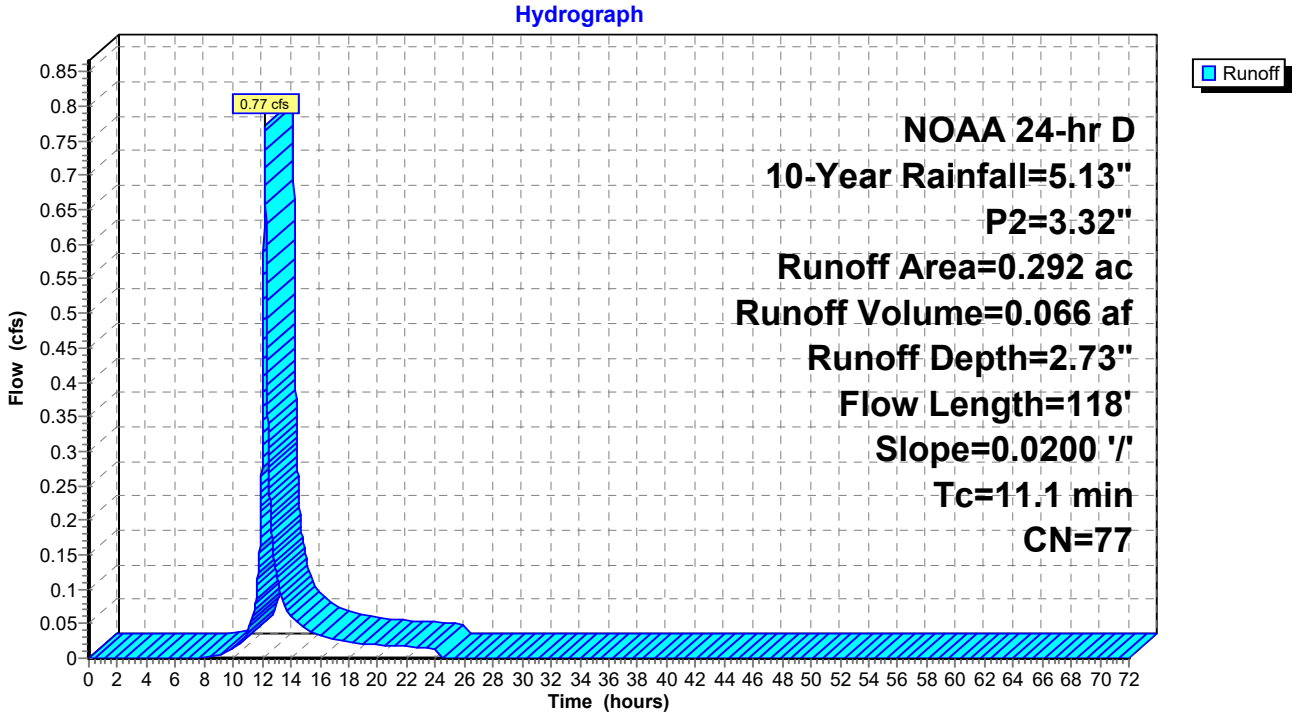
Runoff = 0.77 cfs @ 12.19 hrs, Volume= 0.066 af, Depth= 2.73"
Routed to Pond E1B D : E-Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.292	77	Woods, Good, HSG D
0.292	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	35	0.0200	0.06		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
2.0	83	0.0200	0.71		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
11.1	118	Total			

Subcatchment E1B: EDA-1B (Depression)



Summary for Subcatchment E1C I: E-Off-Site #1C Impervious

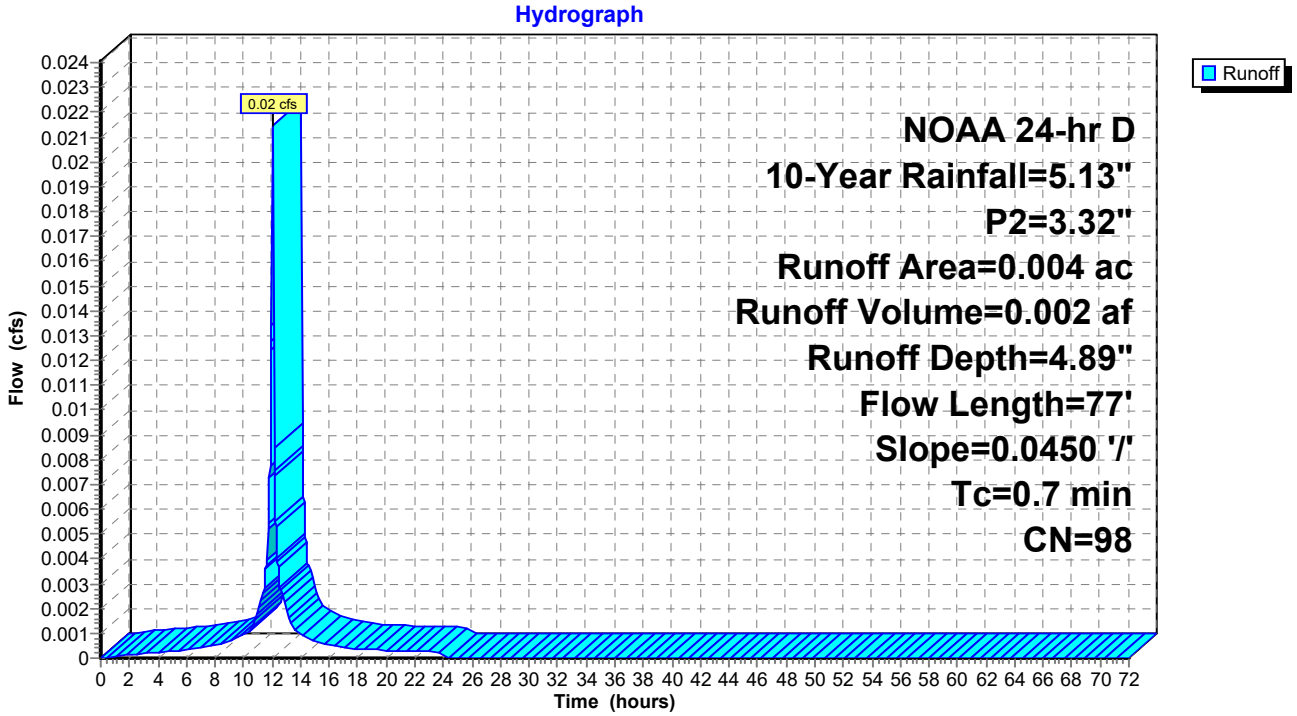
Runoff = 0.02 cfs @ 12.09 hrs, Volume= 0.002 af, Depth= 4.89"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.004	98	Paved parking, HSG D
0.004	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	77	0.0450	1.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"

Subcatchment E1C I: E-Off-Site #1C Impervious



Summary for Subcatchment E1C P: E-Off-Site #1C Pervious

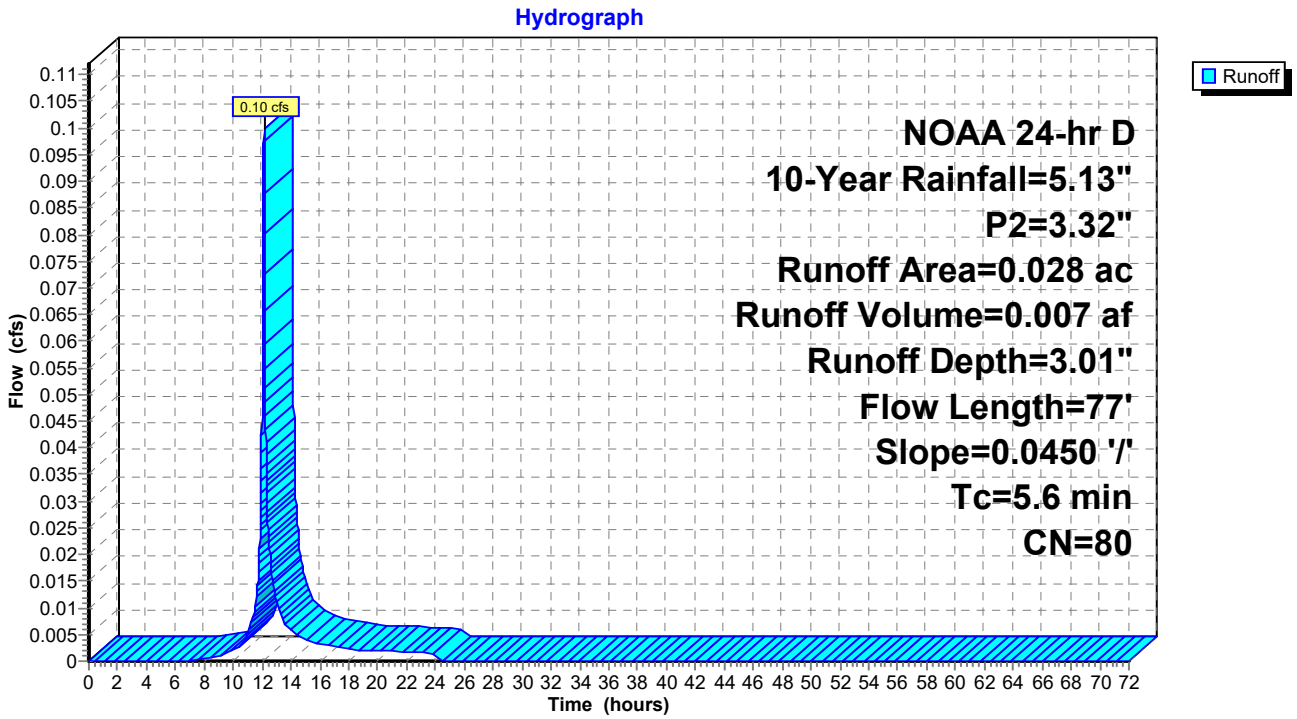
Runoff = 0.10 cfs @ 12.13 hrs, Volume= 0.007 af, Depth= 3.01"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.028	80	>75% Grass cover, Good, HSG D
0.028	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	77	0.0450	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"

Subcatchment E1C P: E-Off-Site #1C Pervious



Summary for Subcatchment E2A: EDA-2

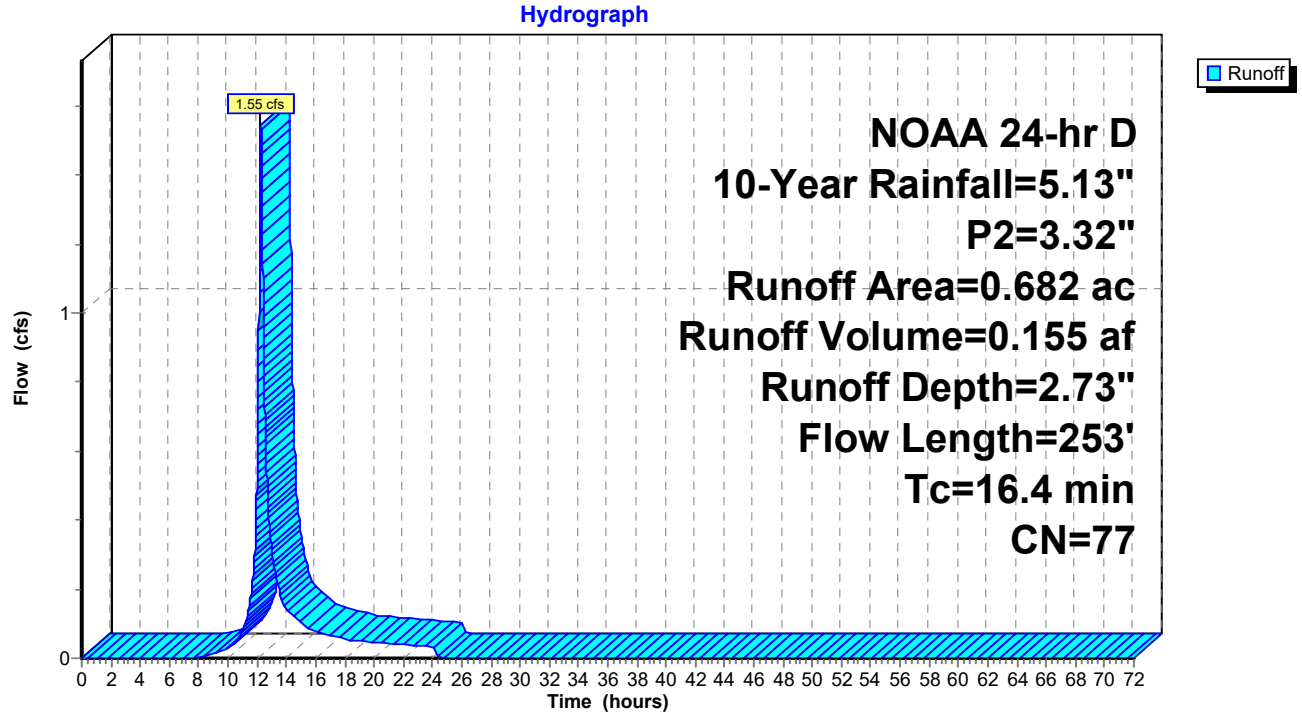
Runoff = 1.55 cfs @ 12.25 hrs, Volume= 0.155 af, Depth= 2.73"
Routed to Link EPOA2 : EPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.682	77	Woods, Good, HSG D
0.682	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	35	0.0200	0.06		**Sheet Flow, E-F** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
7.3	218	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
16.4	253	Total			

Subcatchment E2A: EDA-2



Summary for Subcatchment E4A: EDA-4

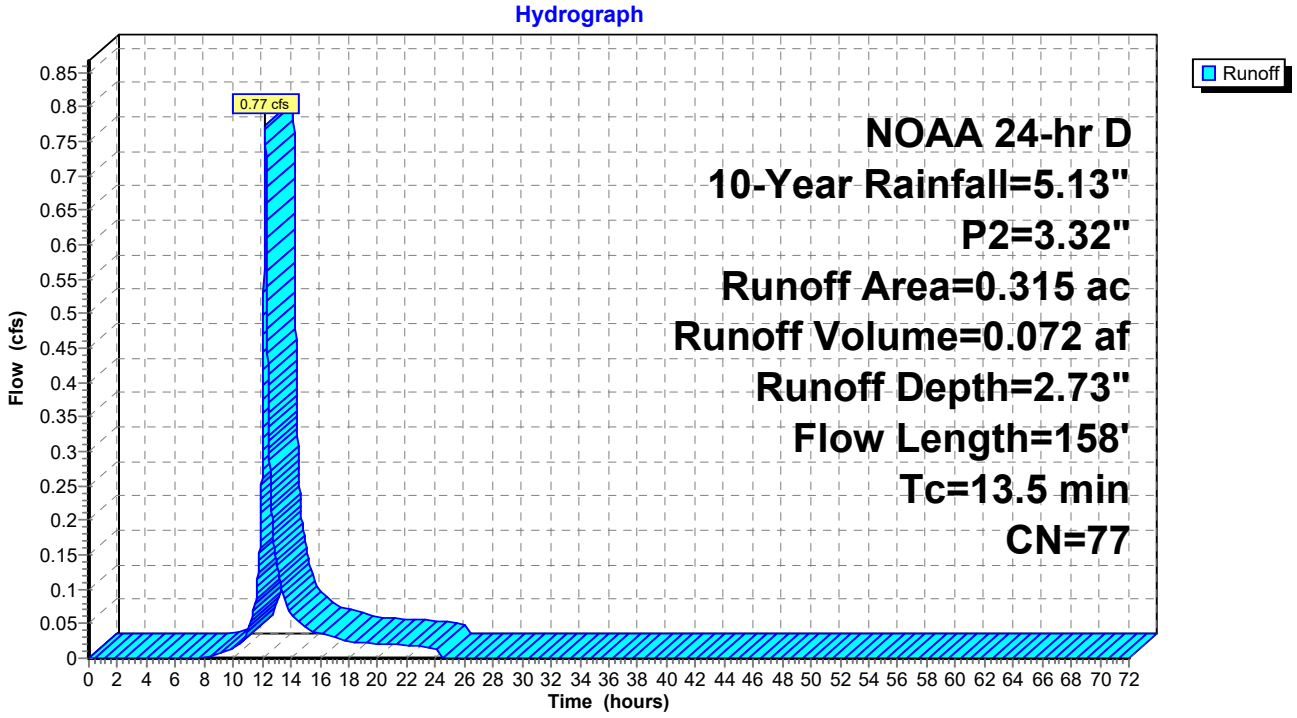
Runoff = 0.77 cfs @ 12.22 hrs, Volume= 0.072 af, Depth= 2.73"
Routed to Link EPOA4 : EPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.315	77	Woods, Good, HSG D
0.315	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	31	0.0150	0.06		**Sheet Flow, Q-R** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
4.2	127	0.0100	0.50		**Shallow Concentrated Flow, R-S** Woodland Kv= 5.0 fps
13.5	158	Total			

Subcatchment E4A: EDA-4



Summary for Subcatchment P1A I: PDA-1 Impervious

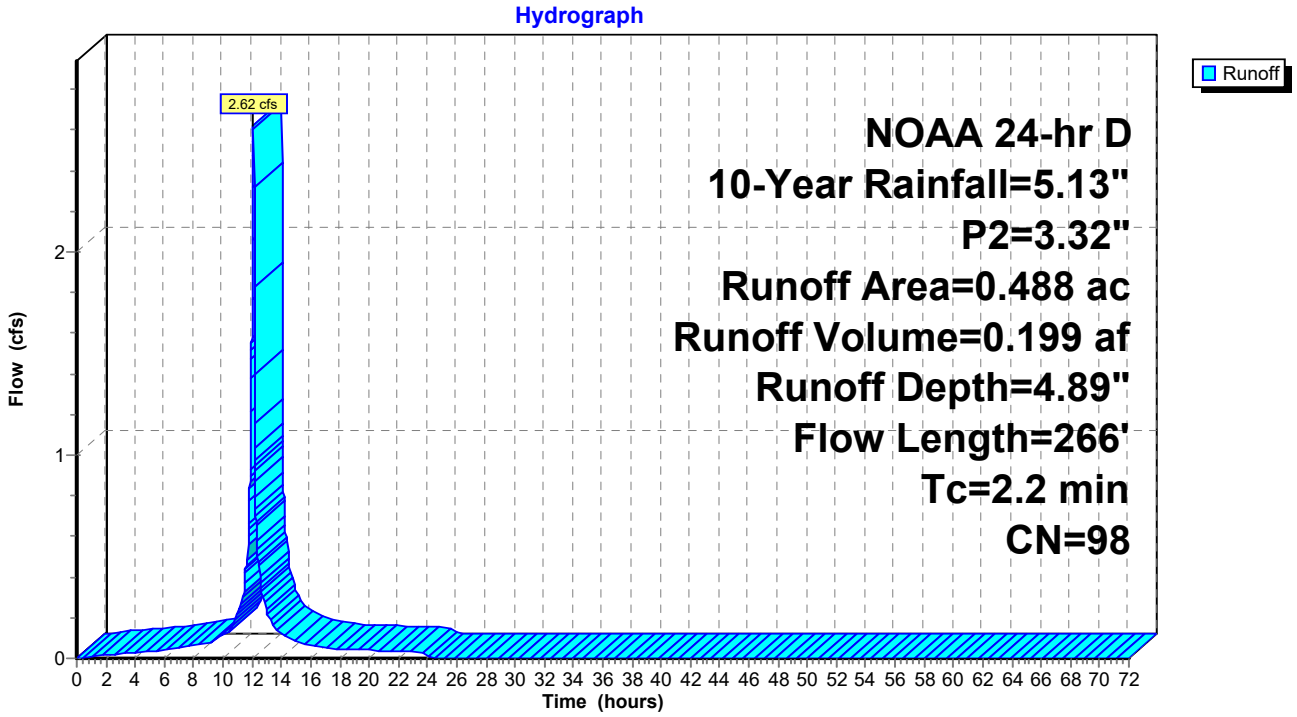
Runoff = 2.62 cfs @ 12.10 hrs, Volume= 0.199 af, Depth= 4.89"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.488	98	Paved parking, HSG D
0.488	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	100	0.0100	1.06		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.32"
0.4	80	0.0230	3.08		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.0	3	0.0030	3.75	4.60	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.2	66	0.0051	4.89	6.00	**Pipe Channel, D-E** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.0	17	0.0127	10.55	33.14	**Pipe Channel, E-F** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.010 PVC, smooth interior
2.2	266	Total			

Subcatchment P1A I: PDA-1 Impervious



Summary for Subcatchment P1A P: PDA-1 Pervious

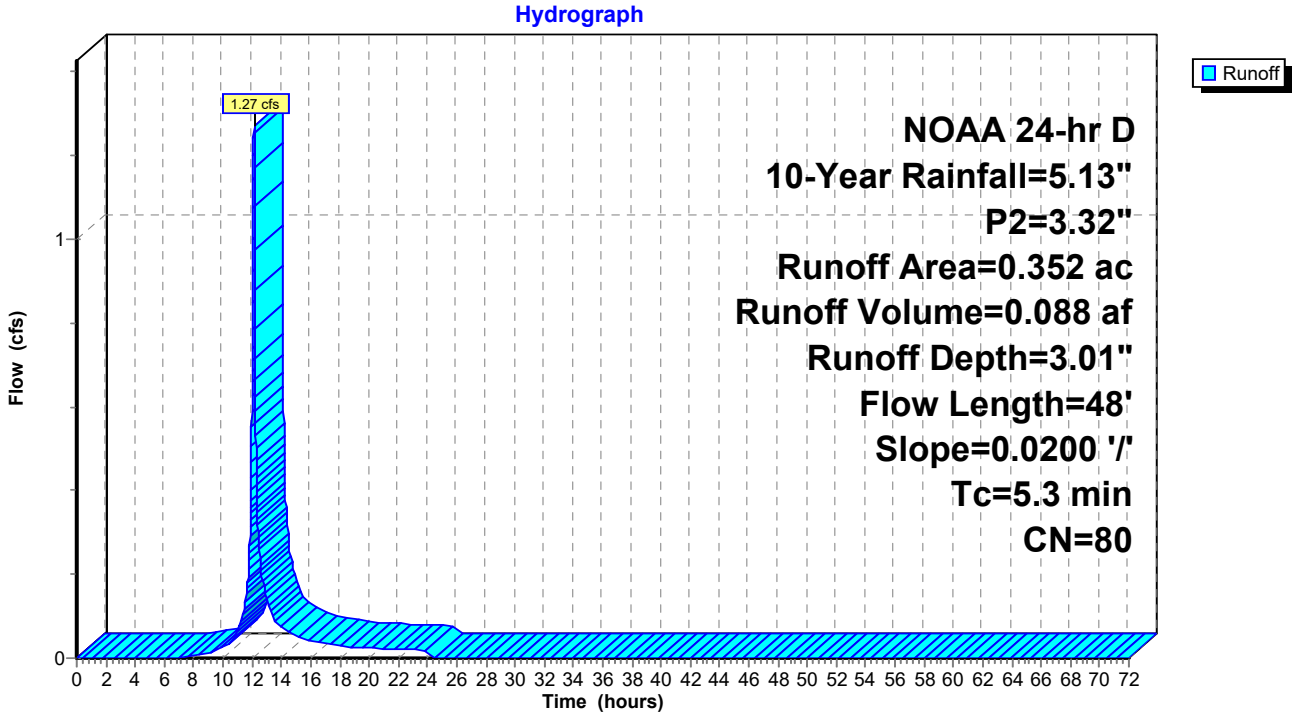
Runoff = 1.27 cfs @ 12.13 hrs, Volume= 0.088 af, Depth= 3.01"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.352	80	>75% Grass cover, Good, HSG D
0.352	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	48	0.0200	0.15		**Sheet Flow, G-H** Grass: Short n= 0.150 P2= 3.32"

Subcatchment P1A P: PDA-1 Pervious



Summary for Subcatchment P1B1: PDA-1 Bypass #1

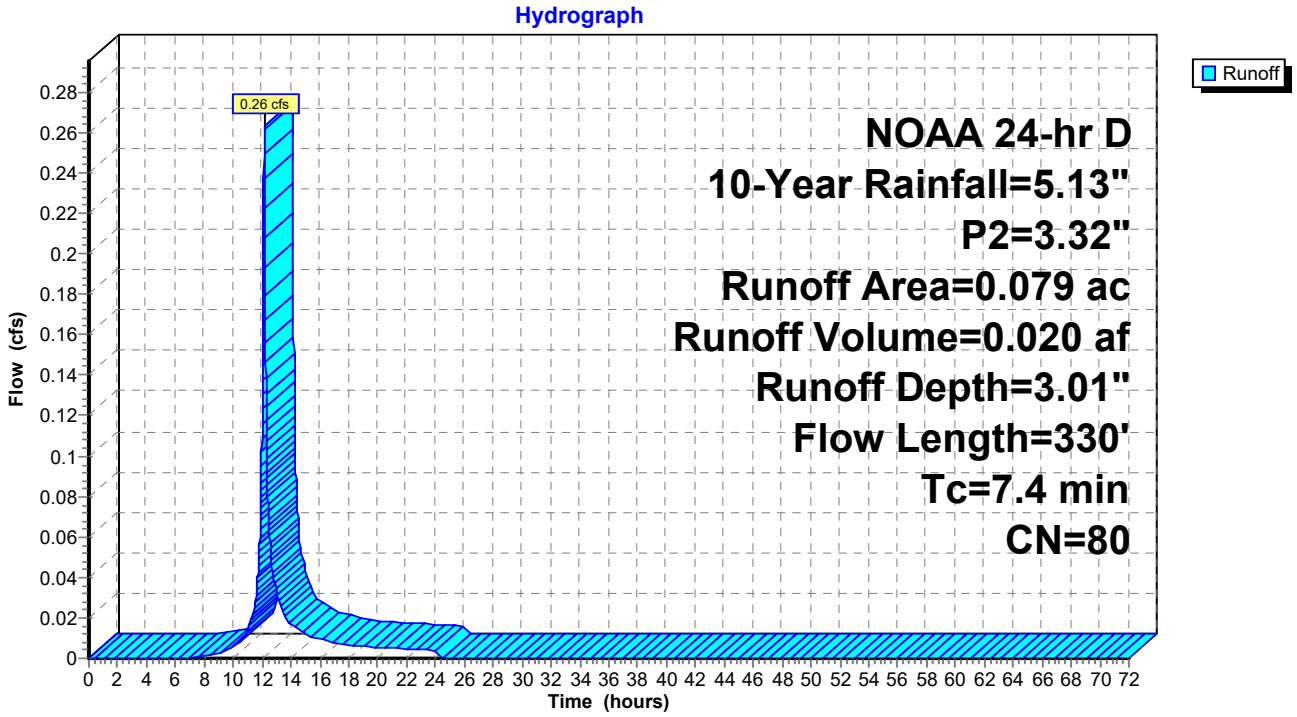
Runoff = 0.26 cfs @ 12.15 hrs, Volume= 0.020 af, Depth= 3.01"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.079	80	>75% Grass cover, Good, HSG D
0.079	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	33	0.0500	0.20		**Sheet Flow, I-J** Grass: Short n= 0.150 P2= 3.32"
0.2	45	0.0013	3.07	9.64	**Pipe Channel, J-K** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
1.2	60	0.0001	0.85	2.67	**Pipe Channel, K-L** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
2.1	105	0.0001	0.85	2.67	**Pipe Channel, L-M** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.9	63	0.0002	1.20	3.78	**Pipe Channel, M-N** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.3	24	0.0002	1.20	3.78	**Pipe Channel, N-O** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
7.4	330	Total			

Subcatchment P1B1: PDA-1 Bypass #1



Summary for Subcatchment P1B2: PDA-1 Bypass #2

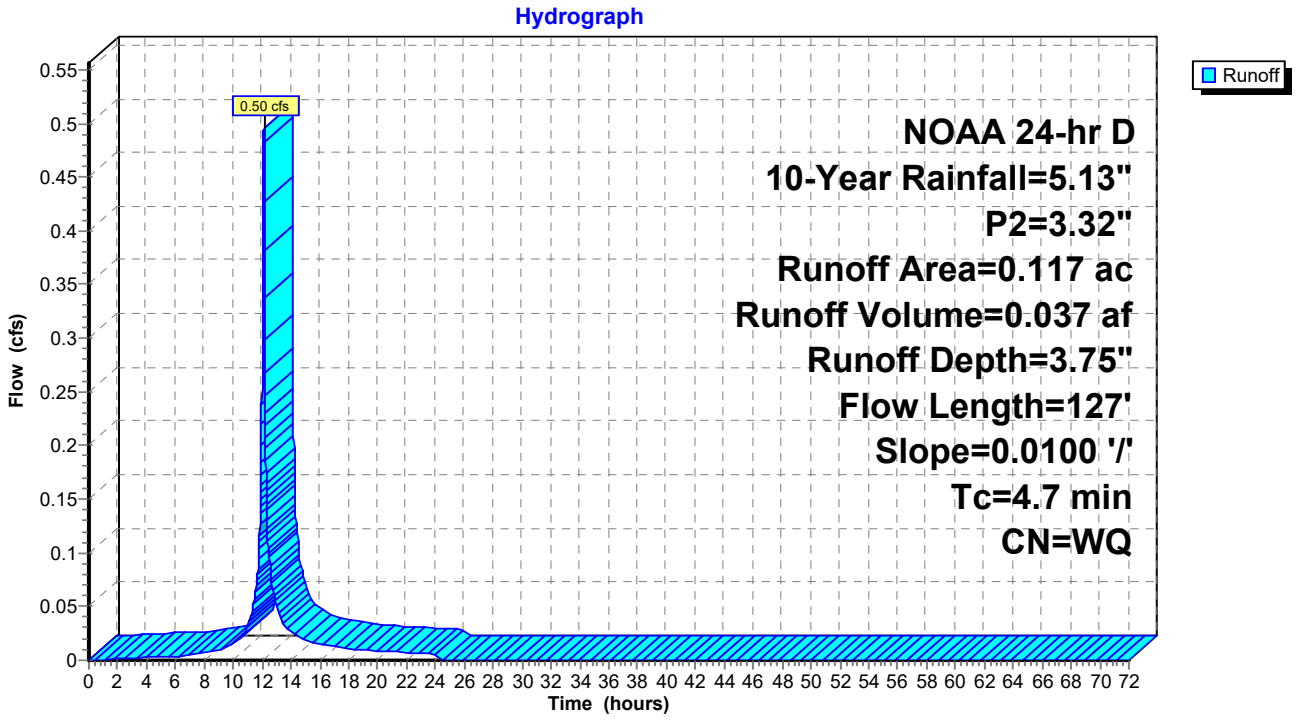
Runoff = 0.50 cfs @ 12.12 hrs, Volume= 0.037 af, Depth= 3.75"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.071	80	>75% Grass cover, Good, HSG D
0.046	98	Paved parking, HSG D
0.117		Weighted Average
0.071	80	60.68% Pervious Area
0.046	98	39.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	22	0.0100	0.10		**Sheet Flow, P-Q** Grass: Short n= 0.150 P2= 3.32"
0.9	105	0.0100	2.03		**Shallow Concentrated Flow, Q-O** Paved Kv= 20.3 fps
4.7	127	Total			

Subcatchment P1B2: PDA-1 Bypass #2



Summary for Subcatchment P1C I: P-Off-Site #1C Impervious

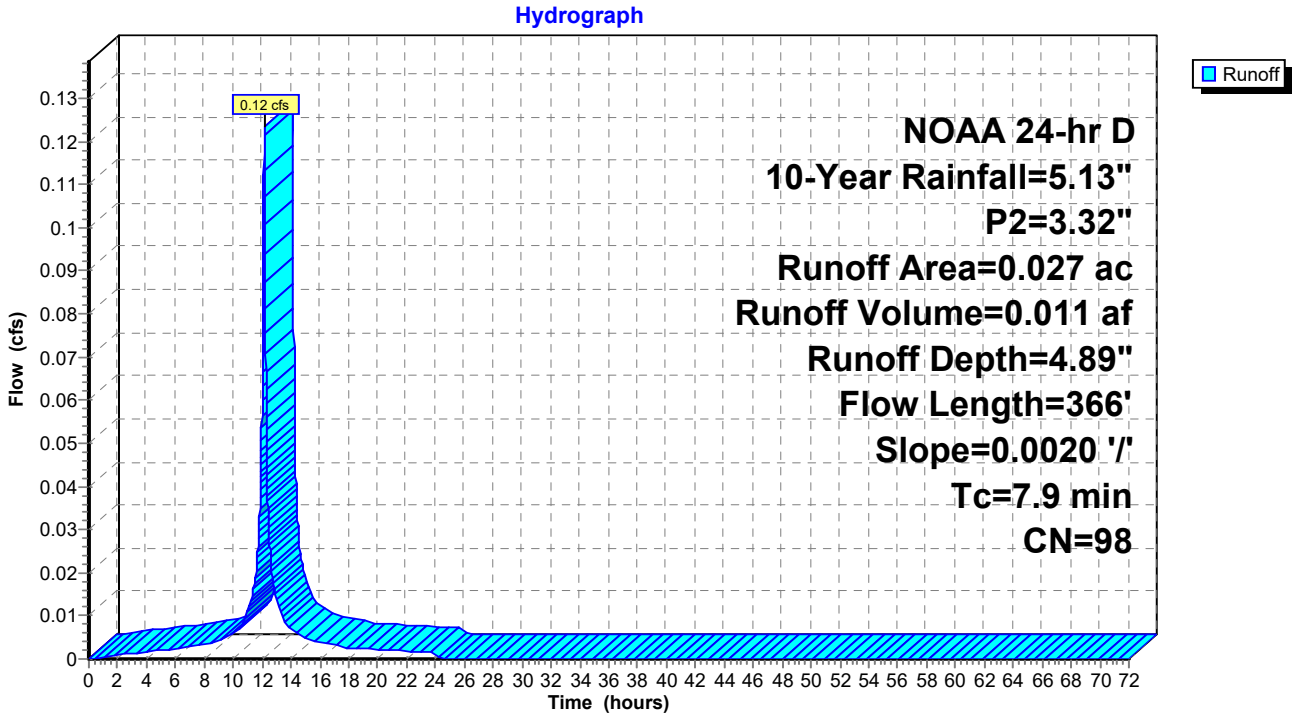
Runoff = 0.12 cfs @ 12.15 hrs, Volume= 0.011 af, Depth= 4.89"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.027	98	Paved parking, HSG D
0.027	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	100	0.0020	0.56		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.32"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.9	366	Total			

Subcatchment P1C I: P-Off-Site #1C Impervious



Summary for Subcatchment P1C P: P-Off-Site #1C Pervious

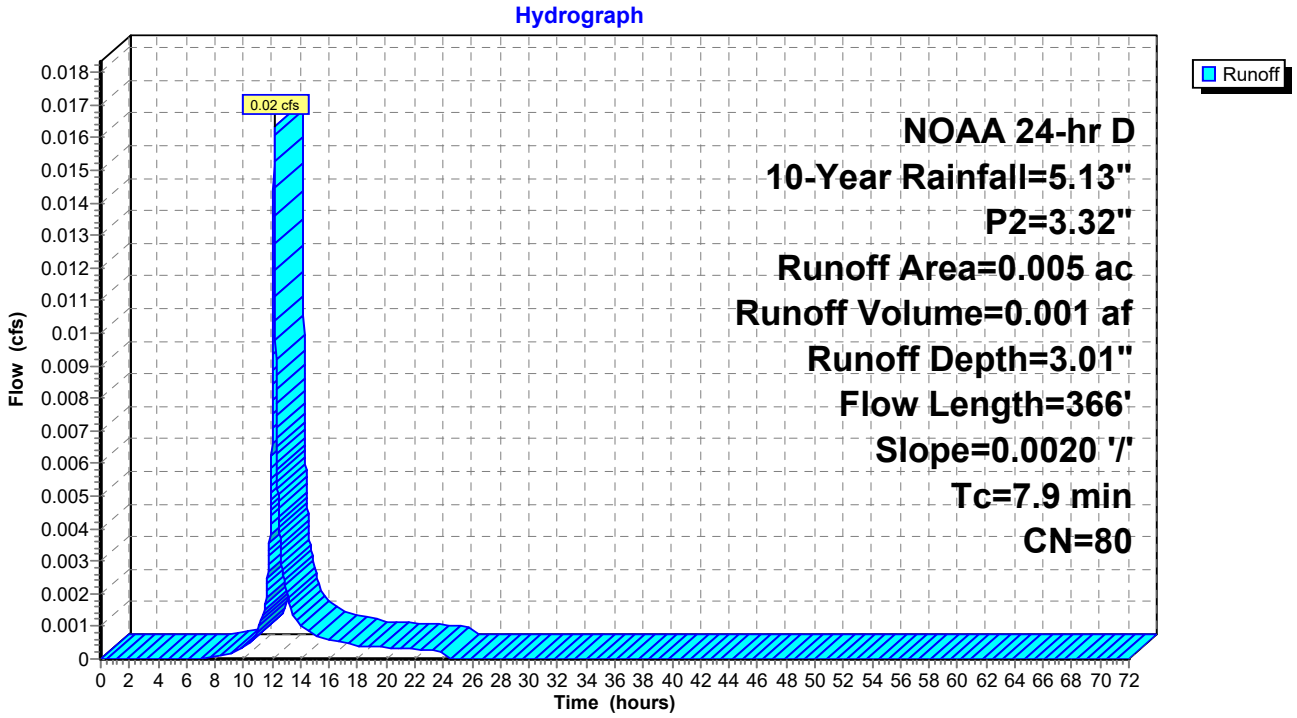
Runoff = 0.02 cfs @ 12.15 hrs, Volume= 0.001 af, Depth= 3.01"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.005	80	>75% Grass cover, Good, HSG D
0.005	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	100	0.0020	0.56		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.32"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.9	366	Total			

Subcatchment P1C P: P-Off-Site #1C Pervious



Summary for Subcatchment P2A I: PDA-2 Impervious

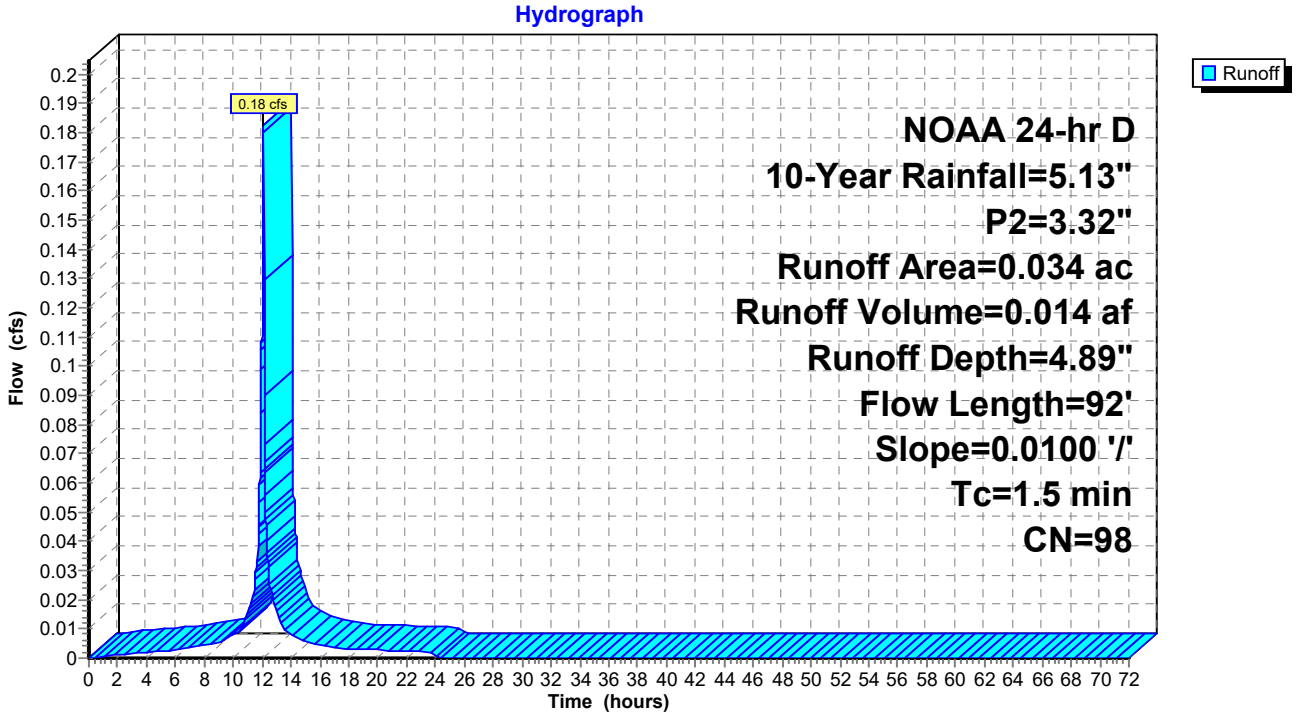
Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.014 af, Depth= 4.89"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.034	98	Paved parking, HSG D
0.034	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	92	0.0100	1.04		**Sheet Flow, R-S** Smooth surfaces n= 0.011 P2= 3.32"

Subcatchment P2A I: PDA-2 Impervious



Summary for Subcatchment P2A P: PDA-2 Pervious

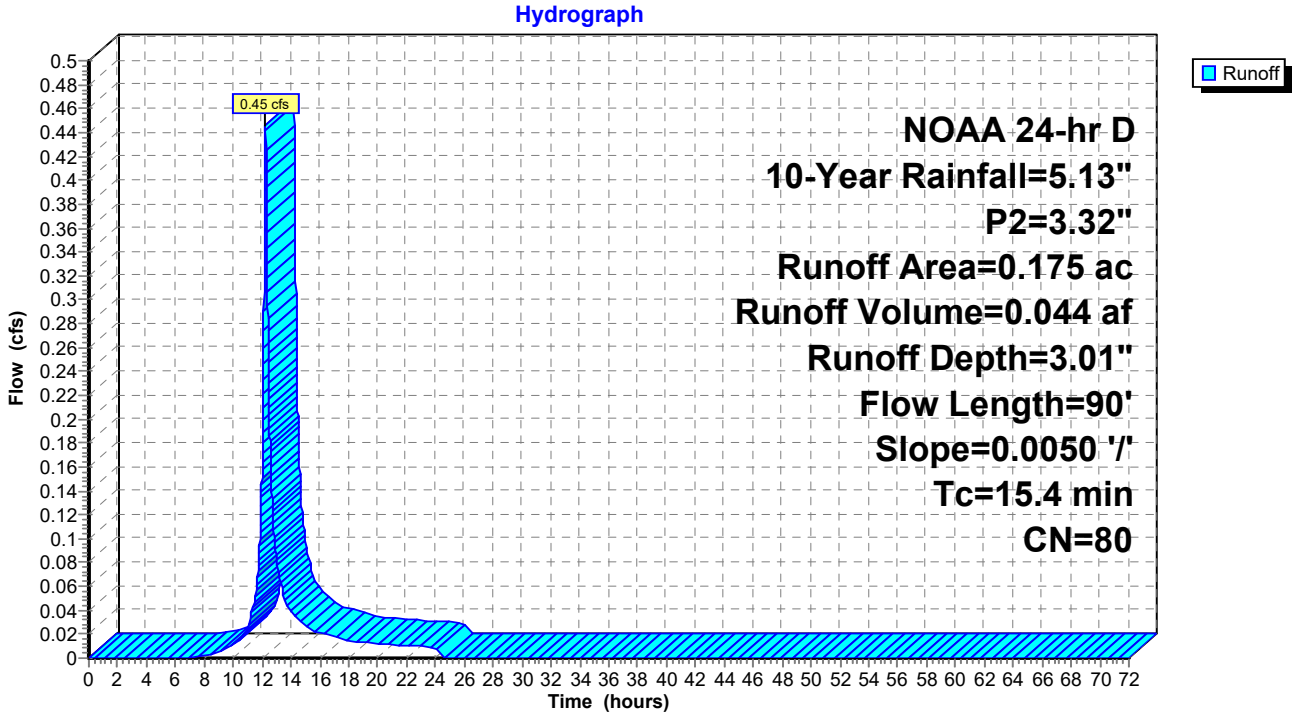
Runoff = 0.45 cfs @ 12.24 hrs, Volume= 0.044 af, Depth= 3.01"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.175	80	>75% Grass cover, Good, HSG D
0.175	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	90	0.0050	0.10		**Sheet Flow, T-U** Grass: Short n= 0.150 P2= 3.32"

Subcatchment P2A P: PDA-2 Pervious



Summary for Subcatchment P4A: PDA-4

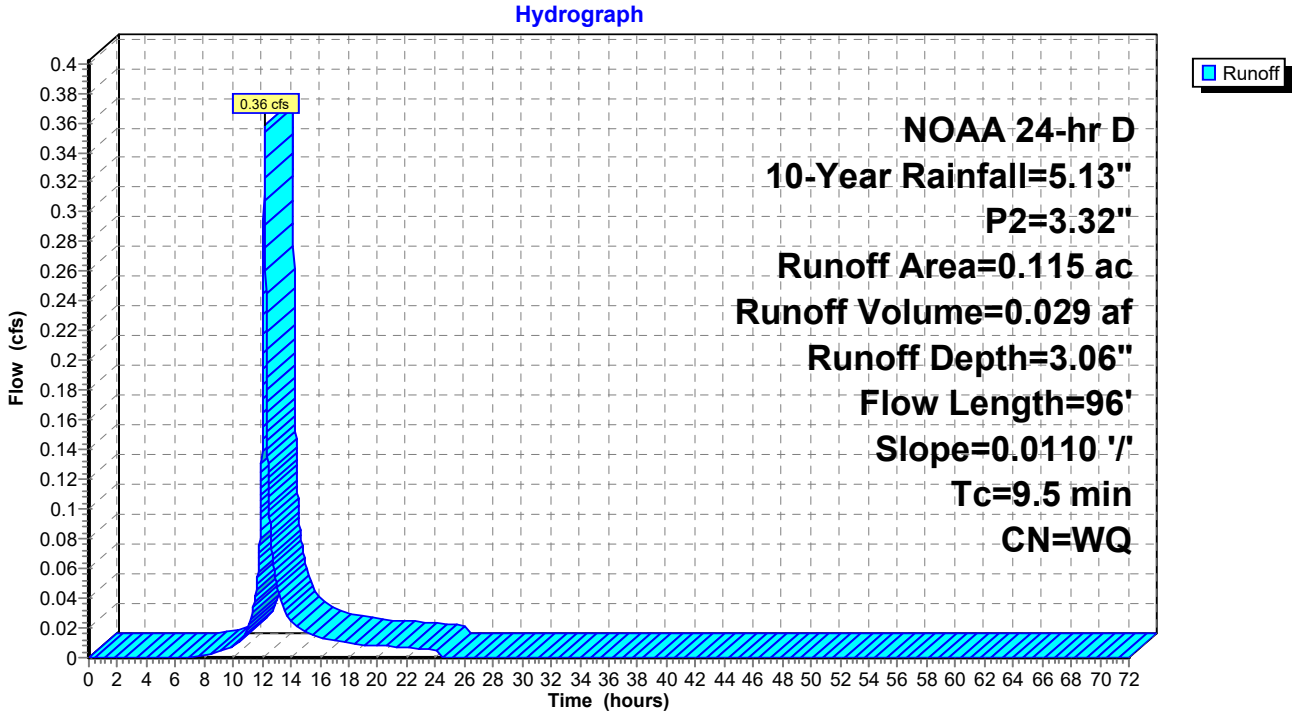
Runoff = 0.36 cfs @ 12.17 hrs, Volume= 0.029 af, Depth= 3.06"
Routed to Link PPOA4 : PPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.112	80	>75% Grass cover, Good, HSG D
0.003	98	Paved parking, HSG D
0.115		Weighted Average
0.112	80	97.39% Pervious Area
0.003	98	2.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	70	0.0110	0.13		**Sheet Flow, V-X** Grass: Short n= 0.150 P2= 3.32" Using McCuen-Spiess flow length
0.3	26	0.0110	1.57		**Shallow Concentrated Flow, X-Y** Grassed Waterway Kv= 15.0 fps
9.5	96	Total			

Subcatchment P4A: PDA-4



Summary for Subcatchment PC1A: PC AREA #1

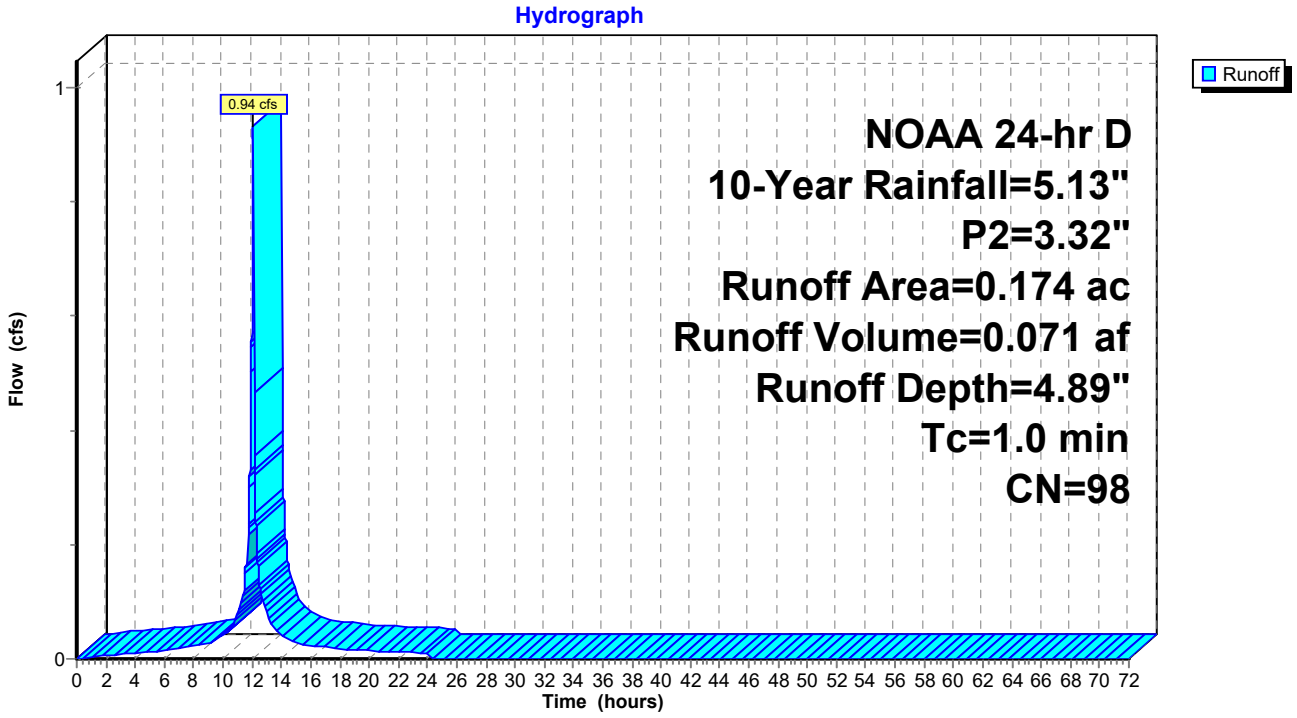
Runoff = 0.94 cfs @ 12.09 hrs, Volume= 0.071 af, Depth= 4.89"
Routed to Pond PC1 : PC 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.174	98	Paved parking, HSG D
0.174	98	100.00% Impervious Area

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

Subcatchment PC1A: PC AREA #1



Summary for Subcatchment PP1A: PPVMT AREA 1

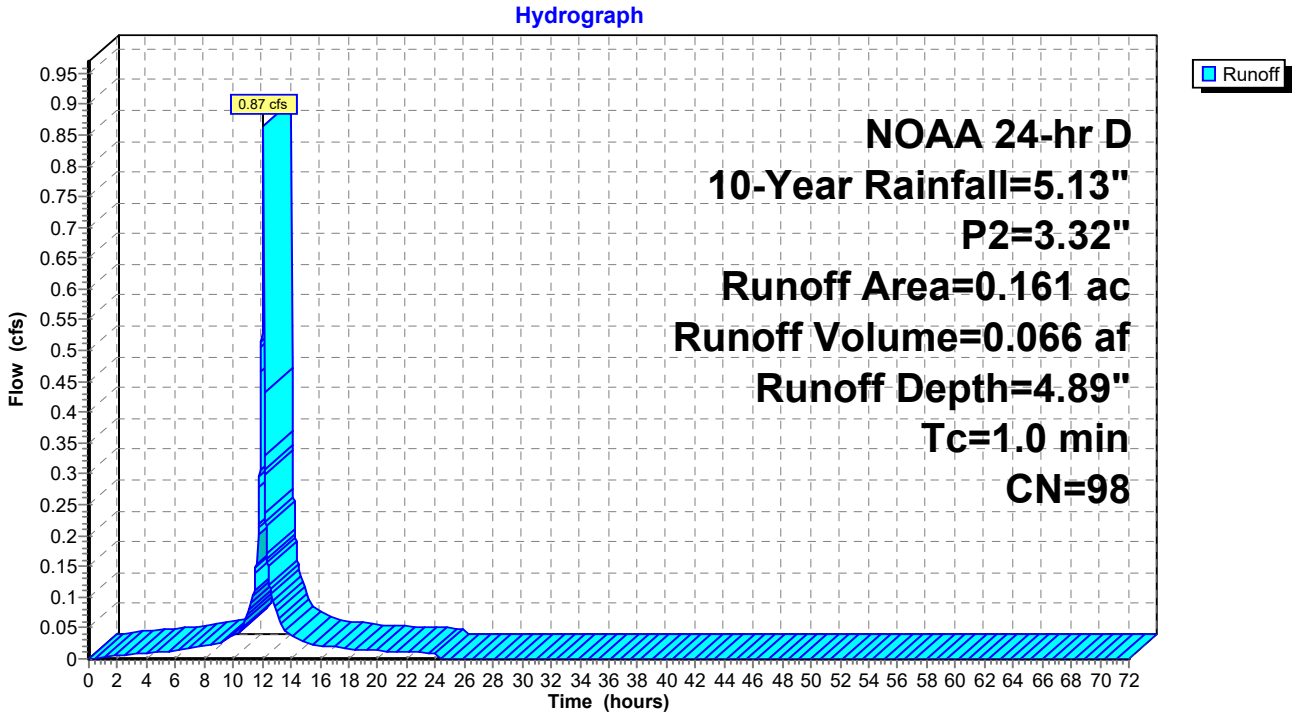
Runoff = 0.87 cfs @ 12.09 hrs, Volume= 0.066 af, Depth= 4.89"
Routed to Pond PP1 : PPVMT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.161	98	Paved parking, HSG D
0.161	98	100.00% Impervious Area

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

Subcatchment PP1A: PPVMT AREA 1



Summary for Subcatchment PP2A: PPVMT AREA #2

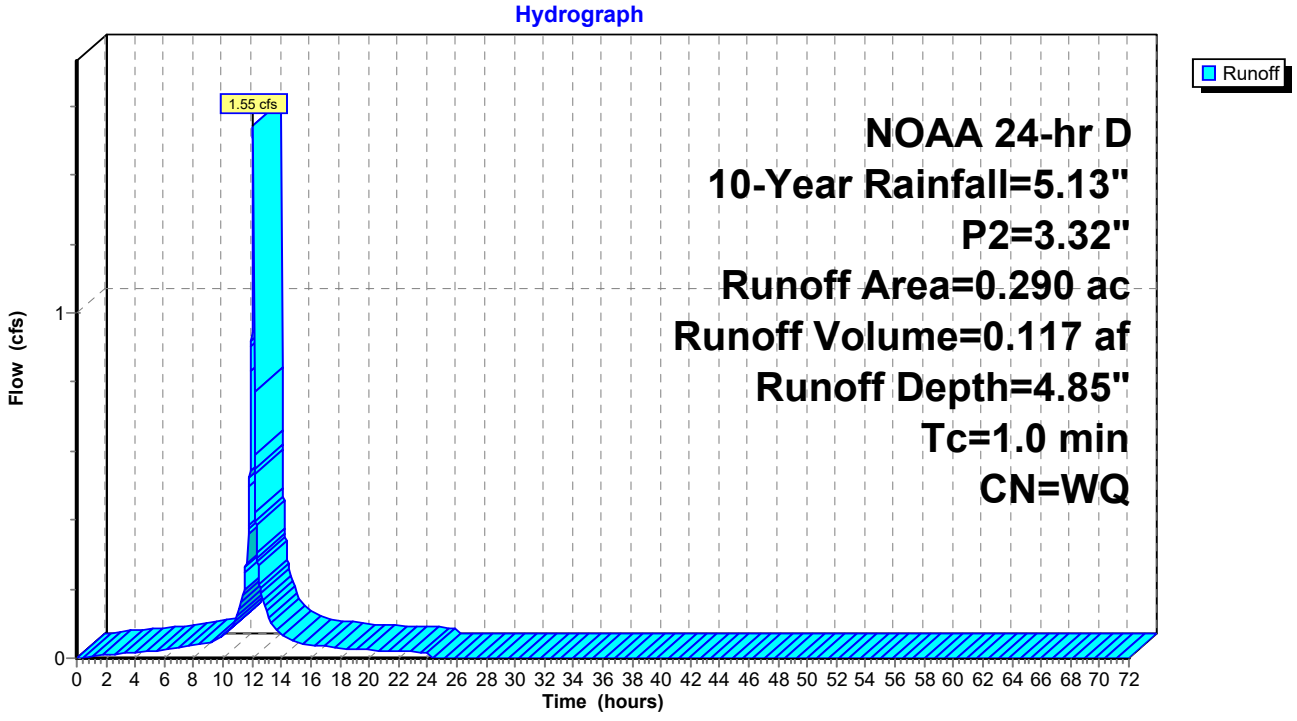
Runoff = 1.55 cfs @ 12.09 hrs, Volume= 0.117 af, Depth= 4.85"
Routed to Pond PP2 : PPVMT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.007	80	>75% Grass cover, Good, HSG D
0.283	98	Paved parking, HSG D
0.290		Weighted Average
0.007	80	2.41% Pervious Area
0.283	98	97.59% Impervious Area

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

Subcatchment PP2A: PPVMT AREA #2



Summary for Subcatchment PP3A: PPVMT AREA #3

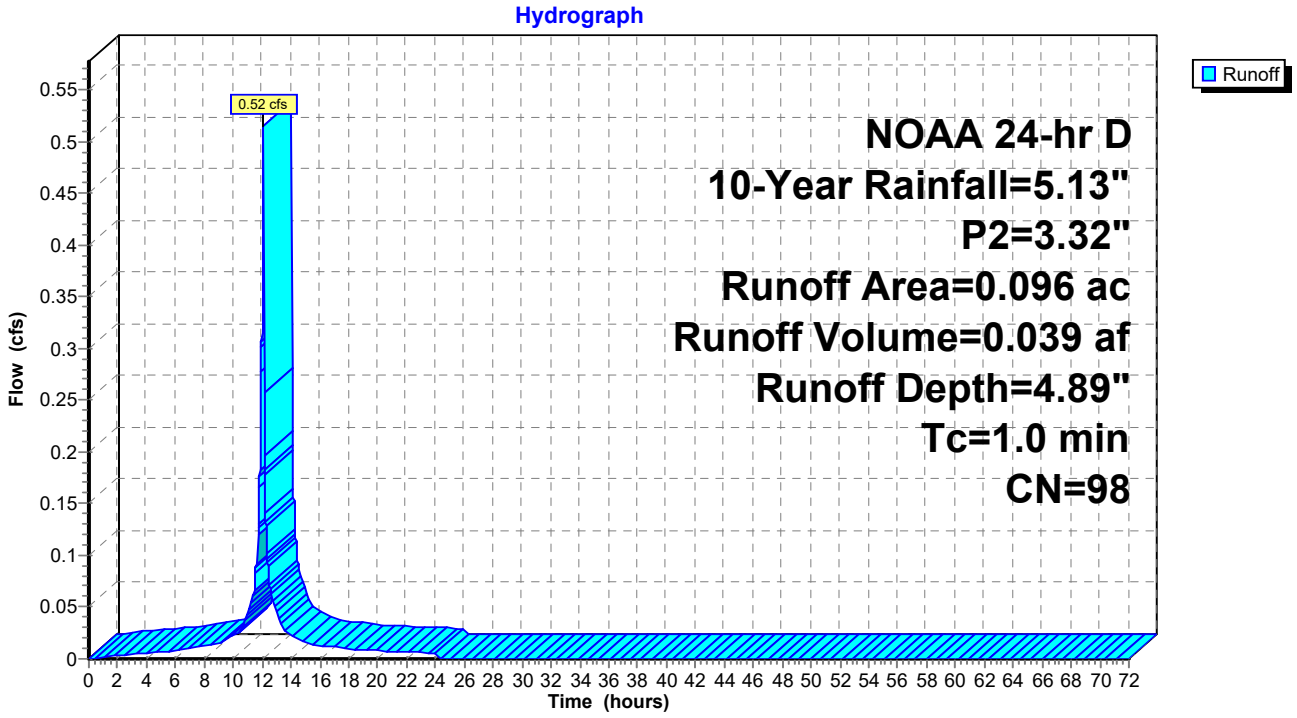
Runoff = 0.52 cfs @ 12.09 hrs, Volume= 0.039 af, Depth= 4.89"
Routed to Pond PP3 : PPVMT 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.096	98	Paved parking, HSG D
0.096	98	100.00% Impervious Area

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

Subcatchment PP3A: PPVMT AREA #3



Summary for Subcatchment PP4A: PPVMT AREA #4

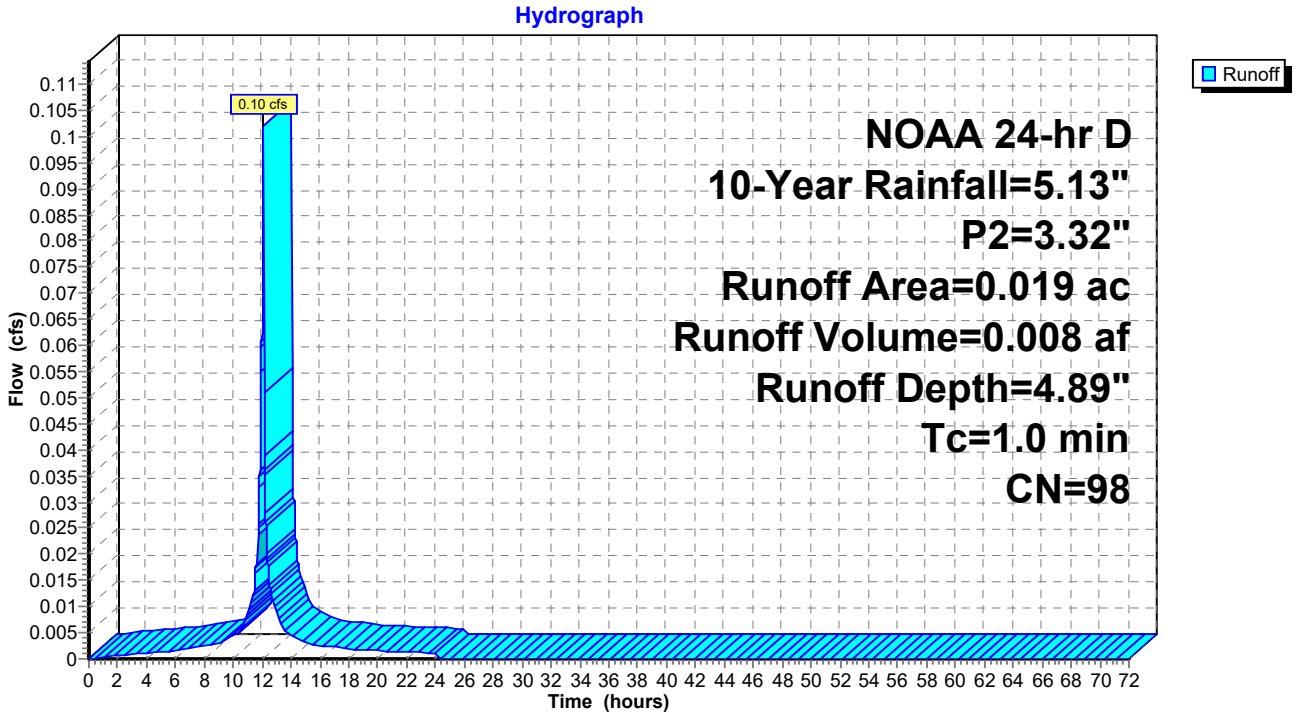
Runoff = 0.10 cfs @ 12.09 hrs, Volume= 0.008 af, Depth= 4.89"
Routed to Pond PP4 : PPVMT 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.019	98	Paved parking, HSG D
0.019	98	100.00% Impervious Area

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

Subcatchment PP4A: PPVMT AREA #4



Summary for Subcatchment PP5A: PPVMT AREA #5

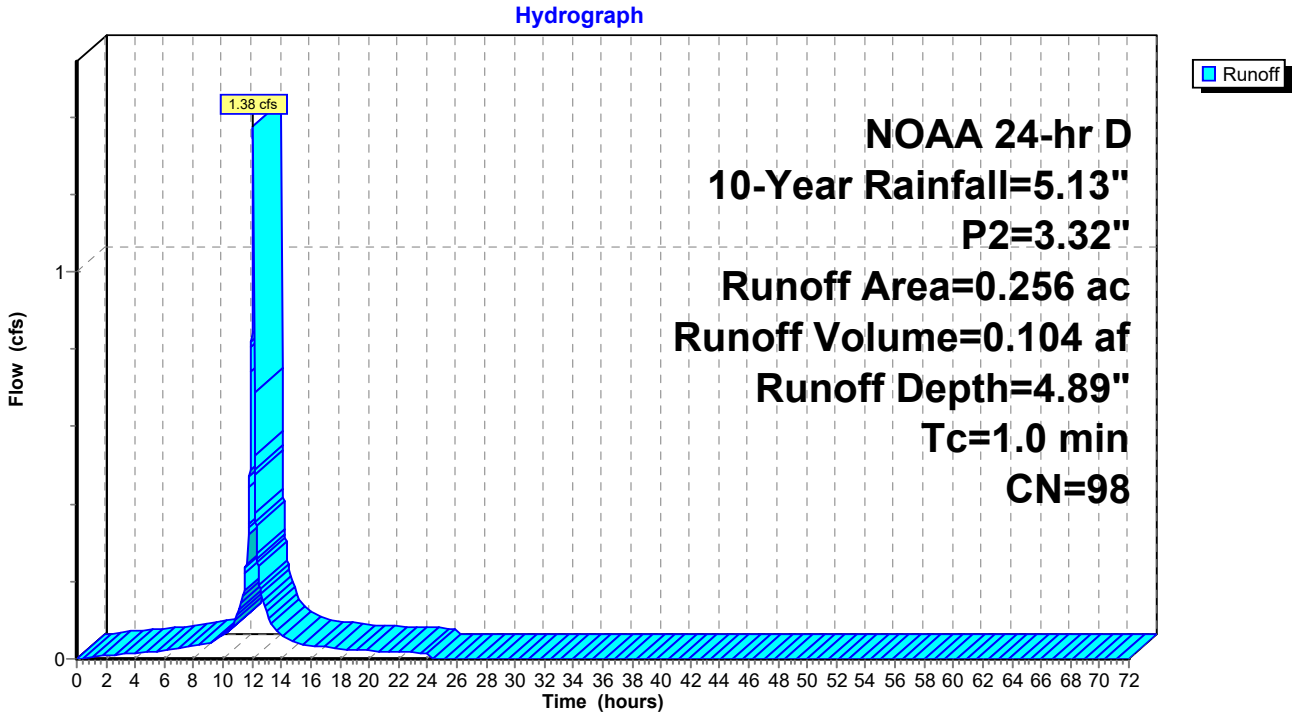
Runoff = 1.38 cfs @ 12.09 hrs, Volume= 0.104 af, Depth= 4.89"
Routed to Pond PP5 : PPVMT 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year Rainfall=5.13", P2=3.32"

Area (ac)	CN	Description
0.256	98	Paved parking, HSG D
0.256	98	100.00% Impervious Area

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

Subcatchment PP5A: PPVMT AREA #5



Summary for Pond CW: Constructed Wetlands (walls with ledge)

Inflow Area = 1.836 ac, 80.45% Impervious, Inflow Depth = 4.25" for 10-Year event
Inflow = 7.61 cfs @ 12.10 hrs, Volume= 0.650 af
Outflow = 0.79 cfs @ 13.27 hrs, Volume= 0.619 af, Atten= 90%, Lag= 69.6 min
Primary = 0.79 cfs @ 13.27 hrs, Volume= 0.619 af
Routed to Link PPOA1 : PPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 106.23' @ 13.27 hrs Surf.Area= 8,172 sf Storage= 16,255 cf

Plug-Flow detention time= 687.4 min calculated for 0.619 af (95% of inflow)
Center-of-Mass det. time= 654.4 min (1,452.1 - 797.6)

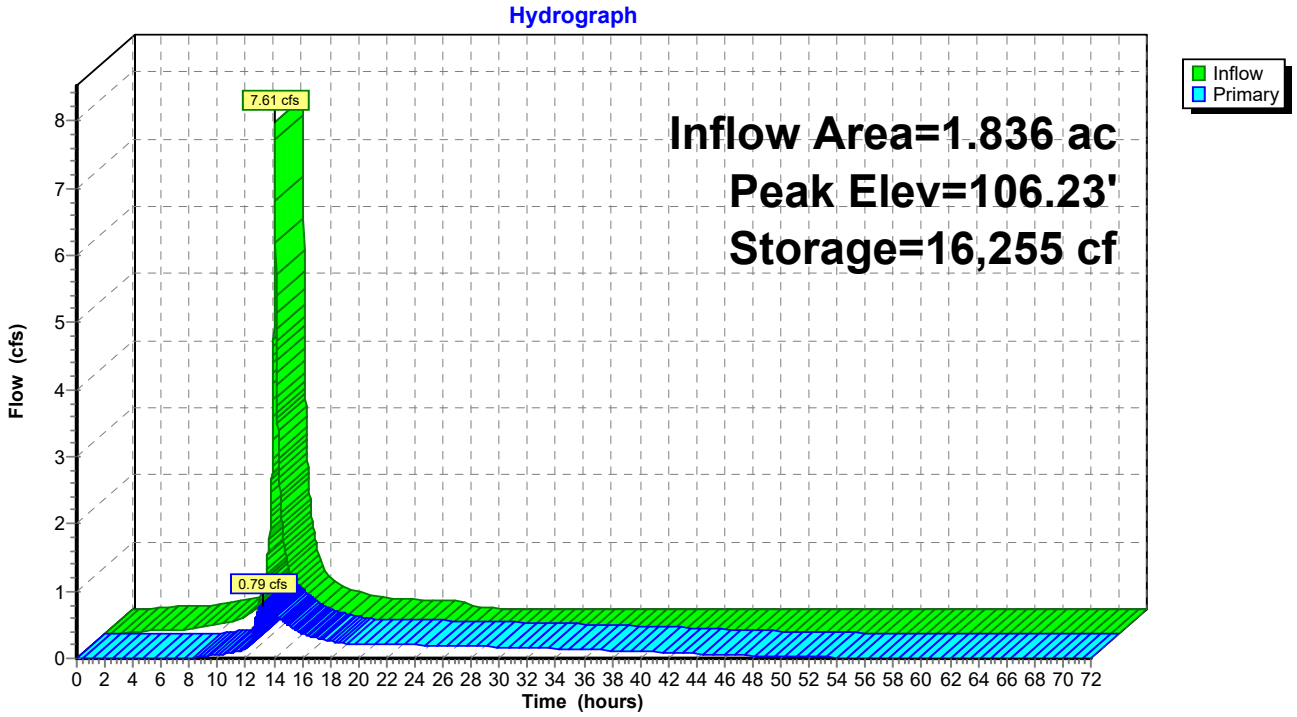
Volume	Invert	Avail.Storage	Storage Description
#1	104.00'	45,333 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
104.00	5,936	0	0
105.00	6,640	6,288	6,288
105.01	8,059	73	6,361
106.00	8,149	8,023	14,384
107.00	8,249	8,199	22,583
108.00	8,349	8,299	30,882
109.00	8,449	8,399	39,281
109.70	8,840	6,051	45,333

Device	Routing	Invert	Outlet Devices
#1	Primary	104.00'	**15.0" Round Culvert** L= 300.0' Ke= 0.500 Inlet / Outlet Invert= 104.00' / 103.10' S= 0.0030 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	104.20'	**2.5" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	105.92'	**12.2" W x 7.7" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	108.00'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.79 cfs @ 13.27 hrs HW=106.23' (Free Discharge)
└**1=Culvert** (Passes 0.79 cfs of 4.94 cfs potential flow)
  ├**2=Orifice** (Orifice Controls 0.23 cfs @ 6.68 fps)
  ├**3=Orifice/Grate** (Orifice Controls 0.56 cfs @ 1.78 fps)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond CW: Constructed Wetlands (walls with ledge)



Summary for Pond E1B D: E-Depression

Inflow Area = 0.292 ac, 0.00% Impervious, Inflow Depth = 2.73" for 10-Year event
Inflow = 0.77 cfs @ 12.19 hrs, Volume= 0.066 af
Outflow = 0.74 cfs @ 12.22 hrs, Volume= 0.059 af, Atten= 5%, Lag= 1.9 min
Primary = 0.74 cfs @ 12.22 hrs, Volume= 0.059 af
Routed to Link EPOA1 : EPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.27' @ 12.22 hrs Surf.Area= 2,290 sf Storage= 438 cf

Plug-Flow detention time= 81.8 min calculated for 0.059 af (89% of inflow)
Center-of-Mass det. time= 28.0 min (871.0 - 843.0)

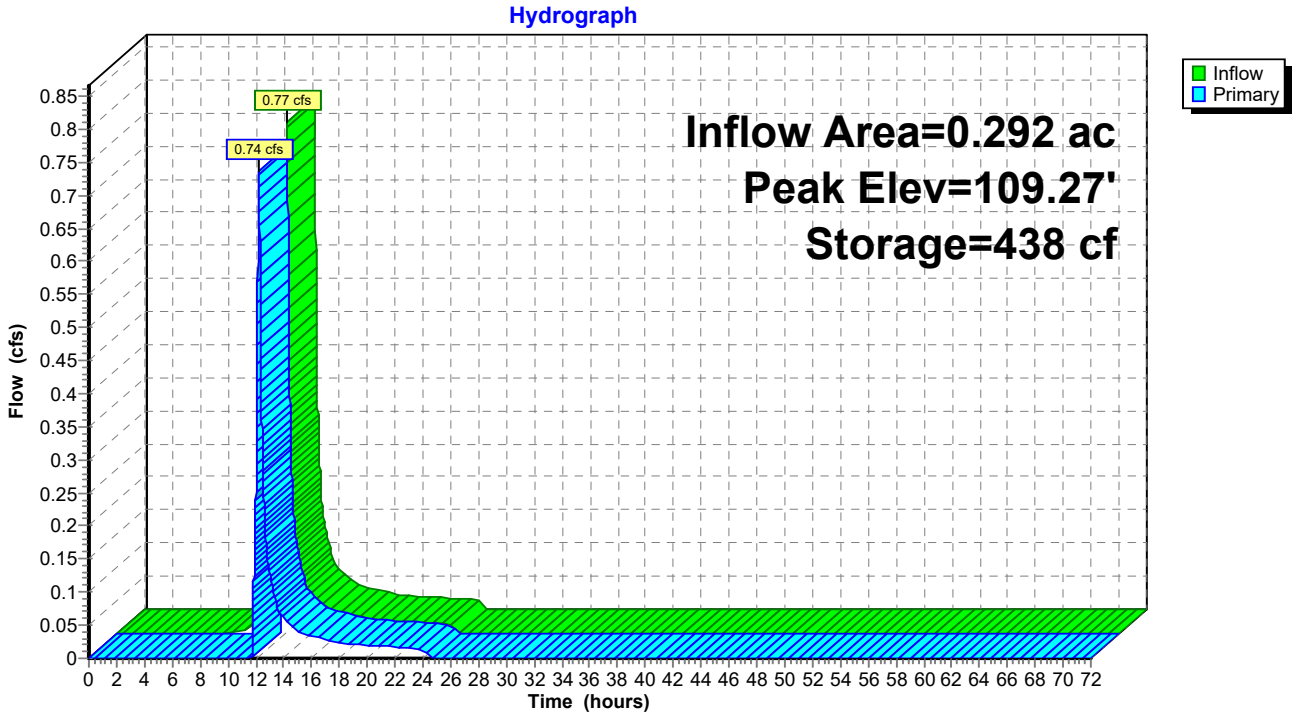
Volume	Invert	Avail.Storage	Storage Description
#1	108.80'	998 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.80	11	0	0
109.00	540	55	55
109.34	2,737	557	612
109.45	4,282	386	998

Device	Routing	Invert	Outlet Devices
#1	Primary	109.21'	**21.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.74 cfs @ 12.22 hrs HW=109.27' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 0.74 cfs @ 0.58 fps)

Pond E1B D: E-Depression



Summary for Pond PC1: PC 1

Inflow Area = 0.174 ac,100.00% Impervious, Inflow Depth = 4.89" for 10-Year event
Inflow = 0.94 cfs @ 12.09 hrs, Volume= 0.071 af
Outflow = 0.37 cfs @ 12.13 hrs, Volume= 0.058 af, Atten= 60%, Lag= 2.5 min
Primary = 0.37 cfs @ 12.13 hrs, Volume= 0.058 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 110.79' @ 12.13 hrs Surf.Area= 5,616 sf Storage= 1,404 cf

Plug-Flow detention time= 247.1 min calculated for 0.058 af (82% of inflow)
Center-of-Mass det. time= 167.1 min (911.3 - 744.2)

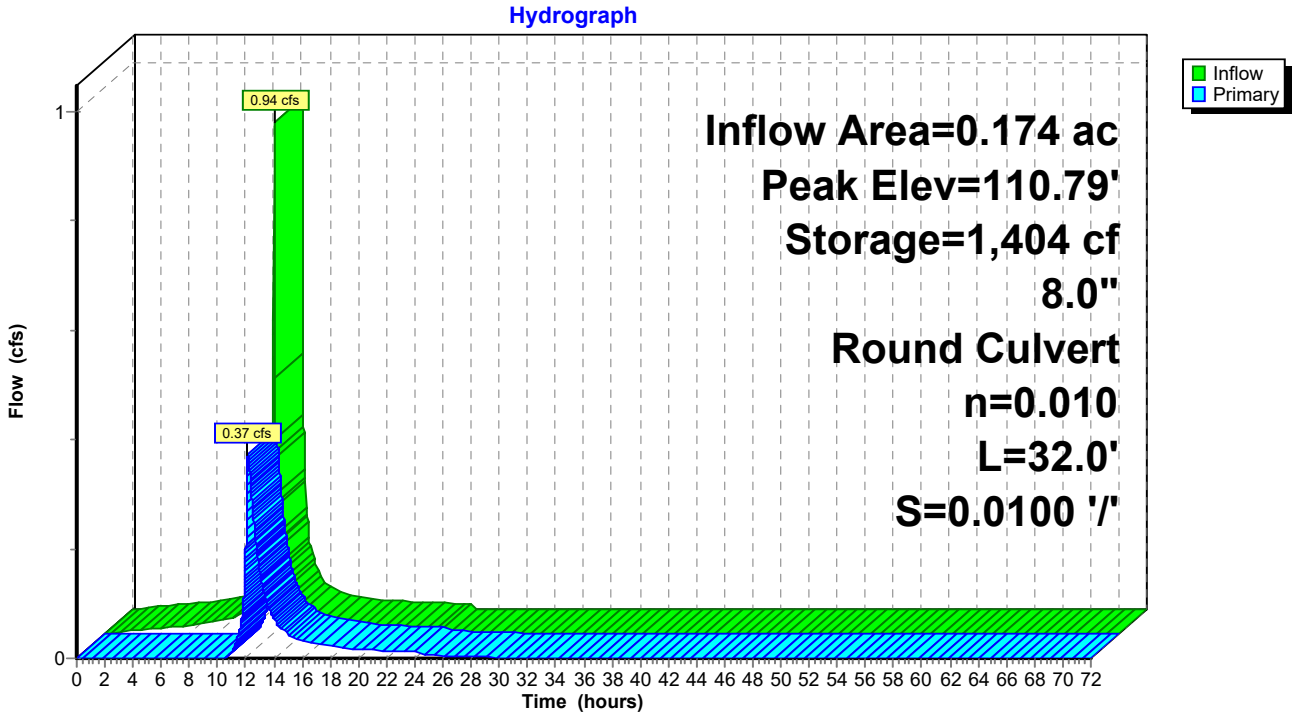
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	6,043 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 15,107 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	5,616	0	0
111.17	5,616	5,616	5,616
112.17	5,616	5,616	11,232
112.86	5,616	3,875	15,107

Device	Routing	Invert	Outlet Devices
#1	Primary	110.42'	**8.0" Round Culvert** L= 32.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.42' / 110.10' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.37 cfs @ 12.13 hrs HW=110.79' (Free Discharge)
↑**1=Culvert** (Inlet Controls 0.37 cfs @ 1.84 fps)

Pond PC1: PC 1


Hydrograph
Inflow
Primary
0.94 cfs
0.37 cfs
Inflow Area=0.174 ac
Peak Elev=110.79'
Storage=1,404 cf
8.0"
Round Culvert
n=0.010
L=32.0'
S=0.0100 '/'
Flow (cfs)
0
1
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
Time (hours)

Summary for Pond PP1: PPVMT 1

Inflow Area = 0.161 ac,100.00% Impervious, Inflow Depth = 4.89" for 10-Year event
Inflow = 0.87 cfs @ 12.09 hrs, Volume= 0.066 af
Outflow = 0.77 cfs @ 12.11 hrs, Volume= 0.066 af, Atten= 11%, Lag= 1.0 min
Primary = 0.77 cfs @ 12.11 hrs, Volume= 0.066 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 110.35' @ 12.11 hrs Surf.Area= 2,680 sf Storage= 191 cf

Plug-Flow detention time= 3.2 min calculated for 0.066 af (100% of inflow)
Center-of-Mass det. time= 3.2 min (747.4 - 744.2)

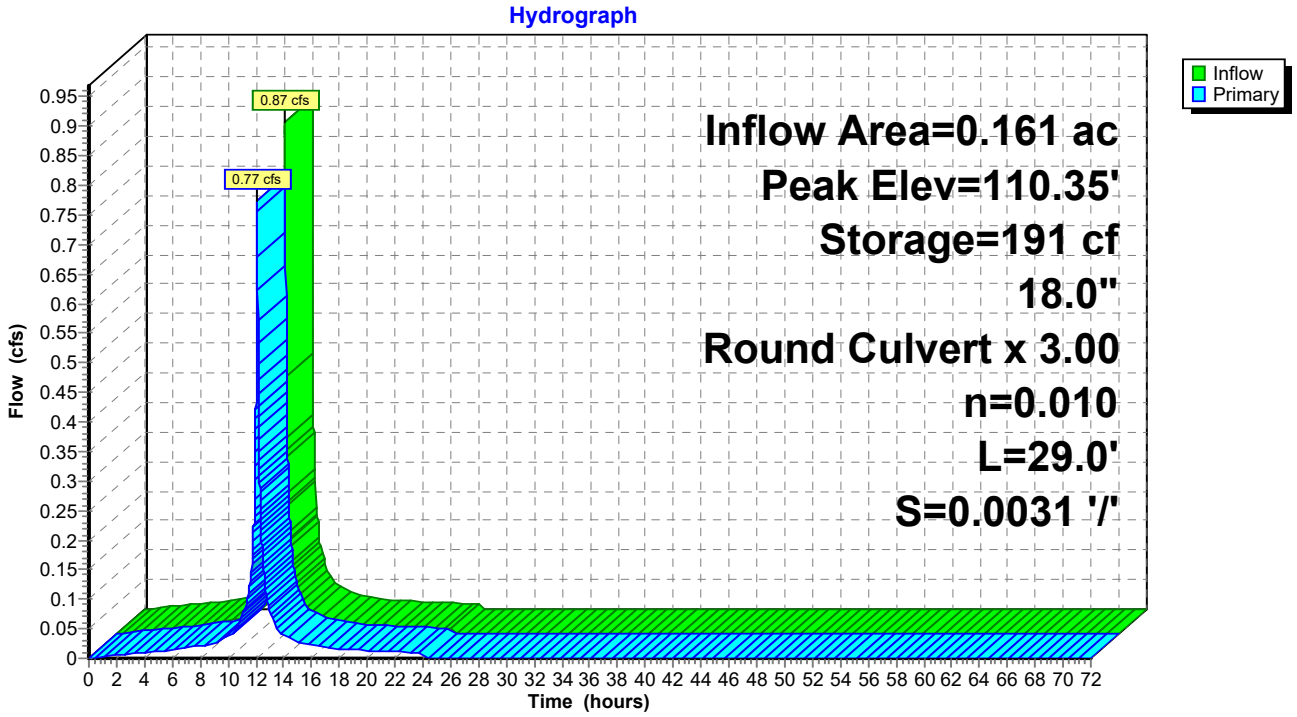
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	1,940 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 4,851 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	2,680	0	0
111.17	2,680	2,680	2,680
111.98	2,680	2,171	4,851

Device	Routing	Invert	Outlet Devices
#1	Primary	110.08'	**18.0" Round Culvert X 3.00** L= 29.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.08' / 109.99' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.77 cfs @ 12.11 hrs HW=110.35' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.77 cfs @ 1.82 fps)

Pond PP1: PPVMT 1



Summary for Pond PP2: PPVMT 2

Inflow Area = 0.290 ac, 97.59% Impervious, Inflow Depth = 4.85" for 10-Year event
Inflow = 1.55 cfs @ 12.09 hrs, Volume= 0.117 af
Outflow = 1.05 cfs @ 12.11 hrs, Volume= 0.092 af, Atten= 33%, Lag= 1.5 min
Primary = 1.05 cfs @ 12.11 hrs, Volume= 0.092 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.36' @ 12.11 hrs Surf.Area= 3,642 sf Storage= 1,981 cf

Plug-Flow detention time= 207.1 min calculated for 0.092 af (79% of inflow)
Center-of-Mass det. time= 119.8 min (865.2 - 745.4)

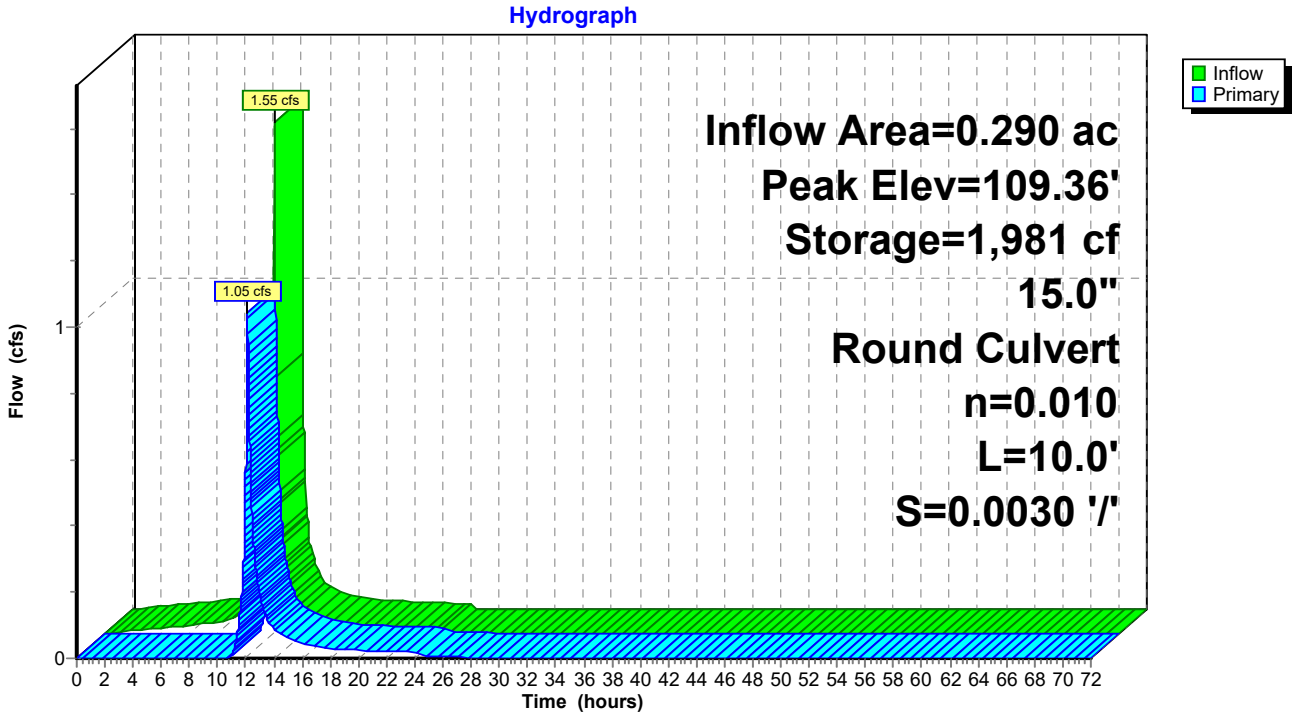
Volume	Invert	Avail.Storage	Storage Description
#1	108.00'	5,434 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 13,585 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	3,642	0	0
109.00	3,642	3,642	3,642
110.00	3,642	3,642	7,284
111.00	3,642	3,642	10,926
111.73	3,642	2,659	13,585

Device	Routing	Invert	Outlet Devices
#1	Primary	108.74'	**15.0" Round Culvert** L= 10.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.74' / 108.71' S= 0.0030 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.04 cfs @ 12.11 hrs HW=109.36' (Free Discharge)
1=Culvert (Barrel Controls 1.04 cfs @ 2.51 fps)

Pond PP2: PPVMT 2



Summary for Pond PP3: PPVMT 3

Inflow Area = 0.096 ac,100.00% Impervious, Inflow Depth = 4.89" for 10-Year event
Inflow = 0.52 cfs @ 12.09 hrs, Volume= 0.039 af
Outflow = 0.52 cfs @ 12.07 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min
Primary = 0.52 cfs @ 12.07 hrs, Volume= 0.039 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.00' @ 12.07 hrs Surf.Area= 1,332 sf Storage= 1 cf

Plug-Flow detention time= 0.0 min calculated for 0.039 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (744.2 - 744.2)

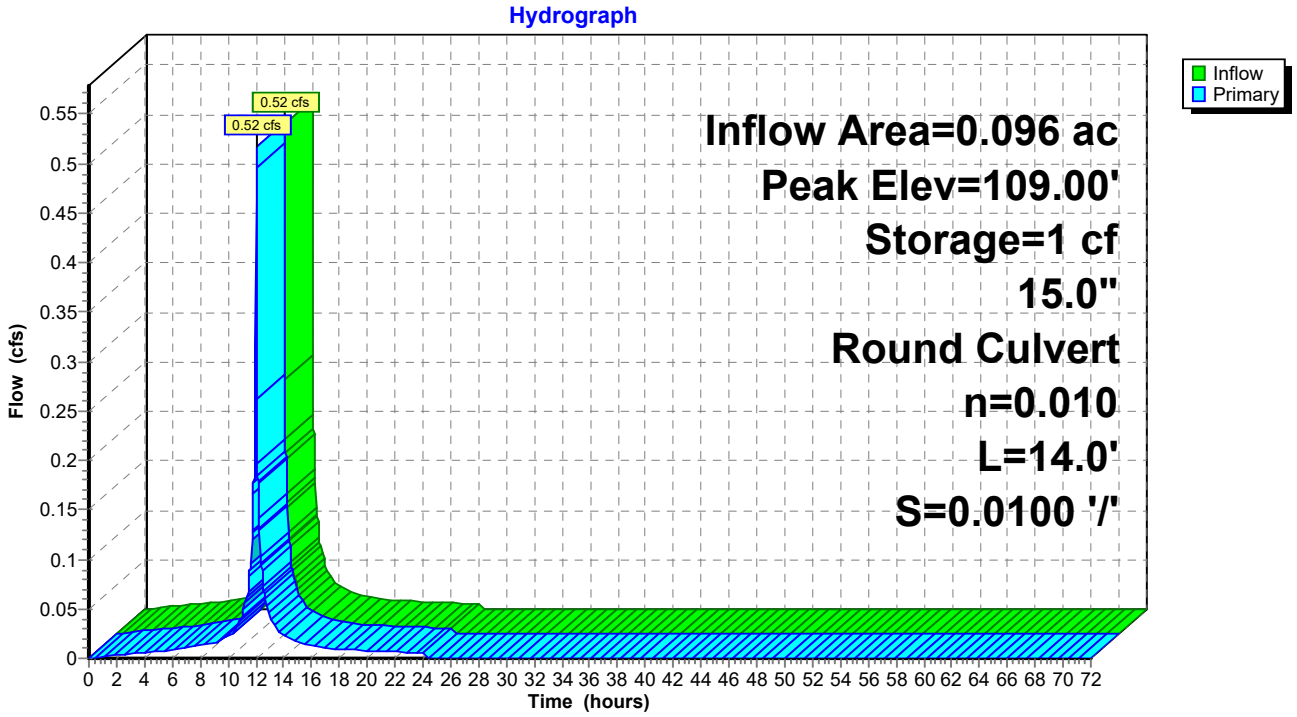
Volume	Invert	Avail.Storage	Storage Description
#1	109.00'	1,108 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 2,771 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
109.00	1,332	0	0
110.00	1,332	1,332	1,332
111.00	1,332	1,332	2,664
111.08	1,332	107	2,771

Device	Routing	Invert	Outlet Devices
#1	Primary	104.14'	**15.0" Round Culvert** L= 14.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 104.14' / 104.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=10.73 cfs @ 12.07 hrs HW=109.00' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 10.73 cfs @ 8.74 fps)

Pond PP3: PPVMT 3



Summary for Pond PP4: PPVMT 4

Inflow Area = 0.019 ac,100.00% Impervious, Inflow Depth = 4.89" for 10-Year event
Inflow = 0.10 cfs @ 12.09 hrs, Volume= 0.008 af
Outflow = 0.10 cfs @ 12.10 hrs, Volume= 0.008 af, Atten= 2%, Lag= 0.5 min
Primary = 0.10 cfs @ 12.10 hrs, Volume= 0.008 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 108.38' @ 12.10 hrs Surf.Area= 360 sf Storage= 7 cf

Plug-Flow detention time= 1.1 min calculated for 0.008 af (100% of inflow)
Center-of-Mass det. time= 1.1 min (745.3 - 744.2)

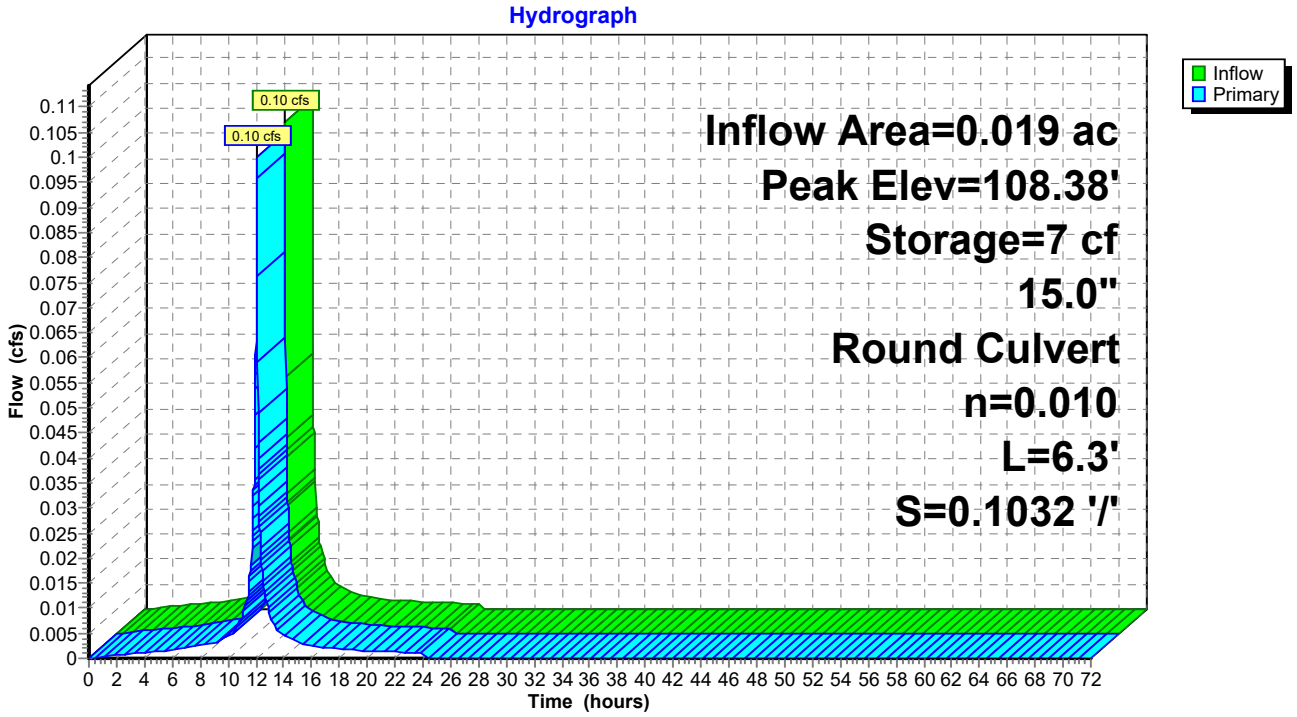
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	511 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 1,278 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	360	0	0
109.33	360	360	360
110.33	360	360	720
111.33	360	360	1,080
111.88	360	198	1,278

Device	Routing	Invert	Outlet Devices
#1	Primary	108.23'	**15.0" Round Culvert** L= 6.3' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.23' / 107.58' S= 0.1032 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.10 cfs @ 12.10 hrs HW=108.38' (Free Discharge)
1=Culvert (Inlet Controls 0.10 cfs @ 1.17 fps)

Pond PP4: PPVMT 4



Summary for Pond PP5: PPVMT 5

Inflow Area = 0.256 ac,100.00% Impervious, Inflow Depth = 4.89" for 10-Year event
Inflow = 1.38 cfs @ 12.09 hrs, Volume= 0.104 af
Outflow = 1.06 cfs @ 12.11 hrs, Volume= 0.100 af, Atten= 23%, Lag= 1.3 min
Primary = 1.06 cfs @ 12.11 hrs, Volume= 0.100 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.00' @ 12.11 hrs Surf.Area= 3,168 sf Storage= 852 cf

Plug-Flow detention time= 85.7 min calculated for 0.100 af (96% of inflow)
Center-of-Mass det. time= 59.6 min (803.8 - 744.2)

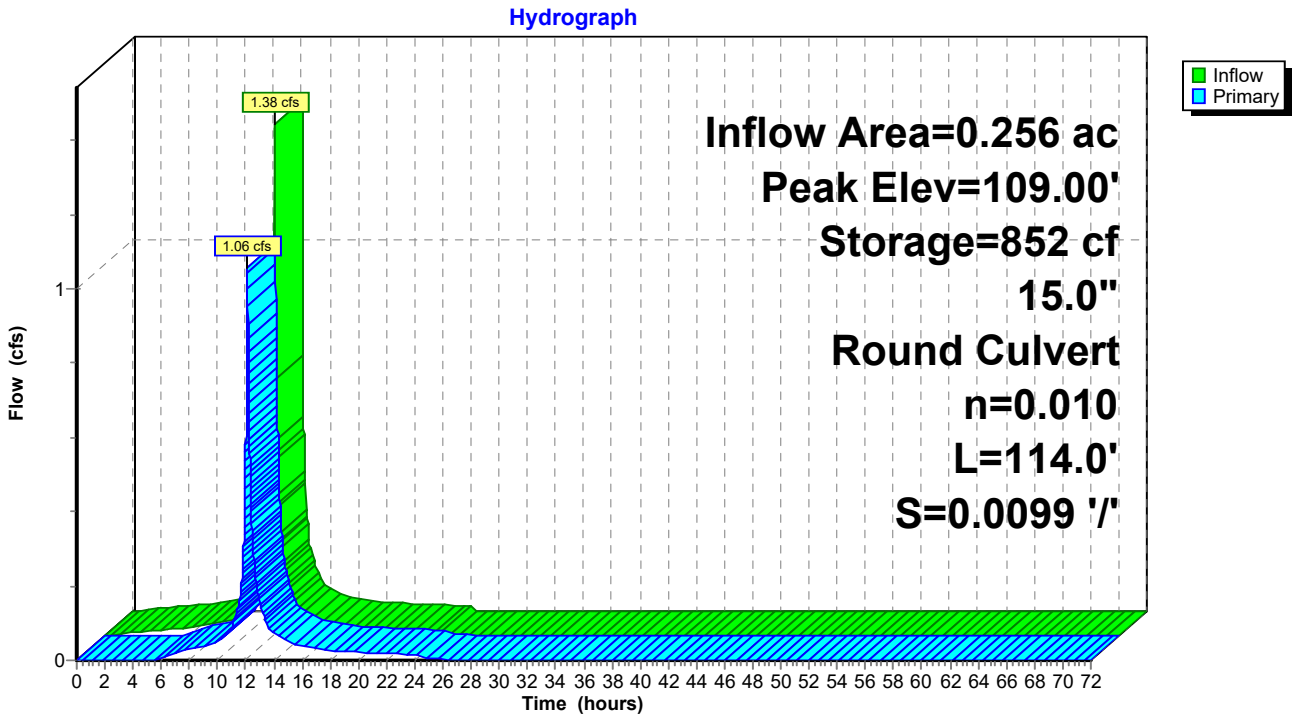
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	3,421 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 8,554 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	3,168	0	0
109.33	3,168	3,168	3,168
110.33	3,168	3,168	6,336
111.00	3,168	2,123	8,459
111.03	3,168	95	8,554

Device	Routing	Invert	Outlet Devices
#1	Primary	108.48'	**15.0" Round Culvert** L= 114.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.48' / 107.35' S= 0.0099 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.05 cfs @ 12.11 hrs HW=109.00' (Free Discharge)
1=Culvert (Inlet Controls 1.05 cfs @ 2.17 fps)

Pond PP5: PPVMT 5

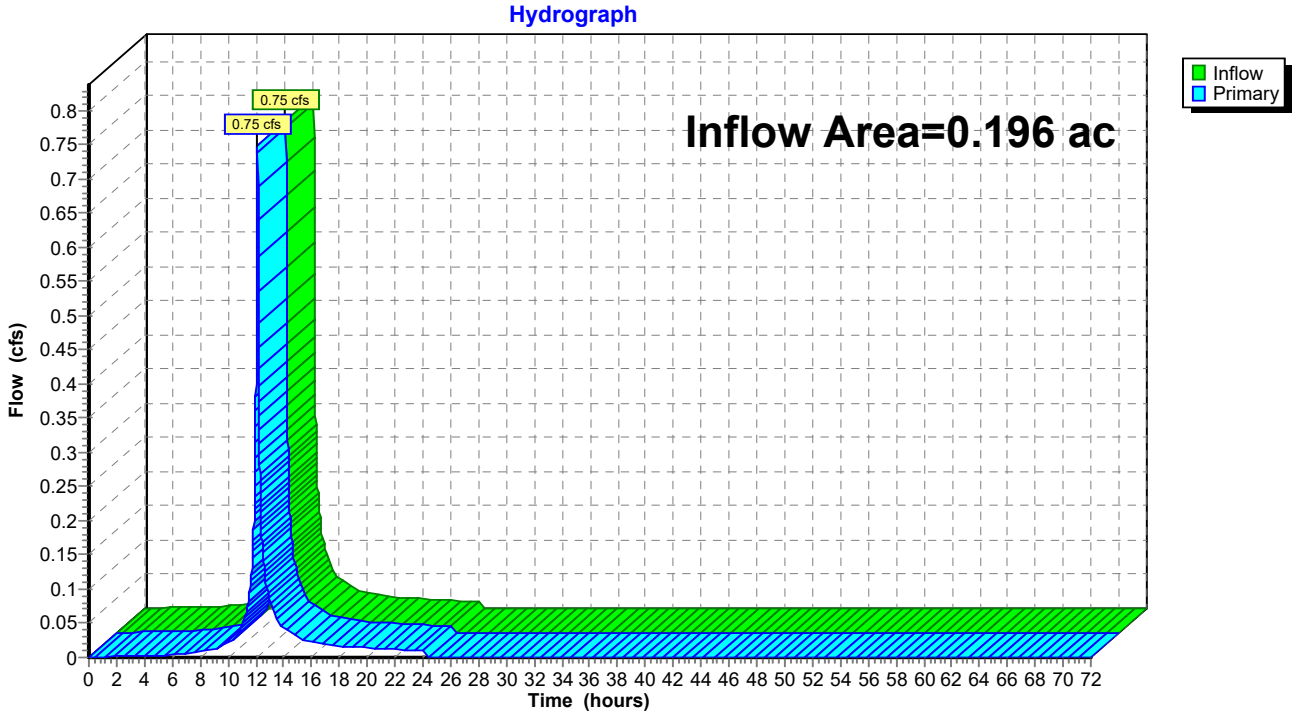


Summary for Link BP: Total Bypass

Inflow Area = 0.196 ac, 23.47% Impervious, Inflow Depth = 3.45" for 10-Year event
Inflow = 0.75 cfs @ 12.13 hrs, Volume= 0.056 af
Primary = 0.75 cfs @ 12.13 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.0 min
Routed to Link PPOA1 : PPOA-1

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

Link BP: Total Bypass

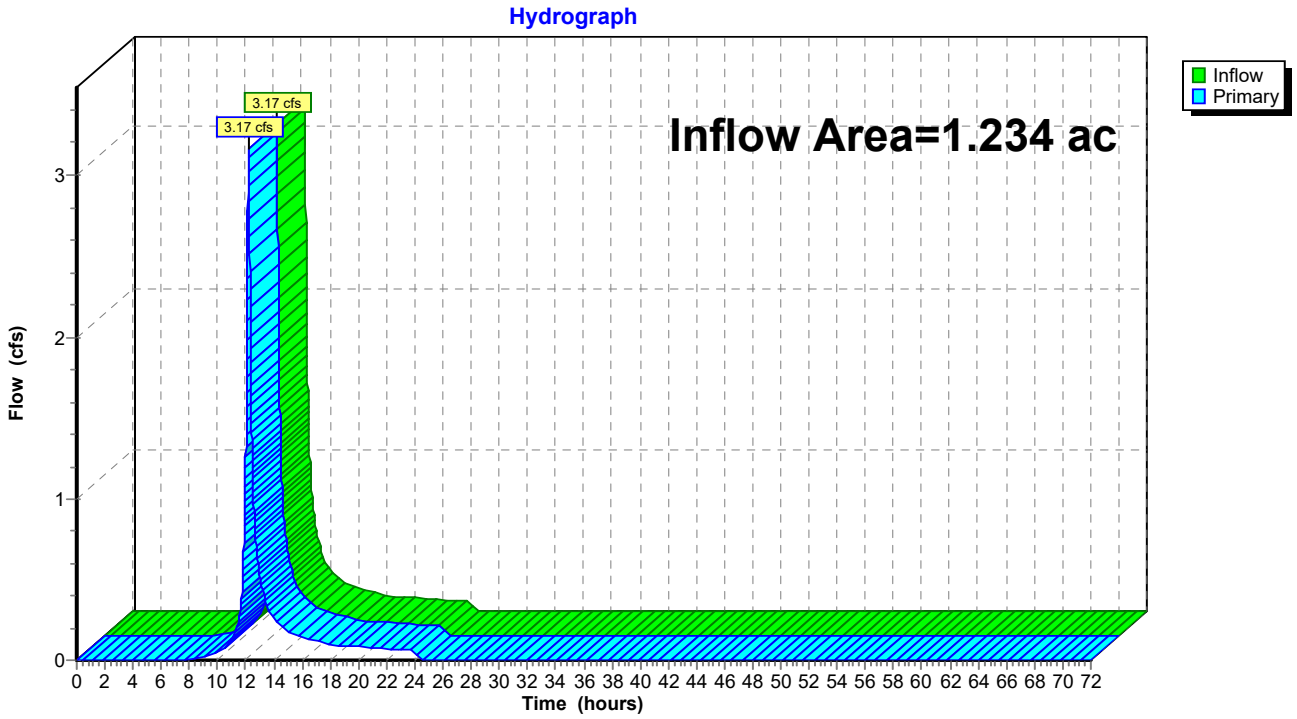


Summary for Link EPOA1: EPOA-1

Inflow Area = 1.234 ac, 0.32% Impervious, Inflow Depth = 2.68" for 10-Year event
Inflow = 3.17 cfs @ 12.20 hrs, Volume= 0.275 af
Primary = 3.17 cfs @ 12.20 hrs, Volume= 0.275 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA1: EPOA-1

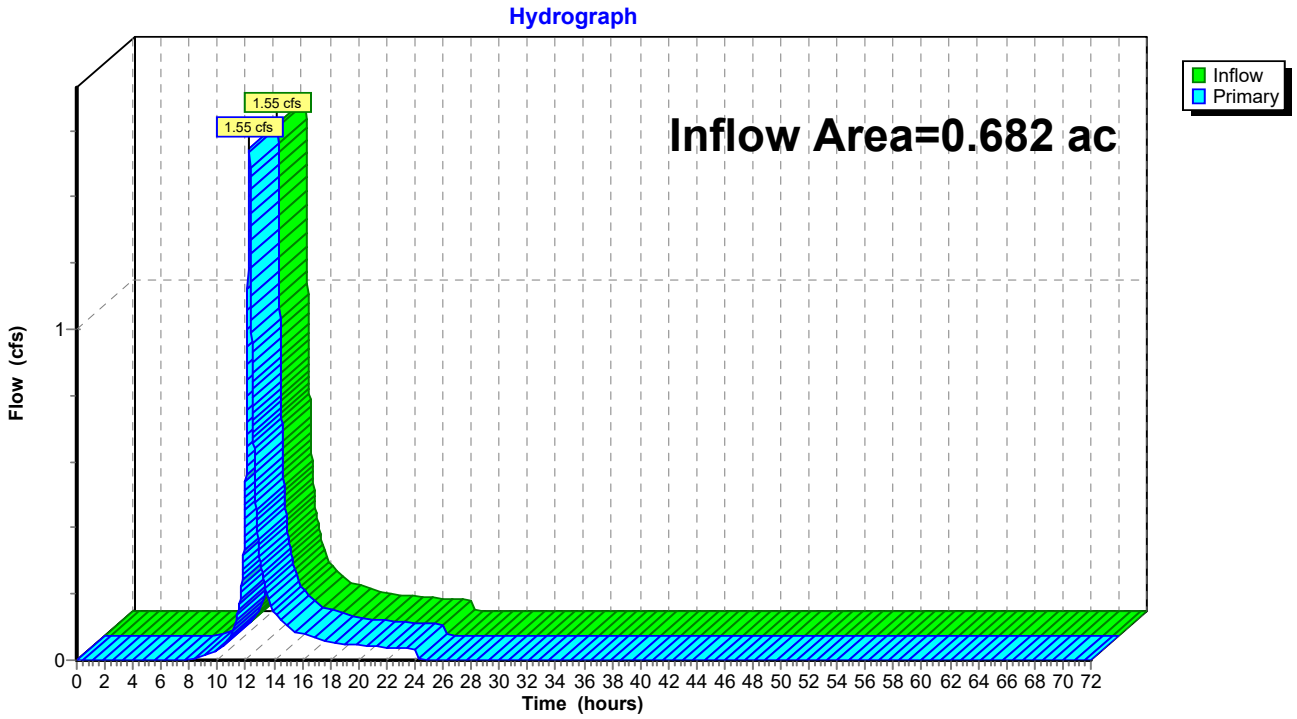


Summary for Link EPOA2: EPOA-2

Inflow Area = 0.682 ac, 0.00% Impervious, Inflow Depth = 2.73" for 10-Year event
Inflow = 1.55 cfs @ 12.25 hrs, Volume= 0.155 af
Primary = 1.55 cfs @ 12.25 hrs, Volume= 0.155 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA2: EPOA-2

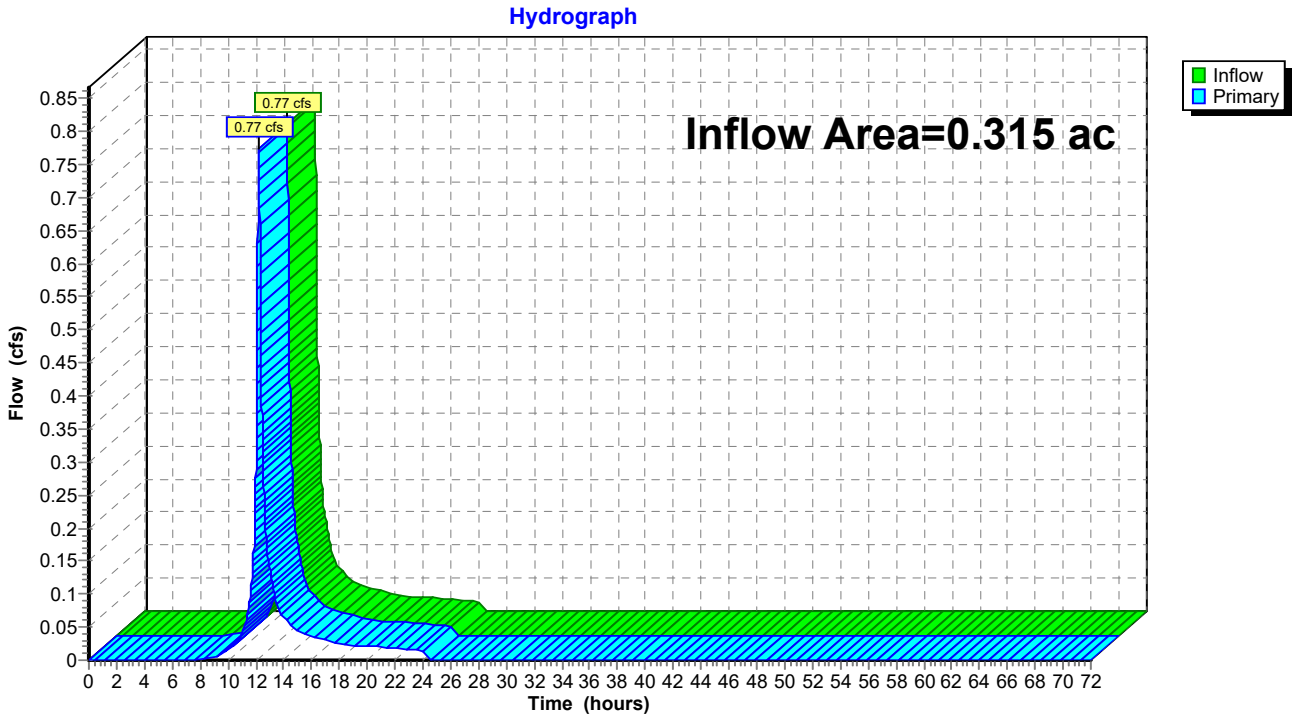


Summary for Link EPOA4: EPOA-4

Inflow Area = 0.315 ac, 0.00% Impervious, Inflow Depth = 2.73" for 10-Year event
Inflow = 0.77 cfs @ 12.22 hrs, Volume= 0.072 af
Primary = 0.77 cfs @ 12.22 hrs, Volume= 0.072 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA4: EPOA-4

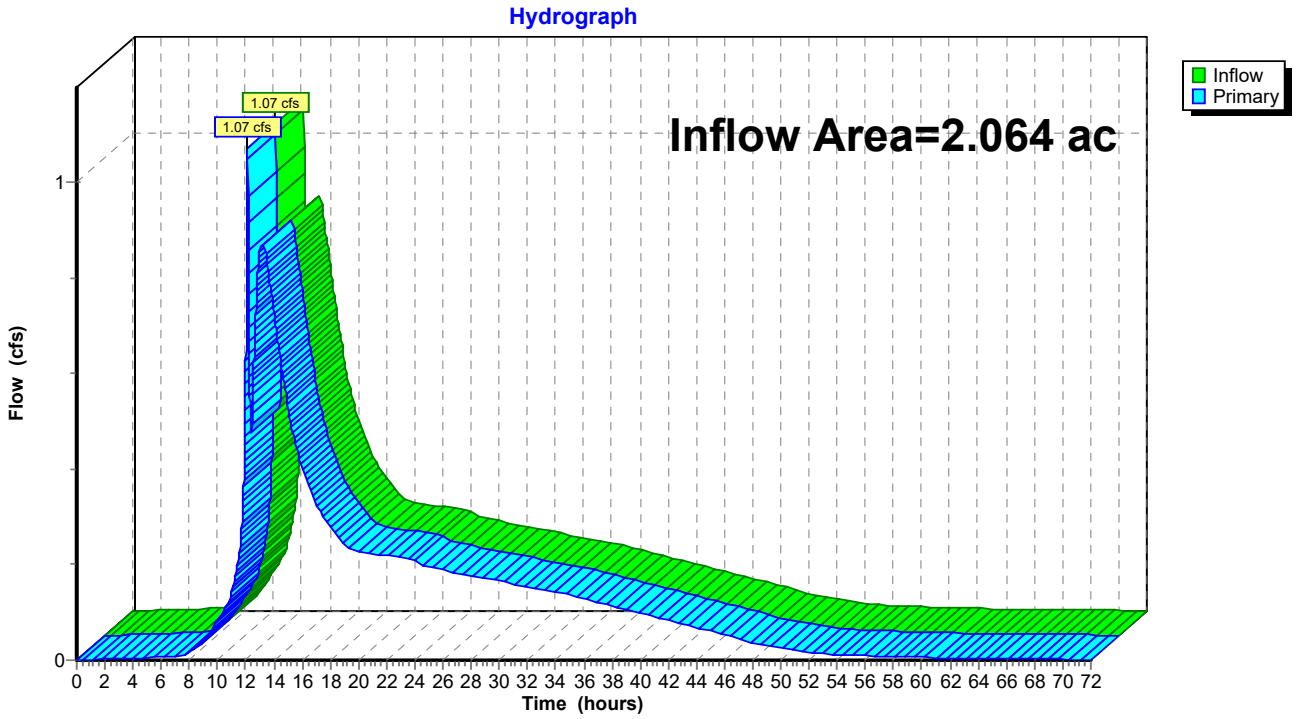


Summary for Link PPOA1: PPOA-1

Inflow Area = 2.064 ac, 75.10% Impervious, Inflow Depth > 4.00" for 10-Year event
Inflow = 1.07 cfs @ 12.13 hrs, Volume= 0.687 af
Primary = 1.07 cfs @ 12.13 hrs, Volume= 0.687 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA1: PPOA-1

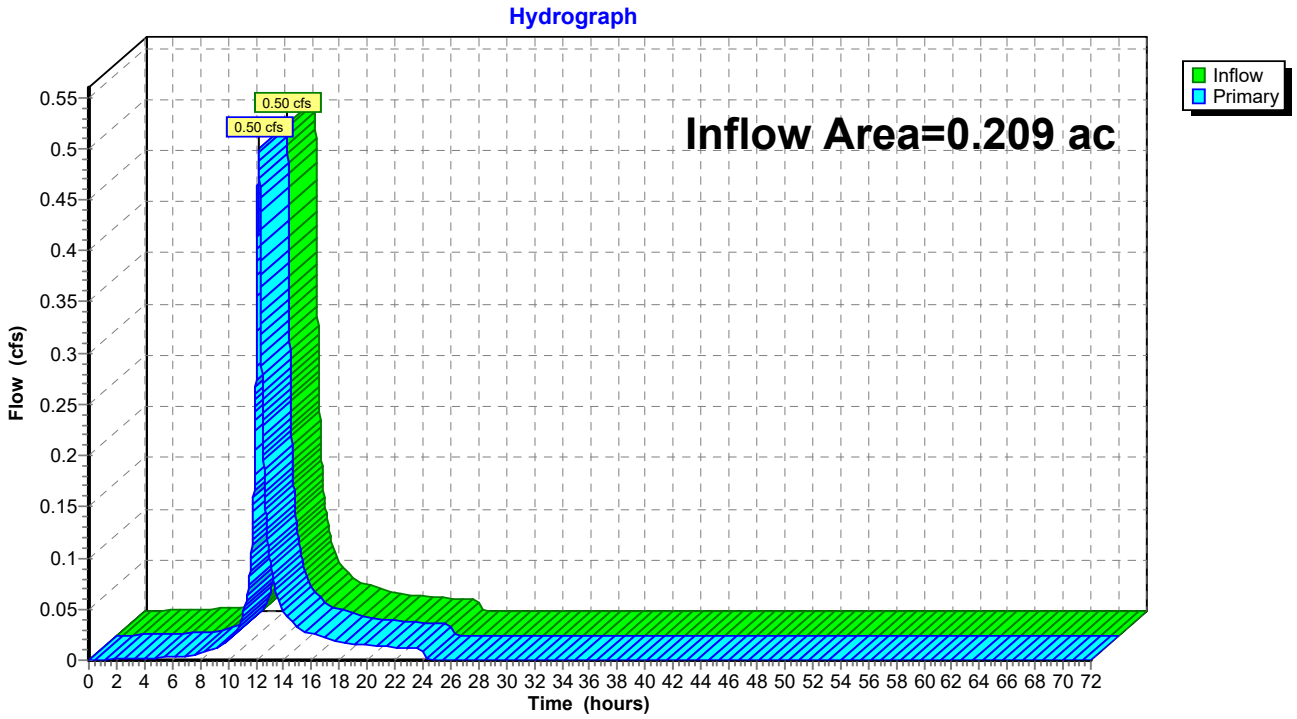


Summary for Link PPOA2: PPOA-2

Inflow Area = 0.209 ac, 16.27% Impervious, Inflow Depth = 3.31" for 10-Year event
Inflow = 0.50 cfs @ 12.21 hrs, Volume= 0.058 af
Primary = 0.50 cfs @ 12.21 hrs, Volume= 0.058 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA2: PPOA-2

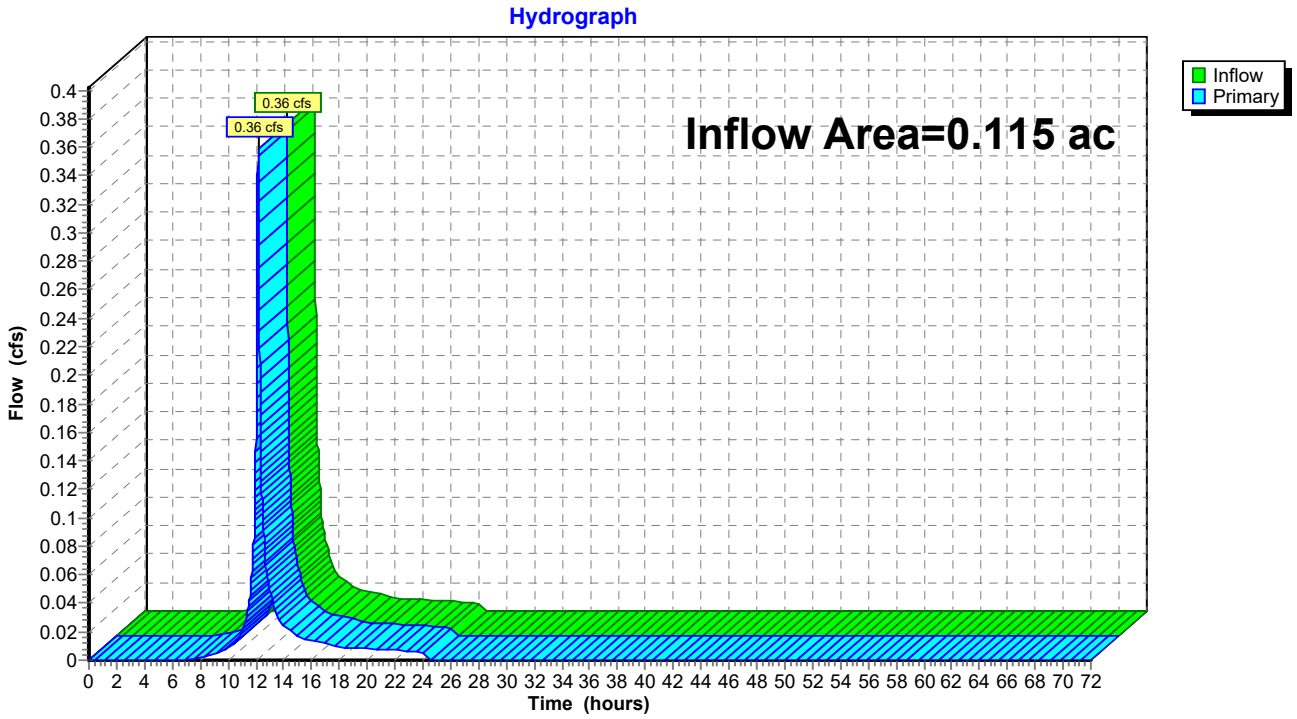


Summary for Link PPOA4: PPOA-4

Inflow Area = 0.115 ac, 2.61% Impervious, Inflow Depth = 3.06" for 10-Year event
Inflow = 0.36 cfs @ 12.17 hrs, Volume= 0.029 af
Primary = 0.36 cfs @ 12.17 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA4: PPOA-4



100-Year Storm Event
(Current Adjusted Precipitation Depth)

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

SubcatchmentE1A: EDA-1A Runoff Area=0.910 ac 0.00% Impervious Runoff Depth=6.01"
Flow Length=296' Slope=0.0500 '/' Tc=11.5 min CN=77 Runoff=5.14 cfs 0.456 af

SubcatchmentE1B: EDA-1B (Depression) Runoff Area=0.292 ac 0.00% Impervious Runoff Depth=6.01"
Flow Length=118' Slope=0.0200 '/' Tc=11.1 min CN=77 Runoff=1.67 cfs 0.146 af

SubcatchmentE1C I: E-Off-Site #1C Runoff Area=0.004 ac 100.00% Impervious Runoff Depth=8.56"
Flow Length=77' Slope=0.0450 '/' Tc=0.7 min CN=98 Runoff=0.04 cfs 0.003 af

SubcatchmentE1C P: E-Off-Site #1C Runoff Area=0.028 ac 0.00% Impervious Runoff Depth=6.38"
Flow Length=77' Slope=0.0450 '/' Tc=5.6 min CN=80 Runoff=0.21 cfs 0.015 af

SubcatchmentE2A: EDA-2 Runoff Area=0.682 ac 0.00% Impervious Runoff Depth=6.01"
Flow Length=253' Tc=16.4 min CN=77 Runoff=3.36 cfs 0.342 af

SubcatchmentE4A: EDA-4 Runoff Area=0.315 ac 0.00% Impervious Runoff Depth=6.01"
Flow Length=158' Tc=13.5 min CN=77 Runoff=1.68 cfs 0.158 af

SubcatchmentP1A I: PDA-1 Impervious Runoff Area=0.488 ac 100.00% Impervious Runoff Depth=8.56"
Flow Length=266' Tc=2.2 min CN=98 Runoff=4.51 cfs 0.348 af

SubcatchmentP1A P: PDA-1 Pervious Runoff Area=0.352 ac 0.00% Impervious Runoff Depth=6.38"
Flow Length=48' Slope=0.0200 '/' Tc=5.3 min CN=80 Runoff=2.61 cfs 0.187 af

SubcatchmentP1B1: PDA-1 Bypass #1 Runoff Area=0.079 ac 0.00% Impervious Runoff Depth=6.38"
Flow Length=330' Tc=7.4 min CN=80 Runoff=0.54 cfs 0.042 af

SubcatchmentP1B2: PDA-1 Bypass #2 Runoff Area=0.117 ac 39.32% Impervious Runoff Depth=7.24"
Flow Length=127' Slope=0.0100 '/' Tc=4.7 min CN=WQ Runoff=0.94 cfs 0.071 af

SubcatchmentP1C I: P-Off-Site #1C Runoff Area=0.027 ac 100.00% Impervious Runoff Depth=8.56"
Flow Length=366' Slope=0.0020 '/' Tc=7.9 min CN=98 Runoff=0.21 cfs 0.019 af

SubcatchmentP1C P: P-Off-Site #1C Runoff Area=0.005 ac 0.00% Impervious Runoff Depth=6.38"
Flow Length=366' Slope=0.0020 '/' Tc=7.9 min CN=80 Runoff=0.03 cfs 0.003 af

SubcatchmentP2A I: PDA-2 Impervious Runoff Area=0.034 ac 100.00% Impervious Runoff Depth=8.56"
Flow Length=92' Slope=0.0100 '/' Tc=1.5 min CN=98 Runoff=0.31 cfs 0.024 af

SubcatchmentP2A P: PDA-2 Pervious Runoff Area=0.175 ac 0.00% Impervious Runoff Depth=6.38"
Flow Length=90' Slope=0.0050 '/' Tc=15.4 min CN=80 Runoff=0.93 cfs 0.093 af

SubcatchmentP4A: PDA-4 Runoff Area=0.115 ac 2.61% Impervious Runoff Depth=6.44"
Flow Length=96' Slope=0.0110 '/' Tc=9.5 min CN=WQ Runoff=0.74 cfs 0.062 af

SubcatchmentPC1A: PC AREA #1 Runoff Area=0.174 ac 100.00% Impervious Runoff Depth=8.56"
Tc=1.0 min CN=98 Runoff=1.61 cfs 0.124 af

Subcatchment PP1A: PPVMT AREA 1 Runoff Area=0.161 ac 100.00% Impervious Runoff Depth=8.56"
Tc=1.0 min CN=98 Runoff=1.49 cfs 0.115 af

Subcatchment PP2A: PPVMT AREA #2 Runoff Area=0.290 ac 97.59% Impervious Runoff Depth=8.51"
Tc=1.0 min CN=WQ Runoff=2.67 cfs 0.206 af

Subcatchment PP3A: PPVMT AREA #3 Runoff Area=0.096 ac 100.00% Impervious Runoff Depth=8.56"
Tc=1.0 min CN=98 Runoff=0.89 cfs 0.068 af

Subcatchment PP4A: PPVMT AREA #4 Runoff Area=0.019 ac 100.00% Impervious Runoff Depth=8.56"
Tc=1.0 min CN=98 Runoff=0.18 cfs 0.014 af

Subcatchment PP5A: PPVMT AREA #5 Runoff Area=0.256 ac 100.00% Impervious Runoff Depth=8.56"
Tc=1.0 min CN=98 Runoff=2.37 cfs 0.183 af

Pond CW: Constructed Wetlands (walls Peak Elev=107.20' Storage=24,275 cf Inflow=14.05 cfs 1.202 af
Outflow=3.35 cfs 1.171 af

Pond E1B D: E-Depression Peak Elev=109.31' Storage=539 cf Inflow=1.67 cfs 0.146 af
Outflow=1.61 cfs 0.139 af

Pond PC1: PC 1 Peak Elev=111.00' Storage=1,870 cf Inflow=1.61 cfs 0.124 af
8.0" Round Culvert n=0.010 L=32.0' S=0.0100 '/' Outflow=0.74 cfs 0.111 af

Pond PP1: PPVMT 1 Peak Elev=110.44' Storage=294 cf Inflow=1.49 cfs 0.115 af
18.0" Round Culvert x 3.00 n=0.010 L=29.0' S=0.0031 '/' Outflow=1.39 cfs 0.115 af

Pond PP2: PPVMT 2 Peak Elev=109.63' Storage=2,380 cf Inflow=2.67 cfs 0.206 af
15.0" Round Culvert n=0.010 L=10.0' S=0.0030 '/' Outflow=2.00 cfs 0.181 af

Pond PP3: PPVMT 3 Peak Elev=109.00' Storage=1 cf Inflow=0.89 cfs 0.068 af
15.0" Round Culvert n=0.010 L=14.0' S=0.0100 '/' Outflow=0.89 cfs 0.068 af

Pond PP4: PPVMT 4 Peak Elev=108.43' Storage=15 cf Inflow=0.18 cfs 0.014 af
15.0" Round Culvert n=0.010 L=6.3' S=0.1032 '/' Outflow=0.17 cfs 0.014 af

Pond PP5: PPVMT 5 Peak Elev=109.22' Storage=1,127 cf Inflow=2.37 cfs 0.183 af
15.0" Round Culvert n=0.010 L=114.0' S=0.0099 '/' Outflow=1.95 cfs 0.178 af

Link BP: Total Bypass Inflow=1.46 cfs 0.113 af
Primary=1.46 cfs 0.113 af

Link EPOA1: EPOA-1 Inflow=6.86 cfs 0.613 af
Primary=6.86 cfs 0.613 af

Link EPOA2: EPOA-2 Inflow=3.36 cfs 0.342 af
Primary=3.36 cfs 0.342 af

Link EPOA4: EPOA-4 Inflow=1.68 cfs 0.158 af
Primary=1.68 cfs 0.158 af

Link PPOA1: PPOA-1 Inflow=4.38 cfs 1.305 af
Primary=4.38 cfs 1.305 af

Link PPOA2: PPOA-2 Inflow=1.02 cfs 0.117 af
Primary=1.02 cfs 0.117 af

Link PPOA4: PPOA-4 Inflow=0.74 cfs 0.062 af
Primary=0.74 cfs 0.062 af

Summary for Subcatchment E1A: EDA-1A

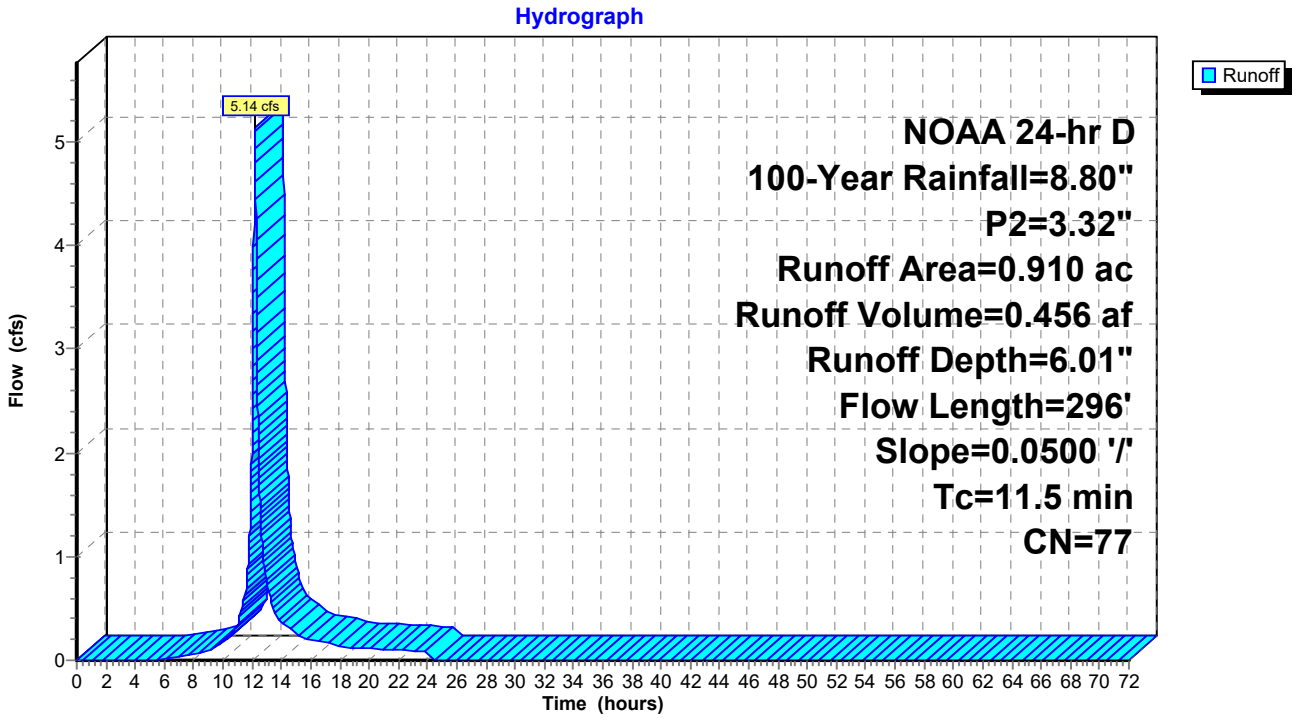
Runoff = 5.14 cfs @ 12.19 hrs, Volume= 0.456 af, Depth= 6.01"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.910	77	Woods, Good, HSG D
0.910	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	56	0.0500	0.10		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
1.9	130	0.0500	1.12		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	110	0.0500	4.54		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
11.5	296	Total			

Subcatchment E1A: EDA-1A



Summary for Subcatchment E1B: EDA-1B (Depression)

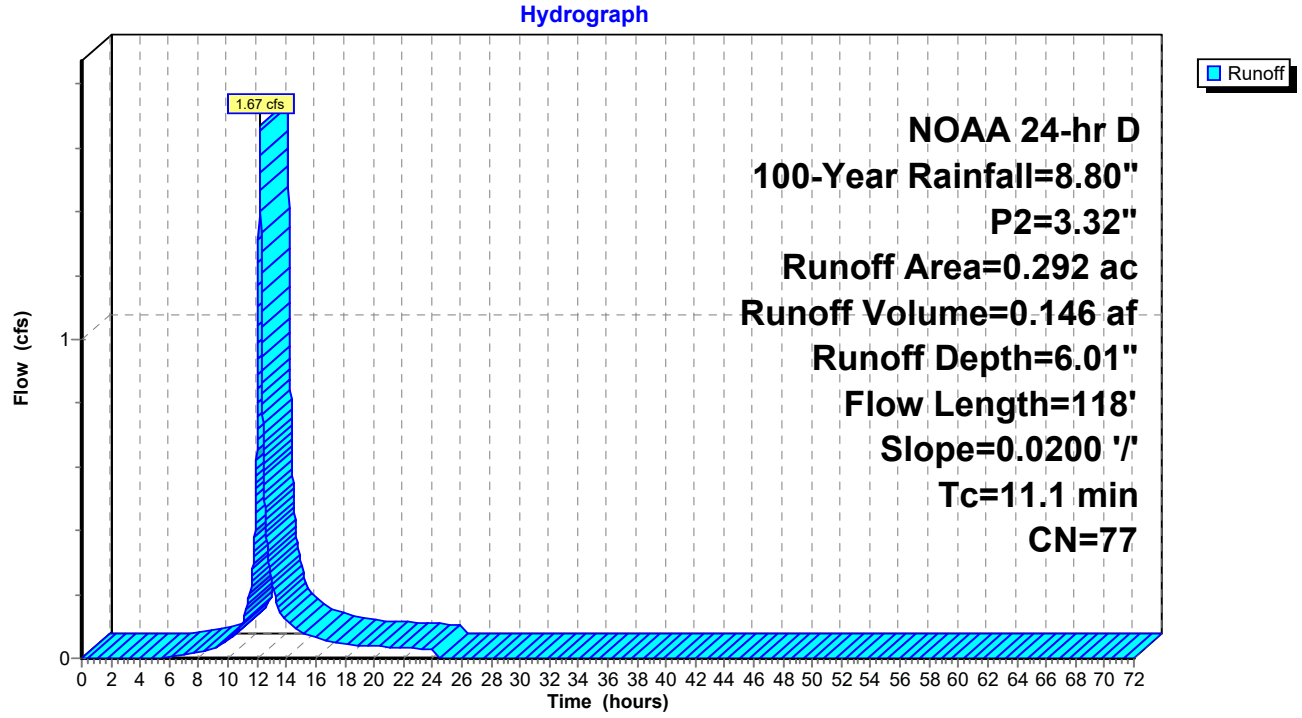
Runoff = 1.67 cfs @ 12.18 hrs, Volume= 0.146 af, Depth= 6.01"
Routed to Pond E1B D : E-Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.292	77	Woods, Good, HSG D
0.292	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	35	0.0200	0.06		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
2.0	83	0.0200	0.71		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
11.1	118	Total			

Subcatchment E1B: EDA-1B (Depression)



Summary for Subcatchment E1C I: E-Off-Site #1C Impervious

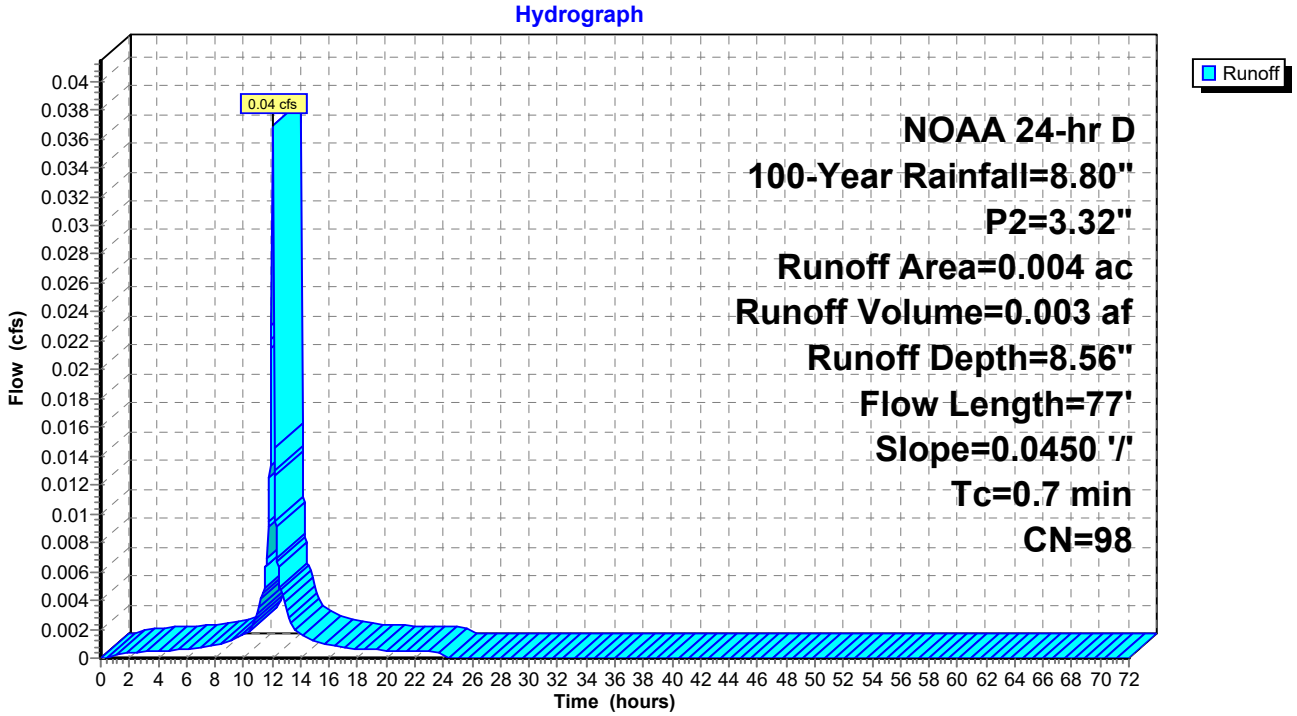
Runoff = 0.04 cfs @ 12.09 hrs, Volume= 0.003 af, Depth= 8.56"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.004	98	Paved parking, HSG D
0.004	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	77	0.0450	1.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"

Subcatchment E1C I: E-Off-Site #1C Impervious



Summary for Subcatchment E1C P: E-Off-Site #1C Pervious

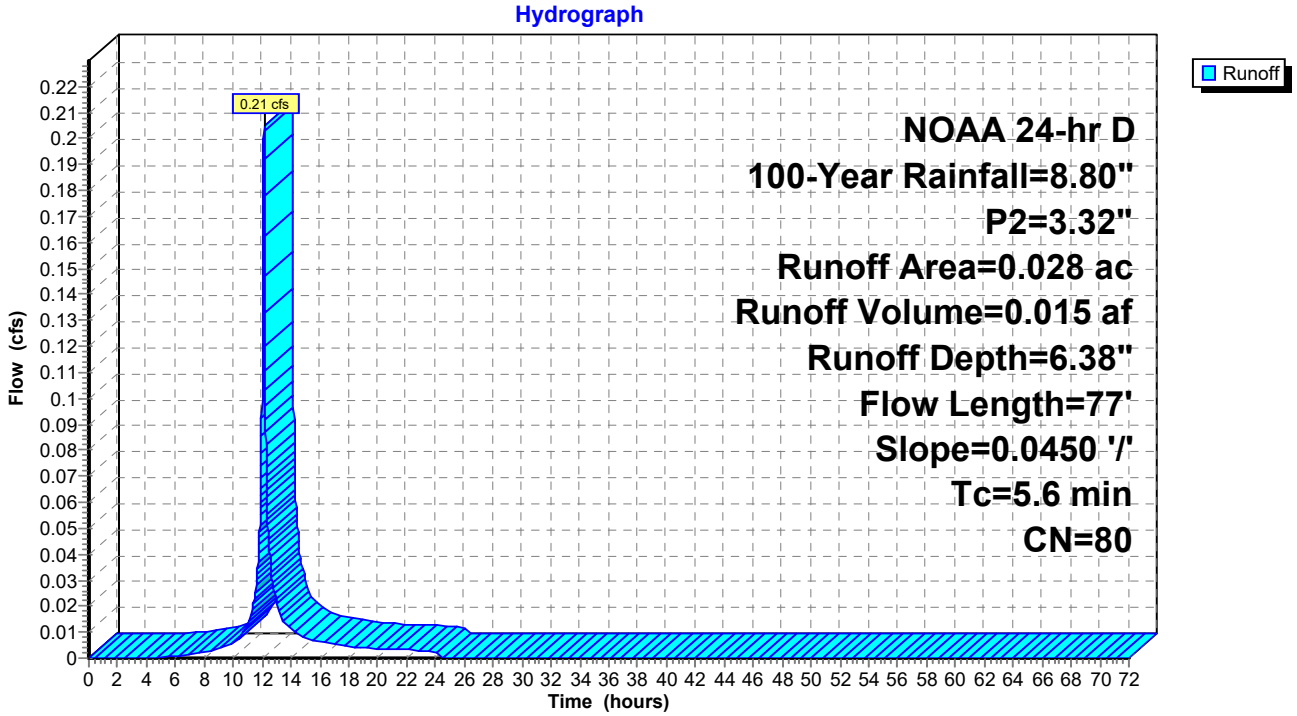
Runoff = 0.21 cfs @ 12.13 hrs, Volume= 0.015 af, Depth= 6.38"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.028	80	>75% Grass cover, Good, HSG D
0.028	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	77	0.0450	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"

Subcatchment E1C P: E-Off-Site #1C Pervious



Summary for Subcatchment E2A: EDA-2

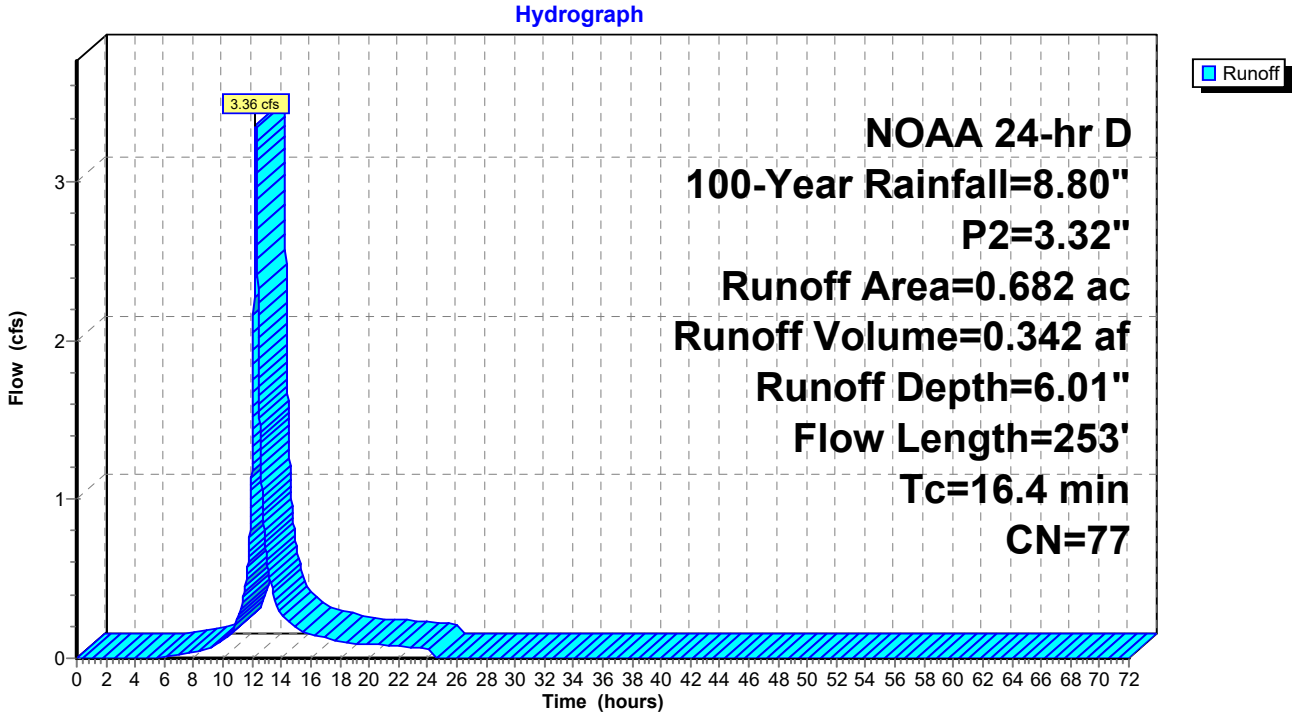
Runoff = 3.36 cfs @ 12.24 hrs, Volume= 0.342 af, Depth= 6.01"
Routed to Link EPOA2 : EPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.682	77	Woods, Good, HSG D
0.682	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	35	0.0200	0.06		**Sheet Flow, E-F** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
7.3	218	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
16.4	253	Total			

Subcatchment E2A: EDA-2



Summary for Subcatchment E4A: EDA-4

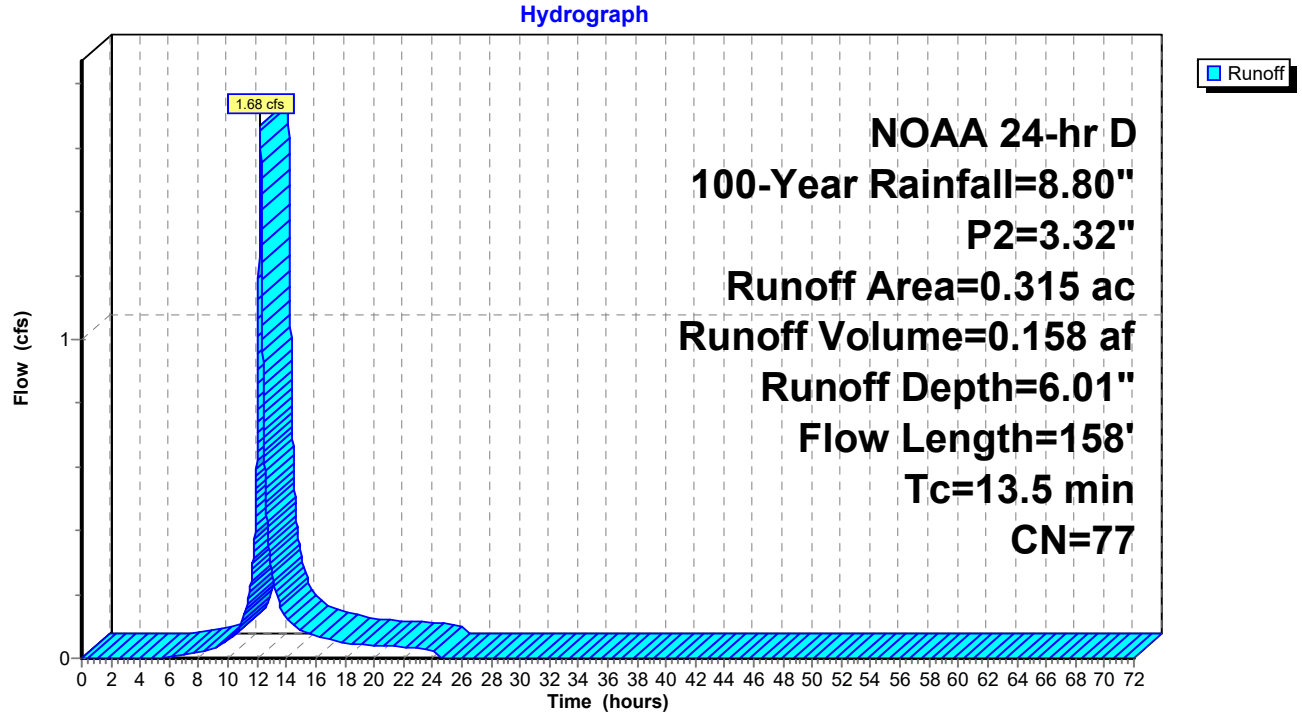
Runoff = 1.68 cfs @ 12.21 hrs, Volume= 0.158 af, Depth= 6.01"
Routed to Link EPOA4 : EPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.315	77	Woods, Good, HSG D
0.315	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	31	0.0150	0.06		**Sheet Flow, Q-R** Woods: Light underbrush n= 0.400 P2= 3.32" Using McCuen-Spiess flow length
4.2	127	0.0100	0.50		**Shallow Concentrated Flow, R-S** Woodland Kv= 5.0 fps
13.5	158	Total			

Subcatchment E4A: EDA-4



Summary for Subcatchment P1A I: PDA-1 Impervious

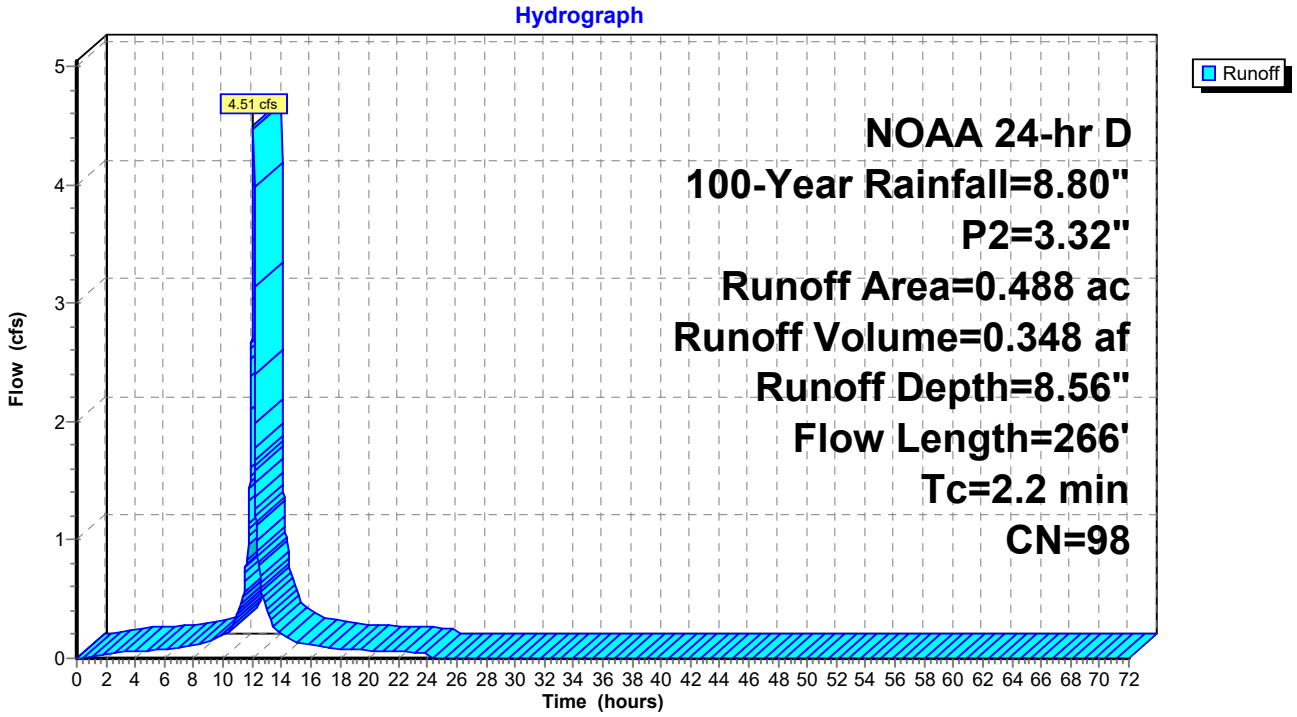
Runoff = 4.51 cfs @ 12.10 hrs, Volume= 0.348 af, Depth= 8.56"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.488	98	Paved parking, HSG D
0.488	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	100	0.0100	1.06		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.32"
0.4	80	0.0230	3.08		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.0	3	0.0030	3.75	4.60	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.2	66	0.0051	4.89	6.00	**Pipe Channel, D-E** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.0	17	0.0127	10.55	33.14	**Pipe Channel, E-F** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.010 PVC, smooth interior
2.2	266	Total			

Subcatchment P1A I: PDA-1 Impervious



Summary for Subcatchment P1A P: PDA-1 Pervious

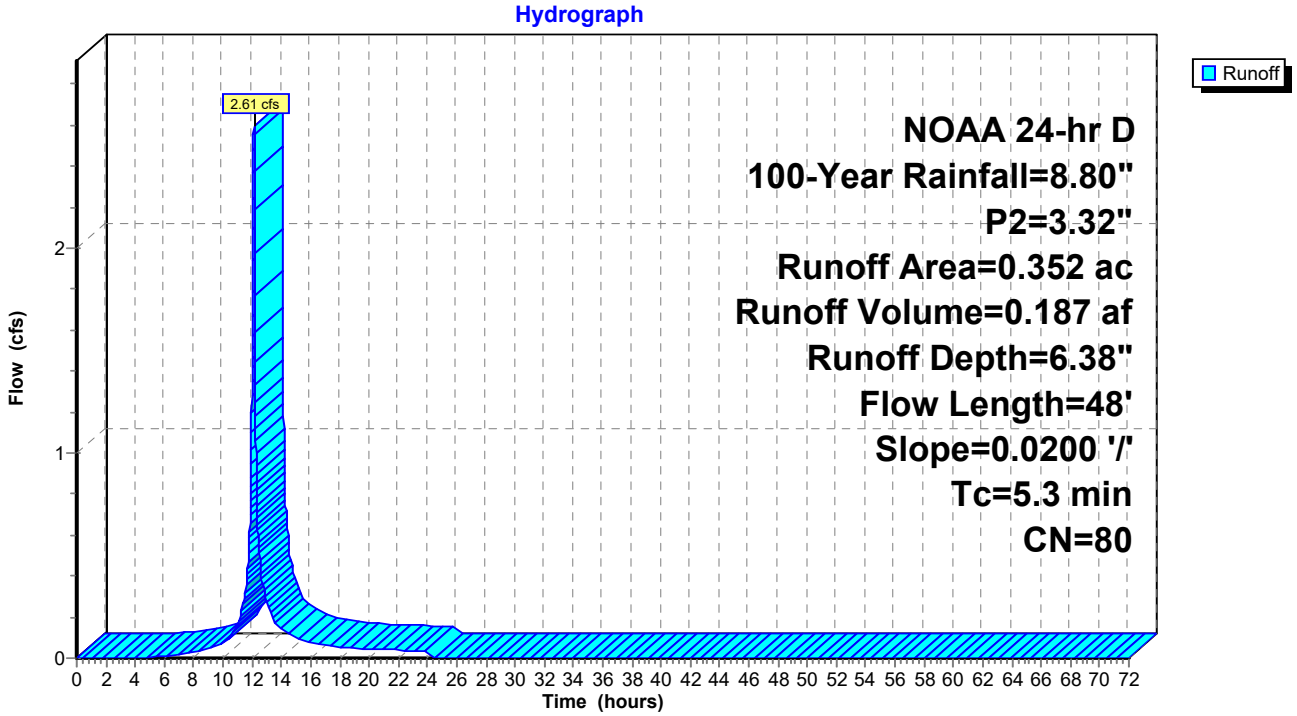
Runoff = 2.61 cfs @ 12.12 hrs, Volume= 0.187 af, Depth= 6.38"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.352	80	>75% Grass cover, Good, HSG D
0.352	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	48	0.0200	0.15		**Sheet Flow, G-H** Grass: Short n= 0.150 P2= 3.32"

Subcatchment P1A P: PDA-1 Pervious



Summary for Subcatchment P1B1: PDA-1 Bypass #1

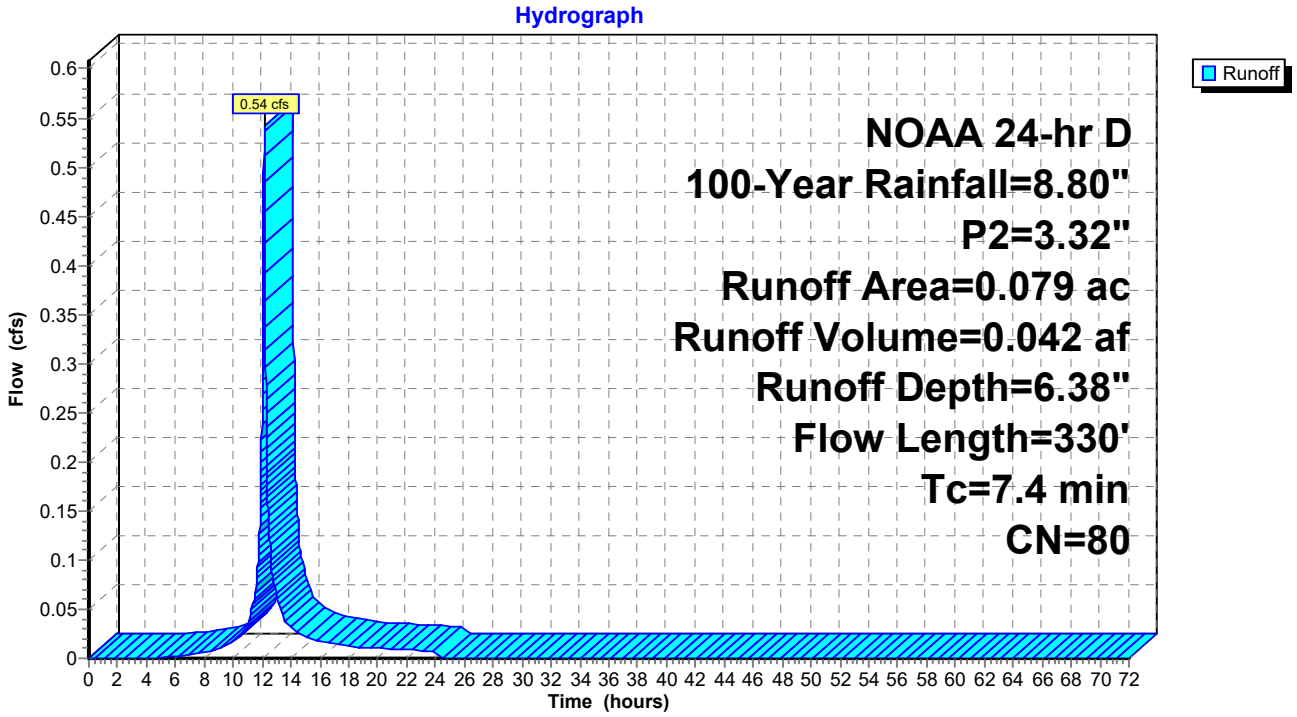
Runoff = 0.54 cfs @ 12.14 hrs, Volume= 0.042 af, Depth= 6.38"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.079	80	>75% Grass cover, Good, HSG D
0.079	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	33	0.0500	0.20		**Sheet Flow, I-J** Grass: Short n= 0.150 P2= 3.32"
0.2	45	0.0013	3.07	9.64	**Pipe Channel, J-K** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
1.2	60	0.0001	0.85	2.67	**Pipe Channel, K-L** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
2.1	105	0.0001	0.85	2.67	**Pipe Channel, L-M** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.9	63	0.0002	1.20	3.78	**Pipe Channel, M-N** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.3	24	0.0002	1.20	3.78	**Pipe Channel, N-O** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
7.4	330	Total			

Subcatchment P1B1: PDA-1 Bypass #1



Summary for Subcatchment P1B2: PDA-1 Bypass #2

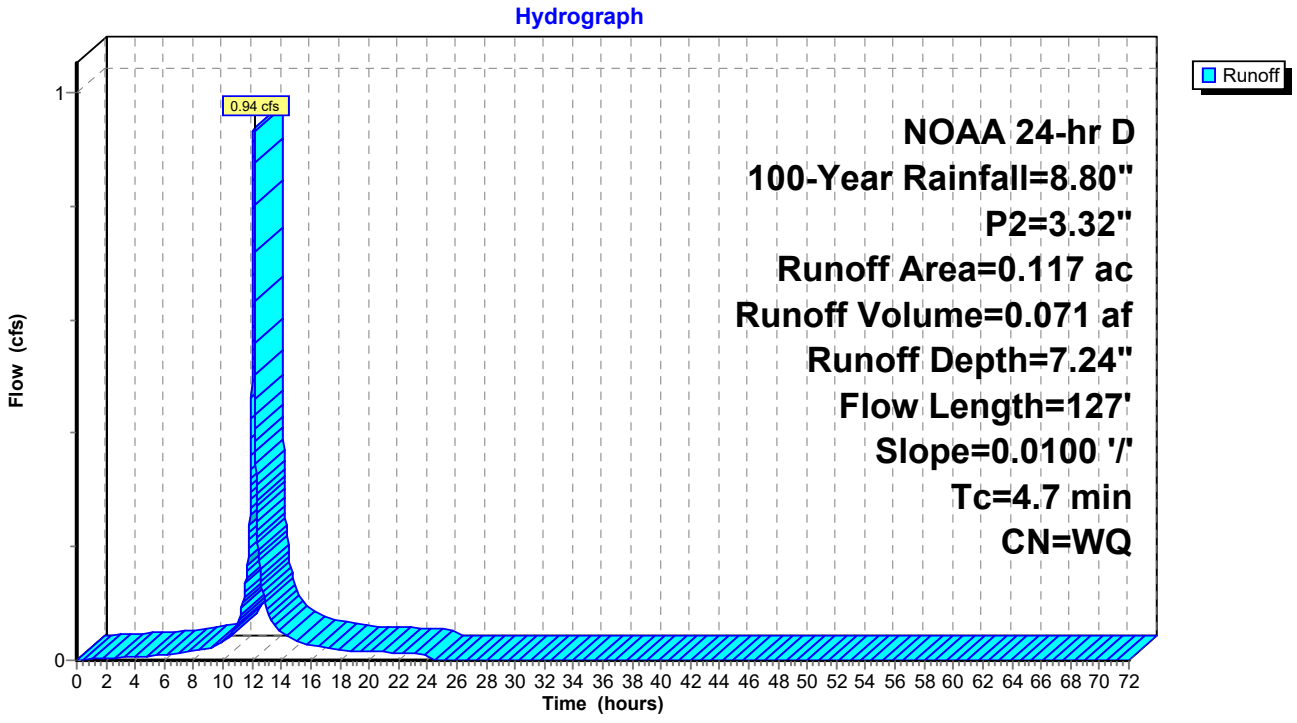
Runoff = 0.94 cfs @ 12.12 hrs, Volume= 0.071 af, Depth= 7.24"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.071	80	>75% Grass cover, Good, HSG D
0.046	98	Paved parking, HSG D
0.117		Weighted Average
0.071	80	60.68% Pervious Area
0.046	98	39.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	22	0.0100	0.10		**Sheet Flow, P-Q** Grass: Short n= 0.150 P2= 3.32"
0.9	105	0.0100	2.03		**Shallow Concentrated Flow, Q-O** Paved Kv= 20.3 fps
4.7	127	Total			

Subcatchment P1B2: PDA-1 Bypass #2



Summary for Subcatchment P1C I: P-Off-Site #1C Impervious

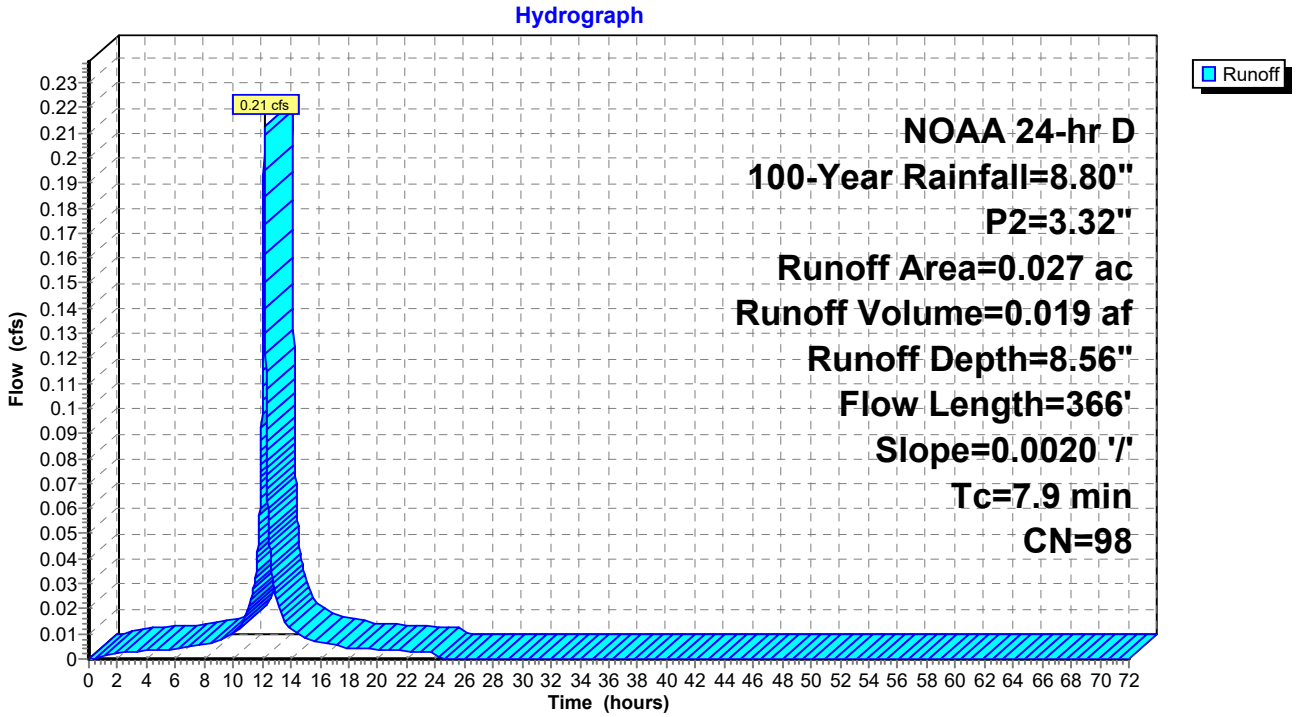
Runoff = 0.21 cfs @ 12.15 hrs, Volume= 0.019 af, Depth= 8.56"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.027	98	Paved parking, HSG D
0.027	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	100	0.0020	0.56		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.32"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.9	366	Total			

Subcatchment P1C I: P-Off-Site #1C Impervious



Summary for Subcatchment P1C P: P-Off-Site #1C Pervious

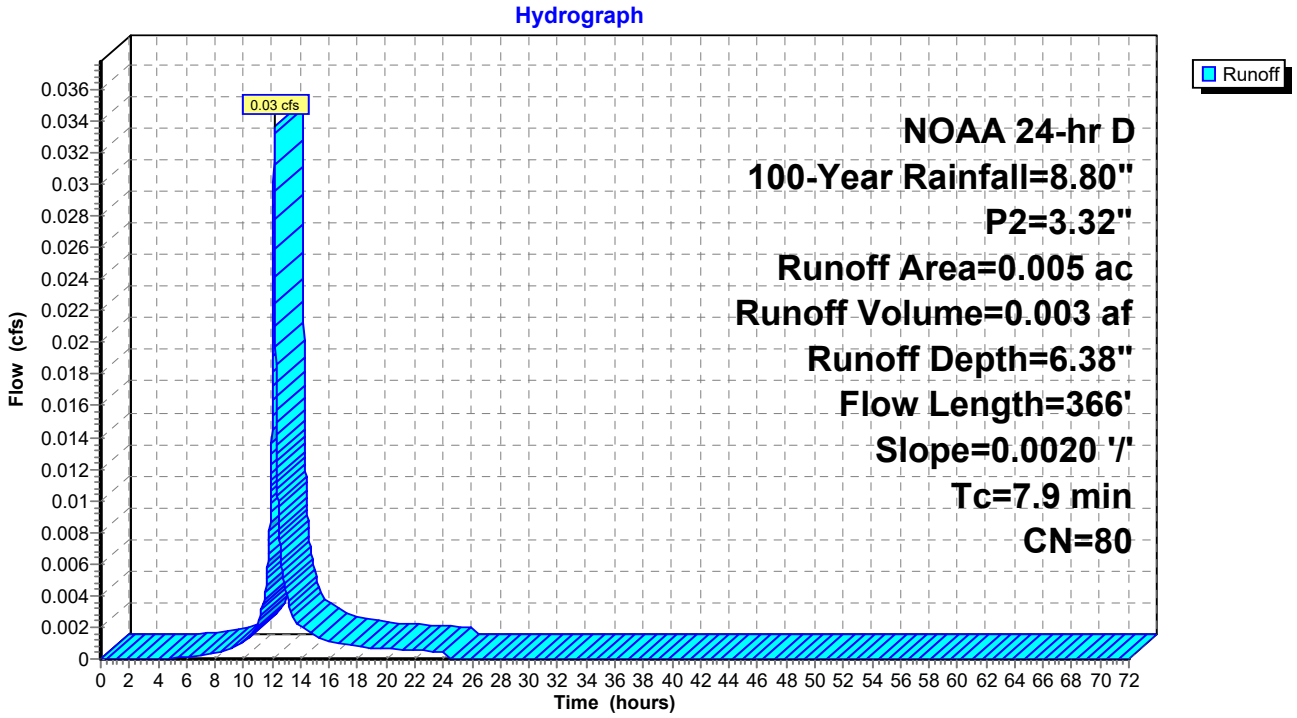
Runoff = 0.03 cfs @ 12.15 hrs, Volume= 0.003 af, Depth= 6.38"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.005	80	>75% Grass cover, Good, HSG D
0.005	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	100	0.0020	0.56		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.32"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.9	366	Total			

Subcatchment P1C P: P-Off-Site #1C Pervious



Summary for Subcatchment P2A I: PDA-2 Impervious

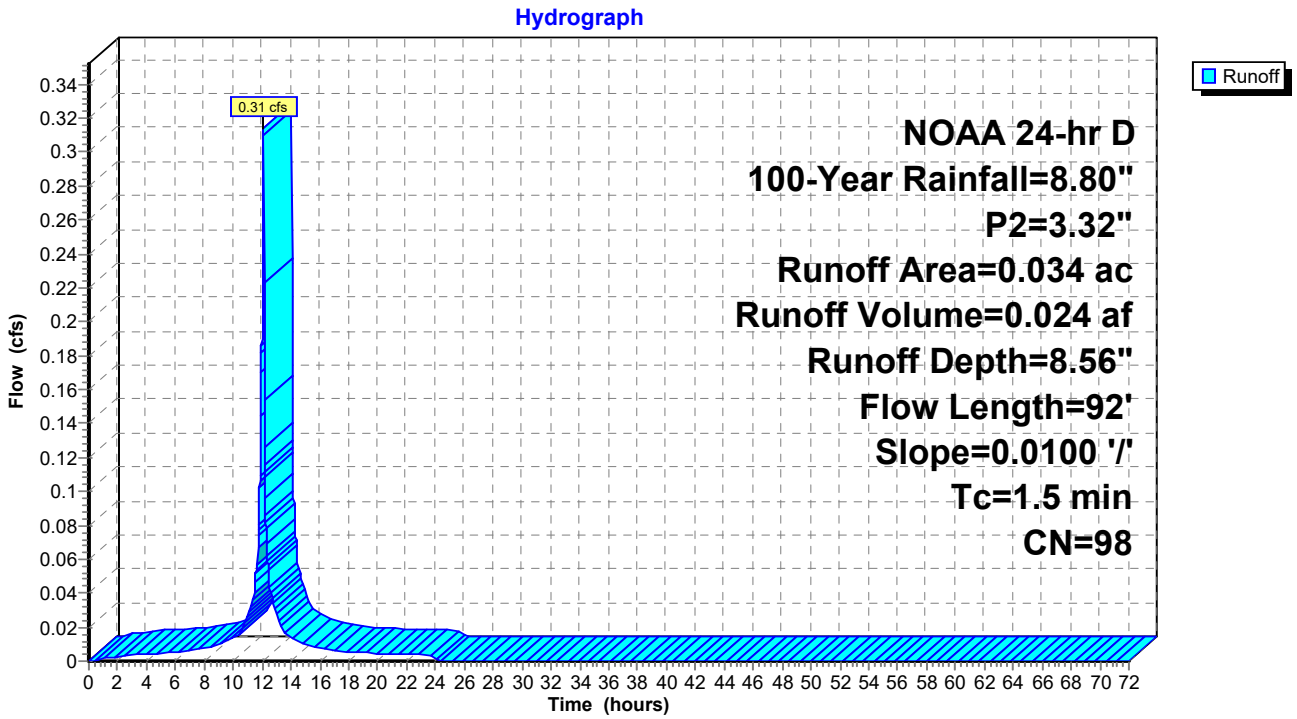
Runoff = 0.31 cfs @ 12.09 hrs, Volume= 0.024 af, Depth= 8.56"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.034	98	Paved parking, HSG D
0.034	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	92	0.0100	1.04		**Sheet Flow, R-S** Smooth surfaces n= 0.011 P2= 3.32"

Subcatchment P2A I: PDA-2 Impervious



Summary for Subcatchment P2A P: PDA-2 Pervious

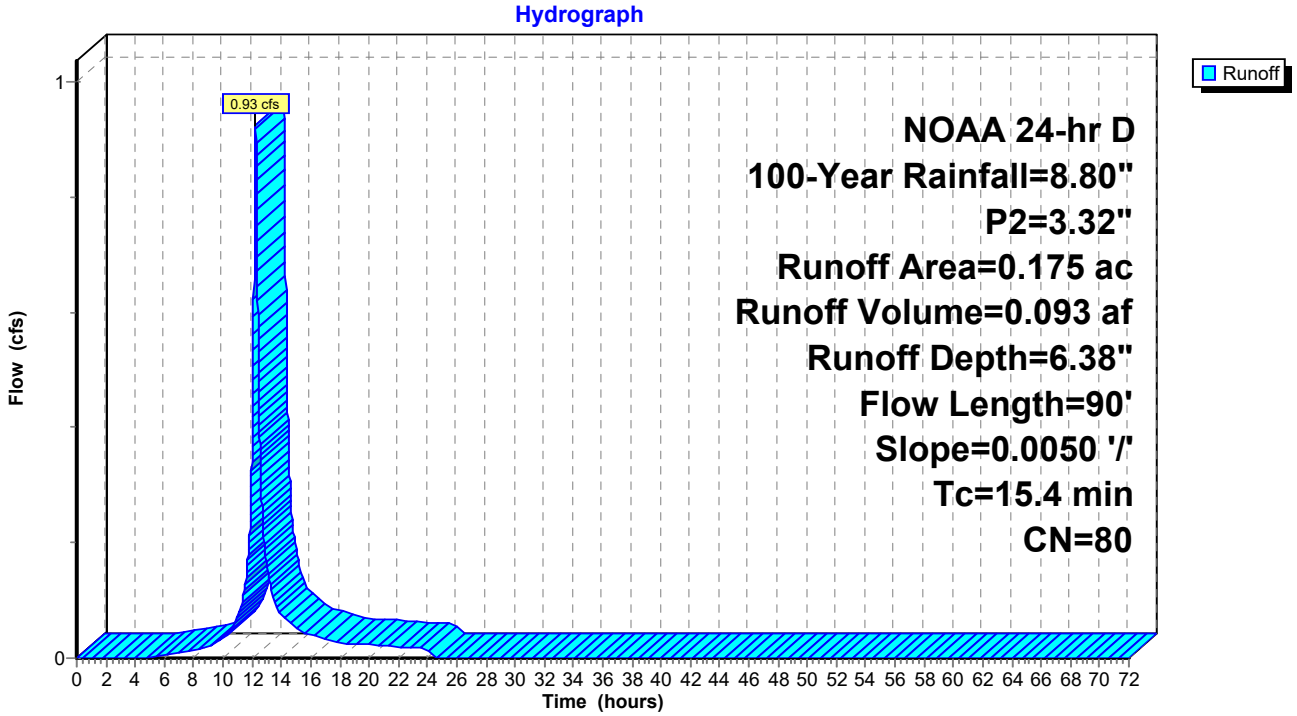
Runoff = 0.93 cfs @ 12.23 hrs, Volume= 0.093 af, Depth= 6.38"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.175	80	>75% Grass cover, Good, HSG D
0.175	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	90	0.0050	0.10		**Sheet Flow, T-U** Grass: Short n= 0.150 P2= 3.32"

Subcatchment P2A P: PDA-2 Pervious



Summary for Subcatchment P4A: PDA-4

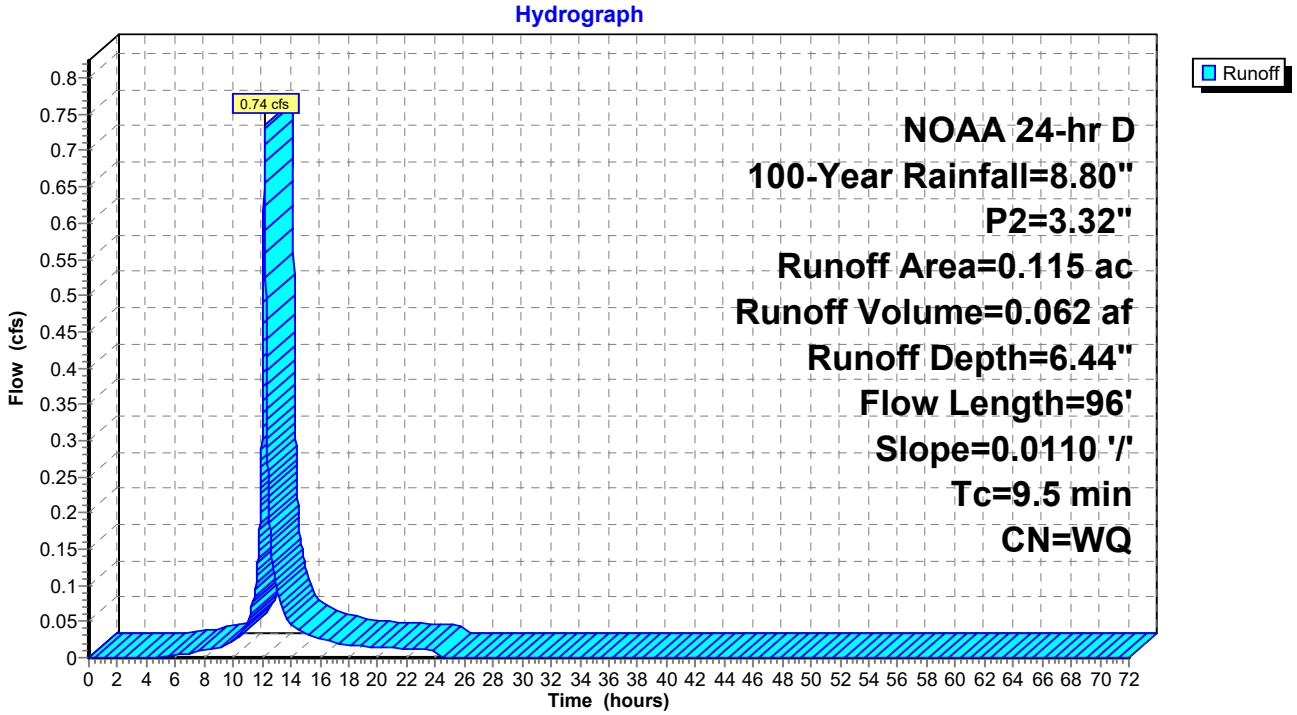
Runoff = 0.74 cfs @ 12.17 hrs, Volume= 0.062 af, Depth= 6.44"
Routed to Link PPOA4 : PPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.112	80	>75% Grass cover, Good, HSG D
0.003	98	Paved parking, HSG D
0.115		Weighted Average
0.112	80	97.39% Pervious Area
0.003	98	2.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	70	0.0110	0.13		**Sheet Flow, V-X** Grass: Short n= 0.150 P2= 3.32" Using McCuen-Spiess flow length
0.3	26	0.0110	1.57		**Shallow Concentrated Flow, X-Y** Grassed Waterway Kv= 15.0 fps
9.5	96	Total			

Subcatchment P4A: PDA-4



Summary for Subcatchment PC1A: PC AREA #1

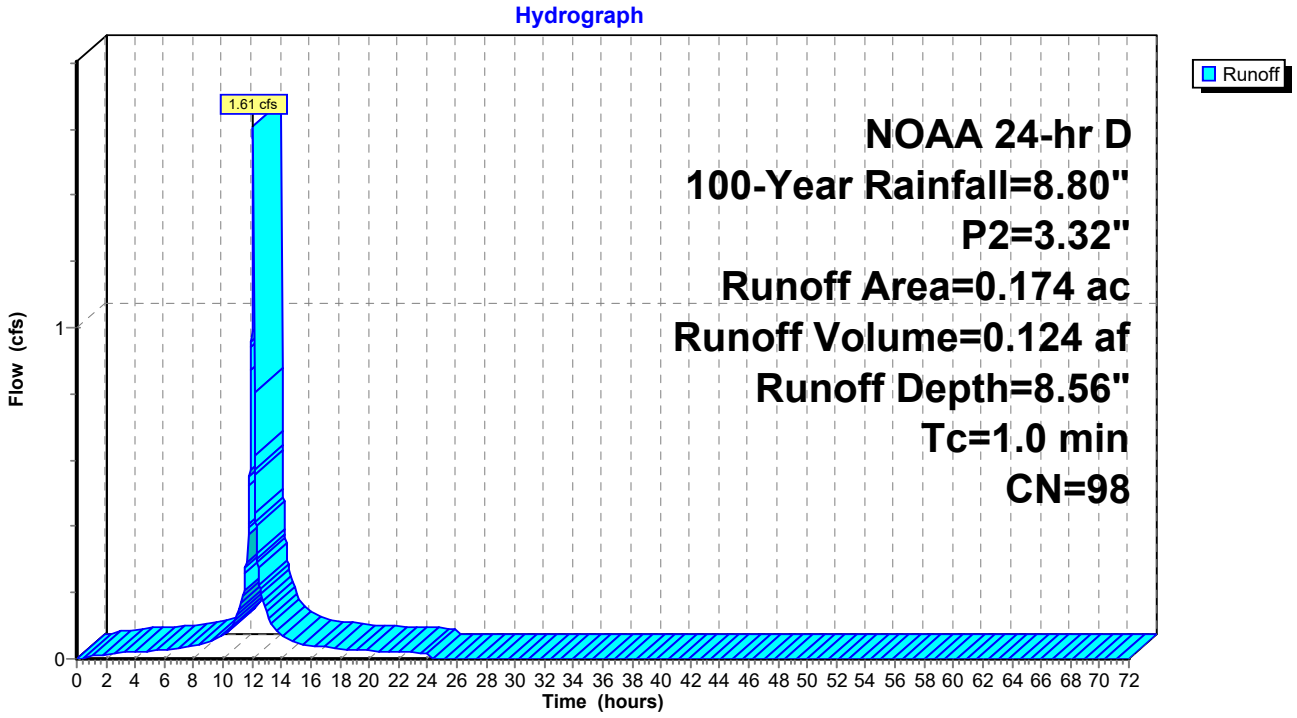
Runoff = 1.61 cfs @ 12.09 hrs, Volume= 0.124 af, Depth= 8.56"
Routed to Pond PC1 : PC 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.174	98	Paved parking, HSG D
0.174	98	100.00% Impervious Area

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

Subcatchment PC1A: PC AREA #1



Summary for Subcatchment PP1A: PPVMT AREA 1

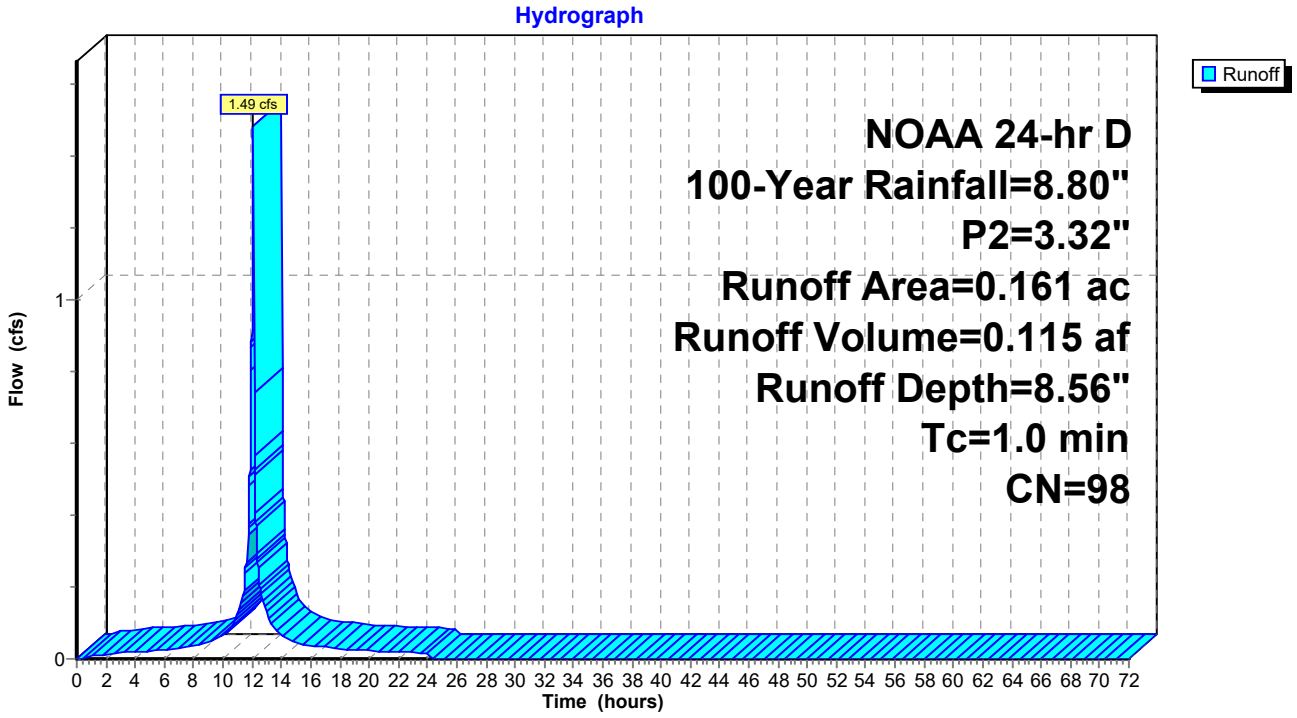
Runoff = 1.49 cfs @ 12.09 hrs, Volume= 0.115 af, Depth= 8.56"
Routed to Pond PP1 : PPVMT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.161	98	Paved parking, HSG D
0.161	98	100.00% Impervious Area

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

Subcatchment PP1A: PPVMT AREA 1



Summary for Subcatchment PP2A: PPVMT AREA #2

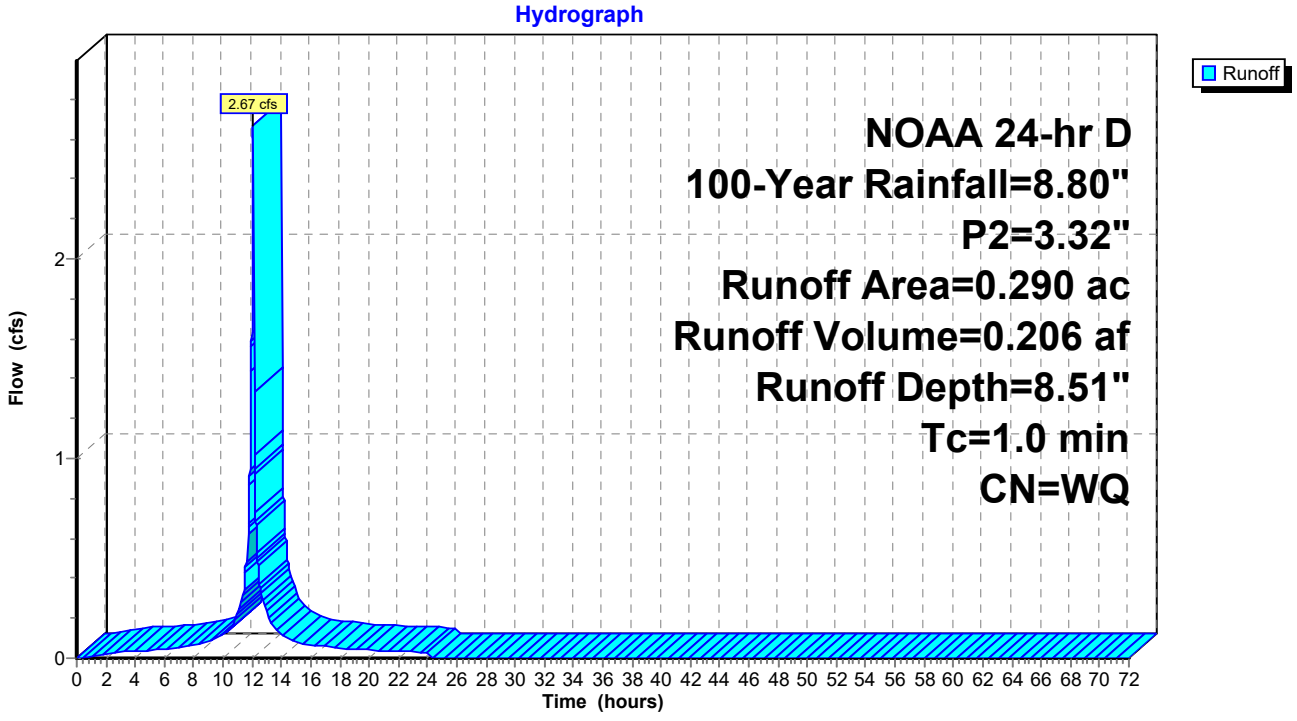
Runoff = 2.67 cfs @ 12.09 hrs, Volume= 0.206 af, Depth= 8.51"
Routed to Pond PP2 : PPVMT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.007	80	>75% Grass cover, Good, HSG D
0.283	98	Paved parking, HSG D
0.290		Weighted Average
0.007	80	2.41% Pervious Area
0.283	98	97.59% Impervious Area

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

Subcatchment PP2A: PPVMT AREA #2



Summary for Subcatchment PP3A: PPVMT AREA #3

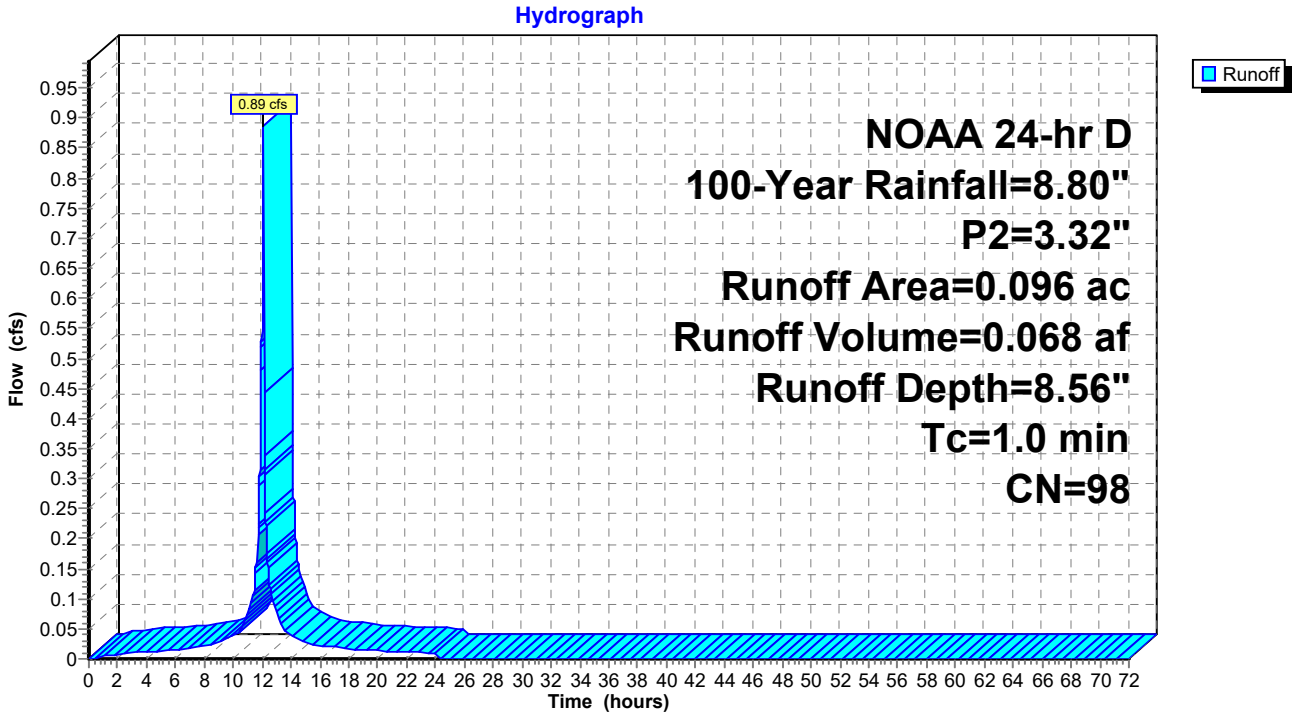
Runoff = 0.89 cfs @ 12.09 hrs, Volume= 0.068 af, Depth= 8.56"
Routed to Pond PP3 : PPVMT 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.096	98	Paved parking, HSG D
0.096	98	100.00% Impervious Area

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

Subcatchment PP3A: PPVMT AREA #3



Summary for Subcatchment PP4A: PPVMT AREA #4

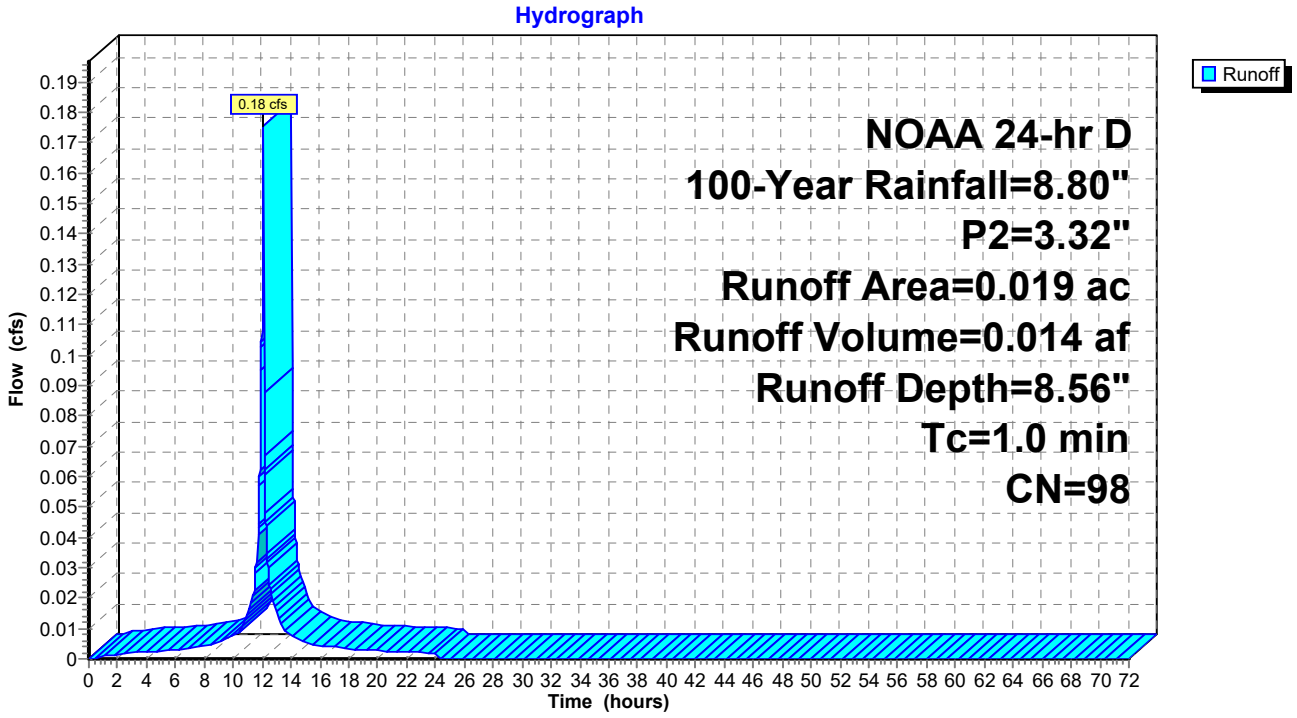
Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.014 af, Depth= 8.56"
Routed to Pond PP4 : PPVMT 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.019	98	Paved parking, HSG D
0.019	98	100.00% Impervious Area

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

Subcatchment PP4A: PPVMT AREA #4



Summary for Subcatchment PP5A: PPVMT AREA #5

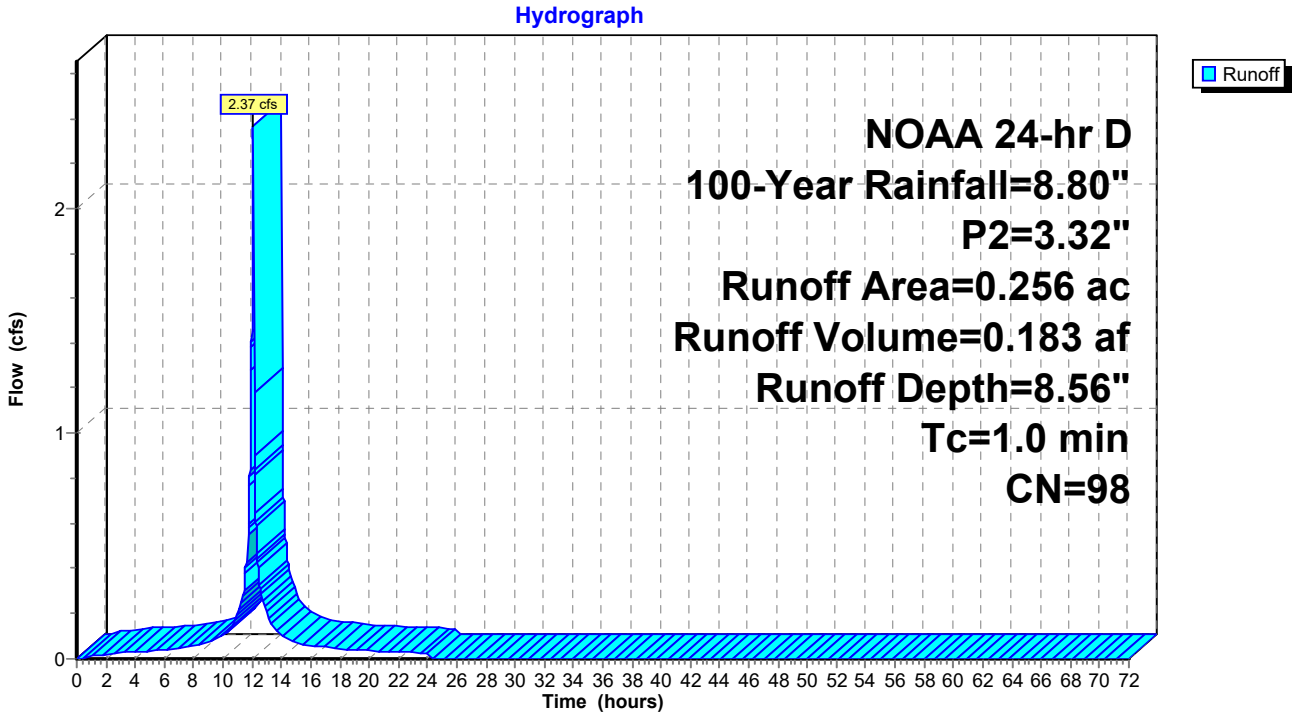
Runoff = 2.37 cfs @ 12.09 hrs, Volume= 0.183 af, Depth= 8.56"
Routed to Pond PP5 : PPVMT 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year Rainfall=8.80", P2=3.32"

Area (ac)	CN	Description
0.256	98	Paved parking, HSG D
0.256	98	100.00% Impervious Area

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

Subcatchment PP5A: PPVMT AREA #5



Summary for Pond CW: Constructed Wetlands (walls with ledge)

Inflow Area = 1.836 ac, 80.45% Impervious, Inflow Depth = 7.86" for 100-Year event
Inflow = 14.05 cfs @ 12.10 hrs, Volume= 1.202 af
Outflow = 3.35 cfs @ 12.51 hrs, Volume= 1.171 af, Atten= 76%, Lag= 24.1 min
Primary = 3.35 cfs @ 12.51 hrs, Volume= 1.171 af
Routed to Link PPOA1 : PPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 107.20' @ 12.51 hrs Surf.Area= 8,269 sf Storage= 24,275 cf

Plug-Flow detention time= 437.7 min calculated for 1.170 af (97% of inflow)
Center-of-Mass det. time= 419.0 min (1,198.2 - 779.2)

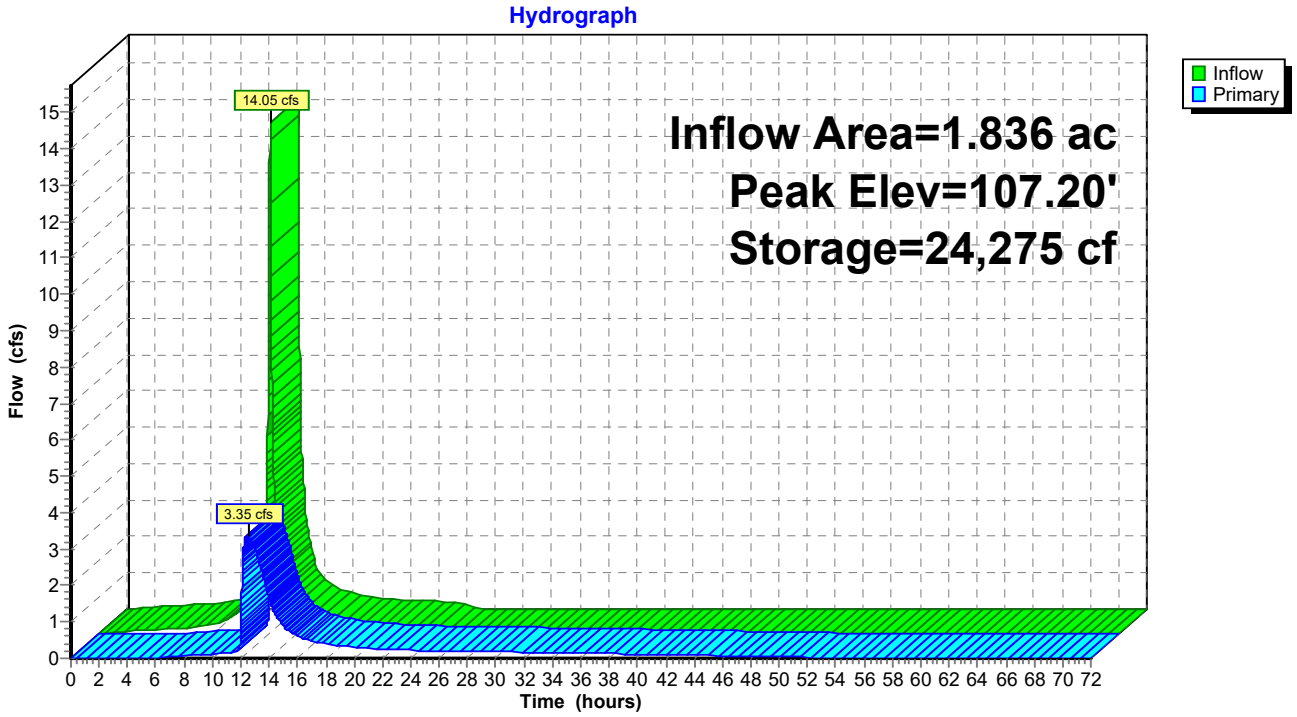
Volume	Invert	Avail.Storage	Storage Description
#1	104.00'	45,333 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
104.00	5,936	0	0
105.00	6,640	6,288	6,288
105.01	8,059	73	6,361
106.00	8,149	8,023	14,384
107.00	8,249	8,199	22,583
108.00	8,349	8,299	30,882
109.00	8,449	8,399	39,281
109.70	8,840	6,051	45,333

Device	Routing	Invert	Outlet Devices
#1	Primary	104.00'	**15.0" Round Culvert** L= 300.0' Ke= 0.500 Inlet / Outlet Invert= 104.00' / 103.10' S= 0.0030 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	104.20'	**2.5" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	105.92'	**12.2" W x 7.7" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	108.00'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.35 cfs @ 12.51 hrs HW=107.20' (Free Discharge)
└**1=Culvert** (Passes 3.35 cfs of 6.09 cfs potential flow)
  ├**2=Orifice** (Orifice Controls 0.28 cfs @ 8.20 fps)
  ├**3=Orifice/Grate** (Orifice Controls 3.07 cfs @ 4.71 fps)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond CW: Constructed Wetlands (walls with ledge)



Summary for Pond E1B D: E-Depression

Inflow Area = 0.292 ac, 0.00% Impervious, Inflow Depth = 6.01" for 100-Year event
Inflow = 1.67 cfs @ 12.18 hrs, Volume= 0.146 af
Outflow = 1.61 cfs @ 12.21 hrs, Volume= 0.139 af, Atten= 4%, Lag= 1.7 min
Primary = 1.61 cfs @ 12.21 hrs, Volume= 0.139 af
Routed to Link EPOA1 : EPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.31' @ 12.21 hrs Surf.Area= 2,559 sf Storage= 539 cf

Plug-Flow detention time= 47.3 min calculated for 0.139 af (95% of inflow)
Center-of-Mass det. time= 19.5 min (837.5 - 818.0)

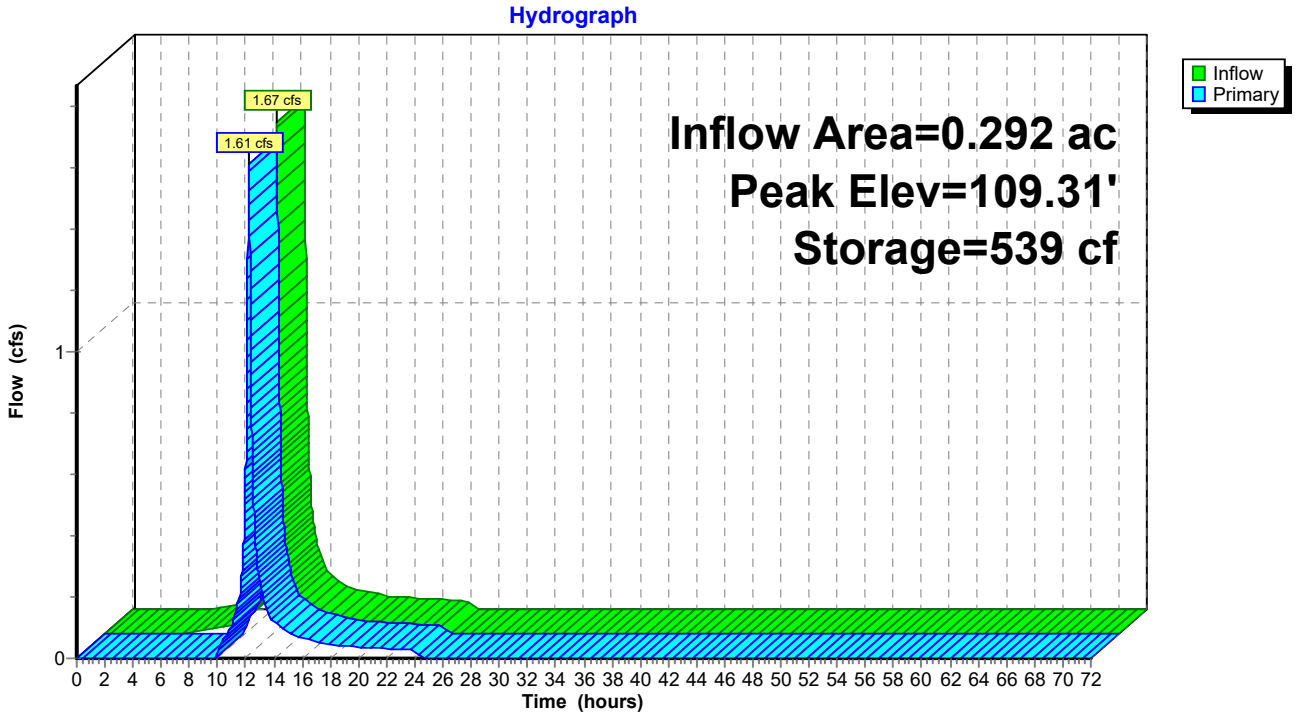
Volume	Invert	Avail.Storage	Storage Description
#1	108.80'	998 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.80	11	0	0
109.00	540	55	55
109.34	2,737	557	612
109.45	4,282	386	998

Device	Routing	Invert	Outlet Devices
#1	Primary	109.21'	**21.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=1.61 cfs @ 12.21 hrs HW=109.31' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 1.61 cfs @ 0.75 fps)

Pond E1B D: E-Depression



Summary for Pond PC1: PC 1

Inflow Area = 0.174 ac,100.00% Impervious, Inflow Depth = 8.56" for 100-Year event
Inflow = 1.61 cfs @ 12.09 hrs, Volume= 0.124 af
Outflow = 0.74 cfs @ 12.12 hrs, Volume= 0.111 af, Atten= 54%, Lag= 2.0 min
Primary = 0.74 cfs @ 12.12 hrs, Volume= 0.111 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 111.00' @ 12.12 hrs Surf.Area= 5,616 sf Storage= 1,870 cf

Plug-Flow detention time= 180.8 min calculated for 0.111 af (90% of inflow)
Center-of-Mass det. time= 125.0 min (861.1 - 736.2)

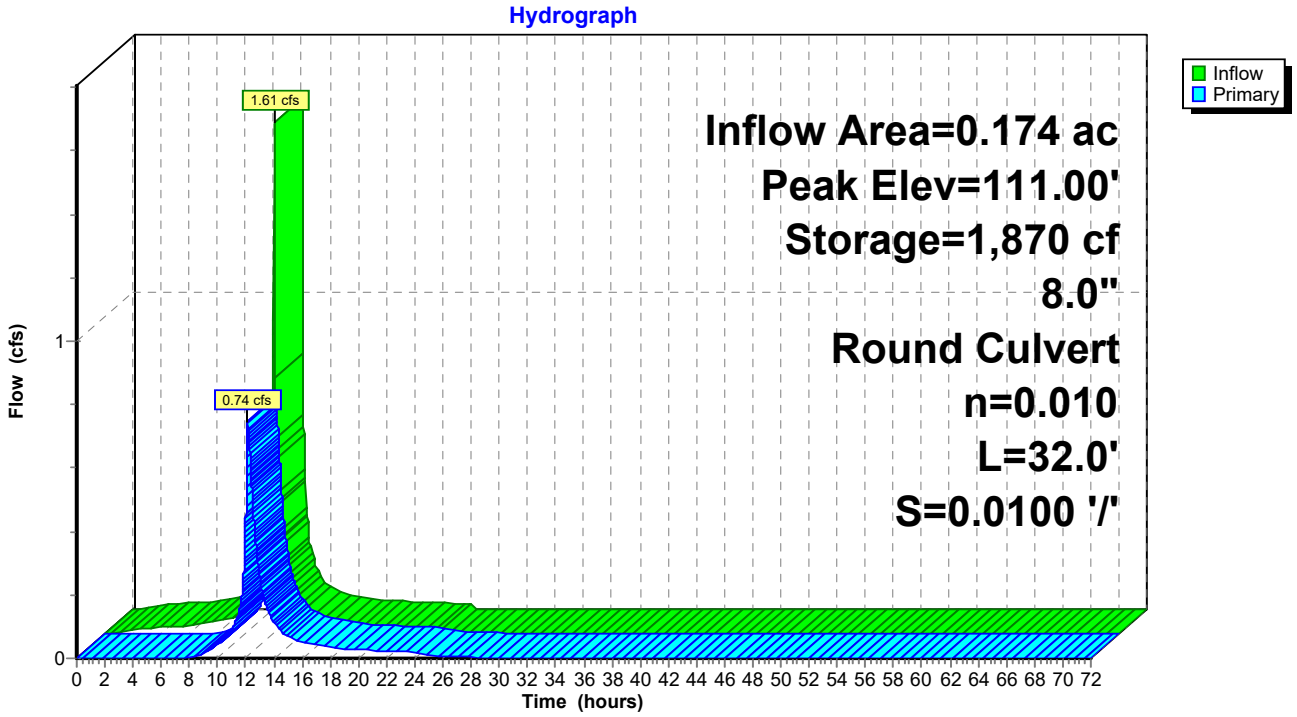
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	6,043 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 15,107 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	5,616	0	0
111.17	5,616	5,616	5,616
112.17	5,616	5,616	11,232
112.86	5,616	3,875	15,107

Device	Routing	Invert	Outlet Devices
#1	Primary	110.42'	**8.0" Round Culvert** L= 32.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.42' / 110.10' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.74 cfs @ 12.12 hrs HW=111.00' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.74 cfs @ 2.29 fps)

Pond PC1: PC 1


Hydrograph
Inflow
Primary
1.61 cfs
0.74 cfs
Inflow Area=0.174 ac
Peak Elev=111.00'
Storage=1,870 cf
8.0"
Round Culvert
n=0.010
L=32.0'
S=0.0100 '/'
Flow (cfs)
0
1
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
Time (hours)

Summary for Pond PP1: PPVMT 1

Inflow Area = 0.161 ac,100.00% Impervious, Inflow Depth = 8.56" for 100-Year event
Inflow = 1.49 cfs @ 12.09 hrs, Volume= 0.115 af
Outflow = 1.39 cfs @ 12.10 hrs, Volume= 0.115 af, Atten= 7%, Lag= 0.8 min
Primary = 1.39 cfs @ 12.10 hrs, Volume= 0.115 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 110.44' @ 12.10 hrs Surf.Area= 2,680 sf Storage= 294 cf

Plug-Flow detention time= 3.3 min calculated for 0.115 af (100% of inflow)
Center-of-Mass det. time= 3.3 min (739.5 - 736.2)

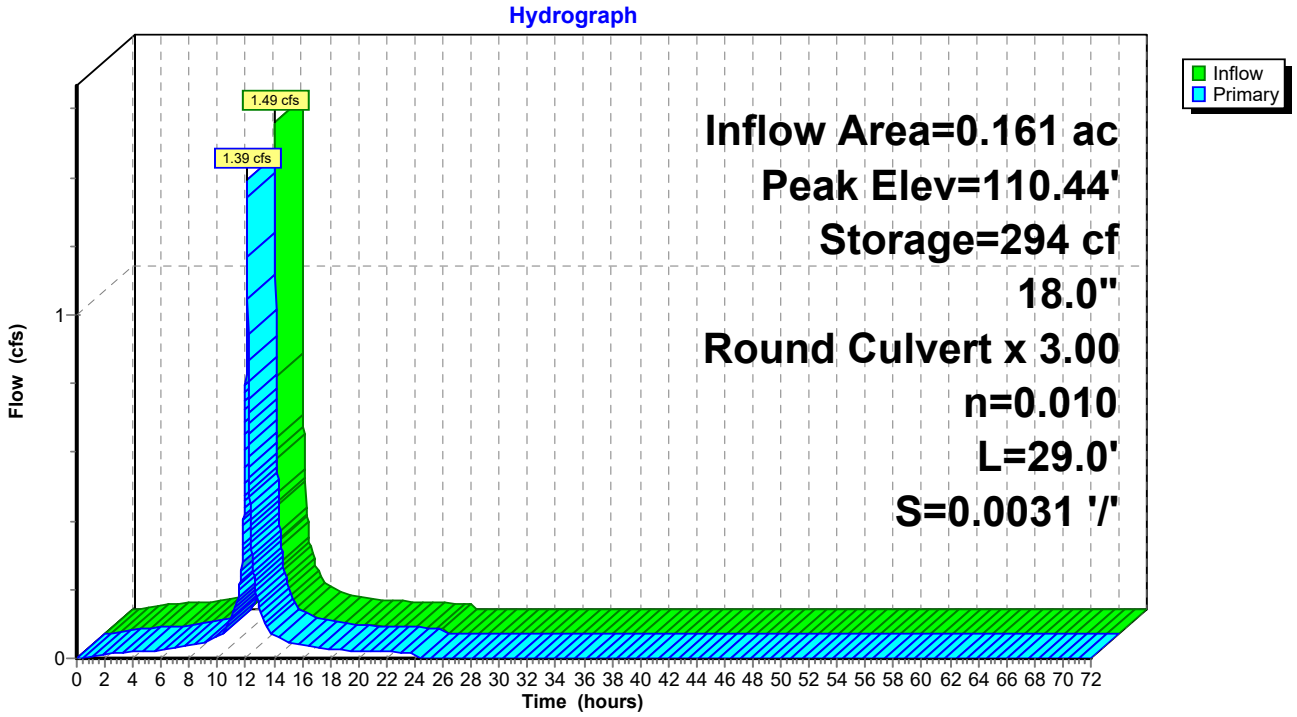
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	1,940 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 4,851 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	2,680	0	0
111.17	2,680	2,680	2,680
111.98	2,680	2,171	4,851

Device	Routing	Invert	Outlet Devices
#1	Primary	110.08'	**18.0" Round Culvert X 3.00** L= 29.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.08' / 109.99' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.39 cfs @ 12.10 hrs HW=110.44' (Free Discharge)
↑**1=Culvert** (Barrel Controls 1.39 cfs @ 2.11 fps)

Pond PP1: PPVMT 1



Summary for Pond PP2: PPVMT 2

Inflow Area = 0.290 ac, 97.59% Impervious, Inflow Depth = 8.51" for 100-Year event
Inflow = 2.67 cfs @ 12.09 hrs, Volume= 0.206 af
Outflow = 2.00 cfs @ 12.11 hrs, Volume= 0.181 af, Atten= 25%, Lag= 1.3 min
Primary = 2.00 cfs @ 12.11 hrs, Volume= 0.181 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.63' @ 12.11 hrs Surf.Area= 3,642 sf Storage= 2,380 cf

Plug-Flow detention time= 151.9 min calculated for 0.181 af (88% of inflow)
Center-of-Mass det. time= 89.9 min (827.2 - 737.3)

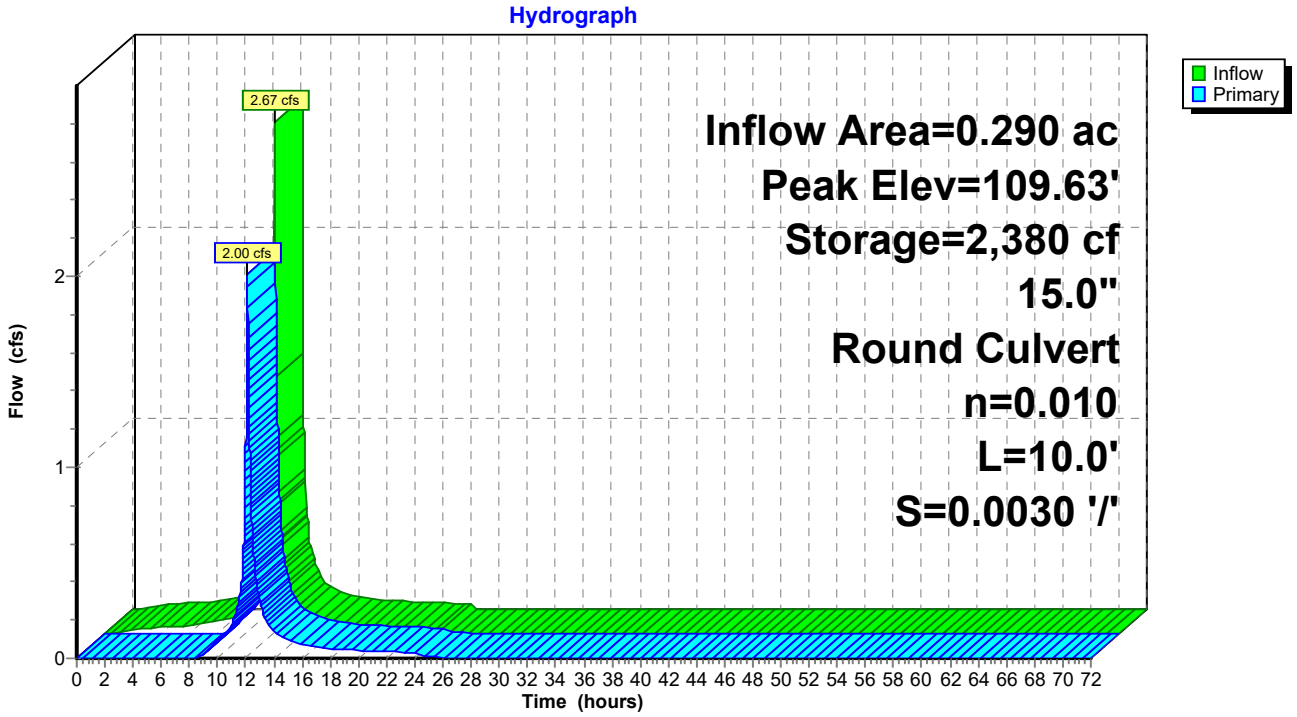
Volume	Invert	Avail.Storage	Storage Description
#1	108.00'	5,434 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 13,585 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	3,642	0	0
109.00	3,642	3,642	3,642
110.00	3,642	3,642	7,284
111.00	3,642	3,642	10,926
111.73	3,642	2,659	13,585

Device	Routing	Invert	Outlet Devices
#1	Primary	108.74'	**15.0" Round Culvert** L= 10.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.74' / 108.71' S= 0.0030 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.00 cfs @ 12.11 hrs HW=109.63' (Free Discharge)
1=Culvert (Barrel Controls 2.00 cfs @ 2.98 fps)

Pond PP2: PPVMT 2



Summary for Pond PP3: PPVMT 3

Inflow Area = 0.096 ac,100.00% Impervious, Inflow Depth = 8.56" for 100-Year event
Inflow = 0.89 cfs @ 12.09 hrs, Volume= 0.068 af
Outflow = 0.89 cfs @ 12.07 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min
Primary = 0.89 cfs @ 12.07 hrs, Volume= 0.068 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.00' @ 12.07 hrs Surf.Area= 1,332 sf Storage= 1 cf

Plug-Flow detention time= 0.0 min calculated for 0.068 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (736.2 - 736.2)

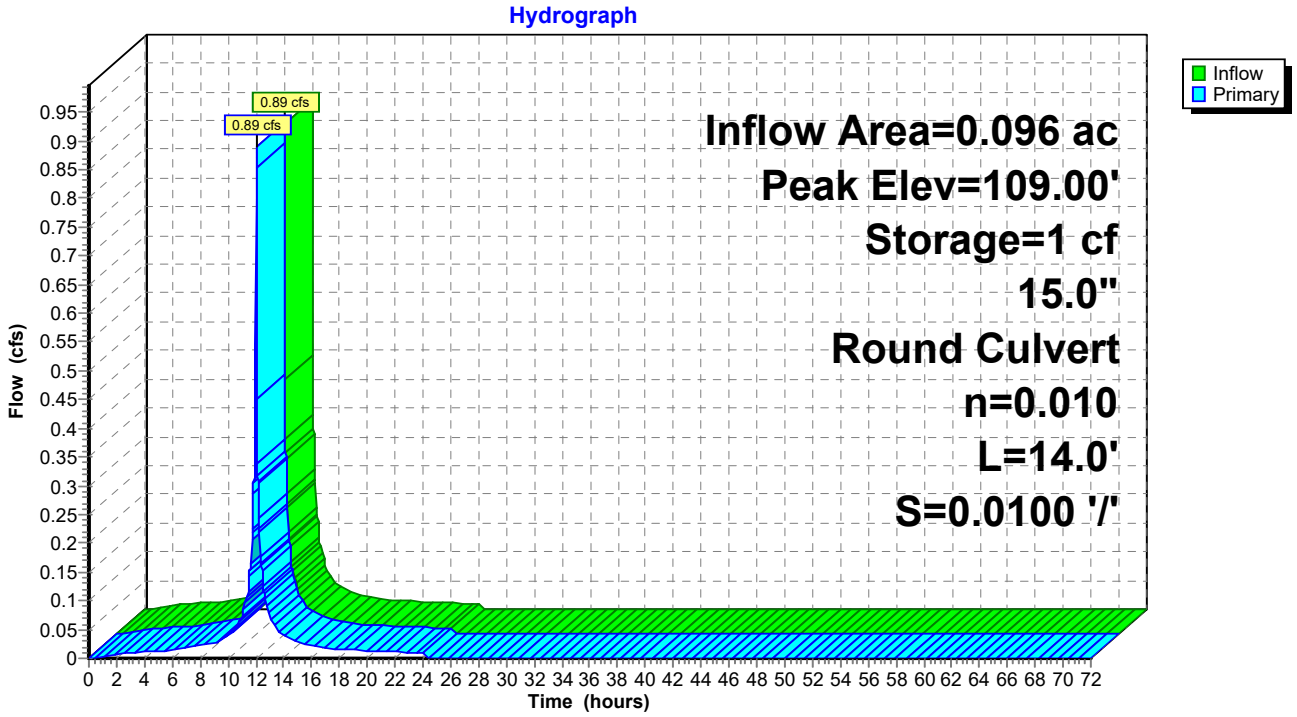
Volume	Invert	Avail.Storage	Storage Description
#1	109.00'	1,108 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 2,771 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
109.00	1,332	0	0
110.00	1,332	1,332	1,332
111.00	1,332	1,332	2,664
111.08	1,332	107	2,771

Device	Routing	Invert	Outlet Devices
#1	Primary	104.14'	**15.0" Round Culvert** L= 14.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 104.14' / 104.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=10.73 cfs @ 12.07 hrs HW=109.00' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 10.73 cfs @ 8.74 fps)

Pond PP3: PPVMT 3



Summary for Pond PP4: PPVMT 4

Inflow Area = 0.019 ac,100.00% Impervious, Inflow Depth = 8.56" for 100-Year event
Inflow = 0.18 cfs @ 12.09 hrs, Volume= 0.014 af
Outflow = 0.17 cfs @ 12.10 hrs, Volume= 0.014 af, Atten= 2%, Lag= 0.5 min
Primary = 0.17 cfs @ 12.10 hrs, Volume= 0.014 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 108.43' @ 12.10 hrs Surf.Area= 360 sf Storage= 15 cf

Plug-Flow detention time= 1.1 min calculated for 0.014 af (100% of inflow)
Center-of-Mass det. time= 1.1 min (737.3 - 736.2)

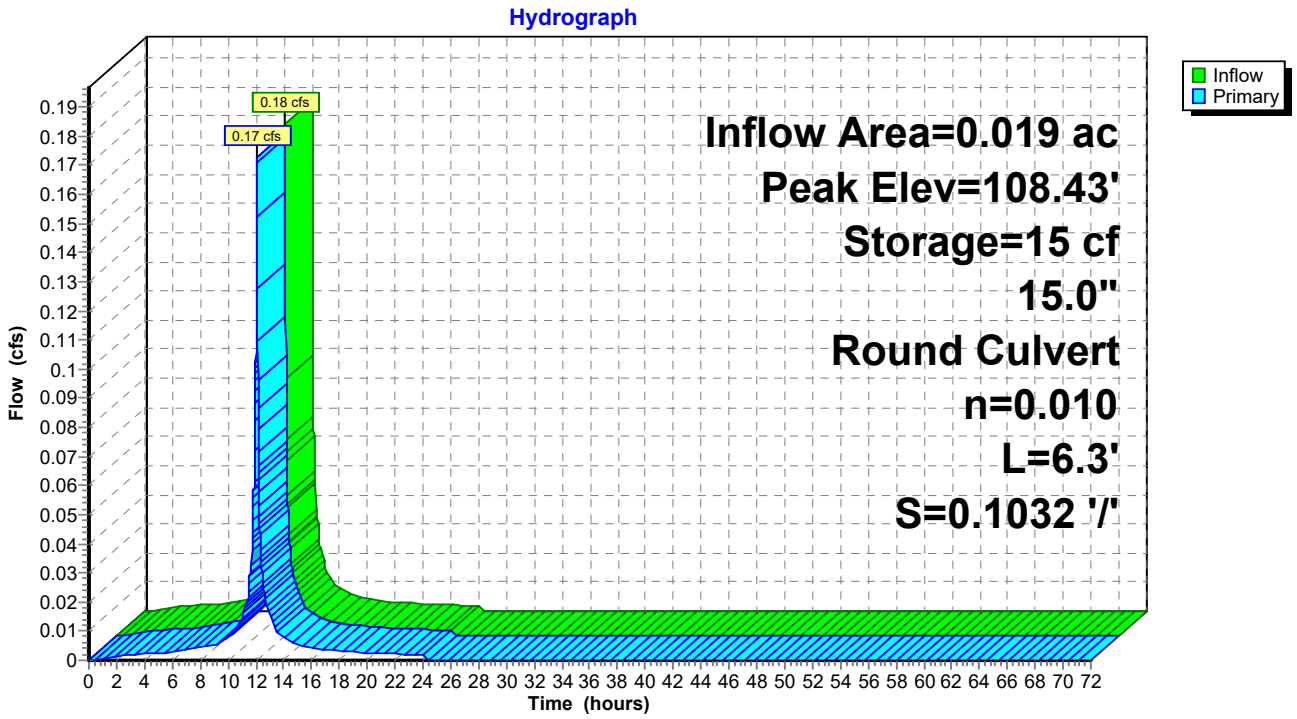
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	511 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 1,278 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	360	0	0
109.33	360	360	360
110.33	360	360	720
111.33	360	360	1,080
111.88	360	198	1,278

Device	Routing	Invert	Outlet Devices
#1	Primary	108.23'	**15.0" Round Culvert** L= 6.3' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.23' / 107.58' S= 0.1032 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.17 cfs @ 12.10 hrs HW=108.43' (Free Discharge)
1=Culvert (Inlet Controls 0.17 cfs @ 1.35 fps)

Pond PP4: PPVMT 4



Summary for Pond PP5: PPVMT 5

Inflow Area = 0.256 ac,100.00% Impervious, Inflow Depth = 8.56" for 100-Year event
Inflow = 2.37 cfs @ 12.09 hrs, Volume= 0.183 af
Outflow = 1.95 cfs @ 12.11 hrs, Volume= 0.178 af, Atten= 18%, Lag= 1.1 min
Primary = 1.95 cfs @ 12.11 hrs, Volume= 0.178 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.22' @ 12.11 hrs Surf.Area= 3,168 sf Storage= 1,127 cf

Plug-Flow detention time= 59.1 min calculated for 0.178 af (98% of inflow)
Center-of-Mass det. time= 43.2 min (779.4 - 736.2)

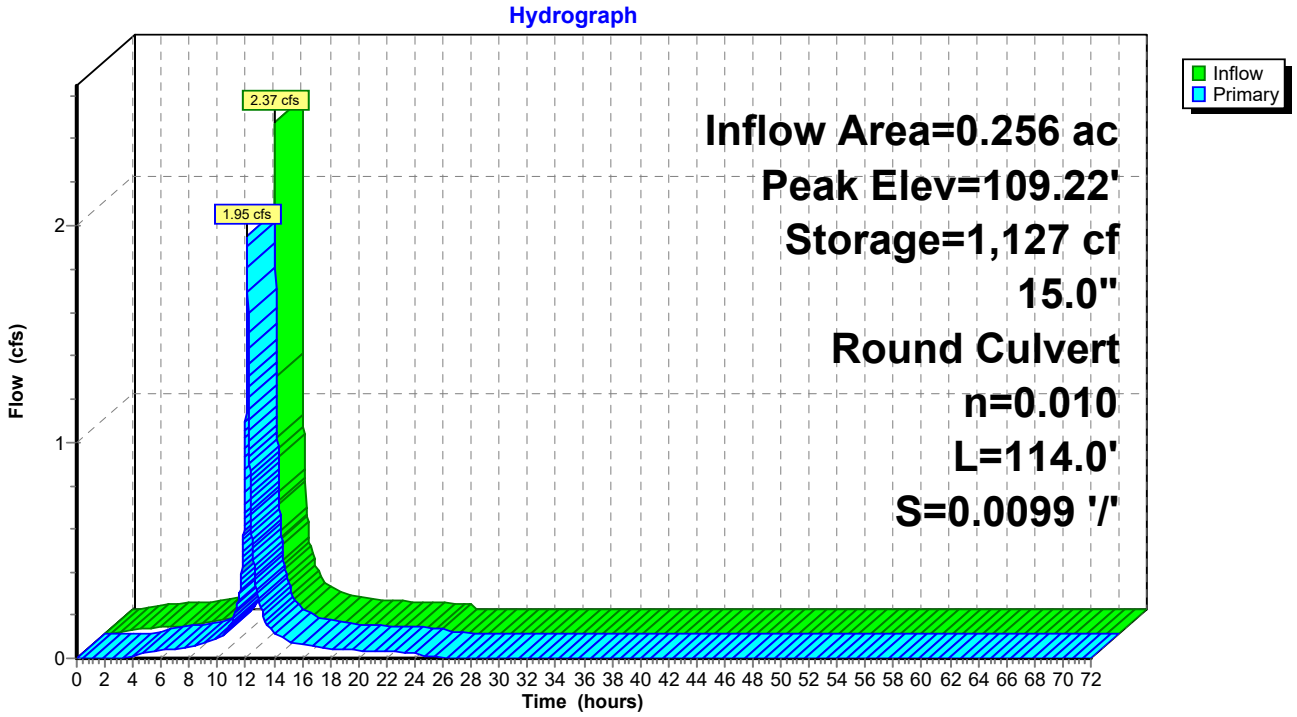
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	3,421 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 8,554 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	3,168	0	0
109.33	3,168	3,168	3,168
110.33	3,168	3,168	6,336
111.00	3,168	2,123	8,459
111.03	3,168	95	8,554

Device	Routing	Invert	Outlet Devices
#1	Primary	108.48'	**15.0" Round Culvert** L= 114.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.48' / 107.35' S= 0.0099 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.95 cfs @ 12.11 hrs HW=109.22' (Free Discharge)
1=Culvert (Inlet Controls 1.95 cfs @ 2.58 fps)

Pond PP5: PPVMT 5

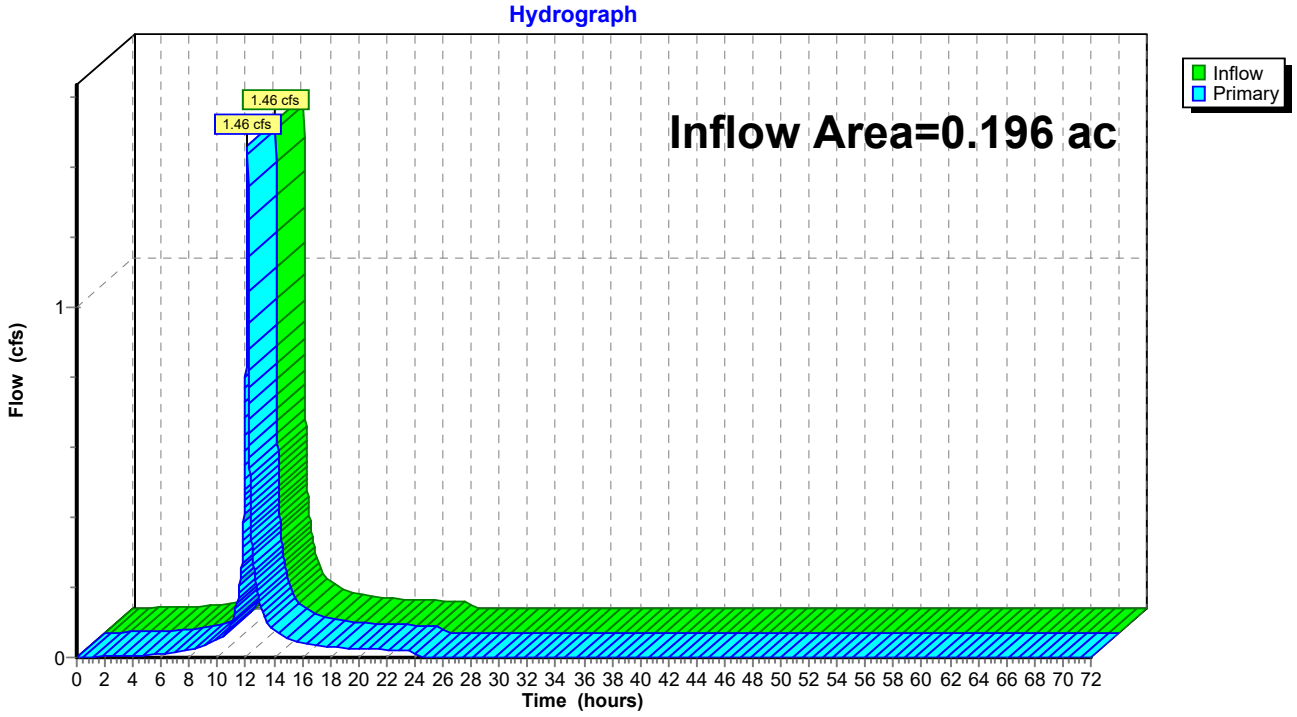


Summary for Link BP: Total Bypass

Inflow Area = 0.196 ac, 23.47% Impervious, Inflow Depth = 6.89" for 100-Year event
Inflow = 1.46 cfs @ 12.13 hrs, Volume= 0.113 af
Primary = 1.46 cfs @ 12.13 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min
Routed to Link PPOA1 : PPOA-1

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

Link BP: Total Bypass

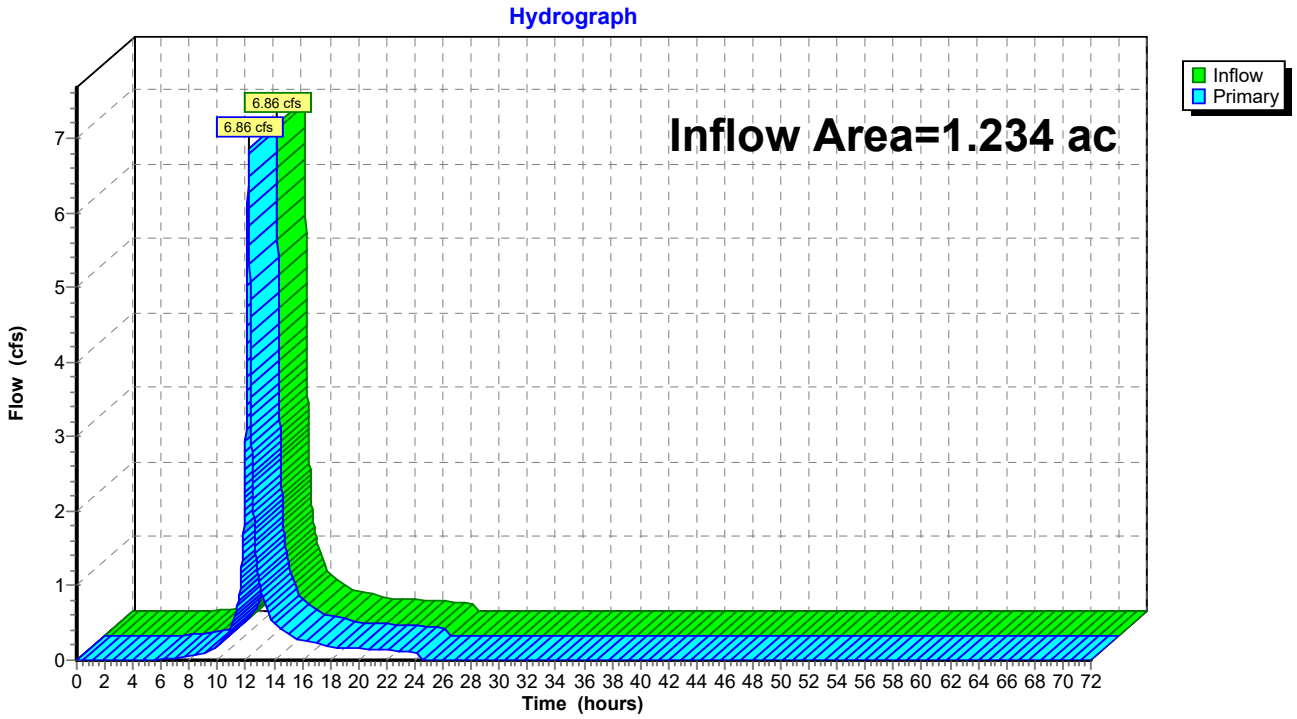


Summary for Link EPOA1: EPOA-1

Inflow Area = 1.234 ac, 0.32% Impervious, Inflow Depth = 5.96" for 100-Year event
Inflow = 6.86 cfs @ 12.19 hrs, Volume= 0.613 af
Primary = 6.86 cfs @ 12.19 hrs, Volume= 0.613 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA1: EPOA-1

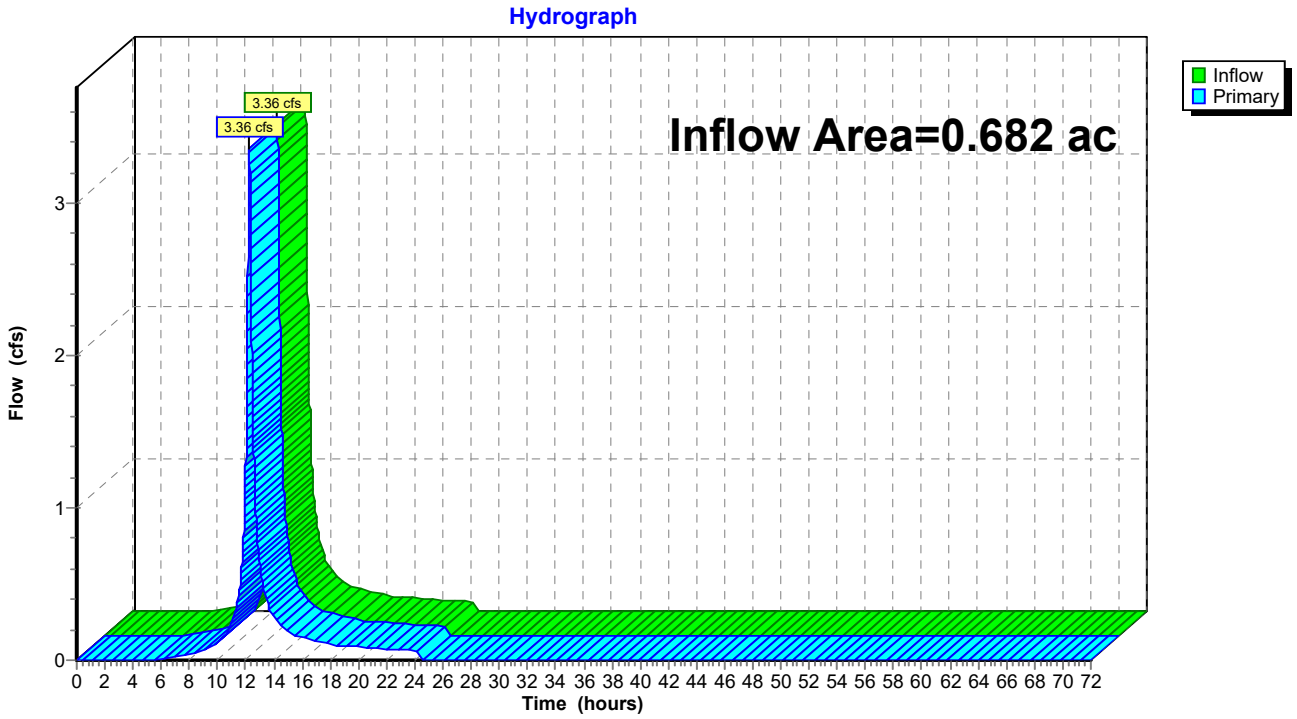


Summary for Link EPOA2: EPOA-2

Inflow Area = 0.682 ac, 0.00% Impervious, Inflow Depth = 6.01" for 100-Year event
Inflow = 3.36 cfs @ 12.24 hrs, Volume= 0.342 af
Primary = 3.36 cfs @ 12.24 hrs, Volume= 0.342 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA2: EPOA-2

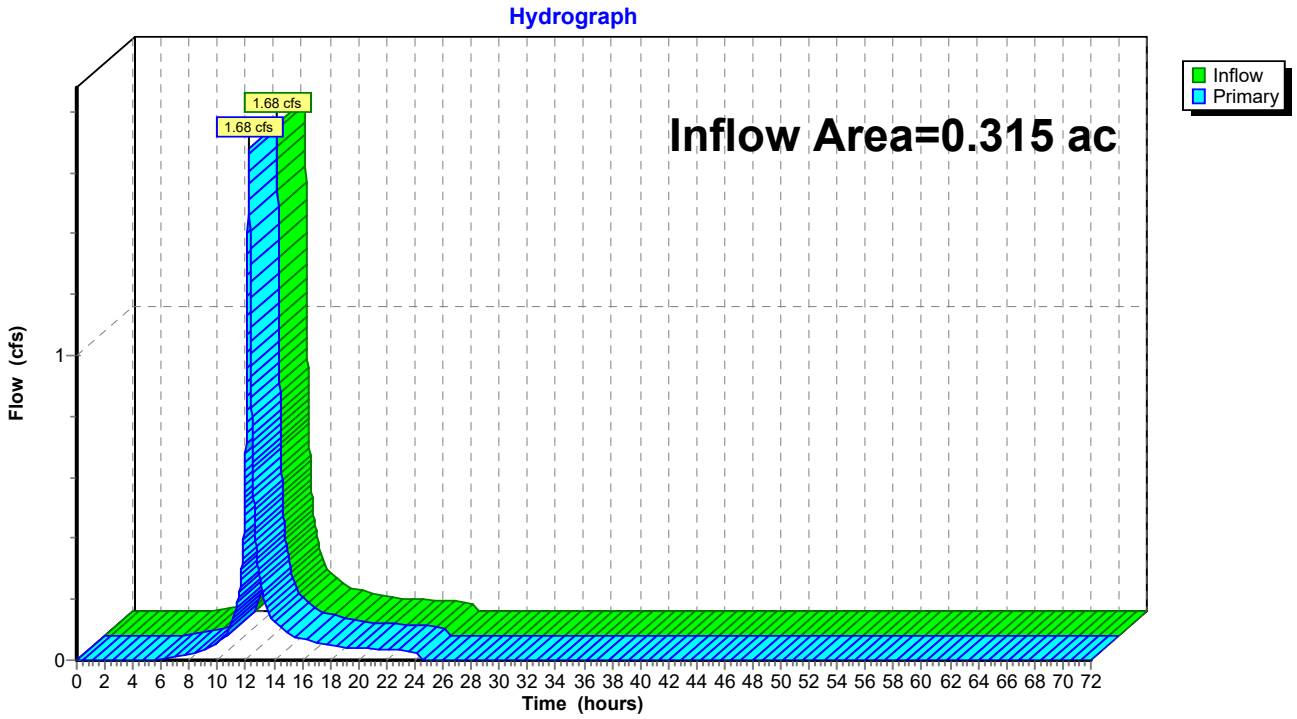


Summary for Link EPOA4: EPOA-4

Inflow Area = 0.315 ac, 0.00% Impervious, Inflow Depth = 6.01" for 100-Year event
Inflow = 1.68 cfs @ 12.21 hrs, Volume= 0.158 af
Primary = 1.68 cfs @ 12.21 hrs, Volume= 0.158 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA4: EPOA-4

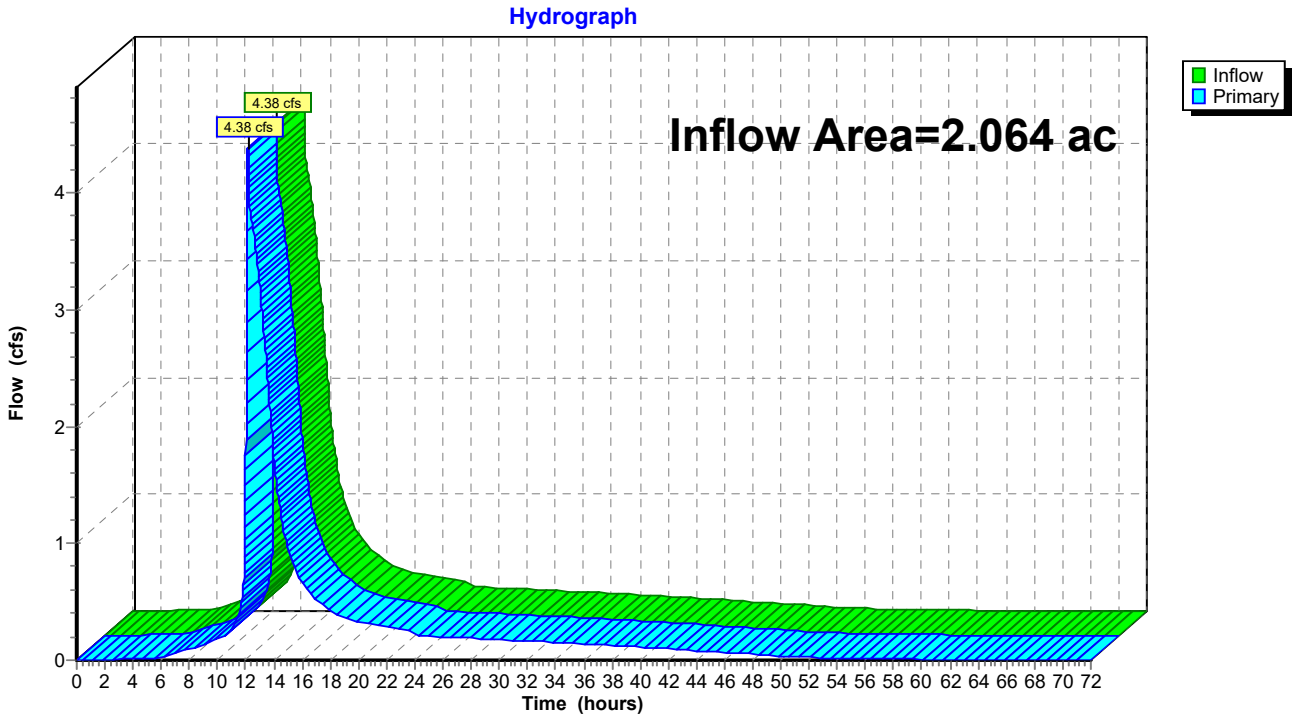


Summary for Link PPOA1: PPOA-1

Inflow Area = 2.064 ac, 75.10% Impervious, Inflow Depth > 7.59" for 100-Year event
Inflow = 4.38 cfs @ 12.14 hrs, Volume= 1.305 af
Primary = 4.38 cfs @ 12.14 hrs, Volume= 1.305 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA1: PPOA-1

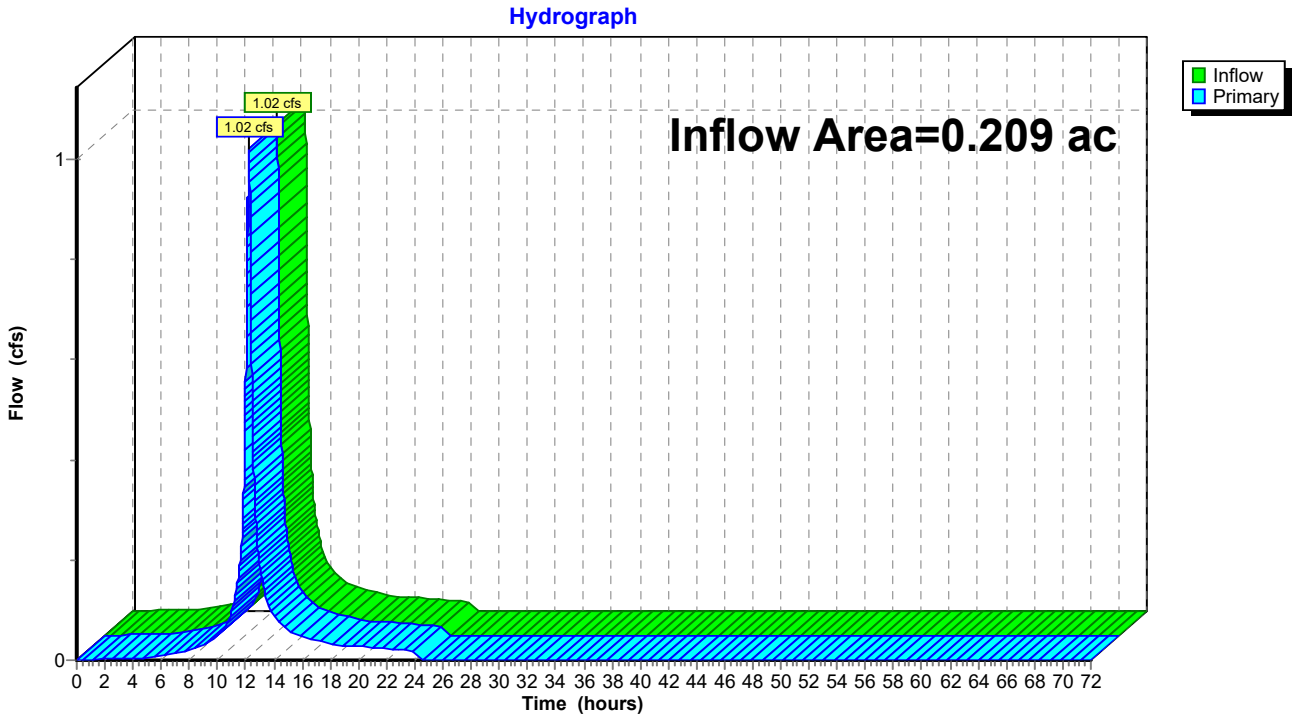


Summary for Link PPOA2: PPOA-2

Inflow Area = 0.209 ac, 16.27% Impervious, Inflow Depth = 6.73" for 100-Year event
Inflow = 1.02 cfs @ 12.21 hrs, Volume= 0.117 af
Primary = 1.02 cfs @ 12.21 hrs, Volume= 0.117 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA2: PPOA-2

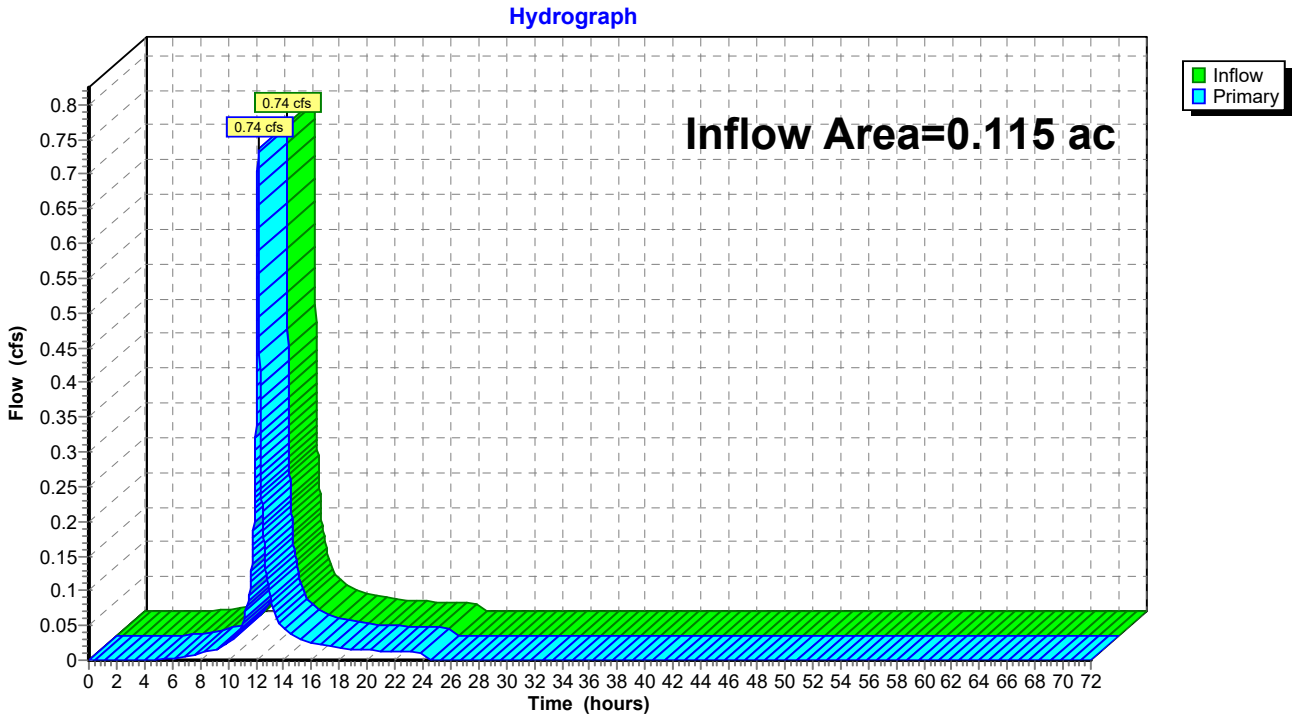


Summary for Link PPOA4: PPOA-4

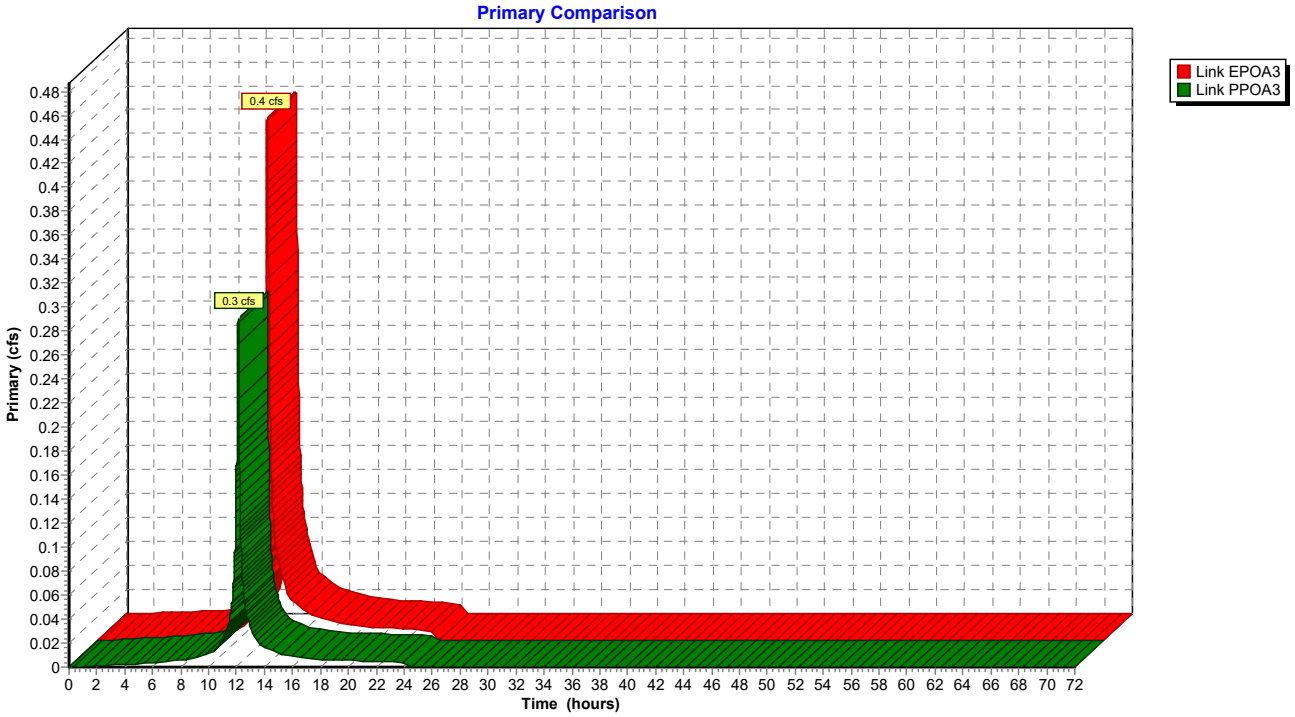
Inflow Area = 0.115 ac, 2.61% Impervious, Inflow Depth = 6.44" for 100-Year event
Inflow = 0.74 cfs @ 12.17 hrs, Volume= 0.062 af
Primary = 0.74 cfs @ 12.17 hrs, Volume= 0.062 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA4: PPOA-4



Pre-vs. Post Comparison (POA#3)
(Current Adjusted Precipitation Depth)

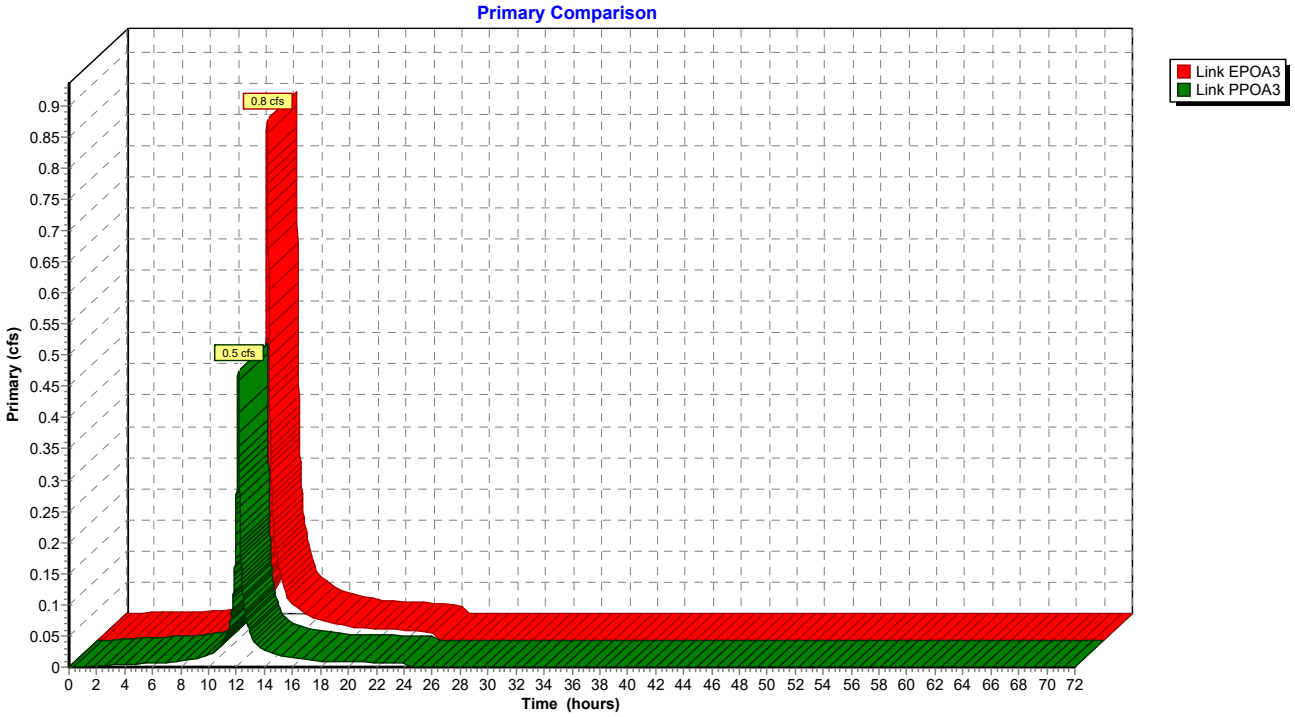

Primary Comparison
Link EPOA3
Link PPOA3
0.4 cfs
0.3 cfs
Primary (cfs)
0 0.02 0.04 0.06 0.08 0.1 0.12 0.14 0.16 0.18 0.2 0.22 0.24 0.26 0.28 0.3 0.32 0.34 0.36 0.38 0.4 0.42 0.44 0.46 0.48
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
Time (hours)

Primary Comparison

Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
0.00	0.0	0.0	13.00	0.1	0.0	26.00	0.0	0.0
0.25	0.0	0.0	13.25	0.1	0.0	26.25	0.0	0.0
0.50	0.0	0.0	13.50	0.0	0.0	26.50	0.0	0.0
0.75	0.0	0.0	13.75	0.0	0.0	26.75	0.0	0.0
1.00	0.0	0.0	14.00	0.0	0.0	27.00	0.0	0.0
1.25	0.0	0.0	14.25	0.0	0.0	27.25	0.0	0.0
1.50	0.0	0.0	14.50	0.0	0.0	27.50	0.0	0.0
1.75	0.0	0.0	14.75	0.0	0.0	27.75	0.0	0.0
2.00	0.0	0.0	15.00	0.0	0.0	28.00	0.0	0.0
2.25	0.0	0.0	15.25	0.0	0.0	28.25	0.0	0.0
2.50	0.0	0.0	15.50	0.0	0.0	28.50	0.0	0.0
2.75	0.0	0.0	15.75	0.0	0.0	28.75	0.0	0.0
3.00	0.0	0.0	16.00	0.0	0.0	29.00	0.0	0.0
3.25	0.0	0.0	16.25	0.0	0.0	29.25	0.0	0.0
3.50	0.0	0.0	16.50	0.0	0.0	29.50	0.0	0.0
3.75	0.0	0.0	16.75	0.0	0.0	29.75	0.0	0.0
4.00	0.0	0.0	17.00	0.0	0.0	30.00	0.0	0.0
4.25	0.0	0.0	17.25	0.0	0.0	30.25	0.0	0.0
4.50	0.0	0.0	17.50	0.0	0.0	30.50	0.0	0.0
4.75	0.0	0.0	17.75	0.0	0.0	30.75	0.0	0.0
5.00	0.0	0.0	18.00	0.0	0.0	31.00	0.0	0.0
5.25	0.0	0.0	18.25	0.0	0.0	31.25	0.0	0.0
5.50	0.0	0.0	18.50	0.0	0.0	31.50	0.0	0.0
5.75	0.0	0.0	18.75	0.0	0.0	31.75	0.0	0.0
6.00	0.0	0.0	19.00	0.0	0.0	32.00	0.0	0.0
6.25	0.0	0.0	19.25	0.0	0.0	32.25	0.0	0.0
6.50	0.0	0.0	19.50	0.0	0.0	32.50	0.0	0.0
6.75	0.0	0.0	19.75	0.0	0.0	32.75	0.0	0.0
7.00	0.0	0.0	20.00	0.0	0.0	33.00	0.0	0.0
7.25	0.0	0.0	20.25	0.0	0.0	33.25	0.0	0.0
7.50	0.0	0.0	20.50	0.0	0.0	33.50	0.0	0.0
7.75	0.0	0.0	20.75	0.0	0.0	33.75	0.0	0.0
8.00	0.0	0.0	21.00	0.0	0.0	34.00	0.0	0.0
8.25	0.0	0.0	21.25	0.0	0.0	34.25	0.0	0.0
8.50	0.0	0.0	21.50	0.0	0.0	34.50	0.0	0.0
8.75	0.0	0.0	21.75	0.0	0.0	34.75	0.0	0.0
9.00	0.0	0.0	22.00	0.0	0.0	35.00	0.0	0.0
9.25	0.0	0.0	22.25	0.0	0.0	35.25	0.0	0.0
9.50	0.0	0.0	22.50	0.0	0.0	35.50	0.0	0.0
9.75	0.0	0.0	22.75	0.0	0.0	35.75	0.0	0.0
10.00	0.0	0.0	23.00	0.0	0.0	36.00	0.0	0.0
10.25	0.0	0.0	23.25	0.0	0.0	36.25	0.0	0.0
10.50	0.0	0.0	23.50	0.0	0.0	36.50	0.0	0.0
10.75	0.0	0.0	23.75	0.0	0.0	36.75	0.0	0.0
11.00	0.0	0.0	24.00	0.0	0.0	37.00	0.0	0.0
11.25	0.0	0.0	24.25	0.0	0.0	37.25	0.0	0.0
11.50	0.0	0.0	24.50	0.0	0.0	37.50	0.0	0.0
11.75	0.1	0.1	24.75	0.0	0.0	37.75	0.0	0.0
12.00	**0.2**	**0.2**	25.00	0.0	0.0	38.00	0.0	0.0
12.25	**0.3**	**0.1**	25.25	0.0	0.0	38.25	0.0	0.0
12.50	0.1	0.1	25.50	0.0	0.0	38.50	0.0	0.0
12.75	0.1	0.0	25.75	0.0	0.0	38.75	0.0	0.0

Primary Comparison (continued)

Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
39.00	0.0	0.0
39.25	0.0	0.0
39.50	0.0	0.0
39.75	0.0	0.0
40.00	0.0	0.0
40.25	0.0	0.0
40.50	0.0	0.0
40.75	0.0	0.0
41.00	0.0	0.0
41.25	0.0	0.0
41.50	0.0	0.0
41.75	0.0	0.0
42.00	0.0	0.0
42.25	0.0	0.0
42.50	0.0	0.0
42.75	0.0	0.0
43.00	0.0	0.0
43.25	0.0	0.0
43.50	0.0	0.0
43.75	0.0	0.0
44.00	0.0	0.0
44.25	0.0	0.0
44.50	0.0	0.0
44.75	0.0	0.0
45.00	0.0	0.0
45.25	0.0	0.0
45.50	0.0	0.0
45.75	0.0	0.0
46.00	0.0	0.0
46.25	0.0	0.0
46.50	0.0	0.0
46.75	0.0	0.0
47.00	0.0	0.0
47.25	0.0	0.0
47.50	0.0	0.0
47.75	0.0	0.0
48.00	0.0	0.0
48.25	0.0	0.0
48.50	0.0	0.0
48.75	0.0	0.0
49.00	0.0	0.0
49.25	0.0	0.0
49.50	0.0	0.0
49.75	0.0	0.0
50.00	0.0	0.0
50.25	0.0	0.0
50.50	0.0	0.0
50.75	0.0	0.0
51.00	0.0	0.0
51.25	0.0	0.0
51.50	0.0	0.0
51.75	0.0	0.0
52.00	0.0	0.0
52.25	0.0	0.0
52.50	0.0	0.0
52.75	0.0	0.0
53.00	0.0	0.0
53.25	0.0	0.0
53.50	0.0	0.0
53.75	0.0	0.0
54.00	0.0	0.0
54.25	0.0	0.0
54.50	0.0	0.0
54.75	0.0	0.0
55.00	0.0	0.0
55.25	0.0	0.0
55.50	0.0	0.0
55.75	0.0	0.0
56.00	0.0	0.0
56.25	0.0	0.0
56.50	0.0	0.0
56.75	0.0	0.0
57.00	0.0	0.0
57.25	0.0	0.0
57.50	0.0	0.0
57.75	0.0	0.0
58.00	0.0	0.0
58.25	0.0	0.0
58.50	0.0	0.0
58.75	0.0	0.0
59.00	0.0	0.0
59.25	0.0	0.0
59.50	0.0	0.0
59.75	0.0	0.0
60.00	0.0	0.0
60.25	0.0	0.0
60.50	0.0	0.0
60.75	0.0	0.0
61.00	0.0	0.0
61.25	0.0	0.0
61.50	0.0	0.0
61.75	0.0	0.0
62.00	0.0	0.0
62.25	0.0	0.0
62.50	0.0	0.0
62.75	0.0	0.0
63.00	0.0	0.0
63.25	0.0	0.0
63.50	0.0	0.0
63.75	0.0	0.0
64.00	0.0	0.0
64.25	0.0	0.0
64.50	0.0	0.0
64.75	0.0	0.0
65.00	0.0	0.0
65.25	0.0	0.0
65.50	0.0	0.0
65.75	0.0	0.0
66.00	0.0	0.0
66.25	0.0	0.0
66.50	0.0	0.0
66.75	0.0	0.0
67.00	0.0	0.0
67.25	0.0	0.0
67.50	0.0	0.0
67.75	0.0	0.0
68.00	0.0	0.0
68.25	0.0	0.0
68.50	0.0	0.0
68.75	0.0	0.0
69.00	0.0	0.0
69.25	0.0	0.0
69.50	0.0	0.0
69.75	0.0	0.0
70.00	0.0	0.0
70.25	0.0	0.0
70.50	0.0	0.0
70.75	0.0	0.0
71.00	0.0	0.0
71.25	0.0	0.0
71.50	0.0	0.0
71.75	0.0	0.0
72.00	0.0	0.0

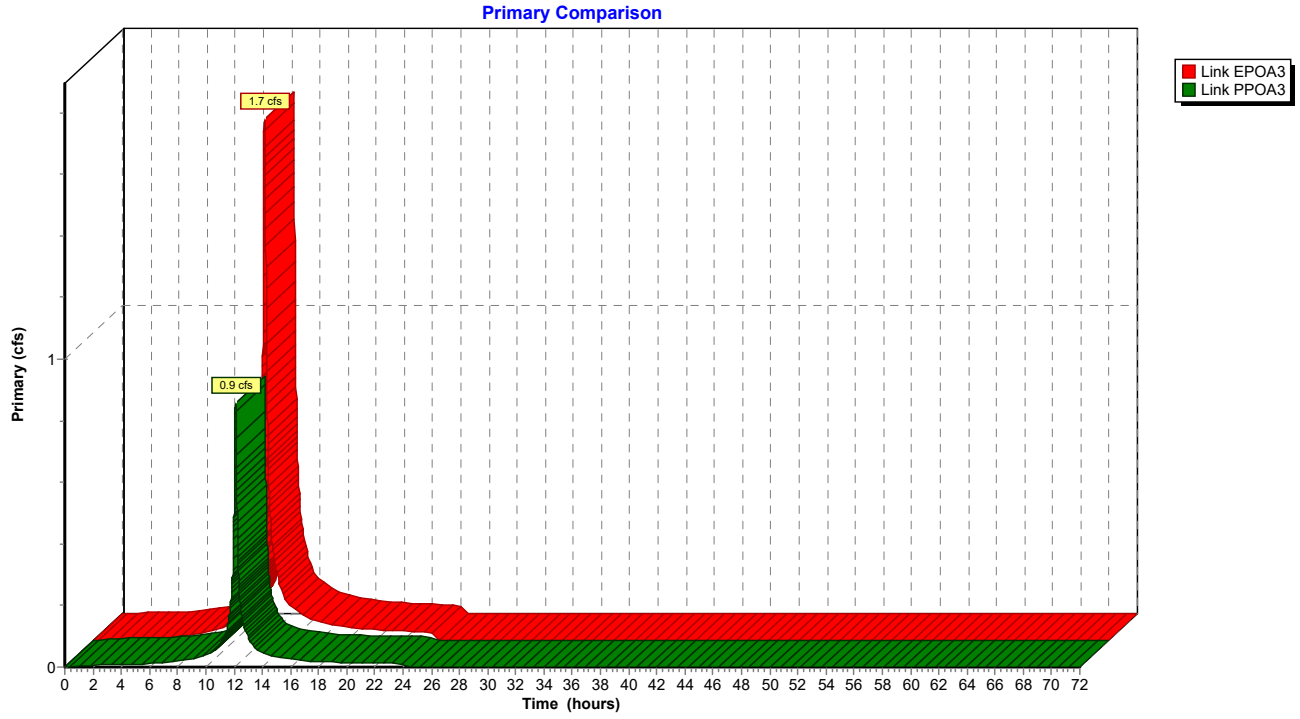

Primary Comparison
Link EPOA3
Link PPOA3
0.8 cfs
0.5 cfs
Primary (cfs)
0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

Primary Comparison

Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
0.00	0.0	0.0	13.00	0.1	0.1	26.00	0.0	0.0
0.25	0.0	0.0	13.25	0.1	0.0	26.25	0.0	0.0
0.50	0.0	0.0	13.50	0.1	0.0	26.50	0.0	0.0
0.75	0.0	0.0	13.75	0.1	0.0	26.75	0.0	0.0
1.00	0.0	0.0	14.00	0.1	0.0	27.00	0.0	0.0
1.25	0.0	0.0	14.25	0.1	0.0	27.25	0.0	0.0
1.50	0.0	0.0	14.50	0.0	0.0	27.50	0.0	0.0
1.75	0.0	0.0	14.75	0.0	0.0	27.75	0.0	0.0
2.00	0.0	0.0	15.00	0.0	0.0	28.00	0.0	0.0
2.25	0.0	0.0	15.25	0.0	0.0	28.25	0.0	0.0
2.50	0.0	0.0	15.50	0.0	0.0	28.50	0.0	0.0
2.75	0.0	0.0	15.75	0.0	0.0	28.75	0.0	0.0
3.00	0.0	0.0	16.00	0.0	0.0	29.00	0.0	0.0
3.25	0.0	0.0	16.25	0.0	0.0	29.25	0.0	0.0
3.50	0.0	0.0	16.50	0.0	0.0	29.50	0.0	0.0
3.75	0.0	0.0	16.75	0.0	0.0	29.75	0.0	0.0
4.00	0.0	0.0	17.00	0.0	0.0	30.00	0.0	0.0
4.25	0.0	0.0	17.25	0.0	0.0	30.25	0.0	0.0
4.50	0.0	0.0	17.50	0.0	0.0	30.50	0.0	0.0
4.75	0.0	0.0	17.75	0.0	0.0	30.75	0.0	0.0
5.00	0.0	0.0	18.00	0.0	0.0	31.00	0.0	0.0
5.25	0.0	0.0	18.25	0.0	0.0	31.25	0.0	0.0
5.50	0.0	0.0	18.50	0.0	0.0	31.50	0.0	0.0
5.75	0.0	0.0	18.75	0.0	0.0	31.75	0.0	0.0
6.00	0.0	0.0	19.00	0.0	0.0	32.00	0.0	0.0
6.25	0.0	0.0	19.25	0.0	0.0	32.25	0.0	0.0
6.50	0.0	0.0	19.50	0.0	0.0	32.50	0.0	0.0
6.75	0.0	0.0	19.75	0.0	0.0	32.75	0.0	0.0
7.00	0.0	0.0	20.00	0.0	0.0	33.00	0.0	0.0
7.25	0.0	0.0	20.25	0.0	0.0	33.25	0.0	0.0
7.50	0.0	0.0	20.50	0.0	0.0	33.50	0.0	0.0
7.75	0.0	0.0	20.75	0.0	0.0	33.75	0.0	0.0
8.00	0.0	0.0	21.00	0.0	0.0	34.00	0.0	0.0
8.25	0.0	0.0	21.25	0.0	0.0	34.25	0.0	0.0
8.50	0.0	0.0	21.50	0.0	0.0	34.50	0.0	0.0
8.75	0.0	0.0	21.75	0.0	0.0	34.75	0.0	0.0
9.00	0.0	0.0	22.00	0.0	0.0	35.00	0.0	0.0
9.25	0.0	0.0	22.25	0.0	0.0	35.25	0.0	0.0
9.50	0.0	0.0	22.50	0.0	0.0	35.50	0.0	0.0
9.75	0.0	0.0	22.75	0.0	0.0	35.75	0.0	0.0
10.00	0.0	0.0	23.00	0.0	0.0	36.00	0.0	0.0
10.25	0.0	0.0	23.25	0.0	0.0	36.25	0.0	0.0
10.50	0.0	0.0	23.50	0.0	0.0	36.50	0.0	0.0
10.75	0.0	0.0	23.75	0.0	0.0	36.75	0.0	0.0
11.00	0.1	0.0	24.00	0.0	0.0	37.00	0.0	0.0
11.25	0.1	0.1	24.25	0.0	0.0	37.25	0.0	0.0
11.50	0.1	0.1	24.50	0.0	0.0	37.50	0.0	0.0
11.75	0.2	0.1	24.75	0.0	0.0	37.75	0.0	0.0
12.00	**0.5**	**0.3**	25.00	0.0	0.0	38.00	0.0	0.0
12.25	**0.5**	**0.2**	25.25	0.0	0.0	38.25	0.0	0.0
12.50	0.2	0.1	25.50	0.0	0.0	38.50	0.0	0.0
12.75	0.1	0.1	25.75	0.0	0.0	38.75	0.0	0.0

Primary Comparison (continued)

Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
39.00	0.0	0.0
39.25	0.0	0.0
39.50	0.0	0.0
39.75	0.0	0.0
40.00	0.0	0.0
40.25	0.0	0.0
40.50	0.0	0.0
40.75	0.0	0.0
41.00	0.0	0.0
41.25	0.0	0.0
41.50	0.0	0.0
41.75	0.0	0.0
42.00	0.0	0.0
42.25	0.0	0.0
42.50	0.0	0.0
42.75	0.0	0.0
43.00	0.0	0.0
43.25	0.0	0.0
43.50	0.0	0.0
43.75	0.0	0.0
44.00	0.0	0.0
44.25	0.0	0.0
44.50	0.0	0.0
44.75	0.0	0.0
45.00	0.0	0.0
45.25	0.0	0.0
45.50	0.0	0.0
45.75	0.0	0.0
46.00	0.0	0.0
46.25	0.0	0.0
46.50	0.0	0.0
46.75	0.0	0.0
47.00	0.0	0.0
47.25	0.0	0.0
47.50	0.0	0.0
47.75	0.0	0.0
48.00	0.0	0.0
48.25	0.0	0.0
48.50	0.0	0.0
48.75	0.0	0.0
49.00	0.0	0.0
49.25	0.0	0.0
49.50	0.0	0.0
49.75	0.0	0.0
50.00	0.0	0.0
50.25	0.0	0.0
50.50	0.0	0.0
50.75	0.0	0.0
51.00	0.0	0.0
51.25	0.0	0.0
51.50	0.0	0.0
51.75	0.0	0.0
52.00	0.0	0.0
52.25	0.0	0.0
52.50	0.0	0.0
52.75	0.0	0.0
53.00	0.0	0.0
53.25	0.0	0.0
53.50	0.0	0.0
53.75	0.0	0.0
54.00	0.0	0.0
54.25	0.0	0.0
54.50	0.0	0.0
54.75	0.0	0.0
55.00	0.0	0.0
55.25	0.0	0.0
55.50	0.0	0.0
55.75	0.0	0.0
56.00	0.0	0.0
56.25	0.0	0.0
56.50	0.0	0.0
56.75	0.0	0.0
57.00	0.0	0.0
57.25	0.0	0.0
57.50	0.0	0.0
57.75	0.0	0.0
58.00	0.0	0.0
58.25	0.0	0.0
58.50	0.0	0.0
58.75	0.0	0.0
59.00	0.0	0.0
59.25	0.0	0.0
59.50	0.0	0.0
59.75	0.0	0.0
60.00	0.0	0.0
60.25	0.0	0.0
60.50	0.0	0.0
60.75	0.0	0.0
61.00	0.0	0.0
61.25	0.0	0.0
61.50	0.0	0.0
61.75	0.0	0.0
62.00	0.0	0.0
62.25	0.0	0.0
62.50	0.0	0.0
62.75	0.0	0.0
63.00	0.0	0.0
63.25	0.0	0.0
63.50	0.0	0.0
63.75	0.0	0.0
64.00	0.0	0.0
64.25	0.0	0.0
64.50	0.0	0.0
64.75	0.0	0.0
65.00	0.0	0.0
65.25	0.0	0.0
65.50	0.0	0.0
65.75	0.0	0.0
66.00	0.0	0.0
66.25	0.0	0.0
66.50	0.0	0.0
66.75	0.0	0.0
67.00	0.0	0.0
67.25	0.0	0.0
67.50	0.0	0.0
67.75	0.0	0.0
68.00	0.0	0.0
68.25	0.0	0.0
68.50	0.0	0.0
68.75	0.0	0.0
69.00	0.0	0.0
69.25	0.0	0.0
69.50	0.0	0.0
69.75	0.0	0.0
70.00	0.0	0.0
70.25	0.0	0.0
70.50	0.0	0.0
70.75	0.0	0.0
71.00	0.0	0.0
71.25	0.0	0.0
71.50	0.0	0.0
71.75	0.0	0.0
72.00	0.0	0.0


Primary Comparison
Link EPOA3
Link PPOA3
1.7 cfs
0.9 cfs
Primary (cfs)
0
1
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
Time (hours)

Primary Comparison

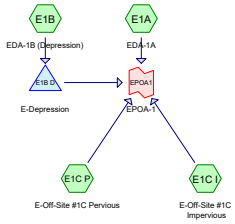
Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
0.00	0.0	0.0	13.00	0.2	0.1	26.00	0.0	0.0
0.25	0.0	0.0	13.25	0.2	0.1	26.25	0.0	0.0
0.50	0.0	0.0	13.50	0.1	0.1	26.50	0.0	0.0
0.75	0.0	0.0	13.75	0.1	0.1	26.75	0.0	0.0
1.00	0.0	0.0	14.00	0.1	0.0	27.00	0.0	0.0
1.25	0.0	0.0	14.25	0.1	0.0	27.25	0.0	0.0
1.50	0.0	0.0	14.50	0.1	0.0	27.50	0.0	0.0
1.75	0.0	0.0	14.75	0.1	0.0	27.75	0.0	0.0
2.00	0.0	0.0	15.00	0.1	0.0	28.00	0.0	0.0
2.25	0.0	0.0	15.25	0.1	0.0	28.25	0.0	0.0
2.50	0.0	0.0	15.50	0.1	0.0	28.50	0.0	0.0
2.75	0.0	0.0	15.75	0.1	0.0	28.75	0.0	0.0
3.00	0.0	0.0	16.00	0.1	0.0	29.00	0.0	0.0
3.25	0.0	0.0	16.25	0.1	0.0	29.25	0.0	0.0
3.50	0.0	0.0	16.50	0.1	0.0	29.50	0.0	0.0
3.75	0.0	0.0	16.75	0.1	0.0	29.75	0.0	0.0
4.00	0.0	0.0	17.00	0.1	0.0	30.00	0.0	0.0
4.25	0.0	0.0	17.25	0.0	0.0	30.25	0.0	0.0
4.50	0.0	0.0	17.50	0.0	0.0	30.50	0.0	0.0
4.75	0.0	0.0	17.75	0.0	0.0	30.75	0.0	0.0
5.00	0.0	0.0	18.00	0.0	0.0	31.00	0.0	0.0
5.25	0.0	0.0	18.25	0.0	0.0	31.25	0.0	0.0
5.50	0.0	0.0	18.50	0.0	0.0	31.50	0.0	0.0
5.75	0.0	0.0	18.75	0.0	0.0	31.75	0.0	0.0
6.00	0.0	0.0	19.00	0.0	0.0	32.00	0.0	0.0
6.25	0.0	0.0	19.25	0.0	0.0	32.25	0.0	0.0
6.50	0.0	0.0	19.50	0.0	0.0	32.50	0.0	0.0
6.75	0.0	0.0	19.75	0.0	0.0	32.75	0.0	0.0
7.00	0.0	0.0	20.00	0.0	0.0	33.00	0.0	0.0
7.25	0.0	0.0	20.25	0.0	0.0	33.25	0.0	0.0
7.50	0.0	0.0	20.50	0.0	0.0	33.50	0.0	0.0
7.75	0.0	0.0	20.75	0.0	0.0	33.75	0.0	0.0
8.00	0.0	0.0	21.00	0.0	0.0	34.00	0.0	0.0
8.25	0.0	0.0	21.25	0.0	0.0	34.25	0.0	0.0
8.50	0.0	0.0	21.50	0.0	0.0	34.50	0.0	0.0
8.75	0.0	0.0	21.75	0.0	0.0	34.75	0.0	0.0
9.00	0.0	0.0	22.00	0.0	0.0	35.00	0.0	0.0
9.25	0.0	0.0	22.25	0.0	0.0	35.25	0.0	0.0
9.50	0.0	0.0	22.50	0.0	0.0	35.50	0.0	0.0
9.75	0.1	0.0	22.75	0.0	0.0	35.75	0.0	0.0
10.00	0.1	0.0	23.00	0.0	0.0	36.00	0.0	0.0
10.25	0.1	0.0	23.25	0.0	0.0	36.25	0.0	0.0
10.50	0.1	0.0	23.50	0.0	0.0	36.50	0.0	0.0
10.75	0.1	0.1	23.75	0.0	0.0	36.75	0.0	0.0
11.00	0.1	0.1	24.00	0.0	0.0	37.00	0.0	0.0
11.25	0.2	0.1	24.25	0.0	0.0	37.25	0.0	0.0
11.50	0.2	0.1	24.50	0.0	0.0	37.50	0.0	0.0
11.75	0.4	0.2	24.75	0.0	0.0	37.75	0.0	0.0
12.00	**1.0**	**0.5**	25.00	0.0	0.0	38.00	0.0	0.0
12.25	**1.0**	**0.4**	25.25	0.0	0.0	38.25	0.0	0.0
12.50	0.4	0.2	25.50	0.0	0.0	38.50	0.0	0.0
12.75	0.3	0.1	25.75	0.0	0.0	38.75	0.0	0.0

Primary Comparison (continued)

Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
39.00	0.0	0.0
39.25	0.0	0.0
39.50	0.0	0.0
39.75	0.0	0.0
40.00	0.0	0.0
40.25	0.0	0.0
40.50	0.0	0.0
40.75	0.0	0.0
41.00	0.0	0.0
41.25	0.0	0.0
41.50	0.0	0.0
41.75	0.0	0.0
42.00	0.0	0.0
42.25	0.0	0.0
42.50	0.0	0.0
42.75	0.0	0.0
43.00	0.0	0.0
43.25	0.0	0.0
43.50	0.0	0.0
43.75	0.0	0.0
44.00	0.0	0.0
44.25	0.0	0.0
44.50	0.0	0.0
44.75	0.0	0.0
45.00	0.0	0.0
45.25	0.0	0.0
45.50	0.0	0.0
45.75	0.0	0.0
46.00	0.0	0.0
46.25	0.0	0.0
46.50	0.0	0.0
46.75	0.0	0.0
47.00	0.0	0.0
47.25	0.0	0.0
47.50	0.0	0.0
47.75	0.0	0.0
48.00	0.0	0.0
48.25	0.0	0.0
48.50	0.0	0.0
48.75	0.0	0.0
49.00	0.0	0.0
49.25	0.0	0.0
49.50	0.0	0.0
49.75	0.0	0.0
50.00	0.0	0.0
50.25	0.0	0.0
50.50	0.0	0.0
50.75	0.0	0.0
51.00	0.0	0.0
51.25	0.0	0.0
51.50	0.0	0.0
51.75	0.0	0.0
52.00	0.0	0.0
52.25	0.0	0.0
52.50	0.0	0.0
52.75	0.0	0.0
53.00	0.0	0.0
53.25	0.0	0.0
53.50	0.0	0.0
53.75	0.0	0.0
54.00	0.0	0.0
54.25	0.0	0.0
54.50	0.0	0.0
54.75	0.0	0.0
55.00	0.0	0.0
55.25	0.0	0.0
55.50	0.0	0.0
55.75	0.0	0.0
56.00	0.0	0.0
56.25	0.0	0.0
56.50	0.0	0.0
56.75	0.0	0.0
57.00	0.0	0.0
57.25	0.0	0.0
57.50	0.0	0.0
57.75	0.0	0.0
58.00	0.0	0.0
58.25	0.0	0.0
58.50	0.0	0.0
58.75	0.0	0.0
59.00	0.0	0.0
59.25	0.0	0.0
59.50	0.0	0.0
59.75	0.0	0.0
60.00	0.0	0.0
60.25	0.0	0.0
60.50	0.0	0.0
60.75	0.0	0.0
61.00	0.0	0.0
61.25	0.0	0.0
61.50	0.0	0.0
61.75	0.0	0.0
62.00	0.0	0.0
62.25	0.0	0.0
62.50	0.0	0.0
62.75	0.0	0.0
63.00	0.0	0.0
63.25	0.0	0.0
63.50	0.0	0.0
63.75	0.0	0.0
64.00	0.0	0.0
64.25	0.0	0.0
64.50	0.0	0.0
64.75	0.0	0.0
65.00	0.0	0.0
65.25	0.0	0.0
65.50	0.0	0.0
65.75	0.0	0.0
66.00	0.0	0.0
66.25	0.0	0.0
66.50	0.0	0.0
66.75	0.0	0.0
67.00	0.0	0.0
67.25	0.0	0.0
67.50	0.0	0.0
67.75	0.0	0.0
68.00	0.0	0.0
68.25	0.0	0.0
68.50	0.0	0.0
68.75	0.0	0.0
69.00	0.0	0.0
69.25	0.0	0.0
69.50	0.0	0.0
69.75	0.0	0.0
70.00	0.0	0.0
70.25	0.0	0.0
70.50	0.0	0.0
70.75	0.0	0.0
71.00	0.0	0.0
71.25	0.0	0.0
71.50	0.0	0.0
71.75	0.0	0.0
72.00	0.0	0.0

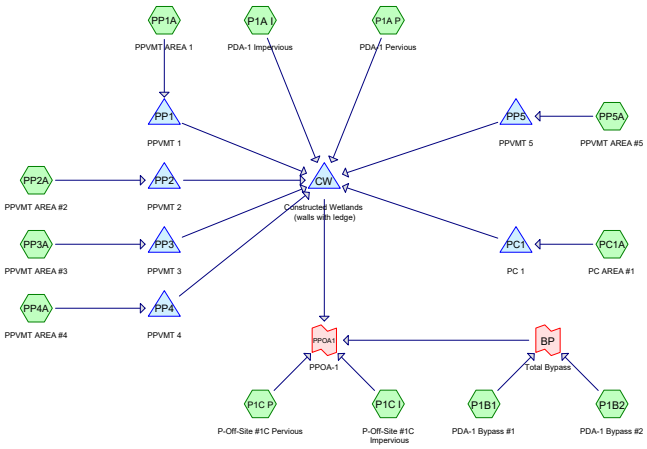
B. PRE- vs. POST-DEVELOPMENT HYDROGRAPHS - Future Adjusted Precipitation Depths

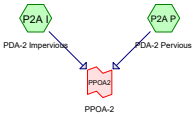
- **2-Year Storm Event**
- **10-Year Storm Event**
- **100-Year Storm Event**
- **Pre- vs. Post Comparison (POA#3)**













Subcat Reach Pond Link

Routing Diagram for NJA240262.00 - Pre vs Post
Prepared by Bohler, Printed 6/12/2025
HydroCAD® 10.20-5c s/n 03478 © 2023 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.829	80	>75% Grass cover, Good, HSG D (E1C P, P1A P, P1B1, P1B2, P1C P, P2A P, P4A, PP2A)
1.591	98	Paved parking, HSG D (E1C I, P1A I, P1B2, P1C I, P2A I, P4A, PC1A, PP1A, PP2A, PP3A, PP4A, PP5A)
2.199	77	Woods, Good, HSG D (E1A, E1B, E2A, E4A)

2-Year Storm Event
(Future Adjusted Precipitation Depth)

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

SubcatchmentE1A: EDA-1A Runoff Area=0.910 ac 0.00% Impervious Runoff Depth=1.77"
Flow Length=296' Slope=0.0500 '/' Tc=10.7 min CN=77 Runoff=1.59 cfs 0.134 af

SubcatchmentE1B: EDA-1B (Depression) Runoff Area=0.292 ac 0.00% Impervious Runoff Depth=1.77"
Flow Length=118' Slope=0.0200 '/' Tc=10.3 min CN=77 Runoff=0.52 cfs 0.043 af

SubcatchmentE1C I: E-Off-Site #1C Runoff Area=0.004 ac 100.00% Impervious Runoff Depth=3.72"
Flow Length=77' Slope=0.0450 '/' Tc=0.6 min CN=98 Runoff=0.02 cfs 0.001 af

SubcatchmentE1C P: E-Off-Site #1C Runoff Area=0.028 ac 0.00% Impervious Runoff Depth=2.00"
Flow Length=77' Slope=0.0450 '/' Tc=5.2 min CN=80 Runoff=0.07 cfs 0.005 af

SubcatchmentE2A: EDA-2 Runoff Area=0.682 ac 0.00% Impervious Runoff Depth=1.77"
Flow Length=253' Tc=15.6 min CN=77 Runoff=1.02 cfs 0.101 af

SubcatchmentE4A: EDA-4 Runoff Area=0.315 ac 0.00% Impervious Runoff Depth=1.77"
Flow Length=158' Tc=12.7 min CN=77 Runoff=0.51 cfs 0.047 af

SubcatchmentP1A I: PDA-1 Impervious Runoff Area=0.488 ac 100.00% Impervious Runoff Depth=3.72"
Flow Length=266' Tc=2.0 min CN=98 Runoff=2.01 cfs 0.151 af

SubcatchmentP1A P: PDA-1 Pervious Runoff Area=0.352 ac 0.00% Impervious Runoff Depth=2.00"
Flow Length=48' Slope=0.0200 '/' Tc=4.9 min CN=80 Runoff=0.87 cfs 0.059 af

SubcatchmentP1B1: PDA-1 Bypass #1 Runoff Area=0.079 ac 0.00% Impervious Runoff Depth=2.00"
Flow Length=330' Tc=7.2 min CN=80 Runoff=0.18 cfs 0.013 af

SubcatchmentP1B2: PDA-1 Bypass #2 Runoff Area=0.117 ac 39.32% Impervious Runoff Depth=2.67"
Flow Length=127' Slope=0.0100 '/' Tc=4.4 min CN=WQ Runoff=0.36 cfs 0.026 af

SubcatchmentP1C I: P-Off-Site #1C Runoff Area=0.027 ac 100.00% Impervious Runoff Depth=3.72"
Flow Length=366' Slope=0.0020 '/' Tc=7.6 min CN=98 Runoff=0.10 cfs 0.008 af

SubcatchmentP1C P: P-Off-Site #1C Runoff Area=0.005 ac 0.00% Impervious Runoff Depth=2.00"
Flow Length=366' Slope=0.0020 '/' Tc=7.6 min CN=80 Runoff=0.01 cfs 0.001 af

SubcatchmentP2A I: PDA-2 Impervious Runoff Area=0.034 ac 100.00% Impervious Runoff Depth=3.72"
Flow Length=92' Slope=0.0100 '/' Tc=1.3 min CN=98 Runoff=0.14 cfs 0.011 af

SubcatchmentP2A P: PDA-2 Pervious Runoff Area=0.175 ac 0.00% Impervious Runoff Depth=2.00"
Flow Length=90' Slope=0.0050 '/' Tc=14.1 min CN=80 Runoff=0.31 cfs 0.029 af

SubcatchmentP4A: PDA-4 Runoff Area=0.115 ac 2.61% Impervious Runoff Depth=2.05"
Flow Length=96' Slope=0.0110 '/' Tc=8.7 min CN=WQ Runoff=0.25 cfs 0.020 af

SubcatchmentPC1A: PC AREA #1 Runoff Area=0.174 ac 100.00% Impervious Runoff Depth=3.72"
Tc=1.0 min CN=98 Runoff=0.72 cfs 0.054 af

Subcatchment PP1A: PPVMT AREA 1 Runoff Area=0.161 ac 100.00% Impervious Runoff Depth=3.72"
Tc=1.0 min CN=98 Runoff=0.66 cfs 0.050 af

Subcatchment PP2A: PPVMT AREA #2 Runoff Area=0.290 ac 97.59% Impervious Runoff Depth=3.67"
Tc=1.0 min CN=WQ Runoff=1.19 cfs 0.089 af

Subcatchment PP3A: PPVMT AREA #3 Runoff Area=0.096 ac 100.00% Impervious Runoff Depth=3.72"
Tc=1.0 min CN=98 Runoff=0.40 cfs 0.030 af

Subcatchment PP4A: PPVMT AREA #4 Runoff Area=0.019 ac 100.00% Impervious Runoff Depth=3.72"
Tc=1.0 min CN=98 Runoff=0.08 cfs 0.006 af

Subcatchment PP5A: PPVMT AREA #5 Runoff Area=0.256 ac 100.00% Impervious Runoff Depth=3.72"
Tc=1.0 min CN=98 Runoff=1.06 cfs 0.079 af

Pond CW: Constructed Wetlands (walls Peak Elev=105.91' Storage=13,633 cf Inflow=5.50 cfs 0.475 af
Outflow=0.21 cfs 0.444 af

Pond E1B D: E-Depression Peak Elev=109.26' Storage=403 cf Inflow=0.52 cfs 0.043 af
Outflow=0.47 cfs 0.036 af

Pond PC1: PC 1 Peak Elev=110.70' Storage=1,197 cf Inflow=0.72 cfs 0.054 af
8.0" Round Culvert n=0.010 L=32.0' S=0.0100 '/' Outflow=0.23 cfs 0.041 af

Pond PP1: PPVMT 1 Peak Elev=110.31' Storage=151 cf Inflow=0.66 cfs 0.050 af
18.0" Round Culvert x 3.00 n=0.010 L=29.0' S=0.0031 '/' Outflow=0.58 cfs 0.050 af

Pond PP2: PPVMT 2 Peak Elev=109.23' Storage=1,798 cf Inflow=1.19 cfs 0.089 af
15.0" Round Culvert n=0.010 L=10.0' S=0.0030 '/' Outflow=0.69 cfs 0.064 af

Pond PP3: PPVMT 3 Peak Elev=109.00' Storage=0 cf Inflow=0.40 cfs 0.030 af
15.0" Round Culvert n=0.010 L=14.0' S=0.0100 '/' Outflow=0.40 cfs 0.030 af

Pond PP4: PPVMT 4 Peak Elev=108.36' Storage=5 cf Inflow=0.08 cfs 0.006 af
15.0" Round Culvert n=0.010 L=6.3' S=0.1032 '/' Outflow=0.08 cfs 0.006 af

Pond PP5: PPVMT 5 Peak Elev=108.92' Storage=749 cf Inflow=1.06 cfs 0.079 af
15.0" Round Culvert n=0.010 L=114.0' S=0.0099 '/' Outflow=0.77 cfs 0.075 af

Link BP: Total Bypass Inflow=0.53 cfs 0.039 af
Primary=0.53 cfs 0.039 af

Link EPOA1: EPOA-1 Inflow=2.08 cfs 0.176 af
Primary=2.08 cfs 0.176 af

Link EPOA2: EPOA-2 Inflow=1.02 cfs 0.101 af
Primary=1.02 cfs 0.101 af

Link EPOA4: EPOA-4 Inflow=0.51 cfs 0.047 af
Primary=0.51 cfs 0.047 af

Link PPOA1: PPOA-1 Inflow=0.78 cfs 0.492 af
Primary=0.78 cfs 0.492 af

Link PPOA2: PPOA-2 Inflow=0.36 cfs 0.040 af
Primary=0.36 cfs 0.040 af

Link PPOA4: PPOA-4 Inflow=0.25 cfs 0.020 af
Primary=0.25 cfs 0.020 af

Summary for Subcatchment E1A: EDA-1A

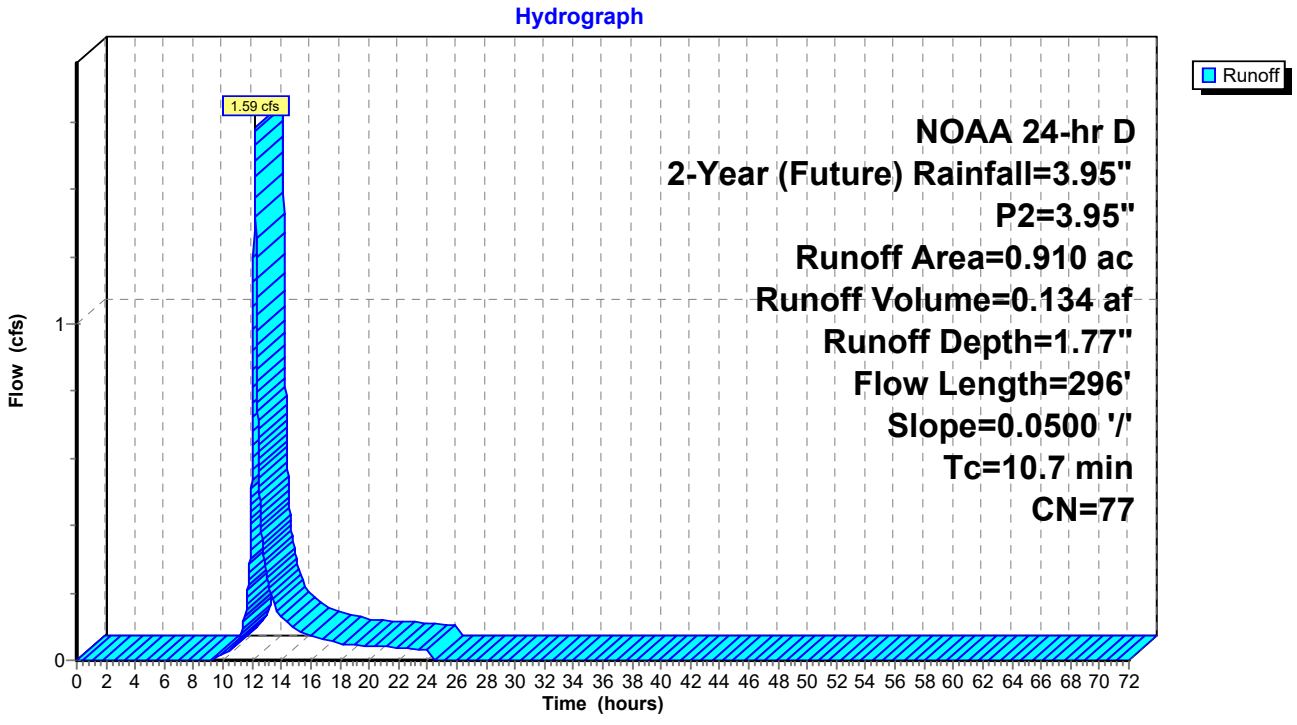
Runoff = 1.59 cfs @ 12.19 hrs, Volume= 0.134 af, Depth= 1.77"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.910	77	Woods, Good, HSG D
0.910	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	56	0.0500	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
1.9	130	0.0500	1.12		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	110	0.0500	4.54		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
10.7	296	Total			

Subcatchment E1A: EDA-1A



Summary for Subcatchment E1B: EDA-1B (Depression)

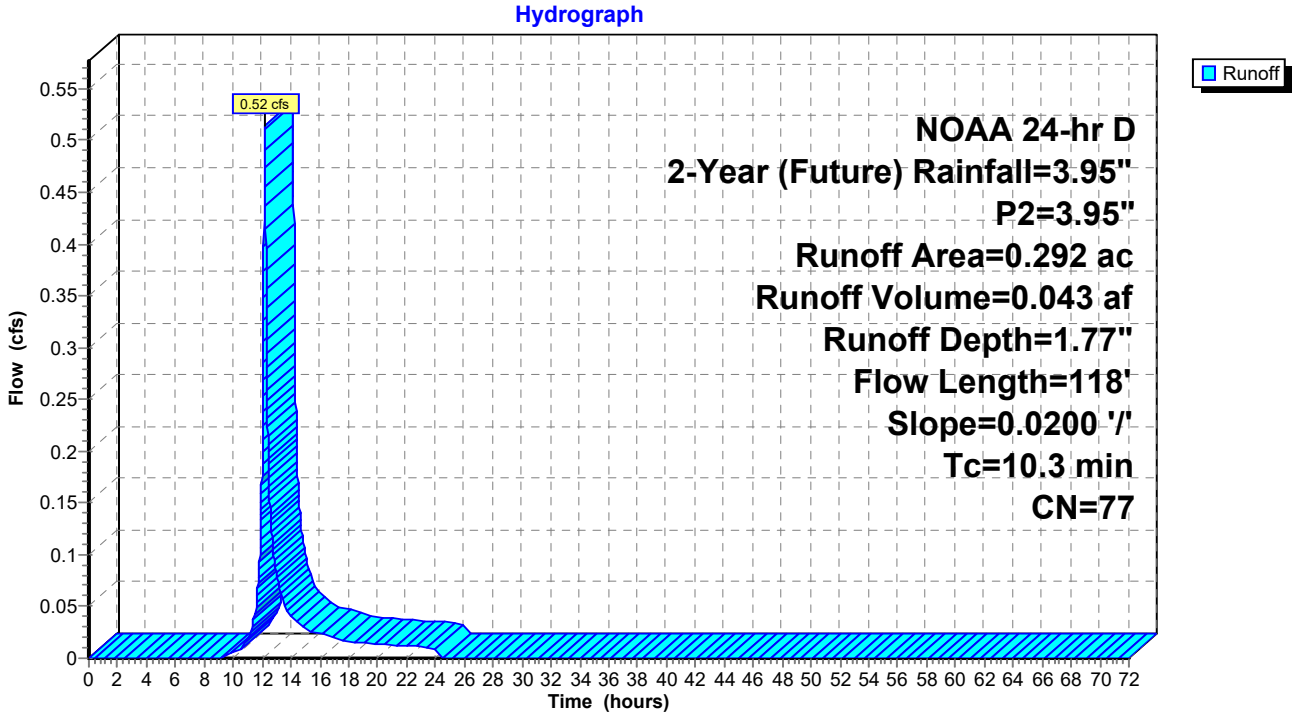
Runoff = 0.52 cfs @ 12.18 hrs, Volume= 0.043 af, Depth= 1.77"
Routed to Pond E1B D : E-Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.292	77	Woods, Good, HSG D
0.292	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	35	0.0200	0.07		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
2.0	83	0.0200	0.71		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
10.3	118	Total			

Subcatchment E1B: EDA-1B (Depression)



Summary for Subcatchment E1C I: E-Off-Site #1C Impervious

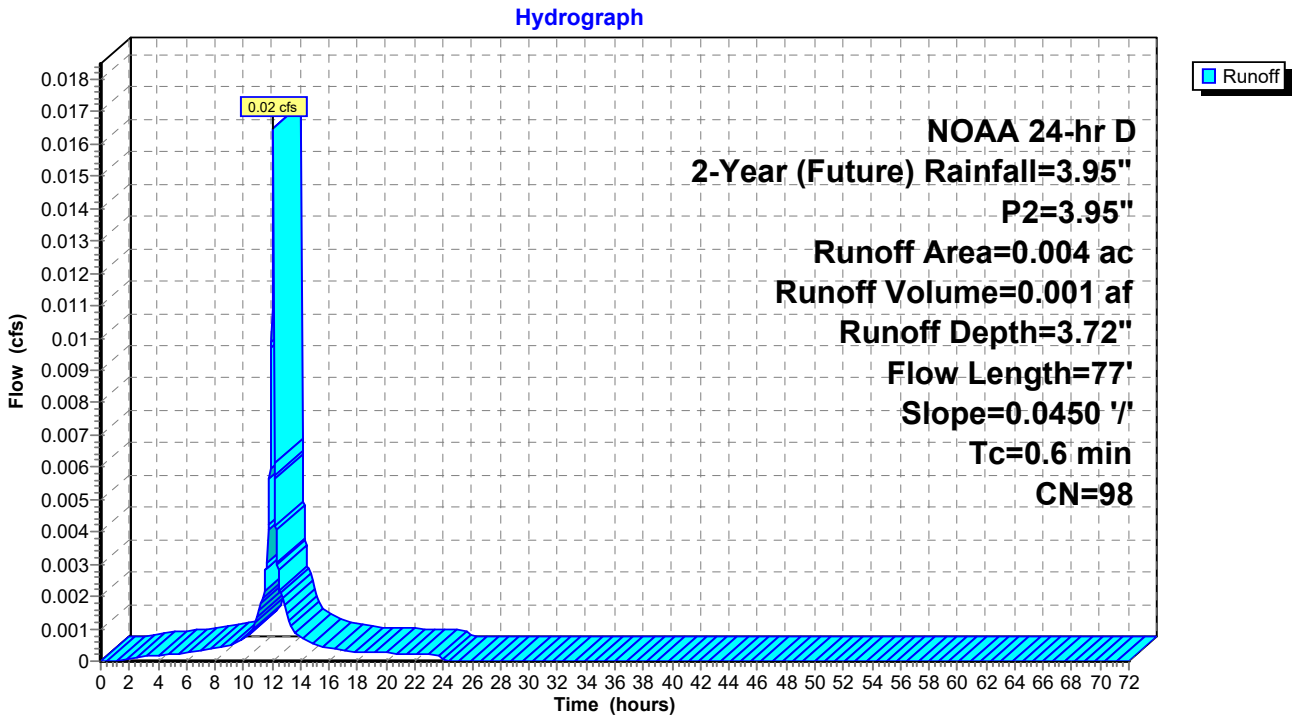
Runoff = 0.02 cfs @ 12.09 hrs, Volume= 0.001 af, Depth= 3.72"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.004	98	Paved parking, HSG D
0.004	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	77	0.0450	2.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.95"

Subcatchment E1C I: E-Off-Site #1C Impervious



Summary for Subcatchment E1C P: E-Off-Site #1C Pervious

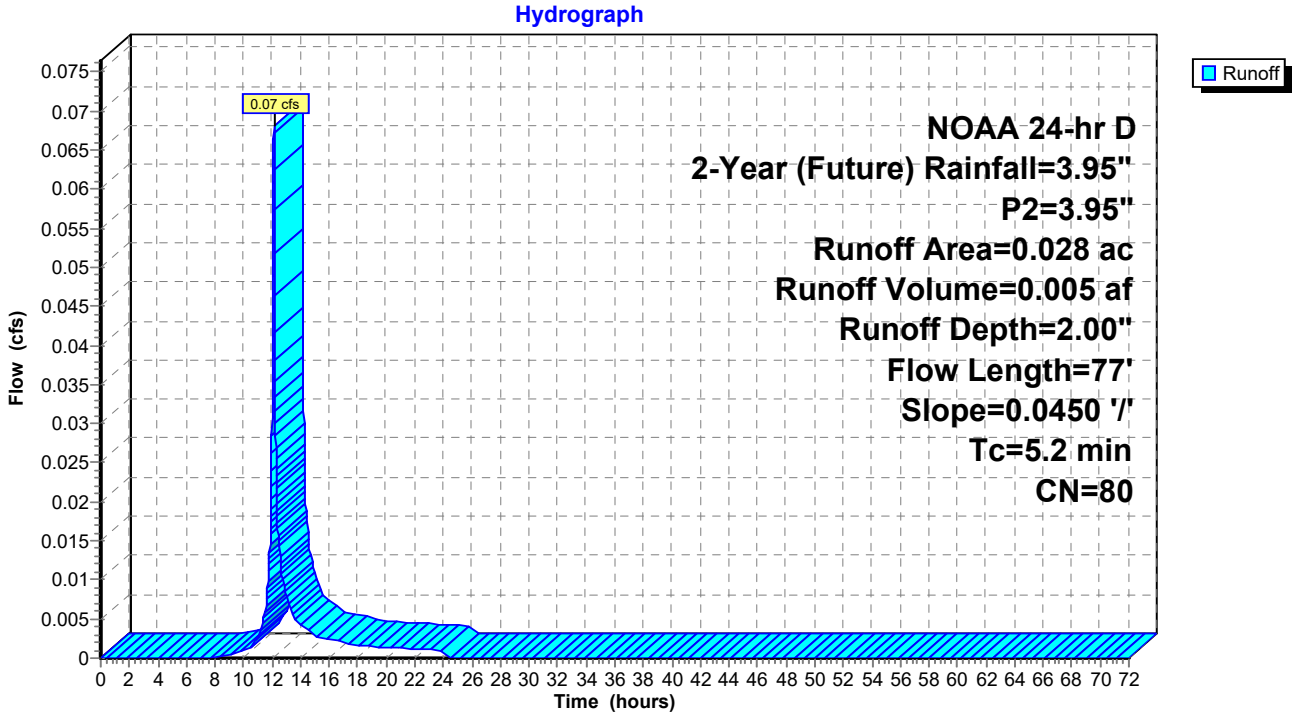
Runoff = 0.07 cfs @ 12.13 hrs, Volume= 0.005 af, Depth= 2.00"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.028	80	>75% Grass cover, Good, HSG D
0.028	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	77	0.0450	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.95"

Subcatchment E1C P: E-Off-Site #1C Pervious



Summary for Subcatchment E2A: EDA-2

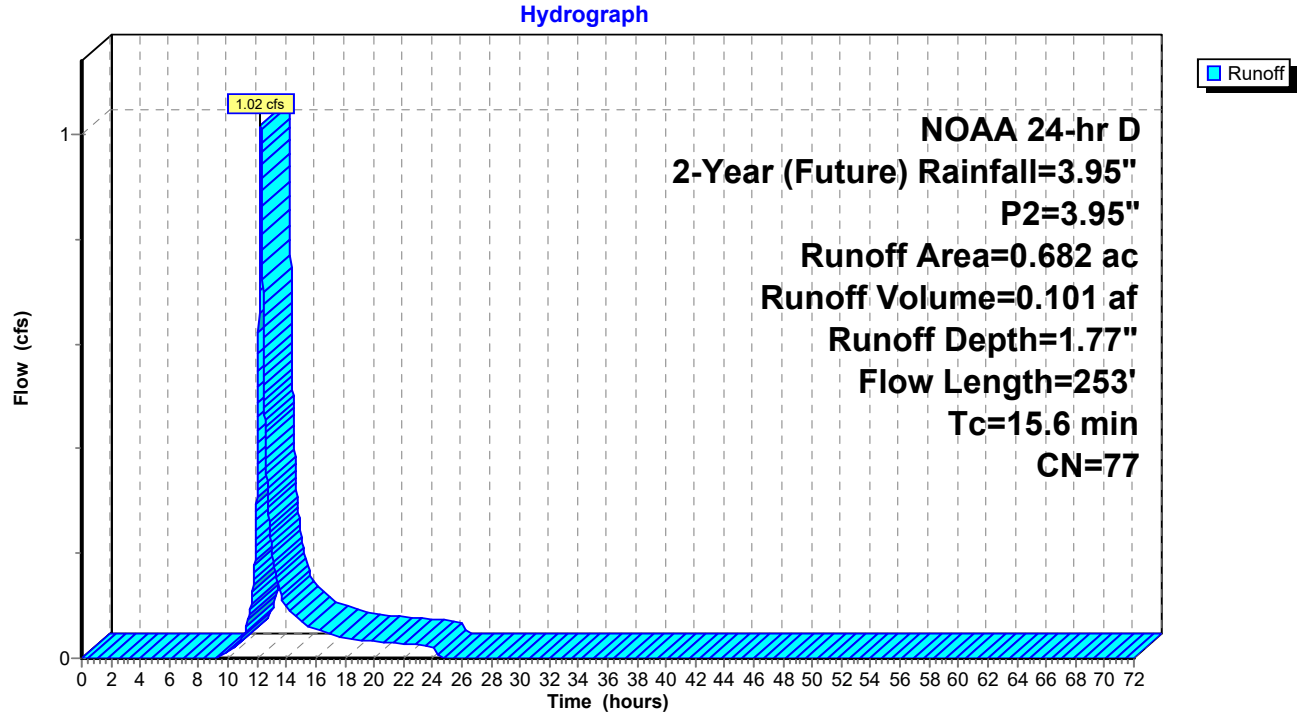
Runoff = 1.02 cfs @ 12.24 hrs, Volume= 0.101 af, Depth= 1.77"
Routed to Link EPOA2 : EPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.682	77	Woods, Good, HSG D
0.682	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	35	0.0200	0.07		**Sheet Flow, E-F** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
7.3	218	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
15.6	253	Total			

Subcatchment E2A: EDA-2



Summary for Subcatchment E4A: EDA-4

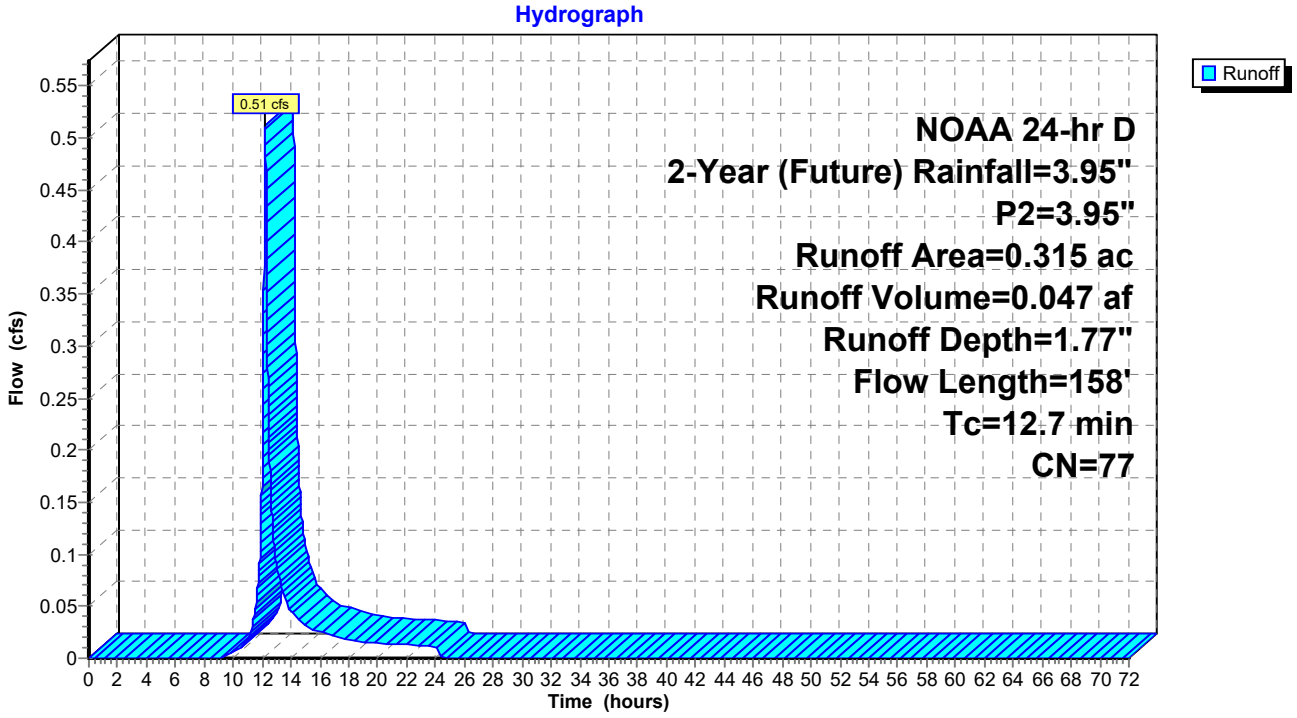
Runoff = 0.51 cfs @ 12.21 hrs, Volume= 0.047 af, Depth= 1.77"
Routed to Link EPOA4 : EPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.315	77	Woods, Good, HSG D
0.315	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	31	0.0150	0.06		**Sheet Flow, Q-R** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
4.2	127	0.0100	0.50		**Shallow Concentrated Flow, R-S** Woodland Kv= 5.0 fps
12.7	158	Total			

Subcatchment E4A: EDA-4



Summary for Subcatchment P1A I: PDA-1 Impervious

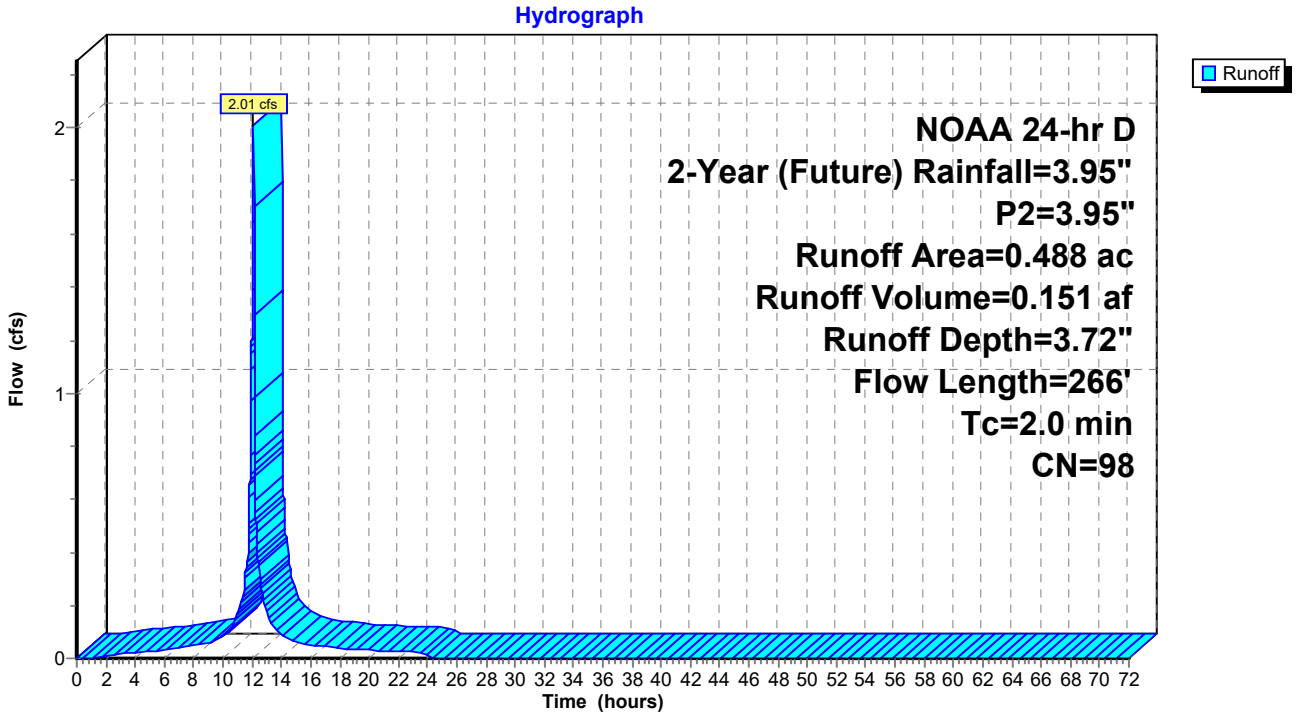
Runoff = 2.01 cfs @ 12.10 hrs, Volume= 0.151 af, Depth= 3.72"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.488	98	Paved parking, HSG D
0.488	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0100	1.16		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.95"
0.4	80	0.0230	3.08		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.0	3	0.0030	3.75	4.60	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.2	66	0.0051	4.89	6.00	**Pipe Channel, D-E** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.0	17	0.0127	10.55	33.14	**Pipe Channel, E-F** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.010 PVC, smooth interior
2.0	266	Total			

Subcatchment P1A I: PDA-1 Impervious



Summary for Subcatchment P1A P: PDA-1 Pervious

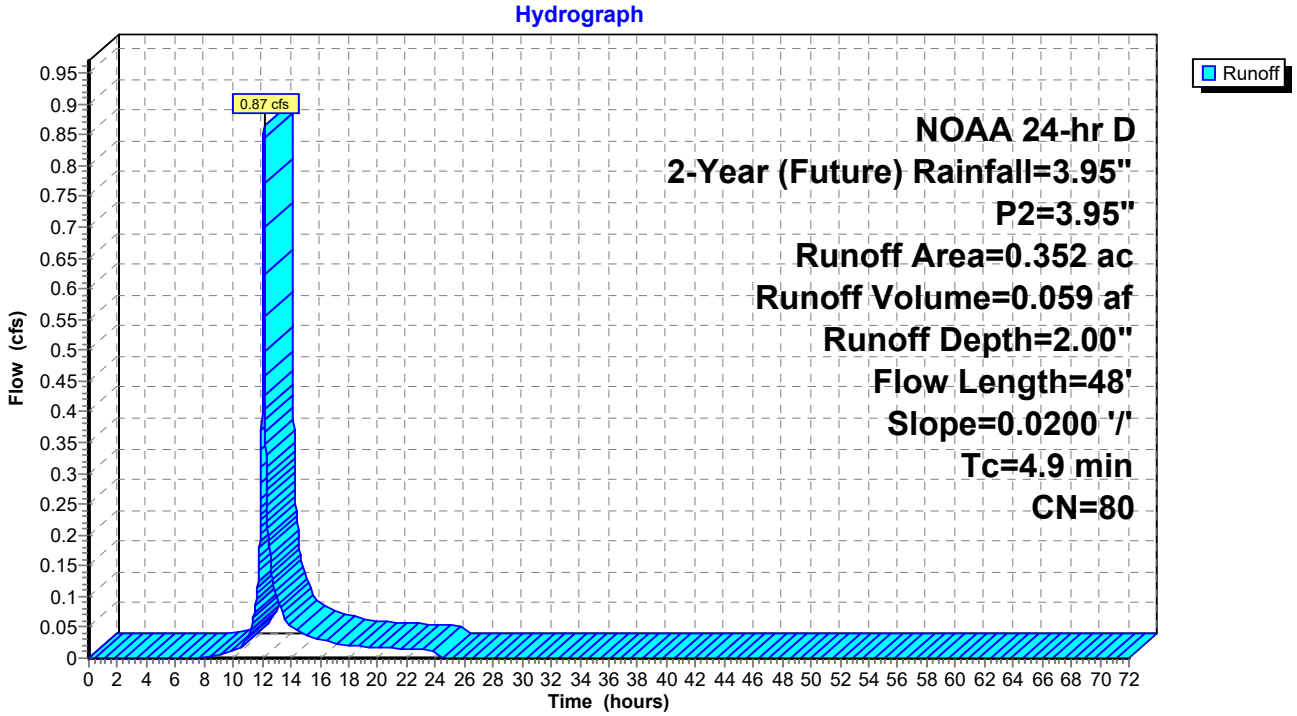
Runoff = 0.87 cfs @ 12.12 hrs, Volume= 0.059 af, Depth= 2.00"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.352	80	>75% Grass cover, Good, HSG D
0.352	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	48	0.0200	0.16		**Sheet Flow, G-H** Grass: Short n= 0.150 P2= 3.95"

Subcatchment P1A P: PDA-1 Pervious



Summary for Subcatchment P1B1: PDA-1 Bypass #1

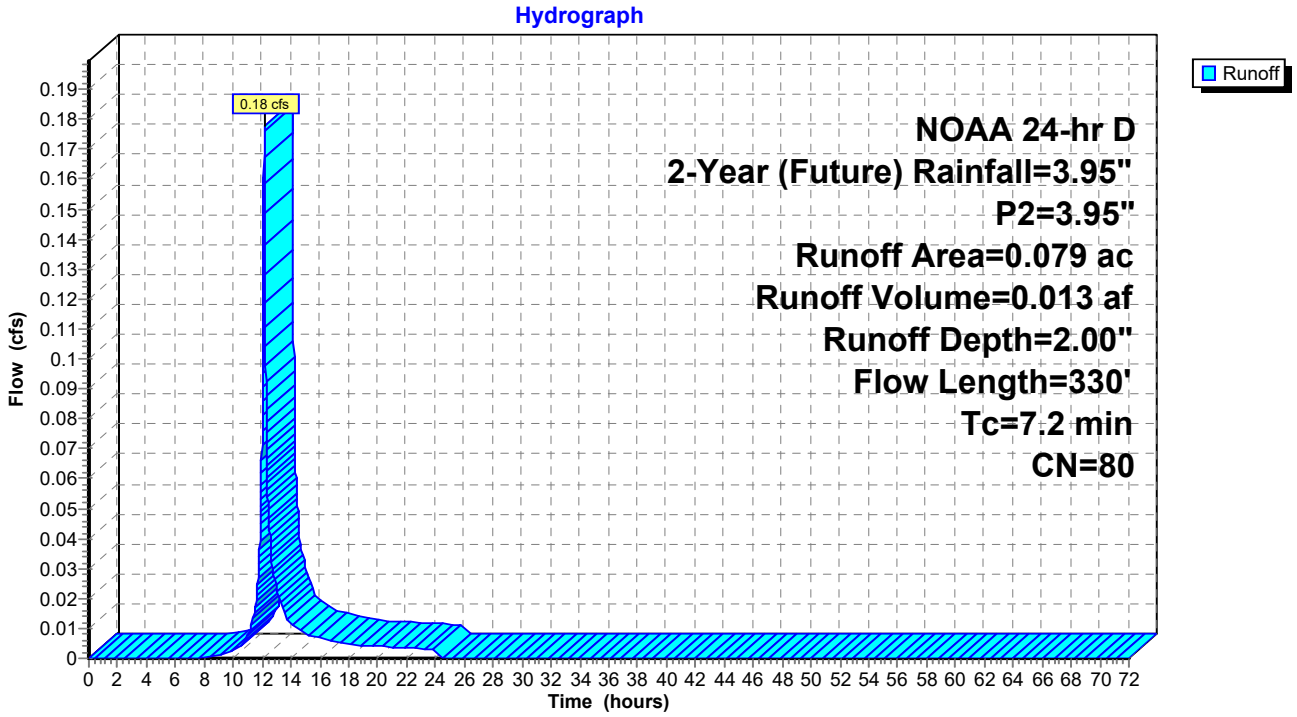
Runoff = 0.18 cfs @ 12.14 hrs, Volume= 0.013 af, Depth= 2.00"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.079	80	>75% Grass cover, Good, HSG D
0.079	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	33	0.0500	0.22		**Sheet Flow, I-J** Grass: Short n= 0.150 P2= 3.95"
0.2	45	0.0013	3.07	9.64	**Pipe Channel, J-K** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
1.2	60	0.0001	0.85	2.67	**Pipe Channel, K-L** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
2.1	105	0.0001	0.85	2.67	**Pipe Channel, L-M** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.9	63	0.0002	1.20	3.78	**Pipe Channel, M-N** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.3	24	0.0002	1.20	3.78	**Pipe Channel, N-O** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
7.2	330	Total			

Subcatchment P1B1: PDA-1 Bypass #1



Summary for Subcatchment P1B2: PDA-1 Bypass #2

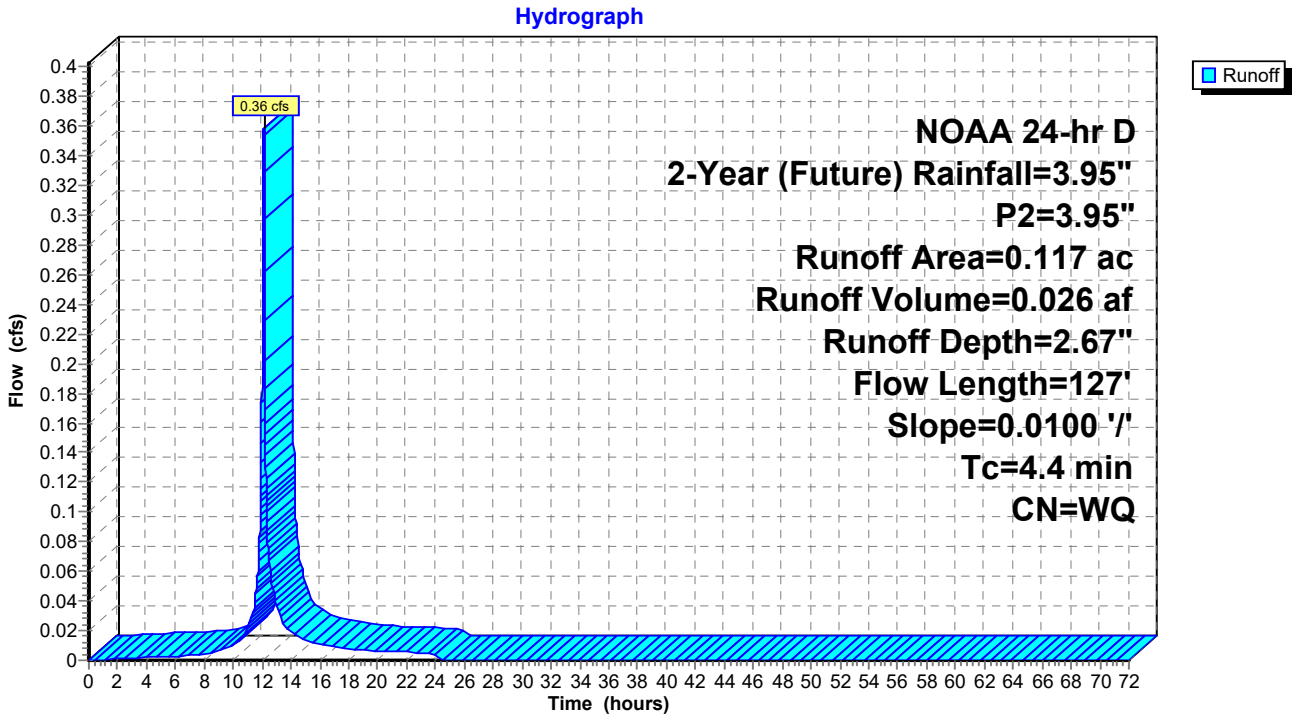
Runoff = 0.36 cfs @ 12.12 hrs, Volume= 0.026 af, Depth= 2.67"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.071	80	>75% Grass cover, Good, HSG D
0.046	98	Paved parking, HSG D
0.117		Weighted Average
0.071	80	60.68% Pervious Area
0.046	98	39.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	22	0.0100	0.11		**Sheet Flow, P-Q** Grass: Short n= 0.150 P2= 3.95"
0.9	105	0.0100	2.03		**Shallow Concentrated Flow, Q-O** Paved Kv= 20.3 fps
4.4	127	Total			

Subcatchment P1B2: PDA-1 Bypass #2



Summary for Subcatchment P1C I: P-Off-Site #1C Impervious

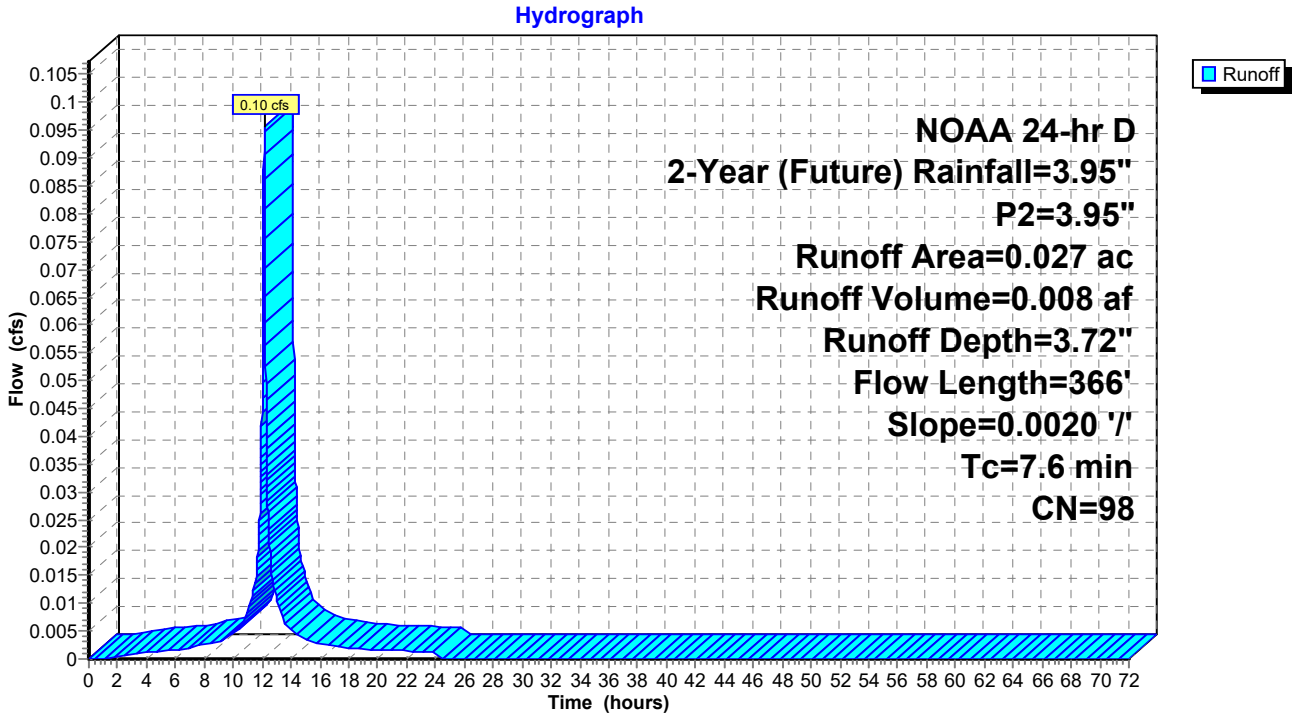
Runoff = 0.10 cfs @ 12.15 hrs, Volume= 0.008 af, Depth= 3.72"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.027	98	Paved parking, HSG D
0.027	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	100	0.0020	0.61		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.95"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.6	366	Total			

Subcatchment P1C I: P-Off-Site #1C Impervious



Summary for Subcatchment P1C P: P-Off-Site #1C Pervious

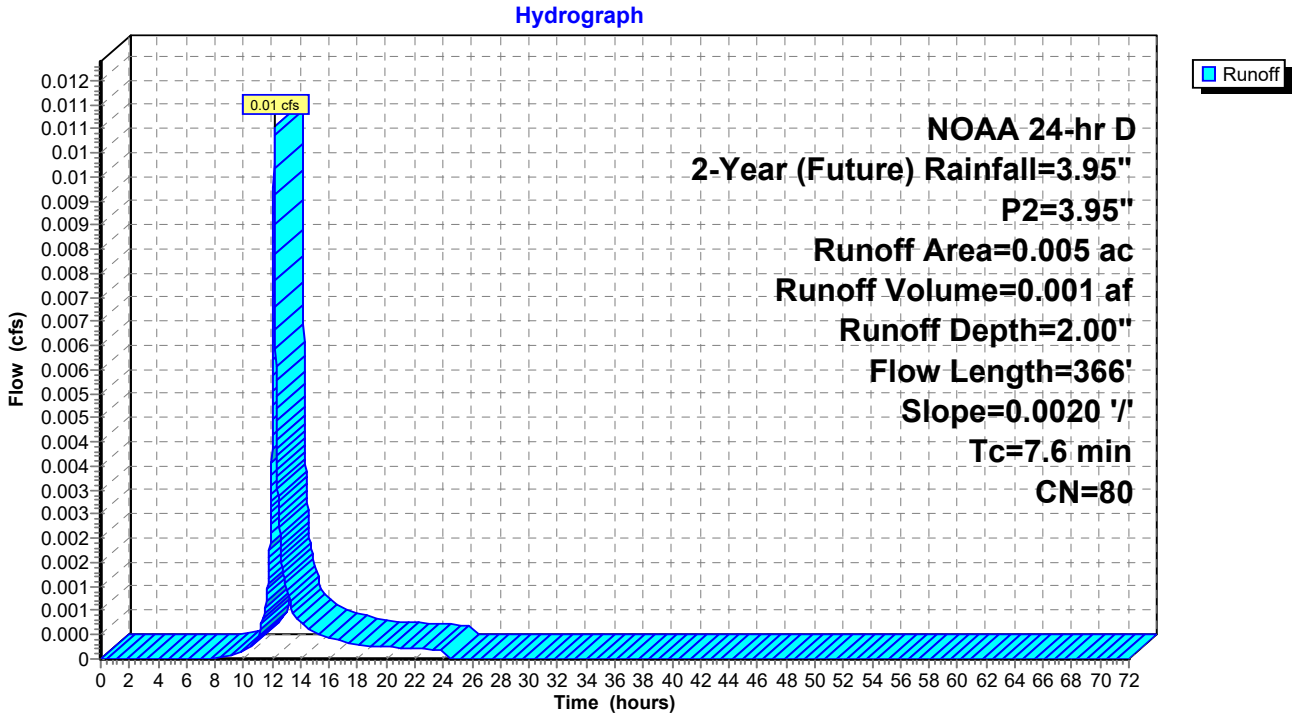
Runoff = 0.01 cfs @ 12.15 hrs, Volume= 0.001 af, Depth= 2.00"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.005	80	>75% Grass cover, Good, HSG D
0.005	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	100	0.0020	0.61		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.95"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.6	366	Total			

Subcatchment P1C P: P-Off-Site #1C Pervious



Summary for Subcatchment P2A I: PDA-2 Impervious

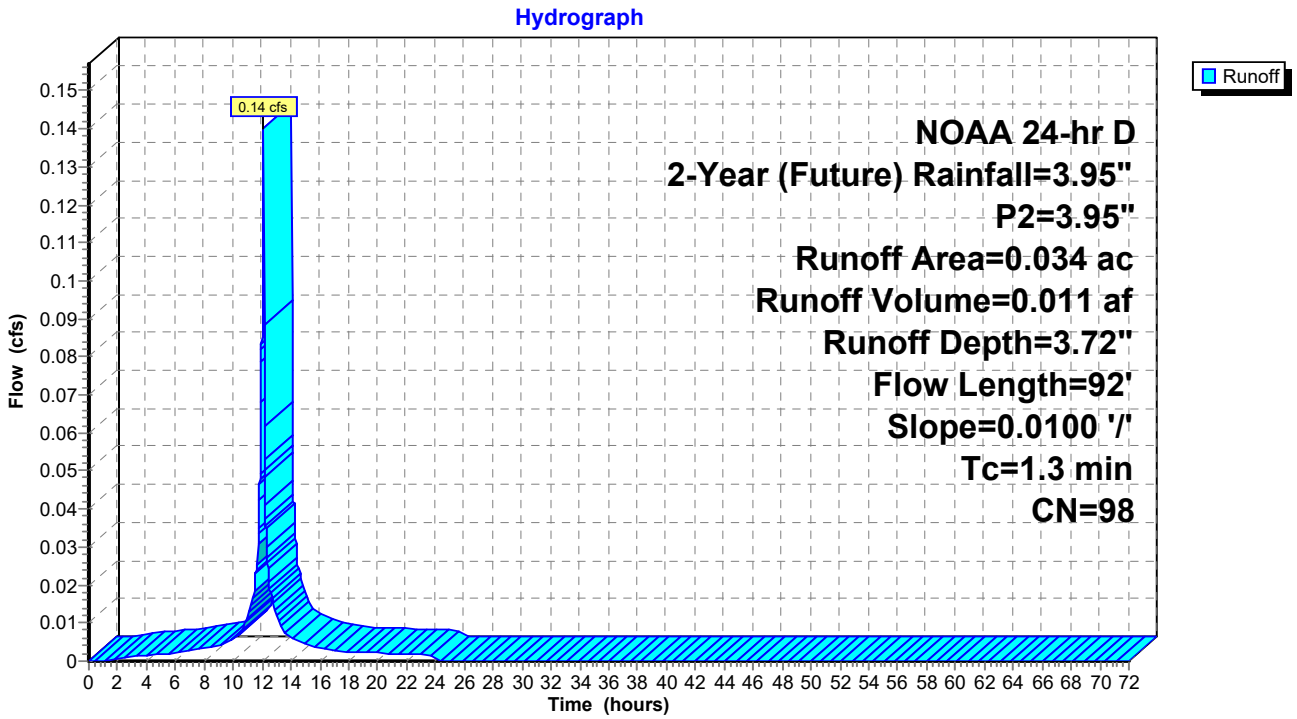
Runoff = 0.14 cfs @ 12.09 hrs, Volume= 0.011 af, Depth= 3.72"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.034	98	Paved parking, HSG D
0.034	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	92	0.0100	1.14		**Sheet Flow, R-S** Smooth surfaces n= 0.011 P2= 3.95"

Subcatchment P2A I: PDA-2 Impervious



Summary for Subcatchment P2A P: PDA-2 Pervious

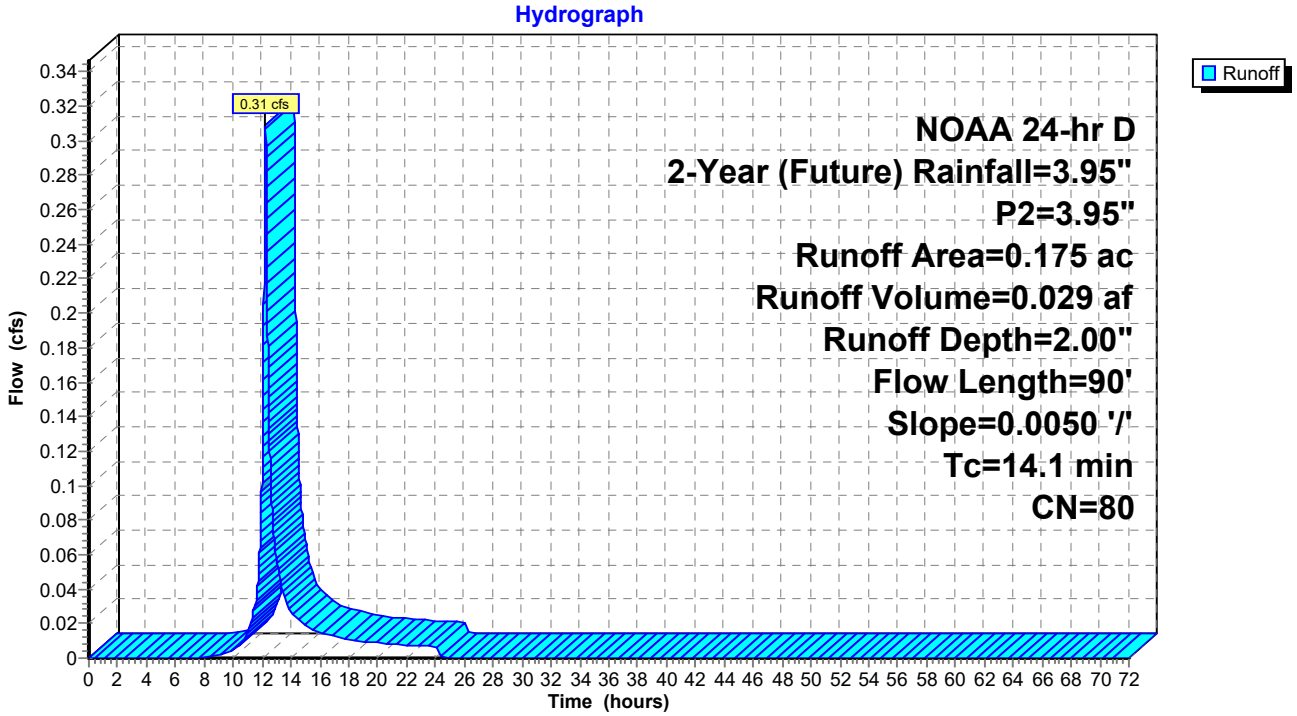
Runoff = 0.31 cfs @ 12.22 hrs, Volume= 0.029 af, Depth= 2.00"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.175	80	>75% Grass cover, Good, HSG D
0.175	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.1	90	0.0050	0.11		**Sheet Flow, T-U** Grass: Short n= 0.150 P2= 3.95"

Subcatchment P2A P: PDA-2 Pervious



Summary for Subcatchment P4A: PDA-4

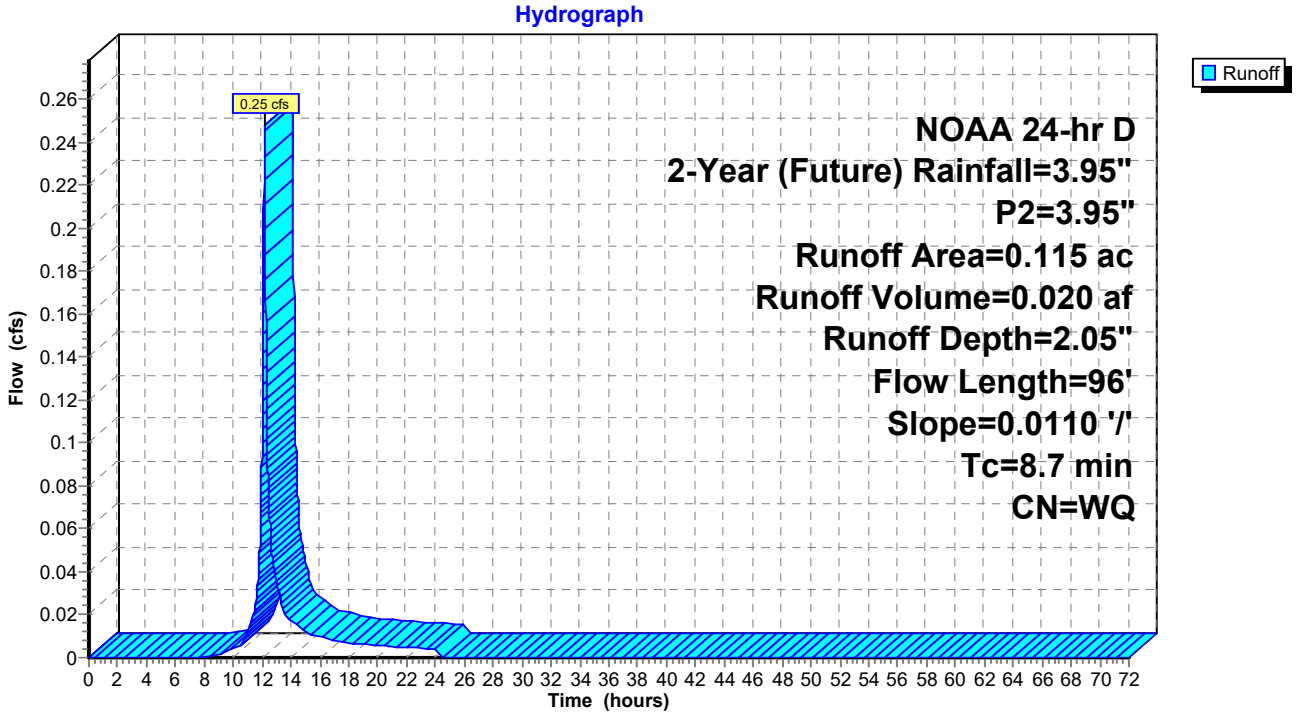
Runoff = 0.25 cfs @ 12.16 hrs, Volume= 0.020 af, Depth= 2.05"
Routed to Link PPOA4 : PPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.112	80	>75% Grass cover, Good, HSG D
0.003	98	Paved parking, HSG D
0.115		Weighted Average
0.112	80	97.39% Pervious Area
0.003	98	2.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	70	0.0110	0.14		**Sheet Flow, V-X** Grass: Short n= 0.150 P2= 3.95" Using McCuen-Spiess flow length
0.3	26	0.0110	1.57		**Shallow Concentrated Flow, X-Y** Grassed Waterway Kv= 15.0 fps
8.7	96	Total			

Subcatchment P4A: PDA-4



Summary for Subcatchment PC1A: PC AREA #1

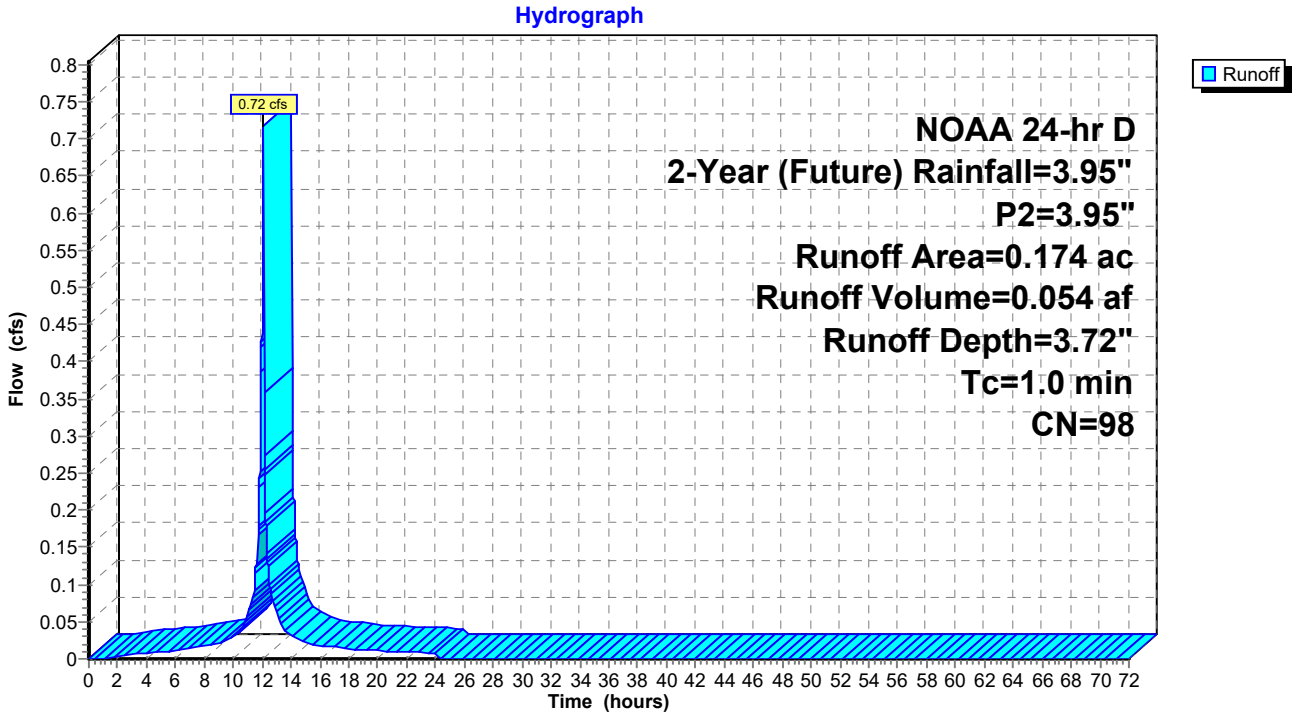
Runoff = 0.72 cfs @ 12.09 hrs, Volume= 0.054 af, Depth= 3.72"
Routed to Pond PC1 : PC 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.174	98	Paved parking, HSG D
0.174	98	100.00% Impervious Area

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

Subcatchment PC1A: PC AREA #1



Summary for Subcatchment PP1A: PPVMT AREA 1

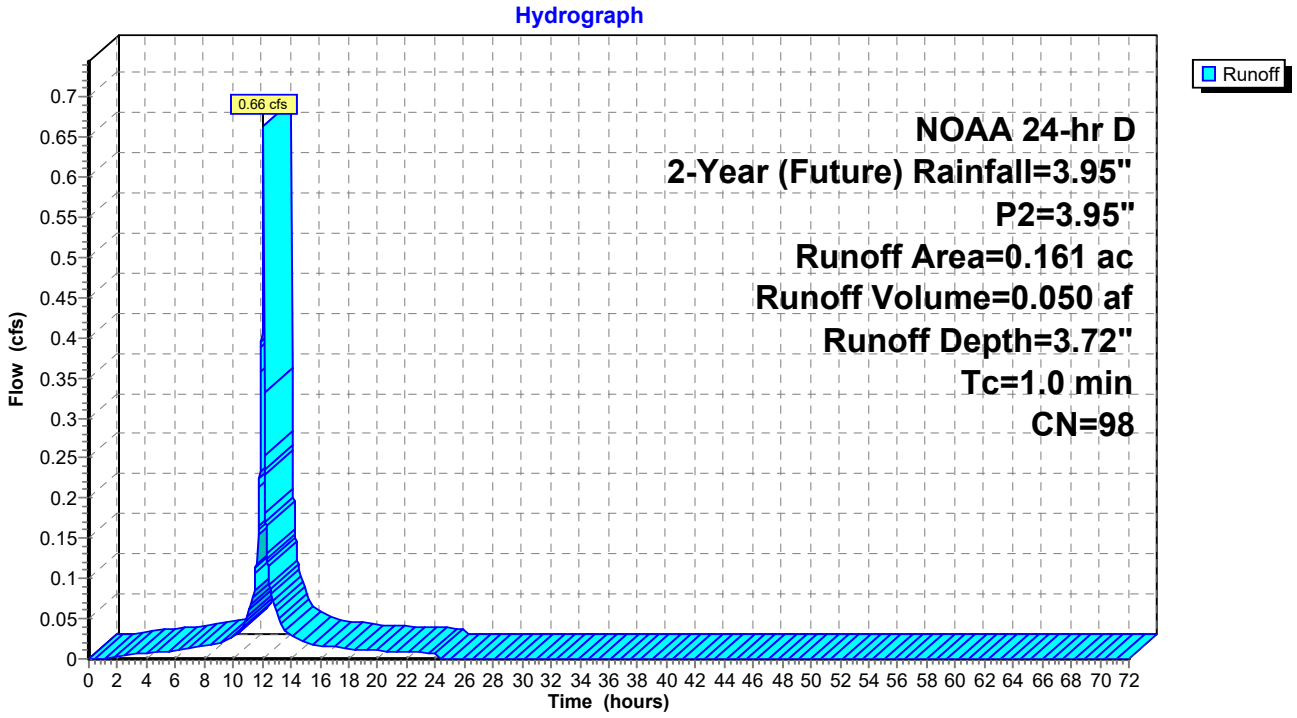
Runoff = 0.66 cfs @ 12.09 hrs, Volume= 0.050 af, Depth= 3.72"
Routed to Pond PP1 : PPVMT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.161	98	Paved parking, HSG D
0.161	98	100.00% Impervious Area

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

Subcatchment PP1A: PPVMT AREA 1



Summary for Subcatchment PP2A: PPVMT AREA #2

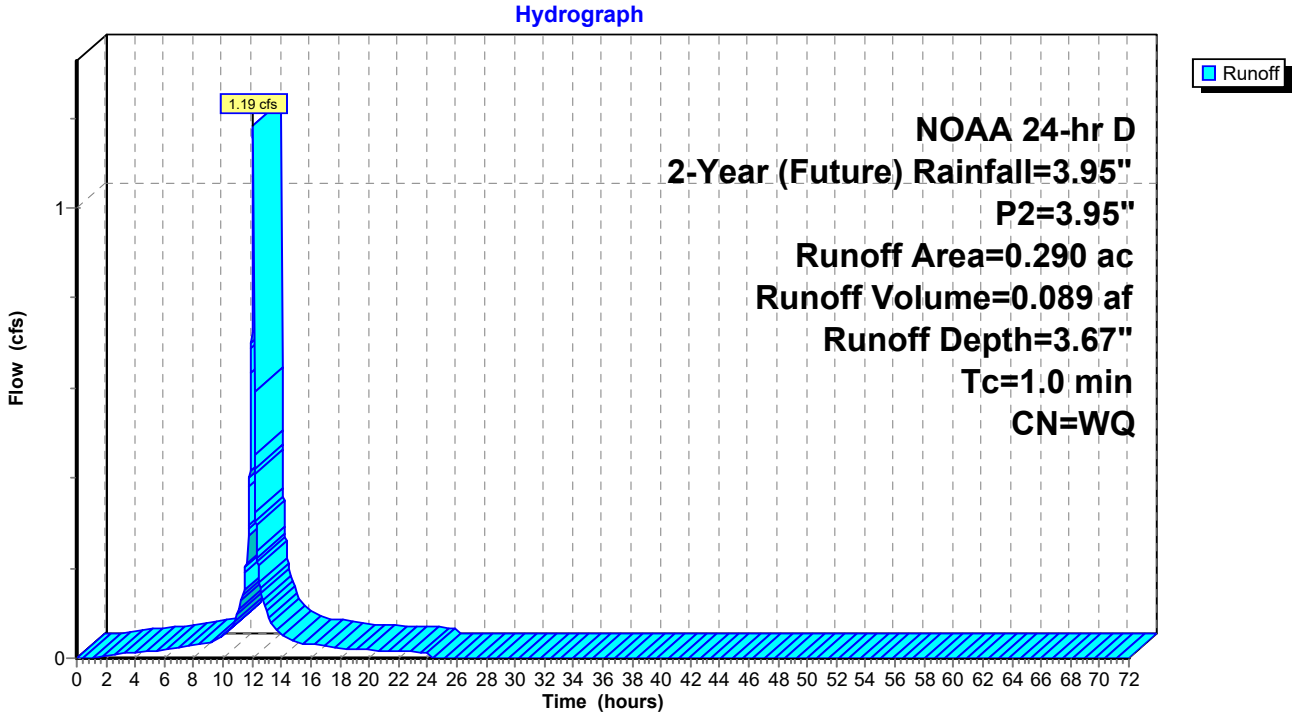
Runoff = 1.19 cfs @ 12.09 hrs, Volume= 0.089 af, Depth= 3.67"
Routed to Pond PP2 : PPVMT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.007	80	>75% Grass cover, Good, HSG D
0.283	98	Paved parking, HSG D
0.290		Weighted Average
0.007	80	2.41% Pervious Area
0.283	98	97.59% Impervious Area

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

Subcatchment PP2A: PPVMT AREA #2



Summary for Subcatchment PP3A: PPVMT AREA #3

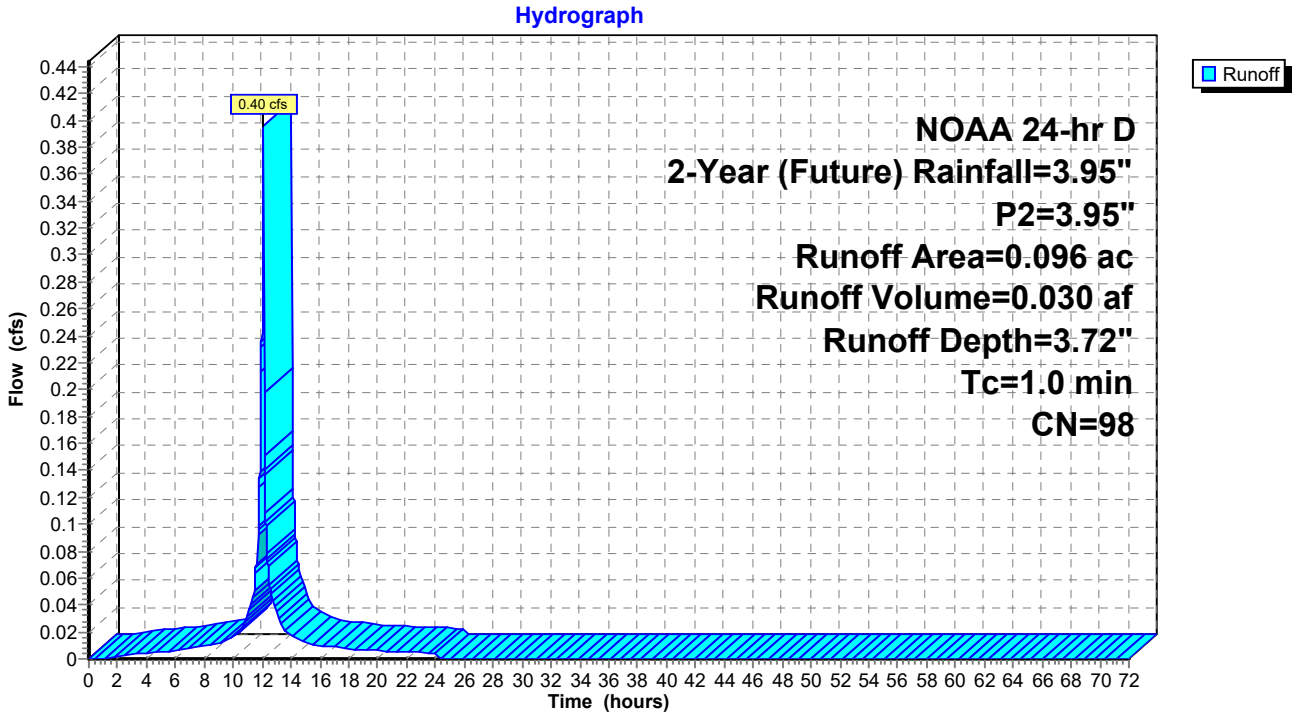
Runoff = 0.40 cfs @ 12.09 hrs, Volume= 0.030 af, Depth= 3.72"
Routed to Pond PP3 : PPVMT 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.096	98	Paved parking, HSG D
0.096	98	100.00% Impervious Area

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

Subcatchment PP3A: PPVMT AREA #3



Summary for Subcatchment PP4A: PPVMT AREA #4

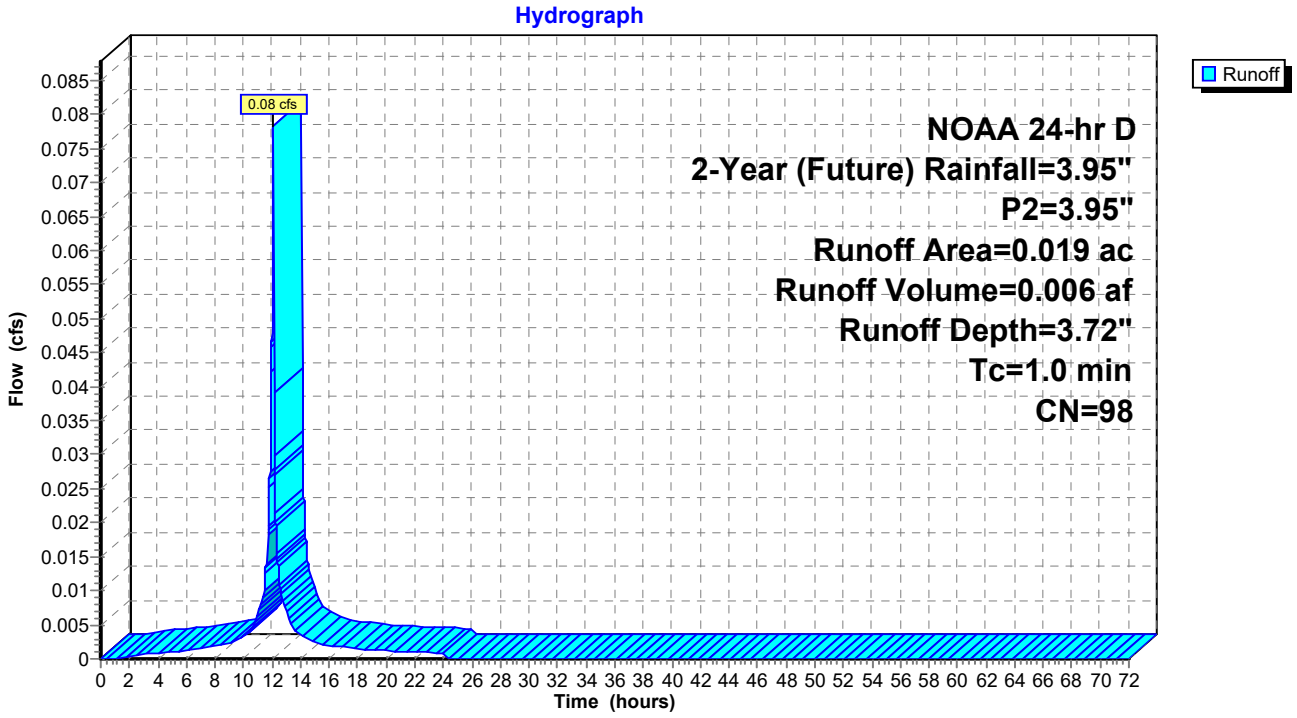
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth= 3.72"
Routed to Pond PP4 : PPVMT 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.019	98	Paved parking, HSG D
0.019	98	100.00% Impervious Area

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

Subcatchment PP4A: PPVMT AREA #4



Summary for Subcatchment PP5A: PPVMT AREA #5

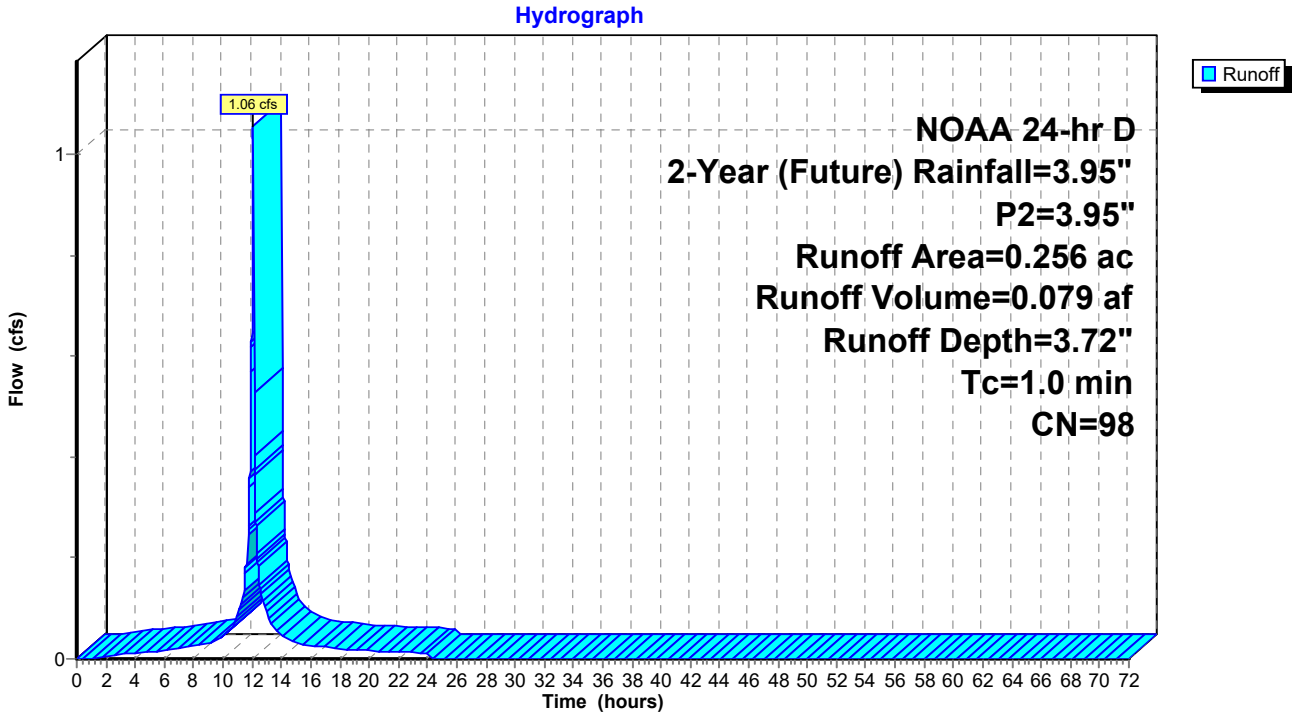
Runoff = 1.06 cfs @ 12.09 hrs, Volume= 0.079 af, Depth= 3.72"
Routed to Pond PP5 : PPVMT 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-Year (Future) Rainfall=3.95", P2=3.95"

Area (ac)	CN	Description
0.256	98	Paved parking, HSG D
0.256	98	100.00% Impervious Area

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

Subcatchment PP5A: PPVMT AREA #5



Summary for Pond CW: Constructed Wetlands (walls with ledge)

Inflow Area = 1.836 ac, 80.45% Impervious, Inflow Depth = 3.10" for 2-Year (Future) event
Inflow = 5.50 cfs @ 12.10 hrs, Volume= 0.475 af
Outflow = 0.21 cfs @ 15.86 hrs, Volume= 0.444 af, Atten= 96%, Lag= 225.4 min
Primary = 0.21 cfs @ 15.86 hrs, Volume= 0.444 af
Routed to Link PPOA1 : PPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 105.91' @ 15.86 hrs Surf.Area= 8,141 sf Storage= 13,633 cf

Plug-Flow detention time= 824.5 min calculated for 0.444 af (93% of inflow)
Center-of-Mass det. time= 781.4 min (1,589.2 - 807.9)

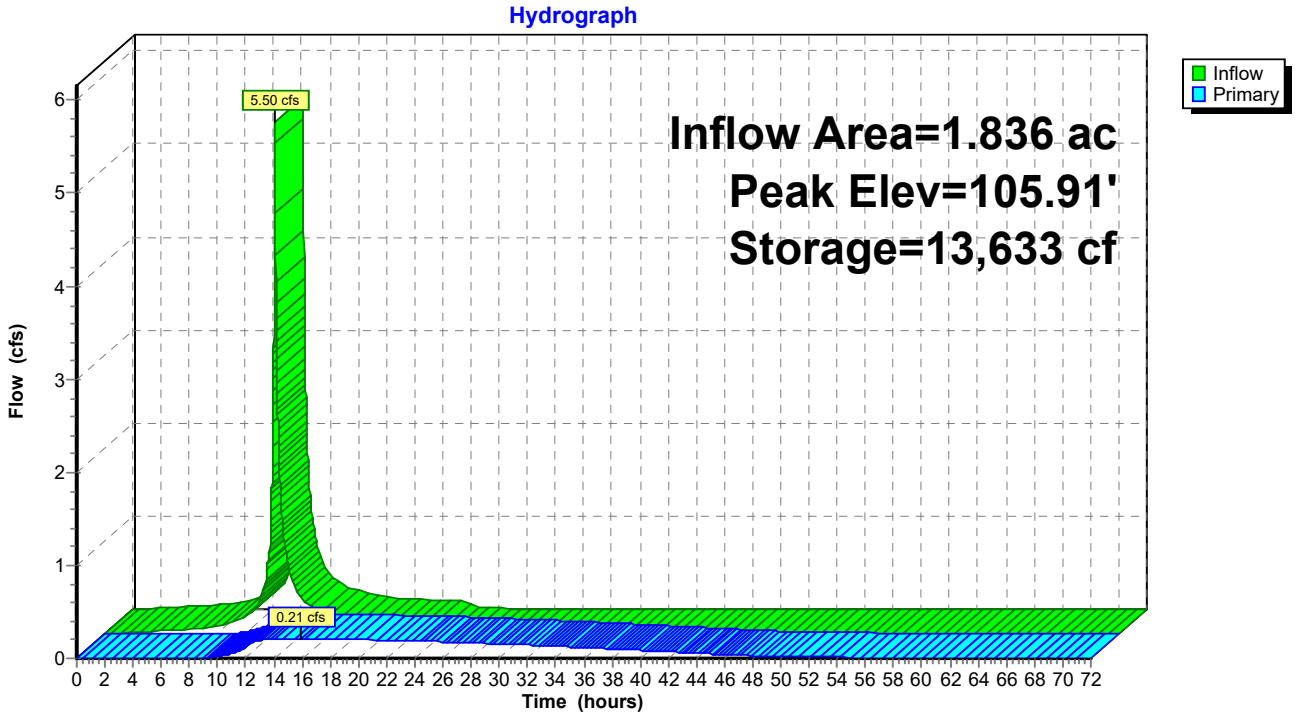
Volume	Invert	Avail.Storage	Storage Description
#1	104.00'	45,333 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
104.00	5,936	0	0
105.00	6,640	6,288	6,288
105.01	8,059	73	6,361
106.00	8,149	8,023	14,384
107.00	8,249	8,199	22,583
108.00	8,349	8,299	30,882
109.00	8,449	8,399	39,281
109.70	8,840	6,051	45,333

Device	Routing	Invert	Outlet Devices
#1	Primary	104.00'	**15.0" Round Culvert** L= 300.0' Ke= 0.500 Inlet / Outlet Invert= 104.00' / 103.10' S= 0.0030 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	104.20'	**2.5" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	105.92'	**12.2" W x 7.7" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	108.00'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.21 cfs @ 15.86 hrs HW=105.91' (Free Discharge)
└**1=Culvert** (Passes 0.21 cfs of 4.50 cfs potential flow)
  ├**2=Orifice** (Orifice Controls 0.21 cfs @ 6.10 fps)
  ├**3=Orifice/Grate** (Controls 0.00 cfs)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond CW: Constructed Wetlands (walls with ledge)



Summary for Pond E1B D: E-Depression

Inflow Area = 0.292 ac, 0.00% Impervious, Inflow Depth = 1.77" for 2-Year (Future) event
Inflow = 0.52 cfs @ 12.18 hrs, Volume= 0.043 af
Outflow = 0.47 cfs @ 12.22 hrs, Volume= 0.036 af, Atten= 9%, Lag= 2.5 min
Primary = 0.47 cfs @ 12.22 hrs, Volume= 0.036 af
Routed to Link EPOA1 : EPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.26' @ 12.22 hrs Surf.Area= 2,189 sf Storage= 403 cf

Plug-Flow detention time= 113.2 min calculated for 0.036 af (83% of inflow)
Center-of-Mass det. time= 38.2 min (894.3 - 856.1)

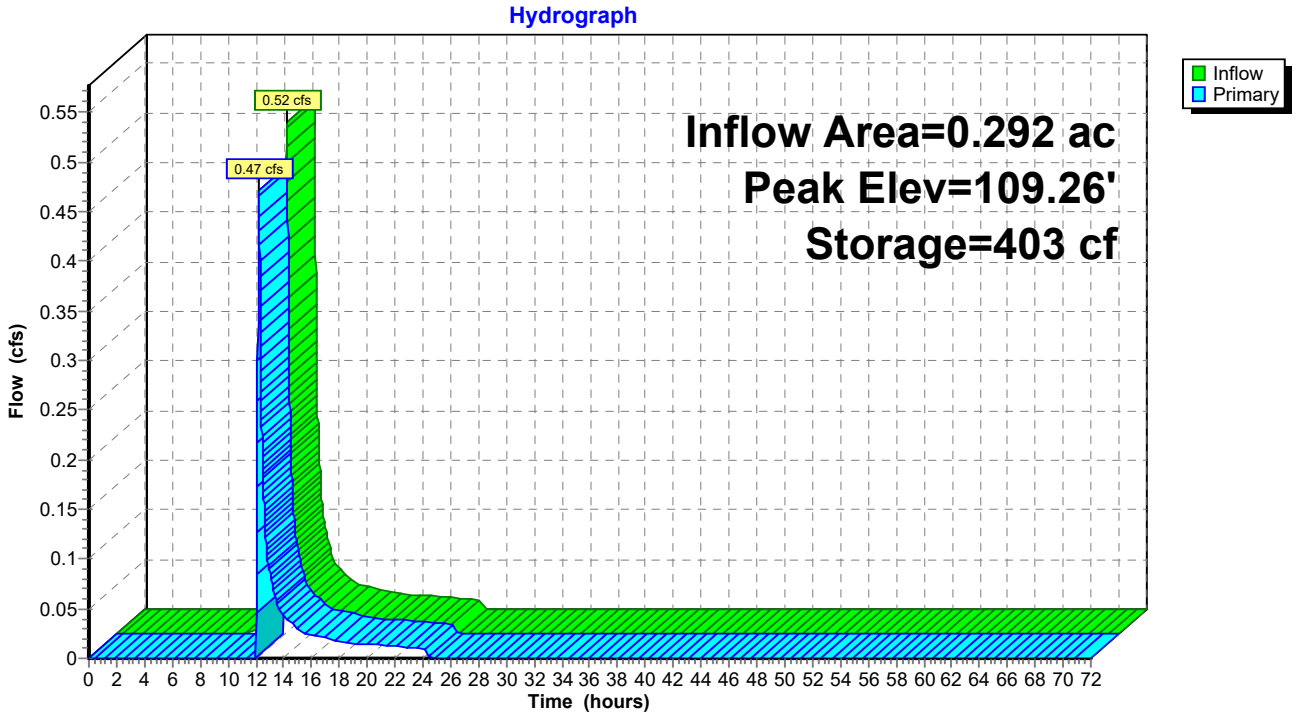
Volume	Invert	Avail.Storage	Storage Description
#1	108.80'	998 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.80	11	0	0
109.00	540	55	55
109.34	2,737	557	612
109.45	4,282	386	998

Device	Routing	Invert	Outlet Devices
#1	Primary	109.21'	**21.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.47 cfs @ 12.22 hrs HW=109.26' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 0.47 cfs @ 0.50 fps)

Pond E1B D: E-Depression



Summary for Pond PC1: PC 1

Inflow Area = 0.174 ac,100.00% Impervious, Inflow Depth = 3.72" for 2-Year (Future) event
Inflow = 0.72 cfs @ 12.09 hrs, Volume= 0.054 af
Outflow = 0.23 cfs @ 12.21 hrs, Volume= 0.041 af, Atten= 69%, Lag= 7.3 min
Primary = 0.23 cfs @ 12.21 hrs, Volume= 0.041 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 110.70' @ 12.21 hrs Surf.Area= 5,616 sf Storage= 1,197 cf

Plug-Flow detention time= 288.0 min calculated for 0.041 af (76% of inflow)
Center-of-Mass det. time= 195.4 min (944.6 - 749.2)

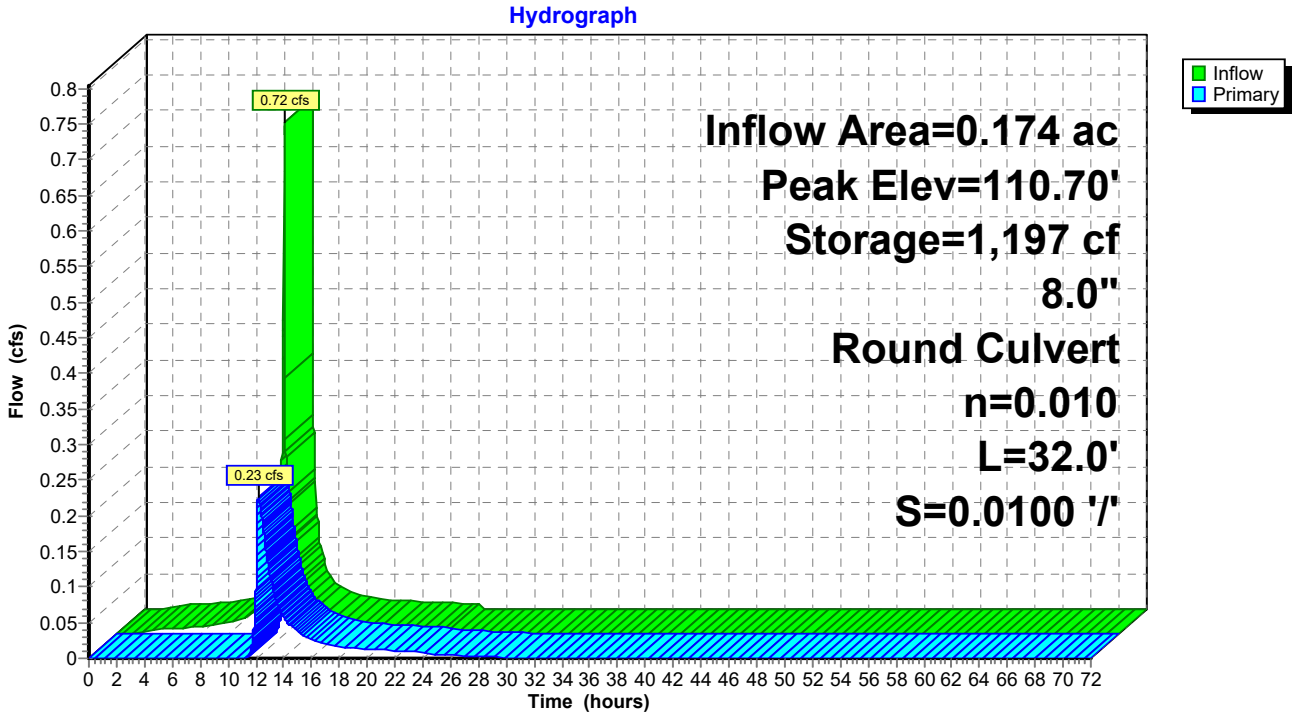
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	6,043 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 15,107 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	5,616	0	0
111.17	5,616	5,616	5,616
112.17	5,616	5,616	11,232
112.86	5,616	3,875	15,107

Device	Routing	Invert	Outlet Devices
#1	Primary	110.42'	**8.0" Round Culvert** L= 32.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.42' / 110.10' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.23 cfs @ 12.21 hrs HW=110.70' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.23 cfs @ 1.60 fps)

Pond PC1: PC 1


Hydrograph
Inflow
Primary
0.72 cfs
0.23 cfs
Inflow Area=0.174 ac
Peak Elev=110.70'
Storage=1,197 cf
8.0"
Round Culvert
n=0.010
L=32.0'
S=0.0100 '/'
Flow (cfs)
Time (hours)

Summary for Pond PP1: PPVMT 1

Inflow Area = 0.161 ac,100.00% Impervious, Inflow Depth = 3.72" for 2-Year (Future) event
Inflow = 0.66 cfs @ 12.09 hrs, Volume= 0.050 af
Outflow = 0.58 cfs @ 12.11 hrs, Volume= 0.050 af, Atten= 13%, Lag= 1.0 min
Primary = 0.58 cfs @ 12.11 hrs, Volume= 0.050 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 110.31' @ 12.11 hrs Surf.Area= 2,680 sf Storage= 151 cf

Plug-Flow detention time= 3.1 min calculated for 0.050 af (100% of inflow)
Center-of-Mass det. time= 3.1 min (752.3 - 749.2)

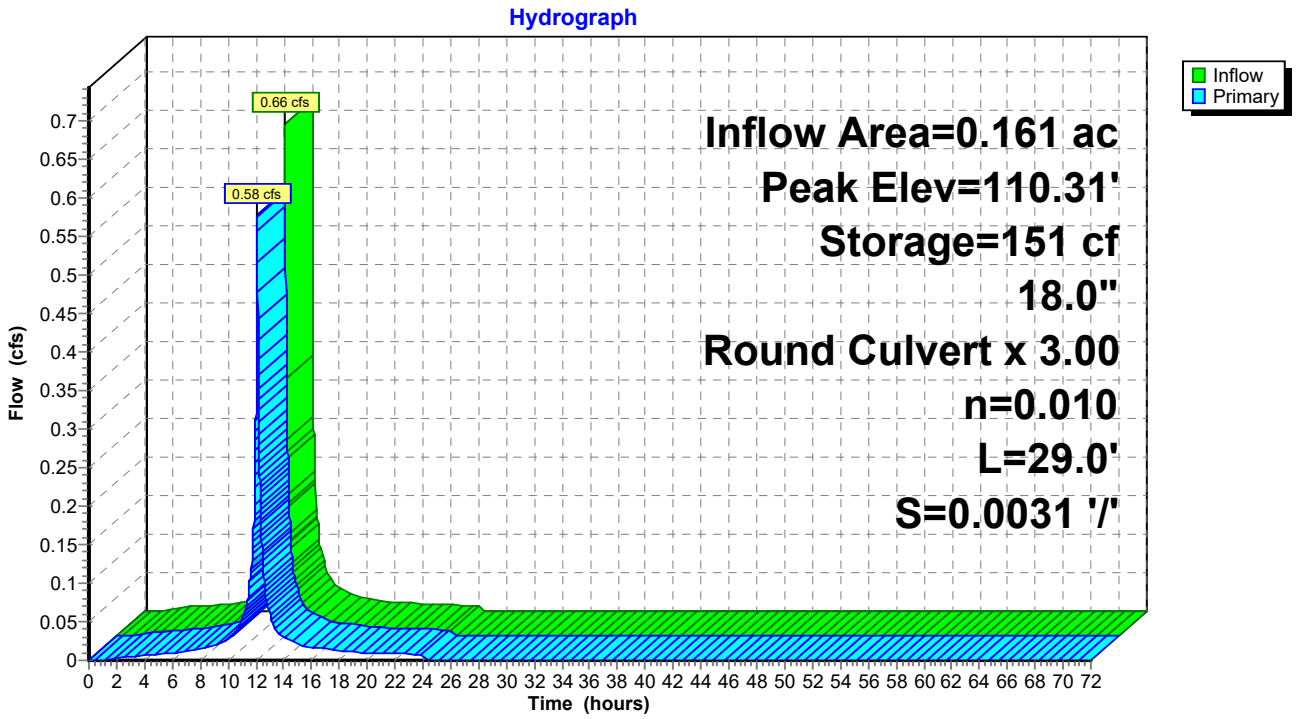
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	1,940 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 4,851 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	2,680	0	0
111.17	2,680	2,680	2,680
111.98	2,680	2,171	4,851

Device	Routing	Invert	Outlet Devices
#1	Primary	110.08'	**18.0" Round Culvert X 3.00** L= 29.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.08' / 109.99' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.57 cfs @ 12.11 hrs HW=110.31' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.57 cfs @ 1.69 fps)

Pond PP1: PPVMT 1



Summary for Pond PP2: PPVMT 2

Inflow Area = 0.290 ac, 97.59% Impervious, Inflow Depth = 3.67" for 2-Year (Future) event
Inflow = 1.19 cfs @ 12.09 hrs, Volume= 0.089 af
Outflow = 0.69 cfs @ 12.12 hrs, Volume= 0.064 af, Atten= 42%, Lag= 1.7 min
Primary = 0.69 cfs @ 12.12 hrs, Volume= 0.064 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.23' @ 12.12 hrs Surf.Area= 3,642 sf Storage= 1,798 cf

Plug-Flow detention time= 239.1 min calculated for 0.064 af (72% of inflow)
Center-of-Mass det. time= 139.3 min (889.6 - 750.3)

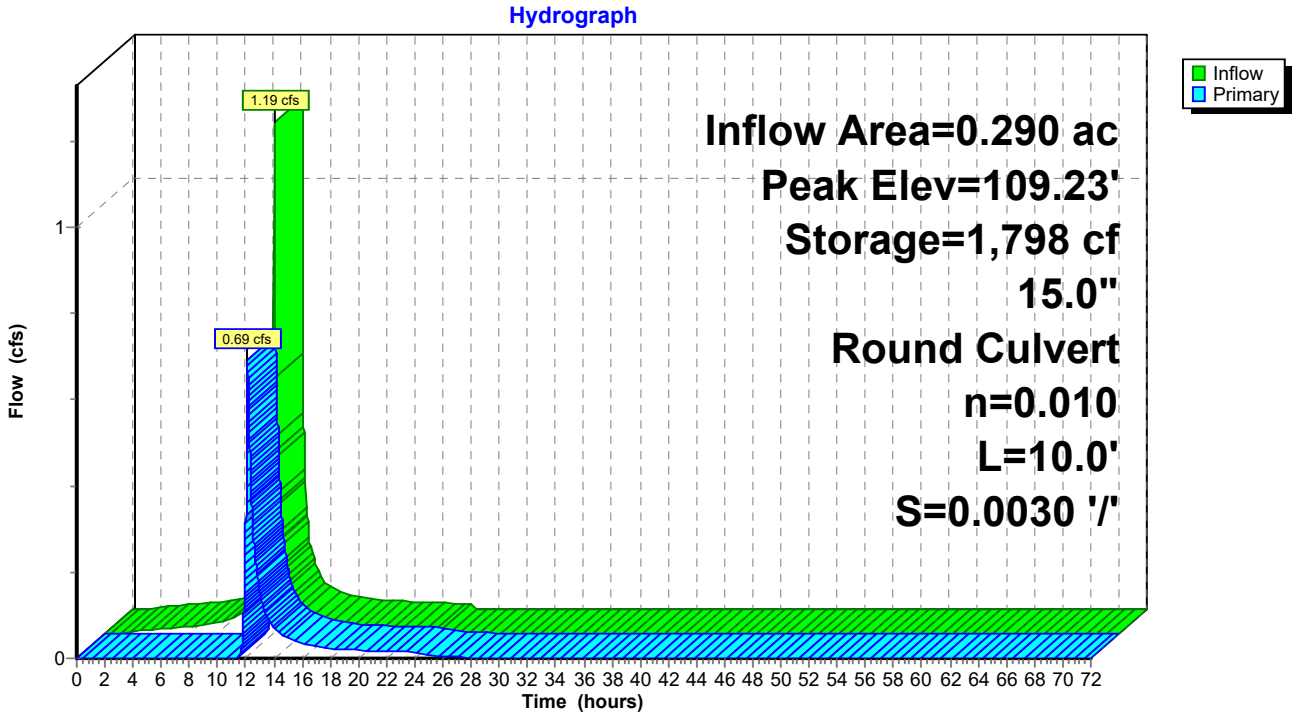
Volume	Invert	Avail.Storage	Storage Description
#1	108.00'	5,434 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 13,585 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	3,642	0	0
109.00	3,642	3,642	3,642
110.00	3,642	3,642	7,284
111.00	3,642	3,642	10,926
111.73	3,642	2,659	13,585

Device	Routing	Invert	Outlet Devices
#1	Primary	108.74'	**15.0" Round Culvert** L= 10.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.74' / 108.71' S= 0.0030 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.69 cfs @ 12.12 hrs HW=109.23' (Free Discharge)
1=Culvert (Barrel Controls 0.69 cfs @ 2.26 fps)

Pond PP2: PPVMT 2



Summary for Pond PP3: PPVMT 3

Inflow Area = 0.096 ac,100.00% Impervious, Inflow Depth = 3.72" for 2-Year (Future) event
Inflow = 0.40 cfs @ 12.09 hrs, Volume= 0.030 af
Outflow = 0.40 cfs @ 12.09 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min
Primary = 0.40 cfs @ 12.09 hrs, Volume= 0.030 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.00' @ 12.09 hrs Surf.Area= 1,332 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.030 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (749.2 - 749.2)

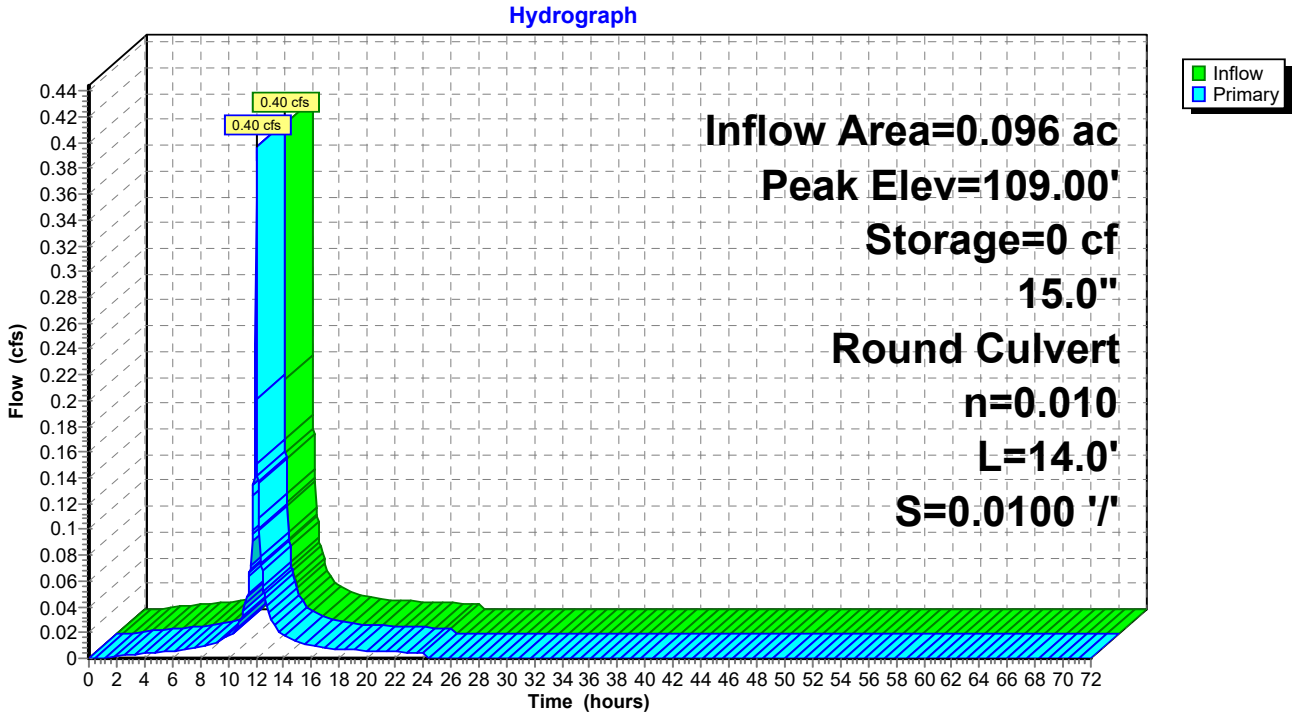
Volume	Invert	Avail.Storage	Storage Description
#1	109.00'	1,108 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 2,771 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
109.00	1,332	0	0
110.00	1,332	1,332	1,332
111.00	1,332	1,332	2,664
111.08	1,332	107	2,771

Device	Routing	Invert	Outlet Devices
#1	Primary	104.14'	**15.0" Round Culvert** L= 14.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 104.14' / 104.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=10.73 cfs @ 12.09 hrs HW=109.00' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 10.73 cfs @ 8.74 fps)

Pond PP3: PPVMT 3



Summary for Pond PP4: PPVMT 4

Inflow Area = 0.019 ac,100.00% Impervious, Inflow Depth = 3.72" for 2-Year (Future) event
Inflow = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af
Outflow = 0.08 cfs @ 12.10 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.3 min
Primary = 0.08 cfs @ 12.10 hrs, Volume= 0.006 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 108.36' @ 12.10 hrs Surf.Area= 360 sf Storage= 5 cf

Plug-Flow detention time= 1.1 min calculated for 0.006 af (100% of inflow)
Center-of-Mass det. time= 1.1 min (750.2 - 749.2)

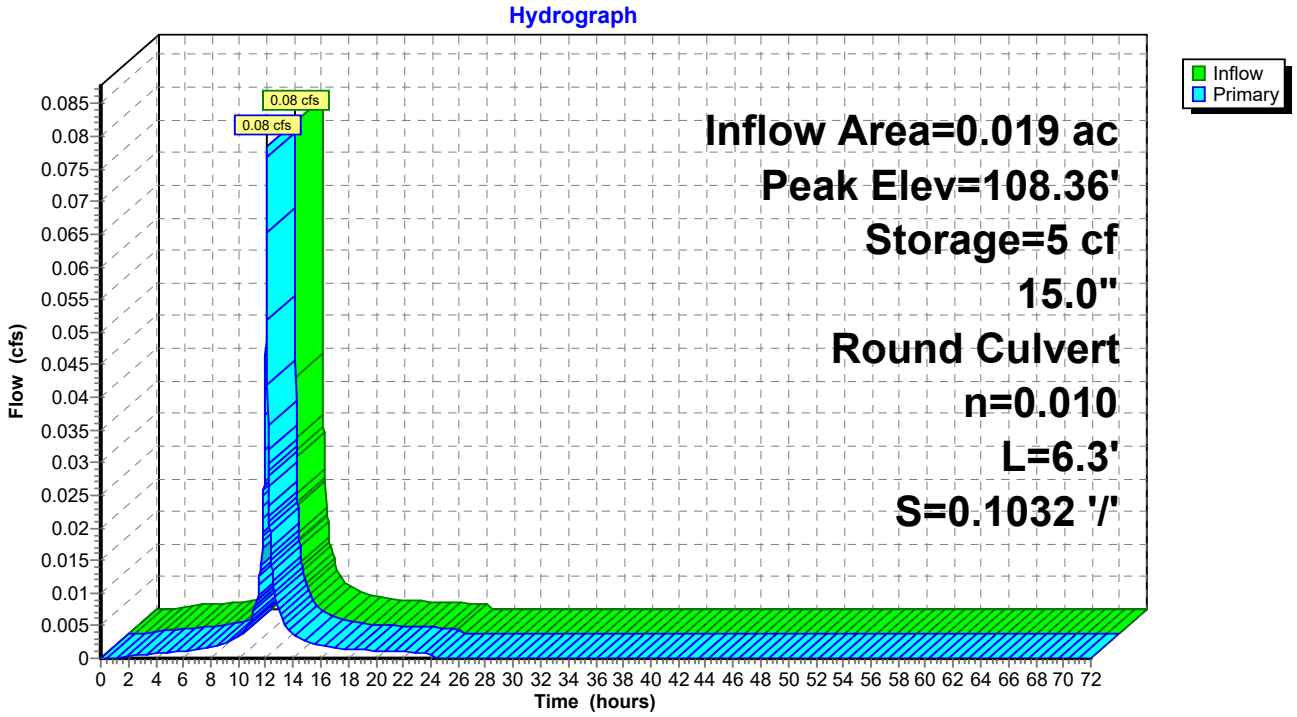
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	511 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 1,278 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	360	0	0
109.33	360	360	360
110.33	360	360	720
111.33	360	360	1,080
111.88	360	198	1,278

Device	Routing	Invert	Outlet Devices
#1	Primary	108.23'	**15.0" Round Culvert** L= 6.3' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.23' / 107.58' S= 0.1032 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.08 cfs @ 12.10 hrs HW=108.36' (Free Discharge)
1=Culvert (Inlet Controls 0.08 cfs @ 1.10 fps)

Pond PP4: PPVMT 4



Summary for Pond PP5: PPVMT 5

Inflow Area = 0.256 ac,100.00% Impervious, Inflow Depth = 3.72" for 2-Year (Future) event
Inflow = 1.06 cfs @ 12.09 hrs, Volume= 0.079 af
Outflow = 0.77 cfs @ 12.11 hrs, Volume= 0.075 af, Atten= 27%, Lag= 1.4 min
Primary = 0.77 cfs @ 12.11 hrs, Volume= 0.075 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 108.92' @ 12.11 hrs Surf.Area= 3,168 sf Storage= 749 cf

Plug-Flow detention time= 101.7 min calculated for 0.075 af (94% of inflow)
Center-of-Mass det. time= 69.1 min (818.2 - 749.2)

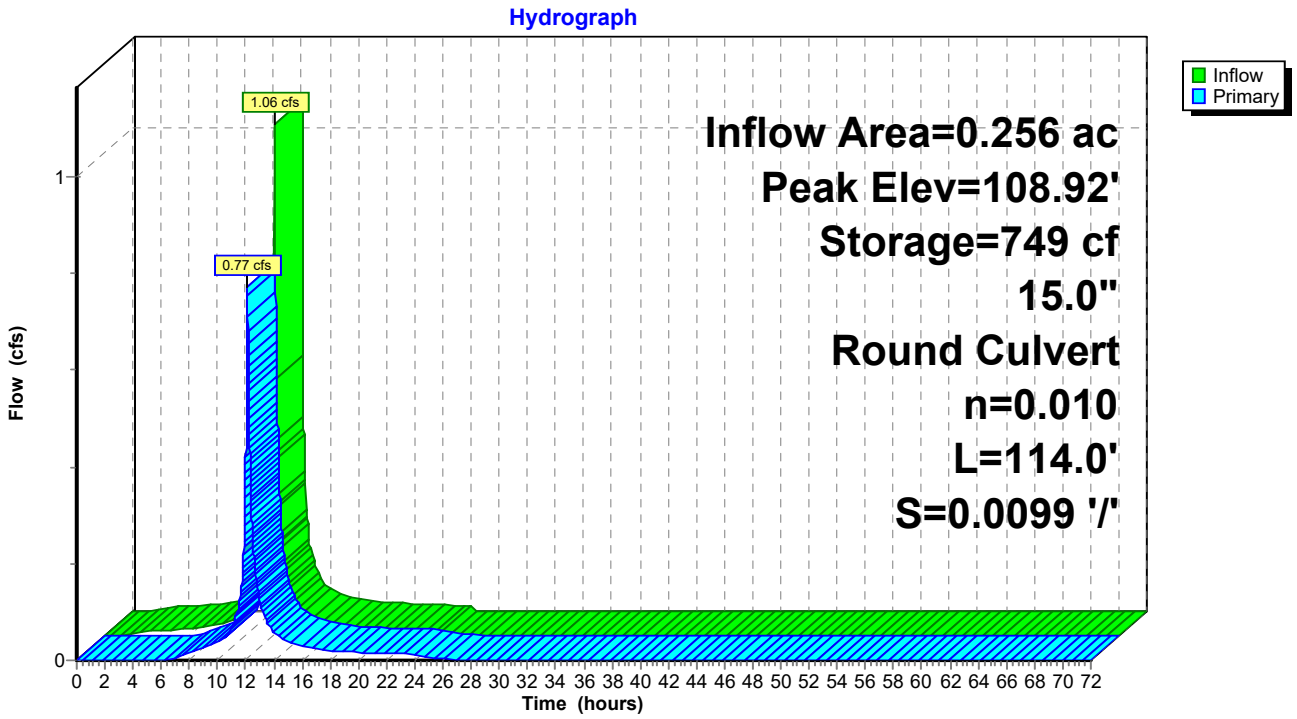
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	3,421 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 8,554 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	3,168	0	0
109.33	3,168	3,168	3,168
110.33	3,168	3,168	6,336
111.00	3,168	2,123	8,459
111.03	3,168	95	8,554

Device	Routing	Invert	Outlet Devices
#1	Primary	108.48'	**15.0" Round Culvert** L= 114.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.48' / 107.35' S= 0.0099 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.77 cfs @ 12.11 hrs HW=108.92' (Free Discharge)
1=Culvert (Inlet Controls 0.77 cfs @ 1.99 fps)

Pond PP5: PPVMT 5

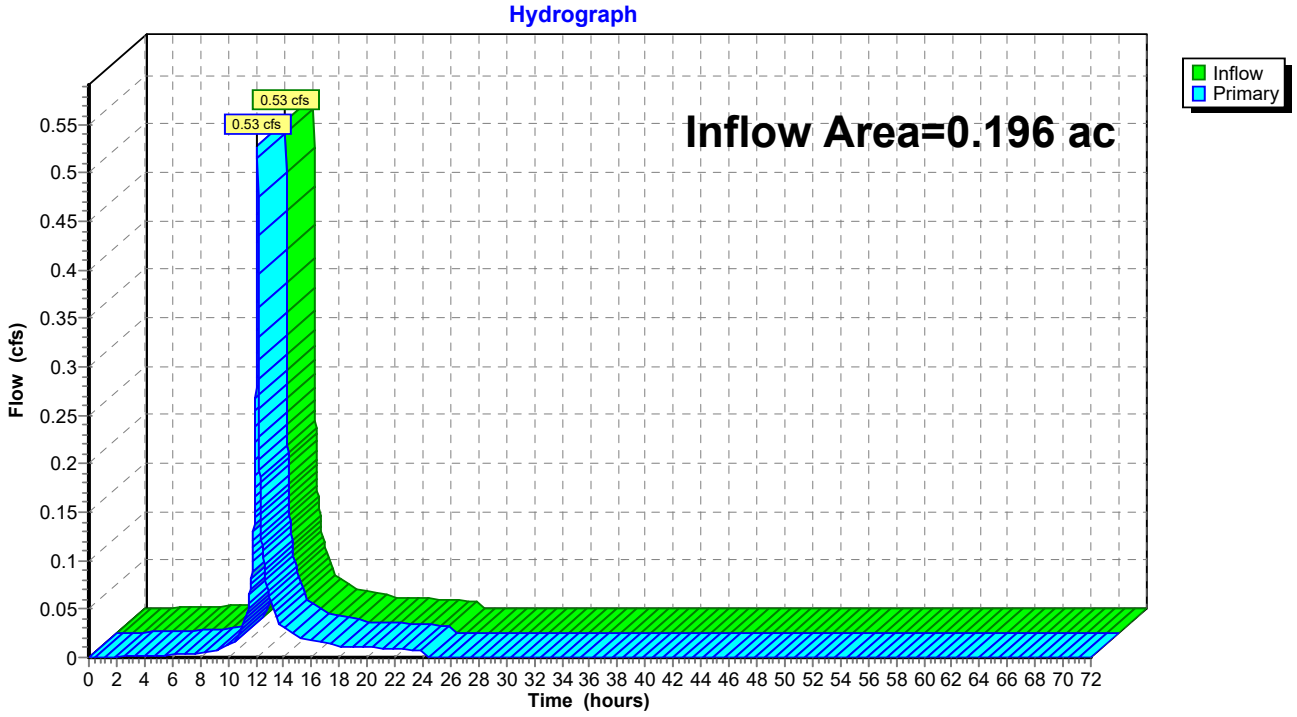


Summary for Link BP: Total Bypass

Inflow Area = 0.196 ac, 23.47% Impervious, Inflow Depth = 2.40" for 2-Year (Future) event
Inflow = 0.53 cfs @ 12.12 hrs, Volume= 0.039 af
Primary = 0.53 cfs @ 12.12 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min
Routed to Link PPOA1 : PPOA-1

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

Link BP: Total Bypass

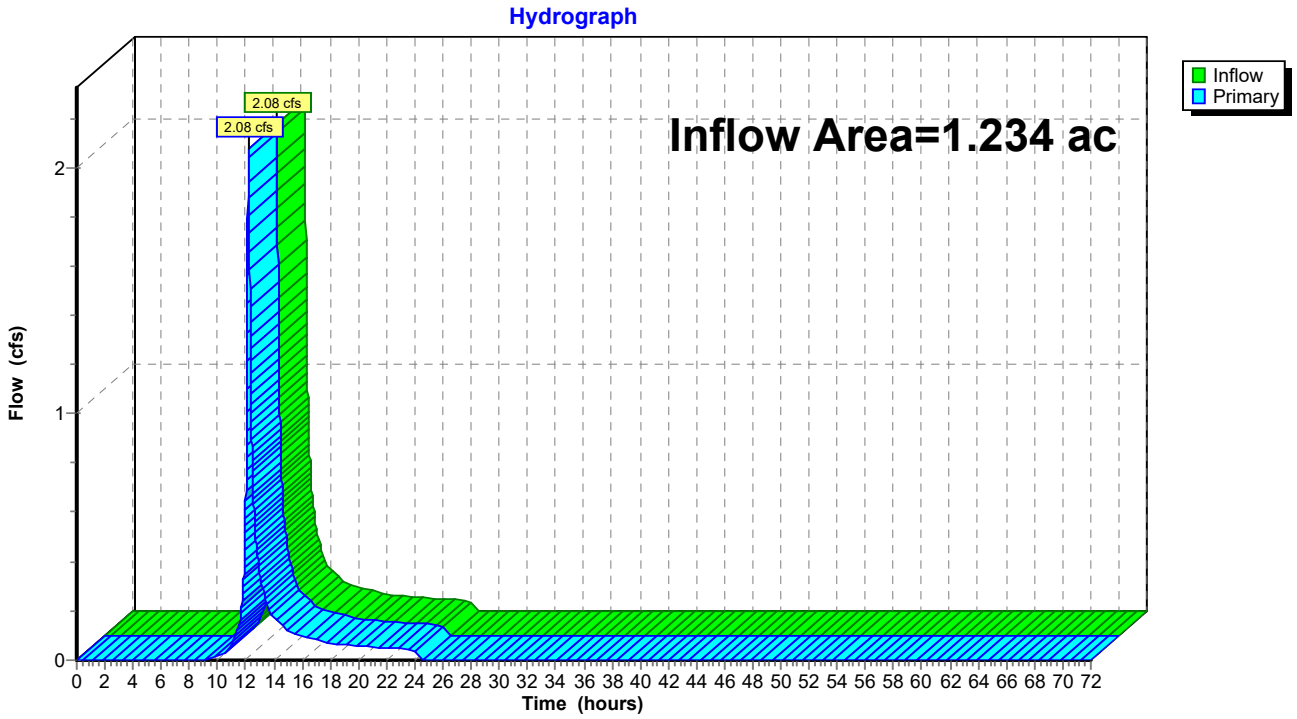


Summary for Link EPOA1: EPOA-1

Inflow Area = 1.234 ac, 0.32% Impervious, Inflow Depth = 1.71" for 2-Year (Future) event
Inflow = 2.08 cfs @ 12.19 hrs, Volume= 0.176 af
Primary = 2.08 cfs @ 12.19 hrs, Volume= 0.176 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA1: EPOA-1

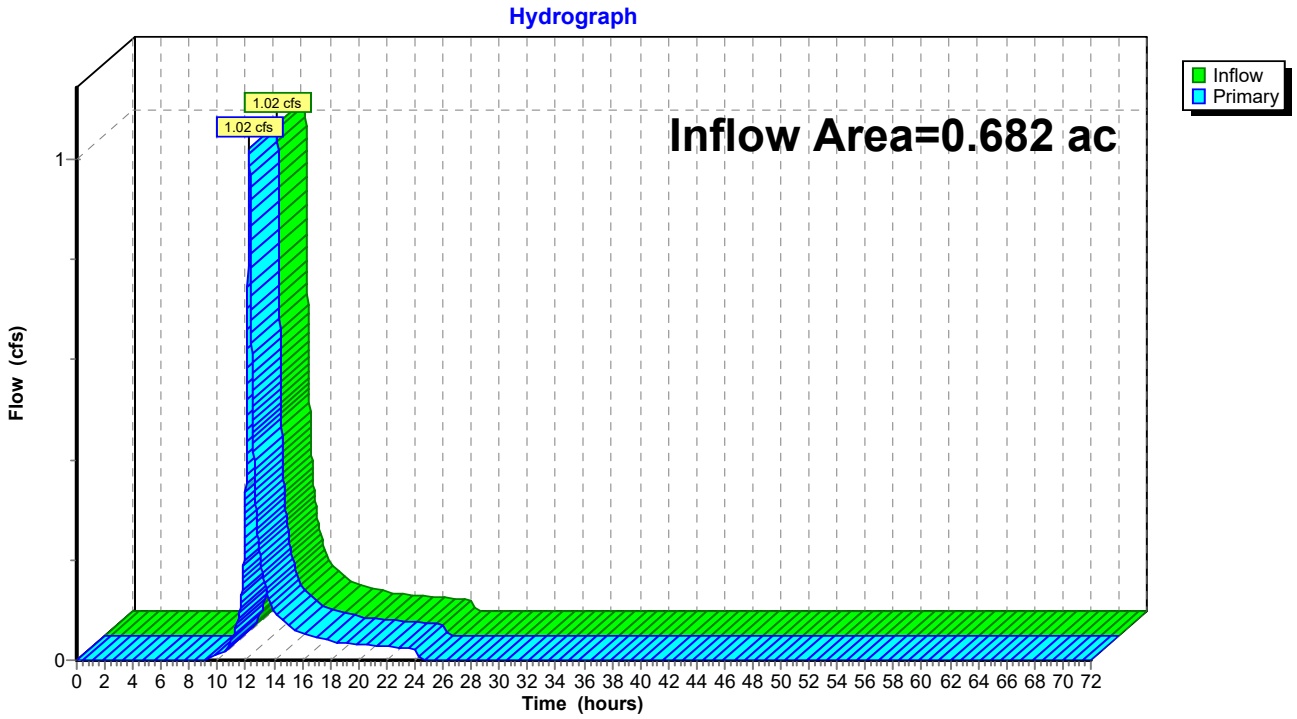


Summary for Link EPOA2: EPOA-2

Inflow Area = 0.682 ac, 0.00% Impervious, Inflow Depth = 1.77" for 2-Year (Future) event
Inflow = 1.02 cfs @ 12.24 hrs, Volume= 0.101 af
Primary = 1.02 cfs @ 12.24 hrs, Volume= 0.101 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA2: EPOA-2

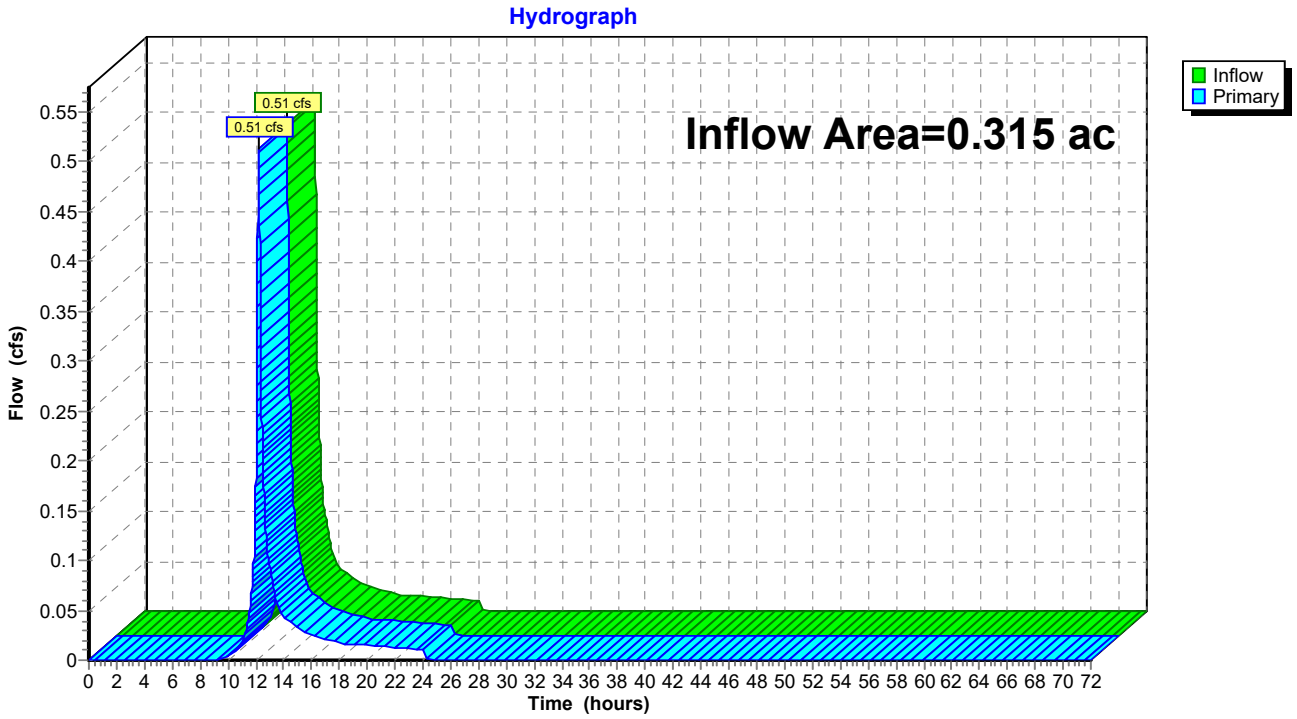


Summary for Link EPOA4: EPOA-4

Inflow Area = 0.315 ac, 0.00% Impervious, Inflow Depth = 1.77" for 2-Year (Future) event
Inflow = 0.51 cfs @ 12.21 hrs, Volume= 0.047 af
Primary = 0.51 cfs @ 12.21 hrs, Volume= 0.047 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA4: EPOA-4

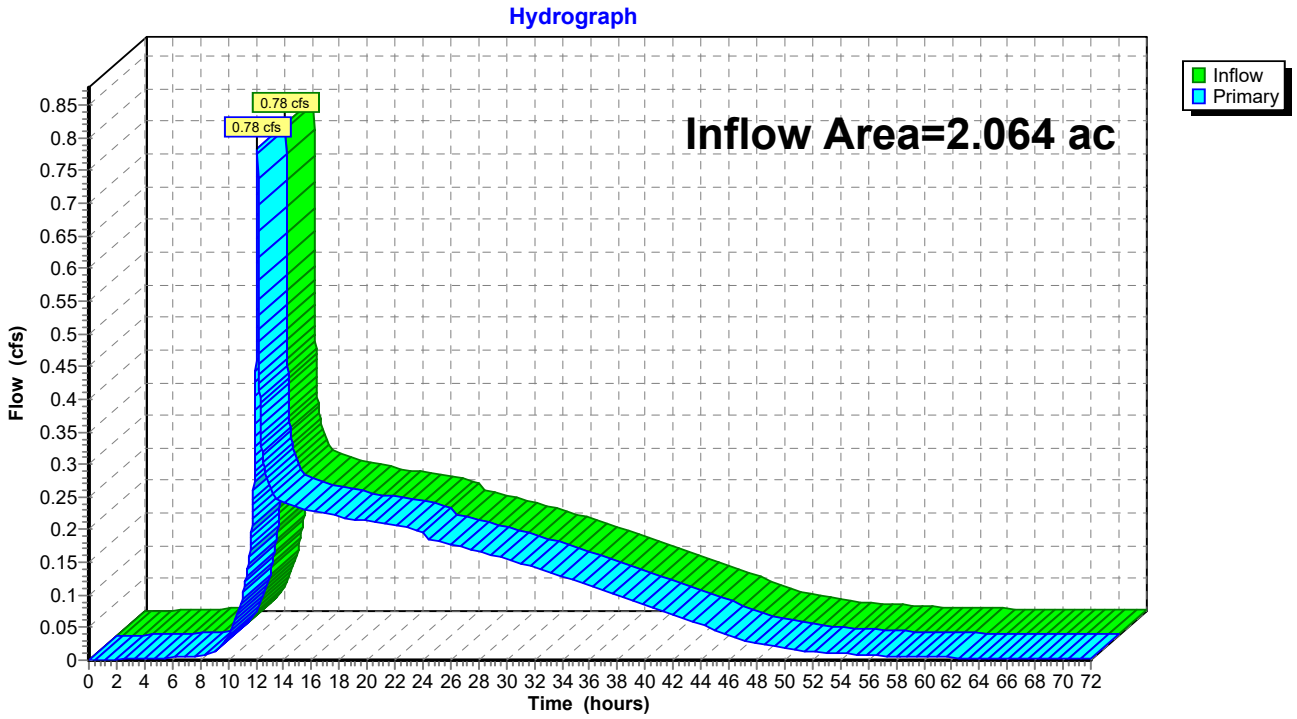


Summary for Link PPOA1: PPOA-1

Inflow Area = 2.064 ac, 75.10% Impervious, Inflow Depth > 2.86" for 2-Year (Future) event
Inflow = 0.78 cfs @ 12.13 hrs, Volume= 0.492 af
Primary = 0.78 cfs @ 12.13 hrs, Volume= 0.492 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA1: PPOA-1

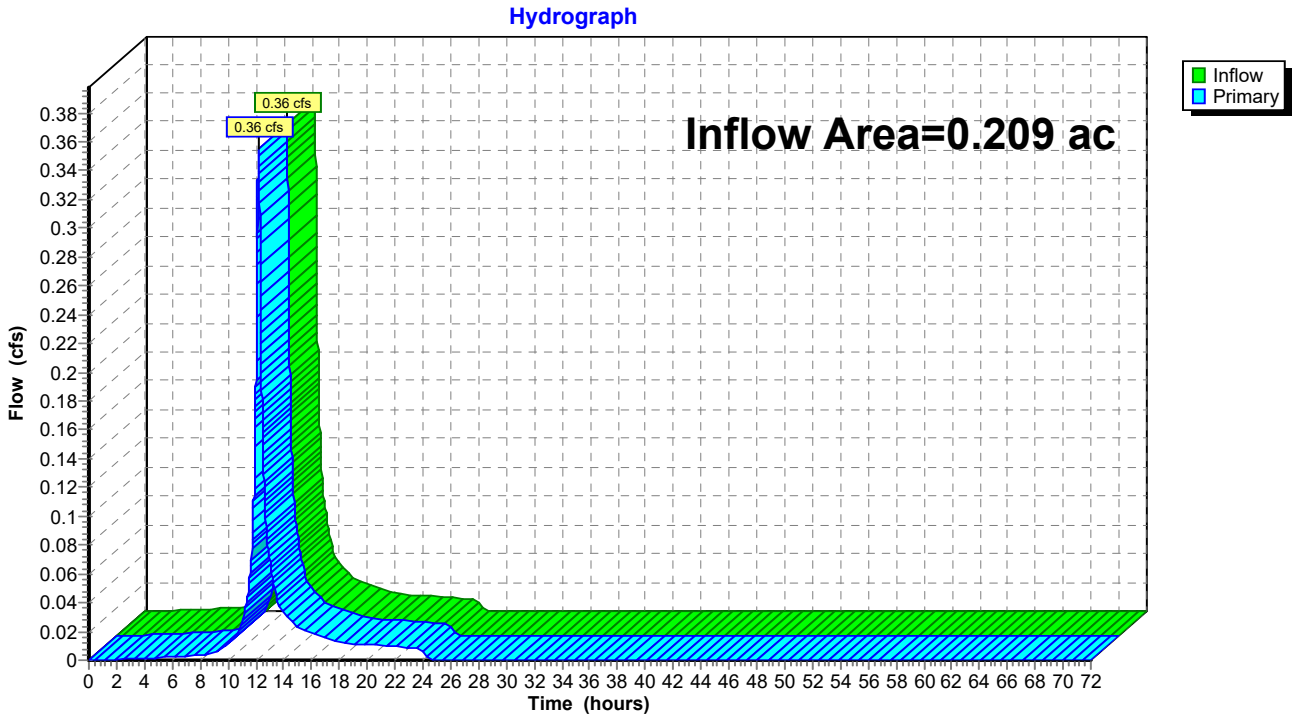


Summary for Link PPOA2: PPOA-2

Inflow Area = 0.209 ac, 16.27% Impervious, Inflow Depth = 2.28" for 2-Year (Future) event
Inflow = 0.36 cfs @ 12.21 hrs, Volume= 0.040 af
Primary = 0.36 cfs @ 12.21 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA2: PPOA-2

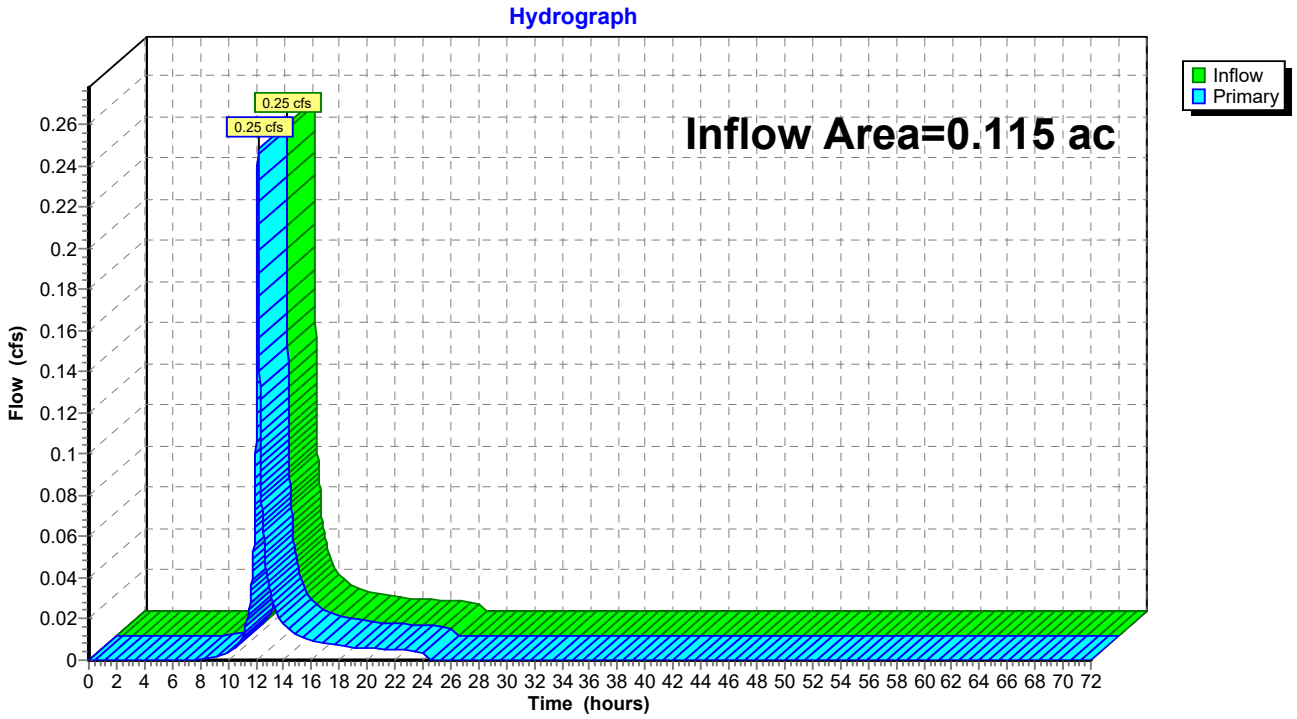


Summary for Link PPOA4: PPOA-4

Inflow Area = 0.115 ac, 2.61% Impervious, Inflow Depth = 2.05" for 2-Year (Future) event
Inflow = 0.25 cfs @ 12.16 hrs, Volume= 0.020 af
Primary = 0.25 cfs @ 12.16 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA4: PPOA-4



10-Year Storm Event
(Future Adjusted Precipitation Depth)

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

SubcatchmentE1A: EDA-1A Runoff Area=0.910 ac 0.00% Impervious Runoff Depth=3.61"
Flow Length=296' Slope=0.0500 '/' Tc=10.7 min CN=77 Runoff=3.23 cfs 0.274 af

SubcatchmentE1B: EDA-1B (Depression) Runoff Area=0.292 ac 0.00% Impervious Runoff Depth=3.61"
Flow Length=118' Slope=0.0200 '/' Tc=10.3 min CN=77 Runoff=1.05 cfs 0.088 af

SubcatchmentE1C I: E-Off-Site #1C Runoff Area=0.004 ac 100.00% Impervious Runoff Depth=5.91"
Flow Length=77' Slope=0.0450 '/' Tc=0.6 min CN=98 Runoff=0.03 cfs 0.002 af

SubcatchmentE1C P: E-Off-Site #1C Runoff Area=0.028 ac 0.00% Impervious Runoff Depth=3.92"
Flow Length=77' Slope=0.0450 '/' Tc=5.2 min CN=80 Runoff=0.13 cfs 0.009 af

SubcatchmentE2A: EDA-2 Runoff Area=0.682 ac 0.00% Impervious Runoff Depth=3.61"
Flow Length=253' Tc=15.6 min CN=77 Runoff=2.09 cfs 0.205 af

SubcatchmentE4A: EDA-4 Runoff Area=0.315 ac 0.00% Impervious Runoff Depth=3.61"
Flow Length=158' Tc=12.7 min CN=77 Runoff=1.05 cfs 0.095 af

SubcatchmentP1A I: PDA-1 Impervious Runoff Area=0.488 ac 100.00% Impervious Runoff Depth=5.91"
Flow Length=266' Tc=2.0 min CN=98 Runoff=3.15 cfs 0.240 af

SubcatchmentP1A P: PDA-1 Pervious Runoff Area=0.352 ac 0.00% Impervious Runoff Depth=3.92"
Flow Length=48' Slope=0.0200 '/' Tc=4.9 min CN=80 Runoff=1.66 cfs 0.115 af

SubcatchmentP1B1: PDA-1 Bypass #1 Runoff Area=0.079 ac 0.00% Impervious Runoff Depth=3.92"
Flow Length=330' Tc=7.2 min CN=80 Runoff=0.34 cfs 0.026 af

SubcatchmentP1B2: PDA-1 Bypass #2 Runoff Area=0.117 ac 39.32% Impervious Runoff Depth=4.70"
Flow Length=127' Slope=0.0100 '/' Tc=4.4 min CN=WQ Runoff=0.63 cfs 0.046 af

SubcatchmentP1C I: P-Off-Site #1C Runoff Area=0.027 ac 100.00% Impervious Runoff Depth=5.91"
Flow Length=366' Slope=0.0020 '/' Tc=7.6 min CN=98 Runoff=0.15 cfs 0.013 af

SubcatchmentP1C P: P-Off-Site #1C Runoff Area=0.005 ac 0.00% Impervious Runoff Depth=3.92"
Flow Length=366' Slope=0.0020 '/' Tc=7.6 min CN=80 Runoff=0.02 cfs 0.002 af

SubcatchmentP2A I: PDA-2 Impervious Runoff Area=0.034 ac 100.00% Impervious Runoff Depth=5.91"
Flow Length=92' Slope=0.0100 '/' Tc=1.3 min CN=98 Runoff=0.22 cfs 0.017 af

SubcatchmentP2A P: PDA-2 Pervious Runoff Area=0.175 ac 0.00% Impervious Runoff Depth=3.92"
Flow Length=90' Slope=0.0050 '/' Tc=14.1 min CN=80 Runoff=0.60 cfs 0.057 af

SubcatchmentP4A: PDA-4 Runoff Area=0.115 ac 2.61% Impervious Runoff Depth=3.97"
Flow Length=96' Slope=0.0110 '/' Tc=8.7 min CN=WQ Runoff=0.48 cfs 0.038 af

SubcatchmentPC1A: PC AREA #1 Runoff Area=0.174 ac 100.00% Impervious Runoff Depth=5.91"
Tc=1.0 min CN=98 Runoff=1.12 cfs 0.086 af

Subcatchment PP1A: PPVMT AREA 1 Runoff Area=0.161 ac 100.00% Impervious Runoff Depth=5.91"
Tc=1.0 min CN=98 Runoff=1.04 cfs 0.079 af

Subcatchment PP2A: PPVMT AREA #2 Runoff Area=0.290 ac 97.59% Impervious Runoff Depth=5.86"
Tc=1.0 min CN=WQ Runoff=1.86 cfs 0.142 af

Subcatchment PP3A: PPVMT AREA #3 Runoff Area=0.096 ac 100.00% Impervious Runoff Depth=5.91"
Tc=1.0 min CN=98 Runoff=0.62 cfs 0.047 af

Subcatchment PP4A: PPVMT AREA #4 Runoff Area=0.019 ac 100.00% Impervious Runoff Depth=5.91"
Tc=1.0 min CN=98 Runoff=0.12 cfs 0.009 af

Subcatchment PP5A: PPVMT AREA #5 Runoff Area=0.256 ac 100.00% Impervious Runoff Depth=5.91"
Tc=1.0 min CN=98 Runoff=1.65 cfs 0.126 af

Pond CW: Constructed Wetlands (walls Peak Elev=106.46' Storage=18,137 cf Inflow=9.44 cfs 0.803 af
Outflow=1.53 cfs 0.771 af

Pond E1B D: E-Depression Peak Elev=109.28' Storage=470 cf Inflow=1.05 cfs 0.088 af
Outflow=1.00 cfs 0.081 af

Pond PC1: PC 1 Peak Elev=110.86' Storage=1,548 cf Inflow=1.12 cfs 0.086 af
8.0" Round Culvert n=0.010 L=32.0' S=0.0100 '/' Outflow=0.49 cfs 0.073 af

Pond PP1: PPVMT 1 Peak Elev=110.38' Storage=223 cf Inflow=1.04 cfs 0.079 af
18.0" Round Culvert x 3.00 n=0.010 L=29.0' S=0.0031 '/' Outflow=0.95 cfs 0.079 af

Pond PP2: PPVMT 2 Peak Elev=109.44' Storage=2,102 cf Inflow=1.86 cfs 0.142 af
15.0" Round Culvert n=0.010 L=10.0' S=0.0030 '/' Outflow=1.31 cfs 0.117 af

Pond PP3: PPVMT 3 Peak Elev=109.00' Storage=1 cf Inflow=0.62 cfs 0.047 af
15.0" Round Culvert n=0.010 L=14.0' S=0.0100 '/' Outflow=0.62 cfs 0.047 af

Pond PP4: PPVMT 4 Peak Elev=108.40' Storage=10 cf Inflow=0.12 cfs 0.009 af
15.0" Round Culvert n=0.010 L=6.3' S=0.1032 '/' Outflow=0.12 cfs 0.009 af

Pond PP5: PPVMT 5 Peak Elev=109.07' Storage=934 cf Inflow=1.65 cfs 0.126 af
15.0" Round Culvert n=0.010 L=114.0' S=0.0099 '/' Outflow=1.30 cfs 0.122 af

Link BP: Total Bypass Inflow=0.95 cfs 0.072 af
Primary=0.95 cfs 0.072 af

Link EPOA1: EPOA-1 Inflow=4.30 cfs 0.366 af
Primary=4.30 cfs 0.366 af

Link EPOA2: EPOA-2 Inflow=2.09 cfs 0.205 af
Primary=2.09 cfs 0.205 af

Link EPOA4: EPOA-4 Inflow=1.05 cfs 0.095 af
Primary=1.05 cfs 0.095 af

Link PPOA1: PPOA-1 Inflow=1.69 cfs 0.858 af
Primary=1.69 cfs 0.858 af

Link PPOA2: PPOA-2 Inflow=0.67 cfs 0.074 af
Primary=0.67 cfs 0.074 af

Link PPOA4: PPOA-4 Inflow=0.48 cfs 0.038 af
Primary=0.48 cfs 0.038 af

Summary for Subcatchment E1A: EDA-1A

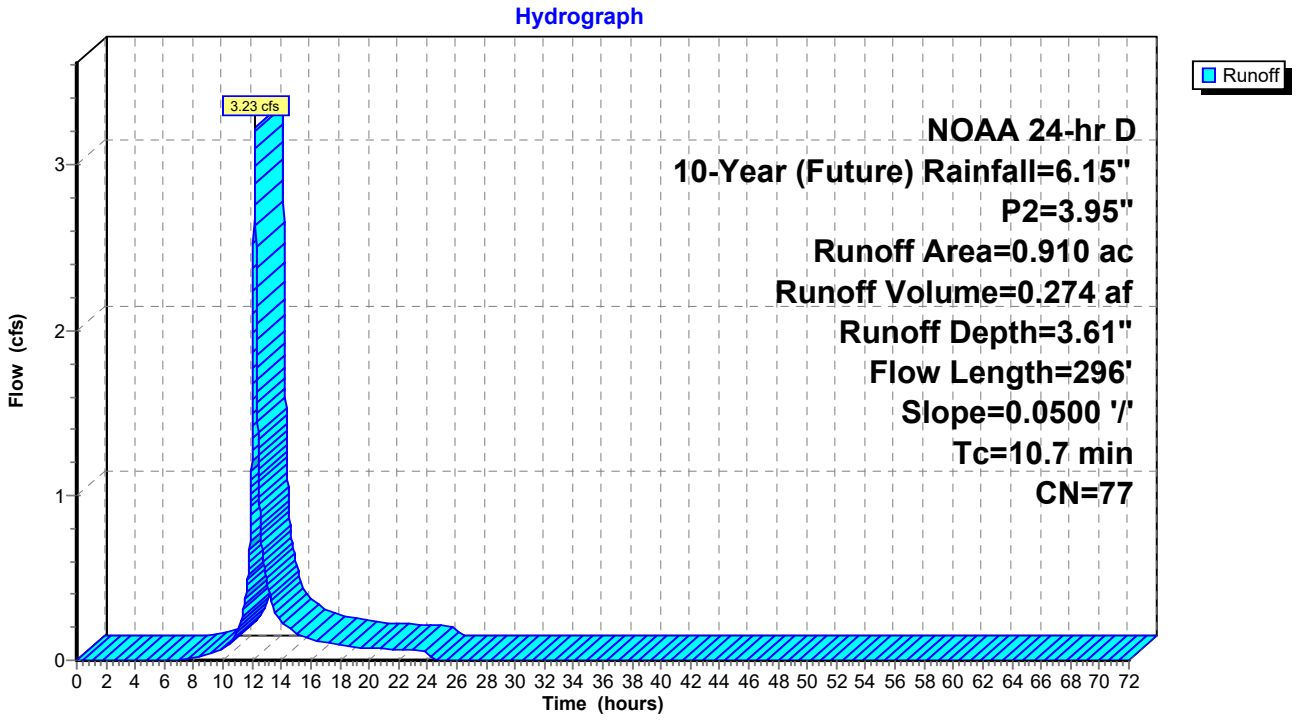
Runoff = 3.23 cfs @ 12.18 hrs, Volume= 0.274 af, Depth= 3.61"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.910	77	Woods, Good, HSG D
0.910	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	56	0.0500	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
1.9	130	0.0500	1.12		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	110	0.0500	4.54		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
10.7	296	Total			

Subcatchment E1A: EDA-1A



Summary for Subcatchment E1B: EDA-1B (Depression)

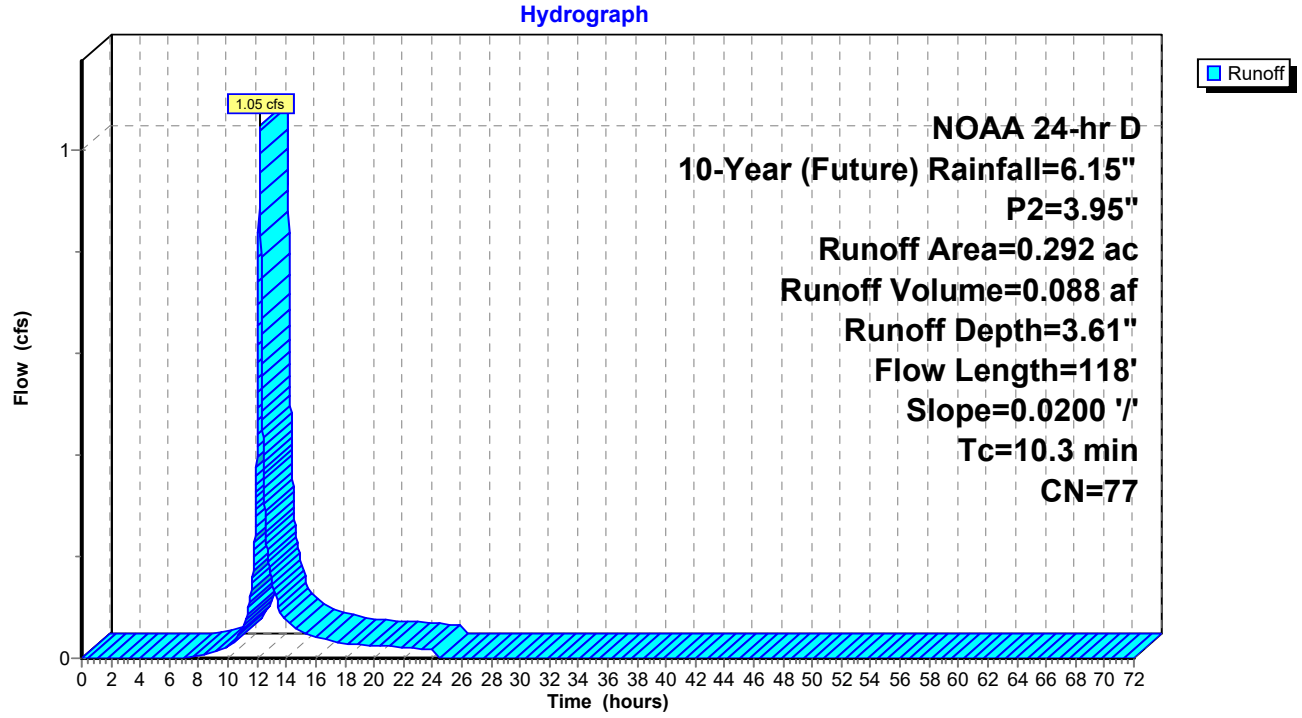
Runoff = 1.05 cfs @ 12.18 hrs, Volume= 0.088 af, Depth= 3.61"
Routed to Pond E1B D : E-Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.292	77	Woods, Good, HSG D
0.292	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	35	0.0200	0.07		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
2.0	83	0.0200	0.71		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
10.3	118	Total			

Subcatchment E1B: EDA-1B (Depression)



Summary for Subcatchment E1C I: E-Off-Site #1C Impervious

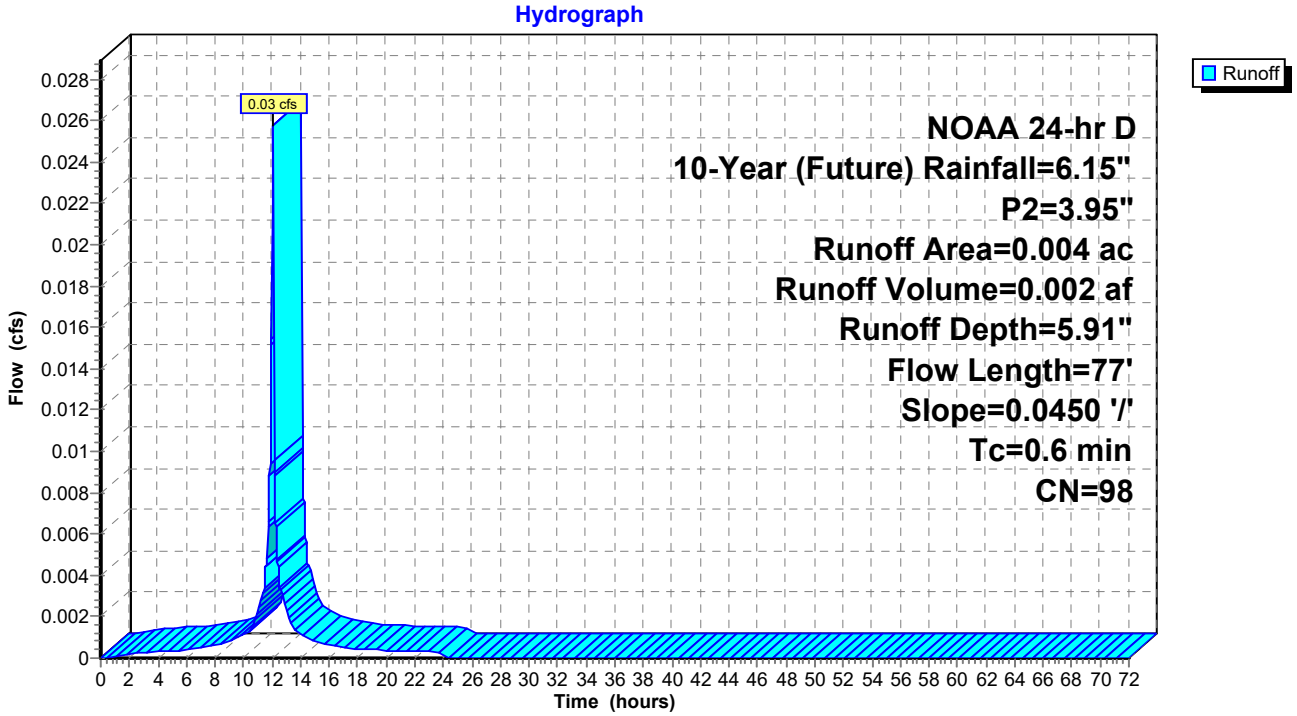
Runoff = 0.03 cfs @ 12.09 hrs, Volume= 0.002 af, Depth= 5.91"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.004	98	Paved parking, HSG D
0.004	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	77	0.0450	2.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.95"

Subcatchment E1C I: E-Off-Site #1C Impervious



Summary for Subcatchment E1C P: E-Off-Site #1C Pervious

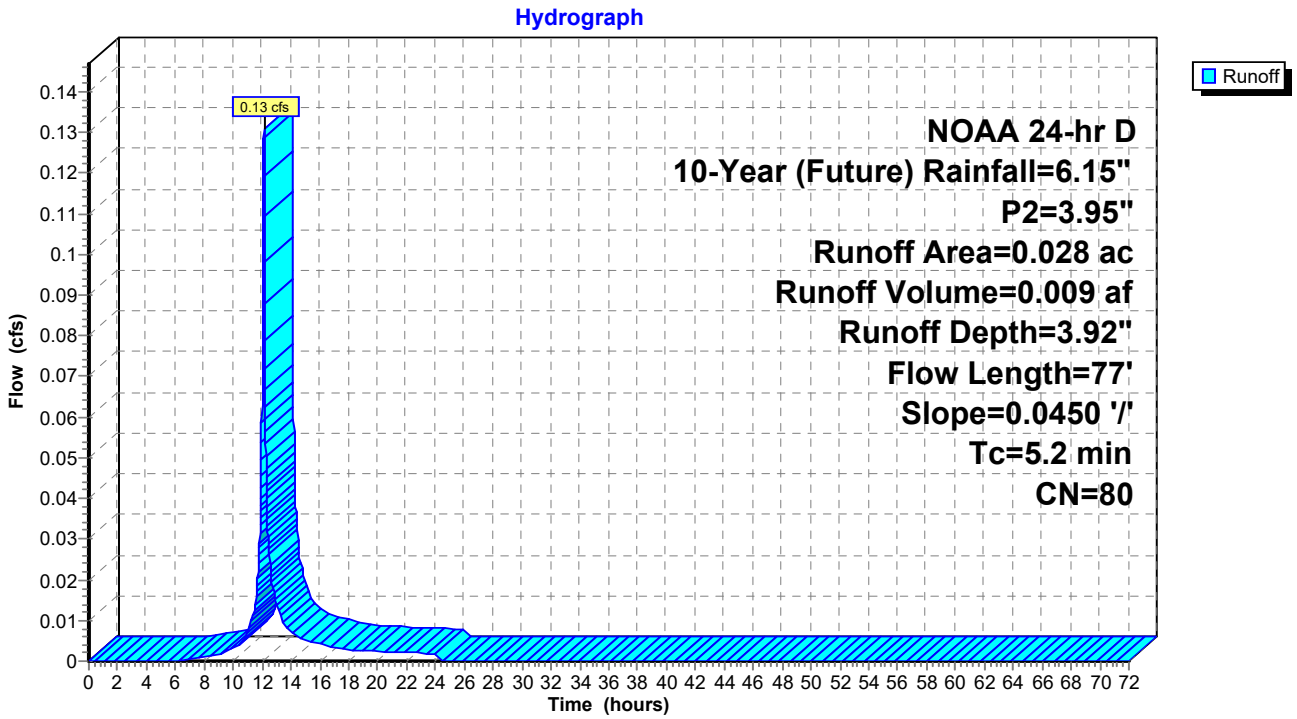
Runoff = 0.13 cfs @ 12.12 hrs, Volume= 0.009 af, Depth= 3.92"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.028	80	>75% Grass cover, Good, HSG D
0.028	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	77	0.0450	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.95"

Subcatchment E1C P: E-Off-Site #1C Pervious



Summary for Subcatchment E2A: EDA-2

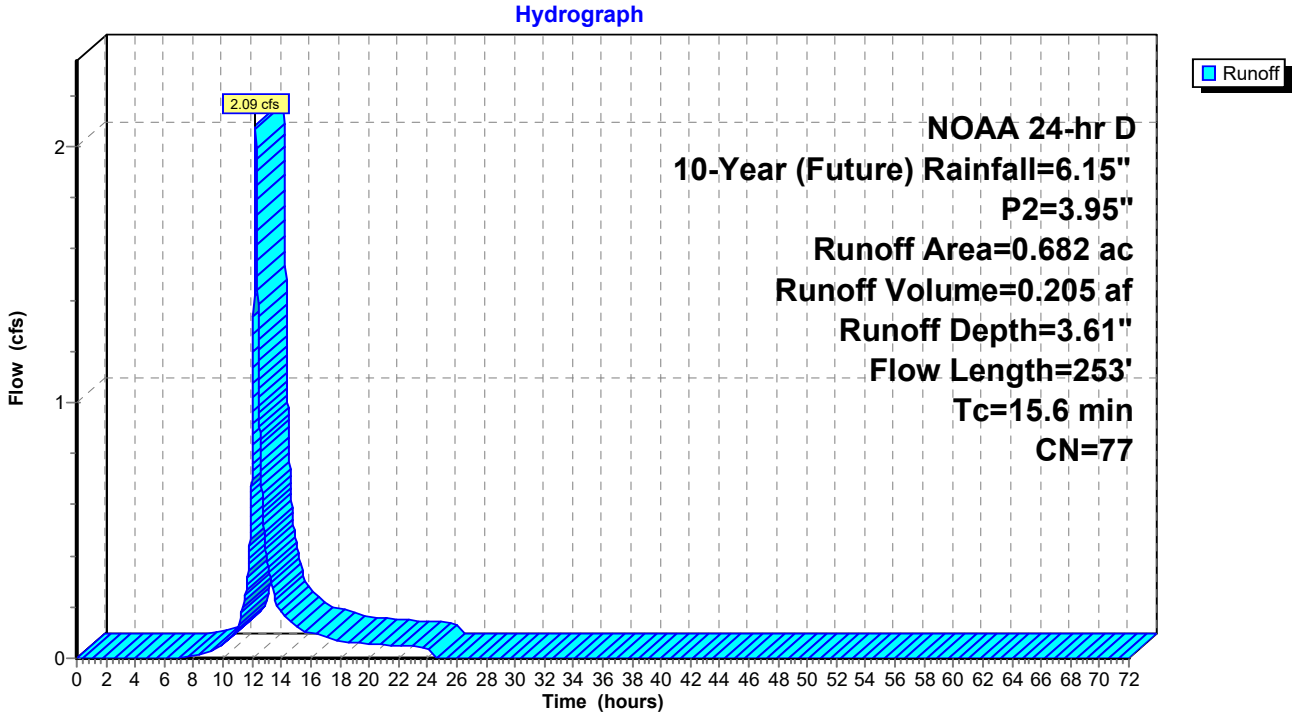
Runoff = 2.09 cfs @ 12.24 hrs, Volume= 0.205 af, Depth= 3.61"
Routed to Link EPOA2 : EPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.682	77	Woods, Good, HSG D
0.682	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	35	0.0200	0.07		**Sheet Flow, E-F** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
7.3	218	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
15.6	253	Total			

Subcatchment E2A: EDA-2



Summary for Subcatchment E4A: EDA-4

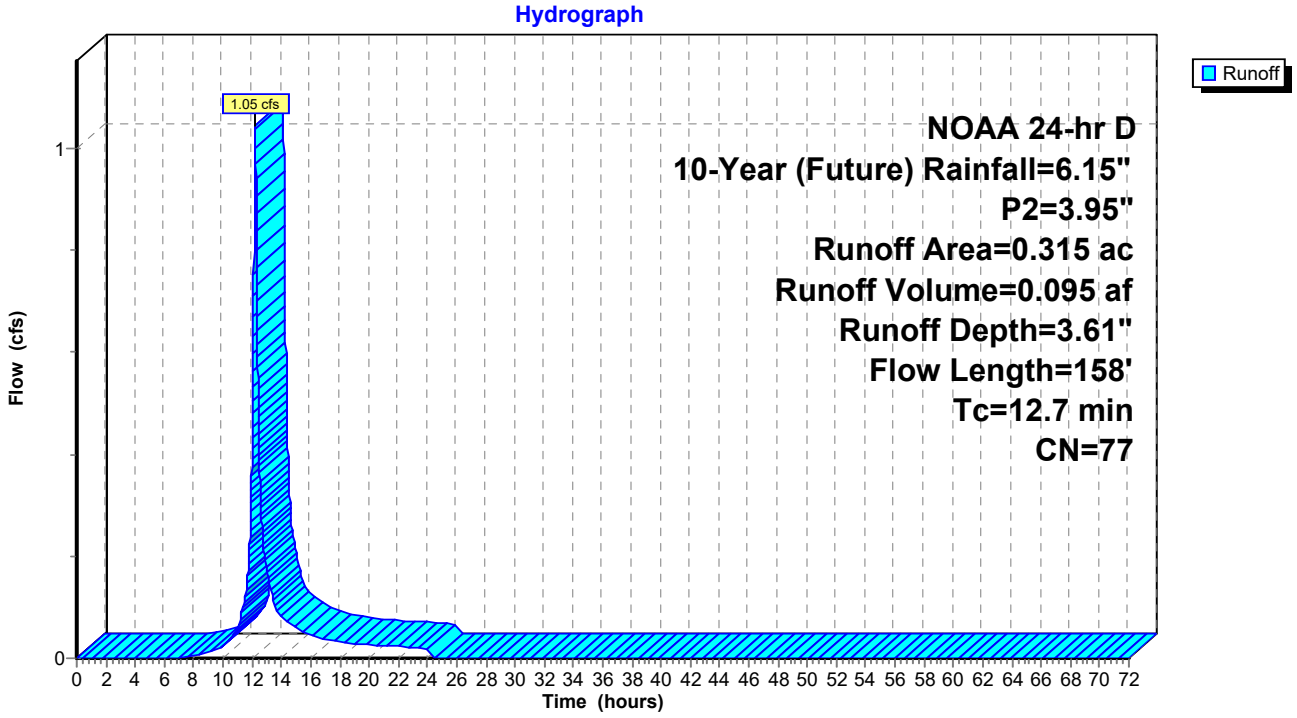
Runoff = 1.05 cfs @ 12.21 hrs, Volume= 0.095 af, Depth= 3.61"
Routed to Link EPOA4 : EPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.315	77	Woods, Good, HSG D
0.315	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	31	0.0150	0.06		**Sheet Flow, Q-R** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
4.2	127	0.0100	0.50		**Shallow Concentrated Flow, R-S** Woodland Kv= 5.0 fps
12.7	158	Total			

Subcatchment E4A: EDA-4



Summary for Subcatchment P1A I: PDA-1 Impervious

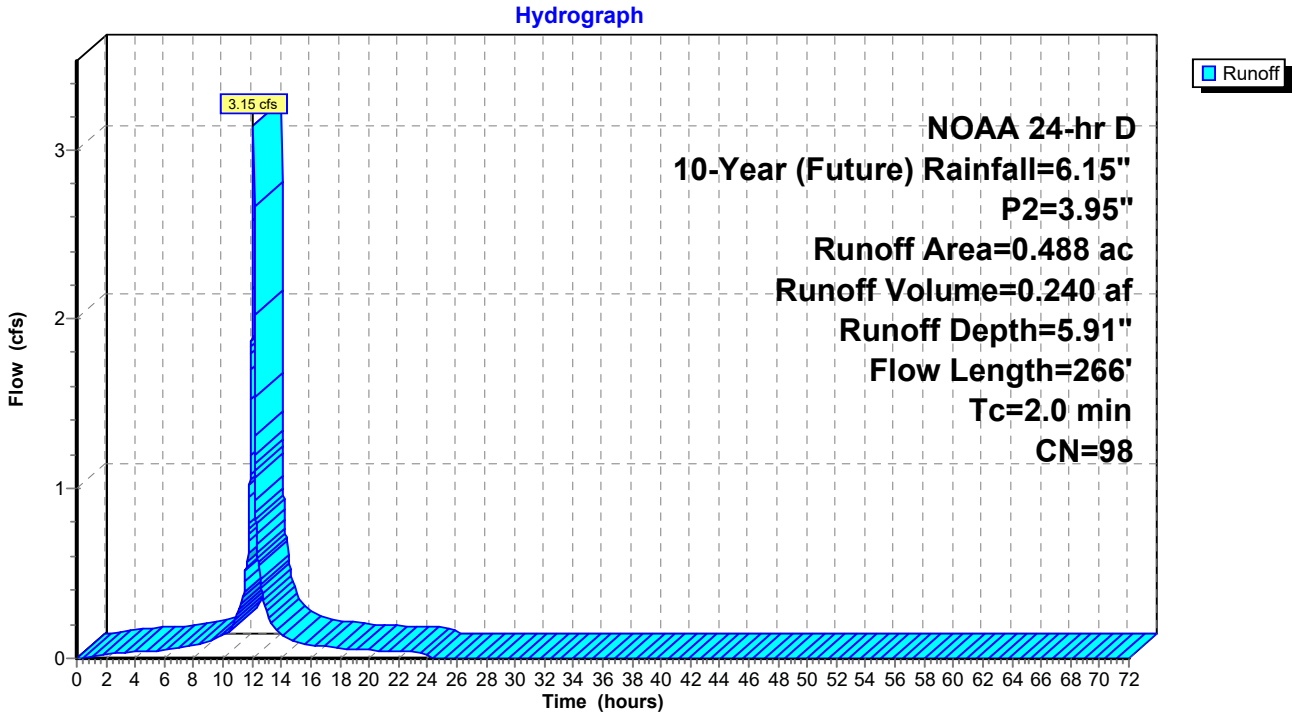
Runoff = 3.15 cfs @ 12.10 hrs, Volume= 0.240 af, Depth= 5.91"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.488	98	Paved parking, HSG D
0.488	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0100	1.16		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.95"
0.4	80	0.0230	3.08		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.0	3	0.0030	3.75	4.60	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.2	66	0.0051	4.89	6.00	**Pipe Channel, D-E** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.0	17	0.0127	10.55	33.14	**Pipe Channel, E-F** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.010 PVC, smooth interior
2.0	266	Total			

Subcatchment P1A I: PDA-1 Impervious



Summary for Subcatchment P1A P: PDA-1 Pervious

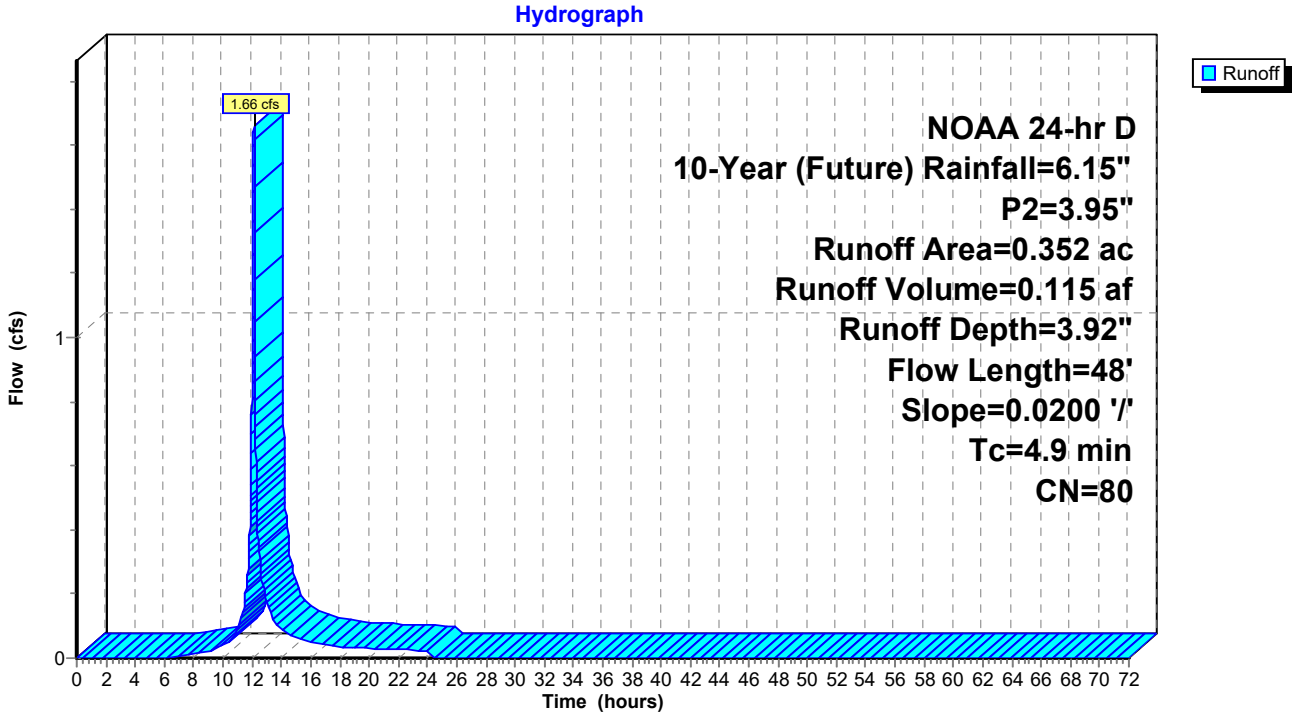
Runoff = 1.66 cfs @ 12.12 hrs, Volume= 0.115 af, Depth= 3.92"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.352	80	>75% Grass cover, Good, HSG D
0.352	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	48	0.0200	0.16		**Sheet Flow, G-H** Grass: Short n= 0.150 P2= 3.95"

Subcatchment P1A P: PDA-1 Pervious



Summary for Subcatchment P1B1: PDA-1 Bypass #1

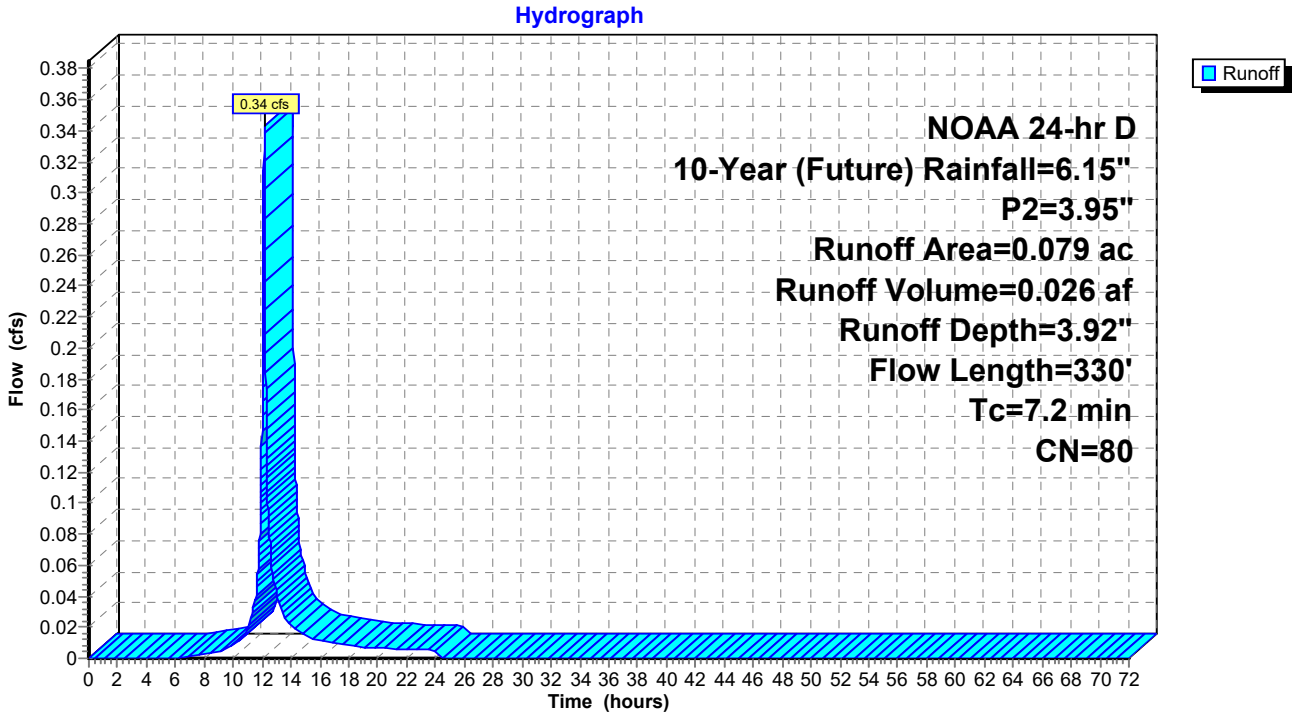
Runoff = 0.34 cfs @ 12.14 hrs, Volume= 0.026 af, Depth= 3.92"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.079	80	>75% Grass cover, Good, HSG D
0.079	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	33	0.0500	0.22		**Sheet Flow, I-J** Grass: Short n= 0.150 P2= 3.95"
0.2	45	0.0013	3.07	9.64	**Pipe Channel, J-K** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
1.2	60	0.0001	0.85	2.67	**Pipe Channel, K-L** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
2.1	105	0.0001	0.85	2.67	**Pipe Channel, L-M** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.9	63	0.0002	1.20	3.78	**Pipe Channel, M-N** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.3	24	0.0002	1.20	3.78	**Pipe Channel, N-O** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
7.2	330	Total			

Subcatchment P1B1: PDA-1 Bypass #1



Summary for Subcatchment P1B2: PDA-1 Bypass #2

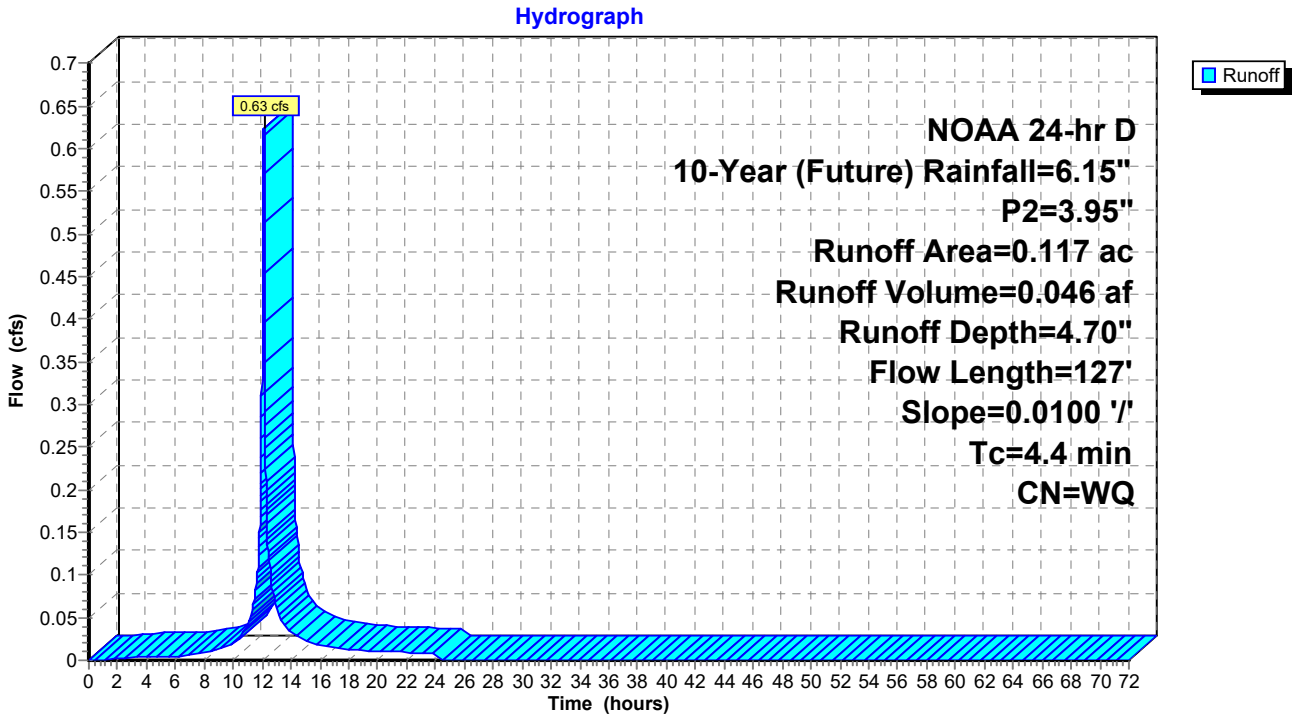
Runoff = 0.63 cfs @ 12.12 hrs, Volume= 0.046 af, Depth= 4.70"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.071	80	>75% Grass cover, Good, HSG D
0.046	98	Paved parking, HSG D
0.117		Weighted Average
0.071	80	60.68% Pervious Area
0.046	98	39.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	22	0.0100	0.11		**Sheet Flow, P-Q** Grass: Short n= 0.150 P2= 3.95"
0.9	105	0.0100	2.03		**Shallow Concentrated Flow, Q-O** Paved Kv= 20.3 fps
4.4	127	Total			

Subcatchment P1B2: PDA-1 Bypass #2



Summary for Subcatchment P1C I: P-Off-Site #1C Impervious

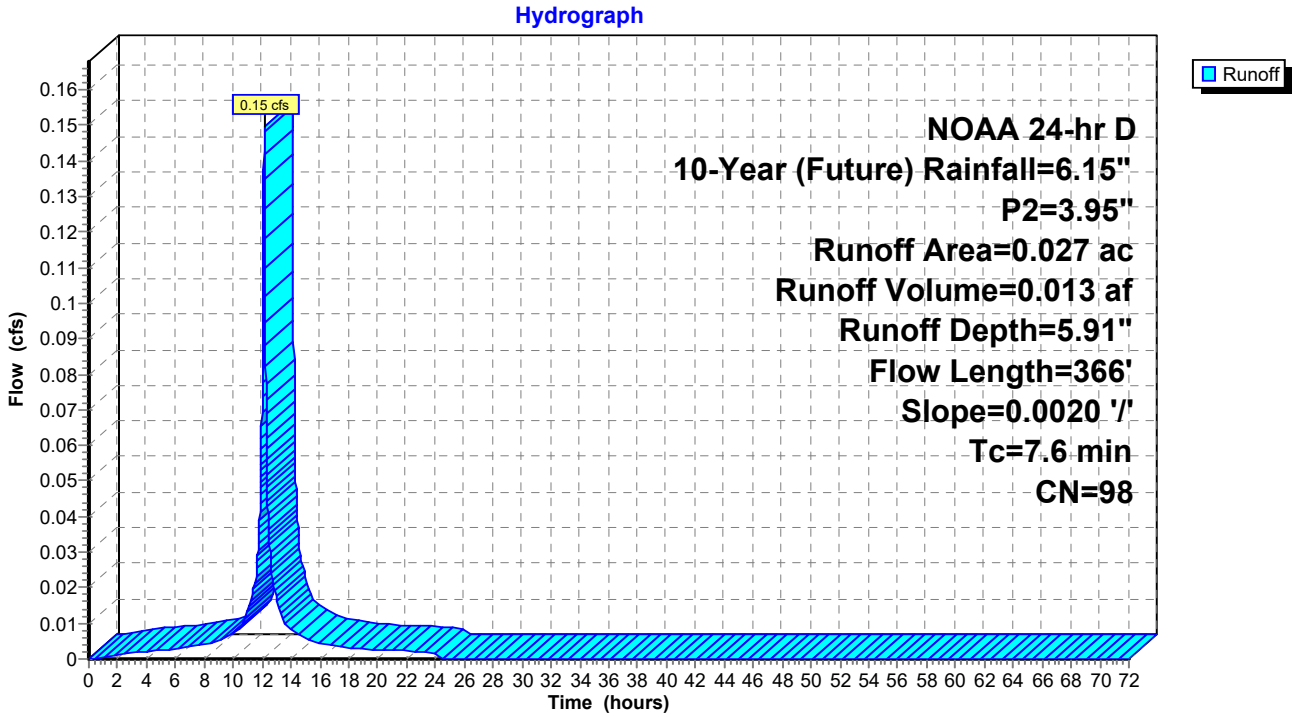
Runoff = 0.15 cfs @ 12.15 hrs, Volume= 0.013 af, Depth= 5.91"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.027	98	Paved parking, HSG D
0.027	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	100	0.0020	0.61		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.95"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.6	366	Total			

Subcatchment P1C I: P-Off-Site #1C Impervious



Summary for Subcatchment P1C P: P-Off-Site #1C Pervious

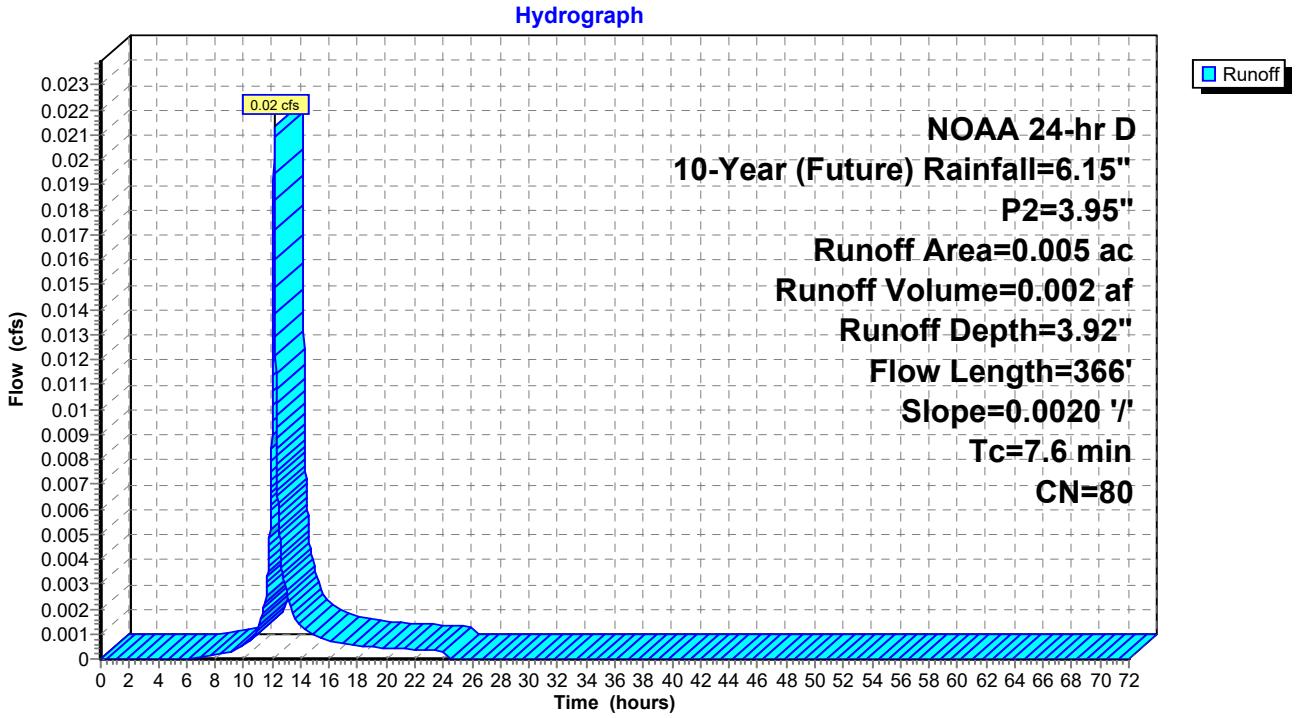
Runoff = 0.02 cfs @ 12.15 hrs, Volume= 0.002 af, Depth= 3.92"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.005	80	>75% Grass cover, Good, HSG D
0.005	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	100	0.0020	0.61		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.95"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.6	366	Total			

Subcatchment P1C P: P-Off-Site #1C Pervious



Summary for Subcatchment P2A I: PDA-2 Impervious

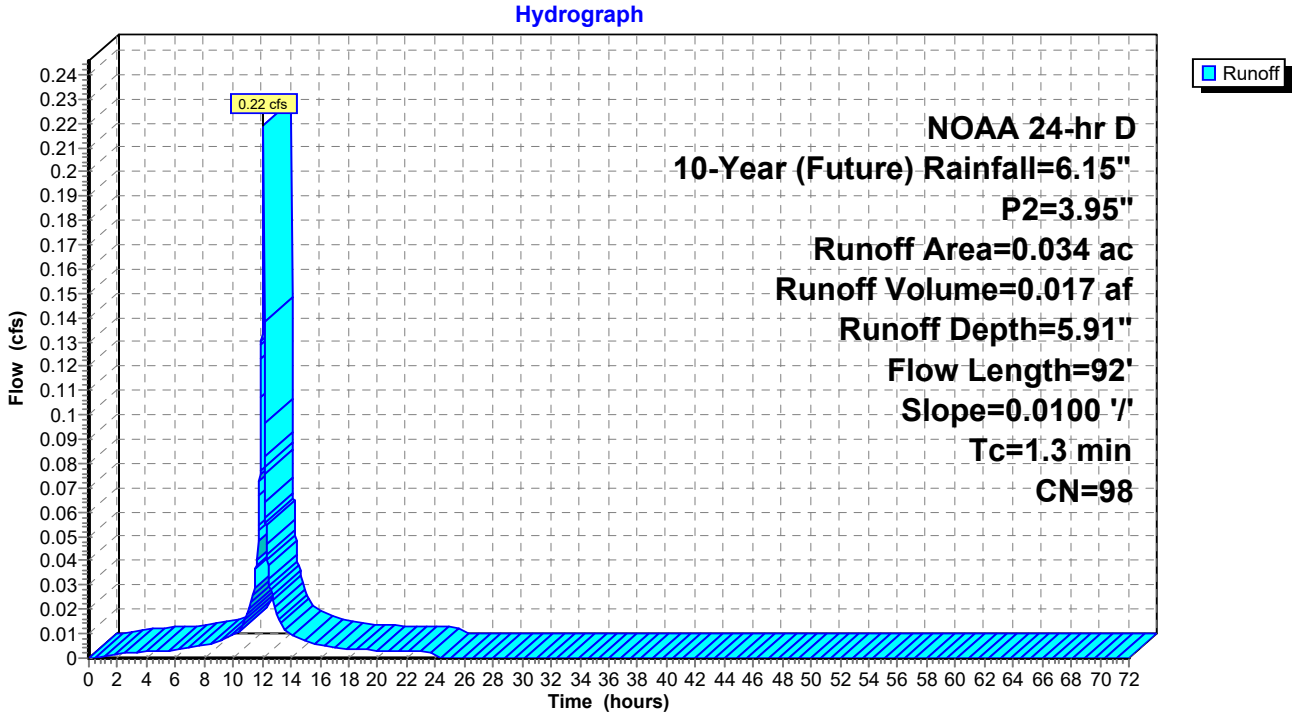
Runoff = 0.22 cfs @ 12.09 hrs, Volume= 0.017 af, Depth= 5.91"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.034	98	Paved parking, HSG D
0.034	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	92	0.0100	1.14		**Sheet Flow, R-S** Smooth surfaces n= 0.011 P2= 3.95"

Subcatchment P2A I: PDA-2 Impervious



Summary for Subcatchment P2A P: PDA-2 Pervious

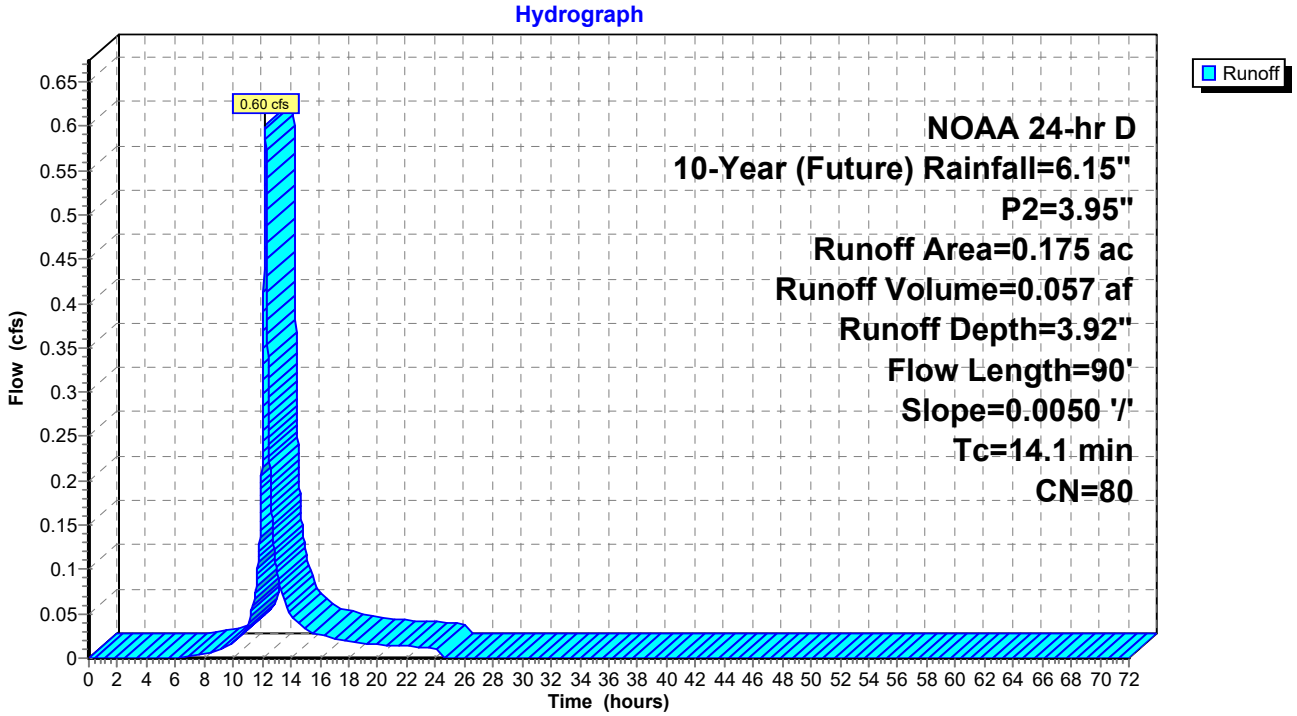
Runoff = 0.60 cfs @ 12.22 hrs, Volume= 0.057 af, Depth= 3.92"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.175	80	>75% Grass cover, Good, HSG D
0.175	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.1	90	0.0050	0.11		**Sheet Flow, T-U** Grass: Short n= 0.150 P2= 3.95"

Subcatchment P2A P: PDA-2 Pervious



Summary for Subcatchment P4A: PDA-4

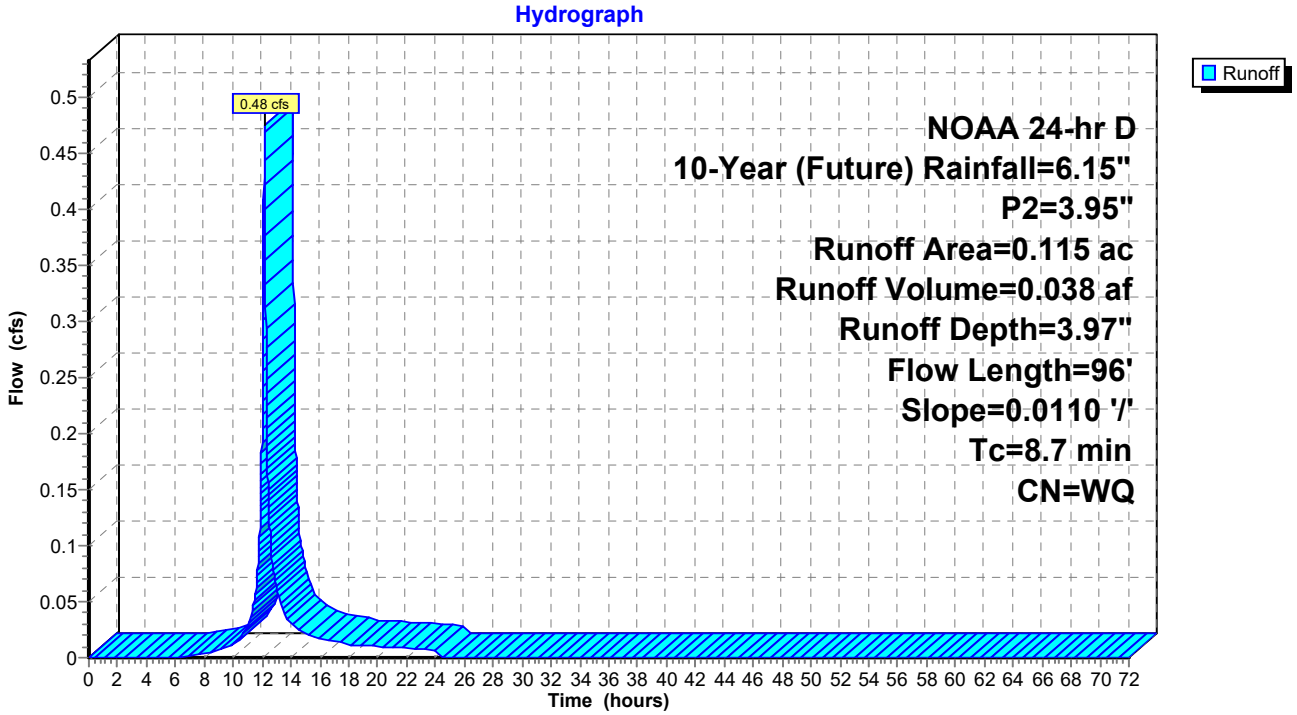
Runoff = 0.48 cfs @ 12.16 hrs, Volume= 0.038 af, Depth= 3.97"
Routed to Link PPOA4 : PPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.112	80	>75% Grass cover, Good, HSG D
0.003	98	Paved parking, HSG D
0.115		Weighted Average
0.112	80	97.39% Pervious Area
0.003	98	2.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	70	0.0110	0.14		**Sheet Flow, V-X** Grass: Short n= 0.150 P2= 3.95" Using McCuen-Spiess flow length
0.3	26	0.0110	1.57		**Shallow Concentrated Flow, X-Y** Grassed Waterway Kv= 15.0 fps
8.7	96	Total			

Subcatchment P4A: PDA-4



Summary for Subcatchment PC1A: PC AREA #1

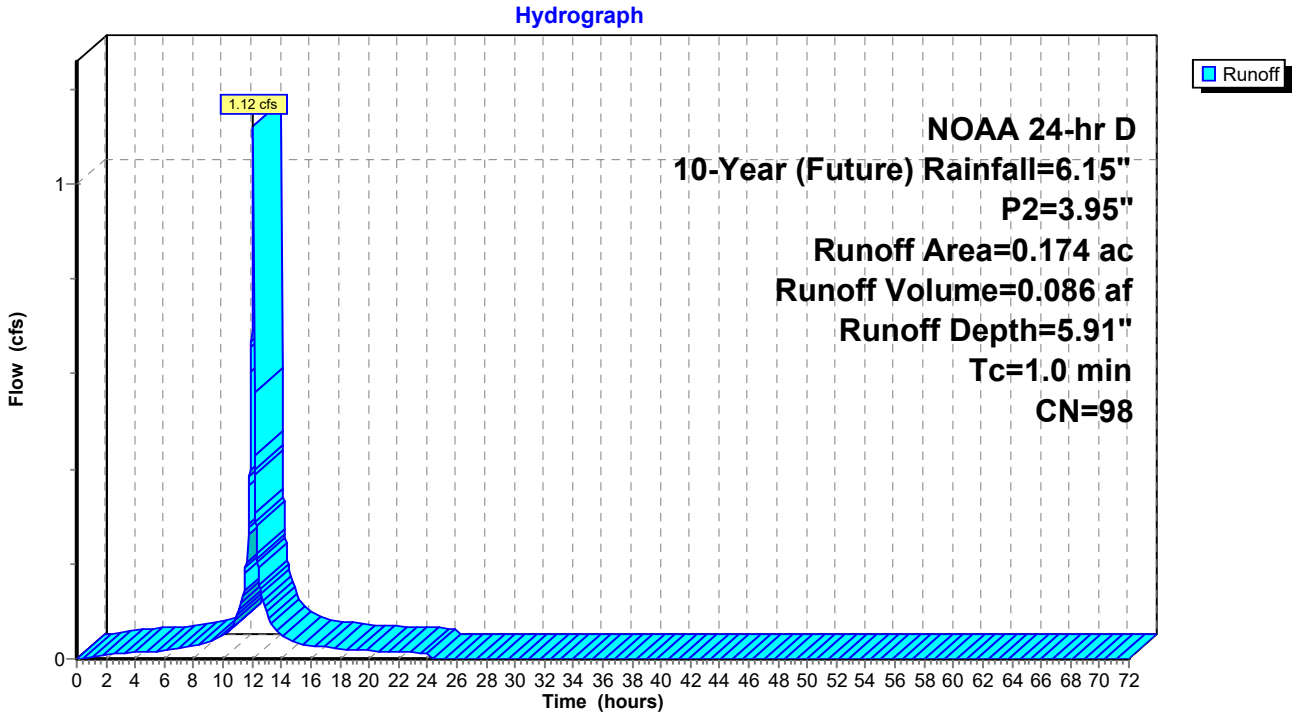
Runoff = 1.12 cfs @ 12.09 hrs, Volume= 0.086 af, Depth= 5.91"
Routed to Pond PC1 : PC 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.174	98	Paved parking, HSG D
0.174	98	100.00% Impervious Area

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

Subcatchment PC1A: PC AREA #1



Summary for Subcatchment PP1A: PPVMT AREA 1

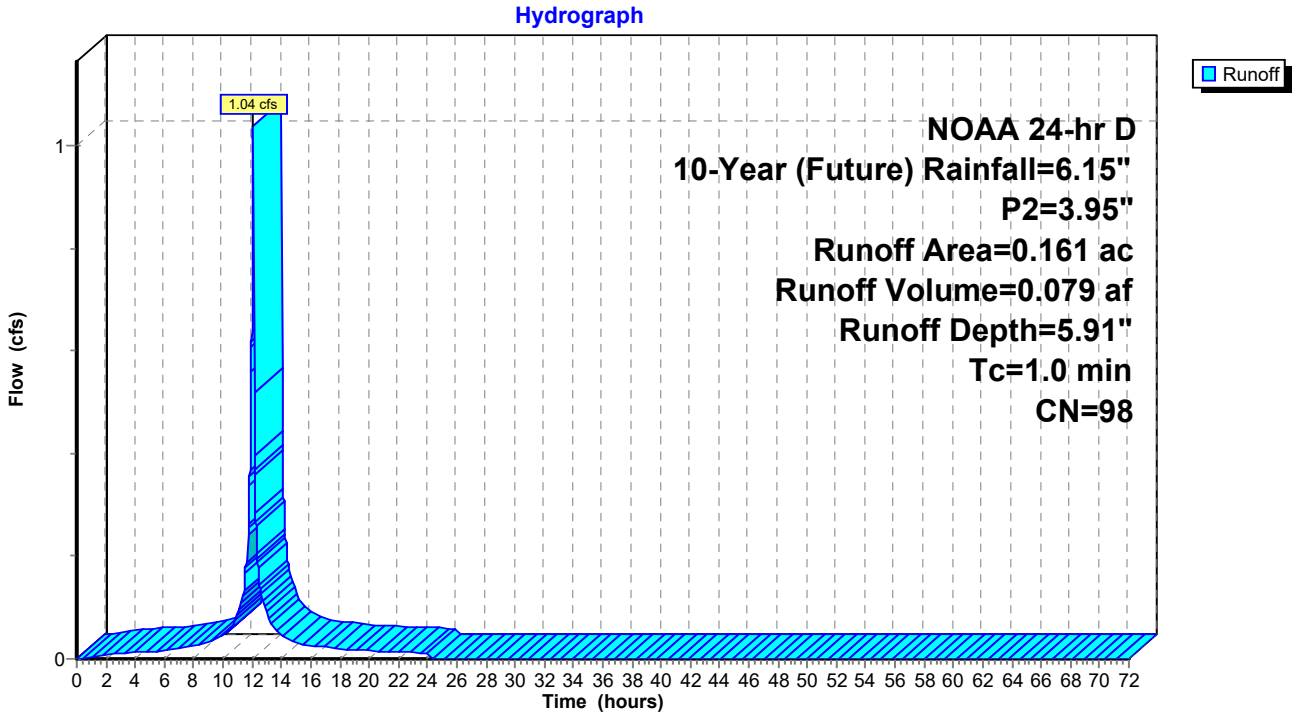
Runoff = 1.04 cfs @ 12.09 hrs, Volume= 0.079 af, Depth= 5.91"
Routed to Pond PP1 : PPVMT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.161	98	Paved parking, HSG D
0.161	98	100.00% Impervious Area

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

Subcatchment PP1A: PPVMT AREA 1



Summary for Subcatchment PP2A: PPVMT AREA #2

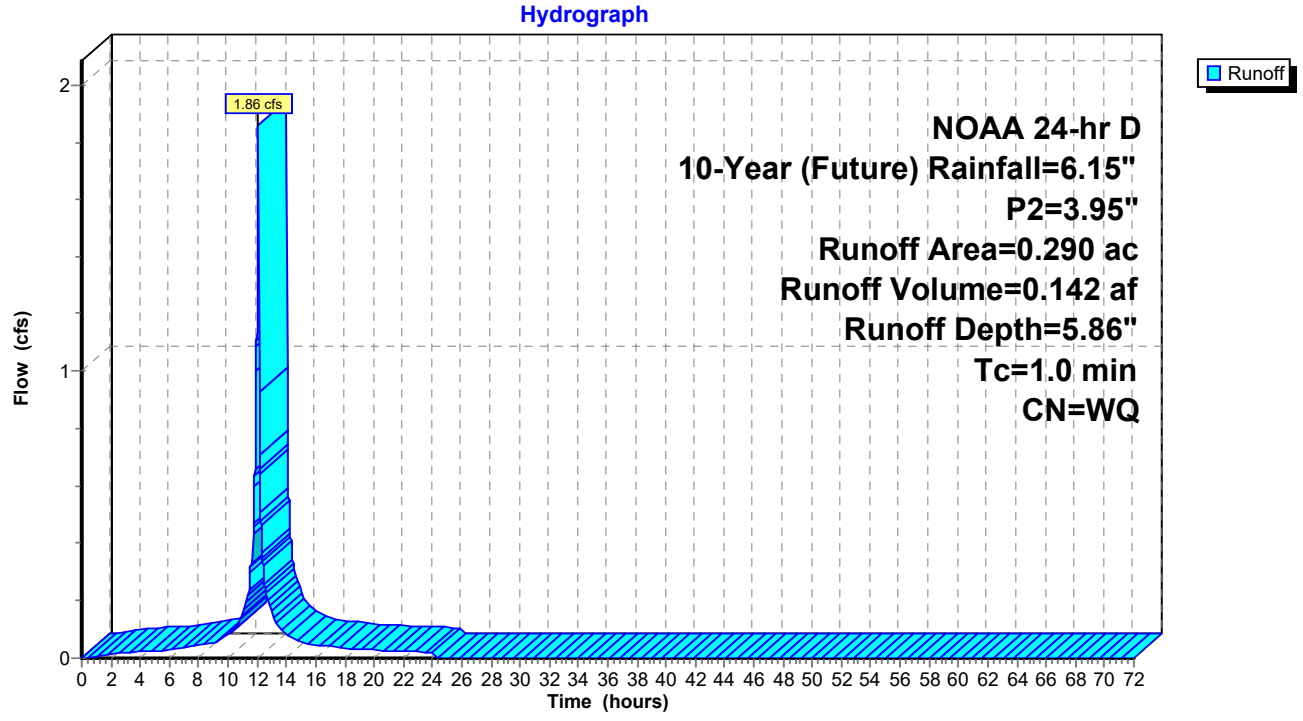
Runoff = 1.86 cfs @ 12.09 hrs, Volume= 0.142 af, Depth= 5.86"
Routed to Pond PP2 : PPVMT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.007	80	>75% Grass cover, Good, HSG D
0.283	98	Paved parking, HSG D
0.290		Weighted Average
0.007	80	2.41% Pervious Area
0.283	98	97.59% Impervious Area

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

Subcatchment PP2A: PPVMT AREA #2



Summary for Subcatchment PP3A: PPVMT AREA #3

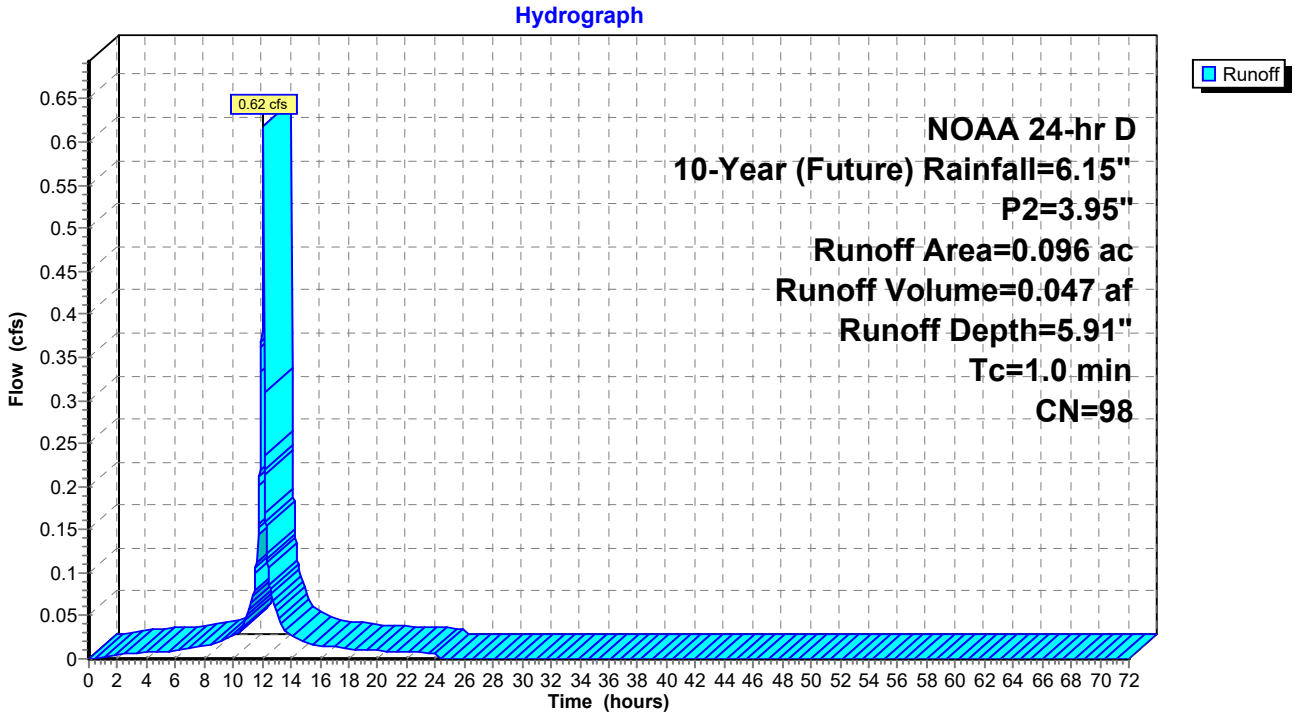
Runoff = 0.62 cfs @ 12.09 hrs, Volume= 0.047 af, Depth= 5.91"
Routed to Pond PP3 : PPVMT 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.096	98	Paved parking, HSG D
0.096	98	100.00% Impervious Area

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

Subcatchment PP3A: PPVMT AREA #3



Summary for Subcatchment PP4A: PPVMT AREA #4

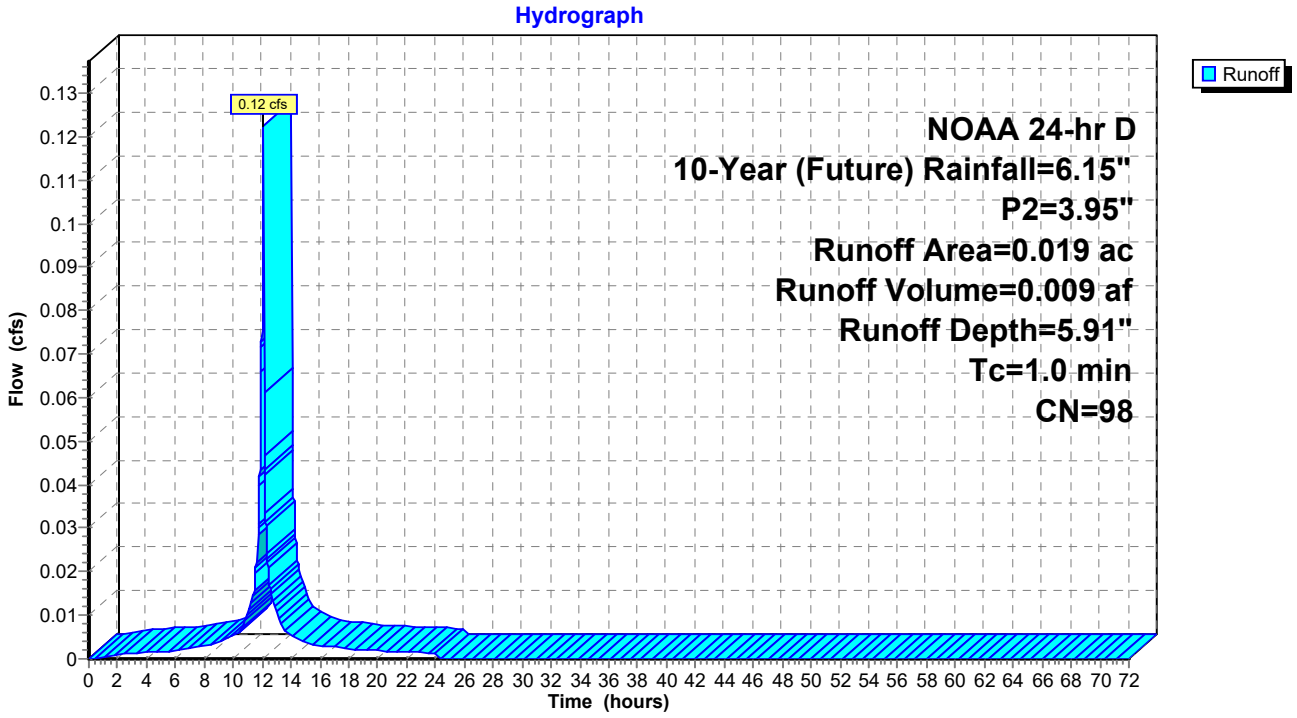
Runoff = 0.12 cfs @ 12.09 hrs, Volume= 0.009 af, Depth= 5.91"
Routed to Pond PP4 : PPVMT 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.019	98	Paved parking, HSG D
0.019	98	100.00% Impervious Area

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

Subcatchment PP4A: PPVMT AREA #4



Summary for Subcatchment PP5A: PPVMT AREA #5

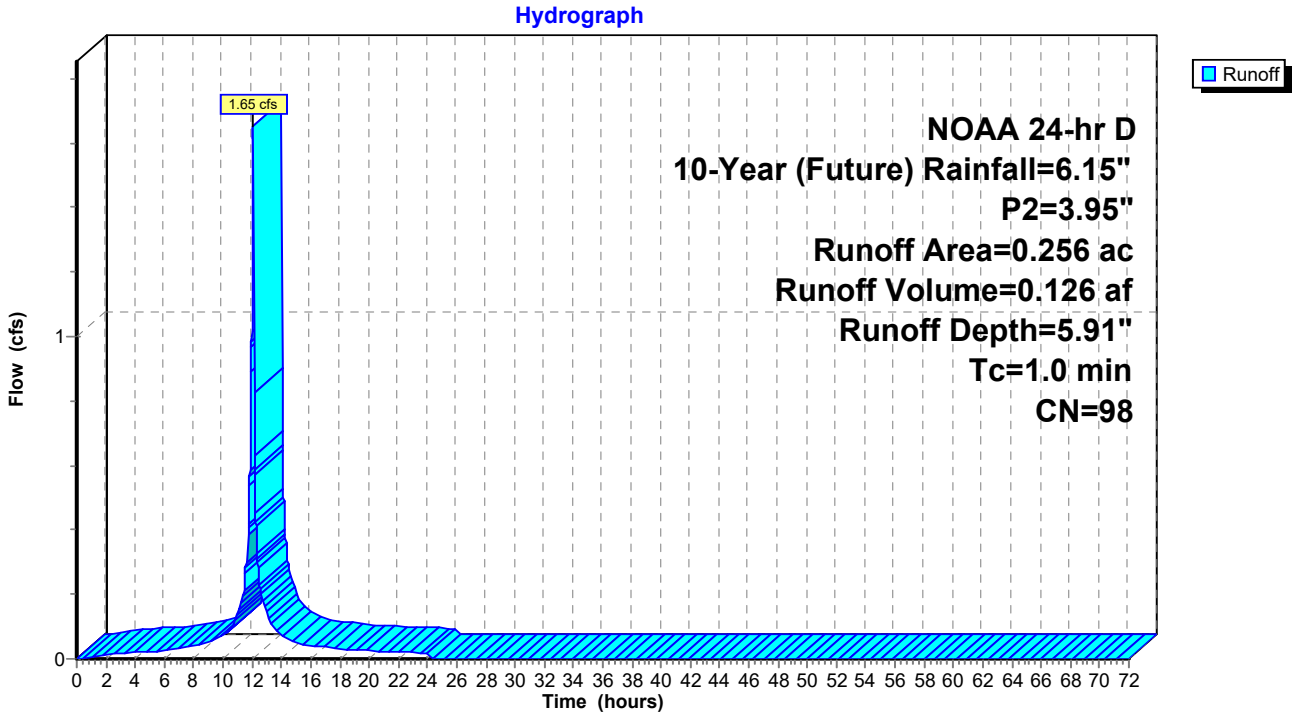
Runoff = 1.65 cfs @ 12.09 hrs, Volume= 0.126 af, Depth= 5.91"
Routed to Pond PP5 : PPVMT 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-Year (Future) Rainfall=6.15", P2=3.95"

Area (ac)	CN	Description
0.256	98	Paved parking, HSG D
0.256	98	100.00% Impervious Area

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

Subcatchment PP5A: PPVMT AREA #5



Summary for Pond CW: Constructed Wetlands (walls with ledge)

Inflow Area = 1.836 ac, 80.45% Impervious, Inflow Depth = 5.25" for 10-Year (Future) event
Inflow = 9.44 cfs @ 12.10 hrs, Volume= 0.803 af
Outflow = 1.53 cfs @ 12.77 hrs, Volume= 0.771 af, Atten= 84%, Lag= 40.0 min
Primary = 1.53 cfs @ 12.77 hrs, Volume= 0.771 af
Routed to Link PPOA1 : PPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 106.46' @ 12.77 hrs Surf.Area= 8,195 sf Storage= 18,137 cf

Plug-Flow detention time= 589.2 min calculated for 0.771 af (96% of inflow)
Center-of-Mass det. time= 561.8 min (1,352.8 - 791.0)

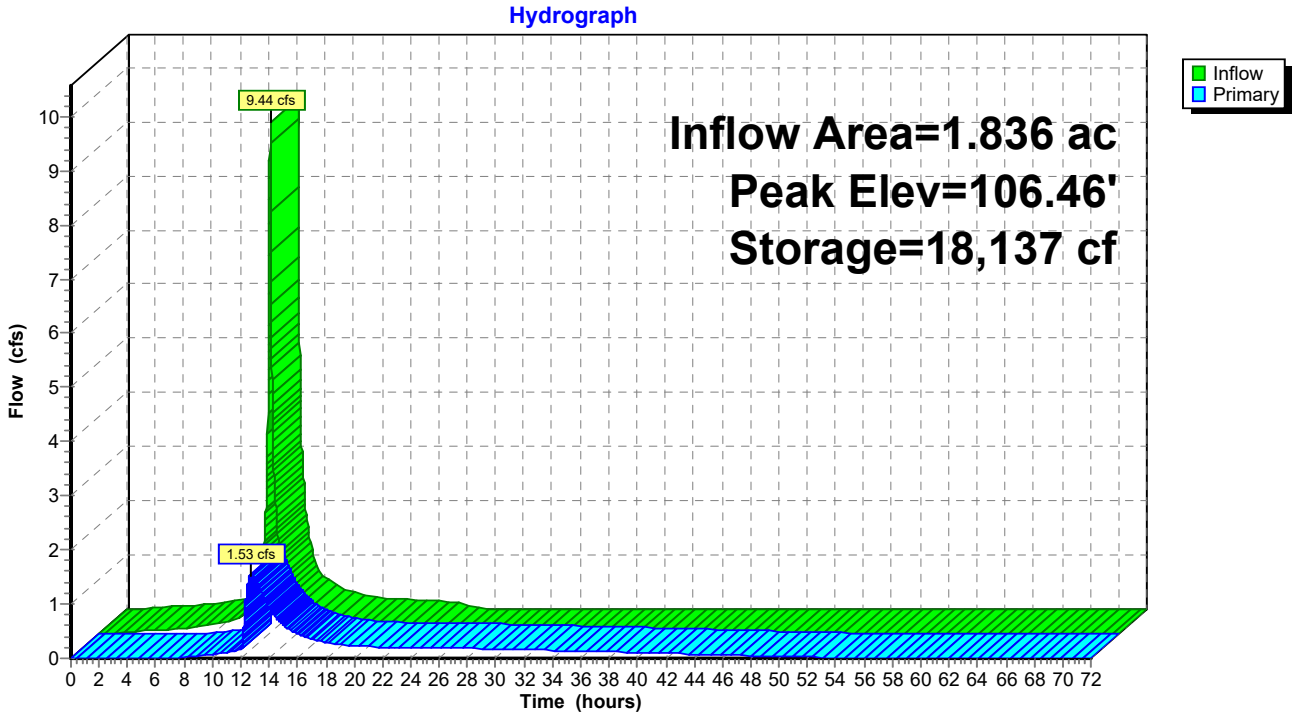
Volume	Invert	Avail.Storage	Storage Description
#1	104.00'	45,333 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
104.00	5,936	0	0
105.00	6,640	6,288	6,288
105.01	8,059	73	6,361
106.00	8,149	8,023	14,384
107.00	8,249	8,199	22,583
108.00	8,349	8,299	30,882
109.00	8,449	8,399	39,281
109.70	8,840	6,051	45,333

Device	Routing	Invert	Outlet Devices
#1	Primary	104.00'	**15.0" Round Culvert** L= 300.0' Ke= 0.500 Inlet / Outlet Invert= 104.00' / 103.10' S= 0.0030 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	104.20'	**2.5" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	105.92'	**12.2" W x 7.7" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	108.00'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.53 cfs @ 12.77 hrs HW=106.46' (Free Discharge)
└**1=Culvert** (Passes 1.53 cfs of 5.24 cfs potential flow)
  ├**2=Orifice** (Orifice Controls 0.24 cfs @ 7.07 fps)
  ├**3=Orifice/Grate** (Orifice Controls 1.29 cfs @ 2.36 fps)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond CW: Constructed Wetlands (walls with ledge)



Summary for Pond E1B D: E-Depression

Inflow Area = 0.292 ac, 0.00% Impervious, Inflow Depth = 3.61" for 10-Year (Future) event
Inflow = 1.05 cfs @ 12.18 hrs, Volume= 0.088 af
Outflow = 1.00 cfs @ 12.21 hrs, Volume= 0.081 af, Atten= 5%, Lag= 1.8 min
Primary = 1.00 cfs @ 12.21 hrs, Volume= 0.081 af
Routed to Link EPOA1 : EPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.28' @ 12.21 hrs Surf.Area= 2,378 sf Storage= 470 cf

Plug-Flow detention time= 67.1 min calculated for 0.081 af (92% of inflow)
Center-of-Mass det. time= 24.2 min (857.6 - 833.4)

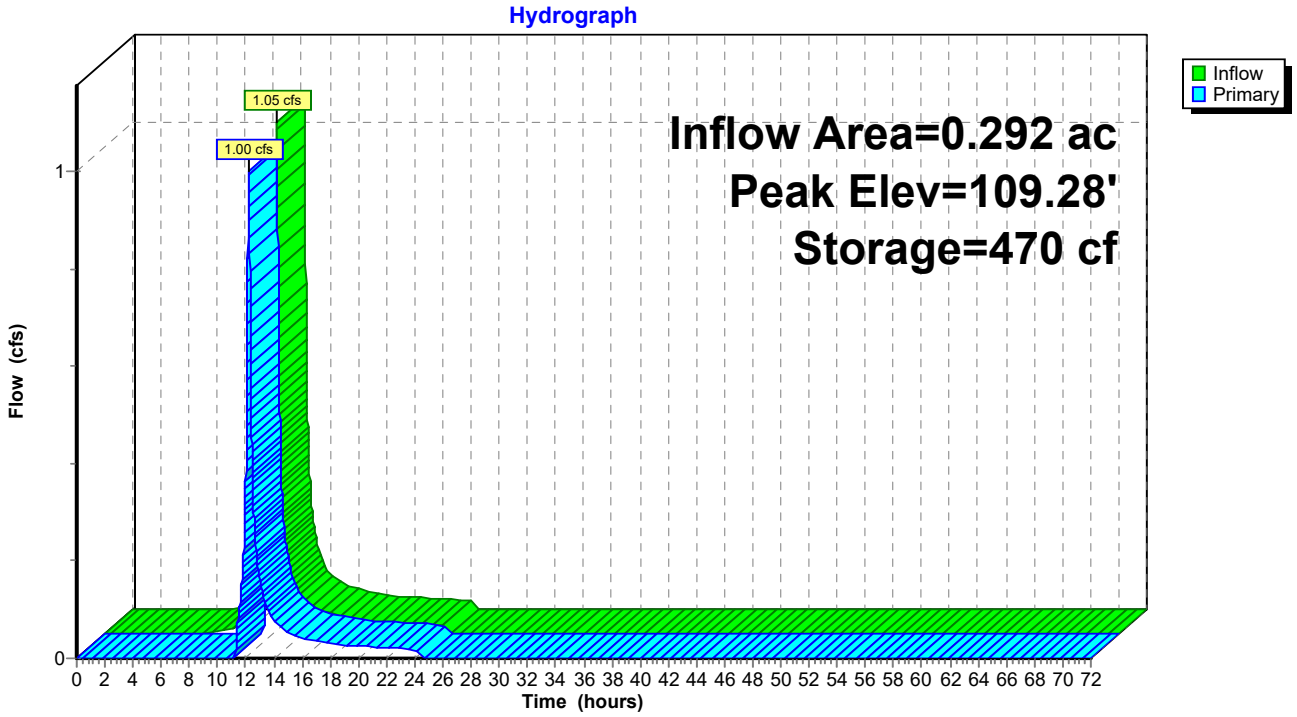
Volume	Invert	Avail.Storage	Storage Description
#1	108.80'	998 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.80	11	0	0
109.00	540	55	55
109.34	2,737	557	612
109.45	4,282	386	998

Device	Routing	Invert	Outlet Devices
#1	Primary	109.21'	**21.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=1.00 cfs @ 12.21 hrs HW=109.28' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 1.00 cfs @ 0.64 fps)

Pond E1B D: E-Depression



Summary for Pond PC1: PC 1

Inflow Area = 0.174 ac,100.00% Impervious, Inflow Depth = 5.91" for 10-Year (Future) event
Inflow = 1.12 cfs @ 12.09 hrs, Volume= 0.086 af
Outflow = 0.49 cfs @ 12.13 hrs, Volume= 0.073 af, Atten= 57%, Lag= 2.2 min
Primary = 0.49 cfs @ 12.13 hrs, Volume= 0.073 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 110.86' @ 12.13 hrs Surf.Area= 5,616 sf Storage= 1,548 cf

Plug-Flow detention time= 222.9 min calculated for 0.073 af (85% of inflow)
Center-of-Mass det. time= 151.3 min (892.5 - 741.2)

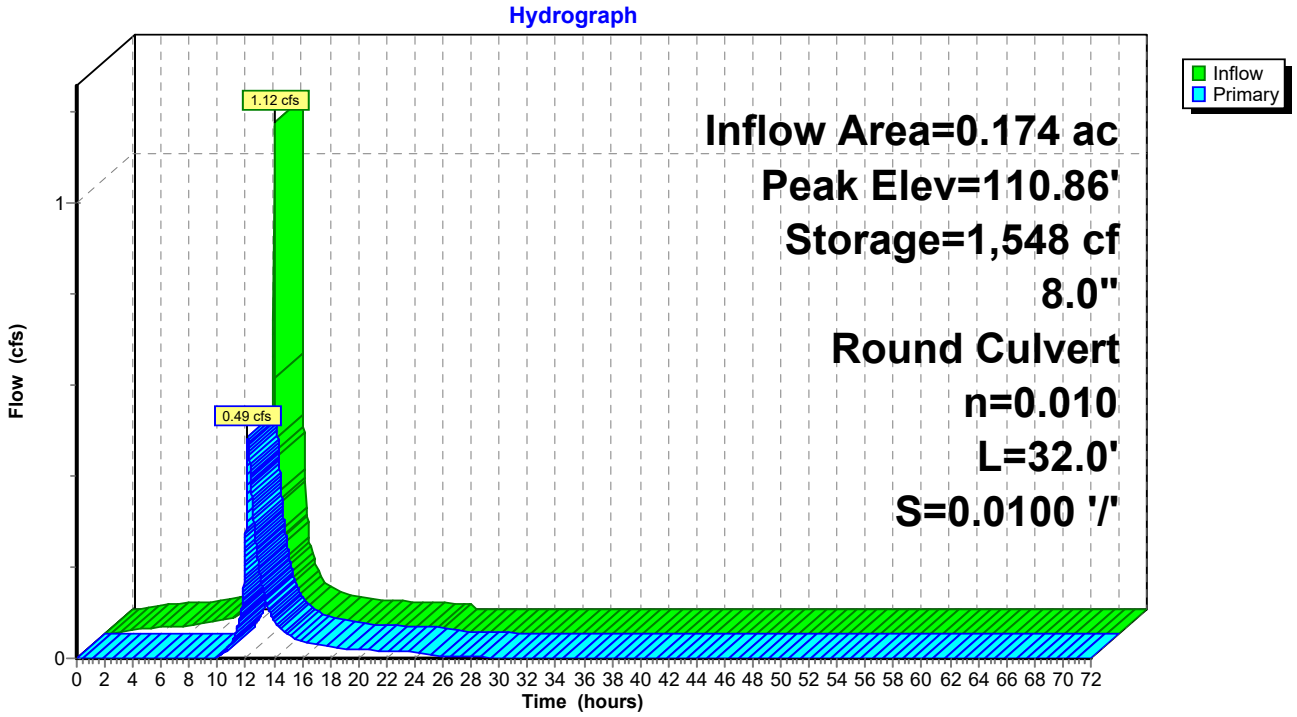
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	6,043 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 15,107 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	5,616	0	0
111.17	5,616	5,616	5,616
112.17	5,616	5,616	11,232
112.86	5,616	3,875	15,107

Device	Routing	Invert	Outlet Devices
#1	Primary	110.42'	**8.0" Round Culvert** L= 32.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.42' / 110.10' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.48 cfs @ 12.13 hrs HW=110.86' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.48 cfs @ 1.99 fps)

Pond PC1: PC 1


Hydrograph
Inflow
Primary
1.12 cfs
0.49 cfs
Inflow Area=0.174 ac
Peak Elev=110.86'
Storage=1,548 cf
8.0"
Round Culvert
n=0.010
L=32.0'
S=0.0100 '/'
Flow (cfs)
0
1
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
Time (hours)

Summary for Pond PP1: PPVMT 1

Inflow Area = 0.161 ac,100.00% Impervious, Inflow Depth = 5.91" for 10-Year (Future) event
Inflow = 1.04 cfs @ 12.09 hrs, Volume= 0.079 af
Outflow = 0.95 cfs @ 12.11 hrs, Volume= 0.079 af, Atten= 9%, Lag= 0.9 min
Primary = 0.95 cfs @ 12.11 hrs, Volume= 0.079 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 110.38' @ 12.11 hrs Surf.Area= 2,680 sf Storage= 223 cf

Plug-Flow detention time= 3.2 min calculated for 0.079 af (100% of inflow)
Center-of-Mass det. time= 3.2 min (744.4 - 741.2)

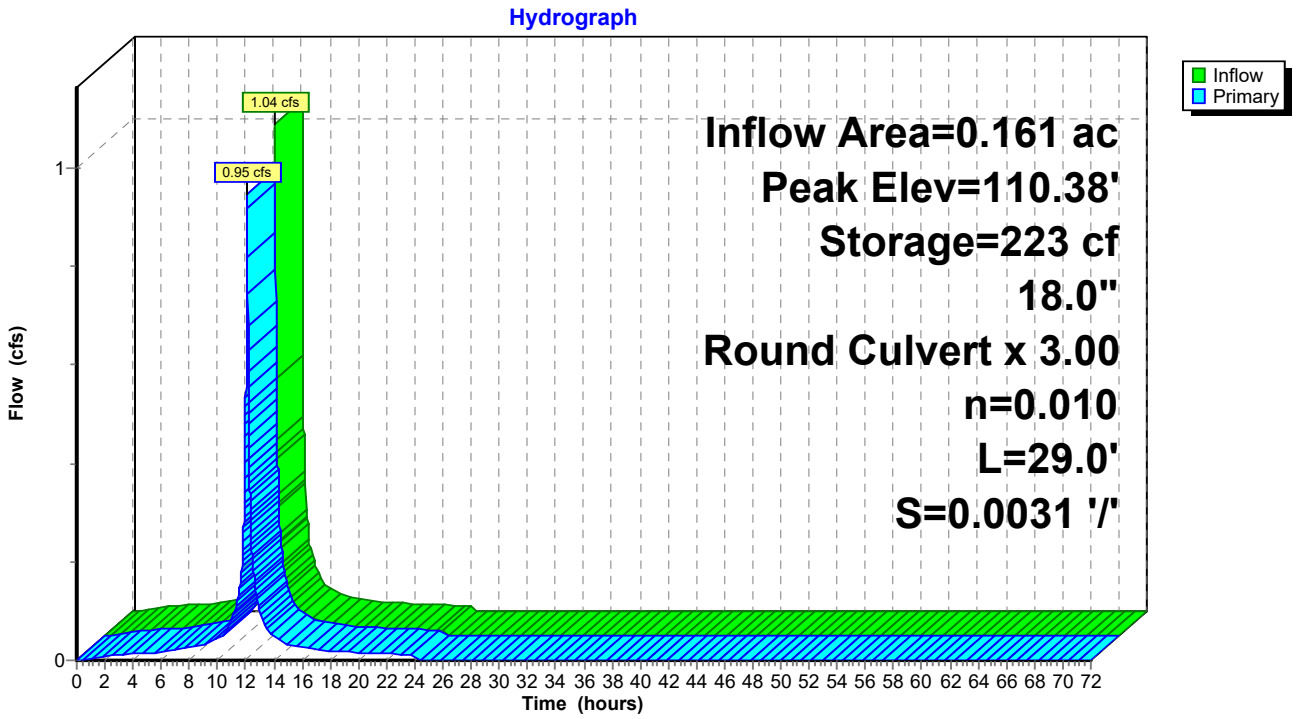
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	1,940 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 4,851 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	2,680	0	0
111.17	2,680	2,680	2,680
111.98	2,680	2,171	4,851

Device	Routing	Invert	Outlet Devices
#1	Primary	110.08'	**18.0" Round Culvert X 3.00** L= 29.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.08' / 109.99' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.94 cfs @ 12.11 hrs HW=110.38' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.94 cfs @ 1.91 fps)

Pond PP1: PPVMT 1



Summary for Pond PP2: PPVMT 2

Inflow Area = 0.290 ac, 97.59% Impervious, Inflow Depth = 5.86" for 10-Year (Future) event
Inflow = 1.86 cfs @ 12.09 hrs, Volume= 0.142 af
Outflow = 1.31 cfs @ 12.11 hrs, Volume= 0.117 af, Atten= 30%, Lag= 1.4 min
Primary = 1.31 cfs @ 12.11 hrs, Volume= 0.117 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.44' @ 12.11 hrs Surf.Area= 3,642 sf Storage= 2,102 cf

Plug-Flow detention time= 186.9 min calculated for 0.117 af (82% of inflow)
Center-of-Mass det. time= 108.8 min (851.2 - 742.4)

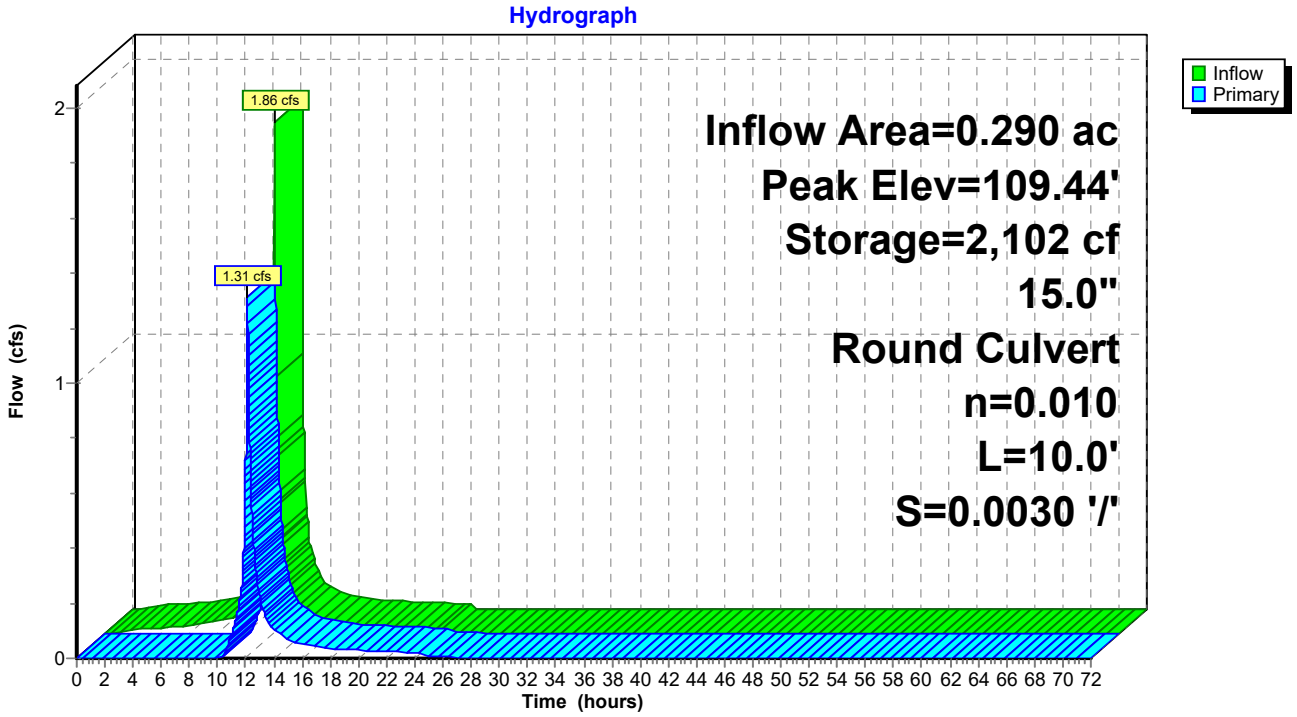
Volume	Invert	Avail.Storage	Storage Description
#1	108.00'	5,434 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 13,585 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	3,642	0	0
109.00	3,642	3,642	3,642
110.00	3,642	3,642	7,284
111.00	3,642	3,642	10,926
111.73	3,642	2,659	13,585

Device	Routing	Invert	Outlet Devices
#1	Primary	108.74'	**15.0" Round Culvert** L= 10.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.74' / 108.71' S= 0.0030 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.31 cfs @ 12.11 hrs HW=109.44' (Free Discharge)
1=Culvert (Barrel Controls 1.31 cfs @ 2.67 fps)

Pond PP2: PPVMT 2



Summary for Pond PP3: PPVMT 3

Inflow Area = 0.096 ac,100.00% Impervious, Inflow Depth = 5.91" for 10-Year (Future) event
Inflow = 0.62 cfs @ 12.09 hrs, Volume= 0.047 af
Outflow = 0.62 cfs @ 12.07 hrs, Volume= 0.047 af, Atten= 0%, Lag= 0.0 min
Primary = 0.62 cfs @ 12.07 hrs, Volume= 0.047 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.00' @ 12.07 hrs Surf.Area= 1,332 sf Storage= 1 cf

Plug-Flow detention time= 0.0 min calculated for 0.047 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (741.2 - 741.2)

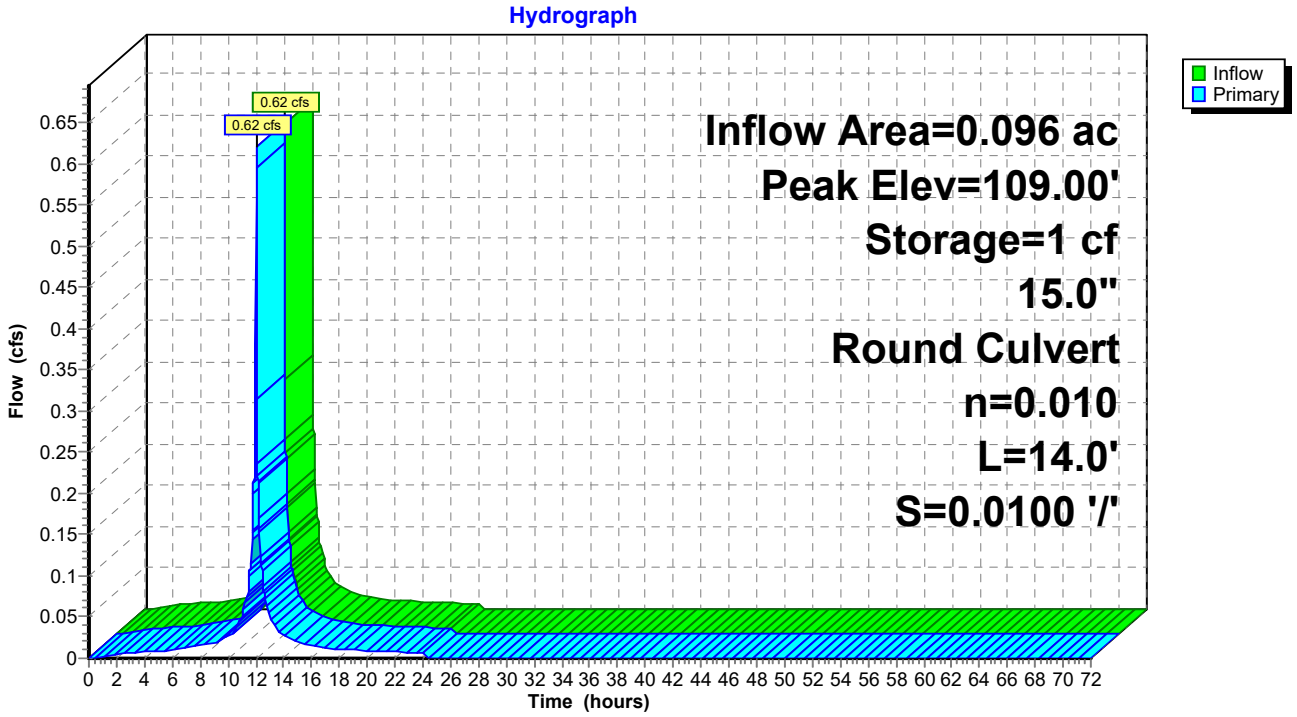
Volume	Invert	Avail.Storage	Storage Description
#1	109.00'	1,108 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 2,771 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
109.00	1,332	0	0
110.00	1,332	1,332	1,332
111.00	1,332	1,332	2,664
111.08	1,332	107	2,771

Device	Routing	Invert	Outlet Devices
#1	Primary	104.14'	**15.0" Round Culvert** L= 14.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 104.14' / 104.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=10.73 cfs @ 12.07 hrs HW=109.00' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 10.73 cfs @ 8.74 fps)

Pond PP3: PPVMT 3



Summary for Pond PP4: PPVMT 4

Inflow Area = 0.019 ac,100.00% Impervious, Inflow Depth = 5.91" for 10-Year (Future) event
Inflow = 0.12 cfs @ 12.09 hrs, Volume= 0.009 af
Outflow = 0.12 cfs @ 12.10 hrs, Volume= 0.009 af, Atten= 3%, Lag= 0.5 min
Primary = 0.12 cfs @ 12.10 hrs, Volume= 0.009 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 108.40' @ 12.10 hrs Surf.Area= 360 sf Storage= 10 cf

Plug-Flow detention time= 1.1 min calculated for 0.009 af (100% of inflow)
Center-of-Mass det. time= 1.1 min (742.3 - 741.2)

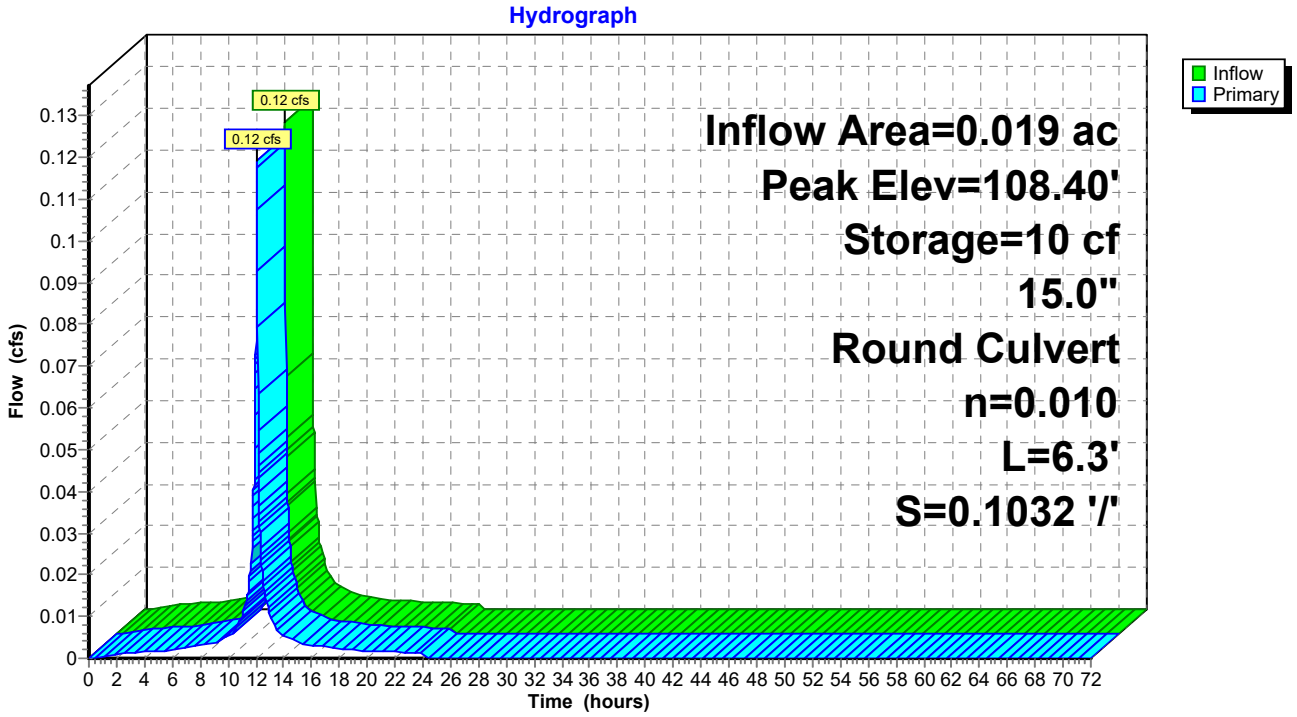
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	511 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 1,278 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	360	0	0
109.33	360	360	360
110.33	360	360	720
111.33	360	360	1,080
111.88	360	198	1,278

Device	Routing	Invert	Outlet Devices
#1	Primary	108.23'	**15.0" Round Culvert** L= 6.3' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.23' / 107.58' S= 0.1032 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.12 cfs @ 12.10 hrs HW=108.40' (Free Discharge)
1=Culvert (Inlet Controls 0.12 cfs @ 1.22 fps)

Pond PP4: PPVMT 4



Summary for Pond PP5: PPVMT 5

Inflow Area = 0.256 ac,100.00% Impervious, Inflow Depth = 5.91" for 10-Year (Future) event
Inflow = 1.65 cfs @ 12.09 hrs, Volume= 0.126 af
Outflow = 1.30 cfs @ 12.11 hrs, Volume= 0.122 af, Atten= 21%, Lag= 1.2 min
Primary = 1.30 cfs @ 12.11 hrs, Volume= 0.122 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.07' @ 12.11 hrs Surf.Area= 3,168 sf Storage= 934 cf

Plug-Flow detention time= 75.7 min calculated for 0.122 af (97% of inflow)
Center-of-Mass det. time= 53.6 min (794.8 - 741.2)

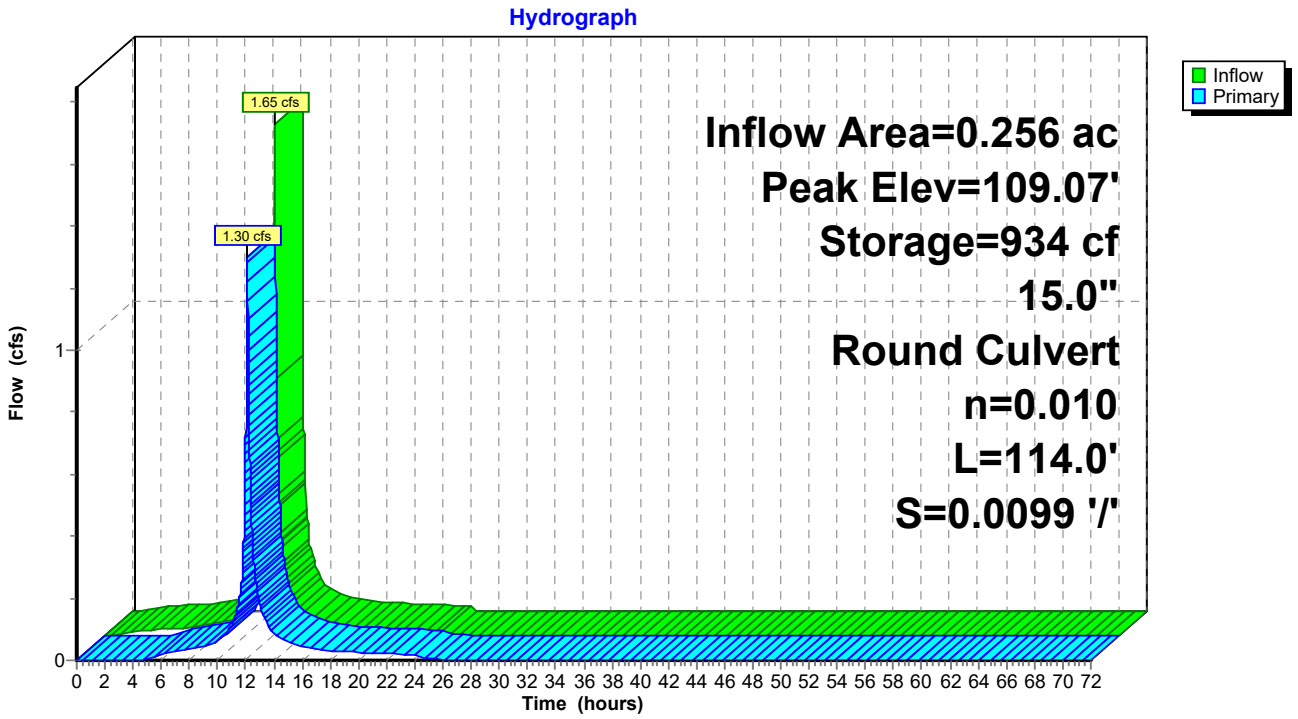
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	3,421 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 8,554 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	3,168	0	0
109.33	3,168	3,168	3,168
110.33	3,168	3,168	6,336
111.00	3,168	2,123	8,459
111.03	3,168	95	8,554

Device	Routing	Invert	Outlet Devices
#1	Primary	108.48'	**15.0" Round Culvert** L= 114.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.48' / 107.35' S= 0.0099 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.30 cfs @ 12.11 hrs HW=109.07' (Free Discharge)
1=Culvert (Inlet Controls 1.30 cfs @ 2.30 fps)

Pond PP5: PPVMT 5

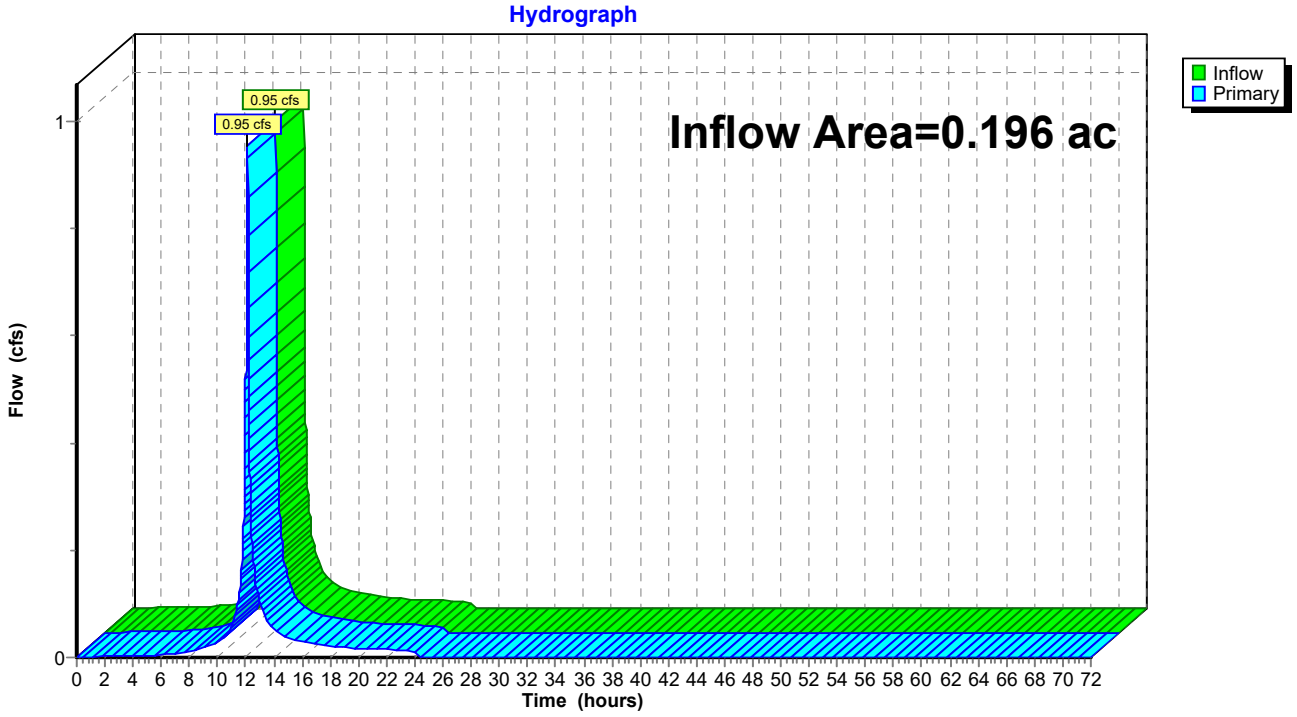


Summary for Link BP: Total Bypass

Inflow Area = 0.196 ac, 23.47% Impervious, Inflow Depth = 4.39" for 10-Year (Future) event
Inflow = 0.95 cfs @ 12.12 hrs, Volume= 0.072 af
Primary = 0.95 cfs @ 12.12 hrs, Volume= 0.072 af, Atten= 0%, Lag= 0.0 min
Routed to Link PPOA1 : PPOA-1

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

Link BP: Total Bypass

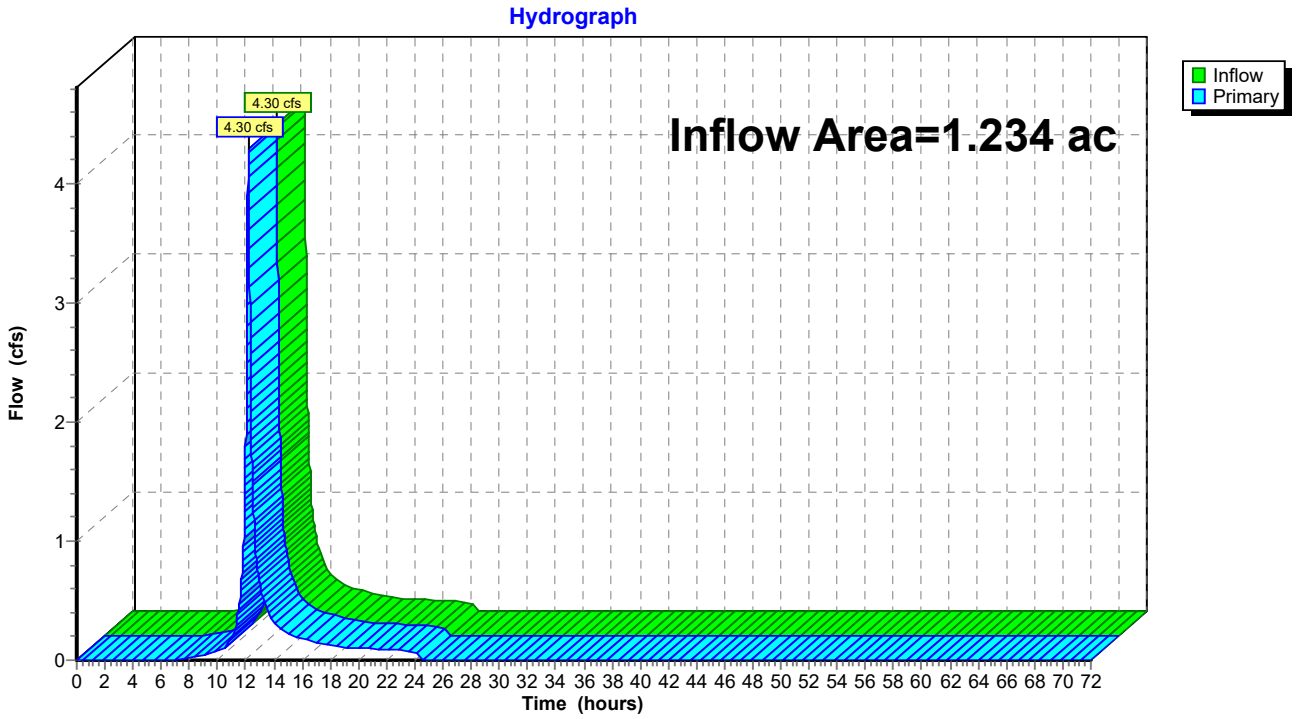


Summary for Link EPOA1: EPOA-1

Inflow Area = 1.234 ac, 0.32% Impervious, Inflow Depth = 3.56" for 10-Year (Future) event
Inflow = 4.30 cfs @ 12.19 hrs, Volume= 0.366 af
Primary = 4.30 cfs @ 12.19 hrs, Volume= 0.366 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA1: EPOA-1

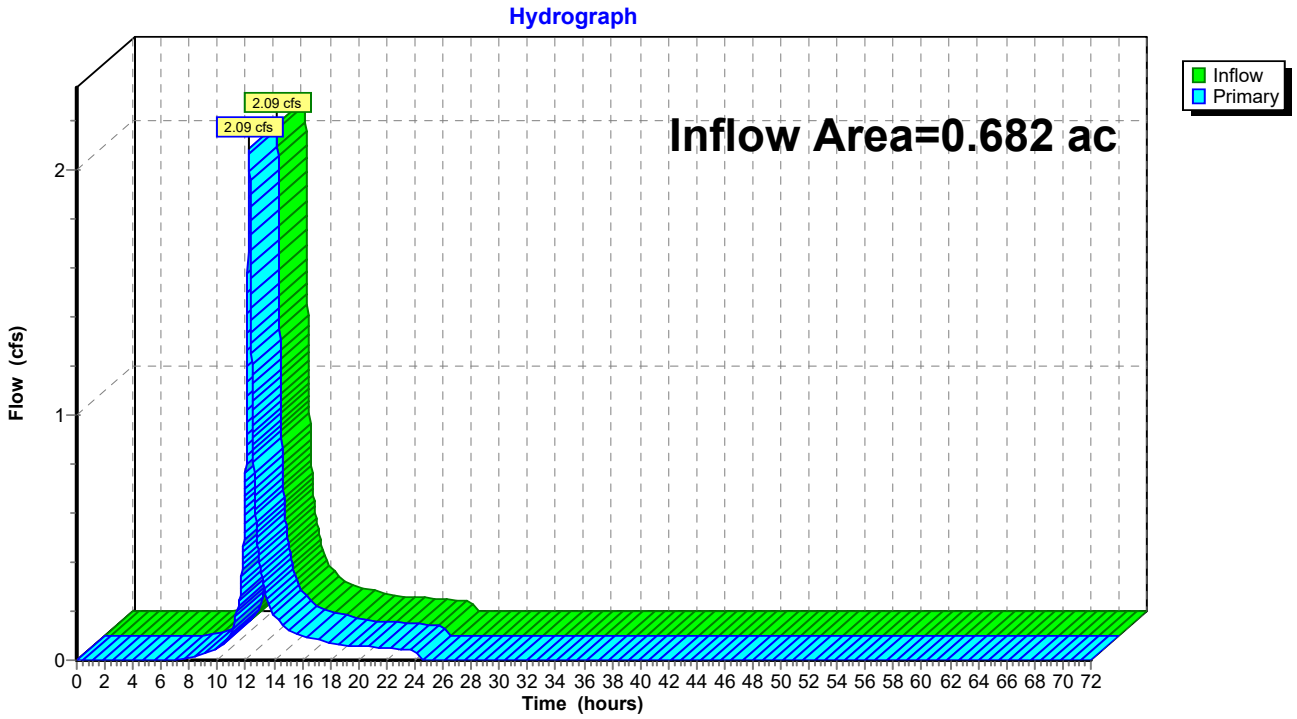


Summary for Link EPOA2: EPOA-2

Inflow Area = 0.682 ac, 0.00% Impervious, Inflow Depth = 3.61" for 10-Year (Future) event
Inflow = 2.09 cfs @ 12.24 hrs, Volume= 0.205 af
Primary = 2.09 cfs @ 12.24 hrs, Volume= 0.205 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA2: EPOA-2

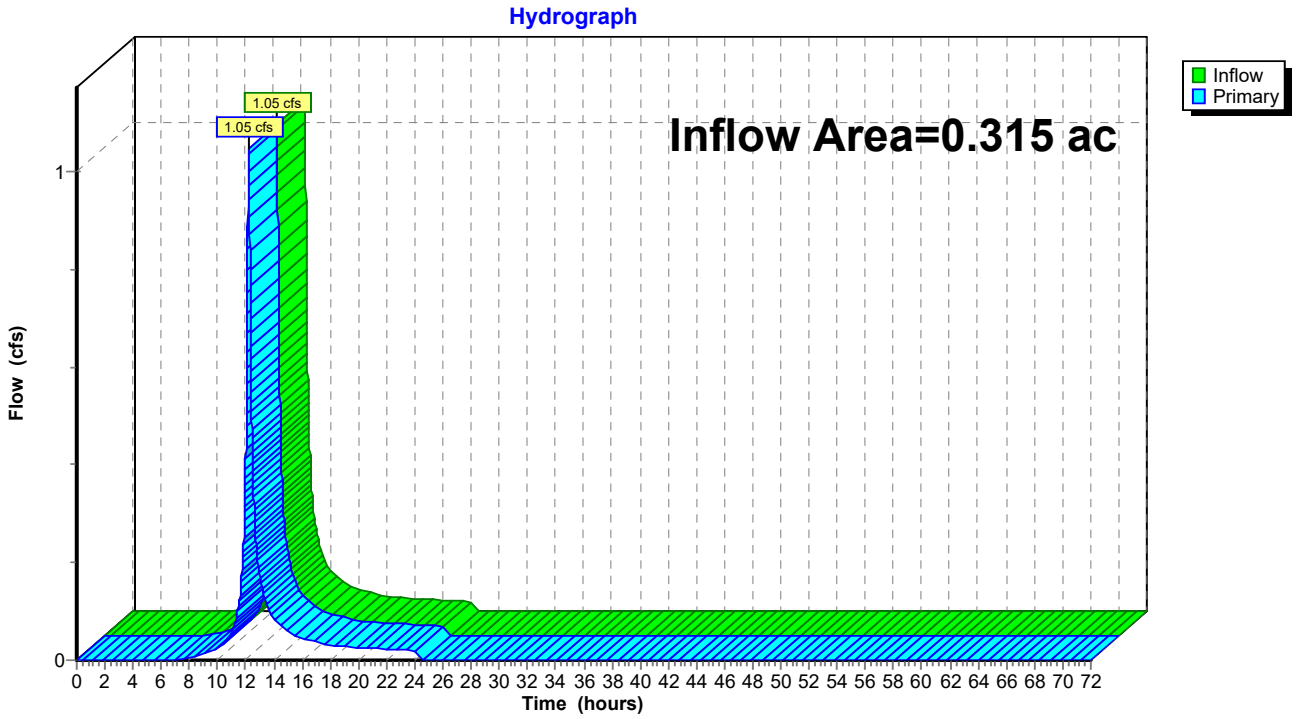


Summary for Link EPOA4: EPOA-4

Inflow Area = 0.315 ac, 0.00% Impervious, Inflow Depth = 3.61" for 10-Year (Future) event
Inflow = 1.05 cfs @ 12.21 hrs, Volume= 0.095 af
Primary = 1.05 cfs @ 12.21 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA4: EPOA-4

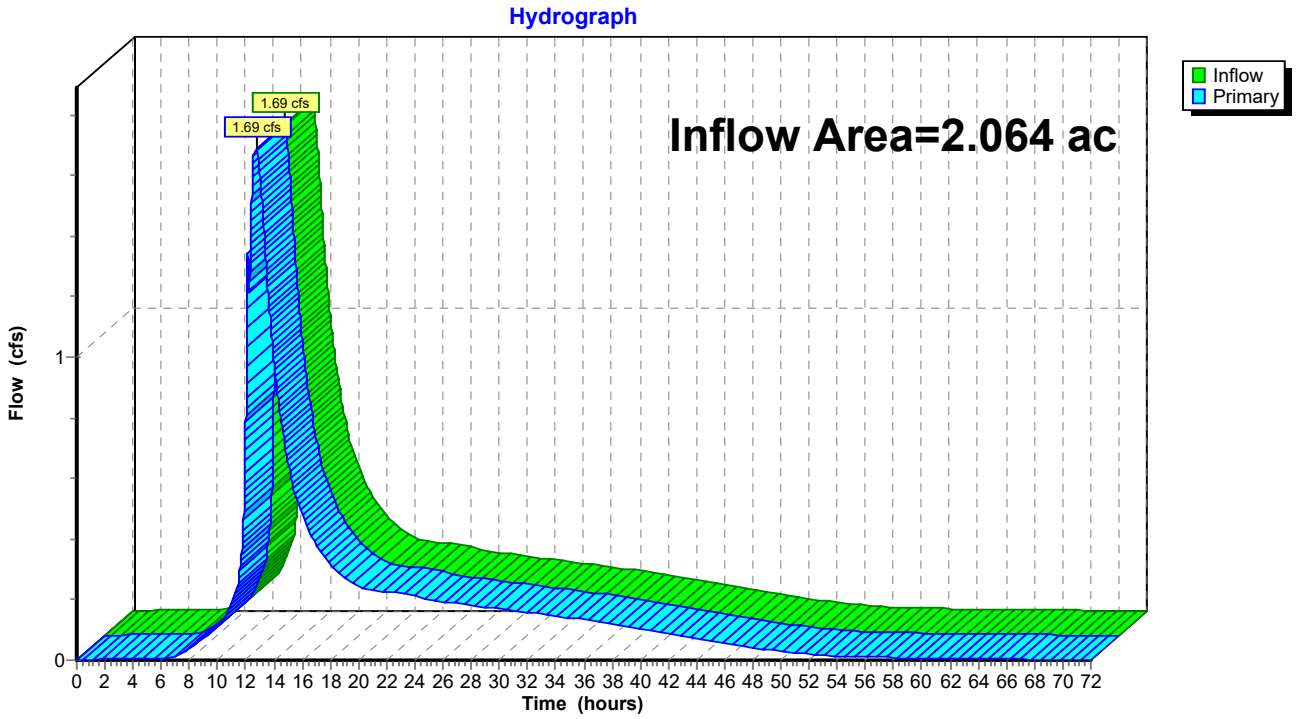


Summary for Link PPOA1: PPOA-1

Inflow Area = 2.064 ac, 75.10% Impervious, Inflow Depth > 4.99" for 10-Year (Future) event
Inflow = 1.69 cfs @ 12.73 hrs, Volume= 0.858 af
Primary = 1.69 cfs @ 12.73 hrs, Volume= 0.858 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA1: PPOA-1

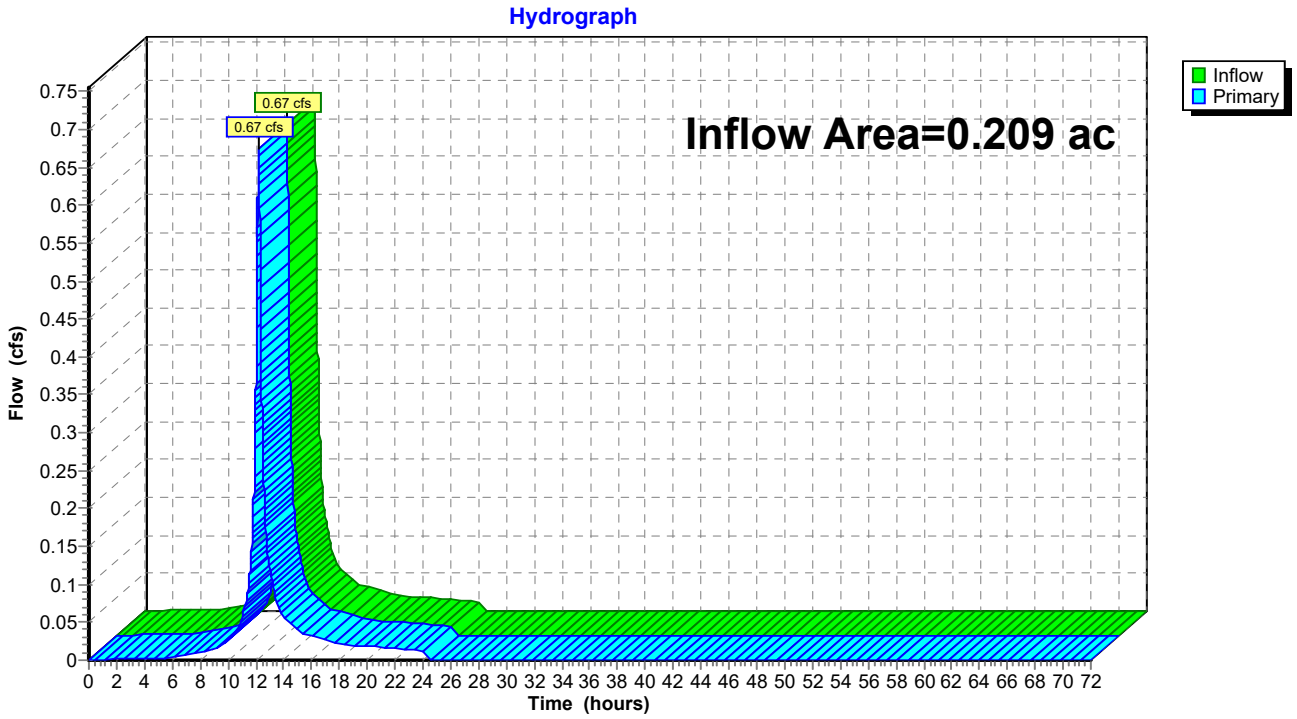


Summary for Link PPOA2: PPOA-2

Inflow Area = 0.209 ac, 16.27% Impervious, Inflow Depth = 4.24" for 10-Year (Future) event
Inflow = 0.67 cfs @ 12.21 hrs, Volume= 0.074 af
Primary = 0.67 cfs @ 12.21 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA2: PPOA-2

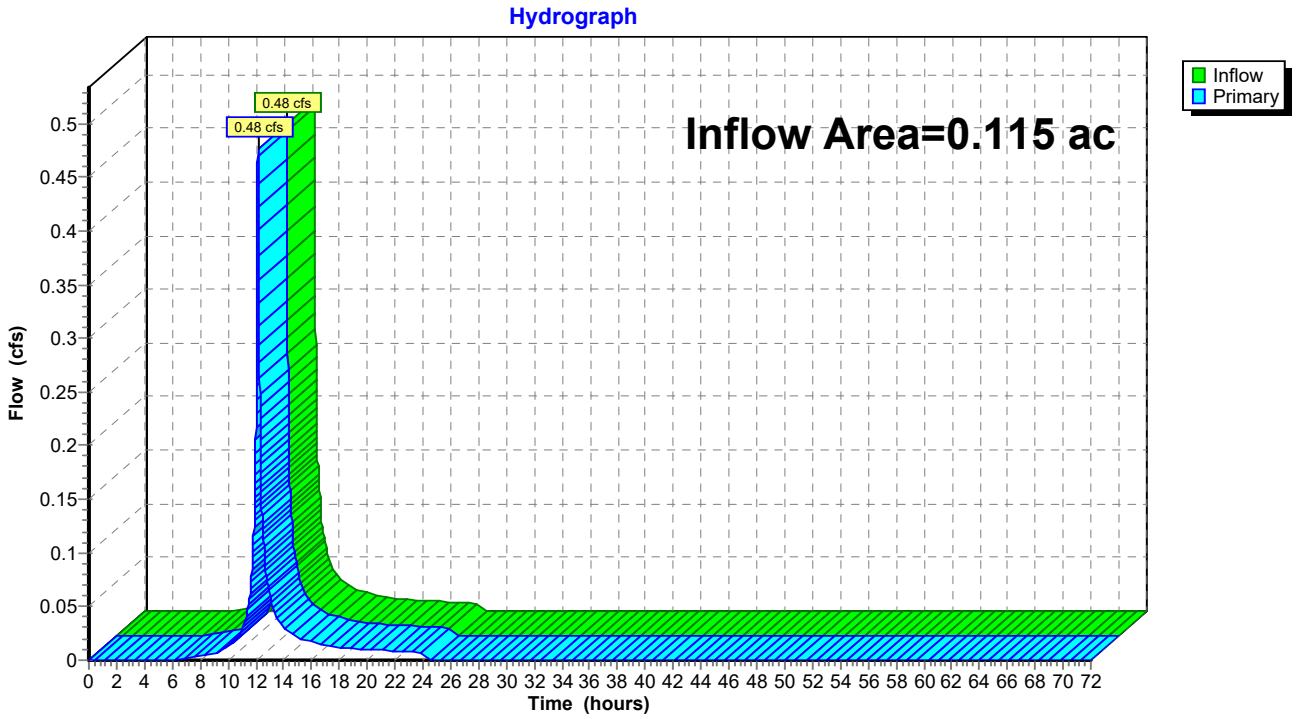


Summary for Link PPOA4: PPOA-4

Inflow Area = 0.115 ac, 2.61% Impervious, Inflow Depth = 3.97" for 10-Year (Future) event
Inflow = 0.48 cfs @ 12.16 hrs, Volume= 0.038 af
Primary = 0.48 cfs @ 12.16 hrs, Volume= 0.038 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA4: PPOA-4



100-Year Storm Event
(Future Adjusted Precipitation Depth)

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

SubcatchmentE1A: EDA-1A Runoff Area=0.910 ac 0.00% Impervious Runoff Depth=8.42"
Flow Length=296' Slope=0.0500 '/' Tc=10.7 min CN=77 Runoff=7.31 cfs 0.639 af

SubcatchmentE1B: EDA-1B (Depression) Runoff Area=0.292 ac 0.00% Impervious Runoff Depth=8.42"
Flow Length=118' Slope=0.0200 '/' Tc=10.3 min CN=77 Runoff=2.37 cfs 0.205 af

SubcatchmentE1C I: E-Off-Site #1C Runoff Area=0.004 ac 100.00% Impervious Runoff Depth=11.12"
Flow Length=77' Slope=0.0450 '/' Tc=0.6 min CN=98 Runoff=0.05 cfs 0.004 af

SubcatchmentE1C P: E-Off-Site #1C Runoff Area=0.028 ac 0.00% Impervious Runoff Depth=8.83"
Flow Length=77' Slope=0.0450 '/' Tc=5.2 min CN=80 Runoff=0.28 cfs 0.021 af

SubcatchmentE2A: EDA-2 Runoff Area=0.682 ac 0.00% Impervious Runoff Depth=8.42"
Flow Length=253' Tc=15.6 min CN=77 Runoff=4.74 cfs 0.479 af

SubcatchmentE4A: EDA-4 Runoff Area=0.315 ac 0.00% Impervious Runoff Depth=8.42"
Flow Length=158' Tc=12.7 min CN=77 Runoff=2.37 cfs 0.221 af

SubcatchmentP1A I: PDA-1 Impervious Runoff Area=0.488 ac 100.00% Impervious Runoff Depth=11.12"
Flow Length=266' Tc=2.0 min CN=98 Runoff=5.82 cfs 0.452 af

SubcatchmentP1A P: PDA-1 Pervious Runoff Area=0.352 ac 0.00% Impervious Runoff Depth=8.83"
Flow Length=48' Slope=0.0200 '/' Tc=4.9 min CN=80 Runoff=3.59 cfs 0.259 af

SubcatchmentP1B1: PDA-1 Bypass #1 Runoff Area=0.079 ac 0.00% Impervious Runoff Depth=8.83"
Flow Length=330' Tc=7.2 min CN=80 Runoff=0.74 cfs 0.058 af

SubcatchmentP1B2: PDA-1 Bypass #2 Runoff Area=0.117 ac 39.32% Impervious Runoff Depth=9.73"
Flow Length=127' Slope=0.0100 '/' Tc=4.4 min CN=WQ Runoff=1.26 cfs 0.095 af

SubcatchmentP1C I: P-Off-Site #1C Runoff Area=0.027 ac 100.00% Impervious Runoff Depth=11.12"
Flow Length=366' Slope=0.0020 '/' Tc=7.6 min CN=98 Runoff=0.28 cfs 0.025 af

SubcatchmentP1C P: P-Off-Site #1C Runoff Area=0.005 ac 0.00% Impervious Runoff Depth=8.83"
Flow Length=366' Slope=0.0020 '/' Tc=7.6 min CN=80 Runoff=0.05 cfs 0.004 af

SubcatchmentP2A I: PDA-2 Impervious Runoff Area=0.034 ac 100.00% Impervious Runoff Depth=11.12"
Flow Length=92' Slope=0.0100 '/' Tc=1.3 min CN=98 Runoff=0.41 cfs 0.032 af

SubcatchmentP2A P: PDA-2 Pervious Runoff Area=0.175 ac 0.00% Impervious Runoff Depth=8.83"
Flow Length=90' Slope=0.0050 '/' Tc=14.1 min CN=80 Runoff=1.31 cfs 0.129 af

SubcatchmentP4A: PDA-4 Runoff Area=0.115 ac 2.61% Impervious Runoff Depth=8.89"
Flow Length=96' Slope=0.0110 '/' Tc=8.7 min CN=WQ Runoff=1.03 cfs 0.085 af

SubcatchmentPC1A: PC AREA #1 Runoff Area=0.174 ac 100.00% Impervious Runoff Depth=11.12"
Tc=1.0 min CN=98 Runoff=2.08 cfs 0.161 af

Subcatchment PP1A: PPVMT AREA 1 Runoff Area=0.161 ac 100.00% Impervious Runoff Depth=11.12"
Tc=1.0 min CN=98 Runoff=1.92 cfs 0.149 af

Subcatchment PP2A: PPVMT AREA #2 Runoff Area=0.290 ac 97.59% Impervious Runoff Depth=11.06"
Tc=1.0 min CN=WQ Runoff=3.46 cfs 0.267 af

Subcatchment PP3A: PPVMT AREA #3 Runoff Area=0.096 ac 100.00% Impervious Runoff Depth=11.12"
Tc=1.0 min CN=98 Runoff=1.15 cfs 0.089 af

Subcatchment PP4A: PPVMT AREA #4 Runoff Area=0.019 ac 100.00% Impervious Runoff Depth=11.12"
Tc=1.0 min CN=98 Runoff=0.23 cfs 0.018 af

Subcatchment PP5A: PPVMT AREA #5 Runoff Area=0.256 ac 100.00% Impervious Runoff Depth=11.12"
Tc=1.0 min CN=98 Runoff=3.06 cfs 0.237 af

Pond CW: Constructed Wetlands (walls Peak Elev=107.99' Storage=30,757 cf Inflow=18.54 cfs 1.591 af
Outflow=4.46 cfs 1.559 af

Pond E1B D: E-Depression Peak Elev=109.34' Storage=610 cf Inflow=2.37 cfs 0.205 af
Outflow=2.29 cfs 0.198 af

Pond PC1: PC 1 Peak Elev=111.14' Storage=2,171 cf Inflow=2.08 cfs 0.161 af
8.0" Round Culvert n=0.010 L=32.0' S=0.0100 '/' Outflow=0.92 cfs 0.148 af

Pond PP1: PPVMT 1 Peak Elev=110.50' Storage=354 cf Inflow=1.92 cfs 0.149 af
18.0" Round Culvert x 3.00 n=0.010 L=29.0' S=0.0031 '/' Outflow=1.82 cfs 0.149 af

Pond PP2: PPVMT 2 Peak Elev=109.80' Storage=2,625 cf Inflow=3.46 cfs 0.267 af
15.0" Round Culvert n=0.010 L=10.0' S=0.0030 '/' Outflow=2.67 cfs 0.243 af

Pond PP3: PPVMT 3 Peak Elev=109.00' Storage=1 cf Inflow=1.15 cfs 0.089 af
15.0" Round Culvert n=0.010 L=14.0' S=0.0100 '/' Outflow=1.15 cfs 0.089 af

Pond PP4: PPVMT 4 Peak Elev=108.46' Storage=19 cf Inflow=0.23 cfs 0.018 af
15.0" Round Culvert n=0.010 L=6.3' S=0.1032 '/' Outflow=0.23 cfs 0.018 af

Pond PP5: PPVMT 5 Peak Elev=109.35' Storage=1,298 cf Inflow=3.06 cfs 0.237 af
15.0" Round Culvert n=0.010 L=114.0' S=0.0099 '/' Outflow=2.57 cfs 0.233 af

Link BP: Total Bypass Inflow=1.97 cfs 0.153 af
Primary=1.97 cfs 0.153 af

Link EPOA1: EPOA-1 Inflow=9.76 cfs 0.861 af
Primary=9.76 cfs 0.861 af

Link EPOA2: EPOA-2 Inflow=4.74 cfs 0.479 af
Primary=4.74 cfs 0.479 af

Link EPOA4: EPOA-4 Inflow=2.37 cfs 0.221 af
Primary=2.37 cfs 0.221 af

Link PPOA1: PPOA-1 Inflow=6.16 cfs 1.740 af
Primary=6.16 cfs 1.740 af

Link PPOA2: PPOA-2 Inflow=1.45 cfs 0.160 af
Primary=1.45 cfs 0.160 af

Link PPOA4: PPOA-4 Inflow=1.03 cfs 0.085 af
Primary=1.03 cfs 0.085 af

Summary for Subcatchment E1A: EDA-1A

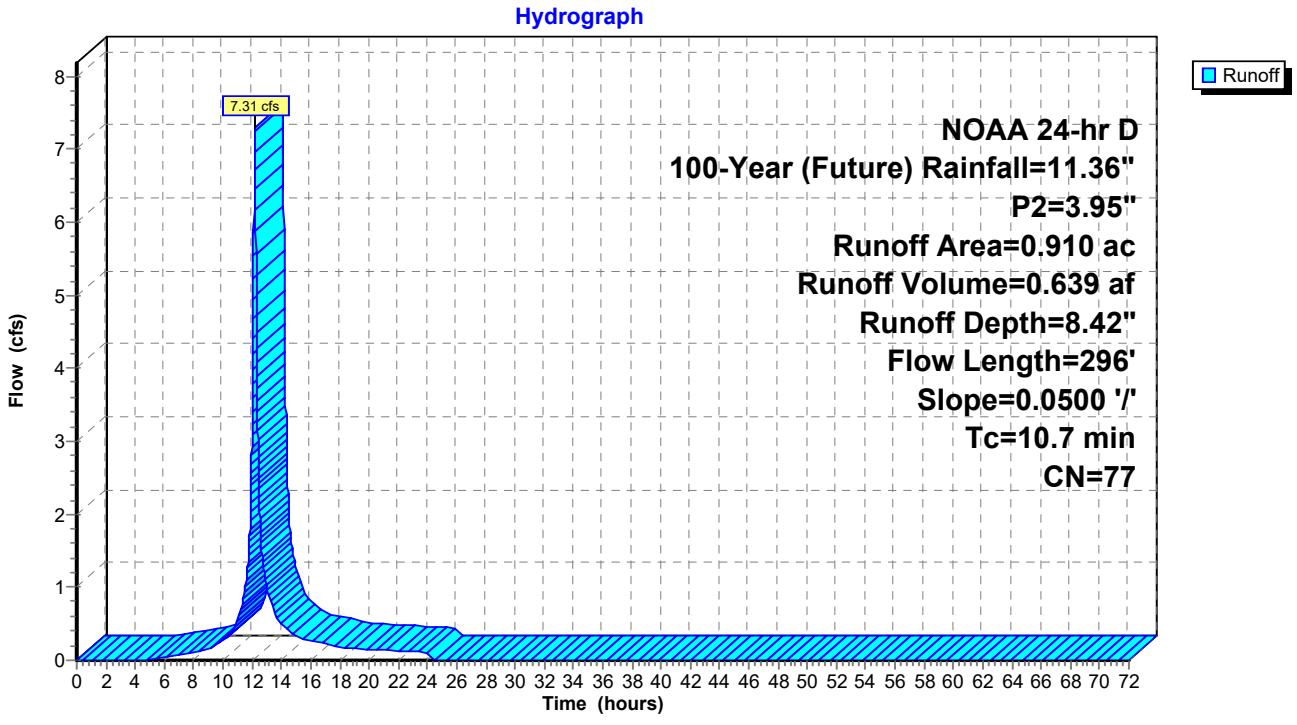
Runoff = 7.31 cfs @ 12.18 hrs, Volume= 0.639 af, Depth= 8.42"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.910	77	Woods, Good, HSG D
0.910	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	56	0.0500	0.11		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
1.9	130	0.0500	1.12		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
0.4	110	0.0500	4.54		**Shallow Concentrated Flow, C-D** Paved Kv= 20.3 fps
10.7	296	Total			

Subcatchment E1A: EDA-1A



Summary for Subcatchment E1B: EDA-1B (Depression)

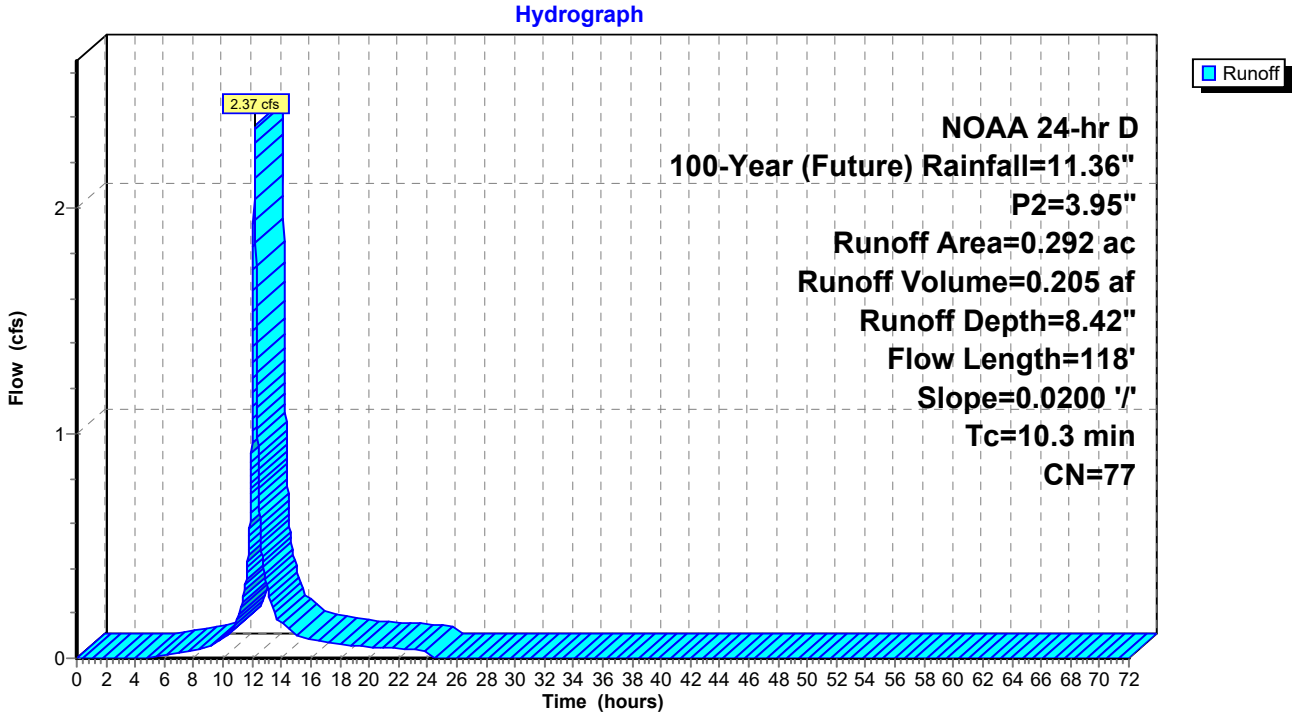
Runoff = 2.37 cfs @ 12.17 hrs, Volume= 0.205 af, Depth= 8.42"
Routed to Pond E1B D : E-Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.292	77	Woods, Good, HSG D
0.292	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	35	0.0200	0.07		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
2.0	83	0.0200	0.71		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
10.3	118	Total			

Subcatchment E1B: EDA-1B (Depression)



Summary for Subcatchment E1C I: E-Off-Site #1C Impervious

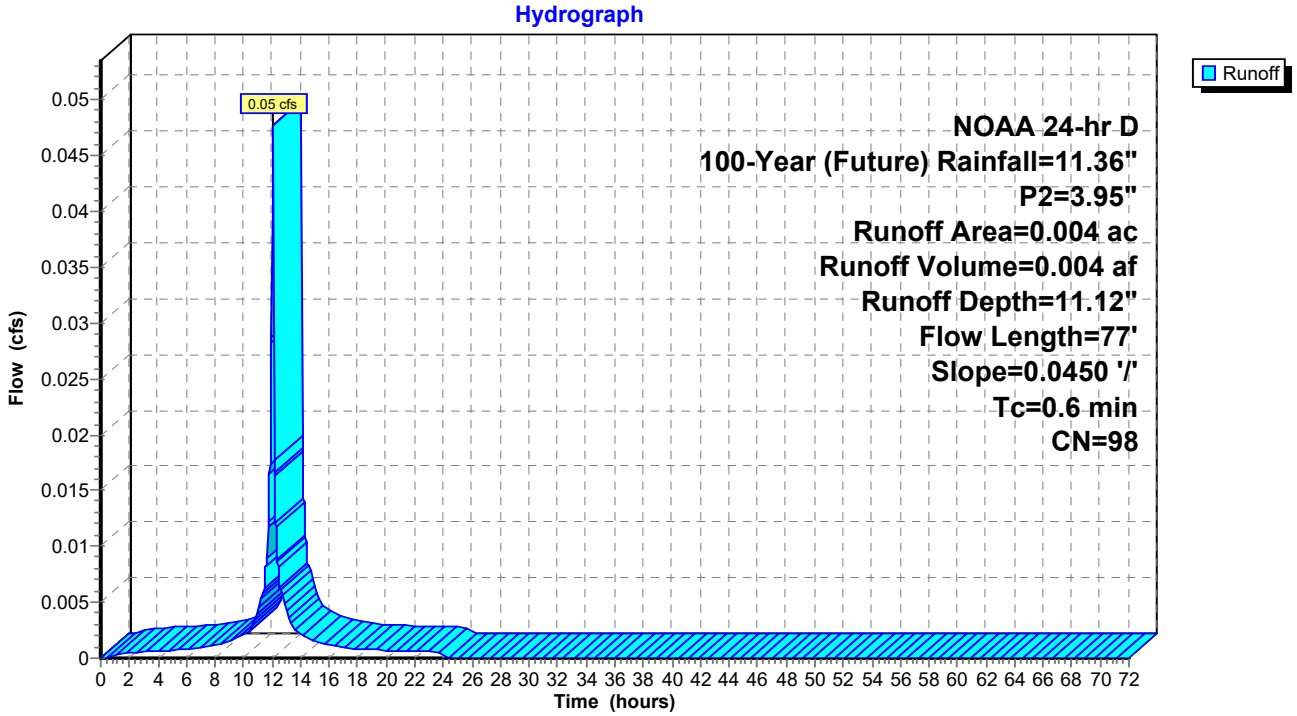
Runoff = 0.05 cfs @ 12.08 hrs, Volume= 0.004 af, Depth=11.12"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.004	98	Paved parking, HSG D
0.004	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	77	0.0450	2.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.95"

Subcatchment E1C I: E-Off-Site #1C Impervious



Summary for Subcatchment E1C P: E-Off-Site #1C Pervious

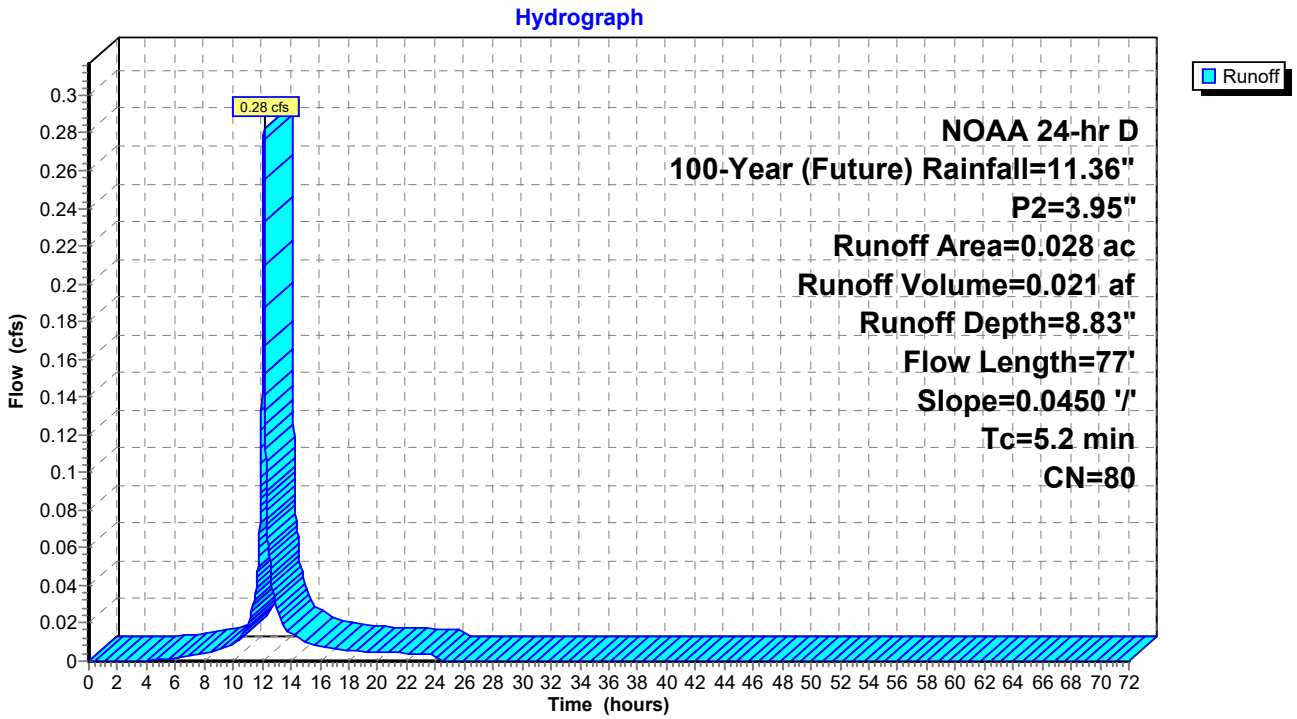
Runoff = 0.28 cfs @ 12.12 hrs, Volume= 0.021 af, Depth= 8.83"
Routed to Link EPOA1 : EPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.028	80	>75% Grass cover, Good, HSG D
0.028	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	77	0.0450	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.95"

Subcatchment E1C P: E-Off-Site #1C Pervious



Summary for Subcatchment E2A: EDA-2

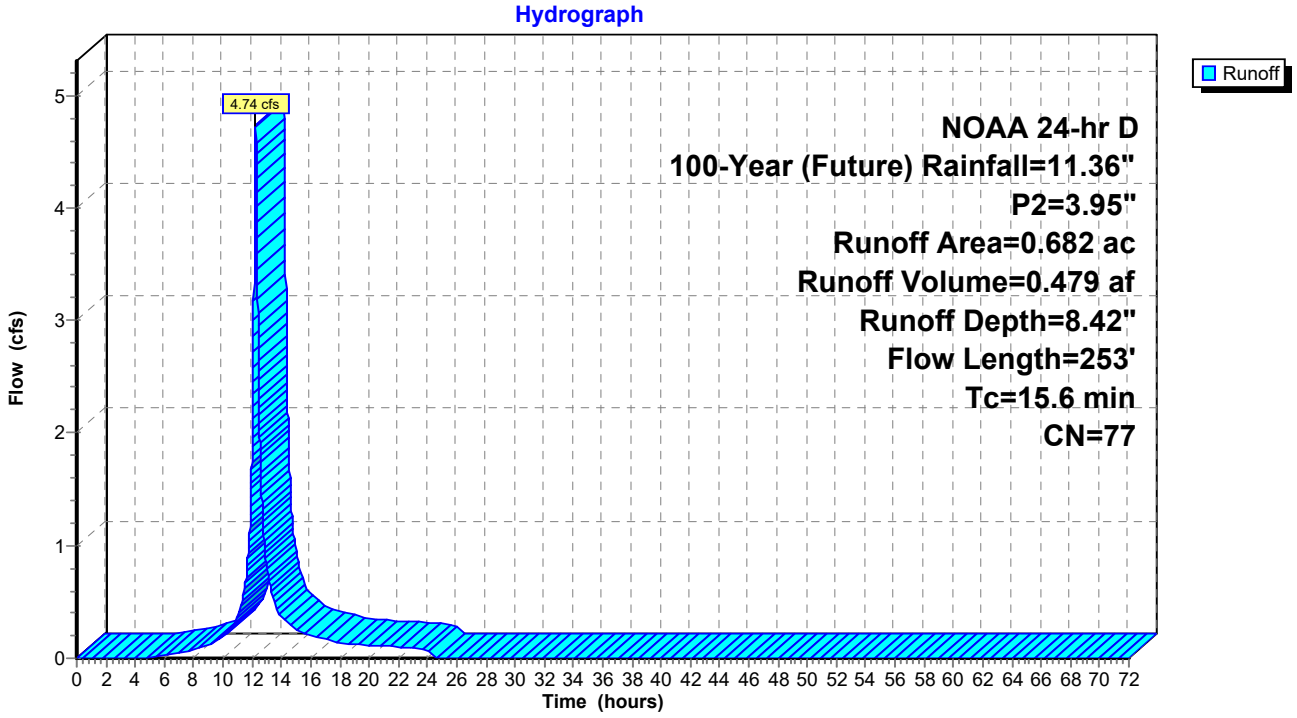
Runoff = 4.74 cfs @ 12.23 hrs, Volume= 0.479 af, Depth= 8.42"
Routed to Link EPOA2 : EPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.682	77	Woods, Good, HSG D
0.682	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	35	0.0200	0.07		**Sheet Flow, E-F** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
7.3	218	0.0100	0.50		**Shallow Concentrated Flow, F-G** Woodland Kv= 5.0 fps
15.6	253	Total			

Subcatchment E2A: EDA-2



Summary for Subcatchment E4A: EDA-4

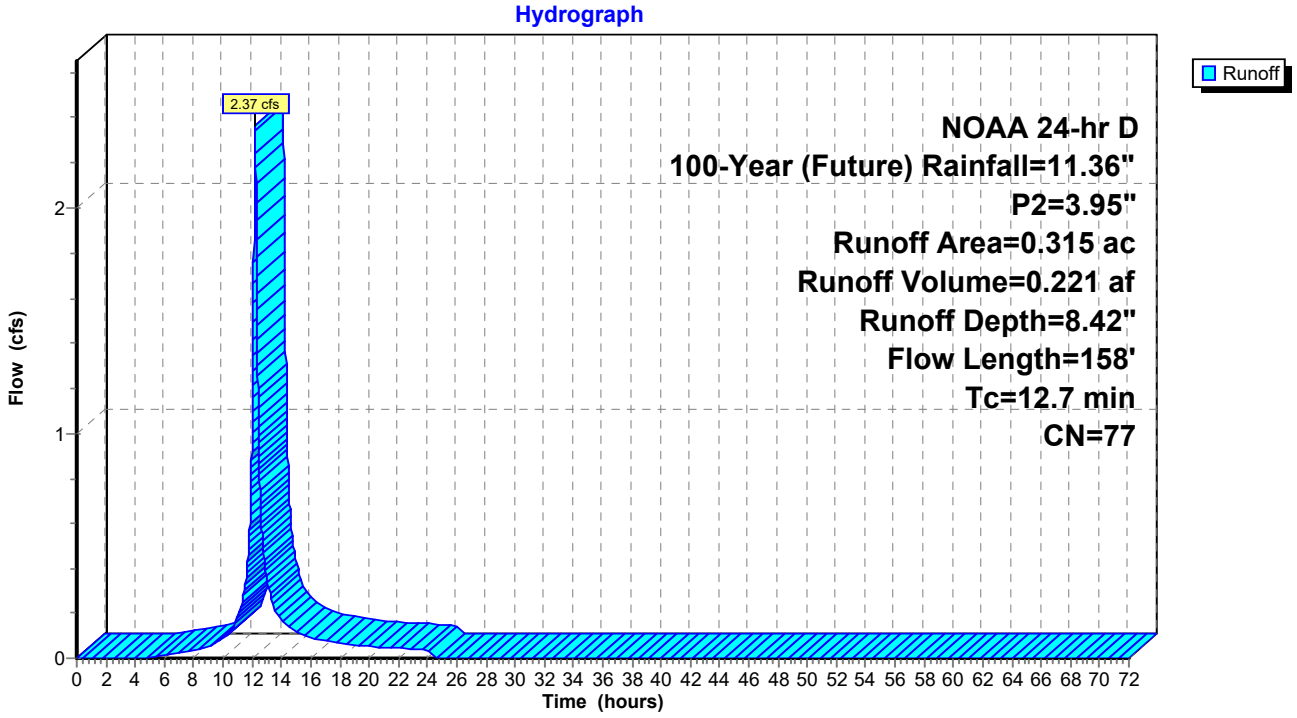
Runoff = 2.37 cfs @ 12.20 hrs, Volume= 0.221 af, Depth= 8.42"
Routed to Link EPOA4 : EPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.315	77	Woods, Good, HSG D
0.315	77	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	31	0.0150	0.06		**Sheet Flow, Q-R** Woods: Light underbrush n= 0.400 P2= 3.95" Using McCuen-Spiess flow length
4.2	127	0.0100	0.50		**Shallow Concentrated Flow, R-S** Woodland Kv= 5.0 fps
12.7	158	Total			

Subcatchment E4A: EDA-4



Summary for Subcatchment P1A I: PDA-1 Impervious

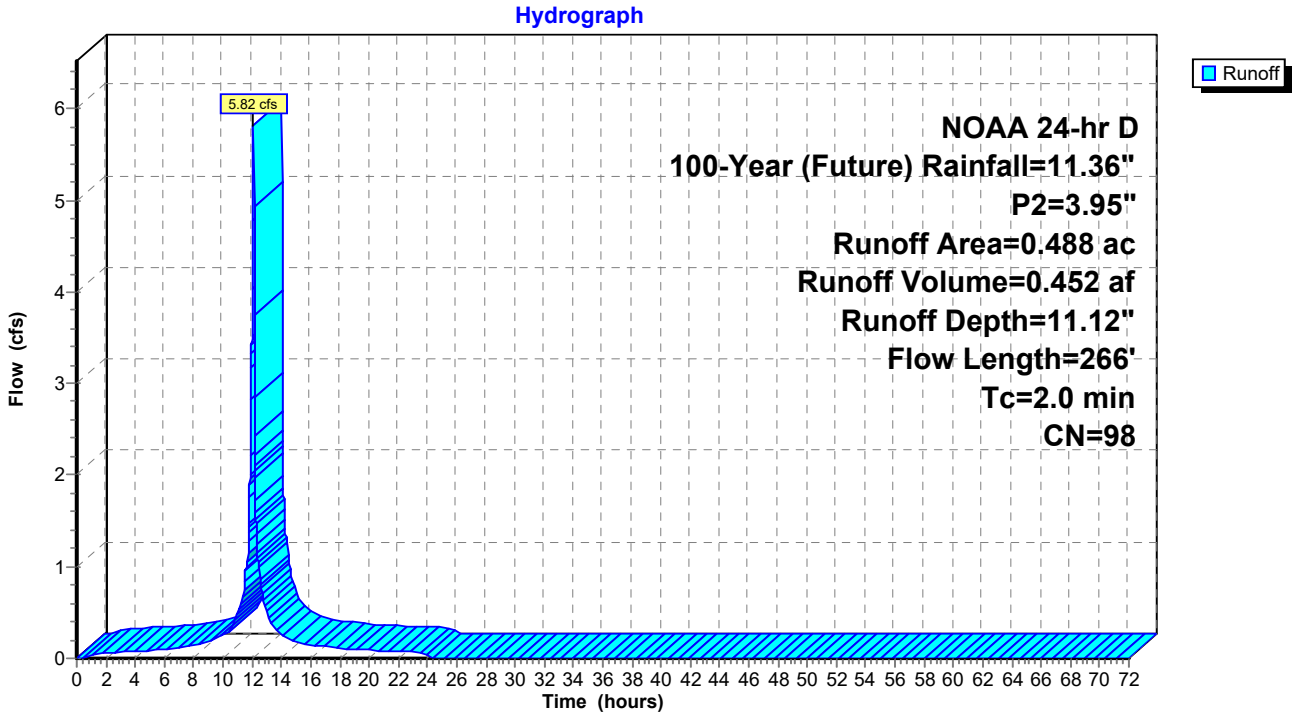
Runoff = 5.82 cfs @ 12.10 hrs, Volume= 0.452 af, Depth=11.12"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.488	98	Paved parking, HSG D
0.488	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0100	1.16		**Sheet Flow, A-B** Smooth surfaces n= 0.011 P2= 3.95"
0.4	80	0.0230	3.08		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
0.0	3	0.0030	3.75	4.60	**Pipe Channel, C-D** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.2	66	0.0051	4.89	6.00	**Pipe Channel, D-E** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
0.0	17	0.0127	10.55	33.14	**Pipe Channel, E-F** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.010 PVC, smooth interior
2.0	266	Total			

Subcatchment P1A I: PDA-1 Impervious



Summary for Subcatchment P1A P: PDA-1 Pervious

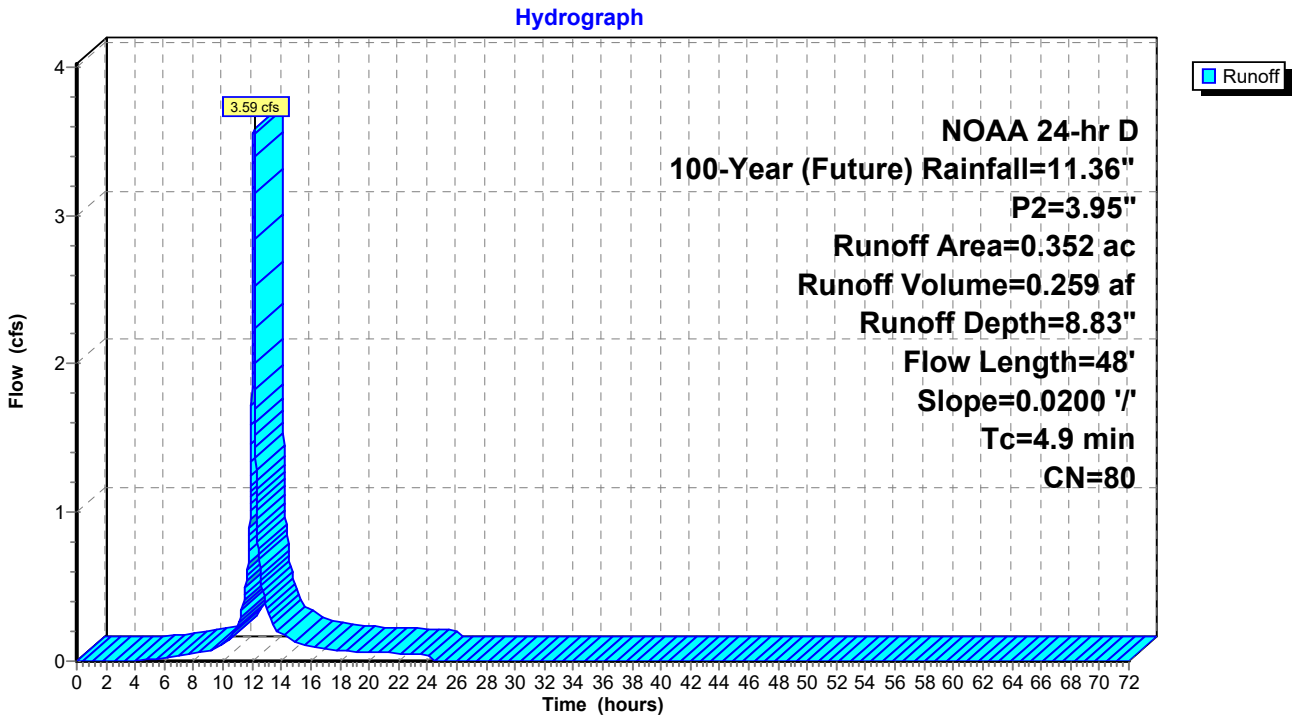
Runoff = 3.59 cfs @ 12.12 hrs, Volume= 0.259 af, Depth= 8.83"
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.352	80	>75% Grass cover, Good, HSG D
0.352	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	48	0.0200	0.16		**Sheet Flow, G-H** Grass: Short n= 0.150 P2= 3.95"

Subcatchment P1A P: PDA-1 Pervious



Summary for Subcatchment P1B1: PDA-1 Bypass #1

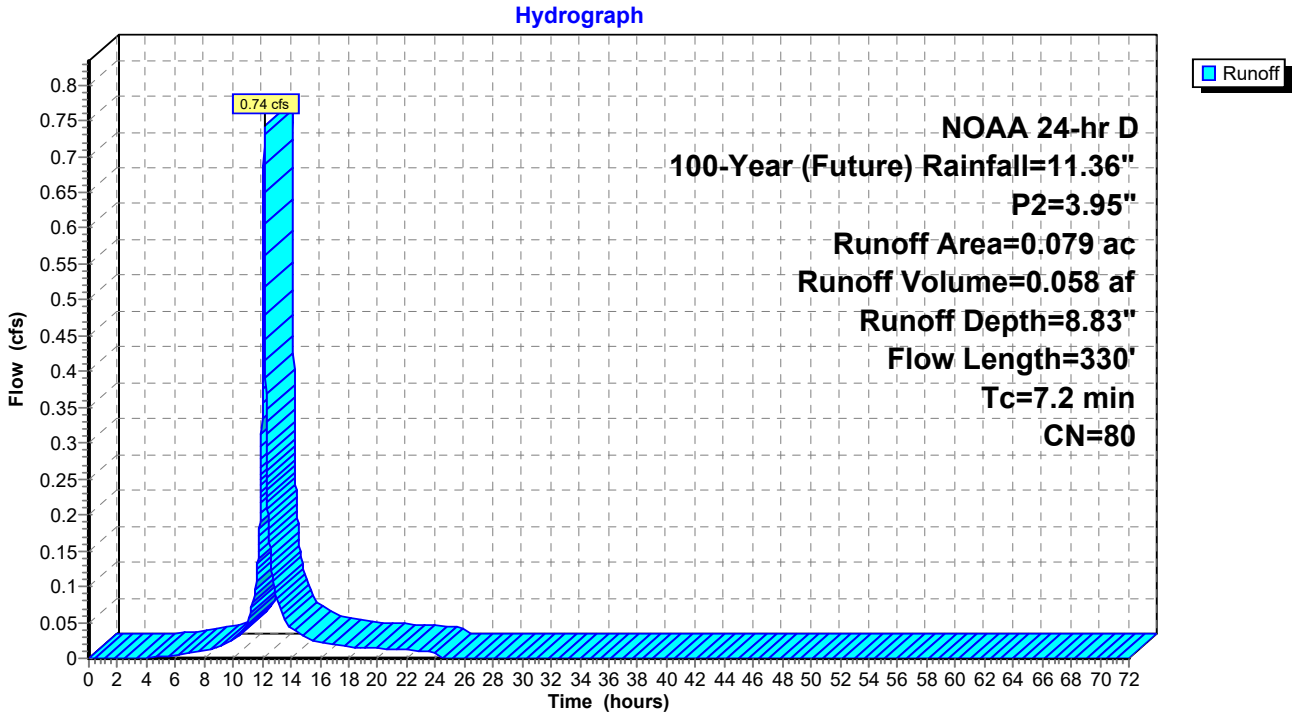
Runoff = 0.74 cfs @ 12.14 hrs, Volume= 0.058 af, Depth= 8.83"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.079	80	>75% Grass cover, Good, HSG D
0.079	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	33	0.0500	0.22		**Sheet Flow, I-J** Grass: Short n= 0.150 P2= 3.95"
0.2	45	0.0013	3.07	9.64	**Pipe Channel, J-K** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
1.2	60	0.0001	0.85	2.67	**Pipe Channel, K-L** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
2.1	105	0.0001	0.85	2.67	**Pipe Channel, L-M** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.9	63	0.0002	1.20	3.78	**Pipe Channel, M-N** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
0.3	24	0.0002	1.20	3.78	**Pipe Channel, N-O** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
7.2	330	Total			

Subcatchment P1B1: PDA-1 Bypass #1



Summary for Subcatchment P1B2: PDA-1 Bypass #2

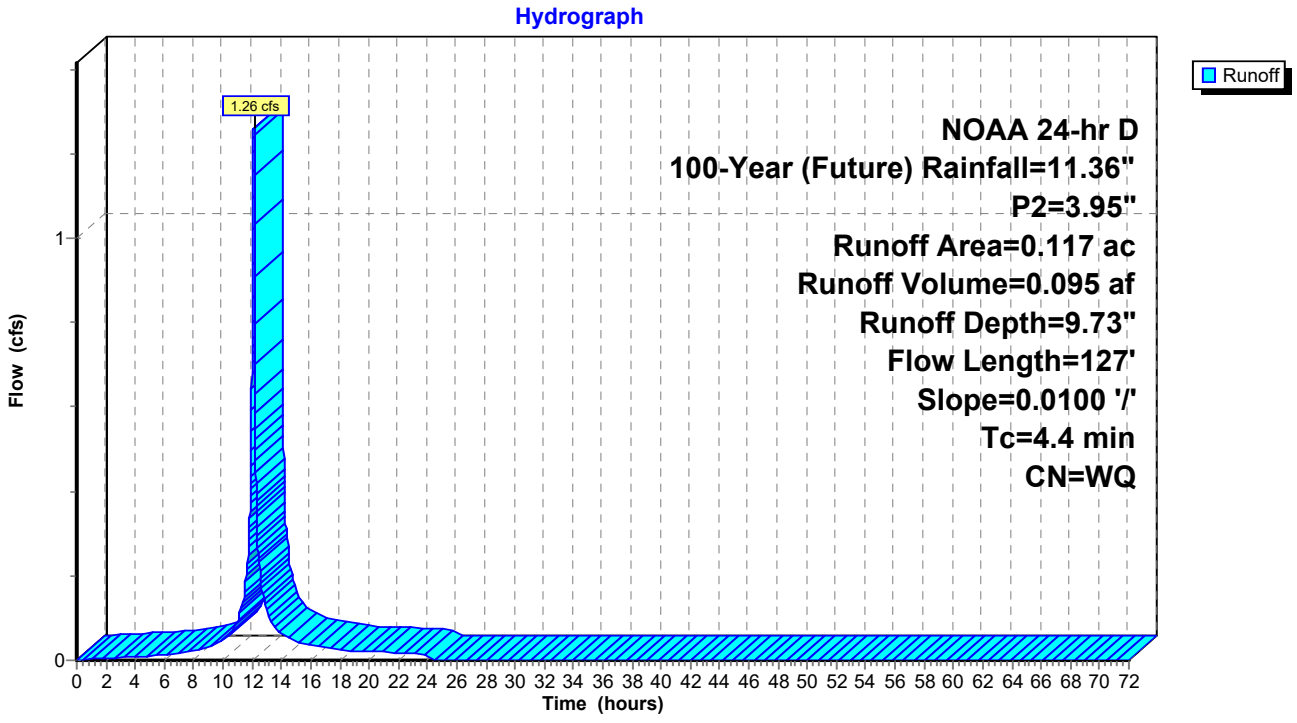
Runoff = 1.26 cfs @ 12.12 hrs, Volume= 0.095 af, Depth= 9.73"
Routed to Link BP : Total Bypass

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.071	80	>75% Grass cover, Good, HSG D
0.046	98	Paved parking, HSG D
0.117		Weighted Average
0.071	80	60.68% Pervious Area
0.046	98	39.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	22	0.0100	0.11		**Sheet Flow, P-Q** Grass: Short n= 0.150 P2= 3.95"
0.9	105	0.0100	2.03		**Shallow Concentrated Flow, Q-O** Paved Kv= 20.3 fps
4.4	127	Total			

Subcatchment P1B2: PDA-1 Bypass #2



Summary for Subcatchment P1C I: P-Off-Site #1C Impervious

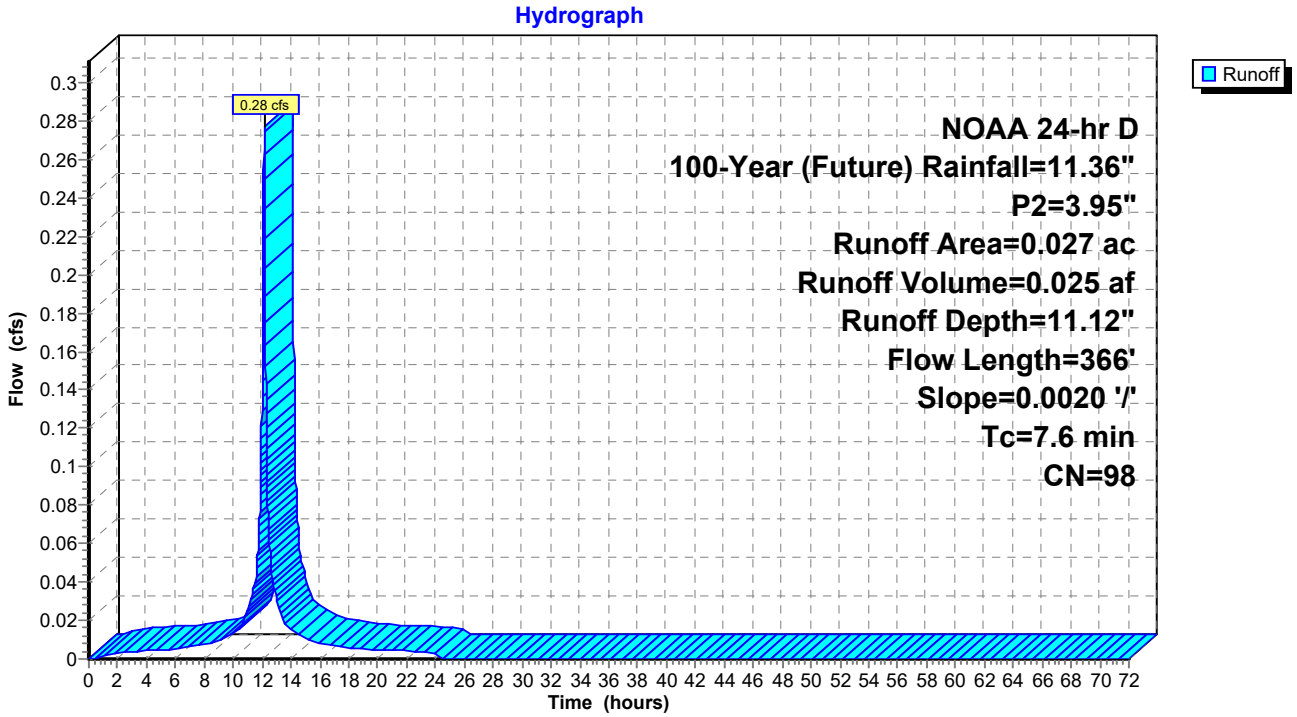
Runoff = 0.28 cfs @ 12.14 hrs, Volume= 0.025 af, Depth=11.12"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.027	98	Paved parking, HSG D
0.027	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	100	0.0020	0.61		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.95"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.6	366	Total			

Subcatchment P1C I: P-Off-Site #1C Impervious



Summary for Subcatchment P1C P: P-Off-Site #1C Pervious

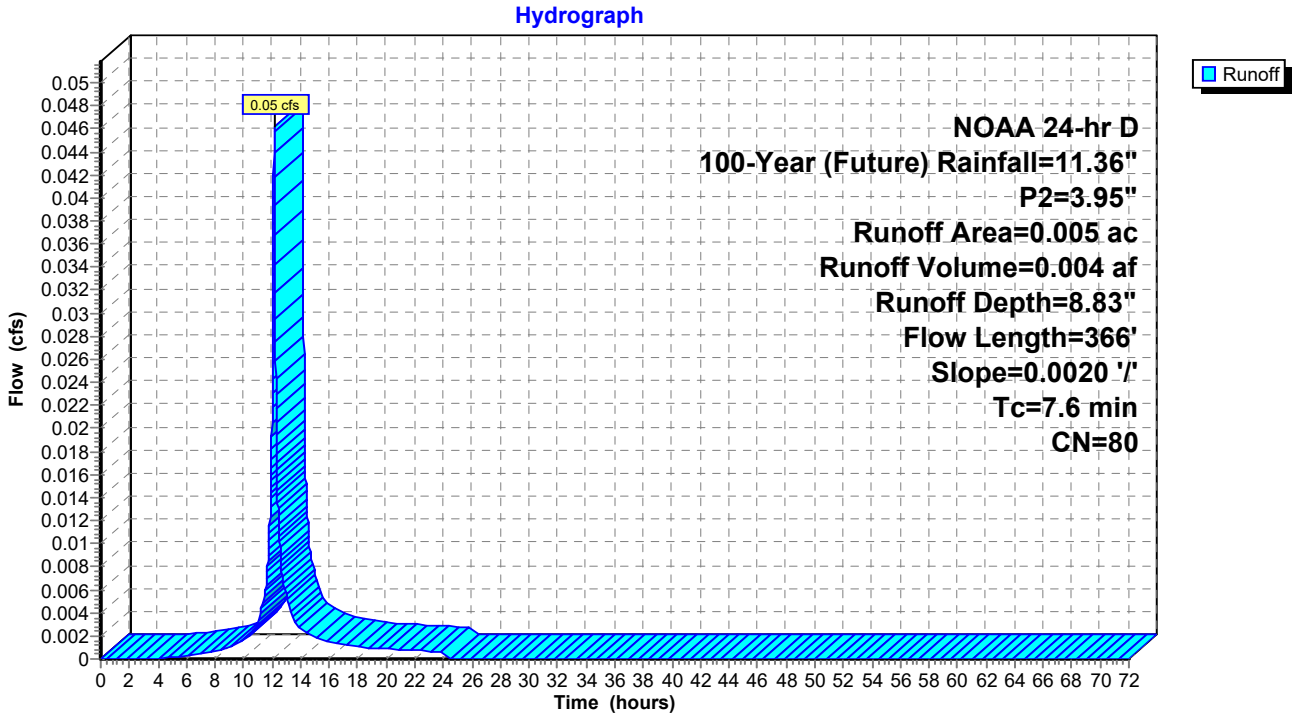
Runoff = 0.05 cfs @ 12.15 hrs, Volume= 0.004 af, Depth= 8.83"
Routed to Link PPOA1 : PPOA-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.005	80	>75% Grass cover, Good, HSG D
0.005	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	100	0.0020	0.61		**Sheet Flow, AG-AH** Smooth surfaces n= 0.011 P2= 3.95"
4.9	266	0.0020	0.91		**Shallow Concentrated Flow, AH-AI** Paved Kv= 20.3 fps
7.6	366	Total			

Subcatchment P1C P: P-Off-Site #1C Pervious



Summary for Subcatchment P2A I: PDA-2 Impervious

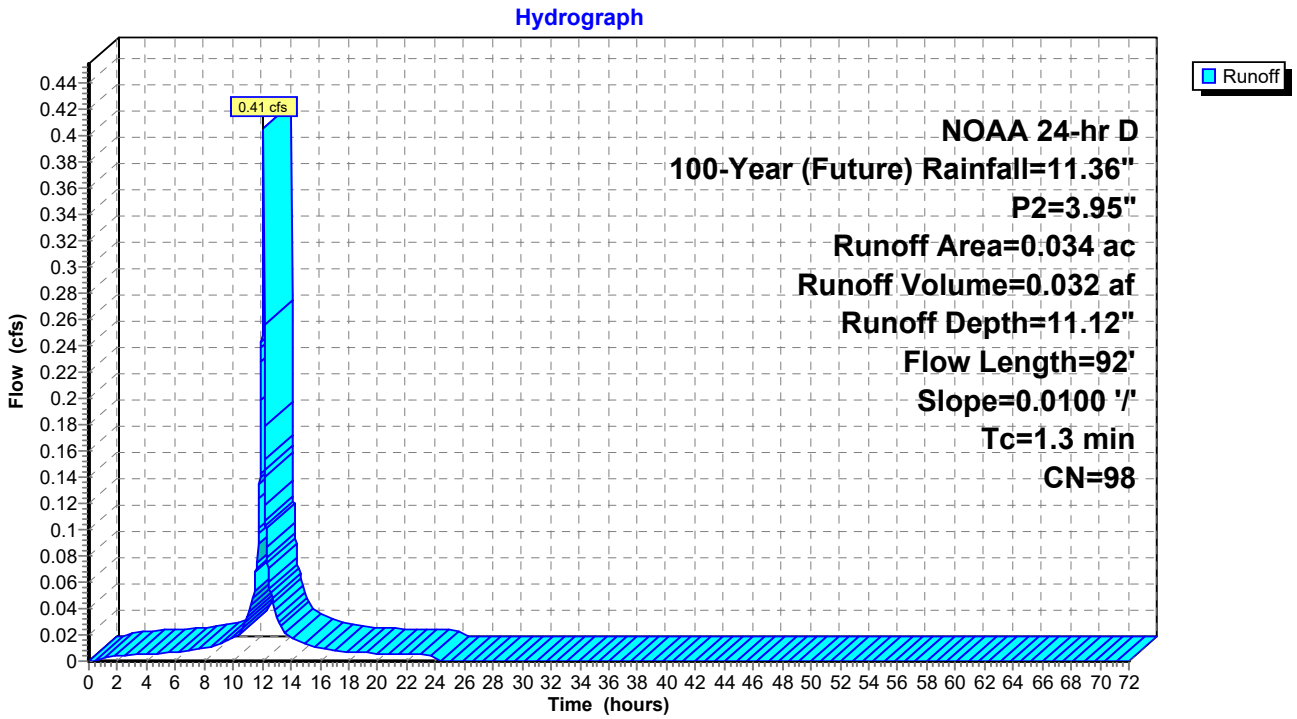
Runoff = 0.41 cfs @ 12.09 hrs, Volume= 0.032 af, Depth=11.12"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.034	98	Paved parking, HSG D
0.034	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	92	0.0100	1.14		**Sheet Flow, R-S** Smooth surfaces n= 0.011 P2= 3.95"

Subcatchment P2A I: PDA-2 Impervious



Summary for Subcatchment P2A P: PDA-2 Pervious

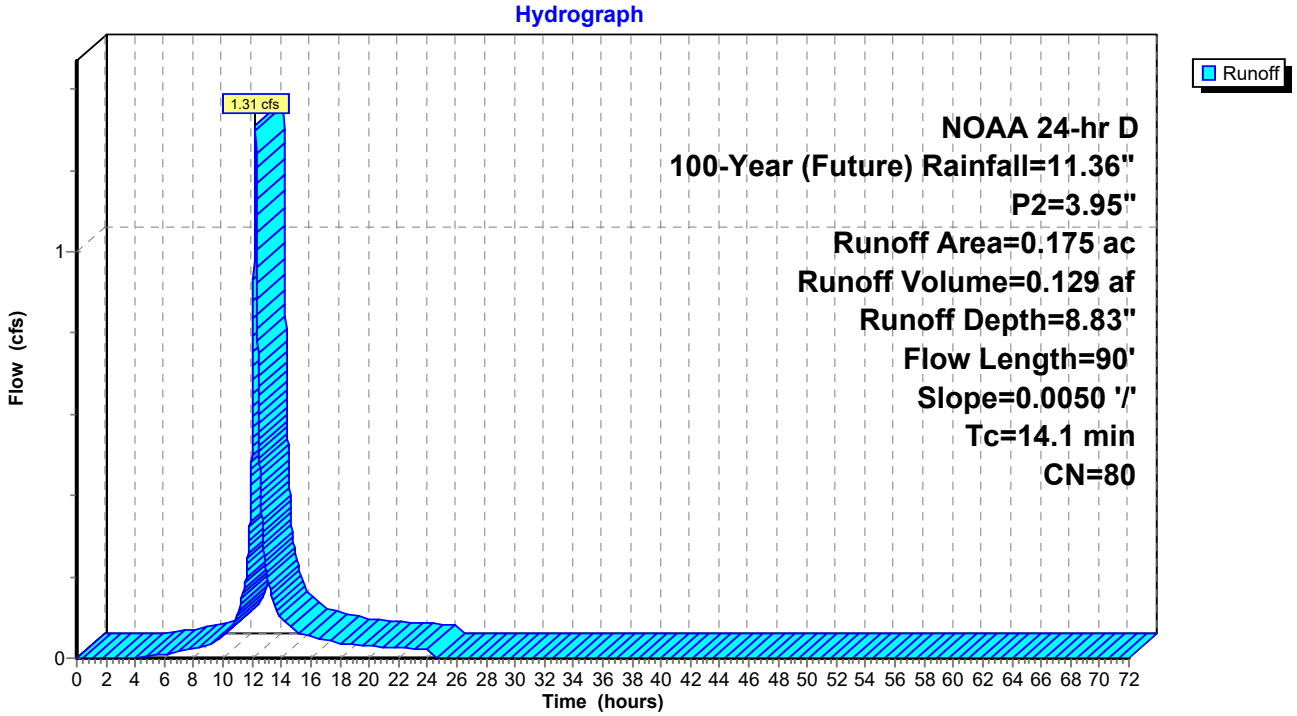
Runoff = 1.31 cfs @ 12.21 hrs, Volume= 0.129 af, Depth= 8.83"
Routed to Link PPOA2 : PPOA-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.175	80	>75% Grass cover, Good, HSG D
0.175	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.1	90	0.0050	0.11		**Sheet Flow, T-U** Grass: Short n= 0.150 P2= 3.95"

Subcatchment P2A P: PDA-2 Pervious



Summary for Subcatchment P4A: PDA-4

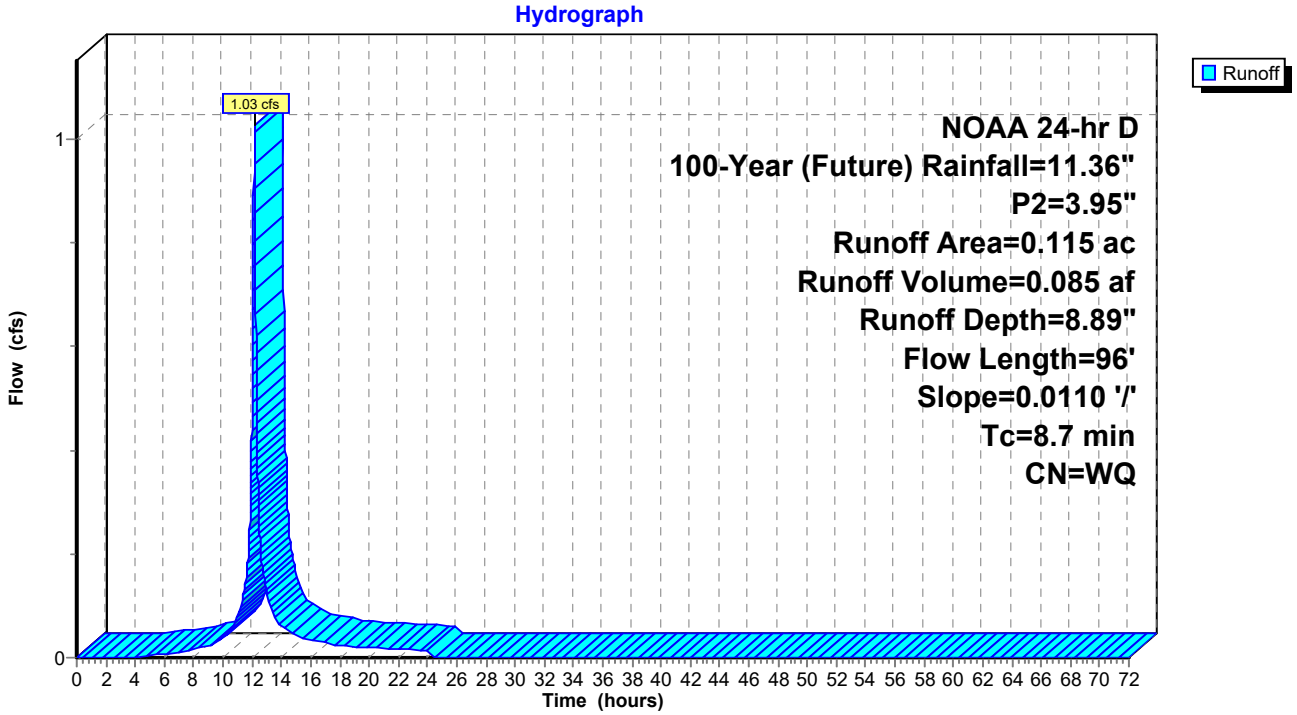
Runoff = 1.03 cfs @ 12.16 hrs, Volume= 0.085 af, Depth= 8.89"
Routed to Link PPOA4 : PPOA-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.112	80	>75% Grass cover, Good, HSG D
0.003	98	Paved parking, HSG D
0.115		Weighted Average
0.112	80	97.39% Pervious Area
0.003	98	2.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	70	0.0110	0.14		**Sheet Flow, V-X** Grass: Short n= 0.150 P2= 3.95" Using McCuen-Spiess flow length
0.3	26	0.0110	1.57		**Shallow Concentrated Flow, X-Y** Grassed Waterway Kv= 15.0 fps
8.7	96	Total			

Subcatchment P4A: PDA-4



Summary for Subcatchment PC1A: PC AREA #1

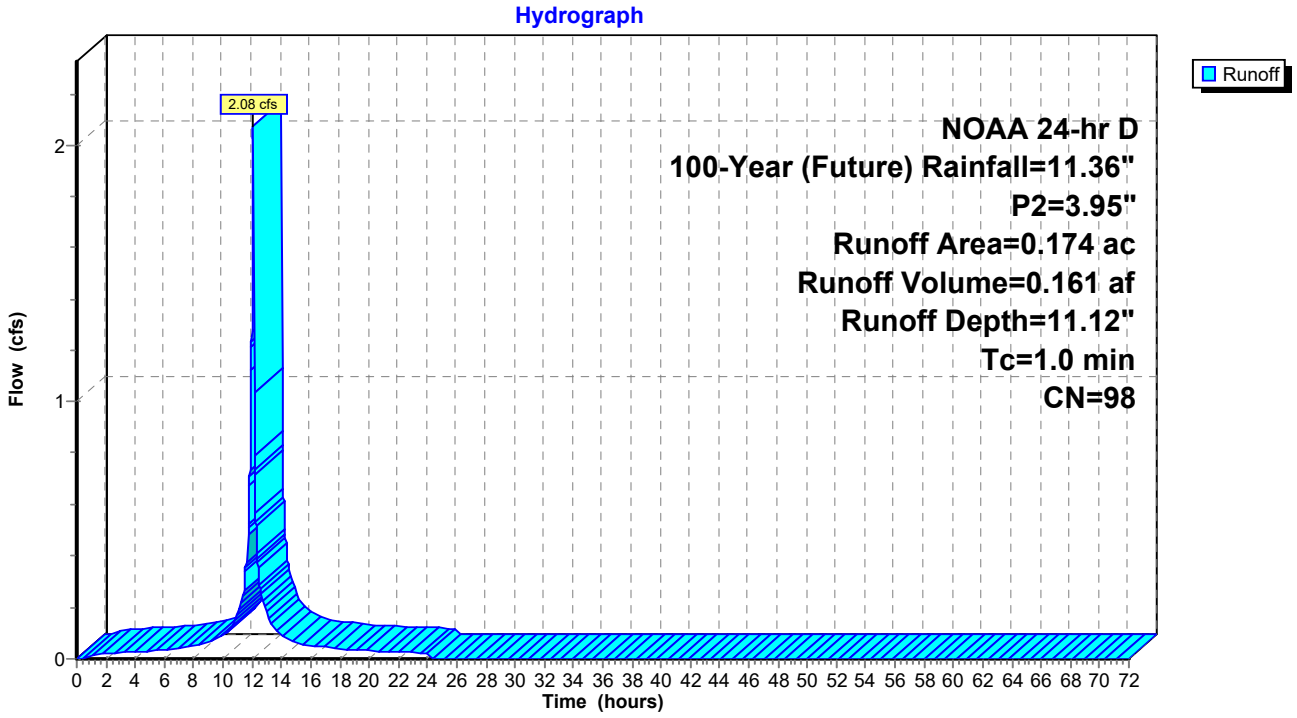
Runoff = 2.08 cfs @ 12.09 hrs, Volume= 0.161 af, Depth=11.12"
Routed to Pond PC1 : PC 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.174	98	Paved parking, HSG D
0.174	98	100.00% Impervious Area

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

Subcatchment PC1A: PC AREA #1



Summary for Subcatchment PP1A: PPVMT AREA 1

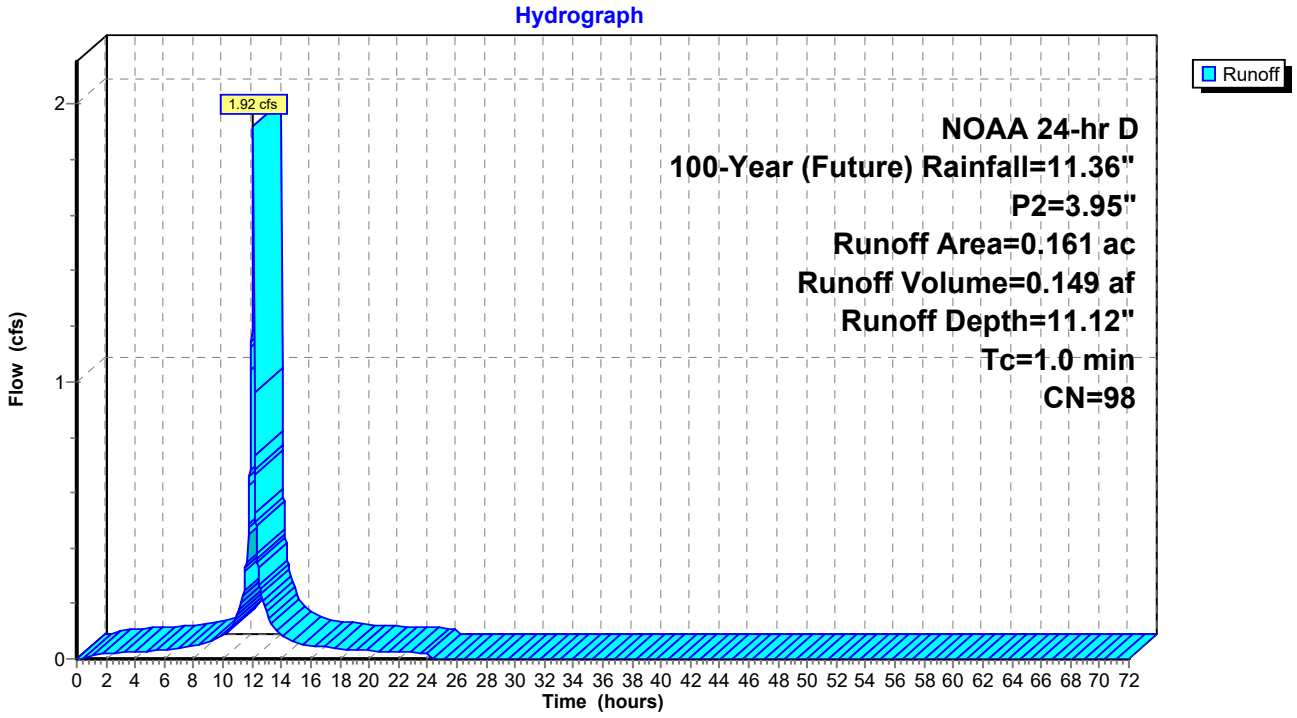
Runoff = 1.92 cfs @ 12.09 hrs, Volume= 0.149 af, Depth=11.12"
Routed to Pond PP1 : PPVMT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.161	98	Paved parking, HSG D
0.161	98	100.00% Impervious Area

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

Subcatchment PP1A: PPVMT AREA 1



Summary for Subcatchment PP2A: PPVMT AREA #2

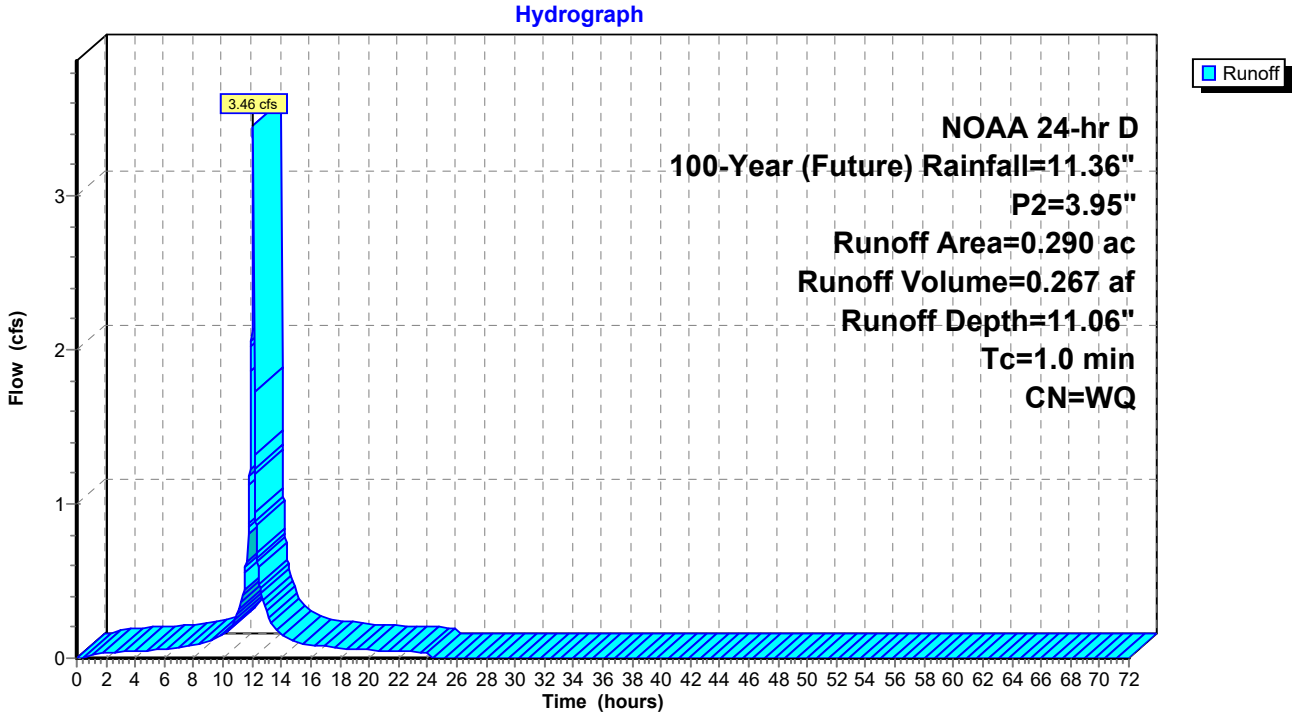
Runoff = 3.46 cfs @ 12.09 hrs, Volume= 0.267 af, Depth=11.06"
Routed to Pond PP2 : PPVMT 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.007	80	>75% Grass cover, Good, HSG D
0.283	98	Paved parking, HSG D
0.290		Weighted Average
0.007	80	2.41% Pervious Area
0.283	98	97.59% Impervious Area

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

Subcatchment PP2A: PPVMT AREA #2



Summary for Subcatchment PP3A: PPVMT AREA #3

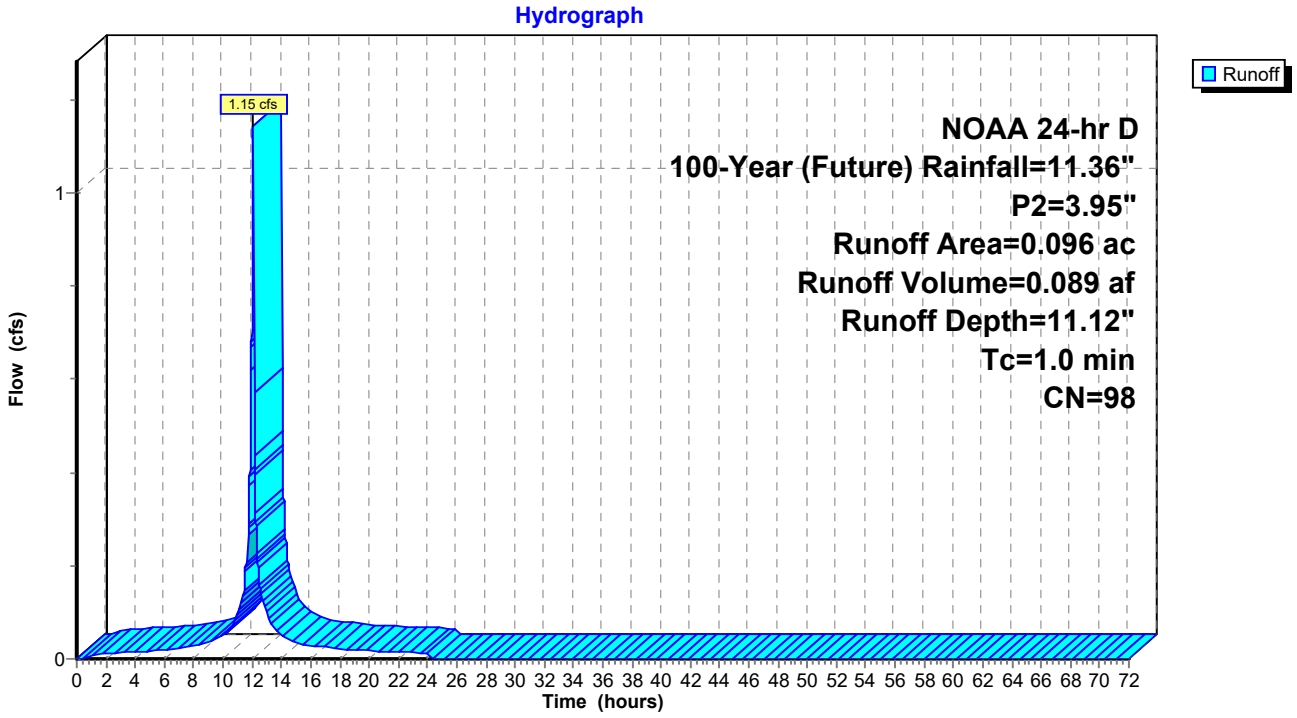
Runoff = 1.15 cfs @ 12.09 hrs, Volume= 0.089 af, Depth=11.12"
Routed to Pond PP3 : PPVMT 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.096	98	Paved parking, HSG D
0.096	98	100.00% Impervious Area

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

Subcatchment PP3A: PPVMT AREA #3



Summary for Subcatchment PP4A: PPVMT AREA #4

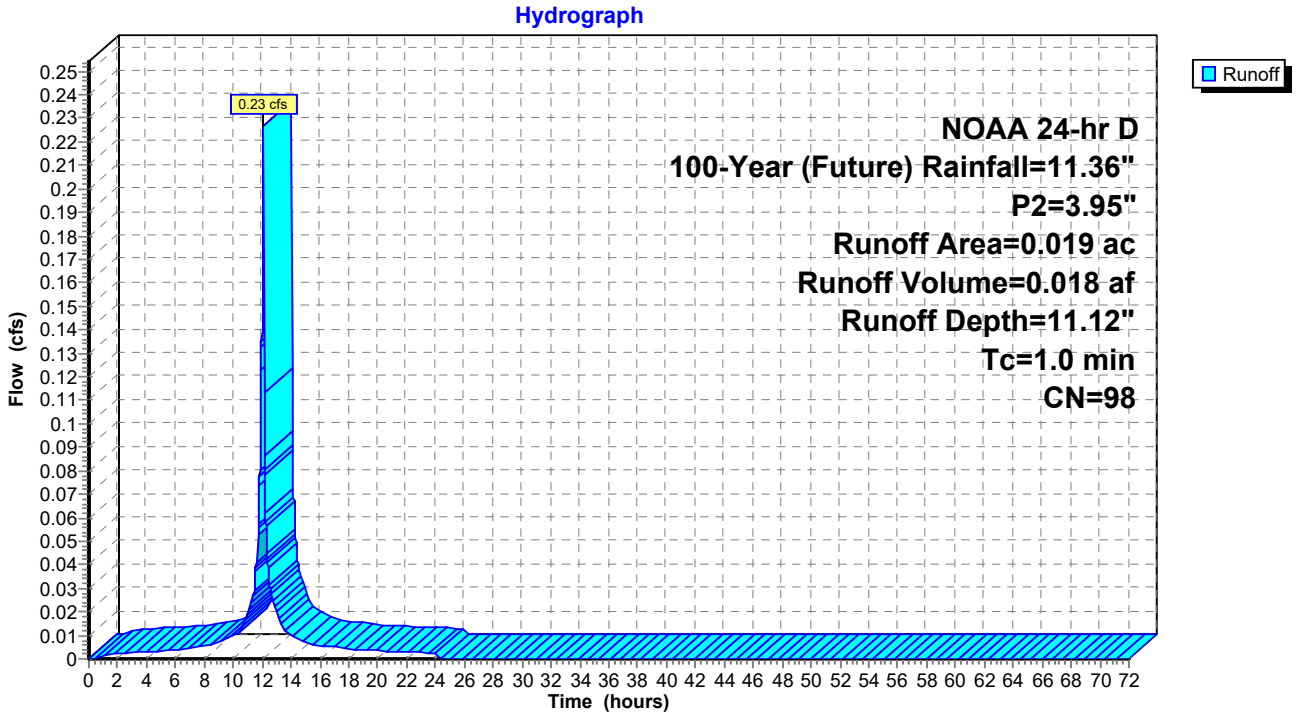
Runoff = 0.23 cfs @ 12.09 hrs, Volume= 0.018 af, Depth=11.12"
Routed to Pond PP4 : PPVMT 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.019	98	Paved parking, HSG D
0.019	98	100.00% Impervious Area

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

Subcatchment PP4A: PPVMT AREA #4



Summary for Subcatchment PP5A: PPVMT AREA #5

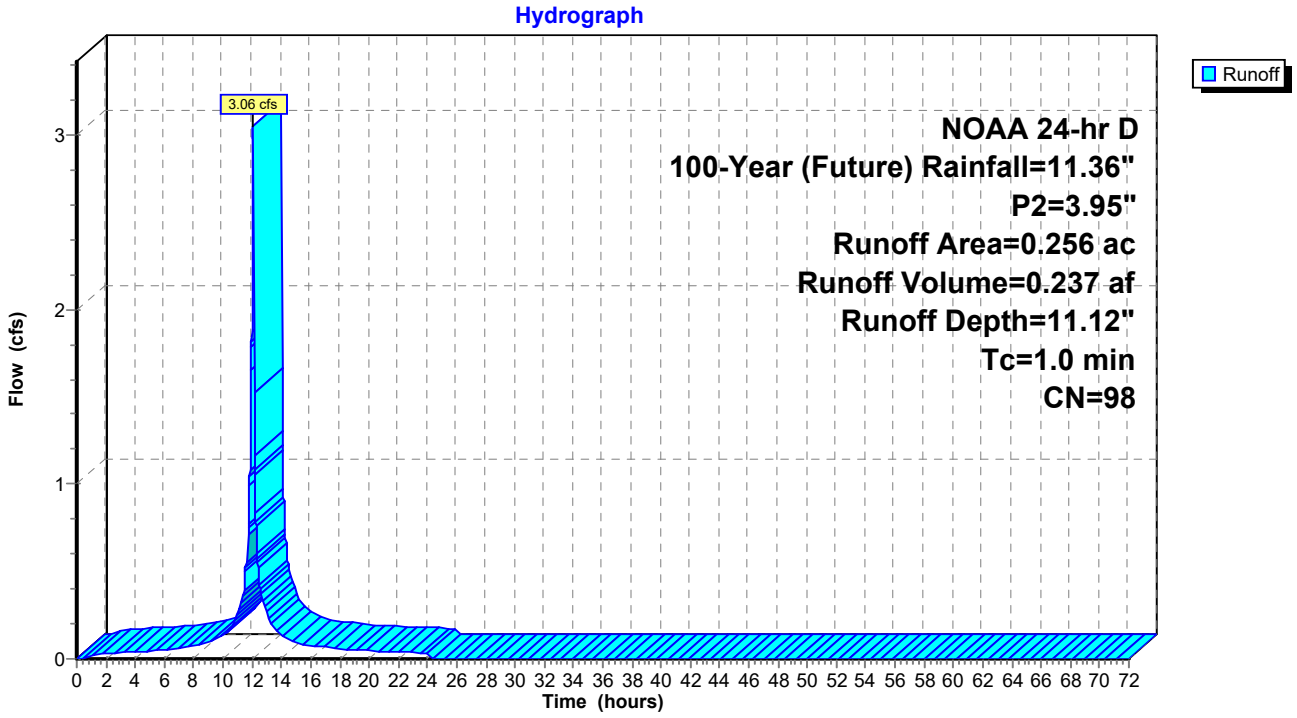
Runoff = 3.06 cfs @ 12.09 hrs, Volume= 0.237 af, Depth=11.12"
Routed to Pond PP5 : PPVMT 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-Year (Future) Rainfall=11.36", P2=3.95"

Area (ac)	CN	Description
0.256	98	Paved parking, HSG D
0.256	98	100.00% Impervious Area

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

Subcatchment PP5A: PPVMT AREA #5



Summary for Pond CW: Constructed Wetlands (walls with ledge)

Inflow Area = 1.836 ac, 80.45% Impervious, Inflow Depth = 10.40" for 100-Year (Future) event
Inflow = 18.54 cfs @ 12.10 hrs, Volume= 1.591 af
Outflow = 4.46 cfs @ 12.47 hrs, Volume= 1.559 af, Atten= 76%, Lag= 22.2 min
Primary = 4.46 cfs @ 12.47 hrs, Volume= 1.559 af
Routed to Link PPOA1 : PPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 107.99' @ 12.47 hrs Surf.Area= 8,348 sf Storage= 30,757 cf

Plug-Flow detention time= 361.1 min calculated for 1.559 af (98% of inflow)
Center-of-Mass det. time= 346.3 min (1,117.8 - 771.5)

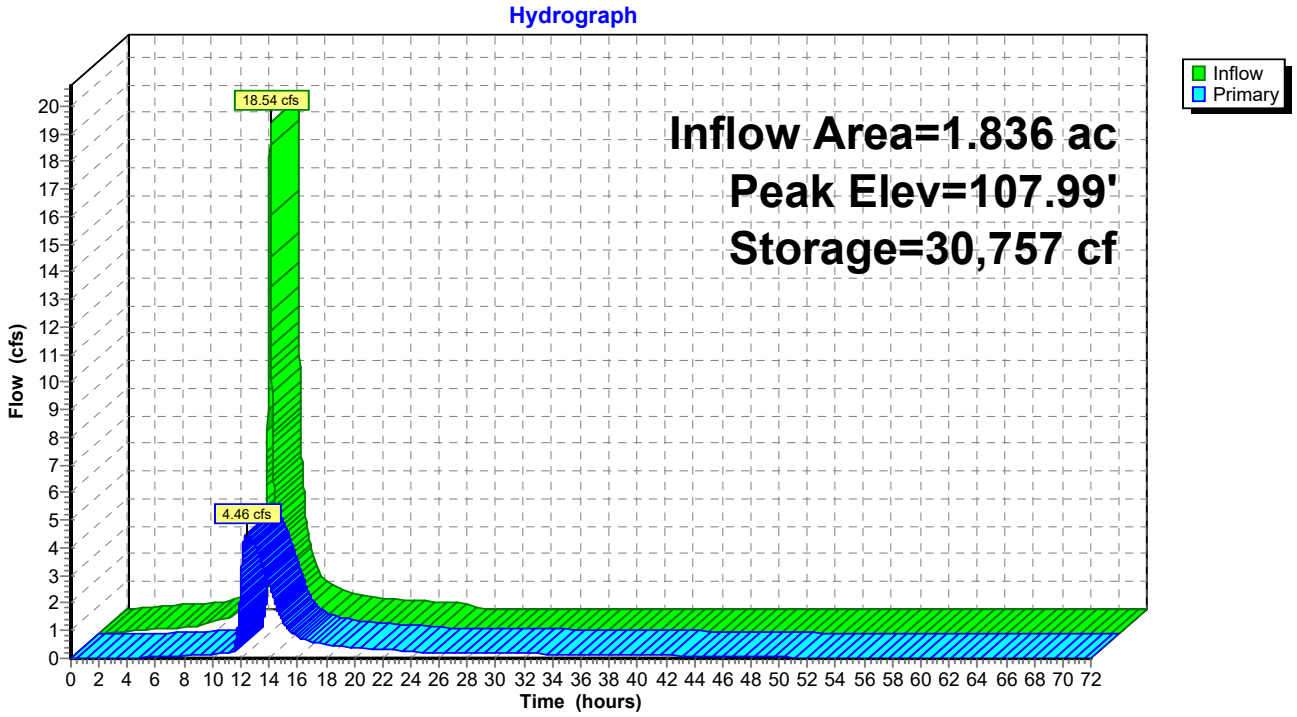
Volume	Invert	Avail.Storage	Storage Description
#1	104.00'	45,333 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
104.00	5,936	0	0
105.00	6,640	6,288	6,288
105.01	8,059	73	6,361
106.00	8,149	8,023	14,384
107.00	8,249	8,199	22,583
108.00	8,349	8,299	30,882
109.00	8,449	8,399	39,281
109.70	8,840	6,051	45,333

Device	Routing	Invert	Outlet Devices
#1	Primary	104.00'	**15.0" Round Culvert** L= 300.0' Ke= 0.500 Inlet / Outlet Invert= 104.00' / 103.10' S= 0.0030 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	104.20'	**2.5" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	105.92'	**12.2" W x 7.7" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	108.00'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.46 cfs @ 12.47 hrs HW=107.98' (Free Discharge)
└**1=Culvert** (Passes 4.46 cfs of 6.87 cfs potential flow)
  ├**2=Orifice** (Orifice Controls 0.31 cfs @ 9.24 fps)
  ├**3=Orifice/Grate** (Orifice Controls 4.14 cfs @ 6.35 fps)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond CW: Constructed Wetlands (walls with ledge)



Summary for Pond E1B D: E-Depression

Inflow Area = 0.292 ac, 0.00% Impervious, Inflow Depth = 8.42" for 100-Year (Future) event
Inflow = 2.37 cfs @ 12.17 hrs, Volume= 0.205 af
Outflow = 2.29 cfs @ 12.20 hrs, Volume= 0.198 af, Atten= 4%, Lag= 1.5 min
Primary = 2.29 cfs @ 12.20 hrs, Volume= 0.198 af
Routed to Link EPOA1 : EPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.34' @ 12.20 hrs Surf.Area= 2,733 sf Storage= 610 cf

Plug-Flow detention time= 37.6 min calculated for 0.198 af (97% of inflow)
Center-of-Mass det. time= 16.9 min (823.7 - 806.8)

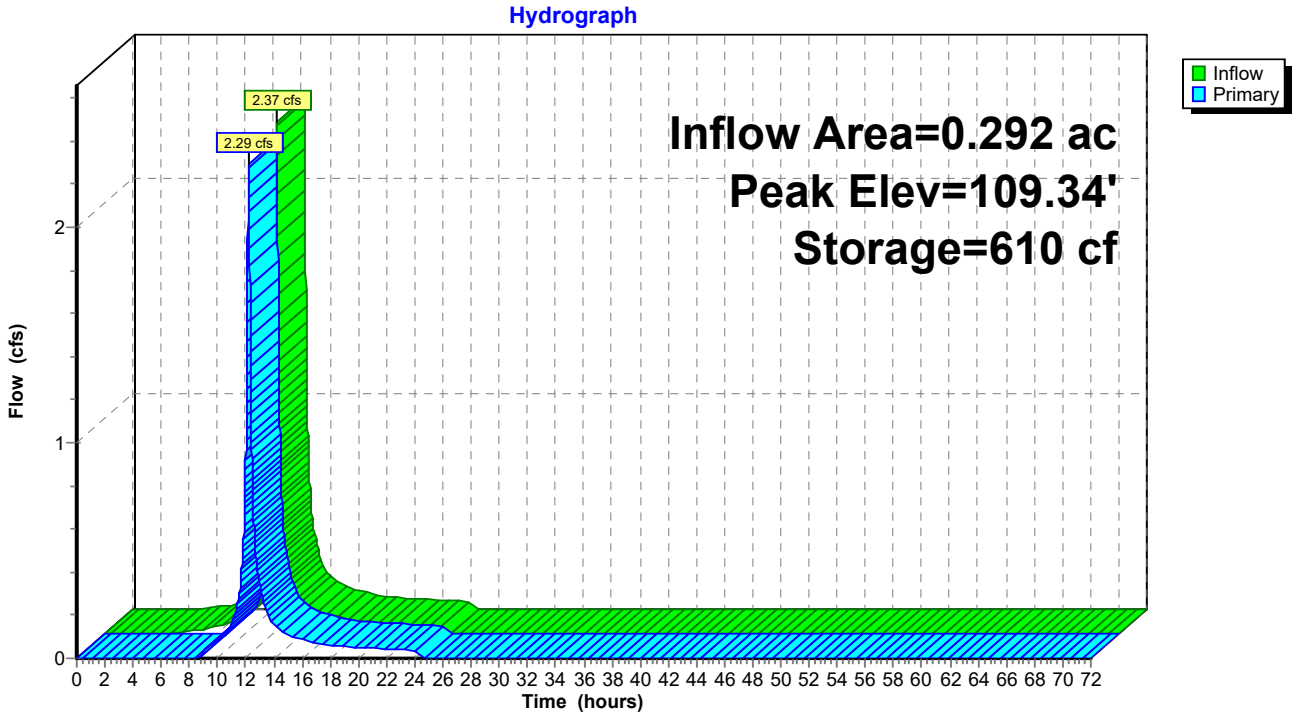
Volume	Invert	Avail.Storage	Storage Description
#1	108.80'	998 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.80	11	0	0
109.00	540	55	55
109.34	2,737	557	612
109.45	4,282	386	998

Device	Routing	Invert	Outlet Devices
#1	Primary	109.21'	**21.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=2.29 cfs @ 12.20 hrs HW=109.34' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 2.29 cfs @ 0.84 fps)

Pond E1B D: E-Depression



Summary for Pond PC1: PC 1

Inflow Area = 0.174 ac,100.00% Impervious, Inflow Depth = 11.12" for 100-Year (Future) event
Inflow = 2.08 cfs @ 12.09 hrs, Volume= 0.161 af
Outflow = 0.92 cfs @ 12.12 hrs, Volume= 0.148 af, Atten= 56%, Lag= 2.1 min
Primary = 0.92 cfs @ 12.12 hrs, Volume= 0.148 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 111.14' @ 12.12 hrs Surf.Area= 5,616 sf Storage= 2,171 cf

Plug-Flow detention time= 155.0 min calculated for 0.148 af (92% of inflow)
Center-of-Mass det. time= 109.1 min (842.4 - 733.3)

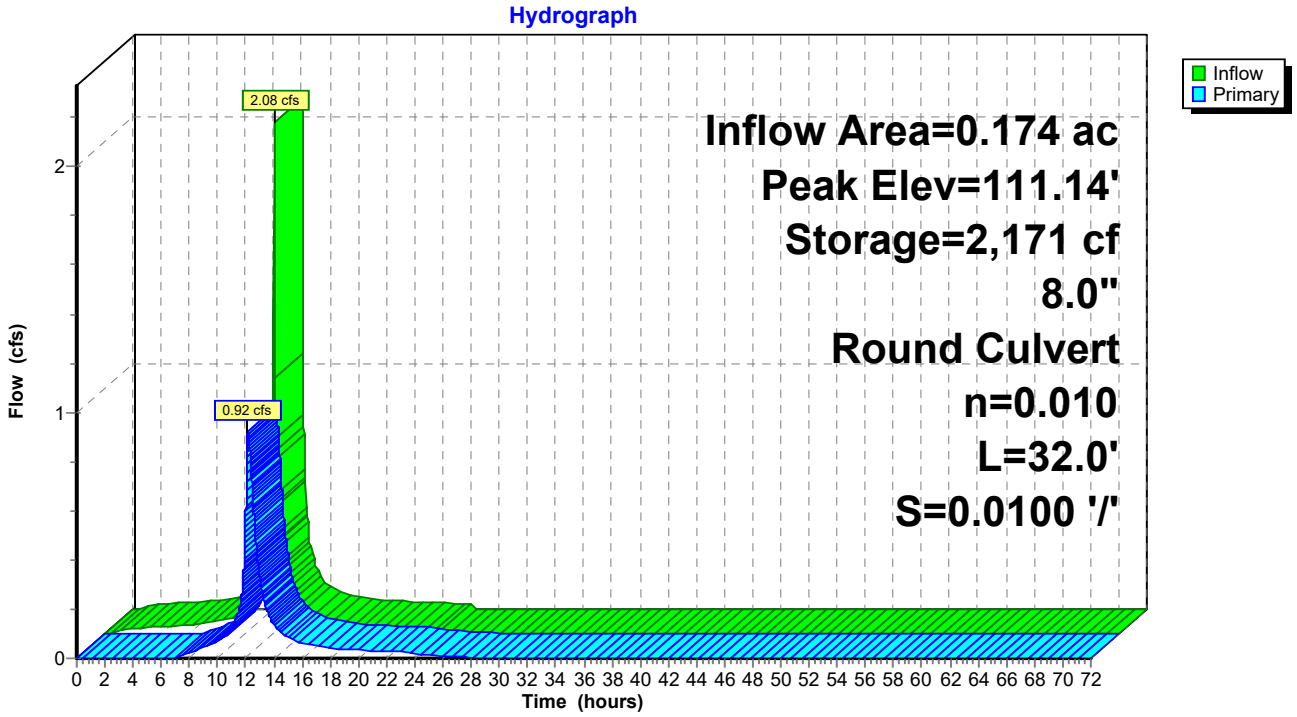
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	6,043 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 15,107 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	5,616	0	0
111.17	5,616	5,616	5,616
112.17	5,616	5,616	11,232
112.86	5,616	3,875	15,107

Device	Routing	Invert	Outlet Devices
#1	Primary	110.42'	**8.0" Round Culvert** L= 32.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.42' / 110.10' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.92 cfs @ 12.12 hrs HW=111.14' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.92 cfs @ 2.63 fps)

Pond PC1: PC 1


Hydrograph
Inflow
Primary
2.08 cfs
0.92 cfs
Inflow Area=0.174 ac
Peak Elev=111.14'
Storage=2,171 cf
8.0"
Round Culvert
n=0.010
L=32.0'
S=0.0100 '/'
Flow (cfs)
0
1
2
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
Time (hours)

Summary for Pond PP1: PPVMT 1

Inflow Area = 0.161 ac,100.00% Impervious, Inflow Depth = 11.12" for 100-Year (Future) event
Inflow = 1.92 cfs @ 12.09 hrs, Volume= 0.149 af
Outflow = 1.82 cfs @ 12.10 hrs, Volume= 0.149 af, Atten= 5%, Lag= 0.7 min
Primary = 1.82 cfs @ 12.10 hrs, Volume= 0.149 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 110.50' @ 12.10 hrs Surf.Area= 2,680 sf Storage= 354 cf

Plug-Flow detention time= 3.3 min calculated for 0.149 af (100% of inflow)
Center-of-Mass det. time= 3.3 min (736.6 - 733.3)

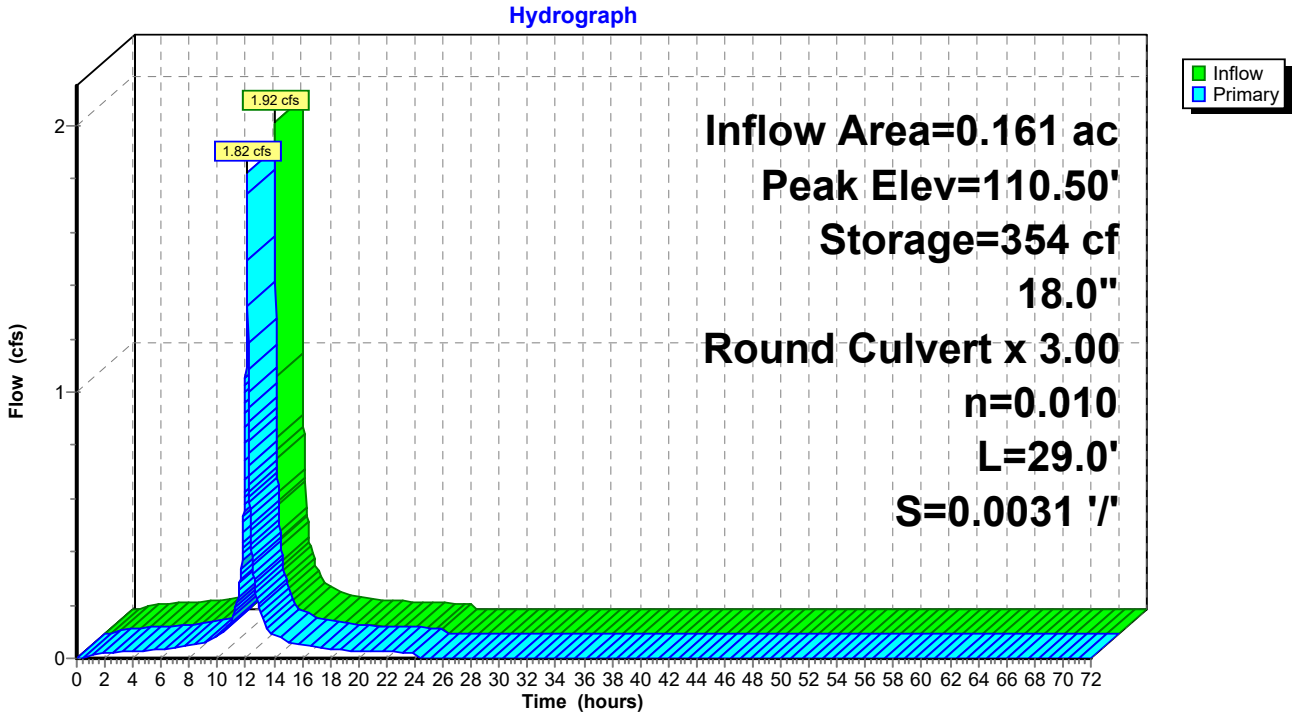
Volume	Invert	Avail.Storage	Storage Description
#1	110.17'	1,940 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 4,851 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
110.17	2,680	0	0
111.17	2,680	2,680	2,680
111.98	2,680	2,171	4,851

Device	Routing	Invert	Outlet Devices
#1	Primary	110.08'	**18.0" Round Culvert X 3.00** L= 29.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 110.08' / 109.99' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.82 cfs @ 12.10 hrs HW=110.50' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 1.82 cfs @ 2.25 fps)

Pond PP1: PPVMT 1



Summary for Pond PP2: PPVMT 2

Inflow Area = 0.290 ac, 97.59% Impervious, Inflow Depth = 11.06" for 100-Year (Future) event
Inflow = 3.46 cfs @ 12.09 hrs, Volume= 0.267 af
Outflow = 2.67 cfs @ 12.11 hrs, Volume= 0.243 af, Atten= 23%, Lag= 1.3 min
Primary = 2.67 cfs @ 12.11 hrs, Volume= 0.243 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.80' @ 12.11 hrs Surf.Area= 3,642 sf Storage= 2,625 cf

Plug-Flow detention time= 128.8 min calculated for 0.243 af (91% of inflow)
Center-of-Mass det. time= 77.7 min (812.1 - 734.4)

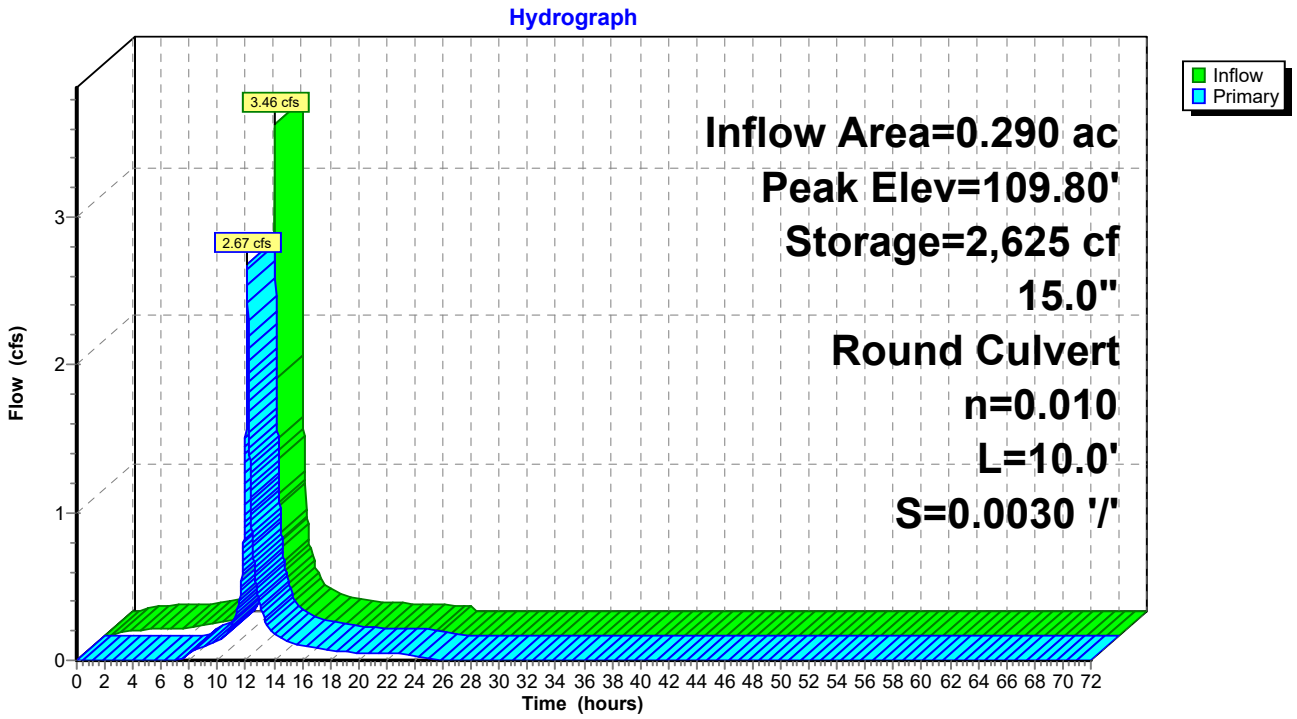
Volume	Invert	Avail.Storage	Storage Description
#1	108.00'	5,434 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 13,585 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	3,642	0	0
109.00	3,642	3,642	3,642
110.00	3,642	3,642	7,284
111.00	3,642	3,642	10,926
111.73	3,642	2,659	13,585

Device	Routing	Invert	Outlet Devices
#1	Primary	108.74'	**15.0" Round Culvert** L= 10.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.74' / 108.71' S= 0.0030 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.67 cfs @ 12.11 hrs HW=109.80' (Free Discharge)
1=Culvert (Barrel Controls 2.67 cfs @ 3.24 fps)

Pond PP2: PPVMT 2



Summary for Pond PP3: PPVMT 3

Inflow Area = 0.096 ac,100.00% Impervious, Inflow Depth = 11.12" for 100-Year (Future) event
Inflow = 1.15 cfs @ 12.09 hrs, Volume= 0.089 af
Outflow = 1.15 cfs @ 12.07 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min
Primary = 1.15 cfs @ 12.07 hrs, Volume= 0.089 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.00' @ 12.07 hrs Surf.Area= 1,332 sf Storage= 1 cf

Plug-Flow detention time= 0.0 min calculated for 0.089 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (733.3 - 733.3)

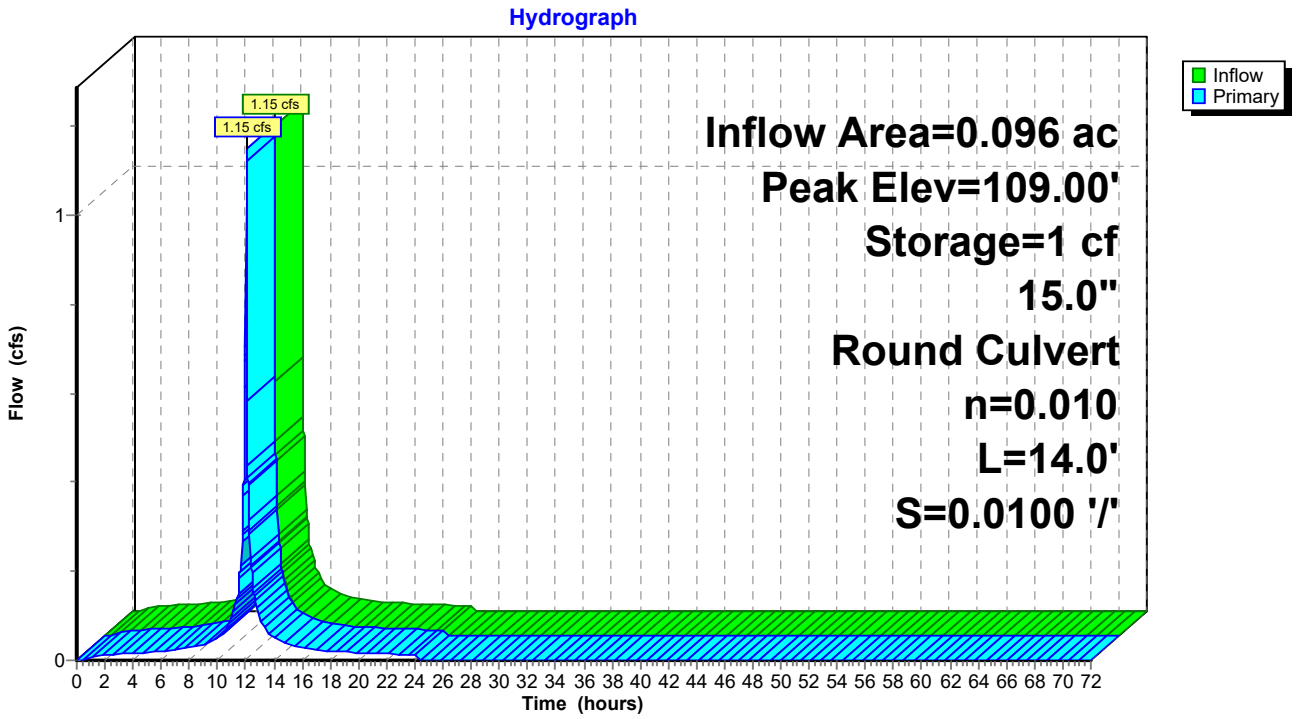
Volume	Invert	Avail.Storage	Storage Description
#1	109.00'	1,108 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 2,771 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
109.00	1,332	0	0
110.00	1,332	1,332	1,332
111.00	1,332	1,332	2,664
111.08	1,332	107	2,771

Device	Routing	Invert	Outlet Devices
#1	Primary	104.14'	**15.0" Round Culvert** L= 14.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 104.14' / 104.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=10.73 cfs @ 12.07 hrs HW=109.00' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 10.73 cfs @ 8.75 fps)

Pond PP3: PPVMT 3



Summary for Pond PP4: PPVMT 4

Inflow Area = 0.019 ac,100.00% Impervious, Inflow Depth = 11.12" for 100-Year (Future) event
Inflow = 0.23 cfs @ 12.09 hrs, Volume= 0.018 af
Outflow = 0.23 cfs @ 12.10 hrs, Volume= 0.018 af, Atten= 1%, Lag= 0.4 min
Primary = 0.23 cfs @ 12.10 hrs, Volume= 0.018 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 108.46' @ 12.10 hrs Surf.Area= 360 sf Storage= 19 cf

Plug-Flow detention time= 1.1 min calculated for 0.018 af (100% of inflow)
Center-of-Mass det. time= 1.1 min (734.4 - 733.3)

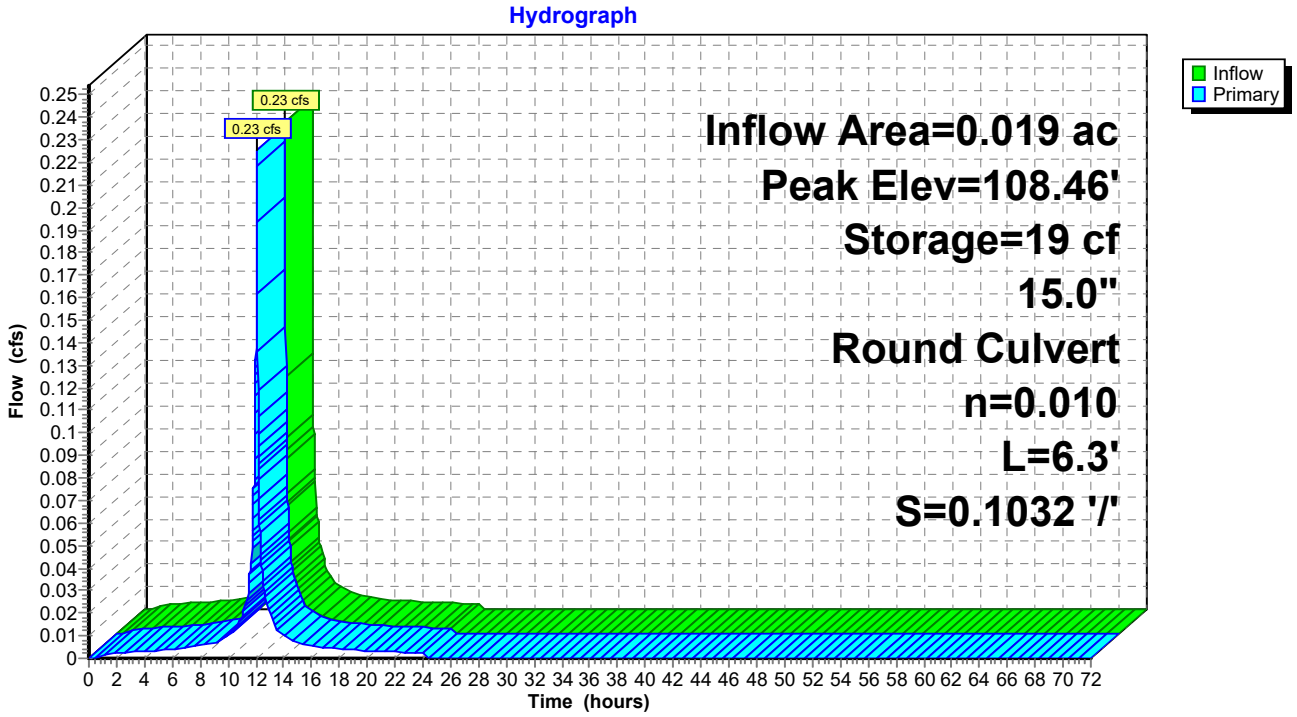
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	511 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 1,278 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	360	0	0
109.33	360	360	360
110.33	360	360	720
111.33	360	360	1,080
111.88	360	198	1,278

Device	Routing	Invert	Outlet Devices
#1	Primary	108.23'	**15.0" Round Culvert** L= 6.3' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.23' / 107.58' S= 0.1032 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.22 cfs @ 12.10 hrs HW=108.46' (Free Discharge)
1=Culvert (Inlet Controls 0.22 cfs @ 1.44 fps)

Pond PP4: PPVMT 4



Summary for Pond PP5: PPVMT 5

Inflow Area = 0.256 ac,100.00% Impervious, Inflow Depth = 11.12" for 100-Year (Future) event
Inflow = 3.06 cfs @ 12.09 hrs, Volume= 0.237 af
Outflow = 2.57 cfs @ 12.11 hrs, Volume= 0.233 af, Atten= 16%, Lag= 1.1 min
Primary = 2.57 cfs @ 12.11 hrs, Volume= 0.233 af
Routed to Pond CW : Constructed Wetlands (walls with ledge)

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.35' @ 12.11 hrs Surf.Area= 3,168 sf Storage= 1,298 cf

Plug-Flow detention time= 49.2 min calculated for 0.233 af (98% of inflow)
Center-of-Mass det. time= 37.1 min (770.3 - 733.3)

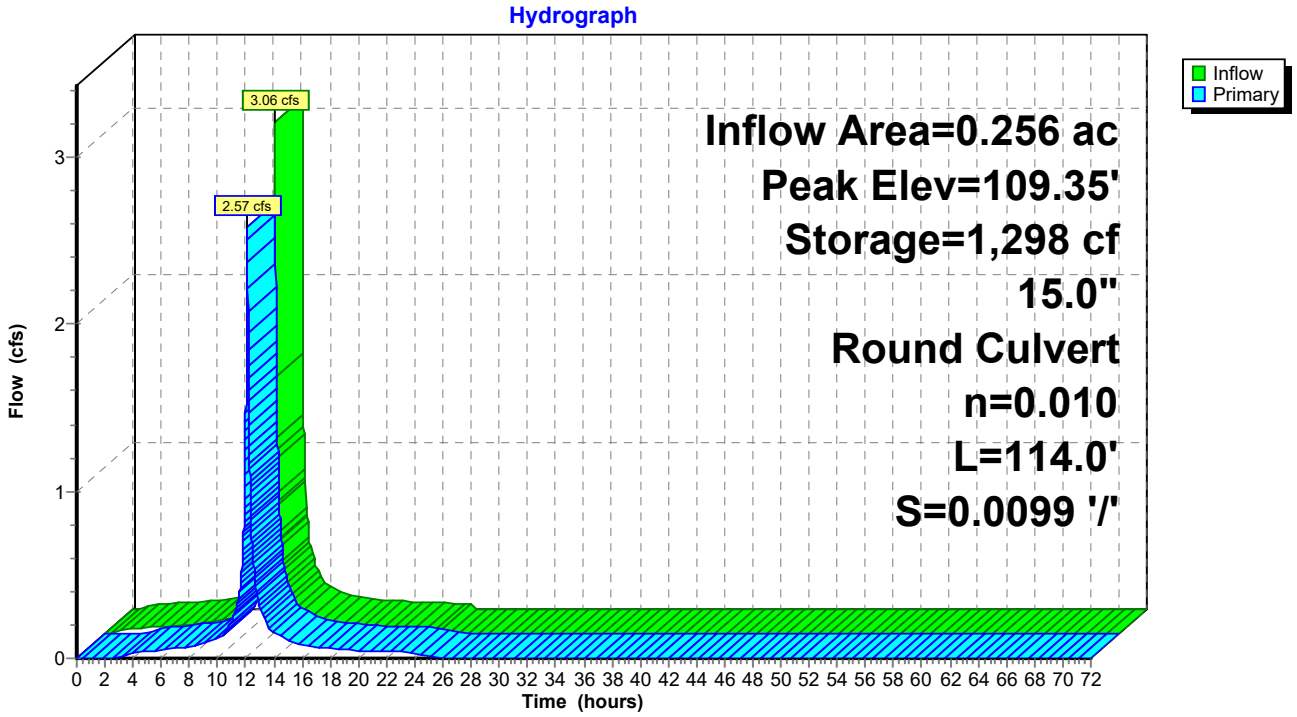
Volume	Invert	Avail.Storage	Storage Description
#1	108.33'	3,421 cf	**Stone Storage (Prismatic)** Listed below (Recalc) 8,554 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.33	3,168	0	0
109.33	3,168	3,168	3,168
110.33	3,168	3,168	6,336
111.00	3,168	2,123	8,459
111.03	3,168	95	8,554

Device	Routing	Invert	Outlet Devices
#1	Primary	108.48'	**15.0" Round Culvert** L= 114.0' Box, 0° wingwalls, square crown edge, Ke= 0.700 Inlet / Outlet Invert= 108.48' / 107.35' S= 0.0099 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.57 cfs @ 12.11 hrs HW=109.35' (Free Discharge)
1=Culvert (Inlet Controls 2.57 cfs @ 2.81 fps)

Pond PP5: PPVMT 5

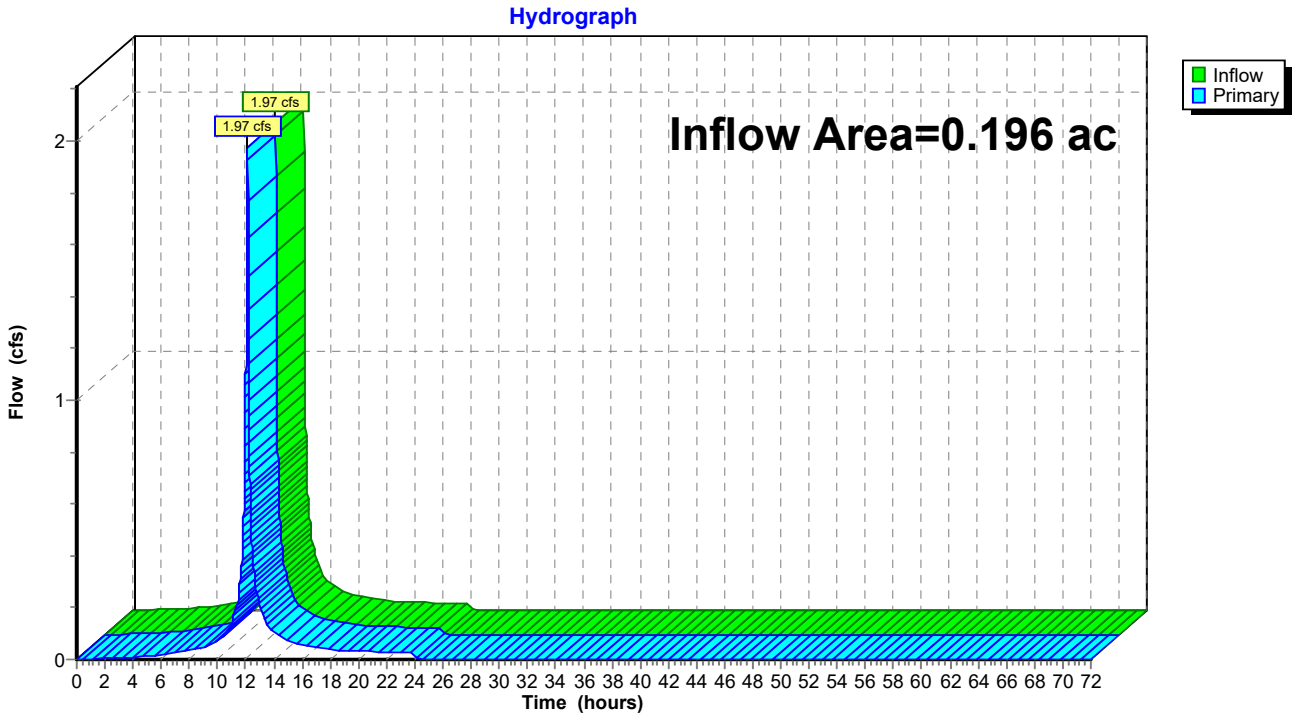


Summary for Link BP: Total Bypass

Inflow Area = 0.196 ac, 23.47% Impervious, Inflow Depth = 9.37" for 100-Year (Future) event
Inflow = 1.97 cfs @ 12.12 hrs, Volume= 0.153 af
Primary = 1.97 cfs @ 12.12 hrs, Volume= 0.153 af, Atten= 0%, Lag= 0.0 min
Routed to Link PPOA1 : PPOA-1

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

Link BP: Total Bypass

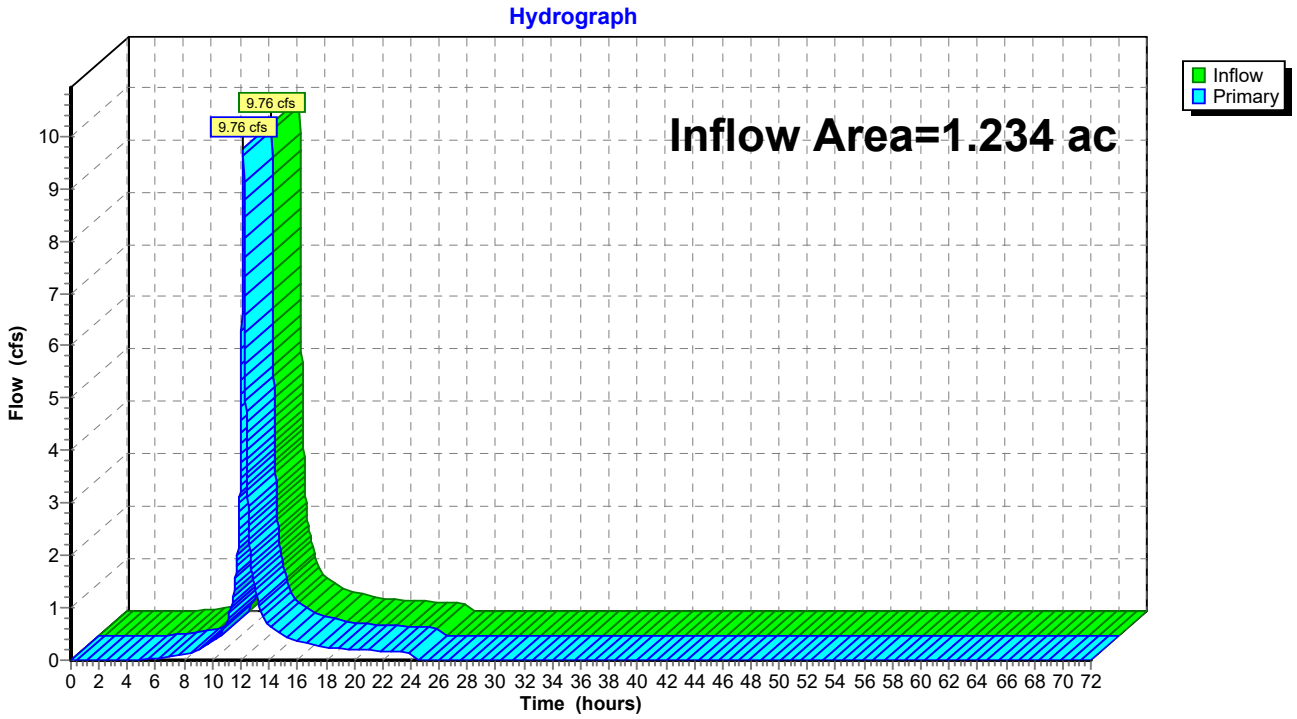


Summary for Link EPOA1: EPOA-1

Inflow Area = 1.234 ac, 0.32% Impervious, Inflow Depth = 8.37" for 100-Year (Future) event
Inflow = 9.76 cfs @ 12.18 hrs, Volume= 0.861 af
Primary = 9.76 cfs @ 12.18 hrs, Volume= 0.861 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA1: EPOA-1

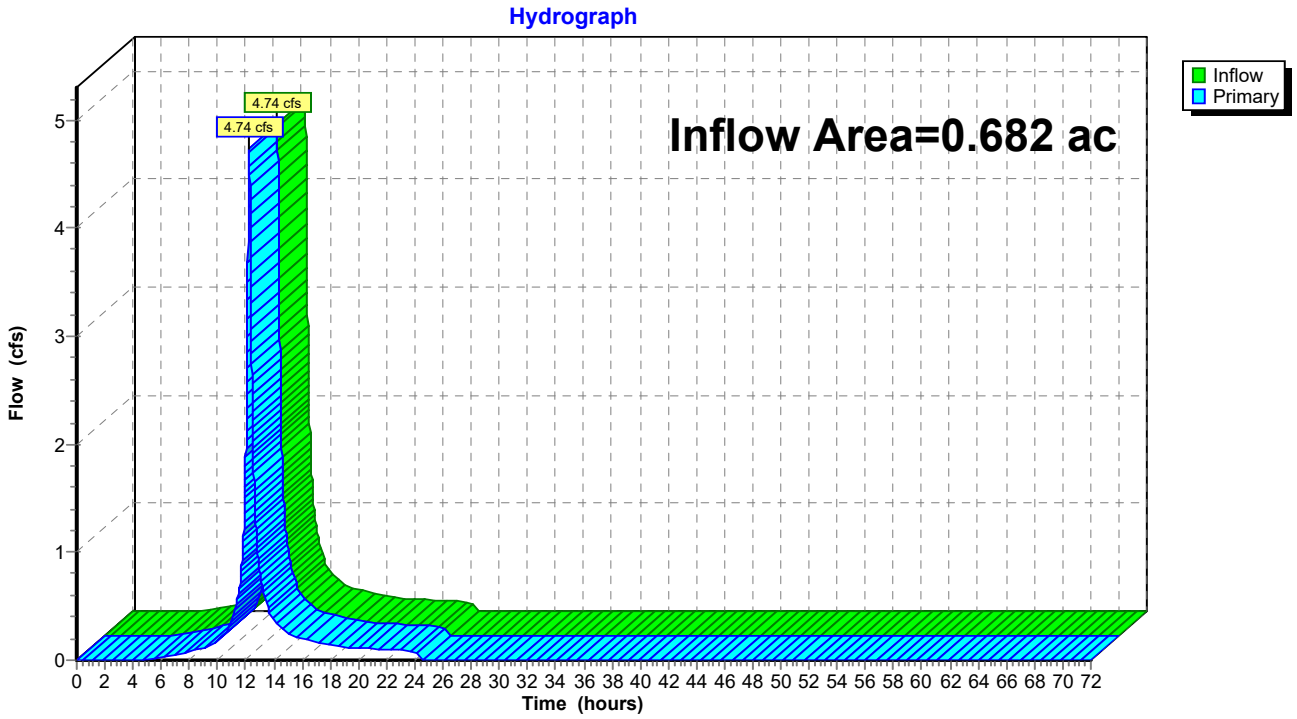


Summary for Link EPOA2: EPOA-2

Inflow Area = 0.682 ac, 0.00% Impervious, Inflow Depth = 8.42" for 100-Year (Future) event
Inflow = 4.74 cfs @ 12.23 hrs, Volume= 0.479 af
Primary = 4.74 cfs @ 12.23 hrs, Volume= 0.479 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA2: EPOA-2

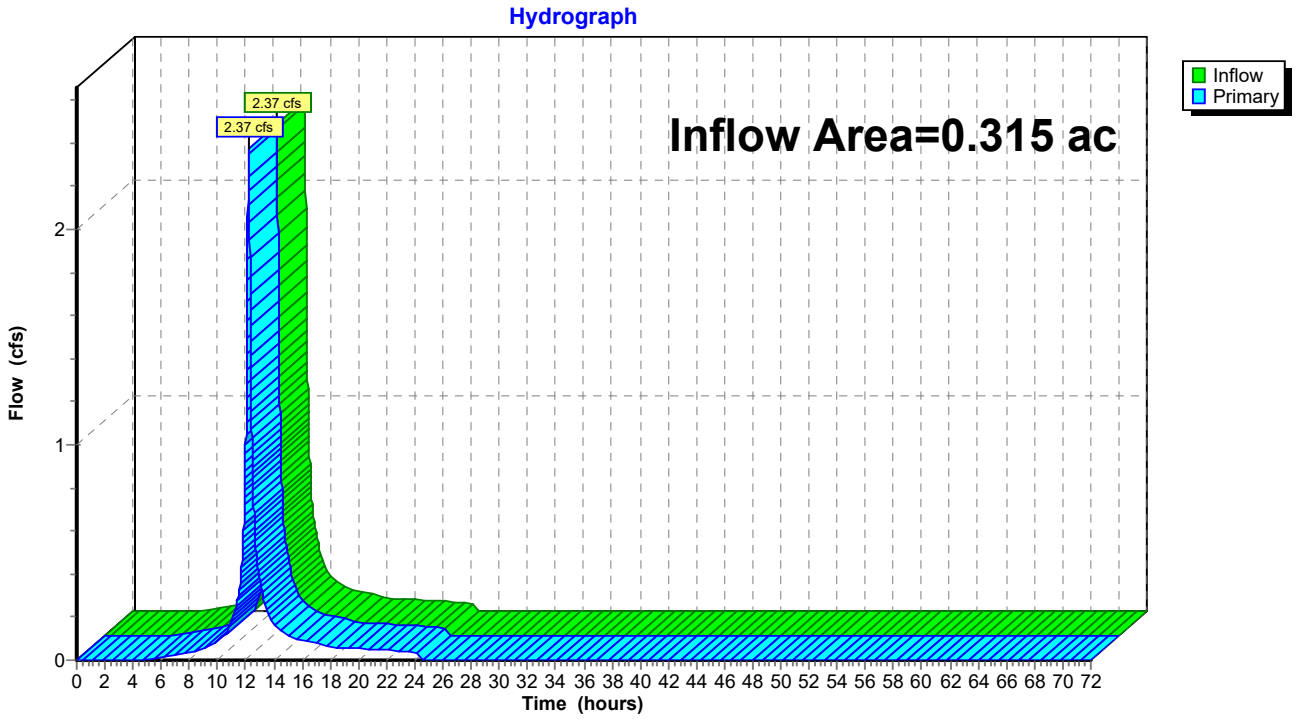


Summary for Link EPOA4: EPOA-4

Inflow Area = 0.315 ac, 0.00% Impervious, Inflow Depth = 8.42" for 100-Year (Future) event
Inflow = 2.37 cfs @ 12.20 hrs, Volume= 0.221 af
Primary = 2.37 cfs @ 12.20 hrs, Volume= 0.221 af, Atten= 0%, Lag= 0.0 min

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

Link EPOA4: EPOA-4

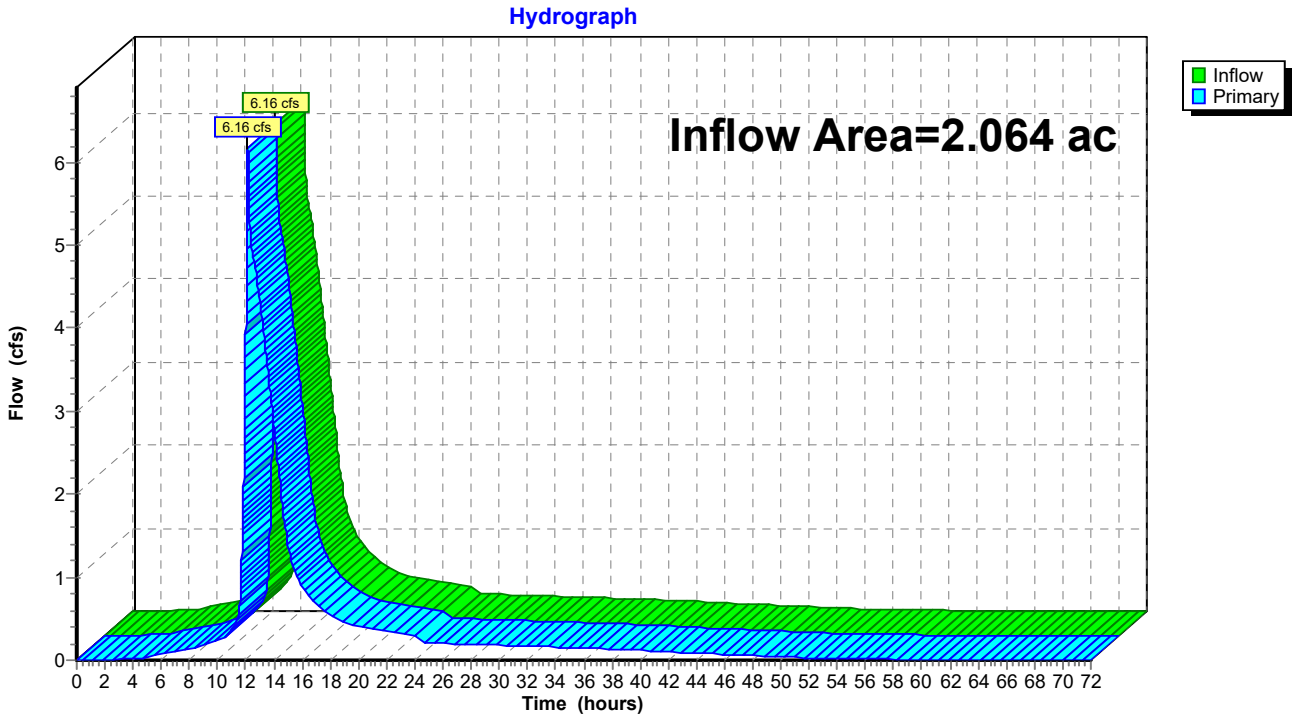


Summary for Link PPOA1: PPOA-1

Inflow Area = 2.064 ac, 75.10% Impervious, Inflow Depth > 10.12" for 100-Year (Future) event
Inflow = 6.16 cfs @ 12.14 hrs, Volume= 1.740 af
Primary = 6.16 cfs @ 12.14 hrs, Volume= 1.740 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA1: PPOA-1

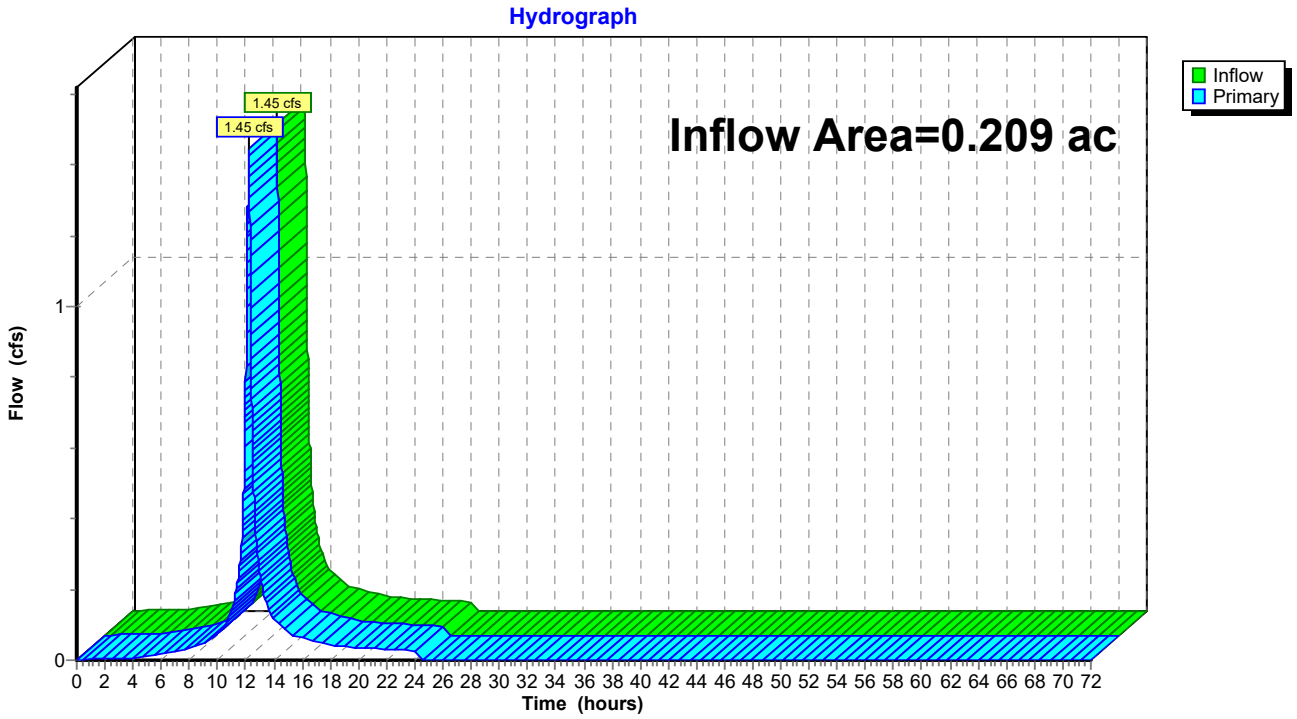


Summary for Link PPOA2: PPOA-2

Inflow Area = 0.209 ac, 16.27% Impervious, Inflow Depth = 9.20" for 100-Year (Future) event
Inflow = 1.45 cfs @ 12.21 hrs, Volume= 0.160 af
Primary = 1.45 cfs @ 12.21 hrs, Volume= 0.160 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA2: PPOA-2

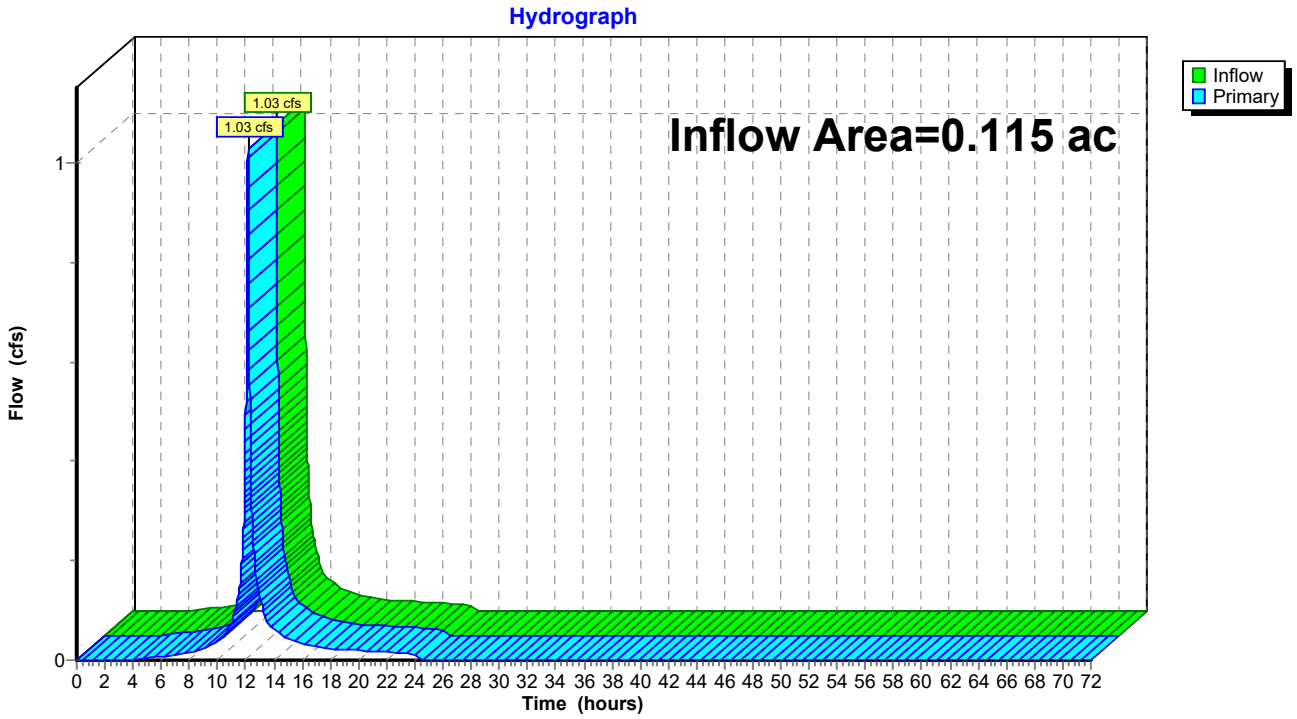


Summary for Link PPOA4: PPOA-4

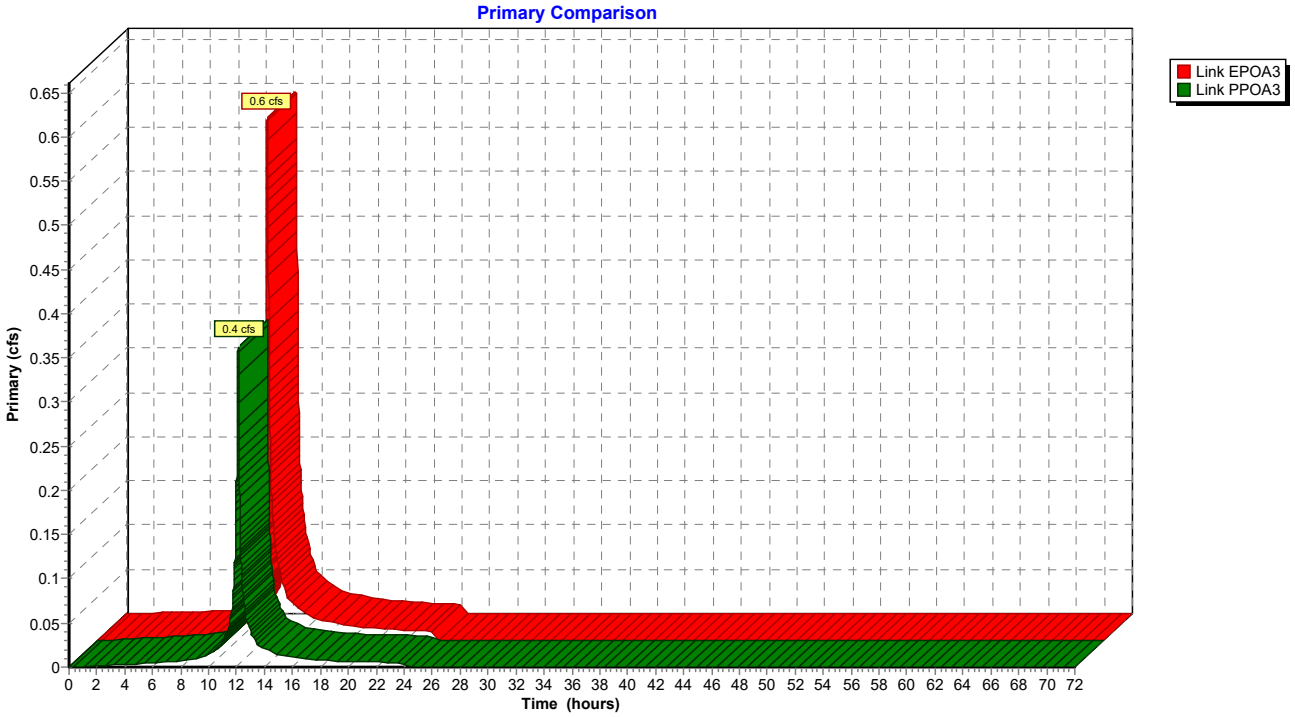
Inflow Area = 0.115 ac, 2.61% Impervious, Inflow Depth = 8.89" for 100-Year (Future) event
Inflow = 1.03 cfs @ 12.16 hrs, Volume= 0.085 af
Primary = 1.03 cfs @ 12.16 hrs, Volume= 0.085 af, Atten= 0%, Lag= 0.0 min

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

Link PPOA4: PPOA-4



Pre-vs. Post Comparison (POA#3)
(Future Adjusted Precipitation Depth)

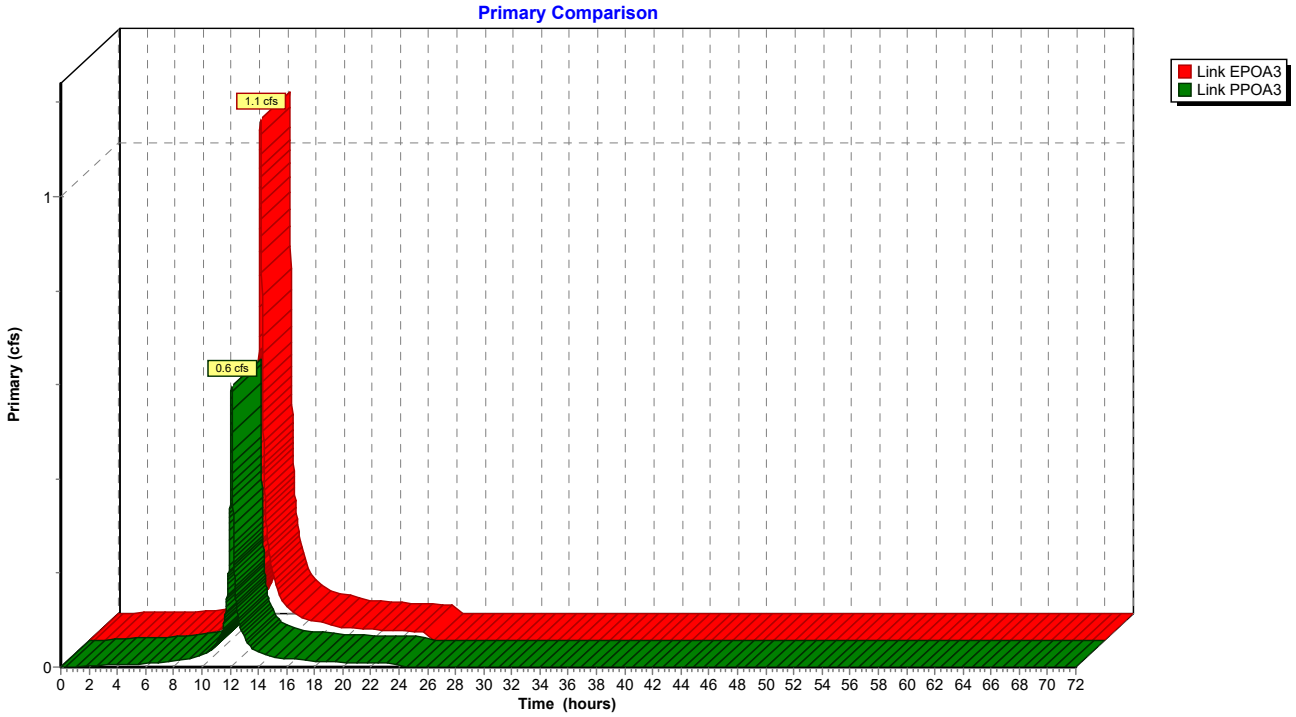

Primary Comparison
Link EPOA3
Link PPOA3
0.6 cfs
0.4 cfs
Primary (cfs)
0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6 0.65
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
Time (hours)

Primary Comparison

Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
0.00	0.0	0.0	13.00	0.1	0.0	26.00	0.0	0.0
0.25	0.0	0.0	13.25	0.1	0.0	26.25	0.0	0.0
0.50	0.0	0.0	13.50	0.1	0.0	26.50	0.0	0.0
0.75	0.0	0.0	13.75	0.0	0.0	26.75	0.0	0.0
1.00	0.0	0.0	14.00	0.0	0.0	27.00	0.0	0.0
1.25	0.0	0.0	14.25	0.0	0.0	27.25	0.0	0.0
1.50	0.0	0.0	14.50	0.0	0.0	27.50	0.0	0.0
1.75	0.0	0.0	14.75	0.0	0.0	27.75	0.0	0.0
2.00	0.0	0.0	15.00	0.0	0.0	28.00	0.0	0.0
2.25	0.0	0.0	15.25	0.0	0.0	28.25	0.0	0.0
2.50	0.0	0.0	15.50	0.0	0.0	28.50	0.0	0.0
2.75	0.0	0.0	15.75	0.0	0.0	28.75	0.0	0.0
3.00	0.0	0.0	16.00	0.0	0.0	29.00	0.0	0.0
3.25	0.0	0.0	16.25	0.0	0.0	29.25	0.0	0.0
3.50	0.0	0.0	16.50	0.0	0.0	29.50	0.0	0.0
3.75	0.0	0.0	16.75	0.0	0.0	29.75	0.0	0.0
4.00	0.0	0.0	17.00	0.0	0.0	30.00	0.0	0.0
4.25	0.0	0.0	17.25	0.0	0.0	30.25	0.0	0.0
4.50	0.0	0.0	17.50	0.0	0.0	30.50	0.0	0.0
4.75	0.0	0.0	17.75	0.0	0.0	30.75	0.0	0.0
5.00	0.0	0.0	18.00	0.0	0.0	31.00	0.0	0.0
5.25	0.0	0.0	18.25	0.0	0.0	31.25	0.0	0.0
5.50	0.0	0.0	18.50	0.0	0.0	31.50	0.0	0.0
5.75	0.0	0.0	18.75	0.0	0.0	31.75	0.0	0.0
6.00	0.0	0.0	19.00	0.0	0.0	32.00	0.0	0.0
6.25	0.0	0.0	19.25	0.0	0.0	32.25	0.0	0.0
6.50	0.0	0.0	19.50	0.0	0.0	32.50	0.0	0.0
6.75	0.0	0.0	19.75	0.0	0.0	32.75	0.0	0.0
7.00	0.0	0.0	20.00	0.0	0.0	33.00	0.0	0.0
7.25	0.0	0.0	20.25	0.0	0.0	33.25	0.0	0.0
7.50	0.0	0.0	20.50	0.0	0.0	33.50	0.0	0.0
7.75	0.0	0.0	20.75	0.0	0.0	33.75	0.0	0.0
8.00	0.0	0.0	21.00	0.0	0.0	34.00	0.0	0.0
8.25	0.0	0.0	21.25	0.0	0.0	34.25	0.0	0.0
8.50	0.0	0.0	21.50	0.0	0.0	34.50	0.0	0.0
8.75	0.0	0.0	21.75	0.0	0.0	34.75	0.0	0.0
9.00	0.0	0.0	22.00	0.0	0.0	35.00	0.0	0.0
9.25	0.0	0.0	22.25	0.0	0.0	35.25	0.0	0.0
9.50	0.0	0.0	22.50	0.0	0.0	35.50	0.0	0.0
9.75	0.0	0.0	22.75	0.0	0.0	35.75	0.0	0.0
10.00	0.0	0.0	23.00	0.0	0.0	36.00	0.0	0.0
10.25	0.0	0.0	23.25	0.0	0.0	36.25	0.0	0.0
10.50	0.0	0.0	23.50	0.0	0.0	36.50	0.0	0.0
10.75	0.0	0.0	23.75	0.0	0.0	36.75	0.0	0.0
11.00	0.0	0.0	24.00	0.0	0.0	37.00	0.0	0.0
11.25	0.0	0.0	24.25	0.0	0.0	37.25	0.0	0.0
11.50	0.1	0.0	24.50	0.0	0.0	37.50	0.0	0.0
11.75	0.1	0.1	24.75	0.0	0.0	37.75	0.0	0.0
12.00	**0.3**	**0.2**	25.00	0.0	0.0	38.00	0.0	0.0
12.25	**0.3**	**0.2**	25.25	0.0	0.0	38.25	0.0	0.0
12.50	0.2	0.1	25.50	0.0	0.0	38.50	0.0	0.0
12.75	0.1	0.1	25.75	0.0	0.0	38.75	0.0	0.0

Primary Comparison (continued)

Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
39.00	0.0	0.0
39.25	0.0	0.0
39.50	0.0	0.0
39.75	0.0	0.0
40.00	0.0	0.0
40.25	0.0	0.0
40.50	0.0	0.0
40.75	0.0	0.0
41.00	0.0	0.0
41.25	0.0	0.0
41.50	0.0	0.0
41.75	0.0	0.0
42.00	0.0	0.0
42.25	0.0	0.0
42.50	0.0	0.0
42.75	0.0	0.0
43.00	0.0	0.0
43.25	0.0	0.0
43.50	0.0	0.0
43.75	0.0	0.0
44.00	0.0	0.0
44.25	0.0	0.0
44.50	0.0	0.0
44.75	0.0	0.0
45.00	0.0	0.0
45.25	0.0	0.0
45.50	0.0	0.0
45.75	0.0	0.0
46.00	0.0	0.0
46.25	0.0	0.0
46.50	0.0	0.0
46.75	0.0	0.0
47.00	0.0	0.0
47.25	0.0	0.0
47.50	0.0	0.0
47.75	0.0	0.0
48.00	0.0	0.0
48.25	0.0	0.0
48.50	0.0	0.0
48.75	0.0	0.0
49.00	0.0	0.0
49.25	0.0	0.0
49.50	0.0	0.0
49.75	0.0	0.0
50.00	0.0	0.0
50.25	0.0	0.0
50.50	0.0	0.0
50.75	0.0	0.0
51.00	0.0	0.0
51.25	0.0	0.0
51.50	0.0	0.0
51.75	0.0	0.0
52.00	0.0	0.0
52.25	0.0	0.0
52.50	0.0	0.0
52.75	0.0	0.0
53.00	0.0	0.0
53.25	0.0	0.0
53.50	0.0	0.0
53.75	0.0	0.0
54.00	0.0	0.0
54.25	0.0	0.0
54.50	0.0	0.0
54.75	0.0	0.0
55.00	0.0	0.0
55.25	0.0	0.0
55.50	0.0	0.0
55.75	0.0	0.0
56.00	0.0	0.0
56.25	0.0	0.0
56.50	0.0	0.0
56.75	0.0	0.0
57.00	0.0	0.0
57.25	0.0	0.0
57.50	0.0	0.0
57.75	0.0	0.0
58.00	0.0	0.0
58.25	0.0	0.0
58.50	0.0	0.0
58.75	0.0	0.0
59.00	0.0	0.0
59.25	0.0	0.0
59.50	0.0	0.0
59.75	0.0	0.0
60.00	0.0	0.0
60.25	0.0	0.0
60.50	0.0	0.0
60.75	0.0	0.0
61.00	0.0	0.0
61.25	0.0	0.0
61.50	0.0	0.0
61.75	0.0	0.0
62.00	0.0	0.0
62.25	0.0	0.0
62.50	0.0	0.0
62.75	0.0	0.0
63.00	0.0	0.0
63.25	0.0	0.0
63.50	0.0	0.0
63.75	0.0	0.0
64.00	0.0	0.0
64.25	0.0	0.0
64.50	0.0	0.0
64.75	0.0	0.0
65.00	0.0	0.0
65.25	0.0	0.0
65.50	0.0	0.0
65.75	0.0	0.0
66.00	0.0	0.0
66.25	0.0	0.0
66.50	0.0	0.0
66.75	0.0	0.0
67.00	0.0	0.0
67.25	0.0	0.0
67.50	0.0	0.0
67.75	0.0	0.0
68.00	0.0	0.0
68.25	0.0	0.0
68.50	0.0	0.0
68.75	0.0	0.0
69.00	0.0	0.0
69.25	0.0	0.0
69.50	0.0	0.0
69.75	0.0	0.0
70.00	0.0	0.0
70.25	0.0	0.0
70.50	0.0	0.0
70.75	0.0	0.0
71.00	0.0	0.0
71.25	0.0	0.0
71.50	0.0	0.0
71.75	0.0	0.0
72.00	0.0	0.0

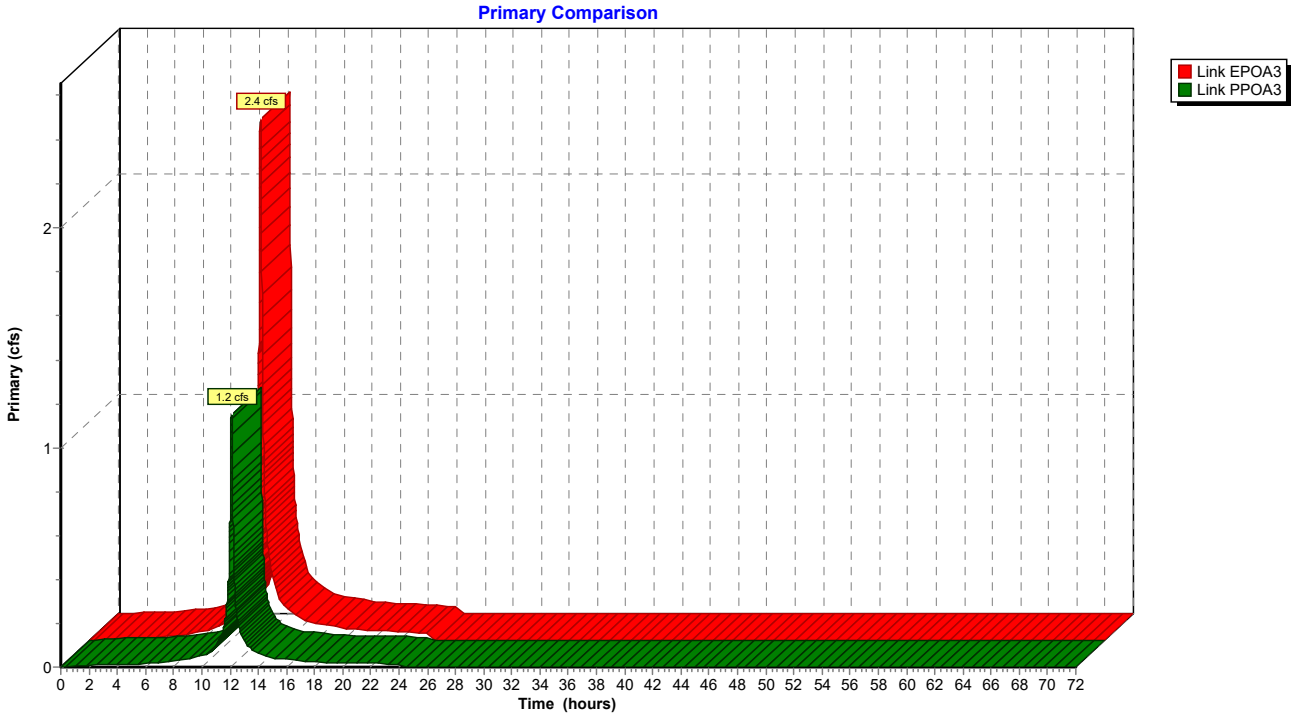

Primary Comparison
Link EPOA3
Link PPOA3
1.1 cfs
0.6 cfs
Primary (cfs)
0
1
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
Time (hours)

Primary Comparison

Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
0.00	0.0	0.0	13.00	0.1	0.1	26.00	0.0	0.0
0.25	0.0	0.0	13.25	0.1	0.1	26.25	0.0	0.0
0.50	0.0	0.0	13.50	0.1	0.0	26.50	0.0	0.0
0.75	0.0	0.0	13.75	0.1	0.0	26.75	0.0	0.0
1.00	0.0	0.0	14.00	0.1	0.0	27.00	0.0	0.0
1.25	0.0	0.0	14.25	0.1	0.0	27.25	0.0	0.0
1.50	0.0	0.0	14.50	0.1	0.0	27.50	0.0	0.0
1.75	0.0	0.0	14.75	0.1	0.0	27.75	0.0	0.0
2.00	0.0	0.0	15.00	0.0	0.0	28.00	0.0	0.0
2.25	0.0	0.0	15.25	0.0	0.0	28.25	0.0	0.0
2.50	0.0	0.0	15.50	0.0	0.0	28.50	0.0	0.0
2.75	0.0	0.0	15.75	0.0	0.0	28.75	0.0	0.0
3.00	0.0	0.0	16.00	0.0	0.0	29.00	0.0	0.0
3.25	0.0	0.0	16.25	0.0	0.0	29.25	0.0	0.0
3.50	0.0	0.0	16.50	0.0	0.0	29.50	0.0	0.0
3.75	0.0	0.0	16.75	0.0	0.0	29.75	0.0	0.0
4.00	0.0	0.0	17.00	0.0	0.0	30.00	0.0	0.0
4.25	0.0	0.0	17.25	0.0	0.0	30.25	0.0	0.0
4.50	0.0	0.0	17.50	0.0	0.0	30.50	0.0	0.0
4.75	0.0	0.0	17.75	0.0	0.0	30.75	0.0	0.0
5.00	0.0	0.0	18.00	0.0	0.0	31.00	0.0	0.0
5.25	0.0	0.0	18.25	0.0	0.0	31.25	0.0	0.0
5.50	0.0	0.0	18.50	0.0	0.0	31.50	0.0	0.0
5.75	0.0	0.0	18.75	0.0	0.0	31.75	0.0	0.0
6.00	0.0	0.0	19.00	0.0	0.0	32.00	0.0	0.0
6.25	0.0	0.0	19.25	0.0	0.0	32.25	0.0	0.0
6.50	0.0	0.0	19.50	0.0	0.0	32.50	0.0	0.0
6.75	0.0	0.0	19.75	0.0	0.0	32.75	0.0	0.0
7.00	0.0	0.0	20.00	0.0	0.0	33.00	0.0	0.0
7.25	0.0	0.0	20.25	0.0	0.0	33.25	0.0	0.0
7.50	0.0	0.0	20.50	0.0	0.0	33.50	0.0	0.0
7.75	0.0	0.0	20.75	0.0	0.0	33.75	0.0	0.0
8.00	0.0	0.0	21.00	0.0	0.0	34.00	0.0	0.0
8.25	0.0	0.0	21.25	0.0	0.0	34.25	0.0	0.0
8.50	0.0	0.0	21.50	0.0	0.0	34.50	0.0	0.0
8.75	0.0	0.0	21.75	0.0	0.0	34.75	0.0	0.0
9.00	0.0	0.0	22.00	0.0	0.0	35.00	0.0	0.0
9.25	0.0	0.0	22.25	0.0	0.0	35.25	0.0	0.0
9.50	0.0	0.0	22.50	0.0	0.0	35.50	0.0	0.0
9.75	0.0	0.0	22.75	0.0	0.0	35.75	0.0	0.0
10.00	0.0	0.0	23.00	0.0	0.0	36.00	0.0	0.0
10.25	0.0	0.0	23.25	0.0	0.0	36.25	0.0	0.0
10.50	0.0	0.0	23.50	0.0	0.0	36.50	0.0	0.0
10.75	0.1	0.0	23.75	0.0	0.0	36.75	0.0	0.0
11.00	0.1	0.0	24.00	0.0	0.0	37.00	0.0	0.0
11.25	0.1	0.1	24.25	0.0	0.0	37.25	0.0	0.0
11.50	0.1	0.1	24.50	0.0	0.0	37.50	0.0	0.0
11.75	0.2	0.1	24.75	0.0	0.0	37.75	0.0	0.0
12.00	**0.6**	**0.3**	25.00	0.0	0.0	38.00	0.0	0.0
12.25	**0.6**	**0.3**	25.25	0.0	0.0	38.25	0.0	0.0
12.50	0.3	0.1	25.50	0.0	0.0	38.50	0.0	0.0
12.75	0.2	0.1	25.75	0.0	0.0	38.75	0.0	0.0

Primary Comparison (continued)

Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
39.00	0.0	0.0
39.25	0.0	0.0
39.50	0.0	0.0
39.75	0.0	0.0
40.00	0.0	0.0
40.25	0.0	0.0
40.50	0.0	0.0
40.75	0.0	0.0
41.00	0.0	0.0
41.25	0.0	0.0
41.50	0.0	0.0
41.75	0.0	0.0
42.00	0.0	0.0
42.25	0.0	0.0
42.50	0.0	0.0
42.75	0.0	0.0
43.00	0.0	0.0
43.25	0.0	0.0
43.50	0.0	0.0
43.75	0.0	0.0
44.00	0.0	0.0
44.25	0.0	0.0
44.50	0.0	0.0
44.75	0.0	0.0
45.00	0.0	0.0
45.25	0.0	0.0
45.50	0.0	0.0
45.75	0.0	0.0
46.00	0.0	0.0
46.25	0.0	0.0
46.50	0.0	0.0
46.75	0.0	0.0
47.00	0.0	0.0
47.25	0.0	0.0
47.50	0.0	0.0
47.75	0.0	0.0
48.00	0.0	0.0
48.25	0.0	0.0
48.50	0.0	0.0
48.75	0.0	0.0
49.00	0.0	0.0
49.25	0.0	0.0
49.50	0.0	0.0
49.75	0.0	0.0
50.00	0.0	0.0
50.25	0.0	0.0
50.50	0.0	0.0
50.75	0.0	0.0
51.00	0.0	0.0
51.25	0.0	0.0
51.50	0.0	0.0
51.75	0.0	0.0
52.00	0.0	0.0
52.25	0.0	0.0
52.50	0.0	0.0
52.75	0.0	0.0
53.00	0.0	0.0
53.25	0.0	0.0
53.50	0.0	0.0
53.75	0.0	0.0
54.00	0.0	0.0
54.25	0.0	0.0
54.50	0.0	0.0
54.75	0.0	0.0
55.00	0.0	0.0
55.25	0.0	0.0
55.50	0.0	0.0
55.75	0.0	0.0
56.00	0.0	0.0
56.25	0.0	0.0
56.50	0.0	0.0
56.75	0.0	0.0
57.00	0.0	0.0
57.25	0.0	0.0
57.50	0.0	0.0
57.75	0.0	0.0
58.00	0.0	0.0
58.25	0.0	0.0
58.50	0.0	0.0
58.75	0.0	0.0
59.00	0.0	0.0
59.25	0.0	0.0
59.50	0.0	0.0
59.75	0.0	0.0
60.00	0.0	0.0
60.25	0.0	0.0
60.50	0.0	0.0
60.75	0.0	0.0
61.00	0.0	0.0
61.25	0.0	0.0
61.50	0.0	0.0
61.75	0.0	0.0
62.00	0.0	0.0
62.25	0.0	0.0
62.50	0.0	0.0
62.75	0.0	0.0
63.00	0.0	0.0
63.25	0.0	0.0
63.50	0.0	0.0
63.75	0.0	0.0
64.00	0.0	0.0
64.25	0.0	0.0
64.50	0.0	0.0
64.75	0.0	0.0
65.00	0.0	0.0
65.25	0.0	0.0
65.50	0.0	0.0
65.75	0.0	0.0
66.00	0.0	0.0
66.25	0.0	0.0
66.50	0.0	0.0
66.75	0.0	0.0
67.00	0.0	0.0
67.25	0.0	0.0
67.50	0.0	0.0
67.75	0.0	0.0
68.00	0.0	0.0
68.25	0.0	0.0
68.50	0.0	0.0
68.75	0.0	0.0
69.00	0.0	0.0
69.25	0.0	0.0
69.50	0.0	0.0
69.75	0.0	0.0
70.00	0.0	0.0
70.25	0.0	0.0
70.50	0.0	0.0
70.75	0.0	0.0
71.00	0.0	0.0
71.25	0.0	0.0
71.50	0.0	0.0
71.75	0.0	0.0
72.00	0.0	0.0


Primary Comparison
Link EPOA3
Link PPOA3
2.4 cfs
1.2 cfs
Primary (cfs)
0
1
2
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
Time (hours)

Primary Comparison

Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)	Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
0.00	0.0	0.0	13.00	0.3	0.1	26.00	0.0	0.0
0.25	0.0	0.0	13.25	0.2	0.1	26.25	0.0	0.0
0.50	0.0	0.0	13.50	0.2	0.1	26.50	0.0	0.0
0.75	0.0	0.0	13.75	0.2	0.1	26.75	0.0	0.0
1.00	0.0	0.0	14.00	0.1	0.1	27.00	0.0	0.0
1.25	0.0	0.0	14.25	0.1	0.1	27.25	0.0	0.0
1.50	0.0	0.0	14.50	0.1	0.1	27.50	0.0	0.0
1.75	0.0	0.0	14.75	0.1	0.0	27.75	0.0	0.0
2.00	0.0	0.0	15.00	0.1	0.0	28.00	0.0	0.0
2.25	0.0	0.0	15.25	0.1	0.0	28.25	0.0	0.0
2.50	0.0	0.0	15.50	0.1	0.0	28.50	0.0	0.0
2.75	0.0	0.0	15.75	0.1	0.0	28.75	0.0	0.0
3.00	0.0	0.0	16.00	0.1	0.0	29.00	0.0	0.0
3.25	0.0	0.0	16.25	0.1	0.0	29.25	0.0	0.0
3.50	0.0	0.0	16.50	0.1	0.0	29.50	0.0	0.0
3.75	0.0	0.0	16.75	0.1	0.0	29.75	0.0	0.0
4.00	0.0	0.0	17.00	0.1	0.0	30.00	0.0	0.0
4.25	0.0	0.0	17.25	0.1	0.0	30.25	0.0	0.0
4.50	0.0	0.0	17.50	0.1	0.0	30.50	0.0	0.0
4.75	0.0	0.0	17.75	0.1	0.0	30.75	0.0	0.0
5.00	0.0	0.0	18.00	0.1	0.0	31.00	0.0	0.0
5.25	0.0	0.0	18.25	0.1	0.0	31.25	0.0	0.0
5.50	0.0	0.0	18.50	0.1	0.0	31.50	0.0	0.0
5.75	0.0	0.0	18.75	0.1	0.0	31.75	0.0	0.0
6.00	0.0	0.0	19.00	0.0	0.0	32.00	0.0	0.0
6.25	0.0	0.0	19.25	0.0	0.0	32.25	0.0	0.0
6.50	0.0	0.0	19.50	0.0	0.0	32.50	0.0	0.0
6.75	0.0	0.0	19.75	0.0	0.0	32.75	0.0	0.0
7.00	0.0	0.0	20.00	0.0	0.0	33.00	0.0	0.0
7.25	0.0	0.0	20.25	0.0	0.0	33.25	0.0	0.0
7.50	0.0	0.0	20.50	0.0	0.0	33.50	0.0	0.0
7.75	0.0	0.0	20.75	0.0	0.0	33.75	0.0	0.0
8.00	0.0	0.0	21.00	0.0	0.0	34.00	0.0	0.0
8.25	0.0	0.0	21.25	0.0	0.0	34.25	0.0	0.0
8.50	0.0	0.0	21.50	0.0	0.0	34.50	0.0	0.0
8.75	0.1	0.0	21.75	0.0	0.0	34.75	0.0	0.0
9.00	0.1	0.0	22.00	0.0	0.0	35.00	0.0	0.0
9.25	0.1	0.0	22.25	0.0	0.0	35.25	0.0	0.0
9.50	0.1	0.0	22.50	0.0	0.0	35.50	0.0	0.0
9.75	0.1	0.0	22.75	0.0	0.0	35.75	0.0	0.0
10.00	0.1	0.1	23.00	0.0	0.0	36.00	0.0	0.0
10.25	0.1	0.1	23.25	0.0	0.0	36.25	0.0	0.0
10.50	0.1	0.1	23.50	0.0	0.0	36.50	0.0	0.0
10.75	0.2	0.1	23.75	0.0	0.0	36.75	0.0	0.0
11.00	0.2	0.1	24.00	0.0	0.0	37.00	0.0	0.0
11.25	0.3	0.1	24.25	0.0	0.0	37.25	0.0	0.0
11.50	0.3	0.2	24.50	0.0	0.0	37.50	0.0	0.0
11.75	0.5	0.3	24.75	0.0	0.0	37.75	0.0	0.0
12.00	**1.4**	**0.7**	25.00	0.0	0.0	38.00	0.0	0.0
12.25	**1.3**	**0.5**	25.25	0.0	0.0	38.25	0.0	0.0
12.50	0.6	0.2	25.50	0.0	0.0	38.50	0.0	0.0
12.75	0.4	0.2	25.75	0.0	0.0	38.75	0.0	0.0

Primary Comparison (continued)

Time (hours)	Link EPOA3 (cfs)	Link PPOA3 (cfs)
39.00	0.0	0.0
39.25	0.0	0.0
39.50	0.0	0.0
39.75	0.0	0.0
40.00	0.0	0.0
40.25	0.0	0.0
40.50	0.0	0.0
40.75	0.0	0.0
41.00	0.0	0.0
41.25	0.0	0.0
41.50	0.0	0.0
41.75	0.0	0.0
42.00	0.0	0.0
42.25	0.0	0.0
42.50	0.0	0.0
42.75	0.0	0.0
43.00	0.0	0.0
43.25	0.0	0.0
43.50	0.0	0.0
43.75	0.0	0.0
44.00	0.0	0.0
44.25	0.0	0.0
44.50	0.0	0.0
44.75	0.0	0.0
45.00	0.0	0.0
45.25	0.0	0.0
45.50	0.0	0.0
45.75	0.0	0.0
46.00	0.0	0.0
46.25	0.0	0.0
46.50	0.0	0.0
46.75	0.0	0.0
47.00	0.0	0.0
47.25	0.0	0.0
47.50	0.0	0.0
47.75	0.0	0.0
48.00	0.0	0.0
48.25	0.0	0.0
48.50	0.0	0.0
48.75	0.0	0.0
49.00	0.0	0.0
49.25	0.0	0.0
49.50	0.0	0.0
49.75	0.0	0.0
50.00	0.0	0.0
50.25	0.0	0.0
50.50	0.0	0.0
50.75	0.0	0.0
51.00	0.0	0.0
51.25	0.0	0.0
51.50	0.0	0.0
51.75	0.0	0.0
52.00	0.0	0.0
52.25	0.0	0.0
52.50	0.0	0.0
52.75	0.0	0.0
53.00	0.0	0.0
53.25	0.0	0.0
53.50	0.0	0.0
53.75	0.0	0.0
54.00	0.0	0.0
54.25	0.0	0.0
54.50	0.0	0.0
54.75	0.0	0.0
55.00	0.0	0.0
55.25	0.0	0.0
55.50	0.0	0.0
55.75	0.0	0.0
56.00	0.0	0.0
56.25	0.0	0.0
56.50	0.0	0.0
56.75	0.0	0.0
57.00	0.0	0.0
57.25	0.0	0.0
57.50	0.0	0.0
57.75	0.0	0.0
58.00	0.0	0.0
58.25	0.0	0.0
58.50	0.0	0.0
58.75	0.0	0.0
59.00	0.0	0.0
59.25	0.0	0.0
59.50	0.0	0.0
59.75	0.0	0.0
60.00	0.0	0.0
60.25	0.0	0.0
60.50	0.0	0.0
60.75	0.0	0.0
61.00	0.0	0.0
61.25	0.0	0.0
61.50	0.0	0.0
61.75	0.0	0.0
62.00	0.0	0.0
62.25	0.0	0.0
62.50	0.0	0.0
62.75	0.0	0.0
63.00	0.0	0.0
63.25	0.0	0.0
63.50	0.0	0.0
63.75	0.0	0.0
64.00	0.0	0.0
64.25	0.0	0.0
64.50	0.0	0.0
64.75	0.0	0.0
65.00	0.0	0.0
65.25	0.0	0.0
65.50	0.0	0.0
65.75	0.0	0.0
66.00	0.0	0.0
66.25	0.0	0.0
66.50	0.0	0.0
66.75	0.0	0.0
67.00	0.0	0.0
67.25	0.0	0.0
67.50	0.0	0.0
67.75	0.0	0.0
68.00	0.0	0.0
68.25	0.0	0.0
68.50	0.0	0.0
68.75	0.0	0.0
69.00	0.0	0.0
69.25	0.0	0.0
69.50	0.0	0.0
69.75	0.0	0.0
70.00	0.0	0.0
70.25	0.0	0.0
70.50	0.0	0.0
70.75	0.0	0.0
71.00	0.0	0.0
71.25	0.0	0.0
71.50	0.0	0.0
71.75	0.0	0.0
72.00	0.0	0.0

D. DESIGN CALCULATIONS

- **Constructed Wetlands Detention Time**
- **Pervious Systems Drain Times**
- **Emergency Spillway**
- **Groundwater Recharge Worksheet**

Constructed Wetlands Detention Time

Hydrograph for Pond CW: Constructed Wetlands (walls with ledge)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	104.00	0.00
0.20	0.00	0	104.00	0.00
0.40	0.03	4	104.00	0.00
0.60	0.15	64	104.01	0.00
0.80	0.32	204	104.03	0.00
1.00	**2.05**	824	104.14	0.00
1.20	**1.32**	2,324	104.38	0.05
1.40	0.56	2,887	104.47	0.07
1.60	0.41	3,186	104.52	0.08
1.80	0.27	3,397	104.55	0.08
2.00	0.16	**3,473**	**104.57**	**0.08**
2.20	0.04	**3,471**	**104.57**	**0.08**
2.40	0.03	3,436	104.56	0.08
2.60	0.02	3,395	104.55	0.08
2.80	0.02	3,351	104.55	0.08
3.00	0.01	3,304	104.54	0.08
3.20	0.01	3,257	104.53	0.08
3.40	0.01	3,209	104.52	0.08
3.60	0.01	3,160	104.52	0.08
3.80	0.01	3,112	104.51	0.07
4.00	0.01	3,065	104.50	0.07
4.20	0.01	3,018	104.49	0.07
4.40	0.01	2,971	104.49	0.07
4.60	0.01	2,925	104.48	0.07
4.80	0.00	2,880	104.47	0.07
5.00	0.00	2,836	104.46	0.07
5.20	0.00	2,792	104.46	0.06
5.40	0.00	2,748	104.45	0.06
5.60	0.00	2,706	104.44	0.06
5.80	0.00	2,665	104.44	0.06
6.00	0.00	2,624	104.43	0.06
6.20	0.00	2,585	104.42	0.06
6.40	0.00	2,546	104.42	0.06
6.60	0.00	2,508	104.41	0.05
6.80	0.00	2,471	104.41	0.05
7.00	0.00	2,435	104.40	0.05
7.20	0.00	2,400	104.39	0.05
7.40	0.00	2,366	104.39	0.05
7.60	0.00	2,333	104.38	0.05
7.80	0.00	2,302	104.38	0.04
8.00	0.00	2,272	104.37	0.04
8.20	0.00	2,243	104.37	0.04
8.40	0.00	2,215	104.37	0.04
8.60	0.00	2,188	104.36	0.04
8.80	0.00	2,162	104.36	0.04
9.00	0.00	2,137	104.35	0.04
9.20	0.00	2,113	104.35	0.03
9.40	0.00	2,090	104.35	0.03
9.60	0.00	2,068	104.34	0.03
9.80	0.00	2,046	104.34	0.03
10.00	0.00	2,026	104.33	0.03
10.20	0.00	2,006	104.33	0.03

Hydrograph for Pond CW: Constructed Wetlands (walls with ledge) (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
10.40	0.00	1,987	104.33	0.03
10.60	0.00	1,968	104.33	0.03
10.80	0.00	1,951	104.32	0.03
11.00	0.00	1,934	104.32	0.02
11.20	0.00	1,917	104.32	0.02
11.40	0.00	1,901	104.31	0.02
11.60	0.00	1,886	104.31	0.02
11.80	0.00	1,871	104.31	0.02
12.00	0.00	1,857	104.31	0.02
12.20	0.00	1,843	104.30	0.02
12.40	0.00	1,830	104.30	0.02
12.60	0.00	1,818	104.30	0.02
12.80	0.00	1,805	104.30	0.02
13.00	0.00	1,794	104.30	0.02
13.20	0.00	1,782	104.30	0.02
13.40	0.00	1,771	104.29	0.02
13.60	0.00	1,761	104.29	0.02
13.80	0.00	1,751	104.29	0.01
14.00	0.00	1,741	104.29	0.01
14.20	0.00	1,732	104.29	0.01
14.40	0.00	1,723	104.29	0.01
14.60	0.00	1,714	104.28	0.01
14.80	0.00	1,705	104.28	0.01
15.00	0.00	1,697	104.28	0.01
15.20	0.00	1,689	104.28	0.01
15.40	0.00	1,681	104.28	0.01
15.60	0.00	1,673	104.28	0.01
15.80	0.00	1,665	104.28	0.01
16.00	0.00	1,658	104.27	0.01
16.20	0.00	1,650	104.27	0.01
16.40	0.00	1,643	104.27	0.01
16.60	0.00	1,636	104.27	0.01
16.80	0.00	1,629	104.27	0.01
17.00	0.00	1,623	104.27	0.01
17.20	0.00	1,616	104.27	0.01
17.40	0.00	1,610	104.27	0.01
17.60	0.00	1,603	104.27	0.01
17.80	0.00	1,597	104.26	0.01
18.00	0.00	1,591	104.26	0.01
18.20	0.00	1,585	104.26	0.01
18.40	0.00	1,580	104.26	0.01
18.60	0.00	1,574	104.26	0.01
18.80	0.00	1,568	104.26	0.01
19.00	0.00	1,563	104.26	0.01
19.20	0.00	1,558	104.26	0.01
19.40	0.00	1,553	104.26	0.01
19.60	0.00	1,548	104.26	0.01
19.80	0.00	1,543	104.26	0.01
20.00	0.00	1,538	104.26	0.01
20.20	0.00	1,533	104.25	0.01
20.40	0.00	1,529	104.25	0.01
20.60	0.00	1,524	104.25	0.01

Hydrograph for Pond CW: Constructed Wetlands (walls with ledge) (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
20.80	0.00	1,520	104.25	0.01
21.00	0.00	1,515	104.25	0.01
21.20	0.00	1,511	104.25	0.01
21.40	0.00	1,507	104.25	0.01
21.60	0.00	1,503	104.25	0.01
21.80	0.00	1,499	104.25	0.01
22.00	0.00	1,495	104.25	0.01
22.20	0.00	1,492	104.25	0.01
22.40	0.00	1,488	104.25	0.01
22.60	0.00	1,484	104.25	0.01
22.80	0.00	1,481	104.25	0.01
23.00	0.00	1,477	104.25	0.01
23.20	0.00	1,474	104.24	0.00
23.40	0.00	1,471	104.24	0.00
23.60	0.00	1,467	104.24	0.00
23.80	0.00	1,464	104.24	0.00
24.00	0.00	1,461	104.24	0.00
24.20	0.00	1,458	104.24	0.00
24.40	0.00	1,455	104.24	0.00
24.60	0.00	1,452	104.24	0.00
24.80	0.00	1,450	104.24	0.00
25.00	0.00	1,447	104.24	0.00
25.20	0.00	1,444	104.24	0.00
25.40	0.00	1,441	104.24	0.00
25.60	0.00	1,439	104.24	0.00
25.80	0.00	1,436	104.24	0.00
26.00	0.00	1,434	104.24	0.00
26.20	0.00	1,431	104.24	0.00
26.40	0.00	1,429	104.24	0.00
26.60	0.00	1,427	104.24	0.00
26.80	0.00	1,425	104.24	0.00
27.00	0.00	1,422	104.24	0.00
27.20	0.00	1,420	104.24	0.00
27.40	0.00	1,418	104.24	0.00
27.60	0.00	1,416	104.24	0.00
27.80	0.00	1,414	104.23	0.00
28.00	0.00	1,412	104.23	0.00
28.20	0.00	1,410	104.23	0.00
28.40	0.00	1,408	104.23	0.00
28.60	0.00	1,406	104.23	0.00
28.80	0.00	1,405	104.23	0.00
29.00	0.00	1,403	104.23	0.00
29.20	0.00	1,401	104.23	0.00
29.40	0.00	1,399	104.23	0.00
29.60	0.00	1,398	104.23	0.00
29.80	0.00	1,396	104.23	0.00
30.00	0.00	1,395	104.23	0.00
30.20	0.00	1,393	104.23	0.00
30.40	0.00	1,391	104.23	0.00
30.60	0.00	1,390	104.23	0.00
30.80	0.00	1,389	104.23	0.00
31.00	0.00	1,387	104.23	0.00

*26-2=24 hrs; Meets minimum requirement for extended detention.

Pervious Systems Drain Times

Hydrograph for Pond PC1: PC 1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	110.17	0.00
0.50	0.00	1	110.17	0.00
1.00	0.01	16	110.18	0.00
1.50	0.02	43	110.19	0.00
2.00	0.02	77	110.20	0.00
2.50	0.02	116	110.22	0.00
3.00	0.02	159	110.24	0.00
3.50	0.03	205	110.26	0.00
4.00	0.03	255	110.28	0.00
4.50	0.03	307	110.31	0.00
5.00	0.03	362	110.33	0.00
5.50	0.03	419	110.36	0.00
6.00	0.03	479	110.38	0.00
6.50	0.04	545	110.41	0.00
7.00	0.04	617	110.44	0.00
7.50	0.05	688	110.48	0.01
8.00	0.05	749	110.50	0.02
8.50	0.06	796	110.52	0.03
9.00	0.06	831	110.54	0.04
9.50	0.08	866	110.56	0.06
10.00	0.09	905	110.57	0.07
10.50	0.11	945	110.59	0.09
11.00	0.17	1,015	110.62	0.12
11.50	0.27	1,143	110.68	0.19
12.00	**1.25**	**1,683**	**110.92**	**0.59**
12.50	**0.36**	**1,752**	**110.95**	**0.65**
13.00	0.19	1,341	110.77	0.33
13.50	0.12	1,150	110.68	0.20
14.00	0.10	1,045	110.64	0.14
14.50	0.08	986	110.61	0.11
15.00	0.06	942	110.59	0.09
15.50	0.06	908	110.57	0.07
16.00	0.05	886	110.56	0.06
16.50	0.05	868	110.56	0.06
17.00	0.04	854	110.55	0.05
17.50	0.04	840	110.54	0.05
18.00	0.04	826	110.54	0.04
18.50	0.03	814	110.53	0.04
19.00	0.03	805	110.53	0.04
19.50	0.03	799	110.53	0.03
20.00	0.03	793	110.52	0.03
20.50	0.03	789	110.52	0.03
21.00	0.03	784	110.52	0.03
21.50	0.03	780	110.52	0.03
22.00	0.03	776	110.52	0.03
22.50	0.03	771	110.51	0.03
23.00	0.02	766	110.51	0.03
23.50	0.02	762	110.51	0.03
24.00	0.02	757	110.51	0.02
24.50	0.00	722	110.49	0.02
25.00	0.00	697	110.48	0.01
25.50	0.00	678	110.47	0.01

Pervious Concrete #1 Drain Time:
24.50-12.00 = 12.50 hours

Hydrograph for Pond PC1: PC 1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
26.00	0.00	664	110.47	0.01
26.50	0.00	653	110.46	0.01
27.00	0.00	644	110.46	0.00
27.50	0.00	636	110.45	0.00
28.00	0.00	629	110.45	0.00
28.50	0.00	623	110.45	0.00
29.00	0.00	618	110.45	0.00
29.50	0.00	614	110.44	0.00
30.00	0.00	611	110.44	0.00
30.50	0.00	608	110.44	0.00
31.00	0.00	605	110.44	0.00
31.50	0.00	603	110.44	0.00
32.00	0.00	601	110.44	0.00
32.50	0.00	599	110.44	0.00
33.00	0.00	598	110.44	0.00
33.50	0.00	596	110.44	0.00
34.00	0.00	594	110.43	0.00
34.50	0.00	593	110.43	0.00
35.00	0.00	591	110.43	0.00
35.50	0.00	590	110.43	0.00
36.00	0.00	588	110.43	0.00
36.50	0.00	587	110.43	0.00
37.00	0.00	586	110.43	0.00
37.50	0.00	585	110.43	0.00
38.00	0.00	584	110.43	0.00
38.50	0.00	582	110.43	0.00
39.00	0.00	581	110.43	0.00
39.50	0.00	581	110.43	0.00
40.00	0.00	580	110.43	0.00
40.50	0.00	579	110.43	0.00
41.00	0.00	578	110.43	0.00
41.50	0.00	577	110.43	0.00
42.00	0.00	576	110.43	0.00
42.50	0.00	576	110.43	0.00
43.00	0.00	575	110.43	0.00
43.50	0.00	574	110.43	0.00
44.00	0.00	574	110.43	0.00
44.50	0.00	573	110.43	0.00
45.00	0.00	573	110.42	0.00
45.50	0.00	572	110.42	0.00
46.00	0.00	572	110.42	0.00
46.50	0.00	571	110.42	0.00
47.00	0.00	571	110.42	0.00
47.50	0.00	570	110.42	0.00
48.00	0.00	570	110.42	0.00
48.50	0.00	569	110.42	0.00
49.00	0.00	569	110.42	0.00
49.50	0.00	569	110.42	0.00
50.00	0.00	568	110.42	0.00
50.50	0.00	568	110.42	0.00
51.00	0.00	568	110.42	0.00
51.50	0.00	567	110.42	0.00

Hydrograph for Pond PC1: PC 1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	567	110.42	0.00
52.50	0.00	567	110.42	0.00
53.00	0.00	567	110.42	0.00
53.50	0.00	566	110.42	0.00
54.00	0.00	566	110.42	0.00
54.50	0.00	566	110.42	0.00
55.00	0.00	566	110.42	0.00
55.50	0.00	565	110.42	0.00
56.00	0.00	565	110.42	0.00
56.50	0.00	565	110.42	0.00
57.00	0.00	565	110.42	0.00
57.50	0.00	565	110.42	0.00
58.00	0.00	565	110.42	0.00
58.50	0.00	564	110.42	0.00
59.00	0.00	564	110.42	0.00
59.50	0.00	564	110.42	0.00
60.00	0.00	564	110.42	0.00
60.50	0.00	564	110.42	0.00
61.00	0.00	564	110.42	0.00
61.50	0.00	564	110.42	0.00
62.00	0.00	564	110.42	0.00
62.50	0.00	564	110.42	0.00
63.00	0.00	563	110.42	0.00
63.50	0.00	563	110.42	0.00
64.00	0.00	563	110.42	0.00
64.50	0.00	563	110.42	0.00
65.00	0.00	563	110.42	0.00
65.50	0.00	563	110.42	0.00
66.00	0.00	563	110.42	0.00
66.50	0.00	563	110.42	0.00
67.00	0.00	563	110.42	0.00
67.50	0.00	563	110.42	0.00
68.00	0.00	563	110.42	0.00
68.50	0.00	563	110.42	0.00
69.00	0.00	563	110.42	0.00
69.50	0.00	563	110.42	0.00
70.00	0.00	563	110.42	0.00
70.50	0.00	562	110.42	0.00
71.00	0.00	562	110.42	0.00
71.50	0.00	562	110.42	0.00
72.00	0.00	562	110.42	0.00

Hydrograph for Pond PP1: PPVMT 1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	110.17	0.00
0.50	0.00	0	110.17	0.00
1.00	0.01	2	110.17	0.01
1.50	0.02	2	110.17	0.02
2.00	0.02	3	110.17	0.02
2.50	0.02	3	110.17	0.02
3.00	0.02	4	110.17	0.02
3.50	0.02	4	110.17	0.02
4.00	0.03	4	110.17	0.03
4.50	0.03	4	110.17	0.03
5.00	0.03	4	110.17	0.03
5.50	0.03	5	110.17	0.03
6.00	0.03	5	110.17	0.03
6.50	0.04	5	110.18	0.04
7.00	0.04	6	110.18	0.04
7.50	0.04	7	110.18	0.04
8.00	0.05	7	110.18	0.05
8.50	0.05	8	110.18	0.05
9.00	0.06	9	110.18	0.06
9.50	0.07	11	110.18	0.07
10.00	0.09	13	110.18	0.09
10.50	0.10	16	110.18	0.10
11.00	0.15	28	110.20	0.15
11.50	0.25	61	110.23	0.24
12.00	**1.15**	**241**	**110.39**	**1.05**
12.50	**0.33**	**97**	**110.26**	**0.35**
13.00	0.17	44	110.21	0.19
13.50	0.11	18	110.19	0.12
14.00	0.09	14	110.18	0.09
14.50	0.07	12	110.18	0.07
15.00	0.06	9	110.18	0.06
15.50	0.05	8	110.18	0.05
16.00	0.05	8	110.18	0.05
16.50	0.05	7	110.18	0.05
17.00	0.04	6	110.18	0.04
17.50	0.04	6	110.18	0.04
18.00	0.03	5	110.17	0.03
18.50	0.03	5	110.17	0.03
19.00	0.03	5	110.17	0.03
19.50	0.03	5	110.17	0.03
20.00	0.03	4	110.17	0.03
20.50	0.03	4	110.17	0.03
21.00	0.03	4	110.17	0.03
21.50	0.03	4	110.17	0.03
22.00	0.02	4	110.17	0.02
22.50	0.02	4	110.17	0.02
23.00	0.02	3	110.17	0.02
23.50	0.02	3	110.17	0.02
24.00	0.02	3	110.17	0.02
24.50	0.00	0	110.17	0.00
25.00	0.00	0	110.17	0.00
25.50	0.00	0	110.17	0.00

Pervious Asphalt Pavement #1 Drain Time:
24.50-12.00 = 12.50 hours

Hydrograph for Pond PP1: PPVMT 1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
26.00	0.00	0	110.17	0.00
26.50	0.00	0	110.17	0.00
27.00	0.00	0	110.17	0.00
27.50	0.00	0	110.17	0.00
28.00	0.00	0	110.17	0.00
28.50	0.00	0	110.17	0.00
29.00	0.00	0	110.17	0.00
29.50	0.00	0	110.17	0.00
30.00	0.00	0	110.17	0.00
30.50	0.00	0	110.17	0.00
31.00	0.00	0	110.17	0.00
31.50	0.00	0	110.17	0.00
32.00	0.00	0	110.17	0.00
32.50	0.00	0	110.17	0.00
33.00	0.00	0	110.17	0.00
33.50	0.00	0	110.17	0.00
34.00	0.00	0	110.17	0.00
34.50	0.00	0	110.17	0.00
35.00	0.00	0	110.17	0.00
35.50	0.00	0	110.17	0.00
36.00	0.00	0	110.17	0.00
36.50	0.00	0	110.17	0.00
37.00	0.00	0	110.17	0.00
37.50	0.00	0	110.17	0.00
38.00	0.00	0	110.17	0.00
38.50	0.00	0	110.17	0.00
39.00	0.00	0	110.17	0.00
39.50	0.00	0	110.17	0.00
40.00	0.00	0	110.17	0.00
40.50	0.00	0	110.17	0.00
41.00	0.00	0	110.17	0.00
41.50	0.00	0	110.17	0.00
42.00	0.00	0	110.17	0.00
42.50	0.00	0	110.17	0.00
43.00	0.00	0	110.17	0.00
43.50	0.00	0	110.17	0.00
44.00	0.00	0	110.17	0.00
44.50	0.00	0	110.17	0.00
45.00	0.00	0	110.17	0.00
45.50	0.00	0	110.17	0.00
46.00	0.00	0	110.17	0.00
46.50	0.00	0	110.17	0.00
47.00	0.00	0	110.17	0.00
47.50	0.00	0	110.17	0.00
48.00	0.00	0	110.17	0.00
48.50	0.00	0	110.17	0.00
49.00	0.00	0	110.17	0.00
49.50	0.00	0	110.17	0.00
50.00	0.00	0	110.17	0.00
50.50	0.00	0	110.17	0.00
51.00	0.00	0	110.17	0.00
51.50	0.00	0	110.17	0.00

Hydrograph for Pond PP1: PPVMT 1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	0	110.17	0.00
52.50	0.00	0	110.17	0.00
53.00	0.00	0	110.17	0.00
53.50	0.00	0	110.17	0.00
54.00	0.00	0	110.17	0.00
54.50	0.00	0	110.17	0.00
55.00	0.00	0	110.17	0.00
55.50	0.00	0	110.17	0.00
56.00	0.00	0	110.17	0.00
56.50	0.00	0	110.17	0.00
57.00	0.00	0	110.17	0.00
57.50	0.00	0	110.17	0.00
58.00	0.00	0	110.17	0.00
58.50	0.00	0	110.17	0.00
59.00	0.00	0	110.17	0.00
59.50	0.00	0	110.17	0.00
60.00	0.00	0	110.17	0.00
60.50	0.00	0	110.17	0.00
61.00	0.00	0	110.17	0.00
61.50	0.00	0	110.17	0.00
62.00	0.00	0	110.17	0.00
62.50	0.00	0	110.17	0.00
63.00	0.00	0	110.17	0.00
63.50	0.00	0	110.17	0.00
64.00	0.00	0	110.17	0.00
64.50	0.00	0	110.17	0.00
65.00	0.00	0	110.17	0.00
65.50	0.00	0	110.17	0.00
66.00	0.00	0	110.17	0.00
66.50	0.00	0	110.17	0.00
67.00	0.00	0	110.17	0.00
67.50	0.00	0	110.17	0.00
68.00	0.00	0	110.17	0.00
68.50	0.00	0	110.17	0.00
69.00	0.00	0	110.17	0.00
69.50	0.00	0	110.17	0.00
70.00	0.00	0	110.17	0.00
70.50	0.00	0	110.17	0.00
71.00	0.00	0	110.17	0.00
71.50	0.00	0	110.17	0.00
72.00	0.00	0	110.17	0.00

Hydrograph for Pond PP2: PPVMT 2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	108.00	0.00
0.50	0.01	2	108.00	0.00
1.00	0.02	27	108.02	0.00
1.50	0.03	70	108.05	0.00
2.00	0.03	125	108.09	0.00
2.50	0.04	188	108.13	0.00
3.00	0.04	258	108.18	0.00
3.50	0.04	334	108.23	0.00
4.00	0.05	415	108.28	0.00
4.50	0.05	500	108.34	0.00
5.00	0.05	590	108.40	0.00
5.50	0.05	683	108.47	0.00
6.00	0.06	781	108.54	0.00
6.50	0.06	888	108.61	0.00
7.00	0.07	1,009	108.69	0.00
7.50	0.08	1,141	108.78	0.01
8.00	0.09	1,247	108.86	0.04
8.50	0.09	1,302	108.89	0.07
9.00	0.10	1,327	108.91	0.09
9.50	0.13	1,354	108.93	0.11
10.00	0.15	1,386	108.95	0.14
10.50	0.18	1,416	108.97	0.16
11.00	0.27	1,485	109.02	0.24
11.50	0.44	1,605	109.10	0.38
12.00	**2.07**	**2,181**	**109.50**	**1.50**
12.50	**0.60**	**1,847**	**109.27**	**0.78**
13.00	0.31	1,601	109.10	0.38
13.50	0.20	1,492	109.02	0.24
14.00	0.16	1,432	108.98	0.18
14.50	0.13	1,399	108.96	0.15
15.00	0.11	1,369	108.94	0.12
15.50	0.10	1,346	108.92	0.11
16.00	0.09	1,333	108.91	0.10
16.50	0.08	1,322	108.91	0.09
17.00	0.07	1,311	108.90	0.08
17.50	0.07	1,301	108.89	0.07
18.00	0.06	1,289	108.88	0.07
18.50	0.06	1,279	108.88	0.06
19.00	0.05	1,274	108.87	0.06
19.50	0.05	1,270	108.87	0.05
20.00	0.05	1,267	108.87	0.05
20.50	0.05	1,263	108.87	0.05
21.00	0.05	1,260	108.86	0.05
21.50	0.05	1,257	108.86	0.05
22.00	0.04	1,254	108.86	0.05
22.50	0.04	1,250	108.86	0.04
23.00	0.04	1,247	108.86	0.04
23.50	0.04	1,243	108.85	0.04
24.00	0.04	1,239	108.85	0.04
24.50	0.00	1,192	108.82	0.02
25.00	0.00	1,165	108.80	0.01
25.50	0.00	1,148	108.79	0.01

Pervious Asphalt Pavement #2 Drain Time:
24.50-12.00 = 12.50 hours

Hydrograph for Pond PP2: PPVMT 2 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
26.00	0.00	1,137	108.78	0.01
26.50	0.00	1,129	108.77	0.00
27.00	0.00	1,122	108.77	0.00
27.50	0.00	1,116	108.77	0.00
28.00	0.00	1,111	108.76	0.00
28.50	0.00	1,107	108.76	0.00
29.00	0.00	1,104	108.76	0.00
29.50	0.00	1,101	108.76	0.00
30.00	0.00	1,098	108.75	0.00
30.50	0.00	1,096	108.75	0.00
31.00	0.00	1,095	108.75	0.00
31.50	0.00	1,093	108.75	0.00
32.00	0.00	1,092	108.75	0.00
32.50	0.00	1,091	108.75	0.00
33.00	0.00	1,090	108.75	0.00
33.50	0.00	1,090	108.75	0.00
34.00	0.00	1,089	108.75	0.00
34.50	0.00	1,088	108.75	0.00
35.00	0.00	1,088	108.75	0.00
35.50	0.00	1,088	108.75	0.00
36.00	0.00	1,087	108.75	0.00
36.50	0.00	1,087	108.75	0.00
37.00	0.00	1,087	108.75	0.00
37.50	0.00	1,087	108.75	0.00
38.00	0.00	1,087	108.75	0.00
38.50	0.00	1,087	108.75	0.00
39.00	0.00	1,086	108.75	0.00
39.50	0.00	1,086	108.75	0.00
40.00	0.00	1,086	108.75	0.00
40.50	0.00	1,086	108.75	0.00
41.00	0.00	1,086	108.75	0.00
41.50	0.00	1,086	108.75	0.00
42.00	0.00	1,086	108.75	0.00
42.50	0.00	1,086	108.75	0.00
43.00	0.00	1,085	108.75	0.00
43.50	0.00	1,085	108.75	0.00
44.00	0.00	1,085	108.74	0.00
44.50	0.00	1,085	108.74	0.00
45.00	0.00	1,085	108.74	0.00
45.50	0.00	1,085	108.74	0.00
46.00	0.00	1,085	108.74	0.00
46.50	0.00	1,085	108.74	0.00
47.00	0.00	1,085	108.74	0.00
47.50	0.00	1,084	108.74	0.00
48.00	0.00	1,084	108.74	0.00
48.50	0.00	1,084	108.74	0.00
49.00	0.00	1,084	108.74	0.00
49.50	0.00	1,084	108.74	0.00
50.00	0.00	1,084	108.74	0.00
50.50	0.00	1,084	108.74	0.00
51.00	0.00	1,084	108.74	0.00
51.50	0.00	1,084	108.74	0.00

Hydrograph for Pond PP2: PPVMT 2 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	1,084	108.74	0.00
52.50	0.00	1,084	108.74	0.00
53.00	0.00	1,083	108.74	0.00
53.50	0.00	1,083	108.74	0.00
54.00	0.00	1,083	108.74	0.00
54.50	0.00	1,083	108.74	0.00
55.00	0.00	1,083	108.74	0.00
55.50	0.00	1,083	108.74	0.00
56.00	0.00	1,083	108.74	0.00
56.50	0.00	1,083	108.74	0.00
57.00	0.00	1,083	108.74	0.00
57.50	0.00	1,083	108.74	0.00
58.00	0.00	1,083	108.74	0.00
58.50	0.00	1,083	108.74	0.00
59.00	0.00	1,082	108.74	0.00
59.50	0.00	1,082	108.74	0.00
60.00	0.00	1,082	108.74	0.00
60.50	0.00	1,082	108.74	0.00
61.00	0.00	1,082	108.74	0.00
61.50	0.00	1,082	108.74	0.00
62.00	0.00	1,082	108.74	0.00
62.50	0.00	1,082	108.74	0.00
63.00	0.00	1,082	108.74	0.00
63.50	0.00	1,082	108.74	0.00
64.00	0.00	1,082	108.74	0.00
64.50	0.00	1,082	108.74	0.00
65.00	0.00	1,082	108.74	0.00
65.50	0.00	1,082	108.74	0.00
66.00	0.00	1,082	108.74	0.00
66.50	0.00	1,082	108.74	0.00
67.00	0.00	1,081	108.74	0.00
67.50	0.00	1,081	108.74	0.00
68.00	0.00	1,081	108.74	0.00
68.50	0.00	1,081	108.74	0.00
69.00	0.00	1,081	108.74	0.00
69.50	0.00	1,081	108.74	0.00
70.00	0.00	1,081	108.74	0.00
70.50	0.00	1,081	108.74	0.00
71.00	0.00	1,081	108.74	0.00
71.50	0.00	1,081	108.74	0.00
72.00	0.00	1,081	108.74	0.00

Hydrograph for Pond PP3: PPVMT 3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	109.00	0.00
0.50	0.00	0	109.00	0.00
1.00	0.01	0	109.00	0.01
1.50	0.01	0	109.00	0.01
2.00	0.01	0	109.00	0.01
2.50	0.01	0	109.00	0.01
3.00	0.01	0	109.00	0.01
3.50	0.01	0	109.00	0.01
4.00	0.02	0	109.00	0.02
4.50	0.02	0	109.00	0.02
5.00	0.02	0	109.00	0.02
5.50	0.02	0	109.00	0.02
6.00	0.02	0	109.00	0.02
6.50	0.02	0	109.00	0.02
7.00	0.02	0	109.00	0.02
7.50	0.03	0	109.00	0.03
8.00	0.03	0	109.00	0.03
8.50	0.03	0	109.00	0.03
9.00	0.03	0	109.00	0.03
9.50	0.04	0	109.00	0.04
10.00	0.05	0	109.00	0.05
10.50	0.06	0	109.00	0.06
11.00	0.09	0	109.00	0.09
11.50	0.15	0	109.00	0.15
12.00	**0.69**	**1**	**109.00**	**0.69**
12.50	**0.20**	**0**	**109.00**	**0.20**
13.00	0.10	0	109.00	0.10
13.50	0.07	0	109.00	0.07
14.00	0.05	0	109.00	0.05
14.50	0.04	0	109.00	0.04
15.00	0.04	0	109.00	0.04
15.50	0.03	0	109.00	0.03
16.00	0.03	0	109.00	0.03
16.50	0.03	0	109.00	0.03
17.00	0.02	0	109.00	0.02
17.50	0.02	0	109.00	0.02
18.00	0.02	0	109.00	0.02
18.50	0.02	0	109.00	0.02
19.00	0.02	0	109.00	0.02
19.50	0.02	0	109.00	0.02
20.00	0.02	0	109.00	0.02
20.50	0.02	0	109.00	0.02
21.00	0.02	0	109.00	0.02
21.50	0.02	0	109.00	0.02
22.00	0.01	0	109.00	0.01
22.50	0.01	0	109.00	0.01
23.00	0.01	0	109.00	0.01
23.50	0.01	0	109.00	0.01
24.00	0.01	0	109.00	0.01
24.50	0.00	0	109.00	0.00
25.00	0.00	0	109.00	0.00
25.50	0.00	0	109.00	0.00

Pervious Asphalt Pavement #3 Drain Time:
24.50-12.00 = 12.50 hours

Hydrograph for Pond PP3: PPVMT 3 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
26.00	0.00	0	109.00	0.00
26.50	0.00	0	109.00	0.00
27.00	0.00	0	109.00	0.00
27.50	0.00	0	109.00	0.00
28.00	0.00	0	109.00	0.00
28.50	0.00	0	109.00	0.00
29.00	0.00	0	109.00	0.00
29.50	0.00	0	109.00	0.00
30.00	0.00	0	109.00	0.00
30.50	0.00	0	109.00	0.00
31.00	0.00	0	109.00	0.00
31.50	0.00	0	109.00	0.00
32.00	0.00	0	109.00	0.00
32.50	0.00	0	109.00	0.00
33.00	0.00	0	109.00	0.00
33.50	0.00	0	109.00	0.00
34.00	0.00	0	109.00	0.00
34.50	0.00	0	109.00	0.00
35.00	0.00	0	109.00	0.00
35.50	0.00	0	109.00	0.00
36.00	0.00	0	109.00	0.00
36.50	0.00	0	109.00	0.00
37.00	0.00	0	109.00	0.00
37.50	0.00	0	109.00	0.00
38.00	0.00	0	109.00	0.00
38.50	0.00	0	109.00	0.00
39.00	0.00	0	109.00	0.00
39.50	0.00	0	109.00	0.00
40.00	0.00	0	109.00	0.00
40.50	0.00	0	109.00	0.00
41.00	0.00	0	109.00	0.00
41.50	0.00	0	109.00	0.00
42.00	0.00	0	109.00	0.00
42.50	0.00	0	109.00	0.00
43.00	0.00	0	109.00	0.00
43.50	0.00	0	109.00	0.00
44.00	0.00	0	109.00	0.00
44.50	0.00	0	109.00	0.00
45.00	0.00	0	109.00	0.00
45.50	0.00	0	109.00	0.00
46.00	0.00	0	109.00	0.00
46.50	0.00	0	109.00	0.00
47.00	0.00	0	109.00	0.00
47.50	0.00	0	109.00	0.00
48.00	0.00	0	109.00	0.00
48.50	0.00	0	109.00	0.00
49.00	0.00	0	109.00	0.00
49.50	0.00	0	109.00	0.00
50.00	0.00	0	109.00	0.00
50.50	0.00	0	109.00	0.00
51.00	0.00	0	109.00	0.00
51.50	0.00	0	109.00	0.00

Hydrograph for Pond PP3: PPVMT 3 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	0	109.00	0.00
52.50	0.00	0	109.00	0.00
53.00	0.00	0	109.00	0.00
53.50	0.00	0	109.00	0.00
54.00	0.00	0	109.00	0.00
54.50	0.00	0	109.00	0.00
55.00	0.00	0	109.00	0.00
55.50	0.00	0	109.00	0.00
56.00	0.00	0	109.00	0.00
56.50	0.00	0	109.00	0.00
57.00	0.00	0	109.00	0.00
57.50	0.00	0	109.00	0.00
58.00	0.00	0	109.00	0.00
58.50	0.00	0	109.00	0.00
59.00	0.00	0	109.00	0.00
59.50	0.00	0	109.00	0.00
60.00	0.00	0	109.00	0.00
60.50	0.00	0	109.00	0.00
61.00	0.00	0	109.00	0.00
61.50	0.00	0	109.00	0.00
62.00	0.00	0	109.00	0.00
62.50	0.00	0	109.00	0.00
63.00	0.00	0	109.00	0.00
63.50	0.00	0	109.00	0.00
64.00	0.00	0	109.00	0.00
64.50	0.00	0	109.00	0.00
65.00	0.00	0	109.00	0.00
65.50	0.00	0	109.00	0.00
66.00	0.00	0	109.00	0.00
66.50	0.00	0	109.00	0.00
67.00	0.00	0	109.00	0.00
67.50	0.00	0	109.00	0.00
68.00	0.00	0	109.00	0.00
68.50	0.00	0	109.00	0.00
69.00	0.00	0	109.00	0.00
69.50	0.00	0	109.00	0.00
70.00	0.00	0	109.00	0.00
70.50	0.00	0	109.00	0.00
71.00	0.00	0	109.00	0.00
71.50	0.00	0	109.00	0.00
72.00	0.00	0	109.00	0.00

Hydrograph for Pond PP4: PPVMT 4

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	108.33	0.00
0.50	0.00	0	108.33	0.00
1.00	0.00	0	108.33	0.00
1.50	0.00	0	108.33	0.00
2.00	0.00	0	108.33	0.00
2.50	0.00	0	108.33	0.00
3.00	0.00	0	108.33	0.00
3.50	0.00	0	108.33	0.00
4.00	0.00	0	108.33	0.00
4.50	0.00	0	108.33	0.00
5.00	0.00	0	108.33	0.00
5.50	0.00	0	108.33	0.00
6.00	0.00	0	108.33	0.00
6.50	0.00	0	108.33	0.00
7.00	0.00	0	108.33	0.00
7.50	0.01	0	108.33	0.01
8.00	0.01	0	108.33	0.01
8.50	0.01	0	108.33	0.01
9.00	0.01	0	108.33	0.01
9.50	0.01	1	108.33	0.01
10.00	0.01	1	108.33	0.01
10.50	0.01	1	108.34	0.01
11.00	0.02	1	108.34	0.02
11.50	0.03	2	108.34	0.03
12.00	**0.14**	**11**	**108.41**	**0.13**
12.50	**0.04**	**3**	**108.35**	**0.04**
13.00	0.02	1	108.34	0.02
13.50	0.01	1	108.34	0.01
14.00	0.01	1	108.33	0.01
14.50	0.01	1	108.33	0.01
15.00	0.01	0	108.33	0.01
15.50	0.01	0	108.33	0.01
16.00	0.01	0	108.33	0.01
16.50	0.01	0	108.33	0.01
17.00	0.00	0	108.33	0.00
17.50	0.00	0	108.33	0.00
18.00	0.00	0	108.33	0.00
18.50	0.00	0	108.33	0.00
19.00	0.00	0	108.33	0.00
19.50	0.00	0	108.33	0.00
20.00	0.00	0	108.33	0.00
20.50	0.00	0	108.33	0.00
21.00	0.00	0	108.33	0.00
21.50	0.00	0	108.33	0.00
22.00	0.00	0	108.33	0.00
22.50	0.00	0	108.33	0.00
23.00	0.00	0	108.33	0.00
23.50	0.00	0	108.33	0.00
24.00	0.00	0	108.33	0.00
24.50	0.00	0	108.33	0.00
25.00	0.00	0	108.33	0.00
25.50	0.00	0	108.33	0.00

Pervious Asphalt Pavement #4 Drain Time:
17.00-12.00 = 5 hours

Hydrograph for Pond PP4: PPVMT 4 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
26.00	0.00	0	108.33	0.00
26.50	0.00	0	108.33	0.00
27.00	0.00	0	108.33	0.00
27.50	0.00	0	108.33	0.00
28.00	0.00	0	108.33	0.00
28.50	0.00	0	108.33	0.00
29.00	0.00	0	108.33	0.00
29.50	0.00	0	108.33	0.00
30.00	0.00	0	108.33	0.00
30.50	0.00	0	108.33	0.00
31.00	0.00	0	108.33	0.00
31.50	0.00	0	108.33	0.00
32.00	0.00	0	108.33	0.00
32.50	0.00	0	108.33	0.00
33.00	0.00	0	108.33	0.00
33.50	0.00	0	108.33	0.00
34.00	0.00	0	108.33	0.00
34.50	0.00	0	108.33	0.00
35.00	0.00	0	108.33	0.00
35.50	0.00	0	108.33	0.00
36.00	0.00	0	108.33	0.00
36.50	0.00	0	108.33	0.00
37.00	0.00	0	108.33	0.00
37.50	0.00	0	108.33	0.00
38.00	0.00	0	108.33	0.00
38.50	0.00	0	108.33	0.00
39.00	0.00	0	108.33	0.00
39.50	0.00	0	108.33	0.00
40.00	0.00	0	108.33	0.00
40.50	0.00	0	108.33	0.00
41.00	0.00	0	108.33	0.00
41.50	0.00	0	108.33	0.00
42.00	0.00	0	108.33	0.00
42.50	0.00	0	108.33	0.00
43.00	0.00	0	108.33	0.00
43.50	0.00	0	108.33	0.00
44.00	0.00	0	108.33	0.00
44.50	0.00	0	108.33	0.00
45.00	0.00	0	108.33	0.00
45.50	0.00	0	108.33	0.00
46.00	0.00	0	108.33	0.00
46.50	0.00	0	108.33	0.00
47.00	0.00	0	108.33	0.00
47.50	0.00	0	108.33	0.00
48.00	0.00	0	108.33	0.00
48.50	0.00	0	108.33	0.00
49.00	0.00	0	108.33	0.00
49.50	0.00	0	108.33	0.00
50.00	0.00	0	108.33	0.00
50.50	0.00	0	108.33	0.00
51.00	0.00	0	108.33	0.00
51.50	0.00	0	108.33	0.00

Hydrograph for Pond PP4: PPVMT 4 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	0	108.33	0.00
52.50	0.00	0	108.33	0.00
53.00	0.00	0	108.33	0.00
53.50	0.00	0	108.33	0.00
54.00	0.00	0	108.33	0.00
54.50	0.00	0	108.33	0.00
55.00	0.00	0	108.33	0.00
55.50	0.00	0	108.33	0.00
56.00	0.00	0	108.33	0.00
56.50	0.00	0	108.33	0.00
57.00	0.00	0	108.33	0.00
57.50	0.00	0	108.33	0.00
58.00	0.00	0	108.33	0.00
58.50	0.00	0	108.33	0.00
59.00	0.00	0	108.33	0.00
59.50	0.00	0	108.33	0.00
60.00	0.00	0	108.33	0.00
60.50	0.00	0	108.33	0.00
61.00	0.00	0	108.33	0.00
61.50	0.00	0	108.33	0.00
62.00	0.00	0	108.33	0.00
62.50	0.00	0	108.33	0.00
63.00	0.00	0	108.33	0.00
63.50	0.00	0	108.33	0.00
64.00	0.00	0	108.33	0.00
64.50	0.00	0	108.33	0.00
65.00	0.00	0	108.33	0.00
65.50	0.00	0	108.33	0.00
66.00	0.00	0	108.33	0.00
66.50	0.00	0	108.33	0.00
67.00	0.00	0	108.33	0.00
67.50	0.00	0	108.33	0.00
68.00	0.00	0	108.33	0.00
68.50	0.00	0	108.33	0.00
69.00	0.00	0	108.33	0.00
69.50	0.00	0	108.33	0.00
70.00	0.00	0	108.33	0.00
70.50	0.00	0	108.33	0.00
71.00	0.00	0	108.33	0.00
71.50	0.00	0	108.33	0.00
72.00	0.00	0	108.33	0.00

Hydrograph for Pond PP5: PPVMT 5

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	108.33	0.00
0.50	0.01	2	108.33	0.00
1.00	0.02	24	108.35	0.00
1.50	0.02	63	108.38	0.00
2.00	0.03	113	108.42	0.00
2.50	0.03	170	108.46	0.00
3.00	0.04	231	108.51	0.01
3.50	0.04	276	108.55	0.02
4.00	0.04	299	108.57	0.03
4.50	0.04	310	108.57	0.04
5.00	0.05	316	108.58	0.04
5.50	0.05	319	108.58	0.05
6.00	0.05	322	108.58	0.05
6.50	0.06	328	108.59	0.05
7.00	0.06	337	108.60	0.06
7.50	0.07	345	108.60	0.07
8.00	0.08	353	108.61	0.07
8.50	0.08	361	108.61	0.08
9.00	0.09	368	108.62	0.09
9.50	0.11	385	108.63	0.10
10.00	0.14	407	108.65	0.13
10.50	0.16	427	108.67	0.15
11.00	0.24	477	108.71	0.22
11.50	0.39	561	108.77	0.36
12.00	**1.83**	**984**	**109.11**	**1.46**
12.50	**0.53**	**690**	**108.87**	**0.63**
13.00	0.27	538	108.75	0.32
13.50	0.18	468	108.70	0.20
14.00	0.14	430	108.67	0.15
14.50	0.12	409	108.65	0.13
15.00	0.10	388	108.64	0.11
15.50	0.09	373	108.62	0.09
16.00	0.08	365	108.62	0.08
16.50	0.07	357	108.61	0.08
17.00	0.07	350	108.61	0.07
17.50	0.06	342	108.60	0.06
18.00	0.05	334	108.59	0.06
18.50	0.05	328	108.59	0.05
19.00	0.05	325	108.59	0.05
19.50	0.05	322	108.58	0.05
20.00	0.05	320	108.58	0.05
20.50	0.04	317	108.58	0.04
21.00	0.04	315	108.58	0.04
21.50	0.04	313	108.58	0.04
22.00	0.04	311	108.58	0.04
22.50	0.04	308	108.57	0.04
23.00	0.04	306	108.57	0.04
23.50	0.03	303	108.57	0.04
24.00	0.03	300	108.57	0.03
24.50	0.00	262	108.54	0.01
25.00	0.00	242	108.52	0.01
25.50	0.00	231	108.51	0.01

Pervious Asphalt Pavement #5 Drain Time:
24.50-12.00 = 12.50 hours

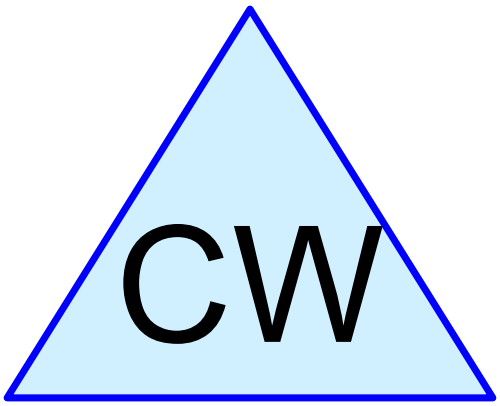
Hydrograph for Pond PP5: PPVMT 5 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
26.00	0.00	223	108.51	0.00
26.50	0.00	217	108.50	0.00
27.00	0.00	213	108.50	0.00
27.50	0.00	210	108.50	0.00
28.00	0.00	208	108.49	0.00
28.50	0.00	206	108.49	0.00
29.00	0.00	205	108.49	0.00
29.50	0.00	204	108.49	0.00
30.00	0.00	203	108.49	0.00
30.50	0.00	202	108.49	0.00
31.00	0.00	201	108.49	0.00
31.50	0.00	200	108.49	0.00
32.00	0.00	200	108.49	0.00
32.50	0.00	199	108.49	0.00
33.00	0.00	198	108.49	0.00
33.50	0.00	198	108.49	0.00
34.00	0.00	197	108.49	0.00
34.50	0.00	197	108.49	0.00
35.00	0.00	196	108.48	0.00
35.50	0.00	196	108.48	0.00
36.00	0.00	195	108.48	0.00
36.50	0.00	195	108.48	0.00
37.00	0.00	195	108.48	0.00
37.50	0.00	194	108.48	0.00
38.00	0.00	194	108.48	0.00
38.50	0.00	194	108.48	0.00
39.00	0.00	194	108.48	0.00
39.50	0.00	193	108.48	0.00
40.00	0.00	193	108.48	0.00
40.50	0.00	193	108.48	0.00
41.00	0.00	193	108.48	0.00
41.50	0.00	192	108.48	0.00
42.00	0.00	192	108.48	0.00
42.50	0.00	192	108.48	0.00
43.00	0.00	192	108.48	0.00
43.50	0.00	192	108.48	0.00
44.00	0.00	192	108.48	0.00
44.50	0.00	192	108.48	0.00
45.00	0.00	192	108.48	0.00
45.50	0.00	191	108.48	0.00
46.00	0.00	191	108.48	0.00
46.50	0.00	191	108.48	0.00
47.00	0.00	191	108.48	0.00
47.50	0.00	191	108.48	0.00
48.00	0.00	191	108.48	0.00
48.50	0.00	191	108.48	0.00
49.00	0.00	191	108.48	0.00
49.50	0.00	191	108.48	0.00
50.00	0.00	191	108.48	0.00
50.50	0.00	191	108.48	0.00
51.00	0.00	191	108.48	0.00
51.50	0.00	191	108.48	0.00

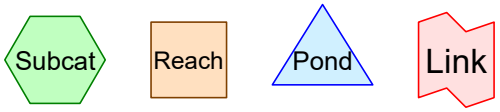
Hydrograph for Pond PP5: PPVMT 5 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	191	108.48	0.00
52.50	0.00	191	108.48	0.00
53.00	0.00	191	108.48	0.00
53.50	0.00	190	108.48	0.00
54.00	0.00	190	108.48	0.00
54.50	0.00	190	108.48	0.00
55.00	0.00	190	108.48	0.00
55.50	0.00	190	108.48	0.00
56.00	0.00	190	108.48	0.00
56.50	0.00	190	108.48	0.00
57.00	0.00	190	108.48	0.00
57.50	0.00	190	108.48	0.00
58.00	0.00	190	108.48	0.00
58.50	0.00	190	108.48	0.00
59.00	0.00	190	108.48	0.00
59.50	0.00	190	108.48	0.00
60.00	0.00	190	108.48	0.00
60.50	0.00	190	108.48	0.00
61.00	0.00	190	108.48	0.00
61.50	0.00	190	108.48	0.00
62.00	0.00	190	108.48	0.00
62.50	0.00	190	108.48	0.00
63.00	0.00	190	108.48	0.00
63.50	0.00	190	108.48	0.00
64.00	0.00	190	108.48	0.00
64.50	0.00	190	108.48	0.00
65.00	0.00	190	108.48	0.00
65.50	0.00	190	108.48	0.00
66.00	0.00	190	108.48	0.00
66.50	0.00	190	108.48	0.00
67.00	0.00	190	108.48	0.00
67.50	0.00	190	108.48	0.00
68.00	0.00	190	108.48	0.00
68.50	0.00	190	108.48	0.00
69.00	0.00	190	108.48	0.00
69.50	0.00	190	108.48	0.00
70.00	0.00	190	108.48	0.00
70.50	0.00	190	108.48	0.00
71.00	0.00	190	108.48	0.00
71.50	0.00	190	108.48	0.00
72.00	0.00	190	108.48	0.00

Emergency Spillway



Constructed Wetlands (walls with ledge)



Routing Diagram for NJA240262.00 - Pre vs Post
Prepared by Bohler, Printed 6/11/2025
HydroCAD® 10.20-5c s/n 03478 © 2023 HydroCAD Software Solutions LLC

Summary for Pond CW: Constructed Wetlands (walls with ledge)

Inflow Area = 1.836 ac, 80.45% Impervious, Inflow Depth = 16.05" for Failure event
Inflow = 28.11 cfs @ 12.10 hrs, Volume= 2.455 af
Outflow = 8.02 cfs @ 12.35 hrs, Volume= 2.140 af, Atten= 71%, Lag= 15.2 min
Primary = 8.02 cfs @ 12.35 hrs, Volume= 2.140 af
Routed to Link PPOA1 : PPOA-1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 109.30' @ 12.35 hrs Surf.Area= 8,617 sf Storage= 41,850 cf

Plug-Flow detention time= 181.5 min calculated for 2.140 af (87% of inflow)
Center-of-Mass det. time= 114.8 min (875.8 - 761.0)

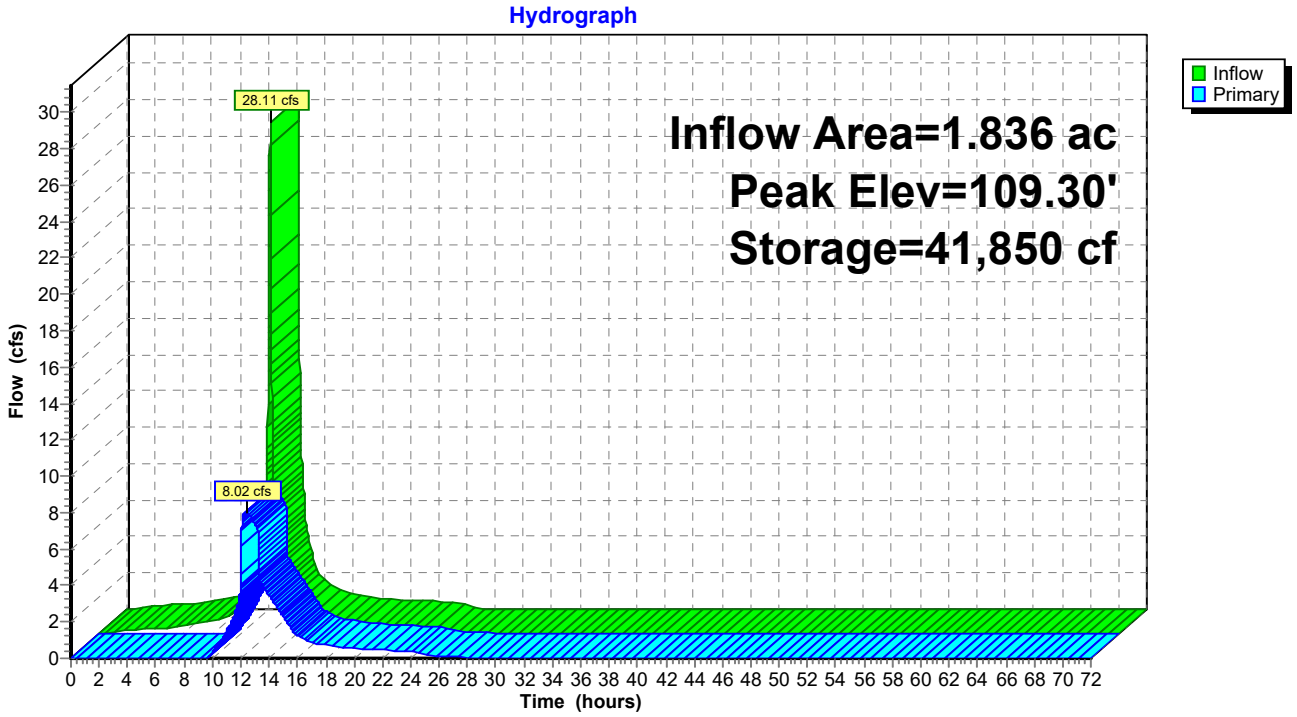
Volume	Invert	Avail.Storage	Storage Description
#1	104.00'	45,333 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
104.00	5,936	0	0
105.00	6,640	6,288	6,288
105.01	8,059	73	6,361
106.00	8,149	8,023	14,384
107.00	8,249	8,199	22,583
108.00	8,349	8,299	30,882
109.00	8,449	8,399	39,281
109.70	8,840	6,051	45,333

Device	Routing	Invert	Outlet Devices
#1	Primary	104.00'	**15.0" Round Culvert** L= 300.0' Ke= 0.500 Inlet / Outlet Invert= 104.00' / 103.10' S= 0.0030 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	104.20'	**2.5" Vert. Orifice X 0.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	105.92'	**12.2" W x 7.7" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	108.00'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.02 cfs @ 12.35 hrs HW=109.30' (Free Discharge)
└**1=Culvert** (Barrel Controls 8.02 cfs @ 6.54 fps)
  ├**2=Orifice** (Controls 0.00 cfs)
  ├**3=Orifice/Grate** (Passes < 5.49 cfs potential flow)
  └**4=Orifice/Grate** (Passes < 77.63 cfs potential flow)

Pond CW: Constructed Wetlands (walls with ledge)



Groundwater Recharge Worksheet

New Jersey Groundwater Recharge Spreadsheet Version 2.0 November 2003

Annual Groundwater Recharge Analysis (based on GSR-32)

Select Township ↓	Average Annual P (in)	Climatic Factor
MIDDLESEX CO., PERTH AMBOY CITY	47.8	1.53

Project Name:	APR North Brunswick
Description:	NJA240262.00
Analysis Date:	06/09/25

Pre-Developed Conditions

Land Segment	Area (acres)	TR-55 Land Cover	Soil	Annual Recharge (in)	Annual Recharge (cu.ft)
1	2.378	Woods	Fallsington	0.0	-
2	0.06	Open space	Fallsington	0.0	-
3	0.065	Woods-grass combination	Fallsington	0.0	-
4	0				
5	0				
6					
7	0				
8	0				
9	0				
10	0				
11	0				
12	0				
13	0				
14	0				
15	0				
Total =	2.5			Total Annual Recharge (in)	Total Annual Recharge (cu-ft)
				0.0	-

Post-Developed Conditions

Land Segment	Area (acres)	TR-55 Land Cover	Soil	Annual Recharge (in)	Annual Recharge (cu.ft)
1	1.663	Impervious areas	Fallsington	0.0	-
2	0.84	Open space	Fallsington	0.0	-
3	0				
4	0				
5	0				
6	0				
7	0				
8	0				
9	0				
10	0				
11	0				
12	0				
13	0				
14	0				
15	0				
Total =	2.5			Total Annual Recharge (in)	Total Annual Recharge (cu.ft)
				0.0	-

Annual Recharge Requirements Calculation ↓

% of Pre-Developed Annual Recharge to Preserve =	100%	Total Impervious Area (sq.ft) 72,440
Post-Development Annual Recharge Deficit=	*0*	(cubic feet)

Recharge Efficiency Parameters Calculations (area averages)

RWC=	0.00	(in)	DRWC= 0.00	(in)
ERWC =	0.00	(in)	EDRWC= 0.00	(in)

Procedure to fill the Pre-Development and Post-Development Conditions Tables

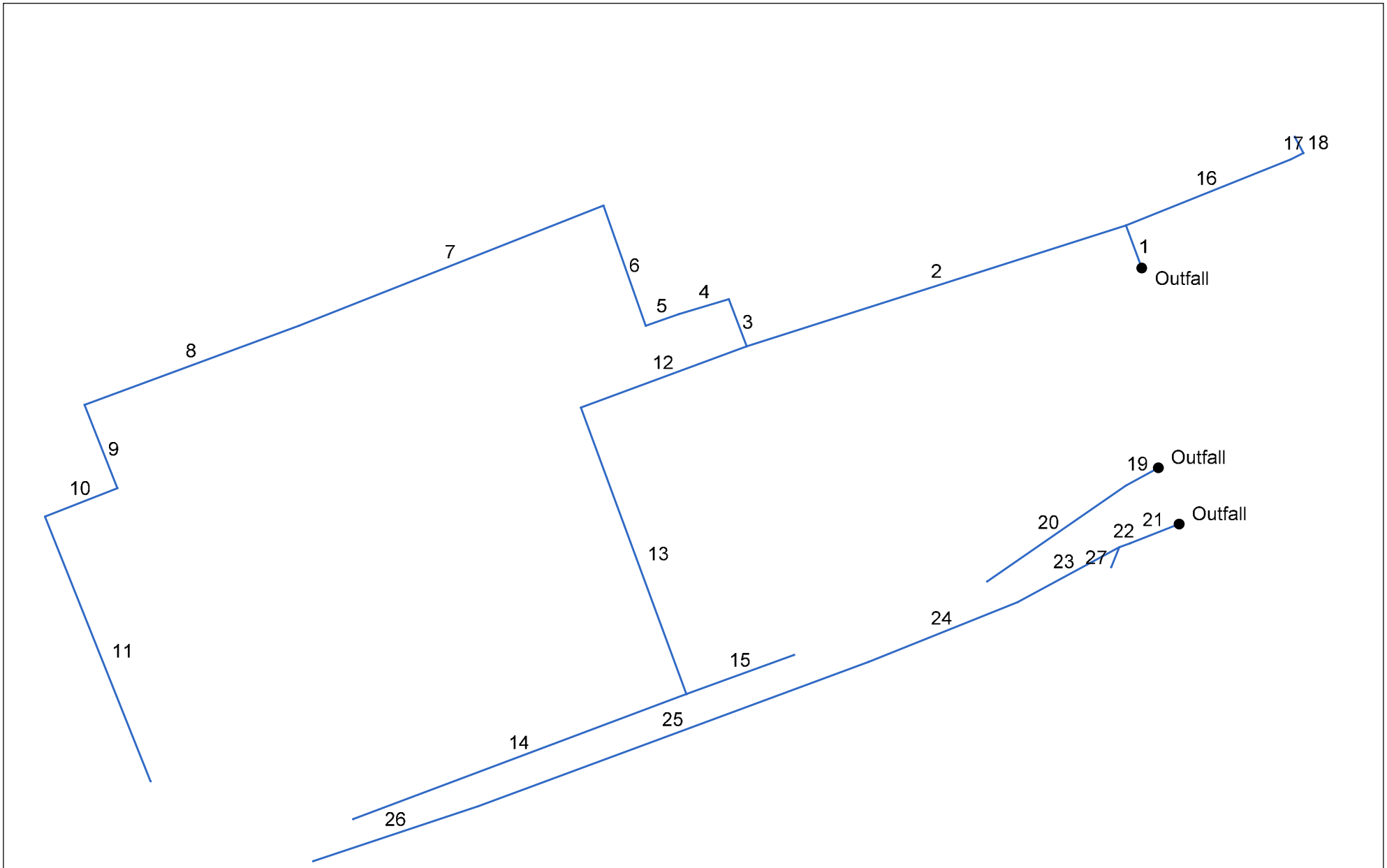
For each land segment, first enter the area, then select TR-55 Land Cover, then select Soil. Start from the top of the table and proceed downward. Don't leave blank rows (with A=0) in between your segment entries. Rows with A=0 will not be displayed or used in calculations. For impervious areas outside of standard lots select "Impervious Areas" as the Land Cover. Soil type for impervious areas are only required if an infiltration facility will be built within these areas.

E. CONVEYANCE CALCULATIONS

- **Pipe Sizing**
  - **Run 1**
  - **Run 2**
- **Riprap Calculations**

Pipe Run 1

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: NJA240262.00 Pipe Sizing Run1.stm	Number of lines: 27	Date: 6/9/2025

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	16.957	0.00	1.24	0.00	0.00	1.23	10.0	13.7	6.9	8.45	27.91	5.75	24	1.30	104.00	104.22	104.88	105.26	106.28	111.00	MH-110 - COP-1
2	1	147.519	0.14	1.13	0.99	0.14	1.12	10.0	13.2	7.0	7.79	10.35	5.95	18	0.83	104.25	105.47	105.26	106.55	111.00	113.10	MH-109 - MH-110
3	2	18.763	0.00	0.44	0.00	0.00	0.43	10.0	13.1	7.0	3.04	3.96	3.32	15	0.32	105.67	105.73	106.55	106.59	113.10	106.97	MW-108 - MH-109
4	3	19.354	0.00	0.44	0.00	0.00	0.43	10.0	13.1	7.0	3.04	5.21	8.72	8	15.86	105.73	108.80	106.77	109.46	106.97	110.25	MW-108 DROP
5	4	13.015	0.08	0.44	0.98	0.08	0.43	10.0	13.0	7.0	3.05	3.88	3.50	15	0.31	108.71	108.75	109.54	109.59	110.25	112.40	E-107 - MW-108
6	5	47.437	0.14	0.36	0.99	0.14	0.36	10.0	12.8	7.1	2.52	3.80	2.71	15	0.30	108.85	108.99	109.78	109.84	112.40	112.45	E-106 - E-107
7	6	121.439	0.00	0.22	0.00	0.00	0.22	10.0	11.8	7.3	1.58	3.81	2.15	15	0.30	109.09	109.45	109.96	110.08	112.45	114.00	MH-105 - B-106
8	7	84.642	0.07	0.22	0.99	0.07	0.22	10.0	11.3	7.4	1.60	3.80	2.77	15	0.30	109.45	109.70	110.09	110.26	114.00	112.74	B-104 - MH-105
9	8	33.276	0.00	0.15	0.00	0.00	0.15	10.0	11.0	7.4	1.10	3.83	2.06	15	0.30	109.80	109.90	110.40	110.43	112.74	113.08	MH-103 - B-104
10	9	28.836	0.09	0.15	0.99	0.09	0.15	10.0	10.8	7.5	1.11	3.91	2.47	15	0.31	109.99	110.08	110.51	110.55	113.08	112.25	E-102 - MH-103
11	10	105.906	0.06	0.06	0.99	0.06	0.06	10.0	10.0	7.7	0.45	3.85	2.10	15	0.30	110.42	110.74	110.71	111.03	112.25	112.57	E-101 - E-102
12	2	65.524	0.30	0.55	0.99	0.30	0.54	10.0	12.1	7.2	3.92	6.97	5.28	15	0.99	106.35	107.00	107.02	107.80	113.10	113.35	MH-303 - MH-109
13	12	113.512	0.00	0.25	0.00	0.00	0.25	10.0	11.6	7.3	1.81	6.98	4.08	15	1.00	107.35	108.48	107.80	109.01	113.35	111.70	E-302 - MH-303
14	13	132.000	0.04	0.04	0.99	0.04	0.04	10.0	10.0	7.7	0.30	3.80	1.37	15	0.30	108.58	108.97	109.01	109.20	111.70	111.95	E-301 - E-302
15	13	42.504	0.21	0.21	0.99	0.21	0.21	10.0	10.0	7.7	1.59	0.06	18.24	4	0.09	108.68	108.72	109.01	134.38	111.70	109.72	Pipe - (42)
16	1	65.670	0.00	0.11	0.00	0.00	0.11	10.0	10.1	7.6	0.83	4.96	1.86	15	0.50	104.32	104.65	105.26	105.01	111.00	110.00	MW-202 - MH-110
17	16	5.448	0.00	0.11	0.00	0.00	0.11	10.0	10.0	7.6	0.83	0.97	3.13	8	0.55	104.65	104.68	105.13	105.16	110.00	110.00	MW-202 DROP
18	17	6.912	0.11	0.11	0.99	0.11	0.11	10.0	10.0	7.7	0.83	3.76	2.46	15	0.29	107.63	107.65	108.03	108.05	110.00	109.84	E-201 - MW-202
19	End	13.712	0.10	0.12	0.99	0.10	0.12	10.0	10.5	7.5	0.90	7.07	2.35	15	1.02	104.00	104.14	104.54	104.51	104.00	111.75	B-402 - COP-2
20	19	62.634	0.02	0.02	0.99	0.02	0.02	10.0	10.0	7.7	0.15	7.13	2.08	15	1.04	107.58	108.23	107.71	108.38	111.75	112.50	B-401 - B-402
21	End	19.676	0.00	0.19	0.00	0.00	0.17	10.0	12.6	7.1	1.23	5.90	1.00	15	0.71	104.00	104.14	107.63	107.64	105.45	105.59	MW-506 - COP-3
22	21	4.167	0.00	0.19	0.00	0.00	0.17	10.0	12.6	7.1	1.23	2.67	1.57	12	0.48	104.14	104.16	107.64	107.64	105.59	108.68	MW-507 DROP

Project File: NJA240262.00 Pipe Sizing Run1.stm

Number of lines: 27

Run Date: 6/9/2025

NOTES:Intensity = 545.78 / (Inlet time + 28.60) ^ 1.17; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
23	22	42.843	0.00	0.14	0.00	0.00	0.13	10.0	12.2	7.2	0.90	3.70	1.93	15	0.28	107.12	107.24	107.67	107.71	108.68	111.00	MH-505 - MW-506
24	23	59.478	0.03	0.14	0.65	0.02	0.13	10.0	11.8	7.3	0.91	3.85	2.36	15	0.30	107.24	107.42	107.72	107.83	111.00	110.50	YARD-504 - MH-5
25	24	154.303	0.03	0.11	0.99	0.03	0.11	10.0	10.7	7.5	0.80	3.86	2.41	15	0.30	107.42	107.89	107.85	108.26	110.50	110.50	YARD-503 - YAR
26	25	64.537	0.08	0.08	0.96	0.08	0.08	10.0	10.0	7.7	0.59	1.18	1.50	12	0.09	107.89	107.95	108.39	108.45	110.50	109.08	E-501 -YARD-503
27	22	8.028	0.05	0.05	0.95	0.05	0.05	10.0	10.0	7.7	0.36	3.49	0.93	15	0.25	107.22	107.24	107.67	107.67	108.68	110.00	E-507 - MW-506

Project File: NJA240262.00 Pipe Sizing Run1.stm

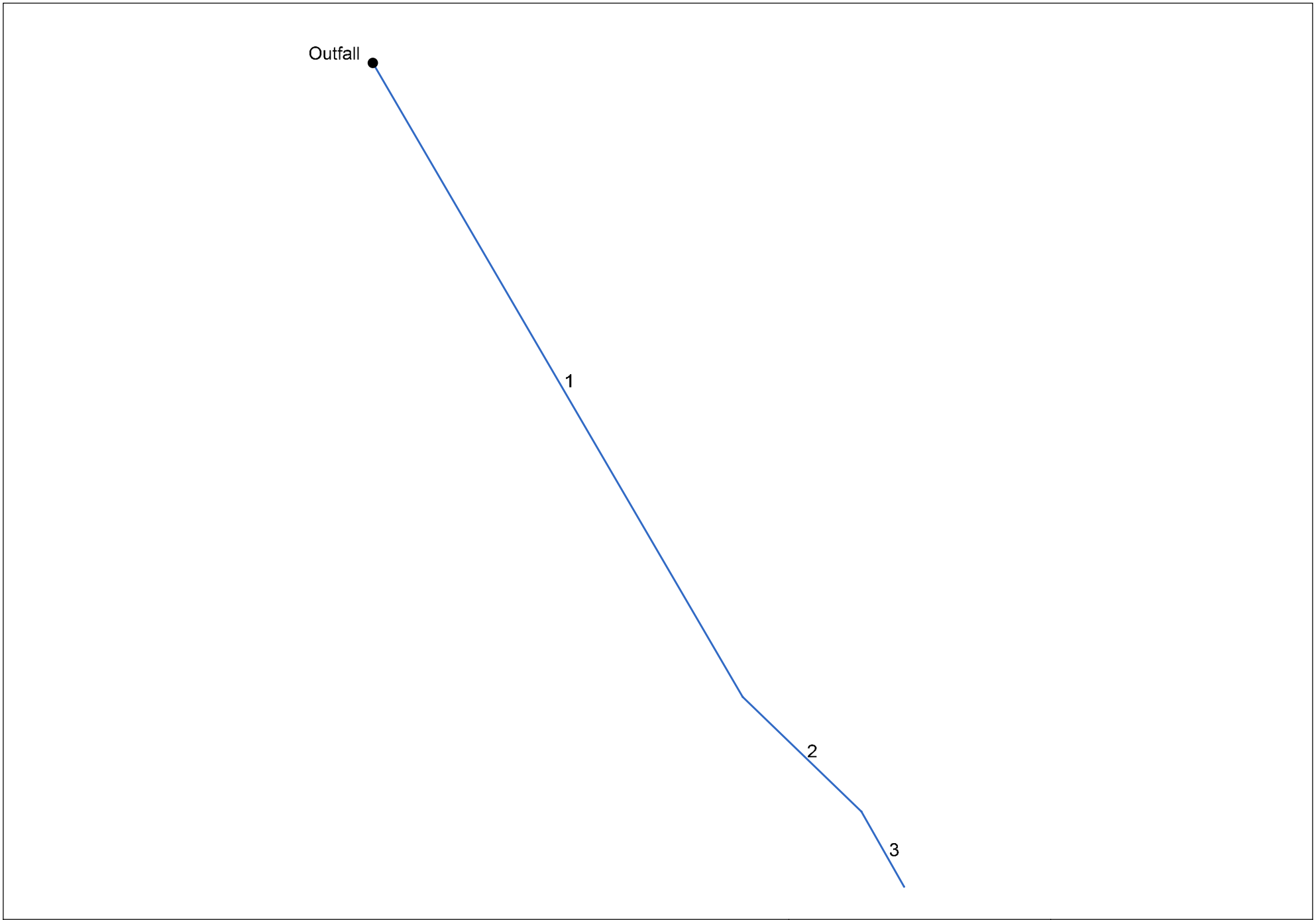
Number of lines: 27

Run Date: 6/9/2025

NOTES:Intensity = 545.78 / (Inlet time + 28.60) ^ 1.17; Return period =Yrs. 100 ; c = cir e = ellip b = box

Pipe Run 2

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: NJA240262.00 Pipe Sizing Run3.stm	Number of lines: 3	Date: 6/12/2025

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	229.129	0.00	0.00	0.00	0.00	0.00	10.0	10.5	0.0	3.35	3.54	3.59	15	0.30	103.09	103.78	103.83	105.02	112.50	112.00	Pipe - (28)
2	1	48.879	0.00	0.00	0.00	0.00	0.00	10.0	10.2	0.0	3.35	3.46	2.73	15	0.29	103.78	103.92	105.05	105.17	112.00	111.02	Pipe - (27)
3	2	26.993	0.00	0.00	0.99	0.00	0.00	10.0	10.0	0.0	3.35	3.52	2.73	15	0.30	103.92	104.00	105.21	105.25	111.02	-2.43	Pipe - (26)

Project File: NJA240262.00 Pipe Sizing Run3.stm

Number of lines: 3

Run Date: 6/12/2025

NOTES:Intensity = 545.78 / (Inlet time + 28.60) ^ 1.17; Return period =Yrs. 100 ; c = cir e = ellip b = box

Riprap Calculations

BOHLER
30 Independence Blvd, Suite 200, Warren, NJ 07059
(908) 668-8300

Date: 6/4/2025
Project: AP North Brunswick
Project No: NJA240262.00

Calculated By: TDW
Checked By: TXL

Conduit Outlet Protection Calculations

Rip Rap Pad # 1

Design Parameters:

Design Storm Flow for 25 Year, Q	5.49	cfs
Vertical Dimension of Outlet Pipe, D_o	24	in
Horizontal Dimension of Outlet Pipe, W_o	24	in
Tailwater Depth, TW[1]	1.68	ft

Apron Dimension Calculations:

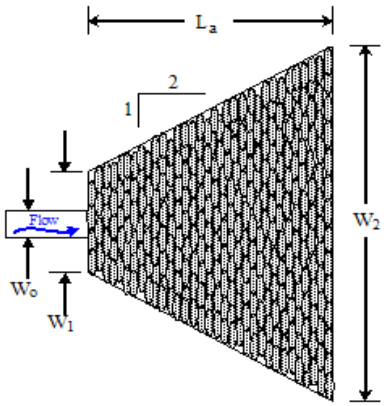
Unit Dicharge, $q = Q/W_o$ = 2.75 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

  Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = L_a =

  Width, $W_1 = 3W_o$ = W_1 =

  Width, $W_2 = 3W_o + L_a$ = W_2 =

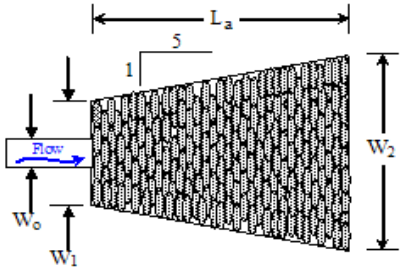


- **Case II: $TW \geq 1/2\ D_o$**

  Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = 5.82 ft or L_a = 6 ft

  Width, $W_1 = 3W_o$ = 6. ft or W_1 = 6 ft

  Width, $W_2 = 3W_o + 0.4L_a$ = 8.33 ft or W_2 = 9 ft



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 0.55 in d_{50} = 6 in

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2 year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

BOHLER

30 Independence Blvd, Suite 200, Warren, NJ 07059
(908) 668-8300

Date: 6/4/2025
Project: AP North Brunswick
Project No: NJA240262.00

Calculated By: TDW
Checked By: TXL

Conduit Outlet Protection Calculations

Rip Rap Pad # 2

Design Parameters:

Design Storm Flow for 25 Year, Q	0.57	cfs
Vertical Dimension of Outlet Pipe, D_o	15	in
Horizontal Dimension of Outlet Pipe, W_o	15	in
Tailwater Depth, TW[1]	1.68	ft

Apron Dimension Calculations:

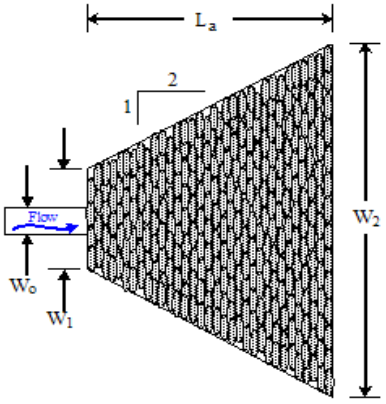
Unit Dicharge, $q = Q/W_o$ = 0.46 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

  Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = → L_a =

  Width, $W_1 = 3W_o$ = → W_1 =

  Width, $W_2 = 3W_o + L_a$ = → W_2 =

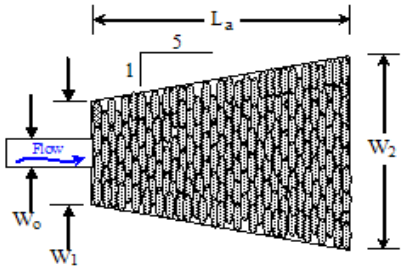


- **Case II: $TW \geq 1/2\ D_o$**

  Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = 1.22 ft or → L_a = **2 ft**

  Width, $W_1 = 3W_o$ = 3.75 ft or → W_1 = **4 ft**

  Width, $W_2 = 3W_o + 0.4L_a$ = 4.24 ft or → W_2 = **5 ft**



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 0.05 in → d_{50} = **6 in**

Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the apron or at the end of the culvert.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50}. The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2 year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

BOHLER

30 Independence Blvd, Suite 200, Warren, NJ 07059
(908) 668-8300

Date: 6/4/2025
Project: AP North Brunswick
Project No: NJA240262.00

Calculated By: TDW
Checked By: TXL

Conduit Outlet Protection Calculations

Rip Rap Pad # 3

Design Parameters:

Design Storm Flow for 25 Year, Q	0.86	cfs
Vertical Dimension of Outlet Pipe, D_o	15	in
Horizontal Dimension of Outlet Pipe, W_o	15	in
Tailwater Depth, TW[1]	1.68	ft

Apron Dimension Calculations:

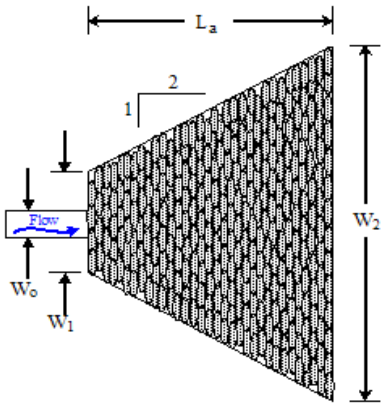
Unit Dicharge, $q = Q/W_o$ = 0.69 cfs per foot

- **Case I: $TW < 1/2\ D_o$**

  Apron Length, $L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o$ = → L_a =

  Width, $W_1 = 3W_o$ = → W_1 =

  Width, $W_2 = 3W_o + L_a$ = → W_2 =

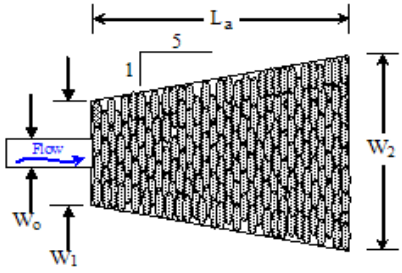


- **Case II: $TW \geq 1/2\ D_o$**

  Apron Length, $L_a = \frac{3q}{D_o^{1/2}}$ = 1.85 ft or → L_a = **2 ft**

  Width, $W_1 = 3W_o$ = 3.75 ft or → W_1 = **4 ft**

  Width, $W_2 = 3W_o + 0.4L_a$ = 4.49 ft or → W_2 = **5 ft**



Rip Rap Stone Size Calculations:

Median Stone, $d_{50} = \frac{0.02q^{1.33}}{TW}$ = 0.09 in → d_{50} = **6 in**

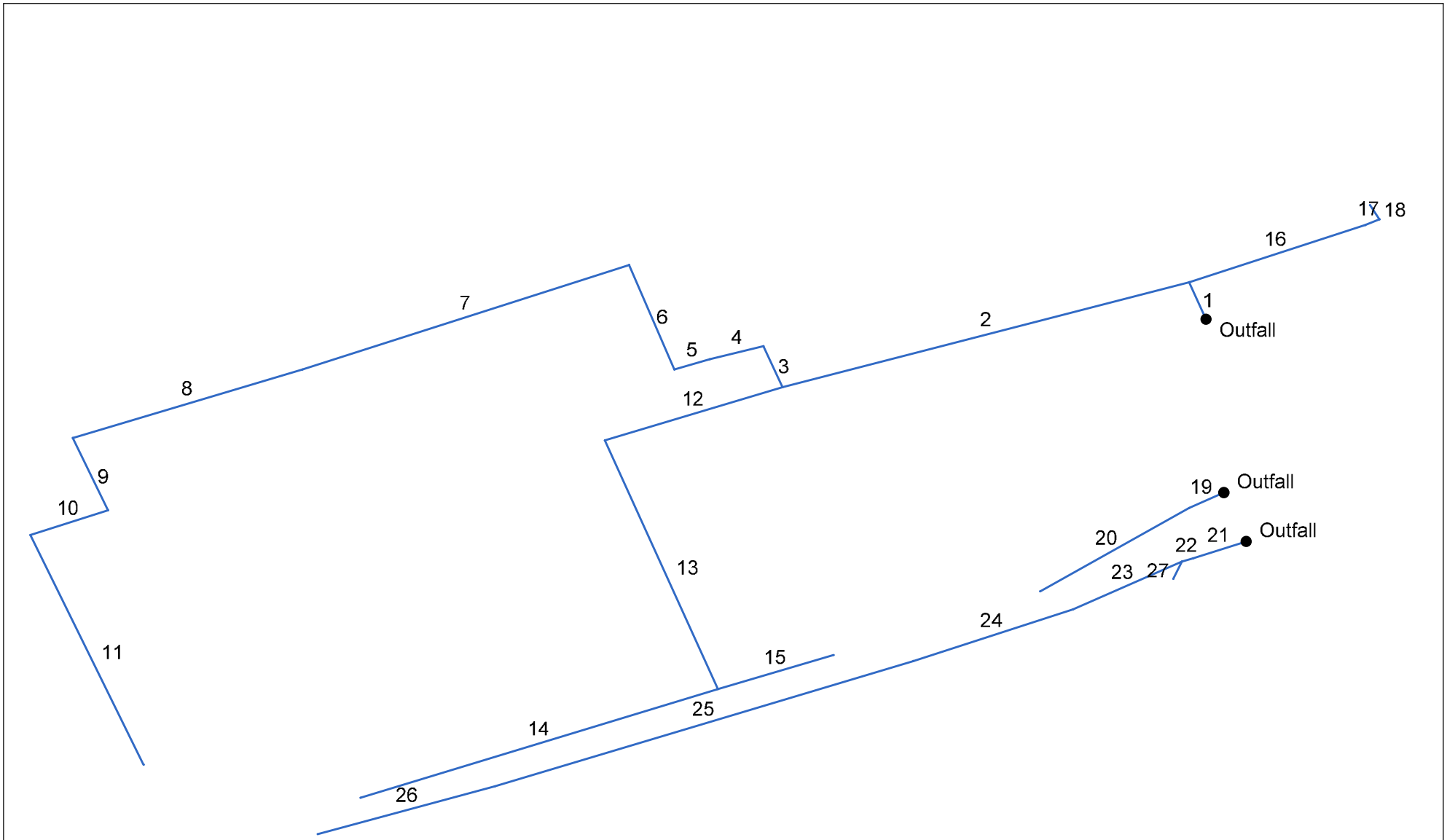
Notes:

1. Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
2. The side slopes shall be 2:1 or flatter.
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7. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
8. No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

1. Tailwater depth shall be the 2 year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
2. For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: NJA240262.00 Pipe Sizing Run1.stm	Number of lines: 27	Date: 6/12/2025

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	16.957	0.00	1.24	0.00	0.00	1.23	10.0	23.1	4.5	5.49	27.91	4.30	24	1.30	104.00	104.22	104.88	105.05	106.28	111.00	MH-110 - COP-1
2	1	147.519	0.14	1.13	0.99	0.14	1.12	10.0	22.4	4.5	5.08	10.35	5.07	18	0.83	104.25	105.47	105.05	106.34	111.00	113.10	MH-109 - MH-110
3	2	18.763	0.00	0.44	0.00	0.00	0.43	10.0	20.7	4.7	2.06	3.96	3.14	15	0.32	105.67	105.73	106.34	106.38	113.10	106.97	MW-108 - MH-109
4	3	19.354	0.00	0.44	0.00	0.00	0.43	10.0	20.7	4.7	2.06	5.21	5.98	8	15.86	105.73	108.80	106.54	109.43	106.97	110.25	MW-108 DROP
5	4	13.015	0.08	0.44	0.98	0.08	0.43	10.0	20.6	4.8	2.07	3.88	2.87	15	0.31	108.71	108.75	109.43	109.45	110.25	112.40	E-107 - MW-108
6	5	47.437	0.14	0.36	0.99	0.14	0.36	10.0	20.1	4.8	1.71	3.80	2.47	15	0.30	108.85	108.99	109.58	109.64	112.40	112.45	E-106 - E-107
7	6	121.439	0.00	0.22	0.00	0.00	0.22	10.0	18.3	5.0	1.10	3.81	2.18	15	0.30	109.09	109.45	109.75	109.91	112.45	114.00	MH-105 - B-106
8	7	84.642	0.07	0.22	0.99	0.07	0.22	10.0	17.0	5.2	1.14	3.80	2.69	15	0.30	109.45	109.70	109.93	110.16	114.00	112.74	B-104 - MH-105
9	8	33.276	0.00	0.15	0.00	0.00	0.15	10.0	16.3	5.3	0.79	3.83	2.02	15	0.30	109.80	109.90	110.28	110.31	112.74	113.08	MH-103 - B-104
10	9	28.836	0.09	0.15	0.99	0.09	0.15	10.0	15.6	5.4	0.81	3.91	2.45	15	0.31	109.99	110.08	110.39	110.46	113.08	112.25	E-102 - MH-103
11	10	105.906	0.06	0.06	0.99	0.06	0.06	10.0	10.0	6.5	0.38	3.85	2.01	15	0.30	110.42	110.74	110.69	111.01	112.25	112.57	E-101 - E-102
12	2	65.524	0.30	0.55	0.99	0.30	0.54	10.0	22.0	4.6	2.50	6.97	4.61	15	0.99	106.35	107.00	106.87	107.63	113.10	113.35	MH-303 - MH-109
13	12	113.512	0.00	0.25	0.00	0.00	0.25	10.0	20.5	4.8	1.18	6.98	3.70	15	1.00	107.35	108.48	107.70	108.91	113.35	111.70	E-302 - MH-303
14	13	132.000	0.04	0.04	0.99	0.04	0.04	10.0	10.0	6.5	0.26	3.80	1.49	15	0.30	108.58	108.97	108.91	109.17	111.70	111.95	E-301 - E-302
15	13	42.504	0.21	0.21	0.99	0.21	0.21	10.0	10.0	6.5	1.34	0.06	15.41	4	0.09	108.68	108.72	109.01	127.12	111.70	109.72	Pipe - (42)
16	1	65.670	0.00	0.11	0.00	0.00	0.11	10.0	10.2	6.4	0.70	4.96	1.84	15	0.50	104.32	104.65	105.05	104.98	111.00	110.00	MW-202 - MH-110
17	16	5.448	0.00	0.11	0.00	0.00	0.11	10.0	10.2	6.4	0.70	0.97	3.03	8	0.55	104.65	104.68	105.07	105.10	110.00	110.00	MW-202 DROP
18	17	6.912	0.11	0.11	0.99	0.11	0.11	10.0	10.0	6.5	0.70	3.76	2.35	15	0.29	107.63	107.65	108.00	108.02	110.00	109.84	E-201 - MW-202
19	End	13.712	0.10	0.12	0.99	0.10	0.12	10.0	20.0	4.8	0.57	7.07	1.86	15	1.02	104.00	104.14	104.54	104.44	104.00	111.75	B-402 - COP-2
20	19	62.634	0.02	0.02	0.99	0.02	0.02	10.0	10.0	6.5	0.13	7.13	1.98	15	1.04	107.58	108.23	107.70	108.37	111.75	112.50	B-401 - B-402
21	End	19.676	0.00	0.19	0.00	0.00	0.17	10.0	19.1	4.9	0.86	5.90	0.70	15	0.71	104.00	104.14	107.63	107.63	105.45	105.59	MW-506 - COP-3
22	21	4.167	0.00	0.19	0.00	0.00	0.17	10.0	19.0	4.9	0.86	2.67	1.09	12	0.48	104.14	104.16	107.63	107.64	105.59	108.68	MW-507 DROP

Project File: NJA240262.00 Pipe Sizing Run1.stm

Number of lines: 27

Run Date: 6/12/2025

NOTES:Intensity = 182.59 / (Inlet time + 19.10) ^ 0.99; Return period =Yrs. 25 ; c = cir e = ellip b = box

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
23	22	42.843	0.00	0.14	0.00	0.00	0.13	10.0	17.9	5.1	0.64	3.70	1.50	15	0.28	107.12	107.24	107.65	107.67	108.68	111.00	MH-505 - MW-506
24	23	59.478	0.03	0.14	0.65	0.02	0.13	10.0	16.3	5.3	0.67	3.85	2.06	15	0.30	107.24	107.42	107.68	107.77	111.00	110.50	YARD-504 - MH-5
25	24	154.303	0.03	0.11	0.99	0.03	0.11	10.0	11.7	6.1	0.65	3.86	2.32	15	0.30	107.42	107.89	107.78	108.23	110.50	110.50	YARD-503 - YAR
26	25	64.537	0.08	0.08	0.96	0.08	0.08	10.0	10.0	6.5	0.50	1.18	1.43	12	0.09	107.89	107.95	108.34	108.40	110.50	109.08	E-501 -YARD-503
27	22	8.028	0.05	0.05	0.95	0.05	0.05	10.0	10.0	6.5	0.31	3.49	0.84	15	0.25	107.22	107.24	107.65	107.65	108.68	110.00	E-507 - MW-506

Project File: NJA240262.00 Pipe Sizing Run1.stm

Number of lines: 27

Run Date: 6/12/2025

NOTES:Intensity = 182.59 / (Inlet time + 19.10) ^ 0.99; Return period =Yrs. 25 ; c = cir e = ellip b = box

F. SUPPORTING DOCUMENTS

- **Manufactured Treatment Device Certification & Details**
- **Geotechnical Report**
- **Water Budget Report**
- **NOAA Atlas 14 Precipitation Estimate Report**

Manufactured Treatment Device Certification & Details

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PHILIP D. MURPHY
Governor

TAHESHA L. WAY
Lt. Governor

DIVISION OF WATERSHED PROTECTION AND RESTORATION
BUREAU OF NJPDES STORMWATER PERMITTING & WATER QUALITY MANAGEMENT
P.O. Box 420 Mail Code 501-02A
Trenton, New Jersey 08625-0420
609-633-7021 / Fax: 609-777-0432
https://dep.nj.gov/stormwater/

SHAWN M. LATOURETTE
Commissioner

March 14, 2024

Zachariha J. Kent
Vice President of Product Development
Contech Engineered Solutions, LLC, a Quikrete Company
9025 Centre Pointe Drive, Suite 400
West Chester, OH 45069

Re: MTD Lab Certification
Modular Wetlands 360 Biofiltration Stormwater Treatment Device (MW 360)
Offline Installation

TSS Removal Rate 80%

Dear Mr. Kent:

The Stormwater Management rules under N.J.A.C. 7:8-5.2(f) and 5.2(j) allow the use of manufactured treatment devices (MTDs) for compliance with the design and performance standards at N.J.A.C. 7:8-5 if the pollutant removal rates have been verified by the New Jersey Corporation for Advanced Technology (NJCAT) and have been certified by the New Jersey Department of Environmental Protection (NJDEP). Hydro International has requested a Laboratory Certification for the Modular Wetlands 360 Biofiltration Stormwater Treatment Device (MW 360).

The project falls under the "Procedure for Obtaining Verification of a Stormwater Manufactured Treatment Device from New Jersey Corporation for Advance Technology" dated August 1, 2021. The applicable protocol is the "New Jersey Laboratory Protocol to Assess Total Suspended Solids Removal by a Filtration Manufactured Treatment Device" dated January 14, 2022.

NJCAT verification documents submitted to the NJDEP indicate that the requirements of the aforementioned protocol have been met or exceeded. The NJCAT letter also included a recommended certification TSS removal rate and the required maintenance plan. The NJCAT Verification Report with the Verification Appendix (dated February 2024) for this device is published online at http://www.njcat.org/verification-process/technology-verification-database.html.

The NJDEP certifies the use of the MW 360 by Contech Engineered Solutions, LLC at a TSS removal rate of 80% when designed, operated and maintained in accordance with the information provided in the Verification Appendix and the following conditions:

1. The maximum treatment flow rate (MTFR) for the manufactured treatment device (MTD) is calculated using the New Jersey Water Quality Design Storm (1.25 inches in 2 hrs) in N.J.A.C. 7:8-

5.5. The MTFR is calculated based on a verified loading rate of 1.7 gpm/ft^2 of effective filtration treatment area.

2. The MW 360 shall be installed using the same configuration reviewed by NJCAT and shall be sized in accordance with the criteria specified in item 7 below.

3. This MW 360 cannot be used in series with another MTD or a media filter (such as a sand filter) to achieve an enhanced removal rate for total suspended solids (TSS) removal under N.J.A.C. 7:8-5.5.

4. Additional design criteria for MTDs can be found in Chapter 9.5 of the New Jersey Stormwater Best Management Practices (NJ Stormwater BMP) Manual which can be found on-line at https://dep.nj.gov/stormwater/.

5. The maintenance plan for a site using this device shall incorporate, at a minimum, the maintenance requirements for the MW 360. A copy of the maintenance plan is attached to this certification. However, it is recommended to review the maintenance website at: https://www.conteches.com/media/gnxbew1a/modwet360-om-manual.pdf for any changes to the maintenance requirements.

6. For an MTD to be considered "green infrastructure" (GI) in accordance with the March 2, 2020 amendments to the Stormwater Management rules at N.J.A.C. 7:8, the MTD must meet the GI definition noted at amended N.J.A.C. 7:8-1.2. Specifically, the MTD shall (1) treat runoff by infiltration into subsoil; and/or (2) treat stormwater runoff through filtration by vegetation or soil. Any configuration that uses a bio-filtration media and can be configured "above ground" and incorporates a tree box, planter box, or shrubs, etc., would meet the GI definition. Any MTD with bio-filtration media that would be placed "below ground" as a vault without any vegetation can be considered GI (for NJ purposes) only if the device infiltrates the entire Water Quality Design Storm into the subsoil. Further, the below ground device (vault) would need to meet the NJDEP Stormwater BMP Manual conditions of having the soil below the MTD meet the minimum tested infiltration rate of one inch per hour, have at least two feet of separation from the seasonal high water table, and infiltrate into the subsoil.

   In order for a MW 360 to meet the definition of GI if a MW 360 is installed by treating stormwater runoff through filtration by vegetation, the vegetative cover in a MW 360 must be maintained at a minimum density of 85% in order to qualify as GI under the Stormwater Management rules at N.J.A.C. 7:8, which is consistent with the vegetative cover requirement for bioretention systems under the Stormwater Management rules at N.J.A.C. 7:8. The vegetative cover should be determined based on the expected coverage of the proposed plantings when matured. Plant death or damage shall require replanting to maintain this 85% coverage requirement if the system is installed as GI.

7. Sizing Requirements:

   The example below demonstrates the sizing procedure for the MW 360:

   Example: A 0.25-acre impervious site with a slope of 5% is to be treated to 80% TSS removal using a MW 360. The hydraulically most distant point to the inlet of MW 360 is 110 feet. The site is located in an area for which the projected 2-year storm rainfall depth was calculated to be 3.84 inches.

The selection of the appropriate model of an MW 360 is based upon both the maximum inflow drainage area and the MTFR. It is necessary to calculate the required model using both methods and to use the largest model determined by the two methods.

Inflow Drainage Area Evaluation:

The drainage area to the MW 360 in this example is 0.25 acres. Based upon the information in Table 1 below, a single 26" cartridge in an MW 360 is the minimum number of cartridges to treat the impervious area without exceeding the maximum allowable drainage area:

Maximum Treatment Flow Rate (MTFR) Evaluation:

The site runoff (Q) was based on the following:

CN = 98 (Curve Number for impervious)
Dimensionless Unit Hydrograph (DUH) = SCS Standard DUH (peak rate factor of 484)
Time of concentration = 0.8 minutes
Q = 0.77 cfs

Given the site runoff is 0.77 cfs and based on Table 1 below, the following minimum numbers of cartridges in an MW 360 may be used without exceeding the MTFR:

a. Nine (9) 26" cartridges;
b. Seven (7) 32" cartridges;
c. Six (6) 40" cartridges;
d. Five (5) 44" cartridges;
e. Four (4) 52", 56", 58" or 60" cartridges; or
f. Three (3) 68", 70", 76", or 80" cartridges.

The MTFR evaluation results will be used since that method results in the highest minimum configuration determined by the two methods.

The sizing table corresponding to the available system models is noted below. Additional specifications regarding each model can be found in the Verification Appendix under Table A-1.

Table 1: MW 360 Associated Cartridge Heights and NJ Cartridge Treatment Capabilities

Cartridge Height (in)	Cartridge Maximum Treatment Flow Rate, MTFR (cfs)	Maximum Allowable Drainage Area (ac)
26	0.090	0.90
32	0.111	1.11
40	0.138	1.38
44	0.152	1.52
52	0.180	1.80
56	0.193	1.93
58	0.200	2.00
60	0.207	2.07
68	0.235	2.35
70	0.242	2.42
76	0.262	2.62
80	0.276	2.76

Be advised a detailed maintenance plan is mandatory for any project with a NJ Stormwater BMP subject to the Stormwater Management Rules, N.J.A.C. 7:8. The plan must include all the items identified in the Stormwater Management Rules, N.J.A.C. 7:8-5.8. Such items include, but are not limited to, the list of inspection and maintenance equipment and tools, specific corrective and preventative maintenance tasks, indication of problems in the system, and training of maintenance personnel. Additional information can be found in Chapter 8: Maintenance and Retrofit of Stormwater Management Measures.

If you have any questions regarding the above information, please contact Changi Wu of my office at chang.i.wu@dep.nj.gov.

Sincerely,



Gabriel Mahon
Bureau of NJPDES Stormwater Permitting & Water Quality Management
Division of Watershed Protection and Restoration
New Jersey Department of Environmental Protection

Attachment: Maintenance Plan

c: Richard Magee, NJCAT

CONTECH®
ENGINEERED SOLUTIONS

Modular Wetlands® 360
Operatons & Maintenance Manual



MODULAR WETLANDS®

MODULAR WETLANDS 360
OPERATION & MAINTENANCE MANUAL

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OVERVIEW

This operation and maintenance (O&M) manual is for the Modular Wetlands 360 (MW360). Please read the instructions and equipment lists closely prior to starting. It is important to follow all necessary safety procedures associated with state and local regulations. Please contact Contech for more information on pre-authorized third-party service providers who can provide inspection and maintenance services in your area. For a list of service providers in your area, please visit www.conteches.com/maintenance.





WARNING

Confined space entry may be required. Contractor to obtain all equipment and training to meet applicable local and OSHA regulations regarding confined space entry. It is the Contractor's or entry personnel's responsibility to always proceed safely.

SAFETY NOTICE AND PERSONAL SAFETY EQUIPMENT

Job site safety is a topic and a practice addressed comprehensively by others. The inclusions here are merely reminders to whole areas of Safety Practice that are the responsibility of the Owner(s), Manager(s), and Service Provider(s). OSHA and Canadian OSH, Federal, State/Provincial, and Local Jurisdiction Safety Standards apply on any given site or project. The knowledge and applicability of those responsibilities is the Service Provider's responsibility and outside the scope of Contech Engineered Solutions.



Safety Boots



Gloves



Hard Hat



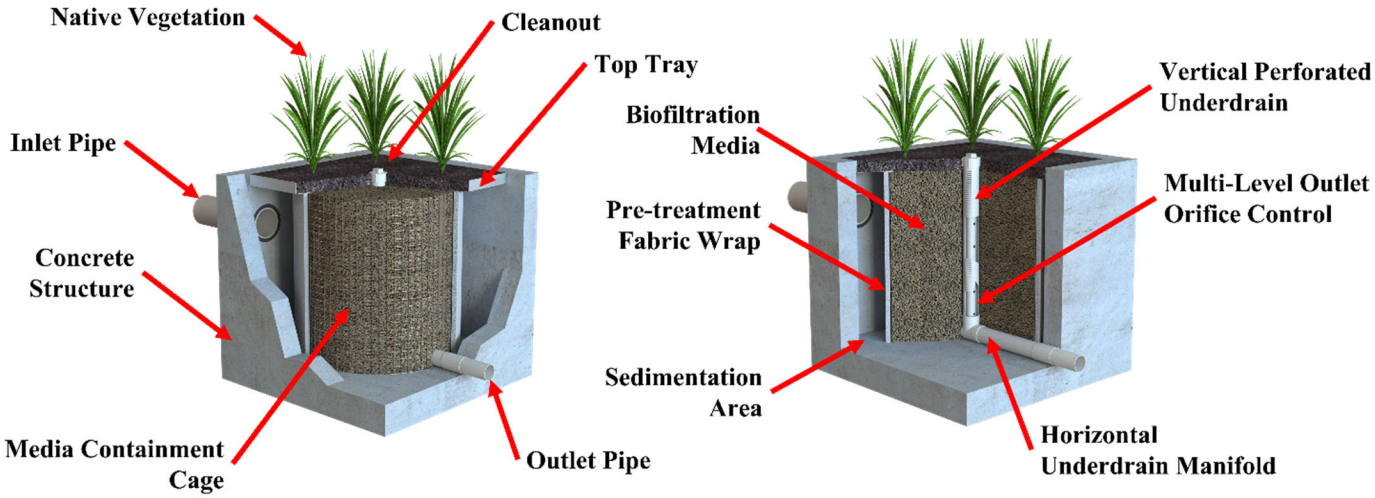
Eye Protection

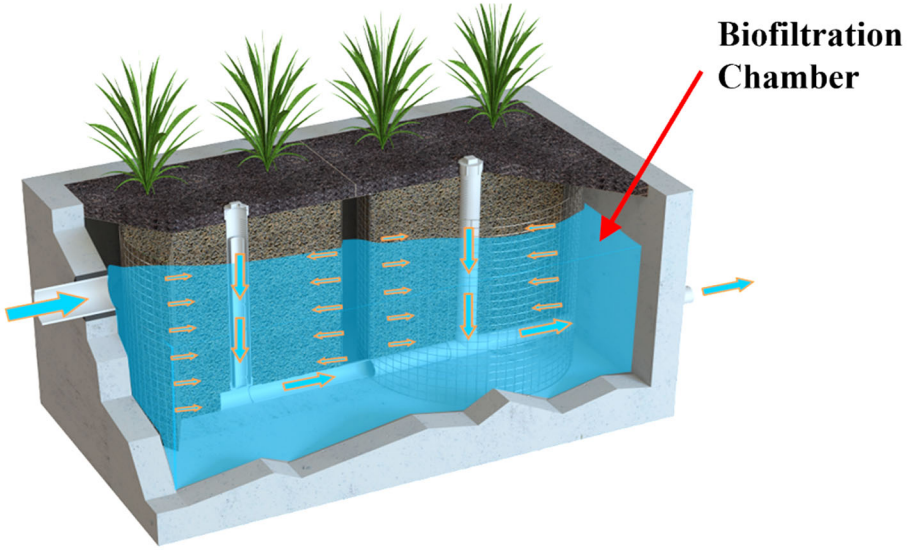


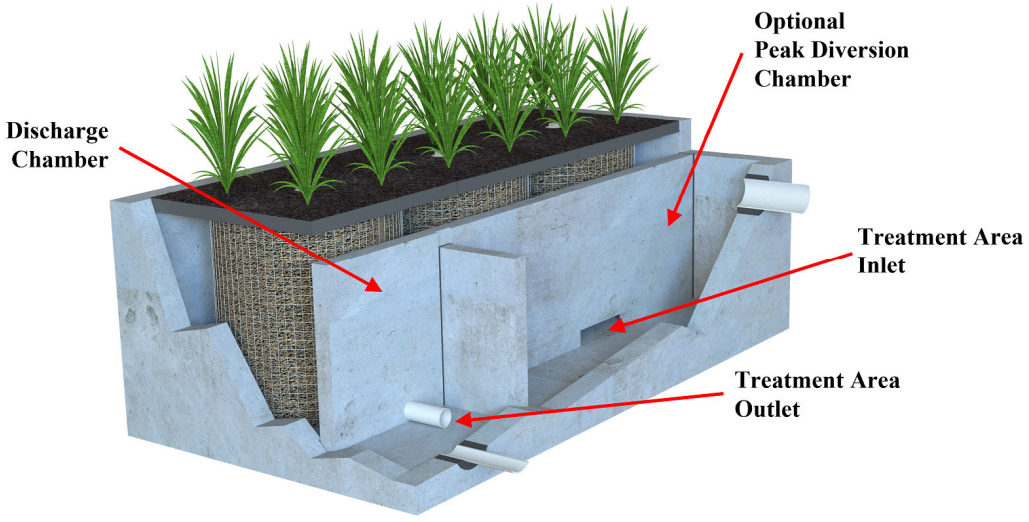
Maintenance and Protection of Traffic Plan

MODULAR WETLANDS 360 COMPONENTS LIST

The MW360 system comes in multiple configurations, including an open planter, underground, or peak diversion configurations. The components per the shop drawings (plans) typically include:







INSPECTION SUMMARY & EQUIPMENT LIST

Stormwater regulations require BMPs be inspected and maintained to ensure they are operating as designed to allow for effective pollutant removal and provide protection to receiving water bodies. It is recommended that inspections be performed multiple times during the first year to assess the site-specific loading conditions. The first year of inspections can be used to set inspection and maintenance intervals for subsequent years to ensure appropriate maintenance is provided.

- Inspect sedimentation area and pre-treatment fabric wrap around the media containment cage an average of once every six to twelve months. Inspection and maintenance intervals vary based on site specific and local conditions.
- Average inspection time is approximately 15 minutes. Always ensure appropriate safety protocol and procedures are followed.

The following is a list of equipment required to allow for simple and effective inspection of the MW360:



Modular Wetlands 360
Inspection Form



Flashlight



Tape Measure



Impact Gun
(9/16" Socket)



Ratchet
(9/16" Socket)



Access Cover Hook

INSPECTION AND MAINTENANCE NOTES

1. Following maintenance and/or inspection, it is recommended that the maintenance operator prepare a maintenance/inspection record. The record should include any maintenance activities performed, amount and description of debris collected, and condition of the system and its various filter mechanisms.
2. The owner should keep maintenance/inspection record(s) for a minimum of five years from the date of maintenance. These records should be made available to the governing municipality for inspection upon request at any time.
3. Transport all debris, trash, organics, and sediments to approved facility for disposal in accordance with local and state requirements.
4. Entry into biofiltration chamber may require confined space training based on state and local regulations.
5. No fertilizer shall be used in the biofiltration chamber.
6. Irrigation should be provided as recommended by manufacturer and/or landscape architect. Amount of irrigation required is dependent on plant species. Some plants may not require irrigation after initial establishment.

INSPECTION PROCESS

1. Prepare the inspection form by writing in the necessary information including project name, location, date & time, unit number and other information (see inspection form).
2. Observe the inside of the system by removing the top tray covers and looking into the biofiltration chamber to inspect the sedimentation area around the media containment cage. If the unit is underground, observe the system through the access covers. If minimal light is available and vision into the unit is impaired, utilize a flashlight to see inside the system.
3. Look for any out of the ordinary obstructions in the inflow pipe, the sedimentation area around the media containment cage, or outflow pipe. Write down any observations on the inspection form.
4. Through observation and/or digital photographs, estimate the amount of trash and debris accumulated in the sedimentation area around the media containment cage. Utilizing a tape measure or measuring stick, estimate the amount of sediment in the biofiltration chamber. Record this depth on the inspection form.
5. Through visual observation, inspect the condition of the pre-treatment fabric wrap. Look for excessive build-up of sediment on the wrap. Record this information on the inspection form.
6. The biofiltration chamber is generally maintenance-free due to the system's sedimentation area around the media containment cage and the pre-treatment fabric wrap. If necessary, the vertical surface of the media can be power washed/back washed to restore flow capacity. For units which have open planters with vegetation, it is recommended that the vegetation be inspected. Look for any plants that are dead or showing signs of disease or other negative stressors. Record the general health of the plants on the inspection form and indicate through visual observation or digital photographs if trimming of the vegetation is required.
7. Finalize the inspection report for analysis by the maintenance manager to determine if maintenance is required.

MAINTENANCE INDICATORS

Based upon the observations made during inspection, maintenance of the system may be required based on the following indicators:

- Obstructions in the system or its inlet and/or outlet pipes
- Excessive accumulation of floatables in the sedimentation area around the media containment cage in which the area is fully impacted more than 18".
- Excessive accumulation of sediment in the sedimentation area around the media containment cage of more than 6" in depth.
- Excessive accumulation of sediment on the pre-treatment fabric wrap.
- Excessive buildup of sediments on the surface of the media bed (visible by removing fabric wrap).

MAINTENANCE SUMMARY & EQUIPMENT LIST

The time has come to maintain your MW360. All necessary pre-maintenance steps must be carried out before maintenance occurs. Once traffic control has been set up per local and state regulations and top trays and/or access covers have been safely opened, the maintenance process can begin. It should be noted that some maintenance activities require confined space entry. All confined space requirements must be strictly followed before entry into the system. In addition, the following is recommended:

- Prepare the maintenance form by writing in the necessary information including project name, location, date & time, unit number and other info (see maintenance form).
- Set up all appropriate safety and maintenance equipment.
- Ensure traffic control is set up and properly positioned.
- Prepared pre-checks (OSHA, safety, confined space entry) are performed.

The following is a list of equipment required for maintenance of the MW360:



Modular Wetlands 360
Maintenance Form



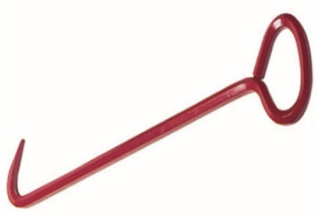
Flashlight



Impact Gun
(9/16" Socket)



Ratchet
(9/16" Socket)



Access Cover Hook



Vacuum Assisted Truck with
Pressure Washer

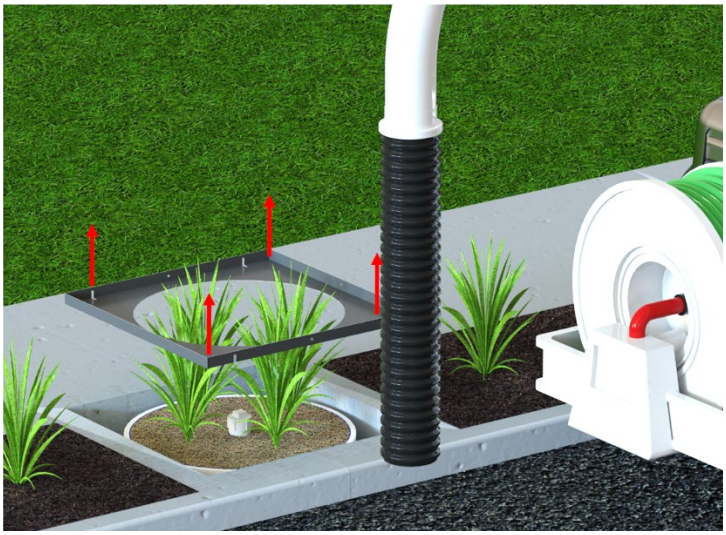


Replacement Pre-Treatment
Fabric Wrap
(If Required)



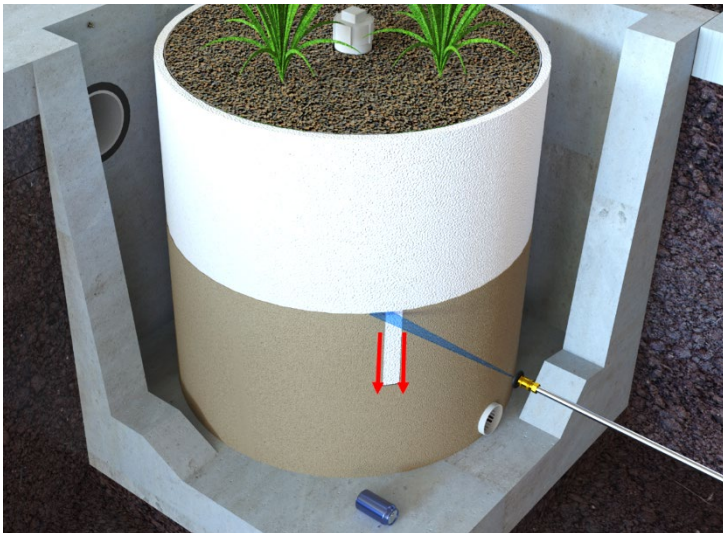
Lifting Equipment (Forklift,
Backhoe, Boom Truck, etc.)
(Only if Replacing Media)

MAINTENANCE INSTRUCTIONS



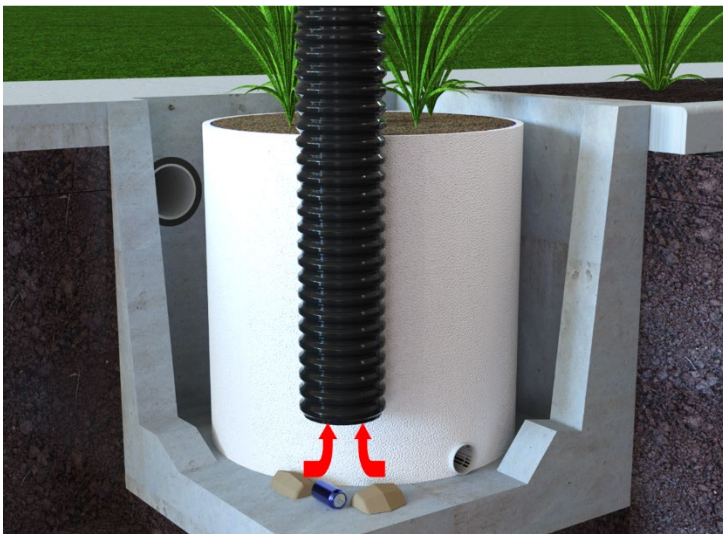
1. TOP TRAY/ACCESS COVER REMOVAL

Remove the mulch and top tray(s) to access the sedimentation area around the media containment cage, and then position the vacuum truck accordingly. To do so, remove the nuts from the wedge anchors using either a ratchet or impact gun with a 9/16" socket. Once the bolts are removed, lift and remove the top tray. For underground units or units with peak diversion chambers, remove the access cover(s) and position the vacuum truck accordingly.



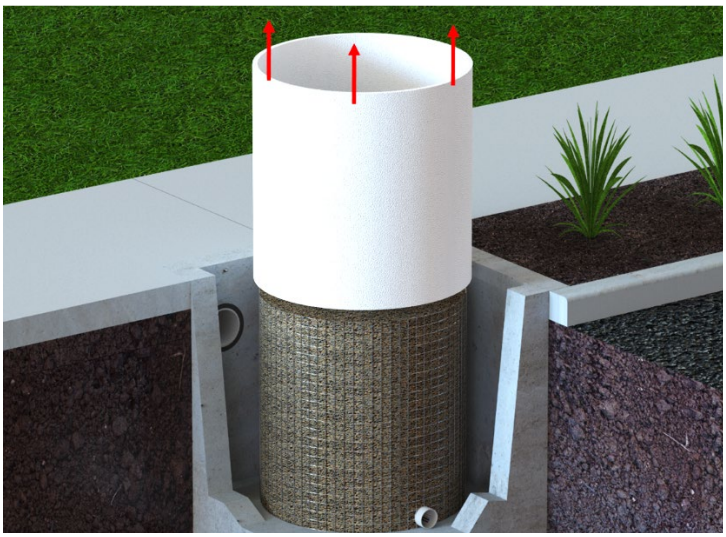
2. PRESSURE WASH SYSTEM

With the pressure washer, spray down larger pollutants accumulated on the walls of the biofiltration chamber and the surface of the pre-treatment fabric wrap. For units with peak diversion chambers, spray down pollutants in the peak diversion chamber first, then proceed to spraying down the biofiltration chamber.



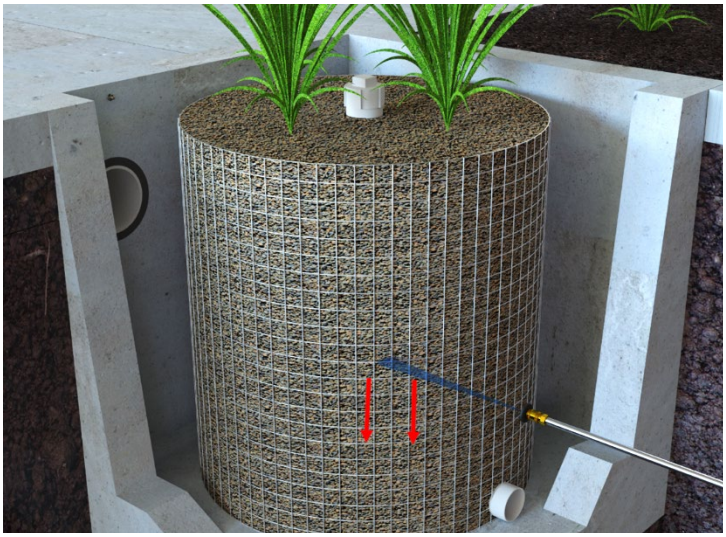
3. VACUUM SEDIMENTATION AREA

Vacuum out sedimentation area and remove all accumulated pollutants including trash, debris, and sediments. Be sure to vacuum the floor until the floor of the biofiltration chamber is visible and clean. For units with peak diversion chambers, vacuum out the floor of the peak diversion chamber until it is visible and clean first, then proceed to vacuuming out the biofiltration chamber.



4. PRE-TREATMENT FABRIC WRAP

After successfully cleaning out the biofiltration chamber, enter the chamber and remove the pre-treatment fabric wrap. With the pressure washer, spray down the pre-treatment fabric wrap thoroughly to wash out any sediment in the fibers. The wrap should be reused, however, if necessary, replacement wraps can be ordered from one of Contech's Maintenance Team members at https://www.conteches.com/maintenance. If replacing the wrap, be sure to transport the old one to an approved facility for disposal in accordance with local and state requirements.



5. WASHING MEDIA BED

With the wrap removed, use the pressure washer to thoroughly spray down the surface of the media bed. This must be done to wash off any finer sediment that gets through the pre-treatment fabric wrap. Continue to spray down the media bed until pollutants are no longer washing out. After thoroughly washing the media, use the vacuum truck to vacuum out all material sprayed off during this phase. Be sure to vacuum the floor until the floor of the biofiltration chamber is visible and clean. Replace the pre-treatment fabric wrap (new or reused, see **Step 4**), exit the biofiltration chamber, and replace the top tray(s) and/or access cover(s).

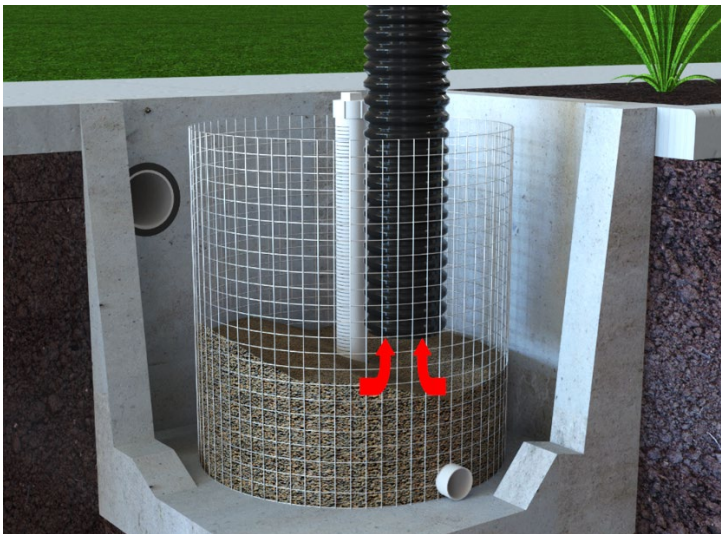


6. MAINTAINING VEGETATION

In general, the biofiltration chamber is maintenance-free with the exception of maintaining the vegetation. The MW360 utilizes vegetation similar to surrounding landscape areas, therefore, trim vegetation to match surrounding vegetation. If any plants have died, replace them with new ones.

REPLACING BIOFILTRATION MEDIA

As with all biofilter systems, at some point the biofiltration media will need to be replaced, either due to physical clogging or sorptive exhaustion (for dissolved pollutants) of the media ion exchange capacity (to remove dissolved metals and phosphorous). The general life of this media is 10 to 20 years based on site specific conditions and pollutant loading, so replacing the biofiltration media should not be a common occurrence. In the event that the biofiltration media requires replacement, contact one of Contech's Maintenance Team members at https://www.conteches.com/maintenance to order new biofiltration media. The quantity of media needed can be determined by providing the model number and unit depth. Media will be provided in super sacks for easy installation. Each sack will weigh between 1,000 and 2,000 lbs. Biofiltration media replacement can be done following the steps below:



1. VACUUM EXISTING BIOFILTRATION MEDIA

Remove the mulch, vegetation, and top tray(s) to access the biofiltration media, and then position the vacuum truck accordingly. For underground units, remove the access cover(s) to gain access to the biofiltration media, and then position the vacuum truck accordingly. Utilize the vacuum truck to vacuum out all the media. Once all media is removed, use the pressure washer to spray down all the netting and center drain down tube on the inside of the media containment cage. Vacuum out any remaining debris after spraying down netting. Inspect the netting for any damage or holes. If the netting is damaged, it can be repaired or replaced with guidance by the manufacturer.



2. INSTALLING NEW BIOFILTRATION MEDIA

Ensure that the chamber is fully cleaned prior to installation of new media. A lifting apparatus (forklift, backhoe, boom truck, or other) is recommended to position the super sack over the biofiltration chamber. Fill the media cage(s) up to the same level as the old media.



3. REPLANT VEGETATION

Once the media has been replaced, replant the vegetation and replace the top tray(s). Fill the top tray(s) with approved mulch (see plan drawings for details). Where applicable, replace all access cover(s).

NOTES

CONTECH® ENGINEERED SOLUTIONS

Inspection Report
Modular Wetlands 360

Project Name _____

Project Address _____
(city) (Zip Code)

Owner / Management Company _____

Contact _____ Phone ( ) –

Inspector Name _____ Date ____ / ____ / _____ Time _____ AM / PM

Type of Inspection ☐ Routine ☐ Follow Up ☐ Complaint ☐ Storm Storm Event in Last 72-hours? ☐ No ☐ Yes

Weather Condition _____ Additional Notes _____

For Office Use Only
(Reviewed By)
(Date) Office personnel to complete section to the left.

Peak Diversion? ☐ No ☐ Yes

Inspection Checklist

Modular Wetlands 360 Type (Open Planter or UG Vault): _____ Size (22', 14' or etc.): _____

Structural Integrity:	**Yes**	**No**	**Comments**
Damage to peak diversion or discharge chamber access cover (manhole cover/grate) or cannot be opened using normal lifting pressure (if applicable)?			
Damage to the biofiltration chamber access cover (UG Vault) or top tray (open planter) or cannot be opened using normal lifting pressure?			
Does the MW360 unit show signs of structural deterioration (cracks in the wall, damage to frame)?			
Is the inlet or outlet pipe damaged or otherwise not functioning properly?			
Working Condition:			
Is there evidence of illicit discharge or excessive oil, grease, or other automobile fluids entering and clogging the unit?			
Is there standing water in inappropriate areas after a dry period?			
Is the filter insert (if applicable) at capacity and/or is there an accumulation of debris/trash on the shelf system?			
Does the depth of sediment/trash/debris suggest a blockage of the inflow pipe? If yes, describe in the comments section. Note depth of accumulation in in peak diversion chamber (if applicable).			Depth:
Does the depth of sediment/trash/debris suggest a blockage of the biofiltration area inlet? If yes, describe in the comments section. Note depth of accumulation in in biofiltration chamber.			Depth:
Any signs of improper functioning in the discharge chamber? Note issues in comments section.			
Other Inspection Items:			
Is there an accumulation of sediment/trash/debris on the wetland media/mulch (if applicable)?			
Is it evident that the plants are alive and healthy (if applicable)? Please note Plant Information below.			
Is there a septic or foul odor coming from inside the system?			

Waste:	**Yes**	**No**
Sediment / Silt / Clay		
Trash / Bags / Bottles		
Green Waste / Leaves / Foliage		

Recommended Maintenance	
No Cleaning Needed	
Schedule Maintenance as Planned	
Needs Immediate Maintenance	

Plant Information	
Damage to Plants	
Plant Replacement	
Plant Trimming	

Additional Notes: _____

CONTECH®
ENGINEERED SOLUTIONS

Cleaning and Maintenance Report
Modular Wetlands 360

Project Name _____

Project Address _____
(city) (Zip Code)

Owner / Management Company _____

Contact _____ Phone ( ) –

Inspector Name _____ Date ____/____/____ Time _____ AM / PM

For Office Use Only
(Reviewed By)
(Date)
Office personnel to complete section to the left.

Type of Inspection ☐ Routine ☐ Follow Up ☐ Complaint ☐ Storm Storm Event in Last 72-hours? ☐ No ☐ Yes

Weather Condition _____ Additional Notes _____

Site Map #	GPS Coordinates of Insert	Manufacturer / Description / Sizing	Trash Accumulation	Foliage Accumulation	Sediment Accumulation	Total Debris Accumulation	Condition of Media 25/50/75/100 (will be changed @ 75%)	Operational Per Manufactures' Specifications (If not, why?)
	Lat: Long:	MW360 Biofiltration Chamber						
		MW360 Peak Diversion (Optional)						
		Media Condition						
		Plant Condition						
		Discharge Chamber Condition						
		Inlet and Outlet Pipe Condition						

Comments:



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ENGINEERED SOLUTIONS

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800-338-1122

WWW.CONTECHES.COM

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SUPPORT

DRAWINGS AND SPECIFICATIONS ARE AVAILABLE AT WWW.CONTECHES.COM

ModWet360 OM Manual 11/23

APR - North Brunswick, NJ

4/28/25

Sizing Basis:

- Presiding agency = NJDEP
- Required TSS removal rate = 80%

Sizing Summary:

The Modular Wetlands Linear is the only biofiltration system to utilize patented horizontal flow, allowing for a smaller footprint, higher treatment capacity, and design versatility. With numerous regulatory approvals, the system's aesthetic appeal and superior pollutant removal make it the ideal solution for a wide range of stormwater applications. The Modular Wetland is NJCAT verified and as a result has received final certification from the NJDEP for 80% TSS removal. Per the NJDEP, Modular Wetland is considered a Green Infrastructure (GI) MTD.

Based on the site-specific information provided by the Engineer of Record and the NJDEP Certified capacities, Contech recommends the **Modular Wetlands Linear sizing outlined below.**

Site Designation	Impervious Drainage Area (ac)	WQ Flow Rate (cfs)	100yr Flow Rate (cfs)	Modular Wetlands Linear Model Size (2.98' head)	NJDEP Certified MTFR (cfs)	NJDEP Certified Maximum Drainage Area (ac)
#1	0.13	0.37	2.01	8'x8' Modular Wetlands Linear	0.56	2.07
#2	0.44	1.36	5.30	8'x20' Modular Wetlands Linear (Offline)	1.39	5.19
#3	0.11	0.35	1.35	6'x8' Modular Wetlands Linear	0.35	1.32

Maintenance:

The Modular Wetlands Linear is a self-contained treatment train. Maintenance requirements for the unit are outlined in the provided operation and maintenance manual.

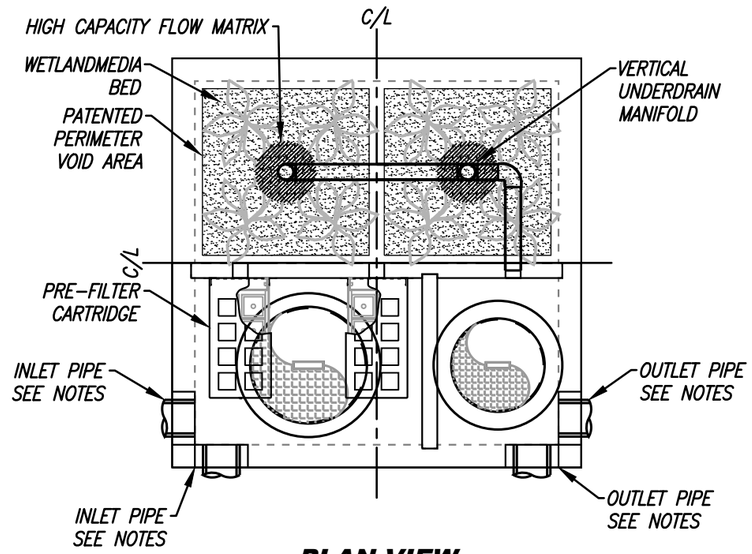
Thank you for the opportunity to present this information to you and your client.
Sincerely,

Taylor Murdock
Project Engineer
Contech Engineered Solutions LLC

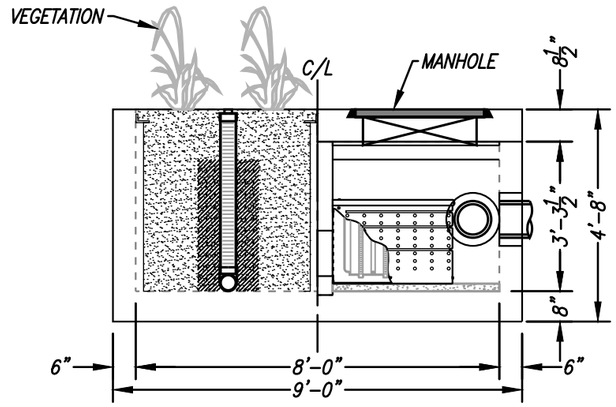
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Office: 443.457.1500 Fax: 410.740.8492

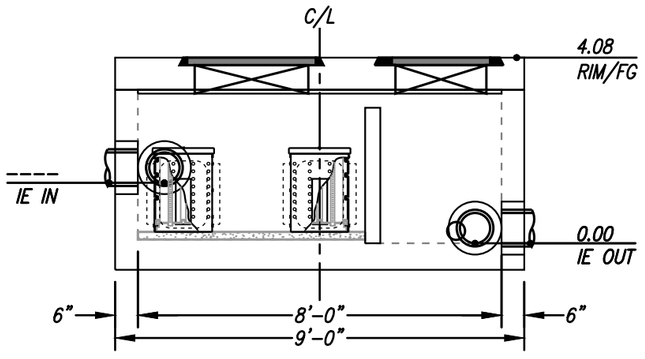
SITE SPECIFIC DATA			
PROJECT NUMBER		----	
PROJECT NAME		----	
PROJECT LOCATION		NEW JERSEY	
STRUCTURE ID		----	
TREATMENT REQUIRED			
VOLUME BASED (CF)		FLOW BASED (CFS)	
N/A		0.557	
TREATMENT HGL AVAILABLE (FT)			N/K
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			N/A
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	----	PVC	8"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	0.00	PVC	8"
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION	4.08	4.08	4.08
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	ø30"	OPEN PLANTER	ø24"
WETLANDMEDIA VOLUME (CY)			4.05
NOTES: PRELIMINARY NOT FOR CONSTRUCTION.			



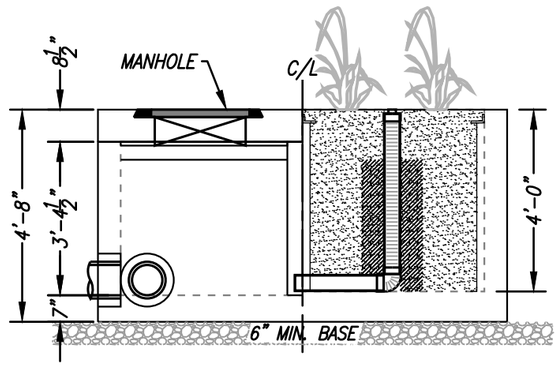
PLAN VIEW



LEFT END VIEW



ELEVATION VIEW



RIGHT END VIEW

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS' SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO USE GROUT AND/OR BRICKS TO MATCH COVERS WITH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. VEGETATION SUPPLIED AND INSTALLED BY OTHERS. ALL UNITS WITH VEGETATION MUST HAVE DRIP OR SPRAY IRRIGATION SUPPLIED AND INSTALLED BY OTHERS.
7. CONTRACTOR RESPONSIBLE FOR CONTACTING BIO CLEAN FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A BIO CLEAN REPRESENTATIVE.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

TREATMENT FLOW (CFS)	0.557
OPERATING HEAD (FT)	2.9
PRETREATMENT LOADING RATE (GPM/SF)	4.9
WETLAND MEDIA LOADING RATE (GPM/SF)	2.9

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING US PATENTS: 7,425,262; 7,470,362; 7,674,378; 8,303,816; RELATED FOREIGN PATENTS OR OTHER PATENTS PENDING

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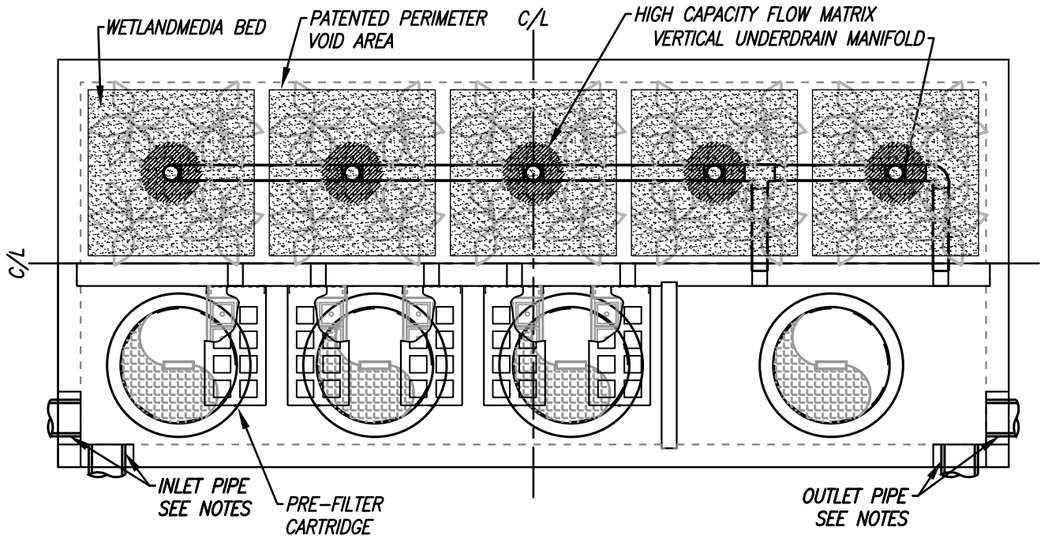
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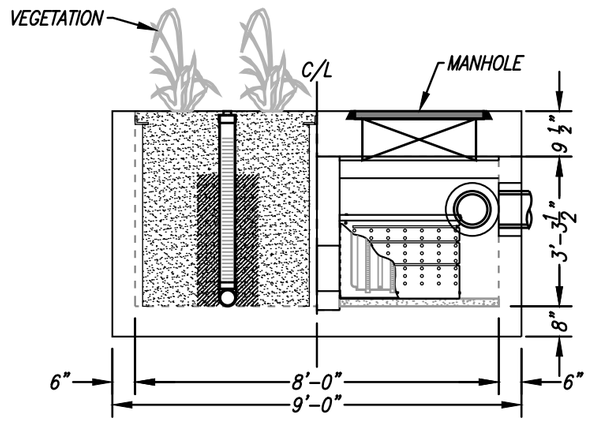
MWS-L-8-8-4'-0"-V
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

11/12/24ANGIE.MCKNIGHT

SITE SPECIFIC DATA			
PROJECT NUMBER		----	
PROJECT NAME		----	
PROJECT LOCATION		NEW JERSEY	
STRUCTURE ID		----	
TREATMENT REQUIRED			
VOLUME BASED (CF)		FLOW BASED (CFS)	
N/A		1.391	
TREATMENT HGL AVAILABLE (FT)			N/K
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			N/A
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	----		
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	0.00		
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION	4.38	4.38	4.38
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	3EA ø30"	OPEN PLANTER	ø30"
WETLANDMEDIA VOLUME (CY)			10.88
NOTES: PRELIMINARY NOT FOR CONSTRUCTION.			



PLAN VIEW



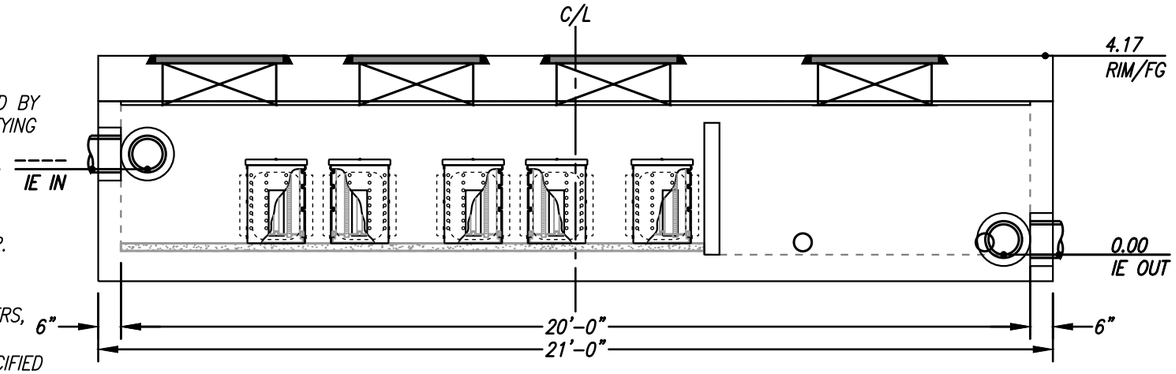
LEFT END VIEW

INSTALLATION NOTES

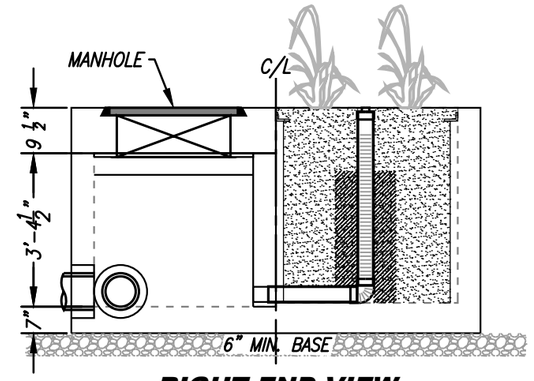
1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS' SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO USE GROUT AND/OR BRICKS TO MATCH COVERS WITH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. VEGETATION SUPPLIED AND INSTALLED BY OTHERS. ALL UNITS WITH VEGETATION MUST HAVE DRIP OR SPRAY IRRIGATION SUPPLIED AND INSTALLED BY OTHERS.
7. CONTRACTOR RESPONSIBLE FOR CONTACTING BIO CLEAN FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A BIO CLEAN REPRESENTATIVE.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.



ELEVATION VIEW



RIGHT END VIEW

TREATMENT FLOW (CFS)	1.391
OPERATING HEAD (FT)	2.9
PRETREATMENT LOADING RATE (GPM/SF)	4.9
WETLAND MEDIA LOADING RATE (GPM/SF)	2.9

MODULAR WETLANDS
FOR PATENT INFORMATION, GO TO www.ContechES.com/IP

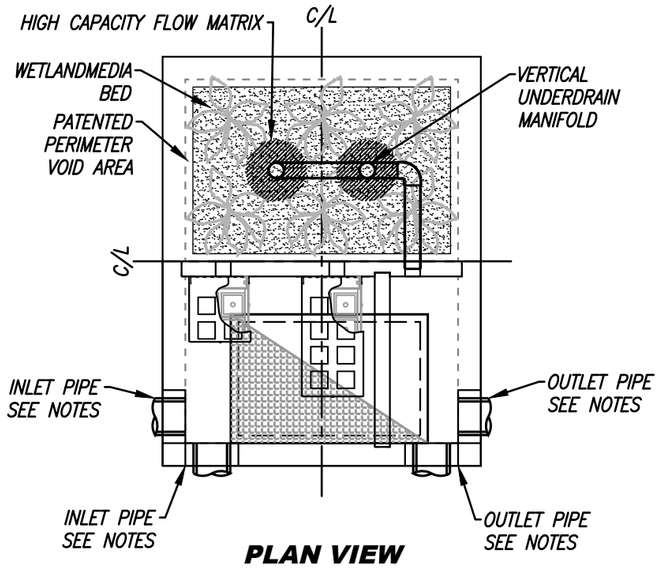
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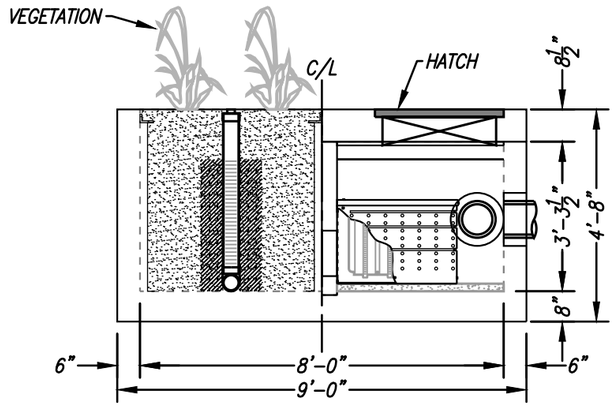
MWS-L-8-20-4'-3.5"-V
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

10/7/24SCOTT.SERTICH

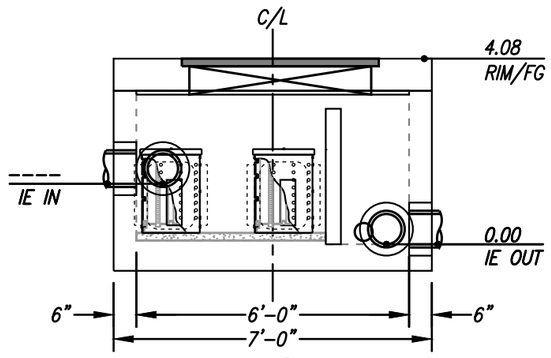
SITE SPECIFIC DATA			
PROJECT NUMBER		----	
PROJECT NAME		----	
PROJECT LOCATION		NEW JERSEY	
STRUCTURE ID		----	
TREATMENT REQUIRED			
VOLUME BASED (CF)		FLOW BASED (CFS)	
N/A		0.354	
TREATMENT HGL AVAILABLE (FT)			N/K
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			N/A
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	----	PVC	8"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	0.00	PVC	8"
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION	4.08	4.08	4.08
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	30" X 48"	OPEN PLANTER	N/A
WETLANDMEDIA VOLUME (CY)			3.12
NOTES: PRELIMINARY NOT FOR CONSTRUCTION.			



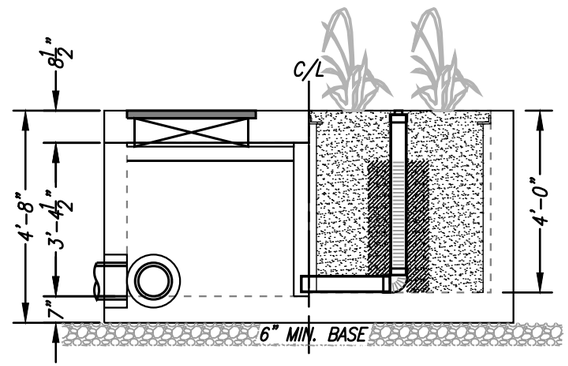
PLAN VIEW



LEFT END VIEW



ELEVATION VIEW



RIGHT END VIEW

INSTALLATION NOTES

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TREATMENT FLOW (CFS)	0.354
OPERATING HEAD (FT)	2.9
PRETREATMENT LOADING RATE (GPM/SF)	4.9
WETLAND MEDIA LOADING RATE (GPM/SF)	2.9

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MWS-L-6-8-4'-0"-V
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

11/19/24ANGIE.MCKNIGHT

Geotechnical Report



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HYDROLOGIC SOIL GROUP EVALUATION

Proposed Quick Chek Food Store
North Brunswick, Middlesex County, New Jersey
ER/UDC North Brunswick, LLC

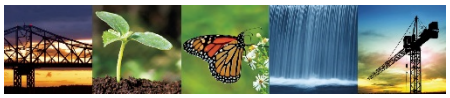
May 24, 2023
File No. 26.0092770.00

PREPARED FOR:
ER/UDC North Brunswick, LLC
P. O. Box 391
Williston, Vermont 05493

GZA GeoEnvironmental, Inc.
27 World Fair Drive | Somerset, NJ 08873
732-356-3400

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08873
T: 732-356-3400
www.gza.com

May 24, 2023
File No. 26.0092770.00

ER/UDC North Brunswick, LLC
P. O. Box 391
Williston, Vermont 05493

Attention: Mr. Len Kuhn

Report
Hydrologic Soil Group Evaluation
Proposed Quick Chek Food Store
North Brunswick, Middlesex County, New Jersey
ER/UDC North Brunswick, LLC

Introduction

This report presents our evaluation of the Hydrologic Soil Group (HSG) at the site of the proposed Quick Chek food store which may be constructed in North Brunswick, Middlesex County, New Jersey. The site is located at 1661 – 1689 New Jersey State Highway Route 130 and is identified as Block 230, Lot 15 on the municipal tax map.

Proposed Construction

A Grading and Drainage Plan (Sheet C-05) prepared by Bohler Engineering dated 6/14/2019 with a Revision 1 date of 11/6/2019 provided to us for prior work indicate that the development would consist of a Quick Chek food store approximately 5,670 square feet in plan area. A canopy with eight fueling positions would be located east of the building and four underground storage tanks would be located south of the canopy area. Access to the site would be provided from Route 130 and Nimitz Place.

An Equal Opportunity Employer M/F/V/H

The referenced plan also indicates that two underground basins would be located on the property, one to the west of the building and one to the east. The basin to the west would consist of five 120-foot long and two 26 foot long sections of 48-inch diameter perforated HDPE pipe and would occupy an area of about 4,300 square feet. The basin to the east would consist of six 280 foot long and two 27-foot long sections of 36-inch diameter perforated HDPE pipe and would occupy an area of about 9,700 square feet. However, it is our understanding that plan will likely be subject to revisions in the future to modify the proposed underground basins and/or add additional locations for stormwater management facilities such as porous asphalt or concrete.

Site Conditions

The site is moderately to heavily wooded. The plans indicate that a 15-foot-wide storm sewer easement which contains a 24-inch RCP pipe traverses the site in a general north to south direction and passes through the western side of the proposed building area. Several wetlands areas are shown on an Alta Survey (dated 9/13/2018) provided and occupy significant portions of the two proposed underground stormwater basin areas. The survey also identifies the locations of sewer inlets on the property and stormwater piping which are outside the designated stormwater sewer easement.

Existing Soil HSG Mapping

Based on information obtained from the USDA Web Soil Survey, the areas of the site to be disturbed by the development as shown on a Soil Exhibit Plan provided to us by Bohler dated August 17, 2022 comprise about 2.59 acres and are currently mapped to contain two soil series, Nixon soil with an HSG of C and Fallsington soil with an HSG of B/D.

Purpose and Scope of Work

The purpose of our services was to advance a series of shallow manual hand auger explorations and collect tube samples of the near surface site soils at selected locations for laboratory tube permeameter testing and review prior explorations at the site to evaluate the HSG of the site soils based on NJDEP mapping criteria.

Prior Site Explorations

GZA previously performed a soils and foundation investigation and a groundwater baseline/limited site investigation at the site as detailed in our January 30, 2019 and January 11, 2019 reports, respectively. A total of 12 test pit excavations were performed for the soils and foundation investigation and five test borings and temporary wells were included in the groundwater baseline study as well as several other explorations for environmental purposes. The subsurface conditions generally consisted of topsoil underlain by silty clays, clayey silts, and silty sands, with clayey and silty soils predominantly located within the upper 4 feet. Groundwater was observed in the explorations at depths of 1.2 to 12 feet below surface grades at the time of the work, with mottling generally at depths of 9 to 48 inches below grade.

Recent Site Explorations

We returned to the site on April 26, 2023 to perform one day of manual hand auger explorations at some of our prior explorations to observe the subsurface conditions for consistency with our prior logs, collect wet season seepage levels and obtain relatively undisturbed tube samples of the near surface soils for laboratory tube permeameter permeability testing where feasible with hand excavations Seven hand auger borings were advanced and tube samples were able to be collected of the near surface silty and

clayey soils at five of these locations. Samples could not be collected at two locations due to the presence of dense gravelly fill that could not be penetrated.

The hand augers and prior site explorations were performed under the direct technical observation of representatives from our office. Our representatives located the explorations in the field, maintained continuous logs of the explorations as the work proceeded, obtained grab samples of the materials encountered in the test pits suitable for identification purposes, and obtained relatively undisturbed tube samples from the explorations for laboratory tube permeameter permeability testing.

Detailed descriptions of the encountered subsurface conditions are described on the Hand Auger Logs, Plates 3A through 3G. The soils were visually classified in general accordance with the procedures of the United States Department of Agriculture Soil Classification System (USDA) described on Plate 4. All soil samples were brought to our office, and selected samples were subjected to laboratory tube permeameter permeability testing. The exploration logs at the locations where tube permeameter test were performed include the measured permeability rates. Copies of the explorations from our previous work are included in Appendix I.

The following discussion of our findings are subject to the Limitations attached as Appendix II to this report.

Findings

Shallow seepage or soil mottling was generally observed in the majority of the site explorations, and in most instances at depths of less than 24 inches. The depths in inches to seepage and soil mottling are shown on the Plot Plan. Also, at most locations where permeability testing was performed, the

measured rates of the near surface natural site soils were restrictive and exhibited permeability rates of less than 0.06 inches per hour. HSG "D" conditions would be present where mottling or seepage is less than 24 inches and the slow permeability soils are present, as well as where mapped wetlands exist at the site. Therefore, based on our review of the soil and groundwater/mottling conditions, it is our opinion that HSG "D" conditions would prevail for the proposed areas of the site to be developed.

Please contact us if you have any questions regarding this information.

The following Plates and Appendices are attached and complete this report:

Plate 1 – Site Location Map
Plate 2 – Plot Plan
Plates 3-A through 3-G – Hand Auger Logs
Plate 4 – USDA Soil Textural Chart
Appendix I – Prior Site Explorations
Appendix II – Limitations

Respectfully submitted,

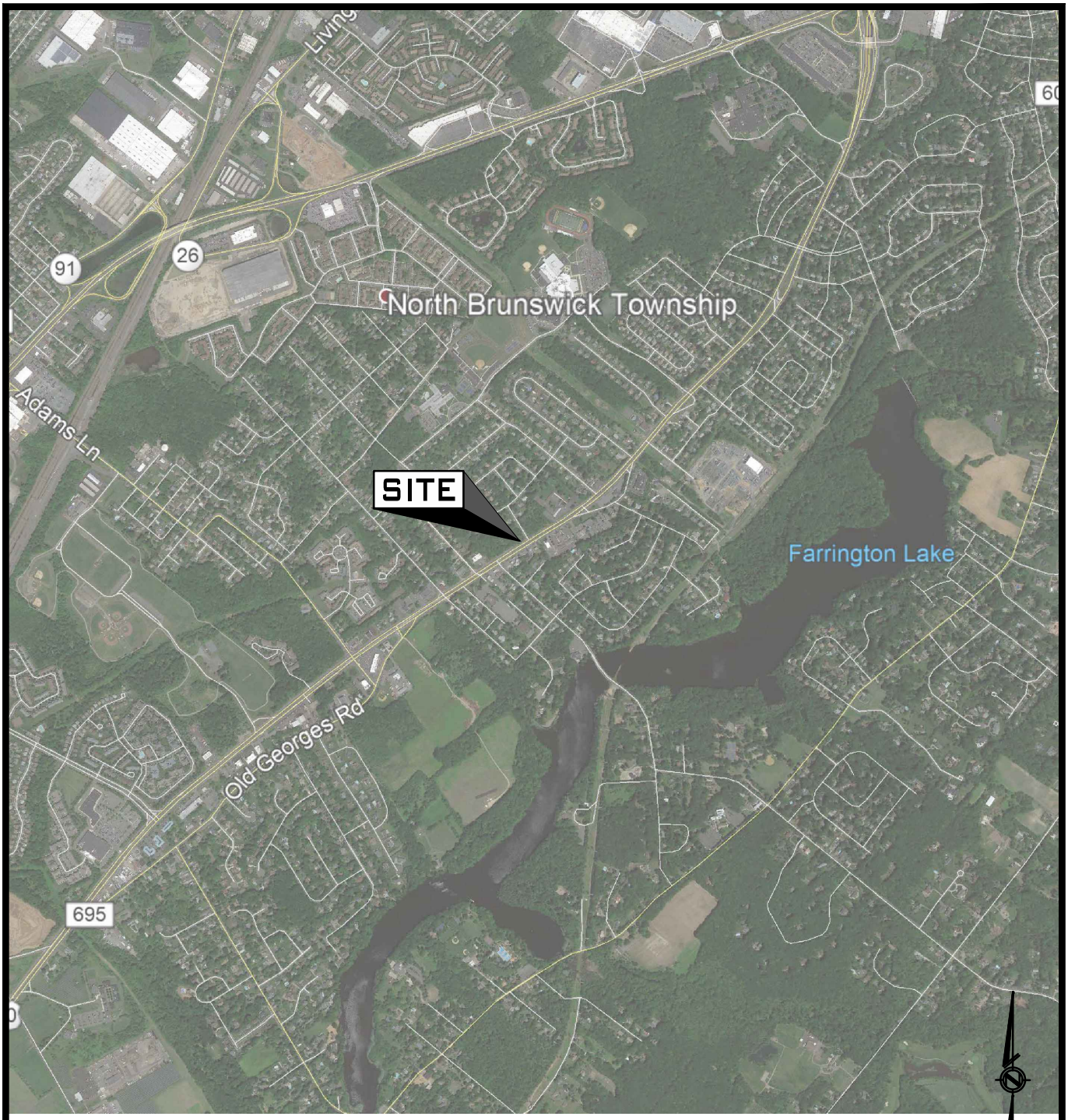
GZA GeoEnvironmental, Inc.

Cory S. Karinja, P.E.
Project Manager

Mark R. Denno, P.E.
Consultant Reviewer

Christopher P. Tansey, P.E.
Vice President

CSK:CPT/mh



Aerial Photo courtesy of Google Earth Pro

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SITE LOCATION MAP

PROPOSED QUICK CHEK
NORTH BRUNSWICK, NEW JERSEY
ER/UDC NORTH BRUNSWICK, LLC

JOB NO.	FILE NO.	DR. BY	CHK. BY	DATE	SCALE	PLATE
26.0092770.00	–	VJD	MRD	5/2/23	1"=2,000'	1

GRAPHIC SCALE

30 0 15 30 60

1 inch = 30 ft.

APPROXIMATE SITE LIMITS

BL-1/BL-1F/TW-1 [14]

PB-1 (3) [72]

HA-3 [10]

TP-9 (36) [108]

HA-2 (16) [34]

D-1 (12)

PSW-3 [48]

TP-7 (36) [90]

TP-8 (48) [48]

HA-4 (20) [NE-36]

TP-6 (18) [108]

TP-5 (18) [84]

TP-11 (18) [108]

TP-10 (18) [120]

GRT=109.43
INV.=102.9

PSW-1 (3) [96]

TP-12 (18) [144]

BL-3/TW-3 [57]

TP-4 (36) [96]

HA-1 (18) [34]

TW-4/BL-4HA/BL-4 [55]

HA-7 (30) [30]

BL-2/TW-2 [22]

TP-3 (9) [18]

HA-6 (10) [10]

TP-2 (28) [18]

PSB-1 (34) [18]

PSB-2 (36) [60]

TP-1 (36) [60]

HA-5 (26) [38]

BL-5/TW-5 [36]

NIMITZ PLACE

U.S. ROUTE 130

GRT=108.42
INV.=102.6

TC=109.15
GRT=108.38
INV=103.0

TC=109.30
GRT=108.62
INV=107.2

SMH
RIM=109.17
T.O.D.=108.5
(PER REF#5)

KEY:

HA-1	NUMBER AND APPROXIMATE LOCATION OF HAND AUGERS PERFORMED IN APRIL, 2023	TP-1	NUMBER AND APPROXIMATE LOCATION OF TEST PITS PERFORMED IN DECEMBER, 2018
BL-1/TW-1	NUMBER AND APPROXIMATE LOCATION OF BORINGS/TEMPORARY WELLS PERFORMED IN DECEMBER, 2018	(3)	APPROXIMATE DEPTH IN INCHES TO SOIL MOTTLING WHERE OBSERVED/RECORDED BELOW THE EXISTING GROUND SURFACE
PSW-1	NUMBER AND APPROXIMATE LOCATION OF SOIL BORINGS PERFORMED IN DECEMBER, 2018	[60]	APPROXIMATE DEPTH IN INCHES TO GROUNDWATER SEEPAGE BELOW THE GROUND SURFACE

NE	NOT ENCOUNTERED
	WETLANDS AREAS

NOTES:

1. This drawing is part of GZA GeoEnvironmental, Inc. Report No. 26.0092770.00 and should be read together with the report for complete evaluation.
2. General layout was obtained from a drawing prepared by Bohler Eng., entitled "Grading & Drainage Plan" dated 11/6/19, scale 1"= 30'.

PLOT PLAN

PROPOSED QUICK CHEK
NORTH BRUNSWICK, NEW JERSEY
ER/UDC NORTH BRUNSWICK, LLC

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JOB NO.	FILE NO.
26.0092770.00	–

DR. BY	CHK. BY	DATE	SCALE	PLATE
VJD	MRD	5/2/23	1"= 30'	2

HAND AUGER LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

ER / UDC North Brunswick, LLC
Proposed Quick Chek
North Brunswick, NJ

EXPLORATION NO.: HA-1 (@ TP-4)
SHEET: 1 of 1
PROJECT NO: 26.0092770.00
REVIEWED BY: Mark Denno

Logged By: Dan Brozoski
Contractor: NA
Operator: NA

Test Pit Location: See Plan
Ground Surface Elev. (ft.): +110.0

Final Test Pit Depth (ft.): 3
Date Start - Finish: 4/26/2023 - 4/26/2023

Type of Excavator: NA
Excavator Model: NA

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab.Time
4/26/23		2.8	

Depth (ft)	Sample No.	Sample Depth (ft.)	Stratum Depth (in.)	Sample Description and Identification	Depth (ft)	Water Content (%)	Remark
1	S1, T1	1	0-6	Topsoil - Very dark grayish brown (10YR, 3/2) silt loam, weak medium subangular blocky, very moist, friable, abrupt smooth boundary, many fine to medium roots	1		
2			6-36	Yellowish brown (10YR, 5/6) silt loam, 5% gravel, weak medium subangular blocky, moist, firm, few medium roots, common medium distinct light gray (10YR, 7/1) mottles encountered from 18 inches to 36 inches	2		
3					3		
4				End of exploration at 3 feet. Slight groundwater seepage encountered @ 34" Soil mottling observed @ 18" Tube Permeameter Test Results: <0.06 in/hr @ 1'			
5							
6							
7							
8							
9							
10							

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Plate No.: 3A

4B - MTA HAND AUGER USDA; 5/24/2023; 9:38:51 AM

HAND AUGER LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

ER / UDC North Brunswick, LLC
Proposed Quick Chek
North Brunswick, NJ

EXPLORATION NO.: HA-2 (near TP-8)
SHEET: 1 of 1
PROJECT NO: 26.0092770.00
REVIEWED BY: Mark Denno

Logged By: Dan Brozoski
Contractor: NA
Operator: NA

Test Pit Location: See Plan
Ground Surface Elev. (ft.): +111

Final Test Pit Depth (ft.): 3
Date Start - Finish: 4/26/2023 - 4/26/2023

Type of Excavator: NA
Excavator Model: NA

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab.Time
4/26/23		2.8	

Depth (ft)	Sample No.	Sample Depth (ft.)	Stratum Depth (in.)	Sample Description and Identification	Depth (ft)	Water Content (%)	Remark
1	S1, T1	1	0-6	Topsoil - Very dark grayish brown (10YR, 3/2) silt loam, weak medium subangular blocky, very moist, friable, abrupt smooth boundary, many fine to medium roots	1		
2			6-36	Yellowish brown (10YR, 5/6) silt loam, 5% gravel, weak medium subangular blocky, very moist, firm, few fine roots, common medium faint light gray (10YR, 7/1) mottles encountered form 16 inches to 36 inches	2		
3					3		
4				End of exploration at 3 feet. Slight groundwater seepage encountered @ 34" Soil mottling observed @ 16" Tube Permeameter Test Results: <0.06 in/hr @ 1'			
5							
6							
7							
8							
9							
10							

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Plate No.: 3B

4B - MTA HAND AUGER USDA; 5/24/2023; 9:38:51 AM

HAND AUGER LOG

GZA GeoEnvironmental, Inc.
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ER / UDC North Brunswick, LLC
Proposed Quick Chek
North Brunswick, NJ

EXPLORATION NO.: HA-3 (@ TP-9)
SHEET: 1 of 1
PROJECT NO: 26.0092770.00
REVIEWED BY: Mark Denno

Logged By: Dan Brozoski
Contractor: NA
Operator: NA

Test Pit Location: See Plan
Ground Surface Elev. (ft.): +110.0

Final Test Pit Depth (ft.): 1
Date Start - Finish: 4/26/2023 - 4/26/2023

Type of Excavator: NA
Excavator Model: NA

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab.Time
4/26/23		0.8	

Depth (ft)	Sample No.	Sample Depth (ft.)	Stratum Depth (in.)	Sample Description and Identification	Depth (ft)	Water Content (%)	Remark
1			0-6	Topsoil/Fill - Dark brown (7.5YR, 3/3) loam, 10% gravel, moderate medium subangular blocky, very moist, friable, abrupt smooth boundary, common fine to medium roots	1		
			6-12	Fill - Dark reddish brown (5YR, 3/3) sandy loam, with 2% brick fragments, 30% gravel, moderate medium crumb, moist, loose to dense, few fine to medium roots			
2				End of exploration at 1 feet. Slight groundwater seepage encountered @ 10" Several attempts made but could not advance deeper due to gravelly soils			
3							
4							
5							
6							
7							
8							
9							
10							

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Plate No.: 3C

4B - MTA HAND AUGER USDA; 5/24/2023; 9:38:52 AM

HAND AUGER LOG

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ER / UDC North Brunswick, LLC
Proposed Quick Chek
North Brunswick, NJ

EXPLORATION NO.: HA-4 (@ TP-7)
SHEET: 1 of 1
PROJECT NO: 26.0092770.00
REVIEWED BY: Mark Denno

Logged By: Dan Brozoski
Contractor: NA
Operator: NA

Test Pit Location: See Plan
Ground Surface Elev. (ft.): +110.5

Final Test Pit Depth (ft.): 3
Date Start - Finish: 4/26/2023 - 4/26/2023

Type of Excavator: NA
Excavator Model: NA

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab.Time
4/26/23		NE	

Depth (ft)	Sample No.	Sample Depth (ft.)	Stratum Depth (in.)	Sample Description and Identification	Depth (ft)	Water Content (%)	Remark
1	S1, T1	1	0-8	Topsoil - Very dark grayish brown (10YR, 3/2) silt loam, weak medium subangular blocky, very moist, friable, abrupt smooth boundary, many fine to medium roots	1		
2			8-36	Yellowish brown (10YR, 5/6) silt loam, 5% gravel, weak medium subangular blocky, moist, firm, few medium roots, common medium distinct light gray (10YR, 7/1) mottles encountered from 20 inches to 36 inches	2		
3					3		
4				End of exploration at 3 feet. Groundwater seepage not encountered Soil mottling observed @ 20" Tube Permeameter Test Results: <0.06 in/hr @ 1'			
5							
6							
7							
8							
9							
10							

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Plate No.: 3D

4B - MTA HAND AUGER USDA; 5/24/2023; 9:38:52 AM

HAND AUGER LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

ER / UDC North Brunswick, LLC
Proposed Quick Chek
North Brunswick, NJ

EXPLORATION NO.: HA-5 (@ TP-1)
SHEET: 1 of 1
PROJECT NO: 26.0092770.00
REVIEWED BY: Mark Denno

Logged By: Dan Brozoski
Contractor: NA
Operator: NA

Test Pit Location: See Plan
Ground Surface Elev. (ft.): +109.5

Final Test Pit Depth (ft.): 4
Date Start - Finish: 4/26/2023 - 4/26/2023

Type of Excavator: NA
Excavator Model: NA

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab.Time
4/26/23		3.2	

Depth (ft)	Sample No.	Sample Depth (ft.)	Stratum Depth (in.)	Sample Description and Identification	Depth (ft)	Water Content (%)	Remark
			0-7	Topsoil/Fill - Dark grayish brown (10YR, 4/2) loam, weak medium subangular blocky, moist, friable, abrupt smooth boundary, many fine to medium roots			
1	S1	1	7-16	Fill - Light brownish gray (10YR, 6/2) loamy sand, weak medium crumb, moist, loose, clear smooth boundary, common fine roots	1		
	S2	1.5	16-26	Fill - Dark yellowish brown (10YR, 4/4) silt loam, weak medium subangular blocky, moist, friable, abrupt smooth boundary			
2					2		
	S3	2.5	26-36	Gray (10YR, 6/1) silty clay loam, weak medium subangular blocky, very moist, plastic, clear smooth boundary, many medium distinct yellowish brown (10YR, 5/8) mottles throughout layer			
3					3		
	S4	3.3	36-48	Strong brown (7.5YR, 4/6) loamy sand, weak medium crumb, wet, loose, common medium faint gray (10YR, 6/1) mottles encountered throughout layer			
4					4		
				End of exploration at 4 feet. Groundwater seepage encountered @ 38" Soil mottling observed @ 26"			
5							
6							
7							
8							
9							
10							

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Plate No.: 3E

4B - MTA HAND AUGER USDA; 5/24/2023; 9:38:52 AM

HAND AUGER LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

ER / UDC North Brunswick, LLC
Proposed Quick Chek
North Brunswick, NJ

EXPLORATION NO.: HA-6 (@ TP-3)
SHEET: 1 of 1
PROJECT NO: 26.0092770.00
REVIEWED BY: Mark Denno

Logged By: Dan Brozoski
Contractor: NA
Operator: NA

Test Pit Location: See Plan
Ground Surface Elev. (ft.): +110.0

Final Test Pit Depth (ft.): 3
Date Start - Finish: 4/26/2023 - 4/26/2023

Type of Excavator: NA

Excavator Model: NA

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab.Time
4/26/23		0.8	

Depth (ft)	Sample No.	Sample Depth (ft.)	Stratum Depth (in.)	Sample Description and Identification	Depth (ft)	Water Content (%)	Remark
1	S1, T1	1	0-10	Topsoil/Fill - Very dark brown (10YR, 2/2) loam, 30% gravel, moderate medium subangular blocky, wet, friable, abrupt smooth boundary, common fine to medium roots	1		
2			10-36	Dark gray (7.5YR, 4/1) silt loam to silty clay, structureless, very moist, plastic, many coarse distinct strong brown (7.5YR, 4/6) mottles encountered throughout layer	2		
3					3		
4				End of exploration at 3 feet. Slight groundwater seepage encountered @ 10" Soil mottling @ 10" Tube Permeameter Test Results: <0.06 in/hr @ 1'			
5							
6							
7							
8							
9							
10							

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Plate No.: 3F

4B - MTA HAND AUGER USDA; 5/24/2023; 9:38:53 AM

HAND AUGER LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

ER / UDC North Brunswick, LLC
Proposed Quick Chek
North Brunswick, NJ

EXPLORATION NO.: HA-7 (@ TP-BL-4)
SHEET: 1 of 1
PROJECT NO: 26.0092770.00
REVIEWED BY: Mark Denno

Logged By: Dan Brozoski
Contractor: NA
Operator: NA

Test Pit Location: See Plan
Ground Surface Elev. (ft.): +109.5

Final Test Pit Depth (ft.): 3
Date Start - Finish: 4/26/2023 - 4/26/2023

Type of Excavator: NA
Excavator Model: NA

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab.Time
4/26/23		2.5	

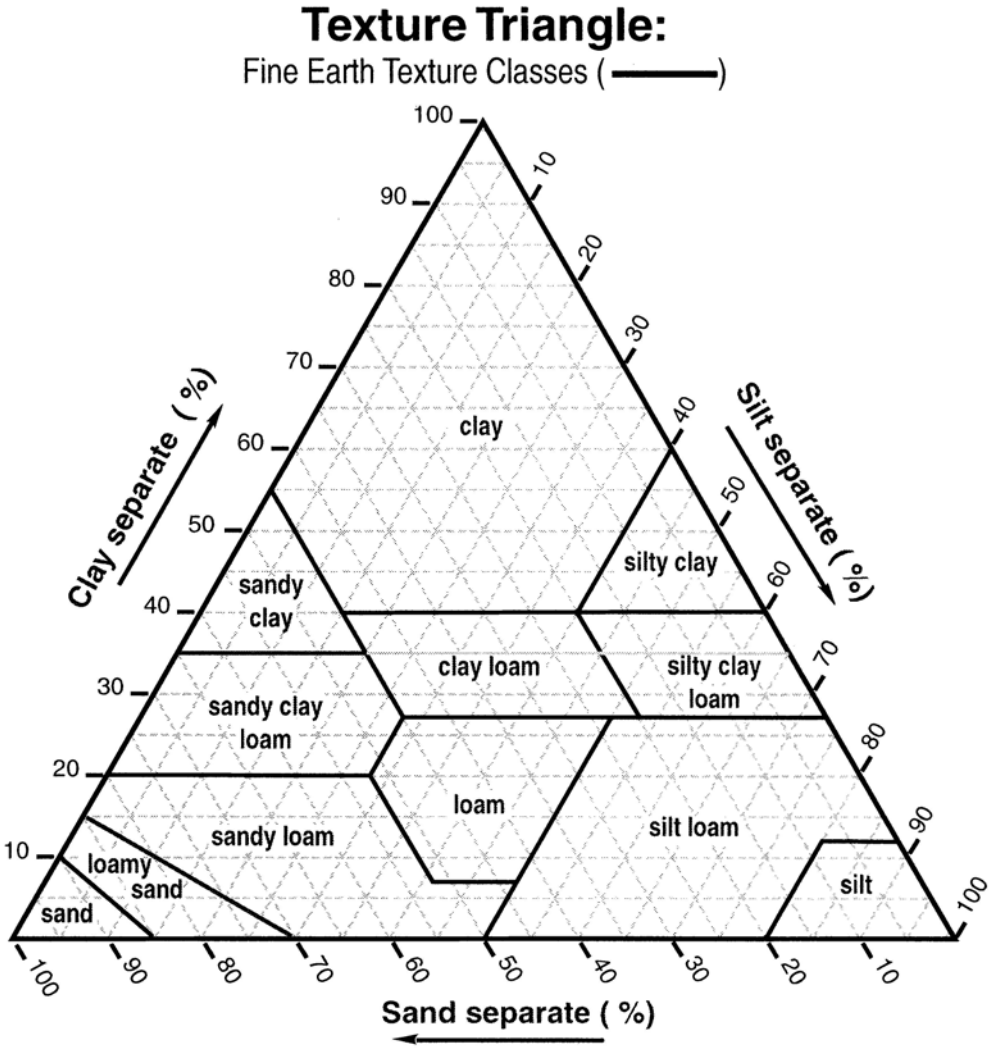
Depth (ft)	Sample No.	Sample Depth (ft.)	Stratum Depth (in.)	Sample Description and Identification	Depth (ft)	Water Content (%)	Remark
1	S1, T1	1	0-3	Topsoil/Fill - Dark grayish brown (10YR, 4/2) loam, moderate medium crumb, moist, friable, clear smooth boundary, many fine to medium roots	1		
			3-20	Brown (10YR, 4/3) loam, 10% gravel, weak medium subangular blocky, moist, friable, few fine roots, clear wavy boundary			
2	S2, T2	2	20-30	Dark grayish brown (10YR, 4/2) loam, 25% gravel, moderate medium crumb, moist, friable, abrupt smooth boundary	2		
3	S3	2.75	30-36	Pale brown (10YR, 6/3) loam, 10% gravel, common medium faint brownish yellow (10YR, 6/8) mottles encountered throughout layer	3		
4				End of exploration at 3 feet. Slight groundwater seepage encountered @ 30" Soil mottling observed @ 30" Tube Permeameter Test Results: <0.06 in/hr @ 1'			
5							
6							
7							
8							
9							
10							

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Plate No.: 3G

4B - MTA HAND AUGER USDA; 5/24/2023; 9:38:53 AM



USDA SOIL CLASSIFICATION SYSTEM

APPENDIX I

Prior Site Explorations - December 2018

LOG OF TEST PIT

TEST PIT NO: 1

COMPLETION DATE: 12/19/18 | SURFACE ELEVATION: +109.5 ft. (±) | WATER LEVEL: 5'

JOB NUMBER: 26.0091498.00 | READING DATE: 12/19/18

DEPTH (FT)	SAMPLES (1)	MOISTURE CONTENT (%)	DEPTH (INCHES)	DESCRIPTION	DEPTH
				12" Fill: Yellowish brown (10YR, 5/4) sandy loam, moderate medium angular blocky, moist, friable, clear wavy boundary, few fine to medium roots	
	S1, T1		12-24	Dark brown (10YR, 4/3) silt loam, weak fine angular blocky, moist, friable, abrupt smooth boundary, few fine roots	
			24-36	Yellowish brown (10YR, 5/6) clay loam, moderate medium angular blocky, moist, friable, abrupt smooth boundary	
	S2, T2	12.6	36-54	Yellowish brown (10YR, 5/6) loamy sand, 5% gravel, moist, friable, clear wavy boundary, few fine faint gray (10YR, 6/1) mottles encountered @ 36 inches to 54 inches	
5	S3, T3	11.2	54-66	Brownish yellow (10YR, 6/8) sand, single grain, moist to wet, loose, clear wavy boundary, few fine faint gray (10YR, 6/1) mottles encountered @ 54 inches to 66 inches	5
			66-132	Very pale brown (10YR, 7/4) sand, single grain, wet, loose	
10	S4, T4				10
				Test Pit completed @ 11'	
15				Mottling observed from 36" to 66"	15
				Moderate groundwater seepage encountered @ 5'	
20					20

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:

TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: JHB/nac 1/19

Sheet: 1 of 1 PLATE: 4A

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO: 2

COMPLETION DATE: 12/19/18 | SURFACE ELEVATION: +110.0 ft. (±) | WATER LEVEL: 1.5' to 5'

JOB NUMBER: 26.0091498.00 | READING DATE: 12/19/18

DEPTH (FT)	SAMPLES (1)	MOISTURE CONTENT (%)	DEPTH (INCHES)	DESCRIPTION	DEPTH
			~~3-6~~	3" Topsoil: Brown (10YR, 4/3) silt loam, weak fine angular blocky, moist, friable, abrupt smooth boundary, common medium roots	
			6-18		
	S1, T1		18-42	Strong brown (7.5YR, 5/6) silty clay loam, moderate medium angular blocky, moist, friable, abrupt smooth boundary, few fine roots	
	S2	13.5	42-70	Brown (10YR, 4/3) silt loam, moderate medium angular blocky, moist, friable, clear wavy boundary	
5				Yellowish brown (10YR, 5/6) clay loam, moderate medium angular blocky, moist, firm, clear wavy boundary, few fine faint gray (10YR, 6/1) mottles encountered @ 28 inches to 42 inches	5
	S3, T2	18.1	70-108	Strong brown (7.5YR, 5/6) sandy loam, 10% gravel, moderate medium angular blocky, wet, friable, common medium distinct gray (10YR, 6/1) mottles encountered @ 42 inches to 70 inches	
				Reddish yellow (7.5YR, 6/8) sandy loam, moderate medium angular blocky, wet, firm, clear wavy boundary, many coarse prominent gray (10YR, 6/1) mottles encountered @ 70 inches to 108 inches	
10	S4, T3		108-144	Very pale brown (10YR, 7/4) sand, single grain, wet, loose	10
15				Test Pit completed @ 12' Mottling observed from 28" to 108" Slight groundwater seepage encountered @ 1.5' Rapid groundwater seepage encountered @ 5'	15
20					20

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: JHB/nac 1/19

Sheet: 1 of 1 PLATE: 4B

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO: 3

COMPLETION DATE: 12/19/18 | SURFACE ELEVATION: +110.0 ft. (±) | WATER LEVEL: 1.5' to 7'

JOB NUMBER: 26.0091498.00 | READING DATE: 12/19/18

DEPTH (FT)	SAMPLES (1)	MOISTURE CONTENT (%)	DEPTH (INCHES)	DESCRIPTION	DEPTH
	S1, T1		4-9 9-36	4" Topsoil: Brown (10YR, 4/3) silt loam, weak fine angular blocky, moist, friable, abrupt smooth boundary, few fine to medium roots FILL - Yellowish brown (10YR, 5/4) silt loam, 40% gravel, weak fine angular blocky, moist, friable, clear wavy boundary	
	S2, T2		36-66	Yellowish brown (10YR, 5/4) silty clay, 10% gravel, massive, moist, firm, clear wavy boundary, many coarse prominent gray (10YR, 6/1) mottles encountered @ 9 inches to 36 inches	
5				Reddish yellow (7.5YR, 6/8) silty clay loam, 10% gravel, moderate medium angular blocky, moist, firm, clear wavy boundary, common medium distinct gray (10YR, 6/1) mottles encountered @ 36 inches to 66 inches	5
	S3, T3		66-108	Reddish yellow (7.5YR, 6/8) sandy loam to sandy clay loam, 10% gravel, moderate medium angular blocky, moist to wet, friable, clear wavy boundary, many coarse prominent gray (10YR, 6/1) mottles encountered @ 66 inches to 108 inches	
10	S4, T4		108-144	Gray (10YR, 6/1) sandy clay, strong coarse subangular blocky, moist to wet, firm, few fine faint reddish yellow (7.5YR, 6/1) mottles encountered @ 108 inches to 144 inches	10
15				Test Pit completed @ 12' Mottling observed from 9" to 144" Slight groundwater seepage encountered @ 1.5' to 7'	15
20					20

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:

TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: JHB/nac 1/19

Sheet: 1 of 1 PLATE: 4C

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO: 4

COMPLETION DATE: 12/19/18 | SURFACE ELEVATION: +110.0 ft (±) | WATER LEVEL: 8'

JOB NUMBER: 26.0091498.00 | READING DATE: 12/19/18

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				6" Topsoil	
	S1	17.7	CL	Yellow-brown silty clay, trace fine sand, trace fine to coarse gravel (moist)(very stiff)	
	S2	11.4	SM	Yellow-brown fine to coarse sand, some clayey silt, little fine to coarse gravel (moist)(medium dense)	
5					5
	S3	15.6	SM	Red-brown fine to coarse sand, some clayey silt, some fine to coarse gravel, occasional cobbles (moist to wet)(medium dense)	
10	S4	22.0	SP	Yellow-brown fine to medium sand, trace silt (wet)(medium dense) - test pit sidewall collapse from 5' to 14'	10
			CL	Gray silty clay (wet)(stiff)	
15				Test pit completed @ 15' Mottling observed from 3' to 15' Rapid groundwater seepage encountered @ 8'	15
20					20

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 1/19

Sheet: 1 of 1 PLATE: 3D

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO: 5

COMPLETION DATE: 12/19/18 | SURFACE ELEVATION: +110.0 ft (±) | WATER LEVEL: 7'

JOB NUMBER: 26.0091498.00 | READING DATE: 12/19/18

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				7" Topsoil	
	S1		ML	Yellow-brown clayey silt, little to some fine to coarse sand, little fine to coarse gravel (moist)(stiff)	
	S2		SM	Yellow-brown fine to coarse sand, some silt, little fne to coarse gravel (moist to wet)(medium dense)	
5	S3				5
	S4				
	S5		SP/SM	Yellow-brown fine to medium sand, little silt (wet)(medium dense)	
10	S6		SP	Yellow-brown fine to medium sand, trace silt (wet)(medium dense) - test pit sidewalls collapsing observed from 7' to 12.5'	10
15				Test pit completed @ 12'-6" Mottling observed @ 1.5' Moderate groundwater seepage encountered @ 7'	15
20					20

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 1/19

Sheet: 1 of 1 PLATE: 3E

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO: 6

COMPLETION DATE: 12/19/18 | SURFACE ELEVATION: +109.5 ft (±) | WATER LEVEL: 9'

JOB NUMBER: 26.0091498.00 | READING DATE: 12/19/18

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				4" Topsoil	
	S1		ML	Yellow-brown clayey silt, some fine to coarse sand, little fine gravel (moist)(stiff)	
	S2				
5	S3		SM	Yellow-brown fine to coarse sand, some clayey silt, some fine to coarse gravel (moist)(medium dense)	5
			ML	Red-brown clayey silt, little fine to coarse sand, little fine to coarse gravel (moist to wet)(stiff)	
10			SP/SM	Red-brown fine to coarse sand, little clayey silt, little fine to coarse gravel (wet)(medium dense)	10
15				Test pit completed @ 12' Mottling observed from 1.5' to 12' Rapid groundwater seepage encountered @ 9'	15
20					20

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:

TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 1/19

Sheet: 1 of 1 PLATE: 3F

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO: 7

COMPLETION DATE: 12/19/18 | SURFACE ELEVATION: +110 ft (±) | WATER LEVEL: 7'-6"

JOB NUMBER: 26.0091498.00 | READING DATE: 12/19/18

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				9" Topsoil	
	S1		SM	Brown fine to medium sand, some clayey silt, trace fine gravel (moist)(medium dense)	
5	S2		SM	Red-brown fine to coarse sand, some silt, little fine to coarse gravel, occasional cobbles (moist to wet)(medium dense)	5
	S3		SM	Yellow-brown fine to medium sand, little to some silt (wet)(medium dense) - test pit sidewall collapse @ 7'-6"	
10	S4		SP	Yellow-brown fine to medium sand, trace silt (wet)(medium dense)	10
15				Test pit completed @ 12' Mottling observed from 3' to 12' Rapid groundwater seepage encountered @ 7'-6"	15
20					20

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS

TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 1/19

Sheet: 1 of 1 PLATE: 3G

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc

LOG OF TEST PIT

TEST PIT NO: 8

COMPLETION DATE: 12/19/18 SURFACE ELEVATION: +111.0 ft. (±) WATER LEVEL:

JOB NUMBER: 26.0091498.00 READING DATE: 12/19/18

DEPTH (FT)	SAMPLES (1)	MOISTURE CONTENT (%)	DEPTH (INCHES)	DESCRIPTION	DEPTH
	S1, T1		0-48	48" Fill: Brown (10YR, 5/3) clay loam, moderate medium angular blocky, moist, friable, diffuse broken boundary	
	S2, T2		48-78	Yellowish brown (10YR, 5/6) sandy clay loam, 10% gravel, moderate medium angular blocky, moist, friable, clear wavy boundary, many coarse prominent gray (10YR, 6/1) mottles encountered @ 48 inches to 78 inches	
5					5
	S3, T3		78-104	Strong brown (7.5YR, 5/8) sandy clay loam, 20% gravel, moderate medium angular blocky, moist to wet, friable, gradual irregular boundary, many coarse prominent gray (10YR, 6/1) mottles encountered @ 78 inches to 104 inches	
	S4, T4		104-120	Reddish yellow (7.5YR, 6/8) sand, single grain, wet, loose, clear wavy boundary, few fine faint gray (10YR, 6/1) mottles encountered @ 104 inches to 120 inches	
10					10
			120-144	Reddish yellow (7.5YR, 6/8) loamy sand to sandy loam, 20% gravel, moderate medium angular blocky, wet, friable	
	S5, T5				
15				Test Pit completed @ 12' Mottling observed from 48" to 120" Rapid perched groundwater seepage encountered @ 4' Moderate groundwater seepage encountered @ 6'	15
20					20

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: JHB/nac 1/19

Sheet: 1 of 1 PLATE: 4E

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO: 9

COMPLETION DATE: 12/20/18 | SURFACE ELEVATION: +110 ft (±) | WATER LEVEL: 9'

JOB NUMBER: 26.0091498.00 | READING DATE: 12/20/18

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				9" Topsoil	
	S1		ML	Yellow-brown clayey silt, little fine to coarse sand, trace fine to coarse gravel (moist)(stiff)	
5	S2		SM	Yellow-brown fine to coarse sand, little silt (wet)(medium dense)	5
	S3		SM	Yellow-brown fine to coarse sand, some clayey silt, some fine to coarse gravel (moist to wet)(medium dense)	
10					10
				Test pit completed @ 12'	
15				Mottling observed from 3' to 12'	15
				Slight groundwater seepage encountered @ 9'	
20					20

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS

TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 1/19

Sheet: 1 of 1 PLATE: 3I

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO: 10

COMPLETION DATE: 12/20/18 | SURFACE ELEVATION: +110 ft (±) | WATER LEVEL: 10'

JOB NUMBER: 26.0091498.00 | READING DATE: 12/20/18

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				8" Topsoil	
	S1		ML	Yellow-brown clayey silt, little fine to coarse sand, trace fine to coarse gravel (moist)(stiff)	
5					5
	S2		SM	Yellow-brown fine to medium sand, some silt, little fine to coarse gravel (moist)(medium dense)	
10	S3		SM	Yellow-brown fine to coarse sand, some clayey silt, some fine to coarse gravel (moist to wet)(medium dense)	10
				Test pit completed @ 12'	
15				Mottling observed from 1.5' to 12'	15
				Very slight groundwater seepage encountered @ 10'	
20					20

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:

TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 1/19

Sheet: 1 of 1 PLATE: 3J

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO: 11

COMPLETION DATE: 12/20/18 | SURFACE ELEVATION: +109.5 ft (±) | WATER LEVEL: 9'

JOB NUMBER: 26.0091498.00 | READING DATE: 12/20/18

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				4" Topsoil	
	S1		SM	Yellow-brown clayey silt, little fine to medium sand (moist)(stiff)	
5	S2		SM	Yellow-brown fine to medium sand, some silt, little fine to coarse gravel (moist)(medium dense)	5
	S3		SM	Red-brown fine to coarse sand, some clayey silt, some fine to coarse gravel, occasional cobbles (wet)(dense)	
10					10
	S4		SM	Yellow-brown fine to medium sand, some silt (wet)(medium dense)	
15				Test pit completed @ 13' Mottling observed from 1.5' to 13' Slight groundwater seepage encountered @ 9' Moderate groundwater seepage encountered @ 11'	15
20					20

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 1/19

Sheet: 1 of 1 PLATE: 3K

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO: 12

COMPLETION DATE: 12/19/18 | SURFACE ELEVATION: +109.5 ft. (±) | WATER LEVEL: 12'

JOB NUMBER: 26.0091498.00 | READING DATE: 12/19/18

DEPTH (FT)	SAMPLES (1)	MOISTURE CONTENT (%)	DEPTH (INCHES)	DESCRIPTION	DEPTH
	S1, T1			12" Topsoil: Very dark grayish brown (10YR, 3/2) silt loam, weak fine angular blocky, moist, friable, abrupt smooth boundary, common medium to coarse roots	
			12-30	Yellowish brown (10YR, 5/6) silt loam, 2% gravel, strong coarse subangular blocky, moist, firm, clear wavy boundary, few medium roots, common medium distinct gray (10YR, 6/1) mottles encountered @ 18 inches to 30 inches	
	S2, T2				
5			30-78	Strong brown (7.5YR, 5/6) sandy clay loam, 10% gravel, moderate medium angular blocky, moist, firm, gradual irregular boundary, many coarse prominent gray (10YR, 6/1) mottles encountered @ 30 inches to 78 inches	5
	S3, T3		78-96	Gray (10YR, 6/1) sandy clay loam, 10% gravel, moderate medium angular blocky, moist, friable, few fine faint reddish yellow (7.5YR, 6/8) mottles encountered @ 78 inches to 96 inches	
10			96-168	Red (2.5YR, 4/6) sandy clay loam, 30% gravel, moderate medium angular blocky, moist to wet, firm, common medium distinct light gray (10YR, 7/1) mottles encountered @ 96 inches to 168 inches	10
	S4, T4				
15				Test Pit completed @ 14'	15
				Mottling observed from 18" to 168"	
				Slight groundwater seepage encountered @ 12'	
20					20

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:

TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: JHB/nac 1/19

Sheet: 1 of 1 PLATE: 4F

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO. PSB-1

COMPLETION DATE: 12/19/18
JOB NUMBER: 26.0091503.03
SURFACE ELEVATION: +109 ft. (±)
WATER LEVEL: 1.5'
READING DATE: 12/19/18

DEPTH	SAMPLES	PID READING (PPM)	SYMBOL	DESCRIPTION	DEPTH
	PSB-1N	ND		0 to 3" Topsoil (Fill) - Brown fine to medium sand, and silt, some organics and roots (moist)	
		ND	ML	3" to 8" Buried Topsoil - Yellowish brown fine to coarse sand, and silt, trace organics (moist)	
		ND		Brown clayey silt, some fine sand, trace organics (moist)	
		ND	SM	Yellowish brown fine to coarse sand, some silt, trace fine to coarse gravel (wet)	
5		ND		- wet @ 5'	5
		ND	ML	Yellowish brown and gray silt, some fine to medium sand, trace fine to coarse gravel (wet)	
		ND			
		ND	SP	Yellowish brown fine to medium sand, trace silt (wet)	
10		ND			10
		ND			
				Test pit completed @ 11'	
				Ground water seepage encountered @ 1.5'	
15				Soil mottling @ 2.8'	15
				Test pit collapse @ 3'	
				PID = Photoionization Detector	
				ppm = parts per million	
				ND = Not Detected	
20					20
25					25

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: BJF/pm 1/19

Sheet: 1 of 1 PLATE: 5E

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO. PSB-2

COMPLETION DATE: 12/19/18
JOB NUMBER: 26.0091503.03
SURFACE ELEVATION: +109 ft. (±)
WATER LEVEL: 5'
READING DATE: 12/19/18

DEPTH	SAMPLES	PID READING (PPM)	SYMBOL	DESCRIPTION	DEPTH
0	PSB-2F	ND		4" Topsoil (Fill) - Brown fine to medium sand, and silt, some organics and roots (moist)	0
		ND	SM	Fill (Reworked topsoil) - Light brown fine to medium sand, little silt (moist)	
		ND		Light brown fine to coarse sand, some silt, trace organics (moist)	
		ND			
5		ND	SP	Yellowish brown fine to coarse sand, trace silt (wet) - wet @ 5'	5
		ND			
		ND			
		ND			
		ND			
10		ND			10
		ND			
				Test pit completed @ 11'	
				Ground water seepage encountered @ 5'	
				Soil mottling @ 3'	
15				PID = Photoionization Detector	15
				ppm = parts per million	
				ND = Not Detected	
20					20
25					25

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: BJF/pm 1/19

Sheet: 1 of 1 PLATE: 5F

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF BORING

BORING NO. PSW-1

COMPLETION DATE: 12/20/18 | SURFACE ELEVATION: +109 ft. (±) | WATER LEVEL: 8'

JOB NUMBER: 26.0091503.03 | READING DATE: 12/20/18

DEPTH	SAMPLES	PID READING (PPM)	SYMBOL	DESCRIPTION	DEPTH
	PSW-1	ND	ML	3" Topsoil - Brown fine sand, and clayey silt, some organics (moist)	
		ND		Yellowish brown to gray clayey silt, some fine sand (moist)	
		ND	SM	Reddish brown fine to medium sand, some silt, trace fine to coarse gravel (moist)	
		ND			
5		ND		- grading to gray @ 5'	5
		ND			
		ND			
		ND			
		ND	SM	Light brown fine to medium sand, and silt, trace fine gravel (wet)	
10		ND			10
				Boring completed @ 10'	
				Ground water encountered @ 8'	
				PID = Photoionization Detector	
15				ppm = parts per million	15
				ND = Not Detected	
20					20
25					25

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: BJF/pm 1/19

Sheet: 1 of 1 PLATE: 4G

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO. PSW-3

COMPLETION DATE: 12/19/18
JOB NUMBER: 26.0091503.03
SURFACE ELEVATION: +110 ft. (±)
WATER LEVEL: 4'
READING DATE: 12/19/18

DEPTH	SAMPLES	PID READING (PPM)	SYMBOL	DESCRIPTION	DEPTH
	PSW-3F	ND		6" Topsoil (Fill) - Brown fine sand, and silt, some organics and roots (moist)	
		ND		Fill - Light brown fine to medium sand, some clayey silt, trace fine gravel, with brick fragments, asphalt fragments, and stone (moist)	
		ND			
	PSW-3N	ND			
5		ND	SM	Light brown fine to coarse sand, and clayey silt, trace fine gravel (wet) - wet @ 4'	5
		ND			
		ND	SM	Brown fine to coarse sand, little fine to coarse gravel, some clayey silt (wet)	
		ND			
		ND			
10		ND	SP	Reddish brown fine to coarse sand, some fine gravel, little silt (wet)	10
		ND			
				Test pit completed @ 11.5'	
				Ground water seepage encountered @ 4'	
15				South side of test pit has 4' of fill and some asphalt at surface	15
				PID = Photoionization Detector	
				ppm = parts per million	
				ND = Not Detected	
20					20
25					25

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: BJF/pm 1/19

Sheet: 1 of 1 PLATE: 5G

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF BORING

BORING NO. PB-1

COMPLETION DATE: 12/20/18 | SURFACE ELEVATION: +109 ft. (±) | WATER LEVEL: 6'

JOB NUMBER: 26.0091503.03 | READING DATE: 12/20/18

DEPTH	SAMPLES	PID READING (PPM)	SYMBOL	DESCRIPTION	DEPTH
	PB-1N	ND	ML	3" Topsoil - Brown fine sand, and silt, trace organics (moist)	
		ND		Light brown to gray clayey silt graded to silty clay, some fine to coarse gravel, trace fine sand (moist)	
		ND		Reddish brown fine to medium sand, and silty clay, trace fine gravel, trace cobbles (moist)	
		ND			
5		ND	SM		5
		ND			
		ND			
		ND			
10		ND			10
				Boring completed @ 10'	
				Ground water encountered @ 6'	
				PID = Photoionization Detector	
15				ppm = parts per million	15
				ND = Not Detected	
20					20
25					25

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: BJF/pm 1/19

Sheet: 1 of 1 PLATE: 4F

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF TEST PIT

TEST PIT NO. D-1

COMPLETION DATE: 12/20/18
JOB NUMBER: 26.0091503.03

SURFACE ELEVATION: +110 ft. (±)

WATER LEVEL: 1'
READING DATE: 12/20/18

DEPTH	SAMPLES	PID READING (PPM)	SYMBOL	DESCRIPTION	DEPTH
		ND		4" Fill Topsoil - Brown fine to medium sand, and clayey silt	
		ND		Fill - Brown clayey silt, little fine to coarse sand, little fine to coarse gravel, some asphalt and brick fragments - wet @ 1'	
		ND	ML	Yellowish brown clayey silt, little fine to coarse sand, little fine to coarse gravel (wet)	
		ND			
5					5
				Test pit completed @ 4'	
				Ground water seepage encountered @ 1'	
				PID = Photoionization Detector	
				ppm = parts per million	
10				ND = Not Detected	10
15					15
20					20
25					25

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: BJF/pm 1/19

Sheet: 1 of 1 PLATE: 5J

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF BORING

BORING NO. BL-1/TW-1

COMPLETION DATE: 12/20/18 | SURFACE ELEVATION: +109 ft. (±) | WATER LEVEL: 8'

JOB NUMBER: 26.0091503.03 | READING DATE: 12/20/18

DEPTH	SAMPLES	PID READING (PPM)	SYMBOL	DESCRIPTION	DEPTH
	BL-1	ND		7" Topsoil - Brown fine sand, and silt, some organics, trace fine to coarse gravel (moist)	
		ND	ML	Yellowish brown clayey silt grading to silty clay, trace to little fine sand, trace fine to coarse gravel (moist)	
		ND			
		ND			
5		ND			5
		ND	SM	Light brown fine to medium sand, some clayey silt, some fine to coarse gravel (moist)	
	BL-1-VO	ND			
		ND		- wet @ 8'	
		ND	ML	Red-brown clayey silt, some fine to coarse gravel, trace silt, and fine sand (wet)	
10		ND	SP	Yellow-brown fine to coarse sand, trace silt, trace fine gravel (wet)	10
		ND			
		ND			
		ND			
		ND	CL	Reddish brown clay, some fine to coarse gravel, trace silt, and fine sand (moist)	
15		ND			15
				Boring completed @ 15'	
				Ground water encountered @ 8'	
				1" PVC well installed to 15'	
				10' of screen, 5' of riser	
20				Water level measured in well @ 1.20 bgs	20
				PID = Photoionization Detector	
				ppm = parts per million	
				ND = Not Detected	
25					25

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: BJF/pm 1/19

Sheet: 1 of 1 PLATE: 4A

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF BORING

BORING NO. BL-2/TW-2

COMPLETION DATE: 12/20/18 | SURFACE ELEVATION: +110 ft. (±) | WATER LEVEL: 5'

JOB NUMBER: 26.0091503.03 | READING DATE: 12/20/18

DEPTH	SAMPLES	PID READING (PPM)	SYMBOL	DESCRIPTION	DEPTH
	BL-2	ND		3" Topsoil (Fill) - Clayey silt, little fine to medium sand, little organics (moist)	
		ND	ML	Fill - (Reworked topsoil) - Yellow-brown clayey silt, little fine to medium sand (moist)	
		ND		Gray clayey silt, little fine sand, little fine to coarse gravel, orange mottles throughout (moist)	
	BL-2VO	ND			
5		ND		Yellow-brown silty clay, little fine to coarse gravel, little fine to medium sand (wet)	5
		ND			
		ND	SM	- grading to yellowish brown	
		ND			
10		ND			10
		ND			
		ND	ML	Gray silty clay, little fine to coarse gravel, little fine to medium sand (wet)	
		ND		Alternating layers of light gray silty clay, and fine to coarse sand, some silt, trace fine to coarse gravel (wet)	
15		ND	CL/SM		15
		ND			
		ND			
		ND		Boring completed @ 18'	
				Ground water encountered @ 5'	
20				1" PVC well point installed to 17'	20
				15' of screen	
				Ground water measured in well @ 1.85' bgs	
				PID = Photoionization Detector	
				ppm = parts per million	
				ND = Not Detected	
25					25

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: BJF/pm 1/19

Sheet: 1 of 1 PLATE: 4B

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF BORING

BORING NO. BL-3/TW-3

COMPLETION DATE: 12/20/18 | SURFACE ELEVATION: +110 ft. (±) | WATER LEVEL: 5'

JOB NUMBER: 26.0091503.03 | READING DATE: 12/20/18

DEPTH	SAMPLES	PID READING (PPM)	SYMBOL	DESCRIPTION	DEPTH
	BL-3	ND	SM	3" Topsoil - Brown silt, and fine sand, some organics (moist)	
		ND		Light gray fine to medium sand, and silt, some fine to coarse gravel (moist)	
		ND	ML	Light brown clayey silt, and fine to medium sand, trace coarse gravel (moist)	
		ND			
5	BL-3VO	ND		- grading to gray, little fine sand	5
		ND	SM	Brown fine to medium sand, and clayey silt, trace fine to coarse gravel (moist)	
		ND			
		ND	SM	Brown to red fine to medium sand, some clayey silt, some fine to coarse gravel (wet)	
		ND			
10	BL-3T-N	ND	SP	Light gray fine to coarse sand, little silt, trace fine to coarse gravel (wet)	10
		ND			
		ND	CL	Reddish brown and gray silty clay (wet)	
		ND		Yellowish to reddish brown fine to coarse sand, trace silt (wet)	
		ND			
15	BL-3T-NVO	ND	SP	- transitions to gray in color around 16'	15
		ND			
		ND			
				Boring completed @ 17'	
				Ground water encountered @ 5'	
				1" PVC temporary well point installed to 17'	
20				Ground water @ 4.75' bgs in TW-3	20
				PID = Photoionization Detector	
				ppm = parts per million	
				ND = Not Detected	
25					25

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: BJF/pm 1/19

Sheet: 1 of 1 PLATE: 4C

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF BORING

BORING NO. BL-4/TW-4

COMPLETION DATE: 12/20/18 | SURFACE ELEVATION: +109 ft. (±) | WATER LEVEL: 10'

JOB NUMBER: 26.0091503.03 | READING DATE: 12/20/18

DEPTH	SAMPLES	PID READING (PPM)	SYMBOL	DESCRIPTION	DEPTH
	BL-4 BL-4HA	ND		3" Topsoil - Brown clayey silt, and fine sand, some organics (moist)	
		ND	ML	Fill - (Reworked topsoil) - Brown fine sand, and clayey silt, trace organics (moist)	
		ND		Light brown clayey silt, trace fine sand, trace fine to coarse gravel (moist)	
		ND			
5		ND		Red to brown fine to medium sand, and clayey silt, little fine to coarse gravel (moist)	5
		ND	SM		
		ND			
		ND			
		ND			
10	BL-4VO	ND			10
		ND		Reddish brown fine to coarse sand, some clayey silt, little fine to coarse gravel (wet)	
		ND	SM		
		ND			
		ND			
15		ND		Gray fine to coarse sand, and silt (moist)	15
		ND	SM		
		ND			
				Boring completed @ 17.5' Ground water encountered @ 10' 1" PVC temporary well point installed to 17.5' 15' screen Ground water measured @ 4.60' in TW-4 PID = Photoionization Detector ppm = parts per million ND = Not Detected	
20					20
25					25

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: BJF/pm 1/19

Sheet: 1 of 1 PLATE: 4D

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

LOG OF BORING

BORING NO. BL-5/TW-5

COMPLETION DATE: 12/20/18 | SURFACE ELEVATION: +109 ft. (±) | WATER LEVEL: 5'

JOB NUMBER: 26.0091503.03 | READING DATE: 12/20/18

DEPTH	SAMPLES	PID READING (PPM)	SYMBOL	DESCRIPTION	DEPTH
0	BL-5	ND		3" Topsoil (Fill) - Brown fine sand, and silt, some organics/roots (moist)	0
		ND		Fill (Reworked topsoil) - Light brown clayey silt, some fine to medium sand, trace organics, trace fine to coarse gravel (moist)	
		ND			
		ND	ML	Light brown clayey silt, trace fine sand (moist)	
5	BL-5VO	ND			5
		ND			
		ND			
		ND			
		ND		Yellowish brown fine to coarse sand, trace silt (wet)	
		ND			
10		ND	SP		10
		ND			
		ND			
		ND			
		ND			
15		ND			15
				Boring completed @ 15'	
				Ground water encountered @ 5'	
				1" PVC temporary well installed to 15'	
				15' of screen	
				Ground water measured @ 3.00' in TW-5	
				PID = Photoionization Detector	
20				ppm = parts per million	20
				ND = Not Detected	
25					25

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: BJF/pm 1/19

Sheet: 1 of 1 PLATE: 4E

MELICK-TULLY AND ASSOCIATES,
a Division of GZA GeoEnvironmental, Inc.

APPENDIX II - Limitations

APPENDIX II

Limitations

A. Subsurface Information

Locations: The locations of the explorations were approximately determined by tape measurement from existing surface features. Elevations of the explorations were approximately determined by interpolation between contours shown on topographic plans provided to us by the site engineer. The locations and elevations of the explorations should be considered accurate only to the degree implied by the method used.

Interface of Strata: The stratification lines shown on the individual logs of the subsurface explorations represent the approximate boundaries between soil types, and the transitions may be gradual. The stratum lines shown on soil profiles are based upon interpolation between explorations and may not represent actual subsurface conditions.

Field Logs/Final Logs: A field log was prepared for each exploration by a member of our staff. The field log contains factual information and interpretation of the soil conditions between samples. Our recommendations are based on the final logs as shown in this report and the information contained therein, and not on the field logs. The final logs represent our interpretation of the contents of the field logs, and the results of the laboratory observations and/or tests of the field samples.

Water Levels: Water level readings have been made in the explorations at times and under conditions stated on the individual logs. These data have been reviewed and interpretations made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater will occur due to variations in rainfall, temperature and other factors.

Pollution/Contamination: Unless specifically indicated to the contrary in this report, the scope of our services was limited only to investigation and evaluation of the geotechnical engineering aspects of the site conditions, and did not include any consideration of potential site pollution or contamination resulting from the presence of chemicals, metals, radioactive elements, etc. This report offers no facts or opinions related to potential pollution/contamination of the site.

Environmental Considerations: Unless specifically indicated to the contrary in this report, this report does not address environmental considerations which may affect the site development, e.g., wetlands determinations, flora and fauna, wildlife, etc. The conclusions and recommendations of this report are not intended to supersede any environmental conditions which should be reflected in the site planning.

B. Applicability of Report

This report has been prepared in accordance with generally accepted soils and foundation engineering practices for the exclusive use of Quick Chek Corporation for specific application to the design of the proposed Food Store. No other warranty, expressed or implied, is made.

This report may be referred to in the project specifications for general information purposes only but should not be used as the technical specifications for the work, as it was prepared for design purposes exclusively.

C. Reinterpretation of Recommendations

Change in Location or Nature of Facilities: In the event that any changes in the nature, design or location of the facilities are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing.

Changed Conditions During Construction: The analyses and recommendations submitted in this report are based in part upon the data obtained from 7 widely-spaced hand augers performed for this study and our review of prior site explorations for previous studies. The nature and extent of variations between the explorations may not become evident until construction. If variations then appear evident, it will be necessary to reevaluate the recommendations of this report.

Changes in State-of-the-Art: The conclusions and recommendations contained in this report are based upon the applicable standards of our profession at the time this report was prepared.

D. Use of Report by Prospective Bidders

This engineering report was prepared for the project by GZA GeoEnvironmental, Inc. for design purposes and may not be sufficient to prepare an accurate bid. Contractors utilizing the information in the report should do so with the express understanding that its scope was developed to address design considerations. Prospective bidders should obtain the owner's permission to perform whatever additional explorations or data gathering they deem necessary to prepare their bid accurately.

E. Construction Observation

We recommend that GZA be retained to provide on-site soils engineering services during the earthwork construction and foundation phases of the work. This is to observe compliance with the design concepts and to allow changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.

FRENCH & PARRELLO ASSOCIATES

1800 Route 34, Suite 101
Wall Township, New Jersey 07719
T: 732.312.9800
F: 732.312.9801
fpaengineers.com

April 24, 2025

Mr. Daniel Hutt
American Properties Realty, Inc.
517 Route One South, Suite 2100
Iselin, New Jersey 08830-3011

Re: Report of Subsurface Exploration &
Geotechnical Engineering Assessment
North Brunswick QuickChek
Township of North Brunswick, Middlesex County, New Jersey
FPA No. 23431.001R1

Dear Mr. Hutt:

INTRODUCTION

This report presents the results of our Subsurface Exploration and Geotechnical Engineering Assessment performed in connection with the proposed QuickChek convenience store to be located at 1661-1689 Route 130 in the Township of North Brunswick, Middlesex County, New Jersey. The property is currently wooded and is designated as Block 230, Lot 15 on the Township of North Brunswick Tax Map. The regional location of the project site is presented on Drawing No. 1, "Regional Location Plan."

It is our understanding that the proposed improvements will include the construction of a QuickCheck convenience store occupying a plan area of approximately 5,670 square feet, fuel sales, paved driveways and parking areas as well as associated site utilities. As a result of the increase in impervious coverage, stormwater management will need to be incorporated into the site design which will consist of porous pavement and constructed wetlands.

The existing site grades are relatively level and vary from approximately elevation +109 feet along Route 130 and gently slope up to +111 feet to the north. The proposed site grades vary from approximately elevation +109 feet to +114 feet with a building finished floor elevation of +114.40 feet. Therefore, we anticipate fills up to 4 feet may be required to accommodate the proposed improvements.

It is our understanding that GZA performed a Hydrologic Soil Group Evaluation dated May 23, 2023 and reclassified the soils at the project site to "D" soils. However, per the NJDEP BMP Manual each BMP that does not infiltrate needs a minimum of 2 test pits to identify the seasonal high water table (SHWT). Therefore, the purpose for our involvement on the project at this was to perform additional explorations to meet the minimum NJDEP BMP Manual testing requirements and identify the subsurface conditions to facilitate the planning, design and construction of the proposed stormwater management systems. Our scope of work included the technical observation of 6 test pits, engineering evaluation of the subsurface information and the preparation of this summary report.

SUBSURFACE EXPLORATION

French and Parrello Associates (FPA) provided technical oversight of 6 test pits performed on March 10, 2025 at locations identified by Bohler. The field work was performed by an excavating subcontractor while under the full-time technical observation by a representative of FPA. The test pit locations were located by a representative of FPA utilizing handheld GPS equipment as well as based on correlation with existing site features presented on the Concept Grading & Drainage Plan. The approximate test pit locations are presented on Drawing No. 2, "Test Pit Location Plan."

The test pits, designated as FPA-1 through FPA-6, were excavated to determine soil and groundwater conditions as well as seasonal high water elevations. The test pits were advanced to depths ranging from approximately 8 feet to 10 feet below the existing ground surface. The exposed soil profiles were classified in accordance with the Burmister Soil Classification System. Indications of seasonal high groundwater (e.g., soil mottling) were also evaluated within the test pits and noted on the logs where observed. The depth to groundwater was measured upon the completion of the test pits. Soil classifications, soil mottling observations and recorded groundwater depths are presented on the test pit logs in Appendix A.

SITE CONDITIONS

Regional Geology

Based on our review of the published geologic literature, the native soils at the project site are comprised of stratified material of marine and continental origin, represented as the Magothy formation on the Geologic Map of New Jersey. The marine soils typically consist of silt, clayey silt and silty clay interbedded with sand layers. Small amounts of gravel may be encountered in some areas. The encountered material consists predominately of strongly laminated, lignitic clay, in places slightly glauconitic. Bedrock is encountered at depths greater than 10 feet in the immediate project vicinity.

Subsurface Conditions

The soils encountered within the test pits were consistent with those reported in published geologic literature and typically consisted of stratified marine deposits of the Magothy formation. The marine soils were comprised predominately of silt and clay intermixed with minor to moderate amounts of coarse to fine sand and varying amounts of coarse to fine gravel. The cohesive deposits were interbedded with predominantly granular soils within test pits FPA-1, FPA-3 and FPA-6 at depths ranging from approximately 4 feet to 10 feet below the existing ground surface. The granular soils typically consisted of coarse to fine sands with minor to moderate amounts of silt, minor amounts of medium to fine grave. Few pieces of cemented sands as well as few cobbles were encountered within the interbedded sand layers.

Based upon the observed excavation effort during the advancement of the test pits, the consistency of the cohesive marine deposits may be described as stiff. The relative density of granular soils was medium-dense to very dense. Excavator refusal was encountered within test pit FPA-2 at a depth of approximately 8 feet below the existing ground surface.

Groundwater was encountered within test pit FPA-6 at a depth of approximately 10 feet below the existing grade at the time the explorations were performed, corresponding to approximate elevation +99.5 feet. Perched groundwater seepage was encountered within the surficial soils within test pit FPA-5 at a depth of approximately 2 feet below the existing grade. The seepage is most likely result of standing water adjacent to the test pit. Soil

mottling, an indication of seasonal high water level, was observed within all of the the test pits at depths ranging from 2 feet to 6 feet below the existing the ground surface, corresponding to approximate elevations +103.5 feet to +107.3 feet. Seasonal and storm-related fluctuations in the groundwater level, as well as the potential presence of perched groundwater should be anticipated. For a more detailed description of the subsurface soil and groundwater conditions encountered, please refer to the test pit logs presented in Appendix A.

DISCUSSION

It is our understanding that GZA reclassified the soils at the project site to "D" soils, which we are in agreement with. Per the NJDEP BMP Manual each BMP that does not infiltrate needs a minimum of 2 test pits to identify the seasonal high water table (SHWT). The soils encountered within the test pits advanced during our subsurface explorations were consistent with those reported by GZA and in published geologic literature. The soils typically consisted of stratified marine deposits of the Magothy formation comprised predominately of silt and clay intermixed with minor to moderate amounts of coarse to fine sand and varying amounts of coarse to fine gravel. Soil mottling, an indication of seasonal high water level, was observed within all of the test pits at depths ranging from 2 feet to 6 feet below the existing the ground surface, corresponding to approximate elevations +103.5 feet to +107.3 feet.

CLOSING & LIMITATIONS

The recommendations contained herein are contingent upon subsurface conditions remaining consistent with those encountered during our subsurface exploration. They are also contingent upon the basis that all stormwater management structure related aspects of construction, including stripping, excavation and removal of unsuitable soil, be observed by a representative of FPA. This is to observe compliance with the design concepts and specifications and to allow design changes in the event that subsurface conditions differ from those anticipated prior to construction.

The scope of our services did not include any environmental assessment or investigation for the presence or absence of wetlands, chemically hazardous, or biologically toxic materials in the soil, surface water, groundwater or air, on or below or around the site.

Services performed by FPA during this project have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation, expressed or implied, and no warranty or guarantee is included or intended in the services provided.

Should you have any questions or if we can be of service to you in the future, please feel free to contact us.

Sincerely,

FRENCH & PARRELLO ASSOCIATES

David M. Rohmeyer, PE
Project Manager

Joseph M. Tierney, PE
Project Consultant, Manager of Geotechnical Services

FRENCH & PARRELLO ASSOCIATES

ENGINEERING AND CONSULTING **SINCE 1974**

Report of Subsurface Exploration & Geotechnical Engineering Assessment

North Brunswick QuickChek

Township of North Brunswick, Middlesex County, New Jersey





Mr. Daniel Hutt
American Properties Realty, Inc.
517 Route One South, Suite 2100
Iselin, New Jersey 08830-3011

April 24, 2025 | FPA No. 23431.001R1
1800 Route 34, Suite 101, Wall Township, NJ 07719

FRENCH & PARRELLO ASSOCIATES

1800 Route 34, Suite 101
Wall Township, New Jersey 07719
T: 732.312.9800
F: 732.312.9801
fpaengineers.com

April 24, 2025

Mr. Daniel Hutt
American Properties Realty, Inc.
517 Route One South, Suite 2100
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Re: Report of Subsurface Exploration &
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Township of North Brunswick, Middlesex County, New Jersey
FPA No. 23431.001R1

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Services performed by FPA during this project have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation, expressed or implied, and no warranty or guarantee is included or intended in the services provided.

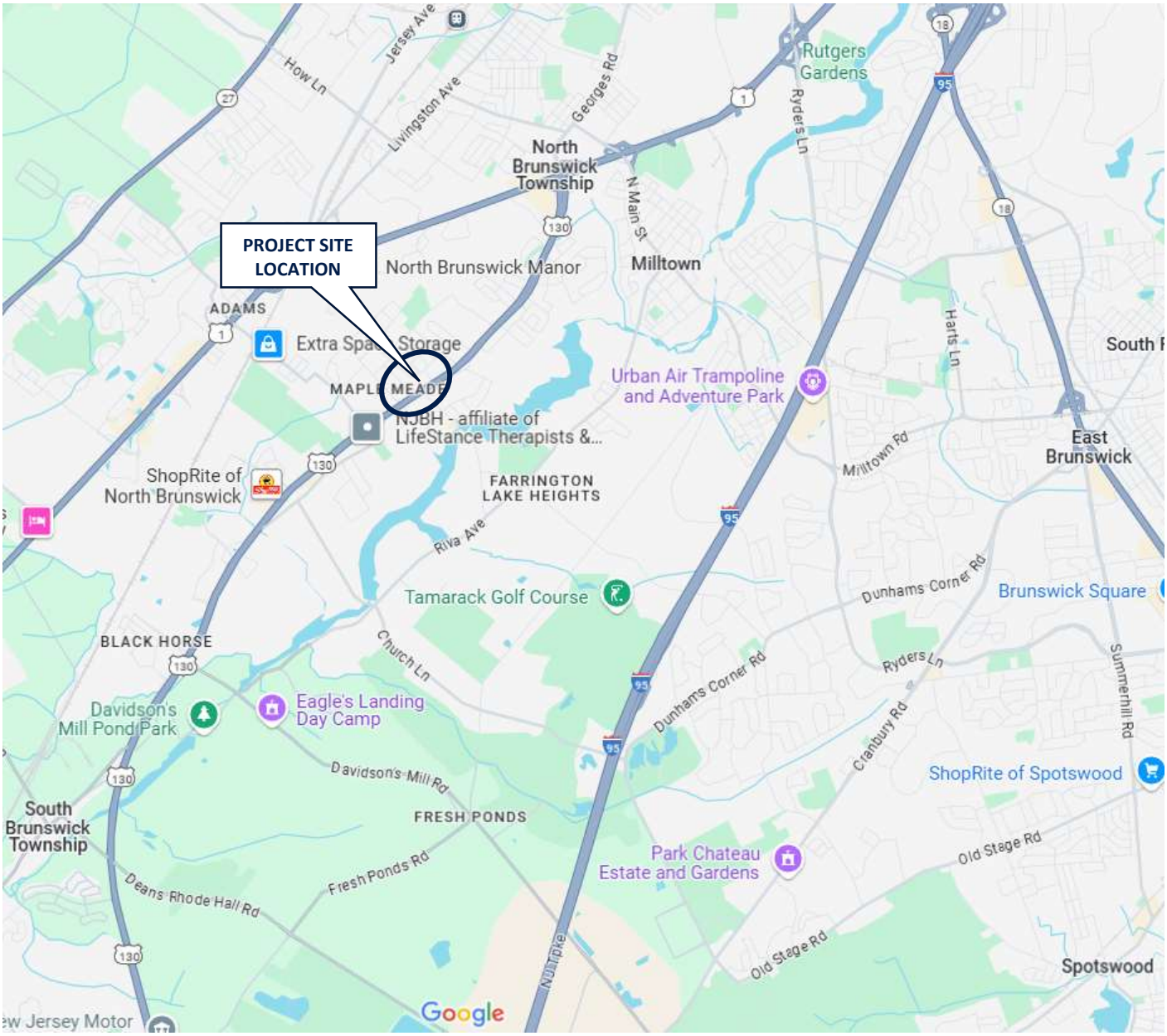
Should you have any questions or if we can be of service to you in the future, please feel free to contact us.

Sincerely,

FRENCH & PARRELLO ASSOCIATES

David M. Rohmeyer, PE
Project Manager

Joseph M. Tierney, PE
Project Consultant, Manager of Geotechnical Services



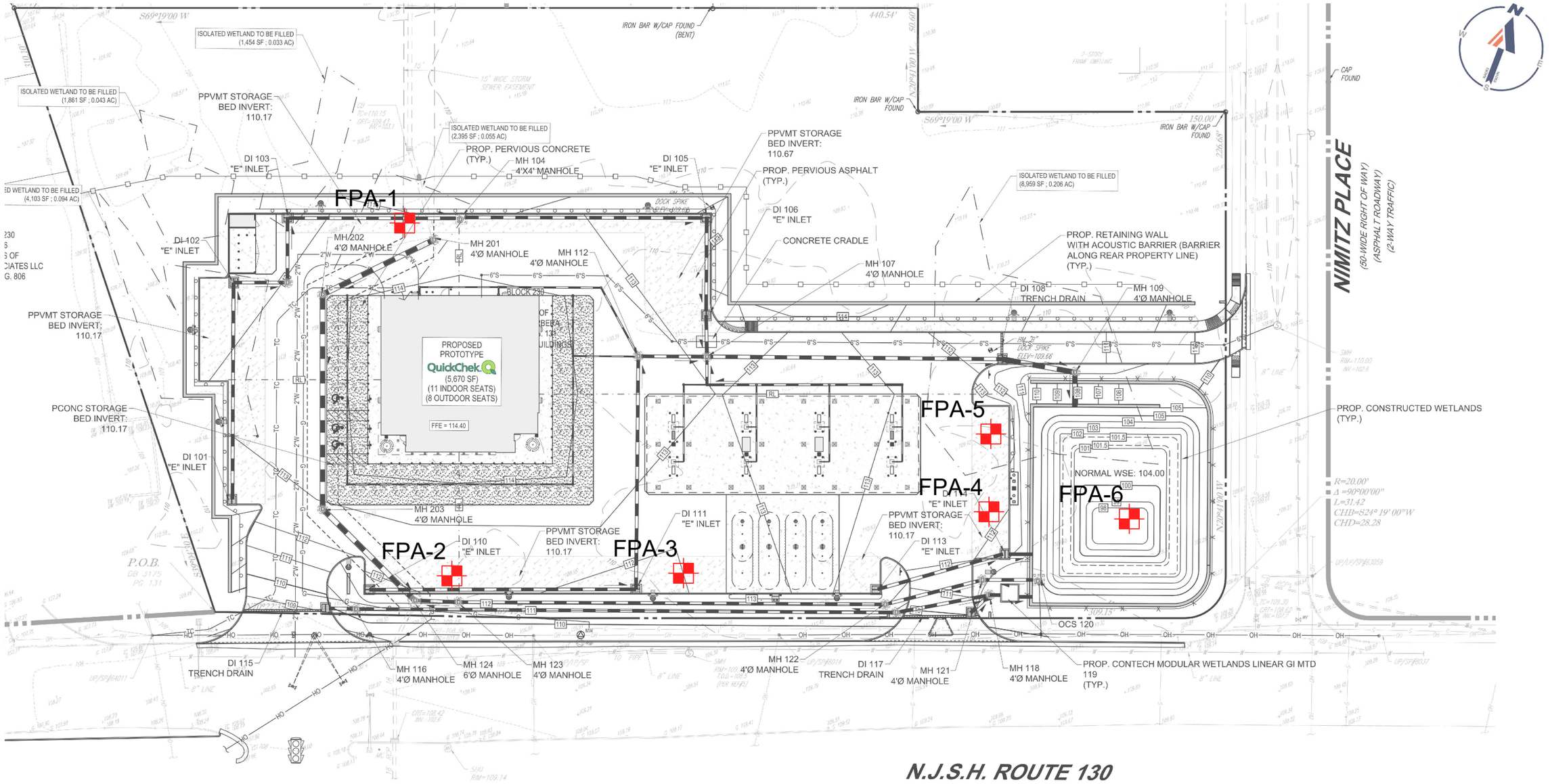
REGIONAL LOCATION PLAN

Copyright Google Maps, 2025

NORTH BRUNSWICK QUICKCHEK

NORTH BRUNSWICK TOWNSHIP, MIDDLESEX COUNTY, NEW JERSEY

SCALE:	DATE:	JOB NO.:	DRAWING NO.:
NTS	MARCH 2025	23431.001	1



LEGEND:

TEST PIT LOCATION

FRENCH & PARRELLO ASSOCIATES

Corporate Office:
1800 Rt 34, Suite 101
Wall, New Jersey 07719
732.312.8000

FPAengineers.com

New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

TEST PIT LOCATION PLAN

FOR

NORTH BRUNSWICK QUICKCHEK

TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY

DATE:	SCALE:	DRAWING #
MARCH 2025	APPROX. 1"=50'	2
DRAWN BY: DMR	PROJECT NUMBER: 23431.001	

U:\23K\23400\23431 - North Brunswick QuickChek\CADD\23431.001 - TPLP.dwg BLP
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Appendix A
Test Pit Logs

BURMISTER SOIL CLASSIFICATION SYSTEM

A. Cohesionless Soils: Particle Size Definitions

Soil	Fraction	U.S. Standard Sieve	Actual Sizes
Gravel	coarse	3 in. to 1 in.	76 mm to 25 mm
	medium	1 in. to 3/8 in.	25 mm to 9.5 mm
	fine	3/8 in. to No. 10	9.5 mm to 2.0 mm
Sand	coarse	No. 10 to No. 30	2.0 mm to 0.6 mm
	medium	No. 30 to No. 60	0.6 mm to 0.25 mm
	fine	No. 60 to No. 200	0.25 mm to 0.075 mm
Silt		< No. 200	< 0.075 mm

B. Terms Describing Gradation of Cohesionless Soils

Written Description	Symbol/Designation	Defining Proportions
coarse, medium to fine	cmf	all fractions > 10%
coarse to medium	cm	< 10% fine
medium to fine	mf	< 10% coarse
coarse	c	< 10% medium and fine
medium	m	< 10% coarse and fine
fine	f	< 10% coarse and medium

Note: Use (+) for upper limit and (-) for lower limit.

C. Cohesive Soils: Terms Describing Plasticity

Soil	Plasticity Index	Workability	Plasticity Description
Clayey SILT	1 to 5	1/4 in. thread	Slightly Plastic
SILT & CLAY	5 to 10	1/8 in. thread	Low Plasticity
CLAY & SILT	10 to 20	1/16 in. thread	Medium Plasticity
Silty CLAY	20 to 40	1/32 in. thread	High Plasticity
CLAY	>40	1/64 in. thread	Very High Plasticity

D. Terms Describing Overall Composition of Soil

Written Proportion	Proportion Symbol	Proportion Percent by Weight
and	a	35 to 50
some	s	20 to 35
little	l	10 to 20
trace	t	1 to 10

Note: Use (+) for upper limit and (-) for lower limit.

TEST PIT LOG

NORTH BRUNSWICK QUICKCHEK
NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY (FPA JOB NO. 23431.001)

TEST PIT NO.: FPA-1
DATE: 3/10/2025

GROUND ELEV.: +109'±
DEPTH OF WATER: Dry
GROUNDWATER ELEV.: Dry
DEPTH TO EST. SEASONAL HIGH WATER: 24"±

DEPTH	DESCRIPTION
0 - 24"	Brown **SILT**, trace f Sand, trace f Gravel. *(Sample S-1)*
24 - 70"	Grey & Orange-Brown **Clayey SILT**, little mf Gravel, trace mf Sand, w/ mottling & few cobbles. (*Sample S-2)*
70 - 120"	Light Grey mf cemented **SAND**, little Silt, trace mf Gravel, w/ few cobbles. *(Sample S-3)*

End of Test Pit @ 10'

NOTES: Mottling most likely representative of perched water conditions.

SOILS ENGINEER: J. Tierney, PE	**CONTRACTOR:** Renova
TEST PIT OBSERVER: E. Harm	**EXCAVATOR:** CASE CX37C

The information shown hereon indicates the subsurface conditions encountered at the specified test pit location on the date(s) of excavation. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.

TEST PIT LOG

NORTH BRUNSWICK QUICKCHEK
NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY (FPA JOB NO. 23431.001)

TEST PIT NO.: FPA-2
DATE: 3/10/2025

GROUND ELEV.: +110'±
DEPTH OF WATER: Dry
GROUNDWATER ELEV.: Dry
DEPTH TO EST. SEASONAL HIGH WATER: 36"±

DEPTH	DESCRIPTION
0 - 36"	Dark Tan & Brown **SILT**, trace f Gravel, trace cmf Sand. *(Sample S-1)*
36 - 96"	Grey & Orange-Brown **Clayey SILT**, little cmf Gravel, trace mf Sand, w/ mottling & many cobbles. *(Sample S-2)*

End of Test Pit @ 8' (due to bucket refusal)

NOTES: Mottling most likely representative of perched water conditions.

SOILS ENGINEER: J. Tierney, PE	**CONTRACTOR:** Renova
TEST PIT OBSERVER: E. Harm	**EXCAVATOR:** CASE CX37C

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TEST PIT LOG

NORTH BRUNSWICK QUICKCHEK
NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY (FPA JOB NO. 23431.001)

TEST PIT NO.: FPA-3
DATE: 3/10/2025

GROUND ELEV.: +110'±
DEPTH OF WATER: Dry
GROUNDWATER ELEV.: Dry
DEPTH TO EST. SEASONAL HIGH WATER: 32"±

DEPTH	DESCRIPTION
0 - 32"	Yellow-Grey **SILT**, some^{-} mf Sand, trace mf Gravel. *(Sample S-1)*
32 - 84"	Orange-Brown & Grey **SILT**, little mf Sand, some mf Gravel, w/ mottling & few cobbles. *(Sample S-2)*
84 - 110"	Orange-Brown & Red-Brown cmf **SAND**, some^{+} Silt, little mf Gravel, w/ few cobbles. *(Sample S-3)*
110 - 120"	Yellow/Tan c^{+}mf **SAND**, little Silt. *(Sample S-4)*

End of Test Pit @ 10'

NOTES: Mottling most likely representative of perched water conditions.

SOILS ENGINEER: J. Tierney, PE	**CONTRACTOR:** Renova
TEST PIT OBSERVER: E. Harm	**EXCAVATOR:** CASE CX37C

The information shown hereon indicates the subsurface conditions encountered at the specified test pit location on the date(s) of excavation. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.

TEST PIT LOG

NORTH BRUNSWICK QUICKCHEK
NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY (FPA JOB NO. 23431.001)

TEST PIT NO.: FPA-4
DATE: 3/10/2025

GROUND ELEV.: +110'±
DEPTH OF WATER: Dry
GROUNDWATER ELEV.: Dry
DEPTH TO EST. SEASONAL HIGH WATER: 32"±

DEPTH	DESCRIPTION
0 - 32"	Dark Tan **SILT & CLAY**, little mf Gravel, trace cmf Sand. *(Sample S-1)*
32 - 90"	Orange-Brown & Grey **SILT & CLAY**, some- cmf Gravel, trace cmf Sand, w/ mottling & few cobbles. *(Sample S-2)*
90 - 120"	Grey & Red-Brown **Clayey SILT**, some- mf Gravel, little- mf Sand, w/ mottling & few cobbles. *(Sample S-3)*

End of Test Pit @ 10'

NOTES: Mottling most likely representative of perched water conditions.

SOILS ENGINEER: J. Tierney, PE	**CONTRACTOR:** Renova
TEST PIT OBSERVER: E. Harm	**EXCAVATOR:** CASE CX37C

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TEST PIT LOG

NORTH BRUNSWICK QUICKCHEK
NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY (FPA JOB NO. 23431.001)

TEST PIT NO.: FPA-5
DATE: 3/10/2025

GROUND ELEV.: +110'±
DEPTH OF WATER: 2'±*
GROUNDWATER ELEV.: 108'±
DEPTH TO EST. SEASONAL HIGH WATER: 36"±

DEPTH	DESCRIPTION
0 - 36"	Light Brown **SILT & CLAY**, little mf Gravel, little mf Sand. *(Sample S-1)*
36 - 96"	Orange-Brown & Grey **Clayey SILT**, some cmf Gravel, trace cmf Sand, w/ mottling & few cobbles. *(Sample S-2)*
96 - 120"	Orange-Brown and Red-Brown **Clayey SILT**, some mf Gravel, little cmf Sand. *(Sample S-3)*

End of Test Pit @ 10'

NOTES: Mottling most likely representative of perched water conditions. Seepage entering test pit at 2 feet most likely result of standing water adjacent to the test pit.

SOILS ENGINEER: J. Tierney, PE	**CONTRACTOR:** Renova
TEST PIT OBSERVER: E. Harm	**EXCAVATOR:** CASE CX37C

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TEST PIT LOG

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NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY (FPA JOB NO. 23431.001)

TEST PIT NO.: FPA-6
DATE: 3/10/2025

GROUND ELEV.: +109.5'±
DEPTH OF WATER: 10'±
GROUNDWATER ELEV.: +99.5'±
DEPTH TO EST. SEASONAL HIGH WATER: 72"±

DEPTH	DESCRIPTION
0 - 48"	Brown **Clayey SILT**, some mf Gravel, little cmf Sand. *(Sample S-1)*
48 - 120"	Tan cmf **SAND**, trace Silt, w/ mottling at 72". (*Sample S-2)*

End of Test Pit @ 10'

NOTES:

SOILS ENGINEER: J. Tierney, PE	**CONTRACTOR:** Renova
TEST PIT OBSERVER: E. Harm	**EXCAVATOR:** CASE CX37C

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Water Budget Report

WATER BUDGET REPORT

for

American Properties Development Group, LLC

Block 230; Lot 15
1661-1689 Route 130

Township of North Brunswick
Middlesex County, New Jersey

Prepared by:

BOHLER

N.J. Certificate of Authorization 24GA28161700

30 Independence Blvd., Suite 200
Warren, NJ 07059
908-668-8300

BENJ File No. J200581

Tung-To Lam
New Jersey Professional Engineer License No. 47863

May 2025

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Appendices

A. **Water Budget Calculations**
B. **Precipitation and Temperature Data from NOAA Online Weather Data**

1. Introduction

The subject property encompasses 3.51 acres of land. The site is located at 1661-1689 N.J.S.H. Route 130, Township of North Brunswick, Middlesex County, New Jersey and is bordered to the northwest by a residential neighborhood; to the northeast by a motel with residential dwellings beyond; to the southeast by N.J.S.H. Route 130 with retail establishments beyond; and to the southwest by N.J.S.H. Route 130 with commercial establishments and residential dwellings beyond. The subject property is currently undeveloped wooded area, consisting of wetlands and ditches.

The post development conditions include the construction of a QuickChek food store with fuel sales with ancillary parking, sidewalks, driveways, stormwater and utility improvements. The proposed site is designed in a manner that generally maintains the existing drainage patterns. Onsite stormwater management improvements to collect and control stormwater runoff include inlets, piping, roof drains, pervious paving systems, and an aboveground extended detention constructed wetlands.

The NJDEP currently requires a water budget calculation for constructed wetlands that do not meet the minimum drainage area requirement. Accordingly, water budget calculations have been performed for the project. More specifically, water budget calculations have been performed in accordance with the guidelines set forth in the Department's (undated) publication entitled "Regionalized Water Budget Manual for Compensatory Wetland Mitigation Sites in New Jersey." This report summarizes the water budget calculations for the proposed constructed wetlands for this project. The appendices of this report contain the water budget calculations, as well as additional technical documentation supporting the calculations.

2. Pre-Development Site Conditions

The site contains a total area of 3.51 acres. There is an existing storm easement that run through the property which discharges to into a backpitched inlet, which pools up prior to overflowing into the storm network located on the N.J.S.H Route 130 frontage. The drainage pattern flows from the northwesterly center of the property to the southwesterly center of the property via overland sheet flow, shallow concentrated flow and pipe channel flow to the inlet located on the N.J.S.H. Route 130 frontage.

3. Post-Development Site Conditions

The post-development condition for the site includes the construction of a QuickChek food store with fuel sales. As part of the proposed stormwater management system, an extended detention

constructed wetland is proposed. The minimum required drainage area for an extended detention constructed wetland is 10 acres. The proposed drainage area for the wetland is 1.836 acres. Since the proposed drainage area is less than the required, a water budget is needed to show sufficient flow to the wetlands to support the required depths of standing water in each of the zones: high marsh, low marsh, and pool.

4. Available and Selected Data Sources

The below sections provide documentation relevant to the acquisition of the data used in the water budget calculations for the subject project.

4.1 Precipitation

4.1.1 Selection of Data Sources

The Water Budget Manual stipulates that the precipitation values employed for water budget calculations should be daily values obtained for representative “dry,” “average” and “wet” years of record, as taken from at least a 30-year period of daily precipitation recordings. The Water Budget Manual provides several potential sources for acquisition of the required data. The NOAA data from the Bound Brook 2W Gage was selected for the daily precipitation values. Printouts from the NOAA Online Weather Data have been included in the Appendix for the selected years.

4.1.2 Selection of “Dry”, “Wet”, and “Average” Years

Upon determining that the data from the Bound Brook 2W Gage available from the above source will be employed for the project’s water balance calculations, the next step in the process was to determine the representative “dry year”, “wet year” and “average year” from the previous 30 years (1992 to 2022). Based on the total annual precipitation, 2001 was chosen as the “dry year” with only 35.22 inches of precipitation in the year. 2014 was chosen as the “average year” with 48.49 inches of precipitation in the year. 2011 was chosen as the “wet year” with 69.01 inches of precipitation in the year.

4.2 Surface Water Inflow

The surface water inflow of the proposed constructed wetland consists solely of rainfall runoff. The method in the water budget calculations to model this surface water inflow is to assign the watershed area a CN number of 95 based on the proposed drainage area using HSG ‘D’ soil for impervious surfaces and grass cover. The CN number then determines the amount of surface water runoff resulting from the precipitation. With a CN of 95, the potential maximum retention (variable S per the method) would be 0.53 inches. The method allows for twenty percent of the maximum retention to be considered

initial abstraction. In this case, the initial abstraction would be 0.11 inches, meaning that runoff will only occur for precipitation event exceeding 0.11 inches per day. Where daily precipitation exceeds the initial abstraction threshold, surface water runoff has been calculated in accordance with the formula provided on page 53 of the Water Budget Manual.

Example calculation (01/20/2001):

$$S = 1000/CN - 10$$

CN=95
S=0.53

$$I_a = 0.2S$$

Ia=0.11
P= 0.77 in
Since precipitation is greater than initial abstraction, the surface water runoff can be calculated. If precipitation is less than initial abstraction, Si=0.

$$Q = (P- I_a)^2/(P- I_a) + S$$

Q=1.19
Si=Q*Drainage Area/Wetland Area = (1.19)*(1.836)/(0.204) = 10.71 inches

4.3 Evapotranspiration

The same source of precipitation was used for average monthly temperatures as was used for precipitation, the NOAA Bound Brook 2W Gage. Where temperature data was unavailable from the NOAA Bound Brook 2W Gage, the NOAA New Brunswick 3 SE Gage was used. A few days did not have temperature data from either gage, in which case the average monthly temperature was used. The Thornthwaite equation was used to estimate evapotranspiration monthly, which was then averaged out per day in the water budget.

Example calculation (02/2001):

$$ET_i = 1.6(10T_i/I)^a$$

$$I = \text{annual heat index} = \sum(T_i/5)^{1.5}$$

$$a = 0.49+0.0179I-0.0000771I^2 + 0.000000675I^3$$

Example monthly temperature = 34.84°F= 1.58°C
I=13.27 for the year
a=0.72
ET=0.63 in/month = 0.02 in/day

4.4 Groundwater Inflow and Outflow

Since an impervious liner is proposed to line the constructed wetlands, ground inflow and outflow have not been considered in these calculations.

4.5 Surface Water Outflow

Surface water outflow occurs when the water in the wetlands reaches the first orifice elevation, which is at the normal water elevation. This was modeled in the water budget calculations by tallying the water elevation in the wetlands. Since the normal water elevation is 104.00, the pool elevation was set at that elevation in the start of each of the three subject years and changes per day based on the above referenced values. The maximum value of the pool elevation is 104.00, since after that elevation the water would spill out of the outlet control structure. In the water budget calculations, the water elevation was manually reduced to 104.00 anytime the calculations went over that value.

5. Conclusions

The attached water budget was calculated as described in the earlier sections for the “dry”, “wet’, and “average” years. Under the proposed water budget, the pool elevation for the three considered years is a maximum of 104.00, the normal water elevation. In order to comply with the NJDEP BMP Manual Chapter 10.4, the pool depth must be a minimum of 4 feet. Since the proposed elevation of the bottom of the pool is 98.00, the lowest water elevation to still comply is 102.00. In the wet year, the lowest water elevation based on the water budget is 103.65. In the average year, the lowest water elevation is 103.83. In the dry year, the lowest water elevation is 103.72. Based on the proposed water budget, the proposed wetland is likely to have an adequate supply of water to support the three required zones for extended detention constructed wetlands based on the data from the wet, dry and average years, since in all three scenarios the pool depth will be greater than the minimum requirement of 4 feet.

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A. Water Budget Calculations

Variable	Meaning
S	Storage
P	Precip.
Gi	Ground-water inflow
ET	Evapotranspiration
So	Surface-water outflow
Go	Ground-water outflow
U	Uncertainty

Equation for Water Budget
S + U = (P +Si + Gi) - (ET + So + Go)

WET YEAR (2011) MONTHLY SUMMARY							
Month	P (in) (Monthly)	Si (in)	So (in)	Gi (in)	Go (in)	ET (in)	S (in)
January	2.99	47.99	0.00	0.00	0.00	0.00	50.98
February	2.70	45.38	0.00	0.00	0.00	0.31	47.77
March	6.08	88.31	0.00	0.00	0.00	1.52	92.88
April	6.50	88.94	0.00	0.00	0.00	3.25	92.19
May	5.31	81.73	0.00	0.00	0.00	4.81	82.24
June	3.62	58.86	0.00	0.00	0.00	6.05	56.42
July	3.02	44.83	0.00	0.00	0.00	6.61	41.25
August	19.48	215.25	0.00	0.00	0.00	5.65	229.07
September	7.22	93.33	0.00	0.00	0.00	4.66	95.89
October	4.96	85.46	0.00	0.00	0.00	2.95	87.47
November	3.16	43.39	0.00	0.00	0.00	1.92	44.63
December	3.97	50.30	0.00	0.00	0.00	1.12	53.15

Si Calcs				
CN	S (in)	Ia (in)	Drain. Area (AC)	Wetland Area (AC)
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204

DRY YEAR (2001) MONTHLY SUMMARY							
Month	P (in) (Monthly)	Si (in)	So (in)	Gi (in)	Go (in)	ET (in)	S (in)
January	2.85	55.63	0.00	0.00	0.00	0.00	58.48
February	2.58	40.53	0.00	0.00	0.00	0.63	42.47
March	5.24	75.56	0.00	0.00	0.00	1.19	79.61
April	1.87	32.54	0.00	0.00	0.00	3.06	31.35
May	3.87	51.93	0.00	0.00	0.00	4.58	51.21
June	4.70	60.36	0.00	0.00	0.00	5.80	59.27
July	3.91	65.33	0.00	0.00	0.00	5.76	63.48
August	2.96	45.28	0.00	0.00	0.00	5.82	42.43
September	3.18	47.35	0.00	0.00	0.00	4.32	46.21
October	0.84	18.16	0.00	0.00	0.00	2.99	16.01

Si Calcs				
CN	S (in)	Ia (in)	Drain. Area (AC)	Wetland Area (AC)
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204

November	0.97	14.56	0.00	0.00	0.00	2.10	13.43
December	2.25	34.32	0.00	0.00	0.00	1.32	35.25

95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204

AVERAGE YEAR (2014) MONTHLY SUMMARY							
Month	**P (in) (Monthly)**	**Si (in)**	**So (in)**	**Gi (in)**	**Go (in)**	**ET (in)**	**S (in)**
January	2.70	52.22	0.00	0.00	0.00	0.00	54.92
February	4.83	79.89	0.00	0.00	0.00	0.00	84.72
March	3.85	49.22	0.00	0.00	0.00	0.74	52.33
April	2.76	47.27	0.00	0.00	0.00	3.06	46.97
May	5.95	85.89	0.00	0.00	0.00	4.61	87.23
June	3.50	55.89	0.00	0.00	0.00	5.76	53.63
July	7.93	95.66	0.00	0.00	0.00	6.10	97.48
August	3.47	39.88	0.00	0.00	0.00	5.35	38.00
September	1.23	24.00	0.00	0.00	0.00	4.54	20.69
October	3.69	61.65	0.00	0.00	0.00	3.18	62.16
November	4.41	76.48	0.00	0.00	0.00	1.44	79.45
December	4.17	64.79	0.00	0.00	0.00	1.08	67.88

Si Calcs				
CN	**S (in)**	**Ia (in)**	**Drain. Area (AC)**	**Wetland Area (AC)**
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204
95	0.53	0.11	1.831	0.204

WET (2011)

Go Calcs	
k (ft/day)	0.00
q' (ft2/day)	0.00
GW flow (ft3/day)	0.00
Wetland Area (SF)	8900
GW outflow (in/day)	0.000

ET Calcs	
Annual	16.42
a	0.77

January	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go (in)	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37	2.78	0.41	0.8	0.00	0.00	104.00
2	0.04	95	0.53	0.11	0.46	0.00	0.00	0.00	0.000	43	6.11	1.35	0.8	0.00	0.04	104.00
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	38	3.33	0.54	0.8	0.00	0.00	104.00
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	29	-1.67	0.19	0.8	0.00	0.00	104.00
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	31	-0.56	0.04	0.8	0.00	0.00	104.00
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	29	-1.67	0.19	0.8	0.00	0.00	104.00
7	0.08	95	0.53	0.11	0.50	0.00	0.00	0.00	0.000	27.5	-2.50	0.35	0.8	0.00	0.08	104.00
8	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	25.5	-3.61	0.61	0.8	0.00	0.05	104.00
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	25	-3.89	0.69	0.8	0.00	0.00	104.00
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	25.5	-3.61	0.61	0.8	0.00	0.00	104.00
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	25.5	-3.61	0.61	0.8	0.00	0.00	104.00
12	0.39	95	0.53	0.11	0.81	7.28	0.00	0.00	0.000	26.5	-3.06	0.48	0.8	0.00	7.67	104.00
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	27	-2.78	0.41	0.8	0.00	0.00	104.00
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	18	-7.78	1.94	0.8	0.00	0.00	104.00
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	21	-6.11	1.35	0.8	0.00	0.00	104.00
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30.5	-0.83	0.07	0.8	0.00	0.00	104.00
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	27	-2.78	0.41	0.8	0.00	0.00	104.00
18	0.53	95	0.53	0.11	0.95	8.54	0.00	0.00	0.000	28	-2.22	0.30	0.8	0.00	9.07	104.00
19	0.23	95	0.53	0.11	0.65	5.84	0.00	0.00	0.000	35	1.67	0.19	0.8	0.00	6.07	104.00
21	0.29	95	0.53	0.11	0.71	6.38	0.00	0.00	0.000	32	0.00	0.00	0.8	0.00	6.67	104.00
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	22	-5.56	1.17	0.8	0.00	0.00	104.00
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	16.5	-8.61	2.26	0.8	0.00	0.00	104.00
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	14.5	-9.72	2.71	0.8	0.00	0.00	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	16	-8.89	2.37	0.8	0.00	0.00	104.00
26	0.24	95	0.53	0.11	0.66	5.93	0.00	0.00	0.000	28.5	-1.94	0.24	0.8	0.00	6.17	104.00

27	1.14	95	0.53	0.11	1.56	14.01	0.00	0.00	0.000	33	0.56	0.04	0.8	0.00	15.15	104.00
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	29.5	-1.39	0.15	0.8	0.00	0.00	104.00
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30.5	-0.83	0.07	0.8	0.00	0.00	104.00
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30	-1.11	0.10	0.8	0.00	0.00	104.00
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	27	-2.78	0.41	0.8	0.00	0.00	104.00
TOTAL	**2.99**														**50.98**	

February	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.07	95	0.53	0.11	0.49	0.00	0.00	0.00	0.000	24	-4.44	0.84	0.89	0.01	0.06	104.00
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30.5	-0.83	0.07	0.89	0.01	-0.01	104.00
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	22	-5.56	1.17	0.89	0.01	-0.01	104.00
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	26	-3.33	0.54	0.89	0.01	-0.01	104.00
6	0.22	95	0.53	0.11	0.64	5.75	0.00	0.00	0.000	33.5	0.83	0.07	0.89	0.01	5.96	104.00
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.89	0.01	-0.01	104.00
8	0.10	95	0.53	0.11	0.52	0.00	0.00	0.00	0.000	38.5	3.61	0.61	0.89	0.01	0.09	104.00
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	27	-2.78	0.41	0.89	0.01	-0.01	104.00
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	24.5	-4.17	0.76	0.89	0.01	-0.01	104.00
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	19	-7.22	1.74	0.89	0.01	-0.01	104.00
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	27.5	-2.50	0.35	0.89	0.01	-0.01	104.00
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30	-1.11	0.10	0.89	0.01	-0.01	104.00
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	38.5	3.61	0.61	0.89	0.01	-0.01	103.99
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41	5.00	1.00	0.89	0.01	-0.01	103.99
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	29	-1.67	0.19	0.89	0.01	-0.01	103.99
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	35	1.67	0.19	0.89	0.01	-0.01	103.99
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	49.5	9.72	2.71	0.89	0.01	-0.01	103.99
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	53.5	11.94	3.69	0.89	0.01	-0.01	103.99
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	31.5	-0.28	0.01	0.89	0.01	-0.01	103.99
21	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	36	2.22	0.30	0.89	0.01	4.87	104.00
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28	-2.22	0.30	0.89	0.01	-0.01	104.00
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28	-2.22	0.30	0.89	0.01	-0.01	104.00
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	31	-0.56	0.04	0.89	0.01	-0.01	104.00
25	0.78	95	0.53	0.11	1.20	10.78	0.00	0.00	0.000	41	5.00	1.00	0.89	0.01	11.55	104.00
26	0.21	95	0.53	0.11	0.63	5.66	0.00	0.00	0.000	44	6.67	1.54	0.89	0.01	5.86	104.00

27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37.5	3.06	0.48	0.89	0.01	-0.01	104.00
28	0.30	95	0.53	0.11	0.72	6.47	0.00	0.00	0.000	42.5	5.83	1.26	0.89	0.01	6.76	104.00
TOTAL	**2.70**														**47.77**	

March	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.21	95	0.53	0.11	0.63	5.66	0.00	0.00	0.000	47.5	8.61	2.26	0.99	0.05	5.83	104.00
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.99	0.05	-0.05	104.00
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.99	0.05	-0.05	103.99
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	29	-1.67	0.19	0.99	0.05	-0.05	103.99
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42	5.56	1.17	0.99	0.05	-0.05	103.98
6	0.20	95	0.53	0.11	0.62	5.57	0.00	0.00	0.000	55.5	13.06	4.22	0.99	0.05	5.73	104.00
7	2.15	95	0.53	0.11	2.57	23.08	0.00	0.00	0.000	45.5	7.50	1.84	0.99	0.05	25.18	104.00
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37	2.78	0.41	0.99	0.05	-0.05	104.00
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	39.5	4.17	0.76	0.99	0.05	-0.05	103.99
10	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	39.5	4.17	0.76	0.99	0.05	4.83	104.00
11	1.49	95	0.53	0.11	1.91	17.15	0.00	0.00	0.000	47	8.33	2.15	0.99	0.05	18.59	104.00
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	45	7.22	1.74	0.99	0.05	-0.05	104.00
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	46	7.78	1.94	0.99	0.05	-0.05	103.99
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42.5	5.83	1.26	0.99	0.05	-0.05	103.99
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37.5	3.06	0.48	0.99	0.05	-0.05	103.98
16	0.50	95	0.53	0.11	0.92	8.27	0.00	0.00	0.000	42.5	5.83	1.26	0.99	0.05	8.72	104.00
17	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	47.5	8.61	2.26	0.99	0.05	-0.03	104.00
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	52	11.11	3.31	0.99	0.05	-0.05	103.99
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	61	16.11	5.78	0.99	0.05	-0.05	103.99
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42.5	5.83	1.26	0.99	0.05	-0.05	103.99
21	0.40	95	0.53	0.11	0.82	7.37	0.00	0.00	0.000	41	5.00	1.00	0.99	0.05	7.72	104.00
22	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	42	5.56	1.17	0.99	0.05	-0.04	104.00
23	0.46	95	0.53	0.11	0.88	7.91	0.00	0.00	0.000	42.5	5.83	1.26	0.99	0.05	8.32	104.00
24	0.53	95	0.53	0.11	0.95	8.54	0.00	0.00	0.000	34.5	1.39	0.15	0.99	0.05	9.02	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	34.5	1.39	0.15	0.99	0.05	-0.05	104.00
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	33.5	0.83	0.07	0.99	0.05	-0.05	103.99
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	33	0.56	0.04	0.99	0.05	-0.05	103.99
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	34	1.11	0.10	0.99	0.05	-0.05	103.98

29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	35.5	1.94	0.24	0.99	0.05	-0.05	103.98
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	38.5	3.61	0.61	0.99	0.05	-0.05	103.98
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44	6.67	1.54	0.99	0.05	-0.05	103.97
TOTAL	**6.08**														**92.88**	

April	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.06	95	0.53	0.11	0.48	0.00	0.00	0.00	0.000	40	4.44	0.84	1.1	0.11	-0.05	103.97
2	0.21	95	0.53	0.11	0.63	5.66	0.00	0.00	0.000	42.5	5.83	1.26	1.1	0.11	5.77	104.00
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44.5	6.94	1.64	1.1	0.11	-0.11	103.99
4	0.03	95	0.53	0.11	0.45	0.00	0.00	0.00	0.000	49.5	9.72	2.71	1.1	0.11	-0.08	103.98
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59.5	15.28	5.34	1.1	0.11	-0.11	103.98
6	0.14	95	0.53	0.11	0.56	5.04	0.00	0.00	0.000	50	10.00	2.83	1.1	0.11	5.07	104.00
7	0.07	95	0.53	0.11	0.49	0.00	0.00	0.00	0.000	47.5	8.61	2.26	1.1	0.11	-0.04	104.00
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44.5	6.94	1.64	1.1	0.11	-0.11	103.99
9	0.24	95	0.53	0.11	0.66	5.93	0.00	0.00	0.000	44	6.67	1.54	1.1	0.11	6.07	104.00
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	48.5	9.17	2.48	1.1	0.11	-0.11	103.99
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55.5	13.06	4.22	1.1	0.11	-0.11	103.98
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66	18.89	7.34	1.1	0.11	-0.11	103.97
13	1.11	95	0.53	0.11	1.53	13.74	0.00	0.00	0.000	53	11.67	3.56	1.1	0.11	14.74	104.00
14	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	48.5	9.17	2.48	1.1	0.11	-0.09	103.99
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	56.5	13.61	4.49	1.1	0.11	-0.11	103.98
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	49.5	9.72	2.71	1.1	0.11	-0.11	103.97
17	2.46	95	0.53	0.11	2.88	25.86	0.00	0.00	0.000	50.5	10.28	2.95	1.1	0.11	28.21	104.00
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	52.5	11.39	3.44	1.1	0.11	-0.11	103.99
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55.5	13.06	4.22	1.1	0.11	-0.11	103.98
20	0.06	95	0.53	0.11	0.48	0.00	0.00	0.00	0.000	50.5	10.28	2.95	1.1	0.11	-0.05	103.98
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57.5	14.17	4.77	1.1	0.11	-0.11	103.97
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	49	9.44	2.60	1.1	0.11	-0.11	103.96
23	0.71	95	0.53	0.11	1.13	10.15	0.00	0.00	0.000	46.5	8.06	2.04	1.1	0.11	10.75	104.00
24	0.08	95	0.53	0.11	0.50	0.00	0.00	0.00	0.000	60.5	15.83	5.64	1.1	0.11	-0.03	104.00
25	0.82	95	0.53	0.11	1.24	11.14	0.00	0.00	0.000	69.5	20.83	8.51	1.1	0.11	11.85	104.00
26	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	64.5	18.06	6.86	1.1	0.11	-0.09	103.99
27	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	71	21.67	9.02	1.1	0.11	-0.09	103.99

28	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	75.5	24.17	10.63	1.1	0.11	4.77	104.00
29	0.32	95	0.53	0.11	0.74	6.65	0.00	0.00	0.000	64.5	18.06	6.86	1.1	0.11	6.86	104.00
30	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	59	15.00	5.20	1.1	0.11	-0.09	103.99
TOTAL	**6.50**														**92.19**	

May	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55.5	13.06	4.22	1.2	0.16	-0.16	103.98
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60	15.56	5.49	1.2	0.16	-0.16	103.97
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	63	17.22	6.39	1.2	0.16	-0.16	103.95
4	0.28	95	0.53	0.11	0.70	6.29	0.00	0.00	0.000	66.5	19.17	7.51	1.2	0.16	6.42	104.00
5	0.24	95	0.53	0.11	0.66	5.93	0.00	0.00	0.000	51	10.56	3.07	1.2	0.16	6.02	104.00
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	53	11.67	3.56	1.2	0.16	-0.16	103.99
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57	13.89	4.63	1.2	0.16	-0.16	103.97
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57	13.89	4.63	1.2	0.16	-0.16	103.96
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	1.2	0.16	-0.16	103.95
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62	16.67	6.09	1.2	0.16	-0.16	103.94
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	61	16.11	5.78	1.2	0.16	-0.16	103.92
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	63	17.22	6.39	1.2	0.16	-0.16	103.91
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	64.5	18.06	6.86	1.2	0.16	-0.16	103.90
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65	18.33	7.02	1.2	0.16	-0.16	103.88
15	0.96	95	0.53	0.11	1.38	12.40	0.00	0.00	0.000	63.5	17.50	6.55	1.2	0.16	13.20	104.00
16	1.20	95	0.53	0.11	1.62	14.55	0.00	0.00	0.000	66	18.89	7.34	1.2	0.16	15.59	104.00
17	0.72	95	0.53	0.11	1.14	10.24	0.00	0.00	0.000	59	15.00	5.20	1.2	0.16	10.81	104.00
18	0.50	95	0.53	0.11	0.92	8.27	0.00	0.00	0.000	60	15.56	5.49	1.2	0.16	8.61	104.00
19	0.61	95	0.53	0.11	1.03	9.25	0.00	0.00	0.000	66	18.89	7.34	1.2	0.16	9.71	104.00
20	0.07	95	0.53	0.11	0.49	0.00	0.00	0.00	0.000	66.5	19.17	7.51	1.2	0.16	-0.09	103.99
21	0.13	95	0.53	0.11	0.55	4.95	0.00	0.00	0.000	61	16.11	5.78	1.2	0.16	4.92	104.00
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68	20.00	8.00	1.2	0.16	-0.16	103.99
23	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	60.5	15.83	5.64	1.2	0.16	-0.11	103.98
24	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	66	18.89	7.34	1.2	0.16	-0.15	103.97
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73	22.78	9.72	1.2	0.16	-0.16	103.95
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73	22.78	9.72	1.2	0.16	-0.16	103.94
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78.5	25.83	11.74	1.2	0.16	-0.16	103.93

28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78.5	25.83	11.74	1.2	0.16	-0.16	103.91
29	0.12	95	0.53	0.11	0.54	4.86	0.00	0.00	0.000	78	25.56	11.56	1.2	0.16	4.82	104.00
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79	26.11	11.93	1.2	0.16	-0.16	103.99
31	0.42	95	0.53	0.11	0.84	5.00	0.00	0.00	0.000	79	26.11	11.93	1.2	0.16	5.26	104.00
TOTAL	**5.31**														**82.24**	

June	Daily Precip	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	80	26.67	12.32	1.25	0.20	-0.20	103.98
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79.5	26.39	12.12	1.25	0.20	-0.20	103.97
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66.5	19.17	7.51	1.25	0.20	-0.20	103.95
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65.5	18.61	7.18	1.25	0.20	-0.20	103.93
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.25	0.20	-0.20	103.92
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.25	0.20	-0.20	103.90
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.25	0.20	-0.20	103.88
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79	26.11	11.93	1.25	0.20	-0.20	103.87
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	82	27.78	13.09	1.25	0.20	-0.20	103.85
10	0.28	95	0.53	0.11	0.70	6.29	0.00	0.00	0.000	83.5	28.61	13.69	1.25	0.20	6.37	104.00
11	0.27	95	0.53	0.11	0.69	6.20	0.00	0.00	0.000	83.5	28.61	13.69	1.25	0.20	6.27	104.00
12	0.34	95	0.53	0.11	0.76	6.83	0.00	0.00	0.000	65.5	18.61	7.18	1.25	0.20	6.97	104.00
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70.5	21.39	8.85	1.25	0.20	-0.20	103.98
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68.5	20.28	8.17	1.25	0.20	-0.20	103.97
15	0.52	95	0.53	0.11	0.94	8.45	0.00	0.00	0.000	64	17.78	6.70	1.25	0.20	8.76	104.00
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71	21.67	9.02	1.25	0.20	-0.20	103.98
17	1.15	95	0.53	0.11	1.57	14.10	0.00	0.00	0.000	76	24.44	10.81	1.25	0.20	15.05	104.00
18	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	74.5	23.61	10.26	1.25	0.20	-0.19	103.98
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	77.5	25.28	11.37	1.25	0.20	-0.20	103.97
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75	23.89	10.44	1.25	0.20	-0.20	103.95
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.25	0.20	-0.20	103.93
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78	25.56	11.56	1.25	0.20	-0.20	103.92
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79.5	26.39	12.12	1.25	0.20	-0.20	103.90
24	0.66	95	0.53	0.11	1.08	9.70	0.00	0.00	0.000	73	22.78	9.72	1.25	0.20	10.16	104.00
25	0.39	95	0.53	0.11	0.81	7.28	0.00	0.00	0.000	70.5	21.39	8.85	1.25	0.20	7.47	104.00
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73.5	23.06	9.90	1.25	0.20	-0.20	103.98

27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73.5	23.06	9.90	1.25	0.20	-0.20	103.97
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78	25.56	11.56	1.25	0.20	-0.20	103.95
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79	26.11	11.93	1.25	0.20	-0.20	103.93
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76	24.44	10.81	1.25	0.20	-0.20	103.92
TOTAL	**3.62**														**56.42**	

July	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.23	0.21	-0.21	103.90
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74.5	23.61	10.26	1.23	0.21	-0.21	103.88
3	0.68	95	0.53	0.11	1.10	9.88	0.00	0.00	0.000	79	26.11	11.93	1.23	0.21	10.35	104.00
4	0.30	95	0.53	0.11	0.72	6.47	0.00	0.00	0.000	74	23.33	10.08	1.23	0.21	6.56	104.00
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75	23.89	10.44	1.23	0.21	-0.21	103.98
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	77.5	25.28	11.37	1.23	0.21	-0.21	103.96
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	81.5	27.50	12.90	1.23	0.21	-0.21	103.95
8	0.03	95	0.53	0.11	0.45	0.00	0.00	0.00	0.000	83	28.33	13.49	1.23	0.21	-0.18	103.93
9	1.01	95	0.53	0.11	1.43	12.84	0.00	0.00	0.000	79	26.11	11.93	1.23	0.21	13.64	104.00
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75	23.89	10.44	1.23	0.21	-0.21	103.98
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78	25.56	11.56	1.23	0.21	-0.21	103.96
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	85.5	29.72	14.49	1.23	0.21	-0.21	103.95
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	83.5	28.61	13.69	1.23	0.21	-0.21	103.93
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75.5	24.17	10.63	1.23	0.21	-0.21	103.91
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.23	0.21	-0.21	103.89
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	77	25.00	11.18	1.23	0.21	-0.21	103.88
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78.5	25.83	11.74	1.23	0.21	-0.21	103.86
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	81.5	27.50	12.90	1.23	0.21	-0.21	103.84
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	87	30.56	15.11	1.23	0.21	-0.21	103.82
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	83.5	28.61	13.69	1.23	0.21	-0.21	103.80
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	84	28.89	13.89	1.23	0.21	-0.21	103.79
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	91.5	33.06	17.00	1.23	0.21	-0.21	103.77
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	92.5	33.61	17.43	1.23	0.21	-0.21	103.75
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	90.5	32.50	16.57	1.23	0.21	-0.21	103.73
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	85	29.44	14.29	1.23	0.21	-0.21	103.72
26	0.54	95	0.53	0.11	0.96	8.63	0.00	0.00	0.000	80	26.67	12.32	1.23	0.21	8.95	104.00

27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79	26.11	11.93	1.23	0.21	-0.21	103.98
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	77.5	25.28	11.37	1.23	0.21	-0.21	103.96
29	0.36	95	0.53	0.11	0.78	7.01	0.00	0.00	0.000	81.5	27.50	12.90	1.23	0.21	7.16	104.00
30	0.10	95	0.53	0.11	0.52	0.00	0.00	0.00	0.000	81	27.22	12.70	1.23	0.21	-0.11	103.99
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79.5	26.39	12.12	1.23	0.21	-0.21	103.97
TOTAL	**3.02**														**41.25**	

August	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	80.5	26.94	12.51	1.15	0.18	-0.18	103.96
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	82.5	28.06	13.29	1.15	0.18	-0.18	103.94
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	81.5	27.50	12.90	1.15	0.18	-0.18	103.93
4	0.56	95	0.53	0.11	0.98	8.81	0.00	0.00	0.000	81	27.22	12.70	1.15	0.18	9.18	104.00
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74	23.33	10.08	1.15	0.18	-0.18	103.98
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79.5	26.39	12.12	1.15	0.18	-0.18	103.97
7	0.34	95	0.53	0.11	0.76	6.83	0.00	0.00	0.000	82.5	28.06	13.29	1.15	0.18	6.99	104.00
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	83	28.33	13.49	1.15	0.18	-0.18	103.98
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	81	27.22	12.70	1.15	0.18	-0.18	103.97
10	3.70	95	0.53	0.11	4.12	36.99	0.00	0.00	0.000	78.5	25.83	11.74	1.15	0.18	40.51	104.00
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75.5	24.17	10.63	1.15	0.18	-0.18	103.98
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71	21.67	9.02	1.15	0.18	-0.18	103.97
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73	22.78	9.72	1.15	0.18	-0.18	103.95
14	3.90	95	0.53	0.11	4.32	38.78	0.00	0.00	0.000	77	25.00	11.18	1.15	0.18	42.50	104.00
15	1.27	95	0.53	0.11	1.69	15.18	0.00	0.00	0.000	70.5	21.39	8.85	1.15	0.18	16.27	104.00
16	0.63	95	0.53	0.11	1.05	9.43	0.00	0.00	0.000	73.5	23.06	9.90	1.15	0.18	9.88	104.00
17	0.39	95	0.53	0.11	0.81	7.28	0.00	0.00	0.000	71.5	21.94	9.19	1.15	0.18	7.49	104.00
18	0.04	95	0.53	0.11	0.46	0.00	0.00	0.00	0.000	75.5	24.17	10.63	1.15	0.18	-0.14	103.99
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.15	0.18	-0.18	103.97
20	0.58	95	0.53	0.11	1.00	8.98	0.00	0.00	0.000	74.5	23.61	10.26	1.15	0.18	9.38	104.00
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.15	0.18	-0.18	103.98
22	0.55	95	0.53	0.11	0.97	8.72	0.00	0.00	0.000	74.5	23.61	10.26	1.15	0.18	9.08	104.00
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67	19.44	7.67	1.15	0.18	-0.18	103.98
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68.5	20.28	8.17	1.15	0.18	-0.18	103.97
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75.5	24.17	10.63	1.15	0.18	-0.18	103.95

26	0.53	95	0.53	0.11	0.95	8.54	0.00	0.00	0.000	73.5	23.06	9.90	1.15	0.18	8.88	104.00
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.15	0.18	-0.18	103.98
28	6.90	95	0.53	0.11	7.32	65.71	0.00	0.00	0.000	75	23.89	10.44	1.15	0.18	72.43	104.00
29	0.09	95	0.53	0.11	0.51	0.00	0.00	0.00	0.000	65.5	18.61	7.18	1.15	0.18	-0.09	103.99
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66.6	19.22	7.54	1.15	0.18	-0.18	103.98
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69.5	20.83	8.51	1.15	0.18	-0.18	103.96
TOTAL	**19.48**														**229.07**	

September	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.04	0.16	-0.16	103.95
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73.5	23.06	9.90	1.04	0.16	-0.16	103.94
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73.5	23.06	9.90	1.04	0.16	-0.16	103.92
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	77	25.00	11.18	1.04	0.16	-0.16	103.91
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	80	26.67	12.32	1.04	0.16	-0.16	103.90
6	0.70	95	0.53	0.11	1.12	10.06	0.00	0.00	0.000	73.5	23.06	9.90	1.04	0.16	10.61	104.00
7	2.83	95	0.53	0.11	3.25	29.18	0.00	0.00	0.000	62.5	16.94	6.24	1.04	0.16	31.85	104.00
8	1.24	95	0.53	0.11	1.66	14.91	0.00	0.00	0.000	68	20.00	8.00	1.04	0.16	15.99	104.00
9	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	72	22.22	9.37	1.04	0.16	-0.14	103.99
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75	23.89	10.44	1.04	0.16	-0.16	103.98
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73.5	23.06	9.90	1.04	0.16	-0.16	103.96
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.04	0.16	-0.16	103.95
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71.5	21.94	9.19	1.04	0.16	-0.16	103.94
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.04	0.16	-0.16	103.92
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76	24.44	10.81	1.04	0.16	-0.16	103.91
16	0.17	95	0.53	0.11	0.59	5.30	0.00	0.00	0.000	62	16.67	6.09	1.04	0.16	5.32	104.00
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59.5	15.28	5.34	1.04	0.16	-0.16	103.99
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	58.5	14.72	5.05	1.04	0.16	-0.16	103.97
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59.5	15.28	5.34	1.04	0.16	-0.16	103.96
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	63	17.22	6.39	1.04	0.16	-0.16	103.95
21	0.09	95	0.53	0.11	0.51	0.00	0.00	0.00	0.000	64.5	18.06	6.86	1.04	0.16	-0.07	103.94
22	0.27	95	0.53	0.11	0.69	6.20	0.00	0.00	0.000	68.5	20.28	8.17	1.04	0.16	6.32	104.00
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74.5	23.61	10.26	1.04	0.16	-0.16	103.99
24	1.00	95	0.53	0.11	1.42	12.75	0.00	0.00	0.000	71	21.67	9.02	1.04	0.16	13.60	104.00

25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72	22.22	9.37	1.04	0.16	-0.16	103.99
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74.5	23.61	10.26	1.04	0.16	-0.16	103.97
27	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	76	24.44	10.81	1.04	0.16	-0.15	103.96
28	0.27	95	0.53	0.11	0.69	6.20	0.00	0.00	0.000	74.5	23.61	10.26	1.04	0.16	6.32	104.00
29	0.07	95	0.53	0.11	0.49	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.04	0.16	-0.09	103.99
30	0.55	95	0.53	0.11	0.97	8.72	0.00	0.00	0.000	66.5	19.17	7.51	1.04	0.16	9.11	104.00
TOTAL	**7.22**														**95.89**	

October	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.22	95	0.53	0.11	0.64	5.75	0.00	0.00	0.000	67	19.44	7.67	0.93	0.10	5.88	104.00
2	0.17	95	0.53	0.11	0.59	5.30	0.00	0.00	0.000	58.5	14.72	5.05	0.93	0.10	5.38	104.00
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	56.5	13.61	4.49	0.93	0.10	-0.10	103.99
4	0.03	95	0.53	0.11	0.45	0.00	0.00	0.00	0.000	54.5	12.50	3.95	0.93	0.10	-0.07	103.99
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59	15.00	5.20	0.93	0.10	-0.10	103.98
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57.5	14.17	4.77	0.93	0.10	-0.10	103.97
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	53.5	11.94	3.69	0.93	0.10	-0.10	103.96
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55.5	13.06	4.22	0.93	0.10	-0.10	103.95
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60.5	15.83	5.64	0.93	0.10	-0.10	103.95
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65.5	18.61	7.18	0.93	0.10	-0.10	103.94
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66.5	19.17	7.51	0.93	0.10	-0.10	103.93
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68	20.00	8.00	0.93	0.10	-0.10	103.92
13	0.29	95	0.53	0.11	0.71	6.38	0.00	0.00	0.000	61	16.11	5.78	0.93	0.10	6.58	104.00
14	0.61	95	0.53	0.11	1.03	9.25	0.00	0.00	0.000	64.5	18.06	6.86	0.93	0.10	9.77	104.00
15	0.15	95	0.53	0.11	0.57	5.13	0.00	0.00	0.000	63.5	17.50	6.55	0.93	0.10	5.18	104.00
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	58	14.44	4.91	0.93	0.10	-0.10	103.99
17	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	61.5	16.39	5.93	0.93	0.10	-0.09	103.98
18	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	57	13.89	4.63	0.93	0.10	-0.09	103.98
19	0.22	95	0.53	0.11	0.64	5.75	0.00	0.00	0.000	60.5	15.83	5.64	0.93	0.10	5.88	104.00
20	0.84	95	0.53	0.11	1.26	11.32	0.00	0.00	0.000	63.5	17.50	6.55	0.93	0.10	12.06	104.00
21	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	56.5	13.61	4.49	0.93	0.10	-0.08	103.99
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50.5	10.28	2.95	0.93	0.10	-0.10	103.99
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	51.5	10.83	3.19	0.93	0.10	-0.10	103.98
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	51	10.56	3.07	0.93	0.10	-0.10	103.97

25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	54	12.22	3.82	0.93	0.10	-0.10	103.96
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	54	12.22	3.82	0.93	0.10	-0.10	103.95
27	0.15	95	0.53	0.11	0.57	5.13	0.00	0.00	0.000	55	12.78	4.09	0.93	0.10	5.18	104.00
28	0.42	95	0.53	0.11	0.84	7.55	0.00	0.00	0.000	46.5	8.06	2.04	0.93	0.10	7.87	104.00
29	0.21	95	0.53	0.11	0.63	5.66	0.00	0.00	0.000	44	6.67	1.54	0.93	0.10	5.78	104.00
30	1.61	95	0.53	0.11	2.03	18.23	0.00	0.00	0.000	35	1.67	0.19	0.93	0.10	19.74	104.00
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37	2.78	0.41	0.93	0.10	-0.10	103.99
TOTAL	**4.96**														**87.47**	

November	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43.5	6.39	1.44	0.83	0.06	-0.06	103.99
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43.5	6.39	1.44	0.83	0.06	-0.06	103.98
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44.5	6.94	1.64	0.83	0.06	-0.06	103.98
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50.5	10.28	2.95	0.83	0.06	-0.06	103.97
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	45	7.22	1.74	0.83	0.06	-0.06	103.97
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	39.5	4.17	0.76	0.83	0.06	-0.06	103.96
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42.5	5.83	1.26	0.83	0.06	-0.06	103.95
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	51.5	10.83	3.19	0.83	0.06	-0.06	103.95
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	52.5	11.39	3.44	0.83	0.06	-0.06	103.94
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57.5	14.17	4.77	0.83	0.06	-0.06	103.94
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	52.5	11.39	3.44	0.83	0.06	-0.06	103.93
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40.5	4.72	0.92	0.83	0.06	-0.06	103.93
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44.5	6.94	1.64	0.83	0.06	-0.06	103.92
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	51.5	10.83	3.19	0.83	0.06	-0.06	103.92
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59	15.00	5.20	0.83	0.06	-0.06	103.91
16	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	59	15.00	5.20	0.83	0.06	-0.05	103.91
17	0.65	95	0.53	0.11	1.07	9.61	0.00	0.00	0.000	51	10.56	3.07	0.83	0.06	10.20	104.00
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	39.5	4.17	0.76	0.83	0.06	-0.06	103.99
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	38	3.33	0.54	0.83	0.06	-0.06	103.99
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43.5	6.39	1.44	0.83	0.06	-0.06	103.98
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50.5	10.28	2.95	0.83	0.06	-0.06	103.98
22	0.24	95	0.53	0.11	0.66	5.93	0.00	0.00	0.000	49	9.44	2.60	0.83	0.06	6.11	104.00
23	1.91	95	0.53	0.11	2.33	20.92	0.00	0.00	0.000	49.5	9.72	2.71	0.83	0.06	22.77	104.00

24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43	6.11	1.35	0.83	0.06	-0.06	103.99
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44.5	6.94	1.64	0.83	0.06	-0.06	103.99
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	47	8.33	2.15	0.83	0.06	-0.06	103.98
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	47	8.33	2.15	0.83	0.06	-0.06	103.98
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	47.5	8.61	2.26	0.83	0.06	-0.06	103.97
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60	15.56	5.49	0.83	0.06	-0.06	103.97
30	0.35	95	0.53	0.11	0.77	6.92	0.00	0.00	0.000	56	13.33	4.35	0.83	0.06	7.21	104.00
TOTAL	**3.16**														**44.63**	

December	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44.5	6.94	1.64	0.78	0.04	-0.04	104.00
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41	5.00	1.00	0.78	0.04	-0.04	103.99
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41.5	5.28	1.08	0.78	0.04	-0.04	103.99
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	39	3.89	0.69	0.78	0.04	-0.04	103.99
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	45	7.22	1.74	0.78	0.04	-0.04	103.98
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	52.5	11.39	3.44	0.78	0.04	-0.04	103.98
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60	15.56	5.49	0.78	0.04	-0.04	103.98
8	1.74	95	0.53	0.11	2.16	19.40	0.00	0.00	0.000	47.5	8.61	2.26	0.78	0.04	21.10	104.00
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37	2.78	0.41	0.78	0.04	-0.04	104.00
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40	4.44	0.84	0.78	0.04	-0.04	103.99
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	33.5	0.83	0.07	0.78	0.04	-0.04	103.99
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30	-1.11	0.10	0.78	0.04	-0.04	103.99
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	32.5	0.28	0.01	0.78	0.04	-0.04	103.98
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	38.5	3.61	0.61	0.78	0.04	-0.04	103.98
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44	6.67	1.54	0.78	0.04	-0.04	103.98
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	53	11.67	3.56	0.78	0.04	-0.04	103.98
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	38.5	3.61	0.61	0.78	0.04	-0.04	103.97
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	34.5	1.39	0.15	0.78	0.04	-0.04	103.97
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	26	-3.33	0.54	0.78	0.04	-0.04	103.97
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.78	0.04	-0.04	103.96
21	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	42.5	5.83	1.26	0.78	0.04	0.01	103.96
22	0.80	95	0.53	0.11	1.22	10.96	0.00	0.00	0.000	52.5	11.39	3.44	0.78	0.04	11.72	104.00
23	0.80	95	0.53	0.11	1.22	10.96	0.00	0.00	0.000	52.5	11.39	3.44	0.78	0.04	11.72	104.00

24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40	4.44	0.84	0.78	0.04	-0.04	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	31.5	-0.28	0.01	0.78	0.04	-0.04	103.99
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37.5	3.06	0.48	0.78	0.04	-0.04	103.99
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	39	3.89	0.69	0.78	0.04	-0.04	103.99
28	0.58	95	0.53	0.11	1.00	8.98	0.00	0.00	0.000	46	7.78	1.94	0.78	0.04	9.53	104.00
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	35	1.67	0.19	0.78	0.04	-0.04	104.00
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30	-1.11	0.10	0.78	0.04	-0.04	103.99
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41	5.00	1.00	0.78	0.04	-0.04	103.99
TOTAL	**3.97**														**53.15**	

DRY (2001)

Go Calcs	
k (ft/day)	0.00
q' (ft2/day)	0.00
GW flow (ft3/day)	0.00
Wetland Area (SF)	8900
GW outflow (in/day)	0.000

ET Calcs	
Annual	13.27
a	0.72

January	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go (in)	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	23.5	-4.72	0.92	0.8	0.00	0.00	104.00
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	26.5	-3.06	0.48	0.8	0.00	0.00	104.00
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	15	-9.44	2.60	0.8	0.00	0.00	104.00
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	22	-5.56	1.17	0.8	0.00	0.00	104.00
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	23	-5.00	1.00	0.8	0.00	0.00	104.00
6	0.13	95	0.53	0.11	0.55	4.95	0.00	0.00	0.000	25	-3.89	0.69	0.8	0.00	5.08	104.00
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	32	0.00	0.00	0.8	0.00	0.00	104.00
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	32	0.00	0.00	0.8	0.00	0.00	104.00
9	0.19	95	0.53	0.11	0.61	5.48	0.00	0.00	0.000	34.5	1.39	0.15	0.8	0.00	5.67	104.00
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28.5	-1.94	0.24	0.8	0.00	0.00	104.00
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	27.5	-2.50	0.35	0.8	0.00	0.00	104.00
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	32.5	0.28	0.01	0.8	0.00	0.00	104.00
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	31.5	-0.28	0.01	0.8	0.00	0.00	104.00
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	29.5	-1.39	0.15	0.8	0.00	0.00	104.00
15	0.24	95	0.53	0.11	0.66	5.93	0.00	0.00	0.000	30.5	-0.83	0.07	0.8	0.00	6.17	104.00
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	35.5	1.94	0.24	0.8	0.00	0.00	104.00
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37.5	3.06	0.48	0.8	0.00	0.00	104.00
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	35.5	1.94	0.24	0.8	0.00	0.00	104.00
19	0.38	95	0.53	0.11	0.80	7.19	0.00	0.00	0.000	33	0.56	0.04	0.8	0.00	7.57	104.00
21	0.52	95	0.53	0.11	0.94	8.45	0.00	0.00	0.000	27.5	-2.50	0.35	0.8	0.00	8.97	104.00
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	24	-4.44	0.84	0.8	0.00	0.00	104.00
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	24	-4.44	0.84	0.8	0.00	0.00	104.00
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	25	-3.89	0.69	0.8	0.00	0.00	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	35.5	1.94	0.24	0.8	0.00	0.00	104.00
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28.5	-1.94	0.24	0.8	0.00	0.00	104.00

27	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	26	-3.33	0.54	0.8	0.00	0.02	104.00
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	33.5	0.83	0.07	0.8	0.00	0.00	104.00
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	29	-1.67	0.19	0.8	0.00	0.00	104.00
30	0.18	95	0.53	0.11	0.60	5.39	0.00	0.00	0.000	30.5	-0.83	0.07	0.8	0.00	5.57	104.00
31	0.42	95	0.53	0.11	0.84	7.55	0.00	0.00	0.000	42.5	5.83	1.26	0.8	0.00	7.97	104.00
TOTAL	**2.85**														**58.48**	

February	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	39.5	4.17	0.76	0.89	0.02	-0.02	104.00
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37	2.78	0.41	0.89	0.02	-0.02	103.99
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	25.5	-3.61	0.61	0.89	0.02	-0.02	103.99
5	0.20	95	0.53	0.11	0.62	5.57	0.00	0.00	0.000	32.5	0.28	0.01	0.89	0.02	5.75	104.00
6	1.21	95	0.53	0.11	1.63	14.64	0.00	0.00	0.000	34	1.11	0.10	0.89	0.02	15.83	104.00
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40.5	4.72	0.92	0.89	0.02	-0.02	104.00
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	35	1.67	0.19	0.89	0.02	-0.02	104.00
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	31	-0.56	0.04	0.89	0.02	-0.02	103.99
10	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	49.5	9.72	2.71	0.89	0.02	0.03	104.00
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37.5	3.06	0.48	0.89	0.02	-0.02	103.99
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	25.5	-3.61	0.61	0.89	0.02	-0.02	103.99
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	25.5	-3.61	0.61	0.89	0.02	-0.02	103.99
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40.5	4.72	0.92	0.89	0.02	-0.02	103.99
15	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	39.5	4.17	0.76	0.89	0.02	0.03	103.99
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37	2.78	0.41	0.89	0.02	-0.02	103.99
17	0.31	95	0.53	0.11	0.73	6.56	0.00	0.00	0.000	38.5	3.61	0.61	0.89	0.02	6.85	104.00
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28	-2.22	0.30	0.89	0.02	-0.02	104.00
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	25.5	-3.61	0.61	0.89	0.02	-0.02	104.00
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	32	0.00	0.00	0.89	0.02	-0.02	103.99
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	46	7.78	1.94	0.89	0.02	-0.02	103.99
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	31	-0.56	0.04	0.89	0.02	-0.02	103.99
23	0.33	95	0.53	0.11	0.75	6.74	0.00	0.00	0.000	20	-6.67	1.54	0.89	0.02	7.05	104.00
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	31.5	-0.28	0.01	0.89	0.02	-0.02	104.00
25	0.07	95	0.53	0.11	0.49	0.00	0.00	0.00	0.000	30	-1.11	0.10	0.89	0.02	0.05	104.00
26	0.36	95	0.53	0.11	0.78	7.01	0.00	0.00	0.000	44	6.67	1.54	0.89	0.02	7.35	104.00

27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	39	3.89	0.69	0.89	0.02	-0.02	104.00
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40.5	4.72	0.92	0.89	0.02	-0.02	104.00
TOTAL	**2.58**									34.84	1.58	0.18			**42.47**	

March	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30	-1.11	0.10	0.99	0.04	-0.04	103.99
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30	-1.11	0.10	0.99	0.04	-0.04	103.99
3	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	37	2.78	0.41	0.99	0.04	-0.02	103.99
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41.5	5.28	1.08	0.99	0.04	-0.04	103.99
5	0.27	95	0.53	0.11	0.69	6.20	0.00	0.00	0.000	33	0.56	0.04	0.99	0.04	6.43	104.00
6	0.07	95	0.53	0.11	0.49	0.00	0.00	0.00	0.000	27.5	-2.50	0.35	0.99	0.04	0.03	104.00
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30.5	-0.83	0.07	0.99	0.04	-0.04	104.00
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.99	0.04	-0.04	103.99
9	0.24	95	0.53	0.11	0.66	5.93	0.00	0.00	0.000	36.5	2.50	0.35	0.99	0.04	6.13	104.00
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	38.5	3.61	0.61	0.99	0.04	-0.04	104.00
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.99	0.04	-0.04	103.99
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41	5.00	1.00	0.99	0.04	-0.04	103.99
13	1.40	95	0.53	0.11	1.82	16.34	0.00	0.00	0.000	37.5	3.06	0.48	0.99	0.04	17.71	104.00
14	0.03	95	0.53	0.11	0.45	0.00	0.00	0.00	0.000	41.5	5.28	1.08	0.99	0.04	-0.01	104.00
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	39.5	4.17	0.76	0.99	0.04	-0.04	104.00
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41.5	5.28	1.08	0.99	0.04	-0.04	103.99
17	0.30	95	0.53	0.11	0.72	6.47	0.00	0.00	0.000	47.5	8.61	2.26	0.99	0.04	6.73	104.00
18	0.17	95	0.53	0.11	0.59	5.30	0.00	0.00	0.000	39.5	4.17	0.76	0.99	0.04	5.44	104.00
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	39	3.89	0.69	0.99	0.04	-0.04	104.00
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41	5.00	1.00	0.99	0.04	-0.04	103.99
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41	5.00	1.00	0.99	0.04	-0.04	103.99
22	0.72	95	0.53	0.11	1.14	10.24	0.00	0.00	0.000	42.5	5.83	1.26	0.99	0.04	10.92	104.00
23	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	42	5.56	1.17	0.99	0.04	-0.02	104.00
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	49.5	9.72	2.71	0.99	0.04	-0.04	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	39.5	4.17	0.76	0.99	0.04	-0.04	103.99
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36.5	2.50	0.35	0.99	0.04	-0.04	103.99
27	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	30.5	-0.83	0.07	0.99	0.04	0.01	103.99
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	33	0.56	0.04	0.99	0.04	-0.04	103.99

29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	38	3.33	0.54	0.99	0.04	-0.04	103.98
30	1.53	95	0.53	0.11	1.95	17.51	0.00	0.00	0.000	41	5.00	1.00	0.99	0.04	19.00	104.00
31	0.42	95	0.53	0.11	0.84	7.55	0.00	0.00	0.000	37.5	3.06	0.48	0.99	0.04	7.93	104.00
TOTAL	**5.24**														**79.61**	

April	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.06	95	0.53	0.11	0.48	0.00	0.00	0.00	0.000	40	4.44	0.84	1.1	0.10	-0.04	104.00
2	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	40	4.44	0.84	1.1	0.10	-0.09	103.99
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42	5.56	1.17	1.1	0.10	-0.10	103.98
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44	6.67	1.54	1.1	0.10	-0.10	103.97
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43	6.11	1.35	1.1	0.10	-0.10	103.96
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	46.5	8.06	2.04	1.1	0.10	-0.10	103.95
7	0.35	95	0.53	0.11	0.77	6.92	0.00	0.00	0.000	48	8.89	2.37	1.1	0.10	7.17	104.00
8	0.06	95	0.53	0.11	0.48	0.00	0.00	0.00	0.000	46.5	8.06	2.04	1.1	0.10	-0.04	104.00
9	0.04	95	0.53	0.11	0.46	0.00	0.00	0.00	0.000	44.5	6.94	1.64	1.1	0.10	-0.06	103.99
10	0.47	95	0.53	0.11	0.89	8.00	0.00	0.00	0.000	64	17.78	6.70	1.1	0.10	8.37	104.00
11	0.08	95	0.53	0.11	0.50	0.00	0.00	0.00	0.000	54	12.22	3.82	1.1	0.10	-0.02	104.00
12	0.37	95	0.53	0.11	0.79	7.10	0.00	0.00	0.000	47.5	8.61	2.26	1.1	0.10	7.37	104.00
13	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	54	12.22	3.82	1.1	0.10	-0.09	103.99
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60	15.56	5.49	1.1	0.10	-0.10	103.98
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	53.5	11.94	3.69	1.1	0.10	-0.10	103.98
16	0.15	95	0.53	0.11	0.57	5.13	0.00	0.00	0.000	56	13.33	4.35	1.1	0.10	5.17	104.00
17	0.08	95	0.53	0.11	0.50	0.00	0.00	0.00	0.000	51.5	10.83	3.19	1.1	0.10	-0.02	104.00
18	0.18	95	0.53	0.11	0.60	5.39	0.00	0.00	0.000	46.5	8.06	2.04	1.1	0.10	5.47	104.00
19	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	42.5	5.83	1.26	1.1	0.10	-0.09	103.99
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42.5	5.83	1.26	1.1	0.10	-0.10	103.98
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	48	8.89	2.37	1.1	0.10	-0.10	103.98
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60.5	15.83	5.64	1.1	0.10	-0.10	103.97
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71.5	21.94	9.19	1.1	0.10	-0.10	103.96
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65.5	18.61	7.18	1.1	0.10	-0.10	103.95
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66.5	19.17	7.51	1.1	0.10	-0.10	103.94
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	46	7.78	1.94	1.1	0.10	-0.10	103.93
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	51.5	10.83	3.19	1.1	0.10	-0.10	103.92

28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55.5	13.06	4.22	1.1	0.10	-0.10	103.92
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50	10.00	2.83	1.1	0.10	-0.10	103.91
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50.5	10.28	2.95	1.1	0.10	-0.10	103.90
TOTAL	**1.87**														**31.35**	

May	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	58	14.44	4.91	1.2	0.15	-0.15	103.89
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.2	0.15	-0.15	103.87
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71	21.67	9.02	1.2	0.15	-0.15	103.86
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76	24.44	10.81	1.2	0.15	-0.15	103.85
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78	25.56	11.56	1.2	0.15	-0.15	103.84
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	1.2	0.15	-0.15	103.82
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50	10.00	2.83	1.2	0.15	-0.15	103.81
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	49.5	9.72	2.71	1.2	0.15	-0.15	103.80
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	56	13.33	4.35	1.2	0.15	-0.15	103.79
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62	16.67	6.09	1.2	0.15	-0.15	103.78
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67.5	19.72	7.83	1.2	0.15	-0.15	103.76
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71	21.67	9.02	1.2	0.15	-0.15	103.75
13	0.09	95	0.53	0.11	0.51	0.00	0.00	0.00	0.000	68	20.00	8.00	1.2	0.15	-0.06	103.75
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	58	14.44	4.91	1.2	0.15	-0.15	103.73
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57.5	14.17	4.77	1.2	0.15	-0.15	103.72
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	61	16.11	5.78	1.2	0.15	-0.15	103.71
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	58.5	14.72	5.05	1.2	0.15	-0.15	103.70
18	0.03	95	0.53	0.11	0.45	0.00	0.00	0.00	0.000	56	13.33	4.35	1.2	0.15	-0.12	103.69
19	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	58	14.44	4.91	1.2	0.15	-0.14	103.68
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69.5	20.83	8.51	1.2	0.15	-0.15	103.66
21	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	56	13.33	4.35	1.2	0.15	-0.13	103.65
22	1.40	95	0.53	0.11	1.82	16.34	0.00	0.00	0.000	55	12.78	4.09	1.2	0.15	17.60	104.00
23	0.54	95	0.53	0.11	0.96	8.63	0.00	0.00	0.000	59.5	15.28	5.34	1.2	0.15	9.02	104.00
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59.5	15.28	5.34	1.2	0.15	-0.15	103.99
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	64	17.78	6.70	1.2	0.15	-0.15	103.98
26	0.68	95	0.53	0.11	1.10	9.88	0.00	0.00	0.000	57	13.89	4.63	1.2	0.15	10.41	104.00
27	0.57	95	0.53	0.11	0.99	8.90	0.00	0.00	0.000	59.5	15.28	5.34	1.2	0.15	9.32	104.00

28	0.49	95	0.53	0.11	0.91	8.18	0.00	0.00	0.000	63.5	17.50	6.55	1.2	0.15	8.52	104.00
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	63	17.22	6.39	1.2	0.15	-0.15	103.99
30	0.04	95	0.53	0.11	0.46	0.00	0.00	0.00	0.000	61.5	16.39	5.93	1.2	0.15	-0.11	103.98
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55	12.78	4.09	1.2	0.15	-0.15	103.97
TOTAL	**3.87**														**51.21**	

June	Daily Precip	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55.5	13.06	4.22	1.25	0.19	-0.19	103.95
2	2.27	95	0.53	0.11	2.69	24.15	0.00	0.00	0.000	61.5	16.39	5.93	1.25	0.19	26.23	104.00
3	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	67.5	19.72	7.83	1.25	0.19	-0.18	103.98
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	63	17.22	6.39	1.25	0.19	-0.19	103.97
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	63.5	17.50	6.55	1.25	0.19	-0.19	103.95
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67.5	19.72	7.83	1.25	0.19	-0.19	103.94
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68.5	20.28	8.17	1.25	0.19	-0.19	103.92
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66.5	19.17	7.51	1.25	0.19	-0.19	103.90
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66	18.89	7.34	1.25	0.19	-0.19	103.89
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66.5	19.17	7.51	1.25	0.19	-0.19	103.87
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69.5	20.83	8.51	1.25	0.19	-0.19	103.86
12	0.23	95	0.53	0.11	0.65	5.84	0.00	0.00	0.000	71.5	21.94	9.19	1.25	0.19	5.88	104.00
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73.5	23.06	9.90	1.25	0.19	-0.19	103.98
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74.5	23.61	10.26	1.25	0.19	-0.19	103.97
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75.5	24.17	10.63	1.25	0.19	-0.19	103.95
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75.5	24.17	10.63	1.25	0.19	-0.19	103.94
17	1.33	95	0.53	0.11	1.75	15.72	0.00	0.00	0.000	73	22.78	9.72	1.25	0.19	16.85	104.00
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71.5	21.94	9.19	1.25	0.19	-0.19	103.98
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73	22.78	9.72	1.25	0.19	-0.19	103.97
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75.5	24.17	10.63	1.25	0.19	-0.19	103.95
21	0.07	95	0.53	0.11	0.49	0.00	0.00	0.00	0.000	77	25.00	11.18	1.25	0.19	-0.12	103.94
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72	22.22	9.37	1.25	0.19	-0.19	103.93
23	0.32	95	0.53	0.11	0.74	6.65	0.00	0.00	0.000	74.5	23.61	10.26	1.25	0.19	6.78	104.00
24	0.47	95	0.53	0.11	0.89	8.00	0.00	0.00	0.000	73	22.78	9.72	1.25	0.19	8.27	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67	19.44	7.67	1.25	0.19	-0.19	103.98
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.25	0.19	-0.19	103.97

27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.25	0.19	-0.19	103.95
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78	25.56	11.56	1.25	0.19	-0.19	103.94
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79.5	26.39	12.12	1.25	0.19	-0.19	103.92
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	77.5	25.28	11.37	1.25	0.19	-0.19	103.90
TOTAL	**4.7**														**59.27**	

July	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.28	95	0.53	0.11	0.70	6.29	0.00	0.00	0.000	79.5	26.39	12.12	1.23	0.19	6.39	104.00
2	0.60	95	0.53	0.11	1.02	9.16	0.00	0.00	0.000	71	21.67	9.02	1.23	0.19	9.58	104.00
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	1.23	0.19	-0.19	103.98
4	0.34	95	0.53	0.11	0.76	6.83	0.00	0.00	0.000	64.5	18.06	6.86	1.23	0.19	6.99	104.00
5	0.62	95	0.53	0.11	1.04	9.34	0.00	0.00	0.000	74	23.33	10.08	1.23	0.19	9.78	104.00
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.23	0.19	-0.19	103.98
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	64	17.78	6.70	1.23	0.19	-0.19	103.97
8	0.20	95	0.53	0.11	0.62	5.57	0.00	0.00	0.000	72.5	22.50	9.55	1.23	0.19	5.59	104.00
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70	21.11	8.68	1.23	0.19	-0.19	103.98
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78	25.56	11.56	1.23	0.19	-0.19	103.97
11	0.31	95	0.53	0.11	0.73	6.56	0.00	0.00	0.000	76.5	24.72	10.99	1.23	0.19	6.69	104.00
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69.5	20.83	8.51	1.23	0.19	-0.19	103.98
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66.5	19.17	7.51	1.23	0.19	-0.19	103.97
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68	20.00	8.00	1.23	0.19	-0.19	103.95
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.23	0.19	-0.19	103.94
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72	22.22	9.37	1.23	0.19	-0.19	103.92
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73	22.78	9.72	1.23	0.19	-0.19	103.91
18	1.45	95	0.53	0.11	1.87	16.79	0.00	0.00	0.000	76.5	24.72	10.99	1.23	0.19	18.06	104.00
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73	22.78	9.72	1.23	0.19	-0.19	103.98
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.23	0.19	-0.19	103.97
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68.5	20.28	8.17	1.23	0.19	-0.19	103.95
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.23	0.19	-0.19	103.94
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.23	0.19	-0.19	103.92
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.23	0.19	-0.19	103.91
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	82.5	28.06	13.29	1.23	0.19	-0.19	103.89
26	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	83.5	28.61	13.69	1.23	0.19	4.69	104.00

27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70.5	21.39	8.85	1.23	0.19	-0.19	103.98
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67	19.44	7.67	1.23	0.19	-0.19	103.97
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67.5	19.72	7.83	1.23	0.19	-0.19	103.95
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.23	0.19	-0.19	103.94
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66	18.89	7.34	1.23	0.19	-0.19	103.92
TOTAL	**3.91**														**63.48**	

August	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71	21.67	9.02	1.15	0.19	-0.19	103.91
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76	24.44	10.81	1.15	0.19	-0.19	103.89
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78.5	25.83	11.74	1.15	0.19	-0.19	103.88
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79	26.11	11.93	1.15	0.19	-0.19	103.86
5	1.13	95	0.53	0.11	1.55	13.92	0.00	0.00	0.000	73	22.78	9.72	1.15	0.19	14.86	104.00
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	77.5	25.28	11.37	1.15	0.19	-0.19	103.98
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	82	27.78	13.09	1.15	0.19	-0.19	103.97
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	85.5	29.72	14.49	1.15	0.19	-0.19	103.95
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	83	28.33	13.49	1.15	0.19	-0.19	103.94
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	86.5	30.28	14.90	1.15	0.19	-0.19	103.92
11	0.40	95	0.53	0.11	0.82	7.37	0.00	0.00	0.000	84	28.89	13.89	1.15	0.19	7.58	104.00
12	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.15	0.19	-0.17	103.99
13	0.48	95	0.53	0.11	0.90	8.09	0.00	0.00	0.000	75	23.89	10.44	1.15	0.19	8.38	104.00
14	0.72	95	0.53	0.11	1.14	10.24	0.00	0.00	0.000	76	24.44	10.81	1.15	0.19	10.77	104.00
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74	23.33	10.08	1.15	0.19	-0.19	103.98
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.15	0.19	-0.19	103.97
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	77.5	25.28	11.37	1.15	0.19	-0.19	103.95
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74	23.33	10.08	1.15	0.19	-0.19	103.94
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.15	0.19	-0.19	103.92
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75	23.89	10.44	1.15	0.19	-0.19	103.91
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76	24.44	10.81	1.15	0.19	-0.19	103.89
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72	22.22	9.37	1.15	0.19	-0.19	103.87
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74	23.33	10.08	1.15	0.19	-0.19	103.86
24	0.21	95	0.53	0.11	0.63	5.66	0.00	0.00	0.000	73.5	23.06	9.90	1.15	0.19	5.69	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71.5	21.94	9.19	1.15	0.19	-0.19	103.98

26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67.5	19.72	7.83	1.15	0.19	-0.19	103.97
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70	21.11	8.68	1.15	0.19	-0.19	103.95
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76	24.44	10.81	1.15	0.19	-0.19	103.94
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75.5	24.17	10.63	1.15	0.19	-0.19	103.92
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.15	0.19	-0.19	103.91
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	75.5	24.17	10.63	1.15	0.19	-0.19	103.89
TOTAL	**2.96**														**42.43**	

September	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	79.5	26.39	12.12	1.04	0.14	-0.13	103.88
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68.5	20.28	8.17	1.04	0.14	-0.14	103.87
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	1.04	0.14	-0.14	103.86
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65	18.33	7.02	1.04	0.14	-0.14	103.84
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70	21.11	8.68	1.04	0.14	-0.14	103.83
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	64.5	18.06	6.86	1.04	0.14	-0.14	103.82
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	64.5	18.06	6.86	1.04	0.14	-0.14	103.81
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69.5	20.83	8.51	1.04	0.14	-0.14	103.80
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.04	0.14	-0.14	103.78
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74.5	23.61	10.26	1.04	0.14	-0.14	103.77
11	0.19	95	0.53	0.11	0.61	5.48	0.00	0.00	0.000	65	18.33	7.02	1.04	0.14	5.53	104.00
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.04	0.14	-0.14	103.99
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66.5	19.17	7.51	1.04	0.14	-0.14	103.98
14	1.30	95	0.53	0.11	1.72	15.45	0.00	0.00	0.000	69.5	20.83	8.51	1.04	0.14	16.60	104.00
15	0.16	95	0.53	0.11	0.58	5.22	0.00	0.00	0.000	54	12.22	3.82	1.04	0.14	5.23	104.00
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57.5	14.17	4.77	1.04	0.14	-0.14	103.99
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59.5	15.28	5.34	1.04	0.14	-0.14	103.98
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	1.04	0.14	-0.14	103.96
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65.5	18.61	7.18	1.04	0.14	-0.14	103.95
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65.5	18.61	7.18	1.04	0.14	-0.14	103.94
21	1.26	95	0.53	0.11	1.68	15.09	0.00	0.00	0.000	68	20.00	8.00	1.04	0.14	16.20	104.00
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.04	0.14	-0.14	103.99
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70.5	21.39	8.85	1.04	0.14	-0.14	103.98
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69.5	20.83	8.51	1.04	0.14	-0.14	103.96

25	0.26	95	0.53	0.11	0.68	6.11	0.00	0.00	0.000	73.5	23.06	9.90	1.04	0.14	6.23	104.00
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	56.5	13.61	4.49	1.04	0.14	-0.14	103.99
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	54.5	12.50	3.95	1.04	0.14	-0.14	103.98
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	56	13.33	4.35	1.04	0.14	-0.14	103.96
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	56	13.33	4.35	1.04	0.14	-0.14	103.95
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57.5	14.17	4.77	1.04	0.14	-0.14	103.94
TOTAL	**3.18**														**46.21**	

October	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.29	95	0.53	0.11	0.71	6.38	0.00	0.00	0.000	55	12.78	4.09	0.93	0.10	6.58	104.00
2	0.06	95	0.53	0.11	0.48	0.00	0.00	0.00	0.000	49.5	9.72	2.71	0.93	0.10	-0.04	104.00
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62	16.67	6.09	0.93	0.10	-0.10	103.99
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55	12.78	4.09	0.93	0.10	-0.10	103.98
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67.5	19.72	7.83	0.93	0.10	-0.10	103.97
6	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	67.5	19.72	7.83	0.93	0.10	-0.08	103.97
7	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	54.5	12.50	3.95	0.93	0.10	4.78	104.00
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	48	8.89	2.37	0.93	0.10	-0.10	103.99
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42.5	5.83	1.26	0.93	0.10	-0.10	103.98
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	45	7.22	1.74	0.93	0.10	-0.10	103.98
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	53.5	11.94	3.69	0.93	0.10	-0.10	103.97
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	0.93	0.10	-0.10	103.96
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	63.5	17.50	6.55	0.93	0.10	-0.10	103.95
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67	19.44	7.67	0.93	0.10	-0.10	103.94
15	0.36	95	0.53	0.11	0.78	7.01	0.00	0.00	0.000	63.5	17.50	6.55	0.93	0.10	7.27	104.00
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55	12.78	4.09	0.93	0.10	-0.10	103.99
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55.5	13.06	4.22	0.93	0.10	-0.10	103.98
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	49.5	9.72	2.71	0.93	0.10	-0.10	103.98
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	46	7.78	1.94	0.93	0.10	-0.10	103.97
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	49	9.44	2.60	0.93	0.10	-0.10	103.96
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57.5	14.17	4.77	0.93	0.10	-0.10	103.95
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60.5	15.83	5.64	0.93	0.10	-0.10	103.94
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60.5	15.83	5.64	0.93	0.10	-0.10	103.94
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	63.5	17.50	6.55	0.93	0.10	-0.10	103.93

25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71.5	21.94	9.19	0.93	0.10	-0.10	103.92
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	0.93	0.10	-0.10	103.91
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	48.5	9.17	2.48	0.93	0.10	-0.10	103.90
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43	6.11	1.35	0.93	0.10	-0.10	103.90
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40.5	4.72	0.92	0.93	0.10	-0.10	103.89
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	45	7.22	1.74	0.93	0.10	-0.10	103.88
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50.5	10.28	2.95	0.93	0.10	-0.10	103.87
TOTAL	**0.84**														**16.01**	

November	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50.5	10.28	2.95	0.83	0.07	-0.07	103.87
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55	12.78	4.09	0.83	0.07	-0.07	103.86
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67	19.44	7.67	0.83	0.07	-0.07	103.85
4	0.09	95	0.53	0.11	0.51	0.00	0.00	0.00	0.000	54.5	12.50	3.95	0.83	0.07	0.02	103.86
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	51	10.56	3.07	0.83	0.07	-0.07	103.85
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44.5	6.94	1.64	0.83	0.07	-0.07	103.84
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	48	8.89	2.37	0.83	0.07	-0.07	103.84
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50	10.00	2.83	0.83	0.07	-0.07	103.83
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	48	8.89	2.37	0.83	0.07	-0.07	103.83
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43	6.11	1.35	0.83	0.07	-0.07	103.82
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50	10.00	2.83	0.83	0.07	-0.07	103.81
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36.5	2.50	0.35	0.83	0.07	-0.07	103.81
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	38.5	3.61	0.61	0.83	0.07	-0.07	103.80
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40.5	4.72	0.92	0.83	0.07	-0.07	103.80
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	46	7.78	1.94	0.83	0.07	-0.07	103.79
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59.5	15.28	5.34	0.83	0.07	-0.07	103.79
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57	13.89	4.63	0.83	0.07	-0.07	103.78
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40	4.44	0.84	0.83	0.07	-0.07	103.77
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44	6.67	1.54	0.83	0.07	-0.07	103.77
20	0.13	95	0.53	0.11	0.55	4.95	0.00	0.00	0.000	48.5	9.17	2.48	0.83	0.07	5.01	104.00
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	38.5	3.61	0.61	0.83	0.07	-0.07	103.99
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.83	0.07	-0.07	103.99
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42.5	5.83	1.26	0.83	0.07	-0.07	103.98

24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	46	7.78	1.94	0.83	0.07	-0.07	103.98
25	0.03	95	0.53	0.11	0.45	0.00	0.00	0.00	0.000	56.5	13.61	4.49	0.83	0.07	-0.04	103.97
26	0.65	95	0.53	0.11	1.07	9.61	0.00	0.00	0.000	61	16.11	5.78	0.83	0.07	10.19	104.00
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50.5	10.28	2.95	0.83	0.07	-0.07	103.99
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	47.5	8.61	2.26	0.83	0.07	-0.07	103.99
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	58	14.44	4.91	0.83	0.07	-0.07	103.98
30	0.07	95	0.53	0.11	0.49	0.00	0.00	0.00	0.000	53	11.67	3.56	0.83	0.07	0.00	103.98
TOTAL	**0.97**														**13.43**	

December	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	63	17.22	6.39	0.78	0.04	-0.04	103.98
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55	12.78	4.09	0.78	0.04	-0.04	103.98
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42	5.56	1.17	0.78	0.04	-0.04	103.97
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43.5	6.39	1.44	0.78	0.04	-0.04	103.97
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50	10.00	2.83	0.78	0.04	-0.04	103.96
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	61.5	16.39	5.93	0.78	0.04	-0.04	103.96
7	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	62.5	16.94	6.24	0.78	0.04	-0.02	103.96
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	48	8.89	2.37	0.78	0.04	-0.04	103.96
9	0.82	95	0.53	0.11	1.24	11.14	0.00	0.00	0.000	40.5	4.72	0.92	0.78	0.04	11.92	104.00
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	34	1.11	0.10	0.78	0.04	-0.04	104.00
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37	2.78	0.41	0.78	0.04	-0.04	103.99
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	45	7.22	1.74	0.78	0.04	-0.04	103.99
13	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	43	6.11	1.35	0.78	0.04	0.01	103.99
14	0.04	95	0.53	0.11	0.46	0.00	0.00	0.00	0.000	50	10.00	2.83	0.78	0.04	0.00	103.99
15	0.17	95	0.53	0.11	0.59	5.30	0.00	0.00	0.000	53	11.67	3.56	0.78	0.04	5.43	104.00
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37	2.78	0.41	0.78	0.04	-0.04	104.00
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.78	0.04	-0.04	103.99
18	0.53	95	0.53	0.11	0.95	8.54	0.00	0.00	0.000	48	8.89	2.37	0.78	0.04	9.02	104.00
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43.5	6.39	1.44	0.78	0.04	-0.04	104.00
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41	5.00	1.00	0.78	0.04	-0.04	103.99
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37	2.78	0.41	0.78	0.04	-0.04	103.99
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.78	0.04	-0.04	103.99
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	33	0.56	0.04	0.78	0.04	-0.04	103.98

24	0.62	95	0.53	0.11	1.04	9.34	0.00	0.00	0.000	36	2.22	0.30	0.78	0.04	9.92	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.78	0.04	-0.04	104.00
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	32	0.00	0.00	0.78	0.04	-0.04	103.99
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28.5	-1.94	0.24	0.78	0.04	-0.04	103.99
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	27	-2.78	0.41	0.78	0.04	-0.04	103.99
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	32	0.00	0.00	0.78	0.04	-0.04	103.98
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30.5	-0.83	0.07	0.78	0.04	-0.04	103.98
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	25	-3.89	0.69	0.78	0.04	-0.04	103.98
TOTAL	**2.25**														**35.25**	

AVERAGE (2014)

Go Calcs	
k (ft/day)	0.00
q' (ft2/day)	0.00
GW flow (ft3/day)	0.00
Wetland Area (SF)	8900
GW outflow (in/day)	0.000

ET Calcs	
Annual	13.39
a	0.72

January	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go (in)	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	25	-3.89	0.69	0.8	0.00	0.00	104.00
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28	-2.22	0.30	0.8	0.00	0.00	104.00
3	0.44	95	0.53	0.11	0.86	7.73	0.00	0.00	0.000	20.5	-6.39	1.44	0.8	0.00	8.17	104.00
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	9	-12.78	4.09	0.8	0.00	0.00	104.00
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	15.5	-9.17	2.48	0.8	0.00	0.00	104.00
6	0.54	95	0.53	0.11	0.96	8.63	0.00	0.00	0.000	39.5	4.17	0.76	0.8	0.00	9.17	104.00
7	0.13	95	0.53	0.11	0.55	4.95	0.00	0.00	0.000	29.5	-1.39	0.15	0.8	0.00	5.08	104.00
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	6.5	-14.17	4.77	0.8	0.00	0.00	104.00
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	16.5	-8.61	2.26	0.8	0.00	0.00	104.00
10	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	27	-2.78	0.41	0.8	0.00	0.05	104.00
11	0.35	95	0.53	0.11	0.77	6.92	0.00	0.00	0.000	41	5.00	1.00	0.8	0.00	7.27	104.00
12	0.28	95	0.53	0.11	0.70	6.29	0.00	0.00	0.000	51.5	10.83	3.19	0.8	0.00	6.57	104.00
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.8	0.00	0.00	104.00
14	0.03	95	0.53	0.11	0.45	0.00	0.00	0.00	0.000	43	6.11	1.35	0.8	0.00	0.03	104.00
15	0.20	95	0.53	0.11	0.62	5.57	0.00	0.00	0.000	39	3.89	0.69	0.8	0.00	5.77	104.00
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42.5	5.83	1.26	0.8	0.00	0.00	104.00
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	30	-1.11	0.10	0.8	0.00	0.00	104.00
18	0.13	95	0.53	0.11	0.55	4.95	0.00	0.00	0.000	34	1.11	0.10	0.8	0.00	5.08	104.00
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	29.5	-1.39	0.15	0.8	0.00	0.00	104.00
21	0.04	95	0.53	0.11	0.46	0.00	0.00	0.00	0.000	35.5	1.94	0.24	0.8	0.00	0.04	104.00
22	0.38	95	0.53	0.11	0.80	7.19	0.00	0.00	0.000	12.5	-10.83	3.19	0.8	0.00	7.57	104.00
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	9.5	-12.50	3.95	0.8	0.00	0.00	104.00
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	13	-10.56	3.07	0.8	0.00	0.00	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	12.5	-10.83	3.19	0.8	0.00	0.00	104.00
26	0.08	95	0.53	0.11	0.50	0.00	0.00	0.00	0.000	15	-9.44	2.60	0.8	0.00	0.08	104.00

27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	21.5	-5.83	1.26	0.8	0.00	0.00	104.00
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28.5	-1.94	0.24	0.8	0.00	0.00	104.00
29	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	15	-9.44	2.60	0.8	0.00	0.05	104.00
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	13.5	-10.28	2.95	0.8	0.00	0.00	104.00
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	22	-5.56	1.17	0.8	0.00	0.00	104.00
TOTAL	**2.70**														**54.92**	

February	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	31	-0.56	0.04	0.89	0.00	0.00	104.00
3	0.63	95	0.53	0.11	1.05	9.43	0.00	0.00	0.000	43.5	6.39	1.44	0.89	0.00	10.06	104.00
4	0.35	95	0.53	0.11	0.77	6.92	0.00	0.00	0.000	22.5	-5.28	1.08	0.89	0.00	7.27	104.00
5	1.43	95	0.53	0.11	1.85	16.61	0.00	0.00	0.000	26	-3.33	0.54	0.89	0.00	18.04	104.00
6	0.08	95	0.53	0.11	0.50	0.00	0.00	0.00	0.000	27.5	-2.50	0.35	0.89	0.00	0.08	104.00
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	25	-3.89	0.69	0.89	0.00	0.00	104.00
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	24.5	-4.17	0.76	0.89	0.00	0.00	104.00
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	23.5	-4.72	0.92	0.89	0.00	0.00	104.00
10	0.15	95	0.53	0.11	0.57	5.13	0.00	0.00	0.000	25.5	-3.61	0.61	0.89	0.00	5.28	104.00
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	20	-6.67	1.54	0.89	0.00	0.00	104.00
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	15	-9.44	2.60	0.89	0.00	0.00	104.00
13	0.68	95	0.53	0.11	1.10	9.88	0.00	0.00	0.000	19	-7.22	1.74	0.89	0.00	10.56	104.00
14	0.85	95	0.53	0.11	1.27	11.41	0.00	0.00	0.000	31.5	-0.28	0.01	0.89	0.00	12.26	104.00
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	34	1.11	0.10	0.89	0.00	0.00	104.00
16	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	27.5	-2.50	0.35	0.89	0.00	4.88	104.00
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	23	-5.00	1.00	0.89	0.00	0.00	104.00
18	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	26	-3.33	0.54	0.89	0.00	4.88	104.00
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	33	0.56	0.04	0.89	0.00	0.00	104.00
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36	2.22	0.30	0.89	0.00	0.00	104.00
21	0.20	95	0.53	0.11	0.62	5.57	0.00	0.00	0.000	41	5.00	1.00	0.89	0.00	5.77	104.00
22	0.18	95	0.53	0.11	0.60	5.39	0.00	0.00	0.000	37	2.78	0.41	0.89	0.00	5.57	104.00
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42	5.56	1.17	0.89	0.00	0.00	104.00
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	46.5	8.06	2.04	0.89	0.00	0.00	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28	-2.22	0.30	0.89	0.00	0.00	104.00
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28	-2.22	0.30	0.89	0.00	0.00	104.00

27	0.06	95	0.53	0.11	0.48	0.00	0.00	0.00	0.000	20.5	-6.39	1.44	0.89	0.00	0.06	104.00
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	20.5	-6.39	1.44	0.89	0.00	0.00	104.00
TOTAL	**4.83**														**84.72**	

March	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	16	-8.89	2.37	0.99	0.02	-0.02	104.00
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	29.5	-1.39	0.15	0.99	0.02	-0.02	104.00
3	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	30	-1.11	0.10	0.99	0.02	0.00	104.00
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	16	-8.89	2.37	0.99	0.02	-0.02	103.99
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	22.5	-5.28	1.08	0.99	0.02	-0.02	103.99
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	29	-1.67	0.19	0.99	0.02	-0.02	103.99
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	23.5	-4.72	0.92	0.99	0.02	-0.02	103.99
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	33	0.56	0.04	0.99	0.02	-0.02	103.99
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	47	8.33	2.15	0.99	0.02	-0.02	103.98
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40.5	4.72	0.92	0.99	0.02	-0.02	103.98
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43.5	6.39	1.44	0.99	0.02	-0.02	103.98
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	51	10.56	3.07	0.99	0.02	-0.02	103.98
13	0.15	95	0.53	0.11	0.57	5.13	0.00	0.00	0.000	43.5	6.39	1.44	0.99	0.02	5.25	104.00
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	23	-5.00	1.00	0.99	0.02	-0.02	104.00
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	35.5	1.94	0.24	0.99	0.02	-0.02	104.00
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	45.5	7.50	1.84	0.99	0.02	-0.02	103.99
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	31	-0.56	0.04	0.99	0.02	-0.02	103.99
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28.5	-1.94	0.24	0.99	0.02	-0.02	103.99
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	35	1.67	0.19	0.99	0.02	-0.02	103.99
20	0.76	95	0.53	0.11	1.18	10.60	0.00	0.00	0.000	38.5	3.61	0.61	0.99	0.02	11.34	104.00
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44.5	6.94	1.64	0.99	0.02	-0.02	104.00
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41.5	5.28	1.08	0.99	0.02	-0.02	104.00
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	51	10.56	3.07	0.99	0.02	-0.02	103.99
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	32.5	0.28	0.01	0.99	0.02	-0.02	103.99
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	26.5	-3.06	0.48	0.99	0.02	-0.02	103.99
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	32	0.00	0.00	0.99	0.02	-0.02	103.99
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28	-2.22	0.30	0.99	0.02	-0.02	103.99
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	32	0.00	0.00	0.99	0.02	-0.02	103.98

29	0.03	95	0.53	0.11	0.45	0.00	0.00	0.00	0.000	50	10.00	2.83	0.99	0.02	0.01	103.98
30	2.12	95	0.53	0.11	2.54	22.81	0.00	0.00	0.000	46.5	8.06	2.04	0.99	0.02	24.90	104.00
31	0.77	95	0.53	0.11	1.19	10.69	0.00	0.00	0.000	40.5	4.72	0.92	0.99	0.02	11.44	104.00
TOTAL	**3.85**														**52.33**	

April	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44	6.67	1.54	1.1	0.10	-0.10	103.99
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	47.5	8.61	2.26	1.1	0.10	-0.10	103.98
3	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	46	7.78	1.94	1.1	0.10	-0.08	103.98
4	0.23	95	0.53	0.11	0.65	5.84	0.00	0.00	0.000	54	12.22	3.82	1.1	0.10	5.97	104.00
5	0.13	95	0.53	0.11	0.55	4.95	0.00	0.00	0.000	41	5.00	1.00	1.1	0.10	4.97	104.00
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43	6.11	1.35	1.1	0.10	-0.10	103.99
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	46	7.78	1.94	1.1	0.10	-0.10	103.98
8	0.40	95	0.53	0.11	0.82	7.37	0.00	0.00	0.000	44	6.67	1.54	1.1	0.10	7.67	104.00
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	52	11.11	3.31	1.1	0.10	-0.10	103.99
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	47	8.33	2.15	1.1	0.10	-0.10	103.98
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	54	12.22	3.82	1.1	0.10	-0.10	103.97
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	61.5	16.39	5.93	1.1	0.10	-0.10	103.97
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59	15.00	5.20	1.1	0.10	-0.10	103.96
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70.5	21.39	8.85	1.1	0.10	-0.10	103.95
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70.5	21.39	8.85	1.1	0.10	-0.10	103.94
16	0.83	95	0.53	0.11	1.25	11.23	0.00	0.00	0.000	48.5	9.17	2.48	1.1	0.10	11.96	104.00
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40.5	4.72	0.92	1.1	0.10	-0.10	103.99
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42.5	5.83	1.26	1.1	0.10	-0.10	103.98
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42	5.56	1.17	1.1	0.10	-0.10	103.97
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57	13.89	4.63	1.1	0.10	-0.10	103.97
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44	6.67	1.54	1.1	0.10	-0.10	103.96
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55.5	13.06	4.22	1.1	0.10	-0.10	103.95
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	1.1	0.10	-0.10	103.94
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50.5	10.28	2.95	1.1	0.10	-0.10	103.93
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	49	9.44	2.60	1.1	0.10	-0.10	103.92
26	0.40	95	0.53	0.11	0.82	7.37	0.00	0.00	0.000	55.5	13.06	4.22	1.1	0.10	7.67	104.00
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	54.5	12.50	3.95	1.1	0.10	-0.10	103.99

28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	50	10.00	2.83	1.1	0.10	-0.10	103.98
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	56	13.33	4.35	1.1	0.10	-0.10	103.97
30	0.75	95	0.53	0.11	1.17	10.51	0.00	0.00	0.000	45.5	7.50	1.84	1.1	0.10	11.16	104.00
TOTAL	**2.76**														**46.97**	

May	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	3.54	95	0.53	0.11	3.96	35.55	0.00	0.00	0.000	54	12.22	3.82	1.2	0.15	38.94	104.00
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66.5	19.17	7.51	1.2	0.15	-0.15	103.99
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	56	13.33	4.35	1.2	0.15	-0.15	103.98
4	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	59	15.00	5.20	1.2	0.15	-0.10	103.97
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	54	12.22	3.82	1.2	0.15	-0.15	103.95
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	55	12.78	4.09	1.2	0.15	-0.15	103.94
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	56	13.33	4.35	1.2	0.15	-0.15	103.93
8	0.33	95	0.53	0.11	0.75	6.74	0.00	0.00	0.000	61	16.11	5.78	1.2	0.15	6.92	104.00
9	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	56.5	13.61	4.49	1.2	0.15	4.73	104.00
10	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	59	15.00	5.20	1.2	0.15	-0.14	103.99
11	0.18	95	0.53	0.11	0.60	5.39	0.00	0.00	0.000	70	21.11	8.68	1.2	0.15	5.43	104.00
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65	18.33	7.02	1.2	0.15	-0.15	103.99
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72	22.22	9.37	1.2	0.15	-0.15	103.98
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60	15.56	5.49	1.2	0.15	-0.15	103.96
15	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	61	16.11	5.78	1.2	0.15	-0.13	103.95
16	0.03	95	0.53	0.11	0.45	0.00	0.00	0.00	0.000	71	21.67	9.02	1.2	0.15	-0.12	103.94
17	0.74	95	0.53	0.11	1.16	10.42	0.00	0.00	0.000	60.5	15.83	5.64	1.2	0.15	11.01	104.00
18	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	56.5	13.61	4.49	1.2	0.15	-0.14	103.99
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	54.5	12.50	3.95	1.2	0.15	-0.15	103.98
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59.5	15.28	5.34	1.2	0.15	-0.15	103.96
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.2	0.15	-0.15	103.95
22	0.15	95	0.53	0.11	0.57	5.13	0.00	0.00	0.000	67	19.44	7.67	1.2	0.15	5.13	104.00
23	0.14	95	0.53	0.11	0.56	5.04	0.00	0.00	0.000	63	17.22	6.39	1.2	0.15	5.03	104.00
24	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	62.5	16.94	6.24	1.2	0.15	4.73	104.00
25	0.48	95	0.53	0.11	0.90	8.09	0.00	0.00	0.000	60	15.56	5.49	1.2	0.15	8.42	104.00
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67.5	19.72	7.83	1.2	0.15	-0.15	103.99
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73.5	23.06	9.90	1.2	0.15	-0.15	103.98

28	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.2	0.15	-0.14	103.96
29	0.04	95	0.53	0.11	0.46	0.00	0.00	0.00	0.000	56	13.33	4.35	1.2	0.15	-0.11	103.95
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	58.5	14.72	5.05	1.2	0.15	-0.15	103.94
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	63.5	17.50	6.55	1.2	0.15	-0.15	103.93
TOTAL	**5.95**														**87.23**	

June	Daily Precip	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	61	16.11	5.78	1.25	0.19	-0.19	103.91
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	1.25	0.19	-0.19	103.90
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70	21.11	8.68	1.25	0.19	-0.19	103.88
4	0.18	95	0.53	0.11	0.60	5.39	0.00	0.00	0.000	75.5	24.17	10.63	1.25	0.19	5.38	104.00
5	0.38	95	0.53	0.11	0.80	7.19	0.00	0.00	0.000	72.5	22.50	9.55	1.25	0.19	7.38	104.00
6	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	67.5	19.72	7.83	1.25	0.19	4.68	104.00
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65	18.33	7.02	1.25	0.19	-0.19	103.98
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69.5	20.83	8.51	1.25	0.19	-0.19	103.97
9	1.40	95	0.53	0.11	1.82	16.34	0.00	0.00	0.000	73	22.78	9.72	1.25	0.19	17.55	104.00
10	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	66.5	19.17	7.51	1.25	0.19	-0.17	103.99
11	0.04	95	0.53	0.11	0.46	0.00	0.00	0.00	0.000	71.5	21.94	9.19	1.25	0.19	-0.15	103.97
12	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	61.5	16.39	5.93	1.25	0.19	-0.14	103.96
13	0.12	95	0.53	0.11	0.54	4.86	0.00	0.00	0.000	66	18.89	7.34	1.25	0.19	4.78	104.00
14	0.36	95	0.53	0.11	0.78	7.01	0.00	0.00	0.000	74	23.33	10.08	1.25	0.19	7.18	104.00
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	64.5	18.06	6.86	1.25	0.19	-0.19	103.98
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68	20.00	8.00	1.25	0.19	-0.19	103.97
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74.5	23.61	10.26	1.25	0.19	-0.19	103.95
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	84	28.89	13.89	1.25	0.19	-0.19	103.94
19	0.06	95	0.53	0.11	0.48	0.00	0.00	0.00	0.000	80	26.67	12.32	1.25	0.19	-0.13	103.92
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65.5	18.61	7.18	1.25	0.19	-0.19	103.91
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72	22.22	9.37	1.25	0.19	-0.19	103.89
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68	20.00	8.00	1.25	0.19	-0.19	103.88
23	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	68	20.00	8.00	1.25	0.19	-0.14	103.87
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71	21.67	9.02	1.25	0.19	-0.19	103.85
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.25	0.19	-0.19	103.83
26	0.73	95	0.53	0.11	1.15	10.33	0.00	0.00	0.000	79	26.11	11.93	1.25	0.19	10.87	104.00

27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.25	0.19	-0.19	103.98
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70	21.11	8.68	1.25	0.19	-0.19	103.97
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.25	0.19	-0.19	103.95
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73	22.78	9.72	1.25	0.19	-0.19	103.94
TOTAL	**3.5**														**53.63**	

July	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78.5	25.83	11.74	1.23	0.20	-0.20	103.92
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	82	27.78	13.09	1.23	0.20	-0.20	103.90
3	1.84	95	0.53	0.11	2.26	20.29	0.00	0.00	0.000	82.5	28.06	13.29	1.23	0.20	21.94	104.00
4	1.08	95	0.53	0.11	1.50	13.47	0.00	0.00	0.000	80.5	26.94	12.51	1.23	0.20	14.36	104.00
5	0.08	95	0.53	0.11	0.50	0.00	0.00	0.00	0.000	66	18.89	7.34	1.23	0.20	-0.12	103.99
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.23	0.20	-0.20	103.97
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.23	0.20	-0.20	103.96
8	0.04	95	0.53	0.11	0.46	0.00	0.00	0.00	0.000	80	26.67	12.32	1.23	0.20	-0.16	103.94
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79.5	26.39	12.12	1.23	0.20	-0.20	103.93
10	0.04	95	0.53	0.11	0.46	0.00	0.00	0.00	0.000	78	25.56	11.56	1.23	0.20	-0.16	103.91
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74.5	23.61	10.26	1.23	0.20	-0.20	103.90
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74.5	23.61	10.26	1.23	0.20	-0.20	103.88
13	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	78.5	25.83	11.74	1.23	0.20	-0.15	103.87
14	1.55	95	0.53	0.11	1.97	17.69	0.00	0.00	0.000	78.5	25.83	11.74	1.23	0.20	19.04	104.00
15	1.11	95	0.53	0.11	1.53	13.74	0.00	0.00	0.000	80	26.67	12.32	1.23	0.20	14.66	104.00
16	0.94	95	0.53	0.11	1.36	12.22	0.00	0.00	0.000	76.5	24.72	10.99	1.23	0.20	12.96	104.00
17	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	72	22.22	9.37	1.23	0.20	-0.19	103.98
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70	21.11	8.68	1.23	0.20	-0.20	103.97
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.23	0.20	-0.20	103.95
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71.5	21.94	9.19	1.23	0.20	-0.20	103.94
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.23	0.20	-0.20	103.92
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73	22.78	9.72	1.23	0.20	-0.20	103.90
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.23	0.20	-0.20	103.89
24	0.53	95	0.53	0.11	0.95	8.54	0.00	0.00	0.000	78.5	25.83	11.74	1.23	0.20	8.87	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71.5	21.94	9.19	1.23	0.20	-0.20	103.98
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.23	0.20	-0.20	103.97

27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74	23.33	10.08	1.23	0.20	-0.20	103.95
28	0.66	95	0.53	0.11	1.08	9.70	0.00	0.00	0.000	77	25.00	11.18	1.23	0.20	10.17	104.00
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70.5	21.39	8.85	1.23	0.20	-0.20	103.98
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66	18.89	7.34	1.23	0.20	-0.20	103.97
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68.5	20.28	8.17	1.23	0.20	-0.20	103.95
TOTAL	**7.93**														**97.48**	

August	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74.5	23.61	10.26	1.15	0.17	-0.17	103.94
2	0.87	95	0.53	0.11	1.29	11.59	0.00	0.00	0.000	74	23.33	10.08	1.15	0.17	12.29	104.00
3	0.10	95	0.53	0.11	0.52	0.00	0.00	0.00	0.000	70	21.11	8.68	1.15	0.17	-0.07	103.99
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71.5	21.94	9.19	1.15	0.17	-0.17	103.98
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73.5	23.06	9.90	1.15	0.17	-0.17	103.97
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	77.5	25.28	11.37	1.15	0.17	-0.17	103.95
7	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70	21.11	8.68	1.15	0.17	-0.17	103.94
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70	21.11	8.68	1.15	0.17	-0.17	103.92
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69.5	20.83	8.51	1.15	0.17	-0.17	103.91
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71.5	21.94	9.19	1.15	0.17	-0.17	103.89
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73	22.78	9.72	1.15	0.17	-0.17	103.88
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	76.5	24.72	10.99	1.15	0.17	-0.17	103.86
13	0.38	95	0.53	0.11	0.80	7.19	0.00	0.00	0.000	73	22.78	9.72	1.15	0.17	7.40	104.00
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71.5	21.94	9.19	1.15	0.17	-0.17	103.99
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66.5	19.17	7.51	1.15	0.17	-0.17	103.97
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	1.15	0.17	-0.17	103.96
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.15	0.17	-0.17	103.94
18	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	68.5	20.28	8.17	1.15	0.17	-0.16	103.93
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70	21.11	8.68	1.15	0.17	-0.17	103.91
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.15	0.17	-0.17	103.90
21	0.09	95	0.53	0.11	0.51	0.00	0.00	0.00	0.000	74	23.33	10.08	1.15	0.17	-0.08	103.89
22	1.93	95	0.53	0.11	2.35	21.10	0.00	0.00	0.000	73	22.78	9.72	1.15	0.17	22.86	104.00
23	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	70.5	21.39	8.85	1.15	0.17	-0.16	103.99
24	0.08	95	0.53	0.11	0.50	0.00	0.00	0.00	0.000	65	18.33	7.02	1.15	0.17	-0.09	103.98
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	67.5	19.72	7.83	1.15	0.17	-0.17	103.96

26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	73	22.78	9.72	1.15	0.17	-0.17	103.95
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	74	23.33	10.08	1.15	0.17	-0.17	103.94
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	78.5	25.83	11.74	1.15	0.17	-0.17	103.92
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65.5	18.61	7.18	1.15	0.17	-0.17	103.91
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65.5	18.61	7.18	1.15	0.17	-0.17	103.89
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.15	0.17	-0.17	103.88
TOTAL	**3.47**														**38.00**	

September	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	81.5	27.50	12.90	1.04	0.15	4.73	104.00
2	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	80.5	26.94	12.51	1.04	0.15	-0.13	103.99
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	79	26.11	11.93	1.04	0.15	-0.15	103.98
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72.5	22.50	9.55	1.04	0.15	-0.15	103.96
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	77	25.00	11.18	1.04	0.15	-0.15	103.95
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	81	27.22	12.70	1.04	0.15	-0.15	103.94
7	0.31	95	0.53	0.11	0.73	6.56	0.00	0.00	0.000	78	25.56	11.56	1.04	0.15	6.72	104.00
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71	21.67	9.02	1.04	0.15	-0.15	103.99
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	70.5	21.39	8.85	1.04	0.15	-0.15	103.97
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69.5	20.83	8.51	1.04	0.15	-0.15	103.96
11	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	70	21.11	8.68	1.04	0.15	-0.14	103.95
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71	21.67	9.02	1.04	0.15	-0.15	103.94
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68.5	20.28	8.17	1.04	0.15	-0.15	103.93
14	0.10	95	0.53	0.11	0.52	0.00	0.00	0.00	0.000	58	14.44	4.91	1.04	0.15	-0.05	103.92
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	58	14.44	4.91	1.04	0.15	-0.15	103.91
16	0.28	95	0.53	0.11	0.70	6.29	0.00	0.00	0.000	63	17.22	6.39	1.04	0.15	6.42	104.00
17	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	58	14.44	4.91	1.04	0.15	-0.15	103.99
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60.5	15.83	5.64	1.04	0.15	-0.15	103.97
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66	18.89	7.34	1.04	0.15	-0.15	103.96
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59.5	15.28	5.34	1.04	0.15	-0.15	103.95
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	66.5	19.17	7.51	1.04	0.15	-0.15	103.94
22	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	67.5	19.72	7.83	1.04	0.15	-0.14	103.93
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57	13.89	4.63	1.04	0.15	-0.15	103.91
24	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	59.5	15.28	5.34	1.04	0.15	-0.15	103.90

25	0.29	95	0.53	0.11	0.71	6.38	0.00	0.00	0.000	62	16.67	6.09	1.04	0.15	6.52	104.00
26	0.10	95	0.53	0.11	0.52	0.00	0.00	0.00	0.000	55	12.78	4.09	1.04	0.15	-0.05	104.00
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	64	17.78	6.70	1.04	0.15	-0.15	103.98
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.04	0.15	-0.15	103.97
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	72	22.22	9.37	1.04	0.15	-0.15	103.96
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	69	20.56	8.34	1.04	0.15	-0.15	103.95
TOTAL	**1.23**														**20.69**	

October	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	68.5	20.28	8.17	0.93	0.10	-0.10	103.94
2	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	0.93	0.10	-0.10	103.93
3	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	0.93	0.10	-0.10	103.92
4	0.37	95	0.53	0.11	0.79	7.10	0.00	0.00	0.000	64	17.78	6.70	0.93	0.10	7.37	104.00
5	0.05	95	0.53	0.11	0.47	0.00	0.00	0.00	0.000	55.5	13.06	4.22	0.93	0.10	-0.05	104.00
6	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	49.5	9.72	2.71	0.93	0.10	-0.10	103.99
7	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	58.5	14.72	5.05	0.93	0.10	-0.08	103.98
8	0.40	95	0.53	0.11	0.82	7.37	0.00	0.00	0.000	66	18.89	7.34	0.93	0.10	7.67	104.00
9	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	59.5	15.28	5.34	0.93	0.10	-0.09	103.99
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	56.5	13.61	4.49	0.93	0.10	-0.10	103.98
11	0.31	95	0.53	0.11	0.73	6.56	0.00	0.00	0.000	58.5	14.72	5.05	0.93	0.10	6.77	104.00
12	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	45.5	7.50	1.84	0.93	0.10	4.77	104.00
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	53	11.67	3.56	0.93	0.10	-0.10	103.99
14	0.03	95	0.53	0.11	0.45	0.00	0.00	0.00	0.000	57.5	14.17	4.77	0.93	0.10	-0.07	103.99
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	71	21.67	9.02	0.93	0.10	-0.10	103.98
16	1.47	95	0.53	0.11	1.89	16.97	0.00	0.00	0.000	72	22.22	9.37	0.93	0.10	18.34	104.00
17	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	63.5	17.50	6.55	0.93	0.10	-0.09	103.99
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	62.5	16.94	6.24	0.93	0.10	-0.10	103.98
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60	15.56	5.49	0.93	0.10	-0.10	103.98
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	43.5	6.39	1.44	0.93	0.10	-0.10	103.97
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	48.5	9.17	2.48	0.93	0.10	-0.10	103.96
22	0.18	95	0.53	0.11	0.60	5.39	0.00	0.00	0.000	59	15.00	5.20	0.93	0.10	5.47	104.00
23	0.51	95	0.53	0.11	0.93	8.36	0.00	0.00	0.000	52.5	11.39	3.44	0.93	0.10	8.76	104.00
24	0.15	95	0.53	0.11	0.57	5.13	0.00	0.00	0.000	52	11.11	3.31	0.93	0.10	5.17	104.00

25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	54.5	12.50	3.95	0.93	0.10	-0.10	103.99
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	56.5	13.61	4.49	0.93	0.10	-0.10	103.98
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	52.5	11.39	3.44	0.93	0.10	-0.10	103.97
28	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	52.5	11.39	3.44	0.93	0.10	-0.10	103.97
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	58	14.44	4.91	0.93	0.10	-0.10	103.96
30	0.07	95	0.53	0.11	0.49	0.00	0.00	0.00	0.000	58	14.44	4.91	0.93	0.10	-0.03	103.95
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	46.5	8.06	2.04	0.93	0.10	-0.10	103.95
TOTAL	**3.69**														**62.16**	

November	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.36	95	0.53	0.11	0.78	7.01	0.00	0.00	0.000	45	7.22	1.74	0.83	0.05	7.32	104.00
2	0.24	95	0.53	0.11	0.66	5.93	0.00	0.00	0.000	44	6.67	1.54	0.83	0.05	6.13	104.00
3	0.01	95	0.53	0.11	0.43	0.00	0.00	0.00	0.000	41	5.00	1.00	0.83	0.05	-0.04	104.00
4	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	51	10.56	3.07	0.83	0.05	-0.05	103.99
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	60	15.56	5.49	0.83	0.05	-0.05	103.99
6	0.22	95	0.53	0.11	0.64	5.75	0.00	0.00	0.000	55.5	13.06	4.22	0.83	0.05	5.93	104.00
7	0.24	95	0.53	0.11	0.66	5.93	0.00	0.00	0.000	46.5	8.06	2.04	0.83	0.05	6.13	104.00
8	0.03	95	0.53	0.11	0.45	0.00	0.00	0.00	0.000	42	5.56	1.17	0.83	0.05	-0.02	104.00
9	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44	6.67	1.54	0.83	0.05	-0.05	103.99
10	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44	6.67	1.54	0.83	0.05	-0.05	103.99
11	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	49.5	9.72	2.71	0.83	0.05	-0.05	103.99
12	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	57.5	14.17	4.77	0.83	0.05	-0.05	103.98
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	51.5	10.83	3.19	0.83	0.05	-0.05	103.98
14	0.28	95	0.53	0.11	0.70	6.29	0.00	0.00	0.000	40.5	4.72	0.92	0.83	0.05	6.52	104.00
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	34.5	1.39	0.15	0.83	0.05	-0.05	104.00
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	33.5	0.83	0.07	0.83	0.05	-0.05	103.99
17	0.49	95	0.53	0.11	0.91	8.18	0.00	0.00	0.000	36.5	2.50	0.35	0.83	0.05	8.62	104.00
18	0.92	95	0.53	0.11	1.34	12.04	0.00	0.00	0.000	35.5	1.94	0.24	0.83	0.05	12.91	104.00
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	26	-3.33	0.54	0.83	0.05	-0.05	104.00
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	26.5	-3.06	0.48	0.83	0.05	-0.05	103.99
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37	2.78	0.41	0.83	0.05	-0.05	103.99
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	27.5	-2.50	0.35	0.83	0.05	-0.05	103.98
23	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	34	1.11	0.10	0.83	0.05	-0.05	103.98

24	0.45	95	0.53	0.11	0.87	7.82	0.00	0.00	0.000	50.5	10.28	2.95	0.83	0.05	8.22	104.00
25	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	65	18.33	7.02	0.83	0.05	-0.05	104.00
26	0.30	95	0.53	0.11	0.72	6.47	0.00	0.00	0.000	49.5	9.72	2.71	0.83	0.05	6.72	104.00
27	0.81	95	0.53	0.11	1.23	11.05	0.00	0.00	0.000	37	2.78	0.41	0.83	0.05	11.81	104.00
28	0.06	95	0.53	0.11	0.48	0.00	0.00	0.00	0.000	30.5	-0.83	0.07	0.83	0.05	0.01	104.00
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	28.5	-1.94	0.24	0.83	0.05	-0.05	104.00
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	32.5	0.28	0.01	0.83	0.05	-0.05	103.99
TOTAL	**4.41**														**79.45**	

December	Daily Precip (in)	CN	S	Ia	Q	Si (in)	So (out)	Gi (in)	Go	T (°F)	T (°C)	Heat Index (I)	Sun Correction	ET (in)	S (in)	Pool Elevation
1	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44.5	6.94	1.64	0.78	0.03	-0.03	103.99
2	0.08	95	0.53	0.11	0.50	0.00	0.00	0.00	0.000	50	10.00	2.83	0.78	0.03	0.05	103.99
3	0.19	95	0.53	0.11	0.61	5.48	0.00	0.00	0.000	39	3.89	0.69	0.78	0.03	5.64	104.00
4	0.08	95	0.53	0.11	0.50	0.00	0.00	0.00	0.000	37.5	3.06	0.48	0.78	0.03	0.05	104.00
5	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	37.5	3.06	0.48	0.78	0.03	-0.03	104.00
6	0.44	95	0.53	0.11	0.86	7.73	0.00	0.00	0.000	37	2.78	0.41	0.78	0.03	8.13	104.00
7	0.91	95	0.53	0.11	1.33	11.95	0.00	0.00	0.000	41.5	5.28	1.08	0.78	0.03	12.82	104.00
8	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	33.5	0.83	0.07	0.78	0.03	-0.03	104.00
9	1.00	95	0.53	0.11	1.42	12.75	0.00	0.00	0.000	31	-0.56	0.04	0.78	0.03	13.72	104.00
10	0.08	95	0.53	0.11	0.50	0.00	0.00	0.00	0.000	39.5	4.17	0.76	0.78	0.03	0.05	104.00
11	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	35.5	1.94	0.24	0.78	0.03	-0.01	104.00
12	0.02	95	0.53	0.11	0.44	0.00	0.00	0.00	0.000	34.5	1.39	0.15	0.78	0.03	-0.01	104.00
13	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	35	1.67	0.19	0.78	0.03	-0.03	103.99
14	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	41.5	5.28	1.08	0.78	0.03	-0.03	103.99
15	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36.5	2.50	0.35	0.78	0.03	-0.03	103.99
16	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	39	3.89	0.69	0.78	0.03	-0.03	103.99
17	0.17	95	0.53	0.11	0.59	5.30	0.00	0.00	0.000	43.5	6.39	1.44	0.78	0.03	5.44	104.00
18	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	44	6.67	1.54	0.78	0.03	-0.03	104.00
19	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	38	3.33	0.54	0.78	0.03	-0.03	103.99
20	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	35.5	1.94	0.24	0.78	0.03	-0.03	103.99
21	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	31	-0.56	0.04	0.78	0.03	-0.03	103.99
22	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	33.5	0.83	0.07	0.78	0.03	-0.03	103.99
23	0.22	95	0.53	0.11	0.64	5.75	0.00	0.00	0.000	40	4.44	0.84	0.78	0.03	5.94	104.00

24	0.11	95	0.53	0.11	0.53	4.77	0.00	0.00	0.000	46	7.78	1.94	0.78	0.03	4.84	104.00
25	0.81	95	0.53	0.11	1.23	11.05	0.00	0.00	0.000	54.5	12.50	3.95	0.78	0.03	11.82	104.00
26	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	42	5.56	1.17	0.78	0.03	-0.03	104.00
27	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	40.5	4.72	0.92	0.78	0.03	-0.03	103.99
28	0.04	95	0.53	0.11	0.46	0.00	0.00	0.00	0.000	44.5	6.94	1.64	0.78	0.03	0.01	103.99
29	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	45	7.22	1.74	0.78	0.03	-0.03	103.99
30	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	36.5	2.50	0.35	0.78	0.03	-0.03	103.99
31	0.00	95	0.53	0.11	0.42	0.00	0.00	0.00	0.000	27	-2.78	0.41	0.78	0.03	-0.03	103.99
TOTAL	**4.17**														**67.88**	

B. Precipitation and Temperature Data from NOAA Online Weather Data

Climatological Data for BOUND BROOK 2W, NJ - January 2001

Date	Precipitation	New Snow	Snow Depth
2001-01-01	0.00	0.0	M
2001-01-02	0.00	0.0	M
2001-01-03	0.00	0.0	M
2001-01-04	0.00	0.0	M
2001-01-05	0.00	0.0	M
2001-01-06	0.13	1.0	M
2001-01-07	0.00	0.0	M
2001-01-08	0.00	0.0	0
2001-01-09	0.19	0.0	0
2001-01-10	0.00	T	0
2001-01-11	0.00	0.0	0
2001-01-12	0.00	0.0	0
2001-01-13	0.00	0.0	0
2001-01-14	0.00	0.0	0
2001-01-15	0.24	0.0	0
2001-01-16	0.00	0.0	0
2001-01-17	0.00	0.0	0
2001-01-18	0.00	0.0	0
2001-01-19	0.38	0.0	0
2001-01-20	**0.77**	0.0	0
2001-01-21	0.52	**3.0**	M
2001-01-22	0.00	0.0	M
2001-01-23	0.00	0.0	M
2001-01-24	0.00	0.0	0
2001-01-25	0.00	0.0	0
2001-01-26	0.00	0.0	0
2001-01-27	0.02	0.7	M
2001-01-28	0.00	0.0	M
2001-01-29	0.00	0.0	0
2001-01-30	0.18	0.0	0
2001-01-31	0.42	0.0	0
Sum	2.85	4.7	-
Average	-	-	0.0
Normal	3.36	6.8	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - January 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-01-01	33	14	23.5	-9.7	41	0	0.00	0.0	13
2001-01-02	36	17	26.5	-6.5	38	0	0.00	0.0	12
2001-01-03	28	2	15.0	-17.9	50	0	0.00	0.0	10
2001-01-04	31	13	22.0	-10.7	43	0	0.00	0.0	10
2001-01-05	36	10	23.0	-9.5	42	0	0.00	0.0	9
2001-01-06	31	19	25.0	-7.4	40	0	0.15	1.4	10
2001-01-07	41	M	M	M	M	M	0.00	0.0	9
2001-01-08	45	19	32.0	-0.1	33	0	0.00	0.0	8
2001-01-09	40	29	34.5	2.5	30	0	0.29	0.2	7
2001-01-10	34	23	28.5	-3.3	36	0	T	0.1	7
2001-01-11	33	22	27.5	-4.2	37	0	0.00	0.0	7
2001-01-12	47	18	32.5	0.9	32	0	0.00	0.0	7
2001-01-13	46	17	31.5	0.0	33	0	0.00	0.0	7
2001-01-14	42	17	29.5	-1.9	35	0	0.00	0.0	6
2001-01-15	42	19	30.5	-0.8	34	0	0.30	0.0	5
2001-01-16	37	34	35.5	4.3	29	0	0.02	0.0	4
2001-01-17	46	29	37.5	6.3	27	0	0.00	0.0	4
2001-01-18	43	28	35.5	4.4	29	0	0.00	0.0	4
2001-01-19	37	29	33.0	1.9	32	0	0.30	1.2	4
2001-01-20	40	34	37.0	6.0	28	0	1.30	0.0	3
2001-01-21	34	21	27.5	-3.5	37	0	0.65	5.3	7
2001-01-22	34	14	24.0	-7.0	41	0	0.00	0.0	6
2001-01-23	37	11	24.0	-7.0	41	0	0.00	0.0	6
2001-01-24	39	11	25.0	-6.0	40	0	0.00	0.0	5
2001-01-25	45	26	35.5	4.5	29	0	0.00	0.0	4
2001-01-26	41	16	28.5	-2.5	36	0	0.00	0.0	4
2001-01-27	36	16	26.0	-5.0	39	0	0.01	0.2	4
2001-01-28	41	26	33.5	2.4	31	0	T	T	3
2001-01-29	38	20	29.0	-2.1	36	0	0.00	0.0	2
2001-01-30	40	21	30.5	-0.7	34	0	T	0.0	2
2001-01-31	55	30	42.5	11.2	22	0	0.63	0.0	1
Sum	1208	605	-	-	1055	0	3.65	8.4	-
Average	39.0	20.2	29.5	-2.1	-	-	-	-	6.1
Normal	40.3	22.9	31.6	-	1035	0	3.74	8.3	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - February 2001

Date	Precipitation	New Snow	Snow Depth
2001-02-01	0.00	0.0	0
2001-02-02	0.00	0.0	0
2001-02-03	0.00	0.0	0
2001-02-04	0.00	0.0	0
2001-02-05	0.20	0.0	0
2001-02-06	**1.21**	2.0	0
2001-02-07	0.00	0.0	0
2001-02-08	0.00	0.0	0
2001-02-09	0.00	0.0	0
2001-02-10	0.05	0.0	0
2001-02-11	0.00	0.0	0
2001-02-12	0.00	0.0	0
2001-02-13	0.00	0.0	0
2001-02-14	0.00	0.0	0
2001-02-15	0.05	0.0	0
2001-02-16	0.00	0.0	0
2001-02-17	0.31	0.0	0
2001-02-18	0.00	0.0	0
2001-02-19	0.00	0.0	0
2001-02-20	0.00	0.0	0
2001-02-21	0.00	0.0	0
2001-02-22	0.00	0.0	0
2001-02-23	0.33	**5.5**	M
2001-02-24	0.00	0.0	M
2001-02-25	0.07	0.0	M
2001-02-26	0.36	0.0	M
2001-02-27	0.00	0.0	0
2001-02-28	0.00	0.0	0
Sum	2.58	7.5	-
Average	-	-	0.0
Normal	2.71	6.7	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - February 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-02-01	50	29	39.5	8.2	25	0	0.04	0.0	1
2001-02-02	51	28	39.5	8.1	25	0	0.00	0.0	0
2001-02-03	46	28	37.0	5.5	28	0	0.04	0.0	0
2001-02-04	34	17	25.5	-6.1	39	0	0.00	0.0	0
2001-02-05	41	24	32.5	0.8	32	0	0.04	0.0	0
2001-02-06	36	32	34.0	2.1	31	0	**1.70**	5.0	5
2001-02-07	46	35	40.5	8.5	24	0	T	0.0	3
2001-02-08	46	24	35.0	2.9	30	0	0.00	0.0	2
2001-02-09	38	24	31.0	-1.3	34	0	0.00	0.0	2
2001-02-10	**62**	37	49.5	17.1	15	0	0.07	0.0	0
2001-02-11	54	21	37.5	4.9	27	0	0.00	0.0	0
2001-02-12	34	17	25.5	-7.3	39	0	0.00	0.0	0
2001-02-13	35	16	25.5	-7.4	39	0	0.03	T	T
2001-02-14	53	28	40.5	7.4	24	0	0.00	0.0	0
2001-02-15	47	32	39.5	6.2	25	0	0.02	0.0	0
2001-02-16	43	31	37.0	3.5	28	0	0.00	0.0	0
2001-02-17	41	36	38.5	4.8	26	0	0.37	0.0	0
2001-02-18	40	16	28.0	-5.9	37	0	0.00	0.0	0
2001-02-19	35	16	25.5	-8.6	39	0	0.00	0.0	0
2001-02-20	44	20	32.0	-2.3	33	0	0.00	0.0	0
2001-02-21	59	33	46.0	11.5	19	0	T	0.0	0
2001-02-22	48	**14**	31.0	-3.7	34	0	0.00	0.0	0
2001-02-23	25	15	20.0	-15.0	45	0	0.42	**6.2**	**6**
2001-02-24	41	22	31.5	-3.7	33	0	0.00	0.0	3
2001-02-25	37	23	30.0	-5.4	35	0	0.04	T	2
2001-02-26	55	33	44.0	8.3	21	0	0.32	0.0	0
2001-02-27	50	28	39.0	3.1	26	0	0.00	0.0	0
2001-02-28	53	28	40.5	4.3	24	0	T	T	0
Sum	1244	707	-	-	837	0	3.09	11.2	-
Average	44.4	25.3	34.8	1.4	-	-	-	-	0.9
Normal	42.8	24.0	33.4	-	885	0	2.97	9.3	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - March 2001

Date	Precipitation	New Snow	Snow Depth
2001-03-01	0.00	0.0	0
2001-03-02	0.00	0.0	0
2001-03-03	0.02	0.0	0
2001-03-04	0.00	0.0	0
2001-03-05	0.27	0.5	0
2001-03-06	0.07	**1.0**	M
2001-03-07	0.00	0.0	M
2001-03-08	0.00	0.0	0
2001-03-09	0.24	0.0	0
2001-03-10	0.00	0.0	0
2001-03-11	0.00	0.0	0
2001-03-12	0.00	0.0	0
2001-03-13	1.40	0.0	0
2001-03-14	0.03	0.0	0
2001-03-15	0.00	0.0	0
2001-03-16	0.00	0.0	0
2001-03-17	0.30	0.0	0
2001-03-18	0.17	0.0	0
2001-03-19	0.00	0.0	0
2001-03-20	0.00	0.0	0
2001-03-21	0.00	0.0	0
2001-03-22	0.72	0.0	0
2001-03-23	0.02	0.0	0
2001-03-24	0.00	0.0	0
2001-03-25	0.00	0.0	0
2001-03-26	0.00	0.0	0
2001-03-27	0.05	0.0	0
2001-03-28	0.00	0.0	0
2001-03-29	0.00	0.0	0
2001-03-30	**1.53**	0.0	0
2001-03-31	0.42	0.0	0
Sum	5.24	1.5	-
Average	-	-	0.0
Normal	4.09	3.6	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - March 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-03-01	39	21	30.0	-6.4	35	0	0.00	0.0	0
2001-03-02	39	21	30.0	-6.7	35	0	T	T	T
2001-03-03	44	30	37.0	0.1	28	0	T	T	0
2001-03-04	48	35	41.5	4.3	23	0	0.00	0.0	0
2001-03-05	37	29	33.0	-4.4	32	0	0.41	1.6	2
2001-03-06	32	23	27.5	-10.2	37	0	0.15	1.5	3
2001-03-07	38	23	30.5	-7.5	34	0	0.13	1.4	4
2001-03-08	47	25	36.0	-2.3	29	0	0.00	0.0	T
2001-03-09	43	30	36.5	-2.0	28	0	0.06	T	0
2001-03-10	47	30	38.5	-0.3	26	0	0.13	0.0	0
2001-03-11	46	26	36.0	-3.1	29	0	0.00	0.0	0
2001-03-12	56	26	41.0	1.6	24	0	0.00	0.0	0
2001-03-13	49	26	37.5	-2.2	27	0	1.14	0.0	0
2001-03-14	49	34	41.5	1.5	23	0	0.06	0.0	0
2001-03-15	51	28	39.5	-0.8	25	0	0.00	0.0	0
2001-03-16	53	30	41.5	0.9	23	0	0.03	0.0	0
2001-03-17	57	38	47.5	6.6	17	0	0.34	0.0	0
2001-03-18	44	35	39.5	-1.8	25	0	0.13	0.0	0
2001-03-19	48	30	39.0	-2.6	26	0	0.00	0.0	0
2001-03-20	54	28	41.0	-0.9	24	0	0.00	0.0	0
2001-03-21	54	M	M	M	M	M	0.00	0.0	0
2001-03-22	44	41	42.5	-0.1	22	0	1.57	0.0	0
2001-03-23	45	39	42.0	-0.9	23	0	0.20	0.0	0
2001-03-24	60	39	49.5	6.2	15	0	0.00	0.0	0
2001-03-25	52	27	39.5	-4.1	25	0	0.01	0.0	0
2001-03-26	46	27	36.5	-7.5	28	0	T	T	0
2001-03-27	40	21	30.5	-13.8	34	0	0.03	T	0
2001-03-28	44	22	33.0	-11.7	32	0	0.00	0.0	0
2001-03-29	49	27	38.0	-7.1	27	0	0.00	0.0	0
2001-03-30	47	35	41.0	-4.4	24	0	1.63	0.0	0
2001-03-31	44	31	37.5	-8.3	27	0	0.84	0.0	0
Sum	1446	877	-	-	807	0	6.86	4.5	-
Average	46.6	29.2	37.8	-3.0	-	-	-	-	0.3
Normal	50.6	31.0	40.8	-	751	0	4.40	5.2	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - April 2001

Date	Precipitation	New Snow	Snow Depth
2001-04-01	0.06	0.0	0
2001-04-02	0.01	0.0	0
2001-04-03	0.00	0.0	0
2001-04-04	0.00	0.0	0
2001-04-05	0.00	0.0	0
2001-04-06	0.00	0.0	0
2001-04-07	0.35	0.0	0
2001-04-08	0.06	0.0	0
2001-04-09	0.04	0.0	0
2001-04-10	**0.47**	0.0	0
2001-04-11	0.08	0.0	0
2001-04-12	0.37	0.0	0
2001-04-13	0.01	0.0	0
2001-04-14	0.00	0.0	0
2001-04-15	0.00	0.0	0
2001-04-16	0.15	0.0	0
2001-04-17	0.08	0.0	0
2001-04-18	0.18	0.0	0
2001-04-19	0.01	0.0	0
2001-04-20	0.00	0.0	0
2001-04-21	0.00	0.0	0
2001-04-22	0.00	0.0	0
2001-04-23	0.00	0.0	0
2001-04-24	0.00	0.0	0
2001-04-25	0.00	0.0	0
2001-04-26	0.00	0.0	0
2001-04-27	0.00	0.0	0
2001-04-28	0.00	0.0	0
2001-04-29	0.00	0.0	0
2001-04-30	0.00	0.0	0
Sum	1.87	0.0	-
Average	-	-	0.0
Normal	3.77	0.2	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - April 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-04-01	47	33	40.0	-6.2	25	0	0.08	T	0
2001-04-02	43	37	40.0	-6.6	25	0	T	0.0	0
2001-04-03	51	33	42.0	-5.0	23	0	0.00	0.0	0
2001-04-04	56	32	44.0	-3.3	21	0	T	0.0	0
2001-04-05	57	29	43.0	-4.7	22	0	0.00	0.0	0
2001-04-06	64	29	46.5	-1.6	18	0	0.00	0.0	0
2001-04-07	52	44	48.0	-0.5	17	0	0.32	0.0	0
2001-04-08	51	42	46.5	-2.4	18	0	0.01	0.0	0
2001-04-09	48	41	44.5	-4.8	20	0	0.08	0.0	0
2001-04-10	82	46	64.0	14.3	1	0	0.63	0.0	0
2001-04-11	63	45	54.0	4.0	11	0	0.08	0.0	0
2001-04-12	50	45	47.5	-2.9	17	0	0.39	0.0	0
2001-04-13	62	46	54.0	3.2	11	0	T	0.0	0
2001-04-14	74	46	60.0	8.8	5	0	T	0.0	0
2001-04-15	67	40	53.5	1.9	11	0	0.00	0.0	0
2001-04-16	68	44	56.0	4.1	9	0	0.14	0.0	0
2001-04-17	62	41	51.5	-0.8	13	0	0.04	0.0	0
2001-04-18	54	39	46.5	-6.2	18	0	0.06	0.0	0
2001-04-19	54	31	42.5	-10.6	22	0	0.00	0.0	0
2001-04-20	M	32	M	M	M	M	0.00	0.0	0
2001-04-21	63	33	48.0	-5.8	17	0	T	0.0	0
2001-04-22	71	50	60.5	6.4	4	0	0.05	0.0	0
2001-04-23	85	58	71.5	17.0	0	7	0.00	0.0	0
2001-04-24	78	53	65.5	10.7	0	1	0.00	0.0	0
2001-04-25	87	46	66.5	11.4	0	2	T	0.0	0
2001-04-26	57	35	46.0	-9.5	19	0	0.00	0.0	0
2001-04-27	63	M	M	M	M	M	0.00	0.0	0
2001-04-28	75	36	55.5	-0.6	9	0	0.00	0.0	0
2001-04-29	65	35	50.0	-6.4	15	0	0.00	0.0	0
2001-04-30	66	35	50.5	-6.3	14	0	0.00	0.0	0
Sum	1815	1156	-	-	385	10	1.88	T	-
Average	62.6	39.9	51.4	-0.3	-	-	-	-	0.0
Normal	62.5	40.8	51.7	-	411	10	3.89	0.6	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - May 2001

Date	Precipitation	New Snow	Snow Depth
2001-05-01	0.00	0.0	0
2001-05-02	0.00	0.0	0
2001-05-03	0.00	0.0	0
2001-05-04	0.00	0.0	0
2001-05-05	0.00	0.0	0
2001-05-06	0.00	0.0	0
2001-05-07	0.00	0.0	0
2001-05-08	0.00	0.0	0
2001-05-09	0.00	0.0	0
2001-05-10	0.00	0.0	0
2001-05-11	0.00	0.0	0
2001-05-12	0.00	0.0	0
2001-05-13	0.09	0.0	0
2001-05-14	0.00	0.0	0
2001-05-15	0.00	0.0	0
2001-05-16	0.00	0.0	0
2001-05-17	0.00	0.0	0
2001-05-18	0.03	0.0	0
2001-05-19	0.01	0.0	0
2001-05-20	0.00	0.0	0
2001-05-21	0.02	0.0	0
2001-05-22	**1.40**	0.0	0
2001-05-23	0.54	0.0	0
2001-05-24	T	0.0	0
2001-05-25	0.00	0.0	0
2001-05-26	0.68	0.0	0
2001-05-27	0.57	0.0	0
2001-05-28	0.49	0.0	0
2001-05-29	0.00	0.0	0
2001-05-30	0.04	0.0	0
2001-05-31	0.00	0.0	0
Sum	3.87	0.0	-
Average	-	-	0.0
Normal	3.93	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - May 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-05-01	76	40	58.0	0.9	7	0	0.00	0.0	0
2001-05-02	86	52	69.0	11.6	0	4	0.00	0.0	0
2001-05-03	90	52	71.0	13.3	0	6	0.00	0.0	0
2001-05-04	91	61	76.0	18.0	0	11	0.00	0.0	0
2001-05-05	92	64	78.0	19.8	0	13	T	0.0	0
2001-05-06	76	49	62.5	4.0	2	0	T	0.0	0
2001-05-07	64	36	50.0	-8.8	15	0	0.00	0.0	0
2001-05-08	62	37	49.5	-9.6	15	0	T	0.0	0
2001-05-09	69	43	56.0	-3.4	9	0	0.00	0.0	0
2001-05-10	79	45	62.0	2.3	3	0	0.00	0.0	0
2001-05-11	84	51	67.5	7.6	0	3	0.00	0.0	0
2001-05-12	87	55	71.0	10.8	0	6	0.00	0.0	0
2001-05-13	84	52	68.0	7.5	0	3	0.03	0.0	0
2001-05-14	72	44	58.0	-2.8	7	0	0.00	0.0	0
2001-05-15	72	43	57.5	-3.5	7	0	0.00	0.0	0
2001-05-16	75	47	61.0	-0.3	4	0	0.00	0.0	0
2001-05-17	65	52	58.5	-3.1	6	0	T	0.0	0
2001-05-18	60	52	56.0	-5.9	9	0	0.02	0.0	0
2001-05-19	62	54	58.0	-4.1	7	0	0.00	0.0	0
2001-05-20	84	55	69.5	7.1	0	5	0.00	0.0	0
2001-05-21	60	52	56.0	-6.7	9	0	0.01	0.0	0
2001-05-22	58	52	55.0	-8.0	10	0	0.76	0.0	0
2001-05-23	63	56	59.5	-3.8	5	0	1.47	0.0	0
2001-05-24	62	57	59.5	-4.1	5	0	0.04	0.0	0
2001-05-25	73	55	64.0	0.1	1	0	0.03	0.0	0
2001-05-26	60	54	57.0	-7.2	8	0	0.05	0.0	0
2001-05-27	64	55	59.5	-5.0	5	0	0.49	0.0	0
2001-05-28	74	53	63.5	-1.3	1	0	0.14	0.0	0
2001-05-29	75	51	63.0	-2.1	2	0	0.01	0.0	0
2001-05-30	75	M	M	M	M	M	0.01	0.0	0
2001-05-31	68	42	55.0	-10.8	10	0	0.00	0.0	0
Sum	2262	1511	-	-	147	51	3.06	0.0	-
Average	73.0	50.4	61.6	0.3	-	-	-	-	0.0
Normal	72.1	50.6	61.3	-	164	51	4.03	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - June 2001

Date	Precipitation	New Snow	Snow Depth
2001-06-01	0.00	0.0	0
2001-06-02	2.27	0.0	0
2001-06-03	0.01	0.0	0
2001-06-04	0.00	0.0	0
2001-06-05	0.00	0.0	0
2001-06-06	0.00	0.0	0
2001-06-07	0.00	0.0	0
2001-06-08	0.00	0.0	0
2001-06-09	0.00	0.0	0
2001-06-10	0.00	0.0	0
2001-06-11	0.00	0.0	0
2001-06-12	0.23	0.0	0
2001-06-13	0.00	0.0	0
2001-06-14	0.00	0.0	0
2001-06-15	0.00	0.0	0
2001-06-16	0.00	0.0	0
2001-06-17	1.33	0.0	0
2001-06-18	0.00	0.0	0
2001-06-19	0.00	0.0	0
2001-06-20	0.00	0.0	0
2001-06-21	0.07	0.0	0
2001-06-22	0.00	0.0	0
2001-06-23	0.32	0.0	0
2001-06-24	0.47	0.0	0
2001-06-25	0.00	0.0	0
2001-06-26	0.00	0.0	0
2001-06-27	0.00	0.0	0
2001-06-28	0.00	0.0	0
2001-06-29	0.00	0.0	0
2001-06-30	0.00	0.0	0
Sum	4.70	0.0	-
Average	-	-	0.0
Normal	4.36	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - June 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-06-01	71	40	55.5	-10.6	9	0	0.00	0.0	0
2001-06-02	69	54	61.5	-4.9	3	0	1.69	0.0	0
2001-06-03	75	60	67.5	0.7	0	3	0.21	0.0	0
2001-06-04	75	51	63.0	-4.1	2	0	0.04	0.0	0
2001-06-05	76	51	63.5	-3.9	1	0	0.00	0.0	0
2001-06-06	79	56	67.5	-0.3	0	3	0.00	0.0	0
2001-06-07	76	61	68.5	0.4	0	4	0.00	0.0	0
2001-06-08	80	53	66.5	-1.9	0	2	0.00	0.0	0
2001-06-09	81	51	66.0	-2.8	0	1	0.00	0.0	0
2001-06-10	82	51	66.5	-2.6	0	2	0.00	0.0	0
2001-06-11	82	57	69.5	0.0	0	5	0.00	0.0	0
2001-06-12	85	58	71.5	1.7	0	7	0.71	0.0	0
2001-06-13	85	62	73.5	3.4	0	9	T	0.0	0
2001-06-14	83	66	74.5	4.0	0	10	0.00	0.0	0
2001-06-15	83	68	75.5	4.7	0	11	0.01	0.0	0
2001-06-16	82	69	75.5	4.4	0	11	T	0.0	0
2001-06-17	78	68	73.0	1.5	0	8	2.32	0.0	0
2001-06-18	82	61	71.5	-0.3	0	7	0.84	0.0	0
2001-06-19	85	61	73.0	0.9	0	8	0.00	0.0	0
2001-06-20	87	64	75.5	3.1	0	11	0.00	0.0	0
2001-06-21	89	65	77.0	4.3	0	12	T	0.0	0
2001-06-22	77	67	72.0	-1.0	0	7	0.00	0.0	0
2001-06-23	83	66	74.5	1.3	0	10	0.24	0.0	0
2001-06-24	84	62	73.0	-0.5	0	8	0.53	0.0	0
2001-06-25	76	58	67.0	-6.8	0	2	0.00	0.0	0
2001-06-26	85	60	72.5	-1.5	0	8	0.00	0.0	0
2001-06-27	89	64	76.5	2.3	0	12	0.00	0.0	0
2001-06-28	91	65	78.0	3.5	0	13	0.00	0.0	0
2001-06-29	92	67	79.5	4.8	0	15	0.00	0.0	0
2001-06-30	86	69	77.5	2.6	0	13	0.00	0.0	0
Sum	2448	1805	-	-	15	202	6.59	0.0	-
Average	81.6	60.2	70.9	0.1	-	-	-	-	0.0
Normal	81.2	60.4	70.8	-	24	197	4.83	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - July 2001

Date	Precipitation	New Snow	Snow Depth
2001-07-01	0.28	0.0	0
2001-07-02	0.60	0.0	0
2001-07-03	0.00	0.0	0
2001-07-04	0.34	0.0	0
2001-07-05	0.62	0.0	0
2001-07-06	0.00	0.0	0
2001-07-07	0.00	0.0	0
2001-07-08	0.20	0.0	0
2001-07-09	0.00	0.0	0
2001-07-10	0.00	0.0	0
2001-07-11	0.31	0.0	0
2001-07-12	0.00	0.0	0
2001-07-13	0.00	0.0	0
2001-07-14	0.00	0.0	0
2001-07-15	0.00	0.0	0
2001-07-16	0.00	0.0	0
2001-07-17	0.00	0.0	0
2001-07-18	**1.45**	0.0	0
2001-07-19	0.00	0.0	0
2001-07-20	0.00	0.0	0
2001-07-21	0.00	0.0	0
2001-07-22	0.00	0.0	0
2001-07-23	0.00	0.0	0
2001-07-24	0.00	0.0	0
2001-07-25	0.00	0.0	0
2001-07-26	0.11	0.0	0
2001-07-27	0.00	0.0	0
2001-07-28	0.00	0.0	0
2001-07-29	0.00	0.0	0
2001-07-30	0.00	0.0	0
2001-07-31	0.00	0.0	0
Sum	3.91	0.0	-
Average	-	-	0.0
Normal	5.01	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - July 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-07-01	92	67	79.5	4.4	0	15	0.31	0.0	0
2001-07-02	89	53	71.0	-4.2	0	6	0.64	0.0	0
2001-07-03	74	49	61.5	-13.9	3	0	0.00	0.0	0
2001-07-04	78	51	64.5	-11.0	0	0	0.10	0.0	0
2001-07-05	83	65	74.0	-1.7	0	9	0.38	0.0	0
2001-07-06	83	55	69.0	-6.8	0	4	0.00	0.0	0
2001-07-07	76	52	64.0	-11.9	1	0	0.00	0.0	0
2001-07-08	82	61	71.5	-4.5	0	7	0.01	0.0	0
2001-07-09	75	65	70.0	-6.1	0	5	0.19	0.0	0
2001-07-10	90	66	78.0	1.8	0	13	0.00	0.0	0
2001-07-11	91	62	76.5	0.3	0	12	0.28	0.0	0
2001-07-12	82	57	69.5	-6.8	0	5	0.00	0.0	0
2001-07-13	79	54	66.5	-9.8	0	2	0.00	0.0	0
2001-07-14	79	57	68.0	-8.4	0	3	0.00	0.0	0
2001-07-15	81	57	69.0	-7.4	0	4	0.00	0.0	0
2001-07-16	85	59	72.0	-4.4	0	7	0.00	0.0	0
2001-07-17	87	59	73.0	-3.4	0	8	0.00	0.0	0
2001-07-18	89	64	76.5	0.1	0	12	1.10	0.0	0
2001-07-19	81	65	73.0	-3.4	0	8	0.00	0.0	0
2001-07-20	78	60	69.0	-7.4	0	4	0.00	0.0	0
2001-07-21	81	56	68.5	-7.8	0	4	0.00	0.0	0
2001-07-22	87	58	72.5	-3.8	0	8	0.00	0.0	0
2001-07-23	85	60	72.5	-3.8	0	8	0.00	0.0	0
2001-07-24	89	64	76.5	0.3	0	12	0.00	0.0	0
2001-07-25	93	72	82.5	6.3	0	18	0.00	0.0	0
2001-07-26	94	73	83.5	7.4	0	19	0.00	0.0	0
2001-07-27	81	60	70.5	-5.6	0	6	0.00	0.0	0
2001-07-28	80	54	67.0	-9.0	0	2	0.00	0.0	0
2001-07-29	80	55	67.5	-8.4	0	3	0.00	0.0	0
2001-07-30	78	60	69.0	-6.9	0	4	0.00	0.0	0
2001-07-31	77	55	66.0	-9.8	0	1	0.00	0.0	0
Sum	2579	1845	-	-	4	209	3.01	0.0	-
Average	83.2	59.5	71.4	-4.7	-	-	-	-	0.0
Normal	86.5	65.6	76.1	-	1	343	4.83	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - August 2001

Date	Precipitation	New Snow	Snow Depth
2001-08-01	0.00	0.0	0
2001-08-02	0.00	0.0	0
2001-08-03	0.00	0.0	0
2001-08-04	0.00	0.0	0
2001-08-05	**1.13**	0.0	0
2001-08-06	0.00	0.0	0
2001-08-07	0.00	0.0	0
2001-08-08	0.00	0.0	0
2001-08-09	0.00	0.0	0
2001-08-10	0.00	0.0	0
2001-08-11	0.40	0.0	0
2001-08-12	0.02	0.0	0
2001-08-13	0.48	0.0	0
2001-08-14	0.72	0.0	0
2001-08-15	0.00	0.0	0
2001-08-16	0.00	0.0	0
2001-08-17	0.00	0.0	0
2001-08-18	0.00	0.0	0
2001-08-19	0.00	0.0	0
2001-08-20	0.00	0.0	0
2001-08-21	0.00	0.0	0
2001-08-22	0.00	0.0	0
2001-08-23	0.00	0.0	0
2001-08-24	0.21	0.0	0
2001-08-25	0.00	0.0	0
2001-08-26	0.00	0.0	0
2001-08-27	0.00	0.0	0
2001-08-28	0.00	0.0	0
2001-08-29	0.00	0.0	0
2001-08-30	0.00	0.0	0
2001-08-31	0.00	0.0	0
Sum	2.96	0.0	-
Average	-	-	0.0
Normal	4.82	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - August 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-08-01	85	57	71.0	-4.7	0	6	0.00	0.0	0
2001-08-02	90	62	76.0	0.3	0	11	0.00	0.0	0
2001-08-03	91	66	78.5	2.9	0	14	0.00	0.0	0
2001-08-04	89	69	79.0	3.5	0	14	0.00	0.0	0
2001-08-05	81	65	73.0	-2.4	0	8	1.10	M	0
2001-08-06	88	67	77.5	2.1	0	13	0.00	0.0	0
2001-08-07	93	71	82.0	6.7	0	17	0.00	0.0	0
2001-08-08	96	75	85.5	10.3	0	21	0.00	0.0	0
2001-08-09	97	69	83.0	7.9	0	18	0.00	0.0	0
2001-08-10	**101**	72	86.5	11.4	0	22	0.00	0.0	0
2001-08-11	95	73	84.0	9.0	0	19	0.48	0.0	0
2001-08-12	76	69	72.5	-2.4	0	8	0.16	0.0	0
2001-08-13	79	71	75.0	0.2	0	10	**1.50**	0.0	0
2001-08-14	85	67	76.0	1.3	0	11	0.51	0.0	0
2001-08-15	85	63	74.0	-0.6	0	9	0.08	0.0	0
2001-08-16	84	61	72.5	-2.0	0	8	0.00	0.0	0
2001-08-17	85	70	77.5	3.1	0	13	0.00	0.0	0
2001-08-18	86	62	74.0	-0.3	0	9	0.01	0.0	0
2001-08-19	85	68	76.5	2.3	0	12	0.00	0.0	0
2001-08-20	82	68	75.0	0.9	0	10	0.02	0.0	0
2001-08-21	87	65	76.0	2.0	0	11	0.00	0.0	0
2001-08-22	82	62	72.0	-1.8	0	7	0.00	0.0	0
2001-08-23	87	61	74.0	0.3	0	9	0.00	0.0	0
2001-08-24	83	64	73.5	-0.1	0	9	0.09	0.0	0
2001-08-25	85	58	71.5	-1.9	0	7	0.00	0.0	0
2001-08-26	81	**54**	67.5	-5.7	0	3	0.00	0.0	0
2001-08-27	83	57	70.0	-3.1	0	5	0.00	0.0	0
2001-08-28	86	66	76.0	3.1	0	11	0.03	0.0	0
2001-08-29	89	62	75.5	2.8	0	11	0.00	0.0	0
2001-08-30	86	59	72.5	0.0	0	8	0.00	0.0	0
2001-08-31	81	70	75.5	3.2	0	11	0.00	0.0	0
Sum	2683	2023	-	-	0	345	3.98	0.0	-
Average	86.5	65.3	75.9	1.6	-	-	-	-	0.0
Normal	84.7	64.0	74.3	-	2	292	4.66	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - September 2001

Date	Precipitation	New Snow	Snow Depth
2001-09-01	0.01	0.0	0
2001-09-02	0.00	0.0	0
2001-09-03	0.00	0.0	0
2001-09-04	0.00	0.0	0
2001-09-05	0.00	0.0	0
2001-09-06	0.00	0.0	0
2001-09-07	0.00	0.0	0
2001-09-08	0.00	0.0	0
2001-09-09	0.00	0.0	0
2001-09-10	0.00	0.0	0
2001-09-11	0.19	0.0	0
2001-09-12	0.00	0.0	0
2001-09-13	0.00	0.0	0
2001-09-14	**1.30**	0.0	0
2001-09-15	0.16	0.0	0
2001-09-16	0.00	0.0	0
2001-09-17	0.00	0.0	0
2001-09-18	0.00	0.0	0
2001-09-19	0.00	0.0	0
2001-09-20	0.00	0.0	0
2001-09-21	1.26	0.0	0
2001-09-22	0.00	0.0	0
2001-09-23	0.00	0.0	0
2001-09-24	0.00	0.0	0
2001-09-25	0.26	0.0	0
2001-09-26	0.00	0.0	0
2001-09-27	0.00	0.0	0
2001-09-28	0.00	0.0	0
2001-09-29	0.00	0.0	0
2001-09-30	0.00	0.0	0
Sum	3.18	0.0	-
Average	-	-	0.0
Normal	4.08	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - September 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-09-01	88	71	79.5	7.4	0	15	T	0.0	0
2001-09-02	83	54	68.5	-3.4	0	4	0.00	0.0	0
2001-09-03	75	50	62.5	-9.1	2	0	0.00	0.0	0
2001-09-04	80	50	65.0	-6.4	0	0	0.00	0.0	0
2001-09-05	82	58	70.0	-1.1	0	5	0.05	0.0	0
2001-09-06	80	49	64.5	-6.4	0	0	0.00	0.0	0
2001-09-07	80	49	64.5	-6.1	0	0	0.00	0.0	0
2001-09-08	85	54	69.5	-0.8	0	5	0.00	0.0	0
2001-09-09	86	59	72.5	2.5	0	8	0.00	0.0	0
2001-09-10	87	62	74.5	4.8	0	10	0.00	0.0	0
2001-09-11	87	M	M	M	M	M	0.18	0.0	0
2001-09-12	87	51	69.0	0.0	0	4	0.00	0.0	0
2001-09-13	80	53	66.5	-2.2	0	2	0.00	0.0	0
2001-09-14	87	52	69.5	1.2	0	5	1.10	0.0	0
2001-09-15	62	46	54.0	-13.9	11	0	0.86	0.0	0
2001-09-16	71	44	57.5	-10.1	7	0	0.00	0.0	0
2001-09-17	76	43	59.5	-7.7	5	0	0.00	0.0	0
2001-09-18	79	46	62.5	-4.3	2	0	0.00	0.0	0
2001-09-19	81	50	65.5	-0.9	0	1	0.00	0.0	0
2001-09-20	81	50	65.5	-0.5	0	1	0.00	0.0	0
2001-09-21	71	65	68.0	2.4	0	3	0.71	0.0	0
2001-09-22	81	64	72.5	7.3	0	8	0.00	0.0	0
2001-09-23	82	59	70.5	5.7	0	6	0.00	0.0	0
2001-09-24	81	58	69.5	5.2	0	5	0.00	0.0	0
2001-09-25	80	67	73.5	9.6	0	9	0.54	0.0	0
2001-09-26	70	43	56.5	-7.0	8	0	0.07	0.0	0
2001-09-27	66	43	54.5	-8.6	10	0	0.00	0.0	0
2001-09-28	68	44	56.0	-6.6	9	0	0.00	0.0	0
2001-09-29	68	44	56.0	-6.2	9	0	0.00	0.0	0
2001-09-30	65	50	57.5	-4.3	7	0	0.00	0.0	0

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - October 2001

Date	Precipitation	New Snow	Snow Depth
2001-10-01	0.29	0.0	0
2001-10-02	0.06	0.0	0
2001-10-03	0.00	0.0	0
2001-10-04	0.00	0.0	0
2001-10-05	0.00	0.0	0
2001-10-06	0.02	0.0	0
2001-10-07	0.11	0.0	0
2001-10-08	0.00	0.0	0
2001-10-09	0.00	0.0	0
2001-10-10	0.00	0.0	0
2001-10-11	0.00	0.0	0
2001-10-12	0.00	0.0	0
2001-10-13	0.00	0.0	0
2001-10-14	0.00	0.0	0
2001-10-15	**0.36**	0.0	0
2001-10-16	0.00	0.0	0
2001-10-17	0.00	0.0	0
2001-10-18	0.00	0.0	0
2001-10-19	0.00	0.0	0
2001-10-20	0.00	0.0	0
2001-10-21	0.00	0.0	0
2001-10-22	0.00	0.0	0
2001-10-23	0.00	0.0	0
2001-10-24	0.00	0.0	0
2001-10-25	0.00	0.0	0
2001-10-26	0.00	0.0	0
2001-10-27	0.00	0.0	0
2001-10-28	0.00	0.0	0
2001-10-29	0.00	0.0	0
2001-10-30	0.00	0.0	0
2001-10-31	0.00	0.0	0
Sum	0.84	0.0	-
Average	-	-	0.0
Normal	4.25	0.1	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - October 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-10-01	M	M	M	M	M	M	M	M	M
2001-10-02	56	43	49.5	-11.4	15	0	0.04	0.0	0
2001-10-03	77	47	62.0	1.5	3	0	0.00	0.0	0
2001-10-04	83	M	M	M	M	M	0.00	0.0	0
2001-10-05	83	52	67.5	7.9	0	3	0.00	0.0	0
2001-10-06	83	52	67.5	8.3	0	3	0.00	0.0	0
2001-10-07	70	39	54.5	-4.3	10	0	0.14	0.0	0
2001-10-08	59	37	48.0	-10.3	17	0	0.00	0.0	0
2001-10-09	56	29	42.5	-15.4	22	0	0.00	0.0	0
2001-10-10	61	29	45.0	-12.5	20	0	0.00	0.0	0
2001-10-11	70	37	53.5	-3.6	11	0	0.00	0.0	0
2001-10-12	76	49	62.5	5.8	2	0	0.00	0.0	0
2001-10-13	78	49	63.5	7.2	1	0	0.00	0.0	0
2001-10-14	78	56	67.0	11.1	0	2	0.00	0.0	0
2001-10-15	70	57	63.5	8.0	1	0	0.31	0.0	0
2001-10-16	70	40	55.0	-0.2	10	0	0.00	0.0	0
2001-10-17	70	41	55.5	0.7	9	0	0.04	0.0	0
2001-10-18	60	39	49.5	-4.9	15	0	0.00	0.0	0
2001-10-19	60	32	46.0	-8.0	19	0	0.00	0.0	0
2001-10-20	66	32	49.0	-4.7	16	0	0.00	0.0	0
2001-10-21	73	42	57.5	4.2	7	0	0.00	0.0	0
2001-10-22	78	43	60.5	7.5	4	0	0.00	0.0	0
2001-10-23	71	50	60.5	7.9	4	0	0.00	0.0	0
2001-10-24	73	54	63.5	11.2	1	0	0.00	0.0	0
2001-10-25	83	60	71.5	19.5	0	7	0.00	0.0	0
2001-10-26	78	47	62.5	10.9	2	0	0.00	0.0	0
2001-10-27	59	38	48.5	-2.8	16	0	0.00	0.0	0
2001-10-28	54	32	43.0	-8.0	22	0	0.00	0.0	0
2001-10-29	53	28	40.5	-10.1	24	0	0.00	0.0	0
2001-10-30	60	30	45.0	-5.3	20	0	0.00	0.0	0
2001-10-31	64	37	50.5	0.5	14	0	0.00	0.0	0
Sum	2072	1221	-	-	285	15	0.53	0.0	-
Average	69.1	42.1	55.3	-0.1	-	-	-	-	0.0
Normal	66.5	44.2	55.4	-	314	15	4.11	0.2	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - November 2001

Date	Precipitation	New Snow	Snow Depth
2001-11-01	0.00	0.0	0
2001-11-02	0.00	0.0	0
2001-11-03	T	0.0	0
2001-11-04	0.09	0.0	0
2001-11-05	0.00	0.0	0
2001-11-06	0.00	0.0	0
2001-11-07	0.00	0.0	0
2001-11-08	0.00	0.0	0
2001-11-09	0.00	0.0	0
2001-11-10	0.00	0.0	0
2001-11-11	0.00	0.0	0
2001-11-12	0.00	0.0	0
2001-11-13	0.00	0.0	0
2001-11-14	0.00	0.0	0
2001-11-15	0.00	0.0	0
2001-11-16	0.00	0.0	0
2001-11-17	0.00	0.0	0
2001-11-18	0.00	0.0	0
2001-11-19	0.00	0.0	0
2001-11-20	0.13	0.0	0
2001-11-21	0.00	0.0	0
2001-11-22	0.00	0.0	0
2001-11-23	0.00	0.0	0
2001-11-24	0.00	0.0	0
2001-11-25	0.03	0.0	0
2001-11-26	**0.65**	0.0	0
2001-11-27	0.00	0.0	0
2001-11-28	0.00	0.0	0
2001-11-29	0.00	0.0	0
2001-11-30	0.07	0.0	0
Sum	0.97	0.0	-
Average	-	-	0.0
Normal	3.22	0.1	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - November 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-11-01	64	37	50.5	0.8	14	0	T	0.0	0
2001-11-02	71	39	55.0	5.6	10	0	0.00	0.0	0
2001-11-03	77	57	67.0	17.9	0	2	0.01	0.0	0
2001-11-04	71	38	54.5	5.7	10	0	0.10	0.0	0
2001-11-05	64	38	51.0	2.5	14	0	0.05	0.0	0
2001-11-06	49	40	44.5	-3.7	20	0	0.00	0.0	0
2001-11-07	56	40	48.0	0.1	17	0	0.00	0.0	0
2001-11-08	68	32	50.0	2.4	15	0	0.00	0.0	0
2001-11-09	64	32	48.0	0.7	17	0	0.00	0.0	0
2001-11-10	54	32	43.0	-4.0	22	0	0.00	0.0	0
2001-11-11	63	37	50.0	3.3	15	0	0.00	0.0	0
2001-11-12	50	23	36.5	-9.9	28	0	0.00	0.0	0
2001-11-13	53	24	38.5	-7.6	26	0	0.00	0.0	0
2001-11-14	56	25	40.5	-5.3	24	0	0.00	0.0	0
2001-11-15	61	31	46.0	0.5	19	0	T	0.0	0
2001-11-16	71	48	59.5	14.3	5	0	0.00	0.0	0
2001-11-17	73	41	57.0	12.1	8	0	0.00	0.0	0
2001-11-18	52	28	40.0	-4.6	25	0	0.00	0.0	0
2001-11-19	60	28	44.0	-0.3	21	0	0.00	0.0	0
2001-11-20	65	M	M	M	M	M	0.09	0.0	0
2001-11-21	53	24	38.5	-5.2	26	0	T	0.0	0
2001-11-22	48	24	36.0	-7.4	29	0	0.00	0.0	0
2001-11-23	58	27	42.5	-0.6	22	0	0.00	0.0	0
2001-11-24	61	31	46.0	3.2	19	0	0.18	0.0	0
2001-11-25	62	51	56.5	13.9	8	0	T	0.0	0
2001-11-26	70	52	61.0	18.7	4	0	0.68	0.0	0
2001-11-27	64	37	50.5	8.5	14	0	0.00	0.0	0
2001-11-28	57	38	47.5	5.8	17	0	0.00	0.0	0
2001-11-29	66	50	58.0	16.6	7	0	0.01	0.0	0
2001-11-30	56	50	53.0	11.9	12	0	0.06	0.0	0

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - December 2001

Date	Precipitation	New Snow	Snow Depth
2001-12-01	0.00	0.0	0
2001-12-02	0.00	0.0	0
2001-12-03	0.00	0.0	0
2001-12-04	0.00	0.0	0
2001-12-05	0.00	0.0	0
2001-12-06	0.00	0.0	0
2001-12-07	0.02	0.0	0
2001-12-08	0.00	0.0	0
2001-12-09	**0.82**	0.0	0
2001-12-10	0.00	0.0	0
2001-12-11	0.00	0.0	0
2001-12-12	0.00	0.0	0
2001-12-13	0.05	0.0	0
2001-12-14	0.04	0.0	0
2001-12-15	0.17	0.0	0
2001-12-16	0.00	0.0	0
2001-12-17	0.00	0.0	0
2001-12-18	0.53	0.0	0
2001-12-19	0.00	0.0	0
2001-12-20	0.00	0.0	0
2001-12-21	0.00	0.0	0
2001-12-22	0.00	0.0	0
2001-12-23	0.00	0.0	0
2001-12-24	0.62	0.0	0
2001-12-25	0.00	0.0	0
2001-12-26	0.00	0.0	0
2001-12-27	0.00	0.0	0
2001-12-28	0.00	0.0	0
2001-12-29	0.00	0.0	0
2001-12-30	0.00	0.0	0
2001-12-31	0.00	0.0	0
Sum	2.25	0.0	-
Average	-	-	0.0
Normal	3.96	3.5	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - December 2001

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2001-12-01	72	54	63.0	22.2	2	0	T	0.0	0
2001-12-02	71	39	55.0	14.5	10	0	0.00	0.0	0
2001-12-03	53	31	42.0	1.7	23	0	0.00	0.0	0
2001-12-04	58	29	43.5	3.5	21	0	0.00	0.0	0
2001-12-05	65	35	50.0	10.3	15	0	0.00	0.0	0
2001-12-06	74	49	61.5	22.1	3	0	0.00	0.0	0
2001-12-07	74	51	62.5	23.3	2	0	T	0.0	0
2001-12-08	62	34	48.0	9.1	17	0	0.00	0.0	0
2001-12-09	45	36	40.5	1.9	24	0	0.89	0.0	0
2001-12-10	44	24	34.0	-4.3	31	0	0.00	0.0	0
2001-12-11	49	25	37.0	-1.1	28	0	T	0.0	0
2001-12-12	55	35	45.0	7.2	20	0	0.00	0.0	0
2001-12-13	47	39	43.0	5.5	22	0	0.03	0.0	0
2001-12-14	54	46	50.0	12.7	15	0	0.01	0.0	0
2001-12-15	64	42	53.0	16.0	12	0	0.17	0.0	0
2001-12-16	49	25	37.0	0.2	28	0	0.00	0.0	0
2001-12-17	46	26	36.0	-0.5	29	0	0.00	0.0	0
2001-12-18	58	38	48.0	11.7	17	0	0.49	0.0	0
2001-12-19	51	36	43.5	7.5	21	0	T	0.0	0
2001-12-20	52	30	41.0	5.2	24	0	0.00	0.0	0
2001-12-21	47	27	37.0	1.4	28	0	0.00	0.0	0
2001-12-22	44	28	36.0	0.7	29	0	0.00	0.0	0
2001-12-23	45	21	33.0	-2.1	32	0	0.00	0.0	0
2001-12-24	51	21	36.0	1.1	29	0	0.60	0.0	0
2001-12-25	46	26	36.0	1.4	29	0	0.00	0.0	0
2001-12-26	40	24	32.0	-2.4	33	0	0.00	0.0	0
2001-12-27	38	19	28.5	-5.7	36	0	0.00	0.0	0
2001-12-28	36	18	27.0	-7.0	38	0	0.00	0.0	0
2001-12-29	43	21	32.0	-1.8	33	0	T	T	0
2001-12-30	40	21	30.5	-3.1	34	0	0.00	0.0	0
2001-12-31	32	18	25.0	-8.4	40	0	0.00	0.0	0
Sum	1605	968	-	-	725	0	2.19	T	-
Average	51.8	31.2	41.5	4.6	-	-	-	-	0.0
Normal	45.4	28.4	36.9	-	871	0	4.49	4.9	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - January 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-01-01	45	29	37.0	M	28	0	0.00	0.0	M
2011-01-02	48	38	43.0	M	22	0	0.04	0.0	M
2011-01-03	50	26	38.0	M	27	0	0.00	0.0	M
2011-01-04	35	23	29.0	M	36	0	0.00	0.0	M
2011-01-05	37	25	31.0	M	34	0	0.00	0.0	M
2011-01-06	38	20	29.0	M	36	0	0.00	0.0	M
2011-01-07	33	22	27.5	M	37	0	0.08	1.0	M
2011-01-08	36	15	25.5	M	39	0	0.05	0.5	M
2011-01-09	29	21	25.0	M	40	0	0.00	0.0	M
2011-01-10	31	20	25.5	M	39	0	0.00	0.0	M
2011-01-11	34	17	25.5	M	39	0	0.00	0.0	M
2011-01-12	33	20	26.5	M	38	0	0.39	7.0	M
2011-01-13	32	22	27.0	M	38	0	0.00	0.0	M
2011-01-14	28	8	18.0	M	47	0	0.00	0.0	M
2011-01-15	30	12	21.0	M	44	0	0.00	0.0	M
2011-01-16	35	26	30.5	M	34	0	0.00	0.0	M
2011-01-17	33	21	27.0	M	38	0	0.00	0.0	M
2011-01-18	32	24	28.0	M	37	0	0.53	2.0	M
2011-01-19	38	32	35.0	M	30	0	0.23	0.0	0
2011-01-20	43	33	38.0	M	27	0	0.00	0.0	0
2011-01-21	35	29	32.0	M	33	0	0.29	2.0	2
2011-01-22	33	11	22.0	M	43	0	0.00	0.0	1
2011-01-23	25	8	16.5	M	48	0	0.00	0.0	1
2011-01-24	24	5	14.5	M	50	0	0.00	0.0	1
2011-01-25	23	9	16.0	M	49	0	T	0.0	1
2011-01-26	34	23	28.5	M	36	0	0.24	4.0	5
2011-01-27	35	31	33.0	M	32	0	1.14	7.0	12
2011-01-28	36	23	29.5	M	35	0	0.00	0.0	12
2011-01-29	36	25	30.5	M	34	0	T	0.0	12
2011-01-30	36	24	30.0	M	35	0	0.00	0.0	11
2011-01-31	38	16	27.0	M	38	0	0.00	0.0	10
Sum	1075	658	-	-	1143	0	2.99	23.5	-
Average	34.7	21.2	28.0	M	-	-	-	-	5.2
Normal	M	M	M	-	M	M	3.36	6.8	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 10am, 11am, 8am, 9am
Min Temperature : 10am, 11am, 8am, 9am
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - February 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-02-01	30	18	24.0	M	41	0	0.07	**1.0**	**10**
2011-02-02	33	26	29.5	M	35	0	**0.91**	**1.0**	8
2011-02-03	36	25	30.5	M	34	0	0.00	0.0	7
2011-02-04	32	12	22.0	M	43	0	0.00	0.0	7
2011-02-05	34	18	26.0	M	39	0	0.00	0.0	7
2011-02-06	37	30	33.5	M	31	0	0.22	0.0	6
2011-02-07	42	30	36.0	M	29	0	0.00	0.0	4
2011-02-08	44	33	38.5	M	26	0	0.10	0.0	2
2011-02-09	39	15	27.0	M	38	0	0.00	0.0	2
2011-02-10	31	18	24.5	M	40	0	0.00	0.0	2
2011-02-11	27	**11**	19.0	M	46	0	0.00	0.0	1
2011-02-12	38	17	27.5	M	37	0	0.00	0.0	1
2011-02-13	39	21	30.0	M	35	0	0.00	0.0	1
2011-02-14	43	34	38.5	M	26	0	0.00	0.0	1
2011-02-15	55	27	41.0	M	24	0	0.00	0.0	1
2011-02-16	35	23	29.0	M	36	0	0.00	0.0	1
2011-02-17	44	26	35.0	M	30	0	0.00	0.0	1
2011-02-18	58	41	49.5	M	15	0	0.00	0.0	0
2011-02-19	**66**	41	53.5	M	11	0	0.00	0.0	0
2011-02-20	41	22	31.5	M	33	0	0.00	0.0	0
2011-02-21	40	32	36.0	M	29	0	0.11	**1.0**	1
2011-02-22	36	20	28.0	M	37	0	0.00	0.0	1
2011-02-23	36	20	28.0	M	37	0	0.00	0.0	0
2011-02-24	41	21	31.0	M	34	0	0.00	0.0	0
2011-02-25	47	35	41.0	M	24	0	0.78	0.0	0
2011-02-26	56	32	44.0	M	21	0	0.21	0.0	0
2011-02-27	42	33	37.5	M	27	0	0.00	0.0	0
2011-02-28	49	36	42.5	M	22	0	0.30	0.0	0
Sum	1151	717	-	-	880	0	2.70	3.0	-
Average	41.1	25.6	33.4	M	-	-	-	-	2.3
Normal	M	M	M	-	M	M	2.71	6.7	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 11am, 9am, 8am, 10am, 12 noon, 7am
Min Temperature : 11am, 9am, 8am, 10am, 12 noon, 7am
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - March 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-03-01	56	39	47.5	M	17	0	0.21	0.0	0
2011-03-02	44	28	36.0	M	29	0	0.00	0.0	0
2011-03-03	52	20	36.0	M	29	0	0.00	0.0	0
2011-03-04	34	24	29.0	M	36	0	0.00	0.0	0
2011-03-05	50	34	42.0	M	23	0	0.00	0.0	0
2011-03-06	61	50	55.5	M	9	0	0.20	0.0	0
2011-03-07	57	34	45.5	M	19	0	2.15	0.0	0
2011-03-08	45	29	37.0	M	28	0	0.00	0.0	0
2011-03-09	48	31	39.5	M	25	0	0.00	0.0	0
2011-03-10	43	36	39.5	M	25	0	0.11	M	M
2011-03-11	53	41	47.0	M	18	0	1.49	0.0	0
2011-03-12	52	38	45.0	M	20	0	0.00	0.0	0
2011-03-13	55	37	46.0	M	19	0	0.00	0.0	0
2011-03-14	49	36	42.5	M	22	0	0.00	0.0	0
2011-03-15	46	29	37.5	M	27	0	0.00	0.0	0
2011-03-16	51	34	42.5	M	22	0	0.50	0.0	0
2011-03-17	55	40	47.5	M	17	0	0.02	0.0	0
2011-03-18	59	45	52.0	M	13	0	0.00	0.0	0
2011-03-19	75	47	61.0	M	4	0	0.00	0.0	0
2011-03-20	52	33	42.5	M	22	0	0.00	0.0	0
2011-03-21	48	34	41.0	M	24	0	0.40	0.0	0
2011-03-22	46	38	42.0	M	23	0	0.01	0.0	0
2011-03-23	50	35	42.5	M	22	0	0.46	1.0	1
2011-03-24	37	32	34.5	M	30	0	0.53	0.0	T
2011-03-25	42	27	34.5	M	30	0	0.00	0.0	0
2011-03-26	42	25	33.5	M	31	0	0.00	0.0	0
2011-03-27	38	28	33.0	M	32	0	0.00	0.0	0
2011-03-28	42	26	34.0	M	31	0	0.00	0.0	0
2011-03-29	43	28	35.5	M	29	0	0.00	0.0	0
2011-03-30	48	29	38.5	M	26	0	0.00	0.0	0
2011-03-31	54	34	44.0	M	21	0	T	0.0	0
Sum	1527	1041	-	-	723	0	6.08	1.0	-
Average	49.3	33.6	41.4	M	-	-	-	-	0.0
Normal	M	M	M	-	M	M	4.09	3.6	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 11am, 9am, 10am, 8am, 12 noon, 7am
Min Temperature : 11am, 9am, 10am, 8am, 12 noon, 7am
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - April 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-04-01	43	37	40.0	M	25	0	0.06	0.0	0
2011-04-02	51	34	42.5	M	22	0	0.21	0.0	0
2011-04-03	54	35	44.5	M	20	0	0.00	0.0	0
2011-04-04	59	40	49.5	M	15	0	0.03	0.0	0
2011-04-05	70	49	59.5	M	5	0	T	0.0	0
2011-04-06	64	36	50.0	M	15	0	0.14	0.0	0
2011-04-07	56	39	47.5	M	17	0	0.07	0.0	0
2011-04-08	51	38	44.5	M	20	0	0.00	0.0	0
2011-04-09	51	37	44.0	M	21	0	0.24	0.0	0
2011-04-10	59	38	48.5	M	16	0	0.00	0.0	0
2011-04-11	60	51	55.5	M	9	0	0.00	0.0	0
2011-04-12	80	52	66.0	M	0	1	0.00	0.0	0
2011-04-13	62	44	53.0	M	12	0	1.11	0.0	0
2011-04-14	52	45	48.5	M	16	0	0.02	0.0	0
2011-04-15	66	47	56.5	M	8	0	0.00	0.0	0
2011-04-16	57	42	49.5	M	15	0	0.00	0.0	0
2011-04-17	56	45	50.5	M	14	0	2.46	0.0	0
2011-04-18	59	46	52.5	M	12	0	0.00	0.0	0
2011-04-19	65	46	55.5	M	9	0	0.00	0.0	0
2011-04-20	54	47	50.5	M	14	0	0.06	0.0	0
2011-04-21	68	47	57.5	M	7	0	0.00	0.0	0
2011-04-22	60	38	49.0	M	16	0	0.00	0.0	0
2011-04-23	54	39	46.5	M	18	0	0.71	0.0	0
2011-04-24	70	51	60.5	M	4	0	0.08	0.0	0
2011-04-25	78	61	69.5	M	0	5	0.82	0.0	0
2011-04-26	73	56	64.5	M	0	0	0.02	0.0	0
2011-04-27	81	61	71.0	M	0	6	0.02	0.0	0
2011-04-28	82	69	75.5	M	0	11	0.11	0.0	0
2011-04-29	78	51	64.5	M	0	0	0.32	0.0	0
2011-04-30	70	48	59.0	M	6	0	0.02	0.0	0
Sum	1883	1369	-	-	336	23	6.50	0.0	-
Average	62.8	45.6	54.2	M	-	-	-	-	0.0
Normal	M	M	M	-	M	M	3.77	0.2	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 8am, 1pm, 7am, 6am, 9am, 11am, 5am
Min Temperature : 8am, 1pm, 7am, 6am, 9am, 11am, 5am
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - May 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-05-01	67	44	55.5	M	9	0	0.00	0.0	0
2011-05-02	72	48	60.0	M	5	0	0.00	0.0	0
2011-05-03	70	56	63.0	M	2	0	0.00	0.0	0
2011-05-04	78	55	66.5	M	0	2	0.28	0.0	0
2011-05-05	55	47	51.0	M	14	0	0.24	0.0	0
2011-05-06	64	**42**	53.0	M	12	0	T	0.0	0
2011-05-07	72	**42**	57.0	M	8	0	0.00	0.0	0
2011-05-08	71	43	57.0	M	8	0	0.00	0.0	0
2011-05-09	72	53	62.5	M	2	0	0.00	0.0	0
2011-05-10	71	53	62.0	M	3	0	0.00	0.0	0
2011-05-11	74	48	61.0	M	4	0	0.00	0.0	0
2011-05-12	71	55	63.0	M	2	0	0.00	0.0	0
2011-05-13	77	52	64.5	M	0	0	0.00	0.0	0
2011-05-14	73	57	65.0	M	0	0	0.00	0.0	0
2011-05-15	69	58	63.5	M	1	0	0.96	0.0	0
2011-05-16	73	59	66.0	M	0	1	**1.20**	0.0	0
2011-05-17	63	55	59.0	M	6	0	0.72	0.0	0
2011-05-18	64	56	60.0	M	5	0	0.50	0.0	0
2011-05-19	72	60	66.0	M	0	1	0.61	0.0	0
2011-05-20	75	58	66.5	M	0	2	0.07	M	M
2011-05-21	69	53	61.0	M	4	0	0.13	0.0	0
2011-05-22	78	58	68.0	M	0	3	0.00	0.0	0
2011-05-23	64	57	60.5	M	4	0	0.05	0.0	0
2011-05-24	72	60	66.0	M	0	1	0.01	0.0	0
2011-05-25	83	63	73.0	M	0	8	0.00	0.0	0
2011-05-26	82	64	73.0	M	0	8	0.00	0.0	0
2011-05-27	**91**	66	78.5	M	0	14	0.00	0.0	0
2011-05-28	89	68	78.5	M	0	14	0.00	0.0	0
2011-05-29	89	67	78.0	M	0	13	0.12	0.0	0
2011-05-30	87	71	79.0	M	0	14	0.00	0.0	0
2011-05-31	88	70	79.0	M	0	14	0.42	0.0	0
Sum	2295	1738	-	-	89	95	5.31	0.0	-
Average	74.0	56.1	65.0	M	-	-	-	-	0.0
Normal	M	M	M	-	M	M	3.93	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.

Max Temperature : 6am, 8am, 7am, 9am, 10am, 5am, 3am

Min Temperature : 6am, 8am, 7am, 9am, 10am, 5am, 3am

Precipitation : 7am

Snowfall : unknown

Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - June 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-06-01	90	70	80.0	M	0	15	0.00	0.0	0
2011-06-02	94	65	79.5	M	0	15	0.00	0.0	0
2011-06-03	79	54	66.5	M	0	2	0.00	0.0	0
2011-06-04	76	55	65.5	M	0	1	0.00	0.0	0
2011-06-05	77	61	69.0	M	0	4	0.00	0.0	0
2011-06-06	77	61	69.0	M	0	4	0.00	0.0	0
2011-06-07	81	64	72.5	M	0	8	0.00	0.0	0
2011-06-08	89	69	79.0	M	0	14	0.00	0.0	0
2011-06-09	95	69	82.0	M	0	17	0.00	0.0	0
2011-06-10	99	68	83.5	M	0	19	0.28	0.0	0
2011-06-11	99	68	83.5	M	0	19	0.27	0.0	0
2011-06-12	70	61	65.5	M	0	1	0.34	0.0	0
2011-06-13	79	62	70.5	M	0	6	T	0.0	0
2011-06-14	76	61	68.5	M	0	4	0.00	0.0	0
2011-06-15	74	54	64.0	M	1	0	0.52	0.0	0
2011-06-16	82	60	71.0	M	0	6	0.00	0.0	0
2011-06-17	86	66	76.0	M	0	11	1.15	0.0	0
2011-06-18	86	63	74.5	M	0	10	0.01	0.0	0
2011-06-19	88	67	77.5	M	0	13	0.00	0.0	0
2011-06-20	84	66	75.0	M	0	10	0.00	0.0	0
2011-06-21	84	69	76.5	M	0	12	0.00	0.0	0
2011-06-22	86	70	78.0	M	0	13	0.00	0.0	0
2011-06-23	87	72	79.5	M	0	15	0.00	0.0	0
2011-06-24	79	67	73.0	M	0	8	0.66	0.0	0
2011-06-25	74	67	70.5	M	0	6	0.39	0.0	0
2011-06-26	83	64	73.5	M	0	9	0.00	0.0	0
2011-06-27	83	64	73.5	M	0	9	0.00	0.0	0
2011-06-28	87	69	78.0	M	0	13	0.00	0.0	0
2011-06-29	89	69	79.0	M	0	14	0.00	0.0	0
2011-06-30	89	63	76.0	M	0	11	0.00	0.0	0
Sum	2522	1938	-	-	1	289	3.62	0.0	-
Average	84.1	64.6	74.3	M	-	-	-	-	0.0
Normal	M	M	M	-	M	M	4.36	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 7am, 6am, 8am, 5am, 11am
Min Temperature : 7am, 6am, 8am, 5am, 11am
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - July 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-07-01	84	61	72.5	M	0	8	0.00	0.0	0
2011-07-02	85	64	74.5	M	0	10	0.00	0.0	0
2011-07-03	89	69	79.0	M	0	14	0.68	0.0	0
2011-07-04	78	70	74.0	M	0	9	0.30	0.0	0
2011-07-05	86	64	75.0	M	0	10	0.00	0.0	0
2011-07-06	87	68	77.5	M	0	13	0.00	0.0	0
2011-07-07	92	71	81.5	M	0	17	0.00	0.0	0
2011-07-08	93	73	83.0	M	0	18	0.03	0.0	0
2011-07-09	91	67	79.0	M	0	14	1.01	0.0	0
2011-07-10	86	64	75.0	M	0	10	T	0.0	0
2011-07-11	87	69	78.0	M	0	13	0.00	0.0	0
2011-07-12	93	78	85.5	M	0	21	0.00	0.0	0
2011-07-13	93	74	83.5	M	0	19	0.00	0.0	0
2011-07-14	86	65	75.5	M	0	11	0.00	0.0	0
2011-07-15	82	63	72.5	M	0	8	0.00	0.0	0
2011-07-16	87	67	77.0	M	0	12	0.00	0.0	0
2011-07-17	90	67	78.5	M	0	14	0.00	0.0	0
2011-07-18	91	72	81.5	M	0	17	0.00	0.0	0
2011-07-19	97	77	87.0	M	0	22	0.00	0.0	0
2011-07-20	94	73	83.5	M	0	19	0.00	0.0	0
2011-07-21	91	77	84.0	M	0	19	0.00	0.0	0
2011-07-22	101	82	91.5	M	0	27	0.00	0.0	0
2011-07-23	104	81	92.5	M	0	28	0.00	0.0	0
2011-07-24	101	80	90.5	M	0	26	0.00	0.0	0
2011-07-25	93	77	85.0	M	0	20	0.00	0.0	0
2011-07-26	89	71	80.0	M	0	15	0.54	0.0	0
2011-07-27	88	70	79.0	M	0	14	0.00	0.0	0
2011-07-28	86	69	77.5	M	0	13	0.00	0.0	0
2011-07-29	90	73	81.5	M	0	17	0.36	0.0	0
2011-07-30	90	72	81.0	M	0	16	0.10	0.0	0
2011-07-31	90	69	79.5	M	0	15	0.00	0.0	0
Sum	2794	2197	-	-	0	489	3.02	0.0	-
Average	90.1	70.9	80.5	M	-	-	-	-	0.0
Normal	M	M	M	-	M	M	5.01	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 7am, 6am, 8am, 9am, 10am, 11am
Min Temperature : 7am, 6am, 8am, 9am, 10am, 11am
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - August 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-08-01	91	70	80.5	M	0	16	0.00	0.0	0
2011-08-02	95	70	82.5	M	0	18	0.00	0.0	0
2011-08-03	91	72	81.5	M	0	17	0.00	0.0	0
2011-08-04	93	69	81.0	M	0	16	0.56	0.0	0
2011-08-05	81	67	74.0	M	0	9	0.00	0.0	0
2011-08-06	88	71	79.5	M	0	15	0.00	0.0	0
2011-08-07	90	75	82.5	M	0	18	0.34	0.0	0
2011-08-08	91	75	83.0	M	0	18	T	0.0	0
2011-08-09	91	71	81.0	M	0	16	0.00	0.0	0
2011-08-10	89	68	78.5	M	0	14	3.70	0.0	0
2011-08-11	84	67	75.5	M	0	11	0.00	0.0	0
2011-08-12	82	60	71.0	M	0	6	0.00	0.0	0
2011-08-13	82	64	73.0	M	0	8	0.00	0.0	0
2011-08-14	87	67	77.0	M	0	12	3.90	0.0	0
2011-08-15	72	69	70.5	M	0	6	1.27	0.0	0
2011-08-16	80	67	73.5	M	0	9	0.63	0.0	0
2011-08-17	79	64	71.5	M	0	7	0.39	0.0	0
2011-08-18	83	68	75.5	M	0	11	0.04	0.0	0
2011-08-19	84	69	76.5	M	0	12	0.00	0.0	0
2011-08-20	86	63	74.5	M	0	10	0.58	0.0	0
2011-08-21	83	70	76.5	M	0	12	T	0.0	0
2011-08-22	84	65	74.5	M	0	10	0.55	0.0	0
2011-08-23	76	58	67.0	M	0	2	0.00	0.0	0
2011-08-24	78	59	68.5	M	0	4	0.00	0.0	0
2011-08-25	81	70	75.5	M	0	11	0.00	0.0	0
2011-08-26	78	69	73.5	M	0	9	0.53	0.0	0
2011-08-27	85	68	76.5	M	0	12	0.00	0.0	0
2011-08-28	80	70	75.0	M	0	10	6.90	0.0	0
2011-08-29	74	57	65.5	M	0	1	0.09	0.0	0
2011-08-30	76	57	66.5	M	0	2	0.00	0.0	0
2011-08-31	79	60	69.5	M	0	5	0.00	0.0	0
Sum	2593	2069	-	-	0	327	19.48	0.0	-
Average	83.6	66.7	75.2	M	-	-	-	-	0.0
Normal	M	M	M	-	M	M	4.82	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.

Max Temperature : 7am, 8am, 6am, 10am, 9am

Min Temperature : 7am, 8am, 6am, 10am, 9am

Precipitation : 7am

Snowfall : unknown

Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - September 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-09-01	83	62	72.5	M	0	8	0.00	0.0	0
2011-09-02	84	63	73.5	M	0	9	0.00	0.0	0
2011-09-03	84	63	73.5	M	0	9	0.00	0.0	0
2011-09-04	84	70	77.0	M	0	12	0.00	0.0	0
2011-09-05	**88**	72	80.0	M	0	15	0.00	0.0	0
2011-09-06	84	63	73.5	M	0	9	0.70	0.0	0
2011-09-07	64	61	62.5	M	2	0	**2.83**	0.0	0
2011-09-08	72	64	68.0	M	0	3	1.24	0.0	0
2011-09-09	77	67	72.0	M	0	7	0.02	0.0	0
2011-09-10	81	69	75.0	M	0	10	0.00	0.0	0
2011-09-11	80	67	73.5	M	0	9	0.00	0.0	0
2011-09-12	72	66	69.0	M	0	4	0.00	0.0	0
2011-09-13	80	63	71.5	M	0	7	T	0.0	0
2011-09-14	82	63	72.5	M	0	8	0.00	0.0	0
2011-09-15	85	67	76.0	M	0	11	0.00	0.0	0
2011-09-16	76	**48**	62.0	M	3	0	0.17	0.0	0
2011-09-17	66	53	59.5	M	5	0	0.00	0.0	0
2011-09-18	66	51	58.5	M	6	0	0.00	0.0	0
2011-09-19	67	52	59.5	M	5	0	0.00	0.0	0
2011-09-20	69	57	63.0	M	2	0	0.00	0.0	0
2011-09-21	69	60	64.5	M	0	0	0.09	0.0	0
2011-09-22	74	63	68.5	M	0	4	0.27	0.0	0
2011-09-23	80	69	74.5	M	0	10	0.00	0.0	0
2011-09-24	74	68	71.0	M	0	6	1.00	0.0	0
2011-09-25	77	67	72.0	M	0	7	0.00	0.0	0
2011-09-26	81	68	74.5	M	0	10	0.00	0.0	0
2011-09-27	83	69	76.0	M	0	11	0.01	0.0	0
2011-09-28	80	69	74.5	M	0	10	0.27	0.0	0
2011-09-29	75	70	72.5	M	0	8	0.07	0.0	0
2011-09-30	77	56	66.5	M	0	2	0.55	0.0	0
Sum	2314	1900	-	-	23	189	7.22	0.0	-
Average	77.1	63.3	70.2	M	-	-	-	-	0.0
Normal	M	M	M	-	M	M	4.08	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 8am, 9am, 10am, 7am
Min Temperature : 8am, 9am, 10am, 7am
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - October 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-10-01	76	58	67.0	M	0	2	0.22	0.0	0
2011-10-02	66	51	58.5	M	6	0	0.17	0.0	0
2011-10-03	63	50	56.5	M	8	0	T	0.0	0
2011-10-04	62	47	54.5	M	10	0	0.03	0.0	0
2011-10-05	66	52	59.0	M	6	0	T	0.0	0
2011-10-06	71	44	57.5	M	7	0	0.00	0.0	0
2011-10-07	64	43	53.5	M	11	0	0.00	0.0	0
2011-10-08	63	48	55.5	M	9	0	0.00	0.0	0
2011-10-09	72	49	60.5	M	4	0	0.00	0.0	0
2011-10-10	78	53	65.5	M	0	1	0.00	0.0	0
2011-10-11	77	56	66.5	M	0	2	0.00	0.0	0
2011-10-12	75	61	68.0	M	0	3	T	0.0	0
2011-10-13	64	58	61.0	M	4	0	0.29	0.0	0
2011-10-14	69	60	64.5	M	0	0	0.61	0.0	0
2011-10-15	75	52	63.5	M	1	0	0.15	0.0	0
2011-10-16	66	50	58.0	M	7	0	0.00	0.0	0
2011-10-17	66	57	61.5	M	3	0	0.01	0.0	0
2011-10-18	65	49	57.0	M	8	0	0.01	0.0	0
2011-10-19	68	53	60.5	M	4	0	0.22	0.0	0
2011-10-20	68	59	63.5	M	1	0	0.84	0.0	0
2011-10-21	63	50	56.5	M	8	0	0.02	0.0	0
2011-10-22	58	43	50.5	M	14	0	0.00	0.0	0
2011-10-23	58	45	51.5	M	13	0	0.00	0.0	0
2011-10-24	60	42	51.0	M	14	0	0.00	0.0	0
2011-10-25	63	45	54.0	M	11	0	0.00	0.0	0
2011-10-26	62	46	54.0	M	11	0	0.00	0.0	0
2011-10-27	61	49	55.0	M	10	0	0.15	0.0	0
2011-10-28	57	36	46.5	M	18	0	0.42	0.0	0
2011-10-29	50	38	44.0	M	21	0	0.21	0.0	0
2011-10-30	38	32	35.0	M	30	0	1.61	2.5	2
2011-10-31	44	30	37.0	M	28	0	0.00	0.0	0
Sum	1988	1506	-	-	267	8	4.96	2.5	-
Average	64.1	48.6	56.4	M	-	-	-	-	0.1
Normal	M	M	M	-	M	M	4.25	0.1	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 8am, 10am, 7am, 11am, 9am
Min Temperature : 8am, 10am, 7am, 11am, 9am
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - November 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-11-01	54	33	43.5	M	21	0	0.00	0.0	0
2011-11-02	54	33	43.5	M	21	0	0.00	0.0	0
2011-11-03	54	35	44.5	M	20	0	0.00	0.0	0
2011-11-04	59	42	50.5	M	14	0	0.00	0.0	0
2011-11-05	54	36	45.0	M	20	0	0.00	0.0	0
2011-11-06	49	**30**	39.5	M	25	0	0.00	0.0	0
2011-11-07	52	33	42.5	M	22	0	0.00	0.0	0
2011-11-08	59	44	51.5	M	13	0	0.00	0.0	0
2011-11-09	65	40	52.5	M	12	0	0.00	0.0	0
2011-11-10	61	54	57.5	M	7	0	0.00	0.0	0
2011-11-11	64	41	52.5	M	12	0	T	0.0	0
2011-11-12	48	33	40.5	M	24	0	0.00	0.0	0
2011-11-13	54	35	44.5	M	20	0	0.00	0.0	0
2011-11-14	59	44	51.5	M	13	0	0.00	0.0	0
2011-11-15	66	52	59.0	M	6	0	0.00	0.0	0
2011-11-16	64	54	59.0	M	6	0	0.01	0.0	0
2011-11-17	57	45	51.0	M	14	0	0.65	0.0	0
2011-11-18	46	33	39.5	M	25	0	0.00	0.0	0
2011-11-19	44	32	38.0	M	27	0	0.00	0.0	0
2011-11-20	51	36	43.5	M	21	0	0.00	0.0	0
2011-11-21	60	41	50.5	M	14	0	0.00	0.0	0
2011-11-22	55	43	49.0	M	16	0	0.24	0.0	0
2011-11-23	53	46	49.5	M	15	0	**1.91**	0.0	0
2011-11-24	52	34	43.0	M	22	0	0.00	0.0	0
2011-11-25	52	37	44.5	M	20	0	0.00	0.0	0
2011-11-26	59	35	47.0	M	18	0	0.00	0.0	0
2011-11-27	59	35	47.0	M	18	0	0.00	0.0	0
2011-11-28	59	36	47.5	M	17	0	0.00	0.0	0
2011-11-29	67	53	60.0	M	5	0	0.00	0.0	0
2011-11-30	**68**	44	56.0	M	9	0	0.35	0.0	0
Sum	1698	1189	-	-	497	0	3.16	0.0	-
Average	56.6	39.6	48.1	M	-	-	-	-	0.0
Normal	M	M	M	-	M	M	3.22	0.1	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.
Max Temperature : 9am, 7am, 12 noon, 10am, 8am
Min Temperature : 9am, 7am, 12 noon, 10am, 8am
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - December 2011

Date	Precipitation	New Snow	Snow Depth
2011-12-01	0.00	0.0	0
2011-12-02	0.00	0.0	0
2011-12-03	0.00	0.0	0
2011-12-04	0.00	0.0	0
2011-12-05	0.00	0.0	0
2011-12-06	0.00	0.0	0
2011-12-07	0.00	0.0	0
2011-12-08	**1.74**	0.0	0
2011-12-09	0.00	0.0	0
2011-12-10	0.00	0.0	0
2011-12-11	0.00	0.0	0
2011-12-12	0.00	0.0	0
2011-12-13	0.00	0.0	0
2011-12-14	0.00	0.0	0
2011-12-15	0.00	0.0	0
2011-12-16	0.00	0.0	0
2011-12-17	0.00	0.0	0
2011-12-18	0.00	0.0	0
2011-12-19	0.00	0.0	0
2011-12-20	0.00	0.0	0
2011-12-21	0.05	0.0	0
2011-12-22	0.80	0.0	0
2011-12-23	0.80	0.0	0
2011-12-24	0.00	0.0	0
2011-12-25	0.00	0.0	0
2011-12-26	0.00	0.0	0
2011-12-27	0.00	0.0	0
2011-12-28	0.58	0.0	0
2011-12-29	0.00	0.0	0
2011-12-30	0.00	0.0	0
2011-12-31	0.00	0.0	0
Sum	3.97	0.0	-
Average	-	-	0.0
Normal	3.96	3.5	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - December 2011

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2011-12-01	53	36	44.5	3.7	20	0	0.00	0.0	0
2011-12-02	54	28	41.0	0.5	24	0	0.00	0.0	0
2011-12-03	55	28	41.5	1.2	23	0	0.00	0.0	0
2011-12-04	50	28	39.0	-1.0	26	0	0.00	0.0	0
2011-12-05	58	32	45.0	5.3	20	0	0.00	0.0	0
2011-12-06	61	44	52.5	13.1	12	0	T	0.0	0
2011-12-07	62	58	60.0	20.8	5	0	0.18	0.0	0
2011-12-08	61	34	47.5	8.6	17	0	2.52	0.0	0
2011-12-09	47	27	37.0	-1.6	28	0	0.00	0.0	0
2011-12-10	53	27	40.0	1.7	25	0	0.00	0.0	0
2011-12-11	46	21	33.5	-4.6	31	0	0.00	0.0	0
2011-12-12	40	20	30.0	-7.8	35	0	0.00	0.0	0
2011-12-13	45	20	32.5	-5.0	32	0	0.00	0.0	0
2011-12-14	51	26	38.5	1.2	26	0	0.00	0.0	0
2011-12-15	52	36	44.0	7.0	21	0	0.00	0.0	0
2011-12-16	60	46	53.0	16.2	12	0	0.00	0.0	0
2011-12-17	47	30	38.5	2.0	26	0	0.00	0.0	0
2011-12-18	47	22	34.5	-1.8	30	0	0.00	0.0	0
2011-12-19	34	18	26.0	-10.0	39	0	0.00	0.0	0
2011-12-20	49	23	36.0	0.2	29	0	T	0.0	0
2011-12-21	47	38	42.5	6.9	22	0	0.08	0.0	0
2011-12-22	62	43	52.5	17.2	12	0	0.21	0.0	0
2011-12-23	61	44	52.5	17.4	12	0	1.01	0.0	0
2011-12-24	51	29	40.0	5.1	25	0	0.00	0.0	0
2011-12-25	40	23	31.5	-3.1	33	0	0.00	0.0	0
2011-12-26	48	27	37.5	3.1	27	0	0.00	0.0	0
2011-12-27	50	28	39.0	4.8	26	0	0.00	0.0	0
2011-12-28	59	33	46.0	12.0	19	0	0.76	0.0	0
2011-12-29	46	24	35.0	1.2	30	0	0.00	0.0	0
2011-12-30	36	24	30.0	-3.6	35	0	0.00	0.0	0
2011-12-31	54	28	41.0	7.6	24	0	0.00	0.0	0
Sum	1579	945	-	-	746	0	4.76	0.0	-
Average	50.9	30.5	40.7	3.8	-	-	-	-	0.0
Normal	45.4	28.4	36.9	-	871	0	4.49	4.9	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - January 2014

Date	Precipitation	New Snow	Snow Depth
2014-01-01	0.00	M	M
2014-01-02	0.00	M	M
2014-01-03	0.44	6.0	6
2014-01-04	0.00	M	5
2014-01-05	0.00	M	3
2014-01-06	**0.54**	M	M
2014-01-07	0.13	M	M
2014-01-08	0.00	M	M
2014-01-09	0.00	M	M
2014-01-10	0.05	0.3	M
2014-01-11	0.35	M	M
2014-01-12	0.28	M	M
2014-01-13	0.00	M	M
2014-01-14	0.03	M	M
2014-01-15	0.20	M	M
2014-01-16	0.00	M	M
2014-01-17	0.00	M	M
2014-01-18	0.13	T	M
2014-01-19	0.00	M	M
2014-01-20	0.00	M	M
2014-01-21	0.04	0.2	T
2014-01-22	0.38	**7.8**	**8**
2014-01-23	0.00	M	6
2014-01-24	0.00	M	6
2014-01-25	0.00	M	5
2014-01-26	0.08	1.0	6
2014-01-27	0.00	M	4
2014-01-28	0.00	M	2
2014-01-29	0.05	1.0	3
2014-01-30	0.00	M	2
2014-01-31	0.00	M	2
Sum	2.70	16.3	-
Average	-	-	4.1
Normal	3.36	6.8	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - January 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-01-01	33	17	25.0	-8.2	40	0	0.00	0.0	0
2014-01-02	34	22	28.0	-5.0	37	0	0.00	0.0	0
2014-01-03	29	12	20.5	-12.4	44	0	**0.52**	7.9	8
2014-01-04	19	**-1**	9.0	-23.7	56	0	T	T	6
2014-01-05	28	3	15.5	-17.0	49	0	T	T	6
2014-01-06	58	21	39.5	7.1	25	0	0.30	T	1
2014-01-07	57	2	29.5	-2.7	35	0	0.27	0.0	0
2014-01-08	10	3	6.5	-25.6	58	0	0.00	0.0	0
2014-01-09	23	10	16.5	-15.5	48	0	0.00	0.0	0
2014-01-10	35	19	27.0	-4.8	38	0	T	0.1	0
2014-01-11	55	27	41.0	9.3	24	0	0.33	0.0	0
2014-01-12	**63**	40	51.5	19.9	13	0	**0.52**	0.0	0
2014-01-13	47	25	36.0	4.5	29	0	0.00	0.0	0
2014-01-14	60	26	43.0	11.6	22	0	T	0.0	0
2014-01-15	47	31	39.0	7.7	26	0	0.34	0.0	0
2014-01-16	53	32	42.5	11.3	22	0	0.00	0.0	0
2014-01-17	39	21	30.0	-1.2	35	0	T	0.0	0
2014-01-18	46	22	34.0	2.9	31	0	T	T	0
2014-01-19	38	21	29.5	-1.6	35	0	0.07	0.0	0
2014-01-20	38	21	29.5	-1.5	35	0	0.00	0.0	0
2014-01-21	48	23	35.5	4.5	29	0	0.00	0.0	0
2014-01-22	23	2	12.5	-18.5	52	0	0.41	**10.5**	**9**
2014-01-23	18	1	9.5	-21.5	55	0	0.00	0.0	8
2014-01-24	22	4	13.0	-18.0	52	0	0.00	0.0	6
2014-01-25	20	5	12.5	-18.5	52	0	0.00	0.0	5
2014-01-26	20	10	15.0	-16.0	50	0	0.06	1.5	6
2014-01-27	29	14	21.5	-9.5	43	0	0.00	0.0	5
2014-01-28	46	11	28.5	-2.6	36	0	0.00	0.0	2
2014-01-29	20	10	15.0	-16.1	50	0	0.04	0.5	2
2014-01-30	23	4	13.5	-17.7	51	0	0.00	0.0	2
2014-01-31	31	13	22.0	-9.3	43	0	0.00	0.0	2
Sum	1112	471	-	-	1215	0	2.86	20.5	-
Average	35.9	15.2	25.5	-6.1	-	-	-	-	2.2
Normal	40.3	22.9	31.6	-	1035	0	3.74	8.3	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - February 2014

Date	Precipitation	New Snow	Snow Depth
2014-02-01	0.00	M	2
2014-02-02	0.00	M	2
2014-02-03	0.63	2.0	4
2014-02-04	0.35	3.0	7
2014-02-05	**1.43**	1.0	8
2014-02-06	0.08	M	7
2014-02-07	0.00	M	7
2014-02-08	0.00	M	5
2014-02-09	0.00	M	4
2014-02-10	0.15	2.0	6
2014-02-11	0.00	M	6
2014-02-12	0.00	M	6
2014-02-13	0.68	**10.0**	**16**
2014-02-14	0.85	M	15
2014-02-15	0.00	M	13
2014-02-16	0.11	M	12
2014-02-17	0.00	M	11
2014-02-18	0.11	2.0	13
2014-02-19	0.00	M	12
2014-02-20	0.00	M	10
2014-02-21	0.20	M	8
2014-02-22	0.18	M	8
2014-02-23	0.00	M	7
2014-02-24	0.00	M	6
2014-02-25	0.00	M	6
2014-02-26	0.00	M	6
2014-02-27	0.06	T	6
2014-02-28	0.00	M	5
Sum	4.83	20.0	-
Average	-	-	7.8
Normal	2.71	6.7	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snow Depth : unknown
Snowfall : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - February 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-02-01	41	21	31.0	-0.3	34	0	0.00	0.0	2
2014-02-02	47	24	35.5	4.1	29	0	0.00	0.0	2
2014-02-03	56	31	43.5	12.0	21	0	0.61	2.9	4
2014-02-04	33	12	22.5	-9.1	42	0	0.67	5.1	9
2014-02-05	39	13	26.0	-5.7	39	0	1.09	1.3	8
2014-02-06	35	20	27.5	-4.4	37	0	0.35	0.0	6
2014-02-07	32	18	25.0	-7.0	40	0	0.00	0.0	6
2014-02-08	34	15	24.5	-7.6	40	0	0.00	0.0	5
2014-02-09	29	18	23.5	-8.8	41	0	0.00	0.0	5
2014-02-10	33	18	25.5	-6.9	39	0	0.12	1.5	7
2014-02-11	32	8	20.0	-12.6	45	0	0.00	0.0	7
2014-02-12	28	2	15.0	-17.8	50	0	0.00	0.0	6
2014-02-13	30	8	19.0	-13.9	46	0	0.37	5.9	12
2014-02-14	34	29	31.5	-1.6	33	0	1.15	4.7	13
2014-02-15	42	26	34.0	0.7	31	0	0.00	0.0	8
2014-02-16	37	18	27.5	-6.0	37	0	0.15	1.9	10
2014-02-17	31	15	23.0	-10.7	42	0	0.00	0.0	9
2014-02-18	37	15	26.0	-7.9	39	0	0.14	1.7	8
2014-02-19	43	23	33.0	-1.1	32	0	0.00	0.0	8
2014-02-20	46	26	36.0	1.7	29	0	0.27	0.0	8
2014-02-21	54	28	41.0	6.5	24	0	0.02	0.0	8
2014-02-22	45	29	37.0	2.3	28	0	0.18	0.0	8
2014-02-23	56	28	42.0	7.0	23	0	0.00	0.0	7
2014-02-24	58	35	46.5	11.3	18	0	0.02	0.0	5
2014-02-25	38	18	28.0	-7.4	37	0	0.00	0.0	3
2014-02-26	34	22	28.0	-7.7	37	0	T	T	3
2014-02-27	35	6	20.5	-15.4	44	0	0.05	1.7	3
2014-02-28	34	7	20.5	-15.7	44	0	0.00	0.0	3
Sum	1093	533	-	-	1001	0	5.19	26.7	-
Average	39.0	19.0	29.0	-4.4	-	-	-	-	6.5
Normal	42.8	24.0	33.4	-	885	0	2.97	9.3	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - March 2014

Date	Precipitation	New Snow	Snow Depth
2014-03-01	0.00	0.0	**5**
2014-03-02	0.00	0.0	3
2014-03-03	0.02	**1.0**	4
2014-03-04	0.00	0.0	4
2014-03-05	0.00	0.0	4
2014-03-06	0.00	0.0	4
2014-03-07	0.00	0.0	4
2014-03-08	0.00	0.0	4
2014-03-09	0.00	0.0	3
2014-03-10	0.00	0.0	0
2014-03-11	0.00	0.0	0
2014-03-12	0.00	0.0	0
2014-03-13	0.15	0.0	0
2014-03-14	0.00	0.0	0
2014-03-15	0.00	0.0	0
2014-03-16	0.00	0.0	0
2014-03-17	0.00	0.0	0
2014-03-18	0.00	0.0	0
2014-03-19	0.00	0.0	0
2014-03-20	0.76	0.0	0
2014-03-21	0.00	0.0	0
2014-03-22	0.00	0.0	0
2014-03-23	0.00	0.0	0
2014-03-24	0.00	0.0	0
2014-03-25	0.00	0.0	0
2014-03-26	0.00	0.0	0
2014-03-27	0.00	0.0	0
2014-03-28	0.00	0.0	0
2014-03-29	0.03	0.0	0
2014-03-30	**2.12**	0.0	0
2014-03-31	0.77	0.0	0
Sum	3.85	1.0	-
Average	-	-	1.1
Normal	4.09	3.6	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - March 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-03-01	24	8	16.0	-20.4	49	0	T	T	3
2014-03-02	40	19	29.5	-7.2	35	0	0.00	0.0	3
2014-03-03	41	19	30.0	-6.9	35	0	0.04	0.1	3
2014-03-04	22	10	16.0	-21.2	49	0	0.00	0.0	3
2014-03-05	31	14	22.5	-14.9	42	0	0.00	0.0	1
2014-03-06	43	15	29.0	-8.7	36	0	0.00	0.0	1
2014-03-07	31	16	23.5	-14.5	41	0	0.00	0.0	1
2014-03-08	38	28	33.0	-5.3	32	0	0.00	0.0	1
2014-03-09	58	36	47.0	8.5	18	0	T	0.0	T
2014-03-10	45	36	40.5	1.7	24	0	0.00	0.0	T
2014-03-11	54	33	43.5	4.4	21	0	0.00	0.0	0
2014-03-12	68	34	51.0	11.6	14	0	0.00	0.0	0
2014-03-13	69	18	43.5	3.8	21	0	0.25	0.0	0
2014-03-14	30	16	23.0	-17.0	42	0	0.00	0.0	0
2014-03-15	49	22	35.5	-4.8	29	0	0.00	0.0	0
2014-03-16	61	30	45.5	4.9	19	0	0.00	0.0	0
2014-03-17	40	22	31.0	-9.9	34	0	T	T	T
2014-03-18	34	23	28.5	-12.8	36	0	0.00	0.0	0
2014-03-19	43	27	35.0	-6.6	30	0	0.00	0.0	0
2014-03-20	43	34	38.5	-3.4	26	0	0.81	0.0	0
2014-03-21	55	34	44.5	2.3	20	0	0.00	0.0	0
2014-03-22	53	30	41.5	-1.1	23	0	0.00	0.0	0
2014-03-23	66	36	51.0	8.1	14	0	0.00	0.0	0
2014-03-24	46	19	32.5	-10.8	32	0	0.00	0.0	0
2014-03-25	36	17	26.5	-17.1	38	0	0.00	0.0	0
2014-03-26	40	24	32.0	-12.0	33	0	T	T	0
2014-03-27	38	18	28.0	-16.3	37	0	0.00	0.0	0
2014-03-28	45	19	32.0	-12.7	33	0	0.00	0.0	0
2014-03-29	63	37	50.0	4.9	15	0	0.04	0.0	0
2014-03-30	49	44	46.5	1.1	18	0	2.64	0.0	0
2014-03-31	46	35	40.5	-5.3	24	0	0.73	0.0	0
Sum	1401	773	-	-	920	0	4.51	0.1	-
Average	45.2	24.9	35.1	-5.7	-	-	-	-	0.5
Normal	50.6	31.0	40.8	-	751	0	4.40	5.2	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - April 2014

Date	Precipitation	New Snow	Snow Depth
2014-04-01	0.00	0.0	0
2014-04-02	0.00	0.0	0
2014-04-03	0.02	0.0	0
2014-04-04	0.23	0.0	0
2014-04-05	0.13	0.0	0
2014-04-06	0.00	0.0	0
2014-04-07	0.00	0.0	0
2014-04-08	0.40	0.0	0
2014-04-09	0.00	0.0	0
2014-04-10	0.00	0.0	0
2014-04-11	0.00	0.0	0
2014-04-12	0.00	0.0	0
2014-04-13	0.00	0.0	0
2014-04-14	0.00	0.0	0
2014-04-15	0.00	0.0	0
2014-04-16	**0.83**	0.0	0
2014-04-17	0.00	0.0	0
2014-04-18	0.00	0.0	0
2014-04-19	0.00	0.0	0
2014-04-20	0.00	0.0	0
2014-04-21	0.00	0.0	0
2014-04-22	0.00	0.0	0
2014-04-23	0.00	0.0	0
2014-04-24	0.00	0.0	0
2014-04-25	0.00	0.0	0
2014-04-26	0.40	0.0	0
2014-04-27	0.00	0.0	0
2014-04-28	0.00	0.0	0
2014-04-29	0.00	0.0	0
2014-04-30	0.75	0.0	0
Sum	2.76	0.0	-
Average	-	-	0.0
Normal	3.77	0.2	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - April 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-04-01	56	32	44.0	-2.2	21	0	0.00	0.0	0
2014-04-02	60	35	47.5	0.9	17	0	0.00	0.0	0
2014-04-03	54	38	46.0	-1.0	19	0	0.04	0.0	0
2014-04-04	67	41	54.0	6.7	11	0	0.26	0.0	0
2014-04-05	43	39	41.0	-6.7	24	0	0.10	0.0	0
2014-04-06	54	32	43.0	-5.1	22	0	0.00	0.0	0
2014-04-07	61	31	46.0	-2.5	19	0	0.00	0.0	0
2014-04-08	52	36	44.0	-4.9	21	0	0.50	0.0	0
2014-04-09	66	38	52.0	2.7	13	0	0.00	0.0	0
2014-04-10	64	**30**	47.0	-2.7	18	0	0.00	0.0	0
2014-04-11	67	41	54.0	4.0	11	0	0.00	0.0	0
2014-04-12	77	46	61.5	11.1	3	0	0.00	0.0	0
2014-04-13	74	44	59.0	8.2	6	0	0.00	0.0	0
2014-04-14	**83**	58	70.5	19.3	0	6	0.00	0.0	0
2014-04-15	79	62	70.5	18.9	0	6	0.04	0.0	0
2014-04-16	67	**30**	48.5	-3.4	16	0	0.82	**0.2**	**T**
2014-04-17	49	32	40.5	-11.8	24	0	0.00	0.0	0
2014-04-18	49	36	42.5	-10.2	22	0	0.00	0.0	0
2014-04-19	50	34	42.0	-11.1	23	0	0.00	0.0	0
2014-04-20	69	45	57.0	3.6	8	0	0.00	0.0	0
2014-04-21	58	**30**	44.0	-9.8	21	0	0.00	0.0	0
2014-04-22	69	42	55.5	1.4	9	0	0.00	0.0	0
2014-04-23	77	48	62.5	8.0	2	0	T	0.0	0
2014-04-24	61	40	50.5	-4.3	14	0	0.00	0.0	0
2014-04-25	63	35	49.0	-6.1	16	0	0.00	0.0	0
2014-04-26	65	46	55.5	0.0	9	0	0.52	0.0	0
2014-04-27	70	39	54.5	-1.3	10	0	0.02	0.0	0
2014-04-28	62	38	50.0	-6.1	15	0	0.00	0.0	0
2014-04-29	66	46	56.0	-0.4	9	0	0.00	0.0	0
2014-04-30	50	41	45.5	-11.3	19	0	**0.89**	0.0	0
Sum	1882	1185	-	-	422	12	3.19	0.2	-
Average	62.7	39.5	51.1	-0.6	-	-	-	-	0.0
Normal	62.5	40.8	51.7	-	411	10	3.89	0.6	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - May 2014

Date	Precipitation	New Snow	Snow Depth
2014-05-01	3.54	0.0	0
2014-05-02	0.00	0.0	0
2014-05-03	0.00	0.0	0
2014-05-04	0.05	0.0	0
2014-05-05	0.00	0.0	0
2014-05-06	0.00	0.0	0
2014-05-07	0.00	0.0	0
2014-05-08	0.33	0.0	0
2014-05-09	0.11	0.0	0
2014-05-10	0.01	0.0	0
2014-05-11	0.18	0.0	0
2014-05-12	0.00	0.0	0
2014-05-13	0.00	0.0	0
2014-05-14	0.00	0.0	0
2014-05-15	0.02	0.0	0
2014-05-16	0.03	0.0	0
2014-05-17	0.74	0.0	0
2014-05-18	0.01	0.0	0
2014-05-19	0.00	0.0	0
2014-05-20	0.00	0.0	0
2014-05-21	0.00	0.0	0
2014-05-22	0.15	0.0	0
2014-05-23	0.14	0.0	0
2014-05-24	0.11	0.0	0
2014-05-25	0.48	0.0	0
2014-05-26	0.00	0.0	0
2014-05-27	0.00	0.0	0
2014-05-28	0.01	0.0	0
2014-05-29	0.04	0.0	0
2014-05-30	T	0.0	0
2014-05-31	0.00	0.0	0
Sum	5.95	0.0	-
Average	-	-	0.0
Normal	3.93	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - May 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-05-01	65	43	54.0	-3.1	11	0	4.50	0.0	0
2014-05-02	79	54	66.5	9.1	0	2	0.02	0.0	0
2014-05-03	69	43	56.0	-1.7	9	0	0.00	0.0	0
2014-05-04	70	48	59.0	1.0	6	0	0.01	0.0	0
2014-05-05	65	43	54.0	-4.2	11	0	0.00	0.0	0
2014-05-06	69	41	55.0	-3.5	10	0	0.00	0.0	0
2014-05-07	72	40	56.0	-2.8	9	0	0.00	0.0	0
2014-05-08	72	50	61.0	1.9	4	0	0.30	0.0	0
2014-05-09	60	53	56.5	-2.9	8	0	0.26	0.0	0
2014-05-10	62	56	59.0	-0.7	6	0	0.02	0.0	0
2014-05-11	84	56	70.0	10.1	0	5	0.26	0.0	0
2014-05-12	79	51	65.0	4.8	0	0	0.00	0.0	0
2014-05-13	85	59	72.0	11.5	0	7	0.02	0.0	0
2014-05-14	70	50	60.0	-0.8	5	0	0.00	0.0	0
2014-05-15	69	53	61.0	0.0	4	0	T	0.0	0
2014-05-16	78	64	71.0	9.7	0	6	0.00	0.0	0
2014-05-17	72	49	60.5	-1.1	4	0	0.61	0.0	0
2014-05-18	70	43	56.5	-5.4	8	0	0.00	0.0	0
2014-05-19	69	40	54.5	-7.6	10	0	0.00	0.0	0
2014-05-20	73	46	59.5	-2.9	5	0	0.01	0.0	0
2014-05-21	79	59	69.0	6.3	0	4	0.00	0.0	0
2014-05-22	74	60	67.0	4.0	0	2	0.30	0.0	0
2014-05-23	69	57	63.0	-0.3	2	0	0.22	0.0	0
2014-05-24	73	52	62.5	-1.1	2	0	0.09	0.0	0
2014-05-25	70	50	60.0	-3.9	5	0	0.24	0.0	0
2014-05-26	83	52	67.5	3.3	0	3	0.00	0.0	0
2014-05-27	87	60	73.5	9.0	0	9	0.00	0.0	0
2014-05-28	87	58	72.5	7.7	0	8	0.02	0.0	0
2014-05-29	60	52	56.0	-9.1	9	0	0.02	0.0	0
2014-05-30	66	51	58.5	-6.9	6	0	0.00	0.0	0
2014-05-31	79	48	63.5	-2.3	1	0	0.00	0.0	0
Sum	2259	1581	-	-	135	46	6.90	0.0	-
Average	72.9	51.0	61.9	0.6	-	-	-	-	0.0
Normal	72.1	50.6	61.3	-	164	51	4.03	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - June 2014

Date	Precipitation	New Snow	Snow Depth
2014-06-01	0.00	0.0	0
2014-06-02	0.00	0.0	0
2014-06-03	0.00	0.0	0
2014-06-04	0.18	0.0	0
2014-06-05	0.38	0.0	0
2014-06-06	0.11	0.0	0
2014-06-07	0.00	0.0	0
2014-06-08	0.00	0.0	0
2014-06-09	**1.40**	0.0	0
2014-06-10	0.02	0.0	0
2014-06-11	0.04	0.0	0
2014-06-12	0.05	0.0	0
2014-06-13	0.12	0.0	0
2014-06-14	0.36	0.0	0
2014-06-15	0.00	0.0	0
2014-06-16	0.00	0.0	0
2014-06-17	0.00	0.0	0
2014-06-18	0.00	0.0	0
2014-06-19	0.06	0.0	0
2014-06-20	0.00	0.0	0
2014-06-21	0.00	0.0	0
2014-06-22	0.00	0.0	0
2014-06-23	0.05	0.0	0
2014-06-24	0.00	0.0	0
2014-06-25	0.00	0.0	0
2014-06-26	0.73	0.0	0
2014-06-27	0.00	0.0	0
2014-06-28	0.00	0.0	0
2014-06-29	0.00	0.0	0
2014-06-30	0.00	0.0	0
Sum	3.50	0.0	-
Average	-	-	0.0
Normal	4.36	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - June 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-06-01	76	46	61.0	-5.1	4	0	0.00	0.0	0
2014-06-02	78	47	62.5	-3.9	2	0	0.00	0.0	0
2014-06-03	82	58	70.0	3.2	0	5	0.00	0.0	0
2014-06-04	90	61	75.5	8.4	0	11	0.00	0.0	0
2014-06-05	84	61	72.5	5.1	0	8	0.36	0.0	0
2014-06-06	78	57	67.5	-0.3	0	3	0.12	0.0	0
2014-06-07	78	52	65.0	-3.1	0	0	0.00	0.0	0
2014-06-08	84	55	69.5	1.1	0	5	0.00	0.0	0
2014-06-09	85	61	73.0	4.2	0	8	2.13	0.0	0
2014-06-10	71	62	66.5	-2.6	0	2	0.27	0.0	0
2014-06-11	81	62	71.5	2.0	0	7	0.04	0.0	0
2014-06-12	64	59	61.5	-8.3	3	0	0.01	0.0	0
2014-06-13	71	61	66.0	-4.1	0	1	0.10	0.0	0
2014-06-14	84	64	74.0	3.5	0	9	0.26	0.0	0
2014-06-15	77	52	64.5	-6.3	0	0	0.00	0.0	0
2014-06-16	82	54	68.0	-3.1	0	3	0.00	0.0	0
2014-06-17	84	65	74.5	3.0	0	10	0.00	0.0	0
2014-06-18	93	75	84.0	12.2	0	19	0.00	0.0	0
2014-06-19	93	67	80.0	7.9	0	15	0.10	0.0	0
2014-06-20	78	53	65.5	-6.9	0	1	0.06	0.0	0
2014-06-21	82	62	72.0	-0.7	0	7	0.00	0.0	0
2014-06-22	79	57	68.0	-5.0	0	3	0.00	0.0	0
2014-06-23	80	56	68.0	-5.2	0	3	0.00	0.0	0
2014-06-24	84	58	71.0	-2.5	0	6	0.00	0.0	0
2014-06-25	86	67	76.5	2.7	0	12	0.00	0.0	0
2014-06-26	91	67	79.0	5.0	0	14	0.48	0.0	0
2014-06-27	87	66	76.5	2.3	0	12	T	0.0	0
2014-06-28	83	57	70.0	-4.5	0	5	0.00	0.0	0
2014-06-29	87	58	72.5	-2.2	0	8	0.00	0.0	0
2014-06-30	86	60	73.0	-1.9	0	8	0.00	0.0	0
Sum	2458	1780	-	-	9	185	3.93	0.0	-
Average	81.9	59.3	70.6	-0.2	-	-	-	-	0.0
Normal	81.2	60.4	70.8	-	24	197	4.83	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - July 2014

Date	Precipitation	New Snow	Snow Depth
2014-07-01	0.00	0.0	0
2014-07-02	0.00	0.0	0
2014-07-03	**1.84**	0.0	0
2014-07-04	1.08	0.0	0
2014-07-05	0.08	0.0	0
2014-07-06	0.00	0.0	0
2014-07-07	0.00	0.0	0
2014-07-08	0.04	0.0	0
2014-07-09	T	0.0	0
2014-07-10	0.04	0.0	0
2014-07-11	0.00	0.0	0
2014-07-12	0.00	0.0	0
2014-07-13	0.05	0.0	0
2014-07-14	1.55	0.0	0
2014-07-15	1.11	0.0	0
2014-07-16	0.94	0.0	0
2014-07-17	0.01	0.0	0
2014-07-18	0.00	0.0	0
2014-07-19	0.00	0.0	0
2014-07-20	0.00	0.0	0
2014-07-21	0.00	0.0	0
2014-07-22	0.00	0.0	0
2014-07-23	0.00	0.0	0
2014-07-24	0.53	0.0	0
2014-07-25	0.00	0.0	0
2014-07-26	0.00	0.0	0
2014-07-27	0.00	0.0	0
2014-07-28	0.66	0.0	0
2014-07-29	T	0.0	0
2014-07-30	0.00	0.0	0
2014-07-31	0.00	0.0	0
Sum	7.93	0.0	-
Average	-	-	0.0
Normal	5.01	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - July 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-07-01	88	69	78.5	3.4	0	14	0.00	0.0	0
2014-07-02	92	72	82.0	6.8	0	17	0.00	0.0	0
2014-07-03	95	70	82.5	7.1	0	18	1.81	0.0	0
2014-07-04	92	69	80.5	5.0	0	16	0.44	0.0	0
2014-07-05	74	58	66.0	-9.7	0	1	T	0.0	0
2014-07-06	83	55	69.0	-6.8	0	4	0.00	0.0	0
2014-07-07	85	68	76.5	0.6	0	12	0.00	0.0	0
2014-07-08	91	69	80.0	4.0	0	15	0.00	0.0	0
2014-07-09	93	66	79.5	3.4	0	15	0.11	0.0	0
2014-07-10	89	67	78.0	1.8	0	13	0.00	0.0	0
2014-07-11	84	65	74.5	-1.7	0	10	0.00	0.0	0
2014-07-12	87	62	74.5	-1.8	0	10	0.00	0.0	0
2014-07-13	88	69	78.5	2.2	0	14	0.00	0.0	0
2014-07-14	88	69	78.5	2.1	0	14	0.79	0.0	0
2014-07-15	88	72	80.0	3.6	0	15	2.59	0.0	0
2014-07-16	88	65	76.5	0.1	0	12	0.97	0.0	0
2014-07-17	84	60	72.0	-4.4	0	7	0.00	0.0	0
2014-07-18	84	56	70.0	-6.4	0	5	0.00	0.0	0
2014-07-19	83	62	72.5	-3.9	0	8	0.00	0.0	0
2014-07-20	78	65	71.5	-4.9	0	7	T	0.0	0
2014-07-21	78	60	69.0	-7.3	0	4	0.00	0.0	0
2014-07-22	85	61	73.0	-3.3	0	8	0.00	0.0	0
2014-07-23	87	66	76.5	0.2	0	12	0.00	0.0	0
2014-07-24	90	67	78.5	2.3	0	14	0.10	0.0	0
2014-07-25	84	59	71.5	-4.7	0	7	0.00	0.0	0
2014-07-26	84	61	72.5	-3.6	0	8	0.00	0.0	0
2014-07-27	81	67	74.0	-2.1	0	9	T	0.0	0
2014-07-28	88	66	77.0	1.0	0	12	0.34	0.0	0
2014-07-29	83	58	70.5	-5.4	0	6	0.00	0.0	0
2014-07-30	78	54	66.0	-9.9	0	1	0.00	0.0	0
2014-07-31	81	56	68.5	-7.3	0	4	0.00	0.0	0
Sum	2653	1983	-	-	0	312	7.15	0.0	-
Average	85.6	64.0	74.8	-1.3	-	-	-	-	0.0
Normal	86.5	65.6	76.1	-	1	343	4.83	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - August 2014

Date	Precipitation	New Snow	Snow Depth
2014-08-01	0.00	0.0	0
2014-08-02	0.87	0.0	0
2014-08-03	0.10	0.0	0
2014-08-04	0.00	0.0	0
2014-08-05	0.00	0.0	0
2014-08-06	0.00	0.0	0
2014-08-07	0.00	0.0	0
2014-08-08	0.00	0.0	0
2014-08-09	0.00	0.0	0
2014-08-10	0.00	0.0	0
2014-08-11	0.00	0.0	0
2014-08-12	0.00	0.0	0
2014-08-13	0.38	0.0	0
2014-08-14	0.00	0.0	0
2014-08-15	0.00	0.0	0
2014-08-16	0.00	0.0	0
2014-08-17	0.00	0.0	0
2014-08-18	0.01	0.0	0
2014-08-19	0.00	0.0	0
2014-08-20	0.00	0.0	0
2014-08-21	0.09	0.0	0
2014-08-22	**1.93**	0.0	0
2014-08-23	0.01	0.0	0
2014-08-24	0.08	0.0	0
2014-08-25	0.00	0.0	0
2014-08-26	0.00	0.0	0
2014-08-27	0.00	0.0	0
2014-08-28	0.00	0.0	0
2014-08-29	0.00	0.0	0
2014-08-30	0.00	0.0	0
2014-08-31	0.00	0.0	0
Sum	3.47	0.0	-
Average	-	-	0.0
Normal	4.82	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - August 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-08-01	84	65	74.5	-1.2	0	10	0.00	0.0	0
2014-08-02	84	64	74.0	-1.7	0	9	0.55	0.0	0
2014-08-03	76	64	70.0	-5.6	0	5	0.14	0.0	0
2014-08-04	78	65	71.5	-4.0	0	7	T	0.0	0
2014-08-05	85	62	73.5	-1.9	0	9	0.00	0.0	0
2014-08-06	90	65	77.5	2.1	0	13	0.00	0.0	0
2014-08-07	84	56	70.0	-5.3	0	5	0.00	0.0	0
2014-08-08	84	56	70.0	-5.2	0	5	0.00	0.0	0
2014-08-09	83	56	69.5	-5.6	0	5	0.00	0.0	0
2014-08-10	86	57	71.5	-3.6	0	7	0.00	0.0	0
2014-08-11	87	59	73.0	-2.0	0	8	0.00	0.0	0
2014-08-12	86	67	76.5	1.6	0	12	0.00	0.0	0
2014-08-13	79	67	73.0	-1.8	0	8	**0.70**	0.0	0
2014-08-14	85	58	71.5	-3.2	0	7	T	0.0	0
2014-08-15	80	53	66.5	-8.1	0	2	0.00	0.0	0
2014-08-16	74	51	62.5	-12.0	2	0	0.00	0.0	0
2014-08-17	80	58	69.0	-5.4	0	4	T	0.0	0
2014-08-18	84	53	68.5	-5.8	0	4	0.02	0.0	0
2014-08-19	84	56	70.0	-4.2	0	5	0.00	0.0	0
2014-08-20	83	62	72.5	-1.6	0	8	0.00	0.0	0
2014-08-21	84	64	74.0	0.0	0	9	0.00	0.0	0
2014-08-22	84	62	73.0	-0.8	0	8	0.44	0.0	0
2014-08-23	77	64	70.5	-3.2	0	6	0.01	0.0	0
2014-08-24	73	57	65.0	-8.6	0	0	0.02	0.0	0
2014-08-25	81	54	67.5	-5.9	0	3	0.00	0.0	0
2014-08-26	87	59	73.0	-0.2	0	8	0.00	0.0	0
2014-08-27	88	60	74.0	0.9	0	9	0.00	0.0	0
2014-08-28	**91**	66	78.5	5.6	0	14	0.00	0.0	0
2014-08-29	81	**50**	65.5	-7.2	0	1	0.00	0.0	0
2014-08-30	79	52	65.5	-7.0	0	1	0.00	0.0	0
2014-08-31	78	67	72.5	0.2	0	8	0.00	0.0	0
Sum	2559	1849	-	-	2	200	1.88	0.0	-
Average	82.5	59.6	71.1	-3.2	-	-	-	-	0.0
Normal	84.7	64.0	74.3	-	2	292	4.66	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - September 2014

Date	Precipitation	New Snow	Snow Depth
2014-09-01	0.11	0.0	0
2014-09-02	0.02	0.0	0
2014-09-03	0.00	0.0	0
2014-09-04	0.00	0.0	0
2014-09-05	0.00	0.0	0
2014-09-06	0.00	0.0	0
2014-09-07	**0.31**	0.0	0
2014-09-08	0.00	0.0	0
2014-09-09	0.00	0.0	0
2014-09-10	0.00	0.0	0
2014-09-11	0.01	0.0	0
2014-09-12	0.00	0.0	0
2014-09-13	0.00	0.0	0
2014-09-14	0.10	0.0	0
2014-09-15	0.00	0.0	0
2014-09-16	0.28	0.0	0
2014-09-17	0.00	0.0	0
2014-09-18	0.00	0.0	0
2014-09-19	0.00	0.0	0
2014-09-20	0.00	0.0	0
2014-09-21	0.00	0.0	0
2014-09-22	0.01	0.0	0
2014-09-23	0.00	0.0	0
2014-09-24	0.00	0.0	0
2014-09-25	0.29	0.0	0
2014-09-26	0.10	0.0	0
2014-09-27	0.00	0.0	0
2014-09-28	0.00	0.0	0
2014-09-29	0.00	0.0	0
2014-09-30	0.00	0.0	0
Sum	1.23	0.0	-
Average	-	-	0.0
Normal	4.08	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - September 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-09-01	92	71	81.5	9.4	0	17	0.03	0.0	0
2014-09-02	90	71	80.5	8.6	0	16	0.00	0.0	0
2014-09-03	93	65	79.0	7.4	0	14	0.00	0.0	0
2014-09-04	87	58	72.5	1.1	0	8	0.00	0.0	0
2014-09-05	89	65	77.0	5.9	0	12	0.00	0.0	0
2014-09-06	91	71	81.0	10.1	0	16	0.00	0.0	0
2014-09-07	94	62	78.0	7.4	0	13	0.46	0.0	0
2014-09-08	82	60	71.0	0.7	0	6	T	0.0	0
2014-09-09	77	64	70.5	0.5	0	6	0.00	0.0	0
2014-09-10	76	63	69.5	-0.2	0	5	0.00	0.0	0
2014-09-11	80	60	70.0	0.7	0	5	T	0.0	0
2014-09-12	85	57	71.0	2.0	0	6	0.00	0.0	0
2014-09-13	80	57	68.5	-0.2	0	4	0.00	0.0	0
2014-09-14	69	47	58.0	-10.3	7	0	0.18	0.0	0
2014-09-15	72	44	58.0	-9.9	7	0	0.00	0.0	0
2014-09-16	75	51	63.0	-4.6	2	0	0.11	0.0	0
2014-09-17	71	45	58.0	-9.2	7	0	0.08	0.0	0
2014-09-18	75	46	60.5	-6.3	4	0	0.00	0.0	0
2014-09-19	79	53	66.0	-0.4	0	1	0.00	0.0	0
2014-09-20	68	51	59.5	-6.5	5	0	0.00	0.0	0
2014-09-21	77	56	66.5	0.9	0	2	T	0.0	0
2014-09-22	77	58	67.5	2.3	0	3	0.00	0.0	0
2014-09-23	72	42	57.0	-7.8	8	0	0.00	0.0	0
2014-09-24	73	46	59.5	-4.8	5	0	0.00	0.0	0
2014-09-25	71	51	61.0	-2.9	4	0	0.22	0.0	0
2014-09-26	62	48	55.0	-8.5	10	0	0.15	0.0	0
2014-09-27	79	49	64.0	0.9	1	0	T	0.0	0
2014-09-28	86	52	69.0	6.4	0	4	0.00	0.0	0
2014-09-29	86	56	71.0	8.8	0	6	0.00	0.0	0
2014-09-30	79	59	69.0	7.2	0	4	0.00	0.0	0
Sum	2387	1678	-	-	60	148	1.23	0.0	-
Average	79.6	55.9	67.8	0.4	-	-	-	-	0.0
Normal	78.4	56.5	67.4	-	54	128	4.18	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - October 2014

Date	Precipitation	New Snow	Snow Depth
2014-10-01	0.00	0.0	0
2014-10-02	0.00	0.0	0
2014-10-03	0.00	0.0	0
2014-10-04	0.37	0.0	0
2014-10-05	0.05	0.0	0
2014-10-06	0.00	0.0	0
2014-10-07	0.02	0.0	0
2014-10-08	0.40	0.0	0
2014-10-09	0.01	0.0	0
2014-10-10	0.00	0.0	0
2014-10-11	0.31	0.0	0
2014-10-12	0.11	0.0	0
2014-10-13	0.00	0.0	0
2014-10-14	0.03	0.0	0
2014-10-15	0.00	0.0	0
2014-10-16	1.47	0.0	0
2014-10-17	0.01	0.0	0
2014-10-18	0.00	0.0	0
2014-10-19	0.00	0.0	0
2014-10-20	0.00	0.0	0
2014-10-21	0.00	0.0	0
2014-10-22	0.18	0.0	0
2014-10-23	0.51	0.0	0
2014-10-24	0.15	0.0	0
2014-10-25	0.00	0.0	0
2014-10-26	0.00	0.0	0
2014-10-27	0.00	0.0	0
2014-10-28	0.00	0.0	0
2014-10-29	0.00	0.0	0
2014-10-30	0.07	0.0	0
2014-10-31	0.00	0.0	0

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - October 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-10-01	77	60	68.5	7.2	0	4	0.00	0.0	0
2014-10-02	66	59	62.5	1.6	2	0	T	0.0	0
2014-10-03	70	55	62.5	2.0	2	0	0.00	0.0	0
2014-10-04	72	56	64.0	4.0	1	0	0.10	0.0	0
2014-10-05	72	39	55.5	-4.1	9	0	0.39	0.0	0
2014-10-06	62	37	49.5	-9.7	15	0	0.00	0.0	0
2014-10-07	73	44	58.5	-0.3	6	0	0.00	0.0	0
2014-10-08	71	61	66.0	7.7	0	1	0.22	0.0	0
2014-10-09	76	43	59.5	1.6	5	0	0.00	0.0	0
2014-10-10	73	40	56.5	-1.0	8	0	0.00	0.0	0
2014-10-11	66	51	58.5	1.4	6	0	0.48	0.0	0
2014-10-12	54	37	45.5	-11.2	19	0	0.18	0.0	0
2014-10-13	65	41	53.0	-3.3	12	0	0.00	0.0	0
2014-10-14	64	51	57.5	1.6	7	0	0.02	0.0	0
2014-10-15	**80**	62	71.0	15.5	0	6	T	0.0	0
2014-10-16	79	65	72.0	16.8	0	7	**1.25**	0.0	0
2014-10-17	72	55	63.5	8.7	1	0	T	0.0	0
2014-10-18	74	51	62.5	8.1	2	0	0.00	0.0	0
2014-10-19	72	48	60.0	6.0	5	0	0.00	0.0	0
2014-10-20	56	**31**	43.5	-10.2	21	0	0.00	0.0	0
2014-10-21	63	34	48.5	-4.8	16	0	0.00	0.0	0
2014-10-22	70	48	59.0	6.0	6	0	0.31	0.0	0
2014-10-23	55	50	52.5	-0.1	12	0	0.92	0.0	0
2014-10-24	54	50	52.0	-0.3	13	0	0.22	0.0	0
2014-10-25	70	39	54.5	2.5	10	0	0.02	0.0	0
2014-10-26	70	43	56.5	4.9	8	0	0.00	0.0	0
2014-10-27	65	40	52.5	1.2	12	0	0.00	0.0	0
2014-10-28	65	40	52.5	1.5	12	0	0.00	0.0	0
2014-10-29	74	42	58.0	7.4	7	0	0.00	0.0	0
2014-10-30	72	44	58.0	7.7	7	0	0.02	0.0	0
2014-10-31	61	32	46.5	-3.5	18	0	0.00	0.0	0
Sum	2113	1448	-	-	242	18	4.13	0.0	-
Average	68.2	46.7	57.4	2.0	-	-	-	-	0.0
Normal	66.5	44.2	55.4	-	314	15	4.11	0.2	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - November 2014

Date	Precipitation	New Snow	Snow Depth
2014-11-01	0.36	0.0	0
2014-11-02	0.24	0.0	0
2014-11-03	0.01	0.0	0
2014-11-04	0.00	0.0	0
2014-11-05	0.00	0.0	0
2014-11-06	0.22	0.0	0
2014-11-07	0.24	0.0	0
2014-11-08	0.03	0.0	0
2014-11-09	0.00	0.0	0
2014-11-10	0.00	0.0	0
2014-11-11	0.00	0.0	0
2014-11-12	0.00	0.0	0
2014-11-13	0.00	0.0	0
2014-11-14	0.28	0.0	0
2014-11-15	0.00	0.0	0
2014-11-16	0.00	0.0	0
2014-11-17	0.49	0.0	0
2014-11-18	**0.92**	0.0	0
2014-11-19	0.00	0.0	0
2014-11-20	0.00	0.0	0
2014-11-21	0.00	0.0	0
2014-11-22	0.00	0.0	0
2014-11-23	0.00	0.0	0
2014-11-24	0.45	0.0	0
2014-11-25	0.00	0.0	0
2014-11-26	0.30	0.0	0
2014-11-27	0.81	**T**	0
2014-11-28	0.06	0.0	0
2014-11-29	0.00	0.0	0
2014-11-30	0.00	0.0	0
Sum	4.41	T	-
Average	-	-	0.0
Normal	3.22	0.1	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - November 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-11-01	52	38	45.0	-4.7	20	0	0.33	0.0	0
2014-11-02	47	41	44.0	-5.4	21	0	0.45	0.0	0
2014-11-03	49	33	41.0	-8.1	24	0	0.00	0.0	0
2014-11-04	61	41	51.0	2.2	14	0	0.00	0.0	0
2014-11-05	71	49	60.0	11.5	5	0	0.00	0.0	0
2014-11-06	66	45	55.5	7.3	9	0	0.12	0.0	0
2014-11-07	51	42	46.5	-1.4	18	0	0.28	0.0	0
2014-11-08	55	29	42.0	-5.6	23	0	0.00	0.0	0
2014-11-09	50	38	44.0	-3.3	21	0	0.00	0.0	0
2014-11-10	58	30	44.0	-3.0	21	0	0.00	0.0	0
2014-11-11	64	35	49.5	2.8	15	0	0.00	0.0	0
2014-11-12	71	44	57.5	11.1	7	0	0.00	0.0	0
2014-11-13	69	34	51.5	5.4	13	0	0.00	0.0	0
2014-11-14	48	33	40.5	-5.3	24	0	0.26	T	0
2014-11-15	45	24	34.5	-11.0	30	0	0.00	0.0	0
2014-11-16	44	23	33.5	-11.7	31	0	0.00	0.0	0
2014-11-17	43	30	36.5	-8.4	28	0	0.40	0.0	0
2014-11-18	46	25	35.5	-9.1	29	0	1.06	0.0	0
2014-11-19	33	19	26.0	-18.3	39	0	0.00	0.0	0
2014-11-20	34	19	26.5	-17.5	38	0	0.00	0.0	0
2014-11-21	49	25	37.0	-6.7	28	0	0.00	0.0	0
2014-11-22	38	**17**	27.5	-15.9	37	0	0.00	0.0	0
2014-11-23	43	25	34.0	-9.1	31	0	0.00	0.0	0
2014-11-24	63	38	50.5	7.7	14	0	0.35	0.0	0
2014-11-25	**73**	57	65.0	22.4	0	0	0.00	0.0	0
2014-11-26	58	41	49.5	7.2	15	0	0.03	0.0	0
2014-11-27	42	32	37.0	-5.0	28	0	**1.28**	**0.5**	**1**
2014-11-28	36	25	30.5	-11.2	34	0	0.03	T	T
2014-11-29	39	18	28.5	-12.9	36	0	0.00	0.0	0
2014-11-30	44	21	32.5	-8.6	32	0	0.00	0.0	0
Sum	1542	971	-	-	685	0	4.59	0.5	-
Average	51.4	32.4	41.9	-3.5	-	-	-	-	0.0
Normal	55.5	35.2	45.4	-	590	0	3.40	0.5	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for BOUND BROOK 2W, NJ - December 2014

Date	Precipitation	New Snow	Snow Depth
2014-12-01	0.00	0.0	0
2014-12-02	0.08	0.0	0
2014-12-03	0.19	0.0	0
2014-12-04	0.08	0.0	0
2014-12-05	0.00	0.0	0
2014-12-06	0.44	0.0	0
2014-12-07	0.91	0.0	0
2014-12-08	0.00	0.0	0
2014-12-09	1.00	0.0	0
2014-12-10	0.08	0.0	0
2014-12-11	0.02	T	0
2014-12-12	0.02	0.0	0
2014-12-13	0.00	0.0	0
2014-12-14	0.00	0.0	0
2014-12-15	0.00	0.0	0
2014-12-16	0.00	0.0	0
2014-12-17	0.17	0.0	0
2014-12-18	0.00	0.0	0
2014-12-19	0.00	0.0	0
2014-12-20	0.00	0.0	0
2014-12-21	0.00	0.0	0
2014-12-22	0.00	0.0	0
2014-12-23	0.22	0.0	0
2014-12-24	0.11	0.0	0
2014-12-25	0.81	0.0	0
2014-12-26	0.00	0.0	0
2014-12-27	0.00	0.0	0
2014-12-28	0.04	0.0	0
2014-12-29	0.00	0.0	0
2014-12-30	0.00	0.0	0
2014-12-31	0.00	0.0	0

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Precipitation : 7am
Snowfall : unknown
Snow Depth : unknown

Climatological Data for NEW BRUNSWICK 3 SE, NJ - December 2014

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2014-12-01	52	37	44.5	3.7	20	0	0.00	0.0	0
2014-12-02	66	34	50.0	9.5	15	0	0.18	0.0	0
2014-12-03	44	34	39.0	-1.3	26	0	0.22	0.0	0
2014-12-04	46	29	37.5	-2.5	27	0	0.24	0.0	0
2014-12-05	46	29	37.5	-2.2	27	0	0.00	0.0	0
2014-12-06	43	31	37.0	-2.4	28	0	0.43	0.0	0
2014-12-07	47	36	41.5	2.3	23	0	1.06	0.0	0
2014-12-08	44	23	33.5	-5.4	31	0	0.00	0.0	0
2014-12-09	37	25	31.0	-7.6	34	0	1.13	0.0	0
2014-12-10	42	37	39.5	1.2	25	0	0.36	0.0	0
2014-12-11	41	30	35.5	-2.6	29	0	T	0.1	T
2014-12-12	37	32	34.5	-3.3	30	0	0.20	0.1	T
2014-12-13	40	30	35.0	-2.5	30	0	0.00	0.0	0
2014-12-14	46	37	41.5	4.2	23	0	0.00	0.0	0
2014-12-15	47	26	36.5	-0.5	28	0	0.00	0.0	0
2014-12-16	50	28	39.0	2.2	26	0	0.00	0.0	0
2014-12-17	51	36	43.5	7.0	21	0	0.16	0.0	0
2014-12-18	55	33	44.0	7.7	21	0	0.00	0.0	0
2014-12-19	42	34	38.0	2.0	27	0	0.00	0.0	0
2014-12-20	41	30	35.5	-0.3	29	0	0.00	0.0	0
2014-12-21	33	29	31.0	-4.6	34	0	0.00	0.0	0
2014-12-22	36	31	33.5	-1.8	31	0	0.00	0.0	0
2014-12-23	46	34	40.0	4.9	25	0	0.23	0.0	0
2014-12-24	47	45	46.0	11.1	19	0	0.16	0.0	0
2014-12-25	64	45	54.5	19.9	10	0	0.96	0.0	0
2014-12-26	53	31	42.0	7.6	23	0	0.00	0.0	0
2014-12-27	51	30	40.5	6.3	24	0	0.00	0.0	0
2014-12-28	58	31	44.5	10.5	20	0	0.01	0.0	0
2014-12-29	55	35	45.0	11.2	20	0	0.00	0.0	0
2014-12-30	46	27	36.5	2.9	28	0	0.00	0.0	0
2014-12-31	37	17	27.0	-6.4	38	0	0.00	0.0	0
Sum	1443	986	-	-	792	0	5.34	0.2	-
Average	46.5	31.8	39.2	2.3	-	-	-	-	0.0
Normal	45.4	28.4	36.9	-	871	0	4.49	4.9	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : 8am
Min Temperature : 8am
Precipitation : 8am
Snowfall : unknown
Snow Depth : unknown

NOAA Atlas 14 Precipitation Estimate Report

NOAA Atlas 14, Volume 2, Version 3
Location name: North Brunswick, New Jersey, USA*
Latitude: 40.4441°, Longitude: -74.4704°
Elevation: 109 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

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

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

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

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.334** (0.302-0.369)	**0.397** (0.360-0.439)	**0.472** (0.425-0.521)	**0.526** (0.474-0.580)	**0.591** (0.530-0.652)	**0.638** (0.569-0.703)	**0.684** (0.608-0.755)	**0.726** (0.642-0.802)	**0.778** (0.681-0.863)	**0.818** (0.711-0.909)
10-min	**0.534** (0.483-0.590)	**0.636** (0.575-0.703)	**0.755** (0.681-0.835)	**0.841** (0.758-0.928)	**0.942** (0.845-1.04)	**1.02** (0.906-1.12)	**1.09** (0.966-1.20)	**1.15** (1.02-1.27)	**1.23** (1.08-1.36)	**1.29** (1.12-1.43)
15-min	**0.667** (0.603-0.737)	**0.799** (0.723-0.883)	**0.955** (0.862-1.06)	**1.06** (0.958-1.17)	**1.19** (1.07-1.32)	**1.29** (1.15-1.42)	**1.37** (1.22-1.52)	**1.45** (1.28-1.60)	**1.55** (1.36-1.72)	**1.62** (1.40-1.80)
30-min	**0.914** (0.827-1.01)	**1.10** (0.999-1.22)	**1.36** (1.22-1.50)	**1.54** (1.39-1.70)	**1.77** (1.59-1.95)	**1.94** (1.73-2.13)	**2.10** (1.87-2.32)	**2.26** (2.00-2.50)	**2.47** (2.16-2.73)	**2.62** (2.28-2.91)
60-min	**1.14** (1.03-1.26)	**1.38** (1.25-1.53)	**1.74** (1.57-1.92)	**2.01** (1.81-2.22)	**2.36** (2.11-2.60)	**2.62** (2.34-2.89)	**2.90** (2.58-3.20)	**3.17** (2.80-3.50)	**3.54** (3.10-3.92)	**3.82** (3.32-4.25)
2-hr	**1.39** (1.25-1.55)	**1.70** (1.52-1.88)	**2.16** (1.93-2.39)	**2.51** (2.25-2.78)	**3.00** (2.67-3.32)	**3.40** (3.01-3.76)	**3.81** (3.35-4.22)	**4.24** (3.70-4.70)	**4.83** (4.18-5.38)	**5.31** (4.55-5.93)
3-hr	**1.55** (1.39-1.72)	**1.88** (1.70-2.10)	**2.39** (2.15-2.67)	**2.79** (2.50-3.11)	**3.34** (2.98-3.72)	**3.80** (3.36-4.21)	**4.26** (3.75-4.73)	**4.76** (4.15-5.28)	**5.43** (4.68-6.06)	**5.98** (5.10-6.69)
6-hr	**1.98** (1.78-2.21)	**2.40** (2.16-2.68)	**3.05** (2.73-3.39)	**3.57** (3.19-3.96)	**4.33** (3.82-4.79)	**4.96** (4.35-5.48)	**5.63** (4.90-6.22)	**6.36** (5.48-7.03)	**7.41** (6.28-8.20)	**8.28** (6.94-9.19)
12-hr	**2.40** (2.15-2.71)	**2.91** (2.60-3.28)	**3.71** (3.30-4.17)	**4.39** (3.89-4.92)	**5.40** (4.74-6.03)	**6.27** (5.47-7.00)	**7.22** (6.22-8.04)	**8.27** (7.04-9.23)	**9.83** (8.22-11.0)	**11.2** (9.19-12.5)
24-hr	**2.74** (2.52-3.01)	**3.32** (3.05-3.65)	**4.26** (3.91-4.69)	**5.08** (4.63-5.57)	**6.30** (5.71-6.89)	**7.36** (6.61-8.05)	**8.54** (7.61-9.34)	**9.86** (8.68-10.8)	**11.9** (10.3-13.0)	**13.6** (11.6-15.0)
2-day	**3.18** (2.90-3.52)	**3.85** (3.52-4.26)	**4.93** (4.49-5.45)	**5.84** (5.30-6.44)	**7.18** (6.47-7.92)	**8.33** (7.46-9.17)	**9.58** (8.52-10.6)	**11.0** (9.63-12.1)	**13.0** (11.2-14.4)	**14.7** (12.6-16.4)
3-day	**3.37** (3.09-3.71)	**4.08** (3.74-4.50)	**5.20** (4.75-5.73)	**6.14** (5.58-6.74)	**7.50** (6.78-8.23)	**8.65** (7.78-9.49)	**9.90** (8.84-10.9)	**11.3** (9.95-12.4)	**13.3** (11.5-14.6)	**14.9** (12.8-16.6)
4-day	**3.56** (3.27-3.91)	**4.32** (3.96-4.73)	**5.48** (5.01-6.00)	**6.43** (5.87-7.04)	**7.81** (7.10-8.54)	**8.97** (8.10-9.82)	**10.2** (9.16-11.2)	**11.6** (10.3-12.7)	**13.5** (11.8-14.9)	**15.1** (13.1-16.7)
7-day	**4.18** (3.88-4.54)	**5.03** (4.66-5.46)	**6.26** (5.79-6.80)	**7.28** (6.71-7.90)	**8.74** (8.02-9.48)	**9.96** (9.08-10.8)	**11.3** (10.2-12.2)	**12.7** (11.4-13.8)	**14.7** (13.0-16.0)	**16.3** (14.3-17.9)
10-day	**4.76** (4.44-5.13)	**5.69** (5.31-6.14)	**6.98** (6.50-7.52)	**8.04** (7.46-8.66)	**9.53** (8.80-10.3)	**10.8** (9.88-11.6)	**12.0** (11.0-13.0)	**13.4** (12.1-14.5)	**15.3** (13.7-16.7)	**16.9** (15.0-18.5)
20-day	**6.43** (6.06-6.84)	**7.64** (7.20-8.12)	**9.13** (8.59-9.69)	**10.3** (9.68-10.9)	**11.9** (11.1-12.6)	**13.2** (12.3-14.0)	**14.4** (13.4-15.3)	**15.7** (14.5-16.7)	**17.4** (15.9-18.7)	**18.8** (17.0-20.1)
30-day	**8.02** (7.61-8.45)	**9.47** (8.99-9.98)	**11.1** (10.5-11.7)	**12.3** (11.7-13.0)	**14.0** (13.2-14.7)	**15.2** (14.3-16.0)	**16.4** (15.4-17.3)	**17.6** (16.5-18.6)	**19.2** (17.8-20.3)	**20.3** (18.7-21.6)
45-day	**10.2** (9.72-10.7)	**12.0** (11.4-12.6)	**13.9** (13.2-14.5)	**15.3** (14.5-16.0)	**17.1** (16.2-17.9)	**18.4** (17.5-19.4)	**19.7** (18.6-20.7)	**21.0** (19.7-22.1)	**22.6** (21.1-23.8)	**23.7** (22.1-25.1)
60-day	**12.2** (11.7-12.8)	**14.3** (13.7-15.0)	**16.4** (15.7-17.1)	**17.9** (17.1-18.7)	**19.9** (18.9-20.8)	**21.3** (20.2-22.2)	**22.6** (21.4-23.6)	**23.8** (22.5-25.0)	**25.3** (23.8-26.6)	**26.4** (24.7-27.8)

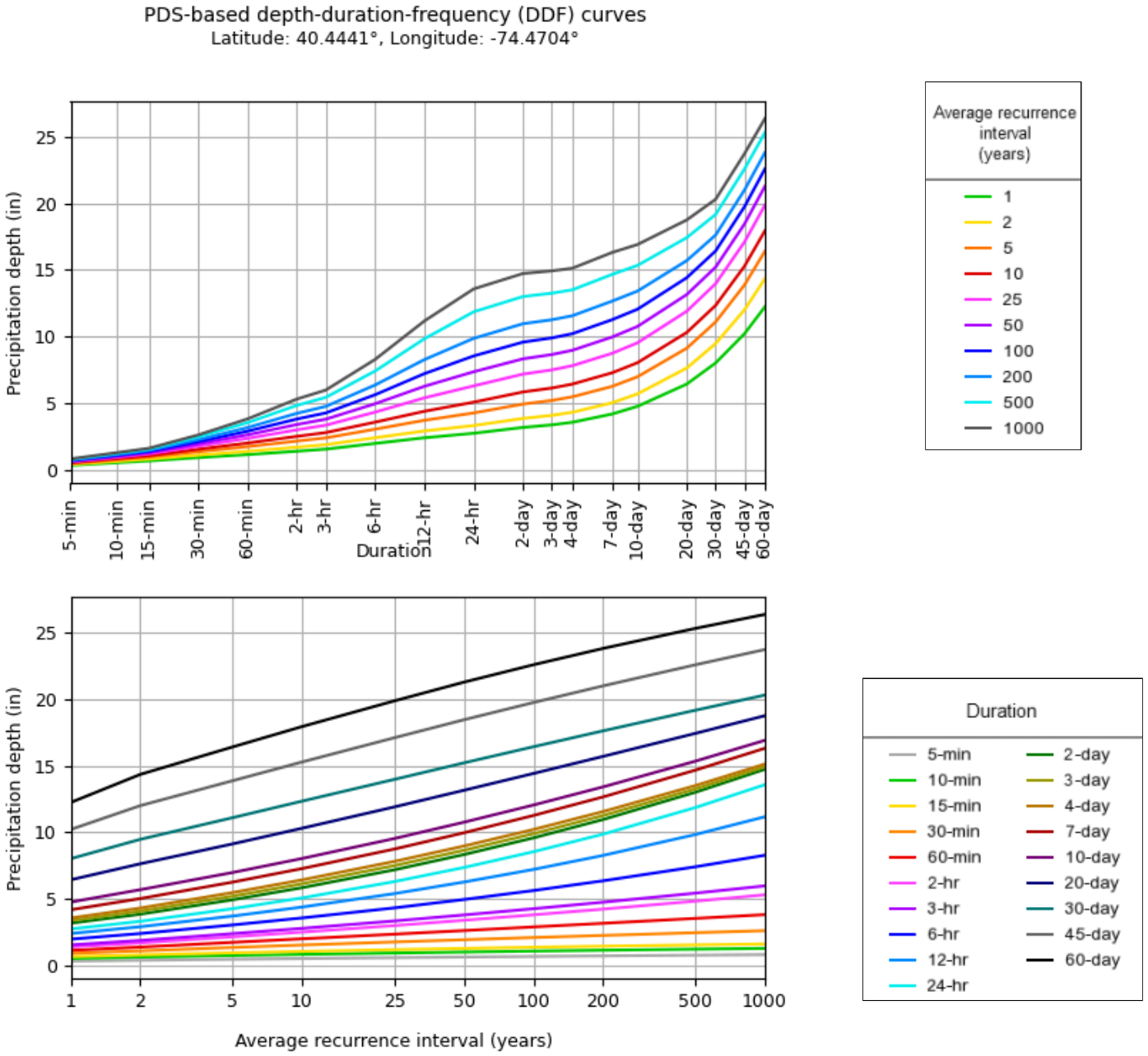
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

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

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



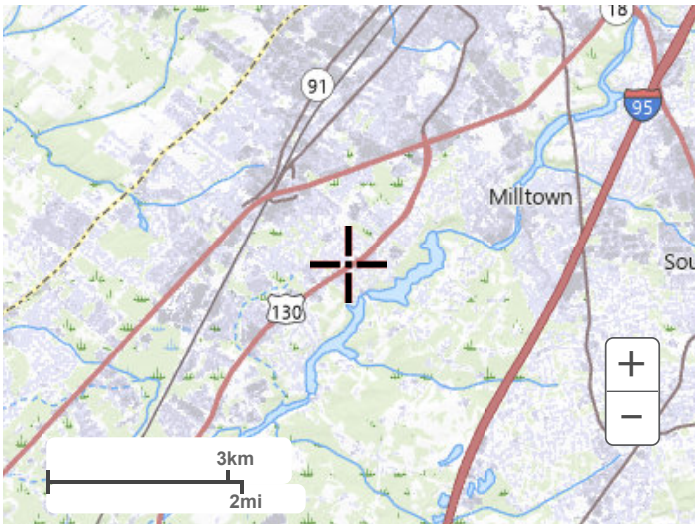
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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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G. MAPS

- **Tax Map**
- **Aerial Map**
- **Soils Map**
- **State Planning Area Map**
- **Depth to Seasonal High Water Table Map**
- **USGS Map**
- **HUC-14 Sub-Watershed Map**
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- **Drainage Area Maps**
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  - **Inlet Drainage Area Map**
  - **Water Quality Drainage Area Map**



Tax Map

Source: Township of North Brunswick Tax Map, Sheet #65

Date Access: 05/02/2025

American Properties at North Brunswick, LLC	
1661-1689 Route 130 **Block 230; Lot 15**	**Township of North Brunswick, Middlesex County, NJ**
BENJ #NJA240262	
Prepared by: JS	Date: 5/2/2025
Checked by: JM	Scale: NTS



Aerial Map

Source: NJ GeoWeb

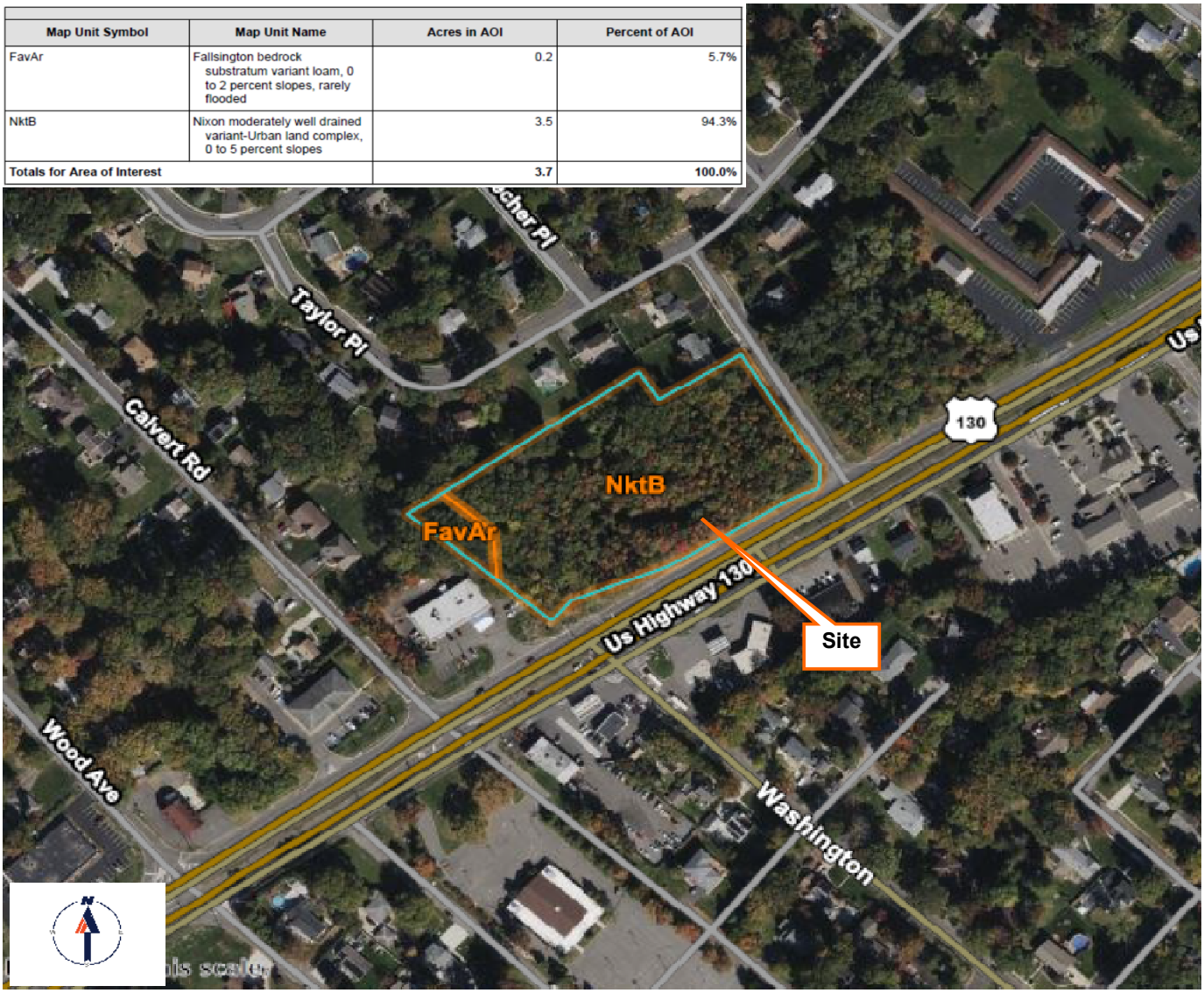
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American Properties at North Brunswick, LLC

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BENJ #NJA240262	
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Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FavAr	Fallsington bedrock substratum variant loam, 0 to 2 percent slopes, rarely flooded	0.2	5.7%
NktB	Nixon moderately well drained variant-Urban land complex, 0 to 5 percent slopes	3.5	94.3%
Totals for Area of Interest		3.7	100.0%

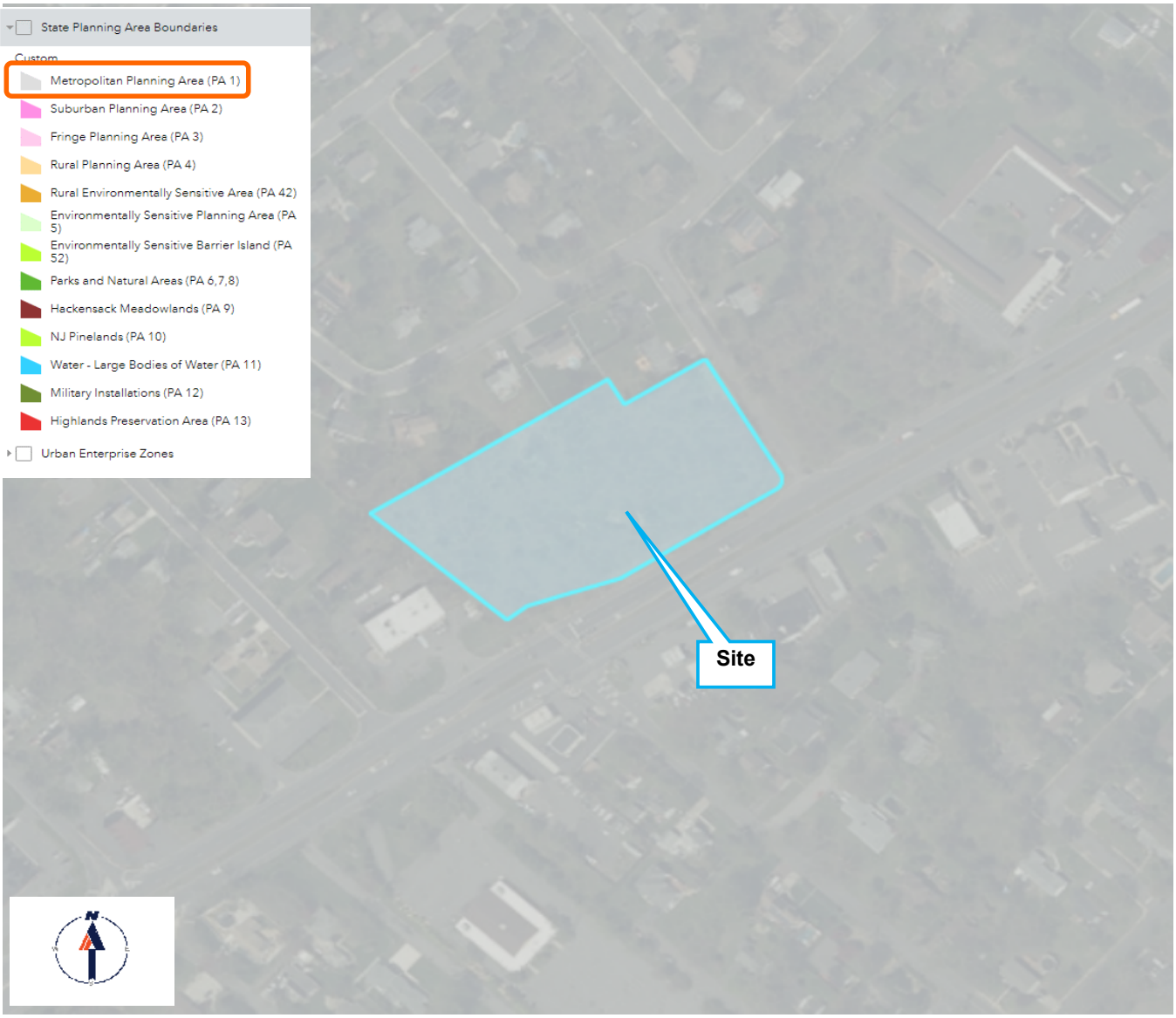


Soils Map

Source: NRCS Web Soil Survey, 2012

Date Access: 05/02/2025

American Properties at North Brunswick, LLC	
1661-1689 Route 130 **Block 230; Lot 15**	**Township of North Brunswick, Middlesex County, NJ**
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State Planning Area Map

Source: NJ GeoWeb

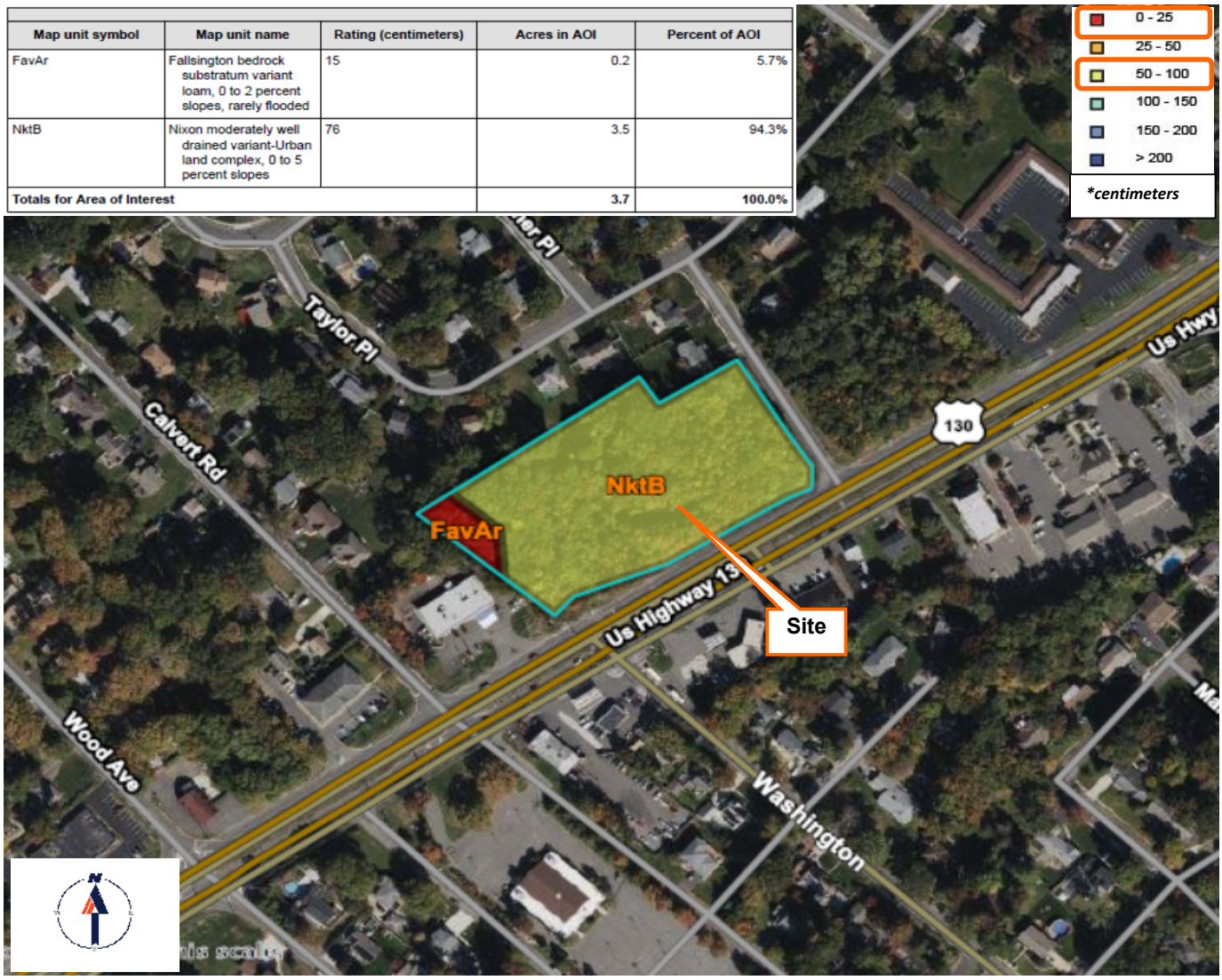
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Prepared by: JS	Date: 5/2/2025
Checked by: JM	Scale: NTS

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Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
FavAr	Fallsington bedrock substratum variant loam, 0 to 2 percent slopes, rarely flooded	15	0.2	5.7%
NktB	Nixon moderately well drained variant-Urban land complex, 0 to 5 percent slopes	76	3.5	94.3%
Totals for Area of Interest			3.7	100.0%

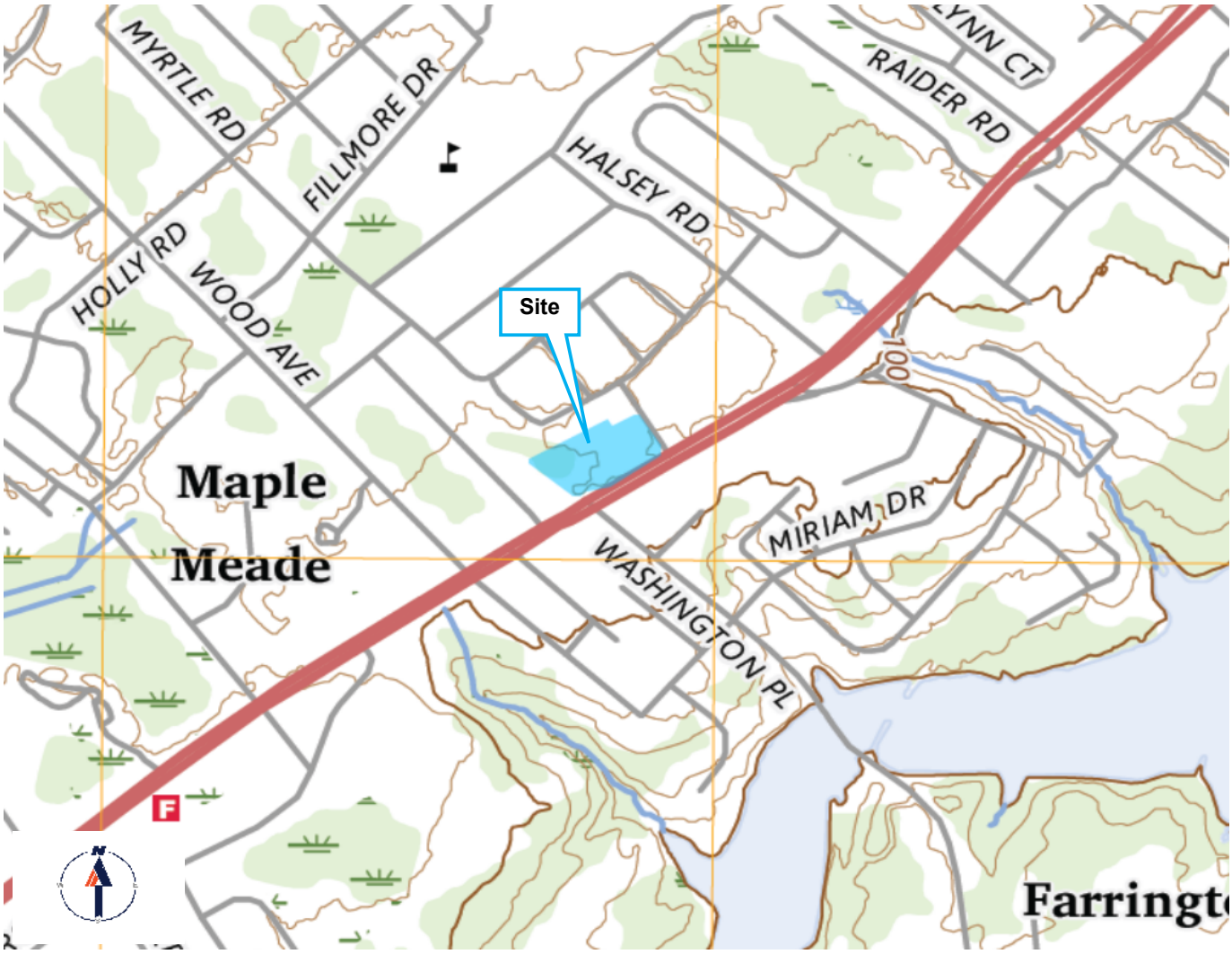


Depth to Seasonal High Water Table

Source: NRCS Web Soil Survey, 2012

Date Access: 05/02/2025

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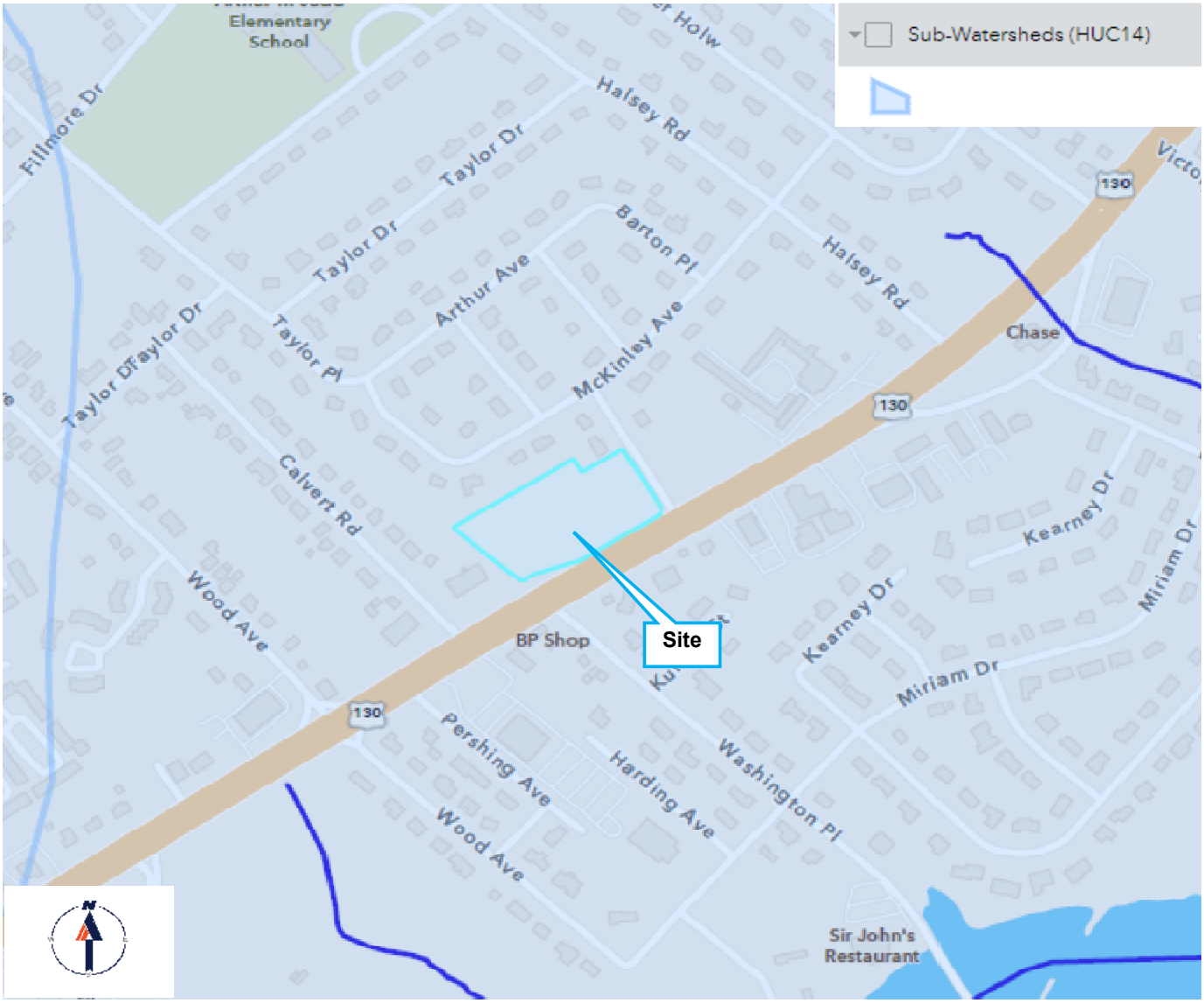
USGS Map
500,058-ft. E; 586,696-ft. N
New Brunswick Quadrangle

Source: USGS, 1986

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HUC-14 Sub-Watershed Map

Source: NJ GeoWeb

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BENJ #NJA240262	
Prepared by: JS — Date: 5/2/2025	BOHLER
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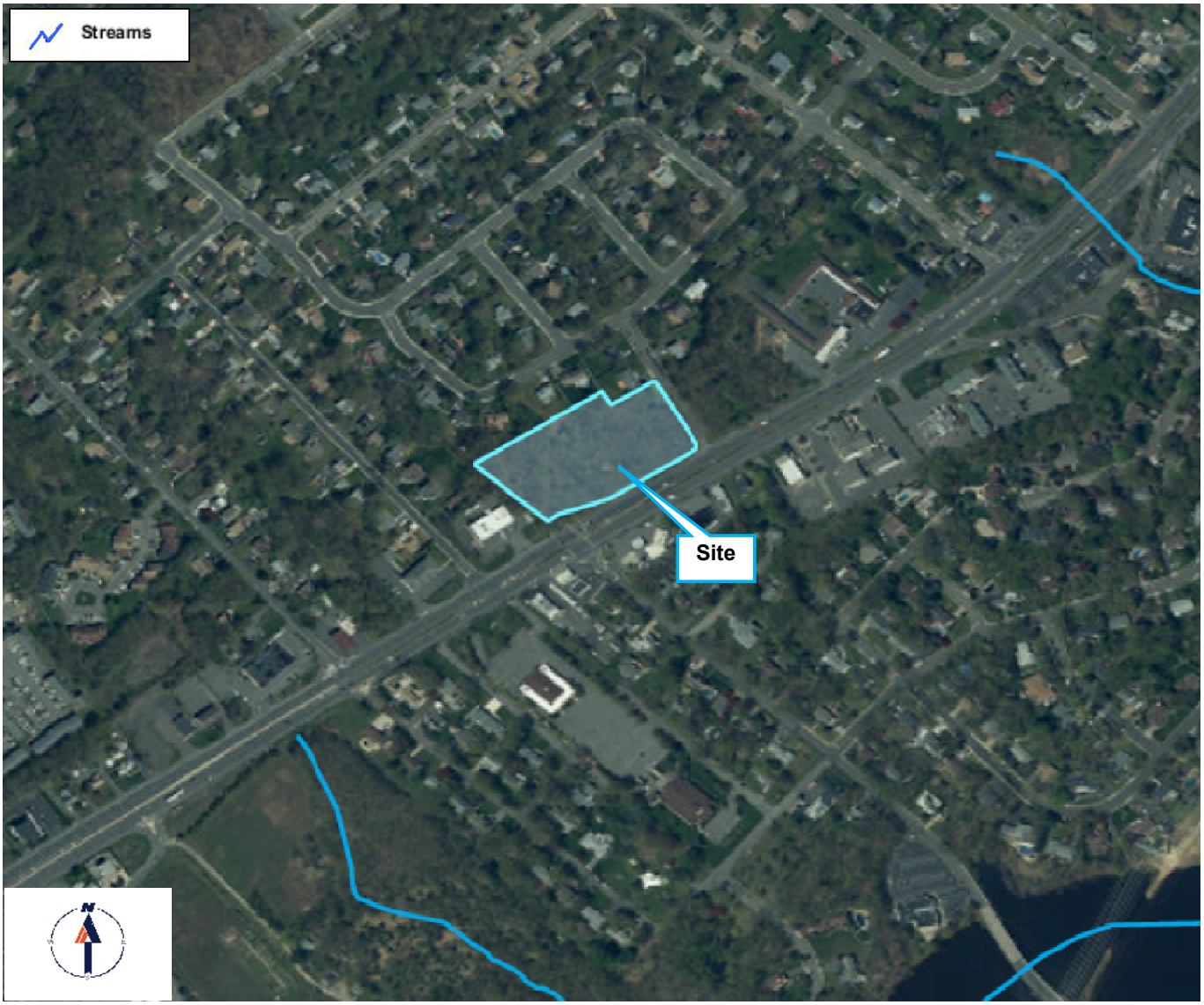


FEMA Flood Map

Source:FEMA FIRM Map #34023C0128F, Date 07/06/2010

Date Access: 05/02/2025

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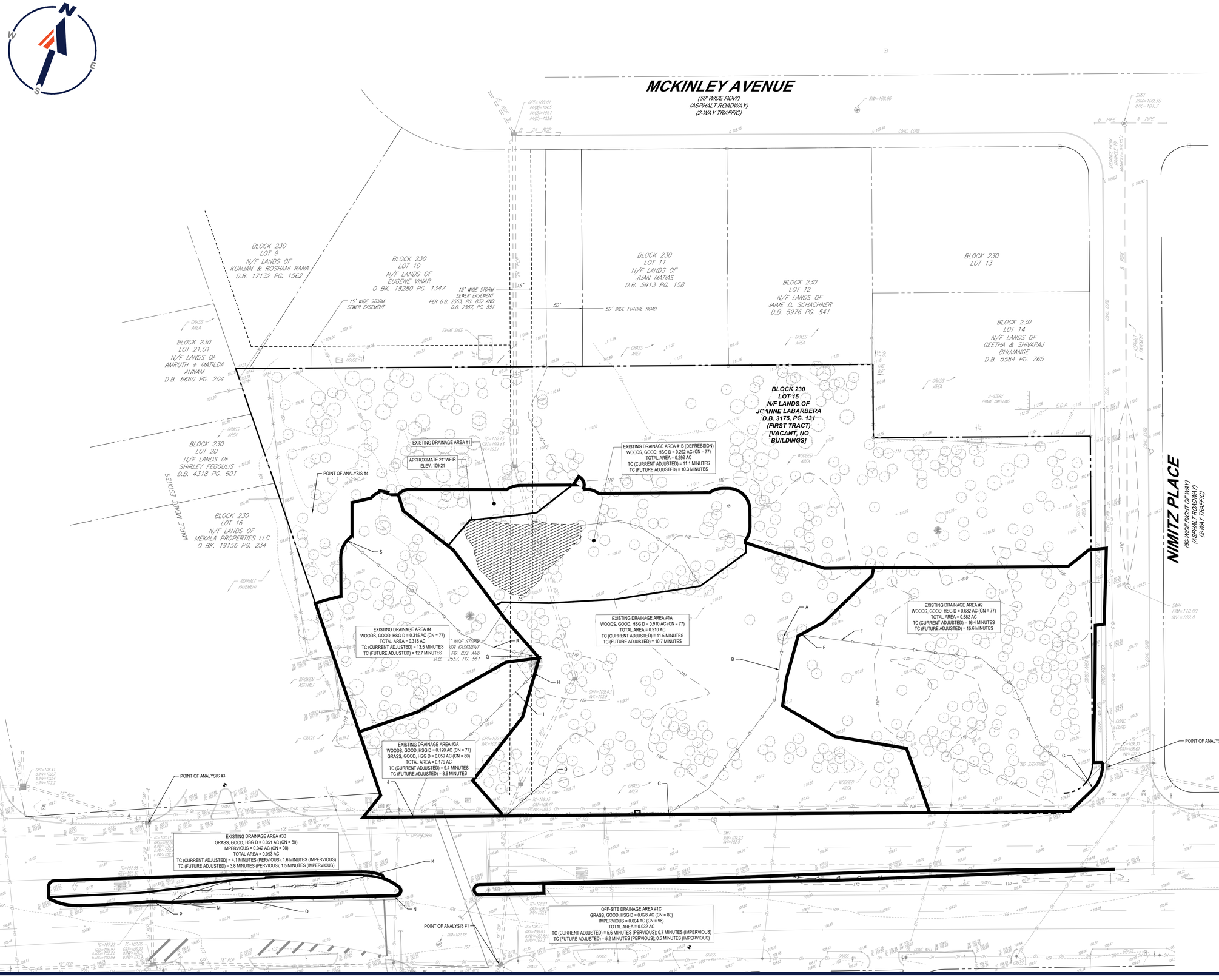
NJDEP Stream Map

Source: NJ GeoWeb

Date Access: 05/02/2025

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1661-1689 Route 130 **Block 230; Lot 15**	**Township of North Brunswick, Middlesex County, NJ**
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CHECKED BY:	TXL
DATE:	08/10/2025
CAD I.D.:	P-PRED-DRNG

PROJECT:

PRELIMINARY & FINAL SITE PLANS

FOR

AMERICAN PROPERTIES AT NORTH BRUNSWICK, LLC

PROPOSED QUICKCHEK FOOD STORE WITH FUEL SALES

BLK: 230 | LOT:15
1661-1689 ROUTE 130
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY

BOHLER
BOHLER ENGINEERING NJ, LLC
30 INDEPENDENCE BLVD., SUITE 200
WARREN, NJ 07059
Phone: (908) 668-8300
Fax: (908) 754-4401
www.BohlerEngineering.com
NJ CERT. OF AUTHORIZATION NO. 24GA28161700 & MH000122

T. LAM

PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 47863
NEW YORK LICENSE No. 092942
CONNECTICUT LICENSE No. 30024
PENNSYLVANIA LICENSE No. 76746

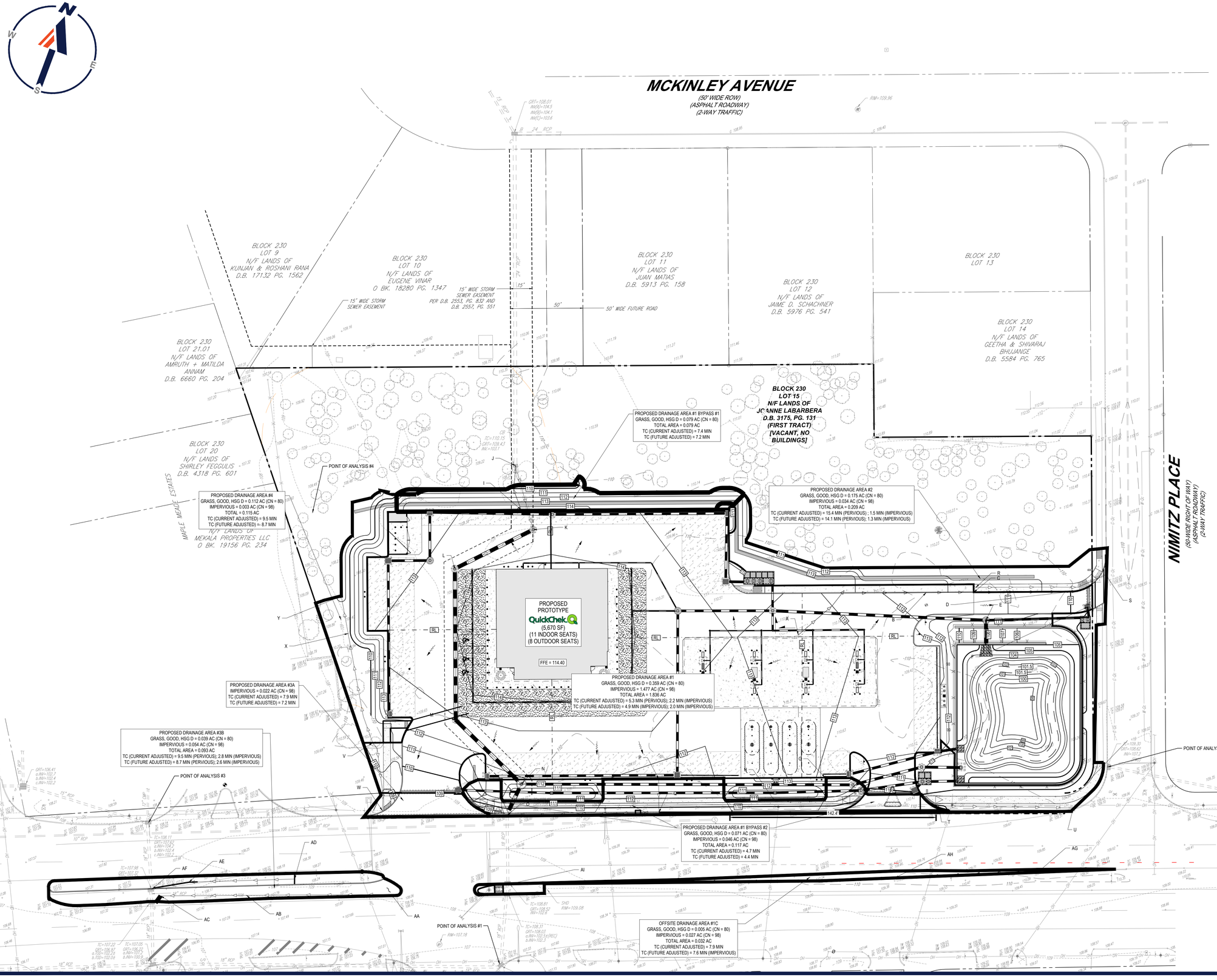
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PRE-DEVELOPMENT DRAINAGE AREA MAP

SHEET NUMBER:

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ORG. DATE - 06/10/2025



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DATE:	06/10/2025
CAD I.D.:	P-PSTD-DRNG

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BOHLER
BOHLER ENGINEERING NJ, LLC
30 INDEPENDENCE BLVD., SUITE 200
WARREN, NJ 07059
Phone: (908) 668-8300
Fax: (908) 754-4401
www.BohlerEngineering.com
NJ CERT. OF AUTHORIZATION NO: 24GA28161700 & MH000122

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CONNECTICUT LICENSE No. 30024
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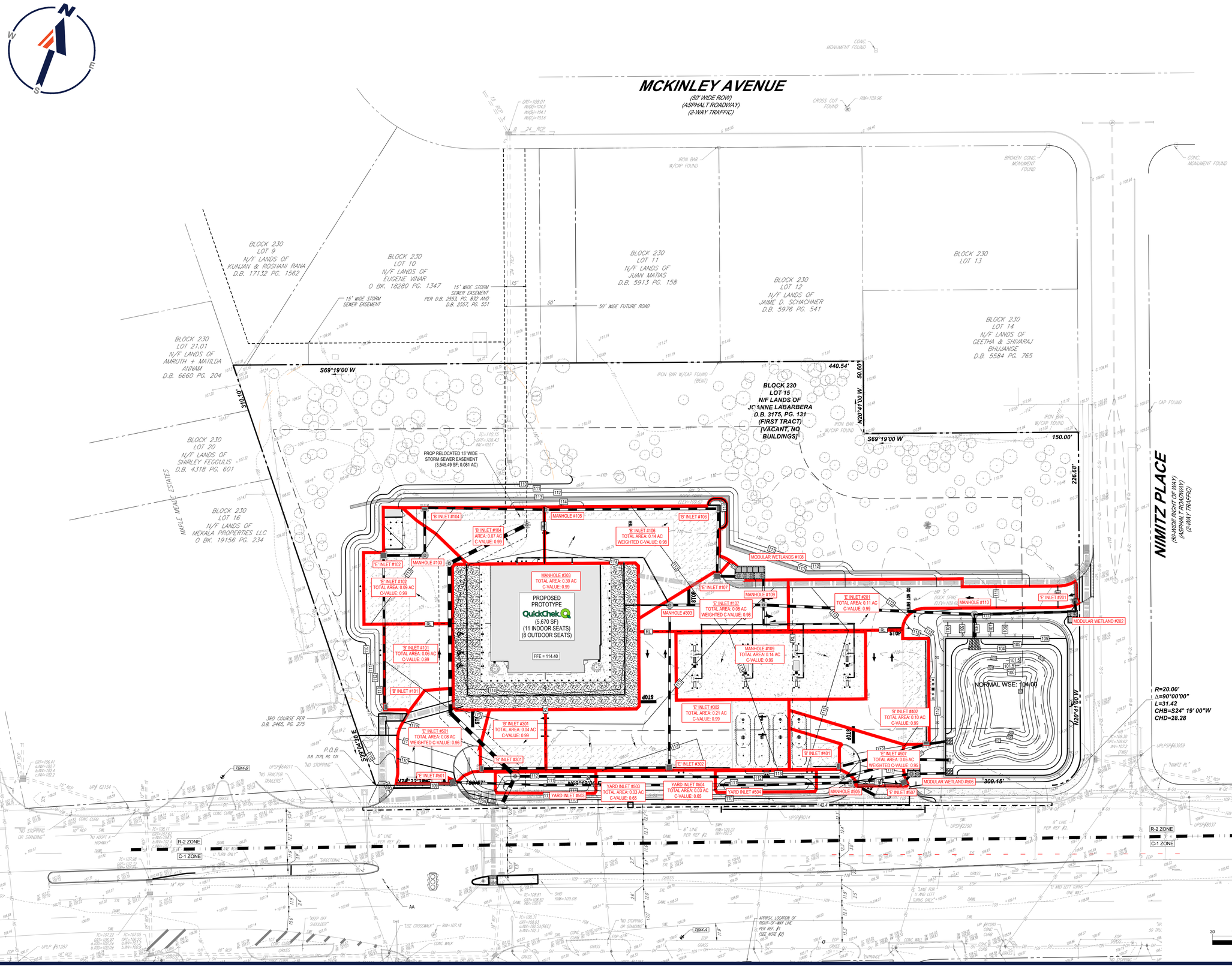
POST-DEVELOPMENT DRAINAGE AREA MAP

SHEET NUMBER:

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ORG. DATE - 06/10/2025

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TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY

BOHLER
BOHLER ENGINEERING NJ, LLC
30 INDEPENDENCE BLVD., SUITE 200
WARREN, NJ 07059
Phone: (908) 668-8300
Fax: (908) 754-4401
www.BohlerEngineering.com
NJ CERT. OF AUTHORIZATION NO: 24GA28161700 & MH000122

T. LAM

PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 47863
NEW YORK LICENSE No. 092942
CONNECTICUT LICENSE No. 30024
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SHEET TITLE:

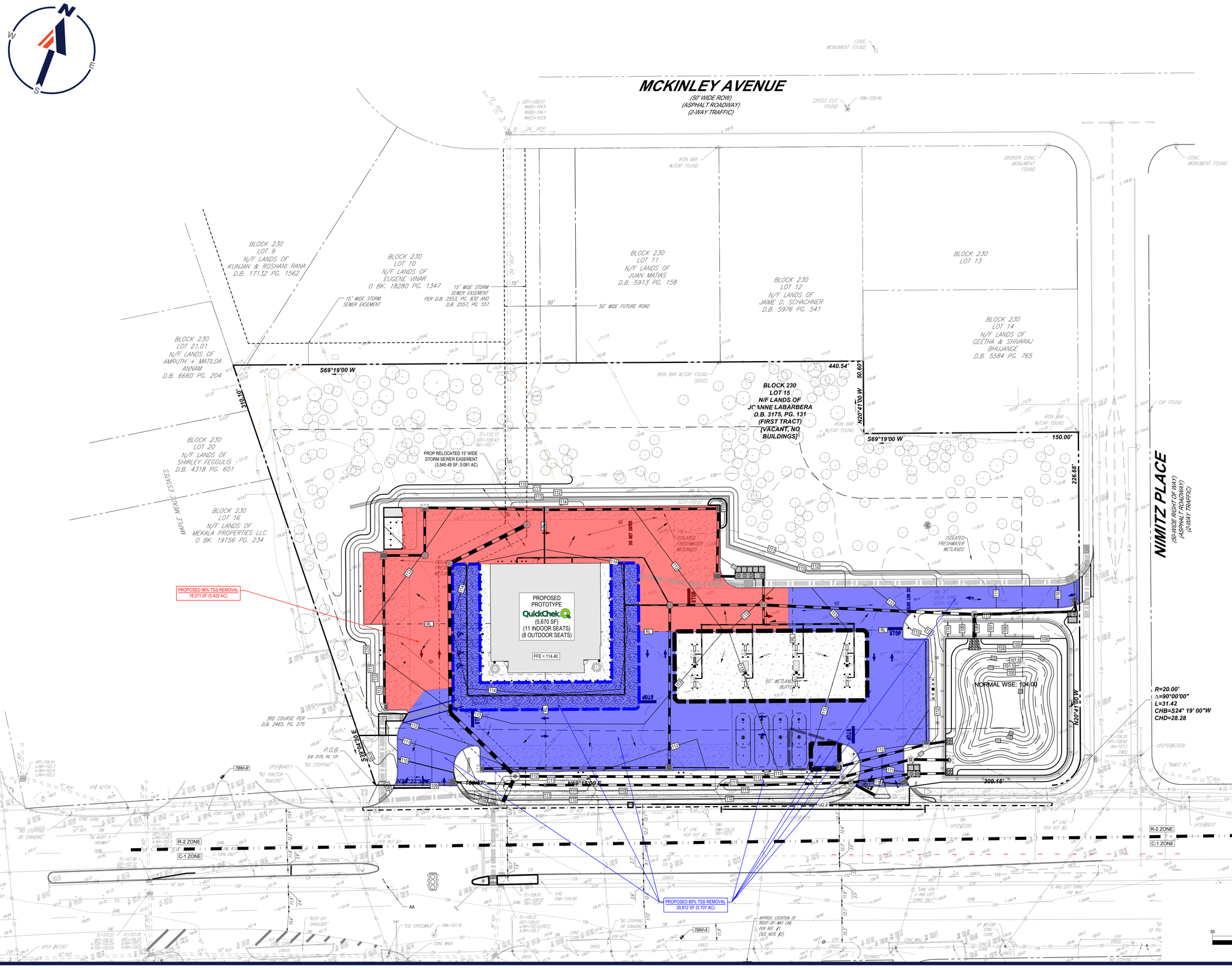
INLET DRAINAGE AREA MAP

SHEET NUMBER:

1

ORG. DATE - 06/10/2025

\\BOHLERENG.NET\SHARE\BNJ-PROJECTS\2024\NJA240262.00\CAD\DRAWINGS\PLAN SETS\POST-DEVELOPMENT DRAINAGE AREA MAPS\P-PSTD-DRNG-NJA240262.00-0A------LAYOUT1: 01 IDA TWP



\\BOHLERENG.NET\SHARES\NJ-PROJECTS\2024\NJA240262.00\CAD\DRAWINGS\PLAN SETS\POST-DEVELOPMENT DRAINAGE AREA MAPS\P-PSTD-DRNG-NJA240262.00-00A------LAYOUT1 03 WQ MAP

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PROJECT No.:	NJA240262.00-0A
DRAWN BY:	TDW/JAR
CHECKED BY:	TXL
DATE:	06/10/2025
CAD I.D.:	P-PSTD-DRNG

PROJECT:

PRELIMINARY & FINAL SITE PLANS

FOR

AMERICAN PROPERTIES AT NORTH BRUNSWICK, LLC

PROPOSED QUICKCHEK FOOD STORE WITH FUEL SALES

BLK: 230 | LOT:15
1661-1689 ROUTE 130
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY

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SHEET TITLE:

WATER QUALITY MAP

SHEET NUMBER:

1

ORG. DATE - 06/10/2025