



Engineering
& Design

Stormwater Pollution Prevention Plan

September 3, 2024

Neelytown Business Park Development

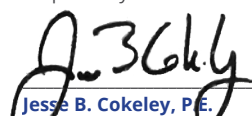
296 Neelytown Road

Town of Montgomery, Orange County, New York

Prepared for:

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INTRODUCTION

The subject property is located at 296 Neelytown Road in the Town of Montgomery, New York, and is comprised of tax lots 36-1-33, 36-1-11.221, 36-1-11.23, 36-1-11.212, 36-1-11.211, 36-1-11.1, 36-1-10.1 and 33-1-91. The owner of the property is Neelytown BD Developers LLC whose address is 4770 White Plans Road, Bronx New York 10470. The combined total parcel consists of approximately 112.46 acres in the LI (Light Industrial) Zoning District. A majority of the existing site consists of undeveloped wooded and grass areas as well as three two-story and two one-story residential dwellings to be removed along Beaver Dam Road on the southwest side of the project site. It is proposed to develop the site into two one-story warehouse buildings with appurtenant parking, loading, and other site improvements. The proposed development and site improvements on this site require a study of the impacts on watercourses in and around the site. This study reviews the existing drainage conditions, as well as the proposed improvements to provide measures that will be used to control potential impacts due to storm water runoff. Due to the size and type of the project, a State Pollutant Discharge Elimination System Permit (SPDES GP-0-20-001) is required from the New York State Department of Environmental Conservation (NYSDEC). This Drainage & Hydrology Report along with the Erosion and Sediment Control plans and Operation and Maintenance Manual make up the Stormwater Pollution Prevention Plan (SWPPP).

Runoff for the site is divided into six watersheds in existing conditions that flow to five identified design points. The majority of the runoff from the existing site flows overland to the existing wetlands on the site. The remainder of the runoff flows overland to various design points identified along Beaver Dam Road including multiple culverts across the road. All of the site runoff is ultimately conveyed to the Beaver Dam Brook. As per the New York State Storm Water Management Design Manual (NYSSMDM) storm water peak flow detention and water quality volume are required. Runoff Reduction is achieved through the design and implementation of eight bioretention basins (designed per Section 6.4 of the NYSSMDM), and four infiltration basins (designed per Section 6.4 of the NYSSMDM), all of which are standard Stormwater Management Practices (SMP) with Runoff Reduction Capacity as described in Table 3.5 of the updated NYSSMDM. One detention basin has also been proposed to attenuate peak flows as required.

The stormwater management practices mentioned above are designed to mitigate the increase in impervious surfaces from existing conditions to proposed development by ensuring the peak runoff rates do not increase from pre- to post-development.

Also within the SWPPP is a discussion of the Erosion and Sediment Control Plan to be implemented during construction, and a long-term Operation & Maintenance Plan to be followed after construction is complete.

While the total area of disturbance for the entire project is 86.08 acres. The construction is divided into Phases 0 – 8 as shown on the Soil Erosion & Sediment Control Plans. The area of disturbance for each phase is outlined in the Area of Disturbance Summary Table below. The sequence of construction describes each phase in more detail. Furthermore, where construction has been

completed or has temporarily ceased, soil shall not be exposed for more than seven (7) days and shall be either temporarily or permanently stabilized.

Area of Disturbance Summary Table	
<i>Phase</i>	<i>Area of Disturbance (acres)</i>
0	± 1.73
1	± 11.90
2	± 13.89
3	± 10.43
4	± 15.55
5	± 15.86
6	± 7.61
7	± 6.80
8	± 2.32
Total	86.08

METHODOLOGY

1. The watersheds are divided into subareas, by topography, soils, and land use. A summary of the watershed areas, composite curve numbers, and travel times are shown below in Tables 1 and 2.
2. Rainfall depths used for this analysis are those published by the Northeast Regional Climate Center for the project location for each storm event as directed in the NYSSMDM.
3. The required WQv was calculated in accordance with Section 4.2 of the NYSSMDM. This is also the required RRV as per Section 4.3 of the NYSSMDM.
4. The provided RRV was calculated using the Green Infrastructure (GI) Worksheets provided by the NYSDEC. The worksheets are included in Appendix 6.
5. The peak flows from the watersheds in the existing condition are computed using the runoff curve numbers taken from TR-55 to determine undeveloped peak runoff and runoff hydrographs at the design points. The existing peak flows are presented in Table 3 below.
6. In the post-development condition, the peak flows from the proposed development are computed using the runoff curve numbers taken from TR-55. The watersheds are adjusted for the proposed improvements and grading of the site. The runoff flows are hydraulically

routed for updated travel times, diversions, and new storage structures as necessary. The resulting proposed peak flows at each design point are presented in Table 3.

7. A full Erosion & Sediment Control Plan (plans and construction sequencing) was designed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (aka the “bluebook”) and is included in this report.
8. A long-term Operation & Maintenance Plan was developed for the proposed post-construction stormwater control practices and is included in this report.
9. Maps indicating the various drainage conditions are included in this report. Schematic diagrams of the flow models in the existing and proposed conditions are provided in the HydroCAD output, which is included in Appendix 4 and 5.
10. The methods used are those presented in the HydroCAD computer program using a shortened printout for convenience. The 1-, 10-, 25-, and 100- year frequency storms are studied. The SCS NRCC Rainfall Distribution Storm Curve D - 24-hour storm distribution is used throughout. Soil types and hydrologic groups are based on soil maps from the NRCS online Web Soil Survey. The output is included in Appendix 2 of this report. Topographical mapping is taken from site-specific aerial mapping and confirmed by using ground survey techniques.

TABLE 1: Predevelopment Conditions Drainage Areas

<i>Predevelopment</i>			
Watershed	Area, SF	CN	Tc, Min
Wetlands / Undeveloped Areas to DP-1	1,182,741	73	23.4
EDA-1	796,527	52	30
EDA-2	822,574	44	55.9
EDA-3	690,451	51	49.9
EDA-4	946,387	54	22.8
EDA-5	459,922	56	21.0
Total	4,898,602	57	-

The Time of Concentration (Tc) paths are shown on the Watershed Maps found in Appendix 18.

TABLE 2: Post Development Conditions Drainage Areas

Post Development							
Watershed	Area, SF	CN	Tc, Min				
Wetlands / Undeveloped Areas TO DP-1	1,182,741	73	23.4	PDA-1H-FB	19,432	39	6.0
PDA-1A	108,164	78	6.0	PDA-1H-IB	39,736	39	6.0
PDA-1B	398,274	86	6.0	PDA-1I	172,961	82	6.0
PDA-1B-FB	16,395	39	6.0	PDA-1I-B	31,544	39	6.0
PDA-1B-IB	33,078	40	6.0	PDA-1J	218,370	98	6.0
PDA-1C	112,511	90	6.0	PDA-1J-B	33,984	55	6.0
PDA-1D	153,719	91	6.0	PDA-1i+j-FB	13,894	47	6.0
PDA-1E	17,321	95	6.0	PDA-1K	26,597	44	6.0
PDA-1F	250,816	81	6.0	PDA-2U	74,849	52	6.0
PDA-1G	416,900	98	6.0	PDA-3U	54,725	39	6.0
PDA-1G-FB	17,215	39	6.0	PDA-4A	104,546	69	6.0
PDA-1G-IB	27,422	45	6.0	PDA-4B	232,321	84	6.0
PDA-1H	433,100	98	6.0	PDA-4B-B	66,436	75	6.0
				PDA-4U	322,148	45	6.0
				PDA-5A	216,315	74	6.0
				PDA-5U	103,088	59	6.0
				Total	4,898,602	79	-

The Time of Concentration (Tc) paths are shown on the Watershed Maps found in Appendix 20.

TABLE 3: Predevelopment and Post Development Peak Flow Summary to the Design Points

Design Point	Storm Event (Yr.)	Predevelopment Peak Flow (Cfs)	Post Development Peak Flow (Cfs)	Net Change (Cfs)	Percent Change Over Prior Conditions
DP 1	1	11.36	11.36	0	0.00%
	10	46.62	42.34	-4.28	-9.18%
	25	73.78	65.85	-7.93	-10.75%
	100	135.47	129.53	-5.94	-4.38%
DP 2	1	0.01	0.01	0	0.00%
	10	1.24	1.17	-0.07	-5.65%
	25	4.04	2.56	-1.48	-36.63%
	100	14.07	6.06	-8.01	-56.93%
DP 3	1	0.21	0.00	-0.21	-100.00%
	10	3.80	0.03	-3.77	-99.21%
	25	8.37	0.19	-8.18	-97.73%
	100	20.64	1.77	-18.87	-91.42%
DP 4	1	0.28	0.01	-0.27	-96.43%
	10	10.04	3.76	-6.28	-62.55%
	25	20.86	11.84	-9.02	-43.24%
	100	48.25	40.58	-7.67	-15.90%
DP 5	1	0.25	0.14	-0.11	-44.00%
	10	6.82	3.09	-3.73	-54.69%
	25	12.09	7.53	-4.56	-37.72%
	100	26.48	21.24	-5.24	-19.79%

As mentioned previously, five bioretention areas, four infiltration basins and one dry detention basin has been designed to attenuate the peak flows discharging to Design Point 1. Peak Flow Reduction is achieved for Design Point 2 and 3 as a result of diversions from the proposed grading that creates a smaller drainage area. Two bioretention basins have been designed to attenuate the peak flows discharging to Design Point 4. One bioretention basin has been designed to reduce peak flows at Design Point 5.

DISCUSSION

Design Points:

Although the runoff from the entire site ultimately gets to the Beaver Dam Brook, the runoff leaves the site at five different locations, so five design points were selected for this hydrologic analysis. Design Point 1 is located within the existing wetlands located at the southern end of the site along Neelytown Road as the majority of the existing runoff gets to this point. While it does not appear the wetlands area has a designed point of discharge, the existing 36" RCP culvert to the south of the site along Neelytown Road will ultimately be the point at which the runoff within the wetlands will drain off site. Design Point 2 is located at an existing depression on the lot identified as 36-1-11.1 along Beaver Dam Road on the west side of the site. Design Point 3 is located further north along Beaver Dam Road where an existing culvert adjacent to lot 36-1-33 conveys the collected runoff across Beaver Dam Road. Design Point 4 is located further north along Beaver Dam Road where an additional existing culvert adjacent to lot 36-1-33 conveys the collected runoff across Beaver Dam Road similar to Design Point 3. Design Point 5 is located even further north at the northwest end of lot 33-1-91 where, similar to Design Points 3 and 4, an additional existing culvert conveys the collected runoff across Beaver Dam Road.

Zero-net Increase:

The proposed storm water improvements for the site provide the required channel protection, overbank flood protection, and extreme flood protection.

Reductions in peak flows from predevelopment conditions to post development conditions have been accomplished, exceeding the zero-net increase in peak flow requirement at each design point for each storm event studied. For example, the peak runoff flow for the 100-year storm event was reduced from 135.47 cfs in the existing condition to 129.53 cfs in the proposed condition at Design Point 1, which is a 4.38% reduction.

NRCS Soils:

The Web Soil Survey of Orange County, New York, shows the site situated in an area consisting of soil types A ("HoB," HoA," "HoD", and "CnB,") B ("PtB," "PtC," and "PtD,") and D ("Ab," "ErA," "ErB", "Ra," and "RSD"). The breakdown of hydrologic soil types on site is approximately 42.25% A, 25.96% B, and 31.80% D. Additional soil information can be found in the "Mid-Hudson Industrial Park Geotechnical Investigation and Assessment Report for RDM Group", prepared by Patton Geotech dated April 20th, 2023.

Wetlands and Floodplain:

No 100-year flood plains are known to exist on the site per the flood insurance rate map number 36071C0301E for the Town of Montgomery, Orange County, New York, dated August 3, 2009 prepared by the Federal Emergency Management Agency.

Wetlands were flagged by Ecological Solutions, LLC and located by Lanc & Tully Engineering and Surveying, P.C. on March 12, 2021. These wetlands are confirmed per a Positive Declaration issued by the Town of Montgomery Planning Board on August 30th, 2021 to be under USACOE (United

States Army Core of Engineers) jurisdiction. There are no NYSDEC regulated wetlands on site, according to NYSDEC maps and field investigation.

Wetland "A" and "B" have a surveyed area of approximately 8.90 AC and 4.813 AC respectively. These wetlands are connected hydraulically to the wetlands on the property to the east across Neelytown Road identified as Lot 33-1-4.22 by way of a 24" and 18" RCP culvert. On the subject Site Wetland "A" is hydraulically connected to Wetland "B" by way of a 12" HDPE and 18" CMP pipe.

A review of the National Wetlands Inventory (NWI) GIS mapping shows three wetland types mapped on site, including Freshwater Forested/ Shrub, Freshwater Pond and Riverine wetlands. Per the national wetland classification system, the three wetland types are identified as Palustrine Unconsolidated bottom Permanently Flooded Excavated wetlands (PUBHx), Riverine Unknown Perennial Unconsolidated Bottom Permanently Flooded wetlands (R5UBH), and Palustrine Scrub-Shrub Broad-Leaved Deciduous Seasonally Flooded/Saturated wetlands (L1UB1Hx).

Wetlands and floodplain maps are included in Appendix 3.

Runoff Reduction Volume (RRv) through Site Planning:

The basic premise of runoff reduction is to recognize the water quality benefits of certain practices by allowing for a reduction in the water quality treatment volume. Runoff reduction is first achieved through better site design during the planning stages. Green infrastructure planning measures applied to the site include the following:

Soil Restoration – All disturbed areas will be restored in accordance with the soil restoration requirements in Table 5.3 of the NYSSMDM.

Green Infrastructure Techniques:

After taking into account the reductions through Site Planning mentioned above, there remains RRv required to be treated through GITs and/or Standard SMPs. Chapter 5 of the NYSSMDM outlines the various Green Infrastructure Techniques which can be implemented on-site to achieve runoff reduction. The GI Worksheets included in Appendix 6 of this report provide the calculations for the green infrastructure techniques chosen to treat the Runoff Reduction Volume for this project. Below is a brief description of each Green Infrastructure Technique along with a discussion regarding the feasibility of each technique with respect to this project.

TABLE 3: Green Infrastructure Feasibility

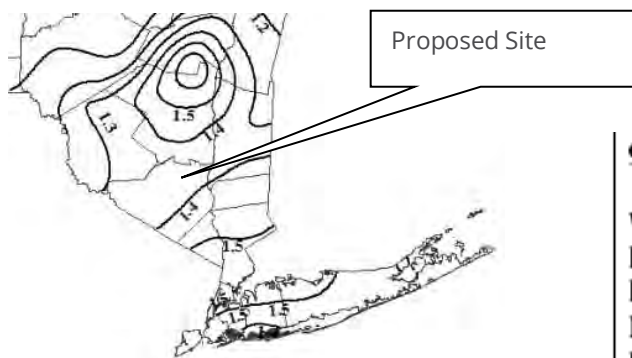
Conservation of Natural Areas	
Retain the pre-development hydrologic and water quality characteristics of undisturbed natural areas, stream and wetland buffers by restoring and/or permanently conserving these areas on a site.	A large majority of the existing wetland areas on the south and west portions of the property are primarily remaining undisturbed.
Sheetflow to Riparian Buffers or Filter Strips	
Undisturbed natural areas such as forested conservation areas and stream buffers or vegetated filter strips and riparian buffers can be used to treat and control stormwater runoff from some areas of a development project.	The majority of the disturbed areas and impervious areas within the drainage area discharge to the proposed stormwater management areas for treatment. Smaller perimeter areas not draining to stormwater management sheet flow to the north, east, or west of the site, but steep slopes do not allow usage of this technique.
Vegetated Open Swale	
The natural drainage paths, or properly designed vegetated channels, can be used instead of constructing underground storm sewers or concrete open channels to increase time of concentration, reduce the peak discharge, and provide infiltration.	Grass filter strips are utilized at a number of bioretention basins where feasible to convey runoff via overland flow and provide the required pre-treatment. However, throughout the rest of the site, vegetated swales are not used for drainage paths within the developed areas due to grade and space limitations on site.
Tree Planting/Tree Box	
Plant or conserve trees to reduce stormwater runoff, increase nutrient uptake, and provide bank stabilization. Trees can be used for applications such as landscaping, stormwater management practice areas, conservation areas and erosion and sediment control.	Some areas of existing trees are to remain. A Significant number of additional trees are proposed as part of the proposed development.
Disconnection of Rooftop Runoff	
Direct runoff from rooftop areas and upland overland runoff flow to designated pervious areas to reduce runoff volumes and rates.	All roof runoff is directed to an associated infiltration basin and all other runoff generated from impervious areas is directed to bioretention basins for treatment. Pervious surfaces adjacent to the proposed building are limited for the use of this technique.
Stream Daylighting for Redevelopment Projects	
Stream Daylight previously-culverted/piped streams to restore natural habitats, better attenuate runoff by increasing the storage size, promoting infiltration, and help reduce pollutant loads.	The project is not a redevelopment; therefore, this technique is not applicable.

Rain Garden	
Manage and treat small volumes of stormwater runoff using a conditioned planting soil bed and planting materials to filter runoff stored within a shallow depression.	Eight bioretention areas are proposed on site.
Green Roof	
Capture runoff by a layer of vegetation and soil installed on top of a conventional flat or sloped roof. The rooftop vegetation allows evaporation and evapotranspiration processes to reduce volume and discharge rate of runoff entering conveyance system.	The structural design of the proposed buildings does not allow for this technique.
Stormwater Planter	
Small landscaped stormwater treatment devices that can be designed as infiltration or filtering practices. Stormwater planters use soil infiltration and biogeochemical processes to decrease stormwater quantity and improve quality.	Runoff from the proposed impervious surfaces is being treated by the infiltration basins and bioretention areas so this technique is not necessary.
Rain Tank or Cistern	
Capture and store stormwater runoff to be used for irrigation systems or filtered and reused for non-contact activities.	Landscape irrigation is not required on site, and this technique is not a common practice for buildings of this use.
Porous Pavement	
Pervious types of pavements that provide an alternative to conventional paved surfaces, designed to infiltrate rainfall through the surface, thereby reducing stormwater runoff from a site and providing some pollutant uptake in the underlying soils.	This technique is not practical due to heavy truck traffic and steep slopes on site.

Water Quality Volume (WQv) and Runoff Reduction Volume (RRv):

The Water Quality Volume (WQv) is intended to improve water quality by capturing and treating 90% of the average annual stormwater runoff volume. The WQv is directly related to the impervious cover created at a site. The 90% rainfall event value (P) used in the calculations (1.4) is shown below in the portion of Figure 4.1 from page 4.2 in the NYSSMDM.

The water quality treatment for the new development portions of the site are designed in accordance with Chapter 4 of the NYSSMDM.



90% Rule:

$$WQ_v = [(P)(R_v)(A)] / 12$$

$$R_v = 0.05 + 0.009(I)$$

I = Impervious Cover (Percent)

Minimum $R_v = 0.2$

P = 90% Rainfall Event Number (See Figure 4.1)

A = site area in acres

The total impervious area was determined for the project site. The Runoff Coefficient “ R_v ” in the computation of Water Quality Volume WQ_v is dependent on the percent impervious cover. As per Section 4.2 of the NYSSMDM, 100% of the water quality volume shall be treated for new development.

TABLE 4: Water Quality Volume for Overall Site

Catchment Number	90% Rainfall Event Number P (inches)	Area A (acres)	Impervious Area (acres)	Percent Impervious I %	Runoff Coefficient R_v	Required WQ_v (Cf)	Provided WQ_v (cf)
PDA-1A	1.40	2.48	1.95	79%	0.76	9,549	9,549
PDA-1B	1.40	10.28	6.72	65%	0.64	33,348	44,935
PDA-1C	1.40	2.58	2.01	78%	0.75	9,849	14,538
PDA-1D + 1E	1.40	3.92	2.57	66%	0.64	12,751	12,751
PDA-1F	1.40	5.76	4.10	73%	0.71	20,216	20,216
PDA-1G	1.40	10.60	9.57	90%	0.86	46,465	79,669
PDA-1H	1.40	11.30	9.94	88%	0.84	48,335	55,786
PDA-1i	1.40	5.40	3.65	68%	0.66	18,067	18,067
PDA-1j	1.40	5.40	3.65	68%	0.66	18,067	18,067
PDA-1K	1.40	0.61	0.00	0%	0.05	155	0
PDA-2U	1.40	1.72	0.00	0%	0.05	437	0
PDA-3U	1.40	1.26	0.00	0%	0.05	320	0
PDA-4U	1.40	7.40	0.75	10%	0.14	5,311	0
PDA-4A	1.40	2.40	0.83	35%	0.36	4,406	4,406

Catchment Number	90% Rainfall Event Number P (inches)	Area A (acres)	Impervious Area (acres)	Percent Impervious I %	Runoff Coefficient Rv	Required WQv (Cf)	Provided WQv (cf)
PDA-4B	1.40	6.86	3.36	49%	0.49	17,111	17,111
PDA-5A	1.40	4.97	2.31	46%	0.47	11,828	11,828
PDA-5U	1.40	2.37	0.50	21%	0.24	2,889	0
Wetlands/ Undeveloped area	1.40	27.15	0.00	0%	0.05	6,899	0
Total	1.40	112.46	51.91	46%	0.47	266,2002	306,923

TABLE 8: Water Quality Volume Treated Per Practice

Practice	Runoff Reduction (cf)
PDA-1A (Bioretention Basin)	4,154
PDA-1B (Infiltration Basin)	31,165
PDA-1C (Infiltration Basin)	8,975
PDA-1D +1E (Bioretention Basin)	6,728
PDA-1F (Bioretention Basin)	8,181
PDA-1G (Infiltration Basin)	41,981
PDA-1H (Infiltration Basin)	44,146
PDA-1i (Bioretention Basin)	10,886
PDA-1J(Bioretention Basin)	11,616
PDA-4A(Bioretention Basin)	2,002
PDA-4B(Bioretention Basin)	7,940
PDA-5A(Bioretention Basin)	5,045
Total	182,819

As per Section 4.3 of the NYSSMDM, the Runoff Reduction Volume is equal to the WQv and must be treated through the use of Green Infrastructure Techniques or Standard SMP's with RRV capacity. The eight bioretention areas provide a total of 56,552 cf of RRV and the four infiltration basins provide a total of 126,267 cf of RRV for a net total of 182,819 cfs of RRV which is less than the required RRV (266,002 cf) but exceeds the minimum required RRV (100,190 cf). The G.I. worksheets for the bioretention areas, infiltration basins, and summary table can be found in Appendix 6 of this report.

Hotspot Treatment:

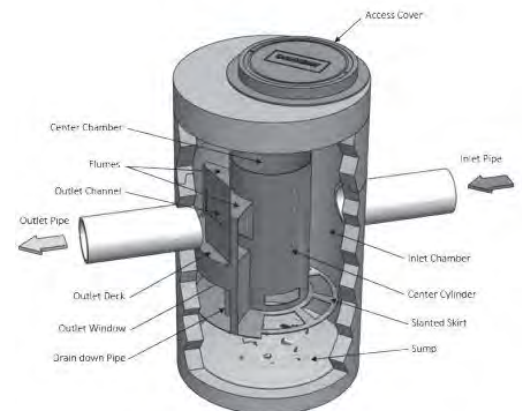
A stormwater hotspot is defined by NYSDEC as a land use or activity that generates higher concentrations of hydrocarbons, trace metals or toxicants than are found in typical stormwater runoff, based on monitoring studies. If an area of a site is designated a hotspot, stormwater runoff cannot be allowed to infiltrate untreated into groundwater, where it may contaminate water supplies. Table 4.3 in the NYSSMDM classifies outdoor loading/unloading facilities as stormwater hotspots.

In order to provide the required Hotspot treatment hydrodynamic separators are proposed to be provided. Hydrodynamic separators are devices that move water in a circular, centrifugal manner to accelerate the separation and deposition of primarily sediment from the water. They are suitable for removal of coarse particles, oils, and fuels over small drainage areas. The NYSDEC refers to the New Jersey Department of Environmental Protection for a list of Stormwater Manufactured Treatment Devices which have received Interim Certification (included in Appendix 11). One of the products on the list is the Contech Cascade Separator.

The Cascade Separator is a vertically oriented cylindrical structure manufactured from concrete with a fiberglass insert. The Separator uses opposing vortices that enhance particle settling and a unique skirt design that allows for sediment transport into the sump while reducing turbulence and resuspension of previously captured material. To size the Separators, a flow associated with the Water Quality storm event over the proposed catchment areas was calculated using HydroCAD computer software, the output from which can be found in Appendix 11 of this report. The Cascade Separators have an internal bypass which eliminates the need for a separate bypass structure for flows above the Water Quality storm event.

Table A-1 Cascade Separator™ Models and Associated MFRs

Model	Manhole Diameter (ft)	MFR (cfs)	50% Maximum Sediment Storage Area Volume (ft³)
CS-3	3	1.02	5.3
CS-4	4	1.80	9.4
CS-5	5	2.81	14.7
CS-6	6	4.05	21.2
CS-8	8	7.20	37.7
CS-10	10	11.3	58.9
CS-12	12	16.2	84.8

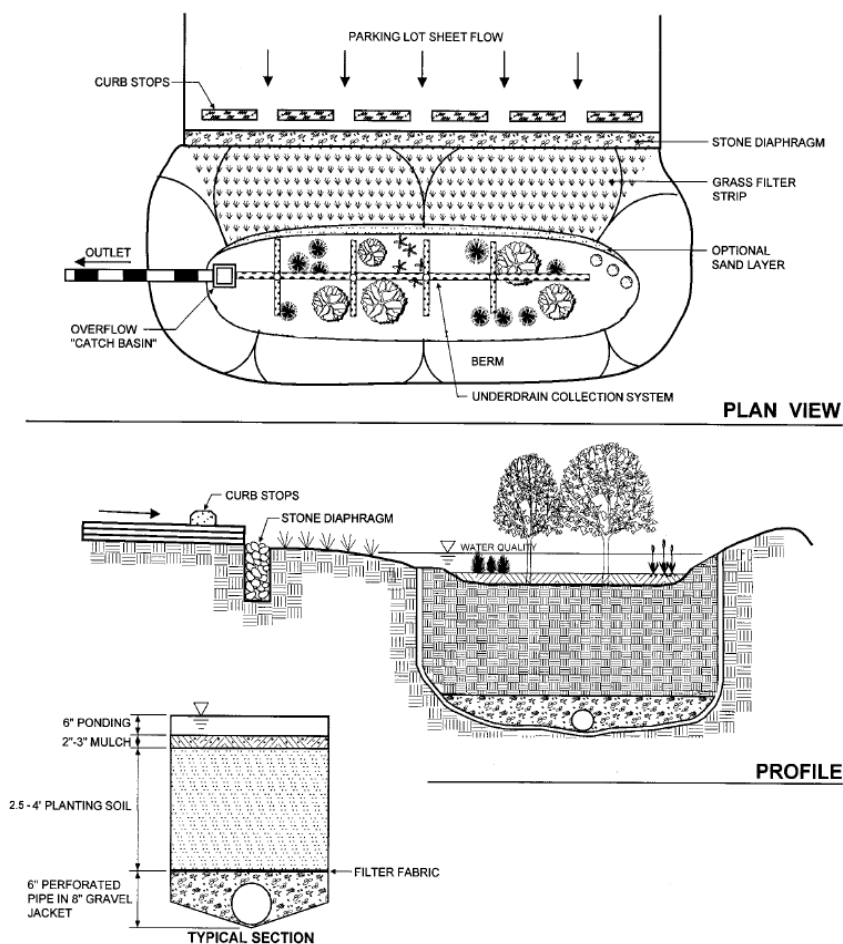


Bioretention Areas:

The proposed development causes an increase in impervious cover. As such the runoff must be mitigated for water quality. One of the SMP utilized for the proposed development is the use of bioretention with a proposed underdrain (F-5). A bioretention area (F-5 in the NYSSMDM) is a shallow stormwater basin or landscaped area which utilizes engineered soils and vegetation to capture and treat runoff. In addition, bioretention areas are considered Standard SMPs with Runoff Reduction Capacity. Eight bioretention areas have been designed in accordance with Section 6.4 of the NYSSMDM using the G.I. Worksheets included in Appendix 6 of this report. The bioretention areas were designed with perforated underdrains to convey filtered stormwater to an outlet structure. Each bioretention area contains an outlet structure with an open top and pipe out to handle overflow for larger storm events up to the 100-year storm, which also helps for water quantity mitigation. Please refer to the stage-area-storage charts included within Appendix 5 for the proposed bioretention areas.

Section 6.4.3 of the NYSSMDM regarding Bioretention Facility Pretreatment provides requirements and design guidelines for the required pretreatment of at least 75% of the computed WQV. One option to provide pre-treatment is outlined in table 6.2 "Guidelines for Filter Strip Pretreatment" as is provided for 3 of the proposed 8 bioretention basins. The other 5 bioretention basins have been designed with forebays that contain at least 75% of the required WQv.

Figure 6.19 Bioretention (F-5)

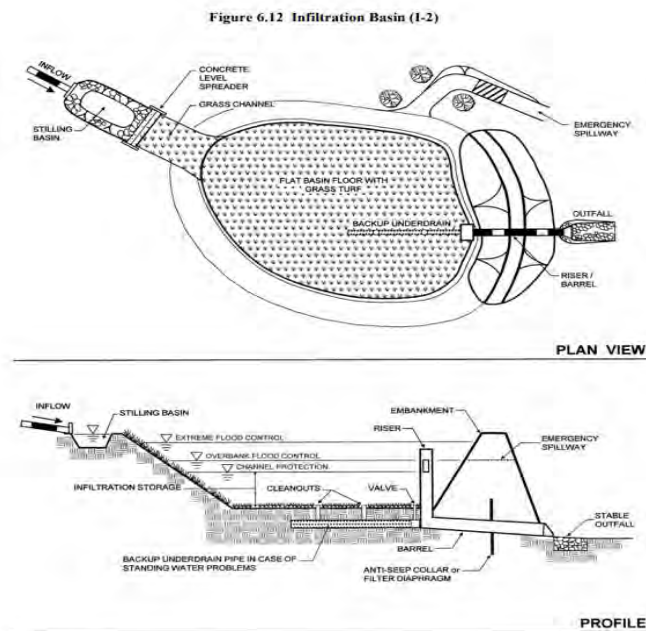


Infiltration Basins:

An infiltration basin (I-2 in the NYSSMDM) is an infiltration practice that stores the water quality volume in a shallow depression before it is infiltrated into the ground. Extended detention can also be provided above the required water quality volume. Four infiltration basins (1B, 1C, 1H and 1G) have been designed in accordance with Section 6.3 of the NYSSMDM using the G.I. Worksheets included in Appendix 6 of this report.

Section 6.3.3 regarding Stormwater Infiltration Pretreatment requires 100% of the WQv to be pretreated prior to entry into an infiltration facility if the Fc for the underlying soils is greater than 5.00 inches per hour as is the case with the design for each of the proposed basins.

In order to provide the 100% WQv required a forebay has been sized for each infiltration basin to contain 100% of the WQv as calculated by the green infrastructure sheets provided in appendix 6.



Vegetation:

The existing site consists of a majority of undeveloped wooded and grass areas as well as three two-story and two one-story residential dwellings to be removed along Beaver Dam Road on the south west side of the project site. The vegetated areas consist of woods, brush, and grass, and the wooded area consists primarily of deciduous trees and some underbrush. Replacement vegetation will consist of a variety of shade trees, evergreen trees, flowering trees, shrubs, and grass, as shown on the approved Landscape Plan.

General Seeding Notes

1. Temporary erosion control protection shall consist of equipment (CAT) tracking or excavation bucket compaction for bare slopes to be protected. Slopes must be tracked from the top of the slope to the bottom of the slope (see page 4.56 of the bluebook). Follow this wood fiber mulch (Hydromulch) shall be applied at a rate of 500-700 lbs/Ac. (11-17lbs/1,000 SF). Temporary erosion control protection shall be mulched and maintained until disturbed areas are permanently stabilized with permanent seeding.
2. Soil should be tested before determining final seed and fertilizer. Pending the results of those tests typical seed and fertilizer specifications are listed below for context.
3. Refer to the site plan Landscape sheets 20-24 for Permanent lawn seeding. Optimum seeding dates are between April 1 and May 31; and August 16 and October 15.
4. Detention and Infiltration basins to be seeded with Ernst seed mix 127 or approved equivalent.
5. Refer to the site plan Landscape sheets 20-24 for permanent seeding rates rate. Sloped area to be covered with mulch as indicated in note 7.
6. Fertilizer for the establishment of temporary and permanent vegetative cover shall be 10-20 applied at a rate of 14# per 1000 sf or as determined by soil tests. Limestone for temporary seeding shall be applied at a rate of 90# per 1000 sf. Limestone for permanent seeding shall be applied at rate of 135# per 1000 sf.
7. If season prevents the establishment of temporary or permanent seeding, exposed area to be stabilized with mulch as indicated in note 7.
8. Mulch to consist of small grain straw or salt hay anchored with a wood and fiber mulch binder or an approved equal. Mulch will be spread at rates of 90 to 115 lbs. per 1000 sf and anchored with a mulch anchoring tool or liquid mulch binder and shall be provided on all seedings. Hydromulch shall only be used during optimum growing seasons.
9. Work lime and fertilizer into soil as nearly as practical to a depth of 4 inches with a disc, springtooth harrow, or other suitable equipment. The final harrowing or discing operation should be on the general contour. Continue tillage until a reasonably uniform, fine seedbed is prepared. All but clay or silty soils and coarse sands should be rolled to firm the seedbed wherever feasible.
10. Remove from the surface all stones two inches or larger in any dimension. Remove all other debris, such as wire, cable, tree roots, pieces of concrete, clods, lumps, or other unsuitable material.
11. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled and firmed as above.

Erosion Control Measures:

All work shall be done in accordance with the New York Standards and Specifications for Erosion and Sediment Control ("Blue Book"). Please refer to the Soil Erosion & Sediment Control Plan and Construction Details for soil erosion and sediment control notes, sequence of construction, and location and size of the proposed erosion control practices to be used during construction, which include but are not limited to silt fence, inlet protection, stabilized construction entrance, temporary sediment basins, and stockpiles. Descriptions of temporary and permanent erosion control practices, as well as detailed phasing/sequence of construction is also provided below. Additionally, "Blue Book"

specifications for each erosion control practice can be found in Appendix 13. Furthermore, Soil Erosion and Sediment Control Plan review checklists and construction inspection and maintenance checklists for soil erosion and sediment control measures can also be found in Appendix 14.

Temporary Soil Erosion and Sediment Control Measures

Temporary soil erosion and sediment control measures are practices that shall be used during the course of construction and removed following site stabilization. These practices shall be used to help control litter, help control soil erosion, help prevent and eliminate silt laden runoff from leaving the site, and to help ensure that disturbed soil is not exposed for more than seven (7) days where construction activities have temporarily or permanently ceased.

1. Temporary Slope Protection: General Contractor to perform equipment (cat) tracking or excavator bucket compaction for bare slopes to be protected. Slopes must be tracked from the top of the slope to the bottom of the slope. (See page 4.56 of the bluebook).
2. Silt Fence: A geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff by temporarily ponding the sediment laden runoff, allowing settling to occur. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence. Sediment that has accumulated along the silt fence shall be removed once it reaches 25% of the silt fence height.
3. Temporary diversion swale: this will prevent runoff from entering disturbed areas by intercepting and diverting it to a stabilized outlet or to intercept sediment laden water and divert it to a sediment trapping device.
4. Stone check dams: these small barriers or dams are constructed of stone or gravel across a drainage way to reduce erosion in a drainage channel by restricting the velocity of flow in the channel. This practice is used as a temporary or emergency measure to limit erosion by reducing velocities in small open channels.
5. Fabric Drop Inlet Protection: A barrier with low permeability installed around an inlet in the form of a fence, berm, or excavation around an opening that detains water and reduces the sediment content of sediment laden runoff to prevent it from entering a storm drain system. These shall be inspected and cleaned after every storm. Sediment should be removed when 50% of the storage volume is achieved.
6. Water Bar: A temporary ridge constructed diagonally across a sloping road or utility right-of-way that is subject to erosion to limit the accumulation of erosive velocity of water by diverting surface runoff at pre-designed intervals.
7. Fiber Roll: A Fiber roll is a coir (coconut fiber), straw, or excelsior roll encased in netting of jute, nylon, or burlap to dissipate energy along streambanks, channels, and bodies of water to reduce sheet flow on slopes.
8. Temporary sediment basins with porous baffles, riser and skimmer: during construction, select stormwater basin areas will be used as temporary basins to intercept sediment laden runoff and trap and retain the sediment in one location.
9. Temporary sediment trap: during construction, a temporary sediment trap is formed by excavation and/or embankment to intercept sediment-laden runoff and trap the sediment in order to protect drainageways, properties, and rights-of-way below the sediment trap from sedimentation.
10. Stabilized Construction Entrance: A pad of stone aggregate over a geotextile fabric that is installed at all points of construction ingress/egress and is used to prevent sediment tracking onto public streets. The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. All sediment spilled, dropped, washed, or tracked onto public rights-of-way must be removed immediately. When washing is required,

it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device. Periodic inspection and any necessary maintenance shall be provided after each storm.

11. Temporary low-level filter: during construction of a perforated pipe section will be installed at the low-level outflow of the outlet structure in each stormwater basin and wrapped with gravel, then with filter fabric to restrict sediment laden run-off from exiting the Project Site at the discharge points.
12. Slope stabilization matting: this biodegradable matting will be installed on slopes 2:1 or steeper, in conjunction with seeding to provide temporary stabilization until vegetation is established and stabilizes the slope.
13. Concrete Truck Washout: An excavated or above ground pit with a liner used to wash concrete truck mixers and equipment in order to prevent highly alkaline runoff from entering storm drainage systems or leaching into the soil. Concrete washout facilities shall be inspected daily. Damaged or leaking facilities shall be deactivated and repaired or replaced immediately. Excess rainwater that has accumulated over hardened concrete shall be pumped to a stabilized area, such as a grass filter strip. Accumulated hardened materials shall be removed when 75% of the storage capacity of the structure is filled. The plastic liner shall be replaced with each cleaning of the washout facility.
14. Soil Stockpile: Storage location for excavated soil. Soil stockpiles shall be stabilized with either seed, mulch, matting, etc. when not in use, and disturbed soils shall not be left exposed more than seven (7) days. Additionally, a silt fence shall be installed 15 feet from the toe of the stockpile to prevent soil migration. Stockpiles shall be inspected after rain storms and as necessary to maintain stabilization when not in use and to ensure silt fence at toe of slope has not reached 25% capacity.

Permanent Soil Erosion and Sediment Control Measures

Permanent soil erosion and sediment control measures are ones that are installed prior to or during construction that will remain in place following construction and site stabilization.

1. Rock Outlet Protection: Rock protection installed at the outlet end of culverts, conduits, or channels to reduce the depth, velocity, and energy of water to prevent erosion of the downstream grade. Once a riprap outlet has been installed, maintenance needs are typically very low. It should be inspected after high flows for evidence of scour beneath the rip rap or for dislodged rocks, and repairs should be made immediately.
2. Retaining walls: structural walls will be constructed in select locations adjacent to parking areas, access roads, wetlands and property lines in order to minimize soil movement, retain soil in place and prevent potential slope failures due proposed elevation changes.
3. Site stabilization: all disturbed areas will be stabilized with either a permanent vegetative cover (seeded, sodded or planting beds) or with site elements such as buildings, roadways, parking areas, driveways, and sidewalks.

Temporary to be Converted to Permanent Soil Erosion and Sediment Control Measures

Temporary Sediment Basin: A basin designed to intercept sediment-laden runoff by ponding it and allowing sediment to settle out. Since these basins will be converted to permanent stormwater basins once the site is stabilized, they will be excavated and graded as shown on the approved Soil Erosion

and Sediment Control Plans. The outlet control structures will be fitted with temporary sediment risers to prevent sediment laden runoff from leaving the basins and entering the storm drain system. Sizing calculations were performed to ensure the basins could adequately handle the required amount of storage and can be found below in the "Temporary Storage" section of this report. Regarding maintenance of the basins, sediment shall be removed from the basin when it reaches the specified depth for cleanout noted on the plans, which is 50% of the capacity of the sediment storage zone. This sediment shall be placed so that it will not erode from the site. Once the temporary sediment basins are no longer required, they shall have all accumulated sediment removed with vacuum excavation trucks for best results converted into the permanent proposed basin.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. All soil erosion and sediment control practices are to be installed prior to any major soil disturbance, or in their proper sequence, and maintained until permanent protection is established.
2. Any disturbed areas that will be left exposed more than five (5) days but in no case no more than 2 days or less if rain is predicted after construction activity, and not subject to construction traffic, will immediately receive temporary slope protection and hydro-mulch applied.
3. Apply slope protection measures within 2 days after earthmoving on a particular slope is complete.
4. Perform equipment (cat) tracking or excavator bucket compaction for bare slopes to be protected. slopes must be tracked from the top of the slope to the bottom of the slope. (see page 4.56 of the bluebook)
5. permanent vegetation to be seeded or sodded on all exposed areas within five (5) days after final grading. mulching is required on all seeding. when hydroseeding, mulch shall not be included in the tank with the seed.
6. all work to be done in accordance with the New York standards and specifications for erosion and sediment control.
7. a subbase course will be applied immediately following rough grading and installation of improvements to stabilize streets, roads, driveways, and parking areas. in areas where no utilities are present, the subbase shall be installed within five (5) days of the preliminary grading.
8. immediately following initial disturbance or rough grading, all critical areas subject to erosion (i.e. steep slopes and roadway embankments) will receive a temporary seeding in combination with straw mulch or a suitable equivalent, at a rate of two (2) tons per acre, according to state standards.
9. in accordance with the standard for management of high acid producing soils, any soil having a PH of 4 or less or containing iron sulfides shall be covered with a minimum of twelve (12) inches of soil having a PH of 5 or more prior to seedbed preparation. areas where trees or shrubs are to be planted shall be covered with a minimum of twenty-four (24) inches of soil having a PH of 5 or more.
10. at the time the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide a suitable environment to support adequate vegetative ground cover, shall be removed or treated in such a way that it will permanently

adjust the soil conditions and render it suitable for vegetative ground cover. if the removal or treatment of the soil will not provide suitable conditions, non-vegetative means of permanent ground stabilization will have to be employed.

11. unfiltered dewatering is not permitted. take all necessary precautions during all dewatering operations to minimize sediment transfer. any dewatering methods used must be in accordance with state standards.
12. should the control of dust at the site be necessary, the site will be sprinkled until the surface is wet, temporary vegetative cover shall be established or mulch shall be applied in accordance with state standards for erosion control.
13. all soil washed, dropped, spilled, or tracked outside the limit of disturbance or onto public right-of-way will be removed immediately.
14. the contractor shall be responsible for any erosion and sedimentation that may occur below stormwater outfalls or offsite as a result of construction of the project.
15. stockpile and staging locations determined in the field, shall be placed within the limits of disturbance according to the certified plan.
16. all permanent soil erosion and sediment control measures shall be maintained by the contractor and shall become their responsibility.
17. pavement areas are to be kept clean at all times.
18. during construction, any additional control measures as deemed necessary to prevent erosion or control sediment beyond those measures shown on the approved plan shall be installed or employed at the direction of the municipal engineer.

Maintenance Plan During Construction:

inspection and maintenance shall be performed in conformance with gp-0-20-001. all erosion and sediment control practices will be checked for stability and operation following every runoff-producing rainfall but in no case less than once every week. any needed repairs will be made immediately to maintain all practices as designed and installed for the project. sediment will be removed from behind the silt fence when it becomes about 0.5 ft deep at the fence. the sediment fence will be repaired as necessary to maintain a barrier. all seeded areas will be fertilized, reseeded as necessary, and mulched according to specifications in the landscape plan to maintain a vigorous, dense vegetative cover.

Sequence of Construction

General Sequence notes that apply to all phases:

1. The engineering inspector shall be notified in writing at least 48 hours prior to the start of any work.
2. Prior to the commencement of any site work the applicant shall install the soil erosion and sediment controls as per the approved plans, which includes but is not limited to the silt fences, inlet filters filter socks and construction entrances. All erosion and sediment control measures shall conform to the latest version of the New York Standards and Specifications for Erosion and Sediment Control.
3. Stabilization - The operator shall initiate stabilization measures as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but

in no case more than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased. Stabilization means covering or maintaining an existing cover over soil. Cover can be vegetative (e.g. grass, trees, seed and mulch, shrubs, or turf) or non-vegetative (e.g. geotextiles, rip rap, gabions and/or cat tracking).

4. Maintenance - Sediment shall be removed from sediment traps whenever their capacity has been reduced by twenty-five (25) percent from the design capacity. A fixed vertical sediment depth marker should be installed to monitor the capacity.
5. Additional erosion control measures shall be installed, as may be required, and requested by authorities, to prevent the incidental discharge of silt laden runoff from entering a water course or a drainage system.
6. The general permit for storm water discharges from construction activities states that it is unlawful for any person to cause or contribute to a violation of water quality standards.
7. Existing on-site utilities to be marked out prior to construction. Extreme care and caution shall be used when performing any work near existing utility lines.

Phase 0: Right of way improvements and road widening

Total limit of disturbance: 1.73 acres

1. Stake out or delineate the limits of the phase by gps or other survey methods prior to disturbance.
2. Install perimeter silt fence and tree protection measures as shown on the project plans.
3. Install construction entrances and truck washouts in locations indicated on this plan for phase 0.
4. Establish areas for construction staging and materials storage.
5. Excavate for utility trenching, and stormwater trenching.
6. Install utility and stormwater pipes/structures located within phase 0 as indicated on the grading and utility plans.
7. Install inlet protection per plan and additional soil erosion measures as dictated by construction conditions.
8. Rough grade the limits within phase 0. stabilize roads with gravel.
9. Prepare pavement subgrade and install subbase material.
10. Install proposed curbing and pave (base and binder course) proposed drive aisles based on the layout and grading plans.
11. Finish grading and stabilize all disturbed area. all catch basins, drainage manholes, and drainage lines shall be cleaned of any accumulated silt and sediment.
12. Repair soil erosion and sediment control measures as needed from construction activities.

Phase 1: Site access, preparation for construction vehicles, and roadway construction
Total limit of disturbance: 11.90 acres

1. Stake out or delineate the limits of each phase by GPS or other survey methods prior to disturbing each area to ensure conformance with the maximum disturbance limit of 18 acres.
2. Install perimeter silt fence and tree protection measures as shown on the project plans.
3. Install construction entrances and truck washouts in locations indicated on this plan for phase 1.
4. Clear stumps and any remaining vegetation within the limits of phase 1.
5. Construct retaining walls per layout and grading plan.
6. Establish areas for construction staging and materials storage.
7. install temporary diversion measures to ensure that stormwater runoff is conveyed to the temporary sediment basins.
8. excavate for temporary sediment basins 1, 2 and temporary sediment trap 3. temporary sediment basins shall be graded to the bottom of the gravel layer in the future proposed bioretention area. Temporary sediment basin 1 will remain throughout the construction of phase 4 and sediment basin 2 will remain throughout the construction of phase 8.
9. Excavate subsurface clay, relocate cut soil in areas of fill as indicated on the grading plan, unsuitable soil that will not be used as fill should be brought off the site.
10. Place any excess excavated material in potential soil stockpile locations as specified on the project plans for phase 1.
11. Excavate for utility trenching, and stormwater trenching. Repeat previous 2 steps.
12. Install utility and stormwater pipes/structures located within phase 1 as indicated on the grading and utility plans.
13. Install inlet protection per plan and additional soil erosion measures as dictated by construction conditions.
14. Rough grade the limits within phase 1. Stabilize roads with gravel.
15. Prepare pavement sub-grade and install sub-base material.
16. Install proposed curbing and pave (base and binder course) proposed drive aisles based on the layout and grading plans.
17. Finish grading and stabilize all disturbed area. all catch basins, drainage manholes, and drainage lines shall be cleaned of any accumulated silt and sediment.
18. Remove all accumulated sediment within the temporary sediment areas with vacuum excavation trucks for best results. Finish final grading for sediment trap 3 area.
19. Repair soil erosion and sediment control measures as needed from construction activities. Once the site is clear of debris and the surrounding area is stabilized clear drainage pipes and structures of any sediment which may have accumulated.
20. Phase 2 may begin. This is to ensure that no more than 18 acres of land is disturbed at any one time.

Phase 2: Proposed Building 2 and Loading Dock Construction
Total Limit of Disturbance: 13.89 acres

1. Install perimeter silt fence and tree protection measures as shown on the project plans.
2. Install construction entrances and truck washouts in locations indicated on this plan for phase 2.
3. Clear stumps and any remaining vegetation within the limits of phase 2.
4. Construct retaining walls per layout and grading plan.
5. Establish areas for construction staging and materials storage.
6. Install temporary diversion measures to ensure that stormwater runoff is conveyed to the temporary sediment basins.
7. Excavate for temporary sediment trap 2. temporary sediment basin 1 will remain for the duration of construction for this phase and throughout phase 4.
8. Excavate subsurface clay, relocate cut soil in areas of fill as indicated on the grading plan, unsuitable soil that will not be used as fill should be brought off the site.
9. Place any excess excavated material in potential soil stockpile locations as specified on the project plans for phase 2.
10. Excavate for utility trenching, and stormwater trenching. repeat previous 2 steps.
11. Install utility and stormwater pipes/structures located within phase 2 as indicated on the grading and utility plans.
12. Install inlet protection per plan and additional soil erosion measures as dictated by construction conditions.
13. Rough grade the limits within phase 2. stabilize roads with gravel.
14. Construct building foundation within the limits of phase 2.
15. Prepare pavement subgrade and install subbase material.
16. install proposed curbing and pave (base and binder course) proposed loading docks and drive aisles based on the layout and grading plans.
17. Finish grading and stabilize all disturbed area. all catch basins, drainage manholes, and drainage lines shall be cleaned of any accumulated silt and sediment.
18. Remove all accumulated sediment within the temporary sediment areas with vacuum excavation trucks for best results.
19. Finalize construction of the bioretention area where sediment trap 2 has been removed upon completion of the construction activities.
20. Repair soil erosion and sediment control measures as needed from construction activities. Once the surrounding area is stabilized clear drainage pipes and structures of any sediment which may have accumulated.
21. phase 3 may begin. This is to ensure that no more than 18 acres of land is disturbed at any one time.

Phase 3: Proposed Building 2 and Loading Dock Construction
Total Limit of Disturbance: 10.43 acres

1. Install perimeter silt fence and tree protection measures as shown on the project plans.
2. Install construction entrances and truck washouts in locations indicated on this plan for phase 3.
3. Clear stumps and any remaining vegetation within the limits of phase 3.
4. Construct retaining walls per layout and grading plan.
5. Establish areas for construction staging and materials storage.
6. install temporary diversion measures to ensure that stormwater runoff is conveyed to the temporary sediment basins.
7. Excavate for temporary sediment basin 3. temporary sediment basin shall be graded to the bottom of the gravel layer in the future proposed bioretention area. Temporary sediment basin 3 will remain for the duration of construction for this phase.
8. Excavate subsurface clay, relocate cut soil in areas of fill as indicated on the grading plan, unsuitable soil that will not be used as fill should be brought off the site.
9. Place any excess excavated material in potential soil stockpile locations as specified on the project plans for phase 3.
10. Excavate for utility trenching, and stormwater trenching. repeat previous 2 steps.
11. Install utility and stormwater pipes/structures located within phase 3 as indicated on the grading and utility plans.
12. Install inlet protection per plan and additional soil erosion measures as dictated by construction conditions.
13. Rough grade the limits within phase 3. stabilize roads with gravel.
14. Construct building foundation within the limits of phase 3.
15. Prepare pavement subgrade and install subbase material.
16. Install proposed curbing and pave (base and binder course) proposed loading docks and drive aisles based on the layout and grading plans.
17. Finish grading and stabilize all disturbed area. all catch basins, drainage manholes, and drainage lines shall be cleaned of any accumulated silt and sediment.
18. Remove all accumulated sediment within the temporary sediment areas with vacuum excavation trucks for best results. remove the temporary risers, baffle and construction fabric from the outlet control structures for the temporary sediment basin.
19. Finalize construction of the bioretention area upon completion of the construction activities.
20. Once construction of the proposed building foundation and truck loading area for phase 3 area are completed the proposed building may be constructed.
21. Repair soil erosion and sediment control measures as needed from construction activities. Once construction of the proposed building foundation and loading area are completed and the surrounding area is stabilized, phase 4 may begin. This is to ensure that no more than 18 acres of land is disturbed at any one time.

Phase 4: Proposed Building 1 and Loading Dock Construction
Total Limit of Disturbance: 15.55 Acres

1. Install perimeter silt fence and tree protection measures as shown on the project plans.
2. Install construction entrances and truck washouts in locations indicated on this plan for phase 4.
3. Clear stumps and any remaining vegetation within the limits of phase 4.
4. Construct retaining walls per layout and grading plan.
5. Establish areas for construction staging and materials storage.
6. Install temporary diversion measures to ensure that stormwater runoff is conveyed to the temporary sediment basins.
7. Excavate for temporary sediment trap 3. temporary sediment basin 1 will remain for the duration of construction for this phase and throughout phase 4. Temporary sediment trap 3 will remain for the duration of construction for this phase and throughout phase 7.
8. Excavate subsurface clay, relocate cut soil in areas of fill as indicated on the grading plan, unsuitable soil that will not be used as fill should be brought off the site.
9. Place any excess excavated material in potential soil stockpile locations as specified on the project plans for phase 4.
10. Excavate for utility trenching, and stormwater trenching. repeat previous 2 steps.
11. Install utility and stormwater pipes/structures located within phase 4 as indicated on the grading and utility plans.
12. Install inlet protection per plan and additional soil erosion measures as dictated by construction conditions.
13. Rough grade the limits within phase 4. stabilize roads with gravel.
14. Construct building foundation within the limits of phase 4.
15. Prepare pavement subgrade and install subbase material.
16. Install proposed curbing and pave (base and binder course) proposed loading docks and drive aisles based on the layout and grading plans.
17. Finish grading and stabilize all disturbed area. all catch basins, drainage manholes, and drainage lines shall be cleaned of any accumulated silt and sediment.
18. Remove all accumulated sediment within the temporary sediment areas with vacuum excavation trucks for best results.
19. Repair soil erosion and sediment control measures as needed from construction activities. Once the surrounding area is stabilized clear drainage pipes and structures of any sediment which may have accumulated.
20. Phase 5 may begin. This is to ensure that no more than 18 acres of land is disturbed at any one time.

Phase 5: Proposed Building 1 and Loading Dock Construction
Total Limit of Disturbance: 15.86 Acres

1. Install perimeter silt fence and tree protection measures as shown on the project plans.
2. Install construction entrances and truck washouts in locations indicated on this plan for phase 5.
3. Clear stumps and any remaining vegetation within the limits of phase 5.
4. Construct retaining walls per layout and grading plan.
5. Establish areas for construction staging and materials storage.
6. Install temporary diversion measures to ensure that stormwater runoff is conveyed to the temporary sediment basins.
7. Excavate for temporary sediment basin 4, 5 and sediment trap 4. Temporary sediment basins shall be graded to the bottom of the gravel layer in the future proposed bioretention (sediment basin 4 and 5) area.
8. Excavate subsurface clay, relocate cut soil in areas of fill as indicated on the grading plan, unsuitable soil that will not be used as fill should be brought off the site.
9. Place any excess excavated material in potential soil stockpile locations as specified on the project plans for phase 5.
10. Excavate for utility trenching, and stormwater trenching. repeat previous 2 steps.
11. Install utility and stormwater pipes/structures located within phase 5 as indicated on the grading and utility plans.
12. Install inlet protection per plan and additional soil erosion measures as dictated by construction conditions.
13. Rough grade the limits within phase 4. stabilize roads with gravel.
14. Construct building foundation within the limits of phase 5.
15. Prepare pavement subgrade and install subbase material.
16. Install proposed curbing and pave (base and binder course) proposed loading docks and drive aisles based on the layout and grading plans.
17. Finish grading and stabilize all disturbed area. all catch basins, drainage manholes, and drainage lines shall be cleaned of any accumulated silt and sediment.
18. Remove all accumulated sediment within the temporary sediment areas with vacuum excavation trucks for best results. remove the temporary risers, baffle and construction fabric from the outlet control structures for the temporary sediment basin.
19. Finalize construction of the bioretention areas upon completion of the construction activities.
20. Once construction of the proposed building foundation and truck loading area for phase 5 area are completed the proposed building may be constructed.
21. Repair soil erosion and sediment control measures as needed from construction activities. Once construction of the proposed building foundation and loading area are completed and the surrounding area is stabilized clear drainage pipes and structures of any sediment which may have accumulated.
22. Phase 6 may begin. This is to ensure that no more than 18 acres of land is disturbed at any one time.

Phase 7: Trailer Parking Construction
Total Limit of Disturbance: 6.80 Acres

1. Install/repair perimeter silt fence and tree protection measures as shown on the project plans.
2. Install construction entrances and truck washouts in locations indicated on this plan for phase 7.
3. Clear stumps and any remaining vegetation within the limits of phase 7.
4. Construct retaining walls per layout and grading plan.
5. Establish areas for construction staging and materials storage.
6. Install temporary diversion measures to ensure that stormwater runoff is conveyed to the temporary sediment basins.
7. Excavate for temporary sediment trap 7.
8. Excavate subsurface clay, relocate cut soil in areas of fill as indicated on the grading plan, unsuitable soil that will not be used as fill should be brought off the site.
9. Place any excess excavated material in potential soil stockpile locations as specified on the project plans for phase 7.
10. Excavate for utility trenching, and stormwater trenching. repeat previous 2 steps.
11. Install utility and stormwater pipes/structures located within phase 7 as indicated on the grading and utility plans.
12. Install inlet protection per plan and additional soil erosion measures as dictated by construction conditions.
13. Rough grade the limits within phase 7 stabilize roads with gravel.
14. Construct building foundation and structure within the limits of phase 7.
15. Prepare pavement subgrade and install subbase material.
16. Install proposed curbing and pave (base and binder course) proposed trailer storage areas and drive aisles based on the layout and grading plans.
17. Finish grading and stabilize all disturbed area. all catch basins, drainage manholes, and drainage lines shall be cleaned of any accumulated silt and sediment.
18. Remove all accumulated sediment within the temporary sediment areas with vacuum excavation trucks for best results.
19. Finalize construction of the basin areas upon completion of the construction activities.
20. Repair soil erosion and sediment control measures as needed from construction activities. Once the surrounding area is stabilized clear drainage pipes and structures of any sediment which may have accumulated.
21. Phase 8 may begin. This is to ensure that no more than 18 acres of land is disturbed at any one time.

Phase 8: Banked Trailer Parking Construction
Total Limit of Disturbance: 2.32 Acres

1. Install/repair perimeter silt fence and tree protection measures as shown on the project plans.
2. Install construction entrances and truck washouts in locations indicated on this plan for phase 8.
3. Clear stumps and any remaining vegetation within the limits of phase 8.
4. Construct retaining walls per layout and grading plan.
5. Establish areas for construction staging and materials storage.
6. Install temporary diversion measures to ensure that stormwater runoff is conveyed to the temporary sediment basins.
7. Temporary sediment basin 2 will remain for the duration of construction for this phase.
8. Excavate subsurface clay, relocate cut soil in areas of fill as indicated on the grading plan, unsuitable soil that will not be used as fill should be brought off the site.
9. Place any excess excavated material in potential soil stockpile locations as specified on the project plans for phase 8.
10. Excavate for utility trenching, and stormwater trenching. repeat previous 2 steps.
11. Install utility and stormwater pipes/structures located within phase 8 as indicated on the grading and utility plans.
12. Install inlet protection per plan and additional soil erosion measures as dictated by construction conditions.
13. Rough grade the limits within phase 8 stabilize roads with gravel.
14. Construct building foundation and structure within the limits of phase 8.
15. Prepare pavement subgrade and install subbase material.
16. Install proposed curbing and pave (base and binder course) proposed loading docks and drive aisles based on the layout and grading plans.
17. Finish grading and stabilize all disturbed area. all catch basins, drainage manholes, and drainage lines shall be cleaned of any accumulated silt and sediment.
18. Finalize construction of site improvements including sidewalks, landscape areas including infiltration and bioretention areas, signage, lighting, and any other outstanding items.
19. Remove all accumulated sediment within the temporary sediment basins with vacuum excavation trucks for best results. Remove the temporary risers, baffle and construction fabric from the outlet control structures for the temporary sediment basin.
20. Finalize construction of the basin areas as shown on the grading and drainage plans upon completion of the construction activities.
21. After completion of construction, apply seed or sod on all lawn areas. after stabilization has been established clear drainage pipes and structures of any sediment which may have accumulated. Remove all erosion control devices. maintain all lawn and landscaped areas to ensure a viable stabilized vegetative cover.

5-Acre Waiver Request

Since the maximum area disturbed at one time will be 15.86 acres, a waiver is requested to disturb more than 5 acres at one time. The larger building itself is about 19.51 acres, so it is necessary to disturb more than five acres at one time in order to work in multiple areas at the same time, such as constructing the building foundation and utilities. This amount of disturbance is also necessary to provide access all around the building for construction. No phase is to exceed 18 Acres in total as is required by the Town of Montgomery. Additionally, it is important to balance the cut-fill during construction which, due to the challenging topography of the land, will require disturbing different portions of the site at the same time. Although this waiver would allow for greater than five acres to be disturbed at once, the contractor will be temporarily stabilizing areas within seven (7) days where construction activities are not actively being performed, which will lessen the amount of exposed soil at any one time throughout construction.

Should this waiver be granted, additional controls will be implemented. A qualified inspector will conduct at least two (2) site inspections every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two inspections shall be separated by a minimum of two (2) full calendar days. Inspections shall also be performed after major rainfall events (greater than 1.5 in/hr). An inspection checklist can be found in Appendix 12. Lastly, where construction has been completed or has temporarily ceased, soil shall not be exposed for more than seven (7) days and shall be either temporarily or permanently stabilized.

Temporary Storage

The proposed bioretention basin areas shall be used as temporary sediment basins during construction. According to New York State Standards and Specifications for Erosion and Sediment Control (aka "the bluebook"), temporary sediment basins shall consist of two separate zones, the sediment storage zone and the dewatering zone. The sediment storage zone shall have a minimum depth of 1 foot and shall be sized for a volume equal to 1,000 cubic feet per disturbed acre of land. The dewatering zone shall have a minimum depth of 3 feet and shall be sized for a volume equal to 3,600 cubic feet per acre is disturbed land. The construction of the proposed development will be phased as shown on the Soil Erosion & Sediment Control Plan.

For Phase 1 of construction totaling 11.90 acres this would require 11,900 cubic feet of storage within the sediment storage zone (11.90 Ac x 1,000 SF) and 42,840 cubic feet within the dewatering zone (11.90 x 3,600), for a total of 54,740 cubic feet of temporary storage during phase 1 of construction. The first foot of Sediment basin 1 has contains a storage volume of 12,014 cf within the first foot of storage (from elevation 414.67 to 415.67). The first foot of sediment basin 2 (from elevation 406.83 to 407.83) has a storage volume of 15,210 cubic feet. Since the combined 27,224 cubic feet of storage is greater than the required 11,900 cubic feet, there is adequate storage in the sediment storage zone of the sediment basins. The remaining total storage in basins 1 and 2 below the top of riser have a volume of 94,370 cf and 78,636 cf, and for a total of 173,006 cf. Since the 173,006 cubic feet of storage is greater than the required 54,740 cubic feet, there is adequate storage in the dewatering zones provided.

In addition, temporary sediment trap 1 has been proposed between the proposed access road off Beaver Damn Road and Beaver Damn Road itself to provide sediment storage for the portion of runoff for the area on the west side of the proposed berm. This area has an approximate drainage area of 1.87 acres included within the total 15.19 acres for phase 1. The temporary sediment trap has 3,282 cf of storage within the first foot ($V = 0.4 \times A \times D = 0.4 \times 8,205 \text{ SF} \times 1 \text{ ft} = 3,282 \text{ cf}$) and as such there is adequate storage in the sediment storage zone of the sediment basin. The remaining total storage within the sediment trap is 9,846 cf ($V = 0.4 \times 8,205 \text{ SF} \times 3 = 9,486 \text{ cf}$) which is more than the 6,696 cf ($1.86 \times 3600 \text{ SF}$) amount required within the dewatering zone of the sediment trap.

Phase 2 proposes to disturb 13.89 acres. This would require 13,890 cubic feet of storage within the sediment storage zone and 50,004 cubic feet within the dewatering zone, for a total of 63,894 cubic feet of temporary storage during phase 2 of construction. Sediment basin 1 is proposed to remain for phase 2 and the first foot of temporary sediment trap 2 has a storage volume of 3,157 cf ($V = 0.4 \times A \times D = 0.4 \times 7,892 \text{ SF} \times 1 \text{ ft} = 3,157 \text{ cf}$). Since the 19,698 cubic feet of storage is greater than the required 13,890 cubic feet, there is adequate storage in the sediment storage zone of the detention basin. The remaining total storage within the sediment trap is 9,470 cf ($V = 0.4 \times 7,892 \text{ SF} \times 3 = 9,470 \text{ cf}$) and the remaining total storage in sediment basin 1 below the riser (elevation 421) has a volume and 94,370 cf. Since the 103,840 cubic feet of storage is greater than the required 50,004 cubic feet there is adequate storage in the dewatering zone provided.

Phase 3 proposes to disturb 10.43 acres. This would require 10,430 cubic feet of storage within the sediment storage zone and 37,548 cubic feet within the dewatering zone, for a total of 48,346 cubic feet of temporary storage during phase 3 of construction. The first foot of sediment basin 4 (between 428.67 and 429.67) has a storage volume of 12,709 cubic feet. Since the 12,709 cubic feet of storage is greater than the required 10,430 cubic feet, there is adequate storage in the sediment storage zone of the sediment basin. The remaining total storage in the basin below the top of riser (elevation 434) has a volume of 73,400 cf. Since the 73,400 cubic feet of storage is greater than the required 37,548 cubic feet there is adequate storage in the dewatering zones provided.

Phase 4 proposes to disturb 15.55 acres. This would require 15,550 cubic feet of storage within the sediment storage zone and 55,980 cubic feet within the dewatering zone, for a total of 71,530 cubic feet of temporary storage during phase 4 of construction. The first foot of sediment trap 3 has a storage volume of 5,037 cf ($V = 0.4 \times 12,593 \text{ SF} \times 1 = 9,470 \text{ CF}$) and the first foot of sediment basin 1 has 12,014 cf. Since the combined 17,051 cubic feet of storage is greater than the required 15,550 cubic feet, there is adequate storage in the sediment storage zone of the detention basin. The remaining total storage in sediment trap 3 and sediment basin 1 respectively are 15,111 cf ($V = 0.4 \times 12,593 \text{ SF} \times 3 = 9,470 \text{ cf}$) and 94,370 for a total volume of 109,481 cf. Since the 109,481 cubic feet of storage is greater than the required 55,980 cubic feet there is adequate storage in the dewatering zones provided.

Phase 5 proposes to disturb 15.86 acres. This would require 15,860 cubic feet of storage within the sediment storage zone and 57,096 cubic feet within the dewatering zone, for a total of 72,956 cubic feet of temporary storage during phase 5 of construction. The first 1 foot of sediment trap 4 has a storage volume of 5,460 cubic feet of ($V = 0.4 \times 12,593 \text{ SF} \times 1 = 5,460 \text{ cf}$). The first foot of storage in sediment basin 4 (from 407.66 to 408.66) is 9,975 cf and the first foot of storage in sediment basin 5 from elevation (407.5 to 408.5) has a storage volume of 5,595 cf for a total of 21,030 C cf. Since the 21,030 cubic feet of storage is greater than the required 15,860 cubic feet, there is adequate storage in the sediment storage zones. The remaining total storage in the sediment trap has a volume of 16,380 cf ($V = 0.4 \times 12,593 \text{ SF} \times 3 = 16,380 \text{ CF}$). The remaining total storage in sediment basins 4 and 5 below the riser (elevation 413) has a volume of 79,741 cf and 56,851 cf for a total of 152,971 cf

between the three. Since the 152,971 cubic feet of storage is greater than the required 57,096 cubic feet there is adequate storage in the dewatering zones provided.

Phase 6 proposes to disturb 7.61 acres. This would require 7,610 cubic feet of storage within the sediment storage zone and 27,396 cubic feet within the dewatering zone, for a total of 35,006 cubic feet of temporary storage during phase 6 of construction. The first foot of temporary storage in sediment trap 5 and 6 have a storage volume of 4,635 cubic feet ($V = 0.4 \times 11,589 \text{ SF} \times 1 = 4,635 \text{ cf}$) and 5,639 cubic feet ($V = 0.4 \times 14,097 \text{ SF} \times 1 = 5,639 \text{ cf}$) respectively and the first foot of temporary storage in sediment basin 6 (from elevation 407.83 to 408.83) is 27,305 cf. Since the combined 37,579 cubic feet of storage is greater than the required 7,610 cubic feet, there is adequate storage in the sediment storage zone of the detention basin. The remaining total storage in sediment traps 5 and 6 respectively are 13,910 cubic feet ($V = 0.4 \times 11,589 \text{ SF} \times 3 = 13,910 \text{ cf}$) and 16,916 cubic feet ($V = 0.4 \times 14,097 \text{ SF} \times 3 = 16,916 \text{ cf}$). The remaining total storage below the top of the riser elevation (413) for sediment basin 6 is 113,862 cf for a total volume of 144,688 cf. Since the 144,688 cubic feet of storage is greater than the required 27,396 cubic feet there is adequate storage in the dewatering zones provided.

Phase 7 proposes to disturb 6.80 acres. This would require 6,800 cubic feet of storage within the sediment storage zone and 24,480 cubic feet within the dewatering zone, for a total of 31,649 cubic feet of temporary storage during phase 7 of construction. The first foot of sediment trap 7 has a storage volume of 1,722 cubic feet ($V = 0.4 \times 4,305 \text{ SF} \times 1 = 1,722 \text{ cf}$) and sediment trap 3 has a storage volume of 5,037 cf. The first foot of sediment basin 2 (from elevation 406.83 to 407.83) has a storage volume of 15,210 cubic feet. Since the combined 21,969 cubic feet of storage is greater than the required 6,800 cubic feet, there is adequate storage in the sediment storage zones provided. The remaining total storage in sediment trap 7 is 5,166 cf ($V = 0.4 \times 4,305 \text{ SF} \times 3 = 5,166 \text{ cf}$), in sediment trap 3 is 15,111 CF and in sediment basin 2 is 78,636 cf for a total volume of 98,913 cf. Since the 98,913 cubic feet of storage is greater than the required 24,480 cubic feet there is adequate storage in the dewatering zone provided.

Phase 8 proposes to disturb 2.32 acres. This would require 2,320 cubic feet of storage within the sediment storage zone and 8,352 cubic feet within the dewatering zone, for a total of 10,534 cubic feet of temporary storage during phase 7 of construction. The first foot of sediment basin 2 (from elevation 406.83 to 407.83) has a storage volume of 15,210 cubic feet. Since the 15,210 cubic feet of storage is greater than the required 2,320 cubic feet, there is adequate storage in the sediment storage zone provided. The remaining total storage in sediment basins 2 below the top of riser is 78,636. Since the 78,636 cubic feet of storage is greater than the required 8,352 cubic feet there is adequate storage in the dewatering provided.

Staging Areas

Proposed Staging Areas as shown on Erosion & Sediment Control Plans, shall be the location where materials and equipment are to be kept when not in use during construction. Area shall be temporarily stabilized with stone and surrounded by silt fence for the duration of construction. For additional information regarding materials and spill prevention, see below.

Spill Prevention & Litter Control:

All parties involved in the construction process, including but not limited to, truck drivers, laborers, foremen, and operators, will be informed of spill prevention and litter control practices and procedures herein prior to construction activity. The project superintendent will inspect the site daily,

at a minimum for litter and debris throughout the site, and will specifically inspect storage areas prior to exiting site. Specific prevention and control measures on the site will be employed as follows:

Petroleum Products

All on-site vehicles will be monitored for leaks and will receive preventive maintenance to reduce the chance of leakage. Equipment and vehicles should be stored on impervious surfaces to manage spills where practical. No vehicle maintenance, handling, or storage of petroleum products will occur within 100 feet of a wetland, waterway, or drainage facility. Petroleum products will be stored in tightly sealed containers that are clearly labeled. Any asphalt substances used on-site will be applied according to manufacturer's recommendations. Storage facilities shall be located as far as practical from private residences, business, and public Right-of-Ways. Storage shall be located in an isolated location, where practical, and in accordance with all federal, state, and local regulations.

Hazardous Substances (Paints, Solvents, etc.)

All containers will be tightly sealed and stored when not required for use. Excess materials will not be discharged to the storm sewer system, buried onsite, or disposed of in any other inappropriate fashion; but will be properly disposed according to manufacturer's instructions and/or state and local regulations (whichever is more stringent). No storage will occur within 100 feet of a wetland, waterway, or onsite drainage facility.

Fertilizers

Fertilizer will be applied only in the minimum amounts recommended by the manufacturer. Once applied, the fertilizer will be worked into the soil to limits exposure to storm runoff and wind. Storage will be in a covered shed, and the contents of any partially used bags will be transferred into a sealable, plastic bin to avoid spills. No fertilizer storage shall occur within 100 feet of a wetland, waterway, or onsite drainage facility.

Debris & Litter Control

The Contractor shall provide covered dumpsters onsite and be placed in a practical location to promote use by all parties; this location should not interfere with site activity, ingress, and egress. Debris and litter shall be managed and placed in the onsite dumpsters to minimize unintended transport by the elements. This will reduce litter accumulation and improve worker safety. Dumpsters shall be emptied regularly by a licensed contractor to prevent overfilling and unsightly conditions and disposed of in accordance with federal, state, and local environmental regulations. All construction waste shall be placed in dumpsters following the completion of construction. No trash or construction waste will be buried onsite. No construction materials shall be stored for extended period's onsite, except for those to be used for construction taking place within seven (7) calendar days, or within a practical time frame. Additionally, inlet filters shall be utilized to help control construction chemicals, debris, and litter from entering the storm water system.

Concrete Washout

Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water within 100 feet of a wetland, waterway, or into any drainage structure already installed. A specific concrete washout location will be identified by the superintendent and will be relocated as appropriate to remain practical as the project is phased.

Trucking Management (Dust & Sediment Control)

Concrete trucks shall not leave the project site except where directed. A stabilized construction entrance shall be installed and maintained and the specified entrance/exit location(s). The length of the stabilization blanket shall be extended if trucks leaving the site track sediment onto public Rights-of-Way. Crushed stone, as specified, shall be re-applied as necessary. A truck wash location shall be implemented and maintained, as necessary.

Any other materials used during construction not specified above should be reviewed for handling and storage requirements from the manufacturer and provided to the Town Engineer for review prior to implementation.

Spill Response and Clean-up Procedures

The Contractor will train all personnel in the proper handling and cleanup of spilled Hazardous Substances or Oil. No spilled Hazardous Substances or Oil will be allowed to come in contact with storm water discharges. If such contact occurs, the storm water discharge will be contained on site by measures such as, but not limited to absorbents, booms, static resistant pads, sump booms and other clean up equipment until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated storm water. It shall be the responsibility of the Contractor's Superintendent to be properly trained, and to train all personnel in spill prevention and clean up procedures. In the event of a spill of Hazardous Substances or Oil, the following procedures must be followed:

- 1) All measures must be taken to contain and abate the spill and to prevent the discharge of the Hazardous Substance or Oil to storm water or off-site. (The spill area must be kept well ventilated and personnel must wear appropriate protective clothing to prevent injury from contact with the Hazardous Substances.)
- 2) Use criteria found in NYSDEC "Spill Guidance Manual Section 1.1" to determine if spill is reportable based on amount and material.
- 3) If the spill is determined to be reportable, notify appropriate party immediately, also identified in "Spill Guidance Manual".
- 4) Contact the Owner or the Operator's Engineer immediately after notifying the appropriate party.
- 5) If the release is equal to or in excess of a reportable quantity, the SWPPP must be modified within seven (7) calendar days of knowledge of the discharge to provide a description of the release, the circumstances leading to the release, and the date of the release. The SWPPP must identify measures to prevent the recurrence of such releases and to respond to such releases.
- 6) If the release is determined to not be reportable (less than a reportable quantity) it shall be noted on the Weekly Erosion & Sediment Control Inspection Report as an unsatisfactory item with a Task for corrective action and shall be noted and dated when implemented.

Duties & Responsibilities of Owner/Operator, Qualified Inspector, & Contractor During Construction:

The owner or operator is responsible for ensuring the provisions of the SWPPP are implemented from the start of construction through final stabilization and NOT submission. As such, the owner or operator must ensure that all erosion and sediment control practices and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained.

The qualified inspector is responsible for conducting at least two (2) site inspections every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed, as outlined in the General Permit (see Appendix 9). The two inspections shall be separated by a minimum of two (2) full calendar days. At a minimum, the qualified inspector shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved final stabilization, all points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of discharge from the construction site. The qualified inspector shall prepare an inspection report following each inspection. Within one business day of the completion of an inspection, the qualified inspector shall notify the owner or operator and contractor of any corrective actions that need to be taken.

It is the responsibility of the contractor to begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame. Generally, it is the responsibility of the contractor to ensure that erosion and sediment control practices and pollution prevention measures are being implemented and maintained in effective operating condition. It is the responsibility of the contractor to ensure that where construction has been completed or has temporarily ceased, soil shall not be exposed for more than seven (7) days and shall be either temporarily or permanently stabilized.

Operation & Maintenance Plan:

During construction, the contractor is responsible for maintaining all permanent stormwater mitigation features including catch basins, pipes, stormwater ponds, infiltration chamber systems and bioretention systems as well as temporary measures including silt fence, construction entrances, and inlet sediment traps.

After construction is complete, the owner/operator shall be responsible for the maintenance of the proposed stormwater mitigation features, including but not limited to catch basins/inlets, pipes, stormwater ponds, hydrodynamic separators, infiltration basins and bioretention systems.

As per the Notice of Termination for stormwater discharges authorized under the SPDES GP-0-20-001 for construction activity, for post-construction stormwater management practices that will be privately owned, the deed of record must be modified to include a deed covenant that requires operation and maintenance of the practices in accordance with the operation and maintenance plan.

A complete Operation & Maintenance Plan is included within Appendix 15 of this report.

Lastly, the owner of a post-construction stormwater management practice shall erect or post, in the immediate vicinity of the stormwater management practice, a conspicuous and legible sign as directed by section 3.5 of the NYSSMDM. The sign should read:

STORMWATER MANAGEMENT PRACTICE – (Type of Practice)
Project Identification – SPDES Permit # NYR _____
Must Be Maintained In Accordance With O&M Plan
DO NOT REMOVE OR ALTER

Summary of Proposed Stormwater Improvements:

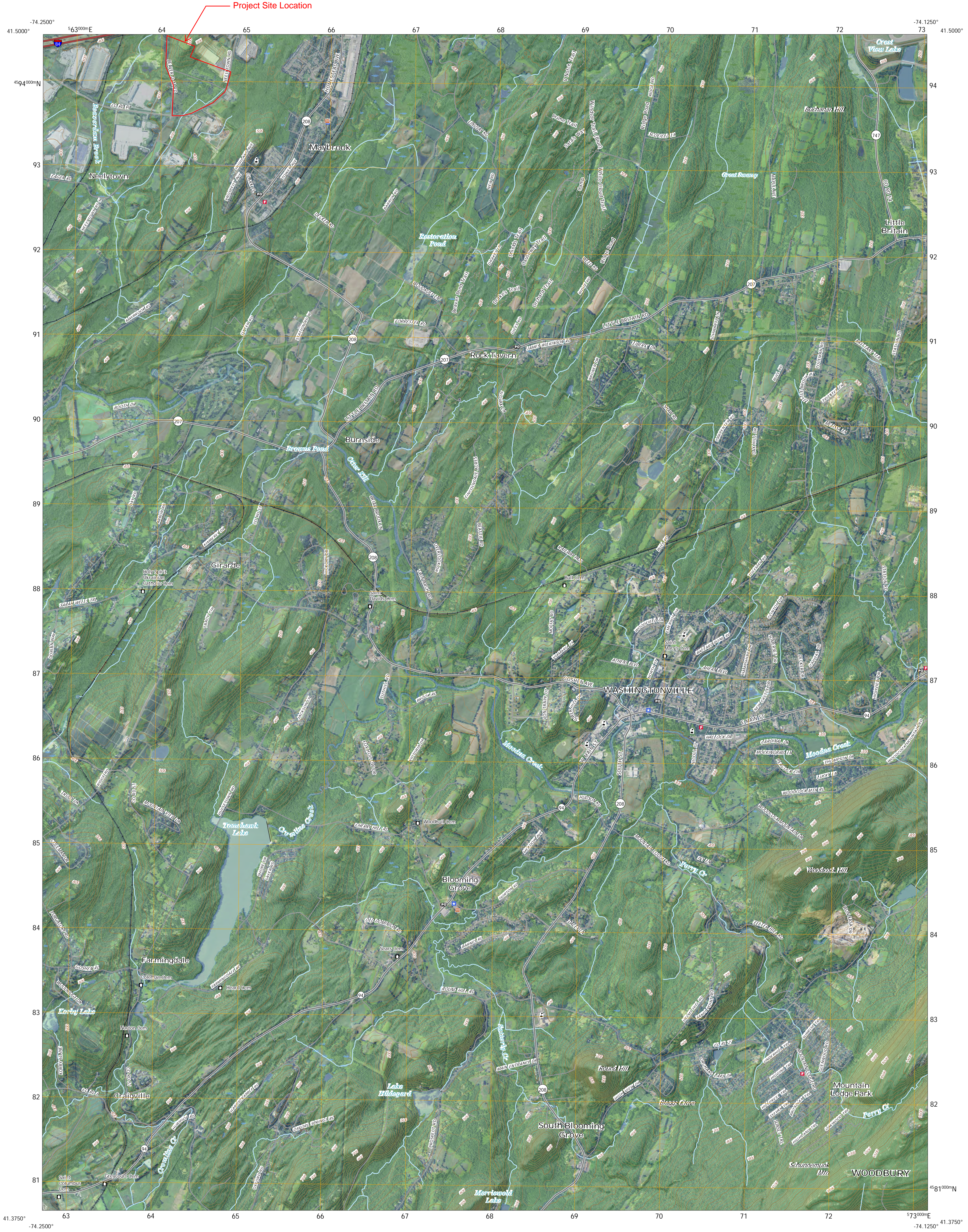
Reductions in peak flow have been provided at all design points for all storm events studied. The combination of peak flow reductions and water quality volume and runoff reduction volume treatment should provide long-term treatment of runoff in keeping with the relevant standards.

CONCLUSION

As the proposed stormwater pollution prevention plan provides reductions in peak flows for all storm events at the design points studied, and runoff reduction/water quality mitigation meeting the applicable standards, there should be no adverse impacts due to stormwater, on-site or off-site, as a result of the proposed development.

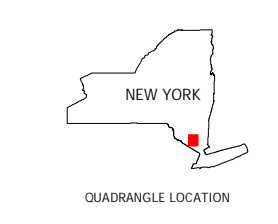
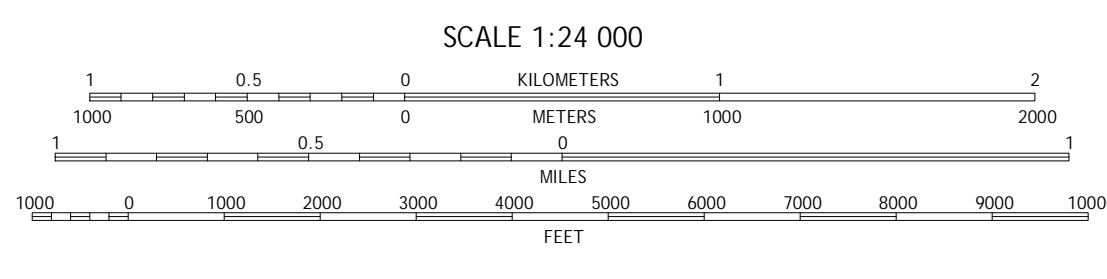
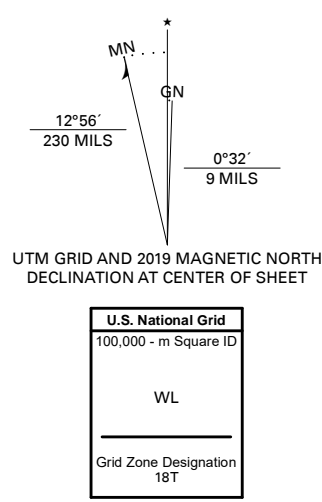
Appendix

Appendix 1 | USGS Quad Map



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1 000-meter grid-Universal Transverse Mercator, Zone 18T
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.

Imagery.....NAIP, July 2017 - December 2017
U.S. Census Bureau, 2016
Names.....CNS, 1980 - 2019
Hydrography.....National Hydrography Dataset, 1989 - 2016
Contours.....National Elevation Dataset, 2016
Boundaries.....Multiple sources: see metadata file 2017 - 2018
Wetlands.....FWS National Wetlands Inventory 1984 - 2011



1	2	3
4	5	6
7	8	9

ADJOINING QUADRANGLES

ROAD CLASSIFICATION	
	Expressway
	Secondary Hwy
	Ramp
	Interstate Route
	US Route
	State Route
	Local Connector
	Local Road
	4WD

MAYBROOK, NY
2019



Appendix 2 | NRCS Web Soil Survey Output



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for Orange County, New York



Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

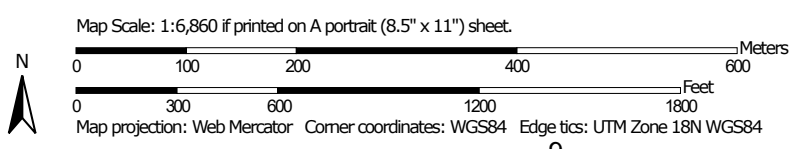
Soil Map

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

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Soil Map may not be valid at this scale.



MAP LEGEND


Area of Interest (AOI)

 Area of Interest (AOI)




















Soils







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Orange County, New York
 Survey Area Data: Version 23, Sep 10, 2022

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

Date(s) aerial images were photographed: Aug 13, 2021—Aug 15, 2021

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ab	Alden silt loam	13.9	11.1%
BnC	Bath-Nassau channery silt loams, 8 to 15 percent slopes	1.3	1.0%
CnB	Chenango gravelly silt loam, 3 to 8 percent slopes	8.5	6.8%
ErA	Erie gravelly silt loam, 0 to 3 percent slopes	15.2	12.2%
ErB	Erie gravelly silt loam, 3 to 8 percent slopes	1.8	1.5%
Fd	Fredon loam	0.0	0.0%
HoA	Hoosic gravelly sandy loam, 0 to 3 percent slopes	14.8	11.9%
HoB	Hoosic gravelly sandy loam, 3 to 8 percent slopes	31.6	25.3%
HoD	Hoosic gravelly sandy loam, 15 to 25 percent slopes	0.8	0.6%
PtB	Pittsfield gravelly loam, 3 to 8 percent slopes	6.1	4.9%
PtC	Pittsfield gravelly loam, 8 to 15 percent slopes	17.4	13.9%
PtD	Pittsfield gravelly loam, 15 to 25 percent slopes	5.1	4.1%
Ra	Raynham silt loam	1.8	1.4%
RSD	Rock outcrop-Nassau complex, hilly	6.7	5.4%
Totals for Area of Interest		125.2	100.0%

Map Unit Descriptions

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

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

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up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

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

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

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

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

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

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

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

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

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

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

Orange County, New York

Ab—Alden silt loam

Map Unit Setting

National map unit symbol: 9vtc
Elevation: 300 to 1,500 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Alden and similar soils: 80 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alden

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: A silty mantle of local deposition overlying loamy till

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 36 inches: silt loam
H3 - 36 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: F144AY040NY - Semi-Rich Very Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Carlisle

Percent of map unit: 5 percent
Landform: Swamps, marshes

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Hydric soil rating: Yes

Canandaigua

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Wayland

Percent of map unit: 5 percent

Landform: Flood plains

Hydric soil rating: Yes

BnC—Bath-Nassau channery silt loams, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9vtp

Elevation: 600 to 1,800 feet

Mean annual precipitation: 42 to 52 inches

Mean annual air temperature: 46 to 52 degrees F

Frost-free period: 135 to 215 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Bath and similar soils: 50 percent

Nassau and similar soils: 30 percent

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

Description of Bath

Setting

Landform: Drumlinoid ridges, till plains, hills

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived mainly from gray and brown siltstone, sandstone, and shale

Typical profile

H1 - 0 to 9 inches: channery silt loam

H2 - 9 to 29 inches: channery silt loam

H3 - 29 to 51 inches: very channery silt loam

H4 - 51 to 57 inches: unweathered bedrock

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 22 to 38 inches to fragipan; 40 to 60 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

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Depth to water table: About 24 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F140XY030NY - Well Drained Dense Till
Hydric soil rating: No

Description of Nassau

Setting

Landform: Till plains, ridges, benches
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Channery loamy till derived mainly from local slate or shale

Typical profile

H1 - 0 to 10 inches: channery silt loam
H2 - 10 to 17 inches: very channery silt loam
H3 - 17 to 21 inches: unweathered bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

CnB—Chenango gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9vv2
Elevation: 600 to 1,800 feet
Mean annual precipitation: 42 to 52 inches

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Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Chenango and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chenango

Setting

Landform: Valley trains, terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone

Typical profile

H1 - 0 to 6 inches: gravelly silt loam
H2 - 6 to 28 inches: very gravelly silt loam
H3 - 28 to 60 inches: stratified very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F140XY021NY - Dry Outwash
Hydric soil rating: No

ErA—Erie gravelly silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9vv8
Elevation: 100 to 1,360 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Erie and similar soils: 75 percent

Minor components: 5 percent

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

Description of Erie

Setting

Landform: Drumlinoid ridges, till plains, hills

Landform position (two-dimensional): Summit, footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy till derived from siltstone, sandstone, shale, and limestone

Typical profile

H1 - 0 to 10 inches: gravelly silt loam

H2 - 10 to 18 inches: channery silt loam

H3 - 18 to 56 inches: channery silt loam

H4 - 56 to 70 inches: channery silt loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 10 to 21 inches to fragipan

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Ecological site: F144AY037MA - Moist Dense Till Uplands

Hydric soil rating: No

Minor Components

Alden

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

ErB—Erie gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9vv9

Elevation: 100 to 1,390 feet

Mean annual precipitation: 42 to 52 inches

Mean annual air temperature: 46 to 52 degrees F

Frost-free period: 135 to 215 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Erie and similar soils: 80 percent

Minor components: 5 percent

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

Description of Erie

Setting

Landform: Drumlinoid ridges, till plains, hills

Landform position (two-dimensional): Summit, footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy till derived from siltstone, sandstone, shale, and limestone

Typical profile

H1 - 0 to 9 inches: gravelly silt loam

H2 - 9 to 18 inches: channery silt loam

H3 - 18 to 54 inches: channery silt loam

H4 - 54 to 70 inches: channery silt loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: 10 to 21 inches to fragipan

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Ecological site: F144AY037MA - Moist Dense Till Uplands

Hydric soil rating: No

Minor Components

Alden

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Fd—Fredon loam

Map Unit Setting

National map unit symbol: 9vvd
Elevation: 250 to 1,200 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Fredon, poorly drained, and similar soils: 50 percent
Fredon, somewhat poorly drained, and similar soils: 25 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fredon, Poorly Drained

Setting

Landform: Valley trains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy over sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 6 inches: loam
H2 - 6 to 24 inches: very fine sandy loam
H3 - 24 to 60 inches: stratified gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

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Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F144AY029NY - Semi-Rich Wet Outwash
Hydric soil rating: Yes

Description of Fredon, Somewhat Poorly Drained

Setting

Landform: Valley trains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy over sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 6 inches: loam
H2 - 6 to 24 inches: very fine sandy loam
H3 - 24 to 60 inches: stratified gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F144AY029NY - Semi-Rich Wet Outwash
Hydric soil rating: No

Minor Components

Halsey

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

HoA—Hoosic gravelly sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9vvk

Elevation: 100 to 1,100 feet

Mean annual precipitation: 42 to 52 inches

Mean annual air temperature: 46 to 52 degrees F

Frost-free period: 135 to 215 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Hoosic and similar soils: 80 percent

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

Description of Hoosic

Setting

Landform: Terraces, outwash plains, deltas

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 6 inches: gravelly sandy loam

H2 - 6 to 31 inches: very gravelly sandy loam

H3 - 31 to 60 inches: very gravelly sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Ecological site: F144AY022MA - Dry Outwash

Hydric soil rating: No

HoB—Hoosic gravelly sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9vvl

Elevation: 100 to 1,100 feet

Mean annual precipitation: 42 to 52 inches

Mean annual air temperature: 46 to 52 degrees F

Frost-free period: 135 to 215 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Hoosic and similar soils: 80 percent

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

Description of Hoosic

Setting

Landform: Terraces, outwash plains, deltas

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 6 inches: gravelly sandy loam

H2 - 6 to 28 inches: very gravelly sandy loam

H3 - 28 to 60 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Ecological site: F144AY022MA - Dry Outwash

Hydric soil rating: No

HoD—Hoosic gravelly sandy loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9vvn
Elevation: 100 to 1,100 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Hoosic and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hoosic

Setting

Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 5 inches: gravelly sandy loam
H2 - 5 to 23 inches: very gravelly sandy loam
H3 - 23 to 60 inches: very gravelly sand

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

PtB—Pittsfield gravelly loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9vw8
Elevation: 0 to 1,000 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Pittsfield and similar soils: 75 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pittsfield

Setting

Landform: Drumlinoid ridges, till plains, hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy till

Typical profile

H1 - 0 to 10 inches: gravelly loam
H2 - 10 to 34 inches: gravelly loam
H3 - 34 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY036NY - Semi-Rich Well Drained Till Uplands
Hydric soil rating: No

PtC—Pittsfield gravelly loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9vw9

Elevation: 0 to 1,000 feet

Mean annual precipitation: 42 to 52 inches

Mean annual air temperature: 46 to 52 degrees F

Frost-free period: 135 to 215 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Pittsfield and similar soils: 75 percent

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

Description of Pittsfield

Setting

Landform: Drumlinoid ridges, till plains, hills

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Calcareous loamy till

Typical profile

H1 - 0 to 9 inches: gravelly loam

H2 - 9 to 31 inches: gravelly loam

H3 - 31 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: F144AY036NY - Semi-Rich Well Drained Till Uplands

Hydric soil rating: No

PtD—Pittsfield gravelly loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9vwb
Elevation: 0 to 1,000 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Pittsfield and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pittsfield

Setting

Landform: Drumlinoid ridges, till plains, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy till

Typical profile

H1 - 0 to 8 inches: gravelly loam
H2 - 8 to 28 inches: gravelly loam
H3 - 28 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F144AY036NY - Semi-Rich Well Drained Till Uplands
Hydric soil rating: No

Ra—Raynham silt loam

Map Unit Setting

National map unit symbol: 9vwd
Elevation: 50 to 500 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Raynham, poorly drained, and similar soils: 50 percent
Raynham, somewhat poorly drained, and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Raynham, Poorly Drained

Setting

Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Glaciolacustrine, eolian, or old alluvial deposits, comprised mainly of silt and very fine sand

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 26 inches: silt loam
H3 - 26 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F144AY019NH - Wet Lake Plain
Hydric soil rating: Yes

Description of Raynham, Somewhat Poorly Drained

Setting

Landform: Lake plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Glaciolacustrine, eolian, or old alluvial deposits, comprised mainly of silt and very fine sand

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 26 inches: silt loam

H3 - 26 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Ecological site: F144AY019NH - Wet Lake Plain

Hydric soil rating: No

Minor Components

Canandaigua

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Madalin

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Palms

Percent of map unit: 5 percent

Landform: Swamps, marshes

Hydric soil rating: Yes

RSD—Rock outcrop-Nassau complex, hilly

Map Unit Setting

National map unit symbol: 9vwx
Elevation: 600 to 1,800 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Rock outcrop: 55 percent
Nassau and similar soils: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rock Outcrop

Typical profile

H1 - 0 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydric soil rating: Unranked

Description of Nassau

Setting

Landform: Benches, till plains, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Channery loamy till derived mainly from local slate or shale

Typical profile

H1 - 0 to 10 inches: channery silt loam
H2 - 10 to 18 inches: very channery silt loam
H3 - 18 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Ecological site: F144AY033MA - Shallow Dry Till Uplands

Hydric soil rating: No

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Custom Soil Resource Report

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Appendix 3 | Wetlands and Floodplain Mapping

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 18. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NINGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was derived from digital orthophotography provided by the New York State Office of Cyber Security & Critical Infrastructure Coordination. This information was provided as 30-centimeter and 60-centimeter resolution natural color orthomography from photography dated April-May 2004.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

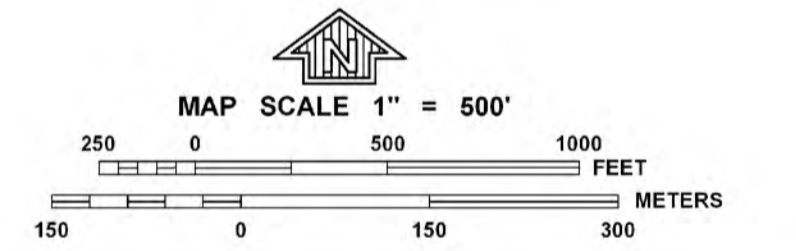
Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://msc.fema.gov>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov>.



LEGEND

- SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**
The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE**
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS**
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*
- * Referenced to the North American Vertical Datum of 1988
- Cross section line
- Limited detail cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 1000-meter Universal Transverse Mercator grid values, zone 18N
- 5000-foot grid ticks: New York State Plane coordinate system, East zone (FPSZONE 3101), Transverse Mercator projection
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile
- MAP REPOSITORY**
Refer to listing of Map Repositories on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**
August 3, 2009
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**
- For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
- To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0301E

FIRM
FLOOD INSURANCE RATE MAP

for ORANGE COUNTY, NEW YORK
(ALL JURISDICTIONS)

CONTAINS:

COMMUNITY	NUMBER
HAMPTONBURGH, TOWN	360617
MAYBROOK, VILLAGE	360241
MONTGOMERY, TOWN OF	360623

PANEL 301 OF 630
MAP SUFFIX: E
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

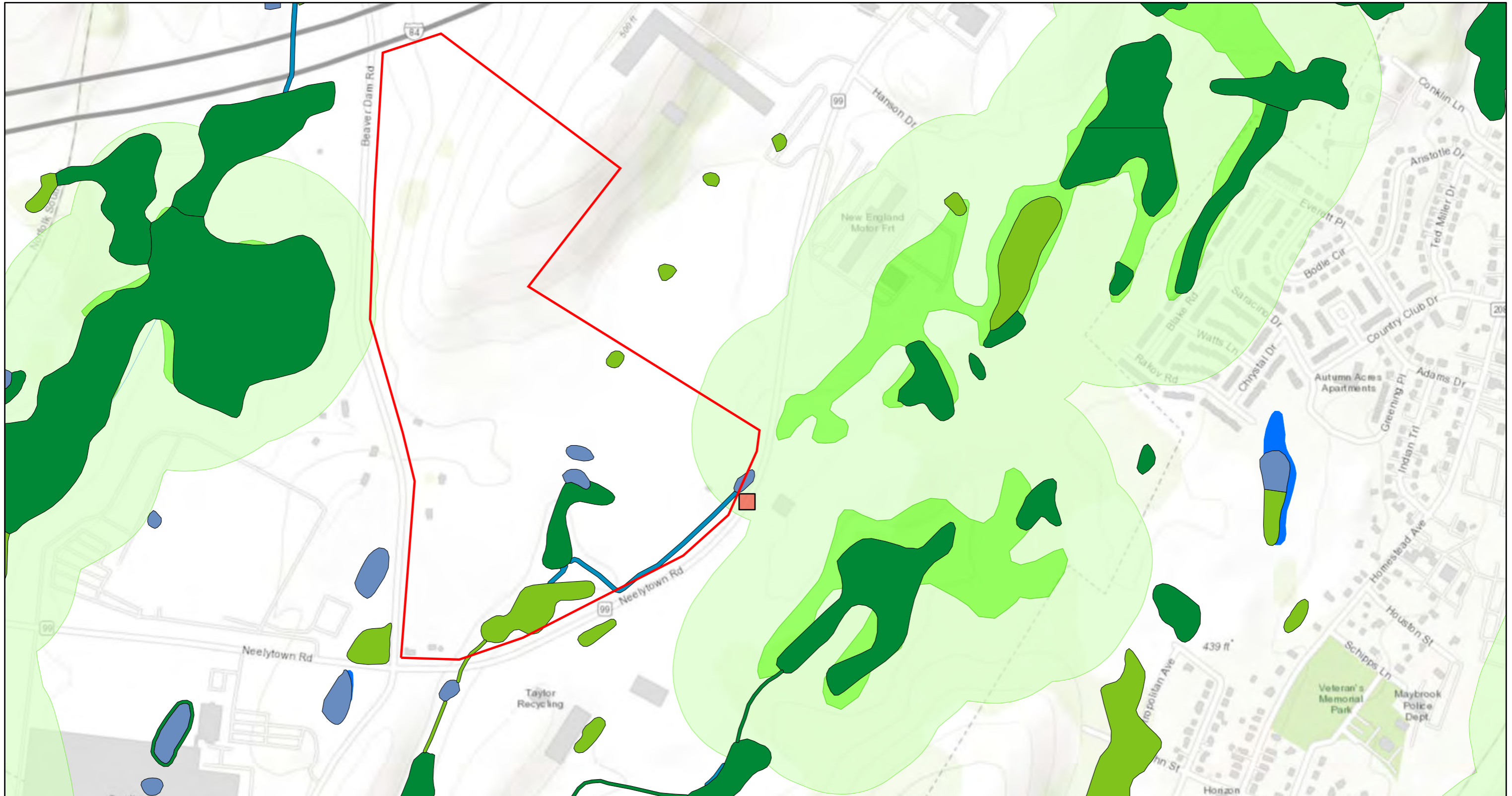
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
36071C0301E

EFFECTIVE DATE
AUGUST 3, 2009

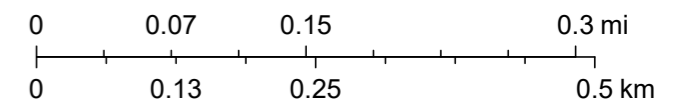
Federal Emergency Management Agency

Environmental Resource Mapper



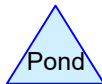
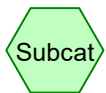
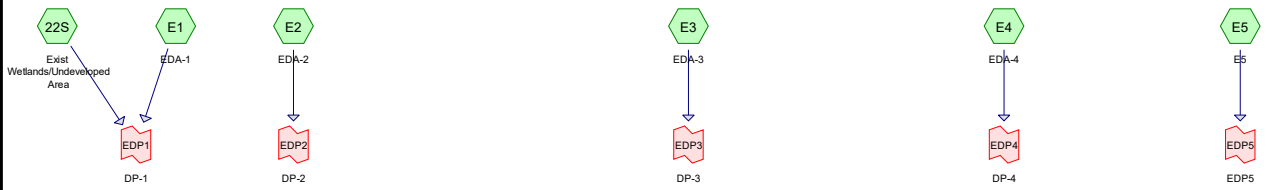
November 30, 2021

1:9,028



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Appendix 4 | Pre-Construction Stormwater Modeling Schematic & Output



Routing Diagram for 240814_RDM Neelytown Drainage
 Prepared by Colliers Engineering & Design, Printed 7/24/2024
 HydroCAD® 10.20-2g s/n 04431 © 2022 HydroCAD Software Solutions LLC

240814_RDM Neelytown Drainage

Prepared by Colliers Engineering & Design

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Printed 7/24/2024

Page 2

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	NRCC 24-hr	C	Default	24.00	1	2.64	2
2	10-Year	NRCC 24-hr	C	Default	24.00	1	4.80	2
3	25-Year	NRCC 24-hr	C	Default	24.00	1	6.04	2
4	100-Year	NRCC 24-hr	C	Default	24.00	1	8.57	2
5	500-Year	NRCC 24-hr	C	Default	24.00	1	11.00	2

240814_RDM Neelytown Drainage

Prepared by Colliers Engineering & Design

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Printed 7/24/2024

Page 3

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
25.299	39	>75% Grass cover, Good, HSG A (22S, E1, E2, E3, E4, E5)
17.345	61	>75% Grass cover, Good, HSG B (22S, E3, E4, E5)
22.127	80	>75% Grass cover, Good, HSG D (22S, E1, E2, E3, E4)
0.324	72	Dirt roads, HSG A (E1, E2, E4)
0.274	82	Dirt roads, HSG B (E3, E4, E5)
0.087	89	Dirt roads, HSG D (22S, E1)
0.076	76	Gravel roads, HSG A (E4)
0.236	96	Gravel surface, HSG A (E3, E5)
0.035	96	Gravel surface, HSG B (E5)
0.121	98	Impervious Area, HSG A (E2)
0.255	98	Impervious Area, HSG D (E1, E2)
0.141	98	Impervious Areas, HSG B (22S)
0.036	98	Impervious Areas, HSG D (22S)
0.044	98	Paved parking, HSG A (E3)
21.423	32	Woods/grass comb., Good, HSG A (22S, E1, E2, E3, E4, E5)
11.398	58	Woods/grass comb., Good, HSG B (E2, E3, E4, E5)
13.229	79	Woods/grass comb., Good, HSG D (22S, E1, E2, E3, E4)
0.009	98	impervious Area, HSG A (E1)
112.456	56	TOTAL AREA

240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 22S: Exist	Runoff Area=1,182,741 sf 0.65% Impervious Runoff Depth=0.64" Flow Length=270' Tc=23.4 min CN=73 Runoff=11.36 cfs 1.459 af
Subcatchment E1: EDA-1	Runoff Area=796,527 sf 0.25% Impervious Runoff Depth=0.06" Flow Length=472' Tc=30.0 min CN=52 Runoff=0.13 cfs 0.096 af
Subcatchment E2: EDA-2	Runoff Area=822,574 sf 1.80% Impervious Runoff Depth=0.00" Flow Length=1,483' Tc=55.9 min CN=44 Runoff=0.01 cfs 0.001 af
Subcatchment E3: EDA-3	Runoff Area=690,451 sf 0.28% Impervious Runoff Depth=0.06" Flow Length=1,360' Tc=49.9 min CN=52 Runoff=0.11 cfs 0.083 af
Subcatchment E4: EDA-4	Runoff Area=946,387 sf 0.00% Impervious Runoff Depth=0.09" Flow Length=1,805' Tc=22.8 min CN=54 Runoff=0.28 cfs 0.168 af
Subcatchment E5: E5	Runoff Area=459,922 sf 0.00% Impervious Runoff Depth=0.13" Flow Length=1,066' Tc=21.0 min CN=56 Runoff=0.24 cfs 0.113 af
Link EDP1: DP-1	Inflow=11.36 cfs 1.555 af Primary=11.36 cfs 1.555 af
Link EDP2: DP-2	Inflow=0.01 cfs 0.001 af Primary=0.01 cfs 0.001 af
Link EDP3: DP-3	Inflow=0.11 cfs 0.083 af Primary=0.11 cfs 0.083 af
Link EDP4: DP-4	Inflow=0.28 cfs 0.168 af Primary=0.28 cfs 0.168 af
Link EDP5: EDP5	Inflow=0.24 cfs 0.113 af Primary=0.24 cfs 0.113 af

Total Runoff Area = 112.456 ac Runoff Volume = 1.920 af Average Runoff Depth = 0.20"
99.46% Pervious = 111.851 ac 0.54% Impervious = 0.605 ac

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Runoff = 11.36 cfs @ 12.36 hrs, Volume= 1.459 af, Depth= 0.64"
 Routed to Link EDP1 : DP-1

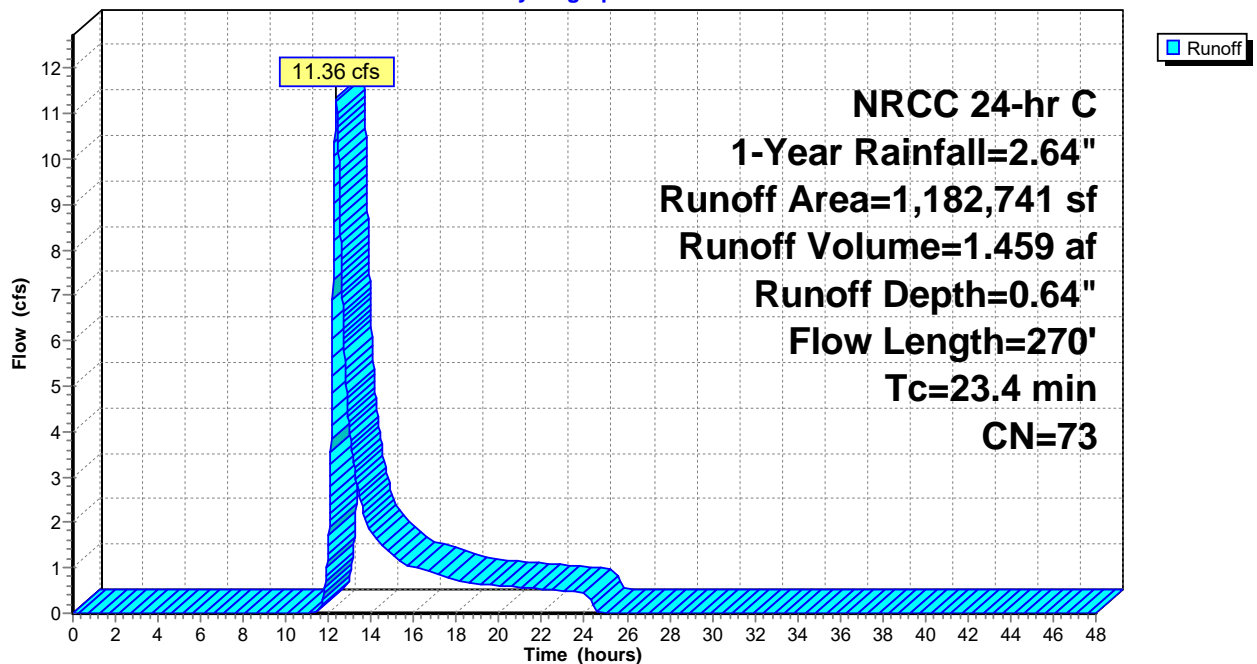
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
66,125	32	Woods/grass comb., Good, HSG A
317,463	79	Woods/grass comb., Good, HSG D
628,062	80	>75% Grass cover, Good, HSG D
78,234	39	>75% Grass cover, Good, HSG A
84,244	61	>75% Grass cover, Good, HSG B
938	89	Dirt roads, HSG D
* 1,552	98	Impervious Areas, HSG D
6,123	98	Impervious Areas, HSG B
1,182,741	73	Weighted Average
1,175,066		99.35% Pervious Area
7,675		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	100	0.0250	0.09		Sheet Flow, sf1 Woods: Light underbrush n= 0.400 P2= 3.31"
4.1	170	0.0190	0.69		Shallow Concentrated Flow, scf1 Woodland Kv= 5.0 fps
23.4	270	Total			

Subcatchment 22S: Exist Wetlands/Undeveloped Area

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.64	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.64	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.64	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.64	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.64	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.64	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.64	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.64	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.64	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.64	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.64	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.64	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.64	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.64	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.64	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.64	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.64	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.64	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.64	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.64	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.64	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.64	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.64	0.00
11.50	0.83	0.00	0.03	40.50	2.64	0.64	0.00
12.00	1.26	0.06	1.56	41.00	2.64	0.64	0.00
12.50	1.81	0.24	9.55	41.50	2.64	0.64	0.00
13.00	1.96	0.30	3.94	42.00	2.64	0.64	0.00
13.50	2.05	0.34	2.48	42.50	2.64	0.64	0.00
14.00	2.12	0.37	1.78	43.00	2.64	0.64	0.00
14.50	2.18	0.40	1.52	43.50	2.64	0.64	0.00
15.00	2.22	0.42	1.29	44.00	2.64	0.64	0.00
15.50	2.26	0.44	1.09	44.50	2.64	0.64	0.00
16.00	2.30	0.46	1.01	45.00	2.64	0.64	0.00
16.50	2.33	0.48	0.95	45.50	2.64	0.64	0.00
17.00	2.36	0.49	0.88	46.00	2.64	0.64	0.00
17.50	2.39	0.51	0.80	46.50	2.64	0.64	0.00
18.00	2.41	0.52	0.73	47.00	2.64	0.64	0.00
18.50	2.44	0.53	0.67	47.50	2.64	0.64	0.00
19.00	2.46	0.55	0.65	48.00	2.64	0.64	0.00
19.50	2.48	0.56	0.63				
20.00	2.50	0.57	0.61				
20.50	2.52	0.58	0.60				
21.00	2.54	0.59	0.58				
21.50	2.56	0.60	0.56				
22.00	2.58	0.61	0.54				
22.50	2.59	0.62	0.52				
23.00	2.61	0.63	0.50				
23.50	2.63	0.64	0.48				
24.00	2.64	0.64	0.46				
24.50	2.64	0.64	0.08				
25.00	2.64	0.64	0.00				
25.50	2.64	0.64	0.00				
26.00	2.64	0.64	0.00				
26.50	2.64	0.64	0.00				
27.00	2.64	0.64	0.00				
27.50	2.64	0.64	0.00				
28.00	2.64	0.64	0.00				
28.50	2.64	0.64	0.00				

Summary for Subcatchment E1: EDA-1

Runoff = 0.13 cfs @ 14.70 hrs, Volume= 0.096 af, Depth= 0.06"
 Routed to Link EDP1 : DP-1

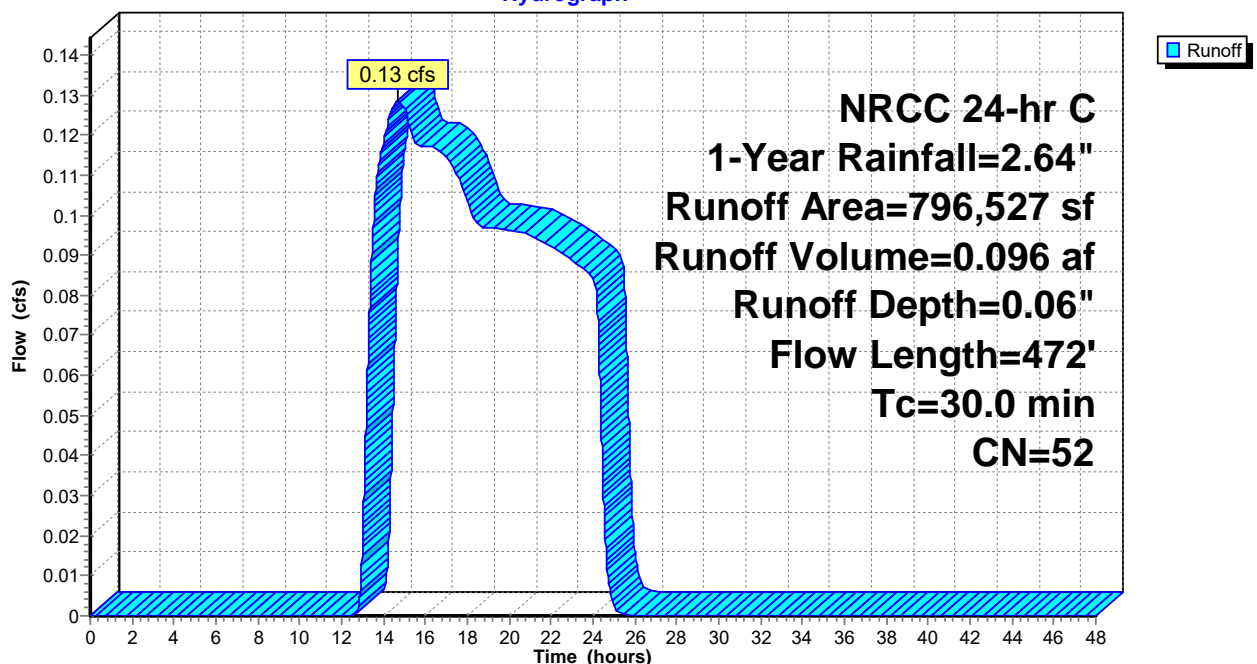
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
* 207,150	80	>75% Grass cover, Good, HSG D
2,839	89	Dirt roads, HSG D
* 1,568	98	Impervious Area, HSG D
71,639	79	Woods/grass comb., Good, HSG D
298,029	39	>75% Grass cover, Good, HSG A
* 406	98	impervious Area, HSG A
5,066	72	Dirt roads, HSG A
209,830	32	Woods/grass comb., Good, HSG A
0	61	>75% Grass cover, Good, HSG B
796,527	52	Weighted Average
794,553		99.75% Pervious Area
1,974		0.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.7	100	0.0150	0.07		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
2.4	81	0.0123	0.55		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
3.9	291	0.0060	1.25		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
30.0	472	Total			

Subcatchment E1: EDA-1

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment E1: EDA-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.06	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.06	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.06	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.06	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.06	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.06	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.06	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.06	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.06	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.06	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.06	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.06	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.06	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.06	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.06	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.06	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.06	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.06	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.06	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.06	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.06	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.06	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.06	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.06	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.06	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.06	0.00
13.00	1.96	0.00	0.02	42.00	2.64	0.06	0.00
13.50	2.05	0.00	0.10	42.50	2.64	0.06	0.00
14.00	2.12	0.01	0.12	43.00	2.64	0.06	0.00
14.50	2.18	0.01	0.13	43.50	2.64	0.06	0.00
15.00	2.22	0.01	0.13	44.00	2.64	0.06	0.00
15.50	2.26	0.02	0.12	44.50	2.64	0.06	0.00
16.00	2.30	0.02	0.12	45.00	2.64	0.06	0.00
16.50	2.33	0.02	0.12	45.50	2.64	0.06	0.00
17.00	2.36	0.03	0.11	46.00	2.64	0.06	0.00
17.50	2.39	0.03	0.11	46.50	2.64	0.06	0.00
18.00	2.41	0.03	0.10	47.00	2.64	0.06	0.00
18.50	2.44	0.04	0.10	47.50	2.64	0.06	0.00
19.00	2.46	0.04	0.10	48.00	2.64	0.06	0.00
19.50	2.48	0.04	0.10				
20.00	2.50	0.04	0.10				
20.50	2.52	0.05	0.10				
21.00	2.54	0.05	0.09				
21.50	2.56	0.05	0.09				
22.00	2.58	0.05	0.09				
22.50	2.59	0.06	0.09				
23.00	2.61	0.06	0.09				
23.50	2.63	0.06	0.09				
24.00	2.64	0.06	0.08				
24.50	2.64	0.06	0.03				
25.00	2.64	0.06	0.00				
25.50	2.64	0.06	0.00				
26.00	2.64	0.06	0.00				
26.50	2.64	0.06	0.00				
27.00	2.64	0.06	0.00				
27.50	2.64	0.06	0.00				
28.00	2.64	0.06	0.00				
28.50	2.64	0.06	0.00				

Summary for Subcatchment E2: EDA-2

Runoff = 0.01 cfs @ 24.28 hrs, Volume= 0.001 af, Depth= 0.00"
 Routed to Link EDP2 : DP-2

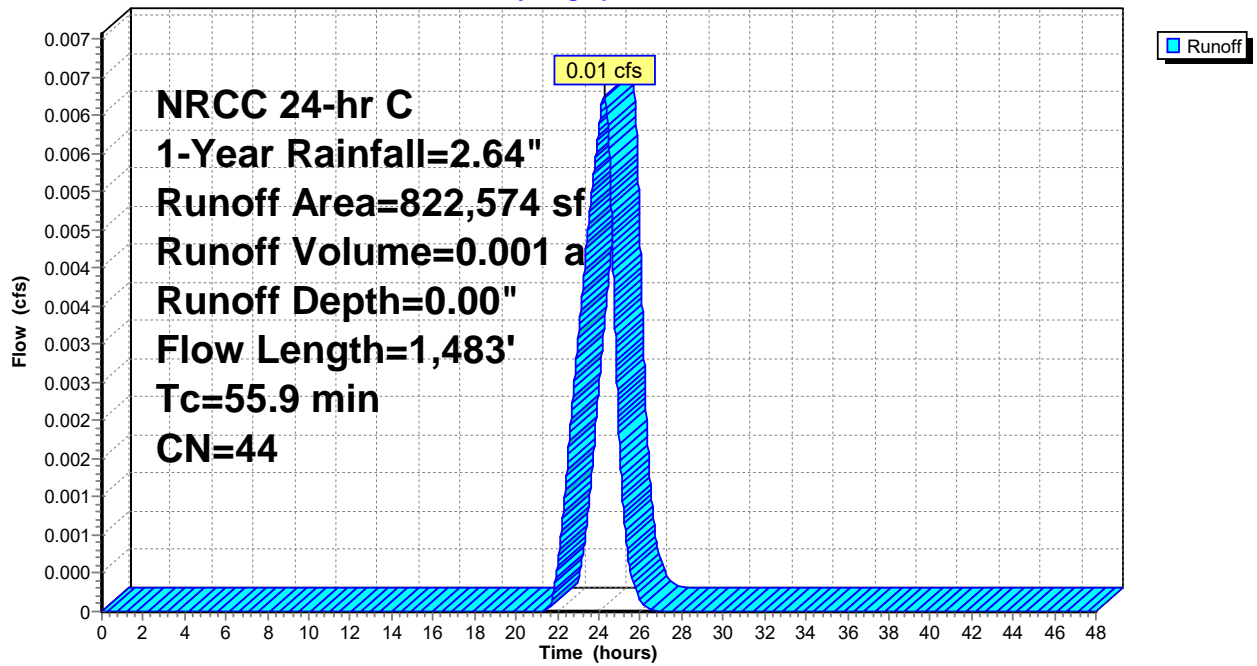
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
411,704	39	>75% Grass cover, Good, HSG A
4,905	72	Dirt roads, HSG A
* 5,267	98	Impervious Area, HSG A
240,401	32	Woods/grass comb., Good, HSG A
52,887	58	Woods/grass comb., Good, HSG B
48,215	80	>75% Grass cover, Good, HSG D
49,660	79	Woods/grass comb., Good, HSG D
9,535	98	Impervious Area, HSG D
822,574	44	Weighted Average
807,772		98.20% Pervious Area
14,802		1.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.7	100	0.0085	0.06		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
3.7	84	0.0058	0.38		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
4.5	437	0.0099	1.60		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
5.5	127	0.0060	0.39		Shallow Concentrated Flow, SCF3 Woodland Kv= 5.0 fps
2.8	296	0.0123	1.79		Shallow Concentrated Flow, SCF4 Unpaved Kv= 16.1 fps
9.7	439	0.0228	0.75		Shallow Concentrated Flow, SCF5 Woodland Kv= 5.0 fps
55.9	1,483	Total			

Subcatchment E2: EDA-2

Hydrograph



Hydrograph for Subcatchment E2: EDA-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.00	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.00	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.00	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.00	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.00	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.00	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.00	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.00	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.00	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.00	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.00	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.00	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.00	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.00	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.00	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.00	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.00	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.00	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.00	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.00	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.00	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.00	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.00	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.00	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.00	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.00	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.00	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.00	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.00	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.00	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.00	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.00	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.00	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.00	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.00	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.00	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.00	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.00	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.00	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.00	0.00				
20.50	2.52	0.00	0.00				
21.00	2.54	0.00	0.00				
21.50	2.56	0.00	0.00				
22.00	2.58	0.00	0.00				
22.50	2.59	0.00	0.00				
23.00	2.61	0.00	0.00				
23.50	2.63	0.00	0.01				
24.00	2.64	0.00	0.01				
24.50	2.64	0.00	0.01				
25.00	2.64	0.00	0.00				
25.50	2.64	0.00	0.00				
26.00	2.64	0.00	0.00				
26.50	2.64	0.00	0.00				
27.00	2.64	0.00	0.00				
27.50	2.64	0.00	0.00				
28.00	2.64	0.00	0.00				
28.50	2.64	0.00	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment E3: EDA-3

Runoff = 0.11 cfs @ 15.03 hrs, Volume= 0.083 af, Depth= 0.06"
 Routed to Link EDP3 : DP-3

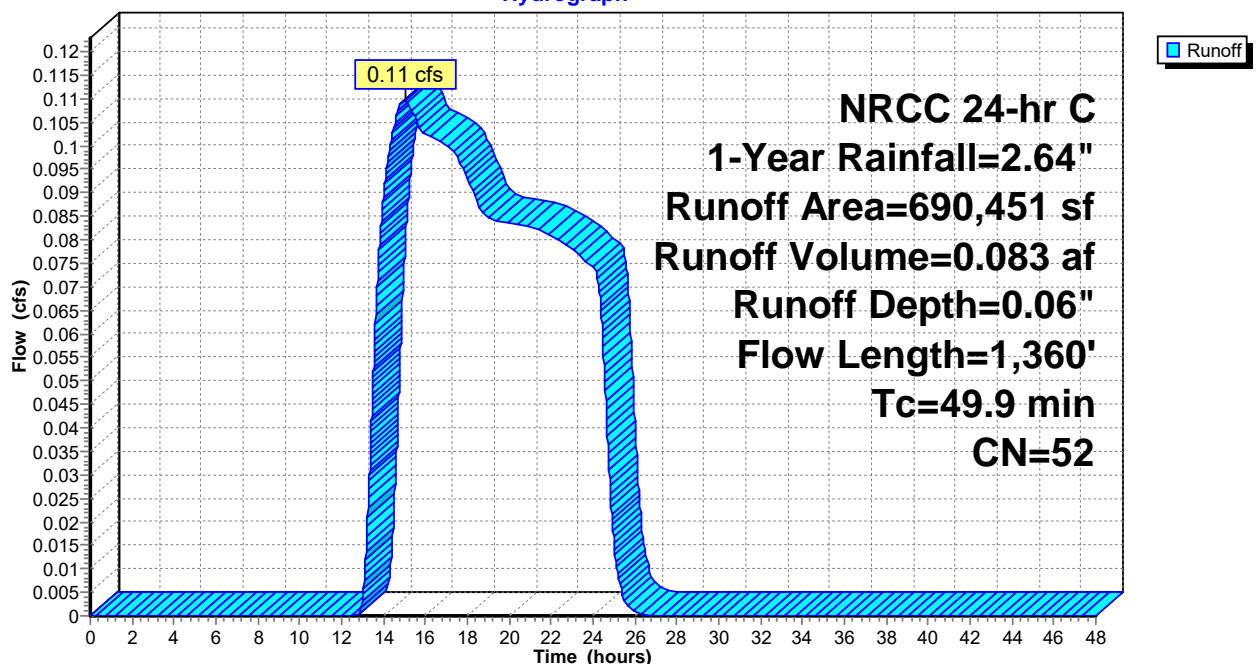
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
1,902	98	Paved parking, HSG A
89,711	39	>75% Grass cover, Good, HSG A
6,532	96	Gravel surface, HSG A
175,868	32	Woods/grass comb., Good, HSG A
168,395	61	>75% Grass cover, Good, HSG B
196,445	58	Woods/grass comb., Good, HSG B
1,344	82	Dirt roads, HSG B
8,737	80	>75% Grass cover, Good, HSG D
41,517	79	Woods/grass comb., Good, HSG D
690,451	52	Weighted Average
688,549		99.72% Pervious Area
1,902		0.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	100	0.0109	0.06		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.31"
21.1	734	0.0135	0.58		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.9	526	0.0494	4.51		Shallow Concentrated Flow, Paved Kv= 20.3 fps
49.9	1,360	Total			

Subcatchment E3: EDA-3

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment E3: EDA-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.06	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.06	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.06	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.06	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.06	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.06	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.06	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.06	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.06	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.06	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.06	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.06	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.06	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.06	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.06	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.06	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.06	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.06	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.06	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.06	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.06	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.06	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.06	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.06	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.06	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.06	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.06	0.00
13.50	2.05	0.00	0.05	42.50	2.64	0.06	0.00
14.00	2.12	0.01	0.09	43.00	2.64	0.06	0.00
14.50	2.18	0.01	0.10	43.50	2.64	0.06	0.00
15.00	2.22	0.01	0.11	44.00	2.64	0.06	0.00
15.50	2.26	0.02	0.11	44.50	2.64	0.06	0.00
16.00	2.30	0.02	0.10	45.00	2.64	0.06	0.00
16.50	2.33	0.02	0.10	45.50	2.64	0.06	0.00
17.00	2.36	0.03	0.10	46.00	2.64	0.06	0.00
17.50	2.39	0.03	0.10	46.50	2.64	0.06	0.00
18.00	2.41	0.03	0.09	47.00	2.64	0.06	0.00
18.50	2.44	0.04	0.09	47.50	2.64	0.06	0.00
19.00	2.46	0.04	0.08	48.00	2.64	0.06	0.00
19.50	2.48	0.04	0.08				
20.00	2.50	0.04	0.08				
20.50	2.52	0.05	0.08				
21.00	2.54	0.05	0.08				
21.50	2.56	0.05	0.08				
22.00	2.58	0.05	0.08				
22.50	2.59	0.06	0.08				
23.00	2.61	0.06	0.08				
23.50	2.63	0.06	0.08				
24.00	2.64	0.06	0.07				
24.50	2.64	0.06	0.06				
25.00	2.64	0.06	0.02				
25.50	2.64	0.06	0.00				
26.00	2.64	0.06	0.00				
26.50	2.64	0.06	0.00				
27.00	2.64	0.06	0.00				
27.50	2.64	0.06	0.00				
28.00	2.64	0.06	0.00				
28.50	2.64	0.06	0.00				

Summary for Subcatchment E4: EDA-4

Runoff = 0.28 cfs @ 13.40 hrs, Volume= 0.168 af, Depth= 0.09"
 Routed to Link EDP4 : DP-4

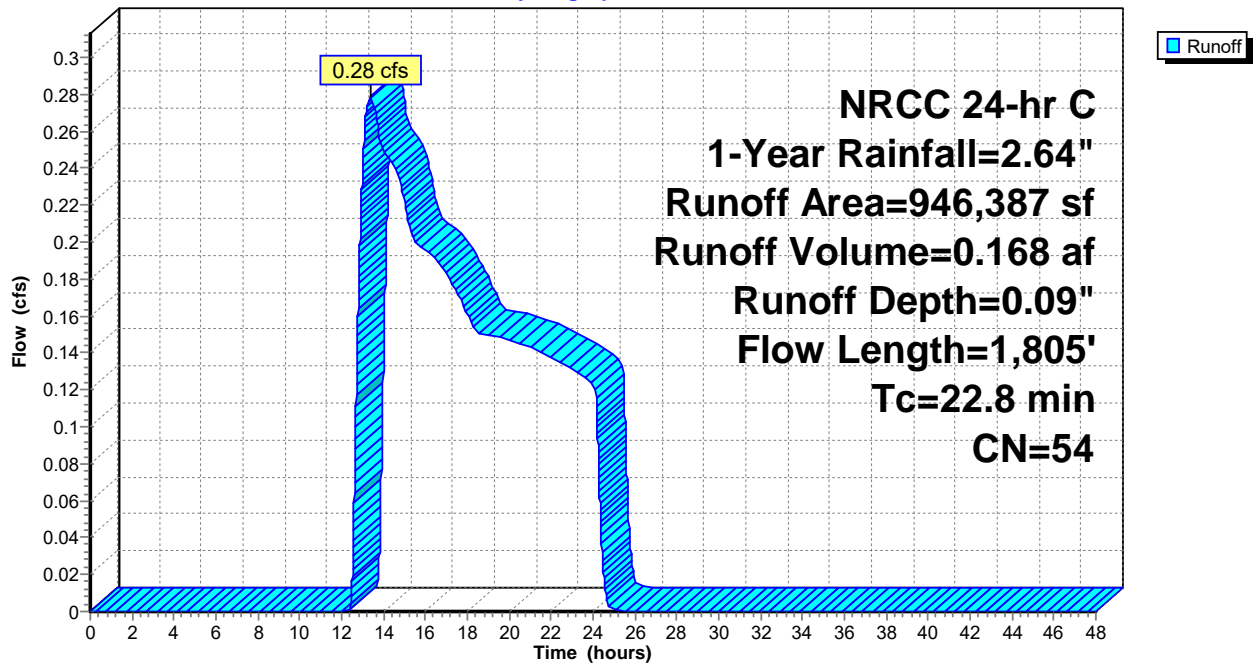
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
3,302	76	Gravel roads, HSG A
4,132	72	Dirt roads, HSG A
7,319	82	Dirt roads, HSG B
215,755	39	>75% Grass cover, Good, HSG A
253,860	61	>75% Grass cover, Good, HSG B
71,688	80	>75% Grass cover, Good, HSG D
181,104	32	Woods/grass comb., Good, HSG A
113,262	58	Woods/grass comb., Good, HSG B
95,965	79	Woods/grass comb., Good, HSG D
946,387	54	Weighted Average
946,387		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	100	0.1400	0.17		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
5.5	658	0.1610	2.01		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
1.7	368	0.0480	3.53		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
5.9	679	0.0089	1.92		Shallow Concentrated Flow, SCF3 Paved Kv= 20.3 fps
22.8	1,805	Total			

Subcatchment E4: EDA-4

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment E4: EDA-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.09	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.09	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.09	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.09	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.09	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.09	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.09	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.09	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.09	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.09	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.09	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.09	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.09	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.09	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.09	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.09	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.09	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.09	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.09	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.09	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.09	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.09	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.09	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.09	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.09	0.00
12.50	1.81	0.00	0.02	41.50	2.64	0.09	0.00
13.00	1.96	0.01	0.24	42.00	2.64	0.09	0.00
13.50	2.05	0.01	0.28	42.50	2.64	0.09	0.00
14.00	2.12	0.02	0.25	43.00	2.64	0.09	0.00
14.50	2.18	0.02	0.24	43.50	2.64	0.09	0.00
15.00	2.22	0.03	0.22	44.00	2.64	0.09	0.00
15.50	2.26	0.03	0.20	44.50	2.64	0.09	0.00
16.00	2.30	0.04	0.20	45.00	2.64	0.09	0.00
16.50	2.33	0.04	0.19	45.50	2.64	0.09	0.00
17.00	2.36	0.05	0.18	46.00	2.64	0.09	0.00
17.50	2.39	0.05	0.17	46.50	2.64	0.09	0.00
18.00	2.41	0.05	0.16	47.00	2.64	0.09	0.00
18.50	2.44	0.06	0.15	47.50	2.64	0.09	0.00
19.00	2.46	0.06	0.15	48.00	2.64	0.09	0.00
19.50	2.48	0.06	0.15				
20.00	2.50	0.07	0.15				
20.50	2.52	0.07	0.15				
21.00	2.54	0.07	0.14				
21.50	2.56	0.08	0.14				
22.00	2.58	0.08	0.14				
22.50	2.59	0.08	0.13				
23.00	2.61	0.09	0.13				
23.50	2.63	0.09	0.13				
24.00	2.64	0.09	0.12				
24.50	2.64	0.09	0.02				
25.00	2.64	0.09	0.00				
25.50	2.64	0.09	0.00				
26.00	2.64	0.09	0.00				
26.50	2.64	0.09	0.00				
27.00	2.64	0.09	0.00				
27.50	2.64	0.09	0.00				
28.00	2.64	0.09	0.00				
28.50	2.64	0.09	0.00				

Summary for Subcatchment E5: E5

Runoff = 0.24 cfs @ 13.04 hrs, Volume= 0.113 af, Depth= 0.13"
 Routed to Link EDP5 : EDP5

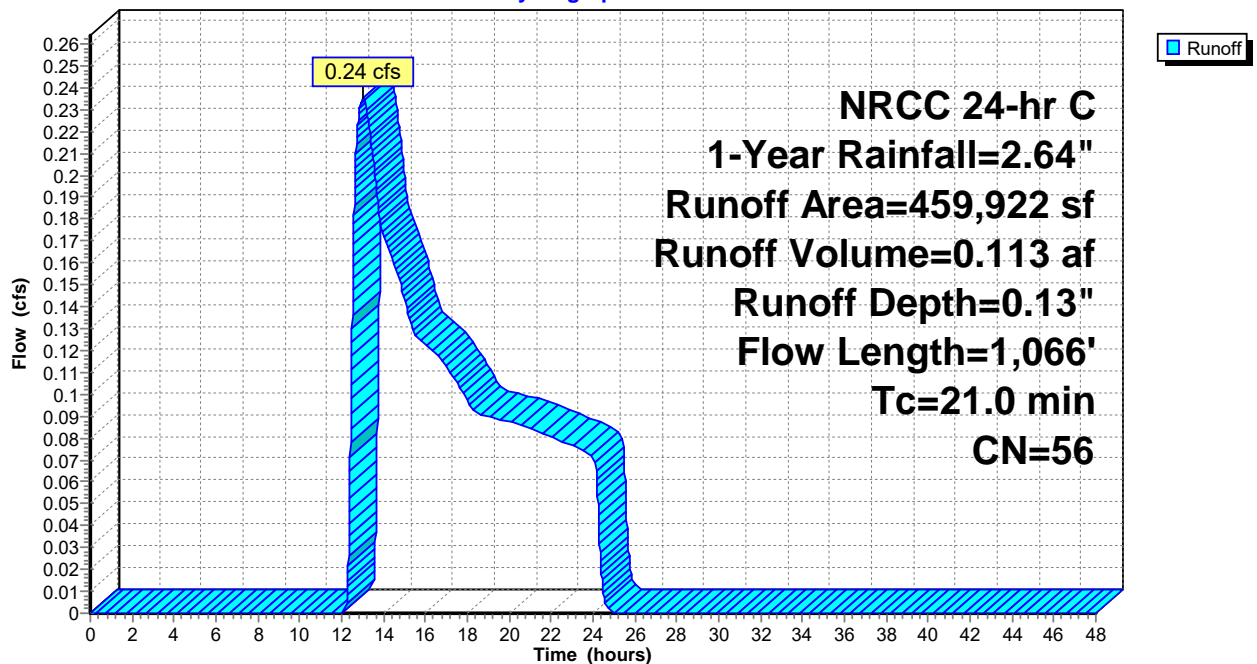
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
3,768	96	Gravel surface, HSG A
1,545	96	Gravel surface, HSG B
3,260	82	Dirt roads, HSG B
8,571	39	>75% Grass cover, Good, HSG A
249,030	61	>75% Grass cover, Good, HSG B
59,839	32	Woods/grass comb., Good, HSG A
133,909	58	Woods/grass comb., Good, HSG B
459,922	56	Weighted Average
459,922		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.1300	0.17		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
7.3	783	0.1270	1.78		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
3.7	183	0.0279	0.84		Shallow Concentrated Flow, SCF2 Woodland Kv= 5.0 fps
21.0	1,066	Total			

Subcatchment E5: E5

Hydrograph



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NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment E5: E5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.13	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.13	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.13	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.13	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.13	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.13	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.13	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.13	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.13	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.13	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.13	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.13	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.13	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.13	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.13	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.13	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.13	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.13	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.13	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.13	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.13	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.13	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.13	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.13	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.13	0.00
12.50	1.81	0.01	0.13	41.50	2.64	0.13	0.00
13.00	1.96	0.02	0.24	42.00	2.64	0.13	0.00
13.50	2.05	0.03	0.21	42.50	2.64	0.13	0.00
14.00	2.12	0.04	0.17	43.00	2.64	0.13	0.00
14.50	2.18	0.04	0.16	43.50	2.64	0.13	0.00
15.00	2.22	0.05	0.14	44.00	2.64	0.13	0.00
15.50	2.26	0.06	0.13	44.50	2.64	0.13	0.00
16.00	2.30	0.06	0.12	45.00	2.64	0.13	0.00
16.50	2.33	0.07	0.12	45.50	2.64	0.13	0.00
17.00	2.36	0.07	0.11	46.00	2.64	0.13	0.00
17.50	2.39	0.08	0.11	46.50	2.64	0.13	0.00
18.00	2.41	0.08	0.10	47.00	2.64	0.13	0.00
18.50	2.44	0.09	0.09	47.50	2.64	0.13	0.00
19.00	2.46	0.09	0.09	48.00	2.64	0.13	0.00
19.50	2.48	0.09	0.09				
20.00	2.50	0.10	0.09				
20.50	2.52	0.10	0.09				
21.00	2.54	0.11	0.08				
21.50	2.56	0.11	0.08				
22.00	2.58	0.11	0.08				
22.50	2.59	0.12	0.08				
23.00	2.61	0.12	0.08				
23.50	2.63	0.12	0.07				
24.00	2.64	0.13	0.07				
24.50	2.64	0.13	0.01				
25.00	2.64	0.13	0.00				
25.50	2.64	0.13	0.00				
26.00	2.64	0.13	0.00				
26.50	2.64	0.13	0.00				
27.00	2.64	0.13	0.00				
27.50	2.64	0.13	0.00				
28.00	2.64	0.13	0.00				
28.50	2.64	0.13	0.00				

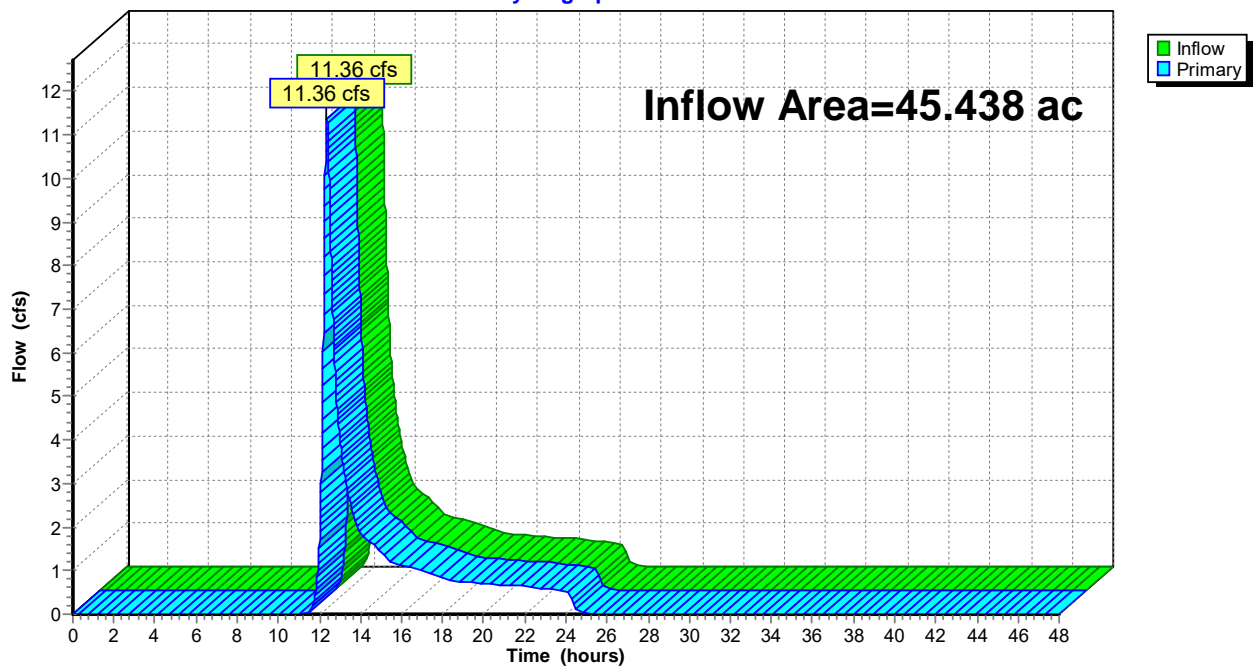
Summary for Link EDP1: DP-1

Inflow Area = 45.438 ac, 0.49% Impervious, Inflow Depth = 0.41" for 1-Year event
Inflow = 11.36 cfs @ 12.36 hrs, Volume= 1.555 af
Primary = 11.36 cfs @ 12.36 hrs, Volume= 1.555 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP1: DP-1

Hydrograph



Hydrograph for Link EDP1: DP-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.03	0.00	0.03	40.50	0.00	0.00	0.00
12.00	1.56	0.00	1.56	41.00	0.00	0.00	0.00
12.50	9.55	0.00	9.55	41.50	0.00	0.00	0.00
13.00	3.96	0.00	3.96	42.00	0.00	0.00	0.00
13.50	2.58	0.00	2.58	42.50	0.00	0.00	0.00
14.00	1.90	0.00	1.90	43.00	0.00	0.00	0.00
14.50	1.65	0.00	1.65	43.50	0.00	0.00	0.00
15.00	1.41	0.00	1.41	44.00	0.00	0.00	0.00
15.50	1.20	0.00	1.20	44.50	0.00	0.00	0.00
16.00	1.13	0.00	1.13	45.00	0.00	0.00	0.00
16.50	1.06	0.00	1.06	45.50	0.00	0.00	0.00
17.00	0.99	0.00	0.99	46.00	0.00	0.00	0.00
17.50	0.91	0.00	0.91	46.50	0.00	0.00	0.00
18.00	0.83	0.00	0.83	47.00	0.00	0.00	0.00
18.50	0.77	0.00	0.77	47.50	0.00	0.00	0.00
19.00	0.74	0.00	0.74	48.00	0.00	0.00	0.00
19.50	0.73	0.00	0.73				
20.00	0.71	0.00	0.71				
20.50	0.69	0.00	0.69				
21.00	0.67	0.00	0.67				
21.50	0.65	0.00	0.65				
22.00	0.63	0.00	0.63				
22.50	0.61	0.00	0.61				
23.00	0.59	0.00	0.59				
23.50	0.57	0.00	0.57				
24.00	0.55	0.00	0.55				
24.50	0.11	0.00	0.11				
25.00	0.01	0.00	0.01				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

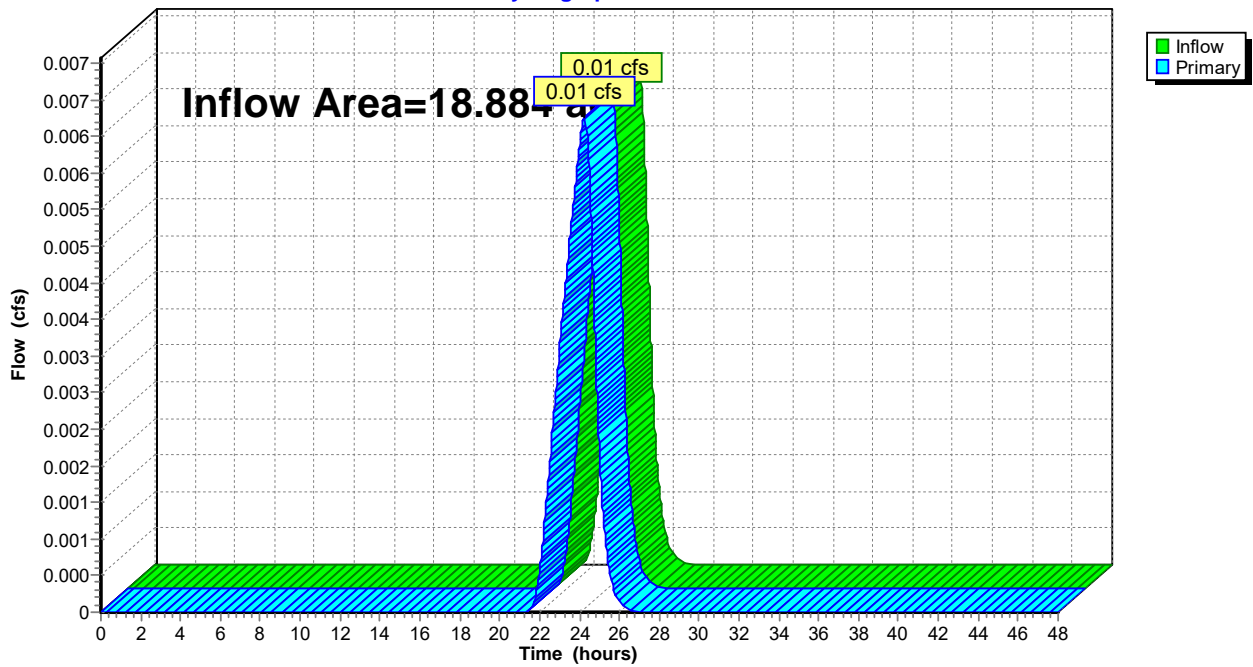
Summary for Link EDP2: DP-2

Inflow Area = 18.884 ac, 1.80% Impervious, Inflow Depth = 0.00" for 1-Year event
Inflow = 0.01 cfs @ 24.28 hrs, Volume= 0.001 af
Primary = 0.01 cfs @ 24.28 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP2: DP-2

Hydrograph



Hydrograph for Link EDP2: DP-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	0.00	0.00	0.00	41.50	0.00	0.00	0.00
13.00	0.00	0.00	0.00	42.00	0.00	0.00	0.00
13.50	0.00	0.00	0.00	42.50	0.00	0.00	0.00
14.00	0.00	0.00	0.00	43.00	0.00	0.00	0.00
14.50	0.00	0.00	0.00	43.50	0.00	0.00	0.00
15.00	0.00	0.00	0.00	44.00	0.00	0.00	0.00
15.50	0.00	0.00	0.00	44.50	0.00	0.00	0.00
16.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00
16.50	0.00	0.00	0.00	45.50	0.00	0.00	0.00
17.00	0.00	0.00	0.00	46.00	0.00	0.00	0.00
17.50	0.00	0.00	0.00	46.50	0.00	0.00	0.00
18.00	0.00	0.00	0.00	47.00	0.00	0.00	0.00
18.50	0.00	0.00	0.00	47.50	0.00	0.00	0.00
19.00	0.00	0.00	0.00	48.00	0.00	0.00	0.00
19.50	0.00	0.00	0.00				
20.00	0.00	0.00	0.00				
20.50	0.00	0.00	0.00				
21.00	0.00	0.00	0.00				
21.50	0.00	0.00	0.00				
22.00	0.00	0.00	0.00				
22.50	0.00	0.00	0.00				
23.00	0.00	0.00	0.00				
23.50	0.01	0.00	0.01				
24.00	0.01	0.00	0.01				
24.50	0.01	0.00	0.01				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

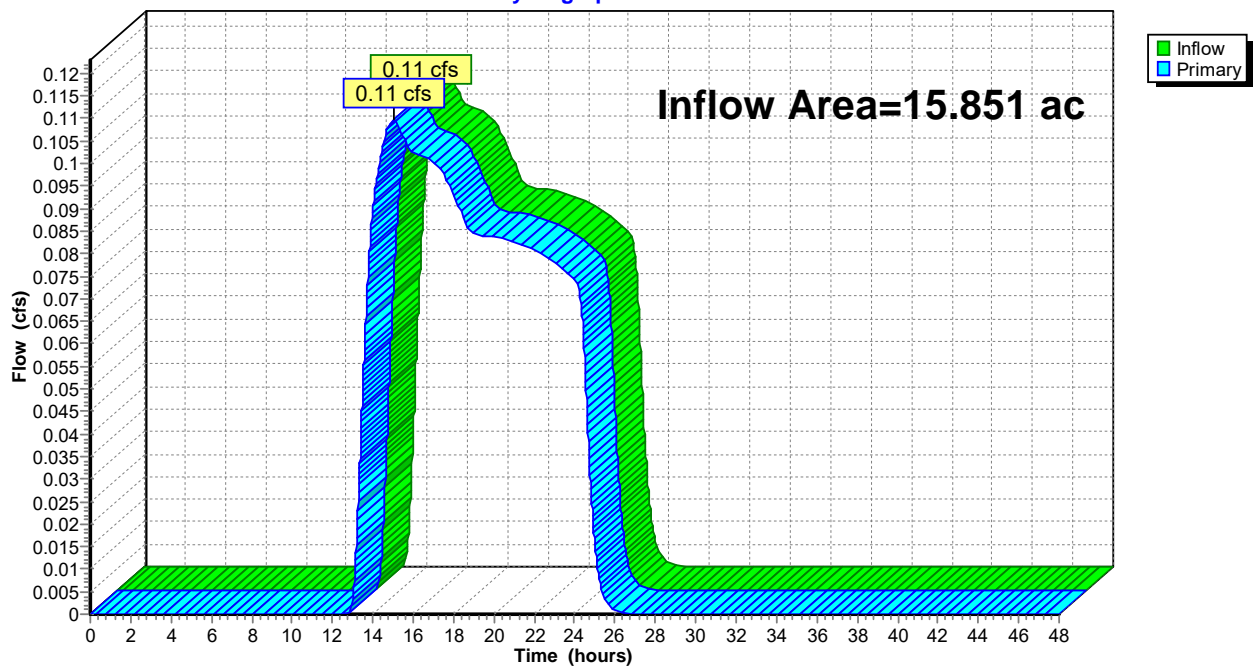
Summary for Link EDP3: DP-3

Inflow Area = 15.851 ac, 0.28% Impervious, Inflow Depth = 0.06" for 1-Year event
Inflow = 0.11 cfs @ 15.03 hrs, Volume= 0.083 af
Primary = 0.11 cfs @ 15.03 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP3: DP-3

Hydrograph



Hydrograph for Link EDP3: DP-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	0.00	0.00	0.00	41.50	0.00	0.00	0.00
13.00	0.00	0.00	0.00	42.00	0.00	0.00	0.00
13.50	0.05	0.00	0.05	42.50	0.00	0.00	0.00
14.00	0.09	0.00	0.09	43.00	0.00	0.00	0.00
14.50	0.10	0.00	0.10	43.50	0.00	0.00	0.00
15.00	0.11	0.00	0.11	44.00	0.00	0.00	0.00
15.50	0.11	0.00	0.11	44.50	0.00	0.00	0.00
16.00	0.10	0.00	0.10	45.00	0.00	0.00	0.00
16.50	0.10	0.00	0.10	45.50	0.00	0.00	0.00
17.00	0.10	0.00	0.10	46.00	0.00	0.00	0.00
17.50	0.10	0.00	0.10	46.50	0.00	0.00	0.00
18.00	0.09	0.00	0.09	47.00	0.00	0.00	0.00
18.50	0.09	0.00	0.09	47.50	0.00	0.00	0.00
19.00	0.08	0.00	0.08	48.00	0.00	0.00	0.00
19.50	0.08	0.00	0.08				
20.00	0.08	0.00	0.08				
20.50	0.08	0.00	0.08				
21.00	0.08	0.00	0.08				
21.50	0.08	0.00	0.08				
22.00	0.08	0.00	0.08				
22.50	0.08	0.00	0.08				
23.00	0.08	0.00	0.08				
23.50	0.08	0.00	0.08				
24.00	0.07	0.00	0.07				
24.50	0.06	0.00	0.06				
25.00	0.02	0.00	0.02				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

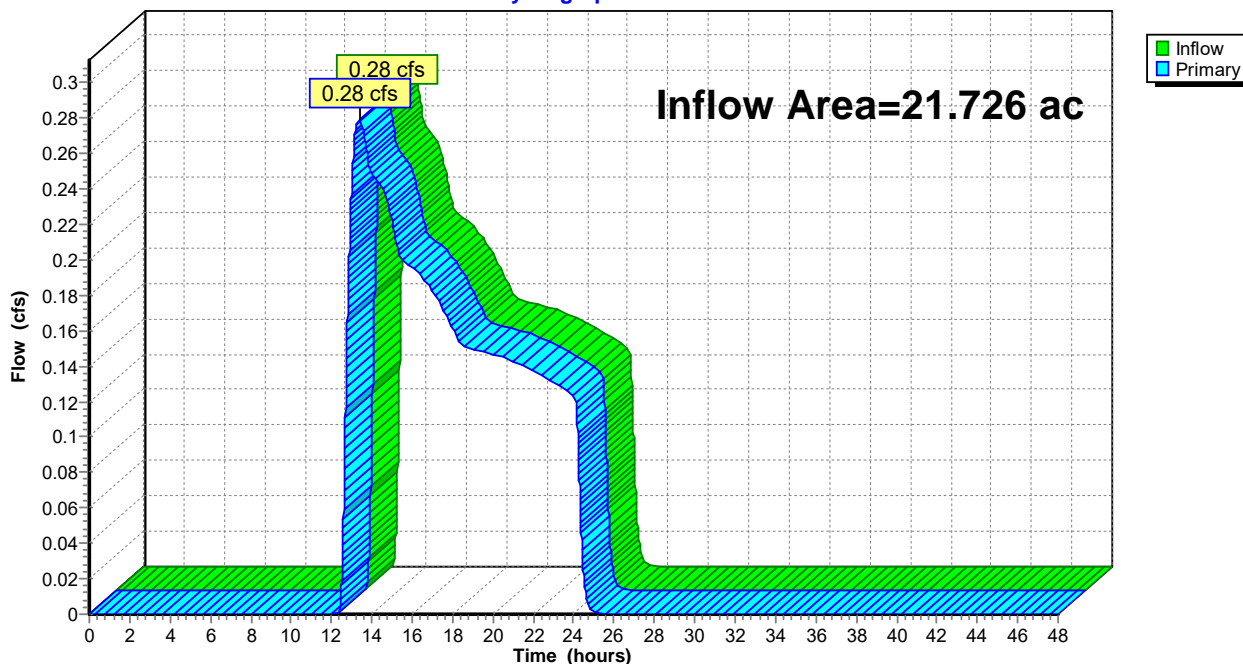
Summary for Link EDP4: DP-4

Inflow Area = 21.726 ac, 0.00% Impervious, Inflow Depth = 0.09" for 1-Year event
Inflow = 0.28 cfs @ 13.40 hrs, Volume= 0.168 af
Primary = 0.28 cfs @ 13.40 hrs, Volume= 0.168 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP4: DP-4

Hydrograph



Hydrograph for Link EDP4: DP-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	0.02	0.00	0.02	41.50	0.00	0.00	0.00
13.00	0.24	0.00	0.24	42.00	0.00	0.00	0.00
13.50	0.28	0.00	0.28	42.50	0.00	0.00	0.00
14.00	0.25	0.00	0.25	43.00	0.00	0.00	0.00
14.50	0.24	0.00	0.24	43.50	0.00	0.00	0.00
15.00	0.22	0.00	0.22	44.00	0.00	0.00	0.00
15.50	0.20	0.00	0.20	44.50	0.00	0.00	0.00
16.00	0.20	0.00	0.20	45.00	0.00	0.00	0.00
16.50	0.19	0.00	0.19	45.50	0.00	0.00	0.00
17.00	0.18	0.00	0.18	46.00	0.00	0.00	0.00
17.50	0.17	0.00	0.17	46.50	0.00	0.00	0.00
18.00	0.16	0.00	0.16	47.00	0.00	0.00	0.00
18.50	0.15	0.00	0.15	47.50	0.00	0.00	0.00
19.00	0.15	0.00	0.15	48.00	0.00	0.00	0.00
19.50	0.15	0.00	0.15				
20.00	0.15	0.00	0.15				
20.50	0.15	0.00	0.15				
21.00	0.14	0.00	0.14				
21.50	0.14	0.00	0.14				
22.00	0.14	0.00	0.14				
22.50	0.13	0.00	0.13				
23.00	0.13	0.00	0.13				
23.50	0.13	0.00	0.13				
24.00	0.12	0.00	0.12				
24.50	0.02	0.00	0.02				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

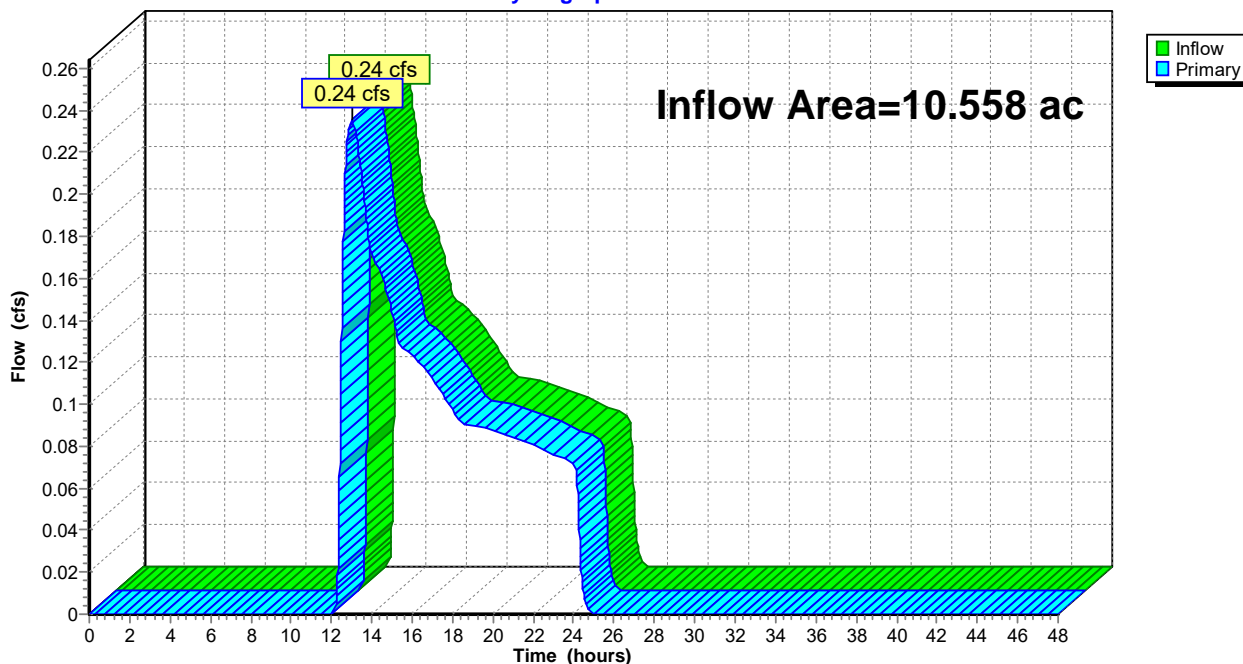
Summary for Link EDP5: EDP5

Inflow Area = 10.558 ac, 0.00% Impervious, Inflow Depth = 0.13" for 1-Year event
Inflow = 0.24 cfs @ 13.04 hrs, Volume= 0.113 af
Primary = 0.24 cfs @ 13.04 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP5: EDP5

Hydrograph



Hydrograph for Link EDP5: EDP5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	0.13	0.00	0.13	41.50	0.00	0.00	0.00
13.00	0.24	0.00	0.24	42.00	0.00	0.00	0.00
13.50	0.21	0.00	0.21	42.50	0.00	0.00	0.00
14.00	0.17	0.00	0.17	43.00	0.00	0.00	0.00
14.50	0.16	0.00	0.16	43.50	0.00	0.00	0.00
15.00	0.14	0.00	0.14	44.00	0.00	0.00	0.00
15.50	0.13	0.00	0.13	44.50	0.00	0.00	0.00
16.00	0.12	0.00	0.12	45.00	0.00	0.00	0.00
16.50	0.12	0.00	0.12	45.50	0.00	0.00	0.00
17.00	0.11	0.00	0.11	46.00	0.00	0.00	0.00
17.50	0.11	0.00	0.11	46.50	0.00	0.00	0.00
18.00	0.10	0.00	0.10	47.00	0.00	0.00	0.00
18.50	0.09	0.00	0.09	47.50	0.00	0.00	0.00
19.00	0.09	0.00	0.09	48.00	0.00	0.00	0.00
19.50	0.09	0.00	0.09				
20.00	0.09	0.00	0.09				
20.50	0.09	0.00	0.09				
21.00	0.08	0.00	0.08				
21.50	0.08	0.00	0.08				
22.00	0.08	0.00	0.08				
22.50	0.08	0.00	0.08				
23.00	0.08	0.00	0.08				
23.50	0.07	0.00	0.07				
24.00	0.07	0.00	0.07				
24.50	0.01	0.00	0.01				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

Prepared by Colliers Engineering & Design

Printed 7/24/2024

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 22S: Exist	Runoff Area=1,182,741 sf 0.65% Impervious Runoff Depth=2.12" Flow Length=270' Tc=23.4 min CN=73 Runoff=42.30 cfs 4.808 af
Subcatchment E1: EDA-1	Runoff Area=796,527 sf 0.25% Impervious Runoff Depth=0.72" Flow Length=472' Tc=30.0 min CN=52 Runoff=5.78 cfs 1.091 af
Subcatchment E2: EDA-2	Runoff Area=822,574 sf 1.80% Impervious Runoff Depth=0.34" Flow Length=1,483' Tc=55.9 min CN=44 Runoff=1.24 cfs 0.534 af
Subcatchment E3: EDA-3	Runoff Area=690,451 sf 0.28% Impervious Runoff Depth=0.72" Flow Length=1,360' Tc=49.9 min CN=52 Runoff=3.80 cfs 0.946 af
Subcatchment E4: EDA-4	Runoff Area=946,387 sf 0.00% Impervious Runoff Depth=0.83" Flow Length=1,805' Tc=22.8 min CN=54 Runoff=10.04 cfs 1.494 af
Subcatchment E5: E5	Runoff Area=459,922 sf 0.00% Impervious Runoff Depth=0.94" Flow Length=1,066' Tc=21.0 min CN=56 Runoff=6.23 cfs 0.827 af
Link EDP1: DP-1	Inflow=46.62 cfs 5.899 af Primary=46.62 cfs 5.899 af
Link EDP2: DP-2	Inflow=1.24 cfs 0.534 af Primary=1.24 cfs 0.534 af
Link EDP3: DP-3	Inflow=3.80 cfs 0.946 af Primary=3.80 cfs 0.946 af
Link EDP4: DP-4	Inflow=10.04 cfs 1.494 af Primary=10.04 cfs 1.494 af
Link EDP5: EDP5	Inflow=6.23 cfs 0.827 af Primary=6.23 cfs 0.827 af

Total Runoff Area = 112.456 ac Runoff Volume = 9.700 af Average Runoff Depth = 1.04"
99.46% Pervious = 111.851 ac 0.54% Impervious = 0.605 ac

Summary for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Runoff = 42.30 cfs @ 12.35 hrs, Volume= 4.808 af, Depth= 2.12"
 Routed to Link EDP1 : DP-1

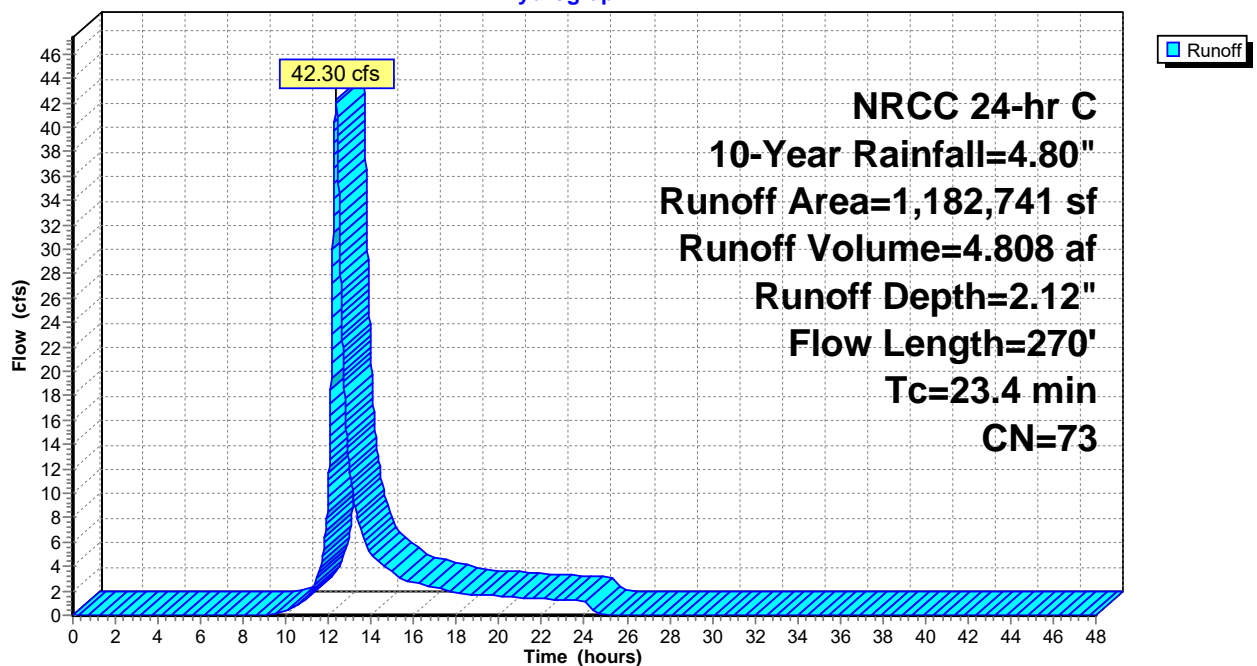
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
66,125	32	Woods/grass comb., Good, HSG A
317,463	79	Woods/grass comb., Good, HSG D
628,062	80	>75% Grass cover, Good, HSG D
78,234	39	>75% Grass cover, Good, HSG A
84,244	61	>75% Grass cover, Good, HSG B
938	89	Dirt roads, HSG D
* 1,552	98	Impervious Areas, HSG D
6,123	98	Impervious Areas, HSG B
1,182,741	73	Weighted Average
1,175,066		99.35% Pervious Area
7,675		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	100	0.0250	0.09		Sheet Flow, sf1 Woods: Light underbrush n= 0.400 P2= 3.31"
4.1	170	0.0190	0.69		Shallow Concentrated Flow, scf1 Woodland Kv= 5.0 fps
23.4	270	Total			

Subcatchment 22S: Exist Wetlands/Undeveloped Area

Hydrograph



Hydrograph for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	2.12	0.00
0.50	0.03	0.00	0.00	29.50	4.80	2.12	0.00
1.00	0.06	0.00	0.00	30.00	4.80	2.12	0.00
1.50	0.09	0.00	0.00	30.50	4.80	2.12	0.00
2.00	0.12	0.00	0.00	31.00	4.80	2.12	0.00
2.50	0.15	0.00	0.00	31.50	4.80	2.12	0.00
3.00	0.18	0.00	0.00	32.00	4.80	2.12	0.00
3.50	0.22	0.00	0.00	32.50	4.80	2.12	0.00
4.00	0.25	0.00	0.00	33.00	4.80	2.12	0.00
4.50	0.29	0.00	0.00	33.50	4.80	2.12	0.00
5.00	0.33	0.00	0.00	34.00	4.80	2.12	0.00
5.50	0.37	0.00	0.00	34.50	4.80	2.12	0.00
6.00	0.41	0.00	0.00	35.00	4.80	2.12	0.00
6.50	0.46	0.00	0.00	35.50	4.80	2.12	0.00
7.00	0.51	0.00	0.00	36.00	4.80	2.12	0.00
7.50	0.56	0.00	0.00	36.50	4.80	2.12	0.00
8.00	0.62	0.00	0.00	37.00	4.80	2.12	0.00
8.50	0.69	0.00	0.00	37.50	4.80	2.12	0.00
9.00	0.76	0.00	0.00	38.00	4.80	2.12	0.00
9.50	0.85	0.00	0.11	38.50	4.80	2.12	0.00
10.00	0.95	0.01	0.37	39.00	4.80	2.12	0.00
10.50	1.07	0.03	0.76	39.50	4.80	2.12	0.00
11.00	1.24	0.06	1.51	40.00	4.80	2.12	0.00
11.50	1.50	0.13	3.31	40.50	4.80	2.12	0.00
12.00	2.29	0.46	10.72	41.00	4.80	2.12	0.00
12.50	3.30	1.05	32.85	41.50	4.80	2.12	0.00
13.00	3.56	1.22	11.75	42.00	4.80	2.12	0.00
13.50	3.73	1.34	7.00	42.50	4.80	2.12	0.00
14.00	3.85	1.42	4.91	43.00	4.80	2.12	0.00
14.50	3.95	1.50	4.14	43.50	4.80	2.12	0.00
15.00	4.04	1.56	3.47	44.00	4.80	2.12	0.00
15.50	4.11	1.61	2.90	44.50	4.80	2.12	0.00
16.00	4.18	1.66	2.68	45.00	4.80	2.12	0.00
16.50	4.24	1.70	2.49	45.50	4.80	2.12	0.00
17.00	4.29	1.74	2.29	46.00	4.80	2.12	0.00
17.50	4.34	1.78	2.09	46.50	4.80	2.12	0.00
18.00	4.39	1.81	1.89	47.00	4.80	2.12	0.00
18.50	4.43	1.84	1.72	47.50	4.80	2.12	0.00
19.00	4.47	1.87	1.66	48.00	4.80	2.12	0.00
19.50	4.51	1.90	1.61				
20.00	4.55	1.93	1.57				
20.50	4.58	1.96	1.52				
21.00	4.62	1.98	1.47				
21.50	4.65	2.01	1.42				
22.00	4.68	2.04	1.37				
22.50	4.71	2.06	1.32				
23.00	4.74	2.08	1.26				
23.50	4.77	2.10	1.21				
24.00	4.80	2.12	1.16				
24.50	4.80	2.12	0.20				
25.00	4.80	2.12	0.01				
25.50	4.80	2.12	0.00				
26.00	4.80	2.12	0.00				
26.50	4.80	2.12	0.00				
27.00	4.80	2.12	0.00				
27.50	4.80	2.12	0.00				
28.00	4.80	2.12	0.00				
28.50	4.80	2.12	0.00				

Summary for Subcatchment E1: EDA-1

Runoff = 5.78 cfs @ 12.51 hrs, Volume= 1.091 af, Depth= 0.72"
 Routed to Link EDP1 : DP-1

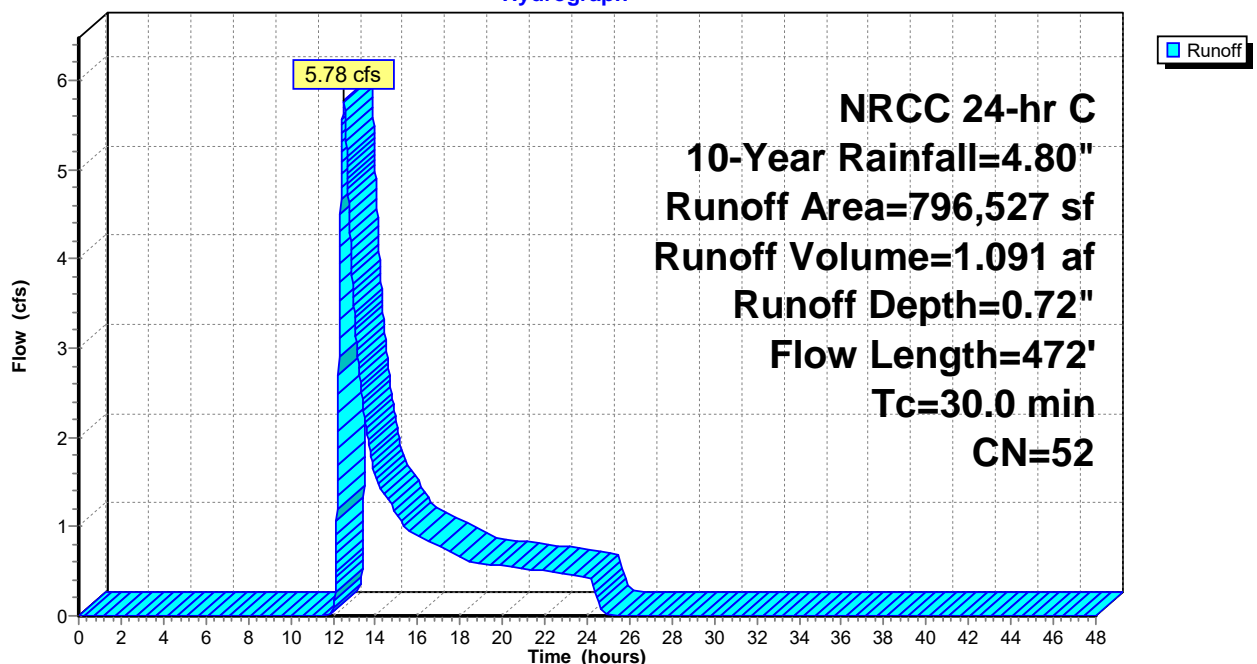
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
* 207,150	80	>75% Grass cover, Good, HSG D
2,839	89	Dirt roads, HSG D
* 1,568	98	Impervious Area, HSG D
71,639	79	Woods/grass comb., Good, HSG D
298,029	39	>75% Grass cover, Good, HSG A
* 406	98	impervious Area, HSG A
5,066	72	Dirt roads, HSG A
209,830	32	Woods/grass comb., Good, HSG A
0	61	>75% Grass cover, Good, HSG B
796,527	52	Weighted Average
794,553		99.75% Pervious Area
1,974		0.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.7	100	0.0150	0.07		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
2.4	81	0.0123	0.55		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
3.9	291	0.0060	1.25		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
30.0	472	Total			

Subcatchment E1: EDA-1

Hydrograph



Hydrograph for Subcatchment E1: EDA-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.72	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.72	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.72	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.72	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.72	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.72	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.72	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.72	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.72	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.72	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.72	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.72	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.72	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.72	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.72	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.72	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.72	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.72	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.72	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.72	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.72	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.72	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.72	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.72	0.00
12.00	2.29	0.02	0.03	41.00	4.80	0.72	0.00
12.50	3.30	0.20	5.78	41.50	4.80	0.72	0.00
13.00	3.56	0.27	3.42	42.00	4.80	0.72	0.00
13.50	3.73	0.32	2.22	42.50	4.80	0.72	0.00
14.00	3.85	0.36	1.57	43.00	4.80	0.72	0.00
14.50	3.95	0.39	1.33	43.50	4.80	0.72	0.00
15.00	4.04	0.42	1.15	44.00	4.80	0.72	0.00
15.50	4.11	0.45	0.97	44.50	4.80	0.72	0.00
16.00	4.18	0.47	0.90	45.00	4.80	0.72	0.00
16.50	4.24	0.49	0.84	45.50	4.80	0.72	0.00
17.00	4.29	0.51	0.79	46.00	4.80	0.72	0.00
17.50	4.34	0.53	0.73	46.50	4.80	0.72	0.00
18.00	4.39	0.55	0.66	47.00	4.80	0.72	0.00
18.50	4.43	0.56	0.61	47.50	4.80	0.72	0.00
19.00	4.47	0.58	0.59	48.00	4.80	0.72	0.00
19.50	4.51	0.60	0.57				
20.00	4.55	0.61	0.56				
20.50	4.58	0.63	0.55				
21.00	4.62	0.64	0.53				
21.50	4.65	0.65	0.52				
22.00	4.68	0.67	0.50				
22.50	4.71	0.68	0.48				
23.00	4.74	0.69	0.47				
23.50	4.77	0.70	0.45				
24.00	4.80	0.72	0.43				
24.50	4.80	0.72	0.15				
25.00	4.80	0.72	0.01				
25.50	4.80	0.72	0.00				
26.00	4.80	0.72	0.00				
26.50	4.80	0.72	0.00				
27.00	4.80	0.72	0.00				
27.50	4.80	0.72	0.00				
28.00	4.80	0.72	0.00				
28.50	4.80	0.72	0.00				

Summary for Subcatchment E2: EDA-2

Runoff = 1.24 cfs @ 13.30 hrs, Volume= 0.534 af, Depth= 0.34"
 Routed to Link EDP2 : DP-2

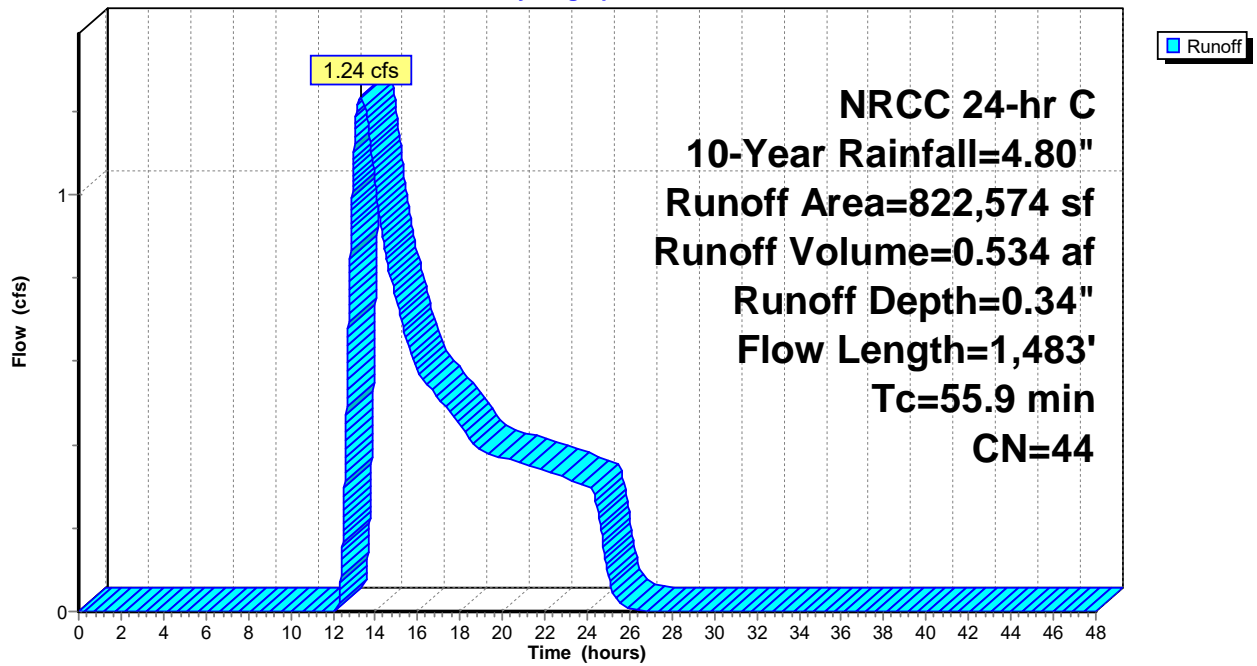
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
411,704	39	>75% Grass cover, Good, HSG A
4,905	72	Dirt roads, HSG A
* 5,267	98	Impervious Area, HSG A
240,401	32	Woods/grass comb., Good, HSG A
52,887	58	Woods/grass comb., Good, HSG B
48,215	80	>75% Grass cover, Good, HSG D
49,660	79	Woods/grass comb., Good, HSG D
9,535	98	Impervious Area, HSG D
822,574	44	Weighted Average
807,772		98.20% Pervious Area
14,802		1.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.7	100	0.0085	0.06		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
3.7	84	0.0058	0.38		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
4.5	437	0.0099	1.60		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
5.5	127	0.0060	0.39		Shallow Concentrated Flow, SCF3 Woodland Kv= 5.0 fps
2.8	296	0.0123	1.79		Shallow Concentrated Flow, SCF4 Unpaved Kv= 16.1 fps
9.7	439	0.0228	0.75		Shallow Concentrated Flow, SCF5 Woodland Kv= 5.0 fps
55.9	1,483	Total			

Subcatchment E2: EDA-2

Hydrograph



Hydrograph for Subcatchment E2: EDA-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.34	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.34	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.34	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.34	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.34	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.34	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.34	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.34	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.34	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.34	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.34	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.34	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.34	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.34	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.34	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.34	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.34	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.34	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.34	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.34	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.34	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.34	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.34	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.34	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.34	0.00
12.50	3.30	0.04	0.23	41.50	4.80	0.34	0.00
13.00	3.56	0.08	1.10	42.00	4.80	0.34	0.00
13.50	3.73	0.10	1.21	42.50	4.80	0.34	0.00
14.00	3.85	0.12	1.02	43.00	4.80	0.34	0.00
14.50	3.95	0.14	0.85	43.50	4.80	0.34	0.00
15.00	4.04	0.16	0.74	44.00	4.80	0.34	0.00
15.50	4.11	0.17	0.65	44.50	4.80	0.34	0.00
16.00	4.18	0.19	0.58	45.00	4.80	0.34	0.00
16.50	4.24	0.20	0.54	45.50	4.80	0.34	0.00
17.00	4.29	0.21	0.51	46.00	4.80	0.34	0.00
17.50	4.34	0.22	0.48	46.50	4.80	0.34	0.00
18.00	4.39	0.23	0.45	47.00	4.80	0.34	0.00
18.50	4.43	0.24	0.41	47.50	4.80	0.34	0.00
19.00	4.47	0.25	0.39	48.00	4.80	0.34	0.00
19.50	4.51	0.26	0.38				
20.00	4.55	0.27	0.37				
20.50	4.58	0.28	0.36				
21.00	4.62	0.29	0.35				
21.50	4.65	0.30	0.35				
22.00	4.68	0.31	0.34				
22.50	4.71	0.32	0.33				
23.00	4.74	0.32	0.32				
23.50	4.77	0.33	0.31				
24.00	4.80	0.34	0.30				
24.50	4.80	0.34	0.24				
25.00	4.80	0.34	0.08				
25.50	4.80	0.34	0.02				
26.00	4.80	0.34	0.01				
26.50	4.80	0.34	0.00				
27.00	4.80	0.34	0.00				
27.50	4.80	0.34	0.00				
28.00	4.80	0.34	0.00				
28.50	4.80	0.34	0.00				

Summary for Subcatchment E3: EDA-3

Runoff = 3.80 cfs @ 12.86 hrs, Volume= 0.946 af, Depth= 0.72"
 Routed to Link EDP3 : DP-3

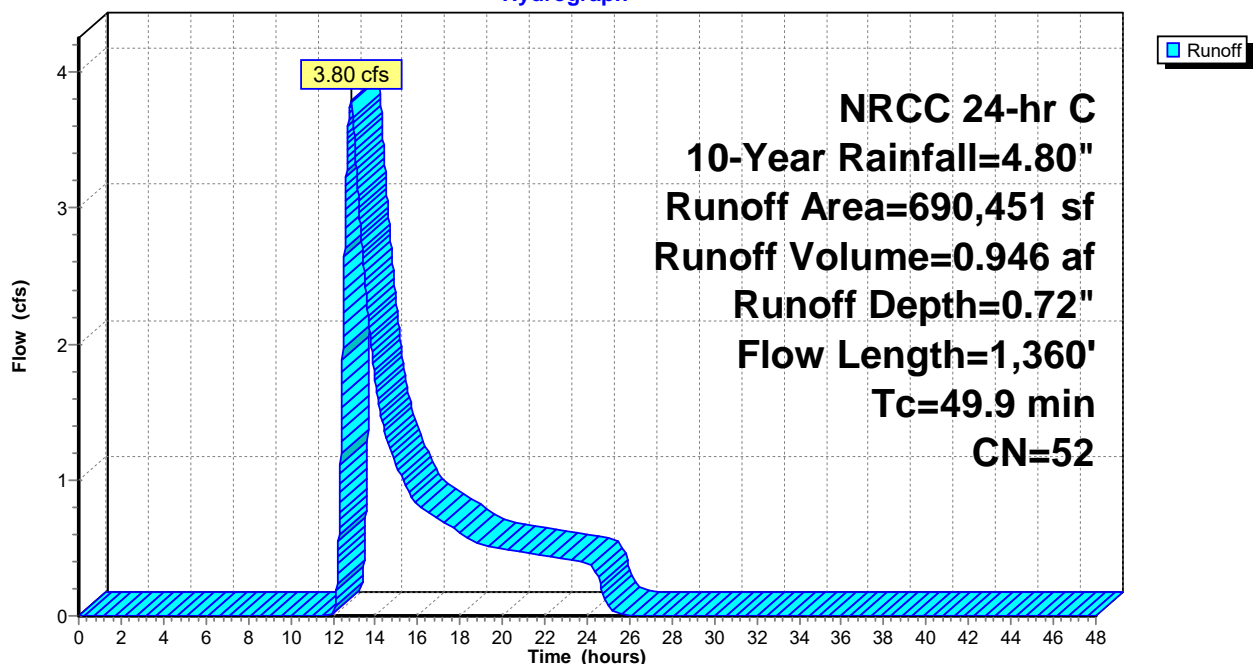
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
1,902	98	Paved parking, HSG A
89,711	39	>75% Grass cover, Good, HSG A
6,532	96	Gravel surface, HSG A
175,868	32	Woods/grass comb., Good, HSG A
168,395	61	>75% Grass cover, Good, HSG B
196,445	58	Woods/grass comb., Good, HSG B
1,344	82	Dirt roads, HSG B
8,737	80	>75% Grass cover, Good, HSG D
41,517	79	Woods/grass comb., Good, HSG D
690,451	52	Weighted Average
688,549		99.72% Pervious Area
1,902		0.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	100	0.0109	0.06		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.31"
21.1	734	0.0135	0.58		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.9	526	0.0494	4.51		Shallow Concentrated Flow, Paved Kv= 20.3 fps
49.9	1,360	Total			

Subcatchment E3: EDA-3

Hydrograph



Hydrograph for Subcatchment E3: EDA-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.72	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.72	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.72	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.72	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.72	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.72	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.72	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.72	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.72	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.72	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.72	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.72	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.72	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.72	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.72	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.72	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.72	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.72	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.72	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.72	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.72	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.72	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.72	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.72	0.00
12.00	2.29	0.02	0.01	41.00	4.80	0.72	0.00
12.50	3.30	0.20	2.31	41.50	4.80	0.72	0.00
13.00	3.56	0.27	3.57	42.00	4.80	0.72	0.00
13.50	3.73	0.32	2.47	42.50	4.80	0.72	0.00
14.00	3.85	0.36	1.72	43.00	4.80	0.72	0.00
14.50	3.95	0.39	1.32	43.50	4.80	0.72	0.00
15.00	4.04	0.42	1.11	44.00	4.80	0.72	0.00
15.50	4.11	0.45	0.93	44.50	4.80	0.72	0.00
16.00	4.18	0.47	0.82	45.00	4.80	0.72	0.00
16.50	4.24	0.49	0.76	45.50	4.80	0.72	0.00
17.00	4.29	0.51	0.71	46.00	4.80	0.72	0.00
17.50	4.34	0.53	0.66	46.50	4.80	0.72	0.00
18.00	4.39	0.55	0.61	47.00	4.80	0.72	0.00
18.50	4.43	0.56	0.56	47.50	4.80	0.72	0.00
19.00	4.47	0.58	0.52	48.00	4.80	0.72	0.00
19.50	4.51	0.60	0.50				
20.00	4.55	0.61	0.49				
20.50	4.58	0.63	0.48				
21.00	4.62	0.64	0.47				
21.50	4.65	0.65	0.45				
22.00	4.68	0.67	0.44				
22.50	4.71	0.68	0.43				
23.00	4.74	0.69	0.41				
23.50	4.77	0.70	0.40				
24.00	4.80	0.72	0.38				
24.50	4.80	0.72	0.29				
25.00	4.80	0.72	0.08				
25.50	4.80	0.72	0.02				
26.00	4.80	0.72	0.00				
26.50	4.80	0.72	0.00				
27.00	4.80	0.72	0.00				
27.50	4.80	0.72	0.00				
28.00	4.80	0.72	0.00				
28.50	4.80	0.72	0.00				

Summary for Subcatchment E4: EDA-4

Runoff = 10.04 cfs @ 12.39 hrs, Volume= 1.494 af, Depth= 0.83"
 Routed to Link EDP4 : DP-4

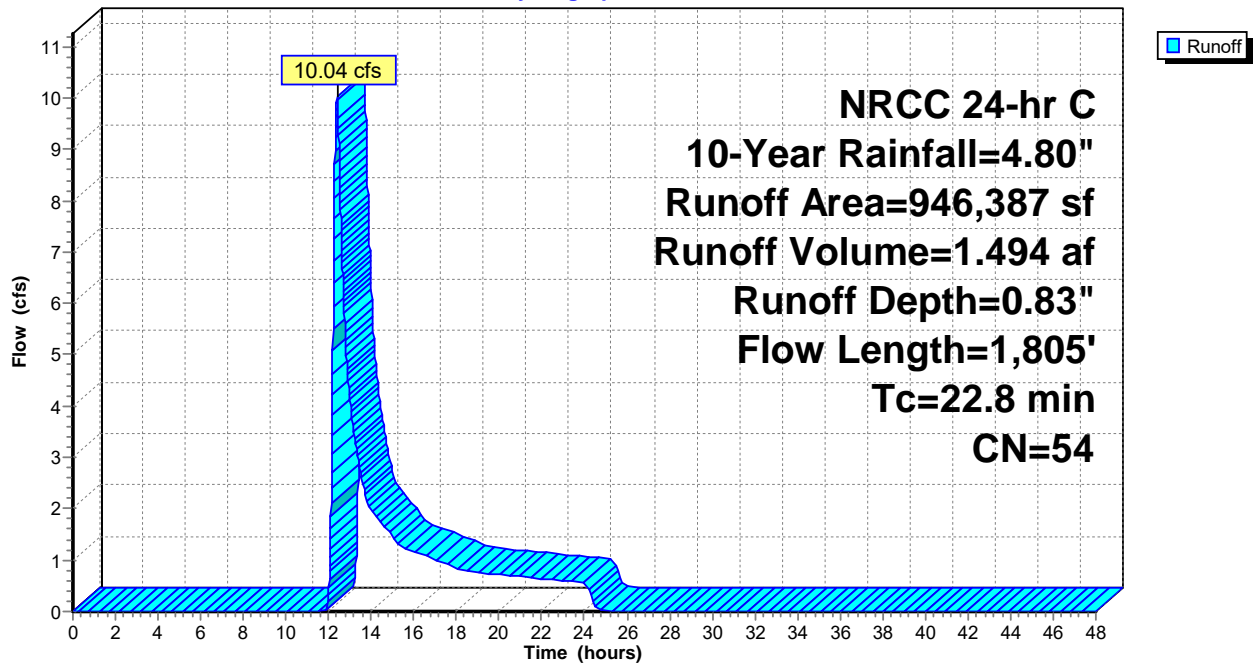
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
3,302	76	Gravel roads, HSG A
4,132	72	Dirt roads, HSG A
7,319	82	Dirt roads, HSG B
215,755	39	>75% Grass cover, Good, HSG A
253,860	61	>75% Grass cover, Good, HSG B
71,688	80	>75% Grass cover, Good, HSG D
181,104	32	Woods/grass comb., Good, HSG A
113,262	58	Woods/grass comb., Good, HSG B
95,965	79	Woods/grass comb., Good, HSG D
946,387	54	Weighted Average
946,387		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	100	0.1400	0.17		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
5.5	658	0.1610	2.01		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
1.7	368	0.0480	3.53		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
5.9	679	0.0089	1.92		Shallow Concentrated Flow, SCF3 Paved Kv= 20.3 fps
22.8	1,805	Total			

Subcatchment E4: EDA-4

Hydrograph



Hydrograph for Subcatchment E4: EDA-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.83	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.83	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.83	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.83	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.83	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.83	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.83	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.83	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.83	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.83	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.83	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.83	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.83	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.83	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.83	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.83	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.83	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.83	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.83	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.83	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.83	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.83	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.83	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.83	0.00
12.00	2.29	0.04	0.35	41.00	4.80	0.83	0.00
12.50	3.30	0.25	8.77	41.50	4.80	0.83	0.00
13.00	3.56	0.33	4.11	42.00	4.80	0.83	0.00
13.50	3.73	0.39	2.70	42.50	4.80	0.83	0.00
14.00	3.85	0.43	1.97	43.00	4.80	0.83	0.00
14.50	3.95	0.47	1.71	43.50	4.80	0.83	0.00
15.00	4.04	0.50	1.45	44.00	4.80	0.83	0.00
15.50	4.11	0.53	1.24	44.50	4.80	0.83	0.00
16.00	4.18	0.56	1.16	45.00	4.80	0.83	0.00
16.50	4.24	0.58	1.09	45.50	4.80	0.83	0.00
17.00	4.29	0.60	1.01	46.00	4.80	0.83	0.00
17.50	4.34	0.62	0.93	46.50	4.80	0.83	0.00
18.00	4.39	0.64	0.85	47.00	4.80	0.83	0.00
18.50	4.43	0.66	0.78	47.50	4.80	0.83	0.00
19.00	4.47	0.68	0.76	48.00	4.80	0.83	0.00
19.50	4.51	0.69	0.74				
20.00	4.55	0.71	0.72				
20.50	4.58	0.73	0.70				
21.00	4.62	0.74	0.68				
21.50	4.65	0.76	0.66				
22.00	4.68	0.77	0.64				
22.50	4.71	0.79	0.62				
23.00	4.74	0.80	0.60				
23.50	4.77	0.81	0.58				
24.00	4.80	0.83	0.55				
24.50	4.80	0.83	0.09				
25.00	4.80	0.83	0.00				
25.50	4.80	0.83	0.00				
26.00	4.80	0.83	0.00				
26.50	4.80	0.83	0.00				
27.00	4.80	0.83	0.00				
27.50	4.80	0.83	0.00				
28.00	4.80	0.83	0.00				
28.50	4.80	0.83	0.00				

Summary for Subcatchment E5: E5

Runoff = 6.23 cfs @ 12.34 hrs, Volume= 0.827 af, Depth= 0.94"
 Routed to Link EDP5 : EDP5

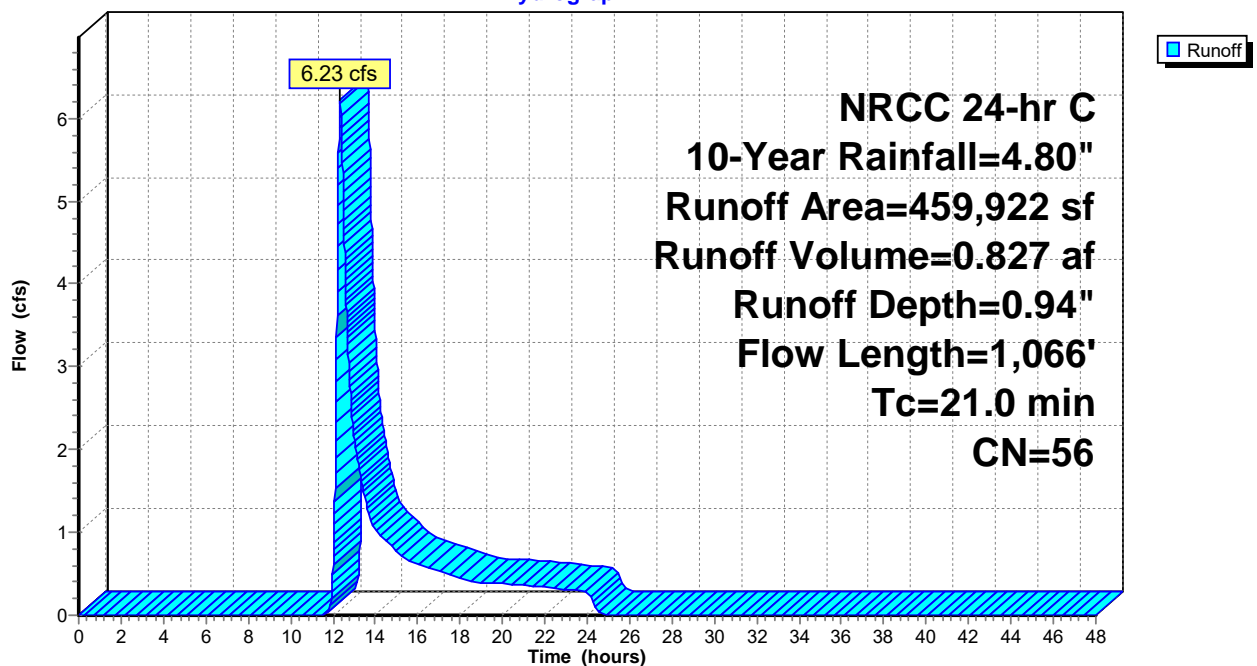
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
3,768	96	Gravel surface, HSG A
1,545	96	Gravel surface, HSG B
3,260	82	Dirt roads, HSG B
8,571	39	>75% Grass cover, Good, HSG A
249,030	61	>75% Grass cover, Good, HSG B
59,839	32	Woods/grass comb., Good, HSG A
133,909	58	Woods/grass comb., Good, HSG B
459,922	56	Weighted Average
459,922		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.1300	0.17		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
7.3	783	0.1270	1.78		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
3.7	183	0.0279	0.84		Shallow Concentrated Flow, SCF2 Woodland Kv= 5.0 fps
21.0	1,066	Total			

Subcatchment E5: E5

Hydrograph



Hydrograph for Subcatchment E5: E5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.94	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.94	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.94	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.94	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.94	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.94	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.94	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.94	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.94	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.94	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.94	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.94	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.94	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.94	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.94	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.94	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.94	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.94	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.94	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.94	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.94	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.94	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.94	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.94	0.00
12.00	2.29	0.06	0.51	41.00	4.80	0.94	0.00
12.50	3.30	0.31	4.88	41.50	4.80	0.94	0.00
13.00	3.56	0.40	2.17	42.00	4.80	0.94	0.00
13.50	3.73	0.47	1.43	42.50	4.80	0.94	0.00
14.00	3.85	0.51	1.04	43.00	4.80	0.94	0.00
14.50	3.95	0.55	0.91	43.50	4.80	0.94	0.00
15.00	4.04	0.59	0.77	44.00	4.80	0.94	0.00
15.50	4.11	0.62	0.65	44.50	4.80	0.94	0.00
16.00	4.18	0.65	0.61	45.00	4.80	0.94	0.00
16.50	4.24	0.68	0.57	45.50	4.80	0.94	0.00
17.00	4.29	0.70	0.53	46.00	4.80	0.94	0.00
17.50	4.34	0.72	0.49	46.50	4.80	0.94	0.00
18.00	4.39	0.74	0.45	47.00	4.80	0.94	0.00
18.50	4.43	0.76	0.41	47.50	4.80	0.94	0.00
19.00	4.47	0.78	0.40	48.00	4.80	0.94	0.00
19.50	4.51	0.80	0.39				
20.00	4.55	0.82	0.38				
20.50	4.58	0.83	0.37				
21.00	4.62	0.85	0.36				
21.50	4.65	0.87	0.35				
22.00	4.68	0.88	0.34				
22.50	4.71	0.90	0.32				
23.00	4.74	0.91	0.31				
23.50	4.77	0.93	0.30				
24.00	4.80	0.94	0.29				
24.50	4.80	0.94	0.03				
25.00	4.80	0.94	0.00				
25.50	4.80	0.94	0.00				
26.00	4.80	0.94	0.00				
26.50	4.80	0.94	0.00				
27.00	4.80	0.94	0.00				
27.50	4.80	0.94	0.00				
28.00	4.80	0.94	0.00				
28.50	4.80	0.94	0.00				

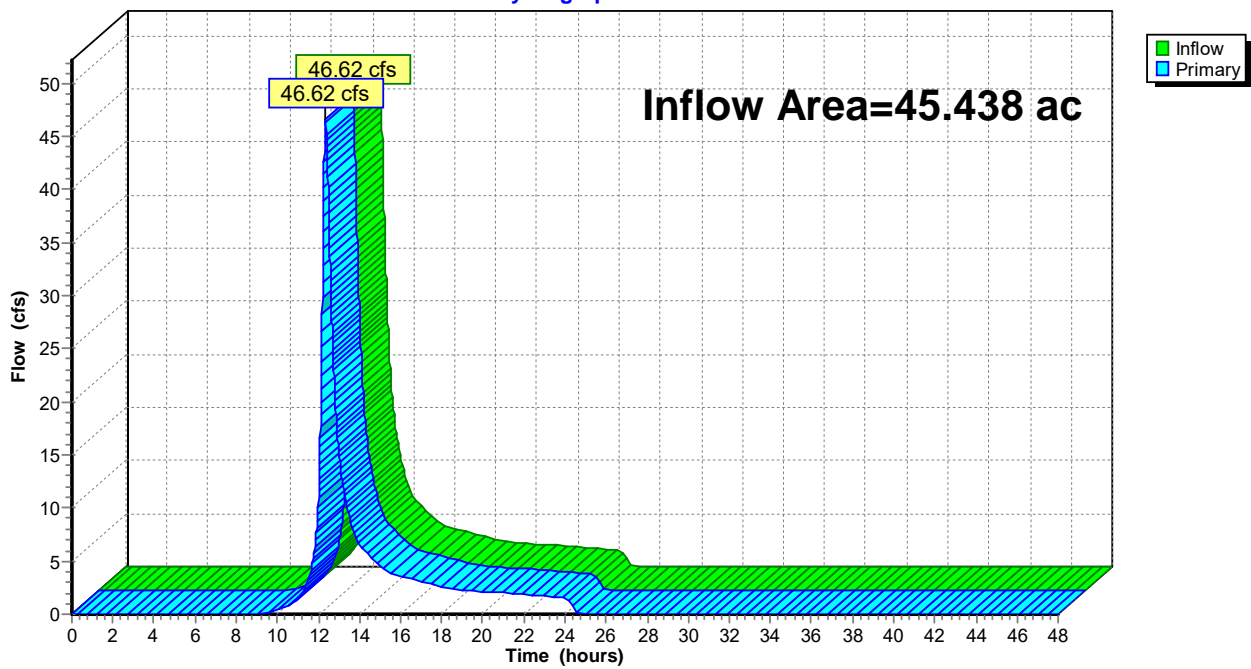
Summary for Link EDP1: DP-1

Inflow Area = 45.438 ac, 0.49% Impervious, Inflow Depth = 1.56" for 10-Year event
Inflow = 46.62 cfs @ 12.35 hrs, Volume= 5.899 af
Primary = 46.62 cfs @ 12.35 hrs, Volume= 5.899 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP1: DP-1

Hydrograph



Hydrograph for Link EDP1: DP-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.11	0.00	0.11	38.50	0.00	0.00	0.00
10.00	0.37	0.00	0.37	39.00	0.00	0.00	0.00
10.50	0.76	0.00	0.76	39.50	0.00	0.00	0.00
11.00	1.51	0.00	1.51	40.00	0.00	0.00	0.00
11.50	3.31	0.00	3.31	40.50	0.00	0.00	0.00
12.00	10.74	0.00	10.74	41.00	0.00	0.00	0.00
12.50	38.62	0.00	38.62	41.50	0.00	0.00	0.00
13.00	15.17	0.00	15.17	42.00	0.00	0.00	0.00
13.50	9.23	0.00	9.23	42.50	0.00	0.00	0.00
14.00	6.49	0.00	6.49	43.00	0.00	0.00	0.00
14.50	5.47	0.00	5.47	43.50	0.00	0.00	0.00
15.00	4.61	0.00	4.61	44.00	0.00	0.00	0.00
15.50	3.87	0.00	3.87	44.50	0.00	0.00	0.00
16.00	3.58	0.00	3.58	45.00	0.00	0.00	0.00
16.50	3.33	0.00	3.33	45.50	0.00	0.00	0.00
17.00	3.08	0.00	3.08	46.00	0.00	0.00	0.00
17.50	2.82	0.00	2.82	46.50	0.00	0.00	0.00
18.00	2.55	0.00	2.55	47.00	0.00	0.00	0.00
18.50	2.33	0.00	2.33	47.50	0.00	0.00	0.00
19.00	2.25	0.00	2.25	48.00	0.00	0.00	0.00
19.50	2.19	0.00	2.19				
20.00	2.13	0.00	2.13				
20.50	2.06	0.00	2.06				
21.00	2.00	0.00	2.00				
21.50	1.93	0.00	1.93				
22.00	1.87	0.00	1.87				
22.50	1.80	0.00	1.80				
23.00	1.73	0.00	1.73				
23.50	1.66	0.00	1.66				
24.00	1.59	0.00	1.59				
24.50	0.35	0.00	0.35				
25.00	0.02	0.00	0.02				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

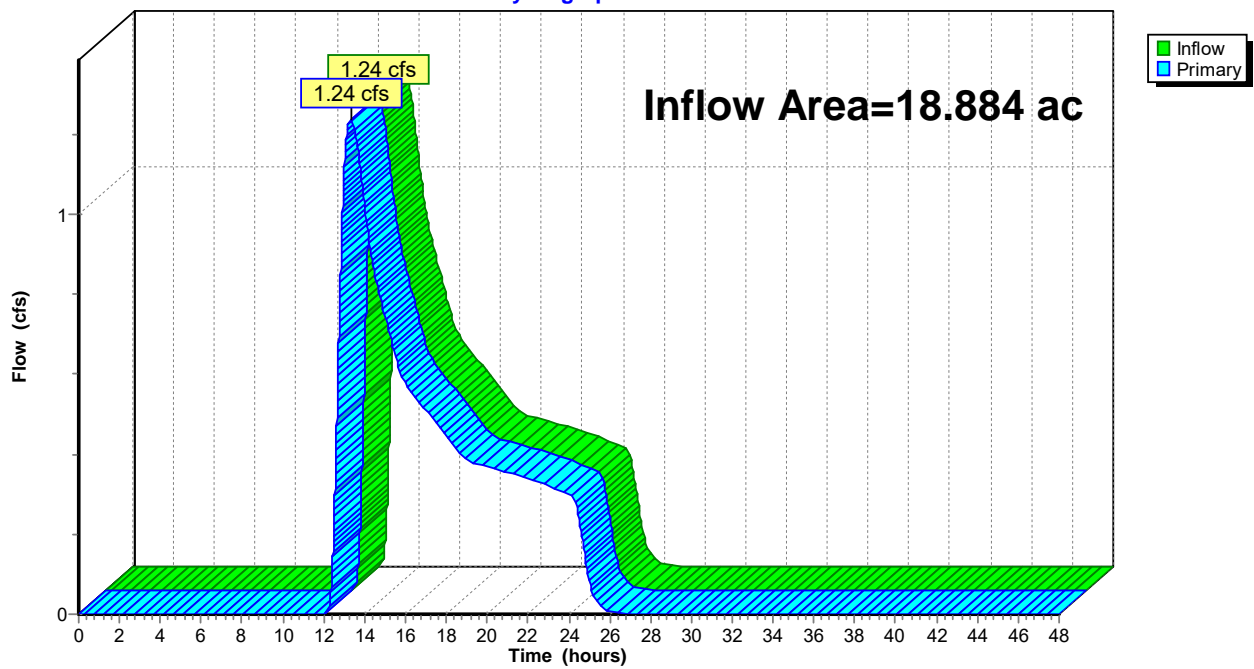
Summary for Link EDP2: DP-2

Inflow Area = 18.884 ac, 1.80% Impervious, Inflow Depth = 0.34" for 10-Year event
Inflow = 1.24 cfs @ 13.30 hrs, Volume= 0.534 af
Primary = 1.24 cfs @ 13.30 hrs, Volume= 0.534 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP2: DP-2

Hydrograph



Hydrograph for Link EDP2: DP-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	0.23	0.00	0.23	41.50	0.00	0.00	0.00
13.00	1.10	0.00	1.10	42.00	0.00	0.00	0.00
13.50	1.21	0.00	1.21	42.50	0.00	0.00	0.00
14.00	1.02	0.00	1.02	43.00	0.00	0.00	0.00
14.50	0.85	0.00	0.85	43.50	0.00	0.00	0.00
15.00	0.74	0.00	0.74	44.00	0.00	0.00	0.00
15.50	0.65	0.00	0.65	44.50	0.00	0.00	0.00
16.00	0.58	0.00	0.58	45.00	0.00	0.00	0.00
16.50	0.54	0.00	0.54	45.50	0.00	0.00	0.00
17.00	0.51	0.00	0.51	46.00	0.00	0.00	0.00
17.50	0.48	0.00	0.48	46.50	0.00	0.00	0.00
18.00	0.45	0.00	0.45	47.00	0.00	0.00	0.00
18.50	0.41	0.00	0.41	47.50	0.00	0.00	0.00
19.00	0.39	0.00	0.39	48.00	0.00	0.00	0.00
19.50	0.38	0.00	0.38				
20.00	0.37	0.00	0.37				
20.50	0.36	0.00	0.36				
21.00	0.35	0.00	0.35				
21.50	0.35	0.00	0.35				
22.00	0.34	0.00	0.34				
22.50	0.33	0.00	0.33				
23.00	0.32	0.00	0.32				
23.50	0.31	0.00	0.31				
24.00	0.30	0.00	0.30				
24.50	0.24	0.00	0.24				
25.00	0.08	0.00	0.08				
25.50	0.02	0.00	0.02				
26.00	0.01	0.00	0.01				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

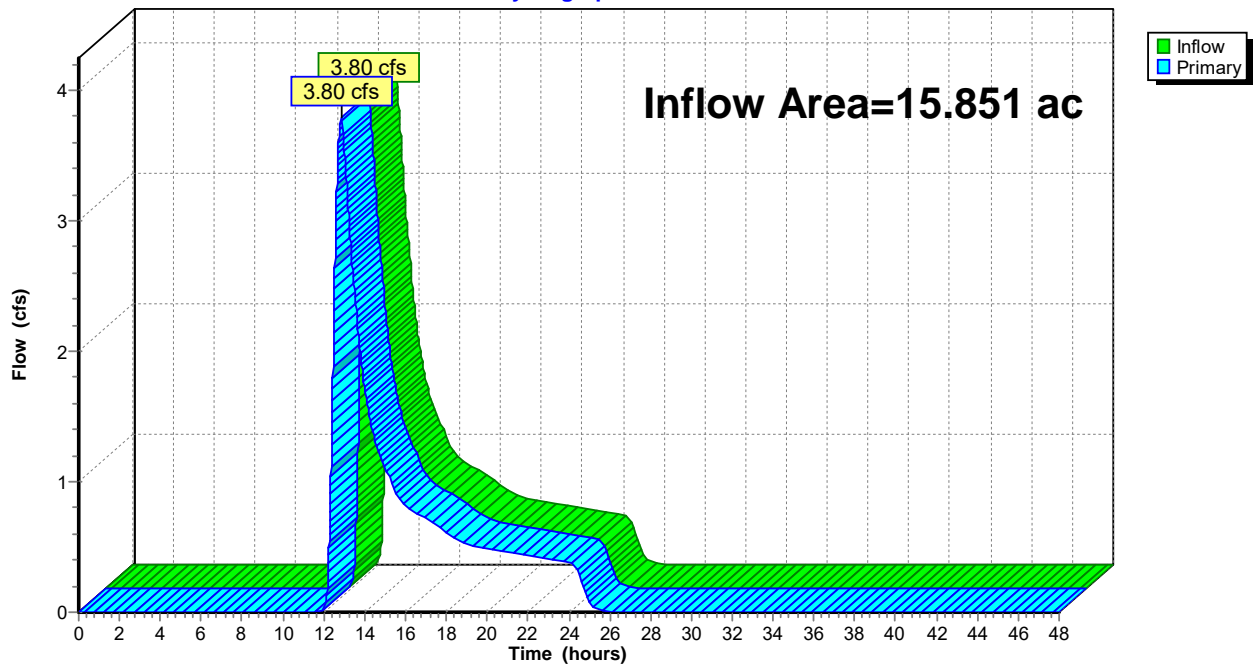
Summary for Link EDP3: DP-3

Inflow Area = 15.851 ac, 0.28% Impervious, Inflow Depth = 0.72" for 10-Year event
Inflow = 3.80 cfs @ 12.86 hrs, Volume= 0.946 af
Primary = 3.80 cfs @ 12.86 hrs, Volume= 0.946 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP3: DP-3

Hydrograph



Hydrograph for Link EDP3: DP-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.01	0.00	0.01	41.00	0.00	0.00	0.00
12.50	2.31	0.00	2.31	41.50	0.00	0.00	0.00
13.00	3.57	0.00	3.57	42.00	0.00	0.00	0.00
13.50	2.47	0.00	2.47	42.50	0.00	0.00	0.00
14.00	1.72	0.00	1.72	43.00	0.00	0.00	0.00
14.50	1.32	0.00	1.32	43.50	0.00	0.00	0.00
15.00	1.11	0.00	1.11	44.00	0.00	0.00	0.00
15.50	0.93	0.00	0.93	44.50	0.00	0.00	0.00
16.00	0.82	0.00	0.82	45.00	0.00	0.00	0.00
16.50	0.76	0.00	0.76	45.50	0.00	0.00	0.00
17.00	0.71	0.00	0.71	46.00	0.00	0.00	0.00
17.50	0.66	0.00	0.66	46.50	0.00	0.00	0.00
18.00	0.61	0.00	0.61	47.00	0.00	0.00	0.00
18.50	0.56	0.00	0.56	47.50	0.00	0.00	0.00
19.00	0.52	0.00	0.52	48.00	0.00	0.00	0.00
19.50	0.50	0.00	0.50				
20.00	0.49	0.00	0.49				
20.50	0.48	0.00	0.48				
21.00	0.47	0.00	0.47				
21.50	0.45	0.00	0.45				
22.00	0.44	0.00	0.44				
22.50	0.43	0.00	0.43				
23.00	0.41	0.00	0.41				
23.50	0.40	0.00	0.40				
24.00	0.38	0.00	0.38				
24.50	0.29	0.00	0.29				
25.00	0.08	0.00	0.08				
25.50	0.02	0.00	0.02				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

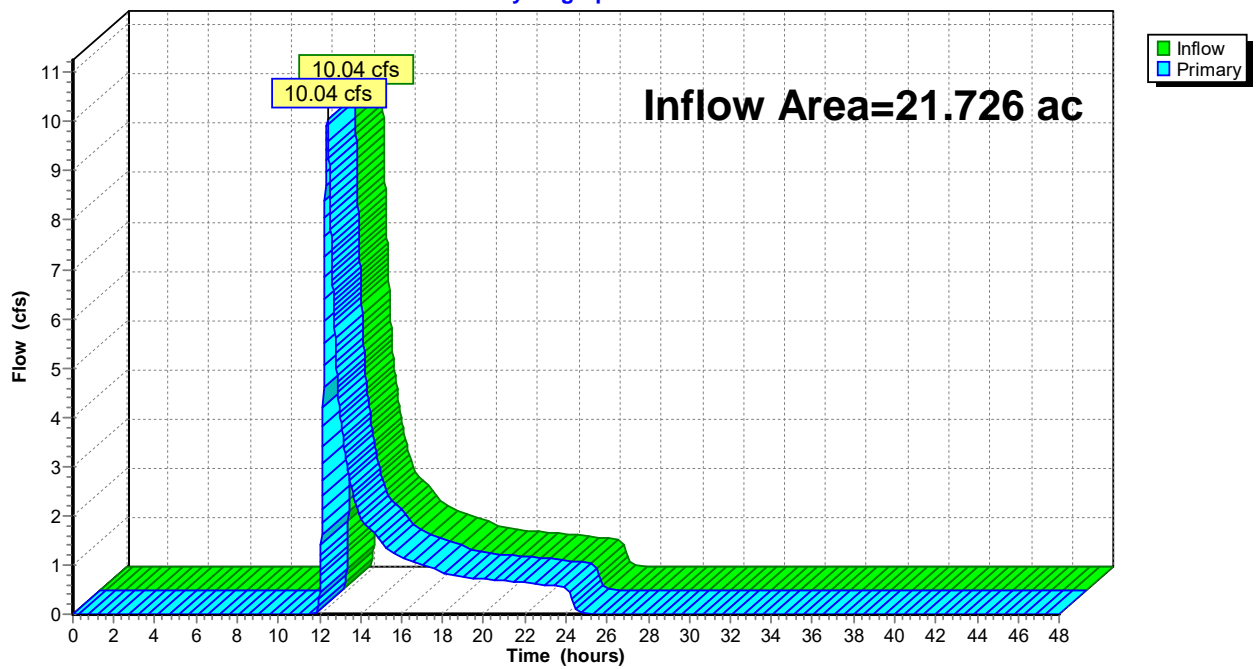
Summary for Link EDP4: DP-4

Inflow Area = 21.726 ac, 0.00% Impervious, Inflow Depth = 0.83" for 10-Year event
Inflow = 10.04 cfs @ 12.39 hrs, Volume= 1.494 af
Primary = 10.04 cfs @ 12.39 hrs, Volume= 1.494 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP4: DP-4

Hydrograph



Hydrograph for Link EDP4: DP-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.35	0.00	0.35	41.00	0.00	0.00	0.00
12.50	8.77	0.00	8.77	41.50	0.00	0.00	0.00
13.00	4.11	0.00	4.11	42.00	0.00	0.00	0.00
13.50	2.70	0.00	2.70	42.50	0.00	0.00	0.00
14.00	1.97	0.00	1.97	43.00	0.00	0.00	0.00
14.50	1.71	0.00	1.71	43.50	0.00	0.00	0.00
15.00	1.45	0.00	1.45	44.00	0.00	0.00	0.00
15.50	1.24	0.00	1.24	44.50	0.00	0.00	0.00
16.00	1.16	0.00	1.16	45.00	0.00	0.00	0.00
16.50	1.09	0.00	1.09	45.50	0.00	0.00	0.00
17.00	1.01	0.00	1.01	46.00	0.00	0.00	0.00
17.50	0.93	0.00	0.93	46.50	0.00	0.00	0.00
18.00	0.85	0.00	0.85	47.00	0.00	0.00	0.00
18.50	0.78	0.00	0.78	47.50	0.00	0.00	0.00
19.00	0.76	0.00	0.76	48.00	0.00	0.00	0.00
19.50	0.74	0.00	0.74				
20.00	0.72	0.00	0.72				
20.50	0.70	0.00	0.70				
21.00	0.68	0.00	0.68				
21.50	0.66	0.00	0.66				
22.00	0.64	0.00	0.64				
22.50	0.62	0.00	0.62				
23.00	0.60	0.00	0.60				
23.50	0.58	0.00	0.58				
24.00	0.55	0.00	0.55				
24.50	0.09	0.00	0.09				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

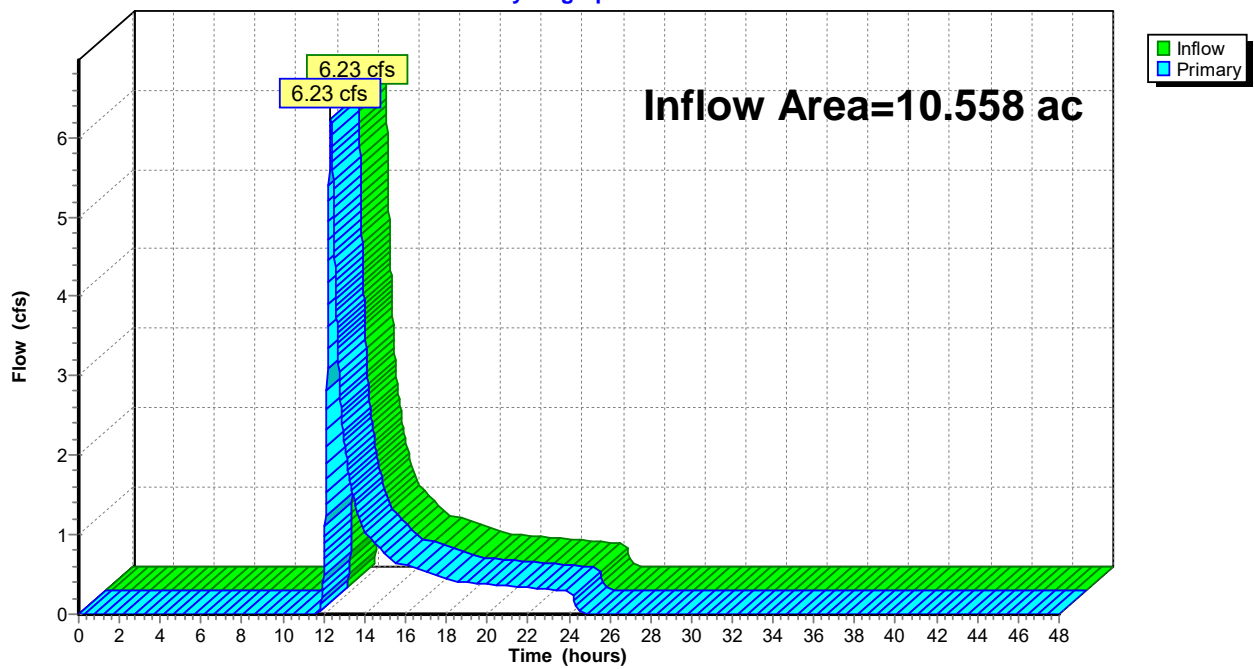
Summary for Link EDP5: EDP5

Inflow Area = 10.558 ac, 0.00% Impervious, Inflow Depth = 0.94" for 10-Year event
Inflow = 6.23 cfs @ 12.34 hrs, Volume= 0.827 af
Primary = 6.23 cfs @ 12.34 hrs, Volume= 0.827 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP5: EDP5

Hydrograph



Hydrograph for Link EDP5: EDP5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.51	0.00	0.51	41.00	0.00	0.00	0.00
12.50	4.88	0.00	4.88	41.50	0.00	0.00	0.00
13.00	2.17	0.00	2.17	42.00	0.00	0.00	0.00
13.50	1.43	0.00	1.43	42.50	0.00	0.00	0.00
14.00	1.04	0.00	1.04	43.00	0.00	0.00	0.00
14.50	0.91	0.00	0.91	43.50	0.00	0.00	0.00
15.00	0.77	0.00	0.77	44.00	0.00	0.00	0.00
15.50	0.65	0.00	0.65	44.50	0.00	0.00	0.00
16.00	0.61	0.00	0.61	45.00	0.00	0.00	0.00
16.50	0.57	0.00	0.57	45.50	0.00	0.00	0.00
17.00	0.53	0.00	0.53	46.00	0.00	0.00	0.00
17.50	0.49	0.00	0.49	46.50	0.00	0.00	0.00
18.00	0.45	0.00	0.45	47.00	0.00	0.00	0.00
18.50	0.41	0.00	0.41	47.50	0.00	0.00	0.00
19.00	0.40	0.00	0.40	48.00	0.00	0.00	0.00
19.50	0.39	0.00	0.39				
20.00	0.38	0.00	0.38				
20.50	0.37	0.00	0.37				
21.00	0.36	0.00	0.36				
21.50	0.35	0.00	0.35				
22.00	0.34	0.00	0.34				
22.50	0.32	0.00	0.32				
23.00	0.31	0.00	0.31				
23.50	0.30	0.00	0.30				
24.00	0.29	0.00	0.29				
24.50	0.03	0.00	0.03				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

Prepared by Colliers Engineering & Design

Printed 7/24/2024

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 22S: Exist	Runoff Area=1,182,741 sf 0.65% Impervious Runoff Depth=3.12" Flow Length=270' Tc=23.4 min CN=73 Runoff=62.68 cfs 7.064 af
Subcatchment E1: EDA-1	Runoff Area=796,527 sf 0.25% Impervious Runoff Depth=1.31" Flow Length=472' Tc=30.0 min CN=52 Runoff=12.99 cfs 1.996 af
Subcatchment E2: EDA-2	Runoff Area=822,574 sf 1.80% Impervious Runoff Depth=0.75" Flow Length=1,483' Tc=55.9 min CN=44 Runoff=4.04 cfs 1.185 af
Subcatchment E3: EDA-3	Runoff Area=690,451 sf 0.28% Impervious Runoff Depth=1.31" Flow Length=1,360' Tc=49.9 min CN=52 Runoff=8.37 cfs 1.731 af
Subcatchment E4: EDA-4	Runoff Area=946,387 sf 0.00% Impervious Runoff Depth=1.46" Flow Length=1,805' Tc=22.8 min CN=54 Runoff=20.86 cfs 2.648 af
Subcatchment E5: E5	Runoff Area=459,922 sf 0.00% Impervious Runoff Depth=1.62" Flow Length=1,066' Tc=21.0 min CN=56 Runoff=12.09 cfs 1.425 af
Link EDP1: DP-1	Inflow=73.78 cfs 9.060 af Primary=73.78 cfs 9.060 af
Link EDP2: DP-2	Inflow=4.04 cfs 1.185 af Primary=4.04 cfs 1.185 af
Link EDP3: DP-3	Inflow=8.37 cfs 1.731 af Primary=8.37 cfs 1.731 af
Link EDP4: DP-4	Inflow=20.86 cfs 2.648 af Primary=20.86 cfs 2.648 af
Link EDP5: EDP5	Inflow=12.09 cfs 1.425 af Primary=12.09 cfs 1.425 af

Total Runoff Area = 112.456 ac Runoff Volume = 16.049 af Average Runoff Depth = 1.71"
99.46% Pervious = 111.851 ac 0.54% Impervious = 0.605 ac

240814_RDM Neelytown Drainage

Prepared by Colliers Engineering & Design

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NRCC 24-hr C 25-Year Rainfall=6.04"

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Summary for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Runoff = 62.68 cfs @ 12.35 hrs, Volume= 7.064 af, Depth= 3.12"
 Routed to Link EDP1 : DP-1

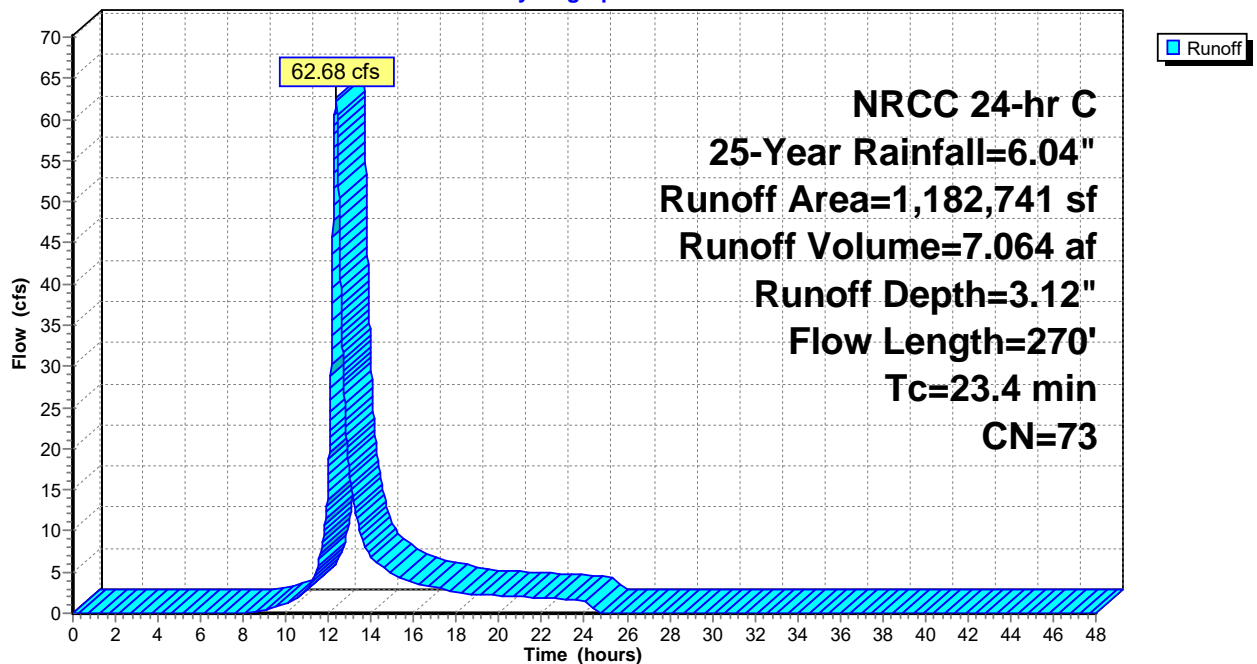
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
66,125	32	Woods/grass comb., Good, HSG A
317,463	79	Woods/grass comb., Good, HSG D
628,062	80	>75% Grass cover, Good, HSG D
78,234	39	>75% Grass cover, Good, HSG A
84,244	61	>75% Grass cover, Good, HSG B
938	89	Dirt roads, HSG D
* 1,552	98	Impervious Areas, HSG D
6,123	98	Impervious Areas, HSG B
1,182,741	73	Weighted Average
1,175,066		99.35% Pervious Area
7,675		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	100	0.0250	0.09		Sheet Flow, sf1 Woods: Light underbrush n= 0.400 P2= 3.31"
4.1	170	0.0190	0.69		Shallow Concentrated Flow, scf1 Woodland Kv= 5.0 fps
23.4	270	Total			

Subcatchment 22S: Exist Wetlands/Undeveloped Area

Hydrograph



Hydrograph for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	3.12	0.00
0.50	0.03	0.00	0.00	29.50	6.04	3.12	0.00
1.00	0.07	0.00	0.00	30.00	6.04	3.12	0.00
1.50	0.11	0.00	0.00	30.50	6.04	3.12	0.00
2.00	0.15	0.00	0.00	31.00	6.04	3.12	0.00
2.50	0.19	0.00	0.00	31.50	6.04	3.12	0.00
3.00	0.23	0.00	0.00	32.00	6.04	3.12	0.00
3.50	0.27	0.00	0.00	32.50	6.04	3.12	0.00
4.00	0.32	0.00	0.00	33.00	6.04	3.12	0.00
4.50	0.37	0.00	0.00	33.50	6.04	3.12	0.00
5.00	0.42	0.00	0.00	34.00	6.04	3.12	0.00
5.50	0.47	0.00	0.00	34.50	6.04	3.12	0.00
6.00	0.52	0.00	0.00	35.00	6.04	3.12	0.00
6.50	0.58	0.00	0.00	35.50	6.04	3.12	0.00
7.00	0.64	0.00	0.00	36.00	6.04	3.12	0.00
7.50	0.71	0.00	0.00	36.50	6.04	3.12	0.00
8.00	0.78	0.00	0.01	37.00	6.04	3.12	0.00
8.50	0.87	0.00	0.16	37.50	6.04	3.12	0.00
9.00	0.96	0.01	0.38	38.00	6.04	3.12	0.00
9.50	1.06	0.03	0.68	38.50	6.04	3.12	0.00
10.00	1.19	0.05	1.15	39.00	6.04	3.12	0.00
10.50	1.35	0.09	1.79	39.50	6.04	3.12	0.00
11.00	1.56	0.15	3.02	40.00	6.04	3.12	0.00
11.50	1.89	0.27	5.93	40.50	6.04	3.12	0.00
12.00	2.88	0.78	17.28	41.00	6.04	3.12	0.00
12.50	4.15	1.64	47.89	41.50	6.04	3.12	0.00
13.00	4.48	1.88	16.59	42.00	6.04	3.12	0.00
13.50	4.69	2.04	9.77	42.50	6.04	3.12	0.00
14.00	4.85	2.16	6.82	43.00	6.04	3.12	0.00
14.50	4.98	2.26	5.72	43.50	6.04	3.12	0.00
15.00	5.08	2.35	4.78	44.00	6.04	3.12	0.00
15.50	5.17	2.42	3.99	44.50	6.04	3.12	0.00
16.00	5.26	2.48	3.68	45.00	6.04	3.12	0.00
16.50	5.33	2.54	3.41	45.50	6.04	3.12	0.00
17.00	5.40	2.60	3.13	46.00	6.04	3.12	0.00
17.50	5.46	2.65	2.86	46.50	6.04	3.12	0.00
18.00	5.52	2.70	2.58	47.00	6.04	3.12	0.00
18.50	5.57	2.74	2.35	47.50	6.04	3.12	0.00
19.00	5.62	2.78	2.27	48.00	6.04	3.12	0.00
19.50	5.67	2.82	2.20				
20.00	5.72	2.86	2.13				
20.50	5.77	2.90	2.06				
21.00	5.81	2.93	1.99				
21.50	5.85	2.97	1.92				
22.00	5.89	3.00	1.85				
22.50	5.93	3.03	1.78				
23.00	5.97	3.06	1.71				
23.50	6.01	3.09	1.64				
24.00	6.04	3.12	1.57				
24.50	6.04	3.12	0.27				
25.00	6.04	3.12	0.01				
25.50	6.04	3.12	0.00				
26.00	6.04	3.12	0.00				
26.50	6.04	3.12	0.00				
27.00	6.04	3.12	0.00				
27.50	6.04	3.12	0.00				
28.00	6.04	3.12	0.00				
28.50	6.04	3.12	0.00				

Summary for Subcatchment E1: EDA-1

Runoff = 12.99 cfs @ 12.47 hrs, Volume= 1.996 af, Depth= 1.31"
 Routed to Link EDP1 : DP-1

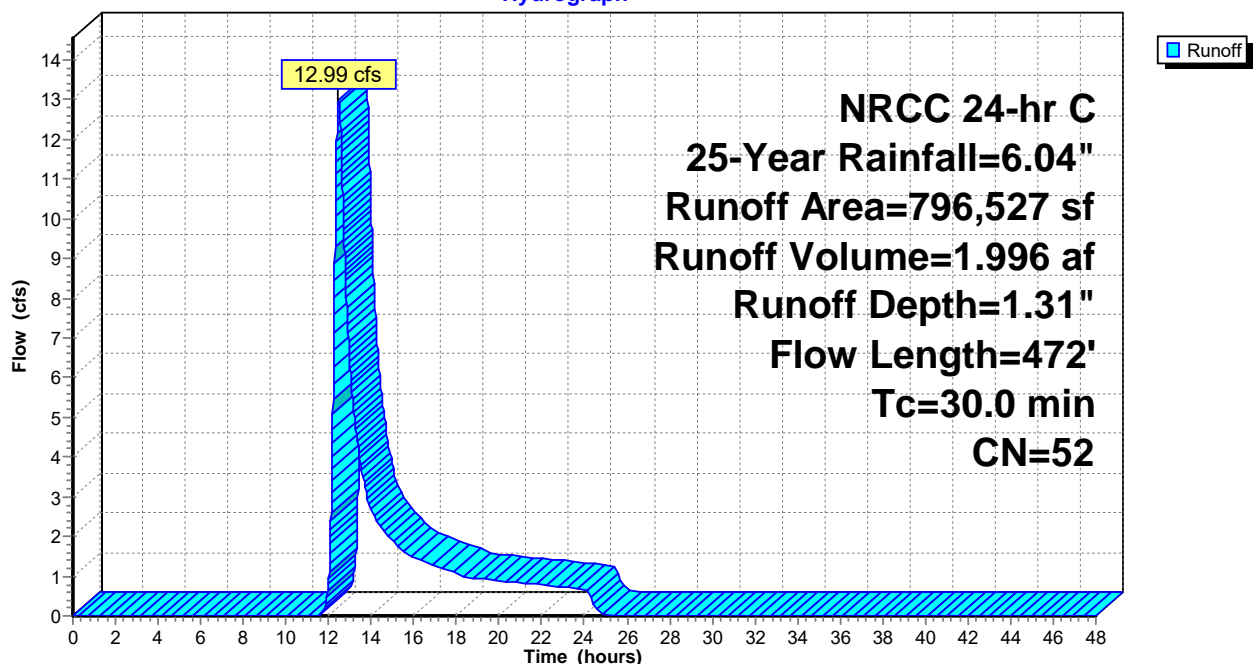
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
* 207,150	80	>75% Grass cover, Good, HSG D
2,839	89	Dirt roads, HSG D
* 1,568	98	Impervious Area, HSG D
71,639	79	Woods/grass comb., Good, HSG D
298,029	39	>75% Grass cover, Good, HSG A
* 406	98	impervious Area, HSG A
5,066	72	Dirt roads, HSG A
209,830	32	Woods/grass comb., Good, HSG A
0	61	>75% Grass cover, Good, HSG B
796,527	52	Weighted Average
794,553		99.75% Pervious Area
1,974		0.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.7	100	0.0150	0.07		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
2.4	81	0.0123	0.55		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
3.9	291	0.0060	1.25		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
30.0	472	Total			

Subcatchment E1: EDA-1

Hydrograph



Hydrograph for Subcatchment E1: EDA-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	1.31	0.00
0.50	0.03	0.00	0.00	29.50	6.04	1.31	0.00
1.00	0.07	0.00	0.00	30.00	6.04	1.31	0.00
1.50	0.11	0.00	0.00	30.50	6.04	1.31	0.00
2.00	0.15	0.00	0.00	31.00	6.04	1.31	0.00
2.50	0.19	0.00	0.00	31.50	6.04	1.31	0.00
3.00	0.23	0.00	0.00	32.00	6.04	1.31	0.00
3.50	0.27	0.00	0.00	32.50	6.04	1.31	0.00
4.00	0.32	0.00	0.00	33.00	6.04	1.31	0.00
4.50	0.37	0.00	0.00	33.50	6.04	1.31	0.00
5.00	0.42	0.00	0.00	34.00	6.04	1.31	0.00
5.50	0.47	0.00	0.00	34.50	6.04	1.31	0.00
6.00	0.52	0.00	0.00	35.00	6.04	1.31	0.00
6.50	0.58	0.00	0.00	35.50	6.04	1.31	0.00
7.00	0.64	0.00	0.00	36.00	6.04	1.31	0.00
7.50	0.71	0.00	0.00	36.50	6.04	1.31	0.00
8.00	0.78	0.00	0.00	37.00	6.04	1.31	0.00
8.50	0.87	0.00	0.00	37.50	6.04	1.31	0.00
9.00	0.96	0.00	0.00	38.00	6.04	1.31	0.00
9.50	1.06	0.00	0.00	38.50	6.04	1.31	0.00
10.00	1.19	0.00	0.00	39.00	6.04	1.31	0.00
10.50	1.35	0.00	0.00	39.50	6.04	1.31	0.00
11.00	1.56	0.00	0.00	40.00	6.04	1.31	0.00
11.50	1.89	0.00	0.00	40.50	6.04	1.31	0.00
12.00	2.88	0.10	0.90	41.00	6.04	1.31	0.00
12.50	4.15	0.46	12.96	41.50	6.04	1.31	0.00
13.00	4.48	0.59	6.34	42.00	6.04	1.31	0.00
13.50	4.69	0.67	3.85	42.50	6.04	1.31	0.00
14.00	4.85	0.74	2.66	43.00	6.04	1.31	0.00
14.50	4.98	0.79	2.22	43.50	6.04	1.31	0.00
15.00	5.08	0.84	1.89	44.00	6.04	1.31	0.00
15.50	5.17	0.88	1.59	44.50	6.04	1.31	0.00
16.00	5.26	0.92	1.46	45.00	6.04	1.31	0.00
16.50	5.33	0.96	1.37	45.50	6.04	1.31	0.00
17.00	5.40	0.99	1.27	46.00	6.04	1.31	0.00
17.50	5.46	1.02	1.17	46.50	6.04	1.31	0.00
18.00	5.52	1.05	1.06	47.00	6.04	1.31	0.00
18.50	5.57	1.07	0.97	47.50	6.04	1.31	0.00
19.00	5.62	1.10	0.93	48.00	6.04	1.31	0.00
19.50	5.67	1.12	0.91				
20.00	5.72	1.15	0.89				
20.50	5.77	1.17	0.86				
21.00	5.81	1.19	0.84				
21.50	5.85	1.21	0.81				
22.00	5.89	1.23	0.78				
22.50	5.93	1.25	0.76				
23.00	5.97	1.27	0.73				
23.50	6.01	1.29	0.70				
24.00	6.04	1.31	0.67				
24.50	6.04	1.31	0.23				
25.00	6.04	1.31	0.02				
25.50	6.04	1.31	0.00				
26.00	6.04	1.31	0.00				
26.50	6.04	1.31	0.00				
27.00	6.04	1.31	0.00				
27.50	6.04	1.31	0.00				
28.00	6.04	1.31	0.00				
28.50	6.04	1.31	0.00				

Summary for Subcatchment E2: EDA-2

Runoff = 4.04 cfs @ 12.98 hrs, Volume= 1.185 af, Depth= 0.75"
 Routed to Link EDP2 : DP-2

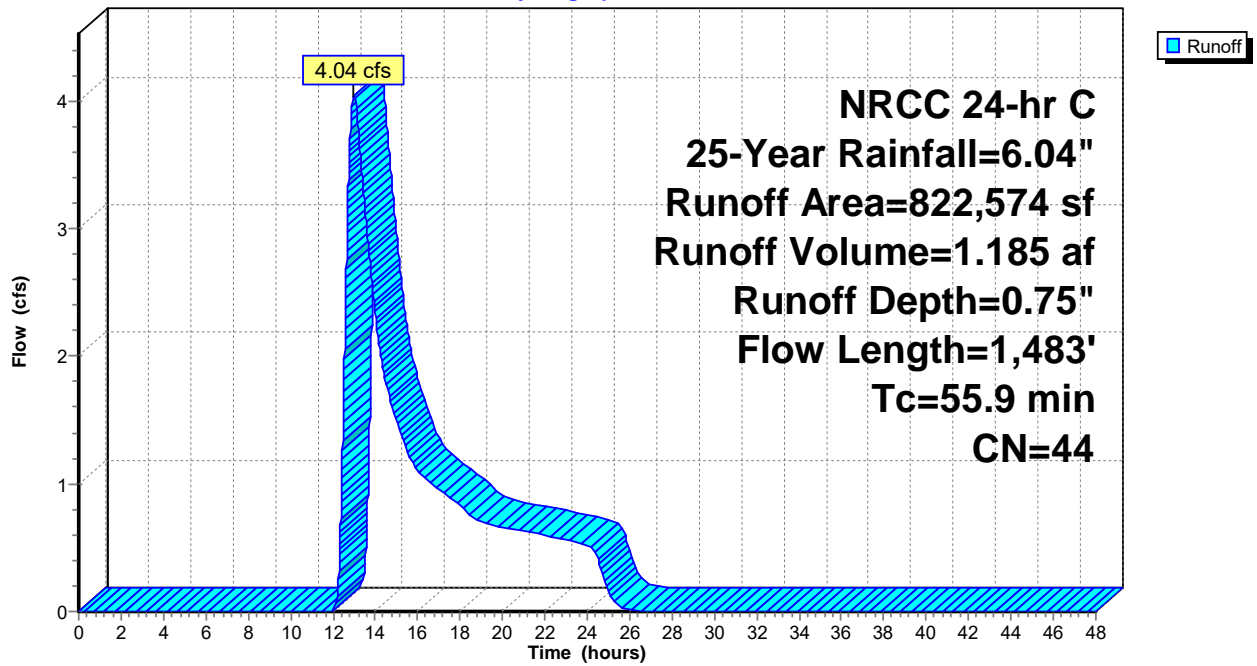
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
411,704	39	>75% Grass cover, Good, HSG A
4,905	72	Dirt roads, HSG A
* 5,267	98	Impervious Area, HSG A
240,401	32	Woods/grass comb., Good, HSG A
52,887	58	Woods/grass comb., Good, HSG B
48,215	80	>75% Grass cover, Good, HSG D
49,660	79	Woods/grass comb., Good, HSG D
9,535	98	Impervious Area, HSG D
822,574	44	Weighted Average
807,772		98.20% Pervious Area
14,802		1.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.7	100	0.0085	0.06		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
3.7	84	0.0058	0.38		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
4.5	437	0.0099	1.60		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
5.5	127	0.0060	0.39		Shallow Concentrated Flow, SCF3 Woodland Kv= 5.0 fps
2.8	296	0.0123	1.79		Shallow Concentrated Flow, SCF4 Unpaved Kv= 16.1 fps
9.7	439	0.0228	0.75		Shallow Concentrated Flow, SCF5 Woodland Kv= 5.0 fps
55.9	1,483	Total			

Subcatchment E2: EDA-2

Hydrograph



Hydrograph for Subcatchment E2: EDA-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.75	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.75	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.75	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.75	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.75	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.75	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.75	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.75	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.75	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.75	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.75	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.75	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.75	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.75	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.75	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.75	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.75	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.75	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.75	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.75	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.75	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.75	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.75	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.75	0.00
12.00	2.88	0.01	0.00	41.00	6.04	0.75	0.00
12.50	4.15	0.18	1.65	41.50	6.04	0.75	0.00
13.00	4.48	0.26	4.04	42.00	6.04	0.75	0.00
13.50	4.69	0.31	3.19	42.50	6.04	0.75	0.00
14.00	4.85	0.35	2.33	43.00	6.04	0.75	0.00
14.50	4.98	0.39	1.79	43.50	6.04	0.75	0.00
15.00	5.08	0.42	1.50	44.00	6.04	0.75	0.00
15.50	5.17	0.45	1.27	44.50	6.04	0.75	0.00
16.00	5.26	0.48	1.11	45.00	6.04	0.75	0.00
16.50	5.33	0.50	1.02	45.50	6.04	0.75	0.00
17.00	5.40	0.52	0.96	46.00	6.04	0.75	0.00
17.50	5.46	0.54	0.89	46.50	6.04	0.75	0.00
18.00	5.52	0.56	0.82	47.00	6.04	0.75	0.00
18.50	5.57	0.58	0.75	47.50	6.04	0.75	0.00
19.00	5.62	0.60	0.70	48.00	6.04	0.75	0.00
19.50	5.67	0.62	0.68				
20.00	5.72	0.63	0.66				
20.50	5.77	0.65	0.65				
21.00	5.81	0.67	0.63				
21.50	5.85	0.68	0.61				
22.00	5.89	0.70	0.60				
22.50	5.93	0.71	0.58				
23.00	5.97	0.73	0.56				
23.50	6.01	0.74	0.54				
24.00	6.04	0.75	0.52				
24.50	6.04	0.75	0.42				
25.00	6.04	0.75	0.15				
25.50	6.04	0.75	0.04				
26.00	6.04	0.75	0.01				
26.50	6.04	0.75	0.00				
27.00	6.04	0.75	0.00				
27.50	6.04	0.75	0.00				
28.00	6.04	0.75	0.00				
28.50	6.04	0.75	0.00				

Summary for Subcatchment E3: EDA-3

Runoff = 8.37 cfs @ 12.76 hrs, Volume= 1.731 af, Depth= 1.31"
 Routed to Link EDP3 : DP-3

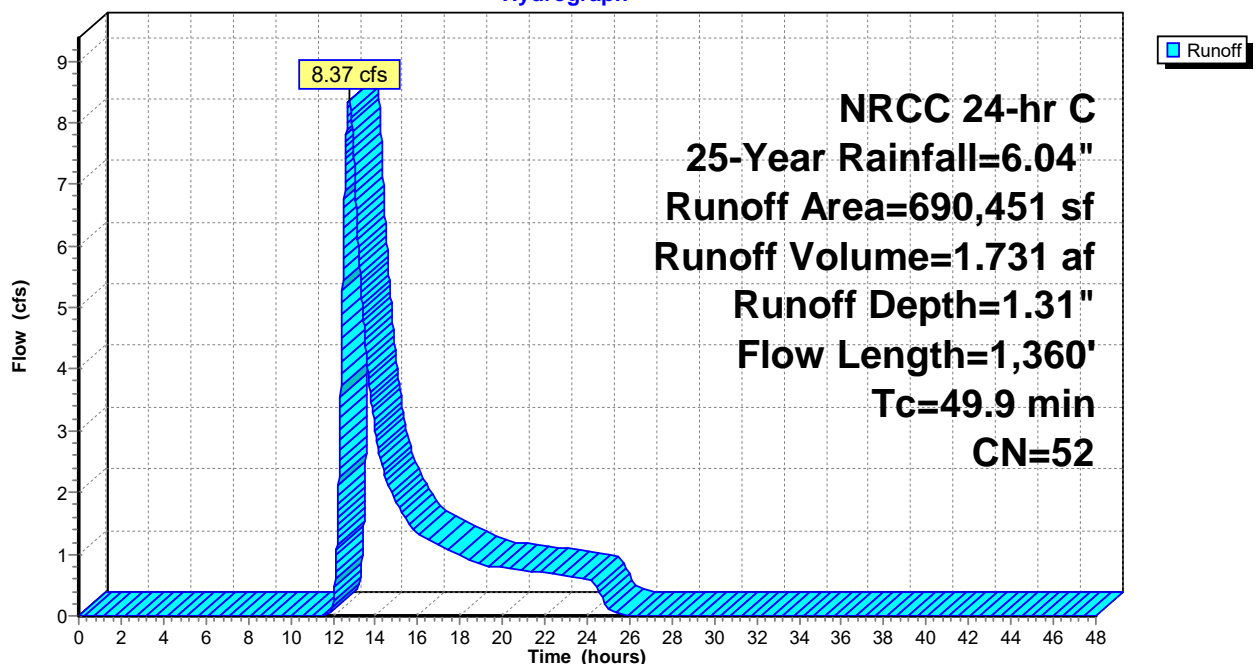
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
1,902	98	Paved parking, HSG A
89,711	39	>75% Grass cover, Good, HSG A
6,532	96	Gravel surface, HSG A
175,868	32	Woods/grass comb., Good, HSG A
168,395	61	>75% Grass cover, Good, HSG B
196,445	58	Woods/grass comb., Good, HSG B
1,344	82	Dirt roads, HSG B
8,737	80	>75% Grass cover, Good, HSG D
41,517	79	Woods/grass comb., Good, HSG D
690,451	52	Weighted Average
688,549		99.72% Pervious Area
1,902		0.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	100	0.0109	0.06		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.31"
21.1	734	0.0135	0.58		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.9	526	0.0494	4.51		Shallow Concentrated Flow, Paved Kv= 20.3 fps
49.9	1,360	Total			

Subcatchment E3: EDA-3

Hydrograph



Hydrograph for Subcatchment E3: EDA-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	1.31	0.00
0.50	0.03	0.00	0.00	29.50	6.04	1.31	0.00
1.00	0.07	0.00	0.00	30.00	6.04	1.31	0.00
1.50	0.11	0.00	0.00	30.50	6.04	1.31	0.00
2.00	0.15	0.00	0.00	31.00	6.04	1.31	0.00
2.50	0.19	0.00	0.00	31.50	6.04	1.31	0.00
3.00	0.23	0.00	0.00	32.00	6.04	1.31	0.00
3.50	0.27	0.00	0.00	32.50	6.04	1.31	0.00
4.00	0.32	0.00	0.00	33.00	6.04	1.31	0.00
4.50	0.37	0.00	0.00	33.50	6.04	1.31	0.00
5.00	0.42	0.00	0.00	34.00	6.04	1.31	0.00
5.50	0.47	0.00	0.00	34.50	6.04	1.31	0.00
6.00	0.52	0.00	0.00	35.00	6.04	1.31	0.00
6.50	0.58	0.00	0.00	35.50	6.04	1.31	0.00
7.00	0.64	0.00	0.00	36.00	6.04	1.31	0.00
7.50	0.71	0.00	0.00	36.50	6.04	1.31	0.00
8.00	0.78	0.00	0.00	37.00	6.04	1.31	0.00
8.50	0.87	0.00	0.00	37.50	6.04	1.31	0.00
9.00	0.96	0.00	0.00	38.00	6.04	1.31	0.00
9.50	1.06	0.00	0.00	38.50	6.04	1.31	0.00
10.00	1.19	0.00	0.00	39.00	6.04	1.31	0.00
10.50	1.35	0.00	0.00	39.50	6.04	1.31	0.00
11.00	1.56	0.00	0.00	40.00	6.04	1.31	0.00
11.50	1.89	0.00	0.00	40.50	6.04	1.31	0.00
12.00	2.88	0.10	0.21	41.00	6.04	1.31	0.00
12.50	4.15	0.46	6.14	41.50	6.04	1.31	0.00
13.00	4.48	0.59	7.33	42.00	6.04	1.31	0.00
13.50	4.69	0.67	4.56	42.50	6.04	1.31	0.00
14.00	4.85	0.74	3.01	43.00	6.04	1.31	0.00
14.50	4.98	0.79	2.24	43.50	6.04	1.31	0.00
15.00	5.08	0.84	1.84	44.00	6.04	1.31	0.00
15.50	5.17	0.88	1.54	44.50	6.04	1.31	0.00
16.00	5.26	0.92	1.35	45.00	6.04	1.31	0.00
16.50	5.33	0.96	1.24	45.50	6.04	1.31	0.00
17.00	5.40	0.99	1.15	46.00	6.04	1.31	0.00
17.50	5.46	1.02	1.07	46.50	6.04	1.31	0.00
18.00	5.52	1.05	0.98	47.00	6.04	1.31	0.00
18.50	5.57	1.07	0.89	47.50	6.04	1.31	0.00
19.00	5.62	1.10	0.83	48.00	6.04	1.31	0.00
19.50	5.67	1.12	0.80				
20.00	5.72	1.15	0.78				
20.50	5.77	1.17	0.76				
21.00	5.81	1.19	0.74				
21.50	5.85	1.21	0.72				
22.00	5.89	1.23	0.69				
22.50	5.93	1.25	0.67				
23.00	5.97	1.27	0.65				
23.50	6.01	1.29	0.62				
24.00	6.04	1.31	0.60				
24.50	6.04	1.31	0.45				
25.00	6.04	1.31	0.12				
25.50	6.04	1.31	0.03				
26.00	6.04	1.31	0.01				
26.50	6.04	1.31	0.00				
27.00	6.04	1.31	0.00				
27.50	6.04	1.31	0.00				
28.00	6.04	1.31	0.00				
28.50	6.04	1.31	0.00				

Summary for Subcatchment E4: EDA-4

Runoff = 20.86 cfs @ 12.36 hrs, Volume= 2.648 af, Depth= 1.46"
 Routed to Link EDP4 : DP-4

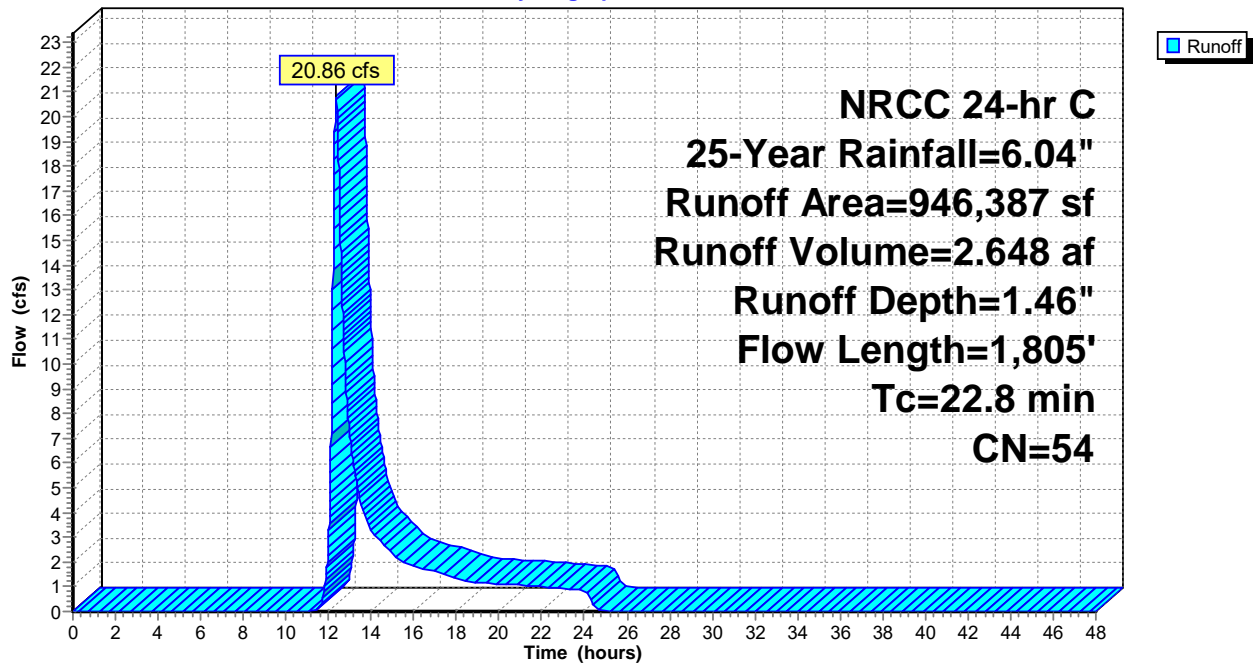
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
3,302	76	Gravel roads, HSG A
4,132	72	Dirt roads, HSG A
7,319	82	Dirt roads, HSG B
215,755	39	>75% Grass cover, Good, HSG A
253,860	61	>75% Grass cover, Good, HSG B
71,688	80	>75% Grass cover, Good, HSG D
181,104	32	Woods/grass comb., Good, HSG A
113,262	58	Woods/grass comb., Good, HSG B
95,965	79	Woods/grass comb., Good, HSG D
946,387	54	Weighted Average
946,387		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	100	0.1400	0.17		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
5.5	658	0.1610	2.01		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
1.7	368	0.0480	3.53		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
5.9	679	0.0089	1.92		Shallow Concentrated Flow, SCF3 Paved Kv= 20.3 fps
22.8	1,805	Total			

Subcatchment E4: EDA-4

Hydrograph



Hydrograph for Subcatchment E4: EDA-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	1.46	0.00
0.50	0.03	0.00	0.00	29.50	6.04	1.46	0.00
1.00	0.07	0.00	0.00	30.00	6.04	1.46	0.00
1.50	0.11	0.00	0.00	30.50	6.04	1.46	0.00
2.00	0.15	0.00	0.00	31.00	6.04	1.46	0.00
2.50	0.19	0.00	0.00	31.50	6.04	1.46	0.00
3.00	0.23	0.00	0.00	32.00	6.04	1.46	0.00
3.50	0.27	0.00	0.00	32.50	6.04	1.46	0.00
4.00	0.32	0.00	0.00	33.00	6.04	1.46	0.00
4.50	0.37	0.00	0.00	33.50	6.04	1.46	0.00
5.00	0.42	0.00	0.00	34.00	6.04	1.46	0.00
5.50	0.47	0.00	0.00	34.50	6.04	1.46	0.00
6.00	0.52	0.00	0.00	35.00	6.04	1.46	0.00
6.50	0.58	0.00	0.00	35.50	6.04	1.46	0.00
7.00	0.64	0.00	0.00	36.00	6.04	1.46	0.00
7.50	0.71	0.00	0.00	36.50	6.04	1.46	0.00
8.00	0.78	0.00	0.00	37.00	6.04	1.46	0.00
8.50	0.87	0.00	0.00	37.50	6.04	1.46	0.00
9.00	0.96	0.00	0.00	38.00	6.04	1.46	0.00
9.50	1.06	0.00	0.00	38.50	6.04	1.46	0.00
10.00	1.19	0.00	0.00	39.00	6.04	1.46	0.00
10.50	1.35	0.00	0.00	39.50	6.04	1.46	0.00
11.00	1.56	0.00	0.00	40.00	6.04	1.46	0.00
11.50	1.89	0.00	0.05	40.50	6.04	1.46	0.00
12.00	2.88	0.14	2.88	41.00	6.04	1.46	0.00
12.50	4.15	0.55	17.05	41.50	6.04	1.46	0.00
13.00	4.48	0.68	7.07	42.00	6.04	1.46	0.00
13.50	4.69	0.78	4.47	42.50	6.04	1.46	0.00
14.00	4.85	0.85	3.22	43.00	6.04	1.46	0.00
14.50	4.98	0.91	2.76	43.50	6.04	1.46	0.00
15.00	5.08	0.96	2.33	44.00	6.04	1.46	0.00
15.50	5.17	1.00	1.97	44.50	6.04	1.46	0.00
16.00	5.26	1.04	1.84	45.00	6.04	1.46	0.00
16.50	5.33	1.08	1.72	45.50	6.04	1.46	0.00
17.00	5.40	1.12	1.59	46.00	6.04	1.46	0.00
17.50	5.46	1.15	1.46	46.50	6.04	1.46	0.00
18.00	5.52	1.18	1.33	47.00	6.04	1.46	0.00
18.50	5.57	1.21	1.21	47.50	6.04	1.46	0.00
19.00	5.62	1.24	1.18	48.00	6.04	1.46	0.00
19.50	5.67	1.26	1.15				
20.00	5.72	1.29	1.12				
20.50	5.77	1.31	1.09				
21.00	5.81	1.34	1.05				
21.50	5.85	1.36	1.02				
22.00	5.89	1.38	0.99				
22.50	5.93	1.40	0.95				
23.00	5.97	1.42	0.92				
23.50	6.01	1.44	0.88				
24.00	6.04	1.46	0.84				
24.50	6.04	1.46	0.13				
25.00	6.04	1.46	0.00				
25.50	6.04	1.46	0.00				
26.00	6.04	1.46	0.00				
26.50	6.04	1.46	0.00				
27.00	6.04	1.46	0.00				
27.50	6.04	1.46	0.00				
28.00	6.04	1.46	0.00				
28.50	6.04	1.46	0.00				

Summary for Subcatchment E5: E5

Runoff = 12.09 cfs @ 12.34 hrs, Volume= 1.425 af, Depth= 1.62"
 Routed to Link EDP5 : EDP5

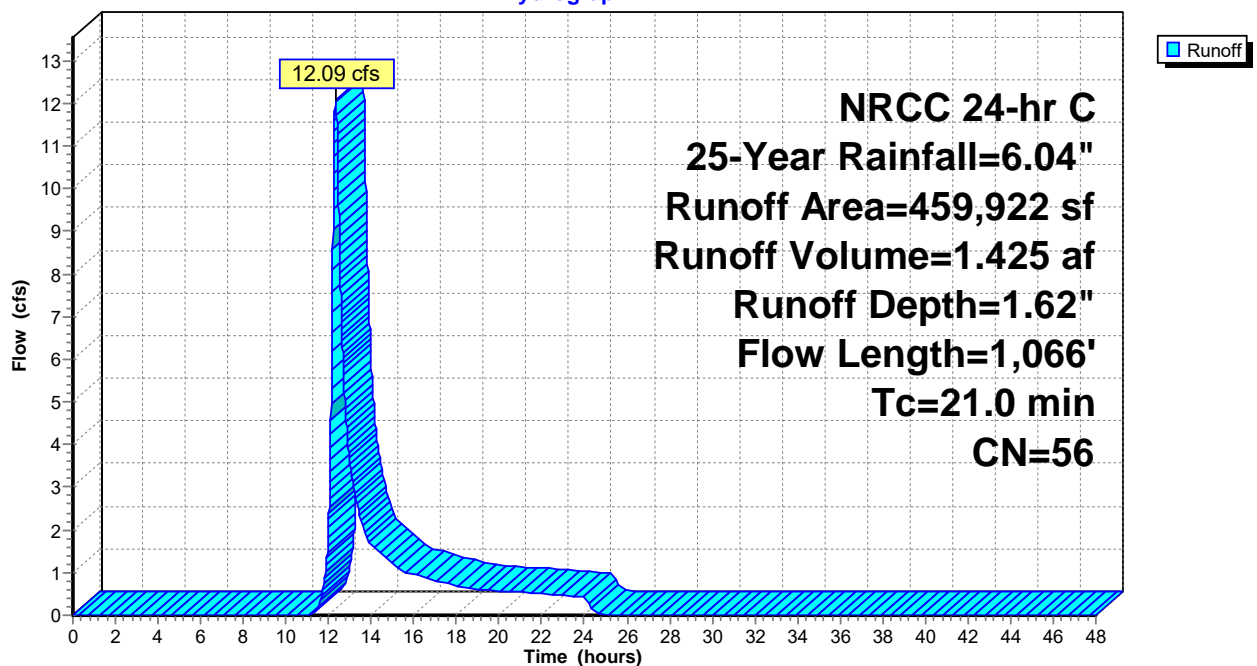
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
3,768	96	Gravel surface, HSG A
1,545	96	Gravel surface, HSG B
3,260	82	Dirt roads, HSG B
8,571	39	>75% Grass cover, Good, HSG A
249,030	61	>75% Grass cover, Good, HSG B
59,839	32	Woods/grass comb., Good, HSG A
133,909	58	Woods/grass comb., Good, HSG B
459,922	56	Weighted Average
459,922		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.1300	0.17		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
7.3	783	0.1270	1.78		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
3.7	183	0.0279	0.84		Shallow Concentrated Flow, SCF2 Woodland Kv= 5.0 fps
21.0	1,066	Total			

Subcatchment E5: E5

Hydrograph



Hydrograph for Subcatchment E5: E5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	1.62	0.00
0.50	0.03	0.00	0.00	29.50	6.04	1.62	0.00
1.00	0.07	0.00	0.00	30.00	6.04	1.62	0.00
1.50	0.11	0.00	0.00	30.50	6.04	1.62	0.00
2.00	0.15	0.00	0.00	31.00	6.04	1.62	0.00
2.50	0.19	0.00	0.00	31.50	6.04	1.62	0.00
3.00	0.23	0.00	0.00	32.00	6.04	1.62	0.00
3.50	0.27	0.00	0.00	32.50	6.04	1.62	0.00
4.00	0.32	0.00	0.00	33.00	6.04	1.62	0.00
4.50	0.37	0.00	0.00	33.50	6.04	1.62	0.00
5.00	0.42	0.00	0.00	34.00	6.04	1.62	0.00
5.50	0.47	0.00	0.00	34.50	6.04	1.62	0.00
6.00	0.52	0.00	0.00	35.00	6.04	1.62	0.00
6.50	0.58	0.00	0.00	35.50	6.04	1.62	0.00
7.00	0.64	0.00	0.00	36.00	6.04	1.62	0.00
7.50	0.71	0.00	0.00	36.50	6.04	1.62	0.00
8.00	0.78	0.00	0.00	37.00	6.04	1.62	0.00
8.50	0.87	0.00	0.00	37.50	6.04	1.62	0.00
9.00	0.96	0.00	0.00	38.00	6.04	1.62	0.00
9.50	1.06	0.00	0.00	38.50	6.04	1.62	0.00
10.00	1.19	0.00	0.00	39.00	6.04	1.62	0.00
10.50	1.35	0.00	0.00	39.50	6.04	1.62	0.00
11.00	1.56	0.00	0.00	40.00	6.04	1.62	0.00
11.50	1.89	0.01	0.18	40.50	6.04	1.62	0.00
12.00	2.88	0.19	2.12	41.00	6.04	1.62	0.00
12.50	4.15	0.64	8.88	41.50	6.04	1.62	0.00
13.00	4.48	0.79	3.60	42.00	6.04	1.62	0.00
13.50	4.69	0.89	2.30	42.50	6.04	1.62	0.00
14.00	4.85	0.96	1.66	43.00	6.04	1.62	0.00
14.50	4.98	1.03	1.43	43.50	6.04	1.62	0.00
15.00	5.08	1.08	1.21	44.00	6.04	1.62	0.00
15.50	5.17	1.13	1.02	44.50	6.04	1.62	0.00
16.00	5.26	1.18	0.95	45.00	6.04	1.62	0.00
16.50	5.33	1.22	0.89	45.50	6.04	1.62	0.00
17.00	5.40	1.26	0.82	46.00	6.04	1.62	0.00
17.50	5.46	1.29	0.75	46.50	6.04	1.62	0.00
18.00	5.52	1.32	0.68	47.00	6.04	1.62	0.00
18.50	5.57	1.35	0.63	47.50	6.04	1.62	0.00
19.00	5.62	1.38	0.61	48.00	6.04	1.62	0.00
19.50	5.67	1.41	0.59				
20.00	5.72	1.43	0.58				
20.50	5.77	1.46	0.56				
21.00	5.81	1.49	0.54				
21.50	5.85	1.51	0.52				
22.00	5.89	1.53	0.51				
22.50	5.93	1.56	0.49				
23.00	5.97	1.58	0.47				
23.50	6.01	1.60	0.45				
24.00	6.04	1.62	0.43				
24.50	6.04	1.62	0.05				
25.00	6.04	1.62	0.00				
25.50	6.04	1.62	0.00				
26.00	6.04	1.62	0.00				
26.50	6.04	1.62	0.00				
27.00	6.04	1.62	0.00				
27.50	6.04	1.62	0.00				
28.00	6.04	1.62	0.00				
28.50	6.04	1.62	0.00				

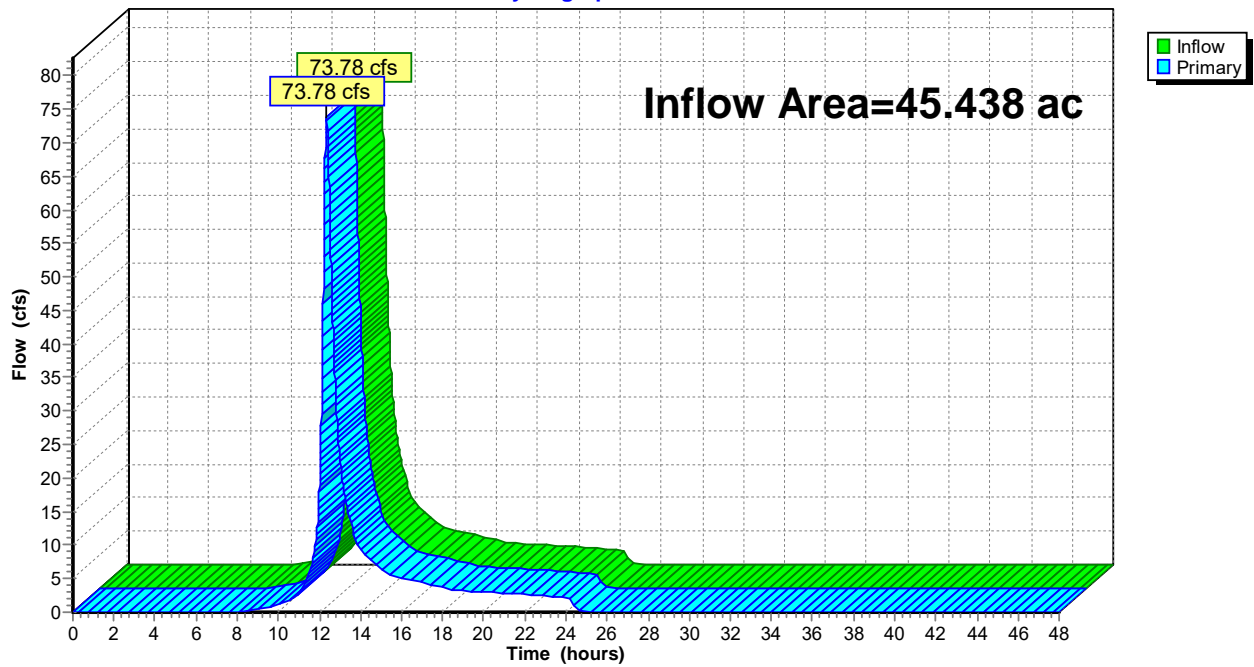
Summary for Link EDP1: DP-1

Inflow Area = 45.438 ac, 0.49% Impervious, Inflow Depth = 2.39" for 25-Year event
Inflow = 73.78 cfs @ 12.35 hrs, Volume= 9.060 af
Primary = 73.78 cfs @ 12.35 hrs, Volume= 9.060 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP1: DP-1

Hydrograph



Hydrograph for Link EDP1: DP-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.01	0.00	0.01	37.00	0.00	0.00	0.00
8.50	0.16	0.00	0.16	37.50	0.00	0.00	0.00
9.00	0.38	0.00	0.38	38.00	0.00	0.00	0.00
9.50	0.68	0.00	0.68	38.50	0.00	0.00	0.00
10.00	1.15	0.00	1.15	39.00	0.00	0.00	0.00
10.50	1.79	0.00	1.79	39.50	0.00	0.00	0.00
11.00	3.02	0.00	3.02	40.00	0.00	0.00	0.00
11.50	5.93	0.00	5.93	40.50	0.00	0.00	0.00
12.00	18.18	0.00	18.18	41.00	0.00	0.00	0.00
12.50	60.85	0.00	60.85	41.50	0.00	0.00	0.00
13.00	22.94	0.00	22.94	42.00	0.00	0.00	0.00
13.50	13.62	0.00	13.62	42.50	0.00	0.00	0.00
14.00	9.48	0.00	9.48	43.00	0.00	0.00	0.00
14.50	7.95	0.00	7.95	43.50	0.00	0.00	0.00
15.00	6.67	0.00	6.67	44.00	0.00	0.00	0.00
15.50	5.58	0.00	5.58	44.50	0.00	0.00	0.00
16.00	5.14	0.00	5.14	45.00	0.00	0.00	0.00
16.50	4.78	0.00	4.78	45.50	0.00	0.00	0.00
17.00	4.40	0.00	4.40	46.00	0.00	0.00	0.00
17.50	4.03	0.00	4.03	46.50	0.00	0.00	0.00
18.00	3.64	0.00	3.64	47.00	0.00	0.00	0.00
18.50	3.32	0.00	3.32	47.50	0.00	0.00	0.00
19.00	3.20	0.00	3.20	48.00	0.00	0.00	0.00
19.50	3.11	0.00	3.11				
20.00	3.02	0.00	3.02				
20.50	2.93	0.00	2.93				
21.00	2.83	0.00	2.83				
21.50	2.74	0.00	2.74				
22.00	2.64	0.00	2.64				
22.50	2.54	0.00	2.54				
23.00	2.44	0.00	2.44				
23.50	2.34	0.00	2.34				
24.00	2.24	0.00	2.24				
24.50	0.50	0.00	0.50				
25.00	0.03	0.00	0.03				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

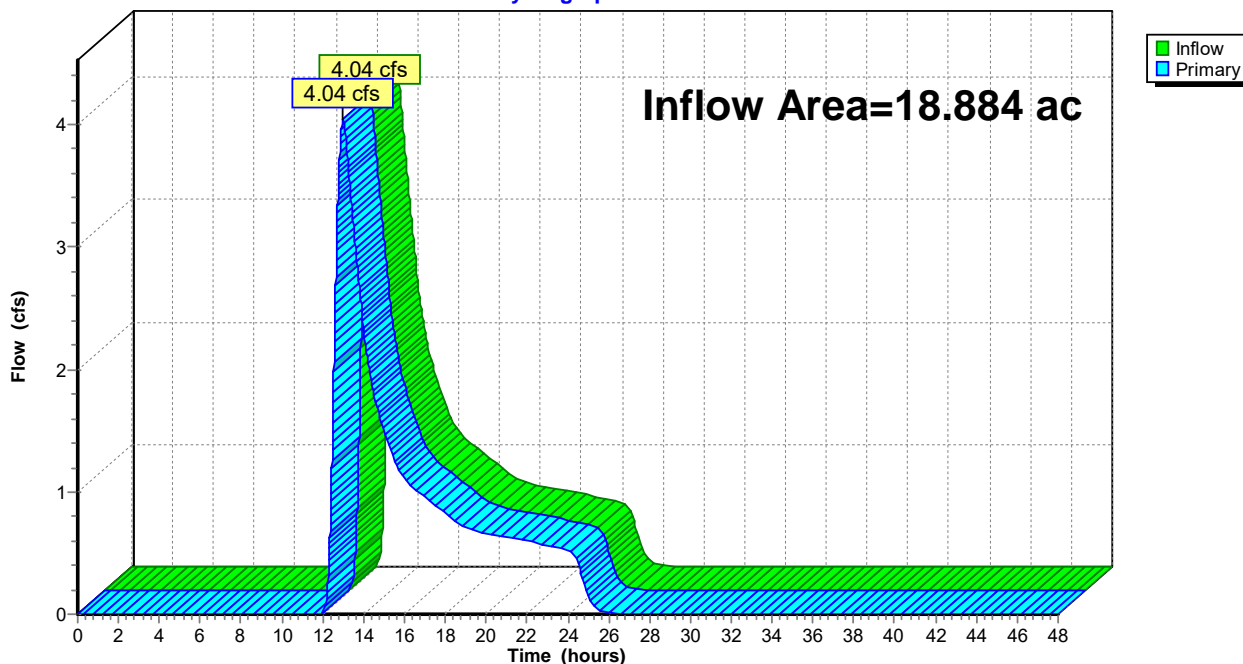
Summary for Link EDP2: DP-2

Inflow Area = 18.884 ac, 1.80% Impervious, Inflow Depth = 0.75" for 25-Year event
Inflow = 4.04 cfs @ 12.98 hrs, Volume= 1.185 af
Primary = 4.04 cfs @ 12.98 hrs, Volume= 1.185 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP2: DP-2

Hydrograph



Hydrograph for Link EDP2: DP-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	1.65	0.00	1.65	41.50	0.00	0.00	0.00
13.00	4.04	0.00	4.04	42.00	0.00	0.00	0.00
13.50	3.19	0.00	3.19	42.50	0.00	0.00	0.00
14.00	2.33	0.00	2.33	43.00	0.00	0.00	0.00
14.50	1.79	0.00	1.79	43.50	0.00	0.00	0.00
15.00	1.50	0.00	1.50	44.00	0.00	0.00	0.00
15.50	1.27	0.00	1.27	44.50	0.00	0.00	0.00
16.00	1.11	0.00	1.11	45.00	0.00	0.00	0.00
16.50	1.02	0.00	1.02	45.50	0.00	0.00	0.00
17.00	0.96	0.00	0.96	46.00	0.00	0.00	0.00
17.50	0.89	0.00	0.89	46.50	0.00	0.00	0.00
18.00	0.82	0.00	0.82	47.00	0.00	0.00	0.00
18.50	0.75	0.00	0.75	47.50	0.00	0.00	0.00
19.00	0.70	0.00	0.70	48.00	0.00	0.00	0.00
19.50	0.68	0.00	0.68				
20.00	0.66	0.00	0.66				
20.50	0.65	0.00	0.65				
21.00	0.63	0.00	0.63				
21.50	0.61	0.00	0.61				
22.00	0.60	0.00	0.60				
22.50	0.58	0.00	0.58				
23.00	0.56	0.00	0.56				
23.50	0.54	0.00	0.54				
24.00	0.52	0.00	0.52				
24.50	0.42	0.00	0.42				
25.00	0.15	0.00	0.15				
25.50	0.04	0.00	0.04				
26.00	0.01	0.00	0.01				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

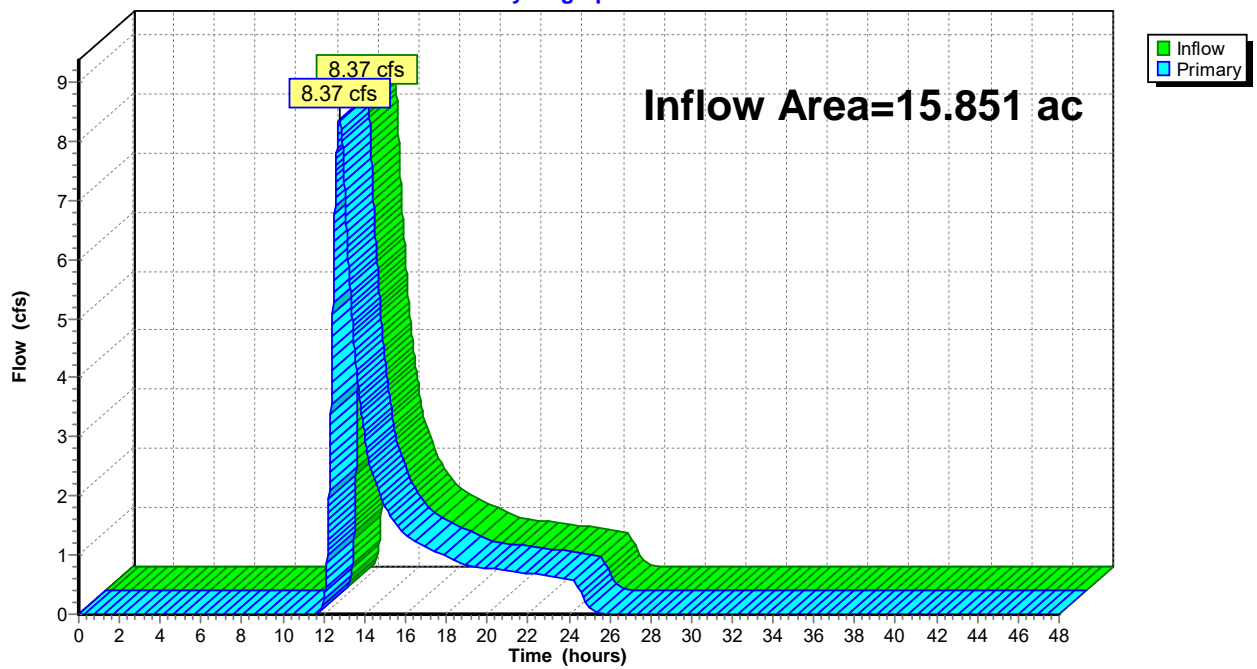
Summary for Link EDP3: DP-3

Inflow Area = 15.851 ac, 0.28% Impervious, Inflow Depth = 1.31" for 25-Year event
Inflow = 8.37 cfs @ 12.76 hrs, Volume= 1.731 af
Primary = 8.37 cfs @ 12.76 hrs, Volume= 1.731 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP3: DP-3

Hydrograph



Hydrograph for Link EDP3: DP-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.21	0.00	0.21	41.00	0.00	0.00	0.00
12.50	6.14	0.00	6.14	41.50	0.00	0.00	0.00
13.00	7.33	0.00	7.33	42.00	0.00	0.00	0.00
13.50	4.56	0.00	4.56	42.50	0.00	0.00	0.00
14.00	3.01	0.00	3.01	43.00	0.00	0.00	0.00
14.50	2.24	0.00	2.24	43.50	0.00	0.00	0.00
15.00	1.84	0.00	1.84	44.00	0.00	0.00	0.00
15.50	1.54	0.00	1.54	44.50	0.00	0.00	0.00
16.00	1.35	0.00	1.35	45.00	0.00	0.00	0.00
16.50	1.24	0.00	1.24	45.50	0.00	0.00	0.00
17.00	1.15	0.00	1.15	46.00	0.00	0.00	0.00
17.50	1.07	0.00	1.07	46.50	0.00	0.00	0.00
18.00	0.98	0.00	0.98	47.00	0.00	0.00	0.00
18.50	0.89	0.00	0.89	47.50	0.00	0.00	0.00
19.00	0.83	0.00	0.83	48.00	0.00	0.00	0.00
19.50	0.80	0.00	0.80				
20.00	0.78	0.00	0.78				
20.50	0.76	0.00	0.76				
21.00	0.74	0.00	0.74				
21.50	0.72	0.00	0.72				
22.00	0.69	0.00	0.69				
22.50	0.67	0.00	0.67				
23.00	0.65	0.00	0.65				
23.50	0.62	0.00	0.62				
24.00	0.60	0.00	0.60				
24.50	0.45	0.00	0.45				
25.00	0.12	0.00	0.12				
25.50	0.03	0.00	0.03				
26.00	0.01	0.00	0.01				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

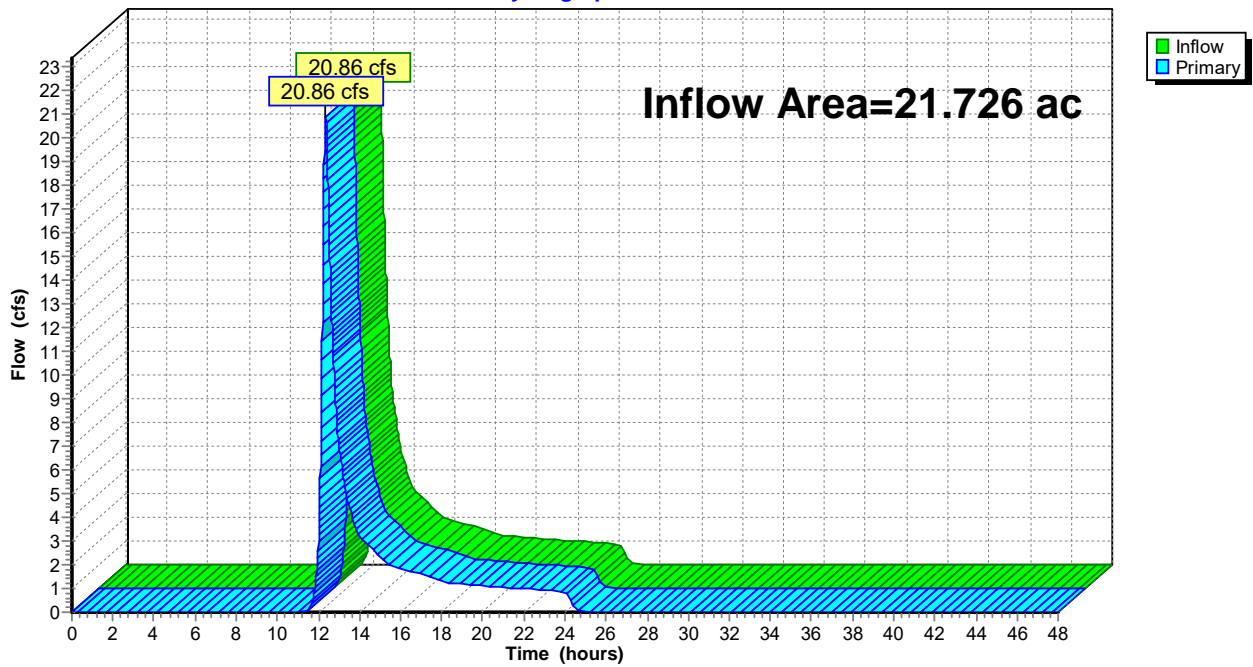
Summary for Link EDP4: DP-4

Inflow Area = 21.726 ac, 0.00% Impervious, Inflow Depth = 1.46" for 25-Year event
Inflow = 20.86 cfs @ 12.36 hrs, Volume= 2.648 af
Primary = 20.86 cfs @ 12.36 hrs, Volume= 2.648 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP4: DP-4

Hydrograph



Hydrograph for Link EDP4: DP-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.05	0.00	0.05	40.50	0.00	0.00	0.00
12.00	2.88	0.00	2.88	41.00	0.00	0.00	0.00
12.50	17.05	0.00	17.05	41.50	0.00	0.00	0.00
13.00	7.07	0.00	7.07	42.00	0.00	0.00	0.00
13.50	4.47	0.00	4.47	42.50	0.00	0.00	0.00
14.00	3.22	0.00	3.22	43.00	0.00	0.00	0.00
14.50	2.76	0.00	2.76	43.50	0.00	0.00	0.00
15.00	2.33	0.00	2.33	44.00	0.00	0.00	0.00
15.50	1.97	0.00	1.97	44.50	0.00	0.00	0.00
16.00	1.84	0.00	1.84	45.00	0.00	0.00	0.00
16.50	1.72	0.00	1.72	45.50	0.00	0.00	0.00
17.00	1.59	0.00	1.59	46.00	0.00	0.00	0.00
17.50	1.46	0.00	1.46	46.50	0.00	0.00	0.00
18.00	1.33	0.00	1.33	47.00	0.00	0.00	0.00
18.50	1.21	0.00	1.21	47.50	0.00	0.00	0.00
19.00	1.18	0.00	1.18	48.00	0.00	0.00	0.00
19.50	1.15	0.00	1.15				
20.00	1.12	0.00	1.12				
20.50	1.09	0.00	1.09				
21.00	1.05	0.00	1.05				
21.50	1.02	0.00	1.02				
22.00	0.99	0.00	0.99				
22.50	0.95	0.00	0.95				
23.00	0.92	0.00	0.92				
23.50	0.88	0.00	0.88				
24.00	0.84	0.00	0.84				
24.50	0.13	0.00	0.13				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

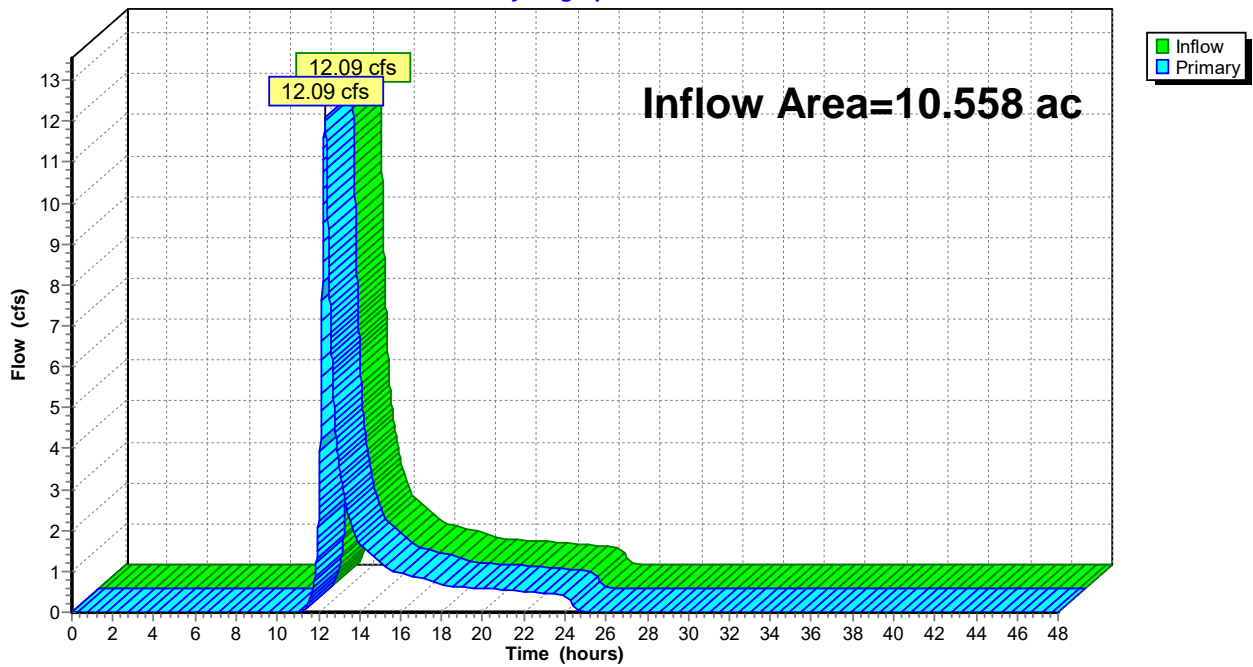
Summary for Link EDP5: EDP5

Inflow Area = 10.558 ac, 0.00% Impervious, Inflow Depth = 1.62" for 25-Year event
Inflow = 12.09 cfs @ 12.34 hrs, Volume= 1.425 af
Primary = 12.09 cfs @ 12.34 hrs, Volume= 1.425 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP5: EDP5

Hydrograph



Hydrograph for Link EDP5: EDP5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.18	0.00	0.18	40.50	0.00	0.00	0.00
12.00	2.12	0.00	2.12	41.00	0.00	0.00	0.00
12.50	8.88	0.00	8.88	41.50	0.00	0.00	0.00
13.00	3.60	0.00	3.60	42.00	0.00	0.00	0.00
13.50	2.30	0.00	2.30	42.50	0.00	0.00	0.00
14.00	1.66	0.00	1.66	43.00	0.00	0.00	0.00
14.50	1.43	0.00	1.43	43.50	0.00	0.00	0.00
15.00	1.21	0.00	1.21	44.00	0.00	0.00	0.00
15.50	1.02	0.00	1.02	44.50	0.00	0.00	0.00
16.00	0.95	0.00	0.95	45.00	0.00	0.00	0.00
16.50	0.89	0.00	0.89	45.50	0.00	0.00	0.00
17.00	0.82	0.00	0.82	46.00	0.00	0.00	0.00
17.50	0.75	0.00	0.75	46.50	0.00	0.00	0.00
18.00	0.68	0.00	0.68	47.00	0.00	0.00	0.00
18.50	0.63	0.00	0.63	47.50	0.00	0.00	0.00
19.00	0.61	0.00	0.61	48.00	0.00	0.00	0.00
19.50	0.59	0.00	0.59				
20.00	0.58	0.00	0.58				
20.50	0.56	0.00	0.56				
21.00	0.54	0.00	0.54				
21.50	0.52	0.00	0.52				
22.00	0.51	0.00	0.51				
22.50	0.49	0.00	0.49				
23.00	0.47	0.00	0.47				
23.50	0.45	0.00	0.45				
24.00	0.43	0.00	0.43				
24.50	0.05	0.00	0.05				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 100-Year Rainfall=8.57"

Prepared by Colliers Engineering & Design

Printed 7/24/2024

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 22S: Exist	Runoff Area=1,182,741 sf 0.65% Impervious Runoff Depth=5.32" Flow Length=270' Tc=23.4 min CN=73 Runoff=106.42 cfs 12.033 af
Subcatchment E1: EDA-1	Runoff Area=796,527 sf 0.25% Impervious Runoff Depth=2.83" Flow Length=472' Tc=30.0 min CN=52 Runoff=31.97 cfs 4.318 af
Subcatchment E2: EDA-2	Runoff Area=822,574 sf 1.80% Impervious Runoff Depth=1.94" Flow Length=1,483' Tc=55.9 min CN=44 Runoff=14.07 cfs 3.046 af
Subcatchment E3: EDA-3	Runoff Area=690,451 sf 0.28% Impervious Runoff Depth=2.83" Flow Length=1,360' Tc=49.9 min CN=52 Runoff=20.64 cfs 3.743 af
Subcatchment E4: EDA-4	Runoff Area=946,387 sf 0.00% Impervious Runoff Depth=3.06" Flow Length=1,805' Tc=22.8 min CN=54 Runoff=48.25 cfs 5.548 af
Subcatchment E5: E5	Runoff Area=459,922 sf 0.00% Impervious Runoff Depth=3.30" Flow Length=1,066' Tc=21.0 min CN=56 Runoff=26.48 cfs 2.901 af
Link EDP1: DP-1	Inflow=135.47 cfs 16.351 af Primary=135.47 cfs 16.351 af
Link EDP2: DP-2	Inflow=14.07 cfs 3.046 af Primary=14.07 cfs 3.046 af
Link EDP3: DP-3	Inflow=20.64 cfs 3.743 af Primary=20.64 cfs 3.743 af
Link EDP4: DP-4	Inflow=48.25 cfs 5.548 af Primary=48.25 cfs 5.548 af
Link EDP5: EDP5	Inflow=26.48 cfs 2.901 af Primary=26.48 cfs 2.901 af

Total Runoff Area = 112.456 ac Runoff Volume = 31.589 af Average Runoff Depth = 3.37"
99.46% Pervious = 111.851 ac 0.54% Impervious = 0.605 ac

240814_RDM Neelytown Drainage

NRCC 24-hr C 100-Year Rainfall=8.57"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Runoff = 106.42 cfs @ 12.34 hrs, Volume= 12.033 af, Depth= 5.32"
 Routed to Link EDP1 : DP-1

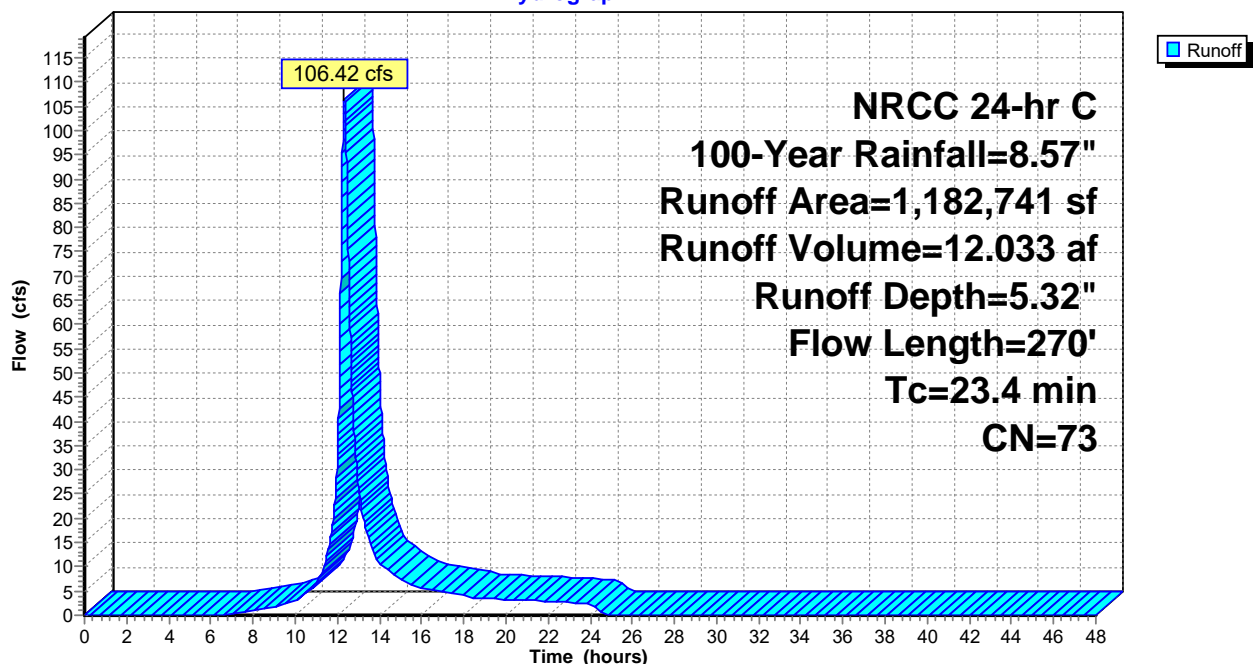
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
66,125	32	Woods/grass comb., Good, HSG A
317,463	79	Woods/grass comb., Good, HSG D
628,062	80	>75% Grass cover, Good, HSG D
78,234	39	>75% Grass cover, Good, HSG A
84,244	61	>75% Grass cover, Good, HSG B
938	89	Dirt roads, HSG D
* 1,552	98	Impervious Areas, HSG D
6,123	98	Impervious Areas, HSG B
1,182,741	73	Weighted Average
1,175,066		99.35% Pervious Area
7,675		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	100	0.0250	0.09		Sheet Flow, sf1 Woods: Light underbrush n= 0.400 P2= 3.31"
4.1	170	0.0190	0.69		Shallow Concentrated Flow, scf1 Woodland Kv= 5.0 fps
23.4	270	Total			

Subcatchment 22S: Exist Wetlands/Undeveloped Area

Hydrograph



Hydrograph for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	5.32	0.00
0.50	0.05	0.00	0.00	29.50	8.57	5.32	0.00
1.00	0.10	0.00	0.00	30.00	8.57	5.32	0.00
1.50	0.15	0.00	0.00	30.50	8.57	5.32	0.00
2.00	0.21	0.00	0.00	31.00	8.57	5.32	0.00
2.50	0.27	0.00	0.00	31.50	8.57	5.32	0.00
3.00	0.33	0.00	0.00	32.00	8.57	5.32	0.00
3.50	0.39	0.00	0.00	32.50	8.57	5.32	0.00
4.00	0.45	0.00	0.00	33.00	8.57	5.32	0.00
4.50	0.52	0.00	0.00	33.50	8.57	5.32	0.00
5.00	0.59	0.00	0.00	34.00	8.57	5.32	0.00
5.50	0.66	0.00	0.00	34.50	8.57	5.32	0.00
6.00	0.74	0.00	0.00	35.00	8.57	5.32	0.00
6.50	0.82	0.00	0.05	35.50	8.57	5.32	0.00
7.00	0.91	0.01	0.25	36.00	8.57	5.32	0.00
7.50	1.01	0.02	0.52	36.50	8.57	5.32	0.00
8.00	1.11	0.03	0.83	37.00	8.57	5.32	0.00
8.50	1.23	0.06	1.19	37.50	8.57	5.32	0.00
9.00	1.36	0.09	1.60	38.00	8.57	5.32	0.00
9.50	1.51	0.13	2.21	38.50	8.57	5.32	0.00
10.00	1.69	0.20	3.19	39.00	8.57	5.32	0.00
10.50	1.91	0.28	4.39	39.50	8.57	5.32	0.00
11.00	2.21	0.42	6.73	40.00	8.57	5.32	0.00
11.50	2.68	0.67	12.10	40.50	8.57	5.32	0.00
12.00	4.08	1.59	32.06	41.00	8.57	5.32	0.00
12.50	5.89	3.00	79.86	41.50	8.57	5.32	0.00
13.00	6.36	3.39	26.69	42.00	8.57	5.32	0.00
13.50	6.66	3.64	15.49	42.50	8.57	5.32	0.00
14.00	6.88	3.83	10.75	43.00	8.57	5.32	0.00
14.50	7.06	3.99	8.98	43.50	8.57	5.32	0.00
15.00	7.21	4.12	7.48	44.00	8.57	5.32	0.00
15.50	7.34	4.23	6.23	44.50	8.57	5.32	0.00
16.00	7.46	4.33	5.73	45.00	8.57	5.32	0.00
16.50	7.56	4.43	5.30	45.50	8.57	5.32	0.00
17.00	7.66	4.51	4.87	46.00	8.57	5.32	0.00
17.50	7.75	4.59	4.43	46.50	8.57	5.32	0.00
18.00	7.83	4.66	3.99	47.00	8.57	5.32	0.00
18.50	7.91	4.73	3.63	47.50	8.57	5.32	0.00
19.00	7.98	4.79	3.50	48.00	8.57	5.32	0.00
19.50	8.05	4.85	3.39				
20.00	8.12	4.91	3.29				
20.50	8.18	4.97	3.18				
21.00	8.24	5.03	3.07				
21.50	8.30	5.08	2.96				
22.00	8.36	5.13	2.85				
22.50	8.42	5.18	2.74				
23.00	8.47	5.23	2.63				
23.50	8.52	5.27	2.51				
24.00	8.57	5.32	2.40				
24.50	8.57	5.32	0.41				
25.00	8.57	5.32	0.02				
25.50	8.57	5.32	0.00				
26.00	8.57	5.32	0.00				
26.50	8.57	5.32	0.00				
27.00	8.57	5.32	0.00				
27.50	8.57	5.32	0.00				
28.00	8.57	5.32	0.00				
28.50	8.57	5.32	0.00				

Summary for Subcatchment E1: EDA-1

Runoff = 31.97 cfs @ 12.44 hrs, Volume= 4.318 af, Depth= 2.83"
 Routed to Link EDP1 : DP-1

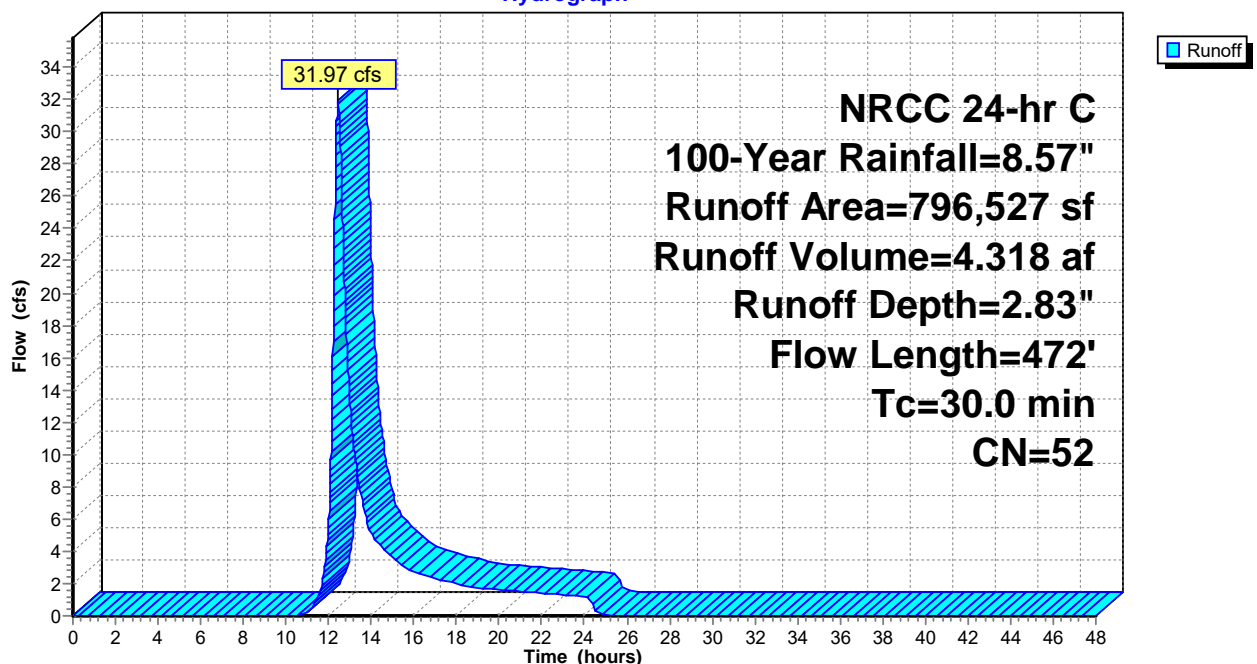
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
* 207,150	80	>75% Grass cover, Good, HSG D
2,839	89	Dirt roads, HSG D
* 1,568	98	Impervious Area, HSG D
71,639	79	Woods/grass comb., Good, HSG D
298,029	39	>75% Grass cover, Good, HSG A
* 406	98	impervious Area, HSG A
5,066	72	Dirt roads, HSG A
209,830	32	Woods/grass comb., Good, HSG A
0	61	>75% Grass cover, Good, HSG B
796,527	52	Weighted Average
794,553		99.75% Pervious Area
1,974		0.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.7	100	0.0150	0.07		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
2.4	81	0.0123	0.55		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
3.9	291	0.0060	1.25		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
30.0	472	Total			

Subcatchment E1: EDA-1

Hydrograph



Hydrograph for Subcatchment E1: EDA-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	2.83	0.00
0.50	0.05	0.00	0.00	29.50	8.57	2.83	0.00
1.00	0.10	0.00	0.00	30.00	8.57	2.83	0.00
1.50	0.15	0.00	0.00	30.50	8.57	2.83	0.00
2.00	0.21	0.00	0.00	31.00	8.57	2.83	0.00
2.50	0.27	0.00	0.00	31.50	8.57	2.83	0.00
3.00	0.33	0.00	0.00	32.00	8.57	2.83	0.00
3.50	0.39	0.00	0.00	32.50	8.57	2.83	0.00
4.00	0.45	0.00	0.00	33.00	8.57	2.83	0.00
4.50	0.52	0.00	0.00	33.50	8.57	2.83	0.00
5.00	0.59	0.00	0.00	34.00	8.57	2.83	0.00
5.50	0.66	0.00	0.00	34.50	8.57	2.83	0.00
6.00	0.74	0.00	0.00	35.00	8.57	2.83	0.00
6.50	0.82	0.00	0.00	35.50	8.57	2.83	0.00
7.00	0.91	0.00	0.00	36.00	8.57	2.83	0.00
7.50	1.01	0.00	0.00	36.50	8.57	2.83	0.00
8.00	1.11	0.00	0.00	37.00	8.57	2.83	0.00
8.50	1.23	0.00	0.00	37.50	8.57	2.83	0.00
9.00	1.36	0.00	0.00	38.00	8.57	2.83	0.00
9.50	1.51	0.00	0.00	38.50	8.57	2.83	0.00
10.00	1.69	0.00	0.00	39.00	8.57	2.83	0.00
10.50	1.91	0.00	0.00	39.50	8.57	2.83	0.00
11.00	2.21	0.01	0.23	40.00	8.57	2.83	0.00
11.50	2.68	0.07	1.28	40.50	8.57	2.83	0.00
12.00	4.08	0.44	5.57	41.00	8.57	2.83	0.00
12.50	5.89	1.23	31.21	41.50	8.57	2.83	0.00
13.00	6.36	1.48	13.35	42.00	8.57	2.83	0.00
13.50	6.66	1.65	7.65	42.50	8.57	2.83	0.00
14.00	6.88	1.77	5.16	43.00	8.57	2.83	0.00
14.50	7.06	1.88	4.26	43.50	8.57	2.83	0.00
15.00	7.21	1.97	3.59	44.00	8.57	2.83	0.00
15.50	7.34	2.05	3.00	44.50	8.57	2.83	0.00
16.00	7.46	2.12	2.73	45.00	8.57	2.83	0.00
16.50	7.56	2.19	2.55	45.50	8.57	2.83	0.00
17.00	7.66	2.25	2.35	46.00	8.57	2.83	0.00
17.50	7.75	2.31	2.16	46.50	8.57	2.83	0.00
18.00	7.83	2.36	1.96	47.00	8.57	2.83	0.00
18.50	7.91	2.40	1.78	47.50	8.57	2.83	0.00
19.00	7.98	2.45	1.71	48.00	8.57	2.83	0.00
19.50	8.05	2.49	1.66				
20.00	8.12	2.54	1.61				
20.50	8.18	2.58	1.57				
21.00	8.24	2.62	1.52				
21.50	8.30	2.66	1.47				
22.00	8.36	2.70	1.42				
22.50	8.42	2.73	1.37				
23.00	8.47	2.77	1.31				
23.50	8.52	2.80	1.26				
24.00	8.57	2.83	1.21				
24.50	8.57	2.83	0.41				
25.00	8.57	2.83	0.03				
25.50	8.57	2.83	0.00				
26.00	8.57	2.83	0.00				
26.50	8.57	2.83	0.00				
27.00	8.57	2.83	0.00				
27.50	8.57	2.83	0.00				
28.00	8.57	2.83	0.00				
28.50	8.57	2.83	0.00				

Summary for Subcatchment E2: EDA-2

Runoff = 14.07 cfs @ 12.86 hrs, Volume= 3.046 af, Depth= 1.94"
 Routed to Link EDP2 : DP-2

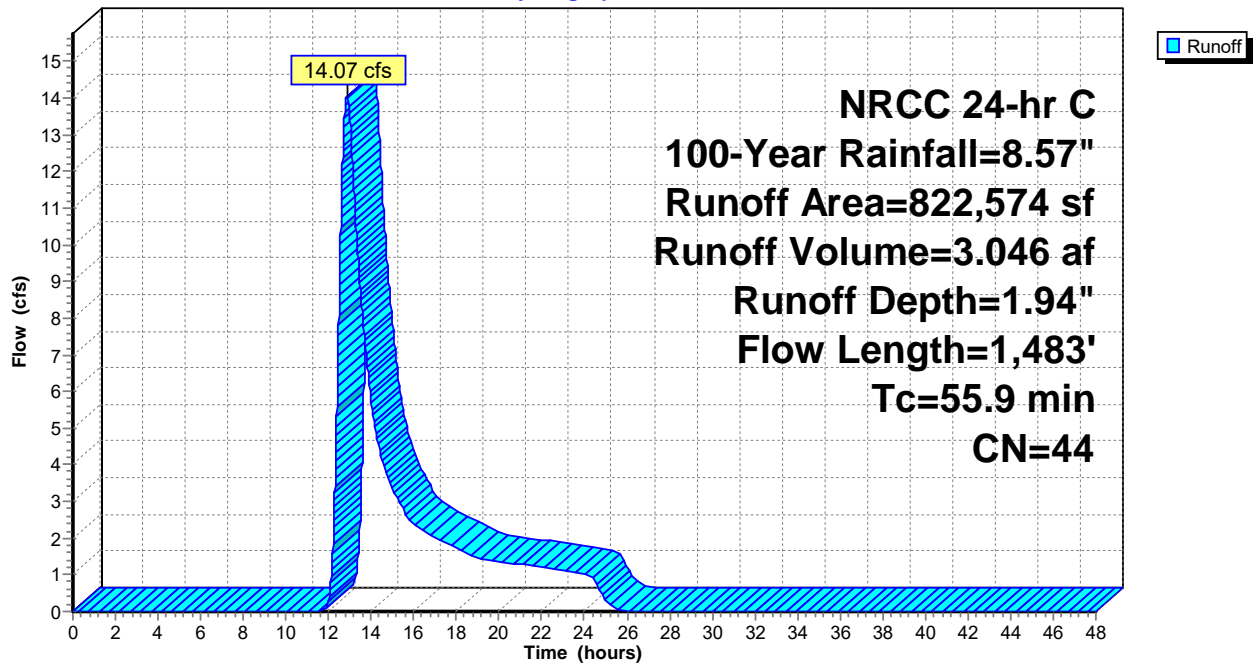
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
411,704	39	>75% Grass cover, Good, HSG A
4,905	72	Dirt roads, HSG A
* 5,267	98	Impervious Area, HSG A
240,401	32	Woods/grass comb., Good, HSG A
52,887	58	Woods/grass comb., Good, HSG B
48,215	80	>75% Grass cover, Good, HSG D
49,660	79	Woods/grass comb., Good, HSG D
9,535	98	Impervious Area, HSG D
822,574	44	Weighted Average
807,772		98.20% Pervious Area
14,802		1.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.7	100	0.0085	0.06		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
3.7	84	0.0058	0.38		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
4.5	437	0.0099	1.60		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
5.5	127	0.0060	0.39		Shallow Concentrated Flow, SCF3 Woodland Kv= 5.0 fps
2.8	296	0.0123	1.79		Shallow Concentrated Flow, SCF4 Unpaved Kv= 16.1 fps
9.7	439	0.0228	0.75		Shallow Concentrated Flow, SCF5 Woodland Kv= 5.0 fps
55.9	1,483	Total			

Subcatchment E2: EDA-2

Hydrograph



Hydrograph for Subcatchment E2: EDA-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	1.94	0.00
0.50	0.05	0.00	0.00	29.50	8.57	1.94	0.00
1.00	0.10	0.00	0.00	30.00	8.57	1.94	0.00
1.50	0.15	0.00	0.00	30.50	8.57	1.94	0.00
2.00	0.21	0.00	0.00	31.00	8.57	1.94	0.00
2.50	0.27	0.00	0.00	31.50	8.57	1.94	0.00
3.00	0.33	0.00	0.00	32.00	8.57	1.94	0.00
3.50	0.39	0.00	0.00	32.50	8.57	1.94	0.00
4.00	0.45	0.00	0.00	33.00	8.57	1.94	0.00
4.50	0.52	0.00	0.00	33.50	8.57	1.94	0.00
5.00	0.59	0.00	0.00	34.00	8.57	1.94	0.00
5.50	0.66	0.00	0.00	34.50	8.57	1.94	0.00
6.00	0.74	0.00	0.00	35.00	8.57	1.94	0.00
6.50	0.82	0.00	0.00	35.50	8.57	1.94	0.00
7.00	0.91	0.00	0.00	36.00	8.57	1.94	0.00
7.50	1.01	0.00	0.00	36.50	8.57	1.94	0.00
8.00	1.11	0.00	0.00	37.00	8.57	1.94	0.00
8.50	1.23	0.00	0.00	37.50	8.57	1.94	0.00
9.00	1.36	0.00	0.00	38.00	8.57	1.94	0.00
9.50	1.51	0.00	0.00	38.50	8.57	1.94	0.00
10.00	1.69	0.00	0.00	39.00	8.57	1.94	0.00
10.50	1.91	0.00	0.00	39.50	8.57	1.94	0.00
11.00	2.21	0.00	0.00	40.00	8.57	1.94	0.00
11.50	2.68	0.00	0.00	40.50	8.57	1.94	0.00
12.00	4.08	0.17	0.33	41.00	8.57	1.94	0.00
12.50	5.89	0.70	8.65	41.50	8.57	1.94	0.00
13.00	6.36	0.88	13.44	42.00	8.57	1.94	0.00
13.50	6.66	1.01	8.68	42.50	8.57	1.94	0.00
14.00	6.88	1.10	5.73	43.00	8.57	1.94	0.00
14.50	7.06	1.18	4.16	43.50	8.57	1.94	0.00
15.00	7.21	1.25	3.36	44.00	8.57	1.94	0.00
15.50	7.34	1.31	2.78	44.50	8.57	1.94	0.00
16.00	7.46	1.37	2.40	45.00	8.57	1.94	0.00
16.50	7.56	1.42	2.19	45.50	8.57	1.94	0.00
17.00	7.66	1.47	2.03	46.00	8.57	1.94	0.00
17.50	7.75	1.51	1.88	46.50	8.57	1.94	0.00
18.00	7.83	1.55	1.72	47.00	8.57	1.94	0.00
18.50	7.91	1.59	1.57	47.50	8.57	1.94	0.00
19.00	7.98	1.63	1.46	48.00	8.57	1.94	0.00
19.50	8.05	1.66	1.40				
20.00	8.12	1.70	1.36				
20.50	8.18	1.73	1.32				
21.00	8.24	1.76	1.28				
21.50	8.30	1.79	1.25				
22.00	8.36	1.82	1.21				
22.50	8.42	1.85	1.17				
23.00	8.47	1.88	1.13				
23.50	8.52	1.91	1.09				
24.00	8.57	1.94	1.05				
24.50	8.57	1.94	0.84				
25.00	8.57	1.94	0.29				
25.50	8.57	1.94	0.08				
26.00	8.57	1.94	0.02				
26.50	8.57	1.94	0.00				
27.00	8.57	1.94	0.00				
27.50	8.57	1.94	0.00				
28.00	8.57	1.94	0.00				
28.50	8.57	1.94	0.00				

Summary for Subcatchment E3: EDA-3

Runoff = 20.64 cfs @ 12.70 hrs, Volume= 3.743 af, Depth= 2.83"
 Routed to Link EDP3 : DP-3

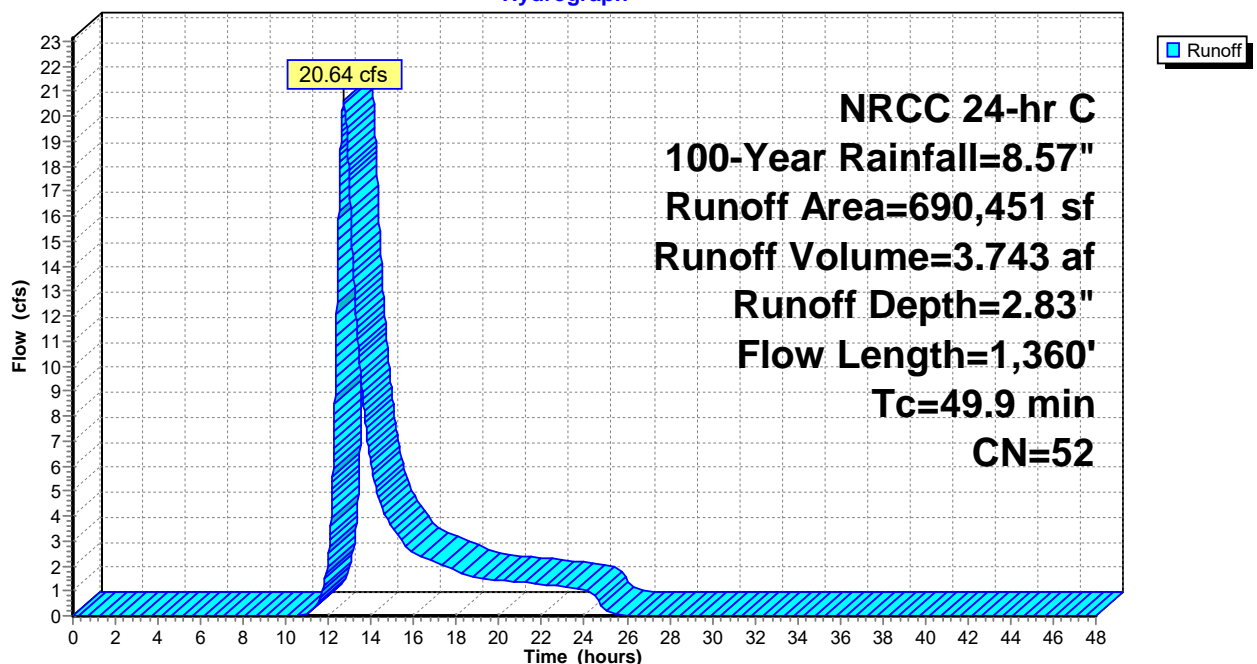
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
1,902	98	Paved parking, HSG A
89,711	39	>75% Grass cover, Good, HSG A
6,532	96	Gravel surface, HSG A
175,868	32	Woods/grass comb., Good, HSG A
168,395	61	>75% Grass cover, Good, HSG B
196,445	58	Woods/grass comb., Good, HSG B
1,344	82	Dirt roads, HSG B
8,737	80	>75% Grass cover, Good, HSG D
41,517	79	Woods/grass comb., Good, HSG D
690,451	52	Weighted Average
688,549		99.72% Pervious Area
1,902		0.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	100	0.0109	0.06		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.31"
21.1	734	0.0135	0.58		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.9	526	0.0494	4.51		Shallow Concentrated Flow, Paved Kv= 20.3 fps
49.9	1,360	Total			

Subcatchment E3: EDA-3

Hydrograph



Hydrograph for Subcatchment E3: EDA-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	2.83	0.00
0.50	0.05	0.00	0.00	29.50	8.57	2.83	0.00
1.00	0.10	0.00	0.00	30.00	8.57	2.83	0.00
1.50	0.15	0.00	0.00	30.50	8.57	2.83	0.00
2.00	0.21	0.00	0.00	31.00	8.57	2.83	0.00
2.50	0.27	0.00	0.00	31.50	8.57	2.83	0.00
3.00	0.33	0.00	0.00	32.00	8.57	2.83	0.00
3.50	0.39	0.00	0.00	32.50	8.57	2.83	0.00
4.00	0.45	0.00	0.00	33.00	8.57	2.83	0.00
4.50	0.52	0.00	0.00	33.50	8.57	2.83	0.00
5.00	0.59	0.00	0.00	34.00	8.57	2.83	0.00
5.50	0.66	0.00	0.00	34.50	8.57	2.83	0.00
6.00	0.74	0.00	0.00	35.00	8.57	2.83	0.00
6.50	0.82	0.00	0.00	35.50	8.57	2.83	0.00
7.00	0.91	0.00	0.00	36.00	8.57	2.83	0.00
7.50	1.01	0.00	0.00	36.50	8.57	2.83	0.00
8.00	1.11	0.00	0.00	37.00	8.57	2.83	0.00
8.50	1.23	0.00	0.00	37.50	8.57	2.83	0.00
9.00	1.36	0.00	0.00	38.00	8.57	2.83	0.00
9.50	1.51	0.00	0.00	38.50	8.57	2.83	0.00
10.00	1.69	0.00	0.00	39.00	8.57	2.83	0.00
10.50	1.91	0.00	0.00	39.50	8.57	2.83	0.00
11.00	2.21	0.01	0.07	40.00	8.57	2.83	0.00
11.50	2.68	0.07	0.56	40.50	8.57	2.83	0.00
12.00	4.08	0.44	2.41	41.00	8.57	2.83	0.00
12.50	5.89	1.23	16.89	41.50	8.57	2.83	0.00
13.00	6.36	1.48	16.80	42.00	8.57	2.83	0.00
13.50	6.66	1.65	9.58	42.50	8.57	2.83	0.00
14.00	6.88	1.77	6.03	43.00	8.57	2.83	0.00
14.50	7.06	1.88	4.36	43.50	8.57	2.83	0.00
15.00	7.21	1.97	3.51	44.00	8.57	2.83	0.00
15.50	7.34	2.05	2.91	44.50	8.57	2.83	0.00
16.00	7.46	2.12	2.53	45.00	8.57	2.83	0.00
16.50	7.56	2.19	2.32	45.50	8.57	2.83	0.00
17.00	7.66	2.25	2.15	46.00	8.57	2.83	0.00
17.50	7.75	2.31	1.98	46.50	8.57	2.83	0.00
18.00	7.83	2.36	1.81	47.00	8.57	2.83	0.00
18.50	7.91	2.40	1.64	47.50	8.57	2.83	0.00
19.00	7.98	2.45	1.53	48.00	8.57	2.83	0.00
19.50	8.05	2.49	1.47				
20.00	8.12	2.54	1.42				
20.50	8.18	2.58	1.38				
21.00	8.24	2.62	1.34				
21.50	8.30	2.66	1.30				
22.00	8.36	2.70	1.26				
22.50	8.42	2.73	1.21				
23.00	8.47	2.77	1.17				
23.50	8.52	2.80	1.12				
24.00	8.57	2.83	1.08				
24.50	8.57	2.83	0.80				
25.00	8.57	2.83	0.22				
25.50	8.57	2.83	0.05				
26.00	8.57	2.83	0.01				
26.50	8.57	2.83	0.00				
27.00	8.57	2.83	0.00				
27.50	8.57	2.83	0.00				
28.00	8.57	2.83	0.00				
28.50	8.57	2.83	0.00				

Summary for Subcatchment E4: EDA-4

Runoff = 48.25 cfs @ 12.34 hrs, Volume= 5.548 af, Depth= 3.06"
 Routed to Link EDP4 : DP-4

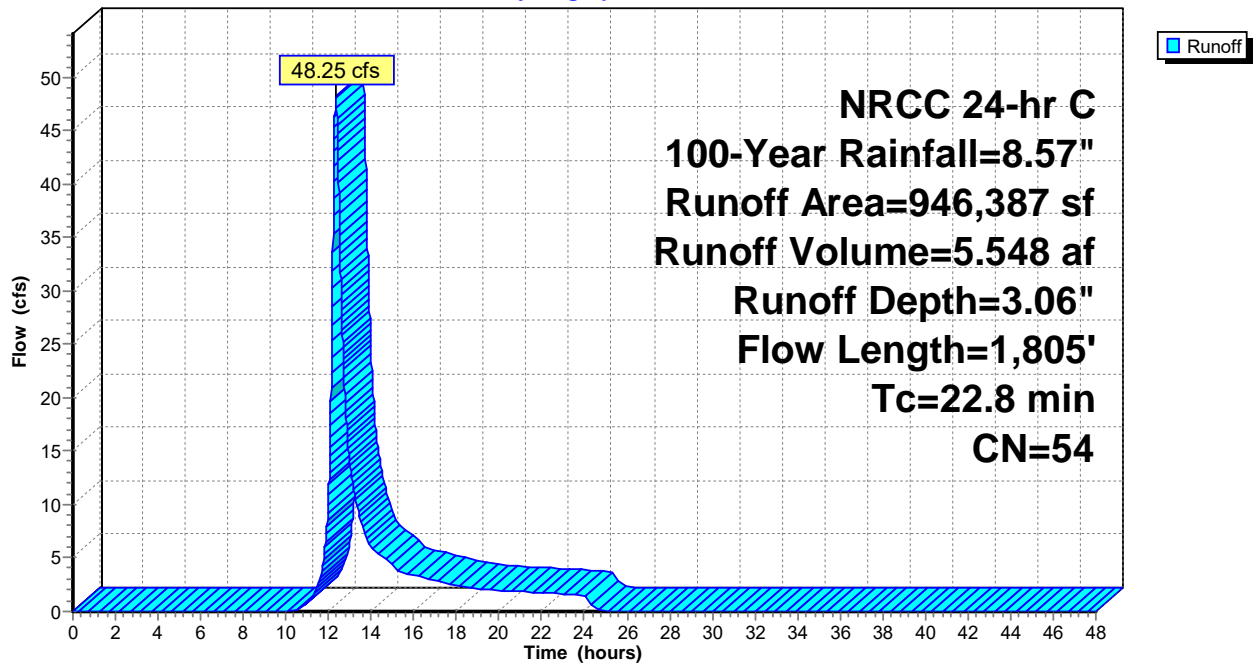
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
3,302	76	Gravel roads, HSG A
4,132	72	Dirt roads, HSG A
7,319	82	Dirt roads, HSG B
215,755	39	>75% Grass cover, Good, HSG A
253,860	61	>75% Grass cover, Good, HSG B
71,688	80	>75% Grass cover, Good, HSG D
181,104	32	Woods/grass comb., Good, HSG A
113,262	58	Woods/grass comb., Good, HSG B
95,965	79	Woods/grass comb., Good, HSG D
946,387	54	Weighted Average
946,387		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	100	0.1400	0.17		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
5.5	658	0.1610	2.01		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
1.7	368	0.0480	3.53		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
5.9	679	0.0089	1.92		Shallow Concentrated Flow, SCF3 Paved Kv= 20.3 fps
22.8	1,805	Total			

Subcatchment E4: EDA-4

Hydrograph



Hydrograph for Subcatchment E4: EDA-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	3.06	0.00
0.50	0.05	0.00	0.00	29.50	8.57	3.06	0.00
1.00	0.10	0.00	0.00	30.00	8.57	3.06	0.00
1.50	0.15	0.00	0.00	30.50	8.57	3.06	0.00
2.00	0.21	0.00	0.00	31.00	8.57	3.06	0.00
2.50	0.27	0.00	0.00	31.50	8.57	3.06	0.00
3.00	0.33	0.00	0.00	32.00	8.57	3.06	0.00
3.50	0.39	0.00	0.00	32.50	8.57	3.06	0.00
4.00	0.45	0.00	0.00	33.00	8.57	3.06	0.00
4.50	0.52	0.00	0.00	33.50	8.57	3.06	0.00
5.00	0.59	0.00	0.00	34.00	8.57	3.06	0.00
5.50	0.66	0.00	0.00	34.50	8.57	3.06	0.00
6.00	0.74	0.00	0.00	35.00	8.57	3.06	0.00
6.50	0.82	0.00	0.00	35.50	8.57	3.06	0.00
7.00	0.91	0.00	0.00	36.00	8.57	3.06	0.00
7.50	1.01	0.00	0.00	36.50	8.57	3.06	0.00
8.00	1.11	0.00	0.00	37.00	8.57	3.06	0.00
8.50	1.23	0.00	0.00	37.50	8.57	3.06	0.00
9.00	1.36	0.00	0.00	38.00	8.57	3.06	0.00
9.50	1.51	0.00	0.00	38.50	8.57	3.06	0.00
10.00	1.69	0.00	0.00	39.00	8.57	3.06	0.00
10.50	1.91	0.00	0.14	39.50	8.57	3.06	0.00
11.00	2.21	0.03	0.81	40.00	8.57	3.06	0.00
11.50	2.68	0.10	2.60	40.50	8.57	3.06	0.00
12.00	4.08	0.52	10.72	41.00	8.57	3.06	0.00
12.50	5.89	1.38	37.17	41.50	8.57	3.06	0.00
13.00	6.36	1.65	13.96	42.00	8.57	3.06	0.00
13.50	6.66	1.82	8.53	42.50	8.57	3.06	0.00
14.00	6.88	1.95	6.05	43.00	8.57	3.06	0.00
14.50	7.06	2.07	5.13	43.50	8.57	3.06	0.00
15.00	7.21	2.16	4.31	44.00	8.57	3.06	0.00
15.50	7.34	2.24	3.62	44.50	8.57	3.06	0.00
16.00	7.46	2.32	3.36	45.00	8.57	3.06	0.00
16.50	7.56	2.39	3.12	45.50	8.57	3.06	0.00
17.00	7.66	2.45	2.89	46.00	8.57	3.06	0.00
17.50	7.75	2.51	2.64	46.50	8.57	3.06	0.00
18.00	7.83	2.57	2.38	47.00	8.57	3.06	0.00
18.50	7.91	2.62	2.18	47.50	8.57	3.06	0.00
19.00	7.98	2.66	2.11	48.00	8.57	3.06	0.00
19.50	8.05	2.71	2.05				
20.00	8.12	2.75	1.99				
20.50	8.18	2.80	1.93				
21.00	8.24	2.84	1.87				
21.50	8.30	2.88	1.81				
22.00	8.36	2.92	1.74				
22.50	8.42	2.96	1.68				
23.00	8.47	3.00	1.61				
23.50	8.52	3.03	1.55				
24.00	8.57	3.06	1.48				
24.50	8.57	3.06	0.23				
25.00	8.57	3.06	0.01				
25.50	8.57	3.06	0.00				
26.00	8.57	3.06	0.00				
26.50	8.57	3.06	0.00				
27.00	8.57	3.06	0.00				
27.50	8.57	3.06	0.00				
28.00	8.57	3.06	0.00				
28.50	8.57	3.06	0.00				

Summary for Subcatchment E5: E5

Runoff = 26.48 cfs @ 12.32 hrs, Volume= 2.901 af, Depth= 3.30"
 Routed to Link EDP5 : EDP5

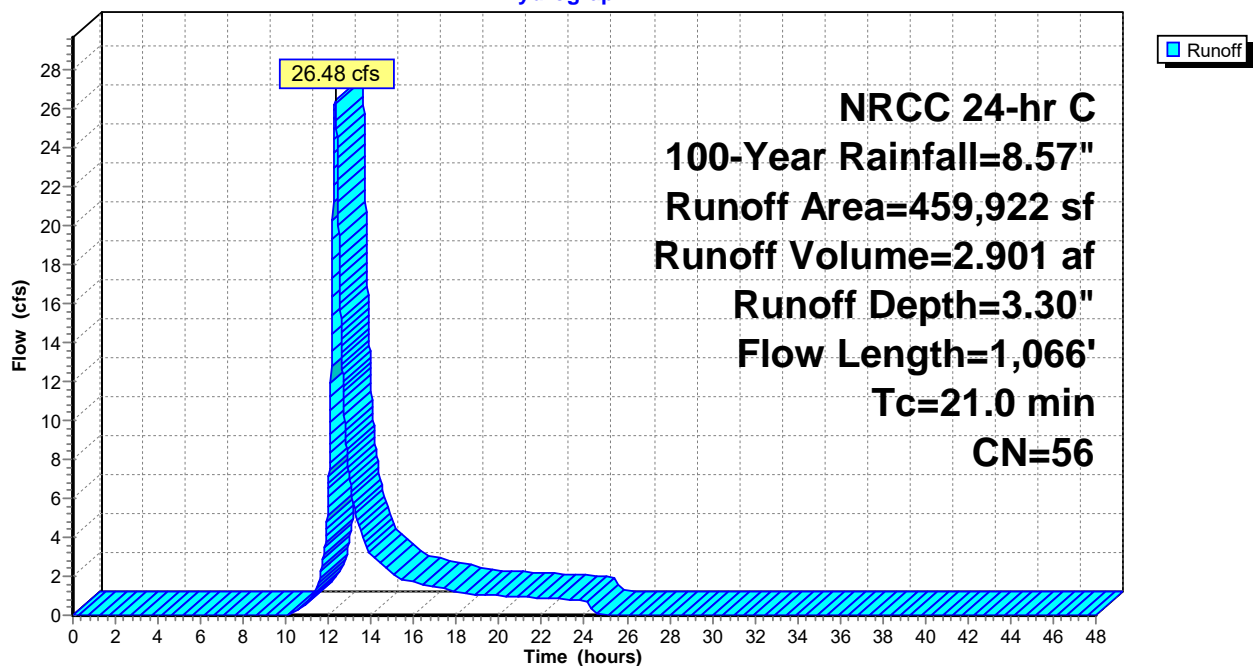
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
3,768	96	Gravel surface, HSG A
1,545	96	Gravel surface, HSG B
3,260	82	Dirt roads, HSG B
8,571	39	>75% Grass cover, Good, HSG A
249,030	61	>75% Grass cover, Good, HSG B
59,839	32	Woods/grass comb., Good, HSG A
133,909	58	Woods/grass comb., Good, HSG B
459,922	56	Weighted Average
459,922		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.1300	0.17		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
7.3	783	0.1270	1.78		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
3.7	183	0.0279	0.84		Shallow Concentrated Flow, SCF2 Woodland Kv= 5.0 fps
21.0	1,066	Total			

Subcatchment E5: E5

Hydrograph



Hydrograph for Subcatchment E5: E5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	3.30	0.00
0.50	0.05	0.00	0.00	29.50	8.57	3.30	0.00
1.00	0.10	0.00	0.00	30.00	8.57	3.30	0.00
1.50	0.15	0.00	0.00	30.50	8.57	3.30	0.00
2.00	0.21	0.00	0.00	31.00	8.57	3.30	0.00
2.50	0.27	0.00	0.00	31.50	8.57	3.30	0.00
3.00	0.33	0.00	0.00	32.00	8.57	3.30	0.00
3.50	0.39	0.00	0.00	32.50	8.57	3.30	0.00
4.00	0.45	0.00	0.00	33.00	8.57	3.30	0.00
4.50	0.52	0.00	0.00	33.50	8.57	3.30	0.00
5.00	0.59	0.00	0.00	34.00	8.57	3.30	0.00
5.50	0.66	0.00	0.00	34.50	8.57	3.30	0.00
6.00	0.74	0.00	0.00	35.00	8.57	3.30	0.00
6.50	0.82	0.00	0.00	35.50	8.57	3.30	0.00
7.00	0.91	0.00	0.00	36.00	8.57	3.30	0.00
7.50	1.01	0.00	0.00	36.50	8.57	3.30	0.00
8.00	1.11	0.00	0.00	37.00	8.57	3.30	0.00
8.50	1.23	0.00	0.00	37.50	8.57	3.30	0.00
9.00	1.36	0.00	0.00	38.00	8.57	3.30	0.00
9.50	1.51	0.00	0.00	38.50	8.57	3.30	0.00
10.00	1.69	0.00	0.02	39.00	8.57	3.30	0.00
10.50	1.91	0.01	0.22	39.50	8.57	3.30	0.00
11.00	2.21	0.05	0.63	40.00	8.57	3.30	0.00
11.50	2.68	0.14	1.68	40.50	8.57	3.30	0.00
12.00	4.08	0.61	6.48	41.00	8.57	3.30	0.00
12.50	5.89	1.53	18.37	41.50	8.57	3.30	0.00
13.00	6.36	1.81	6.86	42.00	8.57	3.30	0.00
13.50	6.66	2.00	4.26	42.50	8.57	3.30	0.00
14.00	6.88	2.14	3.04	43.00	8.57	3.30	0.00
14.50	7.06	2.26	2.59	43.50	8.57	3.30	0.00
15.00	7.21	2.36	2.17	44.00	8.57	3.30	0.00
15.50	7.34	2.44	1.83	44.50	8.57	3.30	0.00
16.00	7.46	2.52	1.70	45.00	8.57	3.30	0.00
16.50	7.56	2.59	1.58	45.50	8.57	3.30	0.00
17.00	7.66	2.66	1.46	46.00	8.57	3.30	0.00
17.50	7.75	2.72	1.33	46.50	8.57	3.30	0.00
18.00	7.83	2.78	1.20	47.00	8.57	3.30	0.00
18.50	7.91	2.83	1.10	47.50	8.57	3.30	0.00
19.00	7.98	2.88	1.07	48.00	8.57	3.30	0.00
19.50	8.05	2.93	1.04				
20.00	8.12	2.97	1.01				
20.50	8.18	3.02	0.98				
21.00	8.24	3.06	0.94				
21.50	8.30	3.11	0.91				
22.00	8.36	3.15	0.88				
22.50	8.42	3.19	0.85				
23.00	8.47	3.23	0.81				
23.50	8.52	3.26	0.78				
24.00	8.57	3.30	0.75				
24.50	8.57	3.30	0.09				
25.00	8.57	3.30	0.00				
25.50	8.57	3.30	0.00				
26.00	8.57	3.30	0.00				
26.50	8.57	3.30	0.00				
27.00	8.57	3.30	0.00				
27.50	8.57	3.30	0.00				
28.00	8.57	3.30	0.00				
28.50	8.57	3.30	0.00				

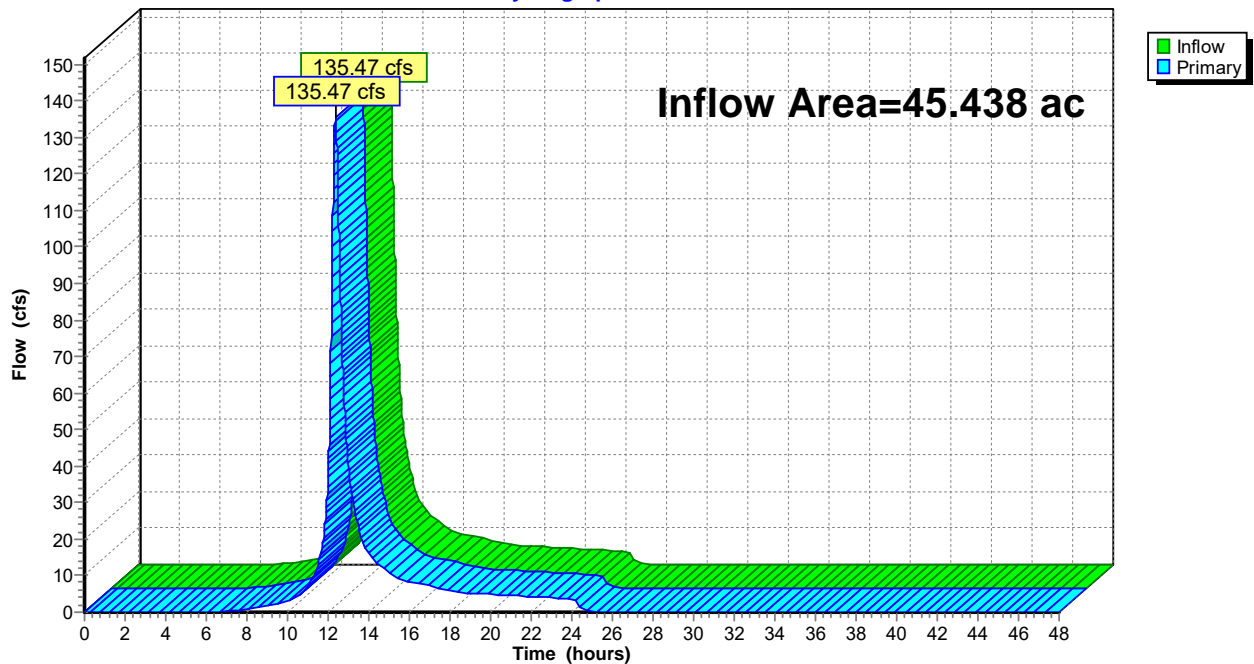
Summary for Link EDP1: DP-1

Inflow Area = 45.438 ac, 0.49% Impervious, Inflow Depth = 4.32" for 100-Year event
Inflow = 135.47 cfs @ 12.35 hrs, Volume= 16.351 af
Primary = 135.47 cfs @ 12.35 hrs, Volume= 16.351 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP1: DP-1

Hydrograph



Hydrograph for Link EDP1: DP-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.05	0.00	0.05	35.50	0.00	0.00	0.00
7.00	0.25	0.00	0.25	36.00	0.00	0.00	0.00
7.50	0.52	0.00	0.52	36.50	0.00	0.00	0.00
8.00	0.83	0.00	0.83	37.00	0.00	0.00	0.00
8.50	1.19	0.00	1.19	37.50	0.00	0.00	0.00
9.00	1.60	0.00	1.60	38.00	0.00	0.00	0.00
9.50	2.21	0.00	2.21	38.50	0.00	0.00	0.00
10.00	3.19	0.00	3.19	39.00	0.00	0.00	0.00
10.50	4.39	0.00	4.39	39.50	0.00	0.00	0.00
11.00	6.96	0.00	6.96	40.00	0.00	0.00	0.00
11.50	13.38	0.00	13.38	40.50	0.00	0.00	0.00
12.00	37.63	0.00	37.63	41.00	0.00	0.00	0.00
12.50	111.07	0.00	111.07	41.50	0.00	0.00	0.00
13.00	40.04	0.00	40.04	42.00	0.00	0.00	0.00
13.50	23.15	0.00	23.15	42.50	0.00	0.00	0.00
14.00	15.90	0.00	15.90	43.00	0.00	0.00	0.00
14.50	13.24	0.00	13.24	43.50	0.00	0.00	0.00
15.00	11.07	0.00	11.07	44.00	0.00	0.00	0.00
15.50	9.22	0.00	9.22	44.50	0.00	0.00	0.00
16.00	8.47	0.00	8.47	45.00	0.00	0.00	0.00
16.50	7.85	0.00	7.85	45.50	0.00	0.00	0.00
17.00	7.22	0.00	7.22	46.00	0.00	0.00	0.00
17.50	6.60	0.00	6.60	46.50	0.00	0.00	0.00
18.00	5.95	0.00	5.95	47.00	0.00	0.00	0.00
18.50	5.41	0.00	5.41	47.50	0.00	0.00	0.00
19.00	5.21	0.00	5.21	48.00	0.00	0.00	0.00
19.50	5.05	0.00	5.05				
20.00	4.90	0.00	4.90				
20.50	4.75	0.00	4.75				
21.00	4.58	0.00	4.58				
21.50	4.43	0.00	4.43				
22.00	4.27	0.00	4.27				
22.50	4.11	0.00	4.11				
23.00	3.94	0.00	3.94				
23.50	3.78	0.00	3.78				
24.00	3.61	0.00	3.61				
24.50	0.83	0.00	0.83				
25.00	0.05	0.00	0.05				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

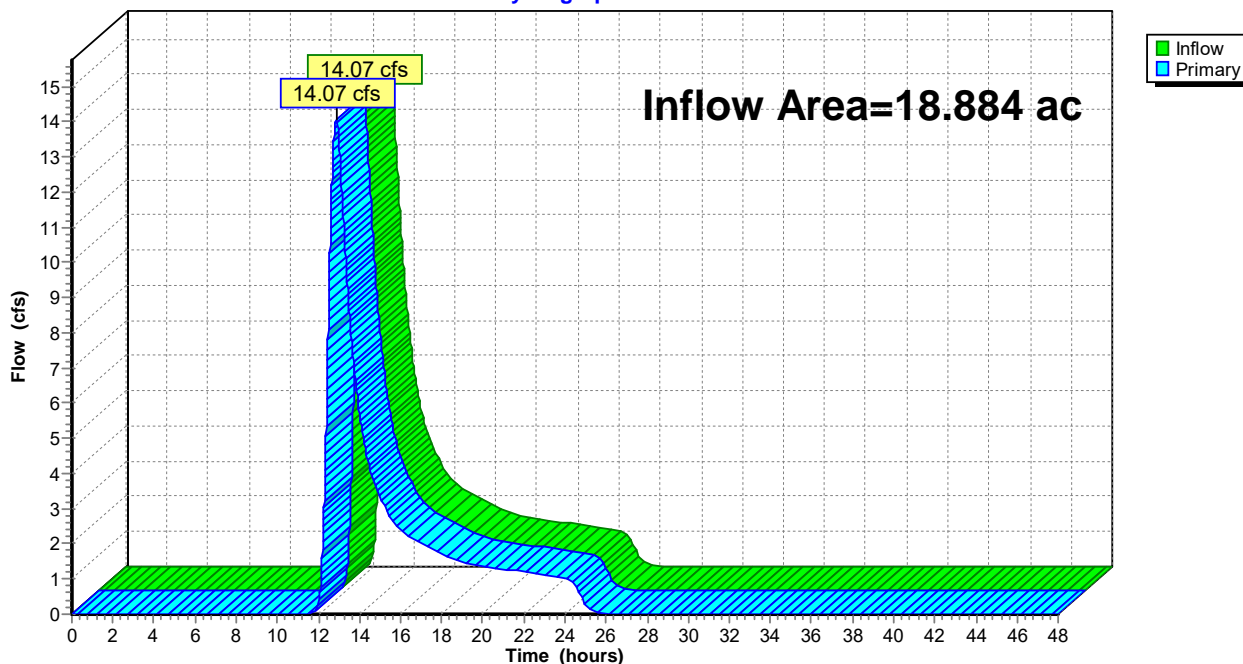
Summary for Link EDP2: DP-2

Inflow Area = 18.884 ac, 1.80% Impervious, Inflow Depth = 1.94" for 100-Year event
Inflow = 14.07 cfs @ 12.86 hrs, Volume= 3.046 af
Primary = 14.07 cfs @ 12.86 hrs, Volume= 3.046 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP2: DP-2

Hydrograph



Hydrograph for Link EDP2: DP-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.33	0.00	0.33	41.00	0.00	0.00	0.00
12.50	8.65	0.00	8.65	41.50	0.00	0.00	0.00
13.00	13.44	0.00	13.44	42.00	0.00	0.00	0.00
13.50	8.68	0.00	8.68	42.50	0.00	0.00	0.00
14.00	5.73	0.00	5.73	43.00	0.00	0.00	0.00
14.50	4.16	0.00	4.16	43.50	0.00	0.00	0.00
15.00	3.36	0.00	3.36	44.00	0.00	0.00	0.00
15.50	2.78	0.00	2.78	44.50	0.00	0.00	0.00
16.00	2.40	0.00	2.40	45.00	0.00	0.00	0.00
16.50	2.19	0.00	2.19	45.50	0.00	0.00	0.00
17.00	2.03	0.00	2.03	46.00	0.00	0.00	0.00
17.50	1.88	0.00	1.88	46.50	0.00	0.00	0.00
18.00	1.72	0.00	1.72	47.00	0.00	0.00	0.00
18.50	1.57	0.00	1.57	47.50	0.00	0.00	0.00
19.00	1.46	0.00	1.46	48.00	0.00	0.00	0.00
19.50	1.40	0.00	1.40				
20.00	1.36	0.00	1.36				
20.50	1.32	0.00	1.32				
21.00	1.28	0.00	1.28				
21.50	1.25	0.00	1.25				
22.00	1.21	0.00	1.21				
22.50	1.17	0.00	1.17				
23.00	1.13	0.00	1.13				
23.50	1.09	0.00	1.09				
24.00	1.05	0.00	1.05				
24.50	0.84	0.00	0.84				
25.00	0.29	0.00	0.29				
25.50	0.08	0.00	0.08				
26.00	0.02	0.00	0.02				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

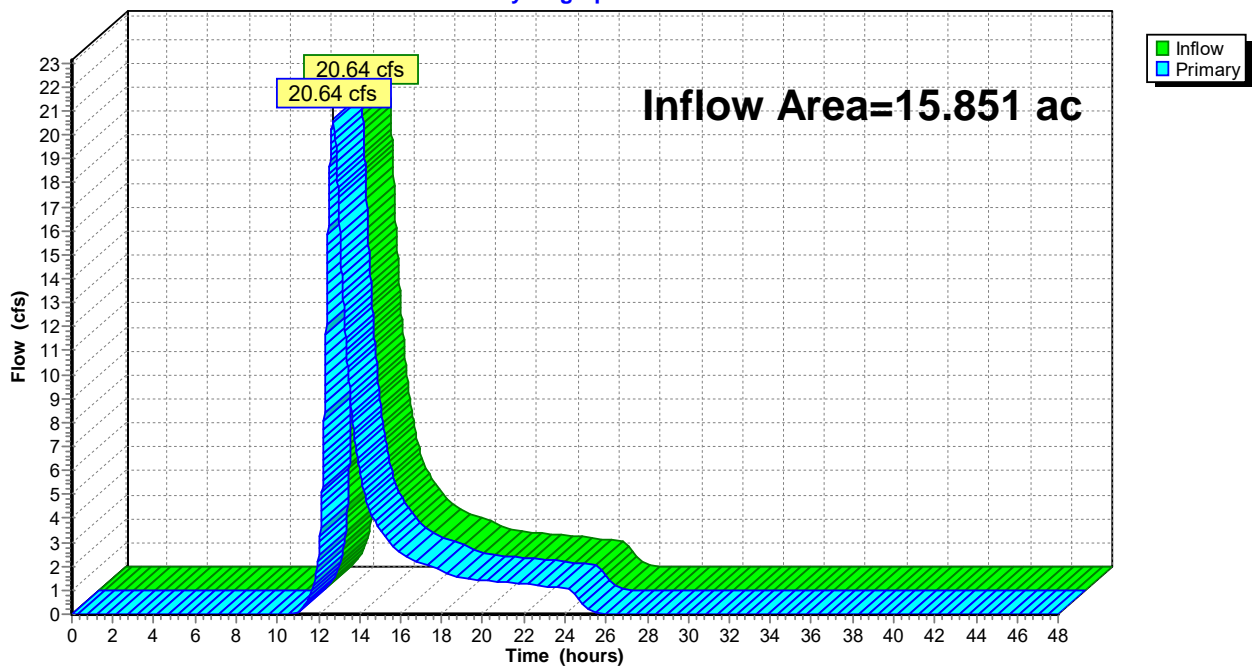
Summary for Link EDP3: DP-3

Inflow Area = 15.851 ac, 0.28% Impervious, Inflow Depth = 2.83" for 100-Year event
Inflow = 20.64 cfs @ 12.70 hrs, Volume= 3.743 af
Primary = 20.64 cfs @ 12.70 hrs, Volume= 3.743 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP3: DP-3

Hydrograph



Hydrograph for Link EDP3: DP-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.07	0.00	0.07	40.00	0.00	0.00	0.00
11.50	0.56	0.00	0.56	40.50	0.00	0.00	0.00
12.00	2.41	0.00	2.41	41.00	0.00	0.00	0.00
12.50	16.89	0.00	16.89	41.50	0.00	0.00	0.00
13.00	16.80	0.00	16.80	42.00	0.00	0.00	0.00
13.50	9.58	0.00	9.58	42.50	0.00	0.00	0.00
14.00	6.03	0.00	6.03	43.00	0.00	0.00	0.00
14.50	4.36	0.00	4.36	43.50	0.00	0.00	0.00
15.00	3.51	0.00	3.51	44.00	0.00	0.00	0.00
15.50	2.91	0.00	2.91	44.50	0.00	0.00	0.00
16.00	2.53	0.00	2.53	45.00	0.00	0.00	0.00
16.50	2.32	0.00	2.32	45.50	0.00	0.00	0.00
17.00	2.15	0.00	2.15	46.00	0.00	0.00	0.00
17.50	1.98	0.00	1.98	46.50	0.00	0.00	0.00
18.00	1.81	0.00	1.81	47.00	0.00	0.00	0.00
18.50	1.64	0.00	1.64	47.50	0.00	0.00	0.00
19.00	1.53	0.00	1.53	48.00	0.00	0.00	0.00
19.50	1.47	0.00	1.47				
20.00	1.42	0.00	1.42				
20.50	1.38	0.00	1.38				
21.00	1.34	0.00	1.34				
21.50	1.30	0.00	1.30				
22.00	1.26	0.00	1.26				
22.50	1.21	0.00	1.21				
23.00	1.17	0.00	1.17				
23.50	1.12	0.00	1.12				
24.00	1.08	0.00	1.08				
24.50	0.80	0.00	0.80				
25.00	0.22	0.00	0.22				
25.50	0.05	0.00	0.05				
26.00	0.01	0.00	0.01				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

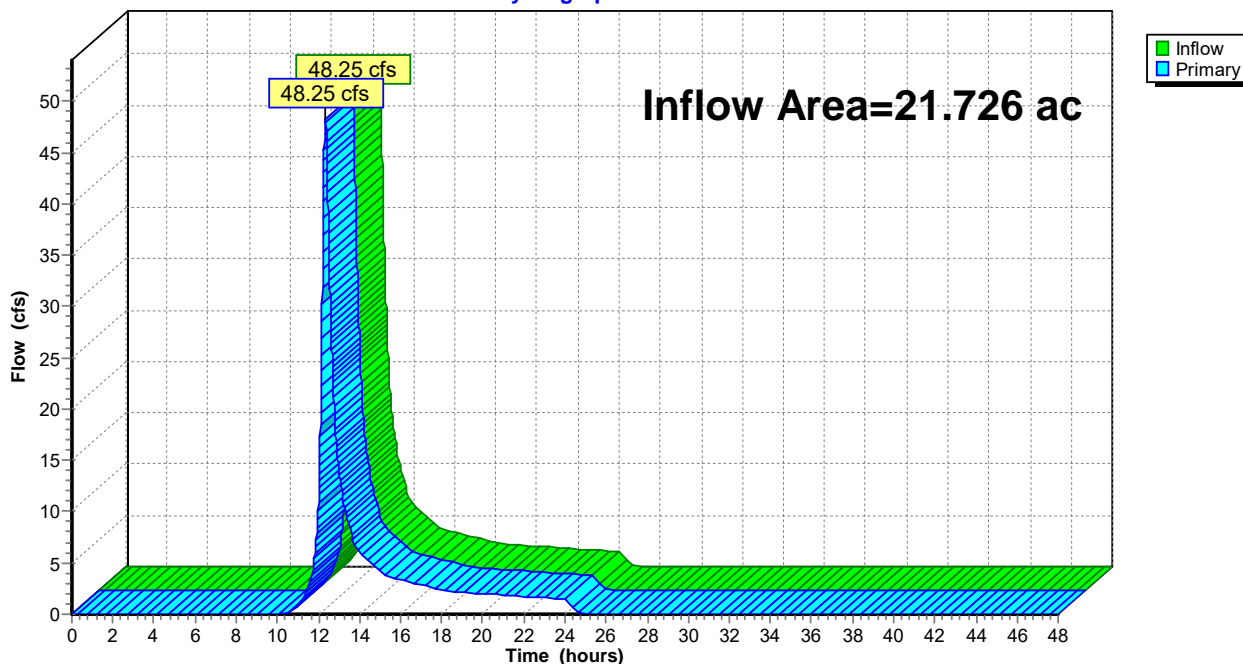
Summary for Link EDP4: DP-4

Inflow Area = 21.726 ac, 0.00% Impervious, Inflow Depth = 3.06" for 100-Year event
Inflow = 48.25 cfs @ 12.34 hrs, Volume= 5.548 af
Primary = 48.25 cfs @ 12.34 hrs, Volume= 5.548 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP4: DP-4

Hydrograph



Hydrograph for Link EDP4: DP-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.14	0.00	0.14	39.50	0.00	0.00	0.00
11.00	0.81	0.00	0.81	40.00	0.00	0.00	0.00
11.50	2.60	0.00	2.60	40.50	0.00	0.00	0.00
12.00	10.72	0.00	10.72	41.00	0.00	0.00	0.00
12.50	37.17	0.00	37.17	41.50	0.00	0.00	0.00
13.00	13.96	0.00	13.96	42.00	0.00	0.00	0.00
13.50	8.53	0.00	8.53	42.50	0.00	0.00	0.00
14.00	6.05	0.00	6.05	43.00	0.00	0.00	0.00
14.50	5.13	0.00	5.13	43.50	0.00	0.00	0.00
15.00	4.31	0.00	4.31	44.00	0.00	0.00	0.00
15.50	3.62	0.00	3.62	44.50	0.00	0.00	0.00
16.00	3.36	0.00	3.36	45.00	0.00	0.00	0.00
16.50	3.12	0.00	3.12	45.50	0.00	0.00	0.00
17.00	2.89	0.00	2.89	46.00	0.00	0.00	0.00
17.50	2.64	0.00	2.64	46.50	0.00	0.00	0.00
18.00	2.38	0.00	2.38	47.00	0.00	0.00	0.00
18.50	2.18	0.00	2.18	47.50	0.00	0.00	0.00
19.00	2.11	0.00	2.11	48.00	0.00	0.00	0.00
19.50	2.05	0.00	2.05				
20.00	1.99	0.00	1.99				
20.50	1.93	0.00	1.93				
21.00	1.87	0.00	1.87				
21.50	1.81	0.00	1.81				
22.00	1.74	0.00	1.74				
22.50	1.68	0.00	1.68				
23.00	1.61	0.00	1.61				
23.50	1.55	0.00	1.55				
24.00	1.48	0.00	1.48				
24.50	0.23	0.00	0.23				
25.00	0.01	0.00	0.01				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

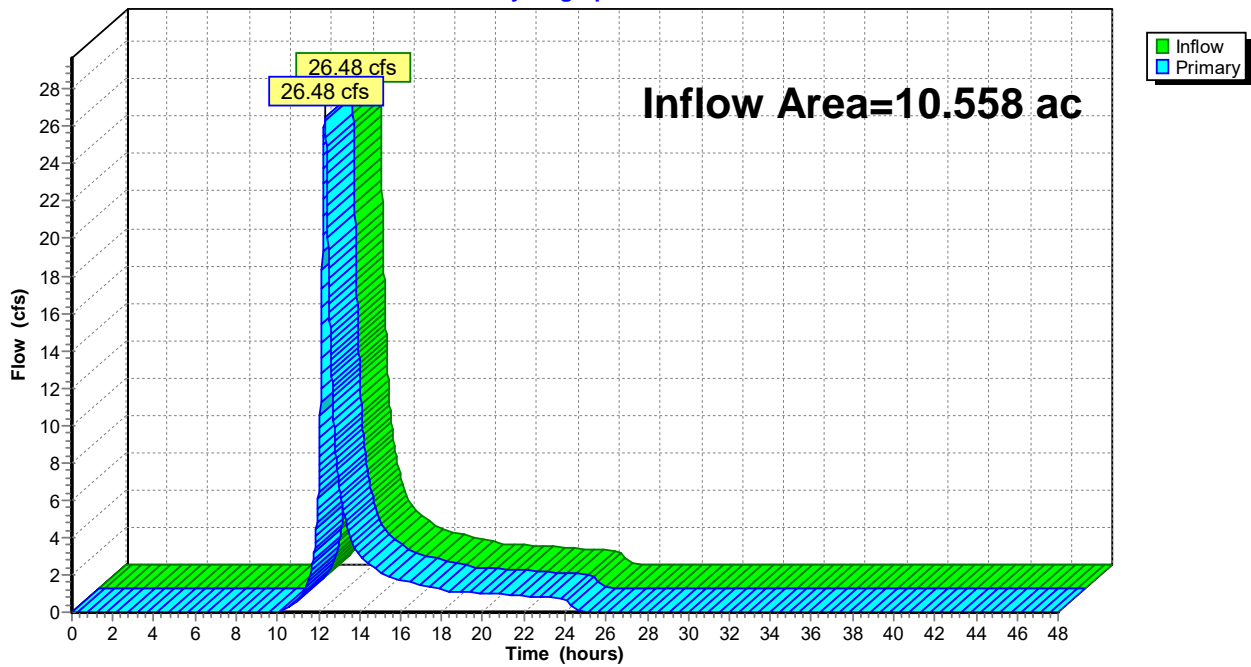
Summary for Link EDP5: EDP5

Inflow Area = 10.558 ac, 0.00% Impervious, Inflow Depth = 3.30" for 100-Year event
Inflow = 26.48 cfs @ 12.32 hrs, Volume= 2.901 af
Primary = 26.48 cfs @ 12.32 hrs, Volume= 2.901 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP5: EDP5

Hydrograph



Hydrograph for Link EDP5: EDP5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.02	0.00	0.02	39.00	0.00	0.00	0.00
10.50	0.22	0.00	0.22	39.50	0.00	0.00	0.00
11.00	0.63	0.00	0.63	40.00	0.00	0.00	0.00
11.50	1.68	0.00	1.68	40.50	0.00	0.00	0.00
12.00	6.48	0.00	6.48	41.00	0.00	0.00	0.00
12.50	18.37	0.00	18.37	41.50	0.00	0.00	0.00
13.00	6.86	0.00	6.86	42.00	0.00	0.00	0.00
13.50	4.26	0.00	4.26	42.50	0.00	0.00	0.00
14.00	3.04	0.00	3.04	43.00	0.00	0.00	0.00
14.50	2.59	0.00	2.59	43.50	0.00	0.00	0.00
15.00	2.17	0.00	2.17	44.00	0.00	0.00	0.00
15.50	1.83	0.00	1.83	44.50	0.00	0.00	0.00
16.00	1.70	0.00	1.70	45.00	0.00	0.00	0.00
16.50	1.58	0.00	1.58	45.50	0.00	0.00	0.00
17.00	1.46	0.00	1.46	46.00	0.00	0.00	0.00
17.50	1.33	0.00	1.33	46.50	0.00	0.00	0.00
18.00	1.20	0.00	1.20	47.00	0.00	0.00	0.00
18.50	1.10	0.00	1.10	47.50	0.00	0.00	0.00
19.00	1.07	0.00	1.07	48.00	0.00	0.00	0.00
19.50	1.04	0.00	1.04				
20.00	1.01	0.00	1.01				
20.50	0.98	0.00	0.98				
21.00	0.94	0.00	0.94				
21.50	0.91	0.00	0.91				
22.00	0.88	0.00	0.88				
22.50	0.85	0.00	0.85				
23.00	0.81	0.00	0.81				
23.50	0.78	0.00	0.78				
24.00	0.75	0.00	0.75				
24.50	0.09	0.00	0.09				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

Prepared by Colliers Engineering & Design

Printed 7/24/2024

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 22S: Exist	Runoff Area=1,182,741 sf 0.65% Impervious Runoff Depth=7.54" Flow Length=270' Tc=23.4 min CN=73 Runoff=149.61 cfs 17.064 af
Subcatchment E1: EDA-1	Runoff Area=796,527 sf 0.25% Impervious Runoff Depth=4.56" Flow Length=472' Tc=30.0 min CN=52 Runoff=53.31 cfs 6.945 af
Subcatchment E2: EDA-2	Runoff Area=822,574 sf 1.80% Impervious Runoff Depth=3.37" Flow Length=1,483' Tc=55.9 min CN=44 Runoff=26.83 cfs 5.310 af
Subcatchment E3: EDA-3	Runoff Area=690,451 sf 0.28% Impervious Runoff Depth=4.56" Flow Length=1,360' Tc=49.9 min CN=52 Runoff=34.53 cfs 6.020 af
Subcatchment E4: EDA-4	Runoff Area=946,387 sf 0.00% Impervious Runoff Depth=4.85" Flow Length=1,805' Tc=22.8 min CN=54 Runoff=78.41 cfs 8.783 af
Subcatchment E5: E5	Runoff Area=459,922 sf 0.00% Impervious Runoff Depth=5.14" Flow Length=1,066' Tc=21.0 min CN=56 Runoff=42.17 cfs 4.525 af
Link EDP1: DP-1	Inflow=198.77 cfs 24.009 af Primary=198.77 cfs 24.009 af
Link EDP2: DP-2	Inflow=26.83 cfs 5.310 af Primary=26.83 cfs 5.310 af
Link EDP3: DP-3	Inflow=34.53 cfs 6.020 af Primary=34.53 cfs 6.020 af
Link EDP4: DP-4	Inflow=78.41 cfs 8.783 af Primary=78.41 cfs 8.783 af
Link EDP5: EDP5	Inflow=42.17 cfs 4.525 af Primary=42.17 cfs 4.525 af

Total Runoff Area = 112.456 ac Runoff Volume = 48.648 af Average Runoff Depth = 5.19"
99.46% Pervious = 111.851 ac 0.54% Impervious = 0.605 ac

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Runoff = 149.61 cfs @ 12.33 hrs, Volume= 17.064 af, Depth= 7.54"
 Routed to Link EDP1 : DP-1

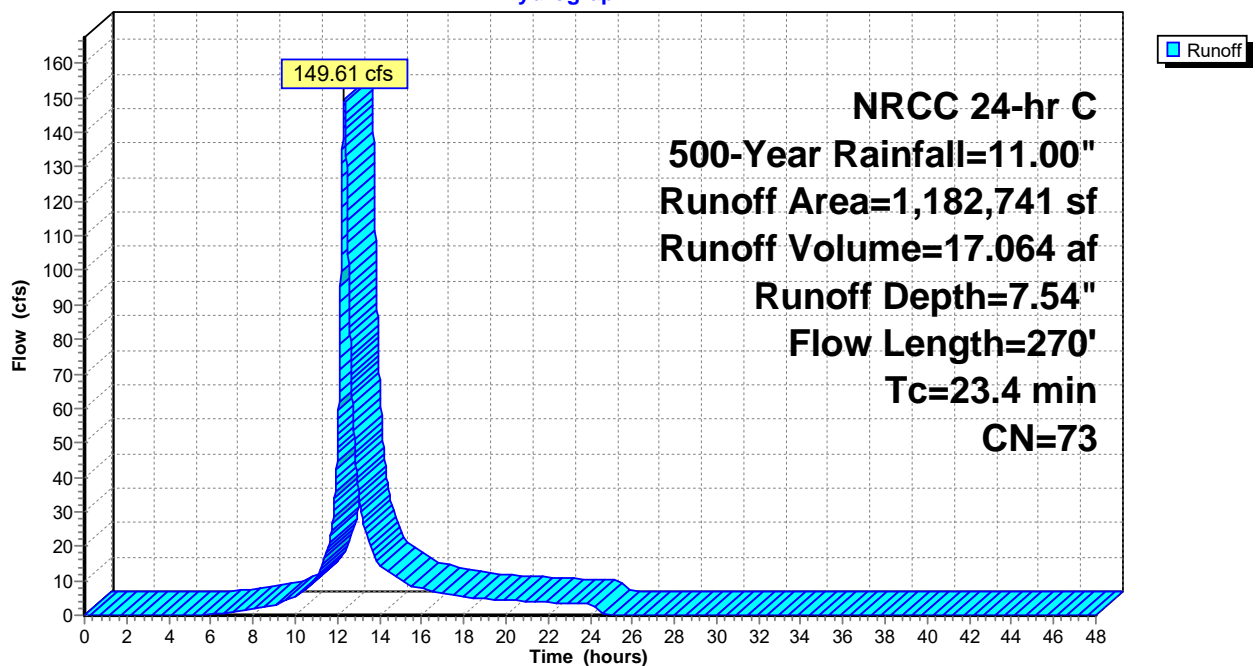
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
66,125	32	Woods/grass comb., Good, HSG A
317,463	79	Woods/grass comb., Good, HSG D
628,062	80	>75% Grass cover, Good, HSG D
78,234	39	>75% Grass cover, Good, HSG A
84,244	61	>75% Grass cover, Good, HSG B
938	89	Dirt roads, HSG D
* 1,552	98	Impervious Areas, HSG D
6,123	98	Impervious Areas, HSG B
1,182,741	73	Weighted Average
1,175,066		99.35% Pervious Area
7,675		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.3	100	0.0250	0.09		Sheet Flow, sf1 Woods: Light underbrush n= 0.400 P2= 3.31"
4.1	170	0.0190	0.69		Shallow Concentrated Flow, scf1 Woodland Kv= 5.0 fps
23.4	270	Total			

Subcatchment 22S: Exist Wetlands/Undeveloped Area

Hydrograph



Hydrograph for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	7.54	0.00
0.50	0.06	0.00	0.00	29.50	11.00	7.54	0.00
1.00	0.13	0.00	0.00	30.00	11.00	7.54	0.00
1.50	0.20	0.00	0.00	30.50	11.00	7.54	0.00
2.00	0.27	0.00	0.00	31.00	11.00	7.54	0.00
2.50	0.34	0.00	0.00	31.50	11.00	7.54	0.00
3.00	0.42	0.00	0.00	32.00	11.00	7.54	0.00
3.50	0.50	0.00	0.00	32.50	11.00	7.54	0.00
4.00	0.58	0.00	0.00	33.00	11.00	7.54	0.00
4.50	0.67	0.00	0.00	33.50	11.00	7.54	0.00
5.00	0.76	0.00	0.00	34.00	11.00	7.54	0.00
5.50	0.85	0.00	0.12	34.50	11.00	7.54	0.00
6.00	0.94	0.01	0.36	35.00	11.00	7.54	0.00
6.50	1.05	0.02	0.64	35.50	11.00	7.54	0.00
7.00	1.16	0.04	1.00	36.00	11.00	7.54	0.00
7.50	1.29	0.07	1.42	36.50	11.00	7.54	0.00
8.00	1.43	0.11	1.91	37.00	11.00	7.54	0.00
8.50	1.58	0.16	2.47	37.50	11.00	7.54	0.00
9.00	1.74	0.21	3.07	38.00	11.00	7.54	0.00
9.50	1.94	0.29	4.01	38.50	11.00	7.54	0.00
10.00	2.17	0.40	5.50	39.00	11.00	7.54	0.00
10.50	2.45	0.54	7.27	39.50	11.00	7.54	0.00
11.00	2.84	0.76	10.75	40.00	11.00	7.54	0.00
11.50	3.44	1.14	18.62	40.50	11.00	7.54	0.00
12.00	5.24	2.47	47.12	41.00	11.00	7.54	0.00
12.50	7.56	4.42	111.08	41.50	11.00	7.54	0.00
13.00	8.16	4.96	36.43	42.00	11.00	7.54	0.00
13.50	8.55	5.30	20.98	42.50	11.00	7.54	0.00
14.00	8.83	5.55	14.51	43.00	11.00	7.54	0.00
14.50	9.06	5.76	12.10	43.50	11.00	7.54	0.00
15.00	9.26	5.94	10.06	44.00	11.00	7.54	0.00
15.50	9.42	6.09	8.36	44.50	11.00	7.54	0.00
16.00	9.57	6.22	7.69	45.00	11.00	7.54	0.00
16.50	9.71	6.35	7.10	45.50	11.00	7.54	0.00
17.00	9.84	6.47	6.52	46.00	11.00	7.54	0.00
17.50	9.95	6.57	5.93	46.50	11.00	7.54	0.00
18.00	10.06	6.67	5.34	47.00	11.00	7.54	0.00
18.50	10.15	6.76	4.85	47.50	11.00	7.54	0.00
19.00	10.24	6.84	4.68	48.00	11.00	7.54	0.00
19.50	10.33	6.92	4.53				
20.00	10.42	7.00	4.39				
20.50	10.50	7.08	4.24				
21.00	10.58	7.15	4.09				
21.50	10.66	7.23	3.94				
22.00	10.73	7.29	3.80				
22.50	10.80	7.36	3.65				
23.00	10.87	7.42	3.50				
23.50	10.94	7.48	3.35				
24.00	11.00	7.54	3.20				
24.50	11.00	7.54	0.55				
25.00	11.00	7.54	0.02				
25.50	11.00	7.54	0.00				
26.00	11.00	7.54	0.00				
26.50	11.00	7.54	0.00				
27.00	11.00	7.54	0.00				
27.50	11.00	7.54	0.00				
28.00	11.00	7.54	0.00				
28.50	11.00	7.54	0.00				

Summary for Subcatchment E1: EDA-1

Runoff = 53.31 cfs @ 12.43 hrs, Volume= 6.945 af, Depth= 4.56"
 Routed to Link EDP1 : DP-1

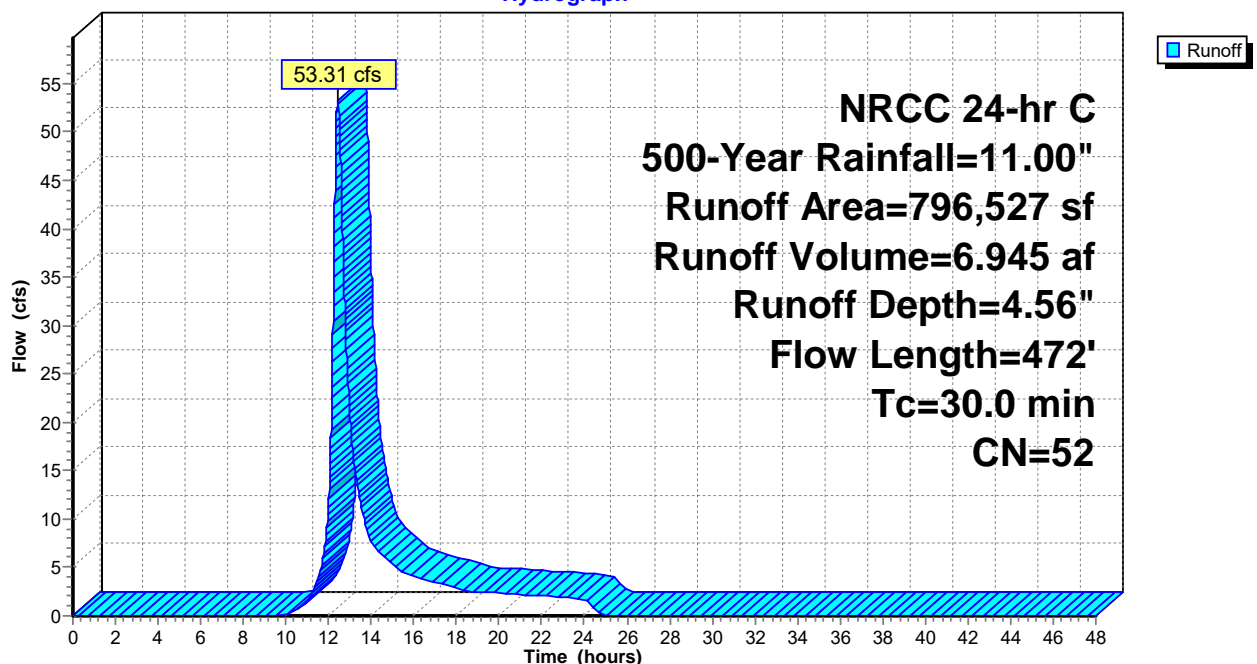
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
* 207,150	80	>75% Grass cover, Good, HSG D
2,839	89	Dirt roads, HSG D
* 1,568	98	Impervious Area, HSG D
71,639	79	Woods/grass comb., Good, HSG D
298,029	39	>75% Grass cover, Good, HSG A
* 406	98	impervious Area, HSG A
5,066	72	Dirt roads, HSG A
209,830	32	Woods/grass comb., Good, HSG A
0	61	>75% Grass cover, Good, HSG B
796,527	52	Weighted Average
794,553		99.75% Pervious Area
1,974		0.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.7	100	0.0150	0.07		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
2.4	81	0.0123	0.55		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
3.9	291	0.0060	1.25		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
30.0	472	Total			

Subcatchment E1: EDA-1

Hydrograph



Hydrograph for Subcatchment E1: EDA-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	4.56	0.00
0.50	0.06	0.00	0.00	29.50	11.00	4.56	0.00
1.00	0.13	0.00	0.00	30.00	11.00	4.56	0.00
1.50	0.20	0.00	0.00	30.50	11.00	4.56	0.00
2.00	0.27	0.00	0.00	31.00	11.00	4.56	0.00
2.50	0.34	0.00	0.00	31.50	11.00	4.56	0.00
3.00	0.42	0.00	0.00	32.00	11.00	4.56	0.00
3.50	0.50	0.00	0.00	32.50	11.00	4.56	0.00
4.00	0.58	0.00	0.00	33.00	11.00	4.56	0.00
4.50	0.67	0.00	0.00	33.50	11.00	4.56	0.00
5.00	0.76	0.00	0.00	34.00	11.00	4.56	0.00
5.50	0.85	0.00	0.00	34.50	11.00	4.56	0.00
6.00	0.94	0.00	0.00	35.00	11.00	4.56	0.00
6.50	1.05	0.00	0.00	35.50	11.00	4.56	0.00
7.00	1.16	0.00	0.00	36.00	11.00	4.56	0.00
7.50	1.29	0.00	0.00	36.50	11.00	4.56	0.00
8.00	1.43	0.00	0.00	37.00	11.00	4.56	0.00
8.50	1.58	0.00	0.00	37.50	11.00	4.56	0.00
9.00	1.74	0.00	0.00	38.00	11.00	4.56	0.00
9.50	1.94	0.00	0.00	38.50	11.00	4.56	0.00
10.00	2.17	0.01	0.21	39.00	11.00	4.56	0.00
10.50	2.45	0.04	0.70	39.50	11.00	4.56	0.00
11.00	2.84	0.10	1.57	40.00	11.00	4.56	0.00
11.50	3.44	0.24	3.70	40.50	11.00	4.56	0.00
12.00	5.24	0.91	11.40	41.00	11.00	4.56	0.00
12.50	7.56	2.18	51.46	41.50	11.00	4.56	0.00
13.00	8.16	2.57	20.82	42.00	11.00	4.56	0.00
13.50	8.55	2.82	11.62	42.50	11.00	4.56	0.00
14.00	8.83	3.01	7.74	43.00	11.00	4.56	0.00
14.50	9.06	3.17	6.36	43.50	11.00	4.56	0.00
15.00	9.26	3.30	5.33	44.00	11.00	4.56	0.00
15.50	9.42	3.41	4.44	44.50	11.00	4.56	0.00
16.00	9.57	3.52	4.04	45.00	11.00	4.56	0.00
16.50	9.71	3.62	3.75	45.50	11.00	4.56	0.00
17.00	9.84	3.71	3.46	46.00	11.00	4.56	0.00
17.50	9.95	3.79	3.17	46.50	11.00	4.56	0.00
18.00	10.06	3.86	2.87	47.00	11.00	4.56	0.00
18.50	10.15	3.93	2.60	47.50	11.00	4.56	0.00
19.00	10.24	4.00	2.49	48.00	11.00	4.56	0.00
19.50	10.33	4.06	2.42				
20.00	10.42	4.13	2.35				
20.50	10.50	4.19	2.28				
21.00	10.58	4.25	2.20				
21.50	10.66	4.30	2.13				
22.00	10.73	4.36	2.05				
22.50	10.80	4.41	1.98				
23.00	10.87	4.46	1.90				
23.50	10.94	4.51	1.83				
24.00	11.00	4.56	1.75				
24.50	11.00	4.56	0.60				
25.00	11.00	4.56	0.05				
25.50	11.00	4.56	0.00				
26.00	11.00	4.56	0.00				
26.50	11.00	4.56	0.00				
27.00	11.00	4.56	0.00				
27.50	11.00	4.56	0.00				
28.00	11.00	4.56	0.00				
28.50	11.00	4.56	0.00				

Summary for Subcatchment E2: EDA-2

Runoff = 26.83 cfs @ 12.85 hrs, Volume= 5.310 af, Depth= 3.37"
 Routed to Link EDP2 : DP-2

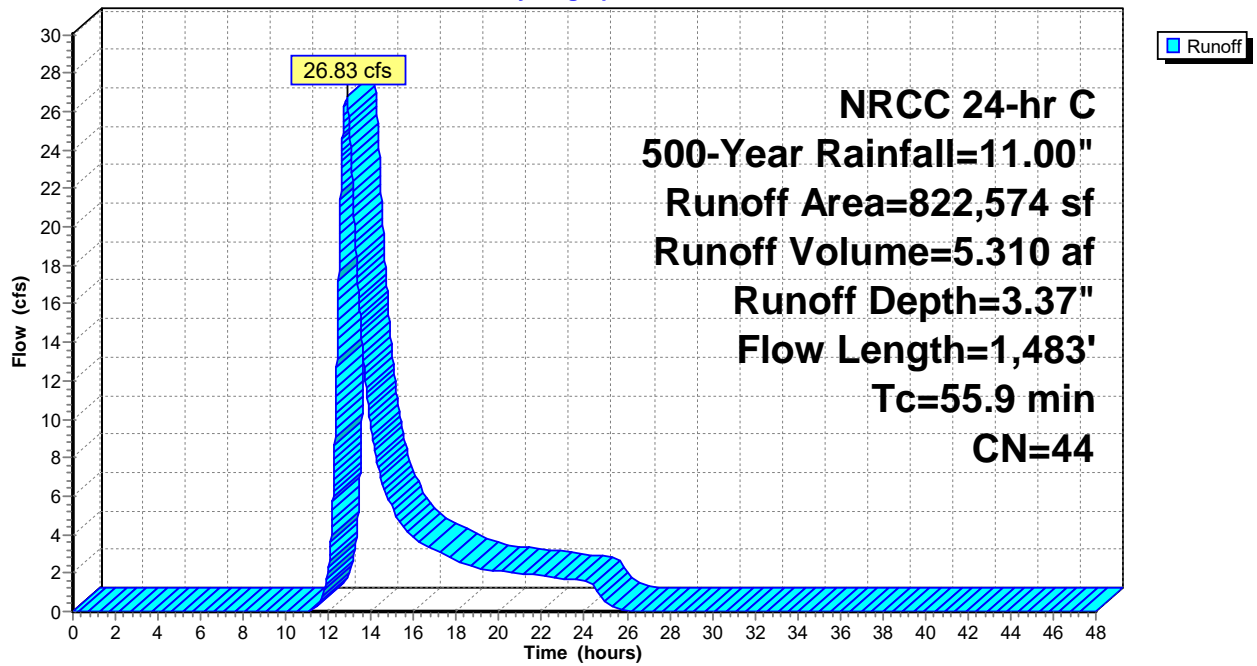
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
411,704	39	>75% Grass cover, Good, HSG A
4,905	72	Dirt roads, HSG A
* 5,267	98	Impervious Area, HSG A
240,401	32	Woods/grass comb., Good, HSG A
52,887	58	Woods/grass comb., Good, HSG B
48,215	80	>75% Grass cover, Good, HSG D
49,660	79	Woods/grass comb., Good, HSG D
9,535	98	Impervious Area, HSG D
822,574	44	Weighted Average
807,772		98.20% Pervious Area
14,802		1.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.7	100	0.0085	0.06		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
3.7	84	0.0058	0.38		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
4.5	437	0.0099	1.60		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
5.5	127	0.0060	0.39		Shallow Concentrated Flow, SCF3 Woodland Kv= 5.0 fps
2.8	296	0.0123	1.79		Shallow Concentrated Flow, SCF4 Unpaved Kv= 16.1 fps
9.7	439	0.0228	0.75		Shallow Concentrated Flow, SCF5 Woodland Kv= 5.0 fps
55.9	1,483	Total			

Subcatchment E2: EDA-2

Hydrograph



Hydrograph for Subcatchment E2: EDA-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	3.37	0.00
0.50	0.06	0.00	0.00	29.50	11.00	3.37	0.00
1.00	0.13	0.00	0.00	30.00	11.00	3.37	0.00
1.50	0.20	0.00	0.00	30.50	11.00	3.37	0.00
2.00	0.27	0.00	0.00	31.00	11.00	3.37	0.00
2.50	0.34	0.00	0.00	31.50	11.00	3.37	0.00
3.00	0.42	0.00	0.00	32.00	11.00	3.37	0.00
3.50	0.50	0.00	0.00	32.50	11.00	3.37	0.00
4.00	0.58	0.00	0.00	33.00	11.00	3.37	0.00
4.50	0.67	0.00	0.00	33.50	11.00	3.37	0.00
5.00	0.76	0.00	0.00	34.00	11.00	3.37	0.00
5.50	0.85	0.00	0.00	34.50	11.00	3.37	0.00
6.00	0.94	0.00	0.00	35.00	11.00	3.37	0.00
6.50	1.05	0.00	0.00	35.50	11.00	3.37	0.00
7.00	1.16	0.00	0.00	36.00	11.00	3.37	0.00
7.50	1.29	0.00	0.00	36.50	11.00	3.37	0.00
8.00	1.43	0.00	0.00	37.00	11.00	3.37	0.00
8.50	1.58	0.00	0.00	37.50	11.00	3.37	0.00
9.00	1.74	0.00	0.00	38.00	11.00	3.37	0.00
9.50	1.94	0.00	0.00	38.50	11.00	3.37	0.00
10.00	2.17	0.00	0.00	39.00	11.00	3.37	0.00
10.50	2.45	0.00	0.00	39.50	11.00	3.37	0.00
11.00	2.84	0.01	0.01	40.00	11.00	3.37	0.00
11.50	3.44	0.06	0.36	40.50	11.00	3.37	0.00
12.00	5.24	0.47	2.34	41.00	11.00	3.37	0.00
12.50	7.56	1.42	18.67	41.50	11.00	3.37	0.00
13.00	8.16	1.72	24.91	42.00	11.00	3.37	0.00
13.50	8.55	1.92	15.05	42.50	11.00	3.37	0.00
14.00	8.83	2.08	9.55	43.00	11.00	3.37	0.00
14.50	9.06	2.21	6.76	43.50	11.00	3.37	0.00
15.00	9.26	2.32	5.38	44.00	11.00	3.37	0.00
15.50	9.42	2.41	4.40	44.50	11.00	3.37	0.00
16.00	9.57	2.50	3.78	45.00	11.00	3.37	0.00
16.50	9.71	2.58	3.44	45.50	11.00	3.37	0.00
17.00	9.84	2.66	3.18	46.00	11.00	3.37	0.00
17.50	9.95	2.73	2.93	46.50	11.00	3.37	0.00
18.00	10.06	2.79	2.68	47.00	11.00	3.37	0.00
18.50	10.15	2.85	2.43	47.50	11.00	3.37	0.00
19.00	10.24	2.90	2.26	48.00	11.00	3.37	0.00
19.50	10.33	2.96	2.16				
20.00	10.42	3.01	2.10				
20.50	10.50	3.06	2.03				
21.00	10.58	3.11	1.97				
21.50	10.66	3.16	1.91				
22.00	10.73	3.21	1.85				
22.50	10.80	3.25	1.79				
23.00	10.87	3.29	1.72				
23.50	10.94	3.33	1.66				
24.00	11.00	3.37	1.59				
24.50	11.00	3.37	1.28				
25.00	11.00	3.37	0.45				
25.50	11.00	3.37	0.12				
26.00	11.00	3.37	0.03				
26.50	11.00	3.37	0.01				
27.00	11.00	3.37	0.00				
27.50	11.00	3.37	0.00				
28.00	11.00	3.37	0.00				
28.50	11.00	3.37	0.00				

Summary for Subcatchment E3: EDA-3

Runoff = 34.53 cfs @ 12.70 hrs, Volume= 6.020 af, Depth= 4.56"
 Routed to Link EDP3 : DP-3

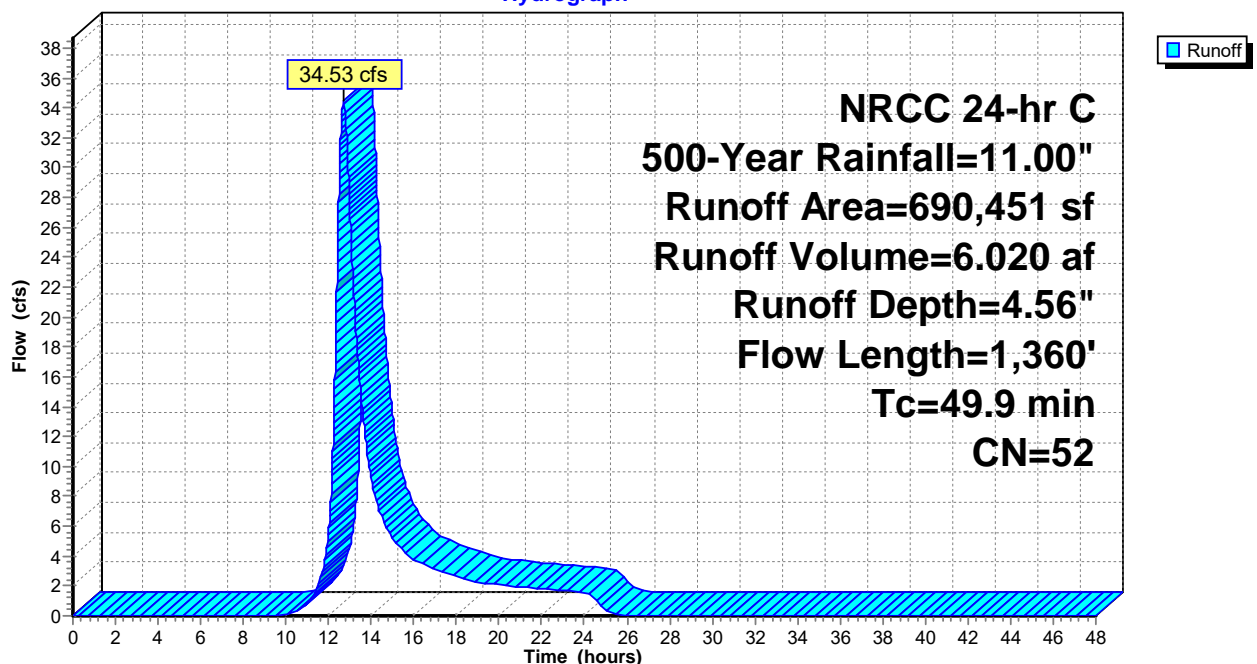
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
1,902	98	Paved parking, HSG A
89,711	39	>75% Grass cover, Good, HSG A
6,532	96	Gravel surface, HSG A
175,868	32	Woods/grass comb., Good, HSG A
168,395	61	>75% Grass cover, Good, HSG B
196,445	58	Woods/grass comb., Good, HSG B
1,344	82	Dirt roads, HSG B
8,737	80	>75% Grass cover, Good, HSG D
41,517	79	Woods/grass comb., Good, HSG D
690,451	52	Weighted Average
688,549		99.72% Pervious Area
1,902		0.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	100	0.0109	0.06		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.31"
21.1	734	0.0135	0.58		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
1.9	526	0.0494	4.51		Shallow Concentrated Flow, Paved Kv= 20.3 fps
49.9	1,360	Total			

Subcatchment E3: EDA-3

Hydrograph



Hydrograph for Subcatchment E3: EDA-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	4.56	0.00
0.50	0.06	0.00	0.00	29.50	11.00	4.56	0.00
1.00	0.13	0.00	0.00	30.00	11.00	4.56	0.00
1.50	0.20	0.00	0.00	30.50	11.00	4.56	0.00
2.00	0.27	0.00	0.00	31.00	11.00	4.56	0.00
2.50	0.34	0.00	0.00	31.50	11.00	4.56	0.00
3.00	0.42	0.00	0.00	32.00	11.00	4.56	0.00
3.50	0.50	0.00	0.00	32.50	11.00	4.56	0.00
4.00	0.58	0.00	0.00	33.00	11.00	4.56	0.00
4.50	0.67	0.00	0.00	33.50	11.00	4.56	0.00
5.00	0.76	0.00	0.00	34.00	11.00	4.56	0.00
5.50	0.85	0.00	0.00	34.50	11.00	4.56	0.00
6.00	0.94	0.00	0.00	35.00	11.00	4.56	0.00
6.50	1.05	0.00	0.00	35.50	11.00	4.56	0.00
7.00	1.16	0.00	0.00	36.00	11.00	4.56	0.00
7.50	1.29	0.00	0.00	36.50	11.00	4.56	0.00
8.00	1.43	0.00	0.00	37.00	11.00	4.56	0.00
8.50	1.58	0.00	0.00	37.50	11.00	4.56	0.00
9.00	1.74	0.00	0.00	38.00	11.00	4.56	0.00
9.50	1.94	0.00	0.00	38.50	11.00	4.56	0.00
10.00	2.17	0.01	0.07	39.00	11.00	4.56	0.00
10.50	2.45	0.04	0.36	39.50	11.00	4.56	0.00
11.00	2.84	0.10	0.89	40.00	11.00	4.56	0.00
11.50	3.44	0.24	2.08	40.50	11.00	4.56	0.00
12.00	5.24	0.91	5.55	41.00	11.00	4.56	0.00
12.50	7.56	2.18	29.23	41.50	11.00	4.56	0.00
13.00	8.16	2.57	27.19	42.00	11.00	4.56	0.00
13.50	8.55	2.82	14.95	42.50	11.00	4.56	0.00
14.00	8.83	3.01	9.19	43.00	11.00	4.56	0.00
14.50	9.06	3.17	6.55	43.50	11.00	4.56	0.00
15.00	9.26	3.30	5.24	44.00	11.00	4.56	0.00
15.50	9.42	3.41	4.32	44.50	11.00	4.56	0.00
16.00	9.57	3.52	3.74	45.00	11.00	4.56	0.00
16.50	9.71	3.62	3.42	45.50	11.00	4.56	0.00
17.00	9.84	3.71	3.16	46.00	11.00	4.56	0.00
17.50	9.95	3.79	2.90	46.50	11.00	4.56	0.00
18.00	10.06	3.86	2.65	47.00	11.00	4.56	0.00
18.50	10.15	3.93	2.39	47.50	11.00	4.56	0.00
19.00	10.24	4.00	2.23	48.00	11.00	4.56	0.00
19.50	10.33	4.06	2.14				
20.00	10.42	4.13	2.08				
20.50	10.50	4.19	2.01				
21.00	10.58	4.25	1.95				
21.50	10.66	4.30	1.88				
22.00	10.73	4.36	1.82				
22.50	10.80	4.41	1.75				
23.00	10.87	4.46	1.69				
23.50	10.94	4.51	1.62				
24.00	11.00	4.56	1.56				
24.50	11.00	4.56	1.16				
25.00	11.00	4.56	0.32				
25.50	11.00	4.56	0.07				
26.00	11.00	4.56	0.02				
26.50	11.00	4.56	0.00				
27.00	11.00	4.56	0.00				
27.50	11.00	4.56	0.00				
28.00	11.00	4.56	0.00				
28.50	11.00	4.56	0.00				

Summary for Subcatchment E4: EDA-4

Runoff = 78.41 cfs @ 12.34 hrs, Volume= 8.783 af, Depth= 4.85"
 Routed to Link EDP4 : DP-4

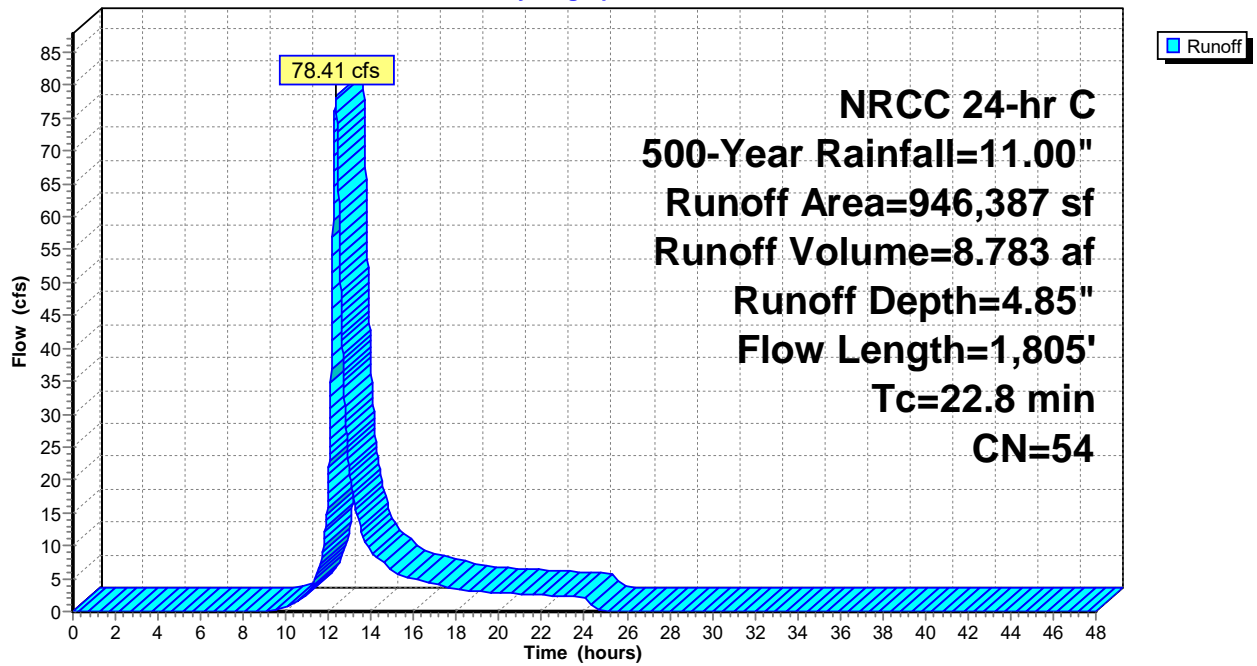
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
3,302	76	Gravel roads, HSG A
4,132	72	Dirt roads, HSG A
7,319	82	Dirt roads, HSG B
215,755	39	>75% Grass cover, Good, HSG A
253,860	61	>75% Grass cover, Good, HSG B
71,688	80	>75% Grass cover, Good, HSG D
181,104	32	Woods/grass comb., Good, HSG A
113,262	58	Woods/grass comb., Good, HSG B
95,965	79	Woods/grass comb., Good, HSG D
946,387	54	Weighted Average
946,387		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	100	0.1400	0.17		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
5.5	658	0.1610	2.01		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
1.7	368	0.0480	3.53		Shallow Concentrated Flow, SCF2 Unpaved Kv= 16.1 fps
5.9	679	0.0089	1.92		Shallow Concentrated Flow, SCF3 Paved Kv= 20.3 fps
22.8	1,805	Total			

Subcatchment E4: EDA-4

Hydrograph



Hydrograph for Subcatchment E4: EDA-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	4.85	0.00
0.50	0.06	0.00	0.00	29.50	11.00	4.85	0.00
1.00	0.13	0.00	0.00	30.00	11.00	4.85	0.00
1.50	0.20	0.00	0.00	30.50	11.00	4.85	0.00
2.00	0.27	0.00	0.00	31.00	11.00	4.85	0.00
2.50	0.34	0.00	0.00	31.50	11.00	4.85	0.00
3.00	0.42	0.00	0.00	32.00	11.00	4.85	0.00
3.50	0.50	0.00	0.00	32.50	11.00	4.85	0.00
4.00	0.58	0.00	0.00	33.00	11.00	4.85	0.00
4.50	0.67	0.00	0.00	33.50	11.00	4.85	0.00
5.00	0.76	0.00	0.00	34.00	11.00	4.85	0.00
5.50	0.85	0.00	0.00	34.50	11.00	4.85	0.00
6.00	0.94	0.00	0.00	35.00	11.00	4.85	0.00
6.50	1.05	0.00	0.00	35.50	11.00	4.85	0.00
7.00	1.16	0.00	0.00	36.00	11.00	4.85	0.00
7.50	1.29	0.00	0.00	36.50	11.00	4.85	0.00
8.00	1.43	0.00	0.00	37.00	11.00	4.85	0.00
8.50	1.58	0.00	0.00	37.50	11.00	4.85	0.00
9.00	1.74	0.00	0.00	38.00	11.00	4.85	0.00
9.50	1.94	0.01	0.19	38.50	11.00	4.85	0.00
10.00	2.17	0.02	0.68	39.00	11.00	4.85	0.00
10.50	2.45	0.06	1.39	39.50	11.00	4.85	0.00
11.00	2.84	0.13	2.76	40.00	11.00	4.85	0.00
11.50	3.44	0.29	6.10	40.50	11.00	4.85	0.00
12.00	5.24	1.04	20.02	41.00	11.00	4.85	0.00
12.50	7.56	2.38	58.88	41.50	11.00	4.85	0.00
13.00	8.16	2.79	21.14	42.00	11.00	4.85	0.00
13.50	8.55	3.05	12.71	42.50	11.00	4.85	0.00
14.00	8.83	3.24	8.94	43.00	11.00	4.85	0.00
14.50	9.06	3.41	7.55	43.50	11.00	4.85	0.00
15.00	9.26	3.55	6.31	44.00	11.00	4.85	0.00
15.50	9.42	3.67	5.29	44.50	11.00	4.85	0.00
16.00	9.57	3.78	4.89	45.00	11.00	4.85	0.00
16.50	9.71	3.88	4.54	45.50	11.00	4.85	0.00
17.00	9.84	3.97	4.19	46.00	11.00	4.85	0.00
17.50	9.95	4.06	3.82	46.50	11.00	4.85	0.00
18.00	10.06	4.14	3.45	47.00	11.00	4.85	0.00
18.50	10.15	4.21	3.14	47.50	11.00	4.85	0.00
19.00	10.24	4.28	3.04	48.00	11.00	4.85	0.00
19.50	10.33	4.34	2.95				
20.00	10.42	4.41	2.87				
20.50	10.50	4.47	2.78				
21.00	10.58	4.53	2.68				
21.50	10.66	4.59	2.59				
22.00	10.73	4.65	2.50				
22.50	10.80	4.70	2.40				
23.00	10.87	4.75	2.31				
23.50	10.94	4.80	2.22				
24.00	11.00	4.85	2.12				
24.50	11.00	4.85	0.33				
25.00	11.00	4.85	0.01				
25.50	11.00	4.85	0.00				
26.00	11.00	4.85	0.00				
26.50	11.00	4.85	0.00				
27.00	11.00	4.85	0.00				
27.50	11.00	4.85	0.00				
28.00	11.00	4.85	0.00				
28.50	11.00	4.85	0.00				

240814 RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment E5: E5

Runoff = 42.17 cfs @ 12.30 hrs, Volume= 4.525 af, Depth= 5.14"
 Routed to Link EDP5 : EDP5

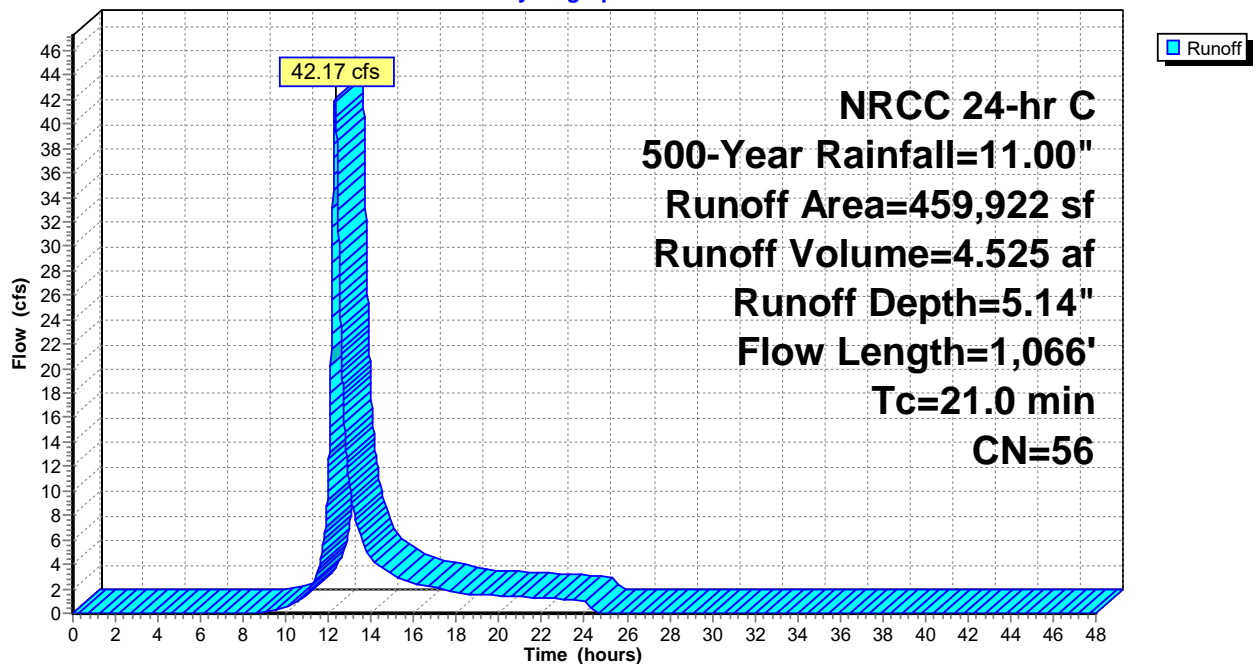
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
3,768	96	Gravel surface, HSG A
1,545	96	Gravel surface, HSG B
3,260	82	Dirt roads, HSG B
8,571	39	>75% Grass cover, Good, HSG A
249,030	61	>75% Grass cover, Good, HSG B
59,839	32	Woods/grass comb., Good, HSG A
133,909	58	Woods/grass comb., Good, HSG B
459,922	56	Weighted Average
459,922		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.1300	0.17		Sheet Flow, SF1 Woods: Light underbrush n= 0.400 P2= 3.31"
7.3	783	0.1270	1.78		Shallow Concentrated Flow, SCF1 Woodland Kv= 5.0 fps
3.7	183	0.0279	0.84		Shallow Concentrated Flow, SCF2 Woodland Kv= 5.0 fps
21.0	1,066	Total			

Subcatchment E5: E5

Hydrograph



Hydrograph for Subcatchment E5: E5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	5.14	0.00
0.50	0.06	0.00	0.00	29.50	11.00	5.14	0.00
1.00	0.13	0.00	0.00	30.00	11.00	5.14	0.00
1.50	0.20	0.00	0.00	30.50	11.00	5.14	0.00
2.00	0.27	0.00	0.00	31.00	11.00	5.14	0.00
2.50	0.34	0.00	0.00	31.50	11.00	5.14	0.00
3.00	0.42	0.00	0.00	32.00	11.00	5.14	0.00
3.50	0.50	0.00	0.00	32.50	11.00	5.14	0.00
4.00	0.58	0.00	0.00	33.00	11.00	5.14	0.00
4.50	0.67	0.00	0.00	33.50	11.00	5.14	0.00
5.00	0.76	0.00	0.00	34.00	11.00	5.14	0.00
5.50	0.85	0.00	0.00	34.50	11.00	5.14	0.00
6.00	0.94	0.00	0.00	35.00	11.00	5.14	0.00
6.50	1.05	0.00	0.00	35.50	11.00	5.14	0.00
7.00	1.16	0.00	0.00	36.00	11.00	5.14	0.00
7.50	1.29	0.00	0.00	36.50	11.00	5.14	0.00
8.00	1.43	0.00	0.00	37.00	11.00	5.14	0.00
8.50	1.58	0.00	0.00	37.50	11.00	5.14	0.00
9.00	1.74	0.00	0.06	38.00	11.00	5.14	0.00
9.50	1.94	0.02	0.23	38.50	11.00	5.14	0.00
10.00	2.17	0.04	0.51	39.00	11.00	5.14	0.00
10.50	2.45	0.09	0.90	39.50	11.00	5.14	0.00
11.00	2.84	0.18	1.68	40.00	11.00	5.14	0.00
11.50	3.44	0.36	3.54	40.50	11.00	5.14	0.00
12.00	5.24	1.17	11.53	41.00	11.00	5.14	0.00
12.50	7.56	2.59	28.44	41.50	11.00	5.14	0.00
13.00	8.16	3.01	10.22	42.00	11.00	5.14	0.00
13.50	8.55	3.28	6.26	42.50	11.00	5.14	0.00
14.00	8.83	3.48	4.44	43.00	11.00	5.14	0.00
14.50	9.06	3.66	3.77	43.50	11.00	5.14	0.00
15.00	9.26	3.80	3.15	44.00	11.00	5.14	0.00
15.50	9.42	3.92	2.64	44.50	11.00	5.14	0.00
16.00	9.57	4.04	2.45	45.00	11.00	5.14	0.00
16.50	9.71	4.14	2.27	45.50	11.00	5.14	0.00
17.00	9.84	4.24	2.09	46.00	11.00	5.14	0.00
17.50	9.95	4.33	1.91	46.50	11.00	5.14	0.00
18.00	10.06	4.41	1.72	47.00	11.00	5.14	0.00
18.50	10.15	4.48	1.57	47.50	11.00	5.14	0.00
19.00	10.24	4.55	1.52	48.00	11.00	5.14	0.00
19.50	10.33	4.62	1.48				
20.00	10.42	4.69	1.43				
20.50	10.50	4.75	1.39				
21.00	10.58	4.81	1.34				
21.50	10.66	4.87	1.29				
22.00	10.73	4.93	1.25				
22.50	10.80	4.99	1.20				
23.00	10.87	5.04	1.15				
23.50	10.94	5.09	1.11				
24.00	11.00	5.14	1.06				
24.50	11.00	5.14	0.13				
25.00	11.00	5.14	0.00				
25.50	11.00	5.14	0.00				
26.00	11.00	5.14	0.00				
26.50	11.00	5.14	0.00				
27.00	11.00	5.14	0.00				
27.50	11.00	5.14	0.00				
28.00	11.00	5.14	0.00				
28.50	11.00	5.14	0.00				

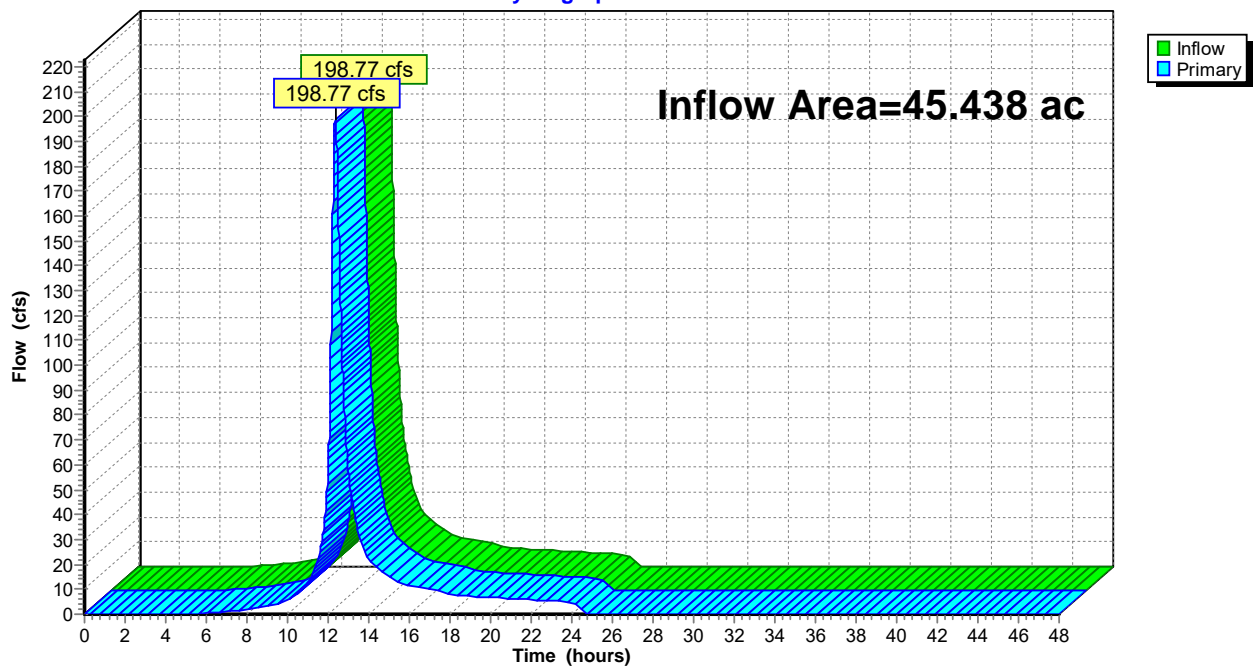
Summary for Link EDP1: DP-1

Inflow Area = 45.438 ac, 0.49% Impervious, Inflow Depth = 6.34" for 500-Year event
Inflow = 198.77 cfs @ 12.35 hrs, Volume= 24.009 af
Primary = 198.77 cfs @ 12.35 hrs, Volume= 24.009 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP1: DP-1

Hydrograph



Hydrograph for Link EDP1: DP-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.12	0.00	0.12	34.50	0.00	0.00	0.00
6.00	0.36	0.00	0.36	35.00	0.00	0.00	0.00
6.50	0.64	0.00	0.64	35.50	0.00	0.00	0.00
7.00	1.00	0.00	1.00	36.00	0.00	0.00	0.00
7.50	1.42	0.00	1.42	36.50	0.00	0.00	0.00
8.00	1.91	0.00	1.91	37.00	0.00	0.00	0.00
8.50	2.47	0.00	2.47	37.50	0.00	0.00	0.00
9.00	3.07	0.00	3.07	38.00	0.00	0.00	0.00
9.50	4.01	0.00	4.01	38.50	0.00	0.00	0.00
10.00	5.71	0.00	5.71	39.00	0.00	0.00	0.00
10.50	7.97	0.00	7.97	39.50	0.00	0.00	0.00
11.00	12.32	0.00	12.32	40.00	0.00	0.00	0.00
11.50	22.32	0.00	22.32	40.50	0.00	0.00	0.00
12.00	58.53	0.00	58.53	41.00	0.00	0.00	0.00
12.50	162.54	0.00	162.54	41.50	0.00	0.00	0.00
13.00	57.25	0.00	57.25	42.00	0.00	0.00	0.00
13.50	32.61	0.00	32.61	42.50	0.00	0.00	0.00
14.00	22.25	0.00	22.25	43.00	0.00	0.00	0.00
14.50	18.46	0.00	18.46	43.50	0.00	0.00	0.00
15.00	15.40	0.00	15.40	44.00	0.00	0.00	0.00
15.50	12.80	0.00	12.80	44.50	0.00	0.00	0.00
16.00	11.73	0.00	11.73	45.00	0.00	0.00	0.00
16.50	10.85	0.00	10.85	45.50	0.00	0.00	0.00
17.00	9.98	0.00	9.98	46.00	0.00	0.00	0.00
17.50	9.11	0.00	9.11	46.50	0.00	0.00	0.00
18.00	8.20	0.00	8.20	47.00	0.00	0.00	0.00
18.50	7.46	0.00	7.46	47.50	0.00	0.00	0.00
19.00	7.17	0.00	7.17	48.00	0.00	0.00	0.00
19.50	6.95	0.00	6.95				
20.00	6.73	0.00	6.73				
20.50	6.52	0.00	6.52				
21.00	6.29	0.00	6.29				
21.50	6.07	0.00	6.07				
22.00	5.85	0.00	5.85				
22.50	5.63	0.00	5.63				
23.00	5.40	0.00	5.40				
23.50	5.17	0.00	5.17				
24.00	4.94	0.00	4.94				
24.50	1.15	0.00	1.15				
25.00	0.07	0.00	0.07				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

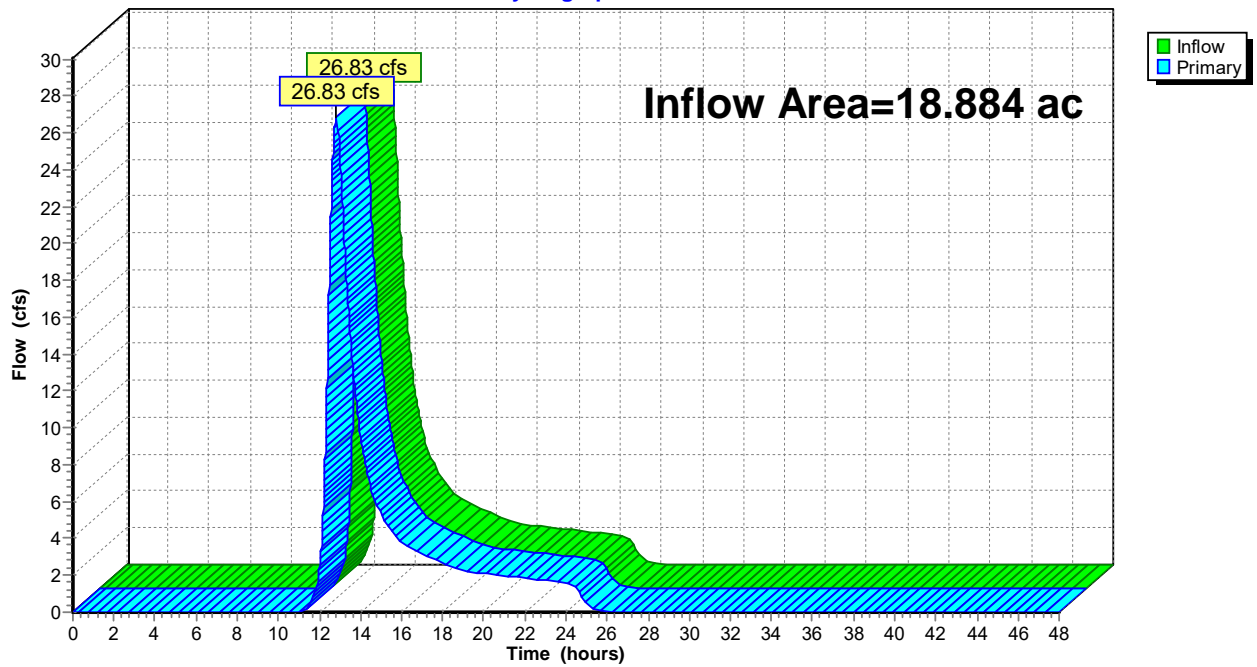
Summary for Link EDP2: DP-2

Inflow Area = 18.884 ac, 1.80% Impervious, Inflow Depth = 3.37" for 500-Year event
Inflow = 26.83 cfs @ 12.85 hrs, Volume= 5.310 af
Primary = 26.83 cfs @ 12.85 hrs, Volume= 5.310 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP2: DP-2

Hydrograph



Hydrograph for Link EDP2: DP-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.01	0.00	0.01	40.00	0.00	0.00	0.00
11.50	0.36	0.00	0.36	40.50	0.00	0.00	0.00
12.00	2.34	0.00	2.34	41.00	0.00	0.00	0.00
12.50	18.67	0.00	18.67	41.50	0.00	0.00	0.00
13.00	24.91	0.00	24.91	42.00	0.00	0.00	0.00
13.50	15.05	0.00	15.05	42.50	0.00	0.00	0.00
14.00	9.55	0.00	9.55	43.00	0.00	0.00	0.00
14.50	6.76	0.00	6.76	43.50	0.00	0.00	0.00
15.00	5.38	0.00	5.38	44.00	0.00	0.00	0.00
15.50	4.40	0.00	4.40	44.50	0.00	0.00	0.00
16.00	3.78	0.00	3.78	45.00	0.00	0.00	0.00
16.50	3.44	0.00	3.44	45.50	0.00	0.00	0.00
17.00	3.18	0.00	3.18	46.00	0.00	0.00	0.00
17.50	2.93	0.00	2.93	46.50	0.00	0.00	0.00
18.00	2.68	0.00	2.68	47.00	0.00	0.00	0.00
18.50	2.43	0.00	2.43	47.50	0.00	0.00	0.00
19.00	2.26	0.00	2.26	48.00	0.00	0.00	0.00
19.50	2.16	0.00	2.16				
20.00	2.10	0.00	2.10				
20.50	2.03	0.00	2.03				
21.00	1.97	0.00	1.97				
21.50	1.91	0.00	1.91				
22.00	1.85	0.00	1.85				
22.50	1.79	0.00	1.79				
23.00	1.72	0.00	1.72				
23.50	1.66	0.00	1.66				
24.00	1.59	0.00	1.59				
24.50	1.28	0.00	1.28				
25.00	0.45	0.00	0.45				
25.50	0.12	0.00	0.12				
26.00	0.03	0.00	0.03				
26.50	0.01	0.00	0.01				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

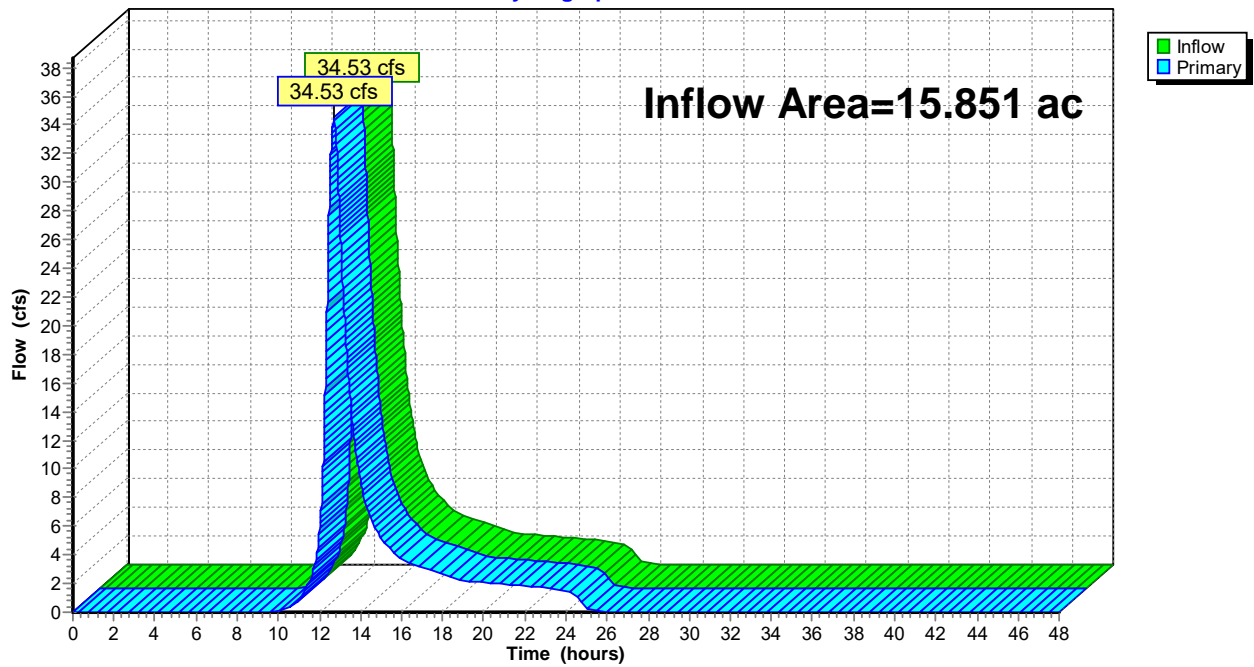
Summary for Link EDP3: DP-3

Inflow Area = 15.851 ac, 0.28% Impervious, Inflow Depth = 4.56" for 500-Year event
Inflow = 34.53 cfs @ 12.70 hrs, Volume= 6.020 af
Primary = 34.53 cfs @ 12.70 hrs, Volume= 6.020 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP3: DP-3

Hydrograph



Hydrograph for Link EDP3: DP-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.07	0.00	0.07	39.00	0.00	0.00	0.00
10.50	0.36	0.00	0.36	39.50	0.00	0.00	0.00
11.00	0.89	0.00	0.89	40.00	0.00	0.00	0.00
11.50	2.08	0.00	2.08	40.50	0.00	0.00	0.00
12.00	5.55	0.00	5.55	41.00	0.00	0.00	0.00
12.50	29.23	0.00	29.23	41.50	0.00	0.00	0.00
13.00	27.19	0.00	27.19	42.00	0.00	0.00	0.00
13.50	14.95	0.00	14.95	42.50	0.00	0.00	0.00
14.00	9.19	0.00	9.19	43.00	0.00	0.00	0.00
14.50	6.55	0.00	6.55	43.50	0.00	0.00	0.00
15.00	5.24	0.00	5.24	44.00	0.00	0.00	0.00
15.50	4.32	0.00	4.32	44.50	0.00	0.00	0.00
16.00	3.74	0.00	3.74	45.00	0.00	0.00	0.00
16.50	3.42	0.00	3.42	45.50	0.00	0.00	0.00
17.00	3.16	0.00	3.16	46.00	0.00	0.00	0.00
17.50	2.90	0.00	2.90	46.50	0.00	0.00	0.00
18.00	2.65	0.00	2.65	47.00	0.00	0.00	0.00
18.50	2.39	0.00	2.39	47.50	0.00	0.00	0.00
19.00	2.23	0.00	2.23	48.00	0.00	0.00	0.00
19.50	2.14	0.00	2.14				
20.00	2.08	0.00	2.08				
20.50	2.01	0.00	2.01				
21.00	1.95	0.00	1.95				
21.50	1.88	0.00	1.88				
22.00	1.82	0.00	1.82				
22.50	1.75	0.00	1.75				
23.00	1.69	0.00	1.69				
23.50	1.62	0.00	1.62				
24.00	1.56	0.00	1.56				
24.50	1.16	0.00	1.16				
25.00	0.32	0.00	0.32				
25.50	0.07	0.00	0.07				
26.00	0.02	0.00	0.02				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

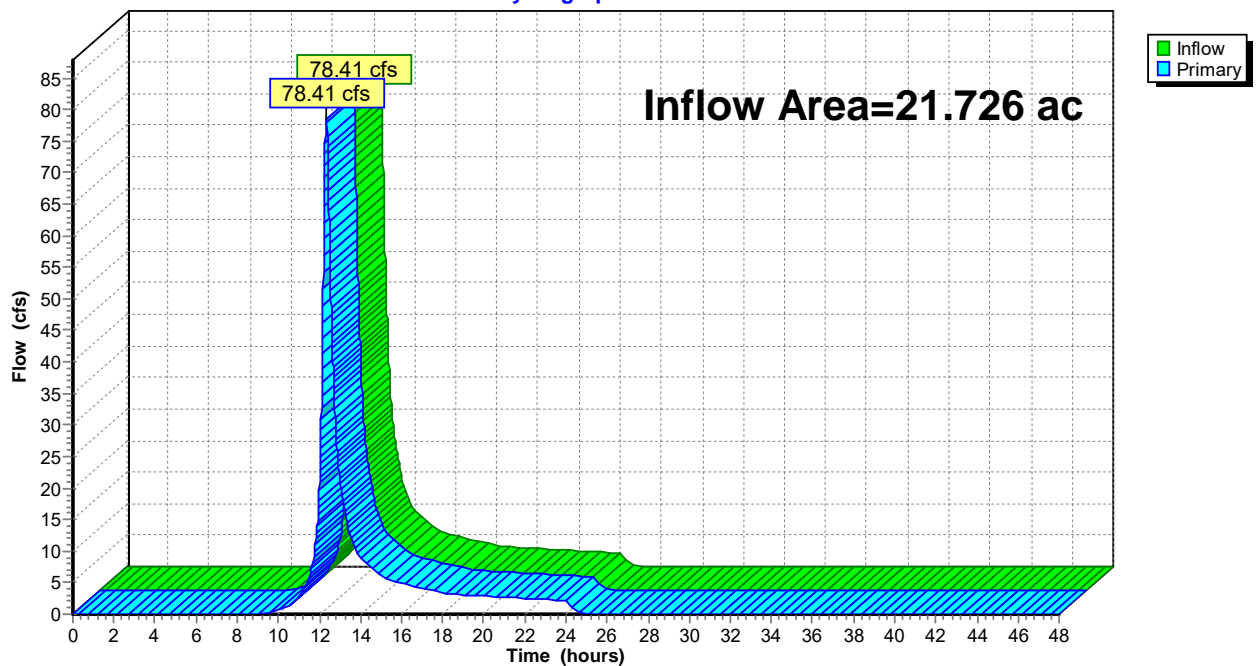
Summary for Link EDP4: DP-4

Inflow Area = 21.726 ac, 0.00% Impervious, Inflow Depth = 4.85" for 500-Year event
Inflow = 78.41 cfs @ 12.34 hrs, Volume= 8.783 af
Primary = 78.41 cfs @ 12.34 hrs, Volume= 8.783 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP4: DP-4

Hydrograph



Hydrograph for Link EDP4: DP-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.19	0.00	0.19	38.50	0.00	0.00	0.00
10.00	0.68	0.00	0.68	39.00	0.00	0.00	0.00
10.50	1.39	0.00	1.39	39.50	0.00	0.00	0.00
11.00	2.76	0.00	2.76	40.00	0.00	0.00	0.00
11.50	6.10	0.00	6.10	40.50	0.00	0.00	0.00
12.00	20.02	0.00	20.02	41.00	0.00	0.00	0.00
12.50	58.88	0.00	58.88	41.50	0.00	0.00	0.00
13.00	21.14	0.00	21.14	42.00	0.00	0.00	0.00
13.50	12.71	0.00	12.71	42.50	0.00	0.00	0.00
14.00	8.94	0.00	8.94	43.00	0.00	0.00	0.00
14.50	7.55	0.00	7.55	43.50	0.00	0.00	0.00
15.00	6.31	0.00	6.31	44.00	0.00	0.00	0.00
15.50	5.29	0.00	5.29	44.50	0.00	0.00	0.00
16.00	4.89	0.00	4.89	45.00	0.00	0.00	0.00
16.50	4.54	0.00	4.54	45.50	0.00	0.00	0.00
17.00	4.19	0.00	4.19	46.00	0.00	0.00	0.00
17.50	3.82	0.00	3.82	46.50	0.00	0.00	0.00
18.00	3.45	0.00	3.45	47.00	0.00	0.00	0.00
18.50	3.14	0.00	3.14	47.50	0.00	0.00	0.00
19.00	3.04	0.00	3.04	48.00	0.00	0.00	0.00
19.50	2.95	0.00	2.95				
20.00	2.87	0.00	2.87				
20.50	2.78	0.00	2.78				
21.00	2.68	0.00	2.68				
21.50	2.59	0.00	2.59				
22.00	2.50	0.00	2.50				
22.50	2.40	0.00	2.40				
23.00	2.31	0.00	2.31				
23.50	2.22	0.00	2.22				
24.00	2.12	0.00	2.12				
24.50	0.33	0.00	0.33				
25.00	0.01	0.00	0.01				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

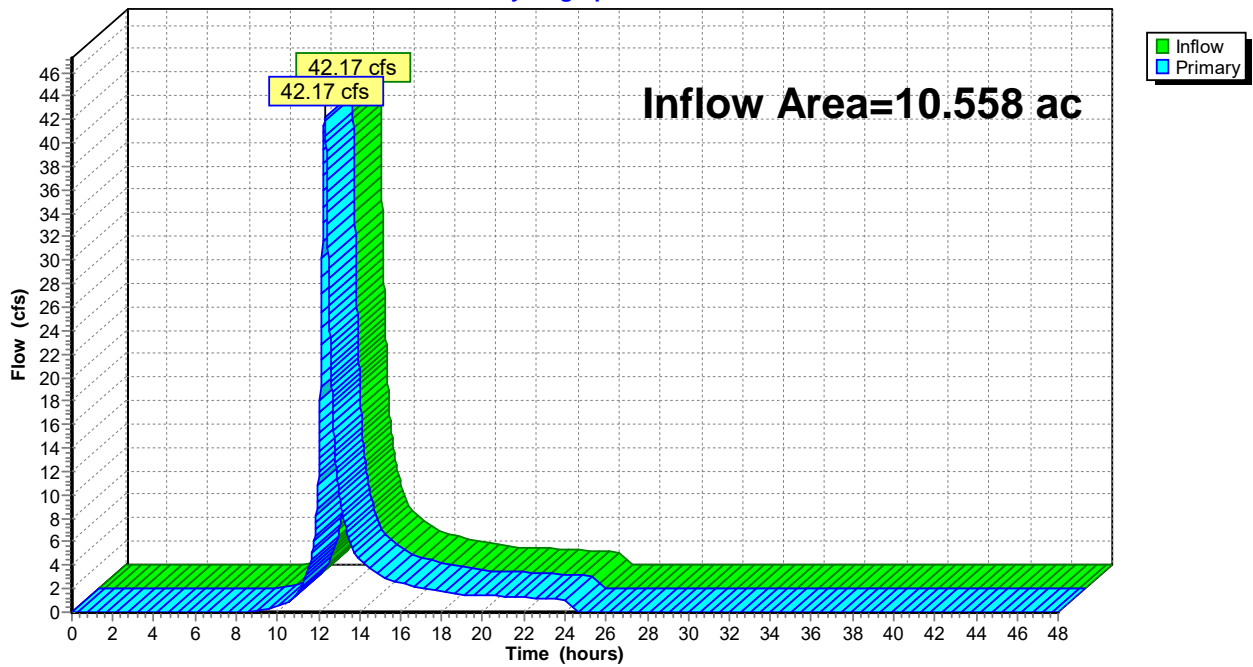
Summary for Link EDP5: EDP5

Inflow Area = 10.558 ac, 0.00% Impervious, Inflow Depth = 5.14" for 500-Year event
Inflow = 42.17 cfs @ 12.30 hrs, Volume= 4.525 af
Primary = 42.17 cfs @ 12.30 hrs, Volume= 4.525 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link EDP5: EDP5

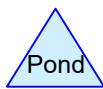
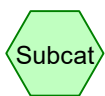
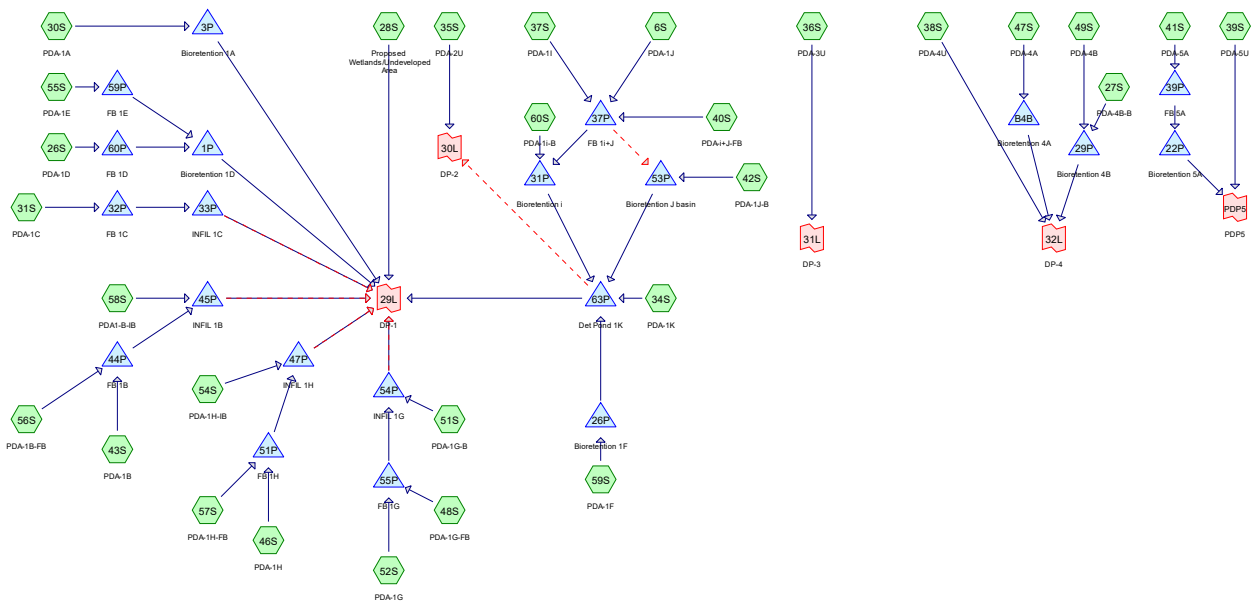
Hydrograph



Hydrograph for Link EDP5: EDP5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.06	0.00	0.06	38.00	0.00	0.00	0.00
9.50	0.23	0.00	0.23	38.50	0.00	0.00	0.00
10.00	0.51	0.00	0.51	39.00	0.00	0.00	0.00
10.50	0.90	0.00	0.90	39.50	0.00	0.00	0.00
11.00	1.68	0.00	1.68	40.00	0.00	0.00	0.00
11.50	3.54	0.00	3.54	40.50	0.00	0.00	0.00
12.00	11.53	0.00	11.53	41.00	0.00	0.00	0.00
12.50	28.44	0.00	28.44	41.50	0.00	0.00	0.00
13.00	10.22	0.00	10.22	42.00	0.00	0.00	0.00
13.50	6.26	0.00	6.26	42.50	0.00	0.00	0.00
14.00	4.44	0.00	4.44	43.00	0.00	0.00	0.00
14.50	3.77	0.00	3.77	43.50	0.00	0.00	0.00
15.00	3.15	0.00	3.15	44.00	0.00	0.00	0.00
15.50	2.64	0.00	2.64	44.50	0.00	0.00	0.00
16.00	2.45	0.00	2.45	45.00	0.00	0.00	0.00
16.50	2.27	0.00	2.27	45.50	0.00	0.00	0.00
17.00	2.09	0.00	2.09	46.00	0.00	0.00	0.00
17.50	1.91	0.00	1.91	46.50	0.00	0.00	0.00
18.00	1.72	0.00	1.72	47.00	0.00	0.00	0.00
18.50	1.57	0.00	1.57	47.50	0.00	0.00	0.00
19.00	1.52	0.00	1.52	48.00	0.00	0.00	0.00
19.50	1.48	0.00	1.48				
20.00	1.43	0.00	1.43				
20.50	1.39	0.00	1.39				
21.00	1.34	0.00	1.34				
21.50	1.29	0.00	1.29				
22.00	1.25	0.00	1.25				
22.50	1.20	0.00	1.20				
23.00	1.15	0.00	1.15				
23.50	1.11	0.00	1.11				
24.00	1.06	0.00	1.06				
24.50	0.13	0.00	0.13				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

Appendix 5 | Post-Construction Stormwater Modeling Schematic & Output



Routing Diagram for 240814_RDM Neelytown Drainage
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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	NRCC 24-hr	C	Default	24.00	1	2.64	2
2	10-Year	NRCC 24-hr	C	Default	24.00	1	4.80	2
3	25-Year	NRCC 24-hr	C	Default	24.00	1	6.04	2
4	100-Year	NRCC 24-hr	C	Default	24.00	1	8.57	2
5	500-Year	NRCC 24-hr	C	Default	24.00	1	11.00	2

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
23.330	39	>75% Grass cover, Good, HSG A (26S, 27S, 28S, 30S, 31S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 41S, 42S, 43S, 47S, 48S, 51S, 54S, 56S, 57S, 58S, 59S, 60S)
9.565	61	>75% Grass cover, Good, HSG B (27S, 28S, 37S, 39S, 40S, 41S, 42S, 43S, 47S, 49S, 51S)
19.717	80	>75% Grass cover, Good, HSG D (26S, 27S, 28S, 31S, 34S, 35S, 37S, 43S, 47S, 55S, 58S, 59S)
0.022	89	Dirt roads, HSG D (28S)
15.181	98	Paved parking, HSG D (26S, 30S, 31S, 37S, 38S, 39S, 41S, 47S, 49S, 55S)
19.513	98	Roofs, HSG D (46S, 52S)
10.822	98	Unconnected pavement, HSG D (43S, 59S)
6.388	98	Unconnected roofs, HSG D (6S, 41S)
1.039	32	Woods/grass comb., Good, HSG A (28S)
6.878	79	Woods/grass comb., Good, HSG D (28S)
112.456	78	TOTAL AREA

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: PDA-1J	Runoff Area=218,370 sf 100.00% Impervious Runoff Depth=2.41" Tc=0.0 min CN=98 Runoff=14.85 cfs 1.007 af
Subcatchment 26S: PDA-1D	Runoff Area=153,719 sf 63.56% Impervious Runoff Depth=1.74" Tc=6.0 min CN=91 Runoff=7.63 cfs 0.511 af
Subcatchment 27S: PDA-4B-B	Runoff Area=66,436 sf 0.00% Impervious Runoff Depth=0.73" Tc=6.0 min CN=75 Runoff=1.35 cfs 0.093 af
Subcatchment 28S: Proposed	Runoff Area=1,182,741 sf 0.00% Impervious Runoff Depth=0.64" Tc=23.4 min CN=73 Runoff=11.36 cfs 1.459 af
Subcatchment 30S: PDA-1A	Runoff Area=108,164 sf 78.54% Impervious Runoff Depth=1.29" Tc=6.0 min CN=85 Runoff=4.08 cfs 0.267 af
Subcatchment 31S: PDA-1C	Runoff Area=112,511 sf 77.93% Impervious Runoff Depth=1.66" Tc=6.0 min CN=90 Runoff=5.36 cfs 0.357 af
Subcatchment 34S: PDA-1K	Runoff Area=26,597 sf 0.00% Impervious Runoff Depth=0.00" Tc=6.0 min CN=44 Runoff=0.00 cfs 0.000 af
Subcatchment 35S: PDA-2U	Runoff Area=74,849 sf 0.00% Impervious Runoff Depth=0.06" Tc=6.0 min CN=52 Runoff=0.01 cfs 0.009 af
Subcatchment 36S: PDA-3U	Runoff Area=54,725 sf 0.00% Impervious Runoff Depth=0.00" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment 37S: PDA-1I	Runoff Area=172,961 sf 57.42% Impervious Runoff Depth=1.10" Tc=6.0 min CN=82 Runoff=5.55 cfs 0.365 af
Subcatchment 38S: PDA-4U	Runoff Area=322,148 sf 10.08% Impervious Runoff Depth=0.00" Tc=6.0 min CN=45 Runoff=0.01 cfs 0.002 af
Subcatchment 39S: PDA-5U	Runoff Area=103,088 sf 21.06% Impervious Runoff Depth=0.19" Tc=6.0 min CN=59 Runoff=0.14 cfs 0.038 af
Subcatchment 40S: PDA-i+J-FB	Runoff Area=13,894 sf 0.00% Impervious Runoff Depth=0.01" Tc=6.0 min CN=47 Runoff=0.00 cfs 0.000 af
Subcatchment 41S: PDA-5A	Runoff Area=216,315 sf 46.58% Impervious Runoff Depth=0.69" Tc=6.0 min CN=74 Runoff=4.08 cfs 0.285 af
Subcatchment 42S: PDA-1J-B	Runoff Area=33,984 sf 0.00% Impervious Runoff Depth=0.08" Tc=6.0 min CN=53 Runoff=0.01 cfs 0.005 af
Subcatchment 43S: PDA-1B	Runoff Area=398,274 sf 73.53% Impervious Runoff Depth=1.36" Tc=6.0 min CN=86 Runoff=15.79 cfs 1.035 af
Subcatchment 46S: PDA-1H	Runoff Area=433,100 sf 100.00% Impervious Runoff Depth=2.41" Tc=6.0 min CN=98 Runoff=26.66 cfs 1.997 af

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Subcatchment 47S: PDA-4A	Runoff Area=104,546 sf 34.61% Impervious Runoff Depth=0.49" Tc=6.0 min CN=69 Runoff=1.25 cfs 0.097 af
Subcatchment 48S: PDA-1G-FB	Runoff Area=17,215 sf 0.00% Impervious Runoff Depth=0.00" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment 49S: PDA-4B	Runoff Area=232,321 sf 62.91% Impervious Runoff Depth=1.23" Tc=6.0 min CN=84 Runoff=8.31 cfs 0.545 af
Subcatchment 51S: PDA-1G-B	Runoff Area=27,422 sf 0.00% Impervious Runoff Depth=0.00" Tc=6.0 min CN=45 Runoff=0.00 cfs 0.000 af
Subcatchment 52S: PDA-1G	Runoff Area=416,900 sf 100.00% Impervious Runoff Depth=2.41" Tc=6.0 min CN=98 Runoff=25.66 cfs 1.922 af
Subcatchment 54S: PDA-1H-IB	Runoff Area=39,736 sf 0.00% Impervious Runoff Depth=0.00" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment 55S: PDA-1E	Runoff Area=17,321 sf 82.34% Impervious Runoff Depth=2.10" Tc=6.0 min CN=95 Runoff=0.99 cfs 0.070 af
Subcatchment 56S: PDA-1B-FB	Runoff Area=16,395 sf 0.00% Impervious Runoff Depth=0.00" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment 57S: PDA-1H-FB	Runoff Area=19,432 sf 0.00% Impervious Runoff Depth=0.00" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment 58S: PDA1-B-IB	Runoff Area=33,078 sf 0.00% Impervious Runoff Depth=0.00" Tc=6.0 min CN=40 Runoff=0.00 cfs 0.000 af
Subcatchment 59S: PDA-1F	Runoff Area=250,816 sf 71.20% Impervious Runoff Depth=1.04" Tc=6.0 min CN=81 Runoff=7.60 cfs 0.501 af
Subcatchment 60S: PDA-1i-B	Runoff Area=31,544 sf 0.00% Impervious Runoff Depth=0.00" Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af
Pond 1P: Bioretention 1D	Peak Elev=412.79' Storage=25,297 cf Inflow=8.52 cfs 0.581 af Outflow=0.00 cfs 0.000 af
Pond 3P: Bioretention 1A	Peak Elev=413.73' Storage=11,636 cf Inflow=4.08 cfs 0.267 af Outflow=0.00 cfs 0.000 af
Pond 22P: Bioretention 5A	Peak Elev=432.28' Storage=12,412 cf Inflow=3.75 cfs 0.285 af Outflow=0.00 cfs 0.000 af
Pond 26P: Bioretention 1F	Peak Elev=411.36' Storage=21,807 cf Inflow=7.60 cfs 0.501 af Outflow=0.00 cfs 0.000 af
Pond 29P: Bioretention 4B	Peak Elev=418.84' Storage=27,790 cf Inflow=9.67 cfs 0.638 af Outflow=0.00 cfs 0.000 af
Pond 31P: Bioretention i	Peak Elev=411.52' Storage=29,876 cf Inflow=9.46 cfs 0.686 af Outflow=0.00 cfs 0.000 af
Pond 32P: FB 1C	Peak Elev=413.52' Storage=10,350 cf Inflow=5.36 cfs 0.357 af Outflow=5.27 cfs 0.357 af

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Pond 33P: INFIL 1C	Peak Elev=409.87'	Storage=3,459 cf	Inflow=5.27 cfs	0.357 af
Discarded=1.22 cfs	0.357 af	Primary=0.00 cfs	0.000 af	Secondary=0.00 cfs
			0.000 af	Outflow=1.22 cfs
				0.357 af
Pond 37P: FB 1i+J	Peak Elev=413.45'	Storage=28,438 cf	Inflow=19.93 cfs	1.372 af
Primary=9.46 cfs	0.686 af	Secondary=9.46 cfs	0.686 af	Outflow=18.92 cfs
				1.372 af
Pond 39P: FB 5A	Peak Elev=433.46'	Storage=9,564 cf	Inflow=4.08 cfs	0.285 af
				Outflow=3.75 cfs
				0.285 af
Pond 44P: FB 1B	Peak Elev=412.56'	Storage=36,163 cf	Inflow=15.79 cfs	1.035 af
				Outflow=15.19 cfs
				1.035 af
Pond 45P: INFIL 1B	Peak Elev=408.77'	Storage=10,206 cf	Inflow=15.19 cfs	1.035 af
Discarded=3.33 cfs	1.035 af	Primary=0.00 cfs	0.000 af	Secondary=0.00 cfs
			0.000 af	Outflow=3.33 cfs
				1.035 af
Pond 47P: INFIL 1H	Peak Elev=409.48'	Storage=21,679 cf	Inflow=25.76 cfs	1.997 af
Discarded=4.41 cfs	1.997 af	Primary=0.00 cfs	0.000 af	Secondary=0.00 cfs
			0.000 af	Outflow=4.41 cfs
				1.997 af
Pond 51P: FB 1H	Peak Elev=413.03'	Storage=51,171 cf	Inflow=26.66 cfs	1.997 af
				Outflow=25.76 cfs
				1.997 af
Pond 53P: Bioretention J basin	Peak Elev=411.45'	Storage=30,095 cf	Inflow=9.46 cfs	0.691 af
				Outflow=0.00 cfs
				0.000 af
Pond 54P: INFIL 1G	Peak Elev=409.47'	Storage=20,763 cf	Inflow=24.49 cfs	1.922 af
Discarded=4.24 cfs	1.922 af	Primary=0.00 cfs	0.000 af	Secondary=0.00 cfs
			0.000 af	Outflow=4.24 cfs
				1.922 af
Pond 55P: FB 1G	Peak Elev=412.87'	Storage=50,236 cf	Inflow=25.66 cfs	1.922 af
				Outflow=24.49 cfs
				1.922 af
Pond 59P: FB 1E	Peak Elev=414.11'	Storage=2,073 cf	Inflow=0.99 cfs	0.070 af
				Outflow=0.98 cfs
				0.070 af
Pond 60P: FB 1D	Peak Elev=415.12'	Storage=9,073 cf	Inflow=7.63 cfs	0.511 af
				Outflow=7.54 cfs
				0.511 af
Pond 63P: Det Pond 1K	Peak Elev=407.50'	Storage=1 cf	Inflow=0.00 cfs	0.000 af
Primary=0.00 cfs	0.000 af	Secondary=0.00 cfs	0.000 af	Outflow=0.00 cfs
			0.000 af	0.000 af
Pond B4B: Bioretention 4A	Peak Elev=439.71'	Storage=4,238 cf	Inflow=1.25 cfs	0.097 af
				Outflow=0.00 cfs
				0.000 af
Link 29L: DP-1			Inflow=11.36 cfs	1.459 af
			Primary=11.36 cfs	1.459 af
Link 30L: DP-2			Inflow=0.01 cfs	0.009 af
			Primary=0.01 cfs	0.009 af
Link 31L: DP-3			Inflow=0.00 cfs	0.000 af
			Primary=0.00 cfs	0.000 af
Link 32L: DP-4			Inflow=0.01 cfs	0.002 af
			Primary=0.01 cfs	0.002 af

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Link PDP5: PDP5

Inflow=0.14 cfs 0.038 af
Primary=0.14 cfs 0.038 af

Total Runoff Area = 112.456 ac Runoff Volume = 10.564 af Average Runoff Depth = 1.13"
53.84% Pervious = 60.551 ac 46.16% Impervious = 51.905 ac

Summary for Subcatchment 6S: PDA-1J

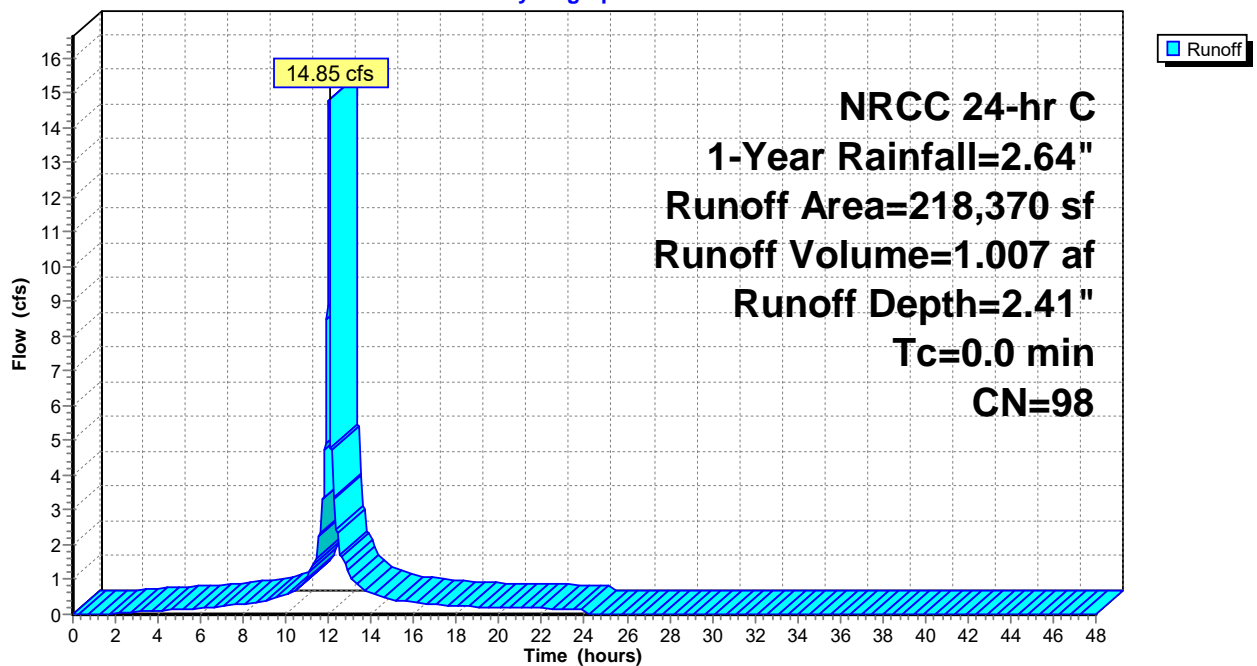
Runoff = 14.85 cfs @ 12.09 hrs, Volume= 1.007 af, Depth= 2.41"
 Routed to Pond 37P : FB 1i+J

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
218,370	98	Unconnected roofs, HSG D
218,370		100.00% Impervious Area
218,370		100.00% Unconnected

Subcatchment 6S: PDA-1J

Hydrograph



Hydrograph for Subcatchment 6S: PDA-1J

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	2.41	0.00
0.50	0.01	0.00	0.00	29.50	2.64	2.41	0.00
1.00	0.03	0.00	0.00	30.00	2.64	2.41	0.00
1.50	0.05	0.00	0.01	30.50	2.64	2.41	0.00
2.00	0.06	0.00	0.03	31.00	2.64	2.41	0.00
2.50	0.08	0.01	0.06	31.50	2.64	2.41	0.00
3.00	0.10	0.01	0.08	32.00	2.64	2.41	0.00
3.50	0.12	0.02	0.09	32.50	2.64	2.41	0.00
4.00	0.14	0.03	0.11	33.00	2.64	2.41	0.00
4.50	0.16	0.04	0.13	33.50	2.64	2.41	0.00
5.00	0.18	0.06	0.14	34.00	2.64	2.41	0.00
5.50	0.20	0.07	0.16	34.50	2.64	2.41	0.00
6.00	0.23	0.09	0.17	35.00	2.64	2.41	0.00
6.50	0.25	0.11	0.20	35.50	2.64	2.41	0.00
7.00	0.28	0.13	0.23	36.00	2.64	2.41	0.00
7.50	0.31	0.15	0.26	36.50	2.64	2.41	0.00
8.00	0.34	0.18	0.30	37.00	2.64	2.41	0.00
8.50	0.38	0.21	0.33	37.50	2.64	2.41	0.00
9.00	0.42	0.25	0.37	38.00	2.64	2.41	0.00
9.50	0.46	0.29	0.46	38.50	2.64	2.41	0.00
10.00	0.52	0.34	0.57	39.00	2.64	2.41	0.00
10.50	0.59	0.40	0.70	39.50	2.64	2.41	0.00
11.00	0.68	0.49	1.08	40.00	2.64	2.41	0.00
11.50	0.83	0.62	1.94	40.50	2.64	2.41	0.00
12.00	1.26	1.04	11.65	41.00	2.64	2.41	0.00
12.50	1.81	1.59	2.00	41.50	2.64	2.41	0.00
13.00	1.96	1.73	1.14	42.00	2.64	2.41	0.00
13.50	2.05	1.83	0.74	42.50	2.64	2.41	0.00
14.00	2.12	1.89	0.62	43.00	2.64	2.41	0.00
14.50	2.18	1.95	0.52	43.50	2.64	2.41	0.00
15.00	2.22	1.99	0.41	44.00	2.64	2.41	0.00
15.50	2.26	2.03	0.38	44.50	2.64	2.41	0.00
16.00	2.30	2.07	0.35	45.00	2.64	2.41	0.00
16.50	2.33	2.10	0.32	45.50	2.64	2.41	0.00
17.00	2.36	2.13	0.29	46.00	2.64	2.41	0.00
17.50	2.39	2.16	0.26	46.50	2.64	2.41	0.00
18.00	2.41	2.18	0.24	47.00	2.64	2.41	0.00
18.50	2.44	2.21	0.23	47.50	2.64	2.41	0.00
19.00	2.46	2.23	0.22	48.00	2.64	2.41	0.00
19.50	2.48	2.25	0.21				
20.00	2.50	2.27	0.20				
20.50	2.52	2.29	0.20				
21.00	2.54	2.31	0.19				
21.50	2.56	2.33	0.18				
22.00	2.58	2.35	0.18				
22.50	2.59	2.36	0.17				
23.00	2.61	2.38	0.16				
23.50	2.63	2.40	0.15				
24.00	2.64	2.41	0.07				
24.50	2.64	2.41	0.00				
25.00	2.64	2.41	0.00				
25.50	2.64	2.41	0.00				
26.00	2.64	2.41	0.00				
26.50	2.64	2.41	0.00				
27.00	2.64	2.41	0.00				
27.50	2.64	2.41	0.00				
28.00	2.64	2.41	0.00				
28.50	2.64	2.41	0.00				

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Summary for Subcatchment 26S: PDA-1D

Runoff = 7.63 cfs @ 12.13 hrs, Volume= 0.511 af, Depth= 1.74"
 Routed to Pond 60P : FB 1D

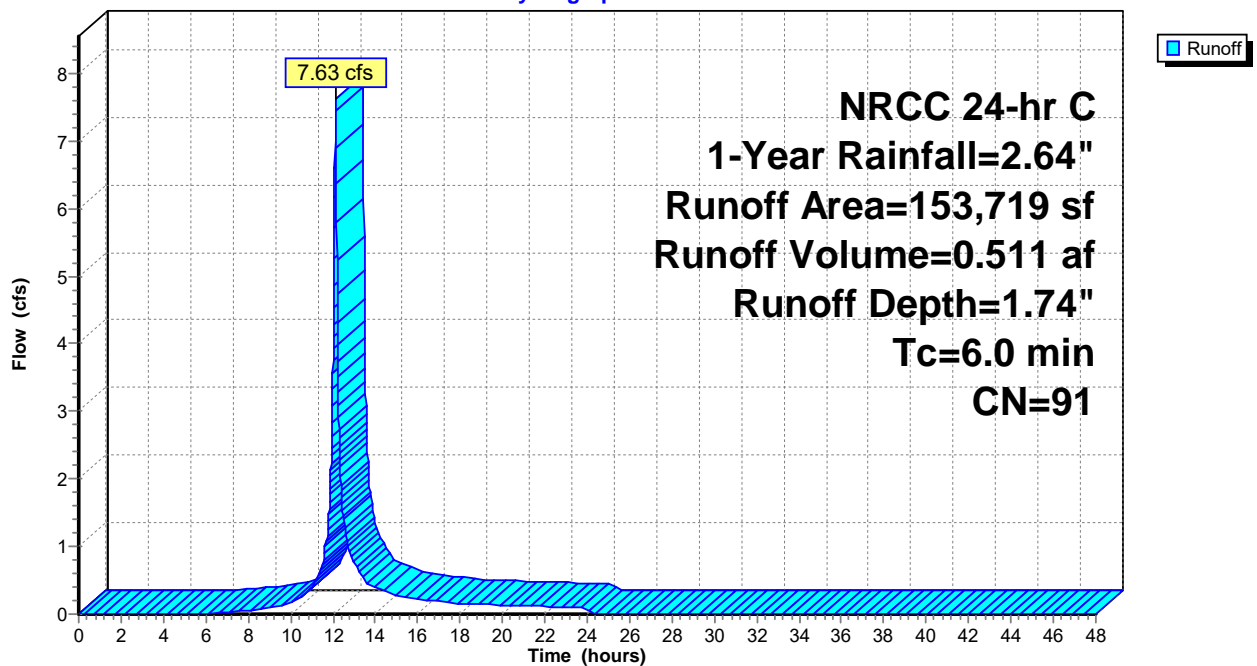
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
55,737	80	>75% Grass cover, Good, HSG D
271	39	>75% Grass cover, Good, HSG A
97,711	98	Paved parking, HSG D
153,719	91	Weighted Average
56,008		36.44% Pervious Area
97,711		63.56% Impervious Area

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

Subcatchment 26S: PDA-1D

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 26S: PDA-1D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	1.74	0.00
0.50	0.01	0.00	0.00	29.50	2.64	1.74	0.00
1.00	0.03	0.00	0.00	30.00	2.64	1.74	0.00
1.50	0.05	0.00	0.00	30.50	2.64	1.74	0.00
2.00	0.06	0.00	0.00	31.00	2.64	1.74	0.00
2.50	0.08	0.00	0.00	31.50	2.64	1.74	0.00
3.00	0.10	0.00	0.00	32.00	2.64	1.74	0.00
3.50	0.12	0.00	0.00	32.50	2.64	1.74	0.00
4.00	0.14	0.00	0.00	33.00	2.64	1.74	0.00
4.50	0.16	0.00	0.00	33.50	2.64	1.74	0.00
5.00	0.18	0.00	0.00	34.00	2.64	1.74	0.00
5.50	0.20	0.00	0.00	34.50	2.64	1.74	0.00
6.00	0.23	0.00	0.01	35.00	2.64	1.74	0.00
6.50	0.25	0.00	0.02	35.50	2.64	1.74	0.00
7.00	0.28	0.01	0.03	36.00	2.64	1.74	0.00
7.50	0.31	0.01	0.04	36.50	2.64	1.74	0.00
8.00	0.34	0.02	0.06	37.00	2.64	1.74	0.00
8.50	0.38	0.03	0.07	37.50	2.64	1.74	0.00
9.00	0.42	0.04	0.09	38.00	2.64	1.74	0.00
9.50	0.46	0.06	0.13	38.50	2.64	1.74	0.00
10.00	0.52	0.08	0.18	39.00	2.64	1.74	0.00
10.50	0.59	0.11	0.24	39.50	2.64	1.74	0.00
11.00	0.68	0.16	0.40	40.00	2.64	1.74	0.00
11.50	0.83	0.24	0.72	40.50	2.64	1.74	0.00
12.00	1.26	0.55	3.77	41.00	2.64	1.74	0.00
12.50	1.81	1.00	1.43	41.50	2.64	1.74	0.00
13.00	1.96	1.13	0.77	42.00	2.64	1.74	0.00
13.50	2.05	1.21	0.50	42.50	2.64	1.74	0.00
14.00	2.12	1.27	0.40	43.00	2.64	1.74	0.00
14.50	2.18	1.32	0.34	43.50	2.64	1.74	0.00
15.00	2.22	1.36	0.27	44.00	2.64	1.74	0.00
15.50	2.26	1.39	0.24	44.50	2.64	1.74	0.00
16.00	2.30	1.43	0.23	45.00	2.64	1.74	0.00
16.50	2.33	1.46	0.21	45.50	2.64	1.74	0.00
17.00	2.36	1.48	0.19	46.00	2.64	1.74	0.00
17.50	2.39	1.51	0.17	46.50	2.64	1.74	0.00
18.00	2.41	1.53	0.15	47.00	2.64	1.74	0.00
18.50	2.44	1.55	0.15	47.50	2.64	1.74	0.00
19.00	2.46	1.57	0.14	48.00	2.64	1.74	0.00
19.50	2.48	1.59	0.14				
20.00	2.50	1.61	0.13				
20.50	2.52	1.63	0.13				
21.00	2.54	1.65	0.12				
21.50	2.56	1.66	0.12				
22.00	2.58	1.68	0.11				
22.50	2.59	1.70	0.11				
23.00	2.61	1.71	0.11				
23.50	2.63	1.72	0.10				
24.00	2.64	1.74	0.10				
24.50	2.64	1.74	0.00				
25.00	2.64	1.74	0.00				
25.50	2.64	1.74	0.00				
26.00	2.64	1.74	0.00				
26.50	2.64	1.74	0.00				
27.00	2.64	1.74	0.00				
27.50	2.64	1.74	0.00				
28.00	2.64	1.74	0.00				
28.50	2.64	1.74	0.00				

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 27S: PDA-4B-B

Runoff = 1.35 cfs @ 12.14 hrs, Volume= 0.093 af, Depth= 0.73"
 Routed to Pond 29P : Bioretention 4B

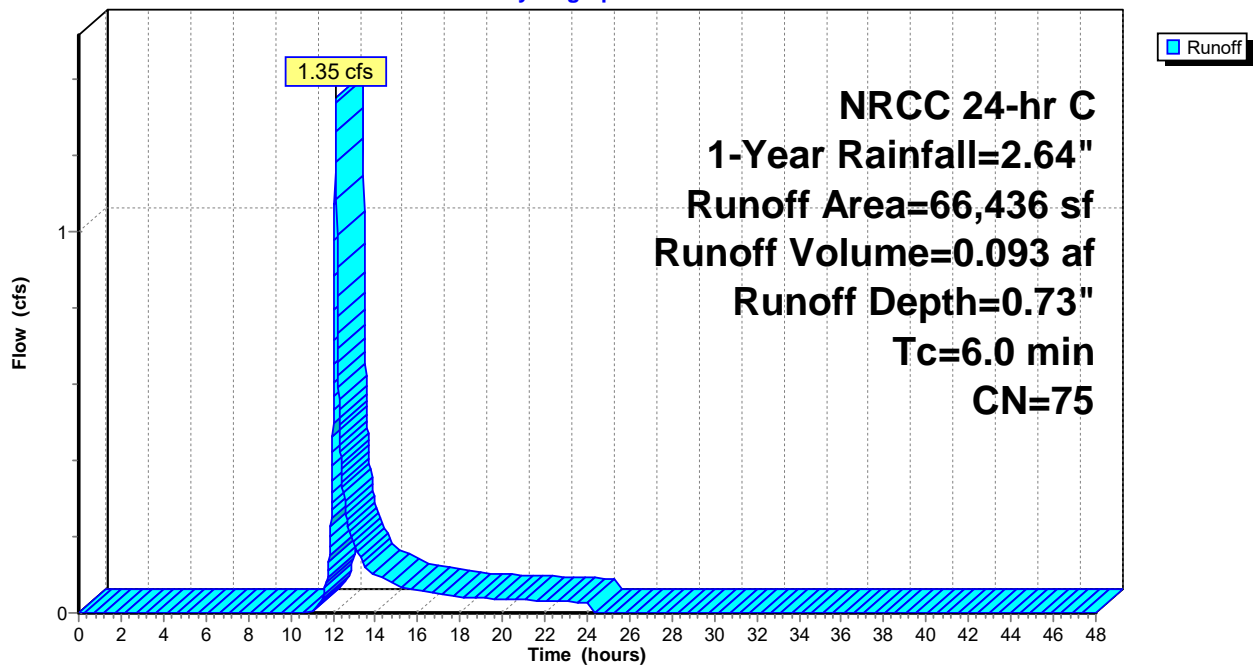
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
917	61	>75% Grass cover, Good, HSG B
57,533	80	>75% Grass cover, Good, HSG D
7,986	39	>75% Grass cover, Good, HSG A
66,436	75	Weighted Average
66,436		100.00% Pervious Area

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

Subcatchment 27S: PDA-4B-B

Hydrograph



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NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 27S: PDA-4B-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.73	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.73	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.73	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.73	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.73	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.73	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.73	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.73	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.73	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.73	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.73	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.73	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.73	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.73	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.73	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.73	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.73	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.73	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.73	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.73	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.73	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.73	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.73	0.00
11.50	0.83	0.01	0.04	40.50	2.64	0.73	0.00
12.00	1.26	0.09	0.50	41.00	2.64	0.73	0.00
12.50	1.81	0.29	0.32	41.50	2.64	0.73	0.00
13.00	1.96	0.36	0.18	42.00	2.64	0.73	0.00
13.50	2.05	0.41	0.12	42.50	2.64	0.73	0.00
14.00	2.12	0.44	0.10	43.00	2.64	0.73	0.00
14.50	2.18	0.47	0.09	43.50	2.64	0.73	0.00
15.00	2.22	0.49	0.07	44.00	2.64	0.73	0.00
15.50	2.26	0.52	0.06	44.50	2.64	0.73	0.00
16.00	2.30	0.54	0.06	45.00	2.64	0.73	0.00
16.50	2.33	0.55	0.06	45.50	2.64	0.73	0.00
17.00	2.36	0.57	0.05	46.00	2.64	0.73	0.00
17.50	2.39	0.59	0.05	46.50	2.64	0.73	0.00
18.00	2.41	0.60	0.04	47.00	2.64	0.73	0.00
18.50	2.44	0.61	0.04	47.50	2.64	0.73	0.00
19.00	2.46	0.63	0.04	48.00	2.64	0.73	0.00
19.50	2.48	0.64	0.04				
20.00	2.50	0.65	0.04				
20.50	2.52	0.66	0.04				
21.00	2.54	0.67	0.03				
21.50	2.56	0.68	0.03				
22.00	2.58	0.70	0.03				
22.50	2.59	0.71	0.03				
23.00	2.61	0.72	0.03				
23.50	2.63	0.72	0.03				
24.00	2.64	0.73	0.03				
24.50	2.64	0.73	0.00				
25.00	2.64	0.73	0.00				
25.50	2.64	0.73	0.00				
26.00	2.64	0.73	0.00				
26.50	2.64	0.73	0.00				
27.00	2.64	0.73	0.00				
27.50	2.64	0.73	0.00				
28.00	2.64	0.73	0.00				
28.50	2.64	0.73	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Runoff = 11.36 cfs @ 12.36 hrs, Volume= 1.459 af, Depth= 0.64"
 Routed to Link 29L : DP-1

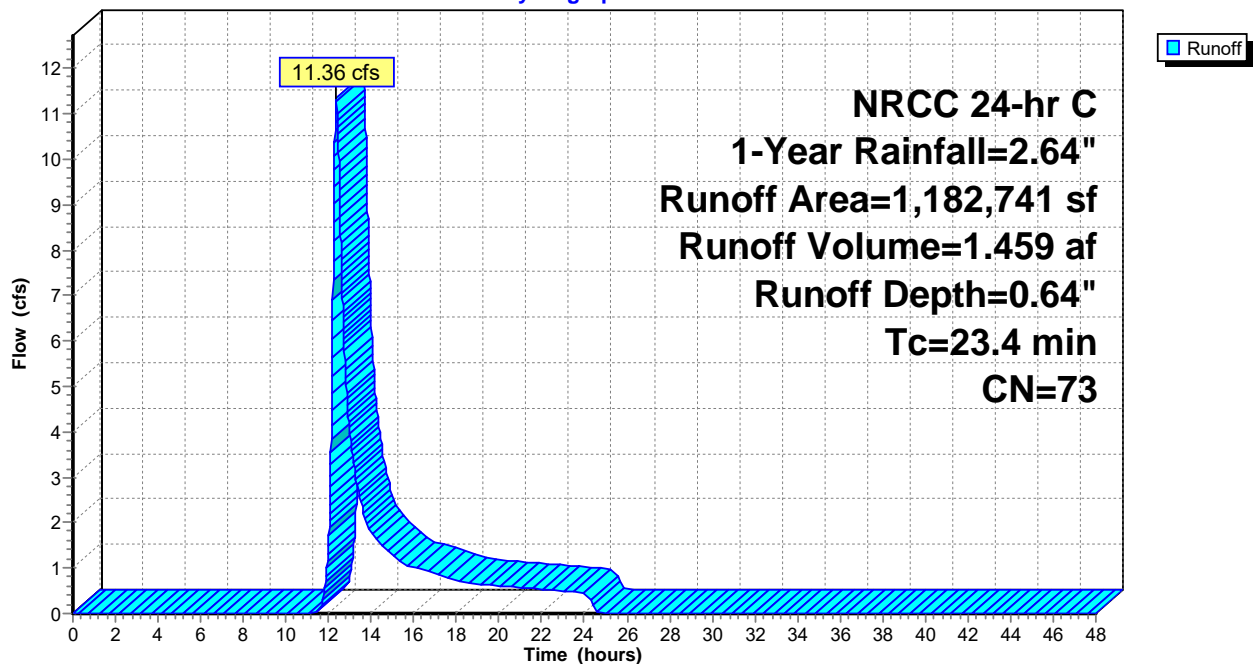
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
* 90,367	61	>75% Grass cover, Good, HSG B
99,079	39	>75% Grass cover, Good, HSG A
647,468	80	>75% Grass cover, Good, HSG D
45,280	32	Woods/grass comb., Good, HSG A
299,609	79	Woods/grass comb., Good, HSG D
938	89	Dirt roads, HSG D
1,182,741	73	Weighted Average
1,182,741		100.00% Pervious Area

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

Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Hydrograph



Hydrograph for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.64	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.64	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.64	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.64	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.64	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.64	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.64	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.64	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.64	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.64	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.64	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.64	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.64	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.64	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.64	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.64	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.64	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.64	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.64	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.64	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.64	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.64	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.64	0.00
11.50	0.83	0.00	0.03	40.50	2.64	0.64	0.00
12.00	1.26	0.06	1.56	41.00	2.64	0.64	0.00
12.50	1.81	0.24	9.55	41.50	2.64	0.64	0.00
13.00	1.96	0.30	3.94	42.00	2.64	0.64	0.00
13.50	2.05	0.34	2.48	42.50	2.64	0.64	0.00
14.00	2.12	0.37	1.78	43.00	2.64	0.64	0.00
14.50	2.18	0.40	1.52	43.50	2.64	0.64	0.00
15.00	2.22	0.42	1.29	44.00	2.64	0.64	0.00
15.50	2.26	0.44	1.09	44.50	2.64	0.64	0.00
16.00	2.30	0.46	1.01	45.00	2.64	0.64	0.00
16.50	2.33	0.48	0.95	45.50	2.64	0.64	0.00
17.00	2.36	0.49	0.88	46.00	2.64	0.64	0.00
17.50	2.39	0.51	0.80	46.50	2.64	0.64	0.00
18.00	2.41	0.52	0.73	47.00	2.64	0.64	0.00
18.50	2.44	0.53	0.67	47.50	2.64	0.64	0.00
19.00	2.46	0.55	0.65	48.00	2.64	0.64	0.00
19.50	2.48	0.56	0.63				
20.00	2.50	0.57	0.61				
20.50	2.52	0.58	0.60				
21.00	2.54	0.59	0.58				
21.50	2.56	0.60	0.56				
22.00	2.58	0.61	0.54				
22.50	2.59	0.62	0.52				
23.00	2.61	0.63	0.50				
23.50	2.63	0.64	0.48				
24.00	2.64	0.64	0.46				
24.50	2.64	0.64	0.08				
25.00	2.64	0.64	0.00				
25.50	2.64	0.64	0.00				
26.00	2.64	0.64	0.00				
26.50	2.64	0.64	0.00				
27.00	2.64	0.64	0.00				
27.50	2.64	0.64	0.00				
28.00	2.64	0.64	0.00				
28.50	2.64	0.64	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 30S: PDA-1A

Runoff = 4.08 cfs @ 12.13 hrs, Volume= 0.267 af, Depth= 1.29"
Routed to Pond 3P : Bioretention 1A

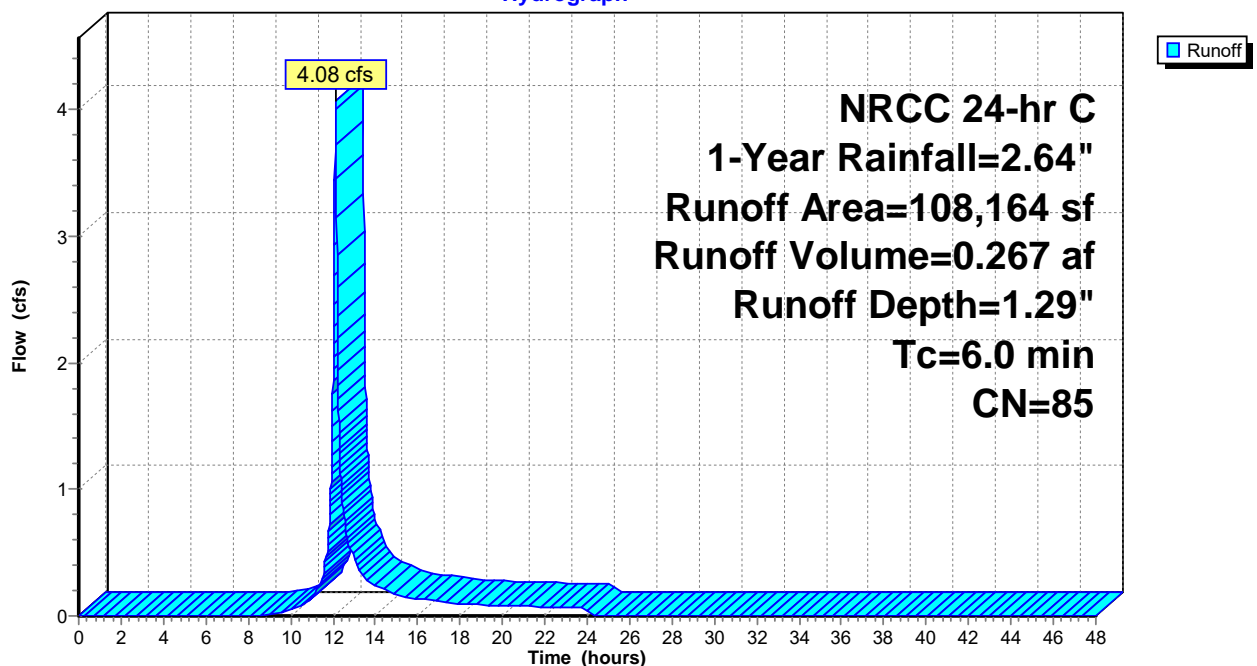
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
23,210	39	>75% Grass cover, Good, HSG A
84,954	98	Paved parking, HSG D
108,164	85	Weighted Average
23,210		21.46% Pervious Area
84,954		78.54% Impervious Area

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

Subcatchment 30S: PDA-1A

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 30S: PDA-1A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	1.29	0.00
0.50	0.01	0.00	0.00	29.50	2.64	1.29	0.00
1.00	0.03	0.00	0.00	30.00	2.64	1.29	0.00
1.50	0.05	0.00	0.00	30.50	2.64	1.29	0.00
2.00	0.06	0.00	0.00	31.00	2.64	1.29	0.00
2.50	0.08	0.00	0.00	31.50	2.64	1.29	0.00
3.00	0.10	0.00	0.00	32.00	2.64	1.29	0.00
3.50	0.12	0.00	0.00	32.50	2.64	1.29	0.00
4.00	0.14	0.00	0.00	33.00	2.64	1.29	0.00
4.50	0.16	0.00	0.00	33.50	2.64	1.29	0.00
5.00	0.18	0.00	0.00	34.00	2.64	1.29	0.00
5.50	0.20	0.00	0.00	34.50	2.64	1.29	0.00
6.00	0.23	0.00	0.00	35.00	2.64	1.29	0.00
6.50	0.25	0.00	0.00	35.50	2.64	1.29	0.00
7.00	0.28	0.00	0.00	36.00	2.64	1.29	0.00
7.50	0.31	0.00	0.00	36.50	2.64	1.29	0.00
8.00	0.34	0.00	0.00	37.00	2.64	1.29	0.00
8.50	0.38	0.00	0.00	37.50	2.64	1.29	0.00
9.00	0.42	0.00	0.01	38.00	2.64	1.29	0.00
9.50	0.46	0.01	0.03	38.50	2.64	1.29	0.00
10.00	0.52	0.01	0.05	39.00	2.64	1.29	0.00
10.50	0.59	0.03	0.07	39.50	2.64	1.29	0.00
11.00	0.68	0.05	0.14	40.00	2.64	1.29	0.00
11.50	0.83	0.10	0.30	40.50	2.64	1.29	0.00
12.00	1.26	0.31	1.86	41.00	2.64	1.29	0.00
12.50	1.81	0.66	0.82	41.50	2.64	1.29	0.00
13.00	1.96	0.77	0.45	42.00	2.64	1.29	0.00
13.50	2.05	0.83	0.30	42.50	2.64	1.29	0.00
14.00	2.12	0.88	0.24	43.00	2.64	1.29	0.00
14.50	2.18	0.93	0.20	43.50	2.64	1.29	0.00
15.00	2.22	0.96	0.16	44.00	2.64	1.29	0.00
15.50	2.26	0.99	0.15	44.50	2.64	1.29	0.00
16.00	2.30	1.02	0.14	45.00	2.64	1.29	0.00
16.50	2.33	1.04	0.13	45.50	2.64	1.29	0.00
17.00	2.36	1.07	0.12	46.00	2.64	1.29	0.00
17.50	2.39	1.09	0.10	46.50	2.64	1.29	0.00
18.00	2.41	1.11	0.09	47.00	2.64	1.29	0.00
18.50	2.44	1.13	0.09	47.50	2.64	1.29	0.00
19.00	2.46	1.15	0.09	48.00	2.64	1.29	0.00
19.50	2.48	1.16	0.08				
20.00	2.50	1.18	0.08				
20.50	2.52	1.19	0.08				
21.00	2.54	1.21	0.08				
21.50	2.56	1.22	0.07				
22.00	2.58	1.24	0.07				
22.50	2.59	1.25	0.07				
23.00	2.61	1.27	0.07				
23.50	2.63	1.28	0.06				
24.00	2.64	1.29	0.06				
24.50	2.64	1.29	0.00				
25.00	2.64	1.29	0.00				
25.50	2.64	1.29	0.00				
26.00	2.64	1.29	0.00				
26.50	2.64	1.29	0.00				
27.00	2.64	1.29	0.00				
27.50	2.64	1.29	0.00				
28.00	2.64	1.29	0.00				
28.50	2.64	1.29	0.00				

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 31S: PDA-1C

Runoff = 5.36 cfs @ 12.13 hrs, Volume= 0.357 af, Depth= 1.66"
 Routed to Pond 32P : FB 1C

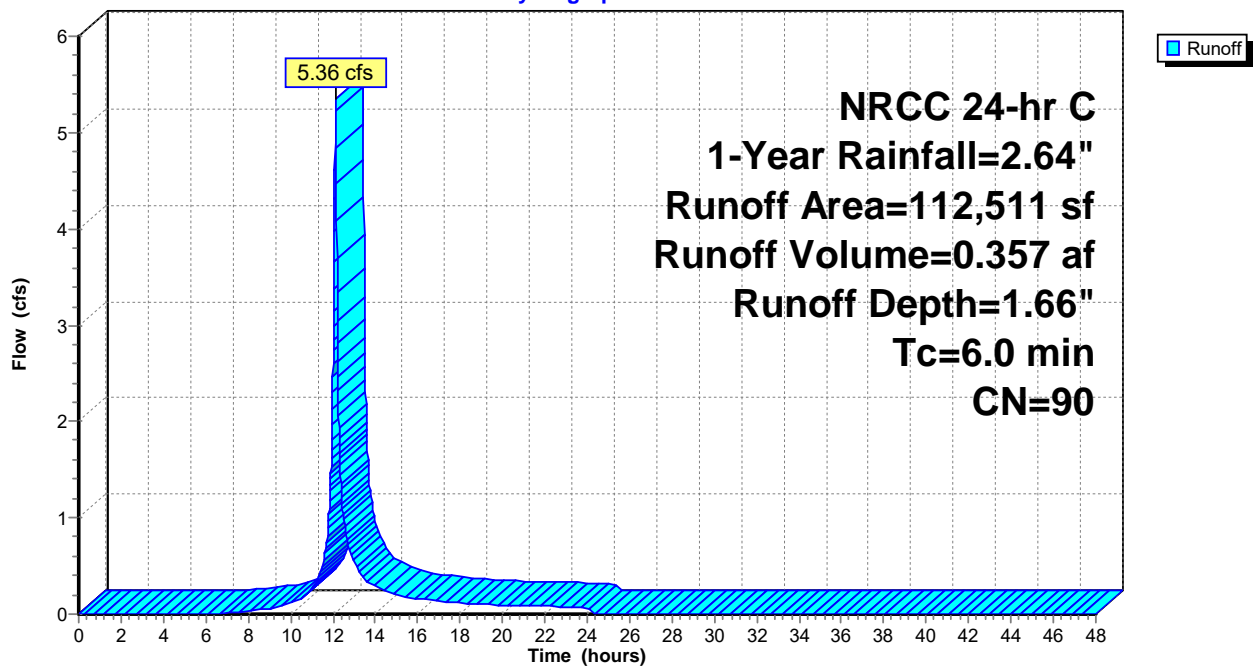
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
14,434	80	>75% Grass cover, Good, HSG D
10,394	39	>75% Grass cover, Good, HSG A
87,683	98	Paved parking, HSG D
112,511	90	Weighted Average
24,828		22.07% Pervious Area
87,683		77.93% Impervious Area

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

Subcatchment 31S: PDA-1C

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 31S: PDA-1C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	1.66	0.00
0.50	0.01	0.00	0.00	29.50	2.64	1.66	0.00
1.00	0.03	0.00	0.00	30.00	2.64	1.66	0.00
1.50	0.05	0.00	0.00	30.50	2.64	1.66	0.00
2.00	0.06	0.00	0.00	31.00	2.64	1.66	0.00
2.50	0.08	0.00	0.00	31.50	2.64	1.66	0.00
3.00	0.10	0.00	0.00	32.00	2.64	1.66	0.00
3.50	0.12	0.00	0.00	32.50	2.64	1.66	0.00
4.00	0.14	0.00	0.00	33.00	2.64	1.66	0.00
4.50	0.16	0.00	0.00	33.50	2.64	1.66	0.00
5.00	0.18	0.00	0.00	34.00	2.64	1.66	0.00
5.50	0.20	0.00	0.00	34.50	2.64	1.66	0.00
6.00	0.23	0.00	0.00	35.00	2.64	1.66	0.00
6.50	0.25	0.00	0.01	35.50	2.64	1.66	0.00
7.00	0.28	0.00	0.01	36.00	2.64	1.66	0.00
7.50	0.31	0.01	0.02	36.50	2.64	1.66	0.00
8.00	0.34	0.01	0.03	37.00	2.64	1.66	0.00
8.50	0.38	0.02	0.04	37.50	2.64	1.66	0.00
9.00	0.42	0.03	0.06	38.00	2.64	1.66	0.00
9.50	0.46	0.04	0.08	38.50	2.64	1.66	0.00
10.00	0.52	0.06	0.11	39.00	2.64	1.66	0.00
10.50	0.59	0.09	0.15	39.50	2.64	1.66	0.00
11.00	0.68	0.13	0.26	40.00	2.64	1.66	0.00
11.50	0.83	0.21	0.49	40.50	2.64	1.66	0.00
12.00	1.26	0.50	2.61	41.00	2.64	1.66	0.00
12.50	1.81	0.94	1.02	41.50	2.64	1.66	0.00
13.00	1.96	1.06	0.55	42.00	2.64	1.66	0.00
13.50	2.05	1.14	0.36	42.50	2.64	1.66	0.00
14.00	2.12	1.20	0.28	43.00	2.64	1.66	0.00
14.50	2.18	1.24	0.24	43.50	2.64	1.66	0.00
15.00	2.22	1.29	0.20	44.00	2.64	1.66	0.00
15.50	2.26	1.32	0.17	44.50	2.64	1.66	0.00
16.00	2.30	1.35	0.16	45.00	2.64	1.66	0.00
16.50	2.33	1.38	0.15	45.50	2.64	1.66	0.00
17.00	2.36	1.41	0.14	46.00	2.64	1.66	0.00
17.50	2.39	1.43	0.12	46.50	2.64	1.66	0.00
18.00	2.41	1.45	0.11	47.00	2.64	1.66	0.00
18.50	2.44	1.47	0.10	47.50	2.64	1.66	0.00
19.00	2.46	1.49	0.10	48.00	2.64	1.66	0.00
19.50	2.48	1.51	0.10				
20.00	2.50	1.53	0.09				
20.50	2.52	1.55	0.09				
21.00	2.54	1.57	0.09				
21.50	2.56	1.58	0.09				
22.00	2.58	1.60	0.08				
22.50	2.59	1.61	0.08				
23.00	2.61	1.63	0.08				
23.50	2.63	1.64	0.07				
24.00	2.64	1.66	0.07				
24.50	2.64	1.66	0.00				
25.00	2.64	1.66	0.00				
25.50	2.64	1.66	0.00				
26.00	2.64	1.66	0.00				
26.50	2.64	1.66	0.00				
27.00	2.64	1.66	0.00				
27.50	2.64	1.66	0.00				
28.00	2.64	1.66	0.00				
28.50	2.64	1.66	0.00				

Summary for Subcatchment 34S: PDA-1K

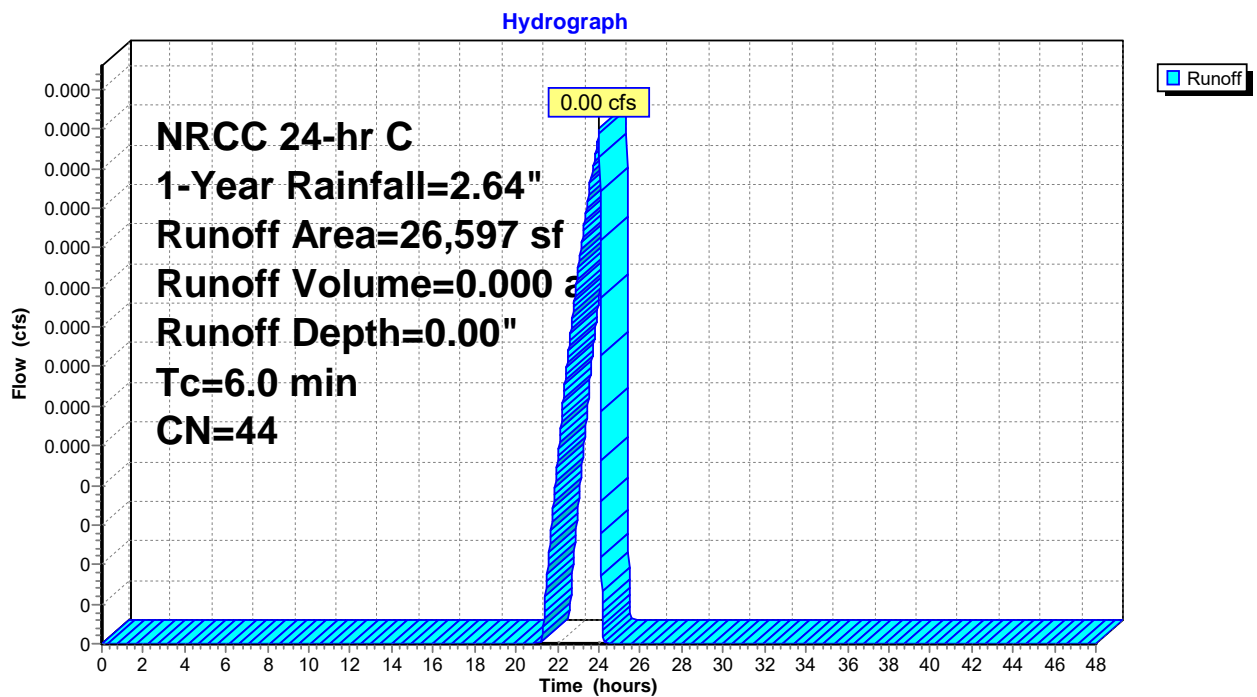
Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Pond 63P : Det Pond 1K

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
23,033	39	>75% Grass cover, Good, HSG A
3,564	80	>75% Grass cover, Good, HSG D
26,597	44	Weighted Average
26,597		100.00% Pervious Area

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

Subcatchment 34S: PDA-1K



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NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 34S: PDA-1K

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.00	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.00	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.00	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.00	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.00	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.00	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.00	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.00	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.00	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.00	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.00	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.00	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.00	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.00	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.00	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.00	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.00	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.00	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.00	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.00	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.00	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.00	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.00	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.00	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.00	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.00	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.00	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.00	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.00	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.00	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.00	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.00	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.00	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.00	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.00	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.00	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.00	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.00	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.00	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.00	0.00				
20.50	2.52	0.00	0.00				
21.00	2.54	0.00	0.00				
21.50	2.56	0.00	0.00				
22.00	2.58	0.00	0.00				
22.50	2.59	0.00	0.00				
23.00	2.61	0.00	0.00				
23.50	2.63	0.00	0.00				
24.00	2.64	0.00	0.00				
24.50	2.64	0.00	0.00				
25.00	2.64	0.00	0.00				
25.50	2.64	0.00	0.00				
26.00	2.64	0.00	0.00				
26.50	2.64	0.00	0.00				
27.00	2.64	0.00	0.00				
27.50	2.64	0.00	0.00				
28.00	2.64	0.00	0.00				
28.50	2.64	0.00	0.00				

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 35S: PDA-2U

Runoff = 0.01 cfs @ 14.34 hrs, Volume= 0.009 af, Depth= 0.06"
 Routed to Link 30L : DP-2

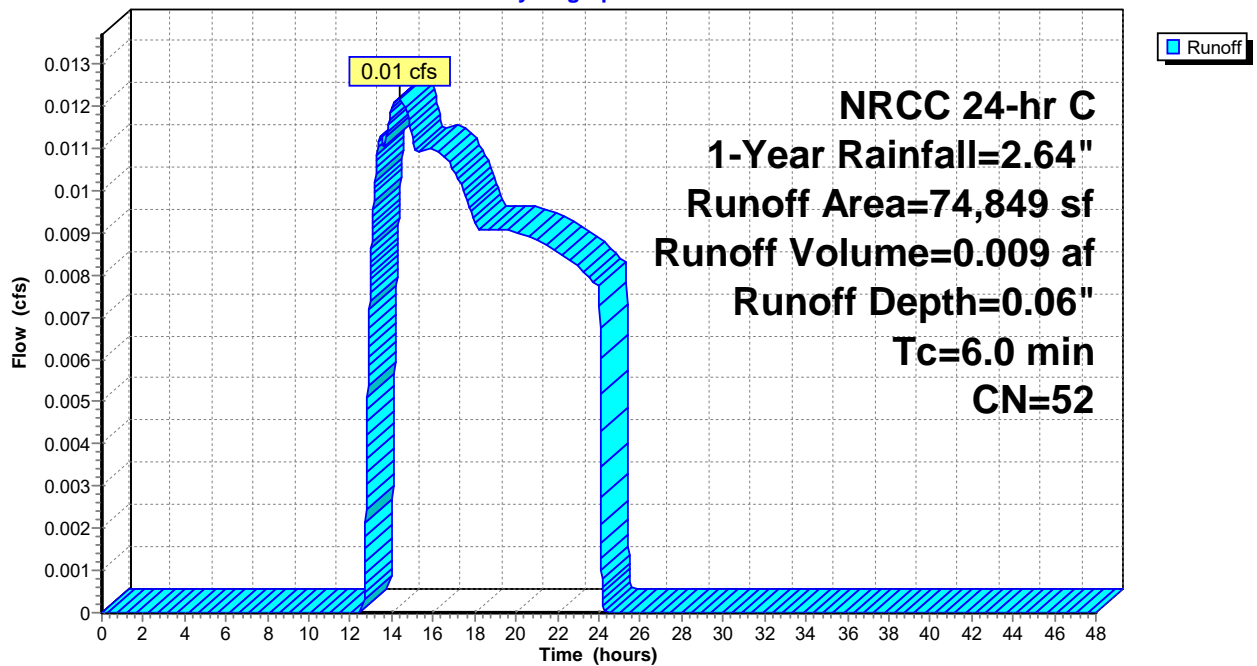
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
24,466	80	>75% Grass cover, Good, HSG D
50,383	39	>75% Grass cover, Good, HSG A
74,849	52	Weighted Average
74,849		100.00% Pervious Area

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

Subcatchment 35S: PDA-2U

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 35S: PDA-2U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.06	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.06	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.06	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.06	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.06	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.06	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.06	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.06	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.06	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.06	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.06	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.06	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.06	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.06	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.06	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.06	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.06	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.06	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.06	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.06	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.06	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.06	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.06	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.06	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.06	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.06	0.00
13.00	1.96	0.00	0.01	42.00	2.64	0.06	0.00
13.50	2.05	0.00	0.01	42.50	2.64	0.06	0.00
14.00	2.12	0.01	0.01	43.00	2.64	0.06	0.00
14.50	2.18	0.01	0.01	43.50	2.64	0.06	0.00
15.00	2.22	0.01	0.01	44.00	2.64	0.06	0.00
15.50	2.26	0.02	0.01	44.50	2.64	0.06	0.00
16.00	2.30	0.02	0.01	45.00	2.64	0.06	0.00
16.50	2.33	0.02	0.01	45.50	2.64	0.06	0.00
17.00	2.36	0.03	0.01	46.00	2.64	0.06	0.00
17.50	2.39	0.03	0.01	46.50	2.64	0.06	0.00
18.00	2.41	0.03	0.01	47.00	2.64	0.06	0.00
18.50	2.44	0.04	0.01	47.50	2.64	0.06	0.00
19.00	2.46	0.04	0.01	48.00	2.64	0.06	0.00
19.50	2.48	0.04	0.01				
20.00	2.50	0.04	0.01				
20.50	2.52	0.05	0.01				
21.00	2.54	0.05	0.01				
21.50	2.56	0.05	0.01				
22.00	2.58	0.05	0.01				
22.50	2.59	0.06	0.01				
23.00	2.61	0.06	0.01				
23.50	2.63	0.06	0.01				
24.00	2.64	0.06	0.01				
24.50	2.64	0.06	0.00				
25.00	2.64	0.06	0.00				
25.50	2.64	0.06	0.00				
26.00	2.64	0.06	0.00				
26.50	2.64	0.06	0.00				
27.00	2.64	0.06	0.00				
27.50	2.64	0.06	0.00				
28.00	2.64	0.06	0.00				
28.50	2.64	0.06	0.00				

Summary for Subcatchment 36S: PDA-3U

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Link 31L : DP-3

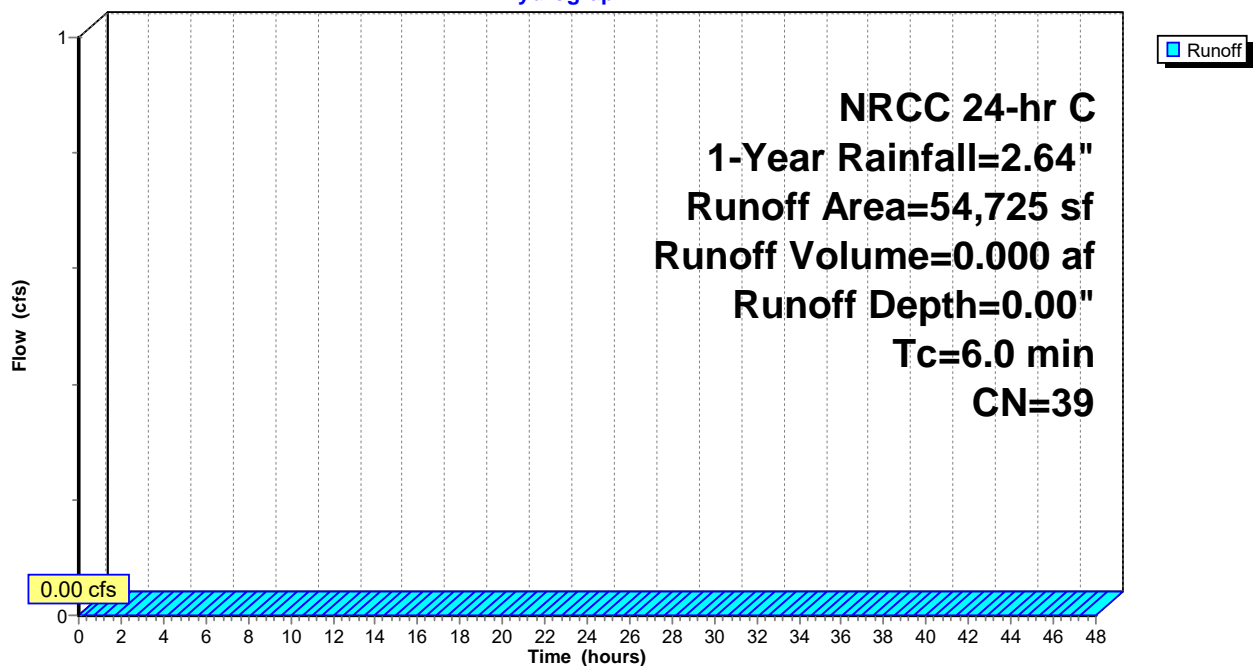
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
54,725	39	>75% Grass cover, Good, HSG A
54,725		100.00% Pervious Area

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

Subcatchment 36S: PDA-3U

Hydrograph



Hydrograph for Subcatchment 36S: PDA-3U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.00	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.00	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.00	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.00	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.00	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.00	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.00	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.00	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.00	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.00	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.00	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.00	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.00	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.00	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.00	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.00	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.00	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.00	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.00	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.00	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.00	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.00	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.00	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.00	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.00	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.00	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.00	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.00	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.00	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.00	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.00	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.00	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.00	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.00	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.00	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.00	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.00	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.00	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.00	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.00	0.00				
20.50	2.52	0.00	0.00				
21.00	2.54	0.00	0.00				
21.50	2.56	0.00	0.00				
22.00	2.58	0.00	0.00				
22.50	2.59	0.00	0.00				
23.00	2.61	0.00	0.00				
23.50	2.63	0.00	0.00				
24.00	2.64	0.00	0.00				
24.50	2.64	0.00	0.00				
25.00	2.64	0.00	0.00				
25.50	2.64	0.00	0.00				
26.00	2.64	0.00	0.00				
26.50	2.64	0.00	0.00				
27.00	2.64	0.00	0.00				
27.50	2.64	0.00	0.00				
28.00	2.64	0.00	0.00				
28.50	2.64	0.00	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 37S: PDA-1I

Runoff = 5.55 cfs @ 12.13 hrs, Volume= 0.365 af, Depth= 1.10"
 Routed to Pond 37P : FB 1i+J

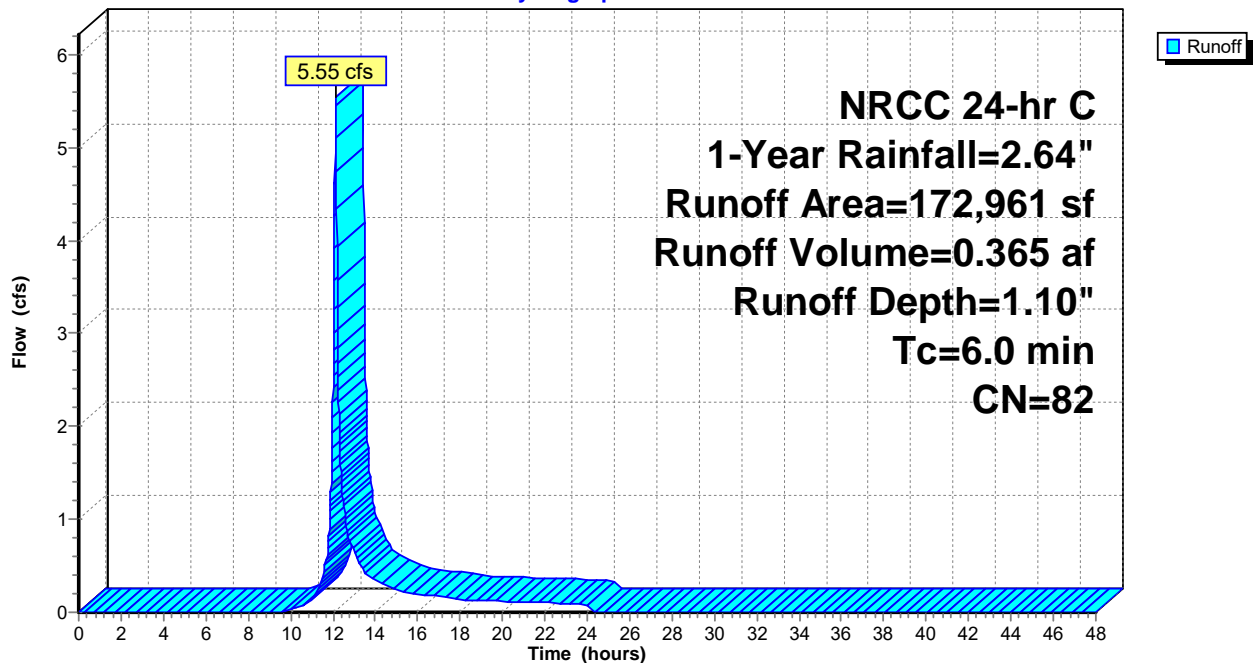
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
42,540	61	>75% Grass cover, Good, HSG B
16,570	39	>75% Grass cover, Good, HSG A
14,535	80	>75% Grass cover, Good, HSG D
99,316	98	Paved parking, HSG D
172,961	82	Weighted Average
73,645		42.58% Pervious Area
99,316		57.42% Impervious Area

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

Subcatchment 37S: PDA-1I

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 37S: PDA-11

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	1.10	0.00
0.50	0.01	0.00	0.00	29.50	2.64	1.10	0.00
1.00	0.03	0.00	0.00	30.00	2.64	1.10	0.00
1.50	0.05	0.00	0.00	30.50	2.64	1.10	0.00
2.00	0.06	0.00	0.00	31.00	2.64	1.10	0.00
2.50	0.08	0.00	0.00	31.50	2.64	1.10	0.00
3.00	0.10	0.00	0.00	32.00	2.64	1.10	0.00
3.50	0.12	0.00	0.00	32.50	2.64	1.10	0.00
4.00	0.14	0.00	0.00	33.00	2.64	1.10	0.00
4.50	0.16	0.00	0.00	33.50	2.64	1.10	0.00
5.00	0.18	0.00	0.00	34.00	2.64	1.10	0.00
5.50	0.20	0.00	0.00	34.50	2.64	1.10	0.00
6.00	0.23	0.00	0.00	35.00	2.64	1.10	0.00
6.50	0.25	0.00	0.00	35.50	2.64	1.10	0.00
7.00	0.28	0.00	0.00	36.00	2.64	1.10	0.00
7.50	0.31	0.00	0.00	36.50	2.64	1.10	0.00
8.00	0.34	0.00	0.00	37.00	2.64	1.10	0.00
8.50	0.38	0.00	0.00	37.50	2.64	1.10	0.00
9.00	0.42	0.00	0.00	38.00	2.64	1.10	0.00
9.50	0.46	0.00	0.01	38.50	2.64	1.10	0.00
10.00	0.52	0.00	0.03	39.00	2.64	1.10	0.00
10.50	0.59	0.01	0.06	39.50	2.64	1.10	0.00
11.00	0.68	0.02	0.15	40.00	2.64	1.10	0.00
11.50	0.83	0.06	0.35	40.50	2.64	1.10	0.00
12.00	1.26	0.22	2.42	41.00	2.64	1.10	0.00
12.50	1.81	0.53	1.16	41.50	2.64	1.10	0.00
13.00	1.96	0.62	0.65	42.00	2.64	1.10	0.00
13.50	2.05	0.68	0.43	42.50	2.64	1.10	0.00
14.00	2.12	0.73	0.34	43.00	2.64	1.10	0.00
14.50	2.18	0.77	0.29	43.50	2.64	1.10	0.00
15.00	2.22	0.80	0.24	44.00	2.64	1.10	0.00
15.50	2.26	0.83	0.21	44.50	2.64	1.10	0.00
16.00	2.30	0.85	0.20	45.00	2.64	1.10	0.00
16.50	2.33	0.88	0.19	45.50	2.64	1.10	0.00
17.00	2.36	0.90	0.17	46.00	2.64	1.10	0.00
17.50	2.39	0.92	0.15	46.50	2.64	1.10	0.00
18.00	2.41	0.94	0.14	47.00	2.64	1.10	0.00
18.50	2.44	0.95	0.13	47.50	2.64	1.10	0.00
19.00	2.46	0.97	0.13	48.00	2.64	1.10	0.00
19.50	2.48	0.98	0.12				
20.00	2.50	1.00	0.12				
20.50	2.52	1.01	0.12				
21.00	2.54	1.03	0.11				
21.50	2.56	1.04	0.11				
22.00	2.58	1.05	0.10				
22.50	2.59	1.07	0.10				
23.00	2.61	1.08	0.10				
23.50	2.63	1.09	0.09				
24.00	2.64	1.10	0.09				
24.50	2.64	1.10	0.00				
25.00	2.64	1.10	0.00				
25.50	2.64	1.10	0.00				
26.00	2.64	1.10	0.00				
26.50	2.64	1.10	0.00				
27.00	2.64	1.10	0.00				
27.50	2.64	1.10	0.00				
28.00	2.64	1.10	0.00				
28.50	2.64	1.10	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 38S: PDA-4U

Runoff = 0.01 cfs @ 24.01 hrs, Volume= 0.002 af, Depth= 0.00"
 Routed to Link 32L : DP-4

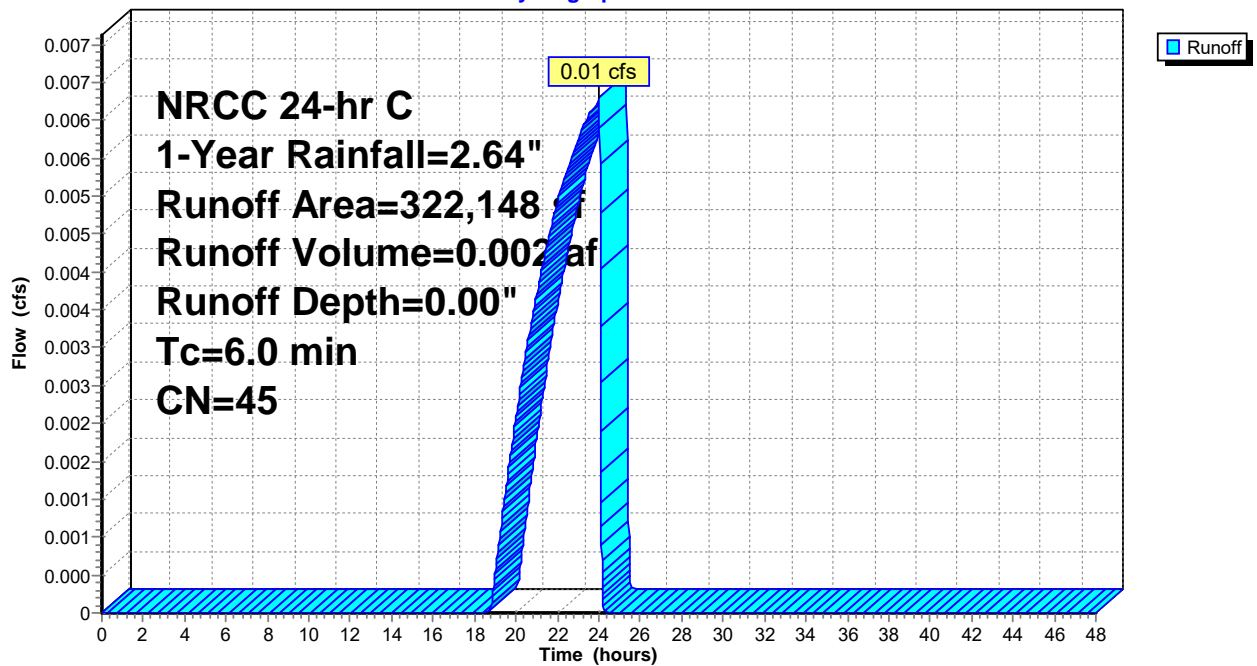
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
289,660	39	>75% Grass cover, Good, HSG A
32,488	98	Paved parking, HSG D
322,148	45	Weighted Average
289,660		89.92% Pervious Area
32,488		10.08% Impervious Area

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

Subcatchment 38S: PDA-4U

Hydrograph



Hydrograph for Subcatchment 38S: PDA-4U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.00	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.00	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.00	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.00	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.00	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.00	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.00	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.00	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.00	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.00	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.00	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.00	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.00	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.00	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.00	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.00	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.00	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.00	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.00	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.00	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.00	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.00	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.00	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.00	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.00	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.00	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.00	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.00	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.00	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.00	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.00	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.00	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.00	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.00	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.00	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.00	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.00	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.00	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.00	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.00	0.00				
20.50	2.52	0.00	0.00				
21.00	2.54	0.00	0.00				
21.50	2.56	0.00	0.00				
22.00	2.58	0.00	0.01				
22.50	2.59	0.00	0.01				
23.00	2.61	0.00	0.01				
23.50	2.63	0.00	0.01				
24.00	2.64	0.00	0.01				
24.50	2.64	0.00	0.00				
25.00	2.64	0.00	0.00				
25.50	2.64	0.00	0.00				
26.00	2.64	0.00	0.00				
26.50	2.64	0.00	0.00				
27.00	2.64	0.00	0.00				
27.50	2.64	0.00	0.00				
28.00	2.64	0.00	0.00				
28.50	2.64	0.00	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 39S: PDA-5U

Runoff = 0.14 cfs @ 12.25 hrs, Volume= 0.038 af, Depth= 0.19"
 Routed to Link PDP5 : PDP5

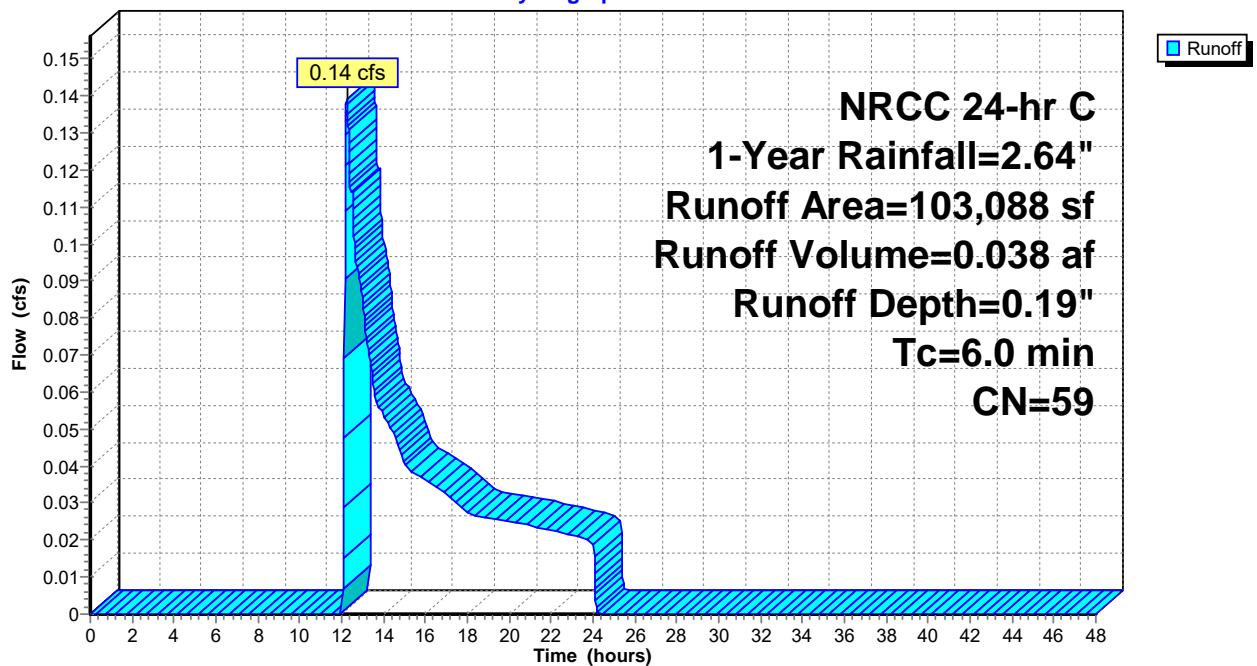
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
47,352	39	>75% Grass cover, Good, HSG A
21,707	98	Paved parking, HSG D
34,029	61	>75% Grass cover, Good, HSG B
103,088	59	Weighted Average
81,381		78.94% Pervious Area
21,707		21.06% Impervious Area

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

Subcatchment 39S: PDA-5U

Hydrograph



240814_RDM Neelytown Drainage

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 39S: PDA-5U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.19	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.19	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.19	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.19	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.19	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.19	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.19	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.19	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.19	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.19	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.19	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.19	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.19	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.19	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.19	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.19	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.19	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.19	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.19	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.19	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.19	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.19	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.19	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.19	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.19	0.00
12.50	1.81	0.02	0.11	41.50	2.64	0.19	0.00
13.00	1.96	0.04	0.08	42.00	2.64	0.19	0.00
13.50	2.05	0.06	0.06	42.50	2.64	0.19	0.00
14.00	2.12	0.07	0.05	43.00	2.64	0.19	0.00
14.50	2.18	0.08	0.05	43.50	2.64	0.19	0.00
15.00	2.22	0.09	0.04	44.00	2.64	0.19	0.00
15.50	2.26	0.10	0.04	44.50	2.64	0.19	0.00
16.00	2.30	0.10	0.04	45.00	2.64	0.19	0.00
16.50	2.33	0.11	0.03	45.50	2.64	0.19	0.00
17.00	2.36	0.12	0.03	46.00	2.64	0.19	0.00
17.50	2.39	0.13	0.03	46.50	2.64	0.19	0.00
18.00	2.41	0.13	0.03	47.00	2.64	0.19	0.00
18.50	2.44	0.14	0.03	47.50	2.64	0.19	0.00
19.00	2.46	0.14	0.03	48.00	2.64	0.19	0.00
19.50	2.48	0.15	0.03				
20.00	2.50	0.15	0.02				
20.50	2.52	0.16	0.02				
21.00	2.54	0.16	0.02				
21.50	2.56	0.17	0.02				
22.00	2.58	0.17	0.02				
22.50	2.59	0.18	0.02				
23.00	2.61	0.18	0.02				
23.50	2.63	0.19	0.02				
24.00	2.64	0.19	0.02				
24.50	2.64	0.19	0.00				
25.00	2.64	0.19	0.00				
25.50	2.64	0.19	0.00				
26.00	2.64	0.19	0.00				
26.50	2.64	0.19	0.00				
27.00	2.64	0.19	0.00				
27.50	2.64	0.19	0.00				
28.00	2.64	0.19	0.00				
28.50	2.64	0.19	0.00				

Summary for Subcatchment 40S: PDA-i+J-FB

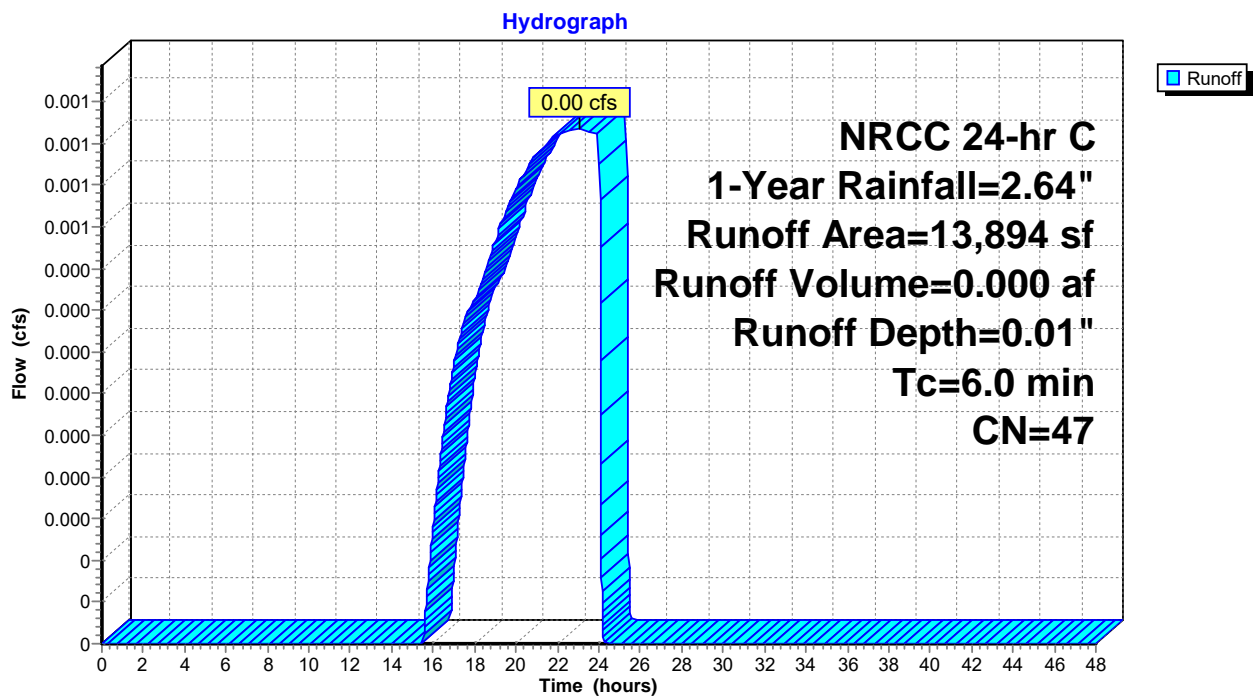
Runoff = 0.00 cfs @ 23.06 hrs, Volume= 0.000 af, Depth= 0.01"
 Routed to Pond 37P : FB 1i+J

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
8,901	39	>75% Grass cover, Good, HSG A
4,993	61	>75% Grass cover, Good, HSG B
13,894	47	Weighted Average
13,894		100.00% Pervious Area

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

Subcatchment 40S: PDA-i+J-FB



240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 40S: PDA-i+J-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.01	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.01	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.01	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.01	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.01	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.01	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.01	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.01	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.01	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.01	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.01	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.01	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.01	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.01	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.01	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.01	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.01	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.01	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.01	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.01	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.01	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.01	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.01	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.01	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.01	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.01	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.01	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.01	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.01	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.01	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.01	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.01	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.01	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.01	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.01	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.01	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.01	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.01	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.01	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.01	0.00				
20.50	2.52	0.01	0.00				
21.00	2.54	0.01	0.00				
21.50	2.56	0.01	0.00				
22.00	2.58	0.01	0.00				
22.50	2.59	0.01	0.00				
23.00	2.61	0.01	0.00				
23.50	2.63	0.01	0.00				
24.00	2.64	0.01	0.00				
24.50	2.64	0.01	0.00				
25.00	2.64	0.01	0.00				
25.50	2.64	0.01	0.00				
26.00	2.64	0.01	0.00				
26.50	2.64	0.01	0.00				
27.00	2.64	0.01	0.00				
27.50	2.64	0.01	0.00				
28.00	2.64	0.01	0.00				
28.50	2.64	0.01	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 41S: PDA-5A

Runoff = 4.08 cfs @ 12.14 hrs, Volume= 0.285 af, Depth= 0.69"
 Routed to Pond 39P : FB 5A

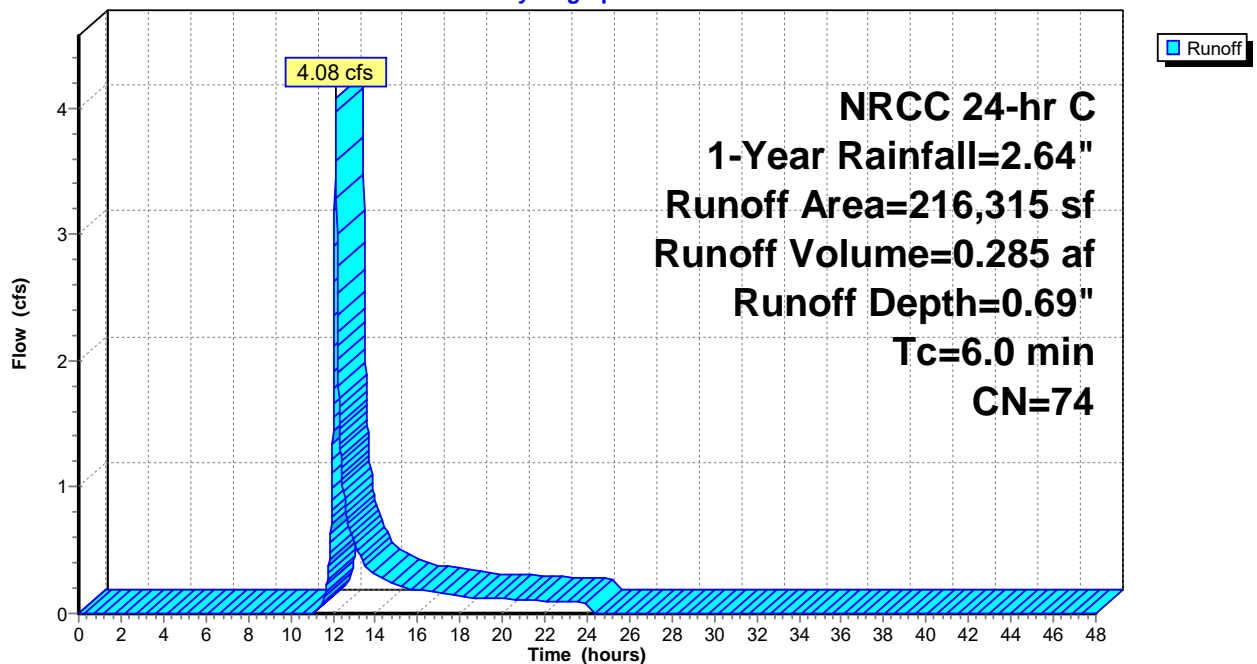
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
40,852	98	Paved parking, HSG D
78,273	61	>75% Grass cover, Good, HSG B
37,290	39	>75% Grass cover, Good, HSG A
59,900	98	Unconnected roofs, HSG D
216,315	74	Weighted Average
115,563		53.42% Pervious Area
100,752		46.58% Impervious Area
59,900		59.45% Unconnected

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

Subcatchment 41S: PDA-5A

Hydrograph



Hydrograph for Subcatchment 41S: PDA-5A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.69	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.69	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.69	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.69	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.69	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.69	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.69	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.69	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.69	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.69	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.69	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.69	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.69	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.69	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.69	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.69	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.69	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.69	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.69	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.69	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.69	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.69	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.69	0.00
11.50	0.83	0.00	0.08	40.50	2.64	0.69	0.00
12.00	1.26	0.08	1.45	41.00	2.64	0.69	0.00
12.50	1.81	0.27	0.98	41.50	2.64	0.69	0.00
13.00	1.96	0.33	0.57	42.00	2.64	0.69	0.00
13.50	2.05	0.37	0.38	42.50	2.64	0.69	0.00
14.00	2.12	0.41	0.31	43.00	2.64	0.69	0.00
14.50	2.18	0.43	0.27	43.50	2.64	0.69	0.00
15.00	2.22	0.46	0.22	44.00	2.64	0.69	0.00
15.50	2.26	0.48	0.20	44.50	2.64	0.69	0.00
16.00	2.30	0.50	0.19	45.00	2.64	0.69	0.00
16.50	2.33	0.52	0.17	45.50	2.64	0.69	0.00
17.00	2.36	0.53	0.16	46.00	2.64	0.69	0.00
17.50	2.39	0.55	0.15	46.50	2.64	0.69	0.00
18.00	2.41	0.56	0.13	47.00	2.64	0.69	0.00
18.50	2.44	0.57	0.12	47.50	2.64	0.69	0.00
19.00	2.46	0.59	0.12	48.00	2.64	0.69	0.00
19.50	2.48	0.60	0.12				
20.00	2.50	0.61	0.11				
20.50	2.52	0.62	0.11				
21.00	2.54	0.63	0.11				
21.50	2.56	0.64	0.10				
22.00	2.58	0.65	0.10				
22.50	2.59	0.66	0.10				
23.00	2.61	0.67	0.09				
23.50	2.63	0.68	0.09				
24.00	2.64	0.69	0.09				
24.50	2.64	0.69	0.00				
25.00	2.64	0.69	0.00				
25.50	2.64	0.69	0.00				
26.00	2.64	0.69	0.00				
26.50	2.64	0.69	0.00				
27.00	2.64	0.69	0.00				
27.50	2.64	0.69	0.00				
28.00	2.64	0.69	0.00				
28.50	2.64	0.69	0.00				

Summary for Subcatchment 42S: PDA-1J-B

Runoff = 0.01 cfs @ 13.34 hrs, Volume= 0.005 af, Depth= 0.08"
 Routed to Pond 53P : Bioretention J basin

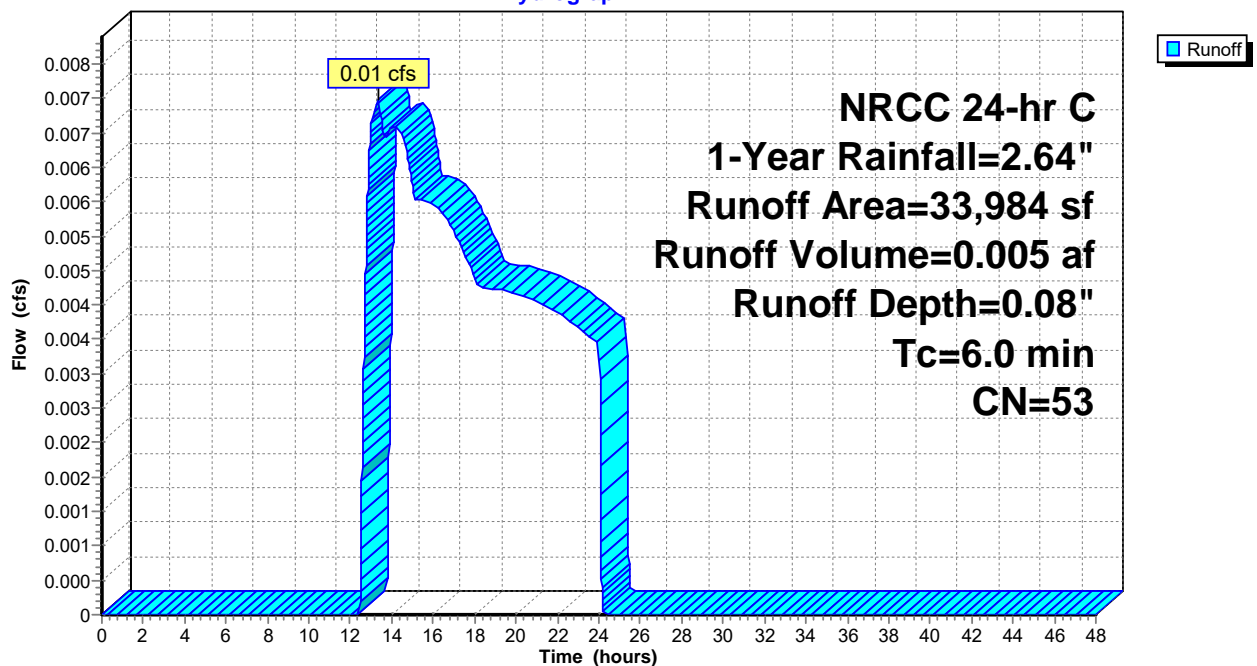
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
11,676	39	>75% Grass cover, Good, HSG A
22,308	61	>75% Grass cover, Good, HSG B
33,984	53	Weighted Average
33,984		100.00% Pervious Area

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

Subcatchment 42S: PDA-1J-B

Hydrograph



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NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 42S: PDA-1J-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.08	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.08	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.08	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.08	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.08	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.08	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.08	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.08	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.08	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.08	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.08	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.08	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.08	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.08	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.08	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.08	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.08	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.08	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.08	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.08	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.08	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.08	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.08	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.08	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.08	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.08	0.00
13.00	1.96	0.00	0.01	42.00	2.64	0.08	0.00
13.50	2.05	0.01	0.01	42.50	2.64	0.08	0.00
14.00	2.12	0.01	0.01	43.00	2.64	0.08	0.00
14.50	2.18	0.02	0.01	43.50	2.64	0.08	0.00
15.00	2.22	0.02	0.01	44.00	2.64	0.08	0.00
15.50	2.26	0.03	0.01	44.50	2.64	0.08	0.00
16.00	2.30	0.03	0.01	45.00	2.64	0.08	0.00
16.50	2.33	0.03	0.01	45.50	2.64	0.08	0.00
17.00	2.36	0.04	0.01	46.00	2.64	0.08	0.00
17.50	2.39	0.04	0.01	46.50	2.64	0.08	0.00
18.00	2.41	0.04	0.00	47.00	2.64	0.08	0.00
18.50	2.44	0.05	0.00	47.50	2.64	0.08	0.00
19.00	2.46	0.05	0.00	48.00	2.64	0.08	0.00
19.50	2.48	0.05	0.00				
20.00	2.50	0.06	0.00				
20.50	2.52	0.06	0.00				
21.00	2.54	0.06	0.00				
21.50	2.56	0.06	0.00				
22.00	2.58	0.07	0.00				
22.50	2.59	0.07	0.00				
23.00	2.61	0.07	0.00				
23.50	2.63	0.07	0.00				
24.00	2.64	0.08	0.00				
24.50	2.64	0.08	0.00				
25.00	2.64	0.08	0.00				
25.50	2.64	0.08	0.00				
26.00	2.64	0.08	0.00				
26.50	2.64	0.08	0.00				
27.00	2.64	0.08	0.00				
27.50	2.64	0.08	0.00				
28.00	2.64	0.08	0.00				
28.50	2.64	0.08	0.00				

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 43S: PDA-1B

Runoff = 15.79 cfs @ 12.13 hrs, Volume= 1.035 af, Depth= 1.36"
 Routed to Pond 44P : FB 1B

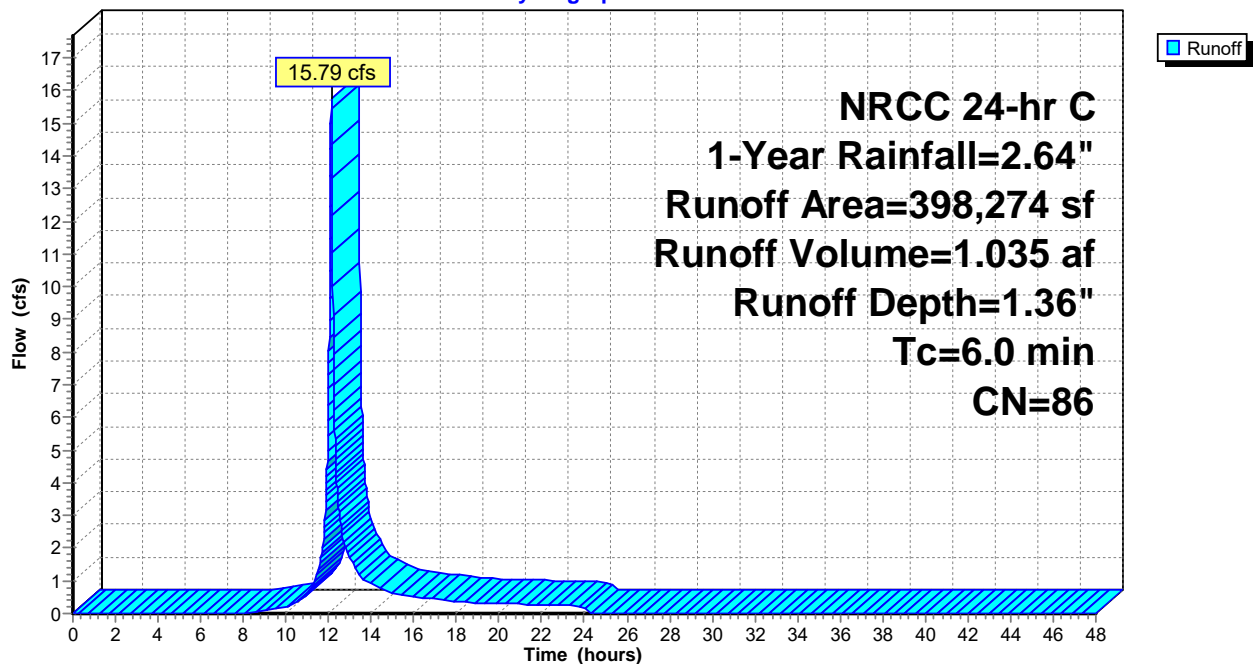
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
292,844	98	Unconnected pavement, HSG D
54,536	39	>75% Grass cover, Good, HSG A
24,842	61	>75% Grass cover, Good, HSG B
26,052	80	>75% Grass cover, Good, HSG D
398,274	86	Weighted Average
105,430		26.47% Pervious Area
292,844		73.53% Impervious Area
292,844		100.00% Unconnected

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

Subcatchment 43S: PDA-1B

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 43S: PDA-1B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	1.36	0.00
0.50	0.01	0.00	0.00	29.50	2.64	1.36	0.00
1.00	0.03	0.00	0.00	30.00	2.64	1.36	0.00
1.50	0.05	0.00	0.00	30.50	2.64	1.36	0.00
2.00	0.06	0.00	0.00	31.00	2.64	1.36	0.00
2.50	0.08	0.00	0.00	31.50	2.64	1.36	0.00
3.00	0.10	0.00	0.00	32.00	2.64	1.36	0.00
3.50	0.12	0.00	0.00	32.50	2.64	1.36	0.00
4.00	0.14	0.00	0.00	33.00	2.64	1.36	0.00
4.50	0.16	0.00	0.00	33.50	2.64	1.36	0.00
5.00	0.18	0.00	0.00	34.00	2.64	1.36	0.00
5.50	0.20	0.00	0.00	34.50	2.64	1.36	0.00
6.00	0.23	0.00	0.00	35.00	2.64	1.36	0.00
6.50	0.25	0.00	0.00	35.50	2.64	1.36	0.00
7.00	0.28	0.00	0.00	36.00	2.64	1.36	0.00
7.50	0.31	0.00	0.00	36.50	2.64	1.36	0.00
8.00	0.34	0.00	0.01	37.00	2.64	1.36	0.00
8.50	0.38	0.00	0.04	37.50	2.64	1.36	0.00
9.00	0.42	0.01	0.07	38.00	2.64	1.36	0.00
9.50	0.46	0.01	0.13	38.50	2.64	1.36	0.00
10.00	0.52	0.02	0.21	39.00	2.64	1.36	0.00
10.50	0.59	0.04	0.32	39.50	2.64	1.36	0.00
11.00	0.68	0.06	0.60	40.00	2.64	1.36	0.00
11.50	0.83	0.12	1.22	40.50	2.64	1.36	0.00
12.00	1.26	0.34	7.31	41.00	2.64	1.36	0.00
12.50	1.81	0.71	3.14	41.50	2.64	1.36	0.00
13.00	1.96	0.82	1.72	42.00	2.64	1.36	0.00
13.50	2.05	0.89	1.14	42.50	2.64	1.36	0.00
14.00	2.12	0.94	0.90	43.00	2.64	1.36	0.00
14.50	2.18	0.98	0.76	43.50	2.64	1.36	0.00
15.00	2.22	1.02	0.62	44.00	2.64	1.36	0.00
15.50	2.26	1.05	0.56	44.50	2.64	1.36	0.00
16.00	2.30	1.08	0.52	45.00	2.64	1.36	0.00
16.50	2.33	1.11	0.48	45.50	2.64	1.36	0.00
17.00	2.36	1.13	0.44	46.00	2.64	1.36	0.00
17.50	2.39	1.15	0.40	46.50	2.64	1.36	0.00
18.00	2.41	1.17	0.36	47.00	2.64	1.36	0.00
18.50	2.44	1.19	0.34	47.50	2.64	1.36	0.00
19.00	2.46	1.21	0.33	48.00	2.64	1.36	0.00
19.50	2.48	1.23	0.32				
20.00	2.50	1.24	0.31				
20.50	2.52	1.26	0.30				
21.00	2.54	1.28	0.29				
21.50	2.56	1.29	0.28				
22.00	2.58	1.31	0.27				
22.50	2.59	1.32	0.26				
23.00	2.61	1.33	0.25				
23.50	2.63	1.35	0.24				
24.00	2.64	1.36	0.23				
24.50	2.64	1.36	0.00				
25.00	2.64	1.36	0.00				
25.50	2.64	1.36	0.00				
26.00	2.64	1.36	0.00				
26.50	2.64	1.36	0.00				
27.00	2.64	1.36	0.00				
27.50	2.64	1.36	0.00				
28.00	2.64	1.36	0.00				
28.50	2.64	1.36	0.00				

Summary for Subcatchment 46S: PDA-1H

Runoff = 26.66 cfs @ 12.13 hrs, Volume= 1.997 af, Depth= 2.41"
 Routed to Pond 51P : FB 1H

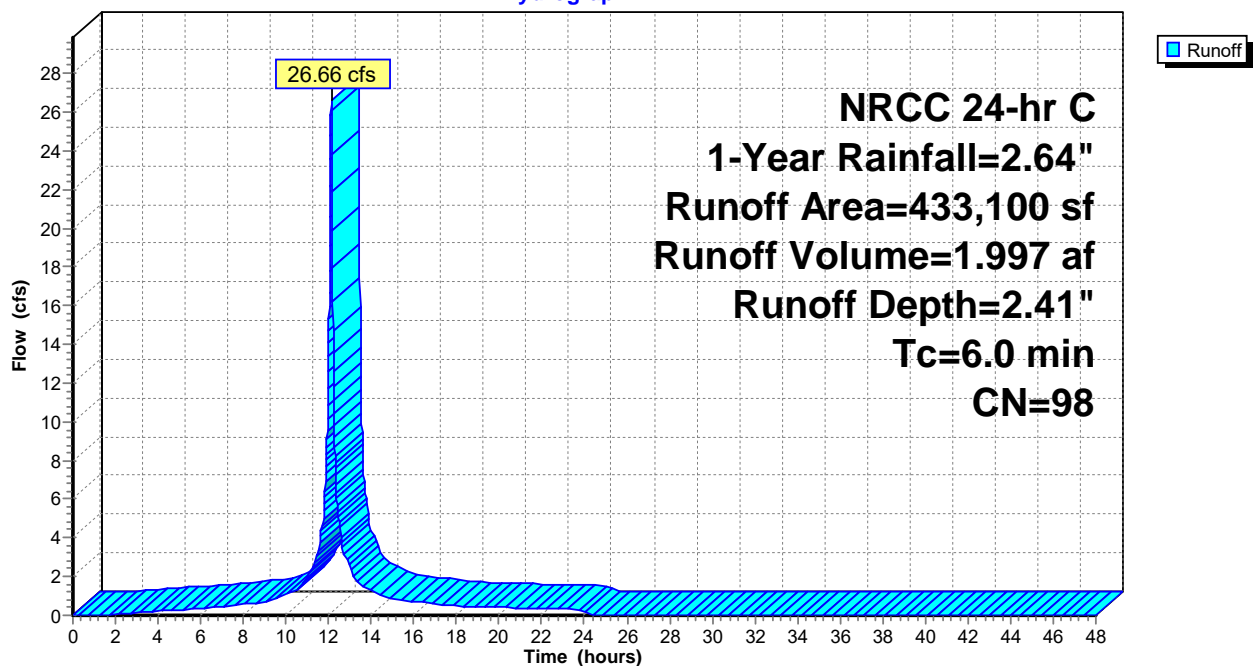
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
433,100	98	Roofs, HSG D
433,100		100.00% Impervious Area

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

Subcatchment 46S: PDA-1H

Hydrograph



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NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 46S: PDA-1H

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	2.41	0.00
0.50	0.01	0.00	0.00	29.50	2.64	2.41	0.00
1.00	0.03	0.00	0.00	30.00	2.64	2.41	0.00
1.50	0.05	0.00	0.01	30.50	2.64	2.41	0.00
2.00	0.06	0.00	0.06	31.00	2.64	2.41	0.00
2.50	0.08	0.01	0.10	31.50	2.64	2.41	0.00
3.00	0.10	0.01	0.14	32.00	2.64	2.41	0.00
3.50	0.12	0.02	0.18	32.50	2.64	2.41	0.00
4.00	0.14	0.03	0.22	33.00	2.64	2.41	0.00
4.50	0.16	0.04	0.25	33.50	2.64	2.41	0.00
5.00	0.18	0.06	0.28	34.00	2.64	2.41	0.00
5.50	0.20	0.07	0.31	34.50	2.64	2.41	0.00
6.00	0.23	0.09	0.33	35.00	2.64	2.41	0.00
6.50	0.25	0.11	0.39	35.50	2.64	2.41	0.00
7.00	0.28	0.13	0.45	36.00	2.64	2.41	0.00
7.50	0.31	0.15	0.51	36.50	2.64	2.41	0.00
8.00	0.34	0.18	0.57	37.00	2.64	2.41	0.00
8.50	0.38	0.21	0.64	37.50	2.64	2.41	0.00
9.00	0.42	0.25	0.70	38.00	2.64	2.41	0.00
9.50	0.46	0.29	0.89	38.50	2.64	2.41	0.00
10.00	0.52	0.34	1.09	39.00	2.64	2.41	0.00
10.50	0.59	0.40	1.29	39.50	2.64	2.41	0.00
11.00	0.68	0.49	1.97	40.00	2.64	2.41	0.00
11.50	0.83	0.62	3.18	40.50	2.64	2.41	0.00
12.00	1.26	1.04	14.14	41.00	2.64	2.41	0.00
12.50	1.81	1.59	4.70	41.50	2.64	2.41	0.00
13.00	1.96	1.73	2.48	42.00	2.64	2.41	0.00
13.50	2.05	1.83	1.61	42.50	2.64	2.41	0.00
14.00	2.12	1.89	1.26	43.00	2.64	2.41	0.00
14.50	2.18	1.95	1.06	43.50	2.64	2.41	0.00
15.00	2.22	1.99	0.86	44.00	2.64	2.41	0.00
15.50	2.26	2.03	0.76	44.50	2.64	2.41	0.00
16.00	2.30	2.07	0.70	45.00	2.64	2.41	0.00
16.50	2.33	2.10	0.65	45.50	2.64	2.41	0.00
17.00	2.36	2.13	0.59	46.00	2.64	2.41	0.00
17.50	2.39	2.16	0.53	46.50	2.64	2.41	0.00
18.00	2.41	2.18	0.48	47.00	2.64	2.41	0.00
18.50	2.44	2.21	0.45	47.50	2.64	2.41	0.00
19.00	2.46	2.23	0.44	48.00	2.64	2.41	0.00
19.50	2.48	2.25	0.42				
20.00	2.50	2.27	0.41				
20.50	2.52	2.29	0.39				
21.00	2.54	2.31	0.38				
21.50	2.56	2.33	0.36				
22.00	2.58	2.35	0.35				
22.50	2.59	2.36	0.34				
23.00	2.61	2.38	0.32				
23.50	2.63	2.40	0.31				
24.00	2.64	2.41	0.29				
24.50	2.64	2.41	0.00				
25.00	2.64	2.41	0.00				
25.50	2.64	2.41	0.00				
26.00	2.64	2.41	0.00				
26.50	2.64	2.41	0.00				
27.00	2.64	2.41	0.00				
27.50	2.64	2.41	0.00				
28.00	2.64	2.41	0.00				
28.50	2.64	2.41	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 47S: PDA-4A

Runoff = 1.25 cfs @ 12.14 hrs, Volume= 0.097 af, Depth= 0.49"
 Routed to Pond B4B : Bioretention 4A

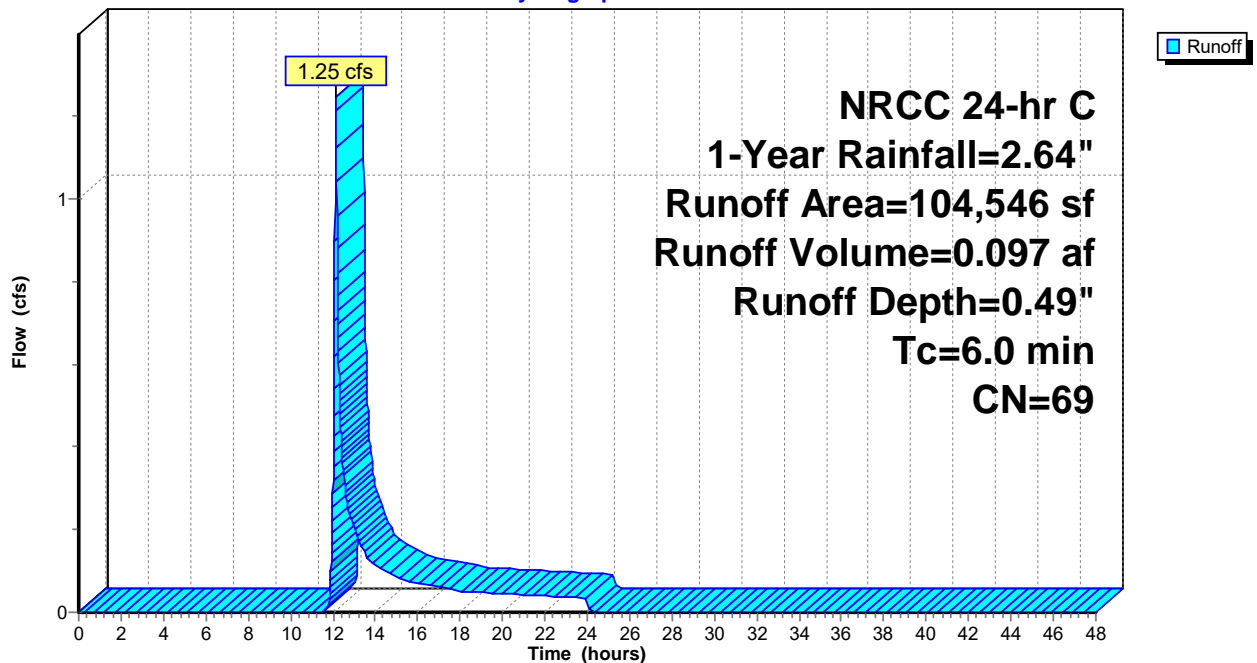
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
9,923	80	>75% Grass cover, Good, HSG D
36,179	98	Paved parking, HSG D
24,698	61	>75% Grass cover, Good, HSG B
33,746	39	>75% Grass cover, Good, HSG A
104,546	69	Weighted Average
68,367		65.39% Pervious Area
36,179		34.61% Impervious Area

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

Subcatchment 47S: PDA-4A

Hydrograph



Hydrograph for Subcatchment 47S: PDA-4A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.49	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.49	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.49	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.49	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.49	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.49	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.49	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.49	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.49	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.49	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.49	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.49	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.49	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.49	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.49	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.49	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.49	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.49	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.49	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.49	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.49	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.49	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.49	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.49	0.00
12.00	1.26	0.03	0.32	41.00	2.64	0.49	0.00
12.50	1.81	0.15	0.34	41.50	2.64	0.49	0.00
13.00	1.96	0.20	0.21	42.00	2.64	0.49	0.00
13.50	2.05	0.24	0.14	42.50	2.64	0.49	0.00
14.00	2.12	0.26	0.12	43.00	2.64	0.49	0.00
14.50	2.18	0.28	0.10	43.50	2.64	0.49	0.00
15.00	2.22	0.30	0.08	44.00	2.64	0.49	0.00
15.50	2.26	0.32	0.08	44.50	2.64	0.49	0.00
16.00	2.30	0.33	0.07	45.00	2.64	0.49	0.00
16.50	2.33	0.35	0.07	45.50	2.64	0.49	0.00
17.00	2.36	0.36	0.06	46.00	2.64	0.49	0.00
17.50	2.39	0.37	0.06	46.50	2.64	0.49	0.00
18.00	2.41	0.38	0.05	47.00	2.64	0.49	0.00
18.50	2.44	0.39	0.05	47.50	2.64	0.49	0.00
19.00	2.46	0.40	0.05	48.00	2.64	0.49	0.00
19.50	2.48	0.41	0.05				
20.00	2.50	0.42	0.05				
20.50	2.52	0.43	0.04				
21.00	2.54	0.44	0.04				
21.50	2.56	0.45	0.04				
22.00	2.58	0.46	0.04				
22.50	2.59	0.46	0.04				
23.00	2.61	0.47	0.04				
23.50	2.63	0.48	0.04				
24.00	2.64	0.49	0.03				
24.50	2.64	0.49	0.00				
25.00	2.64	0.49	0.00				
25.50	2.64	0.49	0.00				
26.00	2.64	0.49	0.00				
26.50	2.64	0.49	0.00				
27.00	2.64	0.49	0.00				
27.50	2.64	0.49	0.00				
28.00	2.64	0.49	0.00				
28.50	2.64	0.49	0.00				

Summary for Subcatchment 48S: PDA-1G-FB

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Pond 55P : FB 1G

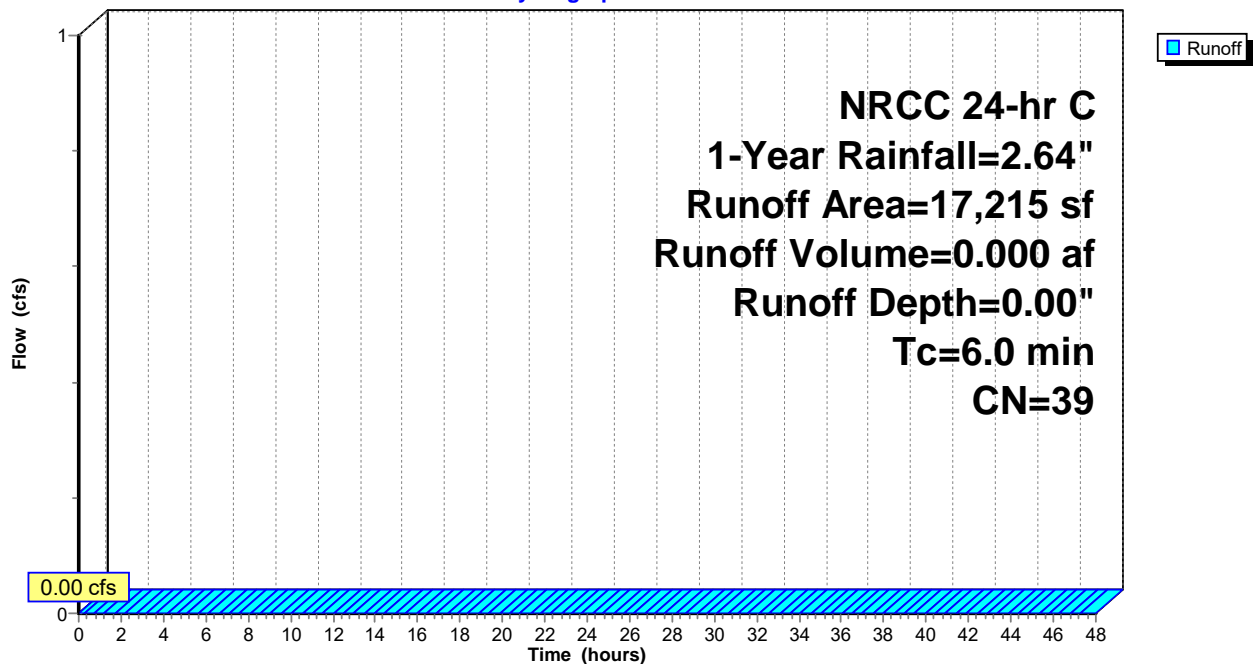
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
17,215	39	>75% Grass cover, Good, HSG A
17,215		100.00% Pervious Area

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

Subcatchment 48S: PDA-1G-FB

Hydrograph



Hydrograph for Subcatchment 48S: PDA-1G-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.00	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.00	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.00	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.00	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.00	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.00	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.00	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.00	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.00	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.00	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.00	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.00	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.00	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.00	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.00	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.00	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.00	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.00	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.00	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.00	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.00	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.00	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.00	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.00	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.00	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.00	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.00	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.00	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.00	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.00	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.00	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.00	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.00	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.00	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.00	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.00	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.00	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.00	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.00	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.00	0.00				
20.50	2.52	0.00	0.00				
21.00	2.54	0.00	0.00				
21.50	2.56	0.00	0.00				
22.00	2.58	0.00	0.00				
22.50	2.59	0.00	0.00				
23.00	2.61	0.00	0.00				
23.50	2.63	0.00	0.00				
24.00	2.64	0.00	0.00				
24.50	2.64	0.00	0.00				
25.00	2.64	0.00	0.00				
25.50	2.64	0.00	0.00				
26.00	2.64	0.00	0.00				
26.50	2.64	0.00	0.00				
27.00	2.64	0.00	0.00				
27.50	2.64	0.00	0.00				
28.00	2.64	0.00	0.00				
28.50	2.64	0.00	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 1-Year Rainfall=2.64"

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Summary for Subcatchment 49S: PDA-4B

Runoff = 8.31 cfs @ 12.13 hrs, Volume= 0.545 af, Depth= 1.23"
 Routed to Pond 29P : Bioretention 4B

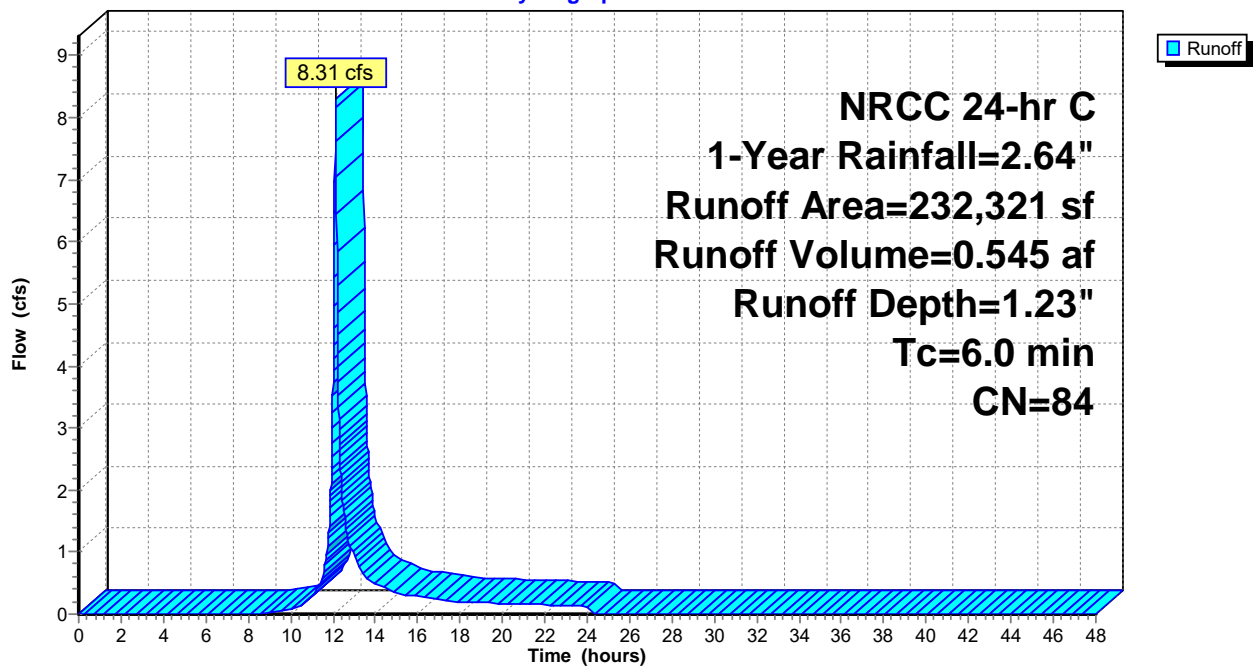
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
146,145	98	Paved parking, HSG D
86,176	61	>75% Grass cover, Good, HSG B
0	98	Unconnected roofs, HSG D
232,321	84	Weighted Average
86,176		37.09% Pervious Area
146,145		62.91% Impervious Area

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

Subcatchment 49S: PDA-4B

Hydrograph



Hydrograph for Subcatchment 49S: PDA-4B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	1.23	0.00
0.50	0.01	0.00	0.00	29.50	2.64	1.23	0.00
1.00	0.03	0.00	0.00	30.00	2.64	1.23	0.00
1.50	0.05	0.00	0.00	30.50	2.64	1.23	0.00
2.00	0.06	0.00	0.00	31.00	2.64	1.23	0.00
2.50	0.08	0.00	0.00	31.50	2.64	1.23	0.00
3.00	0.10	0.00	0.00	32.00	2.64	1.23	0.00
3.50	0.12	0.00	0.00	32.50	2.64	1.23	0.00
4.00	0.14	0.00	0.00	33.00	2.64	1.23	0.00
4.50	0.16	0.00	0.00	33.50	2.64	1.23	0.00
5.00	0.18	0.00	0.00	34.00	2.64	1.23	0.00
5.50	0.20	0.00	0.00	34.50	2.64	1.23	0.00
6.00	0.23	0.00	0.00	35.00	2.64	1.23	0.00
6.50	0.25	0.00	0.00	35.50	2.64	1.23	0.00
7.00	0.28	0.00	0.00	36.00	2.64	1.23	0.00
7.50	0.31	0.00	0.00	36.50	2.64	1.23	0.00
8.00	0.34	0.00	0.00	37.00	2.64	1.23	0.00
8.50	0.38	0.00	0.00	37.50	2.64	1.23	0.00
9.00	0.42	0.00	0.01	38.00	2.64	1.23	0.00
9.50	0.46	0.00	0.04	38.50	2.64	1.23	0.00
10.00	0.52	0.01	0.08	39.00	2.64	1.23	0.00
10.50	0.59	0.02	0.13	39.50	2.64	1.23	0.00
11.00	0.68	0.04	0.27	40.00	2.64	1.23	0.00
11.50	0.83	0.08	0.58	40.50	2.64	1.23	0.00
12.00	1.26	0.28	3.74	41.00	2.64	1.23	0.00
12.50	1.81	0.62	1.70	41.50	2.64	1.23	0.00
13.00	1.96	0.72	0.94	42.00	2.64	1.23	0.00
13.50	2.05	0.78	0.62	42.50	2.64	1.23	0.00
14.00	2.12	0.83	0.49	43.00	2.64	1.23	0.00
14.50	2.18	0.87	0.42	43.50	2.64	1.23	0.00
15.00	2.22	0.90	0.34	44.00	2.64	1.23	0.00
15.50	2.26	0.93	0.31	44.50	2.64	1.23	0.00
16.00	2.30	0.96	0.29	45.00	2.64	1.23	0.00
16.50	2.33	0.99	0.26	45.50	2.64	1.23	0.00
17.00	2.36	1.01	0.24	46.00	2.64	1.23	0.00
17.50	2.39	1.03	0.22	46.50	2.64	1.23	0.00
18.00	2.41	1.05	0.20	47.00	2.64	1.23	0.00
18.50	2.44	1.07	0.19	47.50	2.64	1.23	0.00
19.00	2.46	1.08	0.18	48.00	2.64	1.23	0.00
19.50	2.48	1.10	0.18				
20.00	2.50	1.12	0.17				
20.50	2.52	1.13	0.16				
21.00	2.54	1.15	0.16				
21.50	2.56	1.16	0.15				
22.00	2.58	1.18	0.15				
22.50	2.59	1.19	0.14				
23.00	2.61	1.20	0.14				
23.50	2.63	1.21	0.13				
24.00	2.64	1.23	0.13				
24.50	2.64	1.23	0.00				
25.00	2.64	1.23	0.00				
25.50	2.64	1.23	0.00				
26.00	2.64	1.23	0.00				
26.50	2.64	1.23	0.00				
27.00	2.64	1.23	0.00				
27.50	2.64	1.23	0.00				
28.00	2.64	1.23	0.00				
28.50	2.64	1.23	0.00				

Summary for Subcatchment 51S: PDA-1G-B

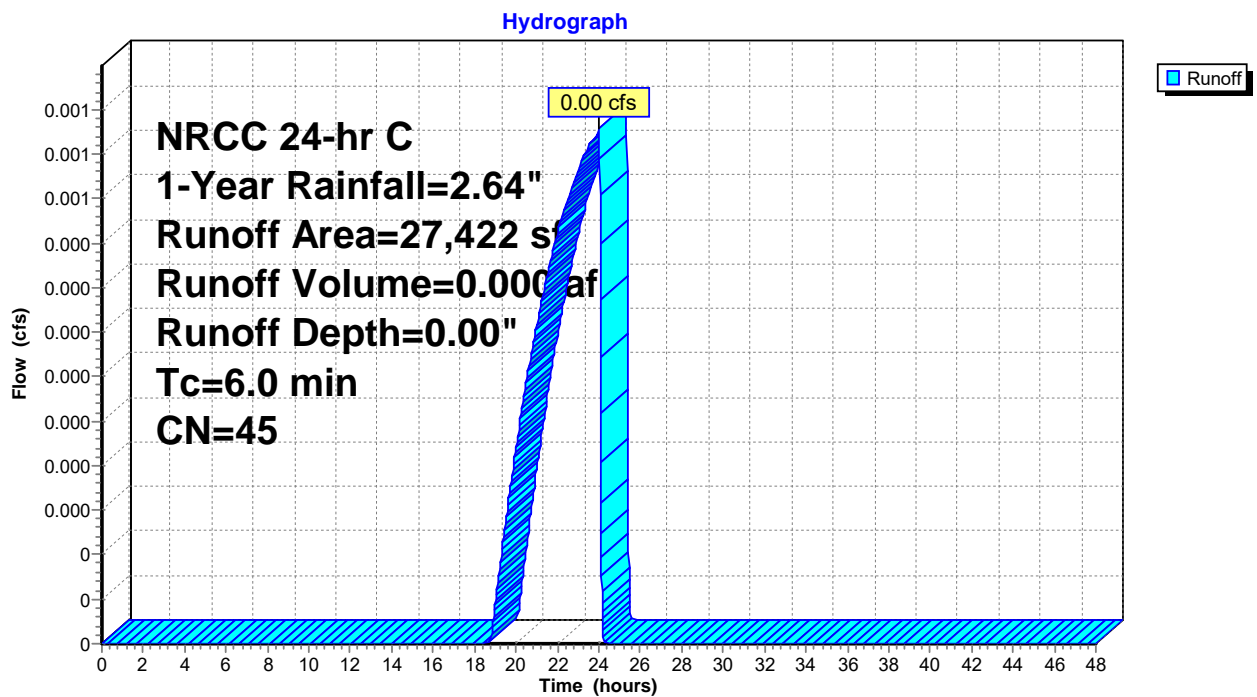
Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Pond 54P : INFIL 1G

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
19,919	39	>75% Grass cover, Good, HSG A
7,503	61	>75% Grass cover, Good, HSG B
27,422	45	Weighted Average
27,422		100.00% Pervious Area

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

Subcatchment 51S: PDA-1G-B



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NRCC 24-hr C 1-Year Rainfall=2.64"

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Hydrograph for Subcatchment 51S: PDA-1G-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.00	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.00	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.00	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.00	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.00	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.00	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.00	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.00	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.00	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.00	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.00	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.00	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.00	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.00	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.00	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.00	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.00	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.00	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.00	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.00	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.00	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.00	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.00	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.00	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.00	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.00	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.00	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.00	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.00	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.00	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.00	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.00	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.00	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.00	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.00	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.00	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.00	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.00	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.00	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.00	0.00				
20.50	2.52	0.00	0.00				
21.00	2.54	0.00	0.00				
21.50	2.56	0.00	0.00				
22.00	2.58	0.00	0.00				
22.50	2.59	0.00	0.00				
23.00	2.61	0.00	0.00				
23.50	2.63	0.00	0.00				
24.00	2.64	0.00	0.00				
24.50	2.64	0.00	0.00				
25.00	2.64	0.00	0.00				
25.50	2.64	0.00	0.00				
26.00	2.64	0.00	0.00				
26.50	2.64	0.00	0.00				
27.00	2.64	0.00	0.00				
27.50	2.64	0.00	0.00				
28.00	2.64	0.00	0.00				
28.50	2.64	0.00	0.00				

Summary for Subcatchment 52S: PDA-1G

Runoff = 25.66 cfs @ 12.13 hrs, Volume= 1.922 af, Depth= 2.41"
 Routed to Pond 55P : FB 1G

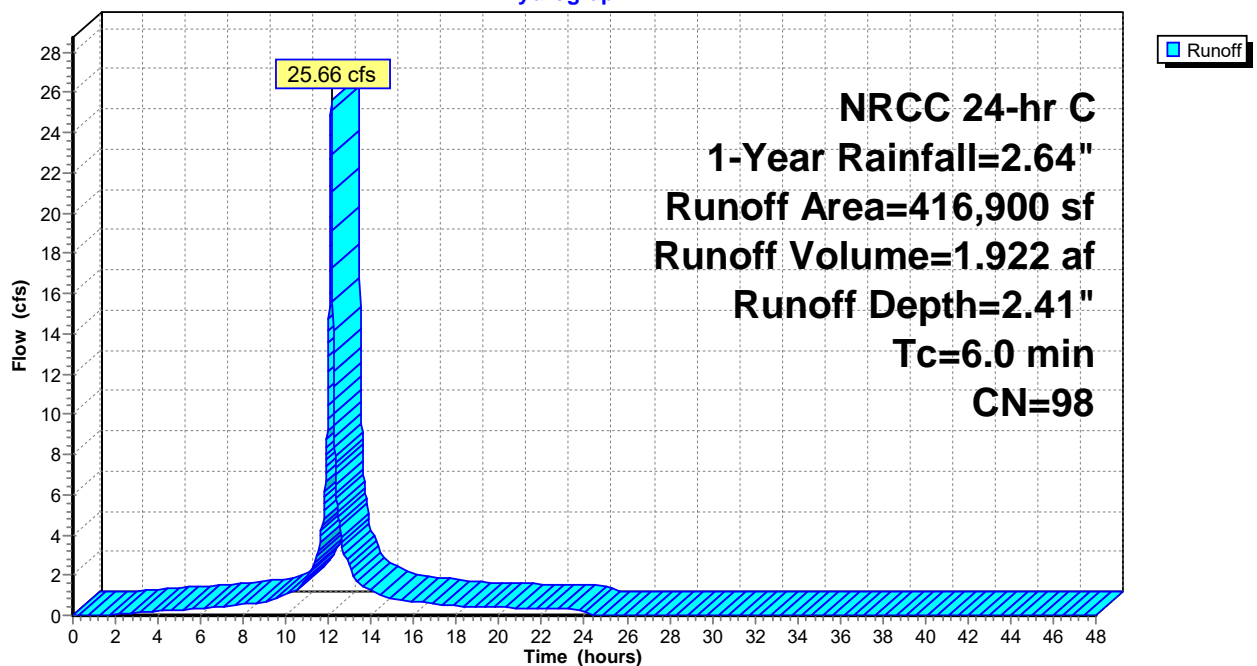
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
416,900	98	Roofs, HSG D
416,900		100.00% Impervious Area

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

Subcatchment 52S: PDA-1G

Hydrograph



Hydrograph for Subcatchment 52S: PDA-1G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	2.41	0.00
0.50	0.01	0.00	0.00	29.50	2.64	2.41	0.00
1.00	0.03	0.00	0.00	30.00	2.64	2.41	0.00
1.50	0.05	0.00	0.01	30.50	2.64	2.41	0.00
2.00	0.06	0.00	0.06	31.00	2.64	2.41	0.00
2.50	0.08	0.01	0.10	31.50	2.64	2.41	0.00
3.00	0.10	0.01	0.14	32.00	2.64	2.41	0.00
3.50	0.12	0.02	0.17	32.50	2.64	2.41	0.00
4.00	0.14	0.03	0.21	33.00	2.64	2.41	0.00
4.50	0.16	0.04	0.24	33.50	2.64	2.41	0.00
5.00	0.18	0.06	0.27	34.00	2.64	2.41	0.00
5.50	0.20	0.07	0.29	34.50	2.64	2.41	0.00
6.00	0.23	0.09	0.32	35.00	2.64	2.41	0.00
6.50	0.25	0.11	0.37	35.50	2.64	2.41	0.00
7.00	0.28	0.13	0.43	36.00	2.64	2.41	0.00
7.50	0.31	0.15	0.49	36.50	2.64	2.41	0.00
8.00	0.34	0.18	0.55	37.00	2.64	2.41	0.00
8.50	0.38	0.21	0.61	37.50	2.64	2.41	0.00
9.00	0.42	0.25	0.68	38.00	2.64	2.41	0.00
9.50	0.46	0.29	0.85	38.50	2.64	2.41	0.00
10.00	0.52	0.34	1.05	39.00	2.64	2.41	0.00
10.50	0.59	0.40	1.24	39.50	2.64	2.41	0.00
11.00	0.68	0.49	1.89	40.00	2.64	2.41	0.00
11.50	0.83	0.62	3.06	40.50	2.64	2.41	0.00
12.00	1.26	1.04	13.61	41.00	2.64	2.41	0.00
12.50	1.81	1.59	4.52	41.50	2.64	2.41	0.00
13.00	1.96	1.73	2.39	42.00	2.64	2.41	0.00
13.50	2.05	1.83	1.55	42.50	2.64	2.41	0.00
14.00	2.12	1.89	1.21	43.00	2.64	2.41	0.00
14.50	2.18	1.95	1.02	43.50	2.64	2.41	0.00
15.00	2.22	1.99	0.83	44.00	2.64	2.41	0.00
15.50	2.26	2.03	0.73	44.50	2.64	2.41	0.00
16.00	2.30	2.07	0.68	45.00	2.64	2.41	0.00
16.50	2.33	2.10	0.62	45.50	2.64	2.41	0.00
17.00	2.36	2.13	0.57	46.00	2.64	2.41	0.00
17.50	2.39	2.16	0.51	46.50	2.64	2.41	0.00
18.00	2.41	2.18	0.46	47.00	2.64	2.41	0.00
18.50	2.44	2.21	0.43	47.50	2.64	2.41	0.00
19.00	2.46	2.23	0.42	48.00	2.64	2.41	0.00
19.50	2.48	2.25	0.41				
20.00	2.50	2.27	0.39				
20.50	2.52	2.29	0.38				
21.00	2.54	2.31	0.36				
21.50	2.56	2.33	0.35				
22.00	2.58	2.35	0.34				
22.50	2.59	2.36	0.32				
23.00	2.61	2.38	0.31				
23.50	2.63	2.40	0.30				
24.00	2.64	2.41	0.28				
24.50	2.64	2.41	0.00				
25.00	2.64	2.41	0.00				
25.50	2.64	2.41	0.00				
26.00	2.64	2.41	0.00				
26.50	2.64	2.41	0.00				
27.00	2.64	2.41	0.00				
27.50	2.64	2.41	0.00				
28.00	2.64	2.41	0.00				
28.50	2.64	2.41	0.00				

Summary for Subcatchment 54S: PDA-1H-IB

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Pond 47P : INFIL 1H

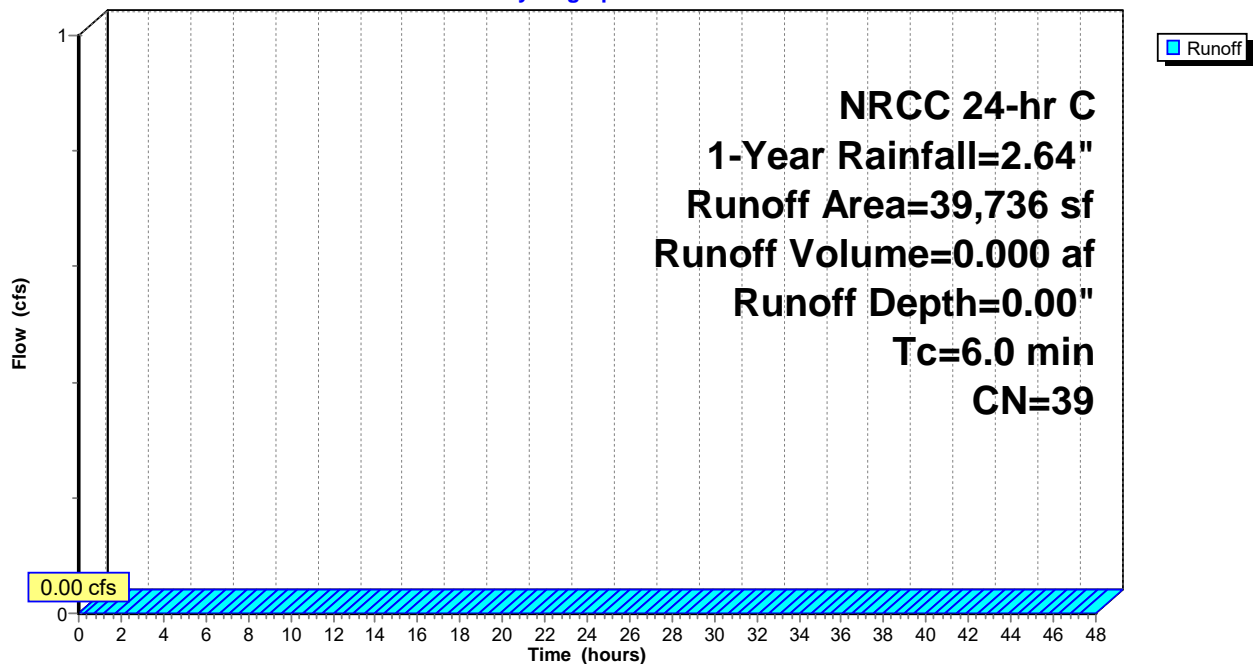
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
39,736	39	>75% Grass cover, Good, HSG A
39,736		100.00% Pervious Area

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

Subcatchment 54S: PDA-1H-IB

Hydrograph



Hydrograph for Subcatchment 54S: PDA-1H-IB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.00	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.00	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.00	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.00	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.00	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.00	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.00	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.00	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.00	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.00	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.00	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.00	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.00	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.00	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.00	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.00	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.00	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.00	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.00	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.00	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.00	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.00	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.00	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.00	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.00	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.00	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.00	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.00	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.00	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.00	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.00	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.00	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.00	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.00	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.00	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.00	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.00	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.00	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.00	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.00	0.00				
20.50	2.52	0.00	0.00				
21.00	2.54	0.00	0.00				
21.50	2.56	0.00	0.00				
22.00	2.58	0.00	0.00				
22.50	2.59	0.00	0.00				
23.00	2.61	0.00	0.00				
23.50	2.63	0.00	0.00				
24.00	2.64	0.00	0.00				
24.50	2.64	0.00	0.00				
25.00	2.64	0.00	0.00				
25.50	2.64	0.00	0.00				
26.00	2.64	0.00	0.00				
26.50	2.64	0.00	0.00				
27.00	2.64	0.00	0.00				
27.50	2.64	0.00	0.00				
28.00	2.64	0.00	0.00				
28.50	2.64	0.00	0.00				

240814_RDM Neelytown Drainage

Prepared by Colliers Engineering & Design

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NRCC 24-hr C 1-Year Rainfall=2.64"

Printed 8/12/2024

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Summary for Subcatchment 55S: PDA-1E

Runoff = 0.99 cfs @ 12.13 hrs, Volume= 0.070 af, Depth= 2.10"
 Routed to Pond 59P : FB 1E

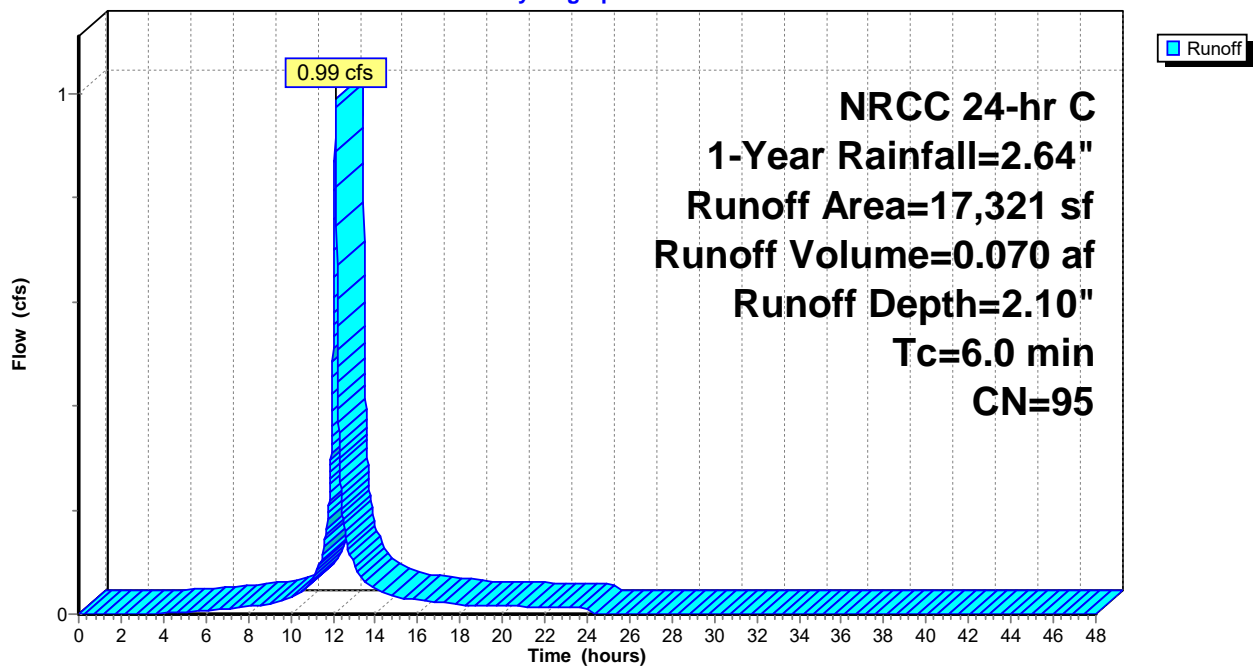
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
3,059	80	>75% Grass cover, Good, HSG D
0	39	>75% Grass cover, Good, HSG A
14,262	98	Paved parking, HSG D
17,321	95	Weighted Average
3,059		17.66% Pervious Area
14,262		82.34% Impervious Area

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

Subcatchment 55S: PDA-1E

Hydrograph



Hydrograph for Subcatchment 55S: PDA-1E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	2.10	0.00
0.50	0.01	0.00	0.00	29.50	2.64	2.10	0.00
1.00	0.03	0.00	0.00	30.00	2.64	2.10	0.00
1.50	0.05	0.00	0.00	30.50	2.64	2.10	0.00
2.00	0.06	0.00	0.00	31.00	2.64	2.10	0.00
2.50	0.08	0.00	0.00	31.50	2.64	2.10	0.00
3.00	0.10	0.00	0.00	32.00	2.64	2.10	0.00
3.50	0.12	0.00	0.00	32.50	2.64	2.10	0.00
4.00	0.14	0.00	0.00	33.00	2.64	2.10	0.00
4.50	0.16	0.01	0.00	33.50	2.64	2.10	0.00
5.00	0.18	0.01	0.00	34.00	2.64	2.10	0.00
5.50	0.20	0.02	0.01	34.50	2.64	2.10	0.00
6.00	0.23	0.02	0.01	35.00	2.64	2.10	0.00
6.50	0.25	0.03	0.01	35.50	2.64	2.10	0.00
7.00	0.28	0.04	0.01	36.00	2.64	2.10	0.00
7.50	0.31	0.06	0.01	36.50	2.64	2.10	0.00
8.00	0.34	0.07	0.01	37.00	2.64	2.10	0.00
8.50	0.38	0.09	0.02	37.50	2.64	2.10	0.00
9.00	0.42	0.12	0.02	38.00	2.64	2.10	0.00
9.50	0.46	0.15	0.03	38.50	2.64	2.10	0.00
10.00	0.52	0.18	0.03	39.00	2.64	2.10	0.00
10.50	0.59	0.23	0.04	39.50	2.64	2.10	0.00
11.00	0.68	0.30	0.06	40.00	2.64	2.10	0.00
11.50	0.83	0.42	0.11	40.50	2.64	2.10	0.00
12.00	1.26	0.79	0.51	41.00	2.64	2.10	0.00
12.50	1.81	1.31	0.18	41.50	2.64	2.10	0.00
13.00	1.96	1.44	0.10	42.00	2.64	2.10	0.00
13.50	2.05	1.53	0.06	42.50	2.64	2.10	0.00
14.00	2.12	1.60	0.05	43.00	2.64	2.10	0.00
14.50	2.18	1.65	0.04	43.50	2.64	2.10	0.00
15.00	2.22	1.69	0.03	44.00	2.64	2.10	0.00
15.50	2.26	1.73	0.03	44.50	2.64	2.10	0.00
16.00	2.30	1.77	0.03	45.00	2.64	2.10	0.00
16.50	2.33	1.80	0.03	45.50	2.64	2.10	0.00
17.00	2.36	1.83	0.02	46.00	2.64	2.10	0.00
17.50	2.39	1.86	0.02	46.50	2.64	2.10	0.00
18.00	2.41	1.88	0.02	47.00	2.64	2.10	0.00
18.50	2.44	1.90	0.02	47.50	2.64	2.10	0.00
19.00	2.46	1.92	0.02	48.00	2.64	2.10	0.00
19.50	2.48	1.94	0.02				
20.00	2.50	1.96	0.02				
20.50	2.52	1.98	0.02				
21.00	2.54	2.00	0.01				
21.50	2.56	2.02	0.01				
22.00	2.58	2.04	0.01				
22.50	2.59	2.05	0.01				
23.00	2.61	2.07	0.01				
23.50	2.63	2.08	0.01				
24.00	2.64	2.10	0.01				
24.50	2.64	2.10	0.00				
25.00	2.64	2.10	0.00				
25.50	2.64	2.10	0.00				
26.00	2.64	2.10	0.00				
26.50	2.64	2.10	0.00				
27.00	2.64	2.10	0.00				
27.50	2.64	2.10	0.00				
28.00	2.64	2.10	0.00				
28.50	2.64	2.10	0.00				

Summary for Subcatchment 56S: PDA-1B-FB

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Pond 44P : FB 1B

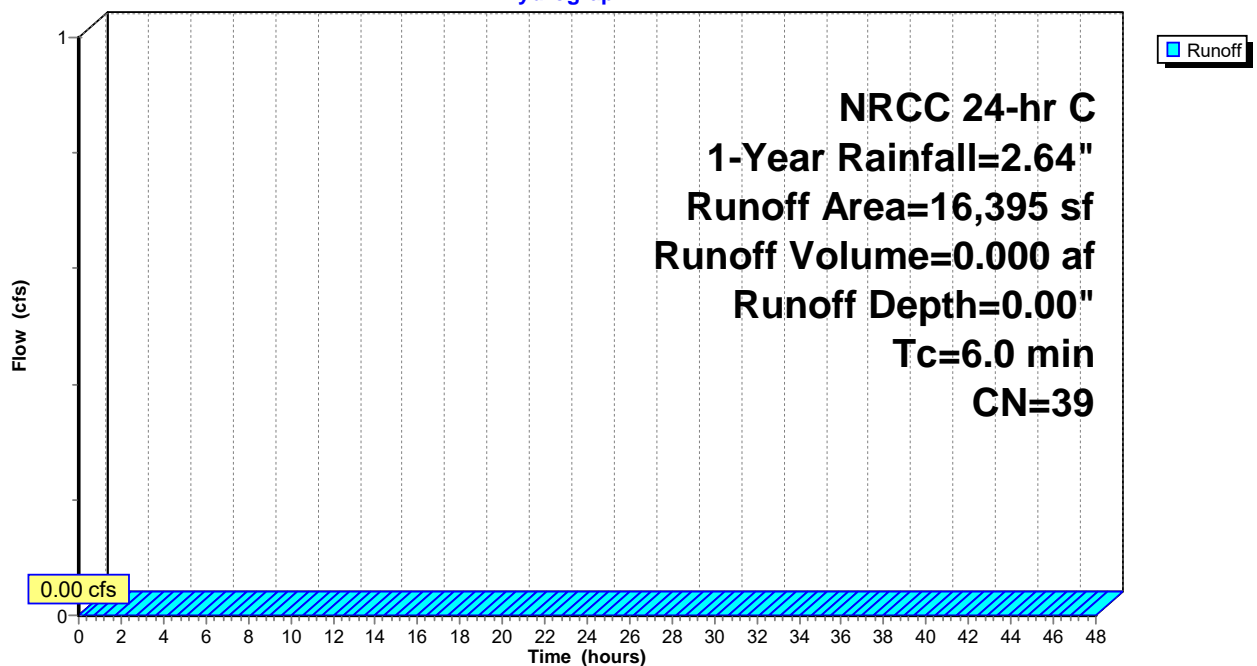
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
16,395	39	>75% Grass cover, Good, HSG A
16,395		100.00% Pervious Area

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

Subcatchment 56S: PDA-1B-FB

Hydrograph



Hydrograph for Subcatchment 56S: PDA-1B-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.00	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.00	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.00	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.00	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.00	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.00	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.00	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.00	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.00	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.00	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.00	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.00	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.00	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.00	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.00	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.00	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.00	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.00	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.00	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.00	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.00	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.00	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.00	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.00	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.00	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.00	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.00	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.00	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.00	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.00	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.00	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.00	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.00	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.00	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.00	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.00	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.00	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.00	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.00	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.00	0.00				
20.50	2.52	0.00	0.00				
21.00	2.54	0.00	0.00				
21.50	2.56	0.00	0.00				
22.00	2.58	0.00	0.00				
22.50	2.59	0.00	0.00				
23.00	2.61	0.00	0.00				
23.50	2.63	0.00	0.00				
24.00	2.64	0.00	0.00				
24.50	2.64	0.00	0.00				
25.00	2.64	0.00	0.00				
25.50	2.64	0.00	0.00				
26.00	2.64	0.00	0.00				
26.50	2.64	0.00	0.00				
27.00	2.64	0.00	0.00				
27.50	2.64	0.00	0.00				
28.00	2.64	0.00	0.00				
28.50	2.64	0.00	0.00				

Summary for Subcatchment 57S: PDA-1H-FB

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Pond 51P : FB 1H

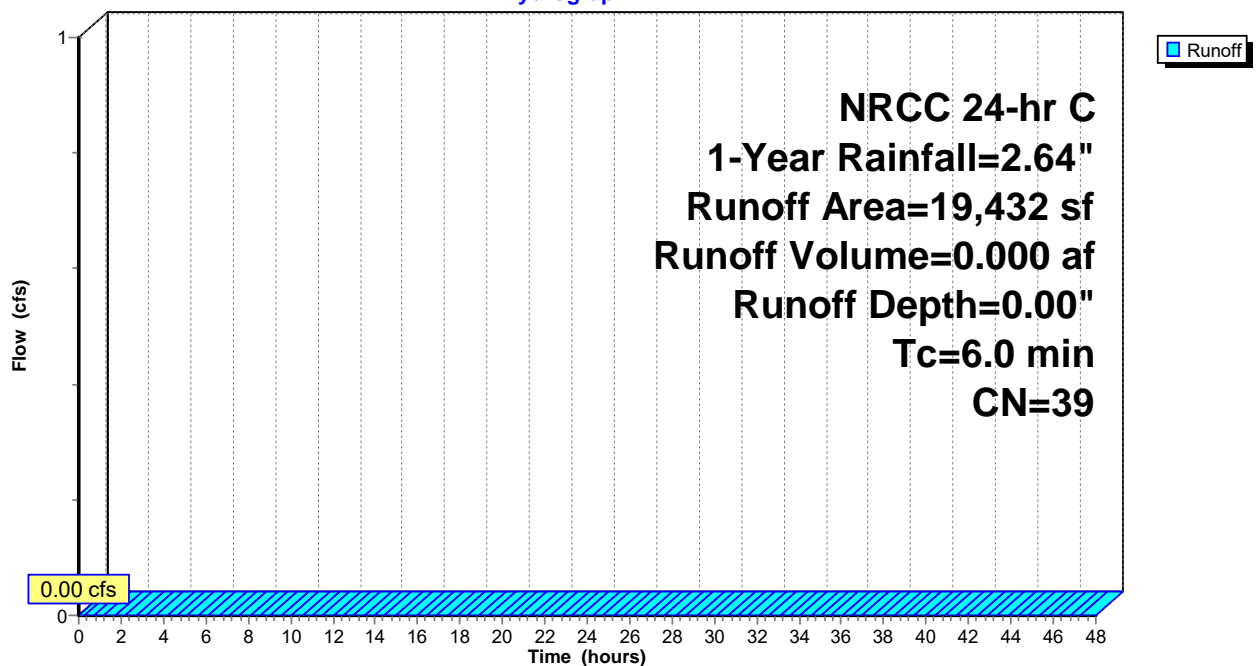
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
19,432	39	>75% Grass cover, Good, HSG A
19,432		100.00% Pervious Area

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

Subcatchment 57S: PDA-1H-FB

Hydrograph



Hydrograph for Subcatchment 57S: PDA-1H-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.00	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.00	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.00	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.00	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.00	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.00	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.00	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.00	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.00	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.00	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.00	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.00	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.00	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.00	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.00	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.00	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.00	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.00	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.00	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.00	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.00	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.00	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.00	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.00	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.00	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.00	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.00	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.00	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.00	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.00	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.00	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.00	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.00	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.00	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.00	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.00	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.00	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.00	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.00	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.00	0.00				
20.50	2.52	0.00	0.00				
21.00	2.54	0.00	0.00				
21.50	2.56	0.00	0.00				
22.00	2.58	0.00	0.00				
22.50	2.59	0.00	0.00				
23.00	2.61	0.00	0.00				
23.50	2.63	0.00	0.00				
24.00	2.64	0.00	0.00				
24.50	2.64	0.00	0.00				
25.00	2.64	0.00	0.00				
25.50	2.64	0.00	0.00				
26.00	2.64	0.00	0.00				
26.50	2.64	0.00	0.00				
27.00	2.64	0.00	0.00				
27.50	2.64	0.00	0.00				
28.00	2.64	0.00	0.00				
28.50	2.64	0.00	0.00				

Summary for Subcatchment 58S: PDA1-B-IB

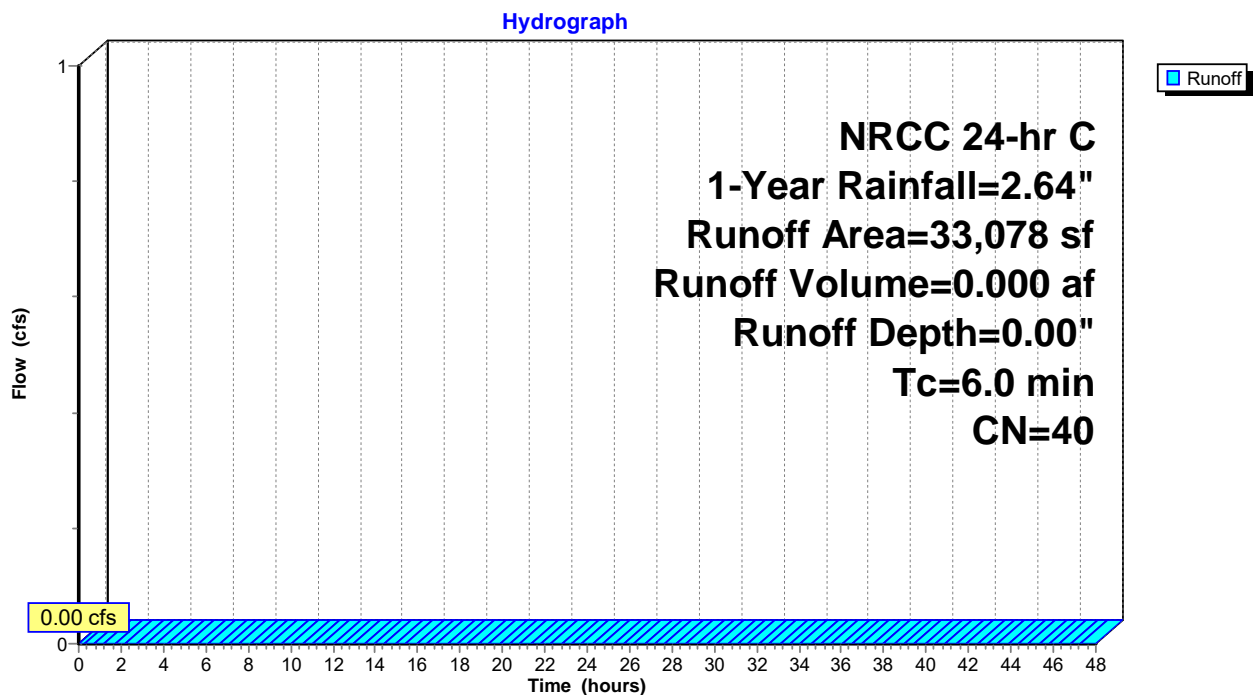
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Pond 45P : INFIL 1B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
1,110	80	>75% Grass cover, Good, HSG D
31,968	39	>75% Grass cover, Good, HSG A
33,078	40	Weighted Average
33,078		100.00% Pervious Area

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

Subcatchment 58S: PDA1-B-IB



Hydrograph for Subcatchment 58S: PDA1-B-IB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.00	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.00	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.00	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.00	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.00	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.00	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.00	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.00	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.00	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.00	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.00	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.00	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.00	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.00	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.00	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.00	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.00	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.00	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.00	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.00	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.00	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.00	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.00	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.00	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.00	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.00	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.00	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.00	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.00	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.00	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.00	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.00	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.00	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.00	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.00	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.00	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.00	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.00	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.00	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.00	0.00				
20.50	2.52	0.00	0.00				
21.00	2.54	0.00	0.00				
21.50	2.56	0.00	0.00				
22.00	2.58	0.00	0.00				
22.50	2.59	0.00	0.00				
23.00	2.61	0.00	0.00				
23.50	2.63	0.00	0.00				
24.00	2.64	0.00	0.00				
24.50	2.64	0.00	0.00				
25.00	2.64	0.00	0.00				
25.50	2.64	0.00	0.00				
26.00	2.64	0.00	0.00				
26.50	2.64	0.00	0.00				
27.00	2.64	0.00	0.00				
27.50	2.64	0.00	0.00				
28.00	2.64	0.00	0.00				
28.50	2.64	0.00	0.00				

240814_RDM Neelytown Drainage

Prepared by Colliers Engineering & Design

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NRCC 24-hr C 1-Year Rainfall=2.64"

Printed 8/12/2024

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Summary for Subcatchment 59S: PDA-1F

Runoff = 7.60 cfs @ 12.13 hrs, Volume= 0.501 af, Depth= 1.04"
 Routed to Pond 26P : Bioretention 1F

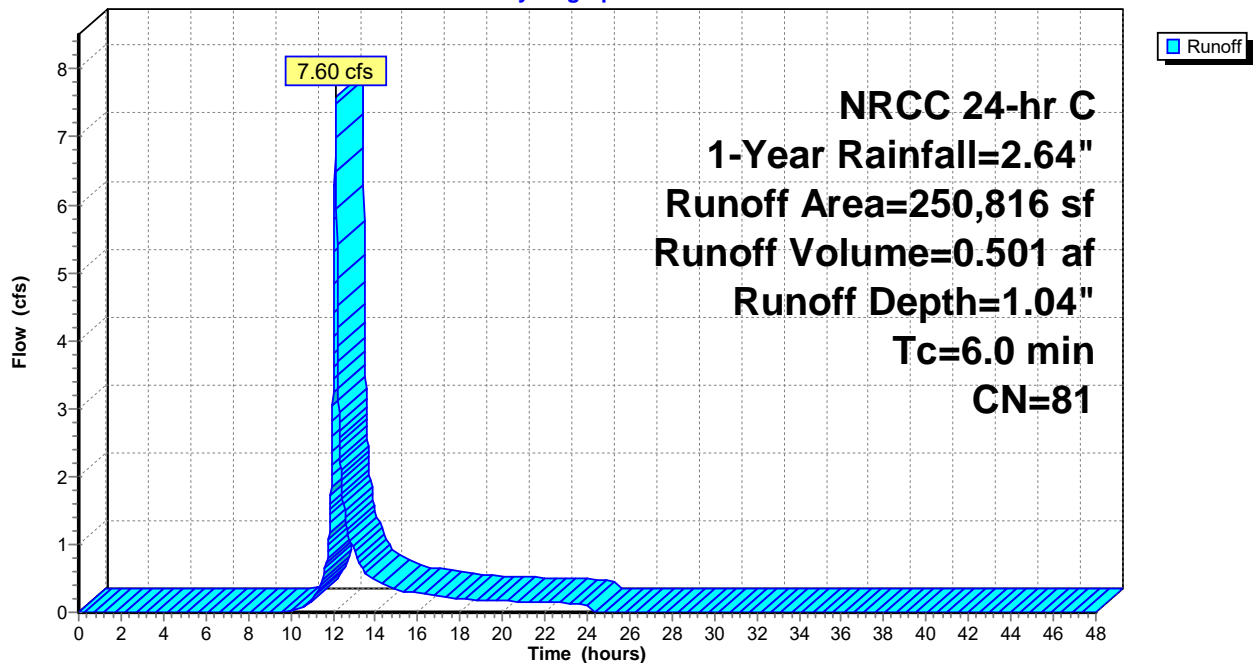
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
178,571	98	Unconnected pavement, HSG D
71,249	39	>75% Grass cover, Good, HSG A
996	80	>75% Grass cover, Good, HSG D
250,816	81	Weighted Average
72,245		28.80% Pervious Area
178,571		71.20% Impervious Area
178,571		100.00% Unconnected

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

Subcatchment 59S: PDA-1F

Hydrograph



240814_RDM Neelytown Drainage

Prepared by Colliers Engineering & Design

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NRCC 24-hr C 1-Year Rainfall=2.64"

Printed 8/12/2024

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Hydrograph for Subcatchment 59S: PDA-1F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	1.04	0.00
0.50	0.01	0.00	0.00	29.50	2.64	1.04	0.00
1.00	0.03	0.00	0.00	30.00	2.64	1.04	0.00
1.50	0.05	0.00	0.00	30.50	2.64	1.04	0.00
2.00	0.06	0.00	0.00	31.00	2.64	1.04	0.00
2.50	0.08	0.00	0.00	31.50	2.64	1.04	0.00
3.00	0.10	0.00	0.00	32.00	2.64	1.04	0.00
3.50	0.12	0.00	0.00	32.50	2.64	1.04	0.00
4.00	0.14	0.00	0.00	33.00	2.64	1.04	0.00
4.50	0.16	0.00	0.00	33.50	2.64	1.04	0.00
5.00	0.18	0.00	0.00	34.00	2.64	1.04	0.00
5.50	0.20	0.00	0.00	34.50	2.64	1.04	0.00
6.00	0.23	0.00	0.00	35.00	2.64	1.04	0.00
6.50	0.25	0.00	0.00	35.50	2.64	1.04	0.00
7.00	0.28	0.00	0.00	36.00	2.64	1.04	0.00
7.50	0.31	0.00	0.00	36.50	2.64	1.04	0.00
8.00	0.34	0.00	0.00	37.00	2.64	1.04	0.00
8.50	0.38	0.00	0.00	37.50	2.64	1.04	0.00
9.00	0.42	0.00	0.00	38.00	2.64	1.04	0.00
9.50	0.46	0.00	0.00	38.50	2.64	1.04	0.00
10.00	0.52	0.00	0.02	39.00	2.64	1.04	0.00
10.50	0.59	0.01	0.07	39.50	2.64	1.04	0.00
11.00	0.68	0.02	0.18	40.00	2.64	1.04	0.00
11.50	0.83	0.05	0.44	40.50	2.64	1.04	0.00
12.00	1.26	0.20	3.25	41.00	2.64	1.04	0.00
12.50	1.81	0.49	1.61	41.50	2.64	1.04	0.00
13.00	1.96	0.58	0.90	42.00	2.64	1.04	0.00
13.50	2.05	0.64	0.60	42.50	2.64	1.04	0.00
14.00	2.12	0.68	0.48	43.00	2.64	1.04	0.00
14.50	2.18	0.72	0.41	43.50	2.64	1.04	0.00
15.00	2.22	0.75	0.34	44.00	2.64	1.04	0.00
15.50	2.26	0.78	0.30	44.50	2.64	1.04	0.00
16.00	2.30	0.80	0.28	45.00	2.64	1.04	0.00
16.50	2.33	0.82	0.26	45.50	2.64	1.04	0.00
17.00	2.36	0.84	0.24	46.00	2.64	1.04	0.00
17.50	2.39	0.86	0.22	46.50	2.64	1.04	0.00
18.00	2.41	0.88	0.19	47.00	2.64	1.04	0.00
18.50	2.44	0.90	0.18	47.50	2.64	1.04	0.00
19.00	2.46	0.91	0.18	48.00	2.64	1.04	0.00
19.50	2.48	0.93	0.17				
20.00	2.50	0.94	0.17				
20.50	2.52	0.96	0.16				
21.00	2.54	0.97	0.16				
21.50	2.56	0.98	0.15				
22.00	2.58	1.00	0.15				
22.50	2.59	1.01	0.14				
23.00	2.61	1.02	0.14				
23.50	2.63	1.03	0.13				
24.00	2.64	1.04	0.13				
24.50	2.64	1.04	0.00				
25.00	2.64	1.04	0.00				
25.50	2.64	1.04	0.00				
26.00	2.64	1.04	0.00				
26.50	2.64	1.04	0.00				
27.00	2.64	1.04	0.00				
27.50	2.64	1.04	0.00				
28.00	2.64	1.04	0.00				
28.50	2.64	1.04	0.00				

Summary for Subcatchment 60S: PDA-1i-B

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Pond 31P : Bioretention i

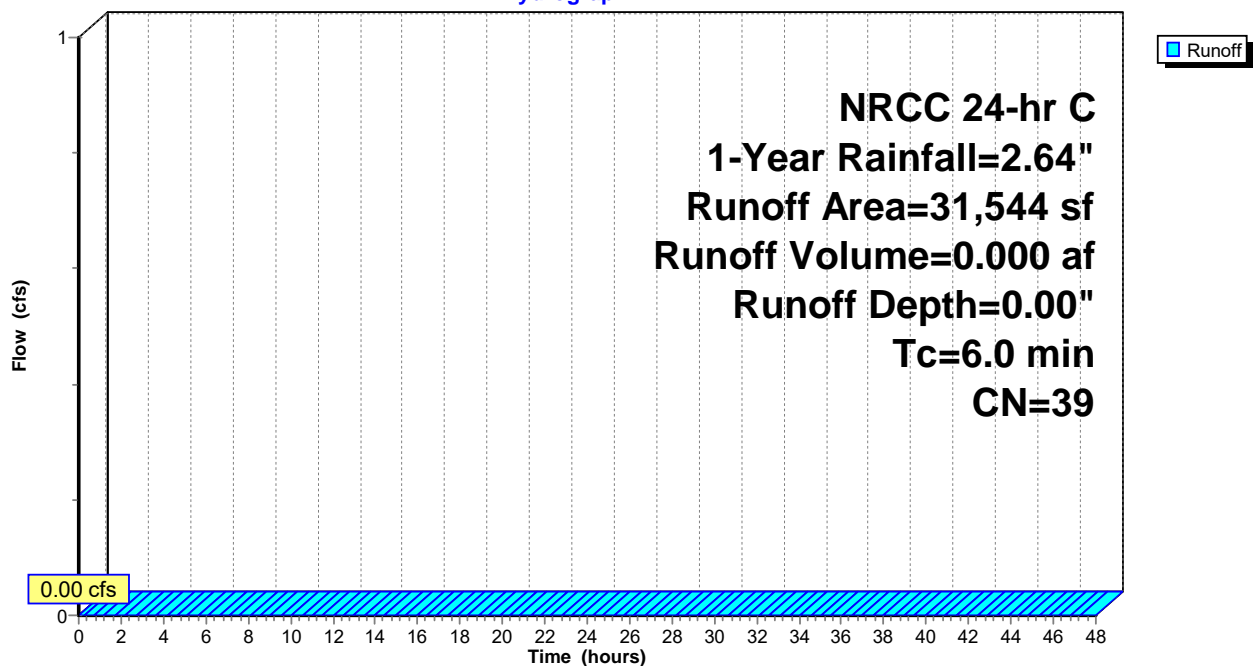
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 1-Year Rainfall=2.64"

Area (sf)	CN	Description
31,544	39	>75% Grass cover, Good, HSG A
31,544		100.00% Pervious Area

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

Subcatchment 60S: PDA-1i-B

Hydrograph



Hydrograph for Subcatchment 60S: PDA-1i-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	2.64	0.00	0.00
0.50	0.01	0.00	0.00	29.50	2.64	0.00	0.00
1.00	0.03	0.00	0.00	30.00	2.64	0.00	0.00
1.50	0.05	0.00	0.00	30.50	2.64	0.00	0.00
2.00	0.06	0.00	0.00	31.00	2.64	0.00	0.00
2.50	0.08	0.00	0.00	31.50	2.64	0.00	0.00
3.00	0.10	0.00	0.00	32.00	2.64	0.00	0.00
3.50	0.12	0.00	0.00	32.50	2.64	0.00	0.00
4.00	0.14	0.00	0.00	33.00	2.64	0.00	0.00
4.50	0.16	0.00	0.00	33.50	2.64	0.00	0.00
5.00	0.18	0.00	0.00	34.00	2.64	0.00	0.00
5.50	0.20	0.00	0.00	34.50	2.64	0.00	0.00
6.00	0.23	0.00	0.00	35.00	2.64	0.00	0.00
6.50	0.25	0.00	0.00	35.50	2.64	0.00	0.00
7.00	0.28	0.00	0.00	36.00	2.64	0.00	0.00
7.50	0.31	0.00	0.00	36.50	2.64	0.00	0.00
8.00	0.34	0.00	0.00	37.00	2.64	0.00	0.00
8.50	0.38	0.00	0.00	37.50	2.64	0.00	0.00
9.00	0.42	0.00	0.00	38.00	2.64	0.00	0.00
9.50	0.46	0.00	0.00	38.50	2.64	0.00	0.00
10.00	0.52	0.00	0.00	39.00	2.64	0.00	0.00
10.50	0.59	0.00	0.00	39.50	2.64	0.00	0.00
11.00	0.68	0.00	0.00	40.00	2.64	0.00	0.00
11.50	0.83	0.00	0.00	40.50	2.64	0.00	0.00
12.00	1.26	0.00	0.00	41.00	2.64	0.00	0.00
12.50	1.81	0.00	0.00	41.50	2.64	0.00	0.00
13.00	1.96	0.00	0.00	42.00	2.64	0.00	0.00
13.50	2.05	0.00	0.00	42.50	2.64	0.00	0.00
14.00	2.12	0.00	0.00	43.00	2.64	0.00	0.00
14.50	2.18	0.00	0.00	43.50	2.64	0.00	0.00
15.00	2.22	0.00	0.00	44.00	2.64	0.00	0.00
15.50	2.26	0.00	0.00	44.50	2.64	0.00	0.00
16.00	2.30	0.00	0.00	45.00	2.64	0.00	0.00
16.50	2.33	0.00	0.00	45.50	2.64	0.00	0.00
17.00	2.36	0.00	0.00	46.00	2.64	0.00	0.00
17.50	2.39	0.00	0.00	46.50	2.64	0.00	0.00
18.00	2.41	0.00	0.00	47.00	2.64	0.00	0.00
18.50	2.44	0.00	0.00	47.50	2.64	0.00	0.00
19.00	2.46	0.00	0.00	48.00	2.64	0.00	0.00
19.50	2.48	0.00	0.00				
20.00	2.50	0.00	0.00				
20.50	2.52	0.00	0.00				
21.00	2.54	0.00	0.00				
21.50	2.56	0.00	0.00				
22.00	2.58	0.00	0.00				
22.50	2.59	0.00	0.00				
23.00	2.61	0.00	0.00				
23.50	2.63	0.00	0.00				
24.00	2.64	0.00	0.00				
24.50	2.64	0.00	0.00				
25.00	2.64	0.00	0.00				
25.50	2.64	0.00	0.00				
26.00	2.64	0.00	0.00				
26.50	2.64	0.00	0.00				
27.00	2.64	0.00	0.00				
27.50	2.64	0.00	0.00				
28.00	2.64	0.00	0.00				
28.50	2.64	0.00	0.00				

Summary for Pond 1P: Bioretention 1D

Inflow Area = 3.927 ac, 65.47% Impervious, Inflow Depth = 1.77" for 1-Year event
 Inflow = 8.52 cfs @ 12.14 hrs, Volume= 0.581 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.79' @ 45.33 hrs Surf.Area= 15,484 sf Storage= 25,297 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

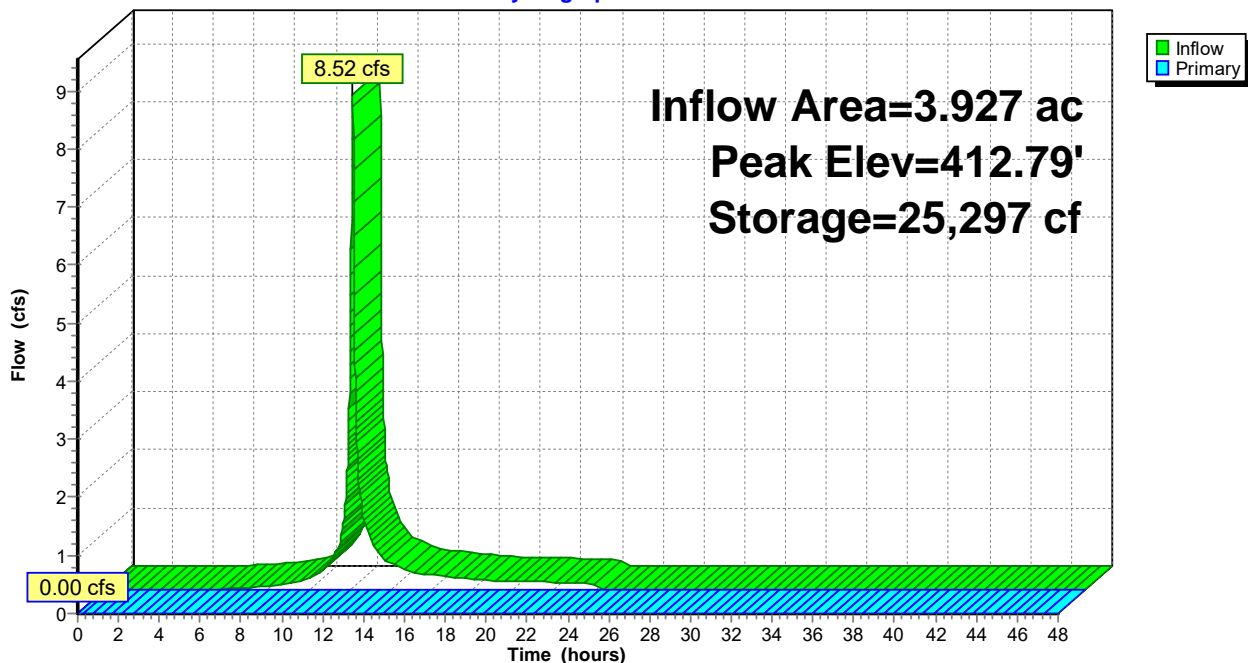
Volume	Invert	Avail.Storage	Storage Description	
#1	408.66'	82,103 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	14,016	0.0	0	0
409.33	14,016	40.0	3,756	3,756
412.00	14,016	20.0	7,485	11,241
416.00	21,415	100.0	70,862	82,103

Device	Routing	Invert	Outlet Devices
#1	Primary	408.78'	18.0" Round Culvert L= 28.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 408.78' / 408.50' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	413.00'	10.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	415.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.66' (Free Discharge)
 1=Culvert (Controls 0.00 cfs)
 2=Orifice/Grate (Controls 0.00 cfs)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

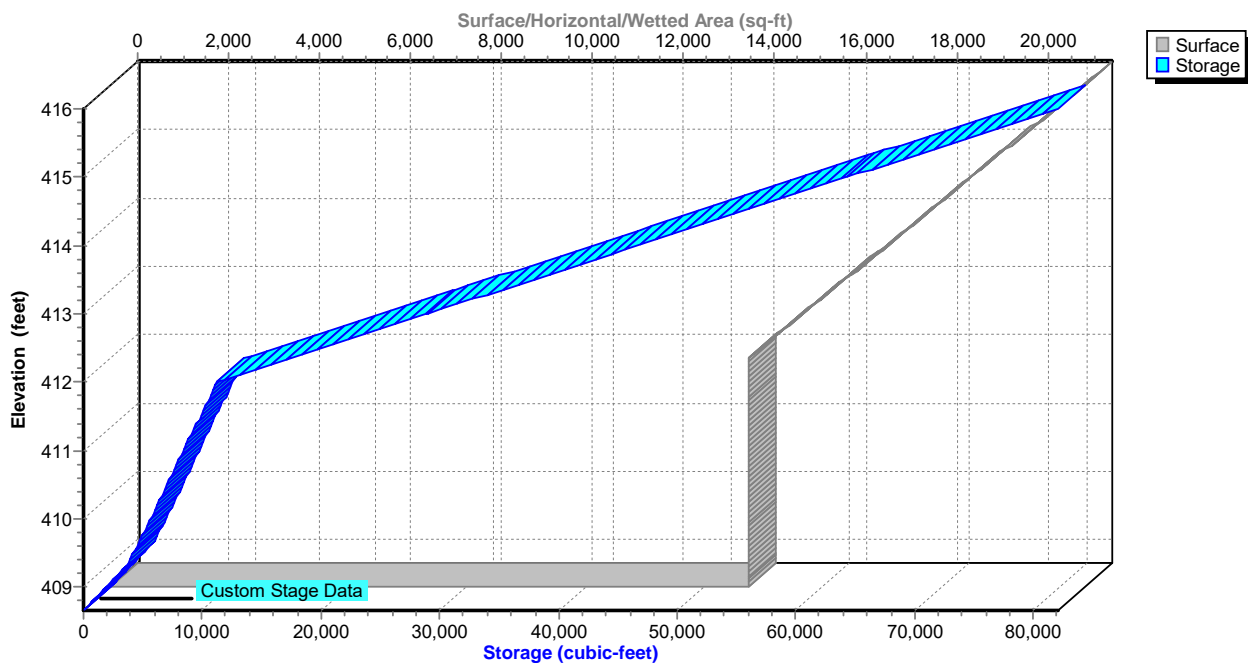
Pond 1P: Bioretention 1D

Hydrograph



Pond 1P: Bioretention 1D

Stage-Area-Storage



Hydrograph for Pond 1P: Bioretention 1D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	408.66	0.00
1.00	0.00	0	408.66	0.00
2.00	0.00	0	408.66	0.00
3.00	0.00	0	408.66	0.00
4.00	0.00	2	408.66	0.00
5.00	0.00	12	408.66	0.00
6.00	0.01	36	408.67	0.00
7.00	0.04	123	408.68	0.00
8.00	0.07	312	408.72	0.00
9.00	0.11	632	408.77	0.00
10.00	0.21	1,188	408.87	0.00
11.00	0.45	2,245	409.06	0.00
12.00	3.89	6,232	410.21	0.00
13.00	0.90	16,135	412.28	0.00
14.00	0.45	18,338	412.40	0.00
15.00	0.31	19,716	412.48	0.00
16.00	0.25	20,711	412.53	0.00
17.00	0.21	21,556	412.58	0.00
18.00	0.17	22,256	412.62	0.00
19.00	0.16	22,847	412.66	0.00
20.00	0.15	23,400	412.69	0.00
21.00	0.14	23,916	412.72	0.00
22.00	0.13	24,396	412.74	0.00
23.00	0.12	24,840	412.77	0.00
24.00	0.11	25,246	412.79	0.00
25.00	0.00	25,297	412.79	0.00
26.00	0.00	25,297	412.79	0.00
27.00	0.00	25,297	412.79	0.00
28.00	0.00	25,297	412.79	0.00
29.00	0.00	25,297	412.79	0.00
30.00	0.00	25,297	412.79	0.00
31.00	0.00	25,297	412.79	0.00
32.00	0.00	25,297	412.79	0.00
33.00	0.00	25,297	412.79	0.00
34.00	0.00	25,297	412.79	0.00
35.00	0.00	25,297	412.79	0.00
36.00	0.00	25,297	412.79	0.00
37.00	0.00	25,297	412.79	0.00
38.00	0.00	25,297	412.79	0.00
39.00	0.00	25,297	412.79	0.00
40.00	0.00	25,297	412.79	0.00
41.00	0.00	25,297	412.79	0.00
42.00	0.00	25,297	412.79	0.00
43.00	0.00	25,297	412.79	0.00
44.00	0.00	25,297	412.79	0.00
45.00	0.00	25,297	412.79	0.00
46.00	0.00	25,297	412.79	0.00
47.00	0.00	25,297	412.79	0.00
48.00	0.00	25,297	412.79	0.00

Stage-Area-Storage for Pond 1P: Bioretention 1D

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.66	14,016	0	414.46	18,566	54,821
408.76	14,016	561	414.56	18,751	56,593
408.86	14,016	1,121	414.66	18,936	58,364
408.96	14,016	1,682	414.76	19,121	60,136
409.06	14,016	2,243	414.86	19,306	61,907
409.16	14,016	2,803	414.96	19,491	63,679
409.26	14,016	3,364	415.06	19,676	65,450
409.36	14,016	3,840	415.16	19,861	67,222
409.46	14,016	4,121	415.26	20,046	68,993
409.56	14,016	4,401	415.36	20,231	70,765
409.66	14,016	4,681	415.46	20,416	72,536
409.76	14,016	4,962	415.56	20,601	74,308
409.86	14,016	5,242	415.66	20,786	76,080
409.96	14,016	5,522	415.76	20,971	77,851
410.06	14,016	5,803	415.86	21,156	79,623
410.16	14,016	6,083	415.96	21,341	81,394
410.26	14,016	6,363			
410.36	14,016	6,644			
410.46	14,016	6,924			
410.56	14,016	7,204			
410.66	14,016	7,485			
410.76	14,016	7,765			
410.86	14,016	8,045			
410.96	14,016	8,326			
411.06	14,016	8,606			
411.16	14,016	8,886			
411.26	14,016	9,166			
411.36	14,016	9,447			
411.46	14,016	9,727			
411.56	14,016	10,007			
411.66	14,016	10,288			
411.76	14,016	10,568			
411.86	14,016	10,848			
411.96	14,016	11,129			
412.06	14,127	12,304			
412.16	14,312	14,075			
412.26	14,497	15,847			
412.36	14,682	17,618			
412.46	14,867	19,390			
412.56	15,052	21,162			
412.66	15,237	22,933			
412.76	15,422	24,705			
412.86	15,607	26,476			
412.96	15,792	28,248			
413.06	15,977	30,019			
413.16	16,162	31,791			
413.26	16,347	33,562			
413.36	16,532	35,334			
413.46	16,717	37,105			
413.56	16,902	38,877			
413.66	17,087	40,649			
413.76	17,272	42,420			
413.86	17,457	44,192			
413.96	17,642	45,963			
414.06	17,826	47,735			
414.16	18,011	49,506			
414.26	18,196	51,278			
414.36	18,381	53,049			

Summary for Pond 3P: Bioretention 1A

Inflow Area = 2.483 ac, 78.54% Impervious, Inflow Depth = 1.29" for 1-Year event
 Inflow = 4.08 cfs @ 12.13 hrs, Volume= 0.267 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 413.73' @ 24.34 hrs Surf.Area= 9,282 sf Storage= 11,636 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

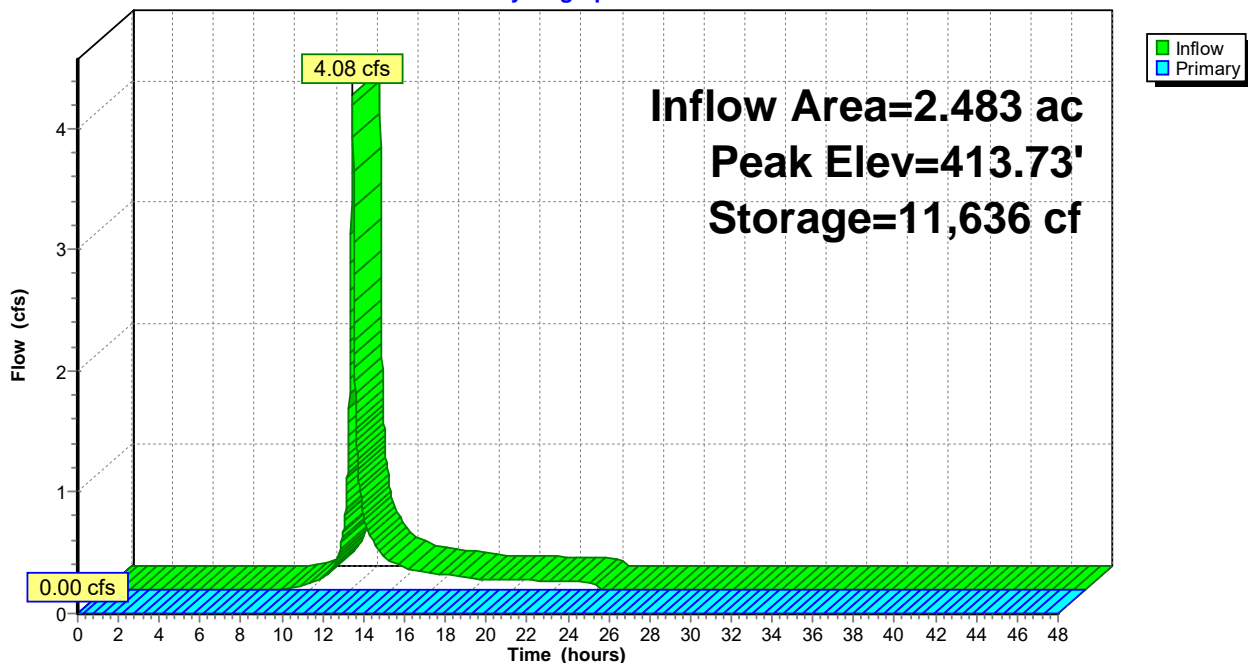
Volume	Invert	Avail.Storage	Storage Description	
#1	408.66'	25,522 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	8,681	0.0	0	0
409.33	8,681	40.0	2,327	2,327
413.50	8,681	20.0	7,240	9,566
415.00	12,593	100.0	15,956	25,522

Device	Routing	Invert	Outlet Devices
#1	Primary	408.66'	18.0" Round Culvert L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 408.66' / 407.50' S= 0.0232 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	414.50'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.66' (Free Discharge)
 ↑1=Culvert (Controls 0.00 cfs)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

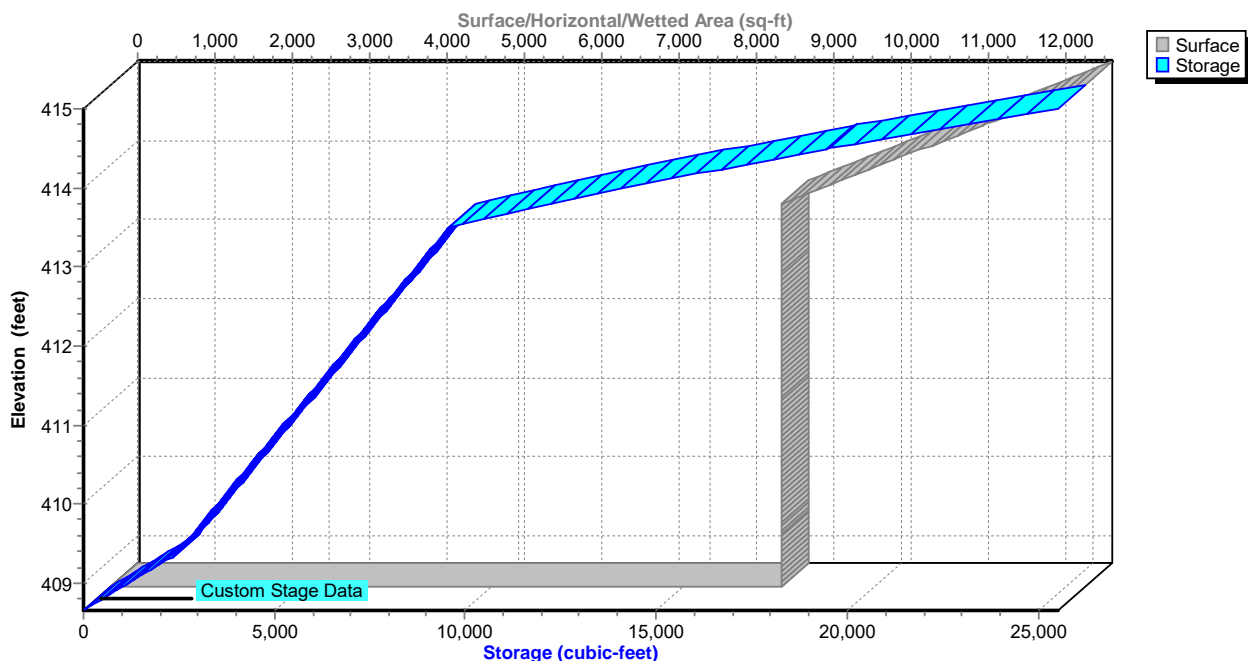
Pond 3P: Bioretention 1A

Hydrograph



Pond 3P: Bioretention 1A

Stage-Area-Storage



Hydrograph for Pond 3P: Bioretention 1A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	408.66	0.00
1.00	0.00	0	408.66	0.00
2.00	0.00	0	408.66	0.00
3.00	0.00	0	408.66	0.00
4.00	0.00	0	408.66	0.00
5.00	0.00	0	408.66	0.00
6.00	0.00	0	408.66	0.00
7.00	0.00	0	408.66	0.00
8.00	0.00	0	408.66	0.00
9.00	0.01	17	408.66	0.00
10.00	0.05	116	408.69	0.00
11.00	0.14	413	408.78	0.00
12.00	1.86	2,046	409.25	0.00
13.00	0.45	6,752	411.88	0.00
14.00	0.24	7,881	412.53	0.00
15.00	0.16	8,607	412.95	0.00
16.00	0.14	9,139	413.25	0.00
17.00	0.12	9,595	413.50	0.00
18.00	0.09	9,974	413.55	0.00
19.00	0.09	10,296	413.58	0.00
20.00	0.08	10,599	413.62	0.00
21.00	0.08	10,882	413.65	0.00
22.00	0.07	11,147	413.68	0.00
23.00	0.07	11,391	413.70	0.00
24.00	0.06	11,616	413.73	0.00
25.00	0.00	11,636	413.73	0.00
26.00	0.00	11,636	413.73	0.00
27.00	0.00	11,636	413.73	0.00
28.00	0.00	11,636	413.73	0.00
29.00	0.00	11,636	413.73	0.00
30.00	0.00	11,636	413.73	0.00
31.00	0.00	11,636	413.73	0.00
32.00	0.00	11,636	413.73	0.00
33.00	0.00	11,636	413.73	0.00
34.00	0.00	11,636	413.73	0.00
35.00	0.00	11,636	413.73	0.00
36.00	0.00	11,636	413.73	0.00
37.00	0.00	11,636	413.73	0.00
38.00	0.00	11,636	413.73	0.00
39.00	0.00	11,636	413.73	0.00
40.00	0.00	11,636	413.73	0.00
41.00	0.00	11,636	413.73	0.00
42.00	0.00	11,636	413.73	0.00
43.00	0.00	11,636	413.73	0.00
44.00	0.00	11,636	413.73	0.00
45.00	0.00	11,636	413.73	0.00
46.00	0.00	11,636	413.73	0.00
47.00	0.00	11,636	413.73	0.00
48.00	0.00	11,636	413.73	0.00

Stage-Area-Storage for Pond 3P: Bioretention 1A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.66	8,681	0	414.46	11,185	19,102
408.76	8,681	347	414.56	11,445	20,233
408.86	8,681	694	414.66	11,706	21,391
408.96	8,681	1,042	414.76	11,967	22,575
409.06	8,681	1,389	414.86	12,228	23,785
409.16	8,681	1,736	414.96	12,489	25,020
409.26	8,681	2,083			
409.36	8,681	2,379			
409.46	8,681	2,552			
409.56	8,681	2,726			
409.66	8,681	2,899			
409.76	8,681	3,073			
409.86	8,681	3,247			
409.96	8,681	3,420			
410.06	8,681	3,594			
410.16	8,681	3,768			
410.26	8,681	3,941			
410.36	8,681	4,115			
410.46	8,681	4,288			
410.56	8,681	4,462			
410.66	8,681	4,636			
410.76	8,681	4,809			
410.86	8,681	4,983			
410.96	8,681	5,157			
411.06	8,681	5,330			
411.16	8,681	5,504			
411.26	8,681	5,677			
411.36	8,681	5,851			
411.46	8,681	6,025			
411.56	8,681	6,198			
411.66	8,681	6,372			
411.76	8,681	6,545			
411.86	8,681	6,719			
411.96	8,681	6,893			
412.06	8,681	7,066			
412.16	8,681	7,240			
412.26	8,681	7,414			
412.36	8,681	7,587			
412.46	8,681	7,761			
412.56	8,681	7,934			
412.66	8,681	8,108			
412.76	8,681	8,282			
412.86	8,681	8,455			
412.96	8,681	8,629			
413.06	8,681	8,803			
413.16	8,681	8,976			
413.26	8,681	9,150			
413.36	8,681	9,323			
413.46	8,681	9,497			
413.56	8,837	10,092			
413.66	9,098	10,989			
413.76	9,359	11,912			
413.86	9,620	12,861			
413.96	9,881	13,836			
414.06	10,141	14,837			
414.16	10,402	15,864			
414.26	10,663	16,917			
414.36	10,924	17,997			

Summary for Pond 22P: Bioretention 5A

Inflow Area = 4.966 ac, 46.58% Impervious, Inflow Depth = 0.69" for 1-Year event
 Inflow = 3.75 cfs @ 12.16 hrs, Volume= 0.285 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link PDP5 : PDP5

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 432.28' @ 46.74 hrs Surf.Area= 11,870 sf Storage= 12,412 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

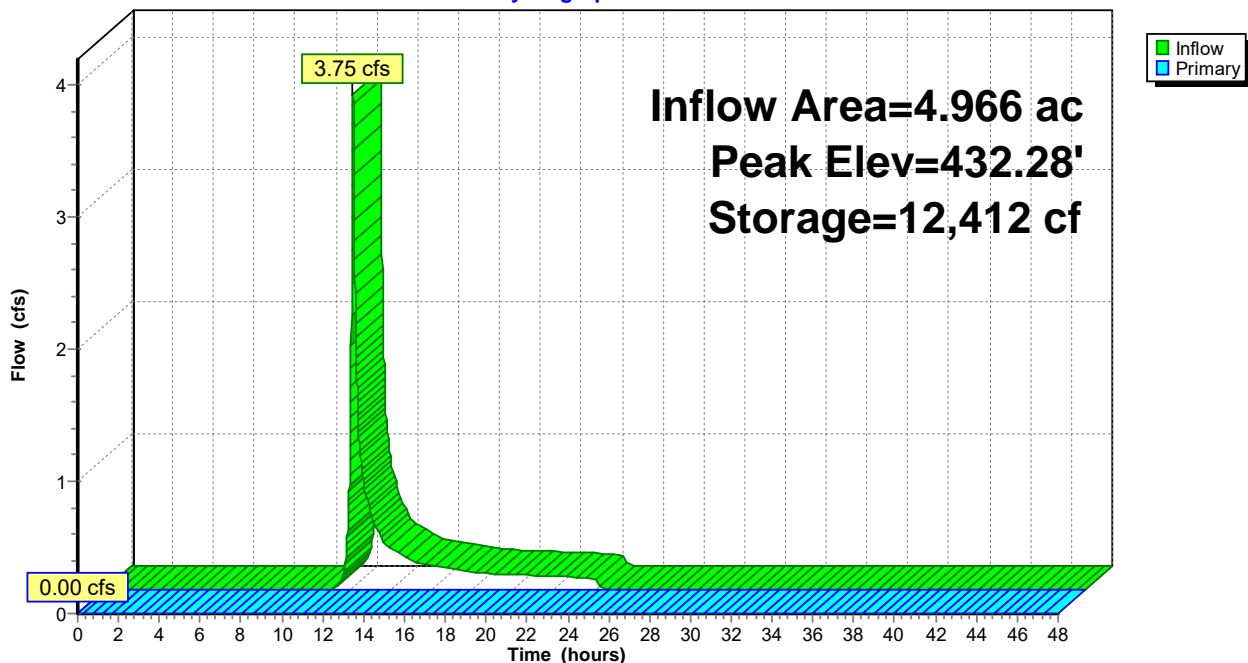
Volume	Invert	Avail.Storage	Storage Description	
#1	428.67'	50,065 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
428.67	11,465	0.0	0	0
429.33	11,465	40.0	3,027	3,027
432.00	11,465	20.0	6,122	9,149
435.00	15,812	100.0	40,916	50,065

Device	Routing	Invert	Outlet Devices
#1	Primary	428.67'	18.0" Round Culvert L= 270.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 428.67' / 389.43' S= 0.1453 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	432.50'	44.0" W x 8.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	434.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=428.67' (Free Discharge)
 1=Culvert (Controls 0.00 cfs)
 2=Orifice/Grate (Controls 0.00 cfs)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

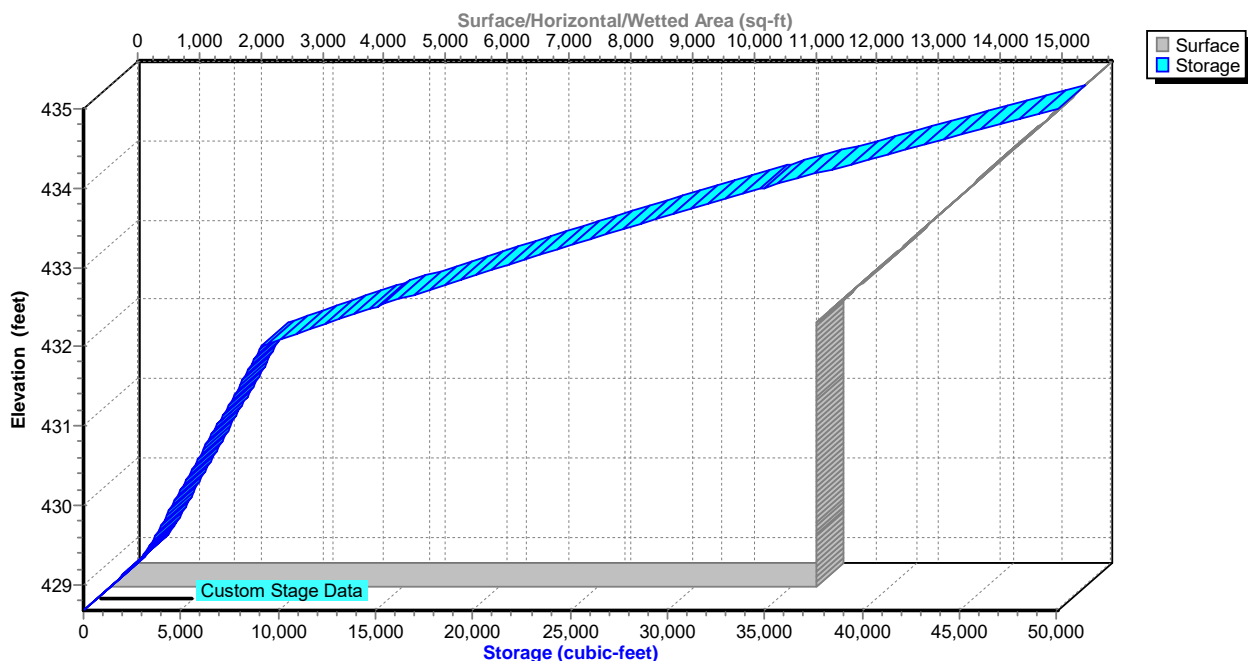
Pond 22P: Bioretention 5A

Hydrograph



Pond 22P: Bioretention 5A

Stage-Area-Storage



Hydrograph for Pond 22P: Bioretention 5A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	428.67	0.00
1.00	0.00	0	428.67	0.00
2.00	0.00	0	428.67	0.00
3.00	0.00	0	428.67	0.00
4.00	0.00	0	428.67	0.00
5.00	0.00	0	428.67	0.00
6.00	0.00	0	428.67	0.00
7.00	0.00	0	428.67	0.00
8.00	0.00	0	428.67	0.00
9.00	0.00	0	428.67	0.00
10.00	0.00	0	428.67	0.00
11.00	0.00	0	428.67	0.00
12.00	0.99	516	428.78	0.00
13.00	0.60	5,607	430.46	0.00
14.00	0.32	7,117	431.11	0.00
15.00	0.23	8,098	431.54	0.00
16.00	0.19	8,825	431.86	0.00
17.00	0.16	9,455	432.03	0.00
18.00	0.13	9,992	432.07	0.00
19.00	0.12	10,448	432.11	0.00
20.00	0.12	10,876	432.15	0.00
21.00	0.11	11,281	432.18	0.00
22.00	0.10	11,661	432.22	0.00
23.00	0.09	12,015	432.25	0.00
24.00	0.09	12,342	432.27	0.00
25.00	0.00	12,412	432.28	0.00
26.00	0.00	12,412	432.28	0.00
27.00	0.00	12,412	432.28	0.00
28.00	0.00	12,412	432.28	0.00
29.00	0.00	12,412	432.28	0.00
30.00	0.00	12,412	432.28	0.00
31.00	0.00	12,412	432.28	0.00
32.00	0.00	12,412	432.28	0.00
33.00	0.00	12,412	432.28	0.00
34.00	0.00	12,412	432.28	0.00
35.00	0.00	12,412	432.28	0.00
36.00	0.00	12,412	432.28	0.00
37.00	0.00	12,412	432.28	0.00
38.00	0.00	12,412	432.28	0.00
39.00	0.00	12,412	432.28	0.00
40.00	0.00	12,412	432.28	0.00
41.00	0.00	12,412	432.28	0.00
42.00	0.00	12,412	432.28	0.00
43.00	0.00	12,412	432.28	0.00
44.00	0.00	12,412	432.28	0.00
45.00	0.00	12,412	432.28	0.00
46.00	0.00	12,412	432.28	0.00
47.00	0.00	12,412	432.28	0.00
48.00	0.00	12,412	432.28	0.00

Stage-Area-Storage for Pond 22P: Bioretention 5A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
428.67	11,465	0	434.47	15,044	41,888
428.77	11,465	459	434.57	15,189	43,399
428.87	11,465	917	434.67	15,334	44,926
428.97	11,465	1,376	434.77	15,479	46,466
429.07	11,465	1,834	434.87	15,624	48,021
429.17	11,465	2,293	434.97	15,769	49,591
429.27	11,465	2,752			
429.37	11,465	3,118			
429.47	11,465	3,348			
429.57	11,465	3,577			
429.67	11,465	3,806			
429.77	11,465	4,036			
429.87	11,465	4,265			
429.97	11,465	4,494			
430.07	11,465	4,724			
430.17	11,465	4,953			
430.27	11,465	5,182			
430.37	11,465	5,411			
430.47	11,465	5,641			
430.57	11,465	5,870			
430.67	11,465	6,099			
430.77	11,465	6,329			
430.87	11,465	6,558			
430.97	11,465	6,787			
431.07	11,465	7,017			
431.17	11,465	7,246			
431.27	11,465	7,475			
431.37	11,465	7,704			
431.47	11,465	7,934			
431.57	11,465	8,163			
431.67	11,465	8,392			
431.77	11,465	8,622			
431.87	11,465	8,851			
431.97	11,465	9,080			
432.07	11,566	9,955			
432.17	11,711	11,119			
432.27	11,856	12,297			
432.37	12,001	13,490			
432.47	12,146	14,698			
432.57	12,291	15,920			
432.67	12,436	17,156			
432.77	12,581	18,407			
432.87	12,726	19,672			
432.97	12,871	20,952			
433.07	13,015	22,246			
433.17	13,160	23,555			
433.27	13,305	24,878			
433.37	13,450	26,216			
433.47	13,595	27,568			
433.57	13,740	28,935			
433.67	13,885	30,316			
433.77	14,030	31,712			
433.87	14,175	33,122			
433.97	14,320	34,547			
434.07	14,464	35,986			
434.17	14,609	37,440			
434.27	14,754	38,908			
434.37	14,899	40,391			

Summary for Pond 26P: Bioretention 1F

Inflow Area = 5.758 ac, 71.20% Impervious, Inflow Depth = 1.04" for 1-Year event
 Inflow = 7.60 cfs @ 12.13 hrs, Volume= 0.501 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 411.36' @ 24.34 hrs Surf.Area= 19,763 sf Storage= 21,807 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

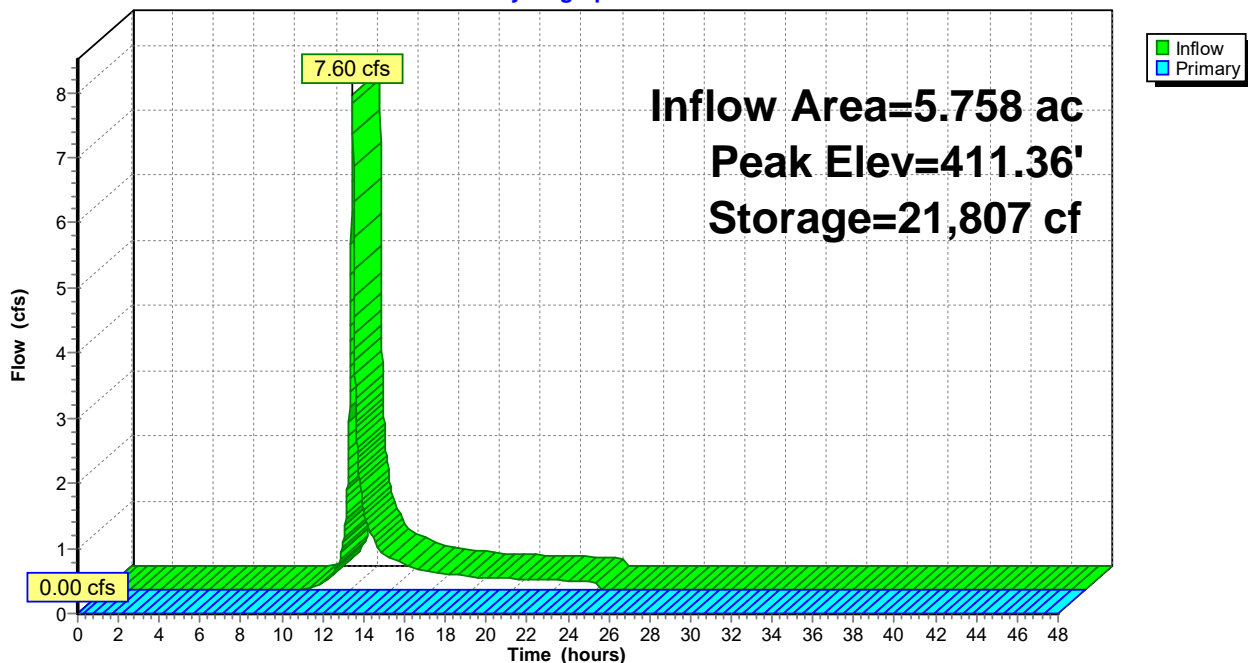
Volume	Invert	Avail.Storage	Storage Description	
#1	407.66'	85,321 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.66	18,594	0.0	0	0
408.33	18,594	40.0	4,983	4,983
411.00	18,594	20.0	9,929	14,912
414.00	28,345	100.0	70,409	85,321

Device	Routing	Invert	Outlet Devices
#1	Primary	407.66'	18.0" Round Culvert L= 47.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.66' / 407.50' S= 0.0034 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	411.50'	48.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=407.66' (Free Discharge)
 1=Culvert (Controls 0.00 cfs)
 2=Orifice/Grate (Controls 0.00 cfs)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

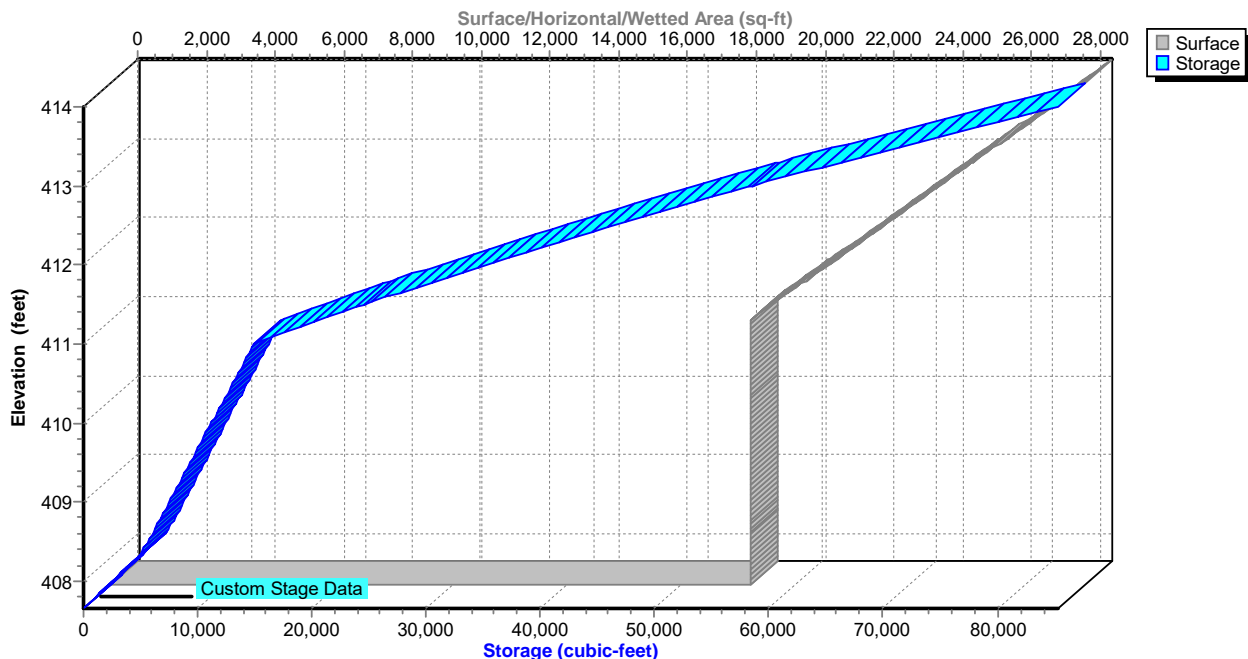
Pond 26P: Bioretention 1F

Hydrograph



Pond 26P: Bioretention 1F

Stage-Area-Storage



Hydrograph for Pond 26P: Bioretention 1F

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.66	0.00
1.00	0.00	0	407.66	0.00
2.00	0.00	0	407.66	0.00
3.00	0.00	0	407.66	0.00
4.00	0.00	0	407.66	0.00
5.00	0.00	0	407.66	0.00
6.00	0.00	0	407.66	0.00
7.00	0.00	0	407.66	0.00
8.00	0.00	0	407.66	0.00
9.00	0.00	0	407.66	0.00
10.00	0.02	15	407.66	0.00
11.00	0.18	304	407.70	0.00
12.00	3.25	2,875	408.05	0.00
13.00	0.90	11,805	410.16	0.00
14.00	0.48	14,075	410.77	0.00
15.00	0.34	15,550	411.03	0.00
16.00	0.28	16,638	411.09	0.00
17.00	0.24	17,574	411.14	0.00
18.00	0.19	18,355	411.18	0.00
19.00	0.18	19,020	411.22	0.00
20.00	0.17	19,648	411.25	0.00
21.00	0.16	20,237	411.28	0.00
22.00	0.15	20,788	411.31	0.00
23.00	0.14	21,298	411.33	0.00
24.00	0.13	21,767	411.36	0.00
25.00	0.00	21,809	411.36	0.00
26.00	0.00	21,809	411.36	0.00
27.00	0.00	21,809	411.36	0.00
28.00	0.00	21,809	411.36	0.00
29.00	0.00	21,809	411.36	0.00
30.00	0.00	21,809	411.36	0.00
31.00	0.00	21,809	411.36	0.00
32.00	0.00	21,809	411.36	0.00
33.00	0.00	21,809	411.36	0.00
34.00	0.00	21,809	411.36	0.00
35.00	0.00	21,809	411.36	0.00
36.00	0.00	21,809	411.36	0.00
37.00	0.00	21,809	411.36	0.00
38.00	0.00	21,809	411.36	0.00
39.00	0.00	21,809	411.36	0.00
40.00	0.00	21,809	411.36	0.00
41.00	0.00	21,809	411.36	0.00
42.00	0.00	21,809	411.36	0.00
43.00	0.00	21,809	411.36	0.00
44.00	0.00	21,809	411.36	0.00
45.00	0.00	21,809	411.36	0.00
46.00	0.00	21,809	411.36	0.00
47.00	0.00	21,809	411.36	0.00
48.00	0.00	21,809	411.36	0.00

Stage-Area-Storage for Pond 26P: Bioretention 1F

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.66	18,594	0	413.46	26,590	70,488
407.76	18,594	744	413.56	26,915	73,164
407.86	18,594	1,488	413.66	27,240	75,871
407.96	18,594	2,231	413.76	27,565	78,612
408.06	18,594	2,975	413.86	27,890	81,384
408.16	18,594	3,719	413.96	28,215	84,190
408.26	18,594	4,463			
408.36	18,594	5,095			
408.46	18,594	5,467			
408.56	18,594	5,839			
408.66	18,594	6,210			
408.76	18,594	6,582			
408.86	18,594	6,954			
408.96	18,594	7,326			
409.06	18,594	7,698			
409.16	18,594	8,070			
409.26	18,594	8,442			
409.36	18,594	8,814			
409.46	18,594	9,185			
409.56	18,594	9,557			
409.66	18,594	9,929			
409.76	18,594	10,301			
409.86	18,594	10,673			
409.96	18,594	11,045			
410.06	18,594	11,417			
410.16	18,594	11,789			
410.26	18,594	12,160			
410.36	18,594	12,532			
410.46	18,594	12,904			
410.56	18,594	13,276			
410.66	18,594	13,648			
410.76	18,594	14,020			
410.86	18,594	14,392			
410.96	18,594	14,764			
411.06	18,789	16,034			
411.16	19,114	17,929			
411.26	19,439	19,857			
411.36	19,764	21,817			
411.46	20,089	23,810			
411.56	20,414	25,835			
411.66	20,739	27,892			
411.76	21,064	29,983			
411.86	21,389	32,105			
411.96	21,714	34,260			
412.06	22,039	36,448			
412.16	22,364	38,668			
412.26	22,689	40,921			
412.36	23,014	43,206			
412.46	23,339	45,524			
412.56	23,665	47,874			
412.66	23,990	50,257			
412.76	24,315	52,672			
412.86	24,640	55,120			
412.96	24,965	57,600			
413.06	25,290	60,113			
413.16	25,615	62,658			
413.26	25,940	65,236			
413.36	26,265	67,846			

Summary for Pond 29P: Bioretention 4B

Inflow Area = 6.859 ac, 48.92% Impervious, Inflow Depth = 1.12" for 1-Year event
 Inflow = 9.67 cfs @ 12.13 hrs, Volume= 0.638 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 32L : DP-4

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 418.84' @ 24.34 hrs Surf.Area= 18,171 sf Storage= 27,790 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

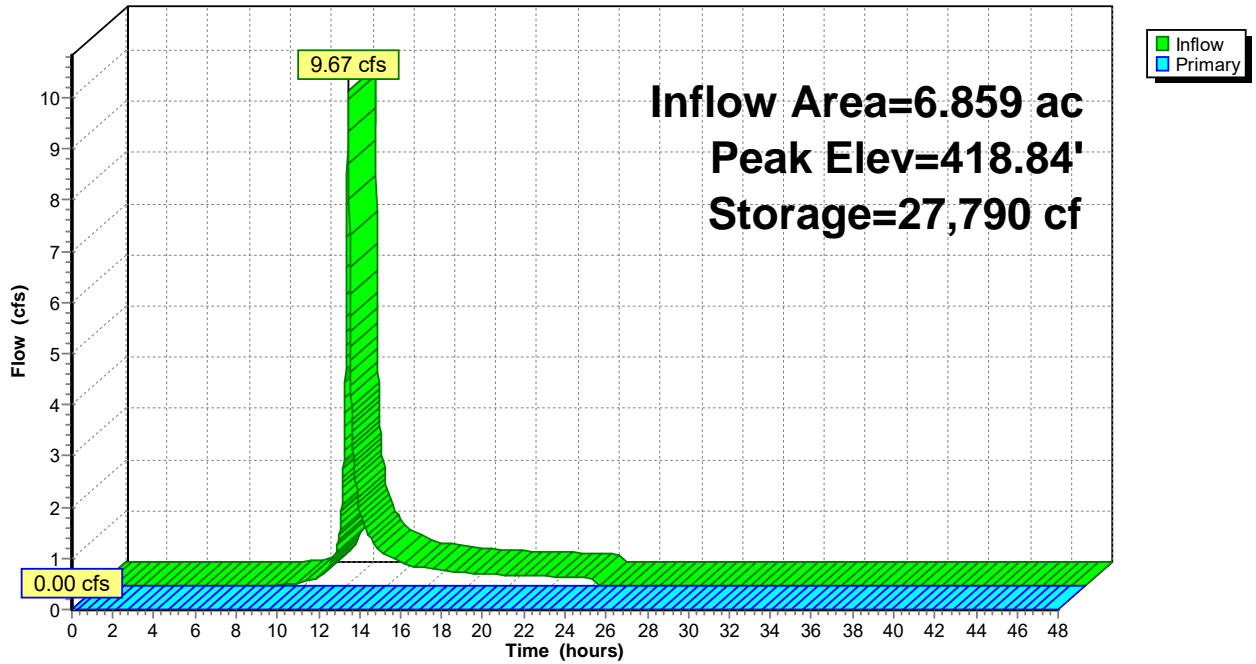
Volume	Invert	Avail.Storage	Storage Description	
#1	414.67'	94,874 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
414.67	16,541	0.0	0	0
415.33	16,541	40.0	4,367	4,367
418.00	16,541	20.0	8,833	13,200
422.00	24,296	100.0	81,674	94,874

Device	Routing	Invert	Outlet Devices
#1	Primary	414.67'	18.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 414.67' / 414.07' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	419.00'	48.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	421.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=414.67' (Free Discharge)
 1=Culvert (Controls 0.00 cfs)
 2=Orifice/Grate (Controls 0.00 cfs)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

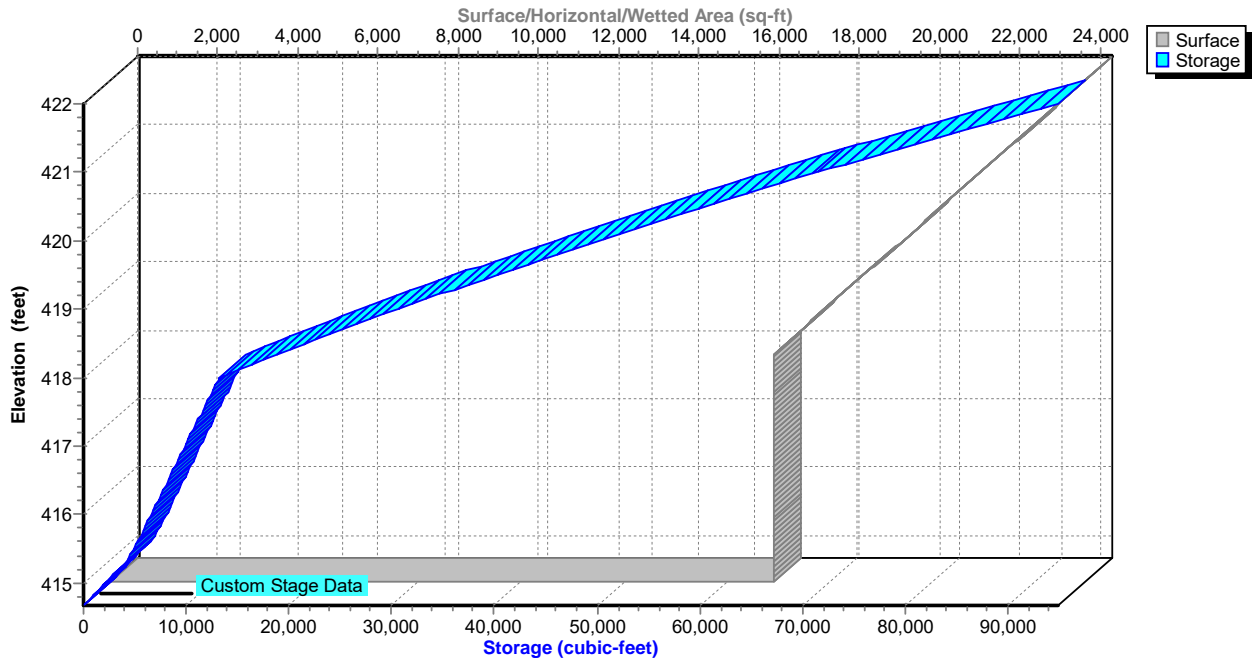
Pond 29P: Bioretention 4B

Hydrograph



Pond 29P: Bioretention 4B

Stage-Area-Storage



Hydrograph for Pond 29P: Bioretention 4B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	414.67	0.00
1.00	0.00	0	414.67	0.00
2.00	0.00	0	414.67	0.00
3.00	0.00	0	414.67	0.00
4.00	0.00	0	414.67	0.00
5.00	0.00	0	414.67	0.00
6.00	0.00	0	414.67	0.00
7.00	0.00	0	414.67	0.00
8.00	0.00	0	414.67	0.00
9.00	0.01	9	414.67	0.00
10.00	0.08	159	414.69	0.00
11.00	0.27	695	414.78	0.00
12.00	4.24	4,193	415.30	0.00
13.00	1.12	15,481	418.14	0.00
14.00	0.59	18,291	418.30	0.00
15.00	0.41	20,112	418.41	0.00
16.00	0.34	21,451	418.49	0.00
17.00	0.29	22,602	418.55	0.00
18.00	0.24	23,560	418.60	0.00
19.00	0.22	24,377	418.65	0.00
20.00	0.21	25,146	418.69	0.00
21.00	0.19	25,868	418.73	0.00
22.00	0.18	26,542	418.77	0.00
23.00	0.17	27,166	418.81	0.00
24.00	0.15	27,740	418.84	0.00
25.00	0.00	27,791	418.84	0.00
26.00	0.00	27,791	418.84	0.00
27.00	0.00	27,791	418.84	0.00
28.00	0.00	27,791	418.84	0.00
29.00	0.00	27,791	418.84	0.00
30.00	0.00	27,791	418.84	0.00
31.00	0.00	27,791	418.84	0.00
32.00	0.00	27,791	418.84	0.00
33.00	0.00	27,791	418.84	0.00
34.00	0.00	27,791	418.84	0.00
35.00	0.00	27,791	418.84	0.00
36.00	0.00	27,791	418.84	0.00
37.00	0.00	27,791	418.84	0.00
38.00	0.00	27,791	418.84	0.00
39.00	0.00	27,791	418.84	0.00
40.00	0.00	27,791	418.84	0.00
41.00	0.00	27,791	418.84	0.00
42.00	0.00	27,791	418.84	0.00
43.00	0.00	27,791	418.84	0.00
44.00	0.00	27,791	418.84	0.00
45.00	0.00	27,791	418.84	0.00
46.00	0.00	27,791	418.84	0.00
47.00	0.00	27,791	418.84	0.00
48.00	0.00	27,791	418.84	0.00

Stage-Area-Storage for Pond 29P: Bioretention 4B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
414.67	16,541	0	420.47	21,330	59,970
414.77	16,541	662	420.57	21,524	62,113
414.87	16,541	1,323	420.67	21,717	64,275
414.97	16,541	1,985	420.77	21,911	66,456
415.07	16,541	2,647	420.87	22,105	68,657
415.17	16,541	3,308	420.97	22,299	70,877
415.27	16,541	3,970	421.07	22,493	73,117
415.37	16,541	4,499	421.17	22,687	75,376
415.47	16,541	4,830	421.27	22,881	77,654
415.57	16,541	5,161	421.37	23,075	79,952
415.67	16,541	5,492	421.47	23,268	82,269
415.77	16,541	5,822	421.57	23,462	84,606
415.87	16,541	6,153	421.67	23,656	86,962
415.97	16,541	6,484	421.77	23,850	89,337
416.07	16,541	6,815	421.87	24,044	91,732
416.17	16,541	7,146	421.97	24,238	94,146
416.27	16,541	7,477			
416.37	16,541	7,807			
416.47	16,541	8,138			
416.57	16,541	8,469			
416.67	16,541	8,800			
416.77	16,541	9,131			
416.87	16,541	9,461			
416.97	16,541	9,792			
417.07	16,541	10,123			
417.17	16,541	10,454			
417.27	16,541	10,785			
417.37	16,541	11,116			
417.47	16,541	11,446			
417.57	16,541	11,777			
417.67	16,541	12,108			
417.77	16,541	12,439			
417.87	16,541	12,770			
417.97	16,541	13,100			
418.07	16,677	14,362			
418.17	16,871	16,040			
418.27	17,064	17,736			
418.37	17,258	19,453			
418.47	17,452	21,188			
418.57	17,646	22,943			
418.67	17,840	24,717			
418.77	18,034	26,511			
418.87	18,228	28,324			
418.97	18,422	30,157			
419.07	18,615	32,008			
419.17	18,809	33,880			
419.27	19,003	35,770			
419.37	19,197	37,680			
419.47	19,391	39,610			
419.57	19,585	41,559			
419.67	19,779	43,527			
419.77	19,973	45,514			
419.87	20,166	47,521			
419.97	20,360	49,548			
420.07	20,554	51,593			
420.17	20,748	53,658			
420.27	20,942	55,743			
420.37	21,136	57,847			

Summary for Pond 31P: Bioretention i

Inflow Area = 10.027 ac, 72.74% Impervious, Inflow Depth = 0.82" for 1-Year event
 Inflow = 9.46 cfs @ 12.09 hrs, Volume= 0.686 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 411.52' @ 25.57 hrs Surf.Area= 23,660 sf Storage= 29,876 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

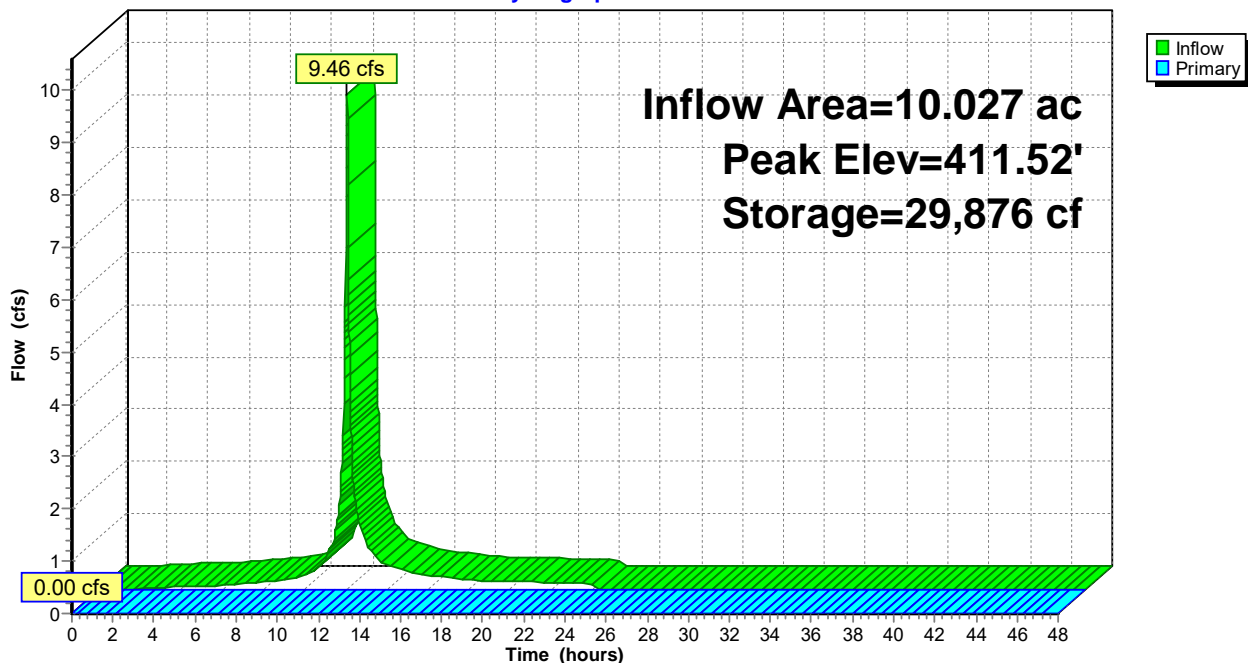
Volume	Invert	Avail.Storage	Storage Description	
#1	407.83'	93,189 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	22,680	0.0	0	0
408.33	22,680	40.0	4,536	4,536
411.00	22,680	20.0	12,111	16,647
414.00	28,348	100.0	76,542	93,189

Device	Routing	Invert	Outlet Devices
#1	Primary	407.83'	12.0" Round Culvert L= 42.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.83' / 407.50' S= 0.0079 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	412.00'	34.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=407.83' (Free Discharge)
 1=Culvert (Controls 0.00 cfs)
 2=Orifice/Grate (Controls 0.00 cfs)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

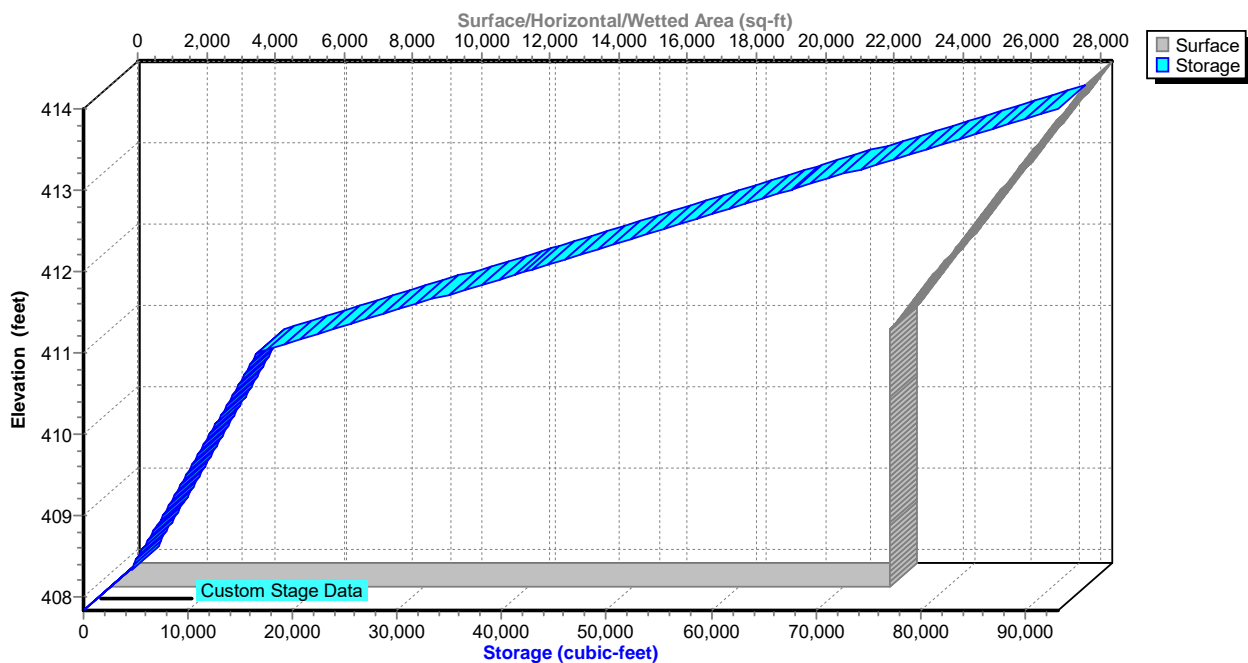
Pond 31P: Bioretention i

Hydrograph



Pond 31P: Bioretention i

Stage-Area-Storage



Hydrograph for Pond 31P: Bioretention i

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.83	0.00
1.00	0.00	0	407.83	0.00
2.00	0.02	18	407.83	0.00
3.00	0.04	114	407.84	0.00
4.00	0.05	281	407.86	0.00
5.00	0.07	507	407.89	0.00
6.00	0.08	786	407.92	0.00
7.00	0.11	1,142	407.96	0.00
8.00	0.15	1,609	408.01	0.00
9.00	0.18	2,192	408.07	0.00
10.00	0.29	3,021	408.16	0.00
11.00	0.58	4,435	408.32	0.00
12.00	5.62	10,061	409.55	0.00
13.00	0.93	19,987	411.13	0.00
14.00	0.49	22,295	411.22	0.00
15.00	0.34	23,785	411.28	0.00
16.00	0.28	24,868	411.32	0.00
17.00	0.23	25,790	411.36	0.00
18.00	0.19	26,553	411.39	0.00
19.00	0.17	27,200	411.41	0.00
20.00	0.16	27,807	411.44	0.00
21.00	0.15	28,374	411.46	0.00
22.00	0.14	28,901	411.48	0.00
23.00	0.13	29,388	411.50	0.00
24.00	0.12	29,835	411.52	0.00
25.00	0.00	29,876	411.52	0.00
26.00	0.00	29,876	411.52	0.00
27.00	0.00	29,876	411.52	0.00
28.00	0.00	29,876	411.52	0.00
29.00	0.00	29,876	411.52	0.00
30.00	0.00	29,876	411.52	0.00
31.00	0.00	29,876	411.52	0.00
32.00	0.00	29,876	411.52	0.00
33.00	0.00	29,876	411.52	0.00
34.00	0.00	29,876	411.52	0.00
35.00	0.00	29,876	411.52	0.00
36.00	0.00	29,876	411.52	0.00
37.00	0.00	29,876	411.52	0.00
38.00	0.00	29,876	411.52	0.00
39.00	0.00	29,876	411.52	0.00
40.00	0.00	29,876	411.52	0.00
41.00	0.00	29,876	411.52	0.00
42.00	0.00	29,876	411.52	0.00
43.00	0.00	29,876	411.52	0.00
44.00	0.00	29,876	411.52	0.00
45.00	0.00	29,876	411.52	0.00
46.00	0.00	29,876	411.52	0.00
47.00	0.00	29,876	411.52	0.00
48.00	0.00	29,876	411.52	0.00

Stage-Area-Storage for Pond 31P: Bioretention i

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.83	22,680	0	413.63	27,649	83,749
407.93	22,680	907	413.73	27,838	86,300
408.03	22,680	1,814	413.83	28,027	88,852
408.13	22,680	2,722	413.93	28,216	91,403
408.23	22,680	3,629			
408.33	22,680	4,536			
408.43	22,680	4,990			
408.53	22,680	5,443			
408.63	22,680	5,897			
408.73	22,680	6,350			
408.83	22,680	6,804			
408.93	22,680	7,258			
409.03	22,680	7,711			
409.13	22,680	8,165			
409.23	22,680	8,618			
409.33	22,680	9,072			
409.43	22,680	9,526			
409.53	22,680	9,979			
409.63	22,680	10,433			
409.73	22,680	10,886			
409.83	22,680	11,340			
409.93	22,680	11,794			
410.03	22,680	12,247			
410.13	22,680	12,701			
410.23	22,680	13,154			
410.33	22,680	13,608			
410.43	22,680	14,062			
410.53	22,680	14,515			
410.63	22,680	14,969			
410.73	22,680	15,422			
410.83	22,680	15,876			
410.93	22,680	16,330			
411.03	22,737	17,413			
411.13	22,926	19,964			
411.23	23,115	22,515			
411.33	23,303	25,067			
411.43	23,492	27,618			
411.53	23,681	30,170			
411.63	23,870	32,721			
411.73	24,059	35,272			
411.83	24,248	37,824			
411.93	24,437	40,375			
412.03	24,626	42,927			
412.13	24,815	45,478			
412.23	25,004	48,029			
412.33	25,193	50,581			
412.43	25,382	53,132			
412.53	25,571	55,684			
412.63	25,760	58,235			
412.73	25,949	60,786			
412.83	26,137	63,338			
412.93	26,326	65,889			
413.03	26,515	68,441			
413.13	26,704	70,992			
413.23	26,893	73,543			
413.33	27,082	76,095			
413.43	27,271	78,646			
413.53	27,460	81,198			

Summary for Pond 32P: FB 1C

Inflow Area = 2.583 ac, 77.93% Impervious, Inflow Depth = 1.66" for 1-Year event
 Inflow = 5.36 cfs @ 12.13 hrs, Volume= 0.357 af
 Outflow = 5.27 cfs @ 12.14 hrs, Volume= 0.357 af, Atten= 2%, Lag= 0.7 min
 Primary = 5.27 cfs @ 12.14 hrs, Volume= 0.357 af
 Routed to Pond 33P : INFIL 1C

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 413.35' Surf.Area= 3,197 sf Storage= 9,962 cf
 Peak Elev= 413.52' @ 12.14 hrs Surf.Area= 3,311 sf Storage= 10,350 cf (388 cf above start)

Plug-Flow detention time= 339.9 min calculated for 0.128 af (36% of inflow)
 Center-of-Mass det. time= 2.3 min (825.2 - 822.9)

Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	13,740 cf	Custom Stage Data (Prismatic) Listed below

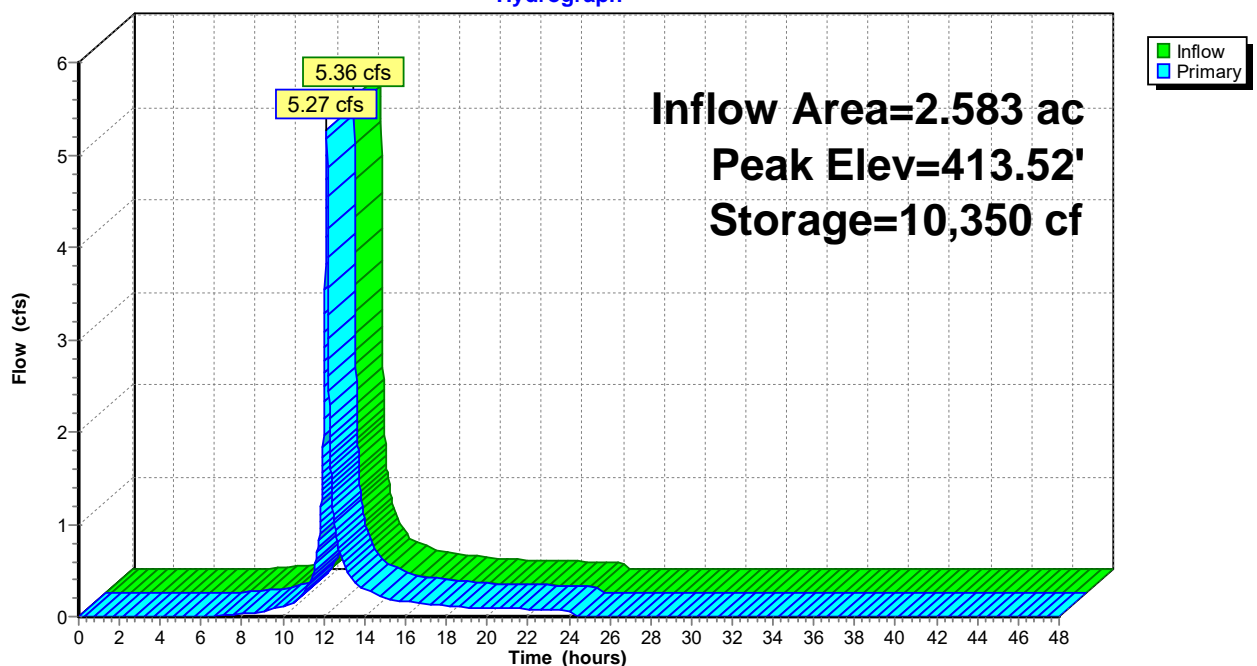
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
409.00	275	0	0
415.00	4,305	13,740	13,740

Device	Routing	Invert	Outlet Devices
#1	Primary	413.35'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

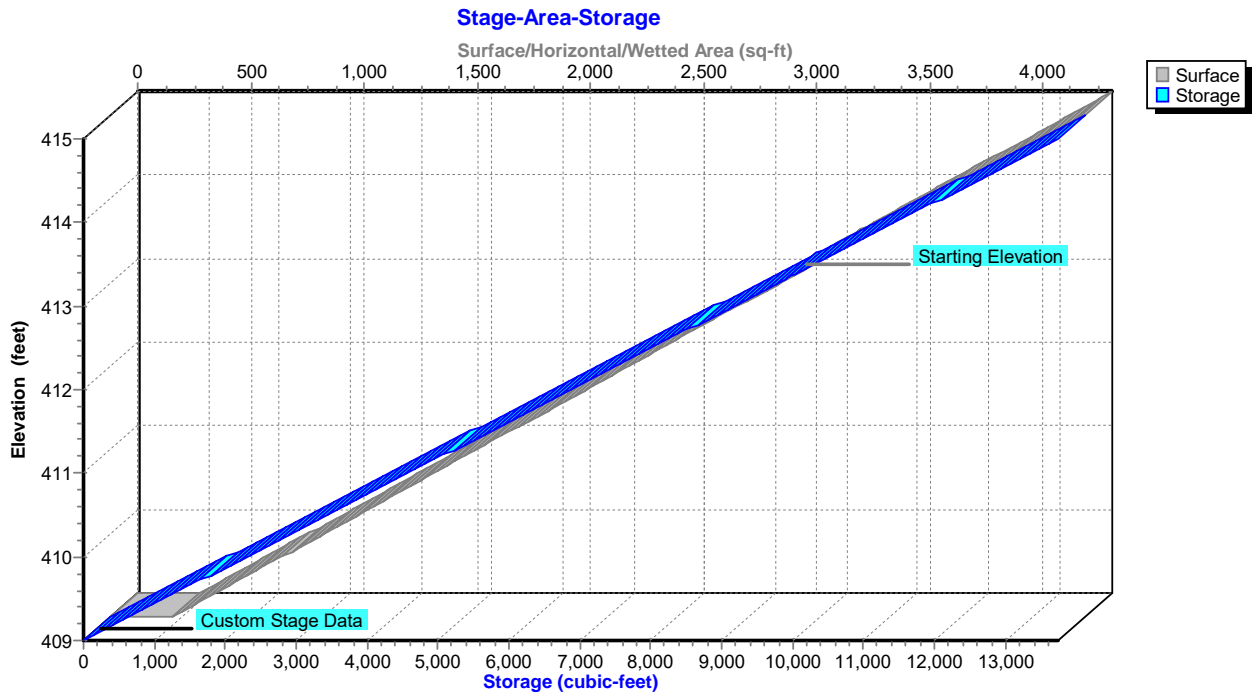
Primary OutFlow Max=5.20 cfs @ 12.14 hrs HW=413.52' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 5.20 cfs @ 1.02 fps)

Pond 32P: FB 1C

Hydrograph



Pond 32P: FB 1C



Hydrograph for Pond 32P: FB 1C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	9,962	413.35	0.00
1.00	0.00	9,962	413.35	0.00
2.00	0.00	9,962	413.35	0.00
3.00	0.00	9,962	413.35	0.00
4.00	0.00	9,962	413.35	0.00
5.00	0.00	9,962	413.35	0.00
6.00	0.00	9,962	413.35	0.00
7.00	0.01	9,964	413.35	0.01
8.00	0.03	9,967	413.35	0.03
9.00	0.06	9,971	413.35	0.05
10.00	0.11	9,981	413.36	0.11
11.00	0.26	10,006	413.37	0.25
12.00	2.61	10,186	413.45	2.33
13.00	0.55	10,045	413.39	0.56
14.00	0.28	10,013	413.37	0.29
15.00	0.20	9,997	413.37	0.20
16.00	0.16	9,990	413.36	0.16
17.00	0.14	9,986	413.36	0.14
18.00	0.11	9,981	413.36	0.11
19.00	0.10	9,979	413.36	0.10
20.00	0.09	9,978	413.36	0.10
21.00	0.09	9,977	413.36	0.09
22.00	0.08	9,976	413.36	0.08
23.00	0.08	9,975	413.36	0.08
24.00	0.07	9,974	413.36	0.07
25.00	0.00	9,962	413.35	0.00
26.00	0.00	9,962	413.35	0.00
27.00	0.00	9,962	413.35	0.00
28.00	0.00	9,962	413.35	0.00
29.00	0.00	9,962	413.35	0.00
30.00	0.00	9,962	413.35	0.00
31.00	0.00	9,962	413.35	0.00
32.00	0.00	9,962	413.35	0.00
33.00	0.00	9,962	413.35	0.00
34.00	0.00	9,962	413.35	0.00
35.00	0.00	9,962	413.35	0.00
36.00	0.00	9,962	413.35	0.00
37.00	0.00	9,962	413.35	0.00
38.00	0.00	9,962	413.35	0.00
39.00	0.00	9,962	413.35	0.00
40.00	0.00	9,962	413.35	0.00
41.00	0.00	9,962	413.35	0.00
42.00	0.00	9,962	413.35	0.00
43.00	0.00	9,962	413.35	0.00
44.00	0.00	9,962	413.35	0.00
45.00	0.00	9,962	413.35	0.00
46.00	0.00	9,962	413.35	0.00
47.00	0.00	9,962	413.35	0.00
48.00	0.00	9,962	413.35	0.00

Stage-Area-Storage for Pond 32P: FB 1C

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
409.00	275	0	414.80	4,171	13,282
409.10	342	229	414.90	4,238	13,511
409.20	409	458	415.00	4,305	13,740
409.30	477	687			
409.40	544	916			
409.50	611	1,145			
409.60	678	1,374			
409.70	745	1,603			
409.80	812	1,832			
409.90	879	2,061			
410.00	947	2,290			
410.10	1,014	2,519			
410.20	1,081	2,748			
410.30	1,148	2,977			
410.40	1,215	3,206			
410.50	1,283	3,435			
410.60	1,350	3,664			
410.70	1,417	3,893			
410.80	1,484	4,122			
410.90	1,551	4,351			
411.00	1,618	4,580			
411.10	1,686	4,809			
411.20	1,753	5,038			
411.30	1,820	5,267			
411.40	1,887	5,496			
411.50	1,954	5,725			
411.60	2,021	5,954			
411.70	2,088	6,183			
411.80	2,156	6,412			
411.90	2,223	6,641			
412.00	2,290	6,870			
412.10	2,357	7,099			
412.20	2,424	7,328			
412.30	2,492	7,557			
412.40	2,559	7,786			
412.50	2,626	8,015			
412.60	2,693	8,244			
412.70	2,760	8,473			
412.80	2,827	8,702			
412.90	2,894	8,931			
413.00	2,962	9,160			
413.10	3,029	9,389			
413.20	3,096	9,618			
413.30	3,163	9,847			
413.40	3,230	10,076			
413.50	3,298	10,305			
413.60	3,365	10,534			
413.70	3,432	10,763			
413.80	3,499	10,992			
413.90	3,566	11,221			
414.00	3,633	11,450			
414.10	3,701	11,679			
414.20	3,768	11,908			
414.30	3,835	12,137			
414.40	3,902	12,366			
414.50	3,969	12,595			
414.60	4,036	12,824			
414.70	4,103	13,053			

Summary for Pond 33P: INFIL 1C

Inflow Area = 2.583 ac, 77.93% Impervious, Inflow Depth = 1.66" for 1-Year event
 Inflow = 5.27 cfs @ 12.14 hrs, Volume= 0.357 af
 Outflow = 1.22 cfs @ 12.42 hrs, Volume= 0.357 af, Atten= 77%, Lag= 16.7 min
 Discarded = 1.22 cfs @ 12.42 hrs, Volume= 0.357 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 409.87' @ 12.42 hrs Surf.Area= 4,475 sf Storage= 3,459 cf

Plug-Flow detention time= 19.2 min calculated for 0.356 af (100% of inflow)
 Center-of-Mass det. time= 19.2 min (844.4 - 825.2)

Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	41,232 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
409.00	3,499	0	0
415.00	10,245	41,232	41,232

Device	Routing	Invert	Outlet Devices
#1	Secondary	414.00'	10.0' 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
#2	Device 4	411.85'	5.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	409.00'	10.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 404.80' Phase-In= 0.01'
#4	Primary	409.00'	18.0" Round Culvert L= 34.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 409.00' / 408.00' S= 0.0294 '/ Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

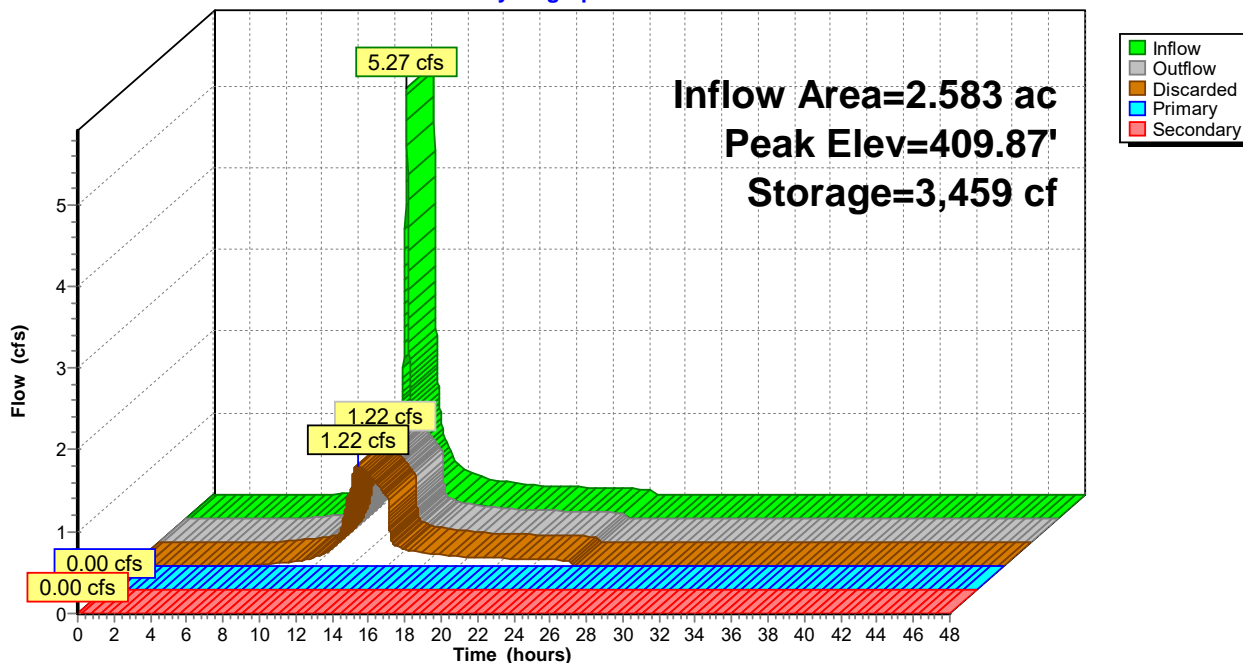
Discarded OutFlow Max=1.22 cfs @ 12.42 hrs HW=409.87' (Free Discharge)
 ↑3=Exfiltration (Controls 1.22 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=409.00' (Free Discharge)
 ↑4=Culvert (Controls 0.00 cfs)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=409.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

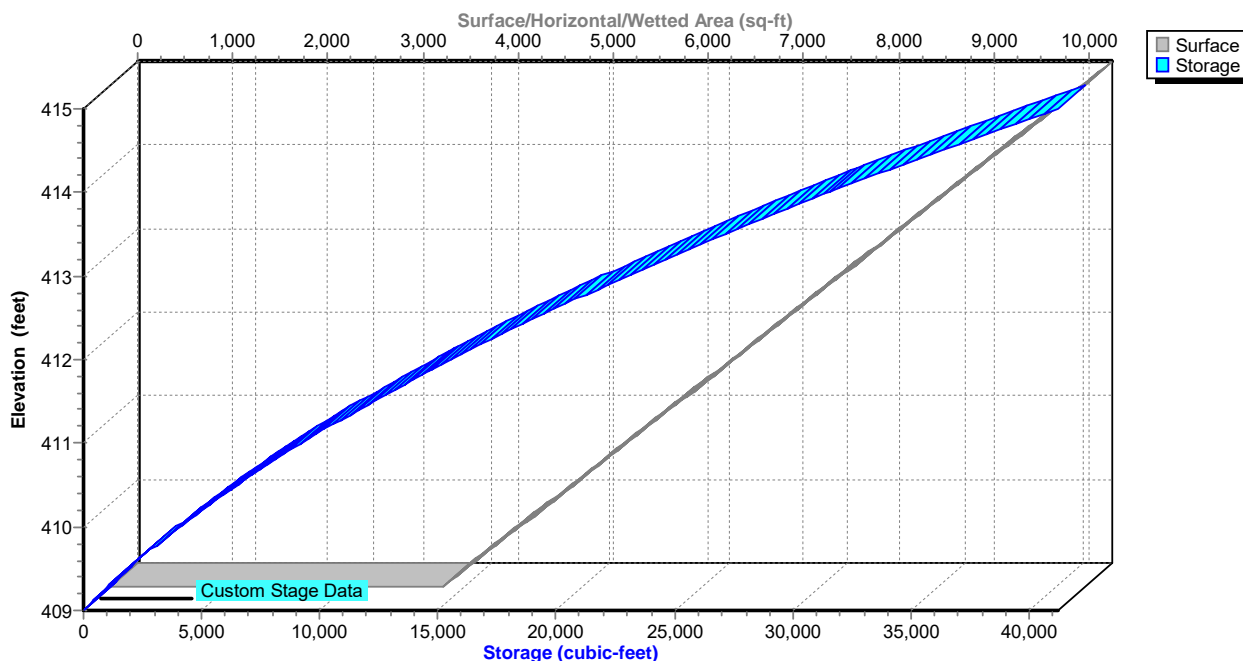
Pond 33P: INFIL 1C

Hydrograph



Pond 33P: INFIL 1C

Stage-Area-Storage



Hydrograph for Pond 33P: INFIL 1C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	409.00	0.00	0.00	0.00	0.00
1.00	0.00	0	409.00	0.00	0.00	0.00	0.00
2.00	0.00	0	409.00	0.00	0.00	0.00	0.00
3.00	0.00	0	409.00	0.00	0.00	0.00	0.00
4.00	0.00	0	409.00	0.00	0.00	0.00	0.00
5.00	0.00	0	409.00	0.00	0.00	0.00	0.00
6.00	0.00	0	409.00	0.00	0.00	0.00	0.00
7.00	0.01	3	409.00	0.01	0.01	0.00	0.00
8.00	0.03	7	409.00	0.03	0.03	0.00	0.00
9.00	0.05	13	409.00	0.05	0.05	0.00	0.00
10.00	0.11	27	409.01	0.11	0.11	0.00	0.00
11.00	0.25	59	409.02	0.23	0.23	0.00	0.00
12.00	2.33	591	409.16	0.89	0.89	0.00	0.00
13.00	0.56	2,644	409.68	1.13	1.13	0.00	0.00
14.00	0.29	438	409.12	0.87	0.87	0.00	0.00
15.00	0.20	52	409.01	0.21	0.21	0.00	0.00
16.00	0.16	42	409.01	0.16	0.16	0.00	0.00
17.00	0.14	35	409.01	0.14	0.14	0.00	0.00
18.00	0.11	29	409.01	0.11	0.11	0.00	0.00
19.00	0.10	26	409.01	0.10	0.10	0.00	0.00
20.00	0.10	24	409.01	0.10	0.10	0.00	0.00
21.00	0.09	23	409.01	0.09	0.09	0.00	0.00
22.00	0.08	21	409.01	0.08	0.08	0.00	0.00
23.00	0.08	19	409.01	0.08	0.08	0.00	0.00
24.00	0.07	18	409.01	0.07	0.07	0.00	0.00
25.00	0.00	0	409.00	0.00	0.00	0.00	0.00
26.00	0.00	0	409.00	0.00	0.00	0.00	0.00
27.00	0.00	0	409.00	0.00	0.00	0.00	0.00
28.00	0.00	0	409.00	0.00	0.00	0.00	0.00
29.00	0.00	0	409.00	0.00	0.00	0.00	0.00
30.00	0.00	0	409.00	0.00	0.00	0.00	0.00
31.00	0.00	0	409.00	0.00	0.00	0.00	0.00
32.00	0.00	0	409.00	0.00	0.00	0.00	0.00
33.00	0.00	0	409.00	0.00	0.00	0.00	0.00
34.00	0.00	0	409.00	0.00	0.00	0.00	0.00
35.00	0.00	0	409.00	0.00	0.00	0.00	0.00
36.00	0.00	0	409.00	0.00	0.00	0.00	0.00
37.00	0.00	0	409.00	0.00	0.00	0.00	0.00
38.00	0.00	0	409.00	0.00	0.00	0.00	0.00
39.00	0.00	0	409.00	0.00	0.00	0.00	0.00
40.00	0.00	0	409.00	0.00	0.00	0.00	0.00
41.00	0.00	0	409.00	0.00	0.00	0.00	0.00
42.00	0.00	0	409.00	0.00	0.00	0.00	0.00
43.00	0.00	0	409.00	0.00	0.00	0.00	0.00
44.00	0.00	0	409.00	0.00	0.00	0.00	0.00
45.00	0.00	0	409.00	0.00	0.00	0.00	0.00
46.00	0.00	0	409.00	0.00	0.00	0.00	0.00
47.00	0.00	0	409.00	0.00	0.00	0.00	0.00
48.00	0.00	0	409.00	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 33P: INFIL 1C

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
409.00	3,499	0	414.80	10,020	39,205
409.10	3,611	356	414.90	10,133	40,213
409.20	3,724	722	415.00	10,245	41,232
409.30	3,836	1,100			
409.40	3,949	1,490			
409.50	4,061	1,890			
409.60	4,174	2,302			
409.70	4,286	2,725			
409.80	4,398	3,159			
409.90	4,511	3,604			
410.00	4,623	4,061			
410.10	4,736	4,529			
410.20	4,848	5,008			
410.30	4,961	5,499			
410.40	5,073	6,000			
410.50	5,186	6,513			
410.60	5,298	7,038			
410.70	5,410	7,573			
410.80	5,523	8,120			
410.90	5,635	8,678			
411.00	5,748	9,247			
411.10	5,860	9,827			
411.20	5,973	10,419			
411.30	6,085	11,022			
411.40	6,197	11,636			
411.50	6,310	12,261			
411.60	6,422	12,898			
411.70	6,535	13,545			
411.80	6,647	14,205			
411.90	6,760	14,875			
412.00	6,872	15,557			
412.10	6,984	16,249			
412.20	7,097	16,953			
412.30	7,209	17,669			
412.40	7,322	18,395			
412.50	7,434	19,133			
412.60	7,547	19,882			
412.70	7,659	20,642			
412.80	7,771	21,414			
412.90	7,884	22,197			
413.00	7,996	22,991			
413.10	8,109	23,796			
413.20	8,221	24,612			
413.30	8,334	25,440			
413.40	8,446	26,279			
413.50	8,559	27,129			
413.60	8,671	27,991			
413.70	8,783	28,864			
413.80	8,896	29,748			
413.90	9,008	30,643			
414.00	9,121	31,549			
414.10	9,233	32,467			
414.20	9,346	33,396			
414.30	9,458	34,336			
414.40	9,570	35,287			
414.50	9,683	36,250			
414.60	9,795	37,224			
414.70	9,908	38,209			

Summary for Pond 37P: FB 1i+J

Inflow Area = 9.303 ac, 78.40% Impervious, Inflow Depth = 1.77" for 1-Year event
 Inflow = 19.93 cfs @ 12.09 hrs, Volume= 1.372 af
 Outflow = 18.92 cfs @ 12.09 hrs, Volume= 1.372 af, Atten= 5%, Lag= 0.1 min
 Primary = 9.46 cfs @ 12.09 hrs, Volume= 0.686 af
 Routed to Pond 31P : Bioretention i
 Secondary = 9.46 cfs @ 12.09 hrs, Volume= 0.686 af
 Routed to Pond 53P : Bioretention J basin

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 413.25' Surf.Area= 9,799 sf Storage= 26,806 cf
 Peak Elev= 413.45' @ 12.09 hrs Surf.Area= 10,044 sf Storage= 28,438 cf (1,632 cf above start)

Plug-Flow detention time= 251.1 min calculated for 0.756 af (55% of inflow)
 Center-of-Mass det. time= 2.9 min (787.1 - 784.2)

Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	32,992 cf	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
410.00	5,767	0	0
414.00	10,729	32,992	32,992

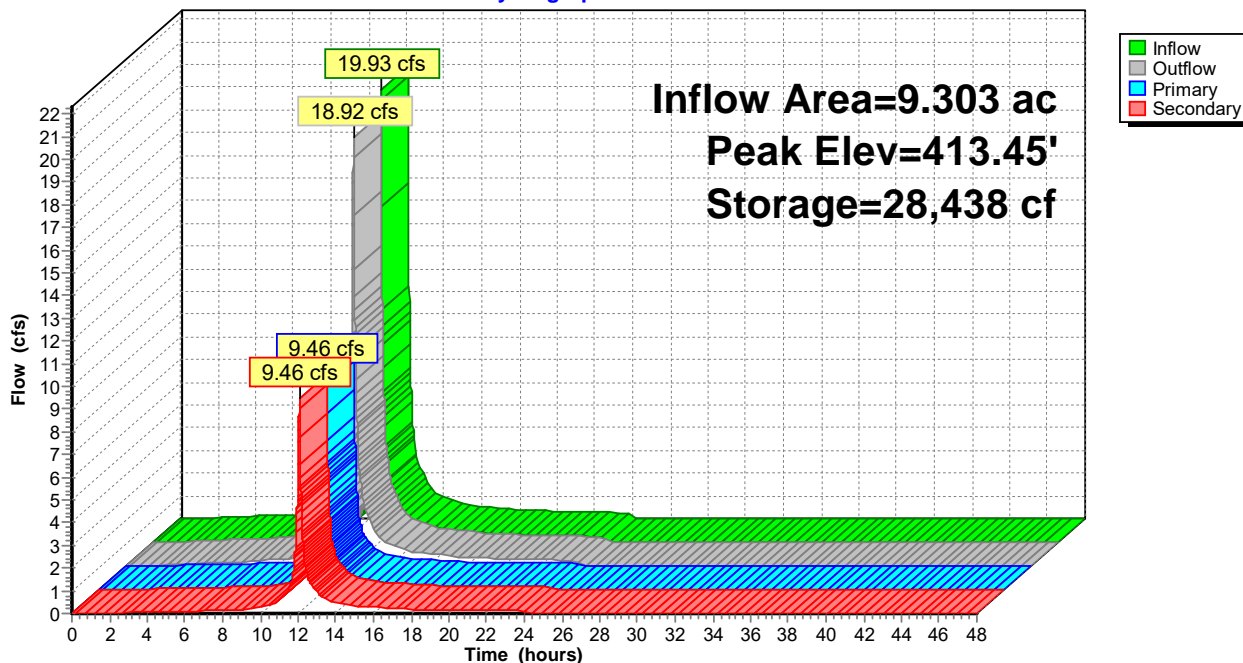
Device	Routing	Invert	Outlet Devices
#1	Primary	413.25'	40.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	413.25'	40.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=9.39 cfs @ 12.09 hrs HW=413.45' (Free Discharge)
 ↑1=**Broad-Crested Rectangular Weir** (Weir Controls 9.39 cfs @ 1.19 fps)

Secondary OutFlow Max=9.39 cfs @ 12.09 hrs HW=413.45' (Free Discharge)
 ↑2=**Broad-Crested Rectangular Weir** (Weir Controls 9.39 cfs @ 1.19 fps)

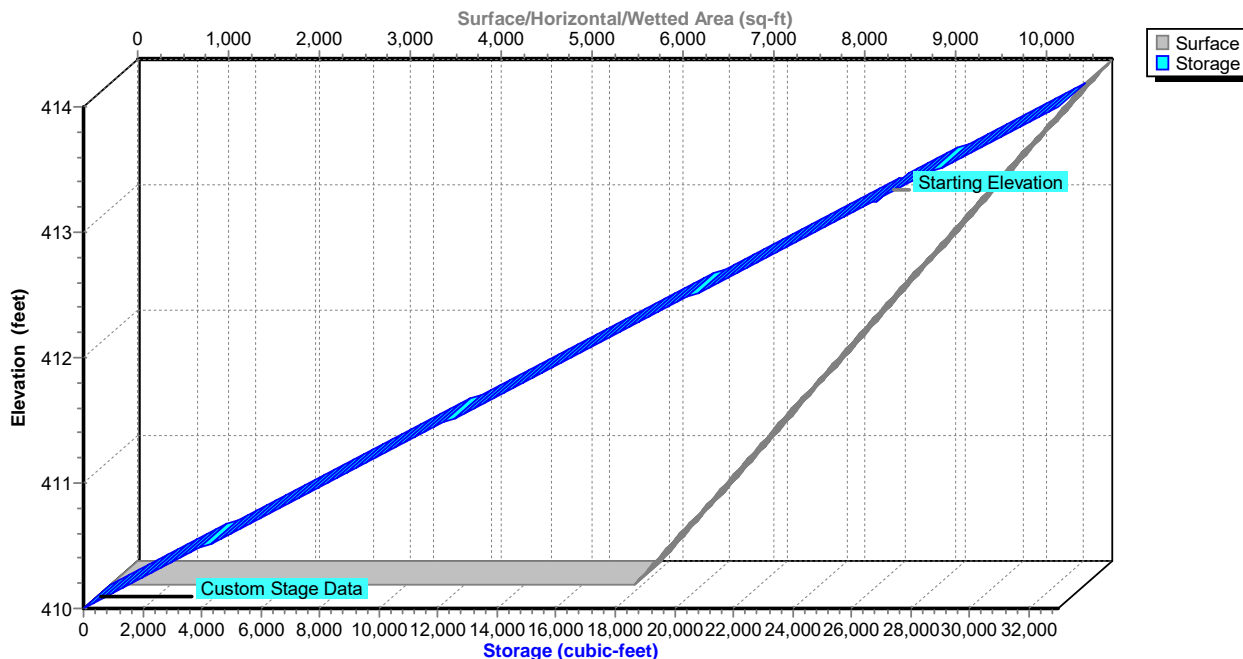
Pond 37P: FB 1i+J

Hydrograph



Pond 37P: FB 1i+J

Stage-Area-Storage



Hydrograph for Pond 37P: FB 1i+J

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	26,806	413.25	0.00	0.00	0.00
1.00	0.00	26,806	413.25	0.00	0.00	0.00
2.00	0.03	26,813	413.25	0.03	0.02	0.02
3.00	0.08	26,822	413.25	0.07	0.04	0.04
4.00	0.11	26,830	413.25	0.11	0.05	0.05
5.00	0.14	26,837	413.25	0.14	0.07	0.07
6.00	0.17	26,843	413.25	0.17	0.08	0.08
7.00	0.23	26,856	413.26	0.23	0.11	0.11
8.00	0.30	26,871	413.26	0.29	0.15	0.15
9.00	0.37	26,885	413.26	0.36	0.18	0.18
10.00	0.60	26,934	413.27	0.58	0.29	0.29
11.00	1.23	27,058	413.28	1.16	0.58	0.58
12.00	14.07	27,957	413.39	11.24	5.62	5.62
13.00	1.79	27,141	413.29	1.87	0.93	0.93
14.00	0.96	27,024	413.28	0.98	0.49	0.49
15.00	0.65	26,956	413.27	0.68	0.34	0.34
16.00	0.55	26,929	413.26	0.56	0.28	0.28
17.00	0.46	26,910	413.26	0.47	0.23	0.23
18.00	0.37	26,890	413.26	0.38	0.19	0.19
19.00	0.35	26,883	413.26	0.35	0.17	0.17
20.00	0.32	26,878	413.26	0.33	0.16	0.16
21.00	0.30	26,873	413.26	0.30	0.15	0.15
22.00	0.28	26,868	413.26	0.28	0.14	0.14
23.00	0.26	26,864	413.26	0.26	0.13	0.13
24.00	0.16	26,858	413.26	0.23	0.12	0.12
25.00	0.00	26,806	413.25	0.00	0.00	0.00
26.00	0.00	26,806	413.25	0.00	0.00	0.00
27.00	0.00	26,806	413.25	0.00	0.00	0.00
28.00	0.00	26,806	413.25	0.00	0.00	0.00
29.00	0.00	26,806	413.25	0.00	0.00	0.00
30.00	0.00	26,806	413.25	0.00	0.00	0.00
31.00	0.00	26,806	413.25	0.00	0.00	0.00
32.00	0.00	26,806	413.25	0.00	0.00	0.00
33.00	0.00	26,806	413.25	0.00	0.00	0.00
34.00	0.00	26,806	413.25	0.00	0.00	0.00
35.00	0.00	26,806	413.25	0.00	0.00	0.00
36.00	0.00	26,806	413.25	0.00	0.00	0.00
37.00	0.00	26,806	413.25	0.00	0.00	0.00
38.00	0.00	26,806	413.25	0.00	0.00	0.00
39.00	0.00	26,806	413.25	0.00	0.00	0.00
40.00	0.00	26,806	413.25	0.00	0.00	0.00
41.00	0.00	26,806	413.25	0.00	0.00	0.00
42.00	0.00	26,806	413.25	0.00	0.00	0.00
43.00	0.00	26,806	413.25	0.00	0.00	0.00
44.00	0.00	26,806	413.25	0.00	0.00	0.00
45.00	0.00	26,806	413.25	0.00	0.00	0.00
46.00	0.00	26,806	413.25	0.00	0.00	0.00
47.00	0.00	26,806	413.25	0.00	0.00	0.00
48.00	0.00	26,806	413.25	0.00	0.00	0.00

Stage-Area-Storage for Pond 37P: FB 1i+J

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
410.00	5,767	0	412.90	9,364	23,919
410.05	5,829	412	412.95	9,426	24,332
410.10	5,891	825	413.00	9,489	24,744
410.15	5,953	1,237	413.05	9,551	25,156
410.20	6,015	1,650	413.10	9,613	25,569
410.25	6,077	2,062	413.15	9,675	25,981
410.30	6,139	2,474	413.20	9,737	26,394
410.35	6,201	2,887	413.25	9,799	26,806
410.40	6,263	3,299	413.30	9,861	27,218
410.45	6,325	3,712	413.35	9,923	27,631
410.50	6,387	4,124	413.40	9,985	28,043
410.55	6,449	4,536	413.45	10,047	28,456
410.60	6,511	4,949	413.50	10,109	28,868
410.65	6,573	5,361	413.55	10,171	29,280
410.70	6,635	5,774	413.60	10,233	29,693
410.75	6,697	6,186	413.65	10,295	30,105
410.80	6,759	6,598	413.70	10,357	30,518
410.85	6,821	7,011	413.75	10,419	30,930
410.90	6,883	7,423	413.80	10,481	31,342
410.95	6,945	7,836	413.85	10,543	31,755
411.00	7,008	8,248	413.90	10,605	32,167
411.05	7,070	8,660	413.95	10,667	32,580
411.10	7,132	9,073	414.00	10,729	32,992
411.15	7,194	9,485			
411.20	7,256	9,898			
411.25	7,318	10,310			
411.30	7,380	10,722			
411.35	7,442	11,135			
411.40	7,504	11,547			
411.45	7,566	11,960			
411.50	7,628	12,372			
411.55	7,690	12,784			
411.60	7,752	13,197			
411.65	7,814	13,609			
411.70	7,876	14,022			
411.75	7,938	14,434			
411.80	8,000	14,846			
411.85	8,062	15,259			
411.90	8,124	15,671			
411.95	8,186	16,084			
412.00	8,248	16,496			
412.05	8,310	16,908			
412.10	8,372	17,321			
412.15	8,434	17,733			
412.20	8,496	18,146			
412.25	8,558	18,558			
412.30	8,620	18,970			
412.35	8,682	19,383			
412.40	8,744	19,795			
412.45	8,806	20,208			
412.50	8,868	20,620			
412.55	8,930	21,032			
412.60	8,992	21,445			
412.65	9,054	21,857			
412.70	9,116	22,270			
412.75	9,178	22,682			
412.80	9,240	23,094			
412.85	9,302	23,507			

Summary for Pond 39P: FB 5A

Inflow Area = 4.966 ac, 46.58% Impervious, Inflow Depth = 0.69" for 1-Year event
 Inflow = 4.08 cfs @ 12.14 hrs, Volume= 0.285 af
 Outflow = 3.75 cfs @ 12.16 hrs, Volume= 0.285 af, Atten= 8%, Lag= 1.5 min
 Primary = 3.75 cfs @ 12.16 hrs, Volume= 0.285 af
 Routed to Pond 22P : Bioretention 5A

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 433.30' Surf.Area= 4,110 sf Storage= 8,944 cf
 Peak Elev= 433.46' @ 12.16 hrs Surf.Area= 4,227 sf Storage= 9,564 cf (620 cf above start)

Plug-Flow detention time= 459.9 min calculated for 0.080 af (28% of inflow)
 Center-of-Mass det. time= 5.5 min (895.0 - 889.5)

Volume	Invert	Avail.Storage	Storage Description
#1	431.00'	15,554 cf	Custom Stage Data (Prismatic) Listed below

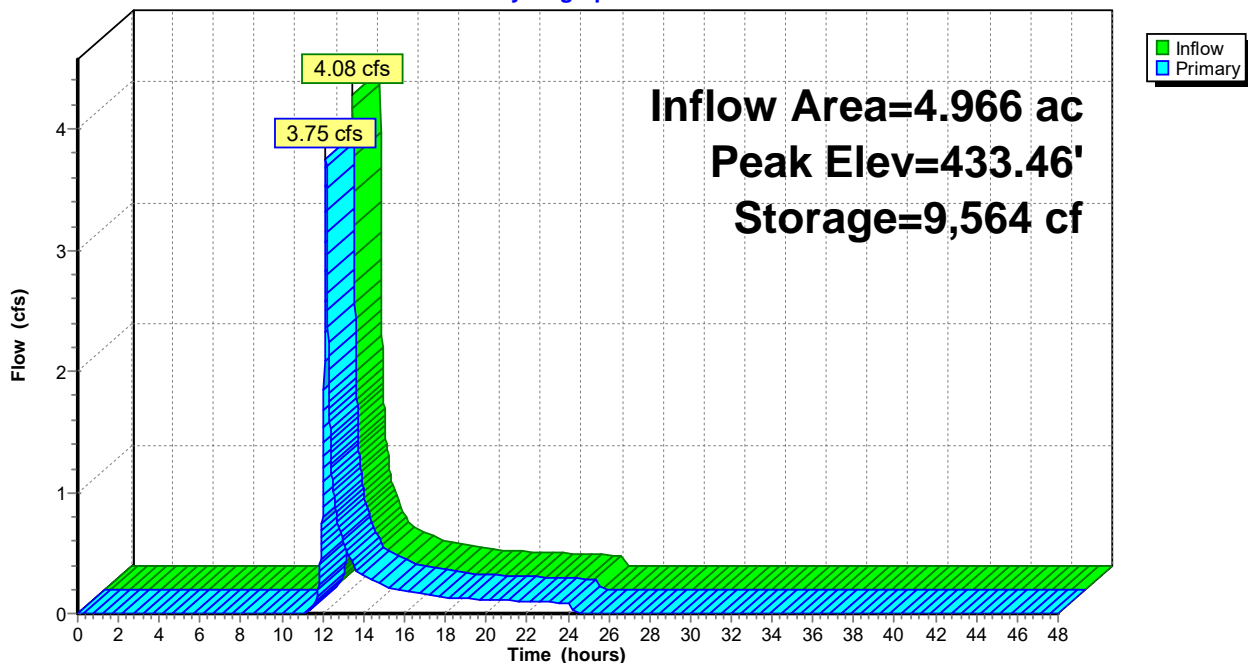
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
431.00	2,415	0	0
435.00	5,362	15,554	15,554

Device	Routing	Invert	Outlet Devices
#1	Primary	433.30'	25.0' 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=3.72 cfs @ 12.16 hrs HW=433.46' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 3.72 cfs @ 0.93 fps)

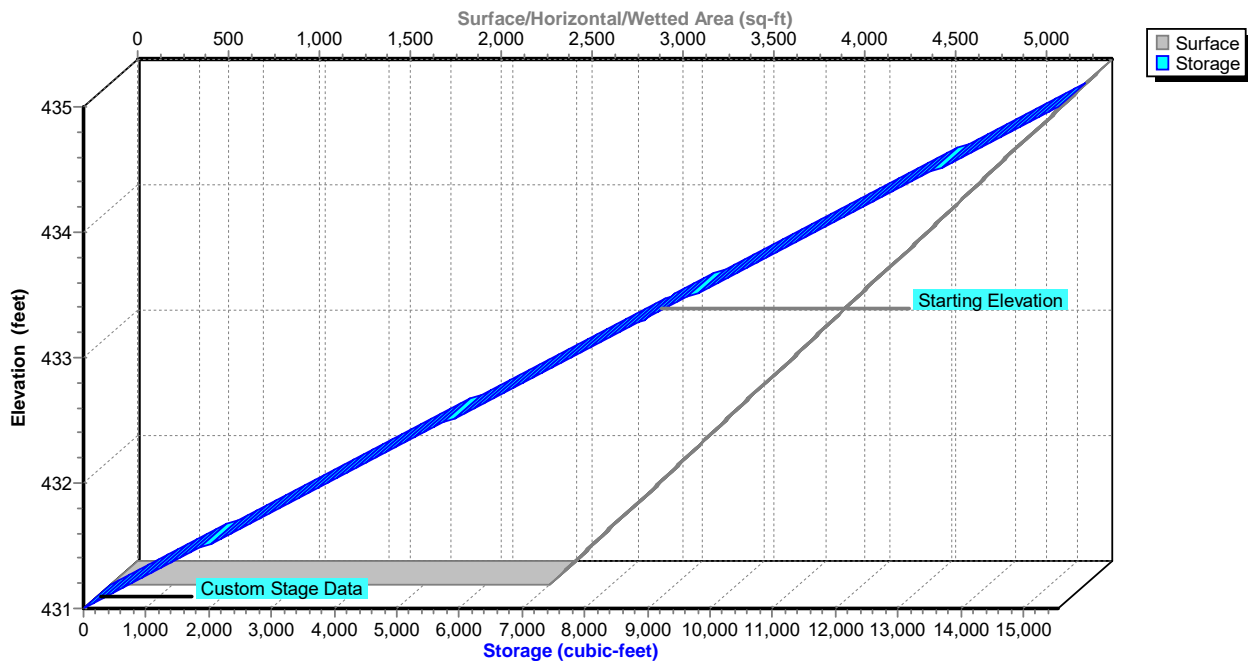
Pond 39P: FB 5A

Hydrograph



Pond 39P: FB 5A

Stage-Area-Storage



Hydrograph for Pond 39P: FB 5A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,944	433.30	0.00
1.00	0.00	8,944	433.30	0.00
2.00	0.00	8,944	433.30	0.00
3.00	0.00	8,944	433.30	0.00
4.00	0.00	8,944	433.30	0.00
5.00	0.00	8,944	433.30	0.00
6.00	0.00	8,944	433.30	0.00
7.00	0.00	8,944	433.30	0.00
8.00	0.00	8,944	433.30	0.00
9.00	0.00	8,944	433.30	0.00
10.00	0.00	8,944	433.30	0.00
11.00	0.00	8,944	433.30	0.00
12.00	1.45	9,197	433.37	0.99
13.00	0.57	9,118	433.34	0.60
14.00	0.31	9,055	433.33	0.32
15.00	0.22	9,035	433.32	0.23
16.00	0.19	9,026	433.32	0.19
17.00	0.16	9,020	433.32	0.16
18.00	0.13	9,007	433.32	0.13
19.00	0.12	9,001	433.31	0.12
20.00	0.11	8,998	433.31	0.12
21.00	0.11	8,995	433.31	0.11
22.00	0.10	8,991	433.31	0.10
23.00	0.09	8,988	433.31	0.09
24.00	0.09	8,984	433.31	0.09
25.00	0.00	8,944	433.30	0.00
26.00	0.00	8,944	433.30	0.00
27.00	0.00	8,944	433.30	0.00
28.00	0.00	8,944	433.30	0.00
29.00	0.00	8,944	433.30	0.00
30.00	0.00	8,944	433.30	0.00
31.00	0.00	8,944	433.30	0.00
32.00	0.00	8,944	433.30	0.00
33.00	0.00	8,944	433.30	0.00
34.00	0.00	8,944	433.30	0.00
35.00	0.00	8,944	433.30	0.00
36.00	0.00	8,944	433.30	0.00
37.00	0.00	8,944	433.30	0.00
38.00	0.00	8,944	433.30	0.00
39.00	0.00	8,944	433.30	0.00
40.00	0.00	8,944	433.30	0.00
41.00	0.00	8,944	433.30	0.00
42.00	0.00	8,944	433.30	0.00
43.00	0.00	8,944	433.30	0.00
44.00	0.00	8,944	433.30	0.00
45.00	0.00	8,944	433.30	0.00
46.00	0.00	8,944	433.30	0.00
47.00	0.00	8,944	433.30	0.00
48.00	0.00	8,944	433.30	0.00

Stage-Area-Storage for Pond 39P: FB 5A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
431.00	2,415	0	433.90	4,552	11,277
431.05	2,452	194	433.95	4,588	11,471
431.10	2,489	389	434.00	4,625	11,666
431.15	2,526	583	434.05	4,662	11,860
431.20	2,562	778	434.10	4,699	12,054
431.25	2,599	972	434.15	4,736	12,249
431.30	2,636	1,167	434.20	4,773	12,443
431.35	2,673	1,361	434.25	4,809	12,638
431.40	2,710	1,555	434.30	4,846	12,832
431.45	2,747	1,750	434.35	4,883	13,026
431.50	2,783	1,944	434.40	4,920	13,221
431.55	2,820	2,139	434.45	4,957	13,415
431.60	2,857	2,333	434.50	4,994	13,610
431.65	2,894	2,528	434.55	5,030	13,804
431.70	2,931	2,722	434.60	5,067	13,999
431.75	2,968	2,916	434.65	5,104	14,193
431.80	3,004	3,111	434.70	5,141	14,387
431.85	3,041	3,305	434.75	5,178	14,582
431.90	3,078	3,500	434.80	5,215	14,776
431.95	3,115	3,694	434.85	5,251	14,971
432.00	3,152	3,889	434.90	5,288	15,165
432.05	3,189	4,083	434.95	5,325	15,360
432.10	3,225	4,277	435.00	5,362	15,554
432.15	3,262	4,472			
432.20	3,299	4,666			
432.25	3,336	4,861			
432.30	3,373	5,055			
432.35	3,410	5,249			
432.40	3,446	5,444			
432.45	3,483	5,638			
432.50	3,520	5,833			
432.55	3,557	6,027			
432.60	3,594	6,222			
432.65	3,631	6,416			
432.70	3,667	6,610			
432.75	3,704	6,805			
432.80	3,741	6,999			
432.85	3,778	7,194			
432.90	3,815	7,388			
432.95	3,852	7,583			
433.00	3,889	7,777			
433.05	3,925	7,971			
433.10	3,962	8,166			
433.15	3,999	8,360			
433.20	4,036	8,555			
433.25	4,073	8,749			
433.30	4,110	8,944			
433.35	4,146	9,138			
433.40	4,183	9,332			
433.45	4,220	9,527			
433.50	4,257	9,721			
433.55	4,294	9,916			
433.60	4,331	10,110			
433.65	4,367	10,305			
433.70	4,404	10,499			
433.75	4,441	10,693			
433.80	4,478	10,888			
433.85	4,515	11,082			

Summary for Pond 44P: FB 1B

Inflow Area = 9.519 ac, 70.62% Impervious, Inflow Depth = 1.31" for 1-Year event
 Inflow = 15.79 cfs @ 12.13 hrs, Volume= 1.035 af
 Outflow = 15.19 cfs @ 12.15 hrs, Volume= 1.035 af, Atten= 4%, Lag= 1.1 min
 Primary = 15.19 cfs @ 12.15 hrs, Volume= 1.035 af
 Routed to Pond 45P : INFIL 1B

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.35' Surf.Area= 9,580 sf Storage= 34,519 cf
 Peak Elev= 412.56' @ 12.15 hrs Surf.Area= 9,832 sf Storage= 36,163 cf (1,644 cf above start)

Plug-Flow detention time= 462.1 min calculated for 0.243 af (23% of inflow)
 Center-of-Mass det. time= 3.5 min (844.8 - 841.2)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	47,613 cf	Custom Stage Data (Prismatic) Listed below

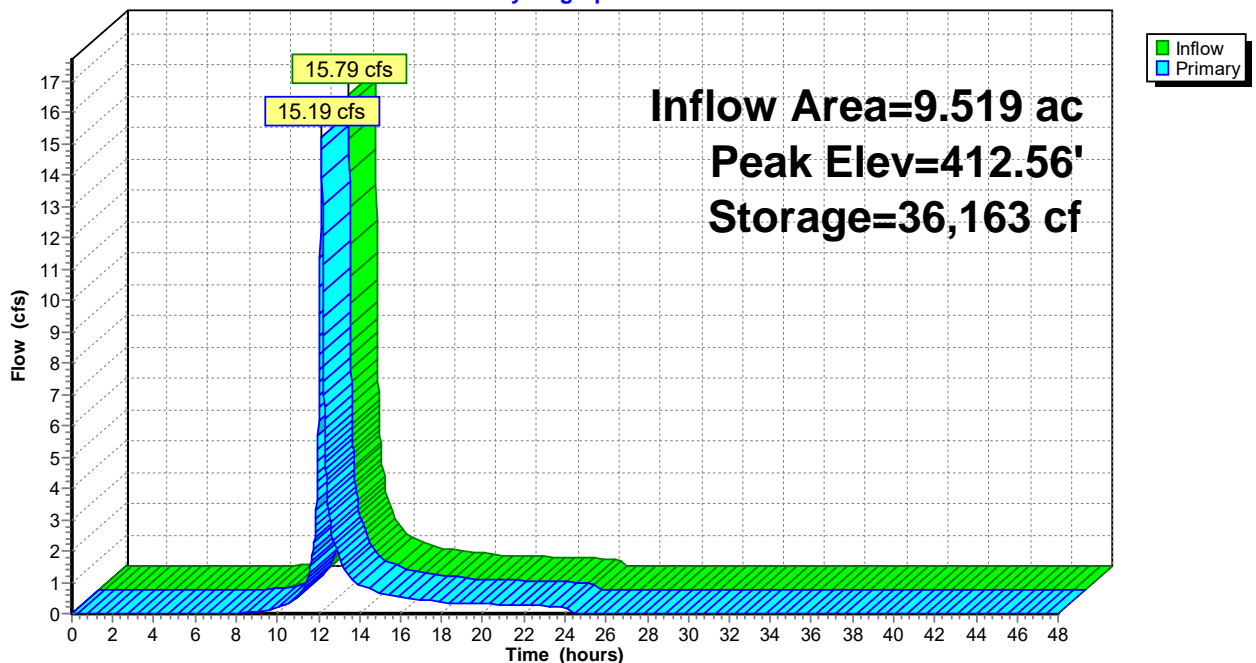
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	4,282	0	0
414.00	11,589	47,613	47,613

Device	Routing	Invert	Outlet Devices
#1	Primary	412.35'	60.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

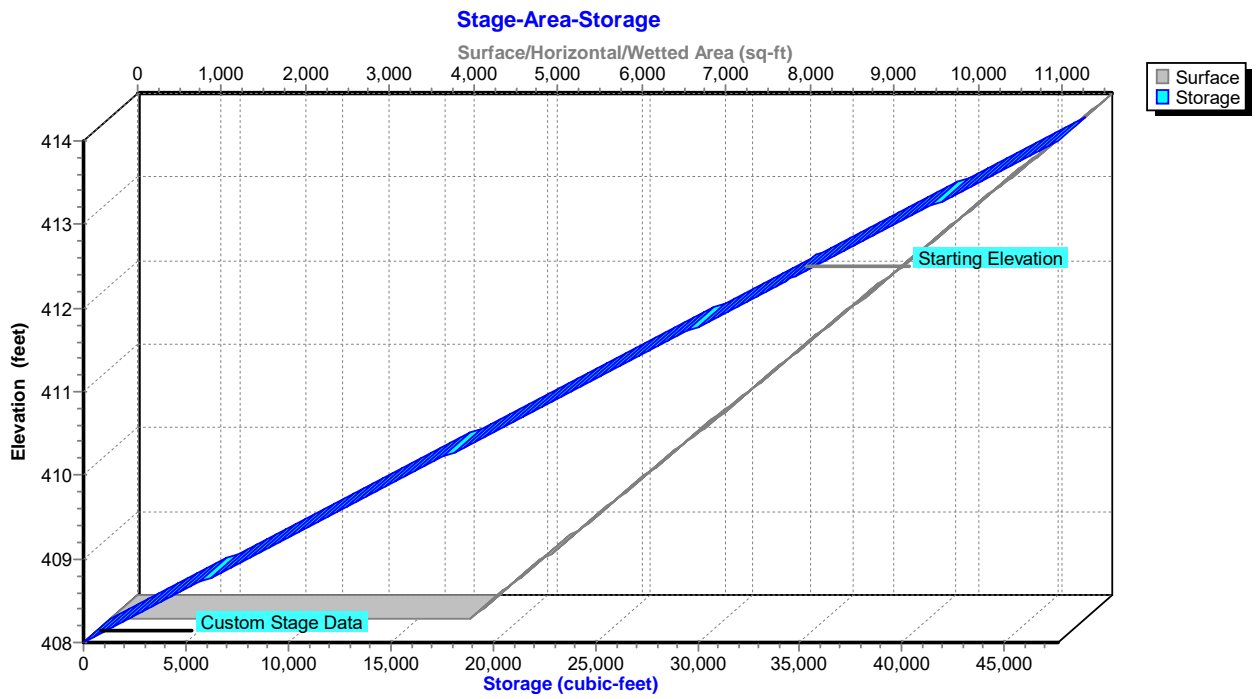
Primary OutFlow Max=15.15 cfs @ 12.15 hrs HW=412.56' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 15.15 cfs @ 1.22 fps)

Pond 44P: FB 1B

Hydrograph



Pond 44P: FB 1B



Hydrograph for Pond 44P: FB 1B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	34,519	412.35	0.00
1.00	0.00	34,519	412.35	0.00
2.00	0.00	34,519	412.35	0.00
3.00	0.00	34,519	412.35	0.00
4.00	0.00	34,519	412.35	0.00
5.00	0.00	34,519	412.35	0.00
6.00	0.00	34,519	412.35	0.00
7.00	0.00	34,519	412.35	0.00
8.00	0.01	34,521	412.35	0.01
9.00	0.07	34,538	412.35	0.07
10.00	0.21	34,576	412.36	0.20
11.00	0.60	34,676	412.37	0.55
12.00	7.31	35,405	412.46	6.14
13.00	1.72	34,887	412.40	1.79
14.00	0.90	34,768	412.38	0.91
15.00	0.62	34,704	412.37	0.65
16.00	0.52	34,669	412.37	0.53
17.00	0.44	34,646	412.37	0.45
18.00	0.36	34,623	412.36	0.36
19.00	0.33	34,613	412.36	0.33
20.00	0.31	34,608	412.36	0.31
21.00	0.29	34,602	412.36	0.29
22.00	0.27	34,596	412.36	0.27
23.00	0.25	34,590	412.36	0.25
24.00	0.23	34,584	412.36	0.23
25.00	0.00	34,519	412.35	0.00
26.00	0.00	34,519	412.35	0.00
27.00	0.00	34,519	412.35	0.00
28.00	0.00	34,519	412.35	0.00
29.00	0.00	34,519	412.35	0.00
30.00	0.00	34,519	412.35	0.00
31.00	0.00	34,519	412.35	0.00
32.00	0.00	34,519	412.35	0.00
33.00	0.00	34,519	412.35	0.00
34.00	0.00	34,519	412.35	0.00
35.00	0.00	34,519	412.35	0.00
36.00	0.00	34,519	412.35	0.00
37.00	0.00	34,519	412.35	0.00
38.00	0.00	34,519	412.35	0.00
39.00	0.00	34,519	412.35	0.00
40.00	0.00	34,519	412.35	0.00
41.00	0.00	34,519	412.35	0.00
42.00	0.00	34,519	412.35	0.00
43.00	0.00	34,519	412.35	0.00
44.00	0.00	34,519	412.35	0.00
45.00	0.00	34,519	412.35	0.00
46.00	0.00	34,519	412.35	0.00
47.00	0.00	34,519	412.35	0.00
48.00	0.00	34,519	412.35	0.00

Stage-Area-Storage for Pond 44P: FB 1B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	4,282	0	413.80	11,345	46,026
408.10	4,404	794	413.90	11,467	46,819
408.20	4,526	1,587	414.00	11,589	47,613
408.30	4,647	2,381			
408.40	4,769	3,174			
408.50	4,891	3,968			
408.60	5,013	4,761			
408.70	5,134	5,555			
408.80	5,256	6,348			
408.90	5,378	7,142			
409.00	5,500	7,936			
409.10	5,622	8,729			
409.20	5,743	9,523			
409.30	5,865	10,316			
409.40	5,987	11,110			
409.50	6,109	11,903			
409.60	6,231	12,697			
409.70	6,352	13,490			
409.80	6,474	14,284			
409.90	6,596	15,077			
410.00	6,718	15,871			
410.10	6,839	16,665			
410.20	6,961	17,458			
410.30	7,083	18,252			
410.40	7,205	19,045			
410.50	7,327	19,839			
410.60	7,448	20,632			
410.70	7,570	21,426			
410.80	7,692	22,219			
410.90	7,814	23,013			
411.00	7,936	23,807			
411.10	8,057	24,600			
411.20	8,179	25,394			
411.30	8,301	26,187			
411.40	8,423	26,981			
411.50	8,544	27,774			
411.60	8,666	28,568			
411.70	8,788	29,361			
411.80	8,910	30,155			
411.90	9,032	30,948			
412.00	9,153	31,742			
412.10	9,275	32,536			
412.20	9,397	33,329			
412.30	9,519	34,123			
412.40	9,640	34,916			
412.50	9,762	35,710			
412.60	9,884	36,503			
412.70	10,006	37,297			
412.80	10,128	38,090			
412.90	10,249	38,884			
413.00	10,371	39,678			
413.10	10,493	40,471			
413.20	10,615	41,265			
413.30	10,737	42,058			
413.40	10,858	42,852			
413.50	10,980	43,645			
413.60	11,102	44,439			
413.70	11,224	45,232			

Summary for Pond 45P: INFIL 1B

Inflow Area = 10.279 ac, 65.40% Impervious, Inflow Depth = 1.21" for 1-Year event
 Inflow = 15.19 cfs @ 12.15 hrs, Volume= 1.035 af
 Outflow = 3.33 cfs @ 12.50 hrs, Volume= 1.035 af, Atten= 78%, Lag= 20.7 min
 Discarded = 3.33 cfs @ 12.50 hrs, Volume= 1.035 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 408.77' @ 12.50 hrs Surf.Area= 14,143 sf Storage= 10,206 cf

Plug-Flow detention time= 21.2 min calculated for 1.035 af (100% of inflow)
 Center-of-Mass det. time= 21.2 min (866.0 - 844.8)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	118,185 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	12,210	0	0
414.00	27,185	118,185	118,185

Device	Routing	Invert	Outlet Devices
#1	Secondary	413.00'	10.0' 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
#2	Device 4	410.85'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.00'	9.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 402.50' Phase-In= 0.01'
#4	Primary	408.00'	18.0" Round Culvert L= 50.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 408.00' / 407.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

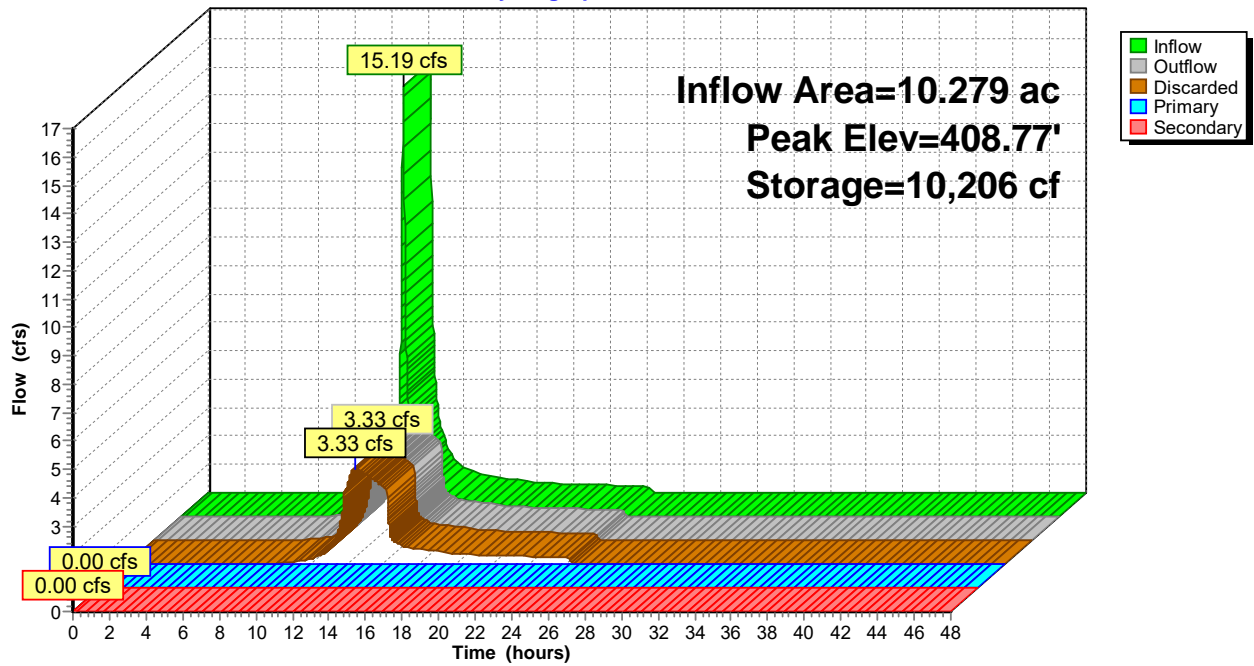
Discarded OutFlow Max=3.33 cfs @ 12.50 hrs HW=408.77' (Free Discharge)
 ↑3=Exfiltration (Controls 3.33 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.00' (Free Discharge)
 ↑4=Culvert (Controls 0.00 cfs)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

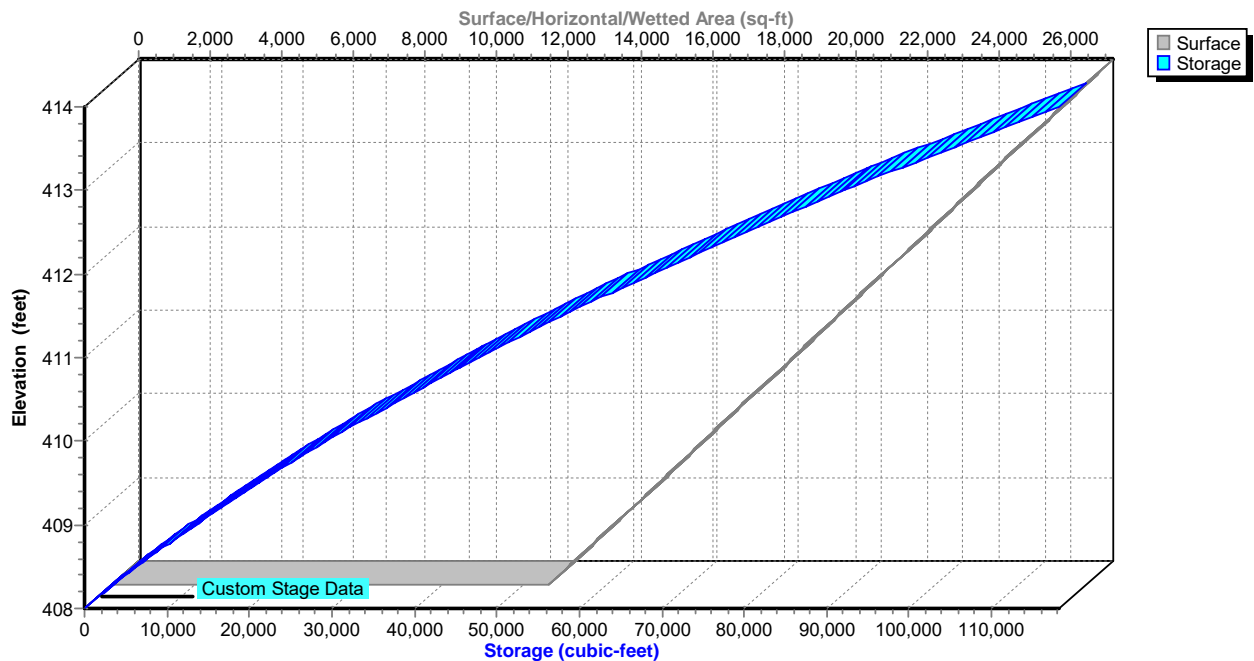
Pond 45P: INFIL 1B

Hydrograph



Pond 45P: INFIL 1B

Stage-Area-Storage



Hydrograph for Pond 45P: INFIL 1B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	408.00	0.00	0.00	0.00	0.00
1.00	0.00	0	408.00	0.00	0.00	0.00	0.00
2.00	0.00	0	408.00	0.00	0.00	0.00	0.00
3.00	0.00	0	408.00	0.00	0.00	0.00	0.00
4.00	0.00	0	408.00	0.00	0.00	0.00	0.00
5.00	0.00	0	408.00	0.00	0.00	0.00	0.00
6.00	0.00	0	408.00	0.00	0.00	0.00	0.00
7.00	0.00	0	408.00	0.00	0.00	0.00	0.00
8.00	0.01	1	408.00	0.00	0.00	0.00	0.00
9.00	0.07	17	408.00	0.06	0.06	0.00	0.00
10.00	0.20	52	408.00	0.18	0.18	0.00	0.00
11.00	0.55	141	408.01	0.50	0.50	0.00	0.00
12.00	6.14	1,393	408.11	2.65	2.65	0.00	0.00
13.00	1.79	8,548	408.66	3.21	3.21	0.00	0.00
14.00	0.91	2,251	408.18	2.72	2.72	0.00	0.00
15.00	0.65	190	408.02	0.67	0.67	0.00	0.00
16.00	0.53	151	408.01	0.53	0.53	0.00	0.00
17.00	0.45	128	408.01	0.45	0.45	0.00	0.00
18.00	0.36	105	408.01	0.37	0.37	0.00	0.00
19.00	0.33	94	408.01	0.33	0.33	0.00	0.00
20.00	0.31	88	408.01	0.31	0.31	0.00	0.00
21.00	0.29	82	408.01	0.29	0.29	0.00	0.00
22.00	0.27	77	408.01	0.27	0.27	0.00	0.00
23.00	0.25	71	408.01	0.25	0.25	0.00	0.00
24.00	0.23	65	408.01	0.23	0.23	0.00	0.00
25.00	0.00	0	408.00	0.00	0.00	0.00	0.00
26.00	0.00	0	408.00	0.00	0.00	0.00	0.00
27.00	0.00	0	408.00	0.00	0.00	0.00	0.00
28.00	0.00	0	408.00	0.00	0.00	0.00	0.00
29.00	0.00	0	408.00	0.00	0.00	0.00	0.00
30.00	0.00	0	408.00	0.00	0.00	0.00	0.00
31.00	0.00	0	408.00	0.00	0.00	0.00	0.00
32.00	0.00	0	408.00	0.00	0.00	0.00	0.00
33.00	0.00	0	408.00	0.00	0.00	0.00	0.00
34.00	0.00	0	408.00	0.00	0.00	0.00	0.00
35.00	0.00	0	408.00	0.00	0.00	0.00	0.00
36.00	0.00	0	408.00	0.00	0.00	0.00	0.00
37.00	0.00	0	408.00	0.00	0.00	0.00	0.00
38.00	0.00	0	408.00	0.00	0.00	0.00	0.00
39.00	0.00	0	408.00	0.00	0.00	0.00	0.00
40.00	0.00	0	408.00	0.00	0.00	0.00	0.00
41.00	0.00	0	408.00	0.00	0.00	0.00	0.00
42.00	0.00	0	408.00	0.00	0.00	0.00	0.00
43.00	0.00	0	408.00	0.00	0.00	0.00	0.00
44.00	0.00	0	408.00	0.00	0.00	0.00	0.00
45.00	0.00	0	408.00	0.00	0.00	0.00	0.00
46.00	0.00	0	408.00	0.00	0.00	0.00	0.00
47.00	0.00	0	408.00	0.00	0.00	0.00	0.00
48.00	0.00	0	408.00	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 45P: INFIL 1B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	12,210	0	413.80	26,686	112,798
408.10	12,460	1,233	413.90	26,935	115,479
408.20	12,709	2,492	414.00	27,185	118,185
408.30	12,959	3,775			
408.40	13,208	5,084			
408.50	13,458	6,417			
408.60	13,708	7,775			
408.70	13,957	9,158			
408.80	14,207	10,567			
408.90	14,456	12,000			
409.00	14,706	13,458			
409.10	14,955	14,941			
409.20	15,205	16,449			
409.30	15,455	17,982			
409.40	15,704	19,540			
409.50	15,954	21,123			
409.60	16,203	22,731			
409.70	16,453	24,363			
409.80	16,703	26,021			
409.90	16,952	27,704			
410.00	17,202	29,412			
410.10	17,451	31,144			
410.20	17,701	32,902			
410.30	17,950	34,684			
410.40	18,200	36,492			
410.50	18,450	38,324			
410.60	18,699	40,182			
410.70	18,949	42,064			
410.80	19,198	43,972			
410.90	19,448	45,904			
411.00	19,698	47,861			
411.10	19,947	49,843			
411.20	20,197	51,851			
411.30	20,446	53,883			
411.40	20,696	55,940			
411.50	20,945	58,022			
411.60	21,195	60,129			
411.70	21,445	62,261			
411.80	21,694	64,418			
411.90	21,944	66,600			
412.00	22,193	68,807			
412.10	22,443	71,038			
412.20	22,692	73,295			
412.30	22,942	75,577			
412.40	23,192	77,884			
412.50	23,441	80,215			
412.60	23,691	82,572			
412.70	23,940	84,953			
412.80	24,190	87,360			
412.90	24,440	89,791			
413.00	24,689	92,248			
413.10	24,939	94,729			
413.20	25,188	97,236			
413.30	25,438	99,767			
413.40	25,687	102,323			
413.50	25,937	104,904			
413.60	26,187	107,511			
413.70	26,436	110,142			

Summary for Pond 47P: INFIL 1H

Inflow Area = 11.301 ac, 87.98% Impervious, Inflow Depth = 2.12" for 1-Year event
 Inflow = 25.76 cfs @ 12.15 hrs, Volume= 1.997 af
 Outflow = 4.41 cfs @ 12.58 hrs, Volume= 1.997 af, Atten= 83%, Lag= 26.2 min
 Discarded = 4.41 cfs @ 12.58 hrs, Volume= 1.997 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 409.48' @ 12.58 hrs Surf.Area= 23,269 sf Storage= 21,679 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 31.5 min (798.1 - 766.6)

Volume	Invert	Avail.Storage	Storage Description
#1	408.50'	151,690 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.50	20,873	0	0
414.00	34,287	151,690	151,690

Device	Routing	Invert	Outlet Devices
#1	Secondary	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 4	410.85'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.50'	7.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 403.00' Phase-In= 0.01'
#4	Primary	408.50'	18.0" Round Culvert L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 408.50' / 407.00' S= 0.0214 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

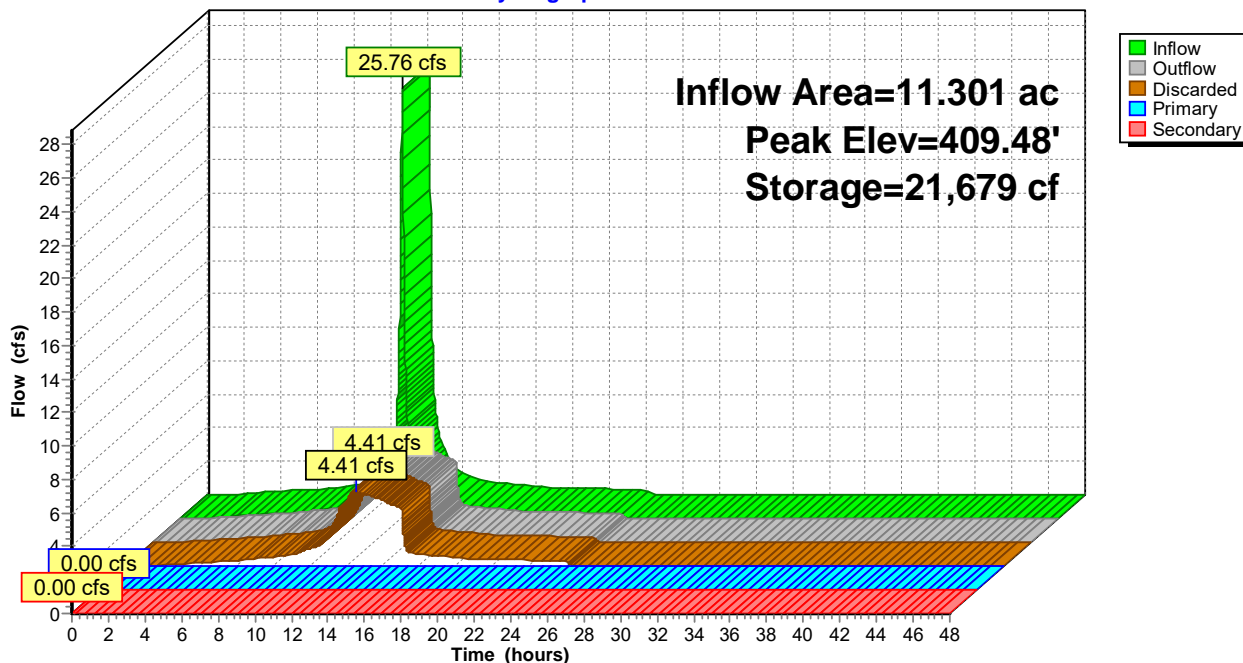
Discarded OutFlow Max=4.41 cfs @ 12.58 hrs HW=409.48' (Free Discharge)
 ↑ **3=Exfiltration** (Controls 4.41 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
 ↑ **4=Culvert** (Controls 0.00 cfs)
 ↑ **2=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
 ↑ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

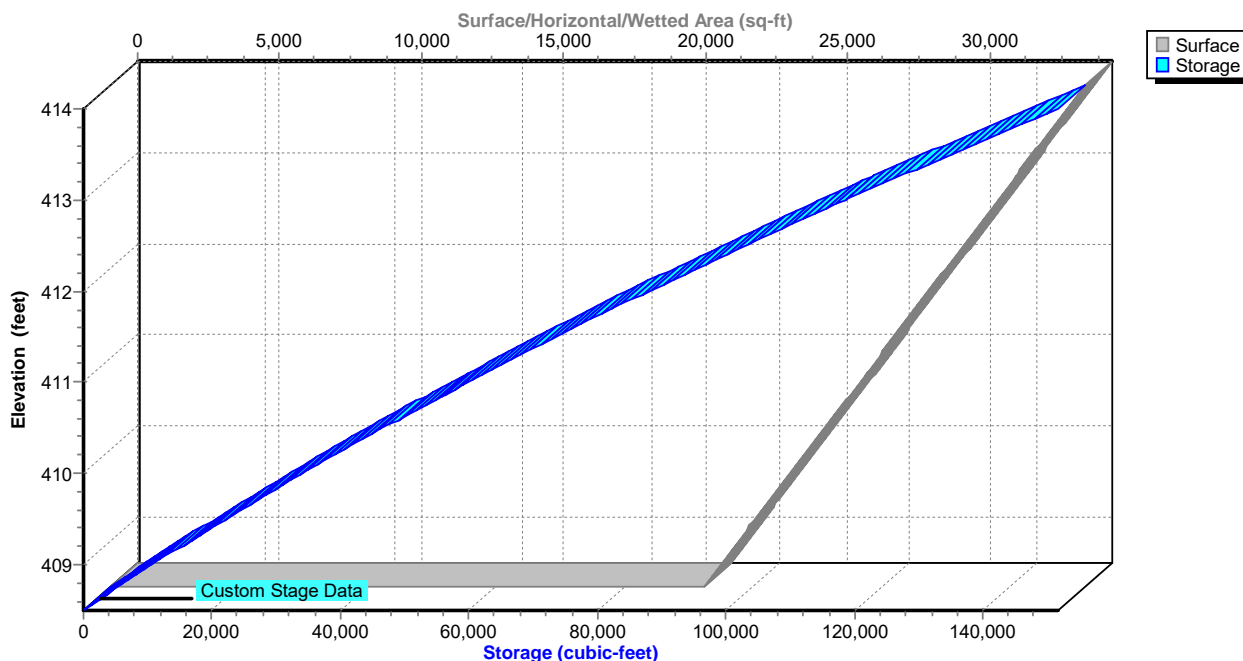
Pond 47P: INFIL 1H

Hydrograph



Pond 47P: INFIL 1H

Stage-Area-Storage



Hydrograph for Pond 47P: INFIL 1H

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	408.50	0.00	0.00	0.00	0.00
1.00	0.00	0	408.50	0.00	0.00	0.00	0.00
2.00	0.05	15	408.50	0.04	0.04	0.00	0.00
3.00	0.14	44	408.50	0.13	0.13	0.00	0.00
4.00	0.21	69	408.50	0.21	0.21	0.00	0.00
5.00	0.27	90	408.50	0.27	0.27	0.00	0.00
6.00	0.33	108	408.51	0.32	0.32	0.00	0.00
7.00	0.44	144	408.51	0.43	0.43	0.00	0.00
8.00	0.56	185	408.51	0.55	0.55	0.00	0.00
9.00	0.69	228	408.51	0.68	0.68	0.00	0.00
10.00	1.06	342	408.52	1.02	1.02	0.00	0.00
11.00	1.86	578	408.53	1.73	1.73	0.00	0.00
12.00	12.04	4,763	408.73	3.61	3.61	0.00	0.00
13.00	2.59	19,970	409.41	4.33	4.33	0.00	0.00
14.00	1.29	11,419	409.03	3.93	3.93	0.00	0.00
15.00	0.89	2,011	408.60	3.48	3.48	0.00	0.00
16.00	0.71	243	408.51	0.72	0.72	0.00	0.00
17.00	0.60	204	408.51	0.61	0.61	0.00	0.00
18.00	0.48	166	408.51	0.50	0.50	0.00	0.00
19.00	0.44	148	408.51	0.44	0.44	0.00	0.00
20.00	0.41	138	408.51	0.41	0.41	0.00	0.00
21.00	0.38	129	408.51	0.38	0.38	0.00	0.00
22.00	0.35	119	408.51	0.36	0.36	0.00	0.00
23.00	0.32	109	408.51	0.33	0.33	0.00	0.00
24.00	0.30	100	408.50	0.30	0.30	0.00	0.00
25.00	0.00	0	408.50	0.00	0.00	0.00	0.00
26.00	0.00	0	408.50	0.00	0.00	0.00	0.00
27.00	0.00	0	408.50	0.00	0.00	0.00	0.00
28.00	0.00	0	408.50	0.00	0.00	0.00	0.00
29.00	0.00	0	408.50	0.00	0.00	0.00	0.00
30.00	0.00	0	408.50	0.00	0.00	0.00	0.00
31.00	0.00	0	408.50	0.00	0.00	0.00	0.00
32.00	0.00	0	408.50	0.00	0.00	0.00	0.00
33.00	0.00	0	408.50	0.00	0.00	0.00	0.00
34.00	0.00	0	408.50	0.00	0.00	0.00	0.00
35.00	0.00	0	408.50	0.00	0.00	0.00	0.00
36.00	0.00	0	408.50	0.00	0.00	0.00	0.00
37.00	0.00	0	408.50	0.00	0.00	0.00	0.00
38.00	0.00	0	408.50	0.00	0.00	0.00	0.00
39.00	0.00	0	408.50	0.00	0.00	0.00	0.00
40.00	0.00	0	408.50	0.00	0.00	0.00	0.00
41.00	0.00	0	408.50	0.00	0.00	0.00	0.00
42.00	0.00	0	408.50	0.00	0.00	0.00	0.00
43.00	0.00	0	408.50	0.00	0.00	0.00	0.00
44.00	0.00	0	408.50	0.00	0.00	0.00	0.00
45.00	0.00	0	408.50	0.00	0.00	0.00	0.00
46.00	0.00	0	408.50	0.00	0.00	0.00	0.00
47.00	0.00	0	408.50	0.00	0.00	0.00	0.00
48.00	0.00	0	408.50	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 47P: INFIL 1H

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.50	20,873	0	411.40	27,946	70,787
408.55	20,995	1,047	411.45	28,068	72,188
408.60	21,117	2,099	411.50	28,190	73,594
408.65	21,239	3,158	411.55	28,312	75,007
408.70	21,361	4,223	411.60	28,434	76,425
408.75	21,483	5,294	411.65	28,556	77,850
408.80	21,605	6,372	411.70	28,678	79,281
408.85	21,727	7,455	411.75	28,799	80,718
408.90	21,849	8,544	411.80	28,921	82,161
408.95	21,971	9,640	411.85	29,043	83,610
409.00	22,092	10,741	411.90	29,165	85,065
409.05	22,214	11,849	411.95	29,287	86,526
409.10	22,336	12,963	412.00	29,409	87,994
409.15	22,458	14,083	412.05	29,531	89,467
409.20	22,580	15,209	412.10	29,653	90,947
409.25	22,702	16,341	412.15	29,775	92,433
409.30	22,824	17,479	412.20	29,897	93,924
409.35	22,946	18,623	412.25	30,019	95,422
409.40	23,068	19,773	412.30	30,141	96,926
409.45	23,190	20,930	412.35	30,263	98,436
409.50	23,312	22,092	412.40	30,385	99,953
409.55	23,434	23,261	412.45	30,507	101,475
409.60	23,556	24,436	412.50	30,629	103,003
409.65	23,678	25,617	412.55	30,751	104,538
409.70	23,800	26,804	412.60	30,873	106,078
409.75	23,922	27,997	412.65	30,994	107,625
409.80	24,044	29,196	412.70	31,116	109,178
409.85	24,166	30,401	412.75	31,238	110,737
409.90	24,287	31,612	412.80	31,360	112,302
409.95	24,409	32,830	412.85	31,482	113,873
410.00	24,531	34,053	412.90	31,604	115,450
410.05	24,653	35,283	412.95	31,726	117,033
410.10	24,775	36,519	413.00	31,848	118,622
410.15	24,897	37,760	413.05	31,970	120,218
410.20	25,019	39,008	413.10	32,092	121,819
410.25	25,141	40,262	413.15	32,214	123,427
410.30	25,263	41,522	413.20	32,336	125,041
410.35	25,385	42,789	413.25	32,458	126,661
410.40	25,507	44,061	413.30	32,580	128,287
410.45	25,629	45,339	413.35	32,702	129,919
410.50	25,751	46,624	413.40	32,824	131,557
410.55	25,873	47,914	413.45	32,946	133,201
410.60	25,995	49,211	413.50	33,068	134,851
410.65	26,117	50,514	413.55	33,189	136,508
410.70	26,239	51,823	413.60	33,311	138,170
410.75	26,361	53,138	413.65	33,433	139,839
410.80	26,482	54,459	413.70	33,555	141,514
410.85	26,604	55,786	413.75	33,677	143,194
410.90	26,726	57,119	413.80	33,799	144,881
410.95	26,848	58,459	413.85	33,921	146,574
411.00	26,970	59,804	413.90	34,043	148,273
411.05	27,092	61,156	413.95	34,165	149,979
411.10	27,214	62,513	414.00	34,287	151,690
411.15	27,336	63,877			
411.20	27,458	65,247			
411.25	27,580	66,623			
411.30	27,702	68,005			
411.35	27,824	69,393			

Summary for Pond 51P: FB 1H

Inflow Area = 10.389 ac, 95.71% Impervious, Inflow Depth = 2.31" for 1-Year event
 Inflow = 26.66 cfs @ 12.13 hrs, Volume= 1.997 af
 Outflow = 25.76 cfs @ 12.15 hrs, Volume= 1.997 af, Atten= 3%, Lag= 1.0 min
 Primary = 25.76 cfs @ 12.15 hrs, Volume= 1.997 af
 Routed to Pond 47P : INFIL 1H

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.75' Surf.Area= 12,203 sf Storage= 48,336 cf
 Peak Elev= 413.03' @ 12.15 hrs Surf.Area= 12,525 sf Storage= 51,171 cf (2,835 cf above start)

Plug-Flow detention time= 308.7 min calculated for 0.887 af (44% of inflow)
 Center-of-Mass det. time= 3.5 min (766.6 - 763.0)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,056 cf	Custom Stage Data (Prismatic) Listed below

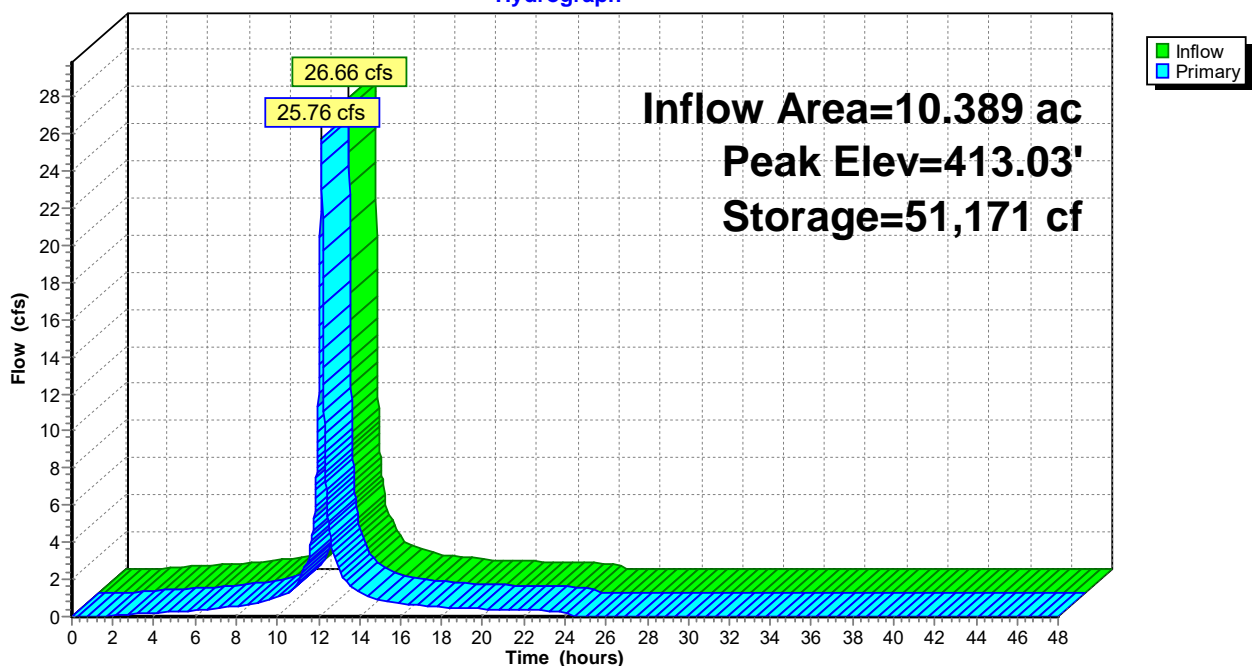
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	6,702	0	0
414.00	13,650	61,056	61,056

Device	Routing	Invert	Outlet Devices
#1	Primary	412.75'	65.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

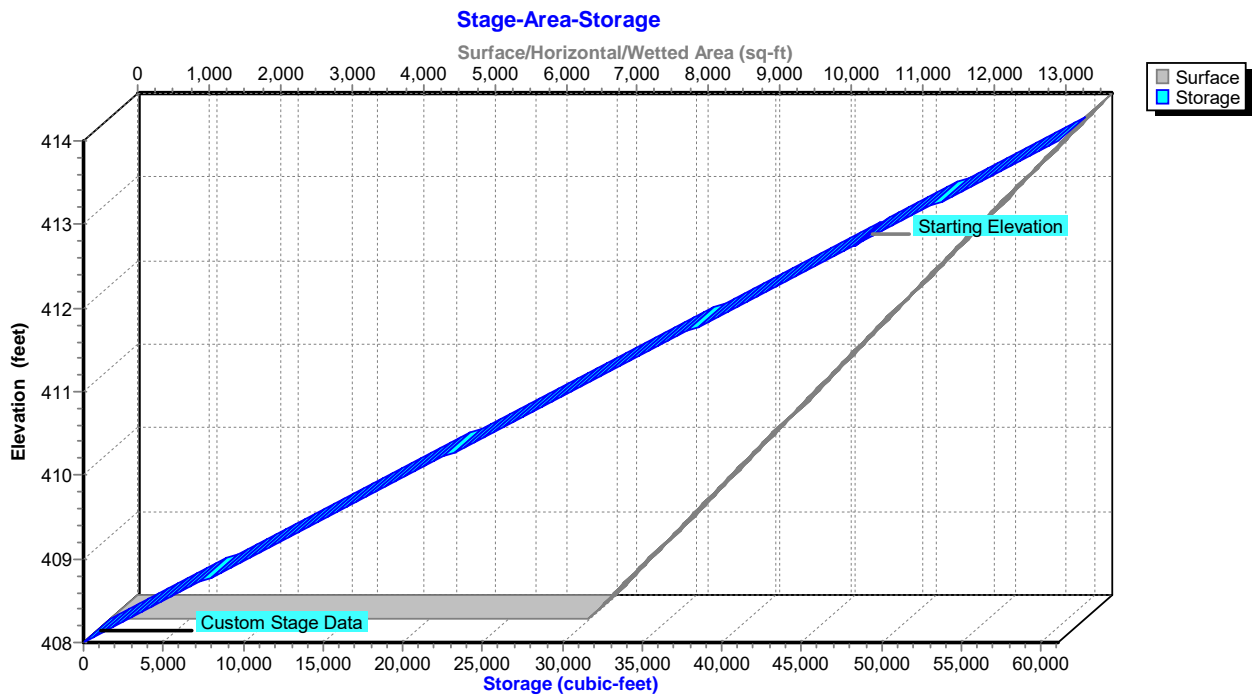
Primary OutFlow Max=25.63 cfs @ 12.15 hrs HW=413.03' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 25.63 cfs @ 1.42 fps)

Pond 51P: FB 1H

Hydrograph



Pond 51P: FB 1H



Hydrograph for Pond 51P: FB 1H

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	48,336	412.75	0.00
1.00	0.00	48,336	412.75	0.00
2.00	0.06	48,350	412.75	0.05
3.00	0.14	48,372	412.75	0.14
4.00	0.22	48,391	412.76	0.21
5.00	0.28	48,408	412.76	0.27
6.00	0.33	48,422	412.76	0.33
7.00	0.45	48,451	412.76	0.44
8.00	0.57	48,484	412.76	0.56
9.00	0.70	48,517	412.77	0.69
10.00	1.09	48,612	412.78	1.06
11.00	1.97	48,821	412.80	1.86
12.00	14.14	50,048	412.92	12.04
13.00	2.48	48,934	412.81	2.59
14.00	1.26	48,673	412.78	1.29
15.00	0.86	48,568	412.77	0.89
16.00	0.70	48,522	412.77	0.71
17.00	0.59	48,493	412.77	0.60
18.00	0.48	48,463	412.76	0.48
19.00	0.44	48,450	412.76	0.44
20.00	0.41	48,443	412.76	0.41
21.00	0.38	48,436	412.76	0.38
22.00	0.35	48,428	412.76	0.35
23.00	0.32	48,421	412.76	0.32
24.00	0.29	48,413	412.76	0.30
25.00	0.00	48,336	412.75	0.00
26.00	0.00	48,336	412.75	0.00
27.00	0.00	48,336	412.75	0.00
28.00	0.00	48,336	412.75	0.00
29.00	0.00	48,336	412.75	0.00
30.00	0.00	48,336	412.75	0.00
31.00	0.00	48,336	412.75	0.00
32.00	0.00	48,336	412.75	0.00
33.00	0.00	48,336	412.75	0.00
34.00	0.00	48,336	412.75	0.00
35.00	0.00	48,336	412.75	0.00
36.00	0.00	48,336	412.75	0.00
37.00	0.00	48,336	412.75	0.00
38.00	0.00	48,336	412.75	0.00
39.00	0.00	48,336	412.75	0.00
40.00	0.00	48,336	412.75	0.00
41.00	0.00	48,336	412.75	0.00
42.00	0.00	48,336	412.75	0.00
43.00	0.00	48,336	412.75	0.00
44.00	0.00	48,336	412.75	0.00
45.00	0.00	48,336	412.75	0.00
46.00	0.00	48,336	412.75	0.00
47.00	0.00	48,336	412.75	0.00
48.00	0.00	48,336	412.75	0.00

Stage-Area-Storage for Pond 51P: FB 1H

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	6,702	0	413.80	13,418	59,021
408.10	6,818	1,018	413.90	13,534	60,038
408.20	6,934	2,035	414.00	13,650	61,056
408.30	7,049	3,053			
408.40	7,165	4,070			
408.50	7,281	5,088			
408.60	7,397	6,106			
408.70	7,513	7,123			
408.80	7,628	8,141			
408.90	7,744	9,158			
409.00	7,860	10,176			
409.10	7,976	11,194			
409.20	8,092	12,211			
409.30	8,207	13,229			
409.40	8,323	14,246			
409.50	8,439	15,264			
409.60	8,555	16,282			
409.70	8,671	17,299			
409.80	8,786	18,317			
409.90	8,902	19,334			
410.00	9,018	20,352			
410.10	9,134	21,370			
410.20	9,250	22,387			
410.30	9,365	23,405			
410.40	9,481	24,422			
410.50	9,597	25,440			
410.60	9,713	26,458			
410.70	9,829	27,475			
410.80	9,944	28,493			
410.90	10,060	29,510			
411.00	10,176	30,528			
411.10	10,292	31,546			
411.20	10,408	32,563			
411.30	10,523	33,581			
411.40	10,639	34,598			
411.50	10,755	35,616			
411.60	10,871	36,634			
411.70	10,987	37,651			
411.80	11,102	38,669			
411.90	11,218	39,686			
412.00	11,334	40,704			
412.10	11,450	41,722			
412.20	11,566	42,739			
412.30	11,681	43,757			
412.40	11,797	44,774			
412.50	11,913	45,792			
412.60	12,029	46,810			
412.70	12,145	47,827			
412.80	12,260	48,845			
412.90	12,376	49,862			
413.00	12,492	50,880			
413.10	12,608	51,898			
413.20	12,724	52,915			
413.30	12,839	53,933			
413.40	12,955	54,950			
413.50	13,071	55,968			
413.60	13,187	56,986			
413.70	13,303	58,003			

Summary for Pond 53P: Bioretention J basin

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 10.63" for 1-Year event
 Inflow = 9.46 cfs @ 12.09 hrs, Volume= 0.691 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 411.45' @ 25.53 hrs Surf.Area= 25,602 sf Storage= 30,095 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

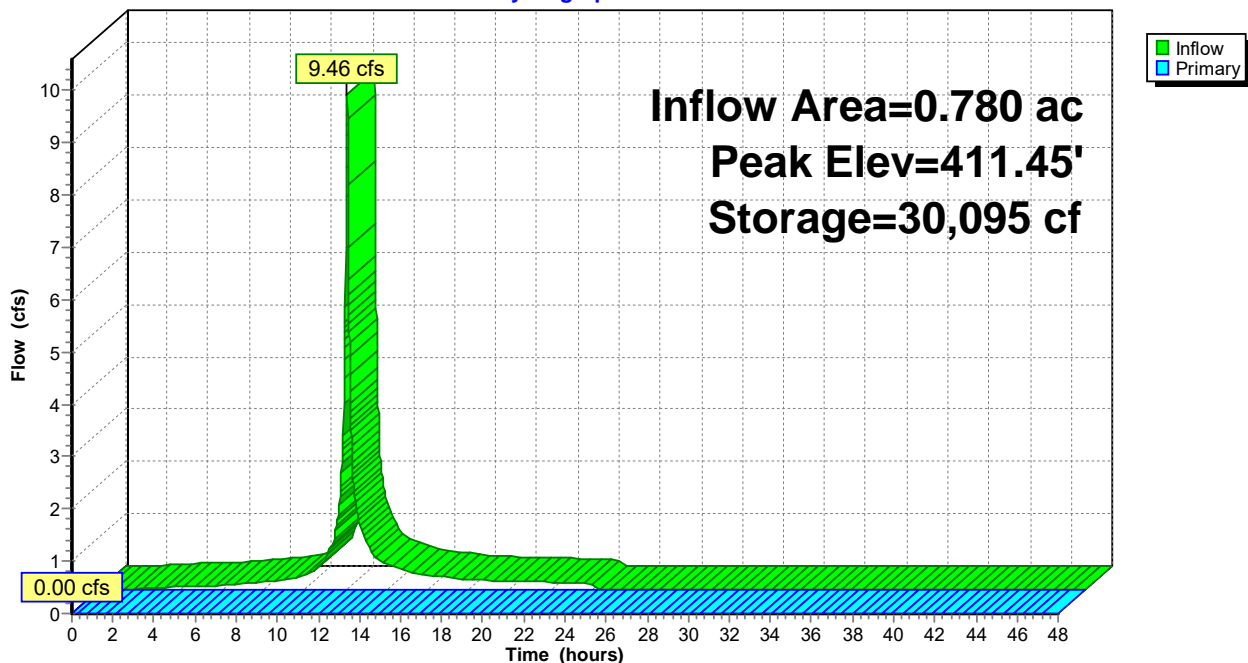
Volume	Invert	Avail.Storage	Storage Description	
#1	407.83'	72,373 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	24,200	0.0	0	0
408.33	24,200	40.0	4,840	4,840
411.00	24,200	20.0	12,923	17,763
413.00	30,410	100.0	54,610	72,373

Device	Routing	Invert	Outlet Devices
#1	Primary	407.83'	12.0" Round Culvert L= 49.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.83' / 407.50' S= 0.0067 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	412.00'	28.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	414.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=407.83' (Free Discharge)
 1=Culvert (Controls 0.00 cfs)
 2=Orifice/Grate (Controls 0.00 cfs)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

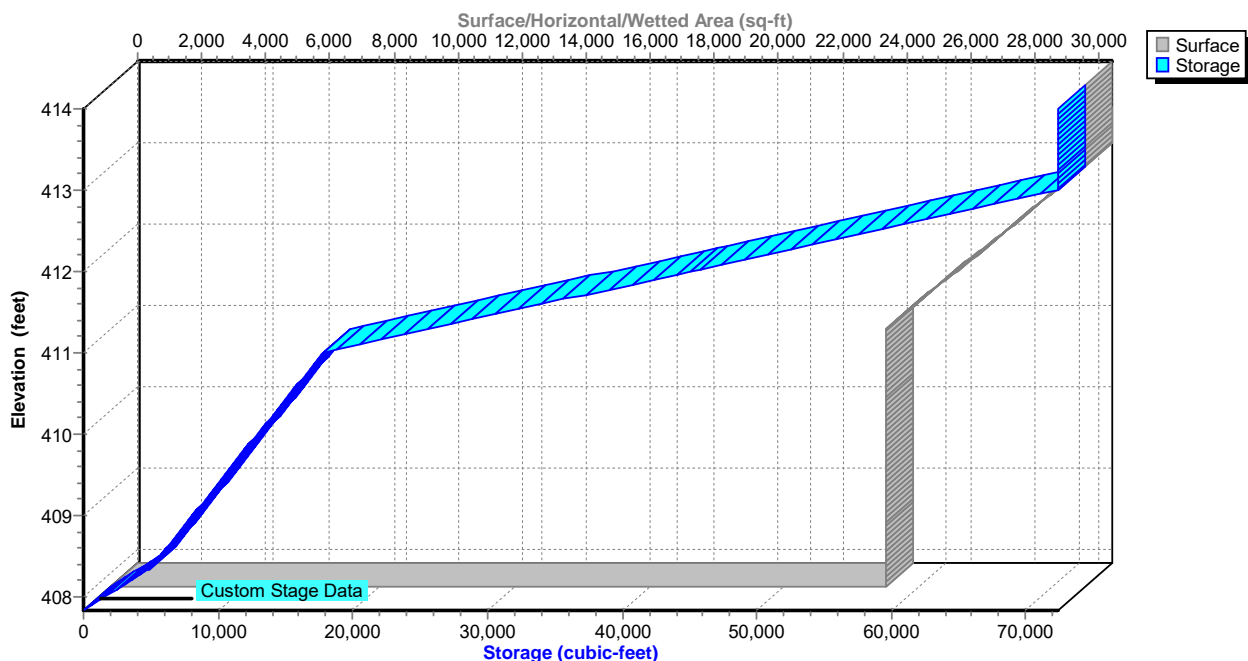
Pond 53P: Bioretention J basin

Hydrograph



Pond 53P: Bioretention J basin

Stage-Area-Storage



Hydrograph for Pond 53P: Bioretention J basin

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.83	0.00
1.00	0.00	0	407.83	0.00
2.00	0.02	18	407.83	0.00
3.00	0.04	114	407.84	0.00
4.00	0.05	281	407.86	0.00
5.00	0.07	507	407.88	0.00
6.00	0.08	786	407.91	0.00
7.00	0.11	1,142	407.95	0.00
8.00	0.15	1,609	408.00	0.00
9.00	0.18	2,192	408.06	0.00
10.00	0.29	3,021	408.14	0.00
11.00	0.58	4,435	408.29	0.00
12.00	5.62	10,061	409.41	0.00
13.00	0.94	19,996	411.08	0.00
14.00	0.50	22,329	411.17	0.00
15.00	0.34	23,844	411.22	0.00
16.00	0.28	24,949	411.26	0.00
17.00	0.24	25,891	411.30	0.00
18.00	0.19	26,673	411.33	0.00
19.00	0.18	27,338	411.35	0.00
20.00	0.17	27,961	411.37	0.00
21.00	0.16	28,545	411.39	0.00
22.00	0.15	29,088	411.41	0.00
23.00	0.13	29,591	411.43	0.00
24.00	0.12	30,052	411.45	0.00
25.00	0.00	30,095	411.45	0.00
26.00	0.00	30,095	411.45	0.00
27.00	0.00	30,095	411.45	0.00
28.00	0.00	30,095	411.45	0.00
29.00	0.00	30,095	411.45	0.00
30.00	0.00	30,095	411.45	0.00
31.00	0.00	30,095	411.45	0.00
32.00	0.00	30,095	411.45	0.00
33.00	0.00	30,095	411.45	0.00
34.00	0.00	30,095	411.45	0.00
35.00	0.00	30,095	411.45	0.00
36.00	0.00	30,095	411.45	0.00
37.00	0.00	30,095	411.45	0.00
38.00	0.00	30,095	411.45	0.00
39.00	0.00	30,095	411.45	0.00
40.00	0.00	30,095	411.45	0.00
41.00	0.00	30,095	411.45	0.00
42.00	0.00	30,095	411.45	0.00
43.00	0.00	30,095	411.45	0.00
44.00	0.00	30,095	411.45	0.00
45.00	0.00	30,095	411.45	0.00
46.00	0.00	30,095	411.45	0.00
47.00	0.00	30,095	411.45	0.00
48.00	0.00	30,095	411.45	0.00

Stage-Area-Storage for Pond 53P: Bioretention J basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.83	24,200	0	413.63	30,410	72,373
407.93	24,200	968	413.73	30,410	72,373
408.03	24,200	1,936	413.83	30,410	72,373
408.13	24,200	2,904	413.93	30,410	72,373
408.23	24,200	3,872			
408.33	24,200	4,840			
408.43	24,200	5,324			
408.53	24,200	5,808			
408.63	24,200	6,292			
408.73	24,200	6,776			
408.83	24,200	7,260			
408.93	24,200	7,744			
409.03	24,200	8,228			
409.13	24,200	8,712			
409.23	24,200	9,196			
409.33	24,200	9,680			
409.43	24,200	10,164			
409.53	24,200	10,648			
409.63	24,200	11,132			
409.73	24,200	11,616			
409.83	24,200	12,100			
409.93	24,200	12,584			
410.03	24,200	13,068			
410.13	24,200	13,552			
410.23	24,200	14,036			
410.33	24,200	14,520			
410.43	24,200	15,004			
410.53	24,200	15,488			
410.63	24,200	15,972			
410.73	24,200	16,456			
410.83	24,200	16,940			
410.93	24,200	17,424			
411.03	24,293	18,582			
411.13	24,604	21,312			
411.23	24,914	24,043			
411.33	25,225	26,773			
411.43	25,535	29,504			
411.53	25,846	32,234			
411.63	26,156	34,965			
411.73	26,467	37,695			
411.83	26,777	40,426			
411.93	27,088	43,156			
412.03	27,398	45,887			
412.13	27,709	48,617			
412.23	28,019	51,348			
412.33	28,330	54,078			
412.43	28,640	56,809			
412.53	28,951	59,539			
412.63	29,261	62,270			
412.73	29,572	65,000			
412.83	29,882	67,731			
412.93	30,193	70,461			
413.03	30,410	72,373			
413.13	30,410	72,373			
413.23	30,410	72,373			
413.33	30,410	72,373			
413.43	30,410	72,373			
413.53	30,410	72,373			

Summary for Pond 54P: INFIL 1G

Inflow Area = 10.595 ac, 90.33% Impervious, Inflow Depth = 2.18" for 1-Year event
 Inflow = 24.49 cfs @ 12.15 hrs, Volume= 1.922 af
 Outflow = 4.24 cfs @ 12.59 hrs, Volume= 1.922 af, Atten= 83%, Lag= 26.4 min
 Discarded = 4.24 cfs @ 12.59 hrs, Volume= 1.922 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 409.47' @ 12.59 hrs Surf.Area= 22,391 sf Storage= 20,763 cf

Plug-Flow detention time= 31.3 min calculated for 1.922 af (100% of inflow)
 Center-of-Mass det. time= 31.2 min (799.2 - 767.9)

Volume	Invert	Avail.Storage	Storage Description
#1	408.50'	142,445 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.50	20,483	0	0
414.00	31,315	142,445	142,445

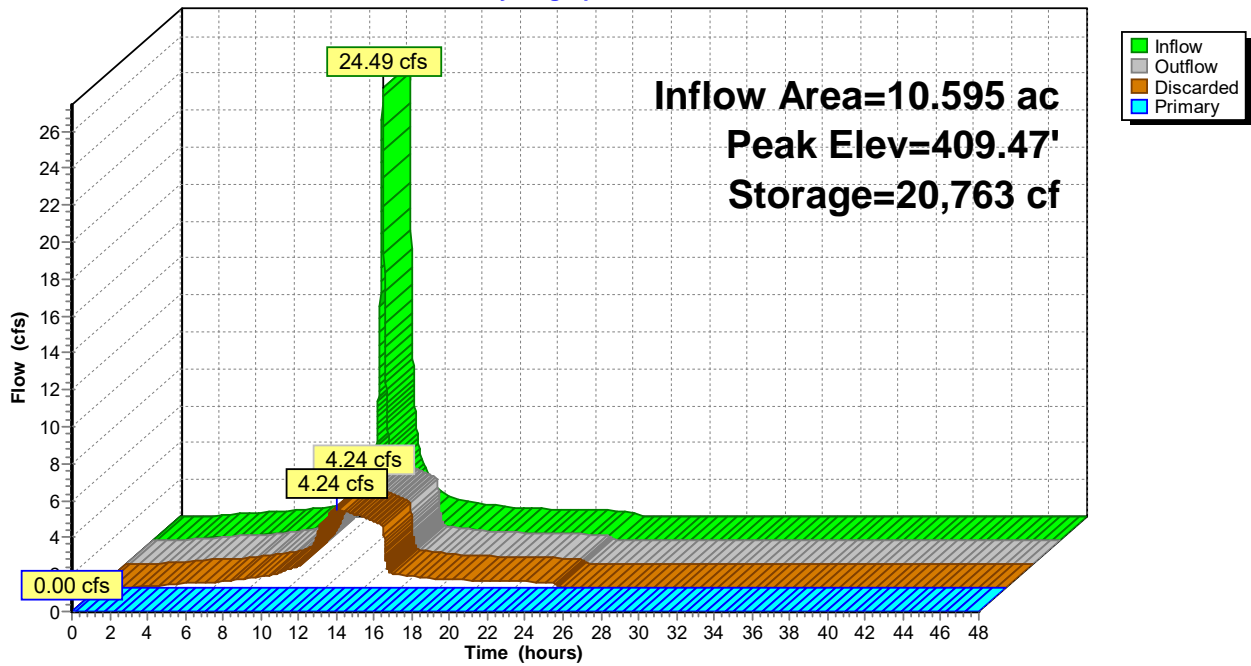
Device	Routing	Invert	Outlet Devices
#1	Device 4	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 4	411.85'	7.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.50'	7.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 403.00' Phase-In= 0.01'
#4	Primary	408.50'	18.0" Round Culvert L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 408.50' / 408.00' S= 0.0071 '/ Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Discarded OutFlow Max=4.24 cfs @ 12.59 hrs HW=409.47' (Free Discharge)
 ↳ **3=Exfiltration** (Controls 4.24 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
 ↳ **4=Culvert** (Controls 0.00 cfs)
 ↳ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
 ↳ **2=Orifice/Grate** (Controls 0.00 cfs)

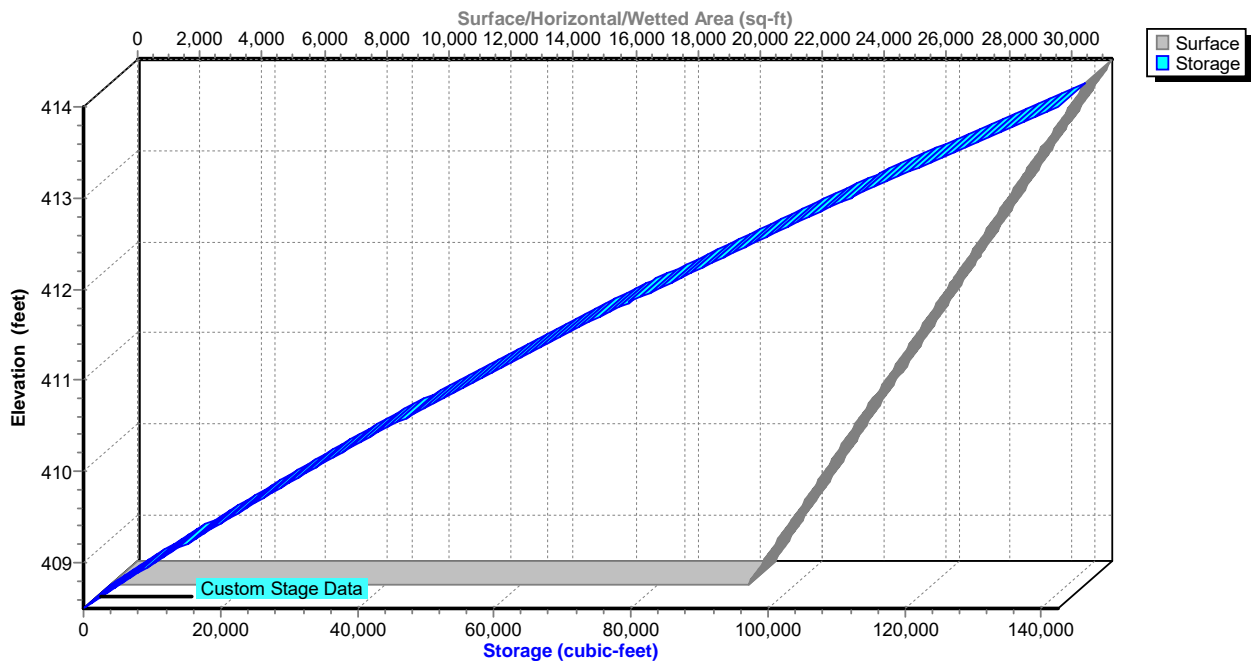
Pond 54P: INFIL 1G

Hydrograph



Pond 54P: INFIL 1G

Stage-Area-Storage



Hydrograph for Pond 54P: INFIL 1G

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	408.50	0.00	0.00	0.00
1.00	0.00	0	408.50	0.00	0.00	0.00
2.00	0.04	10	408.50	0.03	0.03	0.00
3.00	0.12	39	408.50	0.11	0.11	0.00
4.00	0.20	66	408.50	0.20	0.20	0.00
5.00	0.26	87	408.50	0.26	0.26	0.00
6.00	0.32	104	408.51	0.31	0.31	0.00
7.00	0.42	138	408.51	0.41	0.41	0.00
8.00	0.54	178	408.51	0.53	0.53	0.00
9.00	0.67	220	408.51	0.66	0.66	0.00
10.00	1.02	329	408.52	0.98	0.98	0.00
11.00	1.79	557	408.53	1.66	1.66	0.00
12.00	11.24	4,356	408.71	3.51	3.51	0.00
13.00	2.51	19,167	409.40	4.17	4.17	0.00
14.00	1.24	10,961	409.02	3.81	3.81	0.00
15.00	0.86	1,767	408.59	3.40	3.40	0.00
16.00	0.69	234	408.51	0.70	0.70	0.00
17.00	0.58	197	408.51	0.59	0.59	0.00
18.00	0.47	160	408.51	0.48	0.48	0.00
19.00	0.42	142	408.51	0.42	0.42	0.00
20.00	0.39	133	408.51	0.40	0.40	0.00
21.00	0.37	124	408.51	0.37	0.37	0.00
22.00	0.34	115	408.51	0.34	0.34	0.00
23.00	0.31	106	408.51	0.31	0.31	0.00
24.00	0.29	96	408.50	0.29	0.29	0.00
25.00	0.00	2	408.50	0.00	0.00	0.00
26.00	0.00	0	408.50	0.00	0.00	0.00
27.00	0.00	0	408.50	0.00	0.00	0.00
28.00	0.00	0	408.50	0.00	0.00	0.00
29.00	0.00	0	408.50	0.00	0.00	0.00
30.00	0.00	0	408.50	0.00	0.00	0.00
31.00	0.00	0	408.50	0.00	0.00	0.00
32.00	0.00	0	408.50	0.00	0.00	0.00
33.00	0.00	0	408.50	0.00	0.00	0.00
34.00	0.00	0	408.50	0.00	0.00	0.00
35.00	0.00	0	408.50	0.00	0.00	0.00
36.00	0.00	0	408.50	0.00	0.00	0.00
37.00	0.00	0	408.50	0.00	0.00	0.00
38.00	0.00	0	408.50	0.00	0.00	0.00
39.00	0.00	0	408.50	0.00	0.00	0.00
40.00	0.00	0	408.50	0.00	0.00	0.00
41.00	0.00	0	408.50	0.00	0.00	0.00
42.00	0.00	0	408.50	0.00	0.00	0.00
43.00	0.00	0	408.50	0.00	0.00	0.00
44.00	0.00	0	408.50	0.00	0.00	0.00
45.00	0.00	0	408.50	0.00	0.00	0.00
46.00	0.00	0	408.50	0.00	0.00	0.00
47.00	0.00	0	408.50	0.00	0.00	0.00
48.00	0.00	0	408.50	0.00	0.00	0.00

Stage-Area-Storage for Pond 54P: INFIL 1G

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.50	20,483	0	411.40	26,194	67,682
408.55	20,581	1,027	411.45	26,293	68,994
408.60	20,680	2,058	411.50	26,391	70,312
408.65	20,778	3,095	411.55	26,490	71,634
408.70	20,877	4,136	411.60	26,588	72,961
408.75	20,975	5,182	411.65	26,687	74,292
408.80	21,074	6,234	411.70	26,785	75,629
408.85	21,172	7,290	411.75	26,884	76,971
408.90	21,271	8,351	411.80	26,982	78,318
408.95	21,369	9,417	411.85	27,081	79,669
409.00	21,468	10,488	411.90	27,179	81,026
409.05	21,566	11,564	411.95	27,278	82,387
409.10	21,665	12,644	412.00	27,376	83,753
409.15	21,763	13,730	412.05	27,475	85,125
409.20	21,862	14,821	412.10	27,573	86,501
409.25	21,960	15,916	412.15	27,672	87,882
409.30	22,059	17,017	412.20	27,770	89,268
409.35	22,157	18,122	412.25	27,868	90,659
409.40	22,256	19,232	412.30	27,967	92,055
409.45	22,354	20,348	412.35	28,065	93,456
409.50	22,452	21,468	412.40	28,164	94,861
409.55	22,551	22,593	412.45	28,262	96,272
409.60	22,649	23,723	412.50	28,361	97,688
409.65	22,748	24,858	412.55	28,459	99,108
409.70	22,846	25,998	412.60	28,558	100,534
409.75	22,945	27,142	412.65	28,656	101,964
409.80	23,043	28,292	412.70	28,755	103,399
409.85	23,142	29,447	412.75	28,853	104,839
409.90	23,240	30,606	412.80	28,952	106,285
409.95	23,339	31,771	412.85	29,050	107,735
410.00	23,437	32,940	412.90	29,149	109,190
410.05	23,536	34,114	412.95	29,247	110,649
410.10	23,634	35,294	413.00	29,346	112,114
410.15	23,733	36,478	413.05	29,444	113,584
410.20	23,831	37,667	413.10	29,542	115,059
410.25	23,930	38,861	413.15	29,641	116,538
410.30	24,028	40,060	413.20	29,739	118,023
410.35	24,126	41,264	413.25	29,838	119,512
410.40	24,225	42,473	413.30	29,936	121,007
410.45	24,323	43,686	413.35	30,035	122,506
410.50	24,422	44,905	413.40	30,133	124,010
410.55	24,520	46,128	413.45	30,232	125,519
410.60	24,619	47,357	413.50	30,330	127,033
410.65	24,717	48,590	413.55	30,429	128,552
410.70	24,816	49,829	413.60	30,527	130,076
410.75	24,914	51,072	413.65	30,626	131,605
410.80	25,013	52,320	413.70	30,724	133,139
410.85	25,111	53,573	413.75	30,823	134,677
410.90	25,210	54,831	413.80	30,921	136,221
410.95	25,308	56,094	413.85	31,020	137,769
411.00	25,407	57,362	413.90	31,118	139,323
411.05	25,505	58,635	413.95	31,217	140,881
411.10	25,604	59,913	414.00	31,315	142,445
411.15	25,702	61,195			
411.20	25,801	62,483			
411.25	25,899	63,775			
411.30	25,997	65,073			
411.35	26,096	66,375			

Summary for Pond 55P: FB 1G

Inflow Area = 9.966 ac, 96.03% Impervious, Inflow Depth = 2.31" for 1-Year event
 Inflow = 25.66 cfs @ 12.13 hrs, Volume= 1.922 af
 Outflow = 24.49 cfs @ 12.15 hrs, Volume= 1.922 af, Atten= 5%, Lag= 1.2 min
 Primary = 24.49 cfs @ 12.15 hrs, Volume= 1.922 af
 Routed to Pond 54P : INFIL 1G

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.55' Surf.Area= 12,269 sf Storage= 46,929 cf
 Peak Elev= 412.87' @ 12.15 hrs Surf.Area= 12,673 sf Storage= 50,236 cf (3,307 cf above start)

Plug-Flow detention time= 313.6 min calculated for 0.845 af (44% of inflow)
 Center-of-Mass det. time= 4.8 min (767.9 - 763.0)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,884 cf	Custom Stage Data (Prismatic) Listed below

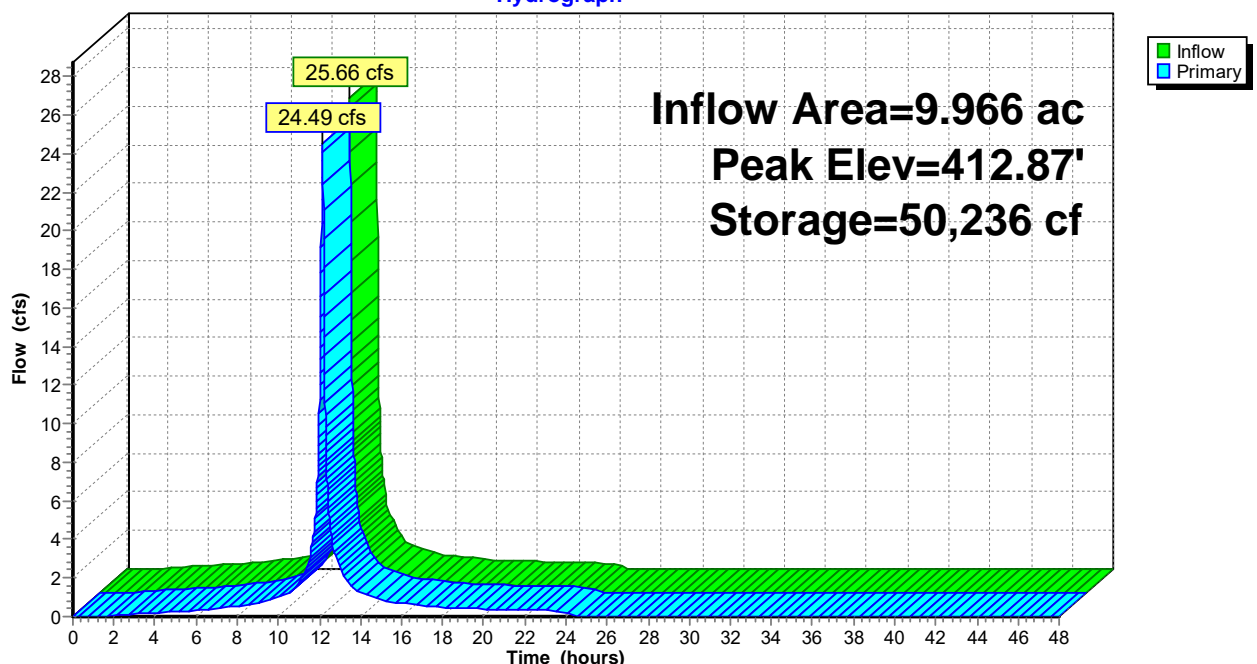
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	6,531	0	0
414.00	14,097	61,884	61,884

Device	Routing	Invert	Outlet Devices
#1	Primary	412.55'	50.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

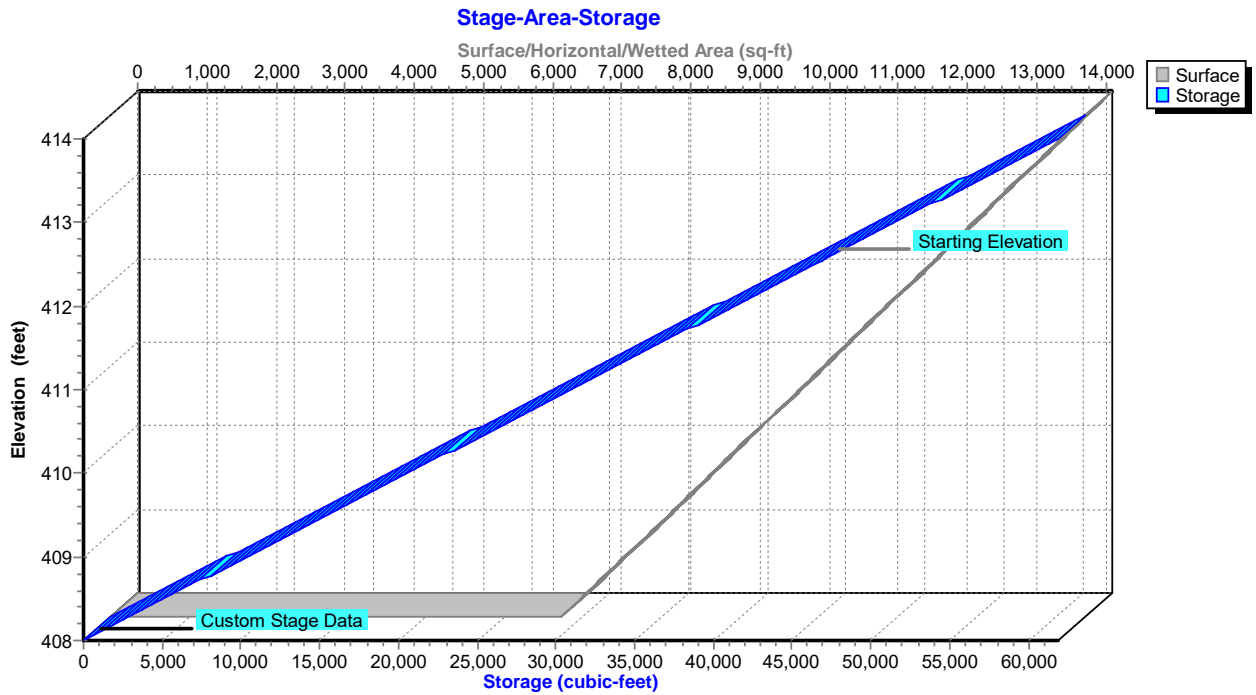
Primary OutFlow Max=24.42 cfs @ 12.15 hrs HW=412.87' (Free Discharge)
 ↑-1=Broad-Crested Rectangular Weir (Weir Controls 24.42 cfs @ 1.52 fps)

Pond 55P: FB 1G

Hydrograph



Pond 55P: FB 1G



Hydrograph for Pond 55P: FB 1G

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	46,929	412.55	0.00
1.00	0.00	46,929	412.55	0.00
2.00	0.06	46,958	412.55	0.04
3.00	0.14	47,023	412.56	0.12
4.00	0.21	47,050	412.56	0.20
5.00	0.27	47,066	412.56	0.26
6.00	0.32	47,080	412.56	0.32
7.00	0.43	47,108	412.57	0.42
8.00	0.55	47,140	412.57	0.54
9.00	0.68	47,172	412.57	0.67
10.00	1.05	47,265	412.58	1.02
11.00	1.89	47,468	412.60	1.79
12.00	13.61	48,904	412.74	11.24
13.00	2.39	47,655	412.62	2.51
14.00	1.21	47,324	412.59	1.24
15.00	0.83	47,222	412.58	0.86
16.00	0.68	47,178	412.57	0.69
17.00	0.57	47,149	412.57	0.58
18.00	0.46	47,120	412.57	0.47
19.00	0.42	47,108	412.57	0.42
20.00	0.39	47,100	412.57	0.39
21.00	0.36	47,093	412.57	0.37
22.00	0.34	47,086	412.57	0.34
23.00	0.31	47,079	412.56	0.31
24.00	0.28	47,072	412.56	0.28
25.00	0.00	46,931	412.55	0.00
26.00	0.00	46,929	412.55	0.00
27.00	0.00	46,929	412.55	0.00
28.00	0.00	46,929	412.55	0.00
29.00	0.00	46,929	412.55	0.00
30.00	0.00	46,929	412.55	0.00
31.00	0.00	46,929	412.55	0.00
32.00	0.00	46,929	412.55	0.00
33.00	0.00	46,929	412.55	0.00
34.00	0.00	46,929	412.55	0.00
35.00	0.00	46,929	412.55	0.00
36.00	0.00	46,929	412.55	0.00
37.00	0.00	46,929	412.55	0.00
38.00	0.00	46,929	412.55	0.00
39.00	0.00	46,929	412.55	0.00
40.00	0.00	46,929	412.55	0.00
41.00	0.00	46,929	412.55	0.00
42.00	0.00	46,929	412.55	0.00
43.00	0.00	46,929	412.55	0.00
44.00	0.00	46,929	412.55	0.00
45.00	0.00	46,929	412.55	0.00
46.00	0.00	46,929	412.55	0.00
47.00	0.00	46,929	412.55	0.00
48.00	0.00	46,929	412.55	0.00

Stage-Area-Storage for Pond 55P: FB 1G

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	6,531	0	413.80	13,845	59,821
408.10	6,657	1,031	413.90	13,971	60,853
408.20	6,783	2,063	414.00	14,097	61,884
408.30	6,909	3,094			
408.40	7,035	4,126			
408.50	7,162	5,157			
408.60	7,288	6,188			
408.70	7,414	7,220			
408.80	7,540	8,251			
408.90	7,666	9,283			
409.00	7,792	10,314			
409.10	7,918	11,345			
409.20	8,044	12,377			
409.30	8,170	13,408			
409.40	8,296	14,440			
409.50	8,423	15,471			
409.60	8,549	16,502			
409.70	8,675	17,534			
409.80	8,801	18,565			
409.90	8,927	19,597			
410.00	9,053	20,628			
410.10	9,179	21,659			
410.20	9,305	22,691			
410.30	9,431	23,722			
410.40	9,557	24,754			
410.50	9,684	25,785			
410.60	9,810	26,816			
410.70	9,936	27,848			
410.80	10,062	28,879			
410.90	10,188	29,911			
411.00	10,314	30,942			
411.10	10,440	31,973			
411.20	10,566	33,005			
411.30	10,692	34,036			
411.40	10,818	35,068			
411.50	10,945	36,099			
411.60	11,071	37,130			
411.70	11,197	38,162			
411.80	11,323	39,193			
411.90	11,449	40,225			
412.00	11,575	41,256			
412.10	11,701	42,287			
412.20	11,827	43,319			
412.30	11,953	44,350			
412.40	12,079	45,382			
412.50	12,206	46,413			
412.60	12,332	47,444			
412.70	12,458	48,476			
412.80	12,584	49,507			
412.90	12,710	50,539			
413.00	12,836	51,570			
413.10	12,962	52,601			
413.20	13,088	53,633			
413.30	13,214	54,664			
413.40	13,340	55,696			
413.50	13,467	56,727			
413.60	13,593	57,758			
413.70	13,719	58,790			

Summary for Pond 59P: FB 1E

Inflow Area = 0.398 ac, 82.34% Impervious, Inflow Depth = 2.10" for 1-Year event
 Inflow = 0.99 cfs @ 12.13 hrs, Volume= 0.070 af
 Outflow = 0.98 cfs @ 12.14 hrs, Volume= 0.070 af, Atten= 1%, Lag= 0.6 min
 Primary = 0.98 cfs @ 12.14 hrs, Volume= 0.070 af
 Routed to Pond 1P : Bioretention 1D

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 414.00' Surf.Area= 668 sf Storage= 2,016 cf
 Peak Elev= 414.11' @ 12.14 hrs Surf.Area= 686 sf Storage= 2,073 cf (57 cf above start)

Plug-Flow detention time= 367.8 min calculated for 0.023 af (33% of inflow)
 Center-of-Mass det. time= 1.9 min (794.2 - 792.3)

Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	3,024 cf	Custom Stage Data (Prismatic) Listed below

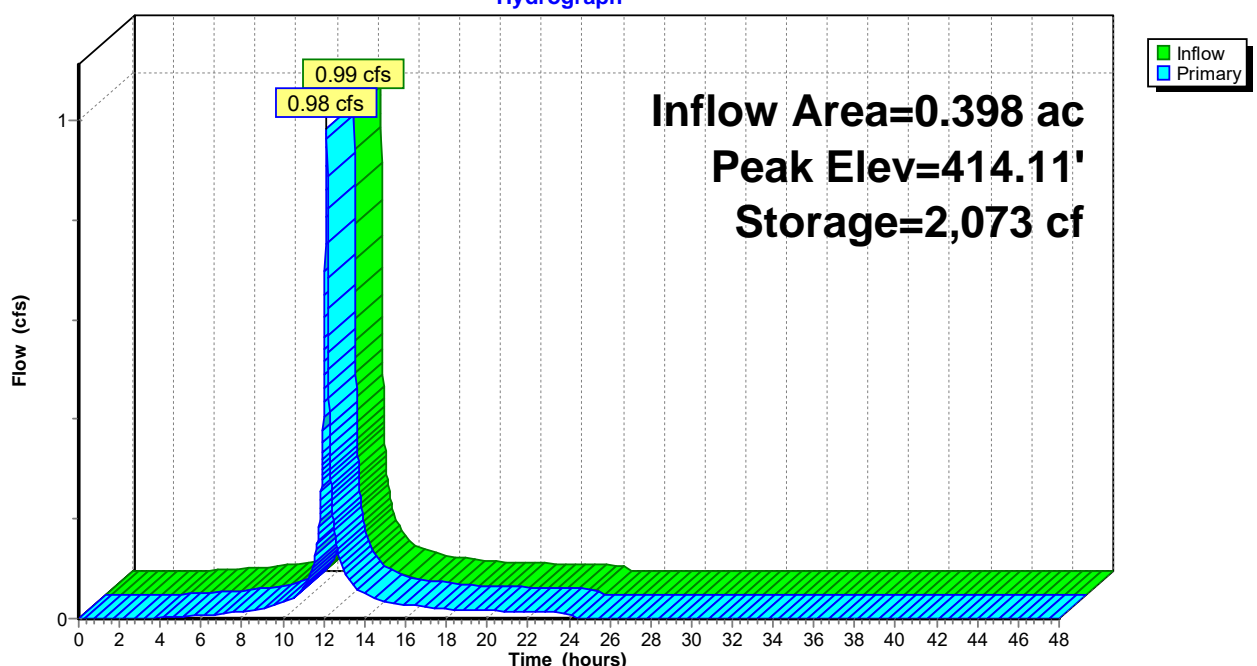
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
410.00	13	0	0
416.00	995	3,024	3,024

Device	Routing	Invert	Outlet Devices
#1	Primary	414.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

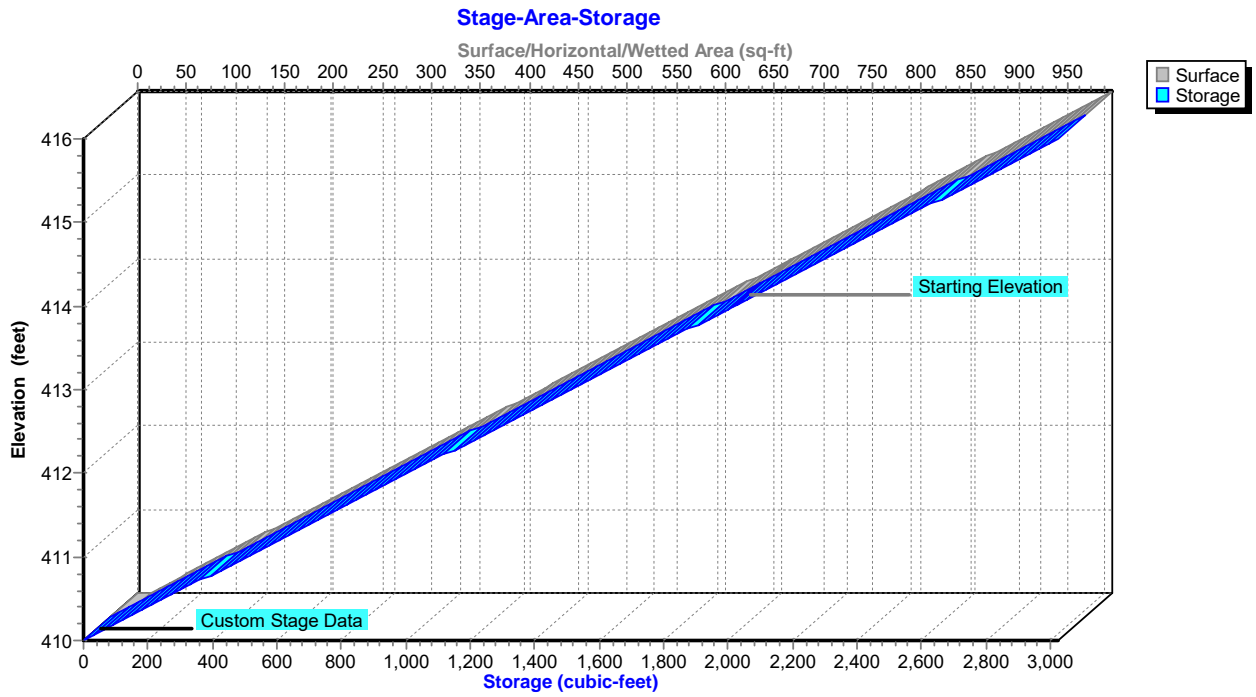
Primary OutFlow Max=0.96 cfs @ 12.14 hrs HW=414.11' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 0.96 cfs @ 0.84 fps)

Pond 59P: FB 1E

Hydrograph



Pond 59P: FB 1E



Hydrograph for Pond 59P: FB 1E

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	2,016	414.00	0.00
1.00	0.00	2,016	414.00	0.00
2.00	0.00	2,016	414.00	0.00
3.00	0.00	2,016	414.00	0.00
4.00	0.00	2,016	414.00	0.00
5.00	0.00	2,017	414.00	0.00
6.00	0.01	2,017	414.00	0.01
7.00	0.01	2,017	414.00	0.01
8.00	0.01	2,018	414.00	0.01
9.00	0.02	2,019	414.01	0.02
10.00	0.03	2,021	414.01	0.03
11.00	0.06	2,025	414.02	0.06
12.00	0.51	2,050	414.07	0.46
13.00	0.10	2,028	414.02	0.10
14.00	0.05	2,023	414.01	0.05
15.00	0.03	2,021	414.01	0.03
16.00	0.03	2,020	414.01	0.03
17.00	0.02	2,019	414.01	0.02
18.00	0.02	2,019	414.01	0.02
19.00	0.02	2,018	414.00	0.02
20.00	0.02	2,018	414.00	0.02
21.00	0.01	2,018	414.00	0.01
22.00	0.01	2,018	414.00	0.01
23.00	0.01	2,018	414.00	0.01
24.00	0.01	2,018	414.00	0.01
25.00	0.00	2,016	414.00	0.00
26.00	0.00	2,016	414.00	0.00
27.00	0.00	2,016	414.00	0.00
28.00	0.00	2,016	414.00	0.00
29.00	0.00	2,016	414.00	0.00
30.00	0.00	2,016	414.00	0.00
31.00	0.00	2,016	414.00	0.00
32.00	0.00	2,016	414.00	0.00
33.00	0.00	2,016	414.00	0.00
34.00	0.00	2,016	414.00	0.00
35.00	0.00	2,016	414.00	0.00
36.00	0.00	2,016	414.00	0.00
37.00	0.00	2,016	414.00	0.00
38.00	0.00	2,016	414.00	0.00
39.00	0.00	2,016	414.00	0.00
40.00	0.00	2,016	414.00	0.00
41.00	0.00	2,016	414.00	0.00
42.00	0.00	2,016	414.00	0.00
43.00	0.00	2,016	414.00	0.00
44.00	0.00	2,016	414.00	0.00
45.00	0.00	2,016	414.00	0.00
46.00	0.00	2,016	414.00	0.00
47.00	0.00	2,016	414.00	0.00
48.00	0.00	2,016	414.00	0.00

Stage-Area-Storage for Pond 59P: FB 1E

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
410.00	13	0	415.80	962	2,923
410.10	29	50	415.90	979	2,974
410.20	46	101	416.00	995	3,024
410.30	62	151			
410.40	78	202			
410.50	95	252			
410.60	111	302			
410.70	128	353			
410.80	144	403			
410.90	160	454			
411.00	177	504			
411.10	193	554			
411.20	209	605			
411.30	226	655			
411.40	242	706			
411.50	259	756			
411.60	275	806			
411.70	291	857			
411.80	308	907			
411.90	324	958			
412.00	340	1,008			
412.10	357	1,058			
412.20	373	1,109			
412.30	389	1,159			
412.40	406	1,210			
412.50	422	1,260			
412.60	439	1,310			
412.70	455	1,361			
412.80	471	1,411			
412.90	488	1,462			
413.00	504	1,512			
413.10	520	1,562			
413.20	537	1,613			
413.30	553	1,663			
413.40	569	1,714			
413.50	586	1,764			
413.60	602	1,814			
413.70	619	1,865			
413.80	635	1,915			
413.90	651	1,966			
414.00	668	2,016			
414.10	684	2,066			
414.20	700	2,117			
414.30	717	2,167			
414.40	733	2,218			
414.50	750	2,268			
414.60	766	2,318			
414.70	782	2,369			
414.80	799	2,419			
414.90	815	2,470			
415.00	831	2,520			
415.10	848	2,570			
415.20	864	2,621			
415.30	880	2,671			
415.40	897	2,722			
415.50	913	2,772			
415.60	930	2,822			
415.70	946	2,873			

Summary for Pond 60P: FB 1D

Inflow Area = 3.529 ac, 63.56% Impervious, Inflow Depth = 1.74" for 1-Year event
 Inflow = 7.63 cfs @ 12.13 hrs, Volume= 0.511 af
 Outflow = 7.54 cfs @ 12.14 hrs, Volume= 0.511 af, Atten= 1%, Lag= 0.6 min
 Primary = 7.54 cfs @ 12.14 hrs, Volume= 0.511 af
 Routed to Pond 1P : Bioretention 1D

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 414.90' Surf.Area= 3,034 sf Storage= 8,598 cf
 Peak Elev= 415.12' @ 12.14 hrs Surf.Area= 3,162 sf Storage= 9,073 cf (476 cf above start)

Plug-Flow detention time= 200.8 min calculated for 0.314 af (61% of inflow)
 Center-of-Mass det. time= 1.8 min (819.5 - 817.7)

Volume	Invert	Avail.Storage	Storage Description
#1	411.00'	11,023 cf	Custom Stage Data (Prismatic) Listed below

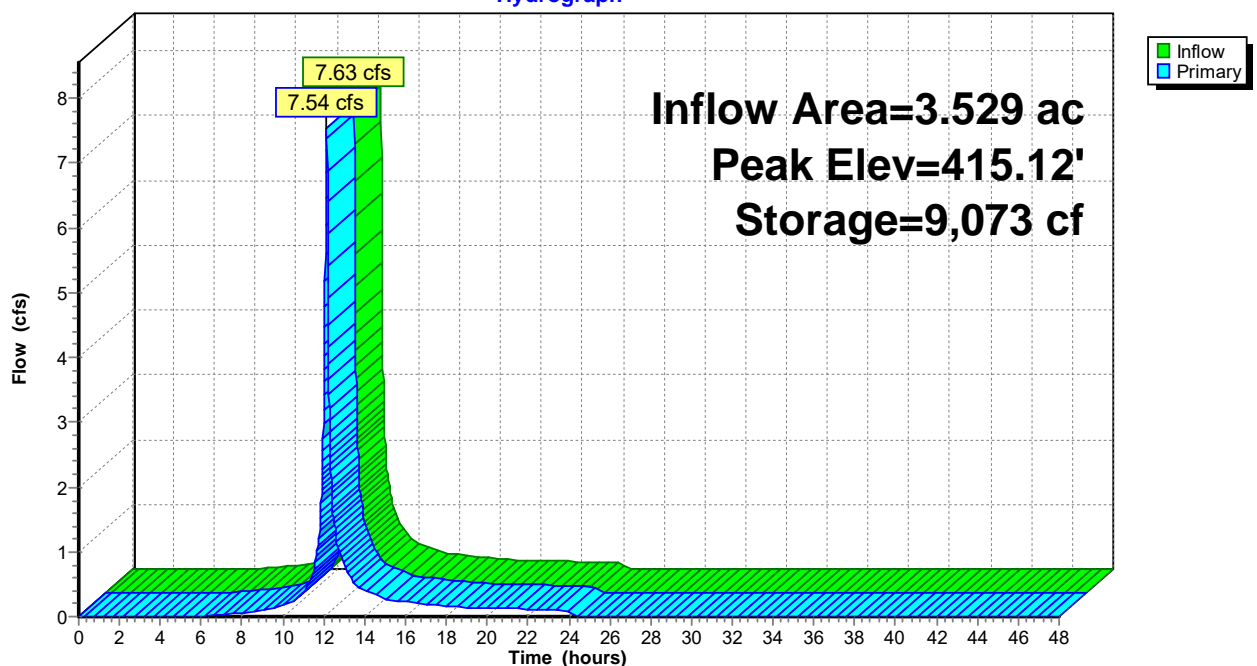
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
411.00	723	0	0
416.00	3,686	11,023	11,023

Device	Routing	Invert	Outlet Devices
#1	Primary	414.90'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

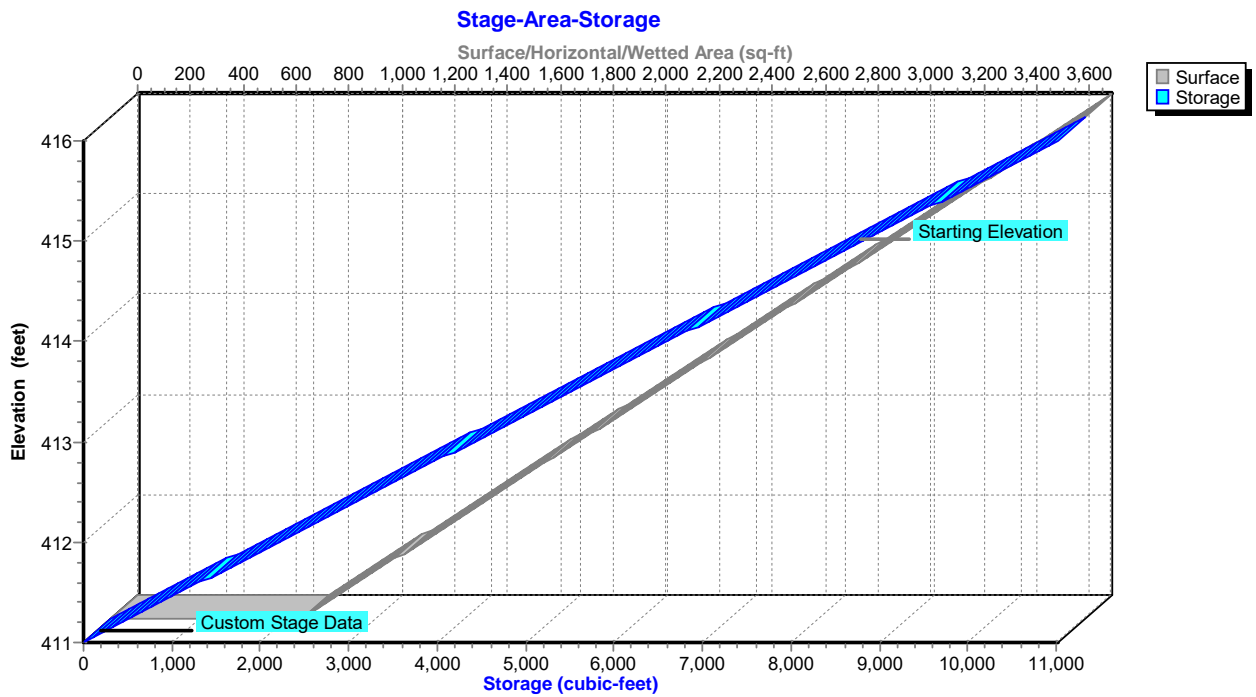
Primary OutFlow Max=7.49 cfs @ 12.14 hrs HW=415.12' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 7.49 cfs @ 1.16 fps)

Pond 60P: FB 1D

Hydrograph



Pond 60P: FB 1D



Hydrograph for Pond 60P: FB 1D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,598	414.90	0.00
1.00	0.00	8,598	414.90	0.00
2.00	0.00	8,598	414.90	0.00
3.00	0.00	8,598	414.90	0.00
4.00	0.00	8,598	414.90	0.00
5.00	0.00	8,598	414.90	0.00
6.00	0.01	8,599	414.90	0.01
7.00	0.03	8,601	414.90	0.03
8.00	0.06	8,605	414.90	0.06
9.00	0.09	8,610	414.91	0.09
10.00	0.18	8,621	414.91	0.18
11.00	0.40	8,648	414.92	0.38
12.00	3.77	8,877	415.03	3.43
13.00	0.77	8,703	414.95	0.80
14.00	0.40	8,651	414.92	0.40
15.00	0.27	8,634	414.92	0.28
16.00	0.23	8,628	414.91	0.23
17.00	0.19	8,623	414.91	0.19
18.00	0.15	8,618	414.91	0.16
19.00	0.14	8,616	414.91	0.14
20.00	0.13	8,615	414.91	0.13
21.00	0.12	8,614	414.91	0.12
22.00	0.11	8,613	414.91	0.11
23.00	0.11	8,611	414.91	0.11
24.00	0.10	8,610	414.91	0.10
25.00	0.00	8,598	414.90	0.00
26.00	0.00	8,598	414.90	0.00
27.00	0.00	8,598	414.90	0.00
28.00	0.00	8,598	414.90	0.00
29.00	0.00	8,598	414.90	0.00
30.00	0.00	8,598	414.90	0.00
31.00	0.00	8,598	414.90	0.00
32.00	0.00	8,598	414.90	0.00
33.00	0.00	8,598	414.90	0.00
34.00	0.00	8,598	414.90	0.00
35.00	0.00	8,598	414.90	0.00
36.00	0.00	8,598	414.90	0.00
37.00	0.00	8,598	414.90	0.00
38.00	0.00	8,598	414.90	0.00
39.00	0.00	8,598	414.90	0.00
40.00	0.00	8,598	414.90	0.00
41.00	0.00	8,598	414.90	0.00
42.00	0.00	8,598	414.90	0.00
43.00	0.00	8,598	414.90	0.00
44.00	0.00	8,598	414.90	0.00
45.00	0.00	8,598	414.90	0.00
46.00	0.00	8,598	414.90	0.00
47.00	0.00	8,598	414.90	0.00
48.00	0.00	8,598	414.90	0.00

Stage-Area-Storage for Pond 60P: FB 1D

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
411.00	723	0	413.90	2,442	6,393
411.05	753	110	413.95	2,471	6,503
411.10	782	220	414.00	2,501	6,614
411.15	812	331	414.05	2,530	6,724
411.20	842	441	414.10	2,560	6,834
411.25	871	551	414.15	2,590	6,944
411.30	901	661	414.20	2,619	7,054
411.35	930	772	414.25	2,649	7,165
411.40	960	882	414.30	2,679	7,275
411.45	990	992	414.35	2,708	7,385
411.50	1,019	1,102	414.40	2,738	7,495
411.55	1,049	1,212	414.45	2,767	7,606
411.60	1,079	1,323	414.50	2,797	7,716
411.65	1,108	1,433	414.55	2,827	7,826
411.70	1,138	1,543	414.60	2,856	7,936
411.75	1,167	1,653	414.65	2,886	8,046
411.80	1,197	1,764	414.70	2,916	8,157
411.85	1,227	1,874	414.75	2,945	8,267
411.90	1,256	1,984	414.80	2,975	8,377
411.95	1,286	2,094	414.85	3,005	8,487
412.00	1,316	2,205	414.90	3,034	8,598
412.05	1,345	2,315	414.95	3,064	8,708
412.10	1,375	2,425	415.00	3,093	8,818
412.15	1,404	2,535	415.05	3,123	8,928
412.20	1,434	2,645	415.10	3,153	9,038
412.25	1,464	2,756	415.15	3,182	9,149
412.30	1,493	2,866	415.20	3,212	9,259
412.35	1,523	2,976	415.25	3,242	9,369
412.40	1,553	3,086	415.30	3,271	9,479
412.45	1,582	3,197	415.35	3,301	9,590
412.50	1,612	3,307	415.40	3,330	9,700
412.55	1,642	3,417	415.45	3,360	9,810
412.60	1,671	3,527	415.50	3,390	9,920
412.65	1,701	3,637	415.55	3,419	10,030
412.70	1,730	3,748	415.60	3,449	10,141
412.75	1,760	3,858	415.65	3,479	10,251
412.80	1,790	3,968	415.70	3,508	10,361
412.85	1,819	4,078	415.75	3,538	10,471
412.90	1,849	4,189	415.80	3,567	10,582
412.95	1,879	4,299	415.85	3,597	10,692
413.00	1,908	4,409	415.90	3,627	10,802
413.05	1,938	4,519	415.95	3,656	10,912
413.10	1,967	4,629	416.00	3,686	11,023
413.15	1,997	4,740			
413.20	2,027	4,850			
413.25	2,056	4,960			
413.30	2,086	5,070			
413.35	2,116	5,181			
413.40	2,145	5,291			
413.45	2,175	5,401			
413.50	2,205	5,511			
413.55	2,234	5,621			
413.60	2,264	5,732			
413.65	2,293	5,842			
413.70	2,323	5,952			
413.75	2,353	6,062			
413.80	2,382	6,173			
413.85	2,412	6,283			

Summary for Pond 63P: Det Pond 1K

Inflow Area = 17.176 ac, 66.33% Impervious, Inflow Depth = 0.00" for 1-Year event
 Inflow = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 24.13 hrs, Volume= 0.000 af, Atten= 84%, Lag= 7.3 min
 Primary = 0.00 cfs @ 24.13 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 30L : DP-2

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 407.50' @ 24.13 hrs Surf.Area= 4,316 sf Storage= 1 cf

Plug-Flow detention time= 444.1 min calculated for 0.000 af (94% of inflow)
 Center-of-Mass det. time= 440.2 min (1,825.2 - 1,385.0)

Volume	Invert	Avail.Storage	Storage Description
#1	407.50'	82,118 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.50	4,315	0	0
414.00	20,952	82,118	82,118

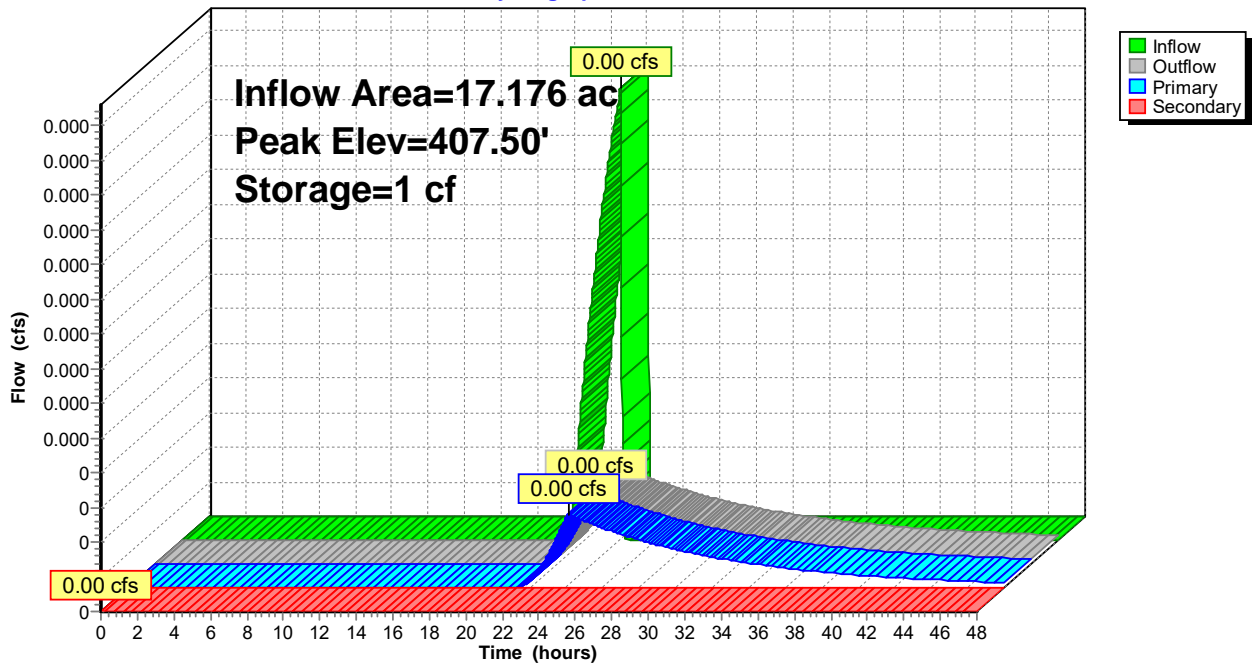
Device	Routing	Invert	Outlet Devices
#1	Primary	407.50'	24.0" Round Culvert L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.50' / 406.00' S= 0.0037 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	407.50'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	408.50'	24.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	409.80'	17.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	413.00'	10.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.00 cfs @ 24.13 hrs HW=407.50' (Free Discharge)
 ↑1=Culvert (Barrel Controls 0.00 cfs @ 0.02 fps)
 ↑2=Orifice/Grate (Passes 0.00 cfs of 0.00 cfs potential flow)
 ↑3=Orifice/Grate (Controls 0.00 cfs)
 ↑4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=407.50' (Free Discharge)
 ↑5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

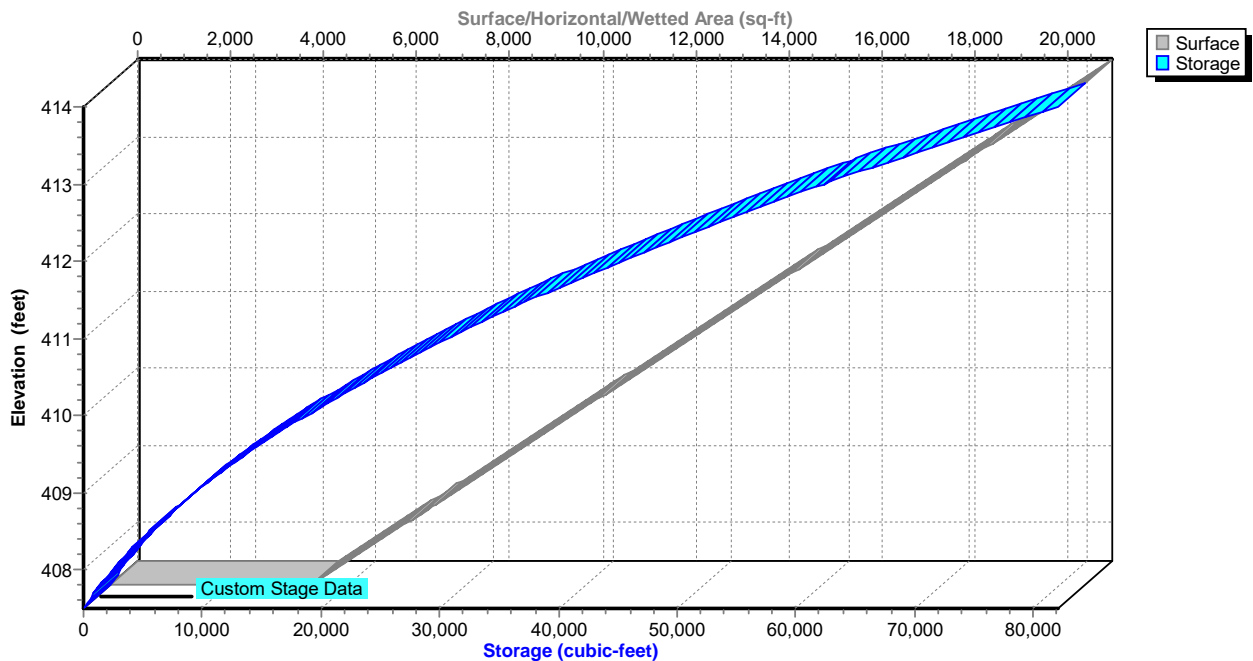
Pond 63P: Det Pond 1K

Hydrograph



Pond 63P: Det Pond 1K

Stage-Area-Storage



Hydrograph for Pond 63P: Det Pond 1K

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	407.50	0.00	0.00	0.00
1.00	0.00	0	407.50	0.00	0.00	0.00
2.00	0.00	0	407.50	0.00	0.00	0.00
3.00	0.00	0	407.50	0.00	0.00	0.00
4.00	0.00	0	407.50	0.00	0.00	0.00
5.00	0.00	0	407.50	0.00	0.00	0.00
6.00	0.00	0	407.50	0.00	0.00	0.00
7.00	0.00	0	407.50	0.00	0.00	0.00
8.00	0.00	0	407.50	0.00	0.00	0.00
9.00	0.00	0	407.50	0.00	0.00	0.00
10.00	0.00	0	407.50	0.00	0.00	0.00
11.00	0.00	0	407.50	0.00	0.00	0.00
12.00	0.00	0	407.50	0.00	0.00	0.00
13.00	0.00	0	407.50	0.00	0.00	0.00
14.00	0.00	0	407.50	0.00	0.00	0.00
15.00	0.00	0	407.50	0.00	0.00	0.00
16.00	0.00	0	407.50	0.00	0.00	0.00
17.00	0.00	0	407.50	0.00	0.00	0.00
18.00	0.00	0	407.50	0.00	0.00	0.00
19.00	0.00	0	407.50	0.00	0.00	0.00
20.00	0.00	0	407.50	0.00	0.00	0.00
21.00	0.00	0	407.50	0.00	0.00	0.00
22.00	0.00	0	407.50	0.00	0.00	0.00
23.00	0.00	1	407.50	0.00	0.00	0.00
24.00	0.00	1	407.50	0.00	0.00	0.00
25.00	0.00	1	407.50	0.00	0.00	0.00
26.00	0.00	1	407.50	0.00	0.00	0.00
27.00	0.00	1	407.50	0.00	0.00	0.00
28.00	0.00	1	407.50	0.00	0.00	0.00
29.00	0.00	1	407.50	0.00	0.00	0.00
30.00	0.00	1	407.50	0.00	0.00	0.00
31.00	0.00	1	407.50	0.00	0.00	0.00
32.00	0.00	1	407.50	0.00	0.00	0.00
33.00	0.00	1	407.50	0.00	0.00	0.00
34.00	0.00	0	407.50	0.00	0.00	0.00
35.00	0.00	0	407.50	0.00	0.00	0.00
36.00	0.00	0	407.50	0.00	0.00	0.00
37.00	0.00	0	407.50	0.00	0.00	0.00
38.00	0.00	0	407.50	0.00	0.00	0.00
39.00	0.00	0	407.50	0.00	0.00	0.00
40.00	0.00	0	407.50	0.00	0.00	0.00
41.00	0.00	0	407.50	0.00	0.00	0.00
42.00	0.00	0	407.50	0.00	0.00	0.00
43.00	0.00	0	407.50	0.00	0.00	0.00
44.00	0.00	0	407.50	0.00	0.00	0.00
45.00	0.00	0	407.50	0.00	0.00	0.00
46.00	0.00	0	407.50	0.00	0.00	0.00
47.00	0.00	0	407.50	0.00	0.00	0.00
48.00	0.00	0	407.50	0.00	0.00	0.00

Stage-Area-Storage for Pond 63P: Det Pond 1K

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.50	4,315	0	413.30	19,160	68,078
407.60	4,571	444	413.40	19,416	70,007
407.70	4,827	914	413.50	19,672	71,962
407.80	5,083	1,410	413.60	19,928	73,942
407.90	5,339	1,931	413.70	20,184	75,947
408.00	5,595	2,477	413.80	20,440	77,979
408.10	5,851	3,050	413.90	20,696	80,035
408.20	6,107	3,648	414.00	20,952	82,118
408.30	6,363	4,271			
408.40	6,619	4,920			
408.50	6,875	5,595			
408.60	7,130	6,295			
408.70	7,386	7,021			
408.80	7,642	7,772			
408.90	7,898	8,549			
409.00	8,154	9,352			
409.10	8,410	10,180			
409.20	8,666	11,034			
409.30	8,922	11,913			
409.40	9,178	12,818			
409.50	9,434	13,749			
409.60	9,690	14,705			
409.70	9,946	15,687			
409.80	10,202	16,694			
409.90	10,458	17,727			
410.00	10,714	18,786			
410.10	10,970	19,870			
410.20	11,226	20,980			
410.30	11,482	22,115			
410.40	11,738	23,276			
410.50	11,994	24,463			
410.60	12,250	25,675			
410.70	12,506	26,913			
410.80	12,761	28,176			
410.90	13,017	29,465			
411.00	13,273	30,780			
411.10	13,529	32,120			
411.20	13,785	33,486			
411.30	14,041	34,877			
411.40	14,297	36,294			
411.50	14,553	37,736			
411.60	14,809	39,204			
411.70	15,065	40,698			
411.80	15,321	42,217			
411.90	15,577	43,762			
412.00	15,833	45,333			
412.10	16,089	46,929			
412.20	16,345	48,551			
412.30	16,601	50,198			
412.40	16,857	51,871			
412.50	17,113	53,569			
412.60	17,369	55,293			
412.70	17,625	57,043			
412.80	17,881	58,818			
412.90	18,137	60,619			
413.00	18,392	62,446			
413.10	18,648	64,298			
413.20	18,904	66,175			

Summary for Pond B4B: Bioretention 4A

Inflow Area = 2.400 ac, 34.61% Impervious, Inflow Depth = 0.49" for 1-Year event
 Inflow = 1.25 cfs @ 12.14 hrs, Volume= 0.097 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 32L : DP-4

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 439.71' @ 24.34 hrs Surf.Area= 4,681 sf Storage= 4,238 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description	
#1	436.17'	12,376 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
436.17	4,171	0.0	0	0
436.83	4,171	40.0	1,101	1,101
439.50	4,171	20.0	2,227	3,328
441.00	7,892	100.0	9,047	12,376

Device	Routing	Invert	Outlet Devices
#1	Primary	436.17'	18.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 436.17' / 435.57' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	440.50'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

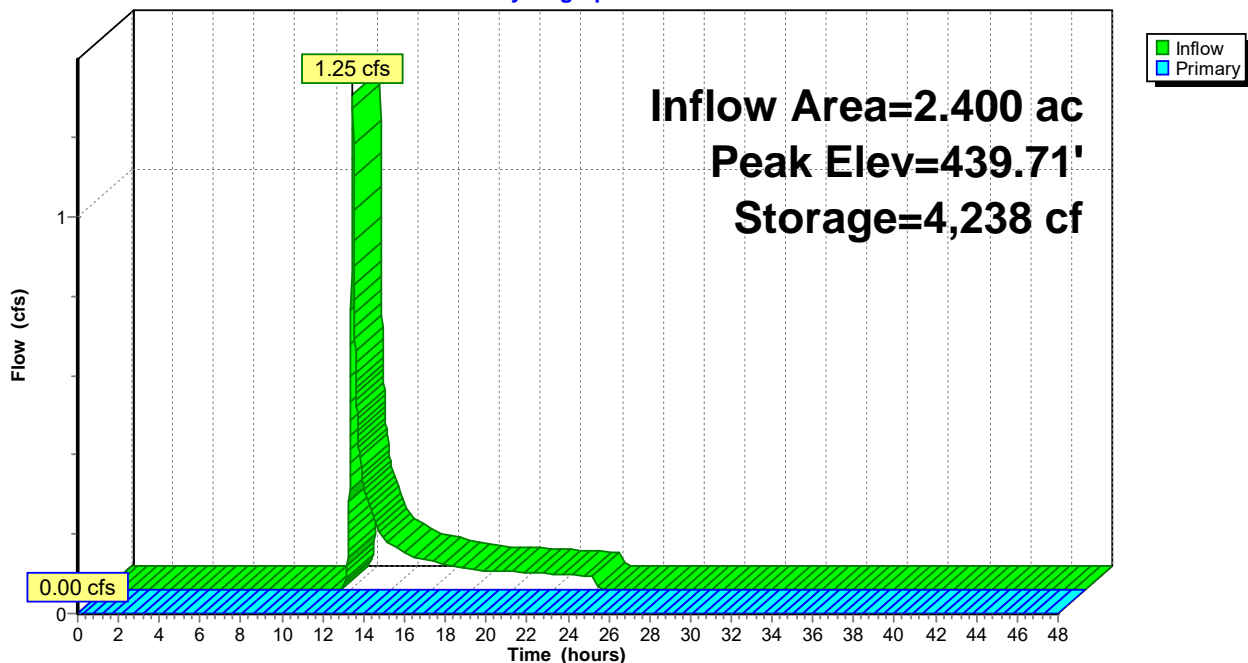
Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=436.17' (Free Discharge)

↑1=Culvert (Controls 0.00 cfs)

↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

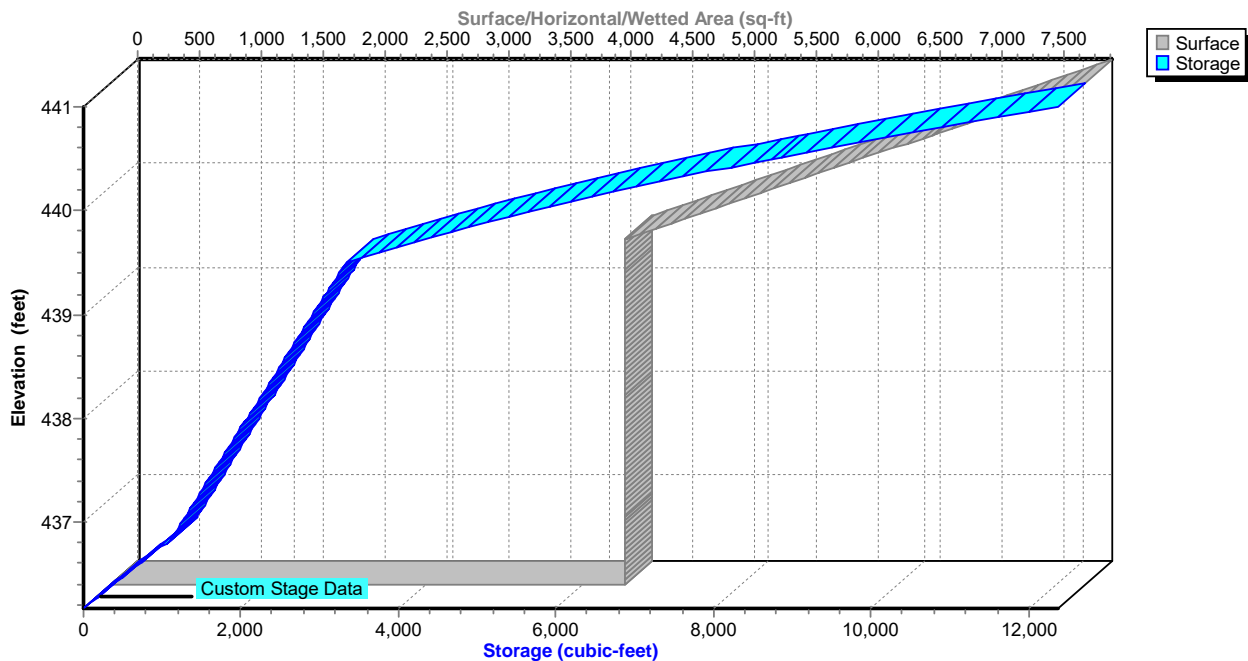
Pond B4B: Bioretention 4A

Hydrograph



Pond B4B: Bioretention 4A

Stage-Area-Storage



Hydrograph for Pond B4B: Bioretention 4A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	436.17	0.00
1.00	0.00	0	436.17	0.00
2.00	0.00	0	436.17	0.00
3.00	0.00	0	436.17	0.00
4.00	0.00	0	436.17	0.00
5.00	0.00	0	436.17	0.00
6.00	0.00	0	436.17	0.00
7.00	0.00	0	436.17	0.00
8.00	0.00	0	436.17	0.00
9.00	0.00	0	436.17	0.00
10.00	0.00	0	436.17	0.00
11.00	0.00	0	436.17	0.00
12.00	0.32	87	436.22	0.00
13.00	0.21	1,698	437.55	0.00
14.00	0.12	2,231	438.18	0.00
15.00	0.08	2,594	438.62	0.00
16.00	0.07	2,868	438.95	0.00
17.00	0.06	3,108	439.24	0.00
18.00	0.05	3,311	439.48	0.00
19.00	0.05	3,487	439.54	0.00
20.00	0.05	3,653	439.58	0.00
21.00	0.04	3,811	439.61	0.00
22.00	0.04	3,960	439.65	0.00
23.00	0.04	4,098	439.68	0.00
24.00	0.03	4,227	439.70	0.00
25.00	0.00	4,238	439.71	0.00
26.00	0.00	4,238	439.71	0.00
27.00	0.00	4,238	439.71	0.00
28.00	0.00	4,238	439.71	0.00
29.00	0.00	4,238	439.71	0.00
30.00	0.00	4,238	439.71	0.00
31.00	0.00	4,238	439.71	0.00
32.00	0.00	4,238	439.71	0.00
33.00	0.00	4,238	439.71	0.00
34.00	0.00	4,238	439.71	0.00
35.00	0.00	4,238	439.71	0.00
36.00	0.00	4,238	439.71	0.00
37.00	0.00	4,238	439.71	0.00
38.00	0.00	4,238	439.71	0.00
39.00	0.00	4,238	439.71	0.00
40.00	0.00	4,238	439.71	0.00
41.00	0.00	4,238	439.71	0.00
42.00	0.00	4,238	439.71	0.00
43.00	0.00	4,238	439.71	0.00
44.00	0.00	4,238	439.71	0.00
45.00	0.00	4,238	439.71	0.00
46.00	0.00	4,238	439.71	0.00
47.00	0.00	4,238	439.71	0.00
48.00	0.00	4,238	439.71	0.00

Stage-Area-Storage for Pond B4B: Bioretention 4A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
436.17	4,171	0	439.07	4,171	2,970
436.22	4,171	83	439.12	4,171	3,011
436.27	4,171	167	439.17	4,171	3,053
436.32	4,171	250	439.22	4,171	3,095
436.37	4,171	334	439.27	4,171	3,137
436.42	4,171	417	439.32	4,171	3,178
436.47	4,171	501	439.37	4,171	3,220
436.52	4,171	584	439.42	4,171	3,262
436.57	4,171	667	439.47	4,171	3,303
436.62	4,171	751	439.52	4,221	3,412
436.67	4,171	834	439.57	4,345	3,627
436.72	4,171	918	439.62	4,469	3,847
436.77	4,171	1,001	439.67	4,593	4,073
436.82	4,171	1,084	439.72	4,717	4,306
436.87	4,171	1,135	439.77	4,841	4,545
436.92	4,171	1,176	439.82	4,965	4,790
436.97	4,171	1,218	439.87	5,089	5,042
437.02	4,171	1,260	439.92	5,213	5,299
437.07	4,171	1,301	439.97	5,337	5,563
437.12	4,171	1,343	440.02	5,461	5,833
437.17	4,171	1,385	440.07	5,585	6,109
437.22	4,171	1,426	440.12	5,709	6,391
437.27	4,171	1,468	440.17	5,833	6,680
437.32	4,171	1,510	440.22	5,957	6,975
437.37	4,171	1,552	440.27	6,081	7,276
437.42	4,171	1,593	440.32	6,205	7,583
437.47	4,171	1,635	440.37	6,329	7,896
437.52	4,171	1,677	440.42	6,453	8,216
437.57	4,171	1,718	440.47	6,577	8,541
437.62	4,171	1,760	440.52	6,701	8,873
437.67	4,171	1,802	440.57	6,825	9,211
437.72	4,171	1,844	440.62	6,949	9,556
437.77	4,171	1,885	440.67	7,073	9,906
437.82	4,171	1,927	440.72	7,197	10,263
437.87	4,171	1,969	440.77	7,321	10,626
437.92	4,171	2,010	440.82	7,445	10,995
437.97	4,171	2,052	440.87	7,570	11,371
438.02	4,171	2,094	440.92	7,694	11,752
438.07	4,171	2,136	440.97	7,818	12,140
438.12	4,171	2,177			
438.17	4,171	2,219			
438.22	4,171	2,261			
438.27	4,171	2,302			
438.32	4,171	2,344			
438.37	4,171	2,386			
438.42	4,171	2,428			
438.47	4,171	2,469			
438.52	4,171	2,511			
438.57	4,171	2,553			
438.62	4,171	2,594			
438.67	4,171	2,636			
438.72	4,171	2,678			
438.77	4,171	2,719			
438.82	4,171	2,761			
438.87	4,171	2,803			
438.92	4,171	2,845			
438.97	4,171	2,886			
439.02	4,171	2,928			

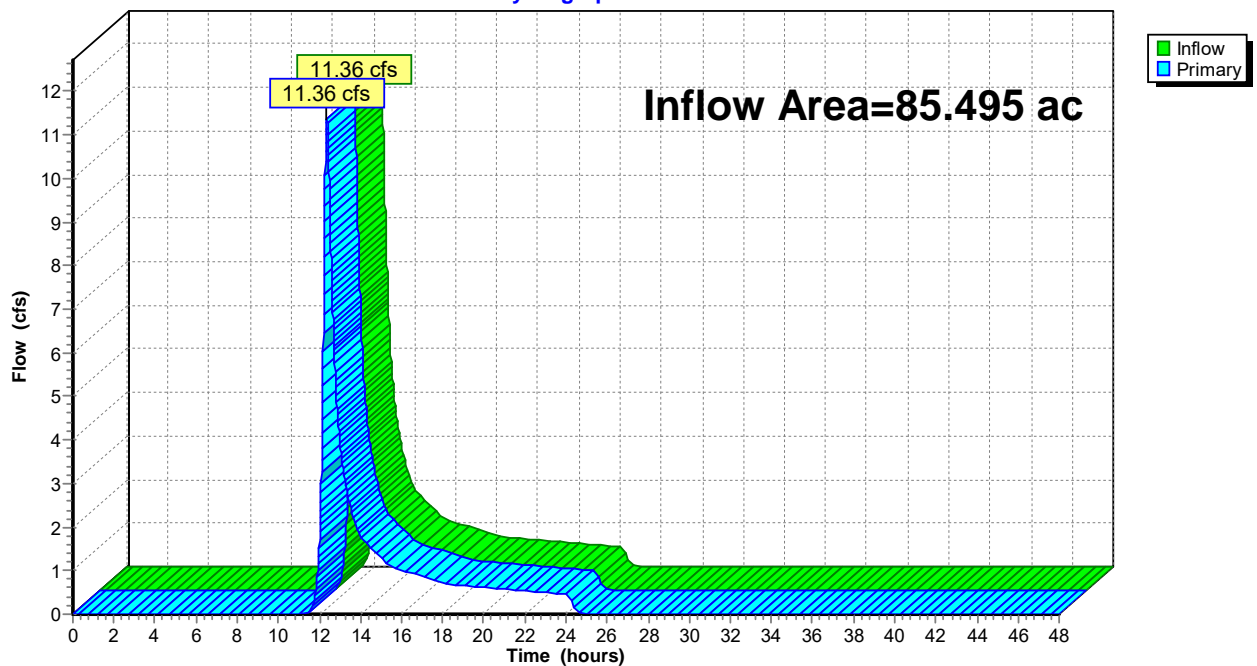
Summary for Link 29L: DP-1

Inflow Area = 85.495 ac, 51.65% Impervious, Inflow Depth = 0.20" for 1-Year event
Inflow = 11.36 cfs @ 12.36 hrs, Volume= 1.459 af
Primary = 11.36 cfs @ 12.36 hrs, Volume= 1.459 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 29L: DP-1

Hydrograph



Hydrograph for Link 29L: DP-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.03	0.00	0.03	40.50	0.00	0.00	0.00
12.00	1.56	0.00	1.56	41.00	0.00	0.00	0.00
12.50	9.55	0.00	9.55	41.50	0.00	0.00	0.00
13.00	3.94	0.00	3.94	42.00	0.00	0.00	0.00
13.50	2.48	0.00	2.48	42.50	0.00	0.00	0.00
14.00	1.78	0.00	1.78	43.00	0.00	0.00	0.00
14.50	1.52	0.00	1.52	43.50	0.00	0.00	0.00
15.00	1.29	0.00	1.29	44.00	0.00	0.00	0.00
15.50	1.09	0.00	1.09	44.50	0.00	0.00	0.00
16.00	1.01	0.00	1.01	45.00	0.00	0.00	0.00
16.50	0.95	0.00	0.95	45.50	0.00	0.00	0.00
17.00	0.88	0.00	0.88	46.00	0.00	0.00	0.00
17.50	0.80	0.00	0.80	46.50	0.00	0.00	0.00
18.00	0.73	0.00	0.73	47.00	0.00	0.00	0.00
18.50	0.67	0.00	0.67	47.50	0.00	0.00	0.00
19.00	0.65	0.00	0.65	48.00	0.00	0.00	0.00
19.50	0.63	0.00	0.63				
20.00	0.61	0.00	0.61				
20.50	0.60	0.00	0.60				
21.00	0.58	0.00	0.58				
21.50	0.56	0.00	0.56				
22.00	0.54	0.00	0.54				
22.50	0.52	0.00	0.52				
23.00	0.50	0.00	0.50				
23.50	0.48	0.00	0.48				
24.00	0.46	0.00	0.46				
24.50	0.08	0.00	0.08				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

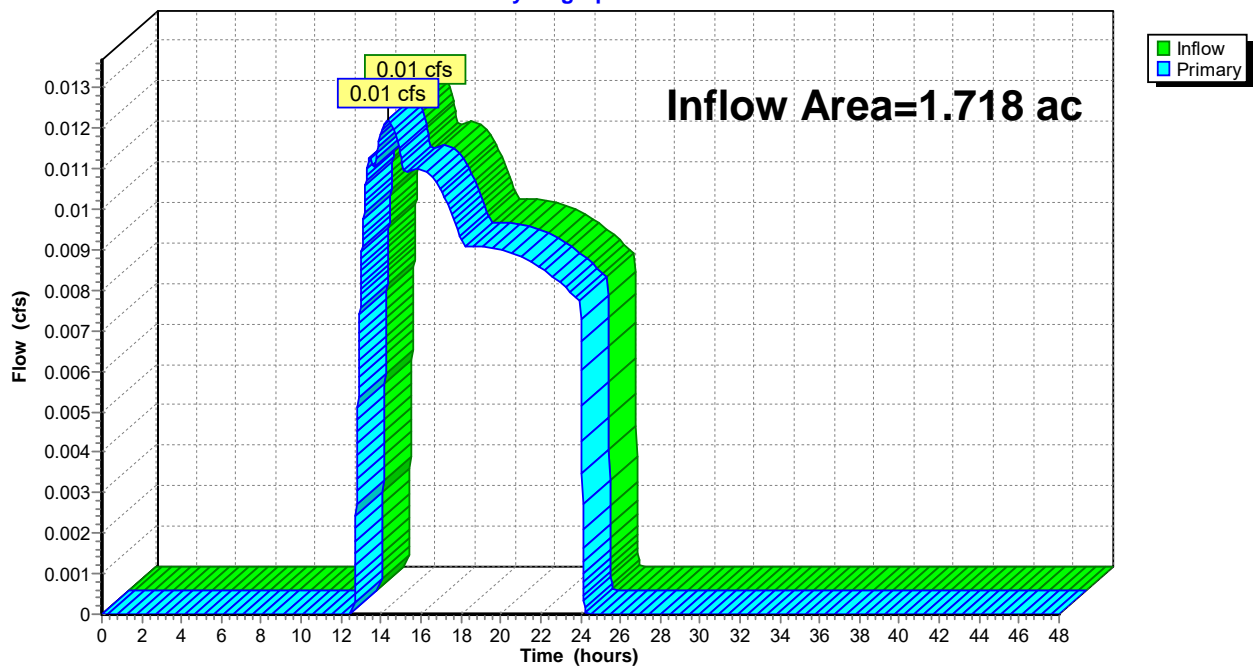
Summary for Link 30L: DP-2

Inflow Area = 1.718 ac, 0.00% Impervious, Inflow Depth = 0.06" for 1-Year event
Inflow = 0.01 cfs @ 14.34 hrs, Volume= 0.009 af
Primary = 0.01 cfs @ 14.34 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 30L: DP-2

Hydrograph



Hydrograph for Link 30L: DP-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	0.00	0.00	0.00	41.50	0.00	0.00	0.00
13.00	0.01	0.00	0.01	42.00	0.00	0.00	0.00
13.50	0.01	0.00	0.01	42.50	0.00	0.00	0.00
14.00	0.01	0.00	0.01	43.00	0.00	0.00	0.00
14.50	0.01	0.00	0.01	43.50	0.00	0.00	0.00
15.00	0.01	0.00	0.01	44.00	0.00	0.00	0.00
15.50	0.01	0.00	0.01	44.50	0.00	0.00	0.00
16.00	0.01	0.00	0.01	45.00	0.00	0.00	0.00
16.50	0.01	0.00	0.01	45.50	0.00	0.00	0.00
17.00	0.01	0.00	0.01	46.00	0.00	0.00	0.00
17.50	0.01	0.00	0.01	46.50	0.00	0.00	0.00
18.00	0.01	0.00	0.01	47.00	0.00	0.00	0.00
18.50	0.01	0.00	0.01	47.50	0.00	0.00	0.00
19.00	0.01	0.00	0.01	48.00	0.00	0.00	0.00
19.50	0.01	0.00	0.01				
20.00	0.01	0.00	0.01				
20.50	0.01	0.00	0.01				
21.00	0.01	0.00	0.01				
21.50	0.01	0.00	0.01				
22.00	0.01	0.00	0.01				
22.50	0.01	0.00	0.01				
23.00	0.01	0.00	0.01				
23.50	0.01	0.00	0.01				
24.00	0.01	0.00	0.01				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

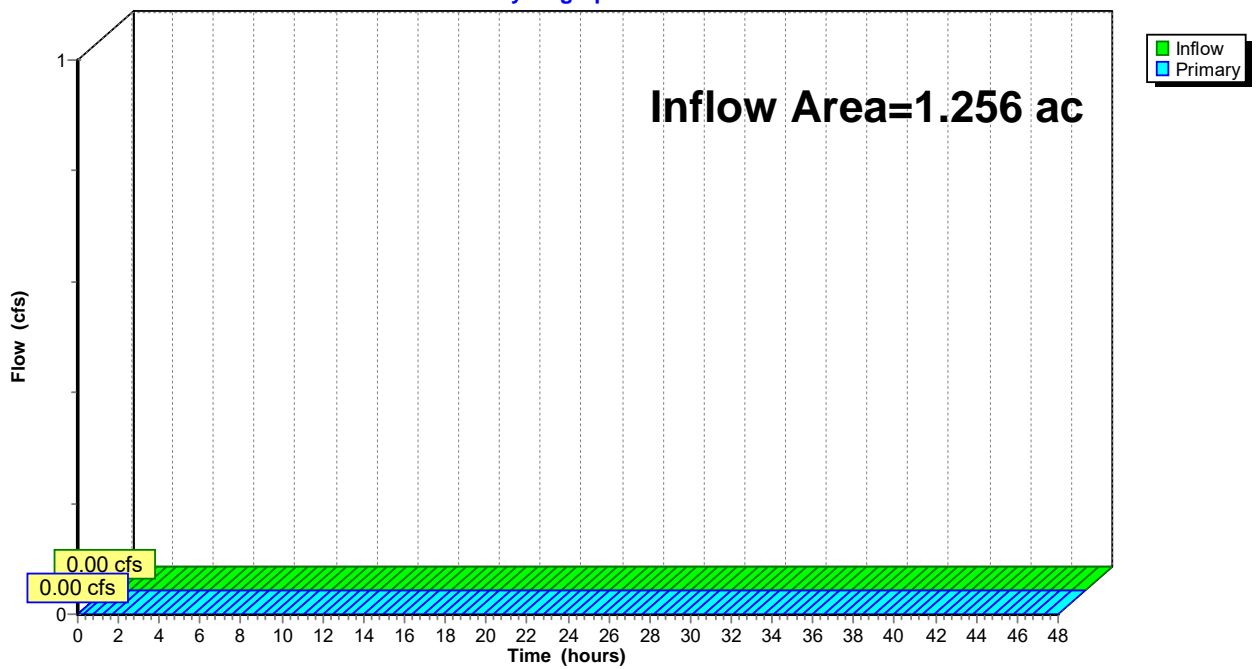
Summary for Link 31L: DP-3

Inflow Area = 1.256 ac, 0.00% Impervious, Inflow Depth = 0.00" for 1-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 31L: DP-3

Hydrograph



Hydrograph for Link 31L: DP-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	0.00	0.00	0.00	41.50	0.00	0.00	0.00
13.00	0.00	0.00	0.00	42.00	0.00	0.00	0.00
13.50	0.00	0.00	0.00	42.50	0.00	0.00	0.00
14.00	0.00	0.00	0.00	43.00	0.00	0.00	0.00
14.50	0.00	0.00	0.00	43.50	0.00	0.00	0.00
15.00	0.00	0.00	0.00	44.00	0.00	0.00	0.00
15.50	0.00	0.00	0.00	44.50	0.00	0.00	0.00
16.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00
16.50	0.00	0.00	0.00	45.50	0.00	0.00	0.00
17.00	0.00	0.00	0.00	46.00	0.00	0.00	0.00
17.50	0.00	0.00	0.00	46.50	0.00	0.00	0.00
18.00	0.00	0.00	0.00	47.00	0.00	0.00	0.00
18.50	0.00	0.00	0.00	47.50	0.00	0.00	0.00
19.00	0.00	0.00	0.00	48.00	0.00	0.00	0.00
19.50	0.00	0.00	0.00				
20.00	0.00	0.00	0.00				
20.50	0.00	0.00	0.00				
21.00	0.00	0.00	0.00				
21.50	0.00	0.00	0.00				
22.00	0.00	0.00	0.00				
22.50	0.00	0.00	0.00				
23.00	0.00	0.00	0.00				
23.50	0.00	0.00	0.00				
24.00	0.00	0.00	0.00				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

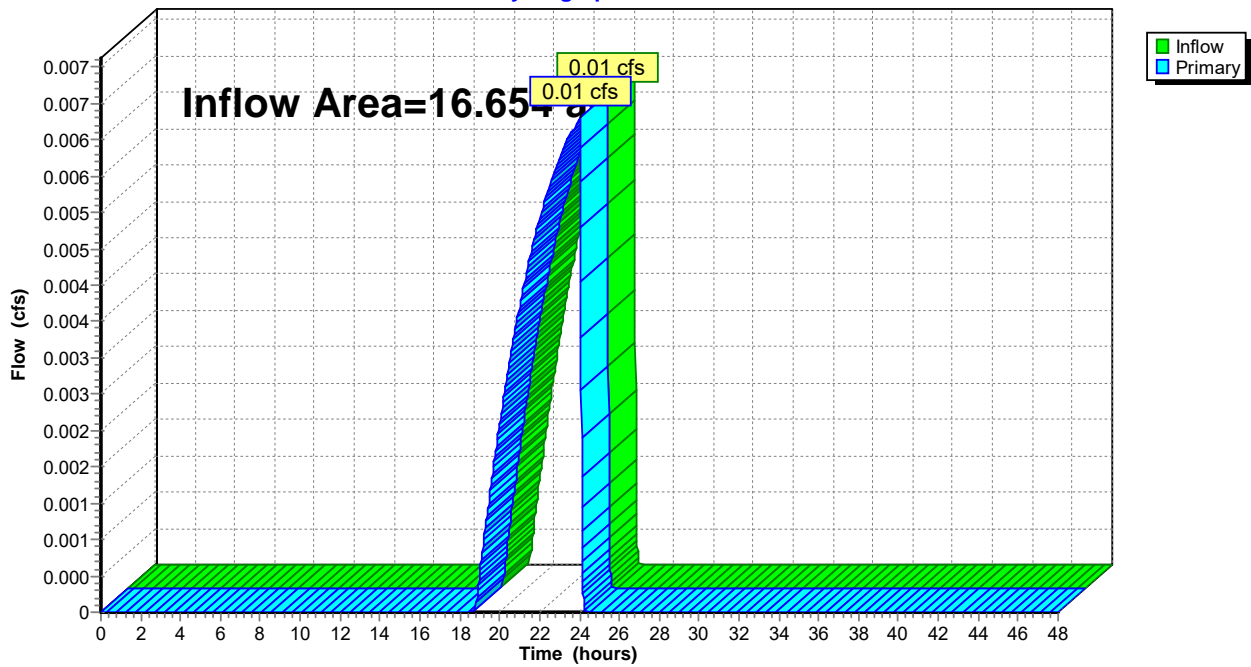
Summary for Link 32L: DP-4

Inflow Area = 16.654 ac, 29.61% Impervious, Inflow Depth = 0.00" for 1-Year event
Inflow = 0.01 cfs @ 24.01 hrs, Volume= 0.002 af
Primary = 0.01 cfs @ 24.01 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 32L: DP-4

Hydrograph



Hydrograph for Link 32L: DP-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	0.00	0.00	0.00	41.50	0.00	0.00	0.00
13.00	0.00	0.00	0.00	42.00	0.00	0.00	0.00
13.50	0.00	0.00	0.00	42.50	0.00	0.00	0.00
14.00	0.00	0.00	0.00	43.00	0.00	0.00	0.00
14.50	0.00	0.00	0.00	43.50	0.00	0.00	0.00
15.00	0.00	0.00	0.00	44.00	0.00	0.00	0.00
15.50	0.00	0.00	0.00	44.50	0.00	0.00	0.00
16.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00
16.50	0.00	0.00	0.00	45.50	0.00	0.00	0.00
17.00	0.00	0.00	0.00	46.00	0.00	0.00	0.00
17.50	0.00	0.00	0.00	46.50	0.00	0.00	0.00
18.00	0.00	0.00	0.00	47.00	0.00	0.00	0.00
18.50	0.00	0.00	0.00	47.50	0.00	0.00	0.00
19.00	0.00	0.00	0.00	48.00	0.00	0.00	0.00
19.50	0.00	0.00	0.00				
20.00	0.00	0.00	0.00				
20.50	0.00	0.00	0.00				
21.00	0.00	0.00	0.00				
21.50	0.00	0.00	0.00				
22.00	0.01	0.00	0.01				
22.50	0.01	0.00	0.01				
23.00	0.01	0.00	0.01				
23.50	0.01	0.00	0.01				
24.00	0.01	0.00	0.01				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

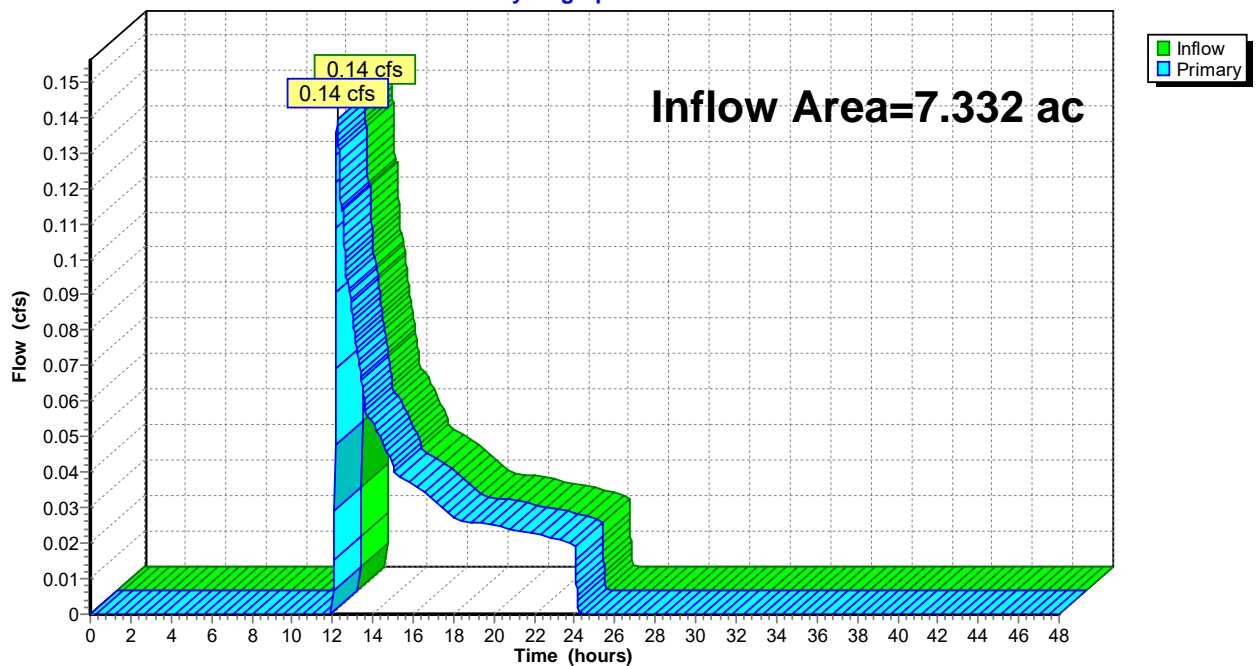
Summary for Link PDP5: PDP5

Inflow Area = 7.332 ac, 38.34% Impervious, Inflow Depth = 0.06" for 1-Year event
Inflow = 0.14 cfs @ 12.25 hrs, Volume= 0.038 af
Primary = 0.14 cfs @ 12.25 hrs, Volume= 0.038 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link PDP5: PDP5

Hydrograph



Hydrograph for Link PDP5: PDP5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	0.11	0.00	0.11	41.50	0.00	0.00	0.00
13.00	0.08	0.00	0.08	42.00	0.00	0.00	0.00
13.50	0.06	0.00	0.06	42.50	0.00	0.00	0.00
14.00	0.05	0.00	0.05	43.00	0.00	0.00	0.00
14.50	0.05	0.00	0.05	43.50	0.00	0.00	0.00
15.00	0.04	0.00	0.04	44.00	0.00	0.00	0.00
15.50	0.04	0.00	0.04	44.50	0.00	0.00	0.00
16.00	0.04	0.00	0.04	45.00	0.00	0.00	0.00
16.50	0.03	0.00	0.03	45.50	0.00	0.00	0.00
17.00	0.03	0.00	0.03	46.00	0.00	0.00	0.00
17.50	0.03	0.00	0.03	46.50	0.00	0.00	0.00
18.00	0.03	0.00	0.03	47.00	0.00	0.00	0.00
18.50	0.03	0.00	0.03	47.50	0.00	0.00	0.00
19.00	0.03	0.00	0.03	48.00	0.00	0.00	0.00
19.50	0.03	0.00	0.03				
20.00	0.02	0.00	0.02				
20.50	0.02	0.00	0.02				
21.00	0.02	0.00	0.02				
21.50	0.02	0.00	0.02				
22.00	0.02	0.00	0.02				
22.50	0.02	0.00	0.02				
23.00	0.02	0.00	0.02				
23.50	0.02	0.00	0.02				
24.00	0.02	0.00	0.02				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: PDA-1J	Runoff Area=218,370 sf 100.00% Impervious Runoff Depth=4.56" Tc=0.0 min CN=98 Runoff=27.27 cfs 1.906 af
Subcatchment 26S: PDA-1D	Runoff Area=153,719 sf 63.56% Impervious Runoff Depth=3.79" Tc=6.0 min CN=91 Runoff=15.93 cfs 1.114 af
Subcatchment 27S: PDA-4B-B	Runoff Area=66,436 sf 0.00% Impervious Runoff Depth=2.29" Tc=6.0 min CN=75 Runoff=4.44 cfs 0.291 af
Subcatchment 28S: Proposed	Runoff Area=1,182,741 sf 0.00% Impervious Runoff Depth=2.12" Tc=23.4 min CN=73 Runoff=42.30 cfs 4.808 af
Subcatchment 30S: PDA-1A	Runoff Area=108,164 sf 78.54% Impervious Runoff Depth=3.18" Tc=6.0 min CN=85 Runoff=9.83 cfs 0.659 af
Subcatchment 31S: PDA-1C	Runoff Area=112,511 sf 77.93% Impervious Runoff Depth=3.68" Tc=6.0 min CN=90 Runoff=11.44 cfs 0.793 af
Subcatchment 34S: PDA-1K	Runoff Area=26,597 sf 0.00% Impervious Runoff Depth=0.34" Tc=6.0 min CN=44 Runoff=0.06 cfs 0.017 af
Subcatchment 35S: PDA-2U	Runoff Area=74,849 sf 0.00% Impervious Runoff Depth=0.72" Tc=6.0 min CN=52 Runoff=1.17 cfs 0.103 af
Subcatchment 36S: PDA-3U	Runoff Area=54,725 sf 0.00% Impervious Runoff Depth=0.16" Tc=6.0 min CN=39 Runoff=0.03 cfs 0.017 af
Subcatchment 37S: PDA-1I	Runoff Area=172,961 sf 57.42% Impervious Runoff Depth=2.90" Tc=6.0 min CN=82 Runoff=14.49 cfs 0.960 af
Subcatchment 38S: PDA-4U	Runoff Area=322,148 sf 10.08% Impervious Runoff Depth=0.38" Tc=6.0 min CN=45 Runoff=1.08 cfs 0.235 af
Subcatchment 39S: PDA-5U	Runoff Area=103,088 sf 21.06% Impervious Runoff Depth=1.12" Tc=6.0 min CN=59 Runoff=3.09 cfs 0.221 af
Subcatchment 40S: PDA-i+J-FB	Runoff Area=13,894 sf 0.00% Impervious Runoff Depth=0.47" Tc=6.0 min CN=47 Runoff=0.09 cfs 0.012 af
Subcatchment 41S: PDA-5A	Runoff Area=216,315 sf 46.58% Impervious Runoff Depth=2.21" Tc=6.0 min CN=74 Runoff=13.93 cfs 0.913 af
Subcatchment 42S: PDA-1J-B	Runoff Area=33,984 sf 0.00% Impervious Runoff Depth=0.77" Tc=6.0 min CN=53 Runoff=0.60 cfs 0.050 af
Subcatchment 43S: PDA-1B	Runoff Area=398,274 sf 73.53% Impervious Runoff Depth=3.28" Tc=6.0 min CN=86 Runoff=37.09 cfs 2.500 af
Subcatchment 46S: PDA-1H	Runoff Area=433,100 sf 100.00% Impervious Runoff Depth=4.56" Tc=6.0 min CN=98 Runoff=49.04 cfs 3.781 af

240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

Prepared by Colliers Engineering & Design

Printed 8/12/2024

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Subcatchment 47S: PDA-4A	Runoff Area=104,546 sf 34.61% Impervious Runoff Depth=1.81" Tc=6.0 min CN=69 Runoff=5.49 cfs 0.363 af
Subcatchment 48S: PDA-1G-FB	Runoff Area=17,215 sf 0.00% Impervious Runoff Depth=0.16" Tc=6.0 min CN=39 Runoff=0.01 cfs 0.005 af
Subcatchment 49S: PDA-4B	Runoff Area=232,321 sf 62.91% Impervious Runoff Depth=3.09" Tc=6.0 min CN=84 Runoff=20.56 cfs 1.372 af
Subcatchment 51S: PDA-1G-B	Runoff Area=27,422 sf 0.00% Impervious Runoff Depth=0.38" Tc=6.0 min CN=45 Runoff=0.09 cfs 0.020 af
Subcatchment 52S: PDA-1G	Runoff Area=416,900 sf 100.00% Impervious Runoff Depth=4.56" Tc=6.0 min CN=98 Runoff=47.21 cfs 3.640 af
Subcatchment 54S: PDA-1H-IB	Runoff Area=39,736 sf 0.00% Impervious Runoff Depth=0.16" Tc=6.0 min CN=39 Runoff=0.02 cfs 0.012 af
Subcatchment 55S: PDA-1E	Runoff Area=17,321 sf 82.34% Impervious Runoff Depth=4.22" Tc=6.0 min CN=95 Runoff=1.91 cfs 0.140 af
Subcatchment 56S: PDA-1B-FB	Runoff Area=16,395 sf 0.00% Impervious Runoff Depth=0.16" Tc=6.0 min CN=39 Runoff=0.01 cfs 0.005 af
Subcatchment 57S: PDA-1H-FB	Runoff Area=19,432 sf 0.00% Impervious Runoff Depth=0.16" Tc=6.0 min CN=39 Runoff=0.01 cfs 0.006 af
Subcatchment 58S: PDA1-B-IB	Runoff Area=33,078 sf 0.00% Impervious Runoff Depth=0.19" Tc=6.0 min CN=40 Runoff=0.02 cfs 0.012 af
Subcatchment 59S: PDA-1F	Runoff Area=250,816 sf 71.20% Impervious Runoff Depth=2.81" Tc=6.0 min CN=81 Runoff=20.41 cfs 1.348 af
Subcatchment 60S: PDA-1i-B	Runoff Area=31,544 sf 0.00% Impervious Runoff Depth=0.16" Tc=6.0 min CN=39 Runoff=0.02 cfs 0.010 af
Pond 1P: Bioretention 1D	Peak Elev=413.50' Storage=37,780 cf Inflow=17.70 cfs 1.254 af Outflow=0.82 cfs 0.574 af
Pond 3P: Bioretention 1A	Peak Elev=414.55' Storage=20,071 cf Inflow=9.83 cfs 0.659 af Outflow=0.49 cfs 0.210 af
Pond 22P: Bioretention 5A	Peak Elev=432.79' Storage=18,655 cf Inflow=13.50 cfs 0.913 af Outflow=1.84 cfs 0.567 af
Pond 26P: Bioretention 1F	Peak Elev=411.82' Storage=31,189 cf Inflow=20.41 cfs 1.348 af Outflow=2.30 cfs 0.783 af
Pond 29P: Bioretention 4B	Peak Elev=419.39' Storage=38,105 cf Inflow=25.00 cfs 1.663 af Outflow=3.16 cfs 0.958 af
Pond 31P: Bioretention i	Peak Elev=412.18' Storage=46,869 cf Inflow=19.36 cfs 1.449 af Outflow=0.73 cfs 0.481 af
Pond 32P: FB 1C	Peak Elev=413.63' Storage=10,607 cf Inflow=11.44 cfs 0.793 af Outflow=11.33 cfs 0.793 af

Pond 33P: INFIL 1C	Peak Elev=411.15'	Storage=10,125 cf	Inflow=11.33 cfs	0.793 af
Discarded=1.90 cfs	0.793 af	Primary=0.00 cfs	0.000 af	Secondary=0.00 cfs
			0.000 af	Outflow=1.90 cfs
				0.793 af
Pond 37P: FB 1i+J	Peak Elev=413.57'	Storage=29,431 cf	Inflow=40.51 cfs	2.879 af
Primary=19.36 cfs	1.439 af	Secondary=19.36 cfs	1.439 af	Outflow=38.71 cfs
				2.879 af
Pond 39P: FB 5A	Peak Elev=433.66'	Storage=10,353 cf	Inflow=13.93 cfs	0.913 af
				Outflow=13.50 cfs
				0.913 af
Pond 44P: FB 1B	Peak Elev=412.72'	Storage=37,446 cf	Inflow=37.09 cfs	2.505 af
				Outflow=36.34 cfs
				2.505 af
Pond 45P: INFIL 1B	Peak Elev=410.31'	Storage=34,882 cf	Inflow=36.34 cfs	2.517 af
Discarded=5.03 cfs	2.517 af	Primary=0.00 cfs	0.000 af	Secondary=0.00 cfs
			0.000 af	Outflow=5.03 cfs
				2.517 af
Pond 47P: INFIL 1H	Peak Elev=410.70'	Storage=51,836 cf	Inflow=47.91 cfs	3.799 af
Discarded=5.76 cfs	3.799 af	Primary=0.00 cfs	0.000 af	Secondary=0.00 cfs
			0.000 af	Outflow=5.76 cfs
				3.799 af
Pond 51P: FB 1H	Peak Elev=413.17'	Storage=52,615 cf	Inflow=49.04 cfs	3.787 af
				Outflow=47.91 cfs
				3.787 af
Pond 53P: Bioretention J basin	Peak Elev=412.18'	Storage=50,048 cf	Inflow=19.75 cfs	1.489 af
				Outflow=0.59 cfs
				0.454 af
Pond 54P: INFIL 1G	Peak Elev=410.71'	Storage=50,018 cf	Inflow=45.73 cfs	3.665 af
Discarded=5.48 cfs	3.665 af	Primary=0.00 cfs	0.000 af	Secondary=0.00 cfs
			0.000 af	Outflow=5.48 cfs
				3.665 af
Pond 55P: FB 1G	Peak Elev=413.04'	Storage=51,933 cf	Inflow=47.21 cfs	3.645 af
				Outflow=45.65 cfs
				3.645 af
Pond 59P: FB 1E	Peak Elev=414.18'	Storage=2,106 cf	Inflow=1.91 cfs	0.140 af
				Outflow=1.89 cfs
				0.140 af
Pond 60P: FB 1D	Peak Elev=415.25'	Storage=9,370 cf	Inflow=15.93 cfs	1.114 af
				Outflow=15.81 cfs
				1.114 af
Pond 63P: Det Pond 1K	Peak Elev=408.98'	Storage=9,196 cf	Inflow=2.49 cfs	1.735 af
Primary=2.42 cfs	1.728 af	Secondary=0.00 cfs	0.000 af	Outflow=2.42 cfs
				1.728 af
Pond B4B: Bioretention 4A	Peak Elev=440.54'	Storage=9,022 cf	Inflow=5.49 cfs	0.363 af
				Outflow=0.44 cfs
				0.162 af
Link 29L: DP-1			Inflow=42.34 cfs	7.320 af
			Primary=42.34 cfs	7.320 af
Link 30L: DP-2			Inflow=1.17 cfs	0.103 af
			Primary=1.17 cfs	0.103 af
Link 31L: DP-3			Inflow=0.03 cfs	0.017 af
			Primary=0.03 cfs	0.017 af
Link 32L: DP-4			Inflow=3.76 cfs	1.355 af
			Primary=3.76 cfs	1.355 af

240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

Prepared by Colliers Engineering & Design

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Link PDP5: PDP5

Inflow=3.09 cfs 0.788 af
Primary=3.09 cfs 0.788 af

Total Runoff Area = 112.456 ac Runoff Volume = 25.312 af Average Runoff Depth = 2.70"
53.84% Pervious = 60.551 ac 46.16% Impervious = 51.905 ac

Summary for Subcatchment 6S: PDA-1J

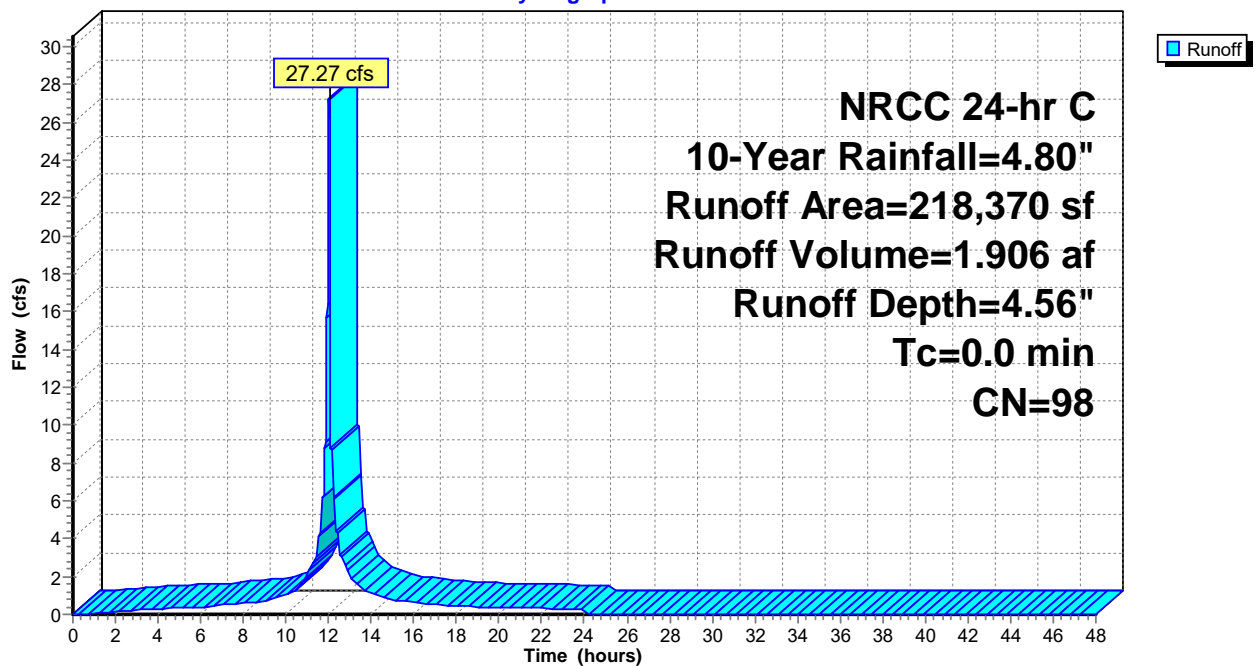
Runoff = 27.27 cfs @ 12.09 hrs, Volume= 1.906 af, Depth= 4.56"
 Routed to Pond 37P : FB 1i+J

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
218,370	98	Unconnected roofs, HSG D
218,370		100.00% Impervious Area
218,370		100.00% Unconnected

Subcatchment 6S: PDA-1J

Hydrograph



Hydrograph for Subcatchment 6S: PDA-1J

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	4.56	0.00
0.50	0.03	0.00	0.00	29.50	4.80	4.56	0.00
1.00	0.06	0.00	0.04	30.00	4.80	4.56	0.00
1.50	0.09	0.01	0.10	30.50	4.80	4.56	0.00
2.00	0.12	0.02	0.15	31.00	4.80	4.56	0.00
2.50	0.15	0.04	0.19	31.50	4.80	4.56	0.00
3.00	0.18	0.06	0.23	32.00	4.80	4.56	0.00
3.50	0.22	0.08	0.26	32.50	4.80	4.56	0.00
4.00	0.25	0.11	0.28	33.00	4.80	4.56	0.00
4.50	0.29	0.14	0.31	33.50	4.80	4.56	0.00
5.00	0.33	0.17	0.33	34.00	4.80	4.56	0.00
5.50	0.37	0.20	0.35	34.50	4.80	4.56	0.00
6.00	0.41	0.24	0.38	35.00	4.80	4.56	0.00
6.50	0.46	0.28	0.43	35.50	4.80	4.56	0.00
7.00	0.51	0.32	0.49	36.00	4.80	4.56	0.00
7.50	0.56	0.38	0.54	36.50	4.80	4.56	0.00
8.00	0.62	0.43	0.60	37.00	4.80	4.56	0.00
8.50	0.69	0.49	0.65	37.50	4.80	4.56	0.00
9.00	0.76	0.56	0.72	38.00	4.80	4.56	0.00
9.50	0.85	0.64	0.91	38.50	4.80	4.56	0.00
10.00	0.95	0.74	1.09	39.00	4.80	4.56	0.00
10.50	1.07	0.86	1.33	39.50	4.80	4.56	0.00
11.00	1.24	1.02	2.05	40.00	4.80	4.56	0.00
11.50	1.50	1.28	3.63	40.50	4.80	4.56	0.00
12.00	2.29	2.06	21.48	41.00	4.80	4.56	0.00
12.50	3.30	3.06	3.67	41.50	4.80	4.56	0.00
13.00	3.56	3.33	2.08	42.00	4.80	4.56	0.00
13.50	3.73	3.50	1.36	42.50	4.80	4.56	0.00
14.00	3.85	3.62	1.13	43.00	4.80	4.56	0.00
14.50	3.95	3.72	0.94	43.50	4.80	4.56	0.00
15.00	4.04	3.80	0.76	44.00	4.80	4.56	0.00
15.50	4.11	3.88	0.69	44.50	4.80	4.56	0.00
16.00	4.18	3.94	0.64	45.00	4.80	4.56	0.00
16.50	4.24	4.00	0.59	45.50	4.80	4.56	0.00
17.00	4.29	4.06	0.53	46.00	4.80	4.56	0.00
17.50	4.34	4.11	0.48	46.50	4.80	4.56	0.00
18.00	4.39	4.15	0.43	47.00	4.80	4.56	0.00
18.50	4.43	4.19	0.41	47.50	4.80	4.56	0.00
19.00	4.47	4.23	0.40	48.00	4.80	4.56	0.00
19.50	4.51	4.27	0.39				
20.00	4.55	4.31	0.37				
20.50	4.58	4.35	0.36				
21.00	4.62	4.38	0.35				
21.50	4.65	4.41	0.33				
22.00	4.68	4.45	0.32				
22.50	4.71	4.48	0.31				
23.00	4.74	4.51	0.29				
23.50	4.77	4.54	0.28				
24.00	4.80	4.56	0.14				
24.50	4.80	4.56	0.00				
25.00	4.80	4.56	0.00				
25.50	4.80	4.56	0.00				
26.00	4.80	4.56	0.00				
26.50	4.80	4.56	0.00				
27.00	4.80	4.56	0.00				
27.50	4.80	4.56	0.00				
28.00	4.80	4.56	0.00				
28.50	4.80	4.56	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 10-Year Rainfall=4.80"

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Summary for Subcatchment 26S: PDA-1D

Runoff = 15.93 cfs @ 12.13 hrs, Volume= 1.114 af, Depth= 3.79"
 Routed to Pond 60P : FB 1D

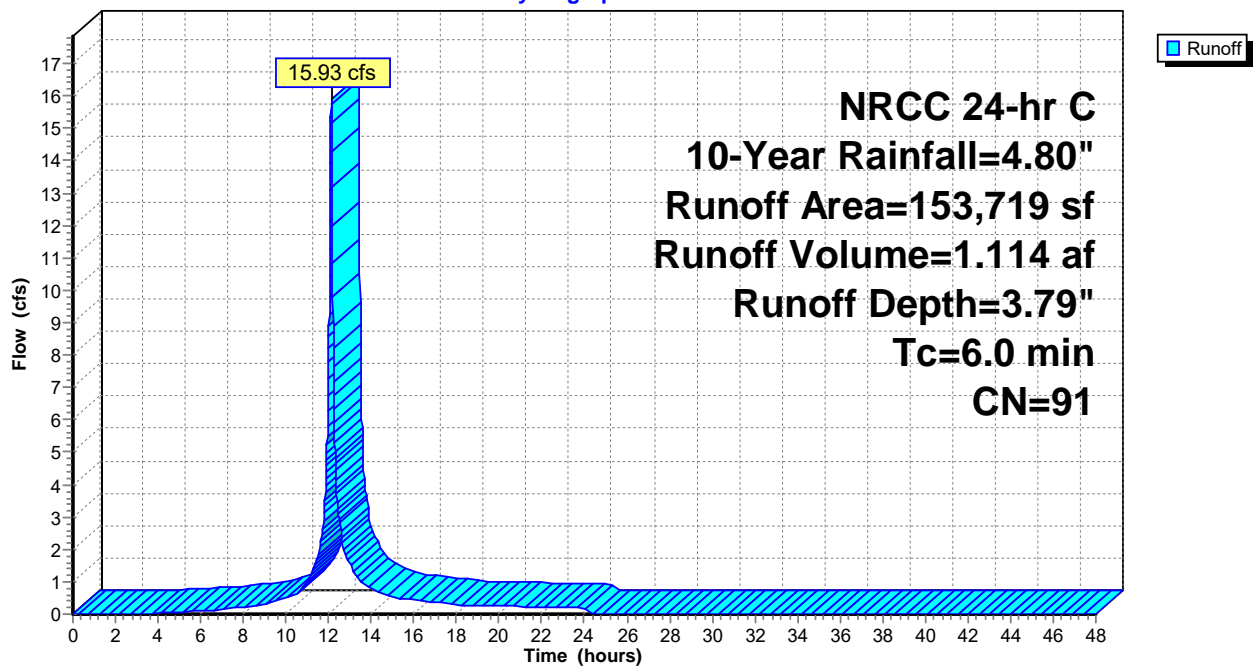
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
55,737	80	>75% Grass cover, Good, HSG D
271	39	>75% Grass cover, Good, HSG A
97,711	98	Paved parking, HSG D
153,719	91	Weighted Average
56,008		36.44% Pervious Area
97,711		63.56% Impervious Area

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

Subcatchment 26S: PDA-1D

Hydrograph



Hydrograph for Subcatchment 26S: PDA-1D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	3.79	0.00
0.50	0.03	0.00	0.00	29.50	4.80	3.79	0.00
1.00	0.06	0.00	0.00	30.00	4.80	3.79	0.00
1.50	0.09	0.00	0.00	30.50	4.80	3.79	0.00
2.00	0.12	0.00	0.00	31.00	4.80	3.79	0.00
2.50	0.15	0.00	0.00	31.50	4.80	3.79	0.00
3.00	0.18	0.00	0.00	32.00	4.80	3.79	0.00
3.50	0.22	0.00	0.01	32.50	4.80	3.79	0.00
4.00	0.25	0.00	0.02	33.00	4.80	3.79	0.00
4.50	0.29	0.01	0.04	33.50	4.80	3.79	0.00
5.00	0.33	0.02	0.06	34.00	4.80	3.79	0.00
5.50	0.37	0.03	0.08	34.50	4.80	3.79	0.00
6.00	0.41	0.04	0.09	35.00	4.80	3.79	0.00
6.50	0.46	0.05	0.12	35.50	4.80	3.79	0.00
7.00	0.51	0.07	0.15	36.00	4.80	3.79	0.00
7.50	0.56	0.10	0.19	36.50	4.80	3.79	0.00
8.00	0.62	0.13	0.22	37.00	4.80	3.79	0.00
8.50	0.69	0.16	0.26	37.50	4.80	3.79	0.00
9.00	0.76	0.20	0.30	38.00	4.80	3.79	0.00
9.50	0.85	0.26	0.40	38.50	4.80	3.79	0.00
10.00	0.95	0.32	0.52	39.00	4.80	3.79	0.00
10.50	1.07	0.41	0.64	39.50	4.80	3.79	0.00
11.00	1.24	0.53	1.02	40.00	4.80	3.79	0.00
11.50	1.50	0.74	1.73	40.50	4.80	3.79	0.00
12.00	2.29	1.42	8.21	41.00	4.80	3.79	0.00
12.50	3.30	2.35	2.88	41.50	4.80	3.79	0.00
13.00	3.56	2.60	1.53	42.00	4.80	3.79	0.00
13.50	3.73	2.76	0.99	42.50	4.80	3.79	0.00
14.00	3.85	2.88	0.78	43.00	4.80	3.79	0.00
14.50	3.95	2.97	0.66	43.50	4.80	3.79	0.00
15.00	4.04	3.05	0.53	44.00	4.80	3.79	0.00
15.50	4.11	3.12	0.48	44.50	4.80	3.79	0.00
16.00	4.18	3.19	0.44	45.00	4.80	3.79	0.00
16.50	4.24	3.24	0.40	45.50	4.80	3.79	0.00
17.00	4.29	3.30	0.37	46.00	4.80	3.79	0.00
17.50	4.34	3.35	0.33	46.50	4.80	3.79	0.00
18.00	4.39	3.39	0.30	47.00	4.80	3.79	0.00
18.50	4.43	3.43	0.28	47.50	4.80	3.79	0.00
19.00	4.47	3.47	0.27	48.00	4.80	3.79	0.00
19.50	4.51	3.51	0.26				
20.00	4.55	3.54	0.26				
20.50	4.58	3.58	0.25				
21.00	4.62	3.61	0.24				
21.50	4.65	3.64	0.23				
22.00	4.68	3.68	0.22				
22.50	4.71	3.71	0.21				
23.00	4.74	3.73	0.20				
23.50	4.77	3.76	0.19				
24.00	4.80	3.79	0.19				
24.50	4.80	3.79	0.00				
25.00	4.80	3.79	0.00				
25.50	4.80	3.79	0.00				
26.00	4.80	3.79	0.00				
26.50	4.80	3.79	0.00				
27.00	4.80	3.79	0.00				
27.50	4.80	3.79	0.00				
28.00	4.80	3.79	0.00				
28.50	4.80	3.79	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

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Summary for Subcatchment 27S: PDA-4B-B

Runoff = 4.44 cfs @ 12.13 hrs, Volume= 0.291 af, Depth= 2.29"
 Routed to Pond 29P : Bioretention 4B

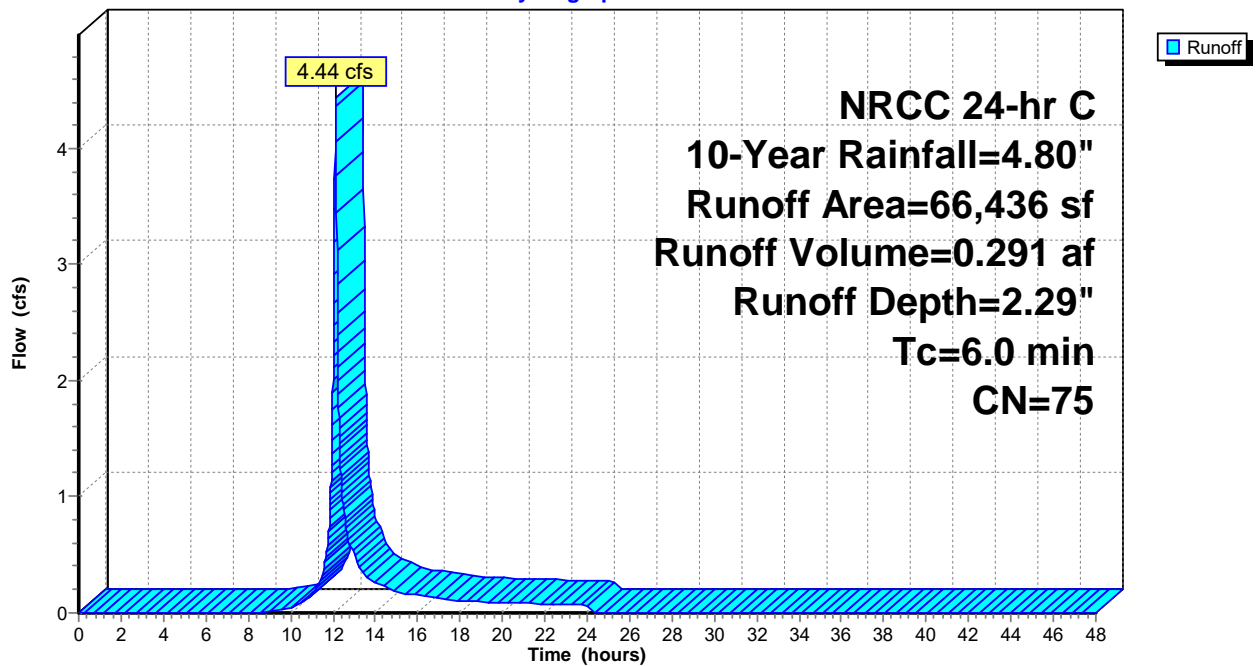
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
917	61	>75% Grass cover, Good, HSG B
57,533	80	>75% Grass cover, Good, HSG D
7,986	39	>75% Grass cover, Good, HSG A
66,436	75	Weighted Average
66,436		100.00% Pervious Area

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

Subcatchment 27S: PDA-4B-B

Hydrograph



Hydrograph for Subcatchment 27S: PDA-4B-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	2.29	0.00
0.50	0.03	0.00	0.00	29.50	4.80	2.29	0.00
1.00	0.06	0.00	0.00	30.00	4.80	2.29	0.00
1.50	0.09	0.00	0.00	30.50	4.80	2.29	0.00
2.00	0.12	0.00	0.00	31.00	4.80	2.29	0.00
2.50	0.15	0.00	0.00	31.50	4.80	2.29	0.00
3.00	0.18	0.00	0.00	32.00	4.80	2.29	0.00
3.50	0.22	0.00	0.00	32.50	4.80	2.29	0.00
4.00	0.25	0.00	0.00	33.00	4.80	2.29	0.00
4.50	0.29	0.00	0.00	33.50	4.80	2.29	0.00
5.00	0.33	0.00	0.00	34.00	4.80	2.29	0.00
5.50	0.37	0.00	0.00	34.50	4.80	2.29	0.00
6.00	0.41	0.00	0.00	35.00	4.80	2.29	0.00
6.50	0.46	0.00	0.00	35.50	4.80	2.29	0.00
7.00	0.51	0.00	0.00	36.00	4.80	2.29	0.00
7.50	0.56	0.00	0.00	36.50	4.80	2.29	0.00
8.00	0.62	0.00	0.00	37.00	4.80	2.29	0.00
8.50	0.69	0.00	0.00	37.50	4.80	2.29	0.00
9.00	0.76	0.00	0.01	38.00	4.80	2.29	0.00
9.50	0.85	0.01	0.03	38.50	4.80	2.29	0.00
10.00	0.95	0.02	0.05	39.00	4.80	2.29	0.00
10.50	1.07	0.04	0.08	39.50	4.80	2.29	0.00
11.00	1.24	0.08	0.15	40.00	4.80	2.29	0.00
11.50	1.50	0.17	0.32	40.50	4.80	2.29	0.00
12.00	2.29	0.53	2.01	41.00	4.80	2.29	0.00
12.50	3.30	1.16	0.90	41.50	4.80	2.29	0.00
13.00	3.56	1.35	0.50	42.00	4.80	2.29	0.00
13.50	3.73	1.47	0.33	42.50	4.80	2.29	0.00
14.00	3.85	1.56	0.26	43.00	4.80	2.29	0.00
14.50	3.95	1.63	0.22	43.50	4.80	2.29	0.00
15.00	4.04	1.70	0.18	44.00	4.80	2.29	0.00
15.50	4.11	1.75	0.16	44.50	4.80	2.29	0.00
16.00	4.18	1.80	0.15	45.00	4.80	2.29	0.00
16.50	4.24	1.85	0.14	45.50	4.80	2.29	0.00
17.00	4.29	1.89	0.13	46.00	4.80	2.29	0.00
17.50	4.34	1.93	0.12	46.50	4.80	2.29	0.00
18.00	4.39	1.96	0.10	47.00	4.80	2.29	0.00
18.50	4.43	2.00	0.10	47.50	4.80	2.29	0.00
19.00	4.47	2.03	0.10	48.00	4.80	2.29	0.00
19.50	4.51	2.06	0.09				
20.00	4.55	2.09	0.09				
20.50	4.58	2.12	0.09				
21.00	4.62	2.14	0.08				
21.50	4.65	2.17	0.08				
22.00	4.68	2.20	0.08				
22.50	4.71	2.22	0.07				
23.00	4.74	2.24	0.07				
23.50	4.77	2.27	0.07				
24.00	4.80	2.29	0.07				
24.50	4.80	2.29	0.00				
25.00	4.80	2.29	0.00				
25.50	4.80	2.29	0.00				
26.00	4.80	2.29	0.00				
26.50	4.80	2.29	0.00				
27.00	4.80	2.29	0.00				
27.50	4.80	2.29	0.00				
28.00	4.80	2.29	0.00				
28.50	4.80	2.29	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

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Summary for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Runoff = 42.30 cfs @ 12.35 hrs, Volume= 4.808 af, Depth= 2.12"
 Routed to Link 29L : DP-1

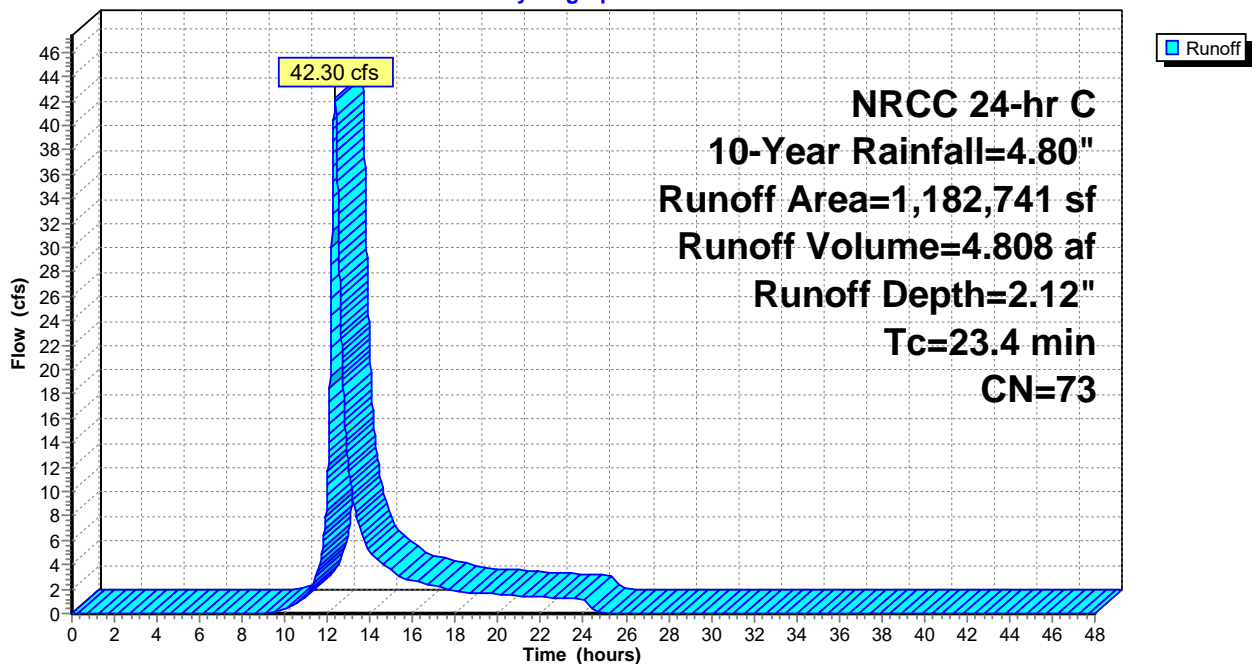
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
* 90,367	61	>75% Grass cover, Good, HSG B
99,079	39	>75% Grass cover, Good, HSG A
647,468	80	>75% Grass cover, Good, HSG D
45,280	32	Woods/grass comb., Good, HSG A
299,609	79	Woods/grass comb., Good, HSG D
938	89	Dirt roads, HSG D
1,182,741	73	Weighted Average
1,182,741		100.00% Pervious Area

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

Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

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Hydrograph for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	2.12	0.00
0.50	0.03	0.00	0.00	29.50	4.80	2.12	0.00
1.00	0.06	0.00	0.00	30.00	4.80	2.12	0.00
1.50	0.09	0.00	0.00	30.50	4.80	2.12	0.00
2.00	0.12	0.00	0.00	31.00	4.80	2.12	0.00
2.50	0.15	0.00	0.00	31.50	4.80	2.12	0.00
3.00	0.18	0.00	0.00	32.00	4.80	2.12	0.00
3.50	0.22	0.00	0.00	32.50	4.80	2.12	0.00
4.00	0.25	0.00	0.00	33.00	4.80	2.12	0.00
4.50	0.29	0.00	0.00	33.50	4.80	2.12	0.00
5.00	0.33	0.00	0.00	34.00	4.80	2.12	0.00
5.50	0.37	0.00	0.00	34.50	4.80	2.12	0.00
6.00	0.41	0.00	0.00	35.00	4.80	2.12	0.00
6.50	0.46	0.00	0.00	35.50	4.80	2.12	0.00
7.00	0.51	0.00	0.00	36.00	4.80	2.12	0.00
7.50	0.56	0.00	0.00	36.50	4.80	2.12	0.00
8.00	0.62	0.00	0.00	37.00	4.80	2.12	0.00
8.50	0.69	0.00	0.00	37.50	4.80	2.12	0.00
9.00	0.76	0.00	0.00	38.00	4.80	2.12	0.00
9.50	0.85	0.00	0.11	38.50	4.80	2.12	0.00
10.00	0.95	0.01	0.37	39.00	4.80	2.12	0.00
10.50	1.07	0.03	0.76	39.50	4.80	2.12	0.00
11.00	1.24	0.06	1.51	40.00	4.80	2.12	0.00
11.50	1.50	0.13	3.31	40.50	4.80	2.12	0.00
12.00	2.29	0.46	10.72	41.00	4.80	2.12	0.00
12.50	3.30	1.05	32.85	41.50	4.80	2.12	0.00
13.00	3.56	1.22	11.75	42.00	4.80	2.12	0.00
13.50	3.73	1.34	7.00	42.50	4.80	2.12	0.00
14.00	3.85	1.42	4.91	43.00	4.80	2.12	0.00
14.50	3.95	1.50	4.14	43.50	4.80	2.12	0.00
15.00	4.04	1.56	3.47	44.00	4.80	2.12	0.00
15.50	4.11	1.61	2.90	44.50	4.80	2.12	0.00
16.00	4.18	1.66	2.68	45.00	4.80	2.12	0.00
16.50	4.24	1.70	2.49	45.50	4.80	2.12	0.00
17.00	4.29	1.74	2.29	46.00	4.80	2.12	0.00
17.50	4.34	1.78	2.09	46.50	4.80	2.12	0.00
18.00	4.39	1.81	1.89	47.00	4.80	2.12	0.00
18.50	4.43	1.84	1.72	47.50	4.80	2.12	0.00
19.00	4.47	1.87	1.66	48.00	4.80	2.12	0.00
19.50	4.51	1.90	1.61				
20.00	4.55	1.93	1.57				
20.50	4.58	1.96	1.52				
21.00	4.62	1.98	1.47				
21.50	4.65	2.01	1.42				
22.00	4.68	2.04	1.37				
22.50	4.71	2.06	1.32				
23.00	4.74	2.08	1.26				
23.50	4.77	2.10	1.21				
24.00	4.80	2.12	1.16				
24.50	4.80	2.12	0.20				
25.00	4.80	2.12	0.01				
25.50	4.80	2.12	0.00				
26.00	4.80	2.12	0.00				
26.50	4.80	2.12	0.00				
27.00	4.80	2.12	0.00				
27.50	4.80	2.12	0.00				
28.00	4.80	2.12	0.00				
28.50	4.80	2.12	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

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Summary for Subcatchment 30S: PDA-1A

Runoff = 9.83 cfs @ 12.13 hrs, Volume= 0.659 af, Depth= 3.18"
 Routed to Pond 3P : Bioretention 1A

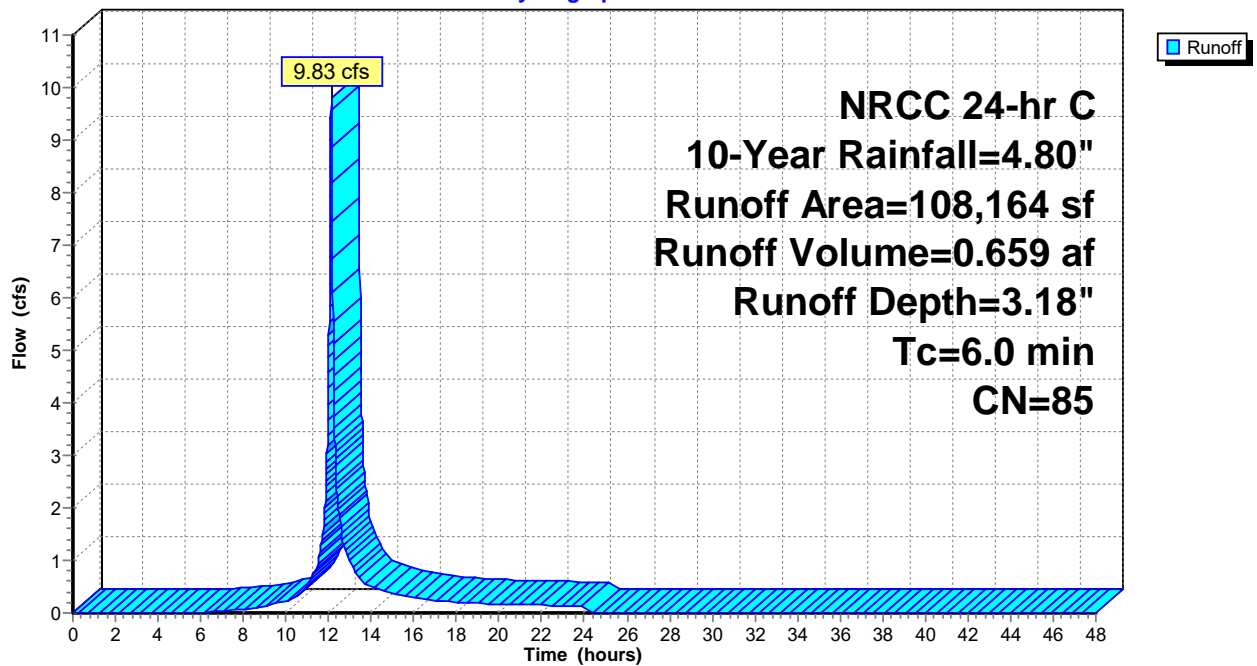
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
23,210	39	>75% Grass cover, Good, HSG A
84,954	98	Paved parking, HSG D
108,164	85	Weighted Average
23,210		21.46% Pervious Area
84,954		78.54% Impervious Area

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

Subcatchment 30S: PDA-1A

Hydrograph



Hydrograph for Subcatchment 30S: PDA-1A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	3.18	0.00
0.50	0.03	0.00	0.00	29.50	4.80	3.18	0.00
1.00	0.06	0.00	0.00	30.00	4.80	3.18	0.00
1.50	0.09	0.00	0.00	30.50	4.80	3.18	0.00
2.00	0.12	0.00	0.00	31.00	4.80	3.18	0.00
2.50	0.15	0.00	0.00	31.50	4.80	3.18	0.00
3.00	0.18	0.00	0.00	32.00	4.80	3.18	0.00
3.50	0.22	0.00	0.00	32.50	4.80	3.18	0.00
4.00	0.25	0.00	0.00	33.00	4.80	3.18	0.00
4.50	0.29	0.00	0.00	33.50	4.80	3.18	0.00
5.00	0.33	0.00	0.00	34.00	4.80	3.18	0.00
5.50	0.37	0.00	0.00	34.50	4.80	3.18	0.00
6.00	0.41	0.00	0.01	35.00	4.80	3.18	0.00
6.50	0.46	0.01	0.02	35.50	4.80	3.18	0.00
7.00	0.51	0.01	0.04	36.00	4.80	3.18	0.00
7.50	0.56	0.02	0.06	36.50	4.80	3.18	0.00
8.00	0.62	0.04	0.08	37.00	4.80	3.18	0.00
8.50	0.69	0.05	0.10	37.50	4.80	3.18	0.00
9.00	0.76	0.08	0.12	38.00	4.80	3.18	0.00
9.50	0.85	0.11	0.17	38.50	4.80	3.18	0.00
10.00	0.95	0.15	0.23	39.00	4.80	3.18	0.00
10.50	1.07	0.21	0.31	39.50	4.80	3.18	0.00
11.00	1.24	0.30	0.52	40.00	4.80	3.18	0.00
11.50	1.50	0.45	0.94	40.50	4.80	3.18	0.00
12.00	2.29	1.01	4.86	41.00	4.80	3.18	0.00
12.50	3.30	1.84	1.84	41.50	4.80	3.18	0.00
13.00	3.56	2.07	0.99	42.00	4.80	3.18	0.00
13.50	3.73	2.22	0.65	42.50	4.80	3.18	0.00
14.00	3.85	2.33	0.51	43.00	4.80	3.18	0.00
14.50	3.95	2.42	0.43	43.50	4.80	3.18	0.00
15.00	4.04	2.49	0.35	44.00	4.80	3.18	0.00
15.50	4.11	2.56	0.31	44.50	4.80	3.18	0.00
16.00	4.18	2.62	0.29	45.00	4.80	3.18	0.00
16.50	4.24	2.67	0.27	45.50	4.80	3.18	0.00
17.00	4.29	2.72	0.24	46.00	4.80	3.18	0.00
17.50	4.34	2.77	0.22	46.50	4.80	3.18	0.00
18.00	4.39	2.81	0.20	47.00	4.80	3.18	0.00
18.50	4.43	2.85	0.19	47.50	4.80	3.18	0.00
19.00	4.47	2.88	0.18	48.00	4.80	3.18	0.00
19.50	4.51	2.92	0.18				
20.00	4.55	2.95	0.17				
20.50	4.58	2.98	0.16				
21.00	4.62	3.02	0.16				
21.50	4.65	3.05	0.15				
22.00	4.68	3.08	0.15				
22.50	4.71	3.11	0.14				
23.00	4.74	3.13	0.13				
23.50	4.77	3.16	0.13				
24.00	4.80	3.18	0.12				
24.50	4.80	3.18	0.00				
25.00	4.80	3.18	0.00				
25.50	4.80	3.18	0.00				
26.00	4.80	3.18	0.00				
26.50	4.80	3.18	0.00				
27.00	4.80	3.18	0.00				
27.50	4.80	3.18	0.00				
28.00	4.80	3.18	0.00				
28.50	4.80	3.18	0.00				

240814_RDM Neelytown Drainage

Prepared by Colliers Engineering & Design

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NRCC 24-hr C 10-Year Rainfall=4.80"

Printed 8/12/2024

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Summary for Subcatchment 31S: PDA-1C

Runoff = 11.44 cfs @ 12.13 hrs, Volume= 0.793 af, Depth= 3.68"
 Routed to Pond 32P : FB 1C

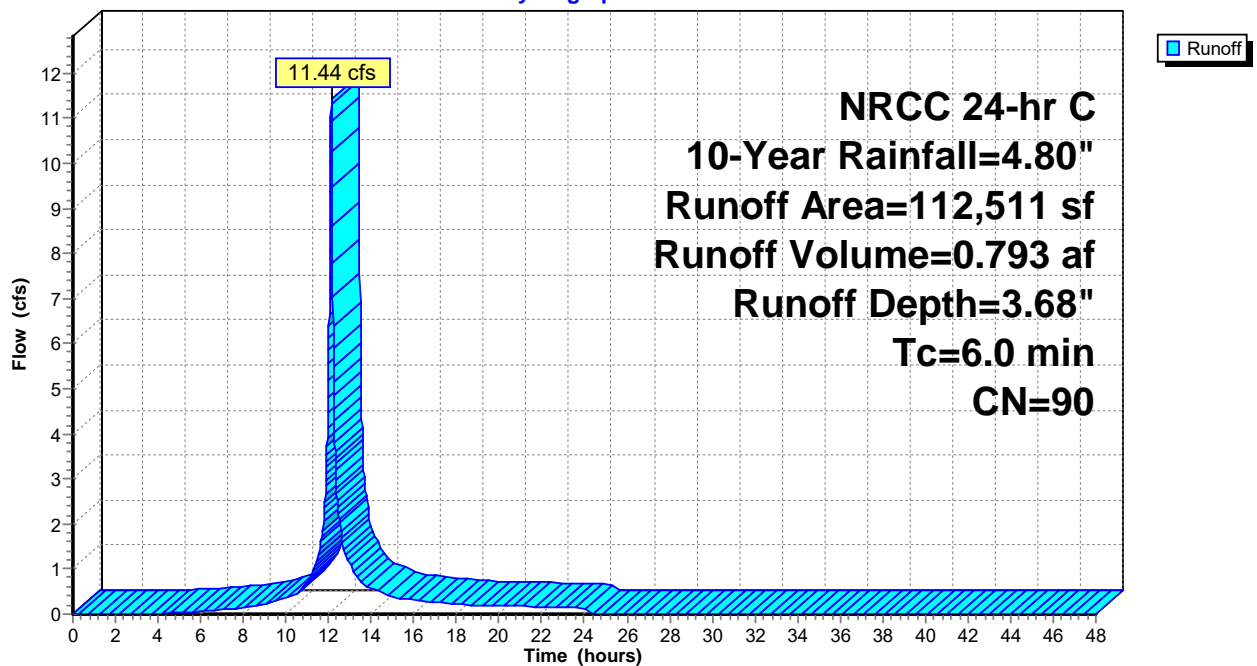
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
14,434	80	>75% Grass cover, Good, HSG D
10,394	39	>75% Grass cover, Good, HSG A
87,683	98	Paved parking, HSG D
112,511	90	Weighted Average
24,828		22.07% Pervious Area
87,683		77.93% Impervious Area

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

Subcatchment 31S: PDA-1C

Hydrograph



Hydrograph for Subcatchment 31S: PDA-1C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	3.68	0.00
0.50	0.03	0.00	0.00	29.50	4.80	3.68	0.00
1.00	0.06	0.00	0.00	30.00	4.80	3.68	0.00
1.50	0.09	0.00	0.00	30.50	4.80	3.68	0.00
2.00	0.12	0.00	0.00	31.00	4.80	3.68	0.00
2.50	0.15	0.00	0.00	31.50	4.80	3.68	0.00
3.00	0.18	0.00	0.00	32.00	4.80	3.68	0.00
3.50	0.22	0.00	0.00	32.50	4.80	3.68	0.00
4.00	0.25	0.00	0.01	33.00	4.80	3.68	0.00
4.50	0.29	0.00	0.02	33.50	4.80	3.68	0.00
5.00	0.33	0.01	0.03	34.00	4.80	3.68	0.00
5.50	0.37	0.02	0.04	34.50	4.80	3.68	0.00
6.00	0.41	0.03	0.06	35.00	4.80	3.68	0.00
6.50	0.46	0.04	0.08	35.50	4.80	3.68	0.00
7.00	0.51	0.06	0.10	36.00	4.80	3.68	0.00
7.50	0.56	0.08	0.12	36.50	4.80	3.68	0.00
8.00	0.62	0.11	0.15	37.00	4.80	3.68	0.00
8.50	0.69	0.14	0.17	37.50	4.80	3.68	0.00
9.00	0.76	0.18	0.20	38.00	4.80	3.68	0.00
9.50	0.85	0.22	0.27	38.50	4.80	3.68	0.00
10.00	0.95	0.29	0.35	39.00	4.80	3.68	0.00
10.50	1.07	0.37	0.44	39.50	4.80	3.68	0.00
11.00	1.24	0.48	0.71	40.00	4.80	3.68	0.00
11.50	1.50	0.69	1.22	40.50	4.80	3.68	0.00
12.00	2.29	1.34	5.86	41.00	4.80	3.68	0.00
12.50	3.30	2.26	2.08	41.50	4.80	3.68	0.00
13.00	3.56	2.51	1.11	42.00	4.80	3.68	0.00
13.50	3.73	2.66	0.72	42.50	4.80	3.68	0.00
14.00	3.85	2.78	0.57	43.00	4.80	3.68	0.00
14.50	3.95	2.88	0.48	43.50	4.80	3.68	0.00
15.00	4.04	2.96	0.39	44.00	4.80	3.68	0.00
15.50	4.11	3.02	0.34	44.50	4.80	3.68	0.00
16.00	4.18	3.09	0.32	45.00	4.80	3.68	0.00
16.50	4.24	3.14	0.29	45.50	4.80	3.68	0.00
17.00	4.29	3.20	0.27	46.00	4.80	3.68	0.00
17.50	4.34	3.25	0.24	46.50	4.80	3.68	0.00
18.00	4.39	3.29	0.22	47.00	4.80	3.68	0.00
18.50	4.43	3.33	0.20	47.50	4.80	3.68	0.00
19.00	4.47	3.37	0.20	48.00	4.80	3.68	0.00
19.50	4.51	3.40	0.19				
20.00	4.55	3.44	0.19				
20.50	4.58	3.47	0.18				
21.00	4.62	3.51	0.17				
21.50	4.65	3.54	0.17				
22.00	4.68	3.57	0.16				
22.50	4.71	3.60	0.15				
23.00	4.74	3.63	0.15				
23.50	4.77	3.66	0.14				
24.00	4.80	3.68	0.13				
24.50	4.80	3.68	0.00				
25.00	4.80	3.68	0.00				
25.50	4.80	3.68	0.00				
26.00	4.80	3.68	0.00				
26.50	4.80	3.68	0.00				
27.00	4.80	3.68	0.00				
27.50	4.80	3.68	0.00				
28.00	4.80	3.68	0.00				
28.50	4.80	3.68	0.00				

Summary for Subcatchment 34S: PDA-1K

Runoff = 0.06 cfs @ 12.25 hrs, Volume= 0.017 af, Depth= 0.34"
 Routed to Pond 63P : Det Pond 1K

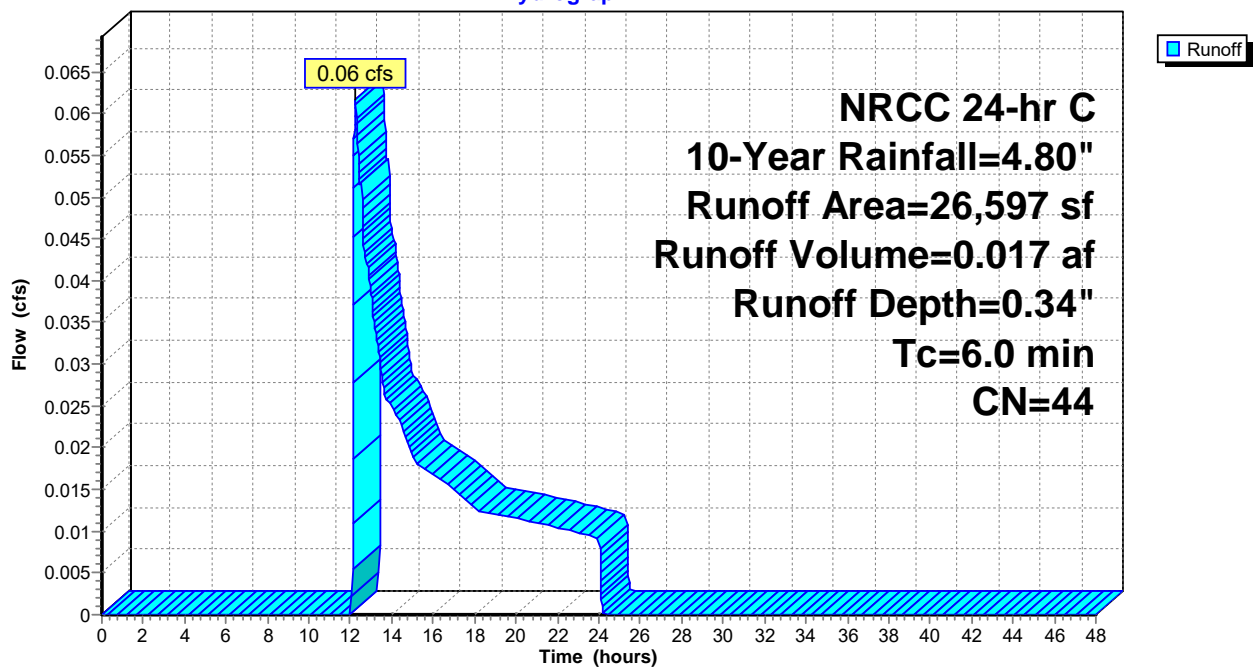
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
23,033	39	>75% Grass cover, Good, HSG A
3,564	80	>75% Grass cover, Good, HSG D
26,597	44	Weighted Average
26,597		100.00% Pervious Area

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

Subcatchment 34S: PDA-1K

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

Prepared by Colliers Engineering & Design

Printed 8/12/2024

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Hydrograph for Subcatchment 34S: PDA-1K

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.34	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.34	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.34	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.34	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.34	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.34	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.34	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.34	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.34	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.34	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.34	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.34	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.34	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.34	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.34	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.34	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.34	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.34	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.34	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.34	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.34	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.34	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.34	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.34	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.34	0.00
12.50	3.30	0.04	0.05	41.50	4.80	0.34	0.00
13.00	3.56	0.08	0.04	42.00	4.80	0.34	0.00
13.50	3.73	0.10	0.03	42.50	4.80	0.34	0.00
14.00	3.85	0.12	0.02	43.00	4.80	0.34	0.00
14.50	3.95	0.14	0.02	43.50	4.80	0.34	0.00
15.00	4.04	0.16	0.02	44.00	4.80	0.34	0.00
15.50	4.11	0.17	0.02	44.50	4.80	0.34	0.00
16.00	4.18	0.19	0.02	45.00	4.80	0.34	0.00
16.50	4.24	0.20	0.02	45.50	4.80	0.34	0.00
17.00	4.29	0.21	0.01	46.00	4.80	0.34	0.00
17.50	4.34	0.22	0.01	46.50	4.80	0.34	0.00
18.00	4.39	0.23	0.01	47.00	4.80	0.34	0.00
18.50	4.43	0.24	0.01	47.50	4.80	0.34	0.00
19.00	4.47	0.25	0.01	48.00	4.80	0.34	0.00
19.50	4.51	0.26	0.01				
20.00	4.55	0.27	0.01				
20.50	4.58	0.28	0.01				
21.00	4.62	0.29	0.01				
21.50	4.65	0.30	0.01				
22.00	4.68	0.31	0.01				
22.50	4.71	0.32	0.01				
23.00	4.74	0.32	0.01				
23.50	4.77	0.33	0.01				
24.00	4.80	0.34	0.01				
24.50	4.80	0.34	0.00				
25.00	4.80	0.34	0.00				
25.50	4.80	0.34	0.00				
26.00	4.80	0.34	0.00				
26.50	4.80	0.34	0.00				
27.00	4.80	0.34	0.00				
27.50	4.80	0.34	0.00				
28.00	4.80	0.34	0.00				
28.50	4.80	0.34	0.00				

Summary for Subcatchment 35S: PDA-2U

Runoff = 1.17 cfs @ 12.15 hrs, Volume= 0.103 af, Depth= 0.72"
 Routed to Link 30L : DP-2

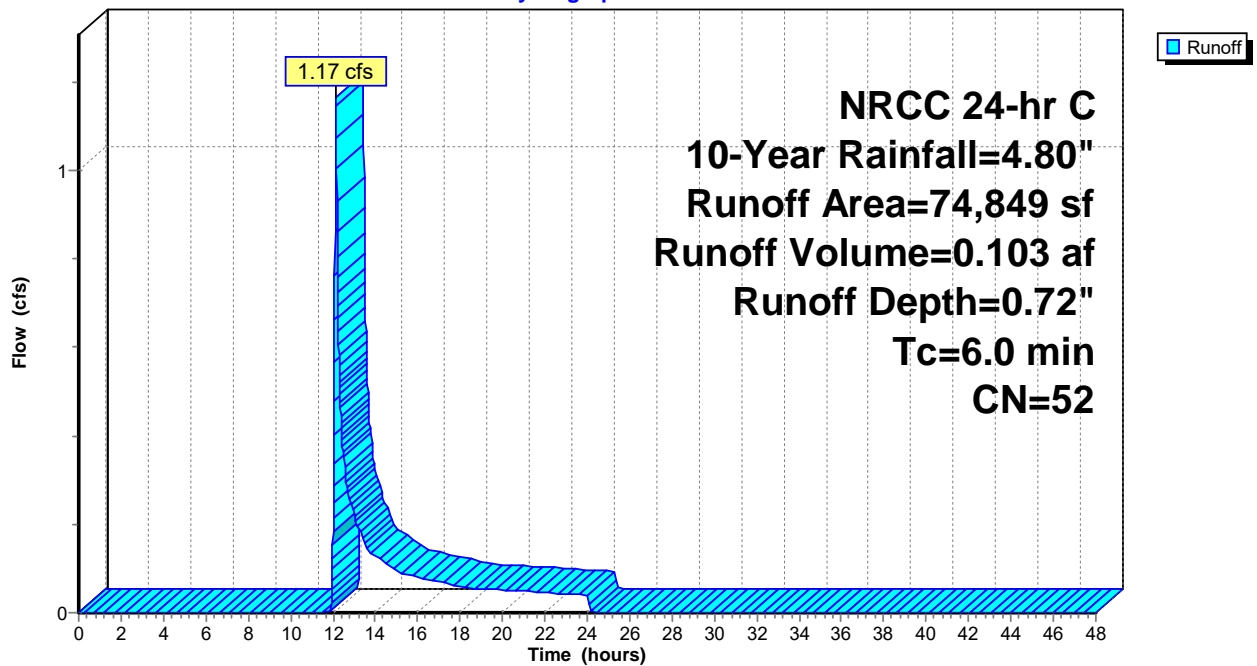
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
24,466	80	>75% Grass cover, Good, HSG D
50,383	39	>75% Grass cover, Good, HSG A
74,849	52	Weighted Average
74,849		100.00% Pervious Area

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

Subcatchment 35S: PDA-2U

Hydrograph



Hydrograph for Subcatchment 35S: PDA-2U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.72	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.72	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.72	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.72	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.72	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.72	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.72	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.72	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.72	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.72	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.72	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.72	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.72	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.72	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.72	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.72	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.72	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.72	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.72	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.72	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.72	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.72	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.72	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.72	0.00
12.00	2.29	0.02	0.18	41.00	4.80	0.72	0.00
12.50	3.30	0.20	0.36	41.50	4.80	0.72	0.00
13.00	3.56	0.27	0.22	42.00	4.80	0.72	0.00
13.50	3.73	0.32	0.16	42.50	4.80	0.72	0.00
14.00	3.85	0.36	0.13	43.00	4.80	0.72	0.00
14.50	3.95	0.39	0.11	43.50	4.80	0.72	0.00
15.00	4.04	0.42	0.09	44.00	4.80	0.72	0.00
15.50	4.11	0.45	0.09	44.50	4.80	0.72	0.00
16.00	4.18	0.47	0.08	45.00	4.80	0.72	0.00
16.50	4.24	0.49	0.08	45.50	4.80	0.72	0.00
17.00	4.29	0.51	0.07	46.00	4.80	0.72	0.00
17.50	4.34	0.53	0.06	46.50	4.80	0.72	0.00
18.00	4.39	0.55	0.06	47.00	4.80	0.72	0.00
18.50	4.43	0.56	0.06	47.50	4.80	0.72	0.00
19.00	4.47	0.58	0.05	48.00	4.80	0.72	0.00
19.50	4.51	0.60	0.05				
20.00	4.55	0.61	0.05				
20.50	4.58	0.63	0.05				
21.00	4.62	0.64	0.05				
21.50	4.65	0.65	0.05				
22.00	4.68	0.67	0.05				
22.50	4.71	0.68	0.04				
23.00	4.74	0.69	0.04				
23.50	4.77	0.70	0.04				
24.00	4.80	0.72	0.04				
24.50	4.80	0.72	0.00				
25.00	4.80	0.72	0.00				
25.50	4.80	0.72	0.00				
26.00	4.80	0.72	0.00				
26.50	4.80	0.72	0.00				
27.00	4.80	0.72	0.00				
27.50	4.80	0.72	0.00				
28.00	4.80	0.72	0.00				
28.50	4.80	0.72	0.00				

Summary for Subcatchment 36S: PDA-3U

Runoff = 0.03 cfs @ 13.04 hrs, Volume= 0.017 af, Depth= 0.16"
 Routed to Link 31L : DP-3

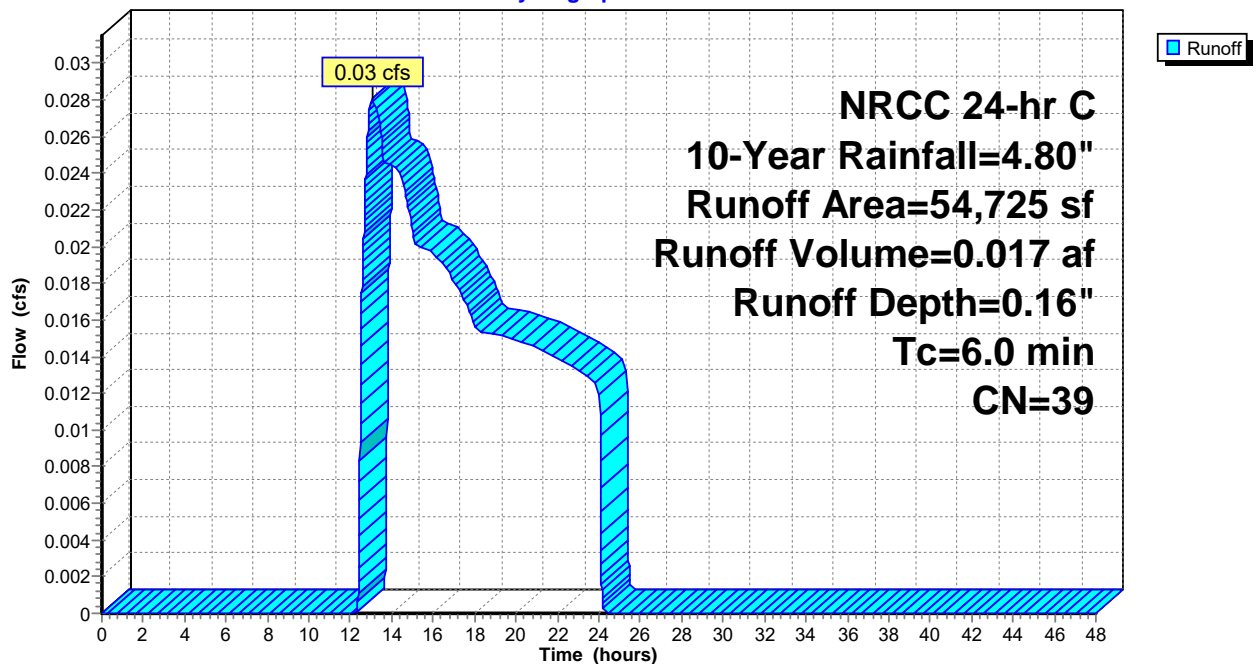
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
54,725	39	>75% Grass cover, Good, HSG A
54,725		100.00% Pervious Area

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

Subcatchment 36S: PDA-3U

Hydrograph



Hydrograph for Subcatchment 36S: PDA-3U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.16	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.16	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.16	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.16	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.16	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.16	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.16	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.16	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.16	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.16	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.16	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.16	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.16	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.16	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.16	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.16	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.16	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.16	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.16	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.16	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.16	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.16	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.16	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.16	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.16	0.00
12.50	3.30	0.00	0.01	41.50	4.80	0.16	0.00
13.00	3.56	0.01	0.03	42.00	4.80	0.16	0.00
13.50	3.73	0.02	0.03	42.50	4.80	0.16	0.00
14.00	3.85	0.03	0.02	43.00	4.80	0.16	0.00
14.50	3.95	0.04	0.02	43.50	4.80	0.16	0.00
15.00	4.04	0.05	0.02	44.00	4.80	0.16	0.00
15.50	4.11	0.06	0.02	44.50	4.80	0.16	0.00
16.00	4.18	0.07	0.02	45.00	4.80	0.16	0.00
16.50	4.24	0.07	0.02	45.50	4.80	0.16	0.00
17.00	4.29	0.08	0.02	46.00	4.80	0.16	0.00
17.50	4.34	0.09	0.02	46.50	4.80	0.16	0.00
18.00	4.39	0.09	0.02	47.00	4.80	0.16	0.00
18.50	4.43	0.10	0.02	47.50	4.80	0.16	0.00
19.00	4.47	0.11	0.02	48.00	4.80	0.16	0.00
19.50	4.51	0.11	0.02				
20.00	4.55	0.12	0.01				
20.50	4.58	0.12	0.01				
21.00	4.62	0.13	0.01				
21.50	4.65	0.14	0.01				
22.00	4.68	0.14	0.01				
22.50	4.71	0.15	0.01				
23.00	4.74	0.15	0.01				
23.50	4.77	0.16	0.01				
24.00	4.80	0.16	0.01				
24.50	4.80	0.16	0.00				
25.00	4.80	0.16	0.00				
25.50	4.80	0.16	0.00				
26.00	4.80	0.16	0.00				
26.50	4.80	0.16	0.00				
27.00	4.80	0.16	0.00				
27.50	4.80	0.16	0.00				
28.00	4.80	0.16	0.00				
28.50	4.80	0.16	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment 37S: PDA-1I

Runoff = 14.49 cfs @ 12.13 hrs, Volume= 0.960 af, Depth= 2.90"
 Routed to Pond 37P : FB 1i+J

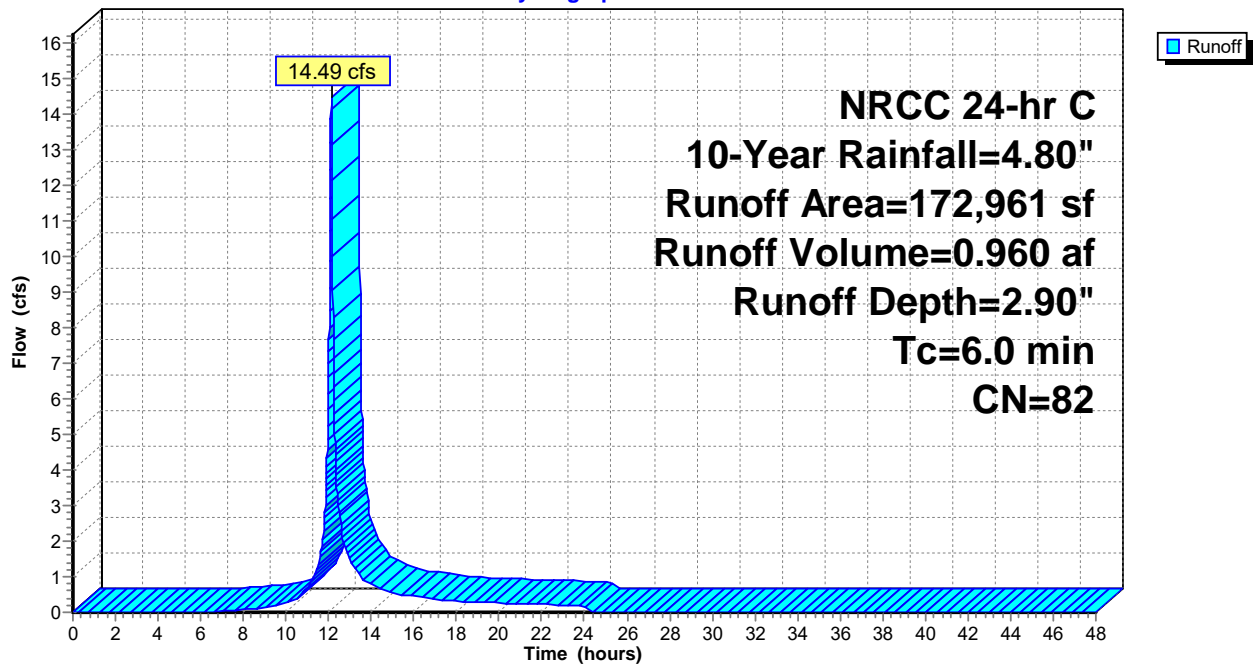
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
42,540	61	>75% Grass cover, Good, HSG B
16,570	39	>75% Grass cover, Good, HSG A
14,535	80	>75% Grass cover, Good, HSG D
99,316	98	Paved parking, HSG D
172,961	82	Weighted Average
73,645		42.58% Pervious Area
99,316		57.42% Impervious Area

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

Subcatchment 37S: PDA-1I

Hydrograph



Hydrograph for Subcatchment 37S: PDA-11

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	2.90	0.00
0.50	0.03	0.00	0.00	29.50	4.80	2.90	0.00
1.00	0.06	0.00	0.00	30.00	4.80	2.90	0.00
1.50	0.09	0.00	0.00	30.50	4.80	2.90	0.00
2.00	0.12	0.00	0.00	31.00	4.80	2.90	0.00
2.50	0.15	0.00	0.00	31.50	4.80	2.90	0.00
3.00	0.18	0.00	0.00	32.00	4.80	2.90	0.00
3.50	0.22	0.00	0.00	32.50	4.80	2.90	0.00
4.00	0.25	0.00	0.00	33.00	4.80	2.90	0.00
4.50	0.29	0.00	0.00	33.50	4.80	2.90	0.00
5.00	0.33	0.00	0.00	34.00	4.80	2.90	0.00
5.50	0.37	0.00	0.00	34.50	4.80	2.90	0.00
6.00	0.41	0.00	0.00	35.00	4.80	2.90	0.00
6.50	0.46	0.00	0.00	35.50	4.80	2.90	0.00
7.00	0.51	0.00	0.02	36.00	4.80	2.90	0.00
7.50	0.56	0.01	0.04	36.50	4.80	2.90	0.00
8.00	0.62	0.01	0.07	37.00	4.80	2.90	0.00
8.50	0.69	0.03	0.10	37.50	4.80	2.90	0.00
9.00	0.76	0.04	0.14	38.00	4.80	2.90	0.00
9.50	0.85	0.06	0.20	38.50	4.80	2.90	0.00
10.00	0.95	0.10	0.29	39.00	4.80	2.90	0.00
10.50	1.07	0.14	0.39	39.50	4.80	2.90	0.00
11.00	1.24	0.21	0.68	40.00	4.80	2.90	0.00
11.50	1.50	0.35	1.28	40.50	4.80	2.90	0.00
12.00	2.29	0.84	7.00	41.00	4.80	2.90	0.00
12.50	3.30	1.62	2.78	41.50	4.80	2.90	0.00
13.00	3.56	1.83	1.50	42.00	4.80	2.90	0.00
13.50	3.73	1.97	0.99	42.50	4.80	2.90	0.00
14.00	3.85	2.08	0.78	43.00	4.80	2.90	0.00
14.50	3.95	2.16	0.66	43.50	4.80	2.90	0.00
15.00	4.04	2.24	0.54	44.00	4.80	2.90	0.00
15.50	4.11	2.30	0.48	44.50	4.80	2.90	0.00
16.00	4.18	2.35	0.44	45.00	4.80	2.90	0.00
16.50	4.24	2.41	0.41	45.50	4.80	2.90	0.00
17.00	4.29	2.46	0.37	46.00	4.80	2.90	0.00
17.50	4.34	2.50	0.34	46.50	4.80	2.90	0.00
18.00	4.39	2.54	0.30	47.00	4.80	2.90	0.00
18.50	4.43	2.57	0.29	47.50	4.80	2.90	0.00
19.00	4.47	2.61	0.28	48.00	4.80	2.90	0.00
19.50	4.51	2.64	0.27				
20.00	4.55	2.68	0.26				
20.50	4.58	2.71	0.25				
21.00	4.62	2.74	0.24				
21.50	4.65	2.77	0.23				
22.00	4.68	2.80	0.23				
22.50	4.71	2.83	0.22				
23.00	4.74	2.85	0.21				
23.50	4.77	2.88	0.20				
24.00	4.80	2.90	0.19				
24.50	4.80	2.90	0.00				
25.00	4.80	2.90	0.00				
25.50	4.80	2.90	0.00				
26.00	4.80	2.90	0.00				
26.50	4.80	2.90	0.00				
27.00	4.80	2.90	0.00				
27.50	4.80	2.90	0.00				
28.00	4.80	2.90	0.00				
28.50	4.80	2.90	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

Prepared by Colliers Engineering & Design

Printed 8/12/2024

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Summary for Subcatchment 38S: PDA-4U

Runoff = 1.08 cfs @ 12.17 hrs, Volume= 0.235 af, Depth= 0.38"
 Routed to Link 32L : DP-4

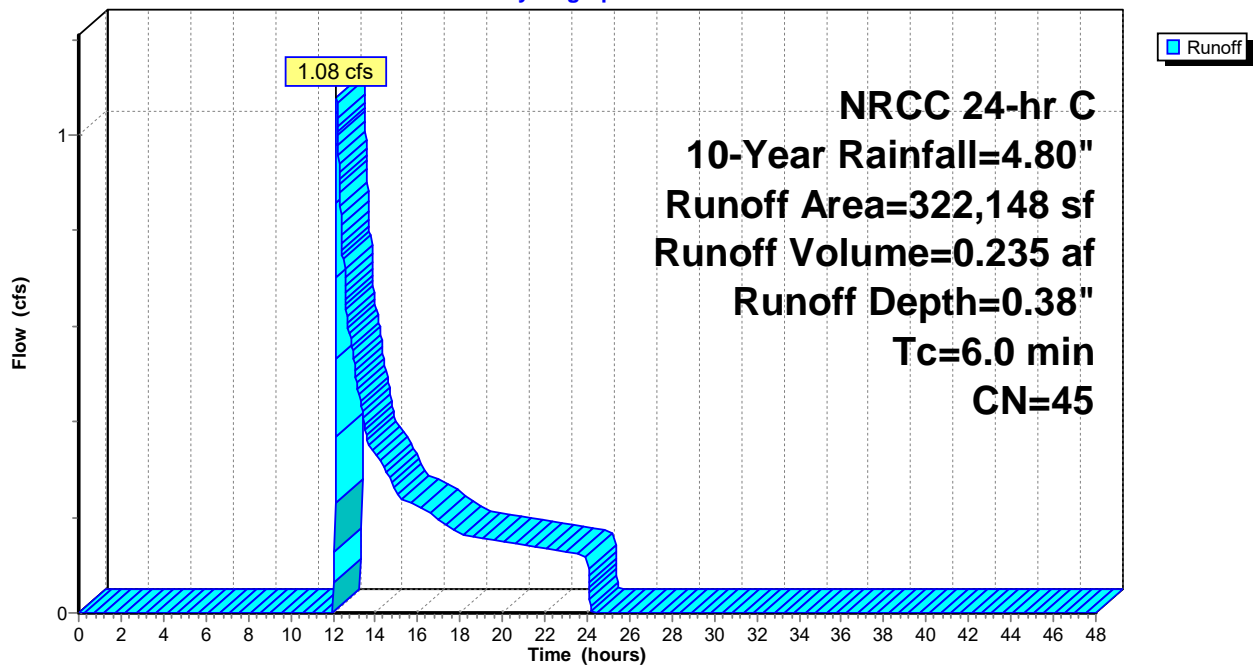
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
289,660	39	>75% Grass cover, Good, HSG A
32,488	98	Paved parking, HSG D
322,148	45	Weighted Average
289,660		89.92% Pervious Area
32,488		10.08% Impervious Area

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

Subcatchment 38S: PDA-4U

Hydrograph



Hydrograph for Subcatchment 38S: PDA-4U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.38	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.38	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.38	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.38	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.38	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.38	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.38	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.38	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.38	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.38	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.38	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.38	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.38	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.38	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.38	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.38	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.38	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.38	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.38	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.38	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.38	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.38	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.38	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.38	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.38	0.00
12.50	3.30	0.06	0.74	41.50	4.80	0.38	0.00
13.00	3.56	0.09	0.53	42.00	4.80	0.38	0.00
13.50	3.73	0.12	0.39	42.50	4.80	0.38	0.00
14.00	3.85	0.15	0.33	43.00	4.80	0.38	0.00
14.50	3.95	0.17	0.30	43.50	4.80	0.38	0.00
15.00	4.04	0.18	0.25	44.00	4.80	0.38	0.00
15.50	4.11	0.20	0.23	44.50	4.80	0.38	0.00
16.00	4.18	0.21	0.22	45.00	4.80	0.38	0.00
16.50	4.24	0.23	0.21	45.50	4.80	0.38	0.00
17.00	4.29	0.24	0.20	46.00	4.80	0.38	0.00
17.50	4.34	0.26	0.18	46.50	4.80	0.38	0.00
18.00	4.39	0.27	0.17	47.00	4.80	0.38	0.00
18.50	4.43	0.28	0.16	47.50	4.80	0.38	0.00
19.00	4.47	0.29	0.16	48.00	4.80	0.38	0.00
19.50	4.51	0.30	0.15				
20.00	4.55	0.31	0.15				
20.50	4.58	0.32	0.15				
21.00	4.62	0.33	0.14				
21.50	4.65	0.34	0.14				
22.00	4.68	0.35	0.14				
22.50	4.71	0.36	0.13				
23.00	4.74	0.36	0.13				
23.50	4.77	0.37	0.12				
24.00	4.80	0.38	0.12				
24.50	4.80	0.38	0.00				
25.00	4.80	0.38	0.00				
25.50	4.80	0.38	0.00				
26.00	4.80	0.38	0.00				
26.50	4.80	0.38	0.00				
27.00	4.80	0.38	0.00				
27.50	4.80	0.38	0.00				
28.00	4.80	0.38	0.00				
28.50	4.80	0.38	0.00				

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NRCC 24-hr C 10-Year Rainfall=4.80"

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Summary for Subcatchment 39S: PDA-5U

Runoff = 3.09 cfs @ 12.14 hrs, Volume= 0.221 af, Depth= 1.12"
 Routed to Link PDP5 : PDP5

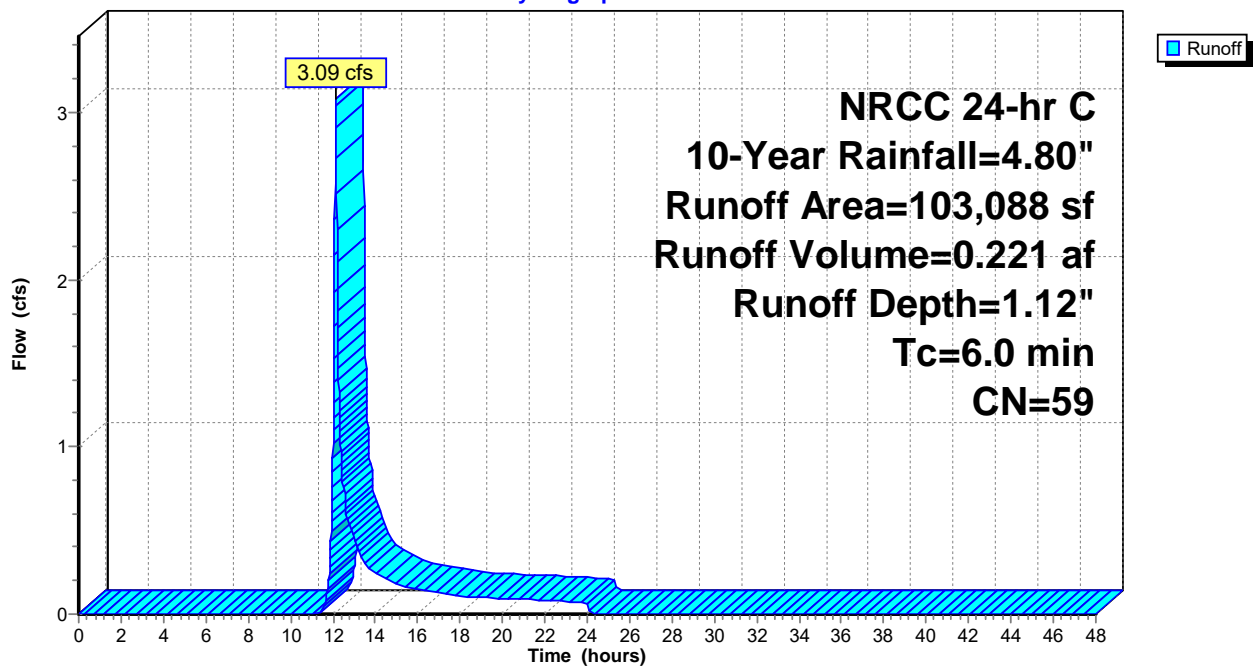
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
47,352	39	>75% Grass cover, Good, HSG A
21,707	98	Paved parking, HSG D
34,029	61	>75% Grass cover, Good, HSG B
103,088	59	Weighted Average
81,381		78.94% Pervious Area
21,707		21.06% Impervious Area

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

Subcatchment 39S: PDA-5U

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

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Hydrograph for Subcatchment 39S: PDA-5U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	1.12	0.00
0.50	0.03	0.00	0.00	29.50	4.80	1.12	0.00
1.00	0.06	0.00	0.00	30.00	4.80	1.12	0.00
1.50	0.09	0.00	0.00	30.50	4.80	1.12	0.00
2.00	0.12	0.00	0.00	31.00	4.80	1.12	0.00
2.50	0.15	0.00	0.00	31.50	4.80	1.12	0.00
3.00	0.18	0.00	0.00	32.00	4.80	1.12	0.00
3.50	0.22	0.00	0.00	32.50	4.80	1.12	0.00
4.00	0.25	0.00	0.00	33.00	4.80	1.12	0.00
4.50	0.29	0.00	0.00	33.50	4.80	1.12	0.00
5.00	0.33	0.00	0.00	34.00	4.80	1.12	0.00
5.50	0.37	0.00	0.00	34.50	4.80	1.12	0.00
6.00	0.41	0.00	0.00	35.00	4.80	1.12	0.00
6.50	0.46	0.00	0.00	35.50	4.80	1.12	0.00
7.00	0.51	0.00	0.00	36.00	4.80	1.12	0.00
7.50	0.56	0.00	0.00	36.50	4.80	1.12	0.00
8.00	0.62	0.00	0.00	37.00	4.80	1.12	0.00
8.50	0.69	0.00	0.00	37.50	4.80	1.12	0.00
9.00	0.76	0.00	0.00	38.00	4.80	1.12	0.00
9.50	0.85	0.00	0.00	38.50	4.80	1.12	0.00
10.00	0.95	0.00	0.00	39.00	4.80	1.12	0.00
10.50	1.07	0.00	0.00	39.50	4.80	1.12	0.00
11.00	1.24	0.00	0.00	40.00	4.80	1.12	0.00
11.50	1.50	0.00	0.02	40.50	4.80	1.12	0.00
12.00	2.29	0.10	1.02	41.00	4.80	1.12	0.00
12.50	3.30	0.41	0.77	41.50	4.80	1.12	0.00
13.00	3.56	0.52	0.45	42.00	4.80	1.12	0.00
13.50	3.73	0.59	0.31	42.50	4.80	1.12	0.00
14.00	3.85	0.64	0.25	43.00	4.80	1.12	0.00
14.50	3.95	0.69	0.21	43.50	4.80	1.12	0.00
15.00	4.04	0.73	0.18	44.00	4.80	1.12	0.00
15.50	4.11	0.77	0.16	44.50	4.80	1.12	0.00
16.00	4.18	0.80	0.15	45.00	4.80	1.12	0.00
16.50	4.24	0.83	0.14	45.50	4.80	1.12	0.00
17.00	4.29	0.86	0.13	46.00	4.80	1.12	0.00
17.50	4.34	0.88	0.12	46.50	4.80	1.12	0.00
18.00	4.39	0.90	0.11	47.00	4.80	1.12	0.00
18.50	4.43	0.93	0.10	47.50	4.80	1.12	0.00
19.00	4.47	0.95	0.10	48.00	4.80	1.12	0.00
19.50	4.51	0.97	0.10				
20.00	4.55	0.99	0.09				
20.50	4.58	1.01	0.09				
21.00	4.62	1.02	0.09				
21.50	4.65	1.04	0.09				
22.00	4.68	1.06	0.08				
22.50	4.71	1.08	0.08				
23.00	4.74	1.09	0.08				
23.50	4.77	1.11	0.07				
24.00	4.80	1.12	0.07				
24.50	4.80	1.12	0.00				
25.00	4.80	1.12	0.00				
25.50	4.80	1.12	0.00				
26.00	4.80	1.12	0.00				
26.50	4.80	1.12	0.00				
27.00	4.80	1.12	0.00				
27.50	4.80	1.12	0.00				
28.00	4.80	1.12	0.00				
28.50	4.80	1.12	0.00				

Summary for Subcatchment 40S: PDA-i+J-FB

Runoff = 0.09 cfs @ 12.16 hrs, Volume= 0.012 af, Depth= 0.47"
 Routed to Pond 37P : FB 1i+J

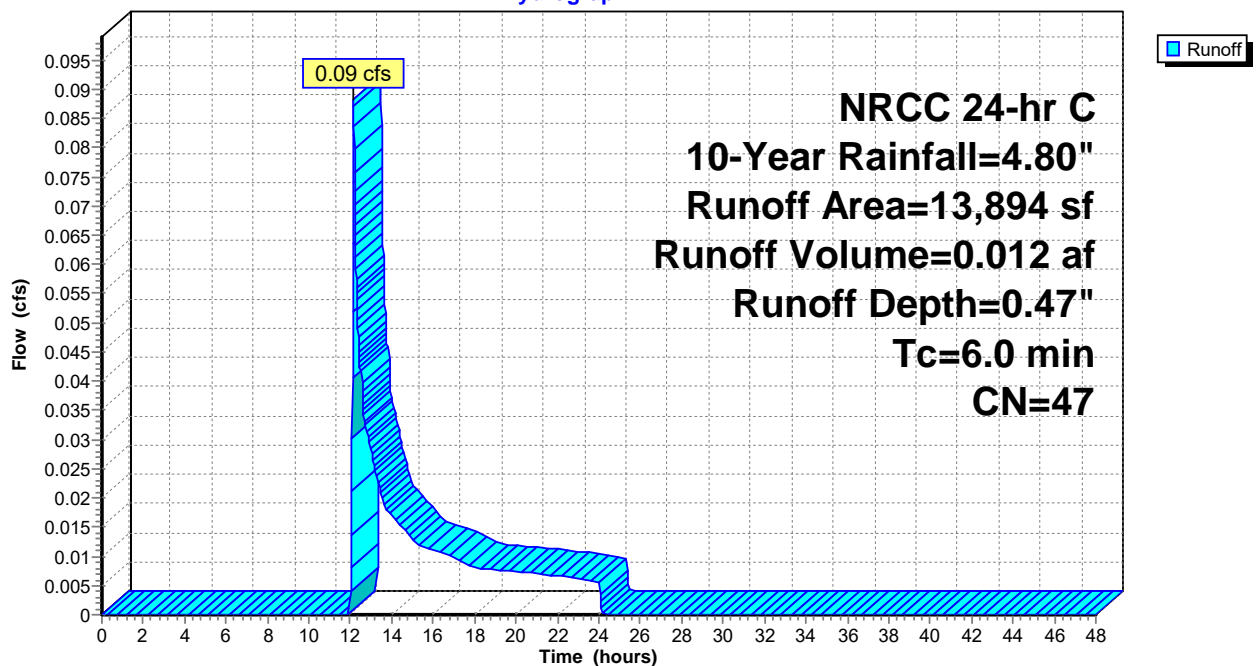
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
8,901	39	>75% Grass cover, Good, HSG A
4,993	61	>75% Grass cover, Good, HSG B
13,894	47	Weighted Average
13,894		100.00% Pervious Area

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

Subcatchment 40S: PDA-i+J-FB

Hydrograph



Hydrograph for Subcatchment 40S: PDA-i+J-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.47	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.47	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.47	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.47	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.47	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.47	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.47	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.47	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.47	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.47	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.47	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.47	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.47	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.47	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.47	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.47	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.47	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.47	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.47	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.47	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.47	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.47	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.47	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.47	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.47	0.00
12.50	3.30	0.09	0.04	41.50	4.80	0.47	0.00
13.00	3.56	0.14	0.03	42.00	4.80	0.47	0.00
13.50	3.73	0.17	0.02	42.50	4.80	0.47	0.00
14.00	3.85	0.20	0.02	43.00	4.80	0.47	0.00
14.50	3.95	0.22	0.02	43.50	4.80	0.47	0.00
15.00	4.04	0.24	0.01	44.00	4.80	0.47	0.00
15.50	4.11	0.26	0.01	44.50	4.80	0.47	0.00
16.00	4.18	0.28	0.01	45.00	4.80	0.47	0.00
16.50	4.24	0.30	0.01	45.50	4.80	0.47	0.00
17.00	4.29	0.31	0.01	46.00	4.80	0.47	0.00
17.50	4.34	0.33	0.01	46.50	4.80	0.47	0.00
18.00	4.39	0.34	0.01	47.00	4.80	0.47	0.00
18.50	4.43	0.35	0.01	47.50	4.80	0.47	0.00
19.00	4.47	0.36	0.01	48.00	4.80	0.47	0.00
19.50	4.51	0.38	0.01				
20.00	4.55	0.39	0.01				
20.50	4.58	0.40	0.01				
21.00	4.62	0.41	0.01				
21.50	4.65	0.42	0.01				
22.00	4.68	0.43	0.01				
22.50	4.71	0.44	0.01				
23.00	4.74	0.45	0.01				
23.50	4.77	0.46	0.01				
24.00	4.80	0.47	0.01				
24.50	4.80	0.47	0.00				
25.00	4.80	0.47	0.00				
25.50	4.80	0.47	0.00				
26.00	4.80	0.47	0.00				
26.50	4.80	0.47	0.00				
27.00	4.80	0.47	0.00				
27.50	4.80	0.47	0.00				
28.00	4.80	0.47	0.00				
28.50	4.80	0.47	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment 41S: PDA-5A

Runoff = 13.93 cfs @ 12.13 hrs, Volume= 0.913 af, Depth= 2.21"
 Routed to Pond 39P : FB 5A

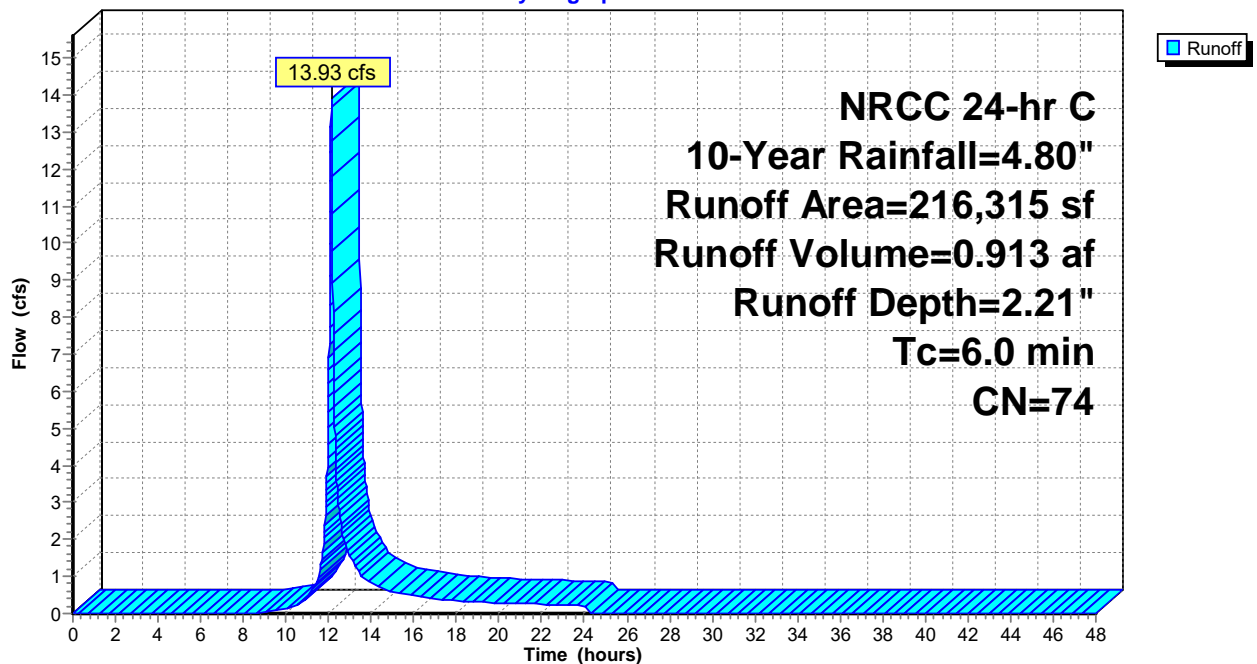
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
40,852	98	Paved parking, HSG D
78,273	61	>75% Grass cover, Good, HSG B
37,290	39	>75% Grass cover, Good, HSG A
59,900	98	Unconnected roofs, HSG D
216,315	74	Weighted Average
115,563		53.42% Pervious Area
100,752		46.58% Impervious Area
59,900		59.45% Unconnected

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

Subcatchment 41S: PDA-5A

Hydrograph



Hydrograph for Subcatchment 41S: PDA-5A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	2.21	0.00
0.50	0.03	0.00	0.00	29.50	4.80	2.21	0.00
1.00	0.06	0.00	0.00	30.00	4.80	2.21	0.00
1.50	0.09	0.00	0.00	30.50	4.80	2.21	0.00
2.00	0.12	0.00	0.00	31.00	4.80	2.21	0.00
2.50	0.15	0.00	0.00	31.50	4.80	2.21	0.00
3.00	0.18	0.00	0.00	32.00	4.80	2.21	0.00
3.50	0.22	0.00	0.00	32.50	4.80	2.21	0.00
4.00	0.25	0.00	0.00	33.00	4.80	2.21	0.00
4.50	0.29	0.00	0.00	33.50	4.80	2.21	0.00
5.00	0.33	0.00	0.00	34.00	4.80	2.21	0.00
5.50	0.37	0.00	0.00	34.50	4.80	2.21	0.00
6.00	0.41	0.00	0.00	35.00	4.80	2.21	0.00
6.50	0.46	0.00	0.00	35.50	4.80	2.21	0.00
7.00	0.51	0.00	0.00	36.00	4.80	2.21	0.00
7.50	0.56	0.00	0.00	36.50	4.80	2.21	0.00
8.00	0.62	0.00	0.00	37.00	4.80	2.21	0.00
8.50	0.69	0.00	0.00	37.50	4.80	2.21	0.00
9.00	0.76	0.00	0.02	38.00	4.80	2.21	0.00
9.50	0.85	0.01	0.06	38.50	4.80	2.21	0.00
10.00	0.95	0.02	0.13	39.00	4.80	2.21	0.00
10.50	1.07	0.03	0.22	39.50	4.80	2.21	0.00
11.00	1.24	0.07	0.44	40.00	4.80	2.21	0.00
11.50	1.50	0.15	0.97	40.50	4.80	2.21	0.00
12.00	2.29	0.49	6.24	41.00	4.80	2.21	0.00
12.50	3.30	1.10	2.85	41.50	4.80	2.21	0.00
13.00	3.56	1.28	1.58	42.00	4.80	2.21	0.00
13.50	3.73	1.40	1.04	42.50	4.80	2.21	0.00
14.00	3.85	1.49	0.83	43.00	4.80	2.21	0.00
14.50	3.95	1.56	0.71	43.50	4.80	2.21	0.00
15.00	4.04	1.62	0.58	44.00	4.80	2.21	0.00
15.50	4.11	1.68	0.52	44.50	4.80	2.21	0.00
16.00	4.18	1.73	0.48	45.00	4.80	2.21	0.00
16.50	4.24	1.77	0.44	45.50	4.80	2.21	0.00
17.00	4.29	1.81	0.41	46.00	4.80	2.21	0.00
17.50	4.34	1.85	0.37	46.50	4.80	2.21	0.00
18.00	4.39	1.89	0.33	47.00	4.80	2.21	0.00
18.50	4.43	1.92	0.31	47.50	4.80	2.21	0.00
19.00	4.47	1.95	0.30	48.00	4.80	2.21	0.00
19.50	4.51	1.98	0.30				
20.00	4.55	2.01	0.29				
20.50	4.58	2.04	0.28				
21.00	4.62	2.06	0.27				
21.50	4.65	2.09	0.26				
22.00	4.68	2.11	0.25				
22.50	4.71	2.14	0.24				
23.00	4.74	2.16	0.23				
23.50	4.77	2.18	0.22				
24.00	4.80	2.21	0.21				
24.50	4.80	2.21	0.00				
25.00	4.80	2.21	0.00				
25.50	4.80	2.21	0.00				
26.00	4.80	2.21	0.00				
26.50	4.80	2.21	0.00				
27.00	4.80	2.21	0.00				
27.50	4.80	2.21	0.00				
28.00	4.80	2.21	0.00				
28.50	4.80	2.21	0.00				

Summary for Subcatchment 42S: PDA-1J-B

Runoff = 0.60 cfs @ 12.14 hrs, Volume= 0.050 af, Depth= 0.77"
 Routed to Pond 53P : Bioretention J basin

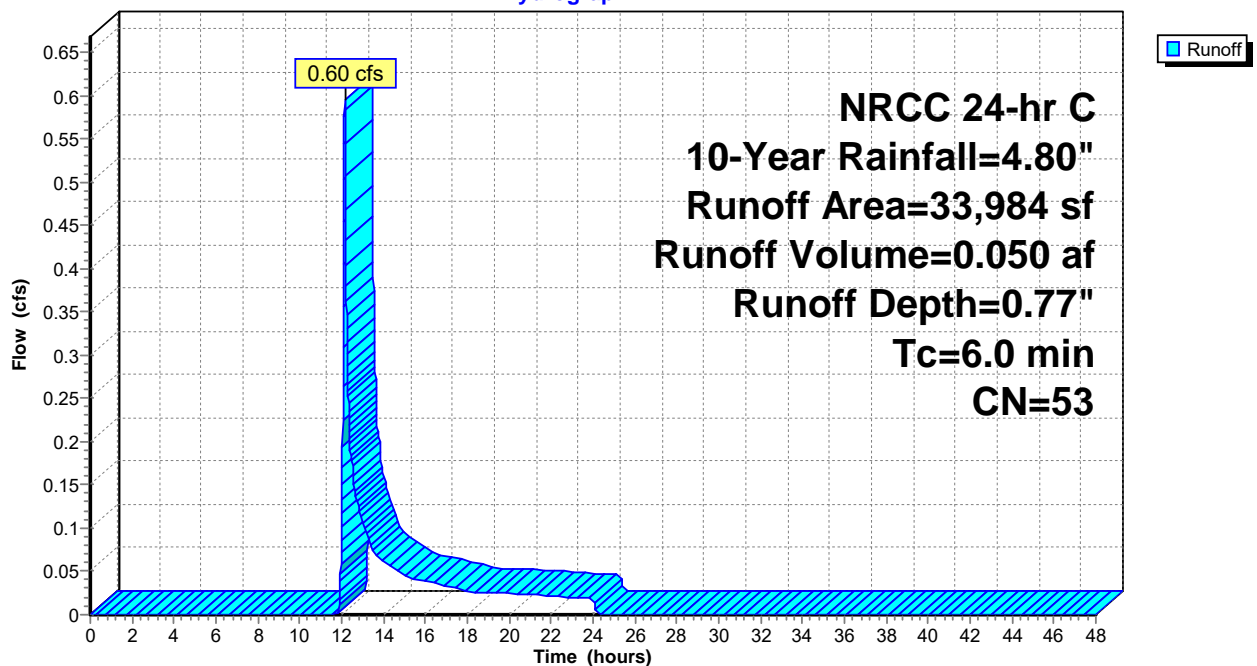
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
11,676	39	>75% Grass cover, Good, HSG A
22,308	61	>75% Grass cover, Good, HSG B
33,984	53	Weighted Average
33,984		100.00% Pervious Area

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

Subcatchment 42S: PDA-1J-B

Hydrograph



Hydrograph for Subcatchment 42S: PDA-1J-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.77	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.77	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.77	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.77	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.77	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.77	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.77	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.77	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.77	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.77	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.77	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.77	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.77	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.77	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.77	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.77	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.77	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.77	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.77	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.77	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.77	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.77	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.77	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.77	0.00
12.00	2.29	0.03	0.12	41.00	4.80	0.77	0.00
12.50	3.30	0.22	0.18	41.50	4.80	0.77	0.00
13.00	3.56	0.30	0.11	42.00	4.80	0.77	0.00
13.50	3.73	0.35	0.08	42.50	4.80	0.77	0.00
14.00	3.85	0.39	0.06	43.00	4.80	0.77	0.00
14.50	3.95	0.43	0.05	43.50	4.80	0.77	0.00
15.00	4.04	0.46	0.04	44.00	4.80	0.77	0.00
15.50	4.11	0.49	0.04	44.50	4.80	0.77	0.00
16.00	4.18	0.51	0.04	45.00	4.80	0.77	0.00
16.50	4.24	0.54	0.04	45.50	4.80	0.77	0.00
17.00	4.29	0.56	0.03	46.00	4.80	0.77	0.00
17.50	4.34	0.58	0.03	46.50	4.80	0.77	0.00
18.00	4.39	0.60	0.03	47.00	4.80	0.77	0.00
18.50	4.43	0.61	0.03	47.50	4.80	0.77	0.00
19.00	4.47	0.63	0.03	48.00	4.80	0.77	0.00
19.50	4.51	0.64	0.03				
20.00	4.55	0.66	0.02				
20.50	4.58	0.68	0.02				
21.00	4.62	0.69	0.02				
21.50	4.65	0.71	0.02				
22.00	4.68	0.72	0.02				
22.50	4.71	0.73	0.02				
23.00	4.74	0.75	0.02				
23.50	4.77	0.76	0.02				
24.00	4.80	0.77	0.02				
24.50	4.80	0.77	0.00				
25.00	4.80	0.77	0.00				
25.50	4.80	0.77	0.00				
26.00	4.80	0.77	0.00				
26.50	4.80	0.77	0.00				
27.00	4.80	0.77	0.00				
27.50	4.80	0.77	0.00				
28.00	4.80	0.77	0.00				
28.50	4.80	0.77	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 10-Year Rainfall=4.80"

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Summary for Subcatchment 43S: PDA-1B

Runoff = 37.09 cfs @ 12.13 hrs, Volume= 2.500 af, Depth= 3.28"
 Routed to Pond 44P : FB 1B

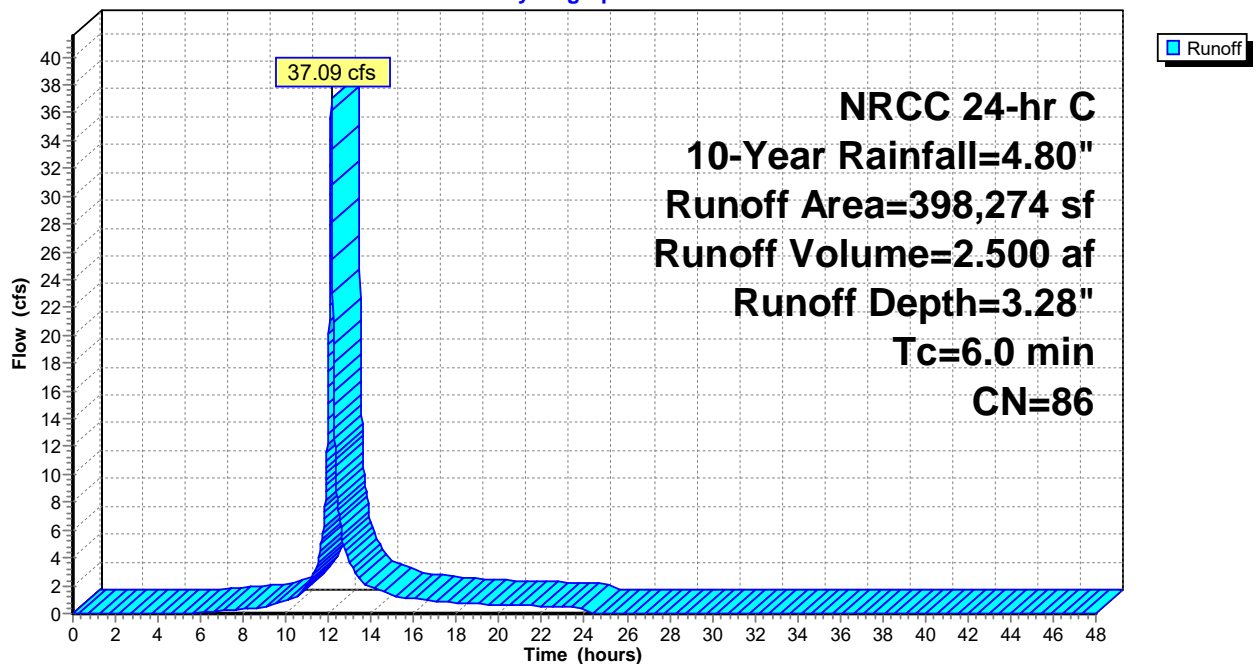
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
292,844	98	Unconnected pavement, HSG D
54,536	39	>75% Grass cover, Good, HSG A
24,842	61	>75% Grass cover, Good, HSG B
26,052	80	>75% Grass cover, Good, HSG D
398,274	86	Weighted Average
105,430		26.47% Pervious Area
292,844		73.53% Impervious Area
292,844		100.00% Unconnected

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

Subcatchment 43S: PDA-1B

Hydrograph



Hydrograph for Subcatchment 43S: PDA-1B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	3.28	0.00
0.50	0.03	0.00	0.00	29.50	4.80	3.28	0.00
1.00	0.06	0.00	0.00	30.00	4.80	3.28	0.00
1.50	0.09	0.00	0.00	30.50	4.80	3.28	0.00
2.00	0.12	0.00	0.00	31.00	4.80	3.28	0.00
2.50	0.15	0.00	0.00	31.50	4.80	3.28	0.00
3.00	0.18	0.00	0.00	32.00	4.80	3.28	0.00
3.50	0.22	0.00	0.00	32.50	4.80	3.28	0.00
4.00	0.25	0.00	0.00	33.00	4.80	3.28	0.00
4.50	0.29	0.00	0.00	33.50	4.80	3.28	0.00
5.00	0.33	0.00	0.00	34.00	4.80	3.28	0.00
5.50	0.37	0.00	0.03	34.50	4.80	3.28	0.00
6.00	0.41	0.00	0.07	35.00	4.80	3.28	0.00
6.50	0.46	0.01	0.12	35.50	4.80	3.28	0.00
7.00	0.51	0.02	0.17	36.00	4.80	3.28	0.00
7.50	0.56	0.03	0.24	36.50	4.80	3.28	0.00
8.00	0.62	0.05	0.32	37.00	4.80	3.28	0.00
8.50	0.69	0.07	0.40	37.50	4.80	3.28	0.00
9.00	0.76	0.09	0.50	38.00	4.80	3.28	0.00
9.50	0.85	0.13	0.69	38.50	4.80	3.28	0.00
10.00	0.95	0.17	0.93	39.00	4.80	3.28	0.00
10.50	1.07	0.23	1.22	39.50	4.80	3.28	0.00
11.00	1.24	0.33	2.02	40.00	4.80	3.28	0.00
11.50	1.50	0.49	3.62	40.50	4.80	3.28	0.00
12.00	2.29	1.07	18.47	41.00	4.80	3.28	0.00
12.50	3.30	1.92	6.91	41.50	4.80	3.28	0.00
13.00	3.56	2.15	3.71	42.00	4.80	3.28	0.00
13.50	3.73	2.30	2.42	42.50	4.80	3.28	0.00
14.00	3.85	2.41	1.91	43.00	4.80	3.28	0.00
14.50	3.95	2.51	1.61	43.50	4.80	3.28	0.00
15.00	4.04	2.58	1.31	44.00	4.80	3.28	0.00
15.50	4.11	2.65	1.17	44.50	4.80	3.28	0.00
16.00	4.18	2.71	1.08	45.00	4.80	3.28	0.00
16.50	4.24	2.76	1.00	45.50	4.80	3.28	0.00
17.00	4.29	2.81	0.91	46.00	4.80	3.28	0.00
17.50	4.34	2.86	0.82	46.50	4.80	3.28	0.00
18.00	4.39	2.90	0.74	47.00	4.80	3.28	0.00
18.50	4.43	2.94	0.70	47.50	4.80	3.28	0.00
19.00	4.47	2.98	0.67	48.00	4.80	3.28	0.00
19.50	4.51	3.01	0.65				
20.00	4.55	3.05	0.63				
20.50	4.58	3.08	0.61				
21.00	4.62	3.11	0.59				
21.50	4.65	3.14	0.57				
22.00	4.68	3.17	0.54				
22.50	4.71	3.20	0.52				
23.00	4.74	3.23	0.50				
23.50	4.77	3.26	0.48				
24.00	4.80	3.28	0.46				
24.50	4.80	3.28	0.00				
25.00	4.80	3.28	0.00				
25.50	4.80	3.28	0.00				
26.00	4.80	3.28	0.00				
26.50	4.80	3.28	0.00				
27.00	4.80	3.28	0.00				
27.50	4.80	3.28	0.00				
28.00	4.80	3.28	0.00				
28.50	4.80	3.28	0.00				

Summary for Subcatchment 46S: PDA-1H

Runoff = 49.04 cfs @ 12.13 hrs, Volume= 3.781 af, Depth= 4.56"
 Routed to Pond 51P : FB 1H

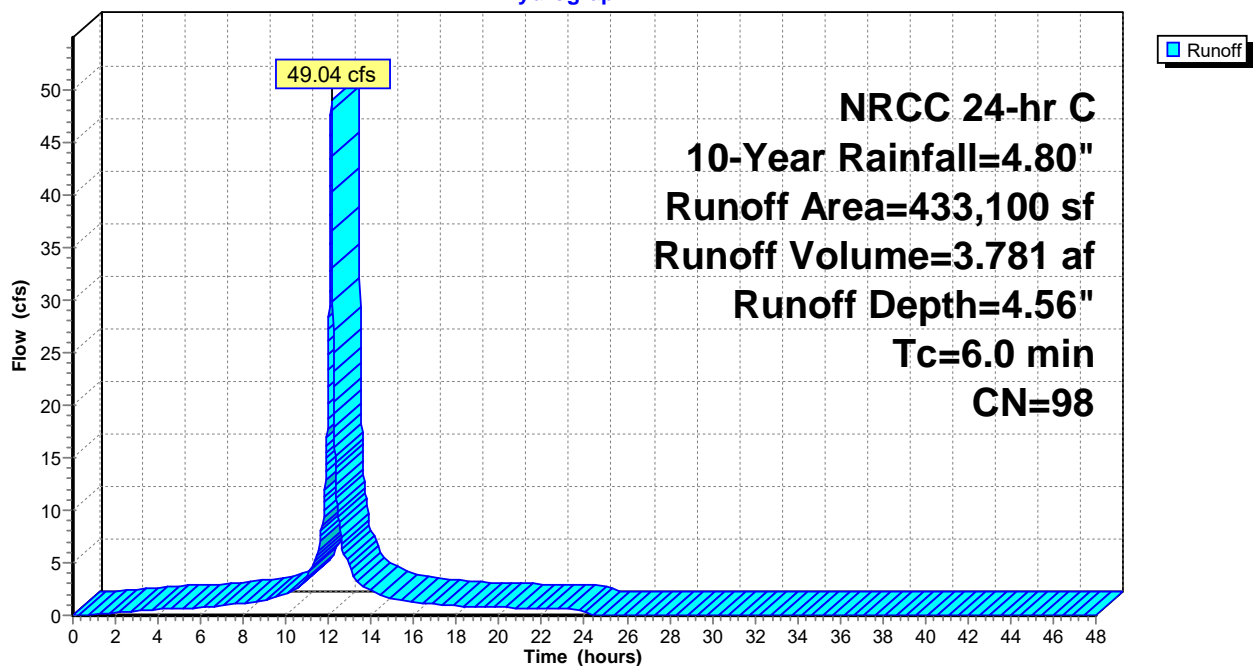
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
433,100	98	Roofs, HSG D
433,100		100.00% Impervious Area

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

Subcatchment 46S: PDA-1H

Hydrograph



Hydrograph for Subcatchment 46S: PDA-1H

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	4.56	0.00
0.50	0.03	0.00	0.00	29.50	4.80	4.56	0.00
1.00	0.06	0.00	0.05	30.00	4.80	4.56	0.00
1.50	0.09	0.01	0.18	30.50	4.80	4.56	0.00
2.00	0.12	0.02	0.28	31.00	4.80	4.56	0.00
2.50	0.15	0.04	0.36	31.50	4.80	4.56	0.00
3.00	0.18	0.06	0.44	32.00	4.80	4.56	0.00
3.50	0.22	0.08	0.50	32.50	4.80	4.56	0.00
4.00	0.25	0.11	0.55	33.00	4.80	4.56	0.00
4.50	0.29	0.14	0.60	33.50	4.80	4.56	0.00
5.00	0.33	0.17	0.65	34.00	4.80	4.56	0.00
5.50	0.37	0.20	0.69	34.50	4.80	4.56	0.00
6.00	0.41	0.24	0.73	35.00	4.80	4.56	0.00
6.50	0.46	0.28	0.83	35.50	4.80	4.56	0.00
7.00	0.51	0.32	0.94	36.00	4.80	4.56	0.00
7.50	0.56	0.38	1.05	36.50	4.80	4.56	0.00
8.00	0.62	0.43	1.17	37.00	4.80	4.56	0.00
8.50	0.69	0.49	1.28	37.50	4.80	4.56	0.00
9.00	0.76	0.56	1.39	38.00	4.80	4.56	0.00
9.50	0.85	0.64	1.73	38.50	4.80	4.56	0.00
10.00	0.95	0.74	2.10	39.00	4.80	4.56	0.00
10.50	1.07	0.86	2.47	39.50	4.80	4.56	0.00
11.00	1.24	1.02	3.72	40.00	4.80	4.56	0.00
11.50	1.50	1.28	5.97	40.50	4.80	4.56	0.00
12.00	2.29	2.06	26.14	41.00	4.80	4.56	0.00
12.50	3.30	3.06	8.61	41.50	4.80	4.56	0.00
13.00	3.56	3.33	4.54	42.00	4.80	4.56	0.00
13.50	3.73	3.50	2.94	42.50	4.80	4.56	0.00
14.00	3.85	3.62	2.30	43.00	4.80	4.56	0.00
14.50	3.95	3.72	1.94	43.50	4.80	4.56	0.00
15.00	4.04	3.80	1.57	44.00	4.80	4.56	0.00
15.50	4.11	3.88	1.39	44.50	4.80	4.56	0.00
16.00	4.18	3.94	1.29	45.00	4.80	4.56	0.00
16.50	4.24	4.00	1.18	45.50	4.80	4.56	0.00
17.00	4.29	4.06	1.08	46.00	4.80	4.56	0.00
17.50	4.34	4.11	0.97	46.50	4.80	4.56	0.00
18.00	4.39	4.15	0.87	47.00	4.80	4.56	0.00
18.50	4.43	4.19	0.82	47.50	4.80	4.56	0.00
19.00	4.47	4.23	0.79	48.00	4.80	4.56	0.00
19.50	4.51	4.27	0.77				
20.00	4.55	4.31	0.74				
20.50	4.58	4.35	0.72				
21.00	4.62	4.38	0.69				
21.50	4.65	4.41	0.66				
22.00	4.68	4.45	0.64				
22.50	4.71	4.48	0.61				
23.00	4.74	4.51	0.59				
23.50	4.77	4.54	0.56				
24.00	4.80	4.56	0.54				
24.50	4.80	4.56	0.00				
25.00	4.80	4.56	0.00				
25.50	4.80	4.56	0.00				
26.00	4.80	4.56	0.00				
26.50	4.80	4.56	0.00				
27.00	4.80	4.56	0.00				
27.50	4.80	4.56	0.00				
28.00	4.80	4.56	0.00				
28.50	4.80	4.56	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment 47S: PDA-4A

Runoff = 5.49 cfs @ 12.14 hrs, Volume= 0.363 af, Depth= 1.81"
 Routed to Pond B4B : Bioretention 4A

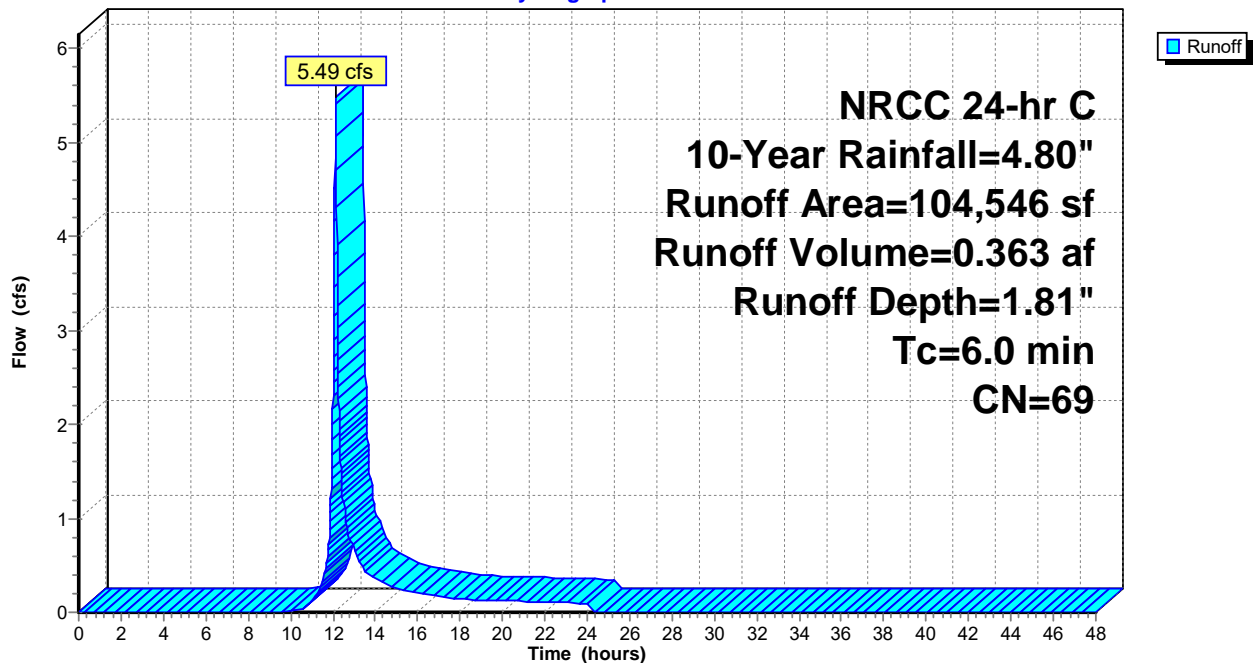
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
9,923	80	>75% Grass cover, Good, HSG D
36,179	98	Paved parking, HSG D
24,698	61	>75% Grass cover, Good, HSG B
33,746	39	>75% Grass cover, Good, HSG A
104,546	69	Weighted Average
68,367		65.39% Pervious Area
36,179		34.61% Impervious Area

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

Subcatchment 47S: PDA-4A

Hydrograph



Hydrograph for Subcatchment 47S: PDA-4A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	1.81	0.00
0.50	0.03	0.00	0.00	29.50	4.80	1.81	0.00
1.00	0.06	0.00	0.00	30.00	4.80	1.81	0.00
1.50	0.09	0.00	0.00	30.50	4.80	1.81	0.00
2.00	0.12	0.00	0.00	31.00	4.80	1.81	0.00
2.50	0.15	0.00	0.00	31.50	4.80	1.81	0.00
3.00	0.18	0.00	0.00	32.00	4.80	1.81	0.00
3.50	0.22	0.00	0.00	32.50	4.80	1.81	0.00
4.00	0.25	0.00	0.00	33.00	4.80	1.81	0.00
4.50	0.29	0.00	0.00	33.50	4.80	1.81	0.00
5.00	0.33	0.00	0.00	34.00	4.80	1.81	0.00
5.50	0.37	0.00	0.00	34.50	4.80	1.81	0.00
6.00	0.41	0.00	0.00	35.00	4.80	1.81	0.00
6.50	0.46	0.00	0.00	35.50	4.80	1.81	0.00
7.00	0.51	0.00	0.00	36.00	4.80	1.81	0.00
7.50	0.56	0.00	0.00	36.50	4.80	1.81	0.00
8.00	0.62	0.00	0.00	37.00	4.80	1.81	0.00
8.50	0.69	0.00	0.00	37.50	4.80	1.81	0.00
9.00	0.76	0.00	0.00	38.00	4.80	1.81	0.00
9.50	0.85	0.00	0.00	38.50	4.80	1.81	0.00
10.00	0.95	0.00	0.01	39.00	4.80	1.81	0.00
10.50	1.07	0.01	0.04	39.50	4.80	1.81	0.00
11.00	1.24	0.02	0.11	40.00	4.80	1.81	0.00
11.50	1.50	0.07	0.30	40.50	4.80	1.81	0.00
12.00	2.29	0.33	2.31	41.00	4.80	1.81	0.00
12.50	3.30	0.84	1.18	41.50	4.80	1.81	0.00
13.00	3.56	0.99	0.66	42.00	4.80	1.81	0.00
13.50	3.73	1.10	0.44	42.50	4.80	1.81	0.00
14.00	3.85	1.17	0.35	43.00	4.80	1.81	0.00
14.50	3.95	1.24	0.30	43.50	4.80	1.81	0.00
15.00	4.04	1.29	0.25	44.00	4.80	1.81	0.00
15.50	4.11	1.34	0.22	44.50	4.80	1.81	0.00
16.00	4.18	1.38	0.21	45.00	4.80	1.81	0.00
16.50	4.24	1.42	0.19	45.50	4.80	1.81	0.00
17.00	4.29	1.46	0.18	46.00	4.80	1.81	0.00
17.50	4.34	1.49	0.16	46.50	4.80	1.81	0.00
18.00	4.39	1.53	0.14	47.00	4.80	1.81	0.00
18.50	4.43	1.55	0.14	47.50	4.80	1.81	0.00
19.00	4.47	1.58	0.13	48.00	4.80	1.81	0.00
19.50	4.51	1.61	0.13				
20.00	4.55	1.63	0.12				
20.50	4.58	1.66	0.12				
21.00	4.62	1.68	0.12				
21.50	4.65	1.71	0.11				
22.00	4.68	1.73	0.11				
22.50	4.71	1.75	0.10				
23.00	4.74	1.77	0.10				
23.50	4.77	1.79	0.10				
24.00	4.80	1.81	0.09				
24.50	4.80	1.81	0.00				
25.00	4.80	1.81	0.00				
25.50	4.80	1.81	0.00				
26.00	4.80	1.81	0.00				
26.50	4.80	1.81	0.00				
27.00	4.80	1.81	0.00				
27.50	4.80	1.81	0.00				
28.00	4.80	1.81	0.00				
28.50	4.80	1.81	0.00				

Summary for Subcatchment 48S: PDA-1G-FB

Runoff = 0.01 cfs @ 13.04 hrs, Volume= 0.005 af, Depth= 0.16"
 Routed to Pond 55P : FB 1G

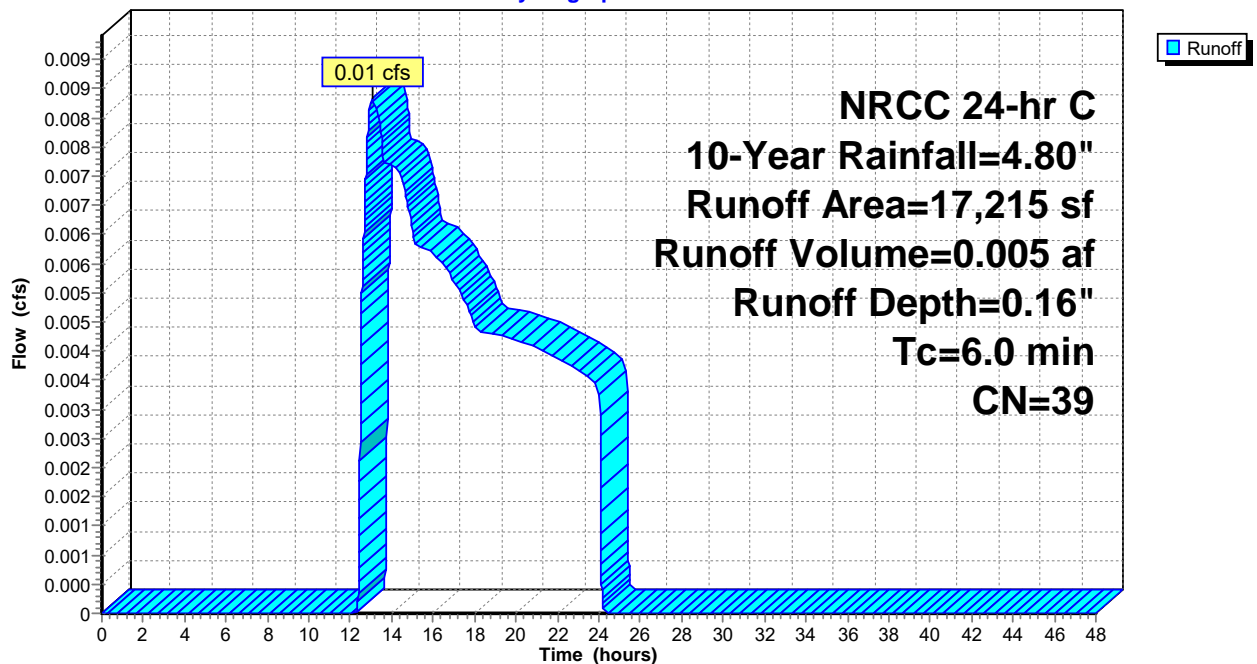
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
17,215	39	>75% Grass cover, Good, HSG A
17,215		100.00% Pervious Area

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

Subcatchment 48S: PDA-1G-FB

Hydrograph



Hydrograph for Subcatchment 48S: PDA-1G-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.16	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.16	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.16	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.16	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.16	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.16	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.16	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.16	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.16	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.16	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.16	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.16	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.16	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.16	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.16	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.16	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.16	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.16	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.16	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.16	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.16	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.16	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.16	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.16	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.16	0.00
12.50	3.30	0.00	0.00	41.50	4.80	0.16	0.00
13.00	3.56	0.01	0.01	42.00	4.80	0.16	0.00
13.50	3.73	0.02	0.01	42.50	4.80	0.16	0.00
14.00	3.85	0.03	0.01	43.00	4.80	0.16	0.00
14.50	3.95	0.04	0.01	43.50	4.80	0.16	0.00
15.00	4.04	0.05	0.01	44.00	4.80	0.16	0.00
15.50	4.11	0.06	0.01	44.50	4.80	0.16	0.00
16.00	4.18	0.07	0.01	45.00	4.80	0.16	0.00
16.50	4.24	0.07	0.01	45.50	4.80	0.16	0.00
17.00	4.29	0.08	0.01	46.00	4.80	0.16	0.00
17.50	4.34	0.09	0.01	46.50	4.80	0.16	0.00
18.00	4.39	0.09	0.00	47.00	4.80	0.16	0.00
18.50	4.43	0.10	0.00	47.50	4.80	0.16	0.00
19.00	4.47	0.11	0.00	48.00	4.80	0.16	0.00
19.50	4.51	0.11	0.00				
20.00	4.55	0.12	0.00				
20.50	4.58	0.12	0.00				
21.00	4.62	0.13	0.00				
21.50	4.65	0.14	0.00				
22.00	4.68	0.14	0.00				
22.50	4.71	0.15	0.00				
23.00	4.74	0.15	0.00				
23.50	4.77	0.16	0.00				
24.00	4.80	0.16	0.00				
24.50	4.80	0.16	0.00				
25.00	4.80	0.16	0.00				
25.50	4.80	0.16	0.00				
26.00	4.80	0.16	0.00				
26.50	4.80	0.16	0.00				
27.00	4.80	0.16	0.00				
27.50	4.80	0.16	0.00				
28.00	4.80	0.16	0.00				
28.50	4.80	0.16	0.00				

Summary for Subcatchment 49S: PDA-4B

Runoff = 20.56 cfs @ 12.13 hrs, Volume= 1.372 af, Depth= 3.09"
 Routed to Pond 29P : Bioretention 4B

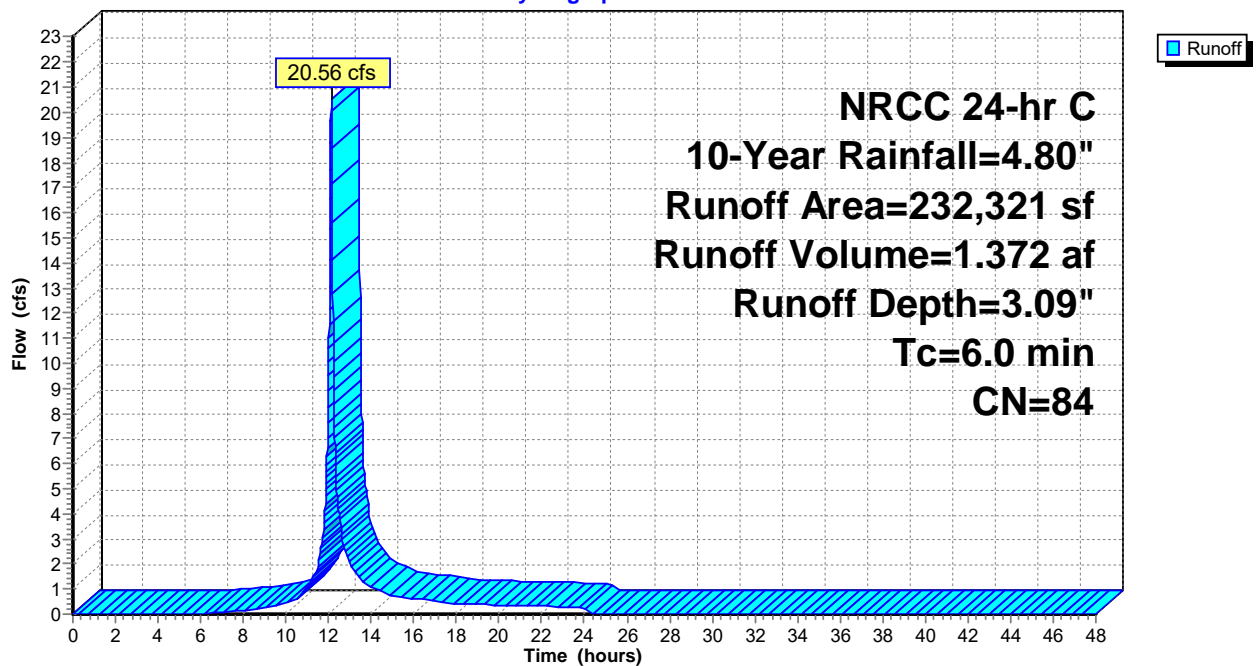
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
146,145	98	Paved parking, HSG D
86,176	61	>75% Grass cover, Good, HSG B
0	98	Unconnected roofs, HSG D
232,321	84	Weighted Average
86,176		37.09% Pervious Area
146,145		62.91% Impervious Area

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

Subcatchment 49S: PDA-4B

Hydrograph



Hydrograph for Subcatchment 49S: PDA-4B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	3.09	0.00
0.50	0.03	0.00	0.00	29.50	4.80	3.09	0.00
1.00	0.06	0.00	0.00	30.00	4.80	3.09	0.00
1.50	0.09	0.00	0.00	30.50	4.80	3.09	0.00
2.00	0.12	0.00	0.00	31.00	4.80	3.09	0.00
2.50	0.15	0.00	0.00	31.50	4.80	3.09	0.00
3.00	0.18	0.00	0.00	32.00	4.80	3.09	0.00
3.50	0.22	0.00	0.00	32.50	4.80	3.09	0.00
4.00	0.25	0.00	0.00	33.00	4.80	3.09	0.00
4.50	0.29	0.00	0.00	33.50	4.80	3.09	0.00
5.00	0.33	0.00	0.00	34.00	4.80	3.09	0.00
5.50	0.37	0.00	0.00	34.50	4.80	3.09	0.00
6.00	0.41	0.00	0.01	35.00	4.80	3.09	0.00
6.50	0.46	0.00	0.03	35.50	4.80	3.09	0.00
7.00	0.51	0.01	0.06	36.00	4.80	3.09	0.00
7.50	0.56	0.02	0.10	36.50	4.80	3.09	0.00
8.00	0.62	0.03	0.14	37.00	4.80	3.09	0.00
8.50	0.69	0.04	0.18	37.50	4.80	3.09	0.00
9.00	0.76	0.06	0.23	38.00	4.80	3.09	0.00
9.50	0.85	0.09	0.33	38.50	4.80	3.09	0.00
10.00	0.95	0.13	0.46	39.00	4.80	3.09	0.00
10.50	1.07	0.18	0.62	39.50	4.80	3.09	0.00
11.00	1.24	0.27	1.05	40.00	4.80	3.09	0.00
11.50	1.50	0.42	1.91	40.50	4.80	3.09	0.00
12.00	2.29	0.95	10.09	41.00	4.80	3.09	0.00
12.50	3.30	1.76	3.89	41.50	4.80	3.09	0.00
13.00	3.56	1.99	2.10	42.00	4.80	3.09	0.00
13.50	3.73	2.14	1.37	42.50	4.80	3.09	0.00
14.00	3.85	2.24	1.08	43.00	4.80	3.09	0.00
14.50	3.95	2.33	0.91	43.50	4.80	3.09	0.00
15.00	4.04	2.41	0.74	44.00	4.80	3.09	0.00
15.50	4.11	2.47	0.66	44.50	4.80	3.09	0.00
16.00	4.18	2.53	0.61	45.00	4.80	3.09	0.00
16.50	4.24	2.58	0.57	45.50	4.80	3.09	0.00
17.00	4.29	2.63	0.52	46.00	4.80	3.09	0.00
17.50	4.34	2.68	0.47	46.50	4.80	3.09	0.00
18.00	4.39	2.72	0.42	47.00	4.80	3.09	0.00
18.50	4.43	2.75	0.40	47.50	4.80	3.09	0.00
19.00	4.47	2.79	0.38	48.00	4.80	3.09	0.00
19.50	4.51	2.82	0.37				
20.00	4.55	2.86	0.36				
20.50	4.58	2.89	0.35				
21.00	4.62	2.92	0.34				
21.50	4.65	2.95	0.32				
22.00	4.68	2.98	0.31				
22.50	4.71	3.01	0.30				
23.00	4.74	3.04	0.29				
23.50	4.77	3.06	0.27				
24.00	4.80	3.09	0.26				
24.50	4.80	3.09	0.00				
25.00	4.80	3.09	0.00				
25.50	4.80	3.09	0.00				
26.00	4.80	3.09	0.00				
26.50	4.80	3.09	0.00				
27.00	4.80	3.09	0.00				
27.50	4.80	3.09	0.00				
28.00	4.80	3.09	0.00				
28.50	4.80	3.09	0.00				

Summary for Subcatchment 51S: PDA-1G-B

Runoff = 0.09 cfs @ 12.17 hrs, Volume= 0.020 af, Depth= 0.38"
 Routed to Pond 54P : INFIL 1G

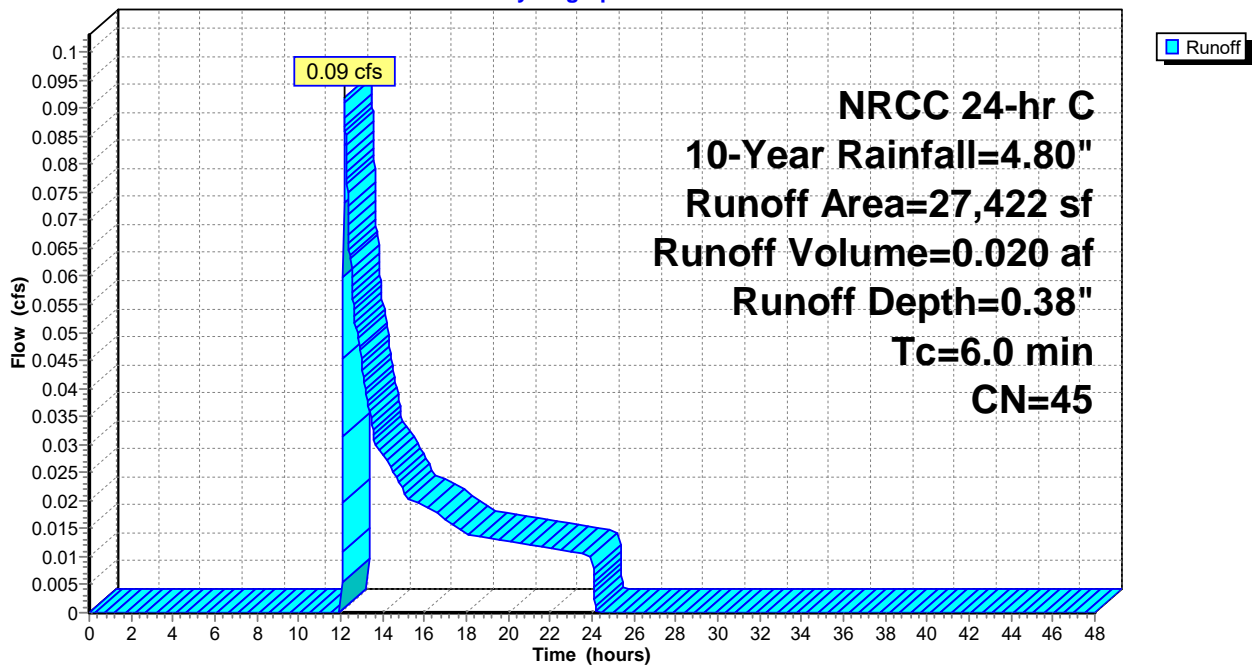
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
19,919	39	>75% Grass cover, Good, HSG A
7,503	61	>75% Grass cover, Good, HSG B
27,422	45	Weighted Average
27,422		100.00% Pervious Area

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

Subcatchment 51S: PDA-1G-B

Hydrograph



Hydrograph for Subcatchment 51S: PDA-1G-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.38	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.38	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.38	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.38	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.38	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.38	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.38	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.38	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.38	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.38	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.38	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.38	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.38	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.38	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.38	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.38	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.38	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.38	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.38	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.38	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.38	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.38	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.38	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.38	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.38	0.00
12.50	3.30	0.06	0.06	41.50	4.80	0.38	0.00
13.00	3.56	0.09	0.04	42.00	4.80	0.38	0.00
13.50	3.73	0.12	0.03	42.50	4.80	0.38	0.00
14.00	3.85	0.15	0.03	43.00	4.80	0.38	0.00
14.50	3.95	0.17	0.03	43.50	4.80	0.38	0.00
15.00	4.04	0.18	0.02	44.00	4.80	0.38	0.00
15.50	4.11	0.20	0.02	44.50	4.80	0.38	0.00
16.00	4.18	0.21	0.02	45.00	4.80	0.38	0.00
16.50	4.24	0.23	0.02	45.50	4.80	0.38	0.00
17.00	4.29	0.24	0.02	46.00	4.80	0.38	0.00
17.50	4.34	0.26	0.02	46.50	4.80	0.38	0.00
18.00	4.39	0.27	0.01	47.00	4.80	0.38	0.00
18.50	4.43	0.28	0.01	47.50	4.80	0.38	0.00
19.00	4.47	0.29	0.01	48.00	4.80	0.38	0.00
19.50	4.51	0.30	0.01				
20.00	4.55	0.31	0.01				
20.50	4.58	0.32	0.01				
21.00	4.62	0.33	0.01				
21.50	4.65	0.34	0.01				
22.00	4.68	0.35	0.01				
22.50	4.71	0.36	0.01				
23.00	4.74	0.36	0.01				
23.50	4.77	0.37	0.01				
24.00	4.80	0.38	0.01				
24.50	4.80	0.38	0.00				
25.00	4.80	0.38	0.00				
25.50	4.80	0.38	0.00				
26.00	4.80	0.38	0.00				
26.50	4.80	0.38	0.00				
27.00	4.80	0.38	0.00				
27.50	4.80	0.38	0.00				
28.00	4.80	0.38	0.00				
28.50	4.80	0.38	0.00				

Summary for Subcatchment 52S: PDA-1G

Runoff = 47.21 cfs @ 12.13 hrs, Volume= 3.640 af, Depth= 4.56"
 Routed to Pond 55P : FB 1G

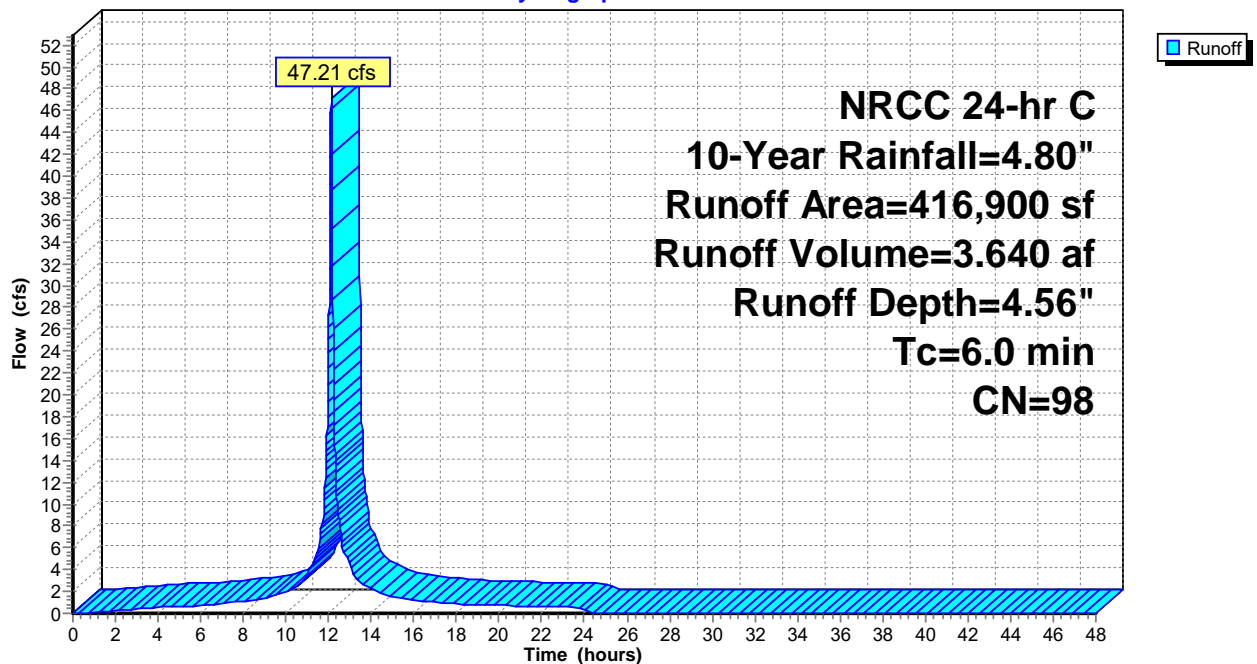
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
416,900	98	Roofs, HSG D
416,900		100.00% Impervious Area

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

Subcatchment 52S: PDA-1G

Hydrograph



Hydrograph for Subcatchment 52S: PDA-1G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	4.56	0.00
0.50	0.03	0.00	0.00	29.50	4.80	4.56	0.00
1.00	0.06	0.00	0.05	30.00	4.80	4.56	0.00
1.50	0.09	0.01	0.17	30.50	4.80	4.56	0.00
2.00	0.12	0.02	0.27	31.00	4.80	4.56	0.00
2.50	0.15	0.04	0.35	31.50	4.80	4.56	0.00
3.00	0.18	0.06	0.42	32.00	4.80	4.56	0.00
3.50	0.22	0.08	0.48	32.50	4.80	4.56	0.00
4.00	0.25	0.11	0.53	33.00	4.80	4.56	0.00
4.50	0.29	0.14	0.58	33.50	4.80	4.56	0.00
5.00	0.33	0.17	0.63	34.00	4.80	4.56	0.00
5.50	0.37	0.20	0.67	34.50	4.80	4.56	0.00
6.00	0.41	0.24	0.70	35.00	4.80	4.56	0.00
6.50	0.46	0.28	0.80	35.50	4.80	4.56	0.00
7.00	0.51	0.32	0.91	36.00	4.80	4.56	0.00
7.50	0.56	0.38	1.02	36.50	4.80	4.56	0.00
8.00	0.62	0.43	1.12	37.00	4.80	4.56	0.00
8.50	0.69	0.49	1.23	37.50	4.80	4.56	0.00
9.00	0.76	0.56	1.34	38.00	4.80	4.56	0.00
9.50	0.85	0.64	1.67	38.50	4.80	4.56	0.00
10.00	0.95	0.74	2.02	39.00	4.80	4.56	0.00
10.50	1.07	0.86	2.38	39.50	4.80	4.56	0.00
11.00	1.24	1.02	3.59	40.00	4.80	4.56	0.00
11.50	1.50	1.28	5.74	40.50	4.80	4.56	0.00
12.00	2.29	2.06	25.17	41.00	4.80	4.56	0.00
12.50	3.30	3.06	8.29	41.50	4.80	4.56	0.00
13.00	3.56	3.33	4.37	42.00	4.80	4.56	0.00
13.50	3.73	3.50	2.83	42.50	4.80	4.56	0.00
14.00	3.85	3.62	2.22	43.00	4.80	4.56	0.00
14.50	3.95	3.72	1.86	43.50	4.80	4.56	0.00
15.00	4.04	3.80	1.51	44.00	4.80	4.56	0.00
15.50	4.11	3.88	1.34	44.50	4.80	4.56	0.00
16.00	4.18	3.94	1.24	45.00	4.80	4.56	0.00
16.50	4.24	4.00	1.14	45.50	4.80	4.56	0.00
17.00	4.29	4.06	1.04	46.00	4.80	4.56	0.00
17.50	4.34	4.11	0.94	46.50	4.80	4.56	0.00
18.00	4.39	4.15	0.84	47.00	4.80	4.56	0.00
18.50	4.43	4.19	0.79	47.50	4.80	4.56	0.00
19.00	4.47	4.23	0.76	48.00	4.80	4.56	0.00
19.50	4.51	4.27	0.74				
20.00	4.55	4.31	0.72				
20.50	4.58	4.35	0.69				
21.00	4.62	4.38	0.66				
21.50	4.65	4.41	0.64				
22.00	4.68	4.45	0.61				
22.50	4.71	4.48	0.59				
23.00	4.74	4.51	0.57				
23.50	4.77	4.54	0.54				
24.00	4.80	4.56	0.52				
24.50	4.80	4.56	0.00				
25.00	4.80	4.56	0.00				
25.50	4.80	4.56	0.00				
26.00	4.80	4.56	0.00				
26.50	4.80	4.56	0.00				
27.00	4.80	4.56	0.00				
27.50	4.80	4.56	0.00				
28.00	4.80	4.56	0.00				
28.50	4.80	4.56	0.00				

Summary for Subcatchment 54S: PDA-1H-IB

Runoff = 0.02 cfs @ 13.04 hrs, Volume= 0.012 af, Depth= 0.16"
 Routed to Pond 47P : INFIL 1H

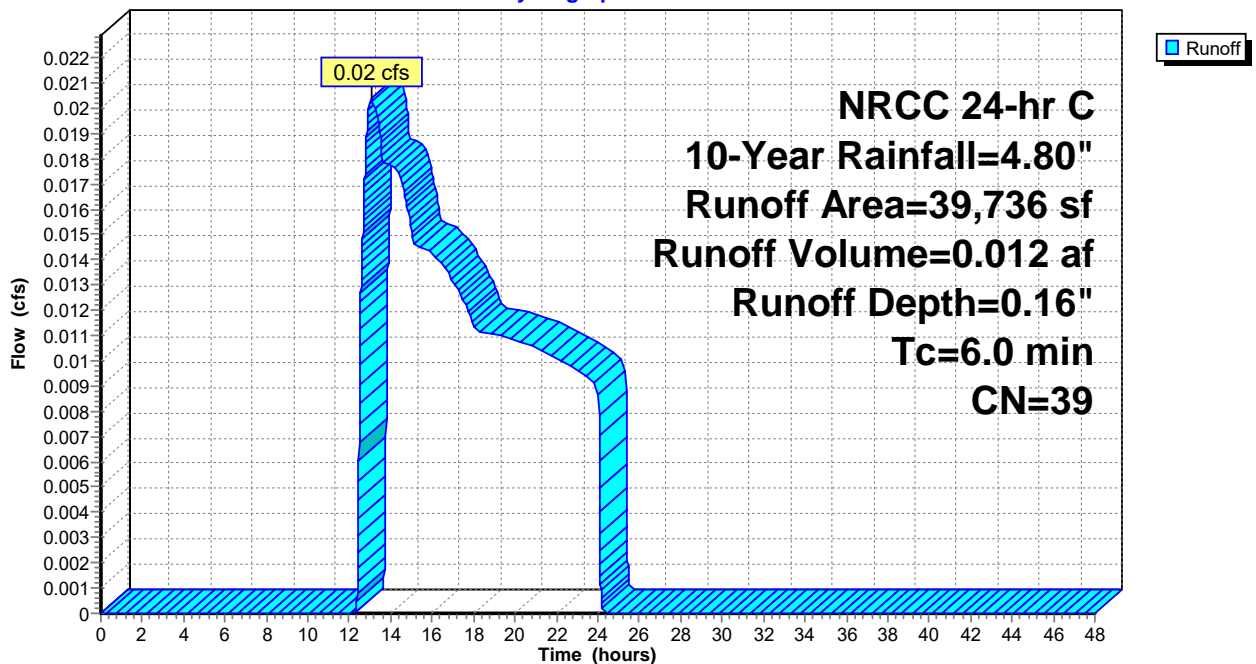
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
39,736	39	>75% Grass cover, Good, HSG A
39,736		100.00% Pervious Area

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

Subcatchment 54S: PDA-1H-IB

Hydrograph



Hydrograph for Subcatchment 54S: PDA-1H-IB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.16	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.16	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.16	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.16	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.16	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.16	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.16	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.16	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.16	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.16	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.16	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.16	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.16	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.16	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.16	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.16	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.16	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.16	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.16	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.16	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.16	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.16	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.16	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.16	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.16	0.00
12.50	3.30	0.00	0.01	41.50	4.80	0.16	0.00
13.00	3.56	0.01	0.02	42.00	4.80	0.16	0.00
13.50	3.73	0.02	0.02	42.50	4.80	0.16	0.00
14.00	3.85	0.03	0.02	43.00	4.80	0.16	0.00
14.50	3.95	0.04	0.02	43.50	4.80	0.16	0.00
15.00	4.04	0.05	0.02	44.00	4.80	0.16	0.00
15.50	4.11	0.06	0.01	44.50	4.80	0.16	0.00
16.00	4.18	0.07	0.01	45.00	4.80	0.16	0.00
16.50	4.24	0.07	0.01	45.50	4.80	0.16	0.00
17.00	4.29	0.08	0.01	46.00	4.80	0.16	0.00
17.50	4.34	0.09	0.01	46.50	4.80	0.16	0.00
18.00	4.39	0.09	0.01	47.00	4.80	0.16	0.00
18.50	4.43	0.10	0.01	47.50	4.80	0.16	0.00
19.00	4.47	0.11	0.01	48.00	4.80	0.16	0.00
19.50	4.51	0.11	0.01				
20.00	4.55	0.12	0.01				
20.50	4.58	0.12	0.01				
21.00	4.62	0.13	0.01				
21.50	4.65	0.14	0.01				
22.00	4.68	0.14	0.01				
22.50	4.71	0.15	0.01				
23.00	4.74	0.15	0.01				
23.50	4.77	0.16	0.01				
24.00	4.80	0.16	0.01				
24.50	4.80	0.16	0.00				
25.00	4.80	0.16	0.00				
25.50	4.80	0.16	0.00				
26.00	4.80	0.16	0.00				
26.50	4.80	0.16	0.00				
27.00	4.80	0.16	0.00				
27.50	4.80	0.16	0.00				
28.00	4.80	0.16	0.00				
28.50	4.80	0.16	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 10-Year Rainfall=4.80"

Prepared by Colliers Engineering & Design

Printed 8/12/2024

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Summary for Subcatchment 55S: PDA-1E

Runoff = 1.91 cfs @ 12.13 hrs, Volume= 0.140 af, Depth= 4.22"
 Routed to Pond 59P : FB 1E

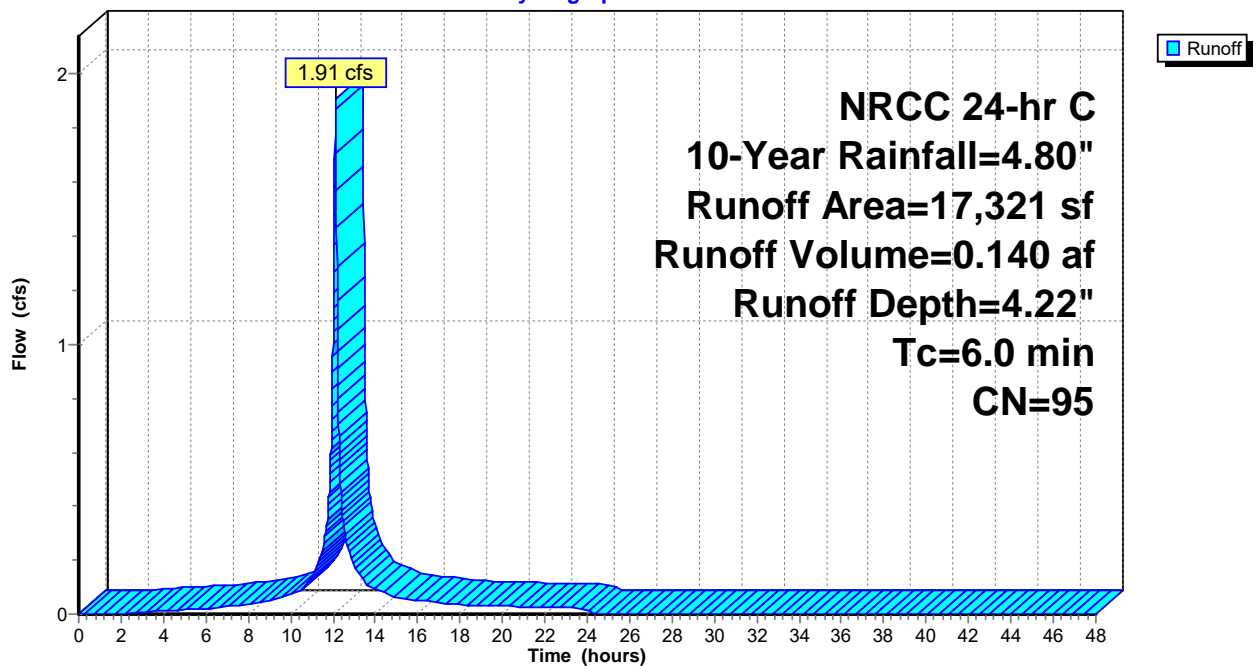
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
3,059	80	>75% Grass cover, Good, HSG D
0	39	>75% Grass cover, Good, HSG A
14,262	98	Paved parking, HSG D
17,321	95	Weighted Average
3,059		17.66% Pervious Area
14,262		82.34% Impervious Area

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

Subcatchment 55S: PDA-1E

Hydrograph



Hydrograph for Subcatchment 55S: PDA-1E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	4.22	0.00
0.50	0.03	0.00	0.00	29.50	4.80	4.22	0.00
1.00	0.06	0.00	0.00	30.00	4.80	4.22	0.00
1.50	0.09	0.00	0.00	30.50	4.80	4.22	0.00
2.00	0.12	0.00	0.00	31.00	4.80	4.22	0.00
2.50	0.15	0.00	0.00	31.50	4.80	4.22	0.00
3.00	0.18	0.01	0.01	32.00	4.80	4.22	0.00
3.50	0.22	0.02	0.01	32.50	4.80	4.22	0.00
4.00	0.25	0.03	0.01	33.00	4.80	4.22	0.00
4.50	0.29	0.05	0.01	33.50	4.80	4.22	0.00
5.00	0.33	0.07	0.02	34.00	4.80	4.22	0.00
5.50	0.37	0.09	0.02	34.50	4.80	4.22	0.00
6.00	0.41	0.11	0.02	35.00	4.80	4.22	0.00
6.50	0.46	0.14	0.02	35.50	4.80	4.22	0.00
7.00	0.51	0.17	0.03	36.00	4.80	4.22	0.00
7.50	0.56	0.21	0.03	36.50	4.80	4.22	0.00
8.00	0.62	0.26	0.04	37.00	4.80	4.22	0.00
8.50	0.69	0.31	0.04	37.50	4.80	4.22	0.00
9.00	0.76	0.36	0.05	38.00	4.80	4.22	0.00
9.50	0.85	0.43	0.06	38.50	4.80	4.22	0.00
10.00	0.95	0.52	0.07	39.00	4.80	4.22	0.00
10.50	1.07	0.62	0.09	39.50	4.80	4.22	0.00
11.00	1.24	0.77	0.14	40.00	4.80	4.22	0.00
11.50	1.50	1.01	0.22	40.50	4.80	4.22	0.00
12.00	2.29	1.76	1.01	41.00	4.80	4.22	0.00
12.50	3.30	2.74	0.34	41.50	4.80	4.22	0.00
13.00	3.56	3.00	0.18	42.00	4.80	4.22	0.00
13.50	3.73	3.17	0.12	42.50	4.80	4.22	0.00
14.00	3.85	3.29	0.09	43.00	4.80	4.22	0.00
14.50	3.95	3.39	0.08	43.50	4.80	4.22	0.00
15.00	4.04	3.47	0.06	44.00	4.80	4.22	0.00
15.50	4.11	3.54	0.06	44.50	4.80	4.22	0.00
16.00	4.18	3.60	0.05	45.00	4.80	4.22	0.00
16.50	4.24	3.66	0.05	45.50	4.80	4.22	0.00
17.00	4.29	3.72	0.04	46.00	4.80	4.22	0.00
17.50	4.34	3.77	0.04	46.50	4.80	4.22	0.00
18.00	4.39	3.81	0.03	47.00	4.80	4.22	0.00
18.50	4.43	3.86	0.03	47.50	4.80	4.22	0.00
19.00	4.47	3.89	0.03	48.00	4.80	4.22	0.00
19.50	4.51	3.93	0.03				
20.00	4.55	3.97	0.03				
20.50	4.58	4.01	0.03				
21.00	4.62	4.04	0.03				
21.50	4.65	4.07	0.03				
22.00	4.68	4.11	0.03				
22.50	4.71	4.14	0.02				
23.00	4.74	4.17	0.02				
23.50	4.77	4.19	0.02				
24.00	4.80	4.22	0.02				
24.50	4.80	4.22	0.00				
25.00	4.80	4.22	0.00				
25.50	4.80	4.22	0.00				
26.00	4.80	4.22	0.00				
26.50	4.80	4.22	0.00				
27.00	4.80	4.22	0.00				
27.50	4.80	4.22	0.00				
28.00	4.80	4.22	0.00				
28.50	4.80	4.22	0.00				

Summary for Subcatchment 56S: PDA-1B-FB

Runoff = 0.01 cfs @ 13.04 hrs, Volume= 0.005 af, Depth= 0.16"
 Routed to Pond 44P : FB 1B

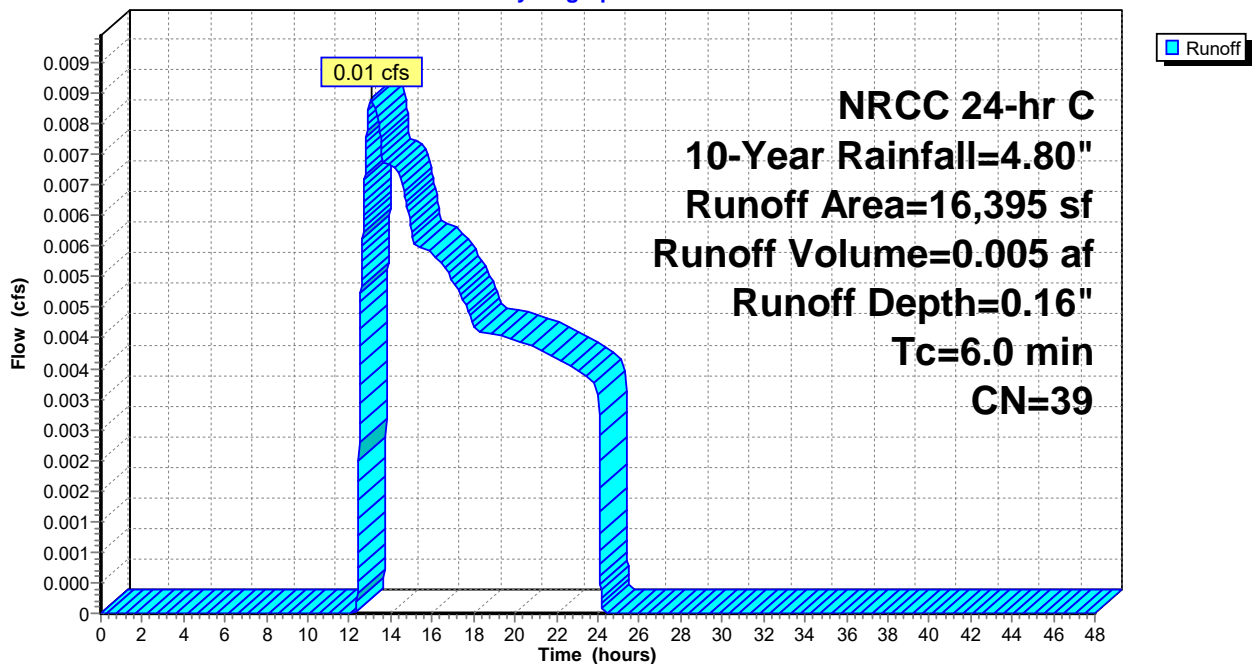
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
16,395	39	>75% Grass cover, Good, HSG A
16,395		100.00% Pervious Area

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

Subcatchment 56S: PDA-1B-FB

Hydrograph



Hydrograph for Subcatchment 56S: PDA-1B-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.16	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.16	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.16	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.16	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.16	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.16	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.16	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.16	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.16	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.16	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.16	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.16	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.16	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.16	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.16	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.16	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.16	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.16	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.16	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.16	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.16	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.16	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.16	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.16	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.16	0.00
12.50	3.30	0.00	0.00	41.50	4.80	0.16	0.00
13.00	3.56	0.01	0.01	42.00	4.80	0.16	0.00
13.50	3.73	0.02	0.01	42.50	4.80	0.16	0.00
14.00	3.85	0.03	0.01	43.00	4.80	0.16	0.00
14.50	3.95	0.04	0.01	43.50	4.80	0.16	0.00
15.00	4.04	0.05	0.01	44.00	4.80	0.16	0.00
15.50	4.11	0.06	0.01	44.50	4.80	0.16	0.00
16.00	4.18	0.07	0.01	45.00	4.80	0.16	0.00
16.50	4.24	0.07	0.01	45.50	4.80	0.16	0.00
17.00	4.29	0.08	0.01	46.00	4.80	0.16	0.00
17.50	4.34	0.09	0.01	46.50	4.80	0.16	0.00
18.00	4.39	0.09	0.00	47.00	4.80	0.16	0.00
18.50	4.43	0.10	0.00	47.50	4.80	0.16	0.00
19.00	4.47	0.11	0.00	48.00	4.80	0.16	0.00
19.50	4.51	0.11	0.00				
20.00	4.55	0.12	0.00				
20.50	4.58	0.12	0.00				
21.00	4.62	0.13	0.00				
21.50	4.65	0.14	0.00				
22.00	4.68	0.14	0.00				
22.50	4.71	0.15	0.00				
23.00	4.74	0.15	0.00				
23.50	4.77	0.16	0.00				
24.00	4.80	0.16	0.00				
24.50	4.80	0.16	0.00				
25.00	4.80	0.16	0.00				
25.50	4.80	0.16	0.00				
26.00	4.80	0.16	0.00				
26.50	4.80	0.16	0.00				
27.00	4.80	0.16	0.00				
27.50	4.80	0.16	0.00				
28.00	4.80	0.16	0.00				
28.50	4.80	0.16	0.00				

Summary for Subcatchment 57S: PDA-1H-FB

Runoff = 0.01 cfs @ 13.04 hrs, Volume= 0.006 af, Depth= 0.16"
 Routed to Pond 51P : FB 1H

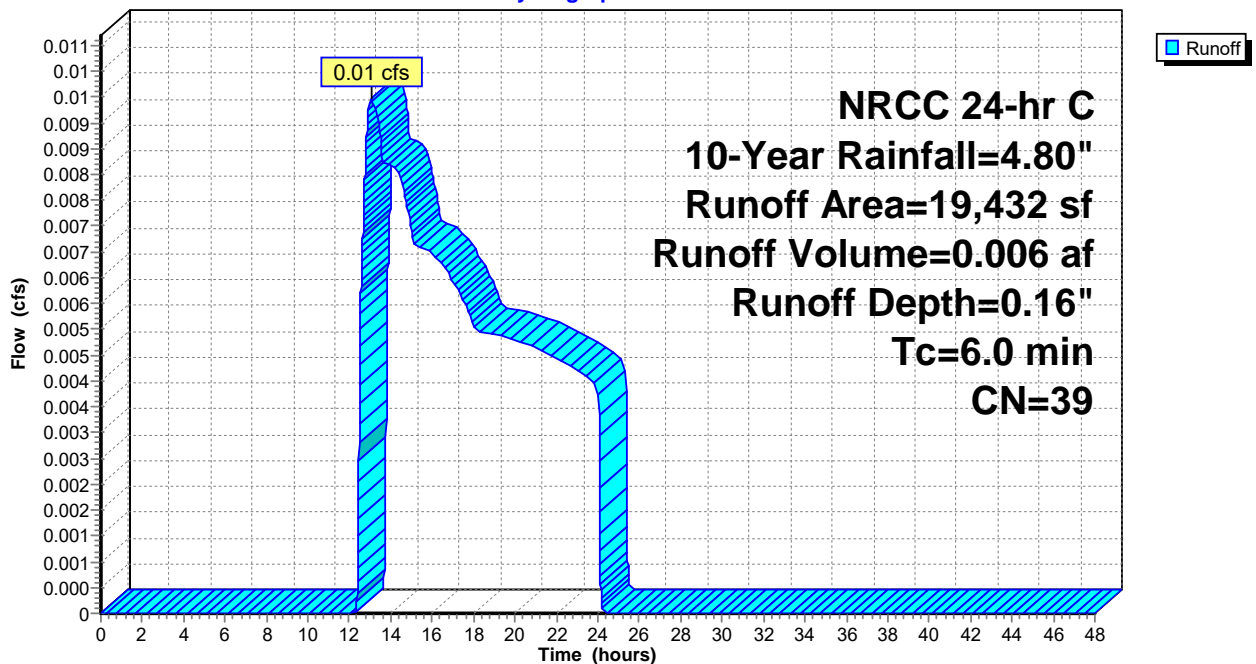
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
19,432	39	>75% Grass cover, Good, HSG A
19,432		100.00% Pervious Area

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

Subcatchment 57S: PDA-1H-FB

Hydrograph



Hydrograph for Subcatchment 57S: PDA-1H-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.16	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.16	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.16	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.16	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.16	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.16	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.16	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.16	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.16	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.16	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.16	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.16	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.16	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.16	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.16	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.16	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.16	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.16	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.16	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.16	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.16	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.16	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.16	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.16	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.16	0.00
12.50	3.30	0.00	0.00	41.50	4.80	0.16	0.00
13.00	3.56	0.01	0.01	42.00	4.80	0.16	0.00
13.50	3.73	0.02	0.01	42.50	4.80	0.16	0.00
14.00	3.85	0.03	0.01	43.00	4.80	0.16	0.00
14.50	3.95	0.04	0.01	43.50	4.80	0.16	0.00
15.00	4.04	0.05	0.01	44.00	4.80	0.16	0.00
15.50	4.11	0.06	0.01	44.50	4.80	0.16	0.00
16.00	4.18	0.07	0.01	45.00	4.80	0.16	0.00
16.50	4.24	0.07	0.01	45.50	4.80	0.16	0.00
17.00	4.29	0.08	0.01	46.00	4.80	0.16	0.00
17.50	4.34	0.09	0.01	46.50	4.80	0.16	0.00
18.00	4.39	0.09	0.01	47.00	4.80	0.16	0.00
18.50	4.43	0.10	0.01	47.50	4.80	0.16	0.00
19.00	4.47	0.11	0.01	48.00	4.80	0.16	0.00
19.50	4.51	0.11	0.01				
20.00	4.55	0.12	0.01				
20.50	4.58	0.12	0.01				
21.00	4.62	0.13	0.01				
21.50	4.65	0.14	0.01				
22.00	4.68	0.14	0.00				
22.50	4.71	0.15	0.00				
23.00	4.74	0.15	0.00				
23.50	4.77	0.16	0.00				
24.00	4.80	0.16	0.00				
24.50	4.80	0.16	0.00				
25.00	4.80	0.16	0.00				
25.50	4.80	0.16	0.00				
26.00	4.80	0.16	0.00				
26.50	4.80	0.16	0.00				
27.00	4.80	0.16	0.00				
27.50	4.80	0.16	0.00				
28.00	4.80	0.16	0.00				
28.50	4.80	0.16	0.00				

Summary for Subcatchment 58S: PDA1-B-IB

Runoff = 0.02 cfs @ 12.94 hrs, Volume= 0.012 af, Depth= 0.19"
 Routed to Pond 45P : INFIL 1B

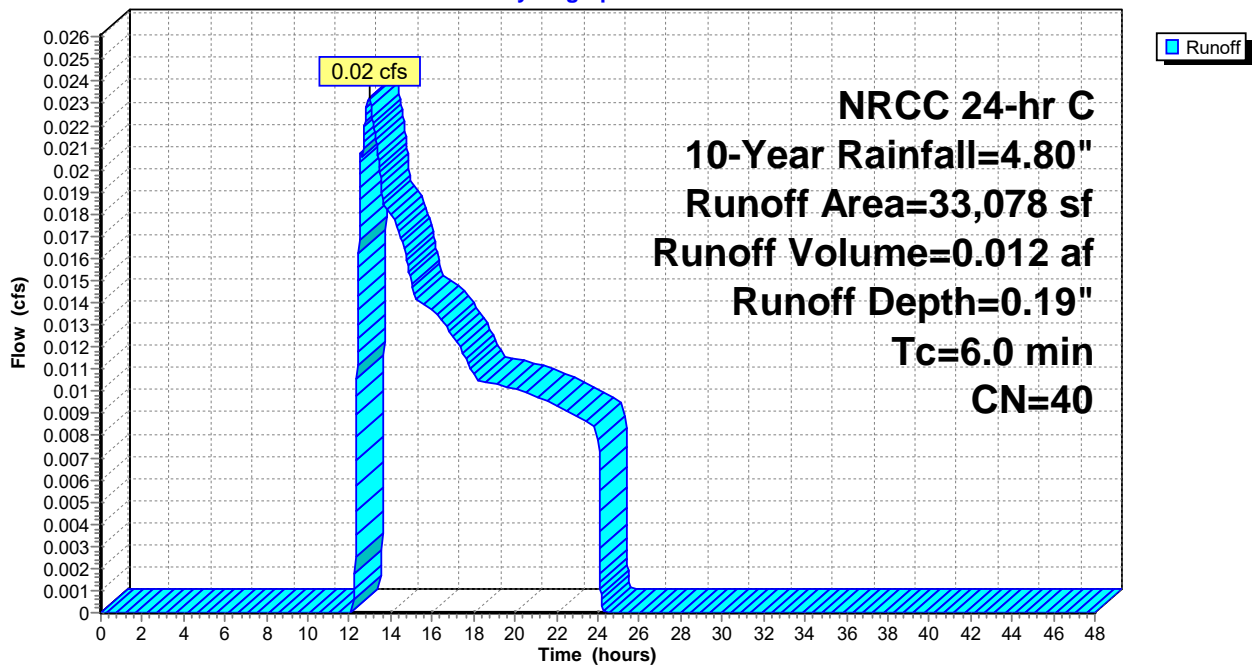
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
1,110	80	>75% Grass cover, Good, HSG D
31,968	39	>75% Grass cover, Good, HSG A
33,078	40	Weighted Average
33,078		100.00% Pervious Area

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

Subcatchment 58S: PDA1-B-IB

Hydrograph



Hydrograph for Subcatchment 58S: PDA1-B-IB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.19	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.19	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.19	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.19	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.19	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.19	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.19	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.19	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.19	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.19	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.19	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.19	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.19	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.19	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.19	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.19	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.19	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.19	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.19	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.19	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.19	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.19	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.19	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.19	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.19	0.00
12.50	3.30	0.01	0.02	41.50	4.80	0.19	0.00
13.00	3.56	0.02	0.02	42.00	4.80	0.19	0.00
13.50	3.73	0.03	0.02	42.50	4.80	0.19	0.00
14.00	3.85	0.05	0.02	43.00	4.80	0.19	0.00
14.50	3.95	0.06	0.02	43.50	4.80	0.19	0.00
15.00	4.04	0.07	0.01	44.00	4.80	0.19	0.00
15.50	4.11	0.08	0.01	44.50	4.80	0.19	0.00
16.00	4.18	0.09	0.01	45.00	4.80	0.19	0.00
16.50	4.24	0.09	0.01	45.50	4.80	0.19	0.00
17.00	4.29	0.10	0.01	46.00	4.80	0.19	0.00
17.50	4.34	0.11	0.01	46.50	4.80	0.19	0.00
18.00	4.39	0.12	0.01	47.00	4.80	0.19	0.00
18.50	4.43	0.12	0.01	47.50	4.80	0.19	0.00
19.00	4.47	0.13	0.01	48.00	4.80	0.19	0.00
19.50	4.51	0.14	0.01				
20.00	4.55	0.14	0.01				
20.50	4.58	0.15	0.01				
21.00	4.62	0.16	0.01				
21.50	4.65	0.16	0.01				
22.00	4.68	0.17	0.01				
22.50	4.71	0.18	0.01				
23.00	4.74	0.18	0.01				
23.50	4.77	0.19	0.01				
24.00	4.80	0.19	0.01				
24.50	4.80	0.19	0.00				
25.00	4.80	0.19	0.00				
25.50	4.80	0.19	0.00				
26.00	4.80	0.19	0.00				
26.50	4.80	0.19	0.00				
27.00	4.80	0.19	0.00				
27.50	4.80	0.19	0.00				
28.00	4.80	0.19	0.00				
28.50	4.80	0.19	0.00				

Summary for Subcatchment 59S: PDA-1F

Runoff = 20.41 cfs @ 12.13 hrs, Volume= 1.348 af, Depth= 2.81"
 Routed to Pond 26P : Bioretention 1F

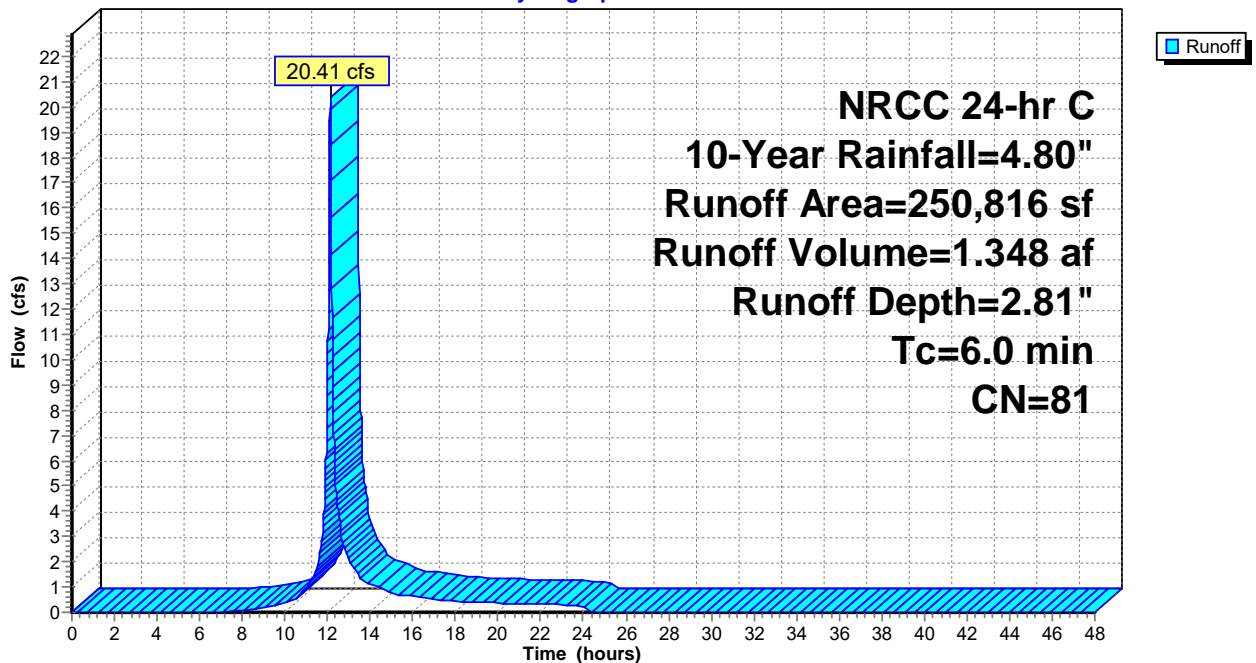
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
178,571	98	Unconnected pavement, HSG D
71,249	39	>75% Grass cover, Good, HSG A
996	80	>75% Grass cover, Good, HSG D
250,816	81	Weighted Average
72,245		28.80% Pervious Area
178,571		71.20% Impervious Area
178,571		100.00% Unconnected

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

Subcatchment 59S: PDA-1F

Hydrograph



Hydrograph for Subcatchment 59S: PDA-1F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	2.81	0.00
0.50	0.03	0.00	0.00	29.50	4.80	2.81	0.00
1.00	0.06	0.00	0.00	30.00	4.80	2.81	0.00
1.50	0.09	0.00	0.00	30.50	4.80	2.81	0.00
2.00	0.12	0.00	0.00	31.00	4.80	2.81	0.00
2.50	0.15	0.00	0.00	31.50	4.80	2.81	0.00
3.00	0.18	0.00	0.00	32.00	4.80	2.81	0.00
3.50	0.22	0.00	0.00	32.50	4.80	2.81	0.00
4.00	0.25	0.00	0.00	33.00	4.80	2.81	0.00
4.50	0.29	0.00	0.00	33.50	4.80	2.81	0.00
5.00	0.33	0.00	0.00	34.00	4.80	2.81	0.00
5.50	0.37	0.00	0.00	34.50	4.80	2.81	0.00
6.00	0.41	0.00	0.00	35.00	4.80	2.81	0.00
6.50	0.46	0.00	0.00	35.50	4.80	2.81	0.00
7.00	0.51	0.00	0.01	36.00	4.80	2.81	0.00
7.50	0.56	0.00	0.04	36.50	4.80	2.81	0.00
8.00	0.62	0.01	0.08	37.00	4.80	2.81	0.00
8.50	0.69	0.02	0.12	37.50	4.80	2.81	0.00
9.00	0.76	0.03	0.17	38.00	4.80	2.81	0.00
9.50	0.85	0.05	0.26	38.50	4.80	2.81	0.00
10.00	0.95	0.08	0.38	39.00	4.80	2.81	0.00
10.50	1.07	0.12	0.52	39.50	4.80	2.81	0.00
11.00	1.24	0.19	0.93	40.00	4.80	2.81	0.00
11.50	1.50	0.32	1.76	40.50	4.80	2.81	0.00
12.00	2.29	0.79	9.78	41.00	4.80	2.81	0.00
12.50	3.30	1.55	3.94	41.50	4.80	2.81	0.00
13.00	3.56	1.76	2.14	42.00	4.80	2.81	0.00
13.50	3.73	1.90	1.40	42.50	4.80	2.81	0.00
14.00	3.85	2.00	1.11	43.00	4.80	2.81	0.00
14.50	3.95	2.08	0.94	43.50	4.80	2.81	0.00
15.00	4.04	2.15	0.77	44.00	4.80	2.81	0.00
15.50	4.11	2.21	0.68	44.50	4.80	2.81	0.00
16.00	4.18	2.27	0.63	45.00	4.80	2.81	0.00
16.50	4.24	2.32	0.59	45.50	4.80	2.81	0.00
17.00	4.29	2.37	0.53	46.00	4.80	2.81	0.00
17.50	4.34	2.41	0.48	46.50	4.80	2.81	0.00
18.00	4.39	2.45	0.43	47.00	4.80	2.81	0.00
18.50	4.43	2.49	0.41	47.50	4.80	2.81	0.00
19.00	4.47	2.52	0.40	48.00	4.80	2.81	0.00
19.50	4.51	2.56	0.39				
20.00	4.55	2.59	0.37				
20.50	4.58	2.62	0.36				
21.00	4.62	2.65	0.35				
21.50	4.65	2.68	0.34				
22.00	4.68	2.71	0.32				
22.50	4.71	2.73	0.31				
23.00	4.74	2.76	0.30				
23.50	4.77	2.79	0.29				
24.00	4.80	2.81	0.27				
24.50	4.80	2.81	0.00				
25.00	4.80	2.81	0.00				
25.50	4.80	2.81	0.00				
26.00	4.80	2.81	0.00				
26.50	4.80	2.81	0.00				
27.00	4.80	2.81	0.00				
27.50	4.80	2.81	0.00				
28.00	4.80	2.81	0.00				
28.50	4.80	2.81	0.00				

Summary for Subcatchment 60S: PDA-1i-B

Runoff = 0.02 cfs @ 13.04 hrs, Volume= 0.010 af, Depth= 0.16"
 Routed to Pond 31P : Bioretention i

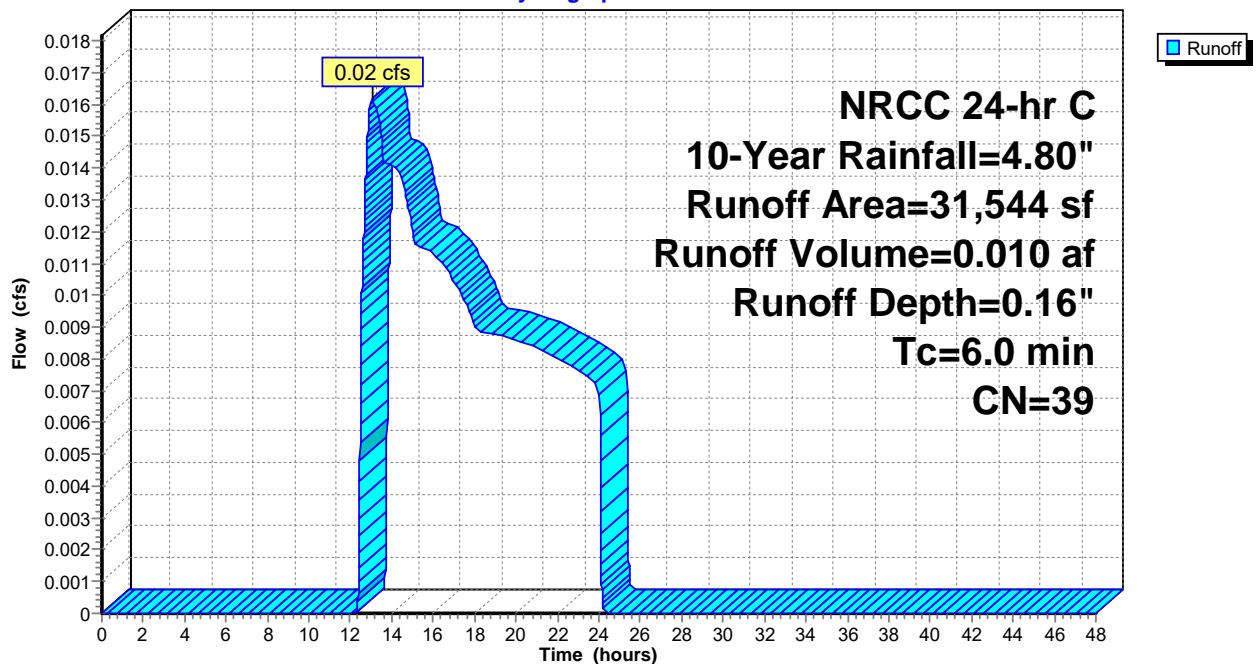
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 10-Year Rainfall=4.80"

Area (sf)	CN	Description
31,544	39	>75% Grass cover, Good, HSG A
31,544		100.00% Pervious Area

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

Subcatchment 60S: PDA-1i-B

Hydrograph



Hydrograph for Subcatchment 60S: PDA-1i-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	4.80	0.16	0.00
0.50	0.03	0.00	0.00	29.50	4.80	0.16	0.00
1.00	0.06	0.00	0.00	30.00	4.80	0.16	0.00
1.50	0.09	0.00	0.00	30.50	4.80	0.16	0.00
2.00	0.12	0.00	0.00	31.00	4.80	0.16	0.00
2.50	0.15	0.00	0.00	31.50	4.80	0.16	0.00
3.00	0.18	0.00	0.00	32.00	4.80	0.16	0.00
3.50	0.22	0.00	0.00	32.50	4.80	0.16	0.00
4.00	0.25	0.00	0.00	33.00	4.80	0.16	0.00
4.50	0.29	0.00	0.00	33.50	4.80	0.16	0.00
5.00	0.33	0.00	0.00	34.00	4.80	0.16	0.00
5.50	0.37	0.00	0.00	34.50	4.80	0.16	0.00
6.00	0.41	0.00	0.00	35.00	4.80	0.16	0.00
6.50	0.46	0.00	0.00	35.50	4.80	0.16	0.00
7.00	0.51	0.00	0.00	36.00	4.80	0.16	0.00
7.50	0.56	0.00	0.00	36.50	4.80	0.16	0.00
8.00	0.62	0.00	0.00	37.00	4.80	0.16	0.00
8.50	0.69	0.00	0.00	37.50	4.80	0.16	0.00
9.00	0.76	0.00	0.00	38.00	4.80	0.16	0.00
9.50	0.85	0.00	0.00	38.50	4.80	0.16	0.00
10.00	0.95	0.00	0.00	39.00	4.80	0.16	0.00
10.50	1.07	0.00	0.00	39.50	4.80	0.16	0.00
11.00	1.24	0.00	0.00	40.00	4.80	0.16	0.00
11.50	1.50	0.00	0.00	40.50	4.80	0.16	0.00
12.00	2.29	0.00	0.00	41.00	4.80	0.16	0.00
12.50	3.30	0.00	0.01	41.50	4.80	0.16	0.00
13.00	3.56	0.01	0.02	42.00	4.80	0.16	0.00
13.50	3.73	0.02	0.01	42.50	4.80	0.16	0.00
14.00	3.85	0.03	0.01	43.00	4.80	0.16	0.00
14.50	3.95	0.04	0.01	43.50	4.80	0.16	0.00
15.00	4.04	0.05	0.01	44.00	4.80	0.16	0.00
15.50	4.11	0.06	0.01	44.50	4.80	0.16	0.00
16.00	4.18	0.07	0.01	45.00	4.80	0.16	0.00
16.50	4.24	0.07	0.01	45.50	4.80	0.16	0.00
17.00	4.29	0.08	0.01	46.00	4.80	0.16	0.00
17.50	4.34	0.09	0.01	46.50	4.80	0.16	0.00
18.00	4.39	0.09	0.01	47.00	4.80	0.16	0.00
18.50	4.43	0.10	0.01	47.50	4.80	0.16	0.00
19.00	4.47	0.11	0.01	48.00	4.80	0.16	0.00
19.50	4.51	0.11	0.01				
20.00	4.55	0.12	0.01				
20.50	4.58	0.12	0.01				
21.00	4.62	0.13	0.01				
21.50	4.65	0.14	0.01				
22.00	4.68	0.14	0.01				
22.50	4.71	0.15	0.01				
23.00	4.74	0.15	0.01				
23.50	4.77	0.16	0.01				
24.00	4.80	0.16	0.01				
24.50	4.80	0.16	0.00				
25.00	4.80	0.16	0.00				
25.50	4.80	0.16	0.00				
26.00	4.80	0.16	0.00				
26.50	4.80	0.16	0.00				
27.00	4.80	0.16	0.00				
27.50	4.80	0.16	0.00				
28.00	4.80	0.16	0.00				
28.50	4.80	0.16	0.00				

Summary for Pond 1P: Bioretention 1D

Inflow Area = 3.927 ac, 65.47% Impervious, Inflow Depth = 3.83" for 10-Year event
 Inflow = 17.70 cfs @ 12.14 hrs, Volume= 1.254 af
 Outflow = 0.82 cfs @ 14.24 hrs, Volume= 0.574 af, Atten= 95%, Lag= 125.9 min
 Primary = 0.82 cfs @ 14.24 hrs, Volume= 0.574 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 413.50' @ 14.24 hrs Surf.Area= 16,787 sf Storage= 37,780 cf

Plug-Flow detention time= 495.8 min calculated for 0.574 af (46% of inflow)
 Center-of-Mass det. time= 363.6 min (1,156.4 - 792.9)

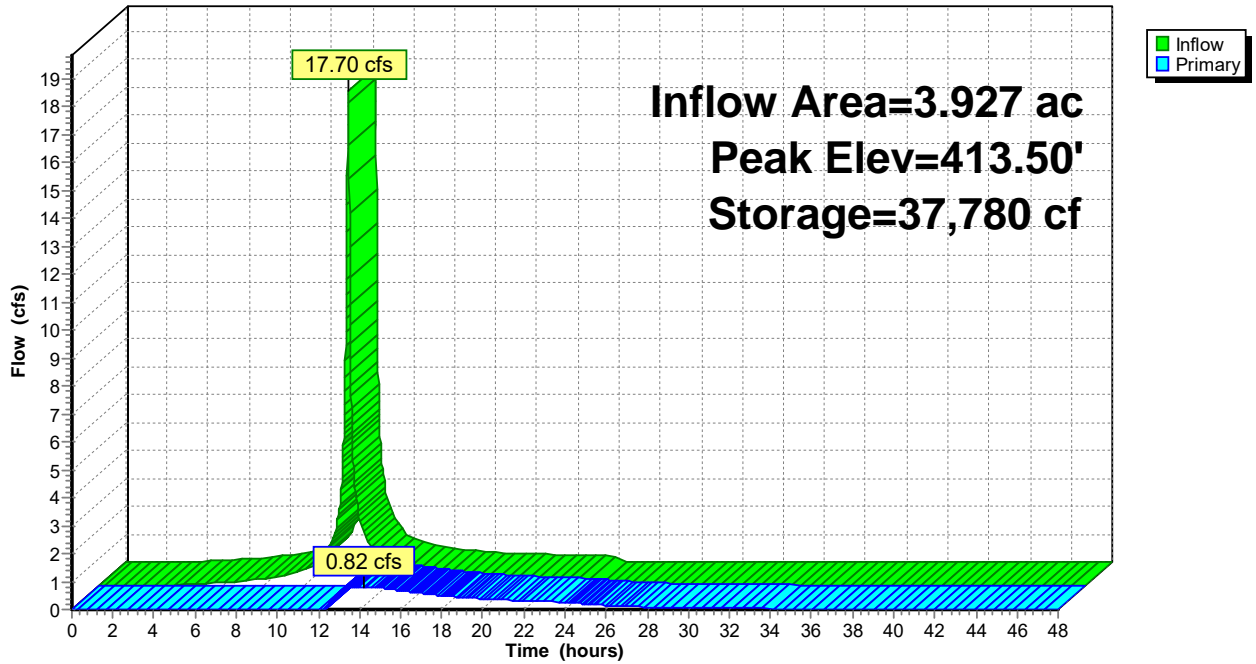
Volume	Invert	Avail.Storage	Storage Description	
#1	408.66'	82,103 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	14,016	0.0	0	0
409.33	14,016	40.0	3,756	3,756
412.00	14,016	20.0	7,485	11,241
416.00	21,415	100.0	70,862	82,103

Device	Routing	Invert	Outlet Devices
#1	Primary	408.78'	18.0" Round Culvert L= 28.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 408.78' / 408.50' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	413.00'	10.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	415.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.82 cfs @ 14.24 hrs HW=413.50' (Free Discharge)
 1=Culvert (Passes 0.82 cfs of 16.95 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.82 cfs @ 2.40 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

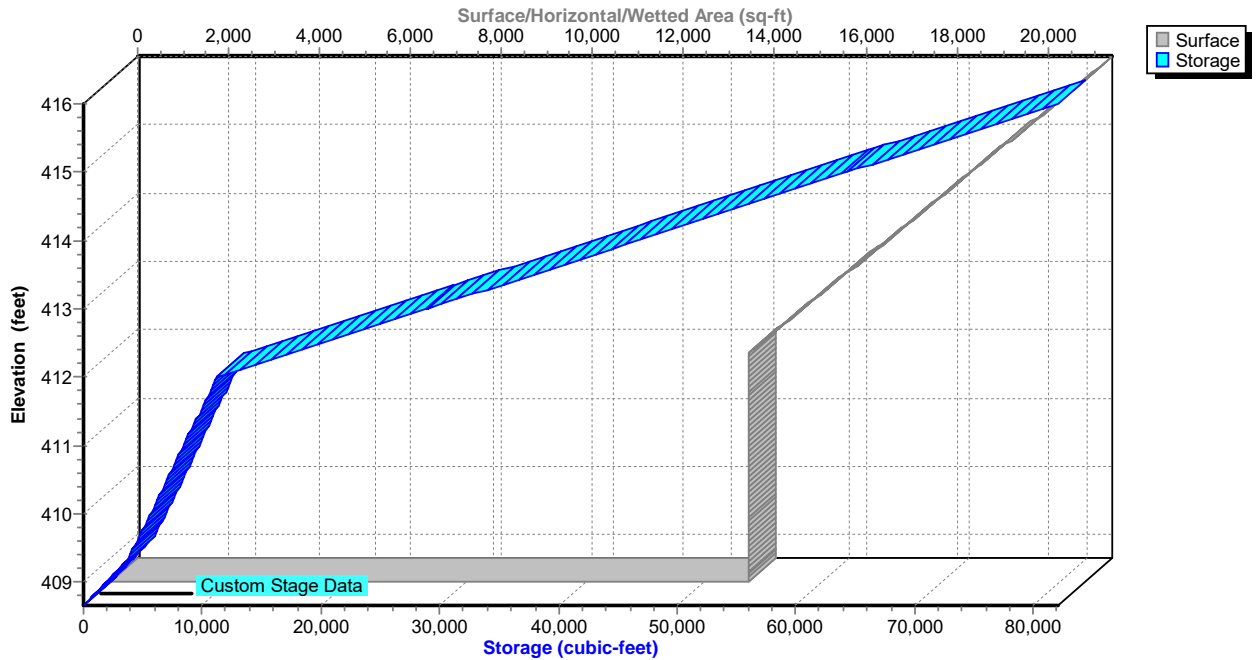
Pond 1P: Bioretention 1D

Hydrograph



Pond 1P: Bioretention 1D

Stage-Area-Storage



Hydrograph for Pond 1P: Bioretention 1D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	408.66	0.00
1.00	0.00	0	408.66	0.00
2.00	0.00	0	408.66	0.00
3.00	0.01	11	408.66	0.00
4.00	0.03	69	408.67	0.00
5.00	0.07	262	408.71	0.00
6.00	0.11	597	408.77	0.00
7.00	0.18	1,112	408.86	0.00
8.00	0.26	1,891	409.00	0.00
9.00	0.35	2,978	409.19	0.00
10.00	0.58	4,617	409.64	0.00
11.00	1.14	7,412	410.63	0.00
12.00	8.63	16,705	412.31	0.00
13.00	1.75	36,143	413.41	0.57
14.00	0.88	37,751	413.50	0.81
15.00	0.61	37,529	413.48	0.78
16.00	0.49	36,844	413.45	0.67
17.00	0.41	36,219	413.41	0.58
18.00	0.34	35,618	413.38	0.50
19.00	0.30	35,089	413.35	0.43
20.00	0.29	34,692	413.32	0.38
21.00	0.27	34,377	413.31	0.34
22.00	0.25	34,116	413.29	0.31
23.00	0.23	33,887	413.28	0.29
24.00	0.21	33,668	413.27	0.27
25.00	0.00	32,932	413.22	0.19
26.00	0.00	32,336	413.19	0.14
27.00	0.00	31,882	413.17	0.11
28.00	0.00	31,533	413.15	0.08
29.00	0.00	31,262	413.13	0.07
30.00	0.00	31,034	413.12	0.06
31.00	0.00	30,840	413.11	0.05
32.00	0.00	30,674	413.10	0.04
33.00	0.00	30,532	413.09	0.04
34.00	0.00	30,412	413.08	0.03
35.00	0.00	30,309	413.08	0.03
36.00	0.00	30,222	413.07	0.02
37.00	0.00	30,147	413.07	0.02
38.00	0.00	30,084	413.06	0.02
39.00	0.00	30,026	413.06	0.02
40.00	0.00	29,971	413.06	0.01
41.00	0.00	29,919	413.05	0.01
42.00	0.00	29,870	413.05	0.01
43.00	0.00	29,823	413.05	0.01
44.00	0.00	29,778	413.05	0.01
45.00	0.00	29,736	413.04	0.01
46.00	0.00	29,696	413.04	0.01
47.00	0.00	29,658	413.04	0.01
48.00	0.00	29,622	413.04	0.01

Stage-Area-Storage for Pond 1P: Bioretention 1D

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.66	14,016	0	414.46	18,566	54,821
408.76	14,016	561	414.56	18,751	56,593
408.86	14,016	1,121	414.66	18,936	58,364
408.96	14,016	1,682	414.76	19,121	60,136
409.06	14,016	2,243	414.86	19,306	61,907
409.16	14,016	2,803	414.96	19,491	63,679
409.26	14,016	3,364	415.06	19,676	65,450
409.36	14,016	3,840	415.16	19,861	67,222
409.46	14,016	4,121	415.26	20,046	68,993
409.56	14,016	4,401	415.36	20,231	70,765
409.66	14,016	4,681	415.46	20,416	72,536
409.76	14,016	4,962	415.56	20,601	74,308
409.86	14,016	5,242	415.66	20,786	76,080
409.96	14,016	5,522	415.76	20,971	77,851
410.06	14,016	5,803	415.86	21,156	79,623
410.16	14,016	6,083	415.96	21,341	81,394
410.26	14,016	6,363			
410.36	14,016	6,644			
410.46	14,016	6,924			
410.56	14,016	7,204			
410.66	14,016	7,485			
410.76	14,016	7,765			
410.86	14,016	8,045			
410.96	14,016	8,326			
411.06	14,016	8,606			
411.16	14,016	8,886			
411.26	14,016	9,166			
411.36	14,016	9,447			
411.46	14,016	9,727			
411.56	14,016	10,007			
411.66	14,016	10,288			
411.76	14,016	10,568			
411.86	14,016	10,848			
411.96	14,016	11,129			
412.06	14,127	12,304			
412.16	14,312	14,075			
412.26	14,497	15,847			
412.36	14,682	17,618			
412.46	14,867	19,390			
412.56	15,052	21,162			
412.66	15,237	22,933			
412.76	15,422	24,705			
412.86	15,607	26,476			
412.96	15,792	28,248			
413.06	15,977	30,019			
413.16	16,162	31,791			
413.26	16,347	33,562			
413.36	16,532	35,334			
413.46	16,717	37,105			
413.56	16,902	38,877			
413.66	17,087	40,649			
413.76	17,272	42,420			
413.86	17,457	44,192			
413.96	17,642	45,963			
414.06	17,826	47,735			
414.16	18,011	49,506			
414.26	18,196	51,278			
414.36	18,381	53,049			

Summary for Pond 3P: Bioretention 1A

Inflow Area = 2.483 ac, 78.54% Impervious, Inflow Depth = 3.18" for 10-Year event
 Inflow = 9.83 cfs @ 12.13 hrs, Volume= 0.659 af
 Outflow = 0.49 cfs @ 14.16 hrs, Volume= 0.210 af, Atten= 95%, Lag= 121.7 min
 Primary = 0.49 cfs @ 14.16 hrs, Volume= 0.210 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 414.55' @ 14.16 hrs Surf.Area= 11,408 sf Storage= 20,071 cf

Plug-Flow detention time= 388.2 min calculated for 0.210 af (32% of inflow)
 Center-of-Mass det. time= 242.7 min (1,059.6 - 816.8)

Volume	Invert	Avail.Storage	Storage Description
#1	408.66'	25,522 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

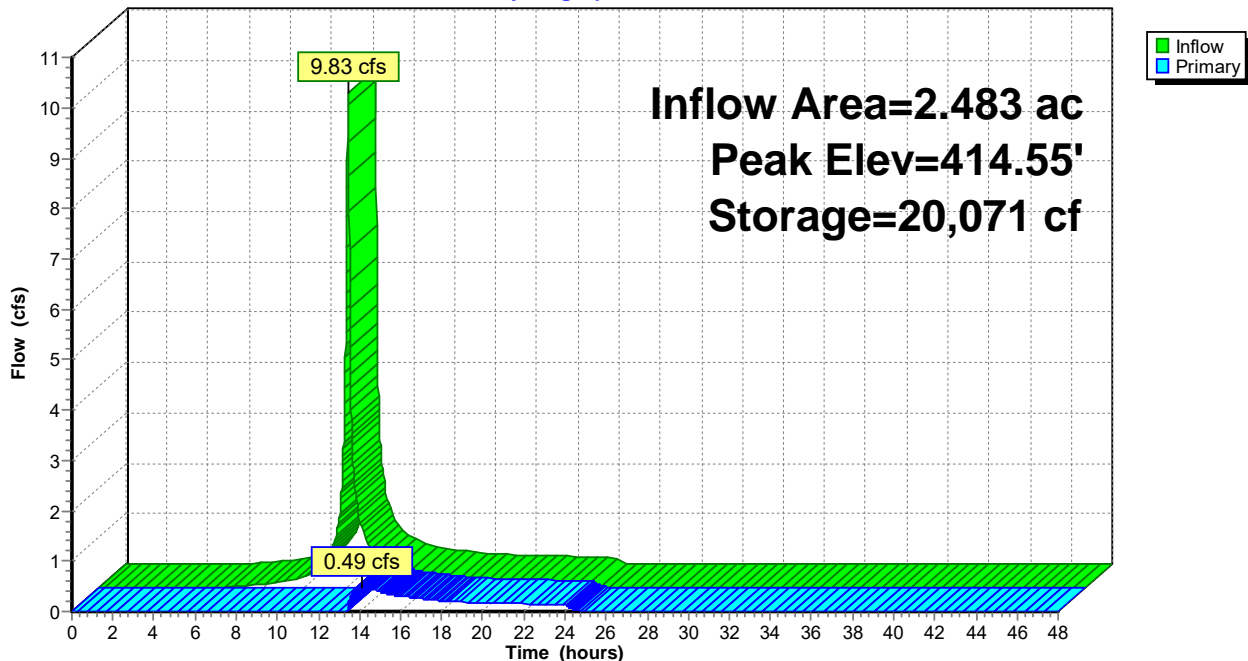
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	8,681	0.0	0	0
409.33	8,681	40.0	2,327	2,327
413.50	8,681	20.0	7,240	9,566
415.00	12,593	100.0	15,956	25,522

Device	Routing	Invert	Outlet Devices
#1	Primary	408.66'	18.0" Round Culvert L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 408.66' / 407.50' S= 0.0232 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	414.50'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.44 cfs @ 14.16 hrs HW=414.55' (Free Discharge)
 ↑1=Culvert (Passes 0.44 cfs of 19.28 cfs potential flow)
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 0.44 cfs @ 0.60 fps)

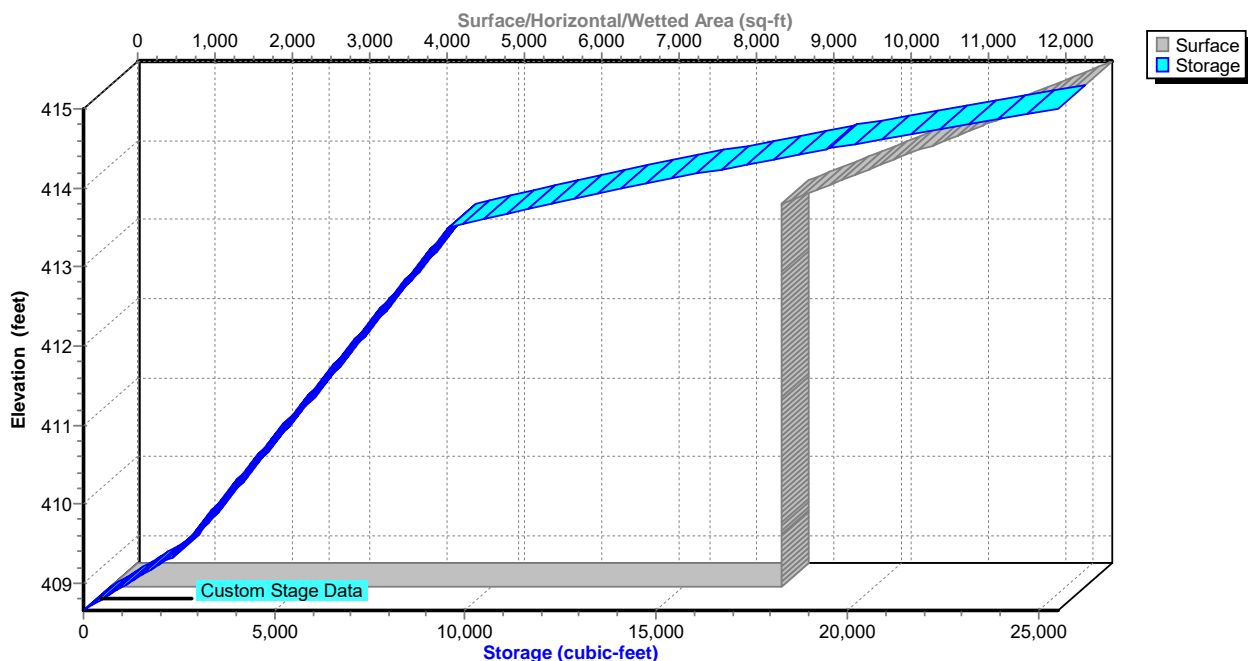
Pond 3P: Bioretention 1A

Hydrograph



Pond 3P: Bioretention 1A

Stage-Area-Storage



Hydrograph for Pond 3P: Bioretention 1A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	408.66	0.00
1.00	0.00	0	408.66	0.00
2.00	0.00	0	408.66	0.00
3.00	0.00	0	408.66	0.00
4.00	0.00	0	408.66	0.00
5.00	0.00	0	408.66	0.00
6.00	0.01	13	408.66	0.00
7.00	0.04	99	408.69	0.00
8.00	0.08	299	408.75	0.00
9.00	0.12	650	408.85	0.00
10.00	0.23	1,273	409.03	0.00
11.00	0.52	2,485	409.42	0.00
12.00	4.86	7,274	412.18	0.00
13.00	0.99	18,342	414.39	0.00
14.00	0.51	20,063	414.55	0.48
15.00	0.35	19,976	414.54	0.40
16.00	0.29	19,878	414.53	0.31
17.00	0.24	19,827	414.52	0.26
18.00	0.20	19,778	414.52	0.21
19.00	0.18	19,750	414.52	0.19
20.00	0.17	19,737	414.52	0.17
21.00	0.16	19,724	414.52	0.16
22.00	0.15	19,712	414.51	0.15
23.00	0.13	19,699	414.51	0.14
24.00	0.12	19,687	414.51	0.13
25.00	0.00	19,558	414.50	0.01
26.00	0.00	19,552	414.50	0.00
27.00	0.00	19,551	414.50	0.00
28.00	0.00	19,551	414.50	0.00
29.00	0.00	19,551	414.50	0.00
30.00	0.00	19,551	414.50	0.00
31.00	0.00	19,551	414.50	0.00
32.00	0.00	19,551	414.50	0.00
33.00	0.00	19,551	414.50	0.00
34.00	0.00	19,551	414.50	0.00
35.00	0.00	19,551	414.50	0.00
36.00	0.00	19,551	414.50	0.00
37.00	0.00	19,551	414.50	0.00
38.00	0.00	19,551	414.50	0.00
39.00	0.00	19,551	414.50	0.00
40.00	0.00	19,551	414.50	0.00
41.00	0.00	19,551	414.50	0.00
42.00	0.00	19,551	414.50	0.00
43.00	0.00	19,551	414.50	0.00
44.00	0.00	19,551	414.50	0.00
45.00	0.00	19,551	414.50	0.00
46.00	0.00	19,551	414.50	0.00
47.00	0.00	19,551	414.50	0.00
48.00	0.00	19,551	414.50	0.00

Stage-Area-Storage for Pond 3P: Bioretention 1A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.66	8,681	0	414.46	11,185	19,102
408.76	8,681	347	414.56	11,445	20,233
408.86	8,681	694	414.66	11,706	21,391
408.96	8,681	1,042	414.76	11,967	22,575
409.06	8,681	1,389	414.86	12,228	23,785
409.16	8,681	1,736	414.96	12,489	25,020
409.26	8,681	2,083			
409.36	8,681	2,379			
409.46	8,681	2,552			
409.56	8,681	2,726			
409.66	8,681	2,899			
409.76	8,681	3,073			
409.86	8,681	3,247			
409.96	8,681	3,420			
410.06	8,681	3,594			
410.16	8,681	3,768			
410.26	8,681	3,941			
410.36	8,681	4,115			
410.46	8,681	4,288			
410.56	8,681	4,462			
410.66	8,681	4,636			
410.76	8,681	4,809			
410.86	8,681	4,983			
410.96	8,681	5,157			
411.06	8,681	5,330			
411.16	8,681	5,504			
411.26	8,681	5,677			
411.36	8,681	5,851			
411.46	8,681	6,025			
411.56	8,681	6,198			
411.66	8,681	6,372			
411.76	8,681	6,545			
411.86	8,681	6,719			
411.96	8,681	6,893			
412.06	8,681	7,066			
412.16	8,681	7,240			
412.26	8,681	7,414			
412.36	8,681	7,587			
412.46	8,681	7,761			
412.56	8,681	7,934			
412.66	8,681	8,108			
412.76	8,681	8,282			
412.86	8,681	8,455			
412.96	8,681	8,629			
413.06	8,681	8,803			
413.16	8,681	8,976			
413.26	8,681	9,150			
413.36	8,681	9,323			
413.46	8,681	9,497			
413.56	8,837	10,092			
413.66	9,098	10,989			
413.76	9,359	11,912			
413.86	9,620	12,861			
413.96	9,881	13,836			
414.06	10,141	14,837			
414.16	10,402	15,864			
414.26	10,663	16,917			
414.36	10,924	17,997			

Summary for Pond 22P: Bioretention 5A

Inflow Area = 4.966 ac, 46.58% Impervious, Inflow Depth = 2.21" for 10-Year event
 Inflow = 13.50 cfs @ 12.15 hrs, Volume= 0.913 af
 Outflow = 1.84 cfs @ 12.87 hrs, Volume= 0.567 af, Atten= 86%, Lag= 43.1 min
 Primary = 1.84 cfs @ 12.87 hrs, Volume= 0.567 af
 Routed to Link PDP5 : PDP5

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 432.79' @ 12.87 hrs Surf.Area= 12,609 sf Storage= 18,655 cf

Plug-Flow detention time= 253.6 min calculated for 0.567 af (62% of inflow)
 Center-of-Mass det. time= 132.4 min (986.7 - 854.2)

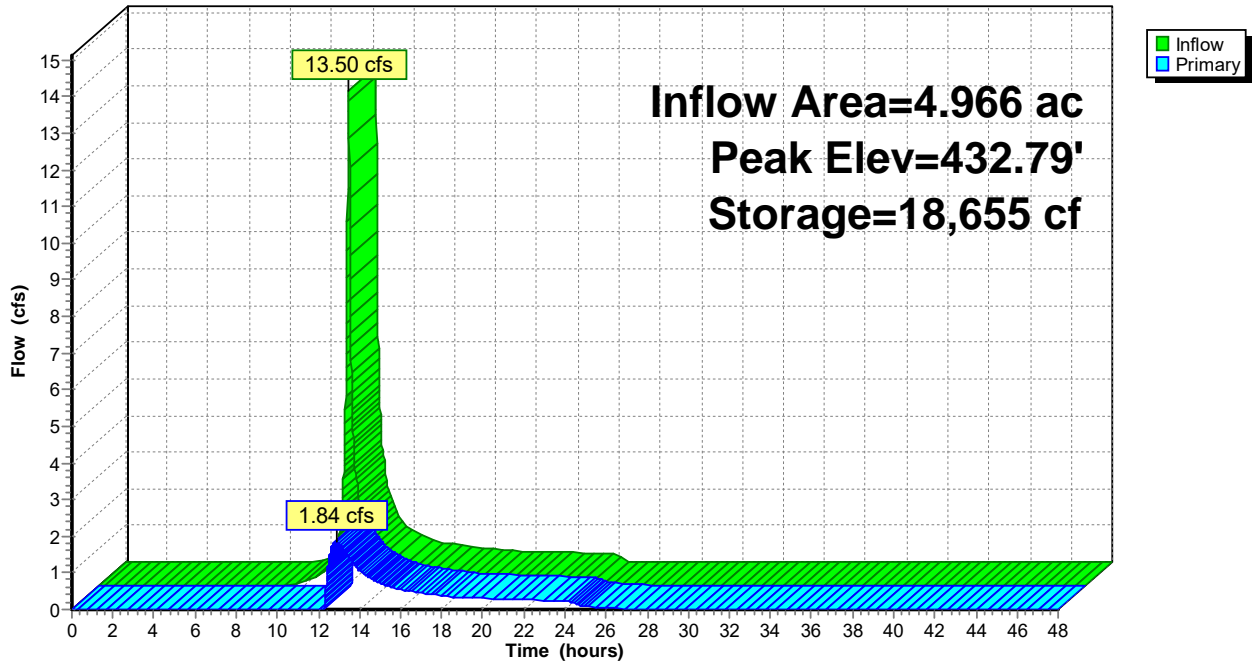
Volume	Invert	Avail.Storage	Storage Description	
#1	428.67'	50,065 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
428.67	11,465	0.0	0	0
429.33	11,465	40.0	3,027	3,027
432.00	11,465	20.0	6,122	9,149
435.00	15,812	100.0	40,916	50,065

Device	Routing	Invert	Outlet Devices
#1	Primary	428.67'	18.0" Round Culvert L= 270.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 428.67' / 389.43' S= 0.1453 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	432.50'	44.0" W x 8.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	434.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.84 cfs @ 12.87 hrs HW=432.79' (Free Discharge)
 1=Culvert (Passes 1.84 cfs of 15.62 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 1.84 cfs @ 1.73 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

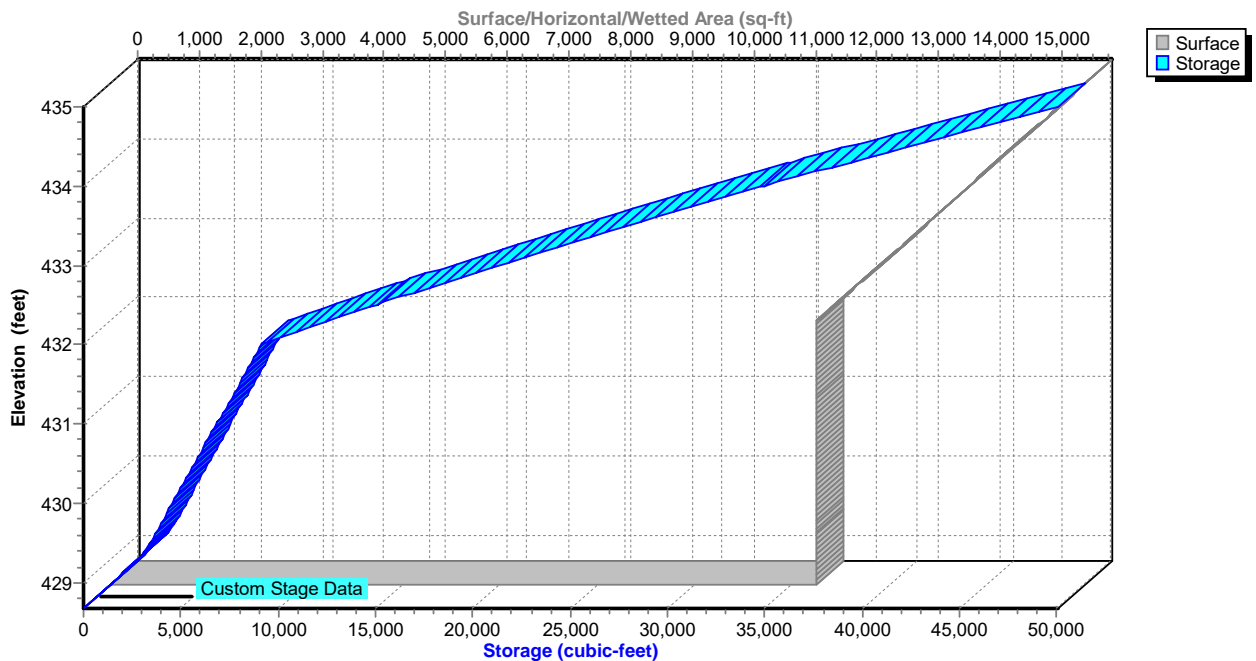
Pond 22P: Bioretention 5A

Hydrograph



Pond 22P: Bioretention 5A

Stage-Area-Storage



Hydrograph for Pond 22P: Bioretention 5A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	428.67	0.00
1.00	0.00	0	428.67	0.00
2.00	0.00	0	428.67	0.00
3.00	0.00	0	428.67	0.00
4.00	0.00	0	428.67	0.00
5.00	0.00	0	428.67	0.00
6.00	0.00	0	428.67	0.00
7.00	0.00	0	428.67	0.00
8.00	0.00	0	428.67	0.00
9.00	0.01	5	428.67	0.00
10.00	0.11	194	428.71	0.00
11.00	0.41	988	428.89	0.00
12.00	5.19	5,684	430.49	0.00
13.00	1.65	18,615	432.79	1.81
14.00	0.85	17,540	432.70	1.07
15.00	0.60	16,978	432.66	0.72
16.00	0.49	16,627	432.63	0.55
17.00	0.41	16,447	432.61	0.46
18.00	0.34	16,294	432.60	0.38
19.00	0.31	16,182	432.59	0.33
20.00	0.29	16,116	432.59	0.30
21.00	0.27	16,060	432.58	0.28
22.00	0.25	16,007	432.58	0.27
23.00	0.23	15,953	432.57	0.25
24.00	0.21	15,899	432.57	0.23
25.00	0.00	15,493	432.54	0.08
26.00	0.00	15,294	432.52	0.04
27.00	0.00	15,188	432.51	0.02
28.00	0.00	15,130	432.51	0.01
29.00	0.00	15,099	432.50	0.01
30.00	0.00	15,083	432.50	0.00
31.00	0.00	15,073	432.50	0.00
32.00	0.00	15,069	432.50	0.00
33.00	0.00	15,066	432.50	0.00
34.00	0.00	15,064	432.50	0.00
35.00	0.00	15,064	432.50	0.00
36.00	0.00	15,063	432.50	0.00
37.00	0.00	15,063	432.50	0.00
38.00	0.00	15,063	432.50	0.00
39.00	0.00	15,063	432.50	0.00
40.00	0.00	15,063	432.50	0.00
41.00	0.00	15,063	432.50	0.00
42.00	0.00	15,063	432.50	0.00
43.00	0.00	15,063	432.50	0.00
44.00	0.00	15,063	432.50	0.00
45.00	0.00	15,063	432.50	0.00
46.00	0.00	15,063	432.50	0.00
47.00	0.00	15,063	432.50	0.00
48.00	0.00	15,063	432.50	0.00

Stage-Area-Storage for Pond 22P: Bioretention 5A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
428.67	11,465	0	434.47	15,044	41,888
428.77	11,465	459	434.57	15,189	43,399
428.87	11,465	917	434.67	15,334	44,926
428.97	11,465	1,376	434.77	15,479	46,466
429.07	11,465	1,834	434.87	15,624	48,021
429.17	11,465	2,293	434.97	15,769	49,591
429.27	11,465	2,752			
429.37	11,465	3,118			
429.47	11,465	3,348			
429.57	11,465	3,577			
429.67	11,465	3,806			
429.77	11,465	4,036			
429.87	11,465	4,265			
429.97	11,465	4,494			
430.07	11,465	4,724			
430.17	11,465	4,953			
430.27	11,465	5,182			
430.37	11,465	5,411			
430.47	11,465	5,641			
430.57	11,465	5,870			
430.67	11,465	6,099			
430.77	11,465	6,329			
430.87	11,465	6,558			
430.97	11,465	6,787			
431.07	11,465	7,017			
431.17	11,465	7,246			
431.27	11,465	7,475			
431.37	11,465	7,704			
431.47	11,465	7,934			
431.57	11,465	8,163			
431.67	11,465	8,392			
431.77	11,465	8,622			
431.87	11,465	8,851			
431.97	11,465	9,080			
432.07	11,566	9,955			
432.17	11,711	11,119			
432.27	11,856	12,297			
432.37	12,001	13,490			
432.47	12,146	14,698			
432.57	12,291	15,920			
432.67	12,436	17,156			
432.77	12,581	18,407			
432.87	12,726	19,672			
432.97	12,871	20,952			
433.07	13,015	22,246			
433.17	13,160	23,555			
433.27	13,305	24,878			
433.37	13,450	26,216			
433.47	13,595	27,568			
433.57	13,740	28,935			
433.67	13,885	30,316			
433.77	14,030	31,712			
433.87	14,175	33,122			
433.97	14,320	34,547			
434.07	14,464	35,986			
434.17	14,609	37,440			
434.27	14,754	38,908			
434.37	14,899	40,391			

Summary for Pond 26P: Bioretention 1F

Inflow Area = 5.758 ac, 71.20% Impervious, Inflow Depth = 2.81" for 10-Year event
 Inflow = 20.41 cfs @ 12.13 hrs, Volume= 1.348 af
 Outflow = 2.30 cfs @ 12.93 hrs, Volume= 0.783 af, Atten= 89%, Lag= 47.9 min
 Primary = 2.30 cfs @ 12.93 hrs, Volume= 0.783 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 411.82' @ 12.93 hrs Surf.Area= 21,250 sf Storage= 31,189 cf

Plug-Flow detention time= 281.7 min calculated for 0.783 af (58% of inflow)
 Center-of-Mass det. time= 162.8 min (992.6 - 829.8)

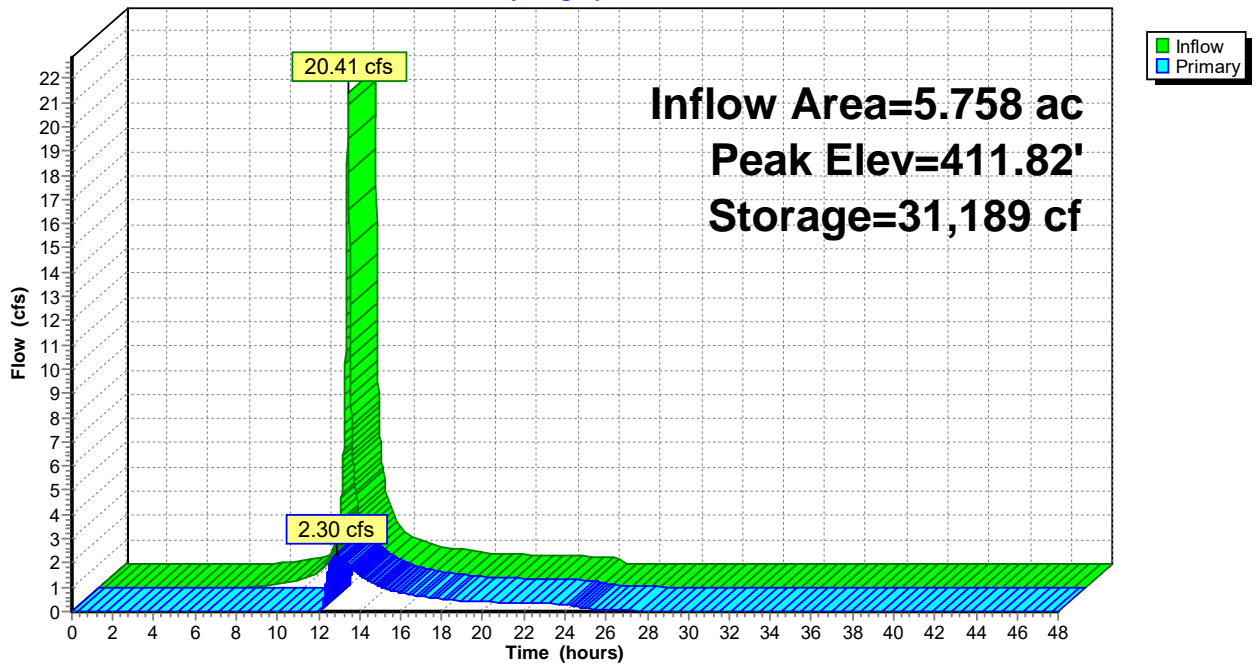
Volume	Invert	Avail.Storage	Storage Description	
#1	407.66'	85,321 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.66	18,594	0.0	0	0
408.33	18,594	40.0	4,983	4,983
411.00	18,594	20.0	9,929	14,912
414.00	28,345	100.0	70,409	85,321

Device	Routing	Invert	Outlet Devices
#1	Primary	407.66'	18.0" Round Culvert L= 47.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.66' / 407.50' S= 0.0034 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	411.50'	48.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.29 cfs @ 12.93 hrs HW=411.82' (Free Discharge)
 1=Culvert (Passes 2.29 cfs of 15.50 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 2.29 cfs @ 1.81 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

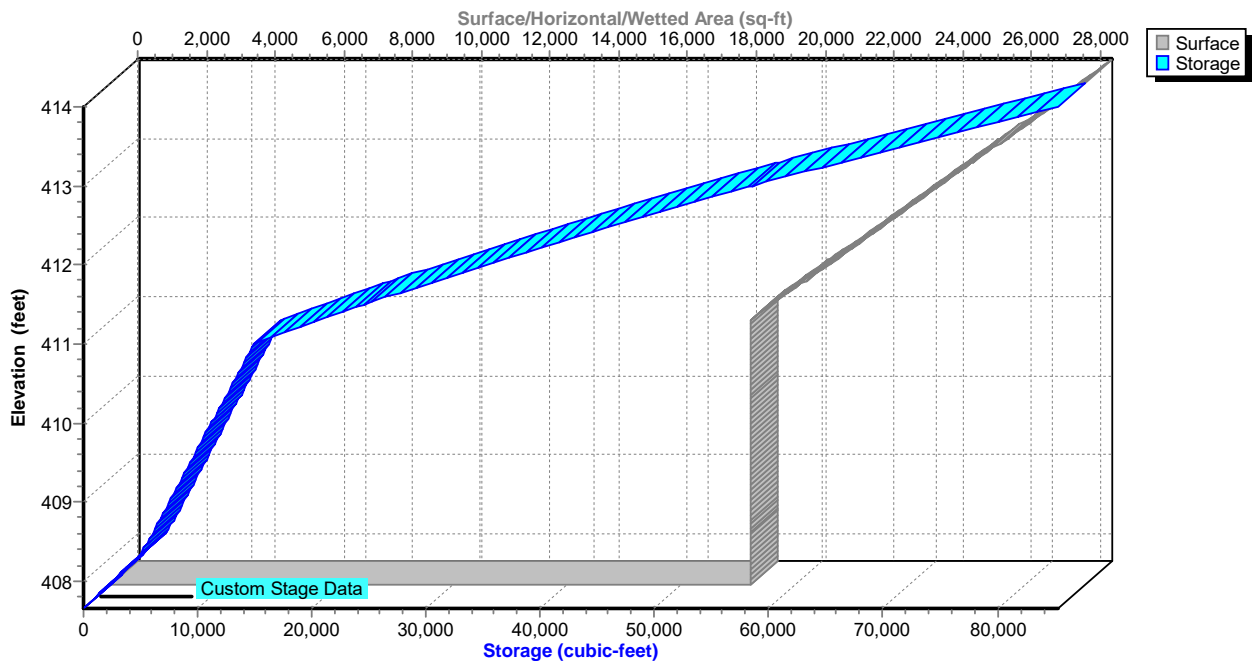
Pond 26P: Bioretention 1F

Hydrograph



Pond 26P: Bioretention 1F

Stage-Area-Storage



Hydrograph for Pond 26P: Bioretention 1F

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.66	0.00
1.00	0.00	0	407.66	0.00
2.00	0.00	0	407.66	0.00
3.00	0.00	0	407.66	0.00
4.00	0.00	0	407.66	0.00
5.00	0.00	0	407.66	0.00
6.00	0.00	0	407.66	0.00
7.00	0.01	7	407.66	0.00
8.00	0.08	172	407.68	0.00
9.00	0.17	617	407.74	0.00
10.00	0.38	1,568	407.87	0.00
11.00	0.93	3,645	408.15	0.00
12.00	9.78	12,857	410.45	0.00
13.00	2.14	31,172	411.82	2.29
14.00	1.11	29,563	411.74	1.52
15.00	0.77	28,432	411.69	1.04
16.00	0.63	27,730	411.65	0.76
17.00	0.53	27,332	411.63	0.63
18.00	0.43	26,996	411.62	0.52
19.00	0.40	26,751	411.60	0.44
20.00	0.37	26,623	411.60	0.40
21.00	0.35	26,530	411.59	0.37
22.00	0.32	26,447	411.59	0.35
23.00	0.30	26,353	411.59	0.33
24.00	0.27	26,248	411.58	0.30
25.00	0.00	25,546	411.55	0.14
26.00	0.00	25,194	411.53	0.06
27.00	0.00	25,012	411.52	0.04
28.00	0.00	24,887	411.51	0.03
29.00	0.00	24,802	411.51	0.02
30.00	0.00	24,743	411.51	0.01
31.00	0.00	24,703	411.50	0.01
32.00	0.00	24,676	411.50	0.01
33.00	0.00	24,657	411.50	0.00
34.00	0.00	24,644	411.50	0.00
35.00	0.00	24,635	411.50	0.00
36.00	0.00	24,629	411.50	0.00
37.00	0.00	24,625	411.50	0.00
38.00	0.00	24,622	411.50	0.00
39.00	0.00	24,620	411.50	0.00
40.00	0.00	24,619	411.50	0.00
41.00	0.00	24,618	411.50	0.00
42.00	0.00	24,617	411.50	0.00
43.00	0.00	24,617	411.50	0.00
44.00	0.00	24,616	411.50	0.00
45.00	0.00	24,616	411.50	0.00
46.00	0.00	24,616	411.50	0.00
47.00	0.00	24,616	411.50	0.00
48.00	0.00	24,616	411.50	0.00

Stage-Area-Storage for Pond 26P: Bioretention 1F

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.66	18,594	0	413.46	26,590	70,488
407.76	18,594	744	413.56	26,915	73,164
407.86	18,594	1,488	413.66	27,240	75,871
407.96	18,594	2,231	413.76	27,565	78,612
408.06	18,594	2,975	413.86	27,890	81,384
408.16	18,594	3,719	413.96	28,215	84,190
408.26	18,594	4,463			
408.36	18,594	5,095			
408.46	18,594	5,467			
408.56	18,594	5,839			
408.66	18,594	6,210			
408.76	18,594	6,582			
408.86	18,594	6,954			
408.96	18,594	7,326			
409.06	18,594	7,698			
409.16	18,594	8,070			
409.26	18,594	8,442			
409.36	18,594	8,814			
409.46	18,594	9,185			
409.56	18,594	9,557			
409.66	18,594	9,929			
409.76	18,594	10,301			
409.86	18,594	10,673			
409.96	18,594	11,045			
410.06	18,594	11,417			
410.16	18,594	11,789			
410.26	18,594	12,160			
410.36	18,594	12,532			
410.46	18,594	12,904			
410.56	18,594	13,276			
410.66	18,594	13,648			
410.76	18,594	14,020			
410.86	18,594	14,392			
410.96	18,594	14,764			
411.06	18,789	16,034			
411.16	19,114	17,929			
411.26	19,439	19,857			
411.36	19,764	21,817			
411.46	20,089	23,810			
411.56	20,414	25,835			
411.66	20,739	27,892			
411.76	21,064	29,983			
411.86	21,389	32,105			
411.96	21,714	34,260			
412.06	22,039	36,448			
412.16	22,364	38,668			
412.26	22,689	40,921			
412.36	23,014	43,206			
412.46	23,339	45,524			
412.56	23,665	47,874			
412.66	23,990	50,257			
412.76	24,315	52,672			
412.86	24,640	55,120			
412.96	24,965	57,600			
413.06	25,290	60,113			
413.16	25,615	62,658			
413.26	25,940	65,236			
413.36	26,265	67,846			

Summary for Pond 29P: Bioretention 4B

Inflow Area = 6.859 ac, 48.92% Impervious, Inflow Depth = 2.91" for 10-Year event
 Inflow = 25.00 cfs @ 12.13 hrs, Volume= 1.663 af
 Outflow = 3.16 cfs @ 12.78 hrs, Volume= 0.958 af, Atten= 87%, Lag= 38.8 min
 Primary = 3.16 cfs @ 12.78 hrs, Volume= 0.958 af
 Routed to Link 32L : DP-4

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 419.39' @ 12.78 hrs Surf.Area= 19,240 sf Storage= 38,105 cf

Plug-Flow detention time= 271.8 min calculated for 0.958 af (58% of inflow)
 Center-of-Mass det. time= 152.9 min (977.9 - 825.0)

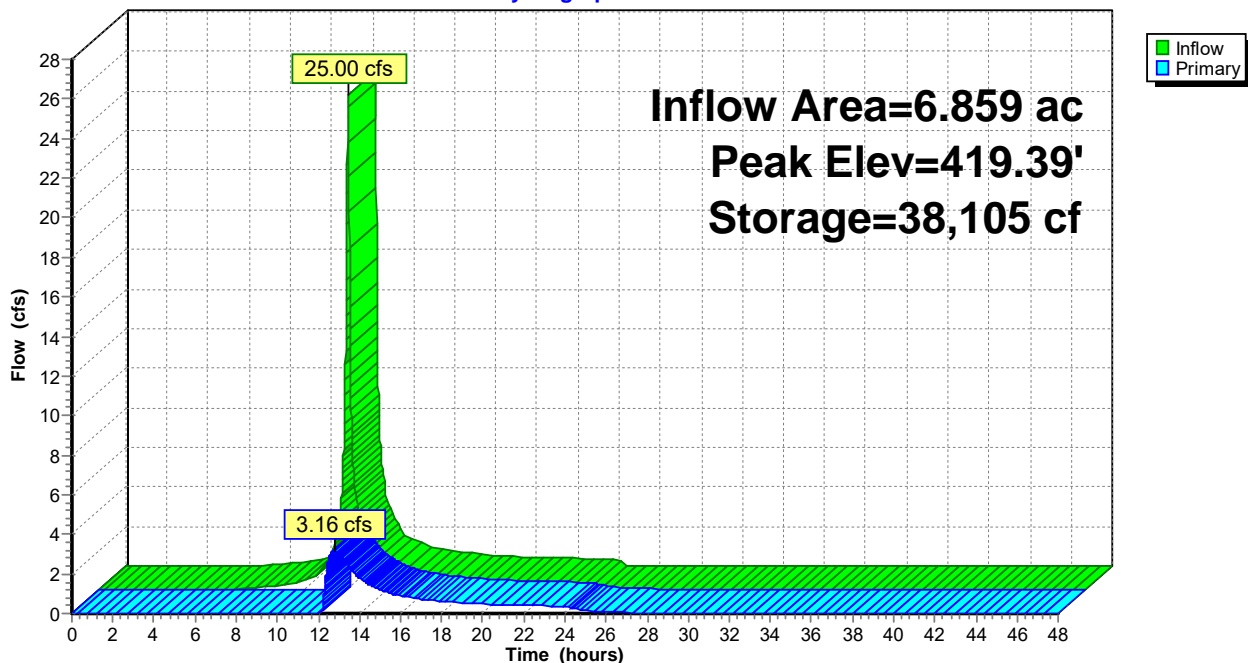
Volume	Invert	Avail.Storage	Storage Description	
#1	414.67'	94,874 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
414.67	16,541	0.0	0	0
415.33	16,541	40.0	4,367	4,367
418.00	16,541	20.0	8,833	13,200
422.00	24,296	100.0	81,674	94,874

Device	Routing	Invert	Outlet Devices
#1	Primary	414.67'	18.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 414.67' / 414.07' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	419.00'	48.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	421.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=3.15 cfs @ 12.78 hrs HW=419.39' (Free Discharge)
 1=Culvert (Passes 3.15 cfs of 16.96 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 3.15 cfs @ 2.01 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

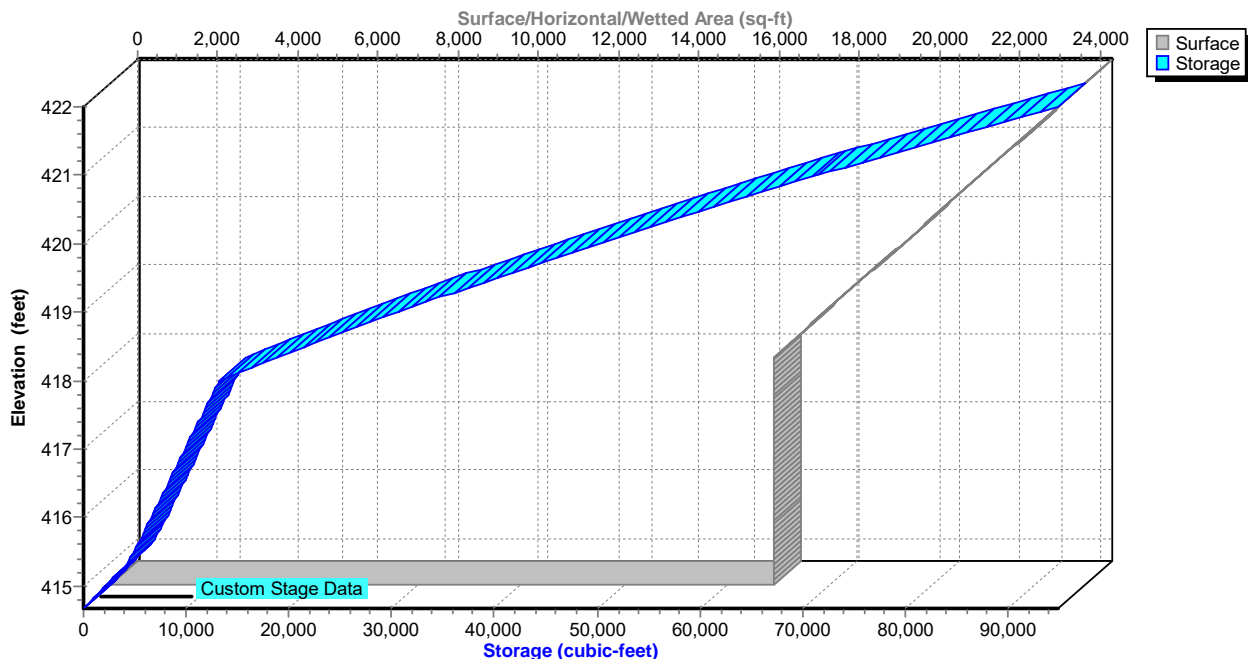
Pond 29P: Bioretention 4B

Hydrograph



Pond 29P: Bioretention 4B

Stage-Area-Storage



Hydrograph for Pond 29P: Bioretention 4B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	414.67	0.00
1.00	0.00	0	414.67	0.00
2.00	0.00	0	414.67	0.00
3.00	0.00	0	414.67	0.00
4.00	0.00	0	414.67	0.00
5.00	0.00	0	414.67	0.00
6.00	0.01	5	414.67	0.00
7.00	0.06	131	414.69	0.00
8.00	0.14	484	414.74	0.00
9.00	0.24	1,156	414.84	0.00
10.00	0.51	2,466	415.04	0.00
11.00	1.20	5,196	415.58	0.00
12.00	12.10	16,782	418.21	0.00
13.00	2.59	37,917	419.38	3.04
14.00	1.34	35,743	419.27	1.80
15.00	0.92	34,551	419.21	1.20
16.00	0.76	33,834	419.17	0.89
17.00	0.64	33,462	419.15	0.73
18.00	0.52	33,144	419.13	0.62
19.00	0.48	32,883	419.12	0.53
20.00	0.45	32,740	419.11	0.48
21.00	0.42	32,634	419.10	0.45
22.00	0.39	32,537	419.10	0.42
23.00	0.36	32,443	419.09	0.38
24.00	0.33	32,350	419.09	0.35
25.00	0.00	31,595	419.05	0.16
26.00	0.00	31,172	419.02	0.08
27.00	0.00	30,951	419.01	0.04
28.00	0.00	30,836	419.01	0.02
29.00	0.00	30,776	419.00	0.01
30.00	0.00	30,744	419.00	0.01
31.00	0.00	30,728	419.00	0.00
32.00	0.00	30,719	419.00	0.00
33.00	0.00	30,715	419.00	0.00
34.00	0.00	30,713	419.00	0.00
35.00	0.00	30,711	419.00	0.00
36.00	0.00	30,711	419.00	0.00
37.00	0.00	30,710	419.00	0.00
38.00	0.00	30,710	419.00	0.00
39.00	0.00	30,710	419.00	0.00
40.00	0.00	30,710	419.00	0.00
41.00	0.00	30,710	419.00	0.00
42.00	0.00	30,710	419.00	0.00
43.00	0.00	30,710	419.00	0.00
44.00	0.00	30,710	419.00	0.00
45.00	0.00	30,710	419.00	0.00
46.00	0.00	30,710	419.00	0.00
47.00	0.00	30,710	419.00	0.00
48.00	0.00	30,710	419.00	0.00

Stage-Area-Storage for Pond 29P: Bioretention 4B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
414.67	16,541	0	420.47	21,330	59,970
414.77	16,541	662	420.57	21,524	62,113
414.87	16,541	1,323	420.67	21,717	64,275
414.97	16,541	1,985	420.77	21,911	66,456
415.07	16,541	2,647	420.87	22,105	68,657
415.17	16,541	3,308	420.97	22,299	70,877
415.27	16,541	3,970	421.07	22,493	73,117
415.37	16,541	4,499	421.17	22,687	75,376
415.47	16,541	4,830	421.27	22,881	77,654
415.57	16,541	5,161	421.37	23,075	79,952
415.67	16,541	5,492	421.47	23,268	82,269
415.77	16,541	5,822	421.57	23,462	84,606
415.87	16,541	6,153	421.67	23,656	86,962
415.97	16,541	6,484	421.77	23,850	89,337
416.07	16,541	6,815	421.87	24,044	91,732
416.17	16,541	7,146	421.97	24,238	94,146
416.27	16,541	7,477			
416.37	16,541	7,807			
416.47	16,541	8,138			
416.57	16,541	8,469			
416.67	16,541	8,800			
416.77	16,541	9,131			
416.87	16,541	9,461			
416.97	16,541	9,792			
417.07	16,541	10,123			
417.17	16,541	10,454			
417.27	16,541	10,785			
417.37	16,541	11,116			
417.47	16,541	11,446			
417.57	16,541	11,777			
417.67	16,541	12,108			
417.77	16,541	12,439			
417.87	16,541	12,770			
417.97	16,541	13,100			
418.07	16,677	14,362			
418.17	16,871	16,040			
418.27	17,064	17,736			
418.37	17,258	19,453			
418.47	17,452	21,188			
418.57	17,646	22,943			
418.67	17,840	24,717			
418.77	18,034	26,511			
418.87	18,228	28,324			
418.97	18,422	30,157			
419.07	18,615	32,008			
419.17	18,809	33,880			
419.27	19,003	35,770			
419.37	19,197	37,680			
419.47	19,391	39,610			
419.57	19,585	41,559			
419.67	19,779	43,527			
419.77	19,973	45,514			
419.87	20,166	47,521			
419.97	20,360	49,548			
420.07	20,554	51,593			
420.17	20,748	53,658			
420.27	20,942	55,743			
420.37	21,136	57,847			

Summary for Pond 31P: Bioretention i

Inflow Area = 10.027 ac, 72.74% Impervious, Inflow Depth = 1.73" for 10-Year event
 Inflow = 19.36 cfs @ 12.09 hrs, Volume= 1.449 af
 Outflow = 0.73 cfs @ 14.83 hrs, Volume= 0.481 af, Atten= 96%, Lag= 164.5 min
 Primary = 0.73 cfs @ 14.83 hrs, Volume= 0.481 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.18' @ 14.83 hrs Surf.Area= 24,918 sf Storage= 46,869 cf

Plug-Flow detention time= 541.9 min calculated for 0.481 af (33% of inflow)
 Center-of-Mass det. time= 359.0 min (1,136.2 - 777.2)

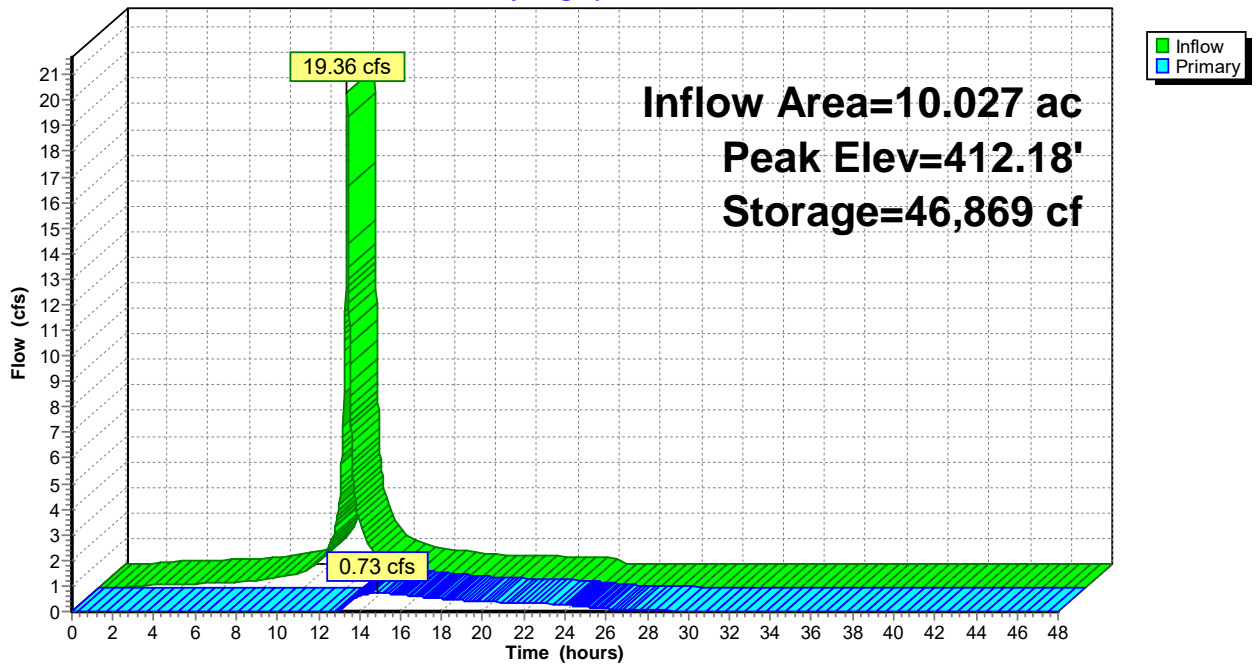
Volume	Invert	Avail.Storage	Storage Description	
#1	407.83'	93,189 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	22,680	0.0	0	0
408.33	22,680	40.0	4,536	4,536
411.00	22,680	20.0	12,111	16,647
414.00	28,348	100.0	76,542	93,189

Device	Routing	Invert	Outlet Devices
#1	Primary	407.83'	12.0" Round Culvert L= 42.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.83' / 407.50' S= 0.0079 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	412.00'	34.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.72 cfs @ 14.83 hrs HW=412.18' (Free Discharge)
 1=Culvert (Passes 0.72 cfs of 7.21 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.72 cfs @ 1.38 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

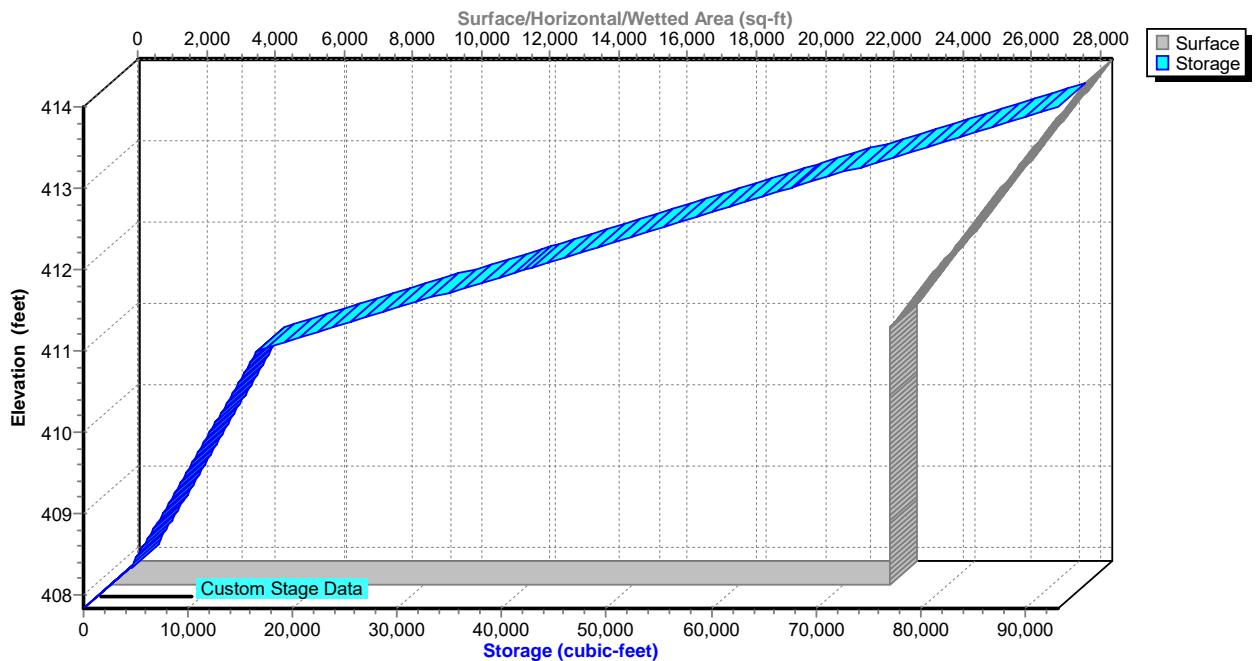
Pond 31P: Bioretention i

Hydrograph



Pond 31P: Bioretention i

Stage-Area-Storage



Hydrograph for Pond 31P: Bioretention i

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.83	0.00
1.00	0.01	6	407.83	0.00
2.00	0.07	170	407.85	0.00
3.00	0.11	503	407.89	0.00
4.00	0.14	958	407.94	0.00
5.00	0.16	1,507	408.00	0.00
6.00	0.19	2,136	408.07	0.00
7.00	0.25	2,909	408.15	0.00
8.00	0.33	3,947	408.27	0.00
9.00	0.42	5,287	408.50	0.00
10.00	0.68	7,242	408.93	0.00
11.00	1.30	10,512	409.65	0.00
12.00	11.74	22,586	411.23	0.00
13.00	1.91	43,068	412.04	0.07
14.00	0.99	46,372	412.17	0.62
15.00	0.68	46,854	412.18	0.73
16.00	0.56	46,550	412.17	0.66
17.00	0.48	46,200	412.16	0.58
18.00	0.39	45,821	412.14	0.50
19.00	0.35	45,468	412.13	0.43
20.00	0.33	45,226	412.12	0.39
21.00	0.31	45,042	412.11	0.35
22.00	0.29	44,888	412.11	0.33
23.00	0.26	44,748	412.10	0.30
24.00	0.24	44,616	412.10	0.28
25.00	0.00	43,905	412.07	0.17
26.00	0.00	43,401	412.05	0.11
27.00	0.00	43,080	412.04	0.07
28.00	0.00	42,876	412.03	0.04
29.00	0.00	42,740	412.02	0.03
30.00	0.00	42,633	412.02	0.03
31.00	0.00	42,545	412.02	0.02
32.00	0.00	42,474	412.01	0.02
33.00	0.00	42,416	412.01	0.01
34.00	0.00	42,369	412.01	0.01
35.00	0.00	42,330	412.01	0.01
36.00	0.00	42,299	412.01	0.01
37.00	0.00	42,273	412.00	0.01
38.00	0.00	42,252	412.00	0.01
39.00	0.00	42,235	412.00	0.00
40.00	0.00	42,222	412.00	0.00
41.00	0.00	42,210	412.00	0.00
42.00	0.00	42,201	412.00	0.00
43.00	0.00	42,194	412.00	0.00
44.00	0.00	42,188	412.00	0.00
45.00	0.00	42,183	412.00	0.00
46.00	0.00	42,179	412.00	0.00
47.00	0.00	42,176	412.00	0.00
48.00	0.00	42,173	412.00	0.00

Stage-Area-Storage for Pond 31P: Bioretention i

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.83	22,680	0	413.63	27,649	83,749
407.93	22,680	907	413.73	27,838	86,300
408.03	22,680	1,814	413.83	28,027	88,852
408.13	22,680	2,722	413.93	28,216	91,403
408.23	22,680	3,629			
408.33	22,680	4,536			
408.43	22,680	4,990			
408.53	22,680	5,443			
408.63	22,680	5,897			
408.73	22,680	6,350			
408.83	22,680	6,804			
408.93	22,680	7,258			
409.03	22,680	7,711			
409.13	22,680	8,165			
409.23	22,680	8,618			
409.33	22,680	9,072			
409.43	22,680	9,526			
409.53	22,680	9,979			
409.63	22,680	10,433			
409.73	22,680	10,886			
409.83	22,680	11,340			
409.93	22,680	11,794			
410.03	22,680	12,247			
410.13	22,680	12,701			
410.23	22,680	13,154			
410.33	22,680	13,608			
410.43	22,680	14,062			
410.53	22,680	14,515			
410.63	22,680	14,969			
410.73	22,680	15,422			
410.83	22,680	15,876			
410.93	22,680	16,330			
411.03	22,737	17,413			
411.13	22,926	19,964			
411.23	23,115	22,515			
411.33	23,303	25,067			
411.43	23,492	27,618			
411.53	23,681	30,170			
411.63	23,870	32,721			
411.73	24,059	35,272			
411.83	24,248	37,824			
411.93	24,437	40,375			
412.03	24,626	42,927			
412.13	24,815	45,478			
412.23	25,004	48,029			
412.33	25,193	50,581			
412.43	25,382	53,132			
412.53	25,571	55,684			
412.63	25,760	58,235			
412.73	25,949	60,786			
412.83	26,137	63,338			
412.93	26,326	65,889			
413.03	26,515	68,441			
413.13	26,704	70,992			
413.23	26,893	73,543			
413.33	27,082	76,095			
413.43	27,271	78,646			
413.53	27,460	81,198			

Summary for Pond 32P: FB 1C

Inflow Area = 2.583 ac, 77.93% Impervious, Inflow Depth = 3.68" for 10-Year event
 Inflow = 11.44 cfs @ 12.13 hrs, Volume= 0.793 af
 Outflow = 11.33 cfs @ 12.14 hrs, Volume= 0.793 af, Atten= 1%, Lag= 0.6 min
 Primary = 11.33 cfs @ 12.14 hrs, Volume= 0.793 af
 Routed to Pond 33P : INFIL 1C

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 413.35' Surf.Area= 3,197 sf Storage= 9,962 cf
 Peak Elev= 413.63' @ 12.14 hrs Surf.Area= 3,386 sf Storage= 10,607 cf (645 cf above start)

Plug-Flow detention time= 167.6 min calculated for 0.564 af (71% of inflow)
 Center-of-Mass det. time= 2.0 min (799.9 - 797.9)

Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	13,740 cf	Custom Stage Data (Prismatic) Listed below

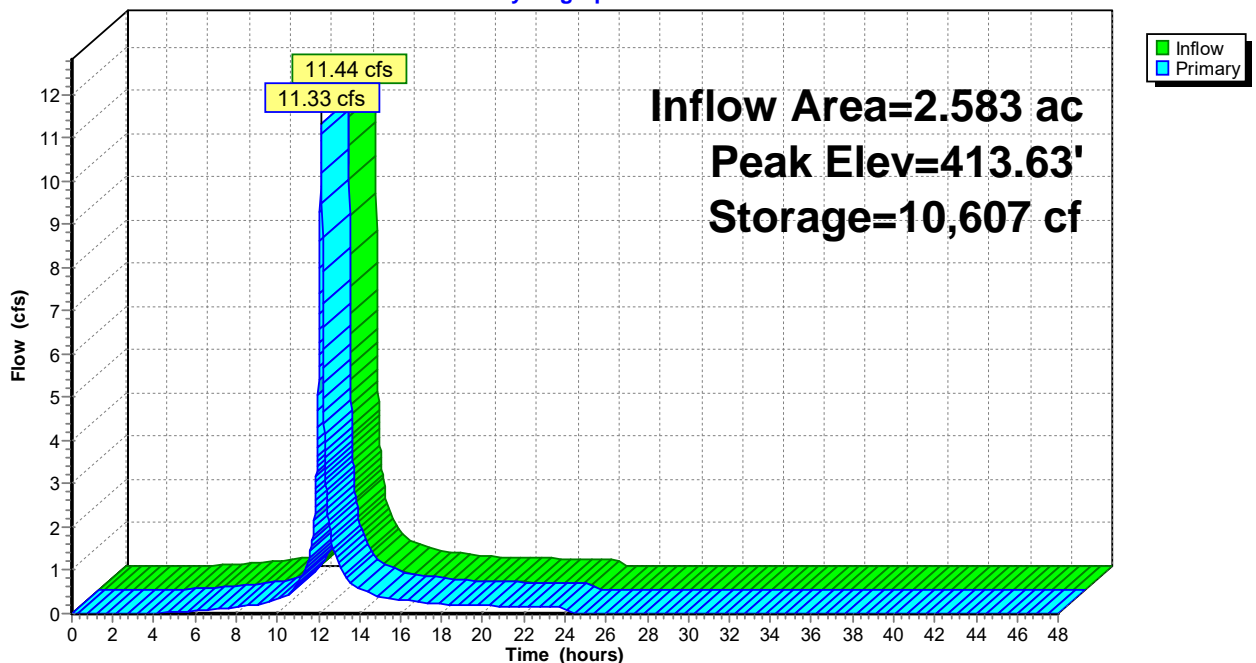
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
409.00	275	0	0
415.00	4,305	13,740	13,740

Device	Routing	Invert	Outlet Devices
#1	Primary	413.35'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

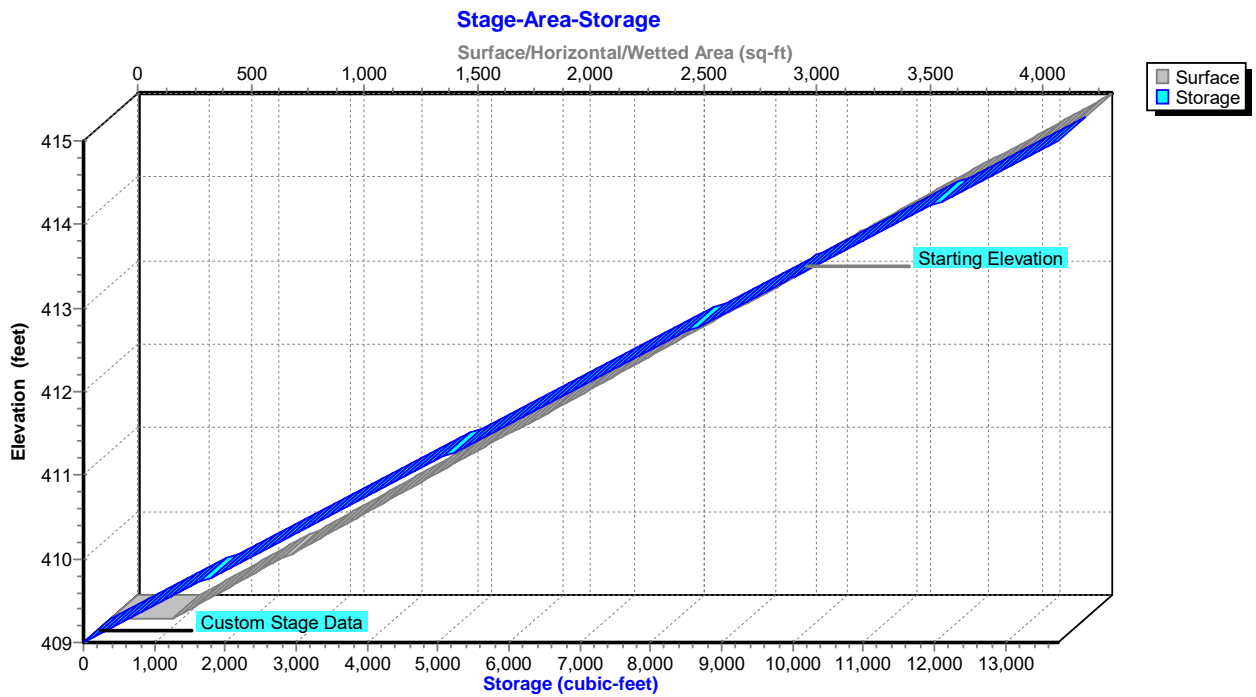
Primary OutFlow Max=11.29 cfs @ 12.14 hrs HW=413.63' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 11.29 cfs @ 1.34 fps)

Pond 32P: FB 1C

Hydrograph



Pond 32P: FB 1C



Hydrograph for Pond 32P: FB 1C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	9,962	413.35	0.00
1.00	0.00	9,962	413.35	0.00
2.00	0.00	9,962	413.35	0.00
3.00	0.00	9,962	413.35	0.00
4.00	0.01	9,963	413.35	0.01
5.00	0.03	9,967	413.35	0.03
6.00	0.06	9,971	413.35	0.06
7.00	0.10	9,978	413.36	0.09
8.00	0.15	9,987	413.36	0.14
9.00	0.20	9,997	413.37	0.20
10.00	0.35	10,023	413.38	0.35
11.00	0.71	10,056	413.39	0.70
12.00	5.86	10,357	413.52	5.41
13.00	1.11	10,093	413.41	1.14
14.00	0.57	10,046	413.39	0.57
15.00	0.39	10,031	413.38	0.39
16.00	0.32	10,018	413.37	0.32
17.00	0.27	10,009	413.37	0.27
18.00	0.22	10,000	413.37	0.22
19.00	0.20	9,997	413.37	0.20
20.00	0.19	9,994	413.36	0.19
21.00	0.17	9,992	413.36	0.17
22.00	0.16	9,990	413.36	0.16
23.00	0.15	9,988	413.36	0.15
24.00	0.13	9,985	413.36	0.13
25.00	0.00	9,962	413.35	0.00
26.00	0.00	9,962	413.35	0.00
27.00	0.00	9,962	413.35	0.00
28.00	0.00	9,962	413.35	0.00
29.00	0.00	9,962	413.35	0.00
30.00	0.00	9,962	413.35	0.00
31.00	0.00	9,962	413.35	0.00
32.00	0.00	9,962	413.35	0.00
33.00	0.00	9,962	413.35	0.00
34.00	0.00	9,962	413.35	0.00
35.00	0.00	9,962	413.35	0.00
36.00	0.00	9,962	413.35	0.00
37.00	0.00	9,962	413.35	0.00
38.00	0.00	9,962	413.35	0.00
39.00	0.00	9,962	413.35	0.00
40.00	0.00	9,962	413.35	0.00
41.00	0.00	9,962	413.35	0.00
42.00	0.00	9,962	413.35	0.00
43.00	0.00	9,962	413.35	0.00
44.00	0.00	9,962	413.35	0.00
45.00	0.00	9,962	413.35	0.00
46.00	0.00	9,962	413.35	0.00
47.00	0.00	9,962	413.35	0.00
48.00	0.00	9,962	413.35	0.00

Stage-Area-Storage for Pond 32P: FB 1C

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
409.00	275	0	414.80	4,171	13,282
409.10	342	229	414.90	4,238	13,511
409.20	409	458	415.00	4,305	13,740
409.30	477	687			
409.40	544	916			
409.50	611	1,145			
409.60	678	1,374			
409.70	745	1,603			
409.80	812	1,832			
409.90	879	2,061			
410.00	947	2,290			
410.10	1,014	2,519			
410.20	1,081	2,748			
410.30	1,148	2,977			
410.40	1,215	3,206			
410.50	1,283	3,435			
410.60	1,350	3,664			
410.70	1,417	3,893			
410.80	1,484	4,122			
410.90	1,551	4,351			
411.00	1,618	4,580			
411.10	1,686	4,809			
411.20	1,753	5,038			
411.30	1,820	5,267			
411.40	1,887	5,496			
411.50	1,954	5,725			
411.60	2,021	5,954			
411.70	2,088	6,183			
411.80	2,156	6,412			
411.90	2,223	6,641			
412.00	2,290	6,870			
412.10	2,357	7,099			
412.20	2,424	7,328			
412.30	2,492	7,557			
412.40	2,559	7,786			
412.50	2,626	8,015			
412.60	2,693	8,244			
412.70	2,760	8,473			
412.80	2,827	8,702			
412.90	2,894	8,931			
413.00	2,962	9,160			
413.10	3,029	9,389			
413.20	3,096	9,618			
413.30	3,163	9,847			
413.40	3,230	10,076			
413.50	3,298	10,305			
413.60	3,365	10,534			
413.70	3,432	10,763			
413.80	3,499	10,992			
413.90	3,566	11,221			
414.00	3,633	11,450			
414.10	3,701	11,679			
414.20	3,768	11,908			
414.30	3,835	12,137			
414.40	3,902	12,366			
414.50	3,969	12,595			
414.60	4,036	12,824			
414.70	4,103	13,053			

Summary for Pond 33P: INFIL 1C

Inflow Area = 2.583 ac, 77.93% Impervious, Inflow Depth = 3.68" for 10-Year event
 Inflow = 11.33 cfs @ 12.14 hrs, Volume= 0.793 af
 Outflow = 1.90 cfs @ 12.58 hrs, Volume= 0.793 af, Atten= 83%, Lag= 26.5 min
 Discarded = 1.90 cfs @ 12.58 hrs, Volume= 0.793 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 411.15' @ 12.58 hrs Surf.Area= 5,917 sf Storage= 10,125 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 42.5 min (842.4 - 799.9)

Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	41,232 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
409.00	3,499	0	0
415.00	10,245	41,232	41,232

Device	Routing	Invert	Outlet Devices
#1	Secondary	414.00'	10.0' 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
#2	Device 4	411.85'	5.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	409.00'	10.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 404.80' Phase-In= 0.01'
#4	Primary	409.00'	18.0" Round Culvert L= 34.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 409.00' / 408.00' S= 0.0294 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

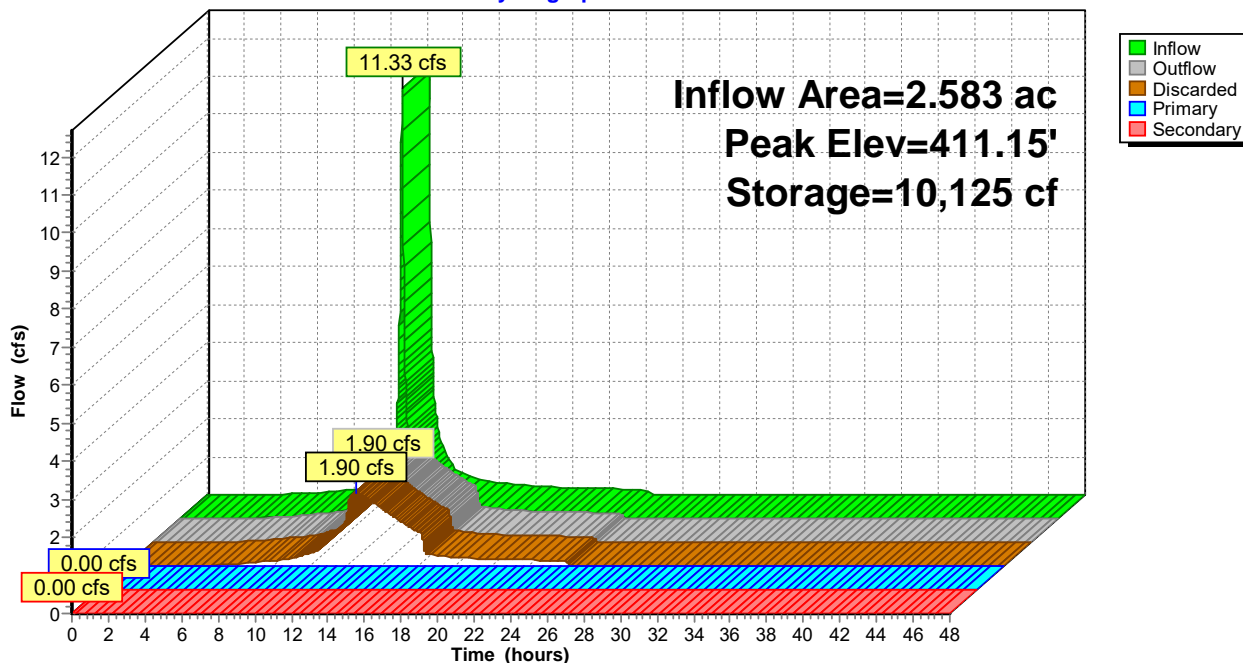
Discarded OutFlow Max=1.90 cfs @ 12.58 hrs HW=411.15' (Free Discharge)
 ↑3=Exfiltration (Controls 1.90 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=409.00' (Free Discharge)
 ↑4=Culvert (Controls 0.00 cfs)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=409.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

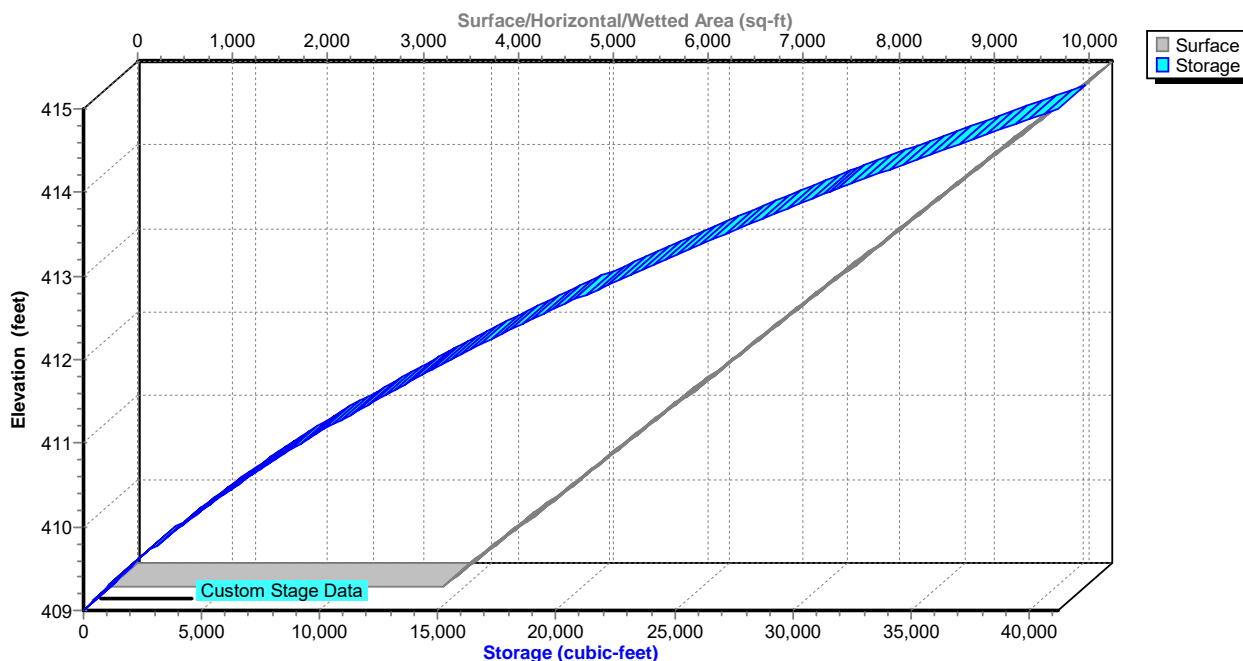
Pond 33P: INFIL 1C

Hydrograph



Pond 33P: INFIL 1C

Stage-Area-Storage



Hydrograph for Pond 33P: INFIL 1C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	409.00	0.00	0.00	0.00	0.00
1.00	0.00	0	409.00	0.00	0.00	0.00	0.00
2.00	0.00	0	409.00	0.00	0.00	0.00	0.00
3.00	0.00	0	409.00	0.00	0.00	0.00	0.00
4.00	0.01	1	409.00	0.01	0.01	0.00	0.00
5.00	0.03	8	409.00	0.03	0.03	0.00	0.00
6.00	0.06	14	409.00	0.05	0.05	0.00	0.00
7.00	0.09	23	409.01	0.09	0.09	0.00	0.00
8.00	0.14	36	409.01	0.14	0.14	0.00	0.00
9.00	0.20	50	409.01	0.20	0.20	0.00	0.00
10.00	0.35	84	409.02	0.33	0.33	0.00	0.00
11.00	0.70	165	409.05	0.65	0.65	0.00	0.00
12.00	5.41	2,799	409.72	1.15	1.15	0.00	0.00
13.00	1.14	9,421	411.03	1.84	1.84	0.00	0.00
14.00	0.57	6,140	410.43	1.51	1.51	0.00	0.00
15.00	0.39	3,047	409.77	1.18	1.18	0.00	0.00
16.00	0.32	609	409.17	0.89	0.89	0.00	0.00
17.00	0.27	69	409.02	0.27	0.27	0.00	0.00
18.00	0.22	56	409.02	0.22	0.22	0.00	0.00
19.00	0.20	51	409.01	0.20	0.20	0.00	0.00
20.00	0.19	47	409.01	0.19	0.19	0.00	0.00
21.00	0.17	44	409.01	0.17	0.17	0.00	0.00
22.00	0.16	41	409.01	0.16	0.16	0.00	0.00
23.00	0.15	38	409.01	0.15	0.15	0.00	0.00
24.00	0.13	34	409.01	0.14	0.14	0.00	0.00
25.00	0.00	0	409.00	0.00	0.00	0.00	0.00
26.00	0.00	0	409.00	0.00	0.00	0.00	0.00
27.00	0.00	0	409.00	0.00	0.00	0.00	0.00
28.00	0.00	0	409.00	0.00	0.00	0.00	0.00
29.00	0.00	0	409.00	0.00	0.00	0.00	0.00
30.00	0.00	0	409.00	0.00	0.00	0.00	0.00
31.00	0.00	0	409.00	0.00	0.00	0.00	0.00
32.00	0.00	0	409.00	0.00	0.00	0.00	0.00
33.00	0.00	0	409.00	0.00	0.00	0.00	0.00
34.00	0.00	0	409.00	0.00	0.00	0.00	0.00
35.00	0.00	0	409.00	0.00	0.00	0.00	0.00
36.00	0.00	0	409.00	0.00	0.00	0.00	0.00
37.00	0.00	0	409.00	0.00	0.00	0.00	0.00
38.00	0.00	0	409.00	0.00	0.00	0.00	0.00
39.00	0.00	0	409.00	0.00	0.00	0.00	0.00
40.00	0.00	0	409.00	0.00	0.00	0.00	0.00
41.00	0.00	0	409.00	0.00	0.00	0.00	0.00
42.00	0.00	0	409.00	0.00	0.00	0.00	0.00
43.00	0.00	0	409.00	0.00	0.00	0.00	0.00
44.00	0.00	0	409.00	0.00	0.00	0.00	0.00
45.00	0.00	0	409.00	0.00	0.00	0.00	0.00
46.00	0.00	0	409.00	0.00	0.00	0.00	0.00
47.00	0.00	0	409.00	0.00	0.00	0.00	0.00
48.00	0.00	0	409.00	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 33P: INFIL 1C

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
409.00	3,499	0	414.80	10,020	39,205
409.10	3,611	356	414.90	10,133	40,213
409.20	3,724	722	415.00	10,245	41,232
409.30	3,836	1,100			
409.40	3,949	1,490			
409.50	4,061	1,890			
409.60	4,174	2,302			
409.70	4,286	2,725			
409.80	4,398	3,159			
409.90	4,511	3,604			
410.00	4,623	4,061			
410.10	4,736	4,529			
410.20	4,848	5,008			
410.30	4,961	5,499			
410.40	5,073	6,000			
410.50	5,186	6,513			
410.60	5,298	7,038			
410.70	5,410	7,573			
410.80	5,523	8,120			
410.90	5,635	8,678			
411.00	5,748	9,247			
411.10	5,860	9,827			
411.20	5,973	10,419			
411.30	6,085	11,022			
411.40	6,197	11,636			
411.50	6,310	12,261			
411.60	6,422	12,898			
411.70	6,535	13,545			
411.80	6,647	14,205			
411.90	6,760	14,875			
412.00	6,872	15,557			
412.10	6,984	16,249			
412.20	7,097	16,953			
412.30	7,209	17,669			
412.40	7,322	18,395			
412.50	7,434	19,133			
412.60	7,547	19,882			
412.70	7,659	20,642			
412.80	7,771	21,414			
412.90	7,884	22,197			
413.00	7,996	22,991			
413.10	8,109	23,796			
413.20	8,221	24,612			
413.30	8,334	25,440			
413.40	8,446	26,279			
413.50	8,559	27,129			
413.60	8,671	27,991			
413.70	8,783	28,864			
413.80	8,896	29,748			
413.90	9,008	30,643			
414.00	9,121	31,549			
414.10	9,233	32,467			
414.20	9,346	33,396			
414.30	9,458	34,336			
414.40	9,570	35,287			
414.50	9,683	36,250			
414.60	9,795	37,224			
414.70	9,908	38,209			

Summary for Pond 37P: FB 1i+J

Inflow Area = 9.303 ac, 78.40% Impervious, Inflow Depth = 3.71" for 10-Year event
 Inflow = 40.51 cfs @ 12.09 hrs, Volume= 2.879 af
 Outflow = 38.71 cfs @ 12.09 hrs, Volume= 2.879 af, Atten= 4%, Lag= 0.1 min
 Primary = 19.36 cfs @ 12.09 hrs, Volume= 1.439 af
 Routed to Pond 31P : Bioretention i
 Secondary = 19.36 cfs @ 12.09 hrs, Volume= 1.439 af
 Routed to Pond 53P : Bioretention J basin

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 413.25' Surf.Area= 9,799 sf Storage= 26,806 cf
 Peak Elev= 413.57' @ 12.09 hrs Surf.Area= 10,193 sf Storage= 29,431 cf (2,625 cf above start)

Plug-Flow detention time= 157.8 min calculated for 2.263 af (79% of inflow)
 Center-of-Mass det. time= 2.5 min (775.4 - 772.8)

Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	32,992 cf	Custom Stage Data (Prismatic) Listed below

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
410.00	5,767	0	0
414.00	10,729	32,992	32,992

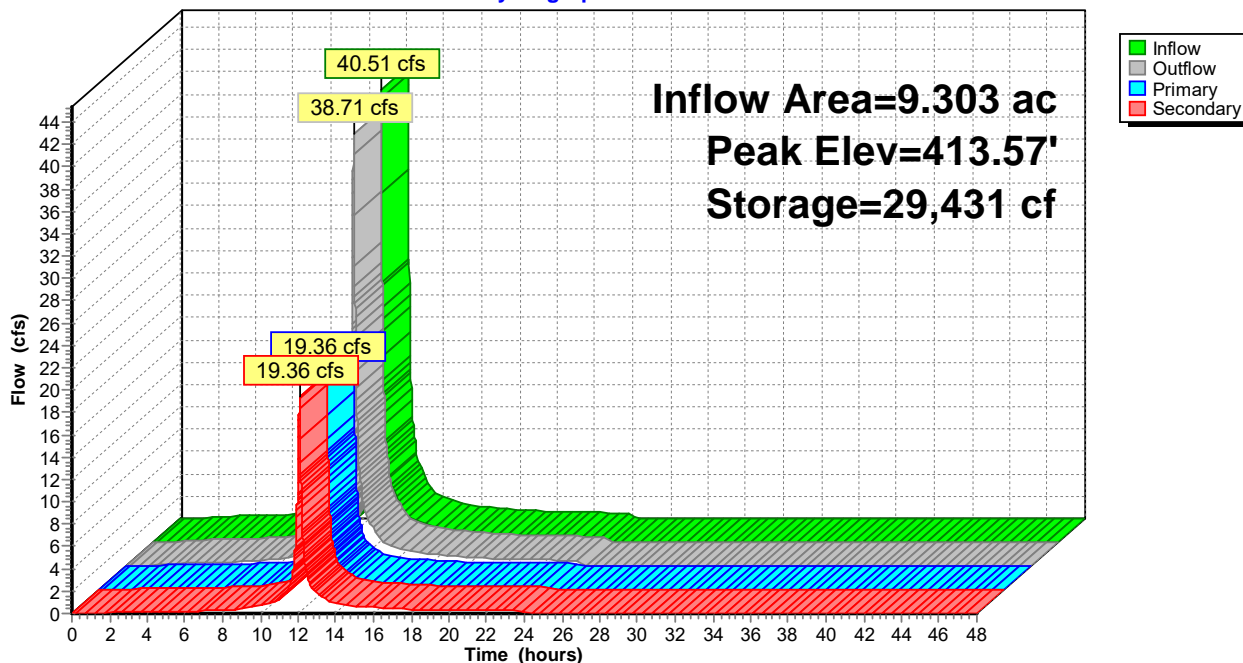
Device	Routing	Invert	Outlet Devices
#1	Primary	413.25'	40.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	413.25'	40.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=19.24 cfs @ 12.09 hrs HW=413.57' (Free Discharge)
 ↰1=**Broad-Crested Rectangular Weir** (Weir Controls 19.24 cfs @ 1.52 fps)

Secondary OutFlow Max=19.24 cfs @ 12.09 hrs HW=413.57' (Free Discharge)
 ↰2=**Broad-Crested Rectangular Weir** (Weir Controls 19.24 cfs @ 1.52 fps)

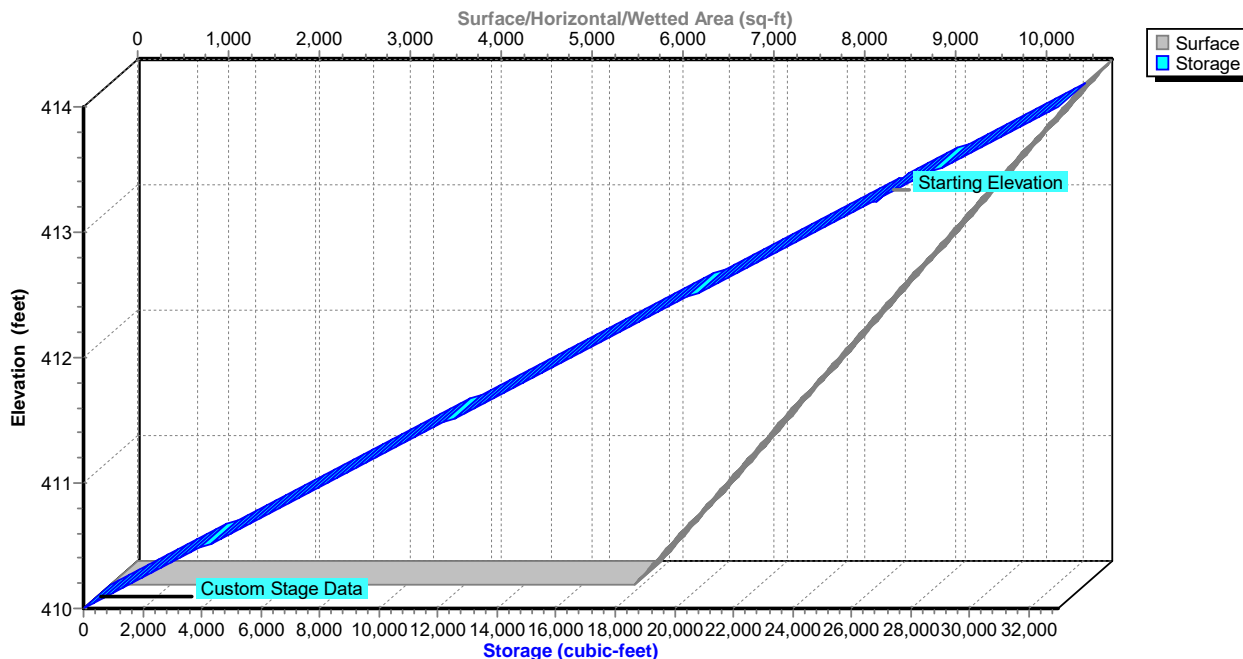
Pond 37P: FB 1i+J

Hydrograph



Pond 37P: FB 1i+J

Stage-Area-Storage



Hydrograph for Pond 37P: FB 1i+J

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	26,806	413.25	0.00	0.00	0.00
1.00	0.04	26,813	413.25	0.03	0.01	0.01
2.00	0.15	26,838	413.25	0.14	0.07	0.07
3.00	0.23	26,855	413.26	0.22	0.11	0.11
4.00	0.28	26,868	413.26	0.28	0.14	0.14
5.00	0.33	26,879	413.26	0.33	0.16	0.16
6.00	0.38	26,888	413.26	0.37	0.19	0.19
7.00	0.51	26,916	413.26	0.50	0.25	0.25
8.00	0.67	26,952	413.27	0.66	0.33	0.33
9.00	0.86	26,991	413.27	0.83	0.42	0.42
10.00	1.38	27,081	413.28	1.36	0.68	0.68
11.00	2.73	27,225	413.30	2.60	1.30	1.30
12.00	28.47	28,692	413.48	23.48	11.74	11.74
13.00	3.62	27,361	413.32	3.78	1.89	1.89
14.00	1.92	27,150	413.29	1.95	0.98	0.98
15.00	1.31	27,079	413.28	1.33	0.67	0.67
16.00	1.09	27,051	413.28	1.10	0.55	0.55
17.00	0.92	27,013	413.28	0.93	0.47	0.47
18.00	0.74	26,973	413.27	0.75	0.38	0.38
19.00	0.68	26,959	413.27	0.69	0.34	0.34
20.00	0.64	26,949	413.27	0.64	0.32	0.32
21.00	0.60	26,939	413.27	0.60	0.30	0.30
22.00	0.55	26,929	413.26	0.55	0.28	0.28
23.00	0.51	26,920	413.26	0.51	0.26	0.26
24.00	0.33	26,908	413.26	0.46	0.23	0.23
25.00	0.00	26,806	413.25	0.00	0.00	0.00
26.00	0.00	26,806	413.25	0.00	0.00	0.00
27.00	0.00	26,806	413.25	0.00	0.00	0.00
28.00	0.00	26,806	413.25	0.00	0.00	0.00
29.00	0.00	26,806	413.25	0.00	0.00	0.00
30.00	0.00	26,806	413.25	0.00	0.00	0.00
31.00	0.00	26,806	413.25	0.00	0.00	0.00
32.00	0.00	26,806	413.25	0.00	0.00	0.00
33.00	0.00	26,806	413.25	0.00	0.00	0.00
34.00	0.00	26,806	413.25	0.00	0.00	0.00
35.00	0.00	26,806	413.25	0.00	0.00	0.00
36.00	0.00	26,806	413.25	0.00	0.00	0.00
37.00	0.00	26,806	413.25	0.00	0.00	0.00
38.00	0.00	26,806	413.25	0.00	0.00	0.00
39.00	0.00	26,806	413.25	0.00	0.00	0.00
40.00	0.00	26,806	413.25	0.00	0.00	0.00
41.00	0.00	26,806	413.25	0.00	0.00	0.00
42.00	0.00	26,806	413.25	0.00	0.00	0.00
43.00	0.00	26,806	413.25	0.00	0.00	0.00
44.00	0.00	26,806	413.25	0.00	0.00	0.00
45.00	0.00	26,806	413.25	0.00	0.00	0.00
46.00	0.00	26,806	413.25	0.00	0.00	0.00
47.00	0.00	26,806	413.25	0.00	0.00	0.00
48.00	0.00	26,806	413.25	0.00	0.00	0.00

Stage-Area-Storage for Pond 37P: FB 1i+J

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
410.00	5,767	0	412.90	9,364	23,919
410.05	5,829	412	412.95	9,426	24,332
410.10	5,891	825	413.00	9,489	24,744
410.15	5,953	1,237	413.05	9,551	25,156
410.20	6,015	1,650	413.10	9,613	25,569
410.25	6,077	2,062	413.15	9,675	25,981
410.30	6,139	2,474	413.20	9,737	26,394
410.35	6,201	2,887	413.25	9,799	26,806
410.40	6,263	3,299	413.30	9,861	27,218
410.45	6,325	3,712	413.35	9,923	27,631
410.50	6,387	4,124	413.40	9,985	28,043
410.55	6,449	4,536	413.45	10,047	28,456
410.60	6,511	4,949	413.50	10,109	28,868
410.65	6,573	5,361	413.55	10,171	29,280
410.70	6,635	5,774	413.60	10,233	29,693
410.75	6,697	6,186	413.65	10,295	30,105
410.80	6,759	6,598	413.70	10,357	30,518
410.85	6,821	7,011	413.75	10,419	30,930
410.90	6,883	7,423	413.80	10,481	31,342
410.95	6,945	7,836	413.85	10,543	31,755
411.00	7,008	8,248	413.90	10,605	32,167
411.05	7,070	8,660	413.95	10,667	32,580
411.10	7,132	9,073	414.00	10,729	32,992
411.15	7,194	9,485			
411.20	7,256	9,898			
411.25	7,318	10,310			
411.30	7,380	10,722			
411.35	7,442	11,135			
411.40	7,504	11,547			
411.45	7,566	11,960			
411.50	7,628	12,372			
411.55	7,690	12,784			
411.60	7,752	13,197			
411.65	7,814	13,609			
411.70	7,876	14,022			
411.75	7,938	14,434			
411.80	8,000	14,846			
411.85	8,062	15,259			
411.90	8,124	15,671			
411.95	8,186	16,084			
412.00	8,248	16,496			
412.05	8,310	16,908			
412.10	8,372	17,321			
412.15	8,434	17,733			
412.20	8,496	18,146			
412.25	8,558	18,558			
412.30	8,620	18,970			
412.35	8,682	19,383			
412.40	8,744	19,795			
412.45	8,806	20,208			
412.50	8,868	20,620			
412.55	8,930	21,032			
412.60	8,992	21,445			
412.65	9,054	21,857			
412.70	9,116	22,270			
412.75	9,178	22,682			
412.80	9,240	23,094			
412.85	9,302	23,507			

Summary for Pond 39P: FB 5A

Inflow Area = 4.966 ac, 46.58% Impervious, Inflow Depth = 2.21" for 10-Year event
 Inflow = 13.93 cfs @ 12.13 hrs, Volume= 0.913 af
 Outflow = 13.50 cfs @ 12.15 hrs, Volume= 0.913 af, Atten= 3%, Lag= 0.9 min
 Primary = 13.50 cfs @ 12.15 hrs, Volume= 0.913 af
 Routed to Pond 22P : Bioretention 5A

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 433.30' Surf.Area= 4,110 sf Storage= 8,944 cf
 Peak Elev= 433.66' @ 12.15 hrs Surf.Area= 4,377 sf Storage= 10,353 cf (1,410 cf above start)

Plug-Flow detention time= 140.7 min calculated for 0.707 af (78% of inflow)
 Center-of-Mass det. time= 3.9 min (854.2 - 850.3)

Volume	Invert	Avail.Storage	Storage Description
#1	431.00'	15,554 cf	Custom Stage Data (Prismatic) Listed below

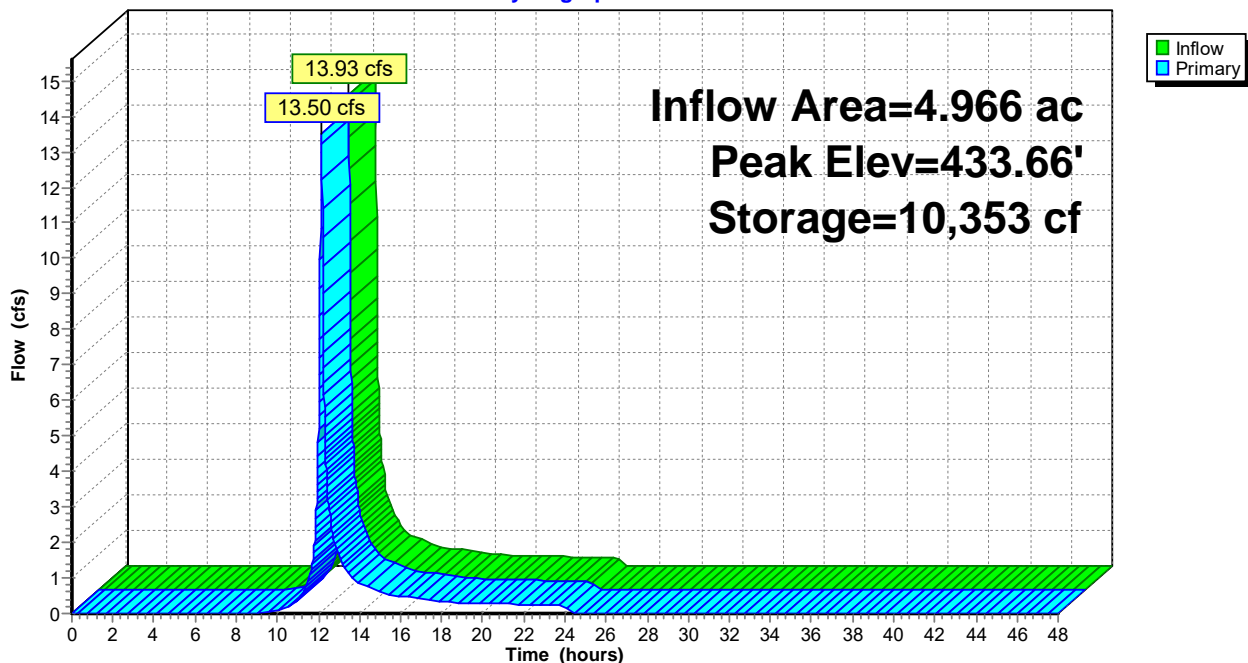
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
431.00	2,415	0	0
435.00	5,362	15,554	15,554

Device	Routing	Invert	Outlet Devices
#1	Primary	433.30'	25.0' 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=13.47 cfs @ 12.15 hrs HW=433.66' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 13.47 cfs @ 1.49 fps)

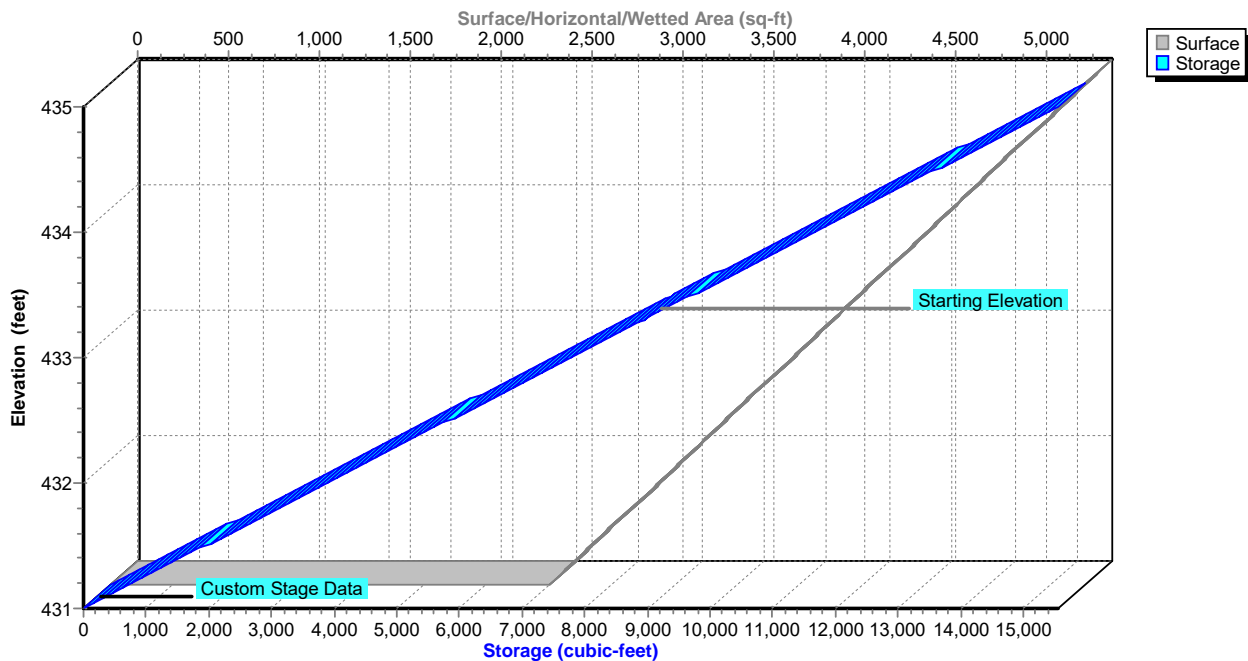
Pond 39P: FB 5A

Hydrograph



Pond 39P: FB 5A

Stage-Area-Storage



Hydrograph for Pond 39P: FB 5A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,944	433.30	0.00
1.00	0.00	8,944	433.30	0.00
2.00	0.00	8,944	433.30	0.00
3.00	0.00	8,944	433.30	0.00
4.00	0.00	8,944	433.30	0.00
5.00	0.00	8,944	433.30	0.00
6.00	0.00	8,944	433.30	0.00
7.00	0.00	8,944	433.30	0.00
8.00	0.00	8,944	433.30	0.00
9.00	0.02	8,949	433.30	0.01
10.00	0.13	8,994	433.31	0.11
11.00	0.44	9,076	433.33	0.41
12.00	6.24	9,714	433.50	5.19
13.00	1.58	9,300	433.39	1.65
14.00	0.83	9,174	433.36	0.85
15.00	0.58	9,118	433.34	0.60
16.00	0.48	9,093	433.34	0.49
17.00	0.41	9,077	433.33	0.41
18.00	0.33	9,060	433.33	0.34
19.00	0.30	9,053	433.33	0.31
20.00	0.29	9,049	433.33	0.29
21.00	0.27	9,045	433.33	0.27
22.00	0.25	9,040	433.32	0.25
23.00	0.23	9,036	433.32	0.23
24.00	0.21	9,032	433.32	0.21
25.00	0.00	8,944	433.30	0.00
26.00	0.00	8,944	433.30	0.00
27.00	0.00	8,944	433.30	0.00
28.00	0.00	8,944	433.30	0.00
29.00	0.00	8,944	433.30	0.00
30.00	0.00	8,944	433.30	0.00
31.00	0.00	8,944	433.30	0.00
32.00	0.00	8,944	433.30	0.00
33.00	0.00	8,944	433.30	0.00
34.00	0.00	8,944	433.30	0.00
35.00	0.00	8,944	433.30	0.00
36.00	0.00	8,944	433.30	0.00
37.00	0.00	8,944	433.30	0.00
38.00	0.00	8,944	433.30	0.00
39.00	0.00	8,944	433.30	0.00
40.00	0.00	8,944	433.30	0.00
41.00	0.00	8,944	433.30	0.00
42.00	0.00	8,944	433.30	0.00
43.00	0.00	8,944	433.30	0.00
44.00	0.00	8,944	433.30	0.00
45.00	0.00	8,944	433.30	0.00
46.00	0.00	8,944	433.30	0.00
47.00	0.00	8,944	433.30	0.00
48.00	0.00	8,944	433.30	0.00

Stage-Area-Storage for Pond 39P: FB 5A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
431.00	2,415	0	433.90	4,552	11,277
431.05	2,452	194	433.95	4,588	11,471
431.10	2,489	389	434.00	4,625	11,666
431.15	2,526	583	434.05	4,662	11,860
431.20	2,562	778	434.10	4,699	12,054
431.25	2,599	972	434.15	4,736	12,249
431.30	2,636	1,167	434.20	4,773	12,443
431.35	2,673	1,361	434.25	4,809	12,638
431.40	2,710	1,555	434.30	4,846	12,832
431.45	2,747	1,750	434.35	4,883	13,026
431.50	2,783	1,944	434.40	4,920	13,221
431.55	2,820	2,139	434.45	4,957	13,415
431.60	2,857	2,333	434.50	4,994	13,610
431.65	2,894	2,528	434.55	5,030	13,804
431.70	2,931	2,722	434.60	5,067	13,999
431.75	2,968	2,916	434.65	5,104	14,193
431.80	3,004	3,111	434.70	5,141	14,387
431.85	3,041	3,305	434.75	5,178	14,582
431.90	3,078	3,500	434.80	5,215	14,776
431.95	3,115	3,694	434.85	5,251	14,971
432.00	3,152	3,889	434.90	5,288	15,165
432.05	3,189	4,083	434.95	5,325	15,360
432.10	3,225	4,277	435.00	5,362	15,554
432.15	3,262	4,472			
432.20	3,299	4,666			
432.25	3,336	4,861			
432.30	3,373	5,055			
432.35	3,410	5,249			
432.40	3,446	5,444			
432.45	3,483	5,638			
432.50	3,520	5,833			
432.55	3,557	6,027			
432.60	3,594	6,222			
432.65	3,631	6,416			
432.70	3,667	6,610			
432.75	3,704	6,805			
432.80	3,741	6,999			
432.85	3,778	7,194			
432.90	3,815	7,388			
432.95	3,852	7,583			
433.00	3,889	7,777			
433.05	3,925	7,971			
433.10	3,962	8,166			
433.15	3,999	8,360			
433.20	4,036	8,555			
433.25	4,073	8,749			
433.30	4,110	8,944			
433.35	4,146	9,138			
433.40	4,183	9,332			
433.45	4,220	9,527			
433.50	4,257	9,721			
433.55	4,294	9,916			
433.60	4,331	10,110			
433.65	4,367	10,305			
433.70	4,404	10,499			
433.75	4,441	10,693			
433.80	4,478	10,888			
433.85	4,515	11,082			

Summary for Pond 44P: FB 1B

Inflow Area = 9.519 ac, 70.62% Impervious, Inflow Depth = 3.16" for 10-Year event
 Inflow = 37.09 cfs @ 12.13 hrs, Volume= 2.505 af
 Outflow = 36.34 cfs @ 12.14 hrs, Volume= 2.505 af, Atten= 2%, Lag= 0.8 min
 Primary = 36.34 cfs @ 12.14 hrs, Volume= 2.505 af
 Routed to Pond 45P : INFIL 1B

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.35' Surf.Area= 9,580 sf Storage= 34,519 cf
 Peak Elev= 412.72' @ 12.14 hrs Surf.Area= 10,029 sf Storage= 37,446 cf (2,927 cf above start)

Plug-Flow detention time= 176.0 min calculated for 1.712 af (68% of inflow)
 Center-of-Mass det. time= 3.0 min (816.8 - 813.8)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	47,613 cf	Custom Stage Data (Prismatic) Listed below

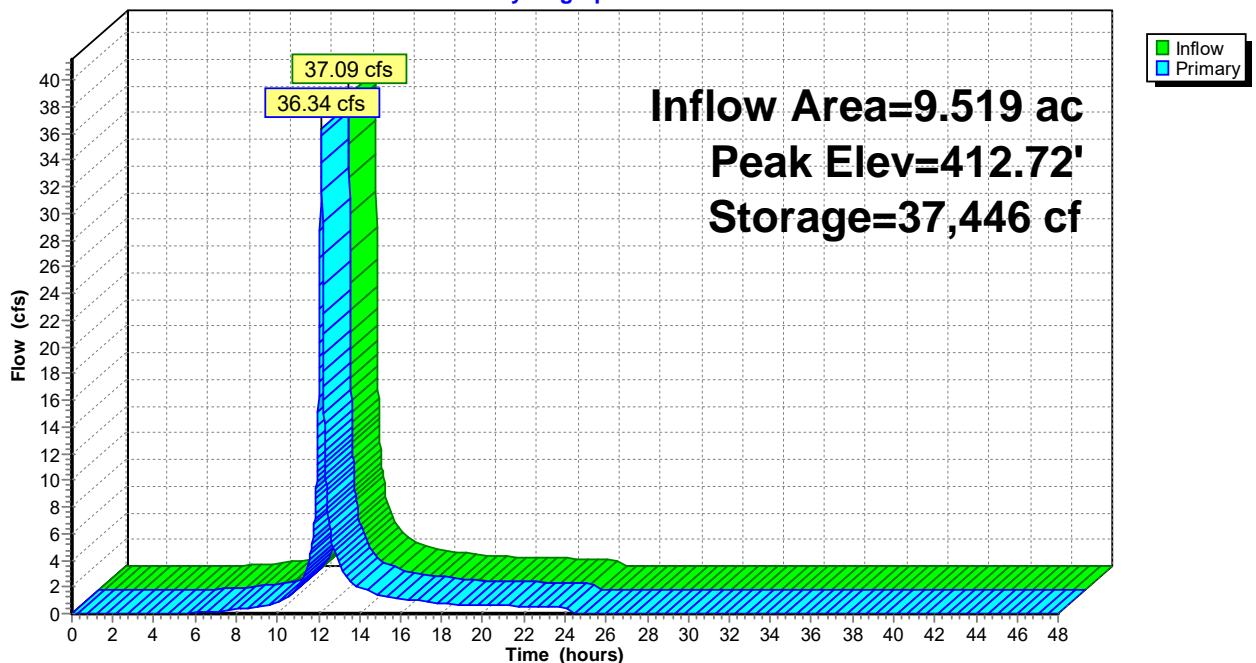
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	4,282	0	0
414.00	11,589	47,613	47,613

Device	Routing	Invert	Outlet Devices
#1	Primary	412.35'	60.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

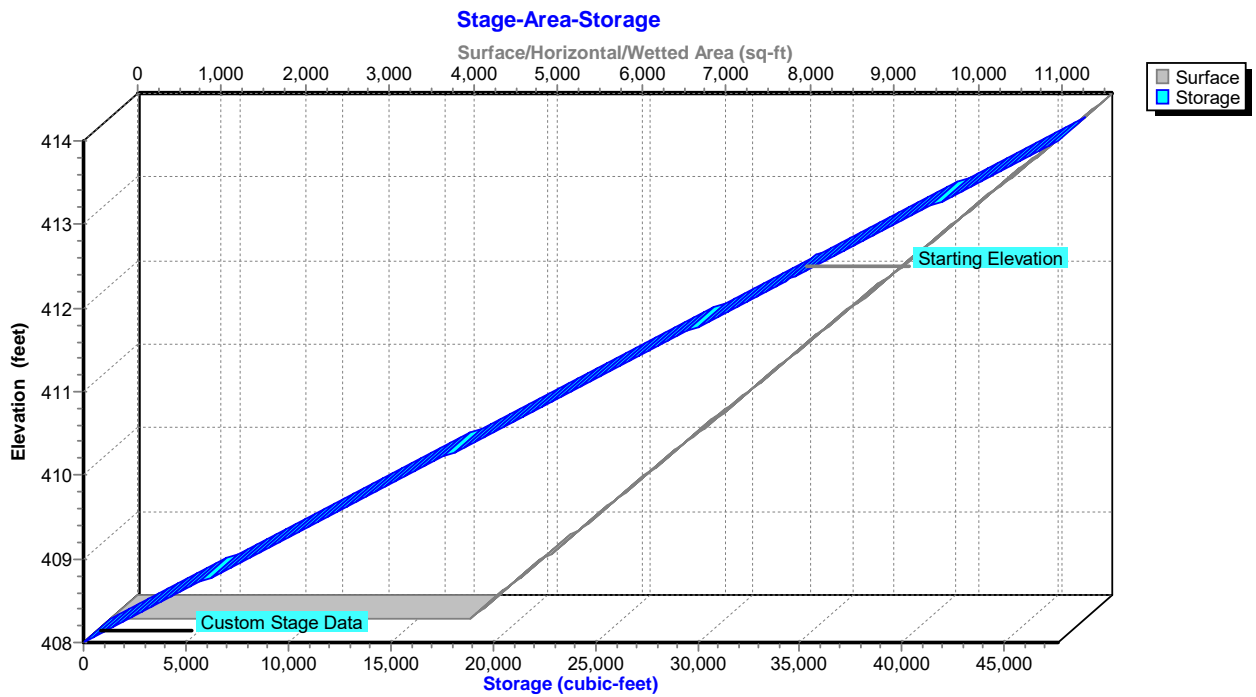
Primary OutFlow Max=36.16 cfs @ 12.14 hrs HW=412.72' (Free Discharge)
 ↑-1=Broad-Crested Rectangular Weir (Weir Controls 36.16 cfs @ 1.64 fps)

Pond 44P: FB 1B

Hydrograph



Pond 44P: FB 1B



Hydrograph for Pond 44P: FB 1B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	34,519	412.35	0.00
1.00	0.00	34,519	412.35	0.00
2.00	0.00	34,519	412.35	0.00
3.00	0.00	34,519	412.35	0.00
4.00	0.00	34,519	412.35	0.00
5.00	0.00	34,519	412.35	0.00
6.00	0.07	34,538	412.35	0.06
7.00	0.17	34,566	412.36	0.17
8.00	0.32	34,607	412.36	0.31
9.00	0.50	34,657	412.37	0.48
10.00	0.93	34,768	412.38	0.91
11.00	2.02	34,909	412.40	1.95
12.00	18.47	36,242	412.57	16.32
13.00	3.72	35,170	412.43	3.87
14.00	1.92	34,908	412.40	1.94
15.00	1.32	34,826	412.39	1.34
16.00	1.09	34,793	412.38	1.09
17.00	0.91	34,769	412.38	0.92
18.00	0.74	34,734	412.38	0.75
19.00	0.68	34,714	412.37	0.68
20.00	0.64	34,702	412.37	0.64
21.00	0.59	34,690	412.37	0.60
22.00	0.55	34,677	412.37	0.55
23.00	0.51	34,665	412.37	0.51
24.00	0.46	34,652	412.37	0.47
25.00	0.00	34,519	412.35	0.00
26.00	0.00	34,519	412.35	0.00
27.00	0.00	34,519	412.35	0.00
28.00	0.00	34,519	412.35	0.00
29.00	0.00	34,519	412.35	0.00
30.00	0.00	34,519	412.35	0.00
31.00	0.00	34,519	412.35	0.00
32.00	0.00	34,519	412.35	0.00
33.00	0.00	34,519	412.35	0.00
34.00	0.00	34,519	412.35	0.00
35.00	0.00	34,519	412.35	0.00
36.00	0.00	34,519	412.35	0.00
37.00	0.00	34,519	412.35	0.00
38.00	0.00	34,519	412.35	0.00
39.00	0.00	34,519	412.35	0.00
40.00	0.00	34,519	412.35	0.00
41.00	0.00	34,519	412.35	0.00
42.00	0.00	34,519	412.35	0.00
43.00	0.00	34,519	412.35	0.00
44.00	0.00	34,519	412.35	0.00
45.00	0.00	34,519	412.35	0.00
46.00	0.00	34,519	412.35	0.00
47.00	0.00	34,519	412.35	0.00
48.00	0.00	34,519	412.35	0.00

Stage-Area-Storage for Pond 44P: FB 1B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	4,282	0	413.80	11,345	46,026
408.10	4,404	794	413.90	11,467	46,819
408.20	4,526	1,587	414.00	11,589	47,613
408.30	4,647	2,381			
408.40	4,769	3,174			
408.50	4,891	3,968			
408.60	5,013	4,761			
408.70	5,134	5,555			
408.80	5,256	6,348			
408.90	5,378	7,142			
409.00	5,500	7,936			
409.10	5,622	8,729			
409.20	5,743	9,523			
409.30	5,865	10,316			
409.40	5,987	11,110			
409.50	6,109	11,903			
409.60	6,231	12,697			
409.70	6,352	13,490			
409.80	6,474	14,284			
409.90	6,596	15,077			
410.00	6,718	15,871			
410.10	6,839	16,665			
410.20	6,961	17,458			
410.30	7,083	18,252			
410.40	7,205	19,045			
410.50	7,327	19,839			
410.60	7,448	20,632			
410.70	7,570	21,426			
410.80	7,692	22,219			
410.90	7,814	23,013			
411.00	7,936	23,807			
411.10	8,057	24,600			
411.20	8,179	25,394			
411.30	8,301	26,187			
411.40	8,423	26,981			
411.50	8,544	27,774			
411.60	8,666	28,568			
411.70	8,788	29,361			
411.80	8,910	30,155			
411.90	9,032	30,948			
412.00	9,153	31,742			
412.10	9,275	32,536			
412.20	9,397	33,329			
412.30	9,519	34,123			
412.40	9,640	34,916			
412.50	9,762	35,710			
412.60	9,884	36,503			
412.70	10,006	37,297			
412.80	10,128	38,090			
412.90	10,249	38,884			
413.00	10,371	39,678			
413.10	10,493	40,471			
413.20	10,615	41,265			
413.30	10,737	42,058			
413.40	10,858	42,852			
413.50	10,980	43,645			
413.60	11,102	44,439			
413.70	11,224	45,232			

Summary for Pond 45P: INFIL 1B

Inflow Area = 10.279 ac, 65.40% Impervious, Inflow Depth = 2.94" for 10-Year event
 Inflow = 36.34 cfs @ 12.14 hrs, Volume= 2.517 af
 Outflow = 5.03 cfs @ 12.70 hrs, Volume= 2.517 af, Atten= 86%, Lag= 33.5 min
 Discarded = 5.03 cfs @ 12.70 hrs, Volume= 2.517 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 410.31' @ 12.70 hrs Surf.Area= 17,978 sf Storage= 34,882 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 58.0 min (875.8 - 817.9)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	118,185 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	12,210	0	0
414.00	27,185	118,185	118,185

Device	Routing	Invert	Outlet Devices
#1	Secondary	413.00'	10.0' 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
#2	Device 4	410.85'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.00'	9.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 402.50' Phase-In= 0.01'
#4	Primary	408.00'	18.0" Round Culvert L= 50.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 408.00' / 407.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

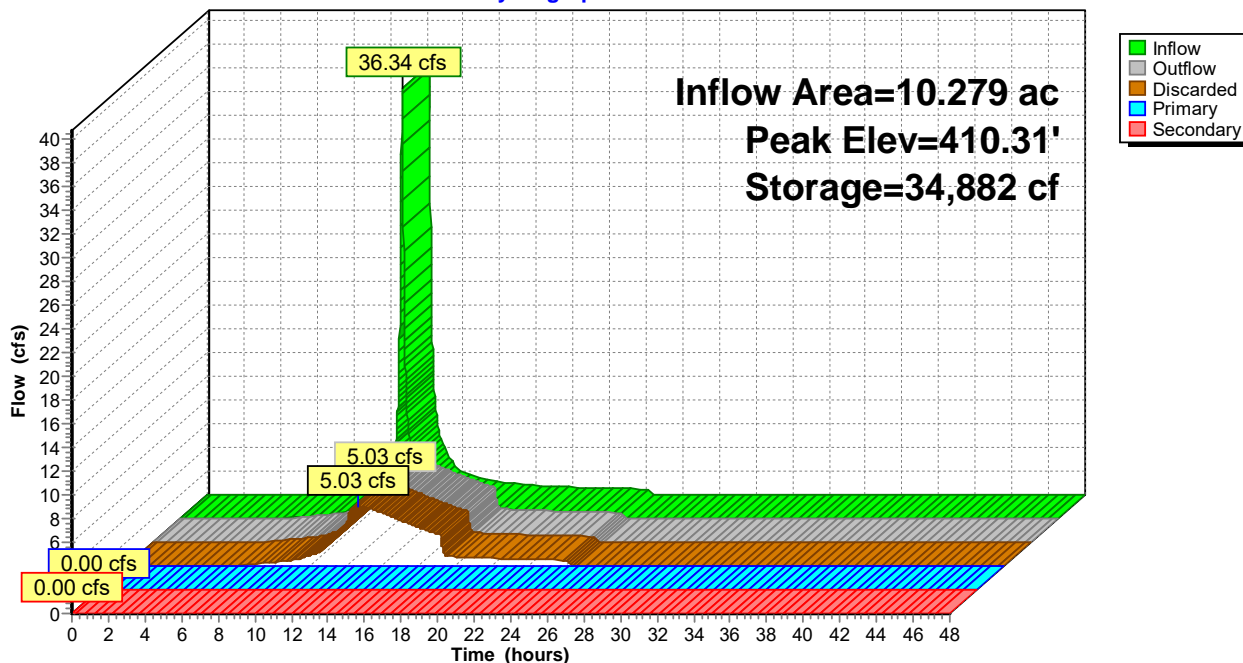
Discarded OutFlow Max=5.03 cfs @ 12.70 hrs HW=410.31' (Free Discharge)
 ↑3=Exfiltration (Controls 5.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.00' (Free Discharge)
 ↑4=Culvert (Controls 0.00 cfs)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

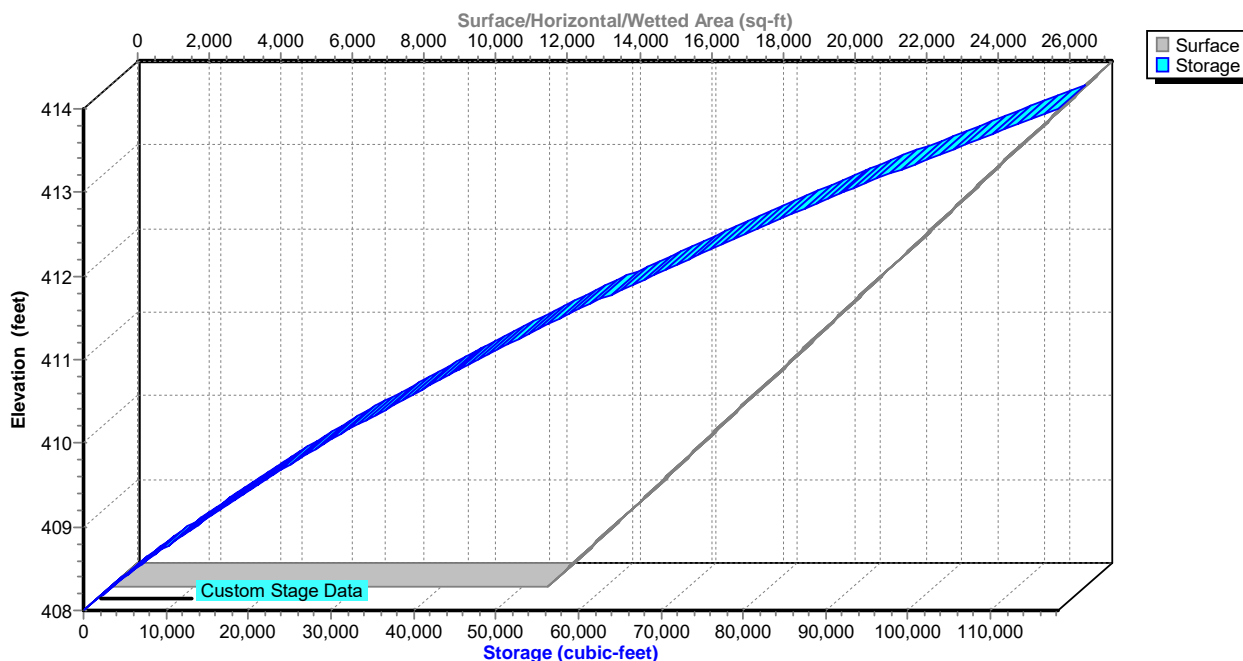
Pond 45P: INFIL 1B

Hydrograph



Pond 45P: INFIL 1B

Stage-Area-Storage



Hydrograph for Pond 45P: INFIL 1B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	408.00	0.00	0.00	0.00	0.00
1.00	0.00	0	408.00	0.00	0.00	0.00	0.00
2.00	0.00	0	408.00	0.00	0.00	0.00	0.00
3.00	0.00	0	408.00	0.00	0.00	0.00	0.00
4.00	0.00	0	408.00	0.00	0.00	0.00	0.00
5.00	0.00	0	408.00	0.00	0.00	0.00	0.00
6.00	0.06	16	408.00	0.06	0.06	0.00	0.00
7.00	0.17	44	408.00	0.16	0.16	0.00	0.00
8.00	0.31	83	408.01	0.29	0.29	0.00	0.00
9.00	0.48	132	408.01	0.47	0.47	0.00	0.00
10.00	0.91	246	408.02	0.87	0.87	0.00	0.00
11.00	1.95	512	408.04	1.81	1.81	0.00	0.00
12.00	16.32	8,352	408.64	3.19	3.19	0.00	0.00
13.00	3.90	34,256	410.28	4.99	4.99	0.00	0.00
14.00	1.96	26,628	409.84	4.49	4.49	0.00	0.00
15.00	1.36	17,569	409.27	3.86	3.86	0.00	0.00
16.00	1.11	9,114	408.70	3.25	3.25	0.00	0.00
17.00	0.93	2,089	408.17	2.71	2.71	0.00	0.00
18.00	0.77	221	408.02	0.78	0.78	0.00	0.00
19.00	0.69	197	408.02	0.70	0.70	0.00	0.00
20.00	0.65	185	408.02	0.65	0.65	0.00	0.00
21.00	0.61	173	408.01	0.61	0.61	0.00	0.00
22.00	0.56	160	408.01	0.57	0.57	0.00	0.00
23.00	0.52	148	408.01	0.52	0.52	0.00	0.00
24.00	0.47	135	408.01	0.48	0.48	0.00	0.00
25.00	0.00	0	408.00	0.00	0.00	0.00	0.00
26.00	0.00	0	408.00	0.00	0.00	0.00	0.00
27.00	0.00	0	408.00	0.00	0.00	0.00	0.00
28.00	0.00	0	408.00	0.00	0.00	0.00	0.00
29.00	0.00	0	408.00	0.00	0.00	0.00	0.00
30.00	0.00	0	408.00	0.00	0.00	0.00	0.00
31.00	0.00	0	408.00	0.00	0.00	0.00	0.00
32.00	0.00	0	408.00	0.00	0.00	0.00	0.00
33.00	0.00	0	408.00	0.00	0.00	0.00	0.00
34.00	0.00	0	408.00	0.00	0.00	0.00	0.00
35.00	0.00	0	408.00	0.00	0.00	0.00	0.00
36.00	0.00	0	408.00	0.00	0.00	0.00	0.00
37.00	0.00	0	408.00	0.00	0.00	0.00	0.00
38.00	0.00	0	408.00	0.00	0.00	0.00	0.00
39.00	0.00	0	408.00	0.00	0.00	0.00	0.00
40.00	0.00	0	408.00	0.00	0.00	0.00	0.00
41.00	0.00	0	408.00	0.00	0.00	0.00	0.00
42.00	0.00	0	408.00	0.00	0.00	0.00	0.00
43.00	0.00	0	408.00	0.00	0.00	0.00	0.00
44.00	0.00	0	408.00	0.00	0.00	0.00	0.00
45.00	0.00	0	408.00	0.00	0.00	0.00	0.00
46.00	0.00	0	408.00	0.00	0.00	0.00	0.00
47.00	0.00	0	408.00	0.00	0.00	0.00	0.00
48.00	0.00	0	408.00	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 45P: INFIL 1B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	12,210	0	413.80	26,686	112,798
408.10	12,460	1,233	413.90	26,935	115,479
408.20	12,709	2,492	414.00	27,185	118,185
408.30	12,959	3,775			
408.40	13,208	5,084			
408.50	13,458	6,417			
408.60	13,708	7,775			
408.70	13,957	9,158			
408.80	14,207	10,567			
408.90	14,456	12,000			
409.00	14,706	13,458			
409.10	14,955	14,941			
409.20	15,205	16,449			
409.30	15,455	17,982			
409.40	15,704	19,540			
409.50	15,954	21,123			
409.60	16,203	22,731			
409.70	16,453	24,363			
409.80	16,703	26,021			
409.90	16,952	27,704			
410.00	17,202	29,412			
410.10	17,451	31,144			
410.20	17,701	32,902			
410.30	17,950	34,684			
410.40	18,200	36,492			
410.50	18,450	38,324			
410.60	18,699	40,182			
410.70	18,949	42,064			
410.80	19,198	43,972			
410.90	19,448	45,904			
411.00	19,698	47,861			
411.10	19,947	49,843			
411.20	20,197	51,851			
411.30	20,446	53,883			
411.40	20,696	55,940			
411.50	20,945	58,022			
411.60	21,195	60,129			
411.70	21,445	62,261			
411.80	21,694	64,418			
411.90	21,944	66,600			
412.00	22,193	68,807			
412.10	22,443	71,038			
412.20	22,692	73,295			
412.30	22,942	75,577			
412.40	23,192	77,884			
412.50	23,441	80,215			
412.60	23,691	82,572			
412.70	23,940	84,953			
412.80	24,190	87,360			
412.90	24,440	89,791			
413.00	24,689	92,248			
413.10	24,939	94,729			
413.20	25,188	97,236			
413.30	25,438	99,767			
413.40	25,687	102,323			
413.50	25,937	104,904			
413.60	26,187	107,511			
413.70	26,436	110,142			

Summary for Pond 47P: INFIL 1H

Inflow Area = 11.301 ac, 87.98% Impervious, Inflow Depth = 4.03" for 10-Year event
 Inflow = 47.91 cfs @ 12.14 hrs, Volume= 3.799 af
 Outflow = 5.76 cfs @ 12.79 hrs, Volume= 3.799 af, Atten= 88%, Lag= 38.9 min
 Discarded = 5.76 cfs @ 12.79 hrs, Volume= 3.799 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 410.70' @ 12.79 hrs Surf.Area= 26,240 sf Storage= 51,836 cf

Plug-Flow detention time= 67.3 min calculated for 3.799 af (100% of inflow)
 Center-of-Mass det. time= 67.3 min (822.0 - 754.7)

Volume	Invert	Avail.Storage	Storage Description
#1	408.50'	151,690 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.50	20,873	0	0
414.00	34,287	151,690	151,690

Device	Routing	Invert	Outlet Devices
#1	Secondary	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 4	410.85'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.50'	7.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 403.00' Phase-In= 0.01'
#4	Primary	408.50'	18.0" Round Culvert L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 408.50' / 407.00' S= 0.0214 '/ Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

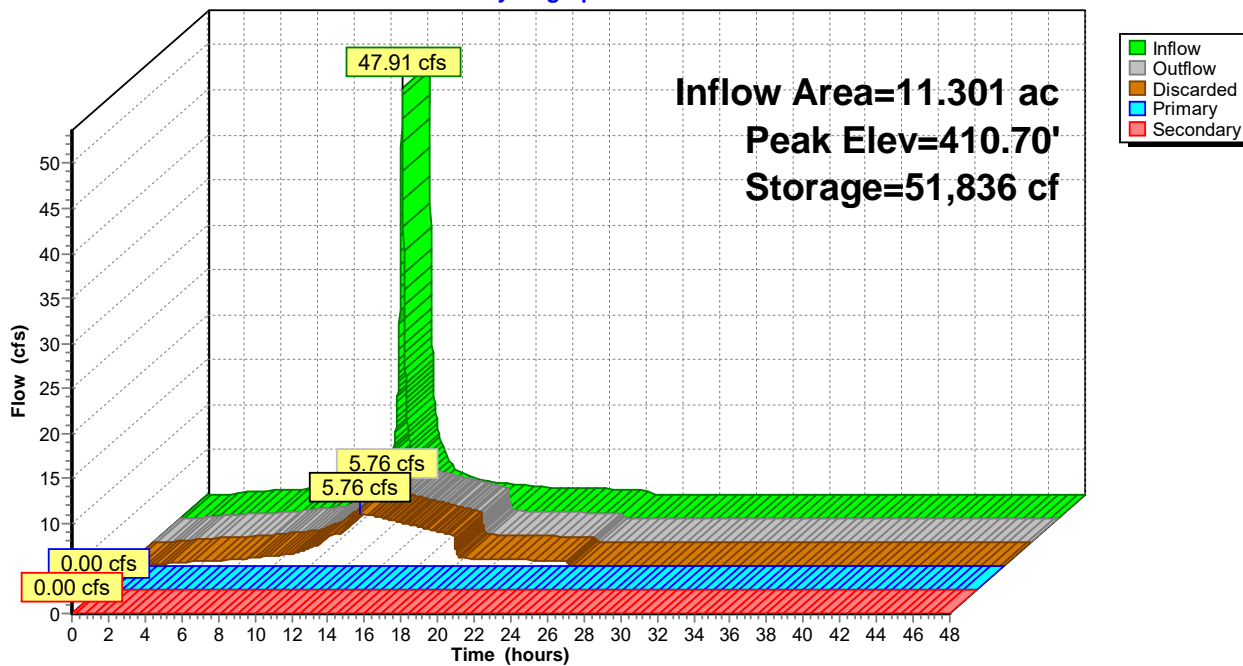
Discarded OutFlow Max=5.76 cfs @ 12.79 hrs HW=410.70' (Free Discharge)
 ↑ **3=Exfiltration** (Controls 5.76 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
 ↑ **4=Culvert** (Controls 0.00 cfs)
 ↑ **2=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
 ↑ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

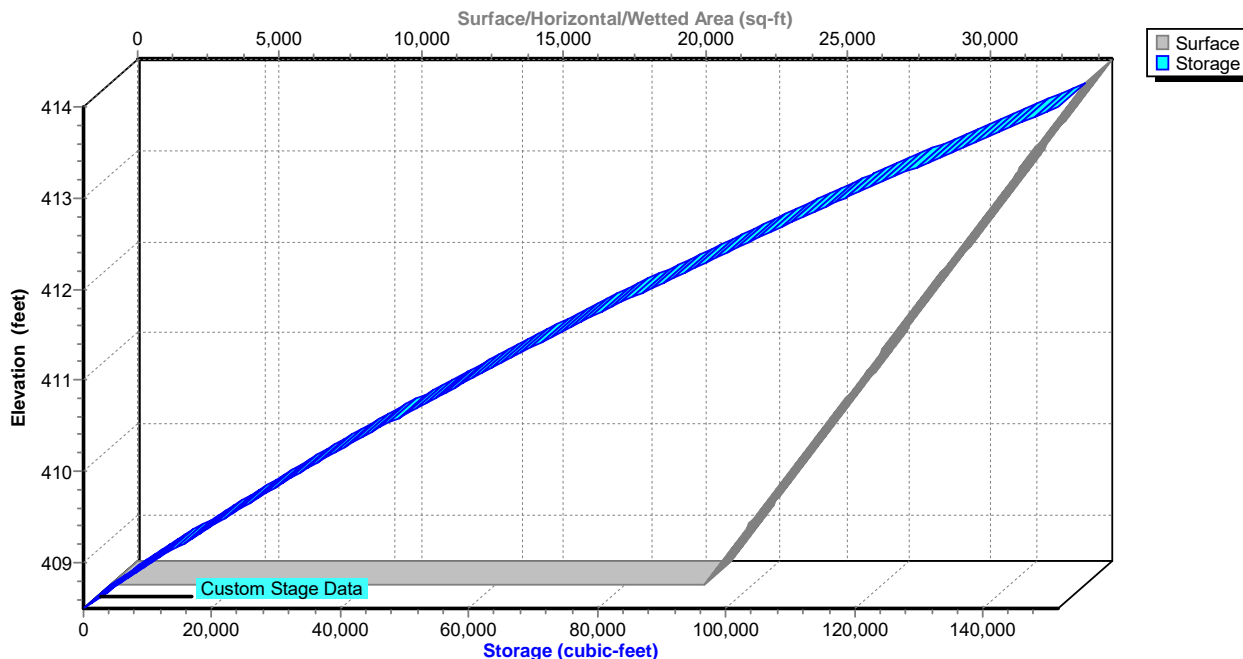
Pond 47P: INFIL 1H

Hydrograph



Pond 47P: INFIL 1H

Stage-Area-Storage



Hydrograph for Pond 47P: INFIL 1H

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	408.50	0.00	0.00	0.00	0.00
1.00	0.03	5	408.50	0.01	0.01	0.00	0.00
2.00	0.27	83	408.50	0.25	0.25	0.00	0.00
3.00	0.43	138	408.51	0.41	0.41	0.00	0.00
4.00	0.55	180	408.51	0.54	0.54	0.00	0.00
5.00	0.64	213	408.51	0.63	0.63	0.00	0.00
6.00	0.73	241	408.51	0.72	0.72	0.00	0.00
7.00	0.93	304	408.51	0.91	0.91	0.00	0.00
8.00	1.15	378	408.52	1.13	1.13	0.00	0.00
9.00	1.37	453	408.52	1.35	1.35	0.00	0.00
10.00	2.07	667	408.53	1.99	1.99	0.00	0.00
11.00	3.62	1,128	408.55	3.37	3.37	0.00	0.00
12.00	23.15	15,217	409.20	4.11	4.11	0.00	0.00
13.00	4.77	51,469	410.69	5.74	5.74	0.00	0.00
14.00	2.36	42,958	410.36	5.37	5.37	0.00	0.00
15.00	1.65	31,737	409.91	4.86	4.86	0.00	0.00
16.00	1.32	20,365	409.43	4.34	4.34	0.00	0.00
17.00	1.11	9,997	408.97	3.86	3.86	0.00	0.00
18.00	0.90	721	408.53	2.15	2.15	0.00	0.00
19.00	0.82	275	408.51	0.82	0.82	0.00	0.00
20.00	0.76	258	408.51	0.77	0.77	0.00	0.00
21.00	0.71	240	408.51	0.72	0.72	0.00	0.00
22.00	0.66	222	408.51	0.66	0.66	0.00	0.00
23.00	0.61	205	408.51	0.61	0.61	0.00	0.00
24.00	0.55	187	408.51	0.56	0.56	0.00	0.00
25.00	0.00	0	408.50	0.00	0.00	0.00	0.00
26.00	0.00	0	408.50	0.00	0.00	0.00	0.00
27.00	0.00	0	408.50	0.00	0.00	0.00	0.00
28.00	0.00	0	408.50	0.00	0.00	0.00	0.00
29.00	0.00	0	408.50	0.00	0.00	0.00	0.00
30.00	0.00	0	408.50	0.00	0.00	0.00	0.00
31.00	0.00	0	408.50	0.00	0.00	0.00	0.00
32.00	0.00	0	408.50	0.00	0.00	0.00	0.00
33.00	0.00	0	408.50	0.00	0.00	0.00	0.00
34.00	0.00	0	408.50	0.00	0.00	0.00	0.00
35.00	0.00	0	408.50	0.00	0.00	0.00	0.00
36.00	0.00	0	408.50	0.00	0.00	0.00	0.00
37.00	0.00	0	408.50	0.00	0.00	0.00	0.00
38.00	0.00	0	408.50	0.00	0.00	0.00	0.00
39.00	0.00	0	408.50	0.00	0.00	0.00	0.00
40.00	0.00	0	408.50	0.00	0.00	0.00	0.00
41.00	0.00	0	408.50	0.00	0.00	0.00	0.00
42.00	0.00	0	408.50	0.00	0.00	0.00	0.00
43.00	0.00	0	408.50	0.00	0.00	0.00	0.00
44.00	0.00	0	408.50	0.00	0.00	0.00	0.00
45.00	0.00	0	408.50	0.00	0.00	0.00	0.00
46.00	0.00	0	408.50	0.00	0.00	0.00	0.00
47.00	0.00	0	408.50	0.00	0.00	0.00	0.00
48.00	0.00	0	408.50	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 47P: INFIL 1H

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.50	20,873	0	411.40	27,946	70,787
408.55	20,995	1,047	411.45	28,068	72,188
408.60	21,117	2,099	411.50	28,190	73,594
408.65	21,239	3,158	411.55	28,312	75,007
408.70	21,361	4,223	411.60	28,434	76,425
408.75	21,483	5,294	411.65	28,556	77,850
408.80	21,605	6,372	411.70	28,678	79,281
408.85	21,727	7,455	411.75	28,799	80,718
408.90	21,849	8,544	411.80	28,921	82,161
408.95	21,971	9,640	411.85	29,043	83,610
409.00	22,092	10,741	411.90	29,165	85,065
409.05	22,214	11,849	411.95	29,287	86,526
409.10	22,336	12,963	412.00	29,409	87,994
409.15	22,458	14,083	412.05	29,531	89,467
409.20	22,580	15,209	412.10	29,653	90,947
409.25	22,702	16,341	412.15	29,775	92,433
409.30	22,824	17,479	412.20	29,897	93,924
409.35	22,946	18,623	412.25	30,019	95,422
409.40	23,068	19,773	412.30	30,141	96,926
409.45	23,190	20,930	412.35	30,263	98,436
409.50	23,312	22,092	412.40	30,385	99,953
409.55	23,434	23,261	412.45	30,507	101,475
409.60	23,556	24,436	412.50	30,629	103,003
409.65	23,678	25,617	412.55	30,751	104,538
409.70	23,800	26,804	412.60	30,873	106,078
409.75	23,922	27,997	412.65	30,994	107,625
409.80	24,044	29,196	412.70	31,116	109,178
409.85	24,166	30,401	412.75	31,238	110,737
409.90	24,287	31,612	412.80	31,360	112,302
409.95	24,409	32,830	412.85	31,482	113,873
410.00	24,531	34,053	412.90	31,604	115,450
410.05	24,653	35,283	412.95	31,726	117,033
410.10	24,775	36,519	413.00	31,848	118,622
410.15	24,897	37,760	413.05	31,970	120,218
410.20	25,019	39,008	413.10	32,092	121,819
410.25	25,141	40,262	413.15	32,214	123,427
410.30	25,263	41,522	413.20	32,336	125,041
410.35	25,385	42,789	413.25	32,458	126,661
410.40	25,507	44,061	413.30	32,580	128,287
410.45	25,629	45,339	413.35	32,702	129,919
410.50	25,751	46,624	413.40	32,824	131,557
410.55	25,873	47,914	413.45	32,946	133,201
410.60	25,995	49,211	413.50	33,068	134,851
410.65	26,117	50,514	413.55	33,189	136,508
410.70	26,239	51,823	413.60	33,311	138,170
410.75	26,361	53,138	413.65	33,433	139,839
410.80	26,482	54,459	413.70	33,555	141,514
410.85	26,604	55,786	413.75	33,677	143,194
410.90	26,726	57,119	413.80	33,799	144,881
410.95	26,848	58,459	413.85	33,921	146,574
411.00	26,970	59,804	413.90	34,043	148,273
411.05	27,092	61,156	413.95	34,165	149,979
411.10	27,214	62,513	414.00	34,287	151,690
411.15	27,336	63,877			
411.20	27,458	65,247			
411.25	27,580	66,623			
411.30	27,702	68,005			
411.35	27,824	69,393			

Summary for Pond 51P: FB 1H

Inflow Area = 10.389 ac, 95.71% Impervious, Inflow Depth = 4.37" for 10-Year event
 Inflow = 49.04 cfs @ 12.13 hrs, Volume= 3.787 af
 Outflow = 47.91 cfs @ 12.14 hrs, Volume= 3.787 af, Atten= 2%, Lag= 0.9 min
 Primary = 47.91 cfs @ 12.14 hrs, Volume= 3.787 af
 Routed to Pond 47P : INFIL 1H

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.75' Surf.Area= 12,203 sf Storage= 48,336 cf
 Peak Elev= 413.17' @ 12.14 hrs Surf.Area= 12,689 sf Storage= 52,615 cf (4,279 cf above start)

Plug-Flow detention time= 198.0 min calculated for 2.677 af (71% of inflow)
 Center-of-Mass det. time= 3.2 min (753.8 - 750.6)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,056 cf	Custom Stage Data (Prismatic) Listed below

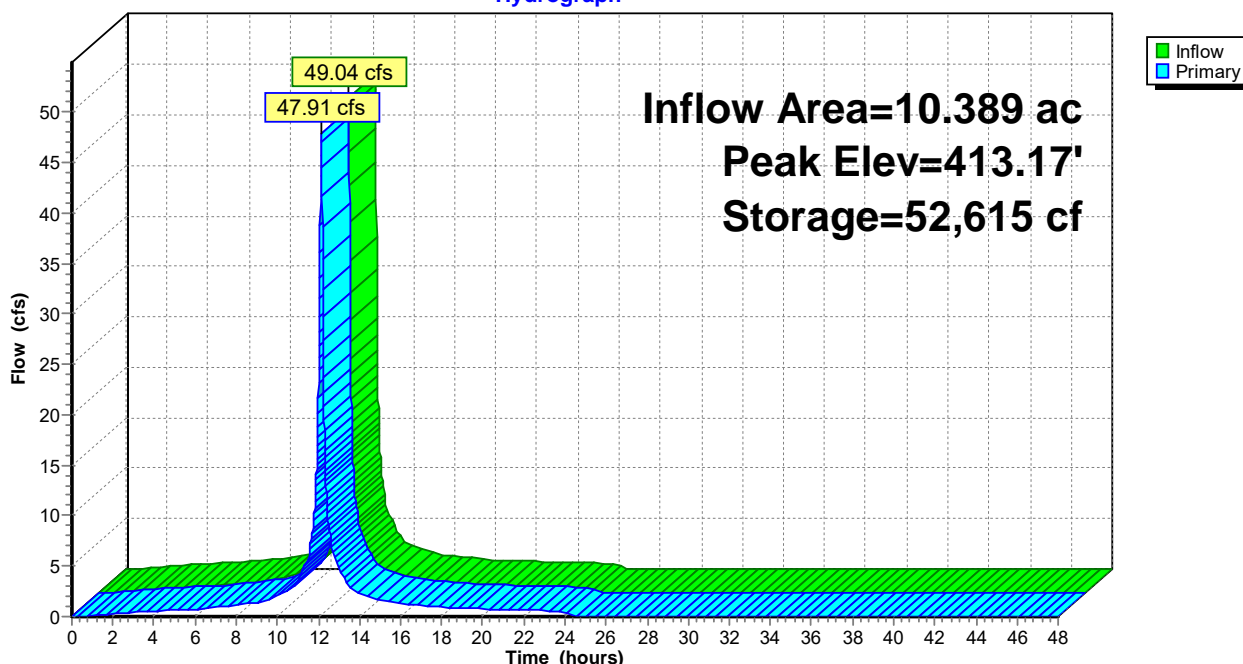
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	6,702	0	0
414.00	13,650	61,056	61,056

Device	Routing	Invert	Outlet Devices
#1	Primary	412.75'	65.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

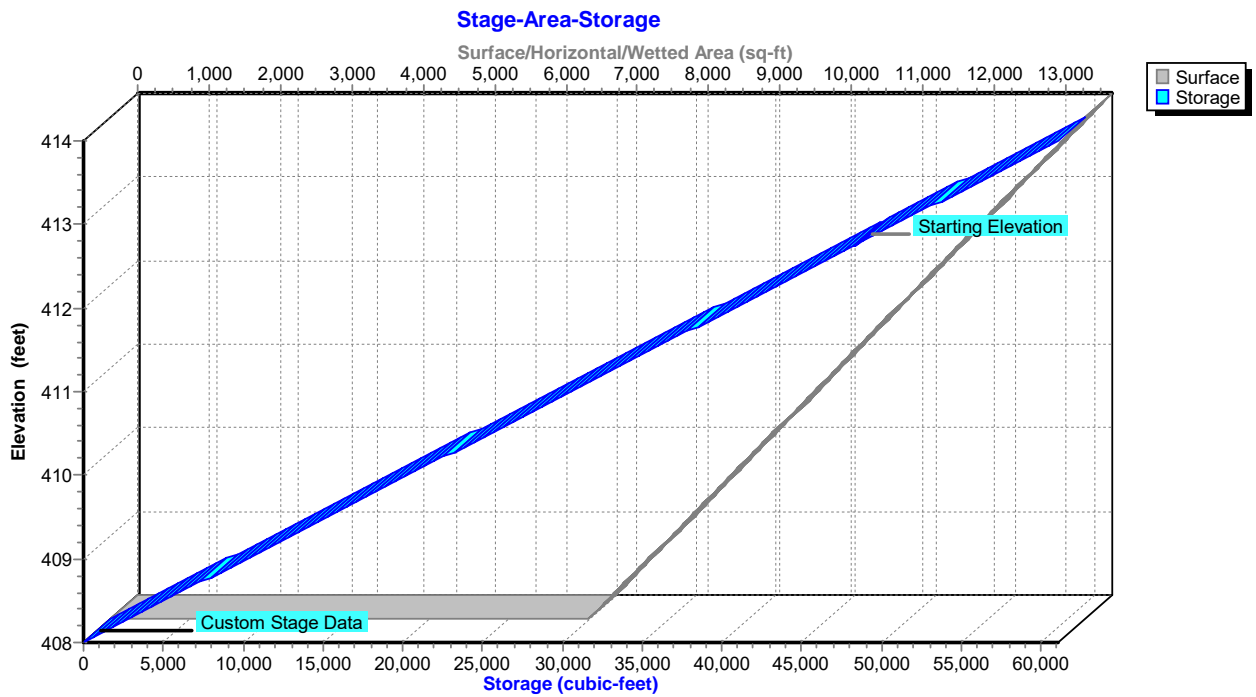
Primary OutFlow Max=47.77 cfs @ 12.14 hrs HW=413.17' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 47.77 cfs @ 1.75 fps)

Pond 51P: FB 1H

Hydrograph



Pond 51P: FB 1H



Hydrograph for Pond 51P: FB 1H

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	48,336	412.75	0.00
1.00	0.05	48,344	412.75	0.03
2.00	0.28	48,406	412.76	0.27
3.00	0.44	48,447	412.76	0.43
4.00	0.55	48,479	412.76	0.55
5.00	0.65	48,504	412.77	0.64
6.00	0.73	48,526	412.77	0.73
7.00	0.94	48,579	412.77	0.93
8.00	1.17	48,636	412.78	1.15
9.00	1.39	48,694	412.79	1.37
10.00	2.10	48,862	412.80	2.07
11.00	3.72	49,076	412.82	3.62
12.00	26.14	50,973	413.01	23.15
13.00	4.55	49,233	412.84	4.75
14.00	2.31	48,899	412.81	2.34
15.00	1.57	48,763	412.79	1.63
16.00	1.29	48,678	412.78	1.31
17.00	1.08	48,624	412.78	1.10
18.00	0.88	48,569	412.77	0.89
19.00	0.80	48,546	412.77	0.80
20.00	0.75	48,533	412.77	0.75
21.00	0.70	48,519	412.77	0.70
22.00	0.64	48,505	412.77	0.65
23.00	0.59	48,492	412.77	0.60
24.00	0.54	48,478	412.76	0.54
25.00	0.00	48,336	412.75	0.00
26.00	0.00	48,336	412.75	0.00
27.00	0.00	48,336	412.75	0.00
28.00	0.00	48,336	412.75	0.00
29.00	0.00	48,336	412.75	0.00
30.00	0.00	48,336	412.75	0.00
31.00	0.00	48,336	412.75	0.00
32.00	0.00	48,336	412.75	0.00
33.00	0.00	48,336	412.75	0.00
34.00	0.00	48,336	412.75	0.00
35.00	0.00	48,336	412.75	0.00
36.00	0.00	48,336	412.75	0.00
37.00	0.00	48,336	412.75	0.00
38.00	0.00	48,336	412.75	0.00
39.00	0.00	48,336	412.75	0.00
40.00	0.00	48,336	412.75	0.00
41.00	0.00	48,336	412.75	0.00
42.00	0.00	48,336	412.75	0.00
43.00	0.00	48,336	412.75	0.00
44.00	0.00	48,336	412.75	0.00
45.00	0.00	48,336	412.75	0.00
46.00	0.00	48,336	412.75	0.00
47.00	0.00	48,336	412.75	0.00
48.00	0.00	48,336	412.75	0.00

Stage-Area-Storage for Pond 51P: FB 1H

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	6,702	0	413.80	13,418	59,021
408.10	6,818	1,018	413.90	13,534	60,038
408.20	6,934	2,035	414.00	13,650	61,056
408.30	7,049	3,053			
408.40	7,165	4,070			
408.50	7,281	5,088			
408.60	7,397	6,106			
408.70	7,513	7,123			
408.80	7,628	8,141			
408.90	7,744	9,158			
409.00	7,860	10,176			
409.10	7,976	11,194			
409.20	8,092	12,211			
409.30	8,207	13,229			
409.40	8,323	14,246			
409.50	8,439	15,264			
409.60	8,555	16,282			
409.70	8,671	17,299			
409.80	8,786	18,317			
409.90	8,902	19,334			
410.00	9,018	20,352			
410.10	9,134	21,370			
410.20	9,250	22,387			
410.30	9,365	23,405			
410.40	9,481	24,422			
410.50	9,597	25,440			
410.60	9,713	26,458			
410.70	9,829	27,475			
410.80	9,944	28,493			
410.90	10,060	29,510			
411.00	10,176	30,528			
411.10	10,292	31,546			
411.20	10,408	32,563			
411.30	10,523	33,581			
411.40	10,639	34,598			
411.50	10,755	35,616			
411.60	10,871	36,634			
411.70	10,987	37,651			
411.80	11,102	38,669			
411.90	11,218	39,686			
412.00	11,334	40,704			
412.10	11,450	41,722			
412.20	11,566	42,739			
412.30	11,681	43,757			
412.40	11,797	44,774			
412.50	11,913	45,792			
412.60	12,029	46,810			
412.70	12,145	47,827			
412.80	12,260	48,845			
412.90	12,376	49,862			
413.00	12,492	50,880			
413.10	12,608	51,898			
413.20	12,724	52,915			
413.30	12,839	53,933			
413.40	12,955	54,950			
413.50	13,071	55,968			
413.60	13,187	56,986			
413.70	13,303	58,003			

Summary for Pond 53P: Bioretention J basin

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 22.91" for 10-Year event
 Inflow = 19.75 cfs @ 12.09 hrs, Volume= 1.489 af
 Outflow = 0.59 cfs @ 16.01 hrs, Volume= 0.454 af, Atten= 97%, Lag= 235.3 min
 Primary = 0.59 cfs @ 16.01 hrs, Volume= 0.454 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.18' @ 16.01 hrs Surf.Area= 27,871 sf Storage= 50,048 cf

Plug-Flow detention time= 607.6 min calculated for 0.454 af (30% of inflow)
 Center-of-Mass det. time= 414.7 min (1,195.0 - 780.3)

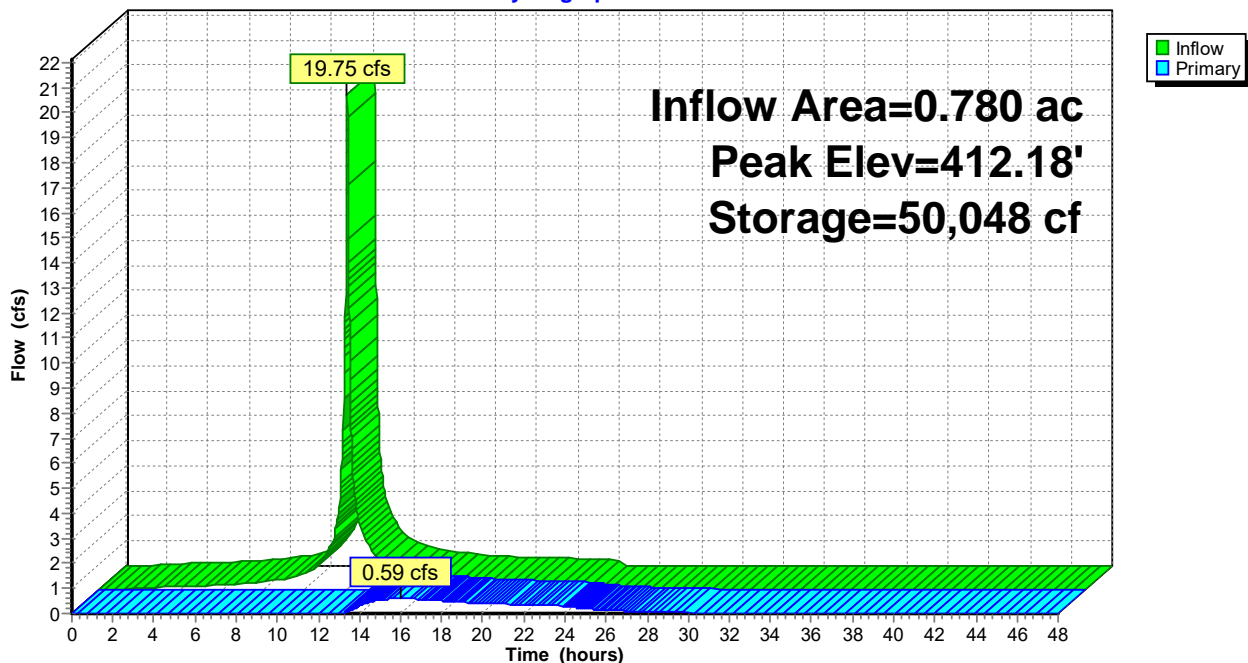
Volume	Invert	Avail.Storage	Storage Description	
#1	407.83'	72,373 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	24,200	0.0	0	0
408.33	24,200	40.0	4,840	4,840
411.00	24,200	20.0	12,923	17,763
413.00	30,410	100.0	54,610	72,373

Device	Routing	Invert	Outlet Devices
#1	Primary	407.83'	12.0" Round Culvert L= 49.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.83' / 407.50' S= 0.0067 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	412.00'	28.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	414.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.58 cfs @ 16.01 hrs HW=412.18' (Free Discharge)
 1=Culvert (Passes 0.58 cfs of 6.94 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.58 cfs @ 1.37 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

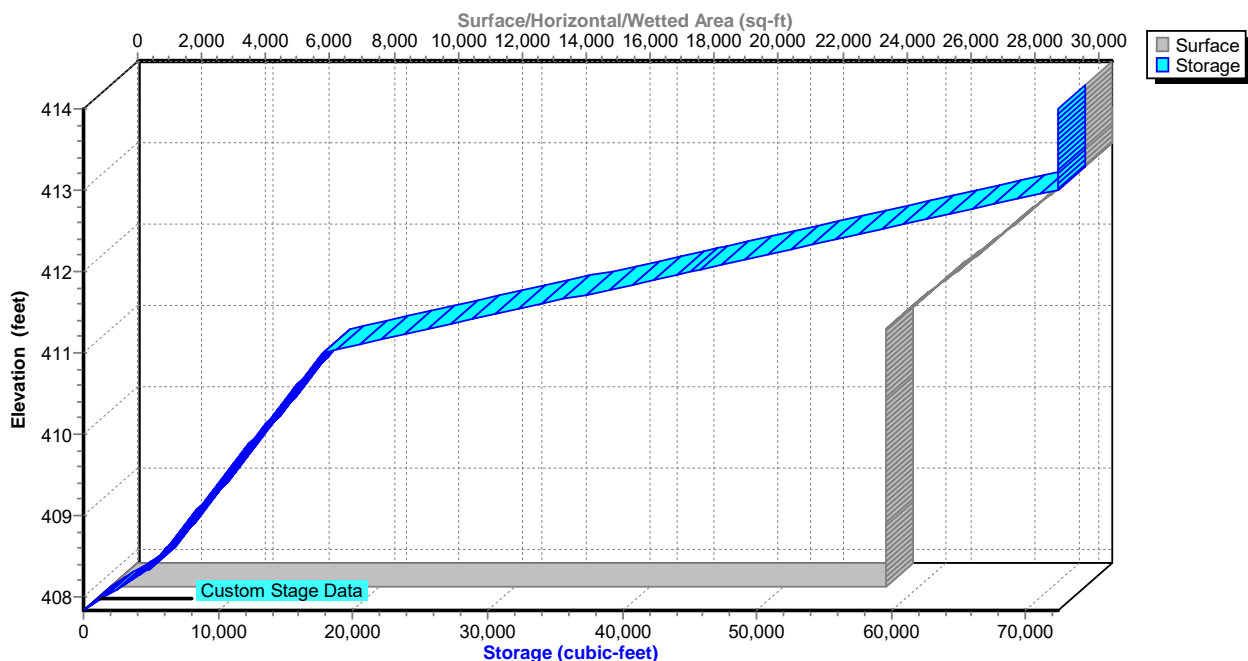
Pond 53P: Bioretention J basin

Hydrograph



Pond 53P: Bioretention J basin

Stage-Area-Storage



Hydrograph for Pond 53P: Bioretention J basin

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.83	0.00
1.00	0.01	6	407.83	0.00
2.00	0.07	170	407.85	0.00
3.00	0.11	503	407.88	0.00
4.00	0.14	958	407.93	0.00
5.00	0.16	1,507	407.99	0.00
6.00	0.19	2,136	408.05	0.00
7.00	0.25	2,909	408.13	0.00
8.00	0.33	3,947	408.24	0.00
9.00	0.42	5,287	408.42	0.00
10.00	0.68	7,242	408.83	0.00
11.00	1.30	10,512	409.50	0.00
12.00	11.86	22,607	411.18	0.00
13.00	2.00	43,871	411.96	0.00
14.00	1.04	48,337	412.12	0.32
15.00	0.71	49,837	412.17	0.55
16.00	0.59	50,048	412.18	0.59
17.00	0.50	49,916	412.18	0.57
18.00	0.40	49,594	412.17	0.51
19.00	0.37	49,247	412.15	0.45
20.00	0.35	48,994	412.14	0.41
21.00	0.32	48,777	412.14	0.38
22.00	0.30	48,579	412.13	0.35
23.00	0.28	48,394	412.12	0.33
24.00	0.25	48,215	412.12	0.30
25.00	0.00	47,423	412.09	0.19
26.00	0.00	46,844	412.07	0.13
27.00	0.00	46,434	412.05	0.10
28.00	0.00	46,145	412.04	0.07
29.00	0.00	45,941	412.03	0.05
30.00	0.00	45,796	412.03	0.03
31.00	0.00	45,689	412.02	0.03
32.00	0.00	45,599	412.02	0.02
33.00	0.00	45,521	412.02	0.02
34.00	0.00	45,455	412.01	0.02
35.00	0.00	45,398	412.01	0.01
36.00	0.00	45,350	412.01	0.01
37.00	0.00	45,309	412.01	0.01
38.00	0.00	45,273	412.01	0.01
39.00	0.00	45,243	412.01	0.01
40.00	0.00	45,218	412.01	0.01
41.00	0.00	45,196	412.00	0.01
42.00	0.00	45,177	412.00	0.00
43.00	0.00	45,161	412.00	0.00
44.00	0.00	45,147	412.00	0.00
45.00	0.00	45,136	412.00	0.00
46.00	0.00	45,126	412.00	0.00
47.00	0.00	45,117	412.00	0.00
48.00	0.00	45,110	412.00	0.00

Stage-Area-Storage for Pond 53P: Bioretention J basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.83	24,200	0	413.63	30,410	72,373
407.93	24,200	968	413.73	30,410	72,373
408.03	24,200	1,936	413.83	30,410	72,373
408.13	24,200	2,904	413.93	30,410	72,373
408.23	24,200	3,872			
408.33	24,200	4,840			
408.43	24,200	5,324			
408.53	24,200	5,808			
408.63	24,200	6,292			
408.73	24,200	6,776			
408.83	24,200	7,260			
408.93	24,200	7,744			
409.03	24,200	8,228			
409.13	24,200	8,712			
409.23	24,200	9,196			
409.33	24,200	9,680			
409.43	24,200	10,164			
409.53	24,200	10,648			
409.63	24,200	11,132			
409.73	24,200	11,616			
409.83	24,200	12,100			
409.93	24,200	12,584			
410.03	24,200	13,068			
410.13	24,200	13,552			
410.23	24,200	14,036			
410.33	24,200	14,520			
410.43	24,200	15,004			
410.53	24,200	15,488			
410.63	24,200	15,972			
410.73	24,200	16,456			
410.83	24,200	16,940			
410.93	24,200	17,424			
411.03	24,293	18,582			
411.13	24,604	21,312			
411.23	24,914	24,043			
411.33	25,225	26,773			
411.43	25,535	29,504			
411.53	25,846	32,234			
411.63	26,156	34,965			
411.73	26,467	37,695			
411.83	26,777	40,426			
411.93	27,088	43,156			
412.03	27,398	45,887			
412.13	27,709	48,617			
412.23	28,019	51,348			
412.33	28,330	54,078			
412.43	28,640	56,809			
412.53	28,951	59,539			
412.63	29,261	62,270			
412.73	29,572	65,000			
412.83	29,882	67,731			
412.93	30,193	70,461			
413.03	30,410	72,373			
413.13	30,410	72,373			
413.23	30,410	72,373			
413.33	30,410	72,373			
413.43	30,410	72,373			
413.53	30,410	72,373			

Summary for Pond 54P: INFIL 1G

Inflow Area = 10.595 ac, 90.33% Impervious, Inflow Depth = 4.15" for 10-Year event
 Inflow = 45.73 cfs @ 12.15 hrs, Volume= 3.665 af
 Outflow = 5.48 cfs @ 12.82 hrs, Volume= 3.665 af, Atten= 88%, Lag= 40.3 min
 Discarded = 5.48 cfs @ 12.82 hrs, Volume= 3.665 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 410.71' @ 12.82 hrs Surf.Area= 24,831 sf Storage= 50,018 cf

Plug-Flow detention time= 68.0 min calculated for 3.664 af (100% of inflow)
 Center-of-Mass det. time= 67.9 min (823.7 - 755.8)

Volume	Invert	Avail.Storage	Storage Description
#1	408.50'	142,445 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.50	20,483	0	0
414.00	31,315	142,445	142,445

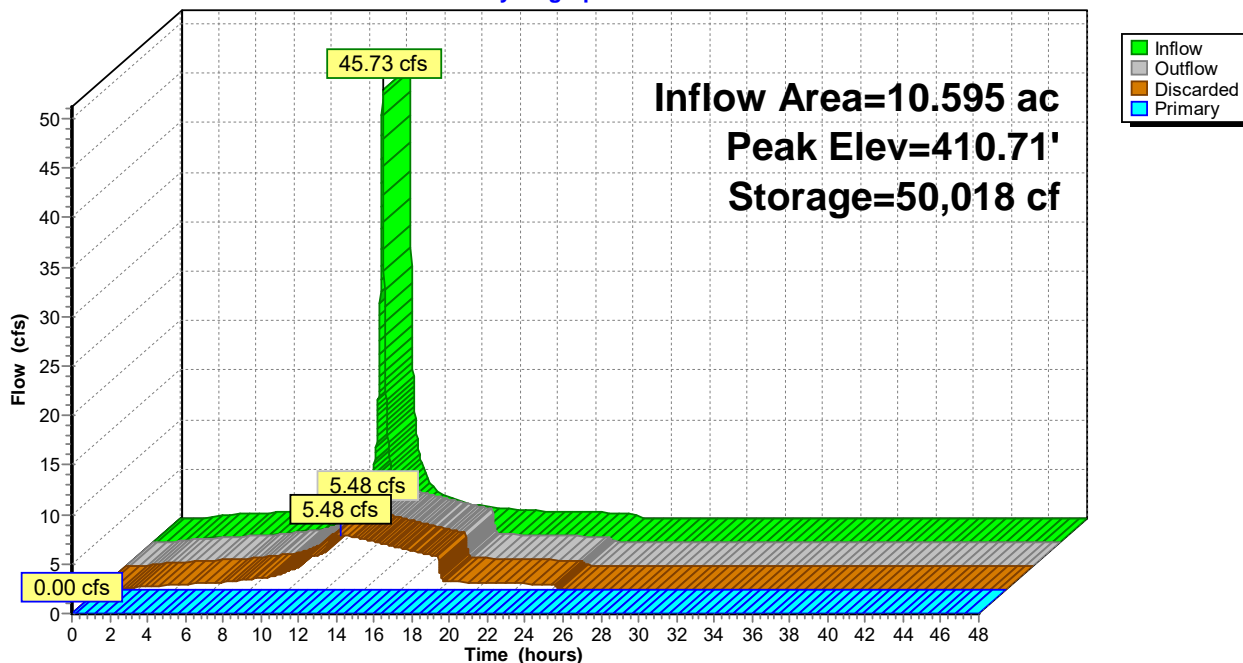
Device	Routing	Invert	Outlet Devices
#1	Device 4	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 4	411.85'	7.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.50'	7.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 403.00' Phase-In= 0.01'
#4	Primary	408.50'	18.0" Round Culvert L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 408.50' / 408.00' S= 0.0071 '/ Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Discarded OutFlow Max=5.48 cfs @ 12.82 hrs HW=410.71' (Free Discharge)
 ↳ **3=Exfiltration** (Controls 5.48 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
 ↳ **4=Culvert** (Controls 0.00 cfs)
 ↳ ↳ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
 ↳ ↳ **2=Orifice/Grate** (Controls 0.00 cfs)

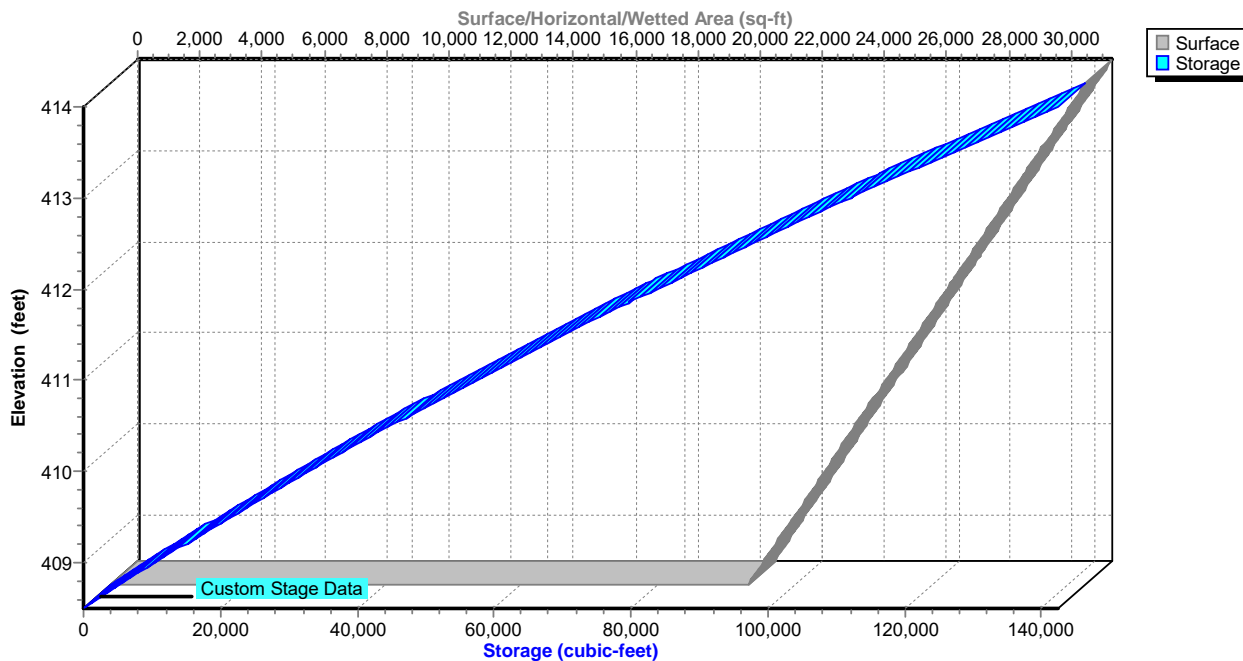
Pond 54P: INFIL 1G

Hydrograph



Pond 54P: INFIL 1G

Stage-Area-Storage



Hydrograph for Pond 54P: INFIL 1G

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	408.50	0.00	0.00	0.00
1.00	0.02	2	408.50	0.01	0.01	0.00
2.00	0.26	80	408.50	0.24	0.24	0.00
3.00	0.41	133	408.51	0.40	0.40	0.00
4.00	0.53	173	408.51	0.52	0.52	0.00
5.00	0.62	205	408.51	0.61	0.61	0.00
6.00	0.70	232	408.51	0.69	0.69	0.00
7.00	0.89	293	408.51	0.87	0.87	0.00
8.00	1.11	364	408.52	1.09	1.09	0.00
9.00	1.32	436	408.52	1.30	1.30	0.00
10.00	1.97	638	408.53	1.90	1.90	0.00
11.00	3.46	1,080	408.55	3.22	3.22	0.00
12.00	21.65	14,164	409.17	3.95	3.95	0.00
13.00	4.65	49,750	410.70	5.47	5.47	0.00
14.00	2.31	41,848	410.37	5.14	5.14	0.00
15.00	1.59	31,175	409.92	4.69	4.69	0.00
16.00	1.28	20,188	409.44	4.21	4.21	0.00
17.00	1.08	10,074	408.98	3.77	3.77	0.00
18.00	0.87	836	408.54	2.49	2.49	0.00
19.00	0.79	266	408.51	0.79	0.79	0.00
20.00	0.74	249	408.51	0.74	0.74	0.00
21.00	0.69	232	408.51	0.69	0.69	0.00
22.00	0.64	215	408.51	0.64	0.64	0.00
23.00	0.58	197	408.51	0.59	0.59	0.00
24.00	0.53	180	408.51	0.54	0.54	0.00
25.00	0.00	2	408.50	0.01	0.01	0.00
26.00	0.00	0	408.50	0.00	0.00	0.00
27.00	0.00	0	408.50	0.00	0.00	0.00
28.00	0.00	0	408.50	0.00	0.00	0.00
29.00	0.00	0	408.50	0.00	0.00	0.00
30.00	0.00	0	408.50	0.00	0.00	0.00
31.00	0.00	0	408.50	0.00	0.00	0.00
32.00	0.00	0	408.50	0.00	0.00	0.00
33.00	0.00	0	408.50	0.00	0.00	0.00
34.00	0.00	0	408.50	0.00	0.00	0.00
35.00	0.00	0	408.50	0.00	0.00	0.00
36.00	0.00	0	408.50	0.00	0.00	0.00
37.00	0.00	0	408.50	0.00	0.00	0.00
38.00	0.00	0	408.50	0.00	0.00	0.00
39.00	0.00	0	408.50	0.00	0.00	0.00
40.00	0.00	0	408.50	0.00	0.00	0.00
41.00	0.00	0	408.50	0.00	0.00	0.00
42.00	0.00	0	408.50	0.00	0.00	0.00
43.00	0.00	0	408.50	0.00	0.00	0.00
44.00	0.00	0	408.50	0.00	0.00	0.00
45.00	0.00	0	408.50	0.00	0.00	0.00
46.00	0.00	0	408.50	0.00	0.00	0.00
47.00	0.00	0	408.50	0.00	0.00	0.00
48.00	0.00	0	408.50	0.00	0.00	0.00

Stage-Area-Storage for Pond 54P: INFIL 1G

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.50	20,483	0	411.40	26,194	67,682
408.55	20,581	1,027	411.45	26,293	68,994
408.60	20,680	2,058	411.50	26,391	70,312
408.65	20,778	3,095	411.55	26,490	71,634
408.70	20,877	4,136	411.60	26,588	72,961
408.75	20,975	5,182	411.65	26,687	74,292
408.80	21,074	6,234	411.70	26,785	75,629
408.85	21,172	7,290	411.75	26,884	76,971
408.90	21,271	8,351	411.80	26,982	78,318
408.95	21,369	9,417	411.85	27,081	79,669
409.00	21,468	10,488	411.90	27,179	81,026
409.05	21,566	11,564	411.95	27,278	82,387
409.10	21,665	12,644	412.00	27,376	83,753
409.15	21,763	13,730	412.05	27,475	85,125
409.20	21,862	14,821	412.10	27,573	86,501
409.25	21,960	15,916	412.15	27,672	87,882
409.30	22,059	17,017	412.20	27,770	89,268
409.35	22,157	18,122	412.25	27,868	90,659
409.40	22,256	19,232	412.30	27,967	92,055
409.45	22,354	20,348	412.35	28,065	93,456
409.50	22,452	21,468	412.40	28,164	94,861
409.55	22,551	22,593	412.45	28,262	96,272
409.60	22,649	23,723	412.50	28,361	97,688
409.65	22,748	24,858	412.55	28,459	99,108
409.70	22,846	25,998	412.60	28,558	100,534
409.75	22,945	27,142	412.65	28,656	101,964
409.80	23,043	28,292	412.70	28,755	103,399
409.85	23,142	29,447	412.75	28,853	104,839
409.90	23,240	30,606	412.80	28,952	106,285
409.95	23,339	31,771	412.85	29,050	107,735
410.00	23,437	32,940	412.90	29,149	109,190
410.05	23,536	34,114	412.95	29,247	110,649
410.10	23,634	35,294	413.00	29,346	112,114
410.15	23,733	36,478	413.05	29,444	113,584
410.20	23,831	37,667	413.10	29,542	115,059
410.25	23,930	38,861	413.15	29,641	116,538
410.30	24,028	40,060	413.20	29,739	118,023
410.35	24,126	41,264	413.25	29,838	119,512
410.40	24,225	42,473	413.30	29,936	121,007
410.45	24,323	43,686	413.35	30,035	122,506
410.50	24,422	44,905	413.40	30,133	124,010
410.55	24,520	46,128	413.45	30,232	125,519
410.60	24,619	47,357	413.50	30,330	127,033
410.65	24,717	48,590	413.55	30,429	128,552
410.70	24,816	49,829	413.60	30,527	130,076
410.75	24,914	51,072	413.65	30,626	131,605
410.80	25,013	52,320	413.70	30,724	133,139
410.85	25,111	53,573	413.75	30,823	134,677
410.90	25,210	54,831	413.80	30,921	136,221
410.95	25,308	56,094	413.85	31,020	137,769
411.00	25,407	57,362	413.90	31,118	139,323
411.05	25,505	58,635	413.95	31,217	140,881
411.10	25,604	59,913	414.00	31,315	142,445
411.15	25,702	61,195			
411.20	25,801	62,483			
411.25	25,899	63,775			
411.30	25,997	65,073			
411.35	26,096	66,375			

Summary for Pond 55P: FB 1G

Inflow Area = 9.966 ac, 96.03% Impervious, Inflow Depth = 4.39" for 10-Year event
 Inflow = 47.21 cfs @ 12.13 hrs, Volume= 3.645 af
 Outflow = 45.65 cfs @ 12.15 hrs, Volume= 3.645 af, Atten= 3%, Lag= 1.0 min
 Primary = 45.65 cfs @ 12.15 hrs, Volume= 3.645 af
 Routed to Pond 54P : INFIL 1G

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.55' Surf.Area= 12,269 sf Storage= 46,929 cf
 Peak Elev= 413.04' @ 12.15 hrs Surf.Area= 12,880 sf Storage= 51,933 cf (5,004 cf above start)

Plug-Flow detention time= 199.8 min calculated for 2.568 af (70% of inflow)
 Center-of-Mass det. time= 4.1 min (754.6 - 750.5)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,884 cf	Custom Stage Data (Prismatic) Listed below

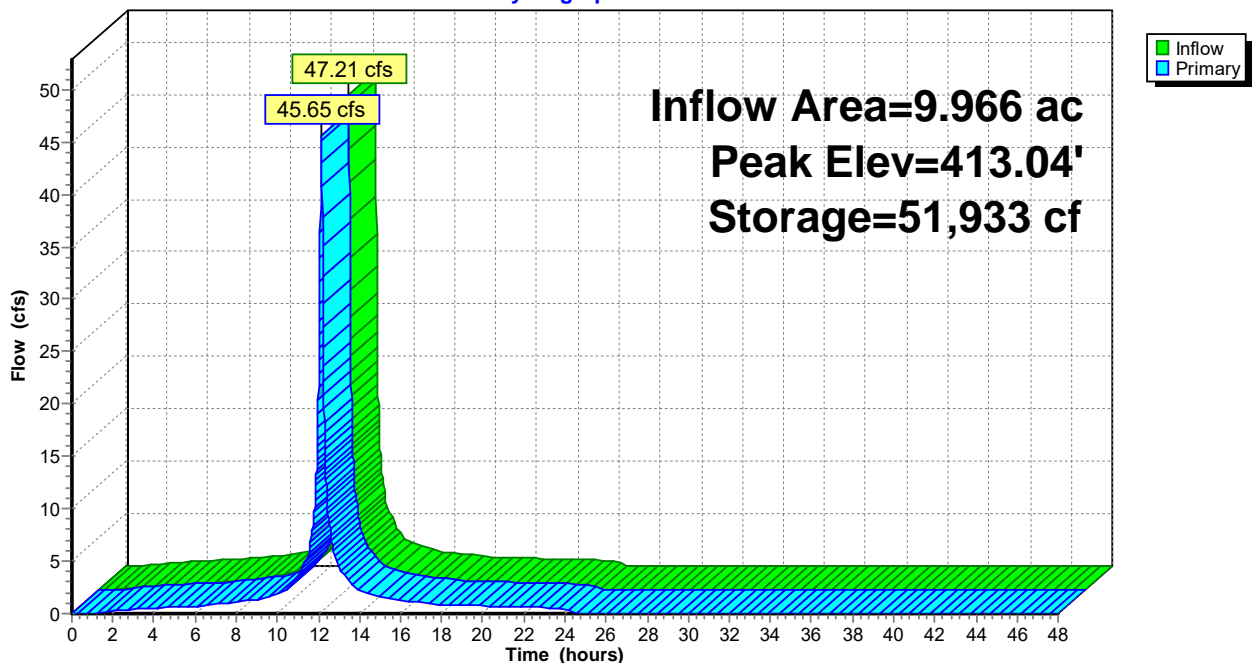
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	6,531	0	0
414.00	14,097	61,884	61,884

Device	Routing	Invert	Outlet Devices
#1	Primary	412.55'	50.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

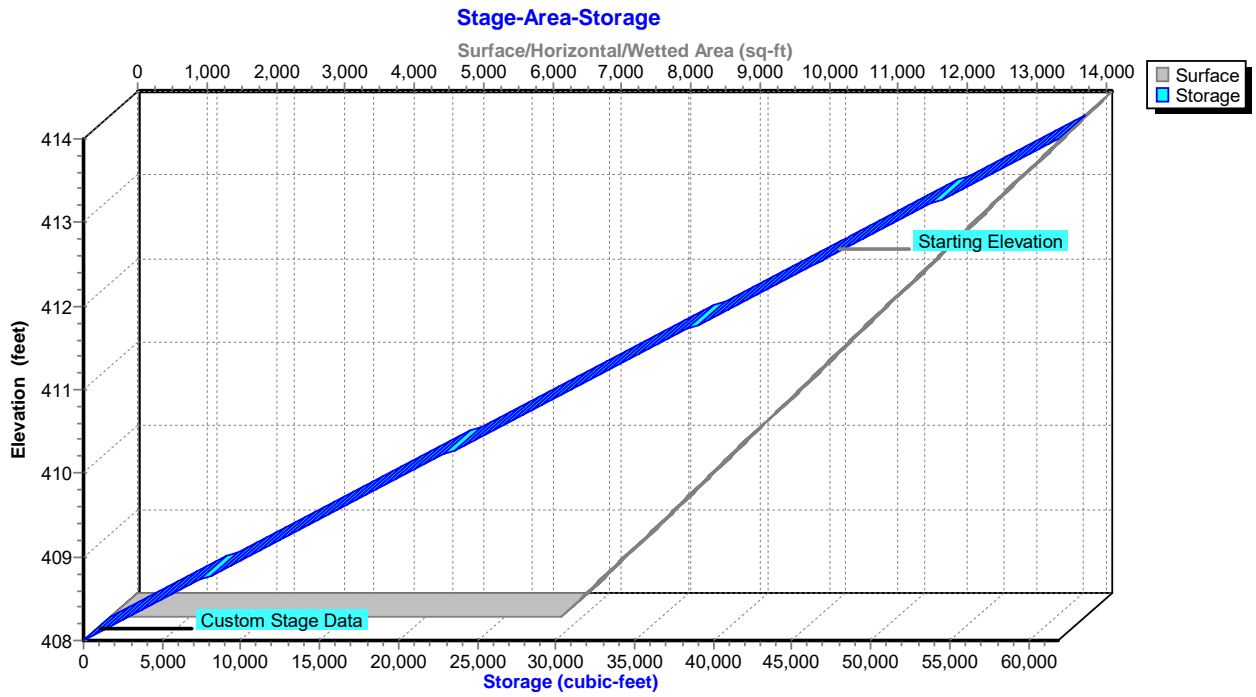
Primary OutFlow Max=45.52 cfs @ 12.15 hrs HW=413.03' (Free Discharge)
 ↑-1=Broad-Crested Rectangular Weir (Weir Controls 45.52 cfs @ 1.88 fps)

Pond 55P: FB 1G

Hydrograph



Pond 55P: FB 1G



Hydrograph for Pond 55P: FB 1G

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	46,929	412.55	0.00
1.00	0.05	46,941	412.55	0.02
2.00	0.27	47,064	412.56	0.26
3.00	0.42	47,105	412.57	0.41
4.00	0.53	47,135	412.57	0.53
5.00	0.63	47,160	412.57	0.62
6.00	0.70	47,181	412.57	0.70
7.00	0.91	47,232	412.58	0.89
8.00	1.12	47,288	412.58	1.11
9.00	1.34	47,345	412.59	1.32
10.00	2.02	47,515	412.61	1.97
11.00	3.59	47,810	412.64	3.46
12.00	25.17	49,975	412.85	21.65
13.00	4.38	47,996	412.65	4.60
14.00	2.22	47,597	412.61	2.28
15.00	1.51	47,411	412.60	1.57
16.00	1.24	47,329	412.59	1.26
17.00	1.04	47,276	412.58	1.06
18.00	0.84	47,222	412.58	0.86
19.00	0.77	47,201	412.58	0.77
20.00	0.72	47,188	412.58	0.72
21.00	0.67	47,174	412.57	0.67
22.00	0.62	47,161	412.57	0.62
23.00	0.57	47,148	412.57	0.57
24.00	0.52	47,135	412.57	0.52
25.00	0.00	46,931	412.55	0.00
26.00	0.00	46,929	412.55	0.00
27.00	0.00	46,929	412.55	0.00
28.00	0.00	46,929	412.55	0.00
29.00	0.00	46,929	412.55	0.00
30.00	0.00	46,929	412.55	0.00
31.00	0.00	46,929	412.55	0.00
32.00	0.00	46,929	412.55	0.00
33.00	0.00	46,929	412.55	0.00
34.00	0.00	46,929	412.55	0.00
35.00	0.00	46,929	412.55	0.00
36.00	0.00	46,929	412.55	0.00
37.00	0.00	46,929	412.55	0.00
38.00	0.00	46,929	412.55	0.00
39.00	0.00	46,929	412.55	0.00
40.00	0.00	46,929	412.55	0.00
41.00	0.00	46,929	412.55	0.00
42.00	0.00	46,929	412.55	0.00
43.00	0.00	46,929	412.55	0.00
44.00	0.00	46,929	412.55	0.00
45.00	0.00	46,929	412.55	0.00
46.00	0.00	46,929	412.55	0.00
47.00	0.00	46,929	412.55	0.00
48.00	0.00	46,929	412.55	0.00

Stage-Area-Storage for Pond 55P: FB 1G

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	6,531	0	413.80	13,845	59,821
408.10	6,657	1,031	413.90	13,971	60,853
408.20	6,783	2,063	414.00	14,097	61,884
408.30	6,909	3,094			
408.40	7,035	4,126			
408.50	7,162	5,157			
408.60	7,288	6,188			
408.70	7,414	7,220			
408.80	7,540	8,251			
408.90	7,666	9,283			
409.00	7,792	10,314			
409.10	7,918	11,345			
409.20	8,044	12,377			
409.30	8,170	13,408			
409.40	8,296	14,440			
409.50	8,423	15,471			
409.60	8,549	16,502			
409.70	8,675	17,534			
409.80	8,801	18,565			
409.90	8,927	19,597			
410.00	9,053	20,628			
410.10	9,179	21,659			
410.20	9,305	22,691			
410.30	9,431	23,722			
410.40	9,557	24,754			
410.50	9,684	25,785			
410.60	9,810	26,816			
410.70	9,936	27,848			
410.80	10,062	28,879			
410.90	10,188	29,911			
411.00	10,314	30,942			
411.10	10,440	31,973			
411.20	10,566	33,005			
411.30	10,692	34,036			
411.40	10,818	35,068			
411.50	10,945	36,099			
411.60	11,071	37,130			
411.70	11,197	38,162			
411.80	11,323	39,193			
411.90	11,449	40,225			
412.00	11,575	41,256			
412.10	11,701	42,287			
412.20	11,827	43,319			
412.30	11,953	44,350			
412.40	12,079	45,382			
412.50	12,206	46,413			
412.60	12,332	47,444			
412.70	12,458	48,476			
412.80	12,584	49,507			
412.90	12,710	50,539			
413.00	12,836	51,570			
413.10	12,962	52,601			
413.20	13,088	53,633			
413.30	13,214	54,664			
413.40	13,340	55,696			
413.50	13,467	56,727			
413.60	13,593	57,758			
413.70	13,719	58,790			

Summary for Pond 59P: FB 1E

Inflow Area = 0.398 ac, 82.34% Impervious, Inflow Depth = 4.22" for 10-Year event
 Inflow = 1.91 cfs @ 12.13 hrs, Volume= 0.140 af
 Outflow = 1.89 cfs @ 12.14 hrs, Volume= 0.140 af, Atten= 1%, Lag= 0.5 min
 Primary = 1.89 cfs @ 12.14 hrs, Volume= 0.140 af
 Routed to Pond 1P : Bioretention 1D

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 414.00' Surf.Area= 668 sf Storage= 2,016 cf
 Peak Elev= 414.18' @ 12.14 hrs Surf.Area= 697 sf Storage= 2,106 cf (90 cf above start)

Plug-Flow detention time= 193.7 min calculated for 0.094 af (67% of inflow)
 Center-of-Mass det. time= 1.7 min (774.3 - 772.6)

Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	3,024 cf	Custom Stage Data (Prismatic) Listed below

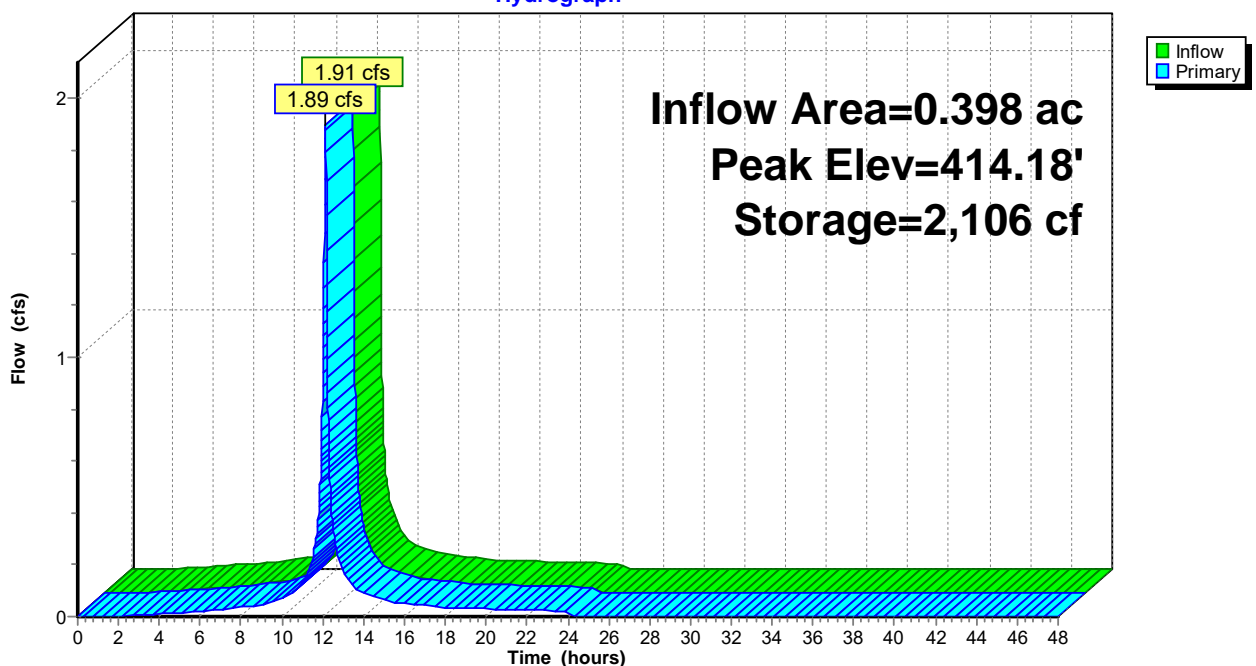
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
410.00	13	0	0
416.00	995	3,024	3,024

Device	Routing	Invert	Outlet Devices
#1	Primary	414.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

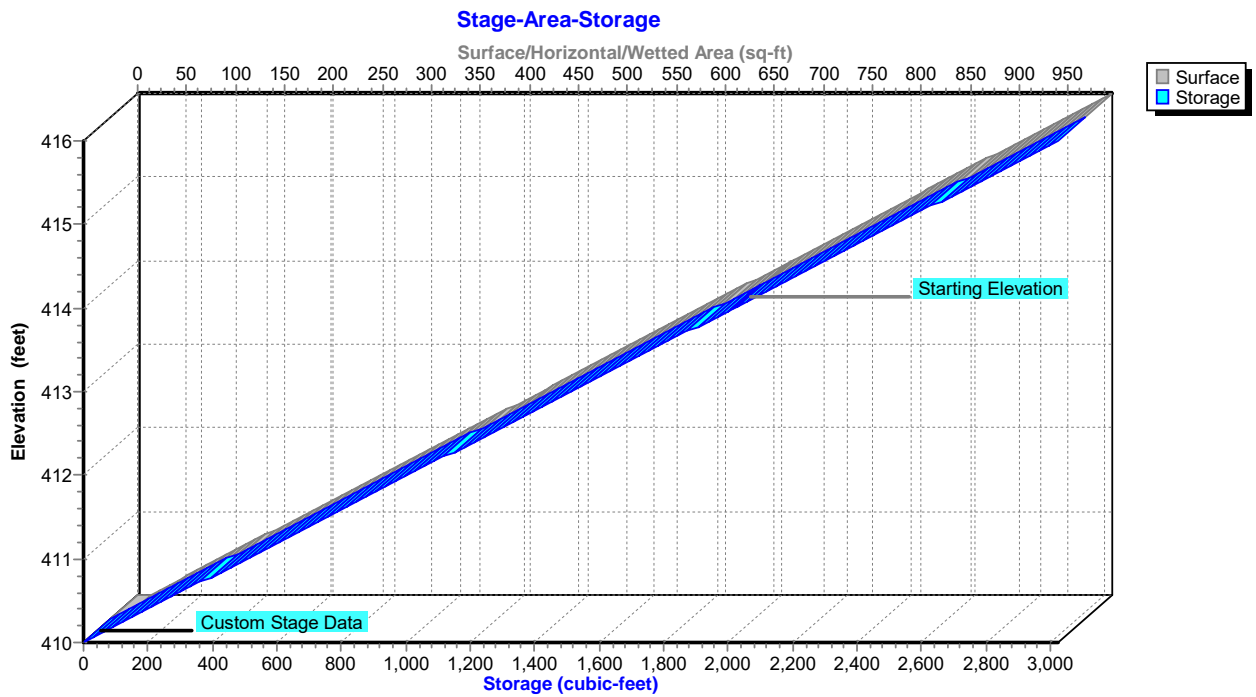
Primary OutFlow Max=1.87 cfs @ 12.14 hrs HW=414.18' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Weir Controls 1.87 cfs @ 1.05 fps)

Pond 59P: FB 1E

Hydrograph



Pond 59P: FB 1E



Hydrograph for Pond 59P: FB 1E

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	2,016	414.00	0.00
1.00	0.00	2,016	414.00	0.00
2.00	0.00	2,016	414.00	0.00
3.00	0.01	2,017	414.00	0.01
4.00	0.01	2,018	414.00	0.01
5.00	0.02	2,018	414.00	0.02
6.00	0.02	2,019	414.01	0.02
7.00	0.03	2,020	414.01	0.03
8.00	0.04	2,021	414.01	0.04
9.00	0.05	2,023	414.01	0.05
10.00	0.07	2,026	414.02	0.07
11.00	0.14	2,030	414.03	0.13
12.00	1.01	2,072	414.11	0.94
13.00	0.18	2,033	414.03	0.18
14.00	0.09	2,027	414.02	0.09
15.00	0.06	2,025	414.02	0.06
16.00	0.05	2,023	414.01	0.05
17.00	0.04	2,022	414.01	0.04
18.00	0.03	2,021	414.01	0.03
19.00	0.03	2,021	414.01	0.03
20.00	0.03	2,020	414.01	0.03
21.00	0.03	2,020	414.01	0.03
22.00	0.03	2,020	414.01	0.03
23.00	0.02	2,019	414.01	0.02
24.00	0.02	2,019	414.01	0.02
25.00	0.00	2,016	414.00	0.00
26.00	0.00	2,016	414.00	0.00
27.00	0.00	2,016	414.00	0.00
28.00	0.00	2,016	414.00	0.00
29.00	0.00	2,016	414.00	0.00
30.00	0.00	2,016	414.00	0.00
31.00	0.00	2,016	414.00	0.00
32.00	0.00	2,016	414.00	0.00
33.00	0.00	2,016	414.00	0.00
34.00	0.00	2,016	414.00	0.00
35.00	0.00	2,016	414.00	0.00
36.00	0.00	2,016	414.00	0.00
37.00	0.00	2,016	414.00	0.00
38.00	0.00	2,016	414.00	0.00
39.00	0.00	2,016	414.00	0.00
40.00	0.00	2,016	414.00	0.00
41.00	0.00	2,016	414.00	0.00
42.00	0.00	2,016	414.00	0.00
43.00	0.00	2,016	414.00	0.00
44.00	0.00	2,016	414.00	0.00
45.00	0.00	2,016	414.00	0.00
46.00	0.00	2,016	414.00	0.00
47.00	0.00	2,016	414.00	0.00
48.00	0.00	2,016	414.00	0.00

Stage-Area-Storage for Pond 59P: FB 1E

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
410.00	13	0	415.80	962	2,923
410.10	29	50	415.90	979	2,974
410.20	46	101	416.00	995	3,024
410.30	62	151			
410.40	78	202			
410.50	95	252			
410.60	111	302			
410.70	128	353			
410.80	144	403			
410.90	160	454			
411.00	177	504			
411.10	193	554			
411.20	209	605			
411.30	226	655			
411.40	242	706			
411.50	259	756			
411.60	275	806			
411.70	291	857			
411.80	308	907			
411.90	324	958			
412.00	340	1,008			
412.10	357	1,058			
412.20	373	1,109			
412.30	389	1,159			
412.40	406	1,210			
412.50	422	1,260			
412.60	439	1,310			
412.70	455	1,361			
412.80	471	1,411			
412.90	488	1,462			
413.00	504	1,512			
413.10	520	1,562			
413.20	537	1,613			
413.30	553	1,663			
413.40	569	1,714			
413.50	586	1,764			
413.60	602	1,814			
413.70	619	1,865			
413.80	635	1,915			
413.90	651	1,966			
414.00	668	2,016			
414.10	684	2,066			
414.20	700	2,117			
414.30	717	2,167			
414.40	733	2,218			
414.50	750	2,268			
414.60	766	2,318			
414.70	782	2,369			
414.80	799	2,419			
414.90	815	2,470			
415.00	831	2,520			
415.10	848	2,570			
415.20	864	2,621			
415.30	880	2,671			
415.40	897	2,722			
415.50	913	2,772			
415.60	930	2,822			
415.70	946	2,873			

Summary for Pond 60P: FB 1D

Inflow Area = 3.529 ac, 63.56% Impervious, Inflow Depth = 3.79" for 10-Year event
 Inflow = 15.93 cfs @ 12.13 hrs, Volume= 1.114 af
 Outflow = 15.81 cfs @ 12.14 hrs, Volume= 1.114 af, Atten= 1%, Lag= 0.5 min
 Primary = 15.81 cfs @ 12.14 hrs, Volume= 1.114 af
 Routed to Pond 1P : Bioretention 1D

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 414.90' Surf.Area= 3,034 sf Storage= 8,598 cf
 Peak Elev= 415.25' @ 12.14 hrs Surf.Area= 3,242 sf Storage= 9,370 cf (772 cf above start)

Plug-Flow detention time= 125.4 min calculated for 0.917 af (82% of inflow)
 Center-of-Mass det. time= 1.7 min (795.2 - 793.5)

Volume	Invert	Avail.Storage	Storage Description
#1	411.00'	11,023 cf	Custom Stage Data (Prismatic) Listed below

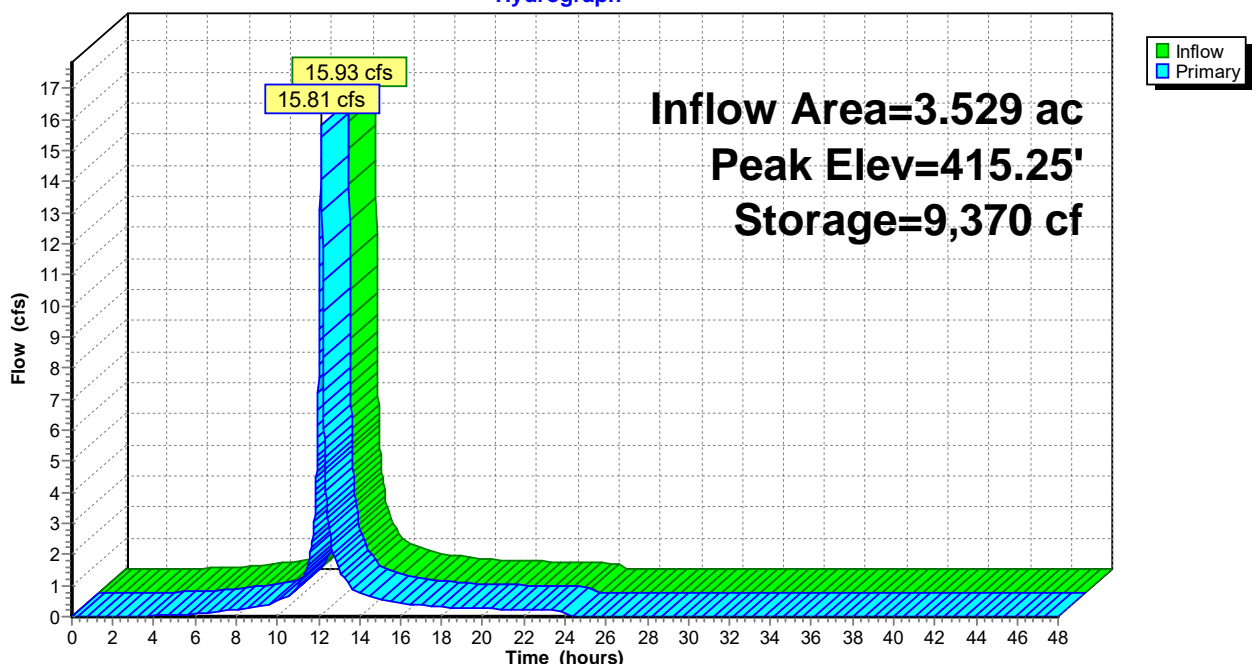
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
411.00	723	0	0
416.00	3,686	11,023	11,023

Device	Routing	Invert	Outlet Devices
#1	Primary	414.90'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

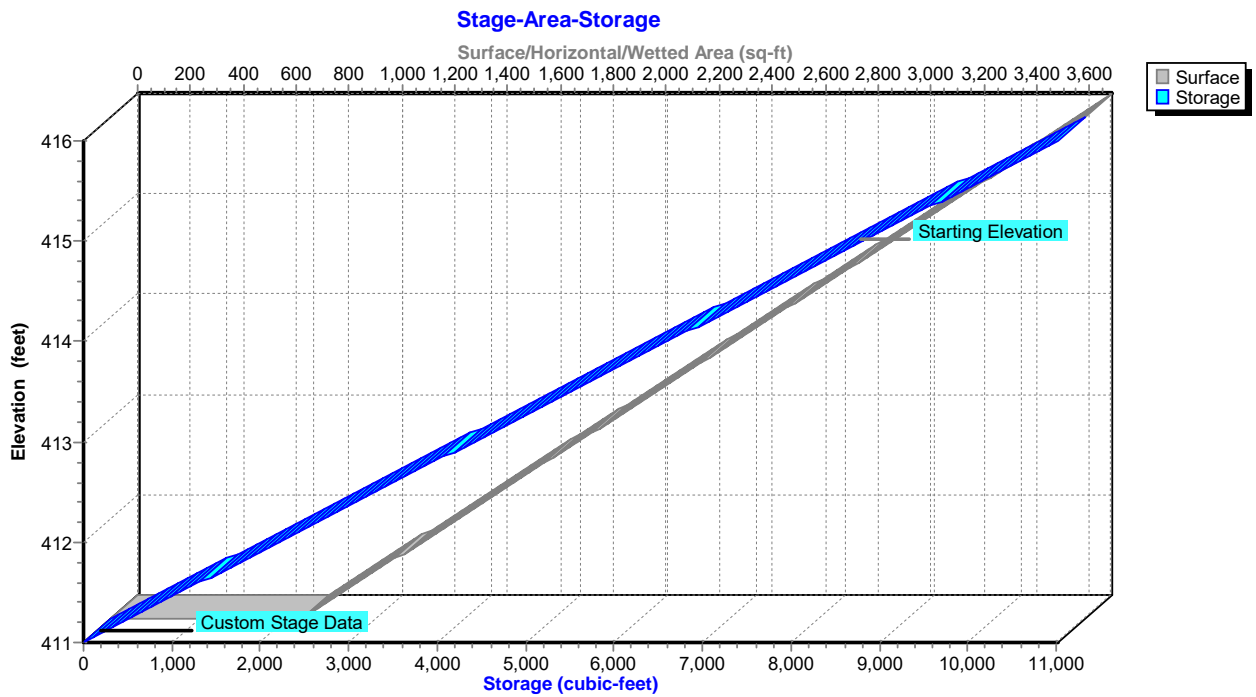
Primary OutFlow Max=15.78 cfs @ 12.14 hrs HW=415.25' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Weir Controls 15.78 cfs @ 1.50 fps)

Pond 60P: FB 1D

Hydrograph



Pond 60P: FB 1D



Hydrograph for Pond 60P: FB 1D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,598	414.90	0.00
1.00	0.00	8,598	414.90	0.00
2.00	0.00	8,598	414.90	0.00
3.00	0.00	8,598	414.90	0.00
4.00	0.02	8,601	414.90	0.02
5.00	0.06	8,605	414.90	0.06
6.00	0.09	8,610	414.91	0.09
7.00	0.15	8,617	414.91	0.15
8.00	0.22	8,627	414.91	0.22
9.00	0.30	8,637	414.92	0.30
10.00	0.52	8,665	414.93	0.51
11.00	1.02	8,720	414.96	1.00
12.00	8.21	9,079	415.12	7.69
13.00	1.53	8,761	414.97	1.57
14.00	0.78	8,702	414.95	0.79
15.00	0.53	8,669	414.93	0.54
16.00	0.44	8,656	414.93	0.44
17.00	0.37	8,647	414.92	0.37
18.00	0.30	8,637	414.92	0.30
19.00	0.27	8,634	414.92	0.27
20.00	0.26	8,631	414.92	0.26
21.00	0.24	8,629	414.91	0.24
22.00	0.22	8,627	414.91	0.22
23.00	0.20	8,624	414.91	0.20
24.00	0.19	8,622	414.91	0.19
25.00	0.00	8,598	414.90	0.00
26.00	0.00	8,598	414.90	0.00
27.00	0.00	8,598	414.90	0.00
28.00	0.00	8,598	414.90	0.00
29.00	0.00	8,598	414.90	0.00
30.00	0.00	8,598	414.90	0.00
31.00	0.00	8,598	414.90	0.00
32.00	0.00	8,598	414.90	0.00
33.00	0.00	8,598	414.90	0.00
34.00	0.00	8,598	414.90	0.00
35.00	0.00	8,598	414.90	0.00
36.00	0.00	8,598	414.90	0.00
37.00	0.00	8,598	414.90	0.00
38.00	0.00	8,598	414.90	0.00
39.00	0.00	8,598	414.90	0.00
40.00	0.00	8,598	414.90	0.00
41.00	0.00	8,598	414.90	0.00
42.00	0.00	8,598	414.90	0.00
43.00	0.00	8,598	414.90	0.00
44.00	0.00	8,598	414.90	0.00
45.00	0.00	8,598	414.90	0.00
46.00	0.00	8,598	414.90	0.00
47.00	0.00	8,598	414.90	0.00
48.00	0.00	8,598	414.90	0.00

Stage-Area-Storage for Pond 60P: FB 1D

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
411.00	723	0	413.90	2,442	6,393
411.05	753	110	413.95	2,471	6,503
411.10	782	220	414.00	2,501	6,614
411.15	812	331	414.05	2,530	6,724
411.20	842	441	414.10	2,560	6,834
411.25	871	551	414.15	2,590	6,944
411.30	901	661	414.20	2,619	7,054
411.35	930	772	414.25	2,649	7,165
411.40	960	882	414.30	2,679	7,275
411.45	990	992	414.35	2,708	7,385
411.50	1,019	1,102	414.40	2,738	7,495
411.55	1,049	1,212	414.45	2,767	7,606
411.60	1,079	1,323	414.50	2,797	7,716
411.65	1,108	1,433	414.55	2,827	7,826
411.70	1,138	1,543	414.60	2,856	7,936
411.75	1,167	1,653	414.65	2,886	8,046
411.80	1,197	1,764	414.70	2,916	8,157
411.85	1,227	1,874	414.75	2,945	8,267
411.90	1,256	1,984	414.80	2,975	8,377
411.95	1,286	2,094	414.85	3,005	8,487
412.00	1,316	2,205	414.90	3,034	8,598
412.05	1,345	2,315	414.95	3,064	8,708
412.10	1,375	2,425	415.00	3,093	8,818
412.15	1,404	2,535	415.05	3,123	8,928
412.20	1,434	2,645	415.10	3,153	9,038
412.25	1,464	2,756	415.15	3,182	9,149
412.30	1,493	2,866	415.20	3,212	9,259
412.35	1,523	2,976	415.25	3,242	9,369
412.40	1,553	3,086	415.30	3,271	9,479
412.45	1,582	3,197	415.35	3,301	9,590
412.50	1,612	3,307	415.40	3,330	9,700
412.55	1,642	3,417	415.45	3,360	9,810
412.60	1,671	3,527	415.50	3,390	9,920
412.65	1,701	3,637	415.55	3,419	10,030
412.70	1,730	3,748	415.60	3,449	10,141
412.75	1,760	3,858	415.65	3,479	10,251
412.80	1,790	3,968	415.70	3,508	10,361
412.85	1,819	4,078	415.75	3,538	10,471
412.90	1,849	4,189	415.80	3,567	10,582
412.95	1,879	4,299	415.85	3,597	10,692
413.00	1,908	4,409	415.90	3,627	10,802
413.05	1,938	4,519	415.95	3,656	10,912
413.10	1,967	4,629	416.00	3,686	11,023
413.15	1,997	4,740			
413.20	2,027	4,850			
413.25	2,056	4,960			
413.30	2,086	5,070			
413.35	2,116	5,181			
413.40	2,145	5,291			
413.45	2,175	5,401			
413.50	2,205	5,511			
413.55	2,234	5,621			
413.60	2,264	5,732			
413.65	2,293	5,842			
413.70	2,323	5,952			
413.75	2,353	6,062			
413.80	2,382	6,173			
413.85	2,412	6,283			

Summary for Pond 63P: Det Pond 1K

Inflow Area = 17.176 ac, 66.33% Impervious, Inflow Depth > 1.21" for 10-Year event
 Inflow = 2.49 cfs @ 13.49 hrs, Volume= 1.735 af
 Outflow = 2.42 cfs @ 14.70 hrs, Volume= 1.728 af, Atten= 3%, Lag= 72.3 min
 Primary = 2.42 cfs @ 14.70 hrs, Volume= 1.728 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 30L : DP-2

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 408.98' @ 14.70 hrs Surf.Area= 8,105 sf Storage= 9,196 cf

Plug-Flow detention time= 122.1 min calculated for 1.728 af (100% of inflow)
 Center-of-Mass det. time= 116.8 min (1,202.1 - 1,085.3)

Volume	Invert	Avail.Storage	Storage Description
#1	407.50'	82,118 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.50	4,315	0	0
414.00	20,952	82,118	82,118

Device	Routing	Invert	Outlet Devices
#1	Primary	407.50'	24.0" Round Culvert L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.50' / 406.00' S= 0.0037 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	407.50'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	408.50'	24.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	409.80'	17.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	413.00'	10.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.42 cfs @ 14.70 hrs HW=408.98' (Free Discharge)

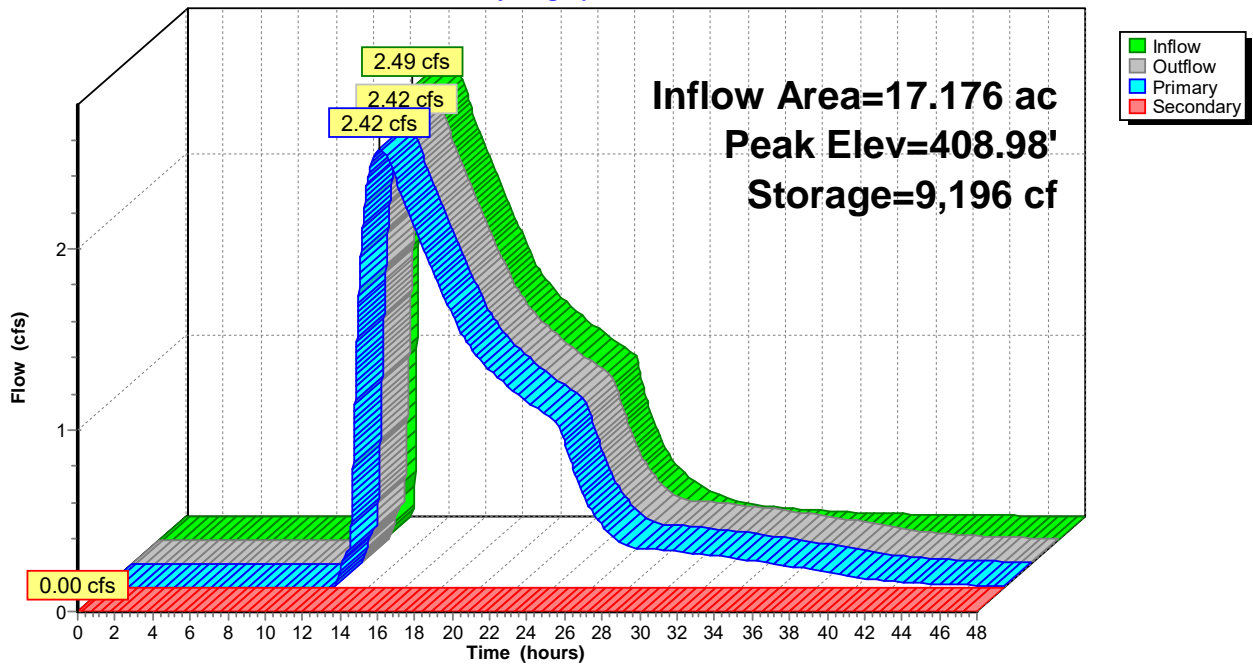
- ↑1=Culvert (Passes 2.42 cfs of 7.97 cfs potential flow)
- ↑2=Orifice/Grate (Orifice Controls 0.28 cfs @ 5.61 fps)
- ↑3=Orifice/Grate (Orifice Controls 2.14 cfs @ 2.23 fps)
- ↑4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=407.50' (Free Discharge)

- ↑5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

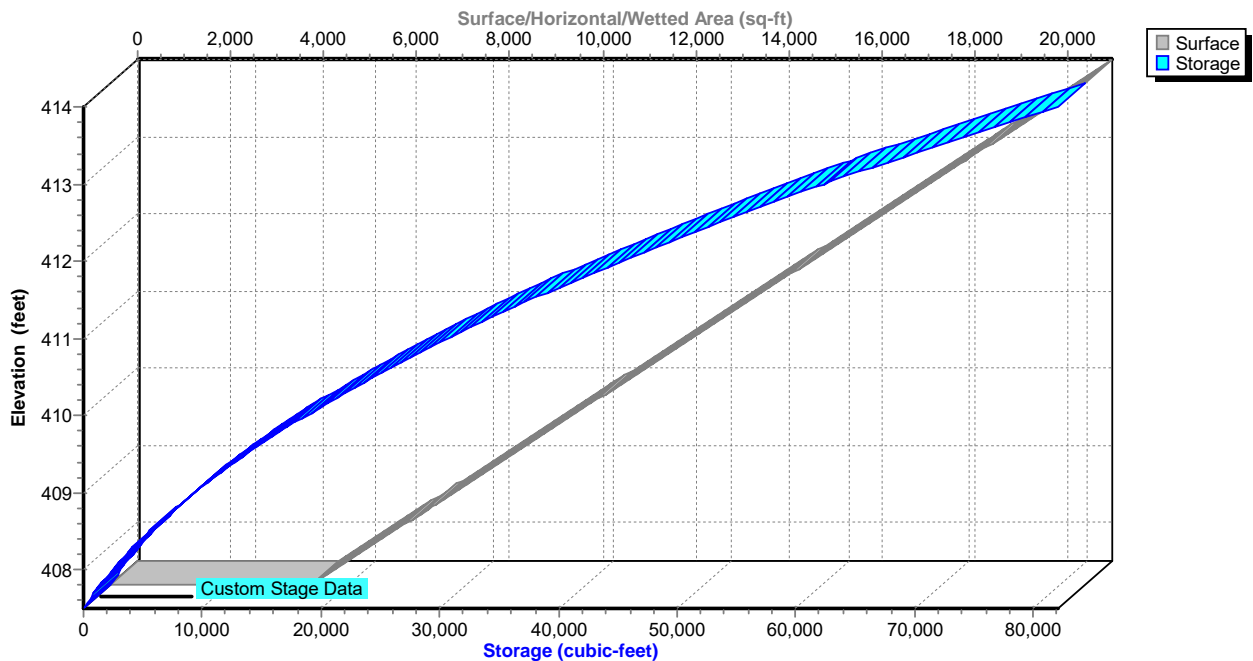
Pond 63P: Det Pond 1K

Hydrograph



Pond 63P: Det Pond 1K

Stage-Area-Storage



Hydrograph for Pond 63P: Det Pond 1K

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	407.50	0.00	0.00	0.00
1.00	0.00	0	407.50	0.00	0.00	0.00
2.00	0.00	0	407.50	0.00	0.00	0.00
3.00	0.00	0	407.50	0.00	0.00	0.00
4.00	0.00	0	407.50	0.00	0.00	0.00
5.00	0.00	0	407.50	0.00	0.00	0.00
6.00	0.00	0	407.50	0.00	0.00	0.00
7.00	0.00	0	407.50	0.00	0.00	0.00
8.00	0.00	0	407.50	0.00	0.00	0.00
9.00	0.00	0	407.50	0.00	0.00	0.00
10.00	0.00	0	407.50	0.00	0.00	0.00
11.00	0.00	0	407.50	0.00	0.00	0.00
12.00	0.00	0	407.50	0.00	0.00	0.00
13.00	2.40	4,772	408.38	0.20	0.20	0.00
14.00	2.48	8,963	408.95	2.23	2.23	0.00
15.00	2.34	9,166	408.98	2.39	2.39	0.00
16.00	2.03	8,833	408.94	2.12	2.12	0.00
17.00	1.79	8,528	408.90	1.88	1.88	0.00
18.00	1.54	8,214	408.86	1.63	1.63	0.00
19.00	1.34	7,908	408.82	1.41	1.41	0.00
20.00	1.21	7,699	408.79	1.26	1.26	0.00
21.00	1.12	7,543	408.77	1.16	1.16	0.00
22.00	1.04	7,413	408.75	1.07	1.07	0.00
23.00	0.96	7,300	408.74	0.99	0.99	0.00
24.00	0.89	7,184	408.72	0.92	0.92	0.00
25.00	0.51	6,741	408.66	0.66	0.66	0.00
26.00	0.31	6,259	408.59	0.43	0.43	0.00
27.00	0.21	5,902	408.54	0.29	0.29	0.00
28.00	0.14	5,606	408.50	0.22	0.22	0.00
29.00	0.10	5,245	408.45	0.21	0.21	0.00
30.00	0.07	4,799	408.38	0.21	0.21	0.00
31.00	0.06	4,312	408.31	0.20	0.20	0.00
32.00	0.05	3,820	408.23	0.18	0.18	0.00
33.00	0.04	3,337	408.15	0.17	0.17	0.00
34.00	0.03	2,872	408.07	0.16	0.16	0.00
35.00	0.03	2,434	407.99	0.14	0.14	0.00
36.00	0.02	2,032	407.92	0.13	0.13	0.00
37.00	0.02	1,671	407.85	0.11	0.11	0.00
38.00	0.01	1,356	407.79	0.10	0.10	0.00
39.00	0.01	1,092	407.74	0.08	0.08	0.00
40.00	0.01	884	407.69	0.06	0.06	0.00
41.00	0.01	727	407.66	0.05	0.05	0.00
42.00	0.01	612	407.64	0.03	0.03	0.00
43.00	0.01	526	407.62	0.03	0.03	0.00
44.00	0.01	457	407.60	0.02	0.02	0.00
45.00	0.00	403	407.59	0.02	0.02	0.00
46.00	0.00	359	407.58	0.01	0.01	0.00
47.00	0.00	324	407.57	0.01	0.01	0.00
48.00	0.00	296	407.57	0.01	0.01	0.00

Stage-Area-Storage for Pond 63P: Det Pond 1K

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.50	4,315	0	413.30	19,160	68,078
407.60	4,571	444	413.40	19,416	70,007
407.70	4,827	914	413.50	19,672	71,962
407.80	5,083	1,410	413.60	19,928	73,942
407.90	5,339	1,931	413.70	20,184	75,947
408.00	5,595	2,477	413.80	20,440	77,979
408.10	5,851	3,050	413.90	20,696	80,035
408.20	6,107	3,648	414.00	20,952	82,118
408.30	6,363	4,271			
408.40	6,619	4,920			
408.50	6,875	5,595			
408.60	7,130	6,295			
408.70	7,386	7,021			
408.80	7,642	7,772			
408.90	7,898	8,549			
409.00	8,154	9,352			
409.10	8,410	10,180			
409.20	8,666	11,034			
409.30	8,922	11,913			
409.40	9,178	12,818			
409.50	9,434	13,749			
409.60	9,690	14,705			
409.70	9,946	15,687			
409.80	10,202	16,694			
409.90	10,458	17,727			
410.00	10,714	18,786			
410.10	10,970	19,870			
410.20	11,226	20,980			
410.30	11,482	22,115			
410.40	11,738	23,276			
410.50	11,994	24,463			
410.60	12,250	25,675			
410.70	12,506	26,913			
410.80	12,761	28,176			
410.90	13,017	29,465			
411.00	13,273	30,780			
411.10	13,529	32,120			
411.20	13,785	33,486			
411.30	14,041	34,877			
411.40	14,297	36,294			
411.50	14,553	37,736			
411.60	14,809	39,204			
411.70	15,065	40,698			
411.80	15,321	42,217			
411.90	15,577	43,762			
412.00	15,833	45,333			
412.10	16,089	46,929			
412.20	16,345	48,551			
412.30	16,601	50,198			
412.40	16,857	51,871			
412.50	17,113	53,569			
412.60	17,369	55,293			
412.70	17,625	57,043			
412.80	17,881	58,818			
412.90	18,137	60,619			
413.00	18,392	62,446			
413.10	18,648	64,298			
413.20	18,904	66,175			

Summary for Pond B4B: Bioretention 4A

Inflow Area = 2.400 ac, 34.61% Impervious, Inflow Depth = 1.81" for 10-Year event
 Inflow = 5.49 cfs @ 12.14 hrs, Volume= 0.363 af
 Outflow = 0.44 cfs @ 13.52 hrs, Volume= 0.162 af, Atten= 92%, Lag= 83.2 min
 Primary = 0.44 cfs @ 13.52 hrs, Volume= 0.162 af
 Routed to Link 32L : DP-4

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 440.54' @ 13.52 hrs Surf.Area= 6,756 sf Storage= 9,022 cf

Plug-Flow detention time= 320.6 min calculated for 0.162 af (45% of inflow)
 Center-of-Mass det. time= 179.0 min (1,043.6 - 864.6)

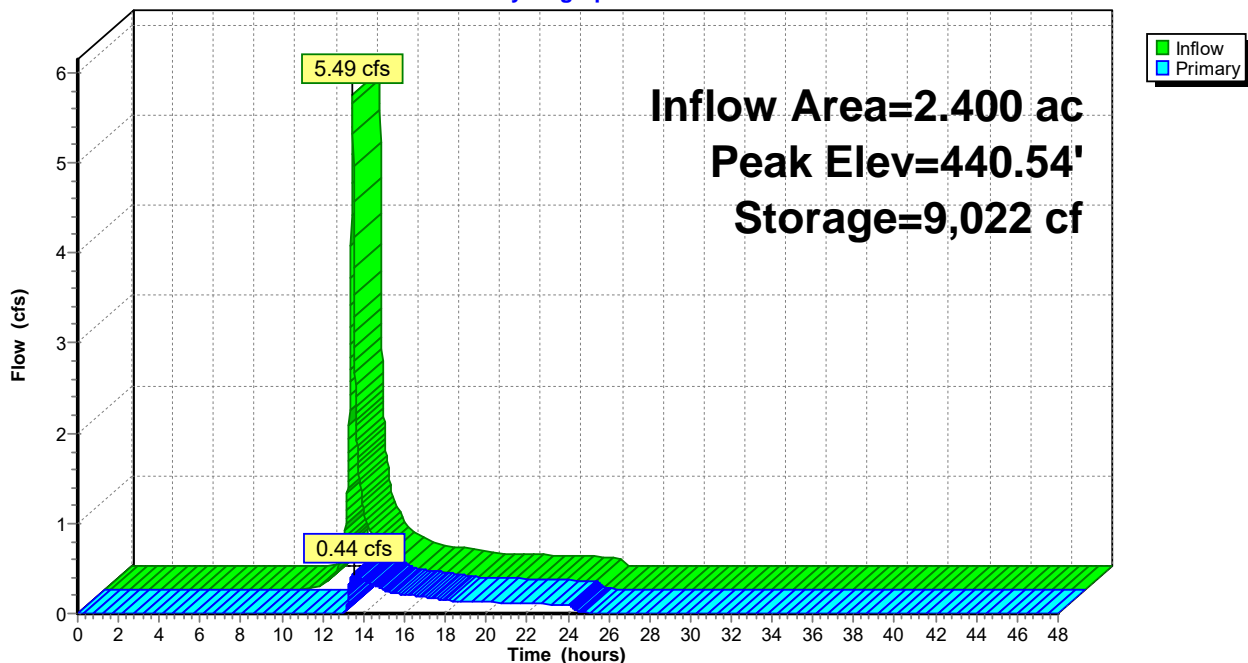
Volume	Invert	Avail.Storage	Storage Description	
#1	436.17'	12,376 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
436.17	4,171	0.0	0	0
436.83	4,171	40.0	1,101	1,101
439.50	4,171	20.0	2,227	3,328
441.00	7,892	100.0	9,047	12,376

Device	Routing	Invert	Outlet Devices
#1	Primary	436.17'	18.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 436.17' / 435.57' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	440.50'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.39 cfs @ 13.52 hrs HW=440.54' (Free Discharge)
 ↑1=Culvert (Passes 0.39 cfs of 16.19 cfs potential flow)
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 0.39 cfs @ 0.57 fps)

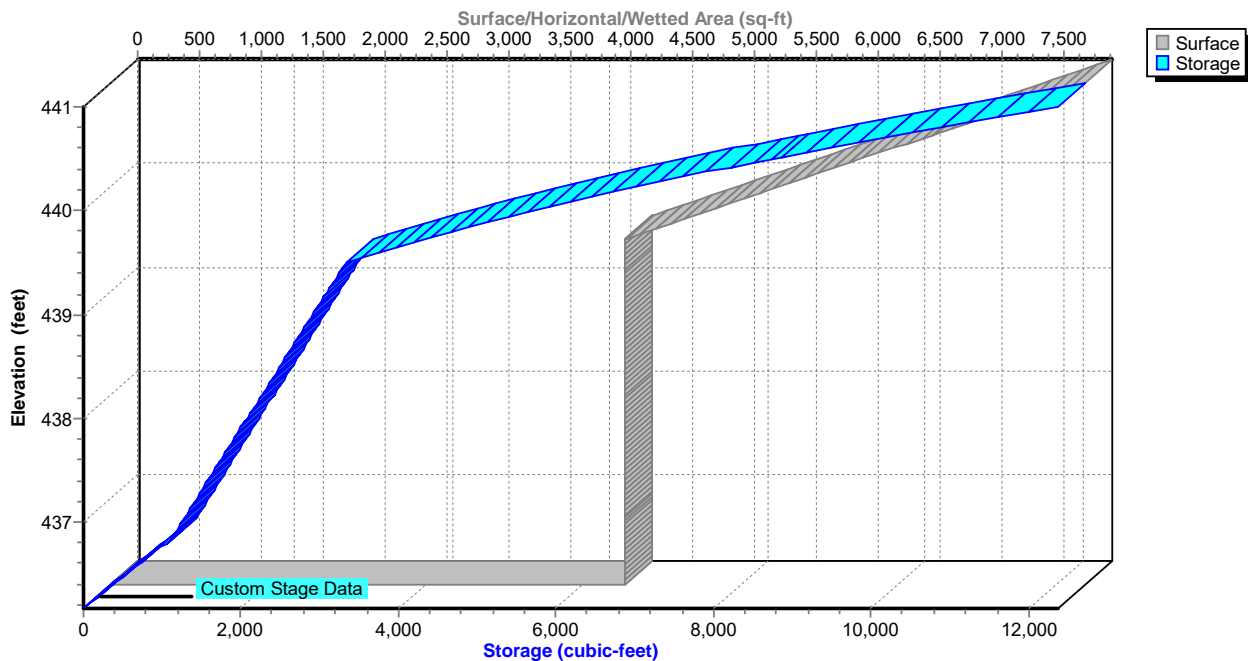
Pond B4B: Bioretention 4A

Hydrograph



Pond B4B: Bioretention 4A

Stage-Area-Storage



Hydrograph for Pond B4B: Bioretention 4A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	436.17	0.00
1.00	0.00	0	436.17	0.00
2.00	0.00	0	436.17	0.00
3.00	0.00	0	436.17	0.00
4.00	0.00	0	436.17	0.00
5.00	0.00	0	436.17	0.00
6.00	0.00	0	436.17	0.00
7.00	0.00	0	436.17	0.00
8.00	0.00	0	436.17	0.00
9.00	0.00	0	436.17	0.00
10.00	0.01	2	436.17	0.00
11.00	0.11	167	436.27	0.00
12.00	2.31	1,947	437.84	0.00
13.00	0.66	8,422	440.45	0.00
14.00	0.35	8,989	440.54	0.37
15.00	0.25	8,936	440.53	0.26
16.00	0.21	8,910	440.53	0.21
17.00	0.18	8,894	440.52	0.18
18.00	0.14	8,878	440.52	0.15
19.00	0.13	8,871	440.52	0.13
20.00	0.12	8,867	440.52	0.13
21.00	0.12	8,863	440.52	0.12
22.00	0.11	8,859	440.52	0.11
23.00	0.10	8,855	440.52	0.10
24.00	0.09	8,848	440.52	0.09
25.00	0.00	8,746	440.50	0.01
26.00	0.00	8,740	440.50	0.00
27.00	0.00	8,740	440.50	0.00
28.00	0.00	8,740	440.50	0.00
29.00	0.00	8,740	440.50	0.00
30.00	0.00	8,740	440.50	0.00
31.00	0.00	8,740	440.50	0.00
32.00	0.00	8,740	440.50	0.00
33.00	0.00	8,740	440.50	0.00
34.00	0.00	8,740	440.50	0.00
35.00	0.00	8,740	440.50	0.00
36.00	0.00	8,740	440.50	0.00
37.00	0.00	8,740	440.50	0.00
38.00	0.00	8,740	440.50	0.00
39.00	0.00	8,740	440.50	0.00
40.00	0.00	8,740	440.50	0.00
41.00	0.00	8,740	440.50	0.00
42.00	0.00	8,740	440.50	0.00
43.00	0.00	8,740	440.50	0.00
44.00	0.00	8,740	440.50	0.00
45.00	0.00	8,740	440.50	0.00
46.00	0.00	8,740	440.50	0.00
47.00	0.00	8,740	440.50	0.00
48.00	0.00	8,740	440.50	0.00

Stage-Area-Storage for Pond B4B: Bioretention 4A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
436.17	4,171	0	439.07	4,171	2,970
436.22	4,171	83	439.12	4,171	3,011
436.27	4,171	167	439.17	4,171	3,053
436.32	4,171	250	439.22	4,171	3,095
436.37	4,171	334	439.27	4,171	3,137
436.42	4,171	417	439.32	4,171	3,178
436.47	4,171	501	439.37	4,171	3,220
436.52	4,171	584	439.42	4,171	3,262
436.57	4,171	667	439.47	4,171	3,303
436.62	4,171	751	439.52	4,221	3,412
436.67	4,171	834	439.57	4,345	3,627
436.72	4,171	918	439.62	4,469	3,847
436.77	4,171	1,001	439.67	4,593	4,073
436.82	4,171	1,084	439.72	4,717	4,306
436.87	4,171	1,135	439.77	4,841	4,545
436.92	4,171	1,176	439.82	4,965	4,790
436.97	4,171	1,218	439.87	5,089	5,042
437.02	4,171	1,260	439.92	5,213	5,299
437.07	4,171	1,301	439.97	5,337	5,563
437.12	4,171	1,343	440.02	5,461	5,833
437.17	4,171	1,385	440.07	5,585	6,109
437.22	4,171	1,426	440.12	5,709	6,391
437.27	4,171	1,468	440.17	5,833	6,680
437.32	4,171	1,510	440.22	5,957	6,975
437.37	4,171	1,552	440.27	6,081	7,276
437.42	4,171	1,593	440.32	6,205	7,583
437.47	4,171	1,635	440.37	6,329	7,896
437.52	4,171	1,677	440.42	6,453	8,216
437.57	4,171	1,718	440.47	6,577	8,541
437.62	4,171	1,760	440.52	6,701	8,873
437.67	4,171	1,802	440.57	6,825	9,211
437.72	4,171	1,844	440.62	6,949	9,556
437.77	4,171	1,885	440.67	7,073	9,906
437.82	4,171	1,927	440.72	7,197	10,263
437.87	4,171	1,969	440.77	7,321	10,626
437.92	4,171	2,010	440.82	7,445	10,995
437.97	4,171	2,052	440.87	7,570	11,371
438.02	4,171	2,094	440.92	7,694	11,752
438.07	4,171	2,136	440.97	7,818	12,140
438.12	4,171	2,177			
438.17	4,171	2,219			
438.22	4,171	2,261			
438.27	4,171	2,302			
438.32	4,171	2,344			
438.37	4,171	2,386			
438.42	4,171	2,428			
438.47	4,171	2,469			
438.52	4,171	2,511			
438.57	4,171	2,553			
438.62	4,171	2,594			
438.67	4,171	2,636			
438.72	4,171	2,678			
438.77	4,171	2,719			
438.82	4,171	2,761			
438.87	4,171	2,803			
438.92	4,171	2,845			
438.97	4,171	2,886			
439.02	4,171	2,928			

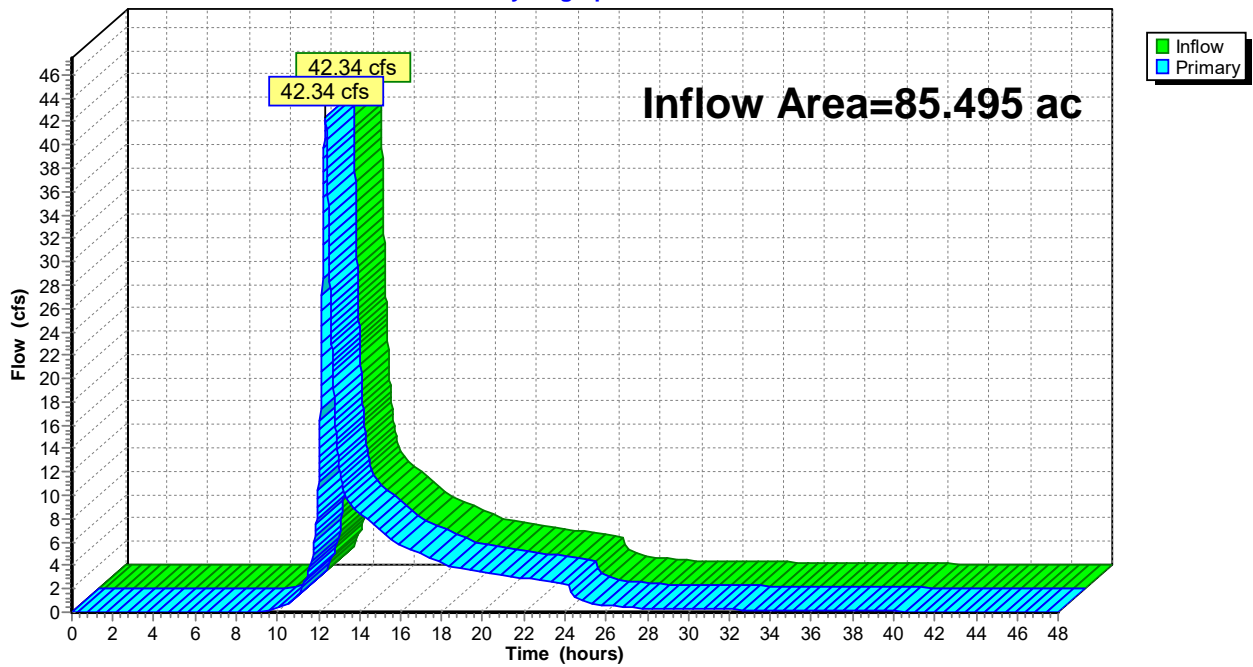
Summary for Link 29L: DP-1

Inflow Area = 85.495 ac, 51.65% Impervious, Inflow Depth > 1.03" for 10-Year event
Inflow = 42.34 cfs @ 12.35 hrs, Volume= 7.320 af
Primary = 42.34 cfs @ 12.35 hrs, Volume= 7.320 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 29L: DP-1

Hydrograph



Hydrograph for Link 29L: DP-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.28	0.00	0.28
0.50	0.00	0.00	0.00	29.50	0.27	0.00	0.27
1.00	0.00	0.00	0.00	30.00	0.26	0.00	0.26
1.50	0.00	0.00	0.00	30.50	0.25	0.00	0.25
2.00	0.00	0.00	0.00	31.00	0.24	0.00	0.24
2.50	0.00	0.00	0.00	31.50	0.24	0.00	0.24
3.00	0.00	0.00	0.00	32.00	0.23	0.00	0.23
3.50	0.00	0.00	0.00	32.50	0.22	0.00	0.22
4.00	0.00	0.00	0.00	33.00	0.21	0.00	0.21
4.50	0.00	0.00	0.00	33.50	0.20	0.00	0.20
5.00	0.00	0.00	0.00	34.00	0.19	0.00	0.19
5.50	0.00	0.00	0.00	34.50	0.18	0.00	0.18
6.00	0.00	0.00	0.00	35.00	0.17	0.00	0.17
6.50	0.00	0.00	0.00	35.50	0.16	0.00	0.16
7.00	0.00	0.00	0.00	36.00	0.15	0.00	0.15
7.50	0.00	0.00	0.00	36.50	0.14	0.00	0.14
8.00	0.00	0.00	0.00	37.00	0.13	0.00	0.13
8.50	0.00	0.00	0.00	37.50	0.12	0.00	0.12
9.00	0.00	0.00	0.00	38.00	0.11	0.00	0.11
9.50	0.11	0.00	0.11	38.50	0.10	0.00	0.10
10.00	0.37	0.00	0.37	39.00	0.09	0.00	0.09
10.50	0.76	0.00	0.76	39.50	0.08	0.00	0.08
11.00	1.51	0.00	1.51	40.00	0.08	0.00	0.08
11.50	3.31	0.00	3.31	40.50	0.07	0.00	0.07
12.00	10.72	0.00	10.72	41.00	0.06	0.00	0.06
12.50	33.09	0.00	33.09	41.50	0.05	0.00	0.05
13.00	12.52	0.00	12.52	42.00	0.05	0.00	0.05
13.50	9.40	0.00	9.40	42.50	0.04	0.00	0.04
14.00	8.43	0.00	8.43	43.00	0.04	0.00	0.04
14.50	7.82	0.00	7.82	43.50	0.04	0.00	0.04
15.00	7.04	0.00	7.04	44.00	0.03	0.00	0.03
15.50	6.23	0.00	6.23	44.50	0.03	0.00	0.03
16.00	5.78	0.00	5.78	45.00	0.03	0.00	0.03
16.50	5.39	0.00	5.39	45.50	0.03	0.00	0.03
17.00	5.01	0.00	5.01	46.00	0.03	0.00	0.03
17.50	4.63	0.00	4.63	46.50	0.02	0.00	0.02
18.00	4.23	0.00	4.23	47.00	0.02	0.00	0.02
18.50	3.89	0.00	3.89	47.50	0.02	0.00	0.02
19.00	3.69	0.00	3.69	48.00	0.02	0.00	0.02
19.50	3.52	0.00	3.52				
20.00	3.38	0.00	3.38				
20.50	3.25	0.00	3.25				
21.00	3.13	0.00	3.13				
21.50	3.01	0.00	3.01				
22.00	2.90	0.00	2.90				
22.50	2.79	0.00	2.79				
23.00	2.68	0.00	2.68				
23.50	2.58	0.00	2.58				
24.00	2.47	0.00	2.47				
24.50	1.28	0.00	1.28				
25.00	0.87	0.00	0.87				
25.50	0.69	0.00	0.69				
26.00	0.57	0.00	0.57				
26.50	0.48	0.00	0.48				
27.00	0.40	0.00	0.40				
27.50	0.35	0.00	0.35				
28.00	0.31	0.00	0.31				
28.50	0.29	0.00	0.29				

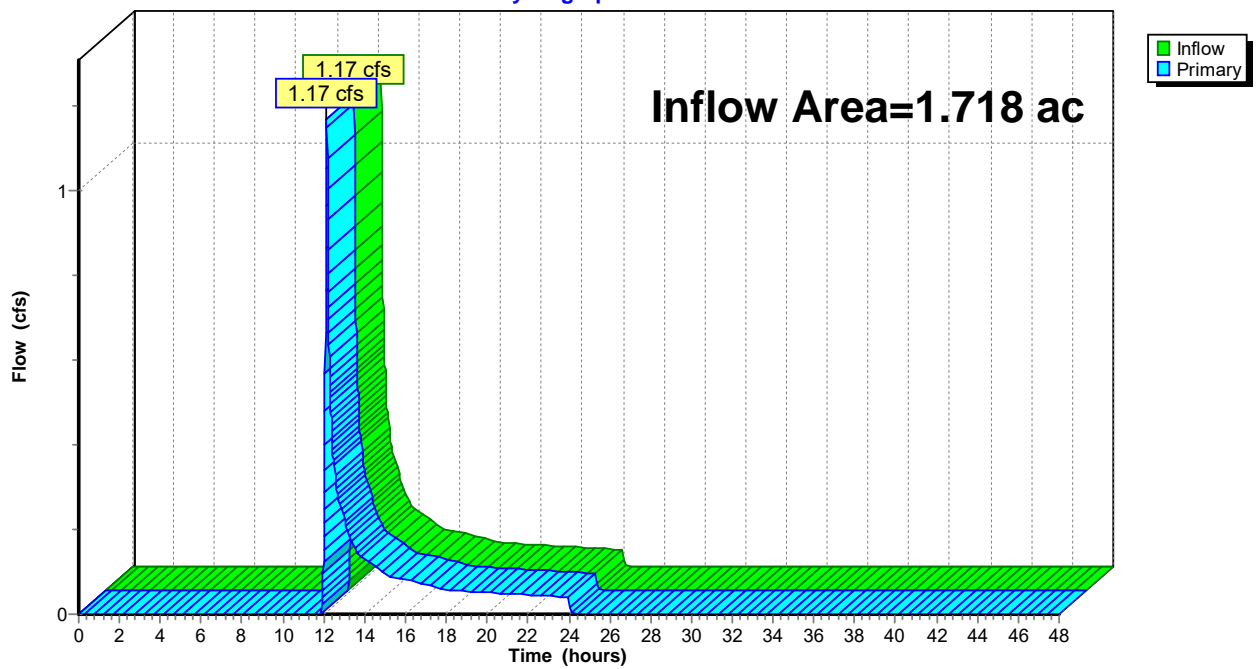
Summary for Link 30L: DP-2

Inflow Area = 1.718 ac, 0.00% Impervious, Inflow Depth = 0.72" for 10-Year event
Inflow = 1.17 cfs @ 12.15 hrs, Volume= 0.103 af
Primary = 1.17 cfs @ 12.15 hrs, Volume= 0.103 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 30L: DP-2

Hydrograph



Hydrograph for Link 30L: DP-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.18	0.00	0.18	41.00	0.00	0.00	0.00
12.50	0.36	0.00	0.36	41.50	0.00	0.00	0.00
13.00	0.22	0.00	0.22	42.00	0.00	0.00	0.00
13.50	0.16	0.00	0.16	42.50	0.00	0.00	0.00
14.00	0.13	0.00	0.13	43.00	0.00	0.00	0.00
14.50	0.11	0.00	0.11	43.50	0.00	0.00	0.00
15.00	0.09	0.00	0.09	44.00	0.00	0.00	0.00
15.50	0.09	0.00	0.09	44.50	0.00	0.00	0.00
16.00	0.08	0.00	0.08	45.00	0.00	0.00	0.00
16.50	0.08	0.00	0.08	45.50	0.00	0.00	0.00
17.00	0.07	0.00	0.07	46.00	0.00	0.00	0.00
17.50	0.06	0.00	0.06	46.50	0.00	0.00	0.00
18.00	0.06	0.00	0.06	47.00	0.00	0.00	0.00
18.50	0.06	0.00	0.06	47.50	0.00	0.00	0.00
19.00	0.05	0.00	0.05	48.00	0.00	0.00	0.00
19.50	0.05	0.00	0.05				
20.00	0.05	0.00	0.05				
20.50	0.05	0.00	0.05				
21.00	0.05	0.00	0.05				
21.50	0.05	0.00	0.05				
22.00	0.05	0.00	0.05				
22.50	0.04	0.00	0.04				
23.00	0.04	0.00	0.04				
23.50	0.04	0.00	0.04				
24.00	0.04	0.00	0.04				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

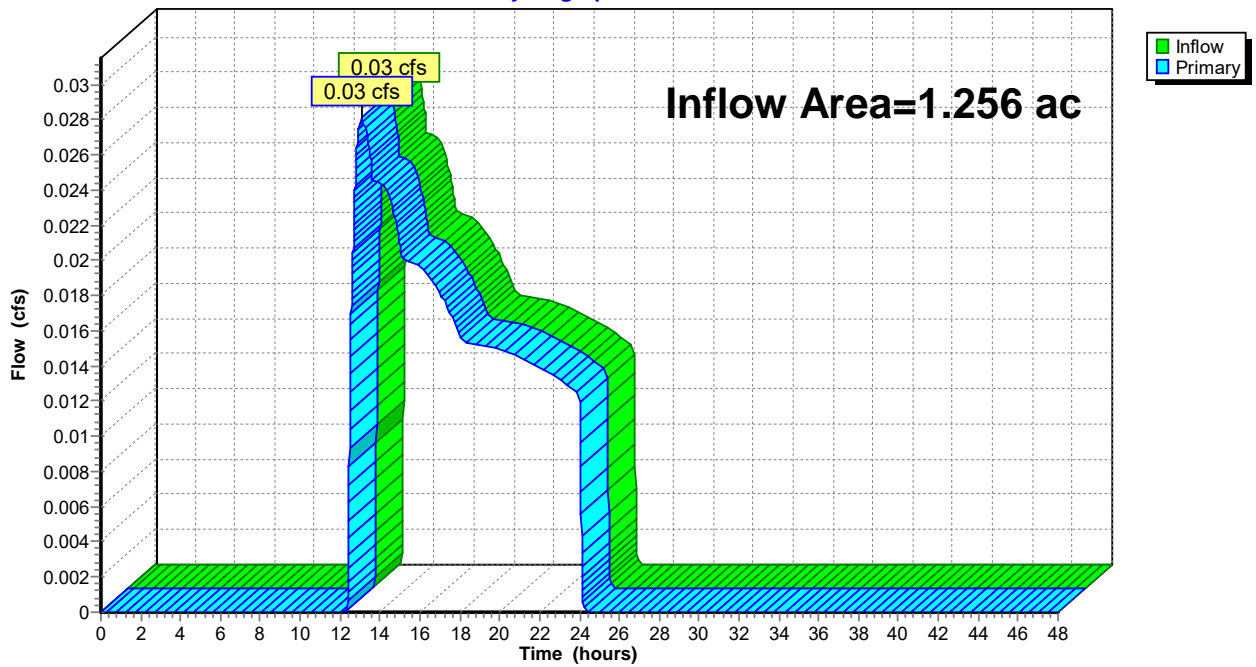
Summary for Link 31L: DP-3

Inflow Area = 1.256 ac, 0.00% Impervious, Inflow Depth = 0.16" for 10-Year event
Inflow = 0.03 cfs @ 13.04 hrs, Volume= 0.017 af
Primary = 0.03 cfs @ 13.04 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 31L: DP-3

Hydrograph



Hydrograph for Link 31L: DP-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	0.01	0.00	0.01	41.50	0.00	0.00	0.00
13.00	0.03	0.00	0.03	42.00	0.00	0.00	0.00
13.50	0.03	0.00	0.03	42.50	0.00	0.00	0.00
14.00	0.02	0.00	0.02	43.00	0.00	0.00	0.00
14.50	0.02	0.00	0.02	43.50	0.00	0.00	0.00
15.00	0.02	0.00	0.02	44.00	0.00	0.00	0.00
15.50	0.02	0.00	0.02	44.50	0.00	0.00	0.00
16.00	0.02	0.00	0.02	45.00	0.00	0.00	0.00
16.50	0.02	0.00	0.02	45.50	0.00	0.00	0.00
17.00	0.02	0.00	0.02	46.00	0.00	0.00	0.00
17.50	0.02	0.00	0.02	46.50	0.00	0.00	0.00
18.00	0.02	0.00	0.02	47.00	0.00	0.00	0.00
18.50	0.02	0.00	0.02	47.50	0.00	0.00	0.00
19.00	0.02	0.00	0.02	48.00	0.00	0.00	0.00
19.50	0.02	0.00	0.02				
20.00	0.01	0.00	0.01				
20.50	0.01	0.00	0.01				
21.00	0.01	0.00	0.01				
21.50	0.01	0.00	0.01				
22.00	0.01	0.00	0.01				
22.50	0.01	0.00	0.01				
23.00	0.01	0.00	0.01				
23.50	0.01	0.00	0.01				
24.00	0.01	0.00	0.01				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

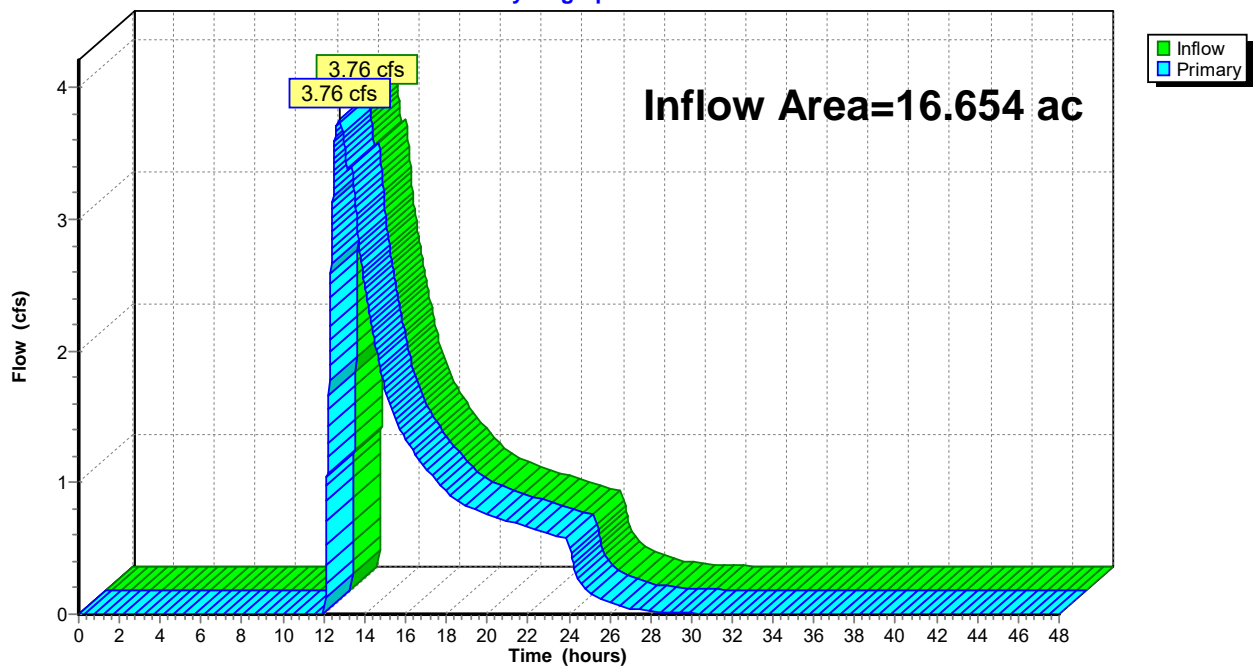
Summary for Link 32L: DP-4

Inflow Area = 16.654 ac, 29.61% Impervious, Inflow Depth = 0.98" for 10-Year event
Inflow = 3.76 cfs @ 12.75 hrs, Volume= 1.355 af
Primary = 3.76 cfs @ 12.75 hrs, Volume= 1.355 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 32L: DP-4

Hydrograph



Hydrograph for Link 32L: DP-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.01	0.00	0.01
0.50	0.00	0.00	0.00	29.50	0.01	0.00	0.01
1.00	0.00	0.00	0.00	30.00	0.01	0.00	0.01
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	3.42	0.00	3.42	41.50	0.00	0.00	0.00
13.00	3.57	0.00	3.57	42.00	0.00	0.00	0.00
13.50	3.21	0.00	3.21	42.50	0.00	0.00	0.00
14.00	2.50	0.00	2.50	43.00	0.00	0.00	0.00
14.50	2.07	0.00	2.07	43.50	0.00	0.00	0.00
15.00	1.72	0.00	1.72	44.00	0.00	0.00	0.00
15.50	1.48	0.00	1.48	44.50	0.00	0.00	0.00
16.00	1.33	0.00	1.33	45.00	0.00	0.00	0.00
16.50	1.21	0.00	1.21	45.50	0.00	0.00	0.00
17.00	1.11	0.00	1.11	46.00	0.00	0.00	0.00
17.50	1.02	0.00	1.02	46.50	0.00	0.00	0.00
18.00	0.93	0.00	0.93	47.00	0.00	0.00	0.00
18.50	0.86	0.00	0.86	47.50	0.00	0.00	0.00
19.00	0.82	0.00	0.82	48.00	0.00	0.00	0.00
19.50	0.79	0.00	0.79				
20.00	0.76	0.00	0.76				
20.50	0.73	0.00	0.73				
21.00	0.71	0.00	0.71				
21.50	0.68	0.00	0.68				
22.00	0.66	0.00	0.66				
22.50	0.64	0.00	0.64				
23.00	0.61	0.00	0.61				
23.50	0.59	0.00	0.59				
24.00	0.57	0.00	0.57				
24.50	0.25	0.00	0.25				
25.00	0.17	0.00	0.17				
25.50	0.12	0.00	0.12				
26.00	0.08	0.00	0.08				
26.50	0.06	0.00	0.06				
27.00	0.04	0.00	0.04				
27.50	0.03	0.00	0.03				
28.00	0.02	0.00	0.02				
28.50	0.02	0.00	0.02				

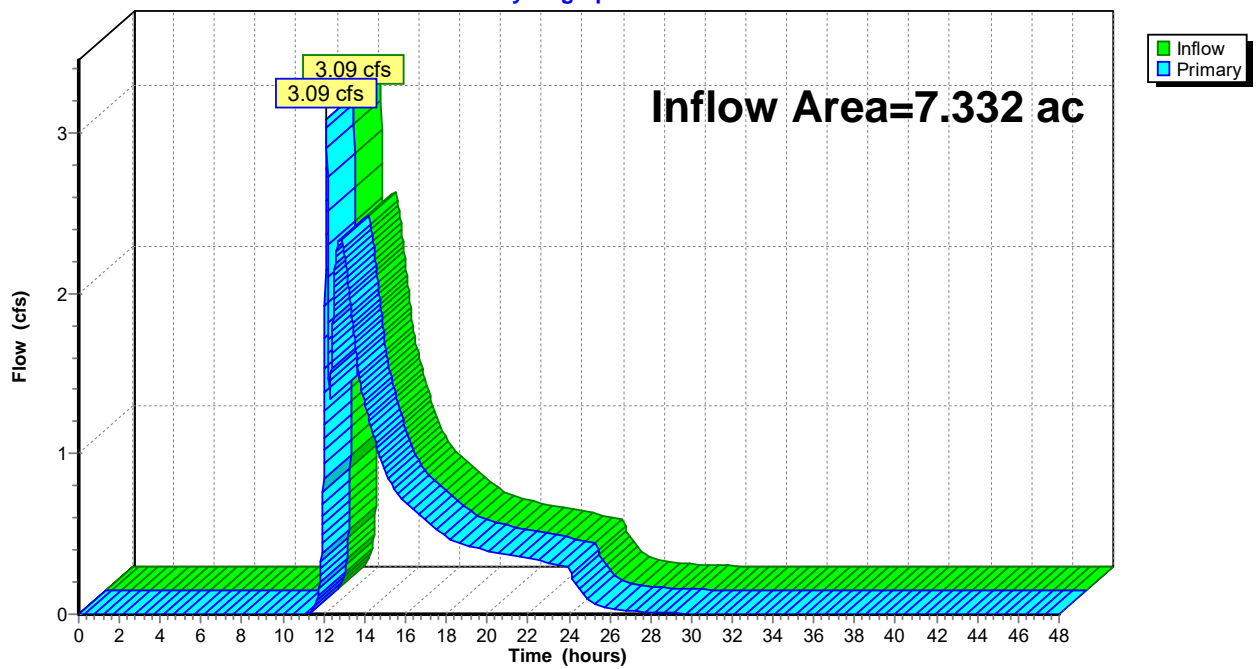
Summary for Link PDP5: PDP5

Inflow Area = 7.332 ac, 38.34% Impervious, Inflow Depth = 1.29" for 10-Year event
Inflow = 3.09 cfs @ 12.14 hrs, Volume= 0.788 af
Primary = 3.09 cfs @ 12.14 hrs, Volume= 0.788 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link PDP5: PDP5

Hydrograph



Hydrograph for Link PDP5: PDP5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.01	0.00	0.01
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.02	0.00	0.02	40.50	0.00	0.00	0.00
12.00	1.02	0.00	1.02	41.00	0.00	0.00	0.00
12.50	2.04	0.00	2.04	41.50	0.00	0.00	0.00
13.00	2.26	0.00	2.26	42.00	0.00	0.00	0.00
13.50	1.73	0.00	1.73	42.50	0.00	0.00	0.00
14.00	1.32	0.00	1.32	43.00	0.00	0.00	0.00
14.50	1.09	0.00	1.09	43.50	0.00	0.00	0.00
15.00	0.90	0.00	0.90	44.00	0.00	0.00	0.00
15.50	0.78	0.00	0.78	44.50	0.00	0.00	0.00
16.00	0.70	0.00	0.70	45.00	0.00	0.00	0.00
16.50	0.64	0.00	0.64	45.50	0.00	0.00	0.00
17.00	0.59	0.00	0.59	46.00	0.00	0.00	0.00
17.50	0.53	0.00	0.53	46.50	0.00	0.00	0.00
18.00	0.48	0.00	0.48	47.00	0.00	0.00	0.00
18.50	0.45	0.00	0.45	47.50	0.00	0.00	0.00
19.00	0.43	0.00	0.43	48.00	0.00	0.00	0.00
19.50	0.41	0.00	0.41				
20.00	0.40	0.00	0.40				
20.50	0.39	0.00	0.39				
21.00	0.37	0.00	0.37				
21.50	0.36	0.00	0.36				
22.00	0.35	0.00	0.35				
22.50	0.34	0.00	0.34				
23.00	0.32	0.00	0.32				
23.50	0.31	0.00	0.31				
24.00	0.30	0.00	0.30				
24.50	0.15	0.00	0.15				
25.00	0.08	0.00	0.08				
25.50	0.05	0.00	0.05				
26.00	0.04	0.00	0.04				
26.50	0.03	0.00	0.03				
27.00	0.02	0.00	0.02				
27.50	0.02	0.00	0.02				
28.00	0.01	0.00	0.01				
28.50	0.01	0.00	0.01				

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: PDA-1J	Runoff Area=218,370 sf 100.00% Impervious Runoff Depth=5.80" Tc=0.0 min CN=98 Runoff=34.37 cfs 2.424 af
Subcatchment 26S: PDA-1D	Runoff Area=153,719 sf 63.56% Impervious Runoff Depth=5.00" Tc=6.0 min CN=91 Runoff=20.65 cfs 1.469 af
Subcatchment 27S: PDA-4B-B	Runoff Area=66,436 sf 0.00% Impervious Runoff Depth=3.32" Tc=6.0 min CN=75 Runoff=6.41 cfs 0.421 af
Subcatchment 28S: Proposed	Runoff Area=1,182,741 sf 0.00% Impervious Runoff Depth=3.12" Tc=23.4 min CN=73 Runoff=62.68 cfs 7.064 af
Subcatchment 30S: PDA-1A	Runoff Area=108,164 sf 78.54% Impervious Runoff Depth=4.34" Tc=6.0 min CN=85 Runoff=13.19 cfs 0.898 af
Subcatchment 31S: PDA-1C	Runoff Area=112,511 sf 77.93% Impervious Runoff Depth=4.88" Tc=6.0 min CN=90 Runoff=14.91 cfs 1.051 af
Subcatchment 34S: PDA-1K	Runoff Area=26,597 sf 0.00% Impervious Runoff Depth=0.75" Tc=6.0 min CN=44 Runoff=0.37 cfs 0.038 af
Subcatchment 35S: PDA-2U	Runoff Area=74,849 sf 0.00% Impervious Runoff Depth=1.31" Tc=6.0 min CN=52 Runoff=2.56 cfs 0.188 af
Subcatchment 36S: PDA-3U	Runoff Area=54,725 sf 0.00% Impervious Runoff Depth=0.46" Tc=6.0 min CN=39 Runoff=0.19 cfs 0.048 af
Subcatchment 37S: PDA-1I	Runoff Area=172,961 sf 57.42% Impervious Runoff Depth=4.02" Tc=6.0 min CN=82 Runoff=19.84 cfs 1.331 af
Subcatchment 38S: PDA-4U	Runoff Area=322,148 sf 10.08% Impervious Runoff Depth=0.82" Tc=6.0 min CN=45 Runoff=5.32 cfs 0.504 af
Subcatchment 39S: PDA-5U	Runoff Area=103,088 sf 21.06% Impervious Runoff Depth=1.86" Tc=6.0 min CN=59 Runoff=5.44 cfs 0.368 af
Subcatchment 40S: PDA-i+J-FB	Runoff Area=13,894 sf 0.00% Impervious Runoff Depth=0.95" Tc=6.0 min CN=47 Runoff=0.30 cfs 0.025 af
Subcatchment 41S: PDA-5A	Runoff Area=216,315 sf 46.58% Impervious Runoff Depth=3.22" Tc=6.0 min CN=74 Runoff=20.29 cfs 1.332 af
Subcatchment 42S: PDA-1J-B	Runoff Area=33,984 sf 0.00% Impervious Runoff Depth=1.39" Tc=6.0 min CN=53 Runoff=1.25 cfs 0.090 af
Subcatchment 43S: PDA-1B	Runoff Area=398,274 sf 73.53% Impervious Runoff Depth=4.45" Tc=6.0 min CN=86 Runoff=49.47 cfs 3.389 af
Subcatchment 46S: PDA-1H	Runoff Area=433,100 sf 100.00% Impervious Runoff Depth=5.80" Tc=6.0 min CN=98 Runoff=61.84 cfs 4.807 af

Subcatchment 47S: PDA-4A	Runoff Area=104,546 sf 34.61% Impervious Runoff Depth=2.74" Tc=6.0 min CN=69 Runoff=8.37 cfs 0.549 af
Subcatchment 48S: PDA-1G-FB	Runoff Area=17,215 sf 0.00% Impervious Runoff Depth=0.46" Tc=6.0 min CN=39 Runoff=0.06 cfs 0.015 af
Subcatchment 49S: PDA-4B	Runoff Area=232,321 sf 62.91% Impervious Runoff Depth=4.23" Tc=6.0 min CN=84 Runoff=27.78 cfs 1.882 af
Subcatchment 51S: PDA-1G-B	Runoff Area=27,422 sf 0.00% Impervious Runoff Depth=0.82" Tc=6.0 min CN=45 Runoff=0.45 cfs 0.043 af
Subcatchment 52S: PDA-1G	Runoff Area=416,900 sf 100.00% Impervious Runoff Depth=5.80" Tc=6.0 min CN=98 Runoff=59.53 cfs 4.627 af
Subcatchment 54S: PDA-1H-IB	Runoff Area=39,736 sf 0.00% Impervious Runoff Depth=0.46" Tc=6.0 min CN=39 Runoff=0.14 cfs 0.035 af
Subcatchment 55S: PDA-1E	Runoff Area=17,321 sf 82.34% Impervious Runoff Depth=5.45" Tc=6.0 min CN=95 Runoff=2.43 cfs 0.181 af
Subcatchment 56S: PDA-1B-FB	Runoff Area=16,395 sf 0.00% Impervious Runoff Depth=0.46" Tc=6.0 min CN=39 Runoff=0.06 cfs 0.014 af
Subcatchment 57S: PDA-1H-FB	Runoff Area=19,432 sf 0.00% Impervious Runoff Depth=0.46" Tc=6.0 min CN=39 Runoff=0.07 cfs 0.017 af
Subcatchment 58S: PDA1-B-IB	Runoff Area=33,078 sf 0.00% Impervious Runoff Depth=0.51" Tc=6.0 min CN=40 Runoff=0.18 cfs 0.032 af
Subcatchment 59S: PDA-1F	Runoff Area=250,816 sf 71.20% Impervious Runoff Depth=3.92" Tc=6.0 min CN=81 Runoff=28.15 cfs 1.881 af
Subcatchment 60S: PDA-1i-B	Runoff Area=31,544 sf 0.00% Impervious Runoff Depth=0.46" Tc=6.0 min CN=39 Runoff=0.11 cfs 0.028 af
Pond 1P: Bioretention 1D	Peak Elev=413.90' Storage=44,950 cf Inflow=22.94 cfs 1.650 af Outflow=1.83 cfs 0.969 af
Pond 3P: Bioretention 1A	Peak Elev=414.64' Storage=21,144 cf Inflow=13.19 cfs 0.898 af Outflow=2.35 cfs 0.449 af
Pond 22P: Bioretention 5A	Peak Elev=433.12' Storage=22,924 cf Inflow=19.84 cfs 1.332 af Outflow=5.78 cfs 0.986 af
Pond 26P: Bioretention 1F	Peak Elev=412.13' Storage=38,021 cf Inflow=28.15 cfs 1.881 af Outflow=6.44 cfs 1.316 af
Pond 29P: Bioretention 4B	Peak Elev=419.85' Storage=47,205 cf Inflow=34.19 cfs 2.303 af Outflow=7.43 cfs 1.598 af
Pond 31P: Bioretention i	Peak Elev=412.40' Storage=52,413 cf Inflow=25.23 cfs 1.918 af Outflow=2.32 cfs 0.950 af
Pond 32P: FB 1C	Peak Elev=413.69' Storage=10,729 cf Inflow=14.91 cfs 1.051 af Outflow=14.78 cfs 1.051 af

Pond 33P: INFIL 1C	Peak Elev=411.83'	Storage=14,431 cf	Inflow=14.78 cfs	1.051 af
Discarded=2.30 cfs	1.051 af	Primary=0.00 cfs	0.000 af	Secondary=0.00 cfs
			0.000 af	Outflow=2.30 cfs
				1.051 af
Pond 37P: FB 1i+J	Peak Elev=413.63'	Storage=29,934 cf	Inflow=52.68 cfs	3.780 af
	Primary=25.22 cfs	1.890 af	Secondary=25.22 cfs	1.890 af
			Outflow=50.45 cfs	3.780 af
Pond 39P: FB 5A	Peak Elev=433.76'	Storage=10,725 cf	Inflow=20.29 cfs	1.332 af
			Outflow=19.84 cfs	1.332 af
Pond 44P: FB 1B	Peak Elev=412.80'	Storage=38,077 cf	Inflow=49.50 cfs	3.403 af
			Outflow=48.64 cfs	3.403 af
Pond 45P: INFIL 1B	Peak Elev=411.18'	Storage=51,548 cf	Inflow=48.79 cfs	3.435 af
Discarded=6.07 cfs	3.427 af	Primary=0.11 cfs	0.009 af	Secondary=0.00 cfs
			0.000 af	Outflow=6.18 cfs
				3.435 af
Pond 47P: INFIL 1H	Peak Elev=411.41'	Storage=70,961 cf	Inflow=60.74 cfs	4.859 af
Discarded=6.57 cfs	4.839 af	Primary=0.16 cfs	0.020 af	Secondary=0.00 cfs
			0.000 af	Outflow=6.73 cfs
				4.859 af
Pond 51P: FB 1H	Peak Elev=413.24'	Storage=53,342 cf	Inflow=61.88 cfs	4.824 af
			Outflow=60.64 cfs	4.824 af
Pond 53P: Bioretention J basin	Peak Elev=412.40'	Storage=56,036 cf	Inflow=26.16 cfs	1.980 af
			Outflow=1.91 cfs	0.945 af
Pond 54P: INFIL 1G	Peak Elev=411.45'	Storage=68,945 cf	Inflow=58.29 cfs	4.685 af
Discarded=6.25 cfs	4.685 af	Primary=0.00 cfs	0.000 af	Outflow=6.25 cfs
				4.685 af
Pond 55P: FB 1G	Peak Elev=413.12'	Storage=52,789 cf	Inflow=59.56 cfs	4.642 af
			Outflow=57.84 cfs	4.642 af
Pond 59P: FB 1E	Peak Elev=414.21'	Storage=2,122 cf	Inflow=2.43 cfs	0.181 af
			Outflow=2.41 cfs	0.181 af
Pond 60P: FB 1D	Peak Elev=415.31'	Storage=9,509 cf	Inflow=20.65 cfs	1.469 af
			Outflow=20.53 cfs	1.469 af
Pond 63P: Det Pond 1K	Peak Elev=410.13'	Storage=20,152 cf	Inflow=9.26 cfs	3.249 af
Primary=6.86 cfs	3.242 af	Secondary=0.00 cfs	0.000 af	Outflow=6.86 cfs
				3.242 af
Pond B4B: Bioretention 4A	Peak Elev=440.63'	Storage=9,649 cf	Inflow=8.37 cfs	0.549 af
			Outflow=2.21 cfs	0.348 af
Link 29L: DP-1			Inflow=65.85 cfs	11.753 af
			Primary=65.85 cfs	11.753 af
Link 30L: DP-2			Inflow=2.56 cfs	0.188 af
			Primary=2.56 cfs	0.188 af
Link 31L: DP-3			Inflow=0.19 cfs	0.048 af
			Primary=0.19 cfs	0.048 af
Link 32L: DP-4			Inflow=11.84 cfs	2.450 af
			Primary=11.84 cfs	2.450 af

240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

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Link PDP5: PDP5

Inflow=7.53 cfs 1.354 af
Primary=7.53 cfs 1.354 af

Total Runoff Area = 112.456 ac Runoff Volume = 34.751 af Average Runoff Depth = 3.71"
53.84% Pervious = 60.551 ac 46.16% Impervious = 51.905 ac

Summary for Subcatchment 6S: PDA-1J

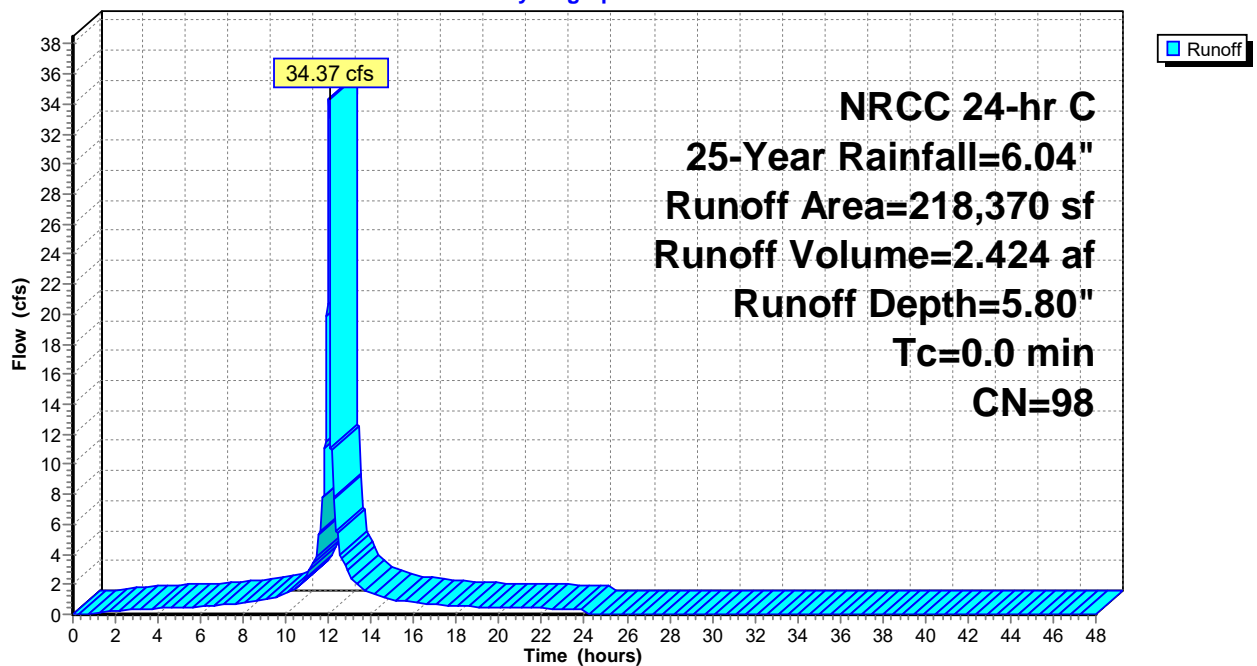
Runoff = 34.37 cfs @ 12.09 hrs, Volume= 2.424 af, Depth= 5.80"
 Routed to Pond 37P : FB 1i+J

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
218,370	98	Unconnected roofs, HSG D
218,370		100.00% Impervious Area
218,370		100.00% Unconnected

Subcatchment 6S: PDA-1J

Hydrograph



Hydrograph for Subcatchment 6S: PDA-1J

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	5.80	0.00
0.50	0.03	0.00	0.00	29.50	6.04	5.80	0.00
1.00	0.07	0.00	0.09	30.00	6.04	5.80	0.00
1.50	0.11	0.02	0.17	30.50	6.04	5.80	0.00
2.00	0.15	0.04	0.23	31.00	6.04	5.80	0.00
2.50	0.19	0.06	0.28	31.50	6.04	5.80	0.00
3.00	0.23	0.09	0.32	32.00	6.04	5.80	0.00
3.50	0.27	0.12	0.35	32.50	6.04	5.80	0.00
4.00	0.32	0.16	0.38	33.00	6.04	5.80	0.00
4.50	0.37	0.20	0.41	33.50	6.04	5.80	0.00
5.00	0.42	0.24	0.44	34.00	6.04	5.80	0.00
5.50	0.47	0.29	0.47	34.50	6.04	5.80	0.00
6.00	0.52	0.33	0.49	35.00	6.04	5.80	0.00
6.50	0.58	0.39	0.56	35.50	6.04	5.80	0.00
7.00	0.64	0.45	0.63	36.00	6.04	5.80	0.00
7.50	0.71	0.51	0.70	36.50	6.04	5.80	0.00
8.00	0.78	0.58	0.77	37.00	6.04	5.80	0.00
8.50	0.87	0.66	0.84	37.50	6.04	5.80	0.00
9.00	0.96	0.75	0.92	38.00	6.04	5.80	0.00
9.50	1.06	0.85	1.16	38.50	6.04	5.80	0.00
10.00	1.19	0.98	1.39	39.00	6.04	5.80	0.00
10.50	1.35	1.13	1.69	39.50	6.04	5.80	0.00
11.00	1.56	1.34	2.59	40.00	6.04	5.80	0.00
11.50	1.89	1.67	4.59	40.50	6.04	5.80	0.00
12.00	2.88	2.64	27.09	41.00	6.04	5.80	0.00
12.50	4.15	3.91	4.62	41.50	6.04	5.80	0.00
13.00	4.48	4.25	2.63	42.00	6.04	5.80	0.00
13.50	4.69	4.46	1.72	42.50	6.04	5.80	0.00
14.00	4.85	4.61	1.42	43.00	6.04	5.80	0.00
14.50	4.98	4.74	1.19	43.50	6.04	5.80	0.00
15.00	5.08	4.85	0.95	44.00	6.04	5.80	0.00
15.50	5.17	4.94	0.87	44.50	6.04	5.80	0.00
16.00	5.26	5.02	0.80	45.00	6.04	5.80	0.00
16.50	5.33	5.09	0.74	45.50	6.04	5.80	0.00
17.00	5.40	5.16	0.67	46.00	6.04	5.80	0.00
17.50	5.46	5.23	0.61	46.50	6.04	5.80	0.00
18.00	5.52	5.28	0.54	47.00	6.04	5.80	0.00
18.50	5.57	5.34	0.52	47.50	6.04	5.80	0.00
19.00	5.62	5.39	0.50	48.00	6.04	5.80	0.00
19.50	5.67	5.44	0.49				
20.00	5.72	5.48	0.47				
20.50	5.77	5.53	0.45				
21.00	5.81	5.57	0.44				
21.50	5.85	5.61	0.42				
22.00	5.89	5.66	0.40				
22.50	5.93	5.69	0.39				
23.00	5.97	5.73	0.37				
23.50	6.01	5.77	0.35				
24.00	6.04	5.80	0.17				
24.50	6.04	5.80	0.00				
25.00	6.04	5.80	0.00				
25.50	6.04	5.80	0.00				
26.00	6.04	5.80	0.00				
26.50	6.04	5.80	0.00				
27.00	6.04	5.80	0.00				
27.50	6.04	5.80	0.00				
28.00	6.04	5.80	0.00				
28.50	6.04	5.80	0.00				

240814 RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

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Summary for Subcatchment 26S: PDA-1D

Runoff = 20.65 cfs @ 12.13 hrs, Volume= 1.469 af, Depth= 5.00"
 Routed to Pond 60P : FB 1D

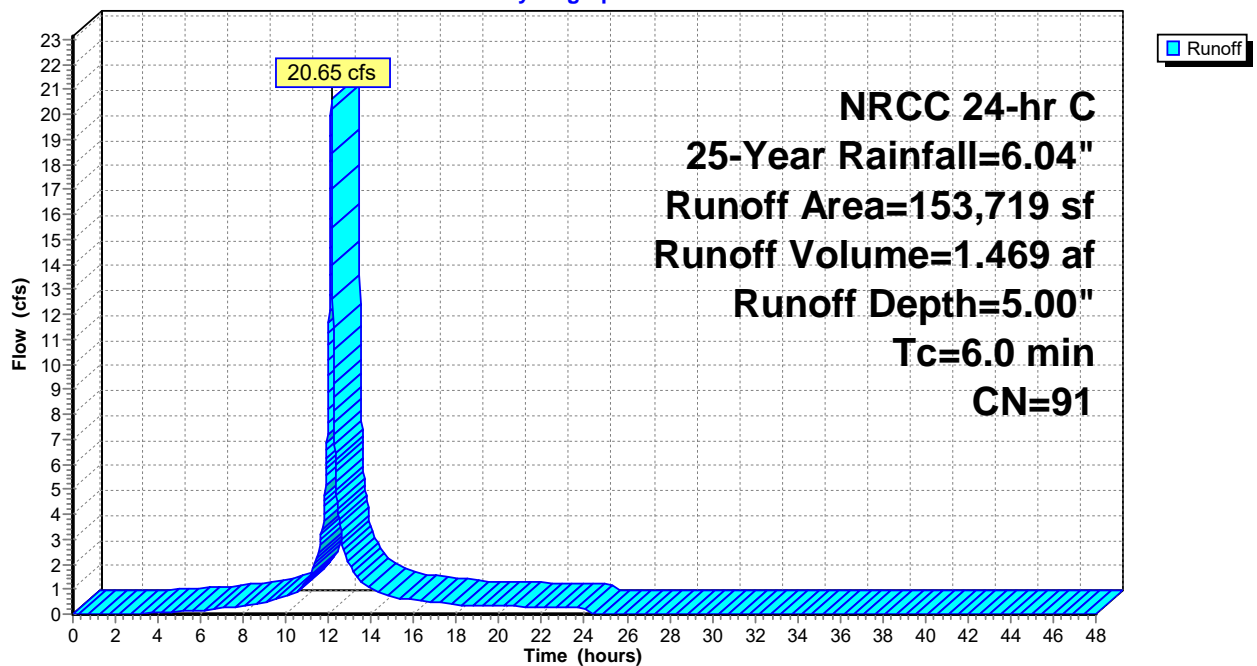
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
55,737	80	>75% Grass cover, Good, HSG D
271	39	>75% Grass cover, Good, HSG A
97,711	98	Paved parking, HSG D
153,719	91	Weighted Average
56,008		36.44% Pervious Area
97,711		63.56% Impervious Area

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

Subcatchment 26S: PDA-1D

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

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Hydrograph for Subcatchment 26S: PDA-1D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	5.00	0.00
0.50	0.03	0.00	0.00	29.50	6.04	5.00	0.00
1.00	0.07	0.00	0.00	30.00	6.04	5.00	0.00
1.50	0.11	0.00	0.00	30.50	6.04	5.00	0.00
2.00	0.15	0.00	0.00	31.00	6.04	5.00	0.00
2.50	0.19	0.00	0.00	31.50	6.04	5.00	0.00
3.00	0.23	0.00	0.01	32.00	6.04	5.00	0.00
3.50	0.27	0.01	0.04	32.50	6.04	5.00	0.00
4.00	0.32	0.01	0.06	33.00	6.04	5.00	0.00
4.50	0.37	0.02	0.09	33.50	6.04	5.00	0.00
5.00	0.42	0.04	0.11	34.00	6.04	5.00	0.00
5.50	0.47	0.06	0.14	34.50	6.04	5.00	0.00
6.00	0.52	0.08	0.16	35.00	6.04	5.00	0.00
6.50	0.58	0.10	0.20	35.50	6.04	5.00	0.00
7.00	0.64	0.14	0.24	36.00	6.04	5.00	0.00
7.50	0.71	0.17	0.29	36.50	6.04	5.00	0.00
8.00	0.78	0.22	0.34	37.00	6.04	5.00	0.00
8.50	0.87	0.27	0.39	37.50	6.04	5.00	0.00
9.00	0.96	0.33	0.44	38.00	6.04	5.00	0.00
9.50	1.06	0.40	0.57	38.50	6.04	5.00	0.00
10.00	1.19	0.50	0.72	39.00	6.04	5.00	0.00
10.50	1.35	0.62	0.89	39.50	6.04	5.00	0.00
11.00	1.56	0.79	1.39	40.00	6.04	5.00	0.00
11.50	1.89	1.07	2.32	40.50	6.04	5.00	0.00
12.00	2.88	1.96	10.75	41.00	6.04	5.00	0.00
12.50	4.15	3.16	3.70	41.50	6.04	5.00	0.00
13.00	4.48	3.48	1.96	42.00	6.04	5.00	0.00
13.50	4.69	3.69	1.27	42.50	6.04	5.00	0.00
14.00	4.85	3.83	1.00	43.00	6.04	5.00	0.00
14.50	4.98	3.96	0.84	43.50	6.04	5.00	0.00
15.00	5.08	4.06	0.68	44.00	6.04	5.00	0.00
15.50	5.17	4.15	0.61	44.50	6.04	5.00	0.00
16.00	5.26	4.23	0.56	45.00	6.04	5.00	0.00
16.50	5.33	4.30	0.52	45.50	6.04	5.00	0.00
17.00	5.40	4.37	0.47	46.00	6.04	5.00	0.00
17.50	5.46	4.43	0.42	46.50	6.04	5.00	0.00
18.00	5.52	4.49	0.38	47.00	6.04	5.00	0.00
18.50	5.57	4.54	0.36	47.50	6.04	5.00	0.00
19.00	5.62	4.59	0.35	48.00	6.04	5.00	0.00
19.50	5.67	4.64	0.34				
20.00	5.72	4.68	0.32				
20.50	5.77	4.73	0.31				
21.00	5.81	4.77	0.30				
21.50	5.85	4.81	0.29				
22.00	5.89	4.85	0.28				
22.50	5.93	4.89	0.27				
23.00	5.97	4.93	0.26				
23.50	6.01	4.96	0.25				
24.00	6.04	5.00	0.24				
24.50	6.04	5.00	0.00				
25.00	6.04	5.00	0.00				
25.50	6.04	5.00	0.00				
26.00	6.04	5.00	0.00				
26.50	6.04	5.00	0.00				
27.00	6.04	5.00	0.00				
27.50	6.04	5.00	0.00				
28.00	6.04	5.00	0.00				
28.50	6.04	5.00	0.00				

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NRCC 24-hr C 25-Year Rainfall=6.04"

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Summary for Subcatchment 27S: PDA-4B-B

Runoff = 6.41 cfs @ 12.13 hrs, Volume= 0.421 af, Depth= 3.32"
 Routed to Pond 29P : Bioretention 4B

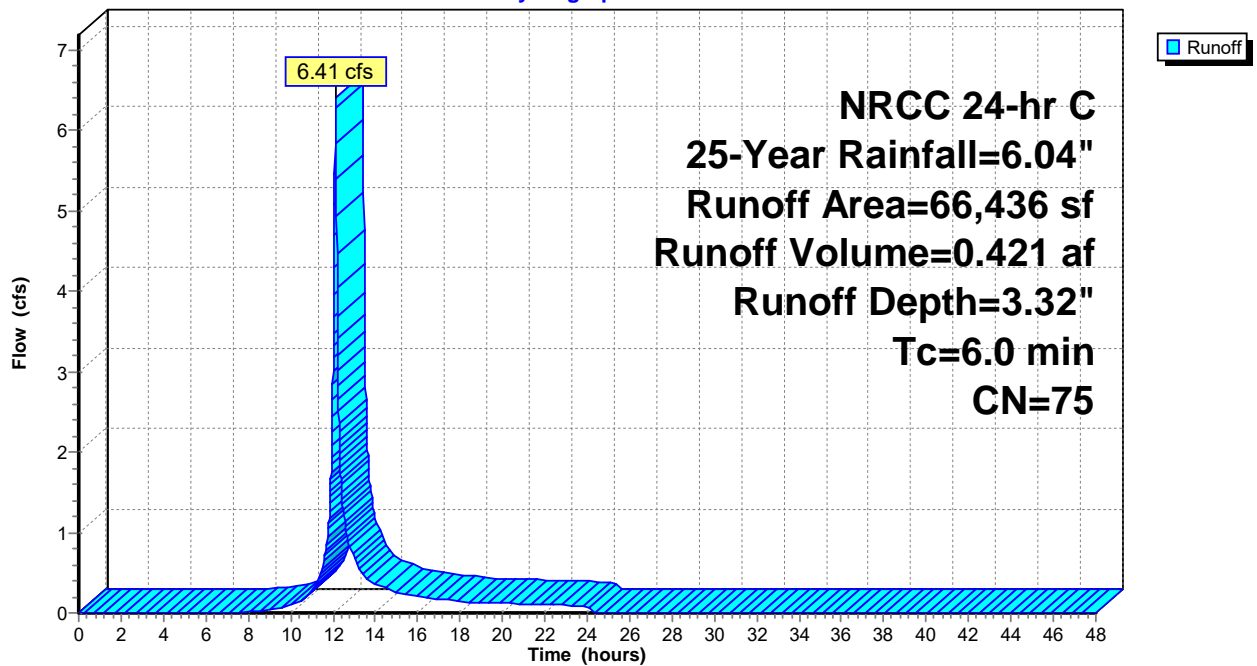
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
917	61	>75% Grass cover, Good, HSG B
57,533	80	>75% Grass cover, Good, HSG D
7,986	39	>75% Grass cover, Good, HSG A
66,436	75	Weighted Average
66,436		100.00% Pervious Area

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

Subcatchment 27S: PDA-4B-B

Hydrograph



Hydrograph for Subcatchment 27S: PDA-4B-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	3.32	0.00
0.50	0.03	0.00	0.00	29.50	6.04	3.32	0.00
1.00	0.07	0.00	0.00	30.00	6.04	3.32	0.00
1.50	0.11	0.00	0.00	30.50	6.04	3.32	0.00
2.00	0.15	0.00	0.00	31.00	6.04	3.32	0.00
2.50	0.19	0.00	0.00	31.50	6.04	3.32	0.00
3.00	0.23	0.00	0.00	32.00	6.04	3.32	0.00
3.50	0.27	0.00	0.00	32.50	6.04	3.32	0.00
4.00	0.32	0.00	0.00	33.00	6.04	3.32	0.00
4.50	0.37	0.00	0.00	33.50	6.04	3.32	0.00
5.00	0.42	0.00	0.00	34.00	6.04	3.32	0.00
5.50	0.47	0.00	0.00	34.50	6.04	3.32	0.00
6.00	0.52	0.00	0.00	35.00	6.04	3.32	0.00
6.50	0.58	0.00	0.00	35.50	6.04	3.32	0.00
7.00	0.64	0.00	0.00	36.00	6.04	3.32	0.00
7.50	0.71	0.00	0.00	36.50	6.04	3.32	0.00
8.00	0.78	0.00	0.01	37.00	6.04	3.32	0.00
8.50	0.87	0.01	0.03	37.50	6.04	3.32	0.00
9.00	0.96	0.02	0.04	38.00	6.04	3.32	0.00
9.50	1.06	0.04	0.07	38.50	6.04	3.32	0.00
10.00	1.19	0.07	0.10	39.00	6.04	3.32	0.00
10.50	1.35	0.11	0.15	39.50	6.04	3.32	0.00
11.00	1.56	0.19	0.27	40.00	6.04	3.32	0.00
11.50	1.89	0.33	0.52	40.50	6.04	3.32	0.00
12.00	2.88	0.88	3.02	41.00	6.04	3.32	0.00
12.50	4.15	1.78	1.26	41.50	6.04	3.32	0.00
13.00	4.48	2.04	0.69	42.00	6.04	3.32	0.00
13.50	4.69	2.20	0.45	42.50	6.04	3.32	0.00
14.00	4.85	2.33	0.36	43.00	6.04	3.32	0.00
14.50	4.98	2.43	0.30	43.50	6.04	3.32	0.00
15.00	5.08	2.52	0.25	44.00	6.04	3.32	0.00
15.50	5.17	2.59	0.22	44.50	6.04	3.32	0.00
16.00	5.26	2.66	0.20	45.00	6.04	3.32	0.00
16.50	5.33	2.72	0.19	45.50	6.04	3.32	0.00
17.00	5.40	2.78	0.17	46.00	6.04	3.32	0.00
17.50	5.46	2.83	0.16	46.50	6.04	3.32	0.00
18.00	5.52	2.88	0.14	47.00	6.04	3.32	0.00
18.50	5.57	2.92	0.13	47.50	6.04	3.32	0.00
19.00	5.62	2.96	0.13	48.00	6.04	3.32	0.00
19.50	5.67	3.01	0.12				
20.00	5.72	3.05	0.12				
20.50	5.77	3.08	0.12				
21.00	5.81	3.12	0.11				
21.50	5.85	3.16	0.11				
22.00	5.89	3.19	0.10				
22.50	5.93	3.22	0.10				
23.00	5.97	3.26	0.10				
23.50	6.01	3.29	0.09				
24.00	6.04	3.32	0.09				
24.50	6.04	3.32	0.00				
25.00	6.04	3.32	0.00				
25.50	6.04	3.32	0.00				
26.00	6.04	3.32	0.00				
26.50	6.04	3.32	0.00				
27.00	6.04	3.32	0.00				
27.50	6.04	3.32	0.00				
28.00	6.04	3.32	0.00				
28.50	6.04	3.32	0.00				

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NRCC 24-hr C 25-Year Rainfall=6.04"

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Summary for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Runoff = 62.68 cfs @ 12.35 hrs, Volume= 7.064 af, Depth= 3.12"
 Routed to Link 29L : DP-1

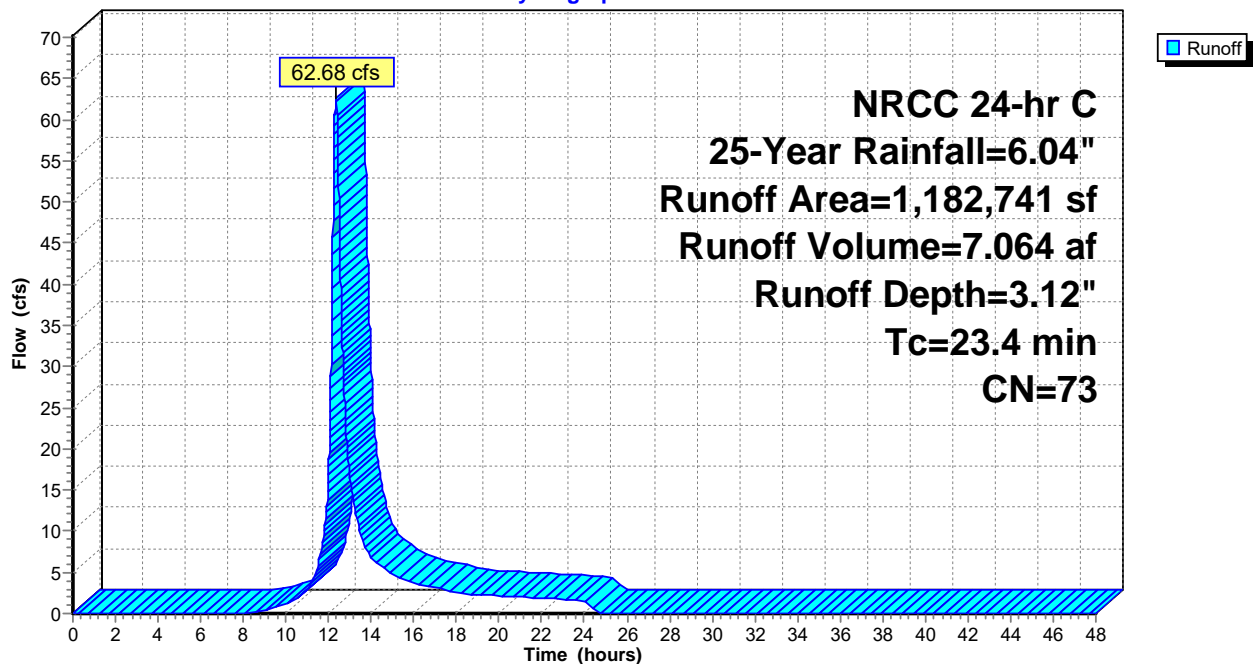
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
* 90,367	61	>75% Grass cover, Good, HSG B
99,079	39	>75% Grass cover, Good, HSG A
647,468	80	>75% Grass cover, Good, HSG D
45,280	32	Woods/grass comb., Good, HSG A
299,609	79	Woods/grass comb., Good, HSG D
938	89	Dirt roads, HSG D
1,182,741	73	Weighted Average
1,182,741		100.00% Pervious Area

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

Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Hydrograph



Hydrograph for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	3.12	0.00
0.50	0.03	0.00	0.00	29.50	6.04	3.12	0.00
1.00	0.07	0.00	0.00	30.00	6.04	3.12	0.00
1.50	0.11	0.00	0.00	30.50	6.04	3.12	0.00
2.00	0.15	0.00	0.00	31.00	6.04	3.12	0.00
2.50	0.19	0.00	0.00	31.50	6.04	3.12	0.00
3.00	0.23	0.00	0.00	32.00	6.04	3.12	0.00
3.50	0.27	0.00	0.00	32.50	6.04	3.12	0.00
4.00	0.32	0.00	0.00	33.00	6.04	3.12	0.00
4.50	0.37	0.00	0.00	33.50	6.04	3.12	0.00
5.00	0.42	0.00	0.00	34.00	6.04	3.12	0.00
5.50	0.47	0.00	0.00	34.50	6.04	3.12	0.00
6.00	0.52	0.00	0.00	35.00	6.04	3.12	0.00
6.50	0.58	0.00	0.00	35.50	6.04	3.12	0.00
7.00	0.64	0.00	0.00	36.00	6.04	3.12	0.00
7.50	0.71	0.00	0.00	36.50	6.04	3.12	0.00
8.00	0.78	0.00	0.01	37.00	6.04	3.12	0.00
8.50	0.87	0.00	0.16	37.50	6.04	3.12	0.00
9.00	0.96	0.01	0.38	38.00	6.04	3.12	0.00
9.50	1.06	0.03	0.68	38.50	6.04	3.12	0.00
10.00	1.19	0.05	1.15	39.00	6.04	3.12	0.00
10.50	1.35	0.09	1.79	39.50	6.04	3.12	0.00
11.00	1.56	0.15	3.02	40.00	6.04	3.12	0.00
11.50	1.89	0.27	5.93	40.50	6.04	3.12	0.00
12.00	2.88	0.78	17.28	41.00	6.04	3.12	0.00
12.50	4.15	1.64	47.89	41.50	6.04	3.12	0.00
13.00	4.48	1.88	16.59	42.00	6.04	3.12	0.00
13.50	4.69	2.04	9.77	42.50	6.04	3.12	0.00
14.00	4.85	2.16	6.82	43.00	6.04	3.12	0.00
14.50	4.98	2.26	5.72	43.50	6.04	3.12	0.00
15.00	5.08	2.35	4.78	44.00	6.04	3.12	0.00
15.50	5.17	2.42	3.99	44.50	6.04	3.12	0.00
16.00	5.26	2.48	3.68	45.00	6.04	3.12	0.00
16.50	5.33	2.54	3.41	45.50	6.04	3.12	0.00
17.00	5.40	2.60	3.13	46.00	6.04	3.12	0.00
17.50	5.46	2.65	2.86	46.50	6.04	3.12	0.00
18.00	5.52	2.70	2.58	47.00	6.04	3.12	0.00
18.50	5.57	2.74	2.35	47.50	6.04	3.12	0.00
19.00	5.62	2.78	2.27	48.00	6.04	3.12	0.00
19.50	5.67	2.82	2.20				
20.00	5.72	2.86	2.13				
20.50	5.77	2.90	2.06				
21.00	5.81	2.93	1.99				
21.50	5.85	2.97	1.92				
22.00	5.89	3.00	1.85				
22.50	5.93	3.03	1.78				
23.00	5.97	3.06	1.71				
23.50	6.01	3.09	1.64				
24.00	6.04	3.12	1.57				
24.50	6.04	3.12	0.27				
25.00	6.04	3.12	0.01				
25.50	6.04	3.12	0.00				
26.00	6.04	3.12	0.00				
26.50	6.04	3.12	0.00				
27.00	6.04	3.12	0.00				
27.50	6.04	3.12	0.00				
28.00	6.04	3.12	0.00				
28.50	6.04	3.12	0.00				

Summary for Subcatchment 30S: PDA-1A

Runoff = 13.19 cfs @ 12.13 hrs, Volume= 0.898 af, Depth= 4.34"
 Routed to Pond 3P : Bioretention 1A

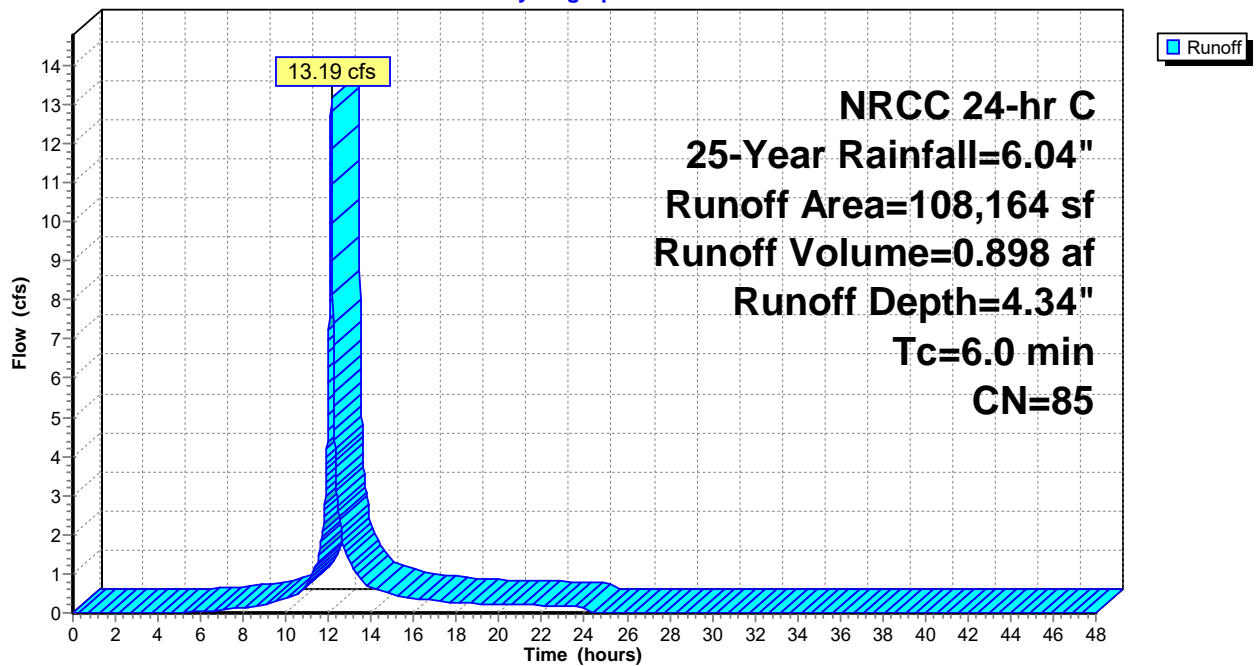
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
23,210	39	>75% Grass cover, Good, HSG A
84,954	98	Paved parking, HSG D
108,164	85	Weighted Average
23,210		21.46% Pervious Area
84,954		78.54% Impervious Area

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

Subcatchment 30S: PDA-1A

Hydrograph



Hydrograph for Subcatchment 30S: PDA-1A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	4.34	0.00
0.50	0.03	0.00	0.00	29.50	6.04	4.34	0.00
1.00	0.07	0.00	0.00	30.00	6.04	4.34	0.00
1.50	0.11	0.00	0.00	30.50	6.04	4.34	0.00
2.00	0.15	0.00	0.00	31.00	6.04	4.34	0.00
2.50	0.19	0.00	0.00	31.50	6.04	4.34	0.00
3.00	0.23	0.00	0.00	32.00	6.04	4.34	0.00
3.50	0.27	0.00	0.00	32.50	6.04	4.34	0.00
4.00	0.32	0.00	0.00	33.00	6.04	4.34	0.00
4.50	0.37	0.00	0.00	33.50	6.04	4.34	0.00
5.00	0.42	0.00	0.01	34.00	6.04	4.34	0.00
5.50	0.47	0.01	0.03	34.50	6.04	4.34	0.00
6.00	0.52	0.01	0.04	35.00	6.04	4.34	0.00
6.50	0.58	0.02	0.06	35.50	6.04	4.34	0.00
7.00	0.64	0.04	0.08	36.00	6.04	4.34	0.00
7.50	0.71	0.06	0.11	36.50	6.04	4.34	0.00
8.00	0.78	0.08	0.14	37.00	6.04	4.34	0.00
8.50	0.87	0.12	0.17	37.50	6.04	4.34	0.00
9.00	0.96	0.15	0.20	38.00	6.04	4.34	0.00
9.50	1.06	0.20	0.27	38.50	6.04	4.34	0.00
10.00	1.19	0.27	0.36	39.00	6.04	4.34	0.00
10.50	1.35	0.36	0.47	39.50	6.04	4.34	0.00
11.00	1.56	0.49	0.76	40.00	6.04	4.34	0.00
11.50	1.89	0.72	1.34	40.50	6.04	4.34	0.00
12.00	2.88	1.48	6.65	41.00	6.04	4.34	0.00
12.50	4.15	2.59	2.43	41.50	6.04	4.34	0.00
13.00	4.48	2.89	1.30	42.00	6.04	4.34	0.00
13.50	4.69	3.09	0.85	42.50	6.04	4.34	0.00
14.00	4.85	3.23	0.67	43.00	6.04	4.34	0.00
14.50	4.98	3.35	0.56	43.50	6.04	4.34	0.00
15.00	5.08	3.44	0.46	44.00	6.04	4.34	0.00
15.50	5.17	3.53	0.41	44.50	6.04	4.34	0.00
16.00	5.26	3.60	0.38	45.00	6.04	4.34	0.00
16.50	5.33	3.68	0.35	45.50	6.04	4.34	0.00
17.00	5.40	3.74	0.32	46.00	6.04	4.34	0.00
17.50	5.46	3.80	0.29	46.50	6.04	4.34	0.00
18.00	5.52	3.85	0.26	47.00	6.04	4.34	0.00
18.50	5.57	3.90	0.24	47.50	6.04	4.34	0.00
19.00	5.62	3.95	0.23	48.00	6.04	4.34	0.00
19.50	5.67	4.00	0.23				
20.00	5.72	4.04	0.22				
20.50	5.77	4.08	0.21				
21.00	5.81	4.12	0.20				
21.50	5.85	4.16	0.20				
22.00	5.89	4.20	0.19				
22.50	5.93	4.24	0.18				
23.00	5.97	4.27	0.17				
23.50	6.01	4.31	0.17				
24.00	6.04	4.34	0.16				
24.50	6.04	4.34	0.00				
25.00	6.04	4.34	0.00				
25.50	6.04	4.34	0.00				
26.00	6.04	4.34	0.00				
26.50	6.04	4.34	0.00				
27.00	6.04	4.34	0.00				
27.50	6.04	4.34	0.00				
28.00	6.04	4.34	0.00				
28.50	6.04	4.34	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment 31S: PDA-1C

Runoff = 14.91 cfs @ 12.13 hrs, Volume= 1.051 af, Depth= 4.88"
 Routed to Pond 32P : FB 1C

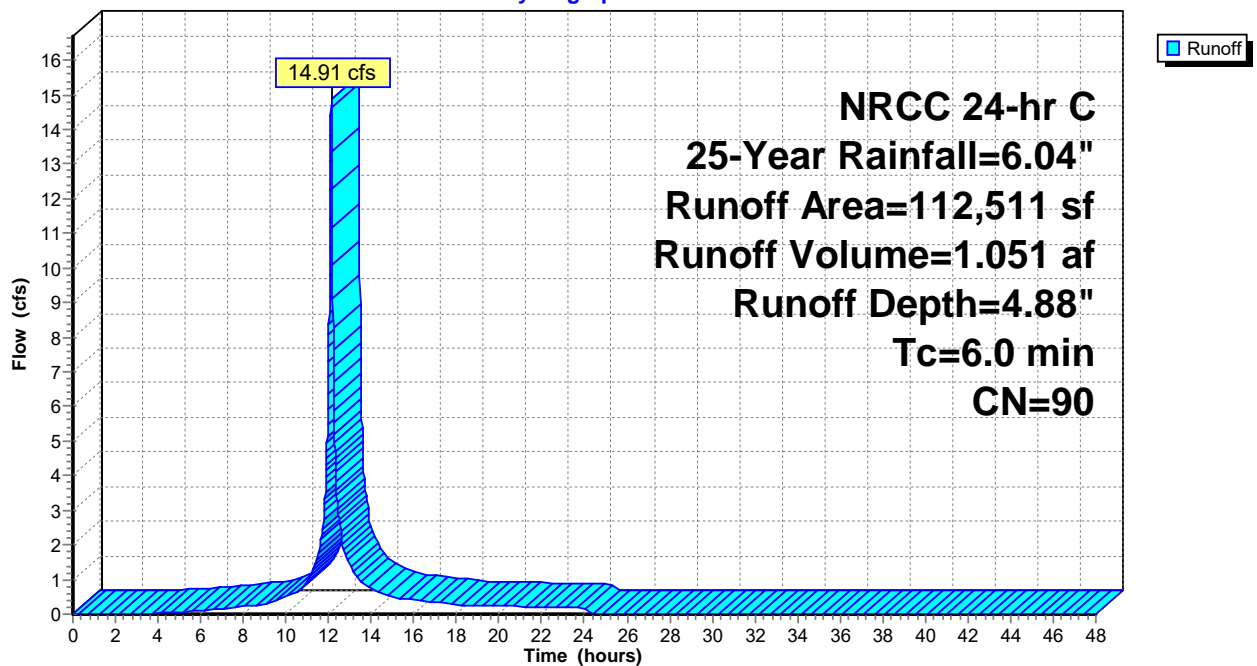
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
14,434	80	>75% Grass cover, Good, HSG D
10,394	39	>75% Grass cover, Good, HSG A
87,683	98	Paved parking, HSG D
112,511	90	Weighted Average
24,828		22.07% Pervious Area
87,683		77.93% Impervious Area

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

Subcatchment 31S: PDA-1C

Hydrograph



Hydrograph for Subcatchment 31S: PDA-1C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	4.88	0.00
0.50	0.03	0.00	0.00	29.50	6.04	4.88	0.00
1.00	0.07	0.00	0.00	30.00	6.04	4.88	0.00
1.50	0.11	0.00	0.00	30.50	6.04	4.88	0.00
2.00	0.15	0.00	0.00	31.00	6.04	4.88	0.00
2.50	0.19	0.00	0.00	31.50	6.04	4.88	0.00
3.00	0.23	0.00	0.00	32.00	6.04	4.88	0.00
3.50	0.27	0.00	0.02	32.50	6.04	4.88	0.00
4.00	0.32	0.01	0.03	33.00	6.04	4.88	0.00
4.50	0.37	0.02	0.05	33.50	6.04	4.88	0.00
5.00	0.42	0.03	0.07	34.00	6.04	4.88	0.00
5.50	0.47	0.04	0.08	34.50	6.04	4.88	0.00
6.00	0.52	0.06	0.10	35.00	6.04	4.88	0.00
6.50	0.58	0.09	0.13	35.50	6.04	4.88	0.00
7.00	0.64	0.11	0.16	36.00	6.04	4.88	0.00
7.50	0.71	0.15	0.19	36.50	6.04	4.88	0.00
8.00	0.78	0.19	0.23	37.00	6.04	4.88	0.00
8.50	0.87	0.24	0.26	37.50	6.04	4.88	0.00
9.00	0.96	0.29	0.30	38.00	6.04	4.88	0.00
9.50	1.06	0.36	0.40	38.50	6.04	4.88	0.00
10.00	1.19	0.45	0.50	39.00	6.04	4.88	0.00
10.50	1.35	0.56	0.62	39.50	6.04	4.88	0.00
11.00	1.56	0.73	0.98	40.00	6.04	4.88	0.00
11.50	1.89	1.00	1.65	40.50	6.04	4.88	0.00
12.00	2.88	1.87	7.72	41.00	6.04	4.88	0.00
12.50	4.15	3.06	2.68	41.50	6.04	4.88	0.00
13.00	4.48	3.38	1.42	42.00	6.04	4.88	0.00
13.50	4.69	3.58	0.92	42.50	6.04	4.88	0.00
14.00	4.85	3.73	0.73	43.00	6.04	4.88	0.00
14.50	4.98	3.85	0.61	43.50	6.04	4.88	0.00
15.00	5.08	3.96	0.50	44.00	6.04	4.88	0.00
15.50	5.17	4.04	0.44	44.50	6.04	4.88	0.00
16.00	5.26	4.12	0.41	45.00	6.04	4.88	0.00
16.50	5.33	4.20	0.38	45.50	6.04	4.88	0.00
17.00	5.40	4.26	0.34	46.00	6.04	4.88	0.00
17.50	5.46	4.33	0.31	46.50	6.04	4.88	0.00
18.00	5.52	4.38	0.28	47.00	6.04	4.88	0.00
18.50	5.57	4.43	0.26	47.50	6.04	4.88	0.00
19.00	5.62	4.48	0.25	48.00	6.04	4.88	0.00
19.50	5.67	4.53	0.24				
20.00	5.72	4.57	0.24				
20.50	5.77	4.62	0.23				
21.00	5.81	4.66	0.22				
21.50	5.85	4.70	0.21				
22.00	5.89	4.74	0.20				
22.50	5.93	4.78	0.20				
23.00	5.97	4.82	0.19				
23.50	6.01	4.85	0.18				
24.00	6.04	4.88	0.17				
24.50	6.04	4.88	0.00				
25.00	6.04	4.88	0.00				
25.50	6.04	4.88	0.00				
26.00	6.04	4.88	0.00				
26.50	6.04	4.88	0.00				
27.00	6.04	4.88	0.00				
27.50	6.04	4.88	0.00				
28.00	6.04	4.88	0.00				
28.50	6.04	4.88	0.00				

Summary for Subcatchment 34S: PDA-1K

Runoff = 0.37 cfs @ 12.15 hrs, Volume= 0.038 af, Depth= 0.75"
 Routed to Pond 63P : Det Pond 1K

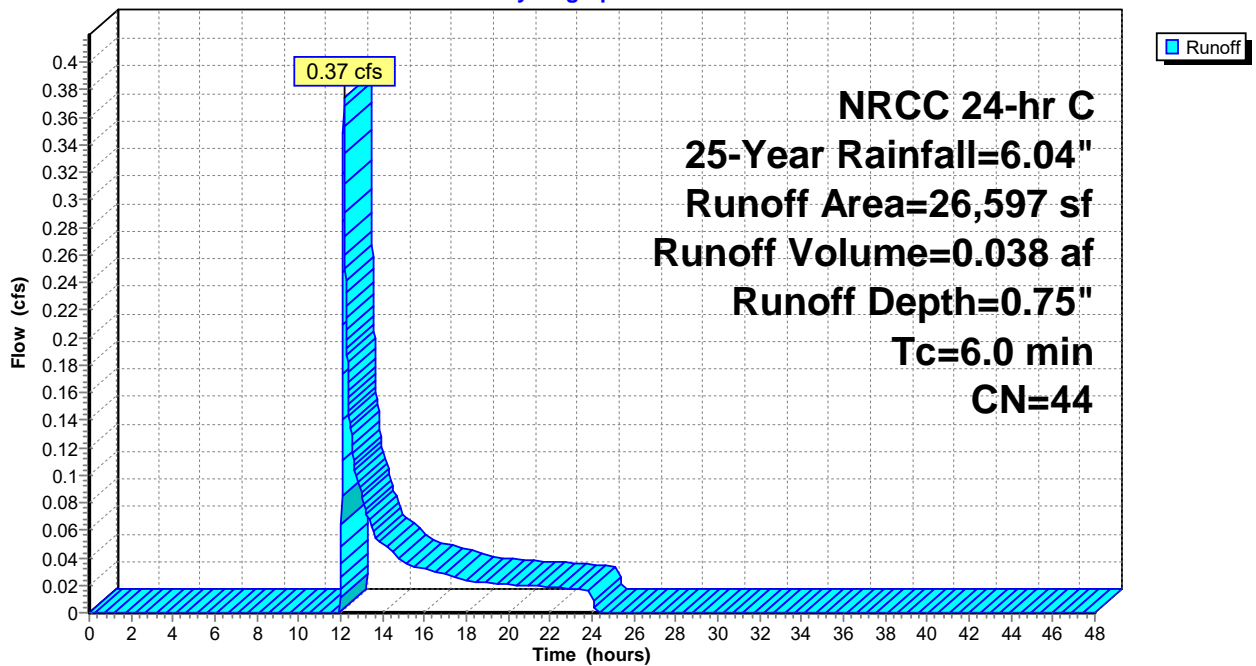
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
23,033	39	>75% Grass cover, Good, HSG A
3,564	80	>75% Grass cover, Good, HSG D
26,597	44	Weighted Average
26,597		100.00% Pervious Area

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

Subcatchment 34S: PDA-1K

Hydrograph



Hydrograph for Subcatchment 34S: PDA-1K

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.75	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.75	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.75	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.75	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.75	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.75	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.75	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.75	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.75	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.75	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.75	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.75	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.75	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.75	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.75	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.75	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.75	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.75	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.75	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.75	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.75	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.75	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.75	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.75	0.00
12.00	2.88	0.01	0.02	41.00	6.04	0.75	0.00
12.50	4.15	0.18	0.13	41.50	6.04	0.75	0.00
13.00	4.48	0.26	0.08	42.00	6.04	0.75	0.00
13.50	4.69	0.31	0.06	42.50	6.04	0.75	0.00
14.00	4.85	0.35	0.05	43.00	6.04	0.75	0.00
14.50	4.98	0.39	0.04	43.50	6.04	0.75	0.00
15.00	5.08	0.42	0.04	44.00	6.04	0.75	0.00
15.50	5.17	0.45	0.03	44.50	6.04	0.75	0.00
16.00	5.26	0.48	0.03	45.00	6.04	0.75	0.00
16.50	5.33	0.50	0.03	45.50	6.04	0.75	0.00
17.00	5.40	0.52	0.03	46.00	6.04	0.75	0.00
17.50	5.46	0.54	0.03	46.50	6.04	0.75	0.00
18.00	5.52	0.56	0.02	47.00	6.04	0.75	0.00
18.50	5.57	0.58	0.02	47.50	6.04	0.75	0.00
19.00	5.62	0.60	0.02	48.00	6.04	0.75	0.00
19.50	5.67	0.62	0.02				
20.00	5.72	0.63	0.02				
20.50	5.77	0.65	0.02				
21.00	5.81	0.67	0.02				
21.50	5.85	0.68	0.02				
22.00	5.89	0.70	0.02				
22.50	5.93	0.71	0.02				
23.00	5.97	0.73	0.02				
23.50	6.01	0.74	0.02				
24.00	6.04	0.75	0.02				
24.50	6.04	0.75	0.00				
25.00	6.04	0.75	0.00				
25.50	6.04	0.75	0.00				
26.00	6.04	0.75	0.00				
26.50	6.04	0.75	0.00				
27.00	6.04	0.75	0.00				
27.50	6.04	0.75	0.00				
28.00	6.04	0.75	0.00				
28.50	6.04	0.75	0.00				

Summary for Subcatchment 35S: PDA-2U

Runoff = 2.56 cfs @ 12.14 hrs, Volume= 0.188 af, Depth= 1.31"
 Routed to Link 30L : DP-2

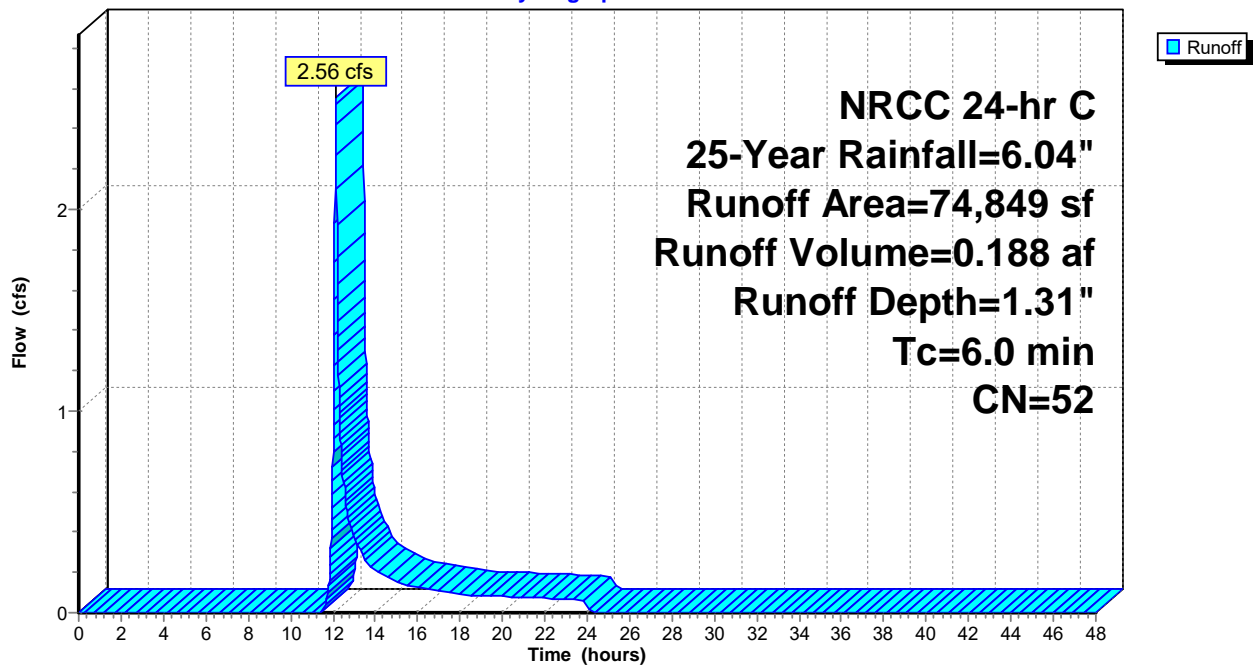
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
24,466	80	>75% Grass cover, Good, HSG D
50,383	39	>75% Grass cover, Good, HSG A
74,849	52	Weighted Average
74,849		100.00% Pervious Area

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

Subcatchment 35S: PDA-2U

Hydrograph



Hydrograph for Subcatchment 35S: PDA-2U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	1.31	0.00
0.50	0.03	0.00	0.00	29.50	6.04	1.31	0.00
1.00	0.07	0.00	0.00	30.00	6.04	1.31	0.00
1.50	0.11	0.00	0.00	30.50	6.04	1.31	0.00
2.00	0.15	0.00	0.00	31.00	6.04	1.31	0.00
2.50	0.19	0.00	0.00	31.50	6.04	1.31	0.00
3.00	0.23	0.00	0.00	32.00	6.04	1.31	0.00
3.50	0.27	0.00	0.00	32.50	6.04	1.31	0.00
4.00	0.32	0.00	0.00	33.00	6.04	1.31	0.00
4.50	0.37	0.00	0.00	33.50	6.04	1.31	0.00
5.00	0.42	0.00	0.00	34.00	6.04	1.31	0.00
5.50	0.47	0.00	0.00	34.50	6.04	1.31	0.00
6.00	0.52	0.00	0.00	35.00	6.04	1.31	0.00
6.50	0.58	0.00	0.00	35.50	6.04	1.31	0.00
7.00	0.64	0.00	0.00	36.00	6.04	1.31	0.00
7.50	0.71	0.00	0.00	36.50	6.04	1.31	0.00
8.00	0.78	0.00	0.00	37.00	6.04	1.31	0.00
8.50	0.87	0.00	0.00	37.50	6.04	1.31	0.00
9.00	0.96	0.00	0.00	38.00	6.04	1.31	0.00
9.50	1.06	0.00	0.00	38.50	6.04	1.31	0.00
10.00	1.19	0.00	0.00	39.00	6.04	1.31	0.00
10.50	1.35	0.00	0.00	39.50	6.04	1.31	0.00
11.00	1.56	0.00	0.00	40.00	6.04	1.31	0.00
11.50	1.89	0.00	0.00	40.50	6.04	1.31	0.00
12.00	2.88	0.10	0.79	41.00	6.04	1.31	0.00
12.50	4.15	0.46	0.65	41.50	6.04	1.31	0.00
13.00	4.48	0.59	0.39	42.00	6.04	1.31	0.00
13.50	4.69	0.67	0.26	42.50	6.04	1.31	0.00
14.00	4.85	0.74	0.21	43.00	6.04	1.31	0.00
14.50	4.98	0.79	0.19	43.50	6.04	1.31	0.00
15.00	5.08	0.84	0.15	44.00	6.04	1.31	0.00
15.50	5.17	0.88	0.14	44.50	6.04	1.31	0.00
16.00	5.26	0.92	0.13	45.00	6.04	1.31	0.00
16.50	5.33	0.96	0.12	45.50	6.04	1.31	0.00
17.00	5.40	0.99	0.11	46.00	6.04	1.31	0.00
17.50	5.46	1.02	0.10	46.50	6.04	1.31	0.00
18.00	5.52	1.05	0.09	47.00	6.04	1.31	0.00
18.50	5.57	1.07	0.09	47.50	6.04	1.31	0.00
19.00	5.62	1.10	0.09	48.00	6.04	1.31	0.00
19.50	5.67	1.12	0.08				
20.00	5.72	1.15	0.08				
20.50	5.77	1.17	0.08				
21.00	5.81	1.19	0.08				
21.50	5.85	1.21	0.07				
22.00	5.89	1.23	0.07				
22.50	5.93	1.25	0.07				
23.00	5.97	1.27	0.07				
23.50	6.01	1.29	0.06				
24.00	6.04	1.31	0.06				
24.50	6.04	1.31	0.00				
25.00	6.04	1.31	0.00				
25.50	6.04	1.31	0.00				
26.00	6.04	1.31	0.00				
26.50	6.04	1.31	0.00				
27.00	6.04	1.31	0.00				
27.50	6.04	1.31	0.00				
28.00	6.04	1.31	0.00				
28.50	6.04	1.31	0.00				

Summary for Subcatchment 36S: PDA-3U

Runoff = 0.19 cfs @ 12.18 hrs, Volume= 0.048 af, Depth= 0.46"
 Routed to Link 31L : DP-3

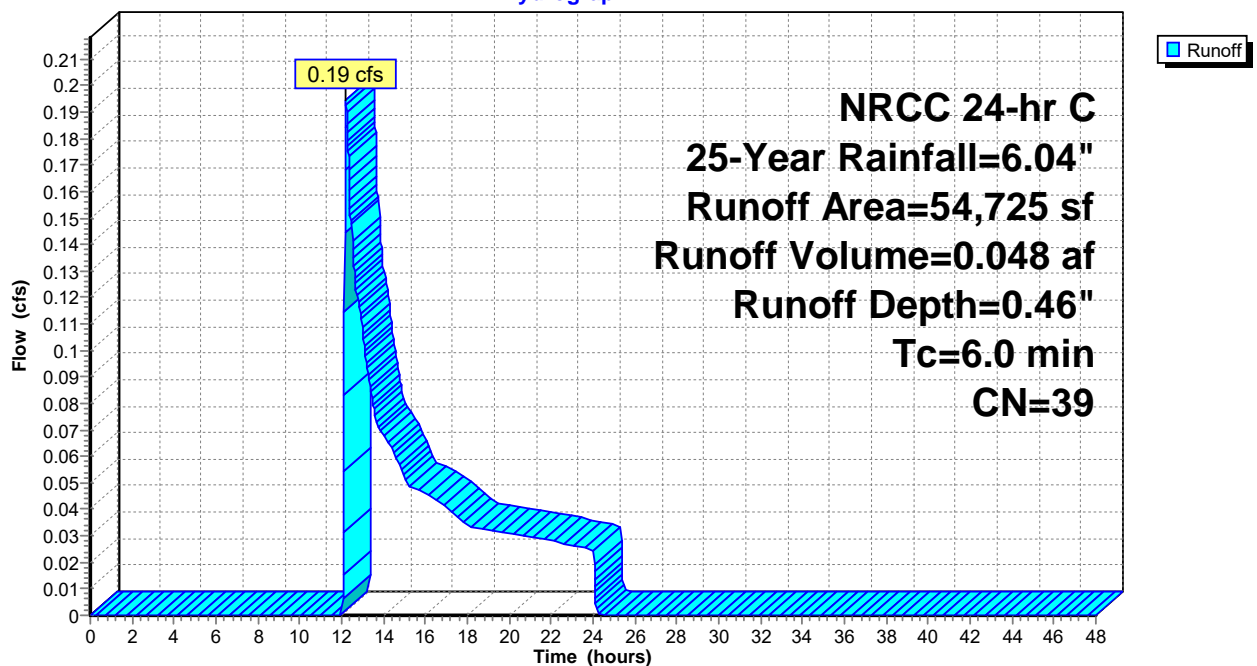
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
54,725	39	>75% Grass cover, Good, HSG A
54,725		100.00% Pervious Area

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

Subcatchment 36S: PDA-3U

Hydrograph



Hydrograph for Subcatchment 36S: PDA-3U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.46	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.46	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.46	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.46	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.46	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.46	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.46	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.46	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.46	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.46	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.46	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.46	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.46	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.46	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.46	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.46	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.46	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.46	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.46	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.46	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.46	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.46	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.46	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.46	0.00
12.00	2.88	0.00	0.00	41.00	6.04	0.46	0.00
12.50	4.15	0.06	0.15	41.50	6.04	0.46	0.00
13.00	4.48	0.11	0.11	42.00	6.04	0.46	0.00
13.50	4.69	0.14	0.08	42.50	6.04	0.46	0.00
14.00	4.85	0.17	0.07	43.00	6.04	0.46	0.00
14.50	4.98	0.20	0.06	43.50	6.04	0.46	0.00
15.00	5.08	0.22	0.05	44.00	6.04	0.46	0.00
15.50	5.17	0.24	0.05	44.50	6.04	0.46	0.00
16.00	5.26	0.25	0.05	45.00	6.04	0.46	0.00
16.50	5.33	0.27	0.04	45.50	6.04	0.46	0.00
17.00	5.40	0.29	0.04	46.00	6.04	0.46	0.00
17.50	5.46	0.30	0.04	46.50	6.04	0.46	0.00
18.00	5.52	0.32	0.03	47.00	6.04	0.46	0.00
18.50	5.57	0.33	0.03	47.50	6.04	0.46	0.00
19.00	5.62	0.34	0.03	48.00	6.04	0.46	0.00
19.50	5.67	0.36	0.03				
20.00	5.72	0.37	0.03				
20.50	5.77	0.38	0.03				
21.00	5.81	0.39	0.03				
21.50	5.85	0.40	0.03				
22.00	5.89	0.42	0.03				
22.50	5.93	0.43	0.03				
23.00	5.97	0.44	0.03				
23.50	6.01	0.45	0.03				
24.00	6.04	0.46	0.02				
24.50	6.04	0.46	0.00				
25.00	6.04	0.46	0.00				
25.50	6.04	0.46	0.00				
26.00	6.04	0.46	0.00				
26.50	6.04	0.46	0.00				
27.00	6.04	0.46	0.00				
27.50	6.04	0.46	0.00				
28.00	6.04	0.46	0.00				
28.50	6.04	0.46	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

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Summary for Subcatchment 37S: PDA-1I

Runoff = 19.84 cfs @ 12.13 hrs, Volume= 1.331 af, Depth= 4.02"
 Routed to Pond 37P : FB 1i+J

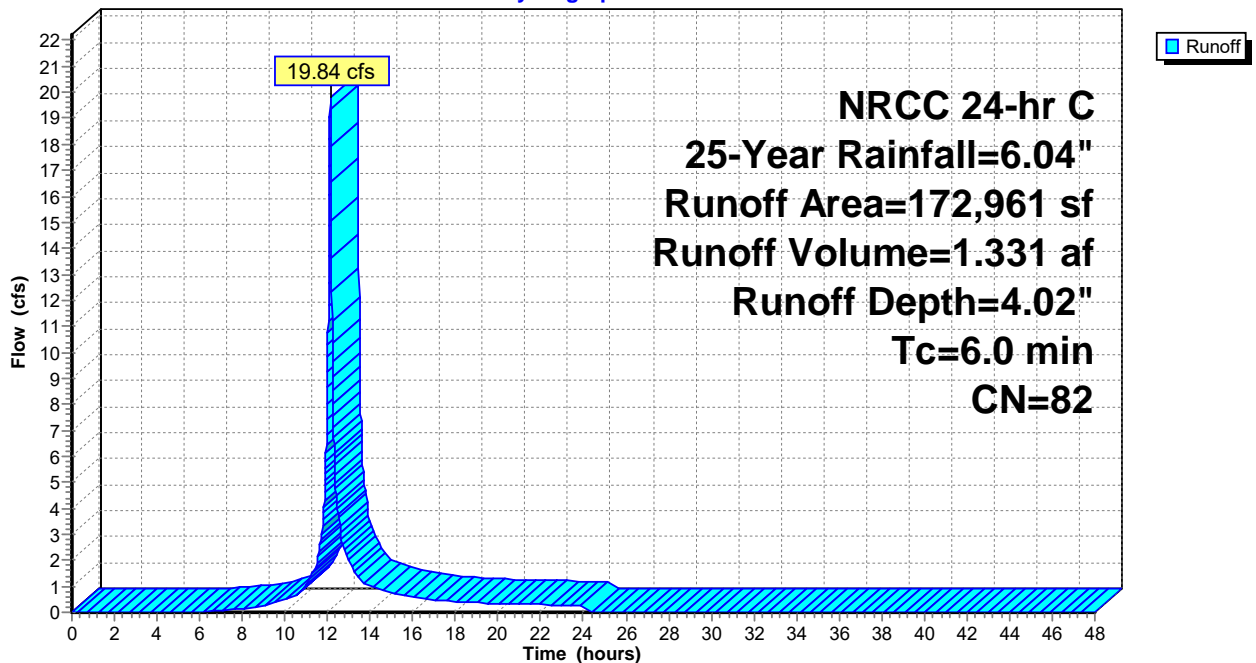
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
42,540	61	>75% Grass cover, Good, HSG B
16,570	39	>75% Grass cover, Good, HSG A
14,535	80	>75% Grass cover, Good, HSG D
99,316	98	Paved parking, HSG D
172,961	82	Weighted Average
73,645		42.58% Pervious Area
99,316		57.42% Impervious Area

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

Subcatchment 37S: PDA-1I

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

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Hydrograph for Subcatchment 37S: PDA-11

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	4.02	0.00
0.50	0.03	0.00	0.00	29.50	6.04	4.02	0.00
1.00	0.07	0.00	0.00	30.00	6.04	4.02	0.00
1.50	0.11	0.00	0.00	30.50	6.04	4.02	0.00
2.00	0.15	0.00	0.00	31.00	6.04	4.02	0.00
2.50	0.19	0.00	0.00	31.50	6.04	4.02	0.00
3.00	0.23	0.00	0.00	32.00	6.04	4.02	0.00
3.50	0.27	0.00	0.00	32.50	6.04	4.02	0.00
4.00	0.32	0.00	0.00	33.00	6.04	4.02	0.00
4.50	0.37	0.00	0.00	33.50	6.04	4.02	0.00
5.00	0.42	0.00	0.00	34.00	6.04	4.02	0.00
5.50	0.47	0.00	0.01	34.50	6.04	4.02	0.00
6.00	0.52	0.00	0.03	35.00	6.04	4.02	0.00
6.50	0.58	0.01	0.05	35.50	6.04	4.02	0.00
7.00	0.64	0.02	0.08	36.00	6.04	4.02	0.00
7.50	0.71	0.03	0.11	36.50	6.04	4.02	0.00
8.00	0.78	0.05	0.15	37.00	6.04	4.02	0.00
8.50	0.87	0.07	0.20	37.50	6.04	4.02	0.00
9.00	0.96	0.10	0.25	38.00	6.04	4.02	0.00
9.50	1.06	0.14	0.35	38.50	6.04	4.02	0.00
10.00	1.19	0.19	0.48	39.00	6.04	4.02	0.00
10.50	1.35	0.26	0.63	39.50	6.04	4.02	0.00
11.00	1.56	0.38	1.05	40.00	6.04	4.02	0.00
11.50	1.89	0.58	1.90	40.50	6.04	4.02	0.00
12.00	2.88	1.28	9.82	41.00	6.04	4.02	0.00
12.50	4.15	2.33	3.72	41.50	6.04	4.02	0.00
13.00	4.48	2.62	2.00	42.00	6.04	4.02	0.00
13.50	4.69	2.81	1.31	42.50	6.04	4.02	0.00
14.00	4.85	2.94	1.03	43.00	6.04	4.02	0.00
14.50	4.98	3.06	0.87	43.50	6.04	4.02	0.00
15.00	5.08	3.15	0.71	44.00	6.04	4.02	0.00
15.50	5.17	3.23	0.63	44.50	6.04	4.02	0.00
16.00	5.26	3.31	0.58	45.00	6.04	4.02	0.00
16.50	5.33	3.38	0.54	45.50	6.04	4.02	0.00
17.00	5.40	3.44	0.49	46.00	6.04	4.02	0.00
17.50	5.46	3.50	0.44	46.50	6.04	4.02	0.00
18.00	5.52	3.55	0.40	47.00	6.04	4.02	0.00
18.50	5.57	3.60	0.38	47.50	6.04	4.02	0.00
19.00	5.62	3.64	0.36	48.00	6.04	4.02	0.00
19.50	5.67	3.69	0.35				
20.00	5.72	3.73	0.34				
20.50	5.77	3.77	0.33				
21.00	5.81	3.81	0.32				
21.50	5.85	3.85	0.31				
22.00	5.89	3.89	0.29				
22.50	5.93	3.93	0.28				
23.00	5.97	3.96	0.27				
23.50	6.01	3.99	0.26				
24.00	6.04	4.02	0.25				
24.50	6.04	4.02	0.00				
25.00	6.04	4.02	0.00				
25.50	6.04	4.02	0.00				
26.00	6.04	4.02	0.00				
26.50	6.04	4.02	0.00				
27.00	6.04	4.02	0.00				
27.50	6.04	4.02	0.00				
28.00	6.04	4.02	0.00				
28.50	6.04	4.02	0.00				

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NRCC 24-hr C 25-Year Rainfall=6.04"

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Summary for Subcatchment 38S: PDA-4U

Runoff = 5.32 cfs @ 12.15 hrs, Volume= 0.504 af, Depth= 0.82"
Routed to Link 32L : DP-4

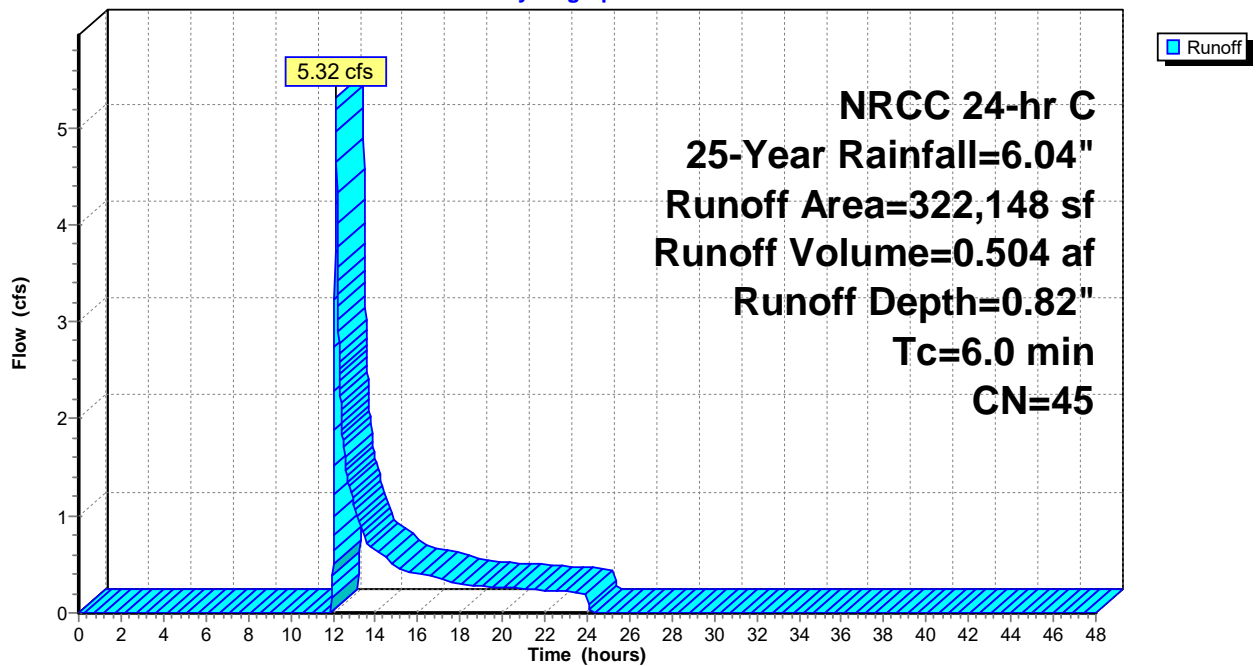
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
289,660	39	>75% Grass cover, Good, HSG A
32,488	98	Paved parking, HSG D
322,148	45	Weighted Average
289,660		89.92% Pervious Area
32,488		10.08% Impervious Area

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

Subcatchment 38S: PDA-4U

Hydrograph



Hydrograph for Subcatchment 38S: PDA-4U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.82	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.82	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.82	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.82	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.82	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.82	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.82	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.82	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.82	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.82	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.82	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.82	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.82	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.82	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.82	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.82	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.82	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.82	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.82	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.82	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.82	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.82	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.82	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.82	0.00
12.00	2.88	0.01	0.51	41.00	6.04	0.82	0.00
12.50	4.15	0.21	1.77	41.50	6.04	0.82	0.00
13.00	4.48	0.29	1.11	42.00	6.04	0.82	0.00
13.50	4.69	0.35	0.78	42.50	6.04	0.82	0.00
14.00	4.85	0.39	0.65	43.00	6.04	0.82	0.00
14.50	4.98	0.43	0.57	43.50	6.04	0.82	0.00
15.00	5.08	0.47	0.47	44.00	6.04	0.82	0.00
15.50	5.17	0.50	0.43	44.50	6.04	0.82	0.00
16.00	5.26	0.53	0.41	45.00	6.04	0.82	0.00
16.50	5.33	0.55	0.38	45.50	6.04	0.82	0.00
17.00	5.40	0.58	0.35	46.00	6.04	0.82	0.00
17.50	5.46	0.60	0.32	46.50	6.04	0.82	0.00
18.00	5.52	0.62	0.29	47.00	6.04	0.82	0.00
18.50	5.57	0.64	0.28	47.50	6.04	0.82	0.00
19.00	5.62	0.66	0.28	48.00	6.04	0.82	0.00
19.50	5.67	0.67	0.27				
20.00	5.72	0.69	0.26				
20.50	5.77	0.71	0.26				
21.00	5.81	0.73	0.25				
21.50	5.85	0.74	0.24				
22.00	5.89	0.76	0.23				
22.50	5.93	0.77	0.23				
23.00	5.97	0.79	0.22				
23.50	6.01	0.80	0.21				
24.00	6.04	0.82	0.20				
24.50	6.04	0.82	0.00				
25.00	6.04	0.82	0.00				
25.50	6.04	0.82	0.00				
26.00	6.04	0.82	0.00				
26.50	6.04	0.82	0.00				
27.00	6.04	0.82	0.00				
27.50	6.04	0.82	0.00				
28.00	6.04	0.82	0.00				
28.50	6.04	0.82	0.00				

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NRCC 24-hr C 25-Year Rainfall=6.04"

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Summary for Subcatchment 39S: PDA-5U

Runoff = 5.44 cfs @ 12.14 hrs, Volume= 0.368 af, Depth= 1.86"
 Routed to Link PDP5 : PDP5

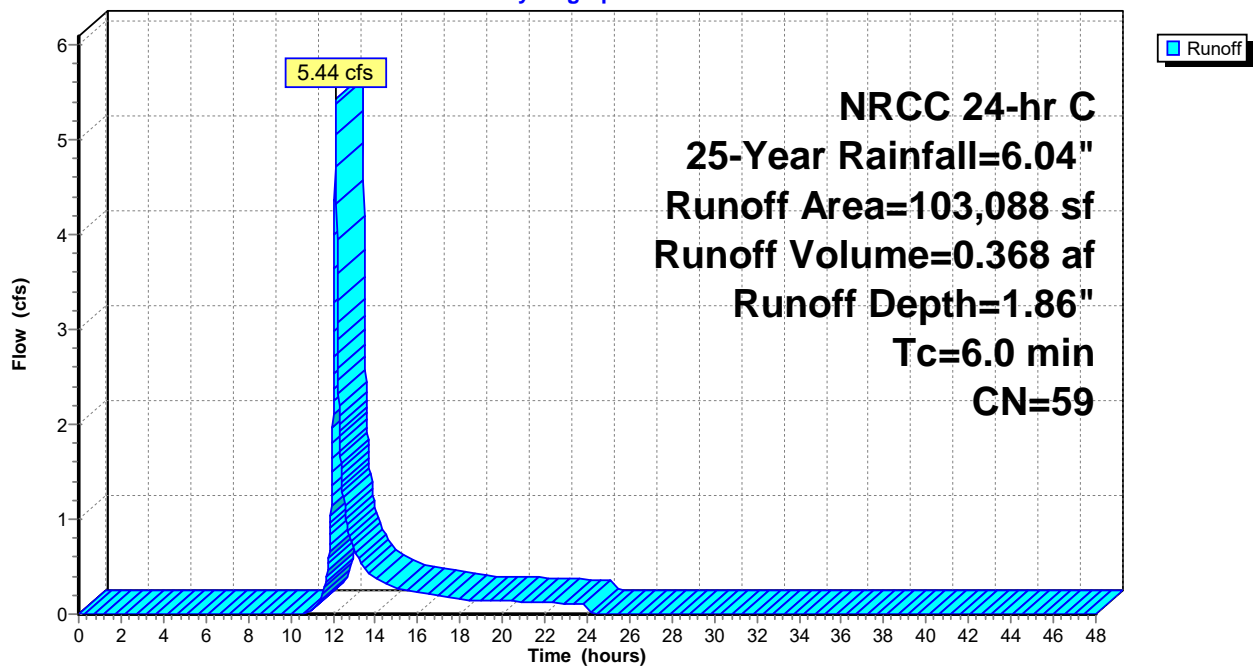
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
47,352	39	>75% Grass cover, Good, HSG A
21,707	98	Paved parking, HSG D
34,029	61	>75% Grass cover, Good, HSG B
103,088	59	Weighted Average
81,381		78.94% Pervious Area
21,707		21.06% Impervious Area

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

Subcatchment 39S: PDA-5U

Hydrograph



Hydrograph for Subcatchment 39S: PDA-5U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	1.86	0.00
0.50	0.03	0.00	0.00	29.50	6.04	1.86	0.00
1.00	0.07	0.00	0.00	30.00	6.04	1.86	0.00
1.50	0.11	0.00	0.00	30.50	6.04	1.86	0.00
2.00	0.15	0.00	0.00	31.00	6.04	1.86	0.00
2.50	0.19	0.00	0.00	31.50	6.04	1.86	0.00
3.00	0.23	0.00	0.00	32.00	6.04	1.86	0.00
3.50	0.27	0.00	0.00	32.50	6.04	1.86	0.00
4.00	0.32	0.00	0.00	33.00	6.04	1.86	0.00
4.50	0.37	0.00	0.00	33.50	6.04	1.86	0.00
5.00	0.42	0.00	0.00	34.00	6.04	1.86	0.00
5.50	0.47	0.00	0.00	34.50	6.04	1.86	0.00
6.00	0.52	0.00	0.00	35.00	6.04	1.86	0.00
6.50	0.58	0.00	0.00	35.50	6.04	1.86	0.00
7.00	0.64	0.00	0.00	36.00	6.04	1.86	0.00
7.50	0.71	0.00	0.00	36.50	6.04	1.86	0.00
8.00	0.78	0.00	0.00	37.00	6.04	1.86	0.00
8.50	0.87	0.00	0.00	37.50	6.04	1.86	0.00
9.00	0.96	0.00	0.00	38.00	6.04	1.86	0.00
9.50	1.06	0.00	0.00	38.50	6.04	1.86	0.00
10.00	1.19	0.00	0.00	39.00	6.04	1.86	0.00
10.50	1.35	0.00	0.00	39.50	6.04	1.86	0.00
11.00	1.56	0.00	0.04	40.00	6.04	1.86	0.00
11.50	1.89	0.03	0.21	40.50	6.04	1.86	0.00
12.00	2.88	0.26	2.11	41.00	6.04	1.86	0.00
12.50	4.15	0.78	1.23	41.50	6.04	1.86	0.00
13.00	4.48	0.95	0.70	42.00	6.04	1.86	0.00
13.50	4.69	1.07	0.47	42.50	6.04	1.86	0.00
14.00	4.85	1.15	0.38	43.00	6.04	1.86	0.00
14.50	4.98	1.22	0.33	43.50	6.04	1.86	0.00
15.00	5.08	1.28	0.27	44.00	6.04	1.86	0.00
15.50	5.17	1.33	0.24	44.50	6.04	1.86	0.00
16.00	5.26	1.38	0.23	45.00	6.04	1.86	0.00
16.50	5.33	1.43	0.21	45.50	6.04	1.86	0.00
17.00	5.40	1.47	0.19	46.00	6.04	1.86	0.00
17.50	5.46	1.51	0.18	46.50	6.04	1.86	0.00
18.00	5.52	1.54	0.16	47.00	6.04	1.86	0.00
18.50	5.57	1.57	0.15	47.50	6.04	1.86	0.00
19.00	5.62	1.60	0.15	48.00	6.04	1.86	0.00
19.50	5.67	1.63	0.14				
20.00	5.72	1.66	0.14				
20.50	5.77	1.69	0.13				
21.00	5.81	1.72	0.13				
21.50	5.85	1.75	0.13				
22.00	5.89	1.77	0.12				
22.50	5.93	1.80	0.12				
23.00	5.97	1.82	0.11				
23.50	6.01	1.84	0.11				
24.00	6.04	1.86	0.10				
24.50	6.04	1.86	0.00				
25.00	6.04	1.86	0.00				
25.50	6.04	1.86	0.00				
26.00	6.04	1.86	0.00				
26.50	6.04	1.86	0.00				
27.00	6.04	1.86	0.00				
27.50	6.04	1.86	0.00				
28.00	6.04	1.86	0.00				
28.50	6.04	1.86	0.00				

Summary for Subcatchment 40S: PDA-i+J-FB

Runoff = 0.30 cfs @ 12.15 hrs, Volume= 0.025 af, Depth= 0.95"
 Routed to Pond 37P : FB 1i+J

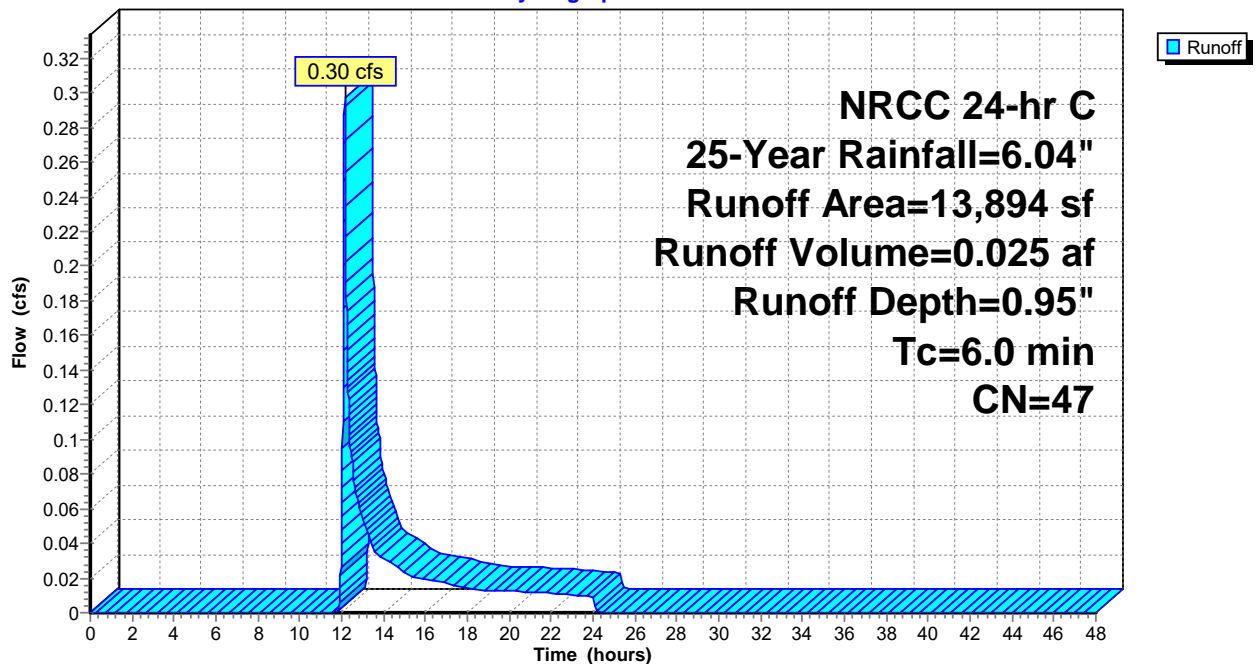
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
8,901	39	>75% Grass cover, Good, HSG A
4,993	61	>75% Grass cover, Good, HSG B
13,894	47	Weighted Average
13,894		100.00% Pervious Area

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

Subcatchment 40S: PDA-i+J-FB

Hydrograph



Hydrograph for Subcatchment 40S: PDA-i+J-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.95	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.95	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.95	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.95	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.95	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.95	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.95	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.95	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.95	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.95	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.95	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.95	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.95	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.95	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.95	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.95	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.95	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.95	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.95	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.95	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.95	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.95	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.95	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.95	0.00
12.00	2.88	0.03	0.06	41.00	6.04	0.95	0.00
12.50	4.15	0.27	0.09	41.50	6.04	0.95	0.00
13.00	4.48	0.37	0.05	42.00	6.04	0.95	0.00
13.50	4.69	0.43	0.04	42.50	6.04	0.95	0.00
14.00	4.85	0.48	0.03	43.00	6.04	0.95	0.00
14.50	4.98	0.53	0.03	43.50	6.04	0.95	0.00
15.00	5.08	0.57	0.02	44.00	6.04	0.95	0.00
15.50	5.17	0.60	0.02	44.50	6.04	0.95	0.00
16.00	5.26	0.63	0.02	45.00	6.04	0.95	0.00
16.50	5.33	0.66	0.02	45.50	6.04	0.95	0.00
17.00	5.40	0.69	0.02	46.00	6.04	0.95	0.00
17.50	5.46	0.71	0.02	46.50	6.04	0.95	0.00
18.00	5.52	0.73	0.01	47.00	6.04	0.95	0.00
18.50	5.57	0.75	0.01	47.50	6.04	0.95	0.00
19.00	5.62	0.78	0.01	48.00	6.04	0.95	0.00
19.50	5.67	0.80	0.01				
20.00	5.72	0.81	0.01				
20.50	5.77	0.83	0.01				
21.00	5.81	0.85	0.01				
21.50	5.85	0.87	0.01				
22.00	5.89	0.89	0.01				
22.50	5.93	0.90	0.01				
23.00	5.97	0.92	0.01				
23.50	6.01	0.94	0.01				
24.00	6.04	0.95	0.01				
24.50	6.04	0.95	0.00				
25.00	6.04	0.95	0.00				
25.50	6.04	0.95	0.00				
26.00	6.04	0.95	0.00				
26.50	6.04	0.95	0.00				
27.00	6.04	0.95	0.00				
27.50	6.04	0.95	0.00				
28.00	6.04	0.95	0.00				
28.50	6.04	0.95	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

Prepared by Colliers Engineering & Design

Printed 8/12/2024

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Summary for Subcatchment 41S: PDA-5A

Runoff = 20.29 cfs @ 12.13 hrs, Volume= 1.332 af, Depth= 3.22"
 Routed to Pond 39P : FB 5A

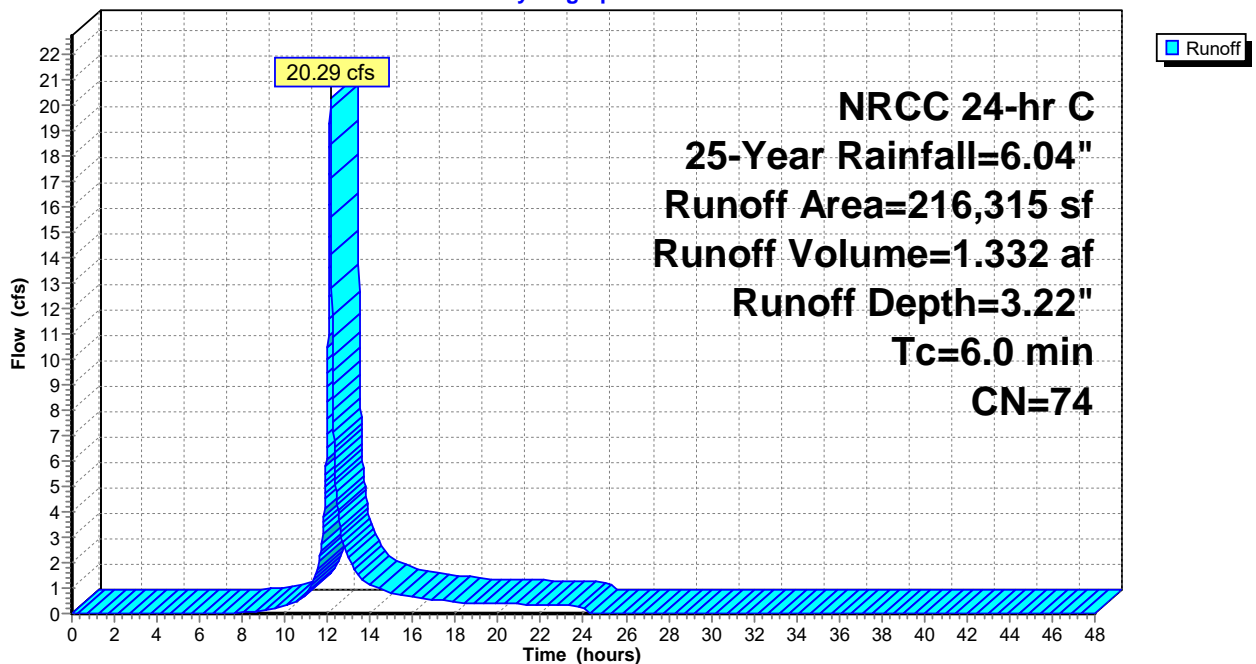
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
40,852	98	Paved parking, HSG D
78,273	61	>75% Grass cover, Good, HSG B
37,290	39	>75% Grass cover, Good, HSG A
59,900	98	Unconnected roofs, HSG D
216,315	74	Weighted Average
115,563		53.42% Pervious Area
100,752		46.58% Impervious Area
59,900		59.45% Unconnected

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

Subcatchment 41S: PDA-5A

Hydrograph



Hydrograph for Subcatchment 41S: PDA-5A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	3.22	0.00
0.50	0.03	0.00	0.00	29.50	6.04	3.22	0.00
1.00	0.07	0.00	0.00	30.00	6.04	3.22	0.00
1.50	0.11	0.00	0.00	30.50	6.04	3.22	0.00
2.00	0.15	0.00	0.00	31.00	6.04	3.22	0.00
2.50	0.19	0.00	0.00	31.50	6.04	3.22	0.00
3.00	0.23	0.00	0.00	32.00	6.04	3.22	0.00
3.50	0.27	0.00	0.00	32.50	6.04	3.22	0.00
4.00	0.32	0.00	0.00	33.00	6.04	3.22	0.00
4.50	0.37	0.00	0.00	33.50	6.04	3.22	0.00
5.00	0.42	0.00	0.00	34.00	6.04	3.22	0.00
5.50	0.47	0.00	0.00	34.50	6.04	3.22	0.00
6.00	0.52	0.00	0.00	35.00	6.04	3.22	0.00
6.50	0.58	0.00	0.00	35.50	6.04	3.22	0.00
7.00	0.64	0.00	0.00	36.00	6.04	3.22	0.00
7.50	0.71	0.00	0.00	36.50	6.04	3.22	0.00
8.00	0.78	0.00	0.03	37.00	6.04	3.22	0.00
8.50	0.87	0.01	0.07	37.50	6.04	3.22	0.00
9.00	0.96	0.02	0.11	38.00	6.04	3.22	0.00
9.50	1.06	0.03	0.19	38.50	6.04	3.22	0.00
10.00	1.19	0.06	0.30	39.00	6.04	3.22	0.00
10.50	1.35	0.10	0.44	39.50	6.04	3.22	0.00
11.00	1.56	0.17	0.81	40.00	6.04	3.22	0.00
11.50	1.89	0.30	1.62	40.50	6.04	3.22	0.00
12.00	2.88	0.83	9.48	41.00	6.04	3.22	0.00
12.50	4.15	1.71	4.00	41.50	6.04	3.22	0.00
13.00	4.48	1.96	2.19	42.00	6.04	3.22	0.00
13.50	4.69	2.12	1.44	42.50	6.04	3.22	0.00
14.00	4.85	2.24	1.14	43.00	6.04	3.22	0.00
14.50	4.98	2.35	0.97	43.50	6.04	3.22	0.00
15.00	5.08	2.43	0.79	44.00	6.04	3.22	0.00
15.50	5.17	2.50	0.71	44.50	6.04	3.22	0.00
16.00	5.26	2.57	0.66	45.00	6.04	3.22	0.00
16.50	5.33	2.63	0.61	45.50	6.04	3.22	0.00
17.00	5.40	2.69	0.55	46.00	6.04	3.22	0.00
17.50	5.46	2.74	0.50	46.50	6.04	3.22	0.00
18.00	5.52	2.79	0.45	47.00	6.04	3.22	0.00
18.50	5.57	2.83	0.43	47.50	6.04	3.22	0.00
19.00	5.62	2.87	0.41	48.00	6.04	3.22	0.00
19.50	5.67	2.91	0.40				
20.00	5.72	2.95	0.39				
20.50	5.77	2.99	0.38				
21.00	5.81	3.03	0.36				
21.50	5.85	3.06	0.35				
22.00	5.89	3.10	0.34				
22.50	5.93	3.13	0.32				
23.00	5.97	3.16	0.31				
23.50	6.01	3.19	0.30				
24.00	6.04	3.22	0.29				
24.50	6.04	3.22	0.00				
25.00	6.04	3.22	0.00				
25.50	6.04	3.22	0.00				
26.00	6.04	3.22	0.00				
26.50	6.04	3.22	0.00				
27.00	6.04	3.22	0.00				
27.50	6.04	3.22	0.00				
28.00	6.04	3.22	0.00				
28.50	6.04	3.22	0.00				

Summary for Subcatchment 42S: PDA-1J-B

Runoff = 1.25 cfs @ 12.14 hrs, Volume= 0.090 af, Depth= 1.39"
 Routed to Pond 53P : Bioretention J basin

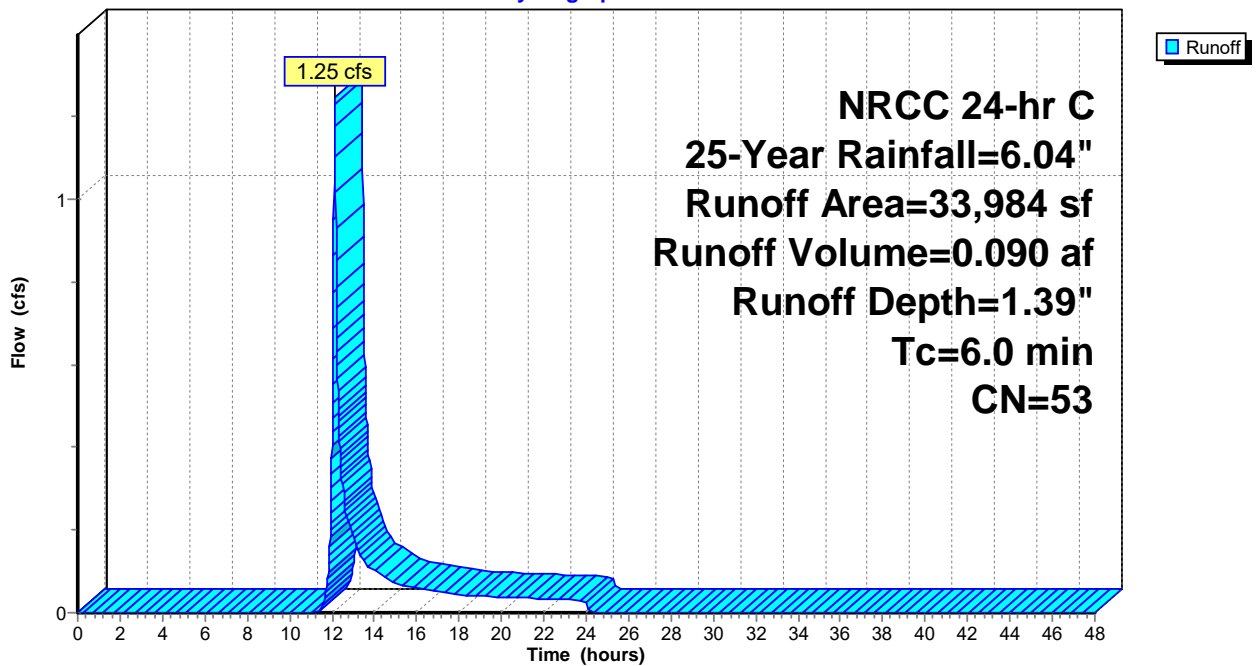
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
11,676	39	>75% Grass cover, Good, HSG A
22,308	61	>75% Grass cover, Good, HSG B
33,984	53	Weighted Average
33,984		100.00% Pervious Area

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

Subcatchment 42S: PDA-1J-B

Hydrograph



Hydrograph for Subcatchment 42S: PDA-1J-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	1.39	0.00
0.50	0.03	0.00	0.00	29.50	6.04	1.39	0.00
1.00	0.07	0.00	0.00	30.00	6.04	1.39	0.00
1.50	0.11	0.00	0.00	30.50	6.04	1.39	0.00
2.00	0.15	0.00	0.00	31.00	6.04	1.39	0.00
2.50	0.19	0.00	0.00	31.50	6.04	1.39	0.00
3.00	0.23	0.00	0.00	32.00	6.04	1.39	0.00
3.50	0.27	0.00	0.00	32.50	6.04	1.39	0.00
4.00	0.32	0.00	0.00	33.00	6.04	1.39	0.00
4.50	0.37	0.00	0.00	33.50	6.04	1.39	0.00
5.00	0.42	0.00	0.00	34.00	6.04	1.39	0.00
5.50	0.47	0.00	0.00	34.50	6.04	1.39	0.00
6.00	0.52	0.00	0.00	35.00	6.04	1.39	0.00
6.50	0.58	0.00	0.00	35.50	6.04	1.39	0.00
7.00	0.64	0.00	0.00	36.00	6.04	1.39	0.00
7.50	0.71	0.00	0.00	36.50	6.04	1.39	0.00
8.00	0.78	0.00	0.00	37.00	6.04	1.39	0.00
8.50	0.87	0.00	0.00	37.50	6.04	1.39	0.00
9.00	0.96	0.00	0.00	38.00	6.04	1.39	0.00
9.50	1.06	0.00	0.00	38.50	6.04	1.39	0.00
10.00	1.19	0.00	0.00	39.00	6.04	1.39	0.00
10.50	1.35	0.00	0.00	39.50	6.04	1.39	0.00
11.00	1.56	0.00	0.00	40.00	6.04	1.39	0.00
11.50	1.89	0.00	0.01	40.50	6.04	1.39	0.00
12.00	2.88	0.12	0.41	41.00	6.04	1.39	0.00
12.50	4.15	0.50	0.31	41.50	6.04	1.39	0.00
13.00	4.48	0.63	0.18	42.00	6.04	1.39	0.00
13.50	4.69	0.72	0.13	42.50	6.04	1.39	0.00
14.00	4.85	0.79	0.10	43.00	6.04	1.39	0.00
14.50	4.98	0.85	0.09	43.50	6.04	1.39	0.00
15.00	5.08	0.90	0.07	44.00	6.04	1.39	0.00
15.50	5.17	0.94	0.07	44.50	6.04	1.39	0.00
16.00	5.26	0.98	0.06	45.00	6.04	1.39	0.00
16.50	5.33	1.02	0.06	45.50	6.04	1.39	0.00
17.00	5.40	1.05	0.05	46.00	6.04	1.39	0.00
17.50	5.46	1.08	0.05	46.50	6.04	1.39	0.00
18.00	5.52	1.11	0.04	47.00	6.04	1.39	0.00
18.50	5.57	1.14	0.04	47.50	6.04	1.39	0.00
19.00	5.62	1.17	0.04	48.00	6.04	1.39	0.00
19.50	5.67	1.19	0.04				
20.00	5.72	1.22	0.04				
20.50	5.77	1.24	0.04				
21.00	5.81	1.26	0.04				
21.50	5.85	1.29	0.03				
22.00	5.89	1.31	0.03				
22.50	5.93	1.33	0.03				
23.00	5.97	1.35	0.03				
23.50	6.01	1.37	0.03				
24.00	6.04	1.39	0.03				
24.50	6.04	1.39	0.00				
25.00	6.04	1.39	0.00				
25.50	6.04	1.39	0.00				
26.00	6.04	1.39	0.00				
26.50	6.04	1.39	0.00				
27.00	6.04	1.39	0.00				
27.50	6.04	1.39	0.00				
28.00	6.04	1.39	0.00				
28.50	6.04	1.39	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment 43S: PDA-1B

Runoff = 49.47 cfs @ 12.13 hrs, Volume= 3.389 af, Depth= 4.45"
 Routed to Pond 44P : FB 1B

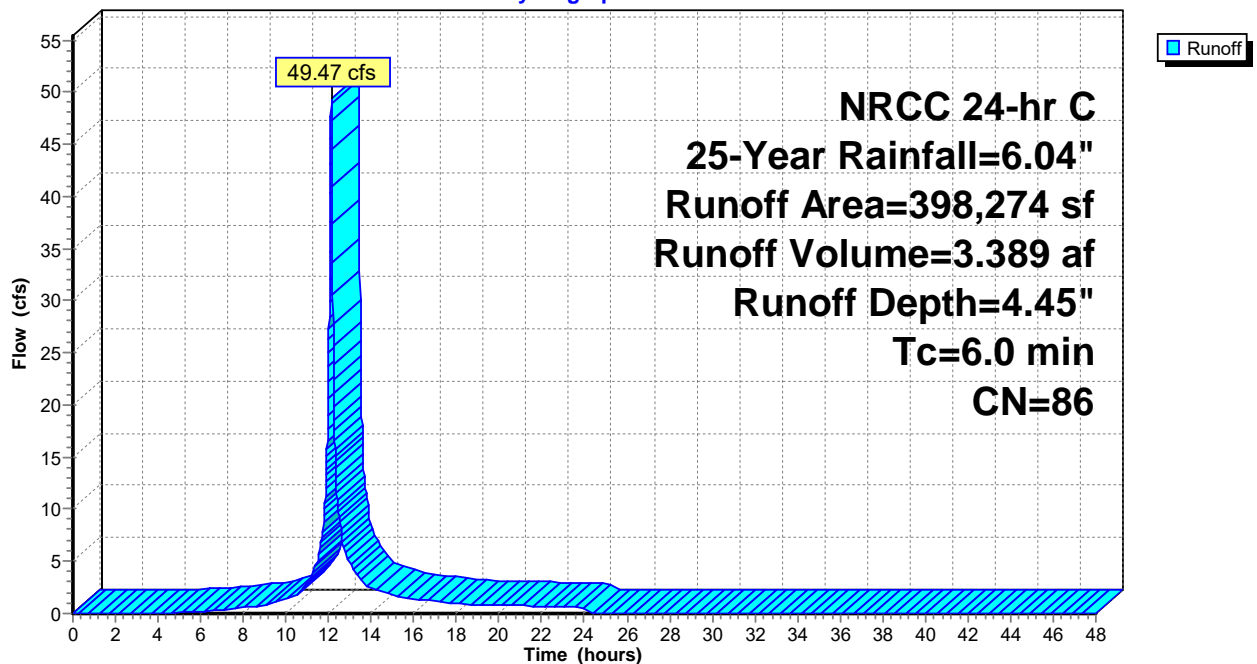
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
292,844	98	Unconnected pavement, HSG D
54,536	39	>75% Grass cover, Good, HSG A
24,842	61	>75% Grass cover, Good, HSG B
26,052	80	>75% Grass cover, Good, HSG D
398,274	86	Weighted Average
105,430		26.47% Pervious Area
292,844		73.53% Impervious Area
292,844		100.00% Unconnected

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

Subcatchment 43S: PDA-1B

Hydrograph



Hydrograph for Subcatchment 43S: PDA-1B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	4.45	0.00
0.50	0.03	0.00	0.00	29.50	6.04	4.45	0.00
1.00	0.07	0.00	0.00	30.00	6.04	4.45	0.00
1.50	0.11	0.00	0.00	30.50	6.04	4.45	0.00
2.00	0.15	0.00	0.00	31.00	6.04	4.45	0.00
2.50	0.19	0.00	0.00	31.50	6.04	4.45	0.00
3.00	0.23	0.00	0.00	32.00	6.04	4.45	0.00
3.50	0.27	0.00	0.00	32.50	6.04	4.45	0.00
4.00	0.32	0.00	0.00	33.00	6.04	4.45	0.00
4.50	0.37	0.00	0.03	33.50	6.04	4.45	0.00
5.00	0.42	0.00	0.08	34.00	6.04	4.45	0.00
5.50	0.47	0.01	0.14	34.50	6.04	4.45	0.00
6.00	0.52	0.02	0.19	35.00	6.04	4.45	0.00
6.50	0.58	0.03	0.26	35.50	6.04	4.45	0.00
7.00	0.64	0.05	0.35	36.00	6.04	4.45	0.00
7.50	0.71	0.07	0.45	36.50	6.04	4.45	0.00
8.00	0.78	0.10	0.56	37.00	6.04	4.45	0.00
8.50	0.87	0.14	0.67	37.50	6.04	4.45	0.00
9.00	0.96	0.18	0.80	38.00	6.04	4.45	0.00
9.50	1.06	0.23	1.09	38.50	6.04	4.45	0.00
10.00	1.19	0.30	1.42	39.00	6.04	4.45	0.00
10.50	1.35	0.39	1.81	39.50	6.04	4.45	0.00
11.00	1.56	0.53	2.93	40.00	6.04	4.45	0.00
11.50	1.89	0.77	5.11	40.50	6.04	4.45	0.00
12.00	2.88	1.56	25.09	41.00	6.04	4.45	0.00
12.50	4.15	2.68	9.07	41.50	6.04	4.45	0.00
13.00	4.48	2.99	4.85	42.00	6.04	4.45	0.00
13.50	4.69	3.18	3.15	42.50	6.04	4.45	0.00
14.00	4.85	3.32	2.48	43.00	6.04	4.45	0.00
14.50	4.98	3.44	2.09	43.50	6.04	4.45	0.00
15.00	5.08	3.54	1.70	44.00	6.04	4.45	0.00
15.50	5.17	3.63	1.51	44.50	6.04	4.45	0.00
16.00	5.26	3.71	1.40	45.00	6.04	4.45	0.00
16.50	5.33	3.78	1.29	45.50	6.04	4.45	0.00
17.00	5.40	3.84	1.18	46.00	6.04	4.45	0.00
17.50	5.46	3.90	1.06	46.50	6.04	4.45	0.00
18.00	5.52	3.96	0.95	47.00	6.04	4.45	0.00
18.50	5.57	4.01	0.90	47.50	6.04	4.45	0.00
19.00	5.62	4.05	0.87	48.00	6.04	4.45	0.00
19.50	5.67	4.10	0.84				
20.00	5.72	4.14	0.81				
20.50	5.77	4.19	0.79				
21.00	5.81	4.23	0.76				
21.50	5.85	4.27	0.73				
22.00	5.89	4.31	0.70				
22.50	5.93	4.35	0.67				
23.00	5.97	4.38	0.65				
23.50	6.01	4.41	0.62				
24.00	6.04	4.45	0.59				
24.50	6.04	4.45	0.00				
25.00	6.04	4.45	0.00				
25.50	6.04	4.45	0.00				
26.00	6.04	4.45	0.00				
26.50	6.04	4.45	0.00				
27.00	6.04	4.45	0.00				
27.50	6.04	4.45	0.00				
28.00	6.04	4.45	0.00				
28.50	6.04	4.45	0.00				

Summary for Subcatchment 46S: PDA-1H

Runoff = 61.84 cfs @ 12.13 hrs, Volume= 4.807 af, Depth= 5.80"
 Routed to Pond 51P : FB 1H

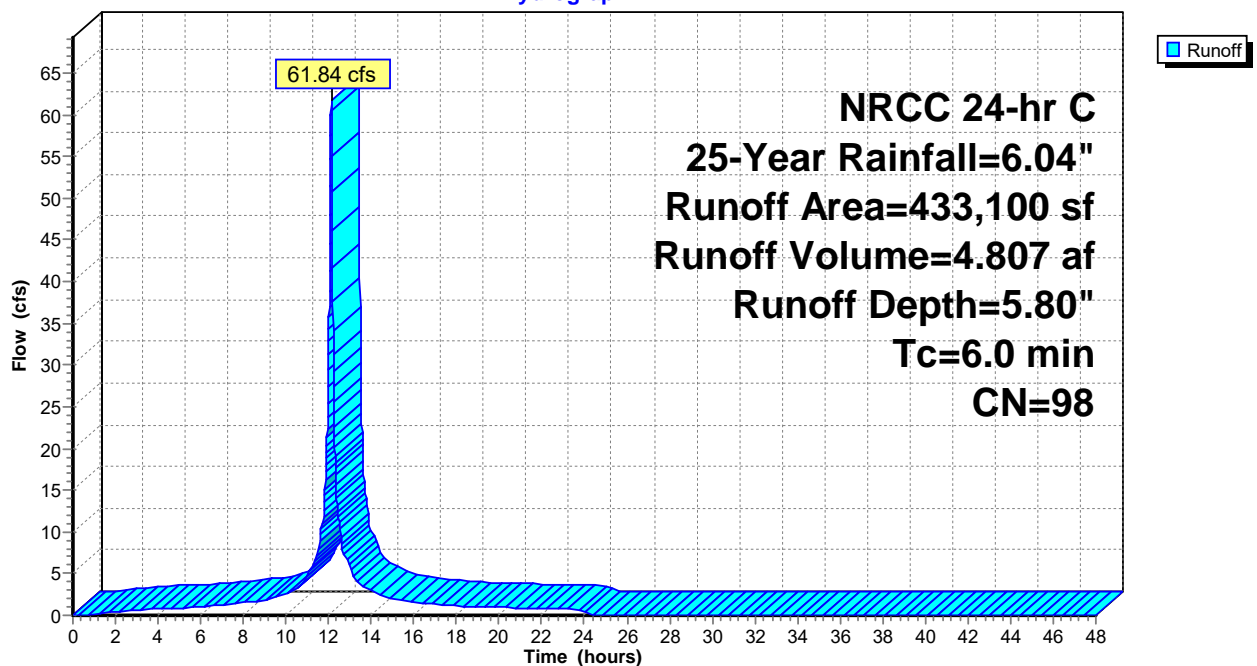
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
433,100	98	Roofs, HSG D
433,100		100.00% Impervious Area

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

Subcatchment 46S: PDA-1H

Hydrograph



Hydrograph for Subcatchment 46S: PDA-1H

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	5.80	0.00
0.50	0.03	0.00	0.00	29.50	6.04	5.80	0.00
1.00	0.07	0.00	0.14	30.00	6.04	5.80	0.00
1.50	0.11	0.02	0.30	30.50	6.04	5.80	0.00
2.00	0.15	0.04	0.43	31.00	6.04	5.80	0.00
2.50	0.19	0.06	0.53	31.50	6.04	5.80	0.00
3.00	0.23	0.09	0.62	32.00	6.04	5.80	0.00
3.50	0.27	0.12	0.69	32.50	6.04	5.80	0.00
4.00	0.32	0.16	0.75	33.00	6.04	5.80	0.00
4.50	0.37	0.20	0.81	33.50	6.04	5.80	0.00
5.00	0.42	0.24	0.87	34.00	6.04	5.80	0.00
5.50	0.47	0.29	0.91	34.50	6.04	5.80	0.00
6.00	0.52	0.33	0.96	35.00	6.04	5.80	0.00
6.50	0.58	0.39	1.09	35.50	6.04	5.80	0.00
7.00	0.64	0.45	1.22	36.00	6.04	5.80	0.00
7.50	0.71	0.51	1.36	36.50	6.04	5.80	0.00
8.00	0.78	0.58	1.50	37.00	6.04	5.80	0.00
8.50	0.87	0.66	1.64	37.50	6.04	5.80	0.00
9.00	0.96	0.75	1.78	38.00	6.04	5.80	0.00
9.50	1.06	0.85	2.21	38.50	6.04	5.80	0.00
10.00	1.19	0.98	2.67	39.00	6.04	5.80	0.00
10.50	1.35	1.13	3.14	39.50	6.04	5.80	0.00
11.00	1.56	1.34	4.72	40.00	6.04	5.80	0.00
11.50	1.89	1.67	7.55	40.50	6.04	5.80	0.00
12.00	2.88	2.64	33.00	41.00	6.04	5.80	0.00
12.50	4.15	3.91	10.85	41.50	6.04	5.80	0.00
13.00	4.48	4.25	5.72	42.00	6.04	5.80	0.00
13.50	4.69	4.46	3.70	42.50	6.04	5.80	0.00
14.00	4.85	4.61	2.90	43.00	6.04	5.80	0.00
14.50	4.98	4.74	2.44	43.50	6.04	5.80	0.00
15.00	5.08	4.85	1.97	44.00	6.04	5.80	0.00
15.50	5.17	4.94	1.76	44.50	6.04	5.80	0.00
16.00	5.26	5.02	1.62	45.00	6.04	5.80	0.00
16.50	5.33	5.09	1.49	45.50	6.04	5.80	0.00
17.00	5.40	5.16	1.36	46.00	6.04	5.80	0.00
17.50	5.46	5.23	1.23	46.50	6.04	5.80	0.00
18.00	5.52	5.28	1.10	47.00	6.04	5.80	0.00
18.50	5.57	5.34	1.03	47.50	6.04	5.80	0.00
19.00	5.62	5.39	1.00	48.00	6.04	5.80	0.00
19.50	5.67	5.44	0.97				
20.00	5.72	5.48	0.94				
20.50	5.77	5.53	0.90				
21.00	5.81	5.57	0.87				
21.50	5.85	5.61	0.84				
22.00	5.89	5.66	0.80				
22.50	5.93	5.69	0.77				
23.00	5.97	5.73	0.74				
23.50	6.01	5.77	0.71				
24.00	6.04	5.80	0.68				
24.50	6.04	5.80	0.00				
25.00	6.04	5.80	0.00				
25.50	6.04	5.80	0.00				
26.00	6.04	5.80	0.00				
26.50	6.04	5.80	0.00				
27.00	6.04	5.80	0.00				
27.50	6.04	5.80	0.00				
28.00	6.04	5.80	0.00				
28.50	6.04	5.80	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment 47S: PDA-4A

Runoff = 8.37 cfs @ 12.13 hrs, Volume= 0.549 af, Depth= 2.74"
 Routed to Pond B4B : Bioretention 4A

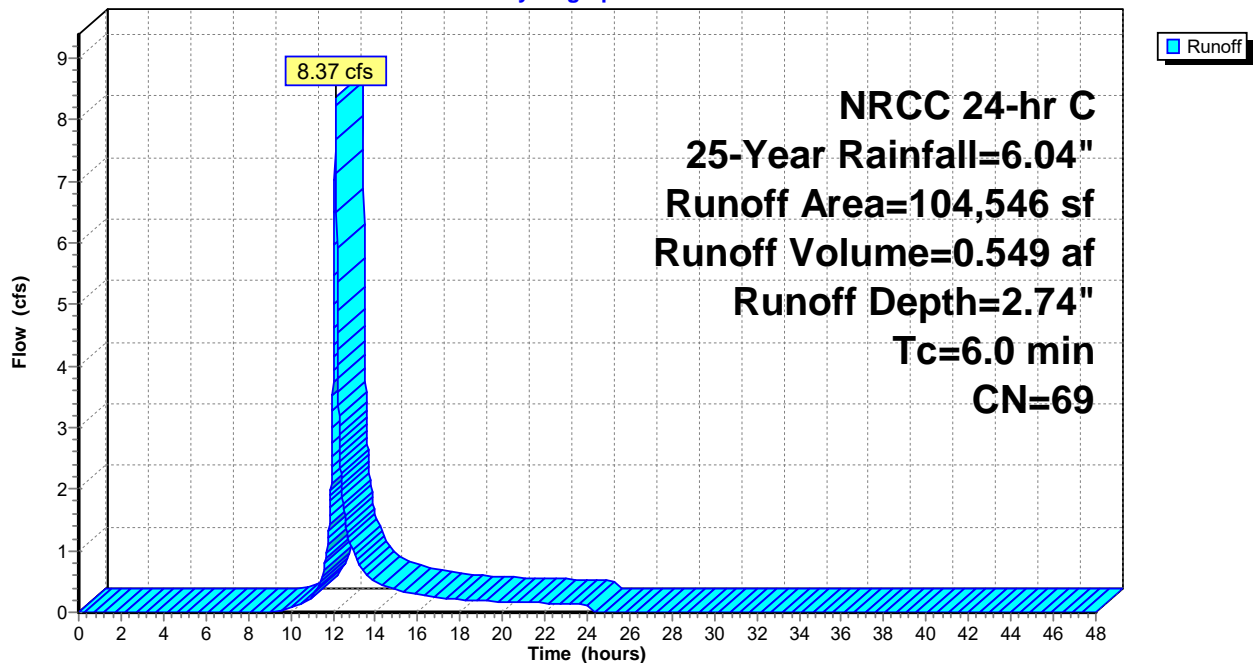
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
9,923	80	>75% Grass cover, Good, HSG D
36,179	98	Paved parking, HSG D
24,698	61	>75% Grass cover, Good, HSG B
33,746	39	>75% Grass cover, Good, HSG A
104,546	69	Weighted Average
68,367		65.39% Pervious Area
36,179		34.61% Impervious Area

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

Subcatchment 47S: PDA-4A

Hydrograph



Hydrograph for Subcatchment 47S: PDA-4A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	2.74	0.00
0.50	0.03	0.00	0.00	29.50	6.04	2.74	0.00
1.00	0.07	0.00	0.00	30.00	6.04	2.74	0.00
1.50	0.11	0.00	0.00	30.50	6.04	2.74	0.00
2.00	0.15	0.00	0.00	31.00	6.04	2.74	0.00
2.50	0.19	0.00	0.00	31.50	6.04	2.74	0.00
3.00	0.23	0.00	0.00	32.00	6.04	2.74	0.00
3.50	0.27	0.00	0.00	32.50	6.04	2.74	0.00
4.00	0.32	0.00	0.00	33.00	6.04	2.74	0.00
4.50	0.37	0.00	0.00	33.50	6.04	2.74	0.00
5.00	0.42	0.00	0.00	34.00	6.04	2.74	0.00
5.50	0.47	0.00	0.00	34.50	6.04	2.74	0.00
6.00	0.52	0.00	0.00	35.00	6.04	2.74	0.00
6.50	0.58	0.00	0.00	35.50	6.04	2.74	0.00
7.00	0.64	0.00	0.00	36.00	6.04	2.74	0.00
7.50	0.71	0.00	0.00	36.50	6.04	2.74	0.00
8.00	0.78	0.00	0.00	37.00	6.04	2.74	0.00
8.50	0.87	0.00	0.00	37.50	6.04	2.74	0.00
9.00	0.96	0.00	0.01	38.00	6.04	2.74	0.00
9.50	1.06	0.01	0.03	38.50	6.04	2.74	0.00
10.00	1.19	0.02	0.07	39.00	6.04	2.74	0.00
10.50	1.35	0.04	0.13	39.50	6.04	2.74	0.00
11.00	1.56	0.08	0.26	40.00	6.04	2.74	0.00
11.50	1.89	0.18	0.57	40.50	6.04	2.74	0.00
12.00	2.88	0.60	3.74	41.00	6.04	2.74	0.00
12.50	4.15	1.36	1.72	41.50	6.04	2.74	0.00
13.00	4.48	1.59	0.95	42.00	6.04	2.74	0.00
13.50	4.69	1.74	0.63	42.50	6.04	2.74	0.00
14.00	4.85	1.85	0.50	43.00	6.04	2.74	0.00
14.50	4.98	1.94	0.43	43.50	6.04	2.74	0.00
15.00	5.08	2.02	0.35	44.00	6.04	2.74	0.00
15.50	5.17	2.08	0.31	44.50	6.04	2.74	0.00
16.00	5.26	2.14	0.29	45.00	6.04	2.74	0.00
16.50	5.33	2.20	0.27	45.50	6.04	2.74	0.00
17.00	5.40	2.25	0.25	46.00	6.04	2.74	0.00
17.50	5.46	2.30	0.22	46.50	6.04	2.74	0.00
18.00	5.52	2.34	0.20	47.00	6.04	2.74	0.00
18.50	5.57	2.38	0.19	47.50	6.04	2.74	0.00
19.00	5.62	2.42	0.18	48.00	6.04	2.74	0.00
19.50	5.67	2.46	0.18				
20.00	5.72	2.50	0.17				
20.50	5.77	2.53	0.17				
21.00	5.81	2.57	0.16				
21.50	5.85	2.60	0.16				
22.00	5.89	2.63	0.15				
22.50	5.93	2.66	0.14				
23.00	5.97	2.69	0.14				
23.50	6.01	2.72	0.13				
24.00	6.04	2.74	0.13				
24.50	6.04	2.74	0.00				
25.00	6.04	2.74	0.00				
25.50	6.04	2.74	0.00				
26.00	6.04	2.74	0.00				
26.50	6.04	2.74	0.00				
27.00	6.04	2.74	0.00				
27.50	6.04	2.74	0.00				
28.00	6.04	2.74	0.00				
28.50	6.04	2.74	0.00				

Summary for Subcatchment 48S: PDA-1G-FB

Runoff = 0.06 cfs @ 12.18 hrs, Volume= 0.015 af, Depth= 0.46"
 Routed to Pond 55P : FB 1G

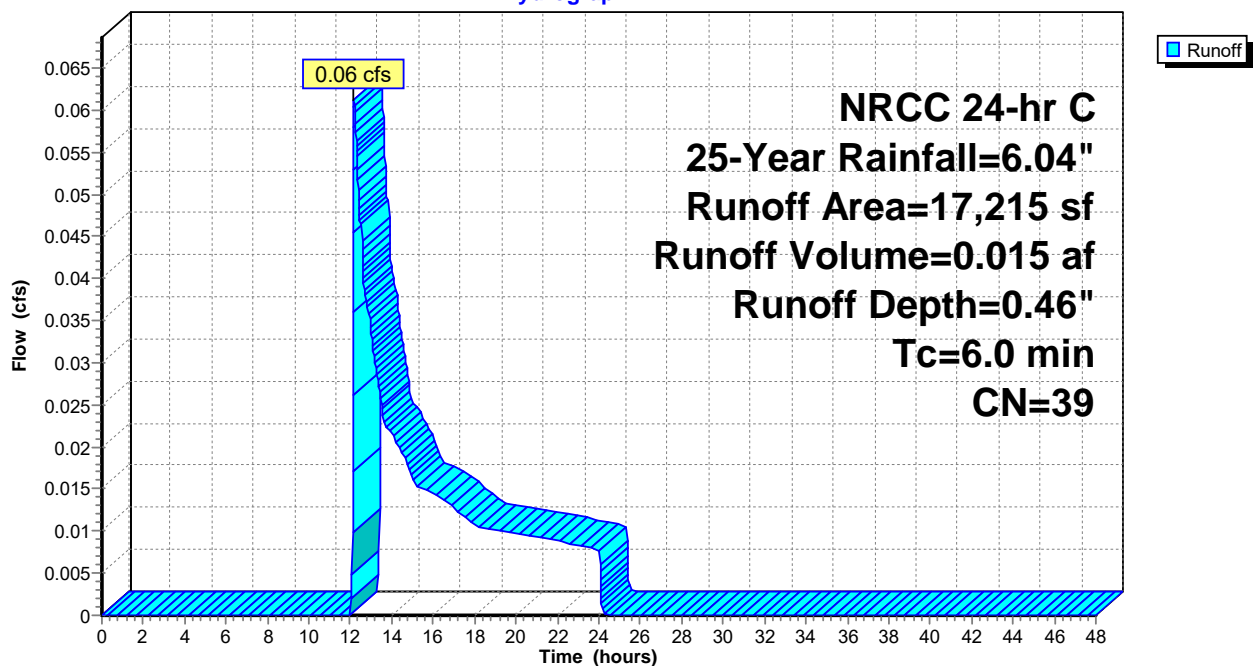
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
17,215	39	>75% Grass cover, Good, HSG A
17,215		100.00% Pervious Area

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

Subcatchment 48S: PDA-1G-FB

Hydrograph



Hydrograph for Subcatchment 48S: PDA-1G-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.46	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.46	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.46	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.46	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.46	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.46	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.46	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.46	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.46	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.46	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.46	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.46	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.46	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.46	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.46	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.46	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.46	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.46	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.46	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.46	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.46	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.46	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.46	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.46	0.00
12.00	2.88	0.00	0.00	41.00	6.04	0.46	0.00
12.50	4.15	0.06	0.05	41.50	6.04	0.46	0.00
13.00	4.48	0.11	0.03	42.00	6.04	0.46	0.00
13.50	4.69	0.14	0.03	42.50	6.04	0.46	0.00
14.00	4.85	0.17	0.02	43.00	6.04	0.46	0.00
14.50	4.98	0.20	0.02	43.50	6.04	0.46	0.00
15.00	5.08	0.22	0.02	44.00	6.04	0.46	0.00
15.50	5.17	0.24	0.02	44.50	6.04	0.46	0.00
16.00	5.26	0.25	0.01	45.00	6.04	0.46	0.00
16.50	5.33	0.27	0.01	45.50	6.04	0.46	0.00
17.00	5.40	0.29	0.01	46.00	6.04	0.46	0.00
17.50	5.46	0.30	0.01	46.50	6.04	0.46	0.00
18.00	5.52	0.32	0.01	47.00	6.04	0.46	0.00
18.50	5.57	0.33	0.01	47.50	6.04	0.46	0.00
19.00	5.62	0.34	0.01	48.00	6.04	0.46	0.00
19.50	5.67	0.36	0.01				
20.00	5.72	0.37	0.01				
20.50	5.77	0.38	0.01				
21.00	5.81	0.39	0.01				
21.50	5.85	0.40	0.01				
22.00	5.89	0.42	0.01				
22.50	5.93	0.43	0.01				
23.00	5.97	0.44	0.01				
23.50	6.01	0.45	0.01				
24.00	6.04	0.46	0.01				
24.50	6.04	0.46	0.00				
25.00	6.04	0.46	0.00				
25.50	6.04	0.46	0.00				
26.00	6.04	0.46	0.00				
26.50	6.04	0.46	0.00				
27.00	6.04	0.46	0.00				
27.50	6.04	0.46	0.00				
28.00	6.04	0.46	0.00				
28.50	6.04	0.46	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

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Summary for Subcatchment 49S: PDA-4B

Runoff = 27.78 cfs @ 12.13 hrs, Volume= 1.882 af, Depth= 4.23"
 Routed to Pond 29P : Bioretention 4B

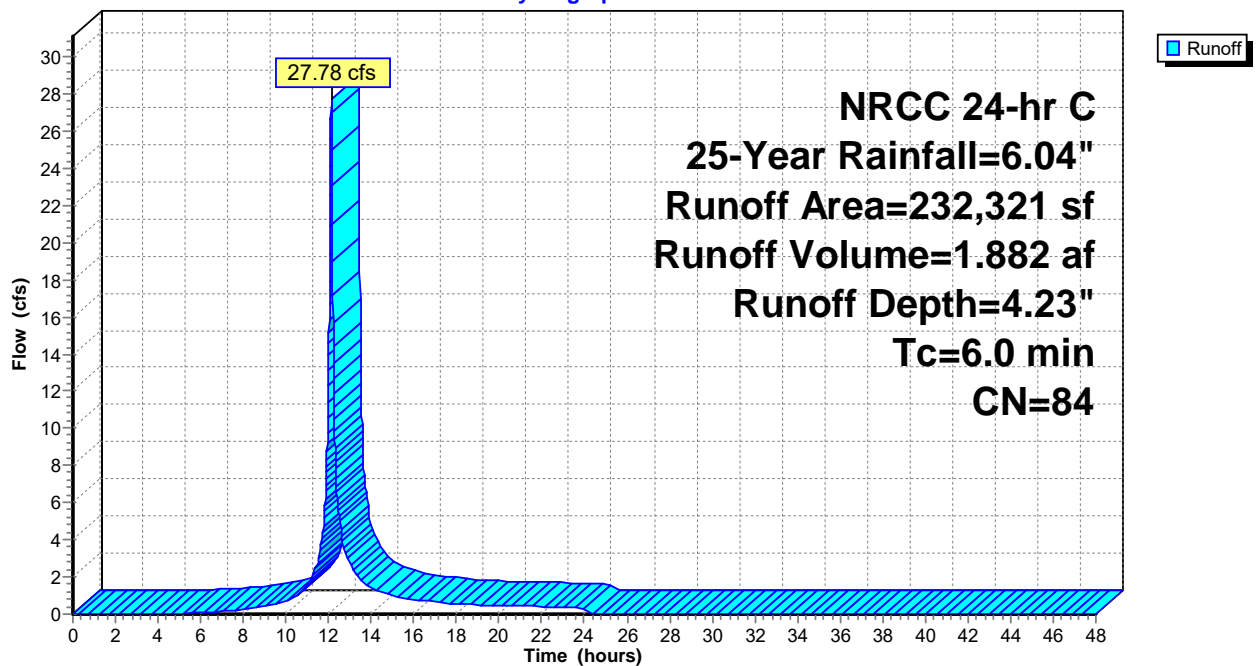
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
146,145	98	Paved parking, HSG D
86,176	61	>75% Grass cover, Good, HSG B
0	98	Unconnected roofs, HSG D
232,321	84	Weighted Average
86,176		37.09% Pervious Area
146,145		62.91% Impervious Area

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

Subcatchment 49S: PDA-4B

Hydrograph



Hydrograph for Subcatchment 49S: PDA-4B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	4.23	0.00
0.50	0.03	0.00	0.00	29.50	6.04	4.23	0.00
1.00	0.07	0.00	0.00	30.00	6.04	4.23	0.00
1.50	0.11	0.00	0.00	30.50	6.04	4.23	0.00
2.00	0.15	0.00	0.00	31.00	6.04	4.23	0.00
2.50	0.19	0.00	0.00	31.50	6.04	4.23	0.00
3.00	0.23	0.00	0.00	32.00	6.04	4.23	0.00
3.50	0.27	0.00	0.00	32.50	6.04	4.23	0.00
4.00	0.32	0.00	0.00	33.00	6.04	4.23	0.00
4.50	0.37	0.00	0.00	33.50	6.04	4.23	0.00
5.00	0.42	0.00	0.01	34.00	6.04	4.23	0.00
5.50	0.47	0.00	0.04	34.50	6.04	4.23	0.00
6.00	0.52	0.01	0.07	35.00	6.04	4.23	0.00
6.50	0.58	0.02	0.11	35.50	6.04	4.23	0.00
7.00	0.64	0.03	0.15	36.00	6.04	4.23	0.00
7.50	0.71	0.05	0.20	36.50	6.04	4.23	0.00
8.00	0.78	0.07	0.26	37.00	6.04	4.23	0.00
8.50	0.87	0.10	0.33	37.50	6.04	4.23	0.00
9.00	0.96	0.13	0.40	38.00	6.04	4.23	0.00
9.50	1.06	0.18	0.55	38.50	6.04	4.23	0.00
10.00	1.19	0.24	0.73	39.00	6.04	4.23	0.00
10.50	1.35	0.32	0.95	39.50	6.04	4.23	0.00
11.00	1.56	0.45	1.56	40.00	6.04	4.23	0.00
11.50	1.89	0.67	2.76	40.50	6.04	4.23	0.00
12.00	2.88	1.42	13.92	41.00	6.04	4.23	0.00
12.50	4.15	2.50	5.15	41.50	6.04	4.23	0.00
13.00	4.48	2.80	2.76	42.00	6.04	4.23	0.00
13.50	4.69	2.99	1.80	42.50	6.04	4.23	0.00
14.00	4.85	3.13	1.42	43.00	6.04	4.23	0.00
14.50	4.98	3.25	1.20	43.50	6.04	4.23	0.00
15.00	5.08	3.35	0.97	44.00	6.04	4.23	0.00
15.50	5.17	3.43	0.87	44.50	6.04	4.23	0.00
16.00	5.26	3.50	0.80	45.00	6.04	4.23	0.00
16.50	5.33	3.58	0.74	45.50	6.04	4.23	0.00
17.00	5.40	3.64	0.67	46.00	6.04	4.23	0.00
17.50	5.46	3.70	0.61	46.50	6.04	4.23	0.00
18.00	5.52	3.75	0.55	47.00	6.04	4.23	0.00
18.50	5.57	3.80	0.52	47.50	6.04	4.23	0.00
19.00	5.62	3.85	0.50	48.00	6.04	4.23	0.00
19.50	5.67	3.89	0.48				
20.00	5.72	3.94	0.47				
20.50	5.77	3.98	0.45				
21.00	5.81	4.02	0.44				
21.50	5.85	4.06	0.42				
22.00	5.89	4.10	0.40				
22.50	5.93	4.13	0.39				
23.00	5.97	4.17	0.37				
23.50	6.01	4.20	0.36				
24.00	6.04	4.23	0.34				
24.50	6.04	4.23	0.00				
25.00	6.04	4.23	0.00				
25.50	6.04	4.23	0.00				
26.00	6.04	4.23	0.00				
26.50	6.04	4.23	0.00				
27.00	6.04	4.23	0.00				
27.50	6.04	4.23	0.00				
28.00	6.04	4.23	0.00				
28.50	6.04	4.23	0.00				

Summary for Subcatchment 51S: PDA-1G-B

Runoff = 0.45 cfs @ 12.15 hrs, Volume= 0.043 af, Depth= 0.82"
 Routed to Pond 54P : INFIL 1G

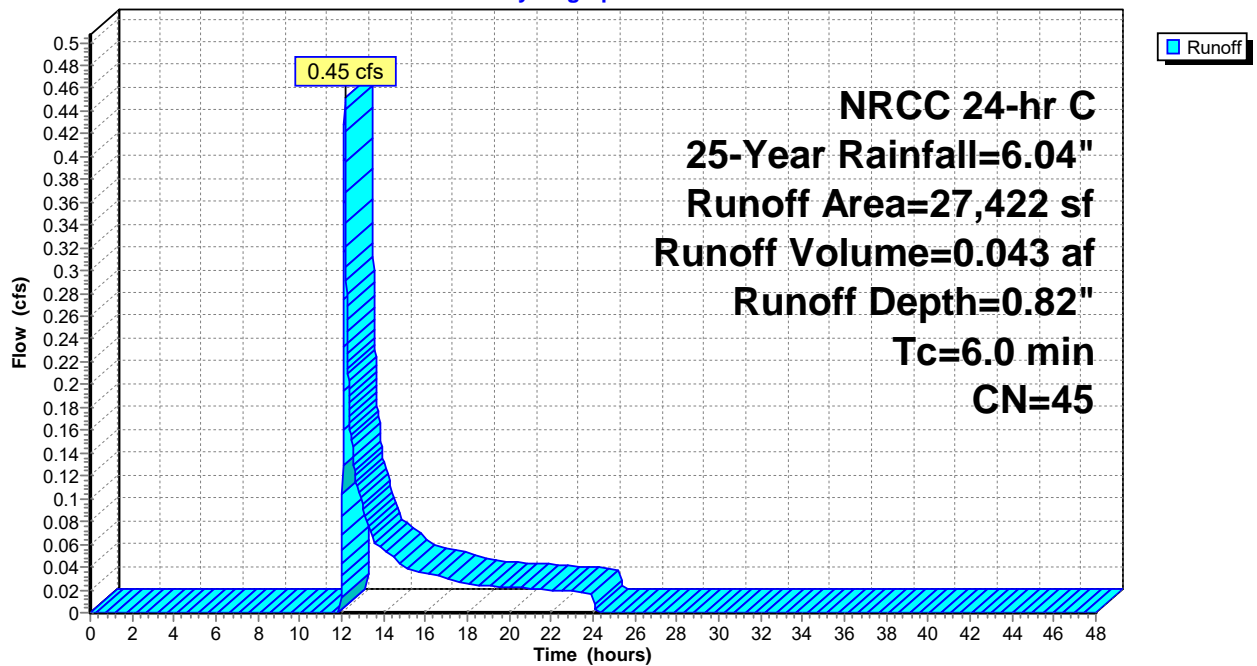
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
19,919	39	>75% Grass cover, Good, HSG A
7,503	61	>75% Grass cover, Good, HSG B
27,422	45	Weighted Average
27,422		100.00% Pervious Area

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

Subcatchment 51S: PDA-1G-B

Hydrograph



Hydrograph for Subcatchment 51S: PDA-1G-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.82	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.82	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.82	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.82	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.82	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.82	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.82	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.82	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.82	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.82	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.82	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.82	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.82	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.82	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.82	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.82	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.82	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.82	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.82	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.82	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.82	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.82	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.82	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.82	0.00
12.00	2.88	0.01	0.04	41.00	6.04	0.82	0.00
12.50	4.15	0.21	0.15	41.50	6.04	0.82	0.00
13.00	4.48	0.29	0.09	42.00	6.04	0.82	0.00
13.50	4.69	0.35	0.07	42.50	6.04	0.82	0.00
14.00	4.85	0.39	0.05	43.00	6.04	0.82	0.00
14.50	4.98	0.43	0.05	43.50	6.04	0.82	0.00
15.00	5.08	0.47	0.04	44.00	6.04	0.82	0.00
15.50	5.17	0.50	0.04	44.50	6.04	0.82	0.00
16.00	5.26	0.53	0.03	45.00	6.04	0.82	0.00
16.50	5.33	0.55	0.03	45.50	6.04	0.82	0.00
17.00	5.40	0.58	0.03	46.00	6.04	0.82	0.00
17.50	5.46	0.60	0.03	46.50	6.04	0.82	0.00
18.00	5.52	0.62	0.03	47.00	6.04	0.82	0.00
18.50	5.57	0.64	0.02	47.50	6.04	0.82	0.00
19.00	5.62	0.66	0.02	48.00	6.04	0.82	0.00
19.50	5.67	0.67	0.02				
20.00	5.72	0.69	0.02				
20.50	5.77	0.71	0.02				
21.00	5.81	0.73	0.02				
21.50	5.85	0.74	0.02				
22.00	5.89	0.76	0.02				
22.50	5.93	0.77	0.02				
23.00	5.97	0.79	0.02				
23.50	6.01	0.80	0.02				
24.00	6.04	0.82	0.02				
24.50	6.04	0.82	0.00				
25.00	6.04	0.82	0.00				
25.50	6.04	0.82	0.00				
26.00	6.04	0.82	0.00				
26.50	6.04	0.82	0.00				
27.00	6.04	0.82	0.00				
27.50	6.04	0.82	0.00				
28.00	6.04	0.82	0.00				
28.50	6.04	0.82	0.00				

Summary for Subcatchment 52S: PDA-1G

Runoff = 59.53 cfs @ 12.13 hrs, Volume= 4.627 af, Depth= 5.80"
 Routed to Pond 55P : FB 1G

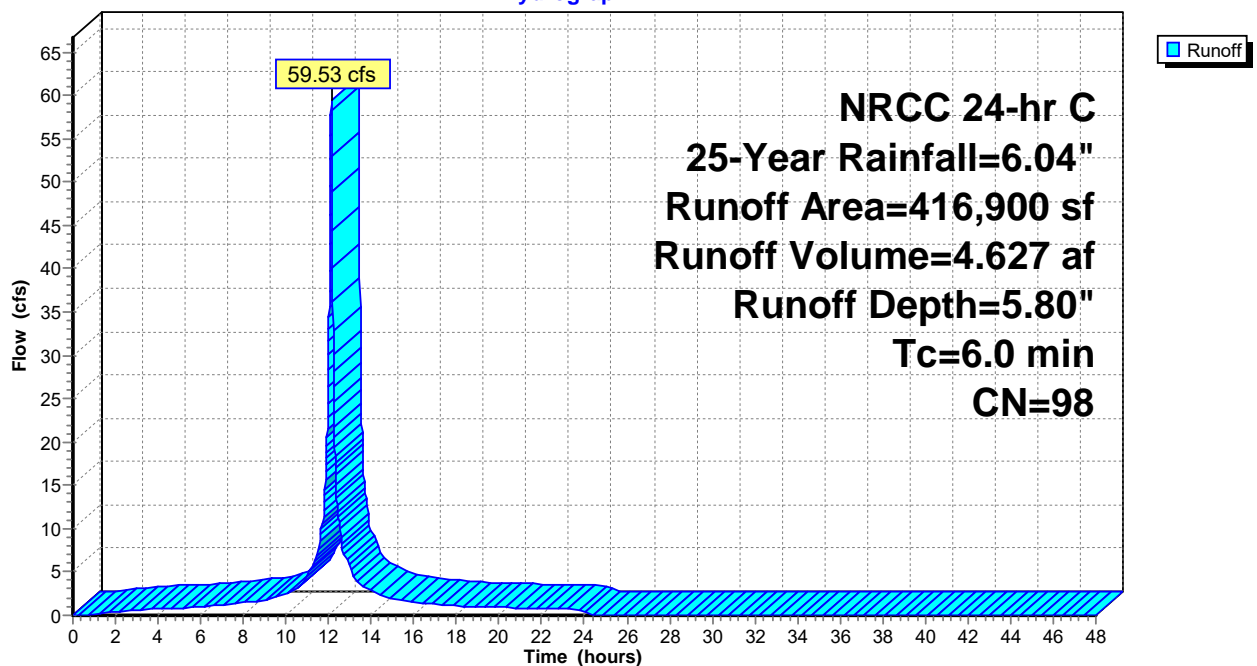
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
416,900	98	Roofs, HSG D
416,900		100.00% Impervious Area

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

Subcatchment 52S: PDA-1G

Hydrograph



Hydrograph for Subcatchment 52S: PDA-1G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	5.80	0.00
0.50	0.03	0.00	0.00	29.50	6.04	5.80	0.00
1.00	0.07	0.00	0.13	30.00	6.04	5.80	0.00
1.50	0.11	0.02	0.29	30.50	6.04	5.80	0.00
2.00	0.15	0.04	0.42	31.00	6.04	5.80	0.00
2.50	0.19	0.06	0.51	31.50	6.04	5.80	0.00
3.00	0.23	0.09	0.60	32.00	6.04	5.80	0.00
3.50	0.27	0.12	0.66	32.50	6.04	5.80	0.00
4.00	0.32	0.16	0.73	33.00	6.04	5.80	0.00
4.50	0.37	0.20	0.78	33.50	6.04	5.80	0.00
5.00	0.42	0.24	0.83	34.00	6.04	5.80	0.00
5.50	0.47	0.29	0.88	34.50	6.04	5.80	0.00
6.00	0.52	0.33	0.92	35.00	6.04	5.80	0.00
6.50	0.58	0.39	1.05	35.50	6.04	5.80	0.00
7.00	0.64	0.45	1.18	36.00	6.04	5.80	0.00
7.50	0.71	0.51	1.31	36.50	6.04	5.80	0.00
8.00	0.78	0.58	1.45	37.00	6.04	5.80	0.00
8.50	0.87	0.66	1.58	37.50	6.04	5.80	0.00
9.00	0.96	0.75	1.71	38.00	6.04	5.80	0.00
9.50	1.06	0.85	2.13	38.50	6.04	5.80	0.00
10.00	1.19	0.98	2.57	39.00	6.04	5.80	0.00
10.50	1.35	1.13	3.03	39.50	6.04	5.80	0.00
11.00	1.56	1.34	4.55	40.00	6.04	5.80	0.00
11.50	1.89	1.67	7.27	40.50	6.04	5.80	0.00
12.00	2.88	2.64	31.76	41.00	6.04	5.80	0.00
12.50	4.15	3.91	10.44	41.50	6.04	5.80	0.00
13.00	4.48	4.25	5.51	42.00	6.04	5.80	0.00
13.50	4.69	4.46	3.56	42.50	6.04	5.80	0.00
14.00	4.85	4.61	2.79	43.00	6.04	5.80	0.00
14.50	4.98	4.74	2.35	43.50	6.04	5.80	0.00
15.00	5.08	4.85	1.90	44.00	6.04	5.80	0.00
15.50	5.17	4.94	1.69	44.50	6.04	5.80	0.00
16.00	5.26	5.02	1.56	45.00	6.04	5.80	0.00
16.50	5.33	5.09	1.44	45.50	6.04	5.80	0.00
17.00	5.40	5.16	1.31	46.00	6.04	5.80	0.00
17.50	5.46	5.23	1.18	46.50	6.04	5.80	0.00
18.00	5.52	5.28	1.05	47.00	6.04	5.80	0.00
18.50	5.57	5.34	1.00	47.50	6.04	5.80	0.00
19.00	5.62	5.39	0.96	48.00	6.04	5.80	0.00
19.50	5.67	5.44	0.93				
20.00	5.72	5.48	0.90				
20.50	5.77	5.53	0.87				
21.00	5.81	5.57	0.84				
21.50	5.85	5.61	0.81				
22.00	5.89	5.66	0.77				
22.50	5.93	5.69	0.74				
23.00	5.97	5.73	0.71				
23.50	6.01	5.77	0.68				
24.00	6.04	5.80	0.65				
24.50	6.04	5.80	0.00				
25.00	6.04	5.80	0.00				
25.50	6.04	5.80	0.00				
26.00	6.04	5.80	0.00				
26.50	6.04	5.80	0.00				
27.00	6.04	5.80	0.00				
27.50	6.04	5.80	0.00				
28.00	6.04	5.80	0.00				
28.50	6.04	5.80	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment 54S: PDA-1H-IB

Runoff = 0.14 cfs @ 12.18 hrs, Volume= 0.035 af, Depth= 0.46"
 Routed to Pond 47P : INFIL 1H

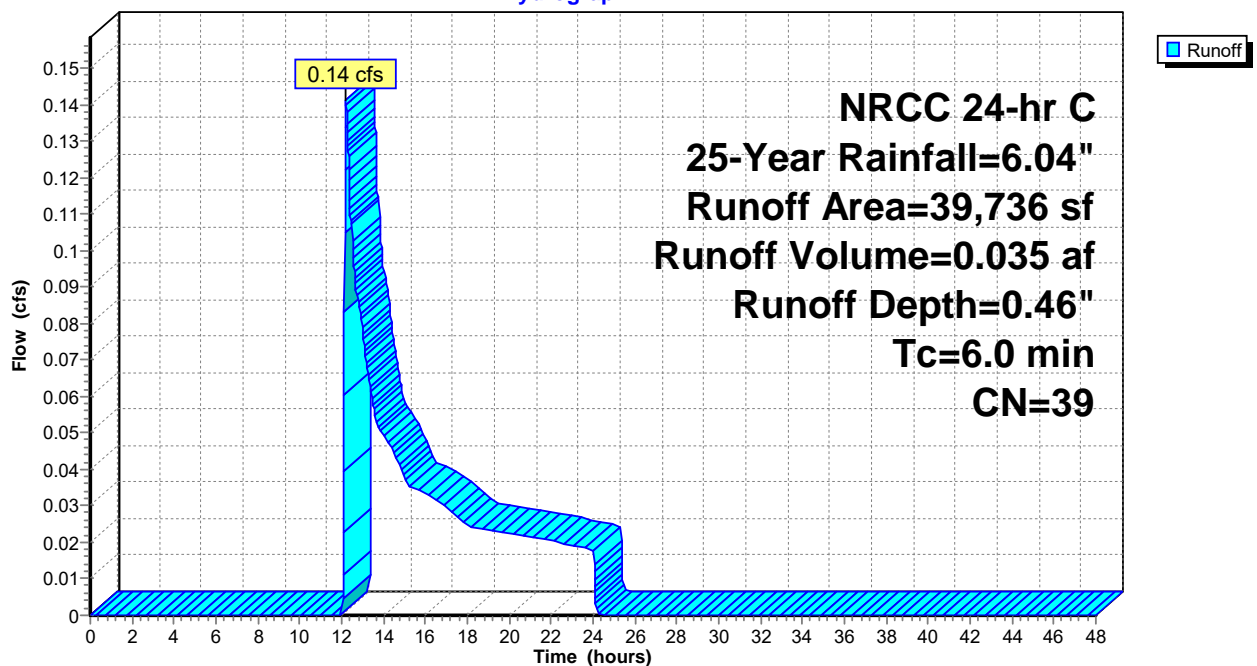
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
39,736	39	>75% Grass cover, Good, HSG A
39,736		100.00% Pervious Area

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

Subcatchment 54S: PDA-1H-IB

Hydrograph



Hydrograph for Subcatchment 54S: PDA-1H-IB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.46	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.46	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.46	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.46	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.46	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.46	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.46	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.46	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.46	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.46	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.46	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.46	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.46	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.46	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.46	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.46	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.46	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.46	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.46	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.46	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.46	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.46	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.46	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.46	0.00
12.00	2.88	0.00	0.00	41.00	6.04	0.46	0.00
12.50	4.15	0.06	0.11	41.50	6.04	0.46	0.00
13.00	4.48	0.11	0.08	42.00	6.04	0.46	0.00
13.50	4.69	0.14	0.06	42.50	6.04	0.46	0.00
14.00	4.85	0.17	0.05	43.00	6.04	0.46	0.00
14.50	4.98	0.20	0.04	43.50	6.04	0.46	0.00
15.00	5.08	0.22	0.04	44.00	6.04	0.46	0.00
15.50	5.17	0.24	0.03	44.50	6.04	0.46	0.00
16.00	5.26	0.25	0.03	45.00	6.04	0.46	0.00
16.50	5.33	0.27	0.03	45.50	6.04	0.46	0.00
17.00	5.40	0.29	0.03	46.00	6.04	0.46	0.00
17.50	5.46	0.30	0.03	46.50	6.04	0.46	0.00
18.00	5.52	0.32	0.02	47.00	6.04	0.46	0.00
18.50	5.57	0.33	0.02	47.50	6.04	0.46	0.00
19.00	5.62	0.34	0.02	48.00	6.04	0.46	0.00
19.50	5.67	0.36	0.02				
20.00	5.72	0.37	0.02				
20.50	5.77	0.38	0.02				
21.00	5.81	0.39	0.02				
21.50	5.85	0.40	0.02				
22.00	5.89	0.42	0.02				
22.50	5.93	0.43	0.02				
23.00	5.97	0.44	0.02				
23.50	6.01	0.45	0.02				
24.00	6.04	0.46	0.02				
24.50	6.04	0.46	0.00				
25.00	6.04	0.46	0.00				
25.50	6.04	0.46	0.00				
26.00	6.04	0.46	0.00				
26.50	6.04	0.46	0.00				
27.00	6.04	0.46	0.00				
27.50	6.04	0.46	0.00				
28.00	6.04	0.46	0.00				
28.50	6.04	0.46	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

Prepared by Colliers Engineering & Design

Printed 8/12/2024

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Summary for Subcatchment 55S: PDA-1E

Runoff = 2.43 cfs @ 12.13 hrs, Volume= 0.181 af, Depth= 5.45"
 Routed to Pond 59P : FB 1E

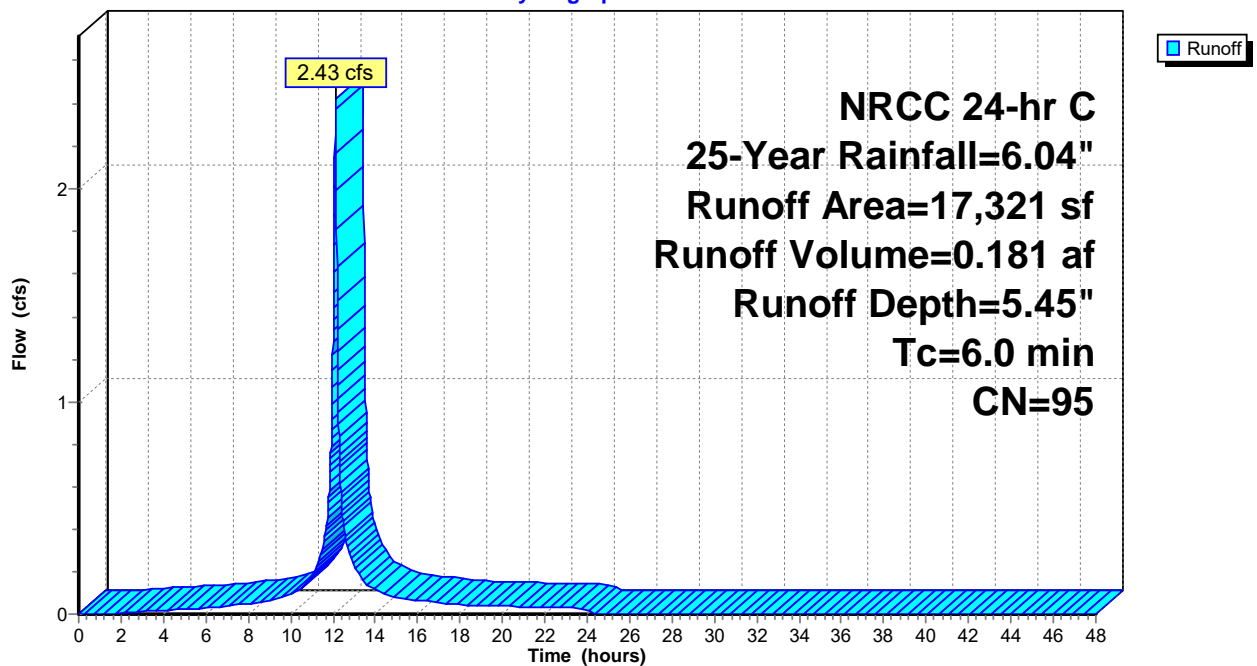
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
3,059	80	>75% Grass cover, Good, HSG D
0	39	>75% Grass cover, Good, HSG A
14,262	98	Paved parking, HSG D
17,321	95	Weighted Average
3,059		17.66% Pervious Area
14,262		82.34% Impervious Area

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

Subcatchment 55S: PDA-1E

Hydrograph



Hydrograph for Subcatchment 55S: PDA-1E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	5.45	0.00
0.50	0.03	0.00	0.00	29.50	6.04	5.45	0.00
1.00	0.07	0.00	0.00	30.00	6.04	5.45	0.00
1.50	0.11	0.00	0.00	30.50	6.04	5.45	0.00
2.00	0.15	0.00	0.00	31.00	6.04	5.45	0.00
2.50	0.19	0.01	0.01	31.50	6.04	5.45	0.00
3.00	0.23	0.02	0.01	32.00	6.04	5.45	0.00
3.50	0.27	0.04	0.01	32.50	6.04	5.45	0.00
4.00	0.32	0.06	0.02	33.00	6.04	5.45	0.00
4.50	0.37	0.09	0.02	33.50	6.04	5.45	0.00
5.00	0.42	0.12	0.02	34.00	6.04	5.45	0.00
5.50	0.47	0.15	0.03	34.50	6.04	5.45	0.00
6.00	0.52	0.18	0.03	35.00	6.04	5.45	0.00
6.50	0.58	0.22	0.03	35.50	6.04	5.45	0.00
7.00	0.64	0.27	0.04	36.00	6.04	5.45	0.00
7.50	0.71	0.32	0.04	36.50	6.04	5.45	0.00
8.00	0.78	0.38	0.05	37.00	6.04	5.45	0.00
8.50	0.87	0.45	0.06	37.50	6.04	5.45	0.00
9.00	0.96	0.53	0.06	38.00	6.04	5.45	0.00
9.50	1.06	0.62	0.08	38.50	6.04	5.45	0.00
10.00	1.19	0.73	0.10	39.00	6.04	5.45	0.00
10.50	1.35	0.87	0.12	39.50	6.04	5.45	0.00
11.00	1.56	1.07	0.18	40.00	6.04	5.45	0.00
11.50	1.89	1.38	0.29	40.50	6.04	5.45	0.00
12.00	2.88	2.33	1.29	41.00	6.04	5.45	0.00
12.50	4.15	3.58	0.43	41.50	6.04	5.45	0.00
13.00	4.48	3.91	0.23	42.00	6.04	5.45	0.00
13.50	4.69	4.12	0.15	42.50	6.04	5.45	0.00
14.00	4.85	4.27	0.11	43.00	6.04	5.45	0.00
14.50	4.98	4.40	0.10	43.50	6.04	5.45	0.00
15.00	5.08	4.50	0.08	44.00	6.04	5.45	0.00
15.50	5.17	4.59	0.07	44.50	6.04	5.45	0.00
16.00	5.26	4.67	0.06	45.00	6.04	5.45	0.00
16.50	5.33	4.75	0.06	45.50	6.04	5.45	0.00
17.00	5.40	4.82	0.05	46.00	6.04	5.45	0.00
17.50	5.46	4.88	0.05	46.50	6.04	5.45	0.00
18.00	5.52	4.94	0.04	47.00	6.04	5.45	0.00
18.50	5.57	4.99	0.04	47.50	6.04	5.45	0.00
19.00	5.62	5.04	0.04	48.00	6.04	5.45	0.00
19.50	5.67	5.09	0.04				
20.00	5.72	5.13	0.04				
20.50	5.77	5.18	0.04				
21.00	5.81	5.22	0.03				
21.50	5.85	5.27	0.03				
22.00	5.89	5.31	0.03				
22.50	5.93	5.34	0.03				
23.00	5.97	5.38	0.03				
23.50	6.01	5.42	0.03				
24.00	6.04	5.45	0.03				
24.50	6.04	5.45	0.00				
25.00	6.04	5.45	0.00				
25.50	6.04	5.45	0.00				
26.00	6.04	5.45	0.00				
26.50	6.04	5.45	0.00				
27.00	6.04	5.45	0.00				
27.50	6.04	5.45	0.00				
28.00	6.04	5.45	0.00				
28.50	6.04	5.45	0.00				

Summary for Subcatchment 56S: PDA-1B-FB

Runoff = 0.06 cfs @ 12.18 hrs, Volume= 0.014 af, Depth= 0.46"
 Routed to Pond 44P : FB 1B

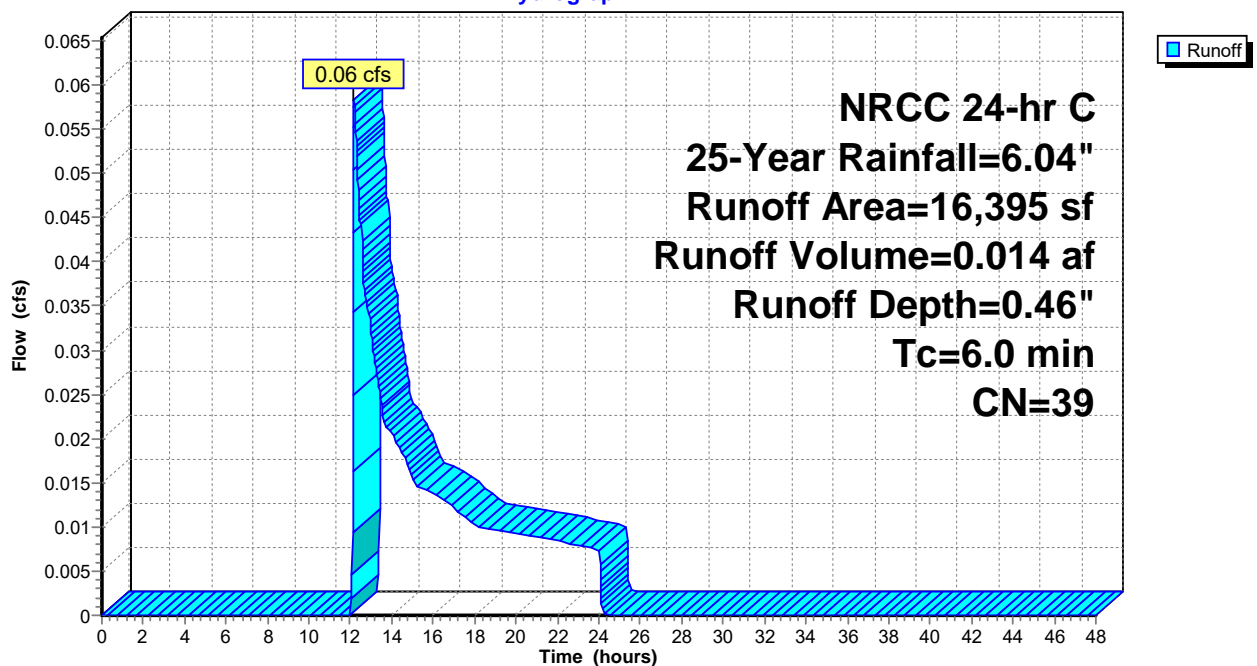
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
16,395	39	>75% Grass cover, Good, HSG A
16,395		100.00% Pervious Area

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

Subcatchment 56S: PDA-1B-FB

Hydrograph



Hydrograph for Subcatchment 56S: PDA-1B-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.46	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.46	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.46	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.46	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.46	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.46	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.46	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.46	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.46	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.46	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.46	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.46	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.46	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.46	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.46	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.46	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.46	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.46	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.46	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.46	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.46	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.46	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.46	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.46	0.00
12.00	2.88	0.00	0.00	41.00	6.04	0.46	0.00
12.50	4.15	0.06	0.04	41.50	6.04	0.46	0.00
13.00	4.48	0.11	0.03	42.00	6.04	0.46	0.00
13.50	4.69	0.14	0.02	42.50	6.04	0.46	0.00
14.00	4.85	0.17	0.02	43.00	6.04	0.46	0.00
14.50	4.98	0.20	0.02	43.50	6.04	0.46	0.00
15.00	5.08	0.22	0.02	44.00	6.04	0.46	0.00
15.50	5.17	0.24	0.01	44.50	6.04	0.46	0.00
16.00	5.26	0.25	0.01	45.00	6.04	0.46	0.00
16.50	5.33	0.27	0.01	45.50	6.04	0.46	0.00
17.00	5.40	0.29	0.01	46.00	6.04	0.46	0.00
17.50	5.46	0.30	0.01	46.50	6.04	0.46	0.00
18.00	5.52	0.32	0.01	47.00	6.04	0.46	0.00
18.50	5.57	0.33	0.01	47.50	6.04	0.46	0.00
19.00	5.62	0.34	0.01	48.00	6.04	0.46	0.00
19.50	5.67	0.36	0.01				
20.00	5.72	0.37	0.01				
20.50	5.77	0.38	0.01				
21.00	5.81	0.39	0.01				
21.50	5.85	0.40	0.01				
22.00	5.89	0.42	0.01				
22.50	5.93	0.43	0.01				
23.00	5.97	0.44	0.01				
23.50	6.01	0.45	0.01				
24.00	6.04	0.46	0.01				
24.50	6.04	0.46	0.00				
25.00	6.04	0.46	0.00				
25.50	6.04	0.46	0.00				
26.00	6.04	0.46	0.00				
26.50	6.04	0.46	0.00				
27.00	6.04	0.46	0.00				
27.50	6.04	0.46	0.00				
28.00	6.04	0.46	0.00				
28.50	6.04	0.46	0.00				

Summary for Subcatchment 57S: PDA-1H-FB

Runoff = 0.07 cfs @ 12.18 hrs, Volume= 0.017 af, Depth= 0.46"
 Routed to Pond 51P : FB 1H

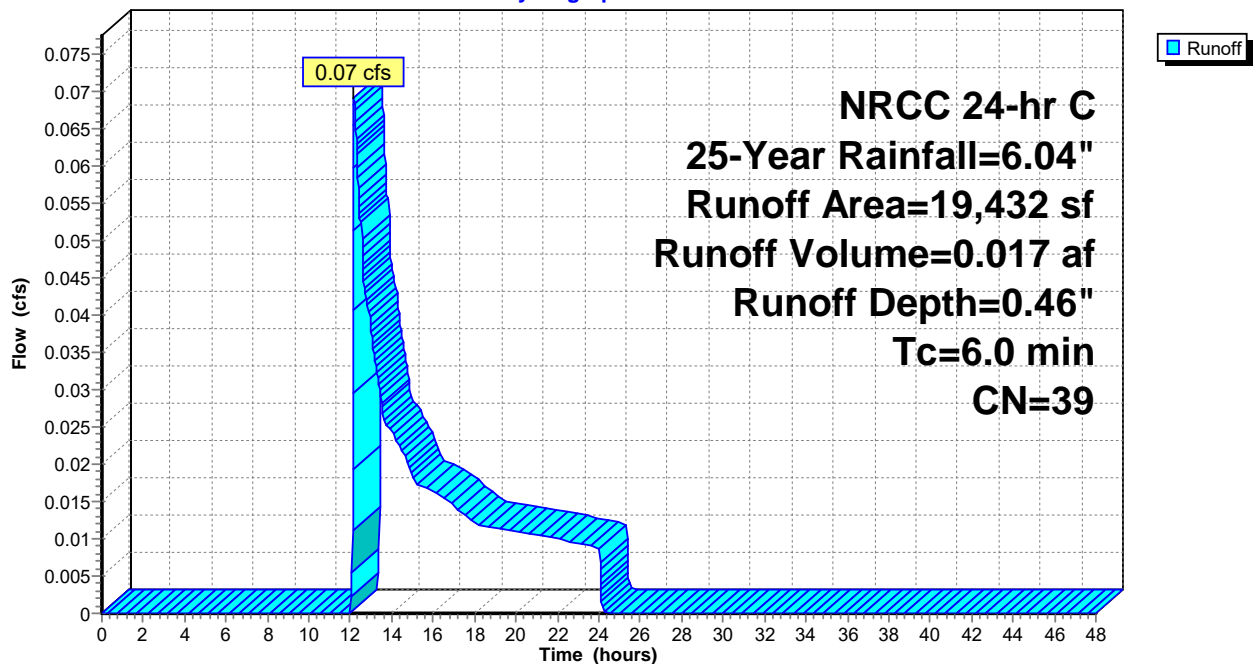
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
19,432	39	>75% Grass cover, Good, HSG A
19,432		100.00% Pervious Area

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

Subcatchment 57S: PDA-1H-FB

Hydrograph



Hydrograph for Subcatchment 57S: PDA-1H-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.46	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.46	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.46	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.46	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.46	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.46	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.46	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.46	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.46	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.46	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.46	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.46	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.46	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.46	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.46	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.46	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.46	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.46	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.46	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.46	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.46	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.46	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.46	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.46	0.00
12.00	2.88	0.00	0.00	41.00	6.04	0.46	0.00
12.50	4.15	0.06	0.05	41.50	6.04	0.46	0.00
13.00	4.48	0.11	0.04	42.00	6.04	0.46	0.00
13.50	4.69	0.14	0.03	42.50	6.04	0.46	0.00
14.00	4.85	0.17	0.02	43.00	6.04	0.46	0.00
14.50	4.98	0.20	0.02	43.50	6.04	0.46	0.00
15.00	5.08	0.22	0.02	44.00	6.04	0.46	0.00
15.50	5.17	0.24	0.02	44.50	6.04	0.46	0.00
16.00	5.26	0.25	0.02	45.00	6.04	0.46	0.00
16.50	5.33	0.27	0.02	45.50	6.04	0.46	0.00
17.00	5.40	0.29	0.01	46.00	6.04	0.46	0.00
17.50	5.46	0.30	0.01	46.50	6.04	0.46	0.00
18.00	5.52	0.32	0.01	47.00	6.04	0.46	0.00
18.50	5.57	0.33	0.01	47.50	6.04	0.46	0.00
19.00	5.62	0.34	0.01	48.00	6.04	0.46	0.00
19.50	5.67	0.36	0.01				
20.00	5.72	0.37	0.01				
20.50	5.77	0.38	0.01				
21.00	5.81	0.39	0.01				
21.50	5.85	0.40	0.01				
22.00	5.89	0.42	0.01				
22.50	5.93	0.43	0.01				
23.00	5.97	0.44	0.01				
23.50	6.01	0.45	0.01				
24.00	6.04	0.46	0.01				
24.50	6.04	0.46	0.00				
25.00	6.04	0.46	0.00				
25.50	6.04	0.46	0.00				
26.00	6.04	0.46	0.00				
26.50	6.04	0.46	0.00				
27.00	6.04	0.46	0.00				
27.50	6.04	0.46	0.00				
28.00	6.04	0.46	0.00				
28.50	6.04	0.46	0.00				

Summary for Subcatchment 58S: PDA1-B-IB

Runoff = 0.18 cfs @ 12.17 hrs, Volume= 0.032 af, Depth= 0.51"
 Routed to Pond 45P : INFIL 1B

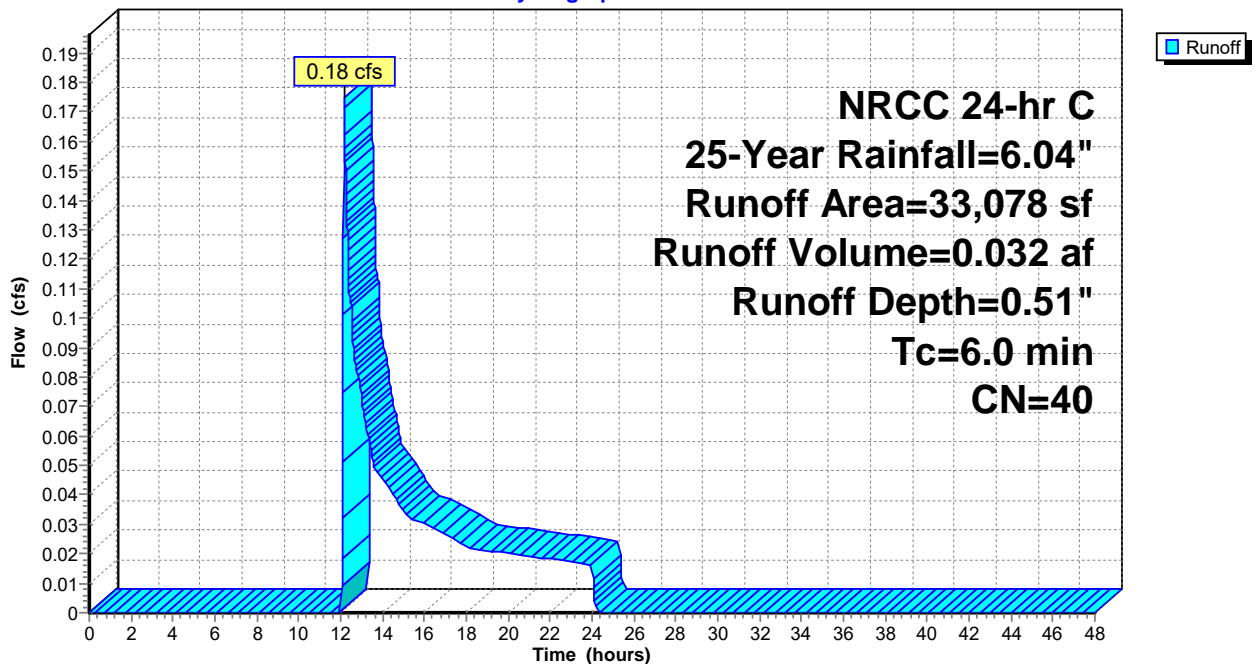
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
1,110	80	>75% Grass cover, Good, HSG D
31,968	39	>75% Grass cover, Good, HSG A
33,078	40	Weighted Average
33,078		100.00% Pervious Area

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

Subcatchment 58S: PDA1-B-IB

Hydrograph



Hydrograph for Subcatchment 58S: PDA1-B-IB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.51	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.51	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.51	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.51	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.51	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.51	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.51	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.51	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.51	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.51	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.51	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.51	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.51	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.51	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.51	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.51	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.51	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.51	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.51	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.51	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.51	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.51	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.51	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.51	0.00
12.00	2.88	0.00	0.00	41.00	6.04	0.51	0.00
12.50	4.15	0.08	0.10	41.50	6.04	0.51	0.00
13.00	4.48	0.13	0.07	42.00	6.04	0.51	0.00
13.50	4.69	0.17	0.05	42.50	6.04	0.51	0.00
14.00	4.85	0.20	0.05	43.00	6.04	0.51	0.00
14.50	4.98	0.23	0.04	43.50	6.04	0.51	0.00
15.00	5.08	0.25	0.03	44.00	6.04	0.51	0.00
15.50	5.17	0.27	0.03	44.50	6.04	0.51	0.00
16.00	5.26	0.29	0.03	45.00	6.04	0.51	0.00
16.50	5.33	0.31	0.03	45.50	6.04	0.51	0.00
17.00	5.40	0.33	0.03	46.00	6.04	0.51	0.00
17.50	5.46	0.35	0.02	46.50	6.04	0.51	0.00
18.00	5.52	0.36	0.02	47.00	6.04	0.51	0.00
18.50	5.57	0.38	0.02	47.50	6.04	0.51	0.00
19.00	5.62	0.39	0.02	48.00	6.04	0.51	0.00
19.50	5.67	0.40	0.02				
20.00	5.72	0.42	0.02				
20.50	5.77	0.43	0.02				
21.00	5.81	0.44	0.02				
21.50	5.85	0.46	0.02				
22.00	5.89	0.47	0.02				
22.50	5.93	0.48	0.02				
23.00	5.97	0.49	0.02				
23.50	6.01	0.50	0.02				
24.00	6.04	0.51	0.02				
24.50	6.04	0.51	0.00				
25.00	6.04	0.51	0.00				
25.50	6.04	0.51	0.00				
26.00	6.04	0.51	0.00				
26.50	6.04	0.51	0.00				
27.00	6.04	0.51	0.00				
27.50	6.04	0.51	0.00				
28.00	6.04	0.51	0.00				
28.50	6.04	0.51	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

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Summary for Subcatchment 59S: PDA-1F

Runoff = 28.15 cfs @ 12.13 hrs, Volume= 1.881 af, Depth= 3.92"
 Routed to Pond 26P : Bioretention 1F

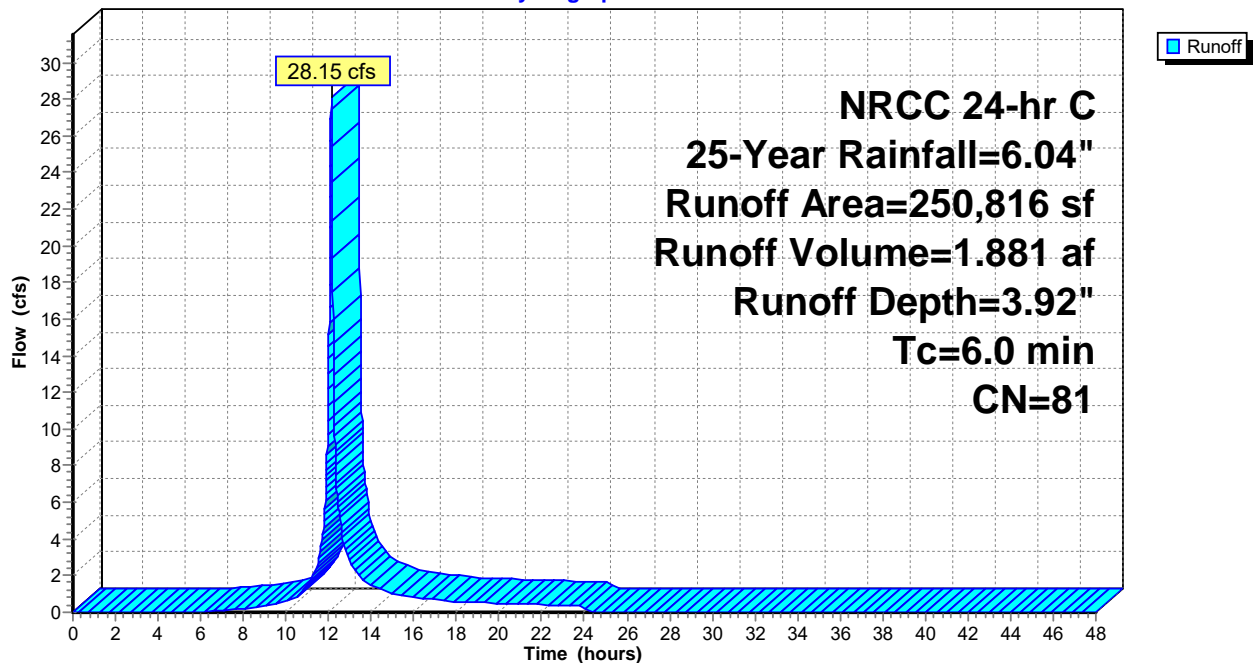
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
178,571	98	Unconnected pavement, HSG D
71,249	39	>75% Grass cover, Good, HSG A
996	80	>75% Grass cover, Good, HSG D
250,816	81	Weighted Average
72,245		28.80% Pervious Area
178,571		71.20% Impervious Area
178,571		100.00% Unconnected

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

Subcatchment 59S: PDA-1F

Hydrograph



Hydrograph for Subcatchment 59S: PDA-1F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	3.92	0.00
0.50	0.03	0.00	0.00	29.50	6.04	3.92	0.00
1.00	0.07	0.00	0.00	30.00	6.04	3.92	0.00
1.50	0.11	0.00	0.00	30.50	6.04	3.92	0.00
2.00	0.15	0.00	0.00	31.00	6.04	3.92	0.00
2.50	0.19	0.00	0.00	31.50	6.04	3.92	0.00
3.00	0.23	0.00	0.00	32.00	6.04	3.92	0.00
3.50	0.27	0.00	0.00	32.50	6.04	3.92	0.00
4.00	0.32	0.00	0.00	33.00	6.04	3.92	0.00
4.50	0.37	0.00	0.00	33.50	6.04	3.92	0.00
5.00	0.42	0.00	0.00	34.00	6.04	3.92	0.00
5.50	0.47	0.00	0.00	34.50	6.04	3.92	0.00
6.00	0.52	0.00	0.02	35.00	6.04	3.92	0.00
6.50	0.58	0.00	0.05	35.50	6.04	3.92	0.00
7.00	0.64	0.01	0.09	36.00	6.04	3.92	0.00
7.50	0.71	0.02	0.14	36.50	6.04	3.92	0.00
8.00	0.78	0.04	0.20	37.00	6.04	3.92	0.00
8.50	0.87	0.06	0.26	37.50	6.04	3.92	0.00
9.00	0.96	0.08	0.33	38.00	6.04	3.92	0.00
9.50	1.06	0.12	0.47	38.50	6.04	3.92	0.00
10.00	1.19	0.17	0.64	39.00	6.04	3.92	0.00
10.50	1.35	0.24	0.85	39.50	6.04	3.92	0.00
11.00	1.56	0.34	1.45	40.00	6.04	3.92	0.00
11.50	1.89	0.54	2.64	40.50	6.04	3.92	0.00
12.00	2.88	1.22	13.84	41.00	6.04	3.92	0.00
12.50	4.15	2.25	5.31	41.50	6.04	3.92	0.00
13.00	4.48	2.53	2.86	42.00	6.04	3.92	0.00
13.50	4.69	2.72	1.87	42.50	6.04	3.92	0.00
14.00	4.85	2.85	1.48	43.00	6.04	3.92	0.00
14.50	4.98	2.96	1.25	43.50	6.04	3.92	0.00
15.00	5.08	3.06	1.01	44.00	6.04	3.92	0.00
15.50	5.17	3.14	0.90	44.50	6.04	3.92	0.00
16.00	5.26	3.21	0.84	45.00	6.04	3.92	0.00
16.50	5.33	3.28	0.77	45.50	6.04	3.92	0.00
17.00	5.40	3.34	0.71	46.00	6.04	3.92	0.00
17.50	5.46	3.40	0.64	46.50	6.04	3.92	0.00
18.00	5.52	3.45	0.57	47.00	6.04	3.92	0.00
18.50	5.57	3.50	0.54	47.50	6.04	3.92	0.00
19.00	5.62	3.54	0.52	48.00	6.04	3.92	0.00
19.50	5.67	3.59	0.51				
20.00	5.72	3.63	0.49				
20.50	5.77	3.67	0.47				
21.00	5.81	3.71	0.46				
21.50	5.85	3.75	0.44				
22.00	5.89	3.79	0.42				
22.50	5.93	3.82	0.41				
23.00	5.97	3.86	0.39				
23.50	6.01	3.89	0.37				
24.00	6.04	3.92	0.36				
24.50	6.04	3.92	0.00				
25.00	6.04	3.92	0.00				
25.50	6.04	3.92	0.00				
26.00	6.04	3.92	0.00				
26.50	6.04	3.92	0.00				
27.00	6.04	3.92	0.00				
27.50	6.04	3.92	0.00				
28.00	6.04	3.92	0.00				
28.50	6.04	3.92	0.00				

Summary for Subcatchment 60S: PDA-1i-B

Runoff = 0.11 cfs @ 12.18 hrs, Volume= 0.028 af, Depth= 0.46"
 Routed to Pond 31P : Bioretention i

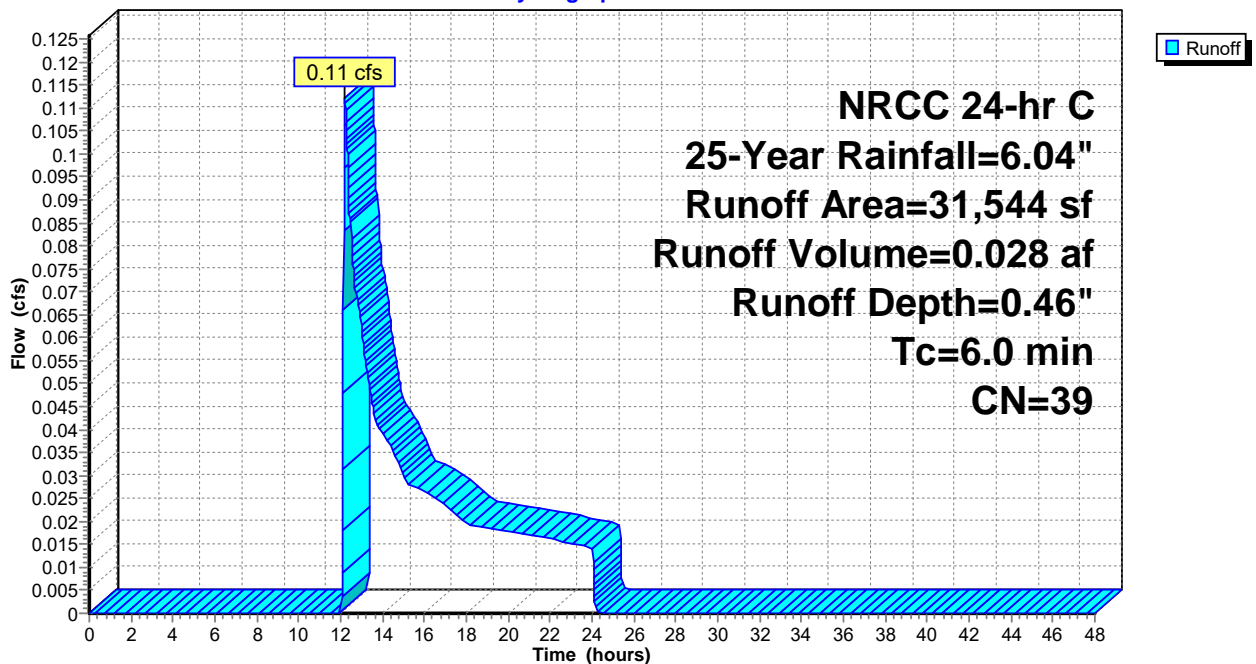
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 25-Year Rainfall=6.04"

Area (sf)	CN	Description
31,544	39	>75% Grass cover, Good, HSG A
31,544		100.00% Pervious Area

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

Subcatchment 60S: PDA-1i-B

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 25-Year Rainfall=6.04"

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Hydrograph for Subcatchment 60S: PDA-1i-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	6.04	0.46	0.00
0.50	0.03	0.00	0.00	29.50	6.04	0.46	0.00
1.00	0.07	0.00	0.00	30.00	6.04	0.46	0.00
1.50	0.11	0.00	0.00	30.50	6.04	0.46	0.00
2.00	0.15	0.00	0.00	31.00	6.04	0.46	0.00
2.50	0.19	0.00	0.00	31.50	6.04	0.46	0.00
3.00	0.23	0.00	0.00	32.00	6.04	0.46	0.00
3.50	0.27	0.00	0.00	32.50	6.04	0.46	0.00
4.00	0.32	0.00	0.00	33.00	6.04	0.46	0.00
4.50	0.37	0.00	0.00	33.50	6.04	0.46	0.00
5.00	0.42	0.00	0.00	34.00	6.04	0.46	0.00
5.50	0.47	0.00	0.00	34.50	6.04	0.46	0.00
6.00	0.52	0.00	0.00	35.00	6.04	0.46	0.00
6.50	0.58	0.00	0.00	35.50	6.04	0.46	0.00
7.00	0.64	0.00	0.00	36.00	6.04	0.46	0.00
7.50	0.71	0.00	0.00	36.50	6.04	0.46	0.00
8.00	0.78	0.00	0.00	37.00	6.04	0.46	0.00
8.50	0.87	0.00	0.00	37.50	6.04	0.46	0.00
9.00	0.96	0.00	0.00	38.00	6.04	0.46	0.00
9.50	1.06	0.00	0.00	38.50	6.04	0.46	0.00
10.00	1.19	0.00	0.00	39.00	6.04	0.46	0.00
10.50	1.35	0.00	0.00	39.50	6.04	0.46	0.00
11.00	1.56	0.00	0.00	40.00	6.04	0.46	0.00
11.50	1.89	0.00	0.00	40.50	6.04	0.46	0.00
12.00	2.88	0.00	0.00	41.00	6.04	0.46	0.00
12.50	4.15	0.06	0.09	41.50	6.04	0.46	0.00
13.00	4.48	0.11	0.06	42.00	6.04	0.46	0.00
13.50	4.69	0.14	0.05	42.50	6.04	0.46	0.00
14.00	4.85	0.17	0.04	43.00	6.04	0.46	0.00
14.50	4.98	0.20	0.04	43.50	6.04	0.46	0.00
15.00	5.08	0.22	0.03	44.00	6.04	0.46	0.00
15.50	5.17	0.24	0.03	44.50	6.04	0.46	0.00
16.00	5.26	0.25	0.03	45.00	6.04	0.46	0.00
16.50	5.33	0.27	0.03	45.50	6.04	0.46	0.00
17.00	5.40	0.29	0.02	46.00	6.04	0.46	0.00
17.50	5.46	0.30	0.02	46.50	6.04	0.46	0.00
18.00	5.52	0.32	0.02	47.00	6.04	0.46	0.00
18.50	5.57	0.33	0.02	47.50	6.04	0.46	0.00
19.00	5.62	0.34	0.02	48.00	6.04	0.46	0.00
19.50	5.67	0.36	0.02				
20.00	5.72	0.37	0.02				
20.50	5.77	0.38	0.02				
21.00	5.81	0.39	0.02				
21.50	5.85	0.40	0.02				
22.00	5.89	0.42	0.02				
22.50	5.93	0.43	0.02				
23.00	5.97	0.44	0.02				
23.50	6.01	0.45	0.01				
24.00	6.04	0.46	0.01				
24.50	6.04	0.46	0.00				
25.00	6.04	0.46	0.00				
25.50	6.04	0.46	0.00				
26.00	6.04	0.46	0.00				
26.50	6.04	0.46	0.00				
27.00	6.04	0.46	0.00				
27.50	6.04	0.46	0.00				
28.00	6.04	0.46	0.00				
28.50	6.04	0.46	0.00				

Summary for Pond 1P: Bioretention 1D

Inflow Area = 3.927 ac, 65.47% Impervious, Inflow Depth = 5.04" for 25-Year event
 Inflow = 22.94 cfs @ 12.14 hrs, Volume= 1.650 af
 Outflow = 1.83 cfs @ 13.20 hrs, Volume= 0.969 af, Atten= 92%, Lag= 64.1 min
 Primary = 1.83 cfs @ 13.20 hrs, Volume= 0.969 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 413.90' @ 13.20 hrs Surf.Area= 17,536 sf Storage= 44,950 cf

Plug-Flow detention time= 395.5 min calculated for 0.969 af (59% of inflow)
 Center-of-Mass det. time= 279.7 min (1,064.5 - 784.8)

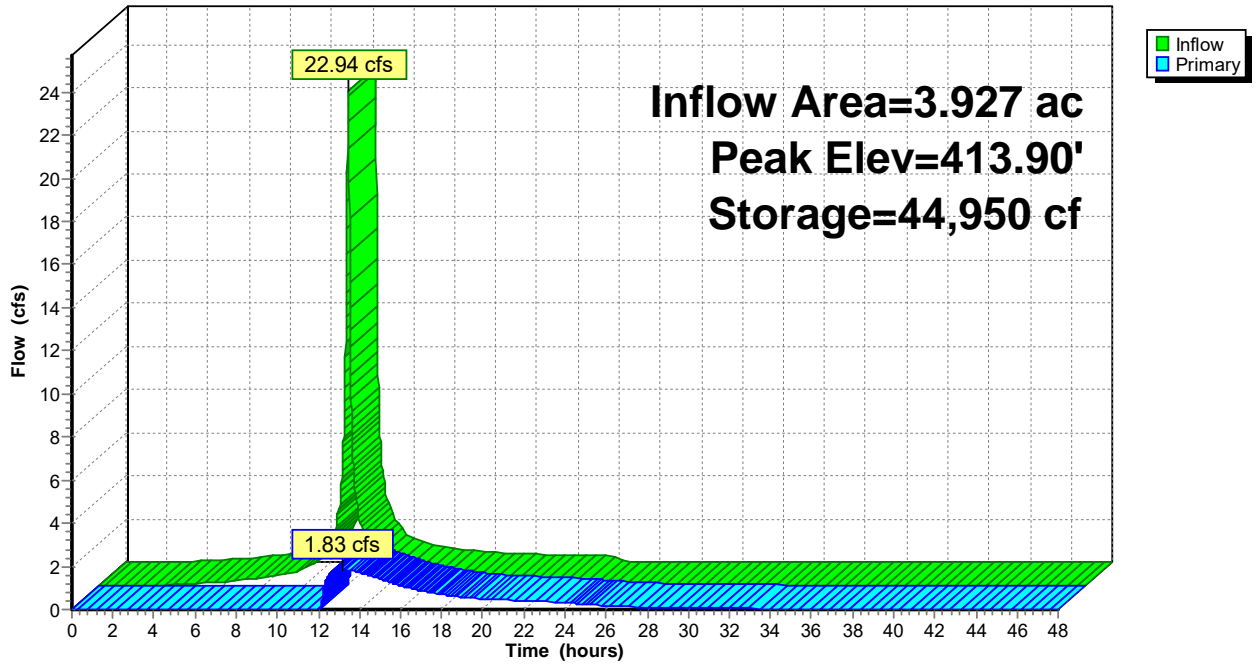
Volume	Invert	Avail.Storage	Storage Description	
#1	408.66'	82,103 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	14,016	0.0	0	0
409.33	14,016	40.0	3,756	3,756
412.00	14,016	20.0	7,485	11,241
416.00	21,415	100.0	70,862	82,103

Device	Routing	Invert	Outlet Devices
#1	Primary	408.78'	18.0" Round Culvert L= 28.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 408.78' / 408.50' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	413.00'	10.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	415.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.83 cfs @ 13.20 hrs HW=413.90' (Free Discharge)
 1=Culvert (Passes 1.83 cfs of 17.79 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 1.83 cfs @ 3.36 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

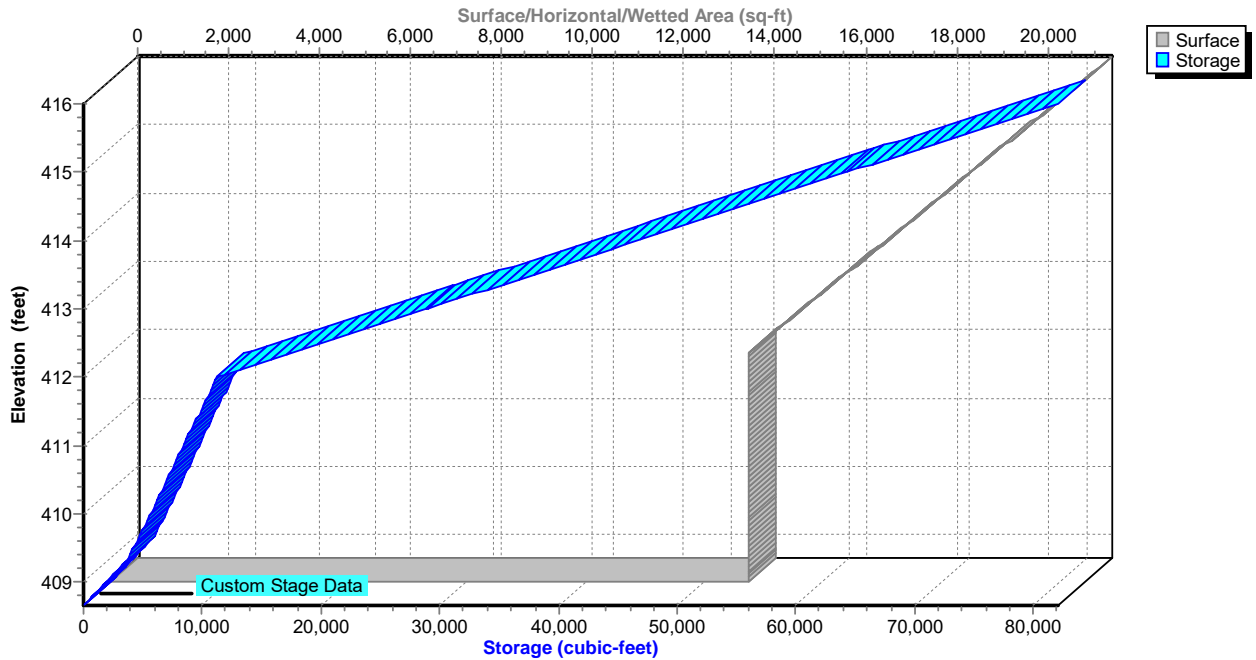
Pond 1P: Bioretention 1D

Hydrograph



Pond 1P: Bioretention 1D

Stage-Area-Storage



Hydrograph for Pond 1P: Bioretention 1D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	408.66	0.00
1.00	0.00	0	408.66	0.00
2.00	0.00	3	408.66	0.00
3.00	0.02	35	408.67	0.00
4.00	0.08	221	408.70	0.00
5.00	0.13	605	408.77	0.00
6.00	0.18	1,179	408.87	0.00
7.00	0.27	1,996	409.02	0.00
8.00	0.38	3,173	409.23	0.00
9.00	0.50	4,754	409.69	0.00
10.00	0.81	7,068	410.51	0.00
11.00	1.54	10,921	411.89	0.00
12.00	11.34	23,290	412.68	0.00
13.00	2.24	44,805	413.89	1.81
14.00	1.12	43,808	413.84	1.71
15.00	0.77	41,545	413.71	1.42
16.00	0.63	39,506	413.60	1.10
17.00	0.53	38,083	413.52	0.87
18.00	0.43	37,000	413.45	0.70
19.00	0.39	36,170	413.41	0.58
20.00	0.36	35,596	413.37	0.50
21.00	0.34	35,176	413.35	0.44
22.00	0.31	34,834	413.33	0.40
23.00	0.29	34,540	413.32	0.36
24.00	0.26	34,275	413.30	0.33
25.00	0.00	33,372	413.25	0.24
26.00	0.00	32,655	413.21	0.17
27.00	0.00	32,127	413.18	0.13
28.00	0.00	31,721	413.16	0.10
29.00	0.00	31,410	413.14	0.08
30.00	0.00	31,160	413.12	0.06
31.00	0.00	30,947	413.11	0.05
32.00	0.00	30,765	413.10	0.05
33.00	0.00	30,610	413.09	0.04
34.00	0.00	30,478	413.09	0.03
35.00	0.00	30,366	413.08	0.03
36.00	0.00	30,270	413.07	0.02
37.00	0.00	30,188	413.07	0.02
38.00	0.00	30,119	413.07	0.02
39.00	0.00	30,058	413.06	0.02
40.00	0.00	30,002	413.06	0.02
41.00	0.00	29,948	413.06	0.01
42.00	0.00	29,897	413.05	0.01
43.00	0.00	29,849	413.05	0.01
44.00	0.00	29,803	413.05	0.01
45.00	0.00	29,760	413.05	0.01
46.00	0.00	29,719	413.04	0.01
47.00	0.00	29,680	413.04	0.01
48.00	0.00	29,643	413.04	0.01

Stage-Area-Storage for Pond 1P: Bioretention 1D

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.66	14,016	0	414.46	18,566	54,821
408.76	14,016	561	414.56	18,751	56,593
408.86	14,016	1,121	414.66	18,936	58,364
408.96	14,016	1,682	414.76	19,121	60,136
409.06	14,016	2,243	414.86	19,306	61,907
409.16	14,016	2,803	414.96	19,491	63,679
409.26	14,016	3,364	415.06	19,676	65,450
409.36	14,016	3,840	415.16	19,861	67,222
409.46	14,016	4,121	415.26	20,046	68,993
409.56	14,016	4,401	415.36	20,231	70,765
409.66	14,016	4,681	415.46	20,416	72,536
409.76	14,016	4,962	415.56	20,601	74,308
409.86	14,016	5,242	415.66	20,786	76,080
409.96	14,016	5,522	415.76	20,971	77,851
410.06	14,016	5,803	415.86	21,156	79,623
410.16	14,016	6,083	415.96	21,341	81,394
410.26	14,016	6,363			
410.36	14,016	6,644			
410.46	14,016	6,924			
410.56	14,016	7,204			
410.66	14,016	7,485			
410.76	14,016	7,765			
410.86	14,016	8,045			
410.96	14,016	8,326			
411.06	14,016	8,606			
411.16	14,016	8,886			
411.26	14,016	9,166			
411.36	14,016	9,447			
411.46	14,016	9,727			
411.56	14,016	10,007			
411.66	14,016	10,288			
411.76	14,016	10,568			
411.86	14,016	10,848			
411.96	14,016	11,129			
412.06	14,127	12,304			
412.16	14,312	14,075			
412.26	14,497	15,847			
412.36	14,682	17,618			
412.46	14,867	19,390			
412.56	15,052	21,162			
412.66	15,237	22,933			
412.76	15,422	24,705			
412.86	15,607	26,476			
412.96	15,792	28,248			
413.06	15,977	30,019			
413.16	16,162	31,791			
413.26	16,347	33,562			
413.36	16,532	35,334			
413.46	16,717	37,105			
413.56	16,902	38,877			
413.66	17,087	40,649			
413.76	17,272	42,420			
413.86	17,457	44,192			
413.96	17,642	45,963			
414.06	17,826	47,735			
414.16	18,011	49,506			
414.26	18,196	51,278			
414.36	18,381	53,049			

Summary for Pond 3P: Bioretention 1A

Inflow Area = 2.483 ac, 78.54% Impervious, Inflow Depth = 4.34" for 25-Year event
 Inflow = 13.19 cfs @ 12.13 hrs, Volume= 0.898 af
 Outflow = 2.35 cfs @ 12.54 hrs, Volume= 0.449 af, Atten= 82%, Lag= 24.4 min
 Primary = 2.35 cfs @ 12.54 hrs, Volume= 0.449 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 414.64' @ 12.54 hrs Surf.Area= 11,651 sf Storage= 21,144 cf

Plug-Flow detention time= 263.5 min calculated for 0.449 af (50% of inflow)
 Center-of-Mass det. time= 139.5 min (946.6 - 807.1)

Volume	Invert	Avail.Storage	Storage Description
#1	408.66'	25,522 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

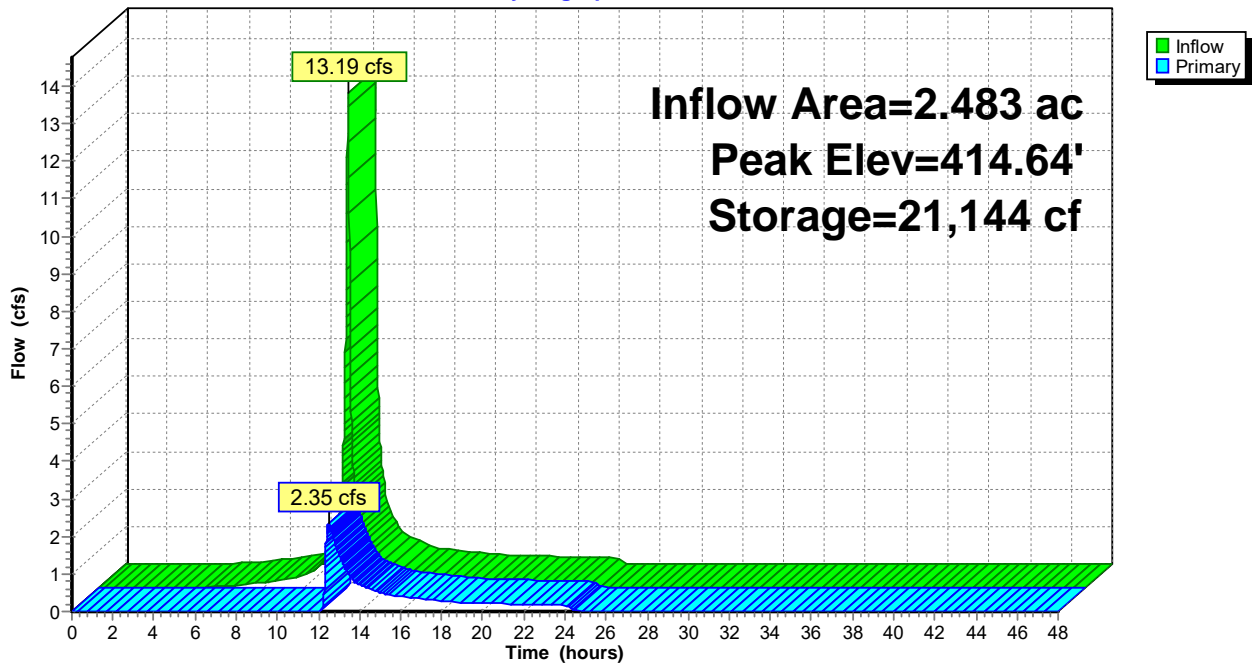
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	8,681	0.0	0	0
409.33	8,681	40.0	2,327	2,327
413.50	8,681	20.0	7,240	9,566
415.00	12,593	100.0	15,956	25,522

Device	Routing	Invert	Outlet Devices
#1	Primary	408.66'	18.0" Round Culvert L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 408.66' / 407.50' S= 0.0232 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	414.50'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.32 cfs @ 12.54 hrs HW=414.64' (Free Discharge)
 ↑1=Culvert (Passes 2.32 cfs of 19.46 cfs potential flow)
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 2.32 cfs @ 1.04 fps)

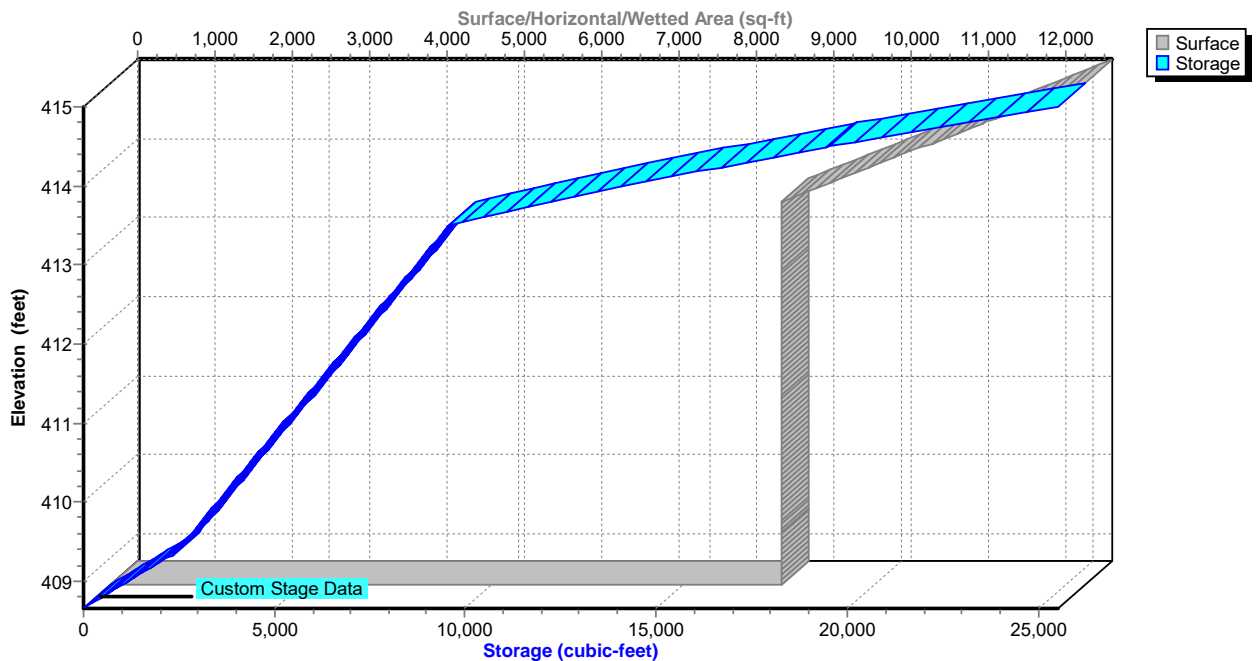
Pond 3P: Bioretention 1A

Hydrograph



Pond 3P: Bioretention 1A

Stage-Area-Storage



Hydrograph for Pond 3P: Bioretention 1A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	408.66	0.00
1.00	0.00	0	408.66	0.00
2.00	0.00	0	408.66	0.00
3.00	0.00	0	408.66	0.00
4.00	0.00	0	408.66	0.00
5.00	0.01	14	408.66	0.00
6.00	0.04	114	408.69	0.00
7.00	0.08	330	408.76	0.00
8.00	0.14	719	408.87	0.00
9.00	0.20	1,323	409.04	0.00
10.00	0.36	2,318	409.33	0.00
11.00	0.76	4,143	410.38	0.00
12.00	6.65	10,886	413.65	0.00
13.00	1.30	20,731	414.60	1.53
14.00	0.67	20,257	414.56	0.71
15.00	0.46	20,103	414.55	0.52
16.00	0.38	19,976	414.54	0.40
17.00	0.32	19,910	414.53	0.34
18.00	0.26	19,845	414.53	0.27
19.00	0.23	19,808	414.52	0.24
20.00	0.22	19,791	414.52	0.22
21.00	0.20	19,775	414.52	0.21
22.00	0.19	19,759	414.52	0.19
23.00	0.17	19,743	414.52	0.18
24.00	0.16	19,726	414.52	0.16
25.00	0.00	19,560	414.50	0.01
26.00	0.00	19,552	414.50	0.00
27.00	0.00	19,551	414.50	0.00
28.00	0.00	19,551	414.50	0.00
29.00	0.00	19,551	414.50	0.00
30.00	0.00	19,551	414.50	0.00
31.00	0.00	19,551	414.50	0.00
32.00	0.00	19,551	414.50	0.00
33.00	0.00	19,551	414.50	0.00
34.00	0.00	19,551	414.50	0.00
35.00	0.00	19,551	414.50	0.00
36.00	0.00	19,551	414.50	0.00
37.00	0.00	19,551	414.50	0.00
38.00	0.00	19,551	414.50	0.00
39.00	0.00	19,551	414.50	0.00
40.00	0.00	19,551	414.50	0.00
41.00	0.00	19,551	414.50	0.00
42.00	0.00	19,551	414.50	0.00
43.00	0.00	19,551	414.50	0.00
44.00	0.00	19,551	414.50	0.00
45.00	0.00	19,551	414.50	0.00
46.00	0.00	19,551	414.50	0.00
47.00	0.00	19,551	414.50	0.00
48.00	0.00	19,551	414.50	0.00

Stage-Area-Storage for Pond 3P: Bioretention 1A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.66	8,681	0	414.46	11,185	19,102
408.76	8,681	347	414.56	11,445	20,233
408.86	8,681	694	414.66	11,706	21,391
408.96	8,681	1,042	414.76	11,967	22,575
409.06	8,681	1,389	414.86	12,228	23,785
409.16	8,681	1,736	414.96	12,489	25,020
409.26	8,681	2,083			
409.36	8,681	2,379			
409.46	8,681	2,552			
409.56	8,681	2,726			
409.66	8,681	2,899			
409.76	8,681	3,073			
409.86	8,681	3,247			
409.96	8,681	3,420			
410.06	8,681	3,594			
410.16	8,681	3,768			
410.26	8,681	3,941			
410.36	8,681	4,115			
410.46	8,681	4,288			
410.56	8,681	4,462			
410.66	8,681	4,636			
410.76	8,681	4,809			
410.86	8,681	4,983			
410.96	8,681	5,157			
411.06	8,681	5,330			
411.16	8,681	5,504			
411.26	8,681	5,677			
411.36	8,681	5,851			
411.46	8,681	6,025			
411.56	8,681	6,198			
411.66	8,681	6,372			
411.76	8,681	6,545			
411.86	8,681	6,719			
411.96	8,681	6,893			
412.06	8,681	7,066			
412.16	8,681	7,240			
412.26	8,681	7,414			
412.36	8,681	7,587			
412.46	8,681	7,761			
412.56	8,681	7,934			
412.66	8,681	8,108			
412.76	8,681	8,282			
412.86	8,681	8,455			
412.96	8,681	8,629			
413.06	8,681	8,803			
413.16	8,681	8,976			
413.26	8,681	9,150			
413.36	8,681	9,323			
413.46	8,681	9,497			
413.56	8,837	10,092			
413.66	9,098	10,989			
413.76	9,359	11,912			
413.86	9,620	12,861			
413.96	9,881	13,836			
414.06	10,141	14,837			
414.16	10,402	15,864			
414.26	10,663	16,917			
414.36	10,924	17,997			

Summary for Pond 22P: Bioretention 5A

Inflow Area = 4.966 ac, 46.58% Impervious, Inflow Depth = 3.22" for 25-Year event
 Inflow = 19.84 cfs @ 12.15 hrs, Volume= 1.332 af
 Outflow = 5.78 cfs @ 12.37 hrs, Volume= 0.986 af, Atten= 71%, Lag= 13.6 min
 Primary = 5.78 cfs @ 12.37 hrs, Volume= 0.986 af
 Routed to Link PDP5 : PDP5

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 433.12' @ 12.37 hrs Surf.Area= 13,091 sf Storage= 22,924 cf

Plug-Flow detention time= 189.1 min calculated for 0.986 af (74% of inflow)
 Center-of-Mass det. time= 89.8 min (931.6 - 841.8)

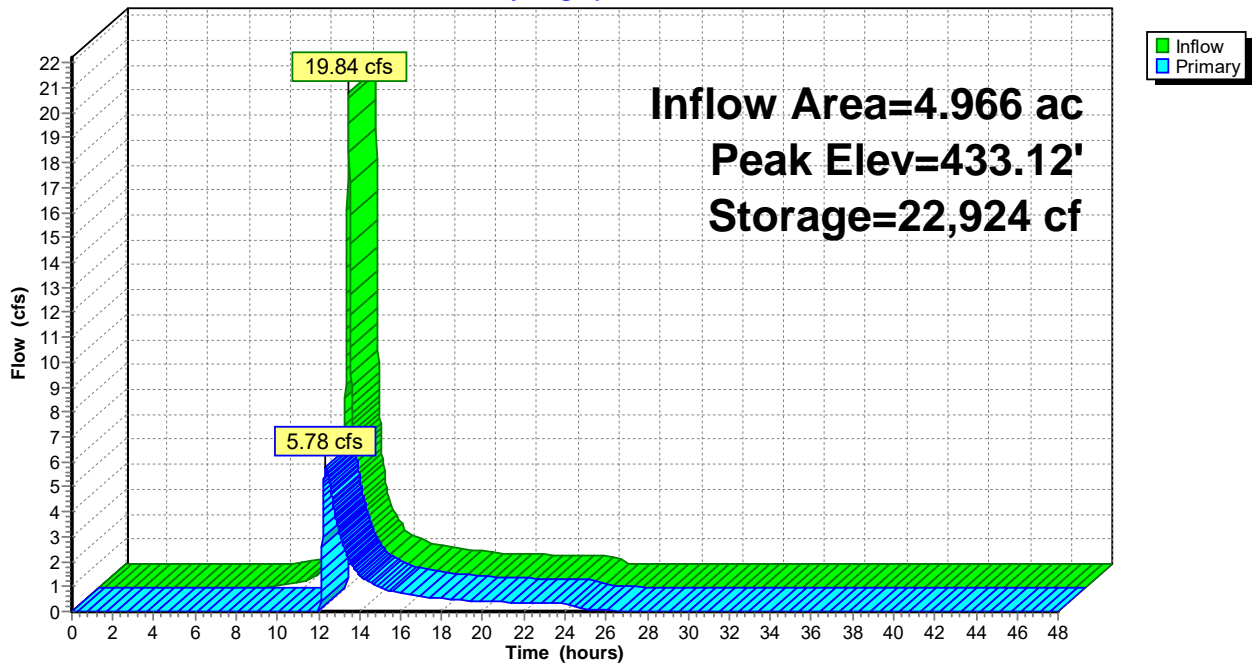
Volume	Invert	Avail.Storage	Storage Description	
#1	428.67'	50,065 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
428.67	11,465	0.0	0	0
429.33	11,465	40.0	3,027	3,027
432.00	11,465	20.0	6,122	9,149
435.00	15,812	100.0	40,916	50,065

Device	Routing	Invert	Outlet Devices
#1	Primary	428.67'	18.0" Round Culvert L= 270.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 428.67' / 389.43' S= 0.1453 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	432.50'	44.0" W x 8.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	434.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=5.77 cfs @ 12.37 hrs HW=433.12' (Free Discharge)
 1=Culvert (Passes 5.77 cfs of 16.37 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 5.77 cfs @ 2.53 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

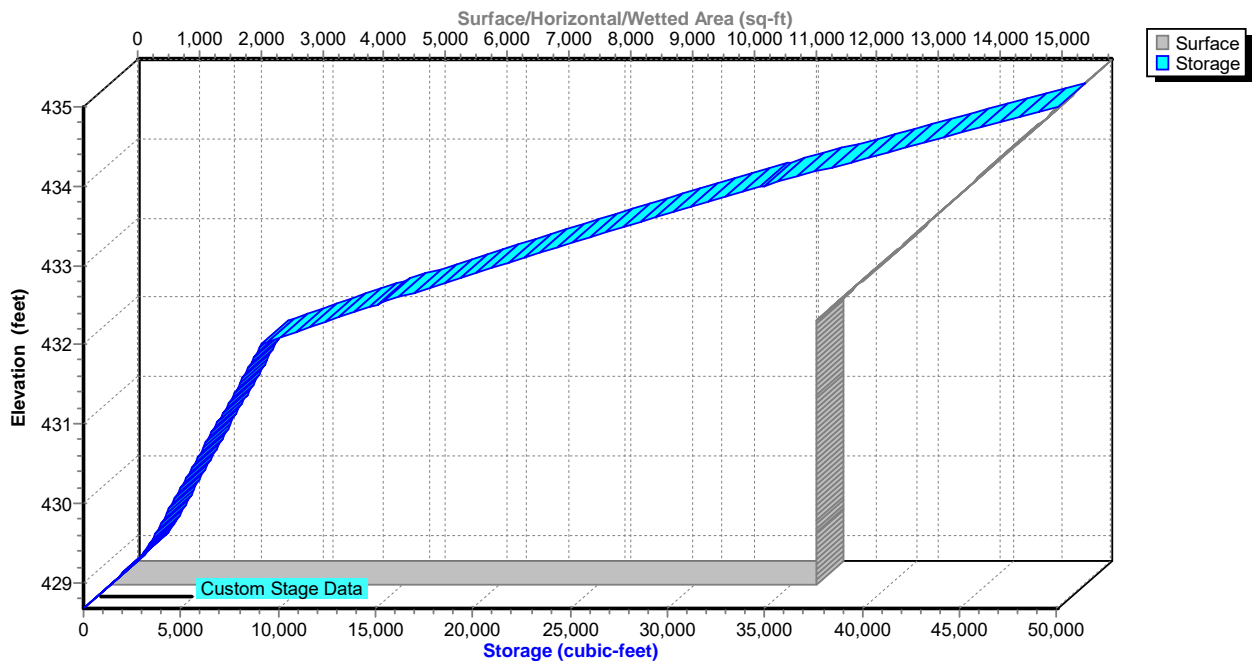
Pond 22P: Bioretention 5A

Hydrograph



Pond 22P: Bioretention 5A

Stage-Area-Storage



Hydrograph for Pond 22P: Bioretention 5A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	428.67	0.00
1.00	0.00	0	428.67	0.00
2.00	0.00	0	428.67	0.00
3.00	0.00	0	428.67	0.00
4.00	0.00	0	428.67	0.00
5.00	0.00	0	428.67	0.00
6.00	0.00	0	428.67	0.00
7.00	0.00	0	428.67	0.00
8.00	0.02	13	428.67	0.00
9.00	0.10	225	428.72	0.00
10.00	0.29	874	428.86	0.00
11.00	0.76	2,523	429.22	0.00
12.00	8.17	10,322	432.10	0.00
13.00	2.27	20,323	432.92	3.22
14.00	1.16	18,145	432.75	1.47
15.00	0.81	17,399	432.69	0.98
16.00	0.66	16,989	432.66	0.73
17.00	0.56	16,770	432.64	0.62
18.00	0.46	16,563	432.62	0.51
19.00	0.42	16,415	432.61	0.44
20.00	0.39	16,348	432.60	0.41
21.00	0.36	16,295	432.60	0.38
22.00	0.34	16,243	432.60	0.35
23.00	0.31	16,187	432.59	0.33
24.00	0.29	16,118	432.59	0.31
25.00	0.00	15,567	432.54	0.11
26.00	0.00	15,327	432.52	0.05
27.00	0.00	15,206	432.51	0.02
28.00	0.00	15,140	432.51	0.01
29.00	0.00	15,105	432.50	0.01
30.00	0.00	15,085	432.50	0.00
31.00	0.00	15,075	432.50	0.00
32.00	0.00	15,069	432.50	0.00
33.00	0.00	15,066	432.50	0.00
34.00	0.00	15,065	432.50	0.00
35.00	0.00	15,064	432.50	0.00
36.00	0.00	15,063	432.50	0.00
37.00	0.00	15,063	432.50	0.00
38.00	0.00	15,063	432.50	0.00
39.00	0.00	15,063	432.50	0.00
40.00	0.00	15,063	432.50	0.00
41.00	0.00	15,063	432.50	0.00
42.00	0.00	15,063	432.50	0.00
43.00	0.00	15,063	432.50	0.00
44.00	0.00	15,063	432.50	0.00
45.00	0.00	15,063	432.50	0.00
46.00	0.00	15,063	432.50	0.00
47.00	0.00	15,063	432.50	0.00
48.00	0.00	15,063	432.50	0.00

Stage-Area-Storage for Pond 22P: Bioretention 5A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
428.67	11,465	0	434.47	15,044	41,888
428.77	11,465	459	434.57	15,189	43,399
428.87	11,465	917	434.67	15,334	44,926
428.97	11,465	1,376	434.77	15,479	46,466
429.07	11,465	1,834	434.87	15,624	48,021
429.17	11,465	2,293	434.97	15,769	49,591
429.27	11,465	2,752			
429.37	11,465	3,118			
429.47	11,465	3,348			
429.57	11,465	3,577			
429.67	11,465	3,806			
429.77	11,465	4,036			
429.87	11,465	4,265			
429.97	11,465	4,494			
430.07	11,465	4,724			
430.17	11,465	4,953			
430.27	11,465	5,182			
430.37	11,465	5,411			
430.47	11,465	5,641			
430.57	11,465	5,870			
430.67	11,465	6,099			
430.77	11,465	6,329			
430.87	11,465	6,558			
430.97	11,465	6,787			
431.07	11,465	7,017			
431.17	11,465	7,246			
431.27	11,465	7,475			
431.37	11,465	7,704			
431.47	11,465	7,934			
431.57	11,465	8,163			
431.67	11,465	8,392			
431.77	11,465	8,622			
431.87	11,465	8,851			
431.97	11,465	9,080			
432.07	11,566	9,955			
432.17	11,711	11,119			
432.27	11,856	12,297			
432.37	12,001	13,490			
432.47	12,146	14,698			
432.57	12,291	15,920			
432.67	12,436	17,156			
432.77	12,581	18,407			
432.87	12,726	19,672			
432.97	12,871	20,952			
433.07	13,015	22,246			
433.17	13,160	23,555			
433.27	13,305	24,878			
433.37	13,450	26,216			
433.47	13,595	27,568			
433.57	13,740	28,935			
433.67	13,885	30,316			
433.77	14,030	31,712			
433.87	14,175	33,122			
433.97	14,320	34,547			
434.07	14,464	35,986			
434.17	14,609	37,440			
434.27	14,754	38,908			
434.37	14,899	40,391			

Summary for Pond 26P: Bioretention 1F

Inflow Area = 5.758 ac, 71.20% Impervious, Inflow Depth = 3.92" for 25-Year event
 Inflow = 28.15 cfs @ 12.13 hrs, Volume= 1.881 af
 Outflow = 6.44 cfs @ 12.39 hrs, Volume= 1.316 af, Atten= 77%, Lag= 15.7 min
 Primary = 6.44 cfs @ 12.39 hrs, Volume= 1.316 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.13' @ 12.39 hrs Surf.Area= 22,270 sf Storage= 38,021 cf

Plug-Flow detention time= 221.1 min calculated for 1.316 af (70% of inflow)
 Center-of-Mass det. time= 118.1 min (937.4 - 819.3)

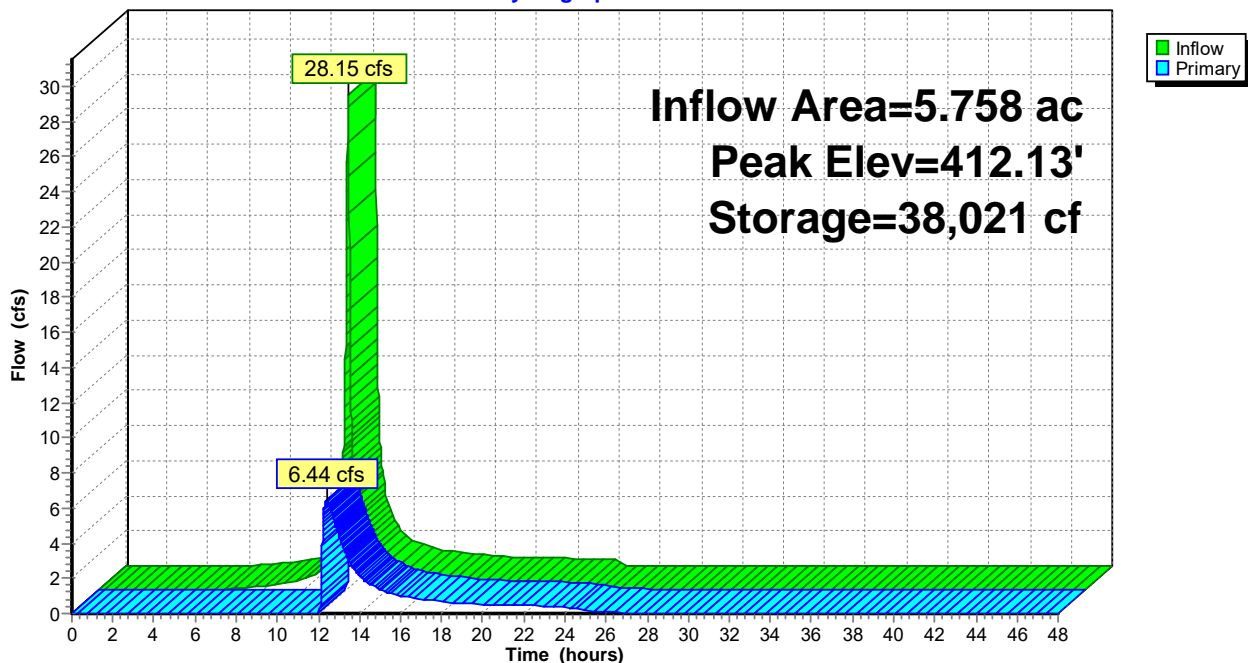
Volume	Invert	Avail.Storage	Storage Description	
#1	407.66'	85,321 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.66	18,594	0.0	0	0
408.33	18,594	40.0	4,983	4,983
411.00	18,594	20.0	9,929	14,912
414.00	28,345	100.0	70,409	85,321

Device	Routing	Invert	Outlet Devices
#1	Primary	407.66'	18.0" Round Culvert L= 47.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.66' / 407.50' S= 0.0034 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	411.50'	48.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=6.44 cfs @ 12.39 hrs HW=412.13' (Free Discharge)
 1=Culvert (Passes 6.44 cfs of 16.34 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 6.44 cfs @ 2.55 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

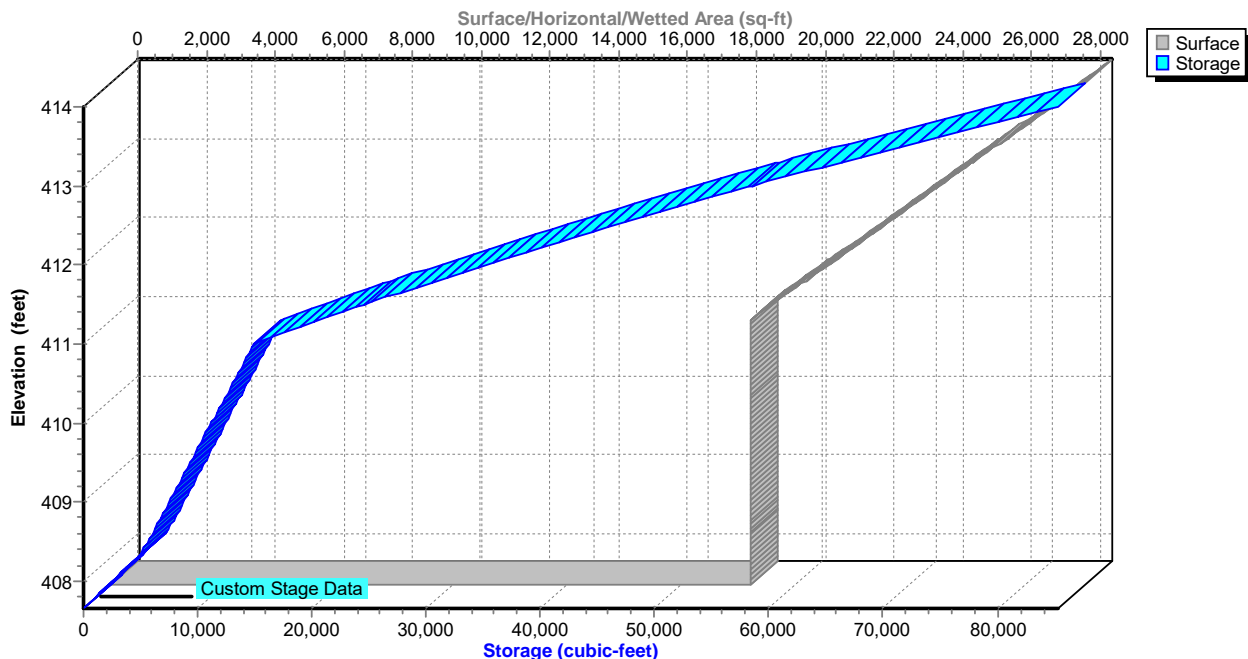
Pond 26P: Bioretention 1F

Hydrograph



Pond 26P: Bioretention 1F

Stage-Area-Storage



Hydrograph for Pond 26P: Bioretention 1F

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.66	0.00
1.00	0.00	0	407.66	0.00
2.00	0.00	0	407.66	0.00
3.00	0.00	0	407.66	0.00
4.00	0.00	0	407.66	0.00
5.00	0.00	0	407.66	0.00
6.00	0.02	14	407.66	0.00
7.00	0.09	206	407.69	0.00
8.00	0.20	716	407.76	0.00
9.00	0.33	1,649	407.88	0.00
10.00	0.64	3,348	408.11	0.00
11.00	1.45	6,712	408.79	0.00
12.00	13.84	20,252	411.28	0.00
13.00	2.86	34,908	411.99	4.41
14.00	1.48	30,879	411.80	2.14
15.00	1.01	29,232	411.72	1.37
16.00	0.84	28,336	411.68	1.00
17.00	0.71	27,868	411.66	0.82
18.00	0.57	27,480	411.64	0.68
19.00	0.52	27,174	411.63	0.58
20.00	0.49	27,009	411.62	0.53
21.00	0.46	26,888	411.61	0.49
22.00	0.42	26,779	411.61	0.45
23.00	0.39	26,674	411.60	0.42
24.00	0.36	26,569	411.60	0.39
25.00	0.00	25,700	411.55	0.18
26.00	0.00	25,262	411.53	0.08
27.00	0.00	25,053	411.52	0.05
28.00	0.00	24,916	411.51	0.03
29.00	0.00	24,821	411.51	0.02
30.00	0.00	24,757	411.51	0.01
31.00	0.00	24,712	411.50	0.01
32.00	0.00	24,682	411.50	0.01
33.00	0.00	24,661	411.50	0.00
34.00	0.00	24,647	411.50	0.00
35.00	0.00	24,637	411.50	0.00
36.00	0.00	24,630	411.50	0.00
37.00	0.00	24,626	411.50	0.00
38.00	0.00	24,623	411.50	0.00
39.00	0.00	24,620	411.50	0.00
40.00	0.00	24,619	411.50	0.00
41.00	0.00	24,618	411.50	0.00
42.00	0.00	24,617	411.50	0.00
43.00	0.00	24,617	411.50	0.00
44.00	0.00	24,616	411.50	0.00
45.00	0.00	24,616	411.50	0.00
46.00	0.00	24,616	411.50	0.00
47.00	0.00	24,616	411.50	0.00
48.00	0.00	24,616	411.50	0.00

Stage-Area-Storage for Pond 26P: Bioretention 1F

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.66	18,594	0	413.46	26,590	70,488
407.76	18,594	744	413.56	26,915	73,164
407.86	18,594	1,488	413.66	27,240	75,871
407.96	18,594	2,231	413.76	27,565	78,612
408.06	18,594	2,975	413.86	27,890	81,384
408.16	18,594	3,719	413.96	28,215	84,190
408.26	18,594	4,463			
408.36	18,594	5,095			
408.46	18,594	5,467			
408.56	18,594	5,839			
408.66	18,594	6,210			
408.76	18,594	6,582			
408.86	18,594	6,954			
408.96	18,594	7,326			
409.06	18,594	7,698			
409.16	18,594	8,070			
409.26	18,594	8,442			
409.36	18,594	8,814			
409.46	18,594	9,185			
409.56	18,594	9,557			
409.66	18,594	9,929			
409.76	18,594	10,301			
409.86	18,594	10,673			
409.96	18,594	11,045			
410.06	18,594	11,417			
410.16	18,594	11,789			
410.26	18,594	12,160			
410.36	18,594	12,532			
410.46	18,594	12,904			
410.56	18,594	13,276			
410.66	18,594	13,648			
410.76	18,594	14,020			
410.86	18,594	14,392			
410.96	18,594	14,764			
411.06	18,789	16,034			
411.16	19,114	17,929			
411.26	19,439	19,857			
411.36	19,764	21,817			
411.46	20,089	23,810			
411.56	20,414	25,835			
411.66	20,739	27,892			
411.76	21,064	29,983			
411.86	21,389	32,105			
411.96	21,714	34,260			
412.06	22,039	36,448			
412.16	22,364	38,668			
412.26	22,689	40,921			
412.36	23,014	43,206			
412.46	23,339	45,524			
412.56	23,665	47,874			
412.66	23,990	50,257			
412.76	24,315	52,672			
412.86	24,640	55,120			
412.96	24,965	57,600			
413.06	25,290	60,113			
413.16	25,615	62,658			
413.26	25,940	65,236			
413.36	26,265	67,846			

Summary for Pond 29P: Bioretention 4B

Inflow Area = 6.859 ac, 48.92% Impervious, Inflow Depth = 4.03" for 25-Year event
 Inflow = 34.19 cfs @ 12.13 hrs, Volume= 2.303 af
 Outflow = 7.43 cfs @ 12.41 hrs, Volume= 1.598 af, Atten= 78%, Lag= 16.5 min
 Primary = 7.43 cfs @ 12.41 hrs, Volume= 1.598 af
 Routed to Link 32L : DP-4

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 419.85' @ 12.41 hrs Surf.Area= 20,136 sf Storage= 47,205 cf

Plug-Flow detention time= 216.8 min calculated for 1.598 af (69% of inflow)
 Center-of-Mass det. time= 113.2 min (928.2 - 814.9)

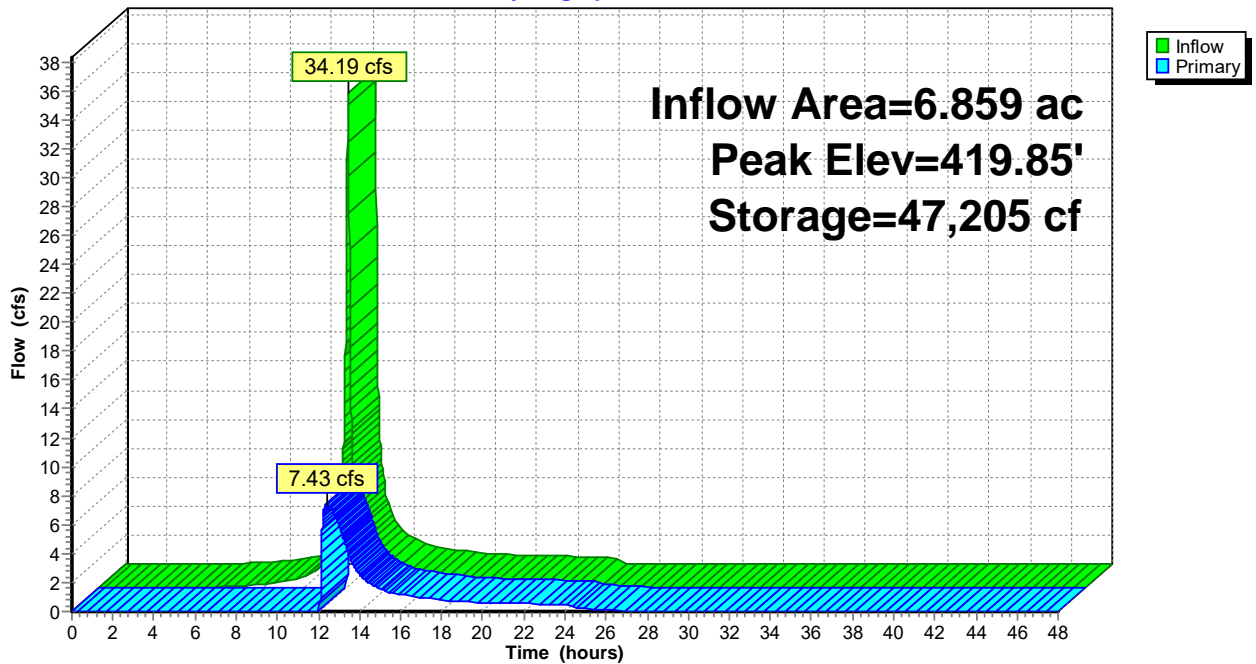
Volume	Invert	Avail.Storage	Storage Description	
#1	414.67'	94,874 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
414.67	16,541	0.0	0	0
415.33	16,541	40.0	4,367	4,367
418.00	16,541	20.0	8,833	13,200
422.00	24,296	100.0	81,674	94,874

Device	Routing	Invert	Outlet Devices
#1	Primary	414.67'	18.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 414.67' / 414.07' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	419.00'	48.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	421.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=7.43 cfs @ 12.41 hrs HW=419.85' (Free Discharge)
 1=Culvert (Passes 7.43 cfs of 17.92 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 7.43 cfs @ 3.72 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

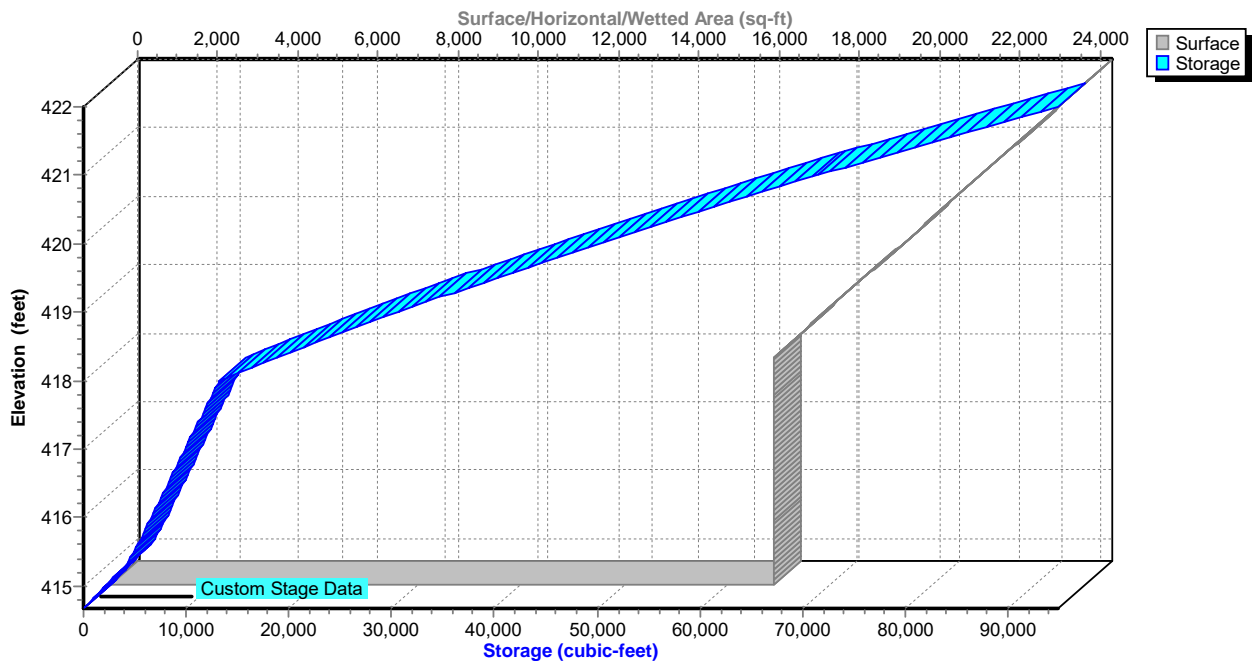
Pond 29P: Bioretention 4B

Hydrograph



Pond 29P: Bioretention 4B

Stage-Area-Storage



Hydrograph for Pond 29P: Bioretention 4B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	414.67	0.00
1.00	0.00	0	414.67	0.00
2.00	0.00	0	414.67	0.00
3.00	0.00	0	414.67	0.00
4.00	0.00	0	414.67	0.00
5.00	0.01	7	414.67	0.00
6.00	0.07	155	414.69	0.00
7.00	0.15	542	414.75	0.00
8.00	0.28	1,296	414.87	0.00
9.00	0.44	2,575	415.06	0.00
10.00	0.84	4,812	415.46	0.00
11.00	1.83	9,109	416.76	0.00
12.00	16.94	25,884	418.74	0.00
13.00	3.45	43,026	419.64	5.93
14.00	1.77	37,100	419.34	2.55
15.00	1.22	35,330	419.25	1.59
16.00	1.01	34,456	419.20	1.16
17.00	0.85	33,990	419.18	0.96
18.00	0.69	33,597	419.15	0.79
19.00	0.63	33,326	419.14	0.68
20.00	0.59	33,175	419.13	0.63
21.00	0.55	33,045	419.13	0.58
22.00	0.51	32,921	419.12	0.54
23.00	0.47	32,798	419.11	0.50
24.00	0.43	32,676	419.11	0.46
25.00	0.00	31,734	419.06	0.18
26.00	0.00	31,245	419.03	0.10
27.00	0.00	30,989	419.02	0.05
28.00	0.00	30,856	419.01	0.03
29.00	0.00	30,786	419.00	0.01
30.00	0.00	30,750	419.00	0.01
31.00	0.00	30,731	419.00	0.00
32.00	0.00	30,721	419.00	0.00
33.00	0.00	30,716	419.00	0.00
34.00	0.00	30,713	419.00	0.00
35.00	0.00	30,712	419.00	0.00
36.00	0.00	30,711	419.00	0.00
37.00	0.00	30,711	419.00	0.00
38.00	0.00	30,710	419.00	0.00
39.00	0.00	30,710	419.00	0.00
40.00	0.00	30,710	419.00	0.00
41.00	0.00	30,710	419.00	0.00
42.00	0.00	30,710	419.00	0.00
43.00	0.00	30,710	419.00	0.00
44.00	0.00	30,710	419.00	0.00
45.00	0.00	30,710	419.00	0.00
46.00	0.00	30,710	419.00	0.00
47.00	0.00	30,710	419.00	0.00
48.00	0.00	30,710	419.00	0.00

Stage-Area-Storage for Pond 29P: Bioretention 4B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
414.67	16,541	0	420.47	21,330	59,970
414.77	16,541	662	420.57	21,524	62,113
414.87	16,541	1,323	420.67	21,717	64,275
414.97	16,541	1,985	420.77	21,911	66,456
415.07	16,541	2,647	420.87	22,105	68,657
415.17	16,541	3,308	420.97	22,299	70,877
415.27	16,541	3,970	421.07	22,493	73,117
415.37	16,541	4,499	421.17	22,687	75,376
415.47	16,541	4,830	421.27	22,881	77,654
415.57	16,541	5,161	421.37	23,075	79,952
415.67	16,541	5,492	421.47	23,268	82,269
415.77	16,541	5,822	421.57	23,462	84,606
415.87	16,541	6,153	421.67	23,656	86,962
415.97	16,541	6,484	421.77	23,850	89,337
416.07	16,541	6,815	421.87	24,044	91,732
416.17	16,541	7,146	421.97	24,238	94,146
416.27	16,541	7,477			
416.37	16,541	7,807			
416.47	16,541	8,138			
416.57	16,541	8,469			
416.67	16,541	8,800			
416.77	16,541	9,131			
416.87	16,541	9,461			
416.97	16,541	9,792			
417.07	16,541	10,123			
417.17	16,541	10,454			
417.27	16,541	10,785			
417.37	16,541	11,116			
417.47	16,541	11,446			
417.57	16,541	11,777			
417.67	16,541	12,108			
417.77	16,541	12,439			
417.87	16,541	12,770			
417.97	16,541	13,100			
418.07	16,677	14,362			
418.17	16,871	16,040			
418.27	17,064	17,736			
418.37	17,258	19,453			
418.47	17,452	21,188			
418.57	17,646	22,943			
418.67	17,840	24,717			
418.77	18,034	26,511			
418.87	18,228	28,324			
418.97	18,422	30,157			
419.07	18,615	32,008			
419.17	18,809	33,880			
419.27	19,003	35,770			
419.37	19,197	37,680			
419.47	19,391	39,610			
419.57	19,585	41,559			
419.67	19,779	43,527			
419.77	19,973	45,514			
419.87	20,166	47,521			
419.97	20,360	49,548			
420.07	20,554	51,593			
420.17	20,748	53,658			
420.27	20,942	55,743			
420.37	21,136	57,847			

Summary for Pond 31P: Bioretention i

Inflow Area = 10.027 ac, 72.74% Impervious, Inflow Depth = 2.30" for 25-Year event
 Inflow = 25.23 cfs @ 12.09 hrs, Volume= 1.918 af
 Outflow = 2.32 cfs @ 13.05 hrs, Volume= 0.950 af, Atten= 91%, Lag= 58.0 min
 Primary = 2.32 cfs @ 13.05 hrs, Volume= 0.950 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.40' @ 13.05 hrs Surf.Area= 25,329 sf Storage= 52,413 cf

Plug-Flow detention time= 386.7 min calculated for 0.950 af (50% of inflow)
 Center-of-Mass det. time= 245.4 min (1,019.3 - 773.9)

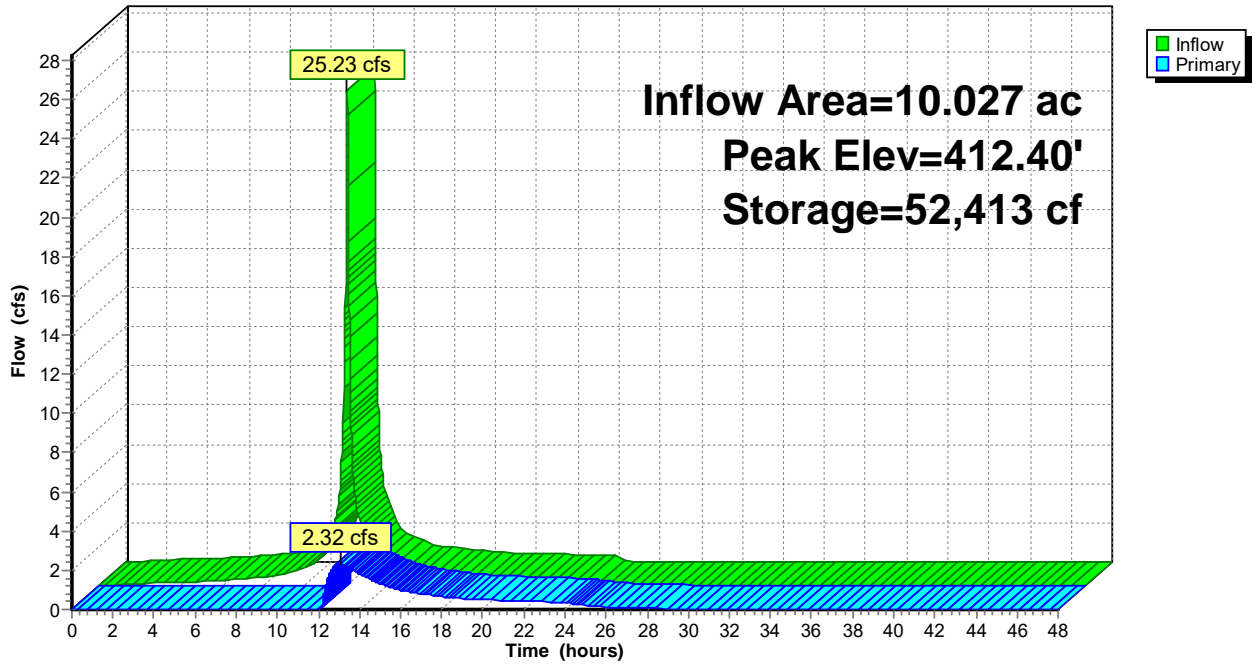
Volume	Invert	Avail.Storage	Storage Description	
#1	407.83'	93,189 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	22,680	0.0	0	0
408.33	22,680	40.0	4,536	4,536
411.00	22,680	20.0	12,111	16,647
414.00	28,348	100.0	76,542	93,189

Device	Routing	Invert	Outlet Devices
#1	Primary	407.83'	12.0" Round Culvert L= 42.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.83' / 407.50' S= 0.0079 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	412.00'	34.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.32 cfs @ 13.05 hrs HW=412.40' (Free Discharge)
 1=Culvert (Passes 2.32 cfs of 7.42 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 2.32 cfs @ 2.03 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

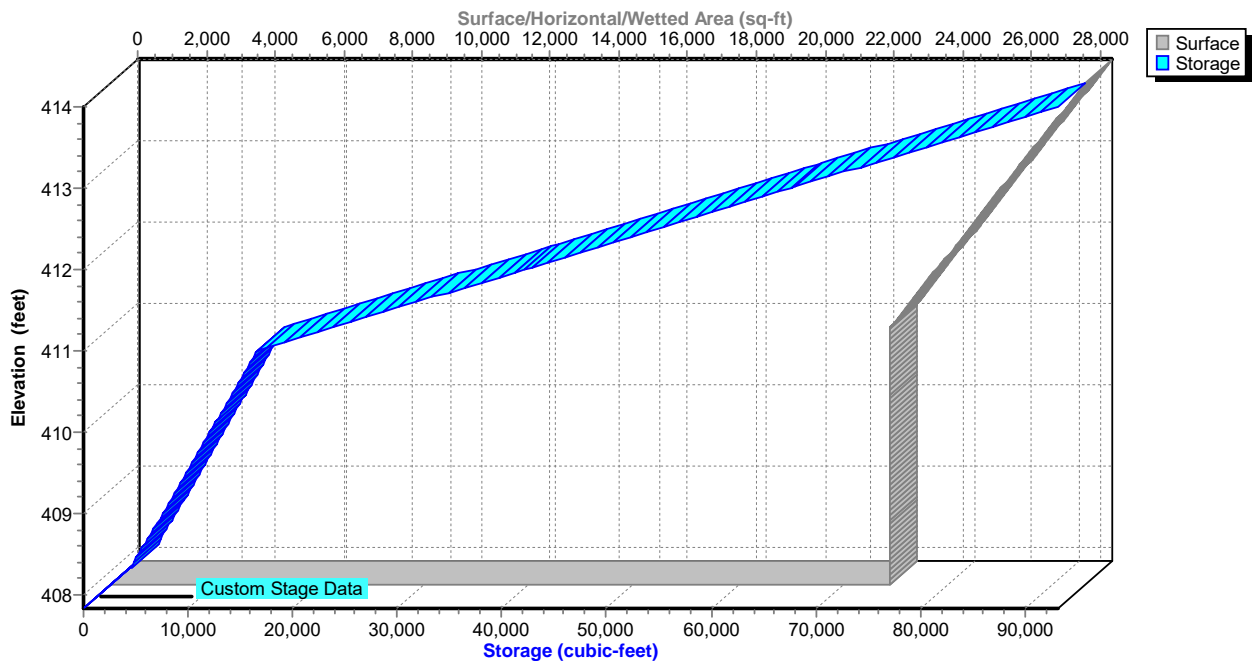
Pond 31P: Bioretention i

Hydrograph



Pond 31P: Bioretention i

Stage-Area-Storage



Hydrograph for Pond 31P: Bioretention i

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.83	0.00
1.00	0.04	25	407.83	0.00
2.00	0.11	304	407.86	0.00
3.00	0.16	790	407.92	0.00
4.00	0.19	1,419	407.99	0.00
5.00	0.22	2,158	408.07	0.00
6.00	0.25	3,002	408.16	0.00
7.00	0.35	4,082	408.28	0.00
8.00	0.45	5,525	408.55	0.00
9.00	0.57	7,369	408.95	0.00
10.00	0.92	10,048	409.55	0.00
11.00	1.74	14,442	410.51	0.00
12.00	15.42	30,395	411.54	0.00
13.00	2.49	52,399	412.40	2.31
14.00	1.30	50,893	412.34	1.82
15.00	0.89	49,202	412.28	1.32
16.00	0.74	47,965	412.23	0.99
17.00	0.62	47,201	412.20	0.80
18.00	0.50	46,585	412.17	0.66
19.00	0.46	46,118	412.16	0.56
20.00	0.43	45,833	412.14	0.50
21.00	0.40	45,612	412.14	0.46
22.00	0.37	45,419	412.13	0.42
23.00	0.34	45,242	412.12	0.39
24.00	0.31	45,072	412.11	0.36
25.00	0.00	44,181	412.08	0.21
26.00	0.00	43,576	412.06	0.13
27.00	0.00	43,192	412.04	0.08
28.00	0.00	42,947	412.03	0.05
29.00	0.00	42,790	412.02	0.04
30.00	0.00	42,673	412.02	0.03
31.00	0.00	42,578	412.02	0.02
32.00	0.00	42,501	412.01	0.02
33.00	0.00	42,438	412.01	0.02
34.00	0.00	42,386	412.01	0.01
35.00	0.00	42,345	412.01	0.01
36.00	0.00	42,311	412.01	0.01
37.00	0.00	42,283	412.00	0.01
38.00	0.00	42,260	412.00	0.01
39.00	0.00	42,242	412.00	0.00
40.00	0.00	42,227	412.00	0.00
41.00	0.00	42,215	412.00	0.00
42.00	0.00	42,205	412.00	0.00
43.00	0.00	42,197	412.00	0.00
44.00	0.00	42,190	412.00	0.00
45.00	0.00	42,185	412.00	0.00
46.00	0.00	42,180	412.00	0.00
47.00	0.00	42,177	412.00	0.00
48.00	0.00	42,174	412.00	0.00

Stage-Area-Storage for Pond 31P: Bioretention i

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.83	22,680	0	413.63	27,649	83,749
407.93	22,680	907	413.73	27,838	86,300
408.03	22,680	1,814	413.83	28,027	88,852
408.13	22,680	2,722	413.93	28,216	91,403
408.23	22,680	3,629			
408.33	22,680	4,536			
408.43	22,680	4,990			
408.53	22,680	5,443			
408.63	22,680	5,897			
408.73	22,680	6,350			
408.83	22,680	6,804			
408.93	22,680	7,258			
409.03	22,680	7,711			
409.13	22,680	8,165			
409.23	22,680	8,618			
409.33	22,680	9,072			
409.43	22,680	9,526			
409.53	22,680	9,979			
409.63	22,680	10,433			
409.73	22,680	10,886			
409.83	22,680	11,340			
409.93	22,680	11,794			
410.03	22,680	12,247			
410.13	22,680	12,701			
410.23	22,680	13,154			
410.33	22,680	13,608			
410.43	22,680	14,062			
410.53	22,680	14,515			
410.63	22,680	14,969			
410.73	22,680	15,422			
410.83	22,680	15,876			
410.93	22,680	16,330			
411.03	22,737	17,413			
411.13	22,926	19,964			
411.23	23,115	22,515			
411.33	23,303	25,067			
411.43	23,492	27,618			
411.53	23,681	30,170			
411.63	23,870	32,721			
411.73	24,059	35,272			
411.83	24,248	37,824			
411.93	24,437	40,375			
412.03	24,626	42,927			
412.13	24,815	45,478			
412.23	25,004	48,029			
412.33	25,193	50,581			
412.43	25,382	53,132			
412.53	25,571	55,684			
412.63	25,760	58,235			
412.73	25,949	60,786			
412.83	26,137	63,338			
412.93	26,326	65,889			
413.03	26,515	68,441			
413.13	26,704	70,992			
413.23	26,893	73,543			
413.33	27,082	76,095			
413.43	27,271	78,646			
413.53	27,460	81,198			

Summary for Pond 32P: FB 1C

Inflow Area = 2.583 ac, 77.93% Impervious, Inflow Depth = 4.88" for 25-Year event
 Inflow = 14.91 cfs @ 12.13 hrs, Volume= 1.051 af
 Outflow = 14.78 cfs @ 12.14 hrs, Volume= 1.051 af, Atten= 1%, Lag= 0.5 min
 Primary = 14.78 cfs @ 12.14 hrs, Volume= 1.051 af
 Routed to Pond 33P : INFIL 1C

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 413.35' Surf.Area= 3,197 sf Storage= 9,962 cf
 Peak Elev= 413.69' @ 12.14 hrs Surf.Area= 3,422 sf Storage= 10,729 cf (767 cf above start)

Plug-Flow detention time= 144.1 min calculated for 0.823 af (78% of inflow)
 Center-of-Mass det. time= 1.9 min (791.3 - 789.4)

Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	13,740 cf	Custom Stage Data (Prismatic) Listed below

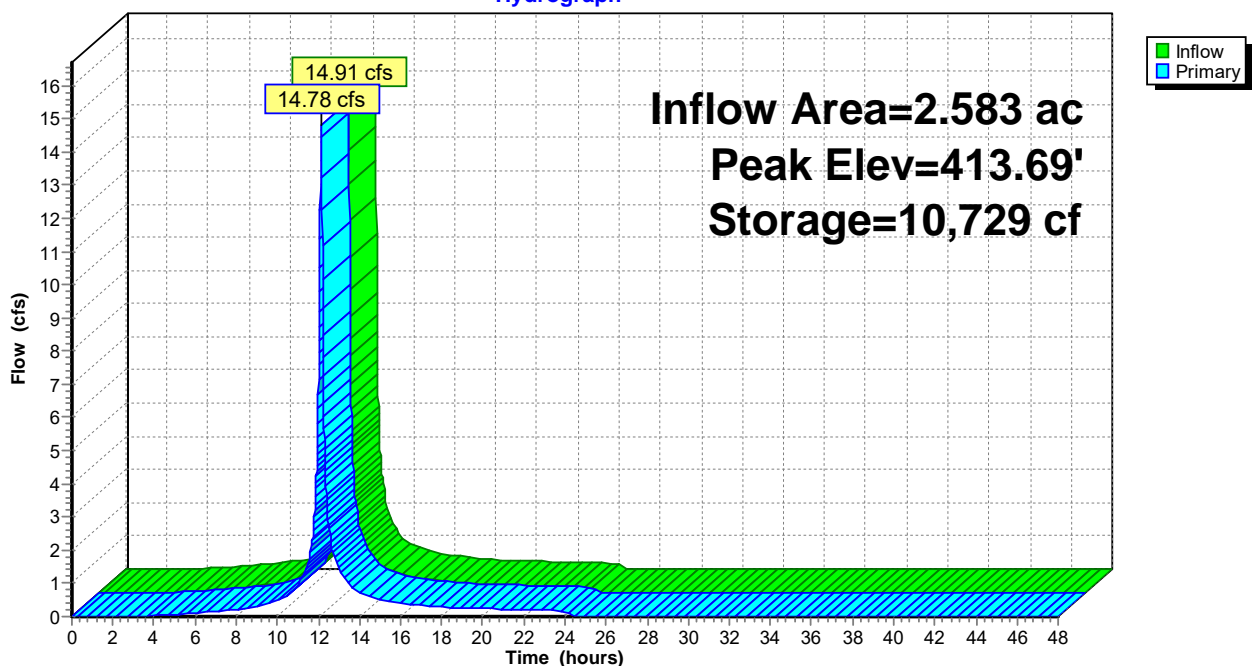
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
409.00	275	0	0
415.00	4,305	13,740	13,740

Device	Routing	Invert	Outlet Devices
#1	Primary	413.35'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

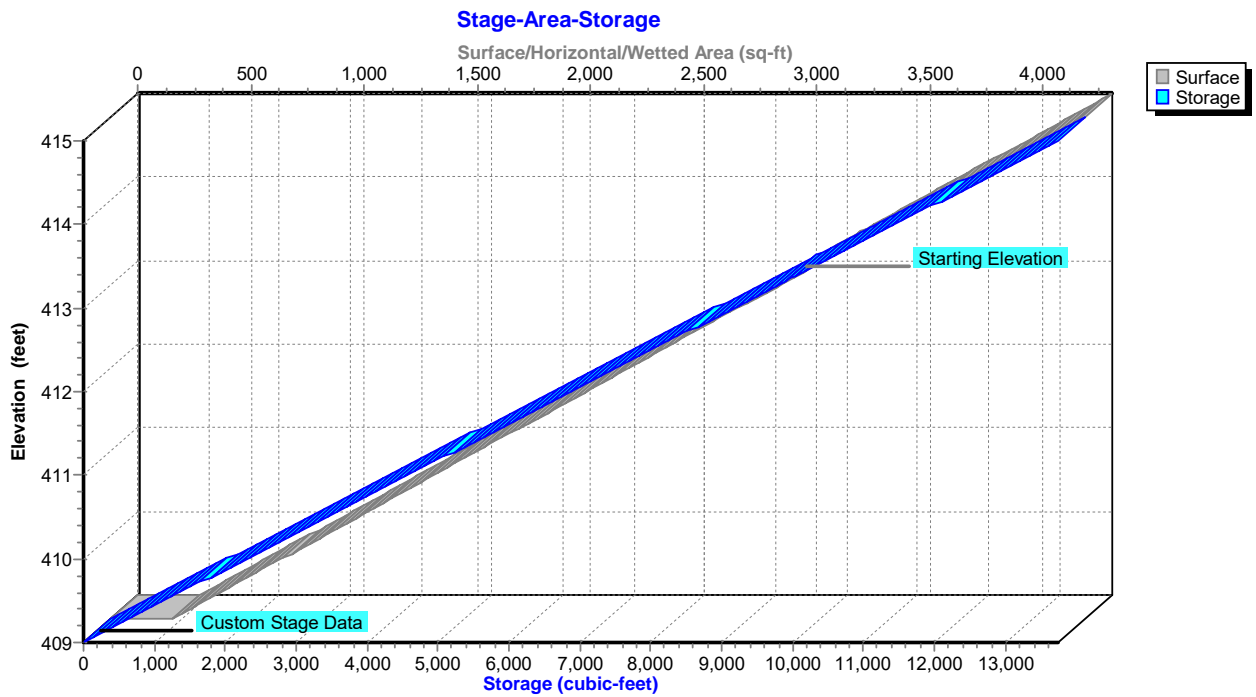
Primary OutFlow Max=14.74 cfs @ 12.14 hrs HW=413.68' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Weir Controls 14.74 cfs @ 1.47 fps)

Pond 32P: FB 1C

Hydrograph



Pond 32P: FB 1C



Hydrograph for Pond 32P: FB 1C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	9,962	413.35	0.00
1.00	0.00	9,962	413.35	0.00
2.00	0.00	9,962	413.35	0.00
3.00	0.00	9,962	413.35	0.00
4.00	0.03	9,967	413.35	0.03
5.00	0.07	9,973	413.36	0.07
6.00	0.10	9,979	413.36	0.10
7.00	0.16	9,989	413.36	0.15
8.00	0.23	10,001	413.37	0.22
9.00	0.30	10,014	413.37	0.30
10.00	0.50	10,039	413.38	0.50
11.00	0.98	10,078	413.40	0.96
12.00	7.72	10,440	413.56	7.15
13.00	1.42	10,121	413.42	1.46
14.00	0.73	10,059	413.39	0.73
15.00	0.50	10,040	413.38	0.50
16.00	0.41	10,032	413.38	0.41
17.00	0.34	10,023	413.38	0.35
18.00	0.28	10,011	413.37	0.28
19.00	0.25	10,006	413.37	0.25
20.00	0.24	10,004	413.37	0.24
21.00	0.22	10,001	413.37	0.22
22.00	0.20	9,998	413.37	0.20
23.00	0.19	9,995	413.36	0.19
24.00	0.17	9,992	413.36	0.17
25.00	0.00	9,962	413.35	0.00
26.00	0.00	9,962	413.35	0.00
27.00	0.00	9,962	413.35	0.00
28.00	0.00	9,962	413.35	0.00
29.00	0.00	9,962	413.35	0.00
30.00	0.00	9,962	413.35	0.00
31.00	0.00	9,962	413.35	0.00
32.00	0.00	9,962	413.35	0.00
33.00	0.00	9,962	413.35	0.00
34.00	0.00	9,962	413.35	0.00
35.00	0.00	9,962	413.35	0.00
36.00	0.00	9,962	413.35	0.00
37.00	0.00	9,962	413.35	0.00
38.00	0.00	9,962	413.35	0.00
39.00	0.00	9,962	413.35	0.00
40.00	0.00	9,962	413.35	0.00
41.00	0.00	9,962	413.35	0.00
42.00	0.00	9,962	413.35	0.00
43.00	0.00	9,962	413.35	0.00
44.00	0.00	9,962	413.35	0.00
45.00	0.00	9,962	413.35	0.00
46.00	0.00	9,962	413.35	0.00
47.00	0.00	9,962	413.35	0.00
48.00	0.00	9,962	413.35	0.00

Stage-Area-Storage for Pond 32P: FB 1C

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
409.00	275	0	414.80	4,171	13,282
409.10	342	229	414.90	4,238	13,511
409.20	409	458	415.00	4,305	13,740
409.30	477	687			
409.40	544	916			
409.50	611	1,145			
409.60	678	1,374			
409.70	745	1,603			
409.80	812	1,832			
409.90	879	2,061			
410.00	947	2,290			
410.10	1,014	2,519			
410.20	1,081	2,748			
410.30	1,148	2,977			
410.40	1,215	3,206			
410.50	1,283	3,435			
410.60	1,350	3,664			
410.70	1,417	3,893			
410.80	1,484	4,122			
410.90	1,551	4,351			
411.00	1,618	4,580			
411.10	1,686	4,809			
411.20	1,753	5,038			
411.30	1,820	5,267			
411.40	1,887	5,496			
411.50	1,954	5,725			
411.60	2,021	5,954			
411.70	2,088	6,183			
411.80	2,156	6,412			
411.90	2,223	6,641			
412.00	2,290	6,870			
412.10	2,357	7,099			
412.20	2,424	7,328			
412.30	2,492	7,557			
412.40	2,559	7,786			
412.50	2,626	8,015			
412.60	2,693	8,244			
412.70	2,760	8,473			
412.80	2,827	8,702			
412.90	2,894	8,931			
413.00	2,962	9,160			
413.10	3,029	9,389			
413.20	3,096	9,618			
413.30	3,163	9,847			
413.40	3,230	10,076			
413.50	3,298	10,305			
413.60	3,365	10,534			
413.70	3,432	10,763			
413.80	3,499	10,992			
413.90	3,566	11,221			
414.00	3,633	11,450			
414.10	3,701	11,679			
414.20	3,768	11,908			
414.30	3,835	12,137			
414.40	3,902	12,366			
414.50	3,969	12,595			
414.60	4,036	12,824			
414.70	4,103	13,053			

Summary for Pond 33P: INFIL 1C

Inflow Area = 2.583 ac, 77.93% Impervious, Inflow Depth = 4.88" for 25-Year event
 Inflow = 14.78 cfs @ 12.14 hrs, Volume= 1.051 af
 Outflow = 2.30 cfs @ 12.60 hrs, Volume= 1.051 af, Atten= 84%, Lag= 27.7 min
 Discarded = 2.30 cfs @ 12.60 hrs, Volume= 1.051 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 411.83' @ 12.60 hrs Surf.Area= 6,685 sf Storage= 14,431 cf

Plug-Flow detention time= 53.4 min calculated for 1.051 af (100% of inflow)
 Center-of-Mass det. time= 53.4 min (844.7 - 791.3)

Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	41,232 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
409.00	3,499	0	0
415.00	10,245	41,232	41,232

Device	Routing	Invert	Outlet Devices
#1	Secondary	414.00'	10.0' 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
#2	Device 4	411.85'	5.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	409.00'	10.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 404.80' Phase-In= 0.01'
#4	Primary	409.00'	18.0" Round Culvert L= 34.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 409.00' / 408.00' S= 0.0294 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

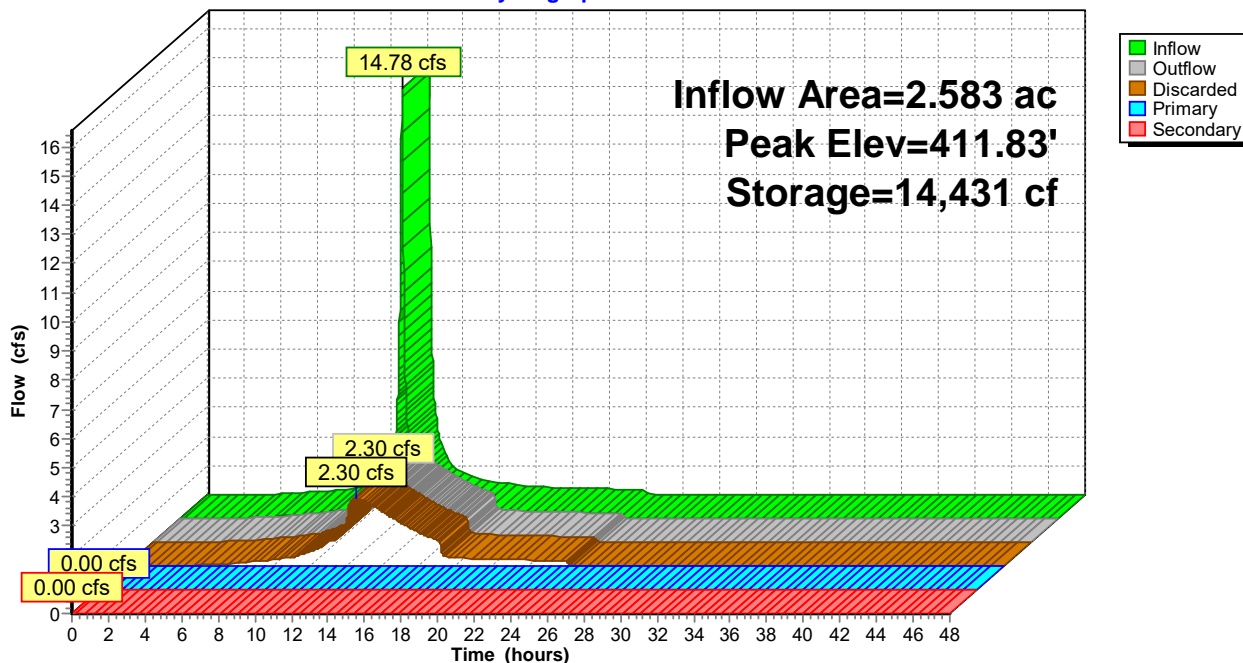
Discarded OutFlow Max=2.30 cfs @ 12.60 hrs HW=411.83' (Free Discharge)
 ↑3=Exfiltration (Controls 2.30 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=409.00' (Free Discharge)
 ↑4=Culvert (Controls 0.00 cfs)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=409.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

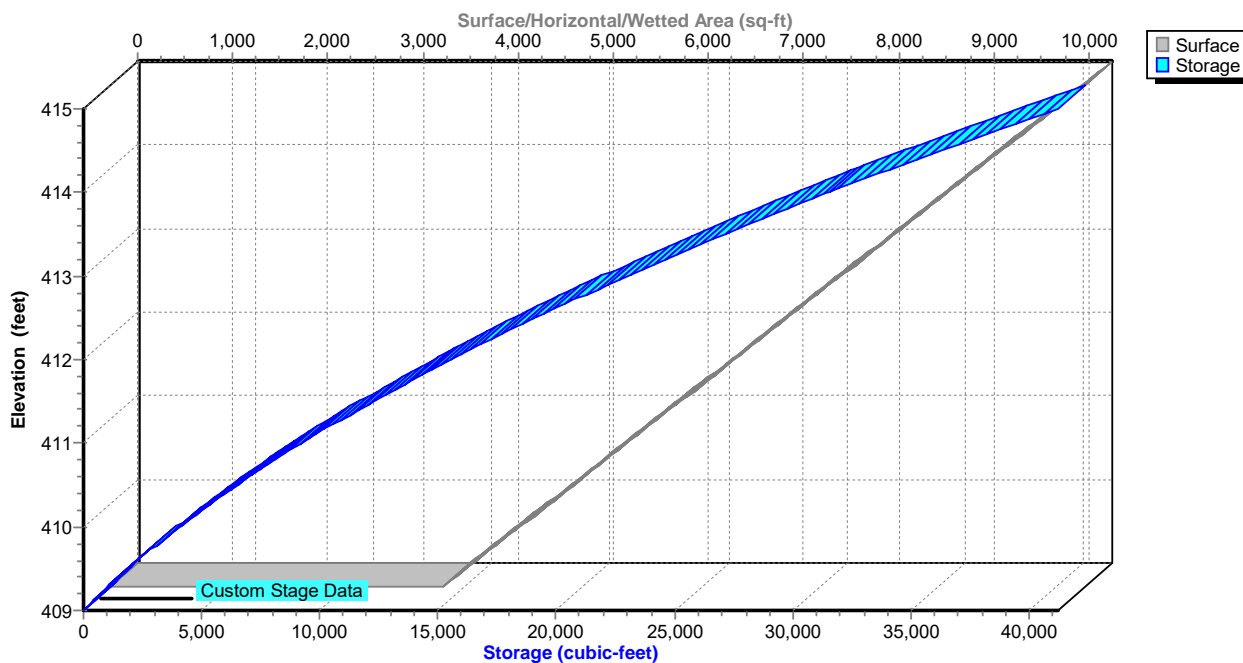
Pond 33P: INFIL 1C

Hydrograph



Pond 33P: INFIL 1C

Stage-Area-Storage



Hydrograph for Pond 33P: INFIL 1C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	409.00	0.00	0.00	0.00	0.00
1.00	0.00	0	409.00	0.00	0.00	0.00	0.00
2.00	0.00	0	409.00	0.00	0.00	0.00	0.00
3.00	0.00	0	409.00	0.00	0.00	0.00	0.00
4.00	0.03	8	409.00	0.03	0.03	0.00	0.00
5.00	0.07	16	409.00	0.06	0.06	0.00	0.00
6.00	0.10	25	409.01	0.10	0.10	0.00	0.00
7.00	0.15	38	409.01	0.15	0.15	0.00	0.00
8.00	0.22	55	409.02	0.22	0.22	0.00	0.00
9.00	0.30	74	409.02	0.29	0.29	0.00	0.00
10.00	0.50	122	409.03	0.48	0.48	0.00	0.00
11.00	0.96	238	409.07	0.84	0.84	0.00	0.00
12.00	7.15	4,535	410.10	1.34	1.34	0.00	0.00
13.00	1.46	13,724	411.73	2.23	2.23	0.00	0.00
14.00	0.73	9,847	411.10	1.88	1.88	0.00	0.00
15.00	0.50	6,003	410.40	1.50	1.50	0.00	0.00
16.00	0.41	2,852	409.73	1.15	1.15	0.00	0.00
17.00	0.35	566	409.16	0.88	0.88	0.00	0.00
18.00	0.28	72	409.02	0.28	0.28	0.00	0.00
19.00	0.25	65	409.02	0.25	0.25	0.00	0.00
20.00	0.24	60	409.02	0.24	0.24	0.00	0.00
21.00	0.22	56	409.02	0.22	0.22	0.00	0.00
22.00	0.20	52	409.01	0.21	0.21	0.00	0.00
23.00	0.19	48	409.01	0.19	0.19	0.00	0.00
24.00	0.17	44	409.01	0.17	0.17	0.00	0.00
25.00	0.00	0	409.00	0.00	0.00	0.00	0.00
26.00	0.00	0	409.00	0.00	0.00	0.00	0.00
27.00	0.00	0	409.00	0.00	0.00	0.00	0.00
28.00	0.00	0	409.00	0.00	0.00	0.00	0.00
29.00	0.00	0	409.00	0.00	0.00	0.00	0.00
30.00	0.00	0	409.00	0.00	0.00	0.00	0.00
31.00	0.00	0	409.00	0.00	0.00	0.00	0.00
32.00	0.00	0	409.00	0.00	0.00	0.00	0.00
33.00	0.00	0	409.00	0.00	0.00	0.00	0.00
34.00	0.00	0	409.00	0.00	0.00	0.00	0.00
35.00	0.00	0	409.00	0.00	0.00	0.00	0.00
36.00	0.00	0	409.00	0.00	0.00	0.00	0.00
37.00	0.00	0	409.00	0.00	0.00	0.00	0.00
38.00	0.00	0	409.00	0.00	0.00	0.00	0.00
39.00	0.00	0	409.00	0.00	0.00	0.00	0.00
40.00	0.00	0	409.00	0.00	0.00	0.00	0.00
41.00	0.00	0	409.00	0.00	0.00	0.00	0.00
42.00	0.00	0	409.00	0.00	0.00	0.00	0.00
43.00	0.00	0	409.00	0.00	0.00	0.00	0.00
44.00	0.00	0	409.00	0.00	0.00	0.00	0.00
45.00	0.00	0	409.00	0.00	0.00	0.00	0.00
46.00	0.00	0	409.00	0.00	0.00	0.00	0.00
47.00	0.00	0	409.00	0.00	0.00	0.00	0.00
48.00	0.00	0	409.00	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 33P: INFIL 1C

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
409.00	3,499	0	414.80	10,020	39,205
409.10	3,611	356	414.90	10,133	40,213
409.20	3,724	722	415.00	10,245	41,232
409.30	3,836	1,100			
409.40	3,949	1,490			
409.50	4,061	1,890			
409.60	4,174	2,302			
409.70	4,286	2,725			
409.80	4,398	3,159			
409.90	4,511	3,604			
410.00	4,623	4,061			
410.10	4,736	4,529			
410.20	4,848	5,008			
410.30	4,961	5,499			
410.40	5,073	6,000			
410.50	5,186	6,513			
410.60	5,298	7,038			
410.70	5,410	7,573			
410.80	5,523	8,120			
410.90	5,635	8,678			
411.00	5,748	9,247			
411.10	5,860	9,827			
411.20	5,973	10,419			
411.30	6,085	11,022			
411.40	6,197	11,636			
411.50	6,310	12,261			
411.60	6,422	12,898			
411.70	6,535	13,545			
411.80	6,647	14,205			
411.90	6,760	14,875			
412.00	6,872	15,557			
412.10	6,984	16,249			
412.20	7,097	16,953			
412.30	7,209	17,669			
412.40	7,322	18,395			
412.50	7,434	19,133			
412.60	7,547	19,882			
412.70	7,659	20,642			
412.80	7,771	21,414			
412.90	7,884	22,197			
413.00	7,996	22,991			
413.10	8,109	23,796			
413.20	8,221	24,612			
413.30	8,334	25,440			
413.40	8,446	26,279			
413.50	8,559	27,129			
413.60	8,671	27,991			
413.70	8,783	28,864			
413.80	8,896	29,748			
413.90	9,008	30,643			
414.00	9,121	31,549			
414.10	9,233	32,467			
414.20	9,346	33,396			
414.30	9,458	34,336			
414.40	9,570	35,287			
414.50	9,683	36,250			
414.60	9,795	37,224			
414.70	9,908	38,209			

Summary for Pond 37P: FB 1i+J

Inflow Area = 9.303 ac, 78.40% Impervious, Inflow Depth = 4.88" for 25-Year event
 Inflow = 52.68 cfs @ 12.09 hrs, Volume= 3.780 af
 Outflow = 50.45 cfs @ 12.09 hrs, Volume= 3.780 af, Atten= 4%, Lag= 0.1 min
 Primary = 25.22 cfs @ 12.09 hrs, Volume= 1.890 af
 Routed to Pond 31P : Bioretention i
 Secondary = 25.22 cfs @ 12.09 hrs, Volume= 1.890 af
 Routed to Pond 53P : Bioretention J basin

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 413.25' Surf.Area= 9,799 sf Storage= 26,806 cf
 Peak Elev= 413.63' @ 12.09 hrs Surf.Area= 10,269 sf Storage= 29,934 cf (3,128 cf above start)

Plug-Flow detention time= 135.1 min calculated for 3.164 af (84% of inflow)
 Center-of-Mass det. time= 2.4 min (770.9 - 768.5)

Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	32,992 cf	Custom Stage Data (Prismatic) Listed below

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
410.00	5,767	0	0
414.00	10,729	32,992	32,992

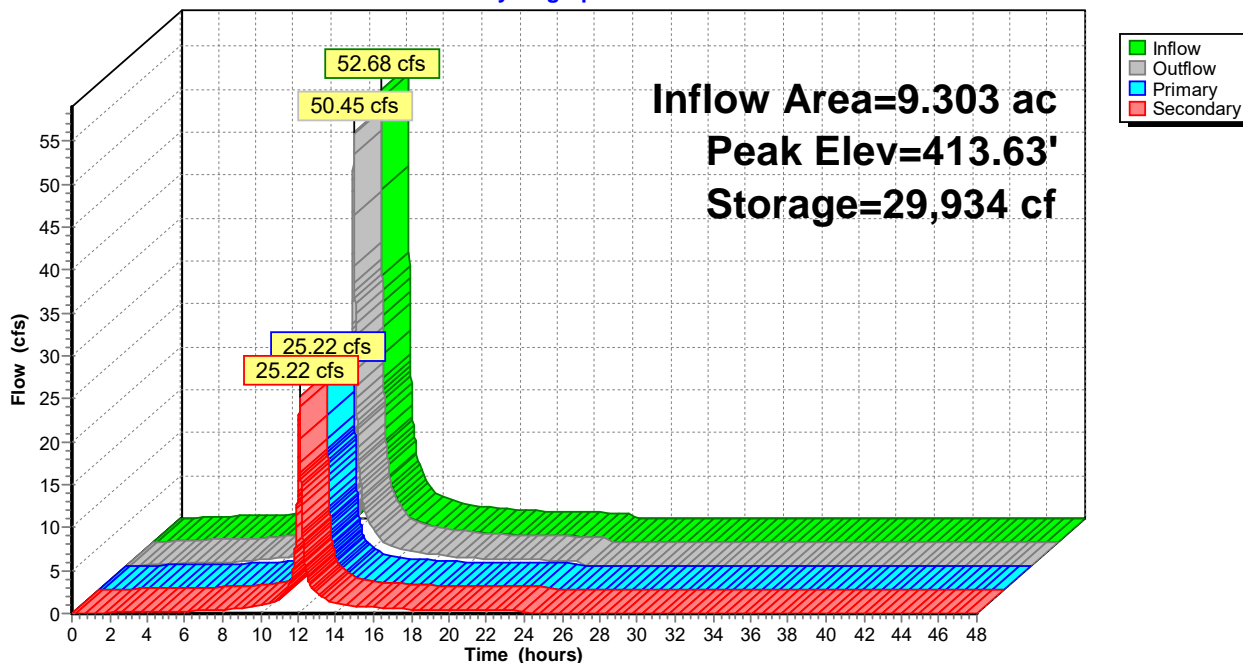
Device	Routing	Invert	Outlet Devices
#1	Primary	413.25'	40.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	413.25'	40.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=25.07 cfs @ 12.09 hrs HW=413.63' (Free Discharge)
 ↕ **1=Broad-Crested Rectangular Weir** (Weir Controls 25.07 cfs @ 1.66 fps)

Secondary OutFlow Max=25.07 cfs @ 12.09 hrs HW=413.63' (Free Discharge)
 ↕ **2=Broad-Crested Rectangular Weir** (Weir Controls 25.07 cfs @ 1.66 fps)

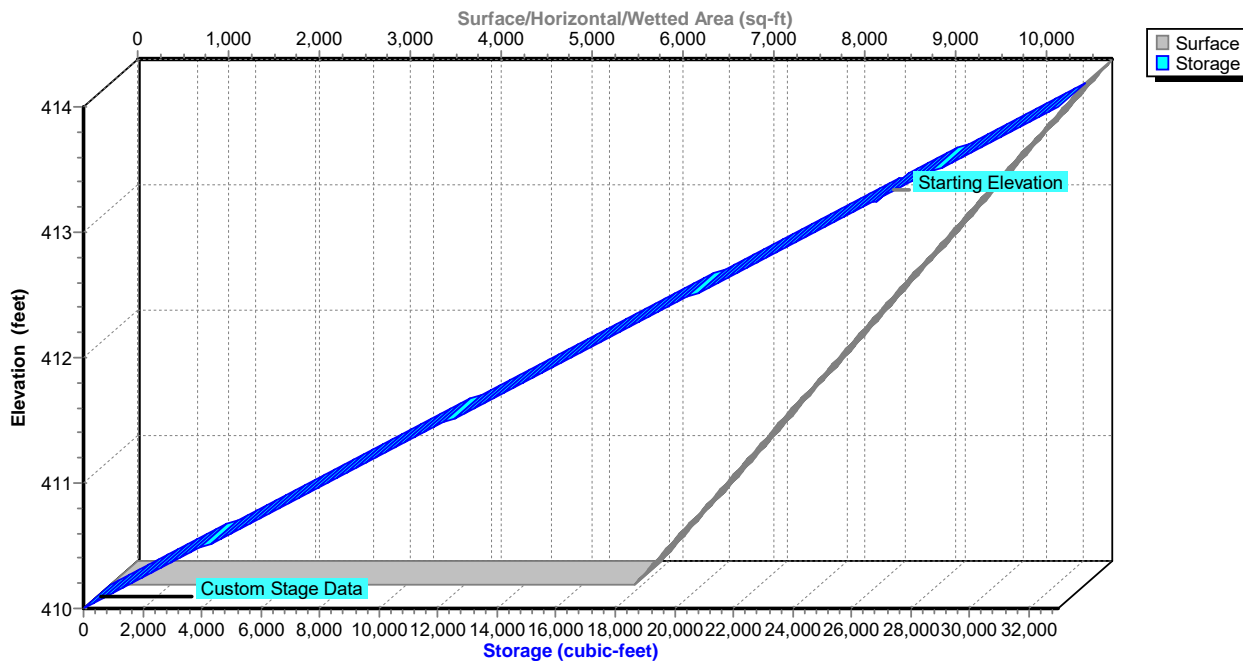
Pond 37P: FB 1i+J

Hydrograph



Pond 37P: FB 1i+J

Stage-Area-Storage



Hydrograph for Pond 37P: FB 1i+J

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	26,806	413.25	0.00	0.00	0.00
1.00	0.09	26,823	413.25	0.07	0.04	0.04
2.00	0.23	26,855	413.26	0.22	0.11	0.11
3.00	0.32	26,876	413.26	0.31	0.16	0.16
4.00	0.38	26,891	413.26	0.38	0.19	0.19
5.00	0.44	26,903	413.26	0.44	0.22	0.22
6.00	0.52	26,919	413.26	0.51	0.25	0.25
7.00	0.71	26,960	413.27	0.70	0.35	0.35
8.00	0.92	27,008	413.27	0.91	0.45	0.45
9.00	1.17	27,058	413.28	1.15	0.57	0.57
10.00	1.87	27,137	413.29	1.84	0.92	0.92
11.00	3.64	27,326	413.31	3.48	1.74	1.74
12.00	36.97	29,065	413.52	30.83	15.42	15.42
13.00	4.68	27,460	413.33	4.86	2.43	2.43
14.00	2.48	27,215	413.30	2.52	1.26	1.26
15.00	1.68	27,123	413.29	1.72	0.86	0.86
16.00	1.41	27,089	413.28	1.42	0.71	0.71
17.00	1.18	27,062	413.28	1.19	0.60	0.60
18.00	0.95	27,021	413.28	0.97	0.48	0.48
19.00	0.88	27,002	413.27	0.88	0.44	0.44
20.00	0.82	26,990	413.27	0.83	0.41	0.41
21.00	0.77	26,977	413.27	0.77	0.38	0.38
22.00	0.71	26,964	413.27	0.71	0.36	0.36
23.00	0.65	26,952	413.27	0.66	0.33	0.33
24.00	0.43	26,937	413.27	0.59	0.29	0.29
25.00	0.00	26,806	413.25	0.00	0.00	0.00
26.00	0.00	26,806	413.25	0.00	0.00	0.00
27.00	0.00	26,806	413.25	0.00	0.00	0.00
28.00	0.00	26,806	413.25	0.00	0.00	0.00
29.00	0.00	26,806	413.25	0.00	0.00	0.00
30.00	0.00	26,806	413.25	0.00	0.00	0.00
31.00	0.00	26,806	413.25	0.00	0.00	0.00
32.00	0.00	26,806	413.25	0.00	0.00	0.00
33.00	0.00	26,806	413.25	0.00	0.00	0.00
34.00	0.00	26,806	413.25	0.00	0.00	0.00
35.00	0.00	26,806	413.25	0.00	0.00	0.00
36.00	0.00	26,806	413.25	0.00	0.00	0.00
37.00	0.00	26,806	413.25	0.00	0.00	0.00
38.00	0.00	26,806	413.25	0.00	0.00	0.00
39.00	0.00	26,806	413.25	0.00	0.00	0.00
40.00	0.00	26,806	413.25	0.00	0.00	0.00
41.00	0.00	26,806	413.25	0.00	0.00	0.00
42.00	0.00	26,806	413.25	0.00	0.00	0.00
43.00	0.00	26,806	413.25	0.00	0.00	0.00
44.00	0.00	26,806	413.25	0.00	0.00	0.00
45.00	0.00	26,806	413.25	0.00	0.00	0.00
46.00	0.00	26,806	413.25	0.00	0.00	0.00
47.00	0.00	26,806	413.25	0.00	0.00	0.00
48.00	0.00	26,806	413.25	0.00	0.00	0.00

Stage-Area-Storage for Pond 37P: FB 1i+J

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
410.00	5,767	0	412.90	9,364	23,919
410.05	5,829	412	412.95	9,426	24,332
410.10	5,891	825	413.00	9,489	24,744
410.15	5,953	1,237	413.05	9,551	25,156
410.20	6,015	1,650	413.10	9,613	25,569
410.25	6,077	2,062	413.15	9,675	25,981
410.30	6,139	2,474	413.20	9,737	26,394
410.35	6,201	2,887	413.25	9,799	26,806
410.40	6,263	3,299	413.30	9,861	27,218
410.45	6,325	3,712	413.35	9,923	27,631
410.50	6,387	4,124	413.40	9,985	28,043
410.55	6,449	4,536	413.45	10,047	28,456
410.60	6,511	4,949	413.50	10,109	28,868
410.65	6,573	5,361	413.55	10,171	29,280
410.70	6,635	5,774	413.60	10,233	29,693
410.75	6,697	6,186	413.65	10,295	30,105
410.80	6,759	6,598	413.70	10,357	30,518
410.85	6,821	7,011	413.75	10,419	30,930
410.90	6,883	7,423	413.80	10,481	31,342
410.95	6,945	7,836	413.85	10,543	31,755
411.00	7,008	8,248	413.90	10,605	32,167
411.05	7,070	8,660	413.95	10,667	32,580
411.10	7,132	9,073	414.00	10,729	32,992
411.15	7,194	9,485			
411.20	7,256	9,898			
411.25	7,318	10,310			
411.30	7,380	10,722			
411.35	7,442	11,135			
411.40	7,504	11,547			
411.45	7,566	11,960			
411.50	7,628	12,372			
411.55	7,690	12,784			
411.60	7,752	13,197			
411.65	7,814	13,609			
411.70	7,876	14,022			
411.75	7,938	14,434			
411.80	8,000	14,846			
411.85	8,062	15,259			
411.90	8,124	15,671			
411.95	8,186	16,084			
412.00	8,248	16,496			
412.05	8,310	16,908			
412.10	8,372	17,321			
412.15	8,434	17,733			
412.20	8,496	18,146			
412.25	8,558	18,558			
412.30	8,620	18,970			
412.35	8,682	19,383			
412.40	8,744	19,795			
412.45	8,806	20,208			
412.50	8,868	20,620			
412.55	8,930	21,032			
412.60	8,992	21,445			
412.65	9,054	21,857			
412.70	9,116	22,270			
412.75	9,178	22,682			
412.80	9,240	23,094			
412.85	9,302	23,507			

Summary for Pond 39P: FB 5A

Inflow Area = 4.966 ac, 46.58% Impervious, Inflow Depth = 3.22" for 25-Year event
 Inflow = 20.29 cfs @ 12.13 hrs, Volume= 1.332 af
 Outflow = 19.84 cfs @ 12.15 hrs, Volume= 1.332 af, Atten= 2%, Lag= 0.8 min
 Primary = 19.84 cfs @ 12.15 hrs, Volume= 1.332 af
 Routed to Pond 22P : Bioretention 5A

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 433.30' Surf.Area= 4,110 sf Storage= 8,944 cf
 Peak Elev= 433.76' @ 12.15 hrs Surf.Area= 4,447 sf Storage= 10,725 cf (1,782 cf above start)

Plug-Flow detention time= 105.5 min calculated for 1.126 af (85% of inflow)
 Center-of-Mass det. time= 3.5 min (841.8 - 838.3)

Volume	Invert	Avail.Storage	Storage Description
#1	431.00'	15,554 cf	Custom Stage Data (Prismatic) Listed below

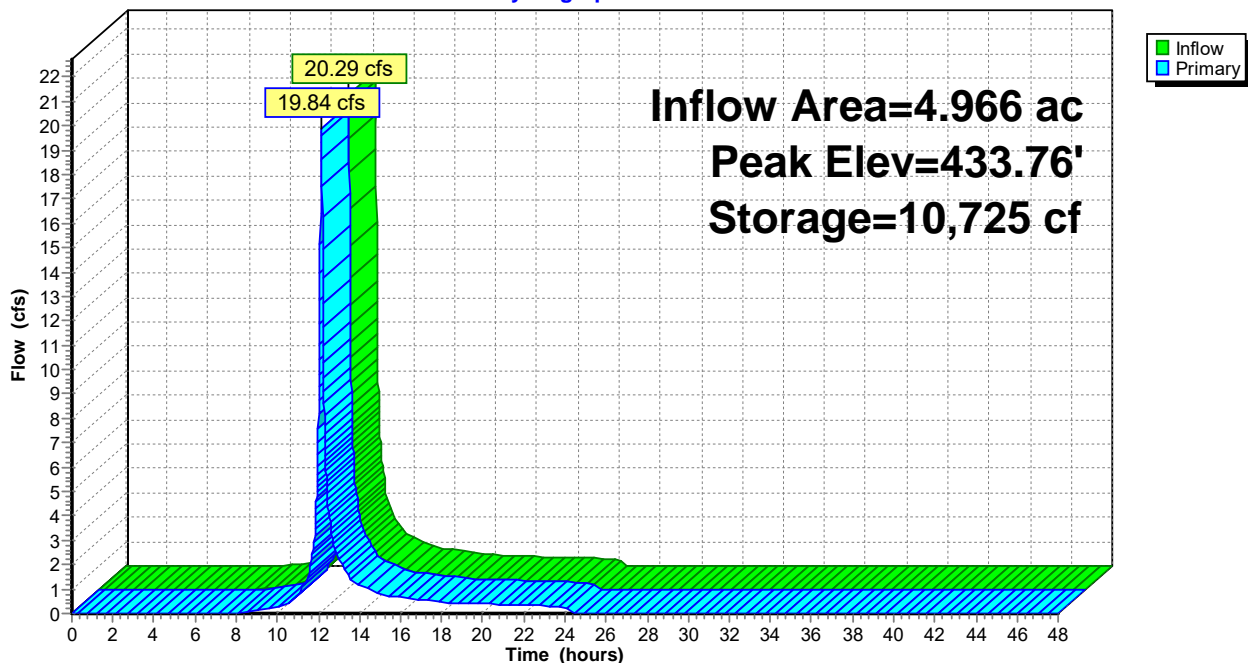
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
431.00	2,415	0	0
435.00	5,362	15,554	15,554

Device	Routing	Invert	Outlet Devices
#1	Primary	433.30'	25.0' 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=19.78 cfs @ 12.15 hrs HW=433.76' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 19.78 cfs @ 1.73 fps)

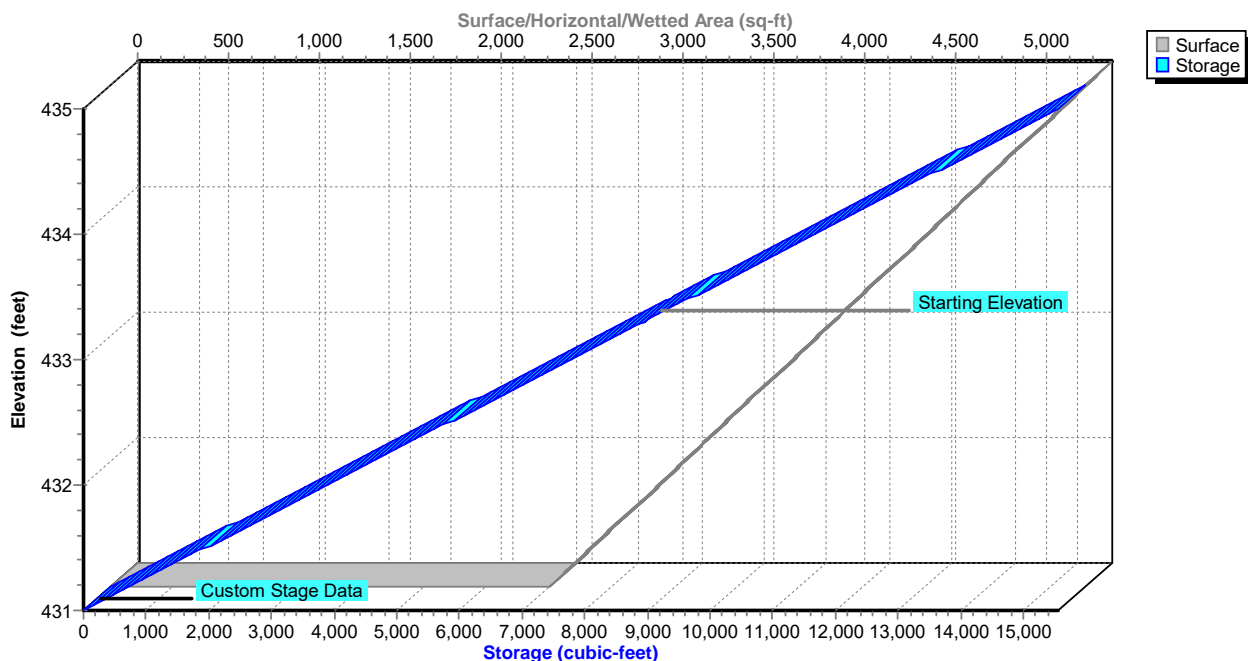
Pond 39P: FB 5A

Hydrograph



Pond 39P: FB 5A

Stage-Area-Storage



Hydrograph for Pond 39P: FB 5A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,944	433.30	0.00
1.00	0.00	8,944	433.30	0.00
2.00	0.00	8,944	433.30	0.00
3.00	0.00	8,944	433.30	0.00
4.00	0.00	8,944	433.30	0.00
5.00	0.00	8,944	433.30	0.00
6.00	0.00	8,944	433.30	0.00
7.00	0.00	8,944	433.30	0.00
8.00	0.03	8,953	433.30	0.02
9.00	0.11	8,991	433.31	0.10
10.00	0.30	9,048	433.33	0.29
11.00	0.81	9,154	433.35	0.76
12.00	9.48	9,974	433.57	8.17
13.00	2.19	9,387	433.41	2.27
14.00	1.14	9,224	433.37	1.16
15.00	0.79	9,167	433.36	0.81
16.00	0.66	9,133	433.35	0.66
17.00	0.55	9,110	433.34	0.56
18.00	0.45	9,087	433.34	0.46
19.00	0.41	9,077	433.33	0.42
20.00	0.39	9,072	433.33	0.39
21.00	0.36	9,066	433.33	0.36
22.00	0.34	9,060	433.33	0.34
23.00	0.31	9,054	433.33	0.31
24.00	0.29	9,048	433.33	0.29
25.00	0.00	8,944	433.30	0.00
26.00	0.00	8,944	433.30	0.00
27.00	0.00	8,944	433.30	0.00
28.00	0.00	8,944	433.30	0.00
29.00	0.00	8,944	433.30	0.00
30.00	0.00	8,944	433.30	0.00
31.00	0.00	8,944	433.30	0.00
32.00	0.00	8,944	433.30	0.00
33.00	0.00	8,944	433.30	0.00
34.00	0.00	8,944	433.30	0.00
35.00	0.00	8,944	433.30	0.00
36.00	0.00	8,944	433.30	0.00
37.00	0.00	8,944	433.30	0.00
38.00	0.00	8,944	433.30	0.00
39.00	0.00	8,944	433.30	0.00
40.00	0.00	8,944	433.30	0.00
41.00	0.00	8,944	433.30	0.00
42.00	0.00	8,944	433.30	0.00
43.00	0.00	8,944	433.30	0.00
44.00	0.00	8,944	433.30	0.00
45.00	0.00	8,944	433.30	0.00
46.00	0.00	8,944	433.30	0.00
47.00	0.00	8,944	433.30	0.00
48.00	0.00	8,944	433.30	0.00

Stage-Area-Storage for Pond 39P: FB 5A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
431.00	2,415	0	433.90	4,552	11,277
431.05	2,452	194	433.95	4,588	11,471
431.10	2,489	389	434.00	4,625	11,666
431.15	2,526	583	434.05	4,662	11,860
431.20	2,562	778	434.10	4,699	12,054
431.25	2,599	972	434.15	4,736	12,249
431.30	2,636	1,167	434.20	4,773	12,443
431.35	2,673	1,361	434.25	4,809	12,638
431.40	2,710	1,555	434.30	4,846	12,832
431.45	2,747	1,750	434.35	4,883	13,026
431.50	2,783	1,944	434.40	4,920	13,221
431.55	2,820	2,139	434.45	4,957	13,415
431.60	2,857	2,333	434.50	4,994	13,610
431.65	2,894	2,528	434.55	5,030	13,804
431.70	2,931	2,722	434.60	5,067	13,999
431.75	2,968	2,916	434.65	5,104	14,193
431.80	3,004	3,111	434.70	5,141	14,387
431.85	3,041	3,305	434.75	5,178	14,582
431.90	3,078	3,500	434.80	5,215	14,776
431.95	3,115	3,694	434.85	5,251	14,971
432.00	3,152	3,889	434.90	5,288	15,165
432.05	3,189	4,083	434.95	5,325	15,360
432.10	3,225	4,277	435.00	5,362	15,554
432.15	3,262	4,472			
432.20	3,299	4,666			
432.25	3,336	4,861			
432.30	3,373	5,055			
432.35	3,410	5,249			
432.40	3,446	5,444			
432.45	3,483	5,638			
432.50	3,520	5,833			
432.55	3,557	6,027			
432.60	3,594	6,222			
432.65	3,631	6,416			
432.70	3,667	6,610			
432.75	3,704	6,805			
432.80	3,741	6,999			
432.85	3,778	7,194			
432.90	3,815	7,388			
432.95	3,852	7,583			
433.00	3,889	7,777			
433.05	3,925	7,971			
433.10	3,962	8,166			
433.15	3,999	8,360			
433.20	4,036	8,555			
433.25	4,073	8,749			
433.30	4,110	8,944			
433.35	4,146	9,138			
433.40	4,183	9,332			
433.45	4,220	9,527			
433.50	4,257	9,721			
433.55	4,294	9,916			
433.60	4,331	10,110			
433.65	4,367	10,305			
433.70	4,404	10,499			
433.75	4,441	10,693			
433.80	4,478	10,888			
433.85	4,515	11,082			

Summary for Pond 44P: FB 1B

Inflow Area = 9.519 ac, 70.62% Impervious, Inflow Depth = 4.29" for 25-Year event
 Inflow = 49.50 cfs @ 12.13 hrs, Volume= 3.403 af
 Outflow = 48.64 cfs @ 12.14 hrs, Volume= 3.403 af, Atten= 2%, Lag= 0.7 min
 Primary = 48.64 cfs @ 12.14 hrs, Volume= 3.403 af
 Routed to Pond 45P : INFIL 1B

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.35' Surf.Area= 9,580 sf Storage= 34,519 cf
 Peak Elev= 412.80' @ 12.14 hrs Surf.Area= 10,126 sf Storage= 38,077 cf (3,558 cf above start)

Plug-Flow detention time= 146.4 min calculated for 2.610 af (77% of inflow)
 Center-of-Mass det. time= 2.8 min (807.3 - 804.6)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	47,613 cf	Custom Stage Data (Prismatic) Listed below

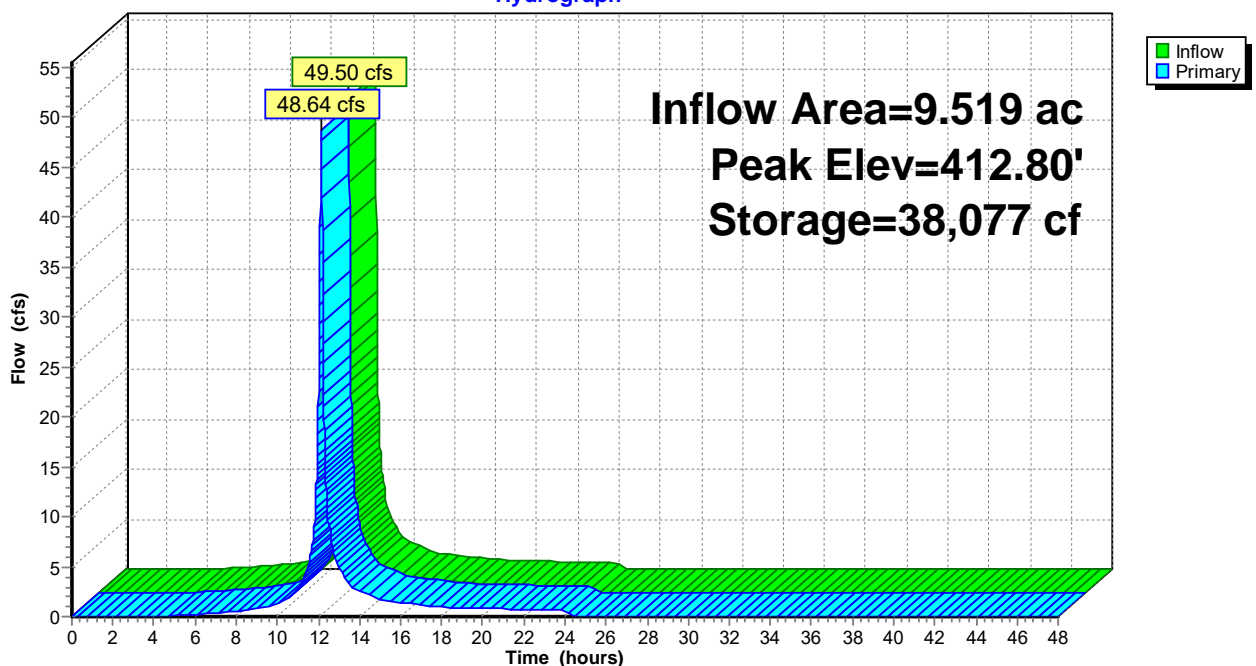
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	4,282	0	0
414.00	11,589	47,613	47,613

Device	Routing	Invert	Outlet Devices
#1	Primary	412.35'	60.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

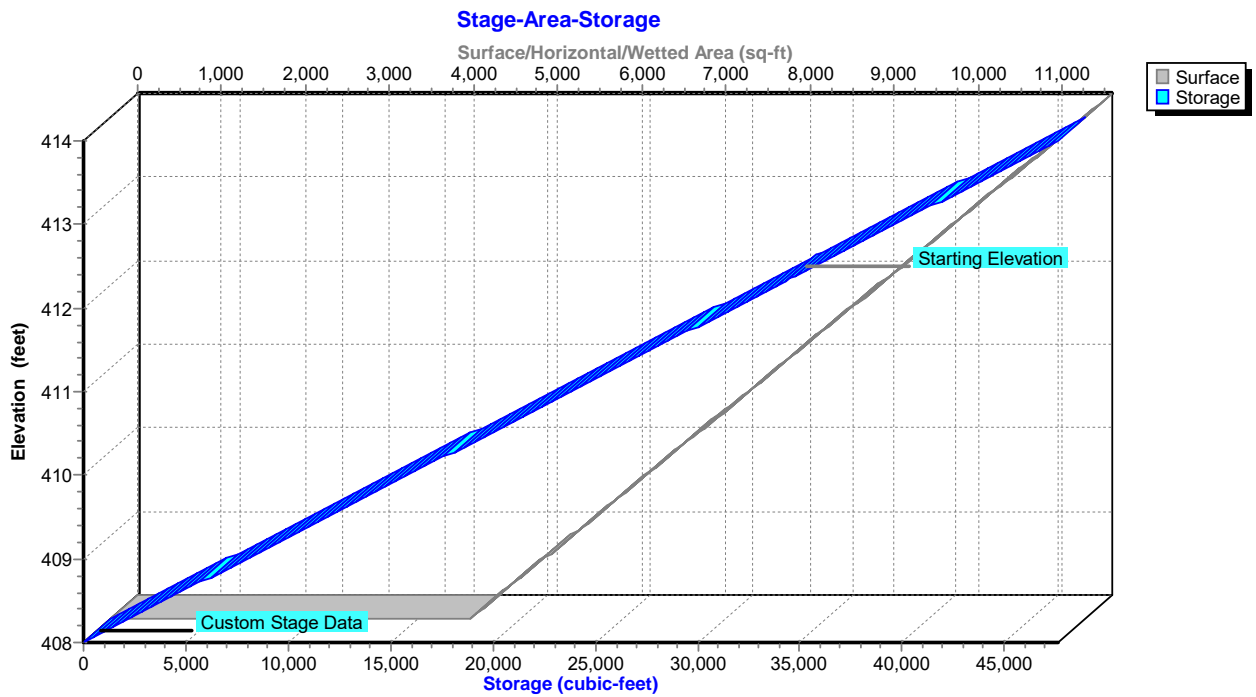
Primary OutFlow Max=48.53 cfs @ 12.14 hrs HW=412.80' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 48.53 cfs @ 1.81 fps)

Pond 44P: FB 1B

Hydrograph



Pond 44P: FB 1B



Hydrograph for Pond 44P: FB 1B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	34,519	412.35	0.00
1.00	0.00	34,519	412.35	0.00
2.00	0.00	34,519	412.35	0.00
3.00	0.00	34,519	412.35	0.00
4.00	0.00	34,519	412.35	0.00
5.00	0.08	34,541	412.35	0.08
6.00	0.19	34,570	412.36	0.18
7.00	0.35	34,614	412.36	0.33
8.00	0.56	34,673	412.37	0.54
9.00	0.80	34,742	412.38	0.78
10.00	1.42	34,834	412.39	1.40
11.00	2.93	35,029	412.41	2.83
12.00	25.09	36,652	412.62	22.47
13.00	4.88	35,299	412.45	5.02
14.00	2.50	34,988	412.41	2.53
15.00	1.71	34,882	412.40	1.75
16.00	1.41	34,837	412.39	1.42
17.00	1.19	34,807	412.39	1.20
18.00	0.96	34,776	412.38	0.97
19.00	0.88	34,764	412.38	0.88
20.00	0.82	34,756	412.38	0.83
21.00	0.77	34,740	412.38	0.77
22.00	0.71	34,724	412.38	0.72
23.00	0.66	34,707	412.37	0.66
24.00	0.60	34,691	412.37	0.60
25.00	0.00	34,519	412.35	0.00
26.00	0.00	34,519	412.35	0.00
27.00	0.00	34,519	412.35	0.00
28.00	0.00	34,519	412.35	0.00
29.00	0.00	34,519	412.35	0.00
30.00	0.00	34,519	412.35	0.00
31.00	0.00	34,519	412.35	0.00
32.00	0.00	34,519	412.35	0.00
33.00	0.00	34,519	412.35	0.00
34.00	0.00	34,519	412.35	0.00
35.00	0.00	34,519	412.35	0.00
36.00	0.00	34,519	412.35	0.00
37.00	0.00	34,519	412.35	0.00
38.00	0.00	34,519	412.35	0.00
39.00	0.00	34,519	412.35	0.00
40.00	0.00	34,519	412.35	0.00
41.00	0.00	34,519	412.35	0.00
42.00	0.00	34,519	412.35	0.00
43.00	0.00	34,519	412.35	0.00
44.00	0.00	34,519	412.35	0.00
45.00	0.00	34,519	412.35	0.00
46.00	0.00	34,519	412.35	0.00
47.00	0.00	34,519	412.35	0.00
48.00	0.00	34,519	412.35	0.00

Stage-Area-Storage for Pond 44P: FB 1B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	4,282	0	413.80	11,345	46,026
408.10	4,404	794	413.90	11,467	46,819
408.20	4,526	1,587	414.00	11,589	47,613
408.30	4,647	2,381			
408.40	4,769	3,174			
408.50	4,891	3,968			
408.60	5,013	4,761			
408.70	5,134	5,555			
408.80	5,256	6,348			
408.90	5,378	7,142			
409.00	5,500	7,936			
409.10	5,622	8,729			
409.20	5,743	9,523			
409.30	5,865	10,316			
409.40	5,987	11,110			
409.50	6,109	11,903			
409.60	6,231	12,697			
409.70	6,352	13,490			
409.80	6,474	14,284			
409.90	6,596	15,077			
410.00	6,718	15,871			
410.10	6,839	16,665			
410.20	6,961	17,458			
410.30	7,083	18,252			
410.40	7,205	19,045			
410.50	7,327	19,839			
410.60	7,448	20,632			
410.70	7,570	21,426			
410.80	7,692	22,219			
410.90	7,814	23,013			
411.00	7,936	23,807			
411.10	8,057	24,600			
411.20	8,179	25,394			
411.30	8,301	26,187			
411.40	8,423	26,981			
411.50	8,544	27,774			
411.60	8,666	28,568			
411.70	8,788	29,361			
411.80	8,910	30,155			
411.90	9,032	30,948			
412.00	9,153	31,742			
412.10	9,275	32,536			
412.20	9,397	33,329			
412.30	9,519	34,123			
412.40	9,640	34,916			
412.50	9,762	35,710			
412.60	9,884	36,503			
412.70	10,006	37,297			
412.80	10,128	38,090			
412.90	10,249	38,884			
413.00	10,371	39,678			
413.10	10,493	40,471			
413.20	10,615	41,265			
413.30	10,737	42,058			
413.40	10,858	42,852			
413.50	10,980	43,645			
413.60	11,102	44,439			
413.70	11,224	45,232			

Summary for Pond 45P: INFIL 1B

Inflow Area = 10.279 ac, 65.40% Impervious, Inflow Depth = 4.01" for 25-Year event
 Inflow = 48.79 cfs @ 12.14 hrs, Volume= 3.435 af
 Outflow = 6.18 cfs @ 12.78 hrs, Volume= 3.435 af, Atten= 87%, Lag= 38.5 min
 Discarded = 6.07 cfs @ 12.78 hrs, Volume= 3.427 af
 Primary = 0.11 cfs @ 12.78 hrs, Volume= 0.009 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 411.18' @ 12.78 hrs Surf.Area= 20,159 sf Storage= 51,548 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 75.9 min (884.8 - 808.9)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	118,185 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	12,210	0	0
414.00	27,185	118,185	118,185

Device	Routing	Invert	Outlet Devices
#1	Secondary	413.00'	10.0' 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
#2	Device 4	410.85'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.00'	9.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 402.50' Phase-In= 0.01'
#4	Primary	408.00'	18.0" Round Culvert L= 50.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 408.00' / 407.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

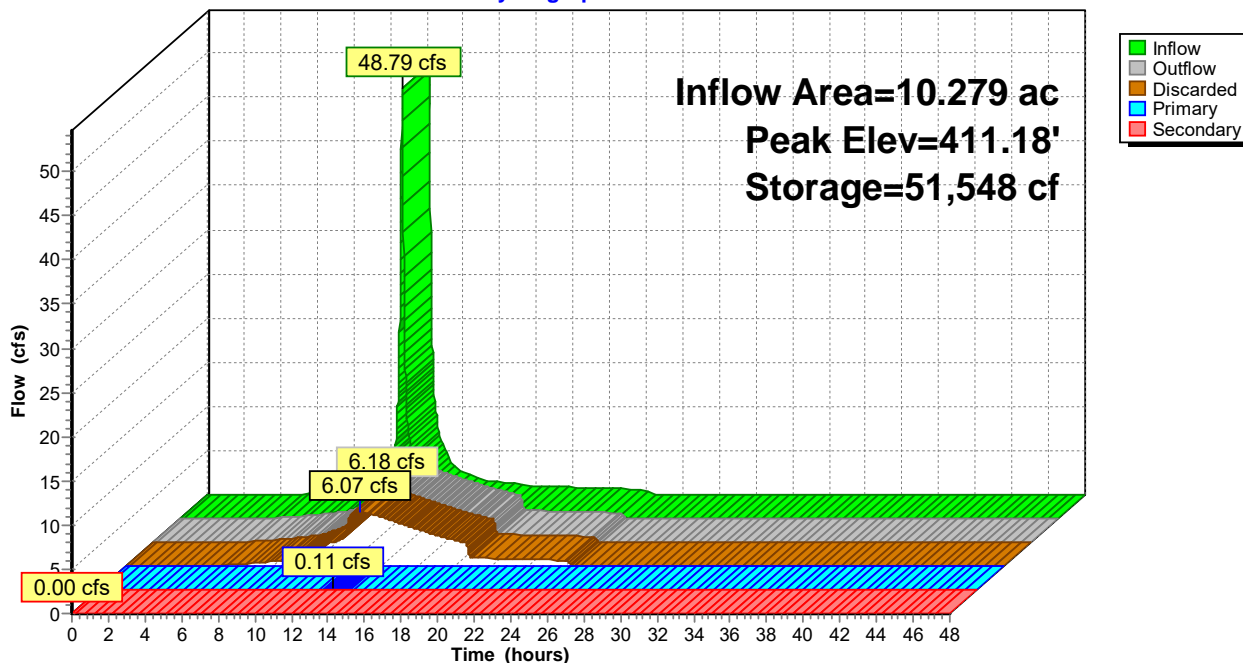
Discarded OutFlow Max=6.07 cfs @ 12.78 hrs HW=411.18' (Free Discharge)
 ↑3=Exfiltration (Controls 6.07 cfs)

Primary OutFlow Max=0.11 cfs @ 12.78 hrs HW=411.18' (Free Discharge)
 ↑4=Culvert (Passes 0.11 cfs of 11.72 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.11 cfs @ 2.21 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

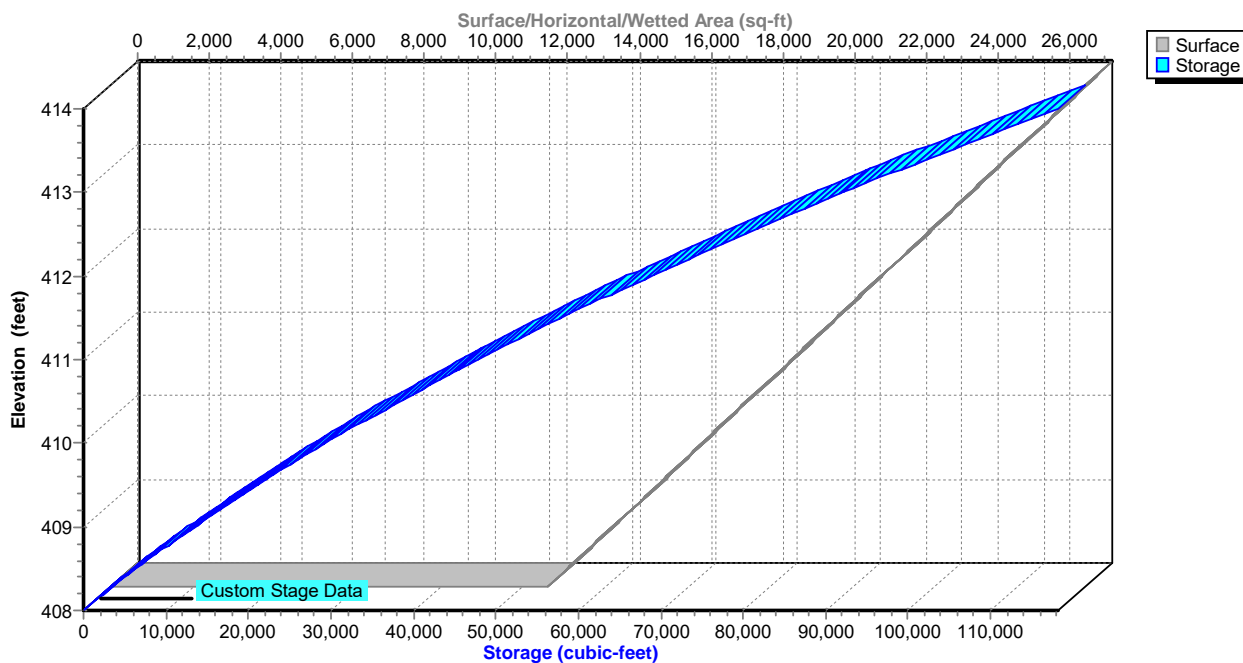
Pond 45P: INFIL 1B

Hydrograph



Pond 45P: INFIL 1B

Stage-Area-Storage



Hydrograph for Pond 45P: INFIL 1B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	408.00	0.00	0.00	0.00	0.00
1.00	0.00	0	408.00	0.00	0.00	0.00	0.00
2.00	0.00	0	408.00	0.00	0.00	0.00	0.00
3.00	0.00	0	408.00	0.00	0.00	0.00	0.00
4.00	0.00	0	408.00	0.00	0.00	0.00	0.00
5.00	0.08	19	408.00	0.07	0.07	0.00	0.00
6.00	0.18	48	408.00	0.17	0.17	0.00	0.00
7.00	0.33	90	408.01	0.32	0.32	0.00	0.00
8.00	0.54	147	408.01	0.52	0.52	0.00	0.00
9.00	0.78	215	408.02	0.76	0.76	0.00	0.00
10.00	1.40	380	408.03	1.34	1.34	0.00	0.00
11.00	2.83	748	408.06	2.60	2.60	0.00	0.00
12.00	22.47	14,477	409.07	3.64	3.64	0.00	0.00
13.00	5.10	51,135	411.16	6.15	6.05	0.10	0.00
14.00	2.58	42,586	410.73	5.52	5.52	0.00	0.00
15.00	1.78	31,801	410.14	4.83	4.83	0.00	0.00
16.00	1.45	21,372	409.52	4.13	4.13	0.00	0.00
17.00	1.22	12,489	408.93	3.50	3.50	0.00	0.00
18.00	0.99	4,928	408.39	2.93	2.93	0.00	0.00
19.00	0.90	262	408.02	0.93	0.93	0.00	0.00
20.00	0.85	242	408.02	0.85	0.85	0.00	0.00
21.00	0.79	226	408.02	0.80	0.80	0.00	0.00
22.00	0.73	209	408.02	0.74	0.74	0.00	0.00
23.00	0.68	193	408.02	0.68	0.68	0.00	0.00
24.00	0.62	176	408.01	0.62	0.62	0.00	0.00
25.00	0.00	0	408.00	0.00	0.00	0.00	0.00
26.00	0.00	0	408.00	0.00	0.00	0.00	0.00
27.00	0.00	0	408.00	0.00	0.00	0.00	0.00
28.00	0.00	0	408.00	0.00	0.00	0.00	0.00
29.00	0.00	0	408.00	0.00	0.00	0.00	0.00
30.00	0.00	0	408.00	0.00	0.00	0.00	0.00
31.00	0.00	0	408.00	0.00	0.00	0.00	0.00
32.00	0.00	0	408.00	0.00	0.00	0.00	0.00
33.00	0.00	0	408.00	0.00	0.00	0.00	0.00
34.00	0.00	0	408.00	0.00	0.00	0.00	0.00
35.00	0.00	0	408.00	0.00	0.00	0.00	0.00
36.00	0.00	0	408.00	0.00	0.00	0.00	0.00
37.00	0.00	0	408.00	0.00	0.00	0.00	0.00
38.00	0.00	0	408.00	0.00	0.00	0.00	0.00
39.00	0.00	0	408.00	0.00	0.00	0.00	0.00
40.00	0.00	0	408.00	0.00	0.00	0.00	0.00
41.00	0.00	0	408.00	0.00	0.00	0.00	0.00
42.00	0.00	0	408.00	0.00	0.00	0.00	0.00
43.00	0.00	0	408.00	0.00	0.00	0.00	0.00
44.00	0.00	0	408.00	0.00	0.00	0.00	0.00
45.00	0.00	0	408.00	0.00	0.00	0.00	0.00
46.00	0.00	0	408.00	0.00	0.00	0.00	0.00
47.00	0.00	0	408.00	0.00	0.00	0.00	0.00
48.00	0.00	0	408.00	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 45P: INFIL 1B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	12,210	0	413.80	26,686	112,798
408.10	12,460	1,233	413.90	26,935	115,479
408.20	12,709	2,492	414.00	27,185	118,185
408.30	12,959	3,775			
408.40	13,208	5,084			
408.50	13,458	6,417			
408.60	13,708	7,775			
408.70	13,957	9,158			
408.80	14,207	10,567			
408.90	14,456	12,000			
409.00	14,706	13,458			
409.10	14,955	14,941			
409.20	15,205	16,449			
409.30	15,455	17,982			
409.40	15,704	19,540			
409.50	15,954	21,123			
409.60	16,203	22,731			
409.70	16,453	24,363			
409.80	16,703	26,021			
409.90	16,952	27,704			
410.00	17,202	29,412			
410.10	17,451	31,144			
410.20	17,701	32,902			
410.30	17,950	34,684			
410.40	18,200	36,492			
410.50	18,450	38,324			
410.60	18,699	40,182			
410.70	18,949	42,064			
410.80	19,198	43,972			
410.90	19,448	45,904			
411.00	19,698	47,861			
411.10	19,947	49,843			
411.20	20,197	51,851			
411.30	20,446	53,883			
411.40	20,696	55,940			
411.50	20,945	58,022			
411.60	21,195	60,129			
411.70	21,445	62,261			
411.80	21,694	64,418			
411.90	21,944	66,600			
412.00	22,193	68,807			
412.10	22,443	71,038			
412.20	22,692	73,295			
412.30	22,942	75,577			
412.40	23,192	77,884			
412.50	23,441	80,215			
412.60	23,691	82,572			
412.70	23,940	84,953			
412.80	24,190	87,360			
412.90	24,440	89,791			
413.00	24,689	92,248			
413.10	24,939	94,729			
413.20	25,188	97,236			
413.30	25,438	99,767			
413.40	25,687	102,323			
413.50	25,937	104,904			
413.60	26,187	107,511			
413.70	26,436	110,142			

Summary for Pond 47P: INFIL 1H

Inflow Area = 11.301 ac, 87.98% Impervious, Inflow Depth = 5.16" for 25-Year event
 Inflow = 60.74 cfs @ 12.14 hrs, Volume= 4.859 af
 Outflow = 6.73 cfs @ 12.88 hrs, Volume= 4.859 af, Atten= 89%, Lag= 44.5 min
 Discarded = 6.57 cfs @ 12.88 hrs, Volume= 4.839 af
 Primary = 0.16 cfs @ 12.88 hrs, Volume= 0.020 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 411.41' @ 12.88 hrs Surf.Area= 27,961 sf Storage= 70,961 cf

Plug-Flow detention time= 85.7 min calculated for 4.859 af (100% of inflow)
 Center-of-Mass det. time= 85.7 min (837.4 - 751.7)

Volume	Invert	Avail.Storage	Storage Description
#1	408.50'	151,690 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.50	20,873	0	0
414.00	34,287	151,690	151,690

Device	Routing	Invert	Outlet Devices
#1	Secondary	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 4	410.85'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.50'	7.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 403.00' Phase-In= 0.01'
#4	Primary	408.50'	18.0" Round Culvert L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 408.50' / 407.00' S= 0.0214 '/ Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

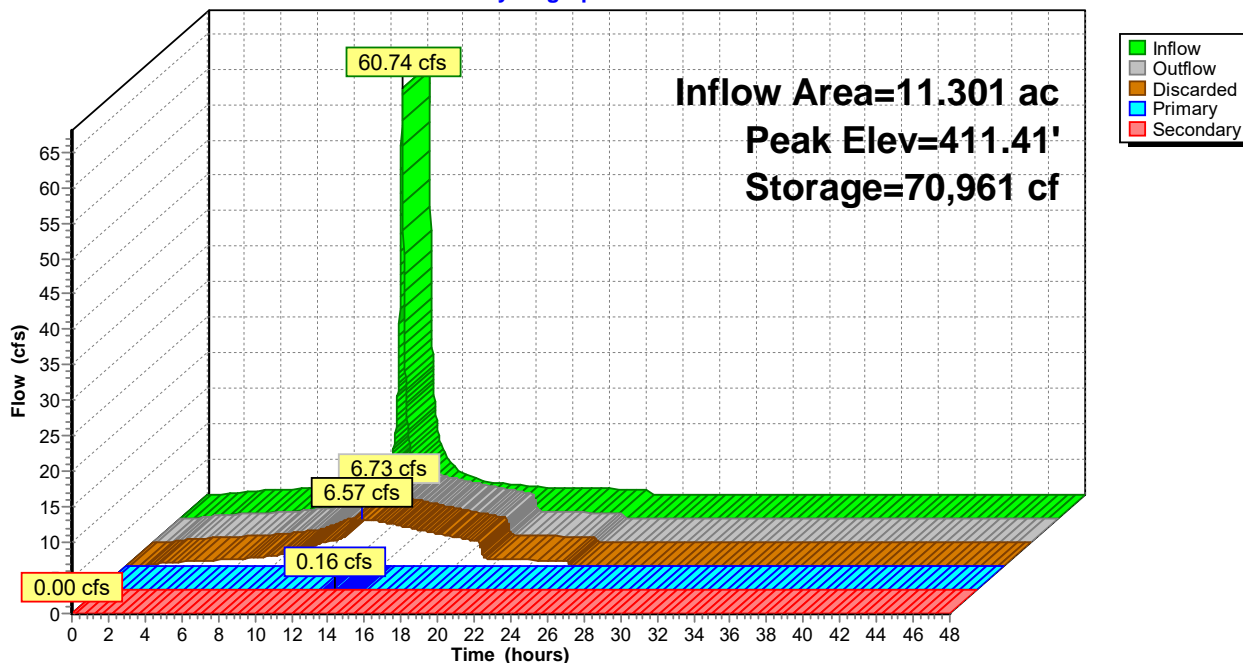
Discarded OutFlow Max=6.57 cfs @ 12.88 hrs HW=411.41' (Free Discharge)
 ↑3=Exfiltration (Controls 6.57 cfs)

Primary OutFlow Max=0.16 cfs @ 12.88 hrs HW=411.41' (Free Discharge)
 ↑4=Culvert (Passes 0.16 cfs of 12.49 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.16 cfs @ 3.16 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

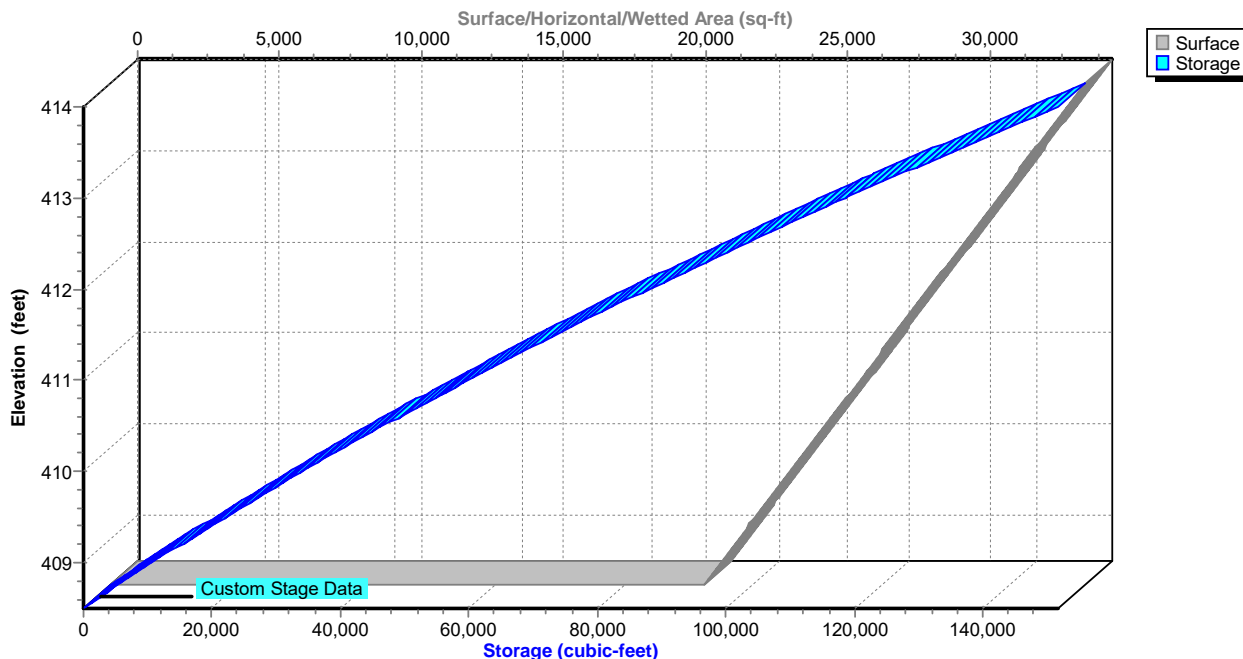
Pond 47P: INFIL 1H

Hydrograph



Pond 47P: INFIL 1H

Stage-Area-Storage



Hydrograph for Pond 47P: INFIL 1H

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	408.50	0.00	0.00	0.00	0.00
1.00	0.11	24	408.50	0.07	0.07	0.00	0.00
2.00	0.42	132	408.51	0.39	0.39	0.00	0.00
3.00	0.61	198	408.51	0.59	0.59	0.00	0.00
4.00	0.75	246	408.51	0.73	0.73	0.00	0.00
5.00	0.86	284	408.51	0.85	0.85	0.00	0.00
6.00	0.95	316	408.52	0.94	0.94	0.00	0.00
7.00	1.21	395	408.52	1.18	1.18	0.00	0.00
8.00	1.48	487	408.52	1.45	1.45	0.00	0.00
9.00	1.76	580	408.53	1.73	1.73	0.00	0.00
10.00	2.64	854	408.54	2.55	2.55	0.00	0.00
11.00	4.58	1,805	408.59	3.47	3.47	0.00	0.00
12.00	29.48	22,683	409.53	4.45	4.45	0.00	0.00
13.00	6.08	70,824	411.40	6.72	6.57	0.15	0.00
14.00	3.01	62,050	411.08	6.27	6.20	0.08	0.00
15.00	2.07	49,777	410.62	5.67	5.67	0.00	0.00
16.00	1.69	37,017	410.12	5.10	5.10	0.00	0.00
17.00	1.42	25,225	409.63	4.57	4.57	0.00	0.00
18.00	1.15	14,331	409.16	4.06	4.06	0.00	0.00
19.00	1.04	4,450	408.71	3.60	3.60	0.00	0.00
20.00	0.98	330	408.52	0.98	0.98	0.00	0.00
21.00	0.91	306	408.51	0.91	0.91	0.00	0.00
22.00	0.84	284	408.51	0.85	0.85	0.00	0.00
23.00	0.77	261	408.51	0.78	0.78	0.00	0.00
24.00	0.71	238	408.51	0.71	0.71	0.00	0.00
25.00	0.00	0	408.50	0.00	0.00	0.00	0.00
26.00	0.00	0	408.50	0.00	0.00	0.00	0.00
27.00	0.00	0	408.50	0.00	0.00	0.00	0.00
28.00	0.00	0	408.50	0.00	0.00	0.00	0.00
29.00	0.00	0	408.50	0.00	0.00	0.00	0.00
30.00	0.00	0	408.50	0.00	0.00	0.00	0.00
31.00	0.00	0	408.50	0.00	0.00	0.00	0.00
32.00	0.00	0	408.50	0.00	0.00	0.00	0.00
33.00	0.00	0	408.50	0.00	0.00	0.00	0.00
34.00	0.00	0	408.50	0.00	0.00	0.00	0.00
35.00	0.00	0	408.50	0.00	0.00	0.00	0.00
36.00	0.00	0	408.50	0.00	0.00	0.00	0.00
37.00	0.00	0	408.50	0.00	0.00	0.00	0.00
38.00	0.00	0	408.50	0.00	0.00	0.00	0.00
39.00	0.00	0	408.50	0.00	0.00	0.00	0.00
40.00	0.00	0	408.50	0.00	0.00	0.00	0.00
41.00	0.00	0	408.50	0.00	0.00	0.00	0.00
42.00	0.00	0	408.50	0.00	0.00	0.00	0.00
43.00	0.00	0	408.50	0.00	0.00	0.00	0.00
44.00	0.00	0	408.50	0.00	0.00	0.00	0.00
45.00	0.00	0	408.50	0.00	0.00	0.00	0.00
46.00	0.00	0	408.50	0.00	0.00	0.00	0.00
47.00	0.00	0	408.50	0.00	0.00	0.00	0.00
48.00	0.00	0	408.50	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 47P: INFIL 1H

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.50	20,873	0	411.40	27,946	70,787
408.55	20,995	1,047	411.45	28,068	72,188
408.60	21,117	2,099	411.50	28,190	73,594
408.65	21,239	3,158	411.55	28,312	75,007
408.70	21,361	4,223	411.60	28,434	76,425
408.75	21,483	5,294	411.65	28,556	77,850
408.80	21,605	6,372	411.70	28,678	79,281
408.85	21,727	7,455	411.75	28,799	80,718
408.90	21,849	8,544	411.80	28,921	82,161
408.95	21,971	9,640	411.85	29,043	83,610
409.00	22,092	10,741	411.90	29,165	85,065
409.05	22,214	11,849	411.95	29,287	86,526
409.10	22,336	12,963	412.00	29,409	87,994
409.15	22,458	14,083	412.05	29,531	89,467
409.20	22,580	15,209	412.10	29,653	90,947
409.25	22,702	16,341	412.15	29,775	92,433
409.30	22,824	17,479	412.20	29,897	93,924
409.35	22,946	18,623	412.25	30,019	95,422
409.40	23,068	19,773	412.30	30,141	96,926
409.45	23,190	20,930	412.35	30,263	98,436
409.50	23,312	22,092	412.40	30,385	99,953
409.55	23,434	23,261	412.45	30,507	101,475
409.60	23,556	24,436	412.50	30,629	103,003
409.65	23,678	25,617	412.55	30,751	104,538
409.70	23,800	26,804	412.60	30,873	106,078
409.75	23,922	27,997	412.65	30,994	107,625
409.80	24,044	29,196	412.70	31,116	109,178
409.85	24,166	30,401	412.75	31,238	110,737
409.90	24,287	31,612	412.80	31,360	112,302
409.95	24,409	32,830	412.85	31,482	113,873
410.00	24,531	34,053	412.90	31,604	115,450
410.05	24,653	35,283	412.95	31,726	117,033
410.10	24,775	36,519	413.00	31,848	118,622
410.15	24,897	37,760	413.05	31,970	120,218
410.20	25,019	39,008	413.10	32,092	121,819
410.25	25,141	40,262	413.15	32,214	123,427
410.30	25,263	41,522	413.20	32,336	125,041
410.35	25,385	42,789	413.25	32,458	126,661
410.40	25,507	44,061	413.30	32,580	128,287
410.45	25,629	45,339	413.35	32,702	129,919
410.50	25,751	46,624	413.40	32,824	131,557
410.55	25,873	47,914	413.45	32,946	133,201
410.60	25,995	49,211	413.50	33,068	134,851
410.65	26,117	50,514	413.55	33,189	136,508
410.70	26,239	51,823	413.60	33,311	138,170
410.75	26,361	53,138	413.65	33,433	139,839
410.80	26,482	54,459	413.70	33,555	141,514
410.85	26,604	55,786	413.75	33,677	143,194
410.90	26,726	57,119	413.80	33,799	144,881
410.95	26,848	58,459	413.85	33,921	146,574
411.00	26,970	59,804	413.90	34,043	148,273
411.05	27,092	61,156	413.95	34,165	149,979
411.10	27,214	62,513	414.00	34,287	151,690
411.15	27,336	63,877			
411.20	27,458	65,247			
411.25	27,580	66,623			
411.30	27,702	68,005			
411.35	27,824	69,393			

Summary for Pond 51P: FB 1H

Inflow Area = 10.389 ac, 95.71% Impervious, Inflow Depth = 5.57" for 25-Year event
 Inflow = 61.88 cfs @ 12.13 hrs, Volume= 4.824 af
 Outflow = 60.64 cfs @ 12.14 hrs, Volume= 4.824 af, Atten= 2%, Lag= 0.8 min
 Primary = 60.64 cfs @ 12.14 hrs, Volume= 4.824 af
 Routed to Pond 47P : INFIL 1H

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.75' Surf.Area= 12,203 sf Storage= 48,336 cf
 Peak Elev= 413.24' @ 12.14 hrs Surf.Area= 12,772 sf Storage= 53,342 cf (5,006 cf above start)

Plug-Flow detention time= 176.1 min calculated for 3.714 af (77% of inflow)
 Center-of-Mass det. time= 3.1 min (750.0 - 747.0)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,056 cf	Custom Stage Data (Prismatic) Listed below

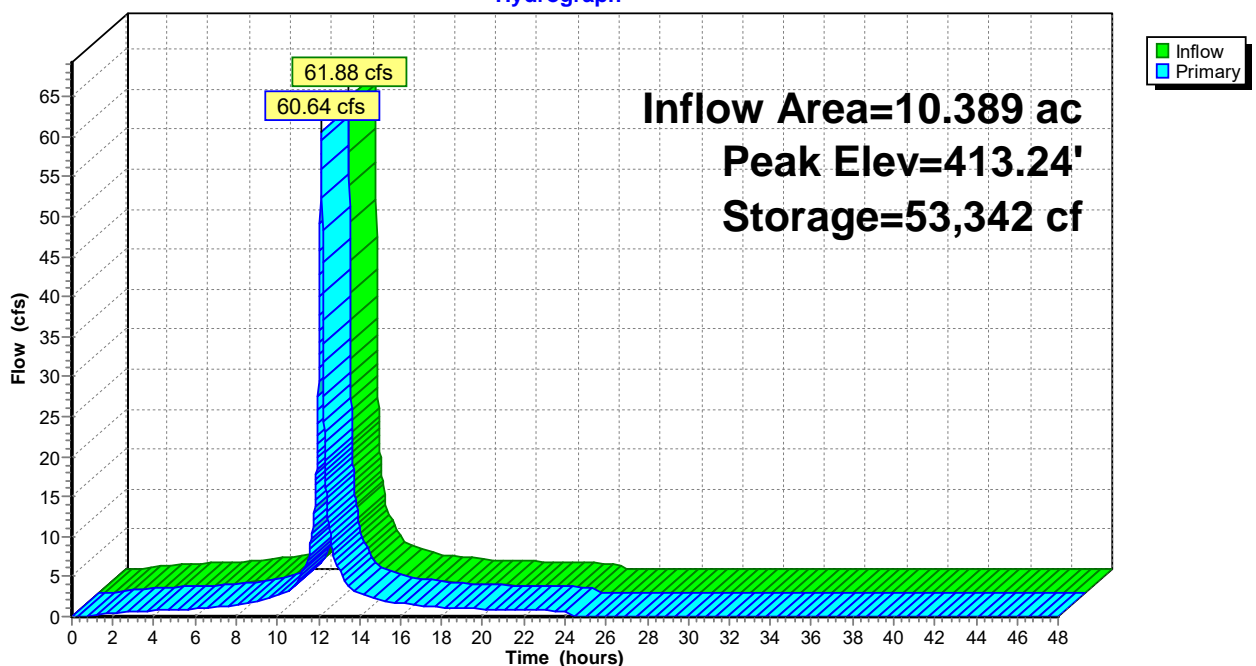
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	6,702	0	0
414.00	13,650	61,056	61,056

Device	Routing	Invert	Outlet Devices
#1	Primary	412.75'	65.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

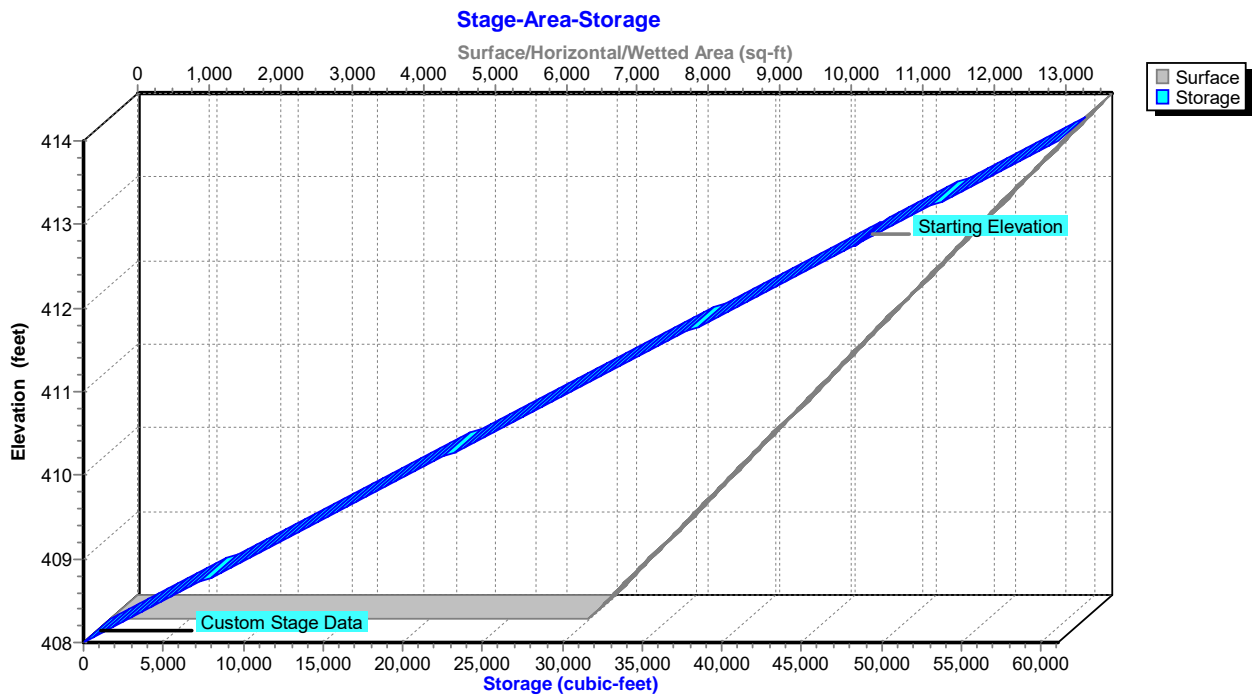
Primary OutFlow Max=60.46 cfs @ 12.14 hrs HW=413.24' (Free Discharge)
 ↑-1=Broad-Crested Rectangular Weir (Weir Controls 60.46 cfs @ 1.89 fps)

Pond 51P: FB 1H

Hydrograph



Pond 51P: FB 1H



Hydrograph for Pond 51P: FB 1H

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	48,336	412.75	0.00
1.00	0.14	48,364	412.75	0.11
2.00	0.43	48,444	412.76	0.42
3.00	0.62	48,494	412.77	0.61
4.00	0.75	48,531	412.77	0.75
5.00	0.87	48,560	412.77	0.86
6.00	0.96	48,585	412.77	0.95
7.00	1.22	48,651	412.78	1.21
8.00	1.50	48,723	412.79	1.48
9.00	1.78	48,795	412.80	1.76
10.00	2.67	48,940	412.81	2.64
11.00	4.72	49,210	412.84	4.58
12.00	33.00	51,436	413.05	29.48
13.00	5.76	49,406	412.86	6.00
14.00	2.92	48,985	412.81	2.96
15.00	1.99	48,857	412.80	2.03
16.00	1.64	48,769	412.79	1.66
17.00	1.37	48,700	412.79	1.39
18.00	1.11	48,630	412.78	1.13
19.00	1.01	48,602	412.78	1.02
20.00	0.95	48,585	412.77	0.95
21.00	0.88	48,568	412.77	0.89
22.00	0.81	48,550	412.77	0.82
23.00	0.75	48,533	412.77	0.75
24.00	0.69	48,516	412.77	0.69
25.00	0.00	48,336	412.75	0.00
26.00	0.00	48,336	412.75	0.00
27.00	0.00	48,336	412.75	0.00
28.00	0.00	48,336	412.75	0.00
29.00	0.00	48,336	412.75	0.00
30.00	0.00	48,336	412.75	0.00
31.00	0.00	48,336	412.75	0.00
32.00	0.00	48,336	412.75	0.00
33.00	0.00	48,336	412.75	0.00
34.00	0.00	48,336	412.75	0.00
35.00	0.00	48,336	412.75	0.00
36.00	0.00	48,336	412.75	0.00
37.00	0.00	48,336	412.75	0.00
38.00	0.00	48,336	412.75	0.00
39.00	0.00	48,336	412.75	0.00
40.00	0.00	48,336	412.75	0.00
41.00	0.00	48,336	412.75	0.00
42.00	0.00	48,336	412.75	0.00
43.00	0.00	48,336	412.75	0.00
44.00	0.00	48,336	412.75	0.00
45.00	0.00	48,336	412.75	0.00
46.00	0.00	48,336	412.75	0.00
47.00	0.00	48,336	412.75	0.00
48.00	0.00	48,336	412.75	0.00

Stage-Area-Storage for Pond 51P: FB 1H

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	6,702	0	413.80	13,418	59,021
408.10	6,818	1,018	413.90	13,534	60,038
408.20	6,934	2,035	414.00	13,650	61,056
408.30	7,049	3,053			
408.40	7,165	4,070			
408.50	7,281	5,088			
408.60	7,397	6,106			
408.70	7,513	7,123			
408.80	7,628	8,141			
408.90	7,744	9,158			
409.00	7,860	10,176			
409.10	7,976	11,194			
409.20	8,092	12,211			
409.30	8,207	13,229			
409.40	8,323	14,246			
409.50	8,439	15,264			
409.60	8,555	16,282			
409.70	8,671	17,299			
409.80	8,786	18,317			
409.90	8,902	19,334			
410.00	9,018	20,352			
410.10	9,134	21,370			
410.20	9,250	22,387			
410.30	9,365	23,405			
410.40	9,481	24,422			
410.50	9,597	25,440			
410.60	9,713	26,458			
410.70	9,829	27,475			
410.80	9,944	28,493			
410.90	10,060	29,510			
411.00	10,176	30,528			
411.10	10,292	31,546			
411.20	10,408	32,563			
411.30	10,523	33,581			
411.40	10,639	34,598			
411.50	10,755	35,616			
411.60	10,871	36,634			
411.70	10,987	37,651			
411.80	11,102	38,669			
411.90	11,218	39,686			
412.00	11,334	40,704			
412.10	11,450	41,722			
412.20	11,566	42,739			
412.30	11,681	43,757			
412.40	11,797	44,774			
412.50	11,913	45,792			
412.60	12,029	46,810			
412.70	12,145	47,827			
412.80	12,260	48,845			
412.90	12,376	49,862			
413.00	12,492	50,880			
413.10	12,608	51,898			
413.20	12,724	52,915			
413.30	12,839	53,933			
413.40	12,955	54,950			
413.50	13,071	55,968			
413.60	13,187	56,986			
413.70	13,303	58,003			

Summary for Pond 53P: Bioretention J basin

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 30.46" for 25-Year event
 Inflow = 26.16 cfs @ 12.09 hrs, Volume= 1.980 af
 Outflow = 1.91 cfs @ 13.37 hrs, Volume= 0.945 af, Atten= 93%, Lag= 76.8 min
 Primary = 1.91 cfs @ 13.37 hrs, Volume= 0.945 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.40' @ 13.37 hrs Surf.Area= 28,552 sf Storage= 56,036 cf

Plug-Flow detention time= 422.7 min calculated for 0.945 af (48% of inflow)
 Center-of-Mass det. time= 278.1 min (1,054.7 - 776.6)

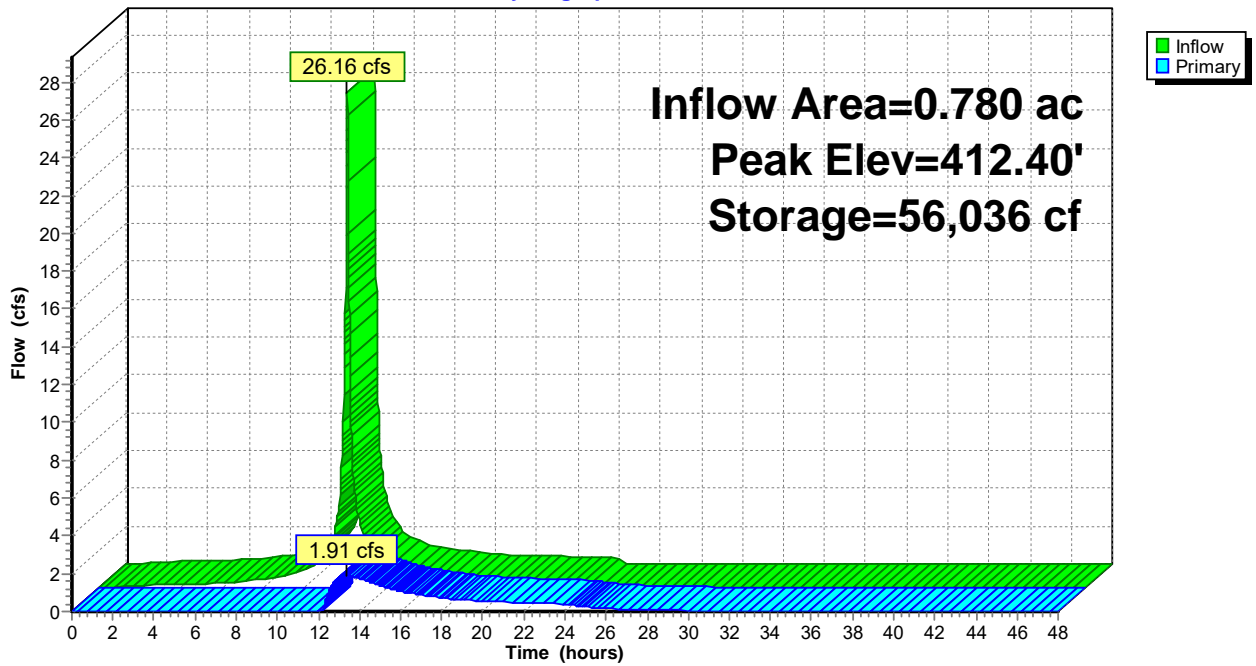
Volume	Invert	Avail.Storage	Storage Description	
#1	407.83'	72,373 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	24,200	0.0	0	0
408.33	24,200	40.0	4,840	4,840
411.00	24,200	20.0	12,923	17,763
413.00	30,410	100.0	54,610	72,373

Device	Routing	Invert	Outlet Devices
#1	Primary	407.83'	12.0" Round Culvert L= 49.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.83' / 407.50' S= 0.0067 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	412.00'	28.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	414.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.91 cfs @ 13.37 hrs HW=412.40' (Free Discharge)
 1=Culvert (Passes 1.91 cfs of 7.14 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 1.91 cfs @ 2.03 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

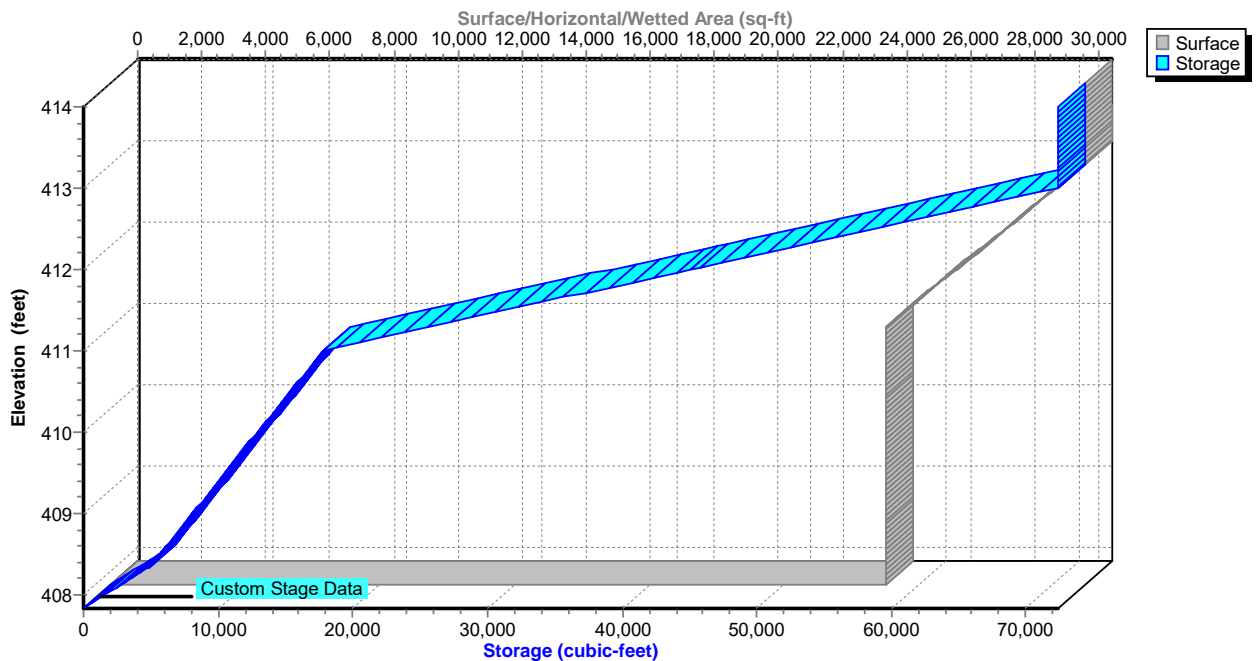
Pond 53P: Bioretention J basin

Hydrograph



Pond 53P: Bioretention J basin

Stage-Area-Storage



Hydrograph for Pond 53P: Bioretention J basin

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.83	0.00
1.00	0.04	25	407.83	0.00
2.00	0.11	304	407.86	0.00
3.00	0.16	790	407.91	0.00
4.00	0.19	1,419	407.98	0.00
5.00	0.22	2,158	408.05	0.00
6.00	0.25	3,002	408.14	0.00
7.00	0.35	4,082	408.25	0.00
8.00	0.45	5,525	408.47	0.00
9.00	0.57	7,369	408.85	0.00
10.00	0.92	10,048	409.41	0.00
11.00	1.74	14,442	410.31	0.00
12.00	15.82	30,570	411.47	0.00
13.00	2.61	55,594	412.39	1.80
14.00	1.36	55,377	412.38	1.74
15.00	0.93	53,878	412.32	1.38
16.00	0.77	52,522	412.27	1.07
17.00	0.65	51,585	412.24	0.88
18.00	0.53	50,822	412.21	0.72
19.00	0.48	50,214	412.19	0.62
20.00	0.45	49,805	412.17	0.55
21.00	0.42	49,504	412.16	0.49
22.00	0.39	49,261	412.15	0.45
23.00	0.36	49,046	412.15	0.42
24.00	0.32	48,831	412.14	0.39
25.00	0.00	47,812	412.10	0.24
26.00	0.00	47,109	412.07	0.16
27.00	0.00	46,622	412.06	0.11
28.00	0.00	46,278	412.04	0.08
29.00	0.00	46,035	412.04	0.06
30.00	0.00	45,863	412.03	0.04
31.00	0.00	45,741	412.02	0.03
32.00	0.00	45,642	412.02	0.03
33.00	0.00	45,558	412.02	0.02
34.00	0.00	45,487	412.02	0.02
35.00	0.00	45,425	412.01	0.02
36.00	0.00	45,373	412.01	0.01
37.00	0.00	45,329	412.01	0.01
38.00	0.00	45,290	412.01	0.01
39.00	0.00	45,258	412.01	0.01
40.00	0.00	45,230	412.01	0.01
41.00	0.00	45,206	412.01	0.01
42.00	0.00	45,186	412.00	0.01
43.00	0.00	45,169	412.00	0.00
44.00	0.00	45,154	412.00	0.00
45.00	0.00	45,141	412.00	0.00
46.00	0.00	45,131	412.00	0.00
47.00	0.00	45,122	412.00	0.00
48.00	0.00	45,114	412.00	0.00

Stage-Area-Storage for Pond 53P: Bioretention J basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.83	24,200	0	413.63	30,410	72,373
407.93	24,200	968	413.73	30,410	72,373
408.03	24,200	1,936	413.83	30,410	72,373
408.13	24,200	2,904	413.93	30,410	72,373
408.23	24,200	3,872			
408.33	24,200	4,840			
408.43	24,200	5,324			
408.53	24,200	5,808			
408.63	24,200	6,292			
408.73	24,200	6,776			
408.83	24,200	7,260			
408.93	24,200	7,744			
409.03	24,200	8,228			
409.13	24,200	8,712			
409.23	24,200	9,196			
409.33	24,200	9,680			
409.43	24,200	10,164			
409.53	24,200	10,648			
409.63	24,200	11,132			
409.73	24,200	11,616			
409.83	24,200	12,100			
409.93	24,200	12,584			
410.03	24,200	13,068			
410.13	24,200	13,552			
410.23	24,200	14,036			
410.33	24,200	14,520			
410.43	24,200	15,004			
410.53	24,200	15,488			
410.63	24,200	15,972			
410.73	24,200	16,456			
410.83	24,200	16,940			
410.93	24,200	17,424			
411.03	24,293	18,582			
411.13	24,604	21,312			
411.23	24,914	24,043			
411.33	25,225	26,773			
411.43	25,535	29,504			
411.53	25,846	32,234			
411.63	26,156	34,965			
411.73	26,467	37,695			
411.83	26,777	40,426			
411.93	27,088	43,156			
412.03	27,398	45,887			
412.13	27,709	48,617			
412.23	28,019	51,348			
412.33	28,330	54,078			
412.43	28,640	56,809			
412.53	28,951	59,539			
412.63	29,261	62,270			
412.73	29,572	65,000			
412.83	29,882	67,731			
412.93	30,193	70,461			
413.03	30,410	72,373			
413.13	30,410	72,373			
413.23	30,410	72,373			
413.33	30,410	72,373			
413.43	30,410	72,373			
413.53	30,410	72,373			

Summary for Pond 54P: INFIL 1G

Inflow Area = 10.595 ac, 90.33% Impervious, Inflow Depth = 5.31" for 25-Year event
 Inflow = 58.29 cfs @ 12.14 hrs, Volume= 4.685 af
 Outflow = 6.25 cfs @ 12.94 hrs, Volume= 4.685 af, Atten= 89%, Lag= 47.5 min
 Discarded = 6.25 cfs @ 12.94 hrs, Volume= 4.685 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 411.45' @ 12.94 hrs Surf.Area= 26,289 sf Storage= 68,945 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 88.1 min (840.5 - 752.4)

Volume	Invert	Avail.Storage	Storage Description
#1	408.50'	142,445 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.50	20,483	0	0
414.00	31,315	142,445	142,445

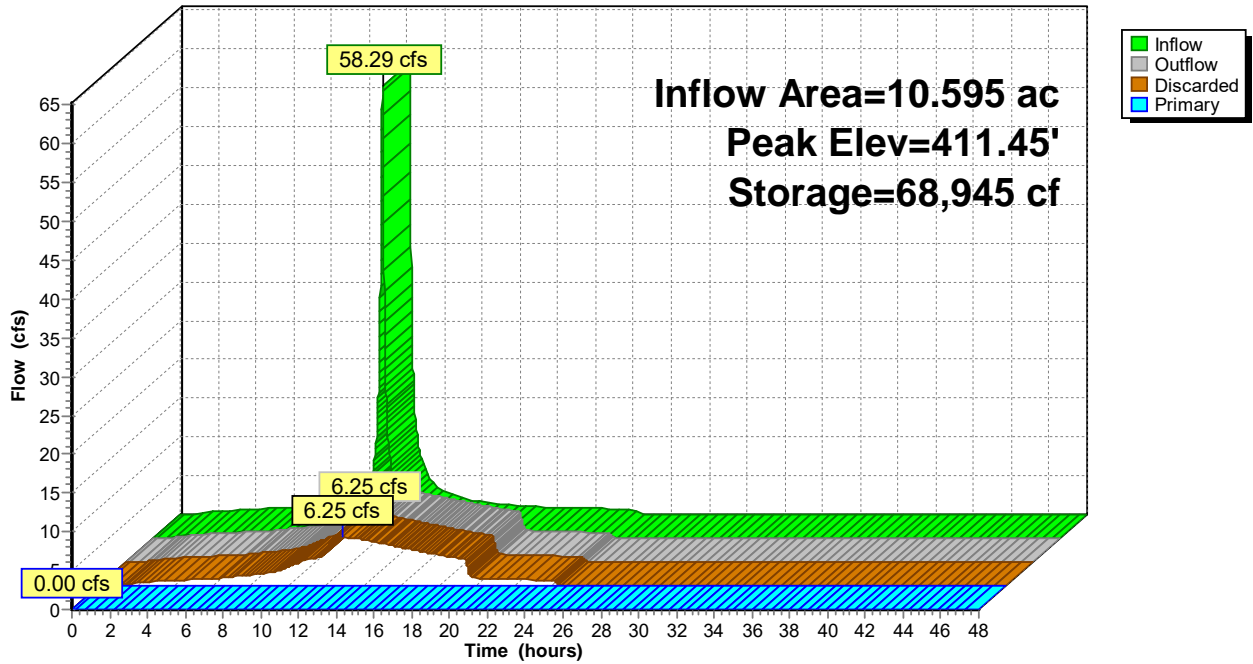
Device	Routing	Invert	Outlet Devices
#1	Device 4	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 4	411.85'	7.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.50'	7.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 403.00' Phase-In= 0.01'
#4	Primary	408.50'	18.0" Round Culvert L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 408.50' / 408.00' S= 0.0071 '/ Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Discarded OutFlow Max=6.25 cfs @ 12.94 hrs HW=411.45' (Free Discharge)
 ↳ **3=Exfiltration** (Controls 6.25 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
 ↳ **4=Culvert** (Controls 0.00 cfs)
 ↳ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
 ↳ **2=Orifice/Grate** (Controls 0.00 cfs)

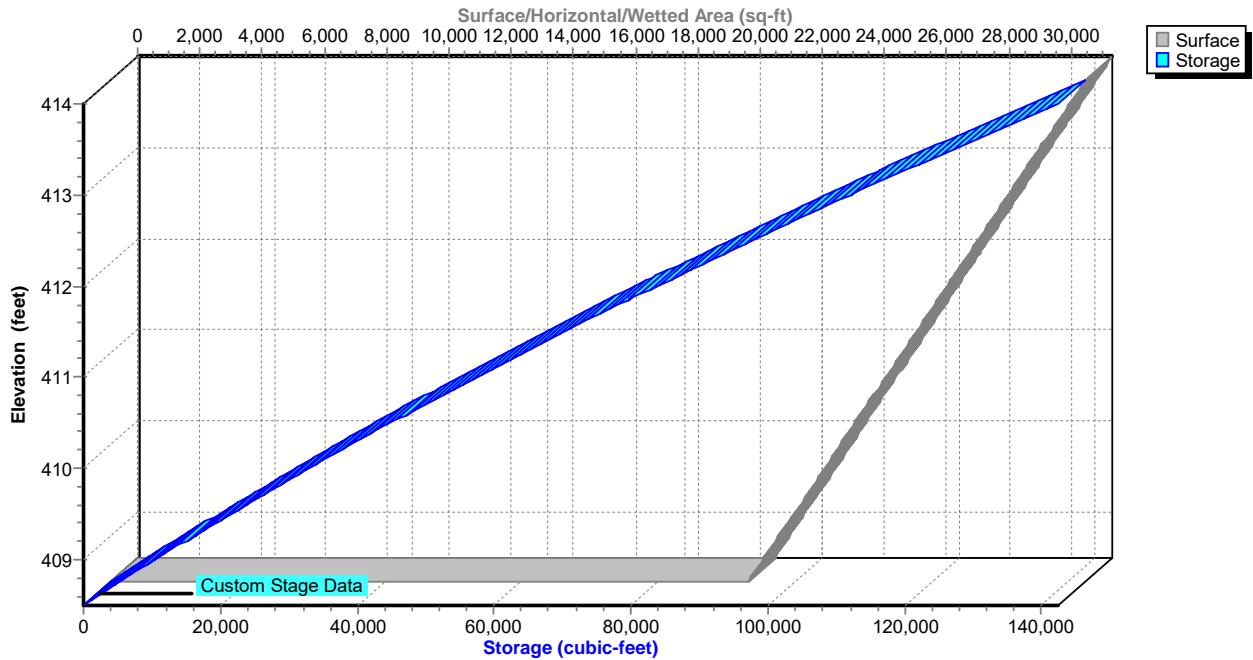
Pond 54P: INFIL 1G

Hydrograph



Pond 54P: INFIL 1G

Stage-Area-Storage



Hydrograph for Pond 54P: INFIL 1G

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	408.50	0.00	0.00	0.00
1.00	0.06	14	408.50	0.04	0.04	0.00
2.00	0.40	127	408.51	0.38	0.38	0.00
3.00	0.58	190	408.51	0.57	0.57	0.00
4.00	0.72	237	408.51	0.71	0.71	0.00
5.00	0.83	273	408.51	0.82	0.82	0.00
6.00	0.92	305	408.51	0.91	0.91	0.00
7.00	1.16	381	408.52	1.14	1.14	0.00
8.00	1.43	469	408.52	1.40	1.40	0.00
9.00	1.69	558	408.53	1.67	1.67	0.00
10.00	2.52	813	408.54	2.43	2.43	0.00
11.00	4.39	1,662	408.58	3.39	3.39	0.00
12.00	27.71	21,251	409.49	4.26	4.26	0.00
13.00	5.91	68,909	411.45	6.25	6.25	0.00
14.00	2.91	61,190	411.15	5.94	5.94	0.00
15.00	2.03	49,553	410.69	5.46	5.46	0.00
16.00	1.63	37,228	410.18	4.94	4.94	0.00
17.00	1.37	25,726	409.69	4.45	4.45	0.00
18.00	1.11	15,010	409.21	3.99	3.99	0.00
19.00	1.00	5,203	408.75	3.55	3.55	0.00
20.00	0.94	319	408.52	0.95	0.95	0.00
21.00	0.87	295	408.51	0.88	0.88	0.00
22.00	0.81	273	408.51	0.82	0.82	0.00
23.00	0.74	251	408.51	0.75	0.75	0.00
24.00	0.68	229	408.51	0.68	0.68	0.00
25.00	0.00	2	408.50	0.01	0.01	0.00
26.00	0.00	0	408.50	0.00	0.00	0.00
27.00	0.00	0	408.50	0.00	0.00	0.00
28.00	0.00	0	408.50	0.00	0.00	0.00
29.00	0.00	0	408.50	0.00	0.00	0.00
30.00	0.00	0	408.50	0.00	0.00	0.00
31.00	0.00	0	408.50	0.00	0.00	0.00
32.00	0.00	0	408.50	0.00	0.00	0.00
33.00	0.00	0	408.50	0.00	0.00	0.00
34.00	0.00	0	408.50	0.00	0.00	0.00
35.00	0.00	0	408.50	0.00	0.00	0.00
36.00	0.00	0	408.50	0.00	0.00	0.00
37.00	0.00	0	408.50	0.00	0.00	0.00
38.00	0.00	0	408.50	0.00	0.00	0.00
39.00	0.00	0	408.50	0.00	0.00	0.00
40.00	0.00	0	408.50	0.00	0.00	0.00
41.00	0.00	0	408.50	0.00	0.00	0.00
42.00	0.00	0	408.50	0.00	0.00	0.00
43.00	0.00	0	408.50	0.00	0.00	0.00
44.00	0.00	0	408.50	0.00	0.00	0.00
45.00	0.00	0	408.50	0.00	0.00	0.00
46.00	0.00	0	408.50	0.00	0.00	0.00
47.00	0.00	0	408.50	0.00	0.00	0.00
48.00	0.00	0	408.50	0.00	0.00	0.00

Stage-Area-Storage for Pond 54P: INFIL 1G

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.50	20,483	0	411.40	26,194	67,682
408.55	20,581	1,027	411.45	26,293	68,994
408.60	20,680	2,058	411.50	26,391	70,312
408.65	20,778	3,095	411.55	26,490	71,634
408.70	20,877	4,136	411.60	26,588	72,961
408.75	20,975	5,182	411.65	26,687	74,292
408.80	21,074	6,234	411.70	26,785	75,629
408.85	21,172	7,290	411.75	26,884	76,971
408.90	21,271	8,351	411.80	26,982	78,318
408.95	21,369	9,417	411.85	27,081	79,669
409.00	21,468	10,488	411.90	27,179	81,026
409.05	21,566	11,564	411.95	27,278	82,387
409.10	21,665	12,644	412.00	27,376	83,753
409.15	21,763	13,730	412.05	27,475	85,125
409.20	21,862	14,821	412.10	27,573	86,501
409.25	21,960	15,916	412.15	27,672	87,882
409.30	22,059	17,017	412.20	27,770	89,268
409.35	22,157	18,122	412.25	27,868	90,659
409.40	22,256	19,232	412.30	27,967	92,055
409.45	22,354	20,348	412.35	28,065	93,456
409.50	22,452	21,468	412.40	28,164	94,861
409.55	22,551	22,593	412.45	28,262	96,272
409.60	22,649	23,723	412.50	28,361	97,688
409.65	22,748	24,858	412.55	28,459	99,108
409.70	22,846	25,998	412.60	28,558	100,534
409.75	22,945	27,142	412.65	28,656	101,964
409.80	23,043	28,292	412.70	28,755	103,399
409.85	23,142	29,447	412.75	28,853	104,839
409.90	23,240	30,606	412.80	28,952	106,285
409.95	23,339	31,771	412.85	29,050	107,735
410.00	23,437	32,940	412.90	29,149	109,190
410.05	23,536	34,114	412.95	29,247	110,649
410.10	23,634	35,294	413.00	29,346	112,114
410.15	23,733	36,478	413.05	29,444	113,584
410.20	23,831	37,667	413.10	29,542	115,059
410.25	23,930	38,861	413.15	29,641	116,538
410.30	24,028	40,060	413.20	29,739	118,023
410.35	24,126	41,264	413.25	29,838	119,512
410.40	24,225	42,473	413.30	29,936	121,007
410.45	24,323	43,686	413.35	30,035	122,506
410.50	24,422	44,905	413.40	30,133	124,010
410.55	24,520	46,128	413.45	30,232	125,519
410.60	24,619	47,357	413.50	30,330	127,033
410.65	24,717	48,590	413.55	30,429	128,552
410.70	24,816	49,829	413.60	30,527	130,076
410.75	24,914	51,072	413.65	30,626	131,605
410.80	25,013	52,320	413.70	30,724	133,139
410.85	25,111	53,573	413.75	30,823	134,677
410.90	25,210	54,831	413.80	30,921	136,221
410.95	25,308	56,094	413.85	31,020	137,769
411.00	25,407	57,362	413.90	31,118	139,323
411.05	25,505	58,635	413.95	31,217	140,881
411.10	25,604	59,913	414.00	31,315	142,445
411.15	25,702	61,195			
411.20	25,801	62,483			
411.25	25,899	63,775			
411.30	25,997	65,073			
411.35	26,096	66,375			

Summary for Pond 55P: FB 1G

Inflow Area = 9.966 ac, 96.03% Impervious, Inflow Depth = 5.59" for 25-Year event
 Inflow = 59.56 cfs @ 12.13 hrs, Volume= 4.642 af
 Outflow = 57.84 cfs @ 12.14 hrs, Volume= 4.642 af, Atten= 3%, Lag= 1.0 min
 Primary = 57.84 cfs @ 12.14 hrs, Volume= 4.642 af
 Routed to Pond 54P : INFIL 1G

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.55' Surf.Area= 12,269 sf Storage= 46,929 cf
 Peak Elev= 413.12' @ 12.14 hrs Surf.Area= 12,985 sf Storage= 52,789 cf (5,860 cf above start)

Plug-Flow detention time= 177.5 min calculated for 3.564 af (77% of inflow)
 Center-of-Mass det. time= 3.8 min (750.7 - 746.9)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,884 cf	Custom Stage Data (Prismatic) Listed below

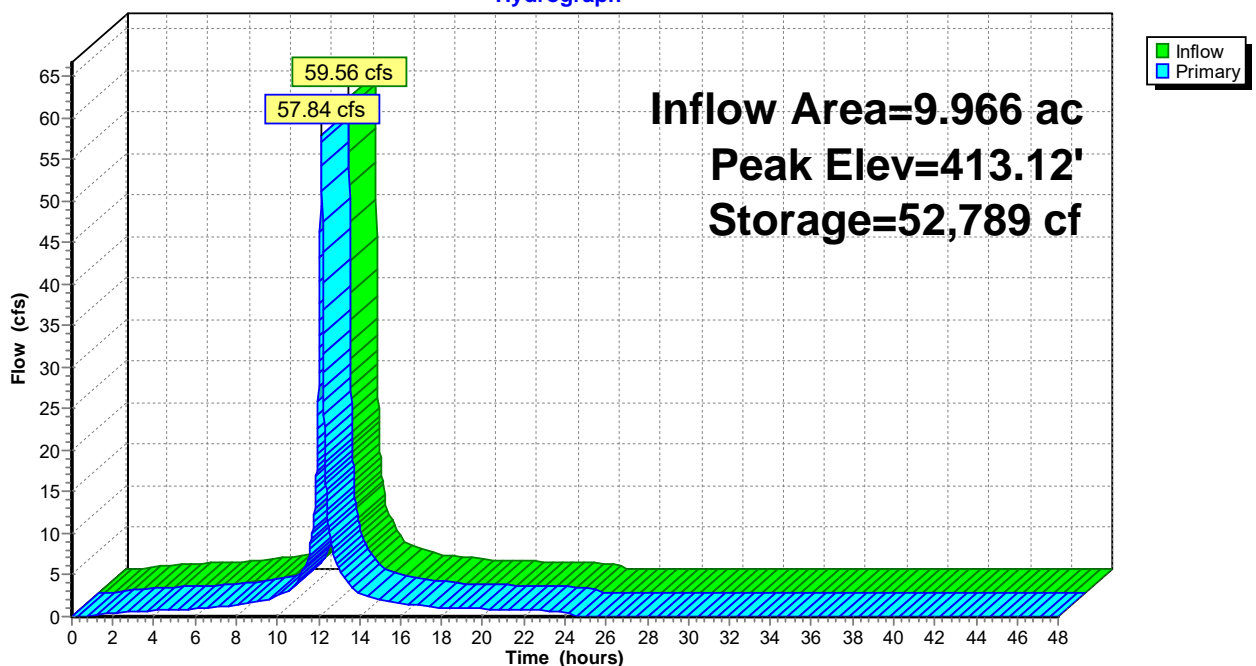
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	6,531	0	0
414.00	14,097	61,884	61,884

Device	Routing	Invert	Outlet Devices
#1	Primary	412.55'	50.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

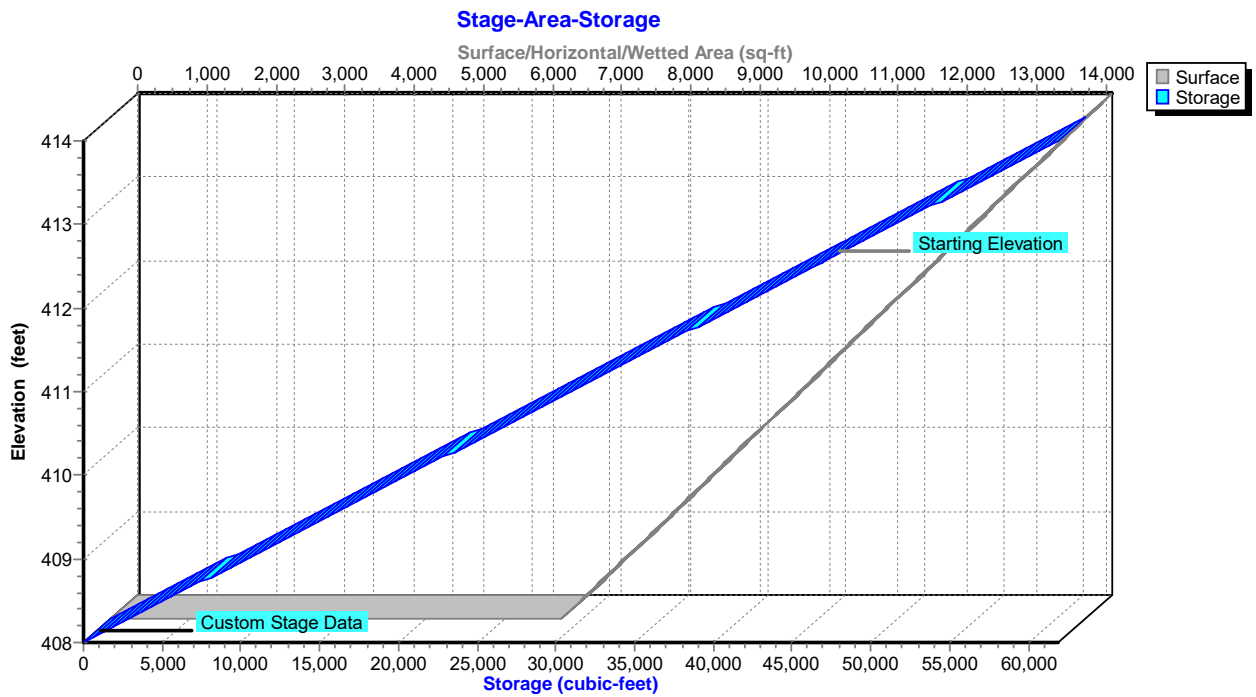
Primary OutFlow Max=57.68 cfs @ 12.14 hrs HW=413.12' (Free Discharge)
 ↑-1=Broad-Crested Rectangular Weir (Weir Controls 57.68 cfs @ 2.03 fps)

Pond 55P: FB 1G

Hydrograph



Pond 55P: FB 1G



Hydrograph for Pond 55P: FB 1G

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	46,929	412.55	0.00
1.00	0.13	46,979	412.55	0.06
2.00	0.42	47,102	412.57	0.40
3.00	0.60	47,150	412.57	0.58
4.00	0.73	47,186	412.57	0.72
5.00	0.83	47,214	412.58	0.83
6.00	0.92	47,238	412.58	0.92
7.00	1.18	47,303	412.59	1.16
8.00	1.45	47,372	412.59	1.43
9.00	1.71	47,442	412.60	1.69
10.00	2.57	47,657	412.62	2.52
11.00	4.55	47,962	412.65	4.39
12.00	31.76	50,512	412.90	27.66
13.00	5.54	48,193	412.67	5.81
14.00	2.81	47,712	412.63	2.86
15.00	1.92	47,521	412.61	1.99
16.00	1.57	47,417	412.60	1.59
17.00	1.32	47,350	412.59	1.34
18.00	1.07	47,282	412.58	1.08
19.00	0.97	47,255	412.58	0.98
20.00	0.91	47,238	412.58	0.92
21.00	0.85	47,221	412.58	0.85
22.00	0.78	47,204	412.58	0.79
23.00	0.72	47,188	412.58	0.73
24.00	0.66	47,171	412.57	0.66
25.00	0.00	46,931	412.55	0.00
26.00	0.00	46,929	412.55	0.00
27.00	0.00	46,929	412.55	0.00
28.00	0.00	46,929	412.55	0.00
29.00	0.00	46,929	412.55	0.00
30.00	0.00	46,929	412.55	0.00
31.00	0.00	46,929	412.55	0.00
32.00	0.00	46,929	412.55	0.00
33.00	0.00	46,929	412.55	0.00
34.00	0.00	46,929	412.55	0.00
35.00	0.00	46,929	412.55	0.00
36.00	0.00	46,929	412.55	0.00
37.00	0.00	46,929	412.55	0.00
38.00	0.00	46,929	412.55	0.00
39.00	0.00	46,929	412.55	0.00
40.00	0.00	46,929	412.55	0.00
41.00	0.00	46,929	412.55	0.00
42.00	0.00	46,929	412.55	0.00
43.00	0.00	46,929	412.55	0.00
44.00	0.00	46,929	412.55	0.00
45.00	0.00	46,929	412.55	0.00
46.00	0.00	46,929	412.55	0.00
47.00	0.00	46,929	412.55	0.00
48.00	0.00	46,929	412.55	0.00

Stage-Area-Storage for Pond 55P: FB 1G

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	6,531	0	413.80	13,845	59,821
408.10	6,657	1,031	413.90	13,971	60,853
408.20	6,783	2,063	414.00	14,097	61,884
408.30	6,909	3,094			
408.40	7,035	4,126			
408.50	7,162	5,157			
408.60	7,288	6,188			
408.70	7,414	7,220			
408.80	7,540	8,251			
408.90	7,666	9,283			
409.00	7,792	10,314			
409.10	7,918	11,345			
409.20	8,044	12,377			
409.30	8,170	13,408			
409.40	8,296	14,440			
409.50	8,423	15,471			
409.60	8,549	16,502			
409.70	8,675	17,534			
409.80	8,801	18,565			
409.90	8,927	19,597			
410.00	9,053	20,628			
410.10	9,179	21,659			
410.20	9,305	22,691			
410.30	9,431	23,722			
410.40	9,557	24,754			
410.50	9,684	25,785			
410.60	9,810	26,816			
410.70	9,936	27,848			
410.80	10,062	28,879			
410.90	10,188	29,911			
411.00	10,314	30,942			
411.10	10,440	31,973			
411.20	10,566	33,005			
411.30	10,692	34,036			
411.40	10,818	35,068			
411.50	10,945	36,099			
411.60	11,071	37,130			
411.70	11,197	38,162			
411.80	11,323	39,193			
411.90	11,449	40,225			
412.00	11,575	41,256			
412.10	11,701	42,287			
412.20	11,827	43,319			
412.30	11,953	44,350			
412.40	12,079	45,382			
412.50	12,206	46,413			
412.60	12,332	47,444			
412.70	12,458	48,476			
412.80	12,584	49,507			
412.90	12,710	50,539			
413.00	12,836	51,570			
413.10	12,962	52,601			
413.20	13,088	53,633			
413.30	13,214	54,664			
413.40	13,340	55,696			
413.50	13,467	56,727			
413.60	13,593	57,758			
413.70	13,719	58,790			

Summary for Pond 59P: FB 1E

Inflow Area = 0.398 ac, 82.34% Impervious, Inflow Depth = 5.45" for 25-Year event
 Inflow = 2.43 cfs @ 12.13 hrs, Volume= 0.181 af
 Outflow = 2.41 cfs @ 12.14 hrs, Volume= 0.181 af, Atten= 1%, Lag= 0.4 min
 Primary = 2.41 cfs @ 12.14 hrs, Volume= 0.181 af
 Routed to Pond 1P : Bioretention 1D

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 414.00' Surf.Area= 668 sf Storage= 2,016 cf
 Peak Elev= 414.21' @ 12.14 hrs Surf.Area= 702 sf Storage= 2,122 cf (106 cf above start)

Plug-Flow detention time= 170.6 min calculated for 0.134 af (74% of inflow)
 Center-of-Mass det. time= 1.6 min (767.7 - 766.2)

Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	3,024 cf	Custom Stage Data (Prismatic) Listed below

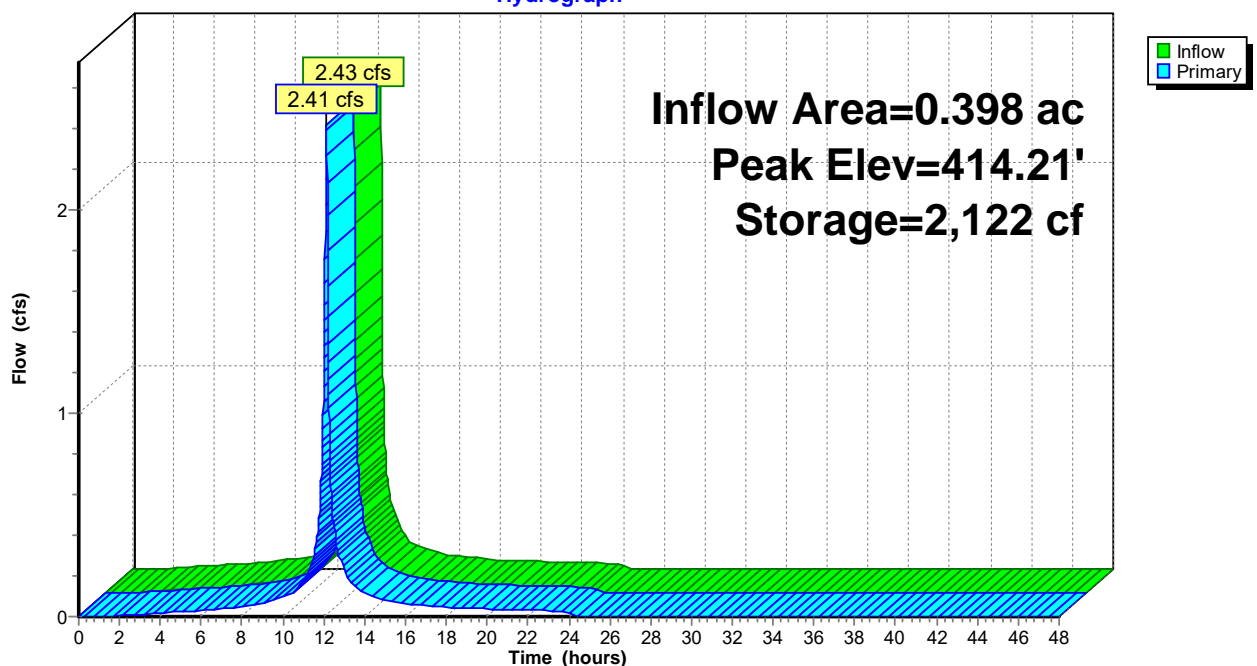
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
410.00	13	0	0
416.00	995	3,024	3,024

Device	Routing	Invert	Outlet Devices
#1	Primary	414.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

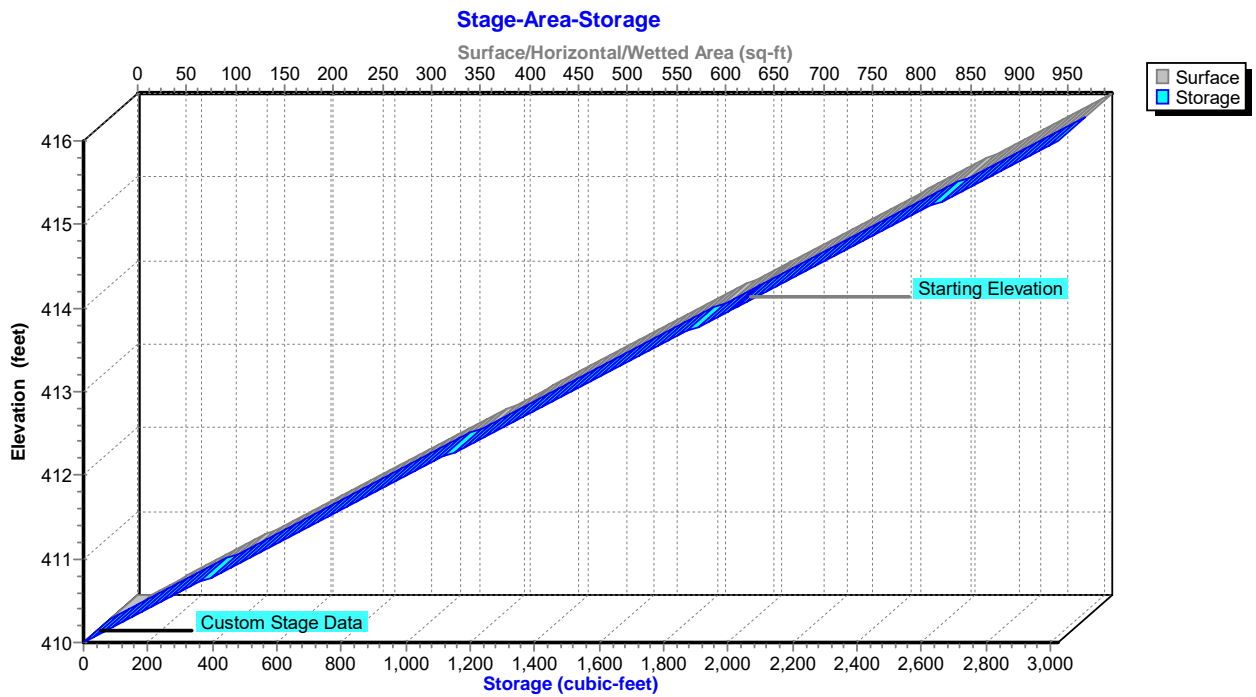
Primary OutFlow Max=2.40 cfs @ 12.14 hrs HW=414.21' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 2.40 cfs @ 1.14 fps)

Pond 59P: FB 1E

Hydrograph



Pond 59P: FB 1E



Hydrograph for Pond 59P: FB 1E

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	2,016	414.00	0.00
1.00	0.00	2,016	414.00	0.00
2.00	0.00	2,016	414.00	0.00
3.00	0.01	2,018	414.00	0.01
4.00	0.02	2,019	414.01	0.02
5.00	0.02	2,019	414.01	0.02
6.00	0.03	2,020	414.01	0.03
7.00	0.04	2,022	414.01	0.04
8.00	0.05	2,023	414.01	0.05
9.00	0.06	2,025	414.02	0.06
10.00	0.10	2,028	414.02	0.10
11.00	0.18	2,033	414.03	0.18
12.00	1.29	2,083	414.13	1.21
13.00	0.23	2,036	414.04	0.23
14.00	0.11	2,029	414.03	0.12
15.00	0.08	2,027	414.02	0.08
16.00	0.06	2,025	414.02	0.06
17.00	0.05	2,024	414.02	0.05
18.00	0.04	2,022	414.01	0.04
19.00	0.04	2,022	414.01	0.04
20.00	0.04	2,021	414.01	0.04
21.00	0.03	2,021	414.01	0.03
22.00	0.03	2,021	414.01	0.03
23.00	0.03	2,020	414.01	0.03
24.00	0.03	2,020	414.01	0.03
25.00	0.00	2,016	414.00	0.00
26.00	0.00	2,016	414.00	0.00
27.00	0.00	2,016	414.00	0.00
28.00	0.00	2,016	414.00	0.00
29.00	0.00	2,016	414.00	0.00
30.00	0.00	2,016	414.00	0.00
31.00	0.00	2,016	414.00	0.00
32.00	0.00	2,016	414.00	0.00
33.00	0.00	2,016	414.00	0.00
34.00	0.00	2,016	414.00	0.00
35.00	0.00	2,016	414.00	0.00
36.00	0.00	2,016	414.00	0.00
37.00	0.00	2,016	414.00	0.00
38.00	0.00	2,016	414.00	0.00
39.00	0.00	2,016	414.00	0.00
40.00	0.00	2,016	414.00	0.00
41.00	0.00	2,016	414.00	0.00
42.00	0.00	2,016	414.00	0.00
43.00	0.00	2,016	414.00	0.00
44.00	0.00	2,016	414.00	0.00
45.00	0.00	2,016	414.00	0.00
46.00	0.00	2,016	414.00	0.00
47.00	0.00	2,016	414.00	0.00
48.00	0.00	2,016	414.00	0.00

Stage-Area-Storage for Pond 59P: FB 1E

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
410.00	13	0	415.80	962	2,923
410.10	29	50	415.90	979	2,974
410.20	46	101	416.00	995	3,024
410.30	62	151			
410.40	78	202			
410.50	95	252			
410.60	111	302			
410.70	128	353			
410.80	144	403			
410.90	160	454			
411.00	177	504			
411.10	193	554			
411.20	209	605			
411.30	226	655			
411.40	242	706			
411.50	259	756			
411.60	275	806			
411.70	291	857			
411.80	308	907			
411.90	324	958			
412.00	340	1,008			
412.10	357	1,058			
412.20	373	1,109			
412.30	389	1,159			
412.40	406	1,210			
412.50	422	1,260			
412.60	439	1,310			
412.70	455	1,361			
412.80	471	1,411			
412.90	488	1,462			
413.00	504	1,512			
413.10	520	1,562			
413.20	537	1,613			
413.30	553	1,663			
413.40	569	1,714			
413.50	586	1,764			
413.60	602	1,814			
413.70	619	1,865			
413.80	635	1,915			
413.90	651	1,966			
414.00	668	2,016			
414.10	684	2,066			
414.20	700	2,117			
414.30	717	2,167			
414.40	733	2,218			
414.50	750	2,268			
414.60	766	2,318			
414.70	782	2,369			
414.80	799	2,419			
414.90	815	2,470			
415.00	831	2,520			
415.10	848	2,570			
415.20	864	2,621			
415.30	880	2,671			
415.40	897	2,722			
415.50	913	2,772			
415.60	930	2,822			
415.70	946	2,873			

Summary for Pond 60P: FB 1D

Inflow Area = 3.529 ac, 63.56% Impervious, Inflow Depth = 5.00" for 25-Year event
 Inflow = 20.65 cfs @ 12.13 hrs, Volume= 1.469 af
 Outflow = 20.53 cfs @ 12.14 hrs, Volume= 1.469 af, Atten= 1%, Lag= 0.4 min
 Primary = 20.53 cfs @ 12.14 hrs, Volume= 1.469 af
 Routed to Pond 1P : Bioretention 1D

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 414.90' Surf.Area= 3,034 sf Storage= 8,598 cf
 Peak Elev= 415.31' @ 12.14 hrs Surf.Area= 3,279 sf Storage= 9,509 cf (912 cf above start)

Plug-Flow detention time= 107.6 min calculated for 1.272 af (87% of inflow)
 Center-of-Mass det. time= 1.6 min (786.9 - 785.4)

Volume	Invert	Avail.Storage	Storage Description
#1	411.00'	11,023 cf	Custom Stage Data (Prismatic) Listed below

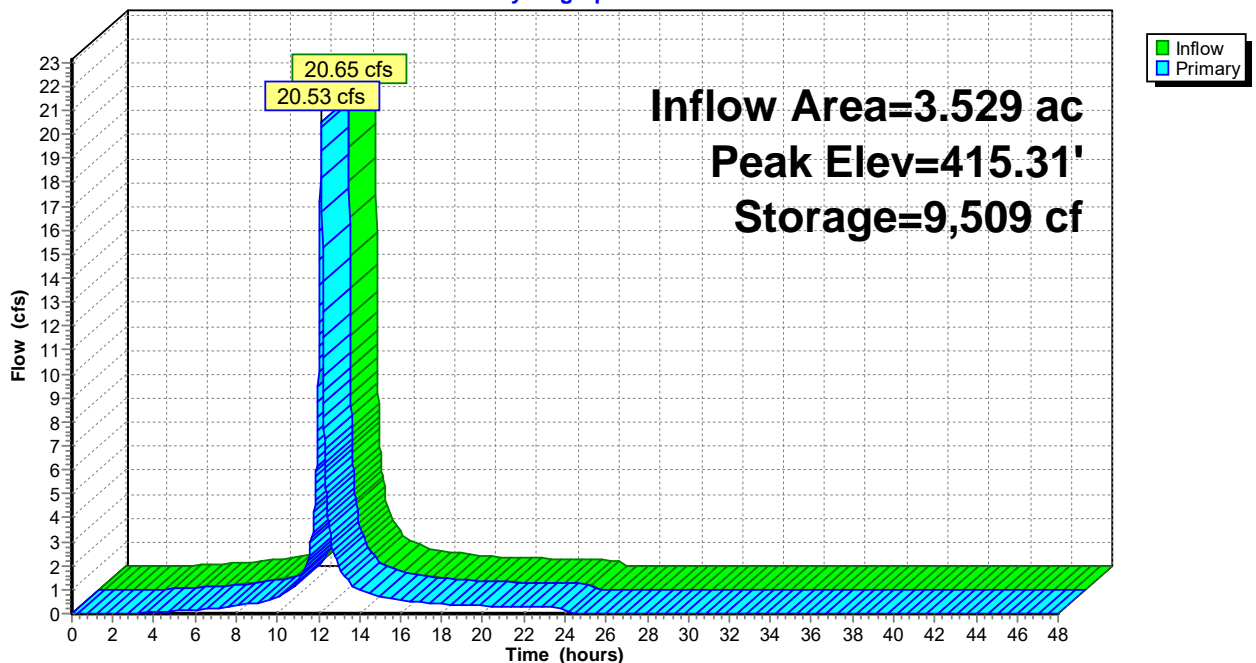
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
411.00	723	0	0
416.00	3,686	11,023	11,023

Device	Routing	Invert	Outlet Devices
#1	Primary	414.90'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

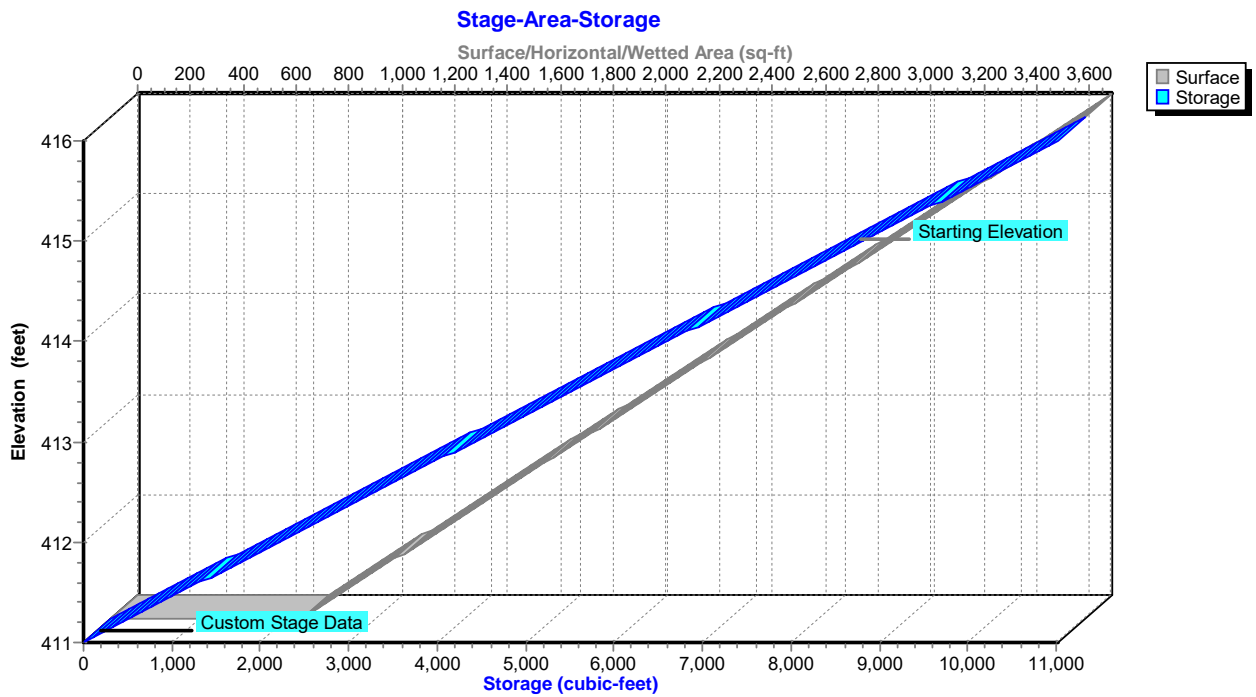
Primary OutFlow Max=20.45 cfs @ 12.14 hrs HW=415.31' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 20.45 cfs @ 1.65 fps)

Pond 60P: FB 1D

Hydrograph



Pond 60P: FB 1D



Hydrograph for Pond 60P: FB 1D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,598	414.90	0.00
1.00	0.00	8,598	414.90	0.00
2.00	0.00	8,598	414.90	0.00
3.00	0.01	8,599	414.90	0.01
4.00	0.06	8,606	414.90	0.06
5.00	0.11	8,612	414.91	0.11
6.00	0.16	8,618	414.91	0.16
7.00	0.24	8,629	414.91	0.24
8.00	0.34	8,641	414.92	0.33
9.00	0.44	8,655	414.93	0.44
10.00	0.72	8,692	414.94	0.71
11.00	1.39	8,746	414.97	1.36
12.00	10.75	9,175	415.16	10.14
13.00	1.96	8,792	414.99	2.01
14.00	1.00	8,720	414.96	1.01
15.00	0.68	8,689	414.94	0.70
16.00	0.56	8,672	414.93	0.56
17.00	0.47	8,660	414.93	0.47
18.00	0.38	8,648	414.92	0.38
19.00	0.35	8,643	414.92	0.35
20.00	0.32	8,641	414.92	0.33
21.00	0.30	8,638	414.92	0.30
22.00	0.28	8,635	414.92	0.28
23.00	0.26	8,632	414.92	0.26
24.00	0.24	8,629	414.91	0.24
25.00	0.00	8,598	414.90	0.00
26.00	0.00	8,598	414.90	0.00
27.00	0.00	8,598	414.90	0.00
28.00	0.00	8,598	414.90	0.00
29.00	0.00	8,598	414.90	0.00
30.00	0.00	8,598	414.90	0.00
31.00	0.00	8,598	414.90	0.00
32.00	0.00	8,598	414.90	0.00
33.00	0.00	8,598	414.90	0.00
34.00	0.00	8,598	414.90	0.00
35.00	0.00	8,598	414.90	0.00
36.00	0.00	8,598	414.90	0.00
37.00	0.00	8,598	414.90	0.00
38.00	0.00	8,598	414.90	0.00
39.00	0.00	8,598	414.90	0.00
40.00	0.00	8,598	414.90	0.00
41.00	0.00	8,598	414.90	0.00
42.00	0.00	8,598	414.90	0.00
43.00	0.00	8,598	414.90	0.00
44.00	0.00	8,598	414.90	0.00
45.00	0.00	8,598	414.90	0.00
46.00	0.00	8,598	414.90	0.00
47.00	0.00	8,598	414.90	0.00
48.00	0.00	8,598	414.90	0.00

Stage-Area-Storage for Pond 60P: FB 1D

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
411.00	723	0	413.90	2,442	6,393
411.05	753	110	413.95	2,471	6,503
411.10	782	220	414.00	2,501	6,614
411.15	812	331	414.05	2,530	6,724
411.20	842	441	414.10	2,560	6,834
411.25	871	551	414.15	2,590	6,944
411.30	901	661	414.20	2,619	7,054
411.35	930	772	414.25	2,649	7,165
411.40	960	882	414.30	2,679	7,275
411.45	990	992	414.35	2,708	7,385
411.50	1,019	1,102	414.40	2,738	7,495
411.55	1,049	1,212	414.45	2,767	7,606
411.60	1,079	1,323	414.50	2,797	7,716
411.65	1,108	1,433	414.55	2,827	7,826
411.70	1,138	1,543	414.60	2,856	7,936
411.75	1,167	1,653	414.65	2,886	8,046
411.80	1,197	1,764	414.70	2,916	8,157
411.85	1,227	1,874	414.75	2,945	8,267
411.90	1,256	1,984	414.80	2,975	8,377
411.95	1,286	2,094	414.85	3,005	8,487
412.00	1,316	2,205	414.90	3,034	8,598
412.05	1,345	2,315	414.95	3,064	8,708
412.10	1,375	2,425	415.00	3,093	8,818
412.15	1,404	2,535	415.05	3,123	8,928
412.20	1,434	2,645	415.10	3,153	9,038
412.25	1,464	2,756	415.15	3,182	9,149
412.30	1,493	2,866	415.20	3,212	9,259
412.35	1,523	2,976	415.25	3,242	9,369
412.40	1,553	3,086	415.30	3,271	9,479
412.45	1,582	3,197	415.35	3,301	9,590
412.50	1,612	3,307	415.40	3,330	9,700
412.55	1,642	3,417	415.45	3,360	9,810
412.60	1,671	3,527	415.50	3,390	9,920
412.65	1,701	3,637	415.55	3,419	10,030
412.70	1,730	3,748	415.60	3,449	10,141
412.75	1,760	3,858	415.65	3,479	10,251
412.80	1,790	3,968	415.70	3,508	10,361
412.85	1,819	4,078	415.75	3,538	10,471
412.90	1,849	4,189	415.80	3,567	10,582
412.95	1,879	4,299	415.85	3,597	10,692
413.00	1,908	4,409	415.90	3,627	10,802
413.05	1,938	4,519	415.95	3,656	10,912
413.10	1,967	4,629	416.00	3,686	11,023
413.15	1,997	4,740			
413.20	2,027	4,850			
413.25	2,056	4,960			
413.30	2,086	5,070			
413.35	2,116	5,181			
413.40	2,145	5,291			
413.45	2,175	5,401			
413.50	2,205	5,511			
413.55	2,234	5,621			
413.60	2,264	5,732			
413.65	2,293	5,842			
413.70	2,323	5,952			
413.75	2,353	6,062			
413.80	2,382	6,173			
413.85	2,412	6,283			

Summary for Pond 63P: Det Pond 1K

Inflow Area = 17.176 ac, 66.33% Impervious, Inflow Depth > 2.27" for 25-Year event
 Inflow = 9.26 cfs @ 12.60 hrs, Volume= 3.249 af
 Outflow = 6.86 cfs @ 13.58 hrs, Volume= 3.242 af, Atten= 26%, Lag= 59.0 min
 Primary = 6.86 cfs @ 13.58 hrs, Volume= 3.242 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 30L : DP-2

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 410.13' @ 13.58 hrs Surf.Area= 11,035 sf Storage= 20,152 cf

Plug-Flow detention time= 83.0 min calculated for 3.241 af (100% of inflow)
 Center-of-Mass det. time= 80.0 min (1,075.5 - 995.5)

Volume	Invert	Avail.Storage	Storage Description
#1	407.50'	82,118 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.50	4,315	0	0
414.00	20,952	82,118	82,118

Device	Routing	Invert	Outlet Devices
#1	Primary	407.50'	24.0" Round Culvert L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.50' / 406.00' S= 0.0037 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	407.50'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	408.50'	24.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	409.80'	17.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	413.00'	10.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=6.86 cfs @ 13.58 hrs HW=410.13' (Free Discharge)

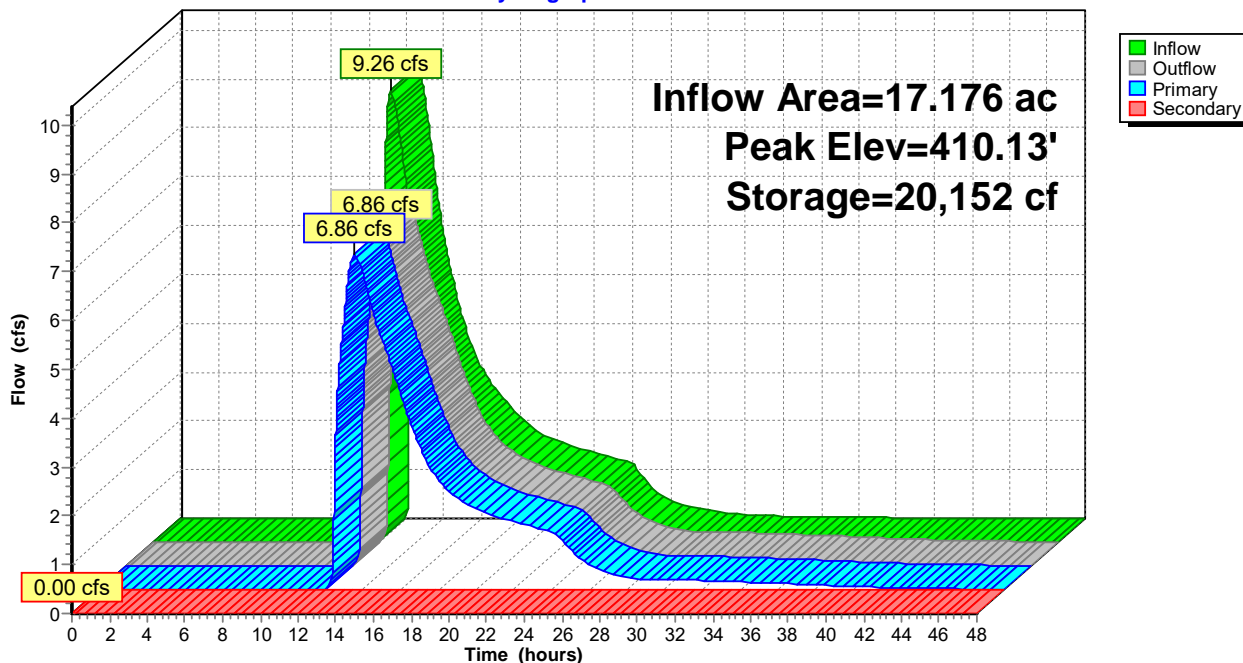
- ↑ 1=Culvert (Passes 6.86 cfs of 15.08 cfs potential flow)
- ↑ 2=Orifice/Grate (Orifice Controls 0.37 cfs @ 7.61 fps)
- ↑ 3=Orifice/Grate (Orifice Controls 5.64 cfs @ 5.64 fps)
- ↑ 4=Orifice/Grate (Orifice Controls 0.85 cfs @ 1.83 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=407.50' (Free Discharge)

- ↑ 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

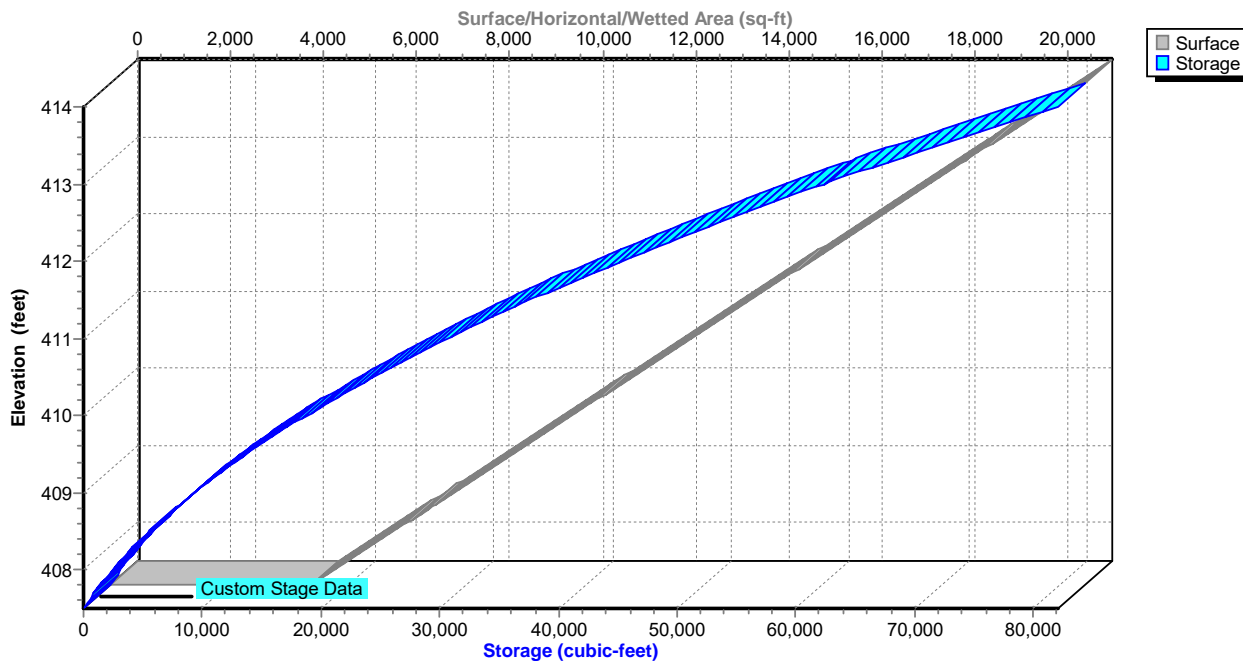
Pond 63P: Det Pond 1K

Hydrograph



Pond 63P: Det Pond 1K

Stage-Area-Storage



Hydrograph for Pond 63P: Det Pond 1K

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	407.50	0.00	0.00	0.00
1.00	0.00	0	407.50	0.00	0.00	0.00
2.00	0.00	0	407.50	0.00	0.00	0.00
3.00	0.00	0	407.50	0.00	0.00	0.00
4.00	0.00	0	407.50	0.00	0.00	0.00
5.00	0.00	0	407.50	0.00	0.00	0.00
6.00	0.00	0	407.50	0.00	0.00	0.00
7.00	0.00	0	407.50	0.00	0.00	0.00
8.00	0.00	0	407.50	0.00	0.00	0.00
9.00	0.00	0	407.50	0.00	0.00	0.00
10.00	0.00	0	407.50	0.00	0.00	0.00
11.00	0.00	0	407.50	0.00	0.00	0.00
12.00	0.02	1	407.50	0.00	0.00	0.00
13.00	8.60	17,400	409.87	5.52	5.52	0.00
14.00	5.76	19,470	410.06	6.50	6.50	0.00
15.00	4.10	16,216	409.75	5.15	5.15	0.00
16.00	3.09	12,379	409.35	4.02	4.02	0.00
17.00	2.53	9,980	409.08	2.95	2.95	0.00
18.00	2.09	9,008	408.96	2.26	2.26	0.00
19.00	1.78	8,535	408.90	1.88	1.88	0.00
20.00	1.60	8,247	408.86	1.66	1.66	0.00
21.00	1.46	8,047	408.84	1.51	1.51	0.00
22.00	1.35	7,881	408.81	1.39	1.39	0.00
23.00	1.25	7,734	408.79	1.29	1.29	0.00
24.00	1.15	7,590	408.78	1.19	1.19	0.00
25.00	0.63	7,019	408.70	0.82	0.82	0.00
26.00	0.37	6,432	408.62	0.50	0.50	0.00
27.00	0.24	6,030	408.56	0.34	0.34	0.00
28.00	0.17	5,729	408.52	0.25	0.25	0.00
29.00	0.11	5,409	408.47	0.22	0.22	0.00
30.00	0.08	4,993	408.41	0.21	0.21	0.00
31.00	0.06	4,517	408.34	0.20	0.20	0.00
32.00	0.05	4,025	408.26	0.19	0.19	0.00
33.00	0.04	3,536	408.18	0.18	0.18	0.00
34.00	0.03	3,062	408.10	0.16	0.16	0.00
35.00	0.03	2,612	408.02	0.15	0.15	0.00
36.00	0.02	2,195	407.95	0.13	0.13	0.00
37.00	0.02	1,816	407.88	0.12	0.12	0.00
38.00	0.02	1,481	407.81	0.10	0.10	0.00
39.00	0.01	1,196	407.76	0.09	0.09	0.00
40.00	0.01	965	407.71	0.07	0.07	0.00
41.00	0.01	787	407.67	0.05	0.05	0.00
42.00	0.01	656	407.65	0.04	0.04	0.00
43.00	0.01	560	407.62	0.03	0.03	0.00
44.00	0.01	485	407.61	0.02	0.02	0.00
45.00	0.00	425	407.60	0.02	0.02	0.00
46.00	0.00	377	407.58	0.02	0.02	0.00
47.00	0.00	338	407.58	0.01	0.01	0.00
48.00	0.00	307	407.57	0.01	0.01	0.00

Stage-Area-Storage for Pond 63P: Det Pond 1K

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.50	4,315	0	413.30	19,160	68,078
407.60	4,571	444	413.40	19,416	70,007
407.70	4,827	914	413.50	19,672	71,962
407.80	5,083	1,410	413.60	19,928	73,942
407.90	5,339	1,931	413.70	20,184	75,947
408.00	5,595	2,477	413.80	20,440	77,979
408.10	5,851	3,050	413.90	20,696	80,035
408.20	6,107	3,648	414.00	20,952	82,118
408.30	6,363	4,271			
408.40	6,619	4,920			
408.50	6,875	5,595			
408.60	7,130	6,295			
408.70	7,386	7,021			
408.80	7,642	7,772			
408.90	7,898	8,549			
409.00	8,154	9,352			
409.10	8,410	10,180			
409.20	8,666	11,034			
409.30	8,922	11,913			
409.40	9,178	12,818			
409.50	9,434	13,749			
409.60	9,690	14,705			
409.70	9,946	15,687			
409.80	10,202	16,694			
409.90	10,458	17,727			
410.00	10,714	18,786			
410.10	10,970	19,870			
410.20	11,226	20,980			
410.30	11,482	22,115			
410.40	11,738	23,276			
410.50	11,994	24,463			
410.60	12,250	25,675			
410.70	12,506	26,913			
410.80	12,761	28,176			
410.90	13,017	29,465			
411.00	13,273	30,780			
411.10	13,529	32,120			
411.20	13,785	33,486			
411.30	14,041	34,877			
411.40	14,297	36,294			
411.50	14,553	37,736			
411.60	14,809	39,204			
411.70	15,065	40,698			
411.80	15,321	42,217			
411.90	15,577	43,762			
412.00	15,833	45,333			
412.10	16,089	46,929			
412.20	16,345	48,551			
412.30	16,601	50,198			
412.40	16,857	51,871			
412.50	17,113	53,569			
412.60	17,369	55,293			
412.70	17,625	57,043			
412.80	17,881	58,818			
412.90	18,137	60,619			
413.00	18,392	62,446			
413.10	18,648	64,298			
413.20	18,904	66,175			

Summary for Pond B4B: Bioretention 4A

Inflow Area = 2.400 ac, 34.61% Impervious, Inflow Depth = 2.74" for 25-Year event
 Inflow = 8.37 cfs @ 12.13 hrs, Volume= 0.549 af
 Outflow = 2.21 cfs @ 12.38 hrs, Volume= 0.348 af, Atten= 74%, Lag= 14.5 min
 Primary = 2.21 cfs @ 12.38 hrs, Volume= 0.348 af
 Routed to Link 32L : DP-4

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 440.63' @ 12.38 hrs Surf.Area= 6,982 sf Storage= 9,649 cf

Plug-Flow detention time= 210.8 min calculated for 0.348 af (63% of inflow)
 Center-of-Mass det. time= 92.2 min (943.4 - 851.2)

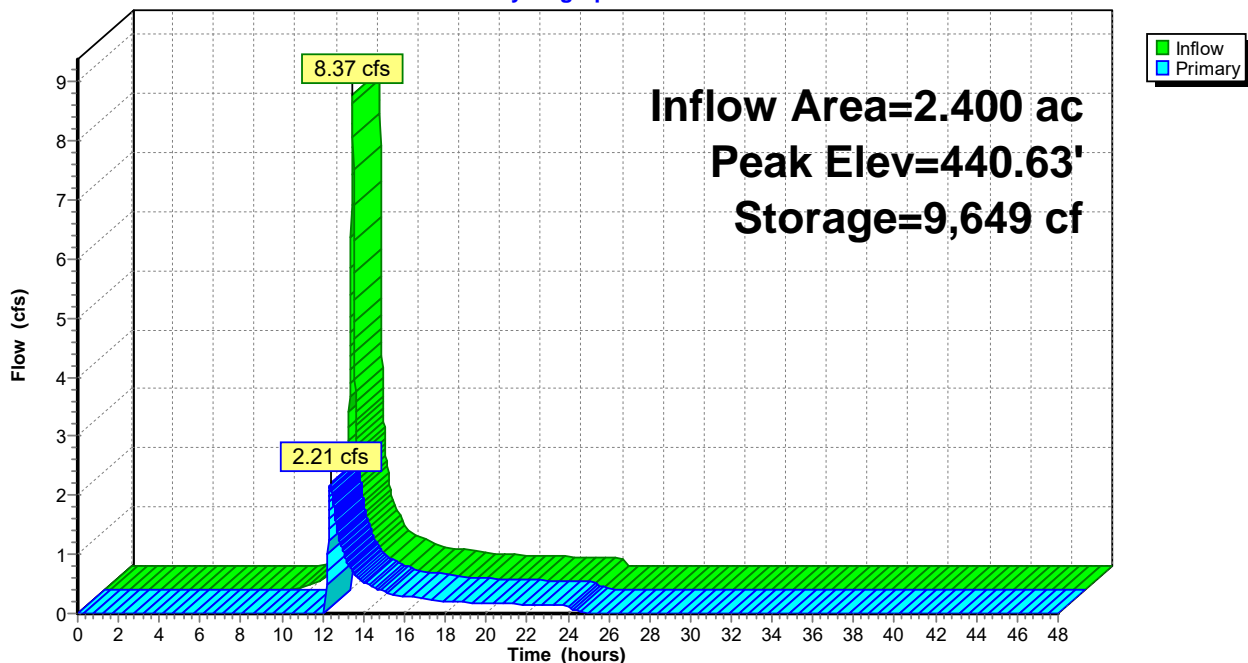
Volume	Invert	Avail.Storage	Storage Description	
#1	436.17'	12,376 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
436.17	4,171	0.0	0	0
436.83	4,171	40.0	1,101	1,101
439.50	4,171	20.0	2,227	3,328
441.00	7,892	100.0	9,047	12,376

Device	Routing	Invert	Outlet Devices
#1	Primary	436.17'	18.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 436.17' / 435.57' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	440.50'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.18 cfs @ 12.38 hrs HW=440.63' (Free Discharge)
 ↑1=Culvert (Passes 2.18 cfs of 16.40 cfs potential flow)
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 2.18 cfs @ 1.02 fps)

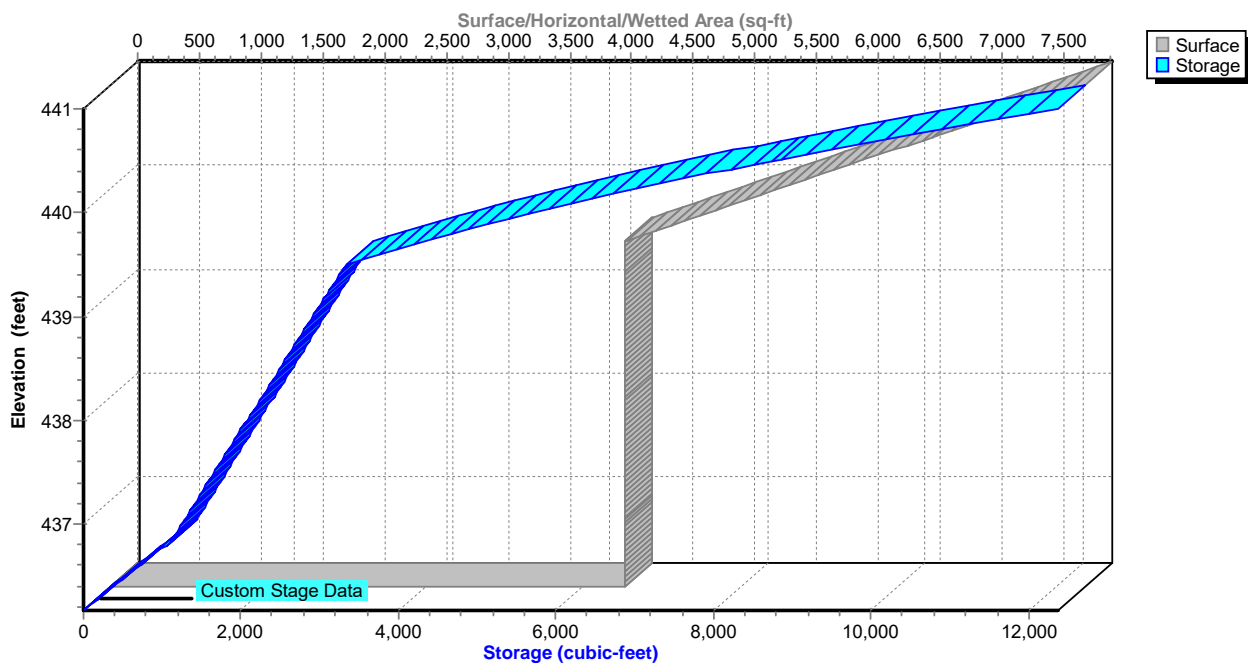
Pond B4B: Bioretention 4A

Hydrograph



Pond B4B: Bioretention 4A

Stage-Area-Storage



Hydrograph for Pond B4B: Bioretention 4A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	436.17	0.00
1.00	0.00	0	436.17	0.00
2.00	0.00	0	436.17	0.00
3.00	0.00	0	436.17	0.00
4.00	0.00	0	436.17	0.00
5.00	0.00	0	436.17	0.00
6.00	0.00	0	436.17	0.00
7.00	0.00	0	436.17	0.00
8.00	0.00	0	436.17	0.00
9.00	0.01	4	436.17	0.00
10.00	0.07	132	436.25	0.00
11.00	0.26	643	436.56	0.00
12.00	3.74	3,822	439.61	0.00
13.00	0.95	9,281	440.58	1.04
14.00	0.50	9,068	440.55	0.53
15.00	0.35	8,990	440.54	0.37
16.00	0.29	8,953	440.53	0.30
17.00	0.25	8,930	440.53	0.25
18.00	0.20	8,907	440.53	0.21
19.00	0.18	8,897	440.52	0.19
20.00	0.17	8,891	440.52	0.18
21.00	0.16	8,886	440.52	0.16
22.00	0.15	8,880	440.52	0.15
23.00	0.14	8,874	440.52	0.14
24.00	0.13	8,868	440.52	0.13
25.00	0.00	8,747	440.50	0.01
26.00	0.00	8,740	440.50	0.00
27.00	0.00	8,740	440.50	0.00
28.00	0.00	8,740	440.50	0.00
29.00	0.00	8,740	440.50	0.00
30.00	0.00	8,740	440.50	0.00
31.00	0.00	8,740	440.50	0.00
32.00	0.00	8,740	440.50	0.00
33.00	0.00	8,740	440.50	0.00
34.00	0.00	8,740	440.50	0.00
35.00	0.00	8,740	440.50	0.00
36.00	0.00	8,740	440.50	0.00
37.00	0.00	8,740	440.50	0.00
38.00	0.00	8,740	440.50	0.00
39.00	0.00	8,740	440.50	0.00
40.00	0.00	8,740	440.50	0.00
41.00	0.00	8,740	440.50	0.00
42.00	0.00	8,740	440.50	0.00
43.00	0.00	8,740	440.50	0.00
44.00	0.00	8,740	440.50	0.00
45.00	0.00	8,740	440.50	0.00
46.00	0.00	8,740	440.50	0.00
47.00	0.00	8,740	440.50	0.00
48.00	0.00	8,740	440.50	0.00

Stage-Area-Storage for Pond B4B: Bioretention 4A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
436.17	4,171	0	439.07	4,171	2,970
436.22	4,171	83	439.12	4,171	3,011
436.27	4,171	167	439.17	4,171	3,053
436.32	4,171	250	439.22	4,171	3,095
436.37	4,171	334	439.27	4,171	3,137
436.42	4,171	417	439.32	4,171	3,178
436.47	4,171	501	439.37	4,171	3,220
436.52	4,171	584	439.42	4,171	3,262
436.57	4,171	667	439.47	4,171	3,303
436.62	4,171	751	439.52	4,221	3,412
436.67	4,171	834	439.57	4,345	3,627
436.72	4,171	918	439.62	4,469	3,847
436.77	4,171	1,001	439.67	4,593	4,073
436.82	4,171	1,084	439.72	4,717	4,306
436.87	4,171	1,135	439.77	4,841	4,545
436.92	4,171	1,176	439.82	4,965	4,790
436.97	4,171	1,218	439.87	5,089	5,042
437.02	4,171	1,260	439.92	5,213	5,299
437.07	4,171	1,301	439.97	5,337	5,563
437.12	4,171	1,343	440.02	5,461	5,833
437.17	4,171	1,385	440.07	5,585	6,109
437.22	4,171	1,426	440.12	5,709	6,391
437.27	4,171	1,468	440.17	5,833	6,680
437.32	4,171	1,510	440.22	5,957	6,975
437.37	4,171	1,552	440.27	6,081	7,276
437.42	4,171	1,593	440.32	6,205	7,583
437.47	4,171	1,635	440.37	6,329	7,896
437.52	4,171	1,677	440.42	6,453	8,216
437.57	4,171	1,718	440.47	6,577	8,541
437.62	4,171	1,760	440.52	6,701	8,873
437.67	4,171	1,802	440.57	6,825	9,211
437.72	4,171	1,844	440.62	6,949	9,556
437.77	4,171	1,885	440.67	7,073	9,906
437.82	4,171	1,927	440.72	7,197	10,263
437.87	4,171	1,969	440.77	7,321	10,626
437.92	4,171	2,010	440.82	7,445	10,995
437.97	4,171	2,052	440.87	7,570	11,371
438.02	4,171	2,094	440.92	7,694	11,752
438.07	4,171	2,136	440.97	7,818	12,140
438.12	4,171	2,177			
438.17	4,171	2,219			
438.22	4,171	2,261			
438.27	4,171	2,302			
438.32	4,171	2,344			
438.37	4,171	2,386			
438.42	4,171	2,428			
438.47	4,171	2,469			
438.52	4,171	2,511			
438.57	4,171	2,553			
438.62	4,171	2,594			
438.67	4,171	2,636			
438.72	4,171	2,678			
438.77	4,171	2,719			
438.82	4,171	2,761			
438.87	4,171	2,803			
438.92	4,171	2,845			
438.97	4,171	2,886			
439.02	4,171	2,928			

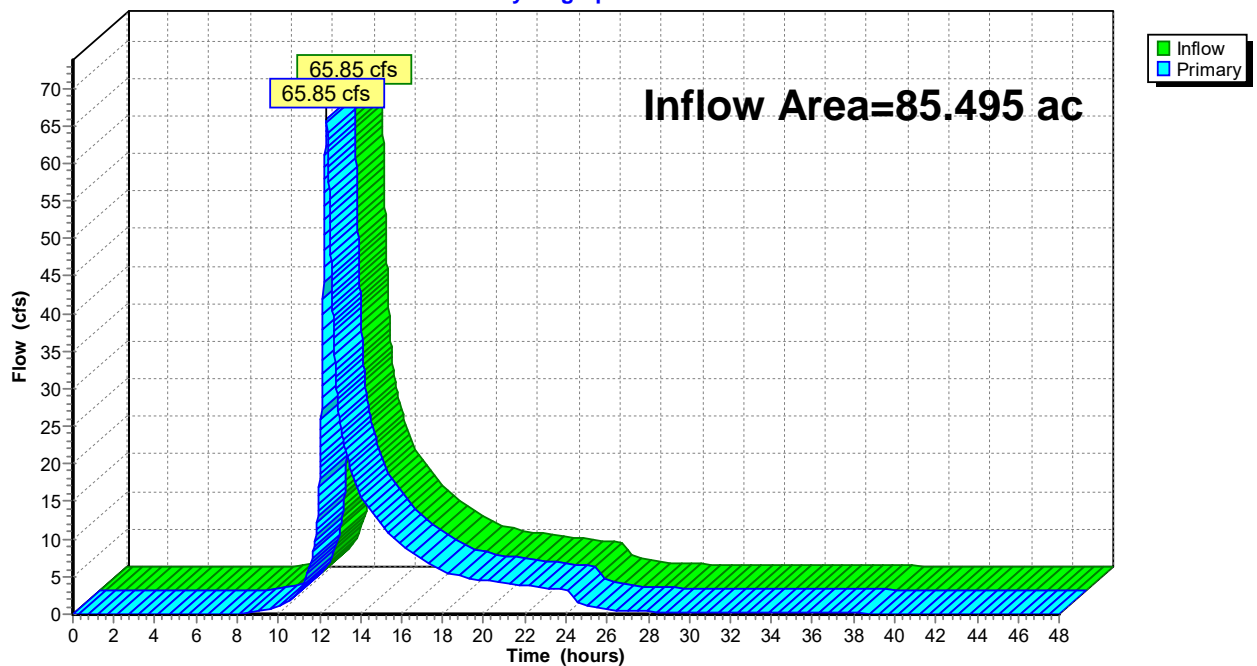
Summary for Link 29L: DP-1

Inflow Area = 85.495 ac, 51.65% Impervious, Inflow Depth > 1.65" for 25-Year event
Inflow = 65.85 cfs @ 12.35 hrs, Volume= 11.753 af
Primary = 65.85 cfs @ 12.35 hrs, Volume= 11.753 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 29L: DP-1

Hydrograph



Hydrograph for Link 29L: DP-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.29	0.00	0.29
0.50	0.00	0.00	0.00	29.50	0.28	0.00	0.28
1.00	0.00	0.00	0.00	30.00	0.27	0.00	0.27
1.50	0.00	0.00	0.00	30.50	0.26	0.00	0.26
2.00	0.00	0.00	0.00	31.00	0.25	0.00	0.25
2.50	0.00	0.00	0.00	31.50	0.24	0.00	0.24
3.00	0.00	0.00	0.00	32.00	0.23	0.00	0.23
3.50	0.00	0.00	0.00	32.50	0.23	0.00	0.23
4.00	0.00	0.00	0.00	33.00	0.22	0.00	0.22
4.50	0.00	0.00	0.00	33.50	0.21	0.00	0.21
5.00	0.00	0.00	0.00	34.00	0.20	0.00	0.20
5.50	0.00	0.00	0.00	34.50	0.19	0.00	0.19
6.00	0.00	0.00	0.00	35.00	0.18	0.00	0.18
6.50	0.00	0.00	0.00	35.50	0.17	0.00	0.17
7.00	0.00	0.00	0.00	36.00	0.16	0.00	0.16
7.50	0.00	0.00	0.00	36.50	0.15	0.00	0.15
8.00	0.01	0.00	0.01	37.00	0.14	0.00	0.14
8.50	0.16	0.00	0.16	37.50	0.13	0.00	0.13
9.00	0.38	0.00	0.38	38.00	0.12	0.00	0.12
9.50	0.68	0.00	0.68	38.50	0.11	0.00	0.11
10.00	1.15	0.00	1.15	39.00	0.10	0.00	0.10
10.50	1.79	0.00	1.79	39.50	0.09	0.00	0.09
11.00	3.02	0.00	3.02	40.00	0.08	0.00	0.08
11.50	5.93	0.00	5.93	40.50	0.07	0.00	0.07
12.00	17.28	0.00	17.28	41.00	0.07	0.00	0.07
12.50	54.23	0.00	54.23	41.50	0.06	0.00	0.06
13.00	25.72	0.00	25.72	42.00	0.05	0.00	0.05
13.50	19.57	0.00	19.57	42.50	0.05	0.00	0.05
14.00	15.81	0.00	15.81	43.00	0.04	0.00	0.04
14.50	13.66	0.00	13.66	43.50	0.04	0.00	0.04
15.00	11.87	0.00	11.87	44.00	0.04	0.00	0.04
15.50	10.29	0.00	10.29	44.50	0.03	0.00	0.03
16.00	9.19	0.00	9.19	45.00	0.03	0.00	0.03
16.50	8.19	0.00	8.19	45.50	0.03	0.00	0.03
17.00	7.29	0.00	7.29	46.00	0.03	0.00	0.03
17.50	6.50	0.00	6.50	46.50	0.03	0.00	0.03
18.00	5.81	0.00	5.81	47.00	0.02	0.00	0.02
18.50	5.27	0.00	5.27	47.50	0.02	0.00	0.02
19.00	4.97	0.00	4.97	48.00	0.02	0.00	0.02
19.50	4.72	0.00	4.72				
20.00	4.51	0.00	4.51				
20.50	4.33	0.00	4.33				
21.00	4.16	0.00	4.16				
21.50	3.99	0.00	3.99				
22.00	3.84	0.00	3.84				
22.50	3.69	0.00	3.69				
23.00	3.54	0.00	3.54				
23.50	3.40	0.00	3.40				
24.00	3.25	0.00	3.25				
24.50	1.64	0.00	1.64				
25.00	1.08	0.00	1.08				
25.50	0.84	0.00	0.84				
26.00	0.67	0.00	0.67				
26.50	0.55	0.00	0.55				
27.00	0.47	0.00	0.47				
27.50	0.39	0.00	0.39				
28.00	0.35	0.00	0.35				
28.50	0.31	0.00	0.31				

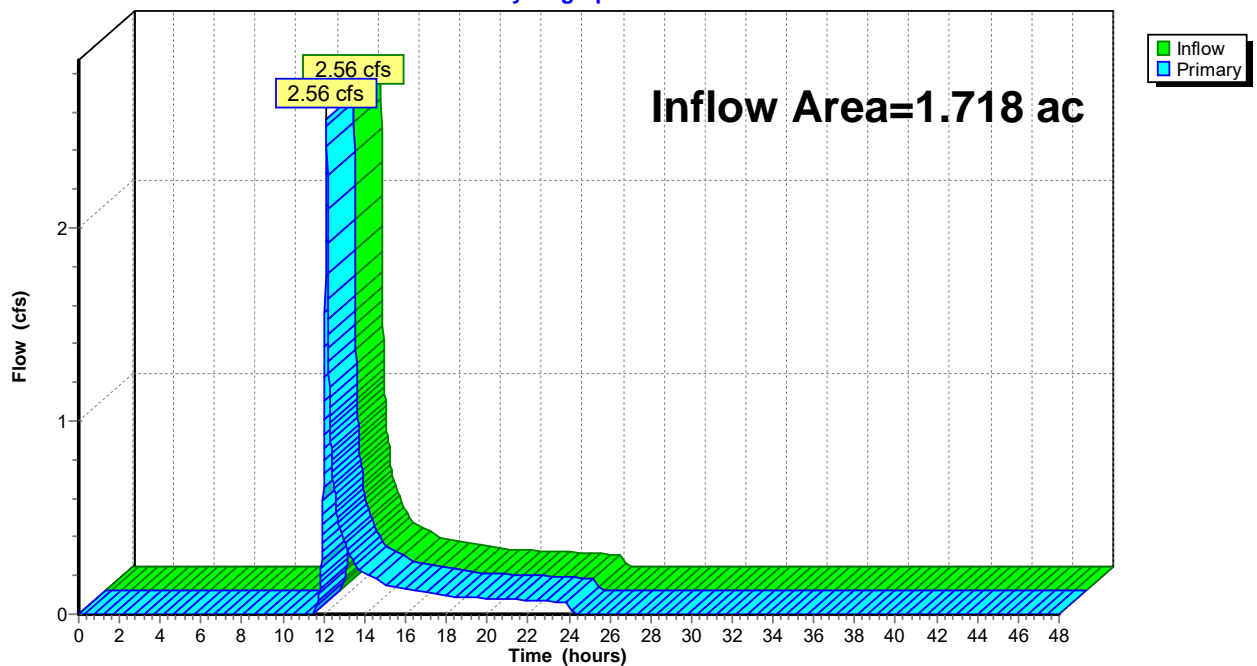
Summary for Link 30L: DP-2

Inflow Area = 1.718 ac, 0.00% Impervious, Inflow Depth = 1.31" for 25-Year event
Inflow = 2.56 cfs @ 12.14 hrs, Volume= 0.188 af
Primary = 2.56 cfs @ 12.14 hrs, Volume= 0.188 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 30L: DP-2

Hydrograph



Hydrograph for Link 30L: DP-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.79	0.00	0.79	41.00	0.00	0.00	0.00
12.50	0.65	0.00	0.65	41.50	0.00	0.00	0.00
13.00	0.39	0.00	0.39	42.00	0.00	0.00	0.00
13.50	0.26	0.00	0.26	42.50	0.00	0.00	0.00
14.00	0.21	0.00	0.21	43.00	0.00	0.00	0.00
14.50	0.19	0.00	0.19	43.50	0.00	0.00	0.00
15.00	0.15	0.00	0.15	44.00	0.00	0.00	0.00
15.50	0.14	0.00	0.14	44.50	0.00	0.00	0.00
16.00	0.13	0.00	0.13	45.00	0.00	0.00	0.00
16.50	0.12	0.00	0.12	45.50	0.00	0.00	0.00
17.00	0.11	0.00	0.11	46.00	0.00	0.00	0.00
17.50	0.10	0.00	0.10	46.50	0.00	0.00	0.00
18.00	0.09	0.00	0.09	47.00	0.00	0.00	0.00
18.50	0.09	0.00	0.09	47.50	0.00	0.00	0.00
19.00	0.09	0.00	0.09	48.00	0.00	0.00	0.00
19.50	0.08	0.00	0.08				
20.00	0.08	0.00	0.08				
20.50	0.08	0.00	0.08				
21.00	0.08	0.00	0.08				
21.50	0.07	0.00	0.07				
22.00	0.07	0.00	0.07				
22.50	0.07	0.00	0.07				
23.00	0.07	0.00	0.07				
23.50	0.06	0.00	0.06				
24.00	0.06	0.00	0.06				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

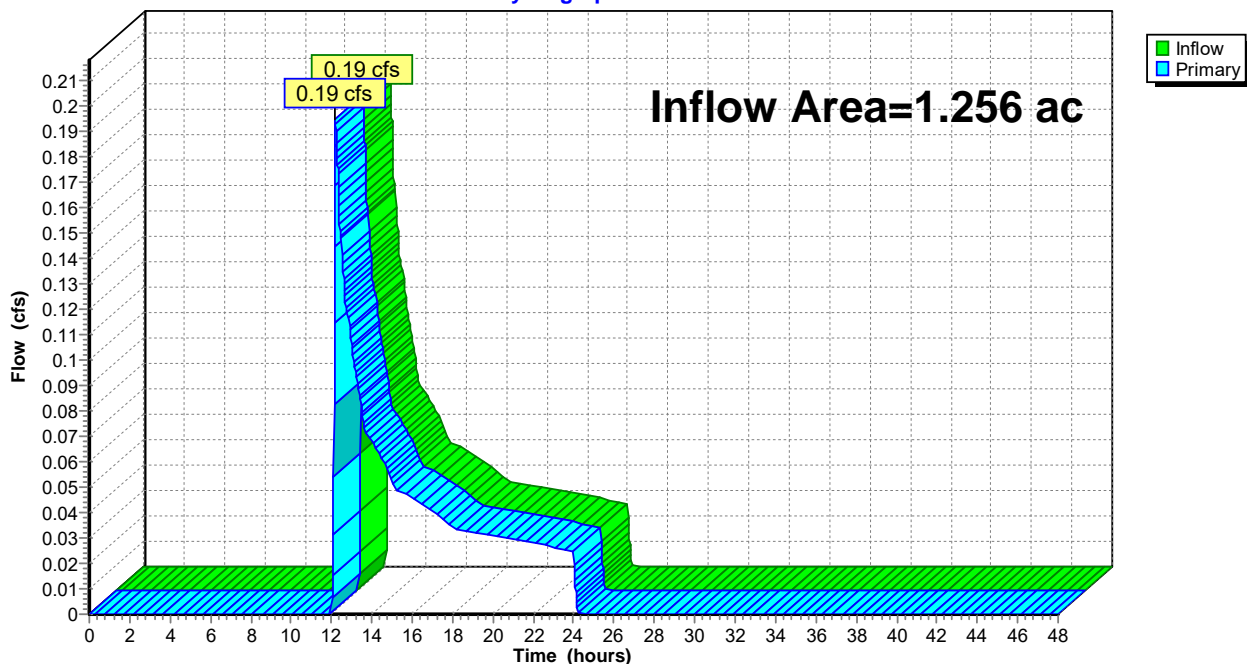
Summary for Link 31L: DP-3

Inflow Area = 1.256 ac, 0.00% Impervious, Inflow Depth = 0.46" for 25-Year event
Inflow = 0.19 cfs @ 12.18 hrs, Volume= 0.048 af
Primary = 0.19 cfs @ 12.18 hrs, Volume= 0.048 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 31L: DP-3

Hydrograph



Hydrograph for Link 31L: DP-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
12.50	0.15	0.00	0.15	41.50	0.00	0.00	0.00
13.00	0.11	0.00	0.11	42.00	0.00	0.00	0.00
13.50	0.08	0.00	0.08	42.50	0.00	0.00	0.00
14.00	0.07	0.00	0.07	43.00	0.00	0.00	0.00
14.50	0.06	0.00	0.06	43.50	0.00	0.00	0.00
15.00	0.05	0.00	0.05	44.00	0.00	0.00	0.00
15.50	0.05	0.00	0.05	44.50	0.00	0.00	0.00
16.00	0.05	0.00	0.05	45.00	0.00	0.00	0.00
16.50	0.04	0.00	0.04	45.50	0.00	0.00	0.00
17.00	0.04	0.00	0.04	46.00	0.00	0.00	0.00
17.50	0.04	0.00	0.04	46.50	0.00	0.00	0.00
18.00	0.03	0.00	0.03	47.00	0.00	0.00	0.00
18.50	0.03	0.00	0.03	47.50	0.00	0.00	0.00
19.00	0.03	0.00	0.03	48.00	0.00	0.00	0.00
19.50	0.03	0.00	0.03				
20.00	0.03	0.00	0.03				
20.50	0.03	0.00	0.03				
21.00	0.03	0.00	0.03				
21.50	0.03	0.00	0.03				
22.00	0.03	0.00	0.03				
22.50	0.03	0.00	0.03				
23.00	0.03	0.00	0.03				
23.50	0.03	0.00	0.03				
24.00	0.02	0.00	0.02				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

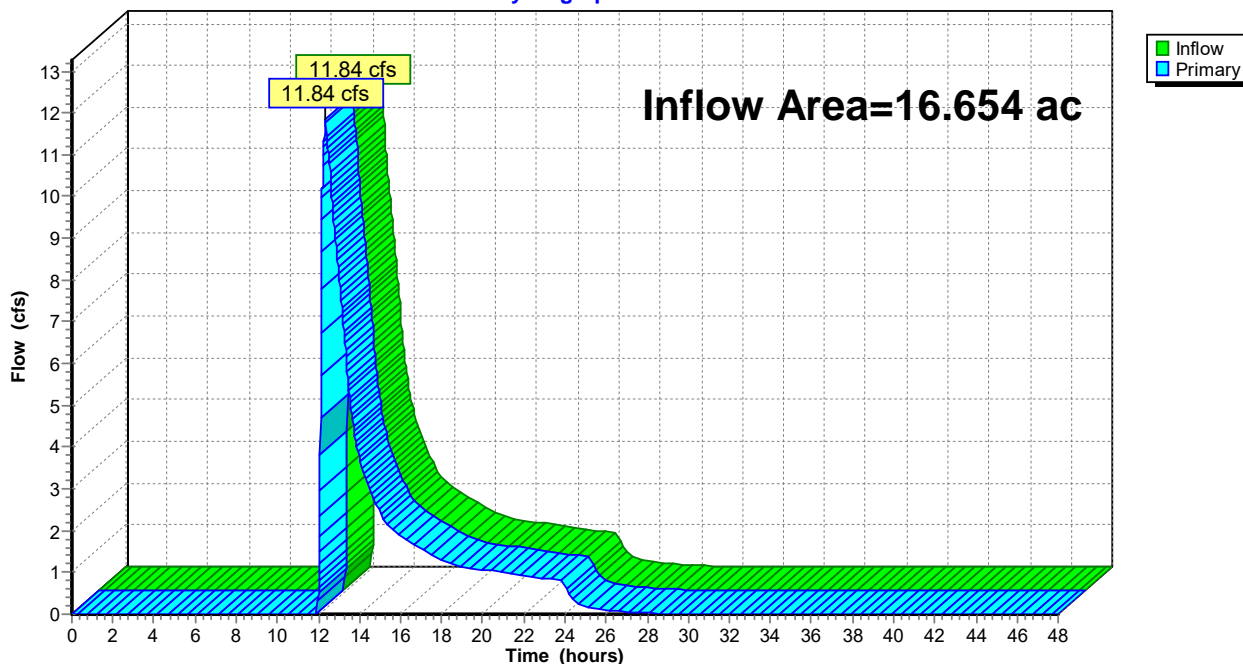
Summary for Link 32L: DP-4

Inflow Area = 16.654 ac, 29.61% Impervious, Inflow Depth = 1.77" for 25-Year event
Inflow = 11.84 cfs @ 12.35 hrs, Volume= 2.450 af
Primary = 11.84 cfs @ 12.35 hrs, Volume= 2.450 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 32L: DP-4

Hydrograph



Hydrograph for Link 32L: DP-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.01	0.00	0.01
0.50	0.00	0.00	0.00	29.50	0.01	0.00	0.01
1.00	0.00	0.00	0.00	30.00	0.01	0.00	0.01
1.50	0.00	0.00	0.00	30.50	0.01	0.00	0.01
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.51	0.00	0.51	41.00	0.00	0.00	0.00
12.50	11.03	0.00	11.03	41.50	0.00	0.00	0.00
13.00	8.09	0.00	8.09	42.00	0.00	0.00	0.00
13.50	5.34	0.00	5.34	42.50	0.00	0.00	0.00
14.00	3.72	0.00	3.72	43.00	0.00	0.00	0.00
14.50	2.97	0.00	2.97	43.50	0.00	0.00	0.00
15.00	2.43	0.00	2.43	44.00	0.00	0.00	0.00
15.50	2.06	0.00	2.06	44.50	0.00	0.00	0.00
16.00	1.87	0.00	1.87	45.00	0.00	0.00	0.00
16.50	1.71	0.00	1.71	45.50	0.00	0.00	0.00
17.00	1.57	0.00	1.57	46.00	0.00	0.00	0.00
17.50	1.43	0.00	1.43	46.50	0.00	0.00	0.00
18.00	1.29	0.00	1.29	47.00	0.00	0.00	0.00
18.50	1.19	0.00	1.19	47.50	0.00	0.00	0.00
19.00	1.14	0.00	1.14	48.00	0.00	0.00	0.00
19.50	1.10	0.00	1.10				
20.00	1.07	0.00	1.07				
20.50	1.03	0.00	1.03				
21.00	1.00	0.00	1.00				
21.50	0.96	0.00	0.96				
22.00	0.93	0.00	0.93				
22.50	0.90	0.00	0.90				
23.00	0.86	0.00	0.86				
23.50	0.83	0.00	0.83				
24.00	0.79	0.00	0.79				
24.50	0.31	0.00	0.31				
25.00	0.19	0.00	0.19				
25.50	0.13	0.00	0.13				
26.00	0.10	0.00	0.10				
26.50	0.07	0.00	0.07				
27.00	0.05	0.00	0.05				
27.50	0.04	0.00	0.04				
28.00	0.03	0.00	0.03				
28.50	0.02	0.00	0.02				

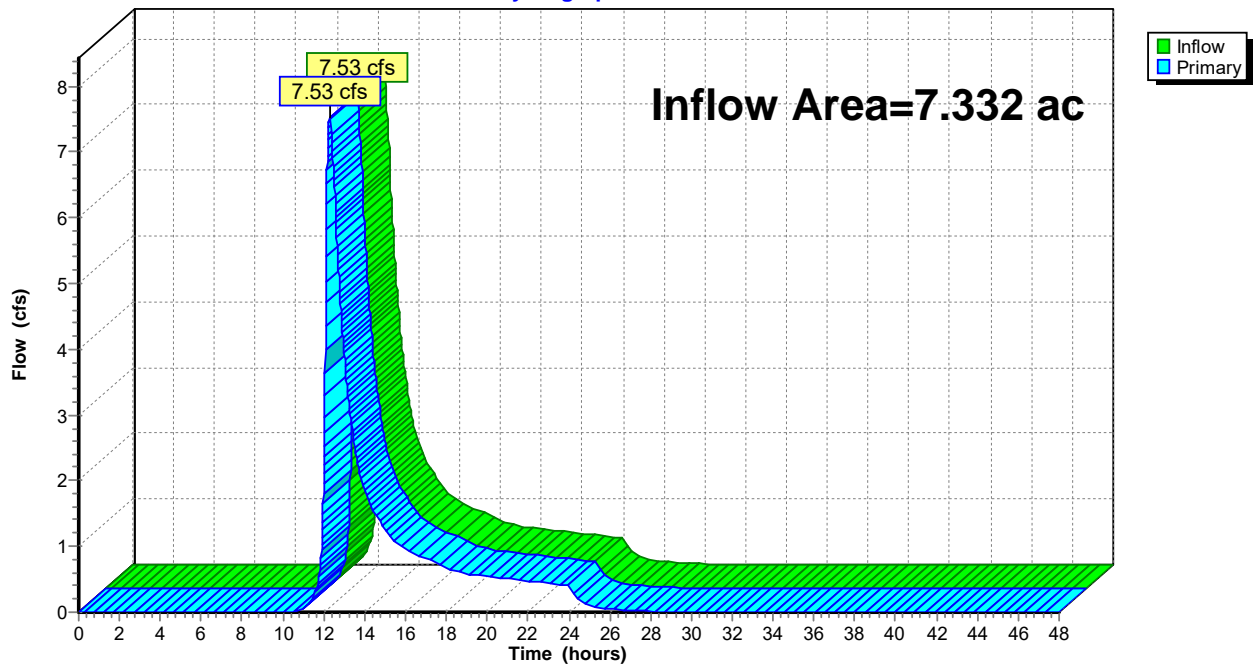
Summary for Link PDP5: PDP5

Inflow Area = 7.332 ac, 38.34% Impervious, Inflow Depth = 2.22" for 25-Year event
Inflow = 7.53 cfs @ 12.32 hrs, Volume= 1.354 af
Primary = 7.53 cfs @ 12.32 hrs, Volume= 1.354 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link PDP5: PDP5

Hydrograph



Hydrograph for Link PDP5: PDP5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.01	0.00	0.01
0.50	0.00	0.00	0.00	29.50	0.01	0.00	0.01
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.04	0.00	0.04	40.00	0.00	0.00	0.00
11.50	0.21	0.00	0.21	40.50	0.00	0.00	0.00
12.00	2.11	0.00	2.11	41.00	0.00	0.00	0.00
12.50	6.60	0.00	6.60	41.50	0.00	0.00	0.00
13.00	3.92	0.00	3.92	42.00	0.00	0.00	0.00
13.50	2.56	0.00	2.56	42.50	0.00	0.00	0.00
14.00	1.85	0.00	1.85	43.00	0.00	0.00	0.00
14.50	1.51	0.00	1.51	43.50	0.00	0.00	0.00
15.00	1.25	0.00	1.25	44.00	0.00	0.00	0.00
15.50	1.06	0.00	1.06	44.50	0.00	0.00	0.00
16.00	0.96	0.00	0.96	45.00	0.00	0.00	0.00
16.50	0.88	0.00	0.88	45.50	0.00	0.00	0.00
17.00	0.81	0.00	0.81	46.00	0.00	0.00	0.00
17.50	0.74	0.00	0.74	46.50	0.00	0.00	0.00
18.00	0.67	0.00	0.67	47.00	0.00	0.00	0.00
18.50	0.62	0.00	0.62	47.50	0.00	0.00	0.00
19.00	0.59	0.00	0.59	48.00	0.00	0.00	0.00
19.50	0.56	0.00	0.56				
20.00	0.54	0.00	0.54				
20.50	0.53	0.00	0.53				
21.00	0.51	0.00	0.51				
21.50	0.49	0.00	0.49				
22.00	0.47	0.00	0.47				
22.50	0.46	0.00	0.46				
23.00	0.44	0.00	0.44				
23.50	0.43	0.00	0.43				
24.00	0.41	0.00	0.41				
24.50	0.20	0.00	0.20				
25.00	0.11	0.00	0.11				
25.50	0.06	0.00	0.06				
26.00	0.05	0.00	0.05				
26.50	0.03	0.00	0.03				
27.00	0.02	0.00	0.02				
27.50	0.02	0.00	0.02				
28.00	0.01	0.00	0.01				
28.50	0.01	0.00	0.01				

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: PDA-1J	Runoff Area=218,370 sf 100.00% Impervious Runoff Depth=8.33" Tc=0.0 min CN=98 Runoff=48.85 cfs 3.480 af
Subcatchment 26S: PDA-1D	Runoff Area=153,719 sf 63.56% Impervious Runoff Depth=7.49" Tc=6.0 min CN=91 Runoff=30.16 cfs 2.202 af
Subcatchment 27S: PDA-4B-B	Runoff Area=66,436 sf 0.00% Impervious Runoff Depth=5.56" Tc=6.0 min CN=75 Runoff=10.57 cfs 0.707 af
Subcatchment 28S: Proposed	Runoff Area=1,182,741 sf 0.00% Impervious Runoff Depth=5.32" Tc=23.4 min CN=73 Runoff=106.42 cfs 12.033 af
Subcatchment 30S: PDA-1A	Runoff Area=108,164 sf 78.54% Impervious Runoff Depth=6.76" Tc=6.0 min CN=85 Runoff=20.02 cfs 1.400 af
Subcatchment 31S: PDA-1C	Runoff Area=112,511 sf 77.93% Impervious Runoff Depth=7.37" Tc=6.0 min CN=90 Runoff=21.90 cfs 1.586 af
Subcatchment 34S: PDA-1K	Runoff Area=26,597 sf 0.00% Impervious Runoff Depth=1.94" Tc=6.0 min CN=44 Runoff=1.36 cfs 0.098 af
Subcatchment 35S: PDA-2U	Runoff Area=74,849 sf 0.00% Impervious Runoff Depth=2.83" Tc=6.0 min CN=52 Runoff=6.06 cfs 0.406 af
Subcatchment 36S: PDA-3U	Runoff Area=54,725 sf 0.00% Impervious Runoff Depth=1.40" Tc=6.0 min CN=39 Runoff=1.77 cfs 0.147 af
Subcatchment 37S: PDA-1I	Runoff Area=172,961 sf 57.42% Impervious Runoff Depth=6.40" Tc=6.0 min CN=82 Runoff=30.81 cfs 2.118 af
Subcatchment 38S: PDA-4U	Runoff Area=322,148 sf 10.08% Impervious Runoff Depth=2.05" Tc=6.0 min CN=45 Runoff=17.68 cfs 1.260 af
Subcatchment 39S: PDA-5U	Runoff Area=103,088 sf 21.06% Impervious Runoff Depth=3.65" Tc=6.0 min CN=59 Runoff=10.96 cfs 0.720 af
Subcatchment 40S: PDA-i+J-FB	Runoff Area=13,894 sf 0.00% Impervious Runoff Depth=2.27" Tc=6.0 min CN=47 Runoff=0.87 cfs 0.060 af
Subcatchment 41S: PDA-5A	Runoff Area=216,315 sf 46.58% Impervious Runoff Depth=5.44" Tc=6.0 min CN=74 Runoff=33.79 cfs 2.251 af
Subcatchment 42S: PDA-1J-B	Runoff Area=33,984 sf 0.00% Impervious Runoff Depth=2.95" Tc=6.0 min CN=53 Runoff=2.88 cfs 0.192 af
Subcatchment 43S: PDA-1B	Runoff Area=398,274 sf 73.53% Impervious Runoff Depth=6.88" Tc=6.0 min CN=86 Runoff=74.56 cfs 5.246 af
Subcatchment 46S: PDA-1H	Runoff Area=433,100 sf 100.00% Impervious Runoff Depth=8.33" Tc=6.0 min CN=98 Runoff=87.91 cfs 6.902 af

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Subcatchment 47S: PDA-4A	Runoff Area=104,546 sf 34.61% Impervious Runoff Depth=4.84" Tc=6.0 min CN=69 Runoff=14.69 cfs 0.968 af
Subcatchment 48S: PDA-1G-FB	Runoff Area=17,215 sf 0.00% Impervious Runoff Depth=1.40" Tc=6.0 min CN=39 Runoff=0.56 cfs 0.046 af
Subcatchment 49S: PDA-4B	Runoff Area=232,321 sf 62.91% Impervious Runoff Depth=6.64" Tc=6.0 min CN=84 Runoff=42.48 cfs 2.953 af
Subcatchment 51S: PDA-1G-B	Runoff Area=27,422 sf 0.00% Impervious Runoff Depth=2.05" Tc=6.0 min CN=45 Runoff=1.50 cfs 0.107 af
Subcatchment 52S: PDA-1G	Runoff Area=416,900 sf 100.00% Impervious Runoff Depth=8.33" Tc=6.0 min CN=98 Runoff=84.62 cfs 6.644 af
Subcatchment 54S: PDA-1H-IB	Runoff Area=39,736 sf 0.00% Impervious Runoff Depth=1.40" Tc=6.0 min CN=39 Runoff=1.29 cfs 0.107 af
Subcatchment 55S: PDA-1E	Runoff Area=17,321 sf 82.34% Impervious Runoff Depth=7.97" Tc=6.0 min CN=95 Runoff=3.48 cfs 0.264 af
Subcatchment 56S: PDA-1B-FB	Runoff Area=16,395 sf 0.00% Impervious Runoff Depth=1.40" Tc=6.0 min CN=39 Runoff=0.53 cfs 0.044 af
Subcatchment 57S: PDA-1H-FB	Runoff Area=19,432 sf 0.00% Impervious Runoff Depth=1.40" Tc=6.0 min CN=39 Runoff=0.63 cfs 0.052 af
Subcatchment 58S: PDA1-B-IB	Runoff Area=33,078 sf 0.00% Impervious Runoff Depth=1.51" Tc=6.0 min CN=40 Runoff=1.20 cfs 0.095 af
Subcatchment 59S: PDA-1F	Runoff Area=250,816 sf 71.20% Impervious Runoff Depth=6.28" Tc=6.0 min CN=81 Runoff=44.05 cfs 3.014 af
Subcatchment 60S: PDA-1i-B	Runoff Area=31,544 sf 0.00% Impervious Runoff Depth=1.40" Tc=6.0 min CN=39 Runoff=1.02 cfs 0.085 af
Pond 1P: Bioretention 1D	Peak Elev=415.00' Storage=64,431 cf Inflow=33.50 cfs 2.466 af Outflow=3.33 cfs 1.785 af
Pond 3P: Bioretention 1A	Peak Elev=414.96' Storage=24,961 cf Inflow=20.02 cfs 1.400 af Outflow=14.60 cfs 0.951 af
Pond 22P: Bioretention 5A	Peak Elev=434.00' Storage=34,944 cf Inflow=33.25 cfs 2.251 af Outflow=12.66 cfs 1.905 af
Pond 26P: Bioretention 1F	Peak Elev=412.80' Storage=53,647 cf Inflow=44.05 cfs 3.014 af Outflow=16.92 cfs 2.449 af
Pond 29P: Bioretention 4B	Peak Elev=421.00' Storage=71,487 cf Inflow=53.05 cfs 3.659 af Outflow=12.72 cfs 2.954 af
Pond 31P: Bioretention i	Peak Elev=413.00' Storage=67,717 cf Inflow=38.02 cfs 2.914 af Outflow=7.97 cfs 1.946 af
Pond 32P: FB 1C	Peak Elev=413.78' Storage=10,943 cf Inflow=21.90 cfs 1.586 af Outflow=21.77 cfs 1.586 af

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Pond 33P: INFIL 1C Peak Elev=412.98' Storage=22,823 cf Inflow=21.77 cfs 1.586 af
Discarded=2.99 cfs 1.514 af Primary=0.63 cfs 0.072 af Secondary=0.00 cfs 0.000 af Outflow=3.62 cfs 1.586 af

Pond 37P: FB 1i+J Peak Elev=413.74' Storage=30,867 cf Inflow=77.69 cfs 5.659 af
Primary=37.34 cfs 2.829 af Secondary=37.34 cfs 2.829 af Outflow=74.67 cfs 5.659 af

Pond 39P: FB 5A Peak Elev=433.92' Storage=11,370 cf Inflow=33.79 cfs 2.251 af
Outflow=33.25 cfs 2.251 af

Pond 44P: FB 1B Peak Elev=412.94' Storage=39,231 cf Inflow=75.07 cfs 5.290 af
Outflow=74.07 cfs 5.290 af

Pond 45P: INFIL 1B Peak Elev=412.85' Storage=88,623 cf Inflow=75.26 cfs 5.385 af
Discarded=8.18 cfs 5.306 af Primary=0.32 cfs 0.079 af Secondary=0.00 cfs 0.000 af Outflow=8.50 cfs 5.385 af

Pond 47P: INFIL 1H Peak Elev=412.84' Storage=113,651 cf Inflow=88.26 cfs 7.061 af
Discarded=8.31 cfs 6.965 af Primary=0.32 cfs 0.096 af Secondary=0.00 cfs 0.000 af Outflow=8.63 cfs 7.061 af

Pond 51P: FB 1H Peak Elev=413.38' Storage=54,721 cf Inflow=88.51 cfs 6.954 af
Outflow=86.98 cfs 6.954 af

Pond 53P: Bioretention J basin Peak Elev=412.99' Storage=72,071 cf Inflow=39.65 cfs 3.021 af
Outflow=7.37 cfs 1.985 af

Pond 54P: INFIL 1G Peak Elev=412.87' Storage=108,290 cf Inflow=84.43 cfs 6.797 af
Discarded=7.79 cfs 6.620 af Primary=1.10 cfs 0.177 af Outflow=8.89 cfs 6.797 af

Pond 55P: FB 1G Peak Elev=413.28' Storage=54,454 cf Inflow=85.16 cfs 6.690 af
Outflow=82.92 cfs 6.690 af

Pond 59P: FB 1E Peak Elev=414.27' Storage=2,150 cf Inflow=3.48 cfs 0.264 af
Outflow=3.47 cfs 0.264 af

Pond 60P: FB 1D Peak Elev=415.42' Storage=9,750 cf Inflow=30.16 cfs 2.202 af
Outflow=30.03 cfs 2.202 af

Pond 63P: Det Pond 1K Peak Elev=412.90' Storage=60,569 cf Inflow=32.28 cfs 6.479 af
Primary=16.10 cfs 6.471 af Secondary=0.00 cfs 0.000 af Outflow=16.10 cfs 6.471 af

Pond B4B: Bioretention 4A Peak Elev=440.92' Storage=11,721 cf Inflow=14.69 cfs 0.968 af
Outflow=12.61 cfs 0.767 af

Link 29L: DP-1 Inflow=129.53 cfs 21.664 af
Primary=129.53 cfs 21.664 af

Link 30L: DP-2 Inflow=6.06 cfs 0.406 af
Primary=6.06 cfs 0.406 af

Link 31L: DP-3 Inflow=1.77 cfs 0.147 af
Primary=1.77 cfs 0.147 af

Link 32L: DP-4 Inflow=40.58 cfs 4.982 af
Primary=40.58 cfs 4.982 af

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Link PDP5: PDP5

Inflow=21.24 cfs 2.624 af
Primary=21.24 cfs 2.624 af

Total Runoff Area = 112.456 ac Runoff Volume = 55.186 af Average Runoff Depth = 5.89"
53.84% Pervious = 60.551 ac 46.16% Impervious = 51.905 ac

Summary for Subcatchment 6S: PDA-1J

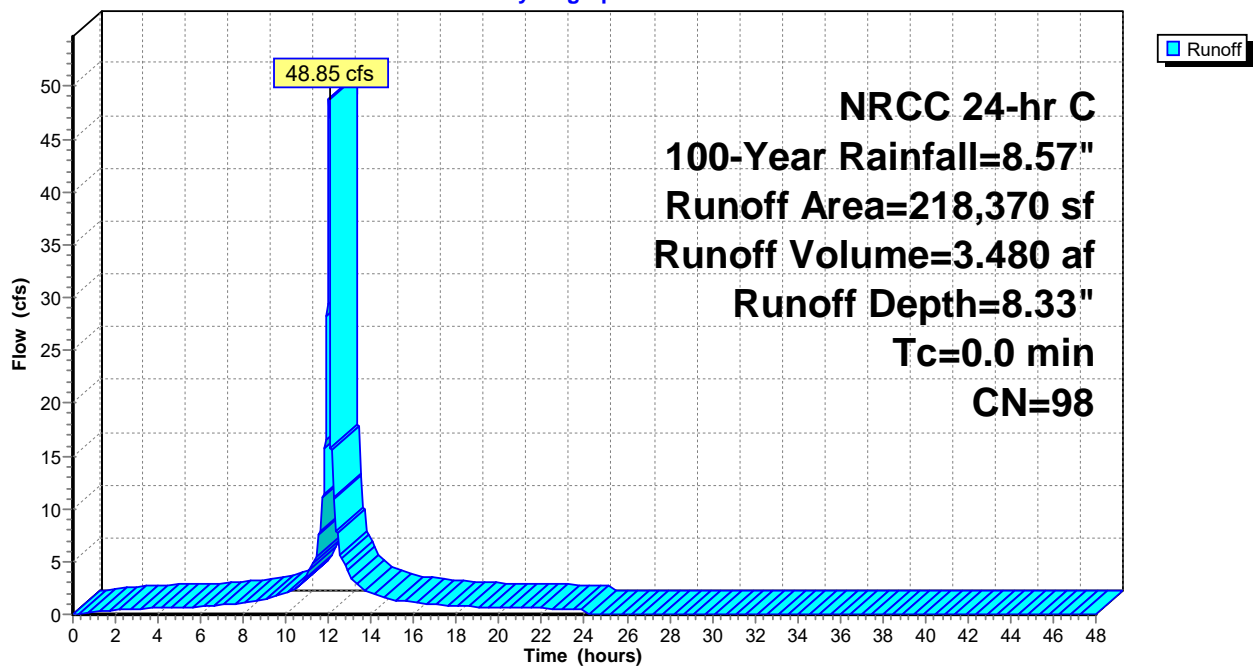
Runoff = 48.85 cfs @ 12.09 hrs, Volume= 3.480 af, Depth= 8.33"
 Routed to Pond 37P : FB 1i+J

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
218,370	98	Unconnected roofs, HSG D
218,370		100.00% Impervious Area
218,370		100.00% Unconnected

Subcatchment 6S: PDA-1J

Hydrograph



Hydrograph for Subcatchment 6S: PDA-1J

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	8.33	0.00
0.50	0.05	0.00	0.04	29.50	8.57	8.33	0.00
1.00	0.10	0.01	0.21	30.00	8.57	8.33	0.00
1.50	0.15	0.04	0.32	30.50	8.57	8.33	0.00
2.00	0.21	0.08	0.40	31.00	8.57	8.33	0.00
2.50	0.27	0.12	0.46	31.50	8.57	8.33	0.00
3.00	0.33	0.17	0.51	32.00	8.57	8.33	0.00
3.50	0.39	0.22	0.56	32.50	8.57	8.33	0.00
4.00	0.45	0.28	0.59	33.00	8.57	8.33	0.00
4.50	0.52	0.34	0.63	33.50	8.57	8.33	0.00
5.00	0.59	0.40	0.66	34.00	8.57	8.33	0.00
5.50	0.66	0.47	0.69	34.50	8.57	8.33	0.00
6.00	0.74	0.54	0.73	35.00	8.57	8.33	0.00
6.50	0.82	0.61	0.82	35.50	8.57	8.33	0.00
7.00	0.91	0.70	0.92	36.00	8.57	8.33	0.00
7.50	1.01	0.80	1.02	36.50	8.57	8.33	0.00
8.00	1.11	0.90	1.11	37.00	8.57	8.33	0.00
8.50	1.23	1.02	1.21	37.50	8.57	8.33	0.00
9.00	1.36	1.14	1.33	38.00	8.57	8.33	0.00
9.50	1.51	1.29	1.66	38.50	8.57	8.33	0.00
10.00	1.69	1.47	1.99	39.00	8.57	8.33	0.00
10.50	1.91	1.68	2.42	39.50	8.57	8.33	0.00
11.00	2.21	1.98	3.70	40.00	8.57	8.33	0.00
11.50	2.68	2.45	6.54	40.50	8.57	8.33	0.00
12.00	4.08	3.85	38.52	41.00	8.57	8.33	0.00
12.50	5.89	5.65	6.57	41.50	8.57	8.33	0.00
13.00	6.36	6.12	3.73	42.00	8.57	8.33	0.00
13.50	6.66	6.42	2.44	42.50	8.57	8.33	0.00
14.00	6.88	6.64	2.02	43.00	8.57	8.33	0.00
14.50	7.06	6.82	1.69	43.50	8.57	8.33	0.00
15.00	7.21	6.97	1.35	44.00	8.57	8.33	0.00
15.50	7.34	7.10	1.24	44.50	8.57	8.33	0.00
16.00	7.46	7.22	1.14	45.00	8.57	8.33	0.00
16.50	7.56	7.33	1.05	45.50	8.57	8.33	0.00
17.00	7.66	7.42	0.95	46.00	8.57	8.33	0.00
17.50	7.75	7.51	0.86	46.50	8.57	8.33	0.00
18.00	7.83	7.60	0.77	47.00	8.57	8.33	0.00
18.50	7.91	7.67	0.74	47.50	8.57	8.33	0.00
19.00	7.98	7.74	0.71	48.00	8.57	8.33	0.00
19.50	8.05	7.81	0.69				
20.00	8.12	7.88	0.66				
20.50	8.18	7.94	0.64				
21.00	8.24	8.00	0.62				
21.50	8.30	8.06	0.60				
22.00	8.36	8.12	0.57				
22.50	8.42	8.18	0.55				
23.00	8.47	8.23	0.53				
23.50	8.52	8.28	0.50				
24.00	8.57	8.33	0.24				
24.50	8.57	8.33	0.00				
25.00	8.57	8.33	0.00				
25.50	8.57	8.33	0.00				
26.00	8.57	8.33	0.00				
26.50	8.57	8.33	0.00				
27.00	8.57	8.33	0.00				
27.50	8.57	8.33	0.00				
28.00	8.57	8.33	0.00				
28.50	8.57	8.33	0.00				

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 26S: PDA-1D

Runoff = 30.16 cfs @ 12.13 hrs, Volume= 2.202 af, Depth= 7.49"
 Routed to Pond 60P : FB 1D

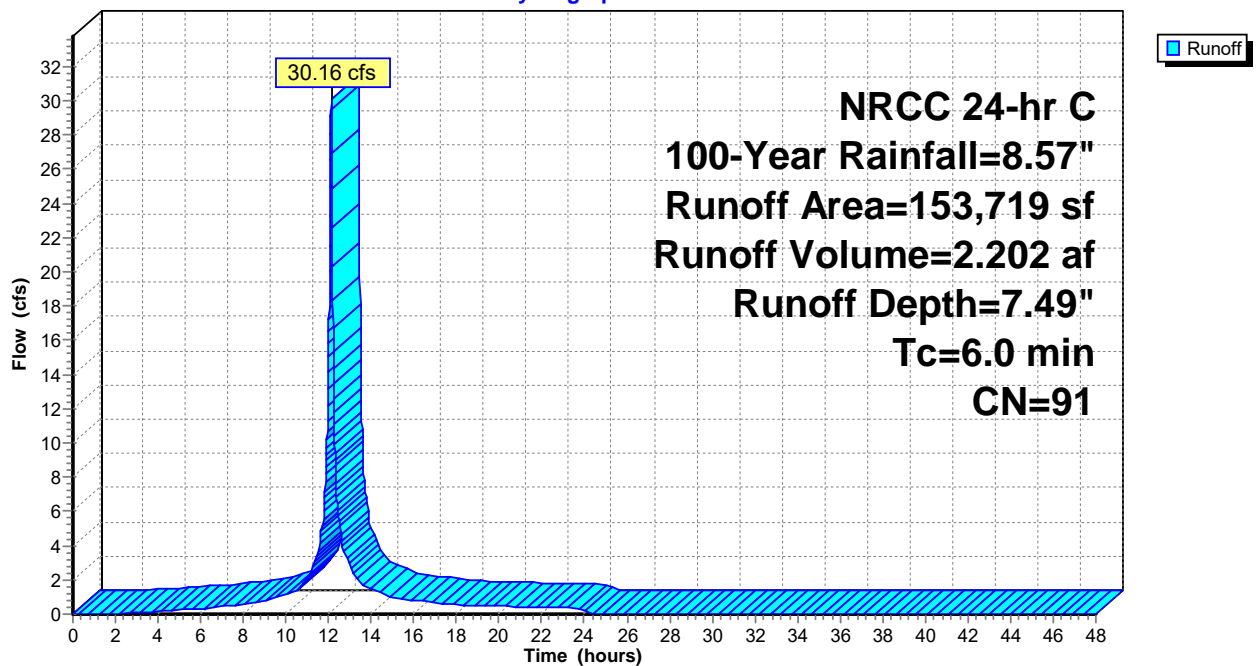
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
55,737	80	>75% Grass cover, Good, HSG D
271	39	>75% Grass cover, Good, HSG A
97,711	98	Paved parking, HSG D
153,719	91	Weighted Average
56,008		36.44% Pervious Area
97,711		63.56% Impervious Area

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

Subcatchment 26S: PDA-1D

Hydrograph



Hydrograph for Subcatchment 26S: PDA-1D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	7.49	0.00
0.50	0.05	0.00	0.00	29.50	8.57	7.49	0.00
1.00	0.10	0.00	0.00	30.00	8.57	7.49	0.00
1.50	0.15	0.00	0.00	30.50	8.57	7.49	0.00
2.00	0.21	0.00	0.00	31.00	8.57	7.49	0.00
2.50	0.27	0.00	0.04	31.50	8.57	7.49	0.00
3.00	0.33	0.01	0.09	32.00	8.57	7.49	0.00
3.50	0.39	0.03	0.13	32.50	8.57	7.49	0.00
4.00	0.45	0.05	0.17	33.00	8.57	7.49	0.00
4.50	0.52	0.08	0.20	33.50	8.57	7.49	0.00
5.00	0.59	0.11	0.24	34.00	8.57	7.49	0.00
5.50	0.66	0.15	0.27	34.50	8.57	7.49	0.00
6.00	0.74	0.19	0.30	35.00	8.57	7.49	0.00
6.50	0.82	0.24	0.37	35.50	8.57	7.49	0.00
7.00	0.91	0.30	0.43	36.00	8.57	7.49	0.00
7.50	1.01	0.36	0.50	36.50	8.57	7.49	0.00
8.00	1.11	0.44	0.58	37.00	8.57	7.49	0.00
8.50	1.23	0.53	0.65	37.50	8.57	7.49	0.00
9.00	1.36	0.63	0.73	38.00	8.57	7.49	0.00
9.50	1.51	0.75	0.93	38.50	8.57	7.49	0.00
10.00	1.69	0.90	1.15	39.00	8.57	7.49	0.00
10.50	1.91	1.08	1.39	39.50	8.57	7.49	0.00
11.00	2.21	1.35	2.14	40.00	8.57	7.49	0.00
11.50	2.68	1.78	3.51	40.50	8.57	7.49	0.00
12.00	4.08	3.09	15.87	41.00	8.57	7.49	0.00
12.50	5.89	4.85	5.35	41.50	8.57	7.49	0.00
13.00	6.36	5.31	2.83	42.00	8.57	7.49	0.00
13.50	6.66	5.61	1.83	42.50	8.57	7.49	0.00
14.00	6.88	5.82	1.44	43.00	8.57	7.49	0.00
14.50	7.06	6.00	1.21	43.50	8.57	7.49	0.00
15.00	7.21	6.15	0.98	44.00	8.57	7.49	0.00
15.50	7.34	6.27	0.87	44.50	8.57	7.49	0.00
16.00	7.46	6.39	0.80	45.00	8.57	7.49	0.00
16.50	7.56	6.50	0.74	45.50	8.57	7.49	0.00
17.00	7.66	6.59	0.68	46.00	8.57	7.49	0.00
17.50	7.75	6.68	0.61	46.50	8.57	7.49	0.00
18.00	7.83	6.76	0.55	47.00	8.57	7.49	0.00
18.50	7.91	6.83	0.51	47.50	8.57	7.49	0.00
19.00	7.98	6.91	0.50	48.00	8.57	7.49	0.00
19.50	8.05	6.97	0.48				
20.00	8.12	7.04	0.47				
20.50	8.18	7.10	0.45				
21.00	8.24	7.17	0.43				
21.50	8.30	7.23	0.42				
22.00	8.36	7.28	0.40				
22.50	8.42	7.34	0.38				
23.00	8.47	7.39	0.37				
23.50	8.52	7.44	0.35				
24.00	8.57	7.49	0.34				
24.50	8.57	7.49	0.00				
25.00	8.57	7.49	0.00				
25.50	8.57	7.49	0.00				
26.00	8.57	7.49	0.00				
26.50	8.57	7.49	0.00				
27.00	8.57	7.49	0.00				
27.50	8.57	7.49	0.00				
28.00	8.57	7.49	0.00				
28.50	8.57	7.49	0.00				

Summary for Subcatchment 27S: PDA-4B-B

Runoff = 10.57 cfs @ 12.13 hrs, Volume= 0.707 af, Depth= 5.56"
 Routed to Pond 29P : Bioretention 4B

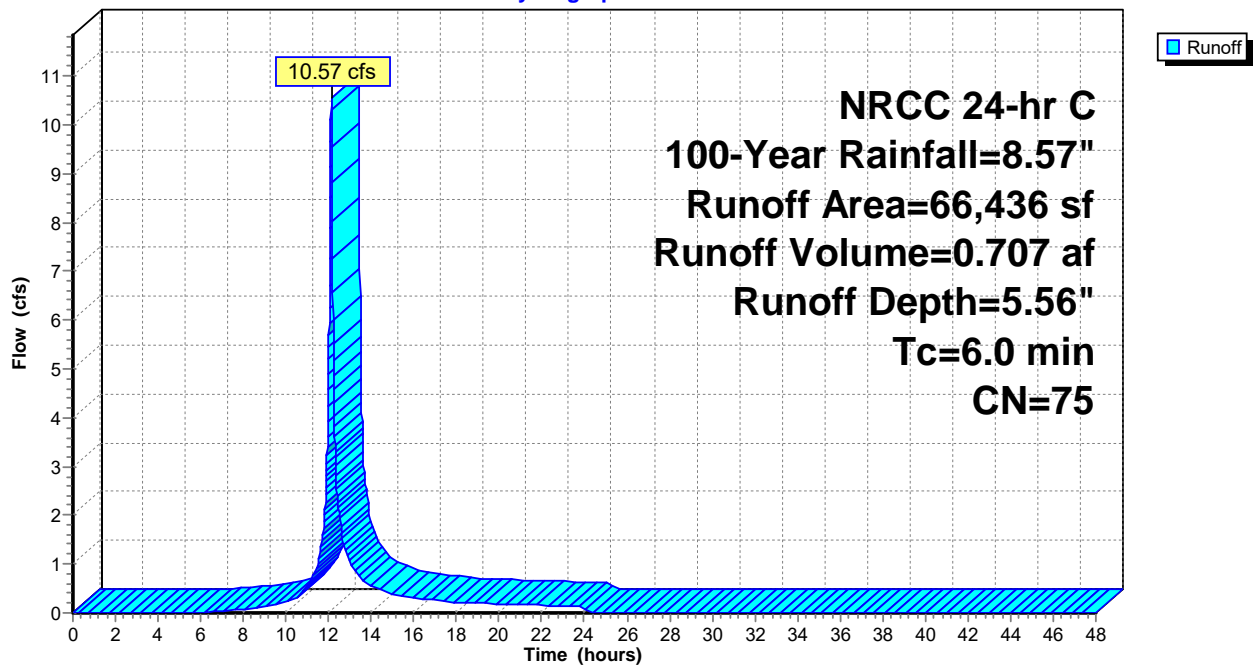
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
917	61	>75% Grass cover, Good, HSG B
57,533	80	>75% Grass cover, Good, HSG D
7,986	39	>75% Grass cover, Good, HSG A
66,436	75	Weighted Average
66,436		100.00% Pervious Area

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

Subcatchment 27S: PDA-4B-B

Hydrograph



Hydrograph for Subcatchment 27S: PDA-4B-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	5.56	0.00
0.50	0.05	0.00	0.00	29.50	8.57	5.56	0.00
1.00	0.10	0.00	0.00	30.00	8.57	5.56	0.00
1.50	0.15	0.00	0.00	30.50	8.57	5.56	0.00
2.00	0.21	0.00	0.00	31.00	8.57	5.56	0.00
2.50	0.27	0.00	0.00	31.50	8.57	5.56	0.00
3.00	0.33	0.00	0.00	32.00	8.57	5.56	0.00
3.50	0.39	0.00	0.00	32.50	8.57	5.56	0.00
4.00	0.45	0.00	0.00	33.00	8.57	5.56	0.00
4.50	0.52	0.00	0.00	33.50	8.57	5.56	0.00
5.00	0.59	0.00	0.00	34.00	8.57	5.56	0.00
5.50	0.66	0.00	0.00	34.50	8.57	5.56	0.00
6.00	0.74	0.00	0.01	35.00	8.57	5.56	0.00
6.50	0.82	0.01	0.02	35.50	8.57	5.56	0.00
7.00	0.91	0.02	0.03	36.00	8.57	5.56	0.00
7.50	1.01	0.03	0.05	36.50	8.57	5.56	0.00
8.00	1.11	0.05	0.07	37.00	8.57	5.56	0.00
8.50	1.23	0.08	0.10	37.50	8.57	5.56	0.00
9.00	1.36	0.12	0.12	38.00	8.57	5.56	0.00
9.50	1.51	0.17	0.18	38.50	8.57	5.56	0.00
10.00	1.69	0.24	0.24	39.00	8.57	5.56	0.00
10.50	1.91	0.34	0.32	39.50	8.57	5.56	0.00
11.00	2.21	0.49	0.54	40.00	8.57	5.56	0.00
11.50	2.68	0.76	0.99	40.50	8.57	5.56	0.00
12.00	4.08	1.73	5.20	41.00	8.57	5.56	0.00
12.50	5.89	3.19	1.99	41.50	8.57	5.56	0.00
13.00	6.36	3.59	1.08	42.00	8.57	5.56	0.00
13.50	6.66	3.85	0.70	42.50	8.57	5.56	0.00
14.00	6.88	4.04	0.55	43.00	8.57	5.56	0.00
14.50	7.06	4.20	0.47	43.50	8.57	5.56	0.00
15.00	7.21	4.34	0.38	44.00	8.57	5.56	0.00
15.50	7.34	4.45	0.34	44.50	8.57	5.56	0.00
16.00	7.46	4.55	0.31	45.00	8.57	5.56	0.00
16.50	7.56	4.65	0.29	45.50	8.57	5.56	0.00
17.00	7.66	4.74	0.26	46.00	8.57	5.56	0.00
17.50	7.75	4.82	0.24	46.50	8.57	5.56	0.00
18.00	7.83	4.89	0.21	47.00	8.57	5.56	0.00
18.50	7.91	4.96	0.20	47.50	8.57	5.56	0.00
19.00	7.98	5.02	0.20	48.00	8.57	5.56	0.00
19.50	8.05	5.09	0.19				
20.00	8.12	5.15	0.18				
20.50	8.18	5.21	0.18				
21.00	8.24	5.26	0.17				
21.50	8.30	5.32	0.17				
22.00	8.36	5.37	0.16				
22.50	8.42	5.42	0.15				
23.00	8.47	5.47	0.15				
23.50	8.52	5.51	0.14				
24.00	8.57	5.56	0.13				
24.50	8.57	5.56	0.00				
25.00	8.57	5.56	0.00				
25.50	8.57	5.56	0.00				
26.00	8.57	5.56	0.00				
26.50	8.57	5.56	0.00				
27.00	8.57	5.56	0.00				
27.50	8.57	5.56	0.00				
28.00	8.57	5.56	0.00				
28.50	8.57	5.56	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Runoff = 106.42 cfs @ 12.34 hrs, Volume= 12.033 af, Depth= 5.32"
 Routed to Link 29L : DP-1

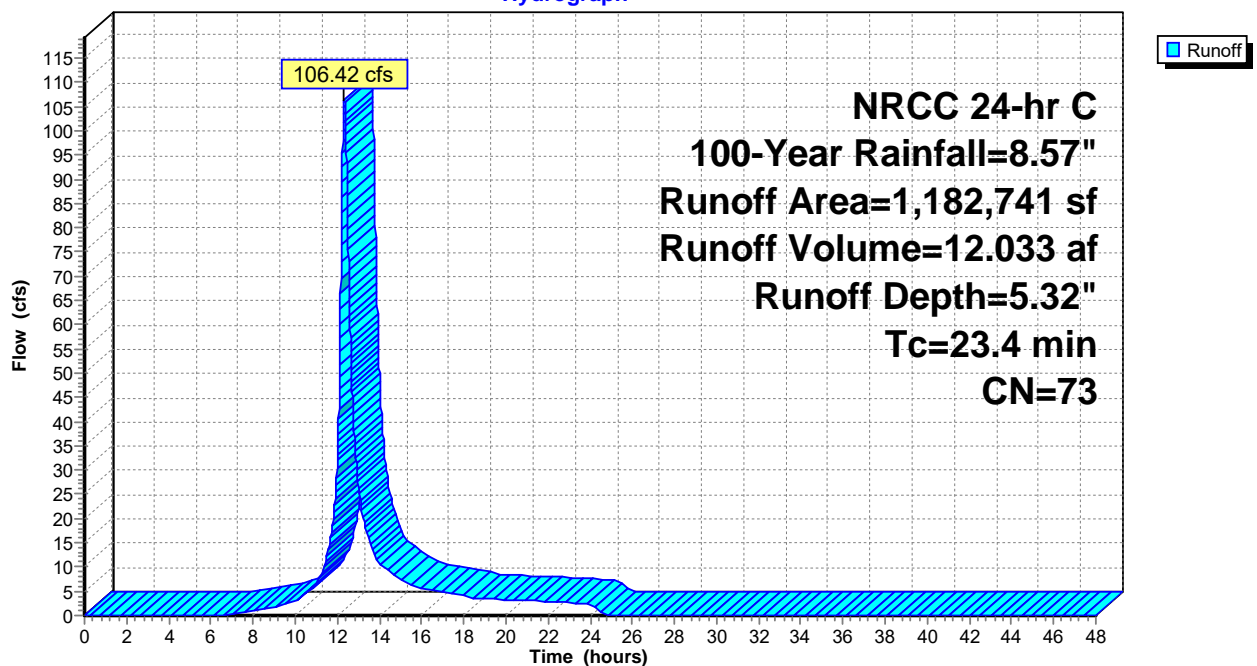
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
* 90,367	61	>75% Grass cover, Good, HSG B
99,079	39	>75% Grass cover, Good, HSG A
647,468	80	>75% Grass cover, Good, HSG D
45,280	32	Woods/grass comb., Good, HSG A
299,609	79	Woods/grass comb., Good, HSG D
938	89	Dirt roads, HSG D
1,182,741	73	Weighted Average
1,182,741		100.00% Pervious Area

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

Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Hydrograph



Hydrograph for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	5.32	0.00
0.50	0.05	0.00	0.00	29.50	8.57	5.32	0.00
1.00	0.10	0.00	0.00	30.00	8.57	5.32	0.00
1.50	0.15	0.00	0.00	30.50	8.57	5.32	0.00
2.00	0.21	0.00	0.00	31.00	8.57	5.32	0.00
2.50	0.27	0.00	0.00	31.50	8.57	5.32	0.00
3.00	0.33	0.00	0.00	32.00	8.57	5.32	0.00
3.50	0.39	0.00	0.00	32.50	8.57	5.32	0.00
4.00	0.45	0.00	0.00	33.00	8.57	5.32	0.00
4.50	0.52	0.00	0.00	33.50	8.57	5.32	0.00
5.00	0.59	0.00	0.00	34.00	8.57	5.32	0.00
5.50	0.66	0.00	0.00	34.50	8.57	5.32	0.00
6.00	0.74	0.00	0.00	35.00	8.57	5.32	0.00
6.50	0.82	0.00	0.05	35.50	8.57	5.32	0.00
7.00	0.91	0.01	0.25	36.00	8.57	5.32	0.00
7.50	1.01	0.02	0.52	36.50	8.57	5.32	0.00
8.00	1.11	0.03	0.83	37.00	8.57	5.32	0.00
8.50	1.23	0.06	1.19	37.50	8.57	5.32	0.00
9.00	1.36	0.09	1.60	38.00	8.57	5.32	0.00
9.50	1.51	0.13	2.21	38.50	8.57	5.32	0.00
10.00	1.69	0.20	3.19	39.00	8.57	5.32	0.00
10.50	1.91	0.28	4.39	39.50	8.57	5.32	0.00
11.00	2.21	0.42	6.73	40.00	8.57	5.32	0.00
11.50	2.68	0.67	12.10	40.50	8.57	5.32	0.00
12.00	4.08	1.59	32.06	41.00	8.57	5.32	0.00
12.50	5.89	3.00	79.86	41.50	8.57	5.32	0.00
13.00	6.36	3.39	26.69	42.00	8.57	5.32	0.00
13.50	6.66	3.64	15.49	42.50	8.57	5.32	0.00
14.00	6.88	3.83	10.75	43.00	8.57	5.32	0.00
14.50	7.06	3.99	8.98	43.50	8.57	5.32	0.00
15.00	7.21	4.12	7.48	44.00	8.57	5.32	0.00
15.50	7.34	4.23	6.23	44.50	8.57	5.32	0.00
16.00	7.46	4.33	5.73	45.00	8.57	5.32	0.00
16.50	7.56	4.43	5.30	45.50	8.57	5.32	0.00
17.00	7.66	4.51	4.87	46.00	8.57	5.32	0.00
17.50	7.75	4.59	4.43	46.50	8.57	5.32	0.00
18.00	7.83	4.66	3.99	47.00	8.57	5.32	0.00
18.50	7.91	4.73	3.63	47.50	8.57	5.32	0.00
19.00	7.98	4.79	3.50	48.00	8.57	5.32	0.00
19.50	8.05	4.85	3.39				
20.00	8.12	4.91	3.29				
20.50	8.18	4.97	3.18				
21.00	8.24	5.03	3.07				
21.50	8.30	5.08	2.96				
22.00	8.36	5.13	2.85				
22.50	8.42	5.18	2.74				
23.00	8.47	5.23	2.63				
23.50	8.52	5.27	2.51				
24.00	8.57	5.32	2.40				
24.50	8.57	5.32	0.41				
25.00	8.57	5.32	0.02				
25.50	8.57	5.32	0.00				
26.00	8.57	5.32	0.00				
26.50	8.57	5.32	0.00				
27.00	8.57	5.32	0.00				
27.50	8.57	5.32	0.00				
28.00	8.57	5.32	0.00				
28.50	8.57	5.32	0.00				

Summary for Subcatchment 30S: PDA-1A

Runoff = 20.02 cfs @ 12.13 hrs, Volume= 1.400 af, Depth= 6.76"
 Routed to Pond 3P : Bioretention 1A

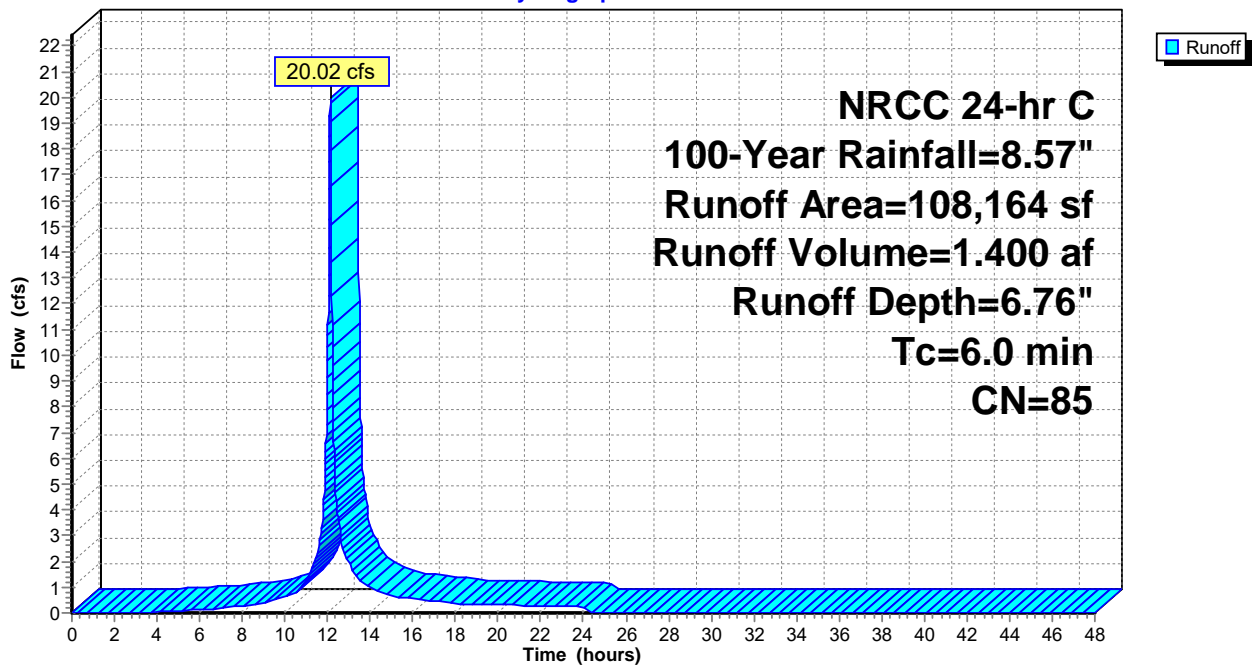
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
23,210	39	>75% Grass cover, Good, HSG A
84,954	98	Paved parking, HSG D
108,164	85	Weighted Average
23,210		21.46% Pervious Area
84,954		78.54% Impervious Area

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

Subcatchment 30S: PDA-1A

Hydrograph



Hydrograph for Subcatchment 30S: PDA-1A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	6.76	0.00
0.50	0.05	0.00	0.00	29.50	8.57	6.76	0.00
1.00	0.10	0.00	0.00	30.00	8.57	6.76	0.00
1.50	0.15	0.00	0.00	30.50	8.57	6.76	0.00
2.00	0.21	0.00	0.00	31.00	8.57	6.76	0.00
2.50	0.27	0.00	0.00	31.50	8.57	6.76	0.00
3.00	0.33	0.00	0.00	32.00	8.57	6.76	0.00
3.50	0.39	0.00	0.01	32.50	8.57	6.76	0.00
4.00	0.45	0.01	0.03	33.00	8.57	6.76	0.00
4.50	0.52	0.01	0.05	33.50	8.57	6.76	0.00
5.00	0.59	0.03	0.07	34.00	8.57	6.76	0.00
5.50	0.66	0.05	0.10	34.50	8.57	6.76	0.00
6.00	0.74	0.07	0.12	35.00	8.57	6.76	0.00
6.50	0.82	0.10	0.15	35.50	8.57	6.76	0.00
7.00	0.91	0.13	0.19	36.00	8.57	6.76	0.00
7.50	1.01	0.18	0.23	36.50	8.57	6.76	0.00
8.00	1.11	0.23	0.28	37.00	8.57	6.76	0.00
8.50	1.23	0.29	0.33	37.50	8.57	6.76	0.00
9.00	1.36	0.37	0.38	38.00	8.57	6.76	0.00
9.50	1.51	0.46	0.51	38.50	8.57	6.76	0.00
10.00	1.69	0.58	0.65	39.00	8.57	6.76	0.00
10.50	1.91	0.73	0.81	39.50	8.57	6.76	0.00
11.00	2.21	0.95	1.28	40.00	8.57	6.76	0.00
11.50	2.68	1.33	2.18	40.50	8.57	6.76	0.00
12.00	4.08	2.53	10.32	41.00	8.57	6.76	0.00
12.50	5.89	4.20	3.62	41.50	8.57	6.76	0.00
13.00	6.36	4.64	1.93	42.00	8.57	6.76	0.00
13.50	6.66	4.93	1.25	42.50	8.57	6.76	0.00
14.00	6.88	5.14	0.98	43.00	8.57	6.76	0.00
14.50	7.06	5.31	0.83	43.50	8.57	6.76	0.00
15.00	7.21	5.45	0.67	44.00	8.57	6.76	0.00
15.50	7.34	5.58	0.60	44.50	8.57	6.76	0.00
16.00	7.46	5.69	0.55	45.00	8.57	6.76	0.00
16.50	7.56	5.79	0.51	45.50	8.57	6.76	0.00
17.00	7.66	5.89	0.46	46.00	8.57	6.76	0.00
17.50	7.75	5.98	0.42	46.50	8.57	6.76	0.00
18.00	7.83	6.05	0.37	47.00	8.57	6.76	0.00
18.50	7.91	6.13	0.35	47.50	8.57	6.76	0.00
19.00	7.98	6.19	0.34	48.00	8.57	6.76	0.00
19.50	8.05	6.26	0.33				
20.00	8.12	6.33	0.32				
20.50	8.18	6.39	0.31				
21.00	8.24	6.45	0.30				
21.50	8.30	6.51	0.29				
22.00	8.36	6.56	0.28				
22.50	8.42	6.62	0.26				
23.00	8.47	6.67	0.25				
23.50	8.52	6.72	0.24				
24.00	8.57	6.76	0.23				
24.50	8.57	6.76	0.00				
25.00	8.57	6.76	0.00				
25.50	8.57	6.76	0.00				
26.00	8.57	6.76	0.00				
26.50	8.57	6.76	0.00				
27.00	8.57	6.76	0.00				
27.50	8.57	6.76	0.00				
28.00	8.57	6.76	0.00				
28.50	8.57	6.76	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 31S: PDA-1C

Runoff = 21.90 cfs @ 12.13 hrs, Volume= 1.586 af, Depth= 7.37"
 Routed to Pond 32P : FB 1C

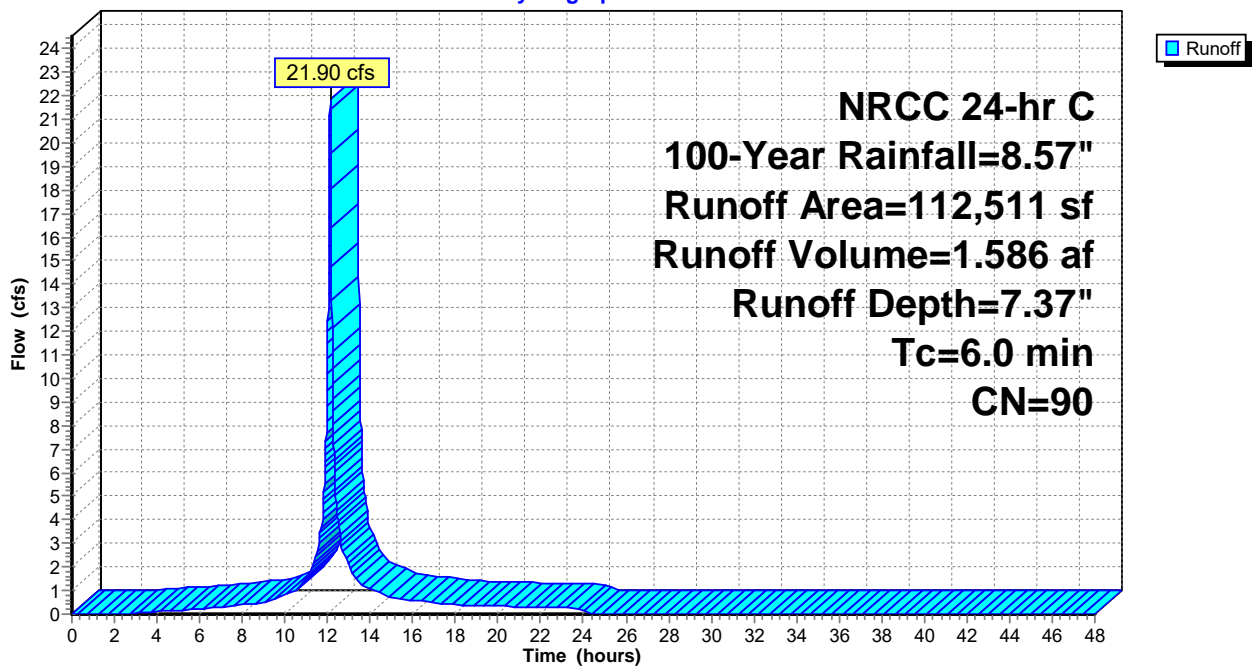
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
14,434	80	>75% Grass cover, Good, HSG D
10,394	39	>75% Grass cover, Good, HSG A
87,683	98	Paved parking, HSG D
112,511	90	Weighted Average
24,828		22.07% Pervious Area
87,683		77.93% Impervious Area

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

Subcatchment 31S: PDA-1C

Hydrograph



Hydrograph for Subcatchment 31S: PDA-1C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	7.37	0.00
0.50	0.05	0.00	0.00	29.50	8.57	7.37	0.00
1.00	0.10	0.00	0.00	30.00	8.57	7.37	0.00
1.50	0.15	0.00	0.00	30.50	8.57	7.37	0.00
2.00	0.21	0.00	0.00	31.00	8.57	7.37	0.00
2.50	0.27	0.00	0.02	31.50	8.57	7.37	0.00
3.00	0.33	0.01	0.05	32.00	8.57	7.37	0.00
3.50	0.39	0.02	0.08	32.50	8.57	7.37	0.00
4.00	0.45	0.04	0.10	33.00	8.57	7.37	0.00
4.50	0.52	0.06	0.13	33.50	8.57	7.37	0.00
5.00	0.59	0.09	0.16	34.00	8.57	7.37	0.00
5.50	0.66	0.12	0.18	34.50	8.57	7.37	0.00
6.00	0.74	0.16	0.20	35.00	8.57	7.37	0.00
6.50	0.82	0.21	0.25	35.50	8.57	7.37	0.00
7.00	0.91	0.26	0.29	36.00	8.57	7.37	0.00
7.50	1.01	0.32	0.35	36.50	8.57	7.37	0.00
8.00	1.11	0.40	0.40	37.00	8.57	7.37	0.00
8.50	1.23	0.48	0.45	37.50	8.57	7.37	0.00
9.00	1.36	0.57	0.51	38.00	8.57	7.37	0.00
9.50	1.51	0.69	0.66	38.50	8.57	7.37	0.00
10.00	1.69	0.84	0.82	39.00	8.57	7.37	0.00
10.50	1.91	1.02	0.99	39.50	8.57	7.37	0.00
11.00	2.21	1.27	1.53	40.00	8.57	7.37	0.00
11.50	2.68	1.69	2.52	40.50	8.57	7.37	0.00
12.00	4.08	3.00	11.49	41.00	8.57	7.37	0.00
12.50	5.89	4.74	3.89	41.50	8.57	7.37	0.00
13.00	6.36	5.20	2.06	42.00	8.57	7.37	0.00
13.50	6.66	5.49	1.34	42.50	8.57	7.37	0.00
14.00	6.88	5.70	1.05	43.00	8.57	7.37	0.00
14.50	7.06	5.88	0.88	43.50	8.57	7.37	0.00
15.00	7.21	6.03	0.71	44.00	8.57	7.37	0.00
15.50	7.34	6.16	0.64	44.50	8.57	7.37	0.00
16.00	7.46	6.27	0.59	45.00	8.57	7.37	0.00
16.50	7.56	6.38	0.54	45.50	8.57	7.37	0.00
17.00	7.66	6.48	0.49	46.00	8.57	7.37	0.00
17.50	7.75	6.56	0.44	46.50	8.57	7.37	0.00
18.00	7.83	6.64	0.40	47.00	8.57	7.37	0.00
18.50	7.91	6.72	0.38	47.50	8.57	7.37	0.00
19.00	7.98	6.79	0.36	48.00	8.57	7.37	0.00
19.50	8.05	6.85	0.35				
20.00	8.12	6.92	0.34				
20.50	8.18	6.98	0.33				
21.00	8.24	7.05	0.32				
21.50	8.30	7.11	0.30				
22.00	8.36	7.16	0.29				
22.50	8.42	7.22	0.28				
23.00	8.47	7.27	0.27				
23.50	8.52	7.32	0.26				
24.00	8.57	7.37	0.25				
24.50	8.57	7.37	0.00				
25.00	8.57	7.37	0.00				
25.50	8.57	7.37	0.00				
26.00	8.57	7.37	0.00				
26.50	8.57	7.37	0.00				
27.00	8.57	7.37	0.00				
27.50	8.57	7.37	0.00				
28.00	8.57	7.37	0.00				
28.50	8.57	7.37	0.00				

Summary for Subcatchment 34S: PDA-1K

Runoff = 1.36 cfs @ 12.14 hrs, Volume= 0.098 af, Depth= 1.94"
 Routed to Pond 63P : Det Pond 1K

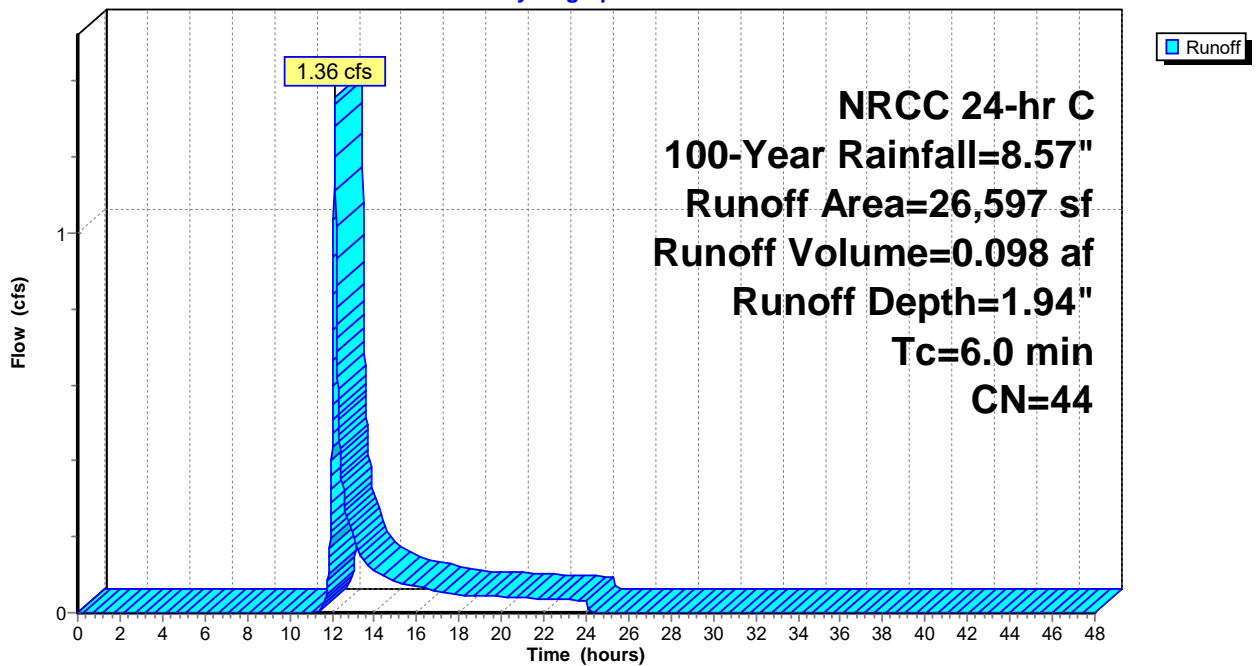
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
23,033	39	>75% Grass cover, Good, HSG A
3,564	80	>75% Grass cover, Good, HSG D
26,597	44	Weighted Average
26,597		100.00% Pervious Area

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

Subcatchment 34S: PDA-1K

Hydrograph



Hydrograph for Subcatchment 34S: PDA-1K

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	1.94	0.00
0.50	0.05	0.00	0.00	29.50	8.57	1.94	0.00
1.00	0.10	0.00	0.00	30.00	8.57	1.94	0.00
1.50	0.15	0.00	0.00	30.50	8.57	1.94	0.00
2.00	0.21	0.00	0.00	31.00	8.57	1.94	0.00
2.50	0.27	0.00	0.00	31.50	8.57	1.94	0.00
3.00	0.33	0.00	0.00	32.00	8.57	1.94	0.00
3.50	0.39	0.00	0.00	32.50	8.57	1.94	0.00
4.00	0.45	0.00	0.00	33.00	8.57	1.94	0.00
4.50	0.52	0.00	0.00	33.50	8.57	1.94	0.00
5.00	0.59	0.00	0.00	34.00	8.57	1.94	0.00
5.50	0.66	0.00	0.00	34.50	8.57	1.94	0.00
6.00	0.74	0.00	0.00	35.00	8.57	1.94	0.00
6.50	0.82	0.00	0.00	35.50	8.57	1.94	0.00
7.00	0.91	0.00	0.00	36.00	8.57	1.94	0.00
7.50	1.01	0.00	0.00	36.50	8.57	1.94	0.00
8.00	1.11	0.00	0.00	37.00	8.57	1.94	0.00
8.50	1.23	0.00	0.00	37.50	8.57	1.94	0.00
9.00	1.36	0.00	0.00	38.00	8.57	1.94	0.00
9.50	1.51	0.00	0.00	38.50	8.57	1.94	0.00
10.00	1.69	0.00	0.00	39.00	8.57	1.94	0.00
10.50	1.91	0.00	0.00	39.50	8.57	1.94	0.00
11.00	2.21	0.00	0.00	40.00	8.57	1.94	0.00
11.50	2.68	0.00	0.00	40.50	8.57	1.94	0.00
12.00	4.08	0.17	0.44	41.00	8.57	1.94	0.00
12.50	5.89	0.70	0.34	41.50	8.57	1.94	0.00
13.00	6.36	0.88	0.20	42.00	8.57	1.94	0.00
13.50	6.66	1.01	0.14	42.50	8.57	1.94	0.00
14.00	6.88	1.10	0.11	43.00	8.57	1.94	0.00
14.50	7.06	1.18	0.10	43.50	8.57	1.94	0.00
15.00	7.21	1.25	0.08	44.00	8.57	1.94	0.00
15.50	7.34	1.31	0.07	44.50	8.57	1.94	0.00
16.00	7.46	1.37	0.07	45.00	8.57	1.94	0.00
16.50	7.56	1.42	0.06	45.50	8.57	1.94	0.00
17.00	7.66	1.47	0.06	46.00	8.57	1.94	0.00
17.50	7.75	1.51	0.05	46.50	8.57	1.94	0.00
18.00	7.83	1.55	0.05	47.00	8.57	1.94	0.00
18.50	7.91	1.59	0.05	47.50	8.57	1.94	0.00
19.00	7.98	1.63	0.04	48.00	8.57	1.94	0.00
19.50	8.05	1.66	0.04				
20.00	8.12	1.70	0.04				
20.50	8.18	1.73	0.04				
21.00	8.24	1.76	0.04				
21.50	8.30	1.79	0.04				
22.00	8.36	1.82	0.04				
22.50	8.42	1.85	0.04				
23.00	8.47	1.88	0.03				
23.50	8.52	1.91	0.03				
24.00	8.57	1.94	0.03				
24.50	8.57	1.94	0.00				
25.00	8.57	1.94	0.00				
25.50	8.57	1.94	0.00				
26.00	8.57	1.94	0.00				
26.50	8.57	1.94	0.00				
27.00	8.57	1.94	0.00				
27.50	8.57	1.94	0.00				
28.00	8.57	1.94	0.00				
28.50	8.57	1.94	0.00				

Summary for Subcatchment 35S: PDA-2U

Runoff = 6.06 cfs @ 12.14 hrs, Volume= 0.406 af, Depth= 2.83"
 Routed to Link 30L : DP-2

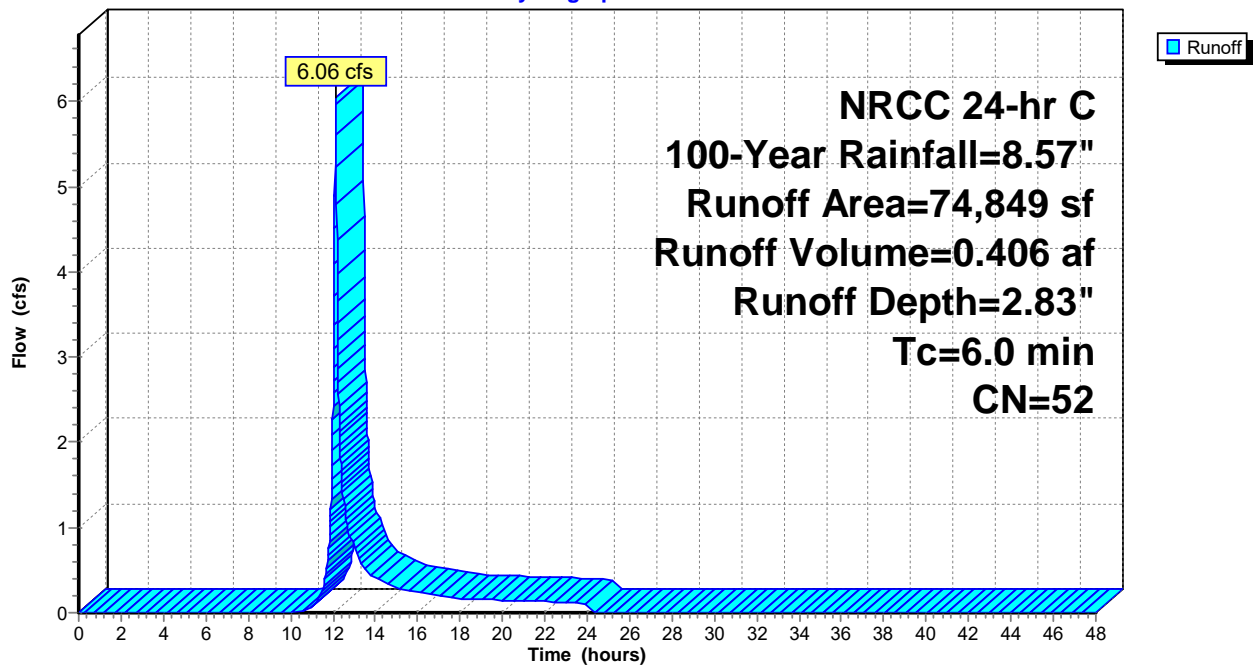
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
24,466	80	>75% Grass cover, Good, HSG D
50,383	39	>75% Grass cover, Good, HSG A
74,849	52	Weighted Average
74,849		100.00% Pervious Area

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

Subcatchment 35S: PDA-2U

Hydrograph



Hydrograph for Subcatchment 35S: PDA-2U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	2.83	0.00
0.50	0.05	0.00	0.00	29.50	8.57	2.83	0.00
1.00	0.10	0.00	0.00	30.00	8.57	2.83	0.00
1.50	0.15	0.00	0.00	30.50	8.57	2.83	0.00
2.00	0.21	0.00	0.00	31.00	8.57	2.83	0.00
2.50	0.27	0.00	0.00	31.50	8.57	2.83	0.00
3.00	0.33	0.00	0.00	32.00	8.57	2.83	0.00
3.50	0.39	0.00	0.00	32.50	8.57	2.83	0.00
4.00	0.45	0.00	0.00	33.00	8.57	2.83	0.00
4.50	0.52	0.00	0.00	33.50	8.57	2.83	0.00
5.00	0.59	0.00	0.00	34.00	8.57	2.83	0.00
5.50	0.66	0.00	0.00	34.50	8.57	2.83	0.00
6.00	0.74	0.00	0.00	35.00	8.57	2.83	0.00
6.50	0.82	0.00	0.00	35.50	8.57	2.83	0.00
7.00	0.91	0.00	0.00	36.00	8.57	2.83	0.00
7.50	1.01	0.00	0.00	36.50	8.57	2.83	0.00
8.00	1.11	0.00	0.00	37.00	8.57	2.83	0.00
8.50	1.23	0.00	0.00	37.50	8.57	2.83	0.00
9.00	1.36	0.00	0.00	38.00	8.57	2.83	0.00
9.50	1.51	0.00	0.00	38.50	8.57	2.83	0.00
10.00	1.69	0.00	0.00	39.00	8.57	2.83	0.00
10.50	1.91	0.00	0.00	39.50	8.57	2.83	0.00
11.00	2.21	0.01	0.07	40.00	8.57	2.83	0.00
11.50	2.68	0.07	0.27	40.50	8.57	2.83	0.00
12.00	4.08	0.44	2.43	41.00	8.57	2.83	0.00
12.50	5.89	1.23	1.35	41.50	8.57	2.83	0.00
13.00	6.36	1.48	0.76	42.00	8.57	2.83	0.00
13.50	6.66	1.65	0.51	42.50	8.57	2.83	0.00
14.00	6.88	1.77	0.41	43.00	8.57	2.83	0.00
14.50	7.06	1.88	0.35	43.50	8.57	2.83	0.00
15.00	7.21	1.97	0.29	44.00	8.57	2.83	0.00
15.50	7.34	2.05	0.26	44.50	8.57	2.83	0.00
16.00	7.46	2.12	0.24	45.00	8.57	2.83	0.00
16.50	7.56	2.19	0.23	45.50	8.57	2.83	0.00
17.00	7.66	2.25	0.21	46.00	8.57	2.83	0.00
17.50	7.75	2.31	0.19	46.50	8.57	2.83	0.00
18.00	7.83	2.36	0.17	47.00	8.57	2.83	0.00
18.50	7.91	2.40	0.16	47.50	8.57	2.83	0.00
19.00	7.98	2.45	0.16	48.00	8.57	2.83	0.00
19.50	8.05	2.49	0.15				
20.00	8.12	2.54	0.15				
20.50	8.18	2.58	0.14				
21.00	8.24	2.62	0.14				
21.50	8.30	2.66	0.13				
22.00	8.36	2.70	0.13				
22.50	8.42	2.73	0.12				
23.00	8.47	2.77	0.12				
23.50	8.52	2.80	0.12				
24.00	8.57	2.83	0.11				
24.50	8.57	2.83	0.00				
25.00	8.57	2.83	0.00				
25.50	8.57	2.83	0.00				
26.00	8.57	2.83	0.00				
26.50	8.57	2.83	0.00				
27.00	8.57	2.83	0.00				
27.50	8.57	2.83	0.00				
28.00	8.57	2.83	0.00				
28.50	8.57	2.83	0.00				

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 36S: PDA-3U

Runoff = 1.77 cfs @ 12.14 hrs, Volume= 0.147 af, Depth= 1.40"
Routed to Link 31L : DP-3

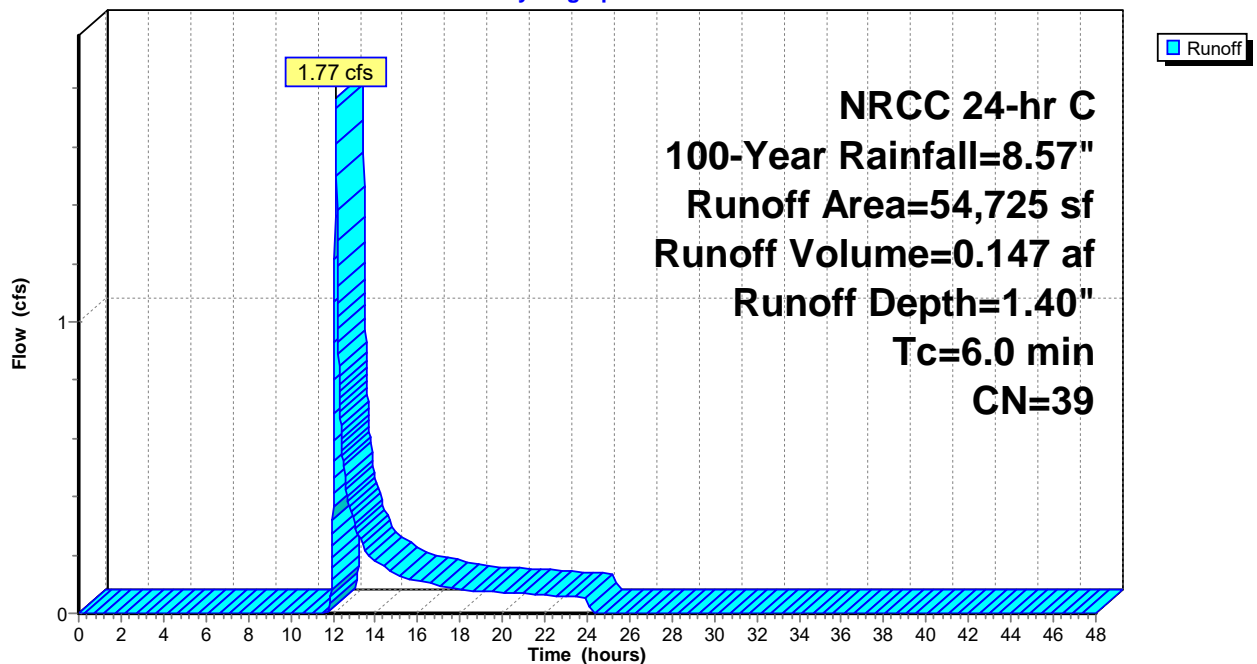
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
54,725	39	>75% Grass cover, Good, HSG A
54,725		100.00% Pervious Area

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

Subcatchment 36S: PDA-3U

Hydrograph



Hydrograph for Subcatchment 36S: PDA-3U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	1.40	0.00
0.50	0.05	0.00	0.00	29.50	8.57	1.40	0.00
1.00	0.10	0.00	0.00	30.00	8.57	1.40	0.00
1.50	0.15	0.00	0.00	30.50	8.57	1.40	0.00
2.00	0.21	0.00	0.00	31.00	8.57	1.40	0.00
2.50	0.27	0.00	0.00	31.50	8.57	1.40	0.00
3.00	0.33	0.00	0.00	32.00	8.57	1.40	0.00
3.50	0.39	0.00	0.00	32.50	8.57	1.40	0.00
4.00	0.45	0.00	0.00	33.00	8.57	1.40	0.00
4.50	0.52	0.00	0.00	33.50	8.57	1.40	0.00
5.00	0.59	0.00	0.00	34.00	8.57	1.40	0.00
5.50	0.66	0.00	0.00	34.50	8.57	1.40	0.00
6.00	0.74	0.00	0.00	35.00	8.57	1.40	0.00
6.50	0.82	0.00	0.00	35.50	8.57	1.40	0.00
7.00	0.91	0.00	0.00	36.00	8.57	1.40	0.00
7.50	1.01	0.00	0.00	36.50	8.57	1.40	0.00
8.00	1.11	0.00	0.00	37.00	8.57	1.40	0.00
8.50	1.23	0.00	0.00	37.50	8.57	1.40	0.00
9.00	1.36	0.00	0.00	38.00	8.57	1.40	0.00
9.50	1.51	0.00	0.00	38.50	8.57	1.40	0.00
10.00	1.69	0.00	0.00	39.00	8.57	1.40	0.00
10.50	1.91	0.00	0.00	39.50	8.57	1.40	0.00
11.00	2.21	0.00	0.00	40.00	8.57	1.40	0.00
11.50	2.68	0.00	0.00	40.50	8.57	1.40	0.00
12.00	4.08	0.05	0.37	41.00	8.57	1.40	0.00
12.50	5.89	0.41	0.52	41.50	8.57	1.40	0.00
13.00	6.36	0.55	0.32	42.00	8.57	1.40	0.00
13.50	6.66	0.65	0.22	42.50	8.57	1.40	0.00
14.00	6.88	0.72	0.18	43.00	8.57	1.40	0.00
14.50	7.06	0.79	0.16	43.50	8.57	1.40	0.00
15.00	7.21	0.85	0.13	44.00	8.57	1.40	0.00
15.50	7.34	0.89	0.12	44.50	8.57	1.40	0.00
16.00	7.46	0.94	0.11	45.00	8.57	1.40	0.00
16.50	7.56	0.98	0.10	45.50	8.57	1.40	0.00
17.00	7.66	1.02	0.10	46.00	8.57	1.40	0.00
17.50	7.75	1.06	0.09	46.50	8.57	1.40	0.00
18.00	7.83	1.09	0.08	47.00	8.57	1.40	0.00
18.50	7.91	1.12	0.08	47.50	8.57	1.40	0.00
19.00	7.98	1.15	0.07	48.00	8.57	1.40	0.00
19.50	8.05	1.18	0.07				
20.00	8.12	1.21	0.07				
20.50	8.18	1.23	0.07				
21.00	8.24	1.26	0.07				
21.50	8.30	1.29	0.07				
22.00	8.36	1.31	0.06				
22.50	8.42	1.34	0.06				
23.00	8.47	1.36	0.06				
23.50	8.52	1.38	0.06				
24.00	8.57	1.40	0.05				
24.50	8.57	1.40	0.00				
25.00	8.57	1.40	0.00				
25.50	8.57	1.40	0.00				
26.00	8.57	1.40	0.00				
26.50	8.57	1.40	0.00				
27.00	8.57	1.40	0.00				
27.50	8.57	1.40	0.00				
28.00	8.57	1.40	0.00				
28.50	8.57	1.40	0.00				

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 37S: PDA-1I

Runoff = 30.81 cfs @ 12.13 hrs, Volume= 2.118 af, Depth= 6.40"
 Routed to Pond 37P : FB 1i+J

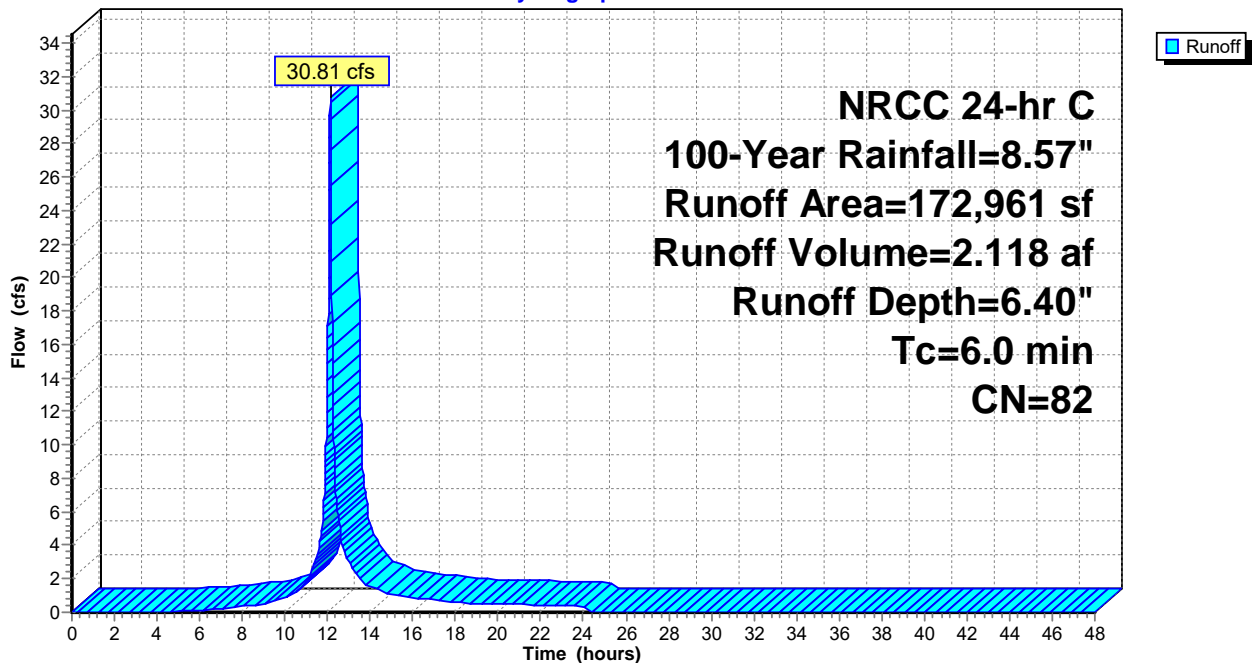
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
42,540	61	>75% Grass cover, Good, HSG B
16,570	39	>75% Grass cover, Good, HSG A
14,535	80	>75% Grass cover, Good, HSG D
99,316	98	Paved parking, HSG D
172,961	82	Weighted Average
73,645		42.58% Pervious Area
99,316		57.42% Impervious Area

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

Subcatchment 37S: PDA-1I

Hydrograph



Hydrograph for Subcatchment 37S: PDA-11

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	6.40	0.00
0.50	0.05	0.00	0.00	29.50	8.57	6.40	0.00
1.00	0.10	0.00	0.00	30.00	8.57	6.40	0.00
1.50	0.15	0.00	0.00	30.50	8.57	6.40	0.00
2.00	0.21	0.00	0.00	31.00	8.57	6.40	0.00
2.50	0.27	0.00	0.00	31.50	8.57	6.40	0.00
3.00	0.33	0.00	0.00	32.00	8.57	6.40	0.00
3.50	0.39	0.00	0.00	32.50	8.57	6.40	0.00
4.00	0.45	0.00	0.00	33.00	8.57	6.40	0.00
4.50	0.52	0.00	0.03	33.50	8.57	6.40	0.00
5.00	0.59	0.01	0.06	34.00	8.57	6.40	0.00
5.50	0.66	0.02	0.10	34.50	8.57	6.40	0.00
6.00	0.74	0.04	0.13	35.00	8.57	6.40	0.00
6.50	0.82	0.06	0.18	35.50	8.57	6.40	0.00
7.00	0.91	0.08	0.23	36.00	8.57	6.40	0.00
7.50	1.01	0.12	0.29	36.50	8.57	6.40	0.00
8.00	1.11	0.16	0.36	37.00	8.57	6.40	0.00
8.50	1.23	0.21	0.44	37.50	8.57	6.40	0.00
9.00	1.36	0.27	0.52	38.00	8.57	6.40	0.00
9.50	1.51	0.35	0.70	38.50	8.57	6.40	0.00
10.00	1.69	0.46	0.91	39.00	8.57	6.40	0.00
10.50	1.91	0.59	1.15	39.50	8.57	6.40	0.00
11.00	2.21	0.79	1.86	40.00	8.57	6.40	0.00
11.50	2.68	1.13	3.22	40.50	8.57	6.40	0.00
12.00	4.08	2.27	15.68	41.00	8.57	6.40	0.00
12.50	5.89	3.88	5.63	41.50	8.57	6.40	0.00
13.00	6.36	4.32	3.01	42.00	8.57	6.40	0.00
13.50	6.66	4.60	1.96	42.50	8.57	6.40	0.00
14.00	6.88	4.80	1.54	43.00	8.57	6.40	0.00
14.50	7.06	4.97	1.30	43.50	8.57	6.40	0.00
15.00	7.21	5.11	1.05	44.00	8.57	6.40	0.00
15.50	7.34	5.23	0.94	44.50	8.57	6.40	0.00
16.00	7.46	5.35	0.87	45.00	8.57	6.40	0.00
16.50	7.56	5.45	0.80	45.50	8.57	6.40	0.00
17.00	7.66	5.54	0.73	46.00	8.57	6.40	0.00
17.50	7.75	5.63	0.66	46.50	8.57	6.40	0.00
18.00	7.83	5.70	0.59	47.00	8.57	6.40	0.00
18.50	7.91	5.77	0.56	47.50	8.57	6.40	0.00
19.00	7.98	5.84	0.54	48.00	8.57	6.40	0.00
19.50	8.05	5.91	0.52				
20.00	8.12	5.97	0.50				
20.50	8.18	6.03	0.49				
21.00	8.24	6.09	0.47				
21.50	8.30	6.15	0.45				
22.00	8.36	6.20	0.43				
22.50	8.42	6.26	0.42				
23.00	8.47	6.31	0.40				
23.50	8.52	6.36	0.38				
24.00	8.57	6.40	0.37				
24.50	8.57	6.40	0.00				
25.00	8.57	6.40	0.00				
25.50	8.57	6.40	0.00				
26.00	8.57	6.40	0.00				
26.50	8.57	6.40	0.00				
27.00	8.57	6.40	0.00				
27.50	8.57	6.40	0.00				
28.00	8.57	6.40	0.00				
28.50	8.57	6.40	0.00				

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 38S: PDA-4U

Runoff = 17.68 cfs @ 12.14 hrs, Volume= 1.260 af, Depth= 2.05"
 Routed to Link 32L : DP-4

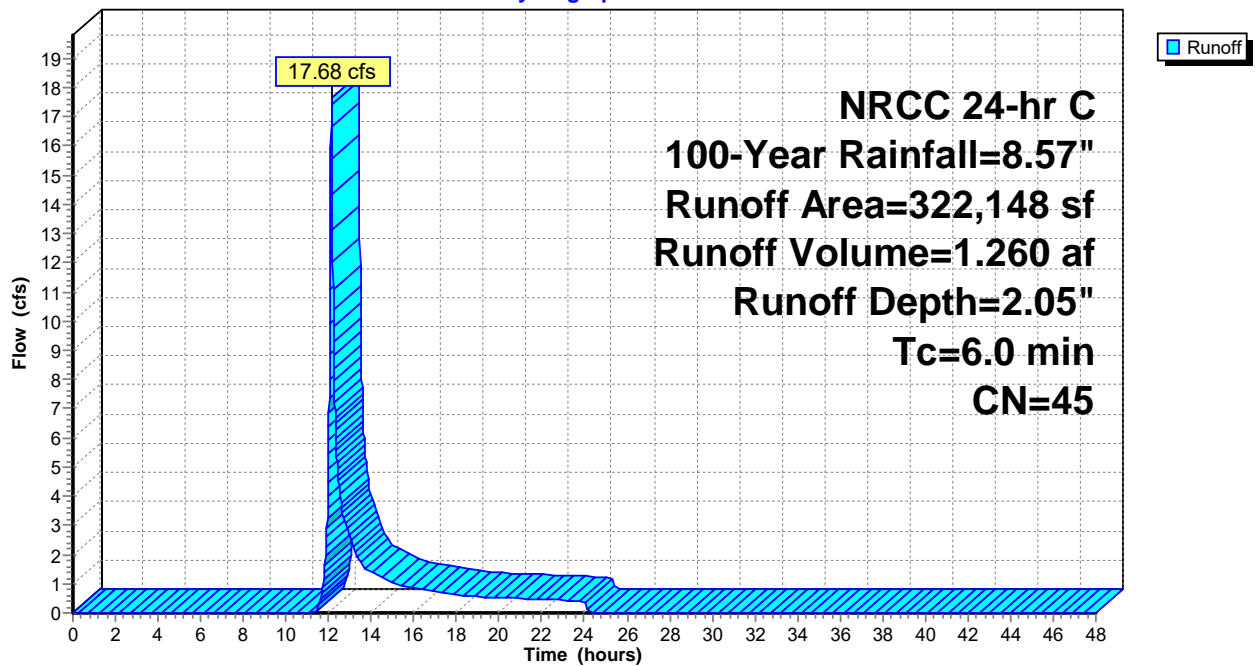
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
289,660	39	>75% Grass cover, Good, HSG A
32,488	98	Paved parking, HSG D
322,148	45	Weighted Average
289,660		89.92% Pervious Area
32,488		10.08% Impervious Area

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

Subcatchment 38S: PDA-4U

Hydrograph



Hydrograph for Subcatchment 38S: PDA-4U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	2.05	0.00
0.50	0.05	0.00	0.00	29.50	8.57	2.05	0.00
1.00	0.10	0.00	0.00	30.00	8.57	2.05	0.00
1.50	0.15	0.00	0.00	30.50	8.57	2.05	0.00
2.00	0.21	0.00	0.00	31.00	8.57	2.05	0.00
2.50	0.27	0.00	0.00	31.50	8.57	2.05	0.00
3.00	0.33	0.00	0.00	32.00	8.57	2.05	0.00
3.50	0.39	0.00	0.00	32.50	8.57	2.05	0.00
4.00	0.45	0.00	0.00	33.00	8.57	2.05	0.00
4.50	0.52	0.00	0.00	33.50	8.57	2.05	0.00
5.00	0.59	0.00	0.00	34.00	8.57	2.05	0.00
5.50	0.66	0.00	0.00	34.50	8.57	2.05	0.00
6.00	0.74	0.00	0.00	35.00	8.57	2.05	0.00
6.50	0.82	0.00	0.00	35.50	8.57	2.05	0.00
7.00	0.91	0.00	0.00	36.00	8.57	2.05	0.00
7.50	1.01	0.00	0.00	36.50	8.57	2.05	0.00
8.00	1.11	0.00	0.00	37.00	8.57	2.05	0.00
8.50	1.23	0.00	0.00	37.50	8.57	2.05	0.00
9.00	1.36	0.00	0.00	38.00	8.57	2.05	0.00
9.50	1.51	0.00	0.00	38.50	8.57	2.05	0.00
10.00	1.69	0.00	0.00	39.00	8.57	2.05	0.00
10.50	1.91	0.00	0.00	39.50	8.57	2.05	0.00
11.00	2.21	0.00	0.00	40.00	8.57	2.05	0.00
11.50	2.68	0.00	0.18	40.50	8.57	2.05	0.00
12.00	4.08	0.19	5.94	41.00	8.57	2.05	0.00
12.50	5.89	0.76	4.36	41.50	8.57	2.05	0.00
13.00	6.36	0.95	2.55	42.00	8.57	2.05	0.00
13.50	6.66	1.08	1.74	42.50	8.57	2.05	0.00
14.00	6.88	1.18	1.41	43.00	8.57	2.05	0.00
14.50	7.06	1.27	1.21	43.50	8.57	2.05	0.00
15.00	7.21	1.34	1.00	44.00	8.57	2.05	0.00
15.50	7.34	1.40	0.91	44.50	8.57	2.05	0.00
16.00	7.46	1.46	0.85	45.00	8.57	2.05	0.00
16.50	7.56	1.51	0.79	45.50	8.57	2.05	0.00
17.00	7.66	1.56	0.73	46.00	8.57	2.05	0.00
17.50	7.75	1.61	0.66	46.50	8.57	2.05	0.00
18.00	7.83	1.65	0.60	47.00	8.57	2.05	0.00
18.50	7.91	1.69	0.57	47.50	8.57	2.05	0.00
19.00	7.98	1.73	0.56	48.00	8.57	2.05	0.00
19.50	8.05	1.76	0.54				
20.00	8.12	1.80	0.53				
20.50	8.18	1.83	0.51				
21.00	8.24	1.87	0.50				
21.50	8.30	1.90	0.48				
22.00	8.36	1.93	0.46				
22.50	8.42	1.96	0.45				
23.00	8.47	1.99	0.43				
23.50	8.52	2.02	0.41				
24.00	8.57	2.05	0.40				
24.50	8.57	2.05	0.00				
25.00	8.57	2.05	0.00				
25.50	8.57	2.05	0.00				
26.00	8.57	2.05	0.00				
26.50	8.57	2.05	0.00				
27.00	8.57	2.05	0.00				
27.50	8.57	2.05	0.00				
28.00	8.57	2.05	0.00				
28.50	8.57	2.05	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 39S: PDA-5U

Runoff = 10.96 cfs @ 12.13 hrs, Volume= 0.720 af, Depth= 3.65"
Routed to Link PDP5 : PDP5

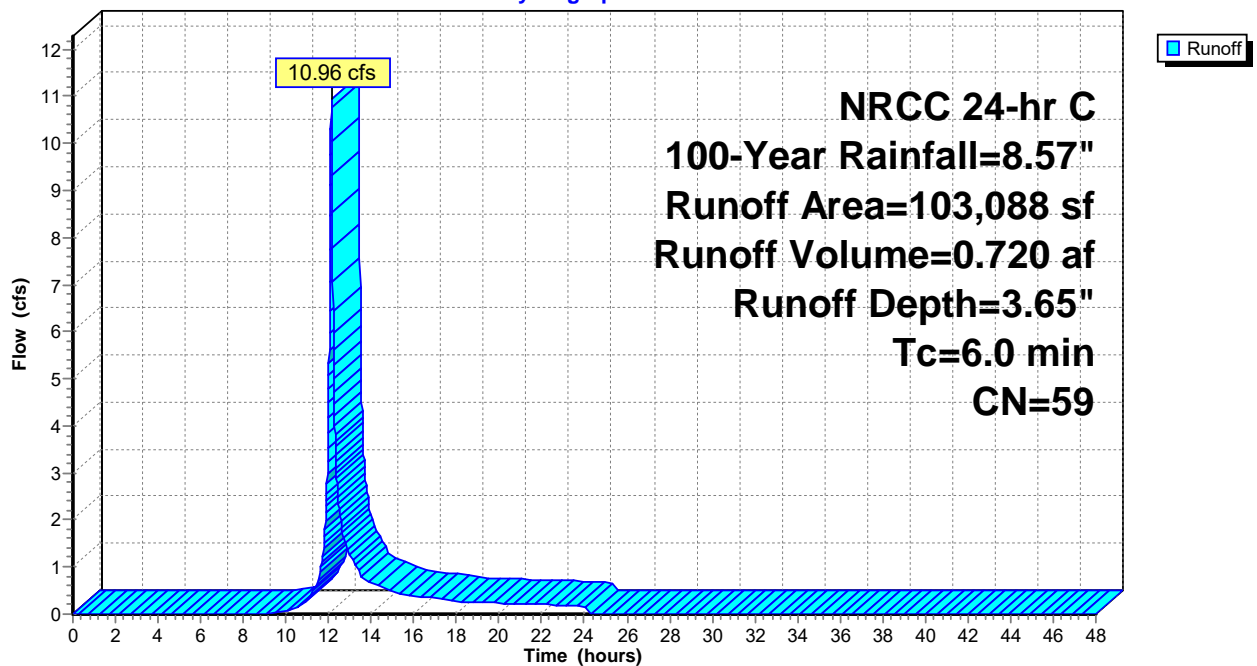
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
47,352	39	>75% Grass cover, Good, HSG A
21,707	98	Paved parking, HSG D
34,029	61	>75% Grass cover, Good, HSG B
103,088	59	Weighted Average
81,381		78.94% Pervious Area
21,707		21.06% Impervious Area

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

Subcatchment 39S: PDA-5U

Hydrograph



Hydrograph for Subcatchment 39S: PDA-5U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	3.65	0.00
0.50	0.05	0.00	0.00	29.50	8.57	3.65	0.00
1.00	0.10	0.00	0.00	30.00	8.57	3.65	0.00
1.50	0.15	0.00	0.00	30.50	8.57	3.65	0.00
2.00	0.21	0.00	0.00	31.00	8.57	3.65	0.00
2.50	0.27	0.00	0.00	31.50	8.57	3.65	0.00
3.00	0.33	0.00	0.00	32.00	8.57	3.65	0.00
3.50	0.39	0.00	0.00	32.50	8.57	3.65	0.00
4.00	0.45	0.00	0.00	33.00	8.57	3.65	0.00
4.50	0.52	0.00	0.00	33.50	8.57	3.65	0.00
5.00	0.59	0.00	0.00	34.00	8.57	3.65	0.00
5.50	0.66	0.00	0.00	34.50	8.57	3.65	0.00
6.00	0.74	0.00	0.00	35.00	8.57	3.65	0.00
6.50	0.82	0.00	0.00	35.50	8.57	3.65	0.00
7.00	0.91	0.00	0.00	36.00	8.57	3.65	0.00
7.50	1.01	0.00	0.00	36.50	8.57	3.65	0.00
8.00	1.11	0.00	0.00	37.00	8.57	3.65	0.00
8.50	1.23	0.00	0.00	37.50	8.57	3.65	0.00
9.00	1.36	0.00	0.00	38.00	8.57	3.65	0.00
9.50	1.51	0.00	0.02	38.50	8.57	3.65	0.00
10.00	1.69	0.01	0.07	39.00	8.57	3.65	0.00
10.50	1.91	0.04	0.13	39.50	8.57	3.65	0.00
11.00	2.21	0.09	0.30	40.00	8.57	3.65	0.00
11.50	2.68	0.20	0.70	40.50	8.57	3.65	0.00
12.00	4.08	0.75	4.80	41.00	8.57	3.65	0.00
12.50	5.89	1.77	2.28	41.50	8.57	3.65	0.00
13.00	6.36	2.07	1.27	42.00	8.57	3.65	0.00
13.50	6.66	2.27	0.84	42.50	8.57	3.65	0.00
14.00	6.88	2.42	0.67	43.00	8.57	3.65	0.00
14.50	7.06	2.55	0.57	43.50	8.57	3.65	0.00
15.00	7.21	2.65	0.47	44.00	8.57	3.65	0.00
15.50	7.34	2.74	0.42	44.50	8.57	3.65	0.00
16.00	7.46	2.83	0.39	45.00	8.57	3.65	0.00
16.50	7.56	2.91	0.36	45.50	8.57	3.65	0.00
17.00	7.66	2.98	0.33	46.00	8.57	3.65	0.00
17.50	7.75	3.04	0.30	46.50	8.57	3.65	0.00
18.00	7.83	3.10	0.27	47.00	8.57	3.65	0.00
18.50	7.91	3.16	0.26	47.50	8.57	3.65	0.00
19.00	7.98	3.21	0.25	48.00	8.57	3.65	0.00
19.50	8.05	3.26	0.24				
20.00	8.12	3.31	0.23				
20.50	8.18	3.36	0.23				
21.00	8.24	3.40	0.22				
21.50	8.30	3.45	0.21				
22.00	8.36	3.49	0.20				
22.50	8.42	3.53	0.20				
23.00	8.47	3.57	0.19				
23.50	8.52	3.61	0.18				
24.00	8.57	3.65	0.17				
24.50	8.57	3.65	0.00				
25.00	8.57	3.65	0.00				
25.50	8.57	3.65	0.00				
26.00	8.57	3.65	0.00				
26.50	8.57	3.65	0.00				
27.00	8.57	3.65	0.00				
27.50	8.57	3.65	0.00				
28.00	8.57	3.65	0.00				
28.50	8.57	3.65	0.00				

Summary for Subcatchment 40S: PDA-i+J-FB

Runoff = 0.87 cfs @ 12.14 hrs, Volume= 0.060 af, Depth= 2.27"
 Routed to Pond 37P : FB 1i+J

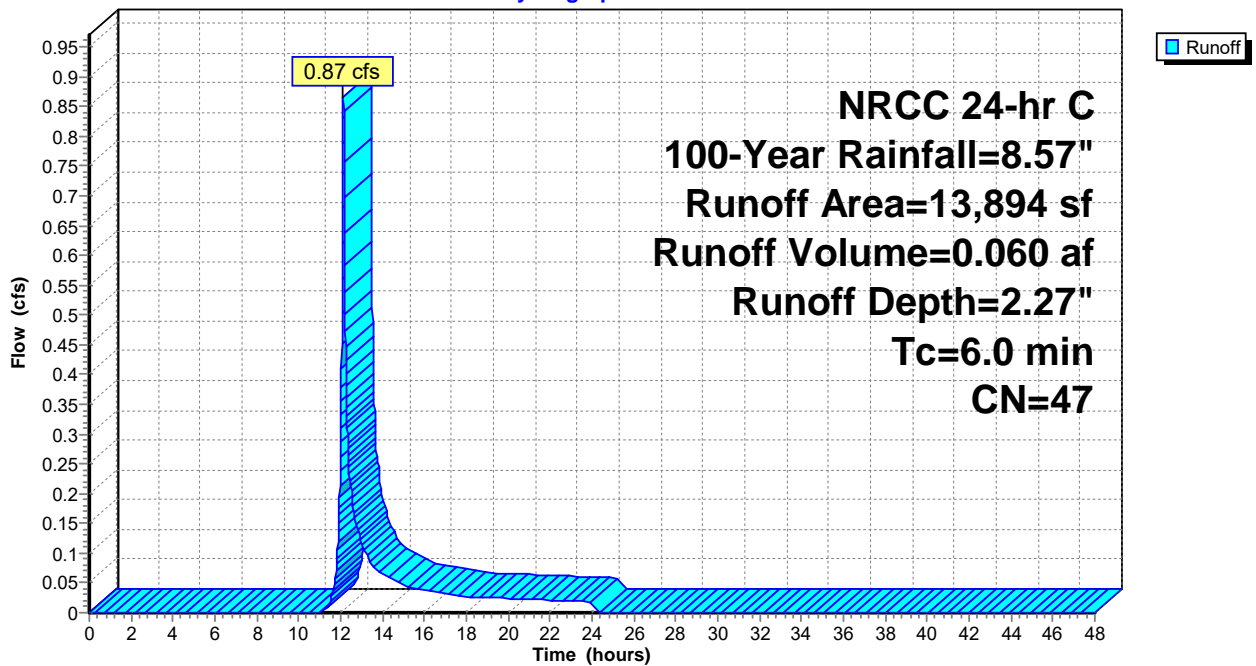
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
8,901	39	>75% Grass cover, Good, HSG A
4,993	61	>75% Grass cover, Good, HSG B
13,894	47	Weighted Average
13,894		100.00% Pervious Area

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

Subcatchment 40S: PDA-i+J-FB

Hydrograph



Hydrograph for Subcatchment 40S: PDA-i+J-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	2.27	0.00
0.50	0.05	0.00	0.00	29.50	8.57	2.27	0.00
1.00	0.10	0.00	0.00	30.00	8.57	2.27	0.00
1.50	0.15	0.00	0.00	30.50	8.57	2.27	0.00
2.00	0.21	0.00	0.00	31.00	8.57	2.27	0.00
2.50	0.27	0.00	0.00	31.50	8.57	2.27	0.00
3.00	0.33	0.00	0.00	32.00	8.57	2.27	0.00
3.50	0.39	0.00	0.00	32.50	8.57	2.27	0.00
4.00	0.45	0.00	0.00	33.00	8.57	2.27	0.00
4.50	0.52	0.00	0.00	33.50	8.57	2.27	0.00
5.00	0.59	0.00	0.00	34.00	8.57	2.27	0.00
5.50	0.66	0.00	0.00	34.50	8.57	2.27	0.00
6.00	0.74	0.00	0.00	35.00	8.57	2.27	0.00
6.50	0.82	0.00	0.00	35.50	8.57	2.27	0.00
7.00	0.91	0.00	0.00	36.00	8.57	2.27	0.00
7.50	1.01	0.00	0.00	36.50	8.57	2.27	0.00
8.00	1.11	0.00	0.00	37.00	8.57	2.27	0.00
8.50	1.23	0.00	0.00	37.50	8.57	2.27	0.00
9.00	1.36	0.00	0.00	38.00	8.57	2.27	0.00
9.50	1.51	0.00	0.00	38.50	8.57	2.27	0.00
10.00	1.69	0.00	0.00	39.00	8.57	2.27	0.00
10.50	1.91	0.00	0.00	39.50	8.57	2.27	0.00
11.00	2.21	0.00	0.00	40.00	8.57	2.27	0.00
11.50	2.68	0.02	0.02	40.50	8.57	2.27	0.00
12.00	4.08	0.25	0.31	41.00	8.57	2.27	0.00
12.50	5.89	0.88	0.21	41.50	8.57	2.27	0.00
13.00	6.36	1.10	0.12	42.00	8.57	2.27	0.00
13.50	6.66	1.24	0.08	42.50	8.57	2.27	0.00
14.00	6.88	1.34	0.07	43.00	8.57	2.27	0.00
14.50	7.06	1.44	0.06	43.50	8.57	2.27	0.00
15.00	7.21	1.51	0.05	44.00	8.57	2.27	0.00
15.50	7.34	1.58	0.04	44.50	8.57	2.27	0.00
16.00	7.46	1.64	0.04	45.00	8.57	2.27	0.00
16.50	7.56	1.70	0.04	45.50	8.57	2.27	0.00
17.00	7.66	1.75	0.03	46.00	8.57	2.27	0.00
17.50	7.75	1.80	0.03	46.50	8.57	2.27	0.00
18.00	7.83	1.85	0.03	47.00	8.57	2.27	0.00
18.50	7.91	1.89	0.03	47.50	8.57	2.27	0.00
19.00	7.98	1.93	0.03	48.00	8.57	2.27	0.00
19.50	8.05	1.97	0.02				
20.00	8.12	2.00	0.02				
20.50	8.18	2.04	0.02				
21.00	8.24	2.08	0.02				
21.50	8.30	2.11	0.02				
22.00	8.36	2.15	0.02				
22.50	8.42	2.18	0.02				
23.00	8.47	2.21	0.02				
23.50	8.52	2.24	0.02				
24.00	8.57	2.27	0.02				
24.50	8.57	2.27	0.00				
25.00	8.57	2.27	0.00				
25.50	8.57	2.27	0.00				
26.00	8.57	2.27	0.00				
26.50	8.57	2.27	0.00				
27.00	8.57	2.27	0.00				
27.50	8.57	2.27	0.00				
28.00	8.57	2.27	0.00				
28.50	8.57	2.27	0.00				

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 41S: PDA-5A

Runoff = 33.79 cfs @ 12.13 hrs, Volume= 2.251 af, Depth= 5.44"
 Routed to Pond 39P : FB 5A

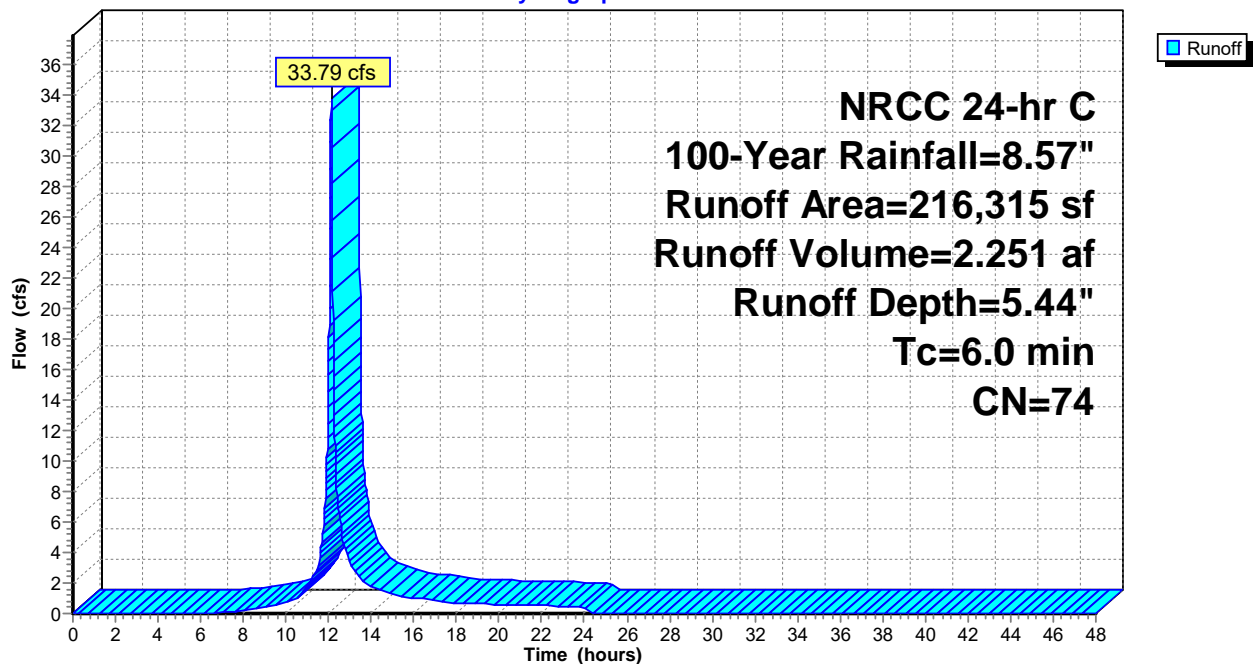
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
40,852	98	Paved parking, HSG D
78,273	61	>75% Grass cover, Good, HSG B
37,290	39	>75% Grass cover, Good, HSG A
59,900	98	Unconnected roofs, HSG D
216,315	74	Weighted Average
115,563		53.42% Pervious Area
100,752		46.58% Impervious Area
59,900		59.45% Unconnected

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

Subcatchment 41S: PDA-5A

Hydrograph



Hydrograph for Subcatchment 41S: PDA-5A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	5.44	0.00
0.50	0.05	0.00	0.00	29.50	8.57	5.44	0.00
1.00	0.10	0.00	0.00	30.00	8.57	5.44	0.00
1.50	0.15	0.00	0.00	30.50	8.57	5.44	0.00
2.00	0.21	0.00	0.00	31.00	8.57	5.44	0.00
2.50	0.27	0.00	0.00	31.50	8.57	5.44	0.00
3.00	0.33	0.00	0.00	32.00	8.57	5.44	0.00
3.50	0.39	0.00	0.00	32.50	8.57	5.44	0.00
4.00	0.45	0.00	0.00	33.00	8.57	5.44	0.00
4.50	0.52	0.00	0.00	33.50	8.57	5.44	0.00
5.00	0.59	0.00	0.00	34.00	8.57	5.44	0.00
5.50	0.66	0.00	0.00	34.50	8.57	5.44	0.00
6.00	0.74	0.00	0.01	35.00	8.57	5.44	0.00
6.50	0.82	0.00	0.04	35.50	8.57	5.44	0.00
7.00	0.91	0.01	0.09	36.00	8.57	5.44	0.00
7.50	1.01	0.02	0.15	36.50	8.57	5.44	0.00
8.00	1.11	0.04	0.21	37.00	8.57	5.44	0.00
8.50	1.23	0.07	0.29	37.50	8.57	5.44	0.00
9.00	1.36	0.10	0.37	38.00	8.57	5.44	0.00
9.50	1.51	0.15	0.53	38.50	8.57	5.44	0.00
10.00	1.69	0.22	0.74	39.00	8.57	5.44	0.00
10.50	1.91	0.31	0.99	39.50	8.57	5.44	0.00
11.00	2.21	0.45	1.69	40.00	8.57	5.44	0.00
11.50	2.68	0.71	3.11	40.50	8.57	5.44	0.00
12.00	4.08	1.66	16.52	41.00	8.57	5.44	0.00
12.50	5.89	3.09	6.40	41.50	8.57	5.44	0.00
13.00	6.36	3.49	3.46	42.00	8.57	5.44	0.00
13.50	6.66	3.75	2.26	42.50	8.57	5.44	0.00
14.00	6.88	3.94	1.79	43.00	8.57	5.44	0.00
14.50	7.06	4.10	1.51	43.50	8.57	5.44	0.00
15.00	7.21	4.23	1.23	44.00	8.57	5.44	0.00
15.50	7.34	4.34	1.10	44.50	8.57	5.44	0.00
16.00	7.46	4.44	1.01	45.00	8.57	5.44	0.00
16.50	7.56	4.54	0.94	45.50	8.57	5.44	0.00
17.00	7.66	4.63	0.85	46.00	8.57	5.44	0.00
17.50	7.75	4.71	0.77	46.50	8.57	5.44	0.00
18.00	7.83	4.78	0.69	47.00	8.57	5.44	0.00
18.50	7.91	4.84	0.66	47.50	8.57	5.44	0.00
19.00	7.98	4.91	0.63	48.00	8.57	5.44	0.00
19.50	8.05	4.97	0.61				
20.00	8.12	5.03	0.59				
20.50	8.18	5.09	0.58				
21.00	8.24	5.14	0.55				
21.50	8.30	5.20	0.53				
22.00	8.36	5.25	0.51				
22.50	8.42	5.30	0.49				
23.00	8.47	5.35	0.47				
23.50	8.52	5.39	0.45				
24.00	8.57	5.44	0.43				
24.50	8.57	5.44	0.00				
25.00	8.57	5.44	0.00				
25.50	8.57	5.44	0.00				
26.00	8.57	5.44	0.00				
26.50	8.57	5.44	0.00				
27.00	8.57	5.44	0.00				
27.50	8.57	5.44	0.00				
28.00	8.57	5.44	0.00				
28.50	8.57	5.44	0.00				

Summary for Subcatchment 42S: PDA-1J-B

Runoff = 2.88 cfs @ 12.14 hrs, Volume= 0.192 af, Depth= 2.95"
 Routed to Pond 53P : Bioretention J basin

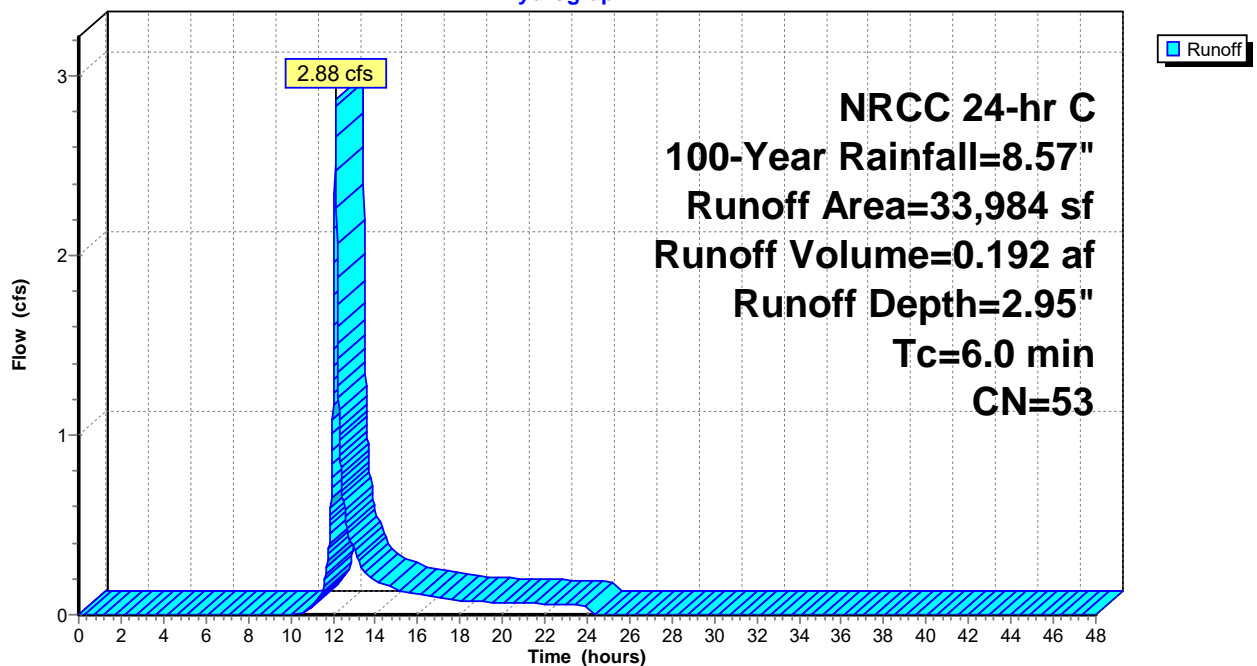
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
11,676	39	>75% Grass cover, Good, HSG A
22,308	61	>75% Grass cover, Good, HSG B
33,984	53	Weighted Average
33,984		100.00% Pervious Area

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

Subcatchment 42S: PDA-1J-B

Hydrograph



Hydrograph for Subcatchment 42S: PDA-1J-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	2.95	0.00
0.50	0.05	0.00	0.00	29.50	8.57	2.95	0.00
1.00	0.10	0.00	0.00	30.00	8.57	2.95	0.00
1.50	0.15	0.00	0.00	30.50	8.57	2.95	0.00
2.00	0.21	0.00	0.00	31.00	8.57	2.95	0.00
2.50	0.27	0.00	0.00	31.50	8.57	2.95	0.00
3.00	0.33	0.00	0.00	32.00	8.57	2.95	0.00
3.50	0.39	0.00	0.00	32.50	8.57	2.95	0.00
4.00	0.45	0.00	0.00	33.00	8.57	2.95	0.00
4.50	0.52	0.00	0.00	33.50	8.57	2.95	0.00
5.00	0.59	0.00	0.00	34.00	8.57	2.95	0.00
5.50	0.66	0.00	0.00	34.50	8.57	2.95	0.00
6.00	0.74	0.00	0.00	35.00	8.57	2.95	0.00
6.50	0.82	0.00	0.00	35.50	8.57	2.95	0.00
7.00	0.91	0.00	0.00	36.00	8.57	2.95	0.00
7.50	1.01	0.00	0.00	36.50	8.57	2.95	0.00
8.00	1.11	0.00	0.00	37.00	8.57	2.95	0.00
8.50	1.23	0.00	0.00	37.50	8.57	2.95	0.00
9.00	1.36	0.00	0.00	38.00	8.57	2.95	0.00
9.50	1.51	0.00	0.00	38.50	8.57	2.95	0.00
10.00	1.69	0.00	0.00	39.00	8.57	2.95	0.00
10.50	1.91	0.00	0.01	39.50	8.57	2.95	0.00
11.00	2.21	0.02	0.04	40.00	8.57	2.95	0.00
11.50	2.68	0.08	0.14	40.50	8.57	2.95	0.00
12.00	4.08	0.48	1.17	41.00	8.57	2.95	0.00
12.50	5.89	1.30	0.63	41.50	8.57	2.95	0.00
13.00	6.36	1.56	0.36	42.00	8.57	2.95	0.00
13.50	6.66	1.74	0.24	42.50	8.57	2.95	0.00
14.00	6.88	1.86	0.19	43.00	8.57	2.95	0.00
14.50	7.06	1.97	0.16	43.50	8.57	2.95	0.00
15.00	7.21	2.07	0.14	44.00	8.57	2.95	0.00
15.50	7.34	2.15	0.12	44.50	8.57	2.95	0.00
16.00	7.46	2.22	0.11	45.00	8.57	2.95	0.00
16.50	7.56	2.29	0.11	45.50	8.57	2.95	0.00
17.00	7.66	2.35	0.10	46.00	8.57	2.95	0.00
17.50	7.75	2.41	0.09	46.50	8.57	2.95	0.00
18.00	7.83	2.46	0.08	47.00	8.57	2.95	0.00
18.50	7.91	2.51	0.07	47.50	8.57	2.95	0.00
19.00	7.98	2.56	0.07	48.00	8.57	2.95	0.00
19.50	8.05	2.60	0.07				
20.00	8.12	2.65	0.07				
20.50	8.18	2.69	0.07				
21.00	8.24	2.73	0.06				
21.50	8.30	2.77	0.06				
22.00	8.36	2.81	0.06				
22.50	8.42	2.85	0.06				
23.00	8.47	2.88	0.06				
23.50	8.52	2.92	0.05				
24.00	8.57	2.95	0.05				
24.50	8.57	2.95	0.00				
25.00	8.57	2.95	0.00				
25.50	8.57	2.95	0.00				
26.00	8.57	2.95	0.00				
26.50	8.57	2.95	0.00				
27.00	8.57	2.95	0.00				
27.50	8.57	2.95	0.00				
28.00	8.57	2.95	0.00				
28.50	8.57	2.95	0.00				

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 43S: PDA-1B

Runoff = 74.56 cfs @ 12.13 hrs, Volume= 5.246 af, Depth= 6.88"
 Routed to Pond 44P : FB 1B

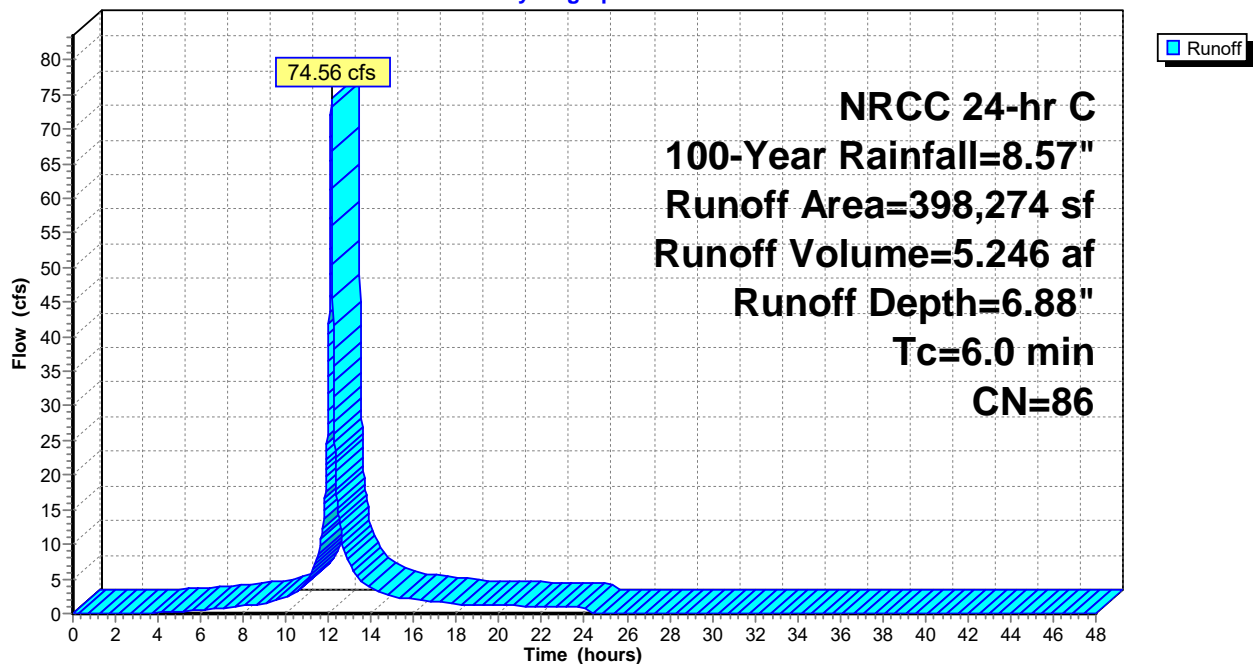
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
292,844	98	Unconnected pavement, HSG D
54,536	39	>75% Grass cover, Good, HSG A
24,842	61	>75% Grass cover, Good, HSG B
26,052	80	>75% Grass cover, Good, HSG D
398,274	86	Weighted Average
105,430		26.47% Pervious Area
292,844		73.53% Impervious Area
292,844		100.00% Unconnected

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

Subcatchment 43S: PDA-1B

Hydrograph



Hydrograph for Subcatchment 43S: PDA-1B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	6.88	0.00
0.50	0.05	0.00	0.00	29.50	8.57	6.88	0.00
1.00	0.10	0.00	0.00	30.00	8.57	6.88	0.00
1.50	0.15	0.00	0.00	30.50	8.57	6.88	0.00
2.00	0.21	0.00	0.00	31.00	8.57	6.88	0.00
2.50	0.27	0.00	0.00	31.50	8.57	6.88	0.00
3.00	0.33	0.00	0.00	32.00	8.57	6.88	0.00
3.50	0.39	0.00	0.07	32.50	8.57	6.88	0.00
4.00	0.45	0.01	0.15	33.00	8.57	6.88	0.00
4.50	0.52	0.02	0.24	33.50	8.57	6.88	0.00
5.00	0.59	0.04	0.32	34.00	8.57	6.88	0.00
5.50	0.66	0.06	0.41	34.50	8.57	6.88	0.00
6.00	0.74	0.08	0.49	35.00	8.57	6.88	0.00
6.50	0.82	0.11	0.62	35.50	8.57	6.88	0.00
7.00	0.91	0.15	0.77	36.00	8.57	6.88	0.00
7.50	1.01	0.20	0.93	36.50	8.57	6.88	0.00
8.00	1.11	0.26	1.11	37.00	8.57	6.88	0.00
8.50	1.23	0.32	1.29	37.50	8.57	6.88	0.00
9.00	1.36	0.40	1.49	38.00	8.57	6.88	0.00
9.50	1.51	0.50	1.95	38.50	8.57	6.88	0.00
10.00	1.69	0.62	2.49	39.00	8.57	6.88	0.00
10.50	1.91	0.78	3.08	39.50	8.57	6.88	0.00
11.00	2.21	1.01	4.86	40.00	8.57	6.88	0.00
11.50	2.68	1.39	8.21	40.50	8.57	6.88	0.00
12.00	4.08	2.62	38.58	41.00	8.57	6.88	0.00
12.50	5.89	4.30	13.43	41.50	8.57	6.88	0.00
13.00	6.36	4.75	7.14	42.00	8.57	6.88	0.00
13.50	6.66	5.04	4.63	42.50	8.57	6.88	0.00
14.00	6.88	5.25	3.64	43.00	8.57	6.88	0.00
14.50	7.06	5.42	3.06	43.50	8.57	6.88	0.00
15.00	7.21	5.57	2.48	44.00	8.57	6.88	0.00
15.50	7.34	5.69	2.21	44.50	8.57	6.88	0.00
16.00	7.46	5.81	2.04	45.00	8.57	6.88	0.00
16.50	7.56	5.91	1.88	45.50	8.57	6.88	0.00
17.00	7.66	6.01	1.72	46.00	8.57	6.88	0.00
17.50	7.75	6.09	1.55	46.50	8.57	6.88	0.00
18.00	7.83	6.17	1.39	47.00	8.57	6.88	0.00
18.50	7.91	6.24	1.31	47.50	8.57	6.88	0.00
19.00	7.98	6.31	1.27	48.00	8.57	6.88	0.00
19.50	8.05	6.38	1.23				
20.00	8.12	6.44	1.19				
20.50	8.18	6.51	1.15				
21.00	8.24	6.57	1.10				
21.50	8.30	6.63	1.06				
22.00	8.36	6.68	1.02				
22.50	8.42	6.74	0.98				
23.00	8.47	6.79	0.94				
23.50	8.52	6.84	0.90				
24.00	8.57	6.88	0.86				
24.50	8.57	6.88	0.00				
25.00	8.57	6.88	0.00				
25.50	8.57	6.88	0.00				
26.00	8.57	6.88	0.00				
26.50	8.57	6.88	0.00				
27.00	8.57	6.88	0.00				
27.50	8.57	6.88	0.00				
28.00	8.57	6.88	0.00				
28.50	8.57	6.88	0.00				

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 46S: PDA-1H

Runoff = 87.91 cfs @ 12.13 hrs, Volume= 6.902 af, Depth= 8.33"
Routed to Pond 51P : FB 1H

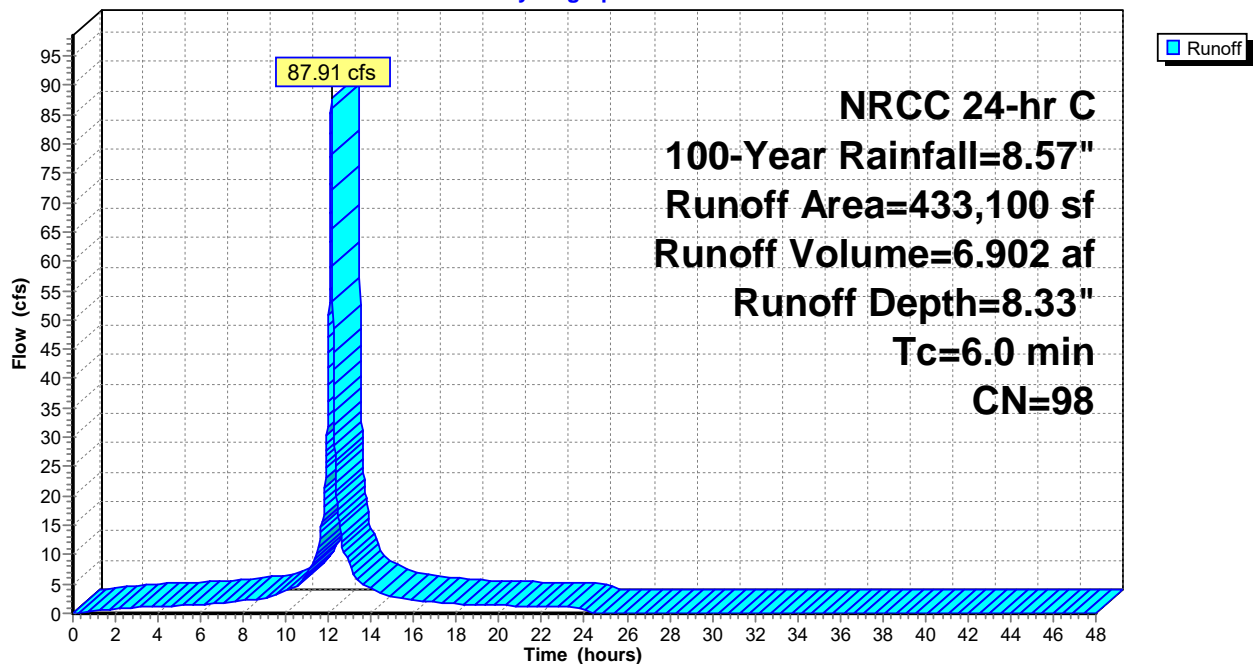
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
433,100	98	Roofs, HSG D
433,100		100.00% Impervious Area

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

Subcatchment 46S: PDA-1H

Hydrograph



Hydrograph for Subcatchment 46S: PDA-1H

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	8.33	0.00
0.50	0.05	0.00	0.01	29.50	8.57	8.33	0.00
1.00	0.10	0.01	0.36	30.00	8.57	8.33	0.00
1.50	0.15	0.04	0.60	30.50	8.57	8.33	0.00
2.00	0.21	0.08	0.77	31.00	8.57	8.33	0.00
2.50	0.27	0.12	0.89	31.50	8.57	8.33	0.00
3.00	0.33	0.17	1.00	32.00	8.57	8.33	0.00
3.50	0.39	0.22	1.08	32.50	8.57	8.33	0.00
4.00	0.45	0.28	1.16	33.00	8.57	8.33	0.00
4.50	0.52	0.34	1.24	33.50	8.57	8.33	0.00
5.00	0.59	0.40	1.30	34.00	8.57	8.33	0.00
5.50	0.66	0.47	1.36	34.50	8.57	8.33	0.00
6.00	0.74	0.54	1.42	35.00	8.57	8.33	0.00
6.50	0.82	0.61	1.60	35.50	8.57	8.33	0.00
7.00	0.91	0.70	1.79	36.00	8.57	8.33	0.00
7.50	1.01	0.80	1.98	36.50	8.57	8.33	0.00
8.00	1.11	0.90	2.18	37.00	8.57	8.33	0.00
8.50	1.23	1.02	2.37	37.50	8.57	8.33	0.00
9.00	1.36	1.14	2.56	38.00	8.57	8.33	0.00
9.50	1.51	1.29	3.18	38.50	8.57	8.33	0.00
10.00	1.69	1.47	3.84	39.00	8.57	8.33	0.00
10.50	1.91	1.68	4.50	39.50	8.57	8.33	0.00
11.00	2.21	1.98	6.75	40.00	8.57	8.33	0.00
11.50	2.68	2.45	10.77	40.50	8.57	8.33	0.00
12.00	4.08	3.85	46.95	41.00	8.57	8.33	0.00
12.50	5.89	5.65	15.41	41.50	8.57	8.33	0.00
13.00	6.36	6.12	8.13	42.00	8.57	8.33	0.00
13.50	6.66	6.42	5.25	42.50	8.57	8.33	0.00
14.00	6.88	6.64	4.12	43.00	8.57	8.33	0.00
14.50	7.06	6.82	3.46	43.50	8.57	8.33	0.00
15.00	7.21	6.97	2.80	44.00	8.57	8.33	0.00
15.50	7.34	7.10	2.49	44.50	8.57	8.33	0.00
16.00	7.46	7.22	2.30	45.00	8.57	8.33	0.00
16.50	7.56	7.33	2.12	45.50	8.57	8.33	0.00
17.00	7.66	7.42	1.93	46.00	8.57	8.33	0.00
17.50	7.75	7.51	1.74	46.50	8.57	8.33	0.00
18.00	7.83	7.60	1.56	47.00	8.57	8.33	0.00
18.50	7.91	7.67	1.47	47.50	8.57	8.33	0.00
19.00	7.98	7.74	1.42	48.00	8.57	8.33	0.00
19.50	8.05	7.81	1.37				
20.00	8.12	7.88	1.33				
20.50	8.18	7.94	1.28				
21.00	8.24	8.00	1.23				
21.50	8.30	8.06	1.19				
22.00	8.36	8.12	1.14				
22.50	8.42	8.18	1.09				
23.00	8.47	8.23	1.05				
23.50	8.52	8.28	1.01				
24.00	8.57	8.33	0.96				
24.50	8.57	8.33	0.00				
25.00	8.57	8.33	0.00				
25.50	8.57	8.33	0.00				
26.00	8.57	8.33	0.00				
26.50	8.57	8.33	0.00				
27.00	8.57	8.33	0.00				
27.50	8.57	8.33	0.00				
28.00	8.57	8.33	0.00				
28.50	8.57	8.33	0.00				

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Summary for Subcatchment 47S: PDA-4A

Runoff = 14.69 cfs @ 12.13 hrs, Volume= 0.968 af, Depth= 4.84"
 Routed to Pond B4B : Bioretention 4A

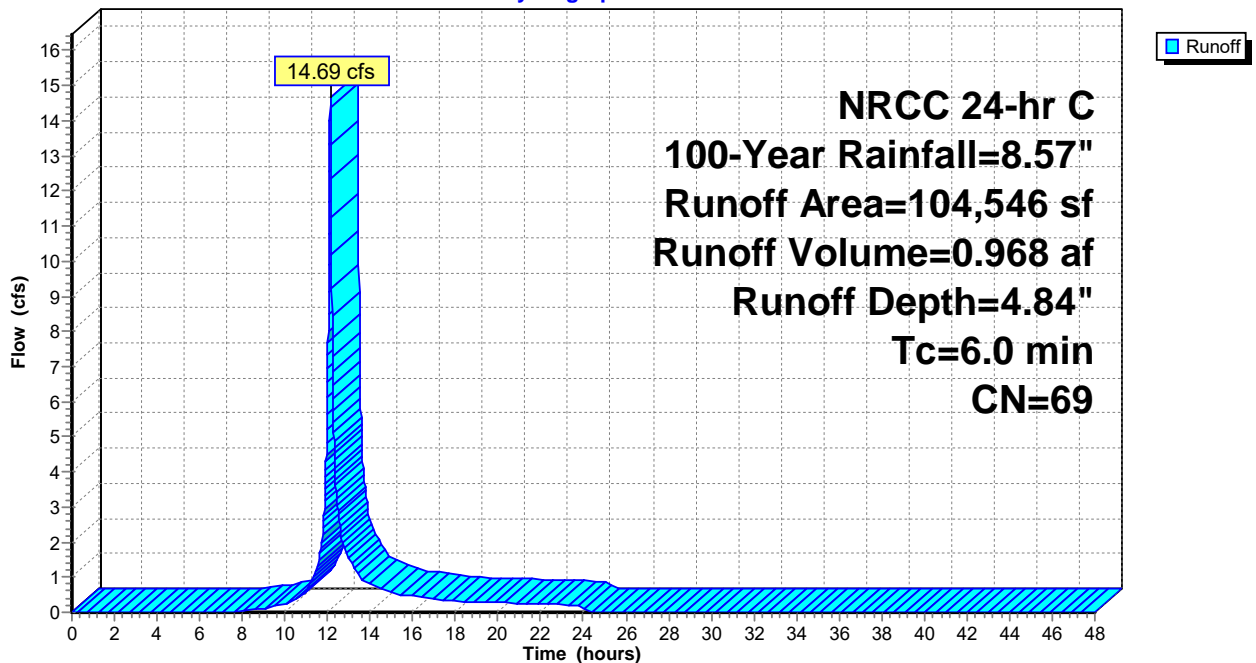
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
9,923	80	>75% Grass cover, Good, HSG D
36,179	98	Paved parking, HSG D
24,698	61	>75% Grass cover, Good, HSG B
33,746	39	>75% Grass cover, Good, HSG A
104,546	69	Weighted Average
68,367		65.39% Pervious Area
36,179		34.61% Impervious Area

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

Subcatchment 47S: PDA-4A

Hydrograph



Hydrograph for Subcatchment 47S: PDA-4A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	4.84	0.00
0.50	0.05	0.00	0.00	29.50	8.57	4.84	0.00
1.00	0.10	0.00	0.00	30.00	8.57	4.84	0.00
1.50	0.15	0.00	0.00	30.50	8.57	4.84	0.00
2.00	0.21	0.00	0.00	31.00	8.57	4.84	0.00
2.50	0.27	0.00	0.00	31.50	8.57	4.84	0.00
3.00	0.33	0.00	0.00	32.00	8.57	4.84	0.00
3.50	0.39	0.00	0.00	32.50	8.57	4.84	0.00
4.00	0.45	0.00	0.00	33.00	8.57	4.84	0.00
4.50	0.52	0.00	0.00	33.50	8.57	4.84	0.00
5.00	0.59	0.00	0.00	34.00	8.57	4.84	0.00
5.50	0.66	0.00	0.00	34.50	8.57	4.84	0.00
6.00	0.74	0.00	0.00	35.00	8.57	4.84	0.00
6.50	0.82	0.00	0.00	35.50	8.57	4.84	0.00
7.00	0.91	0.00	0.00	36.00	8.57	4.84	0.00
7.50	1.01	0.00	0.02	36.50	8.57	4.84	0.00
8.00	1.11	0.01	0.04	37.00	8.57	4.84	0.00
8.50	1.23	0.02	0.07	37.50	8.57	4.84	0.00
9.00	1.36	0.04	0.11	38.00	8.57	4.84	0.00
9.50	1.51	0.07	0.17	38.50	8.57	4.84	0.00
10.00	1.69	0.12	0.25	39.00	8.57	4.84	0.00
10.50	1.91	0.19	0.35	39.50	8.57	4.84	0.00
11.00	2.21	0.30	0.64	40.00	8.57	4.84	0.00
11.50	2.68	0.51	1.23	40.50	8.57	4.84	0.00
12.00	4.08	1.32	6.97	41.00	8.57	4.84	0.00
12.50	5.89	2.63	2.86	41.50	8.57	4.84	0.00
13.00	6.36	3.00	1.56	42.00	8.57	4.84	0.00
13.50	6.66	3.24	1.02	42.50	8.57	4.84	0.00
14.00	6.88	3.41	0.81	43.00	8.57	4.84	0.00
14.50	7.06	3.56	0.69	43.50	8.57	4.84	0.00
15.00	7.21	3.69	0.56	44.00	8.57	4.84	0.00
15.50	7.34	3.79	0.50	44.50	8.57	4.84	0.00
16.00	7.46	3.89	0.46	45.00	8.57	4.84	0.00
16.50	7.56	3.98	0.43	45.50	8.57	4.84	0.00
17.00	7.66	4.07	0.39	46.00	8.57	4.84	0.00
17.50	7.75	4.14	0.35	46.50	8.57	4.84	0.00
18.00	7.83	4.21	0.32	47.00	8.57	4.84	0.00
18.50	7.91	4.27	0.30	47.50	8.57	4.84	0.00
19.00	7.98	4.33	0.29	48.00	8.57	4.84	0.00
19.50	8.05	4.39	0.28				
20.00	8.12	4.45	0.27				
20.50	8.18	4.50	0.26				
21.00	8.24	4.56	0.26				
21.50	8.30	4.61	0.25				
22.00	8.36	4.66	0.24				
22.50	8.42	4.71	0.23				
23.00	8.47	4.75	0.22				
23.50	8.52	4.80	0.21				
24.00	8.57	4.84	0.20				
24.50	8.57	4.84	0.00				
25.00	8.57	4.84	0.00				
25.50	8.57	4.84	0.00				
26.00	8.57	4.84	0.00				
26.50	8.57	4.84	0.00				
27.00	8.57	4.84	0.00				
27.50	8.57	4.84	0.00				
28.00	8.57	4.84	0.00				
28.50	8.57	4.84	0.00				

Summary for Subcatchment 48S: PDA-1G-FB

Runoff = 0.56 cfs @ 12.14 hrs, Volume= 0.046 af, Depth= 1.40"
 Routed to Pond 55P : FB 1G

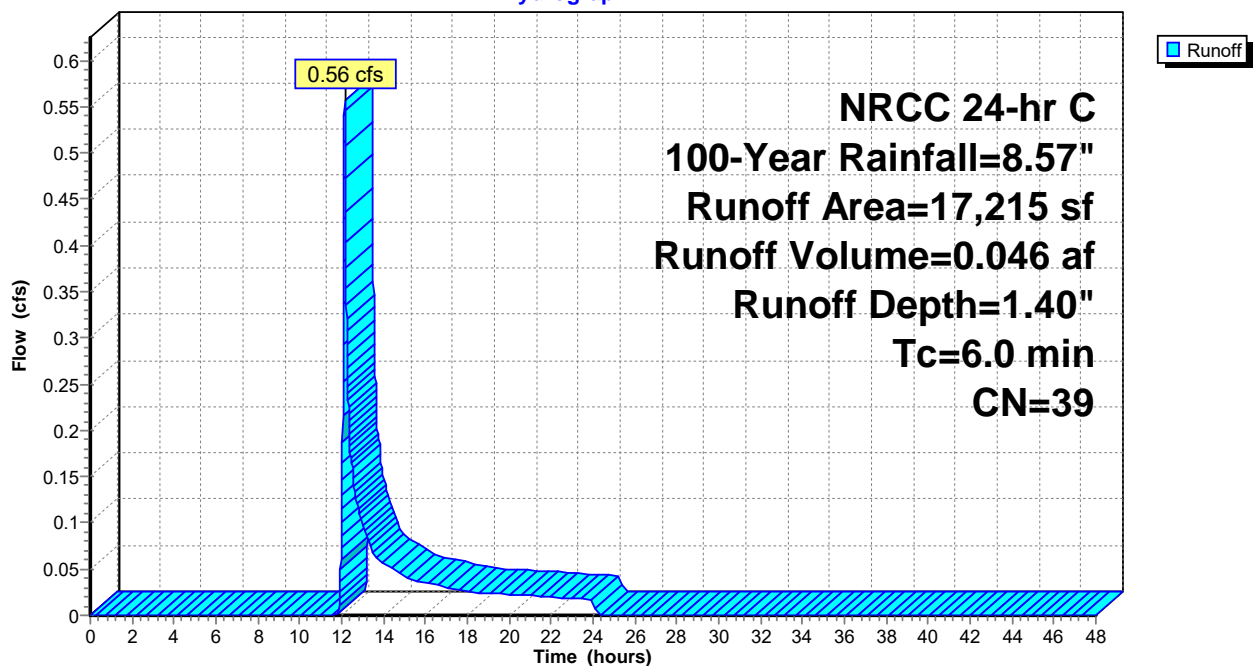
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
17,215	39	>75% Grass cover, Good, HSG A
17,215		100.00% Pervious Area

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

Subcatchment 48S: PDA-1G-FB

Hydrograph



Hydrograph for Subcatchment 48S: PDA-1G-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	1.40	0.00
0.50	0.05	0.00	0.00	29.50	8.57	1.40	0.00
1.00	0.10	0.00	0.00	30.00	8.57	1.40	0.00
1.50	0.15	0.00	0.00	30.50	8.57	1.40	0.00
2.00	0.21	0.00	0.00	31.00	8.57	1.40	0.00
2.50	0.27	0.00	0.00	31.50	8.57	1.40	0.00
3.00	0.33	0.00	0.00	32.00	8.57	1.40	0.00
3.50	0.39	0.00	0.00	32.50	8.57	1.40	0.00
4.00	0.45	0.00	0.00	33.00	8.57	1.40	0.00
4.50	0.52	0.00	0.00	33.50	8.57	1.40	0.00
5.00	0.59	0.00	0.00	34.00	8.57	1.40	0.00
5.50	0.66	0.00	0.00	34.50	8.57	1.40	0.00
6.00	0.74	0.00	0.00	35.00	8.57	1.40	0.00
6.50	0.82	0.00	0.00	35.50	8.57	1.40	0.00
7.00	0.91	0.00	0.00	36.00	8.57	1.40	0.00
7.50	1.01	0.00	0.00	36.50	8.57	1.40	0.00
8.00	1.11	0.00	0.00	37.00	8.57	1.40	0.00
8.50	1.23	0.00	0.00	37.50	8.57	1.40	0.00
9.00	1.36	0.00	0.00	38.00	8.57	1.40	0.00
9.50	1.51	0.00	0.00	38.50	8.57	1.40	0.00
10.00	1.69	0.00	0.00	39.00	8.57	1.40	0.00
10.50	1.91	0.00	0.00	39.50	8.57	1.40	0.00
11.00	2.21	0.00	0.00	40.00	8.57	1.40	0.00
11.50	2.68	0.00	0.00	40.50	8.57	1.40	0.00
12.00	4.08	0.05	0.12	41.00	8.57	1.40	0.00
12.50	5.89	0.41	0.16	41.50	8.57	1.40	0.00
13.00	6.36	0.55	0.10	42.00	8.57	1.40	0.00
13.50	6.66	0.65	0.07	42.50	8.57	1.40	0.00
14.00	6.88	0.72	0.06	43.00	8.57	1.40	0.00
14.50	7.06	0.79	0.05	43.50	8.57	1.40	0.00
15.00	7.21	0.85	0.04	44.00	8.57	1.40	0.00
15.50	7.34	0.89	0.04	44.50	8.57	1.40	0.00
16.00	7.46	0.94	0.04	45.00	8.57	1.40	0.00
16.50	7.56	0.98	0.03	45.50	8.57	1.40	0.00
17.00	7.66	1.02	0.03	46.00	8.57	1.40	0.00
17.50	7.75	1.06	0.03	46.50	8.57	1.40	0.00
18.00	7.83	1.09	0.03	47.00	8.57	1.40	0.00
18.50	7.91	1.12	0.02	47.50	8.57	1.40	0.00
19.00	7.98	1.15	0.02	48.00	8.57	1.40	0.00
19.50	8.05	1.18	0.02				
20.00	8.12	1.21	0.02				
20.50	8.18	1.23	0.02				
21.00	8.24	1.26	0.02				
21.50	8.30	1.29	0.02				
22.00	8.36	1.31	0.02				
22.50	8.42	1.34	0.02				
23.00	8.47	1.36	0.02				
23.50	8.52	1.38	0.02				
24.00	8.57	1.40	0.02				
24.50	8.57	1.40	0.00				
25.00	8.57	1.40	0.00				
25.50	8.57	1.40	0.00				
26.00	8.57	1.40	0.00				
26.50	8.57	1.40	0.00				
27.00	8.57	1.40	0.00				
27.50	8.57	1.40	0.00				
28.00	8.57	1.40	0.00				
28.50	8.57	1.40	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 49S: PDA-4B

Runoff = 42.48 cfs @ 12.13 hrs, Volume= 2.953 af, Depth= 6.64"
 Routed to Pond 29P : Bioretention 4B

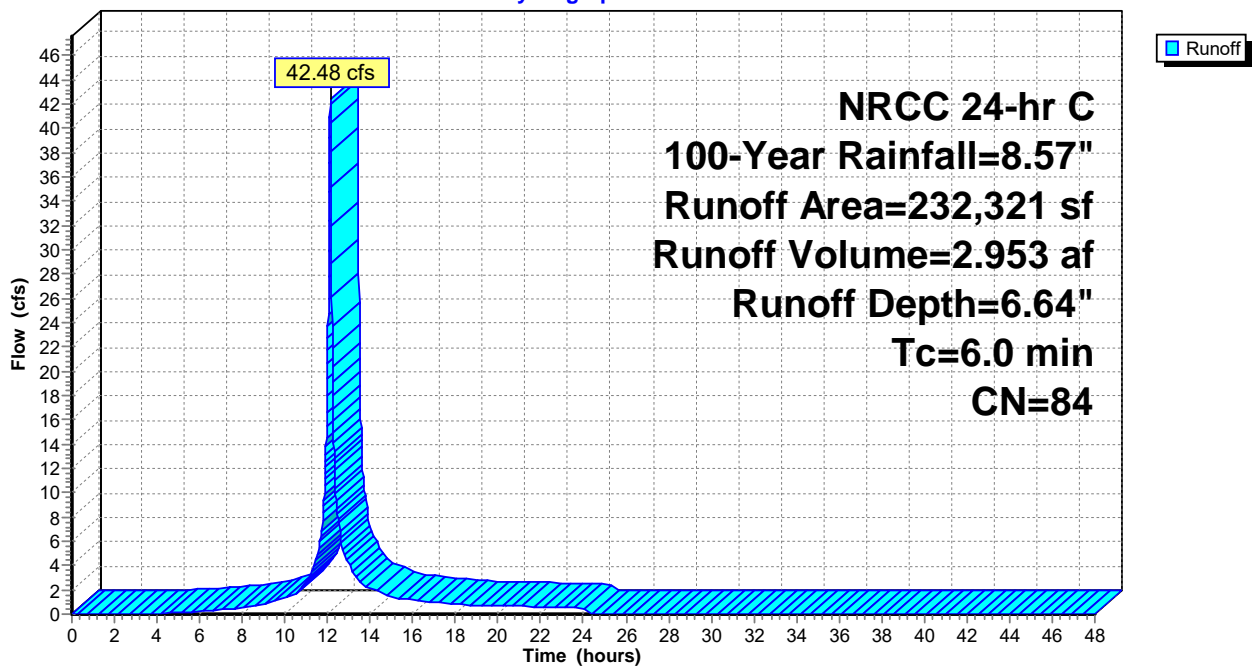
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
146,145	98	Paved parking, HSG D
86,176	61	>75% Grass cover, Good, HSG B
0	98	Unconnected roofs, HSG D
232,321	84	Weighted Average
86,176		37.09% Pervious Area
146,145		62.91% Impervious Area

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

Subcatchment 49S: PDA-4B

Hydrograph



Hydrograph for Subcatchment 49S: PDA-4B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	6.64	0.00
0.50	0.05	0.00	0.00	29.50	8.57	6.64	0.00
1.00	0.10	0.00	0.00	30.00	8.57	6.64	0.00
1.50	0.15	0.00	0.00	30.50	8.57	6.64	0.00
2.00	0.21	0.00	0.00	31.00	8.57	6.64	0.00
2.50	0.27	0.00	0.00	31.50	8.57	6.64	0.00
3.00	0.33	0.00	0.00	32.00	8.57	6.64	0.00
3.50	0.39	0.00	0.00	32.50	8.57	6.64	0.00
4.00	0.45	0.00	0.04	33.00	8.57	6.64	0.00
4.50	0.52	0.01	0.09	33.50	8.57	6.64	0.00
5.00	0.59	0.02	0.13	34.00	8.57	6.64	0.00
5.50	0.66	0.04	0.18	34.50	8.57	6.64	0.00
6.00	0.74	0.06	0.23	35.00	8.57	6.64	0.00
6.50	0.82	0.08	0.30	35.50	8.57	6.64	0.00
7.00	0.91	0.11	0.38	36.00	8.57	6.64	0.00
7.50	1.01	0.15	0.47	36.50	8.57	6.64	0.00
8.00	1.11	0.20	0.56	37.00	8.57	6.64	0.00
8.50	1.23	0.26	0.67	37.50	8.57	6.64	0.00
9.00	1.36	0.33	0.78	38.00	8.57	6.64	0.00
9.50	1.51	0.42	1.04	38.50	8.57	6.64	0.00
10.00	1.69	0.53	1.34	39.00	8.57	6.64	0.00
10.50	1.91	0.68	1.67	39.50	8.57	6.64	0.00
11.00	2.21	0.90	2.67	40.00	8.57	6.64	0.00
11.50	2.68	1.26	4.56	40.50	8.57	6.64	0.00
12.00	4.08	2.44	21.81	41.00	8.57	6.64	0.00
12.50	5.89	4.09	7.71	41.50	8.57	6.64	0.00
13.00	6.36	4.53	4.10	42.00	8.57	6.64	0.00
13.50	6.66	4.82	2.67	42.50	8.57	6.64	0.00
14.00	6.88	5.02	2.10	43.00	8.57	6.64	0.00
14.50	7.06	5.20	1.77	43.50	8.57	6.64	0.00
15.00	7.21	5.34	1.43	44.00	8.57	6.64	0.00
15.50	7.34	5.46	1.28	44.50	8.57	6.64	0.00
16.00	7.46	5.57	1.18	45.00	8.57	6.64	0.00
16.50	7.56	5.68	1.09	45.50	8.57	6.64	0.00
17.00	7.66	5.77	0.99	46.00	8.57	6.64	0.00
17.50	7.75	5.86	0.89	46.50	8.57	6.64	0.00
18.00	7.83	5.94	0.80	47.00	8.57	6.64	0.00
18.50	7.91	6.01	0.76	47.50	8.57	6.64	0.00
19.00	7.98	6.08	0.73	48.00	8.57	6.64	0.00
19.50	8.05	6.14	0.71				
20.00	8.12	6.21	0.68				
20.50	8.18	6.27	0.66				
21.00	8.24	6.33	0.64				
21.50	8.30	6.39	0.61				
22.00	8.36	6.44	0.59				
22.50	8.42	6.50	0.57				
23.00	8.47	6.55	0.54				
23.50	8.52	6.60	0.52				
24.00	8.57	6.64	0.50				
24.50	8.57	6.64	0.00				
25.00	8.57	6.64	0.00				
25.50	8.57	6.64	0.00				
26.00	8.57	6.64	0.00				
26.50	8.57	6.64	0.00				
27.00	8.57	6.64	0.00				
27.50	8.57	6.64	0.00				
28.00	8.57	6.64	0.00				
28.50	8.57	6.64	0.00				

Summary for Subcatchment 51S: PDA-1G-B

Runoff = 1.50 cfs @ 12.14 hrs, Volume= 0.107 af, Depth= 2.05"
 Routed to Pond 54P : INFIL 1G

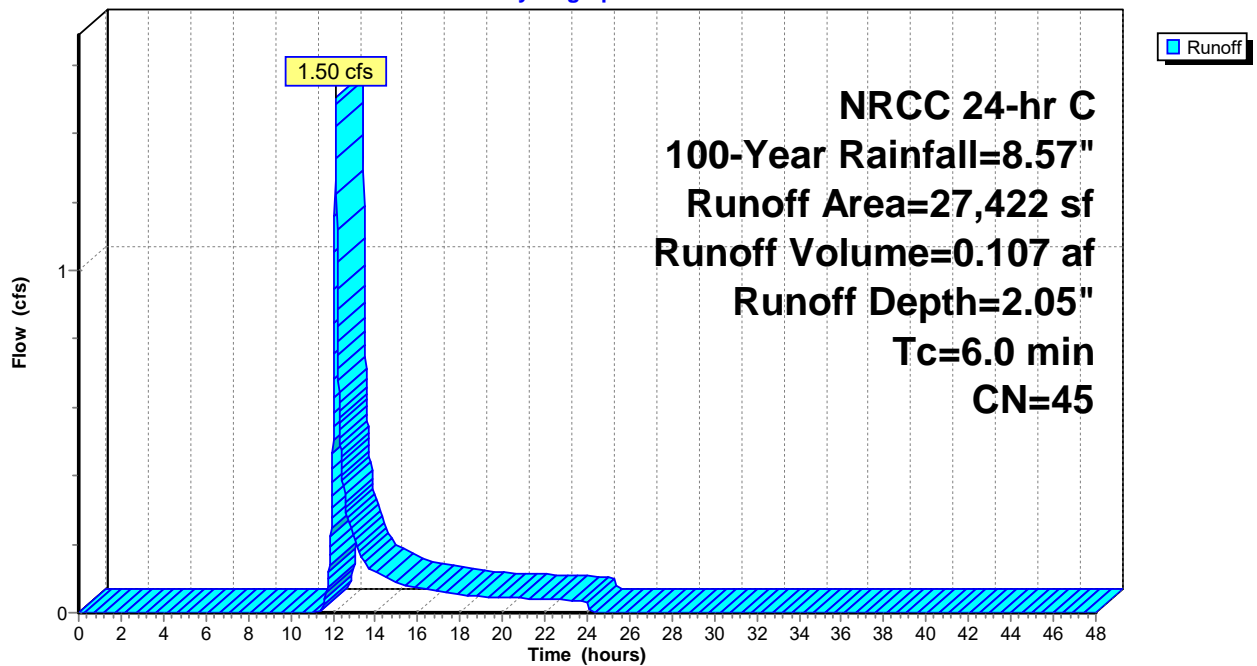
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
19,919	39	>75% Grass cover, Good, HSG A
7,503	61	>75% Grass cover, Good, HSG B
27,422	45	Weighted Average
27,422		100.00% Pervious Area

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

Subcatchment 51S: PDA-1G-B

Hydrograph



Hydrograph for Subcatchment 51S: PDA-1G-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	2.05	0.00
0.50	0.05	0.00	0.00	29.50	8.57	2.05	0.00
1.00	0.10	0.00	0.00	30.00	8.57	2.05	0.00
1.50	0.15	0.00	0.00	30.50	8.57	2.05	0.00
2.00	0.21	0.00	0.00	31.00	8.57	2.05	0.00
2.50	0.27	0.00	0.00	31.50	8.57	2.05	0.00
3.00	0.33	0.00	0.00	32.00	8.57	2.05	0.00
3.50	0.39	0.00	0.00	32.50	8.57	2.05	0.00
4.00	0.45	0.00	0.00	33.00	8.57	2.05	0.00
4.50	0.52	0.00	0.00	33.50	8.57	2.05	0.00
5.00	0.59	0.00	0.00	34.00	8.57	2.05	0.00
5.50	0.66	0.00	0.00	34.50	8.57	2.05	0.00
6.00	0.74	0.00	0.00	35.00	8.57	2.05	0.00
6.50	0.82	0.00	0.00	35.50	8.57	2.05	0.00
7.00	0.91	0.00	0.00	36.00	8.57	2.05	0.00
7.50	1.01	0.00	0.00	36.50	8.57	2.05	0.00
8.00	1.11	0.00	0.00	37.00	8.57	2.05	0.00
8.50	1.23	0.00	0.00	37.50	8.57	2.05	0.00
9.00	1.36	0.00	0.00	38.00	8.57	2.05	0.00
9.50	1.51	0.00	0.00	38.50	8.57	2.05	0.00
10.00	1.69	0.00	0.00	39.00	8.57	2.05	0.00
10.50	1.91	0.00	0.00	39.50	8.57	2.05	0.00
11.00	2.21	0.00	0.00	40.00	8.57	2.05	0.00
11.50	2.68	0.00	0.02	40.50	8.57	2.05	0.00
12.00	4.08	0.19	0.51	41.00	8.57	2.05	0.00
12.50	5.89	0.76	0.37	41.50	8.57	2.05	0.00
13.00	6.36	0.95	0.22	42.00	8.57	2.05	0.00
13.50	6.66	1.08	0.15	42.50	8.57	2.05	0.00
14.00	6.88	1.18	0.12	43.00	8.57	2.05	0.00
14.50	7.06	1.27	0.10	43.50	8.57	2.05	0.00
15.00	7.21	1.34	0.09	44.00	8.57	2.05	0.00
15.50	7.34	1.40	0.08	44.50	8.57	2.05	0.00
16.00	7.46	1.46	0.07	45.00	8.57	2.05	0.00
16.50	7.56	1.51	0.07	45.50	8.57	2.05	0.00
17.00	7.66	1.56	0.06	46.00	8.57	2.05	0.00
17.50	7.75	1.61	0.06	46.50	8.57	2.05	0.00
18.00	7.83	1.65	0.05	47.00	8.57	2.05	0.00
18.50	7.91	1.69	0.05	47.50	8.57	2.05	0.00
19.00	7.98	1.73	0.05	48.00	8.57	2.05	0.00
19.50	8.05	1.76	0.05				
20.00	8.12	1.80	0.04				
20.50	8.18	1.83	0.04				
21.00	8.24	1.87	0.04				
21.50	8.30	1.90	0.04				
22.00	8.36	1.93	0.04				
22.50	8.42	1.96	0.04				
23.00	8.47	1.99	0.04				
23.50	8.52	2.02	0.04				
24.00	8.57	2.05	0.03				
24.50	8.57	2.05	0.00				
25.00	8.57	2.05	0.00				
25.50	8.57	2.05	0.00				
26.00	8.57	2.05	0.00				
26.50	8.57	2.05	0.00				
27.00	8.57	2.05	0.00				
27.50	8.57	2.05	0.00				
28.00	8.57	2.05	0.00				
28.50	8.57	2.05	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 52S: PDA-1G

Runoff = 84.62 cfs @ 12.13 hrs, Volume= 6.644 af, Depth= 8.33"
Routed to Pond 55P : FB 1G

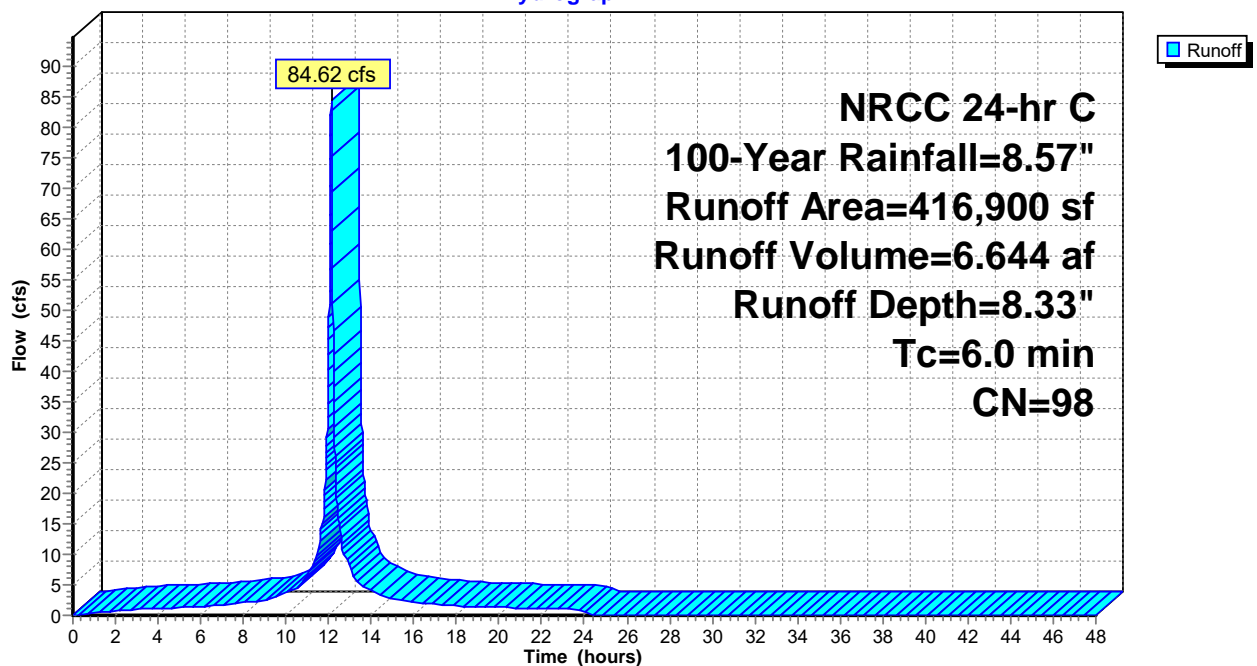
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
416,900	98	Roofs, HSG D
416,900		100.00% Impervious Area

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

Subcatchment 52S: PDA-1G

Hydrograph



Hydrograph for Subcatchment 52S: PDA-1G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	8.33	0.00
0.50	0.05	0.00	0.01	29.50	8.57	8.33	0.00
1.00	0.10	0.01	0.35	30.00	8.57	8.33	0.00
1.50	0.15	0.04	0.58	30.50	8.57	8.33	0.00
2.00	0.21	0.08	0.74	31.00	8.57	8.33	0.00
2.50	0.27	0.12	0.86	31.50	8.57	8.33	0.00
3.00	0.33	0.17	0.96	32.00	8.57	8.33	0.00
3.50	0.39	0.22	1.04	32.50	8.57	8.33	0.00
4.00	0.45	0.28	1.12	33.00	8.57	8.33	0.00
4.50	0.52	0.34	1.19	33.50	8.57	8.33	0.00
5.00	0.59	0.40	1.25	34.00	8.57	8.33	0.00
5.50	0.66	0.47	1.31	34.50	8.57	8.33	0.00
6.00	0.74	0.54	1.37	35.00	8.57	8.33	0.00
6.50	0.82	0.61	1.54	35.50	8.57	8.33	0.00
7.00	0.91	0.70	1.73	36.00	8.57	8.33	0.00
7.50	1.01	0.80	1.91	36.50	8.57	8.33	0.00
8.00	1.11	0.90	2.10	37.00	8.57	8.33	0.00
8.50	1.23	1.02	2.28	37.50	8.57	8.33	0.00
9.00	1.36	1.14	2.47	38.00	8.57	8.33	0.00
9.50	1.51	1.29	3.06	38.50	8.57	8.33	0.00
10.00	1.69	1.47	3.69	39.00	8.57	8.33	0.00
10.50	1.91	1.68	4.33	39.50	8.57	8.33	0.00
11.00	2.21	1.98	6.50	40.00	8.57	8.33	0.00
11.50	2.68	2.45	10.36	40.50	8.57	8.33	0.00
12.00	4.08	3.85	45.19	41.00	8.57	8.33	0.00
12.50	5.89	5.65	14.83	41.50	8.57	8.33	0.00
13.00	6.36	6.12	7.82	42.00	8.57	8.33	0.00
13.50	6.66	6.42	5.06	42.50	8.57	8.33	0.00
14.00	6.88	6.64	3.96	43.00	8.57	8.33	0.00
14.50	7.06	6.82	3.33	43.50	8.57	8.33	0.00
15.00	7.21	6.97	2.70	44.00	8.57	8.33	0.00
15.50	7.34	7.10	2.40	44.50	8.57	8.33	0.00
16.00	7.46	7.22	2.21	45.00	8.57	8.33	0.00
16.50	7.56	7.33	2.04	45.50	8.57	8.33	0.00
17.00	7.66	7.42	1.86	46.00	8.57	8.33	0.00
17.50	7.75	7.51	1.67	46.50	8.57	8.33	0.00
18.00	7.83	7.60	1.50	47.00	8.57	8.33	0.00
18.50	7.91	7.67	1.41	47.50	8.57	8.33	0.00
19.00	7.98	7.74	1.37	48.00	8.57	8.33	0.00
19.50	8.05	7.81	1.32				
20.00	8.12	7.88	1.28				
20.50	8.18	7.94	1.23				
21.00	8.24	8.00	1.19				
21.50	8.30	8.06	1.14				
22.00	8.36	8.12	1.10				
22.50	8.42	8.18	1.05				
23.00	8.47	8.23	1.01				
23.50	8.52	8.28	0.97				
24.00	8.57	8.33	0.93				
24.50	8.57	8.33	0.00				
25.00	8.57	8.33	0.00				
25.50	8.57	8.33	0.00				
26.00	8.57	8.33	0.00				
26.50	8.57	8.33	0.00				
27.00	8.57	8.33	0.00				
27.50	8.57	8.33	0.00				
28.00	8.57	8.33	0.00				
28.50	8.57	8.33	0.00				

Summary for Subcatchment 54S: PDA-1H-IB

Runoff = 1.29 cfs @ 12.14 hrs, Volume= 0.107 af, Depth= 1.40"
 Routed to Pond 47P : INFIL 1H

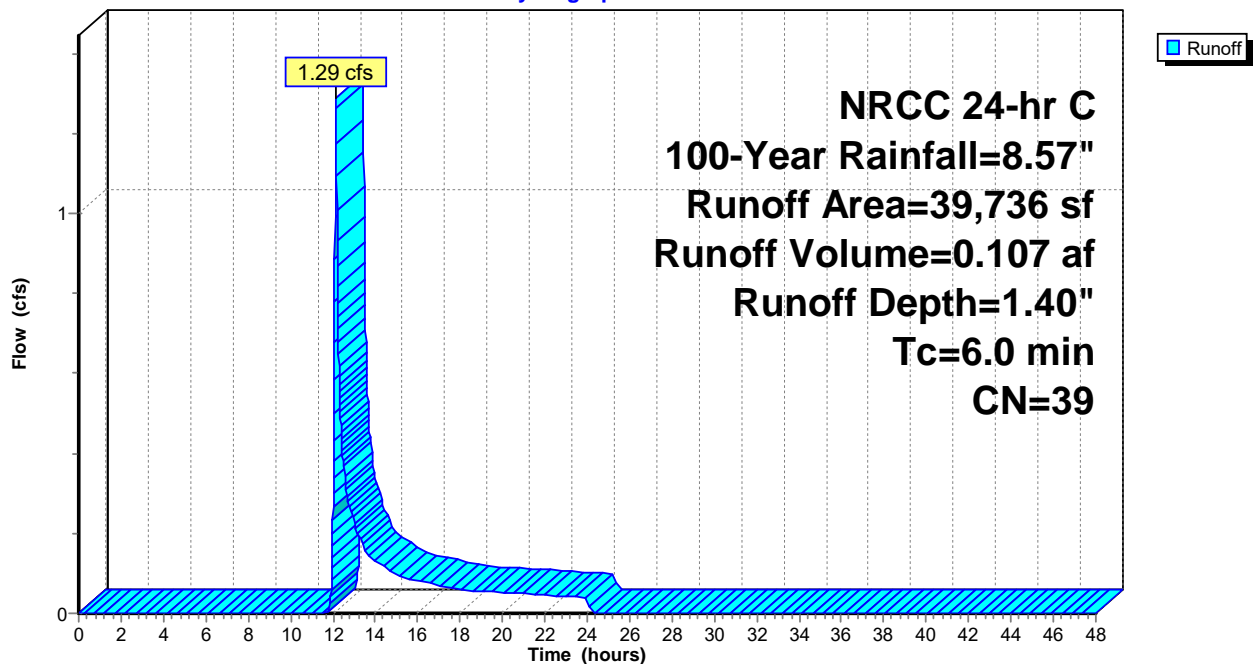
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
39,736	39	>75% Grass cover, Good, HSG A
39,736		100.00% Pervious Area

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

Subcatchment 54S: PDA-1H-IB

Hydrograph



Hydrograph for Subcatchment 54S: PDA-1H-IB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	1.40	0.00
0.50	0.05	0.00	0.00	29.50	8.57	1.40	0.00
1.00	0.10	0.00	0.00	30.00	8.57	1.40	0.00
1.50	0.15	0.00	0.00	30.50	8.57	1.40	0.00
2.00	0.21	0.00	0.00	31.00	8.57	1.40	0.00
2.50	0.27	0.00	0.00	31.50	8.57	1.40	0.00
3.00	0.33	0.00	0.00	32.00	8.57	1.40	0.00
3.50	0.39	0.00	0.00	32.50	8.57	1.40	0.00
4.00	0.45	0.00	0.00	33.00	8.57	1.40	0.00
4.50	0.52	0.00	0.00	33.50	8.57	1.40	0.00
5.00	0.59	0.00	0.00	34.00	8.57	1.40	0.00
5.50	0.66	0.00	0.00	34.50	8.57	1.40	0.00
6.00	0.74	0.00	0.00	35.00	8.57	1.40	0.00
6.50	0.82	0.00	0.00	35.50	8.57	1.40	0.00
7.00	0.91	0.00	0.00	36.00	8.57	1.40	0.00
7.50	1.01	0.00	0.00	36.50	8.57	1.40	0.00
8.00	1.11	0.00	0.00	37.00	8.57	1.40	0.00
8.50	1.23	0.00	0.00	37.50	8.57	1.40	0.00
9.00	1.36	0.00	0.00	38.00	8.57	1.40	0.00
9.50	1.51	0.00	0.00	38.50	8.57	1.40	0.00
10.00	1.69	0.00	0.00	39.00	8.57	1.40	0.00
10.50	1.91	0.00	0.00	39.50	8.57	1.40	0.00
11.00	2.21	0.00	0.00	40.00	8.57	1.40	0.00
11.50	2.68	0.00	0.00	40.50	8.57	1.40	0.00
12.00	4.08	0.05	0.27	41.00	8.57	1.40	0.00
12.50	5.89	0.41	0.38	41.50	8.57	1.40	0.00
13.00	6.36	0.55	0.23	42.00	8.57	1.40	0.00
13.50	6.66	0.65	0.16	42.50	8.57	1.40	0.00
14.00	6.88	0.72	0.13	43.00	8.57	1.40	0.00
14.50	7.06	0.79	0.11	43.50	8.57	1.40	0.00
15.00	7.21	0.85	0.10	44.00	8.57	1.40	0.00
15.50	7.34	0.89	0.09	44.50	8.57	1.40	0.00
16.00	7.46	0.94	0.08	45.00	8.57	1.40	0.00
16.50	7.56	0.98	0.08	45.50	8.57	1.40	0.00
17.00	7.66	1.02	0.07	46.00	8.57	1.40	0.00
17.50	7.75	1.06	0.06	46.50	8.57	1.40	0.00
18.00	7.83	1.09	0.06	47.00	8.57	1.40	0.00
18.50	7.91	1.12	0.06	47.50	8.57	1.40	0.00
19.00	7.98	1.15	0.05	48.00	8.57	1.40	0.00
19.50	8.05	1.18	0.05				
20.00	8.12	1.21	0.05				
20.50	8.18	1.23	0.05				
21.00	8.24	1.26	0.05				
21.50	8.30	1.29	0.05				
22.00	8.36	1.31	0.05				
22.50	8.42	1.34	0.04				
23.00	8.47	1.36	0.04				
23.50	8.52	1.38	0.04				
24.00	8.57	1.40	0.04				
24.50	8.57	1.40	0.00				
25.00	8.57	1.40	0.00				
25.50	8.57	1.40	0.00				
26.00	8.57	1.40	0.00				
26.50	8.57	1.40	0.00				
27.00	8.57	1.40	0.00				
27.50	8.57	1.40	0.00				
28.00	8.57	1.40	0.00				
28.50	8.57	1.40	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 55S: PDA-1E

Runoff = 3.48 cfs @ 12.13 hrs, Volume= 0.264 af, Depth= 7.97"
 Routed to Pond 59P : FB 1E

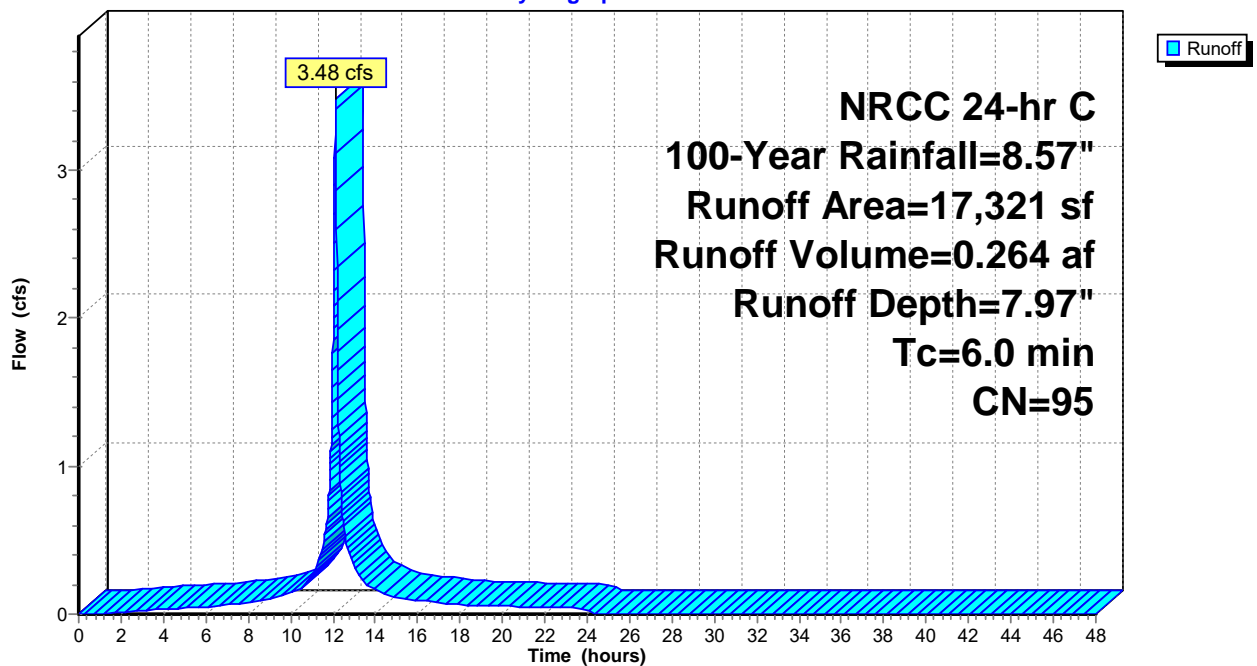
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
3,059	80	>75% Grass cover, Good, HSG D
0	39	>75% Grass cover, Good, HSG A
14,262	98	Paved parking, HSG D
17,321	95	Weighted Average
3,059		17.66% Pervious Area
14,262		82.34% Impervious Area

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

Subcatchment 55S: PDA-1E

Hydrograph



Hydrograph for Subcatchment 55S: PDA-1E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	7.97	0.00
0.50	0.05	0.00	0.00	29.50	8.57	7.97	0.00
1.00	0.10	0.00	0.00	30.00	8.57	7.97	0.00
1.50	0.15	0.00	0.01	30.50	8.57	7.97	0.00
2.00	0.21	0.02	0.01	31.00	8.57	7.97	0.00
2.50	0.27	0.04	0.02	31.50	8.57	7.97	0.00
3.00	0.33	0.07	0.02	32.00	8.57	7.97	0.00
3.50	0.39	0.10	0.03	32.50	8.57	7.97	0.00
4.00	0.45	0.14	0.03	33.00	8.57	7.97	0.00
4.50	0.52	0.18	0.04	33.50	8.57	7.97	0.00
5.00	0.59	0.23	0.04	34.00	8.57	7.97	0.00
5.50	0.66	0.29	0.04	34.50	8.57	7.97	0.00
6.00	0.74	0.34	0.05	35.00	8.57	7.97	0.00
6.50	0.82	0.41	0.05	35.50	8.57	7.97	0.00
7.00	0.91	0.48	0.06	36.00	8.57	7.97	0.00
7.50	1.01	0.57	0.07	36.50	8.57	7.97	0.00
8.00	1.11	0.66	0.08	37.00	8.57	7.97	0.00
8.50	1.23	0.77	0.09	37.50	8.57	7.97	0.00
9.00	1.36	0.88	0.10	38.00	8.57	7.97	0.00
9.50	1.51	1.02	0.12	38.50	8.57	7.97	0.00
10.00	1.69	1.19	0.15	39.00	8.57	7.97	0.00
10.50	1.91	1.40	0.17	39.50	8.57	7.97	0.00
11.00	2.21	1.68	0.26	40.00	8.57	7.97	0.00
11.50	2.68	2.14	0.42	40.50	8.57	7.97	0.00
12.00	4.08	3.51	1.85	41.00	8.57	7.97	0.00
12.50	5.89	5.30	0.61	41.50	8.57	7.97	0.00
13.00	6.36	5.77	0.32	42.00	8.57	7.97	0.00
13.50	6.66	6.07	0.21	42.50	8.57	7.97	0.00
14.00	6.88	6.28	0.16	43.00	8.57	7.97	0.00
14.50	7.06	6.47	0.14	43.50	8.57	7.97	0.00
15.00	7.21	6.62	0.11	44.00	8.57	7.97	0.00
15.50	7.34	6.74	0.10	44.50	8.57	7.97	0.00
16.00	7.46	6.86	0.09	45.00	8.57	7.97	0.00
16.50	7.56	6.97	0.08	45.50	8.57	7.97	0.00
17.00	7.66	7.07	0.08	46.00	8.57	7.97	0.00
17.50	7.75	7.16	0.07	46.50	8.57	7.97	0.00
18.00	7.83	7.24	0.06	47.00	8.57	7.97	0.00
18.50	7.91	7.31	0.06	47.50	8.57	7.97	0.00
19.00	7.98	7.38	0.06	48.00	8.57	7.97	0.00
19.50	8.05	7.45	0.05				
20.00	8.12	7.52	0.05				
20.50	8.18	7.58	0.05				
21.00	8.24	7.64	0.05				
21.50	8.30	7.70	0.05				
22.00	8.36	7.76	0.05				
22.50	8.42	7.82	0.04				
23.00	8.47	7.87	0.04				
23.50	8.52	7.92	0.04				
24.00	8.57	7.97	0.04				
24.50	8.57	7.97	0.00				
25.00	8.57	7.97	0.00				
25.50	8.57	7.97	0.00				
26.00	8.57	7.97	0.00				
26.50	8.57	7.97	0.00				
27.00	8.57	7.97	0.00				
27.50	8.57	7.97	0.00				
28.00	8.57	7.97	0.00				
28.50	8.57	7.97	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 100-Year Rainfall=8.57"

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Summary for Subcatchment 56S: PDA-1B-FB

Runoff = 0.53 cfs @ 12.14 hrs, Volume= 0.044 af, Depth= 1.40"
Routed to Pond 44P : FB 1B

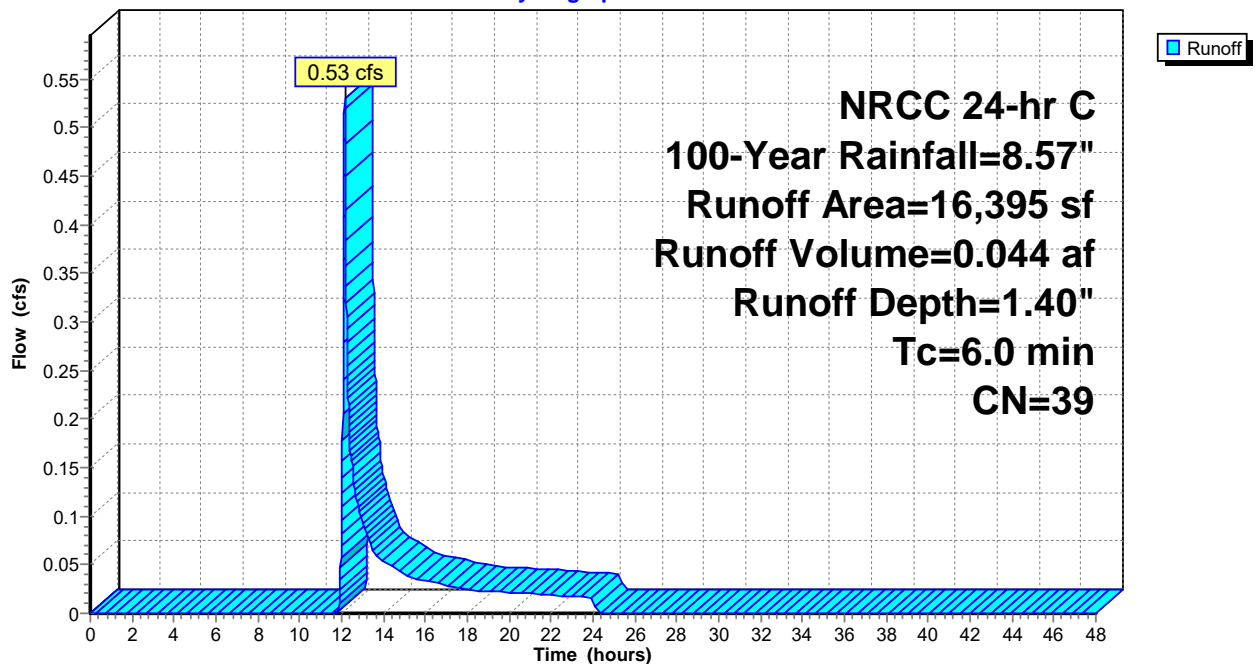
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
16,395	39	>75% Grass cover, Good, HSG A
16,395		100.00% Pervious Area

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

Subcatchment 56S: PDA-1B-FB

Hydrograph



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NRCC 24-hr C 100-Year Rainfall=8.57"

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Hydrograph for Subcatchment 56S: PDA-1B-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	1.40	0.00
0.50	0.05	0.00	0.00	29.50	8.57	1.40	0.00
1.00	0.10	0.00	0.00	30.00	8.57	1.40	0.00
1.50	0.15	0.00	0.00	30.50	8.57	1.40	0.00
2.00	0.21	0.00	0.00	31.00	8.57	1.40	0.00
2.50	0.27	0.00	0.00	31.50	8.57	1.40	0.00
3.00	0.33	0.00	0.00	32.00	8.57	1.40	0.00
3.50	0.39	0.00	0.00	32.50	8.57	1.40	0.00
4.00	0.45	0.00	0.00	33.00	8.57	1.40	0.00
4.50	0.52	0.00	0.00	33.50	8.57	1.40	0.00
5.00	0.59	0.00	0.00	34.00	8.57	1.40	0.00
5.50	0.66	0.00	0.00	34.50	8.57	1.40	0.00
6.00	0.74	0.00	0.00	35.00	8.57	1.40	0.00
6.50	0.82	0.00	0.00	35.50	8.57	1.40	0.00
7.00	0.91	0.00	0.00	36.00	8.57	1.40	0.00
7.50	1.01	0.00	0.00	36.50	8.57	1.40	0.00
8.00	1.11	0.00	0.00	37.00	8.57	1.40	0.00
8.50	1.23	0.00	0.00	37.50	8.57	1.40	0.00
9.00	1.36	0.00	0.00	38.00	8.57	1.40	0.00
9.50	1.51	0.00	0.00	38.50	8.57	1.40	0.00
10.00	1.69	0.00	0.00	39.00	8.57	1.40	0.00
10.50	1.91	0.00	0.00	39.50	8.57	1.40	0.00
11.00	2.21	0.00	0.00	40.00	8.57	1.40	0.00
11.50	2.68	0.00	0.00	40.50	8.57	1.40	0.00
12.00	4.08	0.05	0.11	41.00	8.57	1.40	0.00
12.50	5.89	0.41	0.16	41.50	8.57	1.40	0.00
13.00	6.36	0.55	0.09	42.00	8.57	1.40	0.00
13.50	6.66	0.65	0.07	42.50	8.57	1.40	0.00
14.00	6.88	0.72	0.05	43.00	8.57	1.40	0.00
14.50	7.06	0.79	0.05	43.50	8.57	1.40	0.00
15.00	7.21	0.85	0.04	44.00	8.57	1.40	0.00
15.50	7.34	0.89	0.04	44.50	8.57	1.40	0.00
16.00	7.46	0.94	0.03	45.00	8.57	1.40	0.00
16.50	7.56	0.98	0.03	45.50	8.57	1.40	0.00
17.00	7.66	1.02	0.03	46.00	8.57	1.40	0.00
17.50	7.75	1.06	0.03	46.50	8.57	1.40	0.00
18.00	7.83	1.09	0.02	47.00	8.57	1.40	0.00
18.50	7.91	1.12	0.02	47.50	8.57	1.40	0.00
19.00	7.98	1.15	0.02	48.00	8.57	1.40	0.00
19.50	8.05	1.18	0.02				
20.00	8.12	1.21	0.02				
20.50	8.18	1.23	0.02				
21.00	8.24	1.26	0.02				
21.50	8.30	1.29	0.02				
22.00	8.36	1.31	0.02				
22.50	8.42	1.34	0.02				
23.00	8.47	1.36	0.02				
23.50	8.52	1.38	0.02				
24.00	8.57	1.40	0.02				
24.50	8.57	1.40	0.00				
25.00	8.57	1.40	0.00				
25.50	8.57	1.40	0.00				
26.00	8.57	1.40	0.00				
26.50	8.57	1.40	0.00				
27.00	8.57	1.40	0.00				
27.50	8.57	1.40	0.00				
28.00	8.57	1.40	0.00				
28.50	8.57	1.40	0.00				

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Summary for Subcatchment 57S: PDA-1H-FB

Runoff = 0.63 cfs @ 12.14 hrs, Volume= 0.052 af, Depth= 1.40"
 Routed to Pond 51P : FB 1H

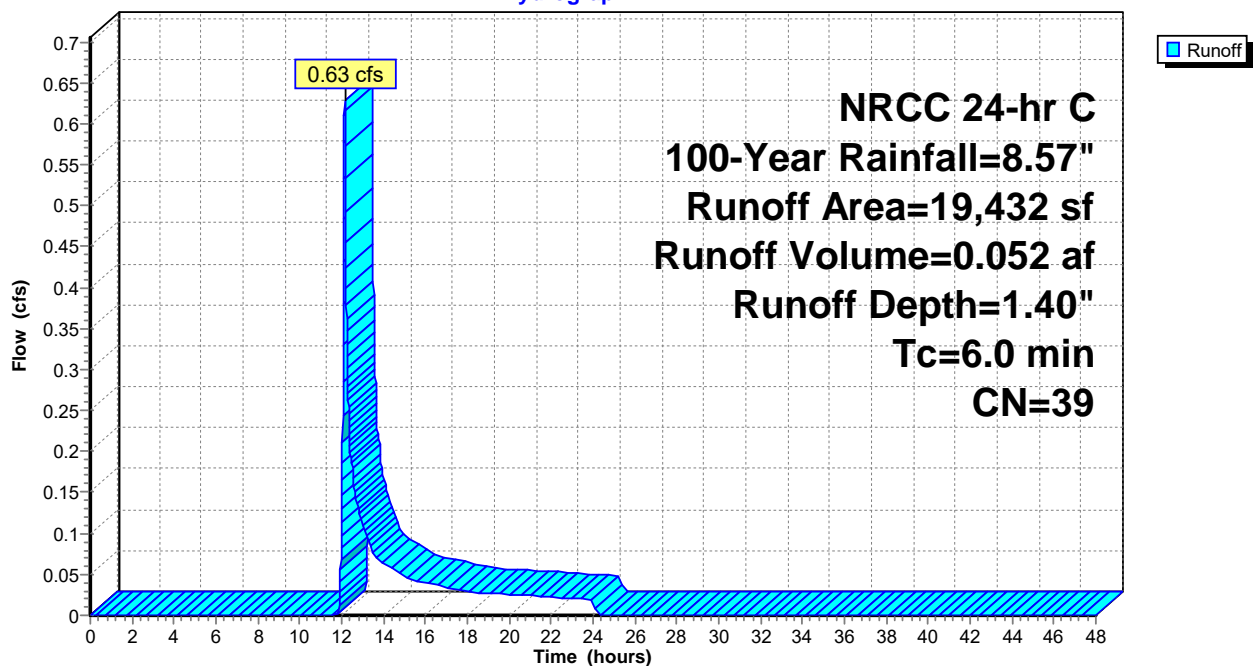
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
19,432	39	>75% Grass cover, Good, HSG A
19,432		100.00% Pervious Area

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

Subcatchment 57S: PDA-1H-FB

Hydrograph



240814_RDM Neelytown Drainage

NRCC 24-hr C 100-Year Rainfall=8.57"

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Hydrograph for Subcatchment 57S: PDA-1H-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	1.40	0.00
0.50	0.05	0.00	0.00	29.50	8.57	1.40	0.00
1.00	0.10	0.00	0.00	30.00	8.57	1.40	0.00
1.50	0.15	0.00	0.00	30.50	8.57	1.40	0.00
2.00	0.21	0.00	0.00	31.00	8.57	1.40	0.00
2.50	0.27	0.00	0.00	31.50	8.57	1.40	0.00
3.00	0.33	0.00	0.00	32.00	8.57	1.40	0.00
3.50	0.39	0.00	0.00	32.50	8.57	1.40	0.00
4.00	0.45	0.00	0.00	33.00	8.57	1.40	0.00
4.50	0.52	0.00	0.00	33.50	8.57	1.40	0.00
5.00	0.59	0.00	0.00	34.00	8.57	1.40	0.00
5.50	0.66	0.00	0.00	34.50	8.57	1.40	0.00
6.00	0.74	0.00	0.00	35.00	8.57	1.40	0.00
6.50	0.82	0.00	0.00	35.50	8.57	1.40	0.00
7.00	0.91	0.00	0.00	36.00	8.57	1.40	0.00
7.50	1.01	0.00	0.00	36.50	8.57	1.40	0.00
8.00	1.11	0.00	0.00	37.00	8.57	1.40	0.00
8.50	1.23	0.00	0.00	37.50	8.57	1.40	0.00
9.00	1.36	0.00	0.00	38.00	8.57	1.40	0.00
9.50	1.51	0.00	0.00	38.50	8.57	1.40	0.00
10.00	1.69	0.00	0.00	39.00	8.57	1.40	0.00
10.50	1.91	0.00	0.00	39.50	8.57	1.40	0.00
11.00	2.21	0.00	0.00	40.00	8.57	1.40	0.00
11.50	2.68	0.00	0.00	40.50	8.57	1.40	0.00
12.00	4.08	0.05	0.13	41.00	8.57	1.40	0.00
12.50	5.89	0.41	0.18	41.50	8.57	1.40	0.00
13.00	6.36	0.55	0.11	42.00	8.57	1.40	0.00
13.50	6.66	0.65	0.08	42.50	8.57	1.40	0.00
14.00	6.88	0.72	0.06	43.00	8.57	1.40	0.00
14.50	7.06	0.79	0.06	43.50	8.57	1.40	0.00
15.00	7.21	0.85	0.05	44.00	8.57	1.40	0.00
15.50	7.34	0.89	0.04	44.50	8.57	1.40	0.00
16.00	7.46	0.94	0.04	45.00	8.57	1.40	0.00
16.50	7.56	0.98	0.04	45.50	8.57	1.40	0.00
17.00	7.66	1.02	0.03	46.00	8.57	1.40	0.00
17.50	7.75	1.06	0.03	46.50	8.57	1.40	0.00
18.00	7.83	1.09	0.03	47.00	8.57	1.40	0.00
18.50	7.91	1.12	0.03	47.50	8.57	1.40	0.00
19.00	7.98	1.15	0.03	48.00	8.57	1.40	0.00
19.50	8.05	1.18	0.03				
20.00	8.12	1.21	0.03				
20.50	8.18	1.23	0.02				
21.00	8.24	1.26	0.02				
21.50	8.30	1.29	0.02				
22.00	8.36	1.31	0.02				
22.50	8.42	1.34	0.02				
23.00	8.47	1.36	0.02				
23.50	8.52	1.38	0.02				
24.00	8.57	1.40	0.02				
24.50	8.57	1.40	0.00				
25.00	8.57	1.40	0.00				
25.50	8.57	1.40	0.00				
26.00	8.57	1.40	0.00				
26.50	8.57	1.40	0.00				
27.00	8.57	1.40	0.00				
27.50	8.57	1.40	0.00				
28.00	8.57	1.40	0.00				
28.50	8.57	1.40	0.00				

Summary for Subcatchment 58S: PDA1-B-IB

Runoff = 1.20 cfs @ 12.14 hrs, Volume= 0.095 af, Depth= 1.51"
 Routed to Pond 45P : INFIL 1B

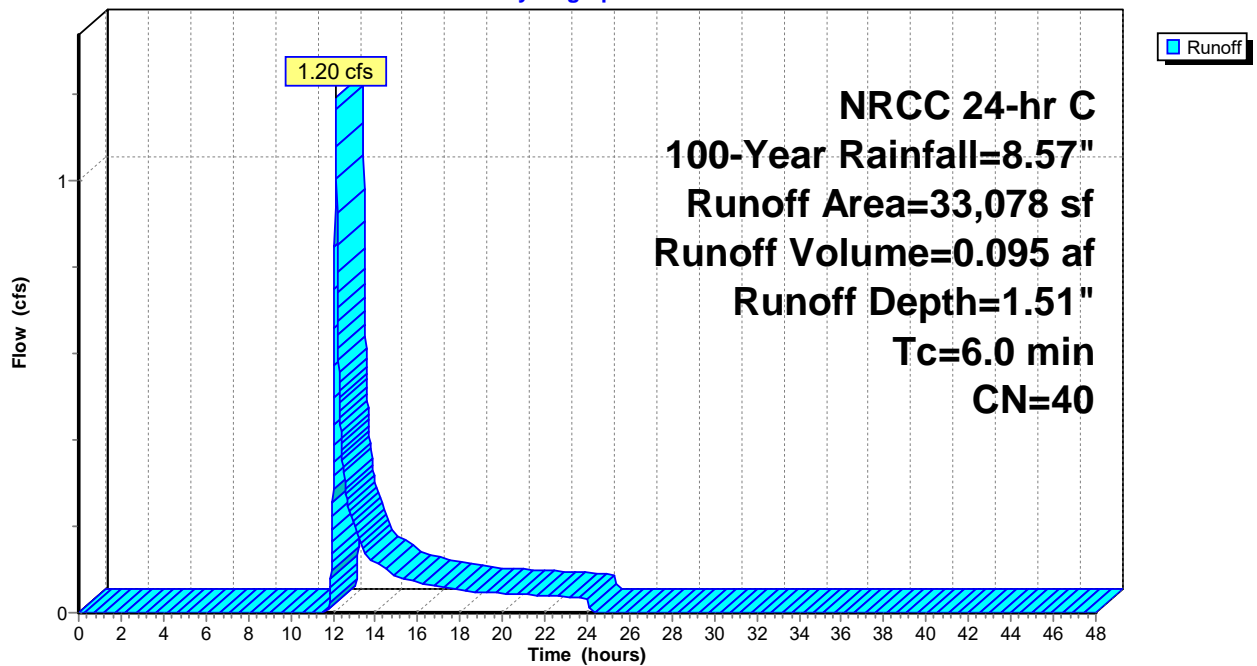
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
1,110	80	>75% Grass cover, Good, HSG D
31,968	39	>75% Grass cover, Good, HSG A
33,078	40	Weighted Average
33,078		100.00% Pervious Area

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

Subcatchment 58S: PDA1-B-IB

Hydrograph



Hydrograph for Subcatchment 58S: PDA1-B-IB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	1.51	0.00
0.50	0.05	0.00	0.00	29.50	8.57	1.51	0.00
1.00	0.10	0.00	0.00	30.00	8.57	1.51	0.00
1.50	0.15	0.00	0.00	30.50	8.57	1.51	0.00
2.00	0.21	0.00	0.00	31.00	8.57	1.51	0.00
2.50	0.27	0.00	0.00	31.50	8.57	1.51	0.00
3.00	0.33	0.00	0.00	32.00	8.57	1.51	0.00
3.50	0.39	0.00	0.00	32.50	8.57	1.51	0.00
4.00	0.45	0.00	0.00	33.00	8.57	1.51	0.00
4.50	0.52	0.00	0.00	33.50	8.57	1.51	0.00
5.00	0.59	0.00	0.00	34.00	8.57	1.51	0.00
5.50	0.66	0.00	0.00	34.50	8.57	1.51	0.00
6.00	0.74	0.00	0.00	35.00	8.57	1.51	0.00
6.50	0.82	0.00	0.00	35.50	8.57	1.51	0.00
7.00	0.91	0.00	0.00	36.00	8.57	1.51	0.00
7.50	1.01	0.00	0.00	36.50	8.57	1.51	0.00
8.00	1.11	0.00	0.00	37.00	8.57	1.51	0.00
8.50	1.23	0.00	0.00	37.50	8.57	1.51	0.00
9.00	1.36	0.00	0.00	38.00	8.57	1.51	0.00
9.50	1.51	0.00	0.00	38.50	8.57	1.51	0.00
10.00	1.69	0.00	0.00	39.00	8.57	1.51	0.00
10.50	1.91	0.00	0.00	39.50	8.57	1.51	0.00
11.00	2.21	0.00	0.00	40.00	8.57	1.51	0.00
11.50	2.68	0.00	0.00	40.50	8.57	1.51	0.00
12.00	4.08	0.07	0.29	41.00	8.57	1.51	0.00
12.50	5.89	0.47	0.34	41.50	8.57	1.51	0.00
13.00	6.36	0.62	0.20	42.00	8.57	1.51	0.00
13.50	6.66	0.72	0.14	42.50	8.57	1.51	0.00
14.00	6.88	0.80	0.12	43.00	8.57	1.51	0.00
14.50	7.06	0.87	0.10	43.50	8.57	1.51	0.00
15.00	7.21	0.92	0.08	44.00	8.57	1.51	0.00
15.50	7.34	0.97	0.08	44.50	8.57	1.51	0.00
16.00	7.46	1.02	0.07	45.00	8.57	1.51	0.00
16.50	7.56	1.07	0.07	45.50	8.57	1.51	0.00
17.00	7.66	1.11	0.06	46.00	8.57	1.51	0.00
17.50	7.75	1.14	0.06	46.50	8.57	1.51	0.00
18.00	7.83	1.18	0.05	47.00	8.57	1.51	0.00
18.50	7.91	1.21	0.05	47.50	8.57	1.51	0.00
19.00	7.98	1.24	0.05	48.00	8.57	1.51	0.00
19.50	8.05	1.27	0.05				
20.00	8.12	1.30	0.04				
20.50	8.18	1.33	0.04				
21.00	8.24	1.36	0.04				
21.50	8.30	1.39	0.04				
22.00	8.36	1.41	0.04				
22.50	8.42	1.44	0.04				
23.00	8.47	1.46	0.04				
23.50	8.52	1.49	0.04				
24.00	8.57	1.51	0.03				
24.50	8.57	1.51	0.00				
25.00	8.57	1.51	0.00				
25.50	8.57	1.51	0.00				
26.00	8.57	1.51	0.00				
26.50	8.57	1.51	0.00				
27.00	8.57	1.51	0.00				
27.50	8.57	1.51	0.00				
28.00	8.57	1.51	0.00				
28.50	8.57	1.51	0.00				

Summary for Subcatchment 59S: PDA-1F

Runoff = 44.05 cfs @ 12.13 hrs, Volume= 3.014 af, Depth= 6.28"
 Routed to Pond 26P : Bioretention 1F

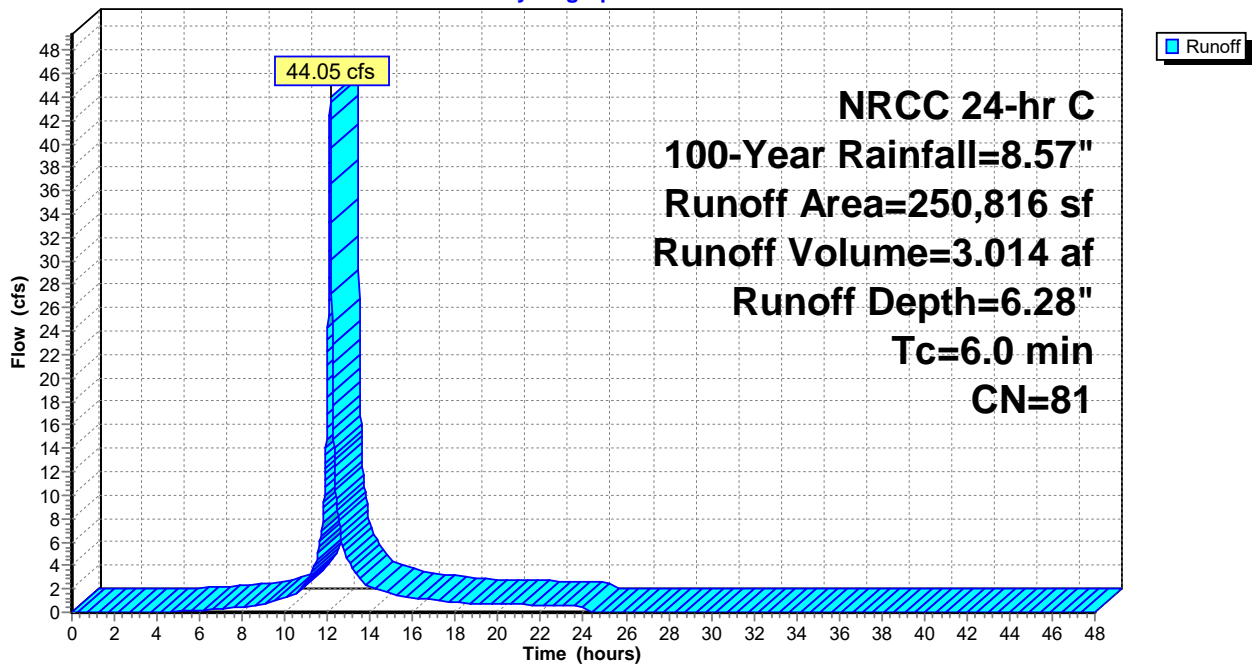
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
178,571	98	Unconnected pavement, HSG D
71,249	39	>75% Grass cover, Good, HSG A
996	80	>75% Grass cover, Good, HSG D
250,816	81	Weighted Average
72,245		28.80% Pervious Area
178,571		71.20% Impervious Area
178,571		100.00% Unconnected

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

Subcatchment 59S: PDA-1F

Hydrograph



Hydrograph for Subcatchment 59S: PDA-1F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	6.28	0.00
0.50	0.05	0.00	0.00	29.50	8.57	6.28	0.00
1.00	0.10	0.00	0.00	30.00	8.57	6.28	0.00
1.50	0.15	0.00	0.00	30.50	8.57	6.28	0.00
2.00	0.21	0.00	0.00	31.00	8.57	6.28	0.00
2.50	0.27	0.00	0.00	31.50	8.57	6.28	0.00
3.00	0.33	0.00	0.00	32.00	8.57	6.28	0.00
3.50	0.39	0.00	0.00	32.50	8.57	6.28	0.00
4.00	0.45	0.00	0.00	33.00	8.57	6.28	0.00
4.50	0.52	0.00	0.03	33.50	8.57	6.28	0.00
5.00	0.59	0.01	0.07	34.00	8.57	6.28	0.00
5.50	0.66	0.01	0.11	34.50	8.57	6.28	0.00
6.00	0.74	0.03	0.16	35.00	8.57	6.28	0.00
6.50	0.82	0.04	0.23	35.50	8.57	6.28	0.00
7.00	0.91	0.07	0.30	36.00	8.57	6.28	0.00
7.50	1.01	0.10	0.39	36.50	8.57	6.28	0.00
8.00	1.11	0.14	0.49	37.00	8.57	6.28	0.00
8.50	1.23	0.19	0.59	37.50	8.57	6.28	0.00
9.00	1.36	0.24	0.71	38.00	8.57	6.28	0.00
9.50	1.51	0.32	0.96	38.50	8.57	6.28	0.00
10.00	1.69	0.42	1.26	39.00	8.57	6.28	0.00
10.50	1.91	0.55	1.60	39.50	8.57	6.28	0.00
11.00	2.21	0.74	2.60	40.00	8.57	6.28	0.00
11.50	2.68	1.07	4.53	40.50	8.57	6.28	0.00
12.00	4.08	2.19	22.32	41.00	8.57	6.28	0.00
12.50	5.89	3.78	8.09	41.50	8.57	6.28	0.00
13.00	6.36	4.21	4.32	42.00	8.57	6.28	0.00
13.50	6.66	4.49	2.81	42.50	8.57	6.28	0.00
14.00	6.88	4.69	2.21	43.00	8.57	6.28	0.00
14.50	7.06	4.86	1.87	43.50	8.57	6.28	0.00
15.00	7.21	5.00	1.52	44.00	8.57	6.28	0.00
15.50	7.34	5.12	1.35	44.50	8.57	6.28	0.00
16.00	7.46	5.23	1.25	45.00	8.57	6.28	0.00
16.50	7.56	5.33	1.15	45.50	8.57	6.28	0.00
17.00	7.66	5.43	1.05	46.00	8.57	6.28	0.00
17.50	7.75	5.51	0.95	46.50	8.57	6.28	0.00
18.00	7.83	5.59	0.85	47.00	8.57	6.28	0.00
18.50	7.91	5.66	0.80	47.50	8.57	6.28	0.00
19.00	7.98	5.72	0.78	48.00	8.57	6.28	0.00
19.50	8.05	5.79	0.75				
20.00	8.12	5.85	0.73				
20.50	8.18	5.91	0.70				
21.00	8.24	5.97	0.68				
21.50	8.30	6.03	0.65				
22.00	8.36	6.08	0.63				
22.50	8.42	6.14	0.60				
23.00	8.47	6.19	0.58				
23.50	8.52	6.24	0.55				
24.00	8.57	6.28	0.53				
24.50	8.57	6.28	0.00				
25.00	8.57	6.28	0.00				
25.50	8.57	6.28	0.00				
26.00	8.57	6.28	0.00				
26.50	8.57	6.28	0.00				
27.00	8.57	6.28	0.00				
27.50	8.57	6.28	0.00				
28.00	8.57	6.28	0.00				
28.50	8.57	6.28	0.00				

Summary for Subcatchment 60S: PDA-1i-B

Runoff = 1.02 cfs @ 12.14 hrs, Volume= 0.085 af, Depth= 1.40"
 Routed to Pond 31P : Bioretention i

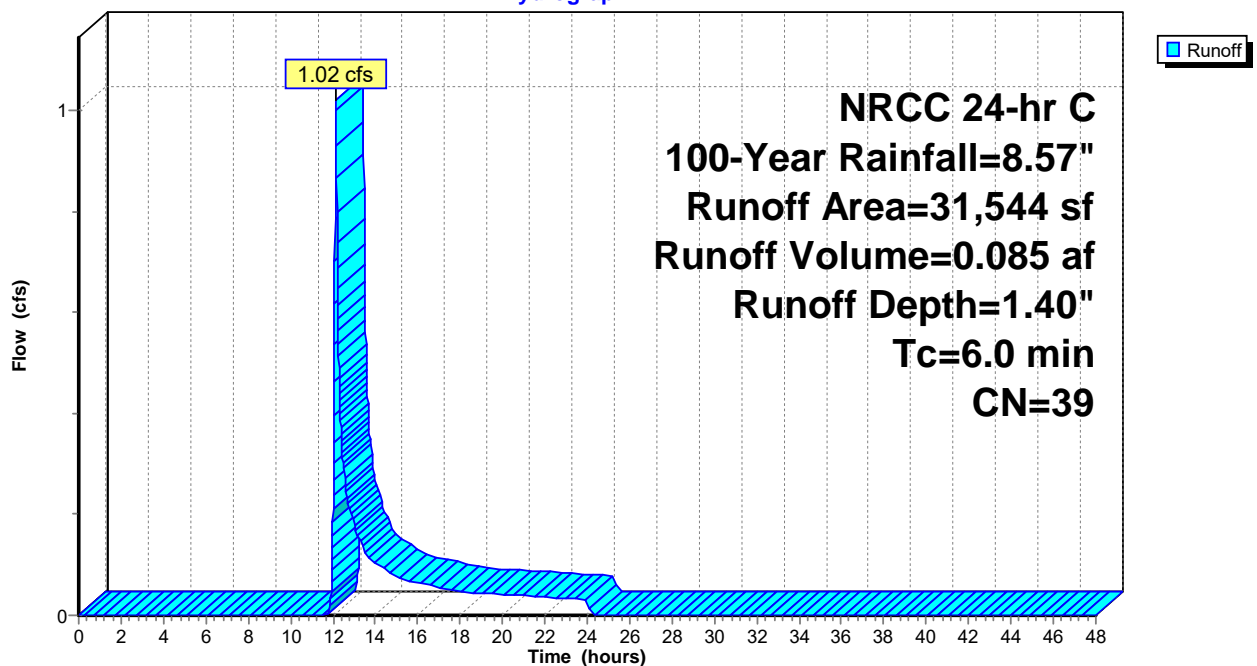
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 100-Year Rainfall=8.57"

Area (sf)	CN	Description
31,544	39	>75% Grass cover, Good, HSG A
31,544		100.00% Pervious Area

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

Subcatchment 60S: PDA-1i-B

Hydrograph



Hydrograph for Subcatchment 60S: PDA-1i-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	8.57	1.40	0.00
0.50	0.05	0.00	0.00	29.50	8.57	1.40	0.00
1.00	0.10	0.00	0.00	30.00	8.57	1.40	0.00
1.50	0.15	0.00	0.00	30.50	8.57	1.40	0.00
2.00	0.21	0.00	0.00	31.00	8.57	1.40	0.00
2.50	0.27	0.00	0.00	31.50	8.57	1.40	0.00
3.00	0.33	0.00	0.00	32.00	8.57	1.40	0.00
3.50	0.39	0.00	0.00	32.50	8.57	1.40	0.00
4.00	0.45	0.00	0.00	33.00	8.57	1.40	0.00
4.50	0.52	0.00	0.00	33.50	8.57	1.40	0.00
5.00	0.59	0.00	0.00	34.00	8.57	1.40	0.00
5.50	0.66	0.00	0.00	34.50	8.57	1.40	0.00
6.00	0.74	0.00	0.00	35.00	8.57	1.40	0.00
6.50	0.82	0.00	0.00	35.50	8.57	1.40	0.00
7.00	0.91	0.00	0.00	36.00	8.57	1.40	0.00
7.50	1.01	0.00	0.00	36.50	8.57	1.40	0.00
8.00	1.11	0.00	0.00	37.00	8.57	1.40	0.00
8.50	1.23	0.00	0.00	37.50	8.57	1.40	0.00
9.00	1.36	0.00	0.00	38.00	8.57	1.40	0.00
9.50	1.51	0.00	0.00	38.50	8.57	1.40	0.00
10.00	1.69	0.00	0.00	39.00	8.57	1.40	0.00
10.50	1.91	0.00	0.00	39.50	8.57	1.40	0.00
11.00	2.21	0.00	0.00	40.00	8.57	1.40	0.00
11.50	2.68	0.00	0.00	40.50	8.57	1.40	0.00
12.00	4.08	0.05	0.21	41.00	8.57	1.40	0.00
12.50	5.89	0.41	0.30	41.50	8.57	1.40	0.00
13.00	6.36	0.55	0.18	42.00	8.57	1.40	0.00
13.50	6.66	0.65	0.13	42.50	8.57	1.40	0.00
14.00	6.88	0.72	0.10	43.00	8.57	1.40	0.00
14.50	7.06	0.79	0.09	43.50	8.57	1.40	0.00
15.00	7.21	0.85	0.08	44.00	8.57	1.40	0.00
15.50	7.34	0.89	0.07	44.50	8.57	1.40	0.00
16.00	7.46	0.94	0.06	45.00	8.57	1.40	0.00
16.50	7.56	0.98	0.06	45.50	8.57	1.40	0.00
17.00	7.66	1.02	0.06	46.00	8.57	1.40	0.00
17.50	7.75	1.06	0.05	46.50	8.57	1.40	0.00
18.00	7.83	1.09	0.05	47.00	8.57	1.40	0.00
18.50	7.91	1.12	0.04	47.50	8.57	1.40	0.00
19.00	7.98	1.15	0.04	48.00	8.57	1.40	0.00
19.50	8.05	1.18	0.04				
20.00	8.12	1.21	0.04				
20.50	8.18	1.23	0.04				
21.00	8.24	1.26	0.04				
21.50	8.30	1.29	0.04				
22.00	8.36	1.31	0.04				
22.50	8.42	1.34	0.04				
23.00	8.47	1.36	0.03				
23.50	8.52	1.38	0.03				
24.00	8.57	1.40	0.03				
24.50	8.57	1.40	0.00				
25.00	8.57	1.40	0.00				
25.50	8.57	1.40	0.00				
26.00	8.57	1.40	0.00				
26.50	8.57	1.40	0.00				
27.00	8.57	1.40	0.00				
27.50	8.57	1.40	0.00				
28.00	8.57	1.40	0.00				
28.50	8.57	1.40	0.00				

Summary for Pond 1P: Bioretention 1D

Inflow Area = 3.927 ac, 65.47% Impervious, Inflow Depth = 7.54" for 100-Year event
 Inflow = 33.50 cfs @ 12.14 hrs, Volume= 2.466 af
 Outflow = 3.33 cfs @ 12.97 hrs, Volume= 1.785 af, Atten= 90%, Lag= 49.9 min
 Primary = 3.33 cfs @ 12.97 hrs, Volume= 1.785 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 415.00' @ 12.97 hrs Surf.Area= 19,570 sf Storage= 64,431 cf

Plug-Flow detention time= 343.8 min calculated for 1.785 af (72% of inflow)
 Center-of-Mass det. time= 245.9 min (1,019.8 - 773.8)

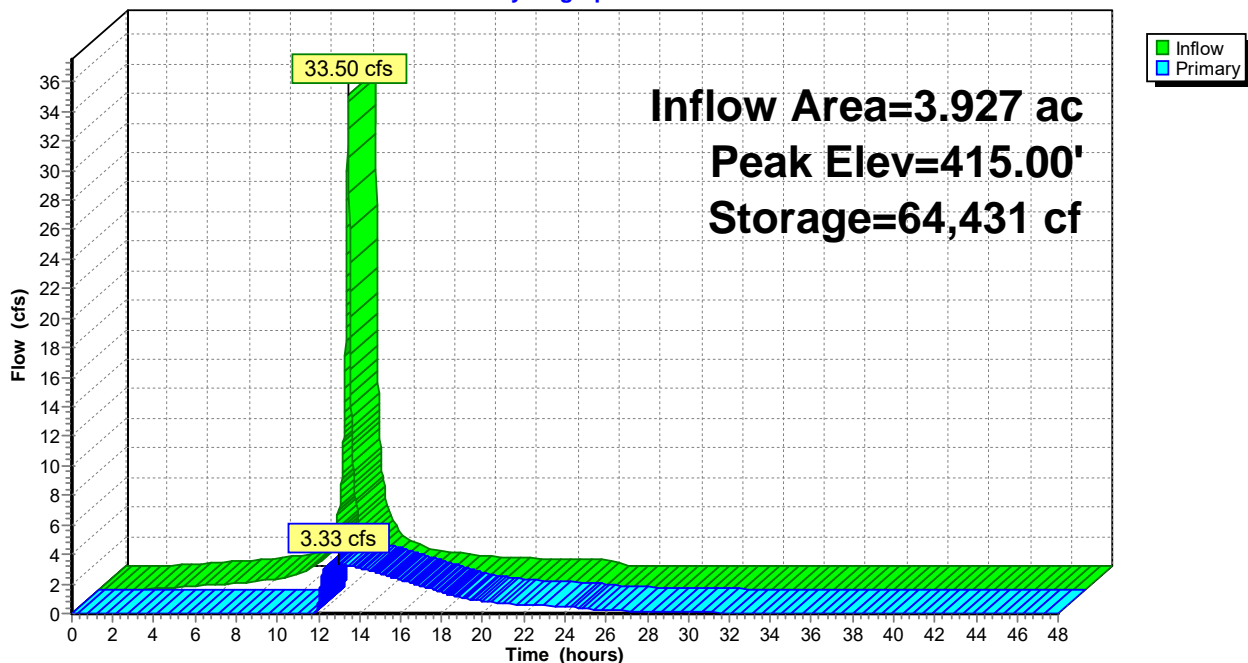
Volume	Invert	Avail.Storage	Storage Description	
#1	408.66'	82,103 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	14,016	0.0	0	0
409.33	14,016	40.0	3,756	3,756
412.00	14,016	20.0	7,485	11,241
416.00	21,415	100.0	70,862	82,103

Device	Routing	Invert	Outlet Devices
#1	Primary	408.78'	18.0" Round Culvert L= 28.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 408.78' / 408.50' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	413.00'	10.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	415.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=3.31 cfs @ 12.97 hrs HW=415.00' (Free Discharge)
 ↑ **1=Culvert** (Passes 3.31 cfs of 19.90 cfs potential flow)
 ↑ **2=Orifice/Grate** (Orifice Controls 3.31 cfs @ 6.06 fps)
 ↑ **3=Broad-Crested Rectangular Weir** (Weir Controls 0.01 cfs @ 0.14 fps)

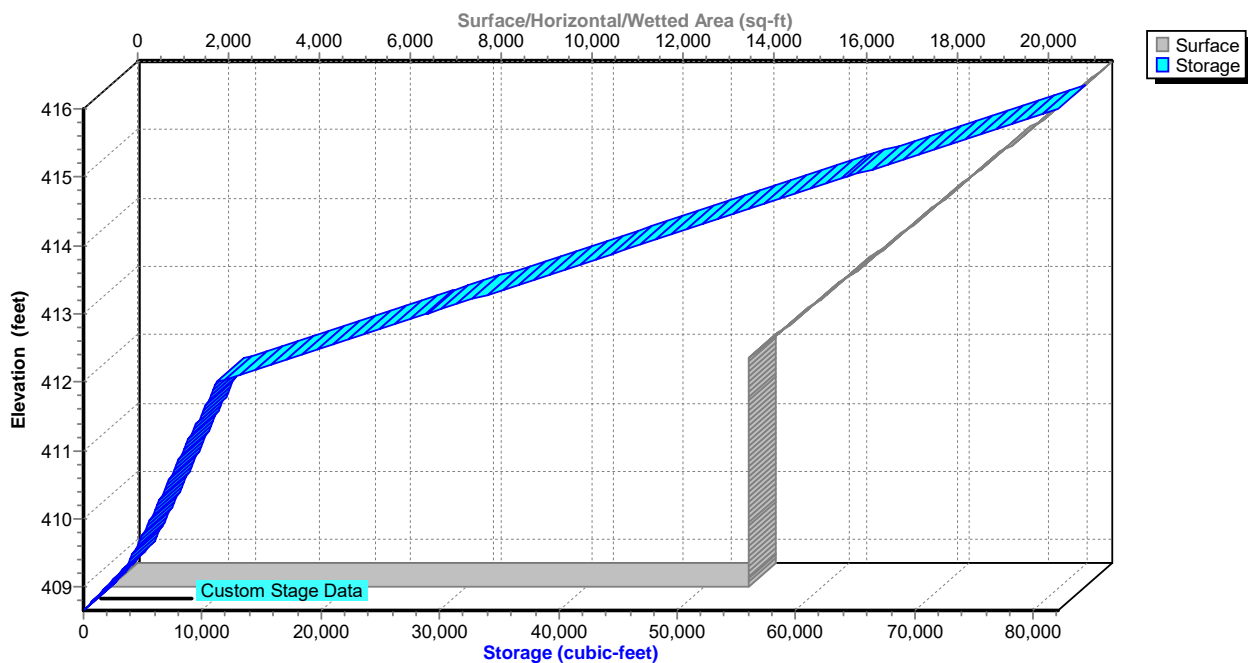
Pond 1P: Bioretention 1D

Hydrograph



Pond 1P: Bioretention 1D

Stage-Area-Storage



Hydrograph for Pond 1P: Bioretention 1D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	408.66	0.00
1.00	0.00	0	408.66	0.00
2.00	0.01	18	408.66	0.00
3.00	0.11	229	408.70	0.00
4.00	0.20	776	408.80	0.00
5.00	0.28	1,627	408.95	0.00
6.00	0.35	2,754	409.15	0.00
7.00	0.49	4,249	409.51	0.00
8.00	0.65	6,291	410.23	0.00
9.00	0.82	8,921	411.17	0.00
10.00	1.29	12,659	412.08	0.00
11.00	2.36	18,667	412.42	0.00
12.00	16.85	37,120	413.46	0.72
13.00	3.21	64,425	415.00	3.33
14.00	1.61	60,686	414.79	3.08
15.00	1.10	55,146	414.48	2.71
16.00	0.90	49,695	414.17	2.28
17.00	0.76	45,235	413.92	1.86
18.00	0.61	41,731	413.72	1.45
19.00	0.56	39,330	413.59	1.07
20.00	0.52	37,884	413.50	0.83
21.00	0.48	36,962	413.45	0.69
22.00	0.45	36,327	413.42	0.60
23.00	0.41	35,843	413.39	0.53
24.00	0.38	35,446	413.37	0.48
25.00	0.00	34,179	413.29	0.32
26.00	0.00	33,219	413.24	0.22
27.00	0.00	32,546	413.20	0.16
28.00	0.00	32,043	413.17	0.12
29.00	0.00	31,657	413.15	0.09
30.00	0.00	31,360	413.14	0.07
31.00	0.00	31,118	413.12	0.06
32.00	0.00	30,911	413.11	0.05
33.00	0.00	30,735	413.10	0.05
34.00	0.00	30,584	413.09	0.04
35.00	0.00	30,456	413.08	0.03
36.00	0.00	30,347	413.08	0.03
37.00	0.00	30,254	413.07	0.02
38.00	0.00	30,175	413.07	0.02
39.00	0.00	30,107	413.06	0.02
40.00	0.00	30,048	413.06	0.02
41.00	0.00	29,992	413.06	0.02
42.00	0.00	29,939	413.06	0.01
43.00	0.00	29,888	413.05	0.01
44.00	0.00	29,841	413.05	0.01
45.00	0.00	29,795	413.05	0.01
46.00	0.00	29,752	413.04	0.01
47.00	0.00	29,711	413.04	0.01
48.00	0.00	29,673	413.04	0.01

Stage-Area-Storage for Pond 1P: Bioretention 1D

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.66	14,016	0	414.46	18,566	54,821
408.76	14,016	561	414.56	18,751	56,593
408.86	14,016	1,121	414.66	18,936	58,364
408.96	14,016	1,682	414.76	19,121	60,136
409.06	14,016	2,243	414.86	19,306	61,907
409.16	14,016	2,803	414.96	19,491	63,679
409.26	14,016	3,364	415.06	19,676	65,450
409.36	14,016	3,840	415.16	19,861	67,222
409.46	14,016	4,121	415.26	20,046	68,993
409.56	14,016	4,401	415.36	20,231	70,765
409.66	14,016	4,681	415.46	20,416	72,536
409.76	14,016	4,962	415.56	20,601	74,308
409.86	14,016	5,242	415.66	20,786	76,080
409.96	14,016	5,522	415.76	20,971	77,851
410.06	14,016	5,803	415.86	21,156	79,623
410.16	14,016	6,083	415.96	21,341	81,394
410.26	14,016	6,363			
410.36	14,016	6,644			
410.46	14,016	6,924			
410.56	14,016	7,204			
410.66	14,016	7,485			
410.76	14,016	7,765			
410.86	14,016	8,045			
410.96	14,016	8,326			
411.06	14,016	8,606			
411.16	14,016	8,886			
411.26	14,016	9,166			
411.36	14,016	9,447			
411.46	14,016	9,727			
411.56	14,016	10,007			
411.66	14,016	10,288			
411.76	14,016	10,568			
411.86	14,016	10,848			
411.96	14,016	11,129			
412.06	14,127	12,304			
412.16	14,312	14,075			
412.26	14,497	15,847			
412.36	14,682	17,618			
412.46	14,867	19,390			
412.56	15,052	21,162			
412.66	15,237	22,933			
412.76	15,422	24,705			
412.86	15,607	26,476			
412.96	15,792	28,248			
413.06	15,977	30,019			
413.16	16,162	31,791			
413.26	16,347	33,562			
413.36	16,532	35,334			
413.46	16,717	37,105			
413.56	16,902	38,877			
413.66	17,087	40,649			
413.76	17,272	42,420			
413.86	17,457	44,192			
413.96	17,642	45,963			
414.06	17,826	47,735			
414.16	18,011	49,506			
414.26	18,196	51,278			
414.36	18,381	53,049			

Summary for Pond 3P: Bioretention 1A

Inflow Area = 2.483 ac, 78.54% Impervious, Inflow Depth = 6.76" for 100-Year event
 Inflow = 20.02 cfs @ 12.13 hrs, Volume= 1.400 af
 Outflow = 14.60 cfs @ 12.18 hrs, Volume= 0.951 af, Atten= 27%, Lag= 3.2 min
 Primary = 14.60 cfs @ 12.18 hrs, Volume= 0.951 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 414.96' @ 12.18 hrs Surf.Area= 12,476 sf Storage= 24,961 cf

Plug-Flow detention time= 190.4 min calculated for 0.951 af (68% of inflow)
 Center-of-Mass det. time= 86.9 min (880.4 - 793.5)

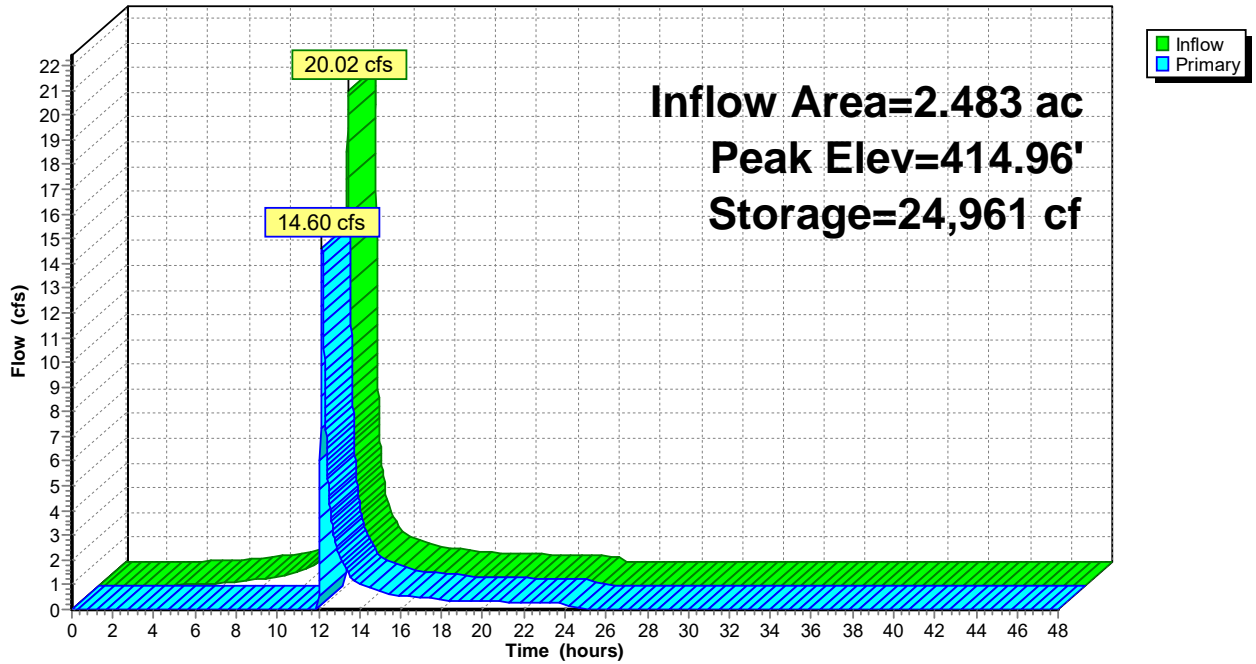
Volume	Invert	Avail.Storage	Storage Description	
#1	408.66'	25,522 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	8,681	0.0	0	0
409.33	8,681	40.0	2,327	2,327
413.50	8,681	20.0	7,240	9,566
415.00	12,593	100.0	15,956	25,522

Device	Routing	Invert	Outlet Devices
#1	Primary	408.66'	18.0" Round Culvert L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 408.66' / 407.50' S= 0.0232 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	414.50'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=14.54 cfs @ 12.18 hrs HW=414.95' (Free Discharge)
 ↑1=Culvert (Passes 14.54 cfs of 20.04 cfs potential flow)
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 14.54 cfs @ 2.00 fps)

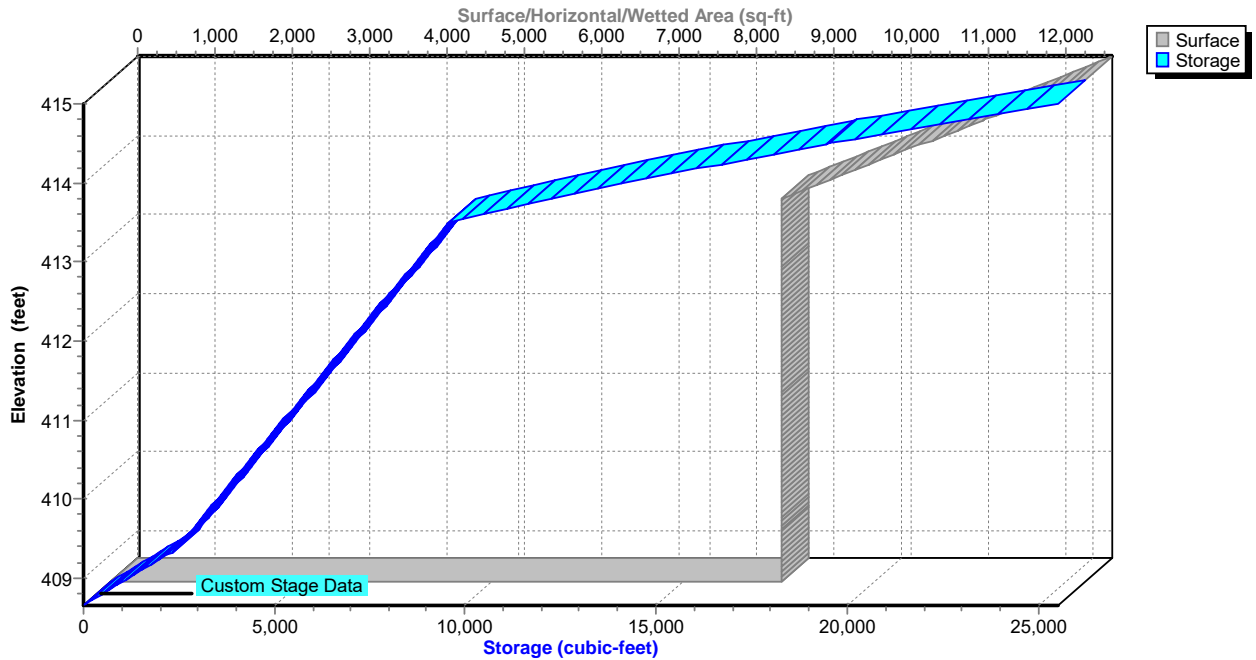
Pond 3P: Bioretention 1A

Hydrograph



Pond 3P: Bioretention 1A

Stage-Area-Storage



Hydrograph for Pond 3P: Bioretention 1A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	408.66	0.00
1.00	0.00	0	408.66	0.00
2.00	0.00	0	408.66	0.00
3.00	0.00	0	408.66	0.00
4.00	0.03	38	408.67	0.00
5.00	0.07	227	408.73	0.00
6.00	0.12	574	408.83	0.00
7.00	0.19	1,124	408.98	0.00
8.00	0.28	1,970	409.23	0.00
9.00	0.38	3,162	409.81	0.00
10.00	0.65	4,991	410.86	0.00
11.00	1.28	8,143	412.68	0.00
12.00	10.32	18,952	414.45	0.00
13.00	1.93	21,081	414.63	2.21
14.00	0.98	20,453	414.58	1.05
15.00	0.67	20,264	414.56	0.72
16.00	0.55	20,167	414.55	0.58
17.00	0.46	20,076	414.55	0.49
18.00	0.37	19,981	414.54	0.40
19.00	0.34	19,927	414.53	0.35
20.00	0.32	19,902	414.53	0.33
21.00	0.30	19,878	414.53	0.31
22.00	0.28	19,854	414.53	0.28
23.00	0.25	19,830	414.52	0.26
24.00	0.23	19,806	414.52	0.24
25.00	0.00	19,564	414.50	0.01
26.00	0.00	19,552	414.50	0.00
27.00	0.00	19,551	414.50	0.00
28.00	0.00	19,551	414.50	0.00
29.00	0.00	19,551	414.50	0.00
30.00	0.00	19,551	414.50	0.00
31.00	0.00	19,551	414.50	0.00
32.00	0.00	19,551	414.50	0.00
33.00	0.00	19,551	414.50	0.00
34.00	0.00	19,551	414.50	0.00
35.00	0.00	19,551	414.50	0.00
36.00	0.00	19,551	414.50	0.00
37.00	0.00	19,551	414.50	0.00
38.00	0.00	19,551	414.50	0.00
39.00	0.00	19,551	414.50	0.00
40.00	0.00	19,551	414.50	0.00
41.00	0.00	19,551	414.50	0.00
42.00	0.00	19,551	414.50	0.00
43.00	0.00	19,551	414.50	0.00
44.00	0.00	19,551	414.50	0.00
45.00	0.00	19,551	414.50	0.00
46.00	0.00	19,551	414.50	0.00
47.00	0.00	19,551	414.50	0.00
48.00	0.00	19,551	414.50	0.00

Stage-Area-Storage for Pond 3P: Bioretention 1A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.66	8,681	0	414.46	11,185	19,102
408.76	8,681	347	414.56	11,445	20,233
408.86	8,681	694	414.66	11,706	21,391
408.96	8,681	1,042	414.76	11,967	22,575
409.06	8,681	1,389	414.86	12,228	23,785
409.16	8,681	1,736	414.96	12,489	25,020
409.26	8,681	2,083			
409.36	8,681	2,379			
409.46	8,681	2,552			
409.56	8,681	2,726			
409.66	8,681	2,899			
409.76	8,681	3,073			
409.86	8,681	3,247			
409.96	8,681	3,420			
410.06	8,681	3,594			
410.16	8,681	3,768			
410.26	8,681	3,941			
410.36	8,681	4,115			
410.46	8,681	4,288			
410.56	8,681	4,462			
410.66	8,681	4,636			
410.76	8,681	4,809			
410.86	8,681	4,983			
410.96	8,681	5,157			
411.06	8,681	5,330			
411.16	8,681	5,504			
411.26	8,681	5,677			
411.36	8,681	5,851			
411.46	8,681	6,025			
411.56	8,681	6,198			
411.66	8,681	6,372			
411.76	8,681	6,545			
411.86	8,681	6,719			
411.96	8,681	6,893			
412.06	8,681	7,066			
412.16	8,681	7,240			
412.26	8,681	7,414			
412.36	8,681	7,587			
412.46	8,681	7,761			
412.56	8,681	7,934			
412.66	8,681	8,108			
412.76	8,681	8,282			
412.86	8,681	8,455			
412.96	8,681	8,629			
413.06	8,681	8,803			
413.16	8,681	8,976			
413.26	8,681	9,150			
413.36	8,681	9,323			
413.46	8,681	9,497			
413.56	8,837	10,092			
413.66	9,098	10,989			
413.76	9,359	11,912			
413.86	9,620	12,861			
413.96	9,881	13,836			
414.06	10,141	14,837			
414.16	10,402	15,864			
414.26	10,663	16,917			
414.36	10,924	17,997			

Summary for Pond 22P: Bioretention 5A

Inflow Area = 4.966 ac, 46.58% Impervious, Inflow Depth = 5.44" for 100-Year event
 Inflow = 33.25 cfs @ 12.14 hrs, Volume= 2.251 af
 Outflow = 12.66 cfs @ 12.29 hrs, Volume= 1.905 af, Atten= 62%, Lag= 9.0 min
 Primary = 12.66 cfs @ 12.29 hrs, Volume= 1.905 af
 Routed to Link PDP5 : PDP5

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 434.00' @ 12.29 hrs Surf.Area= 14,360 sf Storage= 34,944 cf

Plug-Flow detention time= 136.2 min calculated for 1.905 af (85% of inflow)
 Center-of-Mass det. time= 65.3 min (890.0 - 824.7)

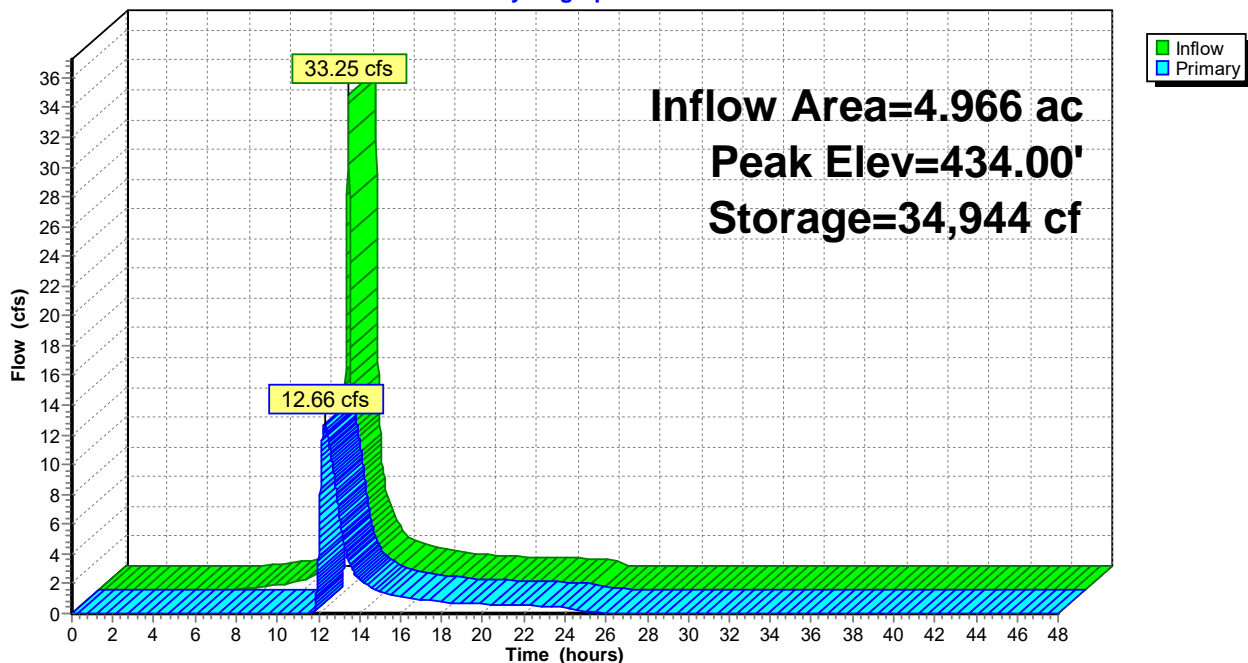
Volume	Invert	Avail.Storage	Storage Description	
#1	428.67'	50,065 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
428.67	11,465	0.0	0	0
429.33	11,465	40.0	3,027	3,027
432.00	11,465	20.0	6,122	9,149
435.00	15,812	100.0	40,916	50,065

Device	Routing	Invert	Outlet Devices
#1	Primary	428.67'	18.0" Round Culvert L= 270.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 428.67' / 389.43' S= 0.1453 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	432.50'	44.0" W x 8.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	434.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=12.66 cfs @ 12.29 hrs HW=434.00' (Free Discharge)
 1=Culvert (Passes 12.66 cfs of 18.20 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 12.66 cfs @ 5.18 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

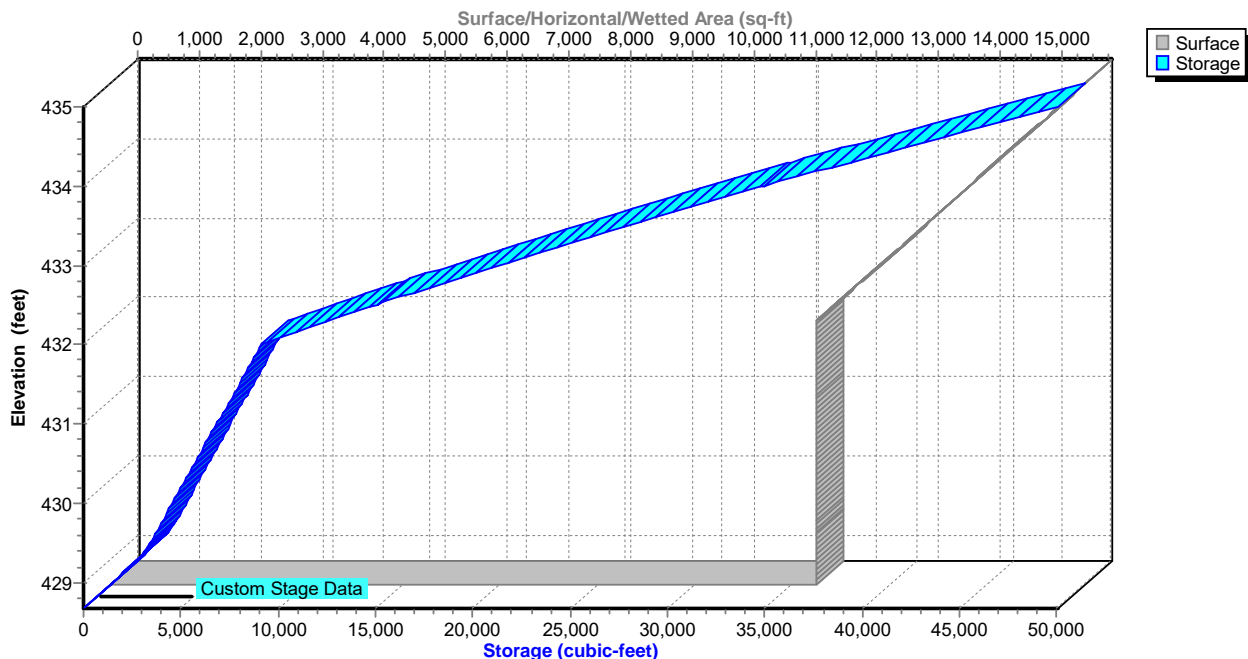
Pond 22P: Bioretention 5A

Hydrograph



Pond 22P: Bioretention 5A

Stage-Area-Storage



Hydrograph for Pond 22P: Bioretention 5A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	428.67	0.00
1.00	0.00	0	428.67	0.00
2.00	0.00	0	428.67	0.00
3.00	0.00	0	428.67	0.00
4.00	0.00	0	428.67	0.00
5.00	0.00	0	428.67	0.00
6.00	0.00	1	428.67	0.00
7.00	0.08	132	428.70	0.00
8.00	0.20	617	428.80	0.00
9.00	0.36	1,615	429.02	0.00
10.00	0.71	3,471	429.52	0.00
11.00	1.62	7,222	431.16	0.00
12.00	14.77	20,993	432.97	3.83
13.00	3.57	24,015	433.20	6.86
14.00	1.81	19,200	432.83	2.27
15.00	1.26	18,166	432.75	1.49
16.00	1.02	17,617	432.71	1.12
17.00	0.86	17,328	432.68	0.94
18.00	0.70	17,067	432.66	0.78
19.00	0.64	16,874	432.65	0.67
20.00	0.60	16,775	432.64	0.62
21.00	0.56	16,693	432.63	0.58
22.00	0.52	16,612	432.63	0.54
23.00	0.48	16,531	432.62	0.50
24.00	0.44	16,450	432.61	0.46
25.00	0.00	15,677	432.55	0.15
26.00	0.00	15,369	432.53	0.05
27.00	0.00	15,229	432.51	0.03
28.00	0.00	15,152	432.51	0.02
29.00	0.00	15,111	432.50	0.01
30.00	0.00	15,089	432.50	0.00
31.00	0.00	15,077	432.50	0.00
32.00	0.00	15,070	432.50	0.00
33.00	0.00	15,067	432.50	0.00
34.00	0.00	15,065	432.50	0.00
35.00	0.00	15,064	432.50	0.00
36.00	0.00	15,063	432.50	0.00
37.00	0.00	15,063	432.50	0.00
38.00	0.00	15,063	432.50	0.00
39.00	0.00	15,063	432.50	0.00
40.00	0.00	15,063	432.50	0.00
41.00	0.00	15,063	432.50	0.00
42.00	0.00	15,063	432.50	0.00
43.00	0.00	15,063	432.50	0.00
44.00	0.00	15,063	432.50	0.00
45.00	0.00	15,063	432.50	0.00
46.00	0.00	15,063	432.50	0.00
47.00	0.00	15,063	432.50	0.00
48.00	0.00	15,063	432.50	0.00

Stage-Area-Storage for Pond 22P: Bioretention 5A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
428.67	11,465	0	434.47	15,044	41,888
428.77	11,465	459	434.57	15,189	43,399
428.87	11,465	917	434.67	15,334	44,926
428.97	11,465	1,376	434.77	15,479	46,466
429.07	11,465	1,834	434.87	15,624	48,021
429.17	11,465	2,293	434.97	15,769	49,591
429.27	11,465	2,752			
429.37	11,465	3,118			
429.47	11,465	3,348			
429.57	11,465	3,577			
429.67	11,465	3,806			
429.77	11,465	4,036			
429.87	11,465	4,265			
429.97	11,465	4,494			
430.07	11,465	4,724			
430.17	11,465	4,953			
430.27	11,465	5,182			
430.37	11,465	5,411			
430.47	11,465	5,641			
430.57	11,465	5,870			
430.67	11,465	6,099			
430.77	11,465	6,329			
430.87	11,465	6,558			
430.97	11,465	6,787			
431.07	11,465	7,017			
431.17	11,465	7,246			
431.27	11,465	7,475			
431.37	11,465	7,704			
431.47	11,465	7,934			
431.57	11,465	8,163			
431.67	11,465	8,392			
431.77	11,465	8,622			
431.87	11,465	8,851			
431.97	11,465	9,080			
432.07	11,566	9,955			
432.17	11,711	11,119			
432.27	11,856	12,297			
432.37	12,001	13,490			
432.47	12,146	14,698			
432.57	12,291	15,920			
432.67	12,436	17,156			
432.77	12,581	18,407			
432.87	12,726	19,672			
432.97	12,871	20,952			
433.07	13,015	22,246			
433.17	13,160	23,555			
433.27	13,305	24,878			
433.37	13,450	26,216			
433.47	13,595	27,568			
433.57	13,740	28,935			
433.67	13,885	30,316			
433.77	14,030	31,712			
433.87	14,175	33,122			
433.97	14,320	34,547			
434.07	14,464	35,986			
434.17	14,609	37,440			
434.27	14,754	38,908			
434.37	14,899	40,391			

Summary for Pond 26P: Bioretention 1F

Inflow Area = 5.758 ac, 71.20% Impervious, Inflow Depth = 6.28" for 100-Year event
 Inflow = 44.05 cfs @ 12.13 hrs, Volume= 3.014 af
 Outflow = 16.92 cfs @ 12.27 hrs, Volume= 2.449 af, Atten= 62%, Lag= 8.2 min
 Primary = 16.92 cfs @ 12.27 hrs, Volume= 2.449 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.80' @ 12.27 hrs Surf.Area= 24,445 sf Storage= 53,647 cf

Plug-Flow detention time= 168.4 min calculated for 2.449 af (81% of inflow)
 Center-of-Mass det. time= 88.7 min (893.2 - 804.5)

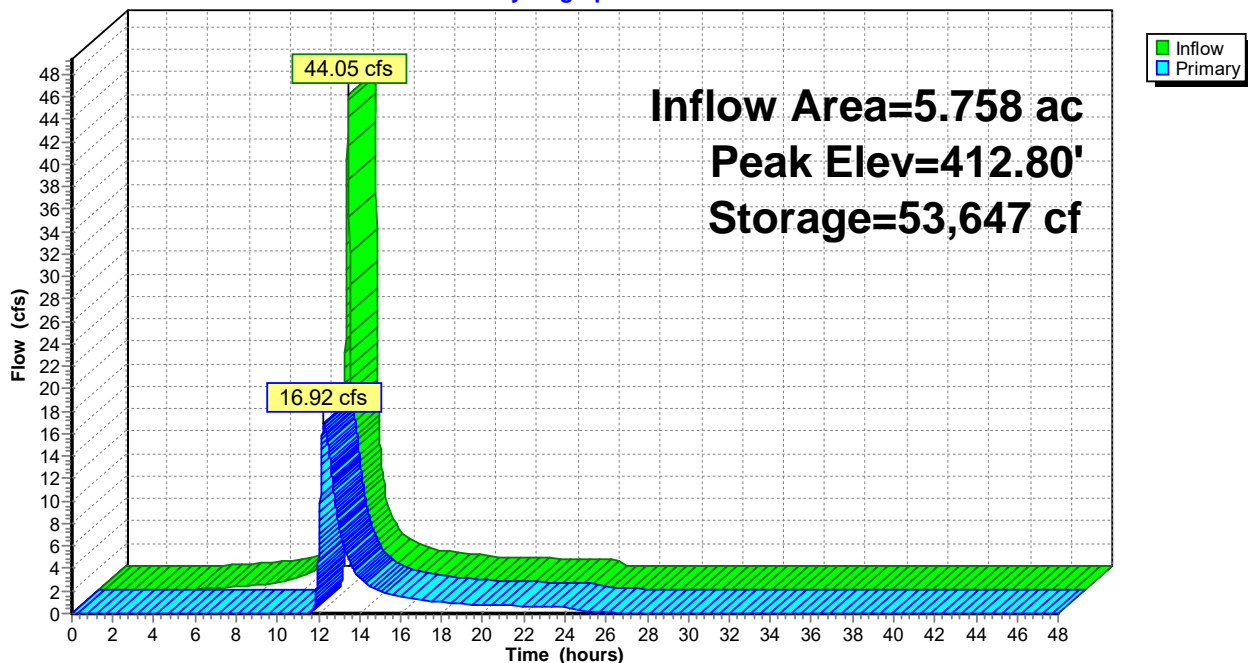
Volume	Invert	Avail.Storage	Storage Description	
#1	407.66'	85,321 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.66	18,594	0.0	0	0
408.33	18,594	40.0	4,983	4,983
411.00	18,594	20.0	9,929	14,912
414.00	28,345	100.0	70,409	85,321

Device	Routing	Invert	Outlet Devices
#1	Primary	407.66'	18.0" Round Culvert L= 47.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.66' / 407.50' S= 0.0034 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	411.50'	48.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=16.92 cfs @ 12.27 hrs HW=412.80' (Free Discharge)
 1=Culvert (Passes 16.92 cfs of 17.83 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 16.92 cfs @ 4.23 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

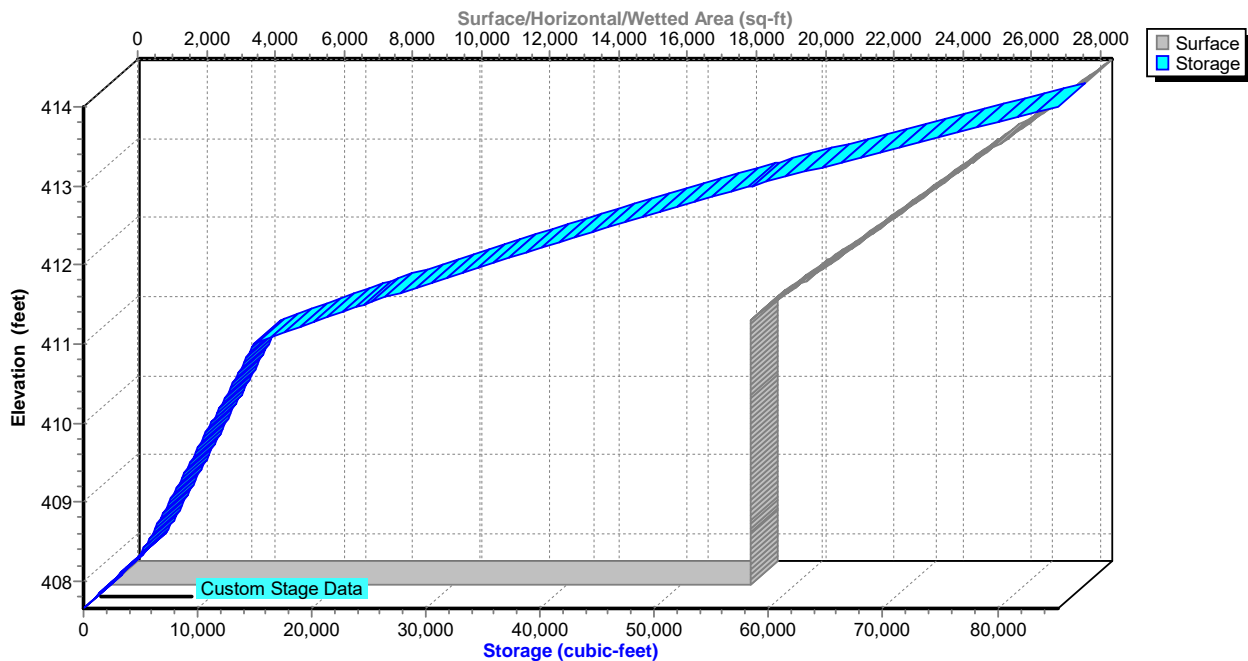
Pond 26P: Bioretention 1F

Hydrograph



Pond 26P: Bioretention 1F

Stage-Area-Storage



Hydrograph for Pond 26P: Bioretention 1F

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.66	0.00
1.00	0.00	0	407.66	0.00
2.00	0.00	0	407.66	0.00
3.00	0.00	0	407.66	0.00
4.00	0.00	0	407.66	0.00
5.00	0.07	98	407.67	0.00
6.00	0.16	512	407.73	0.00
7.00	0.30	1,330	407.84	0.00
8.00	0.49	2,738	408.03	0.00
9.00	0.71	4,874	408.32	0.00
10.00	1.26	8,340	409.23	0.00
11.00	2.60	14,607	410.92	0.00
12.00	22.32	35,605	412.02	4.84
13.00	4.32	39,944	412.22	7.79
14.00	2.21	32,833	411.89	3.18
15.00	1.52	30,570	411.79	1.99
16.00	1.25	29,416	411.73	1.45
17.00	1.05	28,828	411.70	1.20
18.00	0.85	28,309	411.68	0.99
19.00	0.78	27,939	411.66	0.84
20.00	0.73	27,754	411.65	0.77
21.00	0.68	27,598	411.65	0.72
22.00	0.63	27,444	411.64	0.67
23.00	0.58	27,289	411.63	0.62
24.00	0.53	27,134	411.62	0.57
25.00	0.00	25,945	411.57	0.23
26.00	0.00	25,370	411.54	0.10
27.00	0.00	25,112	411.52	0.05
28.00	0.00	24,956	411.52	0.04
29.00	0.00	24,849	411.51	0.02
30.00	0.00	24,776	411.51	0.02
31.00	0.00	24,725	411.51	0.01
32.00	0.00	24,691	411.50	0.01
33.00	0.00	24,667	411.50	0.01
34.00	0.00	24,651	411.50	0.00
35.00	0.00	24,640	411.50	0.00
36.00	0.00	24,632	411.50	0.00
37.00	0.00	24,627	411.50	0.00
38.00	0.00	24,623	411.50	0.00
39.00	0.00	24,621	411.50	0.00
40.00	0.00	24,619	411.50	0.00
41.00	0.00	24,618	411.50	0.00
42.00	0.00	24,617	411.50	0.00
43.00	0.00	24,617	411.50	0.00
44.00	0.00	24,616	411.50	0.00
45.00	0.00	24,616	411.50	0.00
46.00	0.00	24,616	411.50	0.00
47.00	0.00	24,616	411.50	0.00
48.00	0.00	24,616	411.50	0.00

Stage-Area-Storage for Pond 26P: Bioretention 1F

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.66	18,594	0	413.46	26,590	70,488
407.76	18,594	744	413.56	26,915	73,164
407.86	18,594	1,488	413.66	27,240	75,871
407.96	18,594	2,231	413.76	27,565	78,612
408.06	18,594	2,975	413.86	27,890	81,384
408.16	18,594	3,719	413.96	28,215	84,190
408.26	18,594	4,463			
408.36	18,594	5,095			
408.46	18,594	5,467			
408.56	18,594	5,839			
408.66	18,594	6,210			
408.76	18,594	6,582			
408.86	18,594	6,954			
408.96	18,594	7,326			
409.06	18,594	7,698			
409.16	18,594	8,070			
409.26	18,594	8,442			
409.36	18,594	8,814			
409.46	18,594	9,185			
409.56	18,594	9,557			
409.66	18,594	9,929			
409.76	18,594	10,301			
409.86	18,594	10,673			
409.96	18,594	11,045			
410.06	18,594	11,417			
410.16	18,594	11,789			
410.26	18,594	12,160			
410.36	18,594	12,532			
410.46	18,594	12,904			
410.56	18,594	13,276			
410.66	18,594	13,648			
410.76	18,594	14,020			
410.86	18,594	14,392			
410.96	18,594	14,764			
411.06	18,789	16,034			
411.16	19,114	17,929			
411.26	19,439	19,857			
411.36	19,764	21,817			
411.46	20,089	23,810			
411.56	20,414	25,835			
411.66	20,739	27,892			
411.76	21,064	29,983			
411.86	21,389	32,105			
411.96	21,714	34,260			
412.06	22,039	36,448			
412.16	22,364	38,668			
412.26	22,689	40,921			
412.36	23,014	43,206			
412.46	23,339	45,524			
412.56	23,665	47,874			
412.66	23,990	50,257			
412.76	24,315	52,672			
412.86	24,640	55,120			
412.96	24,965	57,600			
413.06	25,290	60,113			
413.16	25,615	62,658			
413.26	25,940	65,236			
413.36	26,265	67,846			

Summary for Pond 29P: Bioretention 4B

Inflow Area = 6.859 ac, 48.92% Impervious, Inflow Depth = 6.40" for 100-Year event
 Inflow = 53.05 cfs @ 12.13 hrs, Volume= 3.659 af
 Outflow = 12.72 cfs @ 12.37 hrs, Volume= 2.954 af, Atten= 76%, Lag= 14.7 min
 Primary = 12.72 cfs @ 12.37 hrs, Volume= 2.954 af
 Routed to Link 32L : DP-4

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 421.00' @ 12.37 hrs Surf.Area= 22,352 sf Storage= 71,487 cf

Plug-Flow detention time= 176.0 min calculated for 2.954 af (81% of inflow)
 Center-of-Mass det. time= 95.2 min (896.0 - 800.8)

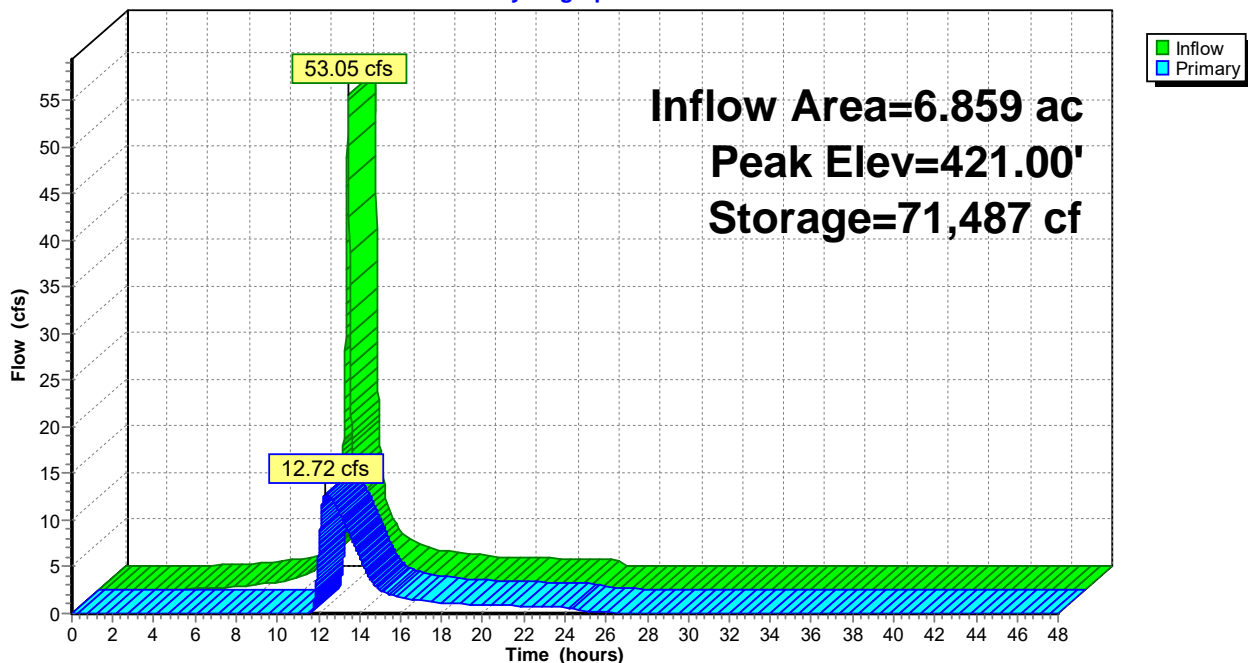
Volume	Invert	Avail.Storage	Storage Description	
#1	414.67'	94,874 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
414.67	16,541	0.0	0	0
415.33	16,541	40.0	4,367	4,367
418.00	16,541	20.0	8,833	13,200
422.00	24,296	100.0	81,674	94,874

Device	Routing	Invert	Outlet Devices
#1	Primary	414.67'	18.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 414.67' / 414.07' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	419.00'	48.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	421.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=12.72 cfs @ 12.37 hrs HW=421.00' (Free Discharge)
 1=Culvert (Passes 12.72 cfs of 20.09 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 12.72 cfs @ 6.36 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

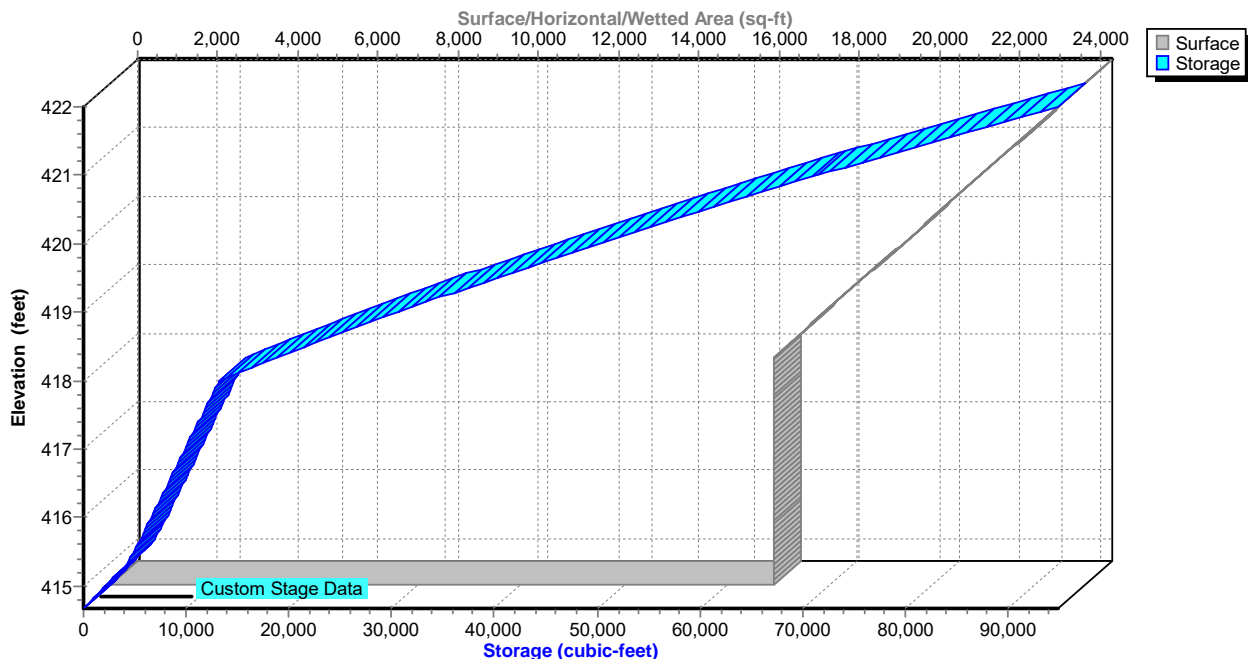
Pond 29P: Bioretention 4B

Hydrograph



Pond 29P: Bioretention 4B

Stage-Area-Storage



Hydrograph for Pond 29P: Bioretention 4B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	414.67	0.00
1.00	0.00	0	414.67	0.00
2.00	0.00	0	414.67	0.00
3.00	0.00	0	414.67	0.00
4.00	0.04	36	414.68	0.00
5.00	0.13	352	414.72	0.00
6.00	0.23	1,004	414.82	0.00
7.00	0.41	2,144	414.99	0.00
8.00	0.64	4,017	415.28	0.00
9.00	0.90	6,775	416.06	0.00
10.00	1.58	11,158	417.38	0.00
11.00	3.21	18,948	418.34	0.00
12.00	27.00	43,937	419.69	6.29
13.00	5.18	61,593	420.55	10.94
14.00	2.65	43,416	419.66	6.09
15.00	1.81	37,137	419.34	2.57
16.00	1.49	35,601	419.26	1.72
17.00	1.26	34,969	419.23	1.40
18.00	1.02	34,457	419.20	1.16
19.00	0.93	34,073	419.18	1.00
20.00	0.87	33,882	419.17	0.92
21.00	0.81	33,731	419.16	0.85
22.00	0.75	33,589	419.15	0.79
23.00	0.69	33,449	419.15	0.73
24.00	0.63	33,307	419.14	0.67
25.00	0.00	31,966	419.07	0.23
26.00	0.00	31,366	419.04	0.12
27.00	0.00	31,052	419.02	0.06
28.00	0.00	30,889	419.01	0.03
29.00	0.00	30,803	419.01	0.02
30.00	0.00	30,759	419.00	0.01
31.00	0.00	30,736	419.00	0.00
32.00	0.00	30,723	419.00	0.00
33.00	0.00	30,717	419.00	0.00
34.00	0.00	30,714	419.00	0.00
35.00	0.00	30,712	419.00	0.00
36.00	0.00	30,711	419.00	0.00
37.00	0.00	30,711	419.00	0.00
38.00	0.00	30,710	419.00	0.00
39.00	0.00	30,710	419.00	0.00
40.00	0.00	30,710	419.00	0.00
41.00	0.00	30,710	419.00	0.00
42.00	0.00	30,710	419.00	0.00
43.00	0.00	30,710	419.00	0.00
44.00	0.00	30,710	419.00	0.00
45.00	0.00	30,710	419.00	0.00
46.00	0.00	30,710	419.00	0.00
47.00	0.00	30,710	419.00	0.00
48.00	0.00	30,710	419.00	0.00

Stage-Area-Storage for Pond 29P: Bioretention 4B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
414.67	16,541	0	420.47	21,330	59,970
414.77	16,541	662	420.57	21,524	62,113
414.87	16,541	1,323	420.67	21,717	64,275
414.97	16,541	1,985	420.77	21,911	66,456
415.07	16,541	2,647	420.87	22,105	68,657
415.17	16,541	3,308	420.97	22,299	70,877
415.27	16,541	3,970	421.07	22,493	73,117
415.37	16,541	4,499	421.17	22,687	75,376
415.47	16,541	4,830	421.27	22,881	77,654
415.57	16,541	5,161	421.37	23,075	79,952
415.67	16,541	5,492	421.47	23,268	82,269
415.77	16,541	5,822	421.57	23,462	84,606
415.87	16,541	6,153	421.67	23,656	86,962
415.97	16,541	6,484	421.77	23,850	89,337
416.07	16,541	6,815	421.87	24,044	91,732
416.17	16,541	7,146	421.97	24,238	94,146
416.27	16,541	7,477			
416.37	16,541	7,807			
416.47	16,541	8,138			
416.57	16,541	8,469			
416.67	16,541	8,800			
416.77	16,541	9,131			
416.87	16,541	9,461			
416.97	16,541	9,792			
417.07	16,541	10,123			
417.17	16,541	10,454			
417.27	16,541	10,785			
417.37	16,541	11,116			
417.47	16,541	11,446			
417.57	16,541	11,777			
417.67	16,541	12,108			
417.77	16,541	12,439			
417.87	16,541	12,770			
417.97	16,541	13,100			
418.07	16,677	14,362			
418.17	16,871	16,040			
418.27	17,064	17,736			
418.37	17,258	19,453			
418.47	17,452	21,188			
418.57	17,646	22,943			
418.67	17,840	24,717			
418.77	18,034	26,511			
418.87	18,228	28,324			
418.97	18,422	30,157			
419.07	18,615	32,008			
419.17	18,809	33,880			
419.27	19,003	35,770			
419.37	19,197	37,680			
419.47	19,391	39,610			
419.57	19,585	41,559			
419.67	19,779	43,527			
419.77	19,973	45,514			
419.87	20,166	47,521			
419.97	20,360	49,548			
420.07	20,554	51,593			
420.17	20,748	53,658			
420.27	20,942	55,743			
420.37	21,136	57,847			

Summary for Pond 31P: Bioretention i

Inflow Area = 10.027 ac, 72.74% Impervious, Inflow Depth = 3.49" for 100-Year event
 Inflow = 38.02 cfs @ 12.09 hrs, Volume= 2.914 af
 Outflow = 7.97 cfs @ 12.40 hrs, Volume= 1.946 af, Atten= 79%, Lag= 18.7 min
 Primary = 7.97 cfs @ 12.40 hrs, Volume= 1.946 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 413.00' @ 12.40 hrs Surf.Area= 26,462 sf Storage= 67,717 cf

Plug-Flow detention time= 284.3 min calculated for 1.946 af (67% of inflow)
 Center-of-Mass det. time= 171.8 min (940.5 - 768.7)

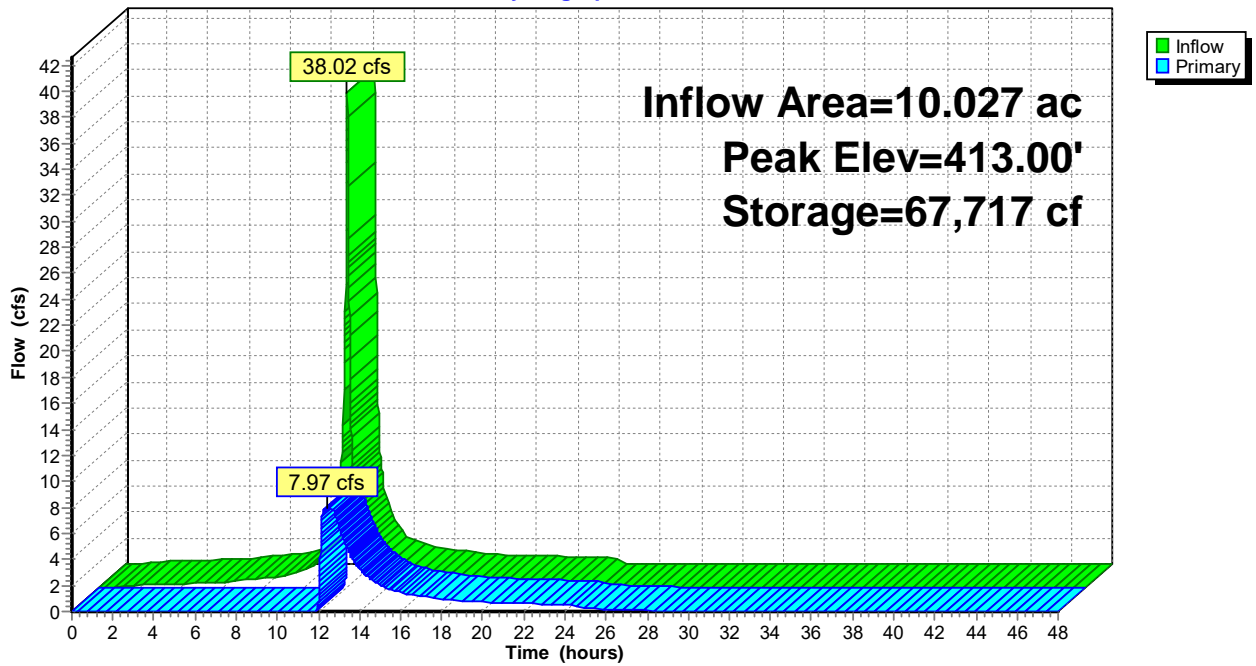
Volume	Invert	Avail.Storage	Storage Description	
#1	407.83'	93,189 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	22,680	0.0	0	0
408.33	22,680	40.0	4,536	4,536
411.00	22,680	20.0	12,111	16,647
414.00	28,348	100.0	76,542	93,189

Device	Routing	Invert	Outlet Devices
#1	Primary	407.83'	12.0" Round Culvert L= 42.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.83' / 407.50' S= 0.0079 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	412.00'	34.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=7.97 cfs @ 12.40 hrs HW=413.00' (Free Discharge)
 1=Culvert (Barrel Controls 7.97 cfs @ 10.14 fps)
 2=Orifice/Grate (Passes < 9.12 cfs potential flow)
 3=Broad-Crested Rectangular Weir (Passes < 0.00 cfs potential flow)

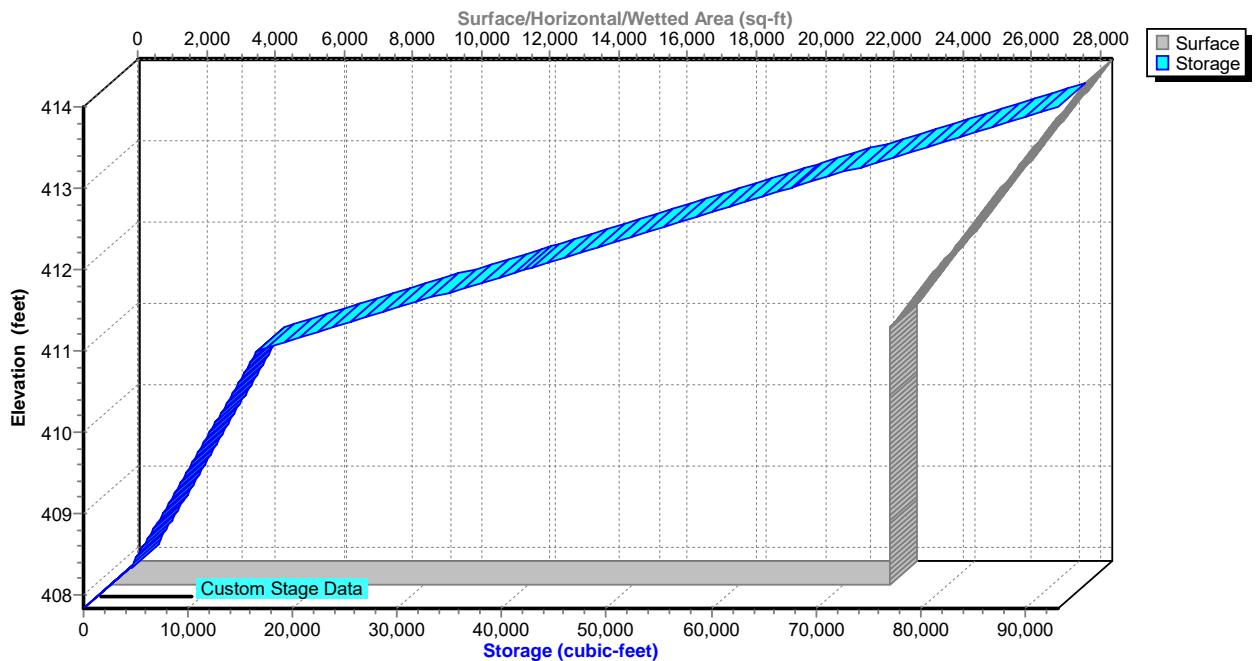
Pond 31P: Bioretention i

Hydrograph



Pond 31P: Bioretention i

Stage-Area-Storage



Hydrograph for Pond 31P: Bioretention i

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.83	0.00
1.00	0.10	97	407.84	0.00
2.00	0.20	641	407.90	0.00
3.00	0.25	1,454	407.99	0.00
4.00	0.29	2,443	408.10	0.00
5.00	0.36	3,617	408.23	0.00
6.00	0.42	5,022	408.44	0.00
7.00	0.57	6,793	408.83	0.00
8.00	0.73	9,138	409.34	0.00
9.00	0.91	12,089	410.00	0.00
10.00	1.43	16,282	410.92	0.00
11.00	2.67	23,070	411.25	0.00
12.00	23.29	47,097	412.19	0.78
13.00	3.74	62,601	412.80	6.53
14.00	1.94	55,064	412.51	3.27
15.00	1.33	51,618	412.37	2.06
16.00	1.10	49,699	412.30	1.47
17.00	0.92	48,637	412.25	1.17
18.00	0.75	47,822	412.22	0.95
19.00	0.68	47,225	412.20	0.81
20.00	0.64	46,856	412.18	0.73
21.00	0.60	46,585	412.17	0.66
22.00	0.55	46,359	412.16	0.61
23.00	0.51	46,150	412.16	0.57
24.00	0.46	45,949	412.15	0.52
25.00	0.00	44,671	412.10	0.29
26.00	0.00	43,883	412.07	0.17
27.00	0.00	43,387	412.05	0.11
28.00	0.00	43,071	412.04	0.07
29.00	0.00	42,870	412.03	0.04
30.00	0.00	42,736	412.02	0.03
31.00	0.00	42,629	412.02	0.03
32.00	0.00	42,542	412.01	0.02
33.00	0.00	42,472	412.01	0.02
34.00	0.00	42,414	412.01	0.01
35.00	0.00	42,367	412.01	0.01
36.00	0.00	42,329	412.01	0.01
37.00	0.00	42,298	412.01	0.01
38.00	0.00	42,272	412.00	0.01
39.00	0.00	42,252	412.00	0.01
40.00	0.00	42,235	412.00	0.00
41.00	0.00	42,221	412.00	0.00
42.00	0.00	42,210	412.00	0.00
43.00	0.00	42,201	412.00	0.00
44.00	0.00	42,194	412.00	0.00
45.00	0.00	42,188	412.00	0.00
46.00	0.00	42,183	412.00	0.00
47.00	0.00	42,179	412.00	0.00
48.00	0.00	42,175	412.00	0.00

Stage-Area-Storage for Pond 31P: Bioretention i

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.83	22,680	0	413.63	27,649	83,749
407.93	22,680	907	413.73	27,838	86,300
408.03	22,680	1,814	413.83	28,027	88,852
408.13	22,680	2,722	413.93	28,216	91,403
408.23	22,680	3,629			
408.33	22,680	4,536			
408.43	22,680	4,990			
408.53	22,680	5,443			
408.63	22,680	5,897			
408.73	22,680	6,350			
408.83	22,680	6,804			
408.93	22,680	7,258			
409.03	22,680	7,711			
409.13	22,680	8,165			
409.23	22,680	8,618			
409.33	22,680	9,072			
409.43	22,680	9,526			
409.53	22,680	9,979			
409.63	22,680	10,433			
409.73	22,680	10,886			
409.83	22,680	11,340			
409.93	22,680	11,794			
410.03	22,680	12,247			
410.13	22,680	12,701			
410.23	22,680	13,154			
410.33	22,680	13,608			
410.43	22,680	14,062			
410.53	22,680	14,515			
410.63	22,680	14,969			
410.73	22,680	15,422			
410.83	22,680	15,876			
410.93	22,680	16,330			
411.03	22,737	17,413			
411.13	22,926	19,964			
411.23	23,115	22,515			
411.33	23,303	25,067			
411.43	23,492	27,618			
411.53	23,681	30,170			
411.63	23,870	32,721			
411.73	24,059	35,272			
411.83	24,248	37,824			
411.93	24,437	40,375			
412.03	24,626	42,927			
412.13	24,815	45,478			
412.23	25,004	48,029			
412.33	25,193	50,581			
412.43	25,382	53,132			
412.53	25,571	55,684			
412.63	25,760	58,235			
412.73	25,949	60,786			
412.83	26,137	63,338			
412.93	26,326	65,889			
413.03	26,515	68,441			
413.13	26,704	70,992			
413.23	26,893	73,543			
413.33	27,082	76,095			
413.43	27,271	78,646			
413.53	27,460	81,198			

Summary for Pond 32P: FB 1C

Inflow Area = 2.583 ac, 77.93% Impervious, Inflow Depth = 7.37" for 100-Year event
 Inflow = 21.90 cfs @ 12.13 hrs, Volume= 1.586 af
 Outflow = 21.77 cfs @ 12.14 hrs, Volume= 1.586 af, Atten= 1%, Lag= 0.4 min
 Primary = 21.77 cfs @ 12.14 hrs, Volume= 1.586 af
 Routed to Pond 33P : INFIL 1C

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 413.35' Surf.Area= 3,197 sf Storage= 9,962 cf
 Peak Elev= 413.78' @ 12.14 hrs Surf.Area= 3,484 sf Storage= 10,943 cf (981 cf above start)

Plug-Flow detention time= 116.1 min calculated for 1.357 af (86% of inflow)
 Center-of-Mass det. time= 1.8 min (779.4 - 777.7)

Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	13,740 cf	Custom Stage Data (Prismatic) Listed below

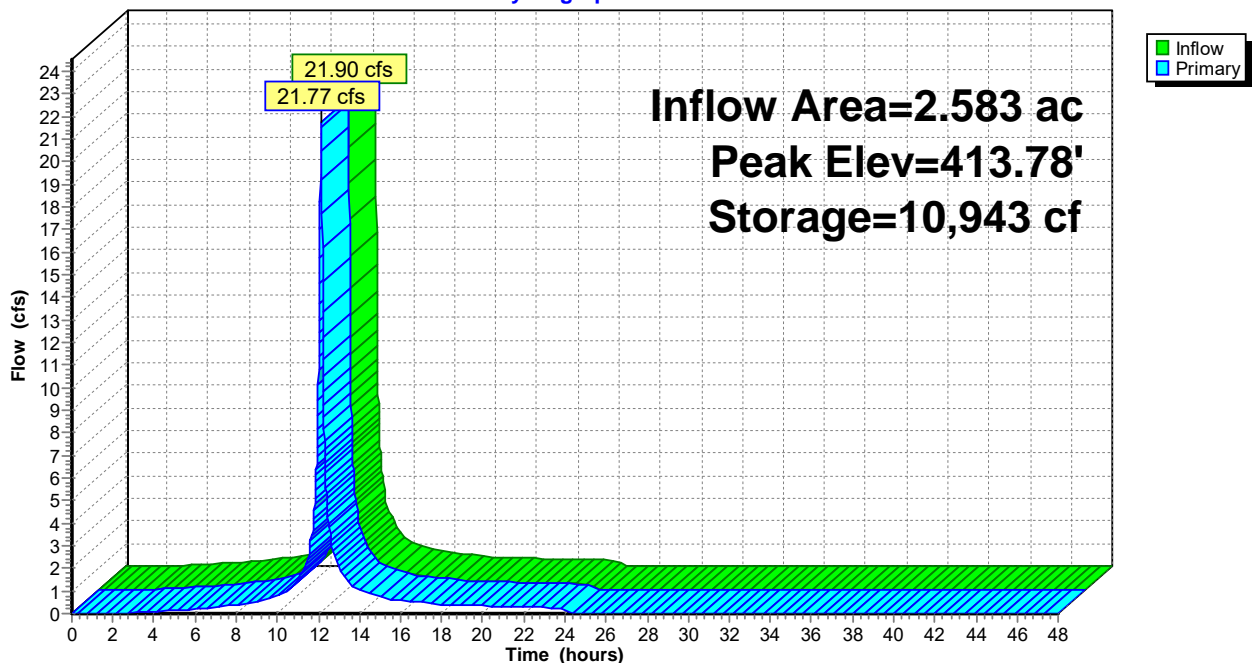
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
409.00	275	0	0
415.00	4,305	13,740	13,740

Device	Routing	Invert	Outlet Devices
#1	Primary	413.35'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

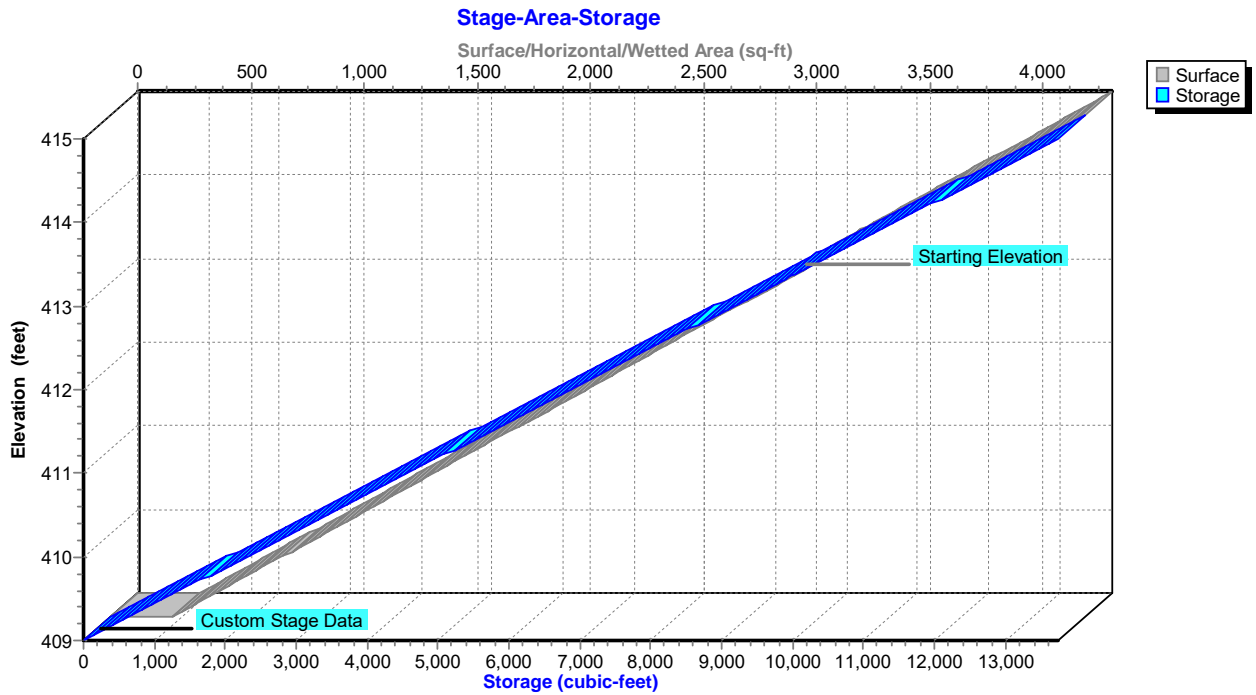
Primary OutFlow Max=21.65 cfs @ 12.14 hrs HW=413.78' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 21.65 cfs @ 1.69 fps)

Pond 32P: FB 1C

Hydrograph



Pond 32P: FB 1C



Hydrograph for Pond 32P: FB 1C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	9,962	413.35	0.00
1.00	0.00	9,962	413.35	0.00
2.00	0.00	9,962	413.35	0.00
3.00	0.05	9,969	413.35	0.04
4.00	0.10	9,979	413.36	0.10
5.00	0.16	9,989	413.36	0.15
6.00	0.20	9,997	413.37	0.20
7.00	0.29	10,013	413.37	0.29
8.00	0.40	10,031	413.38	0.40
9.00	0.51	10,040	413.38	0.51
10.00	0.82	10,066	413.40	0.81
11.00	1.53	10,124	413.42	1.50
12.00	11.49	10,588	413.62	10.80
13.00	2.06	10,173	413.44	2.10
14.00	1.05	10,087	413.40	1.06
15.00	0.71	10,059	413.39	0.72
16.00	0.59	10,047	413.39	0.59
17.00	0.49	10,039	413.38	0.50
18.00	0.40	10,031	413.38	0.40
19.00	0.36	10,026	413.38	0.36
20.00	0.34	10,022	413.38	0.34
21.00	0.32	10,018	413.37	0.32
22.00	0.29	10,014	413.37	0.29
23.00	0.27	10,009	413.37	0.27
24.00	0.25	10,005	413.37	0.25
25.00	0.00	9,962	413.35	0.00
26.00	0.00	9,962	413.35	0.00
27.00	0.00	9,962	413.35	0.00
28.00	0.00	9,962	413.35	0.00
29.00	0.00	9,962	413.35	0.00
30.00	0.00	9,962	413.35	0.00
31.00	0.00	9,962	413.35	0.00
32.00	0.00	9,962	413.35	0.00
33.00	0.00	9,962	413.35	0.00
34.00	0.00	9,962	413.35	0.00
35.00	0.00	9,962	413.35	0.00
36.00	0.00	9,962	413.35	0.00
37.00	0.00	9,962	413.35	0.00
38.00	0.00	9,962	413.35	0.00
39.00	0.00	9,962	413.35	0.00
40.00	0.00	9,962	413.35	0.00
41.00	0.00	9,962	413.35	0.00
42.00	0.00	9,962	413.35	0.00
43.00	0.00	9,962	413.35	0.00
44.00	0.00	9,962	413.35	0.00
45.00	0.00	9,962	413.35	0.00
46.00	0.00	9,962	413.35	0.00
47.00	0.00	9,962	413.35	0.00
48.00	0.00	9,962	413.35	0.00

Stage-Area-Storage for Pond 32P: FB 1C

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
409.00	275	0	414.80	4,171	13,282
409.10	342	229	414.90	4,238	13,511
409.20	409	458	415.00	4,305	13,740
409.30	477	687			
409.40	544	916			
409.50	611	1,145			
409.60	678	1,374			
409.70	745	1,603			
409.80	812	1,832			
409.90	879	2,061			
410.00	947	2,290			
410.10	1,014	2,519			
410.20	1,081	2,748			
410.30	1,148	2,977			
410.40	1,215	3,206			
410.50	1,283	3,435			
410.60	1,350	3,664			
410.70	1,417	3,893			
410.80	1,484	4,122			
410.90	1,551	4,351			
411.00	1,618	4,580			
411.10	1,686	4,809			
411.20	1,753	5,038			
411.30	1,820	5,267			
411.40	1,887	5,496			
411.50	1,954	5,725			
411.60	2,021	5,954			
411.70	2,088	6,183			
411.80	2,156	6,412			
411.90	2,223	6,641			
412.00	2,290	6,870			
412.10	2,357	7,099			
412.20	2,424	7,328			
412.30	2,492	7,557			
412.40	2,559	7,786			
412.50	2,626	8,015			
412.60	2,693	8,244			
412.70	2,760	8,473			
412.80	2,827	8,702			
412.90	2,894	8,931			
413.00	2,962	9,160			
413.10	3,029	9,389			
413.20	3,096	9,618			
413.30	3,163	9,847			
413.40	3,230	10,076			
413.50	3,298	10,305			
413.60	3,365	10,534			
413.70	3,432	10,763			
413.80	3,499	10,992			
413.90	3,566	11,221			
414.00	3,633	11,450			
414.10	3,701	11,679			
414.20	3,768	11,908			
414.30	3,835	12,137			
414.40	3,902	12,366			
414.50	3,969	12,595			
414.60	4,036	12,824			
414.70	4,103	13,053			

Summary for Pond 33P: INFIL 1C

Inflow Area = 2.583 ac, 77.93% Impervious, Inflow Depth = 7.37" for 100-Year event
 Inflow = 21.77 cfs @ 12.14 hrs, Volume= 1.586 af
 Outflow = 3.62 cfs @ 12.57 hrs, Volume= 1.586 af, Atten= 83%, Lag= 26.0 min
 Discarded = 2.99 cfs @ 12.57 hrs, Volume= 1.514 af
 Primary = 0.63 cfs @ 12.57 hrs, Volume= 0.072 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.98' @ 12.57 hrs Surf.Area= 7,973 sf Storage= 22,823 cf

Plug-Flow detention time= 64.2 min calculated for 1.585 af (100% of inflow)
 Center-of-Mass det. time= 64.1 min (843.6 - 779.4)

Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	41,232 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
409.00	3,499	0	0
415.00	10,245	41,232	41,232

Device	Routing	Invert	Outlet Devices
#1	Secondary	414.00'	10.0' 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
#2	Device 4	411.85'	5.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	409.00'	10.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 404.80' Phase-In= 0.01'
#4	Primary	409.00'	18.0" Round Culvert L= 34.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 409.00' / 408.00' S= 0.0294 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

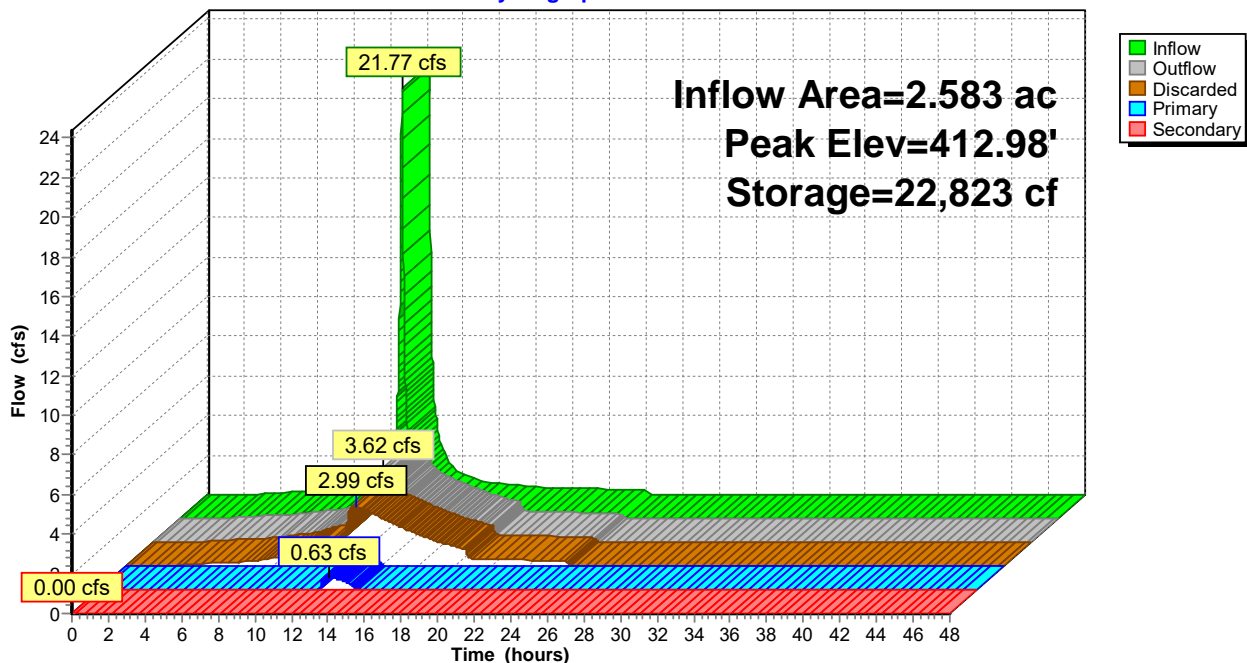
Discarded OutFlow Max=2.99 cfs @ 12.57 hrs HW=412.98' (Free Discharge)
 ↑3=Exfiltration (Controls 2.99 cfs)

Primary OutFlow Max=0.63 cfs @ 12.57 hrs HW=412.98' (Free Discharge)
 ↑4=Culvert (Passes 0.63 cfs of 15.29 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.63 cfs @ 4.62 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=409.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

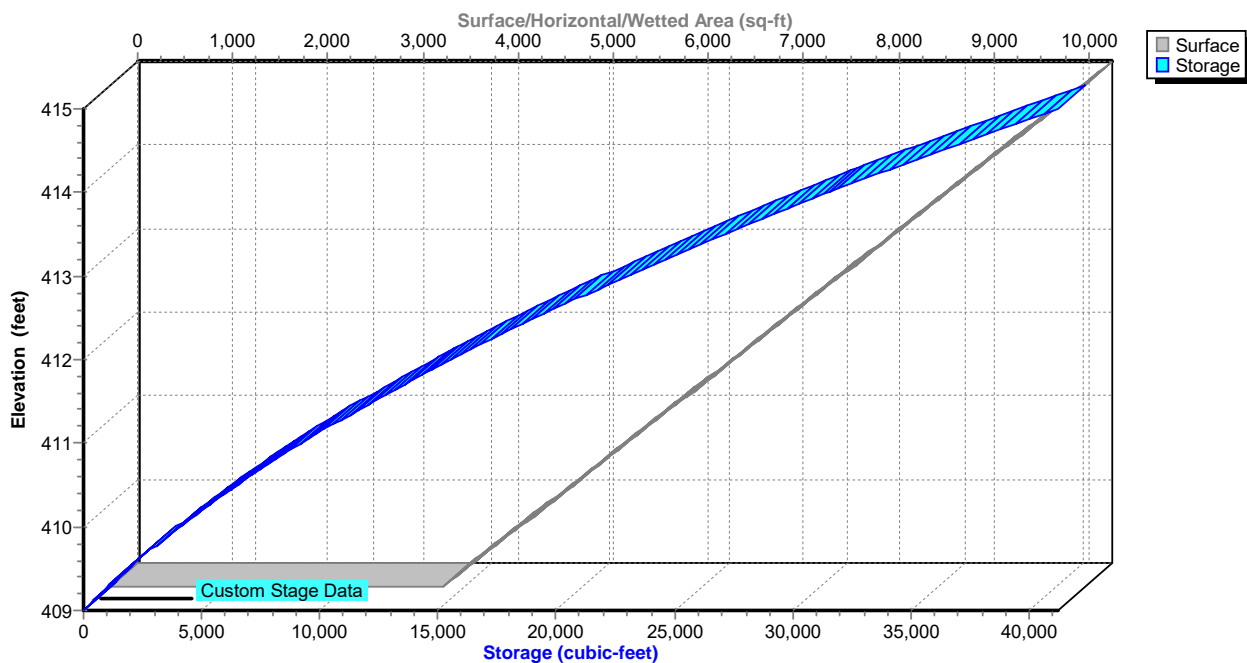
Pond 33P: INFIL 1C

Hydrograph



Pond 33P: INFIL 1C

Stage-Area-Storage



Hydrograph for Pond 33P: INFIL 1C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	409.00	0.00	0.00	0.00	0.00
1.00	0.00	0	409.00	0.00	0.00	0.00	0.00
2.00	0.00	0	409.00	0.00	0.00	0.00	0.00
3.00	0.04	10	409.00	0.04	0.04	0.00	0.00
4.00	0.10	24	409.01	0.10	0.10	0.00	0.00
5.00	0.15	38	409.01	0.15	0.15	0.00	0.00
6.00	0.20	50	409.01	0.20	0.20	0.00	0.00
7.00	0.29	72	409.02	0.28	0.28	0.00	0.00
8.00	0.40	98	409.03	0.39	0.39	0.00	0.00
9.00	0.51	126	409.04	0.50	0.50	0.00	0.00
10.00	0.81	199	409.06	0.79	0.79	0.00	0.00
11.00	1.50	915	409.25	0.93	0.93	0.00	0.00
12.00	10.80	8,569	410.88	1.75	1.75	0.00	0.00
13.00	2.10	21,404	412.80	3.44	2.88	0.56	0.00
14.00	1.06	15,701	412.02	2.48	2.41	0.08	0.00
15.00	0.72	10,987	411.29	1.98	1.98	0.00	0.00
16.00	0.59	6,884	410.57	1.59	1.59	0.00	0.00
17.00	0.50	3,742	409.93	1.25	1.25	0.00	0.00
18.00	0.40	1,349	409.36	0.98	0.98	0.00	0.00
19.00	0.36	93	409.03	0.37	0.37	0.00	0.00
20.00	0.34	87	409.02	0.34	0.34	0.00	0.00
21.00	0.32	81	409.02	0.32	0.32	0.00	0.00
22.00	0.29	75	409.02	0.30	0.30	0.00	0.00
23.00	0.27	69	409.02	0.27	0.27	0.00	0.00
24.00	0.25	63	409.02	0.25	0.25	0.00	0.00
25.00	0.00	0	409.00	0.00	0.00	0.00	0.00
26.00	0.00	0	409.00	0.00	0.00	0.00	0.00
27.00	0.00	0	409.00	0.00	0.00	0.00	0.00
28.00	0.00	0	409.00	0.00	0.00	0.00	0.00
29.00	0.00	0	409.00	0.00	0.00	0.00	0.00
30.00	0.00	0	409.00	0.00	0.00	0.00	0.00
31.00	0.00	0	409.00	0.00	0.00	0.00	0.00
32.00	0.00	0	409.00	0.00	0.00	0.00	0.00
33.00	0.00	0	409.00	0.00	0.00	0.00	0.00
34.00	0.00	0	409.00	0.00	0.00	0.00	0.00
35.00	0.00	0	409.00	0.00	0.00	0.00	0.00
36.00	0.00	0	409.00	0.00	0.00	0.00	0.00
37.00	0.00	0	409.00	0.00	0.00	0.00	0.00
38.00	0.00	0	409.00	0.00	0.00	0.00	0.00
39.00	0.00	0	409.00	0.00	0.00	0.00	0.00
40.00	0.00	0	409.00	0.00	0.00	0.00	0.00
41.00	0.00	0	409.00	0.00	0.00	0.00	0.00
42.00	0.00	0	409.00	0.00	0.00	0.00	0.00
43.00	0.00	0	409.00	0.00	0.00	0.00	0.00
44.00	0.00	0	409.00	0.00	0.00	0.00	0.00
45.00	0.00	0	409.00	0.00	0.00	0.00	0.00
46.00	0.00	0	409.00	0.00	0.00	0.00	0.00
47.00	0.00	0	409.00	0.00	0.00	0.00	0.00
48.00	0.00	0	409.00	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 33P: INFIL 1C

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
409.00	3,499	0	414.80	10,020	39,205
409.10	3,611	356	414.90	10,133	40,213
409.20	3,724	722	415.00	10,245	41,232
409.30	3,836	1,100			
409.40	3,949	1,490			
409.50	4,061	1,890			
409.60	4,174	2,302			
409.70	4,286	2,725			
409.80	4,398	3,159			
409.90	4,511	3,604			
410.00	4,623	4,061			
410.10	4,736	4,529			
410.20	4,848	5,008			
410.30	4,961	5,499			
410.40	5,073	6,000			
410.50	5,186	6,513			
410.60	5,298	7,038			
410.70	5,410	7,573			
410.80	5,523	8,120			
410.90	5,635	8,678			
411.00	5,748	9,247			
411.10	5,860	9,827			
411.20	5,973	10,419			
411.30	6,085	11,022			
411.40	6,197	11,636			
411.50	6,310	12,261			
411.60	6,422	12,898			
411.70	6,535	13,545			
411.80	6,647	14,205			
411.90	6,760	14,875			
412.00	6,872	15,557			
412.10	6,984	16,249			
412.20	7,097	16,953			
412.30	7,209	17,669			
412.40	7,322	18,395			
412.50	7,434	19,133			
412.60	7,547	19,882			
412.70	7,659	20,642			
412.80	7,771	21,414			
412.90	7,884	22,197			
413.00	7,996	22,991			
413.10	8,109	23,796			
413.20	8,221	24,612			
413.30	8,334	25,440			
413.40	8,446	26,279			
413.50	8,559	27,129			
413.60	8,671	27,991			
413.70	8,783	28,864			
413.80	8,896	29,748			
413.90	9,008	30,643			
414.00	9,121	31,549			
414.10	9,233	32,467			
414.20	9,346	33,396			
414.30	9,458	34,336			
414.40	9,570	35,287			
414.50	9,683	36,250			
414.60	9,795	37,224			
414.70	9,908	38,209			

Summary for Pond 37P: FB 1i+J

Inflow Area = 9.303 ac, 78.40% Impervious, Inflow Depth = 7.30" for 100-Year event
 Inflow = 77.69 cfs @ 12.09 hrs, Volume= 5.659 af
 Outflow = 74.67 cfs @ 12.09 hrs, Volume= 5.659 af, Atten= 4%, Lag= 0.1 min
 Primary = 37.34 cfs @ 12.09 hrs, Volume= 2.829 af
 Routed to Pond 31P : Bioretention i
 Secondary = 37.34 cfs @ 12.09 hrs, Volume= 2.829 af
 Routed to Pond 53P : Bioretention J basin

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 413.25' Surf.Area= 9,799 sf Storage= 26,806 cf
 Peak Elev= 413.74' @ 12.09 hrs Surf.Area= 10,409 sf Storage= 30,867 cf (4,061 cf above start)

Plug-Flow detention time= 105.5 min calculated for 5.043 af (89% of inflow)
 Center-of-Mass det. time= 2.2 min (764.2 - 762.0)

Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	32,992 cf	Custom Stage Data (Prismatic) Listed below

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
410.00	5,767	0	0
414.00	10,729	32,992	32,992

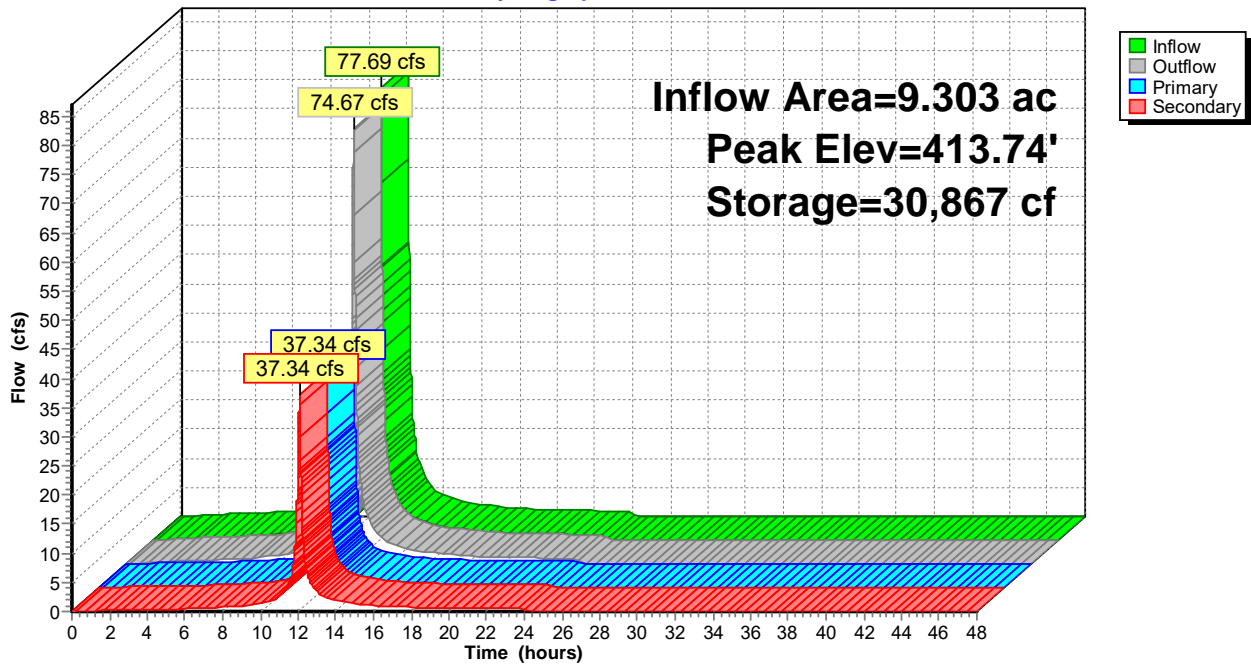
Device	Routing	Invert	Outlet Devices
#1	Primary	413.25'	40.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	413.25'	40.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=37.11 cfs @ 12.09 hrs HW=413.74' (Free Discharge)
 ↰1=**Broad-Crested Rectangular Weir** (Weir Controls 37.11 cfs @ 1.89 fps)

Secondary OutFlow Max=37.11 cfs @ 12.09 hrs HW=413.74' (Free Discharge)
 ↰2=**Broad-Crested Rectangular Weir** (Weir Controls 37.11 cfs @ 1.89 fps)

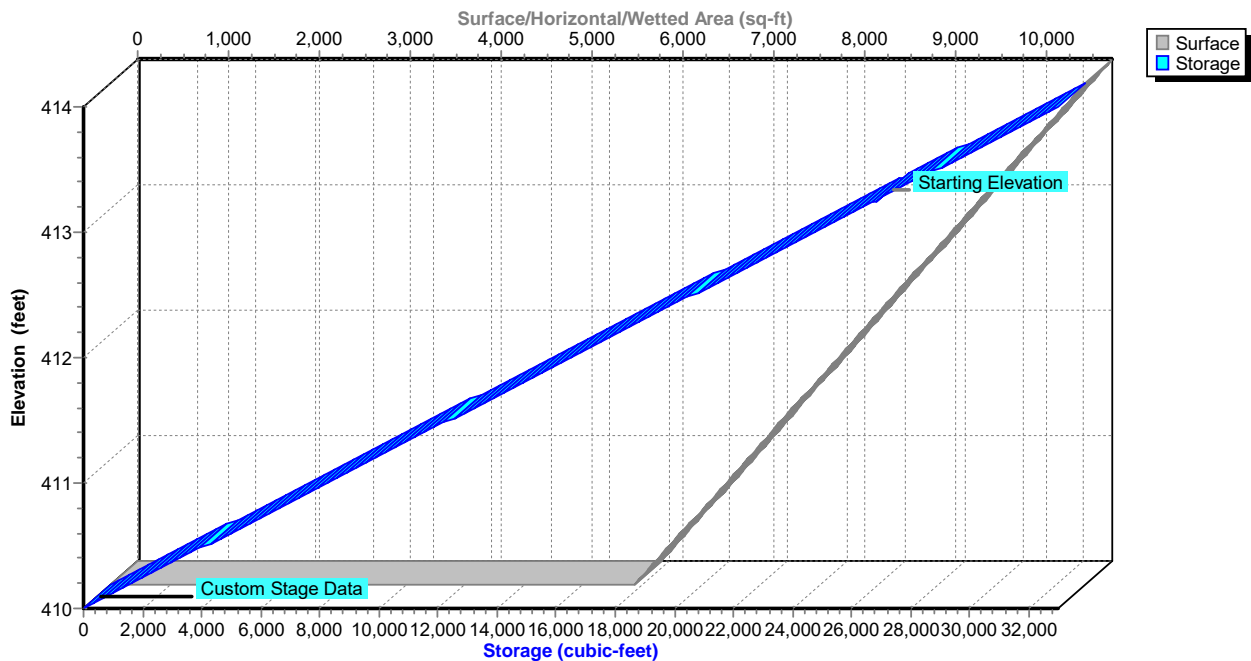
Pond 37P: FB 1i+J

Hydrograph



Pond 37P: FB 1i+J

Stage-Area-Storage



Hydrograph for Pond 37P: FB 1i+J

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	26,806	413.25	0.00	0.00	0.00
1.00	0.21	26,848	413.26	0.19	0.10	0.10
2.00	0.40	26,893	413.26	0.39	0.20	0.20
3.00	0.51	26,919	413.26	0.51	0.25	0.25
4.00	0.59	26,937	413.27	0.59	0.29	0.29
5.00	0.72	26,965	413.27	0.72	0.36	0.36
6.00	0.86	26,993	413.27	0.84	0.42	0.42
7.00	1.15	27,056	413.28	1.14	0.57	0.57
8.00	1.48	27,094	413.28	1.46	0.73	0.73
9.00	1.85	27,134	413.29	1.82	0.91	0.91
10.00	2.90	27,255	413.30	2.86	1.43	1.43
11.00	5.56	27,501	413.33	5.34	2.67	2.67
12.00	54.51	29,755	413.61	46.15	23.07	23.07
13.00	6.85	27,653	413.35	7.12	3.56	3.56
14.00	3.62	27,349	413.32	3.67	1.84	1.84
15.00	2.45	27,214	413.30	2.50	1.25	1.25
16.00	2.05	27,163	413.29	2.06	1.03	1.03
17.00	1.72	27,125	413.29	1.73	0.87	0.87
18.00	1.39	27,086	413.28	1.40	0.70	0.70
19.00	1.28	27,073	413.28	1.28	0.64	0.64
20.00	1.19	27,063	413.28	1.20	0.60	0.60
21.00	1.11	27,053	413.28	1.11	0.56	0.56
22.00	1.03	27,035	413.28	1.03	0.52	0.52
23.00	0.95	27,017	413.28	0.95	0.48	0.48
24.00	0.63	26,995	413.27	0.85	0.43	0.43
25.00	0.00	26,806	413.25	0.00	0.00	0.00
26.00	0.00	26,806	413.25	0.00	0.00	0.00
27.00	0.00	26,806	413.25	0.00	0.00	0.00
28.00	0.00	26,806	413.25	0.00	0.00	0.00
29.00	0.00	26,806	413.25	0.00	0.00	0.00
30.00	0.00	26,806	413.25	0.00	0.00	0.00
31.00	0.00	26,806	413.25	0.00	0.00	0.00
32.00	0.00	26,806	413.25	0.00	0.00	0.00
33.00	0.00	26,806	413.25	0.00	0.00	0.00
34.00	0.00	26,806	413.25	0.00	0.00	0.00
35.00	0.00	26,806	413.25	0.00	0.00	0.00
36.00	0.00	26,806	413.25	0.00	0.00	0.00
37.00	0.00	26,806	413.25	0.00	0.00	0.00
38.00	0.00	26,806	413.25	0.00	0.00	0.00
39.00	0.00	26,806	413.25	0.00	0.00	0.00
40.00	0.00	26,806	413.25	0.00	0.00	0.00
41.00	0.00	26,806	413.25	0.00	0.00	0.00
42.00	0.00	26,806	413.25	0.00	0.00	0.00
43.00	0.00	26,806	413.25	0.00	0.00	0.00
44.00	0.00	26,806	413.25	0.00	0.00	0.00
45.00	0.00	26,806	413.25	0.00	0.00	0.00
46.00	0.00	26,806	413.25	0.00	0.00	0.00
47.00	0.00	26,806	413.25	0.00	0.00	0.00
48.00	0.00	26,806	413.25	0.00	0.00	0.00

Stage-Area-Storage for Pond 37P: FB 1i+J

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
410.00	5,767	0	412.90	9,364	23,919
410.05	5,829	412	412.95	9,426	24,332
410.10	5,891	825	413.00	9,489	24,744
410.15	5,953	1,237	413.05	9,551	25,156
410.20	6,015	1,650	413.10	9,613	25,569
410.25	6,077	2,062	413.15	9,675	25,981
410.30	6,139	2,474	413.20	9,737	26,394
410.35	6,201	2,887	413.25	9,799	26,806
410.40	6,263	3,299	413.30	9,861	27,218
410.45	6,325	3,712	413.35	9,923	27,631
410.50	6,387	4,124	413.40	9,985	28,043
410.55	6,449	4,536	413.45	10,047	28,456
410.60	6,511	4,949	413.50	10,109	28,868
410.65	6,573	5,361	413.55	10,171	29,280
410.70	6,635	5,774	413.60	10,233	29,693
410.75	6,697	6,186	413.65	10,295	30,105
410.80	6,759	6,598	413.70	10,357	30,518
410.85	6,821	7,011	413.75	10,419	30,930
410.90	6,883	7,423	413.80	10,481	31,342
410.95	6,945	7,836	413.85	10,543	31,755
411.00	7,008	8,248	413.90	10,605	32,167
411.05	7,070	8,660	413.95	10,667	32,580
411.10	7,132	9,073	414.00	10,729	32,992
411.15	7,194	9,485			
411.20	7,256	9,898			
411.25	7,318	10,310			
411.30	7,380	10,722			
411.35	7,442	11,135			
411.40	7,504	11,547			
411.45	7,566	11,960			
411.50	7,628	12,372			
411.55	7,690	12,784			
411.60	7,752	13,197			
411.65	7,814	13,609			
411.70	7,876	14,022			
411.75	7,938	14,434			
411.80	8,000	14,846			
411.85	8,062	15,259			
411.90	8,124	15,671			
411.95	8,186	16,084			
412.00	8,248	16,496			
412.05	8,310	16,908			
412.10	8,372	17,321			
412.15	8,434	17,733			
412.20	8,496	18,146			
412.25	8,558	18,558			
412.30	8,620	18,970			
412.35	8,682	19,383			
412.40	8,744	19,795			
412.45	8,806	20,208			
412.50	8,868	20,620			
412.55	8,930	21,032			
412.60	8,992	21,445			
412.65	9,054	21,857			
412.70	9,116	22,270			
412.75	9,178	22,682			
412.80	9,240	23,094			
412.85	9,302	23,507			

Summary for Pond 39P: FB 5A

Inflow Area = 4.966 ac, 46.58% Impervious, Inflow Depth = 5.44" for 100-Year event
 Inflow = 33.79 cfs @ 12.13 hrs, Volume= 2.251 af
 Outflow = 33.25 cfs @ 12.14 hrs, Volume= 2.251 af, Atten= 2%, Lag= 0.7 min
 Primary = 33.25 cfs @ 12.14 hrs, Volume= 2.251 af
 Routed to Pond 22P : Bioretention 5A

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 433.30' Surf.Area= 4,110 sf Storage= 8,944 cf
 Peak Elev= 433.92' @ 12.14 hrs Surf.Area= 4,569 sf Storage= 11,370 cf (2,426 cf above start)

Plug-Flow detention time= 73.0 min calculated for 2.045 af (91% of inflow)
 Center-of-Mass det. time= 3.0 min (824.7 - 821.7)

Volume	Invert	Avail.Storage	Storage Description
#1	431.00'	15,554 cf	Custom Stage Data (Prismatic) Listed below

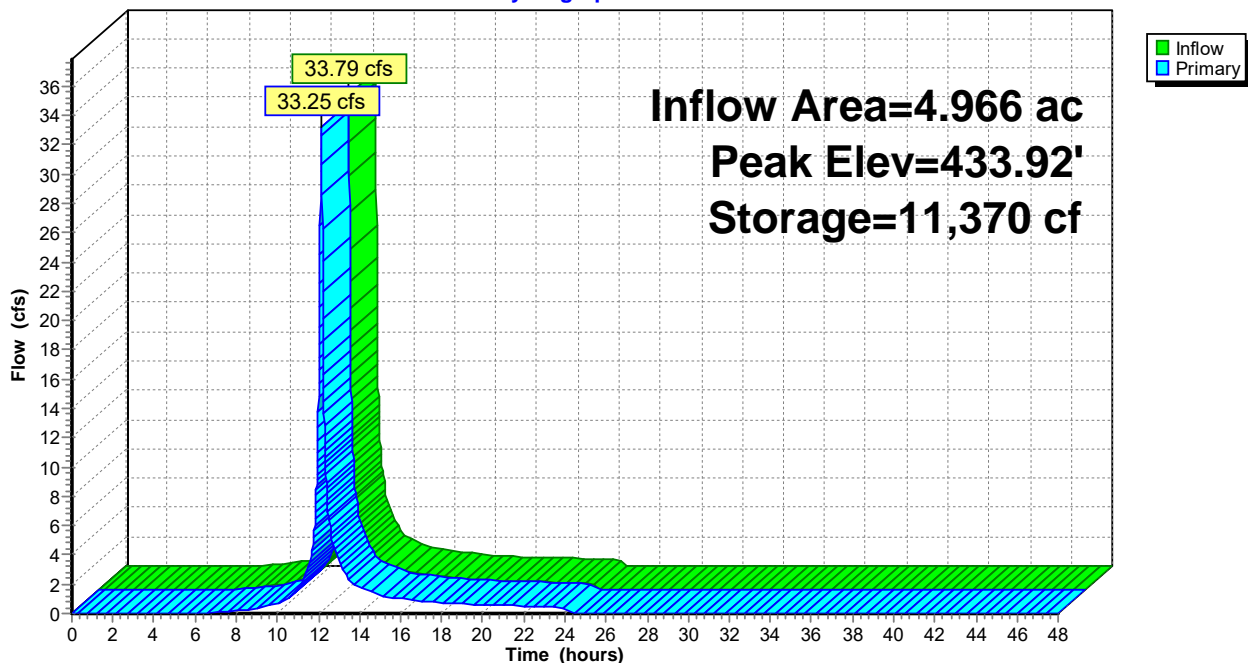
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
431.00	2,415	0	0
435.00	5,362	15,554	15,554

Device	Routing	Invert	Outlet Devices
#1	Primary	433.30'	25.0' 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=33.18 cfs @ 12.14 hrs HW=433.92' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 33.18 cfs @ 2.13 fps)

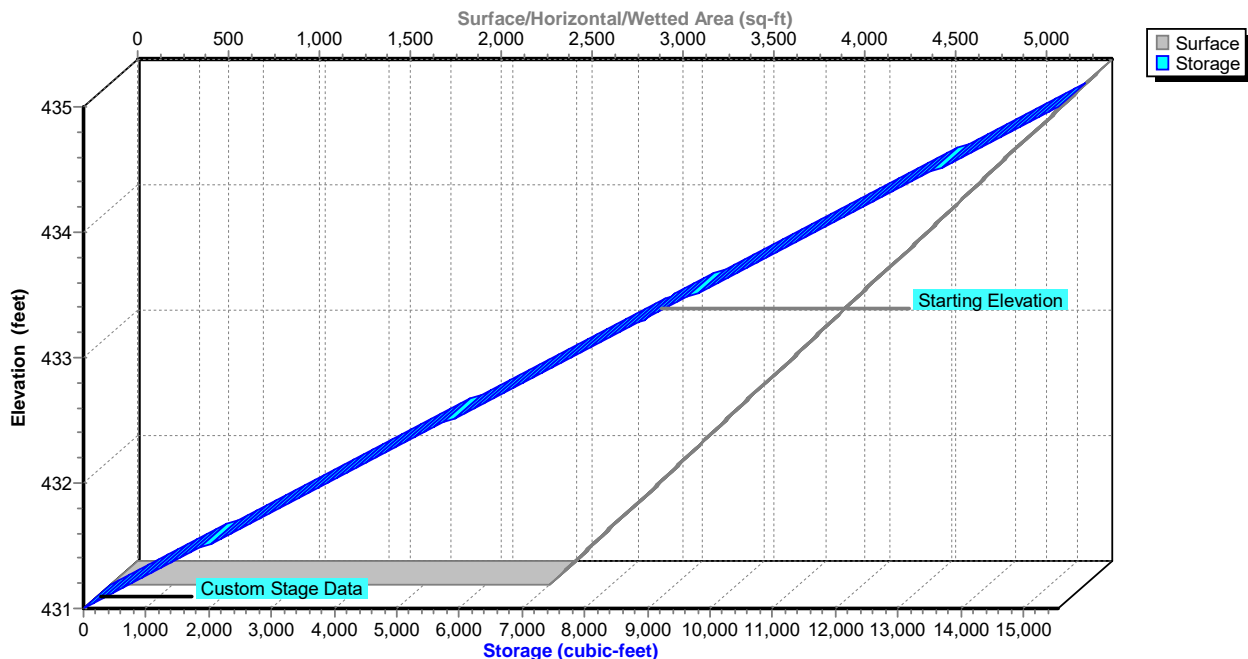
Pond 39P: FB 5A

Hydrograph



Pond 39P: FB 5A

Stage-Area-Storage



Hydrograph for Pond 39P: FB 5A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,944	433.30	0.00
1.00	0.00	8,944	433.30	0.00
2.00	0.00	8,944	433.30	0.00
3.00	0.00	8,944	433.30	0.00
4.00	0.00	8,944	433.30	0.00
5.00	0.00	8,944	433.30	0.00
6.00	0.01	8,945	433.30	0.00
7.00	0.09	8,980	433.31	0.08
8.00	0.21	9,030	433.32	0.20
9.00	0.37	9,064	433.33	0.36
10.00	0.74	9,144	433.35	0.71
11.00	1.69	9,296	433.39	1.62
12.00	16.52	10,435	433.68	14.77
13.00	3.46	9,544	433.45	3.57
14.00	1.79	9,326	433.40	1.81
15.00	1.23	9,239	433.38	1.26
16.00	1.01	9,202	433.37	1.02
17.00	0.85	9,177	433.36	0.86
18.00	0.69	9,142	433.35	0.70
19.00	0.63	9,127	433.35	0.64
20.00	0.59	9,118	433.34	0.60
21.00	0.55	9,109	433.34	0.56
22.00	0.51	9,100	433.34	0.52
23.00	0.47	9,091	433.34	0.48
24.00	0.43	9,082	433.34	0.44
25.00	0.00	8,944	433.30	0.00
26.00	0.00	8,944	433.30	0.00
27.00	0.00	8,944	433.30	0.00
28.00	0.00	8,944	433.30	0.00
29.00	0.00	8,944	433.30	0.00
30.00	0.00	8,944	433.30	0.00
31.00	0.00	8,944	433.30	0.00
32.00	0.00	8,944	433.30	0.00
33.00	0.00	8,944	433.30	0.00
34.00	0.00	8,944	433.30	0.00
35.00	0.00	8,944	433.30	0.00
36.00	0.00	8,944	433.30	0.00
37.00	0.00	8,944	433.30	0.00
38.00	0.00	8,944	433.30	0.00
39.00	0.00	8,944	433.30	0.00
40.00	0.00	8,944	433.30	0.00
41.00	0.00	8,944	433.30	0.00
42.00	0.00	8,944	433.30	0.00
43.00	0.00	8,944	433.30	0.00
44.00	0.00	8,944	433.30	0.00
45.00	0.00	8,944	433.30	0.00
46.00	0.00	8,944	433.30	0.00
47.00	0.00	8,944	433.30	0.00
48.00	0.00	8,944	433.30	0.00

Stage-Area-Storage for Pond 39P: FB 5A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
431.00	2,415	0	433.90	4,552	11,277
431.05	2,452	194	433.95	4,588	11,471
431.10	2,489	389	434.00	4,625	11,666
431.15	2,526	583	434.05	4,662	11,860
431.20	2,562	778	434.10	4,699	12,054
431.25	2,599	972	434.15	4,736	12,249
431.30	2,636	1,167	434.20	4,773	12,443
431.35	2,673	1,361	434.25	4,809	12,638
431.40	2,710	1,555	434.30	4,846	12,832
431.45	2,747	1,750	434.35	4,883	13,026
431.50	2,783	1,944	434.40	4,920	13,221
431.55	2,820	2,139	434.45	4,957	13,415
431.60	2,857	2,333	434.50	4,994	13,610
431.65	2,894	2,528	434.55	5,030	13,804
431.70	2,931	2,722	434.60	5,067	13,999
431.75	2,968	2,916	434.65	5,104	14,193
431.80	3,004	3,111	434.70	5,141	14,387
431.85	3,041	3,305	434.75	5,178	14,582
431.90	3,078	3,500	434.80	5,215	14,776
431.95	3,115	3,694	434.85	5,251	14,971
432.00	3,152	3,889	434.90	5,288	15,165
432.05	3,189	4,083	434.95	5,325	15,360
432.10	3,225	4,277	435.00	5,362	15,554
432.15	3,262	4,472			
432.20	3,299	4,666			
432.25	3,336	4,861			
432.30	3,373	5,055			
432.35	3,410	5,249			
432.40	3,446	5,444			
432.45	3,483	5,638			
432.50	3,520	5,833			
432.55	3,557	6,027			
432.60	3,594	6,222			
432.65	3,631	6,416			
432.70	3,667	6,610			
432.75	3,704	6,805			
432.80	3,741	6,999			
432.85	3,778	7,194			
432.90	3,815	7,388			
432.95	3,852	7,583			
433.00	3,889	7,777			
433.05	3,925	7,971			
433.10	3,962	8,166			
433.15	3,999	8,360			
433.20	4,036	8,555			
433.25	4,073	8,749			
433.30	4,110	8,944			
433.35	4,146	9,138			
433.40	4,183	9,332			
433.45	4,220	9,527			
433.50	4,257	9,721			
433.55	4,294	9,916			
433.60	4,331	10,110			
433.65	4,367	10,305			
433.70	4,404	10,499			
433.75	4,441	10,693			
433.80	4,478	10,888			
433.85	4,515	11,082			

Summary for Pond 44P: FB 1B

Inflow Area = 9.519 ac, 70.62% Impervious, Inflow Depth = 6.67" for 100-Year event
 Inflow = 75.07 cfs @ 12.13 hrs, Volume= 5.290 af
 Outflow = 74.07 cfs @ 12.14 hrs, Volume= 5.290 af, Atten= 1%, Lag= 0.6 min
 Primary = 74.07 cfs @ 12.14 hrs, Volume= 5.290 af
 Routed to Pond 45P : INFIL 1B

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.35' Surf.Area= 9,580 sf Storage= 34,519 cf
 Peak Elev= 412.94' @ 12.14 hrs Surf.Area= 10,303 sf Storage= 39,231 cf (4,711 cf above start)

Plug-Flow detention time= 114.4 min calculated for 4.497 af (85% of inflow)
 Center-of-Mass det. time= 2.4 min (794.1 - 791.6)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	47,613 cf	Custom Stage Data (Prismatic) Listed below

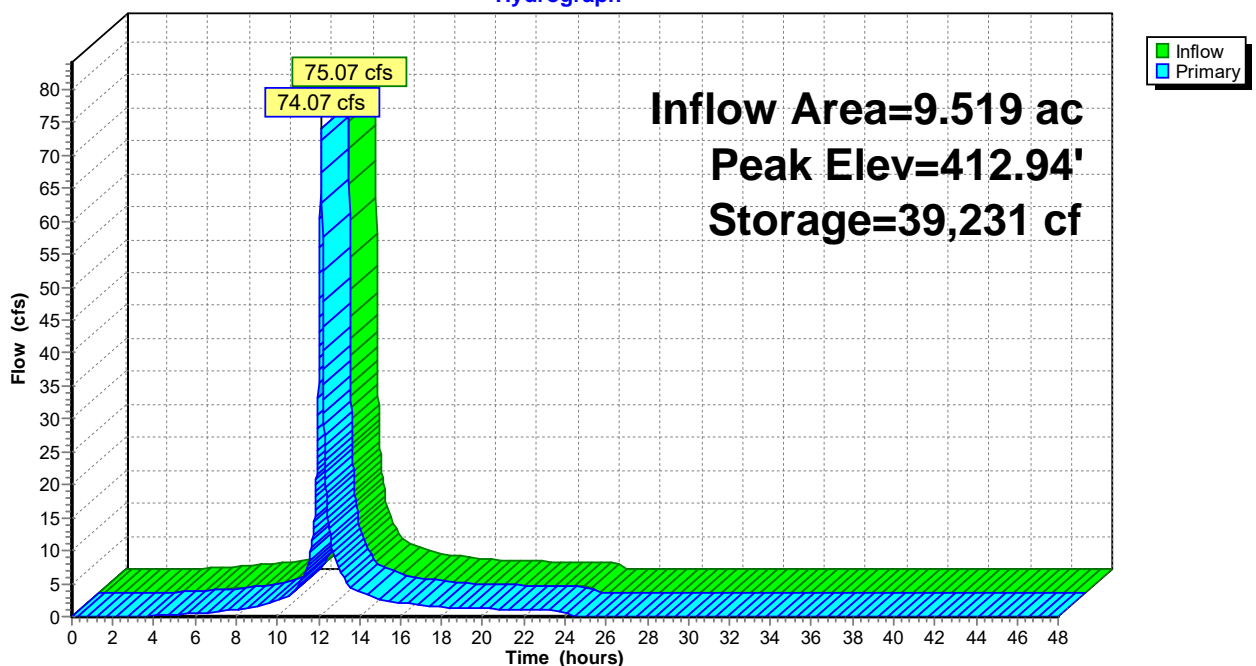
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	4,282	0	0
414.00	11,589	47,613	47,613

Device	Routing	Invert	Outlet Devices
#1	Primary	412.35'	60.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

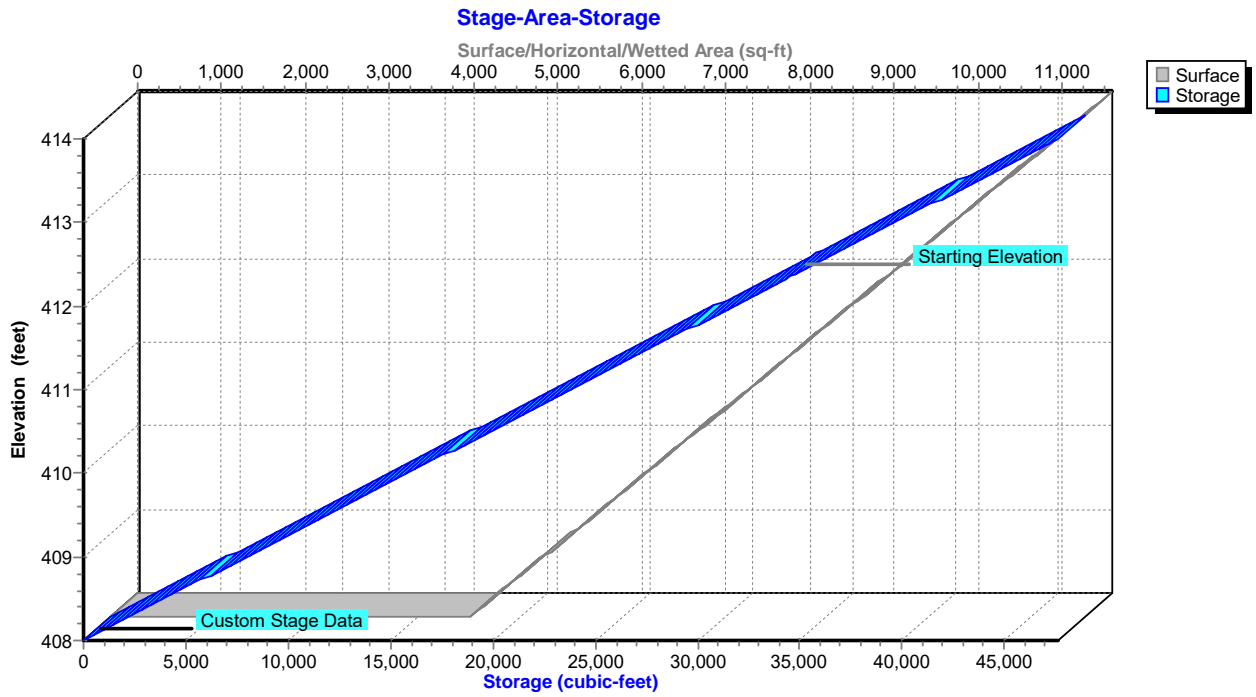
Primary OutFlow Max=74.07 cfs @ 12.14 hrs HW=412.94' (Free Discharge)
 ↑-1=Broad-Crested Rectangular Weir (Weir Controls 74.07 cfs @ 2.08 fps)

Pond 44P: FB 1B

Hydrograph



Pond 44P: FB 1B



Hydrograph for Pond 44P: FB 1B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	34,519	412.35	0.00
1.00	0.00	34,519	412.35	0.00
2.00	0.00	34,519	412.35	0.00
3.00	0.00	34,519	412.35	0.00
4.00	0.15	34,560	412.36	0.14
5.00	0.32	34,608	412.36	0.31
6.00	0.49	34,654	412.37	0.47
7.00	0.77	34,731	412.38	0.74
8.00	1.11	34,792	412.38	1.09
9.00	1.49	34,844	412.39	1.47
10.00	2.49	34,976	412.41	2.45
11.00	4.86	35,272	412.44	4.75
12.00	38.69	37,395	412.71	35.38
13.00	7.23	35,529	412.48	7.45
14.00	3.69	35,152	412.43	3.74
15.00	2.52	34,994	412.41	2.57
16.00	2.08	34,928	412.40	2.09
17.00	1.74	34,883	412.40	1.76
18.00	1.41	34,837	412.39	1.42
19.00	1.29	34,820	412.39	1.29
20.00	1.21	34,809	412.39	1.21
21.00	1.12	34,797	412.39	1.13
22.00	1.04	34,786	412.38	1.04
23.00	0.96	34,775	412.38	0.96
24.00	0.88	34,763	412.38	0.88
25.00	0.00	34,519	412.35	0.00
26.00	0.00	34,519	412.35	0.00
27.00	0.00	34,519	412.35	0.00
28.00	0.00	34,519	412.35	0.00
29.00	0.00	34,519	412.35	0.00
30.00	0.00	34,519	412.35	0.00
31.00	0.00	34,519	412.35	0.00
32.00	0.00	34,519	412.35	0.00
33.00	0.00	34,519	412.35	0.00
34.00	0.00	34,519	412.35	0.00
35.00	0.00	34,519	412.35	0.00
36.00	0.00	34,519	412.35	0.00
37.00	0.00	34,519	412.35	0.00
38.00	0.00	34,519	412.35	0.00
39.00	0.00	34,519	412.35	0.00
40.00	0.00	34,519	412.35	0.00
41.00	0.00	34,519	412.35	0.00
42.00	0.00	34,519	412.35	0.00
43.00	0.00	34,519	412.35	0.00
44.00	0.00	34,519	412.35	0.00
45.00	0.00	34,519	412.35	0.00
46.00	0.00	34,519	412.35	0.00
47.00	0.00	34,519	412.35	0.00
48.00	0.00	34,519	412.35	0.00

Stage-Area-Storage for Pond 44P: FB 1B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	4,282	0	413.80	11,345	46,026
408.10	4,404	794	413.90	11,467	46,819
408.20	4,526	1,587	414.00	11,589	47,613
408.30	4,647	2,381			
408.40	4,769	3,174			
408.50	4,891	3,968			
408.60	5,013	4,761			
408.70	5,134	5,555			
408.80	5,256	6,348			
408.90	5,378	7,142			
409.00	5,500	7,936			
409.10	5,622	8,729			
409.20	5,743	9,523			
409.30	5,865	10,316			
409.40	5,987	11,110			
409.50	6,109	11,903			
409.60	6,231	12,697			
409.70	6,352	13,490			
409.80	6,474	14,284			
409.90	6,596	15,077			
410.00	6,718	15,871			
410.10	6,839	16,665			
410.20	6,961	17,458			
410.30	7,083	18,252			
410.40	7,205	19,045			
410.50	7,327	19,839			
410.60	7,448	20,632			
410.70	7,570	21,426			
410.80	7,692	22,219			
410.90	7,814	23,013			
411.00	7,936	23,807			
411.10	8,057	24,600			
411.20	8,179	25,394			
411.30	8,301	26,187			
411.40	8,423	26,981			
411.50	8,544	27,774			
411.60	8,666	28,568			
411.70	8,788	29,361			
411.80	8,910	30,155			
411.90	9,032	30,948			
412.00	9,153	31,742			
412.10	9,275	32,536			
412.20	9,397	33,329			
412.30	9,519	34,123			
412.40	9,640	34,916			
412.50	9,762	35,710			
412.60	9,884	36,503			
412.70	10,006	37,297			
412.80	10,128	38,090			
412.90	10,249	38,884			
413.00	10,371	39,678			
413.10	10,493	40,471			
413.20	10,615	41,265			
413.30	10,737	42,058			
413.40	10,858	42,852			
413.50	10,980	43,645			
413.60	11,102	44,439			
413.70	11,224	45,232			

Summary for Pond 45P: INFIL 1B

Inflow Area = 10.279 ac, 65.40% Impervious, Inflow Depth = 6.29" for 100-Year event
 Inflow = 75.26 cfs @ 12.14 hrs, Volume= 5.385 af
 Outflow = 8.50 cfs @ 12.89 hrs, Volume= 5.385 af, Atten= 89%, Lag= 44.8 min
 Discarded = 8.18 cfs @ 12.89 hrs, Volume= 5.306 af
 Primary = 0.32 cfs @ 12.89 hrs, Volume= 0.079 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.85' @ 12.89 hrs Surf.Area= 24,320 sf Storage= 88,623 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 104.2 min (900.5 - 796.2)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	118,185 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	12,210	0	0
414.00	27,185	118,185	118,185

Device	Routing	Invert	Outlet Devices
#1	Secondary	413.00'	10.0' 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
#2	Device 4	410.85'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.00'	9.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 402.50' Phase-In= 0.01'
#4	Primary	408.00'	18.0" Round Culvert L= 50.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 408.00' / 407.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

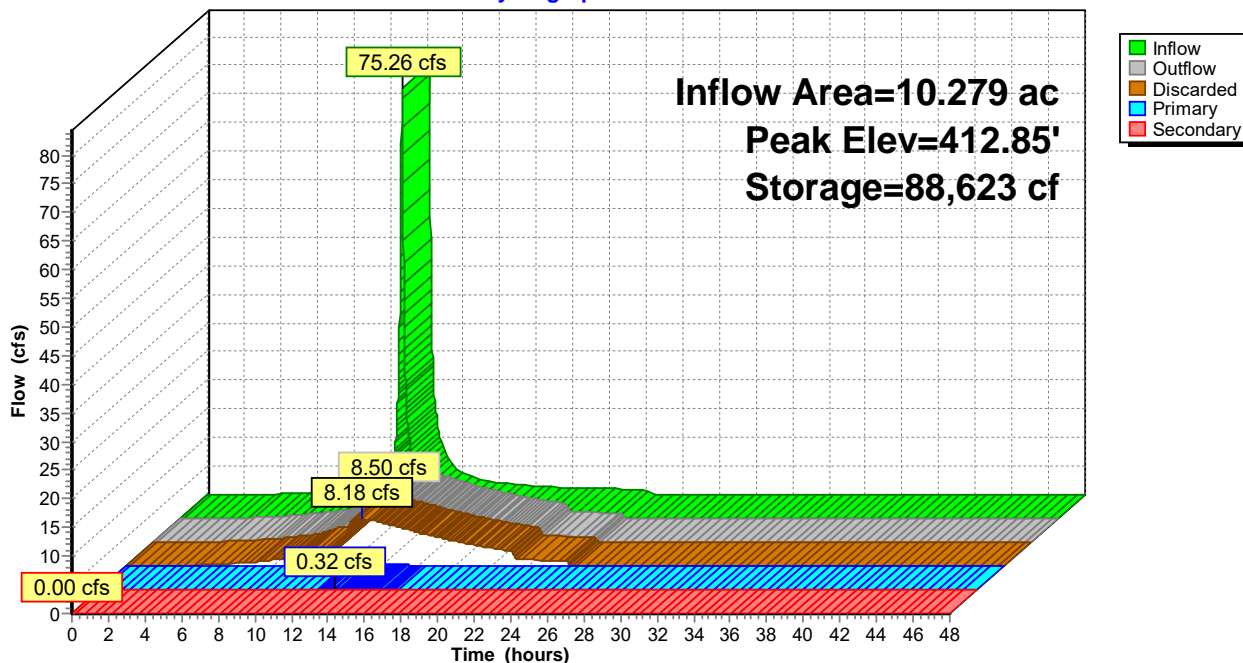
Discarded OutFlow Max=8.18 cfs @ 12.89 hrs HW=412.85' (Free Discharge)
 ↑3=Exfiltration (Controls 8.18 cfs)

Primary OutFlow Max=0.32 cfs @ 12.89 hrs HW=412.85' (Free Discharge)
 ↑4=Culvert (Passes 0.32 cfs of 15.21 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.32 cfs @ 6.60 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

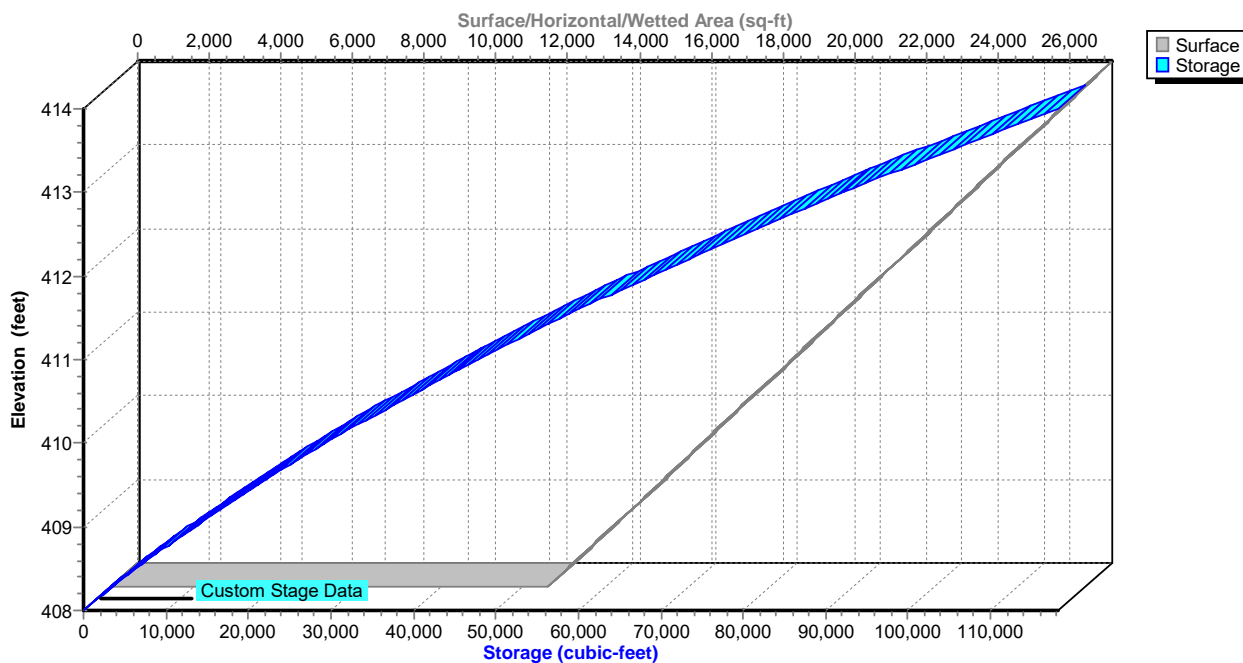
Pond 45P: INFIL 1B

Hydrograph



Pond 45P: INFIL 1B

Stage-Area-Storage



Hydrograph for Pond 45P: INFIL 1B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	408.00	0.00	0.00	0.00	0.00
1.00	0.00	0	408.00	0.00	0.00	0.00	0.00
2.00	0.00	0	408.00	0.00	0.00	0.00	0.00
3.00	0.00	0	408.00	0.00	0.00	0.00	0.00
4.00	0.14	36	408.00	0.13	0.13	0.00	0.00
5.00	0.31	84	408.01	0.30	0.30	0.00	0.00
6.00	0.47	131	408.01	0.46	0.46	0.00	0.00
7.00	0.74	204	408.02	0.72	0.72	0.00	0.00
8.00	1.09	301	408.02	1.06	1.06	0.00	0.00
9.00	1.47	408	408.03	1.44	1.44	0.00	0.00
10.00	2.45	668	408.05	2.36	2.36	0.00	0.00
11.00	4.75	2,968	408.24	2.78	2.78	0.00	0.00
12.00	35.67	29,479	410.00	4.68	4.68	0.00	0.00
13.00	7.65	88,455	412.85	8.49	8.17	0.32	0.00
14.00	3.86	77,539	412.39	7.85	7.57	0.28	0.00
15.00	2.66	62,623	411.72	6.93	6.73	0.20	0.00
16.00	2.16	47,959	411.00	5.90	5.85	0.04	0.00
17.00	1.82	35,476	410.34	5.07	5.07	0.00	0.00
18.00	1.47	24,483	409.71	4.34	4.34	0.00	0.00
19.00	1.34	15,069	409.11	3.68	3.68	0.00	0.00
20.00	1.26	7,513	408.58	3.13	3.13	0.00	0.00
21.00	1.17	1,484	408.12	2.66	2.66	0.00	0.00
22.00	1.08	309	408.03	1.09	1.09	0.00	0.00
23.00	1.00	284	408.02	1.00	1.00	0.00	0.00
24.00	0.91	260	408.02	0.92	0.92	0.00	0.00
25.00	0.00	0	408.00	0.00	0.00	0.00	0.00
26.00	0.00	0	408.00	0.00	0.00	0.00	0.00
27.00	0.00	0	408.00	0.00	0.00	0.00	0.00
28.00	0.00	0	408.00	0.00	0.00	0.00	0.00
29.00	0.00	0	408.00	0.00	0.00	0.00	0.00
30.00	0.00	0	408.00	0.00	0.00	0.00	0.00
31.00	0.00	0	408.00	0.00	0.00	0.00	0.00
32.00	0.00	0	408.00	0.00	0.00	0.00	0.00
33.00	0.00	0	408.00	0.00	0.00	0.00	0.00
34.00	0.00	0	408.00	0.00	0.00	0.00	0.00
35.00	0.00	0	408.00	0.00	0.00	0.00	0.00
36.00	0.00	0	408.00	0.00	0.00	0.00	0.00
37.00	0.00	0	408.00	0.00	0.00	0.00	0.00
38.00	0.00	0	408.00	0.00	0.00	0.00	0.00
39.00	0.00	0	408.00	0.00	0.00	0.00	0.00
40.00	0.00	0	408.00	0.00	0.00	0.00	0.00
41.00	0.00	0	408.00	0.00	0.00	0.00	0.00
42.00	0.00	0	408.00	0.00	0.00	0.00	0.00
43.00	0.00	0	408.00	0.00	0.00	0.00	0.00
44.00	0.00	0	408.00	0.00	0.00	0.00	0.00
45.00	0.00	0	408.00	0.00	0.00	0.00	0.00
46.00	0.00	0	408.00	0.00	0.00	0.00	0.00
47.00	0.00	0	408.00	0.00	0.00	0.00	0.00
48.00	0.00	0	408.00	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 45P: INFIL 1B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	12,210	0	413.80	26,686	112,798
408.10	12,460	1,233	413.90	26,935	115,479
408.20	12,709	2,492	414.00	27,185	118,185
408.30	12,959	3,775			
408.40	13,208	5,084			
408.50	13,458	6,417			
408.60	13,708	7,775			
408.70	13,957	9,158			
408.80	14,207	10,567			
408.90	14,456	12,000			
409.00	14,706	13,458			
409.10	14,955	14,941			
409.20	15,205	16,449			
409.30	15,455	17,982			
409.40	15,704	19,540			
409.50	15,954	21,123			
409.60	16,203	22,731			
409.70	16,453	24,363			
409.80	16,703	26,021			
409.90	16,952	27,704			
410.00	17,202	29,412			
410.10	17,451	31,144			
410.20	17,701	32,902			
410.30	17,950	34,684			
410.40	18,200	36,492			
410.50	18,450	38,324			
410.60	18,699	40,182			
410.70	18,949	42,064			
410.80	19,198	43,972			
410.90	19,448	45,904			
411.00	19,698	47,861			
411.10	19,947	49,843			
411.20	20,197	51,851			
411.30	20,446	53,883			
411.40	20,696	55,940			
411.50	20,945	58,022			
411.60	21,195	60,129			
411.70	21,445	62,261			
411.80	21,694	64,418			
411.90	21,944	66,600			
412.00	22,193	68,807			
412.10	22,443	71,038			
412.20	22,692	73,295			
412.30	22,942	75,577			
412.40	23,192	77,884			
412.50	23,441	80,215			
412.60	23,691	82,572			
412.70	23,940	84,953			
412.80	24,190	87,360			
412.90	24,440	89,791			
413.00	24,689	92,248			
413.10	24,939	94,729			
413.20	25,188	97,236			
413.30	25,438	99,767			
413.40	25,687	102,323			
413.50	25,937	104,904			
413.60	26,187	107,511			
413.70	26,436	110,142			

Summary for Pond 47P: INFIL 1H

Inflow Area = 11.301 ac, 87.98% Impervious, Inflow Depth = 7.50" for 100-Year event
 Inflow = 88.26 cfs @ 12.14 hrs, Volume= 7.061 af
 Outflow = 8.63 cfs @ 13.01 hrs, Volume= 7.061 af, Atten= 90%, Lag= 52.3 min
 Discarded = 8.31 cfs @ 13.01 hrs, Volume= 6.965 af
 Primary = 0.32 cfs @ 13.01 hrs, Volume= 0.096 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.84' @ 13.01 hrs Surf.Area= 31,465 sf Storage= 113,651 cf

Plug-Flow detention time= 119.2 min calculated for 7.059 af (100% of inflow)
 Center-of-Mass det. time= 119.1 min (867.2 - 748.0)

Volume	Invert	Avail.Storage	Storage Description
#1	408.50'	151,690 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.50	20,873	0	0
414.00	34,287	151,690	151,690

Device	Routing	Invert	Outlet Devices
#1	Secondary	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 4	410.85'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.50'	7.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 403.00' Phase-In= 0.01'
#4	Primary	408.50'	18.0" Round Culvert L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 408.50' / 407.00' S= 0.0214 '/ Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

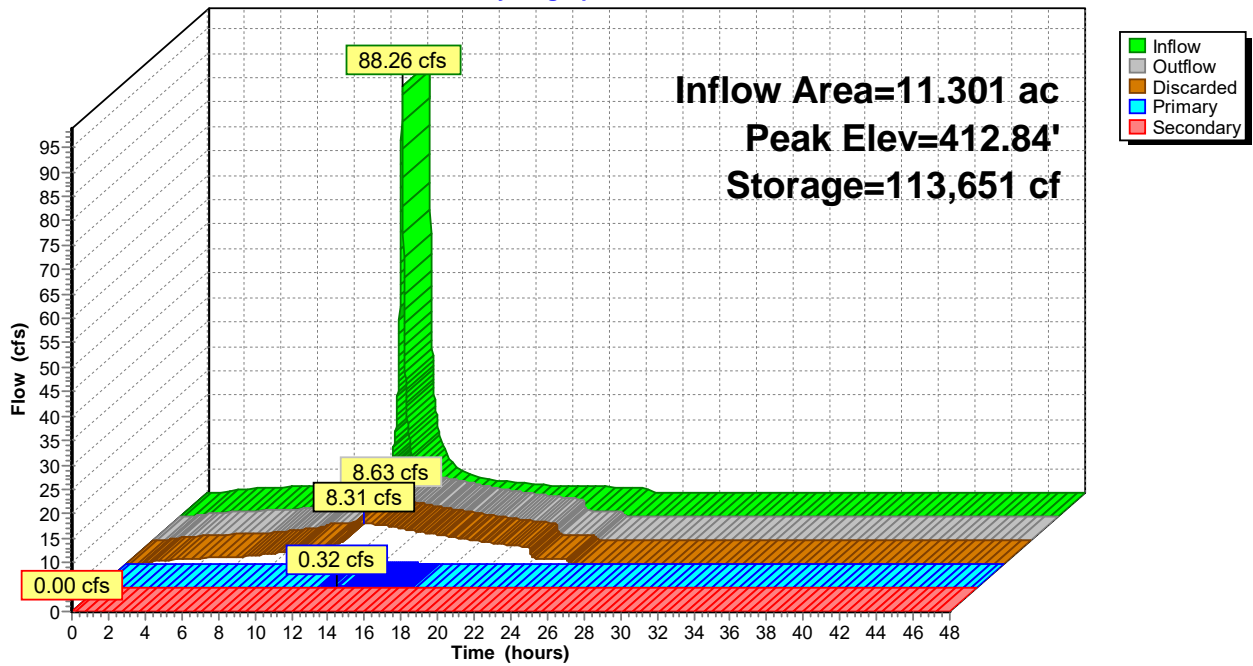
Discarded OutFlow Max=8.31 cfs @ 13.01 hrs HW=412.84' (Free Discharge)
 ↑3=Exfiltration (Controls 8.31 cfs)

Primary OutFlow Max=0.32 cfs @ 13.01 hrs HW=412.84' (Free Discharge)
 ↑4=Culvert (Passes 0.32 cfs of 16.13 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.32 cfs @ 6.58 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

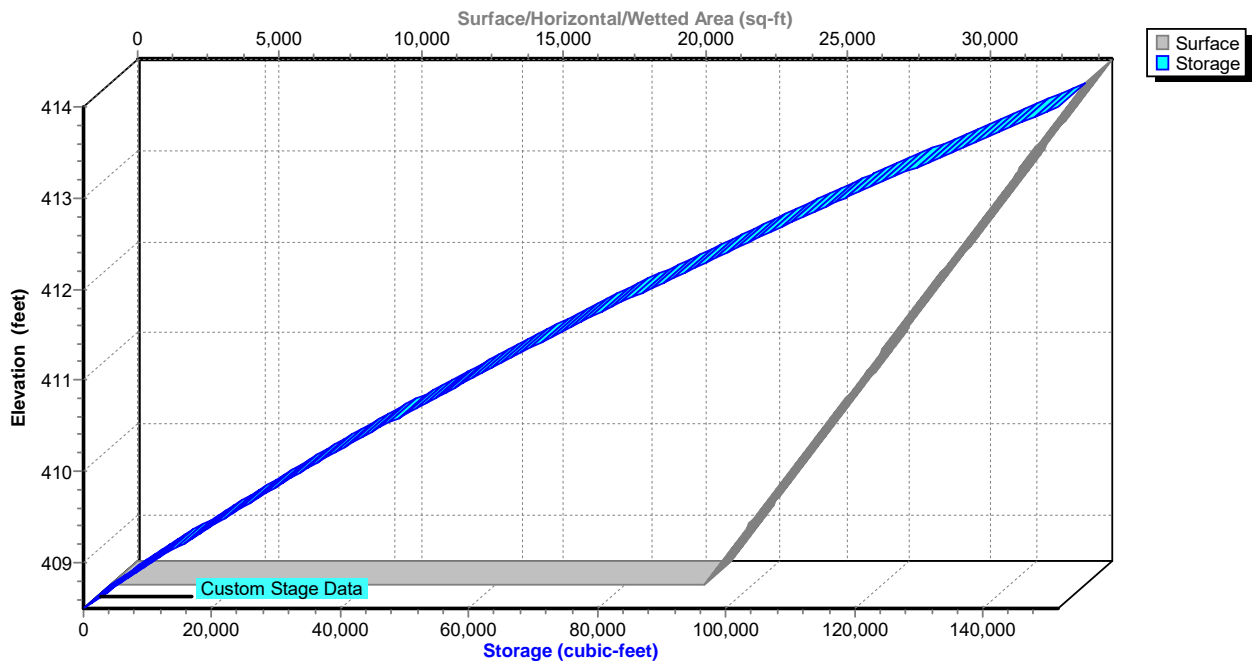
Pond 47P: INFIL 1H

Hydrograph



Pond 47P: INFIL 1H

Stage-Area-Storage



Hydrograph for Pond 47P: INFIL 1H

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	408.50	0.00	0.00	0.00	0.00
1.00	0.31	85	408.50	0.25	0.25	0.00	0.00
2.00	0.74	239	408.51	0.71	0.71	0.00	0.00
3.00	0.98	323	408.52	0.96	0.96	0.00	0.00
4.00	1.15	382	408.52	1.14	1.14	0.00	0.00
5.00	1.29	429	408.52	1.28	1.28	0.00	0.00
6.00	1.41	469	408.52	1.40	1.40	0.00	0.00
7.00	1.77	579	408.53	1.73	1.73	0.00	0.00
8.00	2.16	712	408.53	2.13	2.13	0.00	0.00
9.00	2.55	841	408.54	2.51	2.51	0.00	0.00
10.00	3.78	1,293	408.56	3.44	3.44	0.00	0.00
11.00	6.59	5,737	408.77	3.66	3.66	0.00	0.00
12.00	42.88	40,192	410.25	5.24	5.24	0.00	0.00
13.00	8.74	113,648	412.84	8.63	8.31	0.32	0.00
14.00	4.37	104,438	412.55	8.24	7.94	0.30	0.00
15.00	3.00	89,212	412.04	7.57	7.33	0.24	0.00
16.00	2.44	72,846	411.47	6.82	6.65	0.17	0.00
17.00	2.05	57,774	410.92	6.02	6.01	0.01	0.00
18.00	1.67	43,932	410.39	5.41	5.41	0.00	0.00
19.00	1.51	31,147	409.88	4.84	4.84	0.00	0.00
20.00	1.41	19,936	409.41	4.32	4.32	0.00	0.00
21.00	1.32	10,123	408.97	3.87	3.87	0.00	0.00
22.00	1.22	1,520	408.57	3.46	3.46	0.00	0.00
23.00	1.12	379	408.52	1.13	1.13	0.00	0.00
24.00	1.02	345	408.52	1.03	1.03	0.00	0.00
25.00	0.00	0	408.50	0.00	0.00	0.00	0.00
26.00	0.00	0	408.50	0.00	0.00	0.00	0.00
27.00	0.00	0	408.50	0.00	0.00	0.00	0.00
28.00	0.00	0	408.50	0.00	0.00	0.00	0.00
29.00	0.00	0	408.50	0.00	0.00	0.00	0.00
30.00	0.00	0	408.50	0.00	0.00	0.00	0.00
31.00	0.00	0	408.50	0.00	0.00	0.00	0.00
32.00	0.00	0	408.50	0.00	0.00	0.00	0.00
33.00	0.00	0	408.50	0.00	0.00	0.00	0.00
34.00	0.00	0	408.50	0.00	0.00	0.00	0.00
35.00	0.00	0	408.50	0.00	0.00	0.00	0.00
36.00	0.00	0	408.50	0.00	0.00	0.00	0.00
37.00	0.00	0	408.50	0.00	0.00	0.00	0.00
38.00	0.00	0	408.50	0.00	0.00	0.00	0.00
39.00	0.00	0	408.50	0.00	0.00	0.00	0.00
40.00	0.00	0	408.50	0.00	0.00	0.00	0.00
41.00	0.00	0	408.50	0.00	0.00	0.00	0.00
42.00	0.00	0	408.50	0.00	0.00	0.00	0.00
43.00	0.00	0	408.50	0.00	0.00	0.00	0.00
44.00	0.00	0	408.50	0.00	0.00	0.00	0.00
45.00	0.00	0	408.50	0.00	0.00	0.00	0.00
46.00	0.00	0	408.50	0.00	0.00	0.00	0.00
47.00	0.00	0	408.50	0.00	0.00	0.00	0.00
48.00	0.00	0	408.50	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 47P: INFIL 1H

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.50	20,873	0	411.40	27,946	70,787
408.55	20,995	1,047	411.45	28,068	72,188
408.60	21,117	2,099	411.50	28,190	73,594
408.65	21,239	3,158	411.55	28,312	75,007
408.70	21,361	4,223	411.60	28,434	76,425
408.75	21,483	5,294	411.65	28,556	77,850
408.80	21,605	6,372	411.70	28,678	79,281
408.85	21,727	7,455	411.75	28,799	80,718
408.90	21,849	8,544	411.80	28,921	82,161
408.95	21,971	9,640	411.85	29,043	83,610
409.00	22,092	10,741	411.90	29,165	85,065
409.05	22,214	11,849	411.95	29,287	86,526
409.10	22,336	12,963	412.00	29,409	87,994
409.15	22,458	14,083	412.05	29,531	89,467
409.20	22,580	15,209	412.10	29,653	90,947
409.25	22,702	16,341	412.15	29,775	92,433
409.30	22,824	17,479	412.20	29,897	93,924
409.35	22,946	18,623	412.25	30,019	95,422
409.40	23,068	19,773	412.30	30,141	96,926
409.45	23,190	20,930	412.35	30,263	98,436
409.50	23,312	22,092	412.40	30,385	99,953
409.55	23,434	23,261	412.45	30,507	101,475
409.60	23,556	24,436	412.50	30,629	103,003
409.65	23,678	25,617	412.55	30,751	104,538
409.70	23,800	26,804	412.60	30,873	106,078
409.75	23,922	27,997	412.65	30,994	107,625
409.80	24,044	29,196	412.70	31,116	109,178
409.85	24,166	30,401	412.75	31,238	110,737
409.90	24,287	31,612	412.80	31,360	112,302
409.95	24,409	32,830	412.85	31,482	113,873
410.00	24,531	34,053	412.90	31,604	115,450
410.05	24,653	35,283	412.95	31,726	117,033
410.10	24,775	36,519	413.00	31,848	118,622
410.15	24,897	37,760	413.05	31,970	120,218
410.20	25,019	39,008	413.10	32,092	121,819
410.25	25,141	40,262	413.15	32,214	123,427
410.30	25,263	41,522	413.20	32,336	125,041
410.35	25,385	42,789	413.25	32,458	126,661
410.40	25,507	44,061	413.30	32,580	128,287
410.45	25,629	45,339	413.35	32,702	129,919
410.50	25,751	46,624	413.40	32,824	131,557
410.55	25,873	47,914	413.45	32,946	133,201
410.60	25,995	49,211	413.50	33,068	134,851
410.65	26,117	50,514	413.55	33,189	136,508
410.70	26,239	51,823	413.60	33,311	138,170
410.75	26,361	53,138	413.65	33,433	139,839
410.80	26,482	54,459	413.70	33,555	141,514
410.85	26,604	55,786	413.75	33,677	143,194
410.90	26,726	57,119	413.80	33,799	144,881
410.95	26,848	58,459	413.85	33,921	146,574
411.00	26,970	59,804	413.90	34,043	148,273
411.05	27,092	61,156	413.95	34,165	149,979
411.10	27,214	62,513	414.00	34,287	151,690
411.15	27,336	63,877			
411.20	27,458	65,247			
411.25	27,580	66,623			
411.30	27,702	68,005			
411.35	27,824	69,393			

Summary for Pond 51P: FB 1H

Inflow Area = 10.389 ac, 95.71% Impervious, Inflow Depth = 8.03" for 100-Year event
 Inflow = 88.51 cfs @ 12.13 hrs, Volume= 6.954 af
 Outflow = 86.98 cfs @ 12.14 hrs, Volume= 6.954 af, Atten= 2%, Lag= 0.7 min
 Primary = 86.98 cfs @ 12.14 hrs, Volume= 6.954 af
 Routed to Pond 47P : INFIL 1H

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.75' Surf.Area= 12,203 sf Storage= 48,336 cf
 Peak Elev= 413.38' @ 12.14 hrs Surf.Area= 12,929 sf Storage= 54,721 cf (6,385 cf above start)

Plug-Flow detention time= 145.3 min calculated for 5.844 af (84% of inflow)
 Center-of-Mass det. time= 2.8 min (745.4 - 742.5)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,056 cf	Custom Stage Data (Prismatic) Listed below

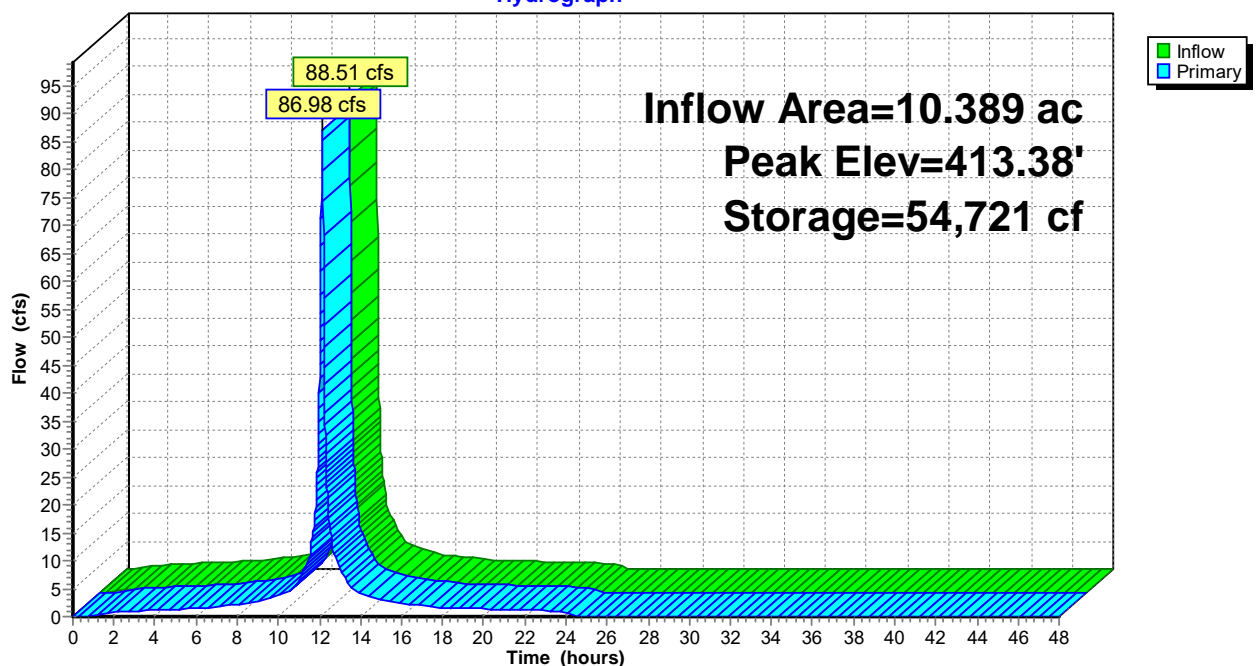
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	6,702	0	0
414.00	13,650	61,056	61,056

Device	Routing	Invert	Outlet Devices
#1	Primary	412.75'	65.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

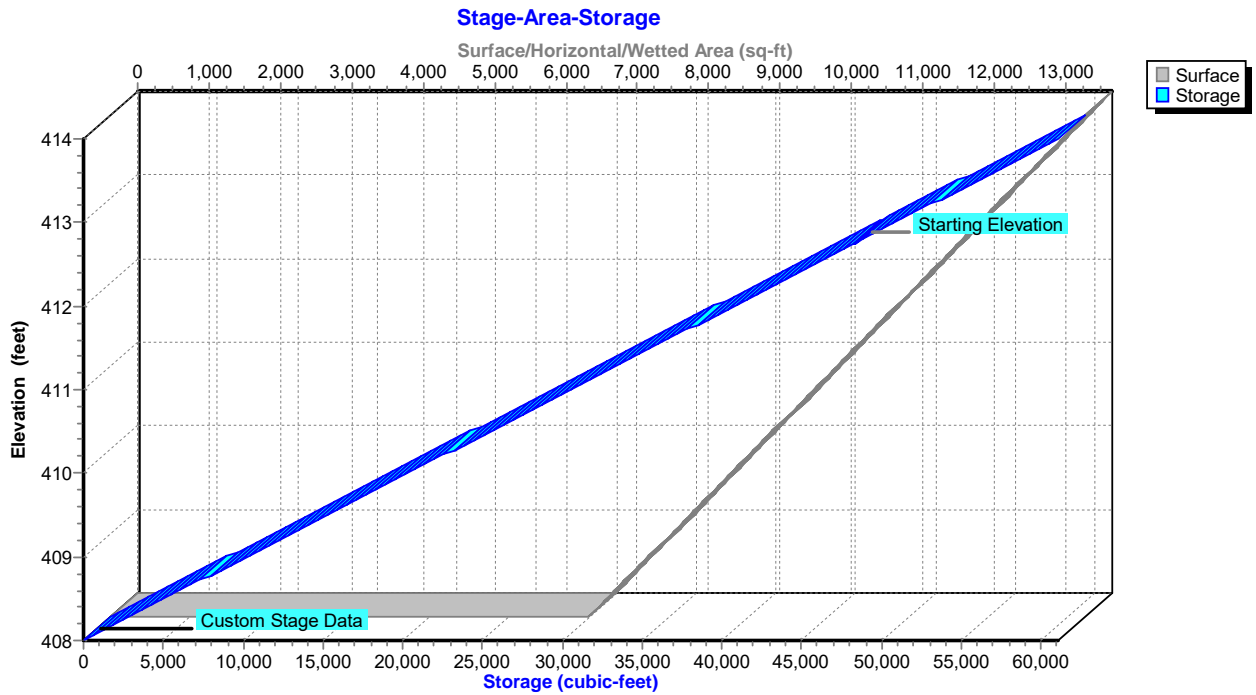
Primary OutFlow Max=86.87 cfs @ 12.14 hrs HW=413.38' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Weir Controls 86.87 cfs @ 2.13 fps)

Pond 51P: FB 1H

Hydrograph



Pond 51P: FB 1H



Hydrograph for Pond 51P: FB 1H

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	48,336	412.75	0.00
1.00	0.36	48,418	412.76	0.31
2.00	0.77	48,530	412.77	0.74
3.00	1.00	48,593	412.78	0.98
4.00	1.16	48,638	412.78	1.15
5.00	1.30	48,674	412.78	1.29
6.00	1.42	48,705	412.79	1.41
7.00	1.79	48,797	412.80	1.77
8.00	2.18	48,875	412.80	2.16
9.00	2.56	48,928	412.81	2.55
10.00	3.84	49,099	412.82	3.78
11.00	6.75	49,480	412.86	6.59
12.00	47.08	52,293	413.14	42.61
13.00	8.24	49,680	412.88	8.51
14.00	4.18	49,162	412.83	4.24
15.00	2.85	48,978	412.81	2.91
16.00	2.34	48,902	412.81	2.36
17.00	1.96	48,849	412.80	1.98
18.00	1.58	48,757	412.79	1.61
19.00	1.45	48,716	412.79	1.46
20.00	1.35	48,692	412.78	1.36
21.00	1.26	48,667	412.78	1.27
22.00	1.16	48,642	412.78	1.17
23.00	1.07	48,618	412.78	1.08
24.00	0.98	48,593	412.78	0.98
25.00	0.00	48,336	412.75	0.00
26.00	0.00	48,336	412.75	0.00
27.00	0.00	48,336	412.75	0.00
28.00	0.00	48,336	412.75	0.00
29.00	0.00	48,336	412.75	0.00
30.00	0.00	48,336	412.75	0.00
31.00	0.00	48,336	412.75	0.00
32.00	0.00	48,336	412.75	0.00
33.00	0.00	48,336	412.75	0.00
34.00	0.00	48,336	412.75	0.00
35.00	0.00	48,336	412.75	0.00
36.00	0.00	48,336	412.75	0.00
37.00	0.00	48,336	412.75	0.00
38.00	0.00	48,336	412.75	0.00
39.00	0.00	48,336	412.75	0.00
40.00	0.00	48,336	412.75	0.00
41.00	0.00	48,336	412.75	0.00
42.00	0.00	48,336	412.75	0.00
43.00	0.00	48,336	412.75	0.00
44.00	0.00	48,336	412.75	0.00
45.00	0.00	48,336	412.75	0.00
46.00	0.00	48,336	412.75	0.00
47.00	0.00	48,336	412.75	0.00
48.00	0.00	48,336	412.75	0.00

Stage-Area-Storage for Pond 51P: FB 1H

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	6,702	0	413.80	13,418	59,021
408.10	6,818	1,018	413.90	13,534	60,038
408.20	6,934	2,035	414.00	13,650	61,056
408.30	7,049	3,053			
408.40	7,165	4,070			
408.50	7,281	5,088			
408.60	7,397	6,106			
408.70	7,513	7,123			
408.80	7,628	8,141			
408.90	7,744	9,158			
409.00	7,860	10,176			
409.10	7,976	11,194			
409.20	8,092	12,211			
409.30	8,207	13,229			
409.40	8,323	14,246			
409.50	8,439	15,264			
409.60	8,555	16,282			
409.70	8,671	17,299			
409.80	8,786	18,317			
409.90	8,902	19,334			
410.00	9,018	20,352			
410.10	9,134	21,370			
410.20	9,250	22,387			
410.30	9,365	23,405			
410.40	9,481	24,422			
410.50	9,597	25,440			
410.60	9,713	26,458			
410.70	9,829	27,475			
410.80	9,944	28,493			
410.90	10,060	29,510			
411.00	10,176	30,528			
411.10	10,292	31,546			
411.20	10,408	32,563			
411.30	10,523	33,581			
411.40	10,639	34,598			
411.50	10,755	35,616			
411.60	10,871	36,634			
411.70	10,987	37,651			
411.80	11,102	38,669			
411.90	11,218	39,686			
412.00	11,334	40,704			
412.10	11,450	41,722			
412.20	11,566	42,739			
412.30	11,681	43,757			
412.40	11,797	44,774			
412.50	11,913	45,792			
412.60	12,029	46,810			
412.70	12,145	47,827			
412.80	12,260	48,845			
412.90	12,376	49,862			
413.00	12,492	50,880			
413.10	12,608	51,898			
413.20	12,724	52,915			
413.30	12,839	53,933			
413.40	12,955	54,950			
413.50	13,071	55,968			
413.60	13,187	56,986			
413.70	13,303	58,003			

Summary for Pond 53P: Bioretention J basin

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 46.47" for 100-Year event
 Inflow = 39.65 cfs @ 12.09 hrs, Volume= 3.021 af
 Outflow = 7.37 cfs @ 12.49 hrs, Volume= 1.985 af, Atten= 81%, Lag= 24.2 min
 Primary = 7.37 cfs @ 12.49 hrs, Volume= 1.985 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.99' @ 12.49 hrs Surf.Area= 30,376 sf Storage= 72,071 cf

Plug-Flow detention time= 304.6 min calculated for 1.985 af (66% of inflow)
 Center-of-Mass det. time= 190.6 min (961.6 - 771.0)

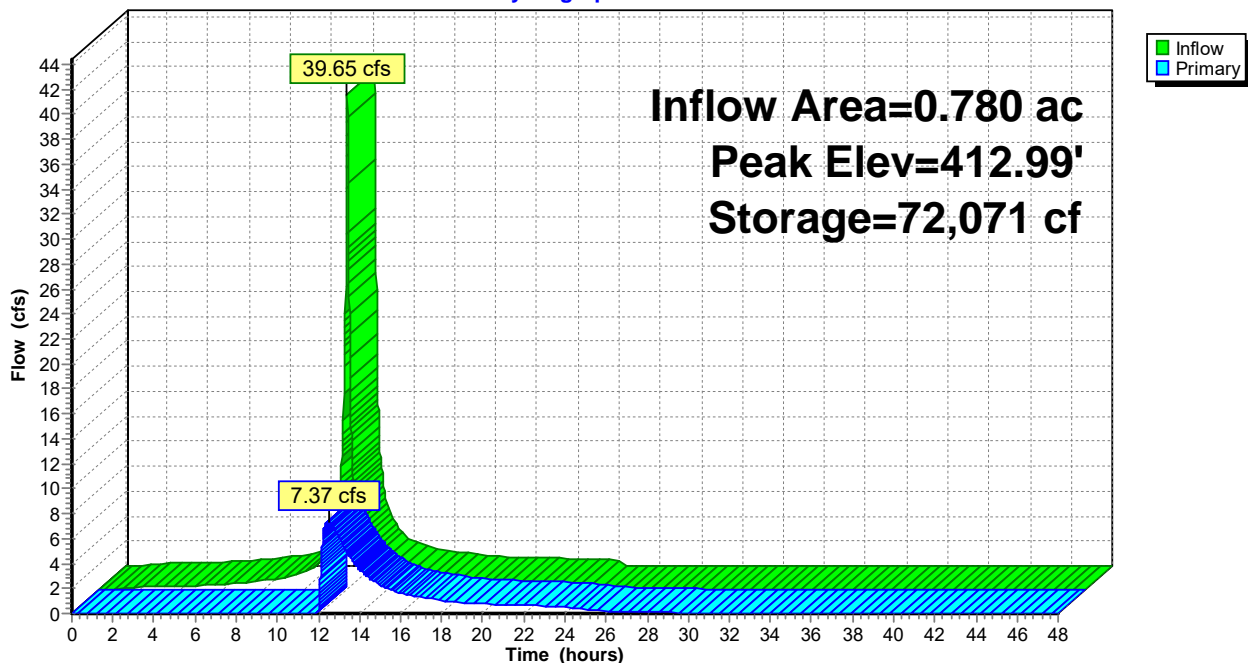
Volume	Invert	Avail.Storage	Storage Description	
#1	407.83'	72,373 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	24,200	0.0	0	0
408.33	24,200	40.0	4,840	4,840
411.00	24,200	20.0	12,923	17,763
413.00	30,410	100.0	54,610	72,373

Device	Routing	Invert	Outlet Devices
#1	Primary	407.83'	12.0" Round Culvert L= 49.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.83' / 407.50' S= 0.0067 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	412.00'	28.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	414.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=7.37 cfs @ 12.49 hrs HW=412.99' (Free Discharge)
 1=Culvert (Passes 7.37 cfs of 7.66 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 7.37 cfs @ 3.19 fps)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

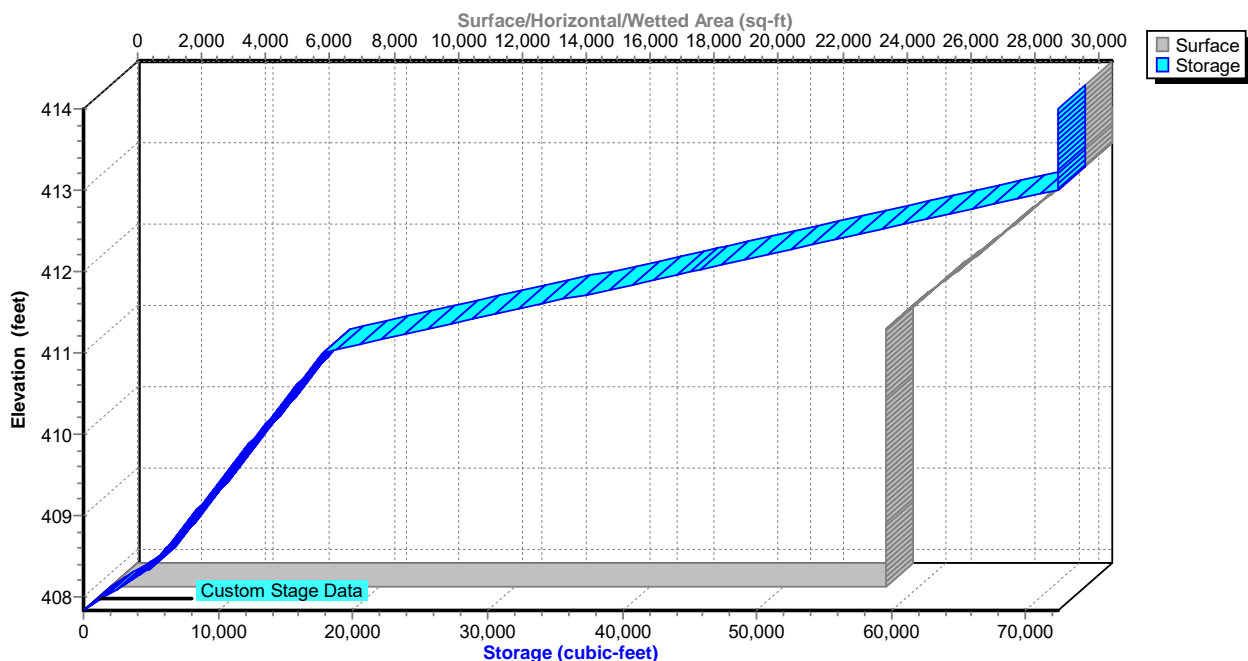
Pond 53P: Bioretention J basin

Hydrograph



Pond 53P: Bioretention J basin

Stage-Area-Storage



Hydrograph for Pond 53P: Bioretention J basin

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.83	0.00
1.00	0.10	97	407.84	0.00
2.00	0.20	641	407.90	0.00
3.00	0.25	1,454	407.98	0.00
4.00	0.29	2,443	408.08	0.00
5.00	0.36	3,617	408.20	0.00
6.00	0.42	5,022	408.37	0.00
7.00	0.57	6,793	408.73	0.00
8.00	0.73	9,138	409.22	0.00
9.00	0.91	12,089	409.83	0.00
10.00	1.43	16,282	410.69	0.00
11.00	2.71	23,112	411.20	0.00
12.00	24.24	48,005	412.11	0.27
13.00	3.92	68,874	412.87	6.10
14.00	2.03	61,593	412.61	3.53
15.00	1.39	57,479	412.45	2.30
16.00	1.14	54,992	412.36	1.65
17.00	0.96	53,538	412.31	1.30
18.00	0.78	52,450	412.27	1.05
19.00	0.71	51,633	412.24	0.89
20.00	0.67	51,120	412.22	0.78
21.00	0.62	50,754	412.21	0.71
22.00	0.58	50,446	412.20	0.66
23.00	0.53	50,158	412.19	0.61
24.00	0.48	49,880	412.18	0.56
25.00	0.00	48,463	412.12	0.34
26.00	0.00	47,515	412.09	0.20
27.00	0.00	46,909	412.07	0.14
28.00	0.00	46,480	412.05	0.10
29.00	0.00	46,178	412.04	0.07
30.00	0.00	45,964	412.03	0.05
31.00	0.00	45,813	412.03	0.04
32.00	0.00	45,702	412.02	0.03
33.00	0.00	45,610	412.02	0.02
34.00	0.00	45,530	412.02	0.02
35.00	0.00	45,463	412.01	0.02
36.00	0.00	45,405	412.01	0.01
37.00	0.00	45,356	412.01	0.01
38.00	0.00	45,314	412.01	0.01
39.00	0.00	45,278	412.01	0.01
40.00	0.00	45,247	412.01	0.01
41.00	0.00	45,221	412.01	0.01
42.00	0.00	45,199	412.00	0.01
43.00	0.00	45,179	412.00	0.00
44.00	0.00	45,163	412.00	0.00
45.00	0.00	45,149	412.00	0.00
46.00	0.00	45,137	412.00	0.00
47.00	0.00	45,127	412.00	0.00
48.00	0.00	45,118	412.00	0.00

Stage-Area-Storage for Pond 53P: Bioretention J basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.83	24,200	0	413.63	30,410	72,373
407.93	24,200	968	413.73	30,410	72,373
408.03	24,200	1,936	413.83	30,410	72,373
408.13	24,200	2,904	413.93	30,410	72,373
408.23	24,200	3,872			
408.33	24,200	4,840			
408.43	24,200	5,324			
408.53	24,200	5,808			
408.63	24,200	6,292			
408.73	24,200	6,776			
408.83	24,200	7,260			
408.93	24,200	7,744			
409.03	24,200	8,228			
409.13	24,200	8,712			
409.23	24,200	9,196			
409.33	24,200	9,680			
409.43	24,200	10,164			
409.53	24,200	10,648			
409.63	24,200	11,132			
409.73	24,200	11,616			
409.83	24,200	12,100			
409.93	24,200	12,584			
410.03	24,200	13,068			
410.13	24,200	13,552			
410.23	24,200	14,036			
410.33	24,200	14,520			
410.43	24,200	15,004			
410.53	24,200	15,488			
410.63	24,200	15,972			
410.73	24,200	16,456			
410.83	24,200	16,940			
410.93	24,200	17,424			
411.03	24,293	18,582			
411.13	24,604	21,312			
411.23	24,914	24,043			
411.33	25,225	26,773			
411.43	25,535	29,504			
411.53	25,846	32,234			
411.63	26,156	34,965			
411.73	26,467	37,695			
411.83	26,777	40,426			
411.93	27,088	43,156			
412.03	27,398	45,887			
412.13	27,709	48,617			
412.23	28,019	51,348			
412.33	28,330	54,078			
412.43	28,640	56,809			
412.53	28,951	59,539			
412.63	29,261	62,270			
412.73	29,572	65,000			
412.83	29,882	67,731			
412.93	30,193	70,461			
413.03	30,410	72,373			
413.13	30,410	72,373			
413.23	30,410	72,373			
413.33	30,410	72,373			
413.43	30,410	72,373			
413.53	30,410	72,373			

Summary for Pond 54P: INFIL 1G

Inflow Area = 10.595 ac, 90.33% Impervious, Inflow Depth = 7.70" for 100-Year event
 Inflow = 84.43 cfs @ 12.14 hrs, Volume= 6.797 af
 Outflow = 8.89 cfs @ 12.95 hrs, Volume= 6.797 af, Atten= 89%, Lag= 48.4 min
 Discarded = 7.79 cfs @ 12.95 hrs, Volume= 6.620 af
 Primary = 1.10 cfs @ 12.95 hrs, Volume= 0.177 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.87' @ 12.95 hrs Surf.Area= 29,088 sf Storage= 108,290 cf

Plug-Flow detention time= 117.5 min calculated for 6.796 af (100% of inflow)
 Center-of-Mass det. time= 117.5 min (865.8 - 748.3)

Volume	Invert	Avail.Storage	Storage Description
#1	408.50'	142,445 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.50	20,483	0	0
414.00	31,315	142,445	142,445

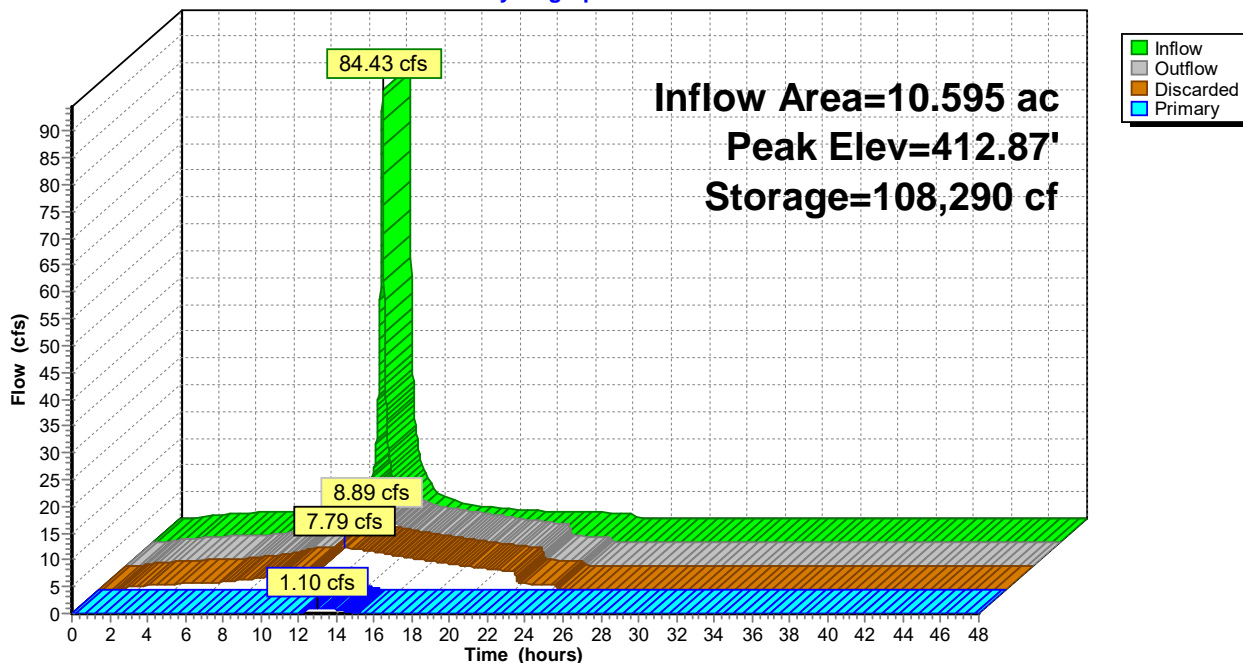
Device	Routing	Invert	Outlet Devices
#1	Device 4	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 4	411.85'	7.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.50'	7.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 403.00' Phase-In= 0.01'
#4	Primary	408.50'	18.0" Round Culvert L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 408.50' / 408.00' S= 0.0071 '/ Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Discarded OutFlow Max=7.79 cfs @ 12.95 hrs HW=412.87' (Free Discharge)
 ↳3=Exfiltration (Controls 7.79 cfs)

Primary OutFlow Max=1.10 cfs @ 12.95 hrs HW=412.87' (Free Discharge)
 ↳4=Culvert (Passes 1.10 cfs of 16.17 cfs potential flow)
 ↳1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
 ↳2=Orifice/Grate (Orifice Controls 1.10 cfs @ 4.11 fps)

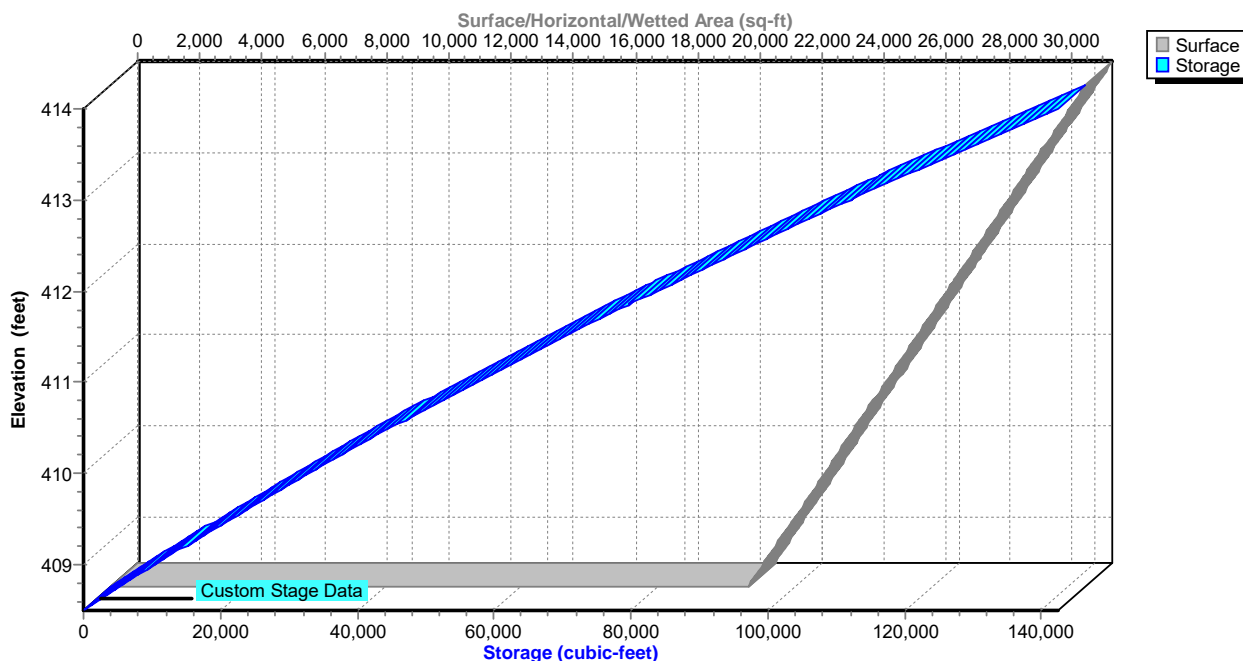
Pond 54P: INFIL 1G

Hydrograph



Pond 54P: INFIL 1G

Stage-Area-Storage



Hydrograph for Pond 54P: INFIL 1G

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	408.50	0.00	0.00	0.00
1.00	0.29	71	408.50	0.21	0.21	0.00
2.00	0.72	230	408.51	0.69	0.69	0.00
3.00	0.95	311	408.52	0.93	0.93	0.00
4.00	1.11	368	408.52	1.10	1.10	0.00
5.00	1.24	413	408.52	1.23	1.23	0.00
6.00	1.36	452	408.52	1.35	1.35	0.00
7.00	1.70	558	408.53	1.66	1.66	0.00
8.00	2.07	682	408.53	2.03	2.03	0.00
9.00	2.44	806	408.54	2.40	2.40	0.00
10.00	3.63	1,208	408.56	3.37	3.37	0.00
11.00	6.28	5,250	408.75	3.55	3.55	0.00
12.00	40.55	38,066	410.22	4.98	4.98	0.00
13.00	8.46	108,254	412.87	8.88	7.79	1.10
14.00	4.20	97,877	412.51	8.17	7.39	0.78
15.00	2.89	83,527	411.99	6.90	6.83	0.07
16.00	2.35	69,130	411.46	6.26	6.26	0.00
17.00	1.98	55,402	410.92	5.70	5.70	0.00
18.00	1.60	42,306	410.39	5.16	5.16	0.00
19.00	1.45	30,095	409.88	4.64	4.64	0.00
20.00	1.35	19,291	409.40	4.17	4.17	0.00
21.00	1.26	9,742	408.97	3.75	3.75	0.00
22.00	1.17	1,287	408.56	3.38	3.38	0.00
23.00	1.07	363	408.52	1.08	1.08	0.00
24.00	0.98	331	408.52	0.99	0.99	0.00
25.00	0.00	2	408.50	0.01	0.01	0.00
26.00	0.00	0	408.50	0.00	0.00	0.00
27.00	0.00	0	408.50	0.00	0.00	0.00
28.00	0.00	0	408.50	0.00	0.00	0.00
29.00	0.00	0	408.50	0.00	0.00	0.00
30.00	0.00	0	408.50	0.00	0.00	0.00
31.00	0.00	0	408.50	0.00	0.00	0.00
32.00	0.00	0	408.50	0.00	0.00	0.00
33.00	0.00	0	408.50	0.00	0.00	0.00
34.00	0.00	0	408.50	0.00	0.00	0.00
35.00	0.00	0	408.50	0.00	0.00	0.00
36.00	0.00	0	408.50	0.00	0.00	0.00
37.00	0.00	0	408.50	0.00	0.00	0.00
38.00	0.00	0	408.50	0.00	0.00	0.00
39.00	0.00	0	408.50	0.00	0.00	0.00
40.00	0.00	0	408.50	0.00	0.00	0.00
41.00	0.00	0	408.50	0.00	0.00	0.00
42.00	0.00	0	408.50	0.00	0.00	0.00
43.00	0.00	0	408.50	0.00	0.00	0.00
44.00	0.00	0	408.50	0.00	0.00	0.00
45.00	0.00	0	408.50	0.00	0.00	0.00
46.00	0.00	0	408.50	0.00	0.00	0.00
47.00	0.00	0	408.50	0.00	0.00	0.00
48.00	0.00	0	408.50	0.00	0.00	0.00

Stage-Area-Storage for Pond 54P: INFIL 1G

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.50	20,483	0	411.40	26,194	67,682
408.55	20,581	1,027	411.45	26,293	68,994
408.60	20,680	2,058	411.50	26,391	70,312
408.65	20,778	3,095	411.55	26,490	71,634
408.70	20,877	4,136	411.60	26,588	72,961
408.75	20,975	5,182	411.65	26,687	74,292
408.80	21,074	6,234	411.70	26,785	75,629
408.85	21,172	7,290	411.75	26,884	76,971
408.90	21,271	8,351	411.80	26,982	78,318
408.95	21,369	9,417	411.85	27,081	79,669
409.00	21,468	10,488	411.90	27,179	81,026
409.05	21,566	11,564	411.95	27,278	82,387
409.10	21,665	12,644	412.00	27,376	83,753
409.15	21,763	13,730	412.05	27,475	85,125
409.20	21,862	14,821	412.10	27,573	86,501
409.25	21,960	15,916	412.15	27,672	87,882
409.30	22,059	17,017	412.20	27,770	89,268
409.35	22,157	18,122	412.25	27,868	90,659
409.40	22,256	19,232	412.30	27,967	92,055
409.45	22,354	20,348	412.35	28,065	93,456
409.50	22,452	21,468	412.40	28,164	94,861
409.55	22,551	22,593	412.45	28,262	96,272
409.60	22,649	23,723	412.50	28,361	97,688
409.65	22,748	24,858	412.55	28,459	99,108
409.70	22,846	25,998	412.60	28,558	100,534
409.75	22,945	27,142	412.65	28,656	101,964
409.80	23,043	28,292	412.70	28,755	103,399
409.85	23,142	29,447	412.75	28,853	104,839
409.90	23,240	30,606	412.80	28,952	106,285
409.95	23,339	31,771	412.85	29,050	107,735
410.00	23,437	32,940	412.90	29,149	109,190
410.05	23,536	34,114	412.95	29,247	110,649
410.10	23,634	35,294	413.00	29,346	112,114
410.15	23,733	36,478	413.05	29,444	113,584
410.20	23,831	37,667	413.10	29,542	115,059
410.25	23,930	38,861	413.15	29,641	116,538
410.30	24,028	40,060	413.20	29,739	118,023
410.35	24,126	41,264	413.25	29,838	119,512
410.40	24,225	42,473	413.30	29,936	121,007
410.45	24,323	43,686	413.35	30,035	122,506
410.50	24,422	44,905	413.40	30,133	124,010
410.55	24,520	46,128	413.45	30,232	125,519
410.60	24,619	47,357	413.50	30,330	127,033
410.65	24,717	48,590	413.55	30,429	128,552
410.70	24,816	49,829	413.60	30,527	130,076
410.75	24,914	51,072	413.65	30,626	131,605
410.80	25,013	52,320	413.70	30,724	133,139
410.85	25,111	53,573	413.75	30,823	134,677
410.90	25,210	54,831	413.80	30,921	136,221
410.95	25,308	56,094	413.85	31,020	137,769
411.00	25,407	57,362	413.90	31,118	139,323
411.05	25,505	58,635	413.95	31,217	140,881
411.10	25,604	59,913	414.00	31,315	142,445
411.15	25,702	61,195			
411.20	25,801	62,483			
411.25	25,899	63,775			
411.30	25,997	65,073			
411.35	26,096	66,375			

Summary for Pond 55P: FB 1G

Inflow Area = 9.966 ac, 96.03% Impervious, Inflow Depth = 8.06" for 100-Year event
 Inflow = 85.16 cfs @ 12.13 hrs, Volume= 6.690 af
 Outflow = 82.92 cfs @ 12.14 hrs, Volume= 6.690 af, Atten= 3%, Lag= 0.9 min
 Primary = 82.92 cfs @ 12.14 hrs, Volume= 6.690 af
 Routed to Pond 54P : INFIL 1G

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.55' Surf.Area= 12,269 sf Storage= 46,929 cf
 Peak Elev= 413.28' @ 12.14 hrs Surf.Area= 13,189 sf Storage= 54,454 cf (7,525 cf above start)

Plug-Flow detention time= 146.6 min calculated for 5.611 af (84% of inflow)
 Center-of-Mass det. time= 3.5 min (745.9 - 742.4)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,884 cf	Custom Stage Data (Prismatic) Listed below

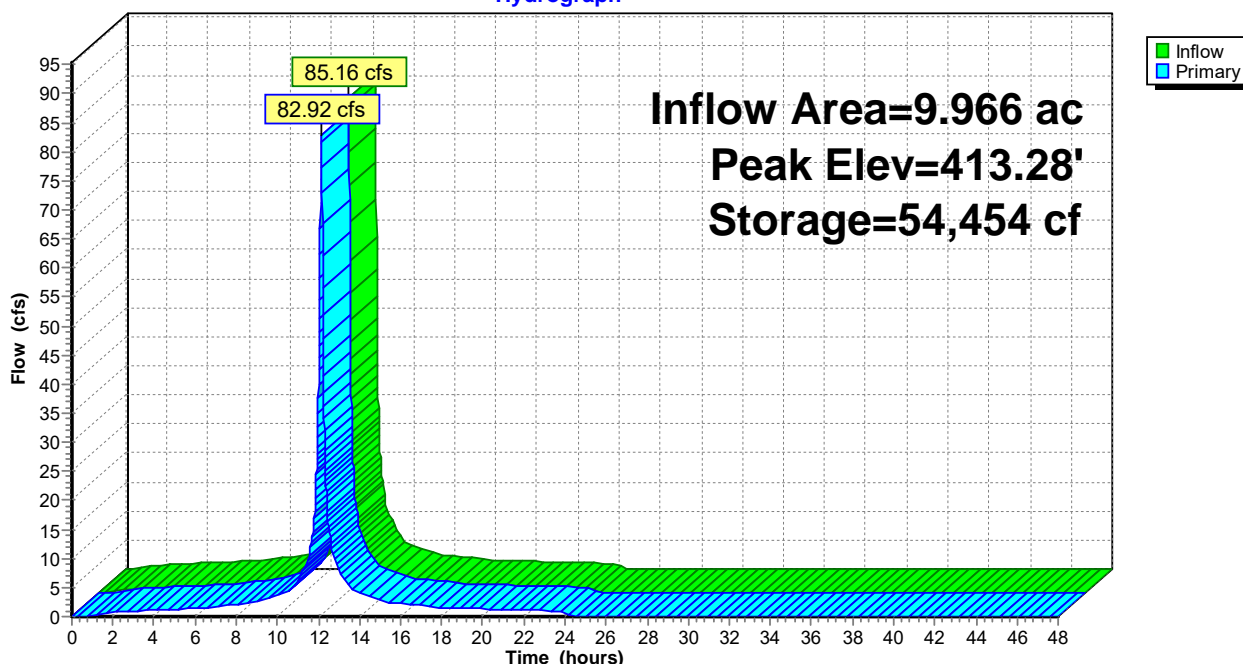
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	6,531	0	0
414.00	14,097	61,884	61,884

Device	Routing	Invert	Outlet Devices
#1	Primary	412.55'	50.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

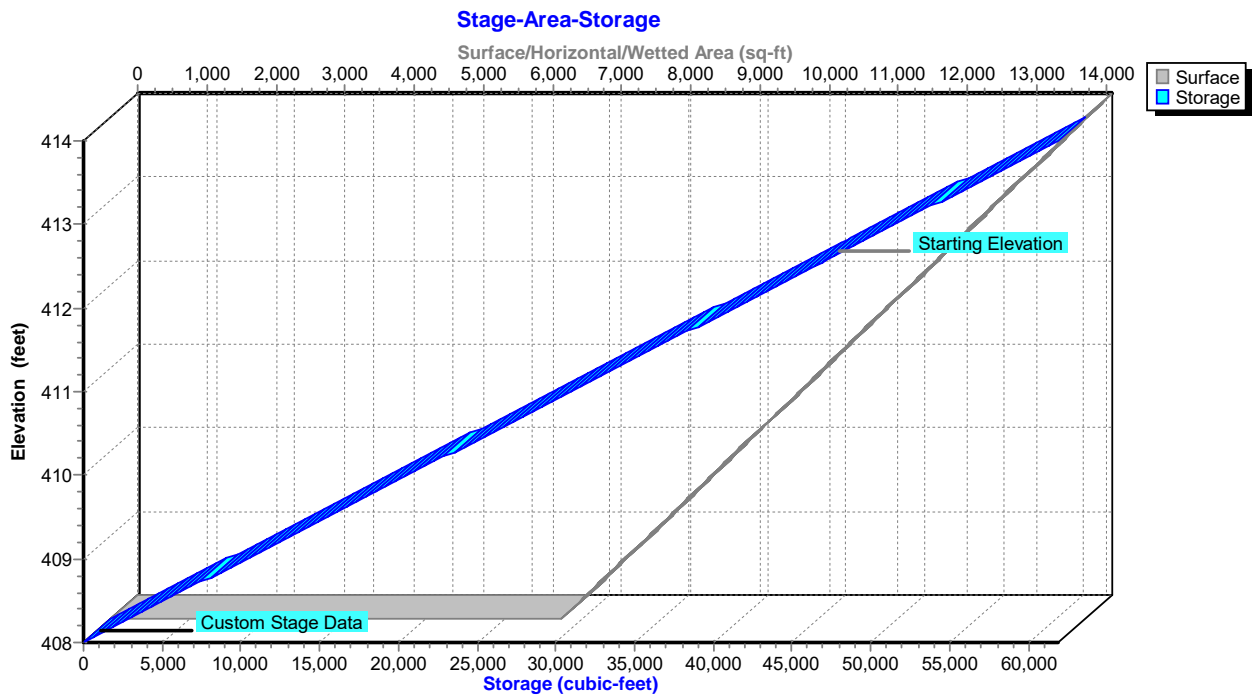
Primary OutFlow Max=82.74 cfs @ 12.14 hrs HW=413.28' (Free Discharge)
 ↑-1=Broad-Crested Rectangular Weir (Weir Controls 82.74 cfs @ 2.27 fps)

Pond 55P: FB 1G

Hydrograph



Pond 55P: FB 1G



Hydrograph for Pond 55P: FB 1G

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	46,929	412.55	0.00
1.00	0.35	47,074	412.56	0.29
2.00	0.74	47,185	412.57	0.72
3.00	0.96	47,246	412.58	0.95
4.00	1.12	47,289	412.58	1.11
5.00	1.25	47,325	412.59	1.24
6.00	1.37	47,355	412.59	1.36
7.00	1.73	47,445	412.60	1.70
8.00	2.10	47,542	412.61	2.07
9.00	2.47	47,639	412.62	2.44
10.00	3.69	47,838	412.64	3.63
11.00	6.50	48,269	412.68	6.28
12.00	45.31	51,512	412.99	40.04
13.00	7.92	48,521	412.70	8.24
14.00	4.02	47,912	412.65	4.08
15.00	2.74	47,703	412.63	2.81
16.00	2.25	47,597	412.61	2.28
17.00	1.89	47,501	412.61	1.91
18.00	1.52	47,405	412.60	1.55
19.00	1.39	47,365	412.59	1.40
20.00	1.30	47,342	412.59	1.31
21.00	1.21	47,318	412.59	1.22
22.00	1.12	47,294	412.59	1.13
23.00	1.03	47,270	412.58	1.04
24.00	0.94	47,246	412.58	0.95
25.00	0.00	46,932	412.55	0.00
26.00	0.00	46,929	412.55	0.00
27.00	0.00	46,929	412.55	0.00
28.00	0.00	46,929	412.55	0.00
29.00	0.00	46,929	412.55	0.00
30.00	0.00	46,929	412.55	0.00
31.00	0.00	46,929	412.55	0.00
32.00	0.00	46,929	412.55	0.00
33.00	0.00	46,929	412.55	0.00
34.00	0.00	46,929	412.55	0.00
35.00	0.00	46,929	412.55	0.00
36.00	0.00	46,929	412.55	0.00
37.00	0.00	46,929	412.55	0.00
38.00	0.00	46,929	412.55	0.00
39.00	0.00	46,929	412.55	0.00
40.00	0.00	46,929	412.55	0.00
41.00	0.00	46,929	412.55	0.00
42.00	0.00	46,929	412.55	0.00
43.00	0.00	46,929	412.55	0.00
44.00	0.00	46,929	412.55	0.00
45.00	0.00	46,929	412.55	0.00
46.00	0.00	46,929	412.55	0.00
47.00	0.00	46,929	412.55	0.00
48.00	0.00	46,929	412.55	0.00

Stage-Area-Storage for Pond 55P: FB 1G

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	6,531	0	413.80	13,845	59,821
408.10	6,657	1,031	413.90	13,971	60,853
408.20	6,783	2,063	414.00	14,097	61,884
408.30	6,909	3,094			
408.40	7,035	4,126			
408.50	7,162	5,157			
408.60	7,288	6,188			
408.70	7,414	7,220			
408.80	7,540	8,251			
408.90	7,666	9,283			
409.00	7,792	10,314			
409.10	7,918	11,345			
409.20	8,044	12,377			
409.30	8,170	13,408			
409.40	8,296	14,440			
409.50	8,423	15,471			
409.60	8,549	16,502			
409.70	8,675	17,534			
409.80	8,801	18,565			
409.90	8,927	19,597			
410.00	9,053	20,628			
410.10	9,179	21,659			
410.20	9,305	22,691			
410.30	9,431	23,722			
410.40	9,557	24,754			
410.50	9,684	25,785			
410.60	9,810	26,816			
410.70	9,936	27,848			
410.80	10,062	28,879			
410.90	10,188	29,911			
411.00	10,314	30,942			
411.10	10,440	31,973			
411.20	10,566	33,005			
411.30	10,692	34,036			
411.40	10,818	35,068			
411.50	10,945	36,099			
411.60	11,071	37,130			
411.70	11,197	38,162			
411.80	11,323	39,193			
411.90	11,449	40,225			
412.00	11,575	41,256			
412.10	11,701	42,287			
412.20	11,827	43,319			
412.30	11,953	44,350			
412.40	12,079	45,382			
412.50	12,206	46,413			
412.60	12,332	47,444			
412.70	12,458	48,476			
412.80	12,584	49,507			
412.90	12,710	50,539			
413.00	12,836	51,570			
413.10	12,962	52,601			
413.20	13,088	53,633			
413.30	13,214	54,664			
413.40	13,340	55,696			
413.50	13,467	56,727			
413.60	13,593	57,758			
413.70	13,719	58,790			

Summary for Pond 59P: FB 1E

Inflow Area = 0.398 ac, 82.34% Impervious, Inflow Depth = 7.97" for 100-Year event
 Inflow = 3.48 cfs @ 12.13 hrs, Volume= 0.264 af
 Outflow = 3.47 cfs @ 12.14 hrs, Volume= 0.264 af, Atten= 0%, Lag= 0.4 min
 Primary = 3.47 cfs @ 12.14 hrs, Volume= 0.264 af
 Routed to Pond 1P : Bioretention 1D

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 414.00' Surf.Area= 668 sf Storage= 2,016 cf
 Peak Elev= 414.27' @ 12.14 hrs Surf.Area= 711 sf Storage= 2,150 cf (134 cf above start)

Plug-Flow detention time= 141.8 min calculated for 0.218 af (82% of inflow)
 Center-of-Mass det. time= 1.5 min (759.0 - 757.6)

Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	3,024 cf	Custom Stage Data (Prismatic) Listed below

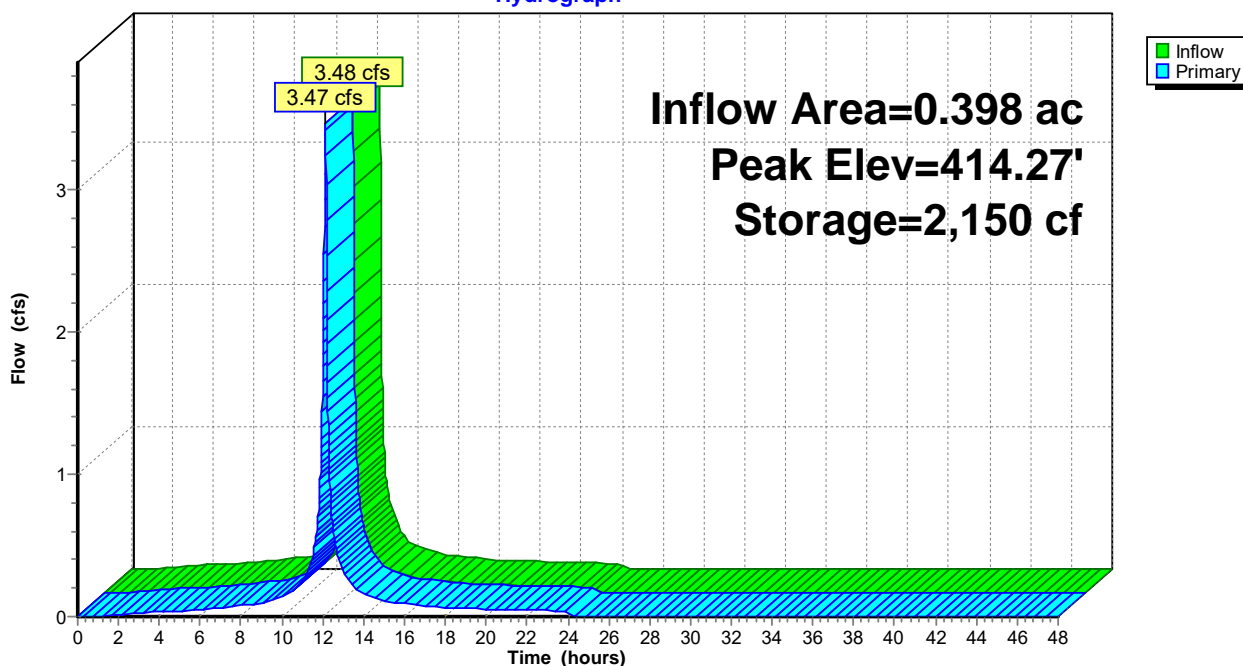
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
410.00	13	0	0
416.00	995	3,024	3,024

Device	Routing	Invert	Outlet Devices
#1	Primary	414.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

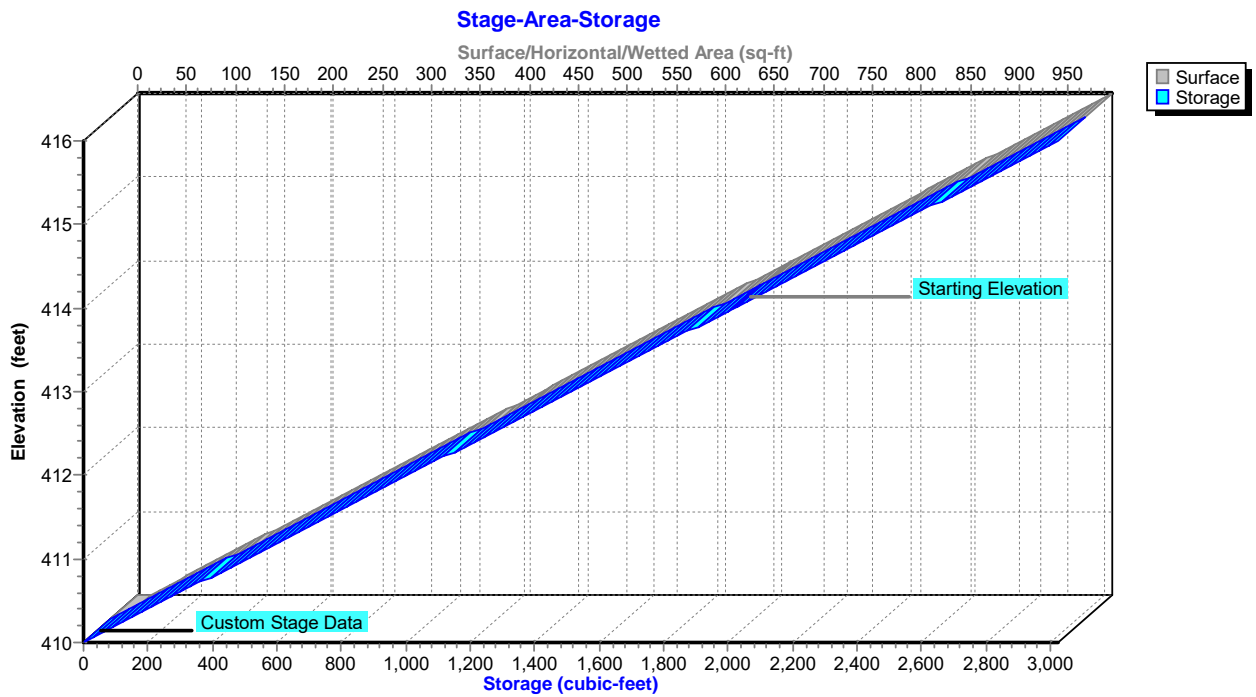
Primary OutFlow Max=3.45 cfs @ 12.14 hrs HW=414.27' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 3.45 cfs @ 1.30 fps)

Pond 59P: FB 1E

Hydrograph



Pond 59P: FB 1E



Hydrograph for Pond 59P: FB 1E

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	2,016	414.00	0.00
1.00	0.00	2,016	414.00	0.00
2.00	0.01	2,018	414.00	0.01
3.00	0.02	2,019	414.01	0.02
4.00	0.03	2,021	414.01	0.03
5.00	0.04	2,022	414.01	0.04
6.00	0.05	2,023	414.01	0.05
7.00	0.06	2,025	414.02	0.06
8.00	0.08	2,027	414.02	0.08
9.00	0.10	2,028	414.02	0.09
10.00	0.15	2,031	414.03	0.14
11.00	0.26	2,038	414.04	0.26
12.00	1.85	2,102	414.17	1.76
13.00	0.32	2,042	414.05	0.33
14.00	0.16	2,032	414.03	0.16
15.00	0.11	2,029	414.03	0.11
16.00	0.09	2,027	414.02	0.09
17.00	0.08	2,026	414.02	0.08
18.00	0.06	2,025	414.02	0.06
19.00	0.06	2,024	414.02	0.06
20.00	0.05	2,024	414.02	0.05
21.00	0.05	2,023	414.01	0.05
22.00	0.05	2,023	414.01	0.05
23.00	0.04	2,022	414.01	0.04
24.00	0.04	2,021	414.01	0.04
25.00	0.00	2,016	414.00	0.00
26.00	0.00	2,016	414.00	0.00
27.00	0.00	2,016	414.00	0.00
28.00	0.00	2,016	414.00	0.00
29.00	0.00	2,016	414.00	0.00
30.00	0.00	2,016	414.00	0.00
31.00	0.00	2,016	414.00	0.00
32.00	0.00	2,016	414.00	0.00
33.00	0.00	2,016	414.00	0.00
34.00	0.00	2,016	414.00	0.00
35.00	0.00	2,016	414.00	0.00
36.00	0.00	2,016	414.00	0.00
37.00	0.00	2,016	414.00	0.00
38.00	0.00	2,016	414.00	0.00
39.00	0.00	2,016	414.00	0.00
40.00	0.00	2,016	414.00	0.00
41.00	0.00	2,016	414.00	0.00
42.00	0.00	2,016	414.00	0.00
43.00	0.00	2,016	414.00	0.00
44.00	0.00	2,016	414.00	0.00
45.00	0.00	2,016	414.00	0.00
46.00	0.00	2,016	414.00	0.00
47.00	0.00	2,016	414.00	0.00
48.00	0.00	2,016	414.00	0.00

Stage-Area-Storage for Pond 59P: FB 1E

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
410.00	13	0	415.80	962	2,923
410.10	29	50	415.90	979	2,974
410.20	46	101	416.00	995	3,024
410.30	62	151			
410.40	78	202			
410.50	95	252			
410.60	111	302			
410.70	128	353			
410.80	144	403			
410.90	160	454			
411.00	177	504			
411.10	193	554			
411.20	209	605			
411.30	226	655			
411.40	242	706			
411.50	259	756			
411.60	275	806			
411.70	291	857			
411.80	308	907			
411.90	324	958			
412.00	340	1,008			
412.10	357	1,058			
412.20	373	1,109			
412.30	389	1,159			
412.40	406	1,210			
412.50	422	1,260			
412.60	439	1,310			
412.70	455	1,361			
412.80	471	1,411			
412.90	488	1,462			
413.00	504	1,512			
413.10	520	1,562			
413.20	537	1,613			
413.30	553	1,663			
413.40	569	1,714			
413.50	586	1,764			
413.60	602	1,814			
413.70	619	1,865			
413.80	635	1,915			
413.90	651	1,966			
414.00	668	2,016			
414.10	684	2,066			
414.20	700	2,117			
414.30	717	2,167			
414.40	733	2,218			
414.50	750	2,268			
414.60	766	2,318			
414.70	782	2,369			
414.80	799	2,419			
414.90	815	2,470			
415.00	831	2,520			
415.10	848	2,570			
415.20	864	2,621			
415.30	880	2,671			
415.40	897	2,722			
415.50	913	2,772			
415.60	930	2,822			
415.70	946	2,873			

Summary for Pond 60P: FB 1D

Inflow Area = 3.529 ac, 63.56% Impervious, Inflow Depth = 7.49" for 100-Year event
 Inflow = 30.16 cfs @ 12.13 hrs, Volume= 2.202 af
 Outflow = 30.03 cfs @ 12.14 hrs, Volume= 2.202 af, Atten= 0%, Lag= 0.4 min
 Primary = 30.03 cfs @ 12.14 hrs, Volume= 2.202 af
 Routed to Pond 1P : Bioretention 1D

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 414.90' Surf.Area= 3,034 sf Storage= 8,598 cf
 Peak Elev= 415.42' @ 12.14 hrs Surf.Area= 3,344 sf Storage= 9,750 cf (1,152 cf above start)

Plug-Flow detention time= 84.5 min calculated for 2.005 af (91% of inflow)
 Center-of-Mass det. time= 1.5 min (775.6 - 774.1)

Volume	Invert	Avail.Storage	Storage Description
#1	411.00'	11,023 cf	Custom Stage Data (Prismatic) Listed below

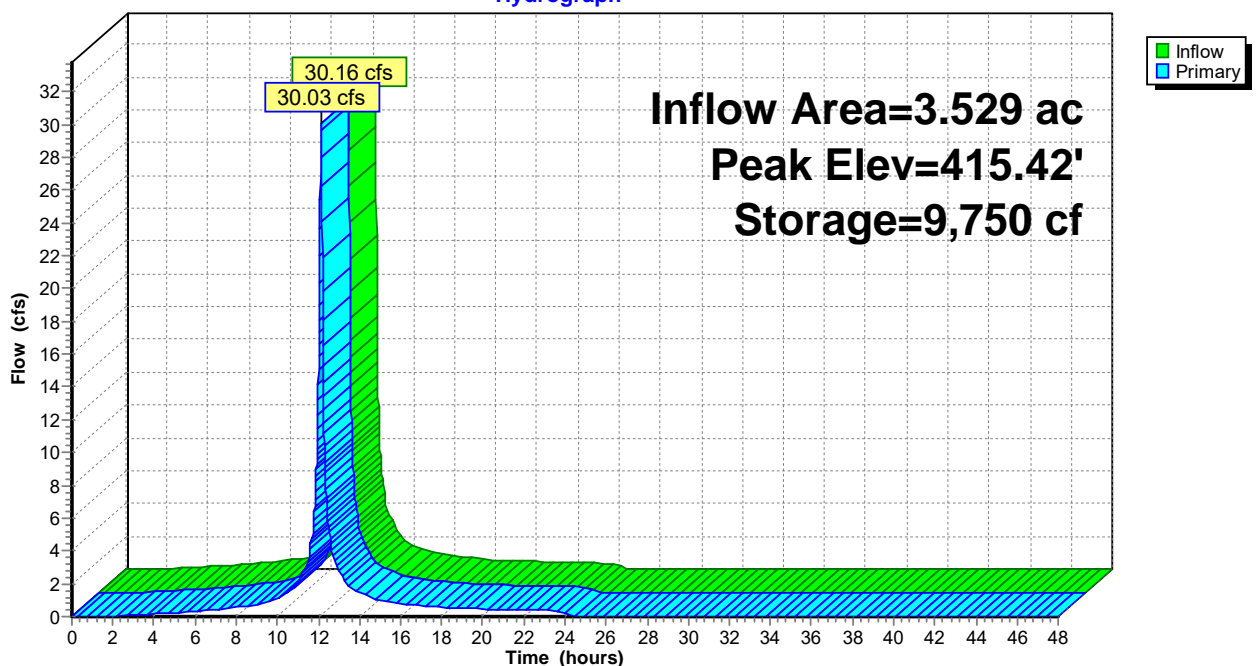
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
411.00	723	0	0
416.00	3,686	11,023	11,023

Device	Routing	Invert	Outlet Devices
#1	Primary	414.90'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

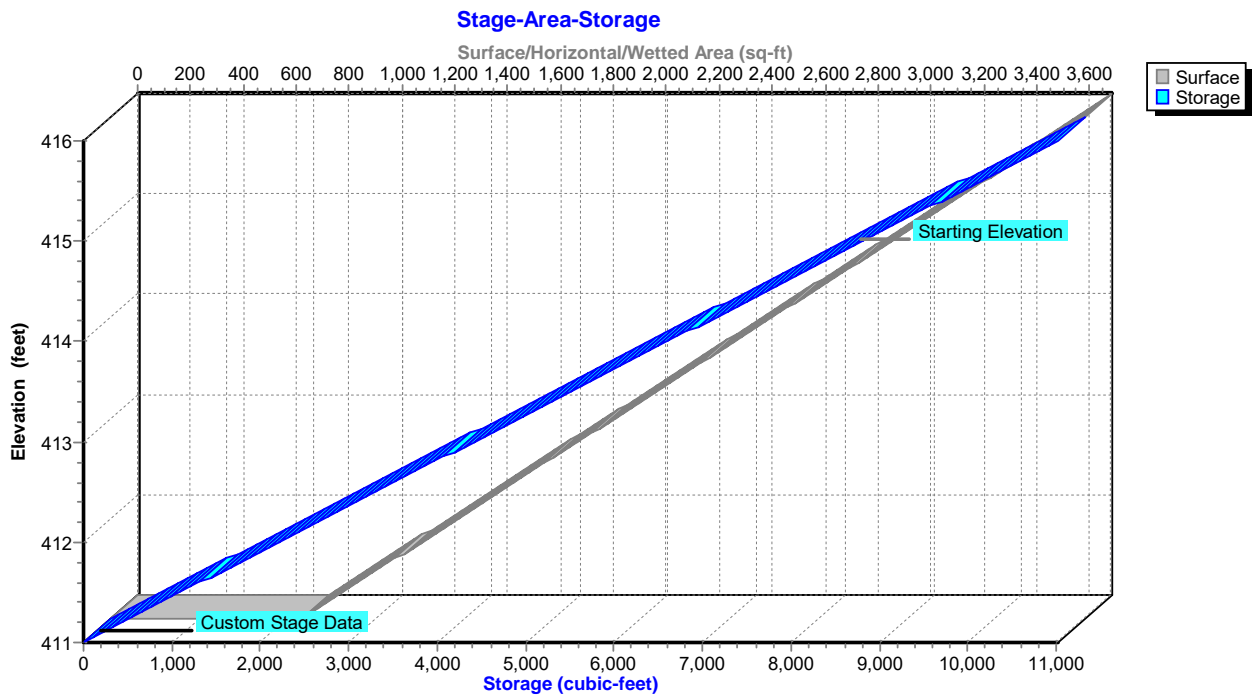
Primary OutFlow Max=29.91 cfs @ 12.14 hrs HW=415.42' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 29.91 cfs @ 1.91 fps)

Pond 60P: FB 1D

Hydrograph



Pond 60P: FB 1D



Hydrograph for Pond 60P: FB 1D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,598	414.90	0.00
1.00	0.00	8,598	414.90	0.00
2.00	0.00	8,598	414.90	0.00
3.00	0.09	8,609	414.90	0.08
4.00	0.17	8,619	414.91	0.16
5.00	0.24	8,629	414.91	0.24
6.00	0.30	8,637	414.92	0.30
7.00	0.43	8,654	414.93	0.43
8.00	0.58	8,673	414.93	0.57
9.00	0.73	8,693	414.94	0.72
10.00	1.15	8,730	414.96	1.14
11.00	2.14	8,799	414.99	2.11
12.00	15.87	9,346	415.24	15.09
13.00	2.83	8,847	415.01	2.88
14.00	1.44	8,752	414.97	1.45
15.00	0.98	8,719	414.96	0.99
16.00	0.80	8,705	414.95	0.81
17.00	0.68	8,687	414.94	0.68
18.00	0.55	8,670	414.93	0.55
19.00	0.50	8,663	414.93	0.50
20.00	0.47	8,659	414.93	0.47
21.00	0.43	8,655	414.93	0.44
22.00	0.40	8,651	414.92	0.40
23.00	0.37	8,646	414.92	0.37
24.00	0.34	8,642	414.92	0.34
25.00	0.00	8,598	414.90	0.00
26.00	0.00	8,598	414.90	0.00
27.00	0.00	8,598	414.90	0.00
28.00	0.00	8,598	414.90	0.00
29.00	0.00	8,598	414.90	0.00
30.00	0.00	8,598	414.90	0.00
31.00	0.00	8,598	414.90	0.00
32.00	0.00	8,598	414.90	0.00
33.00	0.00	8,598	414.90	0.00
34.00	0.00	8,598	414.90	0.00
35.00	0.00	8,598	414.90	0.00
36.00	0.00	8,598	414.90	0.00
37.00	0.00	8,598	414.90	0.00
38.00	0.00	8,598	414.90	0.00
39.00	0.00	8,598	414.90	0.00
40.00	0.00	8,598	414.90	0.00
41.00	0.00	8,598	414.90	0.00
42.00	0.00	8,598	414.90	0.00
43.00	0.00	8,598	414.90	0.00
44.00	0.00	8,598	414.90	0.00
45.00	0.00	8,598	414.90	0.00
46.00	0.00	8,598	414.90	0.00
47.00	0.00	8,598	414.90	0.00
48.00	0.00	8,598	414.90	0.00

Stage-Area-Storage for Pond 60P: FB 1D

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
411.00	723	0	413.90	2,442	6,393
411.05	753	110	413.95	2,471	6,503
411.10	782	220	414.00	2,501	6,614
411.15	812	331	414.05	2,530	6,724
411.20	842	441	414.10	2,560	6,834
411.25	871	551	414.15	2,590	6,944
411.30	901	661	414.20	2,619	7,054
411.35	930	772	414.25	2,649	7,165
411.40	960	882	414.30	2,679	7,275
411.45	990	992	414.35	2,708	7,385
411.50	1,019	1,102	414.40	2,738	7,495
411.55	1,049	1,212	414.45	2,767	7,606
411.60	1,079	1,323	414.50	2,797	7,716
411.65	1,108	1,433	414.55	2,827	7,826
411.70	1,138	1,543	414.60	2,856	7,936
411.75	1,167	1,653	414.65	2,886	8,046
411.80	1,197	1,764	414.70	2,916	8,157
411.85	1,227	1,874	414.75	2,945	8,267
411.90	1,256	1,984	414.80	2,975	8,377
411.95	1,286	2,094	414.85	3,005	8,487
412.00	1,316	2,205	414.90	3,034	8,598
412.05	1,345	2,315	414.95	3,064	8,708
412.10	1,375	2,425	415.00	3,093	8,818
412.15	1,404	2,535	415.05	3,123	8,928
412.20	1,434	2,645	415.10	3,153	9,038
412.25	1,464	2,756	415.15	3,182	9,149
412.30	1,493	2,866	415.20	3,212	9,259
412.35	1,523	2,976	415.25	3,242	9,369
412.40	1,553	3,086	415.30	3,271	9,479
412.45	1,582	3,197	415.35	3,301	9,590
412.50	1,612	3,307	415.40	3,330	9,700
412.55	1,642	3,417	415.45	3,360	9,810
412.60	1,671	3,527	415.50	3,390	9,920
412.65	1,701	3,637	415.55	3,419	10,030
412.70	1,730	3,748	415.60	3,449	10,141
412.75	1,760	3,858	415.65	3,479	10,251
412.80	1,790	3,968	415.70	3,508	10,361
412.85	1,819	4,078	415.75	3,538	10,471
412.90	1,849	4,189	415.80	3,567	10,582
412.95	1,879	4,299	415.85	3,597	10,692
413.00	1,908	4,409	415.90	3,627	10,802
413.05	1,938	4,519	415.95	3,656	10,912
413.10	1,967	4,629	416.00	3,686	11,023
413.15	1,997	4,740			
413.20	2,027	4,850			
413.25	2,056	4,960			
413.30	2,086	5,070			
413.35	2,116	5,181			
413.40	2,145	5,291			
413.45	2,175	5,401			
413.50	2,205	5,511			
413.55	2,234	5,621			
413.60	2,264	5,732			
413.65	2,293	5,842			
413.70	2,323	5,952			
413.75	2,353	6,062			
413.80	2,382	6,173			
413.85	2,412	6,283			

Summary for Pond 63P: Det Pond 1K

Inflow Area = 17.176 ac, 66.33% Impervious, Inflow Depth = 4.53" for 100-Year event
 Inflow = 32.28 cfs @ 12.30 hrs, Volume= 6.479 af
 Outflow = 16.10 cfs @ 13.31 hrs, Volume= 6.471 af, Atten= 50%, Lag= 60.4 min
 Primary = 16.10 cfs @ 13.31 hrs, Volume= 6.471 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 30L : DP-2

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 412.90' @ 13.31 hrs Surf.Area= 18,129 sf Storage= 60,569 cf

Plug-Flow detention time= 67.6 min calculated for 6.470 af (100% of inflow)
 Center-of-Mass det. time= 66.0 min (994.4 - 928.4)

Volume	Invert	Avail.Storage	Storage Description
#1	407.50'	82,118 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.50	4,315	0	0
414.00	20,952	82,118	82,118

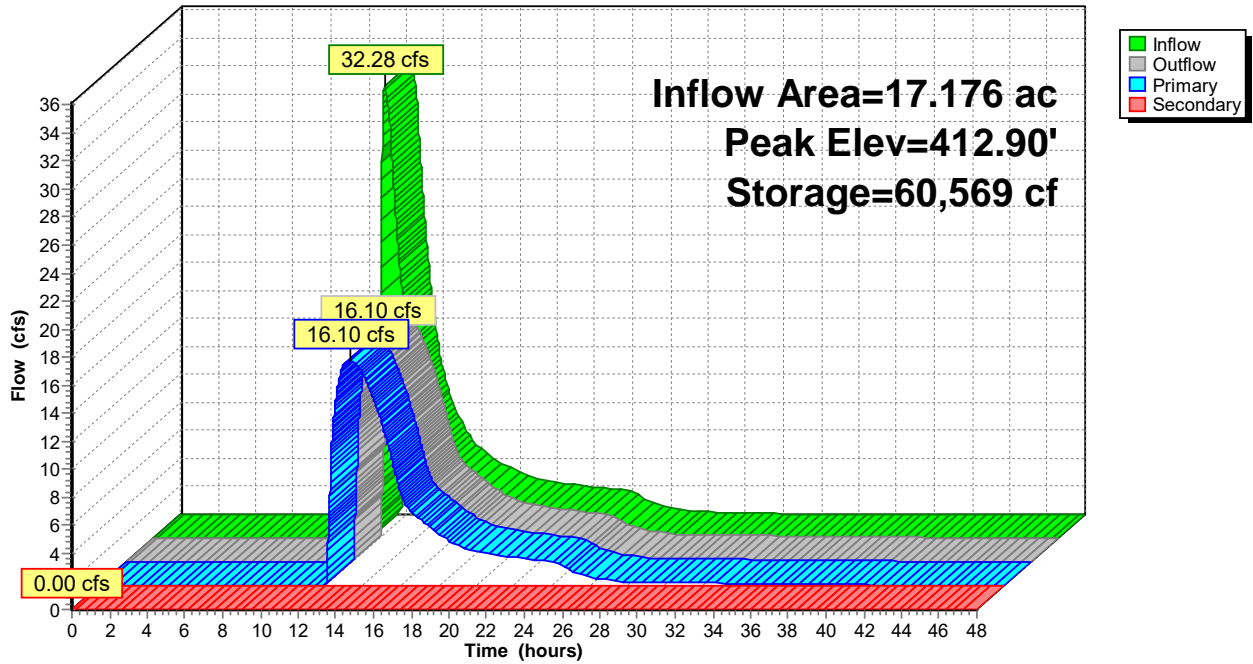
Device	Routing	Invert	Outlet Devices
#1	Primary	407.50'	24.0" Round Culvert L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.50' / 406.00' S= 0.0037 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	407.50'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	408.50'	24.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	409.80'	17.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	413.00'	10.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=16.10 cfs @ 13.31 hrs HW=412.90' (Free Discharge)
 ↑1=Culvert (Passes 16.10 cfs of 21.91 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.54 cfs @ 11.06 fps)
 ↑3=Orifice/Grate (Orifice Controls 9.80 cfs @ 9.80 fps)
 ↑4=Orifice/Grate (Orifice Controls 5.75 cfs @ 8.12 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=407.50' (Free Discharge)
 ↑5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

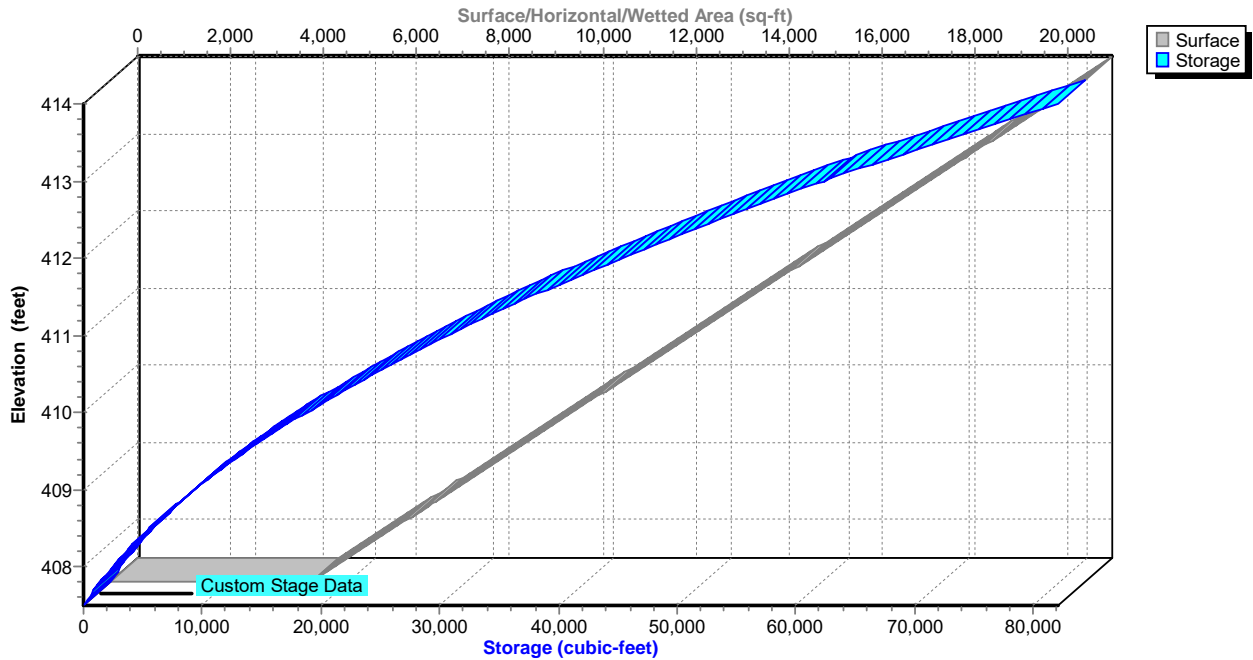
Pond 63P: Det Pond 1K

Hydrograph



Pond 63P: Det Pond 1K

Stage-Area-Storage



Hydrograph for Pond 63P: Det Pond 1K

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	407.50	0.00	0.00	0.00
1.00	0.00	0	407.50	0.00	0.00	0.00
2.00	0.00	0	407.50	0.00	0.00	0.00
3.00	0.00	0	407.50	0.00	0.00	0.00
4.00	0.00	0	407.50	0.00	0.00	0.00
5.00	0.00	0	407.50	0.00	0.00	0.00
6.00	0.00	0	407.50	0.00	0.00	0.00
7.00	0.00	0	407.50	0.00	0.00	0.00
8.00	0.00	0	407.50	0.00	0.00	0.00
9.00	0.00	0	407.50	0.00	0.00	0.00
10.00	0.00	0	407.50	0.00	0.00	0.00
11.00	0.00	0	407.50	0.00	0.00	0.00
12.00	6.33	2,028	407.92	0.13	0.13	0.00
13.00	20.62	58,084	412.76	15.79	15.79	0.00
14.00	10.10	53,018	412.47	15.10	15.10	0.00
15.00	6.42	33,334	411.19	11.59	11.59	0.00
16.00	4.63	19,755	410.09	6.65	6.65	0.00
17.00	3.72	14,881	409.62	4.80	4.80	0.00
18.00	3.05	11,669	409.27	3.75	3.75	0.00
19.00	2.59	9,873	409.06	2.89	2.89	0.00
20.00	2.32	9,210	408.98	2.43	2.43	0.00
21.00	2.14	8,932	408.95	2.20	2.20	0.00
22.00	1.98	8,728	408.92	2.03	2.03	0.00
23.00	1.83	8,534	408.90	1.88	1.88	0.00
24.00	1.68	8,345	408.87	1.73	1.73	0.00
25.00	0.86	7,491	408.76	1.12	1.12	0.00
26.00	0.48	6,715	408.66	0.65	0.65	0.00
27.00	0.30	6,223	408.59	0.41	0.41	0.00
28.00	0.20	5,886	408.54	0.28	0.28	0.00
29.00	0.14	5,594	408.50	0.22	0.22	0.00
30.00	0.10	5,230	408.45	0.21	0.21	0.00
31.00	0.07	4,783	408.38	0.21	0.21	0.00
32.00	0.06	4,294	408.30	0.19	0.19	0.00
33.00	0.05	3,801	408.22	0.18	0.18	0.00
34.00	0.04	3,318	408.15	0.17	0.17	0.00
35.00	0.03	2,854	408.07	0.16	0.16	0.00
36.00	0.03	2,418	407.99	0.14	0.14	0.00
37.00	0.02	2,018	407.92	0.13	0.13	0.00
38.00	0.02	1,659	407.85	0.11	0.11	0.00
39.00	0.01	1,346	407.79	0.09	0.09	0.00
40.00	0.01	1,085	407.73	0.08	0.08	0.00
41.00	0.01	879	407.69	0.06	0.06	0.00
42.00	0.01	723	407.66	0.05	0.05	0.00
43.00	0.01	610	407.64	0.03	0.03	0.00
44.00	0.01	524	407.62	0.03	0.03	0.00
45.00	0.01	456	407.60	0.02	0.02	0.00
46.00	0.00	402	407.59	0.02	0.02	0.00
47.00	0.00	359	407.58	0.01	0.01	0.00
48.00	0.00	324	407.57	0.01	0.01	0.00

Stage-Area-Storage for Pond 63P: Det Pond 1K

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.50	4,315	0	413.30	19,160	68,078
407.60	4,571	444	413.40	19,416	70,007
407.70	4,827	914	413.50	19,672	71,962
407.80	5,083	1,410	413.60	19,928	73,942
407.90	5,339	1,931	413.70	20,184	75,947
408.00	5,595	2,477	413.80	20,440	77,979
408.10	5,851	3,050	413.90	20,696	80,035
408.20	6,107	3,648	414.00	20,952	82,118
408.30	6,363	4,271			
408.40	6,619	4,920			
408.50	6,875	5,595			
408.60	7,130	6,295			
408.70	7,386	7,021			
408.80	7,642	7,772			
408.90	7,898	8,549			
409.00	8,154	9,352			
409.10	8,410	10,180			
409.20	8,666	11,034			
409.30	8,922	11,913			
409.40	9,178	12,818			
409.50	9,434	13,749			
409.60	9,690	14,705			
409.70	9,946	15,687			
409.80	10,202	16,694			
409.90	10,458	17,727			
410.00	10,714	18,786			
410.10	10,970	19,870			
410.20	11,226	20,980			
410.30	11,482	22,115			
410.40	11,738	23,276			
410.50	11,994	24,463			
410.60	12,250	25,675			
410.70	12,506	26,913			
410.80	12,761	28,176			
410.90	13,017	29,465			
411.00	13,273	30,780			
411.10	13,529	32,120			
411.20	13,785	33,486			
411.30	14,041	34,877			
411.40	14,297	36,294			
411.50	14,553	37,736			
411.60	14,809	39,204			
411.70	15,065	40,698			
411.80	15,321	42,217			
411.90	15,577	43,762			
412.00	15,833	45,333			
412.10	16,089	46,929			
412.20	16,345	48,551			
412.30	16,601	50,198			
412.40	16,857	51,871			
412.50	17,113	53,569			
412.60	17,369	55,293			
412.70	17,625	57,043			
412.80	17,881	58,818			
412.90	18,137	60,619			
413.00	18,392	62,446			
413.10	18,648	64,298			
413.20	18,904	66,175			

Summary for Pond B4B: Bioretention 4A

Inflow Area = 2.400 ac, 34.61% Impervious, Inflow Depth = 4.84" for 100-Year event
 Inflow = 14.69 cfs @ 12.13 hrs, Volume= 0.968 af
 Outflow = 12.61 cfs @ 12.17 hrs, Volume= 0.767 af, Atten= 14%, Lag= 2.1 min
 Primary = 12.61 cfs @ 12.17 hrs, Volume= 0.767 af
 Routed to Link 32L : DP-4

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 440.92' @ 12.17 hrs Surf.Area= 7,683 sf Storage= 11,721 cf

Plug-Flow detention time= 136.0 min calculated for 0.767 af (79% of inflow)
 Center-of-Mass det. time= 49.8 min (883.0 - 833.2)

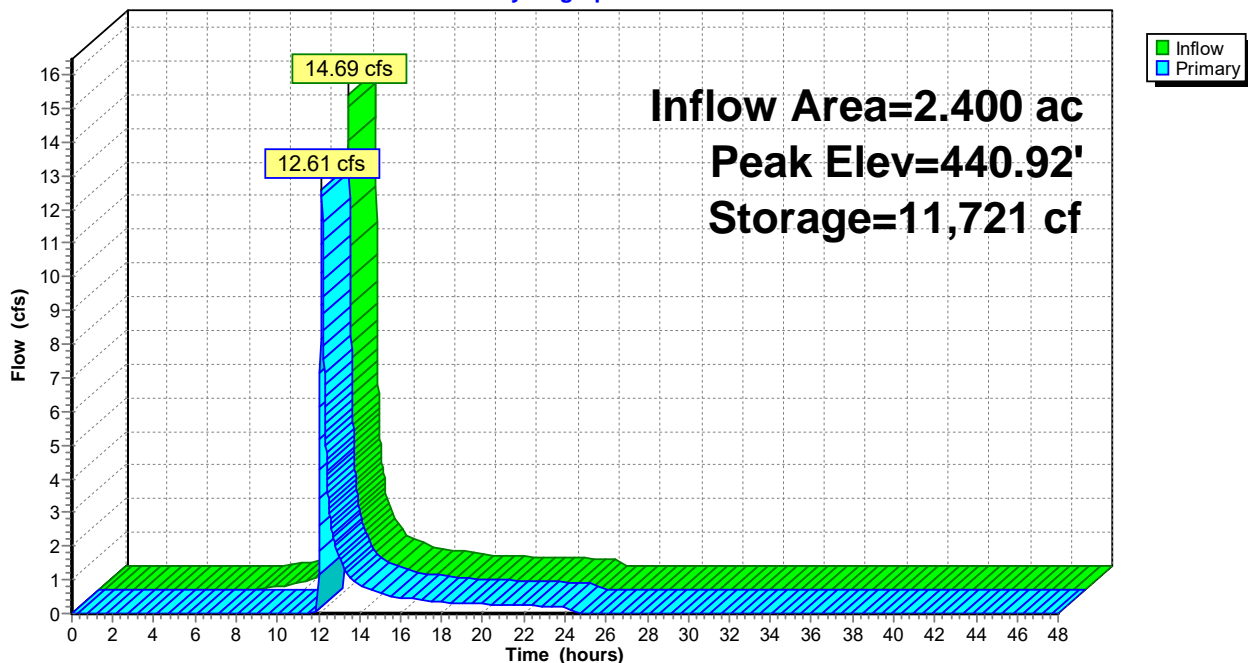
Volume	Invert	Avail.Storage	Storage Description	
#1	436.17'	12,376 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
436.17	4,171	0.0	0	0
436.83	4,171	40.0	1,101	1,101
439.50	4,171	20.0	2,227	3,328
441.00	7,892	100.0	9,047	12,376

Device	Routing	Invert	Outlet Devices
#1	Primary	436.17'	18.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 436.17' / 435.57' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	440.50'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=12.57 cfs @ 12.17 hrs HW=440.92' (Free Discharge)
 ↑1=Culvert (Passes 12.57 cfs of 17.01 cfs potential flow)
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 12.57 cfs @ 1.89 fps)

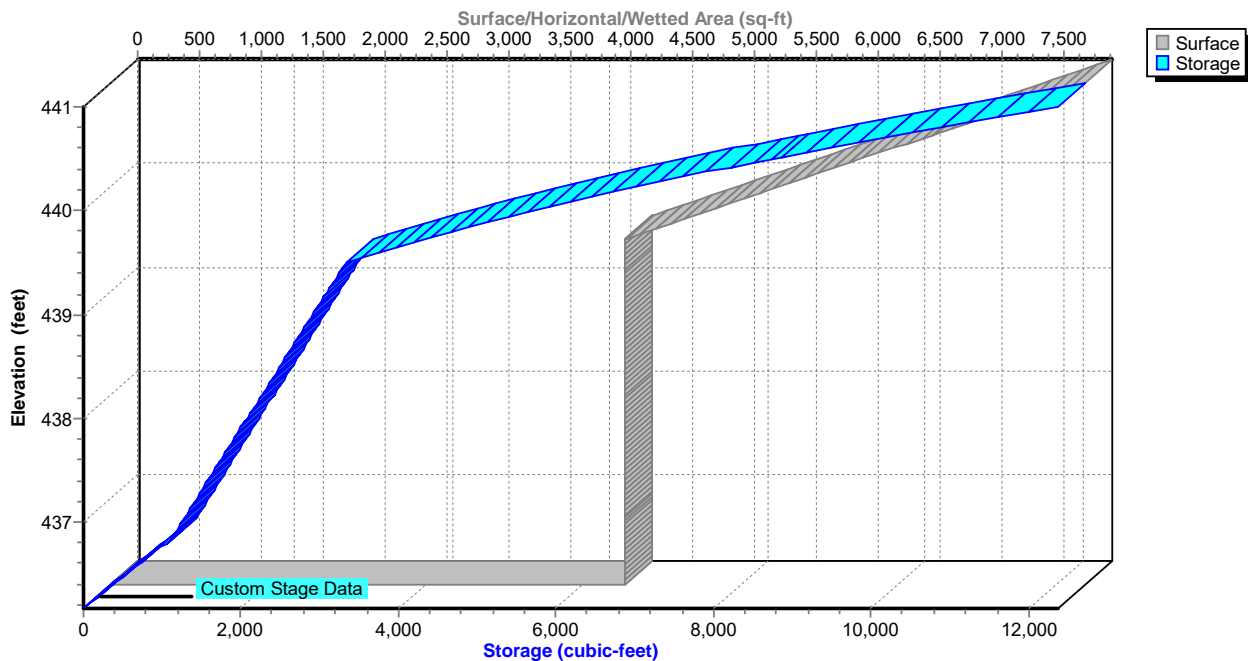
Pond B4B: Bioretention 4A

Hydrograph



Pond B4B: Bioretention 4A

Stage-Area-Storage



Hydrograph for Pond B4B: Bioretention 4A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	436.17	0.00
1.00	0.00	0	436.17	0.00
2.00	0.00	0	436.17	0.00
3.00	0.00	0	436.17	0.00
4.00	0.00	0	436.17	0.00
5.00	0.00	0	436.17	0.00
6.00	0.00	0	436.17	0.00
7.00	0.00	0	436.17	0.00
8.00	0.04	70	436.21	0.00
9.00	0.11	336	436.37	0.00
10.00	0.25	953	436.74	0.00
11.00	0.64	2,361	438.34	0.00
12.00	6.97	8,840	440.52	0.09
13.00	1.56	9,503	440.61	1.69
14.00	0.81	9,210	440.57	0.84
15.00	0.56	9,104	440.55	0.60
16.00	0.46	9,042	440.54	0.47
17.00	0.39	9,005	440.54	0.40
18.00	0.32	8,968	440.53	0.33
19.00	0.29	8,951	440.53	0.29
20.00	0.27	8,942	440.53	0.28
21.00	0.26	8,933	440.53	0.26
22.00	0.24	8,924	440.53	0.24
23.00	0.22	8,915	440.53	0.22
24.00	0.20	8,905	440.52	0.20
25.00	0.00	8,749	440.50	0.01
26.00	0.00	8,740	440.50	0.00
27.00	0.00	8,740	440.50	0.00
28.00	0.00	8,740	440.50	0.00
29.00	0.00	8,740	440.50	0.00
30.00	0.00	8,740	440.50	0.00
31.00	0.00	8,740	440.50	0.00
32.00	0.00	8,740	440.50	0.00
33.00	0.00	8,740	440.50	0.00
34.00	0.00	8,740	440.50	0.00
35.00	0.00	8,740	440.50	0.00
36.00	0.00	8,740	440.50	0.00
37.00	0.00	8,740	440.50	0.00
38.00	0.00	8,740	440.50	0.00
39.00	0.00	8,740	440.50	0.00
40.00	0.00	8,740	440.50	0.00
41.00	0.00	8,740	440.50	0.00
42.00	0.00	8,740	440.50	0.00
43.00	0.00	8,740	440.50	0.00
44.00	0.00	8,740	440.50	0.00
45.00	0.00	8,740	440.50	0.00
46.00	0.00	8,740	440.50	0.00
47.00	0.00	8,740	440.50	0.00
48.00	0.00	8,740	440.50	0.00

Stage-Area-Storage for Pond B4B: Bioretention 4A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
436.17	4,171	0	439.07	4,171	2,970
436.22	4,171	83	439.12	4,171	3,011
436.27	4,171	167	439.17	4,171	3,053
436.32	4,171	250	439.22	4,171	3,095
436.37	4,171	334	439.27	4,171	3,137
436.42	4,171	417	439.32	4,171	3,178
436.47	4,171	501	439.37	4,171	3,220
436.52	4,171	584	439.42	4,171	3,262
436.57	4,171	667	439.47	4,171	3,303
436.62	4,171	751	439.52	4,221	3,412
436.67	4,171	834	439.57	4,345	3,627
436.72	4,171	918	439.62	4,469	3,847
436.77	4,171	1,001	439.67	4,593	4,073
436.82	4,171	1,084	439.72	4,717	4,306
436.87	4,171	1,135	439.77	4,841	4,545
436.92	4,171	1,176	439.82	4,965	4,790
436.97	4,171	1,218	439.87	5,089	5,042
437.02	4,171	1,260	439.92	5,213	5,299
437.07	4,171	1,301	439.97	5,337	5,563
437.12	4,171	1,343	440.02	5,461	5,833
437.17	4,171	1,385	440.07	5,585	6,109
437.22	4,171	1,426	440.12	5,709	6,391
437.27	4,171	1,468	440.17	5,833	6,680
437.32	4,171	1,510	440.22	5,957	6,975
437.37	4,171	1,552	440.27	6,081	7,276
437.42	4,171	1,593	440.32	6,205	7,583
437.47	4,171	1,635	440.37	6,329	7,896
437.52	4,171	1,677	440.42	6,453	8,216
437.57	4,171	1,718	440.47	6,577	8,541
437.62	4,171	1,760	440.52	6,701	8,873
437.67	4,171	1,802	440.57	6,825	9,211
437.72	4,171	1,844	440.62	6,949	9,556
437.77	4,171	1,885	440.67	7,073	9,906
437.82	4,171	1,927	440.72	7,197	10,263
437.87	4,171	1,969	440.77	7,321	10,626
437.92	4,171	2,010	440.82	7,445	10,995
437.97	4,171	2,052	440.87	7,570	11,371
438.02	4,171	2,094	440.92	7,694	11,752
438.07	4,171	2,136	440.97	7,818	12,140
438.12	4,171	2,177			
438.17	4,171	2,219			
438.22	4,171	2,261			
438.27	4,171	2,302			
438.32	4,171	2,344			
438.37	4,171	2,386			
438.42	4,171	2,428			
438.47	4,171	2,469			
438.52	4,171	2,511			
438.57	4,171	2,553			
438.62	4,171	2,594			
438.67	4,171	2,636			
438.72	4,171	2,678			
438.77	4,171	2,719			
438.82	4,171	2,761			
438.87	4,171	2,803			
438.92	4,171	2,845			
438.97	4,171	2,886			
439.02	4,171	2,928			

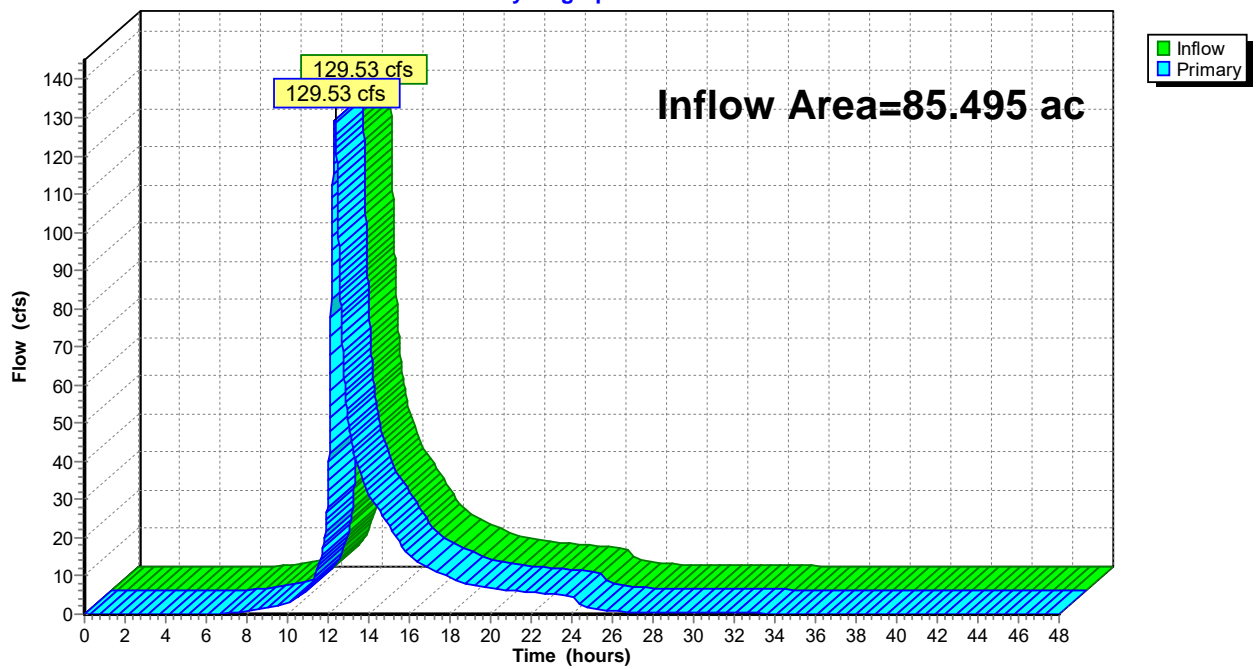
Summary for Link 29L: DP-1

Inflow Area = 85.495 ac, 51.65% Impervious, Inflow Depth > 3.04" for 100-Year event
Inflow = 129.53 cfs @ 12.33 hrs, Volume= 21.664 af
Primary = 129.53 cfs @ 12.33 hrs, Volume= 21.664 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 29L: DP-1

Hydrograph



Hydrograph for Link 29L: DP-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.31	0.00	0.31
0.50	0.00	0.00	0.00	29.50	0.30	0.00	0.30
1.00	0.00	0.00	0.00	30.00	0.29	0.00	0.29
1.50	0.00	0.00	0.00	30.50	0.28	0.00	0.28
2.00	0.00	0.00	0.00	31.00	0.27	0.00	0.27
2.50	0.00	0.00	0.00	31.50	0.26	0.00	0.26
3.00	0.00	0.00	0.00	32.00	0.25	0.00	0.25
3.50	0.00	0.00	0.00	32.50	0.24	0.00	0.24
4.00	0.00	0.00	0.00	33.00	0.23	0.00	0.23
4.50	0.00	0.00	0.00	33.50	0.22	0.00	0.22
5.00	0.00	0.00	0.00	34.00	0.21	0.00	0.21
5.50	0.00	0.00	0.00	34.50	0.20	0.00	0.20
6.00	0.00	0.00	0.00	35.00	0.19	0.00	0.19
6.50	0.05	0.00	0.05	35.50	0.18	0.00	0.18
7.00	0.25	0.00	0.25	36.00	0.17	0.00	0.17
7.50	0.52	0.00	0.52	36.50	0.16	0.00	0.16
8.00	0.83	0.00	0.83	37.00	0.15	0.00	0.15
8.50	1.19	0.00	1.19	37.50	0.14	0.00	0.14
9.00	1.60	0.00	1.60	38.00	0.13	0.00	0.13
9.50	2.21	0.00	2.21	38.50	0.12	0.00	0.12
10.00	3.19	0.00	3.19	39.00	0.11	0.00	0.11
10.50	4.39	0.00	4.39	39.50	0.10	0.00	0.10
11.00	6.73	0.00	6.73	40.00	0.09	0.00	0.09
11.50	12.10	0.00	12.10	40.50	0.08	0.00	0.08
12.00	32.91	0.00	32.91	41.00	0.08	0.00	0.08
12.50	102.77	0.00	102.77	41.50	0.07	0.00	0.07
13.00	50.33	0.00	50.33	42.00	0.06	0.00	0.06
13.50	38.20	0.00	38.20	42.50	0.05	0.00	0.05
14.00	31.41	0.00	31.41	43.00	0.05	0.00	0.05
14.50	27.28	0.00	27.28	43.50	0.04	0.00	0.04
15.00	23.02	0.00	23.02	44.00	0.04	0.00	0.04
15.50	18.92	0.00	18.92	44.50	0.04	0.00	0.04
16.00	15.44	0.00	15.44	45.00	0.03	0.00	0.03
16.50	13.37	0.00	13.37	45.50	0.03	0.00	0.03
17.00	12.03	0.00	12.03	46.00	0.03	0.00	0.03
17.50	10.81	0.00	10.81	46.50	0.03	0.00	0.03
18.00	9.59	0.00	9.59	47.00	0.03	0.00	0.03
18.50	8.51	0.00	8.51	47.50	0.02	0.00	0.02
19.00	7.81	0.00	7.81	48.00	0.02	0.00	0.02
19.50	7.28	0.00	7.28				
20.00	6.88	0.00	6.88				
20.50	6.55	0.00	6.55				
21.00	6.26	0.00	6.26				
21.50	6.00	0.00	6.00				
22.00	5.76	0.00	5.76				
22.50	5.53	0.00	5.53				
23.00	5.30	0.00	5.30				
23.50	5.07	0.00	5.07				
24.00	4.85	0.00	4.85				
24.50	2.35	0.00	2.35				
25.00	1.47	0.00	1.47				
25.50	1.11	0.00	1.11				
26.00	0.87	0.00	0.87				
26.50	0.69	0.00	0.69				
27.00	0.57	0.00	0.57				
27.50	0.48	0.00	0.48				
28.00	0.41	0.00	0.41				
28.50	0.36	0.00	0.36				

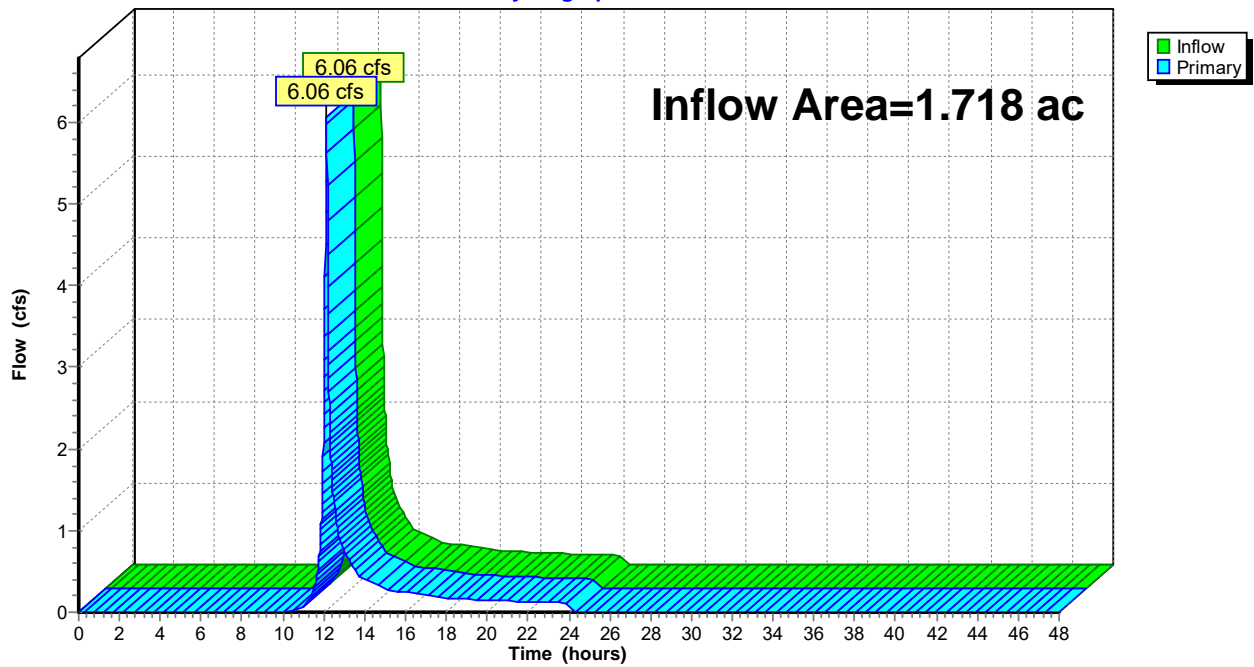
Summary for Link 30L: DP-2

Inflow Area = 1.718 ac, 0.00% Impervious, Inflow Depth = 2.83" for 100-Year event
Inflow = 6.06 cfs @ 12.14 hrs, Volume= 0.406 af
Primary = 6.06 cfs @ 12.14 hrs, Volume= 0.406 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 30L: DP-2

Hydrograph



Hydrograph for Link 30L: DP-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.07	0.00	0.07	40.00	0.00	0.00	0.00
11.50	0.27	0.00	0.27	40.50	0.00	0.00	0.00
12.00	2.43	0.00	2.43	41.00	0.00	0.00	0.00
12.50	1.35	0.00	1.35	41.50	0.00	0.00	0.00
13.00	0.76	0.00	0.76	42.00	0.00	0.00	0.00
13.50	0.51	0.00	0.51	42.50	0.00	0.00	0.00
14.00	0.41	0.00	0.41	43.00	0.00	0.00	0.00
14.50	0.35	0.00	0.35	43.50	0.00	0.00	0.00
15.00	0.29	0.00	0.29	44.00	0.00	0.00	0.00
15.50	0.26	0.00	0.26	44.50	0.00	0.00	0.00
16.00	0.24	0.00	0.24	45.00	0.00	0.00	0.00
16.50	0.23	0.00	0.23	45.50	0.00	0.00	0.00
17.00	0.21	0.00	0.21	46.00	0.00	0.00	0.00
17.50	0.19	0.00	0.19	46.50	0.00	0.00	0.00
18.00	0.17	0.00	0.17	47.00	0.00	0.00	0.00
18.50	0.16	0.00	0.16	47.50	0.00	0.00	0.00
19.00	0.16	0.00	0.16	48.00	0.00	0.00	0.00
19.50	0.15	0.00	0.15				
20.00	0.15	0.00	0.15				
20.50	0.14	0.00	0.14				
21.00	0.14	0.00	0.14				
21.50	0.13	0.00	0.13				
22.00	0.13	0.00	0.13				
22.50	0.12	0.00	0.12				
23.00	0.12	0.00	0.12				
23.50	0.12	0.00	0.12				
24.00	0.11	0.00	0.11				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

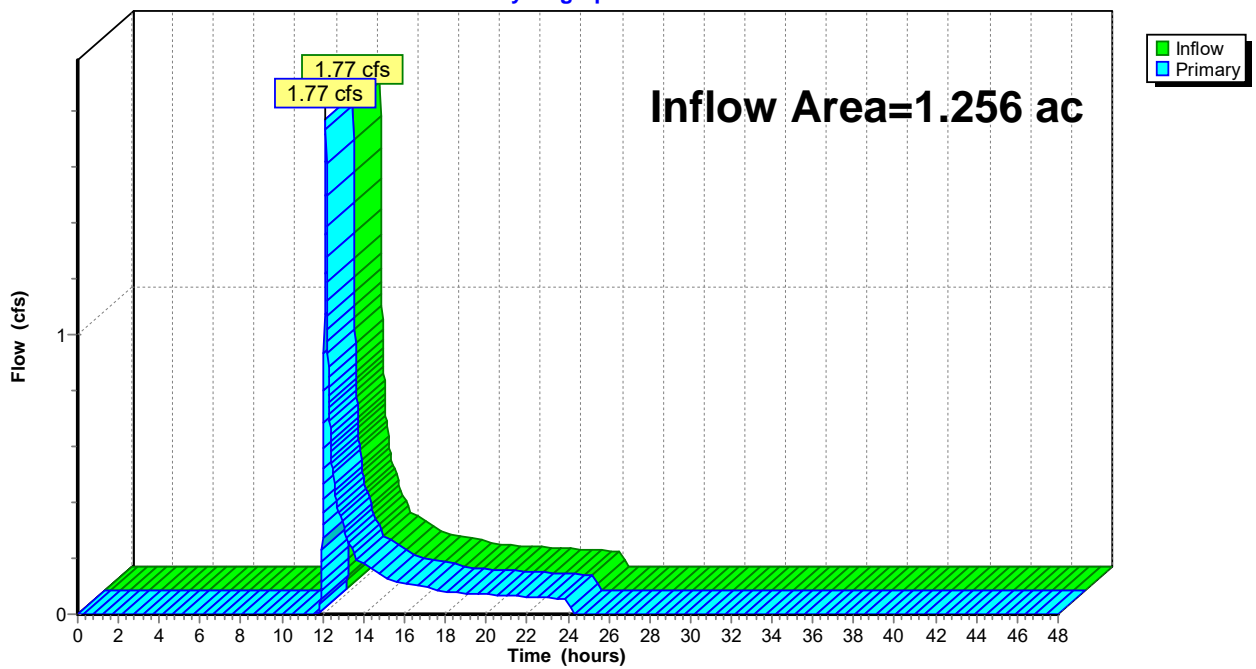
Summary for Link 31L: DP-3

Inflow Area = 1.256 ac, 0.00% Impervious, Inflow Depth = 1.40" for 100-Year event
Inflow = 1.77 cfs @ 12.14 hrs, Volume= 0.147 af
Primary = 1.77 cfs @ 12.14 hrs, Volume= 0.147 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 31L: DP-3

Hydrograph



Hydrograph for Link 31L: DP-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
12.00	0.37	0.00	0.37	41.00	0.00	0.00	0.00
12.50	0.52	0.00	0.52	41.50	0.00	0.00	0.00
13.00	0.32	0.00	0.32	42.00	0.00	0.00	0.00
13.50	0.22	0.00	0.22	42.50	0.00	0.00	0.00
14.00	0.18	0.00	0.18	43.00	0.00	0.00	0.00
14.50	0.16	0.00	0.16	43.50	0.00	0.00	0.00
15.00	0.13	0.00	0.13	44.00	0.00	0.00	0.00
15.50	0.12	0.00	0.12	44.50	0.00	0.00	0.00
16.00	0.11	0.00	0.11	45.00	0.00	0.00	0.00
16.50	0.10	0.00	0.10	45.50	0.00	0.00	0.00
17.00	0.10	0.00	0.10	46.00	0.00	0.00	0.00
17.50	0.09	0.00	0.09	46.50	0.00	0.00	0.00
18.00	0.08	0.00	0.08	47.00	0.00	0.00	0.00
18.50	0.08	0.00	0.08	47.50	0.00	0.00	0.00
19.00	0.07	0.00	0.07	48.00	0.00	0.00	0.00
19.50	0.07	0.00	0.07				
20.00	0.07	0.00	0.07				
20.50	0.07	0.00	0.07				
21.00	0.07	0.00	0.07				
21.50	0.07	0.00	0.07				
22.00	0.06	0.00	0.06				
22.50	0.06	0.00	0.06				
23.00	0.06	0.00	0.06				
23.50	0.06	0.00	0.06				
24.00	0.05	0.00	0.05				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

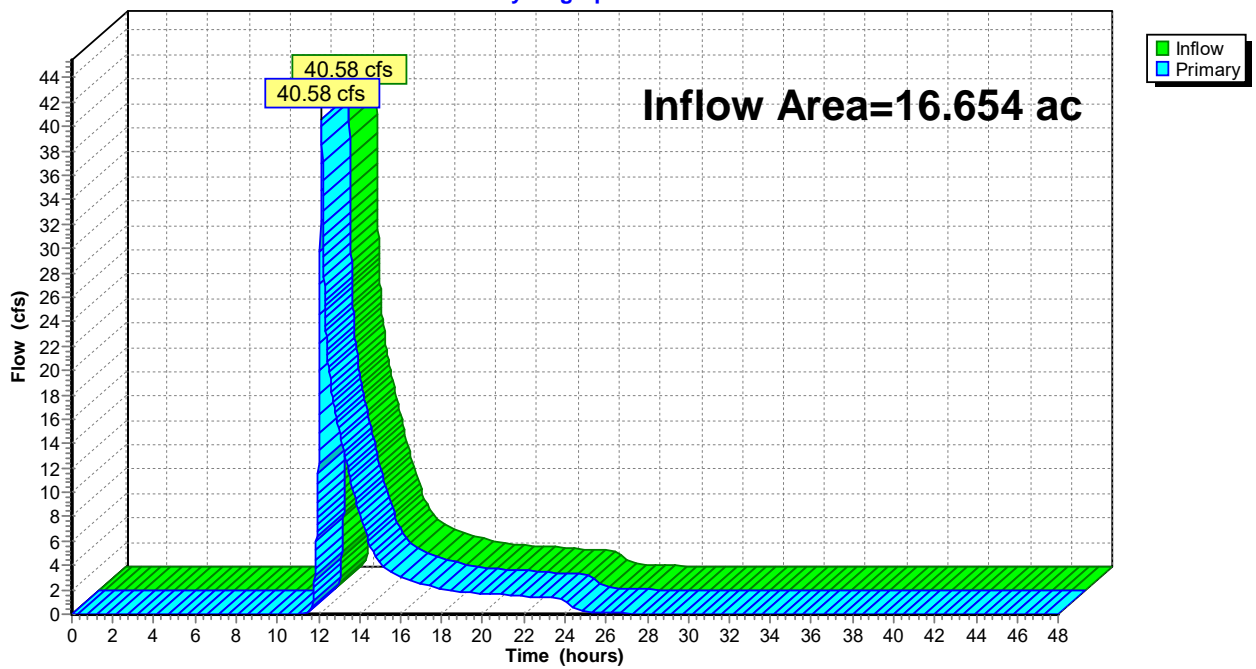
Summary for Link 32L: DP-4

Inflow Area = 16.654 ac, 29.61% Impervious, Inflow Depth = 3.59" for 100-Year event
Inflow = 40.58 cfs @ 12.15 hrs, Volume= 4.982 af
Primary = 40.58 cfs @ 12.15 hrs, Volume= 4.982 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 32L: DP-4

Hydrograph



Hydrograph for Link 32L: DP-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.02	0.00	0.02
0.50	0.00	0.00	0.00	29.50	0.01	0.00	0.01
1.00	0.00	0.00	0.00	30.00	0.01	0.00	0.01
1.50	0.00	0.00	0.00	30.50	0.01	0.00	0.01
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.18	0.00	0.18	40.50	0.00	0.00	0.00
12.00	12.32	0.00	12.32	41.00	0.00	0.00	0.00
12.50	20.24	0.00	20.24	41.50	0.00	0.00	0.00
13.00	15.18	0.00	15.18	42.00	0.00	0.00	0.00
13.50	11.49	0.00	11.49	42.50	0.00	0.00	0.00
14.00	8.34	0.00	8.34	43.00	0.00	0.00	0.00
14.50	5.68	0.00	5.68	43.50	0.00	0.00	0.00
15.00	4.17	0.00	4.17	44.00	0.00	0.00	0.00
15.50	3.41	0.00	3.41	44.50	0.00	0.00	0.00
16.00	3.05	0.00	3.05	45.00	0.00	0.00	0.00
16.50	2.78	0.00	2.78	45.50	0.00	0.00	0.00
17.00	2.53	0.00	2.53	46.00	0.00	0.00	0.00
17.50	2.30	0.00	2.30	46.50	0.00	0.00	0.00
18.00	2.09	0.00	2.09	47.00	0.00	0.00	0.00
18.50	1.94	0.00	1.94	47.50	0.00	0.00	0.00
19.00	1.85	0.00	1.85	48.00	0.00	0.00	0.00
19.50	1.78	0.00	1.78				
20.00	1.72	0.00	1.72				
20.50	1.66	0.00	1.66				
21.00	1.60	0.00	1.60				
21.50	1.55	0.00	1.55				
22.00	1.49	0.00	1.49				
22.50	1.44	0.00	1.44				
23.00	1.38	0.00	1.38				
23.50	1.32	0.00	1.32				
24.00	1.27	0.00	1.27				
24.50	0.45	0.00	0.45				
25.00	0.23	0.00	0.23				
25.50	0.17	0.00	0.17				
26.00	0.12	0.00	0.12				
26.50	0.09	0.00	0.09				
27.00	0.06	0.00	0.06				
27.50	0.04	0.00	0.04				
28.00	0.03	0.00	0.03				
28.50	0.02	0.00	0.02				

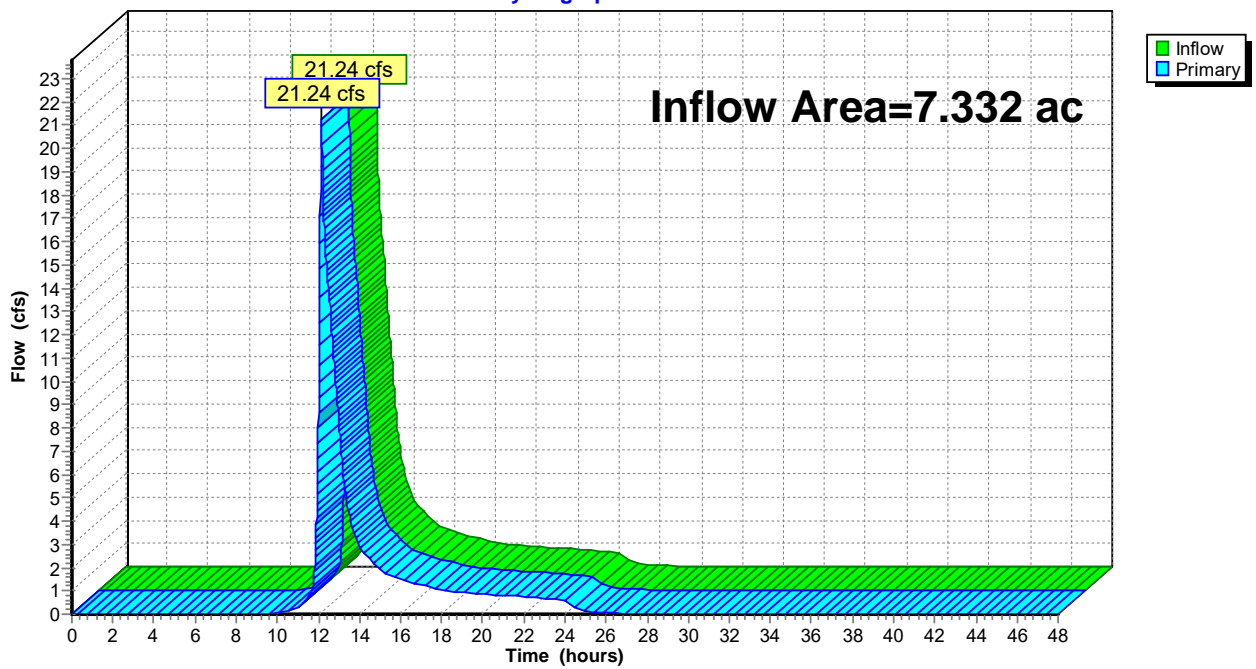
Summary for Link PDP5: PDP5

Inflow Area = 7.332 ac, 38.34% Impervious, Inflow Depth = 4.29" for 100-Year event
Inflow = 21.24 cfs @ 12.15 hrs, Volume= 2.624 af
Primary = 21.24 cfs @ 12.15 hrs, Volume= 2.624 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link PDP5: PDP5

Hydrograph



Hydrograph for Link PDP5: PDP5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.01	0.00	0.01
0.50	0.00	0.00	0.00	29.50	0.01	0.00	0.01
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.02	0.00	0.02	38.50	0.00	0.00	0.00
10.00	0.07	0.00	0.07	39.00	0.00	0.00	0.00
10.50	0.13	0.00	0.13	39.50	0.00	0.00	0.00
11.00	0.30	0.00	0.30	40.00	0.00	0.00	0.00
11.50	0.70	0.00	0.70	40.50	0.00	0.00	0.00
12.00	8.63	0.00	8.63	41.00	0.00	0.00	0.00
12.50	13.88	0.00	13.88	41.50	0.00	0.00	0.00
13.00	8.13	0.00	8.13	42.00	0.00	0.00	0.00
13.50	4.28	0.00	4.28	42.50	0.00	0.00	0.00
14.00	2.94	0.00	2.94	43.00	0.00	0.00	0.00
14.50	2.37	0.00	2.37	43.50	0.00	0.00	0.00
15.00	1.96	0.00	1.96	44.00	0.00	0.00	0.00
15.50	1.66	0.00	1.66	44.50	0.00	0.00	0.00
16.00	1.51	0.00	1.51	45.00	0.00	0.00	0.00
16.50	1.38	0.00	1.38	45.50	0.00	0.00	0.00
17.00	1.27	0.00	1.27	46.00	0.00	0.00	0.00
17.50	1.16	0.00	1.16	46.50	0.00	0.00	0.00
18.00	1.05	0.00	1.05	47.00	0.00	0.00	0.00
18.50	0.97	0.00	0.97	47.50	0.00	0.00	0.00
19.00	0.92	0.00	0.92	48.00	0.00	0.00	0.00
19.50	0.89	0.00	0.89				
20.00	0.86	0.00	0.86				
20.50	0.83	0.00	0.83				
21.00	0.80	0.00	0.80				
21.50	0.77	0.00	0.77				
22.00	0.74	0.00	0.74				
22.50	0.72	0.00	0.72				
23.00	0.69	0.00	0.69				
23.50	0.66	0.00	0.66				
24.00	0.63	0.00	0.63				
24.50	0.28	0.00	0.28				
25.00	0.15	0.00	0.15				
25.50	0.08	0.00	0.08				
26.00	0.05	0.00	0.05				
26.50	0.04	0.00	0.04				
27.00	0.03	0.00	0.03				
27.50	0.02	0.00	0.02				
28.00	0.02	0.00	0.02				
28.50	0.01	0.00	0.01				

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: PDA-1J	Runoff Area=218,370 sf 100.00% Impervious Runoff Depth=10.76" Tc=0.0 min CN=98 Runoff=62.74 cfs 4.495 af
Subcatchment 26S: PDA-1D	Runoff Area=153,719 sf 63.56% Impervious Runoff Depth=9.90" Tc=6.0 min CN=91 Runoff=39.20 cfs 2.910 af
Subcatchment 27S: PDA-4B-B	Runoff Area=66,436 sf 0.00% Impervious Runoff Depth=7.81" Tc=6.0 min CN=75 Runoff=14.62 cfs 0.993 af
Subcatchment 28S: Proposed	Runoff Area=1,182,741 sf 0.00% Impervious Runoff Depth=7.54" Tc=23.4 min CN=73 Runoff=149.61 cfs 17.064 af
Subcatchment 30S: PDA-1A	Runoff Area=108,164 sf 78.54% Impervious Runoff Depth=9.13" Tc=6.0 min CN=85 Runoff=26.51 cfs 1.890 af
Subcatchment 31S: PDA-1C	Runoff Area=112,511 sf 77.93% Impervious Runoff Depth=9.77" Tc=6.0 min CN=90 Runoff=28.54 cfs 2.103 af
Subcatchment 34S: PDA-1K	Runoff Area=26,597 sf 0.00% Impervious Runoff Depth=3.37" Tc=6.0 min CN=44 Runoff=2.54 cfs 0.172 af
Subcatchment 35S: PDA-2U	Runoff Area=74,849 sf 0.00% Impervious Runoff Depth=4.56" Tc=6.0 min CN=52 Runoff=9.93 cfs 0.653 af
Subcatchment 36S: PDA-3U	Runoff Area=54,725 sf 0.00% Impervious Runoff Depth=2.64" Tc=6.0 min CN=39 Runoff=3.87 cfs 0.276 af
Subcatchment 37S: PDA-1I	Runoff Area=172,961 sf 57.42% Impervious Runoff Depth=8.74" Tc=6.0 min CN=82 Runoff=41.28 cfs 2.893 af
Subcatchment 38S: PDA-4U	Runoff Area=322,148 sf 10.08% Impervious Runoff Depth=3.52" Tc=6.0 min CN=45 Runoff=32.28 cfs 2.171 af
Subcatchment 39S: PDA-5U	Runoff Area=103,088 sf 21.06% Impervious Runoff Depth=5.58" Tc=6.0 min CN=59 Runoff=16.78 cfs 1.100 af
Subcatchment 40S: PDA-i+J-FB	Runoff Area=13,894 sf 0.00% Impervious Runoff Depth=3.82" Tc=6.0 min CN=47 Runoff=1.52 cfs 0.102 af
Subcatchment 41S: PDA-5A	Runoff Area=216,315 sf 46.58% Impervious Runoff Depth=7.68" Tc=6.0 min CN=74 Runoff=46.95 cfs 3.177 af
Subcatchment 42S: PDA-1J-B	Runoff Area=33,984 sf 0.00% Impervious Runoff Depth=4.70" Tc=6.0 min CN=53 Runoff=4.66 cfs 0.306 af
Subcatchment 43S: PDA-1B	Runoff Area=398,274 sf 73.53% Impervious Runoff Depth=9.26" Tc=6.0 min CN=86 Runoff=98.40 cfs 7.057 af
Subcatchment 46S: PDA-1H	Runoff Area=433,100 sf 100.00% Impervious Runoff Depth=10.76" Tc=6.0 min CN=98 Runoff=112.92 cfs 8.914 af

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NRCC 24-hr C 500-Year Rainfall=11.00"

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Subcatchment 47S: PDA-4A	Runoff Area=104,546 sf 34.61% Impervious Runoff Depth=6.99" Tc=6.0 min CN=69 Runoff=20.99 cfs 1.398 af
Subcatchment 48S: PDA-1G-FB	Runoff Area=17,215 sf 0.00% Impervious Runoff Depth=2.64" Tc=6.0 min CN=39 Runoff=1.22 cfs 0.087 af
Subcatchment 49S: PDA-4B	Runoff Area=232,321 sf 62.91% Impervious Runoff Depth=9.00" Tc=6.0 min CN=84 Runoff=56.47 cfs 4.002 af
Subcatchment 51S: PDA-1G-B	Runoff Area=27,422 sf 0.00% Impervious Runoff Depth=3.52" Tc=6.0 min CN=45 Runoff=2.75 cfs 0.185 af
Subcatchment 52S: PDA-1G	Runoff Area=416,900 sf 100.00% Impervious Runoff Depth=10.76" Tc=6.0 min CN=98 Runoff=108.69 cfs 8.581 af
Subcatchment 54S: PDA-1H-IB	Runoff Area=39,736 sf 0.00% Impervious Runoff Depth=2.64" Tc=6.0 min CN=39 Runoff=2.81 cfs 0.200 af
Subcatchment 55S: PDA-1E	Runoff Area=17,321 sf 82.34% Impervious Runoff Depth=10.39" Tc=6.0 min CN=95 Runoff=4.49 cfs 0.344 af
Subcatchment 56S: PDA-1B-FB	Runoff Area=16,395 sf 0.00% Impervious Runoff Depth=2.64" Tc=6.0 min CN=39 Runoff=1.16 cfs 0.083 af
Subcatchment 57S: PDA-1H-FB	Runoff Area=19,432 sf 0.00% Impervious Runoff Depth=2.64" Tc=6.0 min CN=39 Runoff=1.38 cfs 0.098 af
Subcatchment 58S: PDA1-B-IB	Runoff Area=33,078 sf 0.00% Impervious Runoff Depth=2.78" Tc=6.0 min CN=40 Runoff=2.51 cfs 0.176 af
Subcatchment 59S: PDA-1F	Runoff Area=250,816 sf 71.20% Impervious Runoff Depth=8.61" Tc=6.0 min CN=81 Runoff=59.26 cfs 4.133 af
Subcatchment 60S: PDA-1i-B	Runoff Area=31,544 sf 0.00% Impervious Runoff Depth=2.64" Tc=6.0 min CN=39 Runoff=2.23 cfs 0.159 af
Pond 1P: Bioretention 1D	Peak Elev=415.43' Storage=72,009 cf Inflow=43.52 cfs 3.255 af Outflow=17.06 cfs 2.573 af
Pond 3P: Bioretention 1A	Peak Elev=425.35' Storage=25,522 cf Inflow=26.51 cfs 1.890 af Outflow=33.97 cfs 1.441 af
Pond 22P: Bioretention 5A	Peak Elev=434.61' Storage=44,005 cf Inflow=46.26 cfs 3.177 af Outflow=19.38 cfs 2.831 af
Pond 26P: Bioretention 1F	Peak Elev=413.39' Storage=68,571 cf Inflow=59.26 cfs 4.133 af Outflow=18.98 cfs 3.567 af
Pond 29P: Bioretention 4B	Peak Elev=421.72' Storage=88,180 cf Inflow=71.09 cfs 4.995 af Outflow=21.36 cfs 4.290 af
Pond 31P: Bioretention i	Peak Elev=413.85' Storage=89,327 cf Inflow=50.70 cfs 3.904 af Outflow=8.68 cfs 2.935 af
Pond 32P: FB 1C	Peak Elev=413.86' Storage=11,119 cf Inflow=28.54 cfs 2.103 af Outflow=28.40 cfs 2.103 af

Pond 33P: INFIL 1C	Peak Elev=414.00'	Storage=31,556 cf	Inflow=28.40 cfs	2.103 af
Discarded=3.64 cfs	1.945 af	Primary=0.92 cfs	0.158 af	Secondary=0.00 cfs
			0.000 af	Outflow=4.56 cfs
				2.103 af
Pond 37P: FB 1i+J	Peak Elev=413.84'	Storage=31,677 cf	Inflow=101.76 cfs	7.489 af
	Primary=49.01 cfs	3.745 af	Secondary=49.01 cfs	3.745 af
			Outflow=98.01 cfs	7.489 af
Pond 39P: FB 5A	Peak Elev=434.08'	Storage=11,980 cf	Inflow=46.95 cfs	3.177 af
			Outflow=46.26 cfs	3.177 af
Pond 44P: FB 1B	Peak Elev=413.07'	Storage=40,260 cf	Inflow=99.55 cfs	7.140 af
			Outflow=98.34 cfs	7.140 af
Pond 45P: INFIL 1B	Peak Elev=413.70'	Storage=110,090 cf	Inflow=100.85 cfs	7.316 af
Discarded=9.30 cfs	6.424 af	Primary=0.39 cfs	0.111 af	Secondary=15.69 cfs
			0.781 af	Outflow=25.38 cfs
				7.316 af
Pond 47P: INFIL 1H	Peak Elev=413.52'	Storage=135,638 cf	Inflow=115.28 cfs	9.213 af
Discarded=9.16 cfs	8.179 af	Primary=0.38 cfs	0.129 af	Secondary=18.34 cfs
			0.905 af	Outflow=27.87 cfs
				9.213 af
Pond 51P: FB 1H	Peak Elev=413.50'	Storage=55,984 cf	Inflow=114.27 cfs	9.012 af
			Outflow=112.47 cfs	9.012 af
Pond 53P: Bioretention J basin	Peak Elev=749.99'	Storage=72,373 cf	Inflow=52.85 cfs	4.050 af
			Outflow=66.82 cfs	3.016 af
Pond 54P: INFIL 1G	Peak Elev=413.57'	Storage=129,100 cf	Inflow=110.27 cfs	8.852 af
Discarded=8.57 cfs	7.705 af	Primary=17.68 cfs	1.147 af	Secondary=17.68 cfs
			1.147 af	Outflow=26.25 cfs
				8.852 af
Pond 55P: FB 1G	Peak Elev=413.42'	Storage=55,931 cf	Inflow=109.89 cfs	8.668 af
			Outflow=107.53 cfs	8.668 af
Pond 59P: FB 1E	Peak Elev=414.31'	Storage=2,175 cf	Inflow=4.49 cfs	0.344 af
			Outflow=4.47 cfs	0.344 af
Pond 60P: FB 1D	Peak Elev=415.51'	Storage=9,953 cf	Inflow=39.20 cfs	2.910 af
			Outflow=39.05 cfs	2.910 af
Pond 63P: Det Pond 1K	Peak Elev=413.65'	Storage=74,919 cf	Inflow=93.58 cfs	9.690 af
Primary=17.70 cfs	8.369 af	Secondary=16.41 cfs	1.316 af	Outflow=34.11 cfs
				9.685 af
Pond B4B: Bioretention 4A	Peak Elev=444.54'	Storage=12,376 cf	Inflow=20.99 cfs	1.398 af
			Outflow=23.51 cfs	1.198 af
Link 29L: DP-1			Inflow=243.45 cfs	32.677 af
			Primary=243.45 cfs	32.677 af
Link 30L: DP-2			Inflow=17.84 cfs	1.969 af
			Primary=17.84 cfs	1.969 af
Link 31L: DP-3			Inflow=3.87 cfs	0.276 af
			Primary=3.87 cfs	0.276 af
Link 32L: DP-4			Inflow=74.47 cfs	7.659 af
			Primary=74.47 cfs	7.659 af

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

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Link PDP5: PDP5

Inflow=34.91 cfs 3.931 af
Primary=34.91 cfs 3.931 af

Total Runoff Area = 112.456 ac Runoff Volume = 75.721 af Average Runoff Depth = 8.08"
53.84% Pervious = 60.551 ac 46.16% Impervious = 51.905 ac

Summary for Subcatchment 6S: PDA-1J

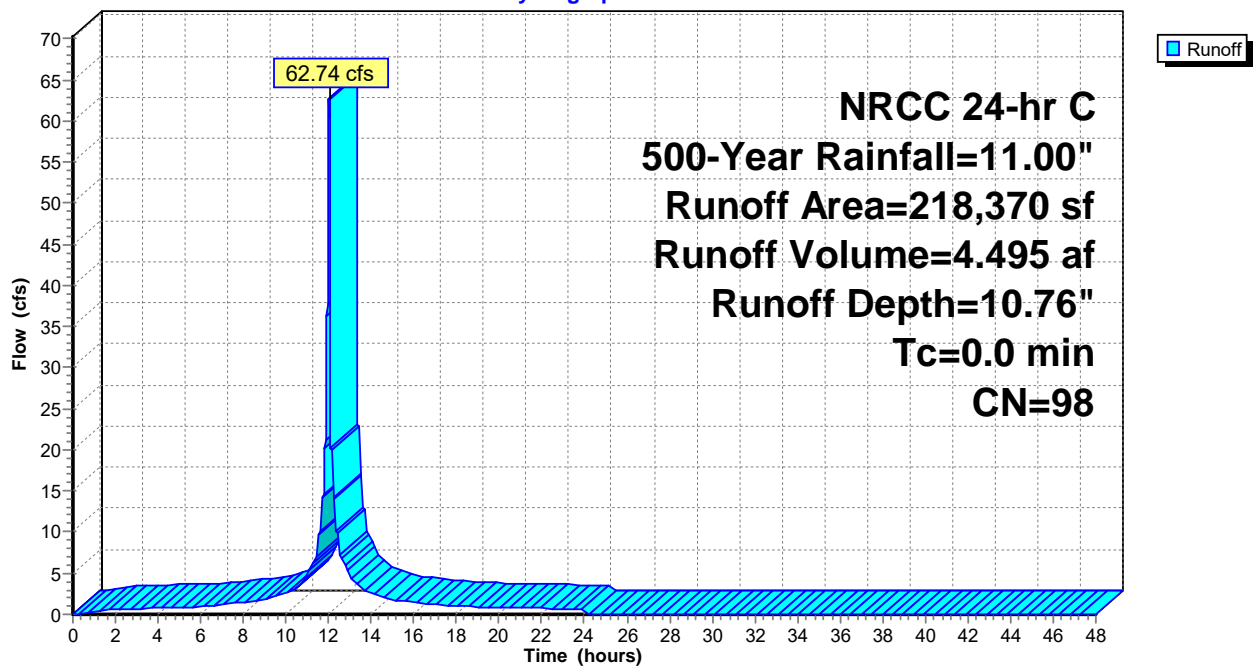
Runoff = 62.74 cfs @ 12.09 hrs, Volume= 4.495 af, Depth=10.76"
 Routed to Pond 37P : FB 1i+J

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
218,370	98	Unconnected roofs, HSG D
218,370		100.00% Impervious Area
218,370		100.00% Unconnected

Subcatchment 6S: PDA-1J

Hydrograph



Hydrograph for Subcatchment 6S: PDA-1J

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	10.76	0.00
0.50	0.06	0.00	0.12	29.50	11.00	10.76	0.00
1.00	0.13	0.03	0.34	30.00	11.00	10.76	0.00
1.50	0.20	0.07	0.48	30.50	11.00	10.76	0.00
2.00	0.27	0.12	0.57	31.00	11.00	10.76	0.00
2.50	0.34	0.18	0.64	31.50	11.00	10.76	0.00
3.00	0.42	0.24	0.70	32.00	11.00	10.76	0.00
3.50	0.50	0.32	0.75	32.50	11.00	10.76	0.00
4.00	0.58	0.39	0.79	33.00	11.00	10.76	0.00
4.50	0.67	0.47	0.83	33.50	11.00	10.76	0.00
5.00	0.76	0.56	0.87	34.00	11.00	10.76	0.00
5.50	0.85	0.64	0.91	34.50	11.00	10.76	0.00
6.00	0.94	0.74	0.95	35.00	11.00	10.76	0.00
6.50	1.05	0.84	1.08	35.50	11.00	10.76	0.00
7.00	1.16	0.95	1.20	36.00	11.00	10.76	0.00
7.50	1.29	1.07	1.32	36.50	11.00	10.76	0.00
8.00	1.43	1.21	1.44	37.00	11.00	10.76	0.00
8.50	1.58	1.36	1.57	37.50	11.00	10.76	0.00
9.00	1.74	1.52	1.72	38.00	11.00	10.76	0.00
9.50	1.94	1.71	2.15	38.50	11.00	10.76	0.00
10.00	2.17	1.95	2.57	39.00	11.00	10.76	0.00
10.50	2.45	2.22	3.11	39.50	11.00	10.76	0.00
11.00	2.84	2.61	4.77	40.00	11.00	10.76	0.00
11.50	3.44	3.21	8.41	40.50	11.00	10.76	0.00
12.00	5.24	5.00	49.49	41.00	11.00	10.76	0.00
12.50	7.56	7.32	8.43	41.50	11.00	10.76	0.00
13.00	8.16	7.92	4.79	42.00	11.00	10.76	0.00
13.50	8.55	8.31	3.13	42.50	11.00	10.76	0.00
14.00	8.83	8.59	2.59	43.00	11.00	10.76	0.00
14.50	9.06	8.82	2.16	43.50	11.00	10.76	0.00
15.00	9.26	9.02	1.74	44.00	11.00	10.76	0.00
15.50	9.42	9.18	1.59	44.50	11.00	10.76	0.00
16.00	9.57	9.33	1.47	45.00	11.00	10.76	0.00
16.50	9.71	9.47	1.35	45.50	11.00	10.76	0.00
17.00	9.84	9.60	1.23	46.00	11.00	10.76	0.00
17.50	9.95	9.71	1.11	46.50	11.00	10.76	0.00
18.00	10.06	9.82	0.99	47.00	11.00	10.76	0.00
18.50	10.15	9.91	0.95	47.50	11.00	10.76	0.00
19.00	10.24	10.00	0.91	48.00	11.00	10.76	0.00
19.50	10.33	10.09	0.89				
20.00	10.42	10.18	0.85				
20.50	10.50	10.26	0.83				
21.00	10.58	10.34	0.79				
21.50	10.66	10.42	0.76				
22.00	10.73	10.49	0.73				
22.50	10.80	10.56	0.70				
23.00	10.87	10.63	0.68				
23.50	10.94	10.70	0.64				
24.00	11.00	10.76	0.31				
24.50	11.00	10.76	0.00				
25.00	11.00	10.76	0.00				
25.50	11.00	10.76	0.00				
26.00	11.00	10.76	0.00				
26.50	11.00	10.76	0.00				
27.00	11.00	10.76	0.00				
27.50	11.00	10.76	0.00				
28.00	11.00	10.76	0.00				
28.50	11.00	10.76	0.00				

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NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 26S: PDA-1D

Runoff = 39.20 cfs @ 12.13 hrs, Volume= 2.910 af, Depth= 9.90"
 Routed to Pond 60P : FB 1D

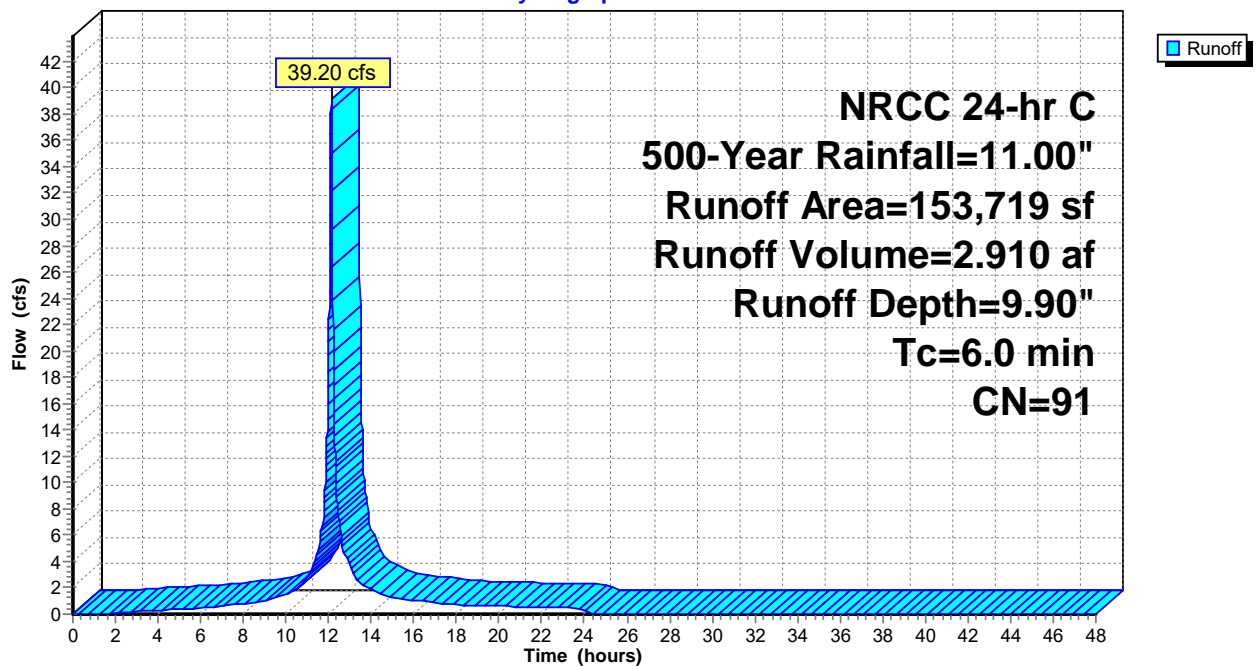
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
55,737	80	>75% Grass cover, Good, HSG D
271	39	>75% Grass cover, Good, HSG A
97,711	98	Paved parking, HSG D
153,719	91	Weighted Average
56,008		36.44% Pervious Area
97,711		63.56% Impervious Area

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

Subcatchment 26S: PDA-1D

Hydrograph



Hydrograph for Subcatchment 26S: PDA-1D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	9.90	0.00
0.50	0.06	0.00	0.00	29.50	11.00	9.90	0.00
1.00	0.13	0.00	0.00	30.00	11.00	9.90	0.00
1.50	0.20	0.00	0.00	30.50	11.00	9.90	0.00
2.00	0.27	0.00	0.05	31.00	11.00	9.90	0.00
2.50	0.34	0.02	0.12	31.50	11.00	9.90	0.00
3.00	0.42	0.04	0.18	32.00	11.00	9.90	0.00
3.50	0.50	0.07	0.23	32.50	11.00	9.90	0.00
4.00	0.58	0.11	0.28	33.00	11.00	9.90	0.00
4.50	0.67	0.15	0.33	33.50	11.00	9.90	0.00
5.00	0.76	0.20	0.37	34.00	11.00	9.90	0.00
5.50	0.85	0.26	0.42	34.50	11.00	9.90	0.00
6.00	0.94	0.32	0.46	35.00	11.00	9.90	0.00
6.50	1.05	0.39	0.54	35.50	11.00	9.90	0.00
7.00	1.16	0.48	0.63	36.00	11.00	9.90	0.00
7.50	1.29	0.57	0.72	36.50	11.00	9.90	0.00
8.00	1.43	0.68	0.81	37.00	11.00	9.90	0.00
8.50	1.58	0.81	0.91	37.50	11.00	9.90	0.00
9.00	1.74	0.94	1.00	38.00	11.00	9.90	0.00
9.50	1.94	1.11	1.27	38.50	11.00	9.90	0.00
10.00	2.17	1.32	1.57	39.00	11.00	9.90	0.00
10.50	2.45	1.56	1.87	39.50	11.00	9.90	0.00
11.00	2.84	1.92	2.86	40.00	11.00	9.90	0.00
11.50	3.44	2.49	4.65	40.50	11.00	9.90	0.00
12.00	5.24	4.21	20.74	41.00	11.00	9.90	0.00
12.50	7.56	6.49	6.92	41.50	11.00	9.90	0.00
13.00	8.16	7.09	3.66	42.00	11.00	9.90	0.00
13.50	8.55	7.47	2.37	42.50	11.00	9.90	0.00
14.00	8.83	7.74	1.86	43.00	11.00	9.90	0.00
14.50	9.06	7.98	1.56	43.50	11.00	9.90	0.00
15.00	9.26	8.17	1.26	44.00	11.00	9.90	0.00
15.50	9.42	8.33	1.13	44.50	11.00	9.90	0.00
16.00	9.57	8.48	1.04	45.00	11.00	9.90	0.00
16.50	9.71	8.62	0.96	45.50	11.00	9.90	0.00
17.00	9.84	8.74	0.87	46.00	11.00	9.90	0.00
17.50	9.95	8.86	0.79	46.50	11.00	9.90	0.00
18.00	10.06	8.96	0.70	47.00	11.00	9.90	0.00
18.50	10.15	9.05	0.66	47.50	11.00	9.90	0.00
19.00	10.24	9.15	0.64	48.00	11.00	9.90	0.00
19.50	10.33	9.23	0.62				
20.00	10.42	9.32	0.60				
20.50	10.50	9.40	0.58				
21.00	10.58	9.48	0.56				
21.50	10.66	9.56	0.54				
22.00	10.73	9.63	0.52				
22.50	10.80	9.70	0.50				
23.00	10.87	9.77	0.48				
23.50	10.94	9.83	0.46				
24.00	11.00	9.90	0.44				
24.50	11.00	9.90	0.00				
25.00	11.00	9.90	0.00				
25.50	11.00	9.90	0.00				
26.00	11.00	9.90	0.00				
26.50	11.00	9.90	0.00				
27.00	11.00	9.90	0.00				
27.50	11.00	9.90	0.00				
28.00	11.00	9.90	0.00				
28.50	11.00	9.90	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 27S: PDA-4B-B

Runoff = 14.62 cfs @ 12.13 hrs, Volume= 0.993 af, Depth= 7.81"
 Routed to Pond 29P : Bioretention 4B

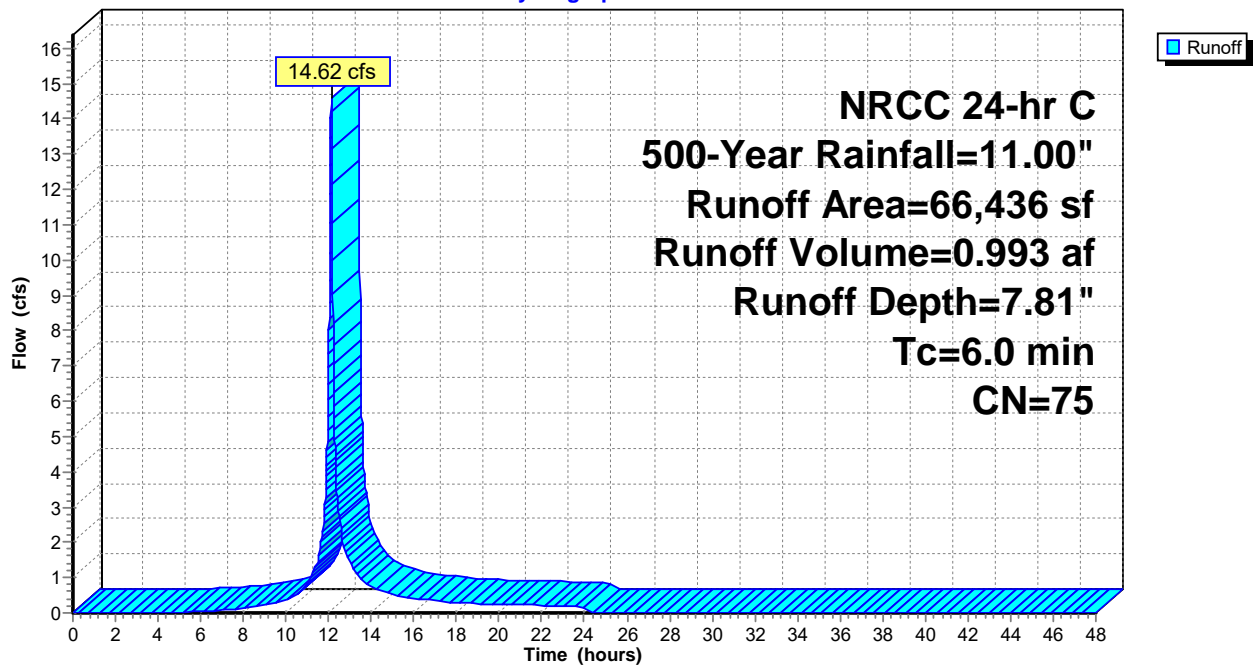
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
917	61	>75% Grass cover, Good, HSG B
57,533	80	>75% Grass cover, Good, HSG D
7,986	39	>75% Grass cover, Good, HSG A
66,436	75	Weighted Average
66,436		100.00% Pervious Area

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

Subcatchment 27S: PDA-4B-B

Hydrograph



Hydrograph for Subcatchment 27S: PDA-4B-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	7.81	0.00
0.50	0.06	0.00	0.00	29.50	11.00	7.81	0.00
1.00	0.13	0.00	0.00	30.00	11.00	7.81	0.00
1.50	0.20	0.00	0.00	30.50	11.00	7.81	0.00
2.00	0.27	0.00	0.00	31.00	11.00	7.81	0.00
2.50	0.34	0.00	0.00	31.50	11.00	7.81	0.00
3.00	0.42	0.00	0.00	32.00	11.00	7.81	0.00
3.50	0.50	0.00	0.00	32.50	11.00	7.81	0.00
4.00	0.58	0.00	0.00	33.00	11.00	7.81	0.00
4.50	0.67	0.00	0.00	33.50	11.00	7.81	0.00
5.00	0.76	0.00	0.01	34.00	11.00	7.81	0.00
5.50	0.85	0.01	0.03	34.50	11.00	7.81	0.00
6.00	0.94	0.02	0.04	35.00	11.00	7.81	0.00
6.50	1.05	0.04	0.06	35.50	11.00	7.81	0.00
7.00	1.16	0.06	0.09	36.00	11.00	7.81	0.00
7.50	1.29	0.10	0.11	36.50	11.00	7.81	0.00
8.00	1.43	0.14	0.14	37.00	11.00	7.81	0.00
8.50	1.58	0.20	0.18	37.50	11.00	7.81	0.00
9.00	1.74	0.26	0.22	38.00	11.00	7.81	0.00
9.50	1.94	0.35	0.30	38.50	11.00	7.81	0.00
10.00	2.17	0.47	0.39	39.00	11.00	7.81	0.00
10.50	2.45	0.62	0.51	39.50	11.00	7.81	0.00
11.00	2.84	0.86	0.83	40.00	11.00	7.81	0.00
11.50	3.44	1.26	1.47	40.50	11.00	7.81	0.00
12.00	5.24	2.64	7.35	41.00	11.00	7.81	0.00
12.50	7.56	4.64	2.70	41.50	11.00	7.81	0.00
13.00	8.16	5.19	1.45	42.00	11.00	7.81	0.00
13.50	8.55	5.54	0.94	42.50	11.00	7.81	0.00
14.00	8.83	5.79	0.74	43.00	11.00	7.81	0.00
14.50	9.06	6.01	0.63	43.50	11.00	7.81	0.00
15.00	9.26	6.19	0.51	44.00	11.00	7.81	0.00
15.50	9.42	6.34	0.45	44.50	11.00	7.81	0.00
16.00	9.57	6.48	0.42	45.00	11.00	7.81	0.00
16.50	9.71	6.61	0.39	45.50	11.00	7.81	0.00
17.00	9.84	6.73	0.35	46.00	11.00	7.81	0.00
17.50	9.95	6.83	0.32	46.50	11.00	7.81	0.00
18.00	10.06	6.93	0.29	47.00	11.00	7.81	0.00
18.50	10.15	7.02	0.27	47.50	11.00	7.81	0.00
19.00	10.24	7.10	0.26	48.00	11.00	7.81	0.00
19.50	10.33	7.19	0.25				
20.00	10.42	7.27	0.24				
20.50	10.50	7.35	0.24				
21.00	10.58	7.42	0.23				
21.50	10.66	7.49	0.22				
22.00	10.73	7.56	0.21				
22.50	10.80	7.63	0.20				
23.00	10.87	7.69	0.19				
23.50	10.94	7.75	0.19				
24.00	11.00	7.81	0.18				
24.50	11.00	7.81	0.00				
25.00	11.00	7.81	0.00				
25.50	11.00	7.81	0.00				
26.00	11.00	7.81	0.00				
26.50	11.00	7.81	0.00				
27.00	11.00	7.81	0.00				
27.50	11.00	7.81	0.00				
28.00	11.00	7.81	0.00				
28.50	11.00	7.81	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Runoff = 149.61 cfs @ 12.33 hrs, Volume= 17.064 af, Depth= 7.54"
 Routed to Link 29L : DP-1

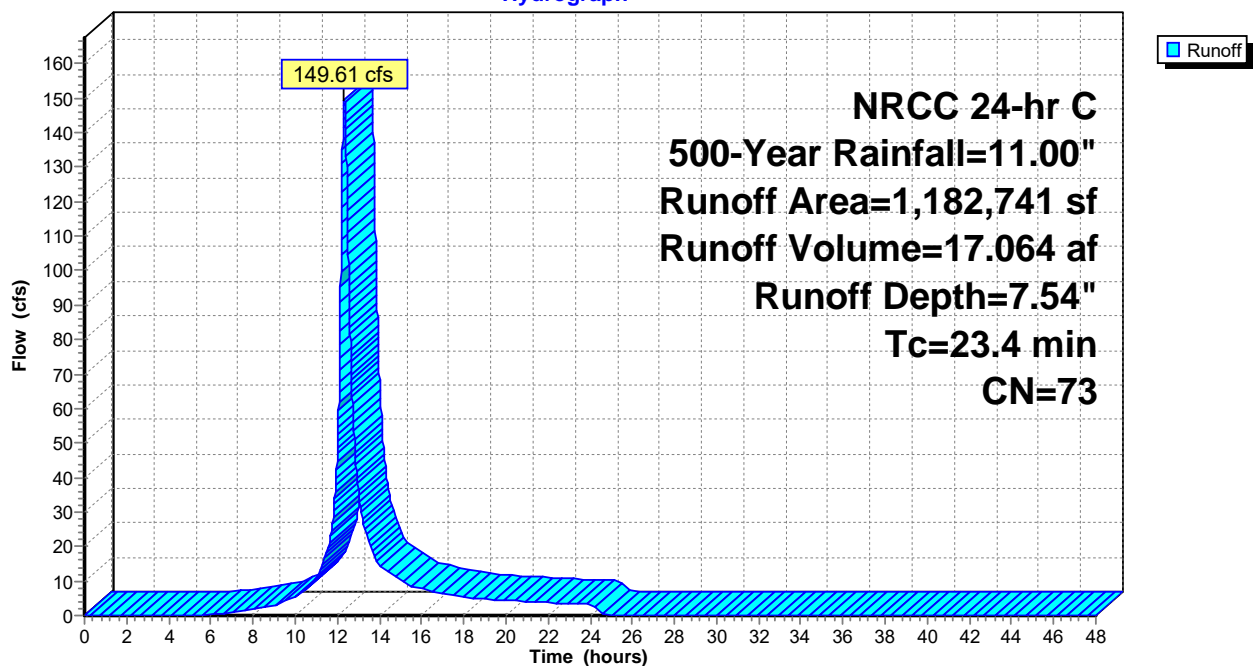
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
* 90,367	61	>75% Grass cover, Good, HSG B
99,079	39	>75% Grass cover, Good, HSG A
647,468	80	>75% Grass cover, Good, HSG D
45,280	32	Woods/grass comb., Good, HSG A
299,609	79	Woods/grass comb., Good, HSG D
938	89	Dirt roads, HSG D
1,182,741	73	Weighted Average
1,182,741		100.00% Pervious Area

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

Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Hydrograph



Hydrograph for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	7.54	0.00
0.50	0.06	0.00	0.00	29.50	11.00	7.54	0.00
1.00	0.13	0.00	0.00	30.00	11.00	7.54	0.00
1.50	0.20	0.00	0.00	30.50	11.00	7.54	0.00
2.00	0.27	0.00	0.00	31.00	11.00	7.54	0.00
2.50	0.34	0.00	0.00	31.50	11.00	7.54	0.00
3.00	0.42	0.00	0.00	32.00	11.00	7.54	0.00
3.50	0.50	0.00	0.00	32.50	11.00	7.54	0.00
4.00	0.58	0.00	0.00	33.00	11.00	7.54	0.00
4.50	0.67	0.00	0.00	33.50	11.00	7.54	0.00
5.00	0.76	0.00	0.00	34.00	11.00	7.54	0.00
5.50	0.85	0.00	0.12	34.50	11.00	7.54	0.00
6.00	0.94	0.01	0.36	35.00	11.00	7.54	0.00
6.50	1.05	0.02	0.64	35.50	11.00	7.54	0.00
7.00	1.16	0.04	1.00	36.00	11.00	7.54	0.00
7.50	1.29	0.07	1.42	36.50	11.00	7.54	0.00
8.00	1.43	0.11	1.91	37.00	11.00	7.54	0.00
8.50	1.58	0.16	2.47	37.50	11.00	7.54	0.00
9.00	1.74	0.21	3.07	38.00	11.00	7.54	0.00
9.50	1.94	0.29	4.01	38.50	11.00	7.54	0.00
10.00	2.17	0.40	5.50	39.00	11.00	7.54	0.00
10.50	2.45	0.54	7.27	39.50	11.00	7.54	0.00
11.00	2.84	0.76	10.75	40.00	11.00	7.54	0.00
11.50	3.44	1.14	18.62	40.50	11.00	7.54	0.00
12.00	5.24	2.47	47.12	41.00	11.00	7.54	0.00
12.50	7.56	4.42	111.08	41.50	11.00	7.54	0.00
13.00	8.16	4.96	36.43	42.00	11.00	7.54	0.00
13.50	8.55	5.30	20.98	42.50	11.00	7.54	0.00
14.00	8.83	5.55	14.51	43.00	11.00	7.54	0.00
14.50	9.06	5.76	12.10	43.50	11.00	7.54	0.00
15.00	9.26	5.94	10.06	44.00	11.00	7.54	0.00
15.50	9.42	6.09	8.36	44.50	11.00	7.54	0.00
16.00	9.57	6.22	7.69	45.00	11.00	7.54	0.00
16.50	9.71	6.35	7.10	45.50	11.00	7.54	0.00
17.00	9.84	6.47	6.52	46.00	11.00	7.54	0.00
17.50	9.95	6.57	5.93	46.50	11.00	7.54	0.00
18.00	10.06	6.67	5.34	47.00	11.00	7.54	0.00
18.50	10.15	6.76	4.85	47.50	11.00	7.54	0.00
19.00	10.24	6.84	4.68	48.00	11.00	7.54	0.00
19.50	10.33	6.92	4.53				
20.00	10.42	7.00	4.39				
20.50	10.50	7.08	4.24				
21.00	10.58	7.15	4.09				
21.50	10.66	7.23	3.94				
22.00	10.73	7.29	3.80				
22.50	10.80	7.36	3.65				
23.00	10.87	7.42	3.50				
23.50	10.94	7.48	3.35				
24.00	11.00	7.54	3.20				
24.50	11.00	7.54	0.55				
25.00	11.00	7.54	0.02				
25.50	11.00	7.54	0.00				
26.00	11.00	7.54	0.00				
26.50	11.00	7.54	0.00				
27.00	11.00	7.54	0.00				
27.50	11.00	7.54	0.00				
28.00	11.00	7.54	0.00				
28.50	11.00	7.54	0.00				

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NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 30S: PDA-1A

Runoff = 26.51 cfs @ 12.13 hrs, Volume= 1.890 af, Depth= 9.13"
Routed to Pond 3P : Bioretention 1A

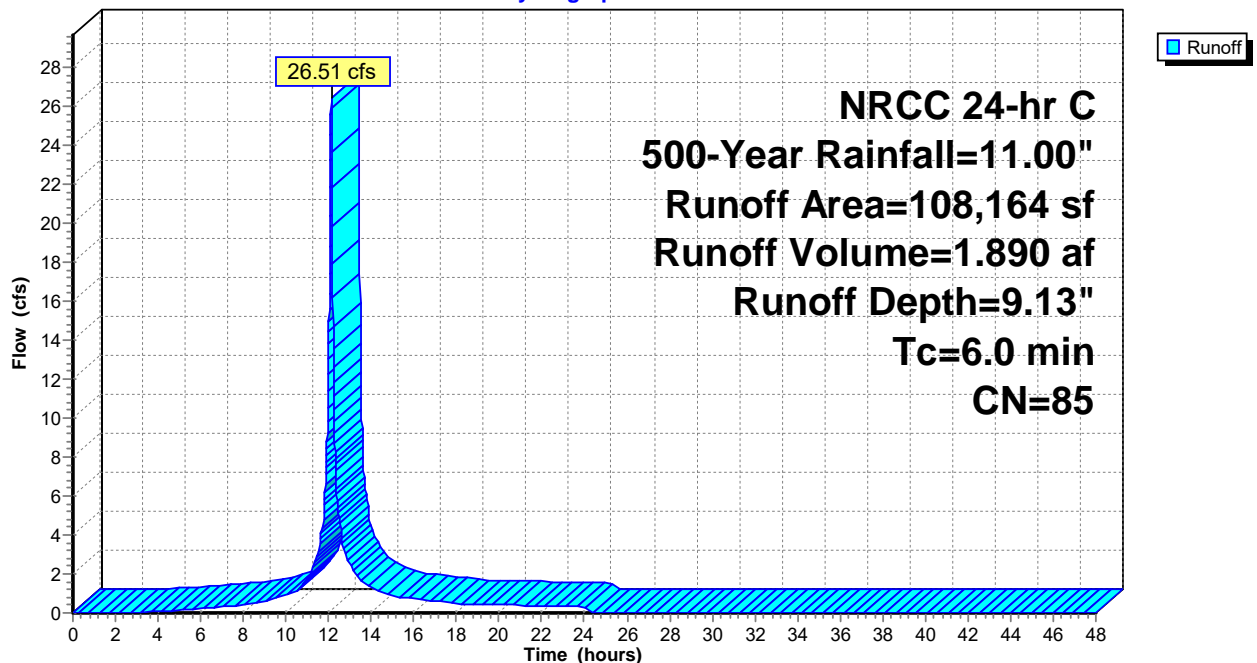
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
23,210	39	>75% Grass cover, Good, HSG A
84,954	98	Paved parking, HSG D
108,164	85	Weighted Average
23,210		21.46% Pervious Area
84,954		78.54% Impervious Area

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

Subcatchment 30S: PDA-1A

Hydrograph



Hydrograph for Subcatchment 30S: PDA-1A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	9.13	0.00
0.50	0.06	0.00	0.00	29.50	11.00	9.13	0.00
1.00	0.13	0.00	0.00	30.00	11.00	9.13	0.00
1.50	0.20	0.00	0.00	30.50	11.00	9.13	0.00
2.00	0.27	0.00	0.00	31.00	11.00	9.13	0.00
2.50	0.34	0.00	0.00	31.50	11.00	9.13	0.00
3.00	0.42	0.00	0.02	32.00	11.00	9.13	0.00
3.50	0.50	0.01	0.05	32.50	11.00	9.13	0.00
4.00	0.58	0.03	0.09	33.00	11.00	9.13	0.00
4.50	0.67	0.05	0.12	33.50	11.00	9.13	0.00
5.00	0.76	0.08	0.15	34.00	11.00	9.13	0.00
5.50	0.85	0.11	0.18	34.50	11.00	9.13	0.00
6.00	0.94	0.15	0.21	35.00	11.00	9.13	0.00
6.50	1.05	0.20	0.26	35.50	11.00	9.13	0.00
7.00	1.16	0.25	0.31	36.00	11.00	9.13	0.00
7.50	1.29	0.32	0.37	36.50	11.00	9.13	0.00
8.00	1.43	0.41	0.44	37.00	11.00	9.13	0.00
8.50	1.58	0.50	0.50	37.50	11.00	9.13	0.00
9.00	1.74	0.61	0.57	38.00	11.00	9.13	0.00
9.50	1.94	0.75	0.74	38.50	11.00	9.13	0.00
10.00	2.17	0.92	0.94	39.00	11.00	9.13	0.00
10.50	2.45	1.14	1.14	39.50	11.00	9.13	0.00
11.00	2.84	1.45	1.79	40.00	11.00	9.13	0.00
11.50	3.44	1.97	2.99	40.50	11.00	9.13	0.00
12.00	5.24	3.59	13.82	41.00	11.00	9.13	0.00
12.50	7.56	5.79	4.75	41.50	11.00	9.13	0.00
13.00	8.16	6.37	2.52	42.00	11.00	9.13	0.00
13.50	8.55	6.75	1.63	42.50	11.00	9.13	0.00
14.00	8.83	7.01	1.28	43.00	11.00	9.13	0.00
14.50	9.06	7.24	1.08	43.50	11.00	9.13	0.00
15.00	9.26	7.43	0.87	44.00	11.00	9.13	0.00
15.50	9.42	7.59	0.78	44.50	11.00	9.13	0.00
16.00	9.57	7.74	0.72	45.00	11.00	9.13	0.00
16.50	9.71	7.87	0.66	45.50	11.00	9.13	0.00
17.00	9.84	8.00	0.60	46.00	11.00	9.13	0.00
17.50	9.95	8.11	0.54	46.50	11.00	9.13	0.00
18.00	10.06	8.21	0.49	47.00	11.00	9.13	0.00
18.50	10.15	8.30	0.46	47.50	11.00	9.13	0.00
19.00	10.24	8.39	0.45	48.00	11.00	9.13	0.00
19.50	10.33	8.48	0.43				
20.00	10.42	8.56	0.42				
20.50	10.50	8.65	0.40				
21.00	10.58	8.72	0.39				
21.50	10.66	8.80	0.37				
22.00	10.73	8.87	0.36				
22.50	10.80	8.94	0.34				
23.00	10.87	9.01	0.33				
23.50	10.94	9.07	0.32				
24.00	11.00	9.13	0.30				
24.50	11.00	9.13	0.00				
25.00	11.00	9.13	0.00				
25.50	11.00	9.13	0.00				
26.00	11.00	9.13	0.00				
26.50	11.00	9.13	0.00				
27.00	11.00	9.13	0.00				
27.50	11.00	9.13	0.00				
28.00	11.00	9.13	0.00				
28.50	11.00	9.13	0.00				

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NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 31S: PDA-1C

Runoff = 28.54 cfs @ 12.13 hrs, Volume= 2.103 af, Depth= 9.77"
 Routed to Pond 32P : FB 1C

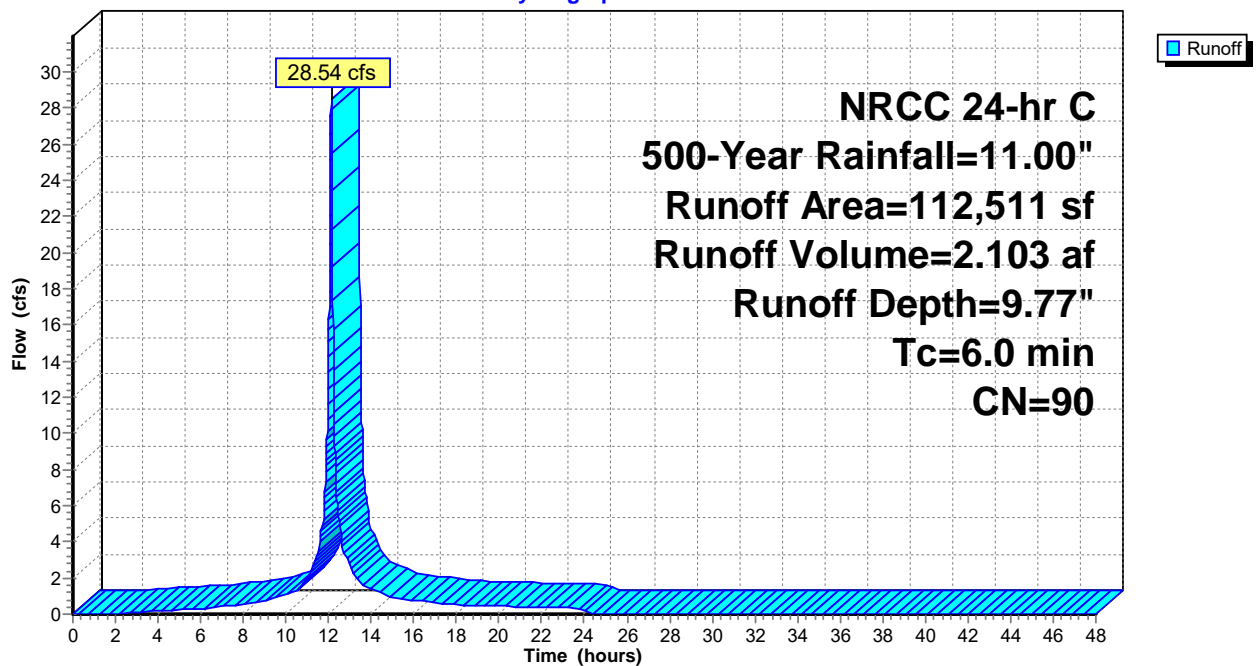
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
14,434	80	>75% Grass cover, Good, HSG D
10,394	39	>75% Grass cover, Good, HSG A
87,683	98	Paved parking, HSG D
112,511	90	Weighted Average
24,828		22.07% Pervious Area
87,683		77.93% Impervious Area

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

Subcatchment 31S: PDA-1C

Hydrograph



Hydrograph for Subcatchment 31S: PDA-1C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	9.77	0.00
0.50	0.06	0.00	0.00	29.50	11.00	9.77	0.00
1.00	0.13	0.00	0.00	30.00	11.00	9.77	0.00
1.50	0.20	0.00	0.00	30.50	11.00	9.77	0.00
2.00	0.27	0.00	0.02	31.00	11.00	9.77	0.00
2.50	0.34	0.01	0.06	31.50	11.00	9.77	0.00
3.00	0.42	0.03	0.11	32.00	11.00	9.77	0.00
3.50	0.50	0.05	0.15	32.50	11.00	9.77	0.00
4.00	0.58	0.09	0.18	33.00	11.00	9.77	0.00
4.50	0.67	0.13	0.22	33.50	11.00	9.77	0.00
5.00	0.76	0.17	0.25	34.00	11.00	9.77	0.00
5.50	0.85	0.23	0.28	34.50	11.00	9.77	0.00
6.00	0.94	0.28	0.31	35.00	11.00	9.77	0.00
6.50	1.05	0.35	0.37	35.50	11.00	9.77	0.00
7.00	1.16	0.43	0.43	36.00	11.00	9.77	0.00
7.50	1.29	0.52	0.50	36.50	11.00	9.77	0.00
8.00	1.43	0.63	0.57	37.00	11.00	9.77	0.00
8.50	1.58	0.75	0.64	37.50	11.00	9.77	0.00
9.00	1.74	0.88	0.71	38.00	11.00	9.77	0.00
9.50	1.94	1.04	0.91	38.50	11.00	9.77	0.00
10.00	2.17	1.24	1.12	39.00	11.00	9.77	0.00
10.50	2.45	1.49	1.34	39.50	11.00	9.77	0.00
11.00	2.84	1.83	2.06	40.00	11.00	9.77	0.00
11.50	3.44	2.39	3.36	40.50	11.00	9.77	0.00
12.00	5.24	4.11	15.07	41.00	11.00	9.77	0.00
12.50	7.56	6.37	5.05	41.50	11.00	9.77	0.00
13.00	8.16	6.97	2.67	42.00	11.00	9.77	0.00
13.50	8.55	7.35	1.73	42.50	11.00	9.77	0.00
14.00	8.83	7.62	1.36	43.00	11.00	9.77	0.00
14.50	9.06	7.85	1.14	43.50	11.00	9.77	0.00
15.00	9.26	8.04	0.92	44.00	11.00	9.77	0.00
15.50	9.42	8.21	0.82	44.50	11.00	9.77	0.00
16.00	9.57	8.36	0.76	45.00	11.00	9.77	0.00
16.50	9.71	8.49	0.70	45.50	11.00	9.77	0.00
17.00	9.84	8.62	0.64	46.00	11.00	9.77	0.00
17.50	9.95	8.73	0.57	46.50	11.00	9.77	0.00
18.00	10.06	8.84	0.51	47.00	11.00	9.77	0.00
18.50	10.15	8.93	0.49	47.50	11.00	9.77	0.00
19.00	10.24	9.02	0.47	48.00	11.00	9.77	0.00
19.50	10.33	9.11	0.45				
20.00	10.42	9.19	0.44				
20.50	10.50	9.28	0.42				
21.00	10.58	9.36	0.41				
21.50	10.66	9.43	0.39				
22.00	10.73	9.51	0.38				
22.50	10.80	9.58	0.36				
23.00	10.87	9.64	0.35				
23.50	10.94	9.71	0.33				
24.00	11.00	9.77	0.32				
24.50	11.00	9.77	0.00				
25.00	11.00	9.77	0.00				
25.50	11.00	9.77	0.00				
26.00	11.00	9.77	0.00				
26.50	11.00	9.77	0.00				
27.00	11.00	9.77	0.00				
27.50	11.00	9.77	0.00				
28.00	11.00	9.77	0.00				
28.50	11.00	9.77	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 34S: PDA-1K

Runoff = 2.54 cfs @ 12.14 hrs, Volume= 0.172 af, Depth= 3.37"
 Routed to Pond 63P : Det Pond 1K

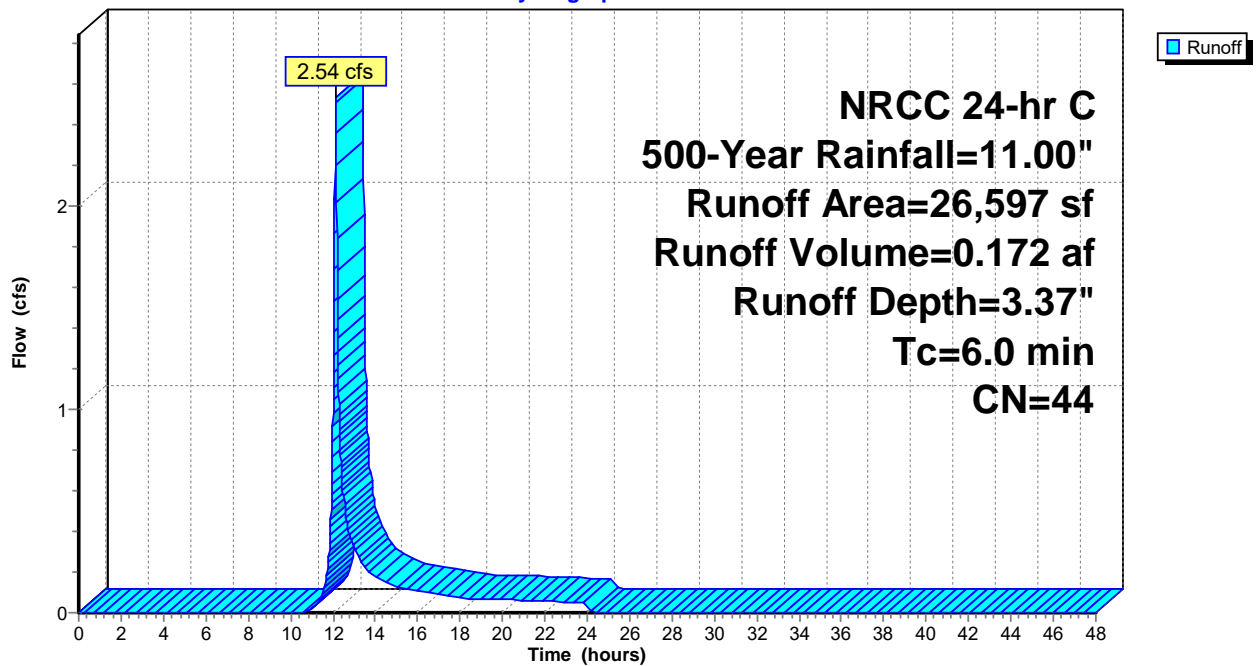
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
23,033	39	>75% Grass cover, Good, HSG A
3,564	80	>75% Grass cover, Good, HSG D
26,597	44	Weighted Average
26,597		100.00% Pervious Area

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

Subcatchment 34S: PDA-1K

Hydrograph



Hydrograph for Subcatchment 34S: PDA-1K

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	3.37	0.00
0.50	0.06	0.00	0.00	29.50	11.00	3.37	0.00
1.00	0.13	0.00	0.00	30.00	11.00	3.37	0.00
1.50	0.20	0.00	0.00	30.50	11.00	3.37	0.00
2.00	0.27	0.00	0.00	31.00	11.00	3.37	0.00
2.50	0.34	0.00	0.00	31.50	11.00	3.37	0.00
3.00	0.42	0.00	0.00	32.00	11.00	3.37	0.00
3.50	0.50	0.00	0.00	32.50	11.00	3.37	0.00
4.00	0.58	0.00	0.00	33.00	11.00	3.37	0.00
4.50	0.67	0.00	0.00	33.50	11.00	3.37	0.00
5.00	0.76	0.00	0.00	34.00	11.00	3.37	0.00
5.50	0.85	0.00	0.00	34.50	11.00	3.37	0.00
6.00	0.94	0.00	0.00	35.00	11.00	3.37	0.00
6.50	1.05	0.00	0.00	35.50	11.00	3.37	0.00
7.00	1.16	0.00	0.00	36.00	11.00	3.37	0.00
7.50	1.29	0.00	0.00	36.50	11.00	3.37	0.00
8.00	1.43	0.00	0.00	37.00	11.00	3.37	0.00
8.50	1.58	0.00	0.00	37.50	11.00	3.37	0.00
9.00	1.74	0.00	0.00	38.00	11.00	3.37	0.00
9.50	1.94	0.00	0.00	38.50	11.00	3.37	0.00
10.00	2.17	0.00	0.00	39.00	11.00	3.37	0.00
10.50	2.45	0.00	0.00	39.50	11.00	3.37	0.00
11.00	2.84	0.01	0.02	40.00	11.00	3.37	0.00
11.50	3.44	0.06	0.09	40.50	11.00	3.37	0.00
12.00	5.24	0.47	0.98	41.00	11.00	3.37	0.00
12.50	7.56	1.42	0.58	41.50	11.00	3.37	0.00
13.00	8.16	1.72	0.33	42.00	11.00	3.37	0.00
13.50	8.55	1.92	0.22	42.50	11.00	3.37	0.00
14.00	8.83	2.08	0.18	43.00	11.00	3.37	0.00
14.50	9.06	2.21	0.15	43.50	11.00	3.37	0.00
15.00	9.26	2.32	0.13	44.00	11.00	3.37	0.00
15.50	9.42	2.41	0.11	44.50	11.00	3.37	0.00
16.00	9.57	2.50	0.11	45.00	11.00	3.37	0.00
16.50	9.71	2.58	0.10	45.50	11.00	3.37	0.00
17.00	9.84	2.66	0.09	46.00	11.00	3.37	0.00
17.50	9.95	2.73	0.08	46.50	11.00	3.37	0.00
18.00	10.06	2.79	0.07	47.00	11.00	3.37	0.00
18.50	10.15	2.85	0.07	47.50	11.00	3.37	0.00
19.00	10.24	2.90	0.07	48.00	11.00	3.37	0.00
19.50	10.33	2.96	0.07				
20.00	10.42	3.01	0.06				
20.50	10.50	3.06	0.06				
21.00	10.58	3.11	0.06				
21.50	10.66	3.16	0.06				
22.00	10.73	3.21	0.06				
22.50	10.80	3.25	0.05				
23.00	10.87	3.29	0.05				
23.50	10.94	3.33	0.05				
24.00	11.00	3.37	0.05				
24.50	11.00	3.37	0.00				
25.00	11.00	3.37	0.00				
25.50	11.00	3.37	0.00				
26.00	11.00	3.37	0.00				
26.50	11.00	3.37	0.00				
27.00	11.00	3.37	0.00				
27.50	11.00	3.37	0.00				
28.00	11.00	3.37	0.00				
28.50	11.00	3.37	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 35S: PDA-2U

Runoff = 9.93 cfs @ 12.13 hrs, Volume= 0.653 af, Depth= 4.56"
 Routed to Link 30L : DP-2

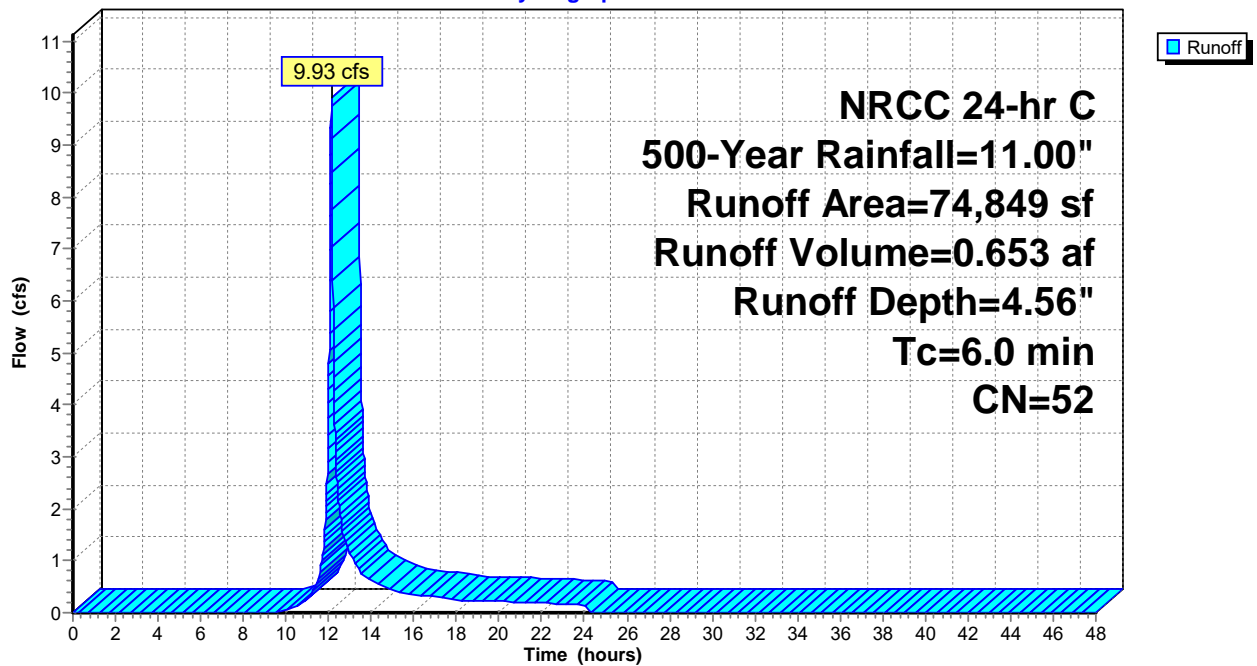
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
24,466	80	>75% Grass cover, Good, HSG D
50,383	39	>75% Grass cover, Good, HSG A
74,849	52	Weighted Average
74,849		100.00% Pervious Area

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

Subcatchment 35S: PDA-2U

Hydrograph



Hydrograph for Subcatchment 35S: PDA-2U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	4.56	0.00
0.50	0.06	0.00	0.00	29.50	11.00	4.56	0.00
1.00	0.13	0.00	0.00	30.00	11.00	4.56	0.00
1.50	0.20	0.00	0.00	30.50	11.00	4.56	0.00
2.00	0.27	0.00	0.00	31.00	11.00	4.56	0.00
2.50	0.34	0.00	0.00	31.50	11.00	4.56	0.00
3.00	0.42	0.00	0.00	32.00	11.00	4.56	0.00
3.50	0.50	0.00	0.00	32.50	11.00	4.56	0.00
4.00	0.58	0.00	0.00	33.00	11.00	4.56	0.00
4.50	0.67	0.00	0.00	33.50	11.00	4.56	0.00
5.00	0.76	0.00	0.00	34.00	11.00	4.56	0.00
5.50	0.85	0.00	0.00	34.50	11.00	4.56	0.00
6.00	0.94	0.00	0.00	35.00	11.00	4.56	0.00
6.50	1.05	0.00	0.00	35.50	11.00	4.56	0.00
7.00	1.16	0.00	0.00	36.00	11.00	4.56	0.00
7.50	1.29	0.00	0.00	36.50	11.00	4.56	0.00
8.00	1.43	0.00	0.00	37.00	11.00	4.56	0.00
8.50	1.58	0.00	0.00	37.50	11.00	4.56	0.00
9.00	1.74	0.00	0.00	38.00	11.00	4.56	0.00
9.50	1.94	0.00	0.01	38.50	11.00	4.56	0.00
10.00	2.17	0.01	0.05	39.00	11.00	4.56	0.00
10.50	2.45	0.04	0.11	39.50	11.00	4.56	0.00
11.00	2.84	0.10	0.26	40.00	11.00	4.56	0.00
11.50	3.44	0.24	0.61	40.50	11.00	4.56	0.00
12.00	5.24	0.91	4.31	41.00	11.00	4.56	0.00
12.50	7.56	2.18	2.08	41.50	11.00	4.56	0.00
13.00	8.16	2.57	1.16	42.00	11.00	4.56	0.00
13.50	8.55	2.82	0.77	42.50	11.00	4.56	0.00
14.00	8.83	3.01	0.62	43.00	11.00	4.56	0.00
14.50	9.06	3.17	0.53	43.50	11.00	4.56	0.00
15.00	9.26	3.30	0.43	44.00	11.00	4.56	0.00
15.50	9.42	3.41	0.39	44.50	11.00	4.56	0.00
16.00	9.57	3.52	0.36	45.00	11.00	4.56	0.00
16.50	9.71	3.62	0.33	45.50	11.00	4.56	0.00
17.00	9.84	3.71	0.30	46.00	11.00	4.56	0.00
17.50	9.95	3.79	0.28	46.50	11.00	4.56	0.00
18.00	10.06	3.86	0.25	47.00	11.00	4.56	0.00
18.50	10.15	3.93	0.24	47.50	11.00	4.56	0.00
19.00	10.24	4.00	0.23	48.00	11.00	4.56	0.00
19.50	10.33	4.06	0.22				
20.00	10.42	4.13	0.22				
20.50	10.50	4.19	0.21				
21.00	10.58	4.25	0.20				
21.50	10.66	4.30	0.19				
22.00	10.73	4.36	0.19				
22.50	10.80	4.41	0.18				
23.00	10.87	4.46	0.17				
23.50	10.94	4.51	0.17				
24.00	11.00	4.56	0.16				
24.50	11.00	4.56	0.00				
25.00	11.00	4.56	0.00				
25.50	11.00	4.56	0.00				
26.00	11.00	4.56	0.00				
26.50	11.00	4.56	0.00				
27.00	11.00	4.56	0.00				
27.50	11.00	4.56	0.00				
28.00	11.00	4.56	0.00				
28.50	11.00	4.56	0.00				

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NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 36S: PDA-3U

Runoff = 3.87 cfs @ 12.14 hrs, Volume= 0.276 af, Depth= 2.64"
Routed to Link 31L : DP-3

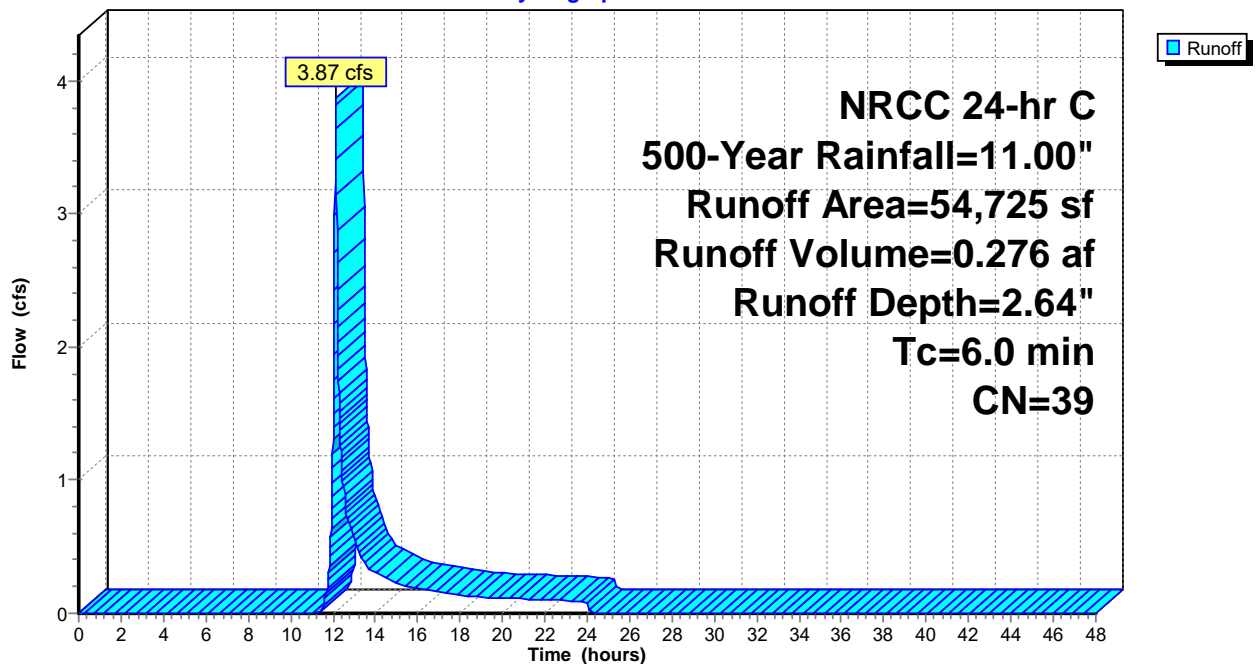
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
54,725	39	>75% Grass cover, Good, HSG A
54,725		100.00% Pervious Area

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

Subcatchment 36S: PDA-3U

Hydrograph



Hydrograph for Subcatchment 36S: PDA-3U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	2.64	0.00
0.50	0.06	0.00	0.00	29.50	11.00	2.64	0.00
1.00	0.13	0.00	0.00	30.00	11.00	2.64	0.00
1.50	0.20	0.00	0.00	30.50	11.00	2.64	0.00
2.00	0.27	0.00	0.00	31.00	11.00	2.64	0.00
2.50	0.34	0.00	0.00	31.50	11.00	2.64	0.00
3.00	0.42	0.00	0.00	32.00	11.00	2.64	0.00
3.50	0.50	0.00	0.00	32.50	11.00	2.64	0.00
4.00	0.58	0.00	0.00	33.00	11.00	2.64	0.00
4.50	0.67	0.00	0.00	33.50	11.00	2.64	0.00
5.00	0.76	0.00	0.00	34.00	11.00	2.64	0.00
5.50	0.85	0.00	0.00	34.50	11.00	2.64	0.00
6.00	0.94	0.00	0.00	35.00	11.00	2.64	0.00
6.50	1.05	0.00	0.00	35.50	11.00	2.64	0.00
7.00	1.16	0.00	0.00	36.00	11.00	2.64	0.00
7.50	1.29	0.00	0.00	36.50	11.00	2.64	0.00
8.00	1.43	0.00	0.00	37.00	11.00	2.64	0.00
8.50	1.58	0.00	0.00	37.50	11.00	2.64	0.00
9.00	1.74	0.00	0.00	38.00	11.00	2.64	0.00
9.50	1.94	0.00	0.00	38.50	11.00	2.64	0.00
10.00	2.17	0.00	0.00	39.00	11.00	2.64	0.00
10.50	2.45	0.00	0.00	39.50	11.00	2.64	0.00
11.00	2.84	0.00	0.00	40.00	11.00	2.64	0.00
11.50	3.44	0.01	0.04	40.50	11.00	2.64	0.00
12.00	5.24	0.25	1.30	41.00	11.00	2.64	0.00
12.50	7.56	0.98	0.95	41.50	11.00	2.64	0.00
13.00	8.16	1.23	0.56	42.00	11.00	2.64	0.00
13.50	8.55	1.40	0.38	42.50	11.00	2.64	0.00
14.00	8.83	1.52	0.31	43.00	11.00	2.64	0.00
14.50	9.06	1.63	0.27	43.50	11.00	2.64	0.00
15.00	9.26	1.72	0.22	44.00	11.00	2.64	0.00
15.50	9.42	1.80	0.20	44.50	11.00	2.64	0.00
16.00	9.57	1.88	0.19	45.00	11.00	2.64	0.00
16.50	9.71	1.95	0.17	45.50	11.00	2.64	0.00
17.00	9.84	2.01	0.16	46.00	11.00	2.64	0.00
17.50	9.95	2.07	0.15	46.50	11.00	2.64	0.00
18.00	10.06	2.13	0.13	47.00	11.00	2.64	0.00
18.50	10.15	2.18	0.12	47.50	11.00	2.64	0.00
19.00	10.24	2.22	0.12	48.00	11.00	2.64	0.00
19.50	10.33	2.27	0.12				
20.00	10.42	2.32	0.12				
20.50	10.50	2.36	0.11				
21.00	10.58	2.41	0.11				
21.50	10.66	2.45	0.10				
22.00	10.73	2.49	0.10				
22.50	10.80	2.53	0.10				
23.00	10.87	2.56	0.09				
23.50	10.94	2.60	0.09				
24.00	11.00	2.64	0.09				
24.50	11.00	2.64	0.00				
25.00	11.00	2.64	0.00				
25.50	11.00	2.64	0.00				
26.00	11.00	2.64	0.00				
26.50	11.00	2.64	0.00				
27.00	11.00	2.64	0.00				
27.50	11.00	2.64	0.00				
28.00	11.00	2.64	0.00				
28.50	11.00	2.64	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment 37S: PDA-1I

Runoff = 41.28 cfs @ 12.13 hrs, Volume= 2.893 af, Depth= 8.74"
 Routed to Pond 37P : FB 1i+J

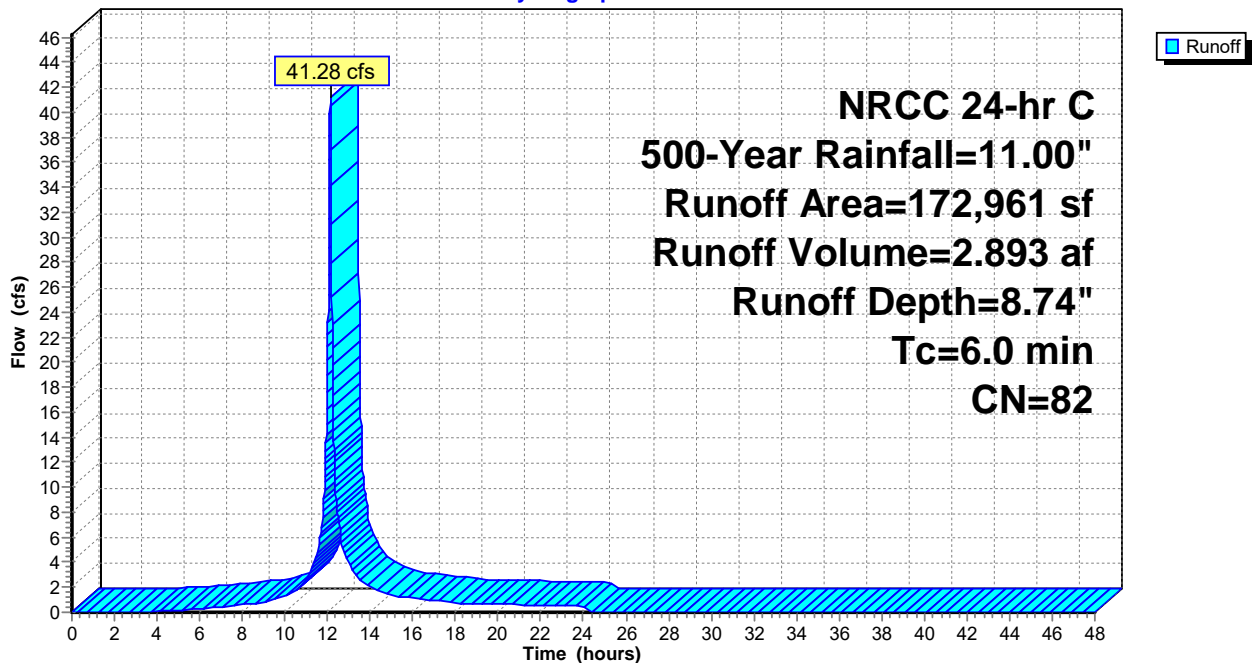
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
42,540	61	>75% Grass cover, Good, HSG B
16,570	39	>75% Grass cover, Good, HSG A
14,535	80	>75% Grass cover, Good, HSG D
99,316	98	Paved parking, HSG D
172,961	82	Weighted Average
73,645		42.58% Pervious Area
99,316		57.42% Impervious Area

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

Subcatchment 37S: PDA-1I

Hydrograph



Hydrograph for Subcatchment 37S: PDA-11

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	8.74	0.00
0.50	0.06	0.00	0.00	29.50	11.00	8.74	0.00
1.00	0.13	0.00	0.00	30.00	11.00	8.74	0.00
1.50	0.20	0.00	0.00	30.50	11.00	8.74	0.00
2.00	0.27	0.00	0.00	31.00	11.00	8.74	0.00
2.50	0.34	0.00	0.00	31.50	11.00	8.74	0.00
3.00	0.42	0.00	0.00	32.00	11.00	8.74	0.00
3.50	0.50	0.00	0.03	32.50	11.00	8.74	0.00
4.00	0.58	0.01	0.07	33.00	11.00	8.74	0.00
4.50	0.67	0.02	0.12	33.50	11.00	8.74	0.00
5.00	0.76	0.04	0.16	34.00	11.00	8.74	0.00
5.50	0.85	0.06	0.21	34.50	11.00	8.74	0.00
6.00	0.94	0.09	0.25	35.00	11.00	8.74	0.00
6.50	1.05	0.13	0.32	35.50	11.00	8.74	0.00
7.00	1.16	0.18	0.41	36.00	11.00	8.74	0.00
7.50	1.29	0.24	0.50	36.50	11.00	8.74	0.00
8.00	1.43	0.31	0.59	37.00	11.00	8.74	0.00
8.50	1.58	0.39	0.69	37.50	11.00	8.74	0.00
9.00	1.74	0.49	0.80	38.00	11.00	8.74	0.00
9.50	1.94	0.61	1.06	38.50	11.00	8.74	0.00
10.00	2.17	0.76	1.35	39.00	11.00	8.74	0.00
10.50	2.45	0.96	1.68	39.50	11.00	8.74	0.00
11.00	2.84	1.25	2.66	40.00	11.00	8.74	0.00
11.50	3.44	1.74	4.51	40.50	11.00	8.74	0.00
12.00	5.24	3.29	21.31	41.00	11.00	8.74	0.00
12.50	7.56	5.44	7.45	41.50	11.00	8.74	0.00
13.00	8.16	6.02	3.96	42.00	11.00	8.74	0.00
13.50	8.55	6.38	2.57	42.50	11.00	8.74	0.00
14.00	8.83	6.65	2.02	43.00	11.00	8.74	0.00
14.50	9.06	6.87	1.70	43.50	11.00	8.74	0.00
15.00	9.26	7.06	1.38	44.00	11.00	8.74	0.00
15.50	9.42	7.22	1.23	44.50	11.00	8.74	0.00
16.00	9.57	7.36	1.14	45.00	11.00	8.74	0.00
16.50	9.71	7.50	1.05	45.50	11.00	8.74	0.00
17.00	9.84	7.62	0.95	46.00	11.00	8.74	0.00
17.50	9.95	7.73	0.86	46.50	11.00	8.74	0.00
18.00	10.06	7.83	0.77	47.00	11.00	8.74	0.00
18.50	10.15	7.92	0.73	47.50	11.00	8.74	0.00
19.00	10.24	8.01	0.70	48.00	11.00	8.74	0.00
19.50	10.33	8.10	0.68				
20.00	10.42	8.18	0.66				
20.50	10.50	8.26	0.64				
21.00	10.58	8.34	0.61				
21.50	10.66	8.41	0.59				
22.00	10.73	8.48	0.57				
22.50	10.80	8.55	0.54				
23.00	10.87	8.62	0.52				
23.50	10.94	8.68	0.50				
24.00	11.00	8.74	0.48				
24.50	11.00	8.74	0.00				
25.00	11.00	8.74	0.00				
25.50	11.00	8.74	0.00				
26.00	11.00	8.74	0.00				
26.50	11.00	8.74	0.00				
27.00	11.00	8.74	0.00				
27.50	11.00	8.74	0.00				
28.00	11.00	8.74	0.00				
28.50	11.00	8.74	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 38S: PDA-4U

Runoff = 32.28 cfs @ 12.14 hrs, Volume= 2.171 af, Depth= 3.52"
 Routed to Link 32L : DP-4

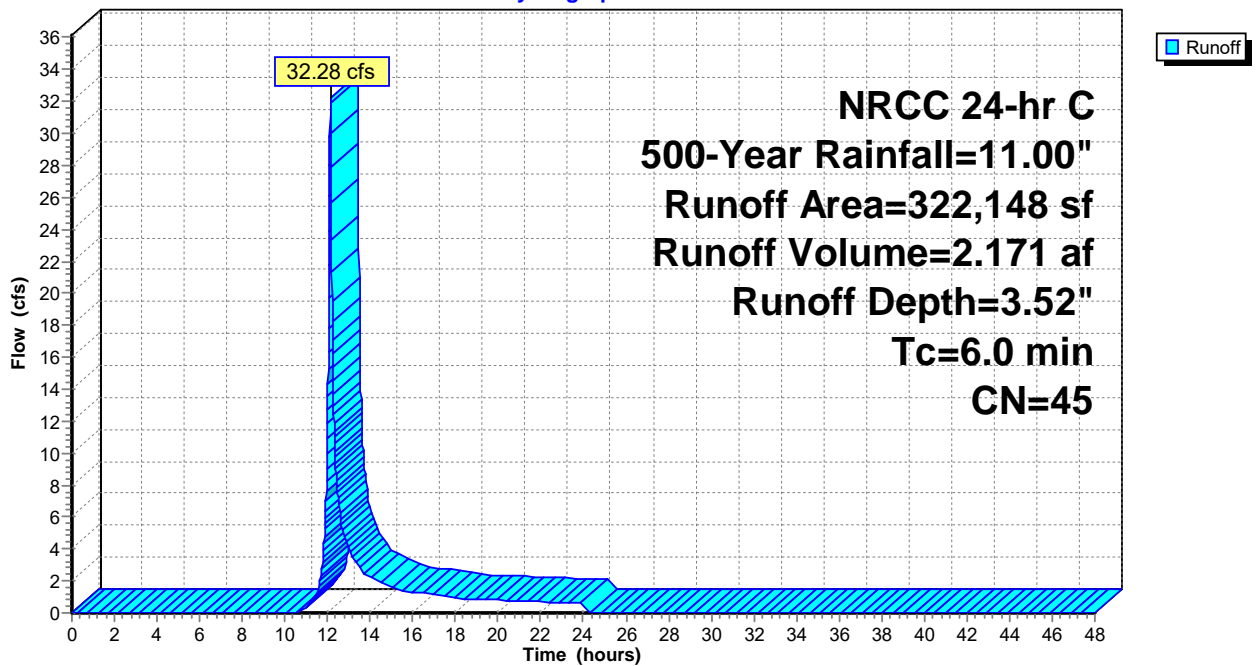
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
289,660	39	>75% Grass cover, Good, HSG A
32,488	98	Paved parking, HSG D
322,148	45	Weighted Average
289,660		89.92% Pervious Area
32,488		10.08% Impervious Area

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

Subcatchment 38S: PDA-4U

Hydrograph



Hydrograph for Subcatchment 38S: PDA-4U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	3.52	0.00
0.50	0.06	0.00	0.00	29.50	11.00	3.52	0.00
1.00	0.13	0.00	0.00	30.00	11.00	3.52	0.00
1.50	0.20	0.00	0.00	30.50	11.00	3.52	0.00
2.00	0.27	0.00	0.00	31.00	11.00	3.52	0.00
2.50	0.34	0.00	0.00	31.50	11.00	3.52	0.00
3.00	0.42	0.00	0.00	32.00	11.00	3.52	0.00
3.50	0.50	0.00	0.00	32.50	11.00	3.52	0.00
4.00	0.58	0.00	0.00	33.00	11.00	3.52	0.00
4.50	0.67	0.00	0.00	33.50	11.00	3.52	0.00
5.00	0.76	0.00	0.00	34.00	11.00	3.52	0.00
5.50	0.85	0.00	0.00	34.50	11.00	3.52	0.00
6.00	0.94	0.00	0.00	35.00	11.00	3.52	0.00
6.50	1.05	0.00	0.00	35.50	11.00	3.52	0.00
7.00	1.16	0.00	0.00	36.00	11.00	3.52	0.00
7.50	1.29	0.00	0.00	36.50	11.00	3.52	0.00
8.00	1.43	0.00	0.00	37.00	11.00	3.52	0.00
8.50	1.58	0.00	0.00	37.50	11.00	3.52	0.00
9.00	1.74	0.00	0.00	38.00	11.00	3.52	0.00
9.50	1.94	0.00	0.00	38.50	11.00	3.52	0.00
10.00	2.17	0.00	0.00	39.00	11.00	3.52	0.00
10.50	2.45	0.00	0.00	39.50	11.00	3.52	0.00
11.00	2.84	0.01	0.32	40.00	11.00	3.52	0.00
11.50	3.44	0.08	1.33	40.50	11.00	3.52	0.00
12.00	5.24	0.52	12.75	41.00	11.00	3.52	0.00
12.50	7.56	1.51	7.25	41.50	11.00	3.52	0.00
13.00	8.16	1.82	4.12	42.00	11.00	3.52	0.00
13.50	8.55	2.03	2.77	42.50	11.00	3.52	0.00
14.00	8.83	2.19	2.23	43.00	11.00	3.52	0.00
14.50	9.06	2.32	1.91	43.50	11.00	3.52	0.00
15.00	9.26	2.44	1.57	44.00	11.00	3.52	0.00
15.50	9.42	2.53	1.41	44.50	11.00	3.52	0.00
16.00	9.57	2.62	1.32	45.00	11.00	3.52	0.00
16.50	9.71	2.71	1.22	45.50	11.00	3.52	0.00
17.00	9.84	2.79	1.12	46.00	11.00	3.52	0.00
17.50	9.95	2.86	1.02	46.50	11.00	3.52	0.00
18.00	10.06	2.92	0.92	47.00	11.00	3.52	0.00
18.50	10.15	2.98	0.87	47.50	11.00	3.52	0.00
19.00	10.24	3.04	0.85	48.00	11.00	3.52	0.00
19.50	10.33	3.09	0.83				
20.00	10.42	3.15	0.80				
20.50	10.50	3.20	0.78				
21.00	10.58	3.25	0.75				
21.50	10.66	3.30	0.73				
22.00	10.73	3.35	0.70				
22.50	10.80	3.40	0.68				
23.00	10.87	3.44	0.65				
23.50	10.94	3.48	0.63				
24.00	11.00	3.52	0.60				
24.50	11.00	3.52	0.00				
25.00	11.00	3.52	0.00				
25.50	11.00	3.52	0.00				
26.00	11.00	3.52	0.00				
26.50	11.00	3.52	0.00				
27.00	11.00	3.52	0.00				
27.50	11.00	3.52	0.00				
28.00	11.00	3.52	0.00				
28.50	11.00	3.52	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 39S: PDA-5U

Runoff = 16.78 cfs @ 12.13 hrs, Volume= 1.100 af, Depth= 5.58"
 Routed to Link PDP5 : PDP5

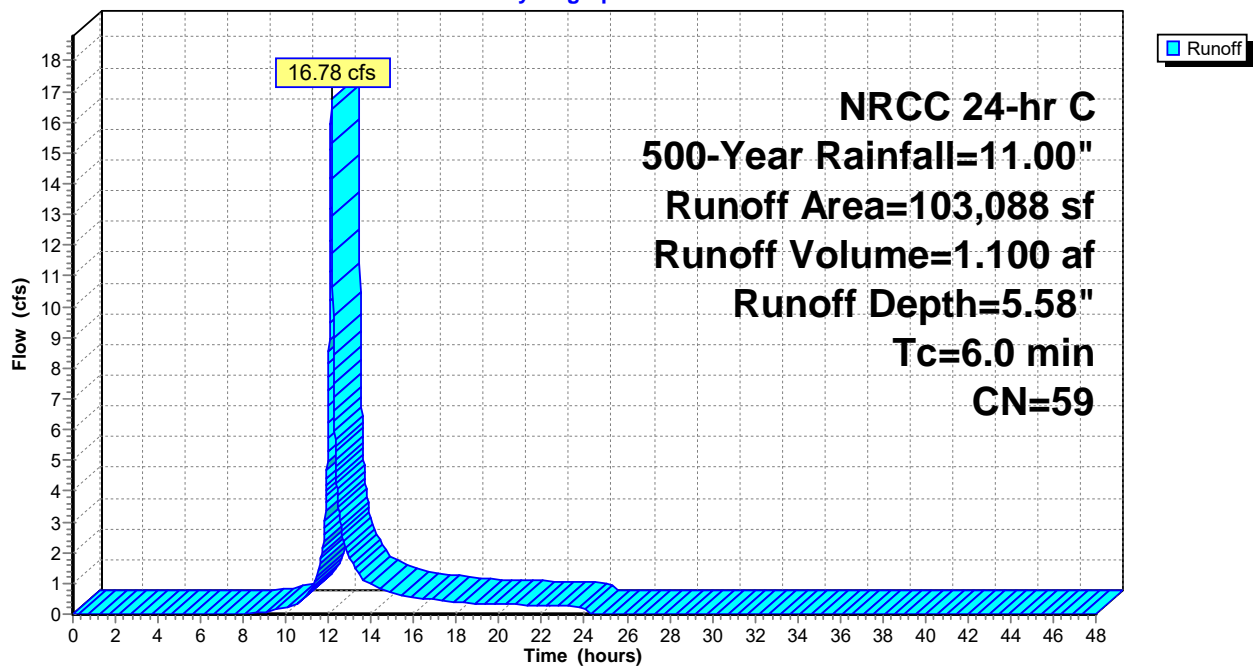
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
47,352	39	>75% Grass cover, Good, HSG A
21,707	98	Paved parking, HSG D
34,029	61	>75% Grass cover, Good, HSG B
103,088	59	Weighted Average
81,381		78.94% Pervious Area
21,707		21.06% Impervious Area

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

Subcatchment 39S: PDA-5U

Hydrograph



Hydrograph for Subcatchment 39S: PDA-5U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	5.58	0.00
0.50	0.06	0.00	0.00	29.50	11.00	5.58	0.00
1.00	0.13	0.00	0.00	30.00	11.00	5.58	0.00
1.50	0.20	0.00	0.00	30.50	11.00	5.58	0.00
2.00	0.27	0.00	0.00	31.00	11.00	5.58	0.00
2.50	0.34	0.00	0.00	31.50	11.00	5.58	0.00
3.00	0.42	0.00	0.00	32.00	11.00	5.58	0.00
3.50	0.50	0.00	0.00	32.50	11.00	5.58	0.00
4.00	0.58	0.00	0.00	33.00	11.00	5.58	0.00
4.50	0.67	0.00	0.00	33.50	11.00	5.58	0.00
5.00	0.76	0.00	0.00	34.00	11.00	5.58	0.00
5.50	0.85	0.00	0.00	34.50	11.00	5.58	0.00
6.00	0.94	0.00	0.00	35.00	11.00	5.58	0.00
6.50	1.05	0.00	0.00	35.50	11.00	5.58	0.00
7.00	1.16	0.00	0.00	36.00	11.00	5.58	0.00
7.50	1.29	0.00	0.00	36.50	11.00	5.58	0.00
8.00	1.43	0.00	0.00	37.00	11.00	5.58	0.00
8.50	1.58	0.01	0.03	37.50	11.00	5.58	0.00
9.00	1.74	0.02	0.07	38.00	11.00	5.58	0.00
9.50	1.94	0.04	0.13	38.50	11.00	5.58	0.00
10.00	2.17	0.08	0.22	39.00	11.00	5.58	0.00
10.50	2.45	0.14	0.33	39.50	11.00	5.58	0.00
11.00	2.84	0.25	0.63	40.00	11.00	5.58	0.00
11.50	3.44	0.47	1.28	40.50	11.00	5.58	0.00
12.00	5.24	1.37	7.73	41.00	11.00	5.58	0.00
12.50	7.56	2.90	3.35	41.50	11.00	5.58	0.00
13.00	8.16	3.34	1.84	42.00	11.00	5.58	0.00
13.50	8.55	3.63	1.21	42.50	11.00	5.58	0.00
14.00	8.83	3.85	0.96	43.00	11.00	5.58	0.00
14.50	9.06	4.03	0.82	43.50	11.00	5.58	0.00
15.00	9.26	4.18	0.67	44.00	11.00	5.58	0.00
15.50	9.42	4.30	0.60	44.50	11.00	5.58	0.00
16.00	9.57	4.42	0.55	45.00	11.00	5.58	0.00
16.50	9.71	4.53	0.51	45.50	11.00	5.58	0.00
17.00	9.84	4.63	0.47	46.00	11.00	5.58	0.00
17.50	9.95	4.73	0.42	46.50	11.00	5.58	0.00
18.00	10.06	4.81	0.38	47.00	11.00	5.58	0.00
18.50	10.15	4.89	0.36	47.50	11.00	5.58	0.00
19.00	10.24	4.96	0.35	48.00	11.00	5.58	0.00
19.50	10.33	5.03	0.34				
20.00	10.42	5.10	0.33				
20.50	10.50	5.17	0.32				
21.00	10.58	5.23	0.31				
21.50	10.66	5.30	0.30				
22.00	10.73	5.36	0.28				
22.50	10.80	5.42	0.27				
23.00	10.87	5.47	0.26				
23.50	10.94	5.53	0.25				
24.00	11.00	5.58	0.24				
24.50	11.00	5.58	0.00				
25.00	11.00	5.58	0.00				
25.50	11.00	5.58	0.00				
26.00	11.00	5.58	0.00				
26.50	11.00	5.58	0.00				
27.00	11.00	5.58	0.00				
27.50	11.00	5.58	0.00				
28.00	11.00	5.58	0.00				
28.50	11.00	5.58	0.00				

Summary for Subcatchment 40S: PDA-i+J-FB

Runoff = 1.52 cfs @ 12.14 hrs, Volume= 0.102 af, Depth= 3.82"
 Routed to Pond 37P : FB 1i+J

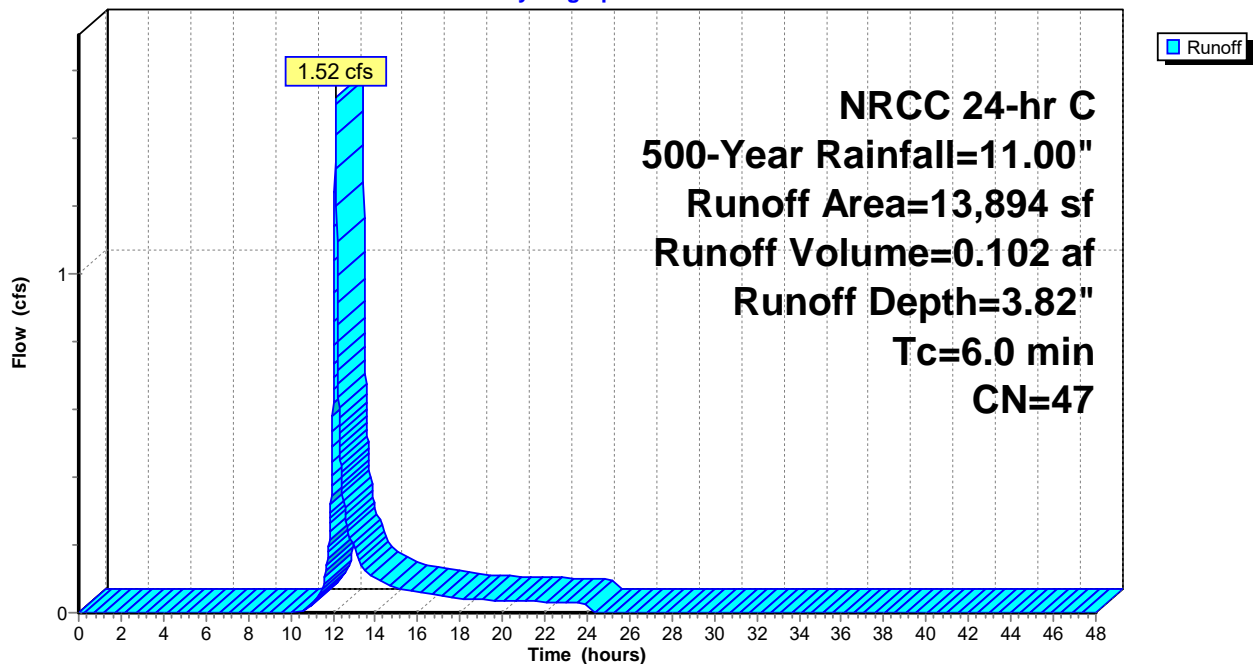
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
8,901	39	>75% Grass cover, Good, HSG A
4,993	61	>75% Grass cover, Good, HSG B
13,894	47	Weighted Average
13,894		100.00% Pervious Area

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

Subcatchment 40S: PDA-i+J-FB

Hydrograph



Hydrograph for Subcatchment 40S: PDA-i+J-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	3.82	0.00
0.50	0.06	0.00	0.00	29.50	11.00	3.82	0.00
1.00	0.13	0.00	0.00	30.00	11.00	3.82	0.00
1.50	0.20	0.00	0.00	30.50	11.00	3.82	0.00
2.00	0.27	0.00	0.00	31.00	11.00	3.82	0.00
2.50	0.34	0.00	0.00	31.50	11.00	3.82	0.00
3.00	0.42	0.00	0.00	32.00	11.00	3.82	0.00
3.50	0.50	0.00	0.00	32.50	11.00	3.82	0.00
4.00	0.58	0.00	0.00	33.00	11.00	3.82	0.00
4.50	0.67	0.00	0.00	33.50	11.00	3.82	0.00
5.00	0.76	0.00	0.00	34.00	11.00	3.82	0.00
5.50	0.85	0.00	0.00	34.50	11.00	3.82	0.00
6.00	0.94	0.00	0.00	35.00	11.00	3.82	0.00
6.50	1.05	0.00	0.00	35.50	11.00	3.82	0.00
7.00	1.16	0.00	0.00	36.00	11.00	3.82	0.00
7.50	1.29	0.00	0.00	36.50	11.00	3.82	0.00
8.00	1.43	0.00	0.00	37.00	11.00	3.82	0.00
8.50	1.58	0.00	0.00	37.50	11.00	3.82	0.00
9.00	1.74	0.00	0.00	38.00	11.00	3.82	0.00
9.50	1.94	0.00	0.00	38.50	11.00	3.82	0.00
10.00	2.17	0.00	0.00	39.00	11.00	3.82	0.00
10.50	2.45	0.00	0.00	39.50	11.00	3.82	0.00
11.00	2.84	0.03	0.02	40.00	11.00	3.82	0.00
11.50	3.44	0.11	0.07	40.50	11.00	3.82	0.00
12.00	5.24	0.62	0.62	41.00	11.00	3.82	0.00
12.50	7.56	1.70	0.33	41.50	11.00	3.82	0.00
13.00	8.16	2.03	0.19	42.00	11.00	3.82	0.00
13.50	8.55	2.26	0.13	42.50	11.00	3.82	0.00
14.00	8.83	2.42	0.10	43.00	11.00	3.82	0.00
14.50	9.06	2.56	0.09	43.50	11.00	3.82	0.00
15.00	9.26	2.68	0.07	44.00	11.00	3.82	0.00
15.50	9.42	2.78	0.06	44.50	11.00	3.82	0.00
16.00	9.57	2.88	0.06	45.00	11.00	3.82	0.00
16.50	9.71	2.97	0.06	45.50	11.00	3.82	0.00
17.00	9.84	3.05	0.05	46.00	11.00	3.82	0.00
17.50	9.95	3.12	0.05	46.50	11.00	3.82	0.00
18.00	10.06	3.19	0.04	47.00	11.00	3.82	0.00
18.50	10.15	3.25	0.04	47.50	11.00	3.82	0.00
19.00	10.24	3.31	0.04	48.00	11.00	3.82	0.00
19.50	10.33	3.37	0.04				
20.00	10.42	3.43	0.04				
20.50	10.50	3.48	0.04				
21.00	10.58	3.54	0.03				
21.50	10.66	3.59	0.03				
22.00	10.73	3.64	0.03				
22.50	10.80	3.69	0.03				
23.00	10.87	3.73	0.03				
23.50	10.94	3.78	0.03				
24.00	11.00	3.82	0.03				
24.50	11.00	3.82	0.00				
25.00	11.00	3.82	0.00				
25.50	11.00	3.82	0.00				
26.00	11.00	3.82	0.00				
26.50	11.00	3.82	0.00				
27.00	11.00	3.82	0.00				
27.50	11.00	3.82	0.00				
28.00	11.00	3.82	0.00				
28.50	11.00	3.82	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 41S: PDA-5A

Runoff = 46.95 cfs @ 12.13 hrs, Volume= 3.177 af, Depth= 7.68"
 Routed to Pond 39P : FB 5A

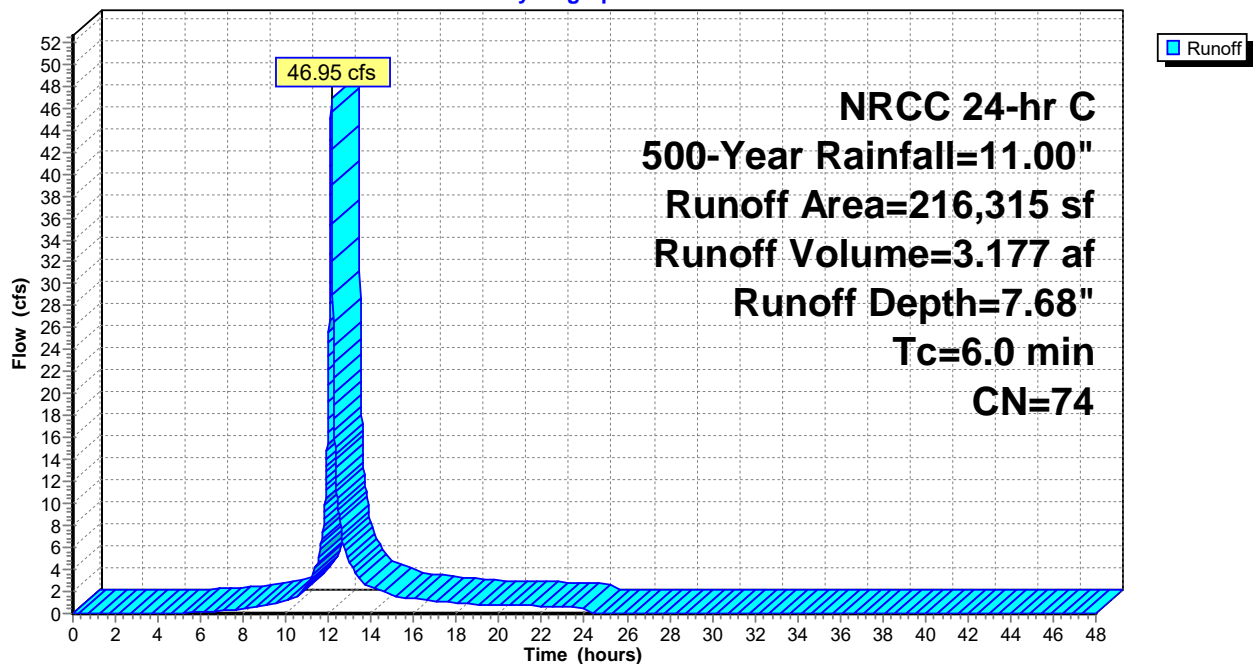
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
40,852	98	Paved parking, HSG D
78,273	61	>75% Grass cover, Good, HSG B
37,290	39	>75% Grass cover, Good, HSG A
59,900	98	Unconnected roofs, HSG D
216,315	74	Weighted Average
115,563		53.42% Pervious Area
100,752		46.58% Impervious Area
59,900		59.45% Unconnected

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

Subcatchment 41S: PDA-5A

Hydrograph



Hydrograph for Subcatchment 41S: PDA-5A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	7.68	0.00
0.50	0.06	0.00	0.00	29.50	11.00	7.68	0.00
1.00	0.13	0.00	0.00	30.00	11.00	7.68	0.00
1.50	0.20	0.00	0.00	30.50	11.00	7.68	0.00
2.00	0.27	0.00	0.00	31.00	11.00	7.68	0.00
2.50	0.34	0.00	0.00	31.50	11.00	7.68	0.00
3.00	0.42	0.00	0.00	32.00	11.00	7.68	0.00
3.50	0.50	0.00	0.00	32.50	11.00	7.68	0.00
4.00	0.58	0.00	0.00	33.00	11.00	7.68	0.00
4.50	0.67	0.00	0.00	33.50	11.00	7.68	0.00
5.00	0.76	0.00	0.02	34.00	11.00	7.68	0.00
5.50	0.85	0.01	0.06	34.50	11.00	7.68	0.00
6.00	0.94	0.02	0.11	35.00	11.00	7.68	0.00
6.50	1.05	0.03	0.17	35.50	11.00	7.68	0.00
7.00	1.16	0.05	0.25	36.00	11.00	7.68	0.00
7.50	1.29	0.08	0.34	36.50	11.00	7.68	0.00
8.00	1.43	0.12	0.44	37.00	11.00	7.68	0.00
8.50	1.58	0.18	0.55	37.50	11.00	7.68	0.00
9.00	1.74	0.24	0.66	38.00	11.00	7.68	0.00
9.50	1.94	0.32	0.92	38.50	11.00	7.68	0.00
10.00	2.17	0.43	1.23	39.00	11.00	7.68	0.00
10.50	2.45	0.58	1.59	39.50	11.00	7.68	0.00
11.00	2.84	0.81	2.62	40.00	11.00	7.68	0.00
11.50	3.44	1.20	4.66	40.50	11.00	7.68	0.00
12.00	5.24	2.56	23.51	41.00	11.00	7.68	0.00
12.50	7.56	4.53	8.71	41.50	11.00	7.68	0.00
13.00	8.16	5.07	4.67	42.00	11.00	7.68	0.00
13.50	8.55	5.42	3.05	42.50	11.00	7.68	0.00
14.00	8.83	5.67	2.40	43.00	11.00	7.68	0.00
14.50	9.06	5.89	2.02	43.50	11.00	7.68	0.00
15.00	9.26	6.06	1.64	44.00	11.00	7.68	0.00
15.50	9.42	6.21	1.47	44.50	11.00	7.68	0.00
16.00	9.57	6.35	1.36	45.00	11.00	7.68	0.00
16.50	9.71	6.48	1.25	45.50	11.00	7.68	0.00
17.00	9.84	6.60	1.14	46.00	11.00	7.68	0.00
17.50	9.95	6.70	1.03	46.50	11.00	7.68	0.00
18.00	10.06	6.80	0.92	47.00	11.00	7.68	0.00
18.50	10.15	6.89	0.87	47.50	11.00	7.68	0.00
19.00	10.24	6.97	0.84	48.00	11.00	7.68	0.00
19.50	10.33	7.06	0.82				
20.00	10.42	7.14	0.79				
20.50	10.50	7.21	0.77				
21.00	10.58	7.29	0.74				
21.50	10.66	7.36	0.71				
22.00	10.73	7.43	0.68				
22.50	10.80	7.49	0.66				
23.00	10.87	7.56	0.63				
23.50	10.94	7.62	0.60				
24.00	11.00	7.68	0.58				
24.50	11.00	7.68	0.00				
25.00	11.00	7.68	0.00				
25.50	11.00	7.68	0.00				
26.00	11.00	7.68	0.00				
26.50	11.00	7.68	0.00				
27.00	11.00	7.68	0.00				
27.50	11.00	7.68	0.00				
28.00	11.00	7.68	0.00				
28.50	11.00	7.68	0.00				

Summary for Subcatchment 42S: PDA-1J-B

Runoff = 4.66 cfs @ 12.13 hrs, Volume= 0.306 af, Depth= 4.70"
 Routed to Pond 53P : Bioretention J basin

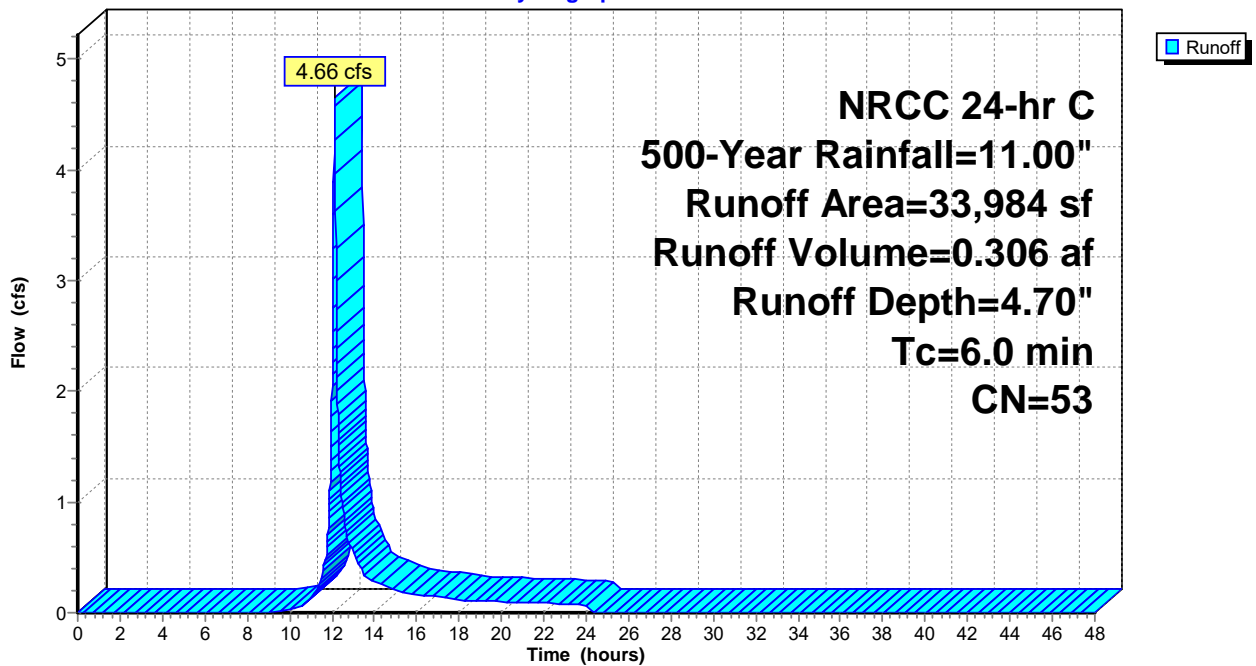
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
11,676	39	>75% Grass cover, Good, HSG A
22,308	61	>75% Grass cover, Good, HSG B
33,984	53	Weighted Average
33,984		100.00% Pervious Area

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

Subcatchment 42S: PDA-1J-B

Hydrograph



Hydrograph for Subcatchment 42S: PDA-1J-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	4.70	0.00
0.50	0.06	0.00	0.00	29.50	11.00	4.70	0.00
1.00	0.13	0.00	0.00	30.00	11.00	4.70	0.00
1.50	0.20	0.00	0.00	30.50	11.00	4.70	0.00
2.00	0.27	0.00	0.00	31.00	11.00	4.70	0.00
2.50	0.34	0.00	0.00	31.50	11.00	4.70	0.00
3.00	0.42	0.00	0.00	32.00	11.00	4.70	0.00
3.50	0.50	0.00	0.00	32.50	11.00	4.70	0.00
4.00	0.58	0.00	0.00	33.00	11.00	4.70	0.00
4.50	0.67	0.00	0.00	33.50	11.00	4.70	0.00
5.00	0.76	0.00	0.00	34.00	11.00	4.70	0.00
5.50	0.85	0.00	0.00	34.50	11.00	4.70	0.00
6.00	0.94	0.00	0.00	35.00	11.00	4.70	0.00
6.50	1.05	0.00	0.00	35.50	11.00	4.70	0.00
7.00	1.16	0.00	0.00	36.00	11.00	4.70	0.00
7.50	1.29	0.00	0.00	36.50	11.00	4.70	0.00
8.00	1.43	0.00	0.00	37.00	11.00	4.70	0.00
8.50	1.58	0.00	0.00	37.50	11.00	4.70	0.00
9.00	1.74	0.00	0.00	38.00	11.00	4.70	0.00
9.50	1.94	0.00	0.01	38.50	11.00	4.70	0.00
10.00	2.17	0.02	0.03	39.00	11.00	4.70	0.00
10.50	2.45	0.05	0.06	39.50	11.00	4.70	0.00
11.00	2.84	0.11	0.13	40.00	11.00	4.70	0.00
11.50	3.44	0.26	0.30	40.50	11.00	4.70	0.00
12.00	5.24	0.97	2.04	41.00	11.00	4.70	0.00
12.50	7.56	2.28	0.97	41.50	11.00	4.70	0.00
13.00	8.16	2.68	0.54	42.00	11.00	4.70	0.00
13.50	8.55	2.94	0.36	42.50	11.00	4.70	0.00
14.00	8.83	3.13	0.29	43.00	11.00	4.70	0.00
14.50	9.06	3.29	0.24	43.50	11.00	4.70	0.00
15.00	9.26	3.42	0.20	44.00	11.00	4.70	0.00
15.50	9.42	3.54	0.18	44.50	11.00	4.70	0.00
16.00	9.57	3.65	0.17	45.00	11.00	4.70	0.00
16.50	9.71	3.75	0.15	45.50	11.00	4.70	0.00
17.00	9.84	3.84	0.14	46.00	11.00	4.70	0.00
17.50	9.95	3.92	0.13	46.50	11.00	4.70	0.00
18.00	10.06	4.00	0.11	47.00	11.00	4.70	0.00
18.50	10.15	4.07	0.11	47.50	11.00	4.70	0.00
19.00	10.24	4.14	0.11	48.00	11.00	4.70	0.00
19.50	10.33	4.20	0.10				
20.00	10.42	4.27	0.10				
20.50	10.50	4.33	0.10				
21.00	10.58	4.39	0.09				
21.50	10.66	4.45	0.09				
22.00	10.73	4.50	0.09				
22.50	10.80	4.56	0.08				
23.00	10.87	4.61	0.08				
23.50	10.94	4.66	0.08				
24.00	11.00	4.70	0.07				
24.50	11.00	4.70	0.00				
25.00	11.00	4.70	0.00				
25.50	11.00	4.70	0.00				
26.00	11.00	4.70	0.00				
26.50	11.00	4.70	0.00				
27.00	11.00	4.70	0.00				
27.50	11.00	4.70	0.00				
28.00	11.00	4.70	0.00				
28.50	11.00	4.70	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 43S: PDA-1B

Runoff = 98.40 cfs @ 12.13 hrs, Volume= 7.057 af, Depth= 9.26"
 Routed to Pond 44P : FB 1B

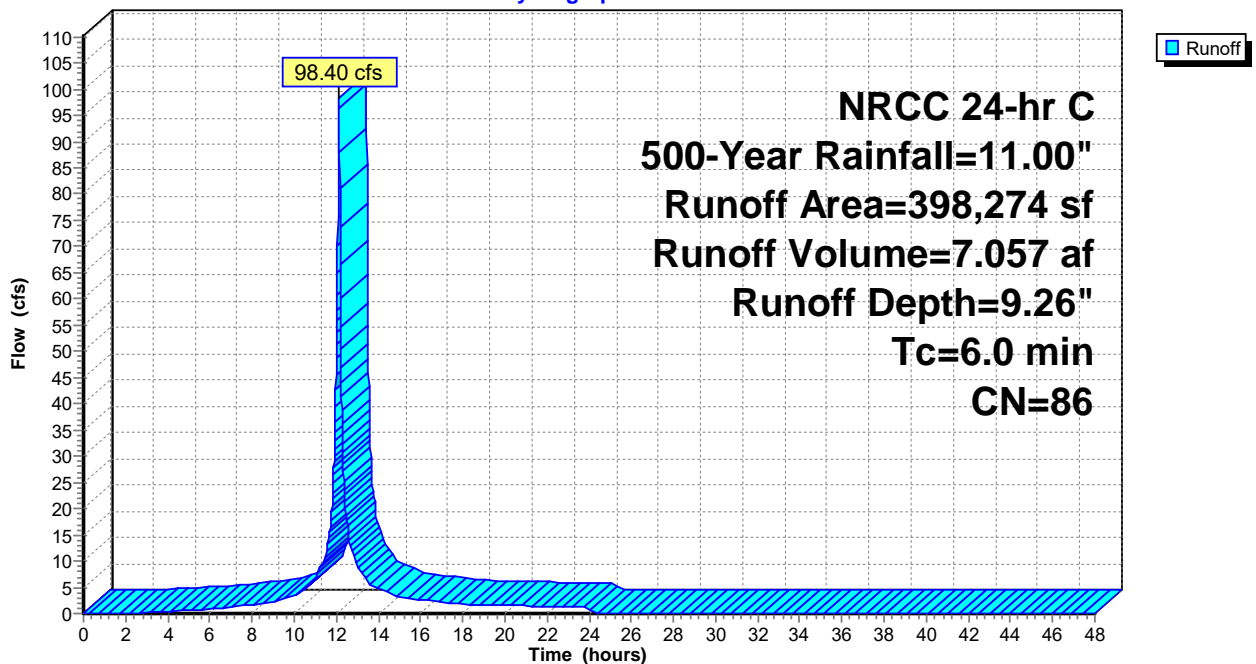
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
292,844	98	Unconnected pavement, HSG D
54,536	39	>75% Grass cover, Good, HSG A
24,842	61	>75% Grass cover, Good, HSG B
26,052	80	>75% Grass cover, Good, HSG D
398,274	86	Weighted Average
105,430		26.47% Pervious Area
292,844		73.53% Impervious Area
292,844		100.00% Unconnected

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

Subcatchment 43S: PDA-1B

Hydrograph



Hydrograph for Subcatchment 43S: PDA-1B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	9.26	0.00
0.50	0.06	0.00	0.00	29.50	11.00	9.26	0.00
1.00	0.13	0.00	0.00	30.00	11.00	9.26	0.00
1.50	0.20	0.00	0.00	30.50	11.00	9.26	0.00
2.00	0.27	0.00	0.00	31.00	11.00	9.26	0.00
2.50	0.34	0.00	0.01	31.50	11.00	9.26	0.00
3.00	0.42	0.00	0.13	32.00	11.00	9.26	0.00
3.50	0.50	0.02	0.25	32.50	11.00	9.26	0.00
4.00	0.58	0.03	0.37	33.00	11.00	9.26	0.00
4.50	0.67	0.06	0.49	33.50	11.00	9.26	0.00
5.00	0.76	0.09	0.61	34.00	11.00	9.26	0.00
5.50	0.85	0.13	0.72	34.50	11.00	9.26	0.00
6.00	0.94	0.17	0.83	35.00	11.00	9.26	0.00
6.50	1.05	0.22	1.01	35.50	11.00	9.26	0.00
7.00	1.16	0.28	1.22	36.00	11.00	9.26	0.00
7.50	1.29	0.36	1.45	36.50	11.00	9.26	0.00
8.00	1.43	0.45	1.68	37.00	11.00	9.26	0.00
8.50	1.58	0.55	1.93	37.50	11.00	9.26	0.00
9.00	1.74	0.66	2.18	38.00	11.00	9.26	0.00
9.50	1.94	0.80	2.83	38.50	11.00	9.26	0.00
10.00	2.17	0.98	3.55	39.00	11.00	9.26	0.00
10.50	2.45	1.20	4.33	39.50	11.00	9.26	0.00
11.00	2.84	1.52	6.74	40.00	11.00	9.26	0.00
11.50	3.44	2.05	11.19	40.50	11.00	9.26	0.00
12.00	5.24	3.69	51.43	41.00	11.00	9.26	0.00
12.50	7.56	5.90	17.57	41.50	11.00	9.26	0.00
13.00	8.16	6.49	9.31	42.00	11.00	9.26	0.00
13.50	8.55	6.87	6.04	42.50	11.00	9.26	0.00
14.00	8.83	7.14	4.74	43.00	11.00	9.26	0.00
14.50	9.06	7.36	3.99	43.50	11.00	9.26	0.00
15.00	9.26	7.55	3.23	44.00	11.00	9.26	0.00
15.50	9.42	7.71	2.88	44.50	11.00	9.26	0.00
16.00	9.57	7.86	2.65	45.00	11.00	9.26	0.00
16.50	9.71	8.00	2.45	45.50	11.00	9.26	0.00
17.00	9.84	8.12	2.23	46.00	11.00	9.26	0.00
17.50	9.95	8.23	2.01	46.50	11.00	9.26	0.00
18.00	10.06	8.34	1.80	47.00	11.00	9.26	0.00
18.50	10.15	8.43	1.70	47.50	11.00	9.26	0.00
19.00	10.24	8.52	1.64	48.00	11.00	9.26	0.00
19.50	10.33	8.61	1.59				
20.00	10.42	8.69	1.54				
20.50	10.50	8.77	1.49				
21.00	10.58	8.85	1.43				
21.50	10.66	8.93	1.38				
22.00	10.73	9.00	1.32				
22.50	10.80	9.07	1.27				
23.00	10.87	9.14	1.22				
23.50	10.94	9.20	1.17				
24.00	11.00	9.26	1.12				
24.50	11.00	9.26	0.00				
25.00	11.00	9.26	0.00				
25.50	11.00	9.26	0.00				
26.00	11.00	9.26	0.00				
26.50	11.00	9.26	0.00				
27.00	11.00	9.26	0.00				
27.50	11.00	9.26	0.00				
28.00	11.00	9.26	0.00				
28.50	11.00	9.26	0.00				

Summary for Subcatchment 46S: PDA-1H

Runoff = 112.92 cfs @ 12.13 hrs, Volume= 8.914 af, Depth=10.76"
 Routed to Pond 51P : FB 1H

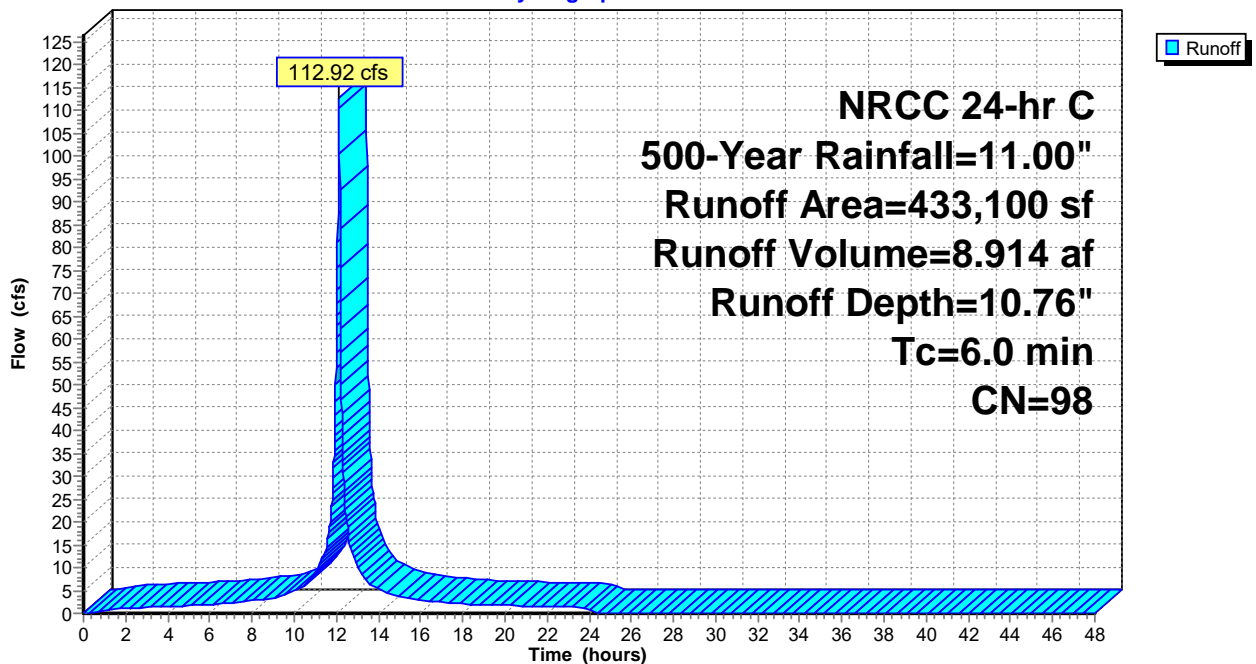
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
433,100	98	Roofs, HSG D
433,100		100.00% Impervious Area

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

Subcatchment 46S: PDA-1H

Hydrograph



Hydrograph for Subcatchment 46S: PDA-1H

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	10.76	0.00
0.50	0.06	0.00	0.11	29.50	11.00	10.76	0.00
1.00	0.13	0.03	0.61	30.00	11.00	10.76	0.00
1.50	0.20	0.07	0.90	30.50	11.00	10.76	0.00
2.00	0.27	0.12	1.10	31.00	11.00	10.76	0.00
2.50	0.34	0.18	1.25	31.50	11.00	10.76	0.00
3.00	0.42	0.24	1.37	32.00	11.00	10.76	0.00
3.50	0.50	0.32	1.46	32.50	11.00	10.76	0.00
4.00	0.58	0.39	1.55	33.00	11.00	10.76	0.00
4.50	0.67	0.47	1.64	33.50	11.00	10.76	0.00
5.00	0.76	0.56	1.72	34.00	11.00	10.76	0.00
5.50	0.85	0.64	1.79	34.50	11.00	10.76	0.00
6.00	0.94	0.74	1.86	35.00	11.00	10.76	0.00
6.50	1.05	0.84	2.09	35.50	11.00	10.76	0.00
7.00	1.16	0.95	2.33	36.00	11.00	10.76	0.00
7.50	1.29	1.07	2.58	36.50	11.00	10.76	0.00
8.00	1.43	1.21	2.82	37.00	11.00	10.76	0.00
8.50	1.58	1.36	3.06	37.50	11.00	10.76	0.00
9.00	1.74	1.52	3.31	38.00	11.00	10.76	0.00
9.50	1.94	1.71	4.11	38.50	11.00	10.76	0.00
10.00	2.17	1.95	4.95	39.00	11.00	10.76	0.00
10.50	2.45	2.22	5.80	39.50	11.00	10.76	0.00
11.00	2.84	2.61	8.69	40.00	11.00	10.76	0.00
11.50	3.44	3.21	13.85	40.50	11.00	10.76	0.00
12.00	5.24	5.00	60.33	41.00	11.00	10.76	0.00
12.50	7.56	7.32	19.79	41.50	11.00	10.76	0.00
13.00	8.16	7.92	10.44	42.00	11.00	10.76	0.00
13.50	8.55	8.31	6.75	42.50	11.00	10.76	0.00
14.00	8.83	8.59	5.29	43.00	11.00	10.76	0.00
14.50	9.06	8.82	4.44	43.50	11.00	10.76	0.00
15.00	9.26	9.02	3.60	44.00	11.00	10.76	0.00
15.50	9.42	9.18	3.20	44.50	11.00	10.76	0.00
16.00	9.57	9.33	2.95	45.00	11.00	10.76	0.00
16.50	9.71	9.47	2.72	45.50	11.00	10.76	0.00
17.00	9.84	9.60	2.47	46.00	11.00	10.76	0.00
17.50	9.95	9.71	2.23	46.50	11.00	10.76	0.00
18.00	10.06	9.82	2.00	47.00	11.00	10.76	0.00
18.50	10.15	9.91	1.89	47.50	11.00	10.76	0.00
19.00	10.24	10.00	1.82	48.00	11.00	10.76	0.00
19.50	10.33	10.09	1.76				
20.00	10.42	10.18	1.71				
20.50	10.50	10.26	1.65				
21.00	10.58	10.34	1.58				
21.50	10.66	10.42	1.53				
22.00	10.73	10.49	1.46				
22.50	10.80	10.56	1.40				
23.00	10.87	10.63	1.35				
23.50	10.94	10.70	1.29				
24.00	11.00	10.76	1.23				
24.50	11.00	10.76	0.00				
25.00	11.00	10.76	0.00				
25.50	11.00	10.76	0.00				
26.00	11.00	10.76	0.00				
26.50	11.00	10.76	0.00				
27.00	11.00	10.76	0.00				
27.50	11.00	10.76	0.00				
28.00	11.00	10.76	0.00				
28.50	11.00	10.76	0.00				

240814_RDM Neelytown Drainage

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NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 47S: PDA-4A

Runoff = 20.99 cfs @ 12.13 hrs, Volume= 1.398 af, Depth= 6.99"
 Routed to Pond B4B : Bioretention 4A

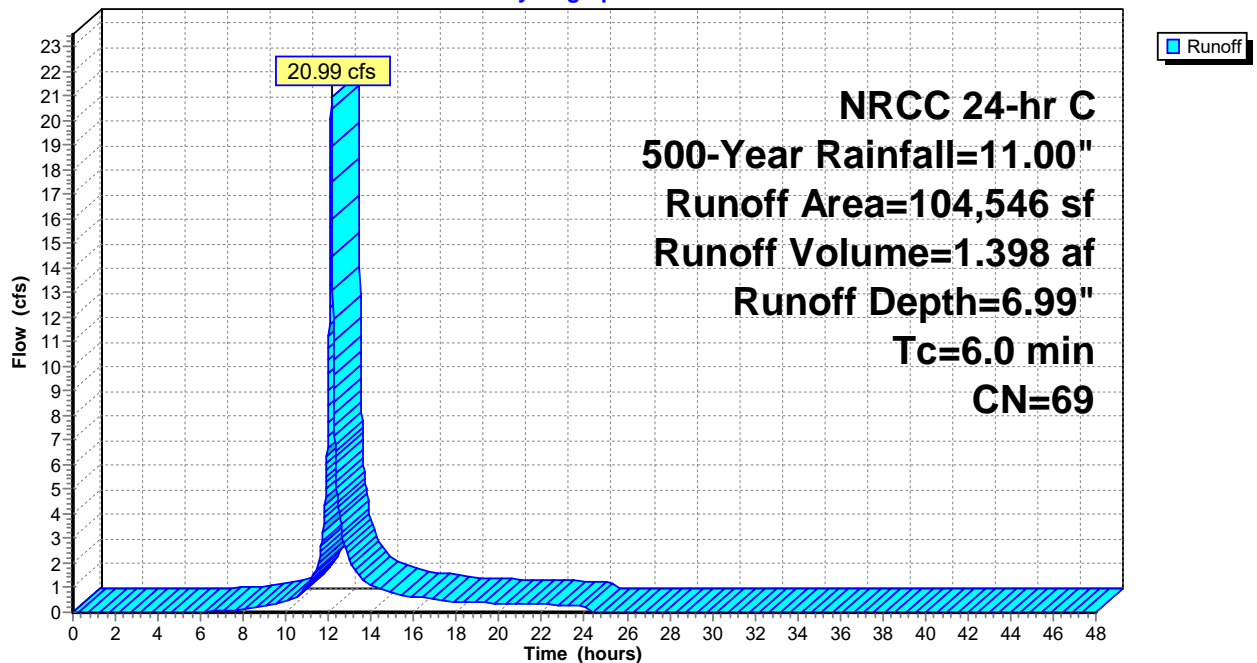
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
9,923	80	>75% Grass cover, Good, HSG D
36,179	98	Paved parking, HSG D
24,698	61	>75% Grass cover, Good, HSG B
33,746	39	>75% Grass cover, Good, HSG A
104,546	69	Weighted Average
68,367		65.39% Pervious Area
36,179		34.61% Impervious Area

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

Subcatchment 47S: PDA-4A

Hydrograph



Hydrograph for Subcatchment 47S: PDA-4A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	6.99	0.00
0.50	0.06	0.00	0.00	29.50	11.00	6.99	0.00
1.00	0.13	0.00	0.00	30.00	11.00	6.99	0.00
1.50	0.20	0.00	0.00	30.50	11.00	6.99	0.00
2.00	0.27	0.00	0.00	31.00	11.00	6.99	0.00
2.50	0.34	0.00	0.00	31.50	11.00	6.99	0.00
3.00	0.42	0.00	0.00	32.00	11.00	6.99	0.00
3.50	0.50	0.00	0.00	32.50	11.00	6.99	0.00
4.00	0.58	0.00	0.00	33.00	11.00	6.99	0.00
4.50	0.67	0.00	0.00	33.50	11.00	6.99	0.00
5.00	0.76	0.00	0.00	34.00	11.00	6.99	0.00
5.50	0.85	0.00	0.00	34.50	11.00	6.99	0.00
6.00	0.94	0.00	0.01	35.00	11.00	6.99	0.00
6.50	1.05	0.00	0.03	35.50	11.00	6.99	0.00
7.00	1.16	0.01	0.06	36.00	11.00	6.99	0.00
7.50	1.29	0.03	0.09	36.50	11.00	6.99	0.00
8.00	1.43	0.06	0.13	37.00	11.00	6.99	0.00
8.50	1.58	0.09	0.18	37.50	11.00	6.99	0.00
9.00	1.74	0.13	0.23	38.00	11.00	6.99	0.00
9.50	1.94	0.20	0.33	38.50	11.00	6.99	0.00
10.00	2.17	0.28	0.46	39.00	11.00	6.99	0.00
10.50	2.45	0.40	0.62	39.50	11.00	6.99	0.00
11.00	2.84	0.58	1.05	40.00	11.00	6.99	0.00
11.50	3.44	0.92	1.94	40.50	11.00	6.99	0.00
12.00	5.24	2.13	10.27	41.00	11.00	6.99	0.00
12.50	7.56	3.98	3.98	41.50	11.00	6.99	0.00
13.00	8.16	4.49	2.15	42.00	11.00	6.99	0.00
13.50	8.55	4.82	1.40	42.50	11.00	6.99	0.00
14.00	8.83	5.06	1.11	43.00	11.00	6.99	0.00
14.50	9.06	5.27	0.94	43.50	11.00	6.99	0.00
15.00	9.26	5.44	0.76	44.00	11.00	6.99	0.00
15.50	9.42	5.58	0.68	44.50	11.00	6.99	0.00
16.00	9.57	5.71	0.63	45.00	11.00	6.99	0.00
16.50	9.71	5.84	0.58	45.50	11.00	6.99	0.00
17.00	9.84	5.95	0.53	46.00	11.00	6.99	0.00
17.50	9.95	6.05	0.48	46.50	11.00	6.99	0.00
18.00	10.06	6.14	0.43	47.00	11.00	6.99	0.00
18.50	10.15	6.23	0.41	47.50	11.00	6.99	0.00
19.00	10.24	6.31	0.39	48.00	11.00	6.99	0.00
19.50	10.33	6.39	0.38				
20.00	10.42	6.47	0.37				
20.50	10.50	6.54	0.36				
21.00	10.58	6.61	0.34				
21.50	10.66	6.68	0.33				
22.00	10.73	6.75	0.32				
22.50	10.80	6.81	0.31				
23.00	10.87	6.88	0.29				
23.50	10.94	6.94	0.28				
24.00	11.00	6.99	0.27				
24.50	11.00	6.99	0.00				
25.00	11.00	6.99	0.00				
25.50	11.00	6.99	0.00				
26.00	11.00	6.99	0.00				
26.50	11.00	6.99	0.00				
27.00	11.00	6.99	0.00				
27.50	11.00	6.99	0.00				
28.00	11.00	6.99	0.00				
28.50	11.00	6.99	0.00				

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NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 48S: PDA-1G-FB

Runoff = 1.22 cfs @ 12.14 hrs, Volume= 0.087 af, Depth= 2.64"
Routed to Pond 55P : FB 1G

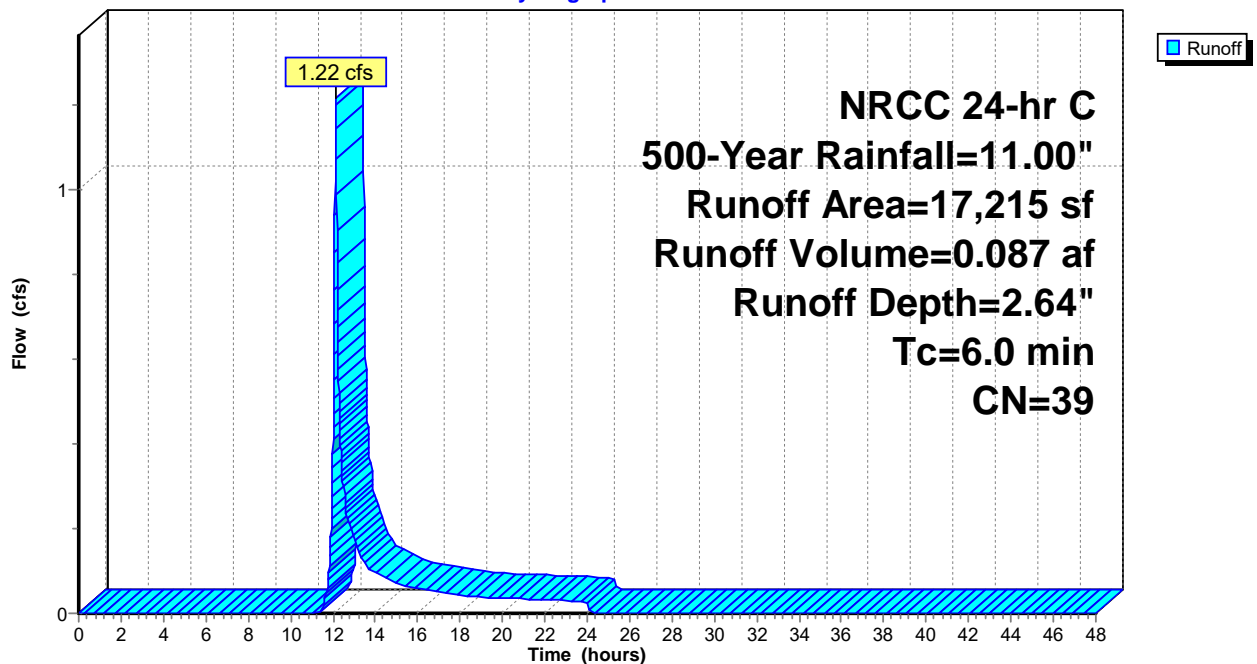
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
17,215	39	>75% Grass cover, Good, HSG A
17,215		100.00% Pervious Area

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

Subcatchment 48S: PDA-1G-FB

Hydrograph



Hydrograph for Subcatchment 48S: PDA-1G-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	2.64	0.00
0.50	0.06	0.00	0.00	29.50	11.00	2.64	0.00
1.00	0.13	0.00	0.00	30.00	11.00	2.64	0.00
1.50	0.20	0.00	0.00	30.50	11.00	2.64	0.00
2.00	0.27	0.00	0.00	31.00	11.00	2.64	0.00
2.50	0.34	0.00	0.00	31.50	11.00	2.64	0.00
3.00	0.42	0.00	0.00	32.00	11.00	2.64	0.00
3.50	0.50	0.00	0.00	32.50	11.00	2.64	0.00
4.00	0.58	0.00	0.00	33.00	11.00	2.64	0.00
4.50	0.67	0.00	0.00	33.50	11.00	2.64	0.00
5.00	0.76	0.00	0.00	34.00	11.00	2.64	0.00
5.50	0.85	0.00	0.00	34.50	11.00	2.64	0.00
6.00	0.94	0.00	0.00	35.00	11.00	2.64	0.00
6.50	1.05	0.00	0.00	35.50	11.00	2.64	0.00
7.00	1.16	0.00	0.00	36.00	11.00	2.64	0.00
7.50	1.29	0.00	0.00	36.50	11.00	2.64	0.00
8.00	1.43	0.00	0.00	37.00	11.00	2.64	0.00
8.50	1.58	0.00	0.00	37.50	11.00	2.64	0.00
9.00	1.74	0.00	0.00	38.00	11.00	2.64	0.00
9.50	1.94	0.00	0.00	38.50	11.00	2.64	0.00
10.00	2.17	0.00	0.00	39.00	11.00	2.64	0.00
10.50	2.45	0.00	0.00	39.50	11.00	2.64	0.00
11.00	2.84	0.00	0.00	40.00	11.00	2.64	0.00
11.50	3.44	0.01	0.01	40.50	11.00	2.64	0.00
12.00	5.24	0.25	0.41	41.00	11.00	2.64	0.00
12.50	7.56	0.98	0.30	41.50	11.00	2.64	0.00
13.00	8.16	1.23	0.18	42.00	11.00	2.64	0.00
13.50	8.55	1.40	0.12	42.50	11.00	2.64	0.00
14.00	8.83	1.52	0.10	43.00	11.00	2.64	0.00
14.50	9.06	1.63	0.08	43.50	11.00	2.64	0.00
15.00	9.26	1.72	0.07	44.00	11.00	2.64	0.00
15.50	9.42	1.80	0.06	44.50	11.00	2.64	0.00
16.00	9.57	1.88	0.06	45.00	11.00	2.64	0.00
16.50	9.71	1.95	0.05	45.50	11.00	2.64	0.00
17.00	9.84	2.01	0.05	46.00	11.00	2.64	0.00
17.50	9.95	2.07	0.05	46.50	11.00	2.64	0.00
18.00	10.06	2.13	0.04	47.00	11.00	2.64	0.00
18.50	10.15	2.18	0.04	47.50	11.00	2.64	0.00
19.00	10.24	2.22	0.04	48.00	11.00	2.64	0.00
19.50	10.33	2.27	0.04				
20.00	10.42	2.32	0.04				
20.50	10.50	2.36	0.04				
21.00	10.58	2.41	0.03				
21.50	10.66	2.45	0.03				
22.00	10.73	2.49	0.03				
22.50	10.80	2.53	0.03				
23.00	10.87	2.56	0.03				
23.50	10.94	2.60	0.03				
24.00	11.00	2.64	0.03				
24.50	11.00	2.64	0.00				
25.00	11.00	2.64	0.00				
25.50	11.00	2.64	0.00				
26.00	11.00	2.64	0.00				
26.50	11.00	2.64	0.00				
27.00	11.00	2.64	0.00				
27.50	11.00	2.64	0.00				
28.00	11.00	2.64	0.00				
28.50	11.00	2.64	0.00				

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NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 49S: PDA-4B

Runoff = 56.47 cfs @ 12.13 hrs, Volume= 4.002 af, Depth= 9.00"
 Routed to Pond 29P : Bioretention 4B

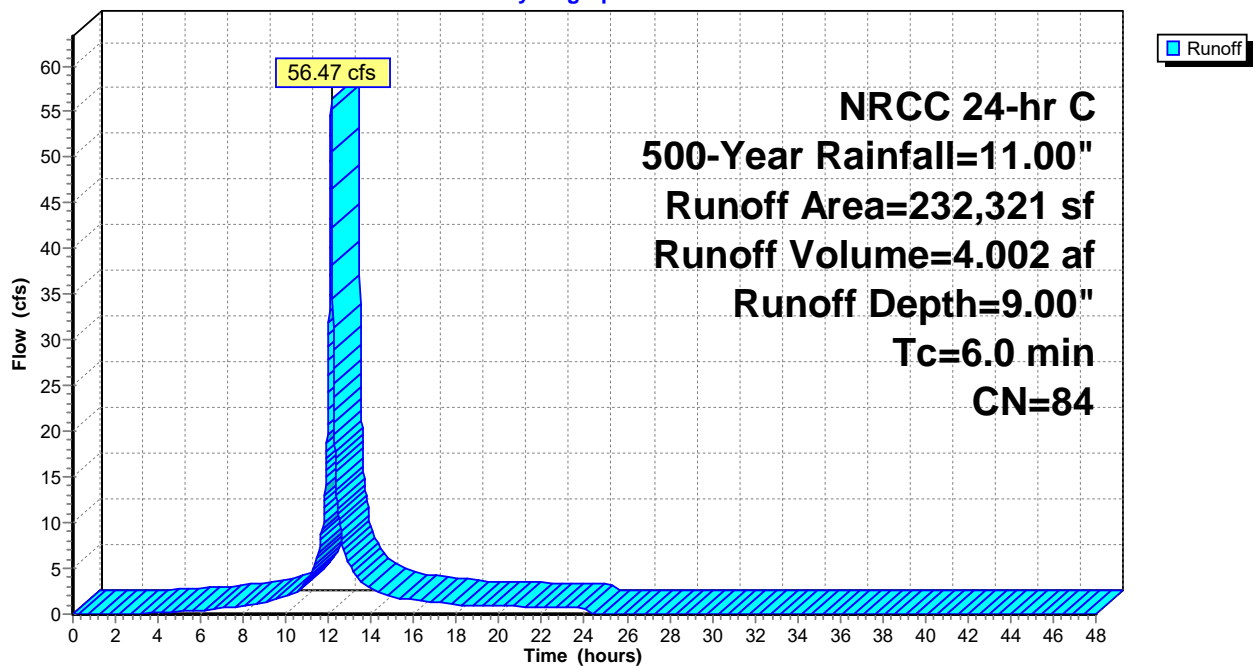
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
146,145	98	Paved parking, HSG D
86,176	61	>75% Grass cover, Good, HSG B
0	98	Unconnected roofs, HSG D
232,321	84	Weighted Average
86,176		37.09% Pervious Area
146,145		62.91% Impervious Area

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

Subcatchment 49S: PDA-4B

Hydrograph



Hydrograph for Subcatchment 49S: PDA-4B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	9.00	0.00
0.50	0.06	0.00	0.00	29.50	11.00	9.00	0.00
1.00	0.13	0.00	0.00	30.00	11.00	9.00	0.00
1.50	0.20	0.00	0.00	30.50	11.00	9.00	0.00
2.00	0.27	0.00	0.00	31.00	11.00	9.00	0.00
2.50	0.34	0.00	0.00	31.50	11.00	9.00	0.00
3.00	0.42	0.00	0.02	32.00	11.00	9.00	0.00
3.50	0.50	0.01	0.09	32.50	11.00	9.00	0.00
4.00	0.58	0.02	0.15	33.00	11.00	9.00	0.00
4.50	0.67	0.04	0.22	33.50	11.00	9.00	0.00
5.00	0.76	0.06	0.28	34.00	11.00	9.00	0.00
5.50	0.85	0.09	0.35	34.50	11.00	9.00	0.00
6.00	0.94	0.13	0.41	35.00	11.00	9.00	0.00
6.50	1.05	0.17	0.51	35.50	11.00	9.00	0.00
7.00	1.16	0.23	0.63	36.00	11.00	9.00	0.00
7.50	1.29	0.29	0.75	36.50	11.00	9.00	0.00
8.00	1.43	0.37	0.89	37.00	11.00	9.00	0.00
8.50	1.58	0.46	1.03	37.50	11.00	9.00	0.00
9.00	1.74	0.57	1.18	38.00	11.00	9.00	0.00
9.50	1.94	0.70	1.54	38.50	11.00	9.00	0.00
10.00	2.17	0.87	1.95	39.00	11.00	9.00	0.00
10.50	2.45	1.08	2.39	39.50	11.00	9.00	0.00
11.00	2.84	1.38	3.76	40.00	11.00	9.00	0.00
11.50	3.44	1.89	6.30	40.50	11.00	9.00	0.00
12.00	5.24	3.49	29.34	41.00	11.00	9.00	0.00
12.50	7.56	5.67	10.13	41.50	11.00	9.00	0.00
13.00	8.16	6.25	5.38	42.00	11.00	9.00	0.00
13.50	8.55	6.62	3.49	42.50	11.00	9.00	0.00
14.00	8.83	6.89	2.74	43.00	11.00	9.00	0.00
14.50	9.06	7.12	2.31	43.50	11.00	9.00	0.00
15.00	9.26	7.31	1.87	44.00	11.00	9.00	0.00
15.50	9.42	7.47	1.66	44.50	11.00	9.00	0.00
16.00	9.57	7.61	1.54	45.00	11.00	9.00	0.00
16.50	9.71	7.75	1.42	45.50	11.00	9.00	0.00
17.00	9.84	7.87	1.29	46.00	11.00	9.00	0.00
17.50	9.95	7.98	1.17	46.50	11.00	9.00	0.00
18.00	10.06	8.08	1.04	47.00	11.00	9.00	0.00
18.50	10.15	8.18	0.99	47.50	11.00	9.00	0.00
19.00	10.24	8.27	0.95	48.00	11.00	9.00	0.00
19.50	10.33	8.35	0.92				
20.00	10.42	8.44	0.89				
20.50	10.50	8.52	0.86				
21.00	10.58	8.60	0.83				
21.50	10.66	8.67	0.80				
22.00	10.73	8.74	0.77				
22.50	10.80	8.81	0.74				
23.00	10.87	8.88	0.71				
23.50	10.94	8.94	0.68				
24.00	11.00	9.00	0.65				
24.50	11.00	9.00	0.00				
25.00	11.00	9.00	0.00				
25.50	11.00	9.00	0.00				
26.00	11.00	9.00	0.00				
26.50	11.00	9.00	0.00				
27.00	11.00	9.00	0.00				
27.50	11.00	9.00	0.00				
28.00	11.00	9.00	0.00				
28.50	11.00	9.00	0.00				

Summary for Subcatchment 51S: PDA-1G-B

Runoff = 2.75 cfs @ 12.14 hrs, Volume= 0.185 af, Depth= 3.52"
 Routed to Pond 54P : INFIL 1G

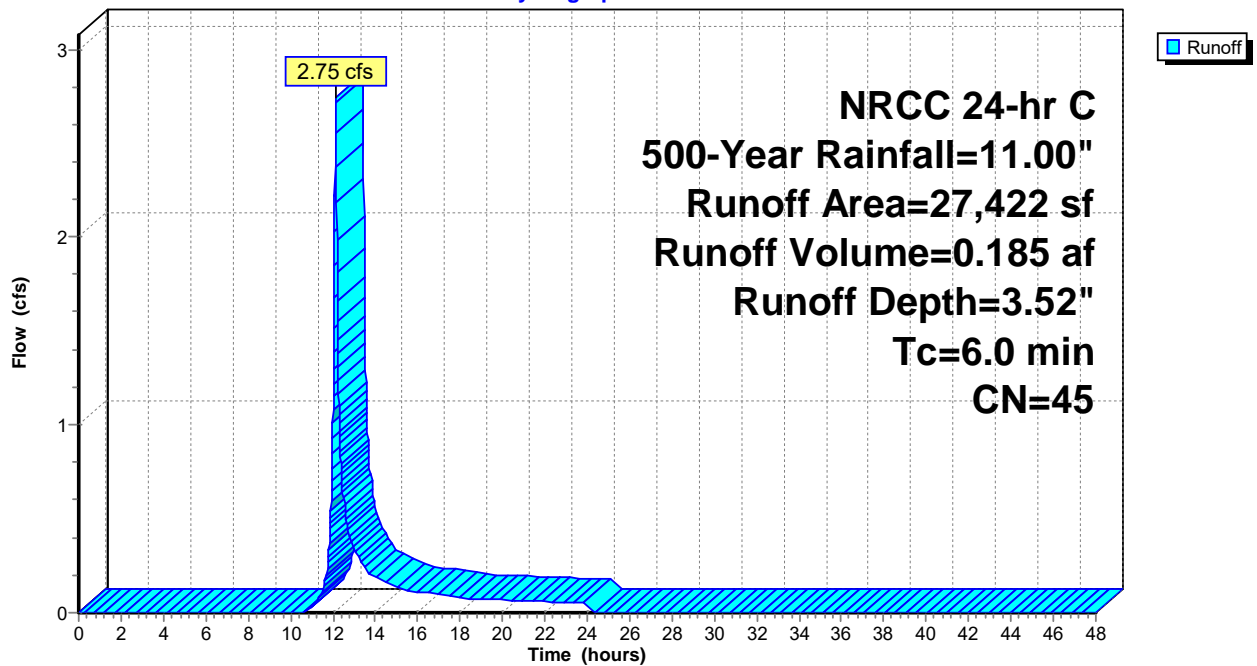
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
19,919	39	>75% Grass cover, Good, HSG A
7,503	61	>75% Grass cover, Good, HSG B
27,422	45	Weighted Average
27,422		100.00% Pervious Area

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

Subcatchment 51S: PDA-1G-B

Hydrograph



Hydrograph for Subcatchment 51S: PDA-1G-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	3.52	0.00
0.50	0.06	0.00	0.00	29.50	11.00	3.52	0.00
1.00	0.13	0.00	0.00	30.00	11.00	3.52	0.00
1.50	0.20	0.00	0.00	30.50	11.00	3.52	0.00
2.00	0.27	0.00	0.00	31.00	11.00	3.52	0.00
2.50	0.34	0.00	0.00	31.50	11.00	3.52	0.00
3.00	0.42	0.00	0.00	32.00	11.00	3.52	0.00
3.50	0.50	0.00	0.00	32.50	11.00	3.52	0.00
4.00	0.58	0.00	0.00	33.00	11.00	3.52	0.00
4.50	0.67	0.00	0.00	33.50	11.00	3.52	0.00
5.00	0.76	0.00	0.00	34.00	11.00	3.52	0.00
5.50	0.85	0.00	0.00	34.50	11.00	3.52	0.00
6.00	0.94	0.00	0.00	35.00	11.00	3.52	0.00
6.50	1.05	0.00	0.00	35.50	11.00	3.52	0.00
7.00	1.16	0.00	0.00	36.00	11.00	3.52	0.00
7.50	1.29	0.00	0.00	36.50	11.00	3.52	0.00
8.00	1.43	0.00	0.00	37.00	11.00	3.52	0.00
8.50	1.58	0.00	0.00	37.50	11.00	3.52	0.00
9.00	1.74	0.00	0.00	38.00	11.00	3.52	0.00
9.50	1.94	0.00	0.00	38.50	11.00	3.52	0.00
10.00	2.17	0.00	0.00	39.00	11.00	3.52	0.00
10.50	2.45	0.00	0.00	39.50	11.00	3.52	0.00
11.00	2.84	0.01	0.03	40.00	11.00	3.52	0.00
11.50	3.44	0.08	0.11	40.50	11.00	3.52	0.00
12.00	5.24	0.52	1.09	41.00	11.00	3.52	0.00
12.50	7.56	1.51	0.62	41.50	11.00	3.52	0.00
13.00	8.16	1.82	0.35	42.00	11.00	3.52	0.00
13.50	8.55	2.03	0.24	42.50	11.00	3.52	0.00
14.00	8.83	2.19	0.19	43.00	11.00	3.52	0.00
14.50	9.06	2.32	0.16	43.50	11.00	3.52	0.00
15.00	9.26	2.44	0.13	44.00	11.00	3.52	0.00
15.50	9.42	2.53	0.12	44.50	11.00	3.52	0.00
16.00	9.57	2.62	0.11	45.00	11.00	3.52	0.00
16.50	9.71	2.71	0.10	45.50	11.00	3.52	0.00
17.00	9.84	2.79	0.10	46.00	11.00	3.52	0.00
17.50	9.95	2.86	0.09	46.50	11.00	3.52	0.00
18.00	10.06	2.92	0.08	47.00	11.00	3.52	0.00
18.50	10.15	2.98	0.07	47.50	11.00	3.52	0.00
19.00	10.24	3.04	0.07	48.00	11.00	3.52	0.00
19.50	10.33	3.09	0.07				
20.00	10.42	3.15	0.07				
20.50	10.50	3.20	0.07				
21.00	10.58	3.25	0.06				
21.50	10.66	3.30	0.06				
22.00	10.73	3.35	0.06				
22.50	10.80	3.40	0.06				
23.00	10.87	3.44	0.06				
23.50	10.94	3.48	0.05				
24.00	11.00	3.52	0.05				
24.50	11.00	3.52	0.00				
25.00	11.00	3.52	0.00				
25.50	11.00	3.52	0.00				
26.00	11.00	3.52	0.00				
26.50	11.00	3.52	0.00				
27.00	11.00	3.52	0.00				
27.50	11.00	3.52	0.00				
28.00	11.00	3.52	0.00				
28.50	11.00	3.52	0.00				

Summary for Subcatchment 52S: PDA-1G

Runoff = 108.69 cfs @ 12.13 hrs, Volume= 8.581 af, Depth=10.76"
 Routed to Pond 55P : FB 1G

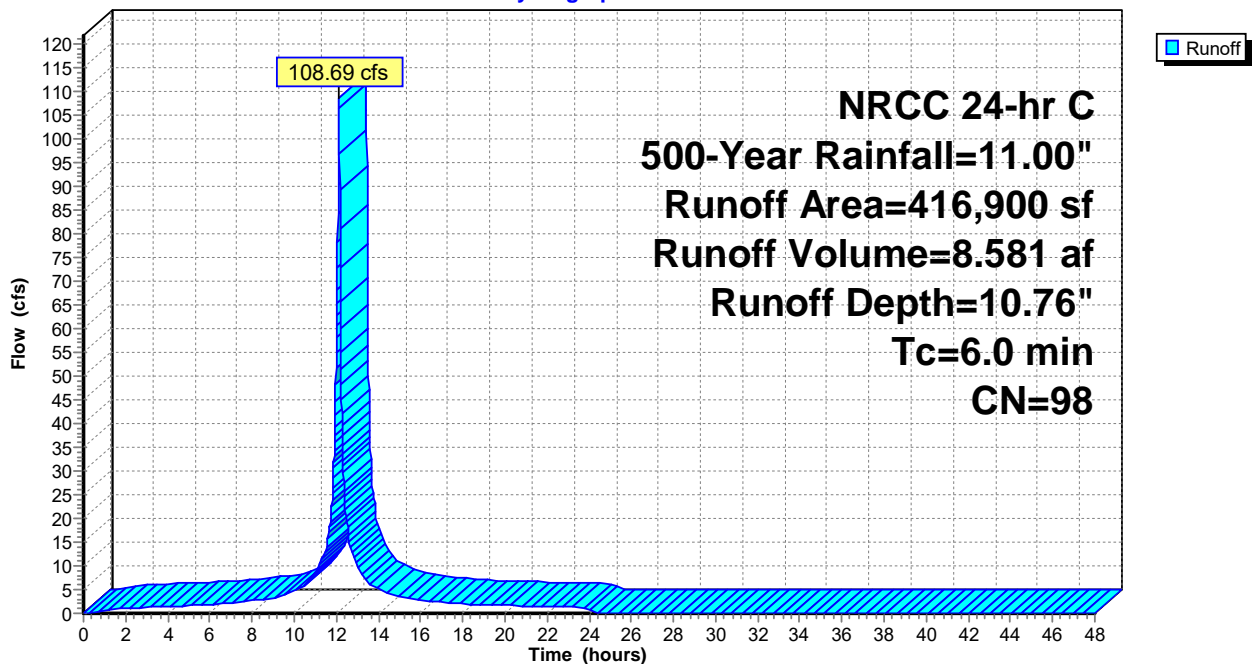
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
416,900	98	Roofs, HSG D
416,900		100.00% Impervious Area

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

Subcatchment 52S: PDA-1G

Hydrograph



Hydrograph for Subcatchment 52S: PDA-1G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	10.76	0.00
0.50	0.06	0.00	0.11	29.50	11.00	10.76	0.00
1.00	0.13	0.03	0.59	30.00	11.00	10.76	0.00
1.50	0.20	0.07	0.87	30.50	11.00	10.76	0.00
2.00	0.27	0.12	1.06	31.00	11.00	10.76	0.00
2.50	0.34	0.18	1.20	31.50	11.00	10.76	0.00
3.00	0.42	0.24	1.31	32.00	11.00	10.76	0.00
3.50	0.50	0.32	1.41	32.50	11.00	10.76	0.00
4.00	0.58	0.39	1.50	33.00	11.00	10.76	0.00
4.50	0.67	0.47	1.58	33.50	11.00	10.76	0.00
5.00	0.76	0.56	1.65	34.00	11.00	10.76	0.00
5.50	0.85	0.64	1.72	34.50	11.00	10.76	0.00
6.00	0.94	0.74	1.79	35.00	11.00	10.76	0.00
6.50	1.05	0.84	2.01	35.50	11.00	10.76	0.00
7.00	1.16	0.95	2.24	36.00	11.00	10.76	0.00
7.50	1.29	1.07	2.48	36.50	11.00	10.76	0.00
8.00	1.43	1.21	2.72	37.00	11.00	10.76	0.00
8.50	1.58	1.36	2.95	37.50	11.00	10.76	0.00
9.00	1.74	1.52	3.19	38.00	11.00	10.76	0.00
9.50	1.94	1.71	3.96	38.50	11.00	10.76	0.00
10.00	2.17	1.95	4.76	39.00	11.00	10.76	0.00
10.50	2.45	2.22	5.58	39.50	11.00	10.76	0.00
11.00	2.84	2.61	8.36	40.00	11.00	10.76	0.00
11.50	3.44	3.21	13.33	40.50	11.00	10.76	0.00
12.00	5.24	5.00	58.07	41.00	11.00	10.76	0.00
12.50	7.56	7.32	19.05	41.50	11.00	10.76	0.00
13.00	8.16	7.92	10.05	42.00	11.00	10.76	0.00
13.50	8.55	8.31	6.49	42.50	11.00	10.76	0.00
14.00	8.83	8.59	5.09	43.00	11.00	10.76	0.00
14.50	9.06	8.82	4.28	43.50	11.00	10.76	0.00
15.00	9.26	9.02	3.46	44.00	11.00	10.76	0.00
15.50	9.42	9.18	3.08	44.50	11.00	10.76	0.00
16.00	9.57	9.33	2.84	45.00	11.00	10.76	0.00
16.50	9.71	9.47	2.62	45.50	11.00	10.76	0.00
17.00	9.84	9.60	2.38	46.00	11.00	10.76	0.00
17.50	9.95	9.71	2.15	46.50	11.00	10.76	0.00
18.00	10.06	9.82	1.92	47.00	11.00	10.76	0.00
18.50	10.15	9.91	1.82	47.50	11.00	10.76	0.00
19.00	10.24	10.00	1.75	48.00	11.00	10.76	0.00
19.50	10.33	10.09	1.70				
20.00	10.42	10.18	1.64				
20.50	10.50	10.26	1.59				
21.00	10.58	10.34	1.52				
21.50	10.66	10.42	1.47				
22.00	10.73	10.49	1.41				
22.50	10.80	10.56	1.35				
23.00	10.87	10.63	1.30				
23.50	10.94	10.70	1.24				
24.00	11.00	10.76	1.19				
24.50	11.00	10.76	0.00				
25.00	11.00	10.76	0.00				
25.50	11.00	10.76	0.00				
26.00	11.00	10.76	0.00				
26.50	11.00	10.76	0.00				
27.00	11.00	10.76	0.00				
27.50	11.00	10.76	0.00				
28.00	11.00	10.76	0.00				
28.50	11.00	10.76	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 54S: PDA-1H-IB

Runoff = 2.81 cfs @ 12.14 hrs, Volume= 0.200 af, Depth= 2.64"
 Routed to Pond 47P : INFIL 1H

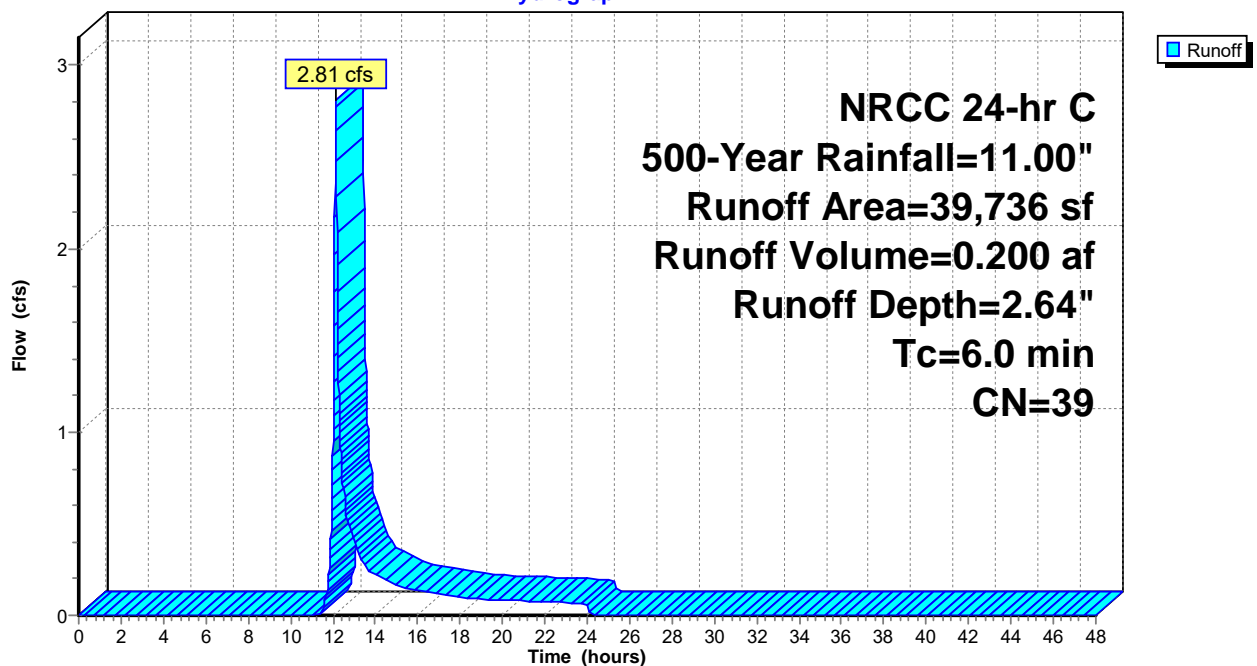
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
39,736	39	>75% Grass cover, Good, HSG A
39,736		100.00% Pervious Area

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

Subcatchment 54S: PDA-1H-IB

Hydrograph



Hydrograph for Subcatchment 54S: PDA-1H-IB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	2.64	0.00
0.50	0.06	0.00	0.00	29.50	11.00	2.64	0.00
1.00	0.13	0.00	0.00	30.00	11.00	2.64	0.00
1.50	0.20	0.00	0.00	30.50	11.00	2.64	0.00
2.00	0.27	0.00	0.00	31.00	11.00	2.64	0.00
2.50	0.34	0.00	0.00	31.50	11.00	2.64	0.00
3.00	0.42	0.00	0.00	32.00	11.00	2.64	0.00
3.50	0.50	0.00	0.00	32.50	11.00	2.64	0.00
4.00	0.58	0.00	0.00	33.00	11.00	2.64	0.00
4.50	0.67	0.00	0.00	33.50	11.00	2.64	0.00
5.00	0.76	0.00	0.00	34.00	11.00	2.64	0.00
5.50	0.85	0.00	0.00	34.50	11.00	2.64	0.00
6.00	0.94	0.00	0.00	35.00	11.00	2.64	0.00
6.50	1.05	0.00	0.00	35.50	11.00	2.64	0.00
7.00	1.16	0.00	0.00	36.00	11.00	2.64	0.00
7.50	1.29	0.00	0.00	36.50	11.00	2.64	0.00
8.00	1.43	0.00	0.00	37.00	11.00	2.64	0.00
8.50	1.58	0.00	0.00	37.50	11.00	2.64	0.00
9.00	1.74	0.00	0.00	38.00	11.00	2.64	0.00
9.50	1.94	0.00	0.00	38.50	11.00	2.64	0.00
10.00	2.17	0.00	0.00	39.00	11.00	2.64	0.00
10.50	2.45	0.00	0.00	39.50	11.00	2.64	0.00
11.00	2.84	0.00	0.00	40.00	11.00	2.64	0.00
11.50	3.44	0.01	0.03	40.50	11.00	2.64	0.00
12.00	5.24	0.25	0.95	41.00	11.00	2.64	0.00
12.50	7.56	0.98	0.69	41.50	11.00	2.64	0.00
13.00	8.16	1.23	0.40	42.00	11.00	2.64	0.00
13.50	8.55	1.40	0.28	42.50	11.00	2.64	0.00
14.00	8.83	1.52	0.22	43.00	11.00	2.64	0.00
14.50	9.06	1.63	0.19	43.50	11.00	2.64	0.00
15.00	9.26	1.72	0.16	44.00	11.00	2.64	0.00
15.50	9.42	1.80	0.14	44.50	11.00	2.64	0.00
16.00	9.57	1.88	0.13	45.00	11.00	2.64	0.00
16.50	9.71	1.95	0.13	45.50	11.00	2.64	0.00
17.00	9.84	2.01	0.12	46.00	11.00	2.64	0.00
17.50	9.95	2.07	0.11	46.50	11.00	2.64	0.00
18.00	10.06	2.13	0.10	47.00	11.00	2.64	0.00
18.50	10.15	2.18	0.09	47.50	11.00	2.64	0.00
19.00	10.24	2.22	0.09	48.00	11.00	2.64	0.00
19.50	10.33	2.27	0.09				
20.00	10.42	2.32	0.08				
20.50	10.50	2.36	0.08				
21.00	10.58	2.41	0.08				
21.50	10.66	2.45	0.08				
22.00	10.73	2.49	0.07				
22.50	10.80	2.53	0.07				
23.00	10.87	2.56	0.07				
23.50	10.94	2.60	0.07				
24.00	11.00	2.64	0.06				
24.50	11.00	2.64	0.00				
25.00	11.00	2.64	0.00				
25.50	11.00	2.64	0.00				
26.00	11.00	2.64	0.00				
26.50	11.00	2.64	0.00				
27.00	11.00	2.64	0.00				
27.50	11.00	2.64	0.00				
28.00	11.00	2.64	0.00				
28.50	11.00	2.64	0.00				

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NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 55S: PDA-1E

Runoff = 4.49 cfs @ 12.13 hrs, Volume= 0.344 af, Depth=10.39"
 Routed to Pond 59P : FB 1E

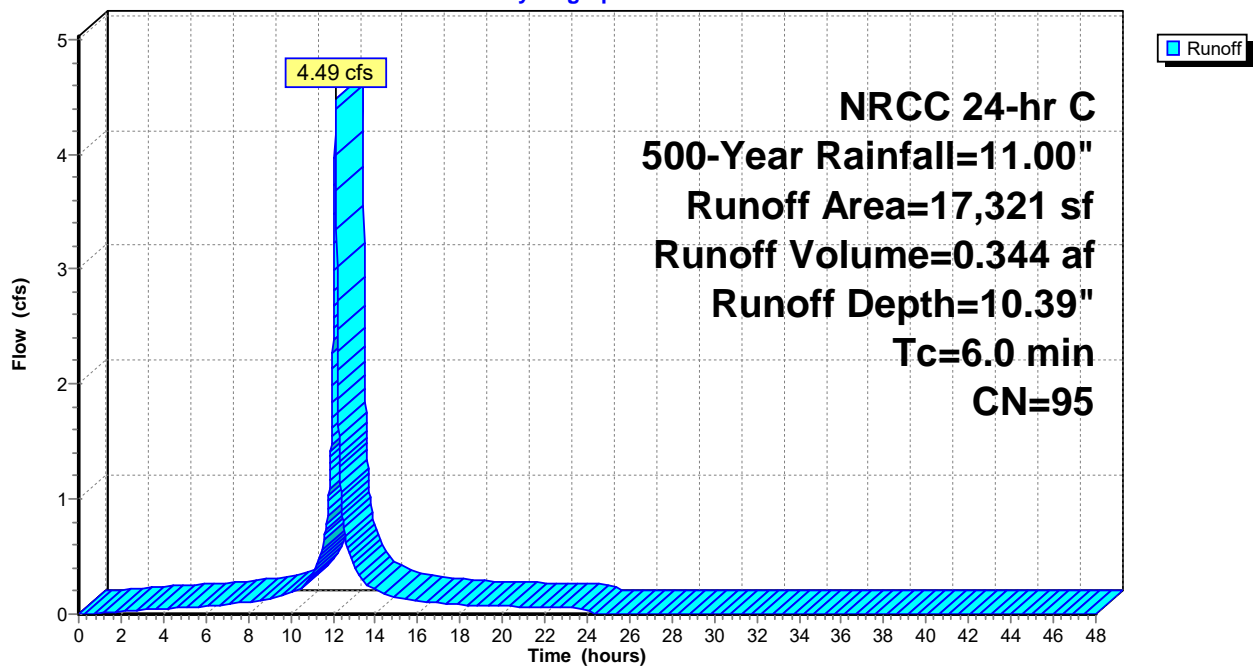
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
3,059	80	>75% Grass cover, Good, HSG D
0	39	>75% Grass cover, Good, HSG A
14,262	98	Paved parking, HSG D
17,321	95	Weighted Average
3,059		17.66% Pervious Area
14,262		82.34% Impervious Area

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

Subcatchment 55S: PDA-1E

Hydrograph



Hydrograph for Subcatchment 55S: PDA-1E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	10.39	0.00
0.50	0.06	0.00	0.00	29.50	11.00	10.39	0.00
1.00	0.13	0.00	0.00	30.00	11.00	10.39	0.00
1.50	0.20	0.01	0.01	30.50	11.00	10.39	0.00
2.00	0.27	0.04	0.02	31.00	11.00	10.39	0.00
2.50	0.34	0.07	0.03	31.50	11.00	10.39	0.00
3.00	0.42	0.12	0.04	32.00	11.00	10.39	0.00
3.50	0.50	0.17	0.04	32.50	11.00	10.39	0.00
4.00	0.58	0.23	0.05	33.00	11.00	10.39	0.00
4.50	0.67	0.29	0.05	33.50	11.00	10.39	0.00
5.00	0.76	0.36	0.06	34.00	11.00	10.39	0.00
5.50	0.85	0.44	0.06	34.50	11.00	10.39	0.00
6.00	0.94	0.52	0.07	35.00	11.00	10.39	0.00
6.50	1.05	0.60	0.07	35.50	11.00	10.39	0.00
7.00	1.16	0.71	0.08	36.00	11.00	10.39	0.00
7.50	1.29	0.82	0.09	36.50	11.00	10.39	0.00
8.00	1.43	0.95	0.11	37.00	11.00	10.39	0.00
8.50	1.58	1.09	0.12	37.50	11.00	10.39	0.00
9.00	1.74	1.24	0.13	38.00	11.00	10.39	0.00
9.50	1.94	1.42	0.16	38.50	11.00	10.39	0.00
10.00	2.17	1.65	0.19	39.00	11.00	10.39	0.00
10.50	2.45	1.91	0.23	39.50	11.00	10.39	0.00
11.00	2.84	2.29	0.34	40.00	11.00	10.39	0.00
11.50	3.44	2.88	0.54	40.50	11.00	10.39	0.00
12.00	5.24	4.66	2.39	41.00	11.00	10.39	0.00
12.50	7.56	6.96	0.79	41.50	11.00	10.39	0.00
13.00	8.16	7.56	0.42	42.00	11.00	10.39	0.00
13.50	8.55	7.95	0.27	42.50	11.00	10.39	0.00
14.00	8.83	8.23	0.21	43.00	11.00	10.39	0.00
14.50	9.06	8.46	0.18	43.50	11.00	10.39	0.00
15.00	9.26	8.65	0.14	44.00	11.00	10.39	0.00
15.50	9.42	8.82	0.13	44.50	11.00	10.39	0.00
16.00	9.57	8.97	0.12	45.00	11.00	10.39	0.00
16.50	9.71	9.11	0.11	45.50	11.00	10.39	0.00
17.00	9.84	9.23	0.10	46.00	11.00	10.39	0.00
17.50	9.95	9.35	0.09	46.50	11.00	10.39	0.00
18.00	10.06	9.45	0.08	47.00	11.00	10.39	0.00
18.50	10.15	9.55	0.08	47.50	11.00	10.39	0.00
19.00	10.24	9.64	0.07	48.00	11.00	10.39	0.00
19.50	10.33	9.73	0.07				
20.00	10.42	9.81	0.07				
20.50	10.50	9.90	0.07				
21.00	10.58	9.98	0.06				
21.50	10.66	10.05	0.06				
22.00	10.73	10.13	0.06				
22.50	10.80	10.20	0.06				
23.00	10.87	10.27	0.05				
23.50	10.94	10.33	0.05				
24.00	11.00	10.39	0.05				
24.50	11.00	10.39	0.00				
25.00	11.00	10.39	0.00				
25.50	11.00	10.39	0.00				
26.00	11.00	10.39	0.00				
26.50	11.00	10.39	0.00				
27.00	11.00	10.39	0.00				
27.50	11.00	10.39	0.00				
28.00	11.00	10.39	0.00				
28.50	11.00	10.39	0.00				

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NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 56S: PDA-1B-FB

Runoff = 1.16 cfs @ 12.14 hrs, Volume= 0.083 af, Depth= 2.64"
Routed to Pond 44P : FB 1B

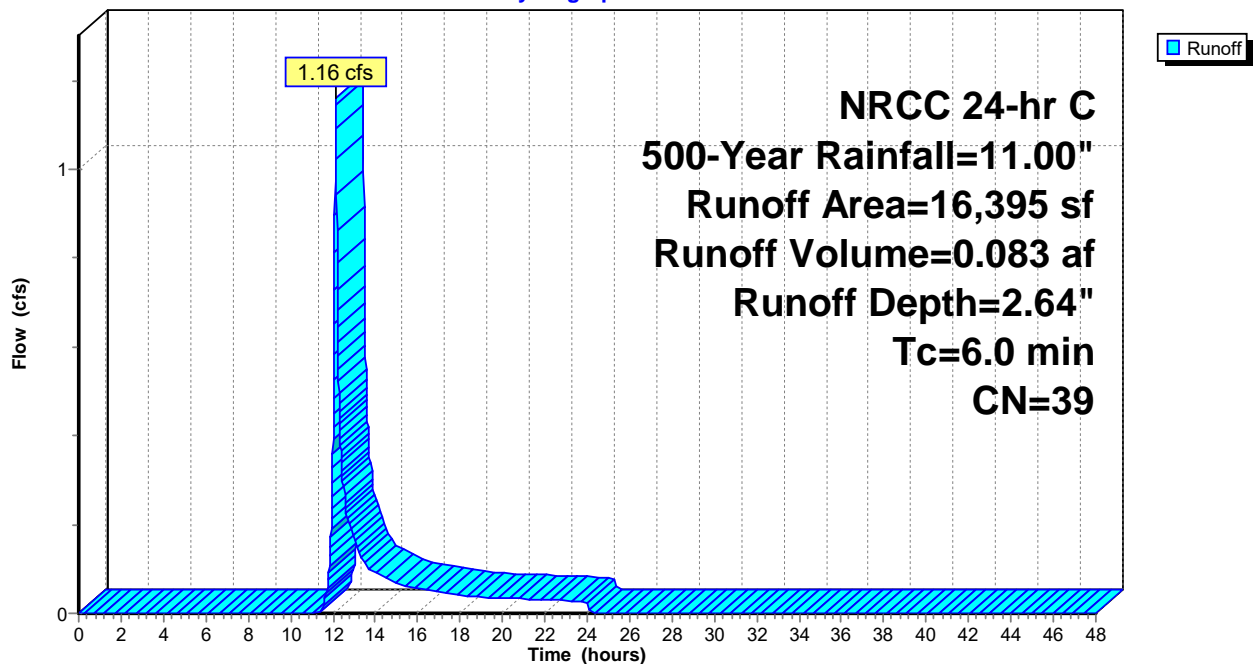
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
16,395	39	>75% Grass cover, Good, HSG A
16,395		100.00% Pervious Area

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

Subcatchment 56S: PDA-1B-FB

Hydrograph



Hydrograph for Subcatchment 56S: PDA-1B-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	2.64	0.00
0.50	0.06	0.00	0.00	29.50	11.00	2.64	0.00
1.00	0.13	0.00	0.00	30.00	11.00	2.64	0.00
1.50	0.20	0.00	0.00	30.50	11.00	2.64	0.00
2.00	0.27	0.00	0.00	31.00	11.00	2.64	0.00
2.50	0.34	0.00	0.00	31.50	11.00	2.64	0.00
3.00	0.42	0.00	0.00	32.00	11.00	2.64	0.00
3.50	0.50	0.00	0.00	32.50	11.00	2.64	0.00
4.00	0.58	0.00	0.00	33.00	11.00	2.64	0.00
4.50	0.67	0.00	0.00	33.50	11.00	2.64	0.00
5.00	0.76	0.00	0.00	34.00	11.00	2.64	0.00
5.50	0.85	0.00	0.00	34.50	11.00	2.64	0.00
6.00	0.94	0.00	0.00	35.00	11.00	2.64	0.00
6.50	1.05	0.00	0.00	35.50	11.00	2.64	0.00
7.00	1.16	0.00	0.00	36.00	11.00	2.64	0.00
7.50	1.29	0.00	0.00	36.50	11.00	2.64	0.00
8.00	1.43	0.00	0.00	37.00	11.00	2.64	0.00
8.50	1.58	0.00	0.00	37.50	11.00	2.64	0.00
9.00	1.74	0.00	0.00	38.00	11.00	2.64	0.00
9.50	1.94	0.00	0.00	38.50	11.00	2.64	0.00
10.00	2.17	0.00	0.00	39.00	11.00	2.64	0.00
10.50	2.45	0.00	0.00	39.50	11.00	2.64	0.00
11.00	2.84	0.00	0.00	40.00	11.00	2.64	0.00
11.50	3.44	0.01	0.01	40.50	11.00	2.64	0.00
12.00	5.24	0.25	0.39	41.00	11.00	2.64	0.00
12.50	7.56	0.98	0.29	41.50	11.00	2.64	0.00
13.00	8.16	1.23	0.17	42.00	11.00	2.64	0.00
13.50	8.55	1.40	0.11	42.50	11.00	2.64	0.00
14.00	8.83	1.52	0.09	43.00	11.00	2.64	0.00
14.50	9.06	1.63	0.08	43.50	11.00	2.64	0.00
15.00	9.26	1.72	0.07	44.00	11.00	2.64	0.00
15.50	9.42	1.80	0.06	44.50	11.00	2.64	0.00
16.00	9.57	1.88	0.06	45.00	11.00	2.64	0.00
16.50	9.71	1.95	0.05	45.50	11.00	2.64	0.00
17.00	9.84	2.01	0.05	46.00	11.00	2.64	0.00
17.50	9.95	2.07	0.04	46.50	11.00	2.64	0.00
18.00	10.06	2.13	0.04	47.00	11.00	2.64	0.00
18.50	10.15	2.18	0.04	47.50	11.00	2.64	0.00
19.00	10.24	2.22	0.04	48.00	11.00	2.64	0.00
19.50	10.33	2.27	0.04				
20.00	10.42	2.32	0.03				
20.50	10.50	2.36	0.03				
21.00	10.58	2.41	0.03				
21.50	10.66	2.45	0.03				
22.00	10.73	2.49	0.03				
22.50	10.80	2.53	0.03				
23.00	10.87	2.56	0.03				
23.50	10.94	2.60	0.03				
24.00	11.00	2.64	0.03				
24.50	11.00	2.64	0.00				
25.00	11.00	2.64	0.00				
25.50	11.00	2.64	0.00				
26.00	11.00	2.64	0.00				
26.50	11.00	2.64	0.00				
27.00	11.00	2.64	0.00				
27.50	11.00	2.64	0.00				
28.00	11.00	2.64	0.00				
28.50	11.00	2.64	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

Prepared by Colliers Engineering & Design

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Summary for Subcatchment 57S: PDA-1H-FB

Runoff = 1.38 cfs @ 12.14 hrs, Volume= 0.098 af, Depth= 2.64"
Routed to Pond 51P : FB 1H

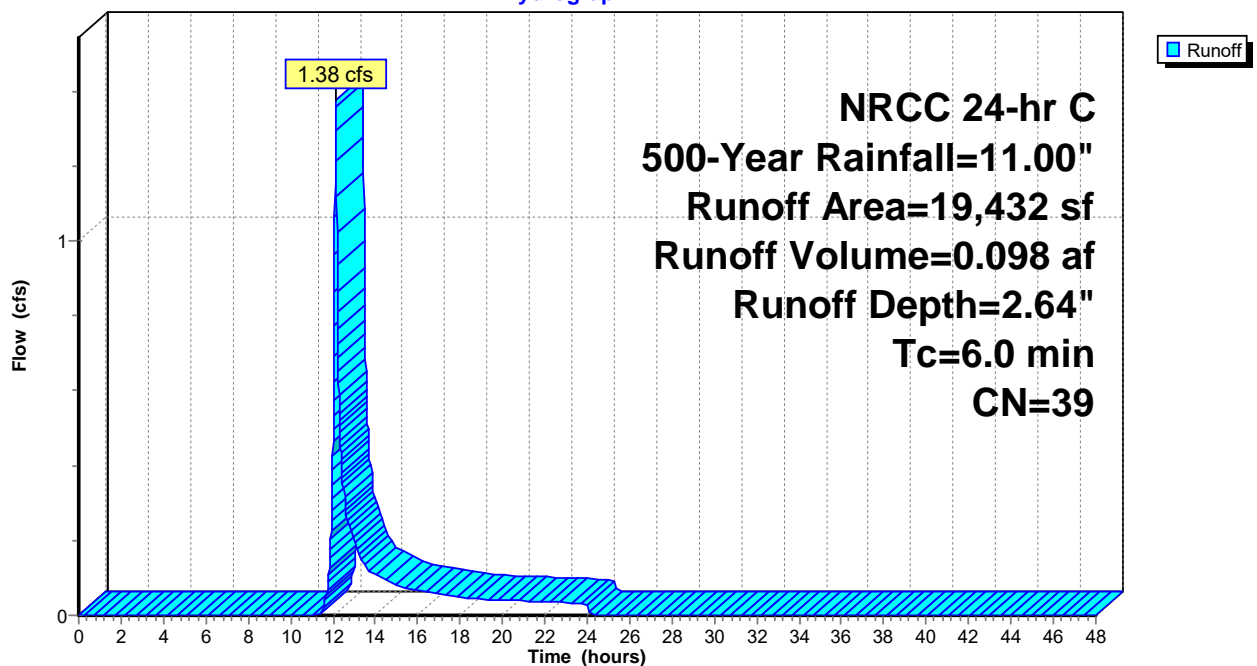
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
19,432	39	>75% Grass cover, Good, HSG A
19,432		100.00% Pervious Area

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

Subcatchment 57S: PDA-1H-FB

Hydrograph



Hydrograph for Subcatchment 57S: PDA-1H-FB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	2.64	0.00
0.50	0.06	0.00	0.00	29.50	11.00	2.64	0.00
1.00	0.13	0.00	0.00	30.00	11.00	2.64	0.00
1.50	0.20	0.00	0.00	30.50	11.00	2.64	0.00
2.00	0.27	0.00	0.00	31.00	11.00	2.64	0.00
2.50	0.34	0.00	0.00	31.50	11.00	2.64	0.00
3.00	0.42	0.00	0.00	32.00	11.00	2.64	0.00
3.50	0.50	0.00	0.00	32.50	11.00	2.64	0.00
4.00	0.58	0.00	0.00	33.00	11.00	2.64	0.00
4.50	0.67	0.00	0.00	33.50	11.00	2.64	0.00
5.00	0.76	0.00	0.00	34.00	11.00	2.64	0.00
5.50	0.85	0.00	0.00	34.50	11.00	2.64	0.00
6.00	0.94	0.00	0.00	35.00	11.00	2.64	0.00
6.50	1.05	0.00	0.00	35.50	11.00	2.64	0.00
7.00	1.16	0.00	0.00	36.00	11.00	2.64	0.00
7.50	1.29	0.00	0.00	36.50	11.00	2.64	0.00
8.00	1.43	0.00	0.00	37.00	11.00	2.64	0.00
8.50	1.58	0.00	0.00	37.50	11.00	2.64	0.00
9.00	1.74	0.00	0.00	38.00	11.00	2.64	0.00
9.50	1.94	0.00	0.00	38.50	11.00	2.64	0.00
10.00	2.17	0.00	0.00	39.00	11.00	2.64	0.00
10.50	2.45	0.00	0.00	39.50	11.00	2.64	0.00
11.00	2.84	0.00	0.00	40.00	11.00	2.64	0.00
11.50	3.44	0.01	0.01	40.50	11.00	2.64	0.00
12.00	5.24	0.25	0.46	41.00	11.00	2.64	0.00
12.50	7.56	0.98	0.34	41.50	11.00	2.64	0.00
13.00	8.16	1.23	0.20	42.00	11.00	2.64	0.00
13.50	8.55	1.40	0.13	42.50	11.00	2.64	0.00
14.00	8.83	1.52	0.11	43.00	11.00	2.64	0.00
14.50	9.06	1.63	0.09	43.50	11.00	2.64	0.00
15.00	9.26	1.72	0.08	44.00	11.00	2.64	0.00
15.50	9.42	1.80	0.07	44.50	11.00	2.64	0.00
16.00	9.57	1.88	0.07	45.00	11.00	2.64	0.00
16.50	9.71	1.95	0.06	45.50	11.00	2.64	0.00
17.00	9.84	2.01	0.06	46.00	11.00	2.64	0.00
17.50	9.95	2.07	0.05	46.50	11.00	2.64	0.00
18.00	10.06	2.13	0.05	47.00	11.00	2.64	0.00
18.50	10.15	2.18	0.04	47.50	11.00	2.64	0.00
19.00	10.24	2.22	0.04	48.00	11.00	2.64	0.00
19.50	10.33	2.27	0.04				
20.00	10.42	2.32	0.04				
20.50	10.50	2.36	0.04				
21.00	10.58	2.41	0.04				
21.50	10.66	2.45	0.04				
22.00	10.73	2.49	0.04				
22.50	10.80	2.53	0.03				
23.00	10.87	2.56	0.03				
23.50	10.94	2.60	0.03				
24.00	11.00	2.64	0.03				
24.50	11.00	2.64	0.00				
25.00	11.00	2.64	0.00				
25.50	11.00	2.64	0.00				
26.00	11.00	2.64	0.00				
26.50	11.00	2.64	0.00				
27.00	11.00	2.64	0.00				
27.50	11.00	2.64	0.00				
28.00	11.00	2.64	0.00				
28.50	11.00	2.64	0.00				

Summary for Subcatchment 58S: PDA1-B-IB

Runoff = 2.51 cfs @ 12.14 hrs, Volume= 0.176 af, Depth= 2.78"
 Routed to Pond 45P : INFIL 1B

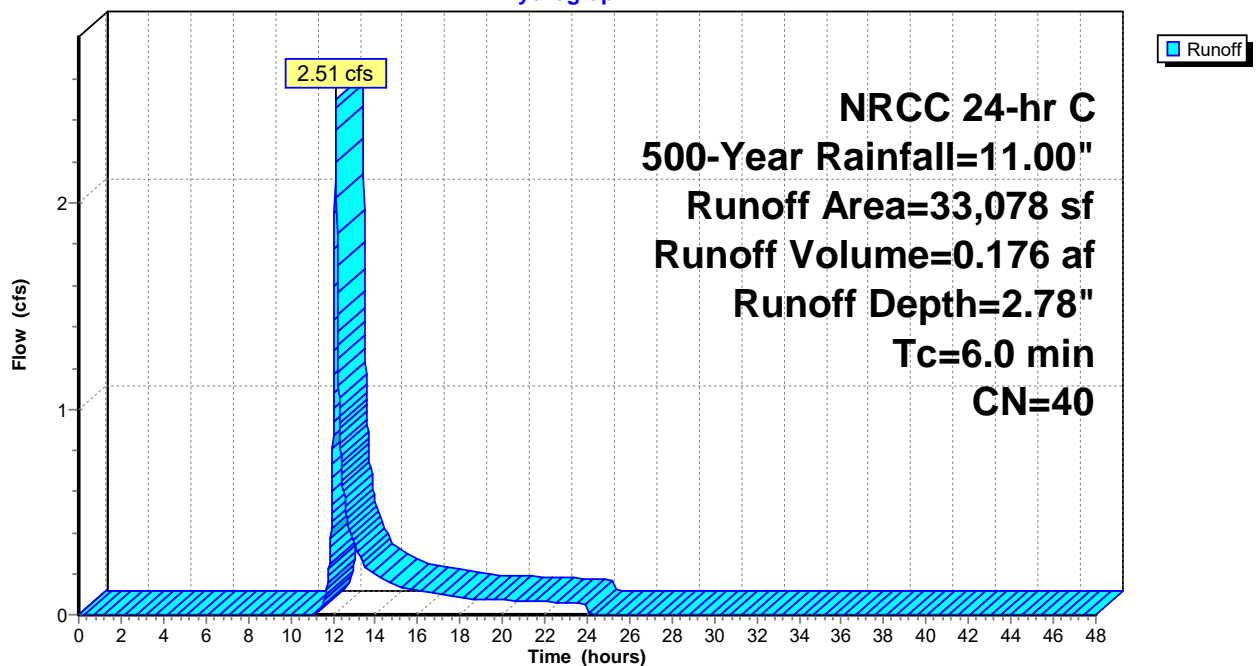
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
1,110	80	>75% Grass cover, Good, HSG D
31,968	39	>75% Grass cover, Good, HSG A
33,078	40	Weighted Average
33,078		100.00% Pervious Area

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

Subcatchment 58S: PDA1-B-IB

Hydrograph



Hydrograph for Subcatchment 58S: PDA1-B-IB

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	2.78	0.00
0.50	0.06	0.00	0.00	29.50	11.00	2.78	0.00
1.00	0.13	0.00	0.00	30.00	11.00	2.78	0.00
1.50	0.20	0.00	0.00	30.50	11.00	2.78	0.00
2.00	0.27	0.00	0.00	31.00	11.00	2.78	0.00
2.50	0.34	0.00	0.00	31.50	11.00	2.78	0.00
3.00	0.42	0.00	0.00	32.00	11.00	2.78	0.00
3.50	0.50	0.00	0.00	32.50	11.00	2.78	0.00
4.00	0.58	0.00	0.00	33.00	11.00	2.78	0.00
4.50	0.67	0.00	0.00	33.50	11.00	2.78	0.00
5.00	0.76	0.00	0.00	34.00	11.00	2.78	0.00
5.50	0.85	0.00	0.00	34.50	11.00	2.78	0.00
6.00	0.94	0.00	0.00	35.00	11.00	2.78	0.00
6.50	1.05	0.00	0.00	35.50	11.00	2.78	0.00
7.00	1.16	0.00	0.00	36.00	11.00	2.78	0.00
7.50	1.29	0.00	0.00	36.50	11.00	2.78	0.00
8.00	1.43	0.00	0.00	37.00	11.00	2.78	0.00
8.50	1.58	0.00	0.00	37.50	11.00	2.78	0.00
9.00	1.74	0.00	0.00	38.00	11.00	2.78	0.00
9.50	1.94	0.00	0.00	38.50	11.00	2.78	0.00
10.00	2.17	0.00	0.00	39.00	11.00	2.78	0.00
10.50	2.45	0.00	0.00	39.50	11.00	2.78	0.00
11.00	2.84	0.00	0.00	40.00	11.00	2.78	0.00
11.50	3.44	0.01	0.04	40.50	11.00	2.78	0.00
12.00	5.24	0.29	0.88	41.00	11.00	2.78	0.00
12.50	7.56	1.06	0.61	41.50	11.00	2.78	0.00
13.00	8.16	1.32	0.35	42.00	11.00	2.78	0.00
13.50	8.55	1.50	0.24	42.50	11.00	2.78	0.00
14.00	8.83	1.63	0.19	43.00	11.00	2.78	0.00
14.50	9.06	1.75	0.17	43.50	11.00	2.78	0.00
15.00	9.26	1.84	0.14	44.00	11.00	2.78	0.00
15.50	9.42	1.92	0.12	44.50	11.00	2.78	0.00
16.00	9.57	2.00	0.12	45.00	11.00	2.78	0.00
16.50	9.71	2.07	0.11	45.50	11.00	2.78	0.00
17.00	9.84	2.14	0.10	46.00	11.00	2.78	0.00
17.50	9.95	2.20	0.09	46.50	11.00	2.78	0.00
18.00	10.06	2.26	0.08	47.00	11.00	2.78	0.00
18.50	10.15	2.31	0.08	47.50	11.00	2.78	0.00
19.00	10.24	2.36	0.08	48.00	11.00	2.78	0.00
19.50	10.33	2.41	0.07				
20.00	10.42	2.45	0.07				
20.50	10.50	2.50	0.07				
21.00	10.58	2.55	0.07				
21.50	10.66	2.59	0.07				
22.00	10.73	2.63	0.06				
22.50	10.80	2.67	0.06				
23.00	10.87	2.71	0.06				
23.50	10.94	2.75	0.06				
24.00	11.00	2.78	0.05				
24.50	11.00	2.78	0.00				
25.00	11.00	2.78	0.00				
25.50	11.00	2.78	0.00				
26.00	11.00	2.78	0.00				
26.50	11.00	2.78	0.00				
27.00	11.00	2.78	0.00				
27.50	11.00	2.78	0.00				
28.00	11.00	2.78	0.00				
28.50	11.00	2.78	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 59S: PDA-1F

Runoff = 59.26 cfs @ 12.13 hrs, Volume= 4.133 af, Depth= 8.61"
 Routed to Pond 26P : Bioretention 1F

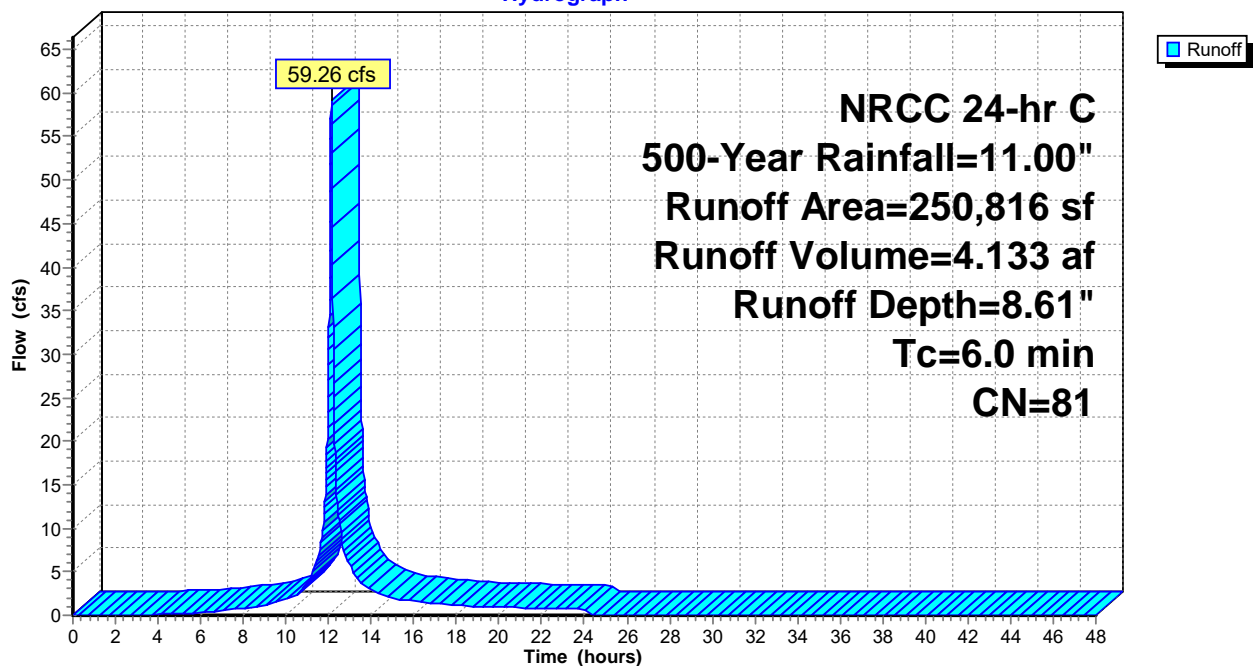
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
178,571	98	Unconnected pavement, HSG D
71,249	39	>75% Grass cover, Good, HSG A
996	80	>75% Grass cover, Good, HSG D
250,816	81	Weighted Average
72,245		28.80% Pervious Area
178,571		71.20% Impervious Area
178,571		100.00% Unconnected

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

Subcatchment 59S: PDA-1F

Hydrograph



Hydrograph for Subcatchment 59S: PDA-1F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	8.61	0.00
0.50	0.06	0.00	0.00	29.50	11.00	8.61	0.00
1.00	0.13	0.00	0.00	30.00	11.00	8.61	0.00
1.50	0.20	0.00	0.00	30.50	11.00	8.61	0.00
2.00	0.27	0.00	0.00	31.00	11.00	8.61	0.00
2.50	0.34	0.00	0.00	31.50	11.00	8.61	0.00
3.00	0.42	0.00	0.00	32.00	11.00	8.61	0.00
3.50	0.50	0.00	0.01	32.50	11.00	8.61	0.00
4.00	0.58	0.01	0.08	33.00	11.00	8.61	0.00
4.50	0.67	0.02	0.14	33.50	11.00	8.61	0.00
5.00	0.76	0.03	0.21	34.00	11.00	8.61	0.00
5.50	0.85	0.05	0.27	34.50	11.00	8.61	0.00
6.00	0.94	0.08	0.33	35.00	11.00	8.61	0.00
6.50	1.05	0.11	0.43	35.50	11.00	8.61	0.00
7.00	1.16	0.16	0.55	36.00	11.00	8.61	0.00
7.50	1.29	0.21	0.67	36.50	11.00	8.61	0.00
8.00	1.43	0.28	0.81	37.00	11.00	8.61	0.00
8.50	1.58	0.36	0.96	37.50	11.00	8.61	0.00
9.00	1.74	0.45	1.11	38.00	11.00	8.61	0.00
9.50	1.94	0.57	1.48	38.50	11.00	8.61	0.00
10.00	2.17	0.72	1.90	39.00	11.00	8.61	0.00
10.50	2.45	0.91	2.36	39.50	11.00	8.61	0.00
11.00	2.84	1.19	3.76	40.00	11.00	8.61	0.00
11.50	3.44	1.66	6.40	40.50	11.00	8.61	0.00
12.00	5.24	3.20	30.49	41.00	11.00	8.61	0.00
12.50	7.56	5.33	10.73	41.50	11.00	8.61	0.00
13.00	8.16	5.90	5.71	42.00	11.00	8.61	0.00
13.50	8.55	6.26	3.71	42.50	11.00	8.61	0.00
14.00	8.83	6.53	2.92	43.00	11.00	8.61	0.00
14.50	9.06	6.75	2.46	43.50	11.00	8.61	0.00
15.00	9.26	6.94	1.99	44.00	11.00	8.61	0.00
15.50	9.42	7.09	1.77	44.50	11.00	8.61	0.00
16.00	9.57	7.24	1.64	45.00	11.00	8.61	0.00
16.50	9.71	7.37	1.51	45.50	11.00	8.61	0.00
17.00	9.84	7.49	1.38	46.00	11.00	8.61	0.00
17.50	9.95	7.60	1.24	46.50	11.00	8.61	0.00
18.00	10.06	7.70	1.11	47.00	11.00	8.61	0.00
18.50	10.15	7.79	1.05	47.50	11.00	8.61	0.00
19.00	10.24	7.88	1.02	48.00	11.00	8.61	0.00
19.50	10.33	7.97	0.98				
20.00	10.42	8.05	0.95				
20.50	10.50	8.13	0.92				
21.00	10.58	8.21	0.89				
21.50	10.66	8.28	0.85				
22.00	10.73	8.35	0.82				
22.50	10.80	8.42	0.79				
23.00	10.87	8.49	0.75				
23.50	10.94	8.55	0.72				
24.00	11.00	8.61	0.69				
24.50	11.00	8.61	0.00				
25.00	11.00	8.61	0.00				
25.50	11.00	8.61	0.00				
26.00	11.00	8.61	0.00				
26.50	11.00	8.61	0.00				
27.00	11.00	8.61	0.00				
27.50	11.00	8.61	0.00				
28.00	11.00	8.61	0.00				
28.50	11.00	8.61	0.00				

240814_RDM Neelytown Drainage

NRCC 24-hr C 500-Year Rainfall=11.00"

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Summary for Subcatchment 60S: PDA-1i-B

Runoff = 2.23 cfs @ 12.14 hrs, Volume= 0.159 af, Depth= 2.64"
 Routed to Pond 31P : Bioretention i

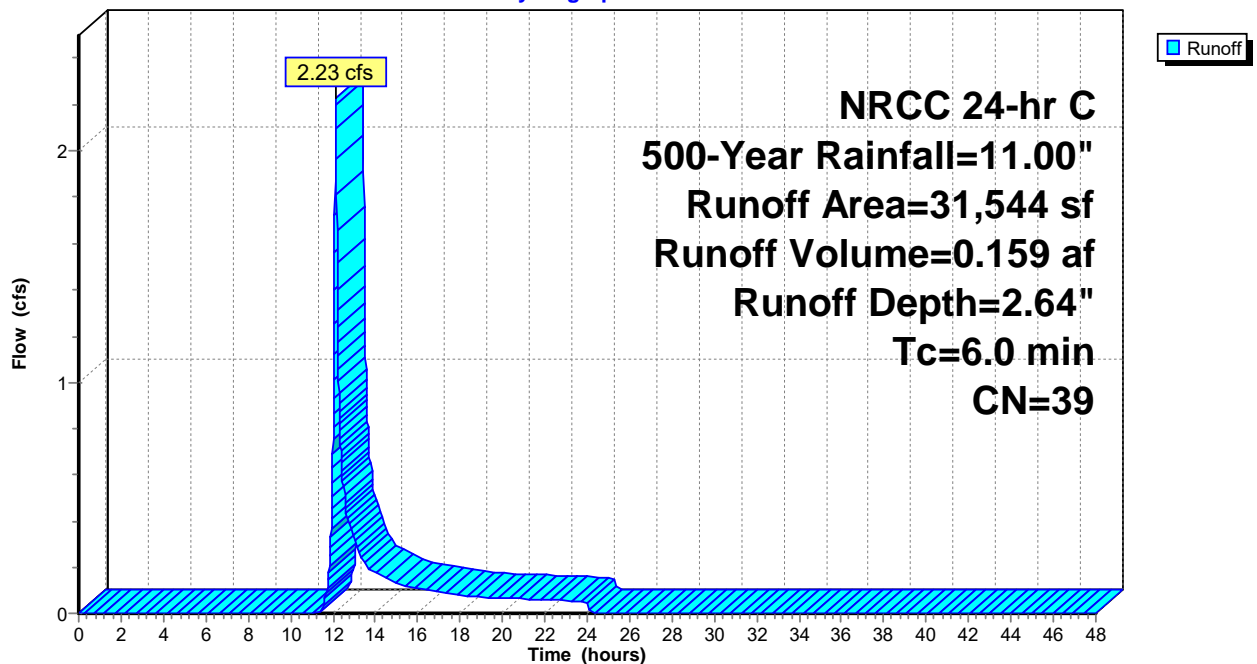
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 NRCC 24-hr C 500-Year Rainfall=11.00"

Area (sf)	CN	Description
31,544	39	>75% Grass cover, Good, HSG A
31,544		100.00% Pervious Area

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

Subcatchment 60S: PDA-1i-B

Hydrograph



Hydrograph for Subcatchment 60S: PDA-1i-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	29.00	11.00	2.64	0.00
0.50	0.06	0.00	0.00	29.50	11.00	2.64	0.00
1.00	0.13	0.00	0.00	30.00	11.00	2.64	0.00
1.50	0.20	0.00	0.00	30.50	11.00	2.64	0.00
2.00	0.27	0.00	0.00	31.00	11.00	2.64	0.00
2.50	0.34	0.00	0.00	31.50	11.00	2.64	0.00
3.00	0.42	0.00	0.00	32.00	11.00	2.64	0.00
3.50	0.50	0.00	0.00	32.50	11.00	2.64	0.00
4.00	0.58	0.00	0.00	33.00	11.00	2.64	0.00
4.50	0.67	0.00	0.00	33.50	11.00	2.64	0.00
5.00	0.76	0.00	0.00	34.00	11.00	2.64	0.00
5.50	0.85	0.00	0.00	34.50	11.00	2.64	0.00
6.00	0.94	0.00	0.00	35.00	11.00	2.64	0.00
6.50	1.05	0.00	0.00	35.50	11.00	2.64	0.00
7.00	1.16	0.00	0.00	36.00	11.00	2.64	0.00
7.50	1.29	0.00	0.00	36.50	11.00	2.64	0.00
8.00	1.43	0.00	0.00	37.00	11.00	2.64	0.00
8.50	1.58	0.00	0.00	37.50	11.00	2.64	0.00
9.00	1.74	0.00	0.00	38.00	11.00	2.64	0.00
9.50	1.94	0.00	0.00	38.50	11.00	2.64	0.00
10.00	2.17	0.00	0.00	39.00	11.00	2.64	0.00
10.50	2.45	0.00	0.00	39.50	11.00	2.64	0.00
11.00	2.84	0.00	0.00	40.00	11.00	2.64	0.00
11.50	3.44	0.01	0.02	40.50	11.00	2.64	0.00
12.00	5.24	0.25	0.75	41.00	11.00	2.64	0.00
12.50	7.56	0.98	0.55	41.50	11.00	2.64	0.00
13.00	8.16	1.23	0.32	42.00	11.00	2.64	0.00
13.50	8.55	1.40	0.22	42.50	11.00	2.64	0.00
14.00	8.83	1.52	0.18	43.00	11.00	2.64	0.00
14.50	9.06	1.63	0.15	43.50	11.00	2.64	0.00
15.00	9.26	1.72	0.13	44.00	11.00	2.64	0.00
15.50	9.42	1.80	0.11	44.50	11.00	2.64	0.00
16.00	9.57	1.88	0.11	45.00	11.00	2.64	0.00
16.50	9.71	1.95	0.10	45.50	11.00	2.64	0.00
17.00	9.84	2.01	0.09	46.00	11.00	2.64	0.00
17.50	9.95	2.07	0.08	46.50	11.00	2.64	0.00
18.00	10.06	2.13	0.08	47.00	11.00	2.64	0.00
18.50	10.15	2.18	0.07	47.50	11.00	2.64	0.00
19.00	10.24	2.22	0.07	48.00	11.00	2.64	0.00
19.50	10.33	2.27	0.07				
20.00	10.42	2.32	0.07				
20.50	10.50	2.36	0.06				
21.00	10.58	2.41	0.06				
21.50	10.66	2.45	0.06				
22.00	10.73	2.49	0.06				
22.50	10.80	2.53	0.06				
23.00	10.87	2.56	0.05				
23.50	10.94	2.60	0.05				
24.00	11.00	2.64	0.05				
24.50	11.00	2.64	0.00				
25.00	11.00	2.64	0.00				
25.50	11.00	2.64	0.00				
26.00	11.00	2.64	0.00				
26.50	11.00	2.64	0.00				
27.00	11.00	2.64	0.00				
27.50	11.00	2.64	0.00				
28.00	11.00	2.64	0.00				
28.50	11.00	2.64	0.00				

Summary for Pond 1P: Bioretention 1D

Inflow Area = 3.927 ac, 65.47% Impervious, Inflow Depth = 9.95" for 500-Year event
 Inflow = 43.52 cfs @ 12.14 hrs, Volume= 3.255 af
 Outflow = 17.06 cfs @ 12.27 hrs, Volume= 2.573 af, Atten= 61%, Lag= 8.1 min
 Primary = 17.06 cfs @ 12.27 hrs, Volume= 2.573 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 415.43' @ 12.27 hrs Surf.Area= 20,361 sf Storage= 72,009 cf

Plug-Flow detention time= 290.1 min calculated for 2.573 af (79% of inflow)
 Center-of-Mass det. time= 204.5 min (971.3 - 766.8)

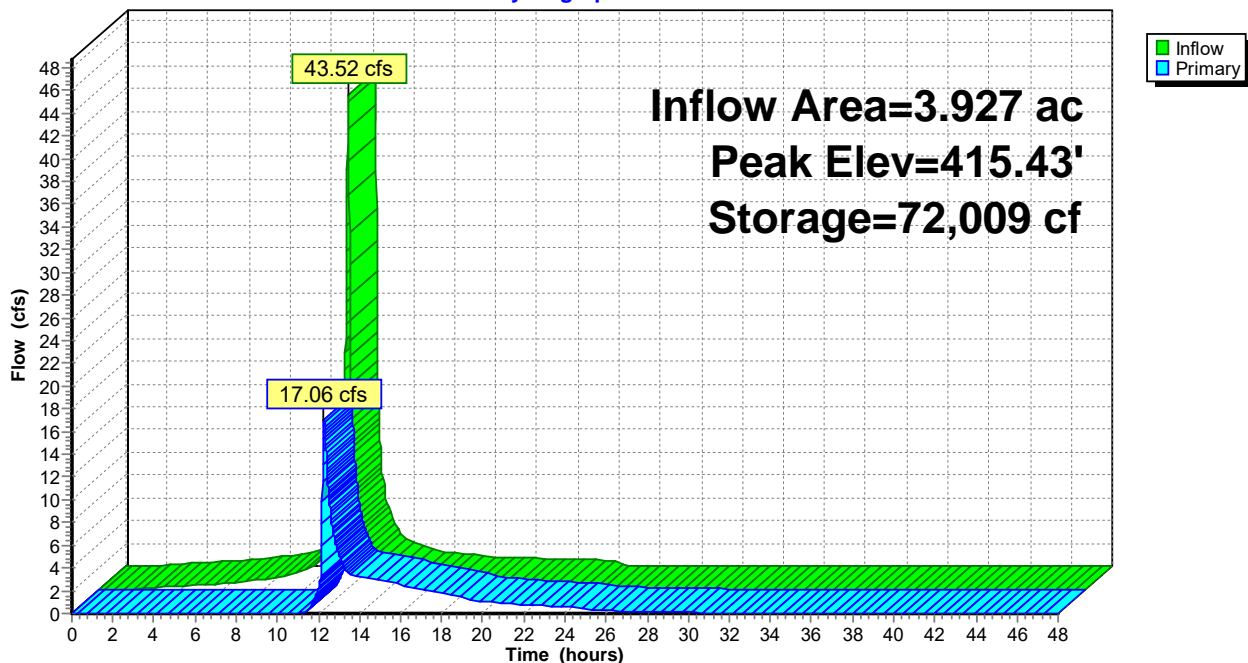
Volume	Invert	Avail.Storage	Storage Description	
#1	408.66'	82,103 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	14,016	0.0	0	0
409.33	14,016	40.0	3,756	3,756
412.00	14,016	20.0	7,485	11,241
416.00	21,415	100.0	70,862	82,103

Device	Routing	Invert	Outlet Devices
#1	Primary	408.78'	18.0" Round Culvert L= 28.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 408.78' / 408.50' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	413.00'	10.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	415.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=17.02 cfs @ 12.27 hrs HW=415.43' (Free Discharge)
 1=Culvert (Passes 17.02 cfs of 20.67 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 3.73 cfs @ 6.83 fps)
 3=Broad-Crested Rectangular Weir (Weir Controls 13.29 cfs @ 1.93 fps)

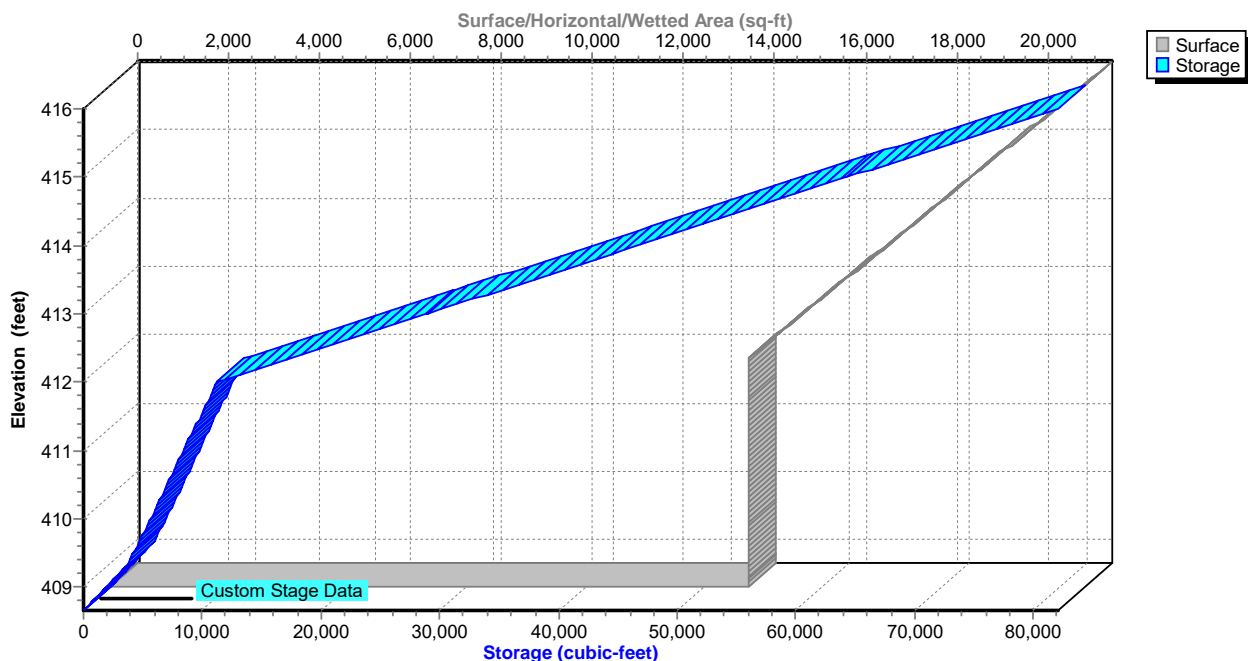
Pond 1P: Bioretention 1D

Hydrograph



Pond 1P: Bioretention 1D

Stage-Area-Storage



Hydrograph for Pond 1P: Bioretention 1D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	408.66	0.00
1.00	0.00	0	408.66	0.00
2.00	0.07	76	408.67	0.00
3.00	0.21	582	408.76	0.00
4.00	0.33	1,545	408.94	0.00
5.00	0.43	2,902	409.18	0.00
6.00	0.52	4,607	409.63	0.00
7.00	0.70	6,790	410.41	0.00
8.00	0.91	9,691	411.45	0.00
9.00	1.13	13,355	412.12	0.00
10.00	1.74	18,461	412.41	0.00
11.00	3.16	26,527	412.86	0.00
12.00	22.12	49,030	414.13	2.22
13.00	4.15	66,402	415.11	5.16
14.00	2.08	62,973	414.92	3.22
15.00	1.42	58,210	414.65	2.92
16.00	1.16	52,925	414.35	2.54
17.00	0.97	48,311	414.09	2.16
18.00	0.79	44,413	413.87	1.77
19.00	0.72	41,379	413.70	1.39
20.00	0.67	39,452	413.59	1.09
21.00	0.62	38,248	413.52	0.89
22.00	0.58	37,442	413.48	0.77
23.00	0.53	36,848	413.45	0.68
24.00	0.49	36,374	413.42	0.61
25.00	0.00	34,796	413.33	0.40
26.00	0.00	33,637	413.26	0.26
27.00	0.00	32,840	413.22	0.18
28.00	0.00	32,268	413.19	0.14
29.00	0.00	31,830	413.16	0.11
30.00	0.00	31,493	413.14	0.08
31.00	0.00	31,229	413.13	0.07
32.00	0.00	31,006	413.12	0.06
33.00	0.00	30,816	413.10	0.05
34.00	0.00	30,653	413.10	0.04
35.00	0.00	30,515	413.09	0.04
36.00	0.00	30,397	413.08	0.03
37.00	0.00	30,297	413.08	0.03
38.00	0.00	30,211	413.07	0.02
39.00	0.00	30,138	413.07	0.02
40.00	0.00	30,076	413.06	0.02
41.00	0.00	30,018	413.06	0.02
42.00	0.00	29,964	413.06	0.01
43.00	0.00	29,912	413.05	0.01
44.00	0.00	29,863	413.05	0.01
45.00	0.00	29,817	413.05	0.01
46.00	0.00	29,773	413.05	0.01
47.00	0.00	29,731	413.04	0.01
48.00	0.00	29,691	413.04	0.01

Stage-Area-Storage for Pond 1P: Bioretention 1D

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.66	14,016	0	414.46	18,566	54,821
408.76	14,016	561	414.56	18,751	56,593
408.86	14,016	1,121	414.66	18,936	58,364
408.96	14,016	1,682	414.76	19,121	60,136
409.06	14,016	2,243	414.86	19,306	61,907
409.16	14,016	2,803	414.96	19,491	63,679
409.26	14,016	3,364	415.06	19,676	65,450
409.36	14,016	3,840	415.16	19,861	67,222
409.46	14,016	4,121	415.26	20,046	68,993
409.56	14,016	4,401	415.36	20,231	70,765
409.66	14,016	4,681	415.46	20,416	72,536
409.76	14,016	4,962	415.56	20,601	74,308
409.86	14,016	5,242	415.66	20,786	76,080
409.96	14,016	5,522	415.76	20,971	77,851
410.06	14,016	5,803	415.86	21,156	79,623
410.16	14,016	6,083	415.96	21,341	81,394
410.26	14,016	6,363			
410.36	14,016	6,644			
410.46	14,016	6,924			
410.56	14,016	7,204			
410.66	14,016	7,485			
410.76	14,016	7,765			
410.86	14,016	8,045			
410.96	14,016	8,326			
411.06	14,016	8,606			
411.16	14,016	8,886			
411.26	14,016	9,166			
411.36	14,016	9,447			
411.46	14,016	9,727			
411.56	14,016	10,007			
411.66	14,016	10,288			
411.76	14,016	10,568			
411.86	14,016	10,848			
411.96	14,016	11,129			
412.06	14,127	12,304			
412.16	14,312	14,075			
412.26	14,497	15,847			
412.36	14,682	17,618			
412.46	14,867	19,390			
412.56	15,052	21,162			
412.66	15,237	22,933			
412.76	15,422	24,705			
412.86	15,607	26,476			
412.96	15,792	28,248			
413.06	15,977	30,019			
413.16	16,162	31,791			
413.26	16,347	33,562			
413.36	16,532	35,334			
413.46	16,717	37,105			
413.56	16,902	38,877			
413.66	17,087	40,649			
413.76	17,272	42,420			
413.86	17,457	44,192			
413.96	17,642	45,963			
414.06	17,826	47,735			
414.16	18,011	49,506			
414.26	18,196	51,278			
414.36	18,381	53,049			

Summary for Pond 3P: Bioretention 1A

Inflow Area = 2.483 ac, 78.54% Impervious, Inflow Depth = 9.13" for 500-Year event
 Inflow = 26.51 cfs @ 12.13 hrs, Volume= 1.890 af
 Outflow = 33.97 cfs @ 12.13 hrs, Volume= 1.441 af, Atten= 0%, Lag= 0.0 min
 Primary = 33.97 cfs @ 12.13 hrs, Volume= 1.441 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 425.35' @ 12.13 hrs Surf.Area= 12,593 sf Storage= 25,522 cf

Plug-Flow detention time= 161.2 min calculated for 1.441 af (76% of inflow)
 Center-of-Mass det. time= 71.0 min (855.6 - 784.7)

Volume	Invert	Avail.Storage	Storage Description	
#1	408.66'	25,522 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	8,681	0.0	0	0
409.33	8,681	40.0	2,327	2,327
413.50	8,681	20.0	7,240	9,566
415.00	12,593	100.0	15,956	25,522

Device	Routing	Invert	Outlet Devices
#1	Primary	408.66'	18.0" Round Culvert L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 408.66' / 407.50' S= 0.0232 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	414.50'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

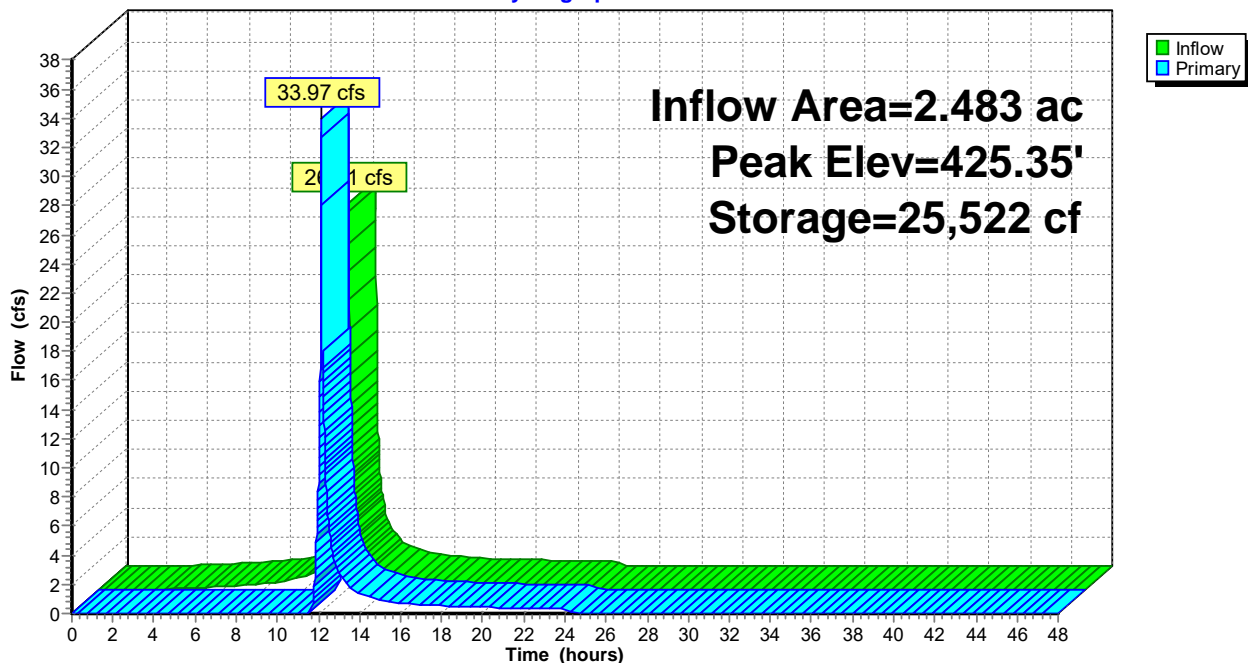
Primary OutFlow Max=33.96 cfs @ 12.13 hrs HW=425.34' (Free Discharge)

↑1=Culvert (Inlet Controls 33.96 cfs @ 19.22 fps)

↑2=Broad-Crested Rectangular Weir (Passes 33.96 cfs of 1,895.43 cfs potential flow)

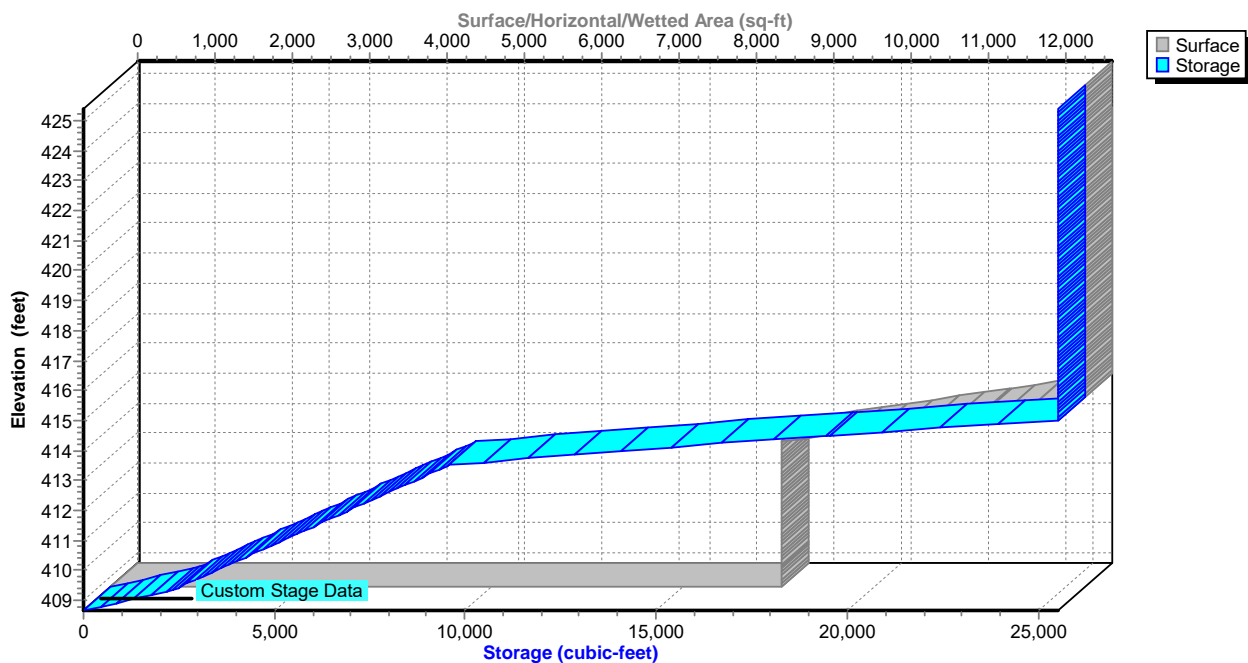
Pond 3P: Bioretention 1A

Hydrograph



Pond 3P: Bioretention 1A

Stage-Area-Storage



Hydrograph for Pond 3P: Bioretention 1A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	408.66	0.00
1.00	0.00	0	408.66	0.00
2.00	0.00	0	408.66	0.00
3.00	0.02	13	408.66	0.00
4.00	0.09	207	408.72	0.00
5.00	0.15	627	408.84	0.00
6.00	0.21	1,266	409.02	0.00
7.00	0.31	2,190	409.29	0.00
8.00	0.44	3,529	410.02	0.00
9.00	0.57	5,335	411.06	0.00
10.00	0.94	8,010	412.60	0.00
11.00	1.79	12,475	413.82	0.00
12.00	13.82	23,433	414.83	8.90
13.00	2.52	21,326	414.65	2.85
14.00	1.28	20,582	414.59	1.40
15.00	0.87	20,261	414.56	0.96
16.00	0.72	20,101	414.55	0.74
17.00	0.60	20,015	414.54	0.63
18.00	0.49	19,929	414.53	0.51
19.00	0.45	19,885	414.53	0.45
20.00	0.42	19,864	414.53	0.42
21.00	0.39	19,843	414.53	0.39
22.00	0.36	19,821	414.52	0.36
23.00	0.33	19,800	414.52	0.34
24.00	0.30	19,778	414.52	0.31
25.00	0.00	19,554	414.50	0.00
26.00	0.00	19,551	414.50	0.00
27.00	0.00	19,551	414.50	0.00
28.00	0.00	19,551	414.50	0.00
29.00	0.00	19,551	414.50	0.00
30.00	0.00	19,551	414.50	0.00
31.00	0.00	19,551	414.50	0.00
32.00	0.00	19,551	414.50	0.00
33.00	0.00	19,551	414.50	0.00
34.00	0.00	19,551	414.50	0.00
35.00	0.00	19,551	414.50	0.00
36.00	0.00	19,551	414.50	0.00
37.00	0.00	19,551	414.50	0.00
38.00	0.00	19,551	414.50	0.00
39.00	0.00	19,551	414.50	0.00
40.00	0.00	19,551	414.50	0.00
41.00	0.00	19,551	414.50	0.00
42.00	0.00	19,551	414.50	0.00
43.00	0.00	19,551	414.50	0.00
44.00	0.00	19,551	414.50	0.00
45.00	0.00	19,551	414.50	0.00
46.00	0.00	19,551	414.50	0.00
47.00	0.00	19,551	414.50	0.00
48.00	0.00	19,551	414.50	0.00

Stage-Area-Storage for Pond 3P: Bioretention 1A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.66	8,681	0	420.26	12,593	25,522
408.86	8,681	694	420.46	12,593	25,522
409.06	8,681	1,389	420.66	12,593	25,522
409.26	8,681	2,083	420.86	12,593	25,522
409.46	8,681	2,552	421.06	12,593	25,522
409.66	8,681	2,899	421.26	12,593	25,522
409.86	8,681	3,247	421.46	12,593	25,522
410.06	8,681	3,594	421.66	12,593	25,522
410.26	8,681	3,941	421.86	12,593	25,522
410.46	8,681	4,288	422.06	12,593	25,522
410.66	8,681	4,636	422.26	12,593	25,522
410.86	8,681	4,983	422.46	12,593	25,522
411.06	8,681	5,330	422.66	12,593	25,522
411.26	8,681	5,677	422.86	12,593	25,522
411.46	8,681	6,025	423.06	12,593	25,522
411.66	8,681	6,372	423.26	12,593	25,522
411.86	8,681	6,719	423.46	12,593	25,522
412.06	8,681	7,066	423.66	12,593	25,522
412.26	8,681	7,414	423.86	12,593	25,522
412.46	8,681	7,761	424.06	12,593	25,522
412.66	8,681	8,108	424.26	12,593	25,522
412.86	8,681	8,455	424.46	12,593	25,522
413.06	8,681	8,803	424.66	12,593	25,522
413.26	8,681	9,150	424.86	12,593	25,522
413.46	8,681	9,497	425.06	12,593	25,522
413.66	9,098	10,989	425.26	12,593	25,522
413.86	9,620	12,861			
414.06	10,141	14,837			
414.26	10,663	16,917			
414.46	11,185	19,102			
414.66	11,706	21,391			
414.86	12,228	23,785			
415.06	12,593	25,522			
415.26	12,593	25,522			
415.46	12,593	25,522			
415.66	12,593	25,522			
415.86	12,593	25,522			
416.06	12,593	25,522			
416.26	12,593	25,522			
416.46	12,593	25,522			
416.66	12,593	25,522			
416.86	12,593	25,522			
417.06	12,593	25,522			
417.26	12,593	25,522			
417.46	12,593	25,522			
417.66	12,593	25,522			
417.86	12,593	25,522			
418.06	12,593	25,522			
418.26	12,593	25,522			
418.46	12,593	25,522			
418.66	12,593	25,522			
418.86	12,593	25,522			
419.06	12,593	25,522			
419.26	12,593	25,522			
419.46	12,593	25,522			
419.66	12,593	25,522			
419.86	12,593	25,522			
420.06	12,593	25,522			

Summary for Pond 22P: Bioretention 5A

Inflow Area = 4.966 ac, 46.58% Impervious, Inflow Depth = 7.68" for 500-Year event
 Inflow = 46.26 cfs @ 12.14 hrs, Volume= 3.177 af
 Outflow = 19.38 cfs @ 12.27 hrs, Volume= 2.831 af, Atten= 58%, Lag= 7.8 min
 Primary = 19.38 cfs @ 12.27 hrs, Volume= 2.831 af
 Routed to Link PDP5 : PDP5

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 434.61' @ 12.27 hrs Surf.Area= 15,247 sf Storage= 44,005 cf

Plug-Flow detention time= 112.5 min calculated for 2.831 af (89% of inflow)
 Center-of-Mass det. time= 57.3 min (870.8 - 813.6)

Volume	Invert	Avail.Storage	Storage Description	
#1	428.67'	50,065 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
428.67	11,465	0.0	0	0
429.33	11,465	40.0	3,027	3,027
432.00	11,465	20.0	6,122	9,149
435.00	15,812	100.0	40,916	50,065

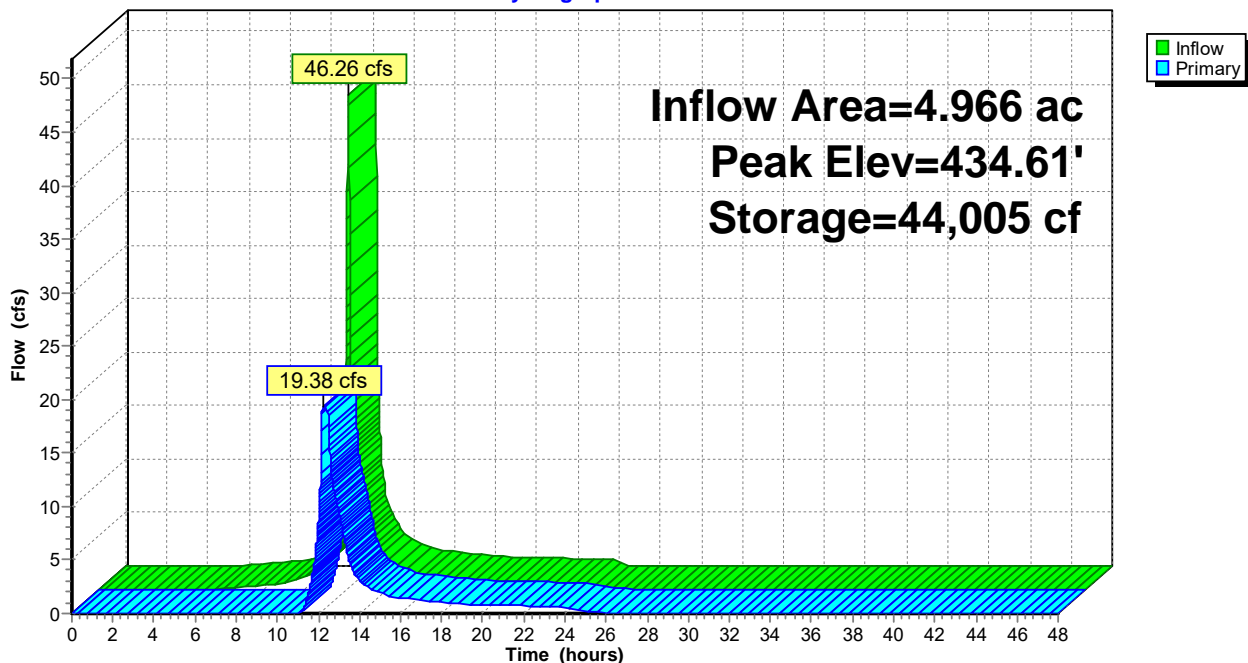
Device	Routing	Invert	Outlet Devices
#1	Primary	428.67'	18.0" Round Culvert L= 270.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 428.67' / 389.43' S= 0.1453 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	432.50'	44.0" W x 8.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	434.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=19.38 cfs @ 12.27 hrs HW=434.61' (Free Discharge)

- ↑ 1=Culvert (Inlet Controls 19.38 cfs @ 10.97 fps)
- ↑ 2=Orifice/Grate (Passes < 15.66 cfs potential flow)
- ↑ 3=Broad-Crested Rectangular Weir (Passes < 23.54 cfs potential flow)

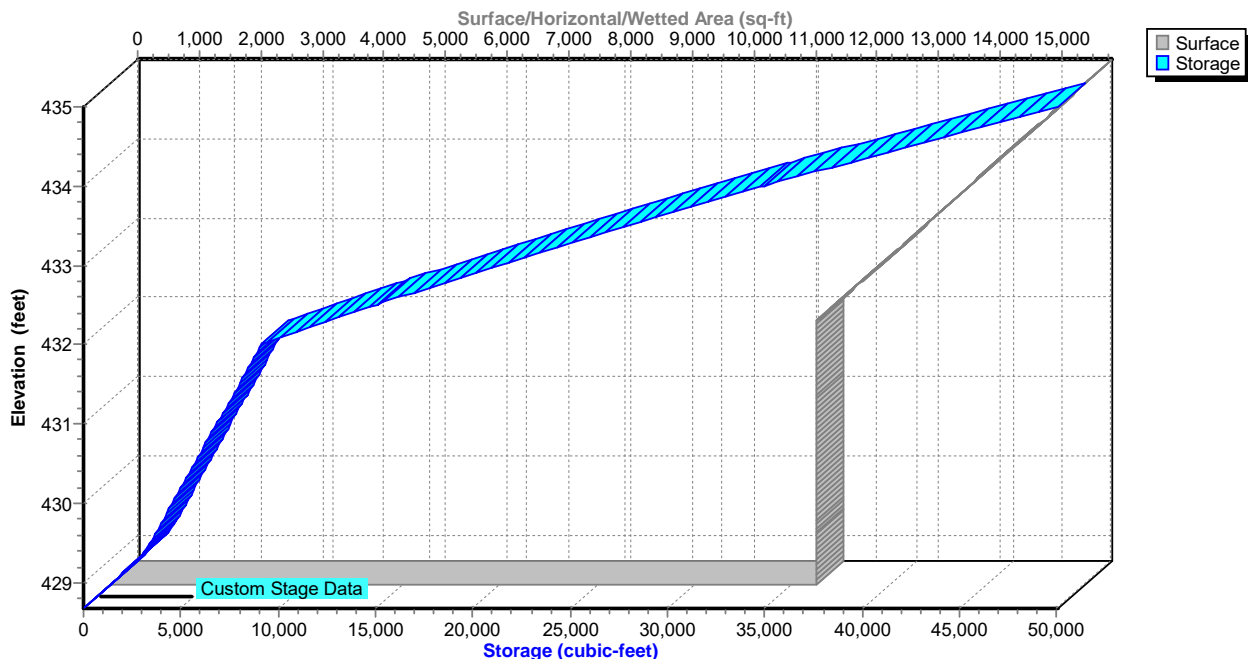
Pond 22P: Bioretention 5A

Hydrograph



Pond 22P: Bioretention 5A

Stage-Area-Storage



Hydrograph for Pond 22P: Bioretention 5A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	428.67	0.00
1.00	0.00	0	428.67	0.00
2.00	0.00	0	428.67	0.00
3.00	0.00	0	428.67	0.00
4.00	0.00	0	428.67	0.00
5.00	0.01	3	428.67	0.00
6.00	0.10	194	428.71	0.00
7.00	0.24	780	428.84	0.00
8.00	0.42	1,961	429.10	0.00
9.00	0.65	3,880	429.70	0.00
10.00	1.20	7,111	431.11	0.00
11.00	2.53	13,156	432.34	0.00
12.00	21.50	26,551	433.39	8.68
13.00	4.81	27,945	433.50	9.48
14.00	2.43	20,113	432.90	3.03
15.00	1.68	18,813	432.80	1.96
16.00	1.37	18,150	432.75	1.48
17.00	1.15	17,814	432.72	1.24
18.00	0.93	17,479	432.70	1.03
19.00	0.85	17,244	432.68	0.89
20.00	0.80	17,140	432.67	0.82
21.00	0.74	17,051	432.66	0.77
22.00	0.69	16,959	432.65	0.72
23.00	0.63	16,854	432.65	0.66
24.00	0.58	16,746	432.64	0.61
25.00	0.00	15,765	432.56	0.18
26.00	0.00	15,398	432.53	0.06
27.00	0.00	15,244	432.51	0.03
28.00	0.00	15,161	432.51	0.02
29.00	0.00	15,116	432.50	0.01
30.00	0.00	15,092	432.50	0.00
31.00	0.00	15,078	432.50	0.00
32.00	0.00	15,071	432.50	0.00
33.00	0.00	15,067	432.50	0.00
34.00	0.00	15,065	432.50	0.00
35.00	0.00	15,064	432.50	0.00
36.00	0.00	15,063	432.50	0.00
37.00	0.00	15,063	432.50	0.00
38.00	0.00	15,063	432.50	0.00
39.00	0.00	15,063	432.50	0.00
40.00	0.00	15,063	432.50	0.00
41.00	0.00	15,063	432.50	0.00
42.00	0.00	15,063	432.50	0.00
43.00	0.00	15,063	432.50	0.00
44.00	0.00	15,063	432.50	0.00
45.00	0.00	15,063	432.50	0.00
46.00	0.00	15,063	432.50	0.00
47.00	0.00	15,063	432.50	0.00
48.00	0.00	15,063	432.50	0.00

Stage-Area-Storage for Pond 22P: Bioretention 5A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
428.67	11,465	0	434.47	15,044	41,888
428.77	11,465	459	434.57	15,189	43,399
428.87	11,465	917	434.67	15,334	44,926
428.97	11,465	1,376	434.77	15,479	46,466
429.07	11,465	1,834	434.87	15,624	48,021
429.17	11,465	2,293	434.97	15,769	49,591
429.27	11,465	2,752			
429.37	11,465	3,118			
429.47	11,465	3,348			
429.57	11,465	3,577			
429.67	11,465	3,806			
429.77	11,465	4,036			
429.87	11,465	4,265			
429.97	11,465	4,494			
430.07	11,465	4,724			
430.17	11,465	4,953			
430.27	11,465	5,182			
430.37	11,465	5,411			
430.47	11,465	5,641			
430.57	11,465	5,870			
430.67	11,465	6,099			
430.77	11,465	6,329			
430.87	11,465	6,558			
430.97	11,465	6,787			
431.07	11,465	7,017			
431.17	11,465	7,246			
431.27	11,465	7,475			
431.37	11,465	7,704			
431.47	11,465	7,934			
431.57	11,465	8,163			
431.67	11,465	8,392			
431.77	11,465	8,622			
431.87	11,465	8,851			
431.97	11,465	9,080			
432.07	11,566	9,955			
432.17	11,711	11,119			
432.27	11,856	12,297			
432.37	12,001	13,490			
432.47	12,146	14,698			
432.57	12,291	15,920			
432.67	12,436	17,156			
432.77	12,581	18,407			
432.87	12,726	19,672			
432.97	12,871	20,952			
433.07	13,015	22,246			
433.17	13,160	23,555			
433.27	13,305	24,878			
433.37	13,450	26,216			
433.47	13,595	27,568			
433.57	13,740	28,935			
433.67	13,885	30,316			
433.77	14,030	31,712			
433.87	14,175	33,122			
433.97	14,320	34,547			
434.07	14,464	35,986			
434.17	14,609	37,440			
434.27	14,754	38,908			
434.37	14,899	40,391			

Summary for Pond 26P: Bioretention 1F

Inflow Area = 5.758 ac, 71.20% Impervious, Inflow Depth = 8.61" for 500-Year event
 Inflow = 59.26 cfs @ 12.13 hrs, Volume= 4.133 af
 Outflow = 18.98 cfs @ 12.30 hrs, Volume= 3.567 af, Atten= 68%, Lag= 10.1 min
 Primary = 18.98 cfs @ 12.30 hrs, Volume= 3.567 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 413.39' @ 12.30 hrs Surf.Area= 26,354 sf Storage= 68,571 cf

Plug-Flow detention time= 145.5 min calculated for 3.567 af (86% of inflow)
 Center-of-Mass det. time= 80.5 min (875.3 - 794.8)

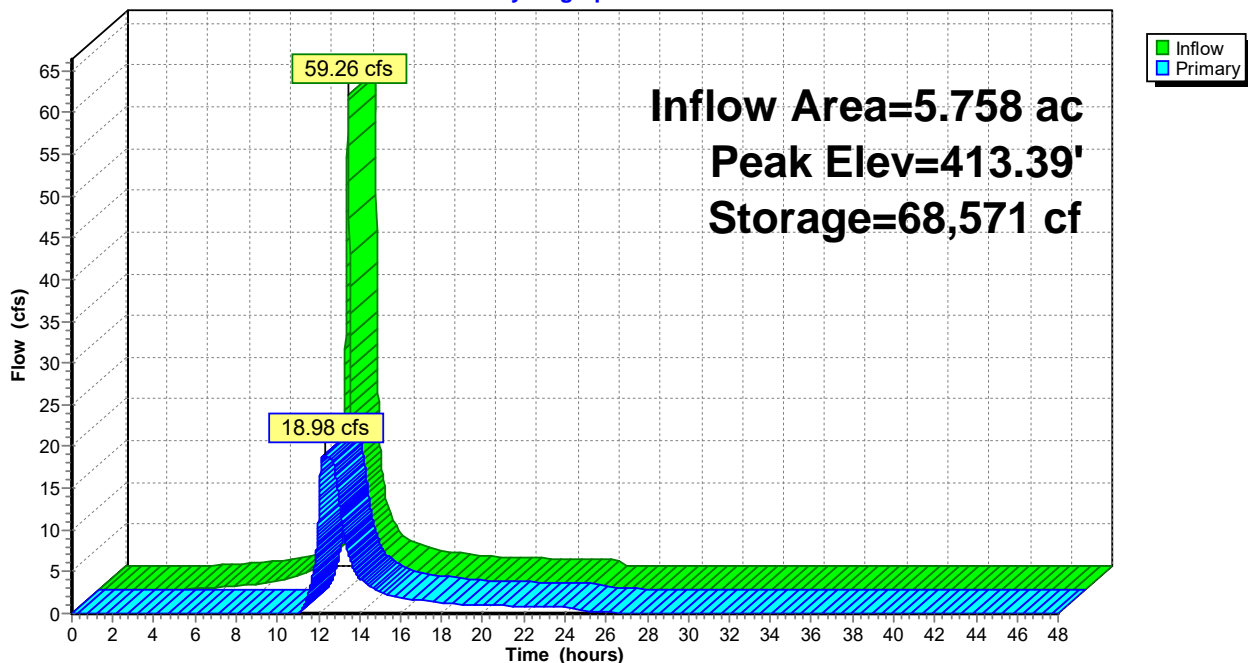
Volume	Invert	Avail.Storage	Storage Description	
#1	407.66'	85,321 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.66	18,594	0.0	0	0
408.33	18,594	40.0	4,983	4,983
411.00	18,594	20.0	9,929	14,912
414.00	28,345	100.0	70,409	85,321

Device	Routing	Invert	Outlet Devices
#1	Primary	407.66'	18.0" Round Culvert L= 47.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.66' / 407.50' S= 0.0034 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	411.50'	48.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=18.98 cfs @ 12.30 hrs HW=413.39' (Free Discharge)
 1=Culvert (Inlet Controls 18.98 cfs @ 10.74 fps)
 2=Orifice/Grate (Passes < 22.56 cfs potential flow)
 3=Broad-Crested Rectangular Weir (Passes < 11.24 cfs potential flow)

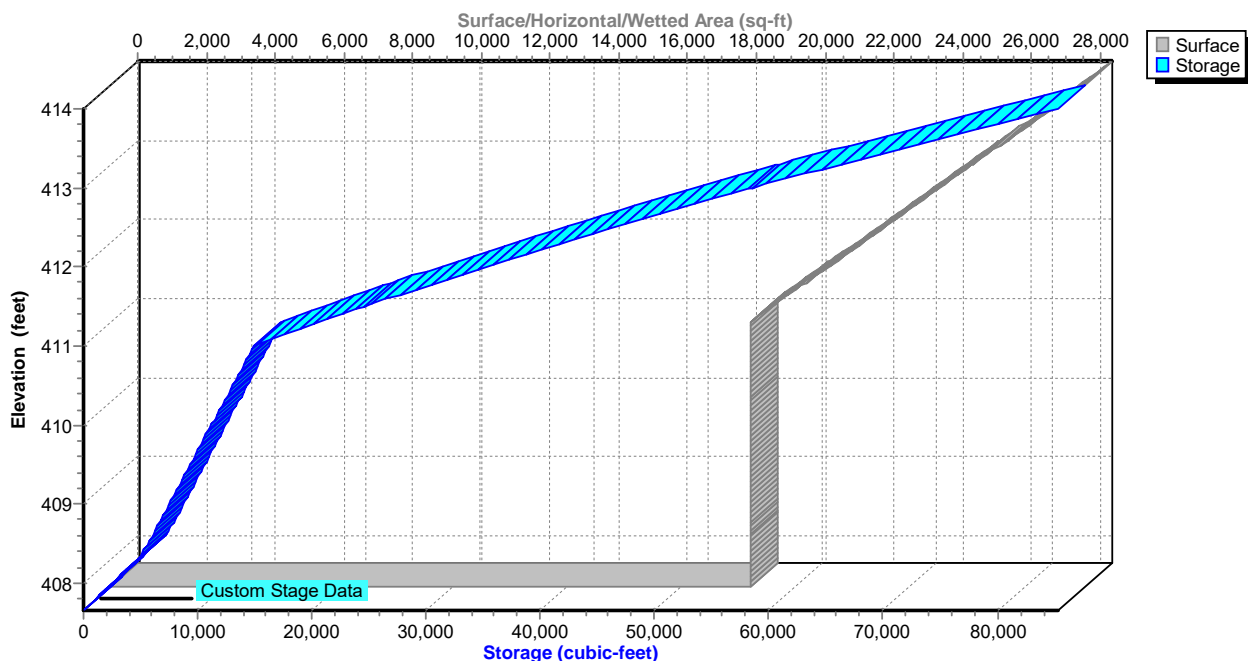
Pond 26P: Bioretention 1F

Hydrograph



Pond 26P: Bioretention 1F

Stage-Area-Storage



Hydrograph for Pond 26P: Bioretention 1F

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.66	0.00
1.00	0.00	0	407.66	0.00
2.00	0.00	0	407.66	0.00
3.00	0.00	0	407.66	0.00
4.00	0.08	80	407.67	0.00
5.00	0.21	586	407.74	0.00
6.00	0.33	1,556	407.87	0.00
7.00	0.55	3,122	408.08	0.00
8.00	0.81	5,555	408.48	0.00
9.00	1.11	9,007	409.41	0.00
10.00	1.90	14,337	410.85	0.00
11.00	3.76	23,567	411.45	0.00
12.00	30.49	44,411	412.41	11.19
13.00	5.71	47,548	412.55	13.61
14.00	2.92	34,699	411.98	4.28
15.00	1.99	31,731	411.84	2.57
16.00	1.64	30,345	411.78	1.88
17.00	1.38	29,637	411.74	1.55
18.00	1.11	29,033	411.71	1.28
19.00	1.02	28,584	411.69	1.10
20.00	0.95	28,350	411.68	1.01
21.00	0.89	28,168	411.67	0.94
22.00	0.82	27,998	411.67	0.87
23.00	0.75	27,830	411.66	0.80
24.00	0.69	27,656	411.65	0.74
25.00	0.00	26,151	411.58	0.28
26.00	0.00	25,461	411.54	0.12
27.00	0.00	25,156	411.53	0.06
28.00	0.00	24,986	411.52	0.04
29.00	0.00	24,869	411.51	0.03
30.00	0.00	24,790	411.51	0.02
31.00	0.00	24,735	411.51	0.01
32.00	0.00	24,697	411.50	0.01
33.00	0.00	24,672	411.50	0.01
34.00	0.00	24,654	411.50	0.00
35.00	0.00	24,642	411.50	0.00
36.00	0.00	24,634	411.50	0.00
37.00	0.00	24,628	411.50	0.00
38.00	0.00	24,624	411.50	0.00
39.00	0.00	24,621	411.50	0.00
40.00	0.00	24,620	411.50	0.00
41.00	0.00	24,618	411.50	0.00
42.00	0.00	24,618	411.50	0.00
43.00	0.00	24,617	411.50	0.00
44.00	0.00	24,617	411.50	0.00
45.00	0.00	24,616	411.50	0.00
46.00	0.00	24,616	411.50	0.00
47.00	0.00	24,616	411.50	0.00
48.00	0.00	24,616	411.50	0.00

Stage-Area-Storage for Pond 26P: Bioretention 1F

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.66	18,594	0	413.46	26,590	70,488
407.76	18,594	744	413.56	26,915	73,164
407.86	18,594	1,488	413.66	27,240	75,871
407.96	18,594	2,231	413.76	27,565	78,612
408.06	18,594	2,975	413.86	27,890	81,384
408.16	18,594	3,719	413.96	28,215	84,190
408.26	18,594	4,463			
408.36	18,594	5,095			
408.46	18,594	5,467			
408.56	18,594	5,839			
408.66	18,594	6,210			
408.76	18,594	6,582			
408.86	18,594	6,954			
408.96	18,594	7,326			
409.06	18,594	7,698			
409.16	18,594	8,070			
409.26	18,594	8,442			
409.36	18,594	8,814			
409.46	18,594	9,185			
409.56	18,594	9,557			
409.66	18,594	9,929			
409.76	18,594	10,301			
409.86	18,594	10,673			
409.96	18,594	11,045			
410.06	18,594	11,417			
410.16	18,594	11,789			
410.26	18,594	12,160			
410.36	18,594	12,532			
410.46	18,594	12,904			
410.56	18,594	13,276			
410.66	18,594	13,648			
410.76	18,594	14,020			
410.86	18,594	14,392			
410.96	18,594	14,764			
411.06	18,789	16,034			
411.16	19,114	17,929			
411.26	19,439	19,857			
411.36	19,764	21,817			
411.46	20,089	23,810			
411.56	20,414	25,835			
411.66	20,739	27,892			
411.76	21,064	29,983			
411.86	21,389	32,105			
411.96	21,714	34,260			
412.06	22,039	36,448			
412.16	22,364	38,668			
412.26	22,689	40,921			
412.36	23,014	43,206			
412.46	23,339	45,524			
412.56	23,665	47,874			
412.66	23,990	50,257			
412.76	24,315	52,672			
412.86	24,640	55,120			
412.96	24,965	57,600			
413.06	25,290	60,113			
413.16	25,615	62,658			
413.26	25,940	65,236			
413.36	26,265	67,846			

Summary for Pond 29P: Bioretention 4B

Inflow Area = 6.859 ac, 48.92% Impervious, Inflow Depth = 8.74" for 500-Year event
 Inflow = 71.09 cfs @ 12.13 hrs, Volume= 4.995 af
 Outflow = 21.36 cfs @ 12.31 hrs, Volume= 4.290 af, Atten= 70%, Lag= 10.9 min
 Primary = 21.36 cfs @ 12.31 hrs, Volume= 4.290 af
 Routed to Link 32L : DP-4

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 421.72' @ 12.31 hrs Surf.Area= 23,756 sf Storage= 88,180 cf

Plug-Flow detention time= 152.7 min calculated for 4.290 af (86% of inflow)
 Center-of-Mass det. time= 86.1 min (877.6 - 791.5)

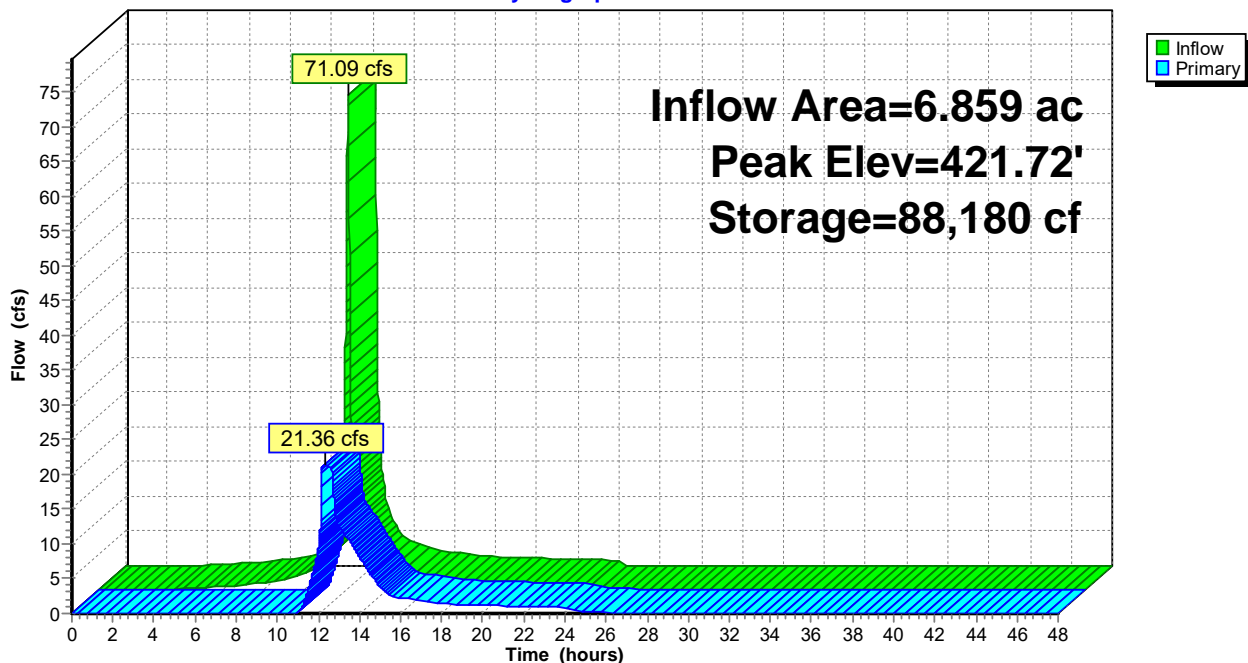
Volume	Invert	Avail.Storage	Storage Description	
#1	414.67'	94,874 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
414.67	16,541	0.0	0	0
415.33	16,541	40.0	4,367	4,367
418.00	16,541	20.0	8,833	13,200
422.00	24,296	100.0	81,674	94,874

Device	Routing	Invert	Outlet Devices
#1	Primary	414.67'	18.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 414.67' / 414.07' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	419.00'	48.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	421.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=21.36 cfs @ 12.31 hrs HW=421.72' (Free Discharge)
 1=Culvert (Inlet Controls 21.36 cfs @ 12.09 fps)
 2=Orifice/Grate (Passes < 15.13 cfs potential flow)
 3=Broad-Crested Rectangular Weir (Passes < 31.50 cfs potential flow)

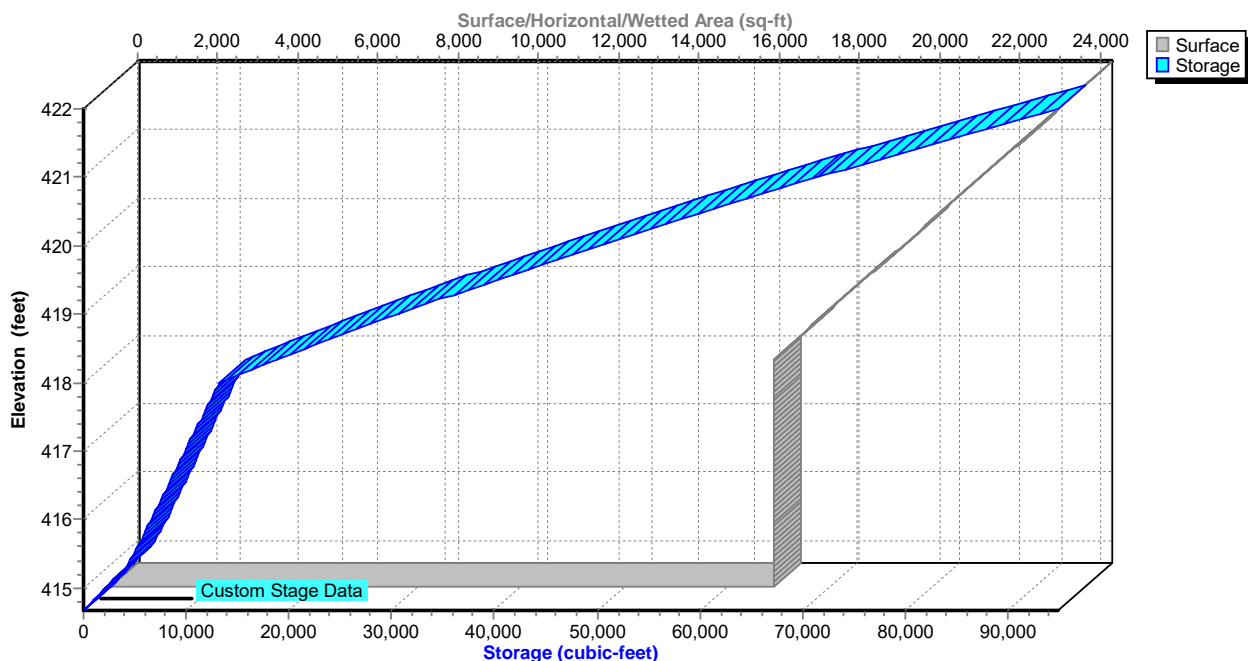
Pond 29P: Bioretention 4B

Hydrograph



Pond 29P: Bioretention 4B

Stage-Area-Storage



Hydrograph for Pond 29P: Bioretention 4B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	414.67	0.00
1.00	0.00	0	414.67	0.00
2.00	0.00	0	414.67	0.00
3.00	0.02	6	414.67	0.00
4.00	0.15	317	414.72	0.00
5.00	0.29	1,111	414.84	0.00
6.00	0.45	2,451	415.04	0.00
7.00	0.71	4,518	415.38	0.00
8.00	1.03	7,644	416.32	0.00
9.00	1.39	11,994	417.64	0.00
10.00	2.34	18,615	418.32	0.00
11.00	4.59	29,938	418.96	0.00
12.00	36.69	55,053	420.24	9.54
13.00	6.83	70,126	420.94	12.49
14.00	3.48	49,449	419.97	8.10
15.00	2.38	39,007	419.44	3.73
16.00	1.96	36,598	419.31	2.26
17.00	1.64	35,808	419.27	1.83
18.00	1.33	35,167	419.24	1.50
19.00	1.21	34,740	419.22	1.29
20.00	1.14	34,525	419.20	1.19
21.00	1.06	34,335	419.19	1.11
22.00	0.98	34,150	419.18	1.03
23.00	0.90	33,966	419.17	0.95
24.00	0.83	33,782	419.16	0.87
25.00	0.00	32,122	419.08	0.28
26.00	0.00	31,444	419.04	0.13
27.00	0.00	31,093	419.02	0.07
28.00	0.00	30,910	419.01	0.04
29.00	0.00	30,815	419.01	0.02
30.00	0.00	30,765	419.00	0.01
31.00	0.00	30,739	419.00	0.01
32.00	0.00	30,725	419.00	0.00
33.00	0.00	30,718	419.00	0.00
34.00	0.00	30,714	419.00	0.00
35.00	0.00	30,712	419.00	0.00
36.00	0.00	30,711	419.00	0.00
37.00	0.00	30,711	419.00	0.00
38.00	0.00	30,710	419.00	0.00
39.00	0.00	30,710	419.00	0.00
40.00	0.00	30,710	419.00	0.00
41.00	0.00	30,710	419.00	0.00
42.00	0.00	30,710	419.00	0.00
43.00	0.00	30,710	419.00	0.00
44.00	0.00	30,710	419.00	0.00
45.00	0.00	30,710	419.00	0.00
46.00	0.00	30,710	419.00	0.00
47.00	0.00	30,710	419.00	0.00
48.00	0.00	30,710	419.00	0.00

Stage-Area-Storage for Pond 29P: Bioretention 4B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
414.67	16,541	0	420.47	21,330	59,970
414.77	16,541	662	420.57	21,524	62,113
414.87	16,541	1,323	420.67	21,717	64,275
414.97	16,541	1,985	420.77	21,911	66,456
415.07	16,541	2,647	420.87	22,105	68,657
415.17	16,541	3,308	420.97	22,299	70,877
415.27	16,541	3,970	421.07	22,493	73,117
415.37	16,541	4,499	421.17	22,687	75,376
415.47	16,541	4,830	421.27	22,881	77,654
415.57	16,541	5,161	421.37	23,075	79,952
415.67	16,541	5,492	421.47	23,268	82,269
415.77	16,541	5,822	421.57	23,462	84,606
415.87	16,541	6,153	421.67	23,656	86,962
415.97	16,541	6,484	421.77	23,850	89,337
416.07	16,541	6,815	421.87	24,044	91,732
416.17	16,541	7,146	421.97	24,238	94,146
416.27	16,541	7,477			
416.37	16,541	7,807			
416.47	16,541	8,138			
416.57	16,541	8,469			
416.67	16,541	8,800			
416.77	16,541	9,131			
416.87	16,541	9,461			
416.97	16,541	9,792			
417.07	16,541	10,123			
417.17	16,541	10,454			
417.27	16,541	10,785			
417.37	16,541	11,116			
417.47	16,541	11,446			
417.57	16,541	11,777			
417.67	16,541	12,108			
417.77	16,541	12,439			
417.87	16,541	12,770			
417.97	16,541	13,100			
418.07	16,677	14,362			
418.17	16,871	16,040			
418.27	17,064	17,736			
418.37	17,258	19,453			
418.47	17,452	21,188			
418.57	17,646	22,943			
418.67	17,840	24,717			
418.77	18,034	26,511			
418.87	18,228	28,324			
418.97	18,422	30,157			
419.07	18,615	32,008			
419.17	18,809	33,880			
419.27	19,003	35,770			
419.37	19,197	37,680			
419.47	19,391	39,610			
419.57	19,585	41,559			
419.67	19,779	43,527			
419.77	19,973	45,514			
419.87	20,166	47,521			
419.97	20,360	49,548			
420.07	20,554	51,593			
420.17	20,748	53,658			
420.27	20,942	55,743			
420.37	21,136	57,847			

Summary for Pond 31P: Bioretention i

Inflow Area = 10.027 ac, 72.74% Impervious, Inflow Depth = 4.67" for 500-Year event
 Inflow = 50.70 cfs @ 12.09 hrs, Volume= 3.904 af
 Outflow = 8.68 cfs @ 12.51 hrs, Volume= 2.935 af, Atten= 83%, Lag= 25.5 min
 Primary = 8.68 cfs @ 12.51 hrs, Volume= 2.935 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 413.85' @ 12.51 hrs Surf.Area= 28,062 sf Storage= 89,327 cf

Plug-Flow detention time= 255.6 min calculated for 2.935 af (75% of inflow)
 Center-of-Mass det. time= 158.8 min (924.0 - 765.1)

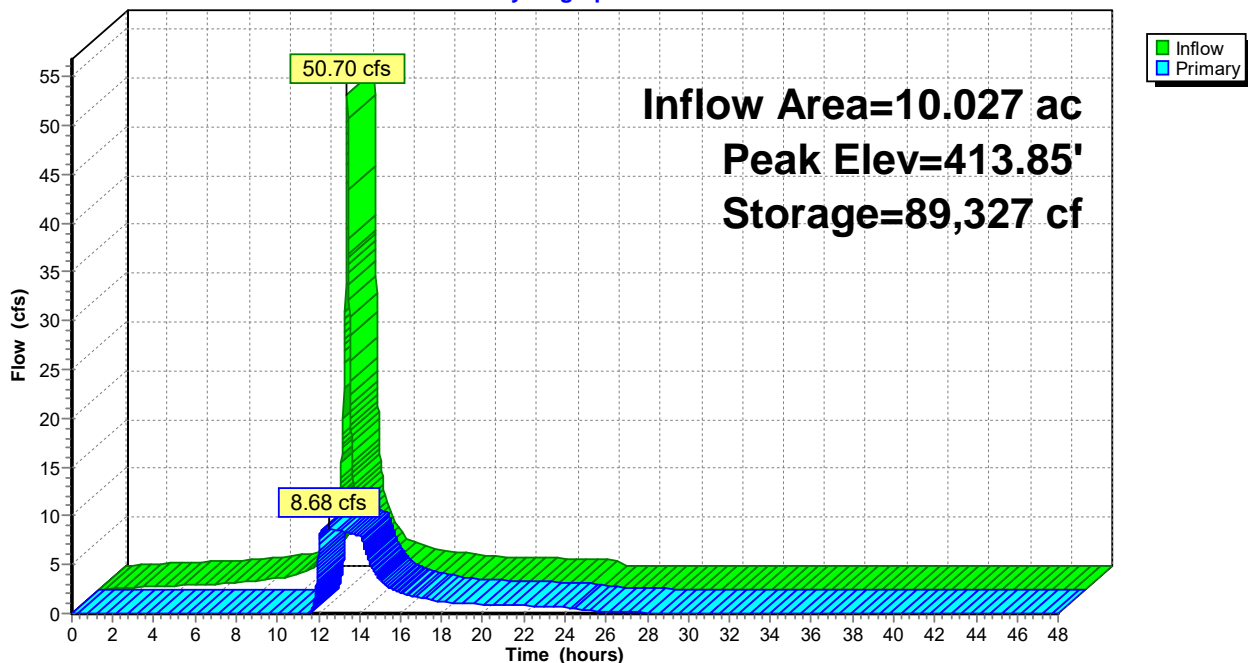
Volume	Invert	Avail.Storage	Storage Description	
#1	407.83'	93,189 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	22,680	0.0	0	0
408.33	22,680	40.0	4,536	4,536
411.00	22,680	20.0	12,111	16,647
414.00	28,348	100.0	76,542	93,189

Device	Routing	Invert	Outlet Devices
#1	Primary	407.83'	12.0" Round Culvert L= 42.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.83' / 407.50' S= 0.0079 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	412.00'	34.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=8.68 cfs @ 12.51 hrs HW=413.85' (Free Discharge)
 1=Culvert (Barrel Controls 8.68 cfs @ 11.05 fps)
 2=Orifice/Grate (Passes < 15.75 cfs potential flow)
 3=Broad-Crested Rectangular Weir (Passes < 41.33 cfs potential flow)

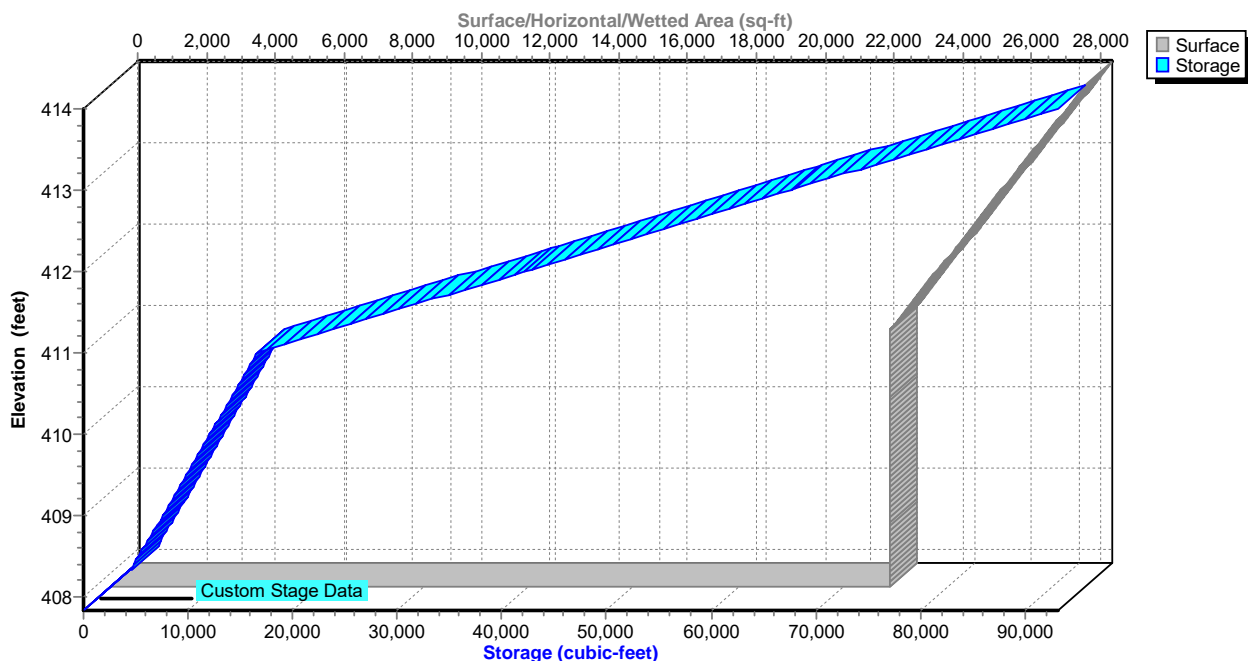
Pond 31P: Bioretention i

Hydrograph



Pond 31P: Bioretention i

Stage-Area-Storage



Hydrograph for Pond 31P: Bioretention i

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.83	0.00
1.00	0.16	200	407.85	0.00
2.00	0.28	1,019	407.94	0.00
3.00	0.35	2,151	408.07	0.00
4.00	0.43	3,526	408.22	0.00
5.00	0.51	5,215	408.48	0.00
6.00	0.60	7,209	408.92	0.00
7.00	0.79	9,709	409.47	0.00
8.00	1.01	12,958	410.19	0.00
9.00	1.24	17,007	411.01	0.00
10.00	1.93	22,702	411.24	0.00
11.00	3.58	31,855	411.60	0.00
12.00	31.24	61,496	412.76	6.00
13.00	4.95	85,240	413.69	8.55
14.00	2.56	67,599	413.00	7.96
15.00	1.75	55,607	412.53	3.48
16.00	1.45	51,716	412.37	2.09
17.00	1.22	50,042	412.31	1.57
18.00	0.98	48,955	412.27	1.25
19.00	0.90	48,198	412.24	1.05
20.00	0.84	47,767	412.22	0.94
21.00	0.78	47,464	412.21	0.86
22.00	0.73	47,191	412.20	0.80
23.00	0.67	46,927	412.19	0.74
24.00	0.60	46,666	412.18	0.68
25.00	0.00	45,056	412.11	0.36
26.00	0.00	44,105	412.08	0.20
27.00	0.00	43,528	412.05	0.13
28.00	0.00	43,161	412.04	0.08
29.00	0.00	42,927	412.03	0.05
30.00	0.00	42,777	412.02	0.04
31.00	0.00	42,663	412.02	0.03
32.00	0.00	42,570	412.02	0.02
33.00	0.00	42,494	412.01	0.02
34.00	0.00	42,432	412.01	0.02
35.00	0.00	42,382	412.01	0.01
36.00	0.00	42,341	412.01	0.01
37.00	0.00	42,307	412.01	0.01
38.00	0.00	42,280	412.00	0.01
39.00	0.00	42,258	412.00	0.01
40.00	0.00	42,240	412.00	0.00
41.00	0.00	42,225	412.00	0.00
42.00	0.00	42,214	412.00	0.00
43.00	0.00	42,204	412.00	0.00
44.00	0.00	42,196	412.00	0.00
45.00	0.00	42,189	412.00	0.00
46.00	0.00	42,184	412.00	0.00
47.00	0.00	42,180	412.00	0.00
48.00	0.00	42,176	412.00	0.00

Stage-Area-Storage for Pond 31P: Bioretention i

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.83	22,680	0	413.63	27,649	83,749
407.93	22,680	907	413.73	27,838	86,300
408.03	22,680	1,814	413.83	28,027	88,852
408.13	22,680	2,722	413.93	28,216	91,403
408.23	22,680	3,629			
408.33	22,680	4,536			
408.43	22,680	4,990			
408.53	22,680	5,443			
408.63	22,680	5,897			
408.73	22,680	6,350			
408.83	22,680	6,804			
408.93	22,680	7,258			
409.03	22,680	7,711			
409.13	22,680	8,165			
409.23	22,680	8,618			
409.33	22,680	9,072			
409.43	22,680	9,526			
409.53	22,680	9,979			
409.63	22,680	10,433			
409.73	22,680	10,886			
409.83	22,680	11,340			
409.93	22,680	11,794			
410.03	22,680	12,247			
410.13	22,680	12,701			
410.23	22,680	13,154			
410.33	22,680	13,608			
410.43	22,680	14,062			
410.53	22,680	14,515			
410.63	22,680	14,969			
410.73	22,680	15,422			
410.83	22,680	15,876			
410.93	22,680	16,330			
411.03	22,737	17,413			
411.13	22,926	19,964			
411.23	23,115	22,515			
411.33	23,303	25,067			
411.43	23,492	27,618			
411.53	23,681	30,170			
411.63	23,870	32,721			
411.73	24,059	35,272			
411.83	24,248	37,824			
411.93	24,437	40,375			
412.03	24,626	42,927			
412.13	24,815	45,478			
412.23	25,004	48,029			
412.33	25,193	50,581			
412.43	25,382	53,132			
412.53	25,571	55,684			
412.63	25,760	58,235			
412.73	25,949	60,786			
412.83	26,137	63,338			
412.93	26,326	65,889			
413.03	26,515	68,441			
413.13	26,704	70,992			
413.23	26,893	73,543			
413.33	27,082	76,095			
413.43	27,271	78,646			
413.53	27,460	81,198			

Summary for Pond 32P: FB 1C

Inflow Area = 2.583 ac, 77.93% Impervious, Inflow Depth = 9.77" for 500-Year event
 Inflow = 28.54 cfs @ 12.13 hrs, Volume= 2.103 af
 Outflow = 28.40 cfs @ 12.14 hrs, Volume= 2.103 af, Atten= 0%, Lag= 0.4 min
 Primary = 28.40 cfs @ 12.14 hrs, Volume= 2.103 af
 Routed to Pond 33P : INFIL 1C

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 413.35' Surf.Area= 3,197 sf Storage= 9,962 cf
 Peak Elev= 413.86' @ 12.14 hrs Surf.Area= 3,536 sf Storage= 11,119 cf (1,157 cf above start)

Plug-Flow detention time= 98.7 min calculated for 1.874 af (89% of inflow)
 Center-of-Mass det. time= 1.6 min (771.9 - 770.2)

Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	13,740 cf	Custom Stage Data (Prismatic) Listed below

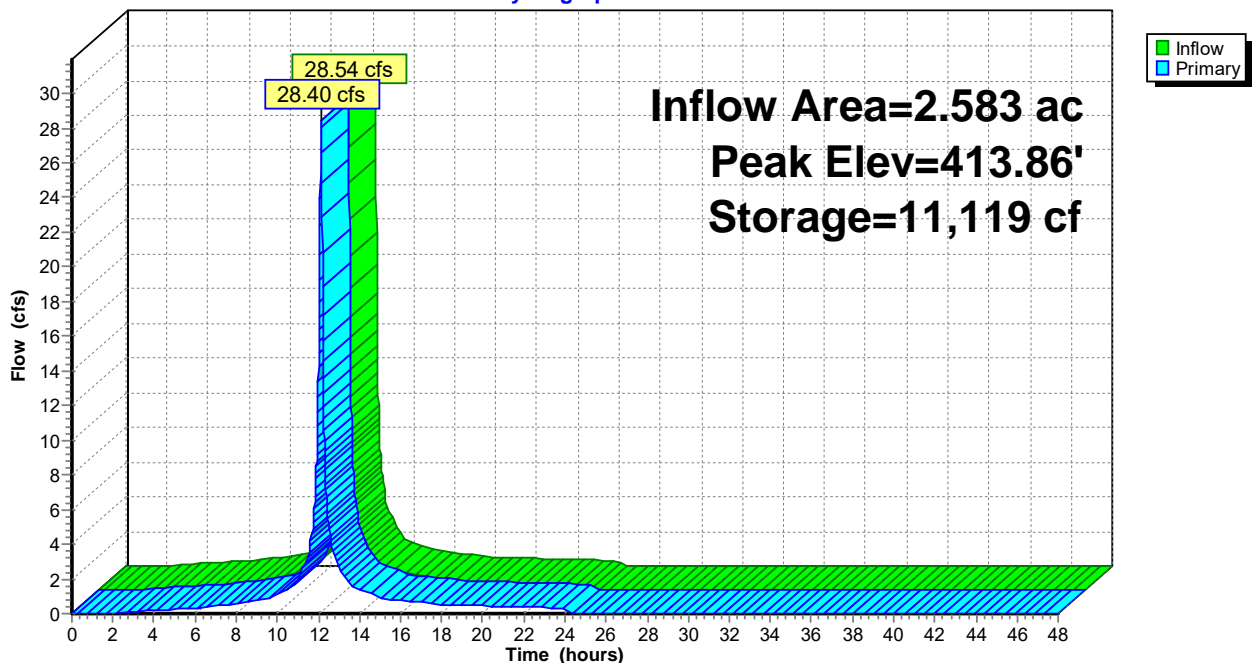
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
409.00	275	0	0
415.00	4,305	13,740	13,740

Device	Routing	Invert	Outlet Devices
#1	Primary	413.35'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

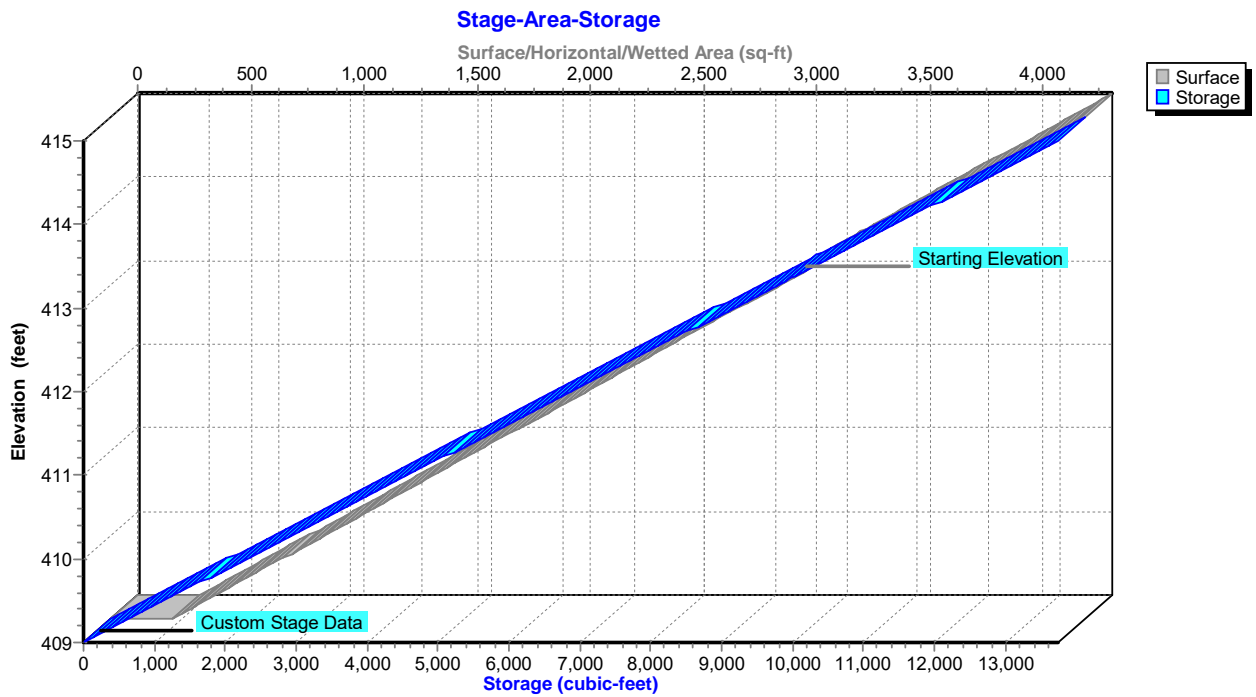
Primary OutFlow Max=28.31 cfs @ 12.14 hrs HW=413.85' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 28.31 cfs @ 1.87 fps)

Pond 32P: FB 1C

Hydrograph



Pond 32P: FB 1C



Hydrograph for Pond 32P: FB 1C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	9,962	413.35	0.00
1.00	0.00	9,962	413.35	0.00
2.00	0.02	9,964	413.35	0.02
3.00	0.11	9,980	413.36	0.10
4.00	0.18	9,993	413.36	0.18
5.00	0.25	10,005	413.37	0.25
6.00	0.31	10,016	413.37	0.31
7.00	0.43	10,034	413.38	0.43
8.00	0.57	10,045	413.39	0.57
9.00	0.71	10,057	413.39	0.71
10.00	1.12	10,091	413.41	1.11
11.00	2.06	10,168	413.44	2.02
12.00	15.07	10,712	413.68	14.26
13.00	2.67	10,209	413.46	2.72
14.00	1.36	10,113	413.42	1.37
15.00	0.92	10,076	413.40	0.94
16.00	0.76	10,062	413.39	0.76
17.00	0.64	10,051	413.39	0.64
18.00	0.51	10,041	413.38	0.52
19.00	0.47	10,037	413.38	0.47
20.00	0.44	10,035	413.38	0.44
21.00	0.41	10,032	413.38	0.41
22.00	0.38	10,029	413.38	0.38
23.00	0.35	10,023	413.38	0.35
24.00	0.32	10,018	413.37	0.32
25.00	0.00	9,962	413.35	0.00
26.00	0.00	9,962	413.35	0.00
27.00	0.00	9,962	413.35	0.00
28.00	0.00	9,962	413.35	0.00
29.00	0.00	9,962	413.35	0.00
30.00	0.00	9,962	413.35	0.00
31.00	0.00	9,962	413.35	0.00
32.00	0.00	9,962	413.35	0.00
33.00	0.00	9,962	413.35	0.00
34.00	0.00	9,962	413.35	0.00
35.00	0.00	9,962	413.35	0.00
36.00	0.00	9,962	413.35	0.00
37.00	0.00	9,962	413.35	0.00
38.00	0.00	9,962	413.35	0.00
39.00	0.00	9,962	413.35	0.00
40.00	0.00	9,962	413.35	0.00
41.00	0.00	9,962	413.35	0.00
42.00	0.00	9,962	413.35	0.00
43.00	0.00	9,962	413.35	0.00
44.00	0.00	9,962	413.35	0.00
45.00	0.00	9,962	413.35	0.00
46.00	0.00	9,962	413.35	0.00
47.00	0.00	9,962	413.35	0.00
48.00	0.00	9,962	413.35	0.00

Stage-Area-Storage for Pond 32P: FB 1C

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
409.00	275	0	414.80	4,171	13,282
409.10	342	229	414.90	4,238	13,511
409.20	409	458	415.00	4,305	13,740
409.30	477	687			
409.40	544	916			
409.50	611	1,145			
409.60	678	1,374			
409.70	745	1,603			
409.80	812	1,832			
409.90	879	2,061			
410.00	947	2,290			
410.10	1,014	2,519			
410.20	1,081	2,748			
410.30	1,148	2,977			
410.40	1,215	3,206			
410.50	1,283	3,435			
410.60	1,350	3,664			
410.70	1,417	3,893			
410.80	1,484	4,122			
410.90	1,551	4,351			
411.00	1,618	4,580			
411.10	1,686	4,809			
411.20	1,753	5,038			
411.30	1,820	5,267			
411.40	1,887	5,496			
411.50	1,954	5,725			
411.60	2,021	5,954			
411.70	2,088	6,183			
411.80	2,156	6,412			
411.90	2,223	6,641			
412.00	2,290	6,870			
412.10	2,357	7,099			
412.20	2,424	7,328			
412.30	2,492	7,557			
412.40	2,559	7,786			
412.50	2,626	8,015			
412.60	2,693	8,244			
412.70	2,760	8,473			
412.80	2,827	8,702			
412.90	2,894	8,931			
413.00	2,962	9,160			
413.10	3,029	9,389			
413.20	3,096	9,618			
413.30	3,163	9,847			
413.40	3,230	10,076			
413.50	3,298	10,305			
413.60	3,365	10,534			
413.70	3,432	10,763			
413.80	3,499	10,992			
413.90	3,566	11,221			
414.00	3,633	11,450			
414.10	3,701	11,679			
414.20	3,768	11,908			
414.30	3,835	12,137			
414.40	3,902	12,366			
414.50	3,969	12,595			
414.60	4,036	12,824			
414.70	4,103	13,053			

Summary for Pond 33P: INFIL 1C

Inflow Area = 2.583 ac, 77.93% Impervious, Inflow Depth = 9.77" for 500-Year event
 Inflow = 28.40 cfs @ 12.14 hrs, Volume= 2.103 af
 Outflow = 4.56 cfs @ 12.58 hrs, Volume= 2.103 af, Atten= 84%, Lag= 26.5 min
 Discarded = 3.64 cfs @ 12.58 hrs, Volume= 1.945 af
 Primary = 0.92 cfs @ 12.58 hrs, Volume= 0.158 af
 Routed to Link 29L : DP-1
 Secondary = 0.00 cfs @ 12.58 hrs, Volume= 0.000 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 414.00' @ 12.58 hrs Surf.Area= 9,122 sf Storage= 31,556 cf

Plug-Flow detention time= 72.8 min calculated for 2.103 af (100% of inflow)
 Center-of-Mass det. time= 72.8 min (844.6 - 771.9)

Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	41,232 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
409.00	3,499	0	0
415.00	10,245	41,232	41,232

Device	Routing	Invert	Outlet Devices
#1	Secondary	414.00'	10.0' 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
#2	Device 4	411.85'	5.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	409.00'	10.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 404.80' Phase-In= 0.01'
#4	Primary	409.00'	18.0" Round Culvert L= 34.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 409.00' / 408.00' S= 0.0294 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

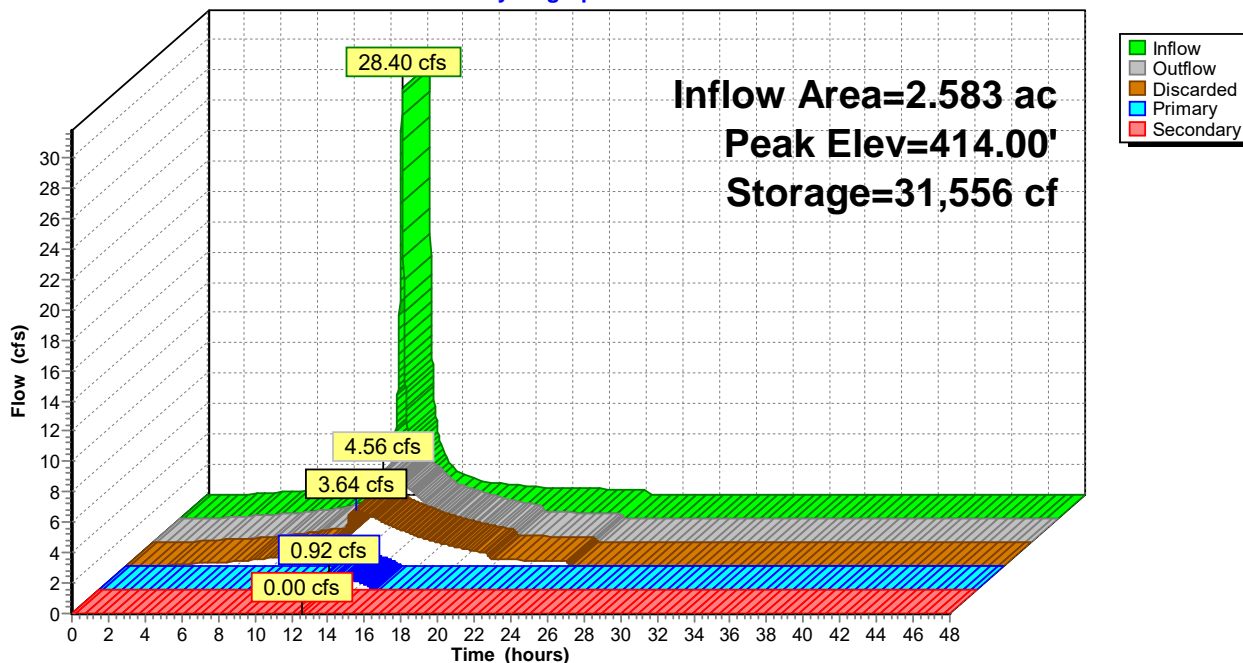
Discarded OutFlow Max=3.64 cfs @ 12.58 hrs HW=414.00' (Free Discharge)
 ↑3=Exfiltration (Controls 3.64 cfs)

Primary OutFlow Max=0.92 cfs @ 12.58 hrs HW=414.00' (Free Discharge)
 ↑4=Culvert (Passes 0.92 cfs of 17.54 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.92 cfs @ 6.71 fps)

Secondary OutFlow Max=0.00 cfs @ 12.58 hrs HW=414.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 0.00 cfs @ 0.06 fps)

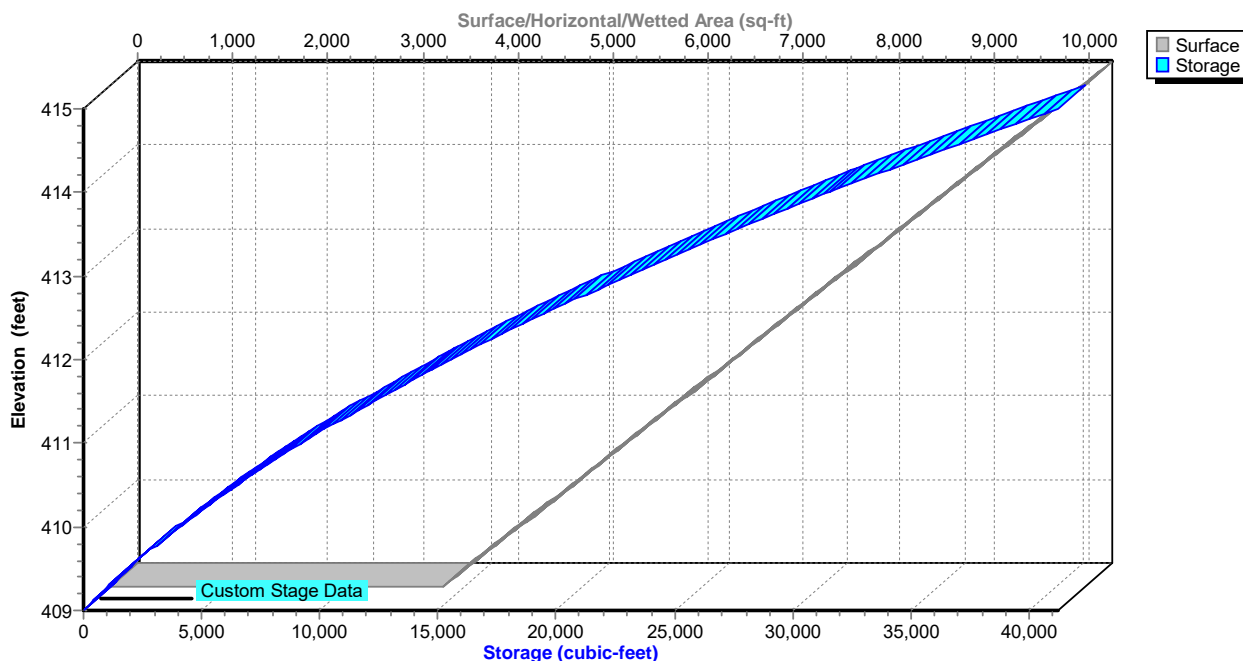
Pond 33P: INFIL 1C

Hydrograph



Pond 33P: INFIL 1C

Stage-Area-Storage



Hydrograph for Pond 33P: INFIL 1C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	409.00	0.00	0.00	0.00	0.00
1.00	0.00	0	409.00	0.00	0.00	0.00	0.00
2.00	0.02	3	409.00	0.01	0.01	0.00	0.00
3.00	0.10	24	409.01	0.10	0.10	0.00	0.00
4.00	0.18	44	409.01	0.17	0.17	0.00	0.00
5.00	0.25	62	409.02	0.24	0.24	0.00	0.00
6.00	0.31	77	409.02	0.31	0.31	0.00	0.00
7.00	0.43	107	409.03	0.42	0.42	0.00	0.00
8.00	0.57	141	409.04	0.56	0.56	0.00	0.00
9.00	0.71	177	409.05	0.70	0.70	0.00	0.00
10.00	1.11	491	409.14	0.87	0.87	0.00	0.00
11.00	2.02	2,209	409.58	1.08	1.08	0.00	0.00
12.00	14.26	12,903	411.60	2.16	2.16	0.00	0.00
13.00	2.72	29,871	413.81	4.39	3.52	0.87	0.00
14.00	1.37	22,148	412.89	3.54	2.94	0.60	0.00
15.00	0.94	15,454	411.99	2.43	2.38	0.05	0.00
16.00	0.76	10,639	411.24	1.95	1.95	0.00	0.00
17.00	0.64	6,821	410.56	1.58	1.58	0.00	0.00
18.00	0.52	3,801	409.94	1.26	1.26	0.00	0.00
19.00	0.47	1,511	409.41	1.00	1.00	0.00	0.00
20.00	0.44	117	409.03	0.46	0.46	0.00	0.00
21.00	0.41	104	409.03	0.41	0.41	0.00	0.00
22.00	0.38	97	409.03	0.38	0.38	0.00	0.00
23.00	0.35	89	409.03	0.35	0.35	0.00	0.00
24.00	0.32	81	409.02	0.32	0.32	0.00	0.00
25.00	0.00	0	409.00	0.00	0.00	0.00	0.00
26.00	0.00	0	409.00	0.00	0.00	0.00	0.00
27.00	0.00	0	409.00	0.00	0.00	0.00	0.00
28.00	0.00	0	409.00	0.00	0.00	0.00	0.00
29.00	0.00	0	409.00	0.00	0.00	0.00	0.00
30.00	0.00	0	409.00	0.00	0.00	0.00	0.00
31.00	0.00	0	409.00	0.00	0.00	0.00	0.00
32.00	0.00	0	409.00	0.00	0.00	0.00	0.00
33.00	0.00	0	409.00	0.00	0.00	0.00	0.00
34.00	0.00	0	409.00	0.00	0.00	0.00	0.00
35.00	0.00	0	409.00	0.00	0.00	0.00	0.00
36.00	0.00	0	409.00	0.00	0.00	0.00	0.00
37.00	0.00	0	409.00	0.00	0.00	0.00	0.00
38.00	0.00	0	409.00	0.00	0.00	0.00	0.00
39.00	0.00	0	409.00	0.00	0.00	0.00	0.00
40.00	0.00	0	409.00	0.00	0.00	0.00	0.00
41.00	0.00	0	409.00	0.00	0.00	0.00	0.00
42.00	0.00	0	409.00	0.00	0.00	0.00	0.00
43.00	0.00	0	409.00	0.00	0.00	0.00	0.00
44.00	0.00	0	409.00	0.00	0.00	0.00	0.00
45.00	0.00	0	409.00	0.00	0.00	0.00	0.00
46.00	0.00	0	409.00	0.00	0.00	0.00	0.00
47.00	0.00	0	409.00	0.00	0.00	0.00	0.00
48.00	0.00	0	409.00	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 33P: INFIL 1C

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
409.00	3,499	0	414.80	10,020	39,205
409.10	3,611	356	414.90	10,133	40,213
409.20	3,724	722	415.00	10,245	41,232
409.30	3,836	1,100			
409.40	3,949	1,490			
409.50	4,061	1,890			
409.60	4,174	2,302			
409.70	4,286	2,725			
409.80	4,398	3,159			
409.90	4,511	3,604			
410.00	4,623	4,061			
410.10	4,736	4,529			
410.20	4,848	5,008			
410.30	4,961	5,499			
410.40	5,073	6,000			
410.50	5,186	6,513			
410.60	5,298	7,038			
410.70	5,410	7,573			
410.80	5,523	8,120			
410.90	5,635	8,678			
411.00	5,748	9,247			
411.10	5,860	9,827			
411.20	5,973	10,419			
411.30	6,085	11,022			
411.40	6,197	11,636			
411.50	6,310	12,261			
411.60	6,422	12,898			
411.70	6,535	13,545			
411.80	6,647	14,205			
411.90	6,760	14,875			
412.00	6,872	15,557			
412.10	6,984	16,249			
412.20	7,097	16,953			
412.30	7,209	17,669			
412.40	7,322	18,395			
412.50	7,434	19,133			
412.60	7,547	19,882			
412.70	7,659	20,642			
412.80	7,771	21,414			
412.90	7,884	22,197			
413.00	7,996	22,991			
413.10	8,109	23,796			
413.20	8,221	24,612			
413.30	8,334	25,440			
413.40	8,446	26,279			
413.50	8,559	27,129			
413.60	8,671	27,991			
413.70	8,783	28,864			
413.80	8,896	29,748			
413.90	9,008	30,643			
414.00	9,121	31,549			
414.10	9,233	32,467			
414.20	9,346	33,396			
414.30	9,458	34,336			
414.40	9,570	35,287			
414.50	9,683	36,250			
414.60	9,795	37,224			
414.70	9,908	38,209			

Summary for Pond 37P: FB 1i+J

Inflow Area = 9.303 ac, 78.40% Impervious, Inflow Depth = 9.66" for 500-Year event
 Inflow = 101.76 cfs @ 12.09 hrs, Volume= 7.489 af
 Outflow = 98.01 cfs @ 12.09 hrs, Volume= 7.489 af, Atten= 4%, Lag= 0.1 min
 Primary = 49.01 cfs @ 12.09 hrs, Volume= 3.745 af
 Routed to Pond 31P : Bioretention i
 Secondary = 49.01 cfs @ 12.09 hrs, Volume= 3.745 af
 Routed to Pond 53P : Bioretention J basin

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 413.25' Surf.Area= 9,799 sf Storage= 26,806 cf
 Peak Elev= 413.84' @ 12.09 hrs Surf.Area= 10,531 sf Storage= 31,677 cf (4,871 cf above start)

Plug-Flow detention time= 87.1 min calculated for 6.872 af (92% of inflow)
 Center-of-Mass det. time= 2.0 min (759.6 - 757.6)

Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	32,992 cf	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
410.00	5,767	0	0
414.00	10,729	32,992	32,992

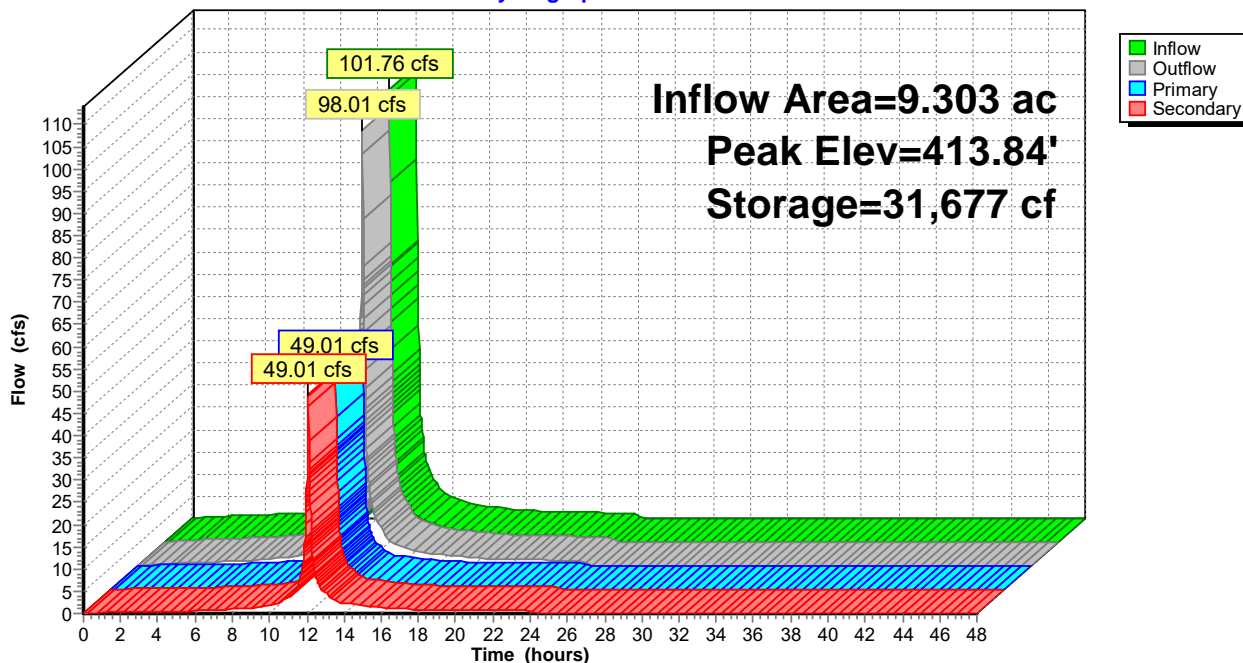
Device	Routing	Invert	Outlet Devices
#1	Primary	413.25'	40.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	413.25'	40.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=48.73 cfs @ 12.09 hrs HW=413.84' (Free Discharge)
 ↰1=**Broad-Crested Rectangular Weir** (Weir Controls 48.73 cfs @ 2.07 fps)

Secondary OutFlow Max=48.73 cfs @ 12.09 hrs HW=413.84' (Free Discharge)
 ↰2=**Broad-Crested Rectangular Weir** (Weir Controls 48.73 cfs @ 2.07 fps)

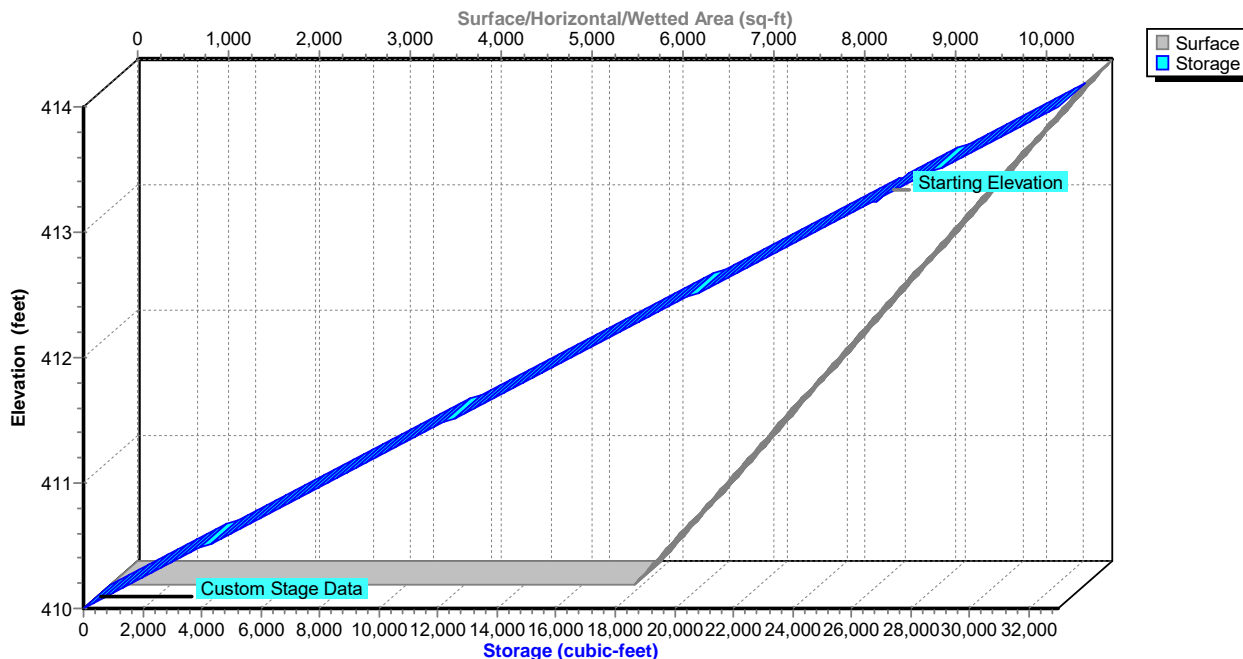
Pond 37P: FB 1i+J

Hydrograph



Pond 37P: FB 1i+J

Stage-Area-Storage



Hydrograph for Pond 37P: FB 1i+J

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	26,806	413.25	0.00	0.00	0.00
1.00	0.34	26,877	413.26	0.32	0.16	0.16
2.00	0.57	26,930	413.27	0.56	0.28	0.28
3.00	0.70	26,960	413.27	0.69	0.35	0.35
4.00	0.86	26,995	413.27	0.85	0.43	0.43
5.00	1.03	27,033	413.28	1.02	0.51	0.51
6.00	1.21	27,062	413.28	1.19	0.60	0.60
7.00	1.60	27,108	413.29	1.59	0.79	0.79
8.00	2.04	27,158	413.29	2.02	1.01	1.01
9.00	2.52	27,211	413.30	2.48	1.24	1.24
10.00	3.93	27,371	413.32	3.86	1.93	1.93
11.00	7.45	27,657	413.35	7.17	3.58	3.58
12.00	71.42	30,355	413.68	60.97	30.49	30.49
13.00	8.94	27,815	413.37	9.25	4.63	4.63
14.00	4.71	27,452	413.33	4.77	2.38	2.38
15.00	3.19	27,301	413.31	3.25	1.63	1.63
16.00	2.66	27,234	413.30	2.68	1.34	1.34
17.00	2.23	27,185	413.30	2.25	1.12	1.12
18.00	1.80	27,135	413.29	1.82	0.91	0.91
19.00	1.66	27,117	413.29	1.66	0.83	0.83
20.00	1.55	27,104	413.29	1.55	0.78	0.78
21.00	1.44	27,092	413.28	1.45	0.72	0.72
22.00	1.33	27,079	413.28	1.34	0.67	0.67
23.00	1.23	27,067	413.28	1.23	0.62	0.62
24.00	0.82	27,050	413.28	1.10	0.55	0.55
25.00	0.00	26,806	413.25	0.00	0.00	0.00
26.00	0.00	26,806	413.25	0.00	0.00	0.00
27.00	0.00	26,806	413.25	0.00	0.00	0.00
28.00	0.00	26,806	413.25	0.00	0.00	0.00
29.00	0.00	26,806	413.25	0.00	0.00	0.00
30.00	0.00	26,806	413.25	0.00	0.00	0.00
31.00	0.00	26,806	413.25	0.00	0.00	0.00
32.00	0.00	26,806	413.25	0.00	0.00	0.00
33.00	0.00	26,806	413.25	0.00	0.00	0.00
34.00	0.00	26,806	413.25	0.00	0.00	0.00
35.00	0.00	26,806	413.25	0.00	0.00	0.00
36.00	0.00	26,806	413.25	0.00	0.00	0.00
37.00	0.00	26,806	413.25	0.00	0.00	0.00
38.00	0.00	26,806	413.25	0.00	0.00	0.00
39.00	0.00	26,806	413.25	0.00	0.00	0.00
40.00	0.00	26,806	413.25	0.00	0.00	0.00
41.00	0.00	26,806	413.25	0.00	0.00	0.00
42.00	0.00	26,806	413.25	0.00	0.00	0.00
43.00	0.00	26,806	413.25	0.00	0.00	0.00
44.00	0.00	26,806	413.25	0.00	0.00	0.00
45.00	0.00	26,806	413.25	0.00	0.00	0.00
46.00	0.00	26,806	413.25	0.00	0.00	0.00
47.00	0.00	26,806	413.25	0.00	0.00	0.00
48.00	0.00	26,806	413.25	0.00	0.00	0.00

Stage-Area-Storage for Pond 37P: FB 1i+J

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
410.00	5,767	0	412.90	9,364	23,919
410.05	5,829	412	412.95	9,426	24,332
410.10	5,891	825	413.00	9,489	24,744
410.15	5,953	1,237	413.05	9,551	25,156
410.20	6,015	1,650	413.10	9,613	25,569
410.25	6,077	2,062	413.15	9,675	25,981
410.30	6,139	2,474	413.20	9,737	26,394
410.35	6,201	2,887	413.25	9,799	26,806
410.40	6,263	3,299	413.30	9,861	27,218
410.45	6,325	3,712	413.35	9,923	27,631
410.50	6,387	4,124	413.40	9,985	28,043
410.55	6,449	4,536	413.45	10,047	28,456
410.60	6,511	4,949	413.50	10,109	28,868
410.65	6,573	5,361	413.55	10,171	29,280
410.70	6,635	5,774	413.60	10,233	29,693
410.75	6,697	6,186	413.65	10,295	30,105
410.80	6,759	6,598	413.70	10,357	30,518
410.85	6,821	7,011	413.75	10,419	30,930
410.90	6,883	7,423	413.80	10,481	31,342
410.95	6,945	7,836	413.85	10,543	31,755
411.00	7,008	8,248	413.90	10,605	32,167
411.05	7,070	8,660	413.95	10,667	32,580
411.10	7,132	9,073	414.00	10,729	32,992
411.15	7,194	9,485			
411.20	7,256	9,898			
411.25	7,318	10,310			
411.30	7,380	10,722			
411.35	7,442	11,135			
411.40	7,504	11,547			
411.45	7,566	11,960			
411.50	7,628	12,372			
411.55	7,690	12,784			
411.60	7,752	13,197			
411.65	7,814	13,609			
411.70	7,876	14,022			
411.75	7,938	14,434			
411.80	8,000	14,846			
411.85	8,062	15,259			
411.90	8,124	15,671			
411.95	8,186	16,084			
412.00	8,248	16,496			
412.05	8,310	16,908			
412.10	8,372	17,321			
412.15	8,434	17,733			
412.20	8,496	18,146			
412.25	8,558	18,558			
412.30	8,620	18,970			
412.35	8,682	19,383			
412.40	8,744	19,795			
412.45	8,806	20,208			
412.50	8,868	20,620			
412.55	8,930	21,032			
412.60	8,992	21,445			
412.65	9,054	21,857			
412.70	9,116	22,270			
412.75	9,178	22,682			
412.80	9,240	23,094			
412.85	9,302	23,507			

Summary for Pond 39P: FB 5A

Inflow Area = 4.966 ac, 46.58% Impervious, Inflow Depth = 7.68" for 500-Year event
 Inflow = 46.95 cfs @ 12.13 hrs, Volume= 3.177 af
 Outflow = 46.26 cfs @ 12.14 hrs, Volume= 3.177 af, Atten= 1%, Lag= 0.7 min
 Primary = 46.26 cfs @ 12.14 hrs, Volume= 3.177 af
 Routed to Pond 22P : Bioretention 5A

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 433.30' Surf.Area= 4,110 sf Storage= 8,944 cf
 Peak Elev= 434.08' @ 12.14 hrs Surf.Area= 4,685 sf Storage= 11,980 cf (3,036 cf above start)

Plug-Flow detention time= 57.8 min calculated for 2.972 af (94% of inflow)
 Center-of-Mass det. time= 2.7 min (813.6 - 810.8)

Volume	Invert	Avail.Storage	Storage Description
#1	431.00'	15,554 cf	Custom Stage Data (Prismatic) Listed below

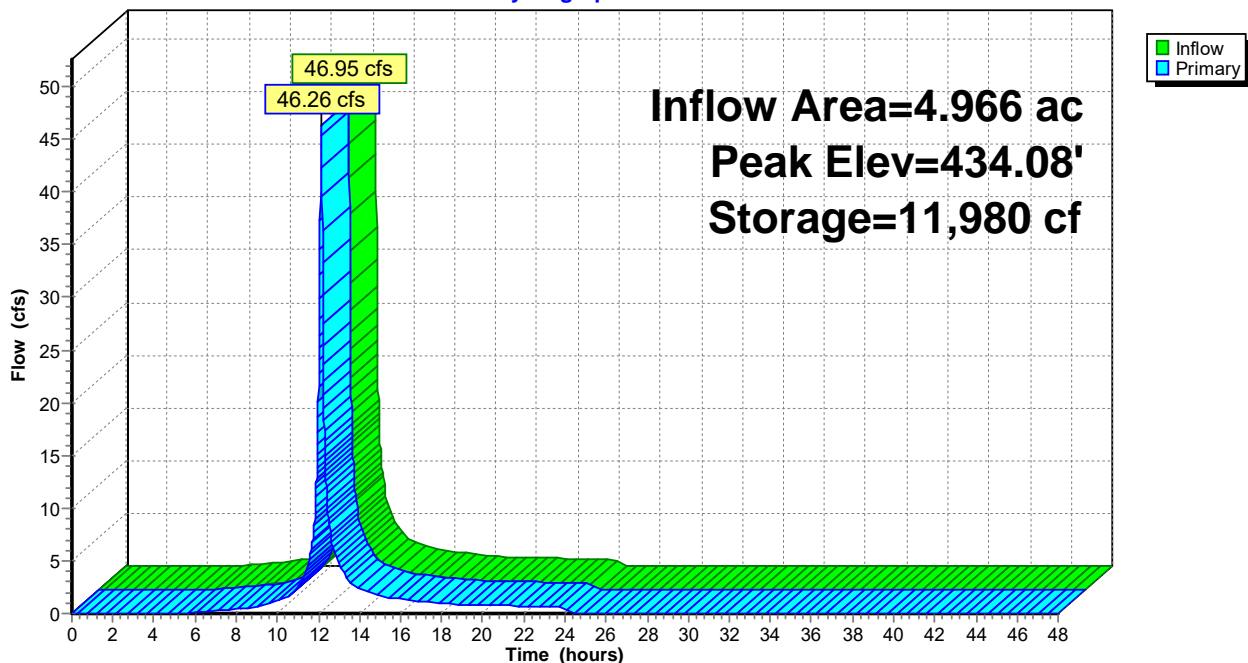
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
431.00	2,415	0	0
435.00	5,362	15,554	15,554

Device	Routing	Invert	Outlet Devices
#1	Primary	433.30'	25.0' 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=46.19 cfs @ 12.14 hrs HW=434.08' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 46.19 cfs @ 2.37 fps)

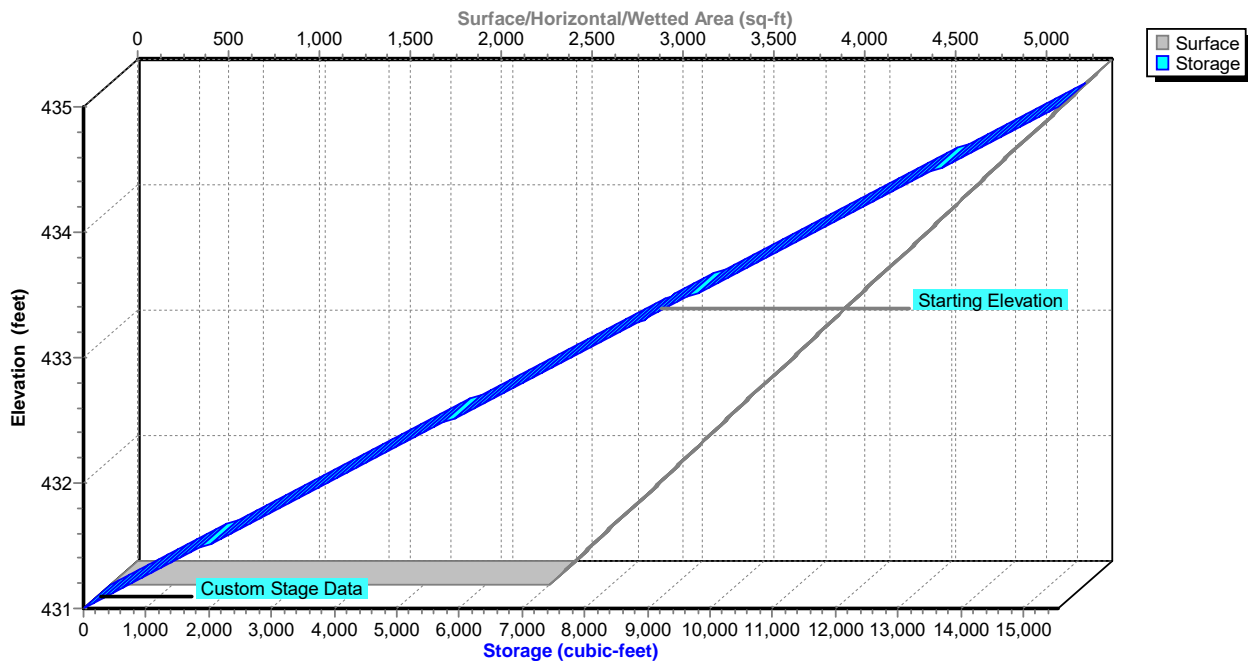
Pond 39P: FB 5A

Hydrograph



Pond 39P: FB 5A

Stage-Area-Storage



Hydrograph for Pond 39P: FB 5A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,944	433.30	0.00
1.00	0.00	8,944	433.30	0.00
2.00	0.00	8,944	433.30	0.00
3.00	0.00	8,944	433.30	0.00
4.00	0.00	8,944	433.30	0.00
5.00	0.02	8,948	433.30	0.01
6.00	0.11	8,990	433.31	0.10
7.00	0.25	9,038	433.32	0.24
8.00	0.44	9,079	433.33	0.42
9.00	0.66	9,130	433.35	0.65
10.00	1.23	9,230	433.37	1.20
11.00	2.62	9,420	433.42	2.53
12.00	23.51	10,811	433.78	21.50
13.00	4.67	9,677	433.49	4.81
14.00	2.40	9,406	433.42	2.43
15.00	1.64	9,306	433.39	1.68
16.00	1.36	9,257	433.38	1.37
17.00	1.14	9,223	433.37	1.15
18.00	0.92	9,188	433.36	0.93
19.00	0.84	9,174	433.36	0.85
20.00	0.79	9,163	433.36	0.80
21.00	0.74	9,151	433.35	0.74
22.00	0.68	9,138	433.35	0.69
23.00	0.63	9,126	433.35	0.63
24.00	0.58	9,114	433.34	0.58
25.00	0.00	8,944	433.30	0.00
26.00	0.00	8,944	433.30	0.00
27.00	0.00	8,944	433.30	0.00
28.00	0.00	8,944	433.30	0.00
29.00	0.00	8,944	433.30	0.00
30.00	0.00	8,944	433.30	0.00
31.00	0.00	8,944	433.30	0.00
32.00	0.00	8,944	433.30	0.00
33.00	0.00	8,944	433.30	0.00
34.00	0.00	8,944	433.30	0.00
35.00	0.00	8,944	433.30	0.00
36.00	0.00	8,944	433.30	0.00
37.00	0.00	8,944	433.30	0.00
38.00	0.00	8,944	433.30	0.00
39.00	0.00	8,944	433.30	0.00
40.00	0.00	8,944	433.30	0.00
41.00	0.00	8,944	433.30	0.00
42.00	0.00	8,944	433.30	0.00
43.00	0.00	8,944	433.30	0.00
44.00	0.00	8,944	433.30	0.00
45.00	0.00	8,944	433.30	0.00
46.00	0.00	8,944	433.30	0.00
47.00	0.00	8,944	433.30	0.00
48.00	0.00	8,944	433.30	0.00

Stage-Area-Storage for Pond 39P: FB 5A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
431.00	2,415	0	433.90	4,552	11,277
431.05	2,452	194	433.95	4,588	11,471
431.10	2,489	389	434.00	4,625	11,666
431.15	2,526	583	434.05	4,662	11,860
431.20	2,562	778	434.10	4,699	12,054
431.25	2,599	972	434.15	4,736	12,249
431.30	2,636	1,167	434.20	4,773	12,443
431.35	2,673	1,361	434.25	4,809	12,638
431.40	2,710	1,555	434.30	4,846	12,832
431.45	2,747	1,750	434.35	4,883	13,026
431.50	2,783	1,944	434.40	4,920	13,221
431.55	2,820	2,139	434.45	4,957	13,415
431.60	2,857	2,333	434.50	4,994	13,610
431.65	2,894	2,528	434.55	5,030	13,804
431.70	2,931	2,722	434.60	5,067	13,999
431.75	2,968	2,916	434.65	5,104	14,193
431.80	3,004	3,111	434.70	5,141	14,387
431.85	3,041	3,305	434.75	5,178	14,582
431.90	3,078	3,500	434.80	5,215	14,776
431.95	3,115	3,694	434.85	5,251	14,971
432.00	3,152	3,889	434.90	5,288	15,165
432.05	3,189	4,083	434.95	5,325	15,360
432.10	3,225	4,277	435.00	5,362	15,554
432.15	3,262	4,472			
432.20	3,299	4,666			
432.25	3,336	4,861			
432.30	3,373	5,055			
432.35	3,410	5,249			
432.40	3,446	5,444			
432.45	3,483	5,638			
432.50	3,520	5,833			
432.55	3,557	6,027			
432.60	3,594	6,222			
432.65	3,631	6,416			
432.70	3,667	6,610			
432.75	3,704	6,805			
432.80	3,741	6,999			
432.85	3,778	7,194			
432.90	3,815	7,388			
432.95	3,852	7,583			
433.00	3,889	7,777			
433.05	3,925	7,971			
433.10	3,962	8,166			
433.15	3,999	8,360			
433.20	4,036	8,555			
433.25	4,073	8,749			
433.30	4,110	8,944			
433.35	4,146	9,138			
433.40	4,183	9,332			
433.45	4,220	9,527			
433.50	4,257	9,721			
433.55	4,294	9,916			
433.60	4,331	10,110			
433.65	4,367	10,305			
433.70	4,404	10,499			
433.75	4,441	10,693			
433.80	4,478	10,888			
433.85	4,515	11,082			

Summary for Pond 44P: FB 1B

Inflow Area = 9.519 ac, 70.62% Impervious, Inflow Depth = 9.00" for 500-Year event
 Inflow = 99.55 cfs @ 12.13 hrs, Volume= 7.140 af
 Outflow = 98.34 cfs @ 12.14 hrs, Volume= 7.140 af, Atten= 1%, Lag= 0.6 min
 Primary = 98.34 cfs @ 12.14 hrs, Volume= 7.140 af
 Routed to Pond 45P : INFIL 1B

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.35' Surf.Area= 9,580 sf Storage= 34,519 cf
 Peak Elev= 413.07' @ 12.14 hrs Surf.Area= 10,460 sf Storage= 40,260 cf (5,740 cf above start)

Plug-Flow detention time= 96.3 min calculated for 6.347 af (89% of inflow)
 Center-of-Mass det. time= 2.2 min (785.5 - 783.3)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	47,613 cf	Custom Stage Data (Prismatic) Listed below

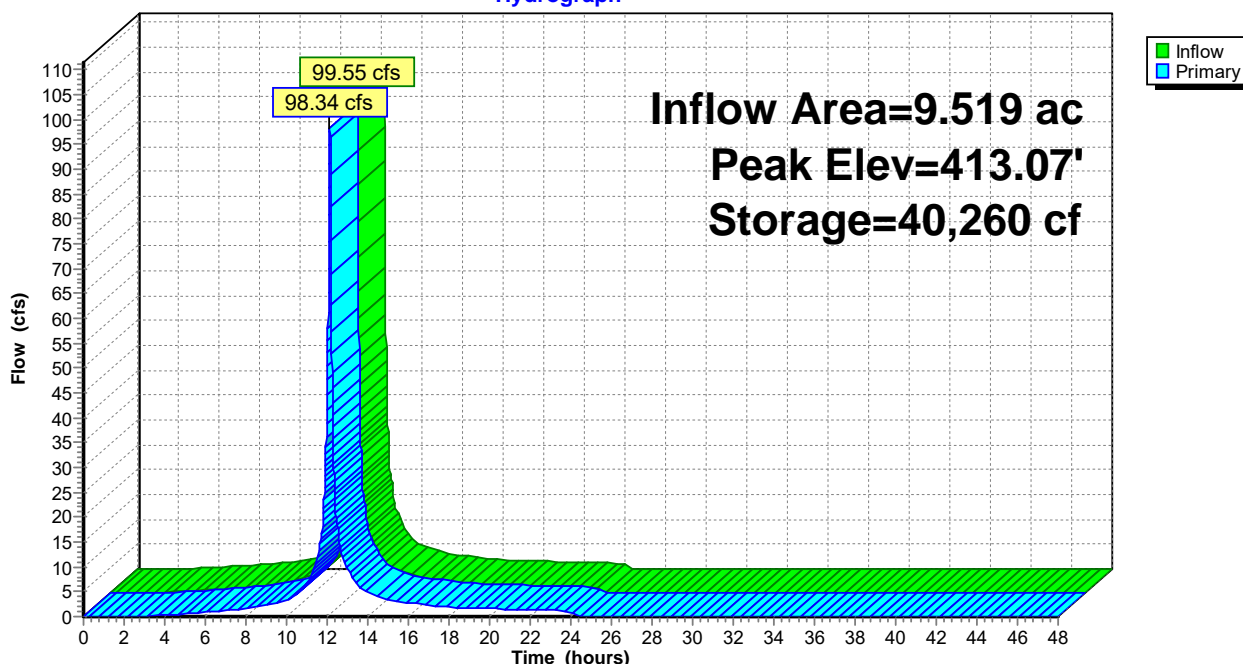
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	4,282	0	0
414.00	11,589	47,613	47,613

Device	Routing	Invert	Outlet Devices
#1	Primary	412.35'	60.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

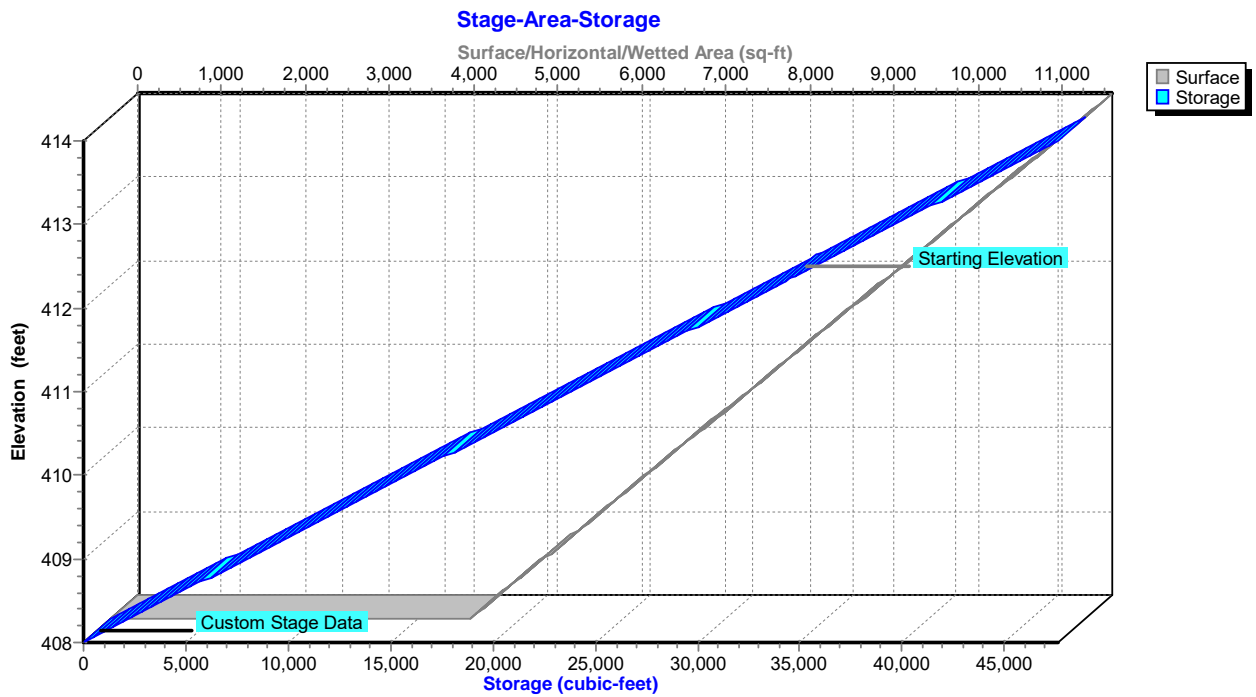
Primary OutFlow Max=98.27 cfs @ 12.14 hrs HW=413.07' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 98.27 cfs @ 2.26 fps)

Pond 44P: FB 1B

Hydrograph



Pond 44P: FB 1B



Hydrograph for Pond 44P: FB 1B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	34,519	412.35	0.00
1.00	0.00	34,519	412.35	0.00
2.00	0.00	34,519	412.35	0.00
3.00	0.13	34,550	412.35	0.11
4.00	0.37	34,620	412.36	0.35
5.00	0.61	34,687	412.37	0.59
6.00	0.83	34,750	412.38	0.81
7.00	1.22	34,808	412.39	1.21
8.00	1.68	34,870	412.39	1.67
9.00	2.18	34,938	412.40	2.16
10.00	3.55	35,118	412.43	3.49
11.00	6.74	35,447	412.47	6.59
12.00	51.82	38,034	412.79	47.78
13.00	9.48	35,739	412.50	9.71
14.00	4.83	35,284	412.45	4.87
15.00	3.30	35,101	412.42	3.36
16.00	2.71	35,015	412.41	2.73
17.00	2.28	34,956	412.40	2.29
18.00	1.84	34,896	412.40	1.85
19.00	1.68	34,873	412.39	1.69
20.00	1.57	34,859	412.39	1.58
21.00	1.46	34,844	412.39	1.47
22.00	1.35	34,829	412.39	1.36
23.00	1.25	34,814	412.39	1.25
24.00	1.14	34,799	412.39	1.14
25.00	0.00	34,519	412.35	0.00
26.00	0.00	34,519	412.35	0.00
27.00	0.00	34,519	412.35	0.00
28.00	0.00	34,519	412.35	0.00
29.00	0.00	34,519	412.35	0.00
30.00	0.00	34,519	412.35	0.00
31.00	0.00	34,519	412.35	0.00
32.00	0.00	34,519	412.35	0.00
33.00	0.00	34,519	412.35	0.00
34.00	0.00	34,519	412.35	0.00
35.00	0.00	34,519	412.35	0.00
36.00	0.00	34,519	412.35	0.00
37.00	0.00	34,519	412.35	0.00
38.00	0.00	34,519	412.35	0.00
39.00	0.00	34,519	412.35	0.00
40.00	0.00	34,519	412.35	0.00
41.00	0.00	34,519	412.35	0.00
42.00	0.00	34,519	412.35	0.00
43.00	0.00	34,519	412.35	0.00
44.00	0.00	34,519	412.35	0.00
45.00	0.00	34,519	412.35	0.00
46.00	0.00	34,519	412.35	0.00
47.00	0.00	34,519	412.35	0.00
48.00	0.00	34,519	412.35	0.00

Stage-Area-Storage for Pond 44P: FB 1B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	4,282	0	413.80	11,345	46,026
408.10	4,404	794	413.90	11,467	46,819
408.20	4,526	1,587	414.00	11,589	47,613
408.30	4,647	2,381			
408.40	4,769	3,174			
408.50	4,891	3,968			
408.60	5,013	4,761			
408.70	5,134	5,555			
408.80	5,256	6,348			
408.90	5,378	7,142			
409.00	5,500	7,936			
409.10	5,622	8,729			
409.20	5,743	9,523			
409.30	5,865	10,316			
409.40	5,987	11,110			
409.50	6,109	11,903			
409.60	6,231	12,697			
409.70	6,352	13,490			
409.80	6,474	14,284			
409.90	6,596	15,077			
410.00	6,718	15,871			
410.10	6,839	16,665			
410.20	6,961	17,458			
410.30	7,083	18,252			
410.40	7,205	19,045			
410.50	7,327	19,839			
410.60	7,448	20,632			
410.70	7,570	21,426			
410.80	7,692	22,219			
410.90	7,814	23,013			
411.00	7,936	23,807			
411.10	8,057	24,600			
411.20	8,179	25,394			
411.30	8,301	26,187			
411.40	8,423	26,981			
411.50	8,544	27,774			
411.60	8,666	28,568			
411.70	8,788	29,361			
411.80	8,910	30,155			
411.90	9,032	30,948			
412.00	9,153	31,742			
412.10	9,275	32,536			
412.20	9,397	33,329			
412.30	9,519	34,123			
412.40	9,640	34,916			
412.50	9,762	35,710			
412.60	9,884	36,503			
412.70	10,006	37,297			
412.80	10,128	38,090			
412.90	10,249	38,884			
413.00	10,371	39,678			
413.10	10,493	40,471			
413.20	10,615	41,265			
413.30	10,737	42,058			
413.40	10,858	42,852			
413.50	10,980	43,645			
413.60	11,102	44,439			
413.70	11,224	45,232			

Summary for Pond 45P: INFIL 1B

Inflow Area = 10.279 ac, 65.40% Impervious, Inflow Depth = 8.54" for 500-Year event
 Inflow = 100.85 cfs @ 12.14 hrs, Volume= 7.316 af
 Outflow = 25.38 cfs @ 12.38 hrs, Volume= 7.316 af, Atten= 75%, Lag= 14.4 min
 Discarded = 9.30 cfs @ 12.38 hrs, Volume= 6.424 af
 Primary = 0.39 cfs @ 12.38 hrs, Volume= 0.111 af
 Routed to Link 29L : DP-1
 Secondary = 15.69 cfs @ 12.38 hrs, Volume= 0.781 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 413.70' @ 12.38 hrs Surf.Area= 26,431 sf Storage= 110,090 cf

Plug-Flow detention time= 100.7 min calculated for 7.314 af (100% of inflow)
 Center-of-Mass det. time= 100.7 min (888.7 - 788.1)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	118,185 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	12,210	0	0
414.00	27,185	118,185	118,185

Device	Routing	Invert	Outlet Devices
#1	Secondary	413.00'	10.0' 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
#2	Device 4	410.85'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.00'	9.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 402.50' Phase-In= 0.01'
#4	Primary	408.00'	18.0" Round Culvert L= 50.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 408.00' / 407.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

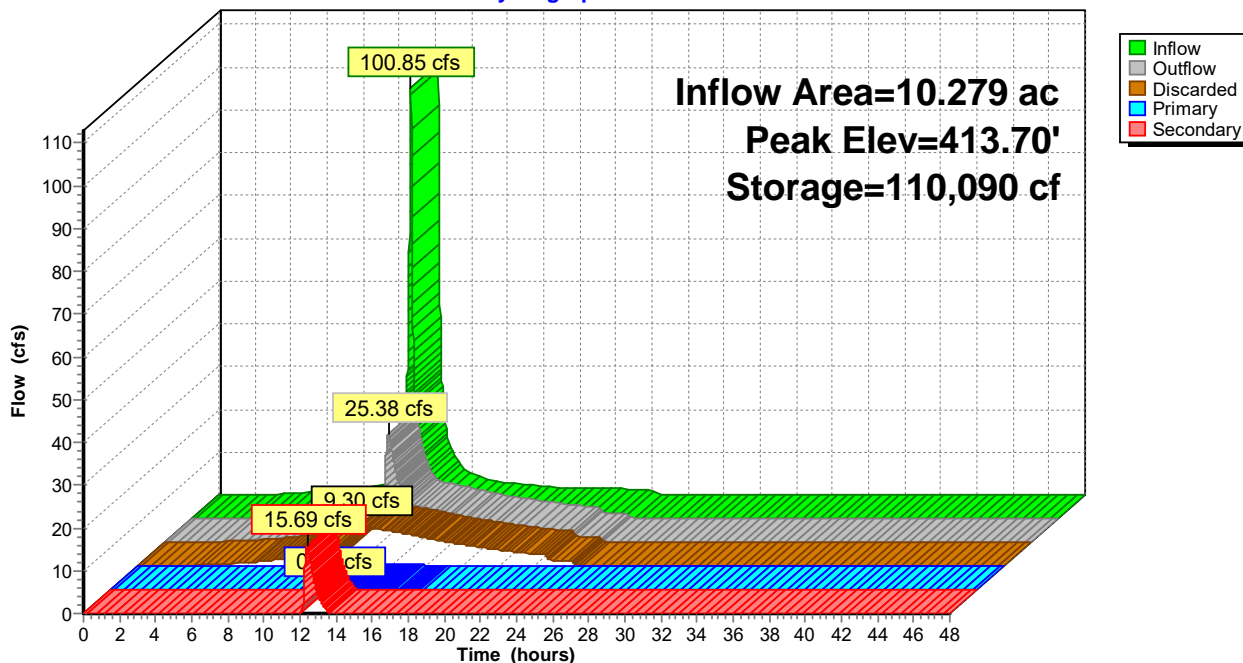
Discarded OutFlow Max=9.30 cfs @ 12.38 hrs HW=413.70' (Free Discharge)
 ↑3=Exfiltration (Controls 9.30 cfs)

Primary OutFlow Max=0.39 cfs @ 12.38 hrs HW=413.70' (Free Discharge)
 ↑4=Culvert (Passes 0.39 cfs of 16.70 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.39 cfs @ 7.95 fps)

Secondary OutFlow Max=15.69 cfs @ 12.38 hrs HW=413.70' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 15.69 cfs @ 2.25 fps)

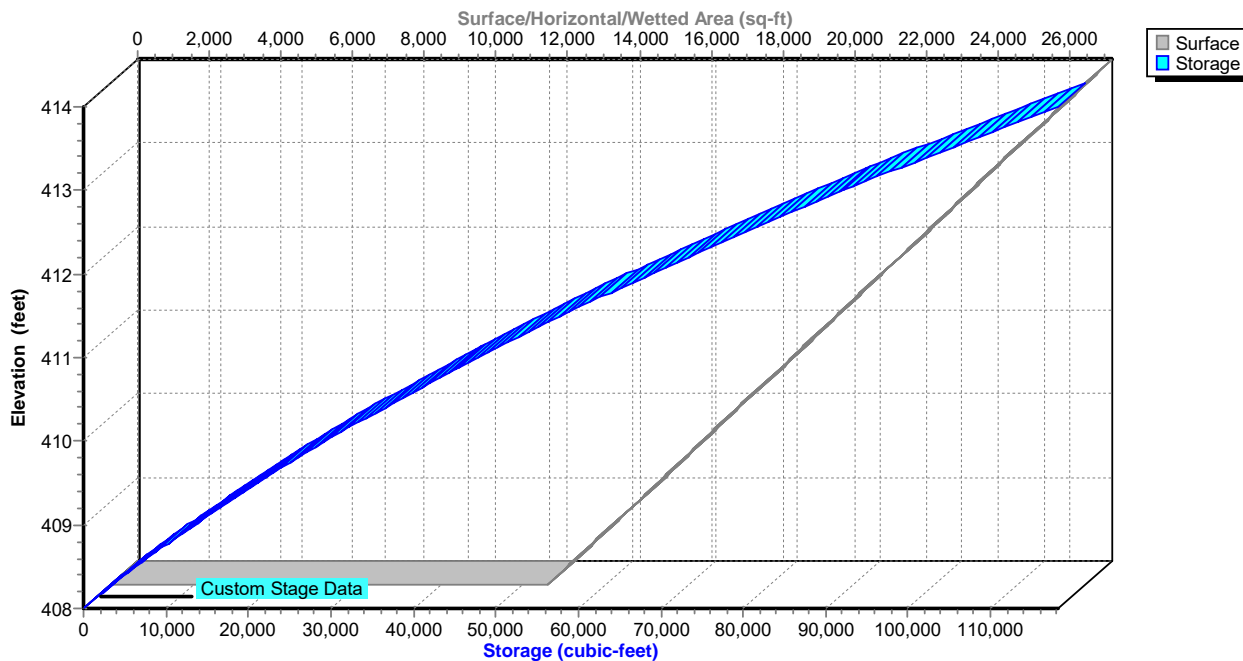
Pond 45P: INFIL 1B

Hydrograph



Pond 45P: INFIL 1B

Stage-Area-Storage



Hydrograph for Pond 45P: INFIL 1B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	408.00	0.00	0.00	0.00	0.00
1.00	0.00	0	408.00	0.00	0.00	0.00	0.00
2.00	0.00	0	408.00	0.00	0.00	0.00	0.00
3.00	0.11	25	408.00	0.09	0.09	0.00	0.00
4.00	0.35	95	408.01	0.34	0.34	0.00	0.00
5.00	0.59	161	408.01	0.57	0.57	0.00	0.00
6.00	0.81	224	408.02	0.79	0.79	0.00	0.00
7.00	1.21	332	408.03	1.17	1.17	0.00	0.00
8.00	1.67	461	408.04	1.63	1.63	0.00	0.00
9.00	2.16	601	408.05	2.12	2.12	0.00	0.00
10.00	3.49	1,651	408.13	2.68	2.68	0.00	0.00
11.00	6.59	7,897	408.61	3.16	3.16	0.00	0.00
12.00	48.66	46,567	410.93	5.78	5.77	0.01	0.00
13.00	10.06	100,336	413.32	13.64	8.80	0.36	4.48
14.00	5.07	88,804	412.86	8.51	8.19	0.32	0.00
15.00	3.50	75,004	412.27	7.70	7.43	0.27	0.00
16.00	2.85	60,099	411.60	6.77	6.58	0.19	0.00
17.00	2.39	46,868	410.95	5.81	5.79	0.02	0.00
18.00	1.94	35,169	410.33	5.05	5.05	0.00	0.00
19.00	1.76	24,826	409.73	4.36	4.36	0.00	0.00
20.00	1.65	16,346	409.19	3.78	3.78	0.00	0.00
21.00	1.54	9,424	408.72	3.27	3.27	0.00	0.00
22.00	1.42	3,769	408.30	2.84	2.84	0.00	0.00
23.00	1.31	377	408.03	1.33	1.33	0.00	0.00
24.00	1.20	341	408.03	1.20	1.20	0.00	0.00
25.00	0.00	0	408.00	0.00	0.00	0.00	0.00
26.00	0.00	0	408.00	0.00	0.00	0.00	0.00
27.00	0.00	0	408.00	0.00	0.00	0.00	0.00
28.00	0.00	0	408.00	0.00	0.00	0.00	0.00
29.00	0.00	0	408.00	0.00	0.00	0.00	0.00
30.00	0.00	0	408.00	0.00	0.00	0.00	0.00
31.00	0.00	0	408.00	0.00	0.00	0.00	0.00
32.00	0.00	0	408.00	0.00	0.00	0.00	0.00
33.00	0.00	0	408.00	0.00	0.00	0.00	0.00
34.00	0.00	0	408.00	0.00	0.00	0.00	0.00
35.00	0.00	0	408.00	0.00	0.00	0.00	0.00
36.00	0.00	0	408.00	0.00	0.00	0.00	0.00
37.00	0.00	0	408.00	0.00	0.00	0.00	0.00
38.00	0.00	0	408.00	0.00	0.00	0.00	0.00
39.00	0.00	0	408.00	0.00	0.00	0.00	0.00
40.00	0.00	0	408.00	0.00	0.00	0.00	0.00
41.00	0.00	0	408.00	0.00	0.00	0.00	0.00
42.00	0.00	0	408.00	0.00	0.00	0.00	0.00
43.00	0.00	0	408.00	0.00	0.00	0.00	0.00
44.00	0.00	0	408.00	0.00	0.00	0.00	0.00
45.00	0.00	0	408.00	0.00	0.00	0.00	0.00
46.00	0.00	0	408.00	0.00	0.00	0.00	0.00
47.00	0.00	0	408.00	0.00	0.00	0.00	0.00
48.00	0.00	0	408.00	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 45P: INFIL 1B

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	12,210	0	413.80	26,686	112,798
408.10	12,460	1,233	413.90	26,935	115,479
408.20	12,709	2,492	414.00	27,185	118,185
408.30	12,959	3,775			
408.40	13,208	5,084			
408.50	13,458	6,417			
408.60	13,708	7,775			
408.70	13,957	9,158			
408.80	14,207	10,567			
408.90	14,456	12,000			
409.00	14,706	13,458			
409.10	14,955	14,941			
409.20	15,205	16,449			
409.30	15,455	17,982			
409.40	15,704	19,540			
409.50	15,954	21,123			
409.60	16,203	22,731			
409.70	16,453	24,363			
409.80	16,703	26,021			
409.90	16,952	27,704			
410.00	17,202	29,412			
410.10	17,451	31,144			
410.20	17,701	32,902			
410.30	17,950	34,684			
410.40	18,200	36,492			
410.50	18,450	38,324			
410.60	18,699	40,182			
410.70	18,949	42,064			
410.80	19,198	43,972			
410.90	19,448	45,904			
411.00	19,698	47,861			
411.10	19,947	49,843			
411.20	20,197	51,851			
411.30	20,446	53,883			
411.40	20,696	55,940			
411.50	20,945	58,022			
411.60	21,195	60,129			
411.70	21,445	62,261			
411.80	21,694	64,418			
411.90	21,944	66,600			
412.00	22,193	68,807			
412.10	22,443	71,038			
412.20	22,692	73,295			
412.30	22,942	75,577			
412.40	23,192	77,884			
412.50	23,441	80,215			
412.60	23,691	82,572			
412.70	23,940	84,953			
412.80	24,190	87,360			
412.90	24,440	89,791			
413.00	24,689	92,248			
413.10	24,939	94,729			
413.20	25,188	97,236			
413.30	25,438	99,767			
413.40	25,687	102,323			
413.50	25,937	104,904			
413.60	26,187	107,511			
413.70	26,436	110,142			

Summary for Pond 47P: INFIL 1H

Inflow Area = 11.301 ac, 87.98% Impervious, Inflow Depth = 9.78" for 500-Year event
 Inflow = 115.28 cfs @ 12.14 hrs, Volume= 9.213 af
 Outflow = 27.87 cfs @ 12.39 hrs, Volume= 9.213 af, Atten= 76%, Lag= 15.0 min
 Discarded = 9.16 cfs @ 12.39 hrs, Volume= 8.179 af
 Primary = 0.38 cfs @ 12.39 hrs, Volume= 0.129 af
 Routed to Link 29L : DP-1
 Secondary = 18.34 cfs @ 12.39 hrs, Volume= 0.905 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 413.52' @ 12.39 hrs Surf.Area= 33,125 sf Storage= 135,638 cf

Plug-Flow detention time= 116.4 min calculated for 9.211 af (100% of inflow)
 Center-of-Mass det. time= 116.4 min (862.4 - 746.0)

Volume	Invert	Avail.Storage	Storage Description
#1	408.50'	151,690 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.50	20,873	0	0
414.00	34,287	151,690	151,690

Device	Routing	Invert	Outlet Devices
#1	Secondary	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 4	410.85'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.50'	7.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 403.00' Phase-In= 0.01'
#4	Primary	408.50'	18.0" Round Culvert L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 408.50' / 407.00' S= 0.0214 '/ Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

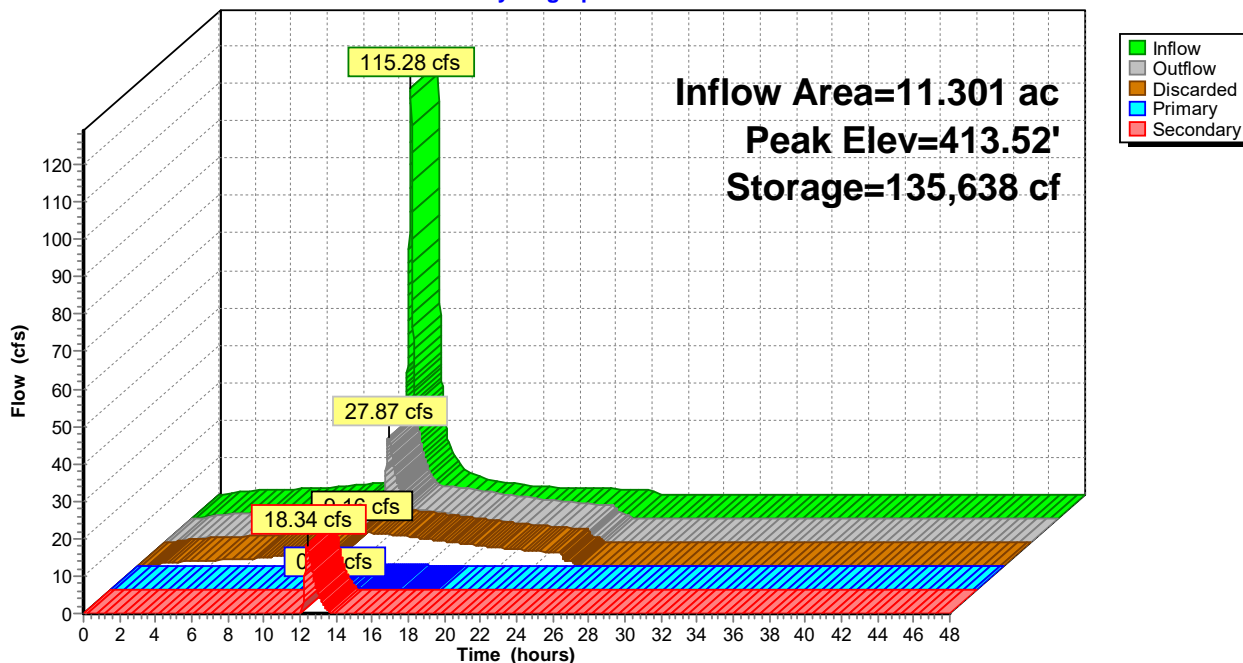
Discarded OutFlow Max=9.16 cfs @ 12.39 hrs HW=413.52' (Free Discharge)
 ↑**3=Exfiltration** (Controls 9.16 cfs)

Primary OutFlow Max=0.38 cfs @ 12.39 hrs HW=413.52' (Free Discharge)
 ↑**4=Culvert** (Passes 0.38 cfs of 17.59 cfs potential flow)
 ↑**2=Orifice/Grate** (Orifice Controls 0.38 cfs @ 7.69 fps)

Secondary OutFlow Max=18.31 cfs @ 12.39 hrs HW=413.52' (Free Discharge)
 ↑**1=Broad-Crested Rectangular Weir** (Weir Controls 18.31 cfs @ 2.18 fps)

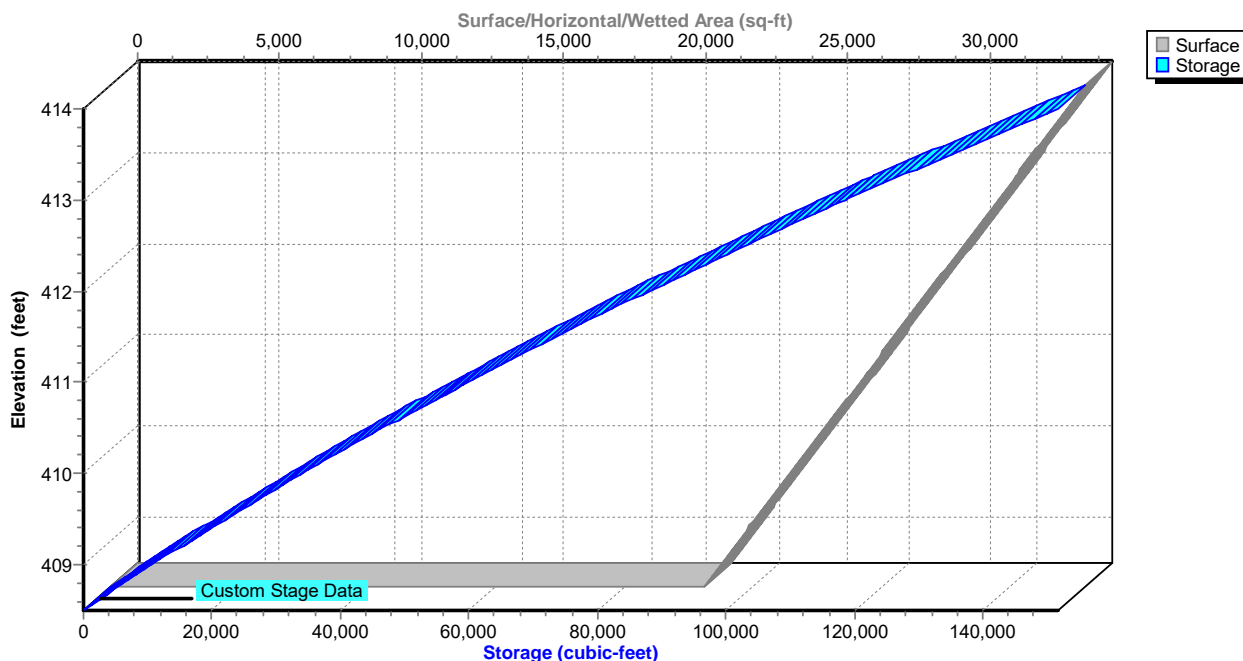
Pond 47P: INFIL 1H

Hydrograph



Pond 47P: INFIL 1H

Stage-Area-Storage



Hydrograph for Pond 47P: INFIL 1H

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	408.50	0.00	0.00	0.00	0.00
1.00	0.55	158	408.51	0.47	0.47	0.00	0.00
2.00	1.07	348	408.52	1.04	1.04	0.00	0.00
3.00	1.35	443	408.52	1.32	1.32	0.00	0.00
4.00	1.54	511	408.52	1.53	1.53	0.00	0.00
5.00	1.71	566	408.53	1.69	1.69	0.00	0.00
6.00	1.85	614	408.53	1.83	1.83	0.00	0.00
7.00	2.32	760	408.54	2.27	2.27	0.00	0.00
8.00	2.80	923	408.54	2.76	2.76	0.00	0.00
9.00	3.29	1,087	408.55	3.24	3.24	0.00	0.00
10.00	4.88	3,249	408.65	3.54	3.54	0.00	0.00
11.00	8.50	12,011	409.06	3.95	3.95	0.00	0.00
12.00	56.38	59,614	410.99	6.13	6.09	0.04	0.00
13.00	11.39	126,508	413.25	14.69	8.81	0.36	5.52
14.00	5.69	116,188	412.92	8.74	8.41	0.33	0.00
15.00	3.91	102,977	412.50	8.18	7.88	0.29	0.00
16.00	3.18	87,210	411.97	7.48	7.25	0.24	0.00
17.00	2.67	72,054	411.45	6.78	6.62	0.16	0.00
18.00	2.16	57,667	410.92	6.02	6.01	0.01	0.00
19.00	1.97	44,420	410.41	5.43	5.43	0.00	0.00
20.00	1.84	32,682	409.94	4.91	4.91	0.00	0.00
21.00	1.71	22,282	409.51	4.43	4.43	0.00	0.00
22.00	1.59	13,047	409.10	4.00	4.00	0.00	0.00
23.00	1.46	4,824	408.73	3.61	3.61	0.00	0.00
24.00	1.33	452	408.52	1.35	1.35	0.00	0.00
25.00	0.00	0	408.50	0.00	0.00	0.00	0.00
26.00	0.00	0	408.50	0.00	0.00	0.00	0.00
27.00	0.00	0	408.50	0.00	0.00	0.00	0.00
28.00	0.00	0	408.50	0.00	0.00	0.00	0.00
29.00	0.00	0	408.50	0.00	0.00	0.00	0.00
30.00	0.00	0	408.50	0.00	0.00	0.00	0.00
31.00	0.00	0	408.50	0.00	0.00	0.00	0.00
32.00	0.00	0	408.50	0.00	0.00	0.00	0.00
33.00	0.00	0	408.50	0.00	0.00	0.00	0.00
34.00	0.00	0	408.50	0.00	0.00	0.00	0.00
35.00	0.00	0	408.50	0.00	0.00	0.00	0.00
36.00	0.00	0	408.50	0.00	0.00	0.00	0.00
37.00	0.00	0	408.50	0.00	0.00	0.00	0.00
38.00	0.00	0	408.50	0.00	0.00	0.00	0.00
39.00	0.00	0	408.50	0.00	0.00	0.00	0.00
40.00	0.00	0	408.50	0.00	0.00	0.00	0.00
41.00	0.00	0	408.50	0.00	0.00	0.00	0.00
42.00	0.00	0	408.50	0.00	0.00	0.00	0.00
43.00	0.00	0	408.50	0.00	0.00	0.00	0.00
44.00	0.00	0	408.50	0.00	0.00	0.00	0.00
45.00	0.00	0	408.50	0.00	0.00	0.00	0.00
46.00	0.00	0	408.50	0.00	0.00	0.00	0.00
47.00	0.00	0	408.50	0.00	0.00	0.00	0.00
48.00	0.00	0	408.50	0.00	0.00	0.00	0.00

Stage-Area-Storage for Pond 47P: INFIL 1H

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.50	20,873	0	411.40	27,946	70,787
408.55	20,995	1,047	411.45	28,068	72,188
408.60	21,117	2,099	411.50	28,190	73,594
408.65	21,239	3,158	411.55	28,312	75,007
408.70	21,361	4,223	411.60	28,434	76,425
408.75	21,483	5,294	411.65	28,556	77,850
408.80	21,605	6,372	411.70	28,678	79,281
408.85	21,727	7,455	411.75	28,799	80,718
408.90	21,849	8,544	411.80	28,921	82,161
408.95	21,971	9,640	411.85	29,043	83,610
409.00	22,092	10,741	411.90	29,165	85,065
409.05	22,214	11,849	411.95	29,287	86,526
409.10	22,336	12,963	412.00	29,409	87,994
409.15	22,458	14,083	412.05	29,531	89,467
409.20	22,580	15,209	412.10	29,653	90,947
409.25	22,702	16,341	412.15	29,775	92,433
409.30	22,824	17,479	412.20	29,897	93,924
409.35	22,946	18,623	412.25	30,019	95,422
409.40	23,068	19,773	412.30	30,141	96,926
409.45	23,190	20,930	412.35	30,263	98,436
409.50	23,312	22,092	412.40	30,385	99,953
409.55	23,434	23,261	412.45	30,507	101,475
409.60	23,556	24,436	412.50	30,629	103,003
409.65	23,678	25,617	412.55	30,751	104,538
409.70	23,800	26,804	412.60	30,873	106,078
409.75	23,922	27,997	412.65	30,994	107,625
409.80	24,044	29,196	412.70	31,116	109,178
409.85	24,166	30,401	412.75	31,238	110,737
409.90	24,287	31,612	412.80	31,360	112,302
409.95	24,409	32,830	412.85	31,482	113,873
410.00	24,531	34,053	412.90	31,604	115,450
410.05	24,653	35,283	412.95	31,726	117,033
410.10	24,775	36,519	413.00	31,848	118,622
410.15	24,897	37,760	413.05	31,970	120,218
410.20	25,019	39,008	413.10	32,092	121,819
410.25	25,141	40,262	413.15	32,214	123,427
410.30	25,263	41,522	413.20	32,336	125,041
410.35	25,385	42,789	413.25	32,458	126,661
410.40	25,507	44,061	413.30	32,580	128,287
410.45	25,629	45,339	413.35	32,702	129,919
410.50	25,751	46,624	413.40	32,824	131,557
410.55	25,873	47,914	413.45	32,946	133,201
410.60	25,995	49,211	413.50	33,068	134,851
410.65	26,117	50,514	413.55	33,189	136,508
410.70	26,239	51,823	413.60	33,311	138,170
410.75	26,361	53,138	413.65	33,433	139,839
410.80	26,482	54,459	413.70	33,555	141,514
410.85	26,604	55,786	413.75	33,677	143,194
410.90	26,726	57,119	413.80	33,799	144,881
410.95	26,848	58,459	413.85	33,921	146,574
411.00	26,970	59,804	413.90	34,043	148,273
411.05	27,092	61,156	413.95	34,165	149,979
411.10	27,214	62,513	414.00	34,287	151,690
411.15	27,336	63,877			
411.20	27,458	65,247			
411.25	27,580	66,623			
411.30	27,702	68,005			
411.35	27,824	69,393			

Summary for Pond 51P: FB 1H

Inflow Area = 10.389 ac, 95.71% Impervious, Inflow Depth = 10.41" for 500-Year event
 Inflow = 114.27 cfs @ 12.13 hrs, Volume= 9.012 af
 Outflow = 112.47 cfs @ 12.14 hrs, Volume= 9.012 af, Atten= 2%, Lag= 0.7 min
 Primary = 112.47 cfs @ 12.14 hrs, Volume= 9.012 af
 Routed to Pond 47P : INFIL 1H

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.75' Surf.Area= 12,203 sf Storage= 48,336 cf
 Peak Elev= 413.50' @ 12.14 hrs Surf.Area= 13,073 sf Storage= 55,984 cf (7,648 cf above start)

Plug-Flow detention time= 124.2 min calculated for 7.903 af (88% of inflow)
 Center-of-Mass det. time= 2.7 min (742.7 - 740.0)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,056 cf	Custom Stage Data (Prismatic) Listed below

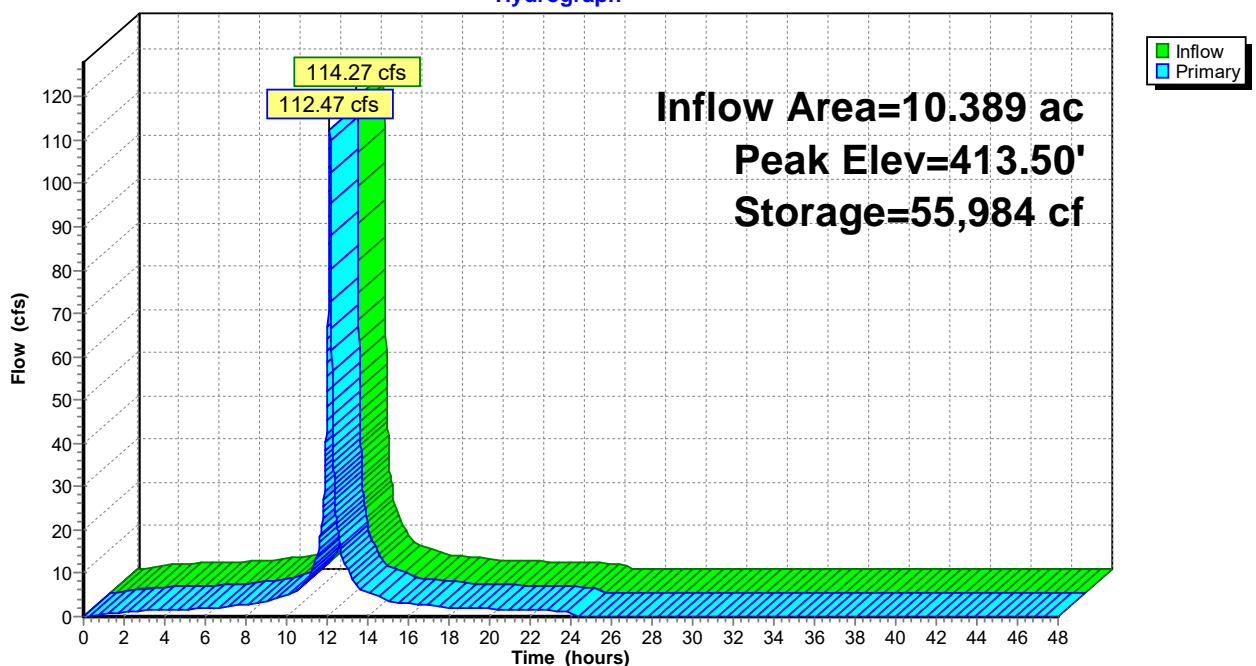
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	6,702	0	0
414.00	13,650	61,056	61,056

Device	Routing	Invert	Outlet Devices
#1	Primary	412.75'	65.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

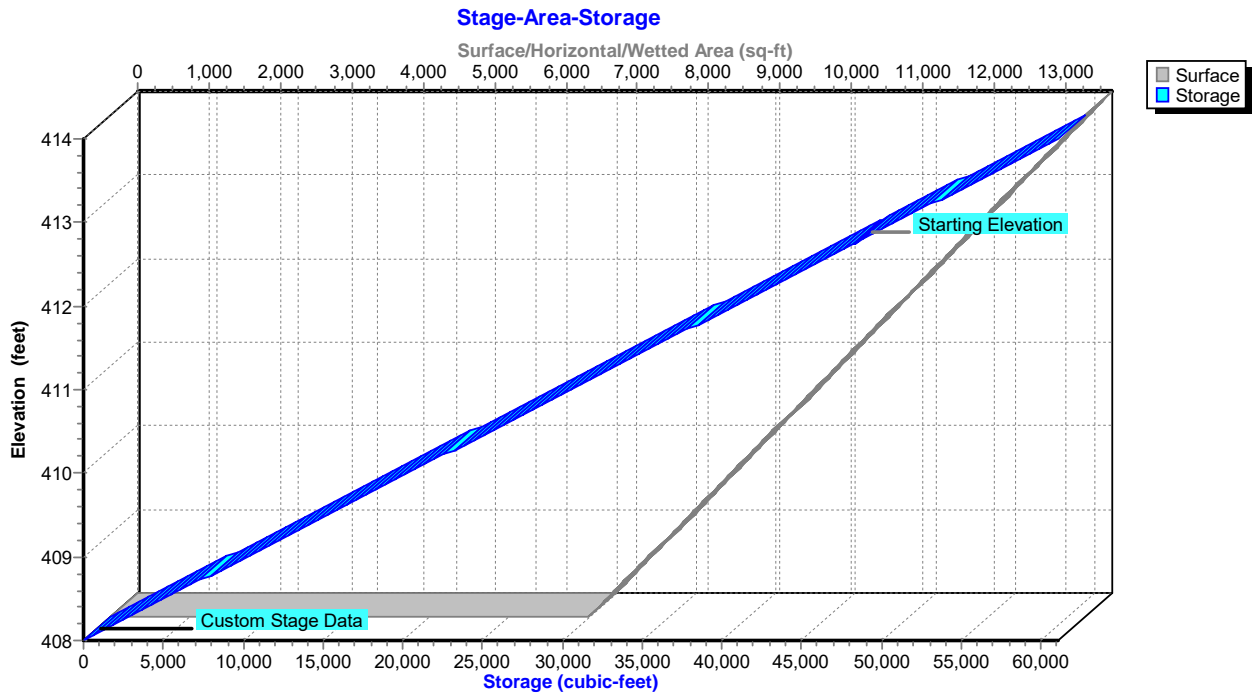
Primary OutFlow Max=112.37 cfs @ 12.14 hrs HW=413.50' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Weir Controls 112.37 cfs @ 2.30 fps)

Pond 51P: FB 1H

Hydrograph



Pond 51P: FB 1H



Hydrograph for Pond 51P: FB 1H

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	48,336	412.75	0.00
1.00	0.61	48,481	412.76	0.55
2.00	1.10	48,616	412.78	1.07
3.00	1.37	48,688	412.78	1.35
4.00	1.55	48,739	412.79	1.54
5.00	1.72	48,782	412.79	1.71
6.00	1.86	48,819	412.80	1.85
7.00	2.33	48,896	412.81	2.32
8.00	2.82	48,963	412.81	2.80
9.00	3.31	49,031	412.82	3.29
10.00	4.95	49,251	412.84	4.88
11.00	8.69	49,679	412.88	8.50
12.00	60.79	53,054	413.21	55.43
13.00	10.64	49,938	412.91	10.98
14.00	5.40	49,333	412.85	5.47
15.00	3.68	49,095	412.82	3.75
16.00	3.02	48,996	412.81	3.04
17.00	2.53	48,929	412.81	2.55
18.00	2.04	48,861	412.80	2.06
19.00	1.87	48,826	412.80	1.88
20.00	1.75	48,795	412.80	1.76
21.00	1.62	48,763	412.79	1.64
22.00	1.50	48,731	412.79	1.51
23.00	1.38	48,699	412.79	1.39
24.00	1.27	48,668	412.78	1.27
25.00	0.00	48,336	412.75	0.00
26.00	0.00	48,336	412.75	0.00
27.00	0.00	48,336	412.75	0.00
28.00	0.00	48,336	412.75	0.00
29.00	0.00	48,336	412.75	0.00
30.00	0.00	48,336	412.75	0.00
31.00	0.00	48,336	412.75	0.00
32.00	0.00	48,336	412.75	0.00
33.00	0.00	48,336	412.75	0.00
34.00	0.00	48,336	412.75	0.00
35.00	0.00	48,336	412.75	0.00
36.00	0.00	48,336	412.75	0.00
37.00	0.00	48,336	412.75	0.00
38.00	0.00	48,336	412.75	0.00
39.00	0.00	48,336	412.75	0.00
40.00	0.00	48,336	412.75	0.00
41.00	0.00	48,336	412.75	0.00
42.00	0.00	48,336	412.75	0.00
43.00	0.00	48,336	412.75	0.00
44.00	0.00	48,336	412.75	0.00
45.00	0.00	48,336	412.75	0.00
46.00	0.00	48,336	412.75	0.00
47.00	0.00	48,336	412.75	0.00
48.00	0.00	48,336	412.75	0.00

Stage-Area-Storage for Pond 51P: FB 1H

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	6,702	0	413.80	13,418	59,021
408.10	6,818	1,018	413.90	13,534	60,038
408.20	6,934	2,035	414.00	13,650	61,056
408.30	7,049	3,053			
408.40	7,165	4,070			
408.50	7,281	5,088			
408.60	7,397	6,106			
408.70	7,513	7,123			
408.80	7,628	8,141			
408.90	7,744	9,158			
409.00	7,860	10,176			
409.10	7,976	11,194			
409.20	8,092	12,211			
409.30	8,207	13,229			
409.40	8,323	14,246			
409.50	8,439	15,264			
409.60	8,555	16,282			
409.70	8,671	17,299			
409.80	8,786	18,317			
409.90	8,902	19,334			
410.00	9,018	20,352			
410.10	9,134	21,370			
410.20	9,250	22,387			
410.30	9,365	23,405			
410.40	9,481	24,422			
410.50	9,597	25,440			
410.60	9,713	26,458			
410.70	9,829	27,475			
410.80	9,944	28,493			
410.90	10,060	29,510			
411.00	10,176	30,528			
411.10	10,292	31,546			
411.20	10,408	32,563			
411.30	10,523	33,581			
411.40	10,639	34,598			
411.50	10,755	35,616			
411.60	10,871	36,634			
411.70	10,987	37,651			
411.80	11,102	38,669			
411.90	11,218	39,686			
412.00	11,334	40,704			
412.10	11,450	41,722			
412.20	11,566	42,739			
412.30	11,681	43,757			
412.40	11,797	44,774			
412.50	11,913	45,792			
412.60	12,029	46,810			
412.70	12,145	47,827			
412.80	12,260	48,845			
412.90	12,376	49,862			
413.00	12,492	50,880			
413.10	12,608	51,898			
413.20	12,724	52,915			
413.30	12,839	53,933			
413.40	12,955	54,950			
413.50	13,071	55,968			
413.60	13,187	56,986			
413.70	13,303	58,003			

Summary for Pond 53P: Bioretention J basin

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 62.30" for 500-Year event
 Inflow = 52.85 cfs @ 12.09 hrs, Volume= 4.050 af
 Outflow = 66.82 cfs @ 12.08 hrs, Volume= 3.016 af, Atten= 0%, Lag= 0.0 min
 Primary = 66.82 cfs @ 12.08 hrs, Volume= 3.016 af
 Routed to Pond 63P : Det Pond 1K

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 749.99' @ 12.08 hrs Surf.Area= 30,410 sf Storage= 72,373 cf

Plug-Flow detention time= 227.0 min calculated for 3.016 af (74% of inflow)
 Center-of-Mass det. time= 128.7 min (895.6 - 766.9)

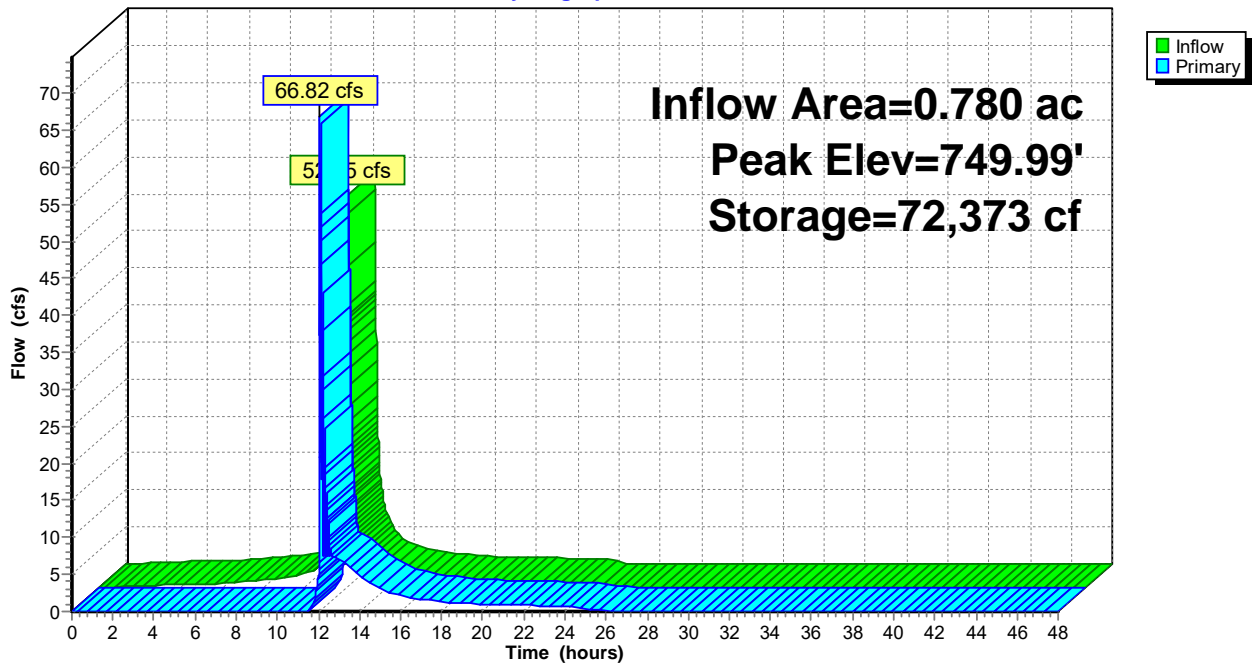
Volume	Invert	Avail.Storage	Storage Description	
#1	407.83'	72,373 cf	Custom Stage Data (Prismatic) Listed below	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	24,200	0.0	0	0
408.33	24,200	40.0	4,840	4,840
411.00	24,200	20.0	12,923	17,763
413.00	30,410	100.0	54,610	72,373

Device	Routing	Invert	Outlet Devices
#1	Primary	407.83'	12.0" Round Culvert L= 49.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.83' / 407.50' S= 0.0067 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	412.00'	28.0" W x 12.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	414.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=66.82 cfs @ 12.08 hrs HW=749.99' (Free Discharge)
 1=Culvert (Barrel Controls 66.82 cfs @ 85.08 fps)
 2=Orifice/Grate (Passes < 206.40 cfs potential flow)
 3=Broad-Crested Rectangular Weir (Passes < 327,152.56 cfs potential flow)

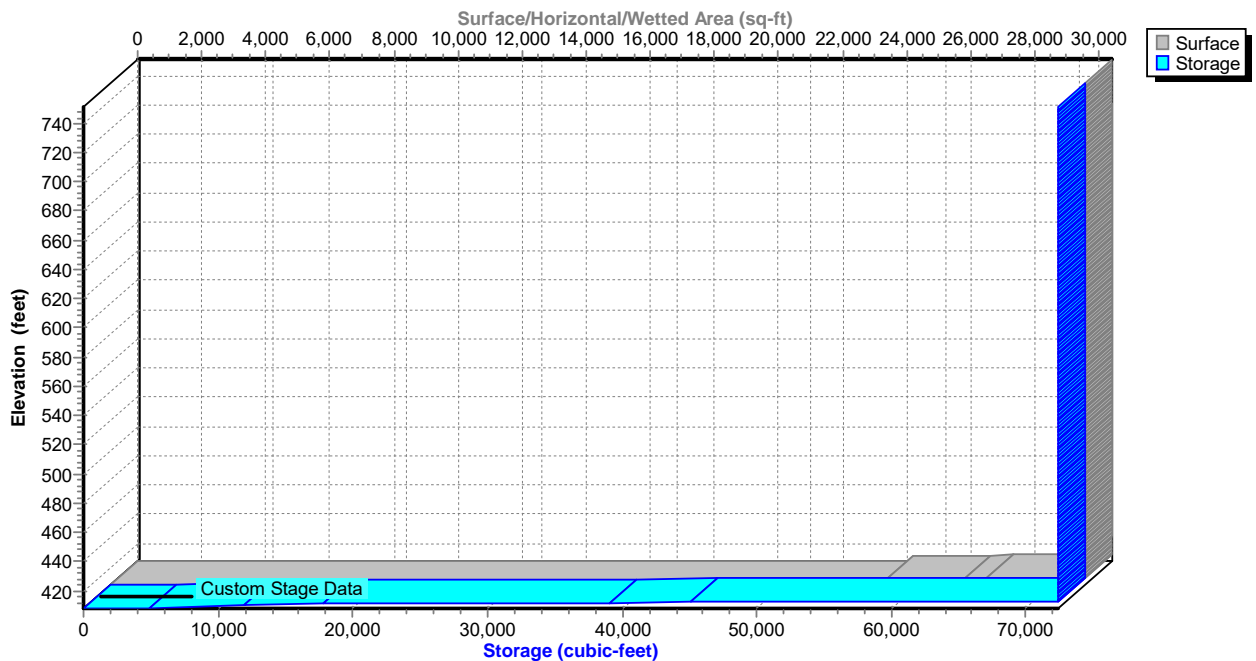
Pond 53P: Bioretention J basin

Hydrograph



Pond 53P: Bioretention J basin

Stage-Area-Storage



Hydrograph for Pond 53P: Bioretention J basin

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	407.83	0.00
1.00	0.16	200	407.85	0.00
2.00	0.28	1,019	407.94	0.00
3.00	0.35	2,151	408.05	0.00
4.00	0.43	3,526	408.19	0.00
5.00	0.51	5,215	408.41	0.00
6.00	0.60	7,209	408.82	0.00
7.00	0.79	9,709	409.34	0.00
8.00	1.01	12,958	410.01	0.00
9.00	1.24	17,007	410.84	0.00
10.00	1.96	22,741	411.18	0.00
11.00	3.71	32,132	411.53	0.00
12.00	32.53	63,288	412.67	5.00
13.00	5.16	70,762	412.94	7.05
14.00	2.67	62,265	412.63	4.72
15.00	1.83	56,449	412.42	3.12
16.00	1.51	52,990	412.29	2.17
17.00	1.27	51,143	412.22	1.67
18.00	1.02	49,899	412.18	1.33
19.00	0.94	49,071	412.15	1.10
20.00	0.88	48,623	412.13	0.98
21.00	0.82	48,318	412.12	0.89
22.00	0.75	48,065	412.11	0.82
23.00	0.70	47,831	412.10	0.76
24.00	0.62	47,605	412.09	0.70
25.00	0.00	46,107	412.04	0.29
26.00	0.00	45,455	412.01	0.11
27.00	0.00	45,212	412.01	0.04
28.00	0.00	45,122	412.00	0.01
29.00	0.00	45,088	412.00	0.01
30.00	0.00	45,075	412.00	0.00
31.00	0.00	45,071	412.00	0.00
32.00	0.00	45,069	412.00	0.00
33.00	0.00	45,068	412.00	0.00
34.00	0.00	45,068	412.00	0.00
35.00	0.00	45,068	412.00	0.00
36.00	0.00	45,068	412.00	0.00
37.00	0.00	45,068	412.00	0.00
38.00	0.00	45,068	412.00	0.00
39.00	0.00	45,068	412.00	0.00
40.00	0.00	45,068	412.00	0.00
41.00	0.00	45,068	412.00	0.00
42.00	0.00	45,068	412.00	0.00
43.00	0.00	45,068	412.00	0.00
44.00	0.00	45,068	412.00	0.00
45.00	0.00	45,068	412.00	0.00
46.00	0.00	45,068	412.00	0.00
47.00	0.00	45,068	412.00	0.00
48.00	0.00	45,068	412.00	0.00

Stage-Area-Storage for Pond 53P: Bioretention J basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.83	24,200	0	697.83	30,410	72,373
412.83	29,882	67,731	702.83	30,410	72,373
417.83	30,410	72,373	707.83	30,410	72,373
422.83	30,410	72,373	712.83	30,410	72,373
427.83	30,410	72,373	717.83	30,410	72,373
432.83	30,410	72,373	722.83	30,410	72,373
437.83	30,410	72,373	727.83	30,410	72,373
442.83	30,410	72,373	732.83	30,410	72,373
447.83	30,410	72,373	737.83	30,410	72,373
452.83	30,410	72,373	742.83	30,410	72,373
457.83	30,410	72,373	747.83	30,410	72,373
462.83	30,410	72,373			
467.83	30,410	72,373			
472.83	30,410	72,373			
477.83	30,410	72,373			
482.83	30,410	72,373			
487.83	30,410	72,373			
492.83	30,410	72,373			
497.83	30,410	72,373			
502.83	30,410	72,373			
507.83	30,410	72,373			
512.83	30,410	72,373			
517.83	30,410	72,373			
522.83	30,410	72,373			
527.83	30,410	72,373			
532.83	30,410	72,373			
537.83	30,410	72,373			
542.83	30,410	72,373			
547.83	30,410	72,373			
552.83	30,410	72,373			
557.83	30,410	72,373			
562.83	30,410	72,373			
567.83	30,410	72,373			
572.83	30,410	72,373			
577.83	30,410	72,373			
582.83	30,410	72,373			
587.83	30,410	72,373			
592.83	30,410	72,373			
597.83	30,410	72,373			
602.83	30,410	72,373			
607.83	30,410	72,373			
612.83	30,410	72,373			
617.83	30,410	72,373			
622.83	30,410	72,373			
627.83	30,410	72,373			
632.83	30,410	72,373			
637.83	30,410	72,373			
642.83	30,410	72,373			
647.83	30,410	72,373			
652.83	30,410	72,373			
657.83	30,410	72,373			
662.83	30,410	72,373			
667.83	30,410	72,373			
672.83	30,410	72,373			
677.83	30,410	72,373			
682.83	30,410	72,373			
687.83	30,410	72,373			
692.83	30,410	72,373			

Summary for Pond 54P: INFIL 1G

Inflow Area = 10.595 ac, 90.33% Impervious, Inflow Depth = 10.03" for 500-Year event
 Inflow = 110.27 cfs @ 12.14 hrs, Volume= 8.852 af
 Outflow = 26.25 cfs @ 12.40 hrs, Volume= 8.852 af, Atten= 76%, Lag= 15.4 min
 Discarded = 8.57 cfs @ 12.40 hrs, Volume= 7.705 af
 Primary = 17.68 cfs @ 12.40 hrs, Volume= 1.147 af
 Routed to Link 29L : DP-1

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 413.57' @ 12.40 hrs Surf.Area= 30,464 sf Storage= 129,100 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 112.8 min (858.7 - 745.9)

Volume	Invert	Avail.Storage	Storage Description
#1	408.50'	142,445 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.50	20,483	0	0
414.00	31,315	142,445	142,445

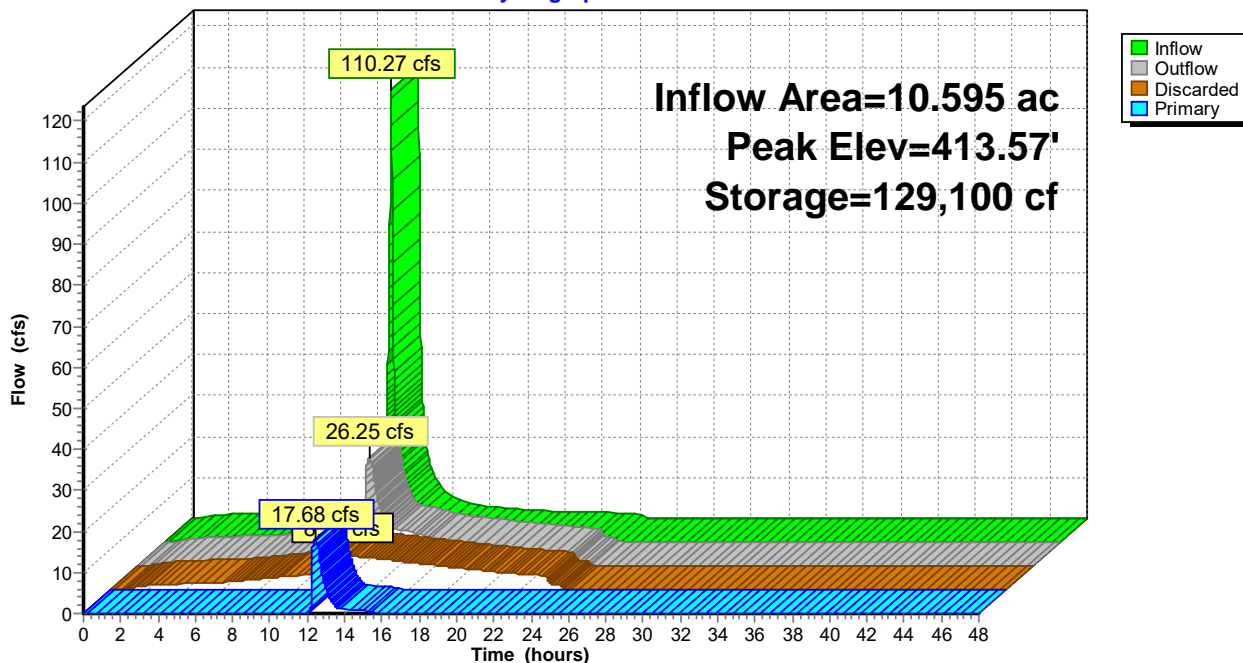
Device	Routing	Invert	Outlet Devices
#1	Device 4	413.00'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#2	Device 4	411.85'	7.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	408.50'	7.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 403.00' Phase-In= 0.01'
#4	Primary	408.50'	18.0" Round Culvert L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 408.50' / 408.00' S= 0.0071 '/ Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Discarded OutFlow Max=8.57 cfs @ 12.40 hrs HW=413.57' (Free Discharge)
 ↳3=Exfiltration (Controls 8.57 cfs)

Primary OutFlow Max=17.68 cfs @ 12.40 hrs HW=413.57' (Free Discharge)
 ↳4=Culvert (Inlet Controls 17.68 cfs @ 10.01 fps)
 ↳1=Broad-Crested Rectangular Weir (Passes < 20.92 cfs potential flow)
 ↳2=Orifice/Grate (Passes < 1.54 cfs potential flow)

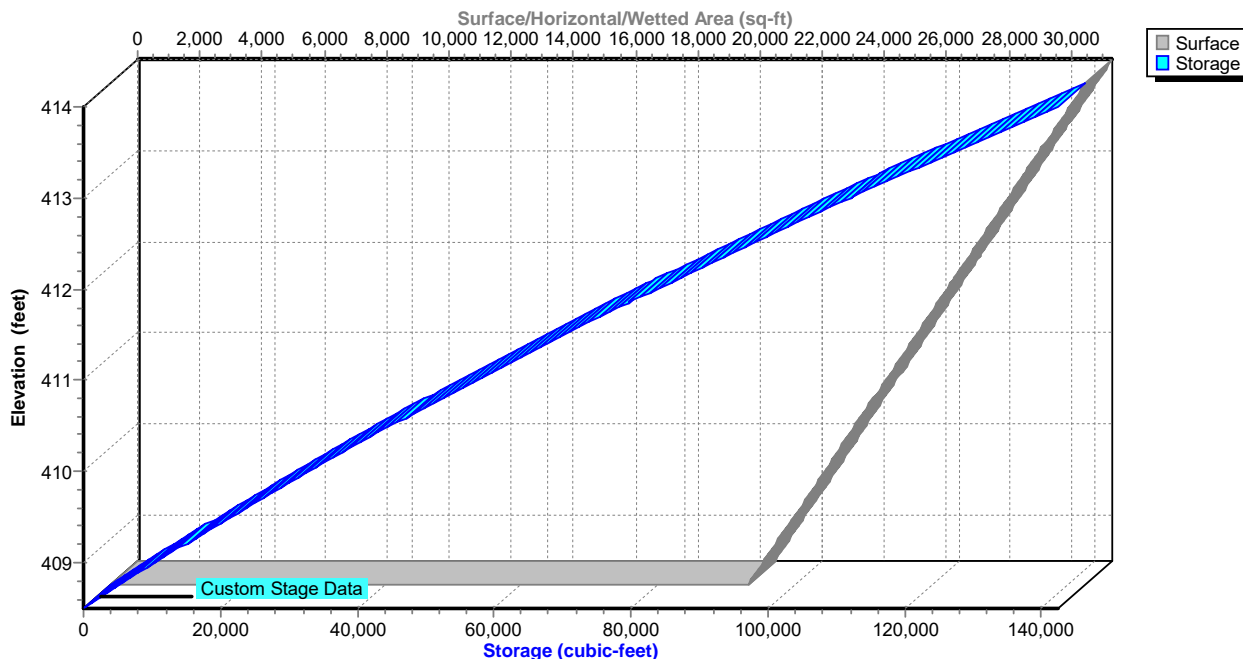
Pond 54P: INFIL 1G

Hydrograph



Pond 54P: INFIL 1G

Stage-Area-Storage



Hydrograph for Pond 54P: INFIL 1G

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	408.50	0.00	0.00	0.00
1.00	0.53	149	408.51	0.45	0.45	0.00
2.00	1.03	335	408.52	1.00	1.00	0.00
3.00	1.30	427	408.52	1.27	1.27	0.00
4.00	1.49	492	408.52	1.47	1.47	0.00
5.00	1.64	545	408.53	1.63	1.63	0.00
6.00	1.78	592	408.53	1.77	1.77	0.00
7.00	2.21	727	408.54	2.17	2.17	0.00
8.00	2.70	888	408.54	2.65	2.65	0.00
9.00	3.17	1,046	408.55	3.12	3.12	0.00
10.00	4.68	2,952	408.64	3.45	3.45	0.00
11.00	8.16	11,207	409.03	3.82	3.82	0.00
12.00	53.30	56,786	410.98	5.76	5.76	0.00
13.00	10.97	118,650	413.22	14.22	8.18	6.03
14.00	5.46	107,988	412.86	8.87	7.78	1.09
15.00	3.75	94,285	412.38	7.88	7.25	0.63
16.00	3.04	80,198	411.87	6.70	6.70	0.00
17.00	2.56	67,086	411.38	6.18	6.18	0.00
18.00	2.08	54,157	410.87	5.65	5.65	0.00
19.00	1.88	41,774	410.37	5.13	5.13	0.00
20.00	1.76	30,692	409.90	4.66	4.66	0.00
21.00	1.64	20,785	409.47	4.24	4.24	0.00
22.00	1.51	11,905	409.07	3.85	3.85	0.00
23.00	1.39	3,921	408.69	3.49	3.49	0.00
24.00	1.27	430	408.52	1.28	1.28	0.00
25.00	0.00	3	408.50	0.01	0.01	0.00
26.00	0.00	0	408.50	0.00	0.00	0.00
27.00	0.00	0	408.50	0.00	0.00	0.00
28.00	0.00	0	408.50	0.00	0.00	0.00
29.00	0.00	0	408.50	0.00	0.00	0.00
30.00	0.00	0	408.50	0.00	0.00	0.00
31.00	0.00	0	408.50	0.00	0.00	0.00
32.00	0.00	0	408.50	0.00	0.00	0.00
33.00	0.00	0	408.50	0.00	0.00	0.00
34.00	0.00	0	408.50	0.00	0.00	0.00
35.00	0.00	0	408.50	0.00	0.00	0.00
36.00	0.00	0	408.50	0.00	0.00	0.00
37.00	0.00	0	408.50	0.00	0.00	0.00
38.00	0.00	0	408.50	0.00	0.00	0.00
39.00	0.00	0	408.50	0.00	0.00	0.00
40.00	0.00	0	408.50	0.00	0.00	0.00
41.00	0.00	0	408.50	0.00	0.00	0.00
42.00	0.00	0	408.50	0.00	0.00	0.00
43.00	0.00	0	408.50	0.00	0.00	0.00
44.00	0.00	0	408.50	0.00	0.00	0.00
45.00	0.00	0	408.50	0.00	0.00	0.00
46.00	0.00	0	408.50	0.00	0.00	0.00
47.00	0.00	0	408.50	0.00	0.00	0.00
48.00	0.00	0	408.50	0.00	0.00	0.00

Stage-Area-Storage for Pond 54P: INFIL 1G

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.50	20,483	0	411.40	26,194	67,682
408.55	20,581	1,027	411.45	26,293	68,994
408.60	20,680	2,058	411.50	26,391	70,312
408.65	20,778	3,095	411.55	26,490	71,634
408.70	20,877	4,136	411.60	26,588	72,961
408.75	20,975	5,182	411.65	26,687	74,292
408.80	21,074	6,234	411.70	26,785	75,629
408.85	21,172	7,290	411.75	26,884	76,971
408.90	21,271	8,351	411.80	26,982	78,318
408.95	21,369	9,417	411.85	27,081	79,669
409.00	21,468	10,488	411.90	27,179	81,026
409.05	21,566	11,564	411.95	27,278	82,387
409.10	21,665	12,644	412.00	27,376	83,753
409.15	21,763	13,730	412.05	27,475	85,125
409.20	21,862	14,821	412.10	27,573	86,501
409.25	21,960	15,916	412.15	27,672	87,882
409.30	22,059	17,017	412.20	27,770	89,268
409.35	22,157	18,122	412.25	27,868	90,659
409.40	22,256	19,232	412.30	27,967	92,055
409.45	22,354	20,348	412.35	28,065	93,456
409.50	22,452	21,468	412.40	28,164	94,861
409.55	22,551	22,593	412.45	28,262	96,272
409.60	22,649	23,723	412.50	28,361	97,688
409.65	22,748	24,858	412.55	28,459	99,108
409.70	22,846	25,998	412.60	28,558	100,534
409.75	22,945	27,142	412.65	28,656	101,964
409.80	23,043	28,292	412.70	28,755	103,399
409.85	23,142	29,447	412.75	28,853	104,839
409.90	23,240	30,606	412.80	28,952	106,285
409.95	23,339	31,771	412.85	29,050	107,735
410.00	23,437	32,940	412.90	29,149	109,190
410.05	23,536	34,114	412.95	29,247	110,649
410.10	23,634	35,294	413.00	29,346	112,114
410.15	23,733	36,478	413.05	29,444	113,584
410.20	23,831	37,667	413.10	29,542	115,059
410.25	23,930	38,861	413.15	29,641	116,538
410.30	24,028	40,060	413.20	29,739	118,023
410.35	24,126	41,264	413.25	29,838	119,512
410.40	24,225	42,473	413.30	29,936	121,007
410.45	24,323	43,686	413.35	30,035	122,506
410.50	24,422	44,905	413.40	30,133	124,010
410.55	24,520	46,128	413.45	30,232	125,519
410.60	24,619	47,357	413.50	30,330	127,033
410.65	24,717	48,590	413.55	30,429	128,552
410.70	24,816	49,829	413.60	30,527	130,076
410.75	24,914	51,072	413.65	30,626	131,605
410.80	25,013	52,320	413.70	30,724	133,139
410.85	25,111	53,573	413.75	30,823	134,677
410.90	25,210	54,831	413.80	30,921	136,221
410.95	25,308	56,094	413.85	31,020	137,769
411.00	25,407	57,362	413.90	31,118	139,323
411.05	25,505	58,635	413.95	31,217	140,881
411.10	25,604	59,913	414.00	31,315	142,445
411.15	25,702	61,195			
411.20	25,801	62,483			
411.25	25,899	63,775			
411.30	25,997	65,073			
411.35	26,096	66,375			

Summary for Pond 55P: FB 1G

Inflow Area = 9.966 ac, 96.03% Impervious, Inflow Depth = 10.44" for 500-Year event
 Inflow = 109.89 cfs @ 12.13 hrs, Volume= 8.668 af
 Outflow = 107.53 cfs @ 12.14 hrs, Volume= 8.668 af, Atten= 2%, Lag= 0.8 min
 Primary = 107.53 cfs @ 12.14 hrs, Volume= 8.668 af
 Routed to Pond 54P : INFIL 1G

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 412.55' Surf.Area= 12,269 sf Storage= 46,929 cf
 Peak Elev= 413.42' @ 12.14 hrs Surf.Area= 13,369 sf Storage= 55,931 cf (9,002 cf above start)

Plug-Flow detention time= 125.4 min calculated for 7.589 af (88% of inflow)
 Center-of-Mass det. time= 3.3 min (743.1 - 739.9)

Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,884 cf	Custom Stage Data (Prismatic) Listed below

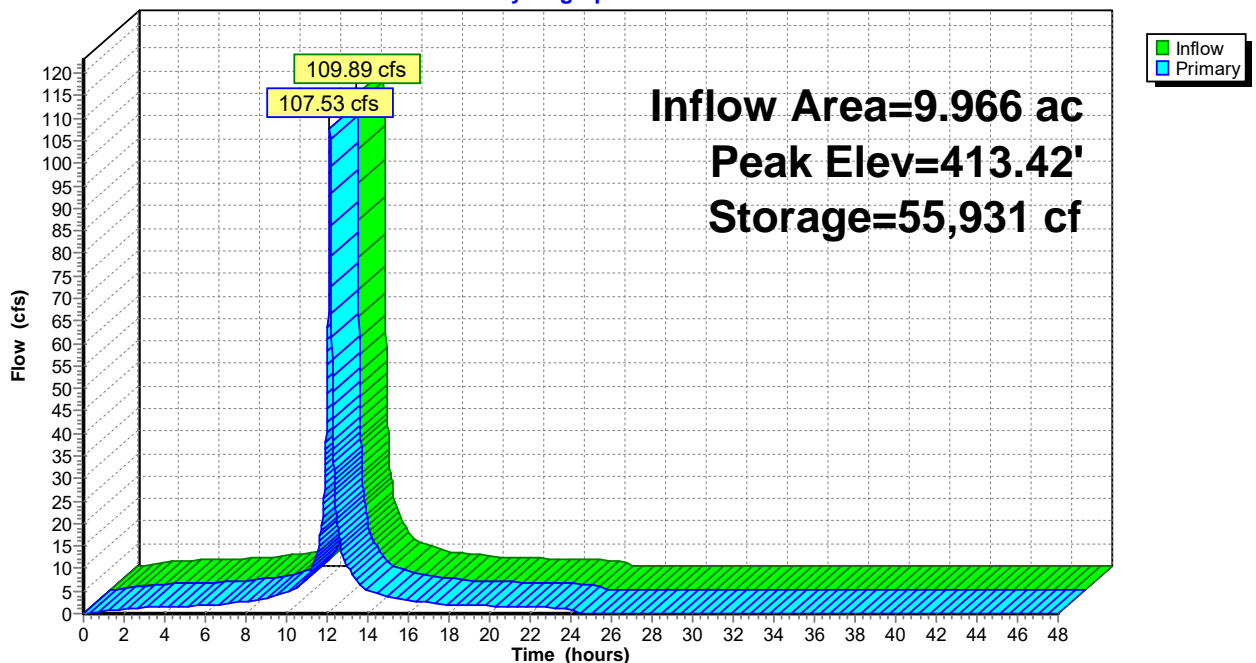
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.00	6,531	0	0
414.00	14,097	61,884	61,884

Device	Routing	Invert	Outlet Devices
#1	Primary	412.55'	50.0' long x 21.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

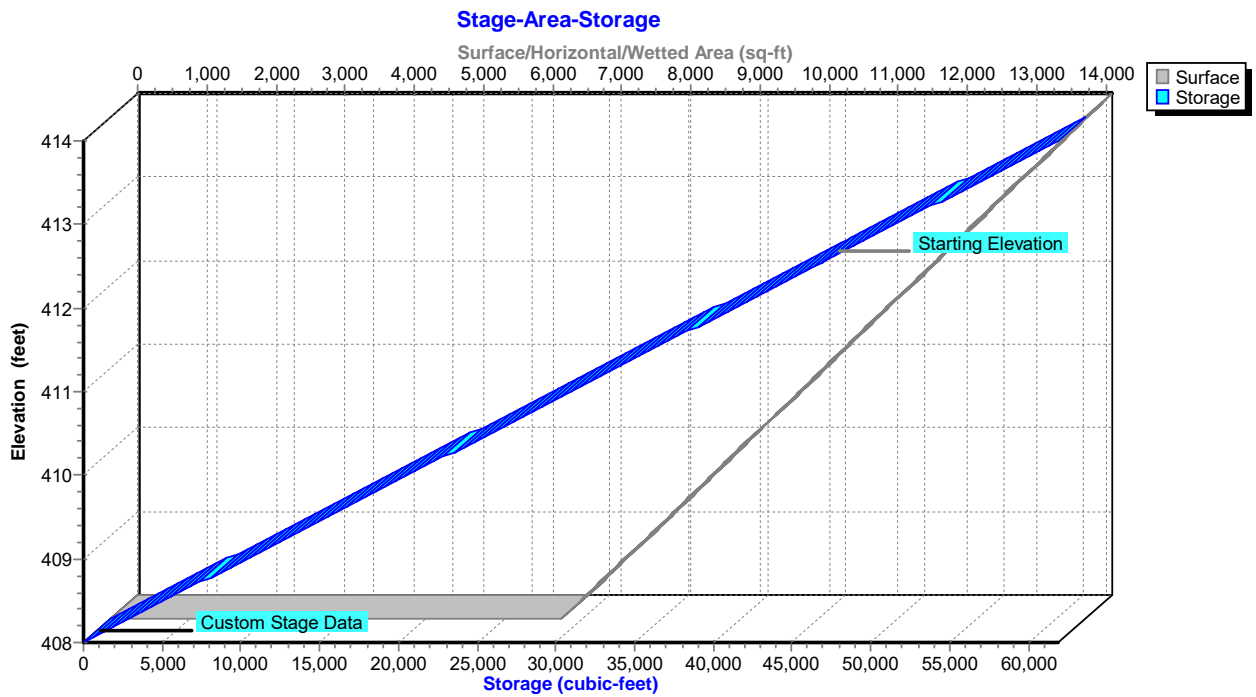
Primary OutFlow Max=107.29 cfs @ 12.14 hrs HW=413.42' (Free Discharge)
 ↑-1=Broad-Crested Rectangular Weir (Weir Controls 107.29 cfs @ 2.46 fps)

Pond 55P: FB 1G

Hydrograph



Pond 55P: FB 1G



Hydrograph for Pond 55P: FB 1G

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	46,929	412.55	0.00
1.00	0.59	47,137	412.57	0.53
2.00	1.06	47,269	412.58	1.03
3.00	1.31	47,338	412.59	1.30
4.00	1.50	47,388	412.59	1.49
5.00	1.65	47,429	412.60	1.64
6.00	1.79	47,465	412.60	1.78
7.00	2.24	47,580	412.61	2.21
8.00	2.72	47,685	412.62	2.70
9.00	3.19	47,762	412.63	3.17
10.00	4.76	48,010	412.65	4.68
11.00	8.36	48,508	412.70	8.14
12.00	58.48	52,400	413.08	52.21
13.00	10.22	48,827	412.73	10.62
14.00	5.19	48,104	412.66	5.27
15.00	3.53	47,836	412.64	3.62
16.00	2.90	47,723	412.63	2.93
17.00	2.43	47,646	412.62	2.46
18.00	1.96	47,523	412.61	2.00
19.00	1.79	47,472	412.60	1.80
20.00	1.68	47,442	412.60	1.69
21.00	1.56	47,411	412.60	1.57
22.00	1.44	47,380	412.59	1.45
23.00	1.33	47,349	412.59	1.34
24.00	1.22	47,318	412.59	1.22
25.00	0.00	46,932	412.55	0.00
26.00	0.00	46,929	412.55	0.00
27.00	0.00	46,929	412.55	0.00
28.00	0.00	46,929	412.55	0.00
29.00	0.00	46,929	412.55	0.00
30.00	0.00	46,929	412.55	0.00
31.00	0.00	46,929	412.55	0.00
32.00	0.00	46,929	412.55	0.00
33.00	0.00	46,929	412.55	0.00
34.00	0.00	46,929	412.55	0.00
35.00	0.00	46,929	412.55	0.00
36.00	0.00	46,929	412.55	0.00
37.00	0.00	46,929	412.55	0.00
38.00	0.00	46,929	412.55	0.00
39.00	0.00	46,929	412.55	0.00
40.00	0.00	46,929	412.55	0.00
41.00	0.00	46,929	412.55	0.00
42.00	0.00	46,929	412.55	0.00
43.00	0.00	46,929	412.55	0.00
44.00	0.00	46,929	412.55	0.00
45.00	0.00	46,929	412.55	0.00
46.00	0.00	46,929	412.55	0.00
47.00	0.00	46,929	412.55	0.00
48.00	0.00	46,929	412.55	0.00

Stage-Area-Storage for Pond 55P: FB 1G

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
408.00	6,531	0	413.80	13,845	59,821
408.10	6,657	1,031	413.90	13,971	60,853
408.20	6,783	2,063	414.00	14,097	61,884
408.30	6,909	3,094			
408.40	7,035	4,126			
408.50	7,162	5,157			
408.60	7,288	6,188			
408.70	7,414	7,220			
408.80	7,540	8,251			
408.90	7,666	9,283			
409.00	7,792	10,314			
409.10	7,918	11,345			
409.20	8,044	12,377			
409.30	8,170	13,408			
409.40	8,296	14,440			
409.50	8,423	15,471			
409.60	8,549	16,502			
409.70	8,675	17,534			
409.80	8,801	18,565			
409.90	8,927	19,597			
410.00	9,053	20,628			
410.10	9,179	21,659			
410.20	9,305	22,691			
410.30	9,431	23,722			
410.40	9,557	24,754			
410.50	9,684	25,785			
410.60	9,810	26,816			
410.70	9,936	27,848			
410.80	10,062	28,879			
410.90	10,188	29,911			
411.00	10,314	30,942			
411.10	10,440	31,973			
411.20	10,566	33,005			
411.30	10,692	34,036			
411.40	10,818	35,068			
411.50	10,945	36,099			
411.60	11,071	37,130			
411.70	11,197	38,162			
411.80	11,323	39,193			
411.90	11,449	40,225			
412.00	11,575	41,256			
412.10	11,701	42,287			
412.20	11,827	43,319			
412.30	11,953	44,350			
412.40	12,079	45,382			
412.50	12,206	46,413			
412.60	12,332	47,444			
412.70	12,458	48,476			
412.80	12,584	49,507			
412.90	12,710	50,539			
413.00	12,836	51,570			
413.10	12,962	52,601			
413.20	13,088	53,633			
413.30	13,214	54,664			
413.40	13,340	55,696			
413.50	13,467	56,727			
413.60	13,593	57,758			
413.70	13,719	58,790			

Summary for Pond 59P: FB 1E

Inflow Area = 0.398 ac, 82.34% Impervious, Inflow Depth = 10.39" for 500-Year event
 Inflow = 4.49 cfs @ 12.13 hrs, Volume= 0.344 af
 Outflow = 4.47 cfs @ 12.14 hrs, Volume= 0.344 af, Atten= 0%, Lag= 0.4 min
 Primary = 4.47 cfs @ 12.14 hrs, Volume= 0.344 af
 Routed to Pond 1P : Bioretention 1D

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 414.00' Surf.Area= 668 sf Storage= 2,016 cf
 Peak Elev= 414.31' @ 12.14 hrs Surf.Area= 719 sf Storage= 2,175 cf (159 cf above start)

Plug-Flow detention time= 122.7 min calculated for 0.298 af (87% of inflow)
 Center-of-Mass det. time= 1.4 min (753.7 - 752.3)

Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	3,024 cf	Custom Stage Data (Prismatic) Listed below

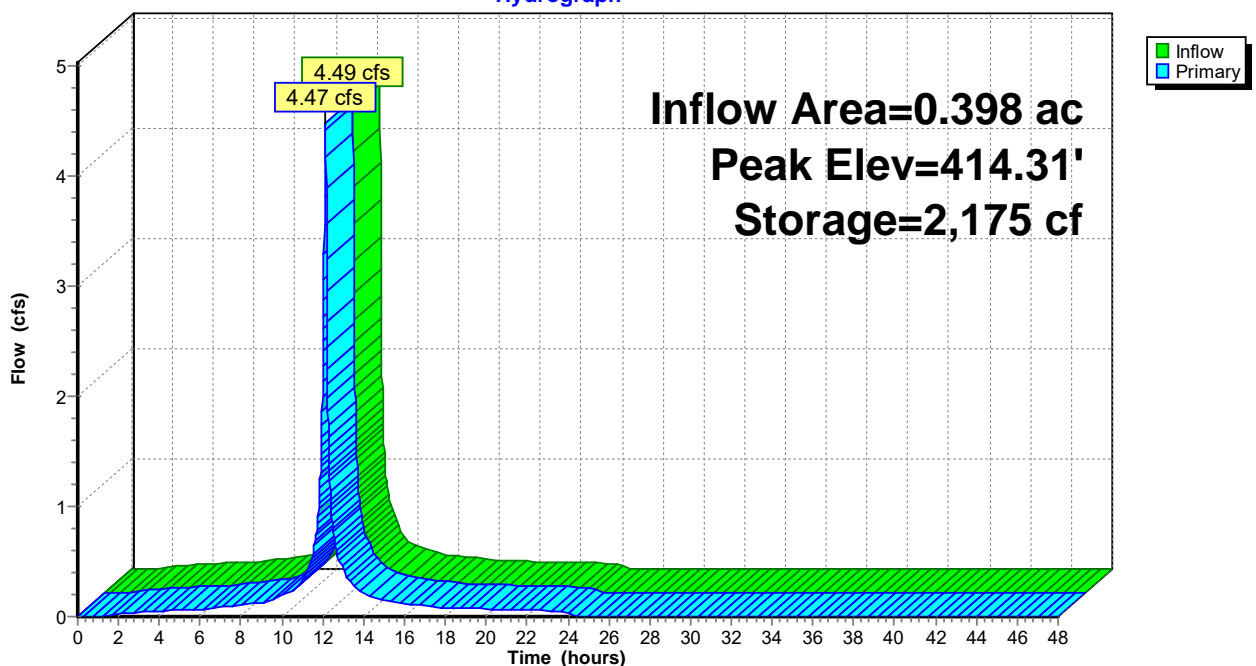
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
410.00	13	0	0
416.00	995	3,024	3,024

Device	Routing	Invert	Outlet Devices
#1	Primary	414.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

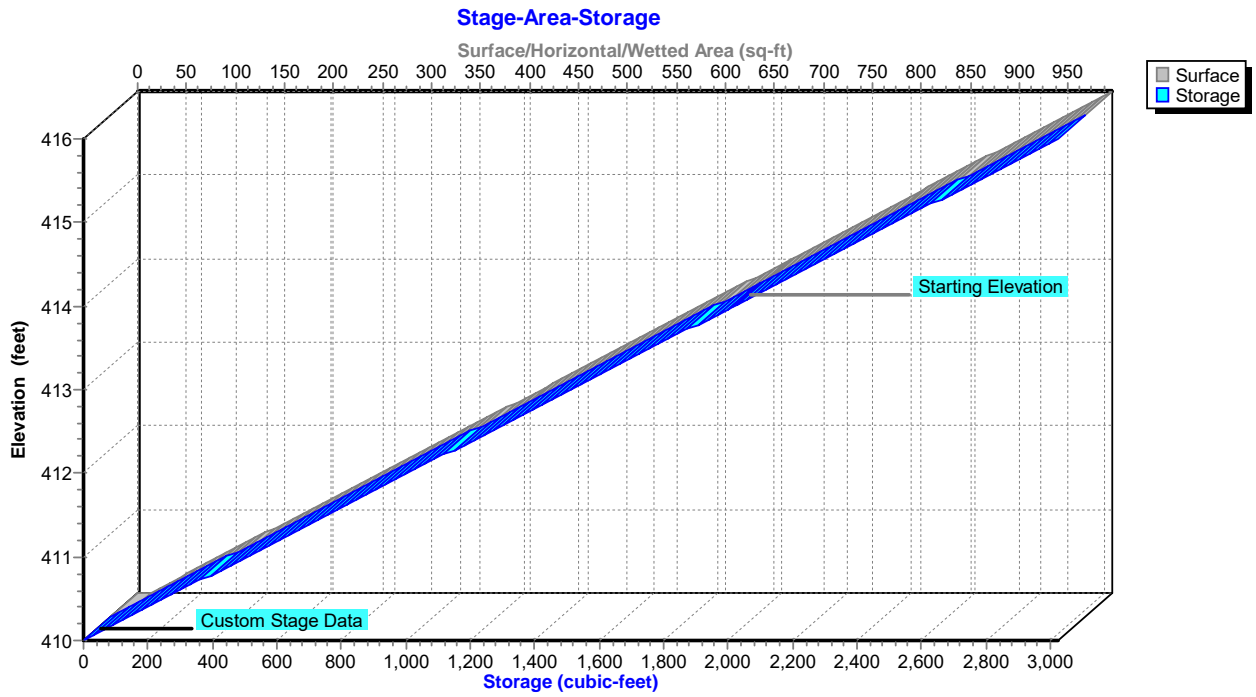
Primary OutFlow Max=4.45 cfs @ 12.14 hrs HW=414.31' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 4.45 cfs @ 1.42 fps)

Pond 59P: FB 1E

Hydrograph



Pond 59P: FB 1E



Hydrograph for Pond 59P: FB 1E

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	2,016	414.00	0.00
1.00	0.00	2,016	414.00	0.00
2.00	0.02	2,019	414.01	0.02
3.00	0.04	2,021	414.01	0.04
4.00	0.05	2,023	414.01	0.05
5.00	0.06	2,024	414.02	0.06
6.00	0.07	2,025	414.02	0.06
7.00	0.08	2,027	414.02	0.08
8.00	0.11	2,028	414.02	0.10
9.00	0.13	2,029	414.03	0.13
10.00	0.19	2,033	414.03	0.19
11.00	0.34	2,042	414.05	0.34
12.00	2.39	2,118	414.20	2.28
13.00	0.42	2,048	414.06	0.42
14.00	0.21	2,035	414.04	0.21
15.00	0.14	2,031	414.03	0.14
16.00	0.12	2,029	414.03	0.12
17.00	0.10	2,028	414.02	0.10
18.00	0.08	2,027	414.02	0.08
19.00	0.07	2,026	414.02	0.07
20.00	0.07	2,026	414.02	0.07
21.00	0.06	2,025	414.02	0.06
22.00	0.06	2,024	414.02	0.06
23.00	0.05	2,024	414.02	0.05
24.00	0.05	2,023	414.01	0.05
25.00	0.00	2,016	414.00	0.00
26.00	0.00	2,016	414.00	0.00
27.00	0.00	2,016	414.00	0.00
28.00	0.00	2,016	414.00	0.00
29.00	0.00	2,016	414.00	0.00
30.00	0.00	2,016	414.00	0.00
31.00	0.00	2,016	414.00	0.00
32.00	0.00	2,016	414.00	0.00
33.00	0.00	2,016	414.00	0.00
34.00	0.00	2,016	414.00	0.00
35.00	0.00	2,016	414.00	0.00
36.00	0.00	2,016	414.00	0.00
37.00	0.00	2,016	414.00	0.00
38.00	0.00	2,016	414.00	0.00
39.00	0.00	2,016	414.00	0.00
40.00	0.00	2,016	414.00	0.00
41.00	0.00	2,016	414.00	0.00
42.00	0.00	2,016	414.00	0.00
43.00	0.00	2,016	414.00	0.00
44.00	0.00	2,016	414.00	0.00
45.00	0.00	2,016	414.00	0.00
46.00	0.00	2,016	414.00	0.00
47.00	0.00	2,016	414.00	0.00
48.00	0.00	2,016	414.00	0.00

Stage-Area-Storage for Pond 59P: FB 1E

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
410.00	13	0	415.80	962	2,923
410.10	29	50	415.90	979	2,974
410.20	46	101	416.00	995	3,024
410.30	62	151			
410.40	78	202			
410.50	95	252			
410.60	111	302			
410.70	128	353			
410.80	144	403			
410.90	160	454			
411.00	177	504			
411.10	193	554			
411.20	209	605			
411.30	226	655			
411.40	242	706			
411.50	259	756			
411.60	275	806			
411.70	291	857			
411.80	308	907			
411.90	324	958			
412.00	340	1,008			
412.10	357	1,058			
412.20	373	1,109			
412.30	389	1,159			
412.40	406	1,210			
412.50	422	1,260			
412.60	439	1,310			
412.70	455	1,361			
412.80	471	1,411			
412.90	488	1,462			
413.00	504	1,512			
413.10	520	1,562			
413.20	537	1,613			
413.30	553	1,663			
413.40	569	1,714			
413.50	586	1,764			
413.60	602	1,814			
413.70	619	1,865			
413.80	635	1,915			
413.90	651	1,966			
414.00	668	2,016			
414.10	684	2,066			
414.20	700	2,117			
414.30	717	2,167			
414.40	733	2,218			
414.50	750	2,268			
414.60	766	2,318			
414.70	782	2,369			
414.80	799	2,419			
414.90	815	2,470			
415.00	831	2,520			
415.10	848	2,570			
415.20	864	2,621			
415.30	880	2,671			
415.40	897	2,722			
415.50	913	2,772			
415.60	930	2,822			
415.70	946	2,873			

Summary for Pond 60P: FB 1D

Inflow Area = 3.529 ac, 63.56% Impervious, Inflow Depth = 9.90" for 500-Year event
 Inflow = 39.20 cfs @ 12.13 hrs, Volume= 2.910 af
 Outflow = 39.05 cfs @ 12.14 hrs, Volume= 2.910 af, Atten= 0%, Lag= 0.4 min
 Primary = 39.05 cfs @ 12.14 hrs, Volume= 2.910 af
 Routed to Pond 1P : Bioretention 1D

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Automatic Starting Elev= 414.90' Surf.Area= 3,034 sf Storage= 8,598 cf
 Peak Elev= 415.51' @ 12.14 hrs Surf.Area= 3,398 sf Storage= 9,953 cf (1,355 cf above start)

Plug-Flow detention time= 70.2 min calculated for 2.712 af (93% of inflow)
 Center-of-Mass det. time= 1.4 min (768.4 - 767.0)

Volume	Invert	Avail.Storage	Storage Description
#1	411.00'	11,023 cf	Custom Stage Data (Prismatic) Listed below

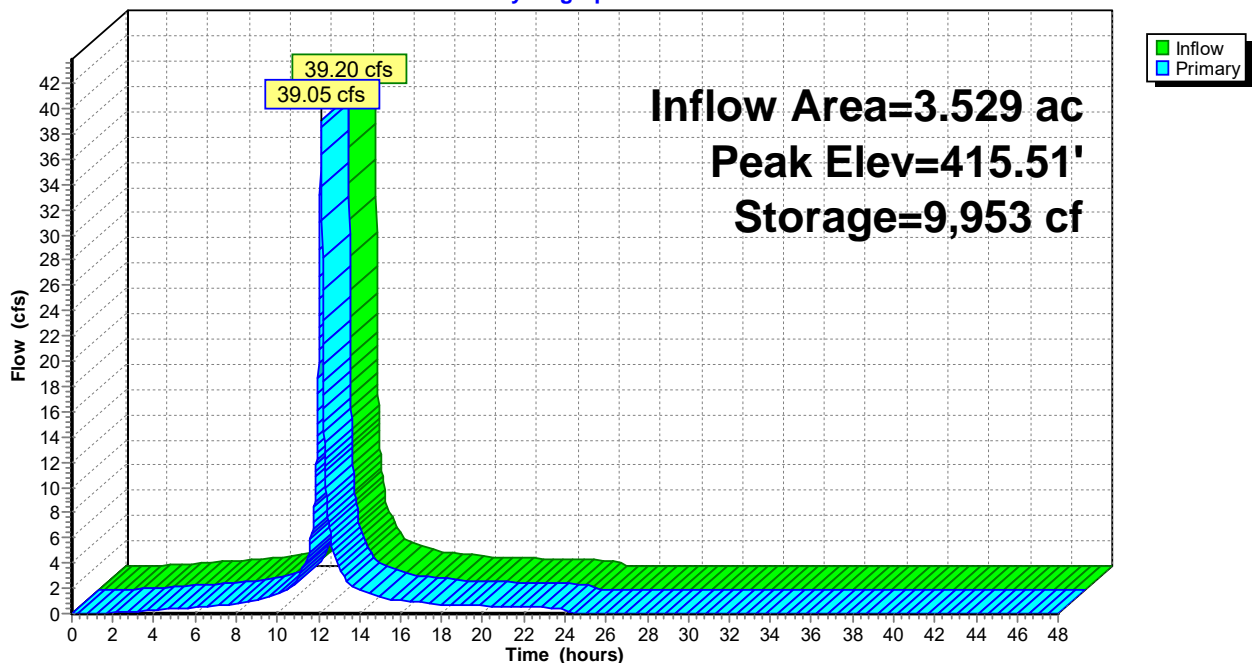
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
411.00	723	0	0
416.00	3,686	11,023	11,023

Device	Routing	Invert	Outlet Devices
#1	Primary	414.90'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

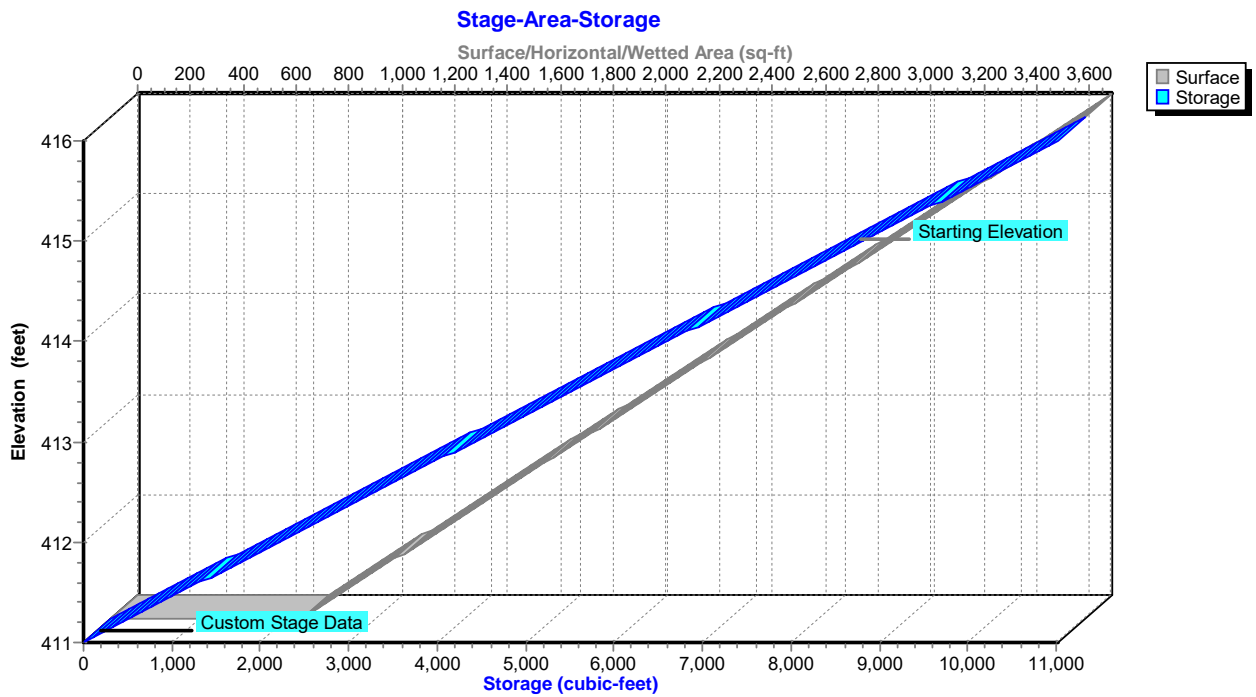
Primary OutFlow Max=38.92 cfs @ 12.14 hrs HW=415.51' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Weir Controls 38.92 cfs @ 2.11 fps)

Pond 60P: FB 1D

Hydrograph



Pond 60P: FB 1D



Hydrograph for Pond 60P: FB 1D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,598	414.90	0.00
1.00	0.00	8,598	414.90	0.00
2.00	0.05	8,604	414.90	0.05
3.00	0.18	8,620	414.91	0.17
4.00	0.28	8,634	414.92	0.28
5.00	0.37	8,647	414.92	0.37
6.00	0.46	8,657	414.93	0.45
7.00	0.63	8,679	414.94	0.62
8.00	0.81	8,704	414.95	0.81
9.00	1.00	8,720	414.96	1.00
10.00	1.57	8,760	414.97	1.55
11.00	2.86	8,844	415.01	2.82
12.00	20.74	9,490	415.31	19.84
13.00	3.66	8,894	415.03	3.73
14.00	1.86	8,783	414.98	1.87
15.00	1.26	8,740	414.96	1.28
16.00	1.04	8,723	414.96	1.04
17.00	0.87	8,711	414.95	0.87
18.00	0.70	8,691	414.94	0.71
19.00	0.64	8,683	414.94	0.64
20.00	0.60	8,677	414.94	0.60
21.00	0.56	8,672	414.93	0.56
22.00	0.52	8,666	414.93	0.52
23.00	0.48	8,661	414.93	0.48
24.00	0.44	8,655	414.93	0.44
25.00	0.00	8,598	414.90	0.00
26.00	0.00	8,598	414.90	0.00
27.00	0.00	8,598	414.90	0.00
28.00	0.00	8,598	414.90	0.00
29.00	0.00	8,598	414.90	0.00
30.00	0.00	8,598	414.90	0.00
31.00	0.00	8,598	414.90	0.00
32.00	0.00	8,598	414.90	0.00
33.00	0.00	8,598	414.90	0.00
34.00	0.00	8,598	414.90	0.00
35.00	0.00	8,598	414.90	0.00
36.00	0.00	8,598	414.90	0.00
37.00	0.00	8,598	414.90	0.00
38.00	0.00	8,598	414.90	0.00
39.00	0.00	8,598	414.90	0.00
40.00	0.00	8,598	414.90	0.00
41.00	0.00	8,598	414.90	0.00
42.00	0.00	8,598	414.90	0.00
43.00	0.00	8,598	414.90	0.00
44.00	0.00	8,598	414.90	0.00
45.00	0.00	8,598	414.90	0.00
46.00	0.00	8,598	414.90	0.00
47.00	0.00	8,598	414.90	0.00
48.00	0.00	8,598	414.90	0.00

Stage-Area-Storage for Pond 60P: FB 1D

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
411.00	723	0	413.90	2,442	6,393
411.05	753	110	413.95	2,471	6,503
411.10	782	220	414.00	2,501	6,614
411.15	812	331	414.05	2,530	6,724
411.20	842	441	414.10	2,560	6,834
411.25	871	551	414.15	2,590	6,944
411.30	901	661	414.20	2,619	7,054
411.35	930	772	414.25	2,649	7,165
411.40	960	882	414.30	2,679	7,275
411.45	990	992	414.35	2,708	7,385
411.50	1,019	1,102	414.40	2,738	7,495
411.55	1,049	1,212	414.45	2,767	7,606
411.60	1,079	1,323	414.50	2,797	7,716
411.65	1,108	1,433	414.55	2,827	7,826
411.70	1,138	1,543	414.60	2,856	7,936
411.75	1,167	1,653	414.65	2,886	8,046
411.80	1,197	1,764	414.70	2,916	8,157
411.85	1,227	1,874	414.75	2,945	8,267
411.90	1,256	1,984	414.80	2,975	8,377
411.95	1,286	2,094	414.85	3,005	8,487
412.00	1,316	2,205	414.90	3,034	8,598
412.05	1,345	2,315	414.95	3,064	8,708
412.10	1,375	2,425	415.00	3,093	8,818
412.15	1,404	2,535	415.05	3,123	8,928
412.20	1,434	2,645	415.10	3,153	9,038
412.25	1,464	2,756	415.15	3,182	9,149
412.30	1,493	2,866	415.20	3,212	9,259
412.35	1,523	2,976	415.25	3,242	9,369
412.40	1,553	3,086	415.30	3,271	9,479
412.45	1,582	3,197	415.35	3,301	9,590
412.50	1,612	3,307	415.40	3,330	9,700
412.55	1,642	3,417	415.45	3,360	9,810
412.60	1,671	3,527	415.50	3,390	9,920
412.65	1,701	3,637	415.55	3,419	10,030
412.70	1,730	3,748	415.60	3,449	10,141
412.75	1,760	3,858	415.65	3,479	10,251
412.80	1,790	3,968	415.70	3,508	10,361
412.85	1,819	4,078	415.75	3,538	10,471
412.90	1,849	4,189	415.80	3,567	10,582
412.95	1,879	4,299	415.85	3,597	10,692
413.00	1,908	4,409	415.90	3,627	10,802
413.05	1,938	4,519	415.95	3,656	10,912
413.10	1,967	4,629	416.00	3,686	11,023
413.15	1,997	4,740			
413.20	2,027	4,850			
413.25	2,056	4,960			
413.30	2,086	5,070			
413.35	2,116	5,181			
413.40	2,145	5,291			
413.45	2,175	5,401			
413.50	2,205	5,511			
413.55	2,234	5,621			
413.60	2,264	5,732			
413.65	2,293	5,842			
413.70	2,323	5,952			
413.75	2,353	6,062			
413.80	2,382	6,173			
413.85	2,412	6,283			

Summary for Pond 63P: Det Pond 1K

Inflow Area = 17.176 ac, 66.33% Impervious, Inflow Depth = 6.77" for 500-Year event
 Inflow = 93.58 cfs @ 12.10 hrs, Volume= 9.690 af
 Outflow = 34.11 cfs @ 12.76 hrs, Volume= 9.685 af, Atten= 64%, Lag= 39.9 min
 Primary = 17.70 cfs @ 12.76 hrs, Volume= 8.369 af
 Routed to Link 29L : DP-1
 Secondary = 16.41 cfs @ 12.76 hrs, Volume= 1.316 af
 Routed to Link 30L : DP-2

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 413.65' @ 12.76 hrs Surf.Area= 20,053 sf Storage= 74,919 cf

Plug-Flow detention time= 57.5 min calculated for 9.683 af (100% of inflow)
 Center-of-Mass det. time= 56.8 min (953.2 - 896.4)

Volume	Invert	Avail.Storage	Storage Description
#1	407.50'	82,118 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.50	4,315	0	0
414.00	20,952	82,118	82,118

Device	Routing	Invert	Outlet Devices
#1	Primary	407.50'	24.0" Round Culvert L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.50' / 406.00' S= 0.0037 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	407.50'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	408.50'	24.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	409.80'	17.0" W x 6.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	413.00'	10.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=17.70 cfs @ 12.76 hrs HW=413.65' (Free Discharge)

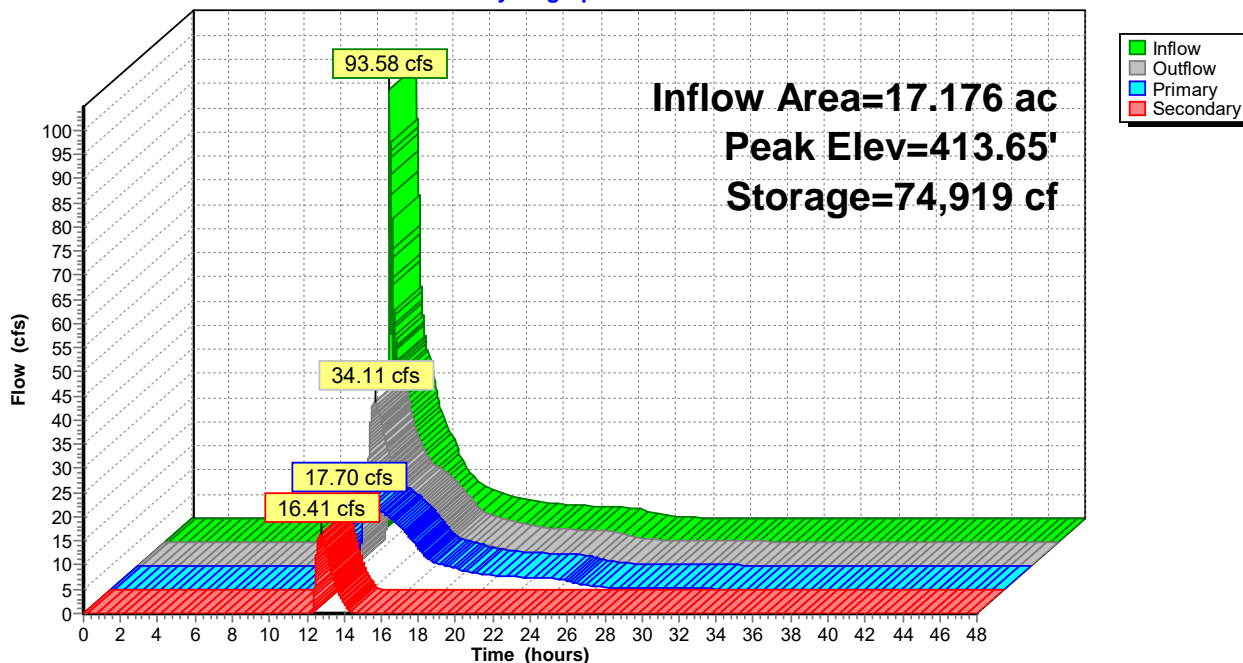
- ↑1=Culvert (Passes 17.70 cfs of 23.53 cfs potential flow)
- ↑2=Orifice/Grate (Orifice Controls 0.58 cfs @ 11.82 fps)
- ↑3=Orifice/Grate (Orifice Controls 10.66 cfs @ 10.66 fps)
- ↑4=Orifice/Grate (Orifice Controls 6.47 cfs @ 9.13 fps)

Secondary OutFlow Max=16.38 cfs @ 12.76 hrs HW=413.65' (Free Discharge)

- ↑5=Broad-Crested Rectangular Weir (Weir Controls 16.38 cfs @ 2.52 fps)

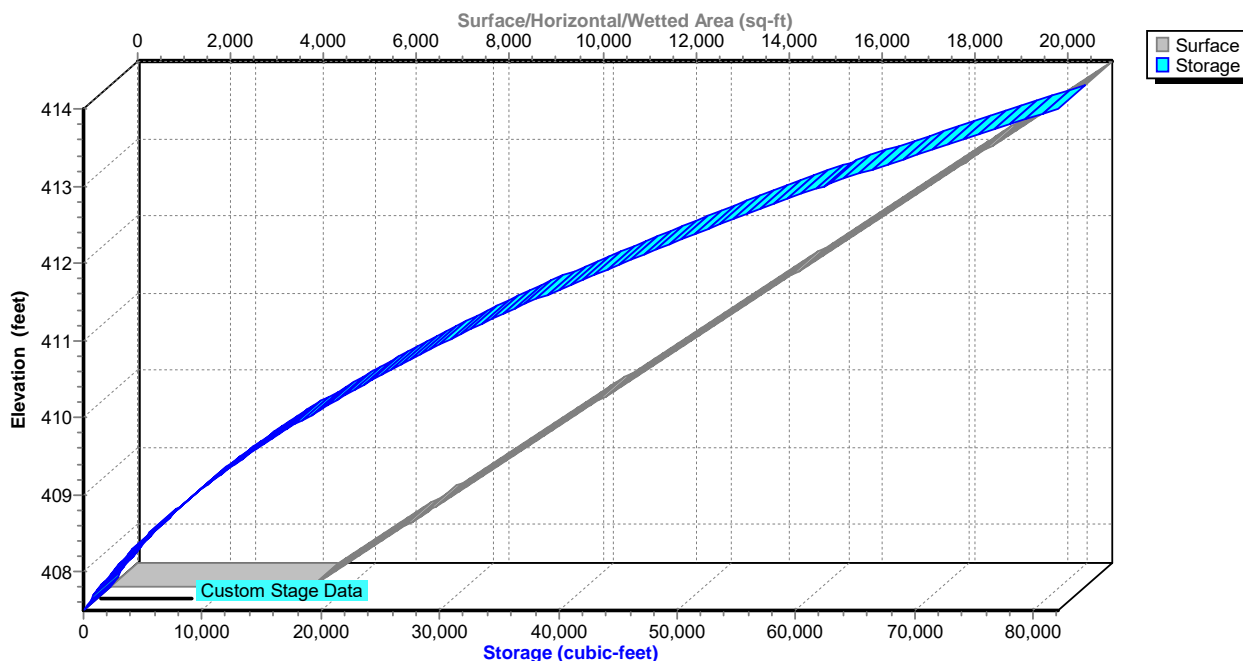
Pond 63P: Det Pond 1K

Hydrograph



Pond 63P: Det Pond 1K

Stage-Area-Storage



Hydrograph for Pond 63P: Det Pond 1K

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	407.50	0.00	0.00	0.00
1.00	0.00	0	407.50	0.00	0.00	0.00
2.00	0.00	0	407.50	0.00	0.00	0.00
3.00	0.00	0	407.50	0.00	0.00	0.00
4.00	0.00	0	407.50	0.00	0.00	0.00
5.00	0.00	0	407.50	0.00	0.00	0.00
6.00	0.00	0	407.50	0.00	0.00	0.00
7.00	0.00	0	407.50	0.00	0.00	0.00
8.00	0.00	0	407.50	0.00	0.00	0.00
9.00	0.00	0	407.50	0.00	0.00	0.00
10.00	0.00	0	407.50	0.00	0.00	0.00
11.00	0.02	8	407.50	0.00	0.00	0.00
12.00	23.17	14,734	409.60	4.76	4.76	0.00
13.00	29.54	73,815	413.59	31.68	17.59	14.09
14.00	17.13	65,754	413.18	18.84	16.72	2.12
15.00	9.30	52,414	412.43	15.02	15.02	0.00
16.00	6.24	31,792	411.08	11.22	11.22	0.00
17.00	4.88	19,646	410.08	6.59	6.59	0.00
18.00	3.93	15,385	409.67	4.94	4.94	0.00
19.00	3.32	12,281	409.34	3.98	3.98	0.00
20.00	2.99	10,617	409.15	3.29	3.29	0.00
21.00	2.75	9,873	409.06	2.89	2.89	0.00
22.00	2.55	9,489	409.02	2.63	2.63	0.00
23.00	2.35	9,202	408.98	2.42	2.42	0.00
24.00	2.17	8,967	408.95	2.23	2.23	0.00
25.00	0.92	7,743	408.80	1.29	1.29	0.00
26.00	0.43	6,707	408.66	0.64	0.64	0.00
27.00	0.22	6,093	408.57	0.36	0.36	0.00
28.00	0.13	5,683	408.51	0.24	0.24	0.00
29.00	0.08	5,271	408.45	0.21	0.21	0.00
30.00	0.06	4,758	408.38	0.20	0.20	0.00
31.00	0.04	4,216	408.29	0.19	0.19	0.00
32.00	0.03	3,677	408.20	0.18	0.18	0.00
33.00	0.02	3,156	408.12	0.17	0.17	0.00
34.00	0.02	2,665	408.03	0.15	0.15	0.00
35.00	0.02	2,213	407.95	0.14	0.14	0.00
36.00	0.01	1,806	407.88	0.12	0.12	0.00
37.00	0.01	1,450	407.81	0.10	0.10	0.00
38.00	0.01	1,151	407.75	0.08	0.08	0.00
39.00	0.01	914	407.70	0.06	0.06	0.00
40.00	0.00	736	407.66	0.05	0.05	0.00
41.00	0.00	608	407.64	0.03	0.03	0.00
42.00	0.00	513	407.61	0.03	0.03	0.00
43.00	0.00	439	407.60	0.02	0.02	0.00
44.00	0.00	382	407.59	0.02	0.02	0.00
45.00	0.00	337	407.58	0.01	0.01	0.00
46.00	0.00	301	407.57	0.01	0.01	0.00
47.00	0.00	273	407.56	0.01	0.01	0.00
48.00	0.00	248	407.56	0.01	0.01	0.00

Stage-Area-Storage for Pond 63P: Det Pond 1K

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
407.50	4,315	0	413.30	19,160	68,078
407.60	4,571	444	413.40	19,416	70,007
407.70	4,827	914	413.50	19,672	71,962
407.80	5,083	1,410	413.60	19,928	73,942
407.90	5,339	1,931	413.70	20,184	75,947
408.00	5,595	2,477	413.80	20,440	77,979
408.10	5,851	3,050	413.90	20,696	80,035
408.20	6,107	3,648	414.00	20,952	82,118
408.30	6,363	4,271			
408.40	6,619	4,920			
408.50	6,875	5,595			
408.60	7,130	6,295			
408.70	7,386	7,021			
408.80	7,642	7,772			
408.90	7,898	8,549			
409.00	8,154	9,352			
409.10	8,410	10,180			
409.20	8,666	11,034			
409.30	8,922	11,913			
409.40	9,178	12,818			
409.50	9,434	13,749			
409.60	9,690	14,705			
409.70	9,946	15,687			
409.80	10,202	16,694			
409.90	10,458	17,727			
410.00	10,714	18,786			
410.10	10,970	19,870			
410.20	11,226	20,980			
410.30	11,482	22,115			
410.40	11,738	23,276			
410.50	11,994	24,463			
410.60	12,250	25,675			
410.70	12,506	26,913			
410.80	12,761	28,176			
410.90	13,017	29,465			
411.00	13,273	30,780			
411.10	13,529	32,120			
411.20	13,785	33,486			
411.30	14,041	34,877			
411.40	14,297	36,294			
411.50	14,553	37,736			
411.60	14,809	39,204			
411.70	15,065	40,698			
411.80	15,321	42,217			
411.90	15,577	43,762			
412.00	15,833	45,333			
412.10	16,089	46,929			
412.20	16,345	48,551			
412.30	16,601	50,198			
412.40	16,857	51,871			
412.50	17,113	53,569			
412.60	17,369	55,293			
412.70	17,625	57,043			
412.80	17,881	58,818			
412.90	18,137	60,619			
413.00	18,392	62,446			
413.10	18,648	64,298			
413.20	18,904	66,175			

Summary for Pond B4B: Bioretention 4A

Inflow Area = 2.400 ac, 34.61% Impervious, Inflow Depth = 6.99" for 500-Year event
 Inflow = 20.99 cfs @ 12.13 hrs, Volume= 1.398 af
 Outflow = 23.51 cfs @ 12.13 hrs, Volume= 1.198 af, Atten= 0%, Lag= 0.0 min
 Primary = 23.51 cfs @ 12.13 hrs, Volume= 1.198 af
 Routed to Link 32L : DP-4

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 444.54' @ 12.13 hrs Surf.Area= 7,892 sf Storage= 12,376 cf

Plug-Flow detention time= 106.4 min calculated for 1.198 af (86% of inflow)
 Center-of-Mass det. time= 39.2 min (860.7 - 821.5)

Volume	Invert	Avail.Storage	Storage Description
#1	436.17'	12,376 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
436.17	4,171	0.0	0	0
436.83	4,171	40.0	1,101	1,101
439.50	4,171	20.0	2,227	3,328
441.00	7,892	100.0	9,047	12,376

Device	Routing	Invert	Outlet Devices
#1	Primary	436.17'	18.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 436.17' / 435.57' S= 0.0100 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	440.50'	16.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

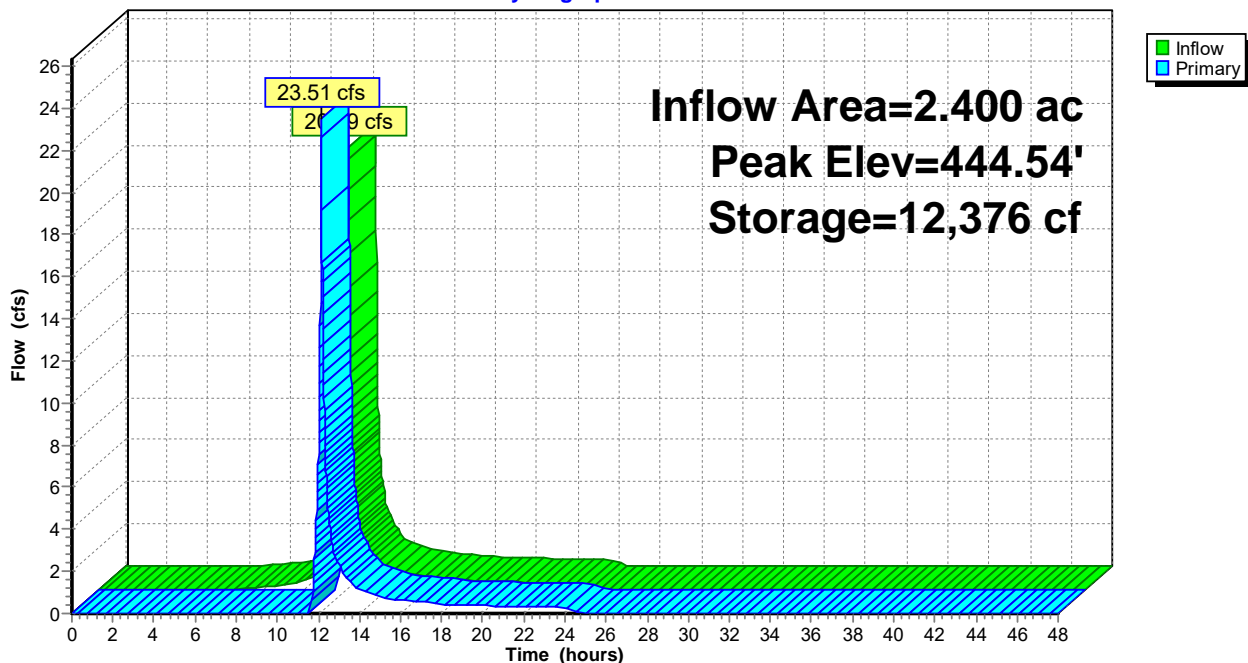
Primary OutFlow Max=23.19 cfs @ 12.13 hrs HW=444.35' (Free Discharge)

↑1=Culvert (Inlet Controls 23.19 cfs @ 13.12 fps)

↑2=Broad-Crested Rectangular Weir (Passes 23.19 cfs of 400.69 cfs potential flow)

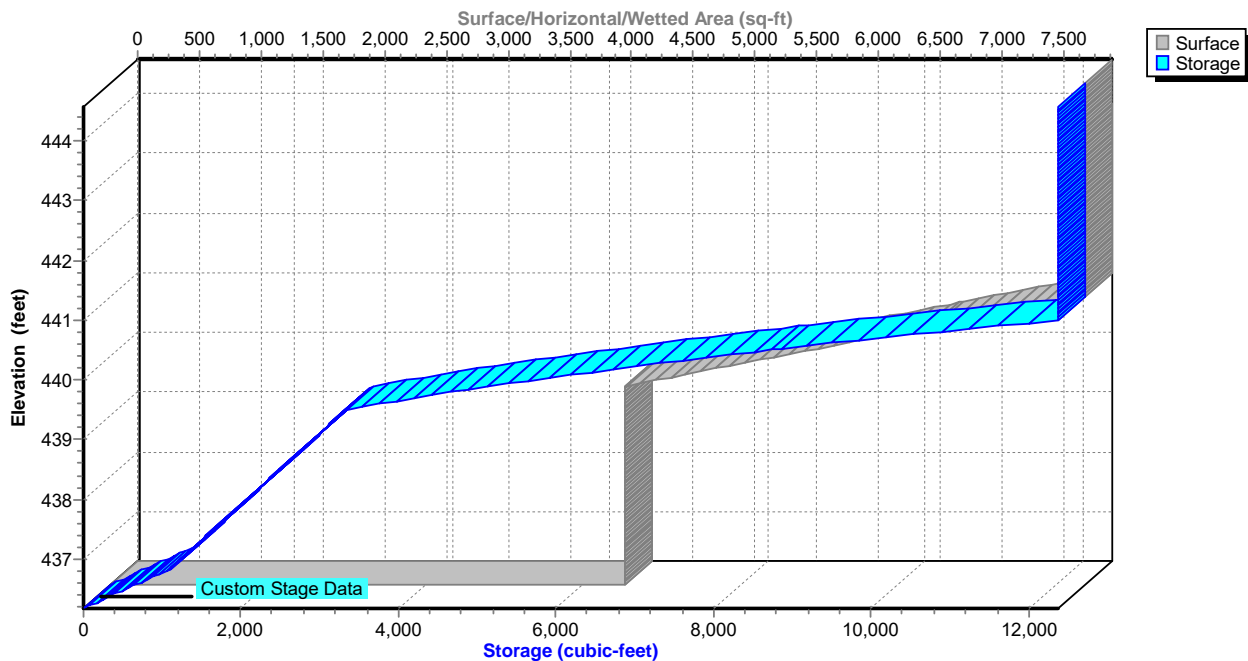
Pond B4B: Bioretention 4A

Hydrograph



Pond B4B: Bioretention 4A

Stage-Area-Storage



Hydrograph for Pond B4B: Bioretention 4A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	436.17	0.00
1.00	0.00	0	436.17	0.00
2.00	0.00	0	436.17	0.00
3.00	0.00	0	436.17	0.00
4.00	0.00	0	436.17	0.00
5.00	0.00	0	436.17	0.00
6.00	0.01	2	436.17	0.00
7.00	0.06	108	436.23	0.00
8.00	0.13	443	436.44	0.00
9.00	0.23	1,089	436.82	0.00
10.00	0.46	2,295	438.26	0.00
11.00	1.05	4,726	439.81	0.00
12.00	10.27	10,856	440.80	7.57
13.00	2.15	9,682	440.64	2.32
14.00	1.11	9,316	440.59	1.14
15.00	0.76	9,197	440.57	0.80
16.00	0.63	9,128	440.56	0.64
17.00	0.53	9,078	440.55	0.55
18.00	0.43	9,027	440.54	0.44
19.00	0.39	9,003	440.54	0.40
20.00	0.37	8,991	440.54	0.37
21.00	0.34	8,979	440.54	0.35
22.00	0.32	8,966	440.53	0.32
23.00	0.29	8,953	440.53	0.30
24.00	0.27	8,940	440.53	0.27
25.00	0.00	8,750	440.50	0.01
26.00	0.00	8,740	440.50	0.00
27.00	0.00	8,740	440.50	0.00
28.00	0.00	8,740	440.50	0.00
29.00	0.00	8,740	440.50	0.00
30.00	0.00	8,740	440.50	0.00
31.00	0.00	8,740	440.50	0.00
32.00	0.00	8,740	440.50	0.00
33.00	0.00	8,740	440.50	0.00
34.00	0.00	8,740	440.50	0.00
35.00	0.00	8,740	440.50	0.00
36.00	0.00	8,740	440.50	0.00
37.00	0.00	8,740	440.50	0.00
38.00	0.00	8,740	440.50	0.00
39.00	0.00	8,740	440.50	0.00
40.00	0.00	8,740	440.50	0.00
41.00	0.00	8,740	440.50	0.00
42.00	0.00	8,740	440.50	0.00
43.00	0.00	8,740	440.50	0.00
44.00	0.00	8,740	440.50	0.00
45.00	0.00	8,740	440.50	0.00
46.00	0.00	8,740	440.50	0.00
47.00	0.00	8,740	440.50	0.00
48.00	0.00	8,740	440.50	0.00

Stage-Area-Storage for Pond B4B: Bioretention 4A

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
436.17	4,171	0	441.97	7,892	12,376
436.27	4,171	167	442.07	7,892	12,376
436.37	4,171	334	442.17	7,892	12,376
436.47	4,171	501	442.27	7,892	12,376
436.57	4,171	667	442.37	7,892	12,376
436.67	4,171	834	442.47	7,892	12,376
436.77	4,171	1,001	442.57	7,892	12,376
436.87	4,171	1,135	442.67	7,892	12,376
436.97	4,171	1,218	442.77	7,892	12,376
437.07	4,171	1,301	442.87	7,892	12,376
437.17	4,171	1,385	442.97	7,892	12,376
437.27	4,171	1,468	443.07	7,892	12,376
437.37	4,171	1,552	443.17	7,892	12,376
437.47	4,171	1,635	443.27	7,892	12,376
437.57	4,171	1,718	443.37	7,892	12,376
437.67	4,171	1,802	443.47	7,892	12,376
437.77	4,171	1,885	443.57	7,892	12,376
437.87	4,171	1,969	443.67	7,892	12,376
437.97	4,171	2,052	443.77	7,892	12,376
438.07	4,171	2,136	443.87	7,892	12,376
438.17	4,171	2,219	443.97	7,892	12,376
438.27	4,171	2,302	444.07	7,892	12,376
438.37	4,171	2,386	444.17	7,892	12,376
438.47	4,171	2,469	444.27	7,892	12,376
438.57	4,171	2,553	444.37	7,892	12,376
438.67	4,171	2,636	444.47	7,892	12,376
438.77	4,171	2,719	444.57	7,892	12,376
438.87	4,171	2,803			
438.97	4,171	2,886			
439.07	4,171	2,970			
439.17	4,171	3,053			
439.27	4,171	3,137			
439.37	4,171	3,220			
439.47	4,171	3,303			
439.57	4,345	3,627			
439.67	4,593	4,073			
439.77	4,841	4,545			
439.87	5,089	5,042			
439.97	5,337	5,563			
440.07	5,585	6,109			
440.17	5,833	6,680			
440.27	6,081	7,276			
440.37	6,329	7,896			
440.47	6,577	8,541			
440.57	6,825	9,211			
440.67	7,073	9,906			
440.77	7,321	10,626			
440.87	7,570	11,371			
440.97	7,818	12,140			
441.07	7,892	12,376			
441.17	7,892	12,376			
441.27	7,892	12,376			
441.37	7,892	12,376			
441.47	7,892	12,376			
441.57	7,892	12,376			
441.67	7,892	12,376			
441.77	7,892	12,376			
441.87	7,892	12,376			

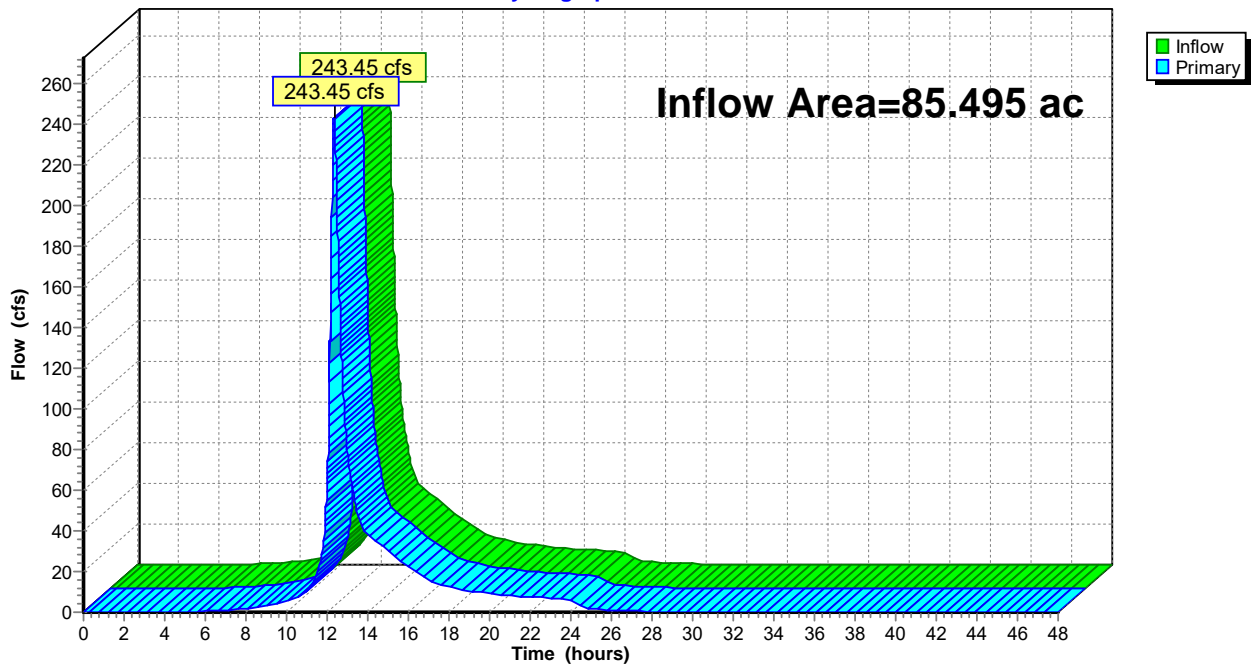
Summary for Link 29L: DP-1

Inflow Area = 85.495 ac, 51.65% Impervious, Inflow Depth = 4.59" for 500-Year event
Inflow = 243.45 cfs @ 12.34 hrs, Volume= 32.677 af
Primary = 243.45 cfs @ 12.34 hrs, Volume= 32.677 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 29L: DP-1

Hydrograph



Hydrograph for Link 29L: DP-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.32	0.00	0.32
0.50	0.00	0.00	0.00	29.50	0.30	0.00	0.30
1.00	0.00	0.00	0.00	30.00	0.29	0.00	0.29
1.50	0.00	0.00	0.00	30.50	0.27	0.00	0.27
2.00	0.00	0.00	0.00	31.00	0.26	0.00	0.26
2.50	0.00	0.00	0.00	31.50	0.25	0.00	0.25
3.00	0.00	0.00	0.00	32.00	0.24	0.00	0.24
3.50	0.00	0.00	0.00	32.50	0.23	0.00	0.23
4.00	0.00	0.00	0.00	33.00	0.21	0.00	0.21
4.50	0.00	0.00	0.00	33.50	0.20	0.00	0.20
5.00	0.00	0.00	0.00	34.00	0.19	0.00	0.19
5.50	0.12	0.00	0.12	34.50	0.18	0.00	0.18
6.00	0.36	0.00	0.36	35.00	0.17	0.00	0.17
6.50	0.64	0.00	0.64	35.50	0.16	0.00	0.16
7.00	1.00	0.00	1.00	36.00	0.15	0.00	0.15
7.50	1.42	0.00	1.42	36.50	0.14	0.00	0.14
8.00	1.91	0.00	1.91	37.00	0.13	0.00	0.13
8.50	2.47	0.00	2.47	37.50	0.12	0.00	0.12
9.00	3.07	0.00	3.07	38.00	0.10	0.00	0.10
9.50	4.01	0.00	4.01	38.50	0.09	0.00	0.09
10.00	5.50	0.00	5.50	39.00	0.08	0.00	0.08
10.50	7.27	0.00	7.27	39.50	0.07	0.00	0.07
11.00	10.75	0.00	10.75	40.00	0.06	0.00	0.06
11.50	19.00	0.00	19.00	40.50	0.06	0.00	0.06
12.00	63.06	0.00	63.06	41.00	0.05	0.00	0.05
12.50	194.33	0.00	194.33	41.50	0.04	0.00	0.04
13.00	79.65	0.00	79.65	42.00	0.04	0.00	0.04
13.50	48.45	0.00	48.45	42.50	0.04	0.00	0.04
14.00	38.18	0.00	38.18	43.00	0.03	0.00	0.03
14.50	34.45	0.00	34.45	43.50	0.03	0.00	0.03
15.00	30.20	0.00	30.20	44.00	0.03	0.00	0.03
15.50	25.92	0.00	25.92	44.50	0.03	0.00	0.03
16.00	22.62	0.00	22.62	45.00	0.03	0.00	0.03
16.50	19.37	0.00	19.37	45.50	0.02	0.00	0.02
17.00	16.07	0.00	16.07	46.00	0.02	0.00	0.02
17.50	14.04	0.00	14.04	46.50	0.02	0.00	0.02
18.00	12.57	0.00	12.57	47.00	0.02	0.00	0.02
18.50	11.36	0.00	11.36	47.50	0.02	0.00	0.02
19.00	10.51	0.00	10.51	48.00	0.02	0.00	0.02
19.50	9.78	0.00	9.78				
20.00	9.18	0.00	9.18				
20.50	8.69	0.00	8.69				
21.00	8.27	0.00	8.27				
21.50	7.89	0.00	7.89				
22.00	7.56	0.00	7.56				
22.50	7.25	0.00	7.25				
23.00	6.93	0.00	6.93				
23.50	6.63	0.00	6.63				
24.00	6.34	0.00	6.34				
24.50	2.93	0.00	2.93				
25.00	1.71	0.00	1.71				
25.50	1.22	0.00	1.22				
26.00	0.91	0.00	0.91				
26.50	0.69	0.00	0.69				
27.00	0.55	0.00	0.55				
27.50	0.44	0.00	0.44				
28.00	0.38	0.00	0.38				
28.50	0.34	0.00	0.34				

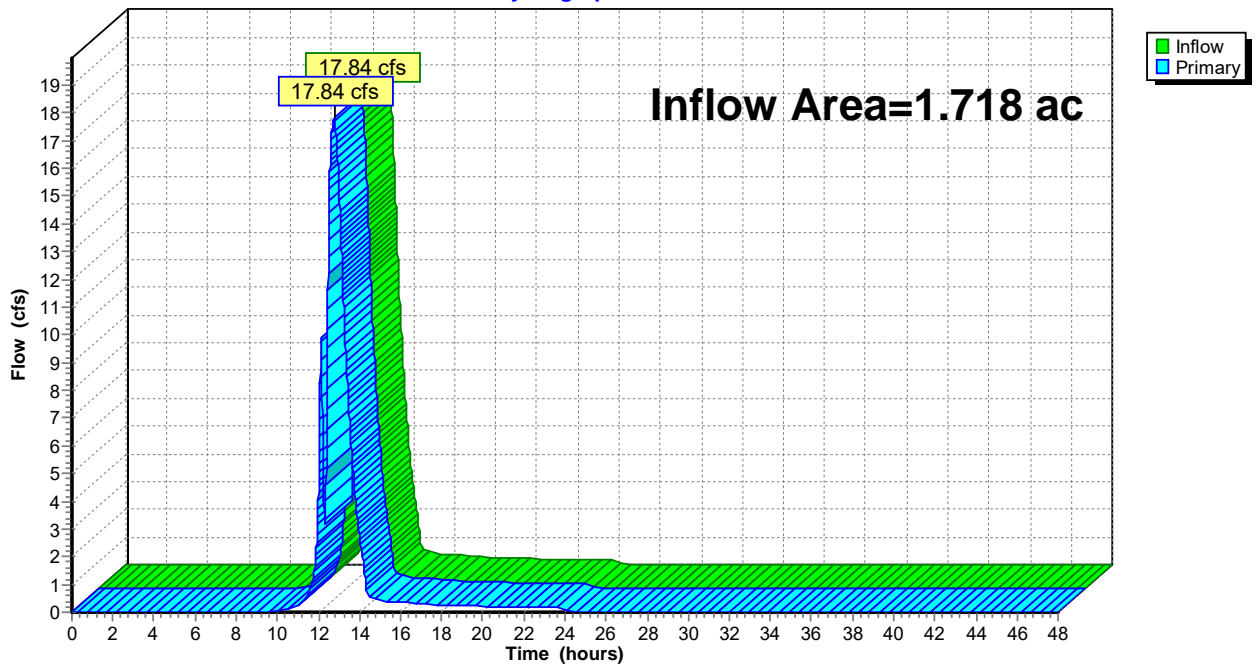
Summary for Link 30L: DP-2

Inflow Area = 1.718 ac, 0.00% Impervious, Inflow Depth = 13.75" for 500-Year event
Inflow = 17.84 cfs @ 12.75 hrs, Volume= 1.969 af
Primary = 17.84 cfs @ 12.75 hrs, Volume= 1.969 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 30L: DP-2

Hydrograph



Hydrograph for Link 30L: DP-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.01	0.00	0.01	38.50	0.00	0.00	0.00
10.00	0.05	0.00	0.05	39.00	0.00	0.00	0.00
10.50	0.11	0.00	0.11	39.50	0.00	0.00	0.00
11.00	0.26	0.00	0.26	40.00	0.00	0.00	0.00
11.50	0.61	0.00	0.61	40.50	0.00	0.00	0.00
12.00	4.31	0.00	4.31	41.00	0.00	0.00	0.00
12.50	13.43	0.00	13.43	41.50	0.00	0.00	0.00
13.00	15.25	0.00	15.25	42.00	0.00	0.00	0.00
13.50	7.11	0.00	7.11	42.50	0.00	0.00	0.00
14.00	2.74	0.00	2.74	43.00	0.00	0.00	0.00
14.50	0.53	0.00	0.53	43.50	0.00	0.00	0.00
15.00	0.43	0.00	0.43	44.00	0.00	0.00	0.00
15.50	0.39	0.00	0.39	44.50	0.00	0.00	0.00
16.00	0.36	0.00	0.36	45.00	0.00	0.00	0.00
16.50	0.33	0.00	0.33	45.50	0.00	0.00	0.00
17.00	0.30	0.00	0.30	46.00	0.00	0.00	0.00
17.50	0.28	0.00	0.28	46.50	0.00	0.00	0.00
18.00	0.25	0.00	0.25	47.00	0.00	0.00	0.00
18.50	0.24	0.00	0.24	47.50	0.00	0.00	0.00
19.00	0.23	0.00	0.23	48.00	0.00	0.00	0.00
19.50	0.22	0.00	0.22				
20.00	0.22	0.00	0.22				
20.50	0.21	0.00	0.21				
21.00	0.20	0.00	0.20				
21.50	0.19	0.00	0.19				
22.00	0.19	0.00	0.19				
22.50	0.18	0.00	0.18				
23.00	0.17	0.00	0.17				
23.50	0.17	0.00	0.17				
24.00	0.16	0.00	0.16				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

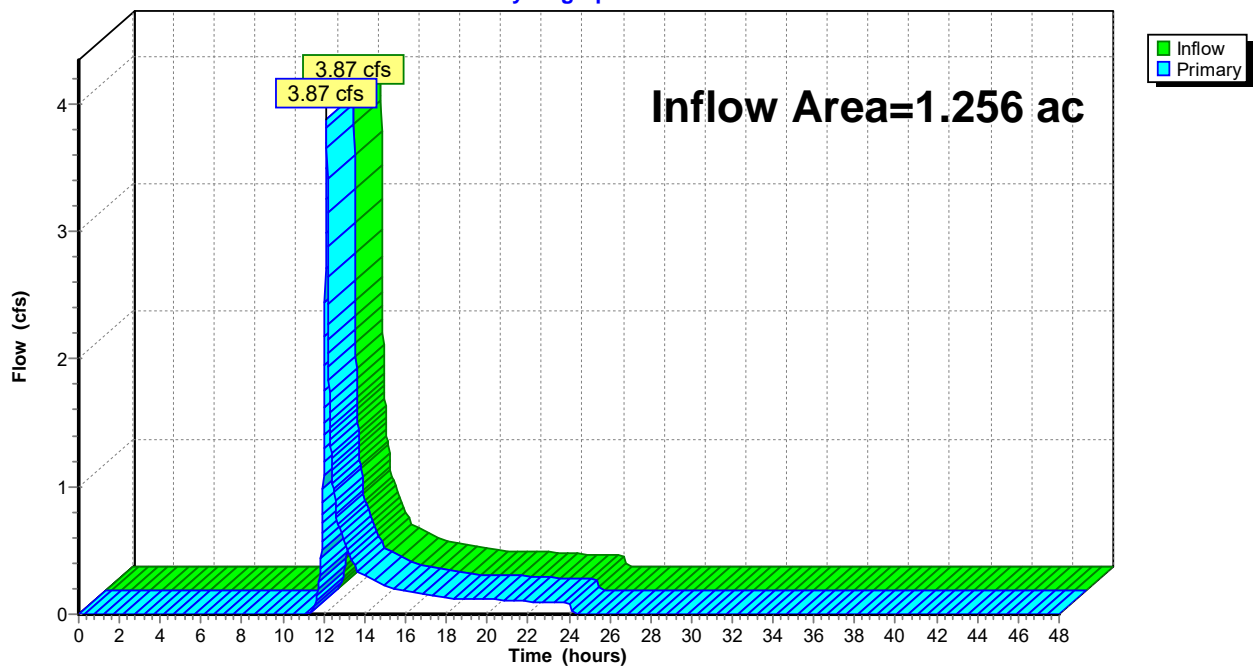
Summary for Link 31L: DP-3

Inflow Area = 1.256 ac, 0.00% Impervious, Inflow Depth = 2.64" for 500-Year event
Inflow = 3.87 cfs @ 12.14 hrs, Volume= 0.276 af
Primary = 3.87 cfs @ 12.14 hrs, Volume= 0.276 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 31L: DP-3

Hydrograph



Hydrograph for Link 31L: DP-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
11.50	0.04	0.00	0.04	40.50	0.00	0.00	0.00
12.00	1.30	0.00	1.30	41.00	0.00	0.00	0.00
12.50	0.95	0.00	0.95	41.50	0.00	0.00	0.00
13.00	0.56	0.00	0.56	42.00	0.00	0.00	0.00
13.50	0.38	0.00	0.38	42.50	0.00	0.00	0.00
14.00	0.31	0.00	0.31	43.00	0.00	0.00	0.00
14.50	0.27	0.00	0.27	43.50	0.00	0.00	0.00
15.00	0.22	0.00	0.22	44.00	0.00	0.00	0.00
15.50	0.20	0.00	0.20	44.50	0.00	0.00	0.00
16.00	0.19	0.00	0.19	45.00	0.00	0.00	0.00
16.50	0.17	0.00	0.17	45.50	0.00	0.00	0.00
17.00	0.16	0.00	0.16	46.00	0.00	0.00	0.00
17.50	0.15	0.00	0.15	46.50	0.00	0.00	0.00
18.00	0.13	0.00	0.13	47.00	0.00	0.00	0.00
18.50	0.12	0.00	0.12	47.50	0.00	0.00	0.00
19.00	0.12	0.00	0.12	48.00	0.00	0.00	0.00
19.50	0.12	0.00	0.12				
20.00	0.12	0.00	0.12				
20.50	0.11	0.00	0.11				
21.00	0.11	0.00	0.11				
21.50	0.10	0.00	0.10				
22.00	0.10	0.00	0.10				
22.50	0.10	0.00	0.10				
23.00	0.09	0.00	0.09				
23.50	0.09	0.00	0.09				
24.00	0.09	0.00	0.09				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				
25.50	0.00	0.00	0.00				
26.00	0.00	0.00	0.00				
26.50	0.00	0.00	0.00				
27.00	0.00	0.00	0.00				
27.50	0.00	0.00	0.00				
28.00	0.00	0.00	0.00				
28.50	0.00	0.00	0.00				

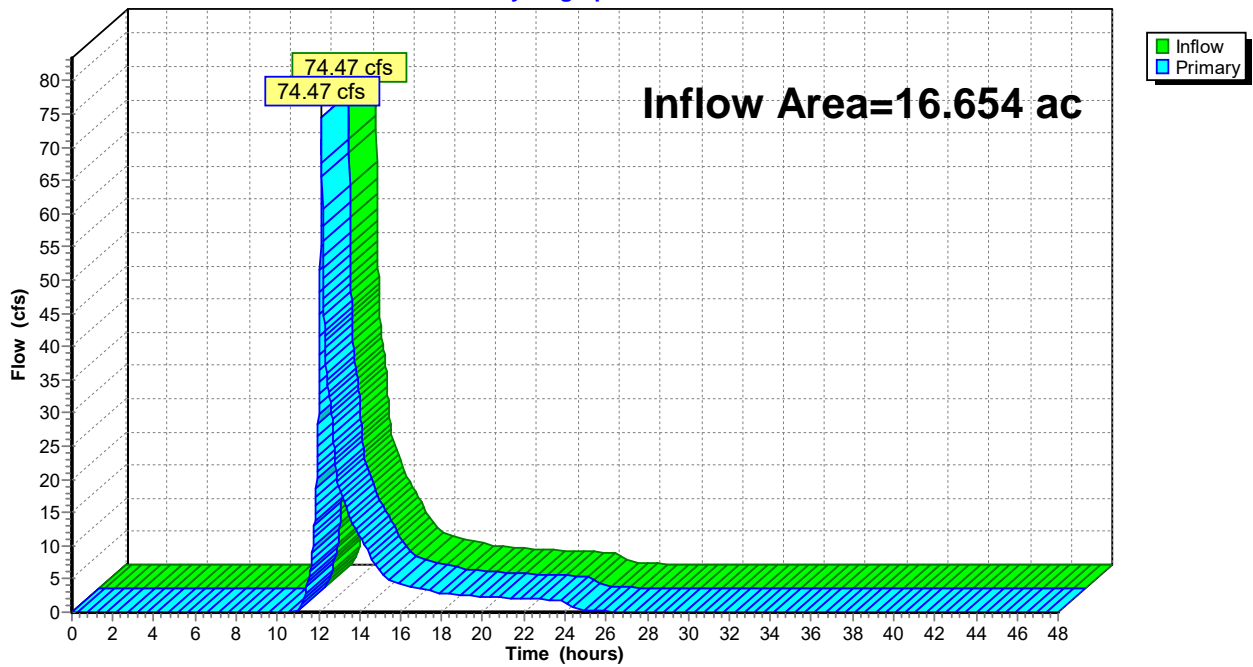
Summary for Link 32L: DP-4

Inflow Area = 16.654 ac, 29.61% Impervious, Inflow Depth = 5.52" for 500-Year event
Inflow = 74.47 cfs @ 12.15 hrs, Volume= 7.659 af
Primary = 74.47 cfs @ 12.15 hrs, Volume= 7.659 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 32L: DP-4

Hydrograph



Hydrograph for Link 32L: DP-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.02	0.00	0.02
0.50	0.00	0.00	0.00	29.50	0.01	0.00	0.01
1.00	0.00	0.00	0.00	30.00	0.01	0.00	0.01
1.50	0.00	0.00	0.00	30.50	0.01	0.00	0.01
2.00	0.00	0.00	0.00	31.00	0.01	0.00	0.01
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
11.00	0.32	0.00	0.32	40.00	0.00	0.00	0.00
11.50	4.76	0.00	4.76	40.50	0.00	0.00	0.00
12.00	29.87	0.00	29.87	41.00	0.00	0.00	0.00
12.50	32.83	0.00	32.83	41.50	0.00	0.00	0.00
13.00	18.94	0.00	18.94	42.00	0.00	0.00	0.00
13.50	14.77	0.00	14.77	42.50	0.00	0.00	0.00
14.00	11.47	0.00	11.47	43.00	0.00	0.00	0.00
14.50	8.69	0.00	8.69	43.50	0.00	0.00	0.00
15.00	6.10	0.00	6.10	44.00	0.00	0.00	0.00
15.50	4.80	0.00	4.80	44.50	0.00	0.00	0.00
16.00	4.23	0.00	4.23	45.00	0.00	0.00	0.00
16.50	3.83	0.00	3.83	45.50	0.00	0.00	0.00
17.00	3.50	0.00	3.50	46.00	0.00	0.00	0.00
17.50	3.18	0.00	3.18	46.50	0.00	0.00	0.00
18.00	2.87	0.00	2.87	47.00	0.00	0.00	0.00
18.50	2.65	0.00	2.65	47.50	0.00	0.00	0.00
19.00	2.53	0.00	2.53	48.00	0.00	0.00	0.00
19.50	2.45	0.00	2.45				
20.00	2.37	0.00	2.37				
20.50	2.29	0.00	2.29				
21.00	2.21	0.00	2.21				
21.50	2.13	0.00	2.13				
22.00	2.06	0.00	2.06				
22.50	1.98	0.00	1.98				
23.00	1.90	0.00	1.90				
23.50	1.82	0.00	1.82				
24.00	1.74	0.00	1.74				
24.50	0.55	0.00	0.55				
25.00	0.29	0.00	0.29				
25.50	0.19	0.00	0.19				
26.00	0.13	0.00	0.13				
26.50	0.10	0.00	0.10				
27.00	0.07	0.00	0.07				
27.50	0.05	0.00	0.05				
28.00	0.04	0.00	0.04				
28.50	0.03	0.00	0.03				

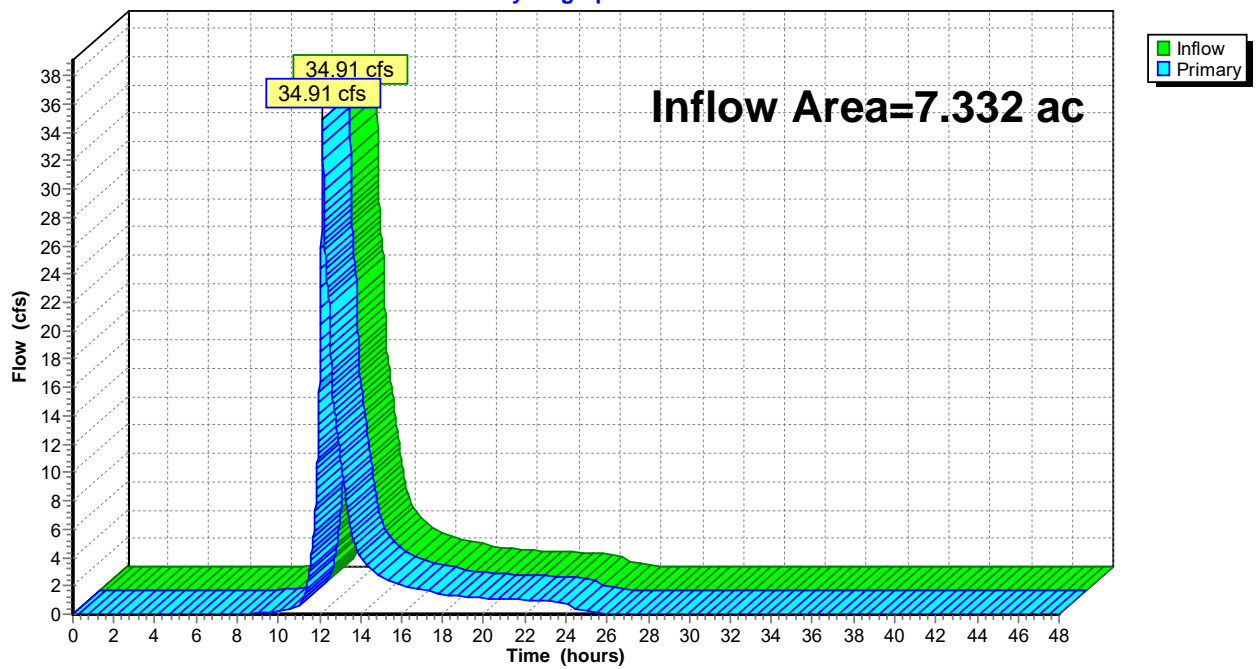
Summary for Link PDP5: PDP5

Inflow Area = 7.332 ac, 38.34% Impervious, Inflow Depth = 6.43" for 500-Year event
Inflow = 34.91 cfs @ 12.15 hrs, Volume= 3.931 af
Primary = 34.91 cfs @ 12.15 hrs, Volume= 3.931 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link PDP5: PDP5

Hydrograph



Hydrograph for Link PDP5: PDP5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	29.00	0.01	0.00	0.01
0.50	0.00	0.00	0.00	29.50	0.01	0.00	0.01
1.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
8.50	0.03	0.00	0.03	37.50	0.00	0.00	0.00
9.00	0.07	0.00	0.07	38.00	0.00	0.00	0.00
9.50	0.13	0.00	0.13	38.50	0.00	0.00	0.00
10.00	0.22	0.00	0.22	39.00	0.00	0.00	0.00
10.50	0.33	0.00	0.33	39.50	0.00	0.00	0.00
11.00	0.63	0.00	0.63	40.00	0.00	0.00	0.00
11.50	3.02	0.00	3.02	40.50	0.00	0.00	0.00
12.00	16.41	0.00	16.41	41.00	0.00	0.00	0.00
12.50	22.04	0.00	22.04	41.50	0.00	0.00	0.00
13.00	11.32	0.00	11.32	42.00	0.00	0.00	0.00
13.50	6.14	0.00	6.14	42.50	0.00	0.00	0.00
14.00	3.99	0.00	3.99	43.00	0.00	0.00	0.00
14.50	3.20	0.00	3.20	43.50	0.00	0.00	0.00
15.00	2.63	0.00	2.63	44.00	0.00	0.00	0.00
15.50	2.24	0.00	2.24	44.50	0.00	0.00	0.00
16.00	2.03	0.00	2.03	45.00	0.00	0.00	0.00
16.50	1.86	0.00	1.86	45.50	0.00	0.00	0.00
17.00	1.71	0.00	1.71	46.00	0.00	0.00	0.00
17.50	1.56	0.00	1.56	46.50	0.00	0.00	0.00
18.00	1.41	0.00	1.41	47.00	0.00	0.00	0.00
18.50	1.30	0.00	1.30	47.50	0.00	0.00	0.00
19.00	1.24	0.00	1.24	48.00	0.00	0.00	0.00
19.50	1.19	0.00	1.19				
20.00	1.15	0.00	1.15				
20.50	1.11	0.00	1.11				
21.00	1.07	0.00	1.07				
21.50	1.04	0.00	1.04				
22.00	1.00	0.00	1.00				
22.50	0.96	0.00	0.96				
23.00	0.93	0.00	0.93				
23.50	0.89	0.00	0.89				
24.00	0.85	0.00	0.85				
24.50	0.34	0.00	0.34				
25.00	0.18	0.00	0.18				
25.50	0.09	0.00	0.09				
26.00	0.06	0.00	0.06				
26.50	0.04	0.00	0.04				
27.00	0.03	0.00	0.03				
27.50	0.02	0.00	0.02				
28.00	0.02	0.00	0.02				
28.50	0.01	0.00	0.01				

Appendix 6 | Green Infrastructure Worksheets

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff) No

Design Point: 1
 P= 1.40 inch Manually enter P, Total Area and Impervious Cover.

Breakdown of Subcatchments						
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Description
1	2.48	1.95	79%	0.76	9,549	1A -Bioretention
2	10.28	6.72	65%	0.64	33,348	1B -Infiltration Basin
3	2.58	2.01	78%	0.75	9,849	1C -Infiltration Basin
4	3.92	2.57	66%	0.64	12,751	1D+1E -Bioretention
5	5.76	4.10	71%	0.69	20,216	1F -Bioretention
6	10.60	9.57	90%	0.86	46,465	1G -Infiltration Basin
7	11.30	9.94	88%	0.84	48,335	1H -Infiltration Basin
8	5.40	3.65	68%	0.66	18,067	1i-Bioretention basin
9	5.40	3.65	68%	0.66	18,067	1J -Bioretention basin
10	0.61	0.00	0%	0.05	155	1K -Detention Basin
Subtotal (1-30)	112.46	51.91	46%	0.47	266,002	Subtotal 1
Total	112.46	51.91	46%	0.47	266,002	Initial WQv

6.11 af

Identify Runoff Reduction Techniques By Area			
Technique	Total Contributing	Contributing Impervious	Notes
	(Acre)	(Acre)	
Conservation of Natural Areas	0.00	0.00	<i>minimum 10,000 sf</i>
Riparian Buffers	0.00	0.00	<i>maximum contributing length 75 feet to 150 feet</i>
Filter Strips	0.00	0.00	
Tree Planting	0.00	0.00	<i>Up to 100 sf directly connected impervious area may be subtracted per tree</i>
Total	0.00	0.00	

Recalculate WQv after application of Area Reduction Techniques					
	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Runoff Coefficient Rv	WQv (ft ³)
"<<Initial WQv"	112.46	51.91	46%	0.47	266,002
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	112.46	51.91	46%	0.47	266,002
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	112.46	51.91	46%	0.47	266,002
WQv reduced by Area Reduction techniques					0

6.11 af
0.00 af

Total Water Quality Volume Calculation

$$WQv(\text{acre-feet}) = [(P)(Rv)(A)] / 12$$

Additional Subcatchments						
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Description
11	1.72	0.00	0%	0.05	437	PDA-2U-Unrouted
12	1.26	0.00	0%	0.05	320	PDA-3U-Unrouted
13	7.40	0.75	10%	0.14	5,311	PDA-4U-Unrouted
14	2.40	0.83	35%	0.36	4,406	PDA-4A-Bioretenion
15	6.86	3.36	49%	0.49	17,111	PDA-4B-Bioretenion
16	4.97	2.31	46%	0.47	11,828	PDA-5A-Bioretenion
17	2.37	0.50	21%	0.24	2,889	PDA-5U-Unrouted
18	27.15	0.00	0%	0.05	6,899	Wetlands / Undeveloped
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

Minimum RRv

Enter the Soils Data for the site		
Soil Group	Acres	S
A	47.51	55%
B	29.19	40%
C	0.00	30%
D	35.76	20%
Total Area	112.46	
Calculate the Minimum RRv		
S =	0.40	
Impervious =	51.91	<i>acre</i>
Precipitation	1.4	<i>in</i>
Rv	0.95	
Minimum RRv	100,190	ft³
	2.30	<i>af</i>

Infiltration Basin Worksheet

Design Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
2	10.28	6.72	0.65	0.64	33348.08	1.40	1B -Infiltration Basin
Enter Impervious Area Reduced by Disconnection of			65%	0.64	33,348	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³	
Drainage Area exceeds the maximum allowable unless soil infiltration rate exceeds 5 in/hr							
Pretreatment Techniques to Prevent Clogging							
Infiltration Rate			9.00	in/hour	Okay		
Pretreatment Sizing			100	% WQv	25% minimum; 50% if >2 in/hr 100% if >5in/hour		
Pretreatment Required			33,348	ft ³			
Pretreatment Provided			34,519	ft ³			
Pretreatment Techniques							
Size An Infiltration Basin							
Design Volume	33,348	ft ³	WQv				
Basal Area Required	11,701	ft ²	Infiltration practices shall be designed to exfiltrate the entire WQv through the floor of each practice.				
Basal Area Provided	12,150	ft ²					
Design Depth	2.85	ft					
Volume Provided	34,628	ft ³	Storage Volume provided in infiltration basin area (not including pretreatment).				
Determine Runoff Reduction							
RRv	31,165	ft ³	90% of the storage provided in the basin or WQv whichever is smaller				
Volume Treated	2,183	ft ³	This is the portion of the WQv that is not reduced/infiltrated				
Sizing v	OK	The infiltration basin must provide storage equal to or greater than the WQv of the contributing area.					

Infiltration Basin Worksheet

Design Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
3	2.58	2.01	0.78	0.75	9848.92	1.40	1C -Infiltration Basin
Enter Impervious Area Reduced by			78%	0.75	9,849	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³	
Pretreatment Techniques to Prevent Clogging							
Infiltration Rate			10.00	in/hour	Okay		
Pretreatment Sizing			100	% WQv	25% minimum; 50% if >2 in/hr 100% if >5in/hour		
Pretreatment Required			9,849	ft ³			
Pretreatment Provided			9,962	ft ³			
Pretreatment Techniques			Other				Forebay
Size An Infiltration Basin							
Design Volume	9,849	ft ³	WQv				
Basal Area Required	3,456	ft ²	<i>Infiltration practices shall be designed to exfiltrate the entire WQv through the floor of each practice.</i>				
Basal Area Provided	3,499	ft ²					
Design Depth	2.85	ft					
Volume Provided	9,972	ft ³	<i>Storage Volume provided in infiltration basin area (not including pretreatment.</i>				
Determine Runoff Reduction							
RRv	8,975	ft³	90% of the storage provided in the basin or WQv whichever is smaller				
Volume Treated	874	ft ³	<i>This is the portion of the WQv that is not reduced/infiltrated</i>				
Sizing v	OK		<i>The infiltration basin must provide storage equal to or greater than the WQv of the contributing area.</i>				

Infiltration Basin Worksheet

Design Point:	1							
Enter Site Data For Drainage Area to be Treated by Practice								
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description	
6	10.60	9.57	0.90	0.86	46464.73	1.40	1G -Infiltration Basin	
Enter Impervious Area Reduced by Disconnection of			90%	0.86	46,465	<<WQv after adjusting for Disconnected Rooftops		
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³		
Drainage Area exceeds the maximum allowable unless soil infiltration rate exceeds 5 in/hr								
Pretreatment Techniques to Prevent Clogging								
Infiltration Rate			7.00	in/hour	Okay			
Pretreatment Sizing			100	% WQv	25% minimum; 50% if >2 in/hr 100% if >5in/hour			
Pretreatment Required			46,465	ft ³				
Pretreatment Provided			46,929	ft ³				
Pretreatment Techniques			Other					
Size An Infiltration Basin								
Design Volume	46,465	ft ³	WQv					
Basal Area Required	13,870	ft ²	Infiltration practices shall be designed to exfiltrate the entire WQv through the floor of each practice.					
Basal Area Provided	13,924	ft ²						
Design Depth	3.35	ft						
Volume Provided	46,645	ft ³	Storage Volume provided in infiltration basin area (not including pretreatment).					
Determine Runoff Reduction								
RRv	41,981	ft³	90% of the storage provided in the basin or WQv whichever is smaller					
Volume Treated	4,484	ft ³	This is the portion of the WQv that is not reduced/infiltrated					
Sizing v	OK		The infiltration basin must provide storage equal to or greater than the WQv of the contributing area.					

Infiltration Basin Worksheet

Design Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
7	11.30	9.94	0.88	0.84	48334.90	1.40	1H-Infiltration Basin
Enter Impervious Area Reduced by Disconnection of			88%	0.84	48,335	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³	
Drainage Area exceeds the maximum allowable unless soil infiltration rate exceeds 5 in/hr							
Pretreatment Techniques to Prevent Clogging							
Infiltration Rate			7.00	in/hour	Okay		
Pretreatment Sizing			100	% WQv	25% minimum; 50% if >2 in/hr 100% if >5in/hour		
Pretreatment Required			48,335	ft ³			
Pretreatment Provided			48,336	ft ³			
Pretreatment techniques utilized			Other				
Size An Infiltration Basin							
Design Volume	48,335	ft ³	WQv				
Basal Area Required	20,568	ft ²	Infiltration practices shall be designed to exfiltrate the entire WQv through the floor of each practice.				
Basal Area Provided	20,873	ft ²					
Design Depth	2.35	ft					
Volume Provided	49,052	ft ³	Storage Volume provided in infiltration basin area (not including pretreatment).				
Determine Runoff Reduction							
RRv	44,146	ft³	90% of the storage provided in the basin or WQv whichever is smaller				
Volume Treated	4,189	ft ³	This is the portion of the WQv that is not reduced/infiltrated				
Sizing v	OK		The infiltration basin must provide storage equal to or greater than the WQv of the contributing area.				

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

$$Af = WQv * (df) / [k * (hf + df)(tf)]$$

- Af* Required Surface Area (ft²)
- WQv* Water Quality Volume (ft³)
- df* Depth of the Soil Medium (feet)
- hf* Average height of water above the practice head
- tf* The Design Time to Filter the Treatment
- k* The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: **Sand** - 3.5 ft/day (City of Austin 1988); **Peat** - 2.0 ft/day (Galli 1990); **Leaf Compost** - 8.7 ft/day (Claytor and Schueler, 1996); **Bioretention Soil** (0.5 ft/day (Claytor & Schueler, 1996)

Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
1	2.48	1.95	0.79	0.76	9549.08	1.40	1A -Bioretention
Enter Impervious Area Reduced by			79%	0.76	9,549	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³	
Soil Information							
Soil Group		D					
Soil Infiltration Rate		0.00	in/hour	Okay			
Using Underdrains?		Yes	Okay				
Calculate the Minimum Filter Area							
				Value	Units	Notes	
WQv				9,549	ft ³		
Enter Depth of Soil Media			<i>df</i>	4	ft	2.5-4 ft	
Enter Hydraulic Conductivity			<i>k</i>	0.5	ft/day		
Enter Average Height of Ponding			<i>hf</i>	0.5	ft	6 inches max.	
Enter Filter Time			<i>tf</i>	2	days		
Required Filter Area				Af	8488	ft²	
Determine Actual Bio-Retention Area							
Filter Width		9232	ft				
Filter Length		1	ft				
Filter Area		9232	ft ²				
Actual Volume Provided		10386	ft ³				
Determine Runoff Reduction							
Is the Bioretention contributing flow to another practice?				Select Practice			
RRv		4,154					
RRv applied		4,154	ft³	This is 40% of the storage provided or WQv whichever is less.			
Volume Treated		5,395	ft ³	This is the portion of the WQv that is not reduced in the practice.			
Volume Directed		0	ft ³	This volume is directed another practice			
Sizing v		OK	Check to be sure Area provided ≥ Af				

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

$$Af = WQv * (df) / [k * (hf + df)(tf)]$$

- Af* Required Surface Area (ft²)
- WQv* Water Quality Volume (ft³)
- df* Depth of the Soil Medium (feet)
- hf* Average height of water above the practice head
- tf* Volume Through the Filter Media (days)
- k* The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: **Sand** - 3.5 ft/day (City of Austin 1988); **Peat** - 2.0 ft/day (Galli 1990); **Leaf Compost** - 8.7 ft/day (Claytor and Schueler, 1996); **Bioretention Soil** (0.5 ft/day (Claytor & Schueler, 1996)

Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
4	3.92	2.57	0.66	0.64	12750.74	1.40	1D+1E -Bioretention
Enter Impervious Area Reduced by Disconnection of			66%	0.64	12,751	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³	
Soil Information							
Soil Group	D						
Soil Infiltration Rate	0.00	in/hour	Okay				
Using Underdrains?	Yes	Okay					
Calculate the Minimum Filter Area							
				Value	Units	Notes	
WQv				12,751	ft ³		
Enter Depth of Soil Media		<i>df</i>	2.5	ft	2.5-4 ft		
Enter Hydraulic Conductivity		<i>k</i>	0.5	ft/day			
Enter Average Height of Ponding		<i>hf</i>	0.5	ft	6 inches max.		
Enter Filter Time		<i>tf</i>	2	days			
Required Filter Area		Af	10626	ft²			
Determine Actual Bio-Retention Area							
Filter Width	14016	ft					
Filter Length	1	ft					
Filter Area	14016	ft ²					
Actual Volume Provided	16819	ft ³					
Determine Runoff Reduction							
Is the Bioretention contributing flow to another practice?				Select Practice			
RRv	6,728						
RRv applied	6,728	ft³	This is 40% of the storage provided or WQv whichever is less.				
Volume Treated	6,023	ft ³	This is the portion of the WQv that is not reduced in the practice.				
Volume Directed	0	ft ³	This volume is directed another practice				
Sizing v	OK	Check to be sure Area provided ≥ Af					

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

$$Af = WQv * (df) / [k * (hf + df)(tf)]$$

- Af* Required Surface Area (ft²)
- WQv* Water Quality Volume (ft³)
- df* Depth of the Soil Medium (feet)
- hf* Average height of water above the practice head
- tf* Volume Through the Filter Media (days)
- k* The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: **Sand** - 3.5 ft/day (City of Austin 1988); **Peat** - 2.0 ft/day (Galli 1990); **Leaf Compost** - 8.7 ft/day (Claytor and Schueler, 1996); **Bioretention Soil** (0.5 ft/day (Claytor & Schueler, 1996)

Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
5	5.76	4.10	0.71	0.69	20216.20	1.40	1F -Bioretention
Enter Impervious Area Reduced by			71%	0.69	20,216	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³	
Soil Information							
Soil Group	A						
Soil Infiltration Rate			in/hour				
Using Underdrains?	Yes		Okay				
Calculate the Minimum Filter Area							
				Value	Units	Notes	
WQv				20,216	ft ³		
Enter Depth of Soil Media			<i>df</i>	2.5	ft	2.5-4 ft	
Enter Hydraulic Conductivity			<i>k</i>	0.5	ft/day		
Enter Average Height of Ponding			<i>hf</i>	0.25	ft	6 inches max.	
Enter Filter Time			<i>tf</i>	2	days		
Required Filter Area			Af	18378	ft²		
Determine Actual Bio-Retention Area							
Filter Width	18594	ft					
Filter Length	1	ft					
Filter Area	18594	ft ²					
Actual Volume Provided	20453	ft ³					
Determine Runoff Reduction							
Is the Bioretention contributing flow to another practice?	No	Select Practice	N/A				
RRv	8,181						
RRv applied	8,181	ft³	This is 40% of the storage provided or WQv whichever is less.				
Volume Treated	12,035	ft ³	This is the portion of the WQv that is not reduced in the practice.				
Volume Directed	0	ft ³	This volume is directed another practice				
Sizing v	OK	Check to be sure Area provided ≥ Af					

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

$$Af = WQv * (df) / [k * (hf + df)(tf)]$$

- | | | |
|------------|---|--|
| <i>Af</i> | Required Surface Area (ft ²) | The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: |
| <i>WQv</i> | Water Quality Volume (ft ³) | Sand - 3.5 ft/day (City of Austin 1988); Peat - 2.0 ft/day (Galli 1990); |
| <i>df</i> | Depth of the Soil Medium (feet) | Leaf Compost - 8.7 ft/day (Claytor and Schueler, 1996); Bioretention |
| <i>hf</i> | Average height of water above the practice head | Soil (0.5 ft/day (Claytor & Schueler, 1996) |
| <i>tf</i> | Volume Through the Filter Media (days) | |

Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
8	5.40	3.65	0.68	0.66	18066.51	1.40	1i-Bioretention basin
Enter Impervious Area Reduced by			68%	0.66	18,067	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³	
Soil Information							
Soil Group	A						
Soil Infiltration Rate			in/hour				
Using Underdrains?	Yes	Okay					
Calculate the Minimum Filter Area							
				Value	Units	Notes	
WQv				18,067	ft ³		
Enter Depth of Soil Media			<i>df</i>	2.5	ft	2.5-4 ft	
Enter Hydraulic Conductivity			<i>k</i>	0.5	ft/day		
Enter Average Height of Ponding			<i>hf</i>	0.5	ft	6 inches max.	
Enter Filter Time			<i>tf</i>	2	days		
Required Filter Area			Af	15055	ft²		
Determine Actual Bio-Retention Area							
Filter Width	22680	ft					
Filter Length	1	ft					
Filter Area	22680	ft ²					
Actual Volume Provided	27216	ft ³					
Determine Runoff Reduction							
Is the Bioretention contributing flow to another practice?			Select Practice				
RRv	10,886						
RRv applied	10,886	ft³	This is 40% of the storage provided or WQv whichever is less.				
Volume Treated	7,180	ft ³	This is the portion of the WQv that is not reduced in the practice.				
Volume Directed	0	ft ³	This volume is directed another practice				
Sizing v	OK	Check to be sure Area provided ≥ Af					

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

$$Af = WQv * (df) / [k * (hf + df)(tf)]$$

<p><i>Af</i> Required Surface Area (ft²)</p> <p><i>WQv</i> Water Quality Volume (ft³)</p> <p><i>df</i> Depth of the Soil Medium (feet)</p> <p><i>hf</i> Average height of water above the practice head</p> <p><i>tf</i> Volume Through the Filter Media (days)</p>	<p><i>k</i> The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: Sand - 3.5 ft/day (City of Austin 1988); Peat - 2.0 ft/day (Galli 1990); Leaf Compost - 8.7 ft/day (Claytor and Schueler, 1996); Bioretention Soil (0.5 ft/day (Claytor & Schueler, 1996)</p>
---	--

Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
9	5.40	3.65	0.68	0.66	18066.51	1.40	1J -Bioretention basin
Enter Impervious Area Reduced by			68%	0.66	18,067	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³	
Soil Information							
Soil Group	D						
Soil Infiltration Rate	0.00	in/hour	Okay				
Using Underdrains?	Yes	Okay					
Calculate the Minimum Filter Area							
				Value	Units	Notes	
WQv				18,067	ft ³		
Enter Depth of Soil Media			<i>df</i>	2.5	ft	2.5-4 ft	
Enter Hydraulic Conductivity			<i>k</i>	0.5	ft/day		
Enter Average Height of Ponding			<i>hf</i>	0.5	ft	6 inches max.	
Enter Filter Time			<i>tf</i>	2	days		
Required Filter Area				Af	15055	ft²	
Determine Actual Bio-Retention Area							
Filter Width	24200	ft					
Filter Length	1	ft					
Filter Area	24200	ft ²					
Actual Volume Provided	29040	ft ³					
Determine Runoff Reduction							
Is the Bioretention contributing flow to another practice?				Select Practice			
RRv	11,616						
RRv applied	11,616	ft³	<i>This is 40% of the storage provided or WQv whichever is less.</i>				
Volume Treated	6,451	ft ³	<i>This is the portion of the WQv that is not reduced in the practice.</i>				
Volume Directed	0	ft ³	This volume is directed another practice				
Sizing v	OK	<i>Check to be sure Area provided ≥ Af</i>					

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

$$Af = WQv * (df) / [k * (hf + df)(tf)]$$

<i>Af</i>	Required Surface Area (ft ²)	The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: Sand - 3.5 ft/day (City of Austin 1988); Peat - 2.0 ft/day (Galli 1990); Leaf Compost - 8.7 ft/day (Claytor and Schueler, 1996); Bioretention Soil (0.5 ft/day (Claytor & Schueler, 1996)
<i>WQv</i>	Water Quality Volume (ft ³)	
<i>df</i>	Depth of the Soil Medium (feet)	
<i>hf</i>	Average height of water above the practice head	
<i>tf</i>	Volume Through the Filter Media (days)	

Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
14	2.40	0.83	0.35	0.36	4406.09	1.40	PDA-4A-Bioretention
Enter Impervious Area Reduced by			35%	0.36	4,406	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³	
Soil Information							
Soil Group	D						
Soil Infiltration Rate			in/hour				
Using Underdrains?	Yes		Okay				
Calculate the Minimum Filter Area							
				Value	Units	Notes	
WQv				4,406	ft ³		
Enter Depth of Soil Media			<i>df</i>	2.5	ft	2.5-4 ft	
Enter Hydraulic Conductivity			<i>k</i>	0.5	ft/day		
Enter Average Height of Ponding			<i>hf</i>	0.5	ft	6 inches max.	
Enter Filter Time			<i>tf</i>	2	days		
Required Filter Area			Af	3672	ft²		
Determine Actual Bio-Retention Area							
Filter Width	4171	ft					
Filter Length	1	ft					
Filter Area	4171	ft ²					
Actual Volume Provided	5005	ft ³					
Determine Runoff Reduction							
Is the Bioretention contributing flow to another practice?				Select Practice			
RRv	2,002						
RRv applied	2,002	ft³	This is 40% of the storage provided or WQv whichever is less.				
Volume Treated	2,404	ft ³	This is the portion of the WQv that is not reduced in the practice.				
Volume Directed	0	ft ³	This volume is directed another practice				
Sizing v	OK	Check to be sure Area provided ≥ Af					

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

$$Af = WQv * (df) / [k * (hf + df)(tf)]$$

<p><i>Af</i> Required Surface Area (ft²)</p> <p><i>WQv</i> Water Quality Volume (ft³)</p> <p><i>df</i> Depth of the Soil Medium (feet)</p> <p><i>hf</i> Average height of water above the practice head</p> <p><i>tf</i> Volume Through the Filter Media (days)</p>	<p><i>k</i> The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: Sand - 3.5 ft/day (City of Austin 1988); Peat - 2.0 ft/day (Galli 1990); Leaf Compost - 8.7 ft/day (Claytor and Schueler, 1996); Bioretention Soil (0.5 ft/day (Claytor & Schueler, 1996)</p>
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Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
15	6.86	3.36	0.49	0.49	17111.09	1.40	PDA-4B-Bioretention
Enter Impervious Area Reduced by Disconnection of			49%	0.49	17,111	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³	
Soil Information							
Soil Group		D					
Soil Infiltration Rate			in/hour				
Using Underdrains?		Yes	Okay				
Calculate the Minimum Filter Area							
				Value	Units	Notes	
WQv				17,111	ft ³		
Enter Depth of Soil Media			<i>df</i>	2.5	ft	2.5-4 ft	
Enter Hydraulic Conductivity			<i>k</i>	0.5	ft/day		
Enter Average Height of Ponding			<i>hf</i>	0.5	ft	6 inches max.	
Enter Filter Time			<i>tf</i>	2	days		
Required Filter Area			Af	14259	ft²		
Determine Actual Bio-Retention Area							
Filter Width		16541	ft				
Filter Length		1	ft				
Filter Area		16541	ft ²				
Actual Volume Provided		19849	ft ³				
Determine Runoff Reduction							
Is the Bioretention contributing flow to another practice?			No	Select Practice	N/A		
RRv		7,940					
RRv applied		7,940	ft³	This is 40% of the storage provided or WQv whichever is less.			
Volume Treated		9,171	ft ³	This is the portion of the WQv that is not reduced in the practice.			
Volume Directed		0	ft ³	This volume is directed another practice			
Sizing v		OK	Check to be sure Area provided ≥ Af				

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

$$Af = WQv * (df) / [k * (hf + df)(tf)]$$

<i>Af</i>	Required Surface Area (ft ²)	The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: Sand - 3.5 ft/day (City of Austin 1988); Peat - 2.0 ft/day (Galli 1990); Leaf Compost - 8.7 ft/day (Claytor and Schueler, 1996); Bioretention Soil (0.5 ft/day (Claytor & Schueler, 1996)
<i>WQv</i>	Water Quality Volume (ft ³)	
<i>df</i>	Depth of the Soil Medium (feet)	
<i>hf</i>	Average height of water above the practice head	
<i>tf</i>	Volume Through the Filter Media (days)	

Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft ³)	Precipitation (in)	Description
16	4.97	2.31	0.46	0.47	11828.36	1.40	PDA-5A-Bioretention
Enter Impervious Area Reduced by			46%	0.47	11,828	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.						ft ³	
Soil Information							
Soil Group	A						
Soil Infiltration Rate			in/hour				
Using Underdrains?	Yes		Okay				
Calculate the Minimum Filter Area							
				Value	Units	Notes	
WQv				11,828	ft ³		
Enter Depth of Soil Media				<i>df</i>	2.5	ft	2.5-4 ft
Enter Hydraulic Conductivity				<i>k</i>	0.5	ft/day	
Enter Average Height of Ponding				<i>hf</i>	0.25	ft	6 inches max.
Enter Filter Time				<i>tf</i>	2	days	
Required Filter Area				Af	10753	ft²	
Determine Actual Bio-Retention Area							
Filter Width	1	ft					
Filter Length	11465	ft					
Filter Area	11465	ft ²					
Actual Volume Provided	12612	ft ³					
Determine Runoff Reduction							
Is the Bioretention contributing flow to another practice?	No	Select Practice					
RRv	5,045						
RRv applied	5,045	ft³	This is 40% of the storage provided or WQv whichever is less.				
Volume Treated	6,784	ft ³	This is the portion of the WQv that is not reduced in the practice.				
Volume Directed	0	ft ³	This volume is directed another practice				
Sizing v	OK	Check to be sure Area provided ≥ Af					

Appendix 7 | Notice of Intent (NOI)

Appendix 8 | MS4 SWPPP Acceptance Form



Department of
Environmental
Conservation

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit
*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information

1. Owner/Operator Name:

2. Contact Person:

3. Street Address:

4. City/State/Zip:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/State/Zip:

III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information

8. SWPPP Reviewed by:

9. Title/Position:

10. Date Final SWPPP Reviewed and Accepted:

IV. Regulated MS4 Information

11. Name of MS4:

12. MS4 SPDES Permit Identification Number: NYR20A

13. Contact Person:

14. Street Address:

15. City/State/Zip:

16. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

Appendix 9 | SPDES General Permit (GP-0-20-001)

Appendix 10 | Contractor, Owner, SWPPP Preparer Certification Forms

Appendix 11 | MTD Documentation



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Nonpoint Pollution Control

Division of Water Quality

401-02B

Post Office Box 420

Trenton, New Jersey 08625-0420

609-633-7021 Fax: 609-777-0432

http://www.state.nj.us/dep/dwq/bnpc_home.htm

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

CATHERINE R. MCCABE
Commissioner

May 18, 2020

Derek M. Berg
Director – Stormwater Regulatory Management - East
Contech Engineered Solutions LLC
71 US Route 1, Suite F
Scarborough, ME 04074

Re: MTD Lab Certification
Cascade Separator™
On-line Installation

TSS Removal Rate 50%

Dear Mr. Berg:

This revised certification letter supersedes the Department's prior certification dated October 1, 2019. This revision was completed to reflect Contech's enhanced fabrication capability to manufacture a smaller-size unit of its the Cascade Separator™ Manufactured Treatment Device (MTD), while still meeting the scaling methodology as agreed upon by the manufacturers' working group on September 19, 2016. Based on this modification, Table A-1 of the New Jersey Corporation for Advanced Technology (NJCAT) Verification report located at <http://www.njcat.org/uploads/newDocs/NJCATTechnologyVerificationFinal.pdf> has been revised to specify this smaller unit and associated maximum treatment flow rate. Table 1 below has been revised to reflect this same updated model size and flow rate.

The Stormwater Management rules under N.J.A.C. 7:8-5.5(b) and 5.7(c) 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). Contech Engineered Solutions, LLC (Contech) has requested an MTD Laboratory Certification for the Cascade Separator™ stormwater treatment system.

The project falls under the "Procedure for Obtaining Verification of a Stormwater Manufactured Treatment Device from New Jersey Corporation for Advance Technology" dated January 25,

2013. The applicable protocol is the “New Jersey Laboratory Testing Protocol to Assess Total Suspended Solids Removal by a Hydrodynamic Sedimentation Manufactured Treatment Device” dated January 25, 2013.

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 September 2019) for this device is published online at <http://www.njcat.org/verification-process/technology-verification-database.html>.

The NJDEP certifies the use of the Cascade Separator™ stormwater treatment system at a TSS removal rate of 50% 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.
2. The Cascade Separator™ shall be installed using the same configuration reviewed by NJCAT and shall be sized in accordance with the criteria specified in item 6 below.
3. This Cascade Separator™ 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 9.6 of the New Jersey Stormwater Best Management Practices (NJ Stormwater BMP) Manual, which can be found online at www.njstormwater.org.
5. The maintenance plan for a site using this device shall incorporate, at a minimum, the maintenance requirements for the Cascade Separator™. 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/Portals/0/Documents/Maintenance%20Guides/Cascade-Maintenance%20Guide.pdf?ver=2018-11-05-093254-300>, for any changes to the maintenance requirements.
6. Sizing Requirement:

The example below demonstrates the sizing procedure for the Cascade Separator™:

Example: A 0.25-acre impervious site is to be treated to 50% TSS removal using a Cascade Separator™. The impervious site runoff (Q) based on the New Jersey Water Quality Design Storm was determined to be 0.79 cfs.

Maximum Treatment Flow Rate (MTFR) Evaluation:

The site runoff (Q) was based on the following:

time of concentration = 10 minutes
 $i = 3.2$ in/hr (page 5-8, Fig. 5-3 of the NJ Stormwater BMP Manual)
 $c = 0.99$ (runoff coefficient for impervious)
 $Q = ciA = 0.99 \times 3.2 \times 0.25 = 0.79$ cfs

Given the site runoff is 0.79 cfs and based on Table A-1 below, the Cascade Separator™ Model CS-3 with an MTFR of 1.02 cfs would be the smallest model approved that could be used for this site to remove 50% of the TSS from the impervious area without exceeding the MTFR.

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 A-1 Cascade Separator™ Models and Associated MTFRs

Model	Manhole Diameter (ft)	MTFR (cfs)	50% Maximum Sediment Storage Area Volume (ft³)
CS-3	3	1.02	5.3
CS-4	4	1.80	9.4
CS-5	5	2.81	14.7
CS-6	6	4.05	21.2
CS-8	8	7.20	37.7
CS-10	10	11.3	58.9
CS-12	12	16.2	84.8

A detailed maintenance plan is mandatory for any project with a stormwater BMP subject to the Stormwater Management rules under N.J.A.C. 7:8. The plan must include all of the items identified in the Maintenance requirements section of the Stormwater Management rules under 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 Brian Salvo of my office at (609) 633-7021.

Sincerely,



Gabriel Mahon, Chief
 Bureau of Nonpoint Pollution Control

Appendix 12 | Construction Inspection Checklist

ATTACHMENT 1

Construction Stormwater Compliance Inspection Report

Project Name and Location:	Date:	Page 1 of 2
	Permit # (if any): NYR	
	Municipality:	County:
On-site Representative(s) and contact information:		Weather Conditions:
Name and Address of SPDES Permittee/Title/Phone/Fax Numbers: Contacted: Yes <input type="checkbox"/> No <input type="checkbox"/>		

INSPECTION CHECKLIST

SPDES Authority

Yes No N/A

1. Is a copy of the NOI posted at the construction site for public viewing?
2. Is an up-to-date copy of the signed SWPPP retained at the construction site?
3. Is a copy of the SPDES General Permit retained at the construction site?

Law, rule or permit citation

SWPPP Content

Yes No N/A

4. Does the SWPPP describe and identify the erosion & sediment control measures to be employed?
5. Does the SWPPP provide a maintenance schedule for the erosion & sediment control measures?
6. Does the SWPPP describe and identify the post-construction SW control measures to be employed?
7. Does the SWPPP identify the contractor(s) and subcontractor(s) responsible for each measure?
8. Does the SWPPP include all the necessary 'CONTRACTOR CERTIFICATION' statements?
9. Is the SWPPP signed/certified by the permittee?

Law, rule or permit citation

Recordkeeping

Yes No N/A

10. Are inspections performed as required by the permit (every 7 days and after 1/2" rain event)?
11. Are the site inspections performed by a qualified professional?
12. Are all required reports properly signed/certified?
13. Does the SWPPP include copies of the monthly/quarterly written summaries of compliance status?

Law, rule or permit citation

Visual Observations

Yes No N/A

14. Are all erosion and sediment control measures installed/constructed?
15. Are all erosion and sediment control measures maintained properly?
16. Have all disturbances of 5 acres or more been approved prior to the disturbance?
17. Are stabilization measures initiated in inactive areas?
18. Are permanent stormwater control measures implemented?
19. Was there a discharge into the receiving water on the day of inspection?
20. Are receiving waters free of there evidence of turbidity, sedimentation, or oil ? (If no , complete Page 2)

Law, rule or permit citation

Overall Inspection Rating: <input type="checkbox"/> Satisfactory <input type="checkbox"/> Marginal <input type="checkbox"/> Unsatisfactory	
Name/Agency of Lead Inspector:	Signature of Lead Inspector:
Names/Agencies of Other Inspectors:	

Water Quality Observations

Describe the discharge(s) [source(s), impact on receiving water(s), etc.] _____

Describe the quality of the receiving water(s) both upstream and downstream of the discharge _____

Describe any other water quality standards or permit violations _____

Additional Comments: _____

Photographs attached

Appendix 13 | Proposed NYSDEC Erosion Control Measures

GENERAL ENHANCED EROSION AND SEDIMENT CONTROL PLAN FOR LARGE PROJECTS
Jay Beaumont PE, Vice-Chairman of the Town of Montgomery Planning Board

Stormwater Pollution Prevention Plan

This Enhanced Erosion and Sediment Control Plan shall be incorporated into the project Stormwater Pollution Prevention Plan. Most of the recommended erosion and sediment control measures are presented in the NYS Standards and Specifications for Erosion and Sediment Control (Bluebook). The recommended measures are more “durable” and better able to withstand rainfall, runoff, and wind.

Five-Acre Disturbance Waiver

The Town of Montgomery Planning Board expects to require that the following measures be incorporated in the plans in connection with any waiver the Planning Board may elect to grant in this regard. The Town of Montgomery does not allow more than 18 acres to be disturbed at any one time. Eighteen acres is the maximum disturbance limit recommended by NYSDEC.

Site Soil Conditions

The Town of Montgomery has extremely silty soils. Many soil types appear to be almost entirely very small silt particles. The silt particles tend to remain suspended in water for long periods of time; making removal in sediment ponds marginally successful at best. In addition, the particles are so small that some of the particles pass through many sediment collection measures; such as hay/straw bales, terra tubes, riprap, jute mats, and vegetated areas. The particles that do not pass through must be removed periodically to prevent clogging of the measures. Furthermore, if the sediment is not removed, the measure may become filled, and sediment laden runoff water will be able to bypass the measure.

Enhanced Erosion and Sediment Control Measures

Intermediate Erosion and Sediment Control Plans

The applicant’s engineer should recognize that the fine silt soils on the site require extra erosion and sediment control measures to protect the streams, wetlands and floodplains downstream of the site.

The applicant’s engineer should prepare intermediate grading plans and erosion and sediment control plans with specifications for each phase of the earthmoving work on the project. The intermediate grading plans should address the amounts of rock and soil to be moved during the phase. In addition, the location of the material to be moved and the location of where the material will be placed should be outlined on site intermediate grading plans.

The intermediate grading plans should show the locations of the resulting stock piles, soil slopes, drainage ditches, slope diversion pipes, check dams, haul roads, sedimentation ponds, and other erosion and sediment control measures.

The erosion and sediment control measures should include:

- Apply slope protection measures within 2 days after earthmoving on a particular slope is complete.
- Install more numerous silt fences
- Install bonded fiber matrix hydraulically applied mulch as manufactured by Profile Products or approved equal (hay/straw mulch and unbonded hydraulically applied mulches are not acceptable) (See page 4.38 of the Bluebook)
- Perform equipment (cat) tracking or excavator bucket compaction for bare slopes to be protected. Slopes must be tracked from top of the slope to the bottom of the slope. (See page 4.56 of the Bluebook)
- Install flexible growth medium with seed, soil amendment, and fertilizer
- Install slope crest protection (perimeter dike/swale) measures to divert flow from going down the slope. (See page 3.36 of the Bluebook)
- Install pipe slope drains. (See page 3.37 of the Bluebook)
- Install reverse slope bench on the long slopes to convey water to a stable outlet. (See page 4.24 of the Bluebook)
- Install porous baffles for sediment ponds, because they will quiet the turbulence of the inflowing water. Information is available at the Planning Board Office.
- Install Geosynthetic Turf Reinforcement Mats available from Profile Products or approved equal on the embankments of sediment basins; immediately following construction. (See pages 5.19 to 5.41 of the Bluebook)
- Install check dams according to Bluebook specifications in all swales (See page 3.2 of Bluebook)
- Install Conveyor Belt Diversions as water bars as described in Technical Bulletin Conveyor Belt Diversion by Penn State University Center for Dirt and Gravel Roads
- Test soils on slopes to be revegetated to get characteristics for soil amendments. Soils testing to be performed by Profile Products or acceptable equal soils testing laboratory.
- Install Hydraulically-Applied Erosion Control Flexible Growth Medium with seed, soil amendments and fertilizer available from Profile Products or approved equal on final slopes. (See page 4.8 of the Bluebook)
- Install water skimmers connected to the outlet riser pipe in sedimentation ponds (See Appendix B of the Bluebook and attached diagrams)
- Install sediment filter bags on the downstream end of the outlet pipe. (See page 5.16 of the Bluebook)
- Design sedimentation pond to maximize the sediment residence time. (See pages 5.19 to 5.41 of the Bluebook)
- Address the disposal or storage of sediment cleaned from sediment control devices, sediment ponds, ditches, and drainage inlets.
- Stabilize roads with gravel
- Assign a dedicated and trained crew to maintain and repair erosion and sediment control measures
- The Town will hire a dedicated erosion and sediment control consultant to be on site or on call during all earthmoving activities and after all rain events. The cost of the consultant is to be borne by the applicant.
- Stop earthmoving work after a turbid discharge; meet with consultants and the building inspector or his designatee; develop a plan to fix the problems; fix the problems; get building inspector's or his designatee's approval to resume work; and resume work.

- There should be an acceptable security (i.e. Letter of Credit) to guaranty the work and to indemnify the Town from regulatory proceedings, lawsuits, legal fees, and any potential judgements.

Experiences at Other Construction Sites in Orange County

Other large construction sites in Orange County have silty soils. Lessons learned from those sites are presented below.

Sediment Problems

The sediment that leaves the ponds/control devices settles in the low wet areas; and then is agitated in the next storm making the discharge appear turbid even if it may not be coming off the site in that instance. Turbid water discharges must be inspected at the point of discharge from the site.

Sediment settles in culverts leading off-site, and it is resuspended in the water of subsequent rain events.

Large sites, which must obtain an exemption to disturb more than 5 acres, often have such large areas disturbed that it is very difficult to contain and prevent erosion and sediment laden runoff. In addition, the sheer volume of earth being moved dictates the need to install temporary sediment control measures in newly cut or filled areas.

There often is so much sediment in the runoff, that the check dams must be cleaned after each rain event.

A well designed and constructed sediment pond with: discharge thru skimmer, filter bag at end of skimmer, silt sock, silt fence, and hay bale still had discharge that was still cloudy/gray.

Cloudy/gray runoff water is common on the sites. Wetlands often have cloudy/gray ponding.

Many earthmoving contractors have not seen the NYS Standards and Specifications for Erosion and Sediment Control (Bluebook) about erosion and sediment control.

Road Sediment Problems

Construction access roads become extremely muddy and wet, with runoff forming eroded swales along the edges. Intermittent stabilization of construction roads using stone should be considered, regardless of the roads expected life span.

Many of the silt fences around the site become clogged and filled with silt; especially along roads. Maintenance is a constant battle.

Site Sediment Control Problems

Sites employ a crew of at least 2 full time people to go around the site and clean and repair silt fences, check dams, and other erosion control devices.

Slope Protection

Sites using hay/straw mulch and jute matting for temporary stabilization found that these products were not very durable or effective. Slopes washed out below jute matting, even after some grass had germinated and begun to grow. Hay/straw mulch is easily blown away or washed away. It has no mechanical properties to hold the soil in place.

Hydraulically-applied erosion control bonded fiber matrix products for both intermittent and final stabilization of open soil areas and slopes have shown very good results as opposed to hay/straw mulch and various mattings.

Slope Revegetation

The water from the sediment ponds may be used to water the grass seed and get it to grow faster.

Overland Flow

Pipes are used to convey overland flow if possible. Sheet flow picks up fines from soil. Pipes are used to change elevation where possible.

Sediment Ponds

Ponds fill with sediment quickly. It is often difficult to remove sediment, because pond sides are too deep and steep. In addition, there is nowhere to put the muck; as it would just end up washing back into the basin. Also, muck is difficult to transport; since it just sloshes out of the dump trucks. It might be possible to use vacuum excavation trucks to empty the ponds.

Ponds are difficult to maintain, because massive amounts of earth are being moved. Ponds must be moved often as the site is being filled. Intermittent erosion control plans are necessary. Often, plans only show existing and finished conditions with ponds in areas of 40 feet of fill or more.

Sediment Pond Skimmers

Silty sediment settles very slowly in sedimentation ponds. One very effective technique is to slowly decant the clear water off of the top of the sediment pond. Floating skimmers have been used on sediment ponds to remove the clear water.

Site experience has shown that floating skimmers were the only device to give a noticeable reduction in the turbidity of the discharge.

Floating skimmers are very expensive to buy, much cheaper and very easy to make themselves with PVC. See attached sketches.

Sediment Pond Porous Baffles

Water flowing into a sediment pond causes turbulence in the pond. Installing porous baffles across the pond quiets the turbulence and allows the sediment to settle faster.

Sediment Pond Design

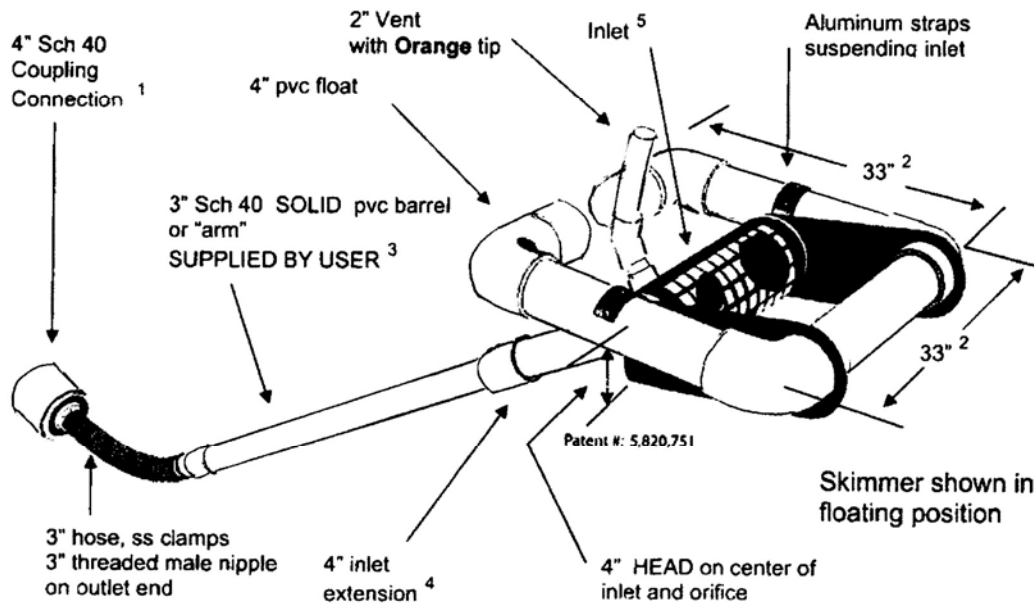
Often the temporary sediment ponds are mostly round, and not shaped with 2:1 length to width ratio as recommended by Bluebook. The 2:1 length to width ratio is needed to increase the residence time in the pond to give the sediment time to settle. Also, ponds often had sheet flow into pond from 75% of perimeter. The flow into the pond should be controlled channeled into one end with the outlet at the opposite end. Slope crest protection (perimeter dike/swale) measures should be used to divert flow from going down the slope.

Topsoil

Sites have excess topsoil from stripping entire site. Topsoil will not be used in new building or parking areas, therefore topsoil must be exported if they cannot find a place to dump it on site.

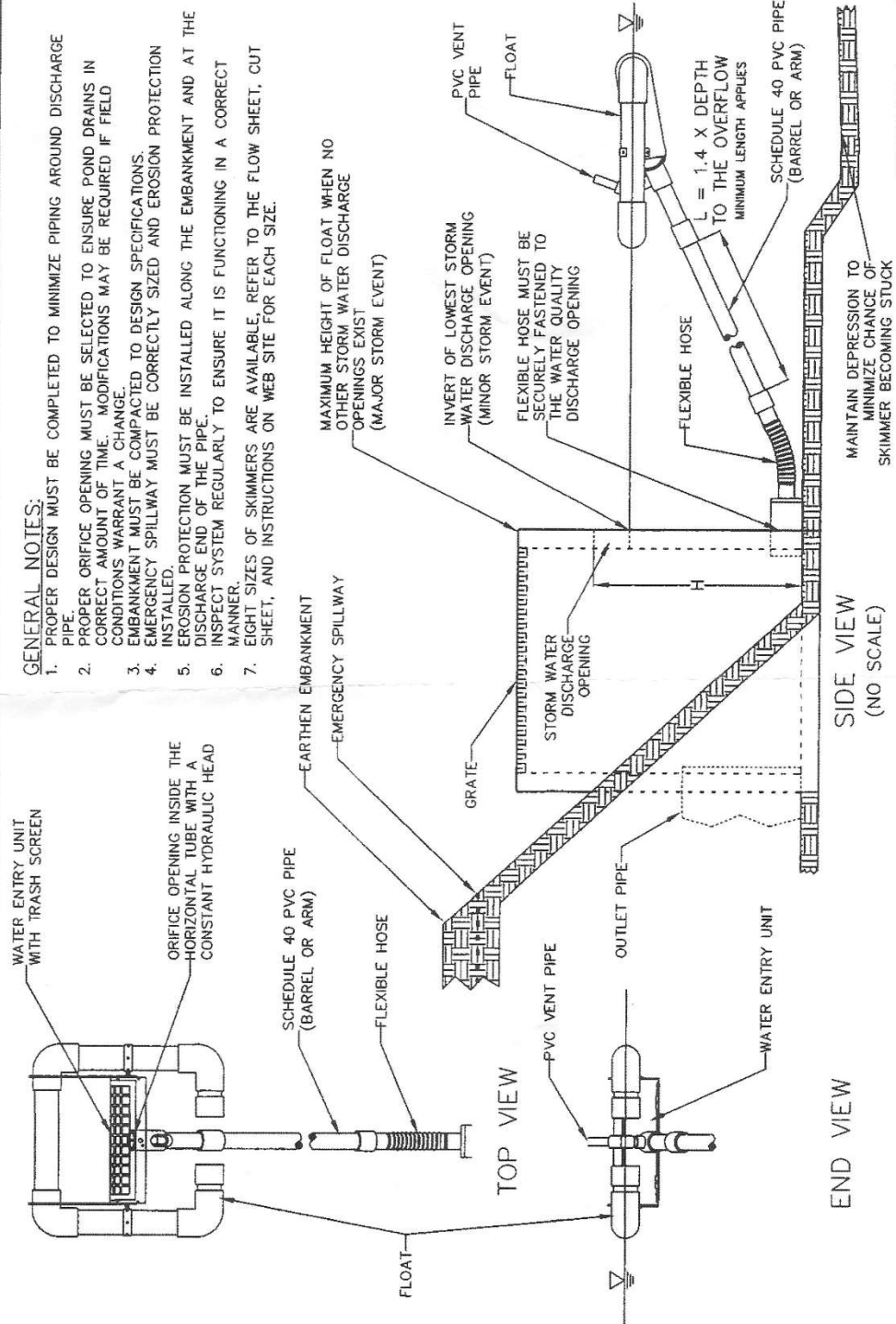
4" Faircloth Skimmer® Surface Drain Cut Sheet

J. W. Faircloth & Son, Inc.
www.FairclothSkimmer.com



1. Coupling can be removed and hose attached to outlet using the threaded 3" nipple. Typical methods used: on a metal structure a steel stubout welded on the side at the bottom with a 3" threaded coupling or reducers; on a concrete structure with a hole or orifice at the bottom, use a steel plate with a hole cut in it and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant. It is possible to grout a 4" pvc pipe in a hole in the concrete to connect the skimmer but this is less secure than other methods.
2. Dimensions are approximate, not intended as plans for construction.
3. Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 8' so the inlet can be pulled to the side for maintenance. If more than 10' long weight may have to be added to inlet to counter the increased buoyancy.
4. Inlet tapers down from 4" maximum inlet to a 3" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The inlet orifice can be reduced using the plug and cutter provided to control the outflow rate.
5. Inlet is 8" pipe between the straps with slots cut in the inlet and aluminum screen door (smaller than shown in illustration) for access to the 4" inlet and orifice inside.
6. **Capacity** 20,109 cubic feet per day maximum with 4" inlet and 4" head. Inlet can be reduced by installing a smaller orifice using the plug and cutter provided to adjust flow rate for the particular basin volume and drawdown time required.
7. Shipped assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plug and attaches to outlet pipe or structure. Includes flexible hose, rope, orifice cutter, etc.

- GENERAL NOTES:**
1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
 2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
 3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
 4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
 5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
 6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
 7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE. REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.



DRAWN BY T. R. EVANS 10/10
 J. W. FAIRCLOTH & SON INC
 WWW.FAIRCLOTHSKIMMER.COM
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 FAX: (919) 732-1266
 EMAIL: WARREN@FAIRCLOTHSKIMMER.COM

FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH OUTLET STRUCTURE

STANDARD AND SPECIFICATIONS FOR SILT FENCE



Definition & Scope

A **temporary** barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil by temporarily ponding the sediment laden runoff allowing settling to occur. The maximum period of use is limited by the ultraviolet stability of the fabric (approximately one year).

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope length and fence length will not exceed the limits shown in the Design Criteria for the specific type of silt fence used ; and
2. Maximum ponding depth of 1.5 feet behind the fence; and
3. Erosion would occur in the form of sheet erosion; and
4. There is no concentration of water flowing to the barrier; and
5. Soil conditions allow for proper keying of fabric, or other anchorage, to prevent blowouts.

Design Criteria

1. Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff.
2. All silt fences shall be placed as close to the disturbed area as possible, but at least 10 feet from the toe of a slope steeper than 3H:1V, to allow for maintenance and

roll down. The area beyond the fence must be undisturbed or stabilized.

3. The type of silt fence specified for each location on the plan shall not exceed the maximum slope length and maximum fence length requirements shown in the following table:

		Slope Length/Fence Length (ft.)		
Slope	Steepness	Standard	Reinforced	Super
<2%	< 50:1	300/1500	N/A	N/A
2-10%	50:1 to 10:1	125/1000	250/2000	300/2500
10-20%	10:1 to 5:1	100/750	150/1000	200/1000
20-33%	5:1 to 3:1	60/500	80/750	100/1000
33-50%	3:1 to 2:1	40/250	70/350	100/500
>50%	> 2:1	20/125	30/175	50/250

Standard Silt Fence (SF) is fabric rolls stapled to wooden stakes driven 16 inches in the ground.
Reinforced Silt Fence (RSF) is fabric placed against welded wire fabric with anchored steel posts driven 16 inches in the ground.
Super Silt Fence (SSF) is fabric placed against chain link fence as support backing with posts driven 3 feet in the ground.

4. Silt fence shall be removed as soon as the disturbed area has achieved final stabilization.

The silt fence shall be installed in accordance with the appropriate details. Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. Butt joints are not acceptable. A detail of the silt fence shall be shown on the plan. See Figure 5.30 on page 5.56 for Reinforced Silt Fence as an example of details to be provided.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	110	ASTM D 4632
Elongation at Failure (%)	20	ASTM D 4632
Mullen Burst Strength (PSI)	300	ASTM D 3786
Puncture Strength (lbs)	60	ASTM D 4833
Minimum Trapezoidal Tear Strength (lbs)	50	ASTM D 4533
Flow Through Rate (gal/min/sf)	25	ASTM D 4491
Equivalent Opening Size	40-80	US Std Sieve ASTM D 4751
Minimum UV Residual (%)	70	ASTM D 4355

Super Silt Fence

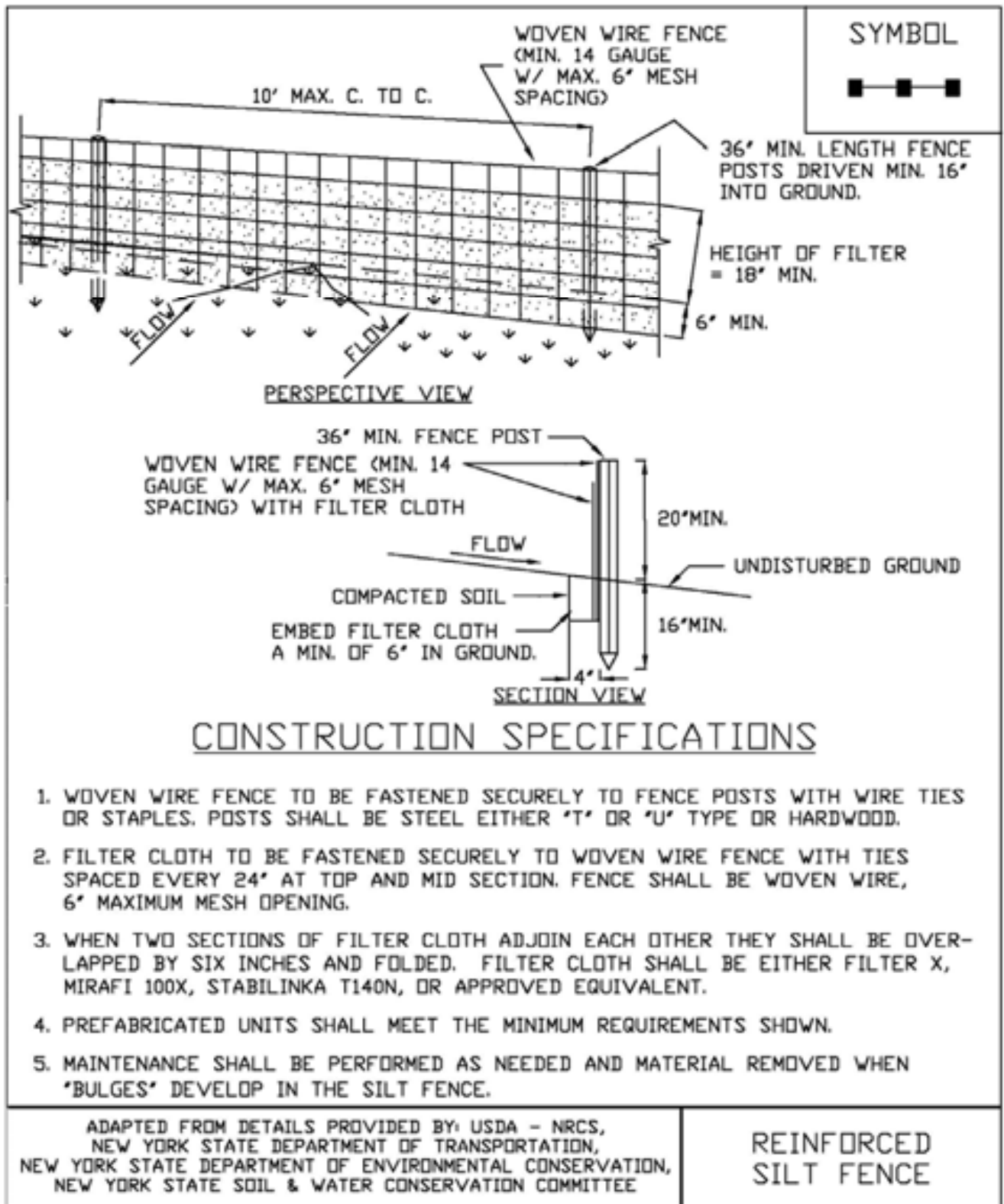


2. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.5 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per linear foot. Posts for super silt fence shall be standard chain link fence posts.
3. Wire Fence for reinforced silt fence: Wire fencing shall be a minimum 14 gage with a maximum 6 in. mesh opening, or as approved.
4. Prefabricated silt fence is acceptable as long as all material specifications are met.

Reinforced Silt Fence



**Figure 5.30
Reinforced Silt Fence**



STANDARD AND SPECIFICATIONS FOR STORM DRAIN INLET PROTECTION



Definition & Scope

A **temporary** barrier with low permeability, installed around inlets in the form of a fence, berm or excavation around an opening, detaining water and thereby reducing the sediment content of sediment laden water by settling thus preventing heavily sediment laden water from entering a storm drain system.

Conditions Where Practice Applies

This practice shall be used where the drainage area to an inlet is disturbed, it is not possible to temporarily divert the storm drain outfall into a trapping device, and watertight blocking of inlets is not advisable. **It is not to be used in place of sediment trapping devices.** This practice shall be used with an upstream buffer strip if placed at a storm drain inlet on a paved surface. It may be used in conjunction with storm drain diversion to help prevent siltation of pipes installed with low slope angle.

Types of Storm Drain Inlet Practices

There are five (5) specific types of storm drain inlet protection practices that vary according to their function, location, drainage area, and availability of materials:

- I. Excavated Drop Inlet Protection
- II. Fabric Drop Inlet Protection
- III. Stone & Block Drop Inlet Protection
- IV. Paved Surface Inlet Protection
- V. Manufactured Insert Inlet Protection

Design Criteria

Drainage Area – The drainage area for storm drain inlets shall not exceed one acre. Erosion control/temporary stabilization measures must be implemented on the disturbed

drainage area tributary to the inlet. The crest elevations of these practices shall provide storage and minimize bypass flow.

Type I – Excavated Drop Inlet Protection

This practice is generally used during initial overlot grading after the storm drain trunk line is installed.

Limit the drainage area to the inlet device to 1 acre. Excavated side slopes shall be no steeper than 2:1. The minimum depth shall be 1 foot and the maximum depth 2 feet as measured from the crest of the inlet structure. Shape the excavated basin to fit conditions with the longest dimension oriented toward the longest inflow area to provide maximum trap efficiency. The capacity of the excavated basin should be established to contain 900 cubic feet per acre of disturbed area. Weep holes, protected by fabric and stone, should be provided for draining the temporary pool.

Inspect and clean the excavated basin after every storm. Sediment should be removed when 50 percent of the storage volume is achieved. This material should be incorporated into the site in a stabilized manner.

Type II – Fabric Drop Inlet Protection



This practice is generally used during final elevation grading phases after the storm drain system is completed.

Limit the drainage area to 1 acre per inlet device. Land area slope immediately surrounding this device should not exceed 1 percent. The maximum height of the fabric above the inlet crest shall not exceed 1.5 feet unless reinforced.

The top of the barrier should be maintained to allow overflow to drop into the drop inlet and not bypass the inlet to

unprotected lower areas. Support stakes for fabric shall be a minimum of 3 feet long, spaced a maximum 3 feet apart. They should be driven close to the inlet so any overflow drops into the inlet and not on the unprotected soil. Improved performance and sediment storage volume can be obtained by excavating the area.

Inspect the fabric barrier after each rain event and make repairs as needed. Remove sediment from the pool area as necessary with care not to undercut or damage the filter fabric. Upon stabilization of the drainage area, remove all materials and unstable sediment and dispose of properly. Bring the adjacent area of the drop inlet to grade, smooth and compact and stabilize in the appropriate manner to the site.

Type III – Stone and Block Drop Inlet Protection

This practice is generally used during the initial and intermediate overlot grading of a construction site.

Limit the drainage area to 1 acre at the drop inlet. The stone barrier should have a minimum height of 1 foot and a maximum height of 2 feet. Do not use mortar. The height should be limited to prevent excess ponding and bypass flow.

Recess the first course of blocks at least 2 inches below the crest opening of the storm drain for lateral support. Subsequent courses can be supported laterally if needed by placing a 2x4 inch wood stud through the block openings perpendicular to the course. The bottom row should have a few blocks oriented so flow can drain through the block to dewater the basin area.

The stone should be placed just below the top of the blocks on slopes of 2:1 or flatter. Place hardware cloth of wire mesh with ½ inch openings over all block openings to hold stone in place.

As an optional design, the concrete blocks may be omitted and the entire structure constructed of stone, ringing the outlet (“doughnut”). The stone should be kept at a 3:1 slope toward the inlet to keep it from being washed into the inlet. A level area 1 foot wide and four inches below the crest will further prevent wash. Stone on the slope toward the inlet should be at least 3 inches in size for stability and 1 inch or smaller away from the inlet to control flow rate. The elevation of the top of the stone crest must be maintained 6 inches lower than the ground elevation down slope from the inlet to ensure that all storm flows pass over the stone into the storm drain and not past the structure. Temporary diking should be used as necessary to prevent bypass flow.

The barrier should be inspected after each rain event and repairs made where needed. Remove sediment as necessary to provide for accurate storage volume for subsequent rains. Upon stabilization of contributing drainage area, remove all

materials and any unstable soil and dispose of properly.

Bring the disturbed area to proper grade, smooth, compact and stabilize in a manner appropriate to the site.

Type IV – Paved Surface Inlet Protection



This practice is generally used after pavement construction has been done while final grading and soil stabilization is occurring. These practices should be used with upstream buffer strips in linear construction applications, and with temporary surface stabilization for overlot areas, to reduce the sediment load at the practice. This practice includes sand bags, compost filter socks, geo-tubes filled with ballast, and manufactured surface barriers. Pea gravel can also be used in conjunction with these practices to improve performance. When the inlet is not at a low point, and is offset from the pavement or gutter line, protection should be selected and installed so that flows are not diverted around the inlet.



The drainage area should be limited to 1 acre at the drain inlet. All practices will be placed at the inlet perimeter or beyond to maximize the flow capacity of the inlet. Practices shall be weighted, braced, tied, or otherwise anchored to prevent movement or shifting of location on paved surfaces. Traffic safety shall be integrated with the use of this practice. All practices should be marked with traffic safety cones as appropriate. Structure height shall not cause flooding or by-pass flow that would cause additional erosion.

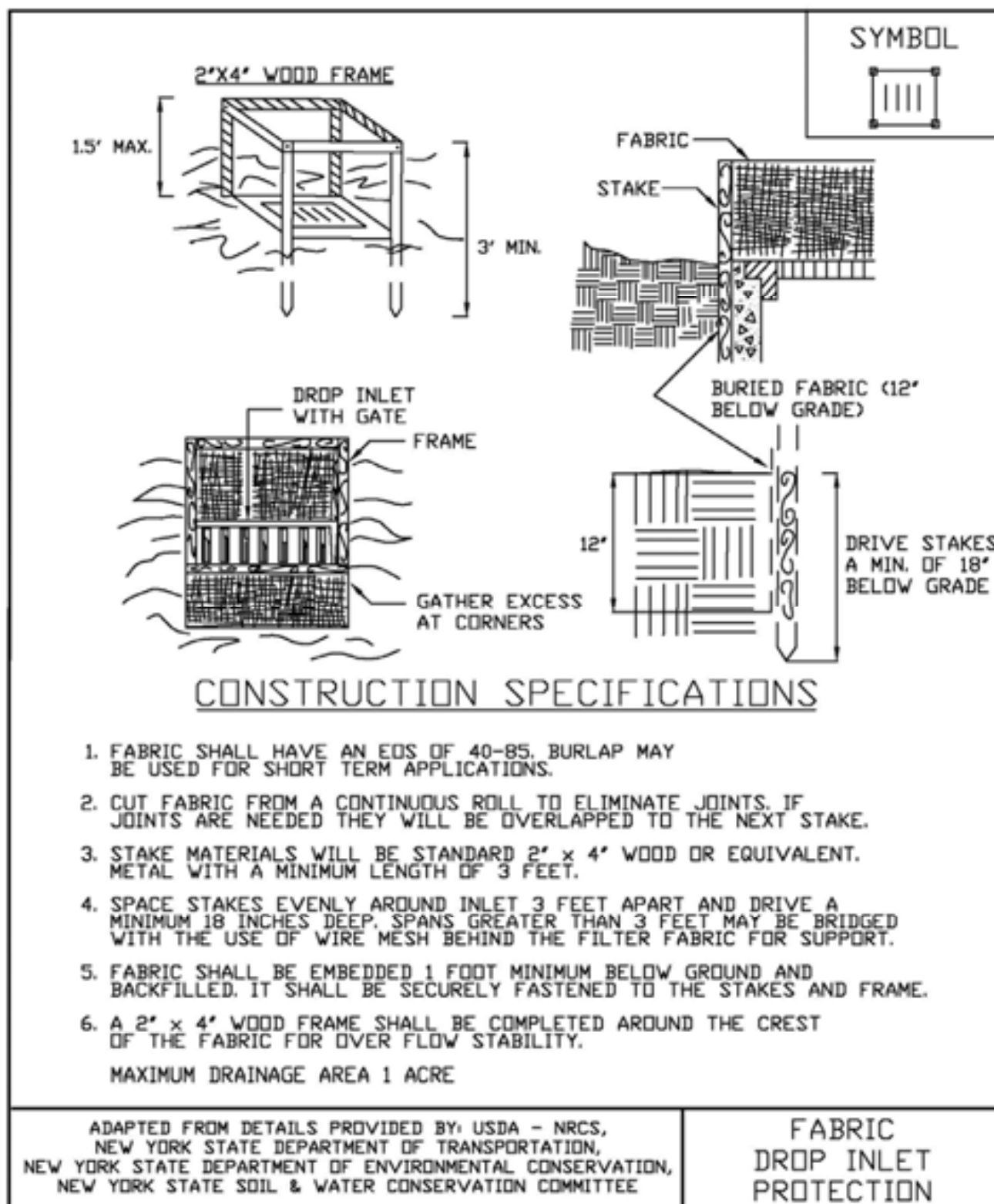
The structure should be inspected after every storm event. Any sediment should be removed and disposed of on the site. Any broken or damaged components should be replaced. Check all materials for proper anchorage and secure as necessary.

Type V - Manufactured Insert Inlet Protection



The drainage area shall be limited to 1 acre at the drain inlet. All inserts will be installed and anchored in accordance with the manufacturers recommendations and design details. The fabric portion of the structure will equal or exceed the performance standard for the silt fence fabric. The inserts will be installed to preserve a minimum of 50 percent of the open, unobstructed design flow area of the storm drain inlet opening to maintain capacity for storm events.

**Figure 5.32
Fabric Drop Inlet Protection**



STANDARD AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ACCESS



inert to commonly encountered chemicals, hydro-carbons, mildew, rot resistant, and conform to the fabric properties as shown:

Fabric Properties ³	Light Duty ¹ Roads Grade Sub- grade	Heavy Duty ² Haul Roads Rough Graded	Test Meth- od
Grab Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Burst Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 Modified
Equivalent	40-80	40-80	US Std Sieve
Opening Size			CW-02215
Aggregate Depth	6	10	-

Definition & Scope

A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area. The purpose of stabilized construction access is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

Conditions Where Practice Applies

A stabilized construction access shall be used at all points of construction ingress and egress.

Design Criteria

See Figure 2.1 on page 2.31 for details.

Aggregate Size: Use a matrix of 1-4 inch stone, or reclaimed or recycled concrete equivalent.

Thickness: Not less than six (6) inches.

Width: 12-foot minimum but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.

Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

Geotextile: To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.

Criteria for Geotextile: The geotextile shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be

¹Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and an occasional multi-axle truck. Acceptable materials are Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent.

²Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevira Spunbond 1135, Mirafi 600X, or equivalent.

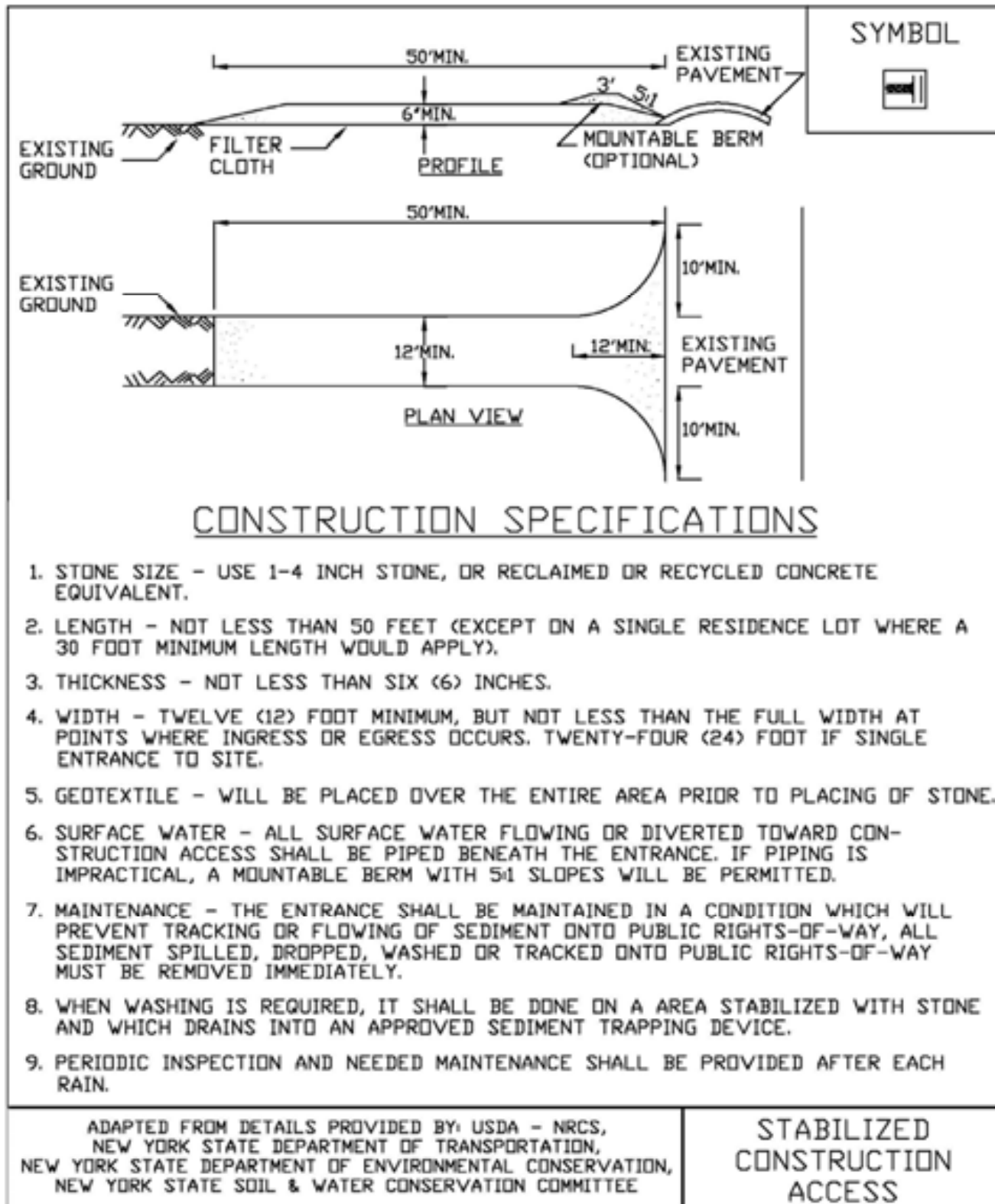
³Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.

Maintenance

The access shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately.

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

**Figure 2.1
Stabilized Construction Access**



STANDARD AND SPECIFICATIONS FOR CONCRETE TRUCK WASHOUT



Definition & Scope

A temporary excavated or above ground lined constructed pit where concrete truck mixers and equipment can be washed after their loads have been discharged, to prevent highly alkaline runoff from entering storm drainage systems or leaching into soil.

Conditions Where Practice Applies

Washout facilities shall be provided for every project where concrete will be poured or otherwise formed on the site. This facility will receive highly alkaline wash water from the cleaning of chutes, mixers, hoppers, vibrators, placing equipment, trowels, and screeds. Under no circumstances will wash water from these operations be allowed to infiltrate into the soil or enter surface waters.

Design Criteria

Capacity: The washout facility should be sized to contain solids, wash water, and rainfall and sized to allow for the evaporation of the wash water and rainfall. Wash water shall be estimated at 7 gallons per chute and 50 gallons per hopper of the concrete pump truck and/or discharging drum. The minimum size shall be 8 feet by 8 feet at the bottom and 2 feet deep. If excavated, the side slopes shall be 2 horizontal to 1 vertical.

Location: Locate the facility a minimum of 100 feet from drainage swales, storm drain inlets, wetlands, streams and other surface waters. Prevent surface water from entering the structure except for the access road. Provide appropriate access with a gravel access road sloped down to the structure. Signs shall be placed to direct drivers to the facility after their load is discharged.

Liner: All washout facilities will be lined to prevent

leaching of liquids into the ground. The liner shall be plastic sheeting with a minimum thickness of 10 mils with no holes or tears, and anchored beyond the top of the pit with an earthen berm, sand bags, stone, or other structural appurtenance except at the access point.

If pre-fabricated washouts are used they must ensure the capture and containment of the concrete wash and be sized based on the expected frequency of concrete pours. They shall be sited as noted in the location criteria.

Maintenance

- All concrete washout facilities shall be inspected daily. Damaged or leaking facilities shall be deactivated and repaired or replaced immediately. Excess rainwater that has accumulated over hardened concrete should be pumped to a stabilized area, such as a grass filter strip.
- Accumulated hardened material shall be removed when 75% of the storage capacity of the structure is filled. Any excess wash water shall be pumped into a containment vessel and properly disposed of off site.
- Dispose of the hardened material off-site in a construction/demolition landfill. On-site disposal may be allowed if this has been approved and accepted as part of the projects SWPPP. In that case, the material should be recycled as specified, or buried and covered with a minimum of 2 feet of clean compacted earthfill that is permanently stabilized to prevent erosion.
- The plastic liner shall be replaced with each cleaning of the washout facility.
- Inspect the project site frequently to ensure that no concrete discharges are taking place in non-designated areas.

STANDARD AND SPECIFICATIONS FOR SEDIMENT TRAP



Definition & Scope

A **temporary** sediment control device formed by excavation and/or embankment to intercept sediment-laden runoff and trap the sediment in order to protect drainageways, properties, and rights-of-way below the sediment trap from sedimentation.

Conditions Where Practice Applies

A sediment trap is usually installed in a drainageway, at a storm drain inlet, or other points of collection from a disturbed area for one construction season.

Sediment traps should be used to artificially break up the natural drainage area into smaller sections where a larger device (sediment basin) would be less effective.

Design Criteria

If the drainage area to the proposed trap location exceeds 5 acres, or the trap is in place beyond one construction season, or any of the additional design criteria presented here cannot be met, a full Sediment Basin must be used. See Standard and Specification for Sediment Basin on page 5.19.

Drainage Area

The maximum drainage area for all sediment traps shall be 5 acres.

Location

Sediment traps shall be located so that they can be installed prior to grading or filling in the drainage area they are to protect. Traps must **not be located any closer than 20 feet** from a proposed building foundation if the trap is to func-

tion during building construction. Locate traps to obtain maximum storage benefit from the terrain and for ease of cleanout and disposal of the trapped sediment.

Trap Size

The volume of a sediment trap as measured at the elevation of the crest of the outlet shall be at least 3,600 cubic feet per acre of drainage area. A minimum length to width ratio of 2:1 should be provided. The volume of a constructed trap shall be calculated using standard mathematical procedures. The volume of a natural sediment trap may be approximated by the equation: Volume (cu.ft.) = 0.4 x surface area (sq.ft.) x maximum depth (ft.).

Trap Cleanout

Sediment shall be removed and the trap restored to the original dimensions when the sediment has accumulated to $\frac{1}{2}$ of the design depth of traps I-II, and $\frac{1}{3}$ the depth for trap III. Sediment removed from the trap shall be deposited in a protected area and in such a manner that it will not erode.

Embankment

All earth embankments for sediment traps shall not exceed five (5) feet in height as measured at the low point of the original ground along the centerline of the embankment. Embankments shall have a minimum four (4) foot wide top and side slopes of 2:1 or flatter. The embankment shall be compacted by traversing with equipment while it is being constructed. The embankment shall be stabilized with seed and mulch as soon as it is completed.

The elevation of the top of any dike directing water to any sediment trap will equal or exceed the maximum height of the outlet structure along the entire length of the trap.

Excavation

All excavation operations shall be carried out in such a manner that erosion and water pollution shall be minimal. Excavated portions of sediment traps shall have 1:1 or flatter slopes.

Outlet

The outlet shall be designed, constructed, and maintained in such a manner that sediment does not leave the trap and that erosion at or below the outlet does not occur.

Sediment traps must outlet onto stabilized (preferable undisturbed) ground, into a watercourse, stabilized channel, or into a storm drain system. Distance between inlet and outlet should be maximized to the longest length practicable.

All traps must be seeded and mulched immediately after construction.

Trap Details Needed on Erosion and Sediment Control Plans

Each trap shall be delineated on the plans in such a manner that it will not be confused with any other features. Each trap on a plan shall indicate all the information necessary to properly construct and maintain the structure. If the drawings are such that this information cannot be delineated on the drawings, then a table shall be developed. If a table is developed, then each trap on a plan shall have a number and the numbers shall be consecutive.

The following information shall be shown for each trap in a summary table format on the plans.

1. Trap number
2. Type of trap
3. Drainage area
4. Storage required
5. Storage provided (if applicable)
6. Outlet length or pipe sizes
7. Storage depth below outlet or cleanout elevation
8. Embankment height and elevation (if applicable)

Type of Sediment Traps

There are three (3) specific types of sediment traps which vary according to their function, location, or drainage area.

- I. Pipe Outlet Sediment Trap
- II. Stone Outlet Sediment Trap
- III. Compost Filter Sock Sediment Trap

I. Pipe Outlet Sediment Trap

A Pipe Outlet Sediment Trap consists of a trap formed by embankment or excavation. The outlet for the trap is through a perforated riser and a pipe through the embankment. The outlet pipe and riser shall be made of steel, corrugated metal or other suitable material. The top of the embankment shall be at least 1 ½ feet above the crest of the riser. The preferred method of dewatering the sediment trap is by surface skimmer. See Dewatering Device Standard, page 5.10. If the riser alone is used for dewatering, the top 2/3 of the riser shall be perforated with one (1) inch nominal diameter holes or slits spaced six (6) inches vertically and horizontally placed in the concave portion of the corrugated pipe.

No holes or slits will be allowed within six (6) inches of the top of the horizontal barrel. All pipe connections shall be watertight. The riser shall be wrapped with ½ to ¾ inch hardware cloth wire then wrapped with filter cloth with a sieve size between #40-80 and secured with strapping or connecting band at the top and bottom of the cloth. The

cloth shall cover an area at least six (6) inches above the highest hole and six (6) inches below the lowest hole. The top of the riser pipe shall not be covered with filter cloth. The riser shall have a base with sufficient weight to prevent flotation of the riser. Two approved bases are:

1. A concrete base 12 in. thick with the riser embedded 9 in. into the concrete base, or
2. One quarter inch, minimum, thick steel plate attached to the riser by a continuous weld around the circumference of the riser to form a watertight connection. The plate shall have 2.5 feet of stone, gravel, or earth placed on it to prevent flotation. In either case, each side of the square base measurement shall be the riser diameter plus 24 inches.

Pipe outlet sediment traps shall be limited to a five (5) acre maximum drainage area. Pipe outlet sediment trap is interchangeable in the field with stone outlet provided that these sediment traps are constructed in accordance with the detail and specifications for that trap.

Select pipe diameter from the following table:
See details for Pipe Outlet Sediment Trap ST-I in Figure 5.25 and 5.26 on pages 5.49 and 5.50.

Optional sediment trap dewatering devices are shown on Figure 5.29 on Page 5.53.

Minimum Sizes

Barrel Diameter¹ (in.)	Riser Diameter¹ (in.)	Maximum Drainage Area (ac.)
12	15	1
15	18	2
18	21	3
21	24	4
21	27	5

¹ Barrel diameter may be same size as riser diameter



II. Stone Outlet Sediment Trap

A Stone Outlet Sediment Trap consists of a trap formed by an embankment or excavation. The outlet of this trap is over a stone section placed on level ground. The minimum length (feet) of the outlet shall be equal to four (4) times the drainage area (acres).

Required storage shall be 3,600 cubic feet per acre of drainage area.

The outlet crest (top of stone in weir section) shall be level, at least one (1) foot below top of embankment and no more than one (1) foot above ground beneath the outlet. Stone used in the outlet shall be small riprap (4 in. x 8 in.). To provide more efficient trapping effect, a layer of filter cloth should be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.

Stone Outlet Sediment Traps may be interchangeable in the field with pipe outlet sediment traps provided they are constructed in accordance with the detail and specifications for those traps. Stone outlet sediment traps shall be limited to a five (5) acre maximum drainage area.

See details for Stone Outlet Sediment Trap ST-II in Figure 5.27 on page 5.51



III. Compost Sock Sediment Trap

A compost sock sediment trap consists of a trap formed by creating an enclosure of geotextile mesh tubes filled with a compost filter media. These traps are used in locations where there is no opportunity to direct runoff into larger traps or well vegetated areas. This could occur at site entrances and access points or in tight areas due to construction boundary limits.

Surface runoff can be directed to the trap with standard conveyance practices. Groundwater or surface ponding in low areas can be pumped into the compost sock sediment trap with appropriate energy dissipation at the pump outlet to prevent scour.

Design criteria for Compost Sock Sediment Trap

1. The maximum drainage area tributary to the trap shall be 5 acres.
2. The minimum settled height above ground shall be 2.0 feet formed by staking 3 compost filter socks in a pyramid as shown in Figure 5.28 on page 5.52.
3. The storage volume provided in the compost sock sediment trap shall be 3,600 cubic feet per tributary drainage acre.
4. If necessary, additional storage area can be created by excavating a sump 1 foot deep beginning at least 5 feet away from the inside sock.
5. All compost filter sock materials, mesh, and compost, will meet the material specifications listed in the Compost Filter Sock standard. No spillway is required.
6. Compost filter sock sediment traps shall be inspected weekly and after every rainfall event. Sediment shall be removed when it reaches one third, 1/3, the height of the trap.
7. The maximum limit of use for a compost sock sediment trap is one (1) year. The existing trap shall be replaced if there is a need for a trap beyond that time limit.
8. Upon completion of the work, the compost sock sediment trap shall be removed. The compost within the socks may be used during cleanup as a vegetative growth medium in accordance with the site stabilization plan.



**Figure 5.25
Pipe Outlet Sediment Trap: ST-I**

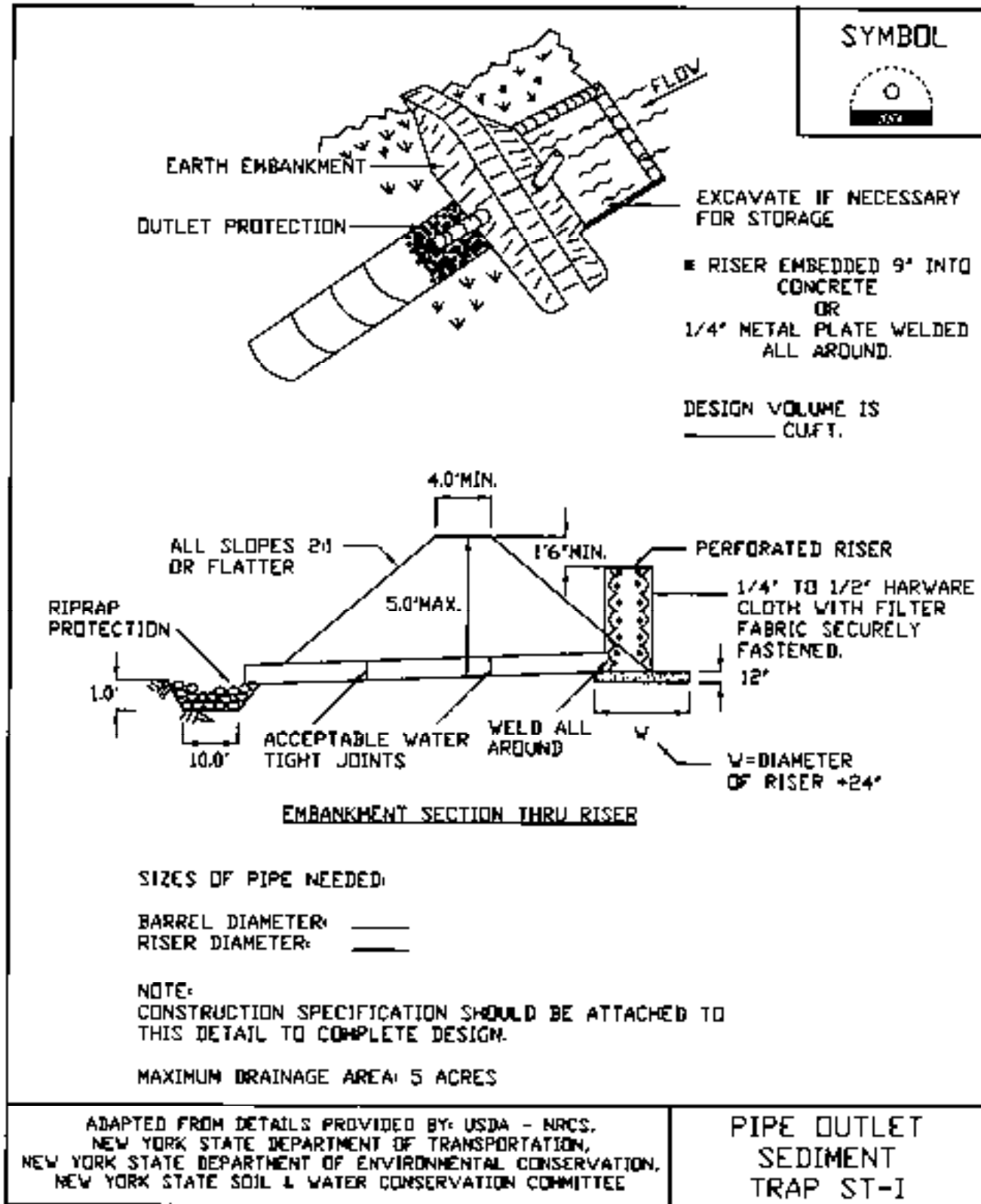


Figure 5.26
Pipe Outlet Sediment Trap: ST-I - Construction Specifications


<p style="font-size: 1.2em; margin: 0;"><u>CONSTRUCTION SPECIFICATIONS</u></p> <ol style="list-style-type: none"> 1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED. 2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. 3. VOLUME OF SEDIMENT STORAGE SHALL BE 3600 CUBIC FEET PER ACRE OF CONTRIBUTORY DRAINAGE. 4. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND STABILIZED. 5. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. 6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT ARE CONTROLLED. 7. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED. 8. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER; CUT SLOPES 1:1 OR FLATTER. 9. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT. 10. THE TOP 2/3 OF THE RISER SHALL BE PERFORATED WITH ONE (1) INCH DIAMETER HOLES OR SLITS SPACED SIX (6) INCHES VERTICALLY AND HORIZONTALLY AND PLACED IN THE CONCAVE PORTION OF PIPE. NO HOLES WILL BE ALLOWED WITHIN SIX (6) INCHES OF THE HORIZONTAL BARREL. 11. THE RISER SHALL BE WRAPPED WITH 1/4 TO 1/2 INCH HARDWARE CLOTH WIRE THEN WRAPPED WITH FILTER CLOTH (HAVING AN EQUIVALENT SIEVE SIZE OF 40-80). THE FILTER CLOTH SHALL EXTEND SIX (6) INCHES ABOVE THE HIGHEST HOLE AND SIX (6) INCHES BELOW THE LOWEST HOLE. WHERE ENDS OF THE FILTER CLOTH COME TOGETHER, THEY SHALL BE OVER-LAPPED, FOLDED AND STAPLED TO PREVENT BYPASS. 12. STRAPS OR CONNECTING BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH. 13. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN FOUR (4) INCH LAYERS. A MINIMUM OF TWO (2) FEET OF HAND COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. 14. THE RISER SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. FOR CONCRETE BASE THE DEPTH SHALL BE TWELVE (12) INCHES WITH THE RISER EMBEDDED NINE (9) INCHES. A 1/4 INCH MINIMUM THICKNESS STEEL PLATE SHALL BE ATTACHED TO THE RISER BY A CONTINUOUS WELD AROUND THE BOTTOM TO FORM A WATERTIGHT CONNECTION AND THEN PLACE TWO (2) FEET OF STONE, GRAVEL, OR TAMPED EARTH ON THE PLATE. 	<p style="margin: 0;">SYMBOL</p> 
<p style="font-size: 0.8em; margin: 0;">ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE</p>	<p style="font-size: 1.1em; margin: 0;">PIPE OUTLET SEDIMENT TRAP ST-I</p>

Figure 5.27
Stone Outlet Sediment Trap: ST-II

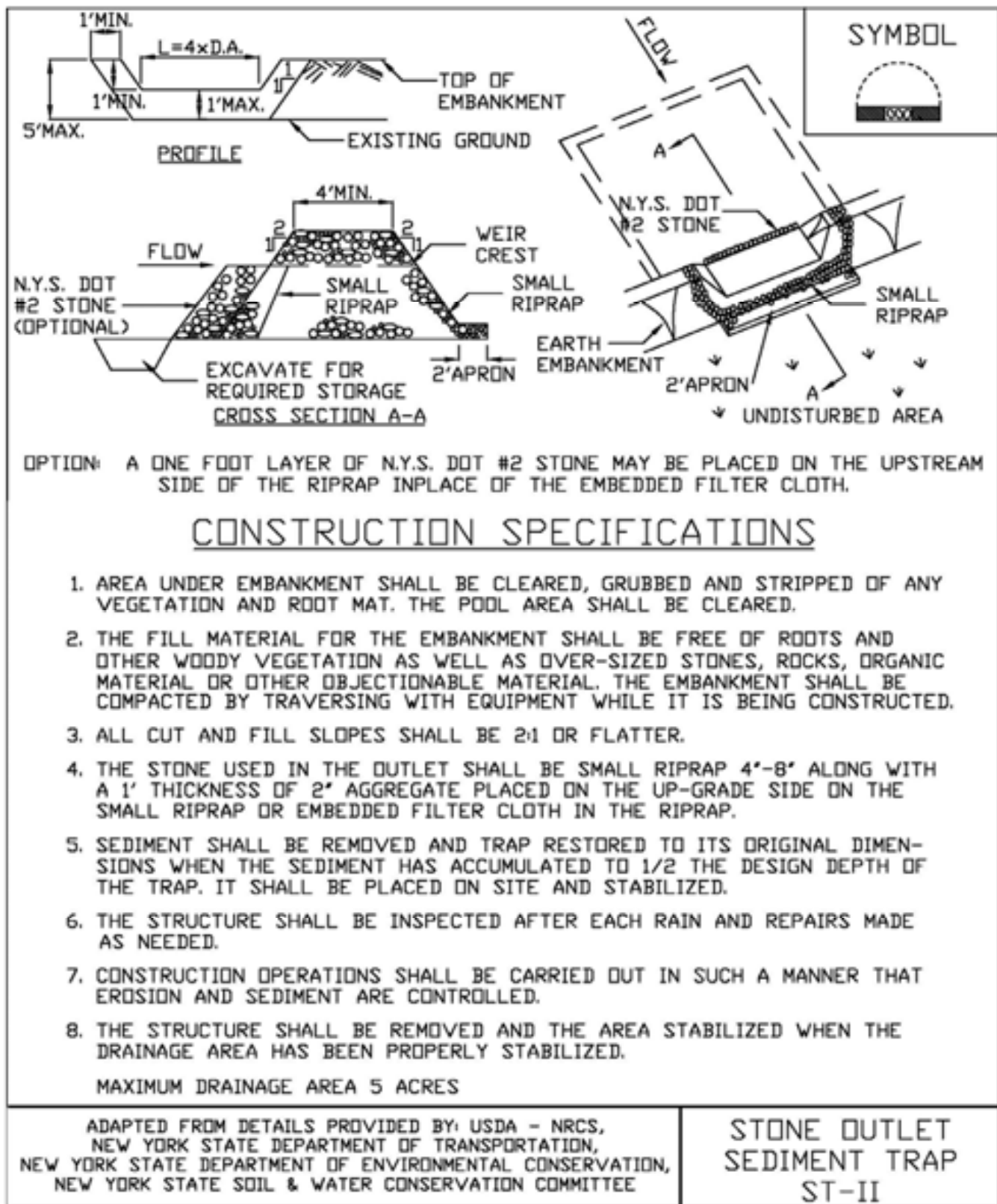
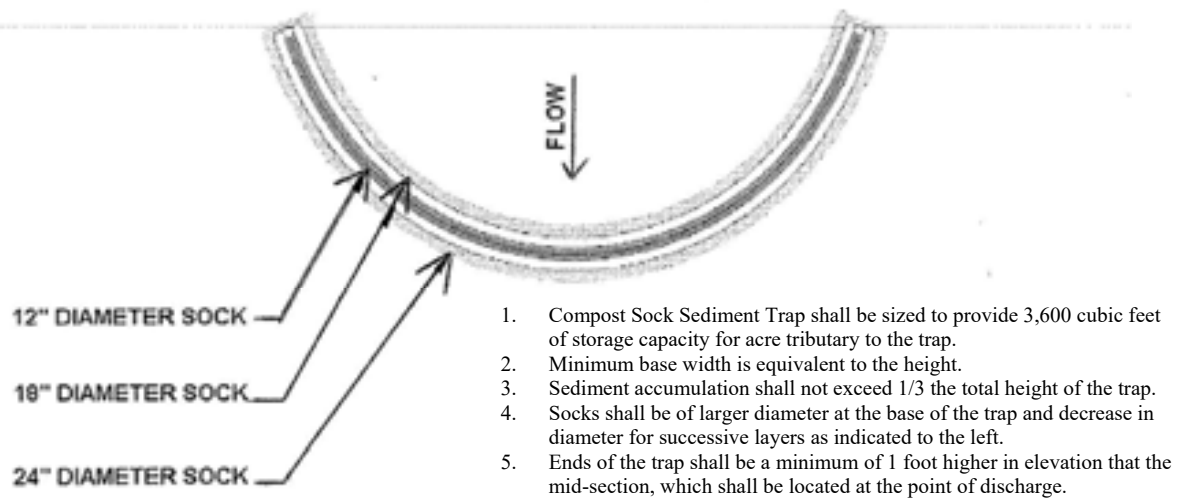
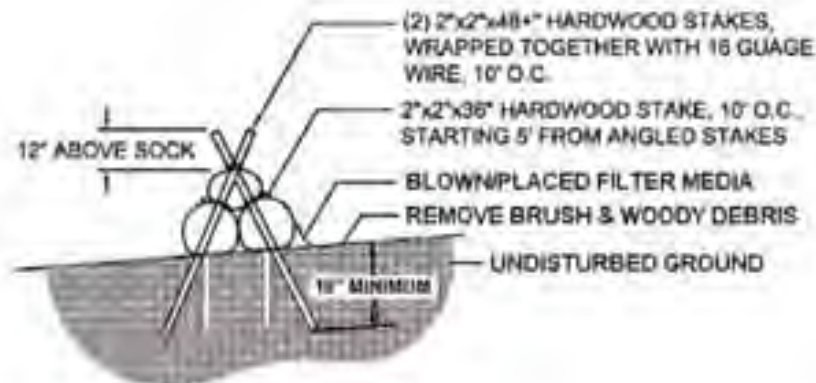


Figure 5.28 Compost Filter Sock Sediment Trap: ST-III

Plan View



Staking Detail

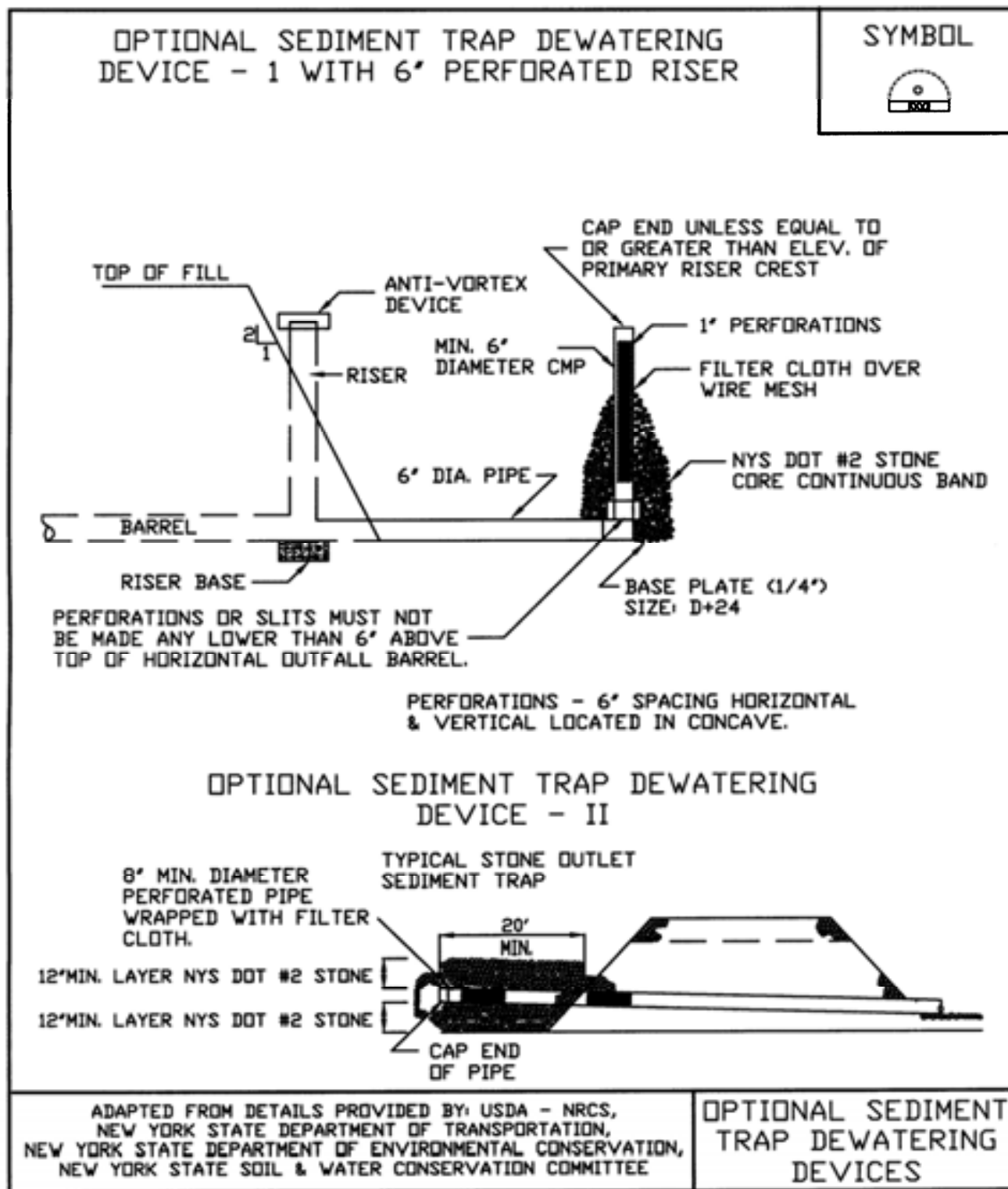


* Figures adapted from Filtrex

Specifications:

1. Sock infill and filter media material shall meet the standards of Table 5.1 on page 5.8 . Compost shall meet the compost filter sock standard of Table 5.2 on page 5.8.
2. Compost sock sediment traps shall not exceed three socks in height and shall be stacked in pyramidal form as shown above. Minimum trap height is one 24 inch diameter sock. Additional storage may be provided by means of an excavated sump 12 inches deep extending 1 to 3 feet upslope of the socks along the lower side of the trap.
3. Compost sock sediment traps shall provide 3,600 cubic feet storage capacity with 12 inches of freeboard for each tributary drainage acreage. (See manufacturer for anticipated settlement.)
4. The maximum tributary drainage area is 5.0 acres. Since compost socks are "flow-through," no spillway is required.
5. Compost sock sediment traps shall be inspected weekly and after each runoff event. Sediment shall be removed when it reaches 1/3 the height of the socks.
6. Photodegradable and biodegradable socks shall not be used for more than 1 year.

Figure 5.29
Optional Sediment Trap Dewatering Devices
for Traps with <5 Acres Drainage Area



STANDARD AND SPECIFICATIONS FOR STRAW BALE DIKE



quarter of an acre per 100 feet of dike and the length of slope above the dike shall be less than 100 feet.

Design Criteria

The above table is adequate, in general, for a one-inch rain-fall event. Larger storms could cause failure of this practice. Use of this practice in sensitive areas for longer than one month should be specifically designed to store expected runoff. All bales shall be placed on the contour with cut edge of bale adhering to the ground. See Figure 5.34 on page 5.64 for details.

Definition & Scope

A **temporary** barrier of straw, or similar material, used to intercept sediment laden runoff from small drainage areas of disturbed soil to reduce runoff velocity and effect deposition of the transported sediment load. Straw bale dikes have an estimated design life of three (3) months.

Condition Where Practice Applies

The straw bale dike is used where:

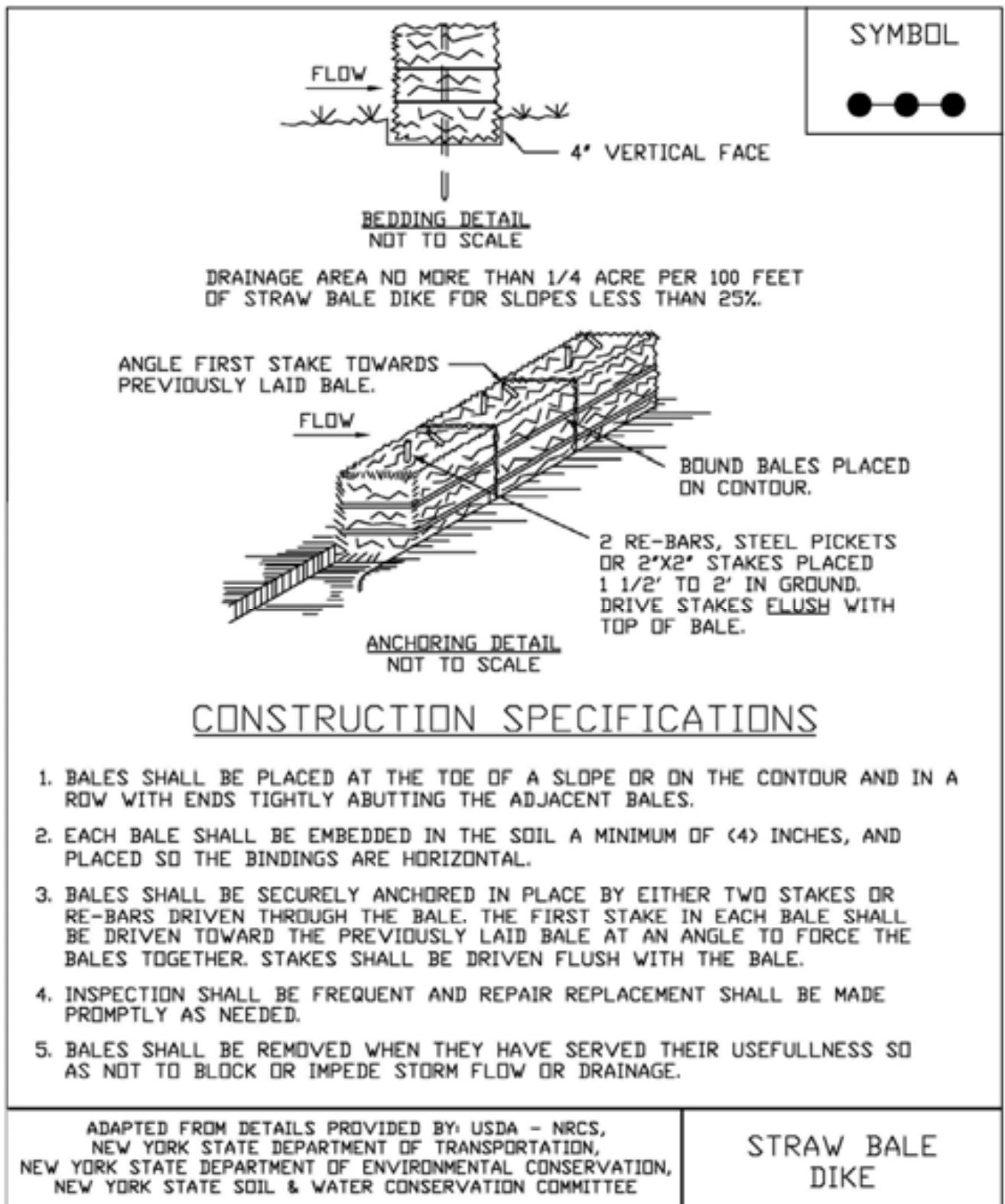
1. No other practice is feasible.
2. There is no concentration of water in a channel or other drainage way above the barrier.
3. Erosion would occur in the form of sheet erosion.
4. Length of slope above the straw bale dike does not exceed the following limits with the bale placed 10 feet from the toe of the slope:

Constructed Slope	Percent Slope	Slope Length (ft.)
2:1	50	25
3:1	33	50
4:1	25	75

Where slope gradient changes through the drainage area, steepness refers to the steepest slope section contributing to the straw bale dike.

The practice may also be used for a single family lot if the slope is less than 15 percent. The contributing drainage areas in this instance shall be less than one

**Figure 5.34
Straw Bale Dike**



STANDARD AND SPECIFICATIONS FOR TEMPORARY CONSTRUCTION AREA SEEDING



Definition & Scope

Providing temporary erosion control protection to disturbed areas and/or localized critical areas for an interim period by covering all bare ground that exists as a result of construction activities or a natural event. Critical areas may include but are not limited to steep excavated cut or fill slopes and any disturbed, denuded natural slopes subject to erosion.

Conditions Where Practice Applies

Temporary seedings may be necessary on construction sites to protect an area, or section, where final grading is complete, when preparing for winter work shutdown, or to provide cover when permanent seedings are likely to fail due to mid-summer heat and drought. The intent is to provide temporary protective cover during temporary shutdown of construction and/or while waiting for optimal planting time.

Criteria

Water management practices must be installed as appropriate for site conditions. The area must be rough graded and slopes physically stable. Large debris and rocks are usually removed. Seedbed must be seeded within 24 hours of disturbance or scarification of the soil surface will be necessary prior to seeding.

Fertilizer or lime are not typically used for temporary seedings.

IF: Spring or summer or early fall, then seed the area with ryegrass (annual or perennial) at 30 lbs. per acre (Approximately 0.7 lb./1000 sq. ft. or use 1 lb./1000 sq. ft.).

IF: Late fall or early winter, then seed Certified 'Aroostook' winter rye (cereal rye) at 100 lbs. per acre (2.5 lbs./1000 sq. ft.).

Any seeding method may be used that will provide uniform application of seed to the area and result in relatively good soil to seed contact.

Mulch the area with hay or straw at 2 tons/acre (approx. 90 lbs./1000 sq. ft. or 2 bales). Quality of hay or straw mulch allowable will be determined based on long term use and visual concerns. Mulch anchoring will be required where wind or areas of concentrated water are of concern. Wood fiber hydromulch or other sprayable products approved for erosion control (nylon web or mesh) may be used if applied according to manufacturers' specification. Caution is advised when using nylon or other synthetic products. They may be difficult to remove prior to final seeding and can be a hazard to young wildlife species.

STANDARD AND SPECIFICATIONS FOR ANCHORED STABILIZATION MATTING



Definition and Scope

A **temporary** or **permanent** protective covering placed on a prepared, seeded planting area that is anchored in place by staples or other means to aid in controlling erosion by absorbing rain splash energy and withstand overland flow as well as provide a microclimate to protect and promote seed establishment.

Conditions Where Practice Applies

Anchored stabilization mats are required for seeded earthen slopes steeper than 3 horizontal to 1 vertical; in vegetated channels where the velocity of the design flow exceeds the allowable velocity for vegetation alone (usually greater than 5 feet per second); on streambanks and shorelines where moving water is likely to erode newly seeded or planted areas; and in areas where wind prevents standard mulching with straw. This standard does not apply to slopes stabilized with sod, rock riprap or hard armor material.

Design Criteria

Slope Applications - Anchored stabilization mats for use on slopes are primarily used as mulch blankets where the mesh material is within the blanket or as a netting over previously placed mulch. These stabilization mats are NOT effective in preventing slope failures.

1. Required on all slopes steeper than 3:1
2. Matting will be designed for proper longevity need and strength based on intended use.
3. All installation details and directions will be included on the site erosion and sediment control plan and will follow manufactures specifications.

Channel Applications - Anchored stabilization mats, for use in supporting vegetation in flow channels, are generally a non-degradable, three dimensional plastic structure which can be filled with soil prior to planting. This structure provides a medium for root growth where the matting and roots become intertwined forming a continuous anchor for the vegetated lining.

1. Channel stabilization shall be based on the tractive force method.
2. For maximum design shear stresses less than 2 pounds per square foot, a temporary or bio-degradable mat may be used.
3. The design of the final matting shall be based on the mats ability to resist the tractive shear stress at bank full flow.
4. The installation details and procedures shall be included on the site erosion and sediment control plan and will follow manufacturers specifications.



Construction Specifications

1. Prepare soil before installing matting by smoothing the surface, removing debris and large stone, and applying lime, fertilizer and seed. Refer to manufacturers installation details.
2. Begin at the top of the slope by anchoring the mat in a 6" deep x 6" wide trench. Backfill and compact the trench after stapling.
3. In channels or swales, begin at the downslope end, anchoring the mat at the bottom and top ends of the blanket. When another roll is needed, the upslope roll

should overlay the lower layer, shingle style, so that channel flows do not peel back the material.

4. Roll the mats down a slope with a minimum 4" overlap. Roll center mat in a channel in direction of water flow on bottom of the channel. Do not stretch blankets. Blankets shall have good continuous contact with the underlying soil throughout its entire length.
5. Place mats end over end (shingle style) with a 6" overlap, use a double row of staggered staples 4" apart to secure mats.
6. Full length edge of mats at top of side slopes must be anchored in 6" deep x 6" wide trench; backfill and compact the trench after stapling.
7. Mats on side slopes of a channel must be overlapped 4" over the center mat and stapled.
8. In high flow channel applications, a staple check slot is recommended at 30 to 40 foot intervals. Use a row of staples 4" apart over entire width of the channel. Place a second row 4" below the first row in a staggered pattern.
9. The terminal end of the mats must be anchored in a 6"x6" wide trench. Backfill and compact the trench after stapling.
10. Stapling and anchoring of blanket shall be done in accordance with the manufactures recommendations.

Maintenance

Blanketed areas shall be inspected weekly and after each runoff event until perennial vegetation is established to a minimum uniform 80% coverage throughout the blanketed area. Damaged or displaced blankets shall be restored or replaced within 2 calendar days.

STANDARD AND SPECIFICATIONS FOR ROCK OUTLET PROTECTION



Definition & Scope

A **permanent** section of rock protection placed at the outlet end of the culverts, conduits, or channels to reduce the depth, velocity, and energy of water, such that the flow will not erode the receiving downstream reach.

Conditions Where Practice Applies

This practice applies where discharge velocities and energies at the outlets of culverts, conduits, or channels are sufficient to erode the next downstream reach. This applies to:

1. Culvert outlets of all types.
2. Pipe conduits from all sediment basins, dry storm water ponds, and permanent type ponds.
3. New channels constructed as outlets for culverts and conduits.

Design Criteria

The design of rock outlet protection depends entirely on the location. Pipe outlet at the top of cuts or on slopes steeper than 10 percent, cannot be protected by rock aprons or riprap sections due to re-concentration of flows and high velocities encountered after the flow leaves the apron.

Many counties and state agencies have regulations and design procedures already established for dimensions, type and size of materials, and locations where outlet protection is required. Where these requirements exist, they shall be followed.

Tailwater Depth

The depth of tailwater immediately below the pipe outlet

must be determined for the design capacity of the pipe. If the tailwater depth is less than half the diameter of the outlet pipe, and the receiving stream is wide enough to accept divergence of the flow, it shall be classified as a Minimum Tailwater Condition; see Figure 3.16 on page 3.42 as an example. If the tailwater depth is greater than half the pipe diameter and the receiving stream will continue to confine the flow, it shall be classified as a Maximum Tailwater Condition; see Figure 3.17 on page 3.43 as an example. Pipes which outlet onto flat areas with no defined channel may be assumed to have a Minimum Tailwater Condition; see Figure 3.16 on page 3.42 as an example.

Apron Size

The apron length and width shall be determined from the curves according to the tailwater conditions:

Minimum Tailwater – Use Figure 3.16 on page 3.42

Maximum Tailwater – Use Figure 3.17 on page 3.43

If the pipe discharges directly into a well defined channel, the apron shall extend across the channel bottom and up the channel banks to an elevation one foot above the maximum tailwater depth or to the top of the bank, whichever is less.

The upstream end of the apron, adjacent to the pipe, shall have a width two (2) times the diameter of the outlet pipe, or conform to pipe end section if used.

Bottom Grade

The outlet protection apron shall be constructed with no slope along its length. There shall be no overfall at the end of the apron. The elevation of the downstream end of the apron shall be equal to the elevation of the receiving channel or adjacent ground.

Alignment

The outlet protection apron shall be located so that there are no bends in the horizontal alignment.

Materials

The outlet protection may be done using rock riprap, grouted riprap, or gabions. Outlets constructed on the bank of a stream or wetland shall not use grouted rip-rap, gabions or concrete.

Riprap shall be composed of a well-graded mixture of rock size so that 50 percent of the pieces, by weight, shall be larger than the d_{50} size determined by using the charts. A

well-graded mixture, as used herein, is defined as a mixture composed primarily of larger rock sizes, but with a sufficient mixture of other sizes to fill the smaller voids between the rocks. The diameter of the largest rock size in such a mixture shall be 1.5 times the d_{50} size.

Thickness

The minimum thickness of the riprap layer shall be 1.5 times the maximum rock diameter for d_{50} of 15 inches or less; and 1.2 times the maximum rock size for d_{50} greater than 15 inches. The following chart lists some examples:

D_{50} (inches)	d_{max} (inches)	Minimum Blanket Thick- ness (inches)
4	6	9
6	9	14
9	14	20
12	18	27
15	22	32
18	27	32
21	32	38
24	36	43

Rock Quality

Rock for riprap shall consist of field rock or rough unhewn quarry rock. The rock shall be hard and angular and of a quality that will not disintegrate on exposure to water or weathering. The specific gravity of the individual rocks shall be at least 2.5.

Filter

A filter is a layer of material placed between the riprap and the underlying soil surface to prevent soil movement into and through the riprap. Riprap shall have a filter placed under it in all cases.

A filter can be of two general forms: a gravel layer or a plastic filter cloth. The plastic filter cloth can be woven or non-woven monofilament yarns, and shall meet these base requirements: thickness 20-60 mils, grab strength 90-120 lbs; and shall conform to ASTM D-1777 and ASTM D-1682.

Gravel filter blanket, when used, shall be designed by comparing particle sizes of the overlying material and the base material. Design criteria are available in Standard and Specification for Anchored Slope and Channel Stabilization on page 4.7.

Gabions

Gabions shall be made of hexagonal triple twist mesh with heavily galvanized steel wire. The maximum linear dimension of the mesh opening shall not exceed 4 ½ inches and the area of the mesh opening shall not exceed 10 square inches.

Gabions shall be fabricated in such a manner that the sides, ends, and lid can be assembled at the construction site into a rectangular basket of the specified sizes. Gabions shall be of single unit construction and shall be installed according to manufacturer's recommendations.

The area on which the gabion is to be installed shall be graded as shown on the drawings. Foundation conditions shall be the same as for placing rock riprap, and filter cloth shall be placed under all gabions. Where necessary, key, or tie, the structure into the bank to prevent undermining of the main gabion structure.

Maintenance

Once a riprap outlet has been installed, the maintenance needs are very low. It should be inspected after high flows for evidence of scour beneath the riprap or for dislodged rocks. Repairs should be made immediately.

Design Procedure

1. Investigate the downstream channel to assure that nonerosive velocities can be maintained.
2. Determine the tailwater condition at the outlet to establish which curve to use.
3. Use the appropriate chart with the design discharge to determine the riprap size and apron length required. It is noted that references to pipe diameters in the charts are based on full flow. For other than full pipe flow, the parameters of depth of flow and velocity must be used to adjust the design discharges.
4. Calculate apron width at the downstream end if a flare section is to be employed.

Design Examples are demonstrated in Appendix B.

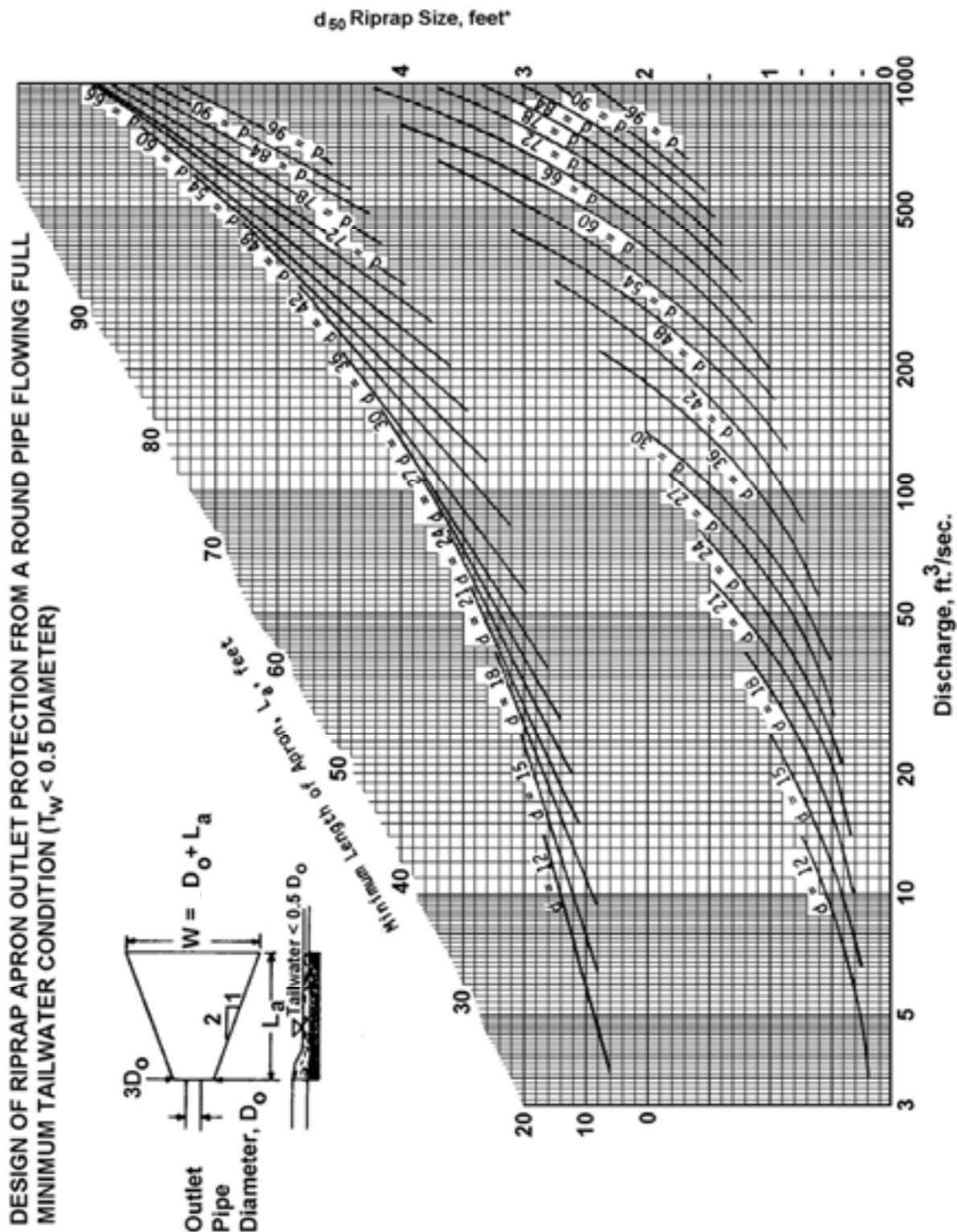
Construction Specifications

1. The subgrade for the filter, riprap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
2. The rock or gravel shall conform to the specified grad-

ing limits when installed respectively in the riprap or filter.

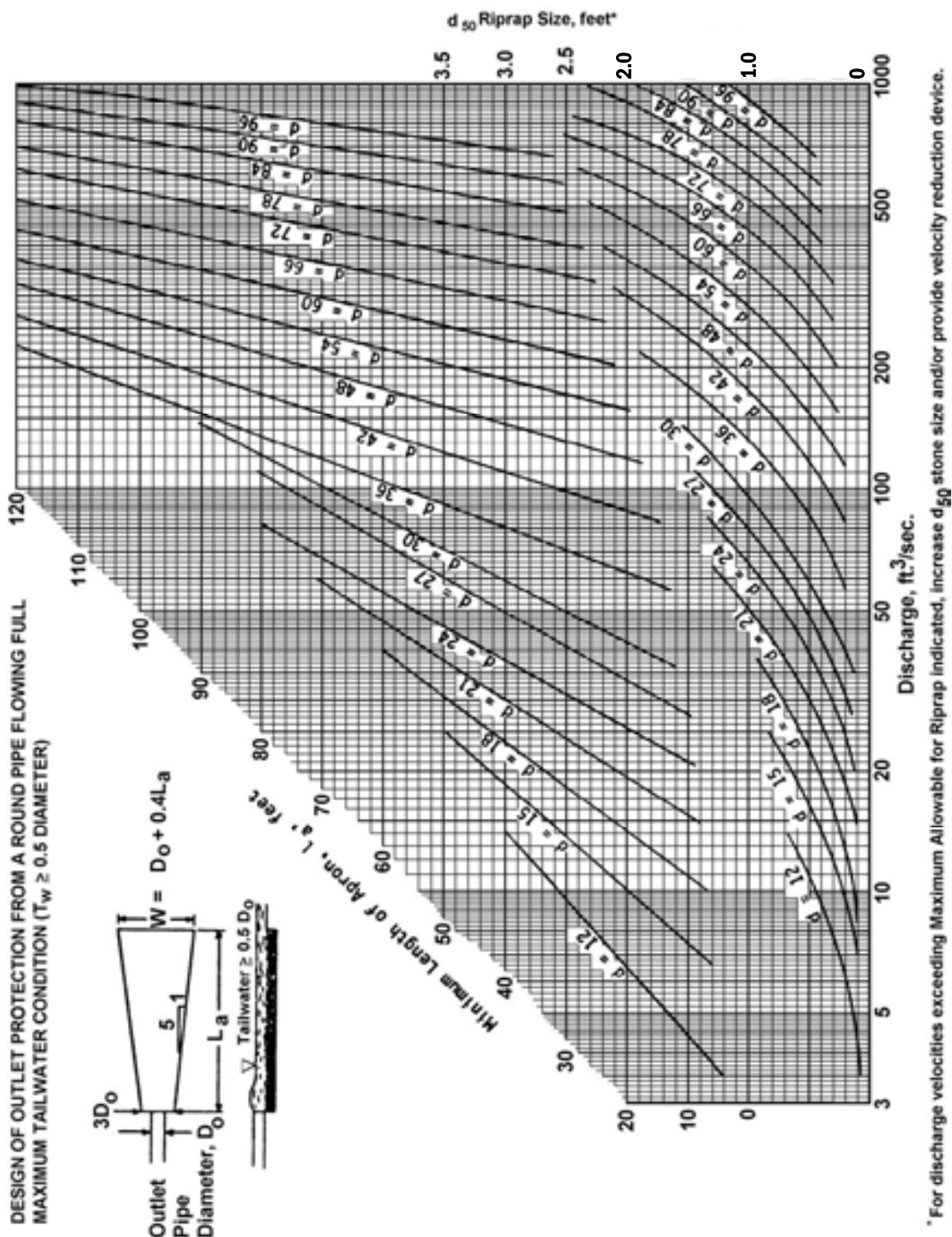
3. Filter cloth shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps, whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
4. Rock for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The rock for riprap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogenous with the smaller rocks and spalls filling the voids between the larger rocks. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

Figure 3.16
Outlet Protection Design—Minimum Tailwater Condition Chart
(Design of Outlet Protection from a Round Pipe Flowing Full,
Minimum Tailwater Condition: $T_w < 0.5D_o$) (USDA - NRCS)

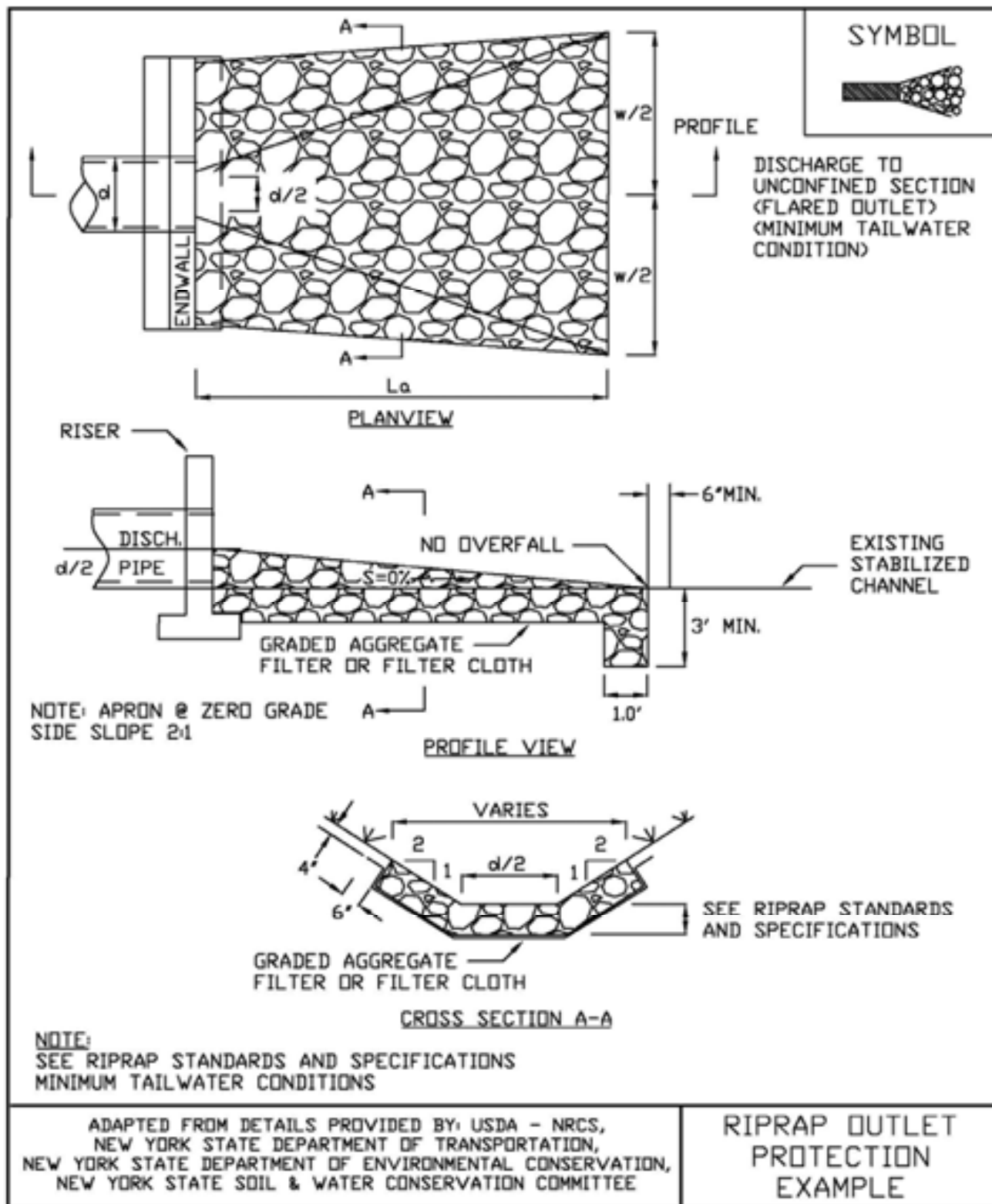


* For discharge velocities exceeding Maximum Allowable for Riprap indicated, increase d_{50} stone size and/or provide velocity reduction device.

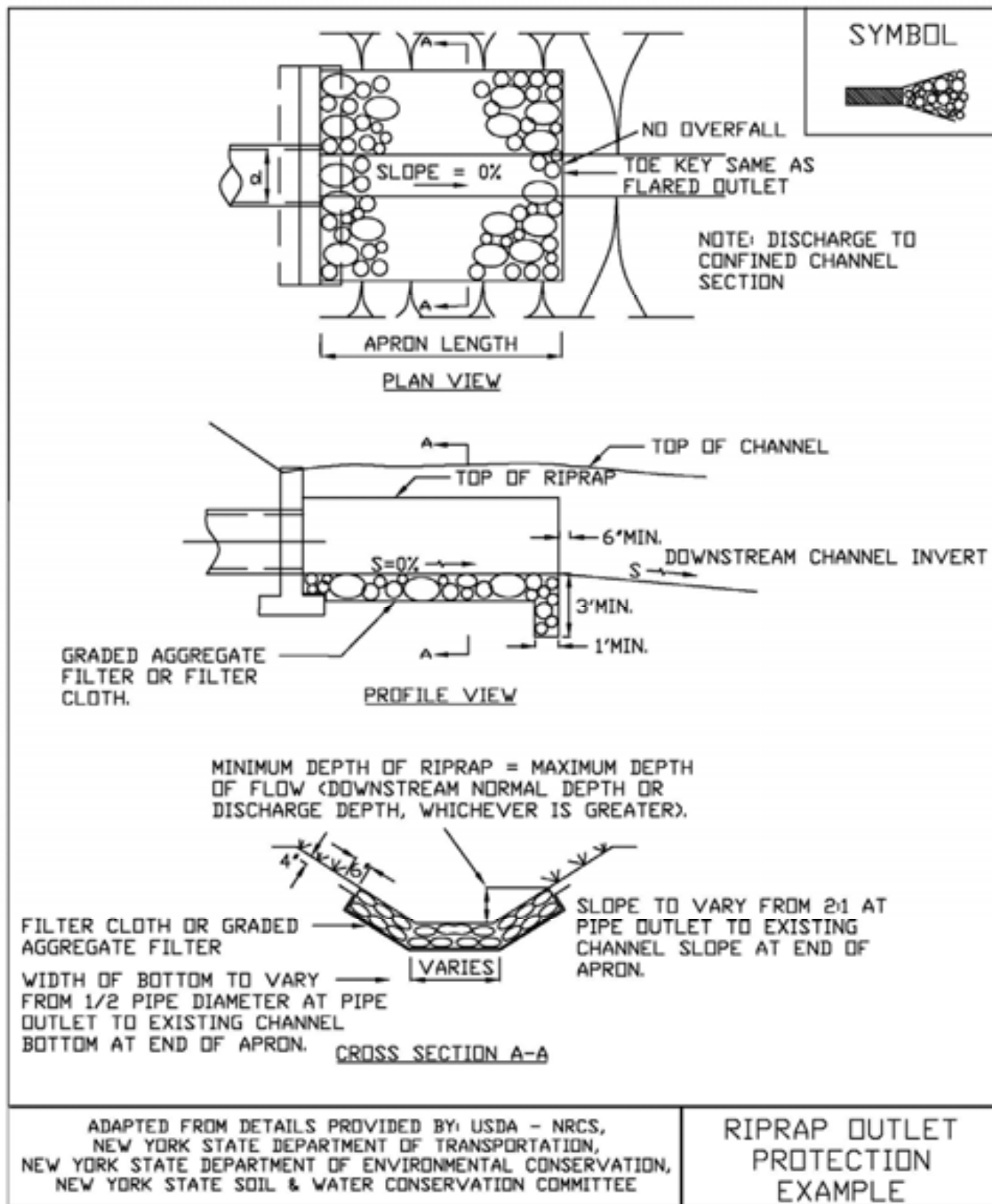
Figure 3.17
Outlet Protection Design—Maximum Tailwater Condition Chart
(Design of Outlet Protection from a Round Pipe Flowing Full,
Maximum Tailwater Condition: $T_w \geq 0.5D_o$) (USDA - NRCS)



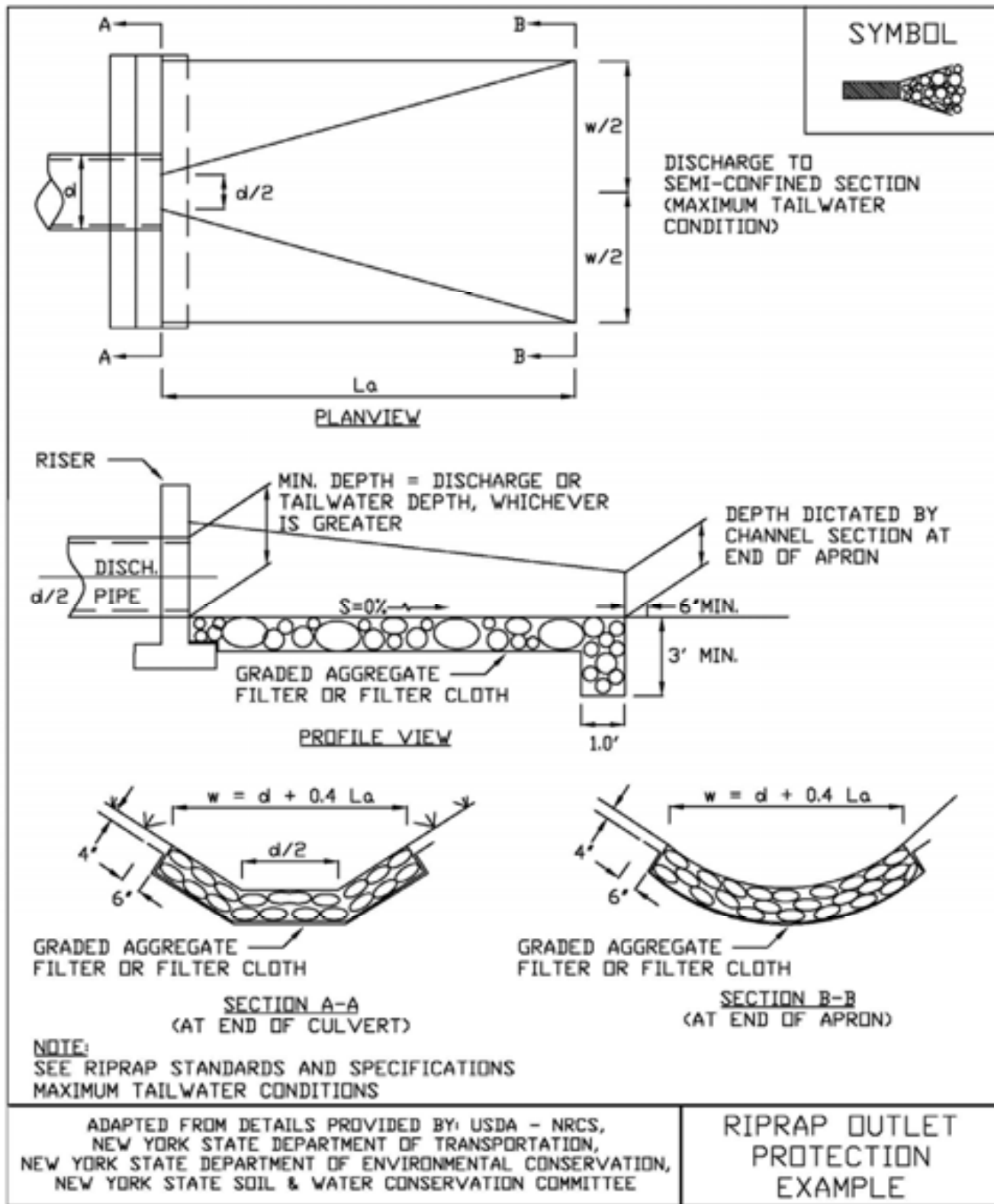
**Figure 3.18
Riprap Outlet Protection Detail (1)**



**Figure 3.19
Riprap Outlet Protection Detail (2)**



**Figure 3.20
Riprap Outlet Protection Detail (3)**



STANDARD AND SPECIFICATIONS FOR SEDIMENT BASIN



Definition & Scope

A **temporary** basin with a barrier or dam constructed across a drainage way or at other suitable locations to intercept sediment-laden runoff and reduce the amount of sediment leaving the disturbed area in order to protect drainageways, properties, and rights-of-way below the sediment basin.

Conditions Where Practice Applies

A sediment basin is appropriate where physical site conditions or land ownership restrictions preclude the installation of other control measures to adequately control runoff, erosion, and sedimentation. However, it is required that other erosion control measures be used with the sediment basin. The basin may be used below construction operations which expose critical areas to soil erosion. The basin shall be maintained until the disturbed area is protected against erosion by permanent stabilization.

This standard applies to the installation of temporary sediment basins on sites where: (a) failure of the structure would not result in loss of life, damage to homes or buildings, or interruption of use or service of public roads or utilities; (b) the drainage area does not exceed 50 acres; and (c) the basin is to be removed within 36 months after the beginning of construction of the basin.

Permanent (to function more than 36 months) sediment basins, or structures that temporarily function as a sediment basin but are intended for use as a permanent pool shall be classified as **permanent** structures and shall conform to criteria appropriate for permanent structures. These structures shall be designed and constructed to conform to NRCS Standard And Specification No. 378 for Ponds in the National Handbook of Conservation Practices and the New York State Department of Environmental Conservation, "Guidelines for the Design of Dams."

Design Criteria

Compliance with Laws and Regulations

Design and construction shall comply with state and local laws, ordinances, rules and regulations, including permits.

Location - Maximum Drainage Area = 50 acres

The sediment basin should be located to obtain the maximum storage benefit from the terrain and for ease of cleanout of the trapped sediment. It should be located to minimize interference with construction activities and construction of utilities. Whenever possible, sediment basins should be located so that storm drains may outfall or be diverted into the basin. **Do not locate basins in perennial streams.**

Size and Shape of the Basin

The sediment basin will contain two separate zones. The lowest zone is the sediment storage zone. This zone is sized for a volume equal to 1,000 cubic feet per disturbed acre over the course of the life of the project, contributing to the basin as measured from the bottom of the basin to the bottom of the dewatering zone. It shall have a minimum depth of 1 foot. Layered above this zone is the dewatering zone. This zone is sized for a minimum volume equal to 3,600 cubic feet per each acre draining to the basin. This volume is temporarily stored between the sediment storage zone and the crest of the principal spillway. This zone should be a minimum of 3 feet deep. See Figures 5.8 and 5.9 on pages 5.26 and 5.27. This 3,600 cubic feet per acre is equivalent to one inch of sediment per acre of drainage area. The entire drainage area is used for this computation, rather than the disturbed area above, to maximize trapping efficiency. The length to width ratio shall be 2:1 or greater, where length is the distance between the inlet and outlet. A wedge shape shall be used with the inlet located at the narrow end. See Figure 5.22 on page 5.41.

Surface Area

Research studies (Barfield and Clar 1985; Pitt, 2003) indicate that the following relationship between surface area and peak inflow rate gives a trapping efficiency of 75% for silt loam soils, and greater than 90% for loamy sand soils:

$$A = 0.01 Q_p \text{ or, } A = 0.015x \text{ D.A. (whichever is greater)}$$

where,

A = the basin surface area, acres, measured at the service spillway crest; and

Q_p = the peak inflow rate for the design storm. (The minimum design storm will be a 10 year, 24 hour storm under construction conditions).

D.A. = contributing drainage area.

Sediment basins shall be cleaned out when the sediment storage zone volume described above is reduced by 50 percent, except in no case shall the sediment level be permitted to build up higher than one foot below the bottom of the dewatering zone. At this elevation, cleanout shall be performed to restore the original design volume to the sediment storage zone.

The elevation corresponding to the maximum allowable sediment level shall be determined and shall be stated in the design data as a distance below the top of the riser and shall be clearly marked on the riser.

The basin dimensions necessary to obtain the required basin volume as stated above shall be clearly shown on the plans to facilitate plan review, construction, and inspection.

Spillway Design

Runoff shall be computed by standard accepted hydrologic methods noted previously in this book of standards. **Runoff computations shall be based upon the worst soil cover conditions expected to prevail in the contributing drainage area during the anticipated effective life of the structure.** The combined capacities of the principal and emergency spillway shall be sufficient to pass the peak rate of runoff from a ten (10) year frequency, 24 hour duration storm.

1. Principal spillway: A spillway consisting of a vertical pipe or box type riser joined (watertight connection) to a pipe (barrel) which shall extend through the embankment and outlet beyond the downstream toe of the fill. The minimum capacity of the principal spillway shall be 0.2 cfs per acre of drainage area when the water surface is at the emergency spillway crest elevation. For those basins with no emergency spillway, the principal spillway shall have the capacity to handle the peak flow from a ten-year frequency rainfall event. The minimum size of the barrel shall be 8 inches in diameter. See Figures 5.10, 5.11 and 5.12 on pages 5.28, 5.29, and 5.30 for principal spillway sizes and capacities.

- A. Crest elevation: When used in combination with an emergency spillway, the crest elevation of the riser shall be a minimum one foot below the elevation of the control section of the emergency spillway.

- B. Watertight riser and barrel assembly: The riser and all pipe connections shall be completely watertight except for the inlet opening at the top, or a dewatering opening. There shall not be other holes, leaks, rips, or perforations in the structure.

- C. Dewatering the basin:

- 1) Preferred Method- The preferred method for dewatering sediment basins is by using surface skimmers to decant the cleaner top surface water from the basin as the sediment settles out. See Dewatering Device Standard, page 5.10.

- 2) Alternative Method- A fixed vertical riser pipe configured with perforations and filter fabric with a cone of pea gravel or small crushed stone is an alternative option for use. See Figure 5.5 on page 5.14.

The sediment basin dewatering system shall be designed to release the dewatering zone volume between 2 to 7 days in watersheds not impaired by sediment, and 4-7 days in sediment impaired watersheds (check the NYSDEC Waterbody Inventory/Priority Waterbody List - <http://www.dec.ny.gov/chemical/36730.html>, to see if your site is in an impaired watershed). The design performance range will depend on the percent of silt and clay in the soils tributary to the basin. If the performance of the basin does not meet water quality objectives after 7 days, chemical treatment may be necessary.

- D. Anti-vortex device and trash rack:

An anti-vortex device and trash rack shall be securely installed on top of the riser and shall be the concentric type as shown in Figure 5.13 and 5.14 on pages 5.31 and 5.32.

- E. Base:

The riser shall have a base attached with a watertight connection and shall have sufficient weight to prevent flotation of the riser. Two approved bases for risers ten feet or less in height are: 1) a concrete base 18 in. thick with the riser embedded 9 in. in the base, and 2) a ¼" minimum thickness steel plate attached to the riser by a continuous weld around the circumference of the riser to form a watertight connection. The plate shall have 2.5 feet of stone, gravel, or compacted earth placed on it to prevent flotation. In either case, each side of the square base shall be twice the riser diameter.

For risers greater than ten feet high, computations

shall be made to design a base which will prevent flotation. The minimum factor of safety shall be 1.20 (Downward forces = 1.20 x upward forces). See Figure 5.15 on page 5.33 for details.

F. Anti-Seep Collars: Anti-seep collars shall be installed around all conduits through earth fills of impoundment structures according to the following criteria:

- 1) Collars shall be placed to increase the seepage length along the conduit by a minimum of 15 percent of the pipe length located within the saturation zone.
- 2) Collar spacing shall be between 5 and 14 times the vertical projection of each collar.
- 3) All collars shall be placed within the saturation zone.
- 4) The assumed normal saturation zone (phreatic line) shall be determined by projecting a line at a slope of 4 horizontal to 1 vertical from the point where the normal water (riser crest) elevation touches the upstream slope of the fill to a point where this line intersects the invert of the pipe conduit. All fill located within this line may be assumed as saturated.

$$2(N)(P) = 1.15(L_s) \quad N = (0.075)(L_s) / P$$

When anti-seep collars are used, the equation for revised seepage length becomes:

Where: L_s = Saturated length is length, in feet, of pipe between riser and intersection of phreatic line and pipe invert.

N = number of anti-seep collars.

P = vertical projection of collar from pipe, in feet.

5) All anti-seep collars and their connections shall be watertight. See Figures 5.16 and 5.17 on pages 5.34 and 5.35 for anti-seep collar design and Figure 5.18 on page 5.36 for construction details. Seepage diaphragms may be used in lieu of anti-seep collars. They shall be designed in accordance to USDA NRCS Pond Standard 378.

G. Outlet: An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel. Where

discharge occurs at the property line, drainage easements will be obtained in accordance with local ordinances. Adequate notes and references will be shown on the erosion and sediment control plan.

Protection against scour at the discharge end of the pipe spillway shall be provided. Measures may include basin, riprap, revetment, excavated plunge pools, or other approved methods. See Standard and Specification for Rock Outlet Protection, Section 3, page 3.39.

2. Emergency Spillways: The entire flow area of the emergency spillway shall be constructed in undisturbed ground (not fill). The emergency spillway cross-section shall be trapezoidal with a minimum bottom width of eight feet. This spillway channel shall have a straight control section of at least 20 feet in length; and a straight outlet section for a minimum distance equal to 25 feet.

A. Capacity: The minimum capacity of the emergency spillway shall be that required to pass the peak rate of runoff from the 10 year 24-hour frequency storm, less any reduction due to flow in the pipe spillway. Emergency spillway dimensions may be determined by using the method described in Figure 5.19 on page 5.37 and the Design Tables in Figures 5.20 and 5.21 on pages 5.38 and 5.39.

B. Velocities: The velocity of flow in the exit channel shall not exceed 5 feet per second for vegetated channels. For channels with erosion protection other than vegetation, velocities shall be within the non-erosive range for the type of protection used.

C. Erosion Protection: Erosion protection shall be provided for by vegetation as prescribed in this publication or by other suitable means such as riprap, asphalt or concrete.

D. Freeboard: Freeboard is the difference between the design high water elevation in the emergency spillway and the top of the settled embankment. If there is no emergency spillway, it is the difference between the water surface elevation required to pass the design flow through the pipe and the top of the settled embankment. Freeboard shall be at least one foot.

Embankment Cross-Section

1. The maximum height of dam = 15 feet (measured from the low point of original ground at the downstream toe to the top of the dam).
2. Minimum top width of dam = 10 feet.

3. Side slopes shall be 2.5 to 1 or flatter.

Entrance of Runoff into Basin

Points of entrance of surface runoff into excavated sediment basins shall be protected to prevent erosion. Considerable care should be given to the major points of inflow into basins. In many cases the difference in elevation of the inflow and the bottom of the basin is considerable, thus creating a potential for severe gulying and sediment generation. Often a riprap drop at major points of inflow would eliminate gulying and sediment generation.

Diversions, grade stabilization structures or other water control devices shall be installed as necessary to ensure direction of runoff and protect points of entry into the basin. Points of entry should be located so as to ensure maximum travel distance of entering runoff to point of exit (the riser) from the basin.

Disposal

The sediment basin plans shall indicate the method (s) of disposing of the sediment removed from the basin. The sediment shall be placed in such a manner that it will not erode from the site. The sediment shall not be deposited downstream from the basin, adjacent to a stream or floodplain. Disposal sites will be covered by an approved sediment control plan.

The sediment basins plans shall also show the method of disposing of the sediment basin after the drainage area is stabilized, and shall include the stabilization of the sediment basin site. Water contained within the storage areas shall be removed from the basin by pumping, cutting the top of the riser, or other appropriate method prior to removing or breaching the embankment. **Sediment shall not be allowed to flush into a stream or drainageway.**

Chemical Treatment

Precipitation of sediment is enhanced with the use of specific chemical flocculants that can be applied to the sediment basin in liquid, powder, or solid form. Flocculants include anionic polyelectrolytes such as polyacrylimides, aluminum sulfate (alum), polyaluminum chloride and chitosan. Cationic polyelectrolytes have a greater toxicity to fish and other aquatic organisms than anionic polyelectrolytes because they bind to the gills of fish resulting in respiratory failure (Pitt, 2003).

Chemical treatment shall not be substituted for proper erosion and sediment control. To reduce the need for flocculants, proper controls include planning, phasing, sequencing and practice design in accordance to NY Standards. **Chemical applications shall not be applied without written approval from the NYSDEC.**

Safety

Sediment basins are attractive to children and can be very dangerous. Local ordinances and regulations must be adhered to regarding health and safety. The developer or owner shall check with local building officials on applicable safety requirements. If fencing of sediment basins is required, the location of and type of fence shall be shown on the plans.

Construction Specifications

Site Preparation

Areas under the embankment shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots, or other objectionable material. In order to facilitate cleanout and restoration, the pool area (measured at the top of the pipe spillway) will be cleared of all brush, trees, and other objectionable materials.

Cutoff-Trench

A cutoff trench shall be excavated along the centerline of earth fill embankments. The minimum depth shall be two feet. The cutoff trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be four feet, but wide enough to permit operation of excavation and compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for embankment. The trench shall be de-watered during the back-filling/compaction operations.

Embankment

The fill material shall be taken from approved areas shown on the plans. It shall be clean mineral soil free of roots, woody vegetation, oversized stones, rocks, or other objectionable material. Relatively pervious materials such as sand or gravel (Unified Soil Classes GW, GP, SW & SP) shall not be placed in the embankment. Areas on which fill is to be placed shall be scarified prior to placement of fill. The fill material shall contain sufficient moisture so that it can be formed by hand into a ball without crumbling. If water can be squeezed out of a ball, it is too wet for proper compaction. Fill material shall be placed in six to eight-inch thick continuous layers over the entire length of the fill. Compaction shall be obtained by routing and hauling the construction equipment over the fill so that the entire surface of each layer of the fill is traversed by at least one

wheel or tread track of the equipment or by the use of a compactor. The embankment shall be constructed to an elevation 10 percent higher than the design height to allow for settlement.

Pipe Spillway

The riser shall be securely attached to the barrel or barrel stub by welding the full circumference making a watertight structural connection. The barrel stub must be attached to the riser at the same percent (angle) of grade as the outlet conduit. The connection between the riser and the riser base shall be watertight. All connections between barrel sections must be achieved by approved watertight bank assemblies. The barrel and riser shall be placed on a firm, smooth foundation of impervious soil. Pervious materials such as sand, gravel, or crushed stone shall not be used as backfill around the pipe or anti-seep collars. The fill material around the pipe spillway shall be placed in four-inch layers and compacted under and around the pipe to at least the same density as the adjacent embankment.

A minimum depth of two feet of hand compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment. Steel base plates on risers shall have at least 2 ½ feet of compacted earth, stone, or gravel placed over it to prevent flotation.

Emergency Spillway

The emergency spillway shall be installed in undisturbed ground. The achievement of planned elevations, grades, design width, entrance and exit channel slopes are critical to the successful operation of the emergency spillway and must be constructed within a tolerance of +/- 0.2 feet.

Vegetative Treatment

Stabilize the embankment and emergency spillway in accordance with the appropriate vegetative standard and specification immediately following construction. In no case shall the embankment remain unstabilized for more than three (3) days.

Erosion and Pollution Control

Construction operations shall be carried out in such a manner that erosion and water pollution will be minimized. State and local laws shall be complied with concerning pollution abatement.

Safety

State and local requirements shall be met concerning fencing and signs, warning the public of hazards of soft sediment and floodwater.

Maintenance

1. Repair all damages caused by soil erosion and construction equipment at or before the end of each working day.
2. Sediment shall be removed from the basin when it reaches the specified depth for cleanout noted on the plans which will not exceed 50% of the capacity of the sediment storage zone. This sediment shall be placed in such a manner that it will not erode from the site. The sediment shall not be deposited downstream from the embankment, adjacent to a stream or floodplain.

Final Disposal

When temporary structures have served their intended purpose and the contributing drainage area has been properly stabilized, the embankment and resulting sediment deposits are to be leveled or otherwise disposed of in accordance with the approved sediment control plan. The proposed use of a sediment basin site will often dictate final disposition of the basin and any sediment contained therein. If the site is scheduled for future construction, then the basin material and trapped sediments must be removed, safely disposed of, and backfilled with a structural fill. When the basin area is to remain open space, the pond may be pumped dry, graded, and backfilled.

Information to be Submitted

Sediment basin designs and construction plans submitted for review to a local municipality, New York State DEC, New York City DEP, Soil and Water Conservation District, or other agency shall include the following:

1. Specific location of the basin.
2. Plan view of the storage basin and emergency spillway, showing existing and proposed contours.
3. Cross section of dam, principal spillway, emergency spillway, and profile of emergency spillway.
4. Details of pipe connections, riser to pipe connections, riser base, anti-seep control, trash rack cleanout elevation, and anti-vortex device.
5. Runoff calculations for 1 and 10-year frequency storms, if required.
6. Storage Computations
 - A. Zones total required
 - B. Zones total Available
 - C. Elevation of sediment at which cleanout shall be required; also stated as a distance from the riser

Appendix 14 | NYSDEC Bluebook Appendices E & F

APPENDIX E

EROSION AND SEDIMENT CONTROL PLAN REVIEW CHECKLIST

Project Name _____ Site Location _____

Applicant's Name & Address _____

General

A narrative statement shall be provided that describes the proposed project nature and purpose; the existing site conditions including topography, vegetation and drainage; adjacent and off-site areas affected by the project; description of the soils on the site and key properties; notations of critical areas such as steep slopes, channels or wetlands; the overall phasing, sequencing and stabilization plan; total disturbed area and, areas not to be disturbed, and soil restoration plan.

I. Construction Drawings

Are the following items shown on the construction drawings:	<u>Yes</u>	<u>No</u>
1. Vicinity Map with scale and north arrow	_____	_____
2. Legend, scales, N arrow on plan view	_____	_____
3. Existing and proposed topography shown with contours labeled with spots elevations in critical areas	_____	_____
4. Scope of the plan noted in the Title Block	_____	_____
5. Limits of clearing and grading shown , and methods of spoil disposal	_____	_____
6. Existing vegetation delineated	_____	_____
7. Soil boundaries shown on the existing and proposed plan views	_____	_____
8. Existing drainage patterns, 100 year floodplain and sub-areas shown, runoff outfall locations identified	_____	_____
9. Existing and proposed development facilities/ improvements shown	_____	_____
10. Location of Erosion and Sediment control practices as phased with construction, with dimensions and material specifications	_____	_____
11. Phasing plan with 5 acre threshold limits shown	_____	_____
12. Stockpile locations, staging areas, access points, and concrete trunk washout locations clearly defined	_____	_____
13. Street profiles, utility locations, property boundaries and, easement delineations shown	_____	_____
14. Soil Restoration Plan detailed on the site plan	_____	_____

II.	<u>Construction Notes & Details</u>	<u>Yes</u>	<u>No</u>
	1. Specific sequence of operation given for each phase	_____	_____
	2. Inspection and maintenance schedule shown for the specific practices	_____	_____
	3. Design details show all dimensions and installation details necessary for construction	_____	_____
	4. Implementation schedule for E&S practices is provided with removal criteria stated	_____	_____
	5. Site pollution and construction waste management plan incorporated in the notes	_____	_____
	6. Site Inspections during construction are noted on the drawings and are in accordance with the General Permit for Stormwater Discharges from Construction Activities	_____	_____

III. Erosion & Sediment Control Practices

A.	General	<u>Yes</u>	<u>No</u>
	1. Practice meets purpose and design criteria	_____	_____
	2. Standard details and construction notes are provided	_____	_____
	3. Special timing of practice noted if applicable	_____	_____
	4. Provisions for traffic crossings shown on the drawings where necessary	_____	_____

B.	Practices Controlling Runoff	<u>Yes</u>	<u>No</u>
	1. Positive drainage is maintained with contributing drainage area shown	_____	_____
	2. Flow grades properly stabilized	_____	_____
	3. Adequate outlet or discharge condition stabilized	_____	_____
	4. Necessary dimensions, gradations, calculations, and materials shown	_____	_____

C.	Practices Stabilizing Soil	<u>Yes</u>	<u>No</u>
	1. Seeding rates and areas properly shown on the drawings	_____	_____
	2. Mulch materials and rates specified on the drawings	_____	_____
	3. Sequencing and timing provisions limit soil exposure to 7 to 14 days as appropriate	_____	_____

C. Practices Stabilizing Soil (cont'd)	<u>Yes</u>	<u>No</u>
4. Rolled Erosion Control Products (RECP's) used are specified to location and appropriate weight/tie down	_____	_____
5. All soil seed bed preparation and amendments are specified on the drawings or in the specifications	_____	_____
6. The seeding dates are specified to cover the entire year for both temporary and permanent seedings	_____	_____
7. Maximum created slopes are no steeper than 2 foot horizontal to 1 foot vertical with Cut and Fill slopes shown	_____	_____

D. Practices Controlling Sediment	<u>Yes</u>	<u>No</u>
1. Sediment traps/basins are sized in accordance with criteria	_____	_____
2. The contributing drainage area is shown on the grading plan	_____	_____
3. All scaled dimensions and volumes are shown on the plan	_____	_____
4. Maintenance requirements and clean out elevations established for all sediment control practices (50% capacity)	_____	_____
5. All access points of the project are shown to be stabilized	_____	_____
6. Storm drain inlets adequately protected	_____	_____
7. Buffer filter strips are appropriately sited and installed	_____	_____
7. Silt fences are shown on the contour lines with no more than one quarter acre per 100 foot drainage to it	_____	_____
8. Temporary sediment traps are not being used at locations of future stormwater infiltration facilities	_____	_____
9. Dewatering devices for traps and basins are adequately designed with details shown on the plans	_____	_____
10. Geotextile filter bags are properly sited, sized, and have their maintenance requirements detailed on the drawings	_____	_____
11. Turbidity curtains are properly located with installation, anchoring, and maintenance details shown on the plans	_____	_____

Additional Comments and Notes

Plan Reviewed By: _____ Date: _____

APPENDIX F
CONSTRUCTION SITE INSPECTION
AND MAINTENANCE LOG BOOK

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION
ACTIVITIES

SAMPLE CONSTRUCTION SITE LOG BOOK

Table of Contents

- I. Pre-Construction Meeting Documents
 - a. Preamble to Site Assessment and Inspections
 - b. Pre-Construction Site Assessment Checklist

- II. Construction Duration Inspections
 - a. Directions
 - b. Modification to the SWPPP

I. PRE-CONSTRUCTION MEETING DOCUMENTS

Project Name _____
Permit No. _____ **Date of Authorization** _____
Name of Operator _____
Prime Contractor _____

a. Preamble to Site Assessment and Inspections

The Following Information To Be Read By All Person’s Involved in The Construction of Stormwater Related Activities:

The Operator agrees to have a qualified inspector¹ conduct an assessment of the site prior to the commencement of construction² and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State’s standards and meets all Federal, State and local erosion and sediment control requirements. A preconstruction meeting should be held to review all of the SWPPP requirements with construction personnel.

When construction starts, site inspections shall be conducted by the qualified inspector at least every 7 calendar days. The Operator shall maintain a record of all inspection reports in this site logbook. The site logbook shall be maintained on site and be made available to the permitting authorities upon request.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified inspector perform a final site inspection. The qualified inspector shall certify that the site has undergone final stabilization³ using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

1 Refer to “Qualified Inspector” inspection requirements in the current SPDES General Permit for Stormwater Discharges from Construction Activity for complete list of inspection requirements.
2 “Commencement of construction” means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.
3 “Final stabilization” means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

b. Pre-construction Site Assessment Checklist
(NOTE: Provide comments below as necessary)

1. Notice of Intent, SWPPP, and Contractors Certification:

Yes No NA

- Has a Notice of Intent been filed with the NYS Department of Conservation?
- Is the SWPPP on-site? Where? _____
- Is the Plan current? What is the latest revision date? _____
- Is a copy of the NOI (with brief description) onsite? Where? _____
- Have all contractors involved with stormwater related activities signed a contractor's certification?

2. Resource Protection

Yes No NA

- Are construction limits clearly flagged or fenced?
- Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
- Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

3. Surface Water Protection

Yes No NA

- Clean stormwater runoff has been diverted from areas to be disturbed.
- Bodies of water located either on site or in the vicinity of the site have been identified and protected.
- Appropriate practices to protect on-site or downstream surface water are installed.
- Are clearing and grading operations divided into areas <5 acres?

4. Stabilized Construction Access

Yes No NA

- A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
- Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
- Sediment tracked onto public streets is removed or cleaned on a regular basis.

5. Sediment Controls

Yes No NA

- Silt fence material and installation comply with the standard drawing and specifications.
- Silt fences are installed at appropriate spacing intervals
- Sediment/detention basin was installed as first land disturbing activity.
- Sediment traps and barriers are installed.

6. Pollution Prevention for Waste and Hazardous Materials

Yes No NA

- The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
- The plan is contained in the SWPPP on page _____
- Appropriate materials to control spills are onsite. Where? _____

II. CONSTRUCTION DURATION INSPECTIONS

a. Directions:

Inspection Forms will be filled out during the entire construction phase of the project.

Required Elements:

- 1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;
- 2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;
- 3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;
- 4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);
- 5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and
- 6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

SITE PLAN/SKETCH

Inspector (print name)

Date of Inspection

Qualified Inspector (print name)

Qualified Inspector Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality

Yes No NA

- Is there an increase in turbidity causing a substantial visible contrast to natural conditions at the outfalls?
- Is there residue from oil and floating substances, visible oil film, or globules or grease at the outfalls?
- All disturbance is within the limits of the approved plans.
- Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions

Yes No NA

- Is construction site litter, debris and spoils appropriately managed?
- Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- Is construction impacting the adjacent property?
- Is dust adequately controlled?

2. Temporary Stream Crossing

Yes No NA

- Maximum diameter pipes necessary to span creek without dredging are installed.
- Installed non-woven geotextile fabric beneath approaches.
- Is fill composed of aggregate (no earth or soil)?
- Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

3. Stabilized Construction Access

Yes No NA

- Stone is clean enough to effectively remove mud from vehicles.
- Installed per standards and specifications?
- Does all traffic use the stabilized entrance to enter and leave site?
- Is adequate drainage provided to prevent ponding at entrance?

Runoff Control Practices

1. Excavation Dewatering

Yes No NA

- Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- Clean water from upstream pool is being pumped to the downstream pool.
- Sediment laden water from work area is being discharged to a silt-trapping device.
- Constructed upstream berm with one-foot minimum freeboard.

Runoff Control Practices (continued)

2. Flow Spreader

Yes No NA

- Installed per plan.
- Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

Yes No NA

- Installed per plan with minimum side slopes 2H:1V or flatter.
- Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- Sediment-laden runoff directed to sediment trapping structure

4. Stone Check Dam

Yes No NA

- Is channel stable? (flow is not eroding soil underneath or around the structure).
- Check is in good condition (rocks in place and no permanent pools behind the structure).
- Has accumulated sediment been removed?.

5. Rock Outlet Protection

Yes No NA

- Installed per plan.
- Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes No NA

- Stockpiles are stabilized with vegetation and/or mulch.
- Sediment control is installed at the toe of the slope.

2. Revegetation

Yes No NA

- Temporary seedings and mulch have been applied to idle areas.
- 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Silt Fence and Linear Barriers

Yes No NA

- Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
 - Joints constructed by wrapping the two ends together for continuous support.
 - Fabric buried 6 inches minimum.
 - Posts are stable, fabric is tight and without rips or frayed areas.
- Sediment accumulation is ___% of design capacity.

Sediment Control Practices (continued)

2. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated; Filter Sock or Manufactured practices)

Yes No NA

- Installed concrete blocks lengthwise so open ends face outward, not upward.
 - Placed wire screen between No. 3 crushed stone and concrete blocks.
 - Drainage area is 1acre or less.
 - Excavated area is 900 cubic feet.
 - Excavated side slopes should be 2:1.
 - 2" x 4" frame is constructed and structurally sound.
 - Posts 3-foot maximum spacing between posts.
 - Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
 - Posts are stable, fabric is tight and without rips or frayed areas.
 - Manufactured insert fabric is free of tears and punctures.
 - Filter Sock is not torn or flattened and fill material is contained within the mesh sock.
- Sediment accumulation ___% of design capacity.

3. Temporary Sediment Trap

Yes No NA

- Outlet structure is constructed per the approved plan or drawing.
 - Geotextile fabric has been placed beneath rock fill.
 - Sediment trap slopes and disturbed areas are stabilized.
- Sediment accumulation is ___% of design capacity.

4. Temporary Sediment Basin

Yes No NA

- Basin and outlet structure constructed per the approved plan.
 - Basin side slopes are stabilized with seed/mulch.
 - Drainage structure flushed and basin surface restored upon removal of sediment basin facility.
 - Sediment basin dewatering pool is dewatering at appropriate rate.
- Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design. All practices shall be maintained in accordance with their respective standards.

Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

Appendix 15 | Operation & Maintenance Plan

(To be provided prior to Final SWPPP Approval)

Appendix 16 | Notice of Termination (NOT)

**New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505**

(NOTE: Submit completed form to address above)

**NOTICE OF TERMINATION for Storm Water Discharges Authorized
under the SPDES General Permit for Construction Activity**

Please indicate your permit identification number: NYR _____

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person:

4a. Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. *Date final stabilization completed (month/year): _____

9b. Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR _____

(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? yes no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? yes no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

**NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued**

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? yes no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

- Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.
- Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).
- For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.
- For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____
(acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? yes
 no
(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:
(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:

Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

Appendix 17 | Soil Erosion & Sediment Control Plans and Details

Appendix 18 | Existing & Proposed Drainage Area Maps

