Colliers Engineering & Design

Stormwater Pollution Prevention Plan

September 3, 2024

Last Revised June 5, 2026

Neelytown Business Park Development
296 Neelytown Road
Town of Montgomery, Orange County, New York

Prepared for:

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1.0 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 (Design Point 1). The wetlands ultimately discharge from the site through a backpitched pipe which runs under Neelytown Road in the southern corner of the site. As the wetlands retain runoff before discharging through this pipe, the wetlands have been modeled as a ponding area. The remainder of the runoff flows overland to various design points identified along Beaver Dam Road including multiple culverts across the road (Design Points 2 – 4). All of the site runoff is ultimately conveyed to the Beaver Dam Brook.

The overall watershed flowing to Design Point 1 has been divided into two (2) sub-watersheds. Sub-watershed Wetlands / Undisturbed Area consists primarily of the wetlands area itself, which is characterized by poor draining HSG D soils. Sub-watershed Existing Drainage Area 1 consists primarily of the upland area draining to the wetlands that is proposed to be developed, which is characterized by well-draining HSG A and B soils. This division of the watershed allows a more accurate model of the existing peak flows to Design Point 1 by lessening the effect of the weighted CN value that occurs when very well draining and very poorly draining areas are combined into a single drainage area.

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	
Phase	**Area of Disturbance (acres)**
0	± 2.08
1	± 11.94
2	± 9.56
3	± 15.96
4	± 14.29
5	± 6.74
6	± 8.55
7	± 16.06
8	± 2.48
Total	**85.14**

2.0 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

Predevelopment			
Watershed	**Area, SF**	**CN**	**Tc, Min**
Wetlands / Undeveloped Areas to DP-1	1,182,741	73	47.1
EDA-1	796,527	52	56.9
EDA-2	822,574	44	55.9
EDA-3	690,451	52	49.9
EDA-4	946,387	54	22.8
EDA-5	459,922	56	21.0
Total	**4,898,602**	**56**	**-**

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	47.1
PDA-1A	108,164	85	6.0
PDA-1B	398,274	86	6.0
PDA-1B-FB	16,395	39	6.0

PDA-1B-IB	33,078	40	6.0
PDA-1C	112,511	90	6.0
PDA-1D	153,719	91	6.0
PDA-1E	17,321	95	6.0
PDA-1F	250,816	81	6.0
PDA-1G	416,900	98	6.0
PDA-1G-FB	17,215	39	6.0
PDA-1G-IB	27,422	45	6.0
PDA-1H	433,100	98	6.0
PDA-1H-FB	19,432	39	6.0
PDA-1H-IB	39,736	39	6.0
PDA-1I	172,961	82	6.0
PDA-1I-B	31,544	39	6.0
PDA-1J	218,370	98	6.0
PDA-1J-B	33,984	53	6.0
PDA-1i+J-FB	13,894	47	6.0
PDA-1K	26,597	44	6.0
PDA-2U	74,849	52	6.0
PDA-3U	54,725	39	6.0
PDA-4A	104,546	69	6.0
PDA-4B	232,321	84	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**	**78**	**-**

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	7.67	7.67	0	0.00%
	10	24.48	24.10	-0.38	-1.55%
	25	33.42	33.58	+0.16	+4.79%
	100	44.63	44.62	-0.01	-0.00%
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	0.11	0.00	-0.11	-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	-92.77%
DP 4	1	0.28	0.22	-0.06	-21.43%
	10	10.04	7.50	-2.54	-25.30%
	25	20.86	18.35	-2.51	-12.03%
	100	48.25	42.50	-5.75	-11.92%
DP 5	1	0.24	0.14	-0.10	-41.67%
	10	6.23	3.09	-3.14	-50.40%
	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.

3.0 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. The wetlands ultimately discharge from the site through a back pitched pipe, which runs under Neelytown Road in the southern corner of the 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 requires 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 0.11 cfs in the existing condition to 0.00 cfs in the proposed condition at Design Point 2, which is a 100.00% 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 4: 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.

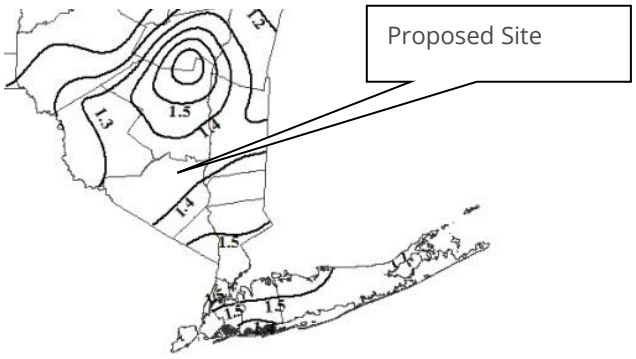
Disconnection of Rooftop Runoff	
Direct runoff from rooftop areas and upland overland runoff flow to designated pervious areas to reduce runoff volumes and rates.	All roof runoff is directed to an associated infiltration basin and all other runoff generated from impervious areas is directed to bioretention 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:

$WQ_v = [(P)(R_v)(A)] /12$
$Rv = 0.05+0.009(I)$
I = Impervious Cover (Percent)
Minimum Rv = 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 "Rv" in the computation of Water Quality Volume WQv 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 5: 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 Rv	Required WQv (Cf)	Provided WQv (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	4.70	2.28	49%	0.49	11,623	11,623
PDA-1J	1.40	6.10	5.01	82%	0.79	24,465	24,465
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
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	51.90	46%	0.47	265,956	306,877

TABLE 6: Water Quality Volume Treated Per Practice

Practice	Runoff Reduction (cf)
PDA-1A (Bioretention Basin)	3,906
PDA-1B (Infiltration Basin)	31,319
PDA-1C (Infiltration Basin)	8,975
PDA-1D +1E (Bioretention Basin)	6,728
PDA-1F (Bioretention Basin)	8,181
PDA-1G (Infiltration Basin)	46,465
PDA-1H (Infiltration Basin)	49,052
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	192,115

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 56,304 cf of RRV and the four infiltration basins provide a total of 135,811 cf of RRv for a net total of 192,115 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

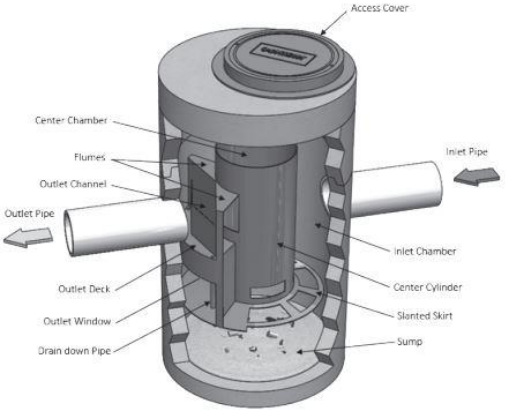
A stormwater hotspot is defined by NYSDEC as a land use or activity that generates higher concentrations of hydrocarbons, trace metals or toxicants than are found in typical stormwater runoff, based on monitoring studies. If an area of a site is designated a hotspot, stormwater runoff cannot be allowed 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 MTFRs

Model	Manhole Diameter (ft)	MTFR (cfs)	50% Maximum Sediment Storage Area Volume (ft^3)
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



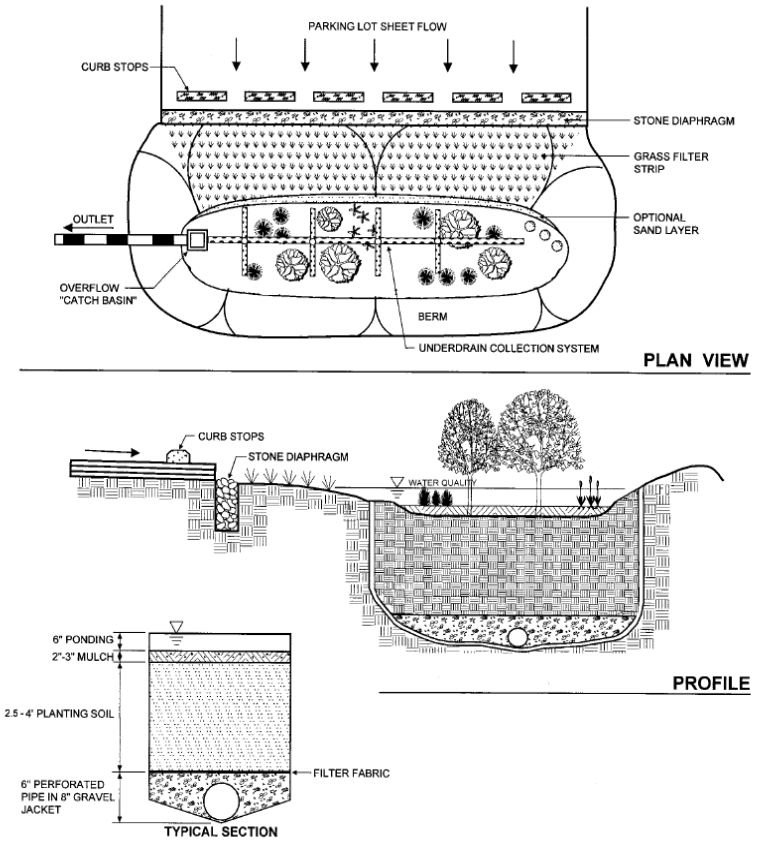
Bioretention Areas

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)



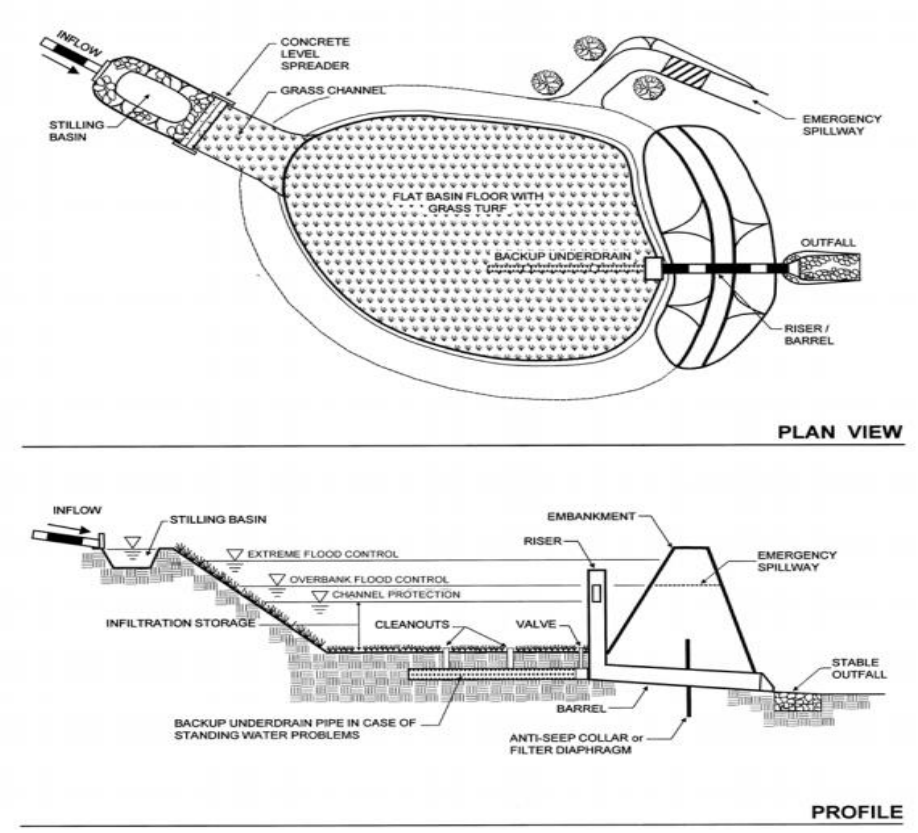
Infiltration Basins

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.

Figure 6.12 Infiltration Basin (I-2)



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 southwest side of the project site. The vegetated areas consist of woods, brush, and grass, and the wooded areas consist 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 10-20-20 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 repairs needed 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 include 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 areas. 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 areas. 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. <u>This is to ensure that no more than 18 acres of land is disturbed at any one time.</u>

<u>Phase 6:</u> Proposed stormwater management and Building 1 passenger parking construction
Total Limit of Disturbance: 7.61 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 6.

3. Clear stumps and any remaining vegetation within the limits of phase 6.
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 6 and temporary sediment trap 5 and 6. Temporary sediment basins shall be graded to the bottom of the gravel layer in the future proposed bioretention 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 6.
10. Excavate for utility trenching, and stormwater trenching. repeat previous 2 steps.
11. Install utility and stormwater pipes/structures located within phase 6 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 6, stabilize roads with gravel.
14. Construct building foundation and structure within the limits of phase 6.
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 7 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 x A x D = 0.4 x 8,205 SF x 1 ft = 3,282 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 x 8,205 SF X 3 = 9,486 cf) which is more than the 6,696 cf (1.86 x 3600 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 x A x D = 0.4 x 7,892 SF x 1 ft = 3,157 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 x 7,892 SF X 3 = 9,470 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 x 12,593 SF X 1 = 9,470 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 x 12,593 SF X 3 = 9,470 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 x 12,593 SF X 1 = 5,460 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 x 12,593 SF X 3 = 16,380 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 traps 5 and 6 have a storage volume of 4,635 cubic feet (V = 0.4 x 11,589 SF X 1 = 4,635 cf) and 5,639 cubic feet (V = 0.4 x 14,097 SF X 1 = 5,639 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 x 11,589 SF X 3 = 13,910 cf) and 16,916 cubic feet (V = 0.4 x 14,097 SF X 3 = 16,916 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 x 4,305 SF X 1 = 1,722 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 x 4,305 SF X 3 = 5,166 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 and 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 limit 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 periods 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 and Responsibilities of Owner/Operator, Qualified Inspector, and 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 implemented and maintained in effective operating conditions. 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 and 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.

4.0 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.

Colliers Engineering & Design

Appendix

Appendix 1 | USGS Quad Map

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

MAYBROOK QUADRANGLE
NEW YORK - ORANGE COUNTY
7.5-MINUTE SERIES



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
Roads..... U.S. Census Bureau, 2016
Names.....GNIS, 1980 - 2019
Hydrography.....National Hydrography Dataset, 1899 - 2016
Contours.....National Elevation Dataset, 2016
Boundaries.....Multiple sources; see metadata file 2017 - 2018

Wetlands.....FWS National Wetlands Inventory 1984 - 2011

MN
GN
12°56′ 230 MILS
0°32′ 9 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
WL
Grid Zone Designation 18T

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

NEW YORK
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 Pine Bush
2 Walden
3 Newburgh
4 Goshen
5 Cornwall-on-Hudson
6 Warwick
7 Monroe
8 Popolopen Lake
ADJOINING QUADRANGLES

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

MAYBROOK, NY
2019

NSN 7643016386900
NGA REF NO. USGSX24K28120

Appendix 2 | NRCS Web Soil Survey Output

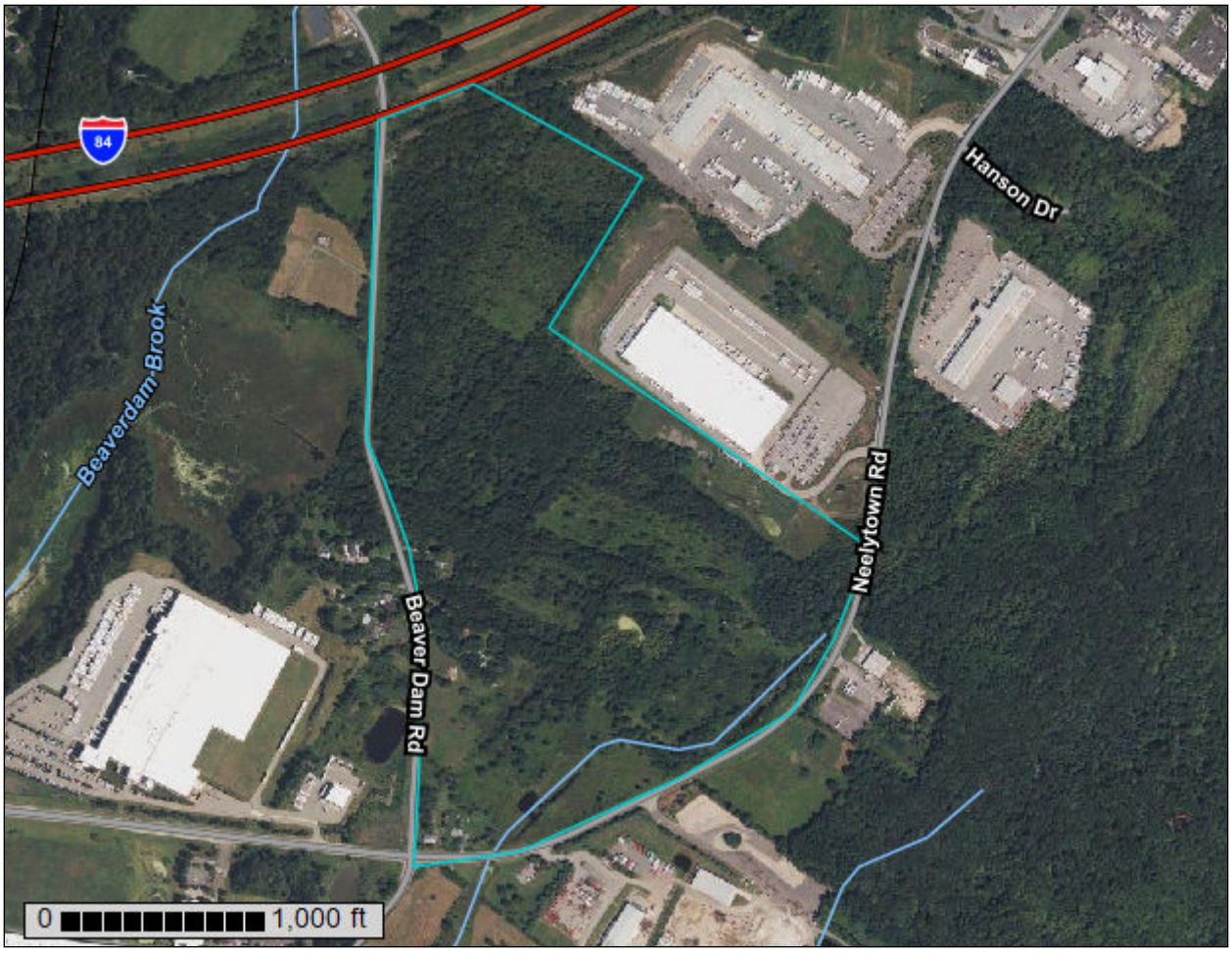
United States Department of Agriculture

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



November 21, 2022

Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map



Map Scale: 1:6,860 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil 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

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.

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

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)

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

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)

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

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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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, N/NGS12
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 Sate Office of Cyber Security & Critical Infrastructure Coordination. This information was provided as 30-centimeter and 60-centimeter resolution natural color orthoimagery 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.
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

A — A	Cross section line
3 — 3	Limited detail cross section line
23 — 23	Transect line
87°07'45", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
4376000mN	1000-meter Universal Transverse Mercator grid values, zone 18N
600000 FT	5000-foot grid ticks: New York State Plane coordinate system, East zone (FIPSZONE 3101), Transverse Mercator projection
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
● M1.5	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.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0301E

FIRM

FLOOD INSURANCE RATE MAP

for ORANGE COUNTY, NEW YORK
(ALL JURISDICTIONS)

CONTAINS:

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

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

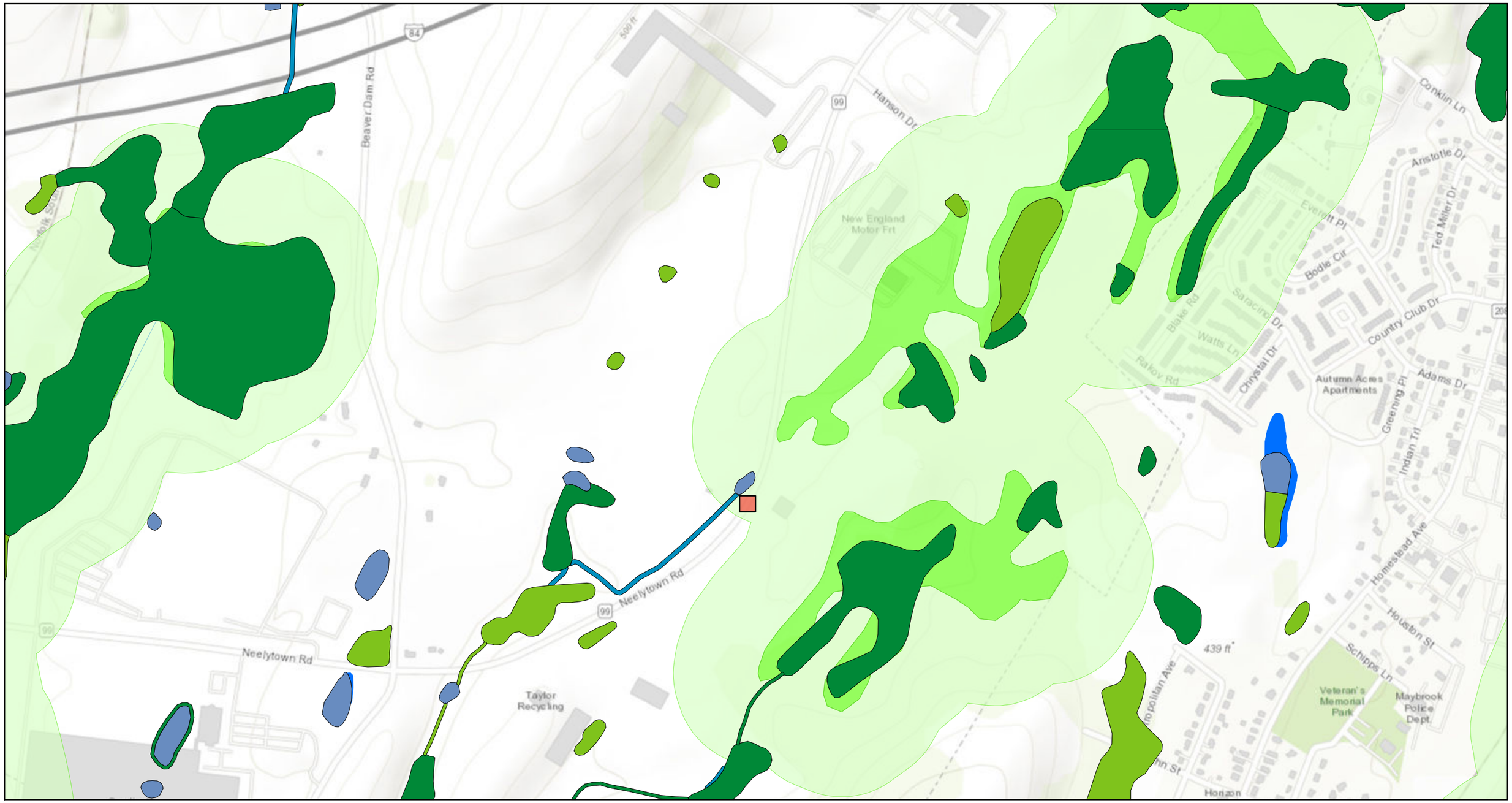
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
36071C0301E

EFFECTIVE DATE
AUGUST 3, 2009

Federal Emergency Management Agency

Environmental Resource Mapper



November 30, 2021

1:9,028

0 0.07 0.15 0.3 mi

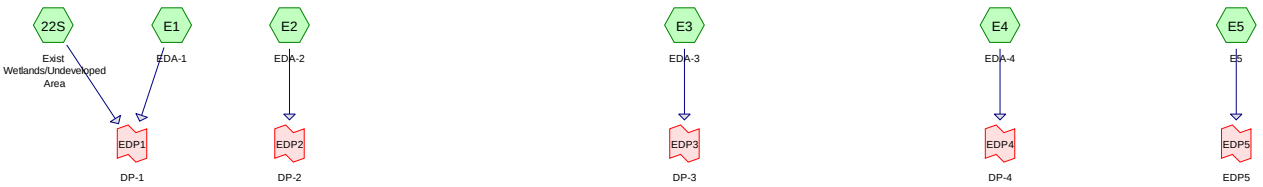
0 0.13 0.25 0.5 km

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

NYS Department of Environmental Conservation
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Colliers Engineering & Design

Appendix 4 | Pre-Construction Stormwater Modeling Schematic & Output



Subcat Reach Pond Link

Routing Diagram for 240814_RDM Neelytown Drainage
Prepared by Colliers Engineering & Design, Printed 7/24/2024
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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)
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**

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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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Summary for Subcatchment 22S: Exist Wetlands/Undeveloped Area

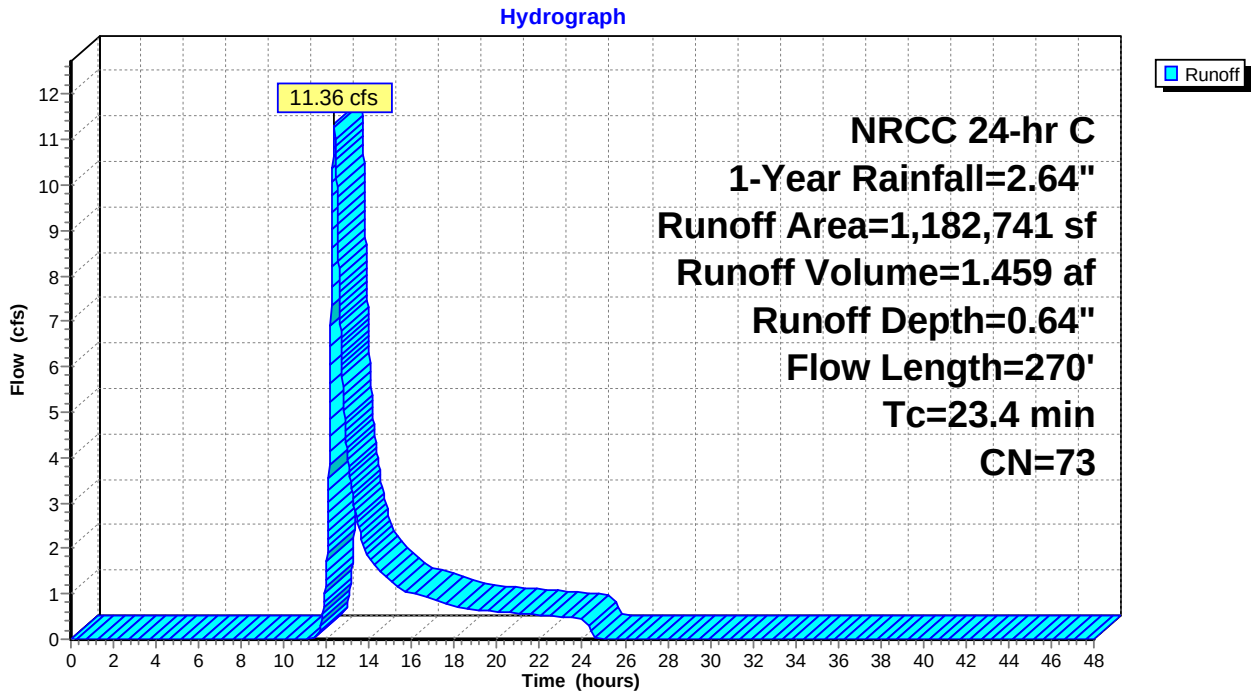
Runoff = 11.36 cfs @ 12.36 hrs, Volume= 1.459 af, Depth= 0.64"
Routed to Link EDP1 : DP-1

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



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Hydrograph for Subcatchment 22S: Exist Wetlands/Undeveloped Area

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

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Summary for Subcatchment E1: EDA-1

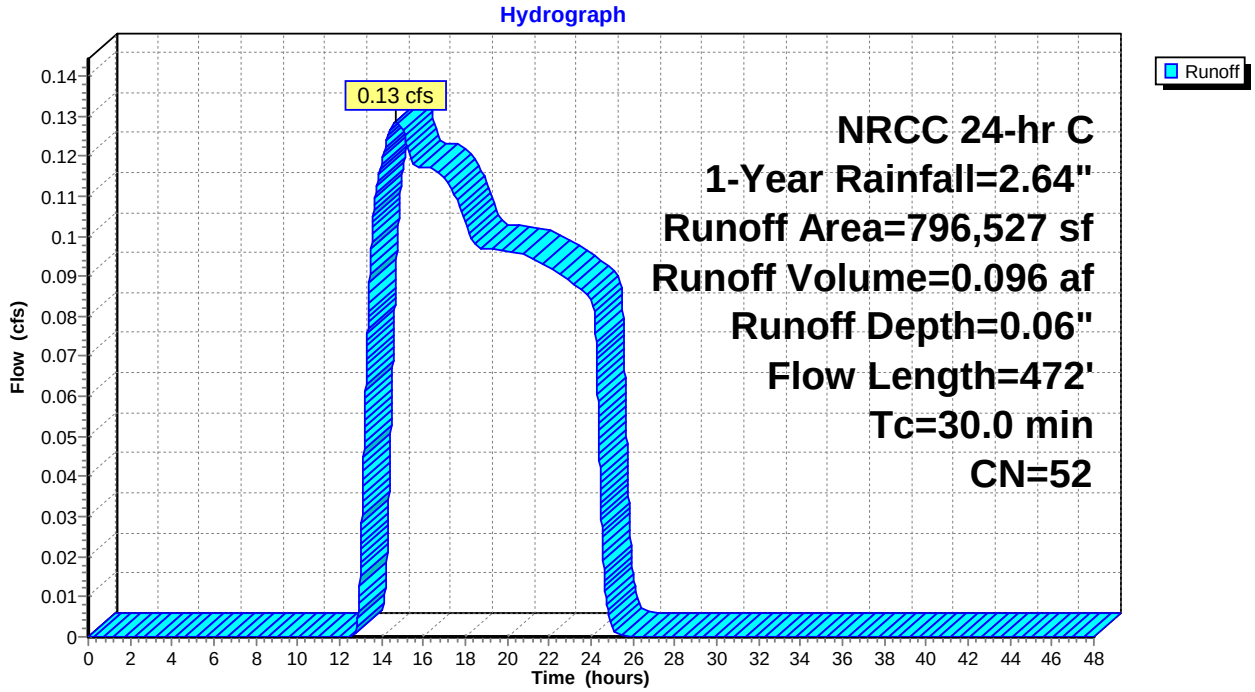
Runoff = 0.13 cfs @ 14.70 hrs, Volume= 0.096 af, Depth= 0.06"
Routed to Link EDP1 : DP-1

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



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Hydrograph for Subcatchment E1: EDA-1

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

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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

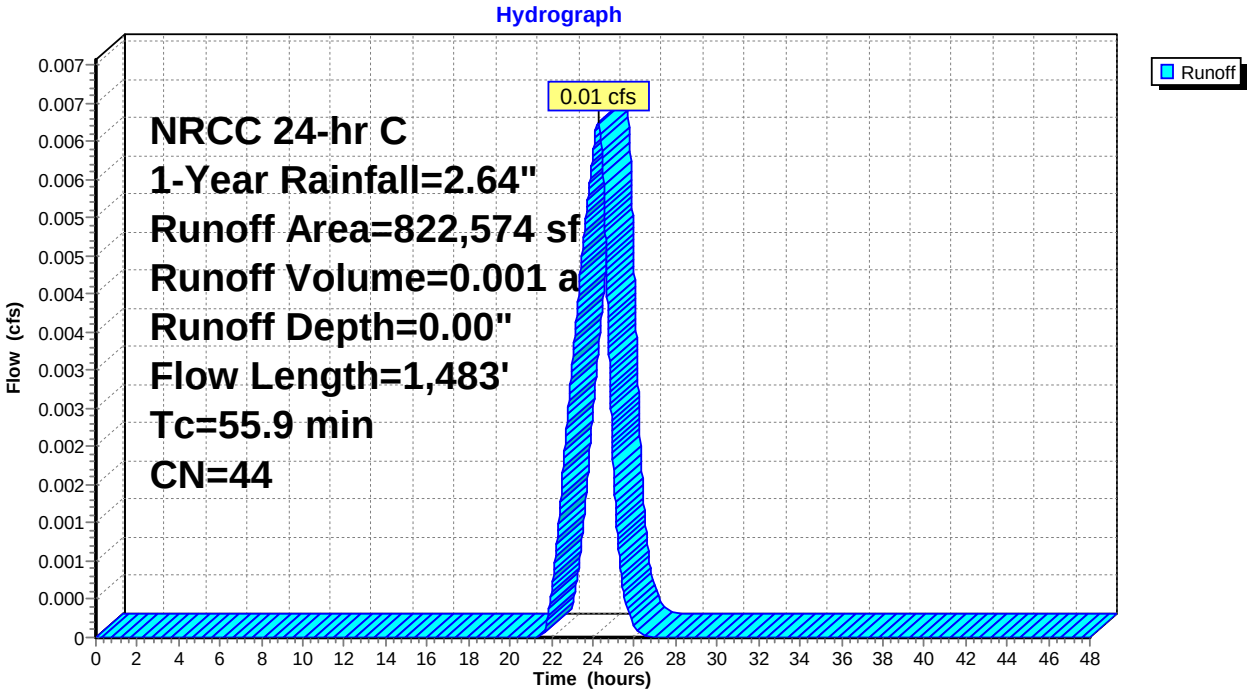
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 1-Year Rainfall=2.64"

	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			

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Subcatchment E2: EDA-2



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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				

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Summary for Subcatchment E3: EDA-3

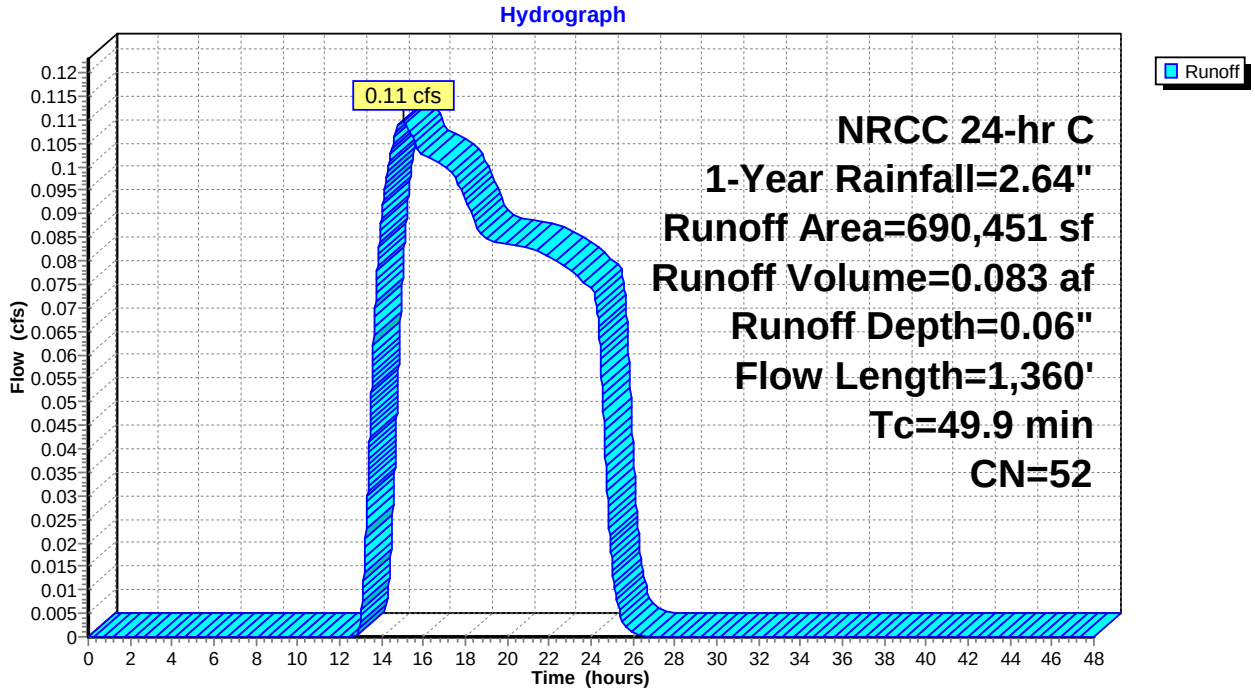
Runoff = 0.11 cfs @ 15.03 hrs, Volume= 0.083 af, Depth= 0.06"
Routed to Link EDP3 : DP-3

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



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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				

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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

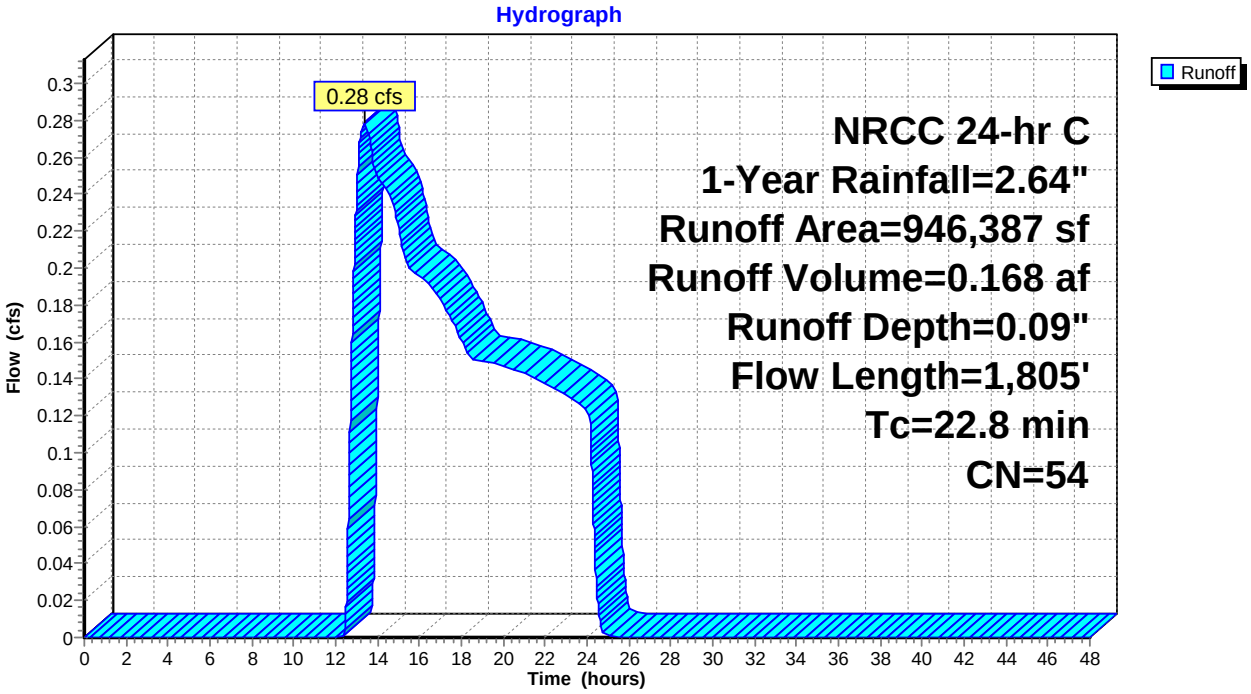
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 1-Year Rainfall=2.64"

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			

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Subcatchment E4: EDA-4



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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				

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Summary for Subcatchment E5: E5

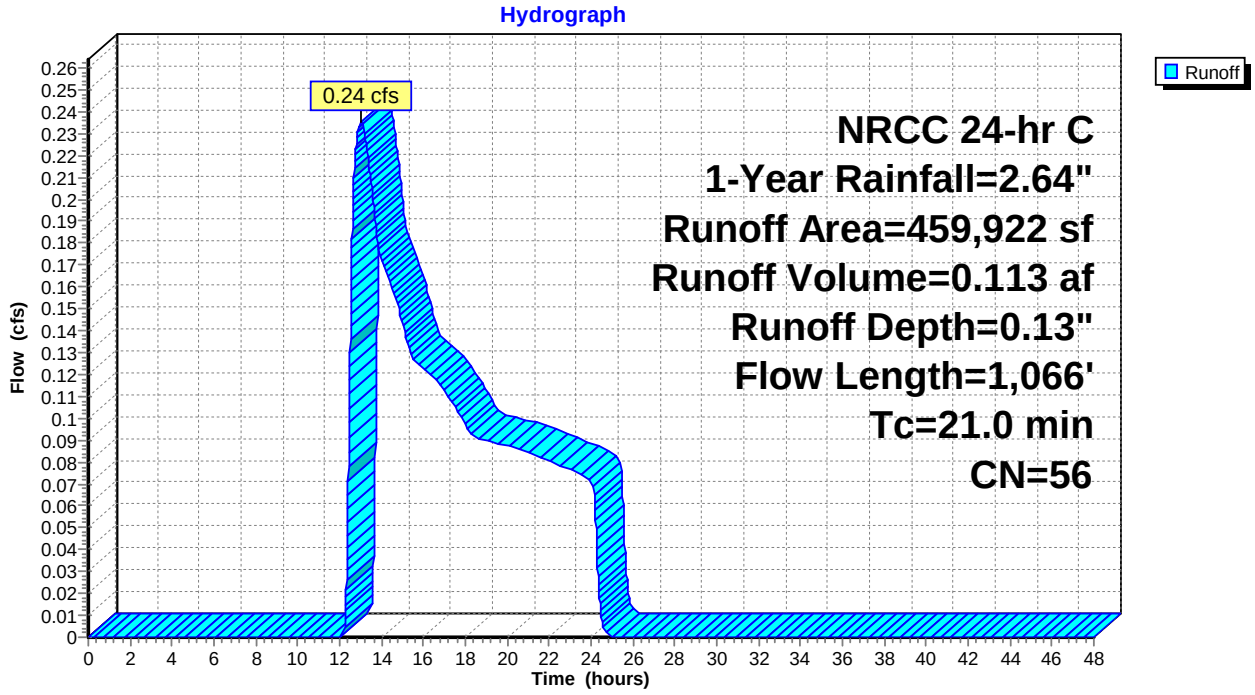
Runoff = 0.24 cfs @ 13.04 hrs, Volume= 0.113 af, Depth= 0.13"
Routed to Link EDP5 : EDP5

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



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Hydrograph for Subcatchment E5: E5

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

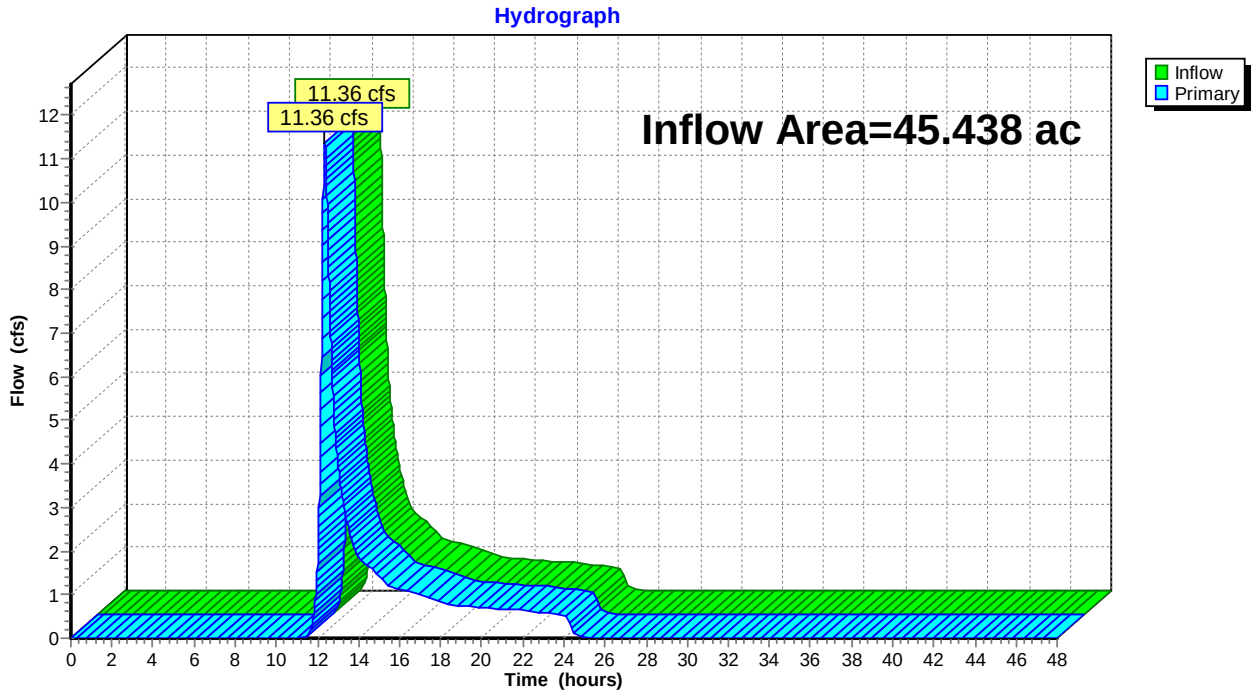
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Summary for Link EDP1: DP-1

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



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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				

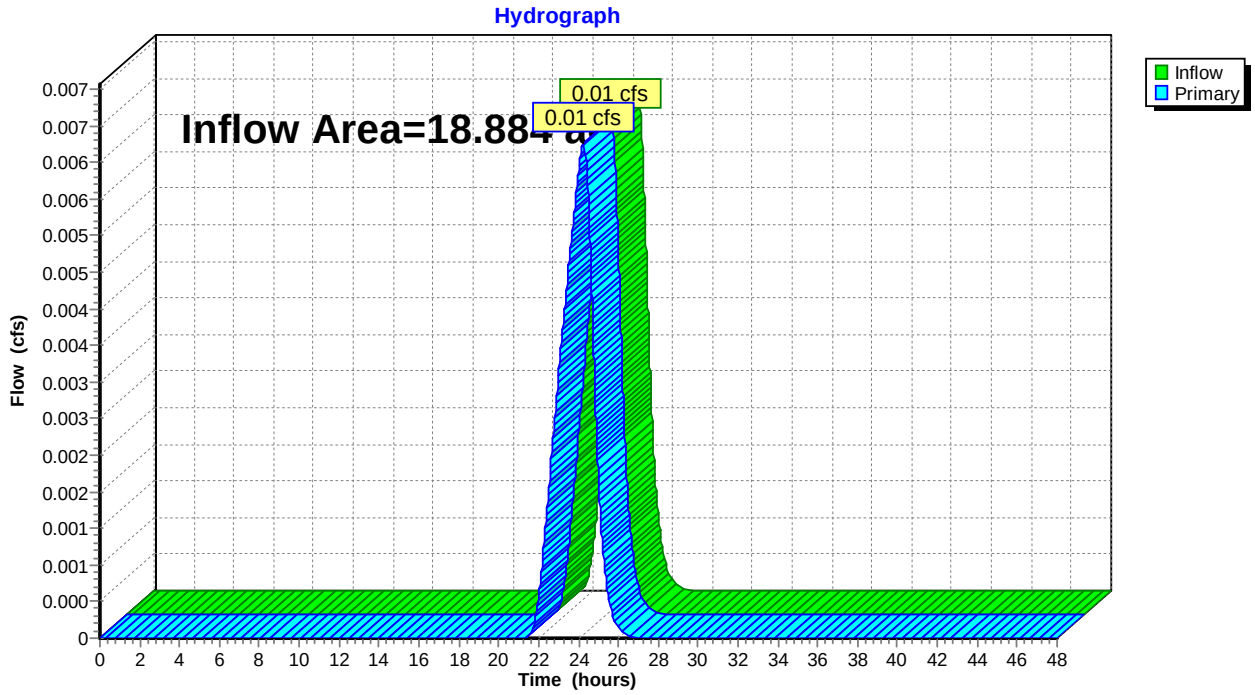
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Summary for Link EDP2: DP-2

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



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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				

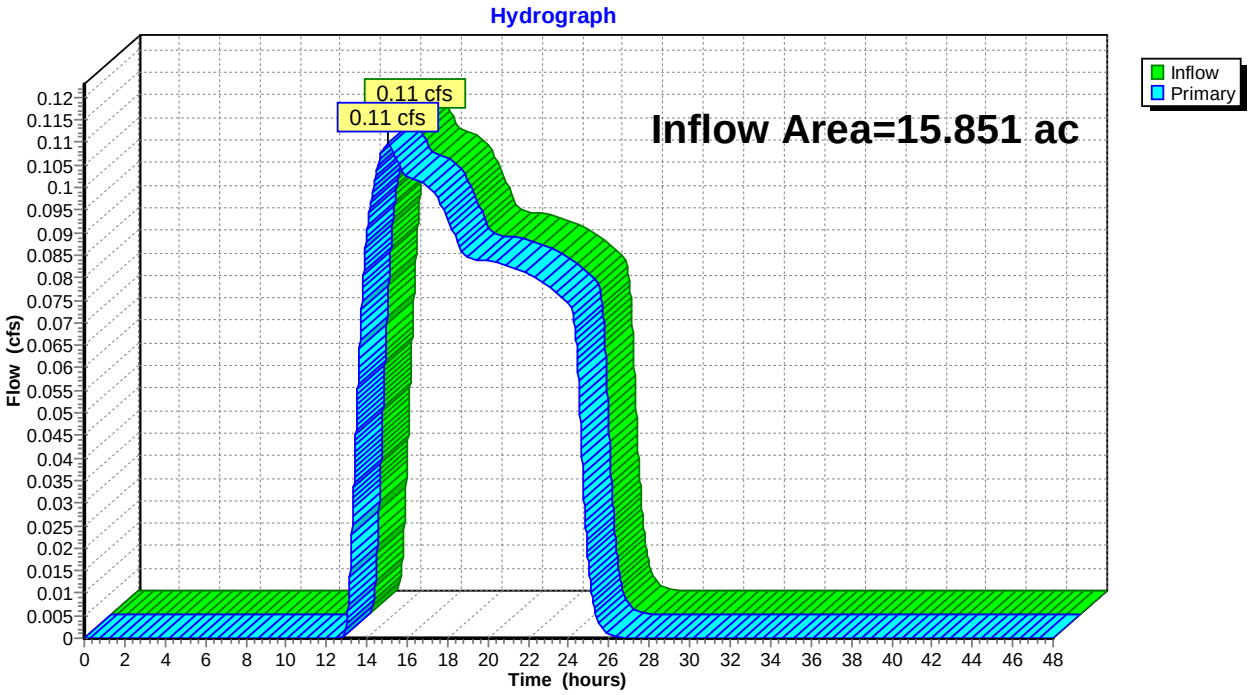
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Summary for Link EDP3: DP-3

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



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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				

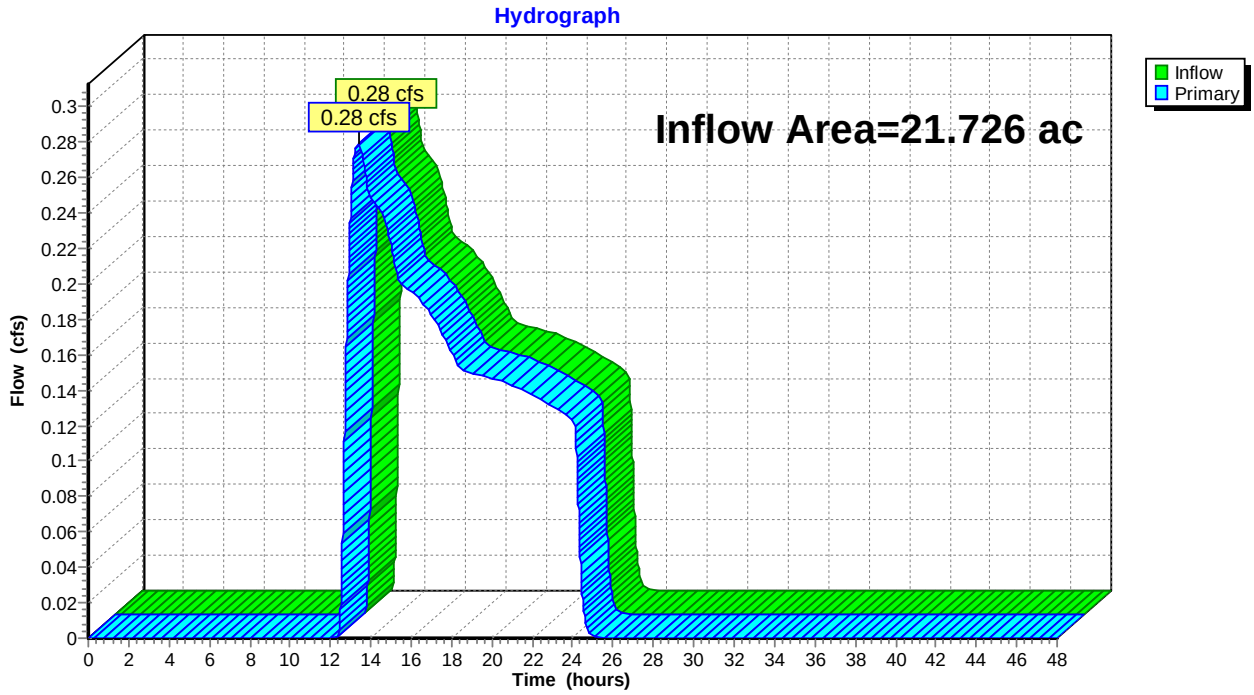
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Summary for Link EDP4: DP-4

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



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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				

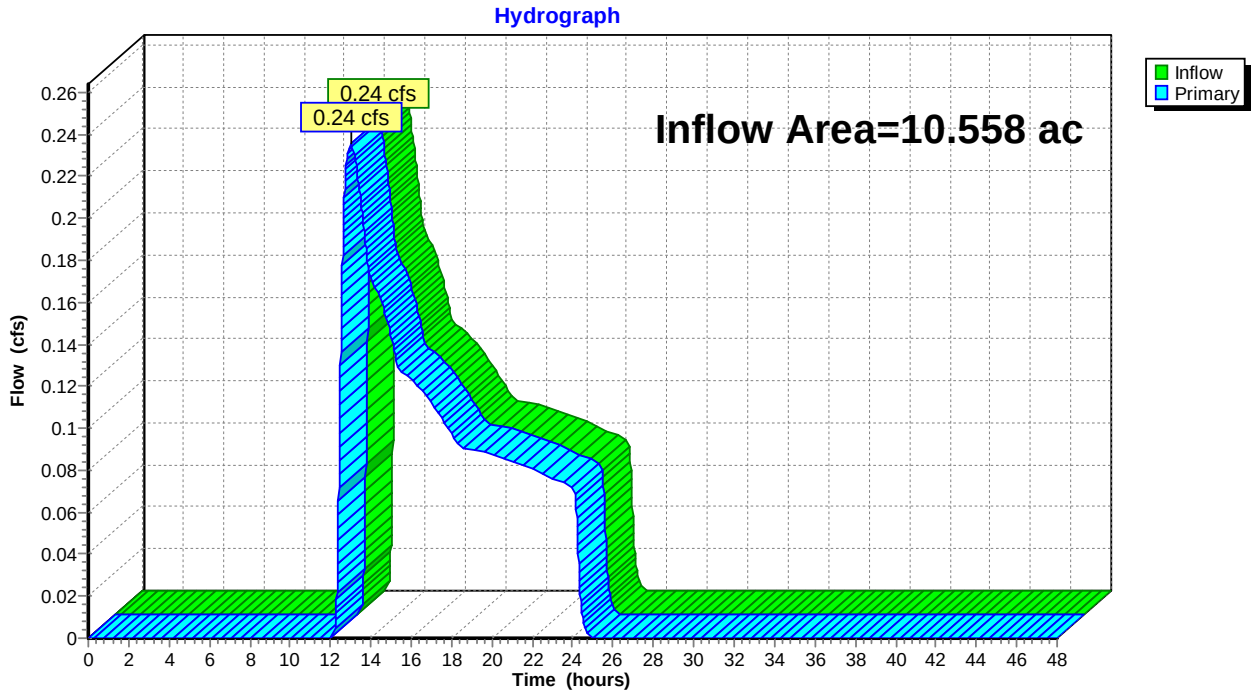
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Summary for Link EDP5: EDP5

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



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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				

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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

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Summary for Subcatchment 22S: Exist Wetlands/Undeveloped Area

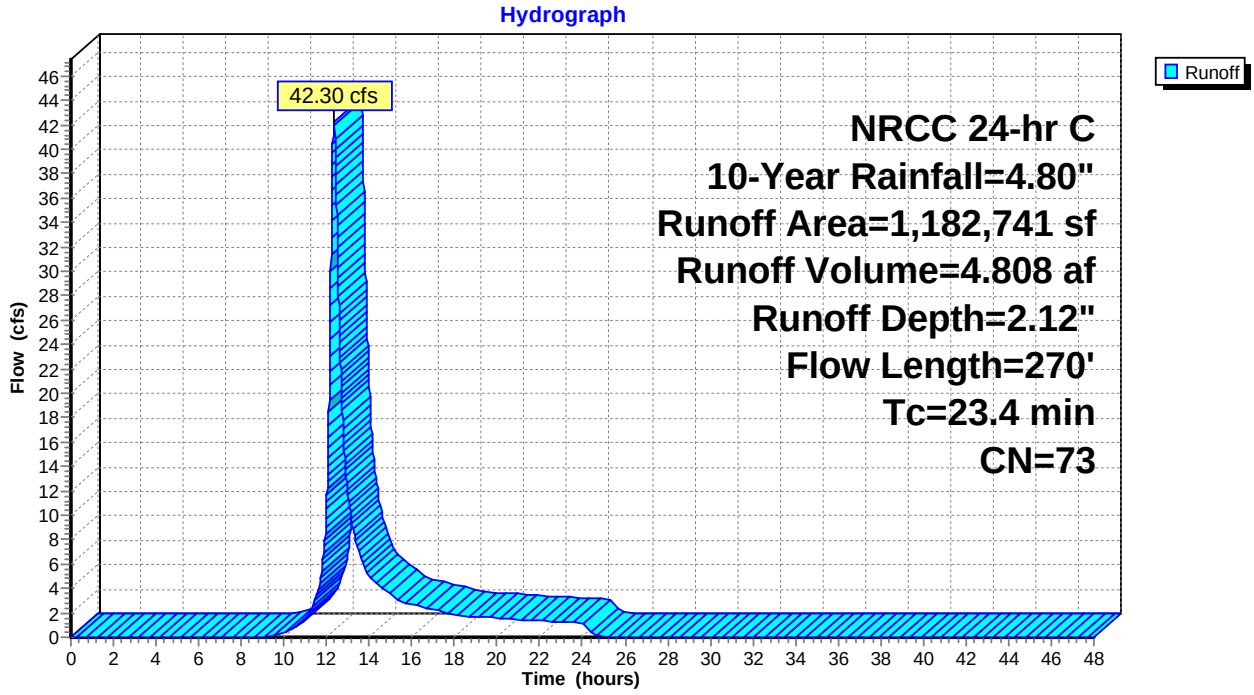
Runoff = 42.30 cfs @ 12.35 hrs, Volume= 4.808 af, Depth= 2.12"
Routed to Link EDP1 : DP-1

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



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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	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				

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Summary for Subcatchment E1: EDA-1

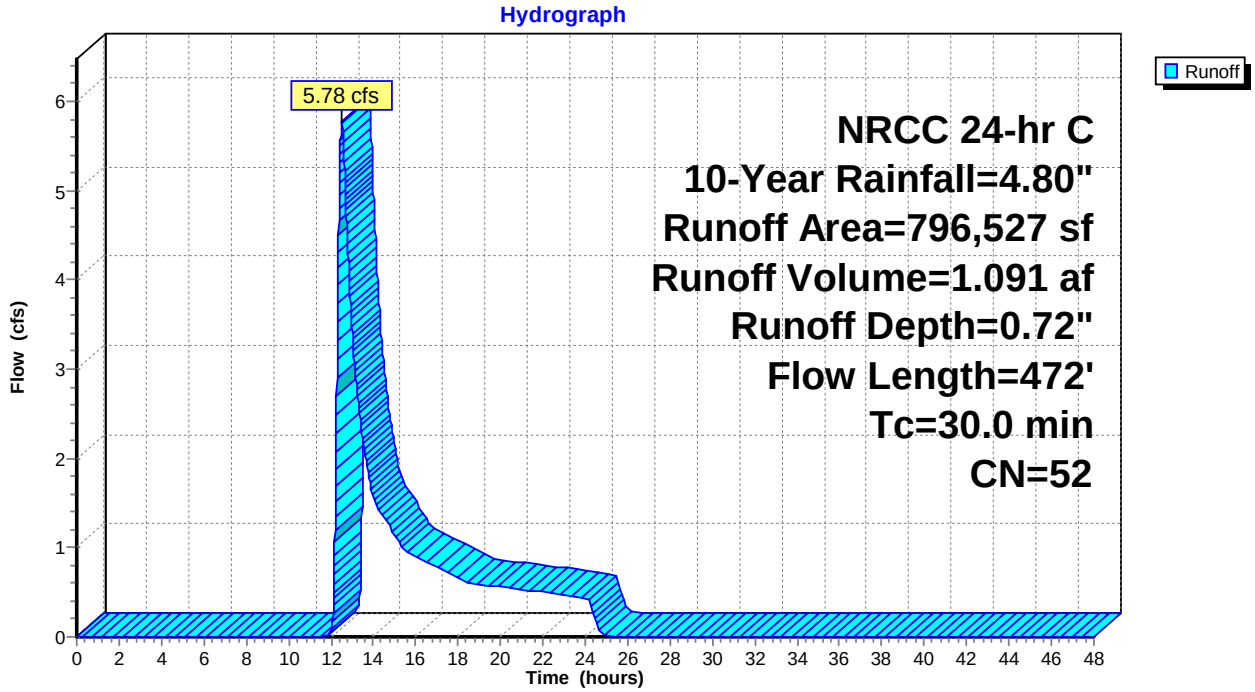
Runoff = 5.78 cfs @ 12.51 hrs, Volume= 1.091 af, Depth= 0.72"
Routed to Link EDP1 : DP-1

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



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Hydrograph for Subcatchment E1: EDA-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.00
10.00	0.95	0.00	0.00
10.50	1.07	0.00	0.00
11.00	1.24	0.00	0.00
11.50	1.50	0.00	0.00
12.00	2.29	0.02	0.03
12.50	3.30	0.20	**5.78**
13.00	3.56	0.27	**3.42**
13.50	3.73	0.32	2.22
14.00	3.85	0.36	1.57
14.50	3.95	0.39	1.33
15.00	4.04	0.42	1.15
15.50	4.11	0.45	0.97
16.00	4.18	0.47	0.90
16.50	4.24	0.49	0.84
17.00	4.29	0.51	0.79
17.50	4.34	0.53	0.73
18.00	4.39	0.55	0.66
18.50	4.43	0.56	0.61
19.00	4.47	0.58	0.59
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
29.00	4.80	0.72	0.00
29.50	4.80	0.72	0.00
30.00	4.80	0.72	0.00
30.50	4.80	0.72	0.00
31.00	4.80	0.72	0.00
31.50	4.80	0.72	0.00
32.00	4.80	0.72	0.00
32.50	4.80	0.72	0.00
33.00	4.80	0.72	0.00
33.50	4.80	0.72	0.00
34.00	4.80	0.72	0.00
34.50	4.80	0.72	0.00
35.00	4.80	0.72	0.00
35.50	4.80	0.72	0.00
36.00	4.80	0.72	0.00
36.50	4.80	0.72	0.00
37.00	4.80	0.72	0.00
37.50	4.80	0.72	0.00
38.00	4.80	0.72	0.00
38.50	4.80	0.72	0.00
39.00	4.80	0.72	0.00
39.50	4.80	0.72	0.00
40.00	4.80	0.72	0.00
40.50	4.80	0.72	0.00
41.00	4.80	0.72	0.00
41.50	4.80	0.72	0.00
42.00	4.80	0.72	0.00
42.50	4.80	0.72	0.00
43.00	4.80	0.72	0.00
43.50	4.80	0.72	0.00
44.00	4.80	0.72	0.00
44.50	4.80	0.72	0.00
45.00	4.80	0.72	0.00
45.50	4.80	0.72	0.00
46.00	4.80	0.72	0.00
46.50	4.80	0.72	0.00
47.00	4.80	0.72	0.00
47.50	4.80	0.72	0.00
48.00	4.80	0.72	0.00

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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

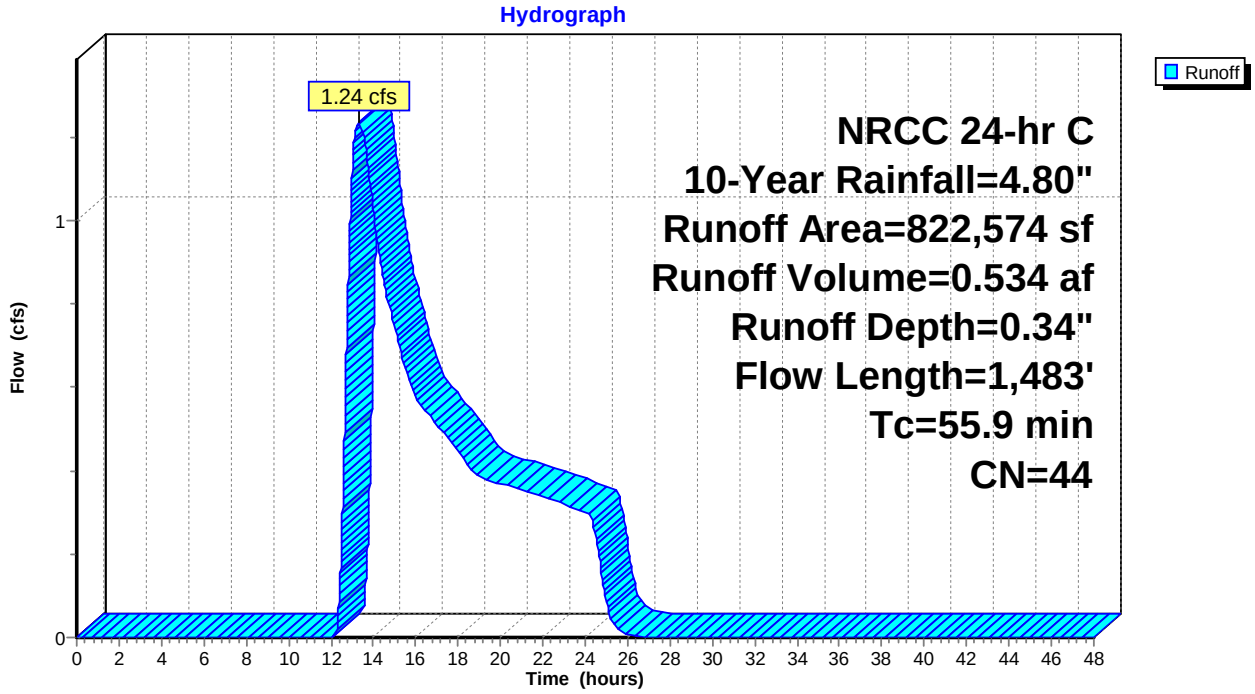
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 10-Year Rainfall=4.80"

	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			

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Subcatchment E2: EDA-2



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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				

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Summary for Subcatchment E3: EDA-3

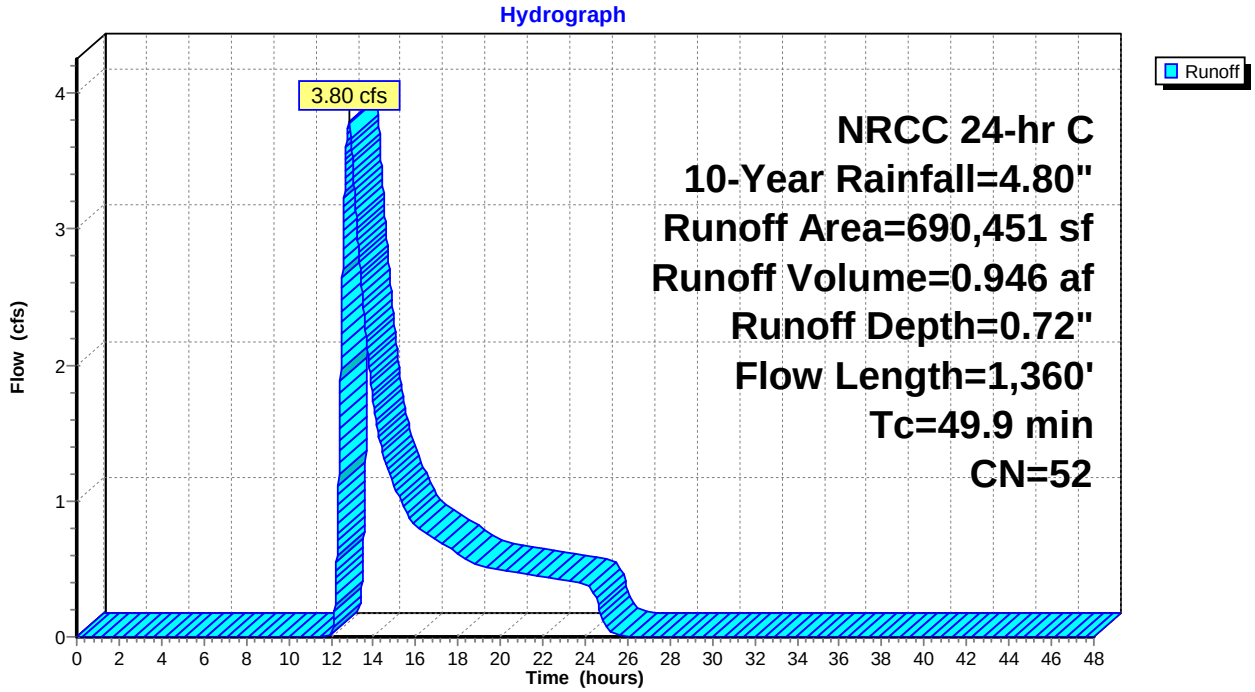
Runoff = 3.80 cfs @ 12.86 hrs, Volume= 0.946 af, Depth= 0.72"
Routed to Link EDP3 : DP-3

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



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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	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				

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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

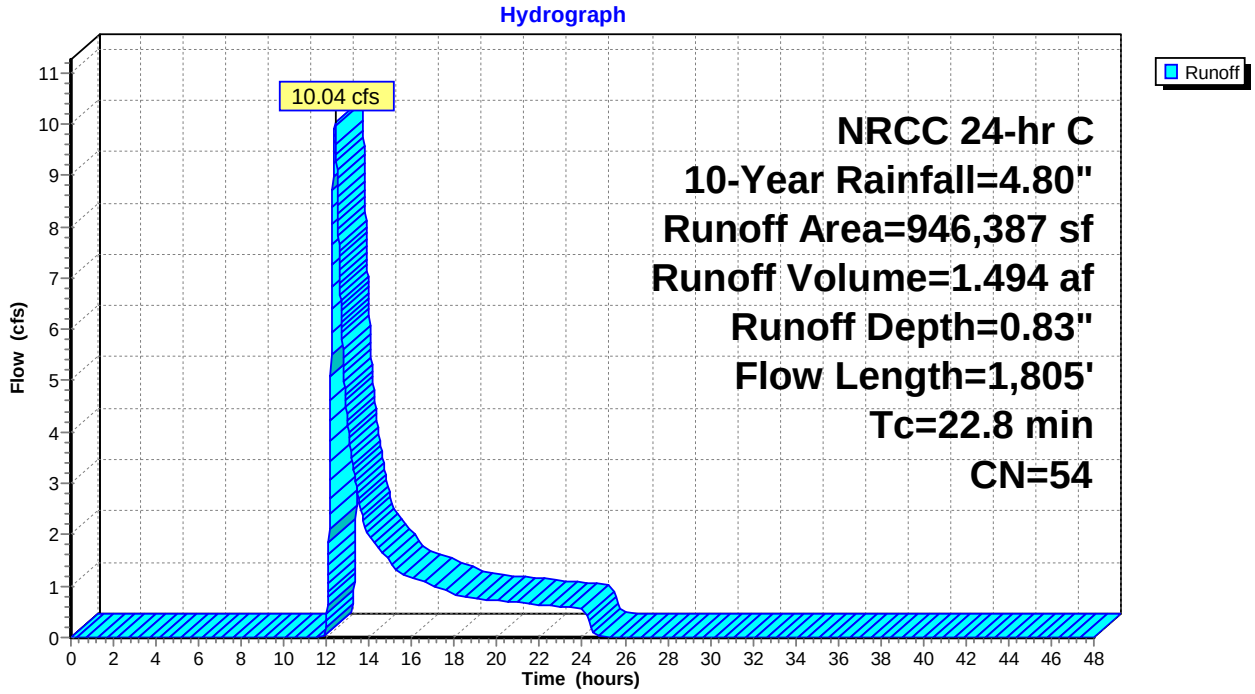
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 10-Year Rainfall=4.80"

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			

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Subcatchment E4: EDA-4



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Hydrograph for Subcatchment E4: EDA-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.00
10.00	0.95	0.00	0.00
10.50	1.07	0.00	0.00
11.00	1.24	0.00	0.00
11.50	1.50	0.00	0.00
12.00	2.29	0.04	**0.35**
12.50	3.30	0.25	**8.77**
13.00	3.56	0.33	4.11
13.50	3.73	0.39	2.70
14.00	3.85	0.43	1.97
14.50	3.95	0.47	1.71
15.00	4.04	0.50	1.45
15.50	4.11	0.53	1.24
16.00	4.18	0.56	1.16
16.50	4.24	0.58	1.09
17.00	4.29	0.60	1.01
17.50	4.34	0.62	0.93
18.00	4.39	0.64	0.85
18.50	4.43	0.66	0.78
19.00	4.47	0.68	0.76
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
29.00	4.80	0.83	0.00
29.50	4.80	0.83	0.00
30.00	4.80	0.83	0.00
30.50	4.80	0.83	0.00
31.00	4.80	0.83	0.00
31.50	4.80	0.83	0.00
32.00	4.80	0.83	0.00
32.50	4.80	0.83	0.00
33.00	4.80	0.83	0.00
33.50	4.80	0.83	0.00
34.00	4.80	0.83	0.00
34.50	4.80	0.83	0.00
35.00	4.80	0.83	0.00
35.50	4.80	0.83	0.00
36.00	4.80	0.83	0.00
36.50	4.80	0.83	0.00
37.00	4.80	0.83	0.00
37.50	4.80	0.83	0.00
38.00	4.80	0.83	0.00
38.50	4.80	0.83	0.00
39.00	4.80	0.83	0.00
39.50	4.80	0.83	0.00
40.00	4.80	0.83	0.00
40.50	4.80	0.83	0.00
41.00	4.80	0.83	0.00
41.50	4.80	0.83	0.00
42.00	4.80	0.83	0.00
42.50	4.80	0.83	0.00
43.00	4.80	0.83	0.00
43.50	4.80	0.83	0.00
44.00	4.80	0.83	0.00
44.50	4.80	0.83	0.00
45.00	4.80	0.83	0.00
45.50	4.80	0.83	0.00
46.00	4.80	0.83	0.00
46.50	4.80	0.83	0.00
47.00	4.80	0.83	0.00
47.50	4.80	0.83	0.00
48.00	4.80	0.83	0.00

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Summary for Subcatchment E5: E5

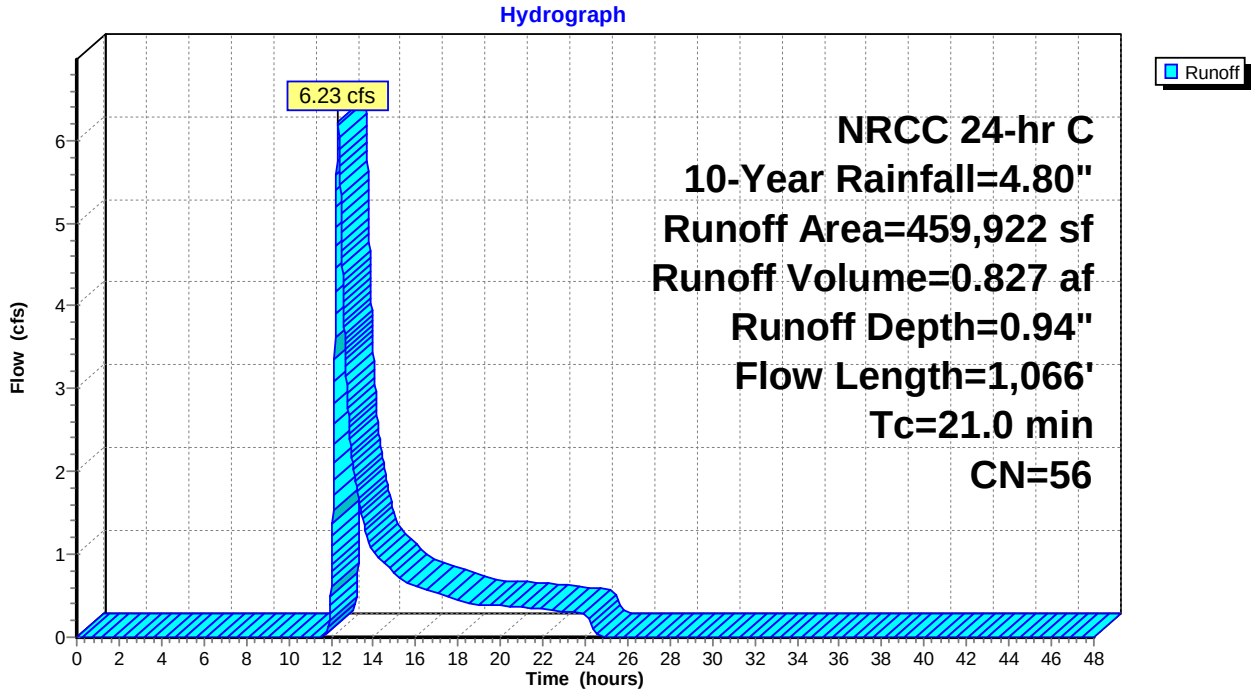
Runoff = 6.23 cfs @ 12.34 hrs, Volume= 0.827 af, Depth= 0.94"
Routed to Link EDP5 : EDP5

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



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Hydrograph for Subcatchment E5: E5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.00
10.00	0.95	0.00	0.00
10.50	1.07	0.00	0.00
11.00	1.24	0.00	0.00
11.50	1.50	0.00	0.00
12.00	2.29	0.06	**0.51**
12.50	3.30	0.31	**4.88**
13.00	3.56	0.40	2.17
13.50	3.73	0.47	1.43
14.00	3.85	0.51	1.04
14.50	3.95	0.55	0.91
15.00	4.04	0.59	0.77
15.50	4.11	0.62	0.65
16.00	4.18	0.65	0.61
16.50	4.24	0.68	0.57
17.00	4.29	0.70	0.53
17.50	4.34	0.72	0.49
18.00	4.39	0.74	0.45
18.50	4.43	0.76	0.41
19.00	4.47	0.78	0.40
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
29.00	4.80	0.94	0.00
29.50	4.80	0.94	0.00
30.00	4.80	0.94	0.00
30.50	4.80	0.94	0.00
31.00	4.80	0.94	0.00
31.50	4.80	0.94	0.00
32.00	4.80	0.94	0.00
32.50	4.80	0.94	0.00
33.00	4.80	0.94	0.00
33.50	4.80	0.94	0.00
34.00	4.80	0.94	0.00
34.50	4.80	0.94	0.00
35.00	4.80	0.94	0.00
35.50	4.80	0.94	0.00
36.00	4.80	0.94	0.00
36.50	4.80	0.94	0.00
37.00	4.80	0.94	0.00
37.50	4.80	0.94	0.00
38.00	4.80	0.94	0.00
38.50	4.80	0.94	0.00
39.00	4.80	0.94	0.00
39.50	4.80	0.94	0.00
40.00	4.80	0.94	0.00
40.50	4.80	0.94	0.00
41.00	4.80	0.94	0.00
41.50	4.80	0.94	0.00
42.00	4.80	0.94	0.00
42.50	4.80	0.94	0.00
43.00	4.80	0.94	0.00
43.50	4.80	0.94	0.00
44.00	4.80	0.94	0.00
44.50	4.80	0.94	0.00
45.00	4.80	0.94	0.00
45.50	4.80	0.94	0.00
46.00	4.80	0.94	0.00
46.50	4.80	0.94	0.00
47.00	4.80	0.94	0.00
47.50	4.80	0.94	0.00
48.00	4.80	0.94	0.00

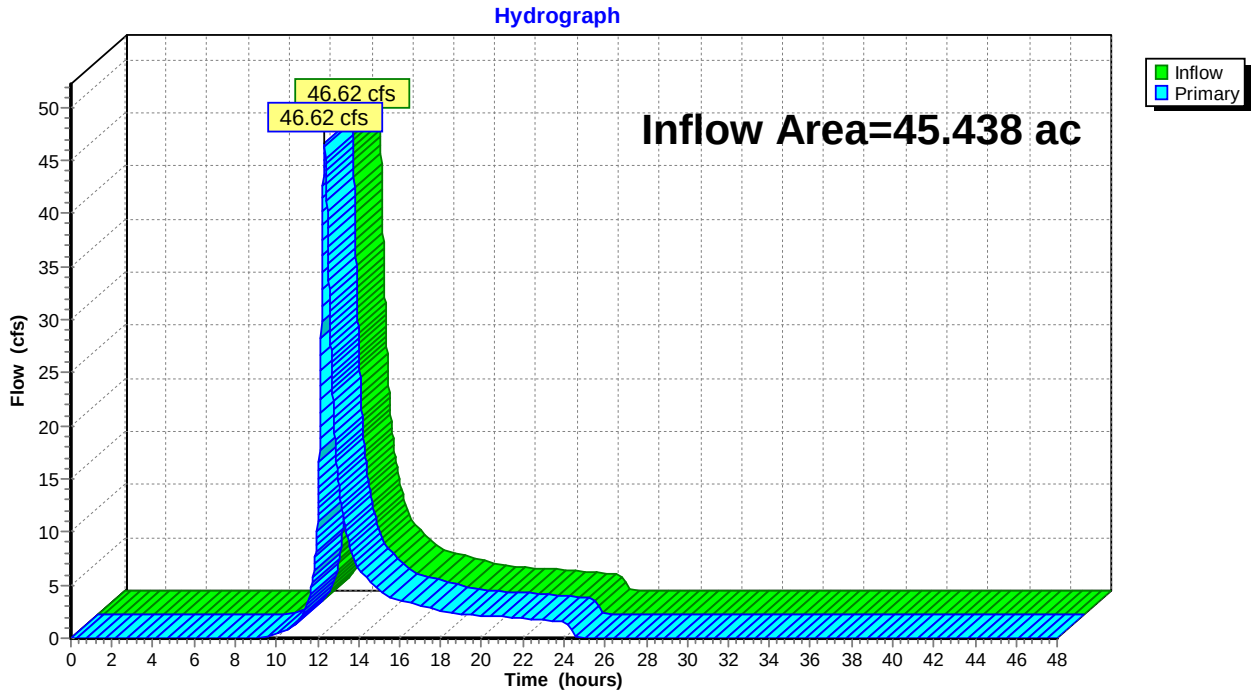
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Summary for Link EDP1: DP-1

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



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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				

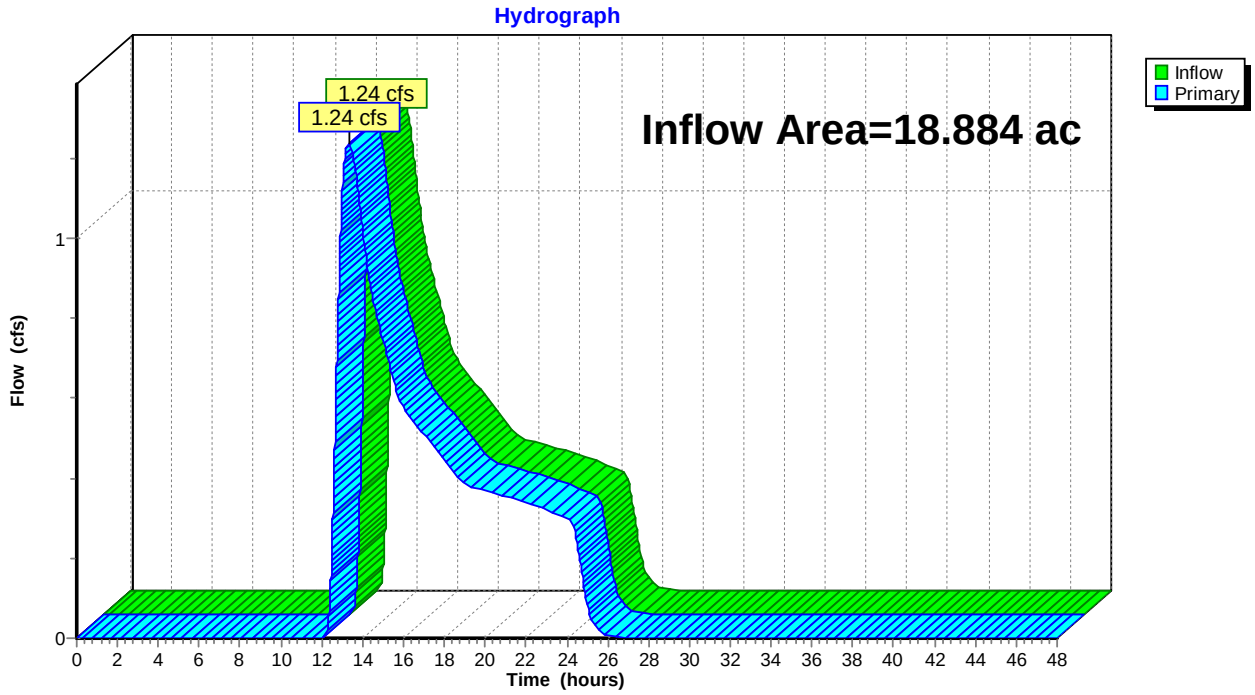
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Summary for Link EDP2: DP-2

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



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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				

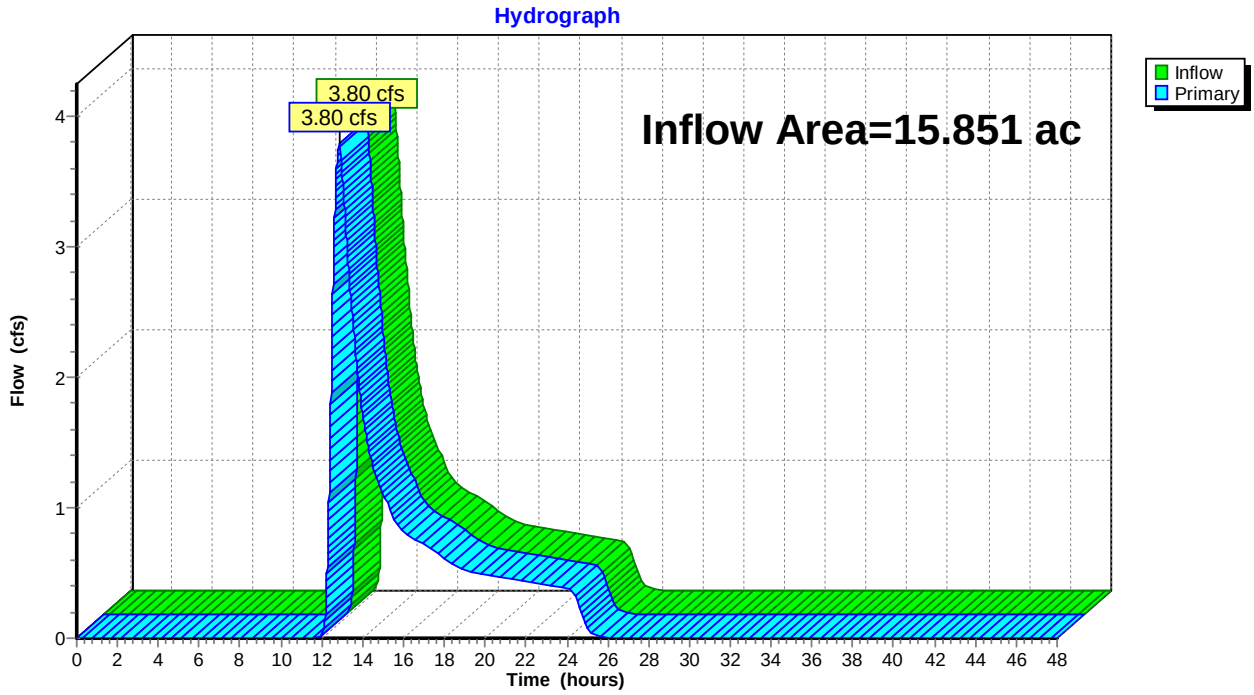
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Summary for Link EDP3: DP-3

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



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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				

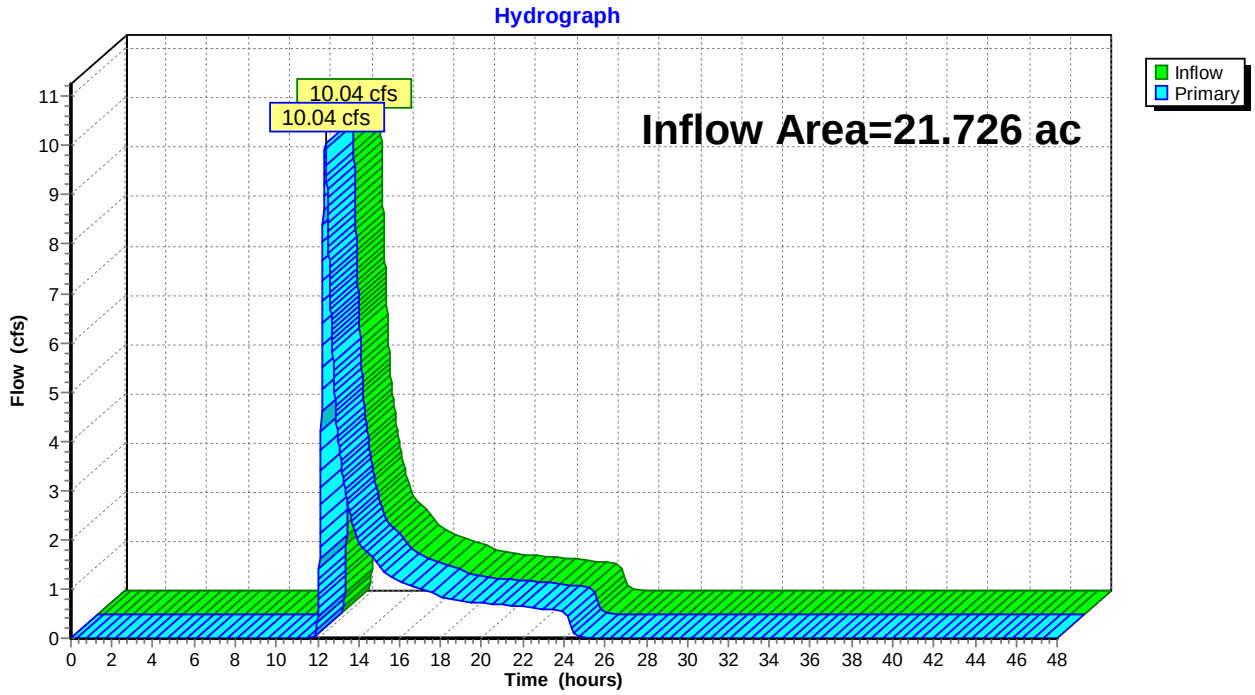
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Summary for Link EDP4: DP-4

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



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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				

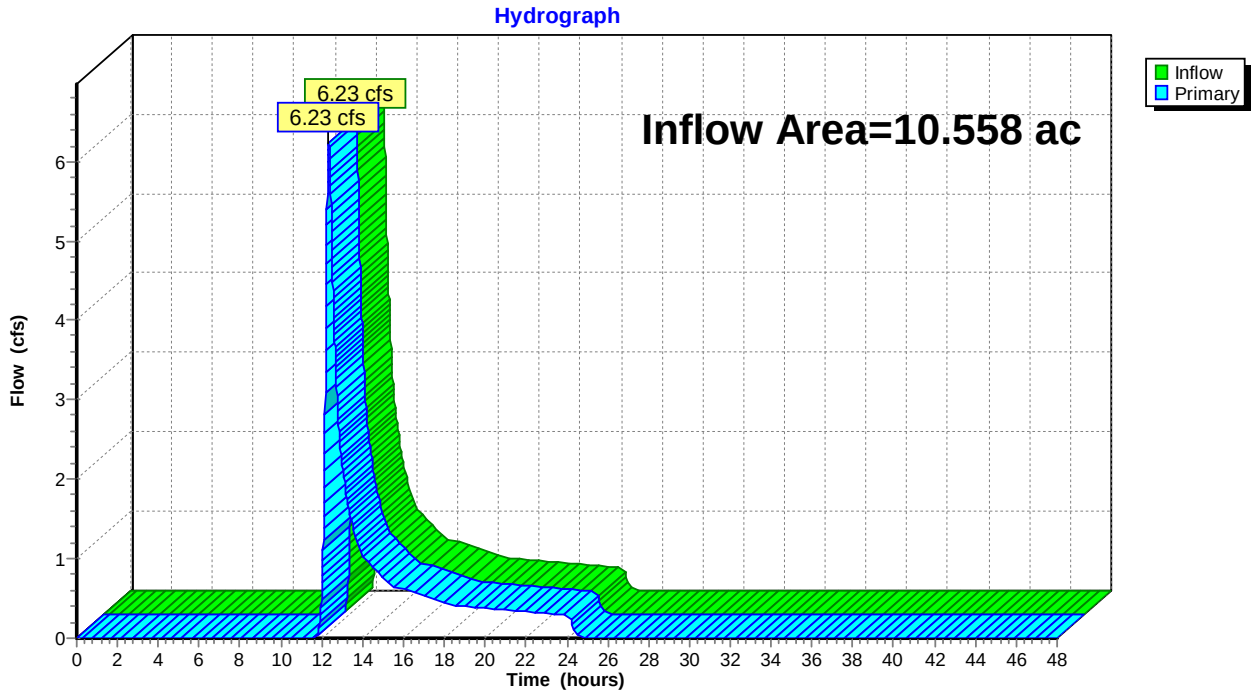
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Summary for Link EDP5: EDP5

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



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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				

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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

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Summary for Subcatchment 22S: Exist Wetlands/Undeveloped Area

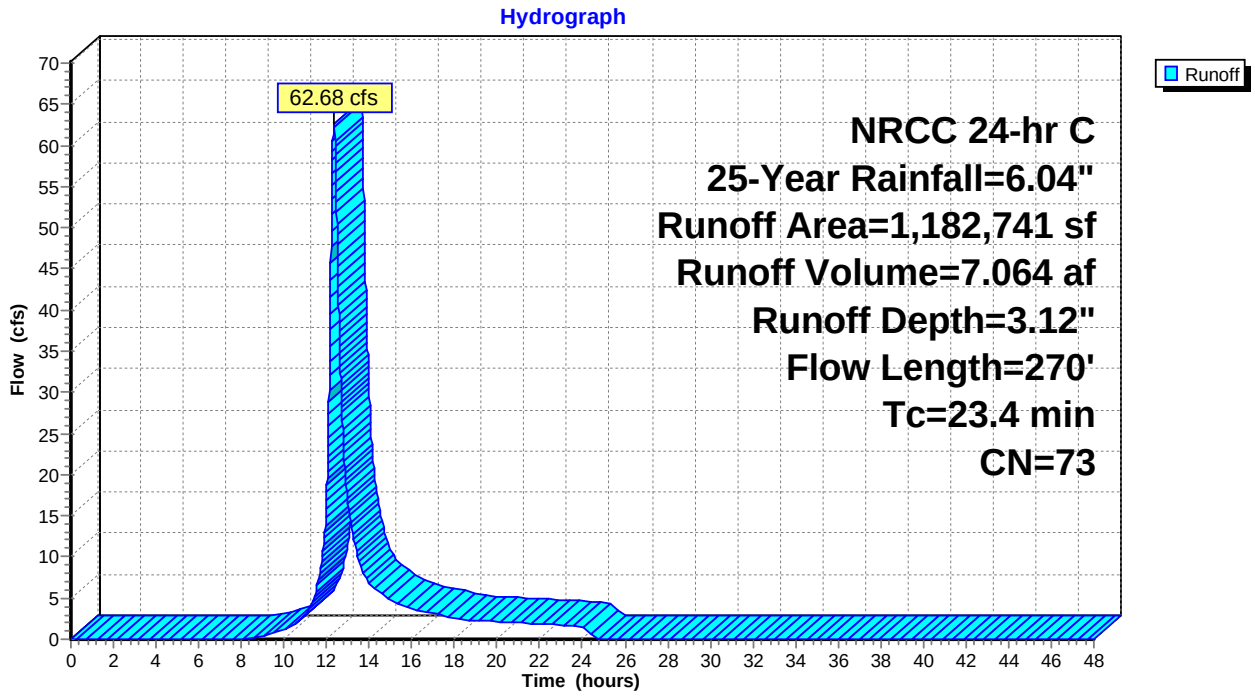
Runoff = 62.68 cfs @ 12.35 hrs, Volume= 7.064 af, Depth= 3.12"
Routed to Link EDP1 : DP-1

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



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Hydrograph for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.01
8.50	0.87	0.00	0.16
9.00	0.96	0.01	0.38
9.50	1.06	0.03	0.68
10.00	1.19	0.05	1.15
10.50	1.35	0.09	1.79
11.00	1.56	0.15	3.02
11.50	1.89	0.27	5.93
12.00	2.88	0.78	**17.28**
12.50	4.15	1.64	**47.89**
13.00	4.48	1.88	16.59
13.50	4.69	2.04	9.77
14.00	4.85	2.16	6.82
14.50	4.98	2.26	5.72
15.00	5.08	2.35	4.78
15.50	5.17	2.42	3.99
16.00	5.26	2.48	3.68
16.50	5.33	2.54	3.41
17.00	5.40	2.60	3.13
17.50	5.46	2.65	2.86
18.00	5.52	2.70	2.58
18.50	5.57	2.74	2.35
19.00	5.62	2.78	2.27
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
29.00	6.04	3.12	0.00
29.50	6.04	3.12	0.00
30.00	6.04	3.12	0.00
30.50	6.04	3.12	0.00
31.00	6.04	3.12	0.00
31.50	6.04	3.12	0.00
32.00	6.04	3.12	0.00
32.50	6.04	3.12	0.00
33.00	6.04	3.12	0.00
33.50	6.04	3.12	0.00
34.00	6.04	3.12	0.00
34.50	6.04	3.12	0.00
35.00	6.04	3.12	0.00
35.50	6.04	3.12	0.00
36.00	6.04	3.12	0.00
36.50	6.04	3.12	0.00
37.00	6.04	3.12	0.00
37.50	6.04	3.12	0.00
38.00	6.04	3.12	0.00
38.50	6.04	3.12	0.00
39.00	6.04	3.12	0.00
39.50	6.04	3.12	0.00
40.00	6.04	3.12	0.00
40.50	6.04	3.12	0.00
41.00	6.04	3.12	0.00
41.50	6.04	3.12	0.00
42.00	6.04	3.12	0.00
42.50	6.04	3.12	0.00
43.00	6.04	3.12	0.00
43.50	6.04	3.12	0.00
44.00	6.04	3.12	0.00
44.50	6.04	3.12	0.00
45.00	6.04	3.12	0.00
45.50	6.04	3.12	0.00
46.00	6.04	3.12	0.00
46.50	6.04	3.12	0.00
47.00	6.04	3.12	0.00
47.50	6.04	3.12	0.00
48.00	6.04	3.12	0.00

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Summary for Subcatchment E1: EDA-1

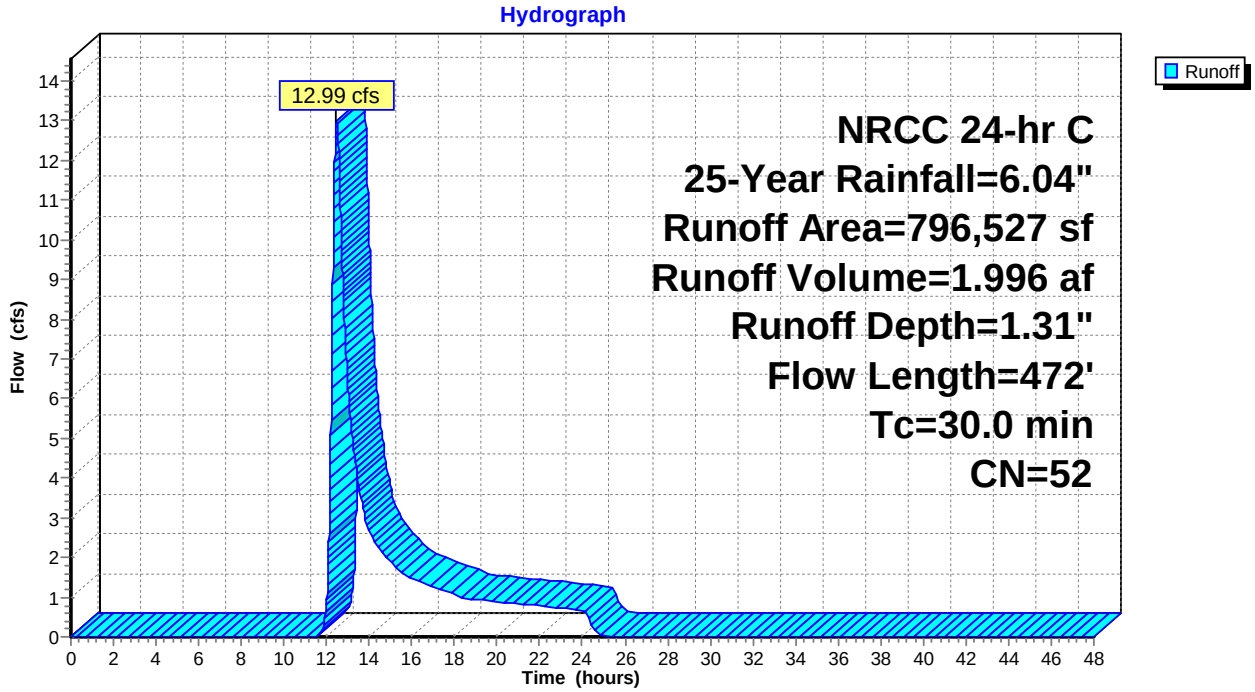
Runoff = 12.99 cfs @ 12.47 hrs, Volume= 1.996 af, Depth= 1.31"
Routed to Link EDP1 : DP-1

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



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Hydrograph for Subcatchment E1: EDA-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.00
11.50	1.89	0.00	0.00
12.00	2.88	0.10	**0.90**
12.50	4.15	0.46	**12.96**
13.00	4.48	0.59	6.34
13.50	4.69	0.67	3.85
14.00	4.85	0.74	2.66
14.50	4.98	0.79	2.22
15.00	5.08	0.84	1.89
15.50	5.17	0.88	1.59
16.00	5.26	0.92	1.46
16.50	5.33	0.96	1.37
17.00	5.40	0.99	1.27
17.50	5.46	1.02	1.17
18.00	5.52	1.05	1.06
18.50	5.57	1.07	0.97
19.00	5.62	1.10	0.93
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
29.00	6.04	1.31	0.00
29.50	6.04	1.31	0.00
30.00	6.04	1.31	0.00
30.50	6.04	1.31	0.00
31.00	6.04	1.31	0.00
31.50	6.04	1.31	0.00
32.00	6.04	1.31	0.00
32.50	6.04	1.31	0.00
33.00	6.04	1.31	0.00
33.50	6.04	1.31	0.00
34.00	6.04	1.31	0.00
34.50	6.04	1.31	0.00
35.00	6.04	1.31	0.00
35.50	6.04	1.31	0.00
36.00	6.04	1.31	0.00
36.50	6.04	1.31	0.00
37.00	6.04	1.31	0.00
37.50	6.04	1.31	0.00
38.00	6.04	1.31	0.00
38.50	6.04	1.31	0.00
39.00	6.04	1.31	0.00
39.50	6.04	1.31	0.00
40.00	6.04	1.31	0.00
40.50	6.04	1.31	0.00
41.00	6.04	1.31	0.00
41.50	6.04	1.31	0.00
42.00	6.04	1.31	0.00
42.50	6.04	1.31	0.00
43.00	6.04	1.31	0.00
43.50	6.04	1.31	0.00
44.00	6.04	1.31	0.00
44.50	6.04	1.31	0.00
45.00	6.04	1.31	0.00
45.50	6.04	1.31	0.00
46.00	6.04	1.31	0.00
46.50	6.04	1.31	0.00
47.00	6.04	1.31	0.00
47.50	6.04	1.31	0.00
48.00	6.04	1.31	0.00

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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

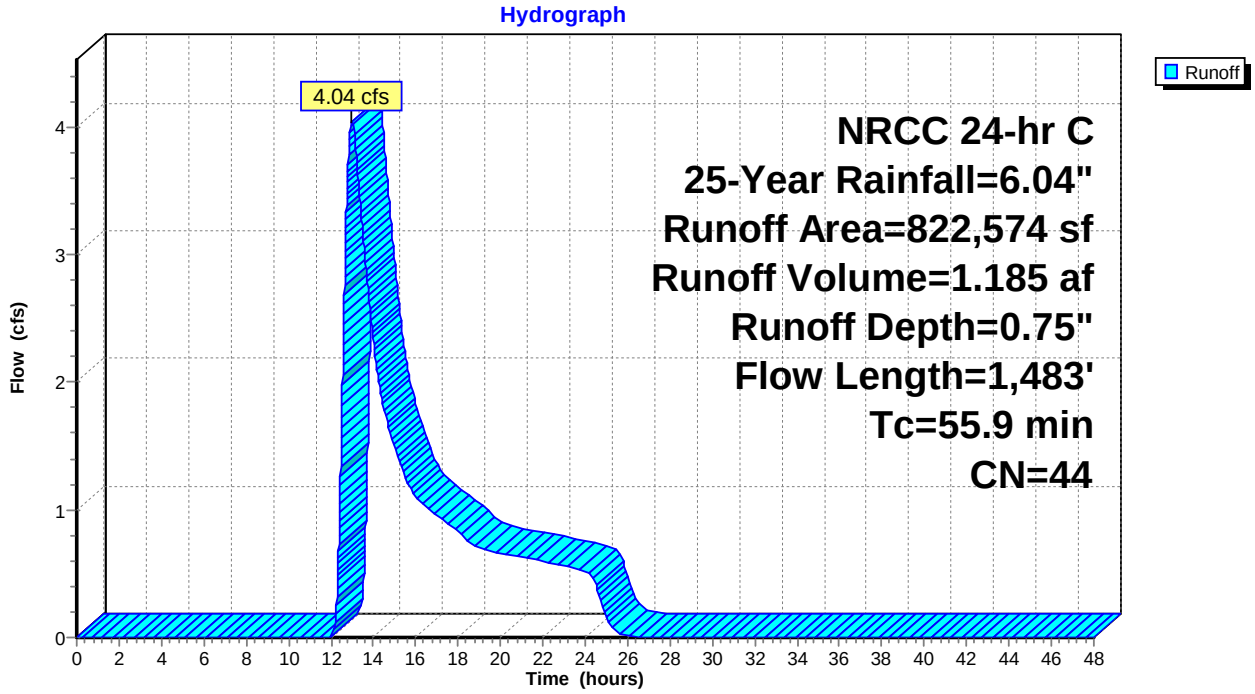
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 25-Year Rainfall=6.04"

	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			

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Subcatchment E2: EDA-2



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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				

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Summary for Subcatchment E3: EDA-3

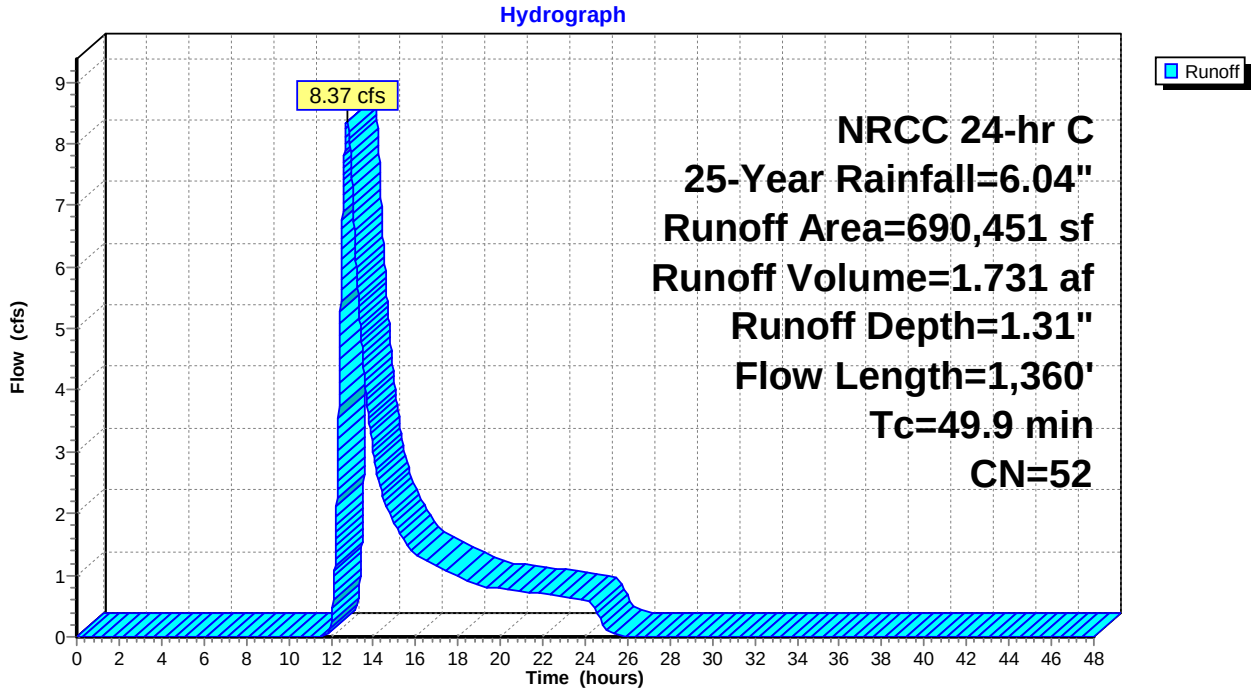
Runoff = 8.37 cfs @ 12.76 hrs, Volume= 1.731 af, Depth= 1.31"
Routed to Link EDP3 : DP-3

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



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Hydrograph for Subcatchment E3: EDA-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.00
11.50	1.89	0.00	0.00
12.00	2.88	0.10	0.21
12.50	4.15	0.46	**6.14**
13.00	4.48	0.59	**7.33**
13.50	4.69	0.67	4.56
14.00	4.85	0.74	3.01
14.50	4.98	0.79	2.24
15.00	5.08	0.84	1.84
15.50	5.17	0.88	1.54
16.00	5.26	0.92	1.35
16.50	5.33	0.96	1.24
17.00	5.40	0.99	1.15
17.50	5.46	1.02	1.07
18.00	5.52	1.05	0.98
18.50	5.57	1.07	0.89
19.00	5.62	1.10	0.83
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
29.00	6.04	1.31	0.00
29.50	6.04	1.31	0.00
30.00	6.04	1.31	0.00
30.50	6.04	1.31	0.00
31.00	6.04	1.31	0.00
31.50	6.04	1.31	0.00
32.00	6.04	1.31	0.00
32.50	6.04	1.31	0.00
33.00	6.04	1.31	0.00
33.50	6.04	1.31	0.00
34.00	6.04	1.31	0.00
34.50	6.04	1.31	0.00
35.00	6.04	1.31	0.00
35.50	6.04	1.31	0.00
36.00	6.04	1.31	0.00
36.50	6.04	1.31	0.00
37.00	6.04	1.31	0.00
37.50	6.04	1.31	0.00
38.00	6.04	1.31	0.00
38.50	6.04	1.31	0.00
39.00	6.04	1.31	0.00
39.50	6.04	1.31	0.00
40.00	6.04	1.31	0.00
40.50	6.04	1.31	0.00
41.00	6.04	1.31	0.00
41.50	6.04	1.31	0.00
42.00	6.04	1.31	0.00
42.50	6.04	1.31	0.00
43.00	6.04	1.31	0.00
43.50	6.04	1.31	0.00
44.00	6.04	1.31	0.00
44.50	6.04	1.31	0.00
45.00	6.04	1.31	0.00
45.50	6.04	1.31	0.00
46.00	6.04	1.31	0.00
46.50	6.04	1.31	0.00
47.00	6.04	1.31	0.00
47.50	6.04	1.31	0.00
48.00	6.04	1.31	0.00

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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

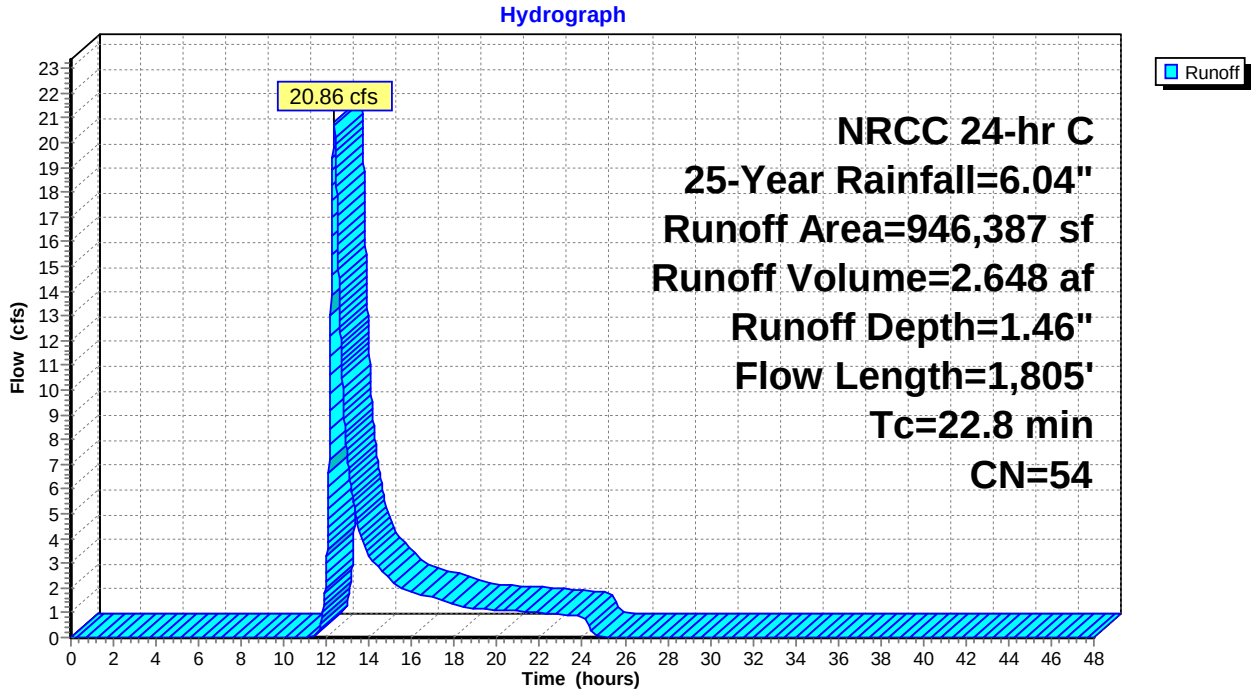
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 25-Year Rainfall=6.04"

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			

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Subcatchment E4: EDA-4



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Hydrograph for Subcatchment E4: EDA-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.00
11.50	1.89	0.00	0.05
12.00	2.88	0.14	**2.88**
12.50	4.15	0.55	**17.05**
13.00	4.48	0.68	7.07
13.50	4.69	0.78	4.47
14.00	4.85	0.85	3.22
14.50	4.98	0.91	2.76
15.00	5.08	0.96	2.33
15.50	5.17	1.00	1.97
16.00	5.26	1.04	1.84
16.50	5.33	1.08	1.72
17.00	5.40	1.12	1.59
17.50	5.46	1.15	1.46
18.00	5.52	1.18	1.33
18.50	5.57	1.21	1.21
19.00	5.62	1.24	1.18
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
29.00	6.04	1.46	0.00
29.50	6.04	1.46	0.00
30.00	6.04	1.46	0.00
30.50	6.04	1.46	0.00
31.00	6.04	1.46	0.00
31.50	6.04	1.46	0.00
32.00	6.04	1.46	0.00
32.50	6.04	1.46	0.00
33.00	6.04	1.46	0.00
33.50	6.04	1.46	0.00
34.00	6.04	1.46	0.00
34.50	6.04	1.46	0.00
35.00	6.04	1.46	0.00
35.50	6.04	1.46	0.00
36.00	6.04	1.46	0.00
36.50	6.04	1.46	0.00
37.00	6.04	1.46	0.00
37.50	6.04	1.46	0.00
38.00	6.04	1.46	0.00
38.50	6.04	1.46	0.00
39.00	6.04	1.46	0.00
39.50	6.04	1.46	0.00
40.00	6.04	1.46	0.00
40.50	6.04	1.46	0.00
41.00	6.04	1.46	0.00
41.50	6.04	1.46	0.00
42.00	6.04	1.46	0.00
42.50	6.04	1.46	0.00
43.00	6.04	1.46	0.00
43.50	6.04	1.46	0.00
44.00	6.04	1.46	0.00
44.50	6.04	1.46	0.00
45.00	6.04	1.46	0.00
45.50	6.04	1.46	0.00
46.00	6.04	1.46	0.00
46.50	6.04	1.46	0.00
47.00	6.04	1.46	0.00
47.50	6.04	1.46	0.00
48.00	6.04	1.46	0.00

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Summary for Subcatchment E5: E5

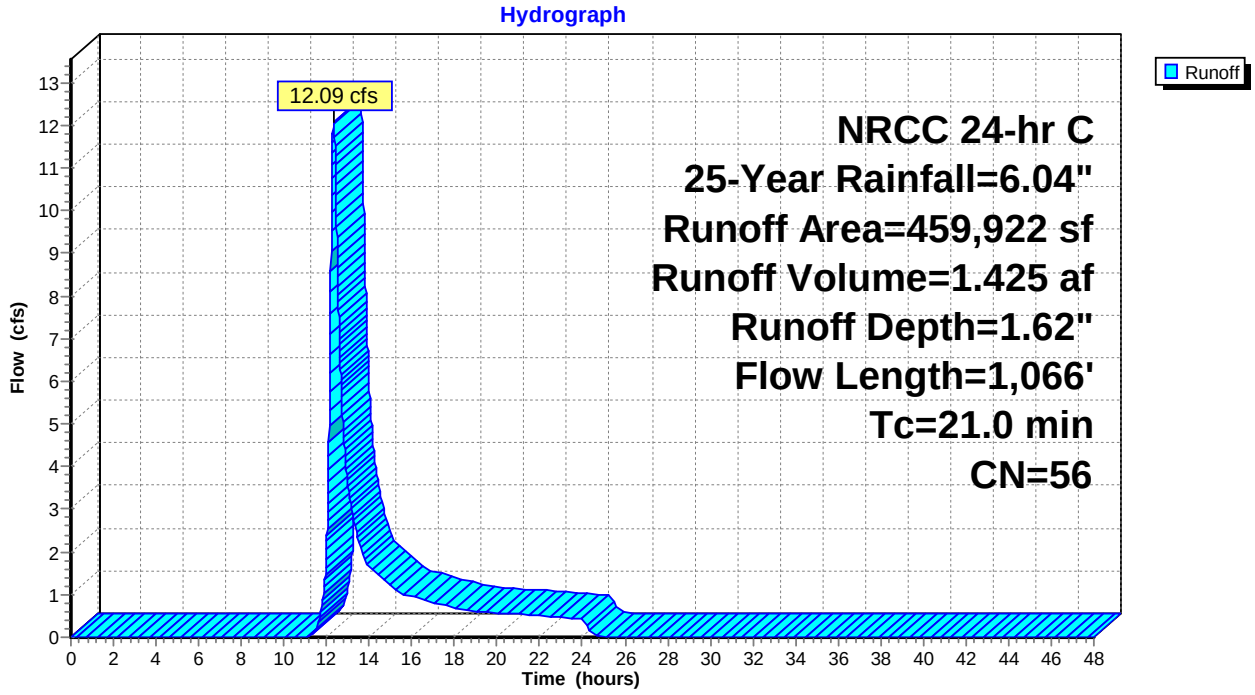
Runoff = 12.09 cfs @ 12.34 hrs, Volume= 1.425 af, Depth= 1.62"
Routed to Link EDP5 : EDP5

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



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Hydrograph for Subcatchment E5: E5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.00
11.50	1.89	0.01	0.18
12.00	2.88	0.19	**2.12**
12.50	4.15	0.64	**8.88**
13.00	4.48	0.79	3.60
13.50	4.69	0.89	2.30
14.00	4.85	0.96	1.66
14.50	4.98	1.03	1.43
15.00	5.08	1.08	1.21
15.50	5.17	1.13	1.02
16.00	5.26	1.18	0.95
16.50	5.33	1.22	0.89
17.00	5.40	1.26	0.82
17.50	5.46	1.29	0.75
18.00	5.52	1.32	0.68
18.50	5.57	1.35	0.63
19.00	5.62	1.38	0.61
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
29.00	6.04	1.62	0.00
29.50	6.04	1.62	0.00
30.00	6.04	1.62	0.00
30.50	6.04	1.62	0.00
31.00	6.04	1.62	0.00
31.50	6.04	1.62	0.00
32.00	6.04	1.62	0.00
32.50	6.04	1.62	0.00
33.00	6.04	1.62	0.00
33.50	6.04	1.62	0.00
34.00	6.04	1.62	0.00
34.50	6.04	1.62	0.00
35.00	6.04	1.62	0.00
35.50	6.04	1.62	0.00
36.00	6.04	1.62	0.00
36.50	6.04	1.62	0.00
37.00	6.04	1.62	0.00
37.50	6.04	1.62	0.00
38.00	6.04	1.62	0.00
38.50	6.04	1.62	0.00
39.00	6.04	1.62	0.00
39.50	6.04	1.62	0.00
40.00	6.04	1.62	0.00
40.50	6.04	1.62	0.00
41.00	6.04	1.62	0.00
41.50	6.04	1.62	0.00
42.00	6.04	1.62	0.00
42.50	6.04	1.62	0.00
43.00	6.04	1.62	0.00
43.50	6.04	1.62	0.00
44.00	6.04	1.62	0.00
44.50	6.04	1.62	0.00
45.00	6.04	1.62	0.00
45.50	6.04	1.62	0.00
46.00	6.04	1.62	0.00
46.50	6.04	1.62	0.00
47.00	6.04	1.62	0.00
47.50	6.04	1.62	0.00
48.00	6.04	1.62	0.00

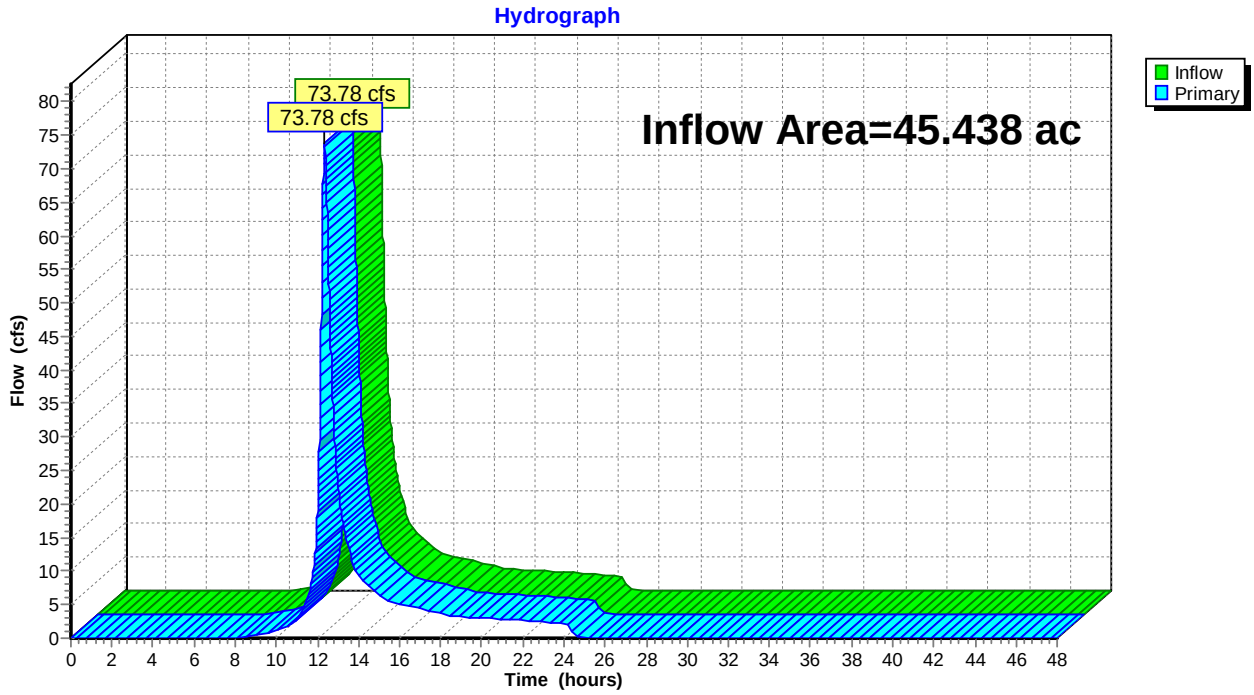
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Summary for Link EDP1: DP-1

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



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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				

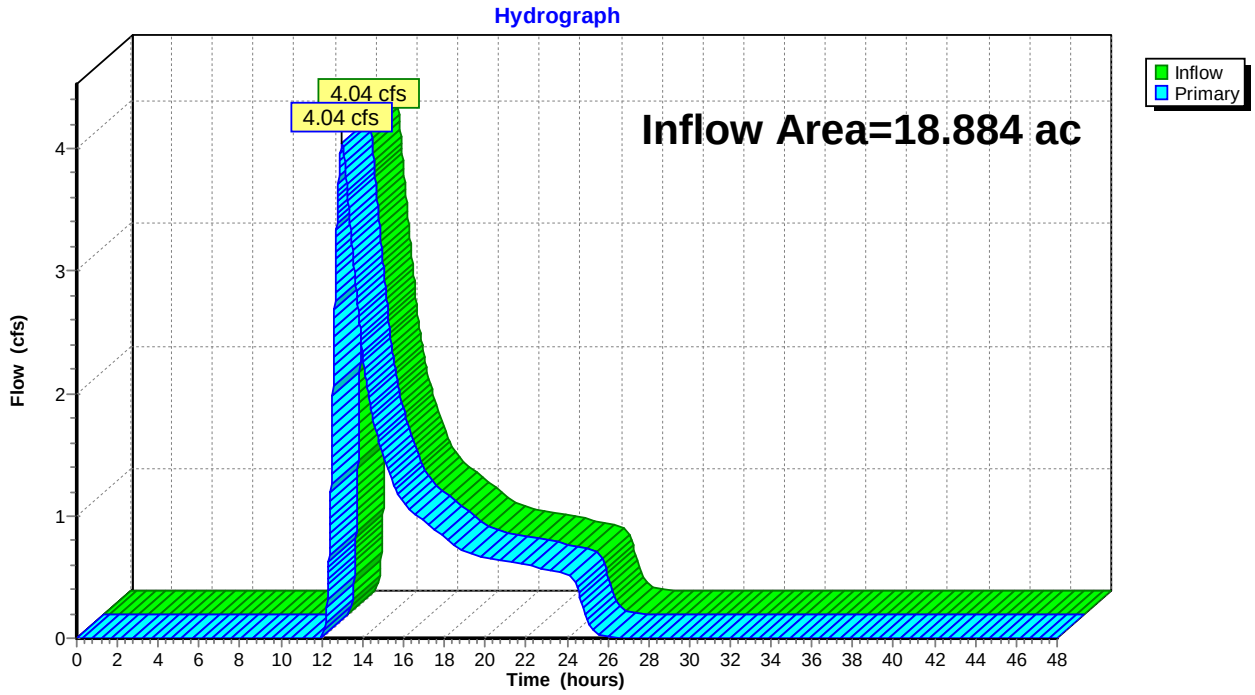
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Summary for Link EDP2: DP-2

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



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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				

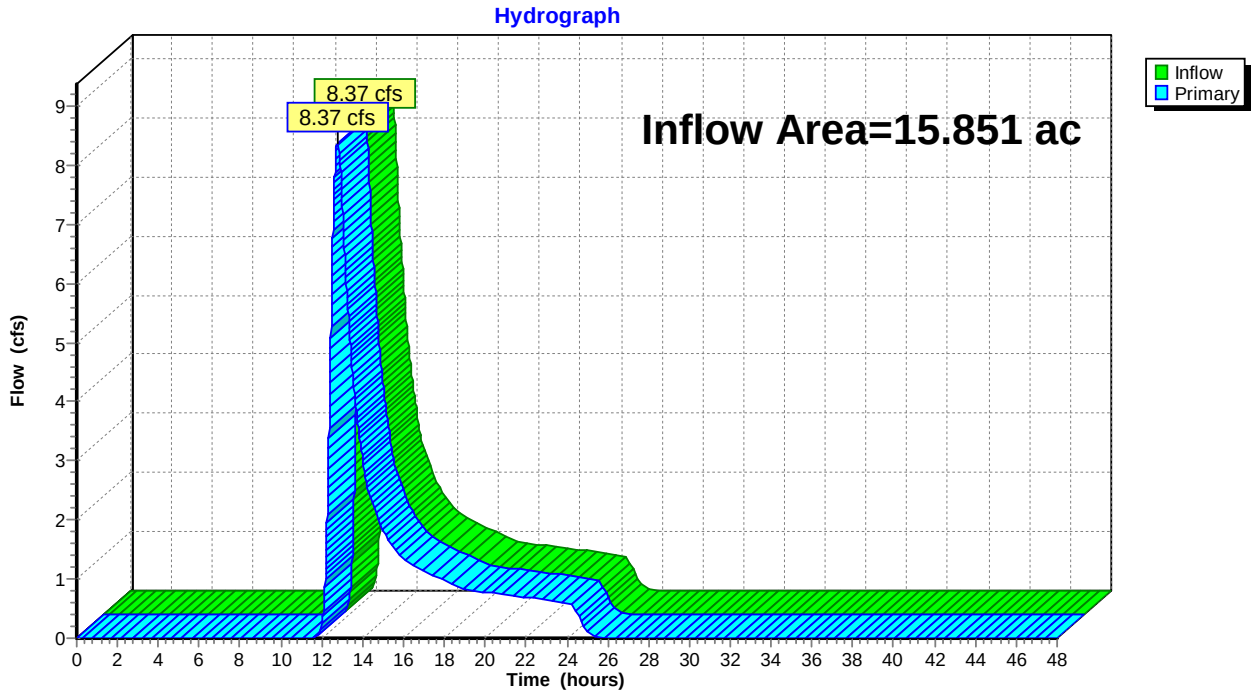
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Summary for Link EDP3: DP-3

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



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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				

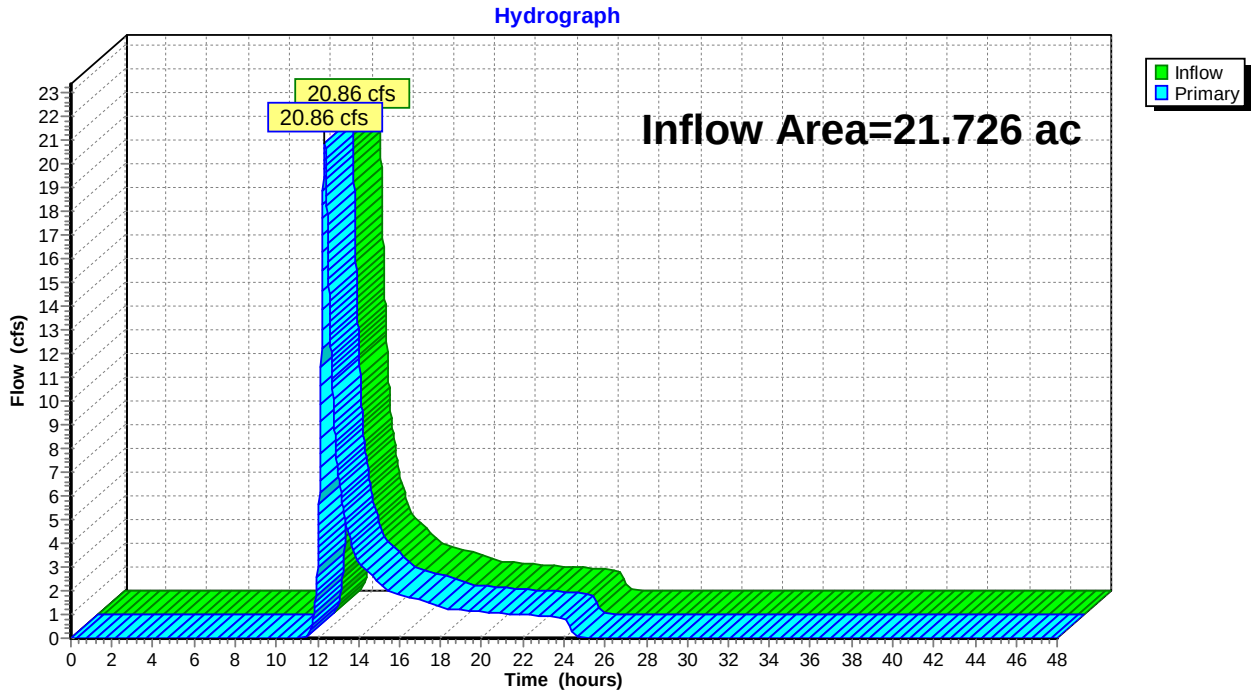
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Summary for Link EDP4: DP-4

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



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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				

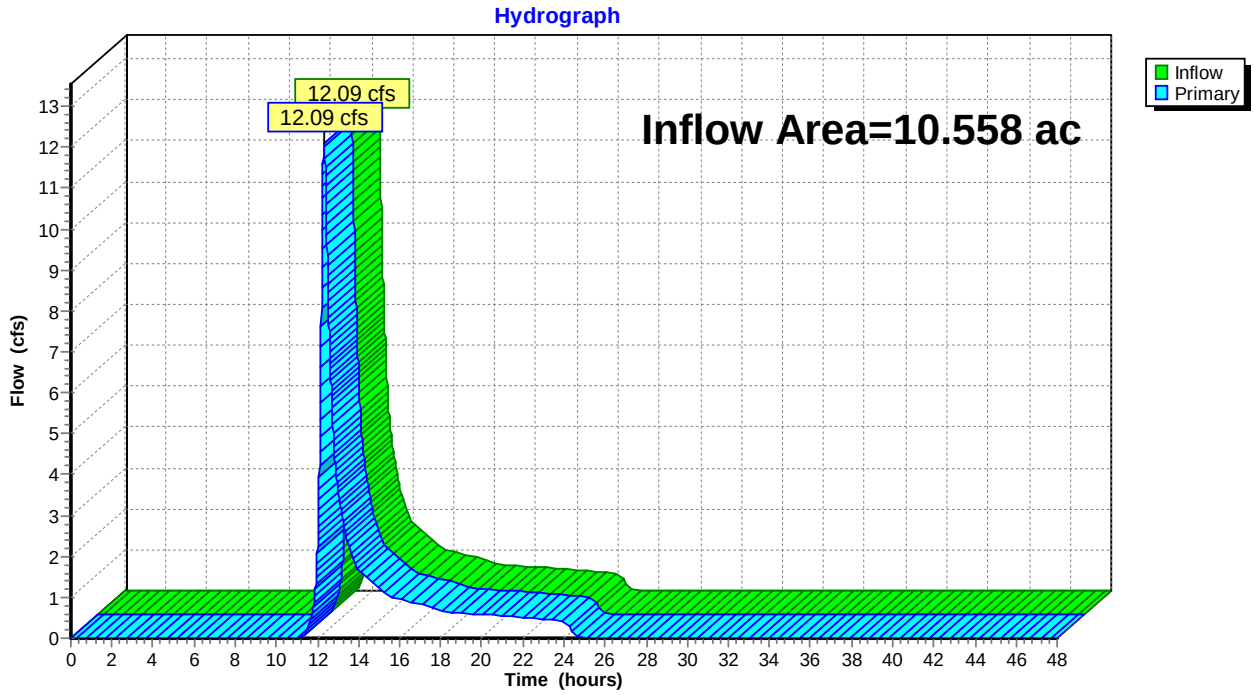
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Summary for Link EDP5: EDP5

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



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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				

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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

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Summary for Subcatchment 22S: Exist Wetlands/Undeveloped Area

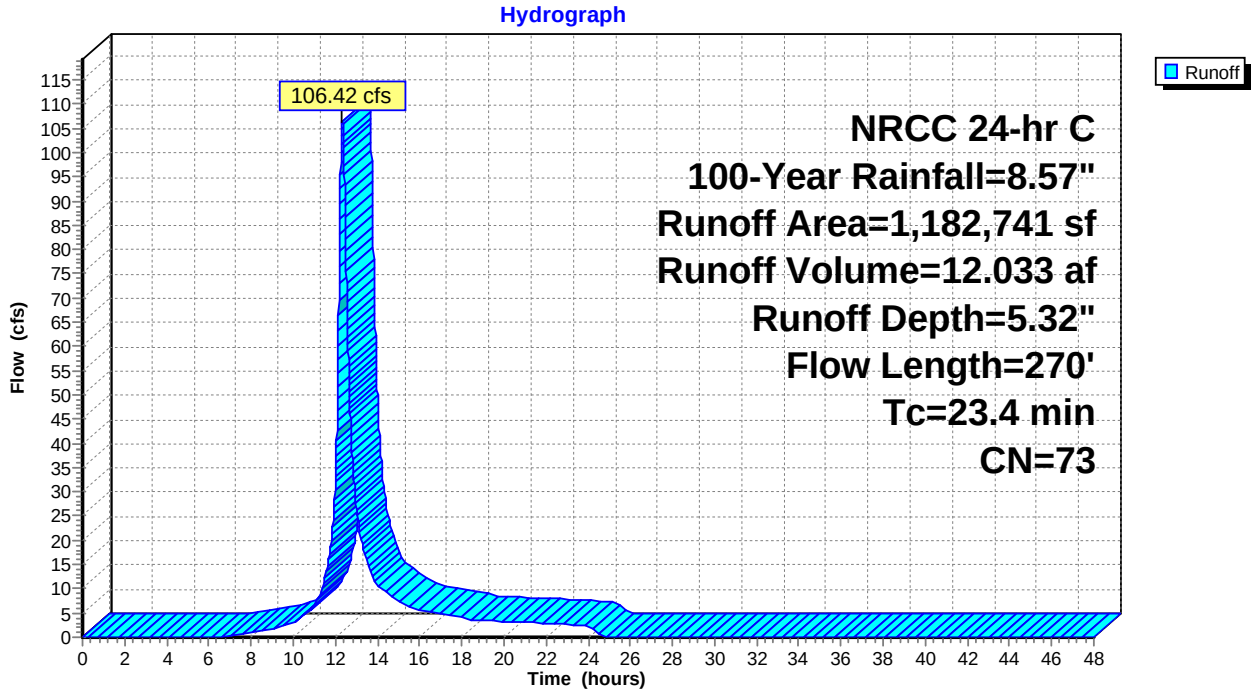
Runoff = 106.42 cfs @ 12.34 hrs, Volume= 12.033 af, Depth= 5.32"
Routed to Link EDP1 : DP-1

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



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Hydrograph for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.05
7.00	0.91	0.01	0.25
7.50	1.01	0.02	0.52
8.00	1.11	0.03	0.83
8.50	1.23	0.06	1.19
9.00	1.36	0.09	1.60
9.50	1.51	0.13	2.21
10.00	1.69	0.20	3.19
10.50	1.91	0.28	4.39
11.00	2.21	0.42	6.73
11.50	2.68	0.67	12.10
12.00	4.08	1.59	**32.06**
12.50	5.89	3.00	**79.86**
13.00	6.36	3.39	26.69
13.50	6.66	3.64	15.49
14.00	6.88	3.83	10.75
14.50	7.06	3.99	8.98
15.00	7.21	4.12	7.48
15.50	7.34	4.23	6.23
16.00	7.46	4.33	5.73
16.50	7.56	4.43	5.30
17.00	7.66	4.51	4.87
17.50	7.75	4.59	4.43
18.00	7.83	4.66	3.99
18.50	7.91	4.73	3.63
19.00	7.98	4.79	3.50
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
29.00	8.57	5.32	0.00
29.50	8.57	5.32	0.00
30.00	8.57	5.32	0.00
30.50	8.57	5.32	0.00
31.00	8.57	5.32	0.00
31.50	8.57	5.32	0.00
32.00	8.57	5.32	0.00
32.50	8.57	5.32	0.00
33.00	8.57	5.32	0.00
33.50	8.57	5.32	0.00
34.00	8.57	5.32	0.00
34.50	8.57	5.32	0.00
35.00	8.57	5.32	0.00
35.50	8.57	5.32	0.00
36.00	8.57	5.32	0.00
36.50	8.57	5.32	0.00
37.00	8.57	5.32	0.00
37.50	8.57	5.32	0.00
38.00	8.57	5.32	0.00
38.50	8.57	5.32	0.00
39.00	8.57	5.32	0.00
39.50	8.57	5.32	0.00
40.00	8.57	5.32	0.00
40.50	8.57	5.32	0.00
41.00	8.57	5.32	0.00
41.50	8.57	5.32	0.00
42.00	8.57	5.32	0.00
42.50	8.57	5.32	0.00
43.00	8.57	5.32	0.00
43.50	8.57	5.32	0.00
44.00	8.57	5.32	0.00
44.50	8.57	5.32	0.00
45.00	8.57	5.32	0.00
45.50	8.57	5.32	0.00
46.00	8.57	5.32	0.00
46.50	8.57	5.32	0.00
47.00	8.57	5.32	0.00
47.50	8.57	5.32	0.00
48.00	8.57	5.32	0.00

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Summary for Subcatchment E1: EDA-1

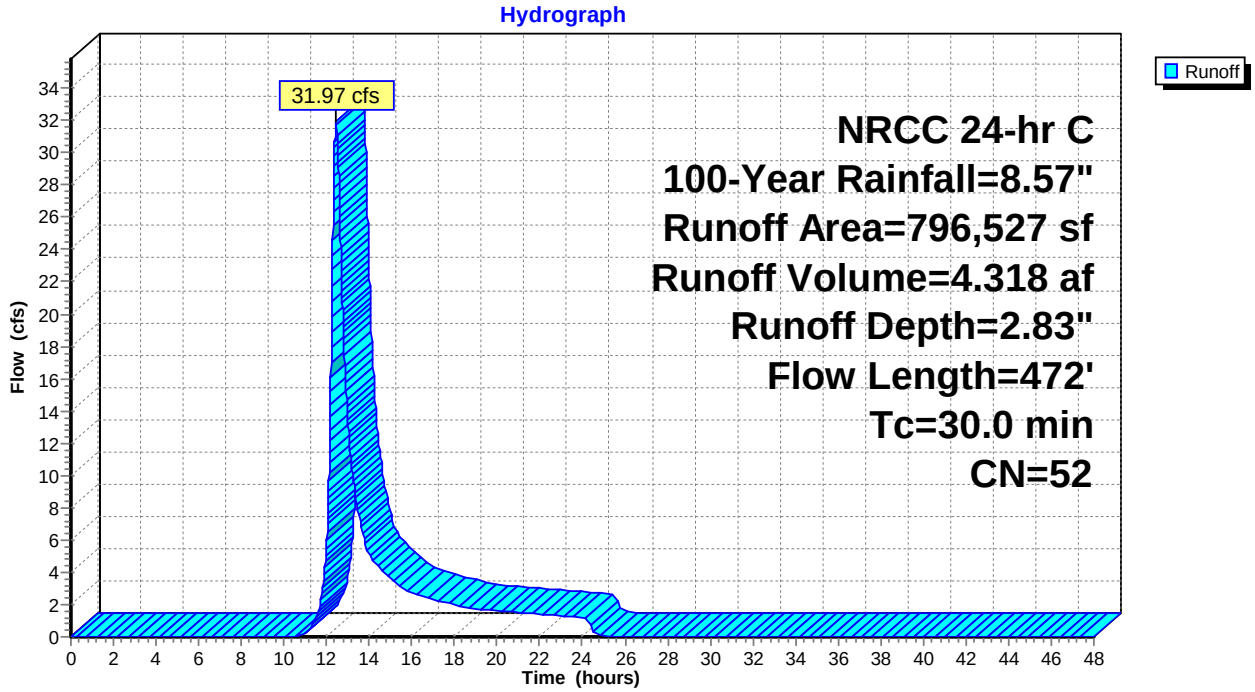
Runoff = 31.97 cfs @ 12.44 hrs, Volume= 4.318 af, Depth= 2.83"
Routed to Link EDP1 : DP-1

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



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Hydrograph for Subcatchment E1: EDA-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.01	0.23
11.50	2.68	0.07	1.28
12.00	4.08	0.44	**5.57**
12.50	5.89	1.23	**31.21**
13.00	6.36	1.48	13.35
13.50	6.66	1.65	7.65
14.00	6.88	1.77	5.16
14.50	7.06	1.88	4.26
15.00	7.21	1.97	3.59
15.50	7.34	2.05	3.00
16.00	7.46	2.12	2.73
16.50	7.56	2.19	2.55
17.00	7.66	2.25	2.35
17.50	7.75	2.31	2.16
18.00	7.83	2.36	1.96
18.50	7.91	2.40	1.78
19.00	7.98	2.45	1.71
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
29.00	8.57	2.83	0.00
29.50	8.57	2.83	0.00
30.00	8.57	2.83	0.00
30.50	8.57	2.83	0.00
31.00	8.57	2.83	0.00
31.50	8.57	2.83	0.00
32.00	8.57	2.83	0.00
32.50	8.57	2.83	0.00
33.00	8.57	2.83	0.00
33.50	8.57	2.83	0.00
34.00	8.57	2.83	0.00
34.50	8.57	2.83	0.00
35.00	8.57	2.83	0.00
35.50	8.57	2.83	0.00
36.00	8.57	2.83	0.00
36.50	8.57	2.83	0.00
37.00	8.57	2.83	0.00
37.50	8.57	2.83	0.00
38.00	8.57	2.83	0.00
38.50	8.57	2.83	0.00
39.00	8.57	2.83	0.00
39.50	8.57	2.83	0.00
40.00	8.57	2.83	0.00
40.50	8.57	2.83	0.00
41.00	8.57	2.83	0.00
41.50	8.57	2.83	0.00
42.00	8.57	2.83	0.00
42.50	8.57	2.83	0.00
43.00	8.57	2.83	0.00
43.50	8.57	2.83	0.00
44.00	8.57	2.83	0.00
44.50	8.57	2.83	0.00
45.00	8.57	2.83	0.00
45.50	8.57	2.83	0.00
46.00	8.57	2.83	0.00
46.50	8.57	2.83	0.00
47.00	8.57	2.83	0.00
47.50	8.57	2.83	0.00
48.00	8.57	2.83	0.00

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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

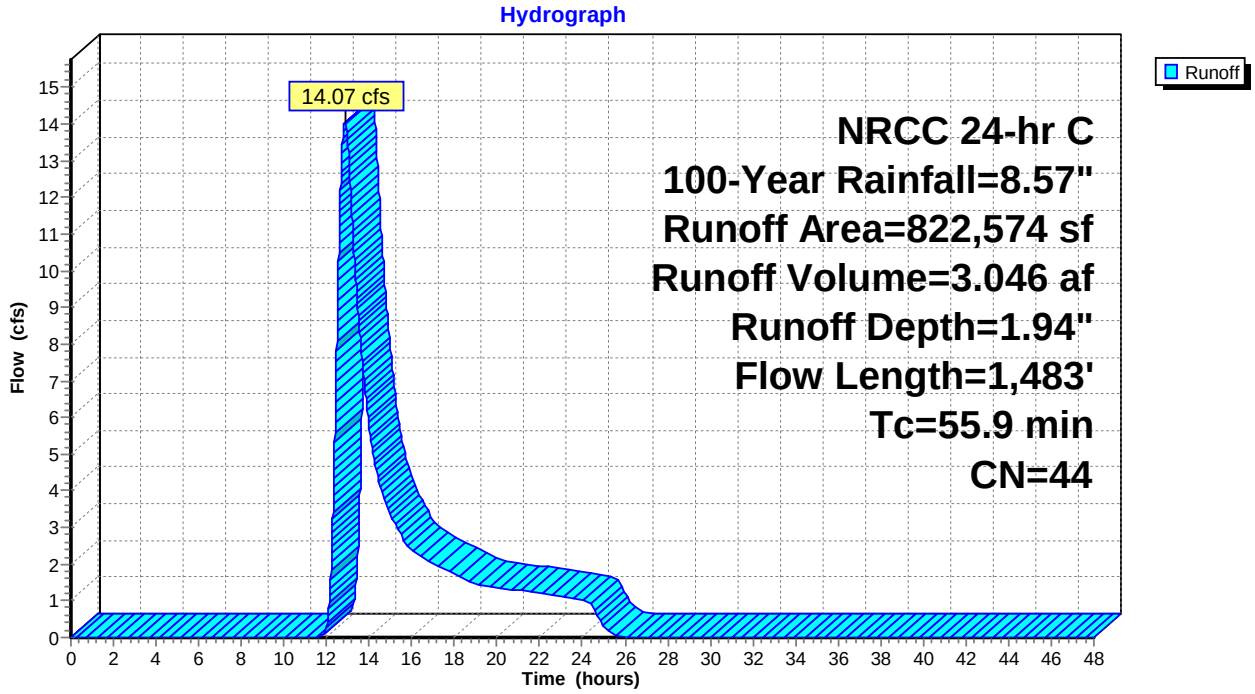
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=8.57"

	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			

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Subcatchment E2: EDA-2



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Hydrograph for Subcatchment E2: EDA-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.00	0.00
11.50	2.68	0.00	0.00
12.00	4.08	0.17	0.33
12.50	5.89	0.70	**8.65**
13.00	6.36	0.88	**13.44**
13.50	6.66	1.01	8.68
14.00	6.88	1.10	5.73
14.50	7.06	1.18	4.16
15.00	7.21	1.25	3.36
15.50	7.34	1.31	2.78
16.00	7.46	1.37	2.40
16.50	7.56	1.42	2.19
17.00	7.66	1.47	2.03
17.50	7.75	1.51	1.88
18.00	7.83	1.55	1.72
18.50	7.91	1.59	1.57
19.00	7.98	1.63	1.46
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
29.00	8.57	1.94	0.00
29.50	8.57	1.94	0.00
30.00	8.57	1.94	0.00
30.50	8.57	1.94	0.00
31.00	8.57	1.94	0.00
31.50	8.57	1.94	0.00
32.00	8.57	1.94	0.00
32.50	8.57	1.94	0.00
33.00	8.57	1.94	0.00
33.50	8.57	1.94	0.00
34.00	8.57	1.94	0.00
34.50	8.57	1.94	0.00
35.00	8.57	1.94	0.00
35.50	8.57	1.94	0.00
36.00	8.57	1.94	0.00
36.50	8.57	1.94	0.00
37.00	8.57	1.94	0.00
37.50	8.57	1.94	0.00
38.00	8.57	1.94	0.00
38.50	8.57	1.94	0.00
39.00	8.57	1.94	0.00
39.50	8.57	1.94	0.00
40.00	8.57	1.94	0.00
40.50	8.57	1.94	0.00
41.00	8.57	1.94	0.00
41.50	8.57	1.94	0.00
42.00	8.57	1.94	0.00
42.50	8.57	1.94	0.00
43.00	8.57	1.94	0.00
43.50	8.57	1.94	0.00
44.00	8.57	1.94	0.00
44.50	8.57	1.94	0.00
45.00	8.57	1.94	0.00
45.50	8.57	1.94	0.00
46.00	8.57	1.94	0.00
46.50	8.57	1.94	0.00
47.00	8.57	1.94	0.00
47.50	8.57	1.94	0.00
48.00	8.57	1.94	0.00

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Summary for Subcatchment E3: EDA-3

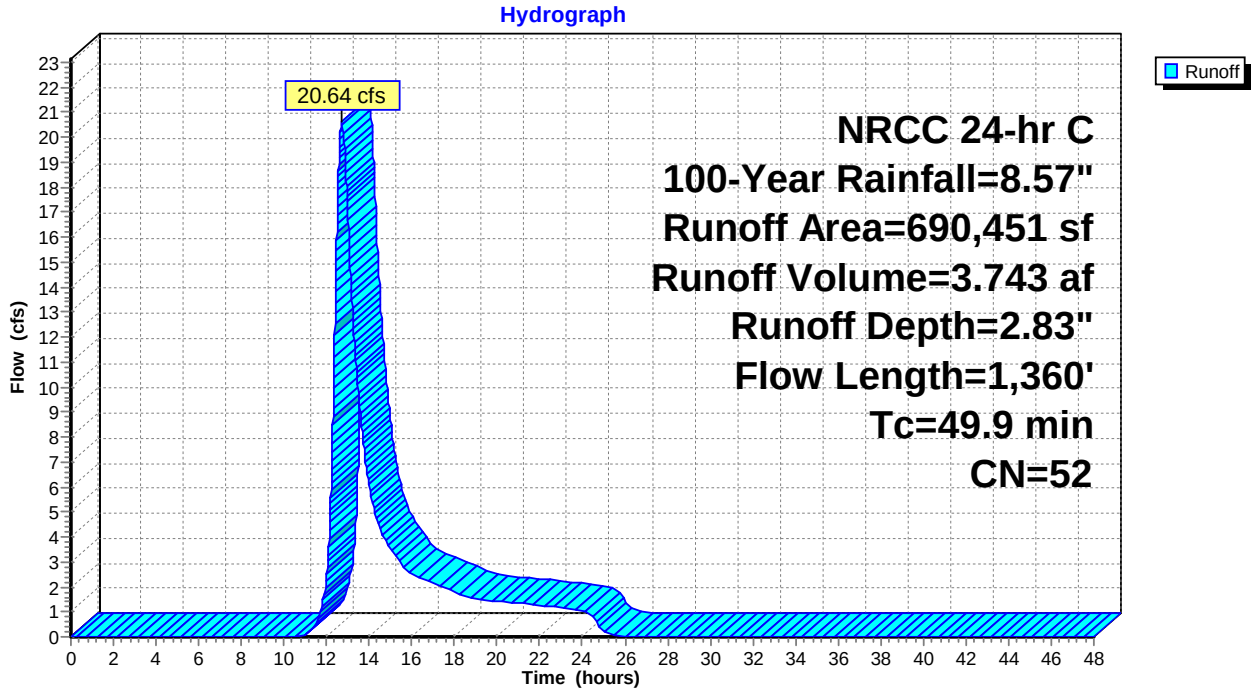
Runoff = 20.64 cfs @ 12.70 hrs, Volume= 3.743 af, Depth= 2.83"
Routed to Link EDP3 : DP-3

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



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Hydrograph for Subcatchment E3: EDA-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.01	0.07
11.50	2.68	0.07	0.56
12.00	4.08	0.44	2.41
12.50	5.89	1.23	**16.89**
13.00	6.36	1.48	**16.80**
13.50	6.66	1.65	9.58
14.00	6.88	1.77	6.03
14.50	7.06	1.88	4.36
15.00	7.21	1.97	3.51
15.50	7.34	2.05	2.91
16.00	7.46	2.12	2.53
16.50	7.56	2.19	2.32
17.00	7.66	2.25	2.15
17.50	7.75	2.31	1.98
18.00	7.83	2.36	1.81
18.50	7.91	2.40	1.64
19.00	7.98	2.45	1.53
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
29.00	8.57	2.83	0.00
29.50	8.57	2.83	0.00
30.00	8.57	2.83	0.00
30.50	8.57	2.83	0.00
31.00	8.57	2.83	0.00
31.50	8.57	2.83	0.00
32.00	8.57	2.83	0.00
32.50	8.57	2.83	0.00
33.00	8.57	2.83	0.00
33.50	8.57	2.83	0.00
34.00	8.57	2.83	0.00
34.50	8.57	2.83	0.00
35.00	8.57	2.83	0.00
35.50	8.57	2.83	0.00
36.00	8.57	2.83	0.00
36.50	8.57	2.83	0.00
37.00	8.57	2.83	0.00
37.50	8.57	2.83	0.00
38.00	8.57	2.83	0.00
38.50	8.57	2.83	0.00
39.00	8.57	2.83	0.00
39.50	8.57	2.83	0.00
40.00	8.57	2.83	0.00
40.50	8.57	2.83	0.00
41.00	8.57	2.83	0.00
41.50	8.57	2.83	0.00
42.00	8.57	2.83	0.00
42.50	8.57	2.83	0.00
43.00	8.57	2.83	0.00
43.50	8.57	2.83	0.00
44.00	8.57	2.83	0.00
44.50	8.57	2.83	0.00
45.00	8.57	2.83	0.00
45.50	8.57	2.83	0.00
46.00	8.57	2.83	0.00
46.50	8.57	2.83	0.00
47.00	8.57	2.83	0.00
47.50	8.57	2.83	0.00
48.00	8.57	2.83	0.00

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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

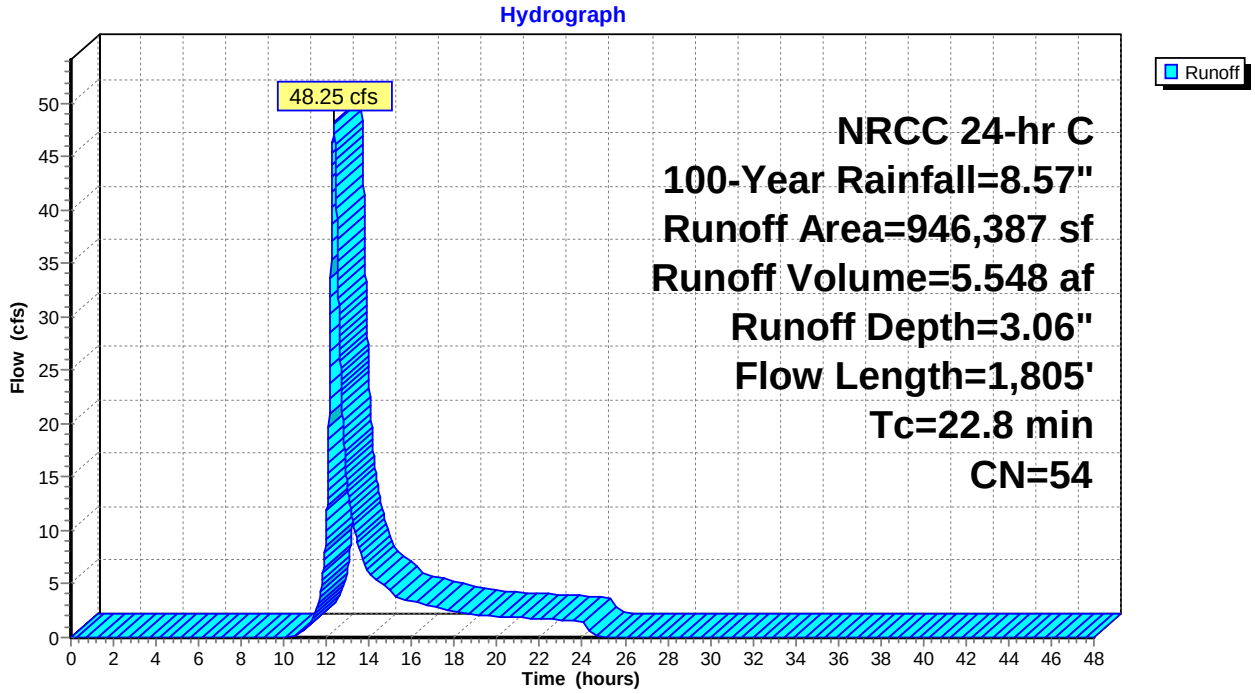
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 100-Year Rainfall=8.57"

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			

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Subcatchment E4: EDA-4



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Hydrograph for Subcatchment E4: EDA-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.14
11.00	2.21	0.03	0.81
11.50	2.68	0.10	2.60
12.00	4.08	0.52	**10.72**
12.50	5.89	1.38	**37.17**
13.00	6.36	1.65	13.96
13.50	6.66	1.82	8.53
14.00	6.88	1.95	6.05
14.50	7.06	2.07	5.13
15.00	7.21	2.16	4.31
15.50	7.34	2.24	3.62
16.00	7.46	2.32	3.36
16.50	7.56	2.39	3.12
17.00	7.66	2.45	2.89
17.50	7.75	2.51	2.64
18.00	7.83	2.57	2.38
18.50	7.91	2.62	2.18
19.00	7.98	2.66	2.11
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
29.00	8.57	3.06	0.00
29.50	8.57	3.06	0.00
30.00	8.57	3.06	0.00
30.50	8.57	3.06	0.00
31.00	8.57	3.06	0.00
31.50	8.57	3.06	0.00
32.00	8.57	3.06	0.00
32.50	8.57	3.06	0.00
33.00	8.57	3.06	0.00
33.50	8.57	3.06	0.00
34.00	8.57	3.06	0.00
34.50	8.57	3.06	0.00
35.00	8.57	3.06	0.00
35.50	8.57	3.06	0.00
36.00	8.57	3.06	0.00
36.50	8.57	3.06	0.00
37.00	8.57	3.06	0.00
37.50	8.57	3.06	0.00
38.00	8.57	3.06	0.00
38.50	8.57	3.06	0.00
39.00	8.57	3.06	0.00
39.50	8.57	3.06	0.00
40.00	8.57	3.06	0.00
40.50	8.57	3.06	0.00
41.00	8.57	3.06	0.00
41.50	8.57	3.06	0.00
42.00	8.57	3.06	0.00
42.50	8.57	3.06	0.00
43.00	8.57	3.06	0.00
43.50	8.57	3.06	0.00
44.00	8.57	3.06	0.00
44.50	8.57	3.06	0.00
45.00	8.57	3.06	0.00
45.50	8.57	3.06	0.00
46.00	8.57	3.06	0.00
46.50	8.57	3.06	0.00
47.00	8.57	3.06	0.00
47.50	8.57	3.06	0.00
48.00	8.57	3.06	0.00

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Summary for Subcatchment E5: E5

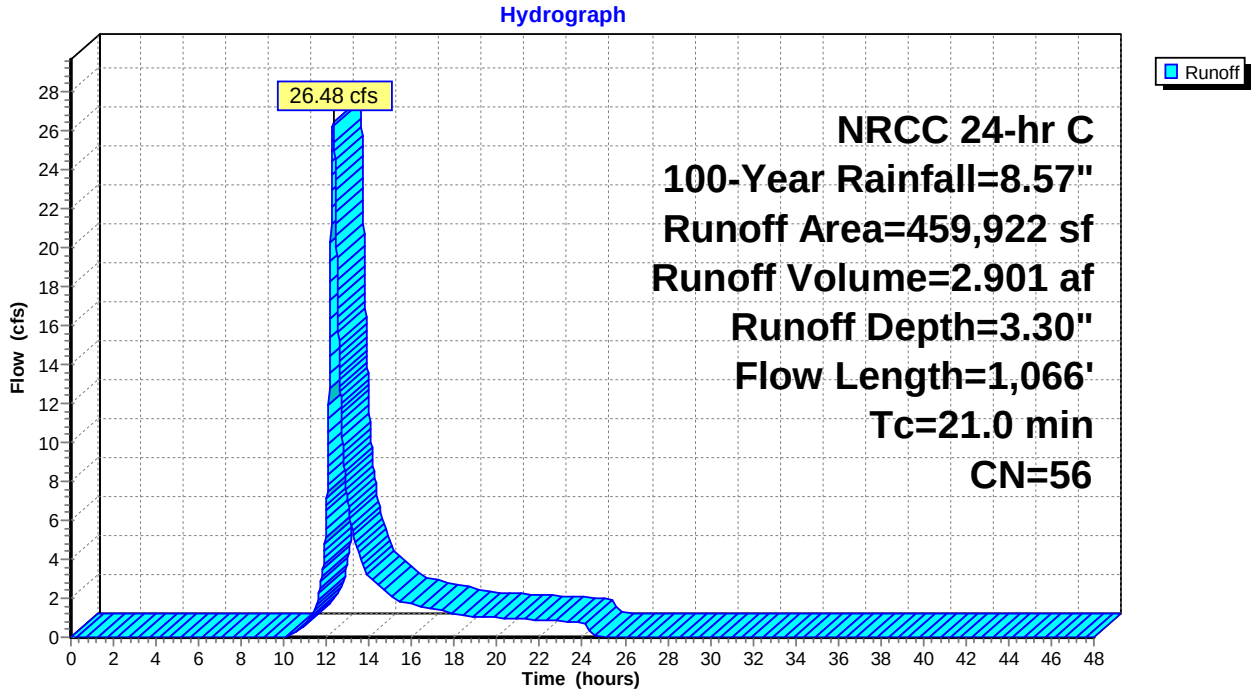
Runoff = 26.48 cfs @ 12.32 hrs, Volume= 2.901 af, Depth= 3.30"
Routed to Link EDP5 : EDP5

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



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Hydrograph for Subcatchment E5: E5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.02
10.50	1.91	0.01	0.22
11.00	2.21	0.05	0.63
11.50	2.68	0.14	1.68
12.00	4.08	0.61	**6.48**
12.50	5.89	1.53	**18.37**
13.00	6.36	1.81	6.86
13.50	6.66	2.00	4.26
14.00	6.88	2.14	3.04
14.50	7.06	2.26	2.59
15.00	7.21	2.36	2.17
15.50	7.34	2.44	1.83
16.00	7.46	2.52	1.70
16.50	7.56	2.59	1.58
17.00	7.66	2.66	1.46
17.50	7.75	2.72	1.33
18.00	7.83	2.78	1.20
18.50	7.91	2.83	1.10
19.00	7.98	2.88	1.07
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
29.00	8.57	3.30	0.00
29.50	8.57	3.30	0.00
30.00	8.57	3.30	0.00
30.50	8.57	3.30	0.00
31.00	8.57	3.30	0.00
31.50	8.57	3.30	0.00
32.00	8.57	3.30	0.00
32.50	8.57	3.30	0.00
33.00	8.57	3.30	0.00
33.50	8.57	3.30	0.00
34.00	8.57	3.30	0.00
34.50	8.57	3.30	0.00
35.00	8.57	3.30	0.00
35.50	8.57	3.30	0.00
36.00	8.57	3.30	0.00
36.50	8.57	3.30	0.00
37.00	8.57	3.30	0.00
37.50	8.57	3.30	0.00
38.00	8.57	3.30	0.00
38.50	8.57	3.30	0.00
39.00	8.57	3.30	0.00
39.50	8.57	3.30	0.00
40.00	8.57	3.30	0.00
40.50	8.57	3.30	0.00
41.00	8.57	3.30	0.00
41.50	8.57	3.30	0.00
42.00	8.57	3.30	0.00
42.50	8.57	3.30	0.00
43.00	8.57	3.30	0.00
43.50	8.57	3.30	0.00
44.00	8.57	3.30	0.00
44.50	8.57	3.30	0.00
45.00	8.57	3.30	0.00
45.50	8.57	3.30	0.00
46.00	8.57	3.30	0.00
46.50	8.57	3.30	0.00
47.00	8.57	3.30	0.00
47.50	8.57	3.30	0.00
48.00	8.57	3.30	0.00

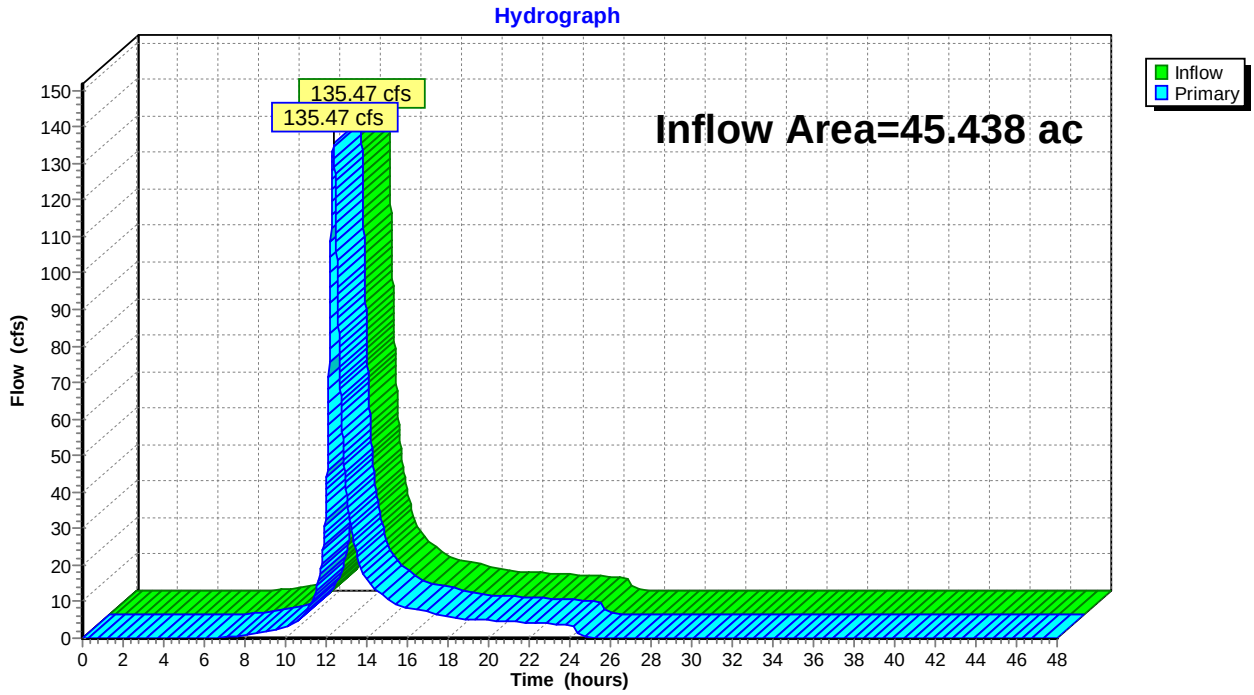
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Summary for Link EDP1: DP-1

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



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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				

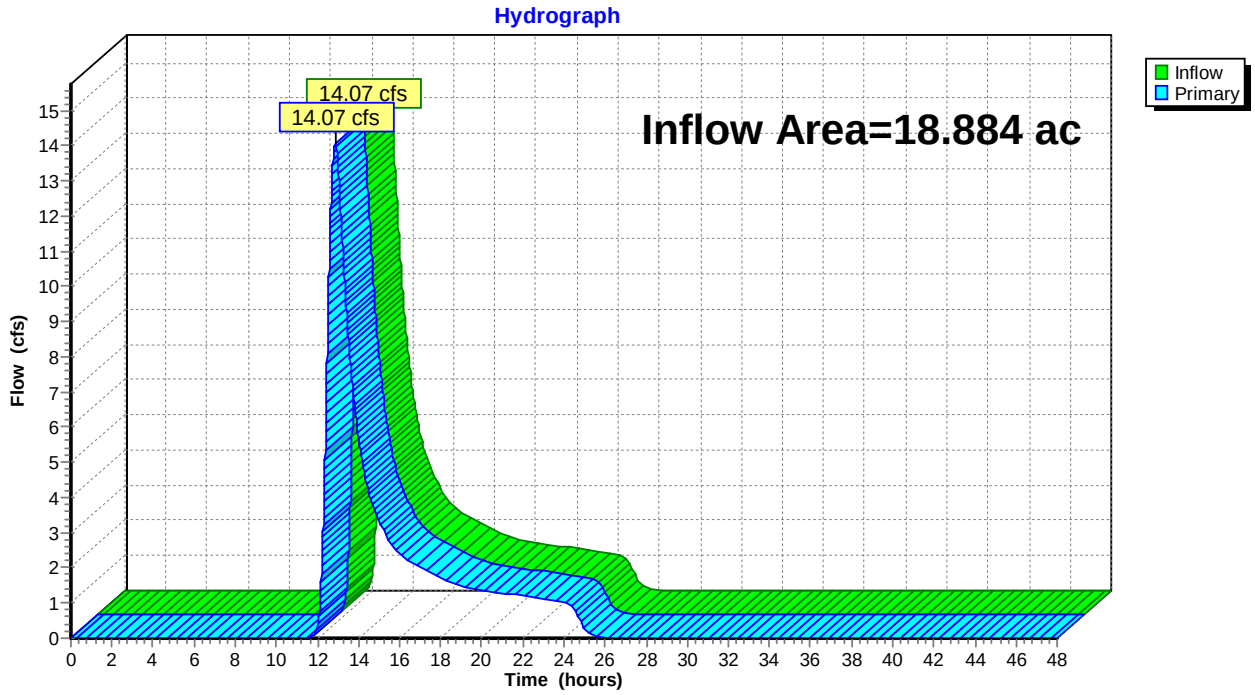
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Summary for Link EDP2: DP-2

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



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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				

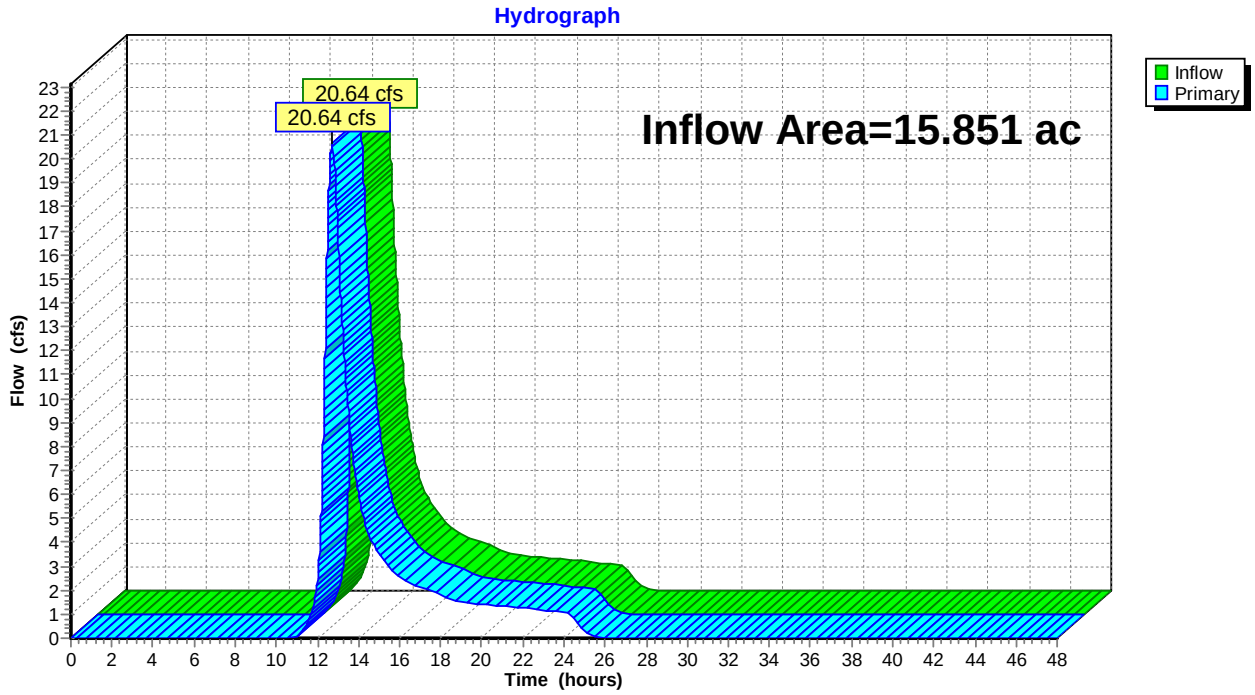
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Summary for Link EDP3: DP-3

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



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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				

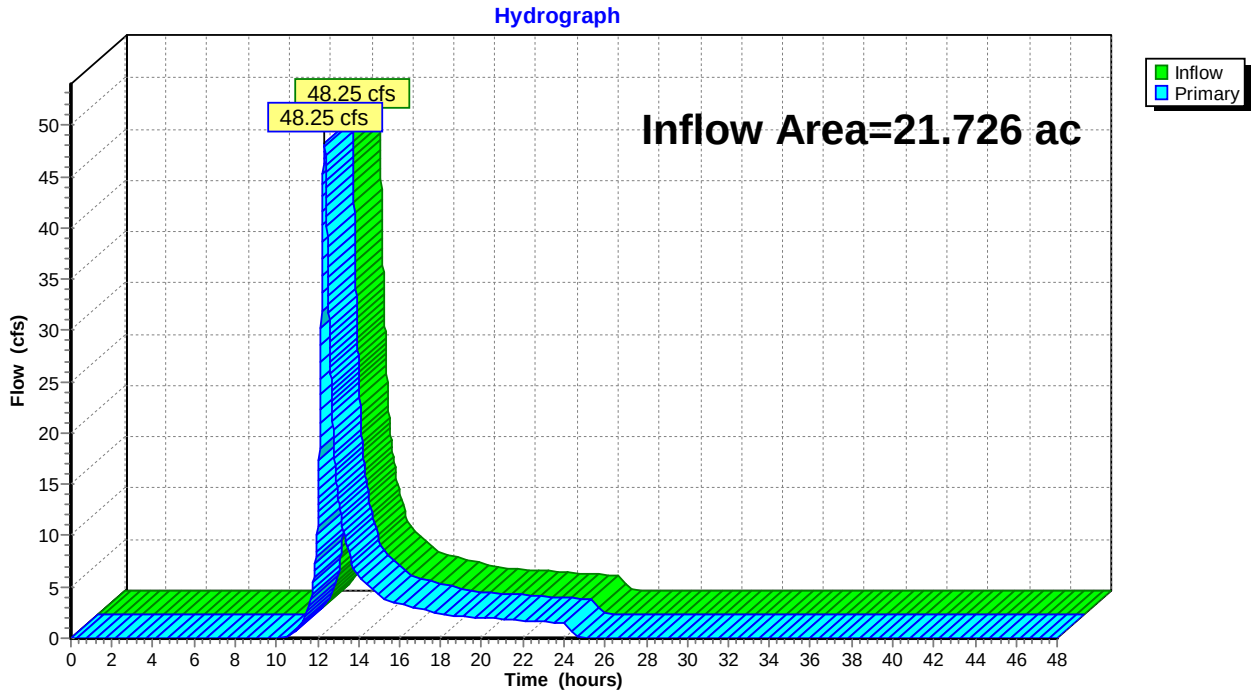
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Summary for Link EDP4: DP-4

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



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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				

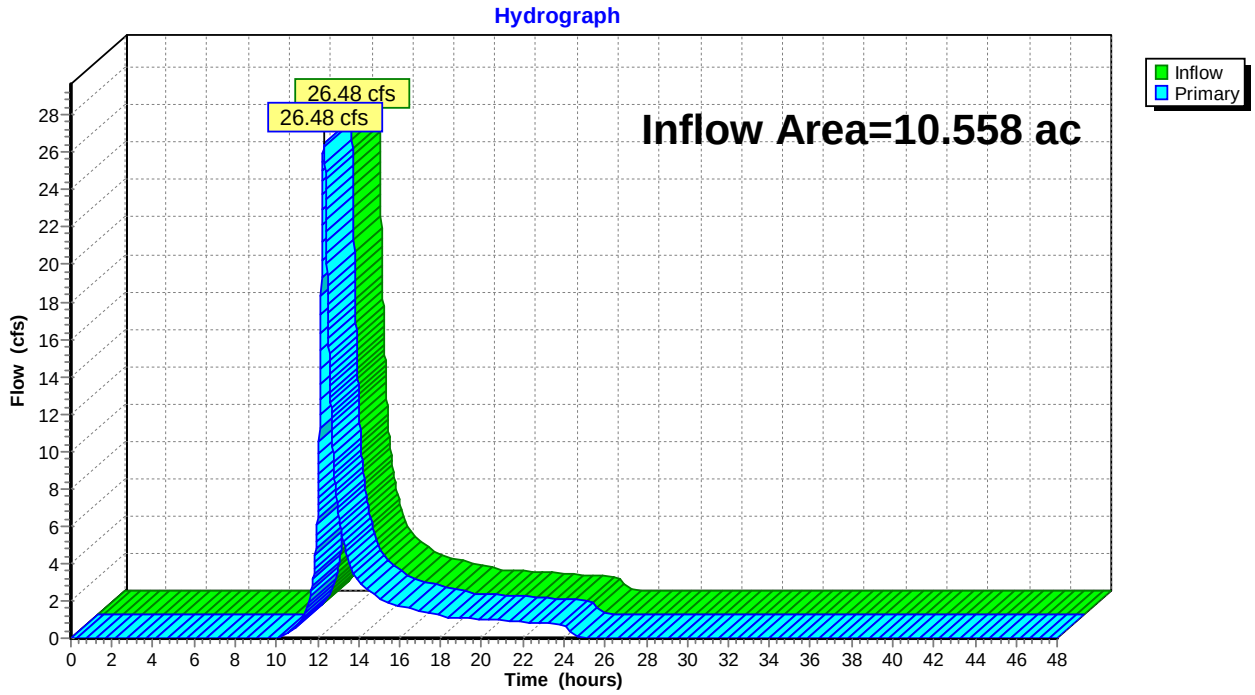
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Summary for Link EDP5: EDP5

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



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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				

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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

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Summary for Subcatchment 22S: Exist Wetlands/Undeveloped Area

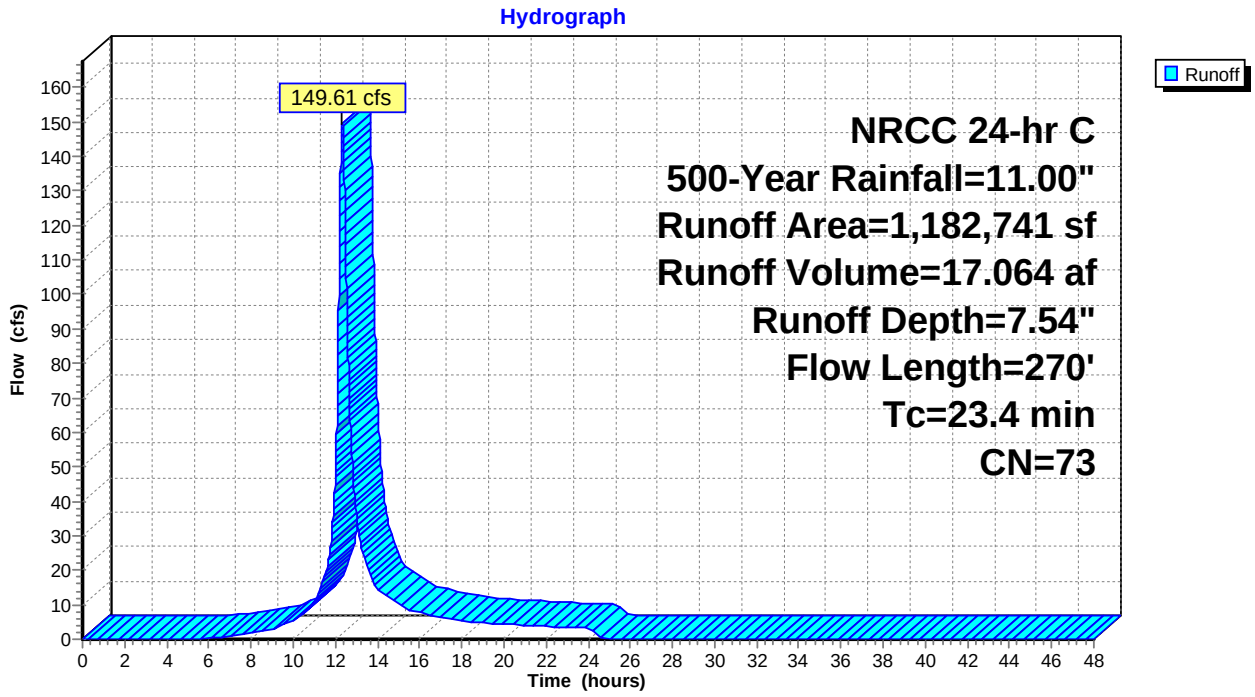
Runoff = 149.61 cfs @ 12.33 hrs, Volume= 17.064 af, Depth= 7.54"
Routed to Link EDP1 : DP-1

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



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Hydrograph for Subcatchment 22S: Exist Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.06	0.00	0.00
1.00	0.13	0.00	0.00
1.50	0.20	0.00	0.00
2.00	0.27	0.00	0.00
2.50	0.34	0.00	0.00
3.00	0.42	0.00	0.00
3.50	0.50	0.00	0.00
4.00	0.58	0.00	0.00
4.50	0.67	0.00	0.00
5.00	0.76	0.00	0.00
5.50	0.85	0.00	0.12
6.00	0.94	0.01	0.36
6.50	1.05	0.02	0.64
7.00	1.16	0.04	1.00
7.50	1.29	0.07	1.42
8.00	1.43	0.11	1.91
8.50	1.58	0.16	2.47
9.00	1.74	0.21	3.07
9.50	1.94	0.29	4.01
10.00	2.17	0.40	5.50
10.50	2.45	0.54	7.27
11.00	2.84	0.76	10.75
11.50	3.44	1.14	18.62
12.00	5.24	2.47	**47.12**
12.50	7.56	4.42	**111.08**
13.00	8.16	4.96	36.43
13.50	8.55	5.30	20.98
14.00	8.83	5.55	14.51
14.50	9.06	5.76	12.10
15.00	9.26	5.94	10.06
15.50	9.42	6.09	8.36
16.00	9.57	6.22	7.69
16.50	9.71	6.35	7.10
17.00	9.84	6.47	6.52
17.50	9.95	6.57	5.93
18.00	10.06	6.67	5.34
18.50	10.15	6.76	4.85
19.00	10.24	6.84	4.68
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
29.00	11.00	7.54	0.00
29.50	11.00	7.54	0.00
30.00	11.00	7.54	0.00
30.50	11.00	7.54	0.00
31.00	11.00	7.54	0.00
31.50	11.00	7.54	0.00
32.00	11.00	7.54	0.00
32.50	11.00	7.54	0.00
33.00	11.00	7.54	0.00
33.50	11.00	7.54	0.00
34.00	11.00	7.54	0.00
34.50	11.00	7.54	0.00
35.00	11.00	7.54	0.00
35.50	11.00	7.54	0.00
36.00	11.00	7.54	0.00
36.50	11.00	7.54	0.00
37.00	11.00	7.54	0.00
37.50	11.00	7.54	0.00
38.00	11.00	7.54	0.00
38.50	11.00	7.54	0.00
39.00	11.00	7.54	0.00
39.50	11.00	7.54	0.00
40.00	11.00	7.54	0.00
40.50	11.00	7.54	0.00
41.00	11.00	7.54	0.00
41.50	11.00	7.54	0.00
42.00	11.00	7.54	0.00
42.50	11.00	7.54	0.00
43.00	11.00	7.54	0.00
43.50	11.00	7.54	0.00
44.00	11.00	7.54	0.00
44.50	11.00	7.54	0.00
45.00	11.00	7.54	0.00
45.50	11.00	7.54	0.00
46.00	11.00	7.54	0.00
46.50	11.00	7.54	0.00
47.00	11.00	7.54	0.00
47.50	11.00	7.54	0.00
48.00	11.00	7.54	0.00

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Summary for Subcatchment E1: EDA-1

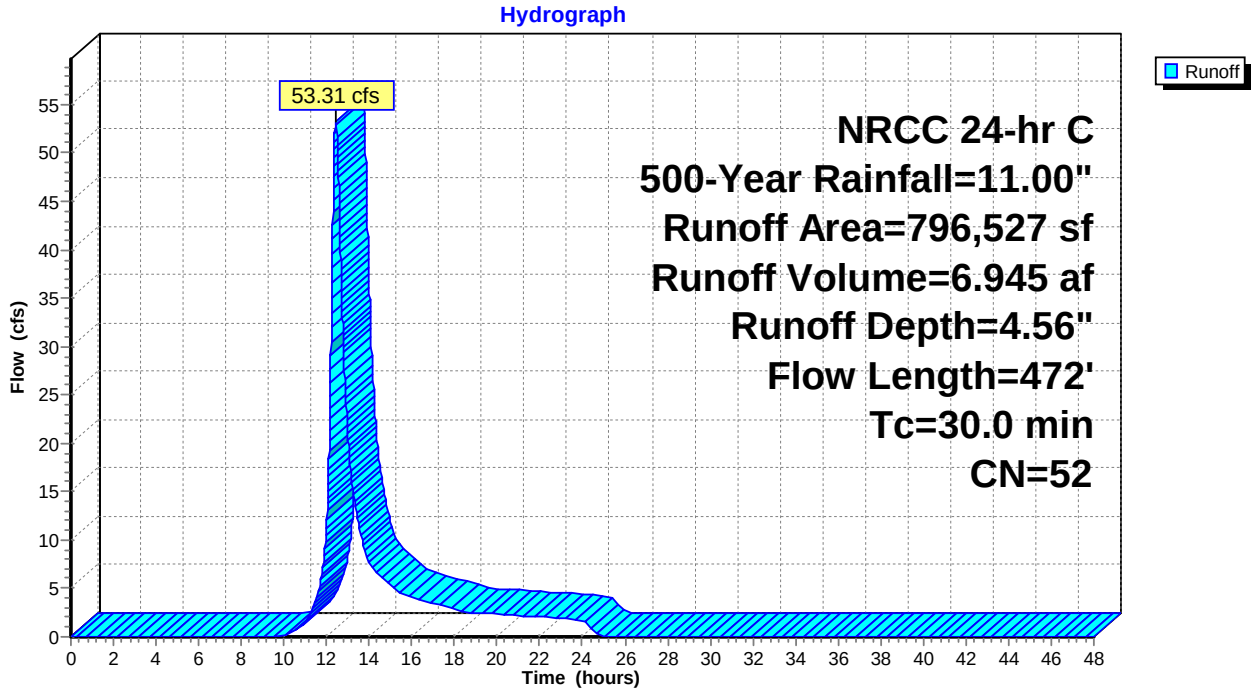
Runoff = 53.31 cfs @ 12.43 hrs, Volume= 6.945 af, Depth= 4.56"
Routed to Link EDP1 : DP-1

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



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Hydrograph for Subcatchment E1: EDA-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.06	0.00	0.00
1.00	0.13	0.00	0.00
1.50	0.20	0.00	0.00
2.00	0.27	0.00	0.00
2.50	0.34	0.00	0.00
3.00	0.42	0.00	0.00
3.50	0.50	0.00	0.00
4.00	0.58	0.00	0.00
4.50	0.67	0.00	0.00
5.00	0.76	0.00	0.00
5.50	0.85	0.00	0.00
6.00	0.94	0.00	0.00
6.50	1.05	0.00	0.00
7.00	1.16	0.00	0.00
7.50	1.29	0.00	0.00
8.00	1.43	0.00	0.00
8.50	1.58	0.00	0.00
9.00	1.74	0.00	0.00
9.50	1.94	0.00	0.00
10.00	2.17	0.01	0.21
10.50	2.45	0.04	0.70
11.00	2.84	0.10	1.57
11.50	3.44	0.24	3.70
12.00	5.24	0.91	**11.40**
12.50	7.56	2.18	**51.46**
13.00	8.16	2.57	20.82
13.50	8.55	2.82	11.62
14.00	8.83	3.01	7.74
14.50	9.06	3.17	6.36
15.00	9.26	3.30	5.33
15.50	9.42	3.41	4.44
16.00	9.57	3.52	4.04
16.50	9.71	3.62	3.75
17.00	9.84	3.71	3.46
17.50	9.95	3.79	3.17
18.00	10.06	3.86	2.87
18.50	10.15	3.93	2.60
19.00	10.24	4.00	2.49
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
29.00	11.00	4.56	0.00
29.50	11.00	4.56	0.00
30.00	11.00	4.56	0.00
30.50	11.00	4.56	0.00
31.00	11.00	4.56	0.00
31.50	11.00	4.56	0.00
32.00	11.00	4.56	0.00
32.50	11.00	4.56	0.00
33.00	11.00	4.56	0.00
33.50	11.00	4.56	0.00
34.00	11.00	4.56	0.00
34.50	11.00	4.56	0.00
35.00	11.00	4.56	0.00
35.50	11.00	4.56	0.00
36.00	11.00	4.56	0.00
36.50	11.00	4.56	0.00
37.00	11.00	4.56	0.00
37.50	11.00	4.56	0.00
38.00	11.00	4.56	0.00
38.50	11.00	4.56	0.00
39.00	11.00	4.56	0.00
39.50	11.00	4.56	0.00
40.00	11.00	4.56	0.00
40.50	11.00	4.56	0.00
41.00	11.00	4.56	0.00
41.50	11.00	4.56	0.00
42.00	11.00	4.56	0.00
42.50	11.00	4.56	0.00
43.00	11.00	4.56	0.00
43.50	11.00	4.56	0.00
44.00	11.00	4.56	0.00
44.50	11.00	4.56	0.00
45.00	11.00	4.56	0.00
45.50	11.00	4.56	0.00
46.00	11.00	4.56	0.00
46.50	11.00	4.56	0.00
47.00	11.00	4.56	0.00
47.50	11.00	4.56	0.00
48.00	11.00	4.56	0.00

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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

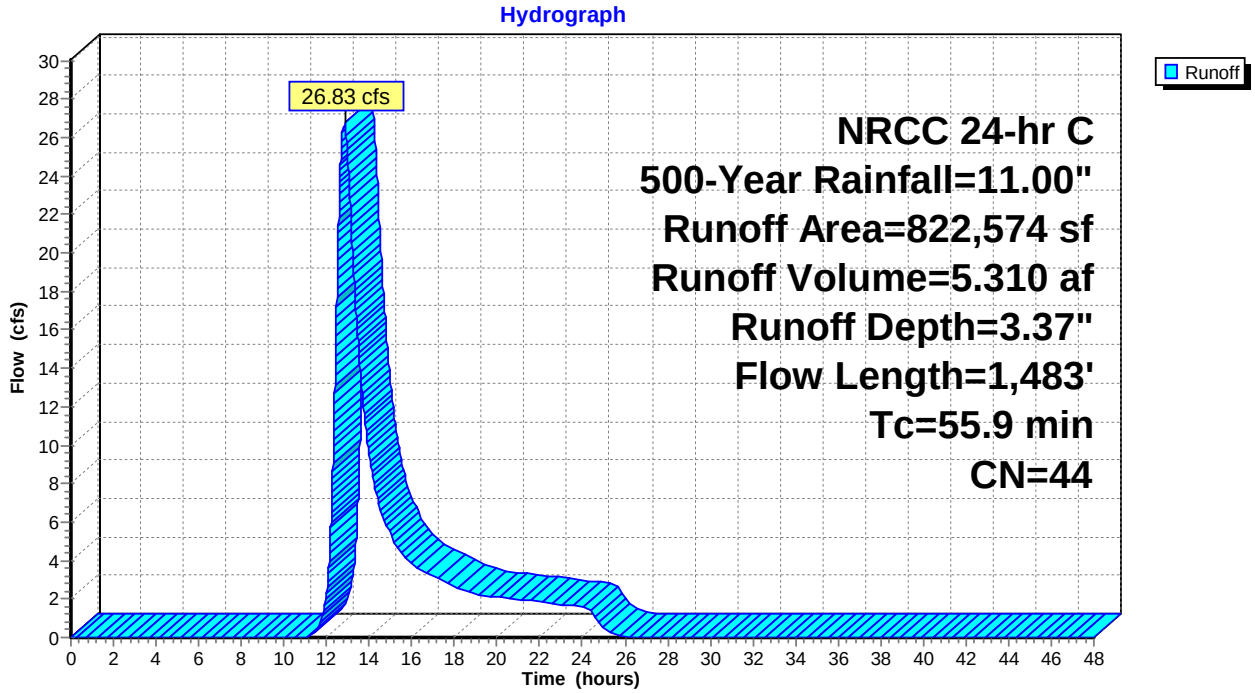
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 500-Year Rainfall=11.00"

	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			

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Subcatchment E2: EDA-2



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Hydrograph for Subcatchment E2: EDA-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.06	0.00	0.00
1.00	0.13	0.00	0.00
1.50	0.20	0.00	0.00
2.00	0.27	0.00	0.00
2.50	0.34	0.00	0.00
3.00	0.42	0.00	0.00
3.50	0.50	0.00	0.00
4.00	0.58	0.00	0.00
4.50	0.67	0.00	0.00
5.00	0.76	0.00	0.00
5.50	0.85	0.00	0.00
6.00	0.94	0.00	0.00
6.50	1.05	0.00	0.00
7.00	1.16	0.00	0.00
7.50	1.29	0.00	0.00
8.00	1.43	0.00	0.00
8.50	1.58	0.00	0.00
9.00	1.74	0.00	0.00
9.50	1.94	0.00	0.00
10.00	2.17	0.00	0.00
10.50	2.45	0.00	0.00
11.00	2.84	0.01	0.01
11.50	3.44	0.06	0.36
12.00	5.24	0.47	2.34
12.50	7.56	1.42	**18.67**
13.00	8.16	1.72	**24.91**
13.50	8.55	1.92	15.05
14.00	8.83	2.08	9.55
14.50	9.06	2.21	6.76
15.00	9.26	2.32	5.38
15.50	9.42	2.41	4.40
16.00	9.57	2.50	3.78
16.50	9.71	2.58	3.44
17.00	9.84	2.66	3.18
17.50	9.95	2.73	2.93
18.00	10.06	2.79	2.68
18.50	10.15	2.85	2.43
19.00	10.24	2.90	2.26
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
29.00	11.00	3.37	0.00
29.50	11.00	3.37	0.00
30.00	11.00	3.37	0.00
30.50	11.00	3.37	0.00
31.00	11.00	3.37	0.00
31.50	11.00	3.37	0.00
32.00	11.00	3.37	0.00
32.50	11.00	3.37	0.00
33.00	11.00	3.37	0.00
33.50	11.00	3.37	0.00
34.00	11.00	3.37	0.00
34.50	11.00	3.37	0.00
35.00	11.00	3.37	0.00
35.50	11.00	3.37	0.00
36.00	11.00	3.37	0.00
36.50	11.00	3.37	0.00
37.00	11.00	3.37	0.00
37.50	11.00	3.37	0.00
38.00	11.00	3.37	0.00
38.50	11.00	3.37	0.00
39.00	11.00	3.37	0.00
39.50	11.00	3.37	0.00
40.00	11.00	3.37	0.00
40.50	11.00	3.37	0.00
41.00	11.00	3.37	0.00
41.50	11.00	3.37	0.00
42.00	11.00	3.37	0.00
42.50	11.00	3.37	0.00
43.00	11.00	3.37	0.00
43.50	11.00	3.37	0.00
44.00	11.00	3.37	0.00
44.50	11.00	3.37	0.00
45.00	11.00	3.37	0.00
45.50	11.00	3.37	0.00
46.00	11.00	3.37	0.00
46.50	11.00	3.37	0.00
47.00	11.00	3.37	0.00
47.50	11.00	3.37	0.00
48.00	11.00	3.37	0.00

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Summary for Subcatchment E3: EDA-3

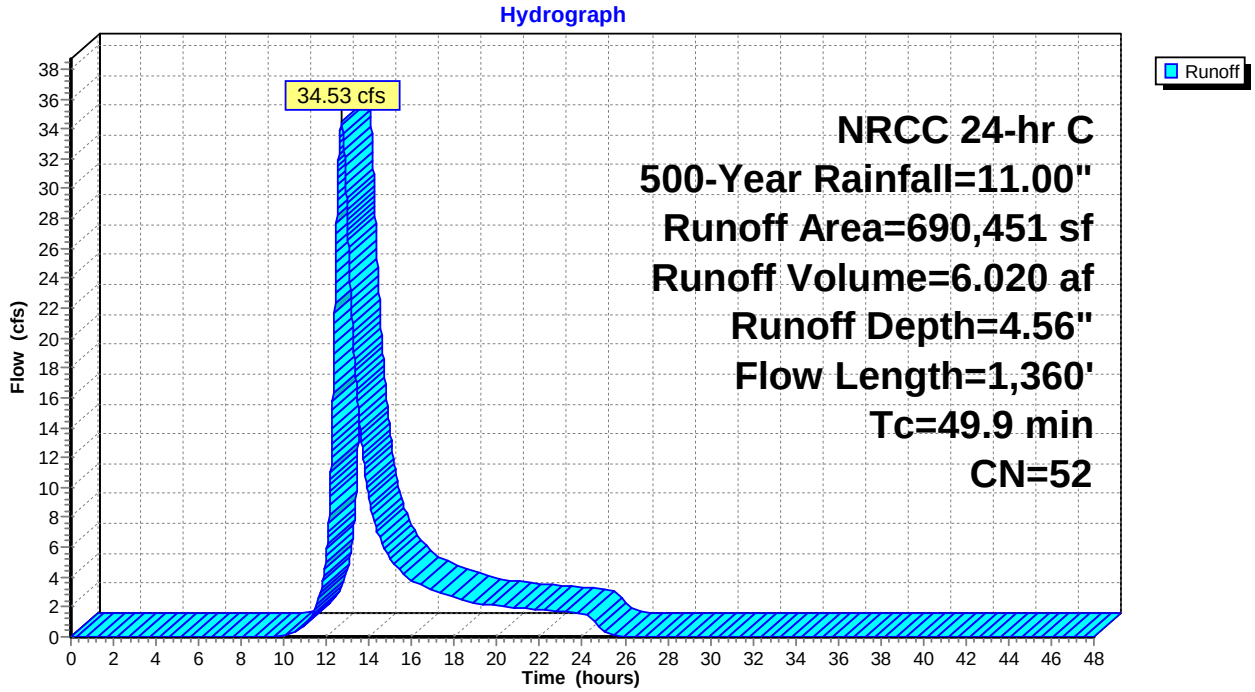
Runoff = 34.53 cfs @ 12.70 hrs, Volume= 6.020 af, Depth= 4.56"
Routed to Link EDP3 : DP-3

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



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Hydrograph for Subcatchment E3: EDA-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.06	0.00	0.00
1.00	0.13	0.00	0.00
1.50	0.20	0.00	0.00
2.00	0.27	0.00	0.00
2.50	0.34	0.00	0.00
3.00	0.42	0.00	0.00
3.50	0.50	0.00	0.00
4.00	0.58	0.00	0.00
4.50	0.67	0.00	0.00
5.00	0.76	0.00	0.00
5.50	0.85	0.00	0.00
6.00	0.94	0.00	0.00
6.50	1.05	0.00	0.00
7.00	1.16	0.00	0.00
7.50	1.29	0.00	0.00
8.00	1.43	0.00	0.00
8.50	1.58	0.00	0.00
9.00	1.74	0.00	0.00
9.50	1.94	0.00	0.00
10.00	2.17	0.01	0.07
10.50	2.45	0.04	0.36
11.00	2.84	0.10	0.89
11.50	3.44	0.24	2.08
12.00	5.24	0.91	5.55
12.50	7.56	2.18	**29.23**
13.00	8.16	2.57	**27.19**
13.50	8.55	2.82	14.95
14.00	8.83	3.01	9.19
14.50	9.06	3.17	6.55
15.00	9.26	3.30	5.24
15.50	9.42	3.41	4.32
16.00	9.57	3.52	3.74
16.50	9.71	3.62	3.42
17.00	9.84	3.71	3.16
17.50	9.95	3.79	2.90
18.00	10.06	3.86	2.65
18.50	10.15	3.93	2.39
19.00	10.24	4.00	2.23
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
29.00	11.00	4.56	0.00
29.50	11.00	4.56	0.00
30.00	11.00	4.56	0.00
30.50	11.00	4.56	0.00
31.00	11.00	4.56	0.00
31.50	11.00	4.56	0.00
32.00	11.00	4.56	0.00
32.50	11.00	4.56	0.00
33.00	11.00	4.56	0.00
33.50	11.00	4.56	0.00
34.00	11.00	4.56	0.00
34.50	11.00	4.56	0.00
35.00	11.00	4.56	0.00
35.50	11.00	4.56	0.00
36.00	11.00	4.56	0.00
36.50	11.00	4.56	0.00
37.00	11.00	4.56	0.00
37.50	11.00	4.56	0.00
38.00	11.00	4.56	0.00
38.50	11.00	4.56	0.00
39.00	11.00	4.56	0.00
39.50	11.00	4.56	0.00
40.00	11.00	4.56	0.00
40.50	11.00	4.56	0.00
41.00	11.00	4.56	0.00
41.50	11.00	4.56	0.00
42.00	11.00	4.56	0.00
42.50	11.00	4.56	0.00
43.00	11.00	4.56	0.00
43.50	11.00	4.56	0.00
44.00	11.00	4.56	0.00
44.50	11.00	4.56	0.00
45.00	11.00	4.56	0.00
45.50	11.00	4.56	0.00
46.00	11.00	4.56	0.00
46.50	11.00	4.56	0.00
47.00	11.00	4.56	0.00
47.50	11.00	4.56	0.00
48.00	11.00	4.56	0.00

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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

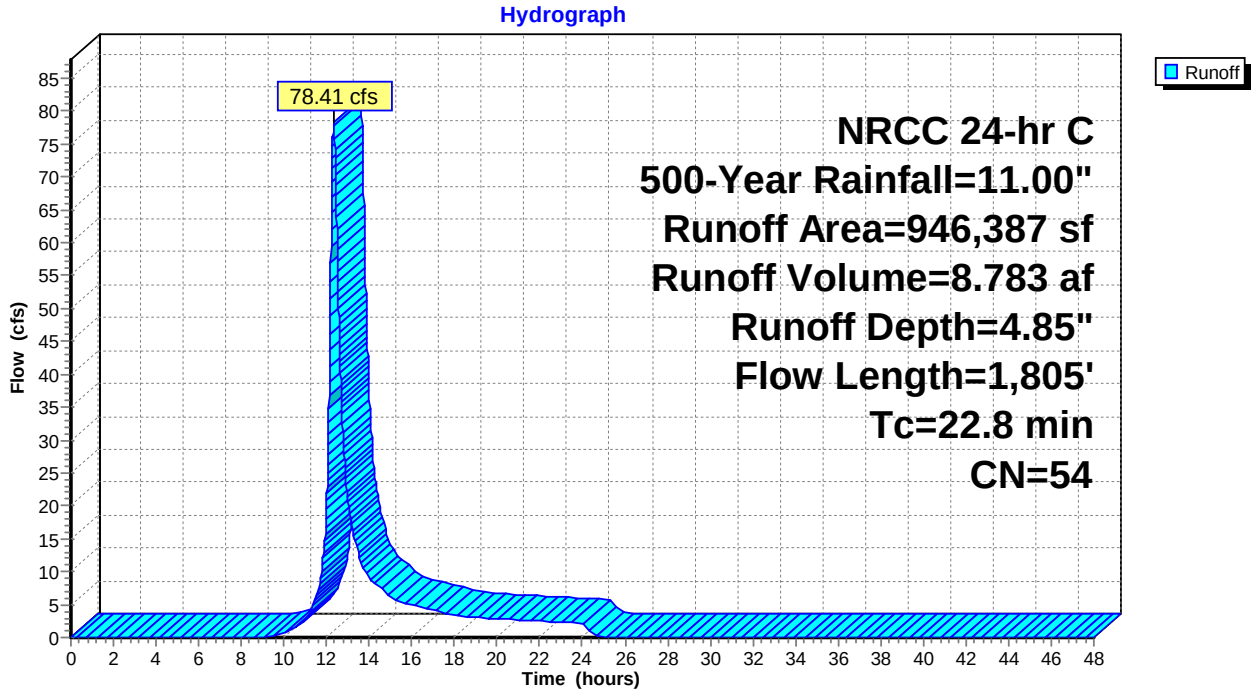
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
NRCC 24-hr C 500-Year Rainfall=11.00"

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			

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Subcatchment E4: EDA-4



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Hydrograph for Subcatchment E4: EDA-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.06	0.00	0.00
1.00	0.13	0.00	0.00
1.50	0.20	0.00	0.00
2.00	0.27	0.00	0.00
2.50	0.34	0.00	0.00
3.00	0.42	0.00	0.00
3.50	0.50	0.00	0.00
4.00	0.58	0.00	0.00
4.50	0.67	0.00	0.00
5.00	0.76	0.00	0.00
5.50	0.85	0.00	0.00
6.00	0.94	0.00	0.00
6.50	1.05	0.00	0.00
7.00	1.16	0.00	0.00
7.50	1.29	0.00	0.00
8.00	1.43	0.00	0.00
8.50	1.58	0.00	0.00
9.00	1.74	0.00	0.00
9.50	1.94	0.01	0.19
10.00	2.17	0.02	0.68
10.50	2.45	0.06	1.39
11.00	2.84	0.13	2.76
11.50	3.44	0.29	6.10
12.00	5.24	1.04	**20.02**
12.50	7.56	2.38	**58.88**
13.00	8.16	2.79	21.14
13.50	8.55	3.05	12.71
14.00	8.83	3.24	8.94
14.50	9.06	3.41	7.55
15.00	9.26	3.55	6.31
15.50	9.42	3.67	5.29
16.00	9.57	3.78	4.89
16.50	9.71	3.88	4.54
17.00	9.84	3.97	4.19
17.50	9.95	4.06	3.82
18.00	10.06	4.14	3.45
18.50	10.15	4.21	3.14
19.00	10.24	4.28	3.04
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
29.00	11.00	4.85	0.00
29.50	11.00	4.85	0.00
30.00	11.00	4.85	0.00
30.50	11.00	4.85	0.00
31.00	11.00	4.85	0.00
31.50	11.00	4.85	0.00
32.00	11.00	4.85	0.00
32.50	11.00	4.85	0.00
33.00	11.00	4.85	0.00
33.50	11.00	4.85	0.00
34.00	11.00	4.85	0.00
34.50	11.00	4.85	0.00
35.00	11.00	4.85	0.00
35.50	11.00	4.85	0.00
36.00	11.00	4.85	0.00
36.50	11.00	4.85	0.00
37.00	11.00	4.85	0.00
37.50	11.00	4.85	0.00
38.00	11.00	4.85	0.00
38.50	11.00	4.85	0.00
39.00	11.00	4.85	0.00
39.50	11.00	4.85	0.00
40.00	11.00	4.85	0.00
40.50	11.00	4.85	0.00
41.00	11.00	4.85	0.00
41.50	11.00	4.85	0.00
42.00	11.00	4.85	0.00
42.50	11.00	4.85	0.00
43.00	11.00	4.85	0.00
43.50	11.00	4.85	0.00
44.00	11.00	4.85	0.00
44.50	11.00	4.85	0.00
45.00	11.00	4.85	0.00
45.50	11.00	4.85	0.00
46.00	11.00	4.85	0.00
46.50	11.00	4.85	0.00
47.00	11.00	4.85	0.00
47.50	11.00	4.85	0.00
48.00	11.00	4.85	0.00

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Summary for Subcatchment E5: E5

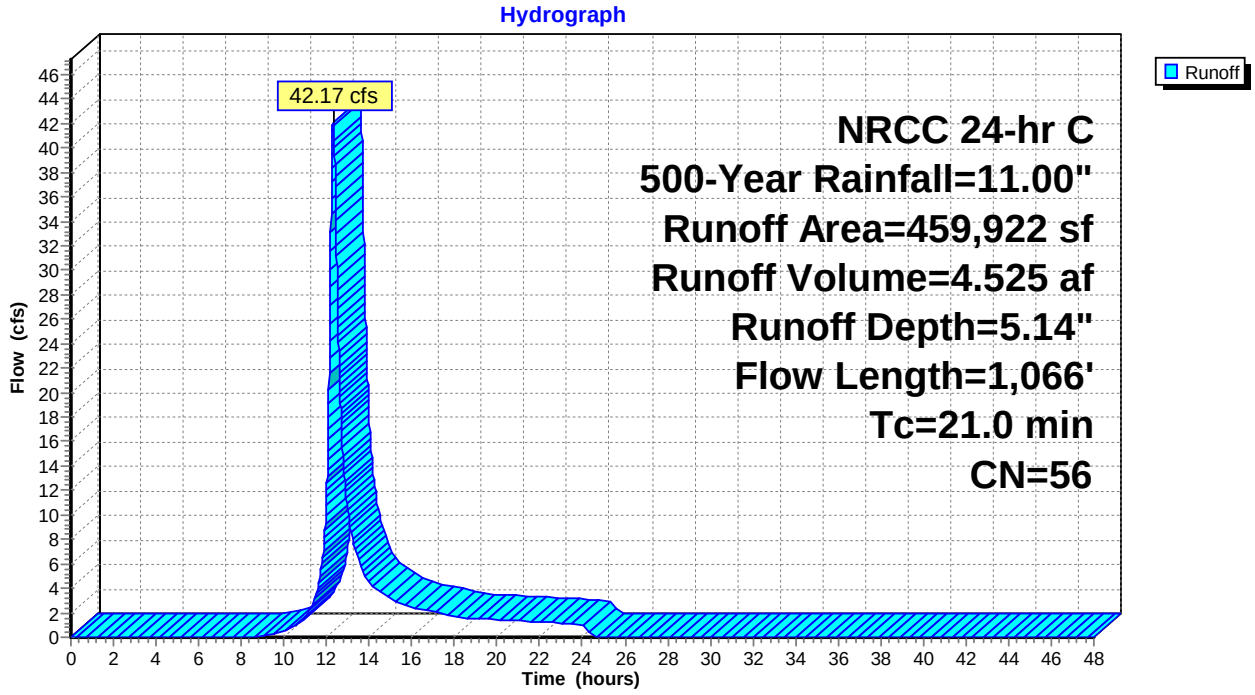
Runoff = 42.17 cfs @ 12.30 hrs, Volume= 4.525 af, Depth= 5.14"
Routed to Link EDP5 : EDP5

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



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Hydrograph for Subcatchment E5: E5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.06	0.00	0.00
1.00	0.13	0.00	0.00
1.50	0.20	0.00	0.00
2.00	0.27	0.00	0.00
2.50	0.34	0.00	0.00
3.00	0.42	0.00	0.00
3.50	0.50	0.00	0.00
4.00	0.58	0.00	0.00
4.50	0.67	0.00	0.00
5.00	0.76	0.00	0.00
5.50	0.85	0.00	0.00
6.00	0.94	0.00	0.00
6.50	1.05	0.00	0.00
7.00	1.16	0.00	0.00
7.50	1.29	0.00	0.00
8.00	1.43	0.00	0.00
8.50	1.58	0.00	0.00
9.00	1.74	0.00	0.06
9.50	1.94	0.02	0.23
10.00	2.17	0.04	0.51
10.50	2.45	0.09	0.90
11.00	2.84	0.18	1.68
11.50	3.44	0.36	3.54
12.00	5.24	1.17	**11.53**
12.50	7.56	2.59	**28.44**
13.00	8.16	3.01	10.22
13.50	8.55	3.28	6.26
14.00	8.83	3.48	4.44
14.50	9.06	3.66	3.77
15.00	9.26	3.80	3.15
15.50	9.42	3.92	2.64
16.00	9.57	4.04	2.45
16.50	9.71	4.14	2.27
17.00	9.84	4.24	2.09
17.50	9.95	4.33	1.91
18.00	10.06	4.41	1.72
18.50	10.15	4.48	1.57
19.00	10.24	4.55	1.52
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
29.00	11.00	5.14	0.00
29.50	11.00	5.14	0.00
30.00	11.00	5.14	0.00
30.50	11.00	5.14	0.00
31.00	11.00	5.14	0.00
31.50	11.00	5.14	0.00
32.00	11.00	5.14	0.00
32.50	11.00	5.14	0.00
33.00	11.00	5.14	0.00
33.50	11.00	5.14	0.00
34.00	11.00	5.14	0.00
34.50	11.00	5.14	0.00
35.00	11.00	5.14	0.00
35.50	11.00	5.14	0.00
36.00	11.00	5.14	0.00
36.50	11.00	5.14	0.00
37.00	11.00	5.14	0.00
37.50	11.00	5.14	0.00
38.00	11.00	5.14	0.00
38.50	11.00	5.14	0.00
39.00	11.00	5.14	0.00
39.50	11.00	5.14	0.00
40.00	11.00	5.14	0.00
40.50	11.00	5.14	0.00
41.00	11.00	5.14	0.00
41.50	11.00	5.14	0.00
42.00	11.00	5.14	0.00
42.50	11.00	5.14	0.00
43.00	11.00	5.14	0.00
43.50	11.00	5.14	0.00
44.00	11.00	5.14	0.00
44.50	11.00	5.14	0.00
45.00	11.00	5.14	0.00
45.50	11.00	5.14	0.00
46.00	11.00	5.14	0.00
46.50	11.00	5.14	0.00
47.00	11.00	5.14	0.00
47.50	11.00	5.14	0.00
48.00	11.00	5.14	0.00

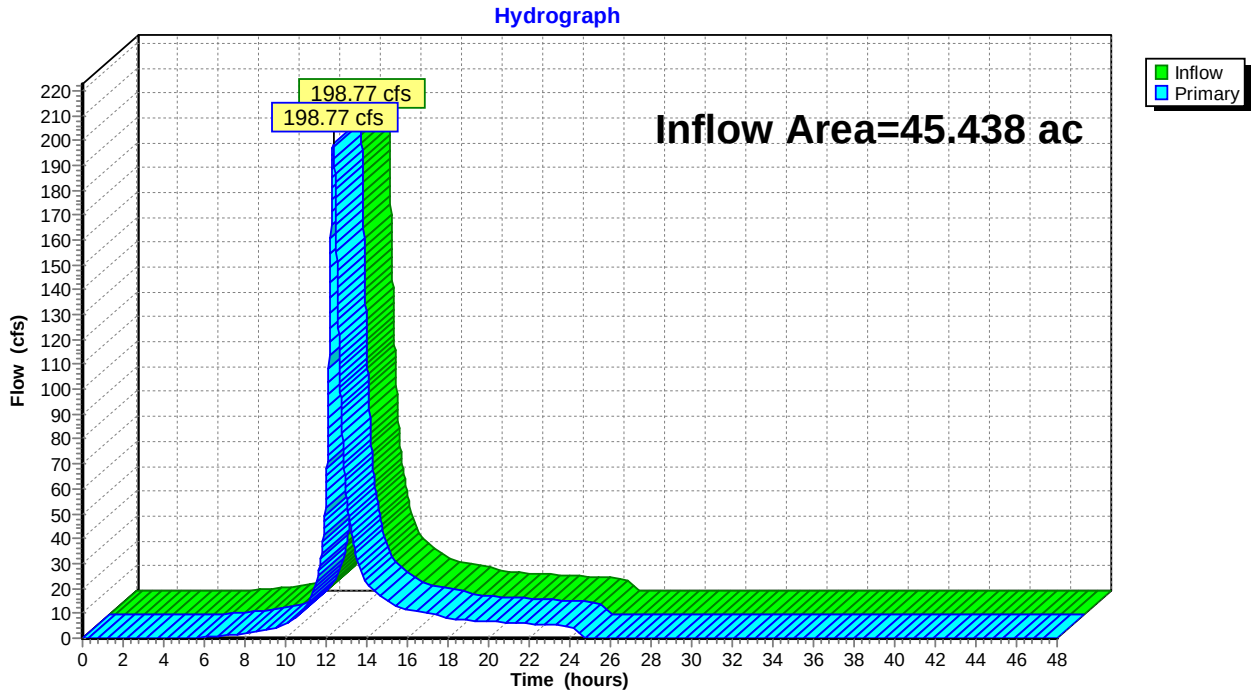
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Summary for Link EDP1: DP-1

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



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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				

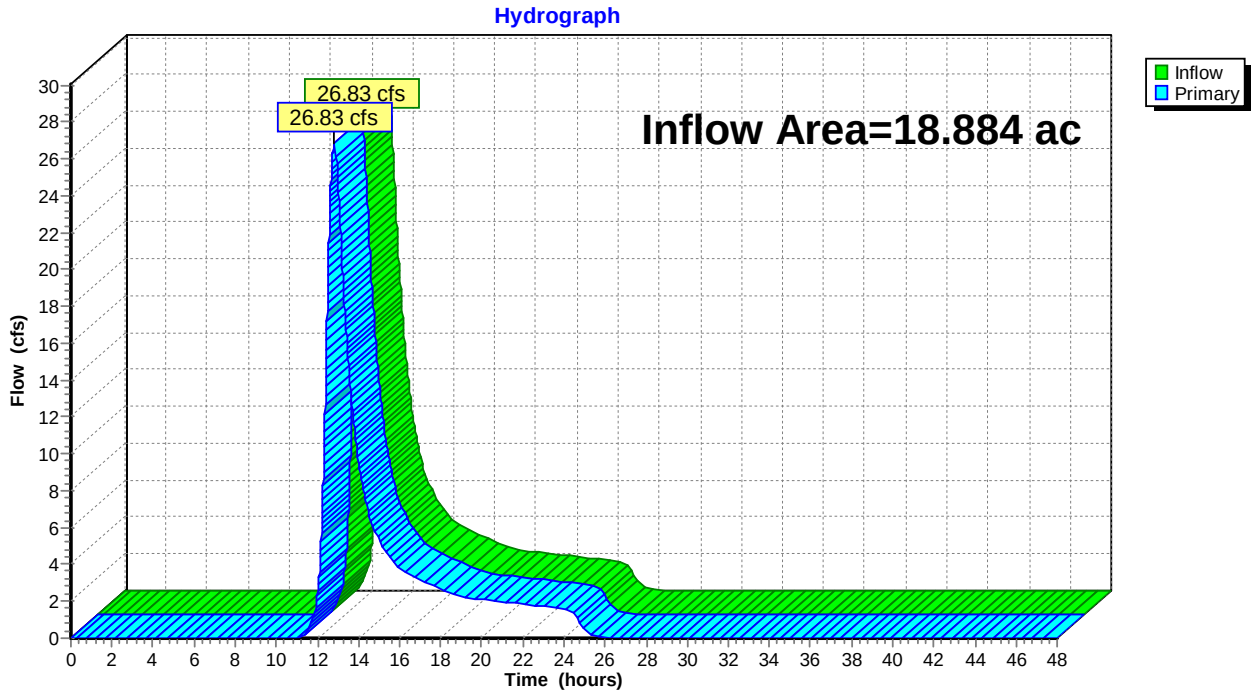
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Summary for Link EDP2: DP-2

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



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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				

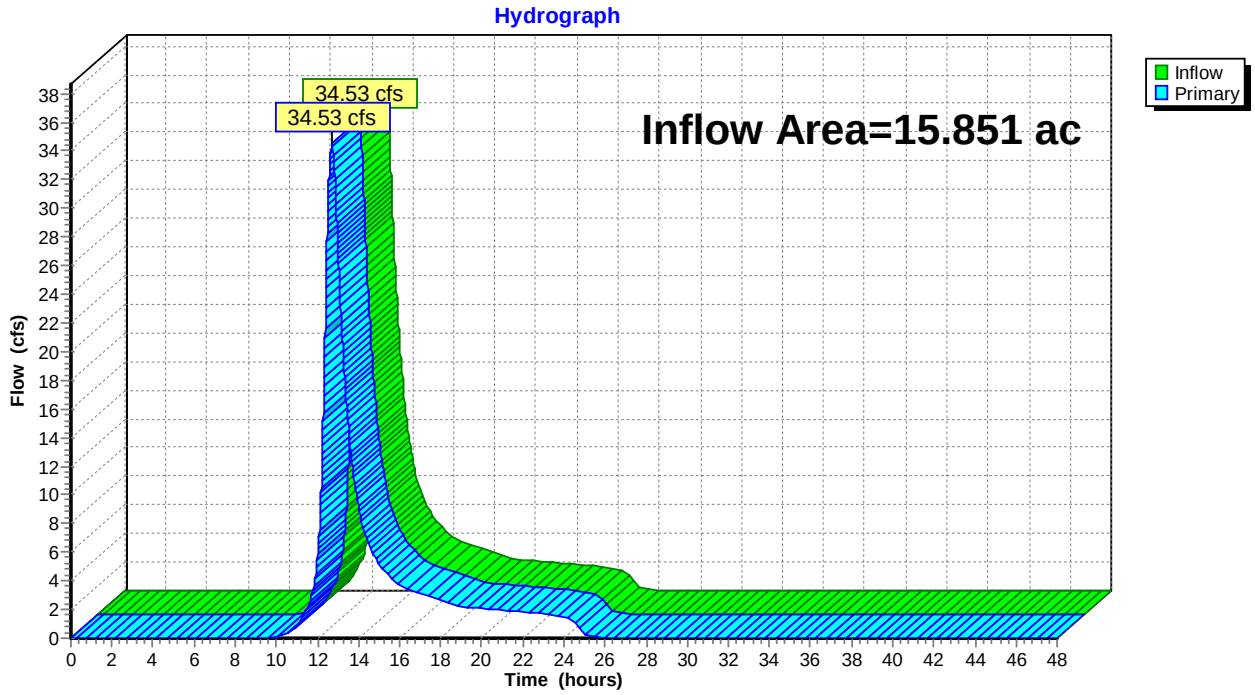
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Summary for Link EDP3: DP-3

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



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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				

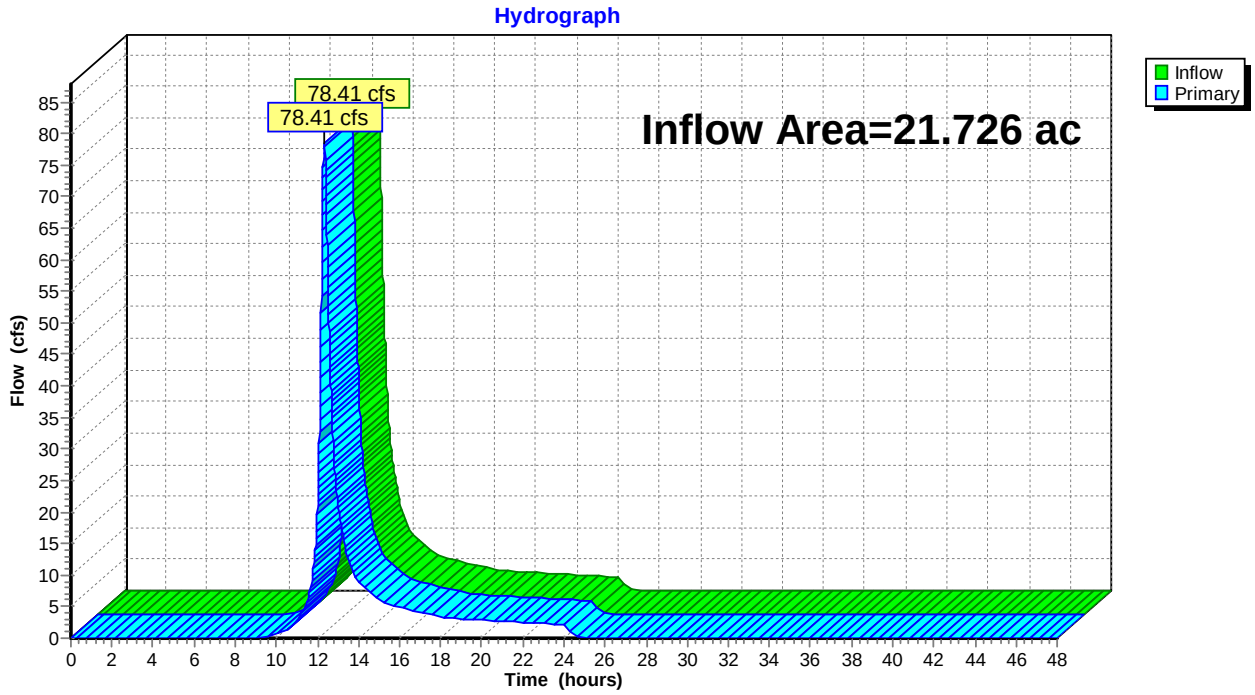
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Summary for Link EDP4: DP-4

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



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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				

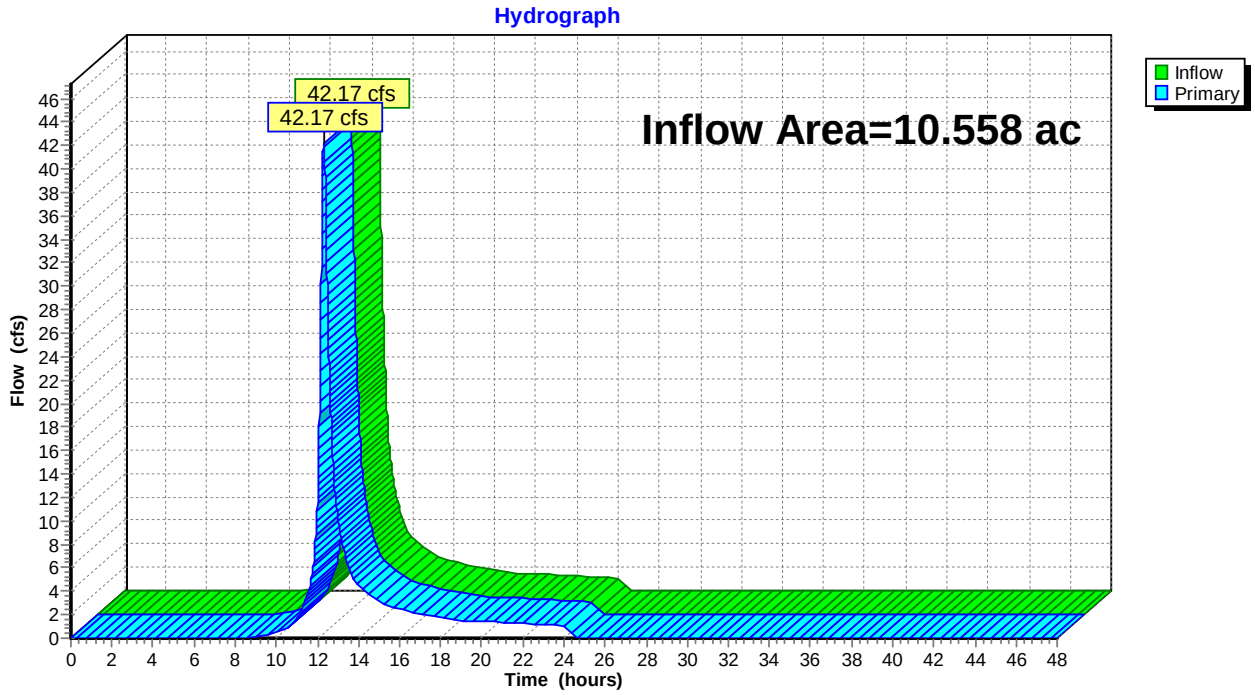
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Summary for Link EDP5: EDP5

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



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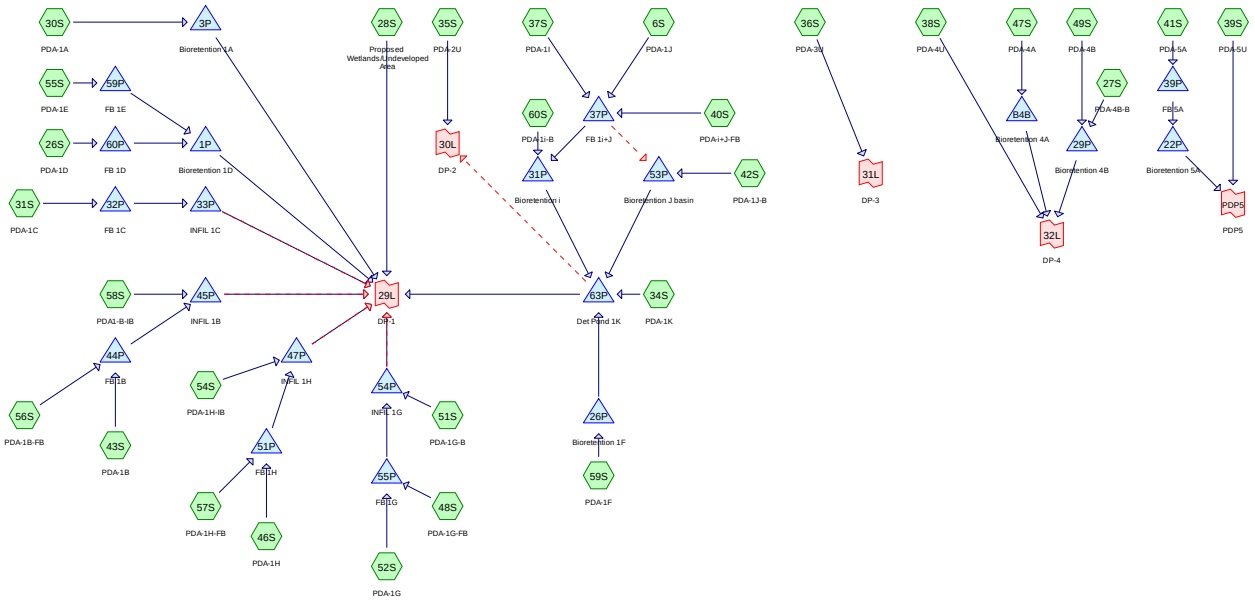
Hydrograph for Link EDP5: EDP5

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				

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Engineering
& Design

Appendix 5 | Post-Construction Stormwater Modeling Schematic & Output



Subcat Reach Pond Link

Routing Diagram for 250212_RDM Neelytown Drainage
Prepared by Colliers Engineering & Design, Printed 3/26/2025
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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

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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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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
24.370	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	HSG B	27S, 28S, 37S, 39S, 40S, 41S, 42S, 43S, 47S, 49S, 51S
0.000	HSG C	
78.522	HSG D	6S, 26S, 27S, 28S, 30S, 31S, 34S, 35S, 37S, 38S, 39S, 41S, 43S, 46S, 47S, 49S, 52S, 55S, 58S, 59S
0.000	Other	
112.456		**TOTAL AREA**

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Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
23.330	9.565	0.000	19.717	0.000	52.612	>75% Grass cover, Good	26S, 27S, 28S, 30S, 31S, 34S, 35S, 36S, 37S, 38S, 39S, 40S, 41S, 42S, 43S, 47S, 48S, 49S, 51S, 54S, 55S, 56S, 57S, 58S, 59S, 60S
0.000	0.000	0.000	0.022	0.000	0.022	Dirt roads	28S
0.000	0.000	0.000	15.181	0.000	15.181	Paved parking	26S, 30S, 31S, 37S, 38S, 39S, 41S, 47S, 49S, 55S
0.000	0.000	0.000	19.513	0.000	19.513	Roofs	46S, 52S
0.000	0.000	0.000	10.822	0.000	10.822	Unconnected pavement	43S, 59S
0.000	0.000	0.000	6.388	0.000	6.388	Unconnected roofs	6S, 41S
1.039	0.000	0.000	6.878	0.000	7.918	Woods/grass comb., Good	28S
24.370	**9.565**	**0.000**	**78.522**	**0.000**	**112.456**	**TOTAL AREA**	

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Summary for Subcatchment 6S: PDA-1J

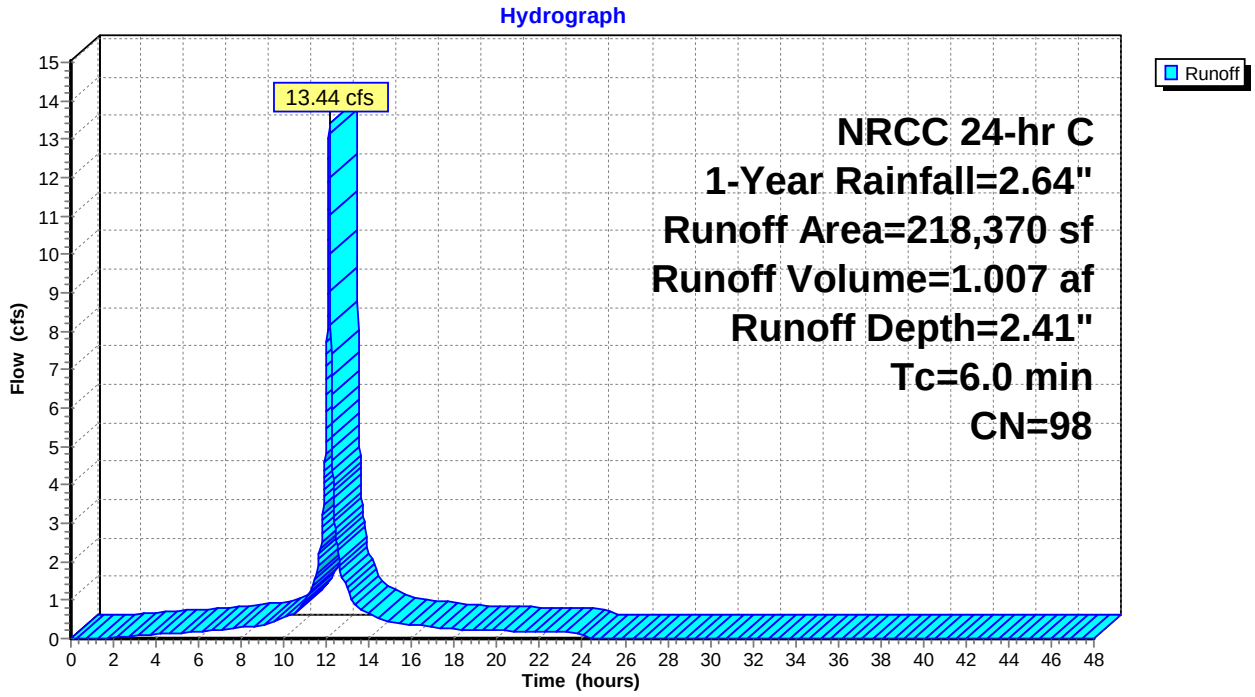
Runoff = 13.44 cfs @ 12.13 hrs, Volume= 1.007 af, Depth= 2.41"
Routed to Pond 37P : FB 1i+J

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

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

Subcatchment 6S: PDA-1J



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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	0.00	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	0.05	31.50	2.64	2.41	0.00
3.00	0.10	0.01	0.07	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	0.15	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	0.29	37.00	2.64	2.41	0.00
8.50	0.38	0.21	0.32	37.50	2.64	2.41	0.00
9.00	0.42	0.25	0.35	38.00	2.64	2.41	0.00
9.50	0.46	0.29	0.45	38.50	2.64	2.41	0.00
10.00	0.52	0.34	0.55	39.00	2.64	2.41	0.00
10.50	0.59	0.40	0.65	39.50	2.64	2.41	0.00
11.00	0.68	0.49	0.99	40.00	2.64	2.41	0.00
11.50	0.83	0.62	1.61	40.50	2.64	2.41	0.00
12.00	1.26	1.04	**7.13**	41.00	2.64	2.41	0.00
12.50	1.81	1.59	**2.37**	41.50	2.64	2.41	0.00
13.00	1.96	1.73	1.25	42.00	2.64	2.41	0.00
13.50	2.05	1.83	0.81	42.50	2.64	2.41	0.00
14.00	2.12	1.89	0.63	43.00	2.64	2.41	0.00
14.50	2.18	1.95	0.53	43.50	2.64	2.41	0.00
15.00	2.22	1.99	0.43	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	0.33	45.50	2.64	2.41	0.00
17.00	2.36	2.13	0.30	46.00	2.64	2.41	0.00
17.50	2.39	2.16	0.27	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	0.21				
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	0.16				
24.00	**2.64**	**2.41**	0.15				
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

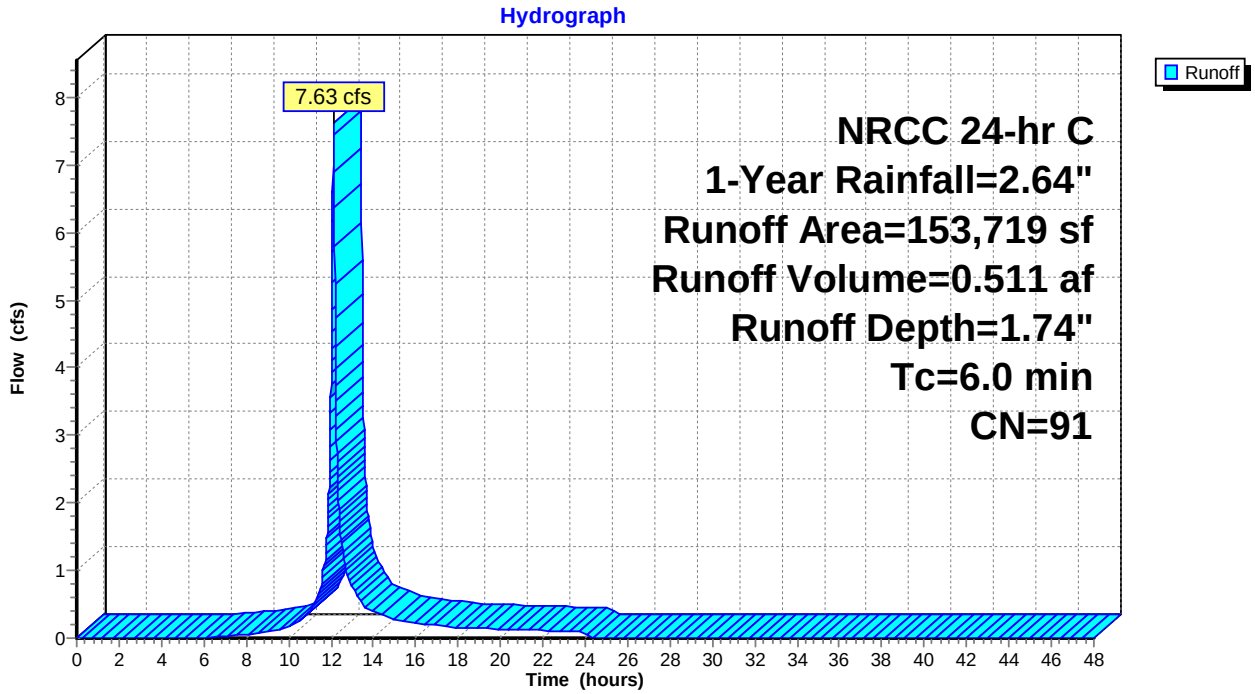
Runoff = 7.63 cfs @ 12.13 hrs, Volume= 0.511 af, Depth= 1.74"
Routed to Pond 60P : FB 1D

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



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Hydrograph for Subcatchment 26S: PDA-1D

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

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

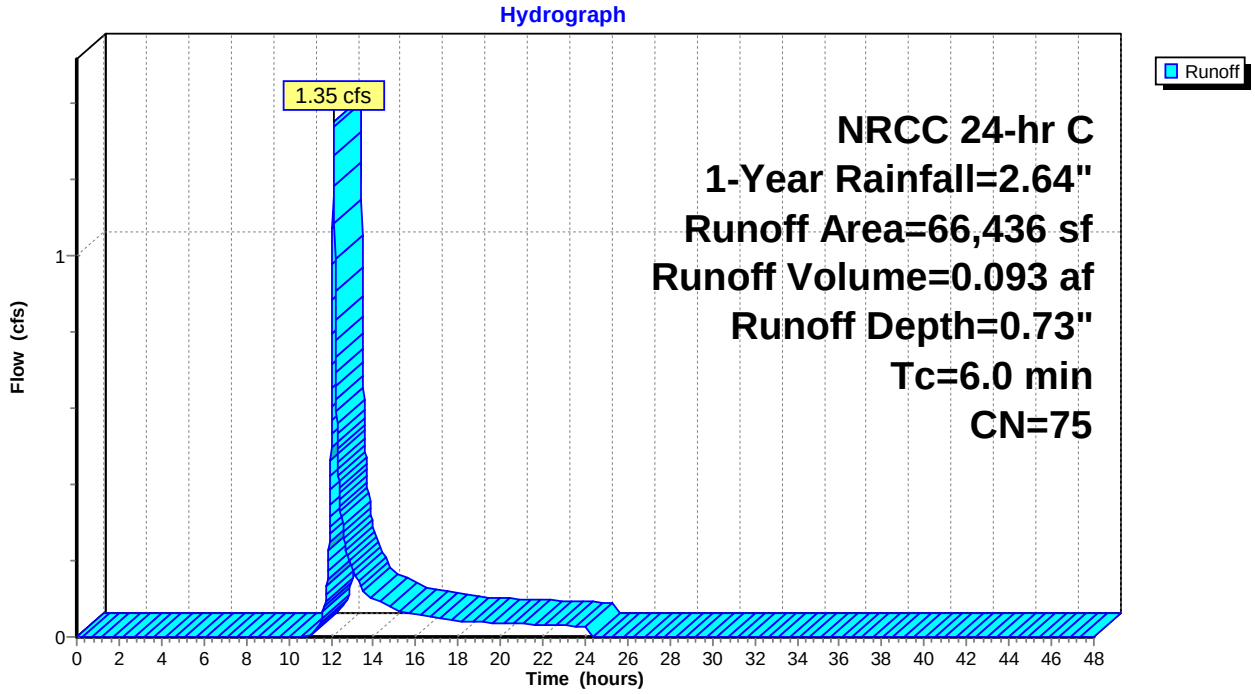
Runoff = 1.35 cfs @ 12.14 hrs, Volume= 0.093 af, Depth= 0.73"
Routed to Pond 29P : Bioretention 4B

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



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

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

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Summary for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

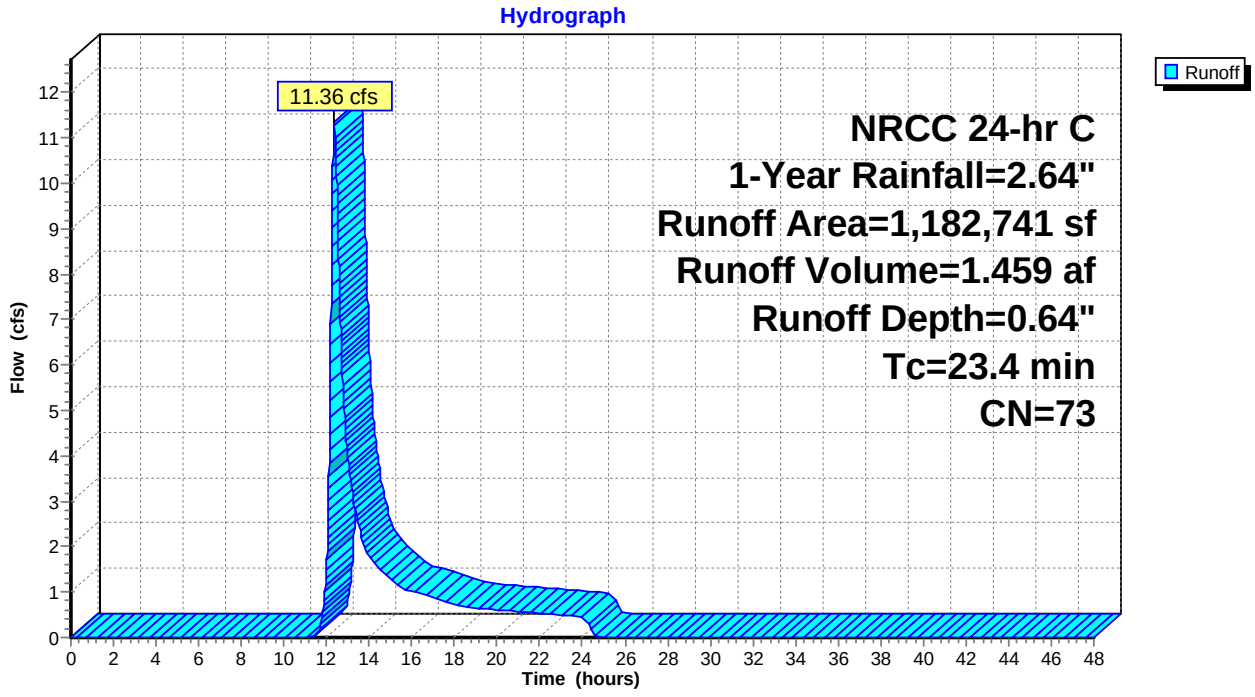
Runoff = 11.36 cfs @ 12.36 hrs, Volume= 1.459 af, Depth= 0.64"
Routed to Link 29L : DP-1

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



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Hydrograph for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

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

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Summary for Subcatchment 30S: PDA-1A

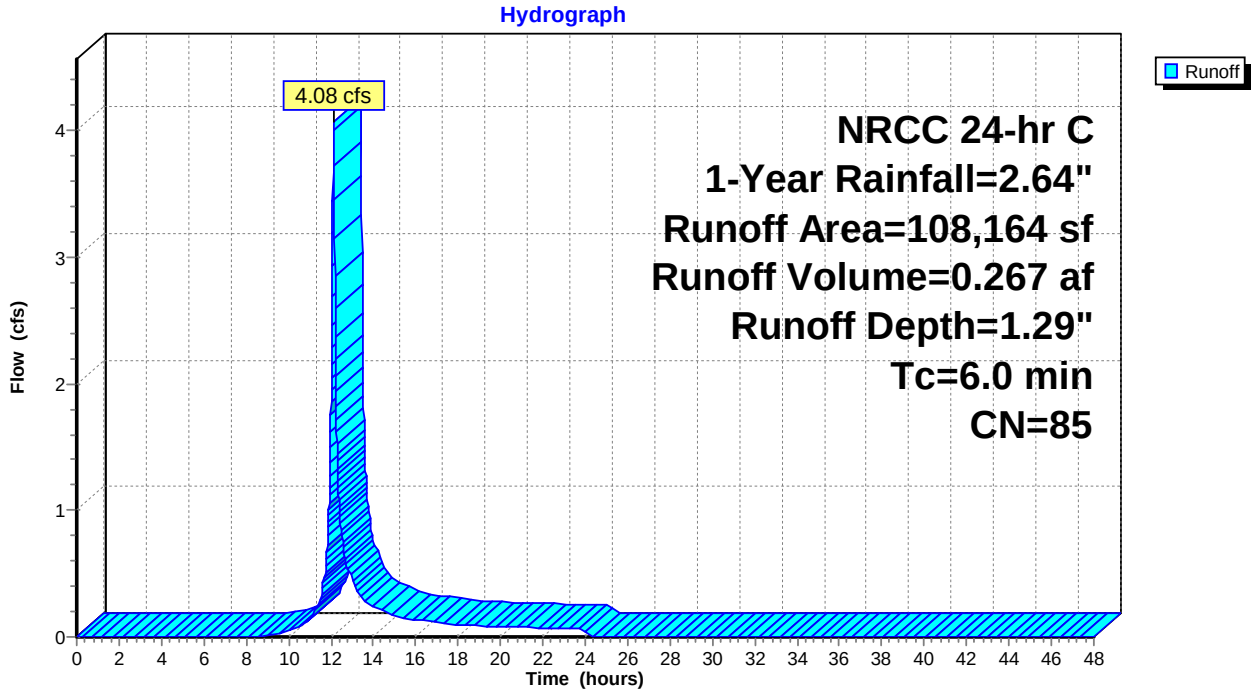
Runoff = 4.08 cfs @ 12.13 hrs, Volume= 0.267 af, Depth= 1.29"
Routed to Pond 3P : Bioretention 1A

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



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Hydrograph for Subcatchment 30S: PDA-1A

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

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Summary for Subcatchment 31S: PDA-1C

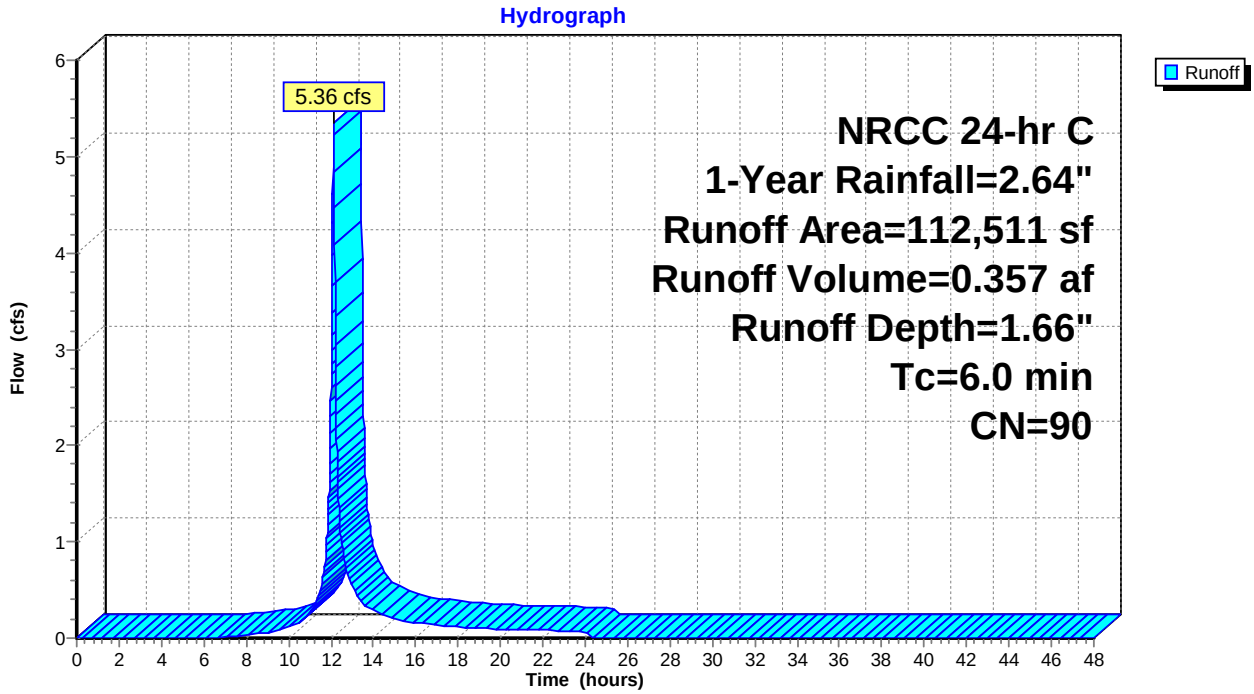
Runoff = 5.36 cfs @ 12.13 hrs, Volume= 0.357 af, Depth= 1.66"
Routed to Pond 32P : FB 1C

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



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Hydrograph for Subcatchment 31S: PDA-1C

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

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Summary for Subcatchment 34S: PDA-1K

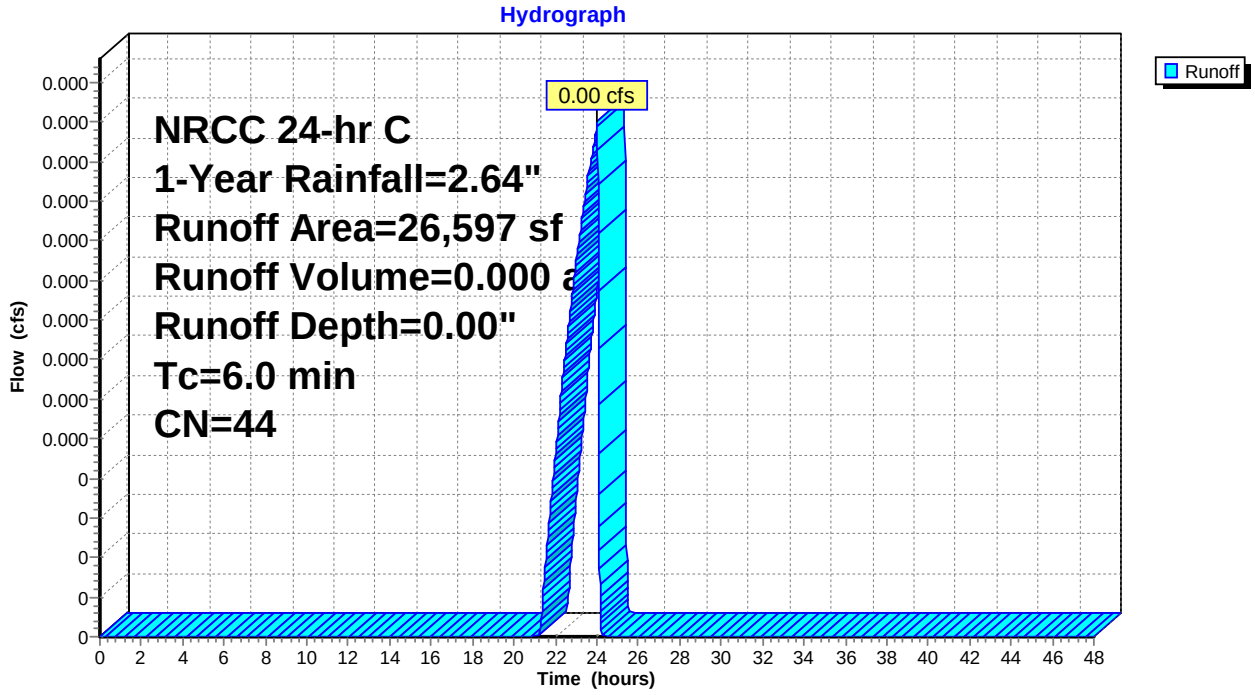
Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Pond 63P : Det Pond 1K

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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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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Summary for Subcatchment 35S: PDA-2U

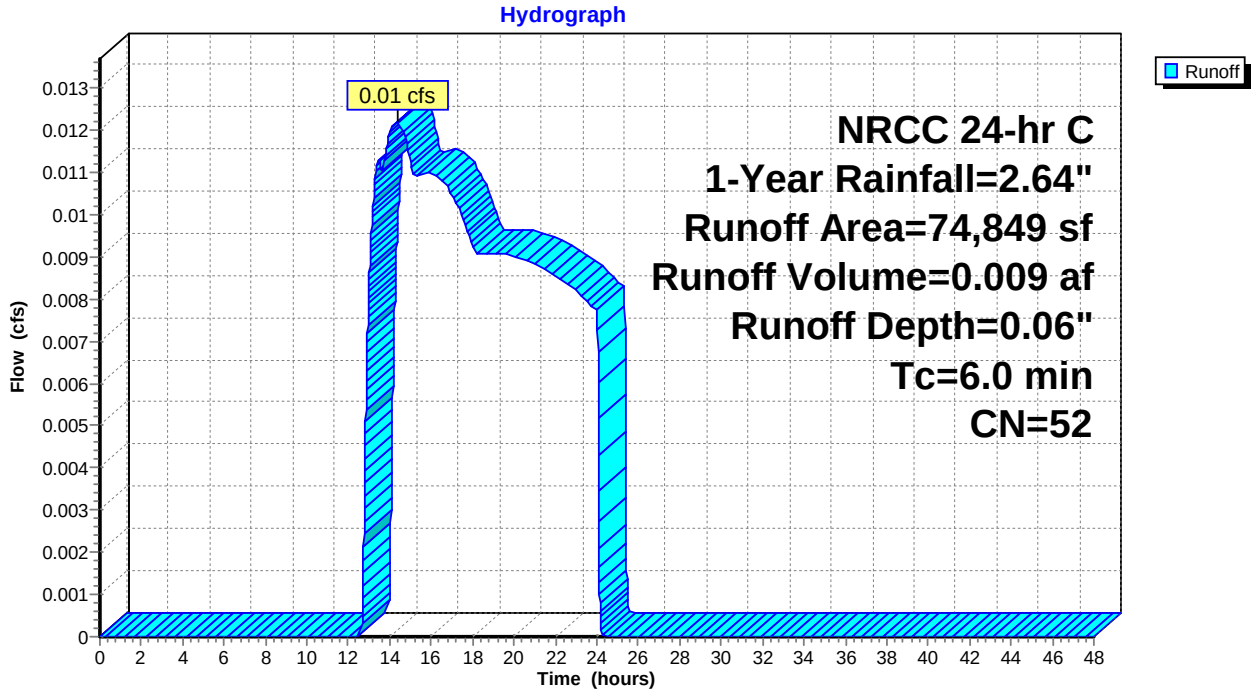
Runoff = 0.01 cfs @ 14.34 hrs, Volume= 0.009 af, Depth= 0.06"
Routed to Link 30L : DP-2

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



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Hydrograph for Subcatchment 35S: PDA-2U

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

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Summary for Subcatchment 36S: PDA-3U

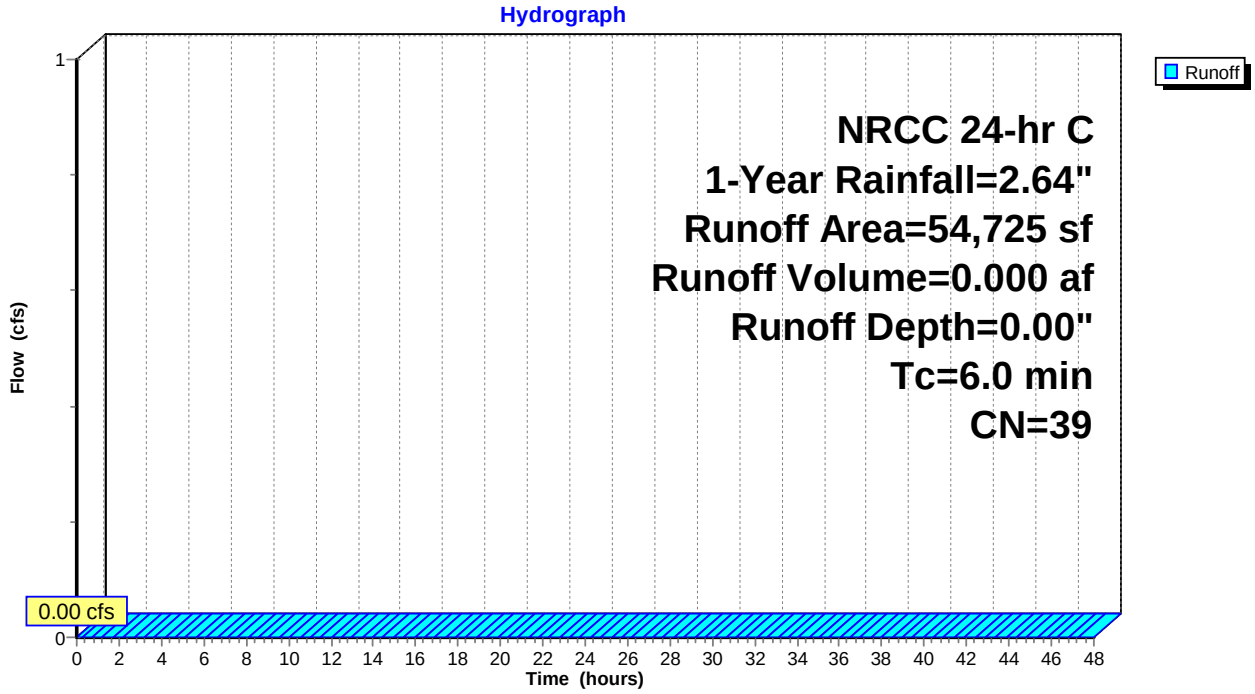
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 31L : DP-3

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



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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				

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Summary for Subcatchment 37S: PDA-1I

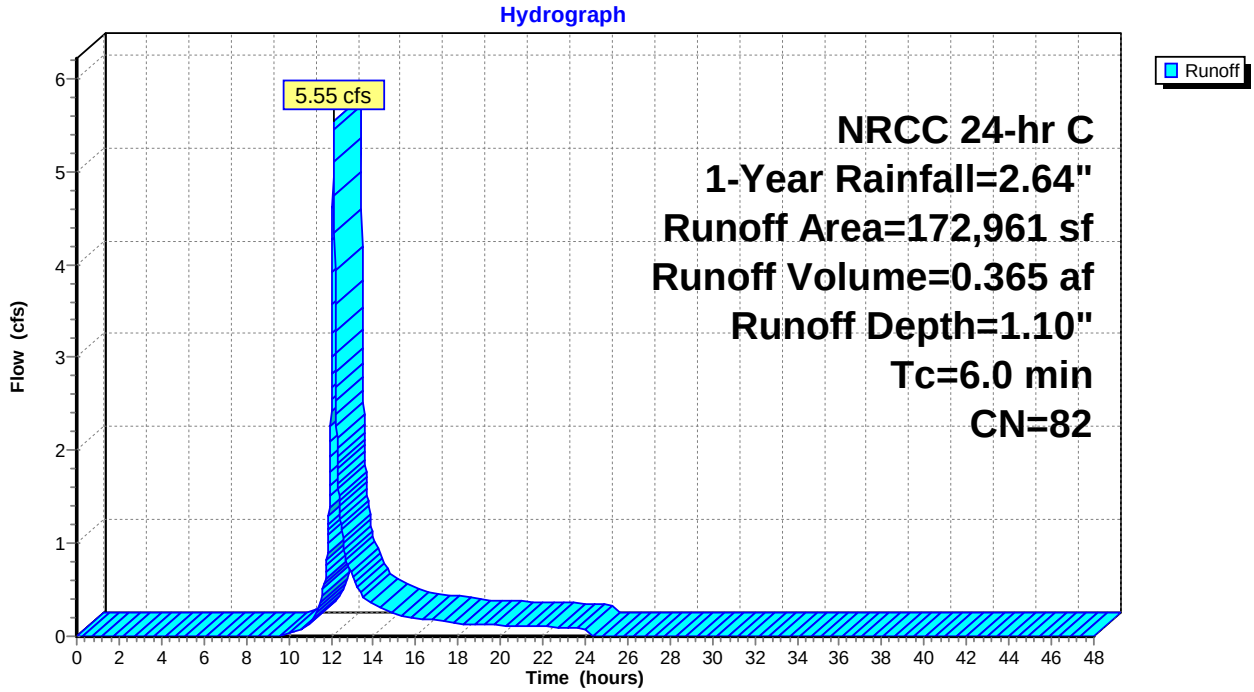
Runoff = 5.55 cfs @ 12.13 hrs, Volume= 0.365 af, Depth= 1.10"
Routed to Pond 37P : FB 1i+J

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



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Hydrograph for Subcatchment 37S: PDA-1I

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				

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Summary for Subcatchment 38S: PDA-4U

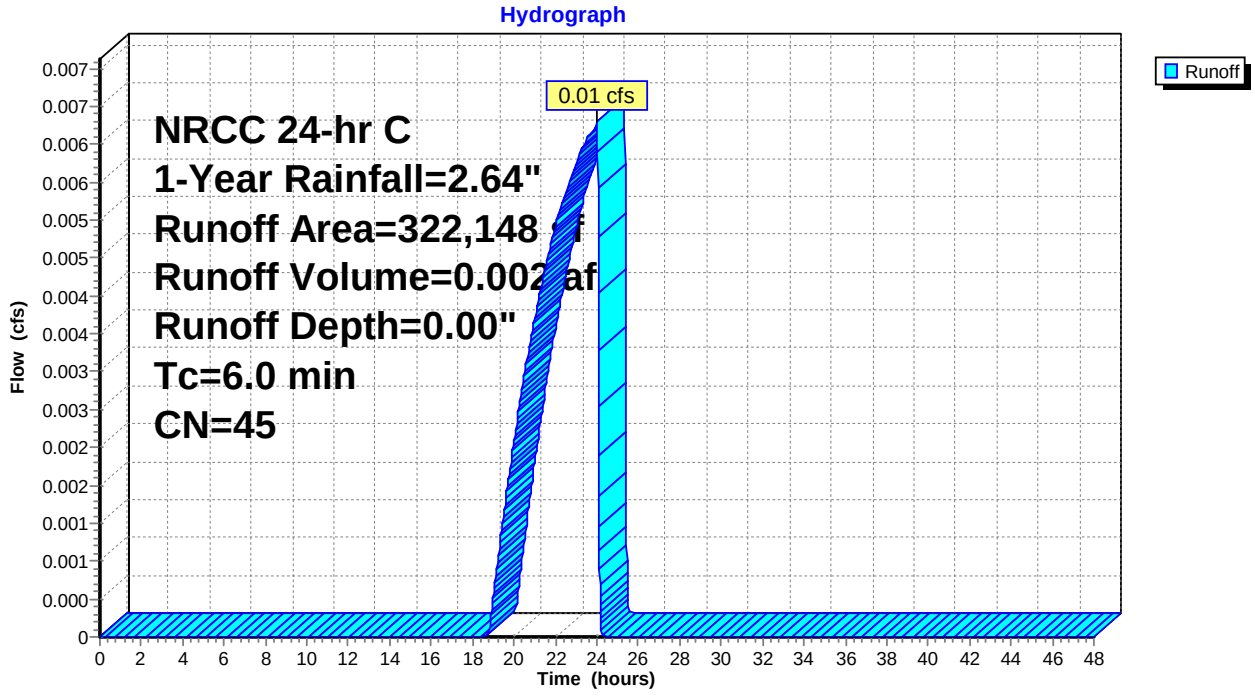
Runoff = 0.01 cfs @ 24.01 hrs, Volume= 0.002 af, Depth= 0.00"
Routed to Link 32L : DP-4

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



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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				

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Summary for Subcatchment 39S: PDA-5U

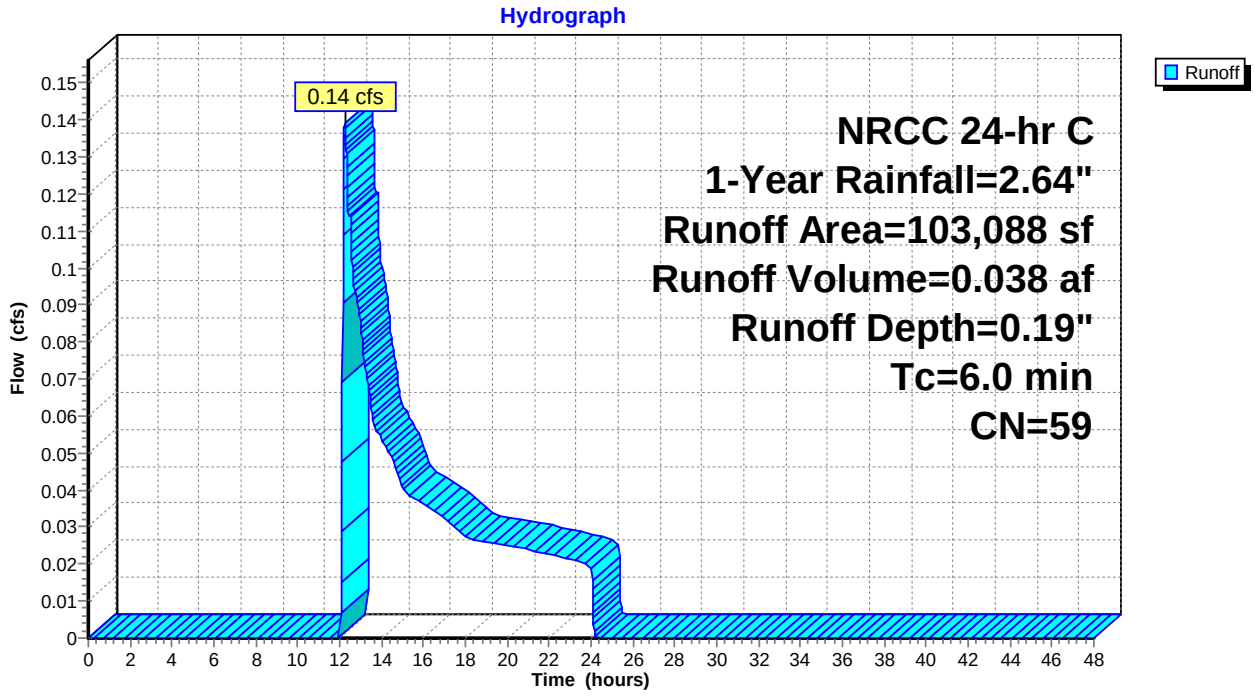
Runoff = 0.14 cfs @ 12.25 hrs, Volume= 0.038 af, Depth= 0.19"
Routed to Link PDP5 : PDP5

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



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Hydrograph for Subcatchment 39S: PDA-5U

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

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

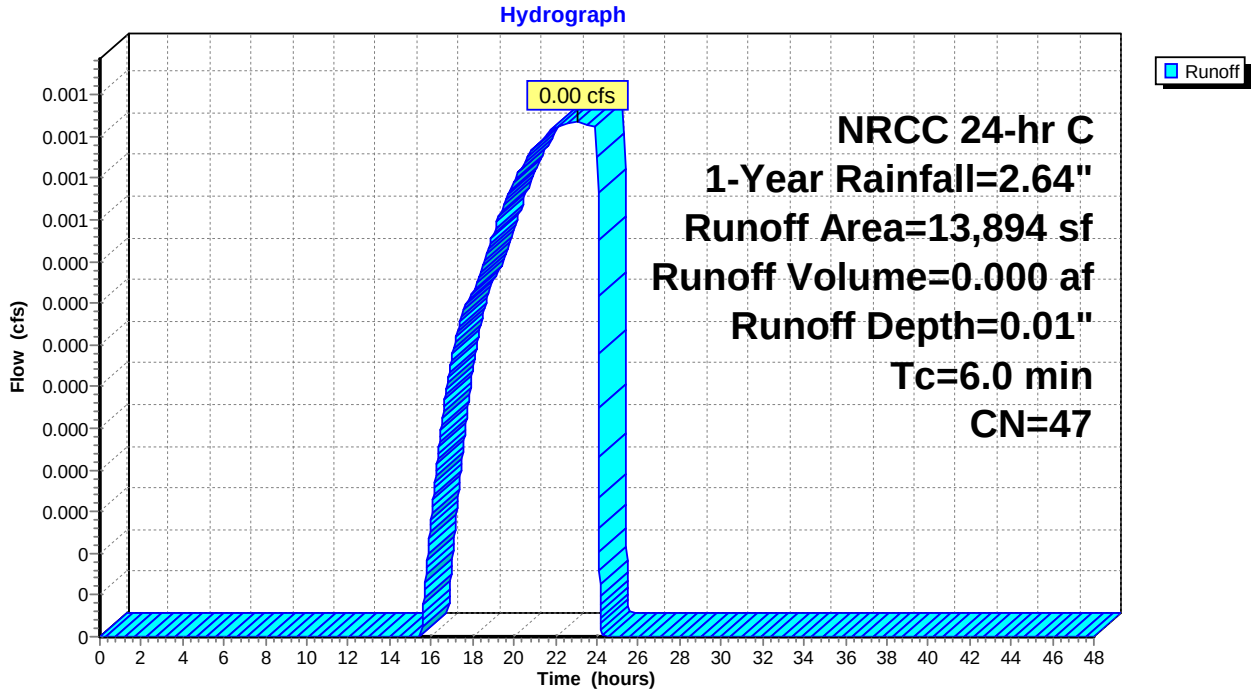
Runoff = 0.00 cfs @ 23.06 hrs, Volume= 0.000 af, Depth= 0.01"
Routed to Pond 37P : FB 1i+J

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



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

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

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Summary for Subcatchment 41S: PDA-5A

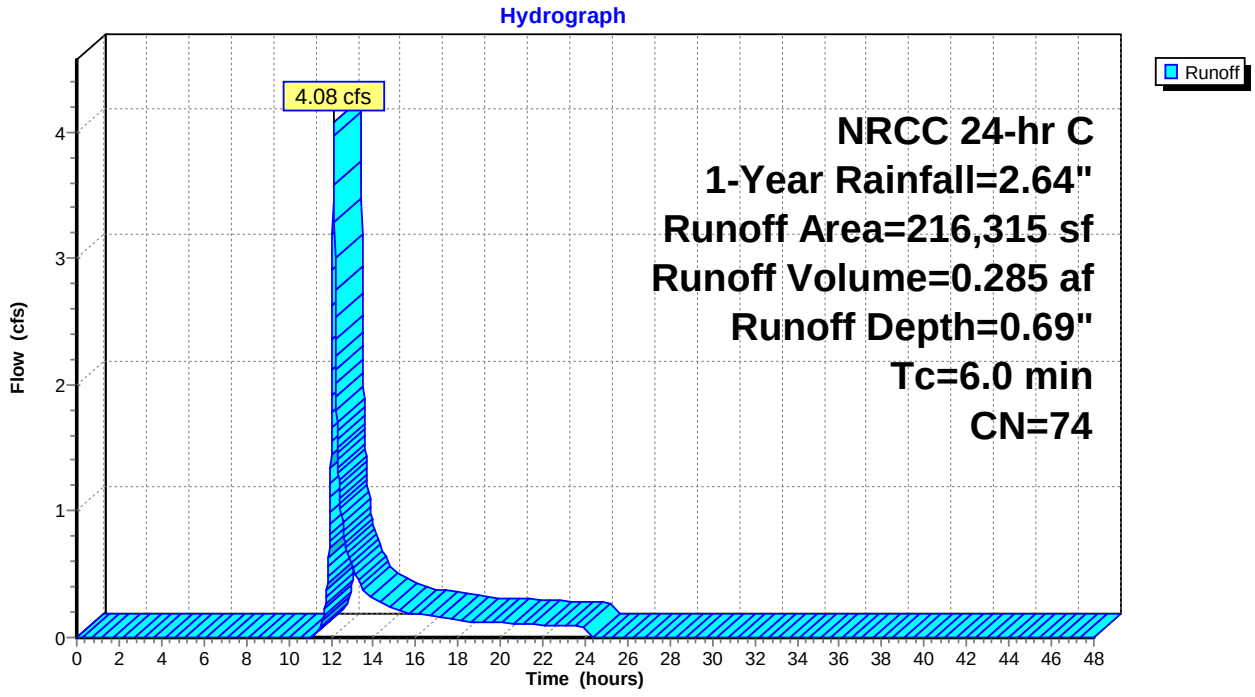
Runoff = 4.08 cfs @ 12.14 hrs, Volume= 0.285 af, Depth= 0.69"
Routed to Pond 39P : FB 5A

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



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Hydrograph for Subcatchment 41S: PDA-5A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.01	0.00	0.00
1.00	0.03	0.00	0.00
1.50	0.05	0.00	0.00
2.00	0.06	0.00	0.00
2.50	0.08	0.00	0.00
3.00	0.10	0.00	0.00
3.50	0.12	0.00	0.00
4.00	0.14	0.00	0.00
4.50	0.16	0.00	0.00
5.00	0.18	0.00	0.00
5.50	0.20	0.00	0.00
6.00	0.23	0.00	0.00
6.50	0.25	0.00	0.00
7.00	0.28	0.00	0.00
7.50	0.31	0.00	0.00
8.00	0.34	0.00	0.00
8.50	0.38	0.00	0.00
9.00	0.42	0.00	0.00
9.50	0.46	0.00	0.00
10.00	0.52	0.00	0.00
10.50	0.59	0.00	0.00
11.00	0.68	0.00	0.00
11.50	0.83	0.00	0.08
12.00	1.26	0.08	**1.45**
12.50	1.81	0.27	**0.98**
13.00	1.96	0.33	0.57
13.50	2.05	0.37	0.38
14.00	2.12	0.41	0.31
14.50	2.18	0.43	0.27
15.00	2.22	0.46	0.22
15.50	2.26	0.48	0.20
16.00	2.30	0.50	0.19
16.50	2.33	0.52	0.17
17.00	2.36	0.53	0.16
17.50	2.39	0.55	0.15
18.00	2.41	0.56	0.13
18.50	2.44	0.57	0.12
19.00	2.46	0.59	0.12
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
29.00	2.64	0.69	0.00
29.50	2.64	0.69	0.00
30.00	2.64	0.69	0.00
30.50	2.64	0.69	0.00
31.00	2.64	0.69	0.00
31.50	2.64	0.69	0.00
32.00	2.64	0.69	0.00
32.50	2.64	0.69	0.00
33.00	2.64	0.69	0.00
33.50	2.64	0.69	0.00
34.00	2.64	0.69	0.00
34.50	2.64	0.69	0.00
35.00	2.64	0.69	0.00
35.50	2.64	0.69	0.00
36.00	2.64	0.69	0.00
36.50	2.64	0.69	0.00
37.00	2.64	0.69	0.00
37.50	2.64	0.69	0.00
38.00	2.64	0.69	0.00
38.50	2.64	0.69	0.00
39.00	2.64	0.69	0.00
39.50	2.64	0.69	0.00
40.00	2.64	0.69	0.00
40.50	2.64	0.69	0.00
41.00	2.64	0.69	0.00
41.50	2.64	0.69	0.00
42.00	2.64	0.69	0.00
42.50	2.64	0.69	0.00
43.00	2.64	0.69	0.00
43.50	2.64	0.69	0.00
44.00	2.64	0.69	0.00
44.50	2.64	0.69	0.00
45.00	2.64	0.69	0.00
45.50	2.64	0.69	0.00
46.00	2.64	0.69	0.00
46.50	2.64	0.69	0.00
47.00	2.64	0.69	0.00
47.50	2.64	0.69	0.00
48.00	2.64	0.69	0.00

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

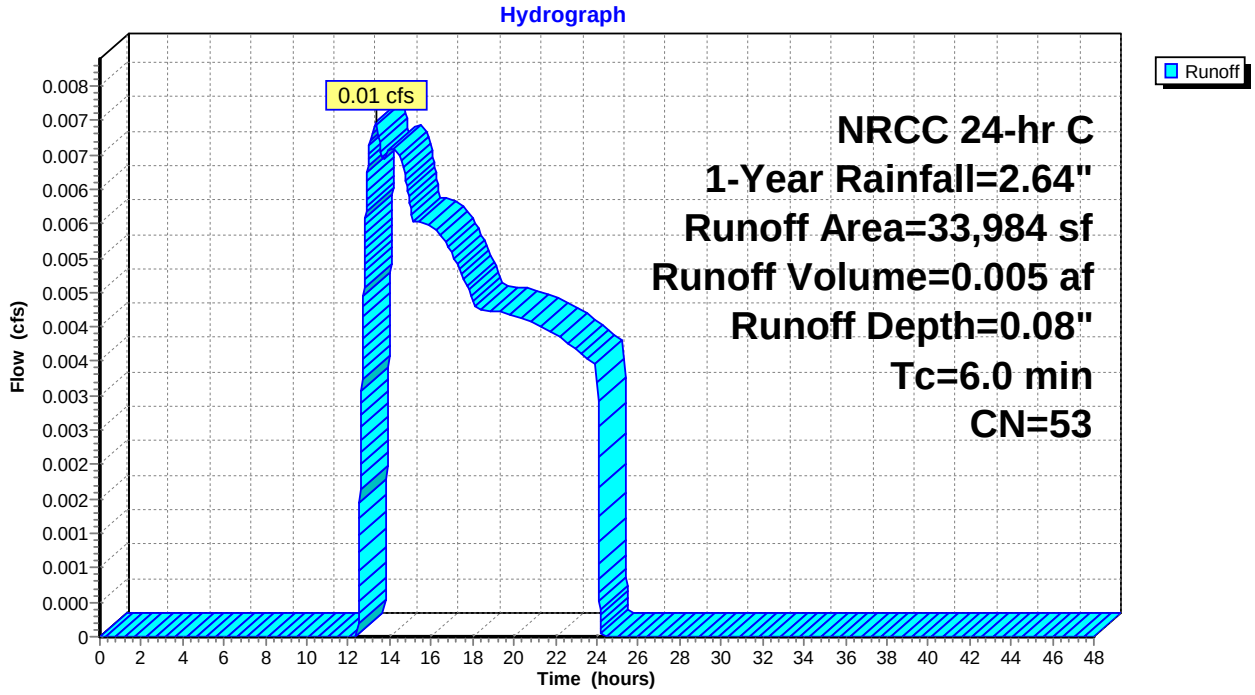
Runoff = 0.01 cfs @ 13.34 hrs, Volume= 0.005 af, Depth= 0.08"
Routed to Pond 53P : Bioretention J basin

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



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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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Summary for Subcatchment 43S: PDA-1B

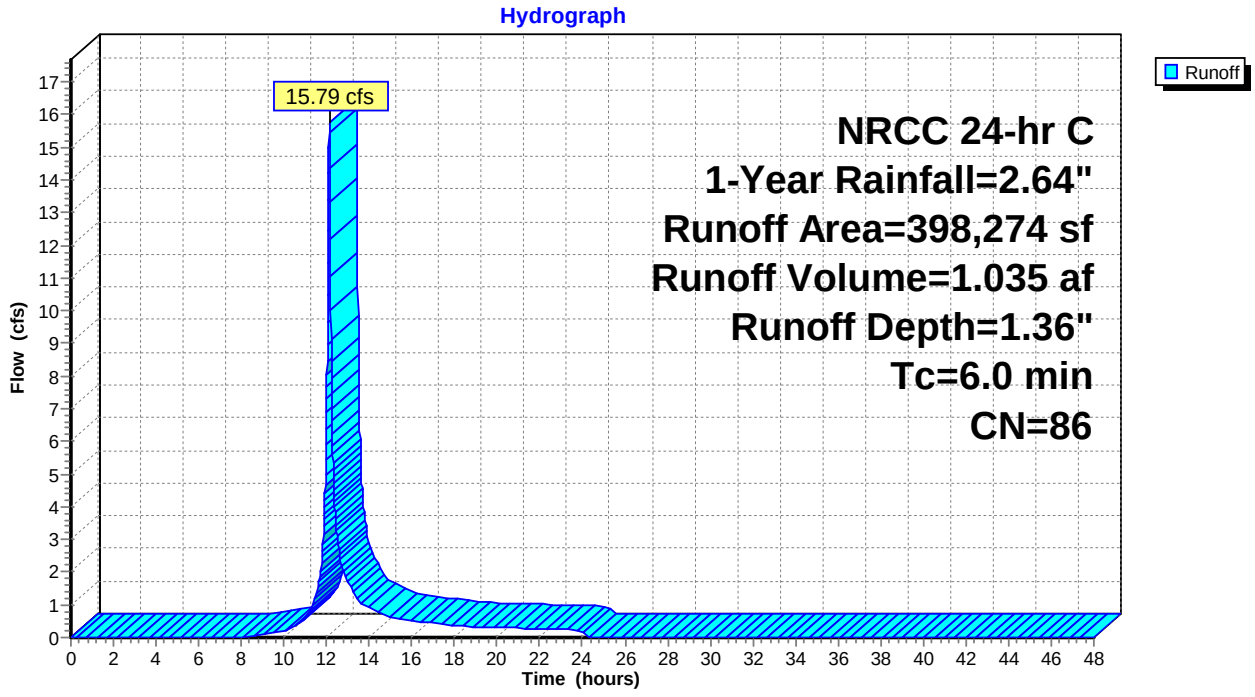
Runoff = 15.79 cfs @ 12.13 hrs, Volume= 1.035 af, Depth= 1.36"
Routed to Pond 44P : FB 1B

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



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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				

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Summary for Subcatchment 46S: PDA-1H

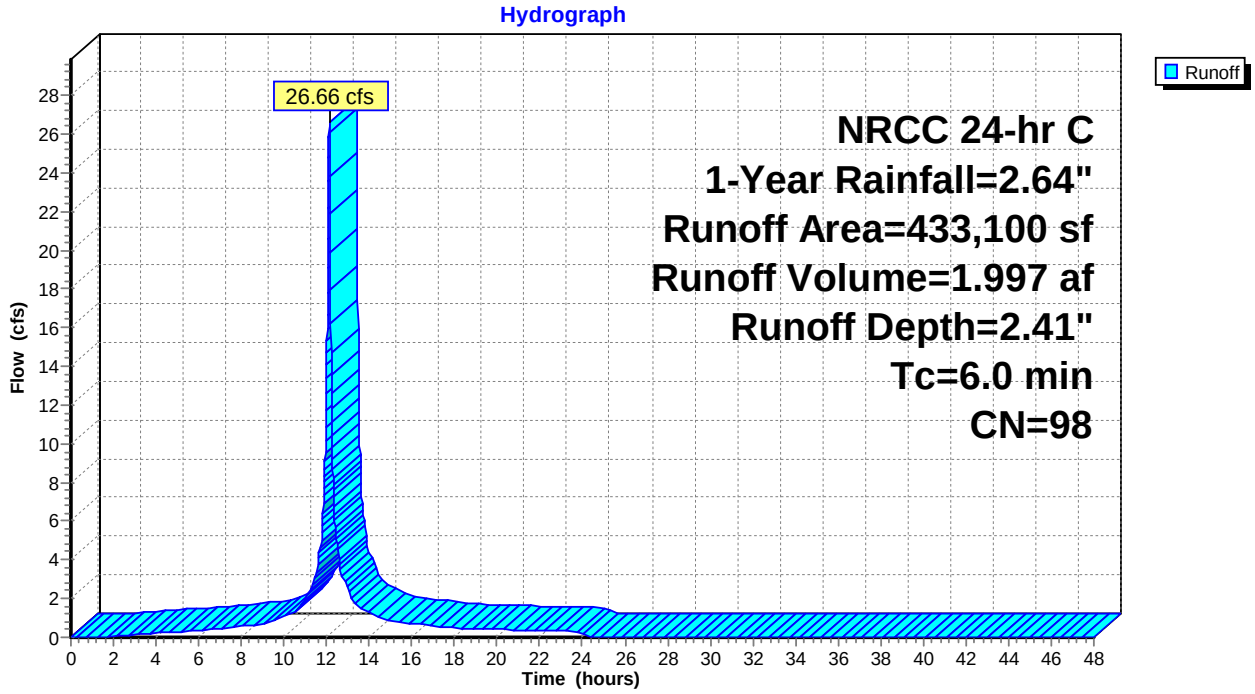
Runoff = 26.66 cfs @ 12.13 hrs, Volume= 1.997 af, Depth= 2.41"
Routed to Pond 51P : FB 1H

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



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Hydrograph for Subcatchment 46S: PDA-1H

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

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Summary for Subcatchment 47S: PDA-4A

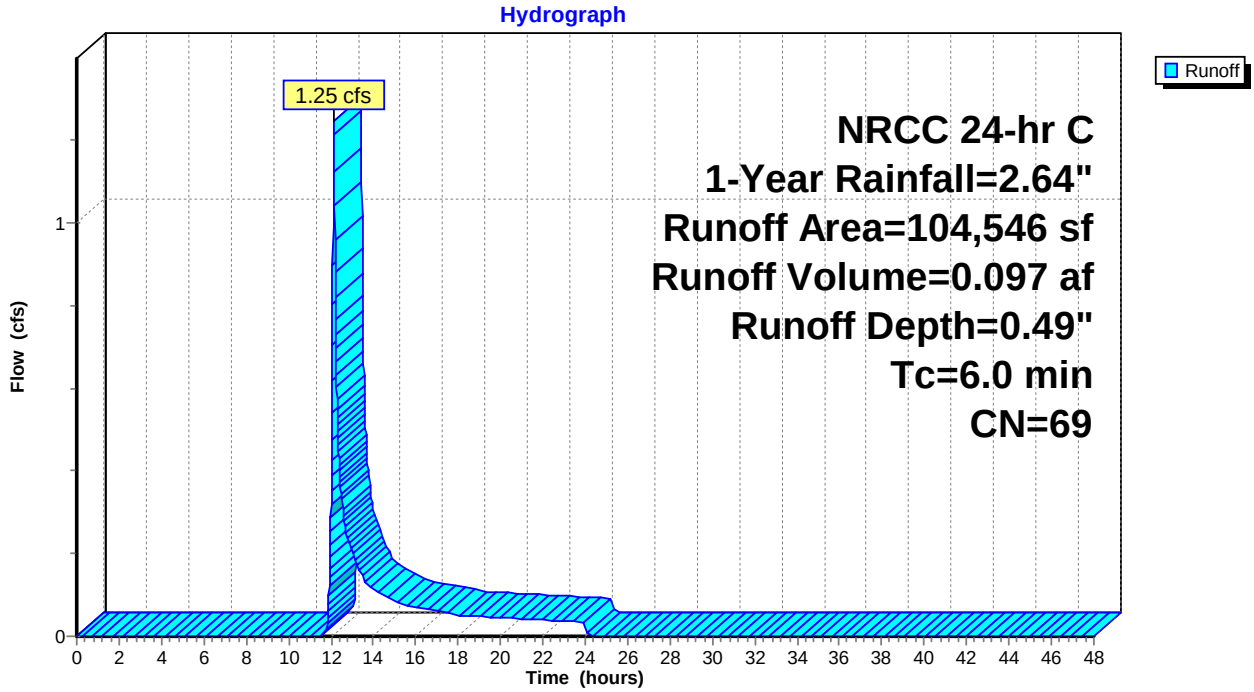
Runoff = 1.25 cfs @ 12.14 hrs, Volume= 0.097 af, Depth= 0.49"
Routed to Pond B4B : Bioretention 4A

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



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Hydrograph for Subcatchment 47S: PDA-4A

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

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

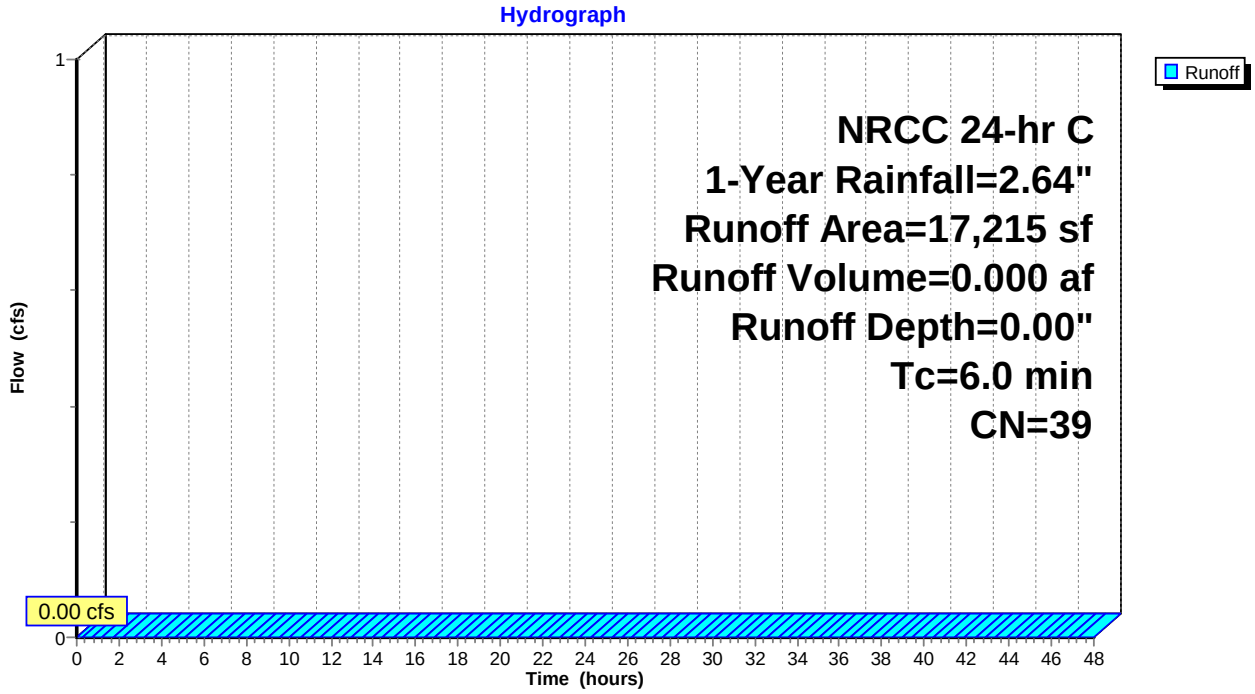
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Pond 55P : FB 1G

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



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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				

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Summary for Subcatchment 49S: PDA-4B

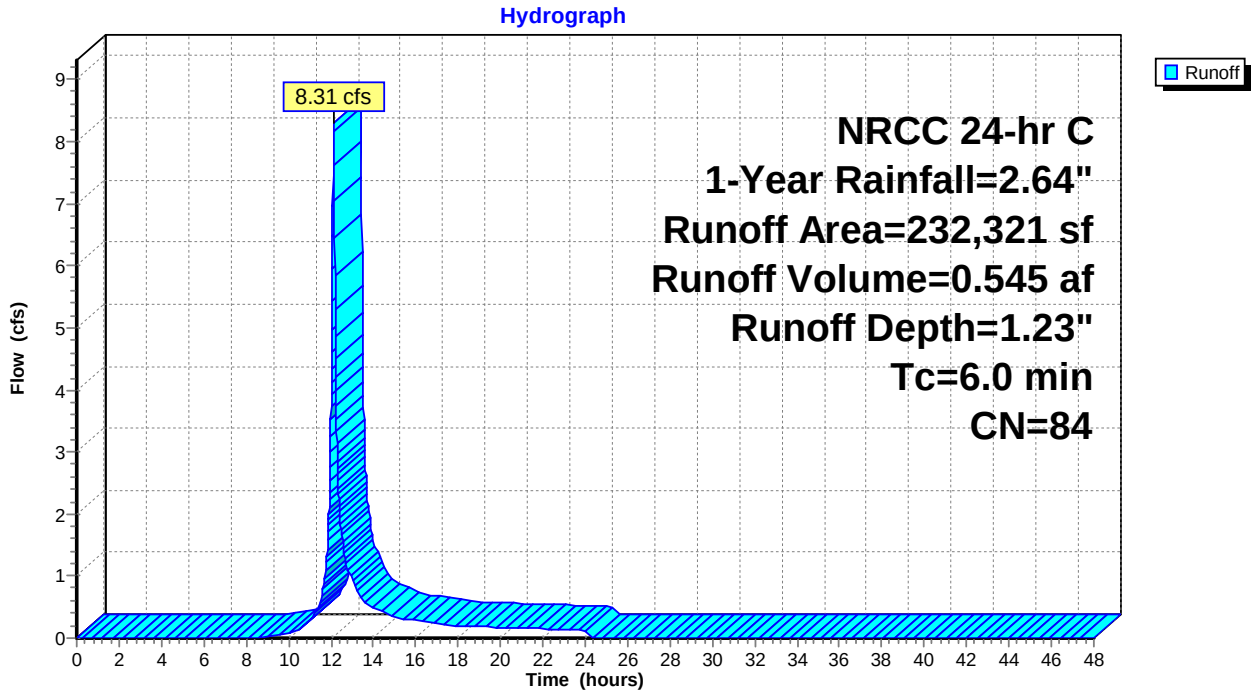
Runoff = 8.31 cfs @ 12.13 hrs, Volume= 0.545 af, Depth= 1.23"
Routed to Pond 29P : Bioretention 4B

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



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Hydrograph for Subcatchment 49S: PDA-4B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.01	0.00	0.00
1.00	0.03	0.00	0.00
1.50	0.05	0.00	0.00
2.00	0.06	0.00	0.00
2.50	0.08	0.00	0.00
3.00	0.10	0.00	0.00
3.50	0.12	0.00	0.00
4.00	0.14	0.00	0.00
4.50	0.16	0.00	0.00
5.00	0.18	0.00	0.00
5.50	0.20	0.00	0.00
6.00	0.23	0.00	0.00
6.50	0.25	0.00	0.00
7.00	0.28	0.00	0.00
7.50	0.31	0.00	0.00
8.00	0.34	0.00	0.00
8.50	0.38	0.00	0.00
9.00	0.42	0.00	0.01
9.50	0.46	0.00	0.04
10.00	0.52	0.01	0.08
10.50	0.59	0.02	0.13
11.00	0.68	0.04	0.27
11.50	0.83	0.08	0.58
12.00	1.26	0.28	**3.74**
12.50	1.81	0.62	**1.70**
13.00	1.96	0.72	0.94
13.50	2.05	0.78	0.62
14.00	2.12	0.83	0.49
14.50	2.18	0.87	0.42
15.00	2.22	0.90	0.34
15.50	2.26	0.93	0.31
16.00	2.30	0.96	0.29
16.50	2.33	0.99	0.26
17.00	2.36	1.01	0.24
17.50	2.39	1.03	0.22
18.00	2.41	1.05	0.20
18.50	2.44	1.07	0.19
19.00	2.46	1.08	0.18
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
29.00	2.64	1.23	0.00
29.50	2.64	1.23	0.00
30.00	2.64	1.23	0.00
30.50	2.64	1.23	0.00
31.00	2.64	1.23	0.00
31.50	2.64	1.23	0.00
32.00	2.64	1.23	0.00
32.50	2.64	1.23	0.00
33.00	2.64	1.23	0.00
33.50	2.64	1.23	0.00
34.00	2.64	1.23	0.00
34.50	2.64	1.23	0.00
35.00	2.64	1.23	0.00
35.50	2.64	1.23	0.00
36.00	2.64	1.23	0.00
36.50	2.64	1.23	0.00
37.00	2.64	1.23	0.00
37.50	2.64	1.23	0.00
38.00	2.64	1.23	0.00
38.50	2.64	1.23	0.00
39.00	2.64	1.23	0.00
39.50	2.64	1.23	0.00
40.00	2.64	1.23	0.00
40.50	2.64	1.23	0.00
41.00	2.64	1.23	0.00
41.50	2.64	1.23	0.00
42.00	2.64	1.23	0.00
42.50	2.64	1.23	0.00
43.00	2.64	1.23	0.00
43.50	2.64	1.23	0.00
44.00	2.64	1.23	0.00
44.50	2.64	1.23	0.00
45.00	2.64	1.23	0.00
45.50	2.64	1.23	0.00
46.00	2.64	1.23	0.00
46.50	2.64	1.23	0.00
47.00	2.64	1.23	0.00
47.50	2.64	1.23	0.00
48.00	2.64	1.23	0.00

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

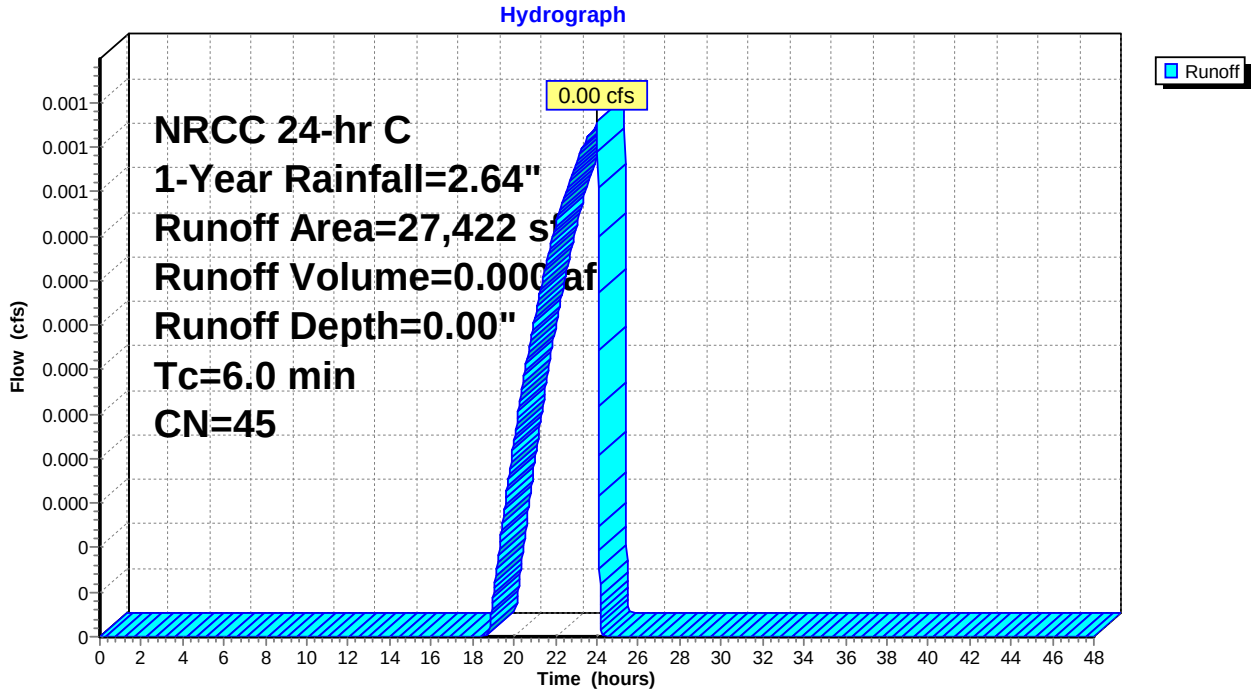
Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Pond 54P : INFIL 1G

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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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				

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Summary for Subcatchment 52S: PDA-1G

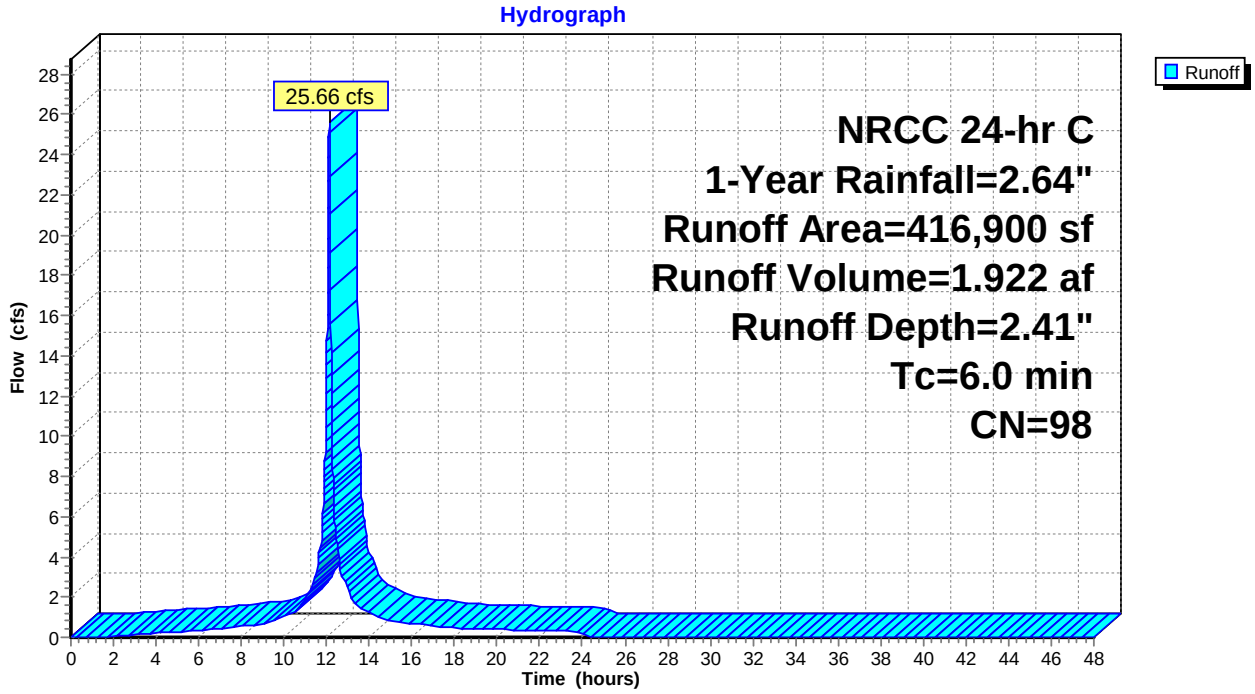
Runoff = 25.66 cfs @ 12.13 hrs, Volume= 1.922 af, Depth= 2.41"
Routed to Pond 55P : FB 1G

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



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Hydrograph for Subcatchment 52S: PDA-1G

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

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

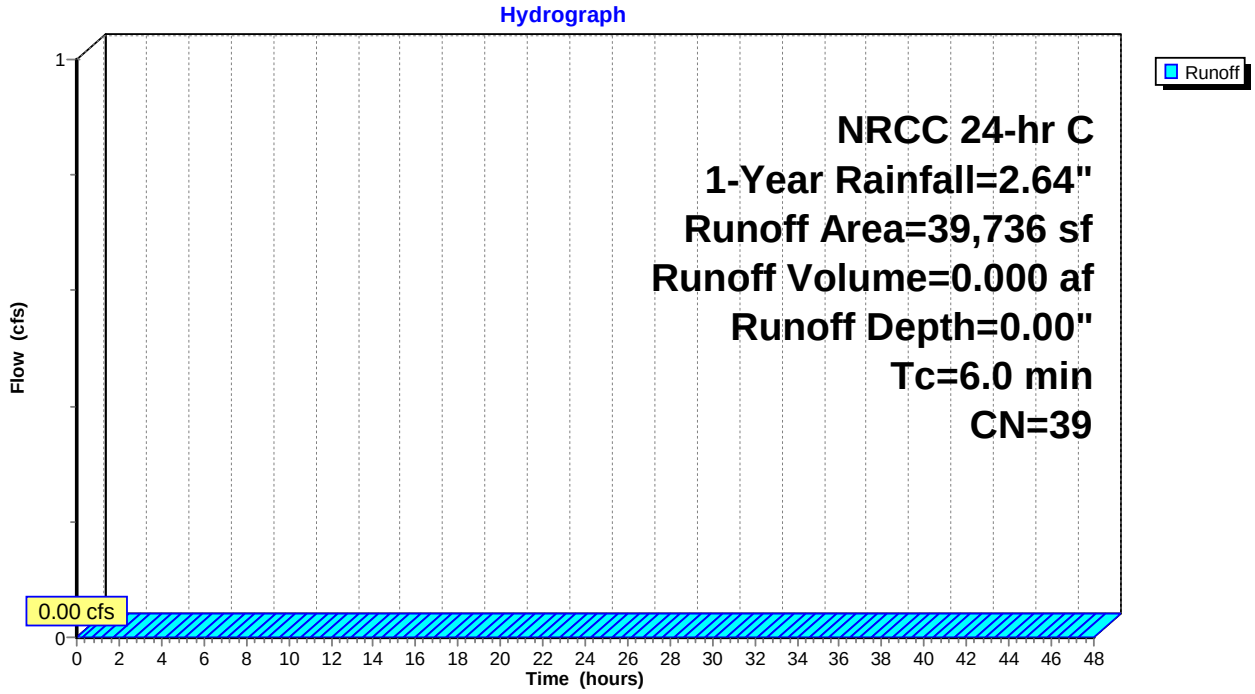
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Pond 47P : INFIL 1H

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



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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				

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Summary for Subcatchment 55S: PDA-1E

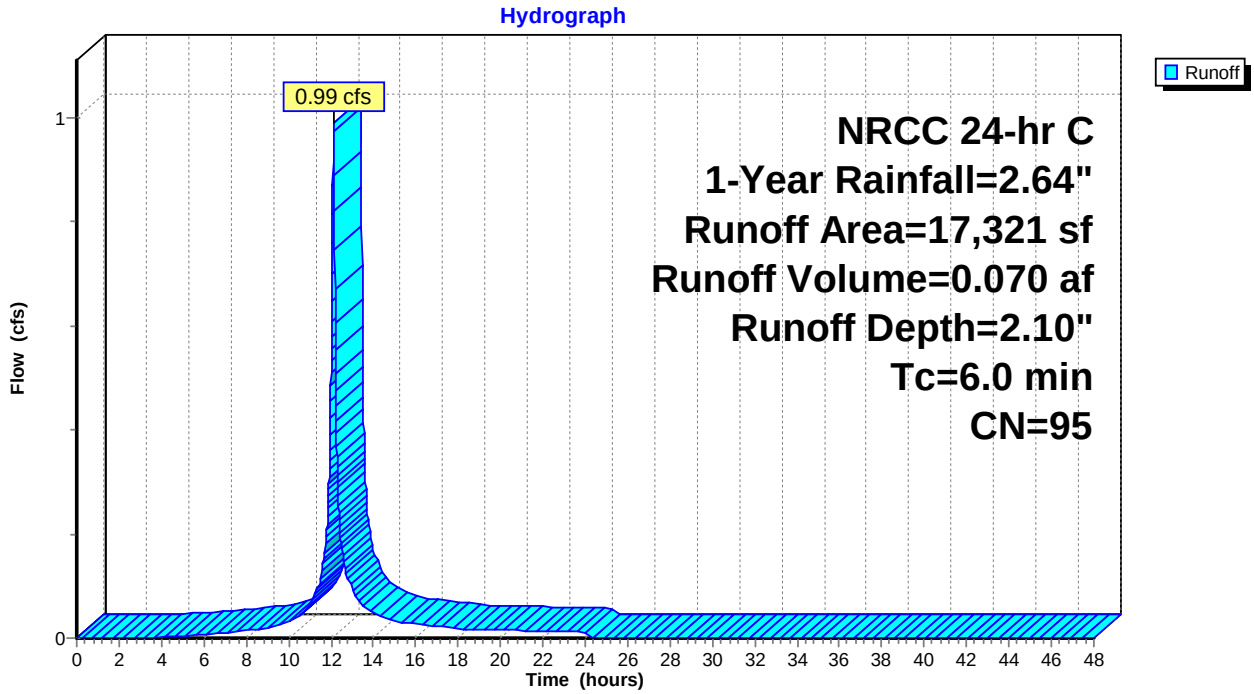
Runoff = 0.99 cfs @ 12.13 hrs, Volume= 0.070 af, Depth= 2.10"
Routed to Pond 59P : FB 1E

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



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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				

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

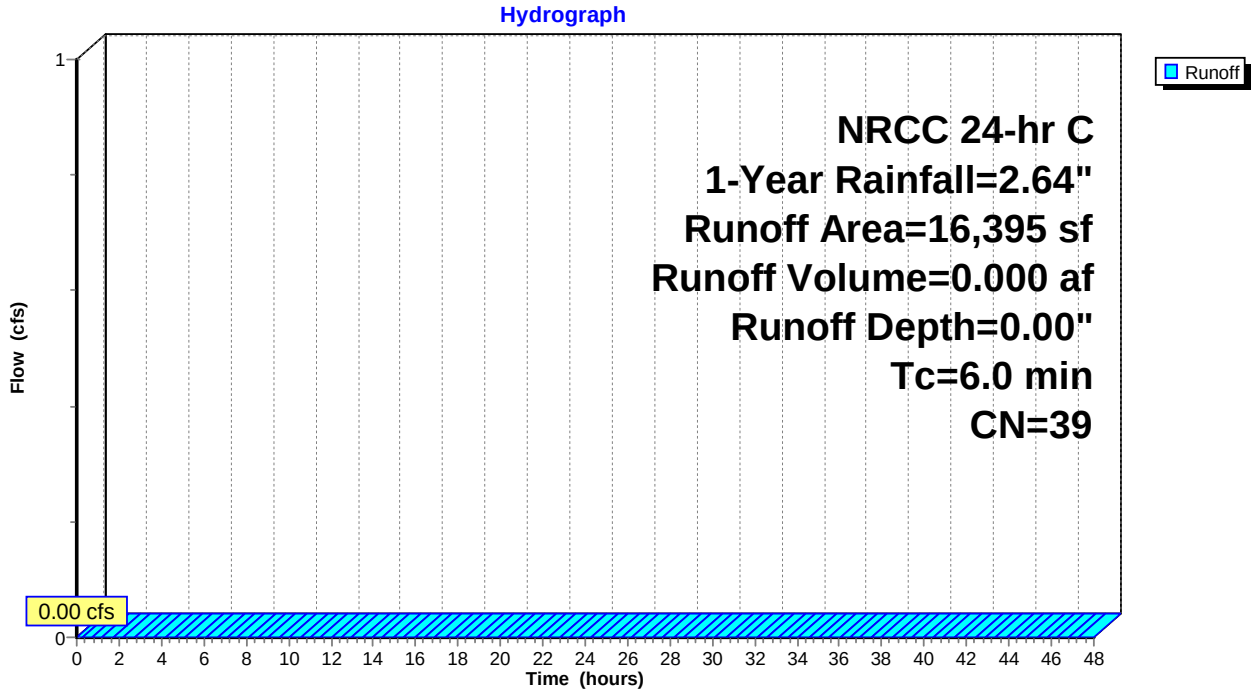
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Pond 44P : FB 1B

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



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

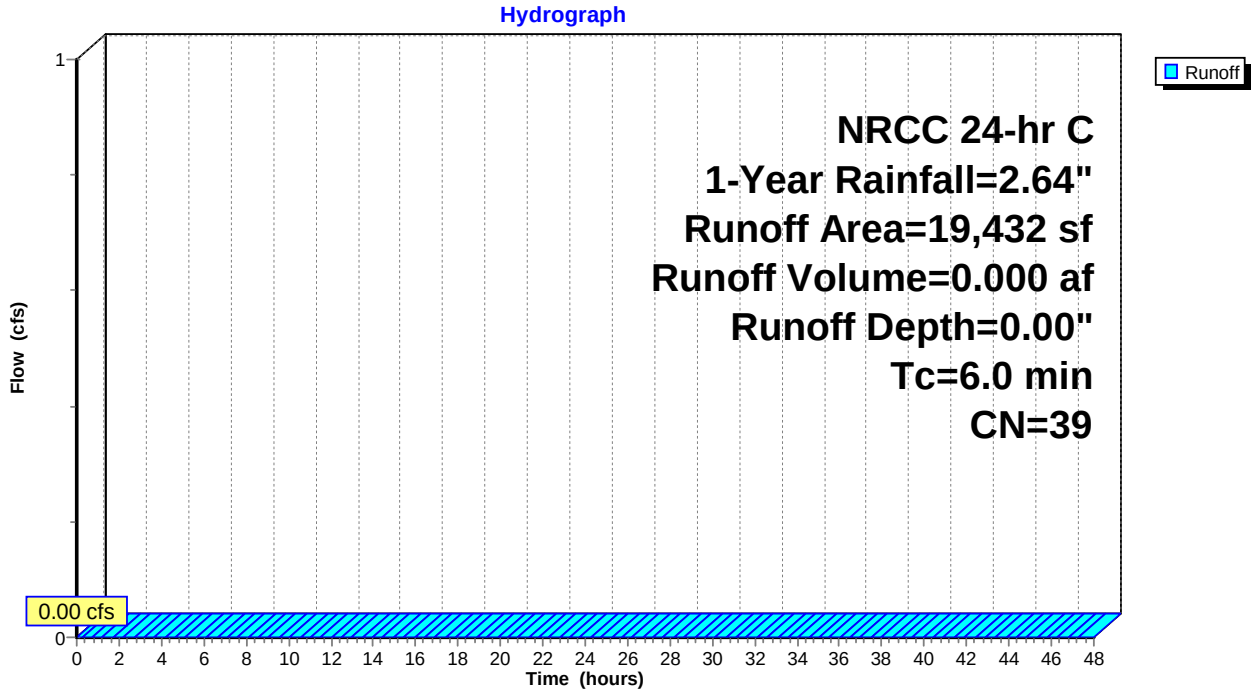
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Pond 51P : FB 1H

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



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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	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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Summary for Subcatchment 58S: PDA1-B-IB

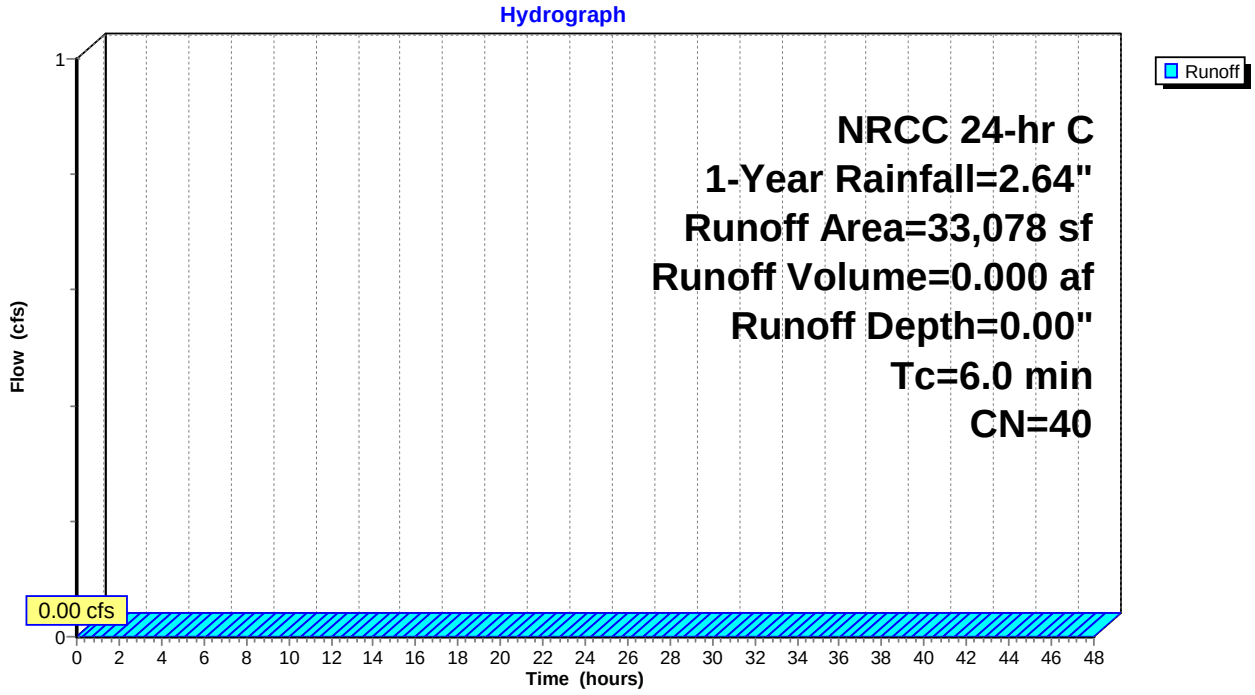
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Pond 45P : INFIL 1B

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



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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				

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Summary for Subcatchment 59S: PDA-1F

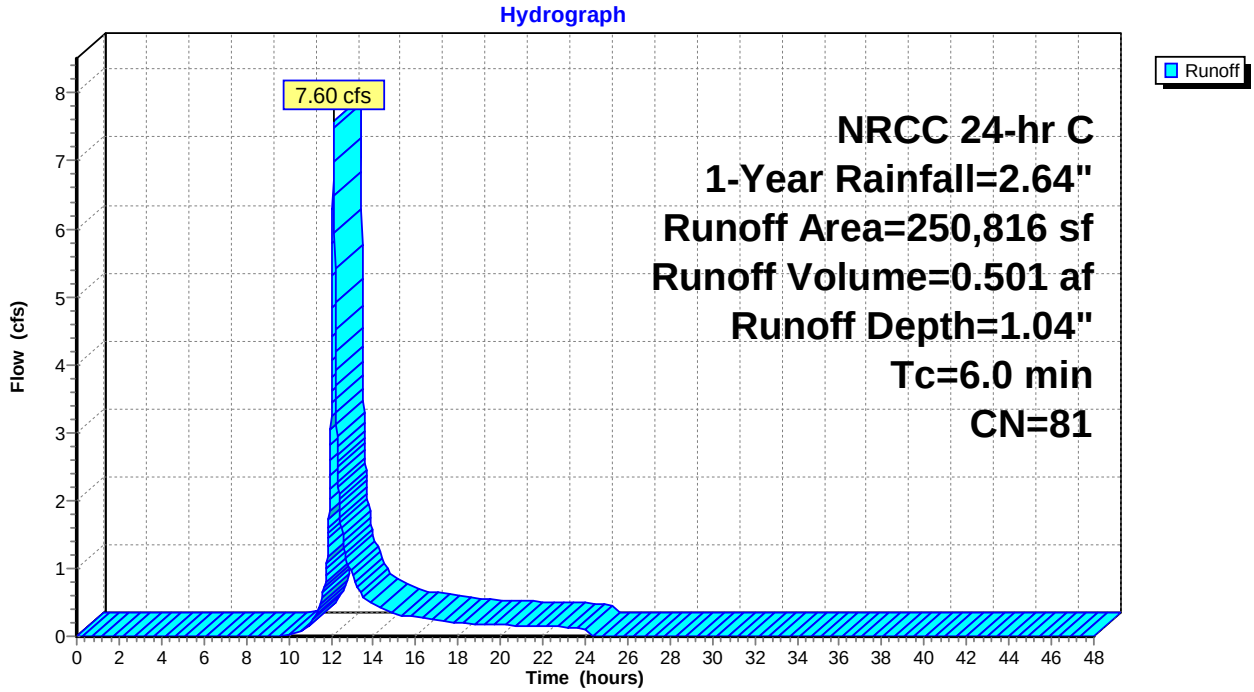
Runoff = 7.60 cfs @ 12.13 hrs, Volume= 0.501 af, Depth= 1.04"
Routed to Pond 26P : Bioretention 1F

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



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Hydrograph for Subcatchment 59S: PDA-1F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.01	0.00	0.00
1.00	0.03	0.00	0.00
1.50	0.05	0.00	0.00
2.00	0.06	0.00	0.00
2.50	0.08	0.00	0.00
3.00	0.10	0.00	0.00
3.50	0.12	0.00	0.00
4.00	0.14	0.00	0.00
4.50	0.16	0.00	0.00
5.00	0.18	0.00	0.00
5.50	0.20	0.00	0.00
6.00	0.23	0.00	0.00
6.50	0.25	0.00	0.00
7.00	0.28	0.00	0.00
7.50	0.31	0.00	0.00
8.00	0.34	0.00	0.00
8.50	0.38	0.00	0.00
9.00	0.42	0.00	0.00
9.50	0.46	0.00	0.00
10.00	0.52	0.00	0.02
10.50	0.59	0.01	0.07
11.00	0.68	0.02	0.18
11.50	0.83	0.05	0.44
12.00	1.26	0.20	**3.25**
12.50	1.81	0.49	**1.61**
13.00	1.96	0.58	0.90
13.50	2.05	0.64	0.60
14.00	2.12	0.68	0.48
14.50	2.18	0.72	0.41
15.00	2.22	0.75	0.34
15.50	2.26	0.78	0.30
16.00	2.30	0.80	0.28
16.50	2.33	0.82	0.26
17.00	2.36	0.84	0.24
17.50	2.39	0.86	0.22
18.00	2.41	0.88	0.19
18.50	2.44	0.90	0.18
19.00	2.46	0.91	0.18
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
29.00	2.64	1.04	0.00
29.50	2.64	1.04	0.00
30.00	2.64	1.04	0.00
30.50	2.64	1.04	0.00
31.00	2.64	1.04	0.00
31.50	2.64	1.04	0.00
32.00	2.64	1.04	0.00
32.50	2.64	1.04	0.00
33.00	2.64	1.04	0.00
33.50	2.64	1.04	0.00
34.00	2.64	1.04	0.00
34.50	2.64	1.04	0.00
35.00	2.64	1.04	0.00
35.50	2.64	1.04	0.00
36.00	2.64	1.04	0.00
36.50	2.64	1.04	0.00
37.00	2.64	1.04	0.00
37.50	2.64	1.04	0.00
38.00	2.64	1.04	0.00
38.50	2.64	1.04	0.00
39.00	2.64	1.04	0.00
39.50	2.64	1.04	0.00
40.00	2.64	1.04	0.00
40.50	2.64	1.04	0.00
41.00	2.64	1.04	0.00
41.50	2.64	1.04	0.00
42.00	2.64	1.04	0.00
42.50	2.64	1.04	0.00
43.00	2.64	1.04	0.00
43.50	2.64	1.04	0.00
44.00	2.64	1.04	0.00
44.50	2.64	1.04	0.00
45.00	2.64	1.04	0.00
45.50	2.64	1.04	0.00
46.00	2.64	1.04	0.00
46.50	2.64	1.04	0.00
47.00	2.64	1.04	0.00
47.50	2.64	1.04	0.00
48.00	2.64	1.04	0.00

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

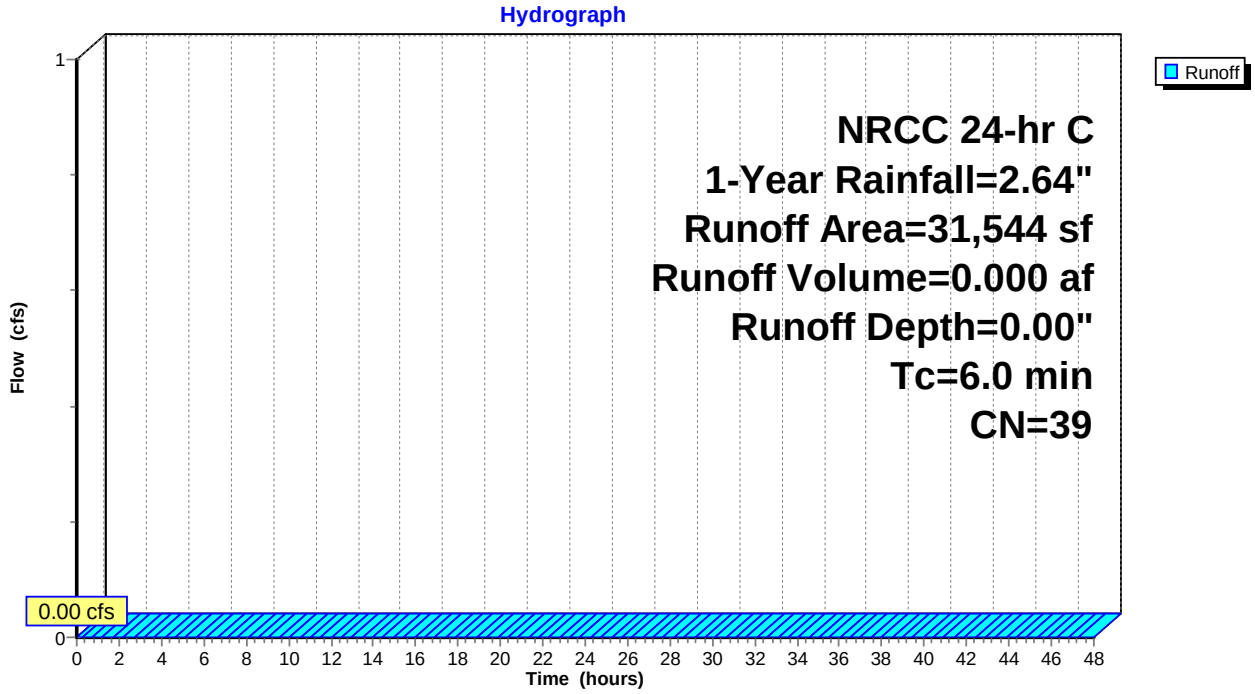
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Pond 31P : Bioretention i

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



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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	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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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 = 0.11 cfs @ 23.67 hrs, Volume= 0.105 af, Atten= 99%, Lag= 691.9 min
Primary = 0.11 cfs @ 23.67 hrs, Volume= 0.105 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= 412.67' @ 23.67 hrs Surf.Area= 15,247 sf Storage= 23,032 cf

Plug-Flow detention time= 922.3 min calculated for 0.105 af (18% of inflow)
Center-of-Mass det. time= 737.4 min (1,553.9 - 816.5)

Volume	Invert	Avail.Storage	Storage Description
#1	408.66'	82,103 cf	**Custom Stage Data (Prismatic)** Listed below

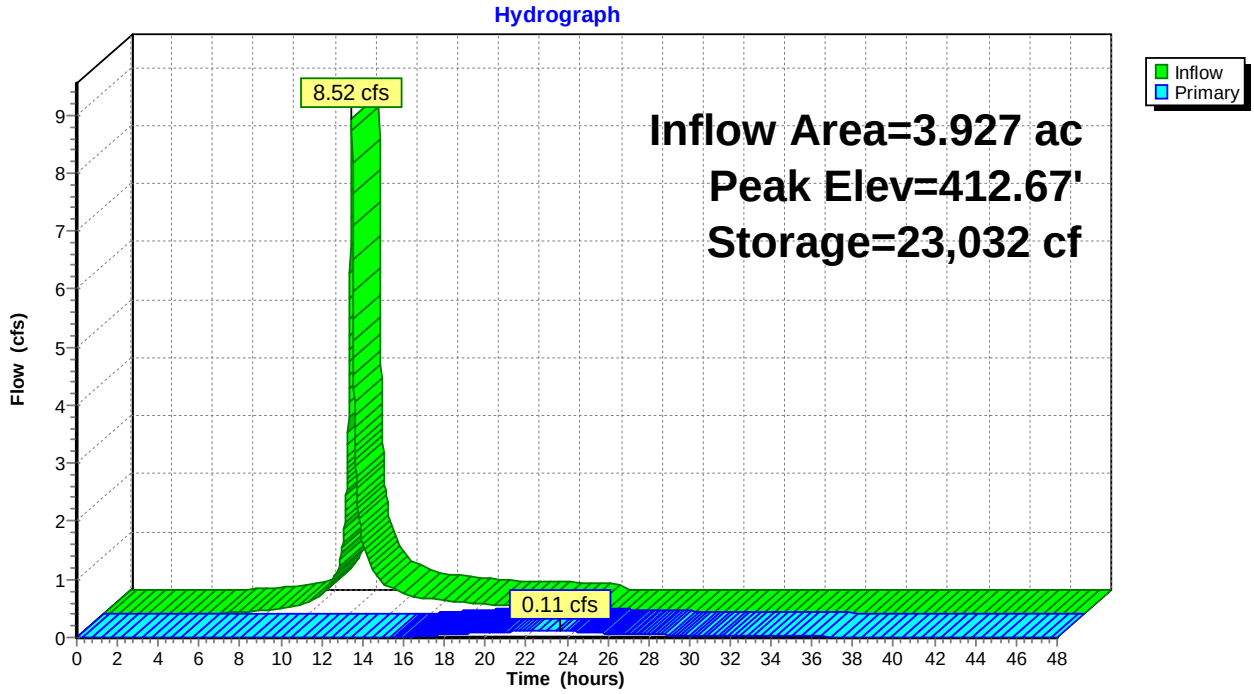
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	14,016	0.0	0	0
409.33	14,016	40.0	3,756	3,756
412.00	14,016	20.0	7,485	11,241
416.00	21,415	100.0	70,862	82,103

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	412.50'	**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=0.11 cfs @ 23.67 hrs HW=412.67' (Free Discharge)
└**1=Culvert** (Passes 0.11 cfs of 15.07 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.11 cfs @ 1.39 fps)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 1P: Bioretention 1D



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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	20,703	412.53	0.01
17.00	0.21	21,489	412.58	0.03
18.00	0.17	22,042	412.61	0.05
19.00	0.16	22,419	412.63	0.07
20.00	0.15	22,687	412.65	0.09
21.00	0.14	22,865	412.66	0.10
22.00	0.13	22,972	412.66	0.11
23.00	0.12	**23,023**	**412.67**	**0.11**
24.00	0.11	**23,030**	**412.67**	**0.11**
25.00	0.00	22,716	412.65	0.09
26.00	0.00	22,431	412.63	0.07
27.00	0.00	22,205	412.62	0.06
28.00	0.00	22,013	412.61	0.05
29.00	0.00	21,845	412.60	0.04
30.00	0.00	21,700	412.59	0.04
31.00	0.00	21,573	412.58	0.03
32.00	0.00	21,463	412.58	0.03
33.00	0.00	21,367	412.57	0.02
34.00	0.00	21,283	412.57	0.02
35.00	0.00	21,210	412.56	0.02
36.00	0.00	21,147	412.56	0.02
37.00	0.00	21,092	412.56	0.01
38.00	0.00	21,044	412.55	0.01
39.00	0.00	21,002	412.55	0.01
40.00	0.00	20,965	412.55	0.01
41.00	0.00	20,930	412.55	0.01
42.00	0.00	20,896	412.55	0.01
43.00	0.00	20,864	412.54	0.01
44.00	0.00	20,833	412.54	0.01
45.00	0.00	20,803	412.54	0.01
46.00	0.00	20,774	412.54	0.01
47.00	0.00	20,747	412.54	0.01
48.00	0.00	20,720	412.54	0.01

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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'	31,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

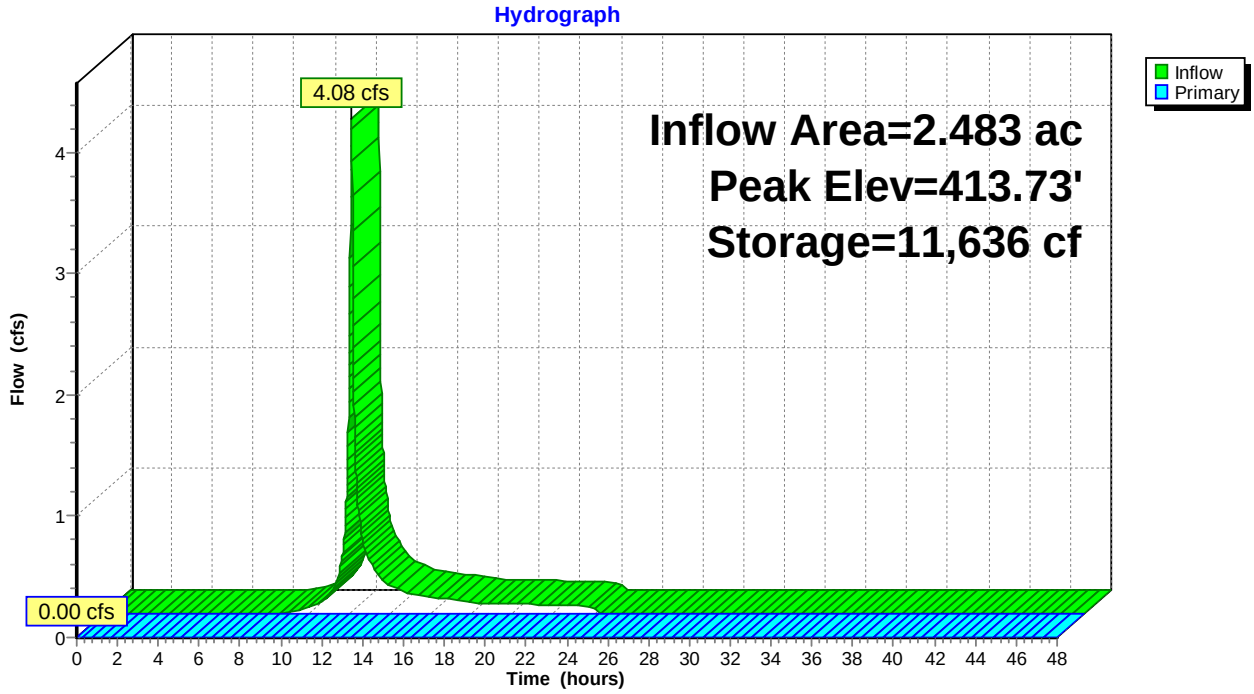
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	8,681	0.0	0	0
409.33	8,681	40.0	2,327	2,327
413.50	8,681	20.0	7,240	9,566
415.00	12,593	100.0	15,956	25,522
415.50	12,817	100.0	6,353	31,874

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	414.00'	**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=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 3P: Bioretention 1A



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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

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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)

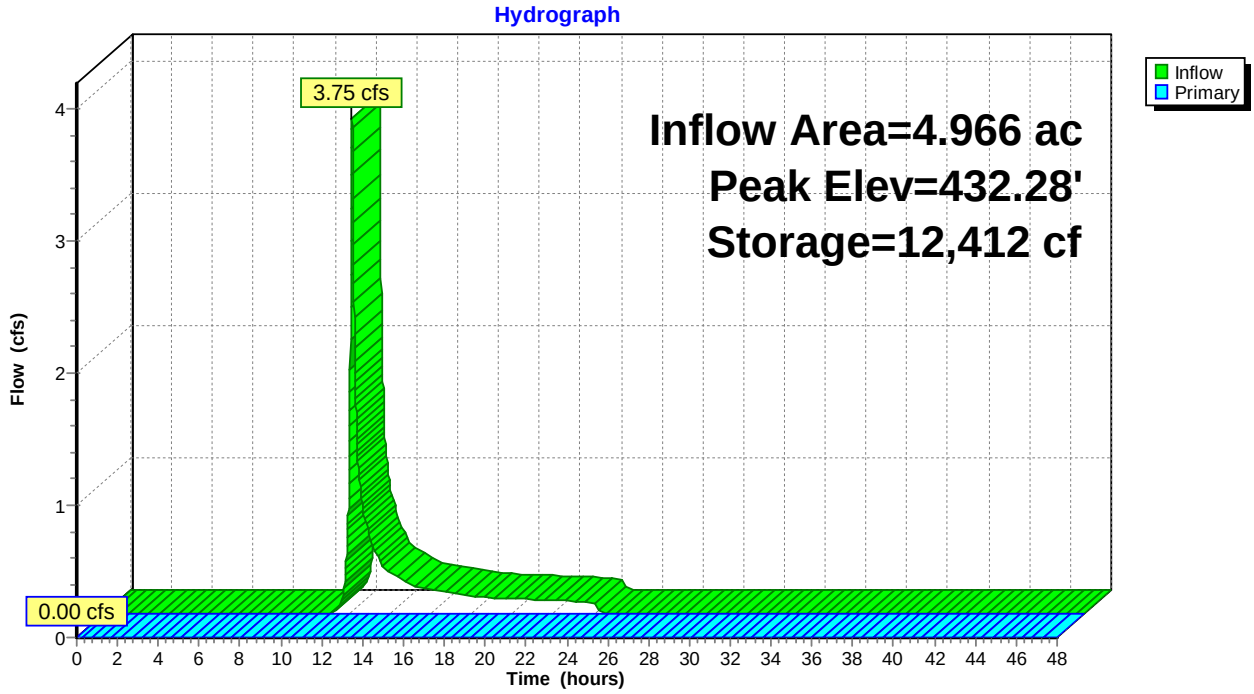
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
428.67	11,465	0.0	0	0
429.33	11,465	40.0	3,027	3,027
432.00	11,465	20.0	6,122	9,149
435.00	15,812	100.0	40,916	50,065

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)

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Pond 22P: Bioretention 5A



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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

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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)

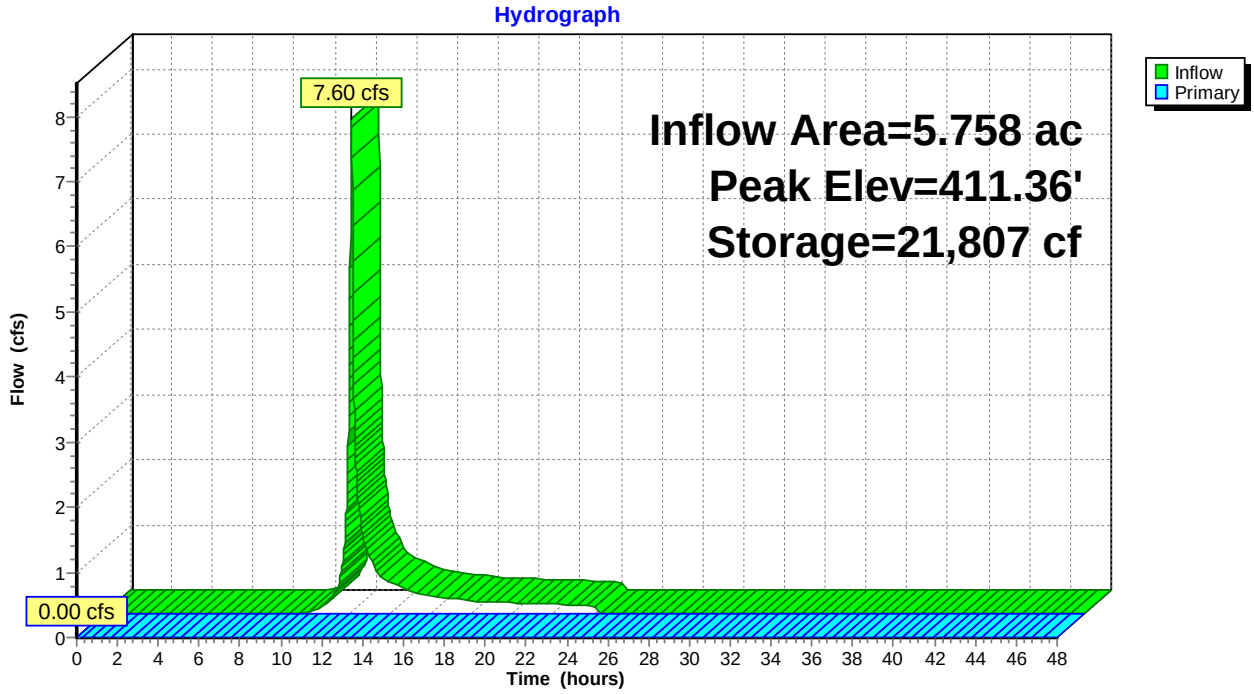
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.66	18,594	0.0	0	0
408.33	18,594	40.0	4,983	4,983
411.00	18,594	20.0	9,929	14,912
414.00	28,345	100.0	70,409	85,321

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)

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Pond 26P: Bioretention 1F



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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

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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 = 0.22 cfs @ 19.25 hrs, Volume= 0.140 af, Atten= 98%, Lag= 426.7 min
Primary = 0.22 cfs @ 19.25 hrs, Volume= 0.140 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= 418.56' @ 19.25 hrs Surf.Area= 17,634 sf Storage= 22,838 cf

Plug-Flow detention time= 572.9 min calculated for 0.140 af (22% of inflow)
Center-of-Mass det. time= 417.8 min (1,272.5 - 854.8)

Volume	Invert	Avail.Storage	Storage Description
#1	414.67'	94,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

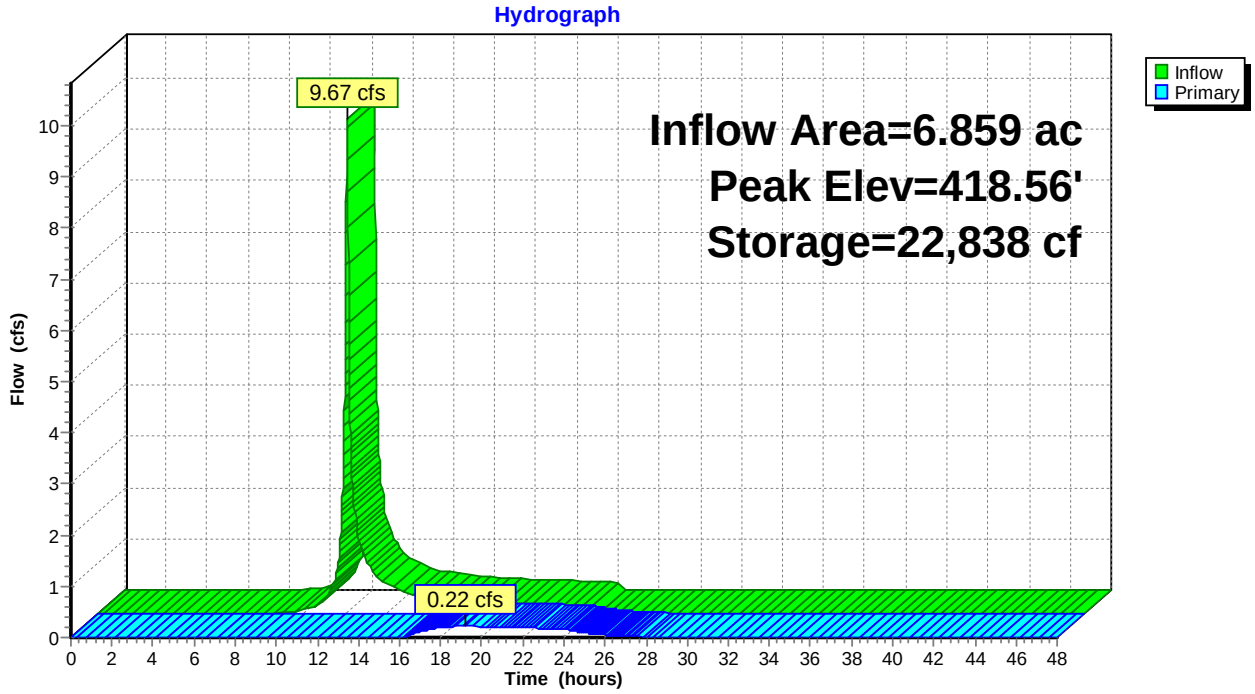
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
414.67	16,541	0.0	0	0
415.33	16,541	40.0	4,367	4,367
418.00	16,541	20.0	8,833	13,200
422.00	24,296	100.0	81,674	94,874

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	418.50'	**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=0.21 cfs @ 19.25 hrs HW=418.56' (Free Discharge)
└**1=Culvert** (Passes 0.21 cfs of 15.09 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.21 cfs @ 0.81 fps)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 29P: Bioretention 4B



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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	22,413	418.54	0.12
18.00	0.24	22,784	418.56	0.20
19.00	0.22	**22,837**	**418.56**	**0.22**
20.00	0.21	**22,826**	**418.56**	**0.21**
21.00	0.19	22,795	418.56	0.20
22.00	0.18	22,757	418.56	0.19
23.00	0.17	22,716	418.56	0.18
24.00	0.15	22,674	418.55	0.16
25.00	0.00	22,260	418.53	0.09
26.00	0.00	22,008	418.52	0.05
27.00	0.00	21,872	418.51	0.03
28.00	0.00	21,799	418.50	0.01
29.00	0.00	21,759	418.50	0.01
30.00	0.00	21,738	418.50	0.00
31.00	0.00	21,726	418.50	0.00
32.00	0.00	21,720	418.50	0.00
33.00	0.00	21,717	418.50	0.00
34.00	0.00	21,715	418.50	0.00
35.00	0.00	21,714	418.50	0.00
36.00	0.00	21,713	418.50	0.00
37.00	0.00	21,713	418.50	0.00
38.00	0.00	21,713	418.50	0.00
39.00	0.00	21,713	418.50	0.00
40.00	0.00	21,713	418.50	0.00
41.00	0.00	21,713	418.50	0.00
42.00	0.00	21,713	418.50	0.00
43.00	0.00	21,713	418.50	0.00
44.00	0.00	21,713	418.50	0.00
45.00	0.00	21,713	418.50	0.00
46.00	0.00	21,713	418.50	0.00
47.00	0.00	21,713	418.50	0.00
48.00	0.00	21,713	418.50	0.00

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Summary for Pond 31P: Bioretention i

Inflow Area = 10.027 ac, 72.74% Impervious, Inflow Depth = 0.82" for 1-Year event
Inflow = 9.27 cfs @ 12.14 hrs, Volume= 0.686 af
Outflow = 0.03 cfs @ 24.20 hrs, Volume= 0.011 af, Atten= 100%, Lag= 723.4 min
Primary = 0.03 cfs @ 24.20 hrs, Volume= 0.011 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' @ 24.20 hrs Surf.Area= 23,655 sf Storage= 29,812 cf

Plug-Flow detention time= 1,448.9 min calculated for 0.011 af (2% of inflow)
Center-of-Mass det. time= 881.8 min (1,673.0 - 791.1)

Volume	Invert	Avail.Storage	Storage Description
#1	407.83'	93,189 cf	**Custom Stage Data (Prismatic)** Listed below

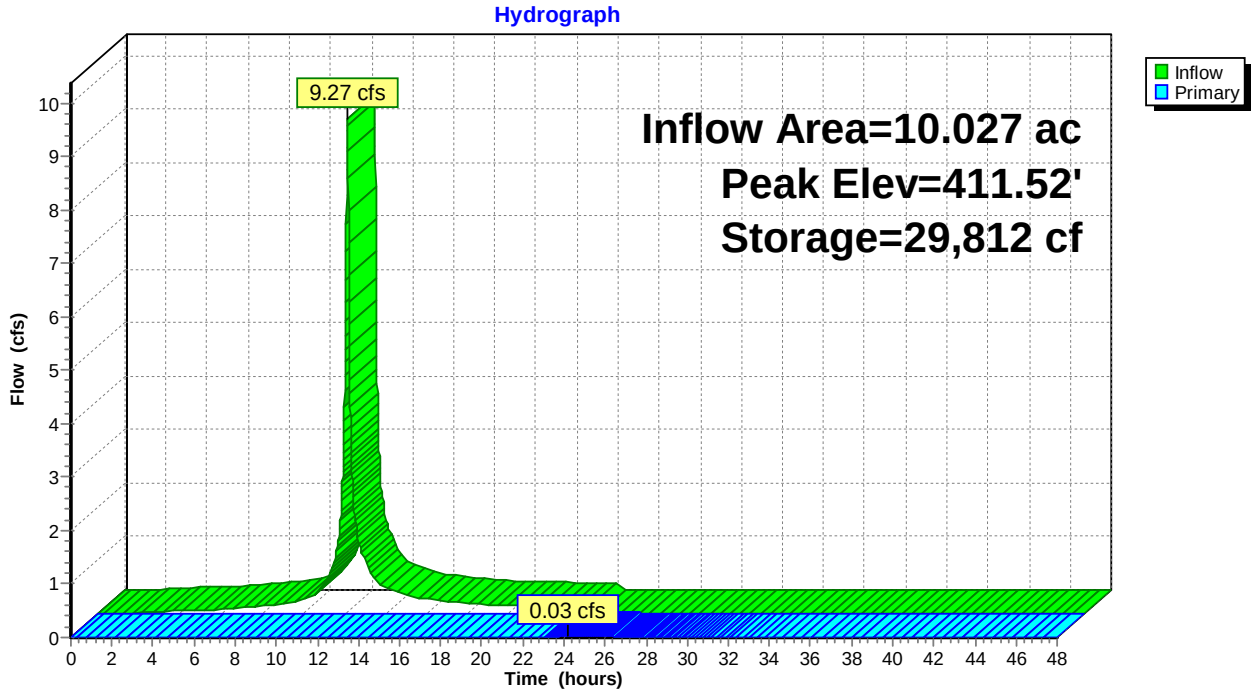
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	22,680	0.0	0	0
408.33	22,680	40.0	4,536	4,536
411.00	22,680	20.0	12,111	16,647
414.00	28,348	100.0	76,542	93,189

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	411.50'	**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=0.02 cfs @ 24.20 hrs HW=411.52' (Free Discharge)
└**1=Culvert** (Passes 0.02 cfs of 6.52 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.02 cfs @ 0.41 fps)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 31P: Bioretention i



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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	0.01	13	407.83	0.00
3.00	0.04	102	407.84	0.00
4.00	0.05	263	407.86	0.00
5.00	0.07	484	407.88	0.00
6.00	0.08	758	407.91	0.00
7.00	0.11	1,105	407.95	0.00
8.00	0.14	1,561	408.00	0.00
9.00	0.18	2,133	408.07	0.00
10.00	0.28	2,931	408.15	0.00
11.00	0.54	4,273	408.30	0.00
12.00	**4.18**	8,813	409.27	0.00
13.00	**0.98**	19,778	411.12	0.00
14.00	0.50	22,188	411.22	0.00
15.00	0.35	23,712	411.28	0.00
16.00	0.28	24,809	411.32	0.00
17.00	0.24	25,740	411.36	0.00
18.00	0.19	26,513	411.39	0.00
19.00	0.17	27,164	411.41	0.00
20.00	0.16	27,772	411.44	0.00
21.00	0.15	28,342	411.46	0.00
22.00	0.14	28,872	411.48	0.00
23.00	0.13	29,361	411.50	0.00
24.00	0.12	**29,770**	**411.51**	**0.02**
25.00	0.00	**29,749**	**411.51**	**0.02**
26.00	0.00	29,678	411.51	0.02
27.00	0.00	29,622	411.51	0.01
28.00	0.00	29,577	411.51	0.01
29.00	0.00	29,542	411.51	0.01
30.00	0.00	29,514	411.50	0.01
31.00	0.00	29,491	411.50	0.01
32.00	0.00	29,473	411.50	0.00
33.00	0.00	29,459	411.50	0.00
34.00	0.00	29,448	411.50	0.00
35.00	0.00	29,439	411.50	0.00
36.00	0.00	29,432	411.50	0.00
37.00	0.00	29,426	411.50	0.00
38.00	0.00	29,422	411.50	0.00
39.00	0.00	29,418	411.50	0.00
40.00	0.00	29,415	411.50	0.00
41.00	0.00	29,413	411.50	0.00
42.00	0.00	29,411	411.50	0.00
43.00	0.00	29,410	411.50	0.00
44.00	0.00	29,409	411.50	0.00
45.00	0.00	29,408	411.50	0.00
46.00	0.00	29,407	411.50	0.00
47.00	0.00	29,406	411.50	0.00
48.00	0.00	29,406	411.50	0.00

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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)

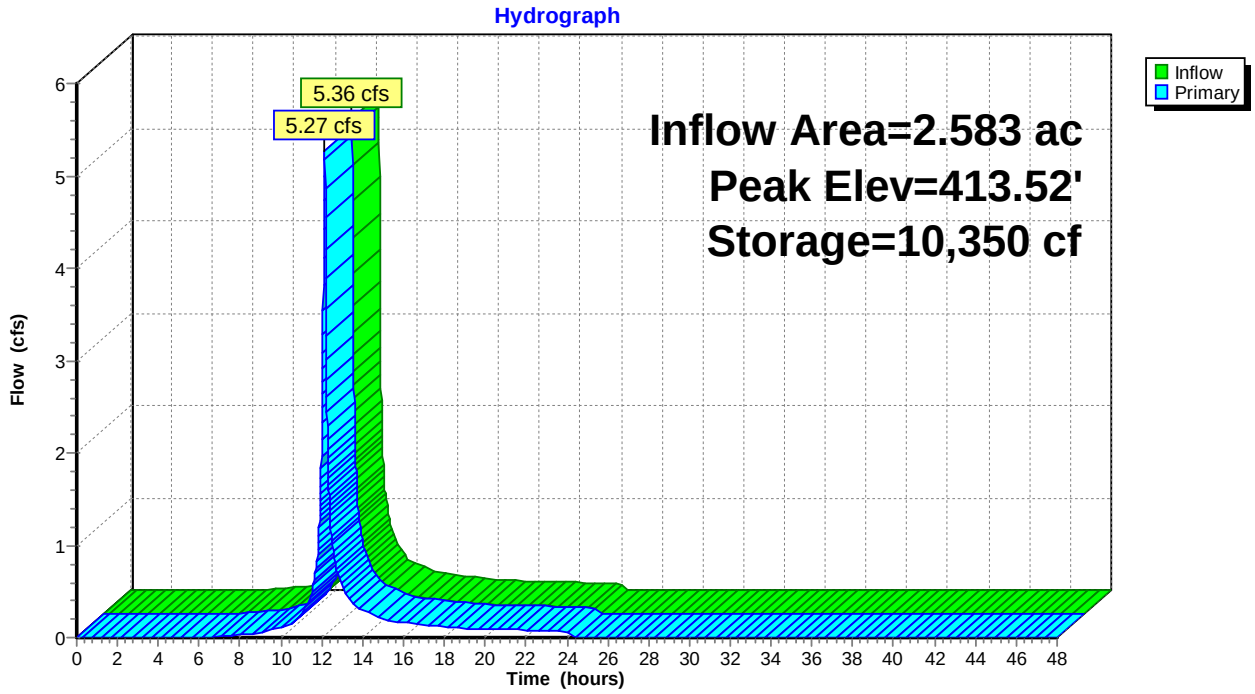
Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	13,740 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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

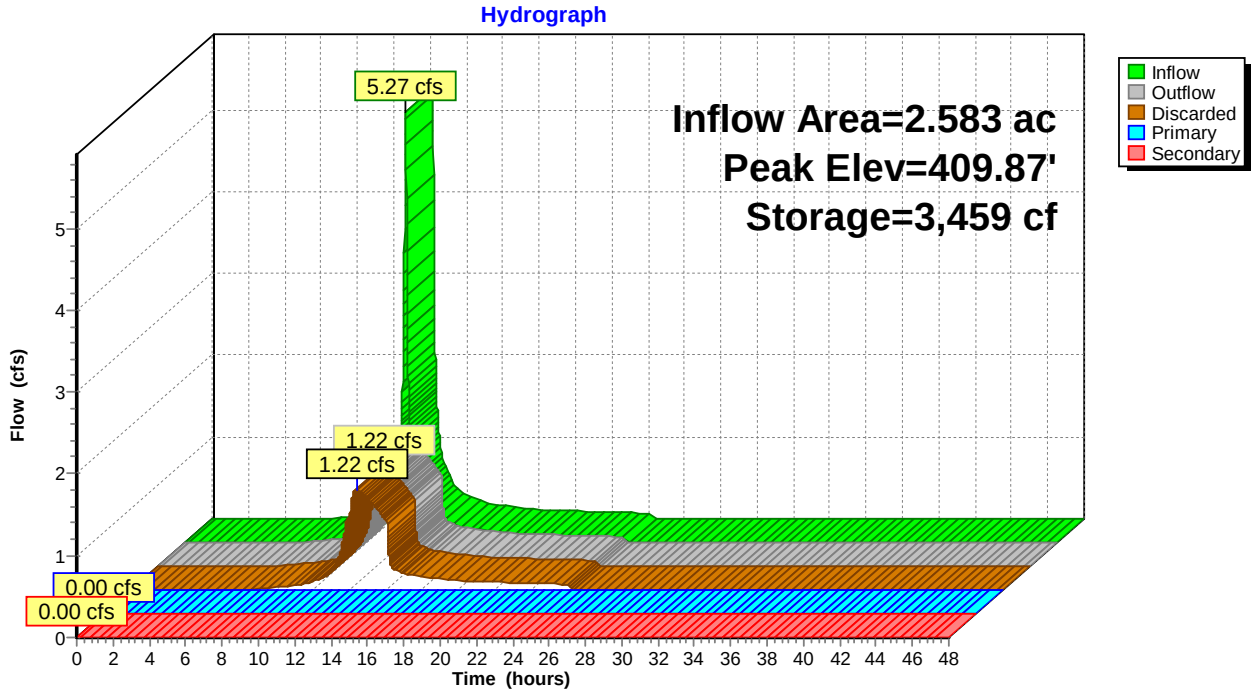
Discarded OutFlow Max=1.22 cfs @ 12.42 hrs HW=409.87' (Free Discharge)
└**3=Exfiltration** (Controls 1.22 cfs)

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)

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Pond 33P: INFIL 1C



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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

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Summary for Pond 37P: FB 1i+J

Inflow Area = 9.303 ac, 78.40% Impervious, Inflow Depth = 1.77" for 1-Year event
Inflow = 18.98 cfs @ 12.13 hrs, Volume= 1.372 af
Outflow = 18.54 cfs @ 12.14 hrs, Volume= 1.372 af, Atten= 2%, Lag= 0.9 min
Primary = 9.27 cfs @ 12.14 hrs, Volume= 0.686 af
Routed to Pond 31P : Bioretention i
Secondary = 9.27 cfs @ 12.14 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' @ 12.14 hrs Surf.Area= 10,041 sf Storage= 28,417 cf (1,611 cf above start)

Plug-Flow detention time= 250.2 min calculated for 0.756 af (55% of inflow)
Center-of-Mass det. time= 2.9 min (791.1 - 788.3)

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

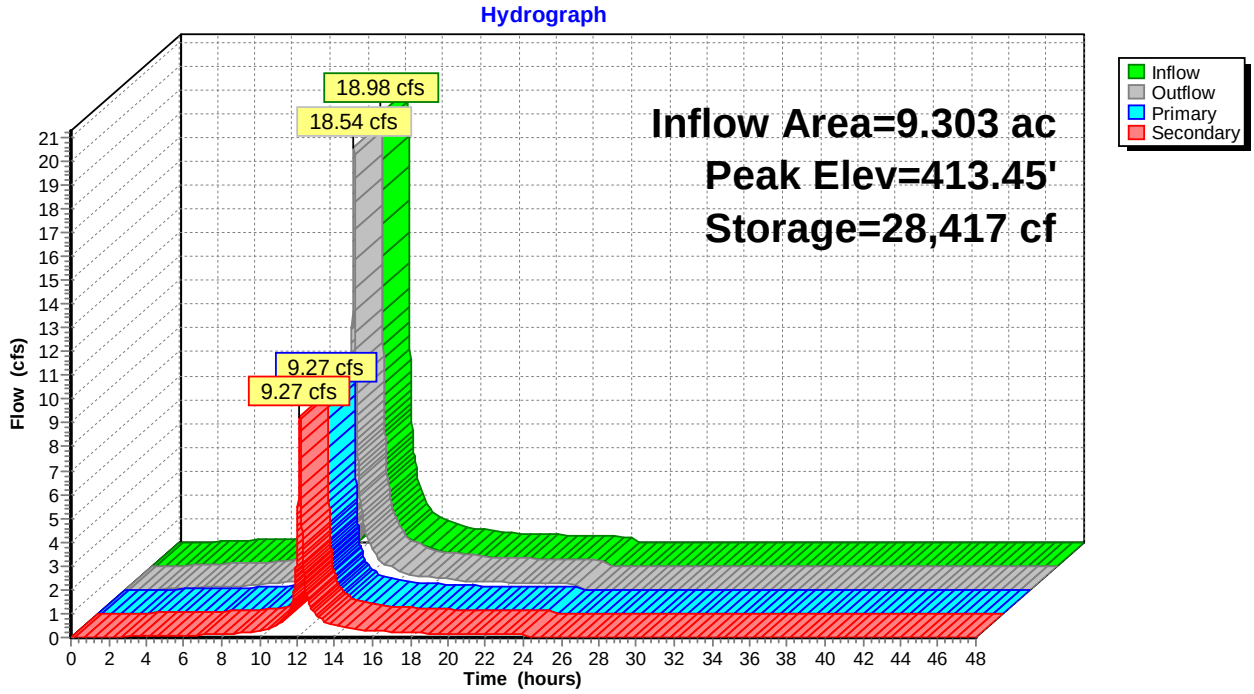
Device	Routing	Invert	Outlet Devices
#1	Primary	413.25'	**40.0' long x 21.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	413.25'	**40.0' long x 21.0' breadth Broad-Crested Rectangular 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=9.23 cfs @ 12.14 hrs HW=413.44' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 9.23 cfs @ 1.18 fps)

Secondary OutFlow Max=9.23 cfs @ 12.14 hrs HW=413.44' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 9.23 cfs @ 1.18 fps)

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Pond 37P: FB 1i+J



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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	26,812	413.25	0.03	0.01	0.01
3.00	0.07	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	26,855	413.26	0.22	0.11	0.11
8.00	0.29	26,869	413.26	0.29	0.14	0.14
9.00	0.35	26,884	413.26	0.35	0.18	0.18
10.00	0.58	26,931	413.27	0.56	0.28	0.28
11.00	1.14	27,046	413.28	1.08	0.54	0.54
12.00	**9.54**	**27,752**	**413.36**	**8.37**	**4.18**	**4.18**
13.00	**1.90**	**27,152**	**413.29**	**1.97**	**0.98**	**0.98**
14.00	0.98	27,028	413.28	1.00	0.50	0.50
15.00	0.67	26,960	413.27	0.69	0.35	0.35
16.00	0.55	26,931	413.27	0.56	0.28	0.28
17.00	0.47	26,911	413.26	0.47	0.24	0.24
18.00	0.38	26,891	413.26	0.38	0.19	0.19
19.00	0.35	26,883	413.26	0.35	0.17	0.17
20.00	0.33	26,879	413.26	0.33	0.16	0.16
21.00	0.30	26,874	413.26	0.31	0.15	0.15
22.00	0.28	26,869	413.26	0.28	0.14	0.14
23.00	0.26	26,864	413.26	0.26	0.13	0.13
24.00	0.24	26,859	413.26	0.24	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

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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

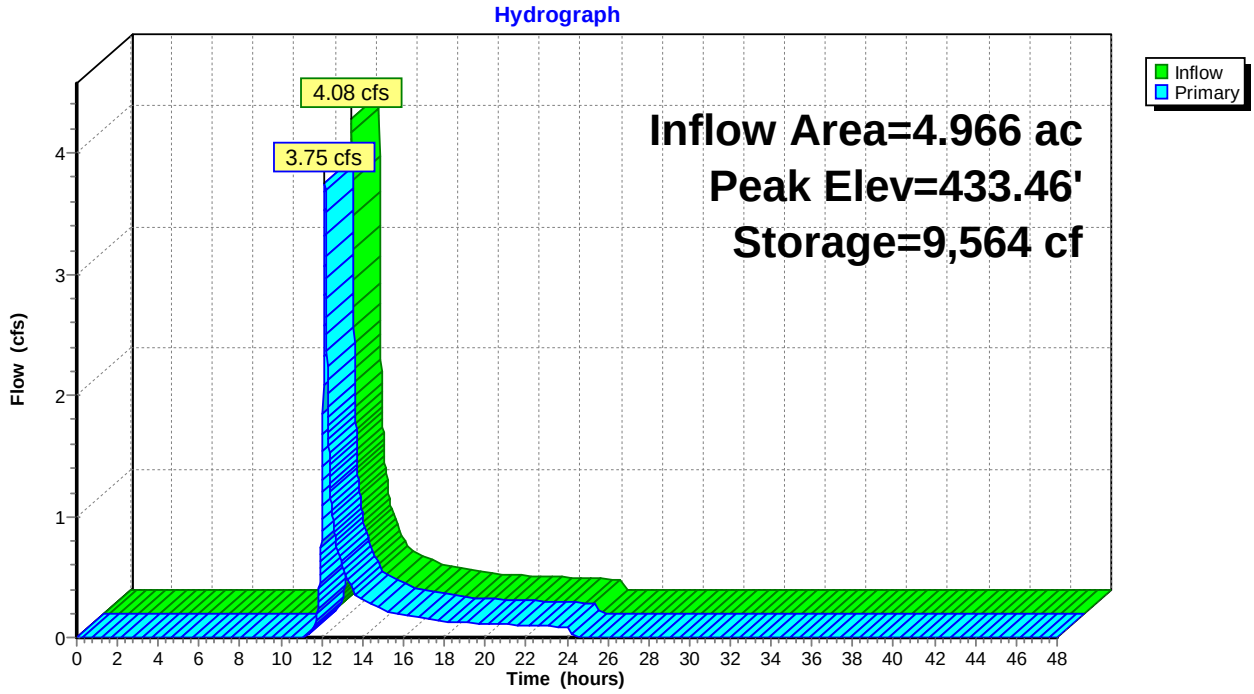
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
431.00	2,415	0	0
435.00	5,362	15,554	15,554

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)

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Pond 39P: FB 5A



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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

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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)

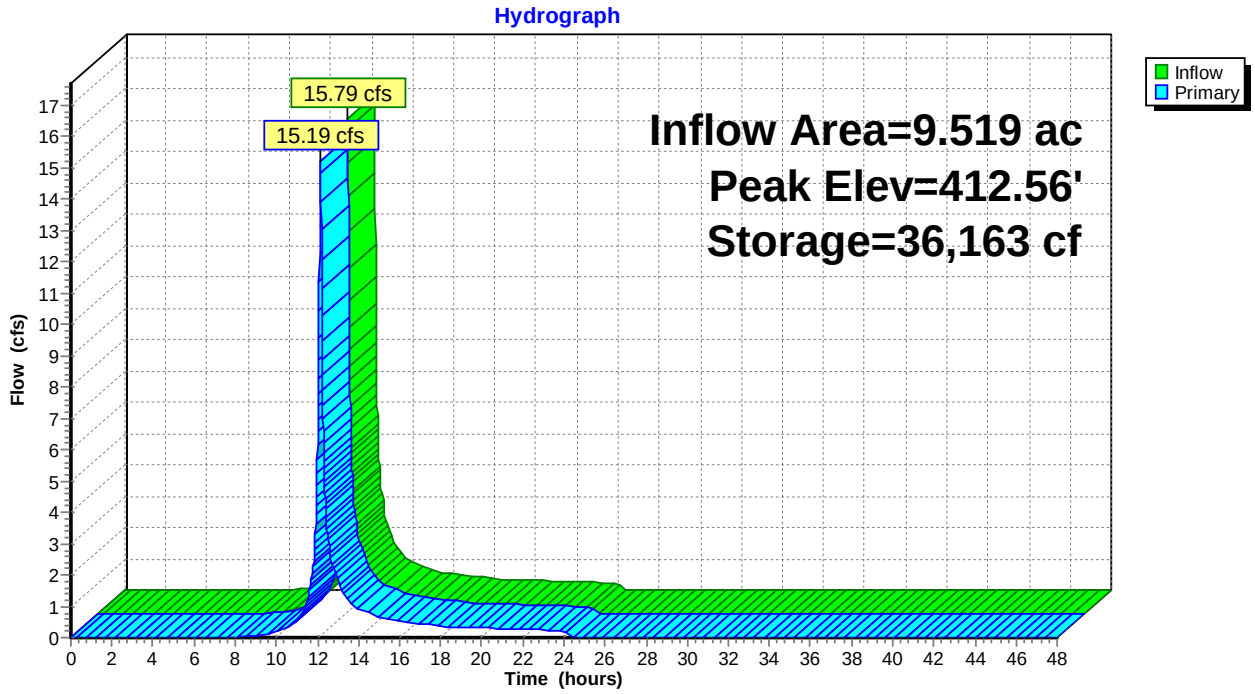
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	47,613 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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

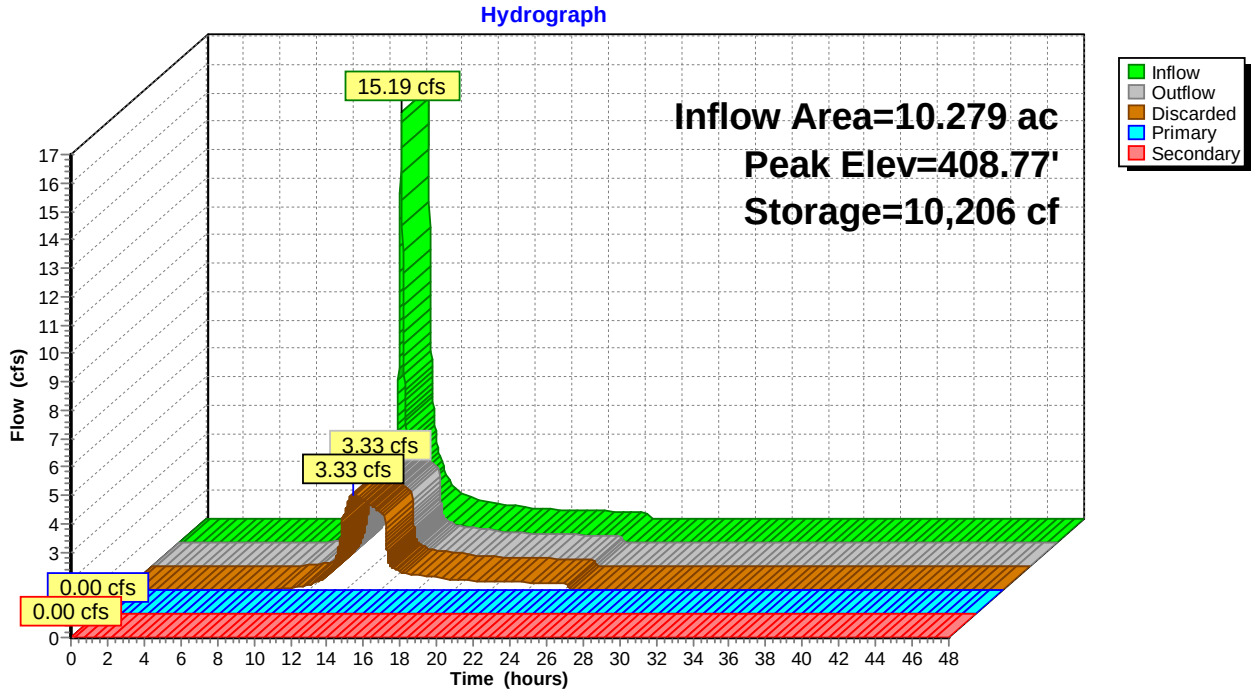
Discarded OutFlow Max=3.33 cfs @ 12.50 hrs HW=408.77' (Free Discharge)
└**3=Exfiltration** (Controls 3.33 cfs)

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)

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Pond 45P: INFIL 1B



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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

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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

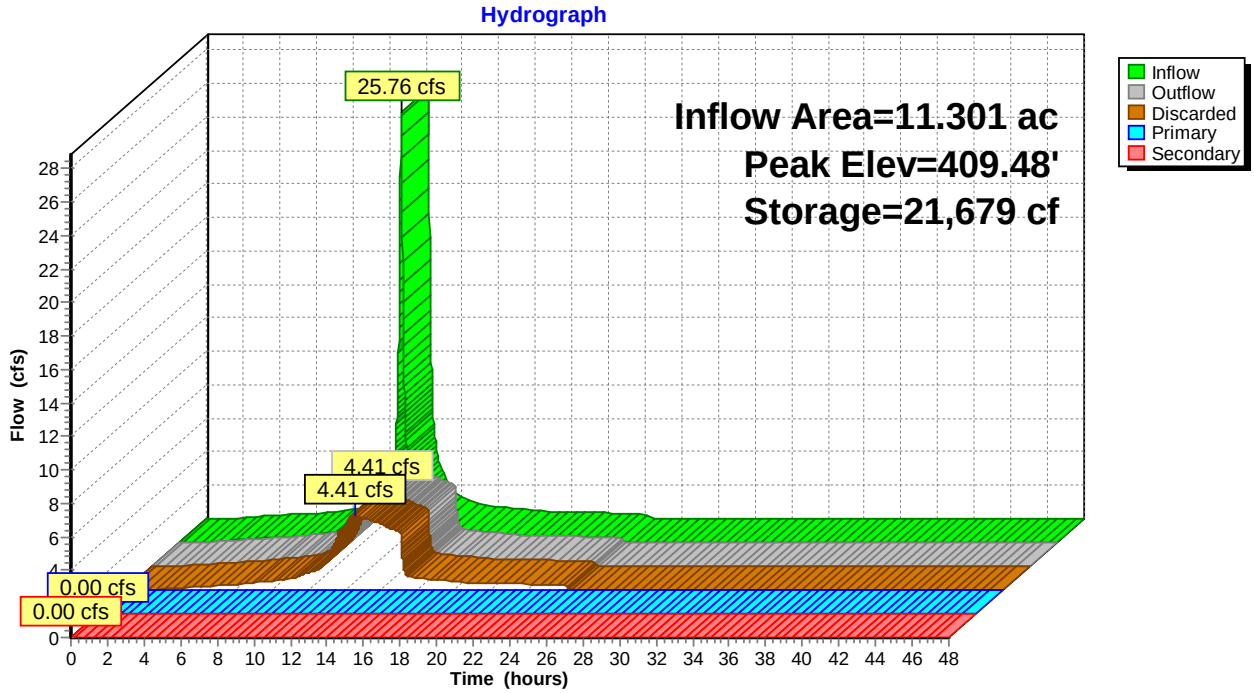
Discarded OutFlow Max=4.41 cfs @ 12.58 hrs HW=409.48' (Free Discharge)
└**3=Exfiltration** (Controls 4.41 cfs)

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)

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Pond 47P: INFIL 1H



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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

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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)

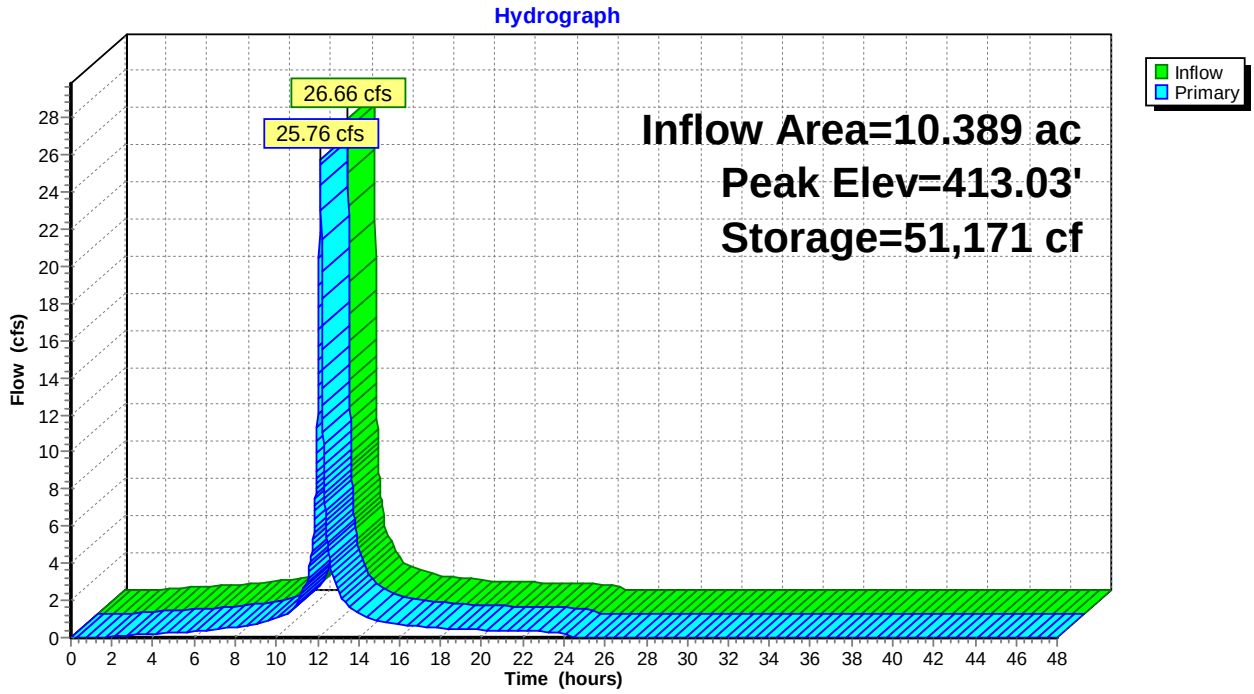
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,056 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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Summary for Pond 53P: Bioretention J basin

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 10.63" for 1-Year event
Inflow = 9.27 cfs @ 12.14 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' @ 25.57 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

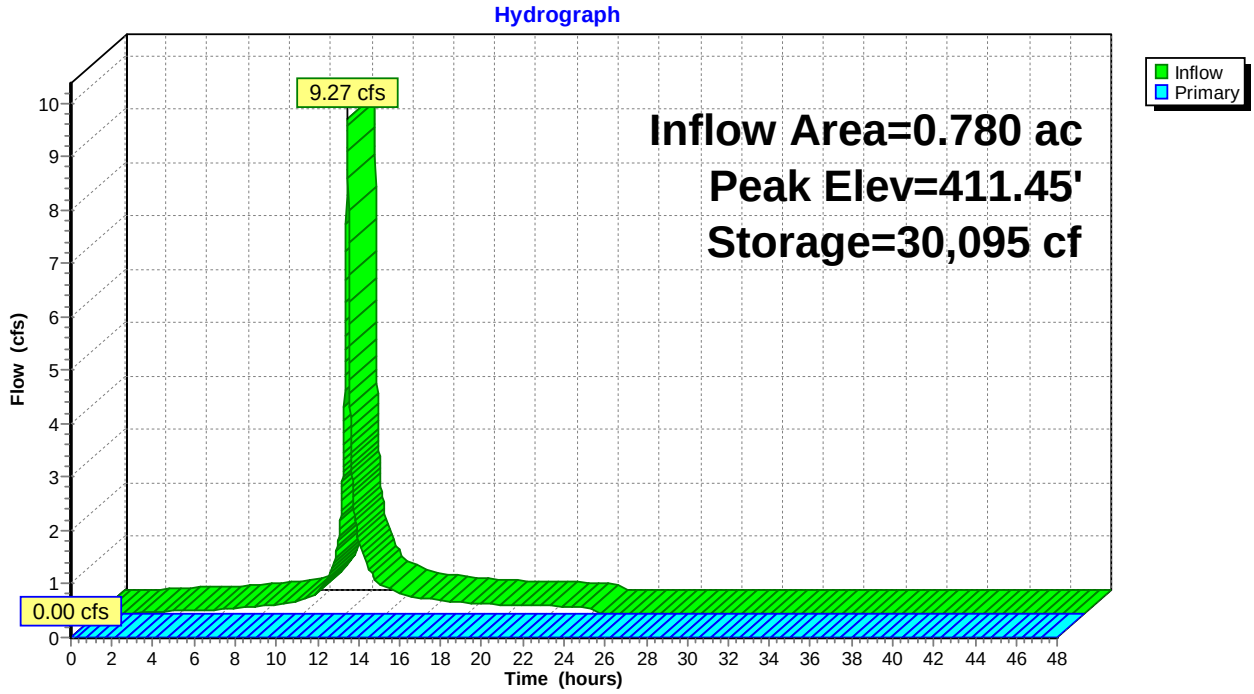
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	24,200	0.0	0	0
408.33	24,200	40.0	4,840	4,840
411.00	24,200	20.0	12,923	17,763
413.00	30,410	100.0	54,610	72,373

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	411.50'	**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)

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Pond 53P: Bioretention J basin



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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	0.01	13	407.83	0.00
3.00	0.04	102	407.84	0.00
4.00	0.05	263	407.86	0.00
5.00	0.07	484	407.88	0.00
6.00	0.08	758	407.91	0.00
7.00	0.11	1,105	407.94	0.00
8.00	0.14	1,561	407.99	0.00
9.00	0.18	2,133	408.05	0.00
10.00	0.28	2,931	408.13	0.00
11.00	0.54	4,273	408.27	0.00
12.00	**4.18**	8,813	409.15	0.00
13.00	**0.99**	19,787	411.07	0.00
14.00	0.51	22,222	411.16	0.00
15.00	0.35	23,770	411.22	0.00
16.00	0.29	24,889	411.26	0.00
17.00	0.24	25,841	411.30	0.00
18.00	0.20	26,633	411.32	0.00
19.00	0.18	27,301	411.35	0.00
20.00	0.17	27,927	411.37	0.00
21.00	0.16	28,513	411.39	0.00
22.00	0.15	29,059	411.41	0.00
23.00	0.13	29,563	411.43	0.00
24.00	0.12	30,027	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

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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
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= 409.47' @ 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	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	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

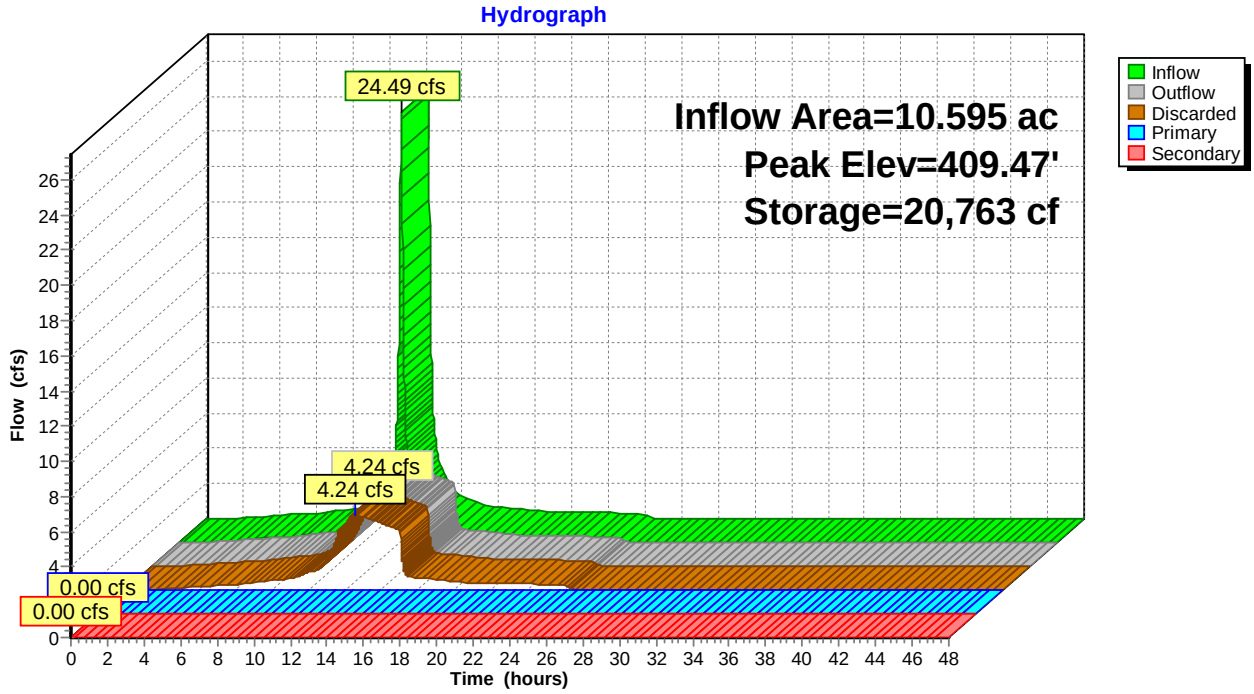
Discarded OutFlow Max=4.24 cfs @ 12.59 hrs HW=409.47' (Free Discharge)
└**3=Exfiltration** (Controls 4.24 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
└**4=Culvert** (Controls 0.00 cfs)
└**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)

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Pond 54P: INFIL 1G



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Hydrograph for Pond 54P: INFIL 1G

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	0.04	10	408.50	0.03	0.03	0.00	0.00
3.00	0.12	39	408.50	0.11	0.11	0.00	0.00
4.00	0.20	66	408.50	0.20	0.20	0.00	0.00
5.00	0.26	87	408.50	0.26	0.26	0.00	0.00
6.00	0.32	104	408.51	0.31	0.31	0.00	0.00
7.00	0.42	138	408.51	0.41	0.41	0.00	0.00
8.00	0.54	178	408.51	0.53	0.53	0.00	0.00
9.00	0.67	220	408.51	0.66	0.66	0.00	0.00
10.00	1.02	329	408.52	0.98	0.98	0.00	0.00
11.00	1.79	557	408.53	1.66	1.66	0.00	0.00
12.00	**11.24**	**4,356**	**408.71**	**3.51**	**3.51**	0.00	0.00
13.00	**2.51**	**19,167**	**409.40**	**4.17**	**4.17**	0.00	0.00
14.00	1.24	10,961	409.02	3.81	3.81	0.00	0.00
15.00	0.86	1,767	408.59	3.40	3.40	0.00	0.00
16.00	0.69	234	408.51	0.70	0.70	0.00	0.00
17.00	0.58	197	408.51	0.59	0.59	0.00	0.00
18.00	0.47	160	408.51	0.48	0.48	0.00	0.00
19.00	0.42	142	408.51	0.42	0.42	0.00	0.00
20.00	0.39	133	408.51	0.40	0.40	0.00	0.00
21.00	0.37	124	408.51	0.37	0.37	0.00	0.00
22.00	0.34	115	408.51	0.34	0.34	0.00	0.00
23.00	0.31	106	408.51	0.31	0.31	0.00	0.00
24.00	0.29	96	408.50	0.29	0.29	0.00	0.00
25.00	0.00	2	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

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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)

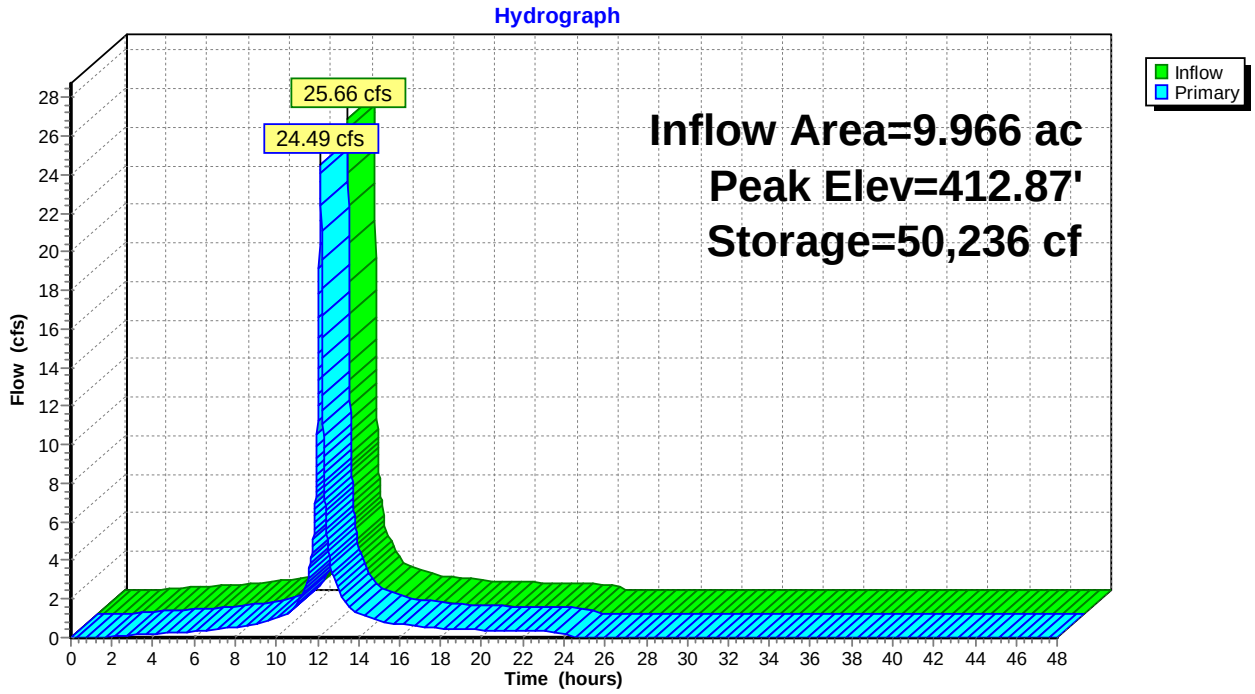
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,884 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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)

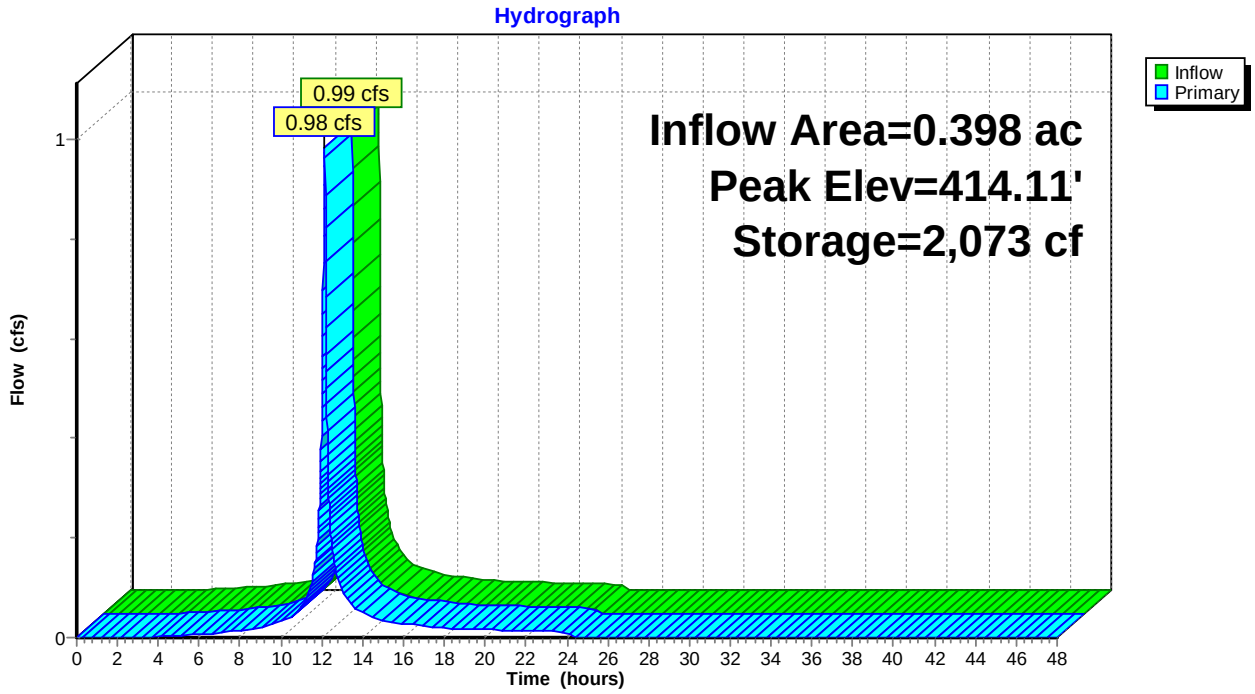
Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	3,024 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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)

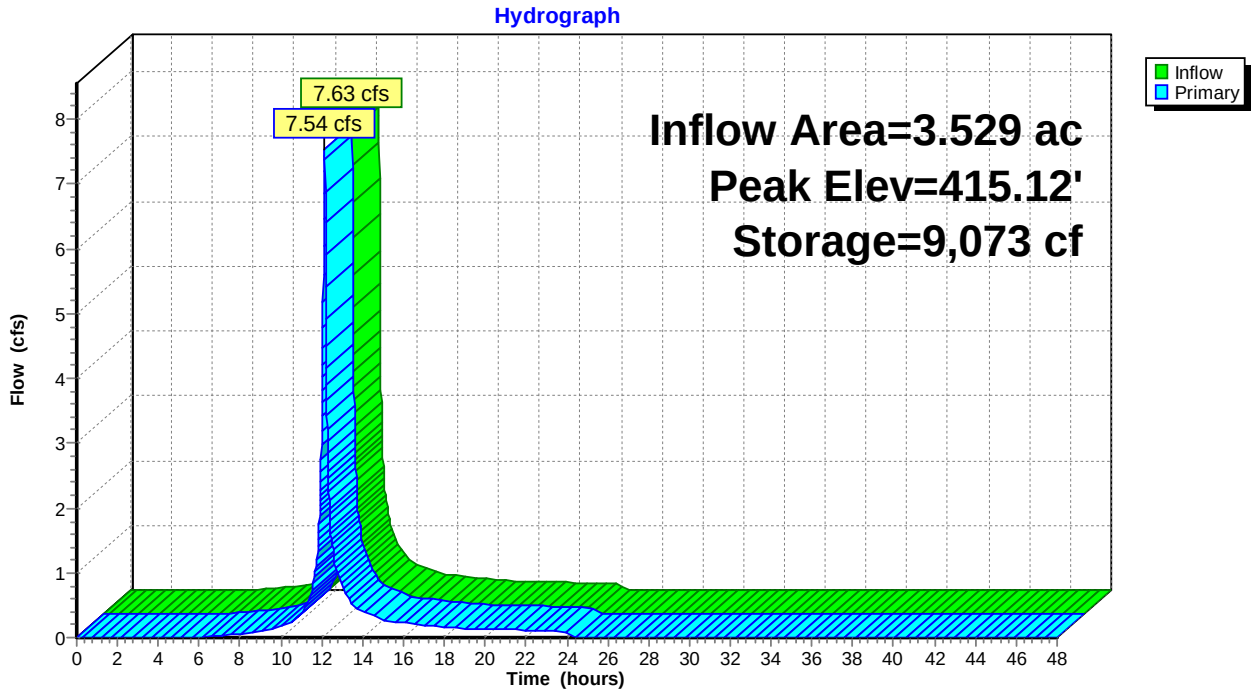
Volume	Invert	Avail.Storage	Storage Description
#1	411.00'	11,023 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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Summary for Pond 63P: Det Pond 1K

Inflow Area = 17.176 ac, 66.33% Impervious, Inflow Depth > 0.01" for 1-Year event
Inflow = 0.03 cfs @ 24.20 hrs, Volume= 0.011 af
Outflow = 0.01 cfs @ 29.75 hrs, Volume= 0.010 af, Atten= 72%, Lag= 333.2 min
Primary = 0.01 cfs @ 29.75 hrs, Volume= 0.010 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= 407.55' @ 29.75 hrs Surf.Area= 4,455 sf Storage= 239 cf

Plug-Flow detention time= 444.9 min calculated for 0.010 af (88% of inflow)
Center-of-Mass det. time= 372.3 min (2,044.3 - 1,672.0)

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

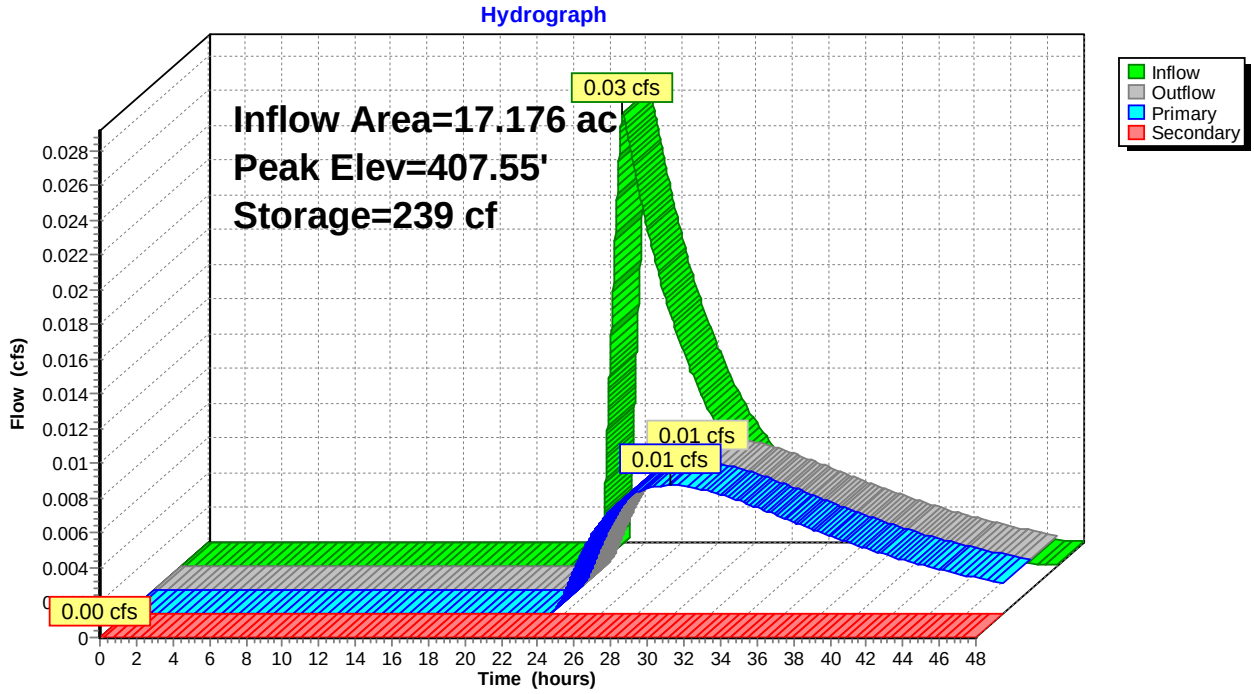
Device	Routing	Invert	Outlet Devices
#1	Primary	407.50'	**24.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.50' / 406.00' S= 0.0037 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	407.50'	**3.0" Vert. Orifice/Grate** 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=0.01 cfs @ 29.75 hrs HW=407.55' (Free Discharge)
└**1=Culvert** (Passes 0.01 cfs of 0.01 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.01 cfs @ 0.79 fps)
├**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)

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Pond 63P: Det Pond 1K



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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	**0.02**	40	407.51	0.00	0.00	0.00
25.00	**0.02**	119	407.53	0.00	0.00	0.00
26.00	0.02	173	407.54	0.01	0.01	0.00
27.00	0.01	208	407.55	0.01	0.01	0.00
28.00	0.01	228	407.55	0.01	0.01	0.00
29.00	0.01	**238**	**407.55**	**0.01**	**0.01**	0.00
30.00	0.01	**240**	**407.55**	**0.01**	**0.01**	0.00
31.00	0.01	236	407.55	0.01	0.01	0.00
32.00	0.00	228	407.55	0.01	0.01	0.00
33.00	0.00	217	407.55	0.01	0.01	0.00
34.00	0.00	205	407.55	0.01	0.01	0.00
35.00	0.00	192	407.54	0.01	0.01	0.00
36.00	0.00	179	407.54	0.01	0.01	0.00
37.00	0.00	165	407.54	0.01	0.01	0.00
38.00	0.00	152	407.53	0.00	0.00	0.00
39.00	0.00	140	407.53	0.00	0.00	0.00
40.00	0.00	128	407.53	0.00	0.00	0.00
41.00	0.00	116	407.53	0.00	0.00	0.00
42.00	0.00	106	407.52	0.00	0.00	0.00
43.00	0.00	96	407.52	0.00	0.00	0.00
44.00	0.00	87	407.52	0.00	0.00	0.00
45.00	0.00	79	407.52	0.00	0.00	0.00
46.00	0.00	71	407.52	0.00	0.00	0.00
47.00	0.00	64	407.51	0.00	0.00	0.00
48.00	0.00	58	407.51	0.00	0.00	0.00

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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= 4,680 sf Storage= 4,237 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'	16,639 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

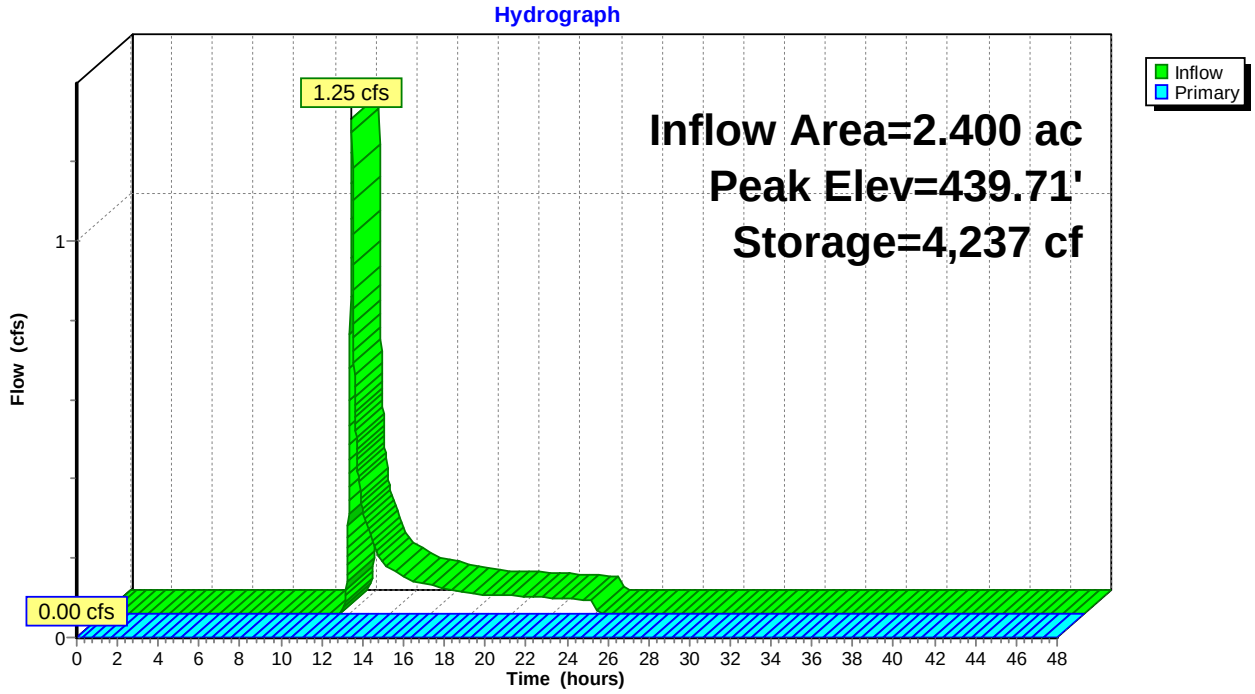
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
436.17	4,171	0.0	0	0
436.83	4,171	40.0	1,101	1,101
439.50	4,171	20.0	2,227	3,328
441.00	7,892	100.0	9,047	12,376
441.50	9,160	100.0	4,263	16,639

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	440.00'	**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=436.17' (Free Discharge)
1=Culvert (Controls 0.00 cfs)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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Pond B4B: Bioretention 4A



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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	439.64	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

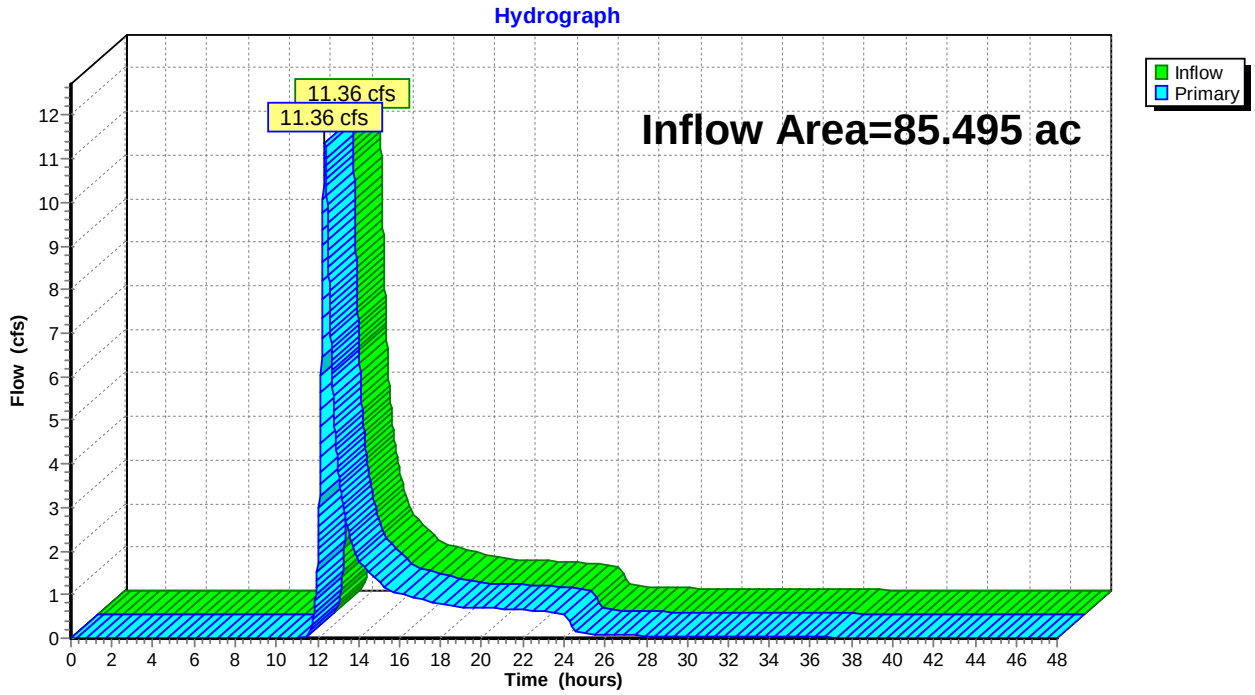
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Summary for Link 29L: DP-1

Inflow Area = 85.495 ac, 51.65% Impervious, Inflow Depth > 0.22" for 1-Year event
Inflow = 11.36 cfs @ 12.36 hrs, Volume= 1.574 af
Primary = 11.36 cfs @ 12.36 hrs, Volume= 1.574 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



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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	0.05	0.00	0.05
0.50	0.00	0.00	0.00	29.50	0.05	0.00	0.05
1.00	0.00	0.00	0.00	30.00	0.05	0.00	0.05
1.50	0.00	0.00	0.00	30.50	0.04	0.00	0.04
2.00	0.00	0.00	0.00	31.00	0.04	0.00	0.04
2.50	0.00	0.00	0.00	31.50	0.04	0.00	0.04
3.00	0.00	0.00	0.00	32.00	0.04	0.00	0.04
3.50	0.00	0.00	0.00	32.50	0.03	0.00	0.03
4.00	0.00	0.00	0.00	33.00	0.03	0.00	0.03
4.50	0.00	0.00	0.00	33.50	0.03	0.00	0.03
5.00	0.00	0.00	0.00	34.00	0.03	0.00	0.03
5.50	0.00	0.00	0.00	34.50	0.03	0.00	0.03
6.00	0.00	0.00	0.00	35.00	0.02	0.00	0.02
6.50	0.00	0.00	0.00	35.50	0.02	0.00	0.02
7.00	0.00	0.00	0.00	36.00	0.02	0.00	0.02
7.50	0.00	0.00	0.00	36.50	0.02	0.00	0.02
8.00	0.00	0.00	0.00	37.00	0.02	0.00	0.02
8.50	0.00	0.00	0.00	37.50	0.02	0.00	0.02
9.00	0.00	0.00	0.00	38.00	0.02	0.00	0.02
9.50	0.00	0.00	0.00	38.50	0.02	0.00	0.02
10.00	0.00	0.00	0.00	39.00	0.02	0.00	0.02
10.50	0.00	0.00	0.00	39.50	0.01	0.00	0.01
11.00	0.00	0.00	0.00	40.00	0.01	0.00	0.01
11.50	0.03	0.00	0.03	40.50	0.01	0.00	0.01
12.00	**1.56**	0.00	**1.56**	41.00	0.01	0.00	0.01
12.50	**9.55**	0.00	**9.55**	41.50	0.01	0.00	0.01
13.00	3.94	0.00	3.94	42.00	0.01	0.00	0.01
13.50	2.48	0.00	2.48	42.50	0.01	0.00	0.01
14.00	1.78	0.00	1.78	43.00	0.01	0.00	0.01
14.50	1.52	0.00	1.52	43.50	0.01	0.00	0.01
15.00	1.29	0.00	1.29	44.00	0.01	0.00	0.01
15.50	1.09	0.00	1.09	44.50	0.01	0.00	0.01
16.00	1.02	0.00	1.02	45.00	0.01	0.00	0.01
16.50	0.96	0.00	0.96	45.50	0.01	0.00	0.01
17.00	0.91	0.00	0.91	46.00	0.01	0.00	0.01
17.50	0.85	0.00	0.85	46.50	0.01	0.00	0.01
18.00	0.78	0.00	0.78	47.00	0.01	0.00	0.01
18.50	0.73	0.00	0.73	47.50	0.01	0.00	0.01
19.00	0.72	0.00	0.72	48.00	0.01	0.00	0.01
19.50	0.71	0.00	0.71				
20.00	0.70	0.00	0.70				
20.50	0.69	0.00	0.69				
21.00	0.68	0.00	0.68				
21.50	0.66	0.00	0.66				
22.00	0.65	0.00	0.65				
22.50	0.63	0.00	0.63				
23.00	0.61	0.00	0.61				
23.50	0.60	0.00	0.60				
24.00	0.58	0.00	0.58				
24.50	0.18	0.00	0.18				
25.00	0.10	0.00	0.10				
25.50	0.08	0.00	0.08				
26.00	0.08	0.00	0.08				
26.50	0.07	0.00	0.07				
27.00	0.06	0.00	0.06				
27.50	0.06	0.00	0.06				
28.00	0.06	0.00	0.06				
28.50	0.05	0.00	0.05				

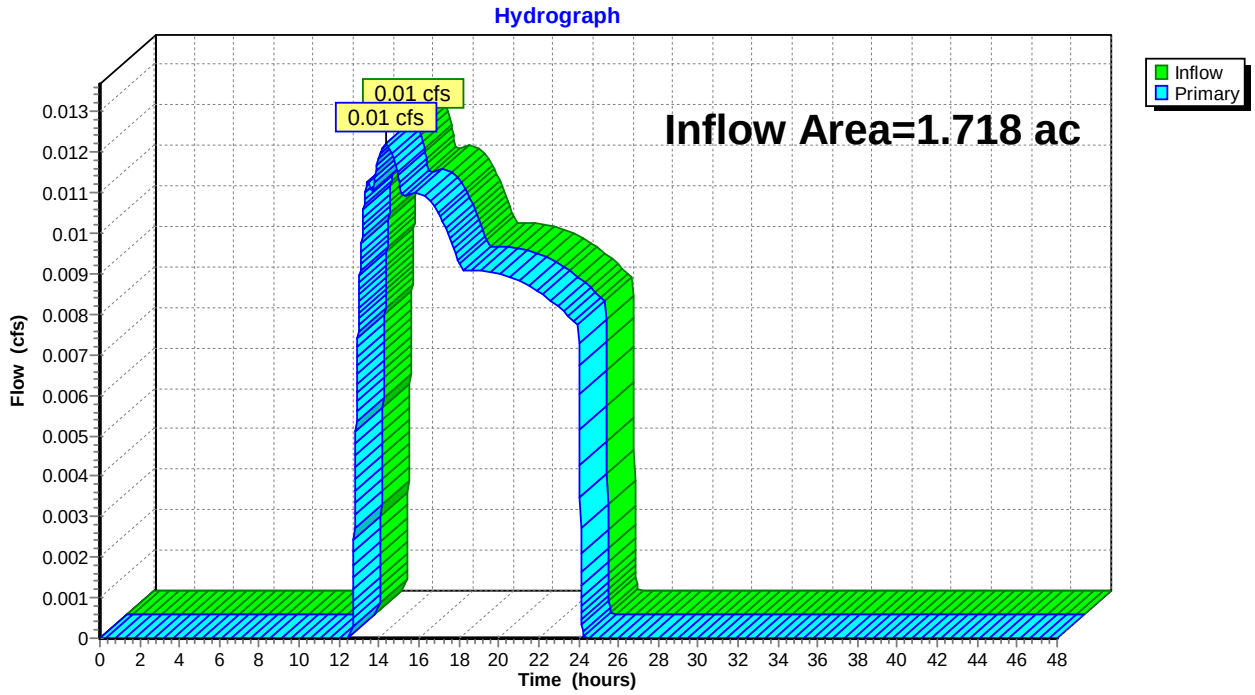
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Summary for Link 30L: DP-2

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



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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				

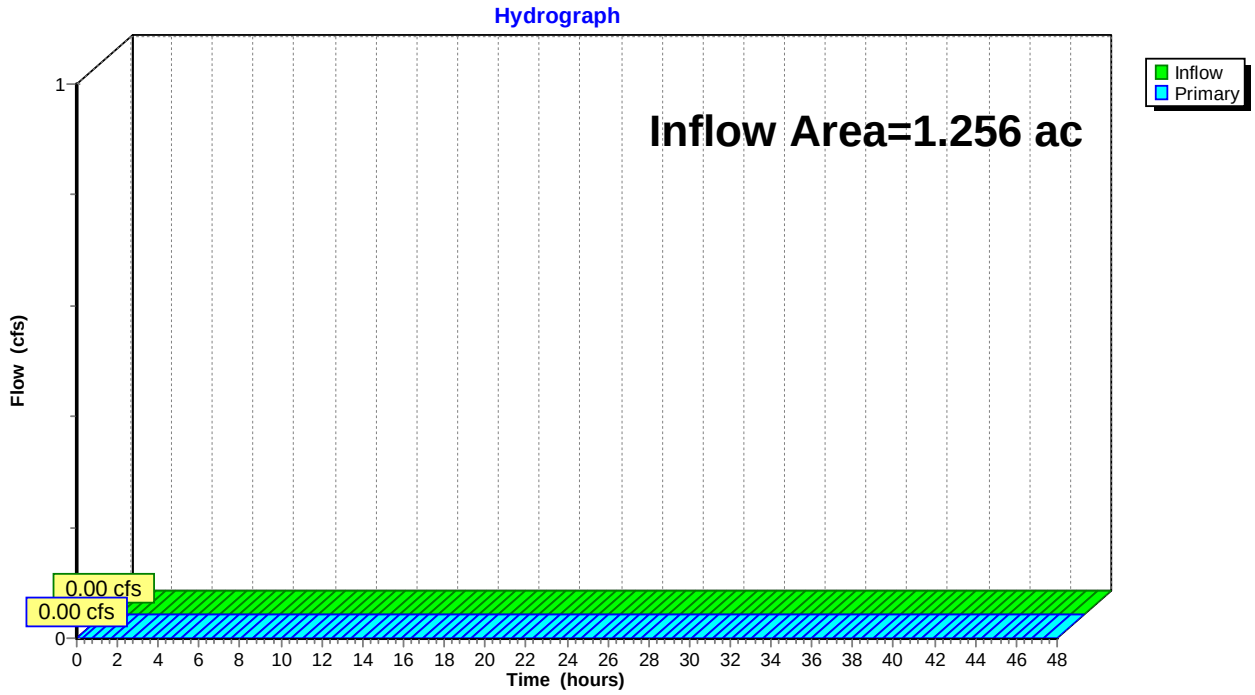
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Summary for Link 31L: DP-3

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



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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				

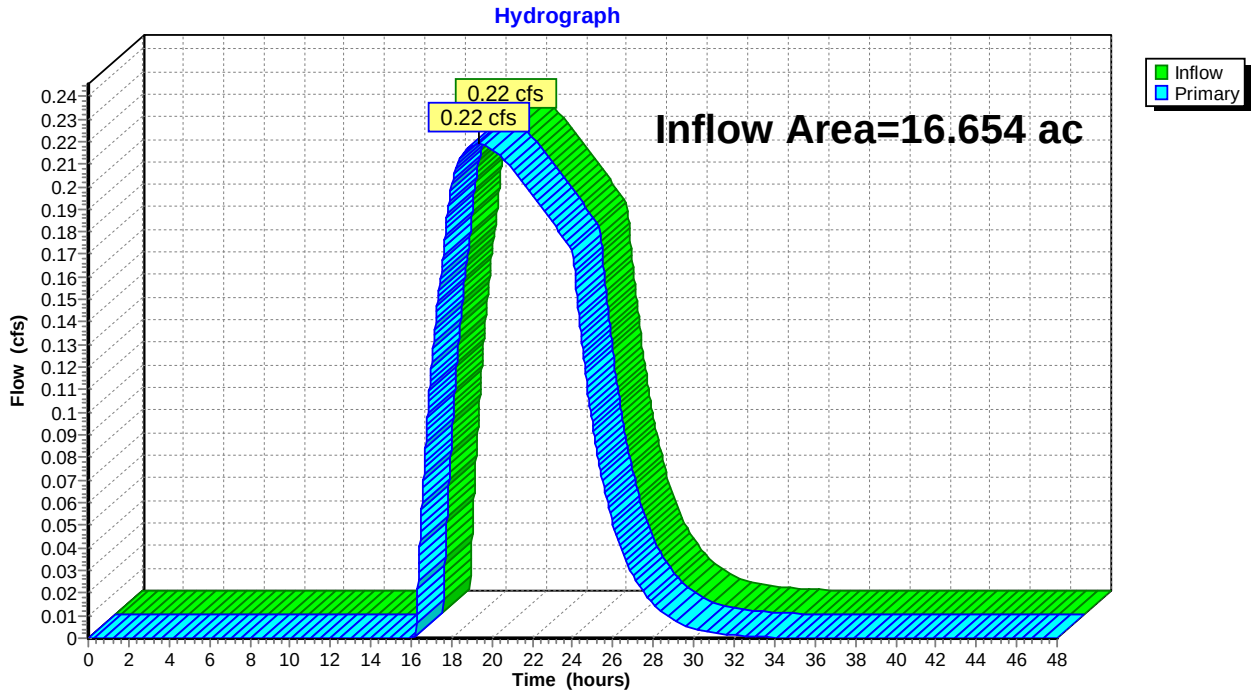
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Summary for Link 32L: DP-4

Inflow Area = 16.654 ac, 29.61% Impervious, Inflow Depth = 0.10" for 1-Year event
Inflow = 0.22 cfs @ 19.33 hrs, Volume= 0.141 af
Primary = 0.22 cfs @ 19.33 hrs, Volume= 0.141 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



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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	0.00	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	0.05	0.00	0.05	45.50	0.00	0.00	0.00
17.00	0.12	0.00	0.12	46.00	0.00	0.00	0.00
17.50	0.16	0.00	0.16	46.50	0.00	0.00	0.00
18.00	0.20	0.00	0.20	47.00	0.00	0.00	0.00
18.50	0.21	0.00	0.21	47.50	0.00	0.00	0.00
19.00	**0.22**	0.00	**0.22**	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	0.21	0.00	0.21				
21.50	0.20	0.00	0.20				
22.00	0.20	0.00	0.20				
22.50	0.19	0.00	0.19				
23.00	0.18	0.00	0.18				
23.50	0.18	0.00	0.18				
24.00	0.17	0.00	0.17				
24.50	0.13	0.00	0.13				
25.00	0.09	0.00	0.09				
25.50	0.07	0.00	0.07				
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	0.01	0.00	0.01				
28.50	0.01	0.00	0.01				

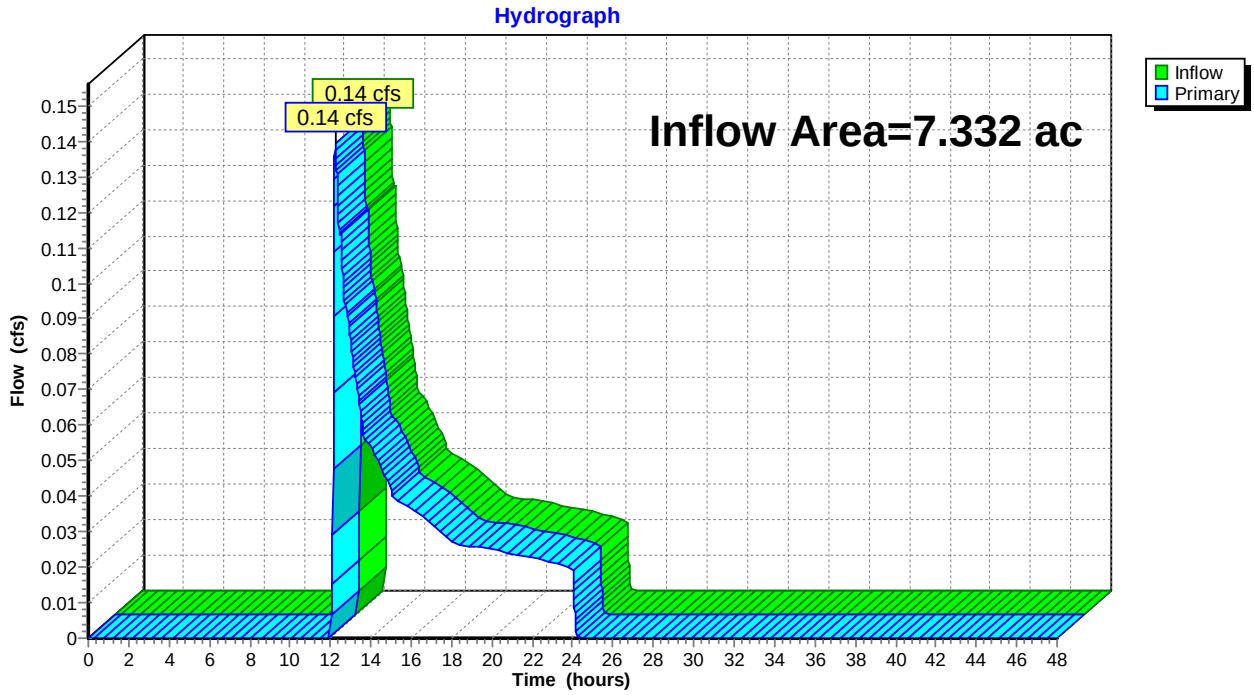
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Summary for Link PDP5: PDP5

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



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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				

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Summary for Subcatchment 6S: PDA-1J

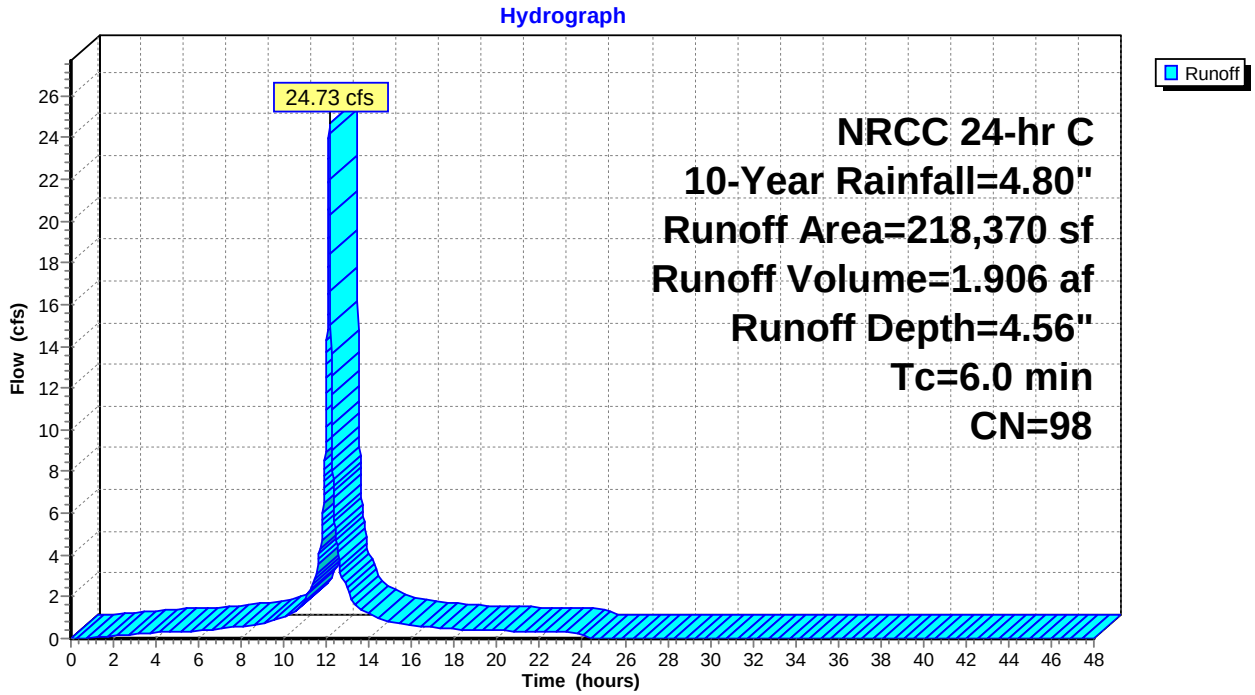
Runoff = 24.73 cfs @ 12.13 hrs, Volume= 1.906 af, Depth= 4.56"
Routed to Pond 37P : FB 1i+J

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

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

Subcatchment 6S: PDA-1J



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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	0.03	30.00	4.80	4.56	0.00
1.50	0.09	0.01	0.09	30.50	4.80	4.56	0.00
2.00	0.12	0.02	0.14	31.00	4.80	4.56	0.00
2.50	0.15	0.04	0.18	31.50	4.80	4.56	0.00
3.00	0.18	0.06	0.22	32.00	4.80	4.56	0.00
3.50	0.22	0.08	0.25	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	0.30	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	0.37	35.00	4.80	4.56	0.00
6.50	0.46	0.28	0.42	35.50	4.80	4.56	0.00
7.00	0.51	0.32	0.48	36.00	4.80	4.56	0.00
7.50	0.56	0.38	0.53	36.50	4.80	4.56	0.00
8.00	0.62	0.43	0.59	37.00	4.80	4.56	0.00
8.50	0.69	0.49	0.64	37.50	4.80	4.56	0.00
9.00	0.76	0.56	0.70	38.00	4.80	4.56	0.00
9.50	0.85	0.64	0.87	38.50	4.80	4.56	0.00
10.00	0.95	0.74	1.06	39.00	4.80	4.56	0.00
10.50	1.07	0.86	1.25	39.50	4.80	4.56	0.00
11.00	1.24	1.02	1.88	40.00	4.80	4.56	0.00
11.50	1.50	1.28	3.01	40.50	4.80	4.56	0.00
12.00	2.29	2.06	**13.18**	41.00	4.80	4.56	0.00
12.50	3.30	3.06	**4.34**	41.50	4.80	4.56	0.00
13.00	3.56	3.33	2.29	42.00	4.80	4.56	0.00
13.50	3.73	3.50	1.48	42.50	4.80	4.56	0.00
14.00	3.85	3.62	1.16	43.00	4.80	4.56	0.00
14.50	3.95	3.72	0.98	43.50	4.80	4.56	0.00
15.00	4.04	3.80	0.79	44.00	4.80	4.56	0.00
15.50	4.11	3.88	0.70	44.50	4.80	4.56	0.00
16.00	4.18	3.94	0.65	45.00	4.80	4.56	0.00
16.50	4.24	4.00	0.60	45.50	4.80	4.56	0.00
17.00	4.29	4.06	0.54	46.00	4.80	4.56	0.00
17.50	4.34	4.11	0.49	46.50	4.80	4.56	0.00
18.00	4.39	4.15	0.44	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	0.34				
22.00	4.68	4.45	0.32				
22.50	4.71	4.48	0.31				
23.00	4.74	4.51	0.30				
23.50	4.77	4.54	0.28				
24.00	**4.80**	**4.56**	0.27				
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				

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Summary for Subcatchment 26S: PDA-1D

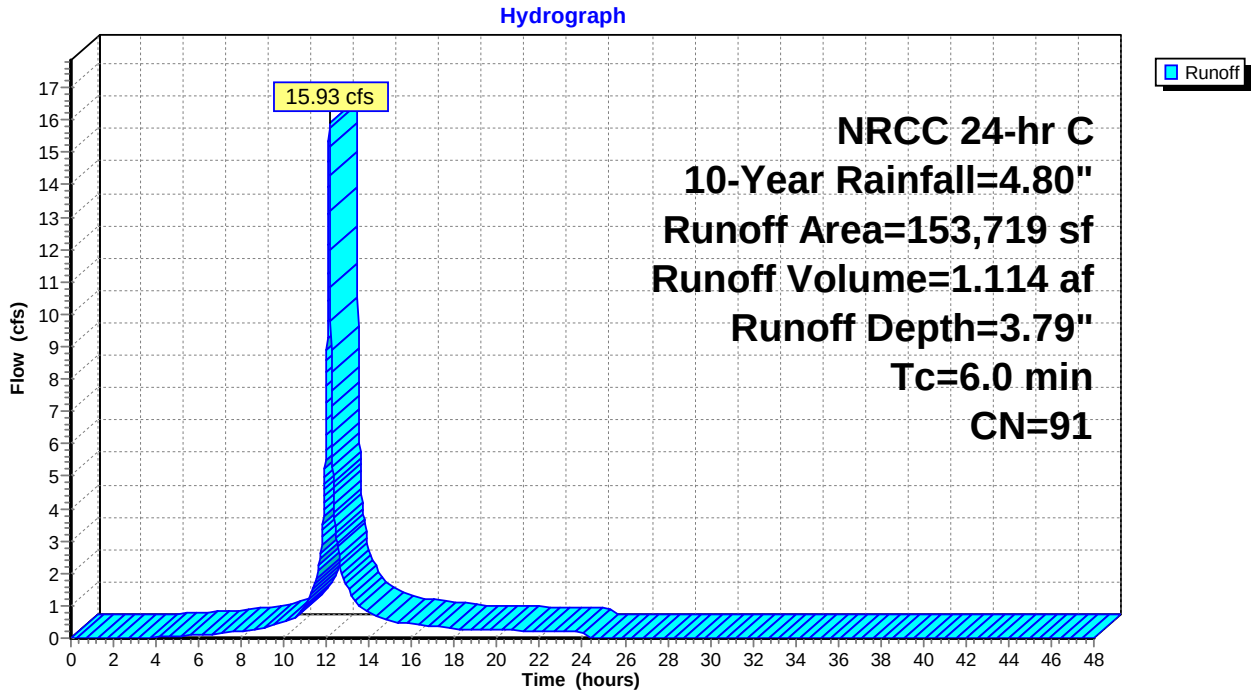
Runoff = 15.93 cfs @ 12.13 hrs, Volume= 1.114 af, Depth= 3.79"
Routed to Pond 60P : FB 1D

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



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Hydrograph for Subcatchment 26S: PDA-1D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.01
4.00	0.25	0.00	0.02
4.50	0.29	0.01	0.04
5.00	0.33	0.02	0.06
5.50	0.37	0.03	0.08
6.00	0.41	0.04	0.09
6.50	0.46	0.05	0.12
7.00	0.51	0.07	0.15
7.50	0.56	0.10	0.19
8.00	0.62	0.13	0.22
8.50	0.69	0.16	0.26
9.00	0.76	0.20	0.30
9.50	0.85	0.26	0.40
10.00	0.95	0.32	0.52
10.50	1.07	0.41	0.64
11.00	1.24	0.53	1.02
11.50	1.50	0.74	1.73
12.00	2.29	1.42	**8.21**
12.50	3.30	2.35	**2.88**
13.00	3.56	2.60	1.53
13.50	3.73	2.76	0.99
14.00	3.85	2.88	0.78
14.50	3.95	2.97	0.66
15.00	4.04	3.05	0.53
15.50	4.11	3.12	0.48
16.00	4.18	3.19	0.44
16.50	4.24	3.24	0.40
17.00	4.29	3.30	0.37
17.50	4.34	3.35	0.33
18.00	4.39	3.39	0.30
18.50	4.43	3.43	0.28
19.00	4.47	3.47	0.27
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
29.00	4.80	3.79	0.00
29.50	4.80	3.79	0.00
30.00	4.80	3.79	0.00
30.50	4.80	3.79	0.00
31.00	4.80	3.79	0.00
31.50	4.80	3.79	0.00
32.00	4.80	3.79	0.00
32.50	4.80	3.79	0.00
33.00	4.80	3.79	0.00
33.50	4.80	3.79	0.00
34.00	4.80	3.79	0.00
34.50	4.80	3.79	0.00
35.00	4.80	3.79	0.00
35.50	4.80	3.79	0.00
36.00	4.80	3.79	0.00
36.50	4.80	3.79	0.00
37.00	4.80	3.79	0.00
37.50	4.80	3.79	0.00
38.00	4.80	3.79	0.00
38.50	4.80	3.79	0.00
39.00	4.80	3.79	0.00
39.50	4.80	3.79	0.00
40.00	4.80	3.79	0.00
40.50	4.80	3.79	0.00
41.00	4.80	3.79	0.00
41.50	4.80	3.79	0.00
42.00	4.80	3.79	0.00
42.50	4.80	3.79	0.00
43.00	4.80	3.79	0.00
43.50	4.80	3.79	0.00
44.00	4.80	3.79	0.00
44.50	4.80	3.79	0.00
45.00	4.80	3.79	0.00
45.50	4.80	3.79	0.00
46.00	4.80	3.79	0.00
46.50	4.80	3.79	0.00
47.00	4.80	3.79	0.00
47.50	4.80	3.79	0.00
48.00	4.80	3.79	0.00

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

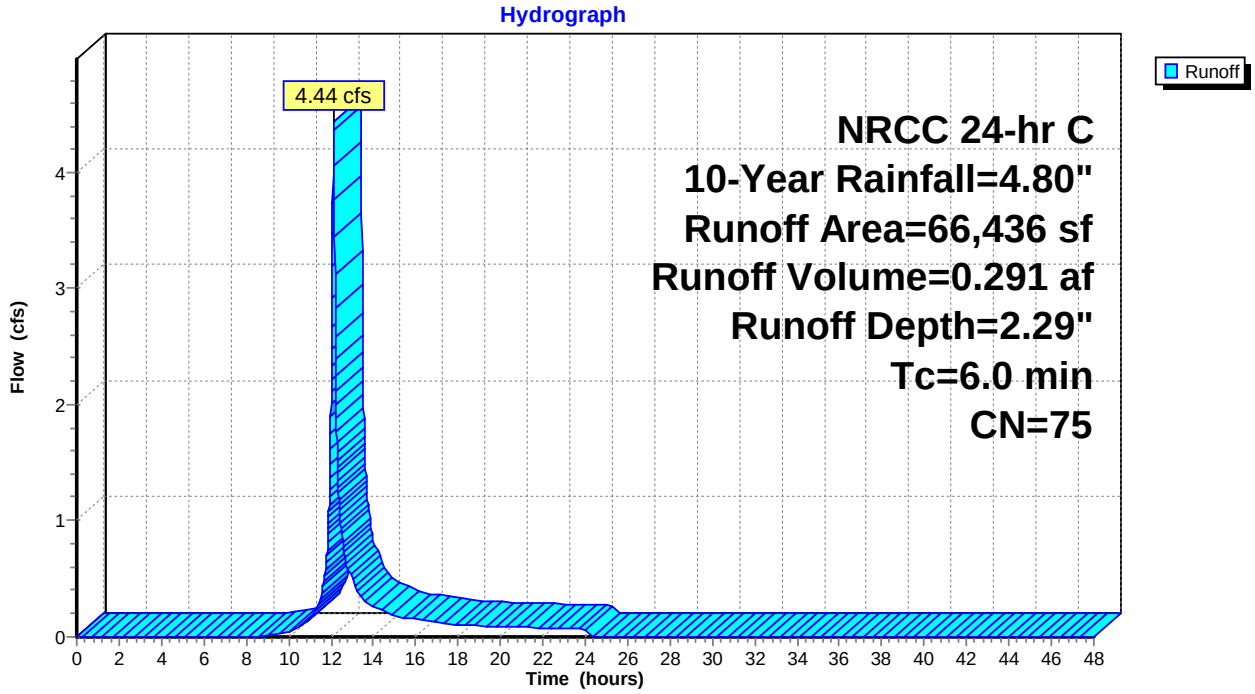
Runoff = 4.44 cfs @ 12.13 hrs, Volume= 0.291 af, Depth= 2.29"
Routed to Pond 29P : Bioretention 4B

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.01
9.50	0.85	0.01	0.03
10.00	0.95	0.02	0.05
10.50	1.07	0.04	0.08
11.00	1.24	0.08	0.15
11.50	1.50	0.17	0.32
12.00	2.29	0.53	**2.01**
12.50	3.30	1.16	**0.90**
13.00	3.56	1.35	0.50
13.50	3.73	1.47	0.33
14.00	3.85	1.56	0.26
14.50	3.95	1.63	0.22
15.00	4.04	1.70	0.18
15.50	4.11	1.75	0.16
16.00	4.18	1.80	0.15
16.50	4.24	1.85	0.14
17.00	4.29	1.89	0.13
17.50	4.34	1.93	0.12
18.00	4.39	1.96	0.10
18.50	4.43	2.00	0.10
19.00	4.47	2.03	0.10
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
29.00	4.80	2.29	0.00
29.50	4.80	2.29	0.00
30.00	4.80	2.29	0.00
30.50	4.80	2.29	0.00
31.00	4.80	2.29	0.00
31.50	4.80	2.29	0.00
32.00	4.80	2.29	0.00
32.50	4.80	2.29	0.00
33.00	4.80	2.29	0.00
33.50	4.80	2.29	0.00
34.00	4.80	2.29	0.00
34.50	4.80	2.29	0.00
35.00	4.80	2.29	0.00
35.50	4.80	2.29	0.00
36.00	4.80	2.29	0.00
36.50	4.80	2.29	0.00
37.00	4.80	2.29	0.00
37.50	4.80	2.29	0.00
38.00	4.80	2.29	0.00
38.50	4.80	2.29	0.00
39.00	4.80	2.29	0.00
39.50	4.80	2.29	0.00
40.00	4.80	2.29	0.00
40.50	4.80	2.29	0.00
41.00	4.80	2.29	0.00
41.50	4.80	2.29	0.00
42.00	4.80	2.29	0.00
42.50	4.80	2.29	0.00
43.00	4.80	2.29	0.00
43.50	4.80	2.29	0.00
44.00	4.80	2.29	0.00
44.50	4.80	2.29	0.00
45.00	4.80	2.29	0.00
45.50	4.80	2.29	0.00
46.00	4.80	2.29	0.00
46.50	4.80	2.29	0.00
47.00	4.80	2.29	0.00
47.50	4.80	2.29	0.00
48.00	4.80	2.29	0.00

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Summary for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

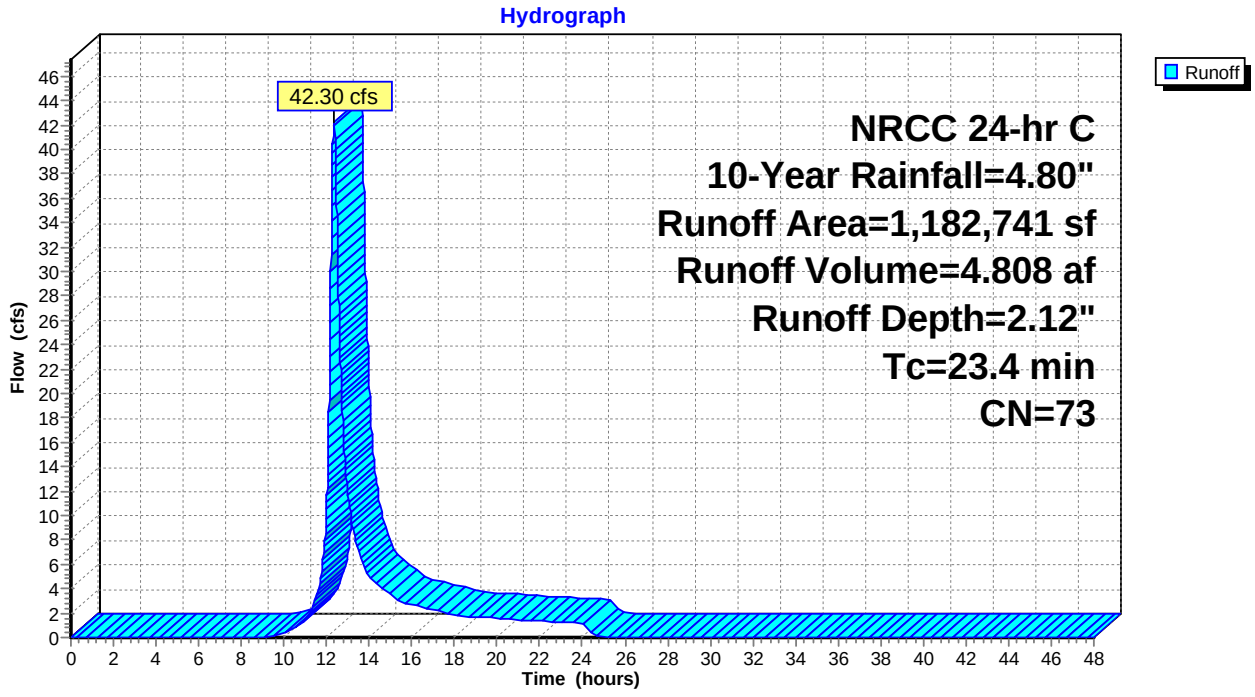
Runoff = 42.30 cfs @ 12.35 hrs, Volume= 4.808 af, Depth= 2.12"
Routed to Link 29L : DP-1

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



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Hydrograph for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.11
10.00	0.95	0.01	0.37
10.50	1.07	0.03	0.76
11.00	1.24	0.06	1.51
11.50	1.50	0.13	3.31
12.00	2.29	0.46	**10.72**
12.50	3.30	1.05	**32.85**
13.00	3.56	1.22	11.75
13.50	3.73	1.34	7.00
14.00	3.85	1.42	4.91
14.50	3.95	1.50	4.14
15.00	4.04	1.56	3.47
15.50	4.11	1.61	2.90
16.00	4.18	1.66	2.68
16.50	4.24	1.70	2.49
17.00	4.29	1.74	2.29
17.50	4.34	1.78	2.09
18.00	4.39	1.81	1.89
18.50	4.43	1.84	1.72
19.00	4.47	1.87	1.66
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
29.00	4.80	2.12	0.00
29.50	4.80	2.12	0.00
30.00	4.80	2.12	0.00
30.50	4.80	2.12	0.00
31.00	4.80	2.12	0.00
31.50	4.80	2.12	0.00
32.00	4.80	2.12	0.00
32.50	4.80	2.12	0.00
33.00	4.80	2.12	0.00
33.50	4.80	2.12	0.00
34.00	4.80	2.12	0.00
34.50	4.80	2.12	0.00
35.00	4.80	2.12	0.00
35.50	4.80	2.12	0.00
36.00	4.80	2.12	0.00
36.50	4.80	2.12	0.00
37.00	4.80	2.12	0.00
37.50	4.80	2.12	0.00
38.00	4.80	2.12	0.00
38.50	4.80	2.12	0.00
39.00	4.80	2.12	0.00
39.50	4.80	2.12	0.00
40.00	4.80	2.12	0.00
40.50	4.80	2.12	0.00
41.00	4.80	2.12	0.00
41.50	4.80	2.12	0.00
42.00	4.80	2.12	0.00
42.50	4.80	2.12	0.00
43.00	4.80	2.12	0.00
43.50	4.80	2.12	0.00
44.00	4.80	2.12	0.00
44.50	4.80	2.12	0.00
45.00	4.80	2.12	0.00
45.50	4.80	2.12	0.00
46.00	4.80	2.12	0.00
46.50	4.80	2.12	0.00
47.00	4.80	2.12	0.00
47.50	4.80	2.12	0.00
48.00	4.80	2.12	0.00

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Summary for Subcatchment 30S: PDA-1A

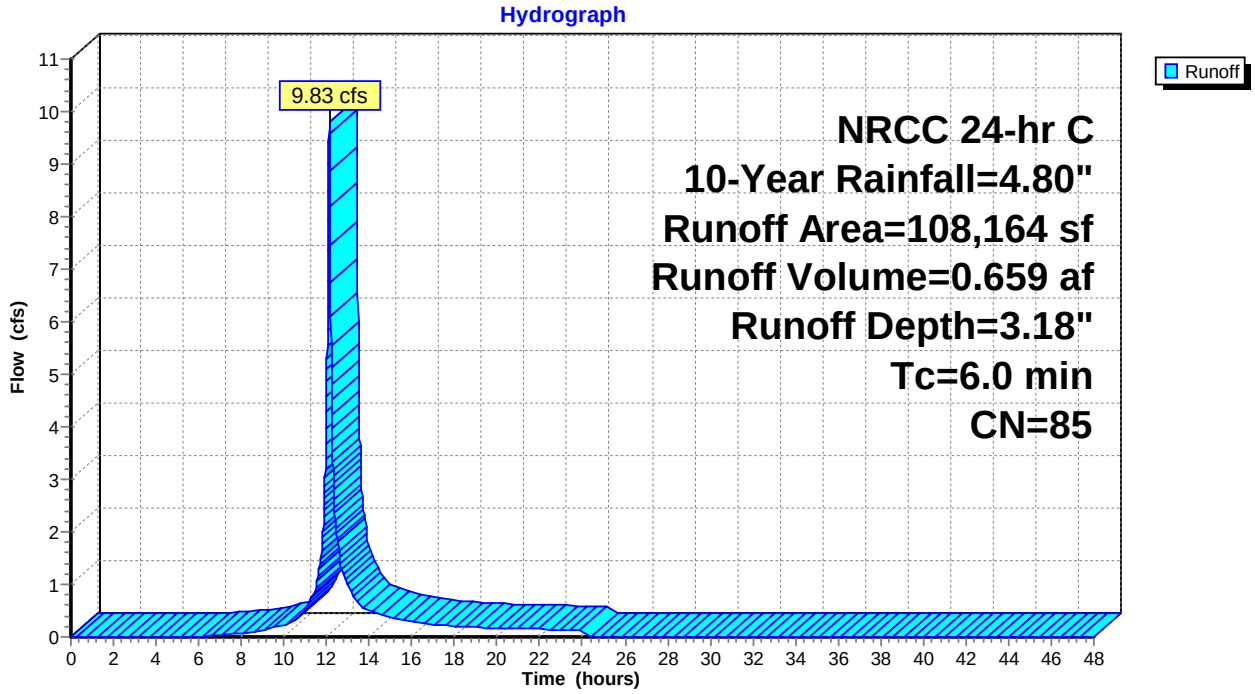
Runoff = 9.83 cfs @ 12.13 hrs, Volume= 0.659 af, Depth= 3.18"
Routed to Pond 3P : Bioretention 1A

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



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Hydrograph for Subcatchment 30S: PDA-1A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.01
6.50	0.46	0.01	0.02
7.00	0.51	0.01	0.04
7.50	0.56	0.02	0.06
8.00	0.62	0.04	0.08
8.50	0.69	0.05	0.10
9.00	0.76	0.08	0.12
9.50	0.85	0.11	0.17
10.00	0.95	0.15	0.23
10.50	1.07	0.21	0.31
11.00	1.24	0.30	0.52
11.50	1.50	0.45	0.94
12.00	2.29	1.01	**4.86**
12.50	3.30	1.84	**1.84**
13.00	3.56	2.07	0.99
13.50	3.73	2.22	0.65
14.00	3.85	2.33	0.51
14.50	3.95	2.42	0.43
15.00	4.04	2.49	0.35
15.50	4.11	2.56	0.31
16.00	4.18	2.62	0.29
16.50	4.24	2.67	0.27
17.00	4.29	2.72	0.24
17.50	4.34	2.77	0.22
18.00	4.39	2.81	0.20
18.50	4.43	2.85	0.19
19.00	4.47	2.88	0.18
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
29.00	4.80	3.18	0.00
29.50	4.80	3.18	0.00
30.00	4.80	3.18	0.00
30.50	4.80	3.18	0.00
31.00	4.80	3.18	0.00
31.50	4.80	3.18	0.00
32.00	4.80	3.18	0.00
32.50	4.80	3.18	0.00
33.00	4.80	3.18	0.00
33.50	4.80	3.18	0.00
34.00	4.80	3.18	0.00
34.50	4.80	3.18	0.00
35.00	4.80	3.18	0.00
35.50	4.80	3.18	0.00
36.00	4.80	3.18	0.00
36.50	4.80	3.18	0.00
37.00	4.80	3.18	0.00
37.50	4.80	3.18	0.00
38.00	4.80	3.18	0.00
38.50	4.80	3.18	0.00
39.00	4.80	3.18	0.00
39.50	4.80	3.18	0.00
40.00	4.80	3.18	0.00
40.50	4.80	3.18	0.00
41.00	4.80	3.18	0.00
41.50	4.80	3.18	0.00
42.00	4.80	3.18	0.00
42.50	4.80	3.18	0.00
43.00	4.80	3.18	0.00
43.50	4.80	3.18	0.00
44.00	4.80	3.18	0.00
44.50	4.80	3.18	0.00
45.00	4.80	3.18	0.00
45.50	4.80	3.18	0.00
46.00	4.80	3.18	0.00
46.50	4.80	3.18	0.00
47.00	4.80	3.18	0.00
47.50	4.80	3.18	0.00
48.00	4.80	3.18	0.00

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Summary for Subcatchment 31S: PDA-1C

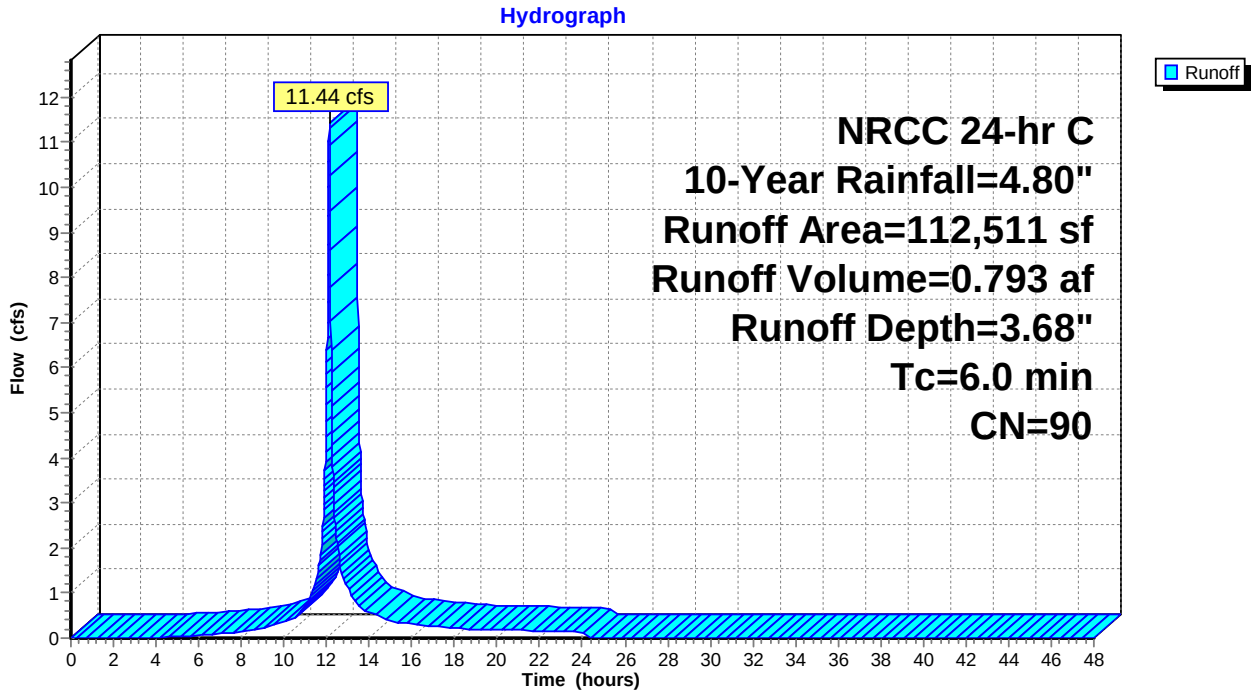
Runoff = 11.44 cfs @ 12.13 hrs, Volume= 0.793 af, Depth= 3.68"
Routed to Pond 32P : FB 1C

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



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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	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				

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Summary for Subcatchment 34S: PDA-1K

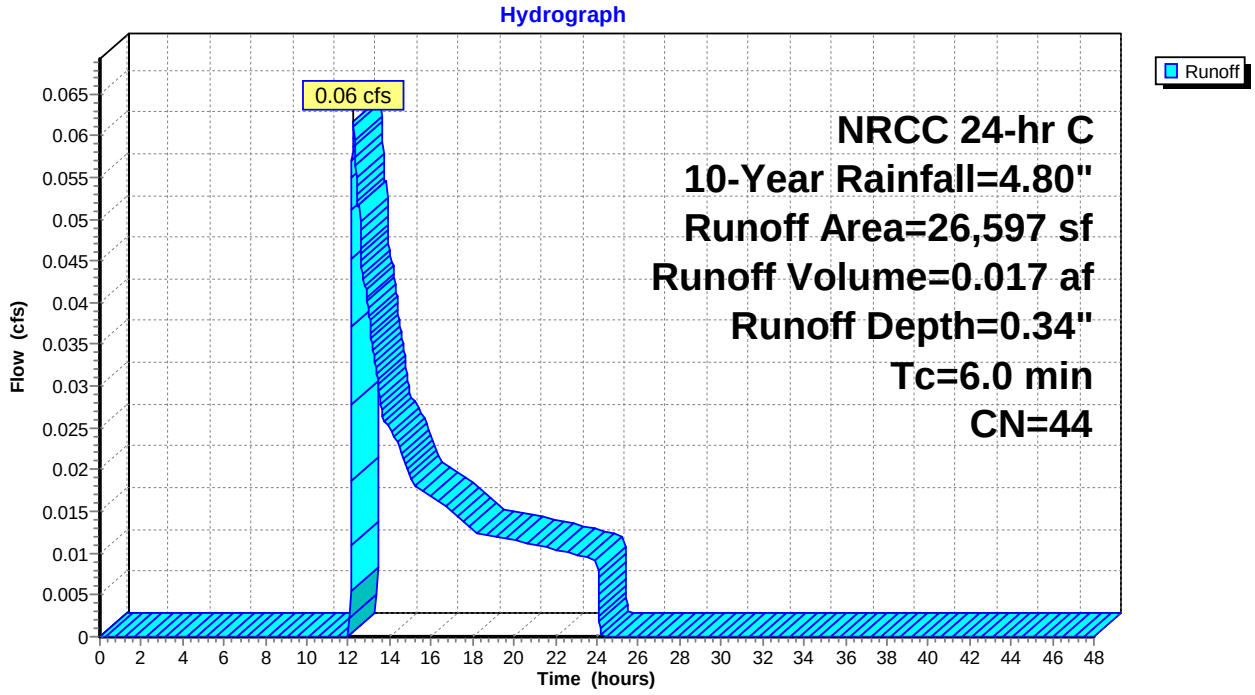
Runoff = 0.06 cfs @ 12.25 hrs, Volume= 0.017 af, Depth= 0.34"
Routed to Pond 63P : Det Pond 1K

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



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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				

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Summary for Subcatchment 35S: PDA-2U

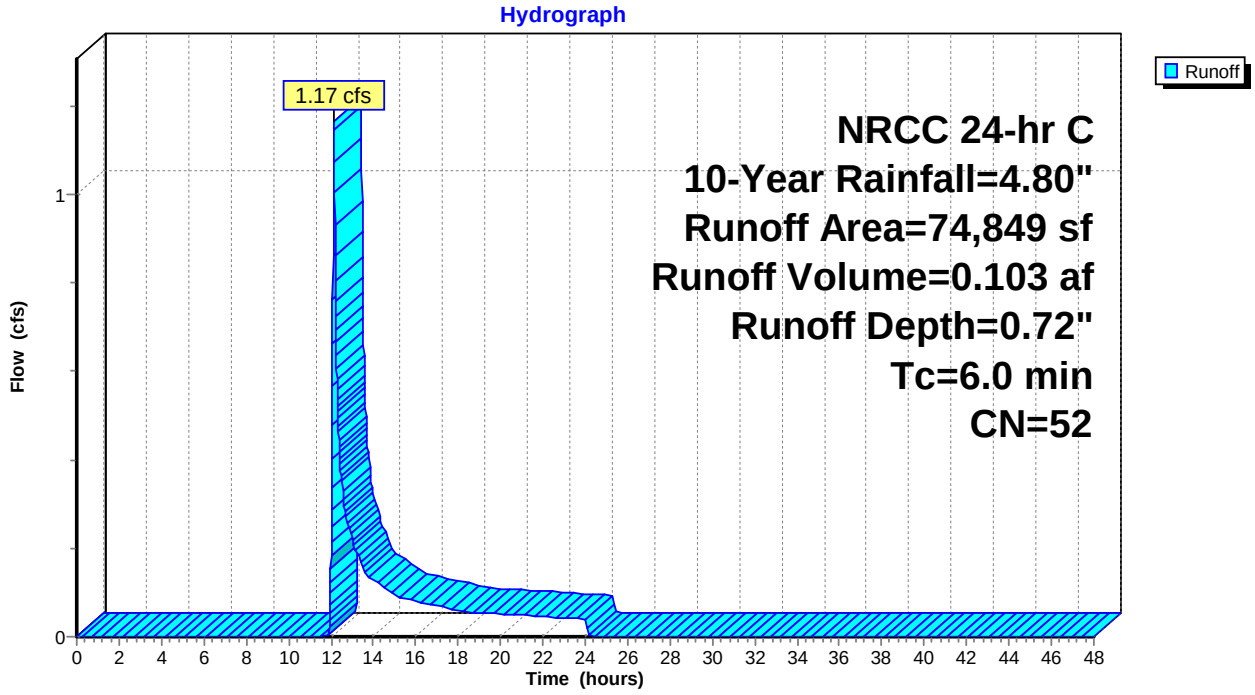
Runoff = 1.17 cfs @ 12.15 hrs, Volume= 0.103 af, Depth= 0.72"
Routed to Link 30L : DP-2

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



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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	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				

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Summary for Subcatchment 36S: PDA-3U

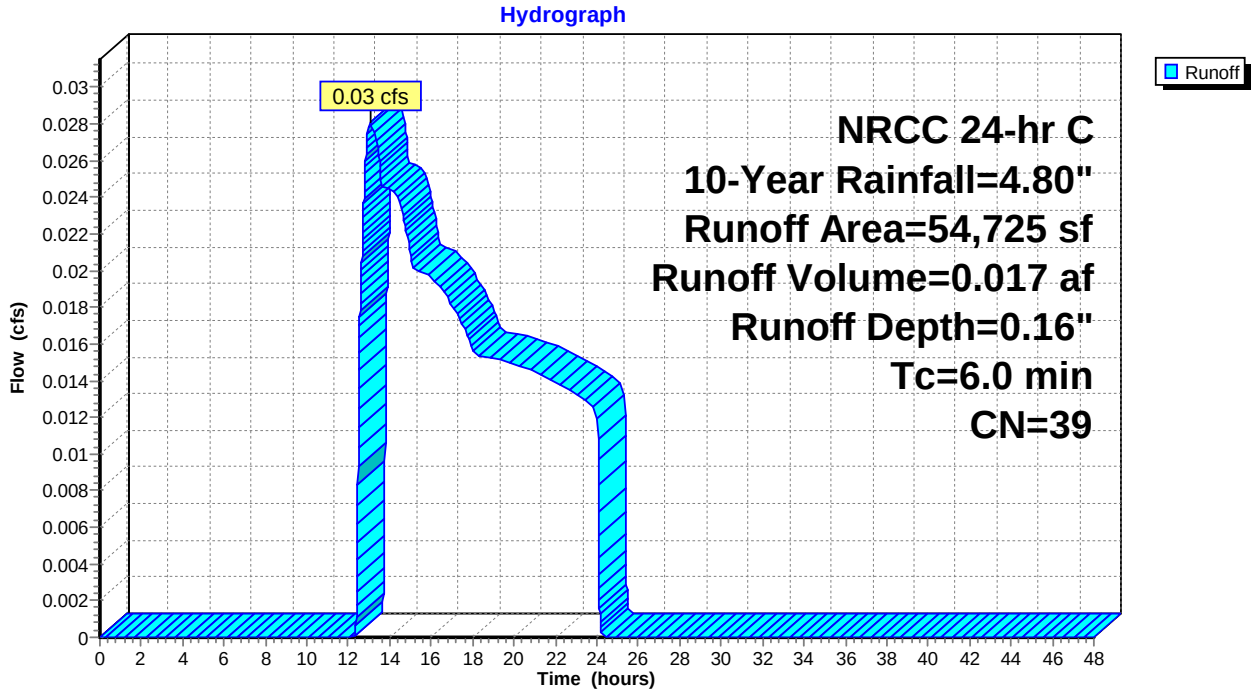
Runoff = 0.03 cfs @ 13.04 hrs, Volume= 0.017 af, Depth= 0.16"
Routed to Link 31L : DP-3

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



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Hydrograph for Subcatchment 36S: PDA-3U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.00
10.00	0.95	0.00	0.00
10.50	1.07	0.00	0.00
11.00	1.24	0.00	0.00
11.50	1.50	0.00	0.00
12.00	2.29	0.00	0.00
12.50	3.30	0.00	0.01
13.00	3.56	0.01	**0.03**
13.50	3.73	0.02	**0.03**
14.00	3.85	0.03	0.02
14.50	3.95	0.04	0.02
15.00	4.04	0.05	0.02
15.50	4.11	0.06	0.02
16.00	4.18	0.07	0.02
16.50	4.24	0.07	0.02
17.00	4.29	0.08	0.02
17.50	4.34	0.09	0.02
18.00	4.39	0.09	0.02
18.50	4.43	0.10	0.02
19.00	4.47	0.11	0.02
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
29.00	4.80	0.16	0.00
29.50	4.80	0.16	0.00
30.00	4.80	0.16	0.00
30.50	4.80	0.16	0.00
31.00	4.80	0.16	0.00
31.50	4.80	0.16	0.00
32.00	4.80	0.16	0.00
32.50	4.80	0.16	0.00
33.00	4.80	0.16	0.00
33.50	4.80	0.16	0.00
34.00	4.80	0.16	0.00
34.50	4.80	0.16	0.00
35.00	4.80	0.16	0.00
35.50	4.80	0.16	0.00
36.00	4.80	0.16	0.00
36.50	4.80	0.16	0.00
37.00	4.80	0.16	0.00
37.50	4.80	0.16	0.00
38.00	4.80	0.16	0.00
38.50	4.80	0.16	0.00
39.00	4.80	0.16	0.00
39.50	4.80	0.16	0.00
40.00	4.80	0.16	0.00
40.50	4.80	0.16	0.00
41.00	4.80	0.16	0.00
41.50	4.80	0.16	0.00
42.00	4.80	0.16	0.00
42.50	4.80	0.16	0.00
43.00	4.80	0.16	0.00
43.50	4.80	0.16	0.00
44.00	4.80	0.16	0.00
44.50	4.80	0.16	0.00
45.00	4.80	0.16	0.00
45.50	4.80	0.16	0.00
46.00	4.80	0.16	0.00
46.50	4.80	0.16	0.00
47.00	4.80	0.16	0.00
47.50	4.80	0.16	0.00
48.00	4.80	0.16	0.00

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Summary for Subcatchment 37S: PDA-1I

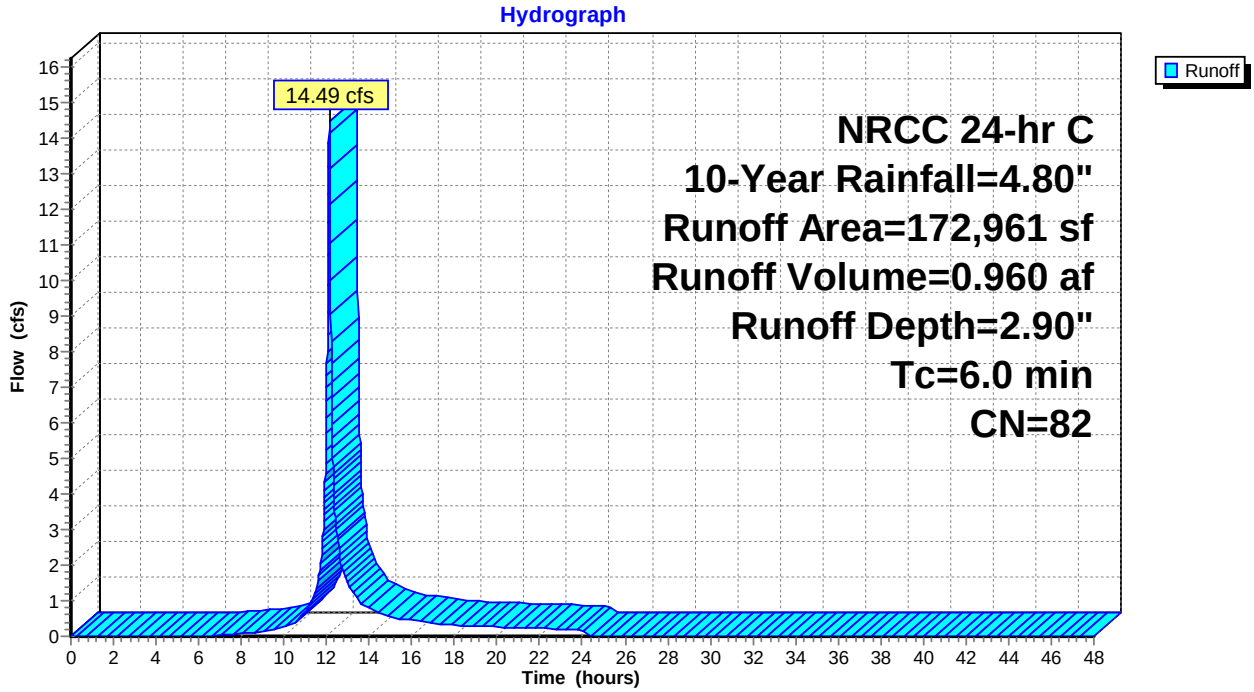
Runoff = 14.49 cfs @ 12.13 hrs, Volume= 0.960 af, Depth= 2.90"
Routed to Pond 37P : FB 1i+J

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



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Hydrograph for Subcatchment 37S: PDA-1I

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.02
7.50	0.56	0.01	0.04
8.00	0.62	0.01	0.07
8.50	0.69	0.03	0.10
9.00	0.76	0.04	0.14
9.50	0.85	0.06	0.20
10.00	0.95	0.10	0.29
10.50	1.07	0.14	0.39
11.00	1.24	0.21	0.68
11.50	1.50	0.35	1.28
12.00	2.29	0.84	**7.00**
12.50	3.30	1.62	**2.78**
13.00	3.56	1.83	1.50
13.50	3.73	1.97	0.99
14.00	3.85	2.08	0.78
14.50	3.95	2.16	0.66
15.00	4.04	2.24	0.54
15.50	4.11	2.30	0.48
16.00	4.18	2.35	0.44
16.50	4.24	2.41	0.41
17.00	4.29	2.46	0.37
17.50	4.34	2.50	0.34
18.00	4.39	2.54	0.30
18.50	4.43	2.57	0.29
19.00	4.47	2.61	0.28
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
29.00	4.80	2.90	0.00
29.50	4.80	2.90	0.00
30.00	4.80	2.90	0.00
30.50	4.80	2.90	0.00
31.00	4.80	2.90	0.00
31.50	4.80	2.90	0.00
32.00	4.80	2.90	0.00
32.50	4.80	2.90	0.00
33.00	4.80	2.90	0.00
33.50	4.80	2.90	0.00
34.00	4.80	2.90	0.00
34.50	4.80	2.90	0.00
35.00	4.80	2.90	0.00
35.50	4.80	2.90	0.00
36.00	4.80	2.90	0.00
36.50	4.80	2.90	0.00
37.00	4.80	2.90	0.00
37.50	4.80	2.90	0.00
38.00	4.80	2.90	0.00
38.50	4.80	2.90	0.00
39.00	4.80	2.90	0.00
39.50	4.80	2.90	0.00
40.00	4.80	2.90	0.00
40.50	4.80	2.90	0.00
41.00	4.80	2.90	0.00
41.50	4.80	2.90	0.00
42.00	4.80	2.90	0.00
42.50	4.80	2.90	0.00
43.00	4.80	2.90	0.00
43.50	4.80	2.90	0.00
44.00	4.80	2.90	0.00
44.50	4.80	2.90	0.00
45.00	4.80	2.90	0.00
45.50	4.80	2.90	0.00
46.00	4.80	2.90	0.00
46.50	4.80	2.90	0.00
47.00	4.80	2.90	0.00
47.50	4.80	2.90	0.00
48.00	4.80	2.90	0.00

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Summary for Subcatchment 38S: PDA-4U

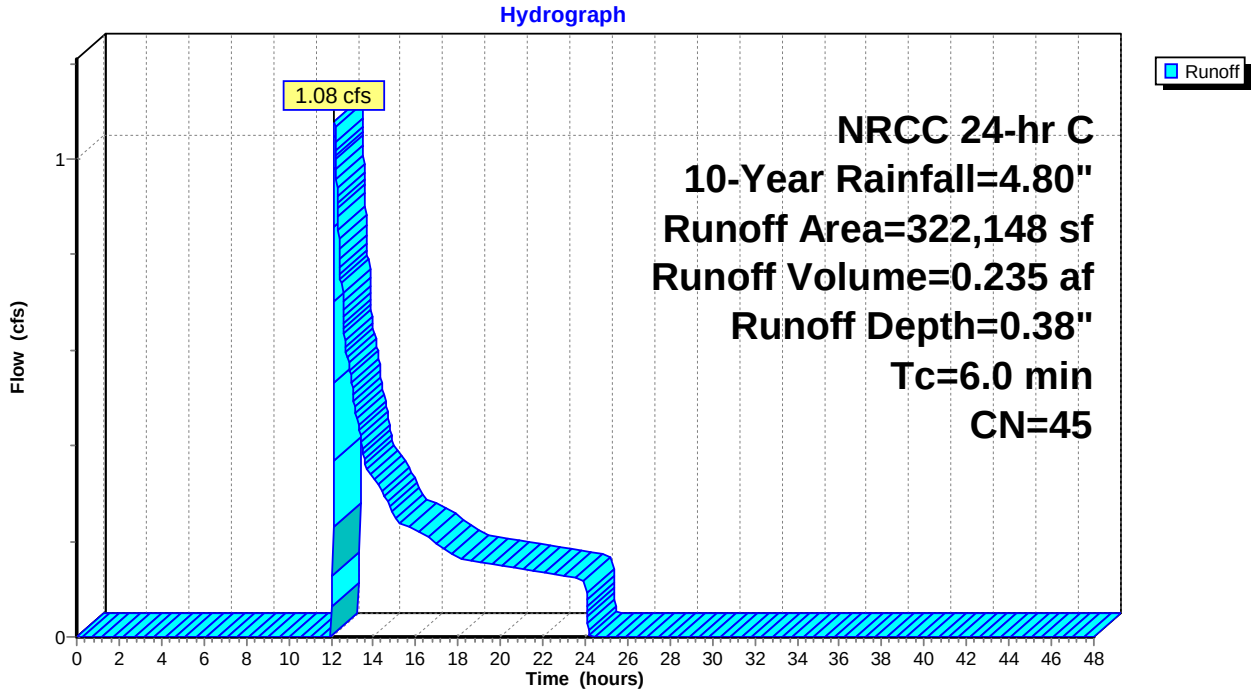
Runoff = 1.08 cfs @ 12.17 hrs, Volume= 0.235 af, Depth= 0.38"
Routed to Link 32L : DP-4

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



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Hydrograph for Subcatchment 38S: PDA-4U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.00
10.00	0.95	0.00	0.00
10.50	1.07	0.00	0.00
11.00	1.24	0.00	0.00
11.50	1.50	0.00	0.00
12.00	2.29	0.00	**0.00**
12.50	3.30	0.06	**0.74**
13.00	3.56	0.09	0.53
13.50	3.73	0.12	0.39
14.00	3.85	0.15	0.33
14.50	3.95	0.17	0.30
15.00	4.04	0.18	0.25
15.50	4.11	0.20	0.23
16.00	4.18	0.21	0.22
16.50	4.24	0.23	0.21
17.00	4.29	0.24	0.20
17.50	4.34	0.26	0.18
18.00	4.39	0.27	0.17
18.50	4.43	0.28	0.16
19.00	4.47	0.29	0.16
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
29.00	4.80	0.38	0.00
29.50	4.80	0.38	0.00
30.00	4.80	0.38	0.00
30.50	4.80	0.38	0.00
31.00	4.80	0.38	0.00
31.50	4.80	0.38	0.00
32.00	4.80	0.38	0.00
32.50	4.80	0.38	0.00
33.00	4.80	0.38	0.00
33.50	4.80	0.38	0.00
34.00	4.80	0.38	0.00
34.50	4.80	0.38	0.00
35.00	4.80	0.38	0.00
35.50	4.80	0.38	0.00
36.00	4.80	0.38	0.00
36.50	4.80	0.38	0.00
37.00	4.80	0.38	0.00
37.50	4.80	0.38	0.00
38.00	4.80	0.38	0.00
38.50	4.80	0.38	0.00
39.00	4.80	0.38	0.00
39.50	4.80	0.38	0.00
40.00	4.80	0.38	0.00
40.50	4.80	0.38	0.00
41.00	4.80	0.38	0.00
41.50	4.80	0.38	0.00
42.00	4.80	0.38	0.00
42.50	4.80	0.38	0.00
43.00	4.80	0.38	0.00
43.50	4.80	0.38	0.00
44.00	4.80	0.38	0.00
44.50	4.80	0.38	0.00
45.00	4.80	0.38	0.00
45.50	4.80	0.38	0.00
46.00	4.80	0.38	0.00
46.50	4.80	0.38	0.00
47.00	4.80	0.38	0.00
47.50	4.80	0.38	0.00
48.00	4.80	0.38	0.00

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Summary for Subcatchment 39S: PDA-5U

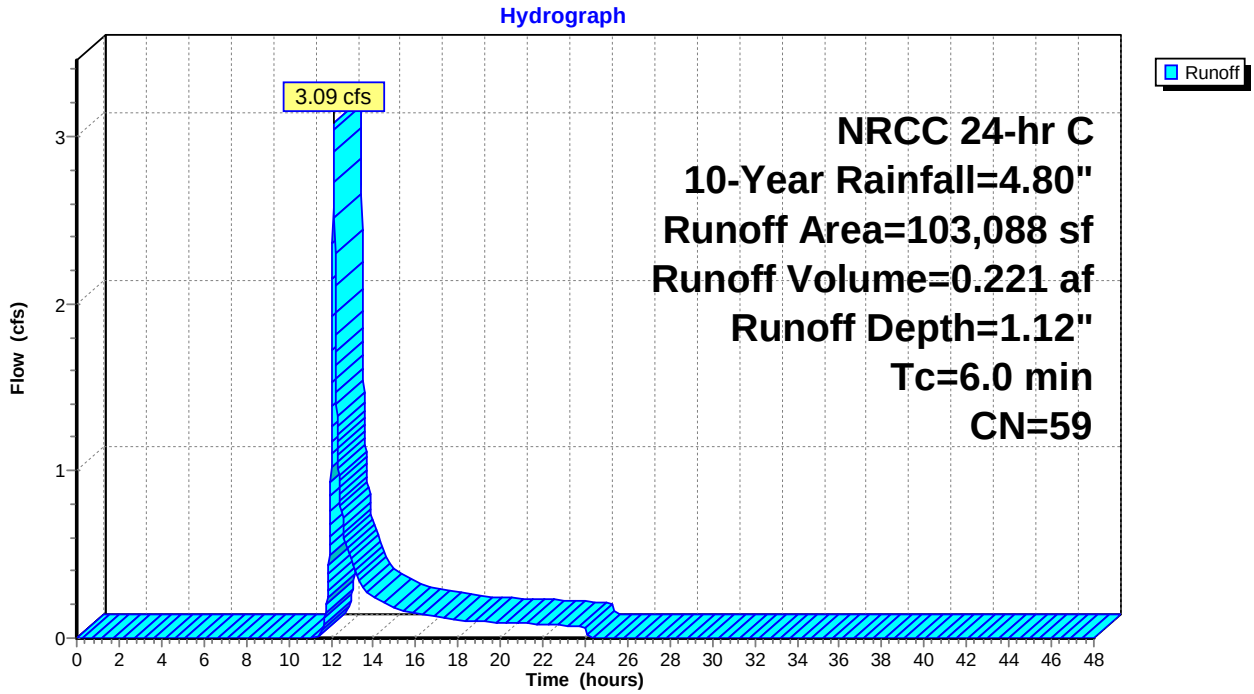
Runoff = 3.09 cfs @ 12.14 hrs, Volume= 0.221 af, Depth= 1.12"
Routed to Link PDP5 : PDP5

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



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Hydrograph for Subcatchment 39S: PDA-5U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.00
10.00	0.95	0.00	0.00
10.50	1.07	0.00	0.00
11.00	1.24	0.00	0.00
11.50	1.50	0.00	0.02
12.00	2.29	0.10	**1.02**
12.50	3.30	0.41	**0.77**
13.00	3.56	0.52	0.45
13.50	3.73	0.59	0.31
14.00	3.85	0.64	0.25
14.50	3.95	0.69	0.21
15.00	4.04	0.73	0.18
15.50	4.11	0.77	0.16
16.00	4.18	0.80	0.15
16.50	4.24	0.83	0.14
17.00	4.29	0.86	0.13
17.50	4.34	0.88	0.12
18.00	4.39	0.90	0.11
18.50	4.43	0.93	0.10
19.00	4.47	0.95	0.10
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
29.00	4.80	1.12	0.00
29.50	4.80	1.12	0.00
30.00	4.80	1.12	0.00
30.50	4.80	1.12	0.00
31.00	4.80	1.12	0.00
31.50	4.80	1.12	0.00
32.00	4.80	1.12	0.00
32.50	4.80	1.12	0.00
33.00	4.80	1.12	0.00
33.50	4.80	1.12	0.00
34.00	4.80	1.12	0.00
34.50	4.80	1.12	0.00
35.00	4.80	1.12	0.00
35.50	4.80	1.12	0.00
36.00	4.80	1.12	0.00
36.50	4.80	1.12	0.00
37.00	4.80	1.12	0.00
37.50	4.80	1.12	0.00
38.00	4.80	1.12	0.00
38.50	4.80	1.12	0.00
39.00	4.80	1.12	0.00
39.50	4.80	1.12	0.00
40.00	4.80	1.12	0.00
40.50	4.80	1.12	0.00
41.00	4.80	1.12	0.00
41.50	4.80	1.12	0.00
42.00	4.80	1.12	0.00
42.50	4.80	1.12	0.00
43.00	4.80	1.12	0.00
43.50	4.80	1.12	0.00
44.00	4.80	1.12	0.00
44.50	4.80	1.12	0.00
45.00	4.80	1.12	0.00
45.50	4.80	1.12	0.00
46.00	4.80	1.12	0.00
46.50	4.80	1.12	0.00
47.00	4.80	1.12	0.00
47.50	4.80	1.12	0.00
48.00	4.80	1.12	0.00

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

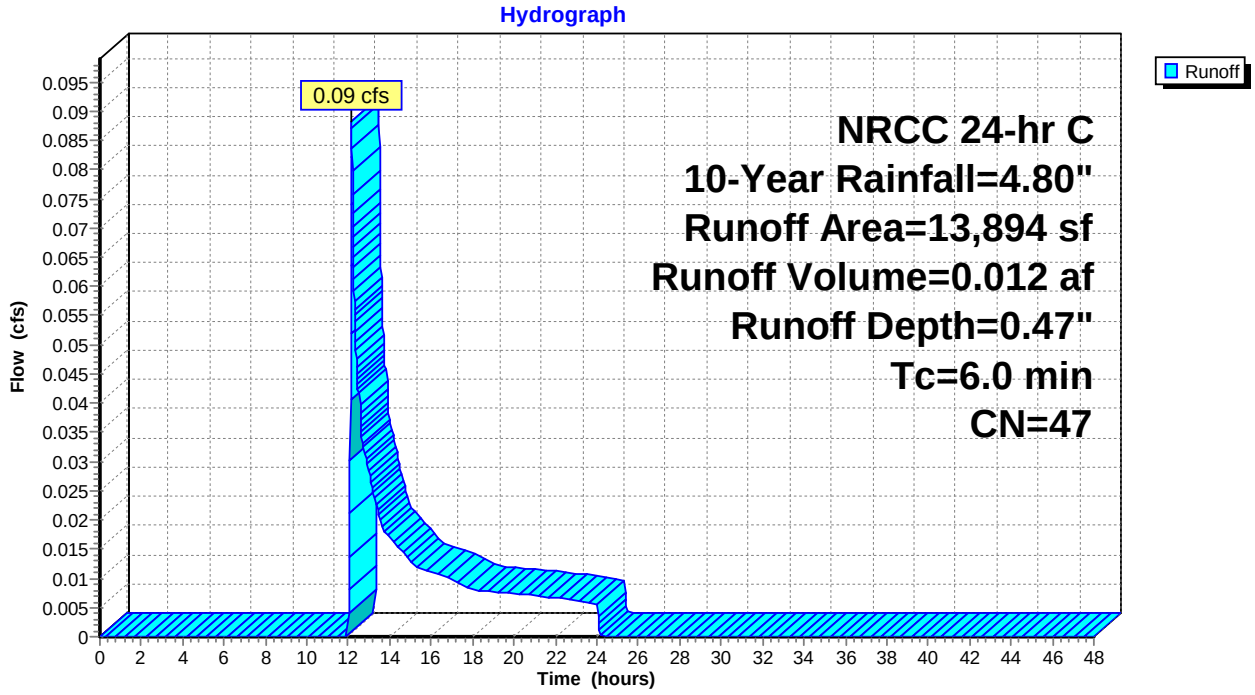
Runoff = 0.09 cfs @ 12.16 hrs, Volume= 0.012 af, Depth= 0.47"
Routed to Pond 37P : FB 1i+J

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.00
10.00	0.95	0.00	0.00
10.50	1.07	0.00	0.00
11.00	1.24	0.00	0.00
11.50	1.50	0.00	0.00
12.00	2.29	0.00	**0.00**
12.50	3.30	0.09	**0.04**
13.00	3.56	0.14	0.03
13.50	3.73	0.17	0.02
14.00	3.85	0.20	0.02
14.50	3.95	0.22	0.02
15.00	4.04	0.24	0.01
15.50	4.11	0.26	0.01
16.00	4.18	0.28	0.01
16.50	4.24	0.30	0.01
17.00	4.29	0.31	0.01
17.50	4.34	0.33	0.01
18.00	4.39	0.34	0.01
18.50	4.43	0.35	0.01
19.00	4.47	0.36	0.01
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
29.00	4.80	0.47	0.00
29.50	4.80	0.47	0.00
30.00	4.80	0.47	0.00
30.50	4.80	0.47	0.00
31.00	4.80	0.47	0.00
31.50	4.80	0.47	0.00
32.00	4.80	0.47	0.00
32.50	4.80	0.47	0.00
33.00	4.80	0.47	0.00
33.50	4.80	0.47	0.00
34.00	4.80	0.47	0.00
34.50	4.80	0.47	0.00
35.00	4.80	0.47	0.00
35.50	4.80	0.47	0.00
36.00	4.80	0.47	0.00
36.50	4.80	0.47	0.00
37.00	4.80	0.47	0.00
37.50	4.80	0.47	0.00
38.00	4.80	0.47	0.00
38.50	4.80	0.47	0.00
39.00	4.80	0.47	0.00
39.50	4.80	0.47	0.00
40.00	4.80	0.47	0.00
40.50	4.80	0.47	0.00
41.00	4.80	0.47	0.00
41.50	4.80	0.47	0.00
42.00	4.80	0.47	0.00
42.50	4.80	0.47	0.00
43.00	4.80	0.47	0.00
43.50	4.80	0.47	0.00
44.00	4.80	0.47	0.00
44.50	4.80	0.47	0.00
45.00	4.80	0.47	0.00
45.50	4.80	0.47	0.00
46.00	4.80	0.47	0.00
46.50	4.80	0.47	0.00
47.00	4.80	0.47	0.00
47.50	4.80	0.47	0.00
48.00	4.80	0.47	0.00

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Summary for Subcatchment 41S: PDA-5A

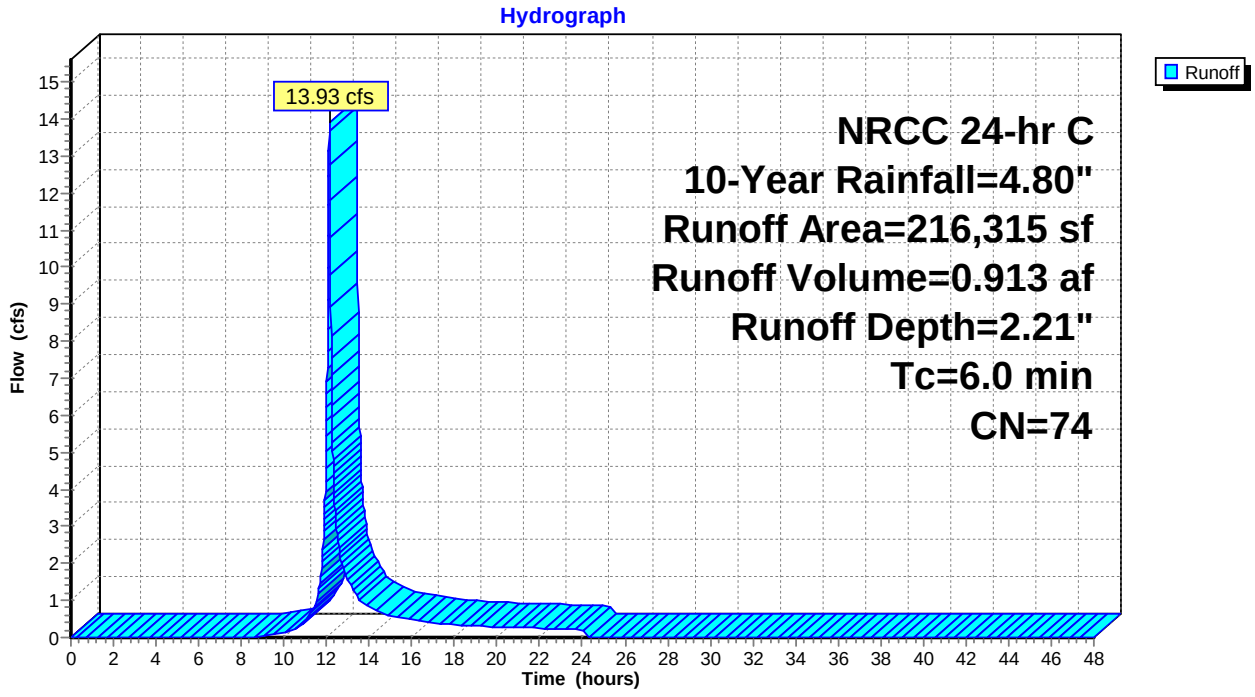
Runoff = 13.93 cfs @ 12.13 hrs, Volume= 0.913 af, Depth= 2.21"
Routed to Pond 39P : FB 5A

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



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Hydrograph for Subcatchment 41S: PDA-5A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.02
9.50	0.85	0.01	0.06
10.00	0.95	0.02	0.13
10.50	1.07	0.03	0.22
11.00	1.24	0.07	0.44
11.50	1.50	0.15	0.97
12.00	2.29	0.49	**6.24**
12.50	3.30	1.10	**2.85**
13.00	3.56	1.28	1.58
13.50	3.73	1.40	1.04
14.00	3.85	1.49	0.83
14.50	3.95	1.56	0.71
15.00	4.04	1.62	0.58
15.50	4.11	1.68	0.52
16.00	4.18	1.73	0.48
16.50	4.24	1.77	0.44
17.00	4.29	1.81	0.41
17.50	4.34	1.85	0.37
18.00	4.39	1.89	0.33
18.50	4.43	1.92	0.31
19.00	4.47	1.95	0.30
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
29.00	4.80	2.21	0.00
29.50	4.80	2.21	0.00
30.00	4.80	2.21	0.00
30.50	4.80	2.21	0.00
31.00	4.80	2.21	0.00
31.50	4.80	2.21	0.00
32.00	4.80	2.21	0.00
32.50	4.80	2.21	0.00
33.00	4.80	2.21	0.00
33.50	4.80	2.21	0.00
34.00	4.80	2.21	0.00
34.50	4.80	2.21	0.00
35.00	4.80	2.21	0.00
35.50	4.80	2.21	0.00
36.00	4.80	2.21	0.00
36.50	4.80	2.21	0.00
37.00	4.80	2.21	0.00
37.50	4.80	2.21	0.00
38.00	4.80	2.21	0.00
38.50	4.80	2.21	0.00
39.00	4.80	2.21	0.00
39.50	4.80	2.21	0.00
40.00	4.80	2.21	0.00
40.50	4.80	2.21	0.00
41.00	4.80	2.21	0.00
41.50	4.80	2.21	0.00
42.00	4.80	2.21	0.00
42.50	4.80	2.21	0.00
43.00	4.80	2.21	0.00
43.50	4.80	2.21	0.00
44.00	4.80	2.21	0.00
44.50	4.80	2.21	0.00
45.00	4.80	2.21	0.00
45.50	4.80	2.21	0.00
46.00	4.80	2.21	0.00
46.50	4.80	2.21	0.00
47.00	4.80	2.21	0.00
47.50	4.80	2.21	0.00
48.00	4.80	2.21	0.00

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

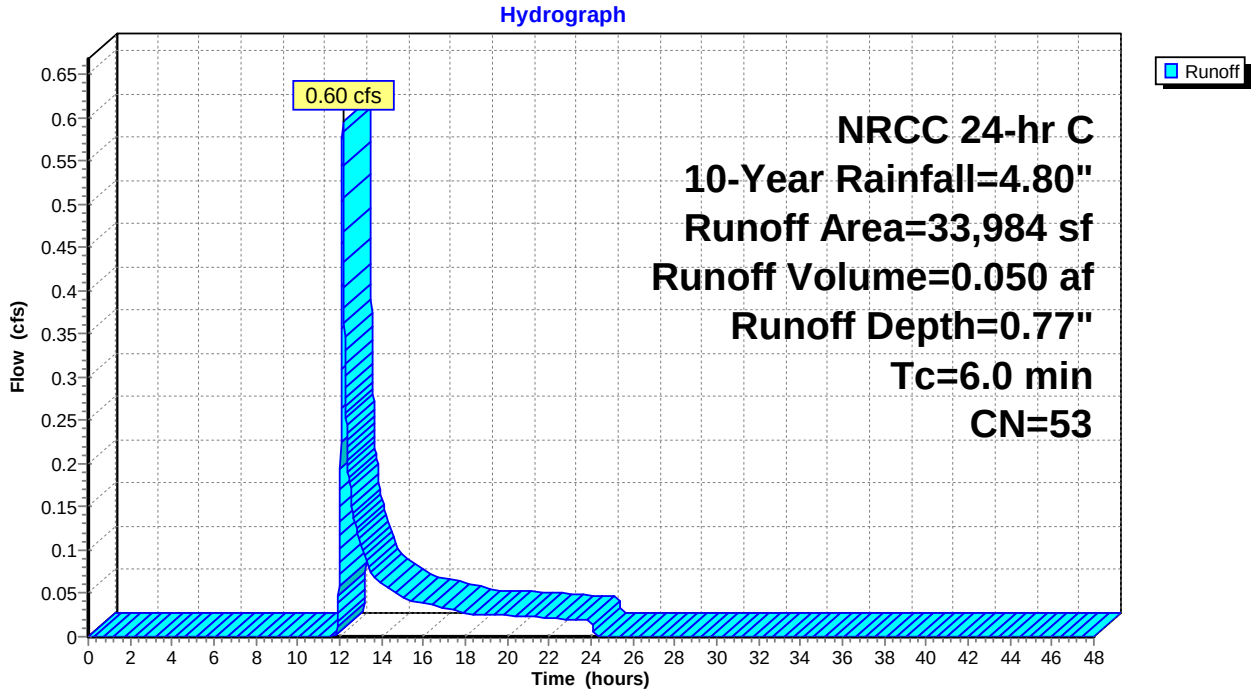
Runoff = 0.60 cfs @ 12.14 hrs, Volume= 0.050 af, Depth= 0.77"
Routed to Pond 53P : Bioretention J basin

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.00
10.00	0.95	0.00	0.00
10.50	1.07	0.00	0.00
11.00	1.24	0.00	0.00
11.50	1.50	0.00	0.00
12.00	2.29	0.03	**0.12**
12.50	3.30	0.22	**0.18**
13.00	3.56	0.30	0.11
13.50	3.73	0.35	0.08
14.00	3.85	0.39	0.06
14.50	3.95	0.43	0.05
15.00	4.04	0.46	0.04
15.50	4.11	0.49	0.04
16.00	4.18	0.51	0.04
16.50	4.24	0.54	0.04
17.00	4.29	0.56	0.03
17.50	4.34	0.58	0.03
18.00	4.39	0.60	0.03
18.50	4.43	0.61	0.03
19.00	4.47	0.63	0.03
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
29.00	4.80	0.77	0.00
29.50	4.80	0.77	0.00
30.00	4.80	0.77	0.00
30.50	4.80	0.77	0.00
31.00	4.80	0.77	0.00
31.50	4.80	0.77	0.00
32.00	4.80	0.77	0.00
32.50	4.80	0.77	0.00
33.00	4.80	0.77	0.00
33.50	4.80	0.77	0.00
34.00	4.80	0.77	0.00
34.50	4.80	0.77	0.00
35.00	4.80	0.77	0.00
35.50	4.80	0.77	0.00
36.00	4.80	0.77	0.00
36.50	4.80	0.77	0.00
37.00	4.80	0.77	0.00
37.50	4.80	0.77	0.00
38.00	4.80	0.77	0.00
38.50	4.80	0.77	0.00
39.00	4.80	0.77	0.00
39.50	4.80	0.77	0.00
40.00	4.80	0.77	0.00
40.50	4.80	0.77	0.00
41.00	4.80	0.77	0.00
41.50	4.80	0.77	0.00
42.00	4.80	0.77	0.00
42.50	4.80	0.77	0.00
43.00	4.80	0.77	0.00
43.50	4.80	0.77	0.00
44.00	4.80	0.77	0.00
44.50	4.80	0.77	0.00
45.00	4.80	0.77	0.00
45.50	4.80	0.77	0.00
46.00	4.80	0.77	0.00
46.50	4.80	0.77	0.00
47.00	4.80	0.77	0.00
47.50	4.80	0.77	0.00
48.00	4.80	0.77	0.00

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Summary for Subcatchment 43S: PDA-1B

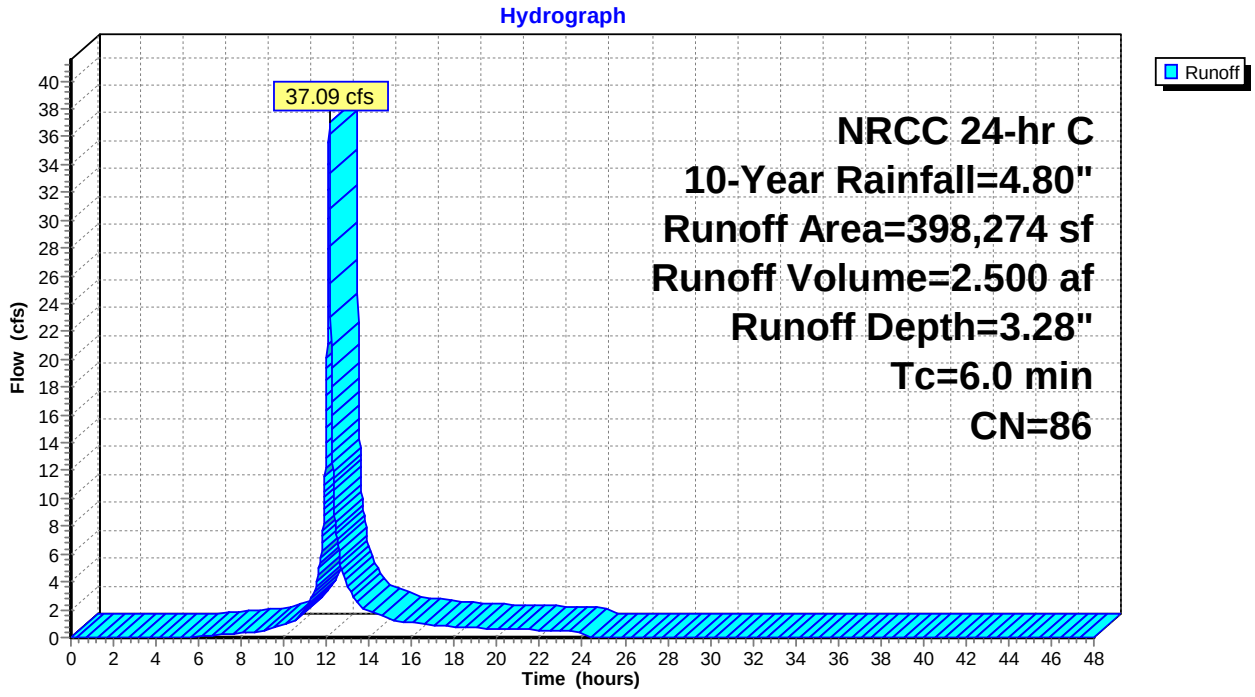
Runoff = 37.09 cfs @ 12.13 hrs, Volume= 2.500 af, Depth= 3.28"
Routed to Pond 44P : FB 1B

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



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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	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				

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Summary for Subcatchment 46S: PDA-1H

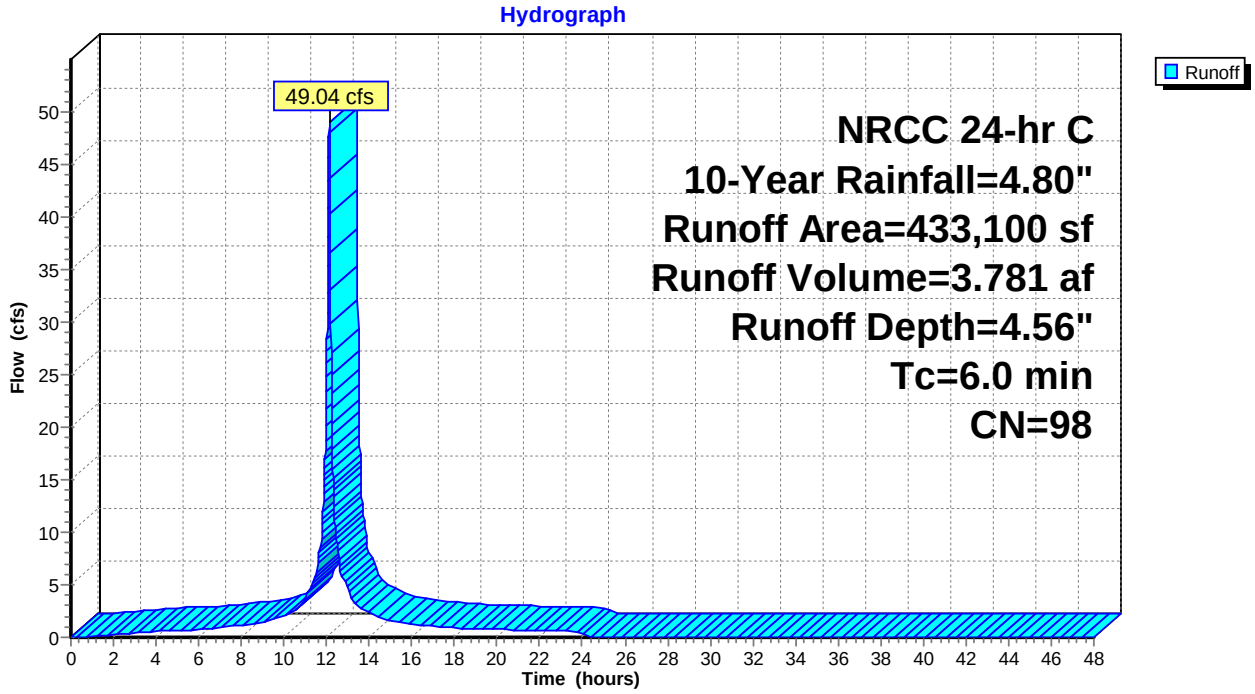
Runoff = 49.04 cfs @ 12.13 hrs, Volume= 3.781 af, Depth= 4.56"
Routed to Pond 51P : FB 1H

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



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Hydrograph for Subcatchment 46S: PDA-1H

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.05
1.50	0.09	0.01	0.18
2.00	0.12	0.02	0.28
2.50	0.15	0.04	0.36
3.00	0.18	0.06	0.44
3.50	0.22	0.08	0.50
4.00	0.25	0.11	0.55
4.50	0.29	0.14	0.60
5.00	0.33	0.17	0.65
5.50	0.37	0.20	0.69
6.00	0.41	0.24	0.73
6.50	0.46	0.28	0.83
7.00	0.51	0.32	0.94
7.50	0.56	0.38	1.05
8.00	0.62	0.43	1.17
8.50	0.69	0.49	1.28
9.00	0.76	0.56	1.39
9.50	0.85	0.64	1.73
10.00	0.95	0.74	2.10
10.50	1.07	0.86	2.47
11.00	1.24	1.02	3.72
11.50	1.50	1.28	5.97
12.00	2.29	2.06	**26.14**
12.50	3.30	3.06	**8.61**
13.00	3.56	3.33	4.54
13.50	3.73	3.50	2.94
14.00	3.85	3.62	2.30
14.50	3.95	3.72	1.94
15.00	4.04	3.80	1.57
15.50	4.11	3.88	1.39
16.00	4.18	3.94	1.29
16.50	4.24	4.00	1.18
17.00	4.29	4.06	1.08
17.50	4.34	4.11	0.97
18.00	4.39	4.15	0.87
18.50	4.43	4.19	0.82
19.00	4.47	4.23	0.79
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
29.00	4.80	4.56	0.00
29.50	4.80	4.56	0.00
30.00	4.80	4.56	0.00
30.50	4.80	4.56	0.00
31.00	4.80	4.56	0.00
31.50	4.80	4.56	0.00
32.00	4.80	4.56	0.00
32.50	4.80	4.56	0.00
33.00	4.80	4.56	0.00
33.50	4.80	4.56	0.00
34.00	4.80	4.56	0.00
34.50	4.80	4.56	0.00
35.00	4.80	4.56	0.00
35.50	4.80	4.56	0.00
36.00	4.80	4.56	0.00
36.50	4.80	4.56	0.00
37.00	4.80	4.56	0.00
37.50	4.80	4.56	0.00
38.00	4.80	4.56	0.00
38.50	4.80	4.56	0.00
39.00	4.80	4.56	0.00
39.50	4.80	4.56	0.00
40.00	4.80	4.56	0.00
40.50	4.80	4.56	0.00
41.00	4.80	4.56	0.00
41.50	4.80	4.56	0.00
42.00	4.80	4.56	0.00
42.50	4.80	4.56	0.00
43.00	4.80	4.56	0.00
43.50	4.80	4.56	0.00
44.00	4.80	4.56	0.00
44.50	4.80	4.56	0.00
45.00	4.80	4.56	0.00
45.50	4.80	4.56	0.00
46.00	4.80	4.56	0.00
46.50	4.80	4.56	0.00
47.00	4.80	4.56	0.00
47.50	4.80	4.56	0.00
48.00	4.80	4.56	0.00

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Summary for Subcatchment 47S: PDA-4A

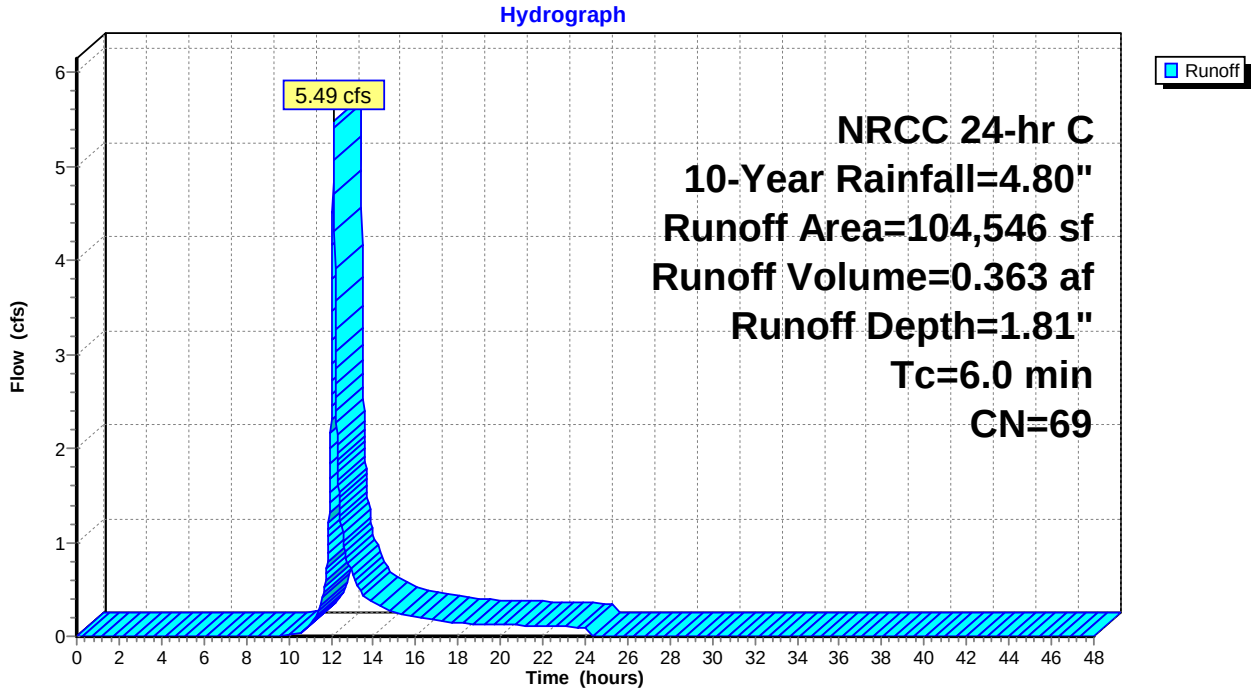
Runoff = 5.49 cfs @ 12.14 hrs, Volume= 0.363 af, Depth= 1.81"
Routed to Pond B4B : Bioretention 4A

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



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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				

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

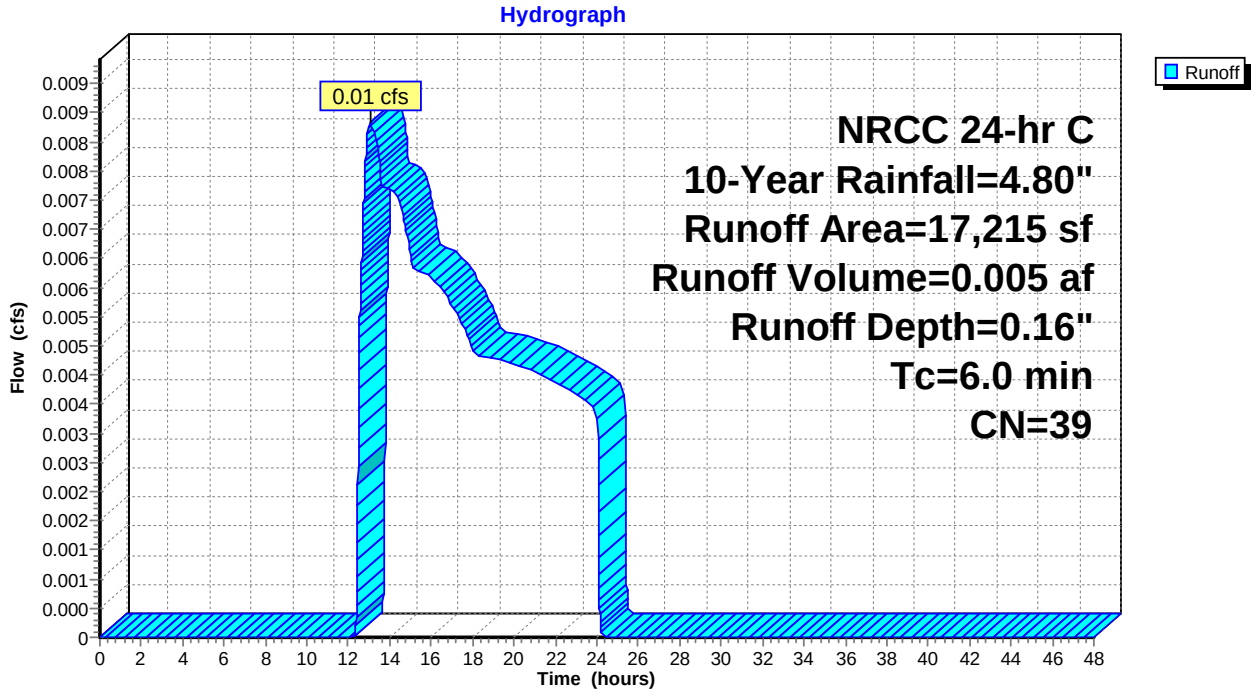
Runoff = 0.01 cfs @ 13.04 hrs, Volume= 0.005 af, Depth= 0.16"
Routed to Pond 55P : FB 1G

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



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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				

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Summary for Subcatchment 49S: PDA-4B

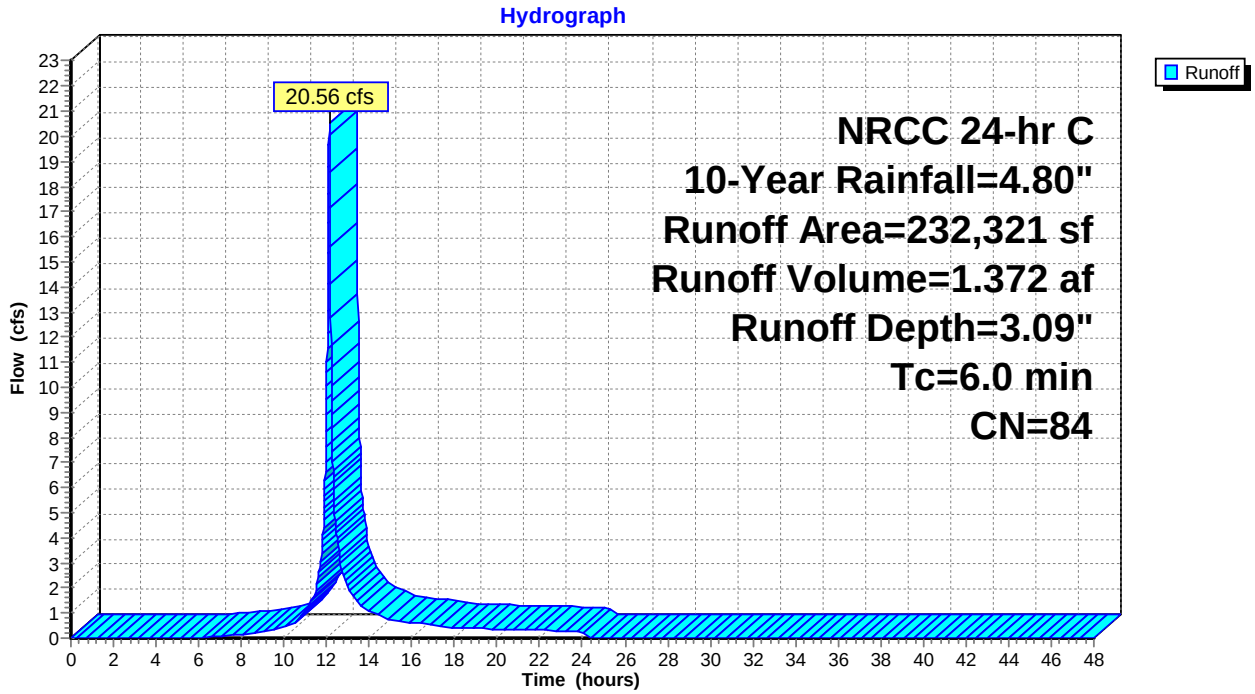
Runoff = 20.56 cfs @ 12.13 hrs, Volume= 1.372 af, Depth= 3.09"
Routed to Pond 29P : Bioretention 4B

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



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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				

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

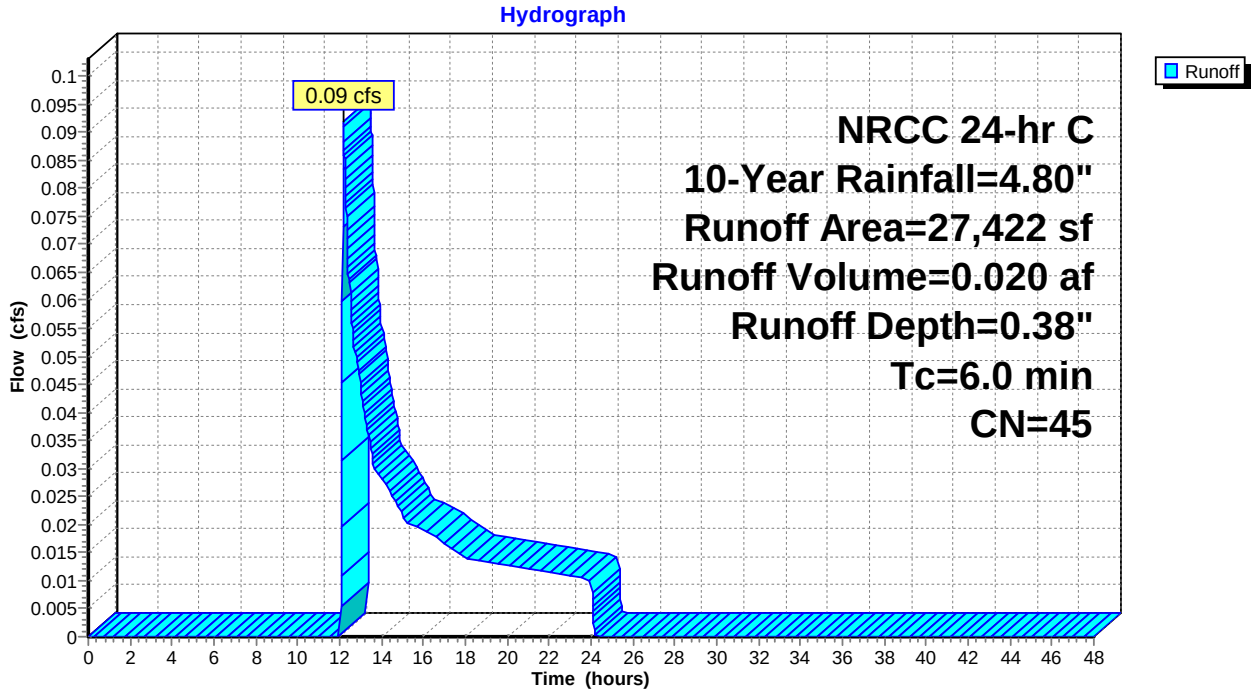
Runoff = 0.09 cfs @ 12.17 hrs, Volume= 0.020 af, Depth= 0.38"
Routed to Pond 54P : INFIL 1G

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.00
10.00	0.95	0.00	0.00
10.50	1.07	0.00	0.00
11.00	1.24	0.00	0.00
11.50	1.50	0.00	0.00
12.00	2.29	0.00	**0.00**
12.50	3.30	0.06	**0.06**
13.00	3.56	0.09	0.04
13.50	3.73	0.12	0.03
14.00	3.85	0.15	0.03
14.50	3.95	0.17	0.03
15.00	4.04	0.18	0.02
15.50	4.11	0.20	0.02
16.00	4.18	0.21	0.02
16.50	4.24	0.23	0.02
17.00	4.29	0.24	0.02
17.50	4.34	0.26	0.02
18.00	4.39	0.27	0.01
18.50	4.43	0.28	0.01
19.00	4.47	0.29	0.01
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
29.00	4.80	0.38	0.00
29.50	4.80	0.38	0.00
30.00	4.80	0.38	0.00
30.50	4.80	0.38	0.00
31.00	4.80	0.38	0.00
31.50	4.80	0.38	0.00
32.00	4.80	0.38	0.00
32.50	4.80	0.38	0.00
33.00	4.80	0.38	0.00
33.50	4.80	0.38	0.00
34.00	4.80	0.38	0.00
34.50	4.80	0.38	0.00
35.00	4.80	0.38	0.00
35.50	4.80	0.38	0.00
36.00	4.80	0.38	0.00
36.50	4.80	0.38	0.00
37.00	4.80	0.38	0.00
37.50	4.80	0.38	0.00
38.00	4.80	0.38	0.00
38.50	4.80	0.38	0.00
39.00	4.80	0.38	0.00
39.50	4.80	0.38	0.00
40.00	4.80	0.38	0.00
40.50	4.80	0.38	0.00
41.00	4.80	0.38	0.00
41.50	4.80	0.38	0.00
42.00	4.80	0.38	0.00
42.50	4.80	0.38	0.00
43.00	4.80	0.38	0.00
43.50	4.80	0.38	0.00
44.00	4.80	0.38	0.00
44.50	4.80	0.38	0.00
45.00	4.80	0.38	0.00
45.50	4.80	0.38	0.00
46.00	4.80	0.38	0.00
46.50	4.80	0.38	0.00
47.00	4.80	0.38	0.00
47.50	4.80	0.38	0.00
48.00	4.80	0.38	0.00

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Summary for Subcatchment 52S: PDA-1G

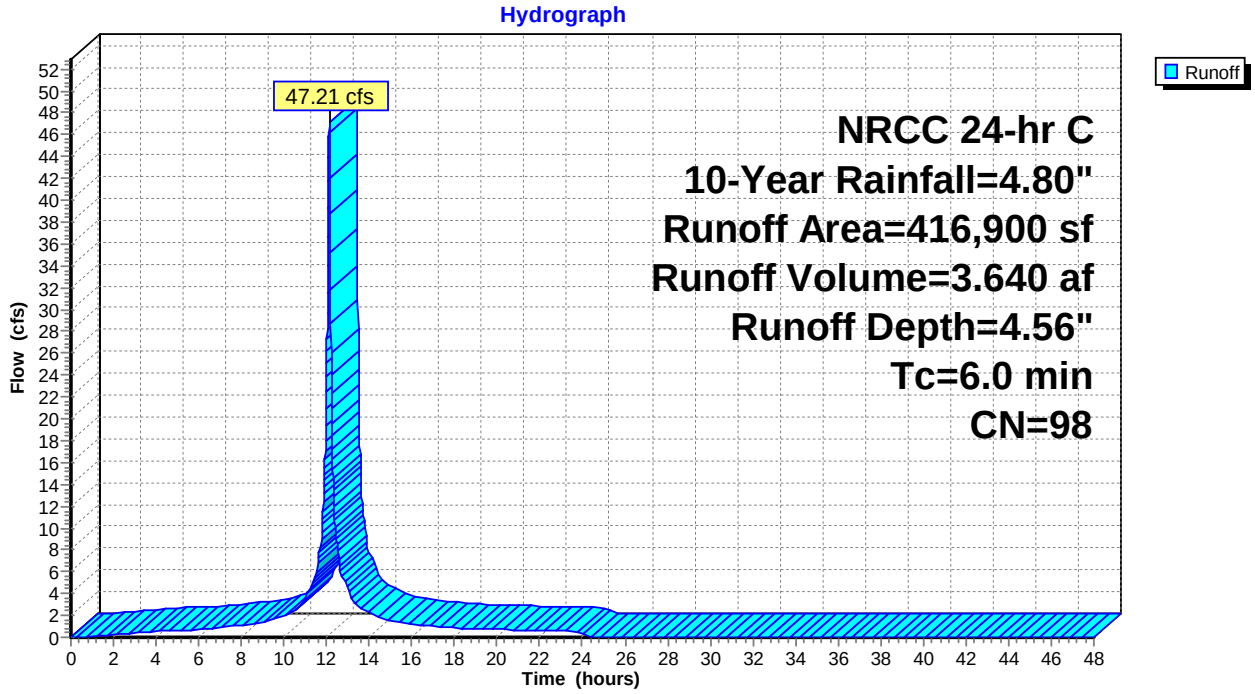
Runoff = 47.21 cfs @ 12.13 hrs, Volume= 3.640 af, Depth= 4.56"
Routed to Pond 55P : FB 1G

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



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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				

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

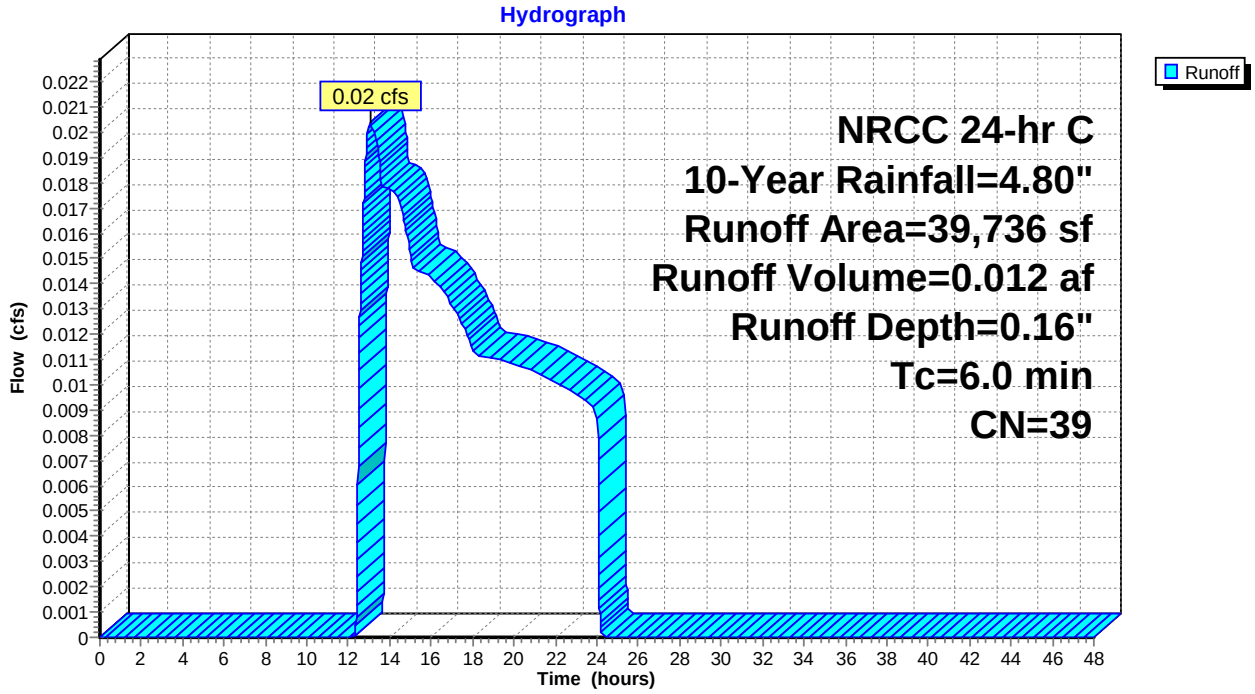
Runoff = 0.02 cfs @ 13.04 hrs, Volume= 0.012 af, Depth= 0.16"
Routed to Pond 47P : INFIL 1H

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.00
10.00	0.95	0.00	0.00
10.50	1.07	0.00	0.00
11.00	1.24	0.00	0.00
11.50	1.50	0.00	0.00
12.00	2.29	0.00	0.00
12.50	3.30	0.00	0.01
13.00	3.56	0.01	**0.02**
13.50	3.73	0.02	**0.02**
14.00	3.85	0.03	0.02
14.50	3.95	0.04	0.02
15.00	4.04	0.05	0.02
15.50	4.11	0.06	0.01
16.00	4.18	0.07	0.01
16.50	4.24	0.07	0.01
17.00	4.29	0.08	0.01
17.50	4.34	0.09	0.01
18.00	4.39	0.09	0.01
18.50	4.43	0.10	0.01
19.00	4.47	0.11	0.01
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
29.00	4.80	0.16	0.00
29.50	4.80	0.16	0.00
30.00	4.80	0.16	0.00
30.50	4.80	0.16	0.00
31.00	4.80	0.16	0.00
31.50	4.80	0.16	0.00
32.00	4.80	0.16	0.00
32.50	4.80	0.16	0.00
33.00	4.80	0.16	0.00
33.50	4.80	0.16	0.00
34.00	4.80	0.16	0.00
34.50	4.80	0.16	0.00
35.00	4.80	0.16	0.00
35.50	4.80	0.16	0.00
36.00	4.80	0.16	0.00
36.50	4.80	0.16	0.00
37.00	4.80	0.16	0.00
37.50	4.80	0.16	0.00
38.00	4.80	0.16	0.00
38.50	4.80	0.16	0.00
39.00	4.80	0.16	0.00
39.50	4.80	0.16	0.00
40.00	4.80	0.16	0.00
40.50	4.80	0.16	0.00
41.00	4.80	0.16	0.00
41.50	4.80	0.16	0.00
42.00	4.80	0.16	0.00
42.50	4.80	0.16	0.00
43.00	4.80	0.16	0.00
43.50	4.80	0.16	0.00
44.00	4.80	0.16	0.00
44.50	4.80	0.16	0.00
45.00	4.80	0.16	0.00
45.50	4.80	0.16	0.00
46.00	4.80	0.16	0.00
46.50	4.80	0.16	0.00
47.00	4.80	0.16	0.00
47.50	4.80	0.16	0.00
48.00	4.80	0.16	0.00

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Summary for Subcatchment 55S: PDA-1E

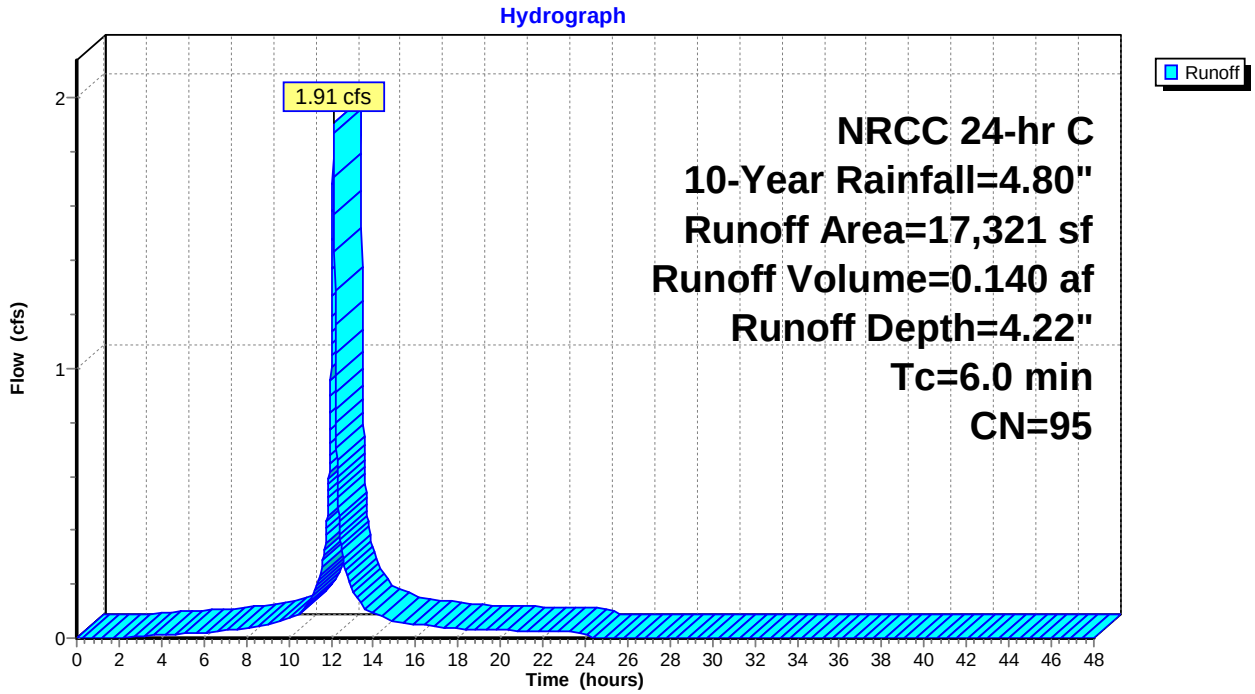
Runoff = 1.91 cfs @ 12.13 hrs, Volume= 0.140 af, Depth= 4.22"
Routed to Pond 59P : FB 1E

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



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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				

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

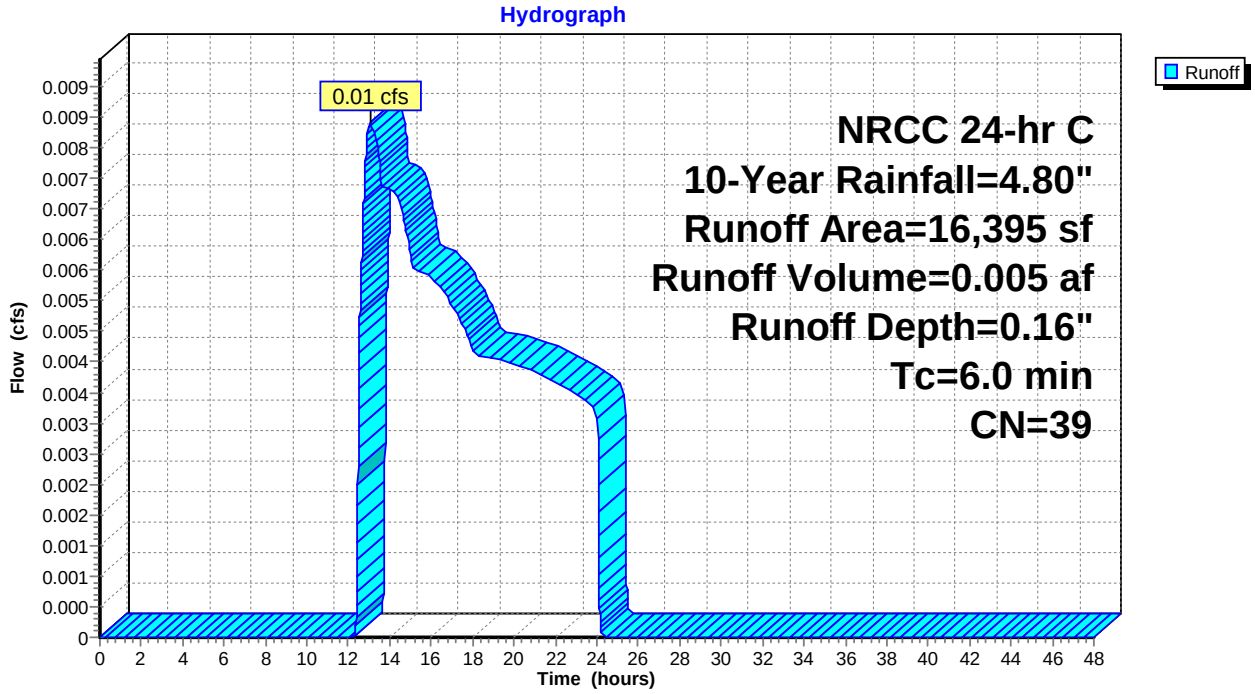
Runoff = 0.01 cfs @ 13.04 hrs, Volume= 0.005 af, Depth= 0.16"
Routed to Pond 44P : FB 1B

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.00
7.50	0.56	0.00	0.00
8.00	0.62	0.00	0.00
8.50	0.69	0.00	0.00
9.00	0.76	0.00	0.00
9.50	0.85	0.00	0.00
10.00	0.95	0.00	0.00
10.50	1.07	0.00	0.00
11.00	1.24	0.00	0.00
11.50	1.50	0.00	0.00
12.00	2.29	0.00	0.00
12.50	3.30	0.00	0.00
13.00	3.56	0.01	**0.01**
13.50	3.73	0.02	**0.01**
14.00	3.85	0.03	0.01
14.50	3.95	0.04	0.01
15.00	4.04	0.05	0.01
15.50	4.11	0.06	0.01
16.00	4.18	0.07	0.01
16.50	4.24	0.07	0.01
17.00	4.29	0.08	0.01
17.50	4.34	0.09	0.01
18.00	4.39	0.09	0.00
18.50	4.43	0.10	0.00
19.00	4.47	0.11	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
29.00	4.80	0.16	0.00
29.50	4.80	0.16	0.00
30.00	4.80	0.16	0.00
30.50	4.80	0.16	0.00
31.00	4.80	0.16	0.00
31.50	4.80	0.16	0.00
32.00	4.80	0.16	0.00
32.50	4.80	0.16	0.00
33.00	4.80	0.16	0.00
33.50	4.80	0.16	0.00
34.00	4.80	0.16	0.00
34.50	4.80	0.16	0.00
35.00	4.80	0.16	0.00
35.50	4.80	0.16	0.00
36.00	4.80	0.16	0.00
36.50	4.80	0.16	0.00
37.00	4.80	0.16	0.00
37.50	4.80	0.16	0.00
38.00	4.80	0.16	0.00
38.50	4.80	0.16	0.00
39.00	4.80	0.16	0.00
39.50	4.80	0.16	0.00
40.00	4.80	0.16	0.00
40.50	4.80	0.16	0.00
41.00	4.80	0.16	0.00
41.50	4.80	0.16	0.00
42.00	4.80	0.16	0.00
42.50	4.80	0.16	0.00
43.00	4.80	0.16	0.00
43.50	4.80	0.16	0.00
44.00	4.80	0.16	0.00
44.50	4.80	0.16	0.00
45.00	4.80	0.16	0.00
45.50	4.80	0.16	0.00
46.00	4.80	0.16	0.00
46.50	4.80	0.16	0.00
47.00	4.80	0.16	0.00
47.50	4.80	0.16	0.00
48.00	4.80	0.16	0.00

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

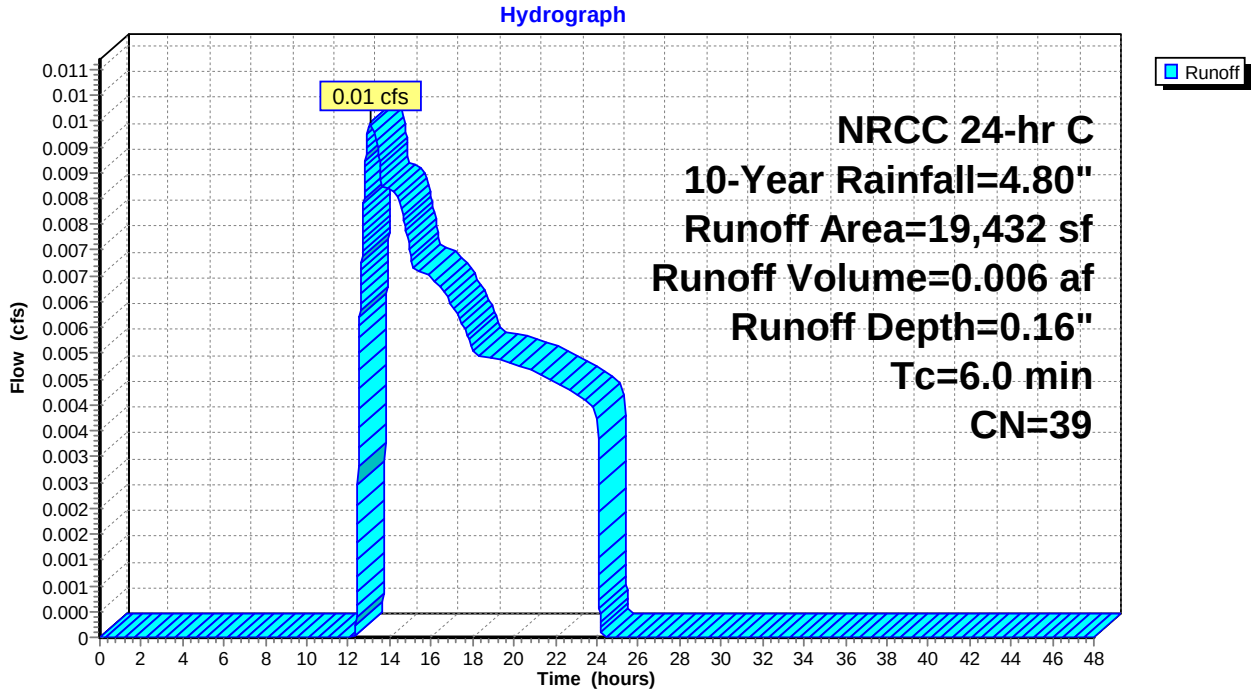
Runoff = 0.01 cfs @ 13.04 hrs, Volume= 0.006 af, Depth= 0.16"
Routed to Pond 51P : FB 1H

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



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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	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				

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Summary for Subcatchment 58S: PDA1-B-IB

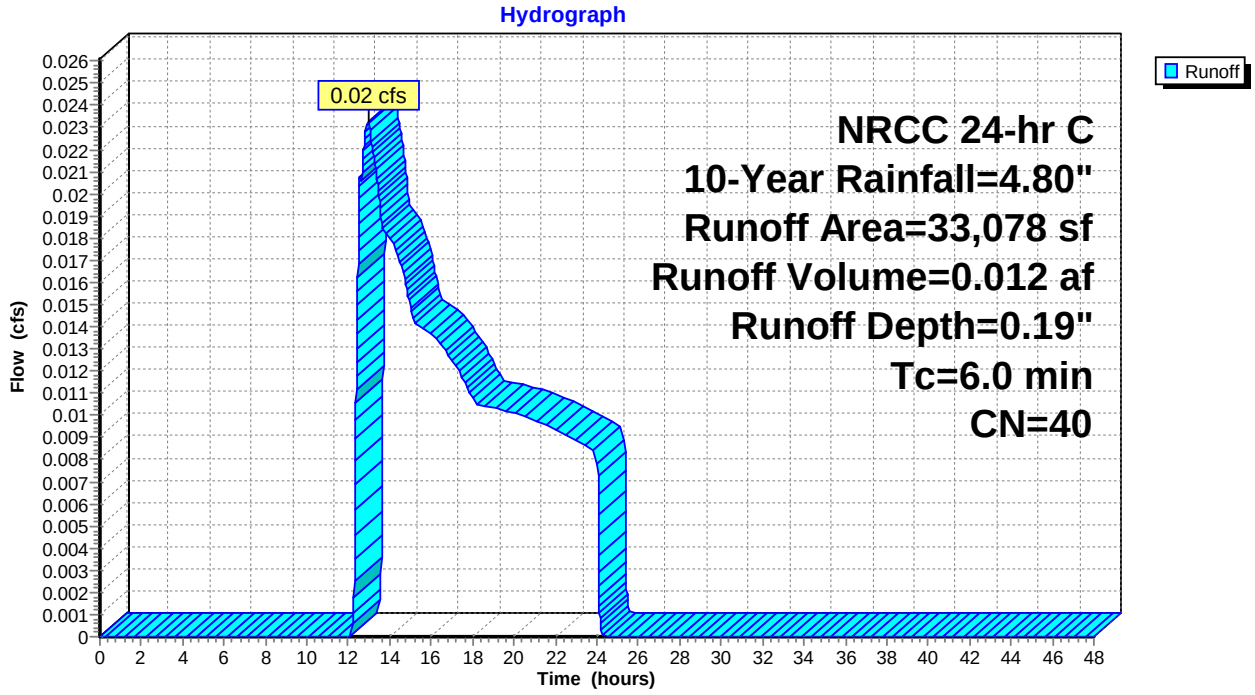
Runoff = 0.02 cfs @ 12.94 hrs, Volume= 0.012 af, Depth= 0.19"
Routed to Pond 45P : INFIL 1B

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



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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				

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Summary for Subcatchment 59S: PDA-1F

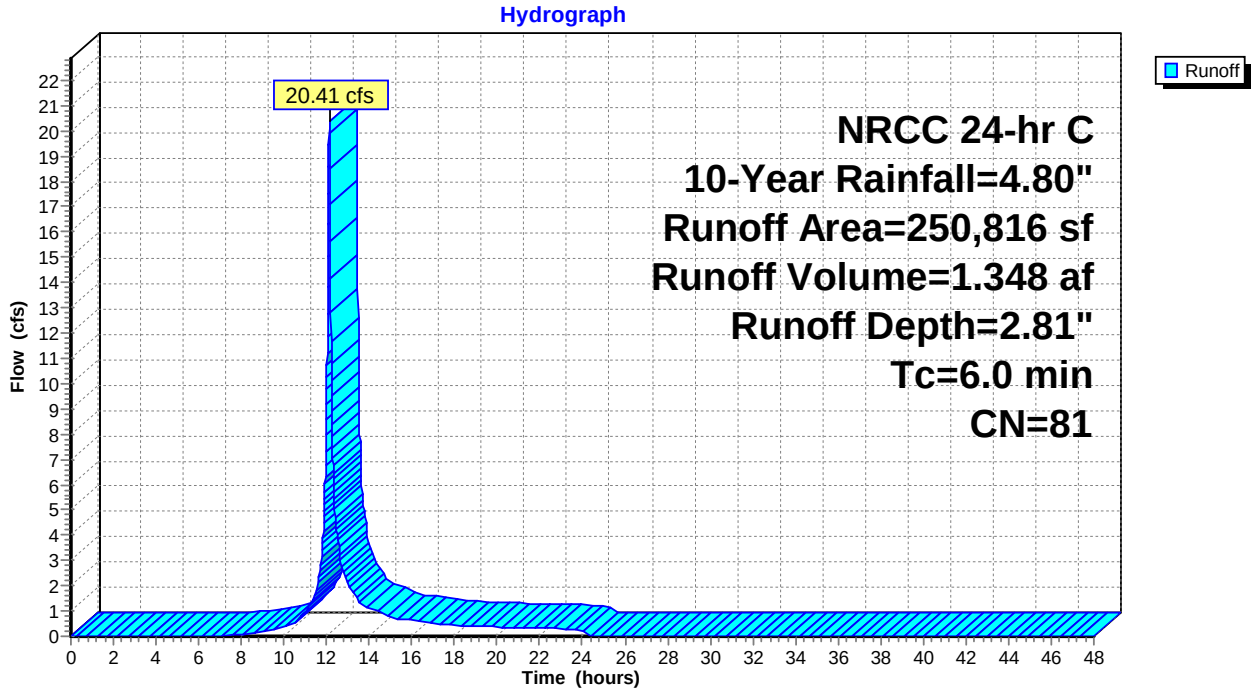
Runoff = 20.41 cfs @ 12.13 hrs, Volume= 1.348 af, Depth= 2.81"
Routed to Pond 26P : Bioretention 1F

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



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Hydrograph for Subcatchment 59S: PDA-1F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.06	0.00	0.00
1.50	0.09	0.00	0.00
2.00	0.12	0.00	0.00
2.50	0.15	0.00	0.00
3.00	0.18	0.00	0.00
3.50	0.22	0.00	0.00
4.00	0.25	0.00	0.00
4.50	0.29	0.00	0.00
5.00	0.33	0.00	0.00
5.50	0.37	0.00	0.00
6.00	0.41	0.00	0.00
6.50	0.46	0.00	0.00
7.00	0.51	0.00	0.01
7.50	0.56	0.00	0.04
8.00	0.62	0.01	0.08
8.50	0.69	0.02	0.12
9.00	0.76	0.03	0.17
9.50	0.85	0.05	0.26
10.00	0.95	0.08	0.38
10.50	1.07	0.12	0.52
11.00	1.24	0.19	0.93
11.50	1.50	0.32	1.76
12.00	2.29	0.79	**9.78**
12.50	3.30	1.55	**3.94**
13.00	3.56	1.76	2.14
13.50	3.73	1.90	1.40
14.00	3.85	2.00	1.11
14.50	3.95	2.08	0.94
15.00	4.04	2.15	0.77
15.50	4.11	2.21	0.68
16.00	4.18	2.27	0.63
16.50	4.24	2.32	0.59
17.00	4.29	2.37	0.53
17.50	4.34	2.41	0.48
18.00	4.39	2.45	0.43
18.50	4.43	2.49	0.41
19.00	4.47	2.52	0.40
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
29.00	4.80	2.81	0.00
29.50	4.80	2.81	0.00
30.00	4.80	2.81	0.00
30.50	4.80	2.81	0.00
31.00	4.80	2.81	0.00
31.50	4.80	2.81	0.00
32.00	4.80	2.81	0.00
32.50	4.80	2.81	0.00
33.00	4.80	2.81	0.00
33.50	4.80	2.81	0.00
34.00	4.80	2.81	0.00
34.50	4.80	2.81	0.00
35.00	4.80	2.81	0.00
35.50	4.80	2.81	0.00
36.00	4.80	2.81	0.00
36.50	4.80	2.81	0.00
37.00	4.80	2.81	0.00
37.50	4.80	2.81	0.00
38.00	4.80	2.81	0.00
38.50	4.80	2.81	0.00
39.00	4.80	2.81	0.00
39.50	4.80	2.81	0.00
40.00	4.80	2.81	0.00
40.50	4.80	2.81	0.00
41.00	4.80	2.81	0.00
41.50	4.80	2.81	0.00
42.00	4.80	2.81	0.00
42.50	4.80	2.81	0.00
43.00	4.80	2.81	0.00
43.50	4.80	2.81	0.00
44.00	4.80	2.81	0.00
44.50	4.80	2.81	0.00
45.00	4.80	2.81	0.00
45.50	4.80	2.81	0.00
46.00	4.80	2.81	0.00
46.50	4.80	2.81	0.00
47.00	4.80	2.81	0.00
47.50	4.80	2.81	0.00
48.00	4.80	2.81	0.00

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

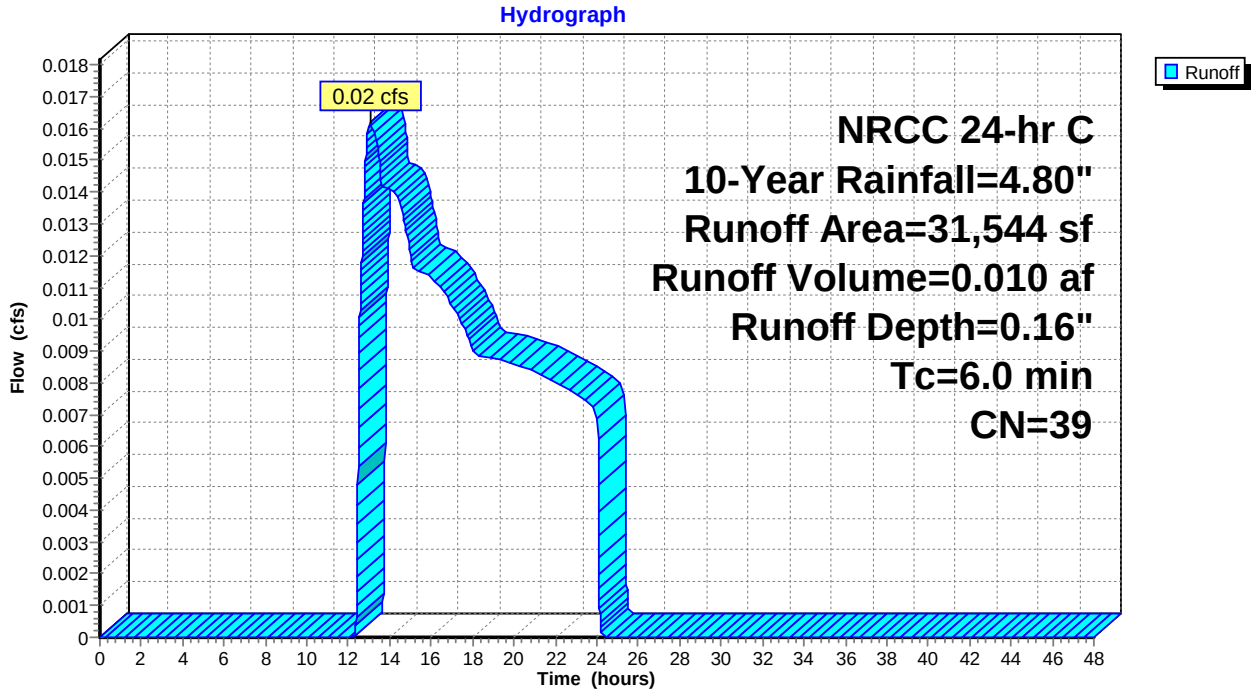
Runoff = 0.02 cfs @ 13.04 hrs, Volume= 0.010 af, Depth= 0.16"
Routed to Pond 31P : Bioretention i

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



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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	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				

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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 = 1.51 cfs @ 13.14 hrs, Volume= 0.776 af, Atten= 91%, Lag= 60.4 min
Primary = 1.51 cfs @ 13.14 hrs, Volume= 0.776 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= 413.25' @ 13.14 hrs Surf.Area= 16,319 sf Storage= 33,300 cf

Plug-Flow detention time= 391.8 min calculated for 0.776 af (62% of inflow)
Center-of-Mass det. time= 280.1 min (1,072.9 - 792.9)

Volume	Invert	Avail.Storage	Storage Description
#1	408.66'	82,103 cf	**Custom Stage Data (Prismatic)** Listed below

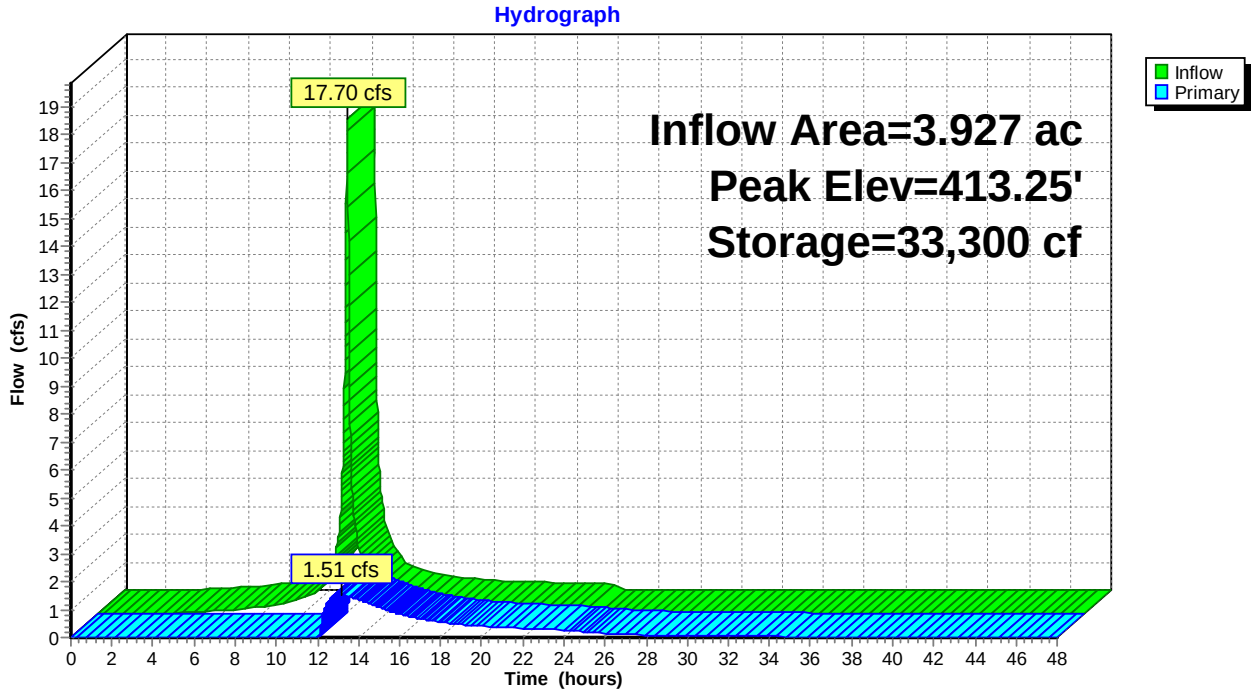
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	14,016	0.0	0	0
409.33	14,016	40.0	3,756	3,756
412.00	14,016	20.0	7,485	11,241
416.00	21,415	100.0	70,862	82,103

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	412.50'	**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=1.51 cfs @ 13.14 hrs HW=413.25' (Free Discharge)
└**1=Culvert** (Passes 1.51 cfs of 16.40 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 1.51 cfs @ 2.94 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 1P: Bioretention 1D



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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**	**33,236**	**413.24**	**1.50**
14.00	0.88	**32,258**	**413.19**	**1.35**
15.00	0.61	30,556	413.09	1.08
16.00	0.49	29,058	413.01	0.84
17.00	0.41	27,985	412.95	0.68
18.00	0.34	27,138	412.90	0.55
19.00	0.30	26,461	412.86	0.46
20.00	0.29	25,985	412.83	0.40
21.00	0.27	25,618	412.81	0.36
22.00	0.25	25,319	412.79	0.32
23.00	0.23	25,065	412.78	0.29
24.00	0.21	24,839	412.77	0.27
25.00	0.00	24,095	412.73	0.20
26.00	0.00	23,494	412.69	0.14
27.00	0.00	23,039	412.67	0.11
28.00	0.00	22,683	412.65	0.09
29.00	0.00	22,404	412.63	0.07
30.00	0.00	22,184	412.62	0.06
31.00	0.00	21,994	412.61	0.05
32.00	0.00	21,829	412.60	0.04
33.00	0.00	21,686	412.59	0.04
34.00	0.00	21,561	412.58	0.03
35.00	0.00	21,452	412.58	0.03
36.00	0.00	21,357	412.57	0.02
37.00	0.00	21,275	412.57	0.02
38.00	0.00	21,203	412.56	0.02
39.00	0.00	21,141	412.56	0.02
40.00	0.00	21,087	412.56	0.01
41.00	0.00	21,039	412.55	0.01
42.00	0.00	20,998	412.55	0.01
43.00	0.00	20,962	412.55	0.01
44.00	0.00	20,926	412.55	0.01
45.00	0.00	20,893	412.54	0.01
46.00	0.00	20,860	412.54	0.01
47.00	0.00	20,830	412.54	0.01
48.00	0.00	20,800	412.54	0.01

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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 = 1.63 cfs @ 12.57 hrs, Volume= 0.332 af, Atten= 83%, Lag= 26.5 min
Primary = 1.63 cfs @ 12.57 hrs, Volume= 0.332 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= 414.11' @ 12.57 hrs Surf.Area= 10,265 sf Storage= 15,319 cf

Plug-Flow detention time= 260.0 min calculated for 0.332 af (50% of inflow)
Center-of-Mass det. time= 136.4 min (953.3 - 816.8)

Volume	Invert	Avail.Storage	Storage Description
#1	408.66'	31,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

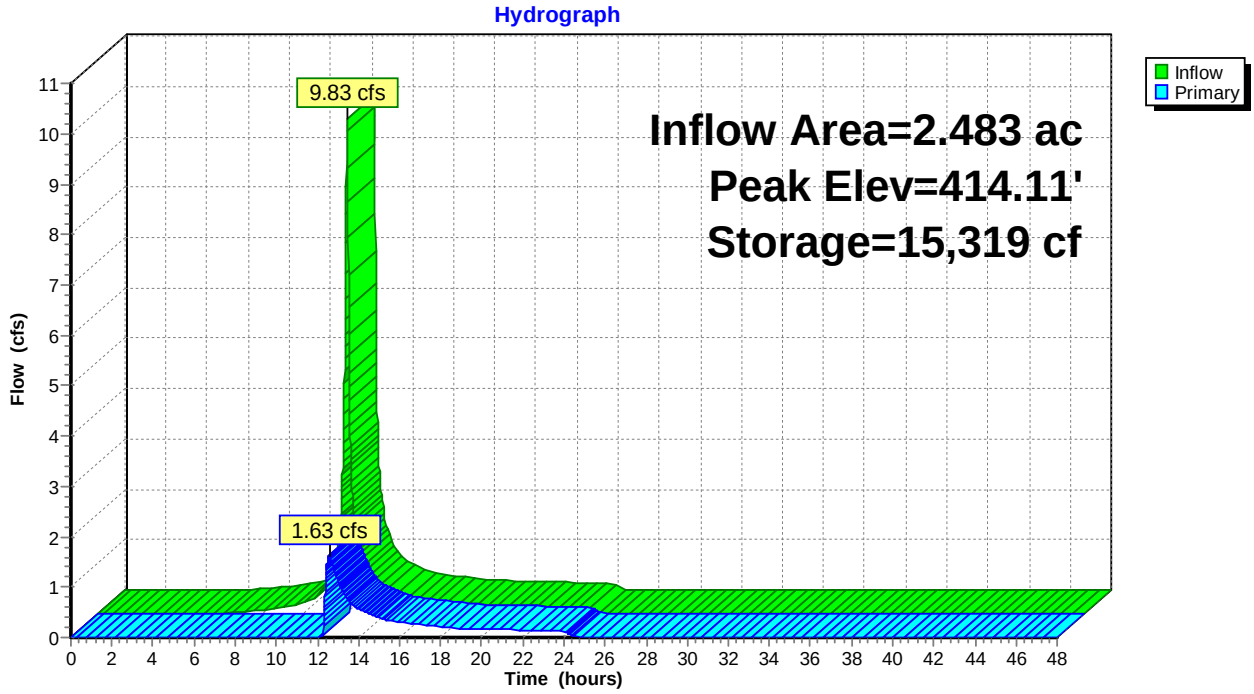
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	8,681	0.0	0	0
409.33	8,681	40.0	2,327	2,327
413.50	8,681	20.0	7,240	9,566
415.00	12,593	100.0	15,956	25,522
415.50	12,817	100.0	6,353	31,874

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	414.00'	**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=1.57 cfs @ 12.57 hrs HW=414.11' (Free Discharge)
↑—**1=Culvert** (Passes 1.57 cfs of 18.44 cfs potential flow)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 1.57 cfs @ 0.92 fps)

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Pond 3P: Bioretention 1A



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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**	**15,079**	**414.08**	**1.14**
14.00	0.51	14,738	414.05	0.57
15.00	0.35	14,582	414.03	0.39
16.00	0.29	14,502	414.03	0.30
17.00	0.24	14,461	414.02	0.26
18.00	0.20	14,419	414.02	0.21
19.00	0.18	14,397	414.02	0.18
20.00	0.17	14,387	414.02	0.17
21.00	0.16	14,377	414.01	0.16
22.00	0.15	14,366	414.01	0.15
23.00	0.13	14,356	414.01	0.14
24.00	0.12	14,345	414.01	0.13
25.00	0.00	14,236	414.00	0.00
26.00	0.00	14,233	414.00	0.00
27.00	0.00	14,233	414.00	0.00
28.00	0.00	14,233	414.00	0.00
29.00	0.00	14,233	414.00	0.00
30.00	0.00	14,233	414.00	0.00
31.00	0.00	14,233	414.00	0.00
32.00	0.00	14,233	414.00	0.00
33.00	0.00	14,233	414.00	0.00
34.00	0.00	14,233	414.00	0.00
35.00	0.00	14,233	414.00	0.00
36.00	0.00	14,233	414.00	0.00
37.00	0.00	14,233	414.00	0.00
38.00	0.00	14,233	414.00	0.00
39.00	0.00	14,233	414.00	0.00
40.00	0.00	14,233	414.00	0.00
41.00	0.00	14,233	414.00	0.00
42.00	0.00	14,233	414.00	0.00
43.00	0.00	14,233	414.00	0.00
44.00	0.00	14,233	414.00	0.00
45.00	0.00	14,233	414.00	0.00
46.00	0.00	14,233	414.00	0.00
47.00	0.00	14,233	414.00	0.00
48.00	0.00	14,233	414.00	0.00

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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)

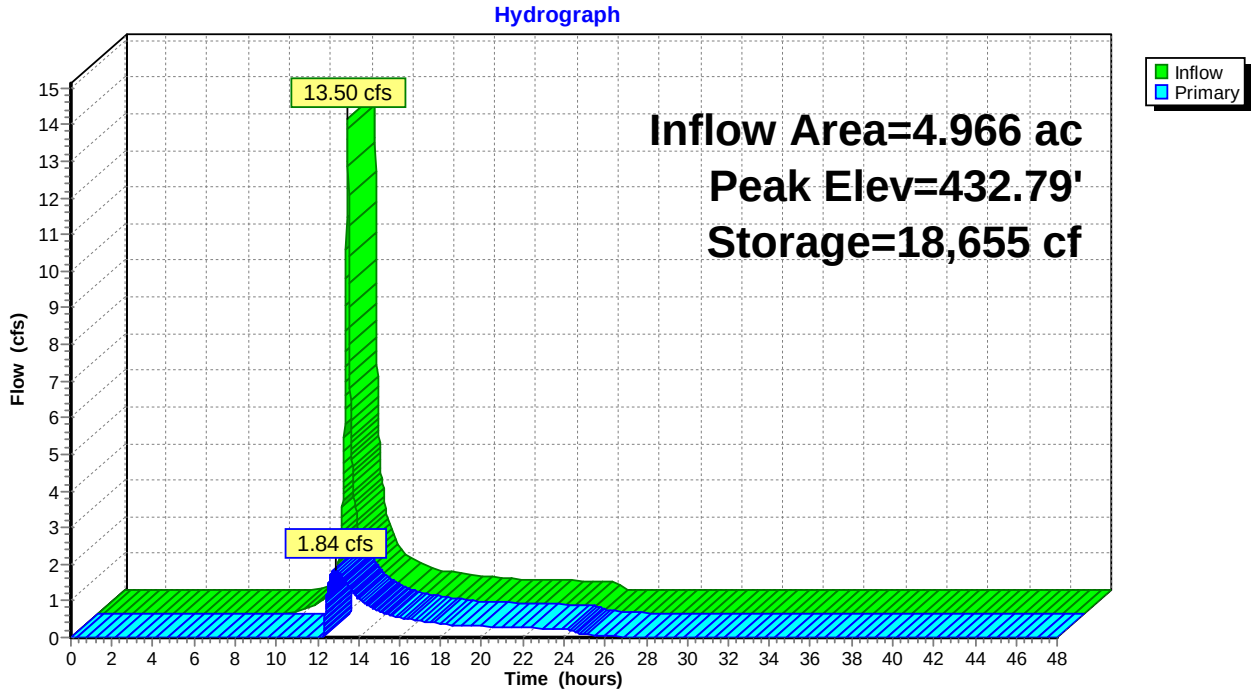
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
428.67	11,465	0.0	0	0
429.33	11,465	40.0	3,027	3,027
432.00	11,465	20.0	6,122	9,149
435.00	15,812	100.0	40,916	50,065

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)

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Pond 22P: Bioretention 5A



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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

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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)

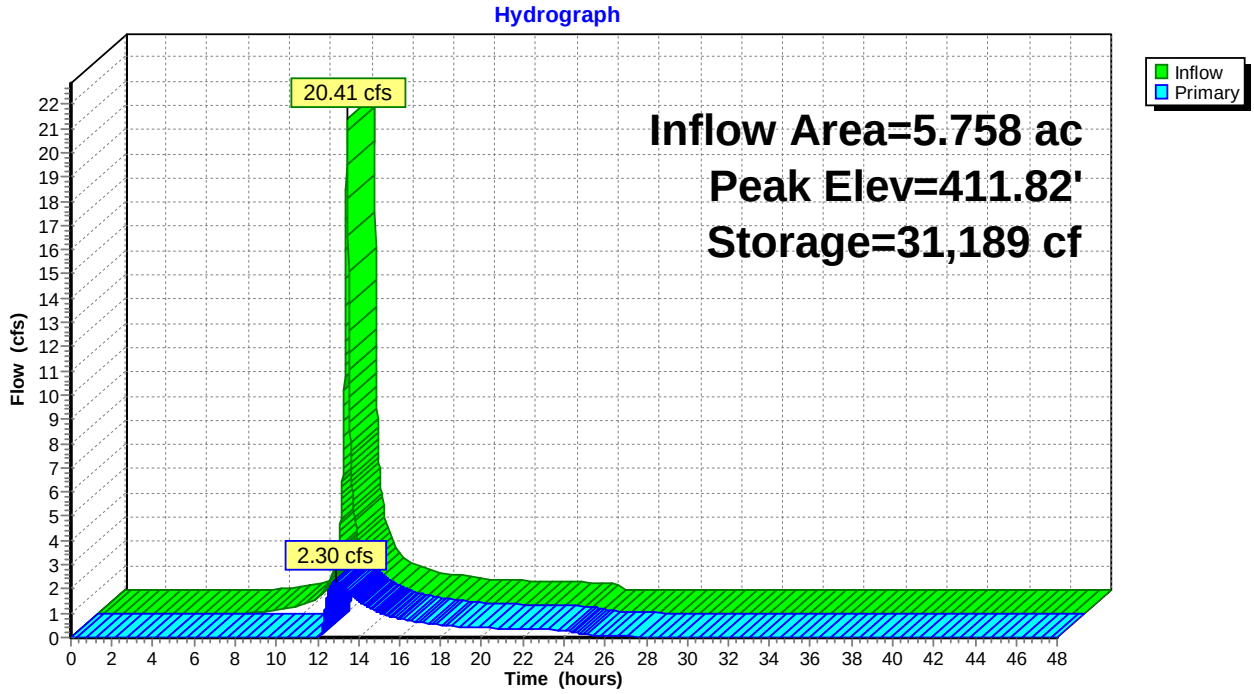
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.66	18,594	0.0	0	0
408.33	18,594	40.0	4,983	4,983
411.00	18,594	20.0	9,929	14,912
414.00	28,345	100.0	70,409	85,321

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)

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Pond 26P: Bioretention 1F



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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

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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 = 5.61 cfs @ 12.40 hrs, Volume= 1.165 af, Atten= 78%, Lag= 16.2 min
Primary = 5.61 cfs @ 12.40 hrs, Volume= 1.165 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= 419.11' @ 12.40 hrs Surf.Area= 18,686 sf Storage= 32,688 cf

Plug-Flow detention time= 215.3 min calculated for 1.165 af (70% of inflow)
Center-of-Mass det. time= 111.3 min (936.2 - 825.0)

Volume	Invert	Avail.Storage	Storage Description
#1	414.67'	94,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

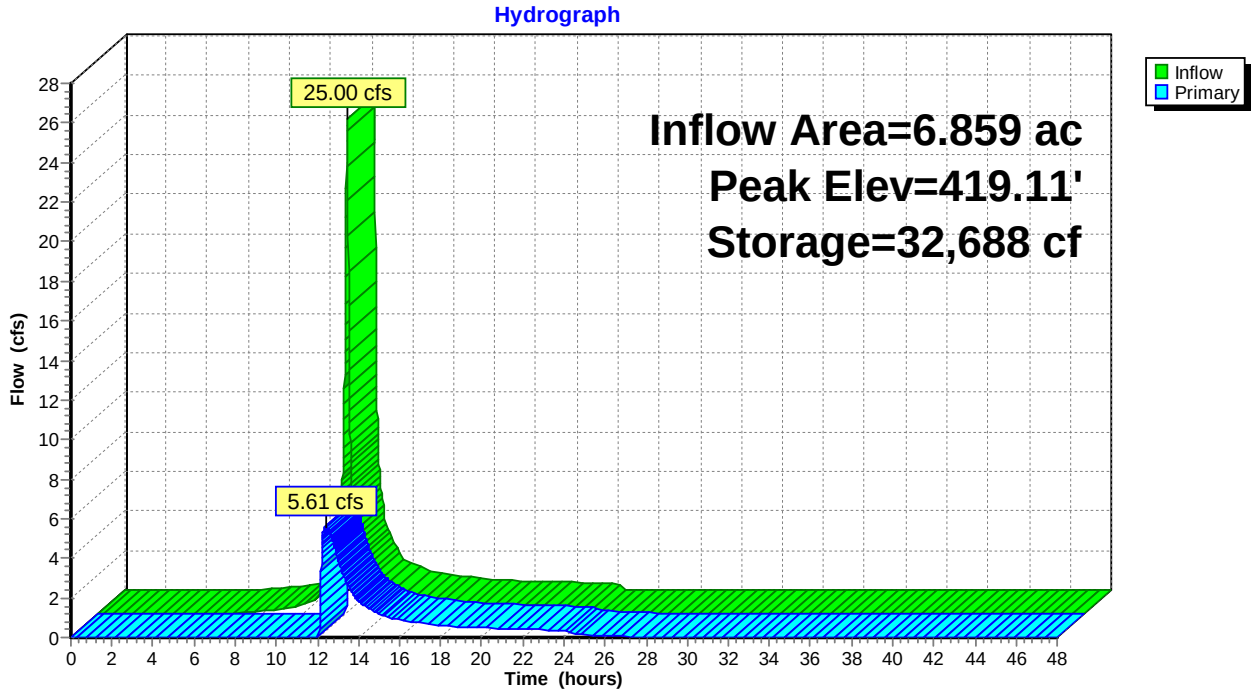
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
414.67	16,541	0.0	0	0
415.33	16,541	40.0	4,367	4,367
418.00	16,541	20.0	8,833	13,200
422.00	24,296	100.0	81,674	94,874

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	418.50'	**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=5.62 cfs @ 12.40 hrs HW=419.11' (Free Discharge)
└**1=Culvert** (Passes 5.62 cfs of 16.34 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 5.62 cfs @ 2.81 fps)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 29P: Bioretention 4B



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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**	**29,925**	**418.96**	**3.98**
14.00	1.34	26,591	418.77	1.85
15.00	0.92	25,340	418.70	1.19
16.00	0.76	24,658	418.67	0.89
17.00	0.64	24,299	418.65	0.73
18.00	0.52	24,004	418.63	0.60
19.00	0.48	23,778	418.62	0.53
20.00	0.45	23,644	418.61	0.48
21.00	0.42	23,539	418.60	0.45
22.00	0.39	23,443	418.60	0.42
23.00	0.36	23,347	418.59	0.38
24.00	0.33	23,253	418.59	0.35
25.00	0.00	22,531	418.55	0.14
26.00	0.00	22,154	418.53	0.08
27.00	0.00	21,951	418.51	0.04
28.00	0.00	21,841	418.51	0.02
29.00	0.00	21,782	418.50	0.01
30.00	0.00	21,750	418.50	0.01
31.00	0.00	21,733	418.50	0.00
32.00	0.00	21,723	418.50	0.00
33.00	0.00	21,718	418.50	0.00
34.00	0.00	21,716	418.50	0.00
35.00	0.00	21,714	418.50	0.00
36.00	0.00	21,713	418.50	0.00
37.00	0.00	21,713	418.50	0.00
38.00	0.00	21,713	418.50	0.00
39.00	0.00	21,713	418.50	0.00
40.00	0.00	21,713	418.50	0.00
41.00	0.00	21,713	418.50	0.00
42.00	0.00	21,713	418.50	0.00
43.00	0.00	21,713	418.50	0.00
44.00	0.00	21,713	418.50	0.00
45.00	0.00	21,713	418.50	0.00
46.00	0.00	21,713	418.50	0.00
47.00	0.00	21,713	418.50	0.00
48.00	0.00	21,713	418.50	0.00

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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 @ 12.14 hrs, Volume= 1.449 af
Outflow = 1.93 cfs @ 13.03 hrs, Volume= 0.774 af, Atten= 90%, Lag= 53.6 min
Primary = 1.93 cfs @ 13.03 hrs, Volume= 0.774 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= 411.85' @ 13.03 hrs Surf.Area= 24,295 sf Storage= 38,459 cf

Plug-Flow detention time= 370.3 min calculated for 0.774 af (53% of inflow)
Center-of-Mass det. time= 237.2 min (1,018.1 - 780.9)

Volume	Invert	Avail.Storage	Storage Description
#1	407.83'	93,189 cf	**Custom Stage Data (Prismatic)** Listed below

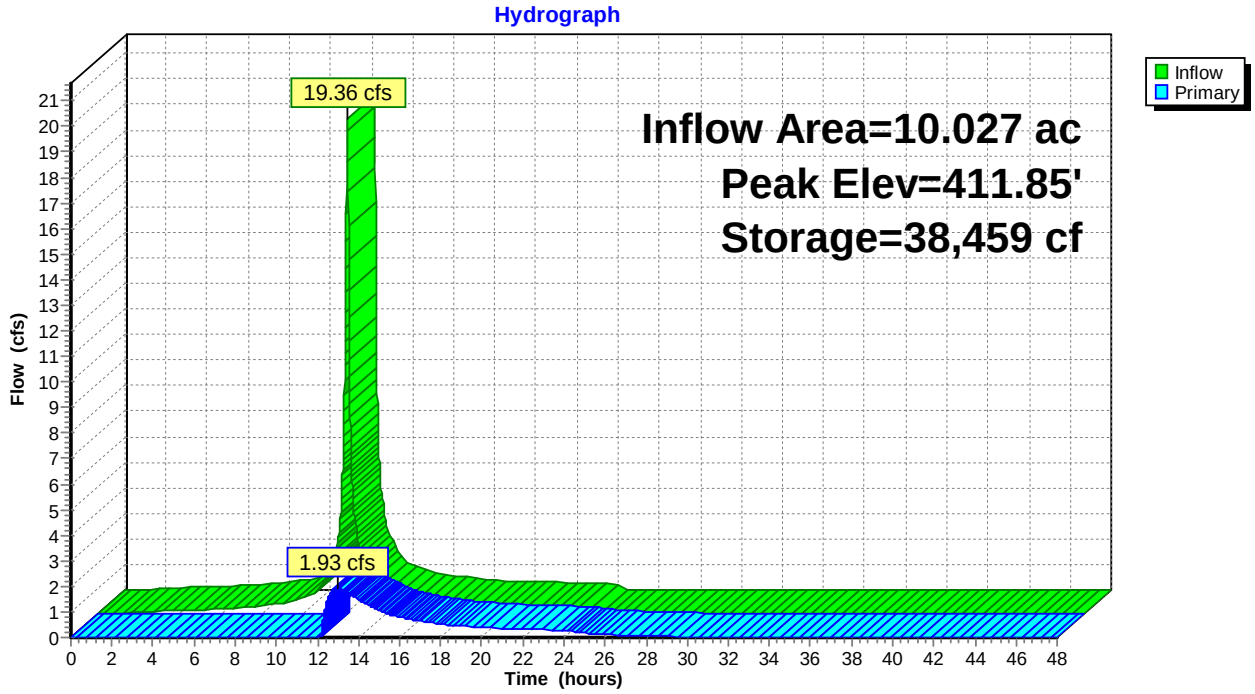
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	22,680	0.0	0	0
408.33	22,680	40.0	4,536	4,536
411.00	22,680	20.0	12,111	16,647
414.00	28,348	100.0	76,542	93,189

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	411.50'	**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=1.92 cfs @ 13.03 hrs HW=411.85' (Free Discharge)
└**1=Culvert** (Passes 1.92 cfs of 6.88 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 1.92 cfs @ 1.91 fps)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 31P: Bioretention i



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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	2	407.83	0.00
2.00	0.07	147	407.85	0.00
3.00	0.11	467	407.88	0.00
4.00	0.14	911	407.93	0.00
5.00	0.16	1,453	407.99	0.00
6.00	0.18	2,075	408.06	0.00
7.00	0.24	2,830	408.14	0.00
8.00	0.32	3,849	408.25	0.00
9.00	0.41	5,171	408.47	0.00
10.00	0.66	7,066	408.89	0.00
11.00	1.25	10,198	409.58	0.00
12.00	**9.14**	20,236	411.14	0.00
13.00	**1.98**	**38,456**	**411.85**	**1.93**
14.00	1.00	**37,030**	**411.80**	**1.49**
15.00	0.69	35,521	411.74	1.07
16.00	0.57	34,422	411.70	0.80
17.00	0.48	33,734	411.67	0.64
18.00	0.39	33,212	411.65	0.53
19.00	0.35	32,787	411.63	0.45
20.00	0.33	32,510	411.62	0.40
21.00	0.31	32,311	411.61	0.36
22.00	0.29	32,151	411.61	0.33
23.00	0.26	32,011	411.60	0.30
24.00	0.24	31,880	411.60	0.28
25.00	0.00	31,186	411.57	0.18
26.00	0.00	30,670	411.55	0.11
27.00	0.00	30,350	411.54	0.07
28.00	0.00	30,149	411.53	0.05
29.00	0.00	29,996	411.52	0.04
30.00	0.00	29,875	411.52	0.03
31.00	0.00	29,778	411.51	0.02
32.00	0.00	29,701	411.51	0.02
33.00	0.00	29,640	411.51	0.02
34.00	0.00	29,592	411.51	0.01
35.00	0.00	29,553	411.51	0.01
36.00	0.00	29,523	411.50	0.01
37.00	0.00	29,498	411.50	0.01
38.00	0.00	29,479	411.50	0.00
39.00	0.00	29,464	411.50	0.00
40.00	0.00	29,451	411.50	0.00
41.00	0.00	29,442	411.50	0.00
42.00	0.00	29,434	411.50	0.00
43.00	0.00	29,428	411.50	0.00
44.00	0.00	29,423	411.50	0.00
45.00	0.00	29,419	411.50	0.00
46.00	0.00	29,416	411.50	0.00
47.00	0.00	29,414	411.50	0.00
48.00	0.00	29,412	411.50	0.00

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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)

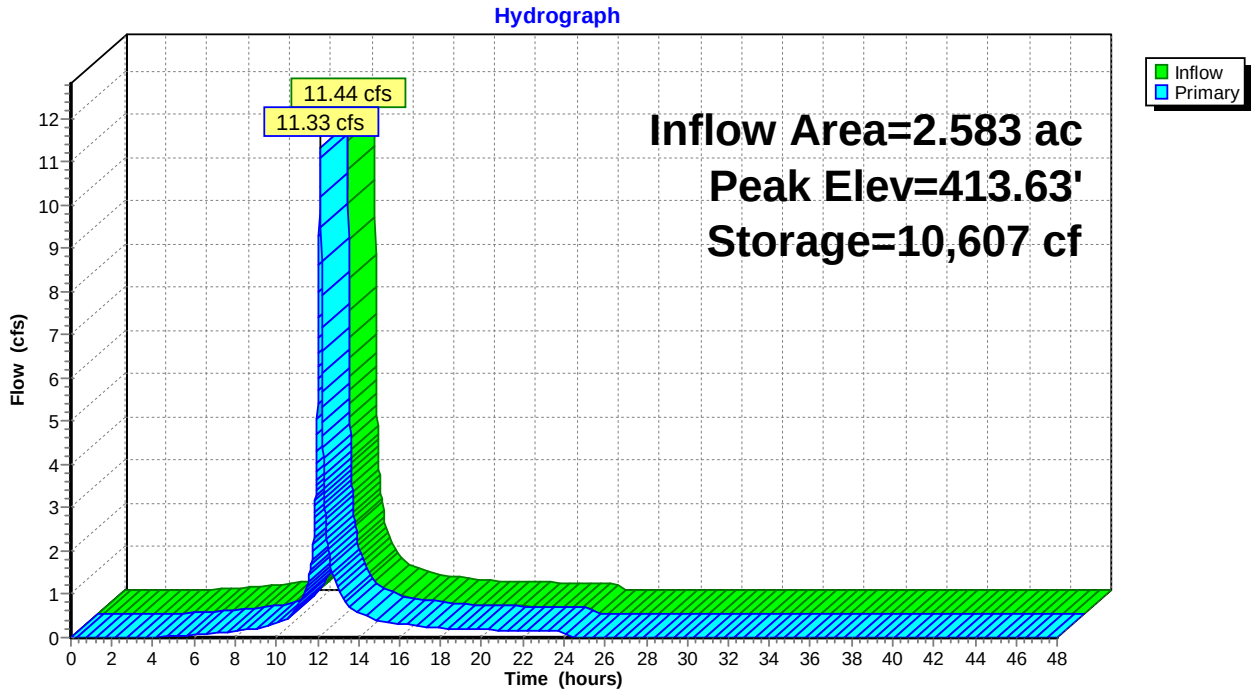
Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	13,740 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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

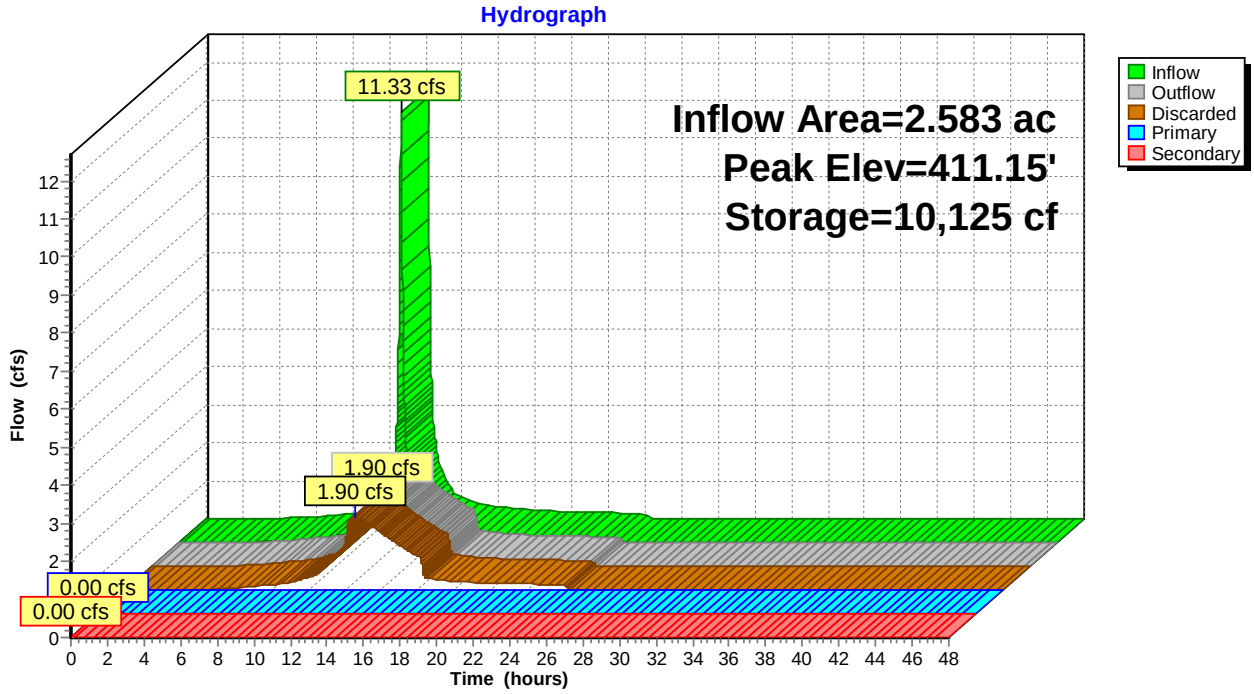
Discarded OutFlow Max=1.90 cfs @ 12.58 hrs HW=411.15' (Free Discharge)
└**3=Exfiltration** (Controls 1.90 cfs)

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)

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Pond 33P: INFIL 1C



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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

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Summary for Pond 37P: FB 1i+J

Inflow Area = 9.303 ac, 78.40% Impervious, Inflow Depth = 3.71" for 10-Year event
Inflow = 39.28 cfs @ 12.13 hrs, Volume= 2.879 af
Outflow = 38.72 cfs @ 12.14 hrs, Volume= 2.879 af, Atten= 1%, Lag= 0.7 min
Primary = 19.36 cfs @ 12.14 hrs, Volume= 1.439 af
Routed to Pond 31P : Bioretention i
Secondary = 19.36 cfs @ 12.14 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' @ 12.14 hrs Surf.Area= 10,194 sf Storage= 29,432 cf (2,626 cf above start)

Plug-Flow detention time= 157.4 min calculated for 2.263 af (79% of inflow)
Center-of-Mass det. time= 2.5 min (779.0 - 776.5)

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

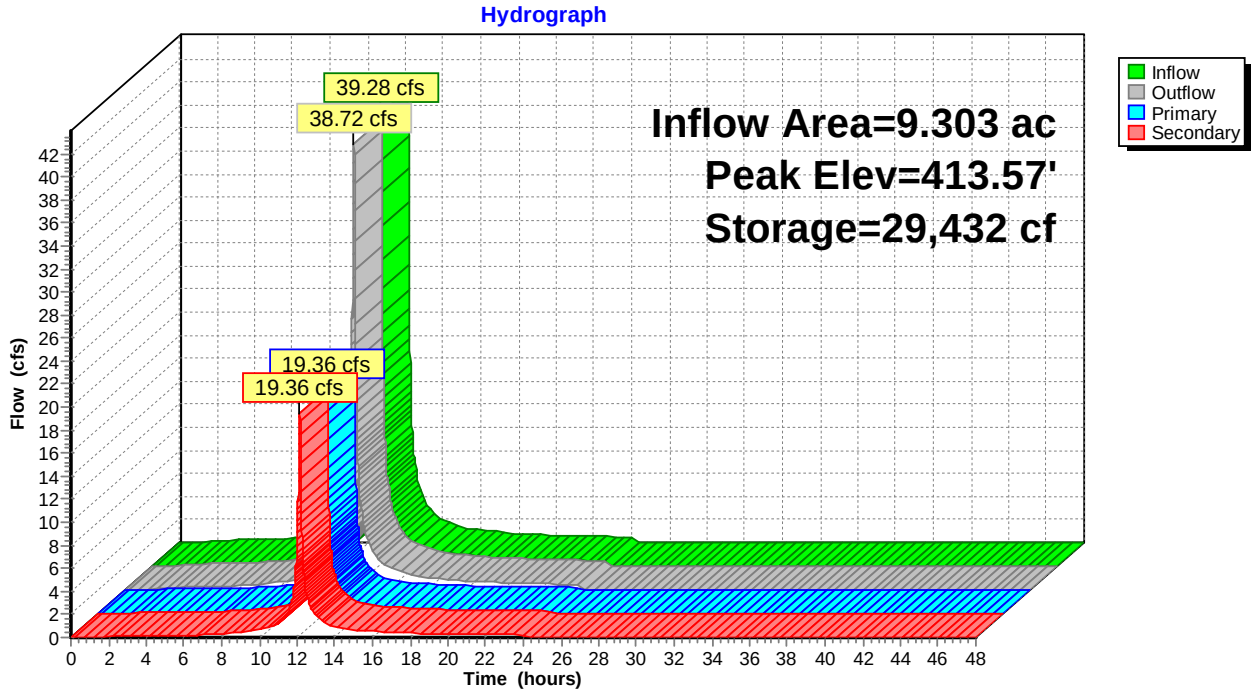
Device	Routing	Invert	Outlet Devices
#1	Primary	413.25'	**40.0' long x 21.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	413.25'	**40.0' long x 21.0' breadth Broad-Crested Rectangular 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=19.32 cfs @ 12.14 hrs HW=413.57' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 19.32 cfs @ 1.52 fps)

Secondary OutFlow Max=19.32 cfs @ 12.14 hrs HW=413.57' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 19.32 cfs @ 1.52 fps)

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Pond 37P: FB 1i+J



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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	0.03	26,810	413.25	0.02	0.01	0.01
2.00	0.14	26,836	413.25	0.14	0.07	0.07
3.00	0.22	26,854	413.26	0.22	0.11	0.11
4.00	0.28	26,867	413.26	0.28	0.14	0.14
5.00	0.33	26,878	413.26	0.33	0.16	0.16
6.00	0.37	26,887	413.26	0.37	0.18	0.18
7.00	0.50	26,914	413.26	0.49	0.24	0.24
8.00	0.66	26,950	413.27	0.65	0.32	0.32
9.00	0.84	26,989	413.27	0.82	0.41	0.41
10.00	1.35	27,078	413.28	1.33	0.66	0.66
11.00	2.56	27,213	413.30	2.49	1.25	1.25
12.00	**20.18**	**28,402**	**413.44**	**18.28**	**9.14**	**9.14**
13.00	**3.82**	**27,379**	**413.32**	**3.94**	**1.97**	**1.97**
14.00	1.96	27,153	413.29	1.98	0.99	0.99
15.00	1.34	27,082	413.28	1.36	0.68	0.68
16.00	1.10	27,053	413.28	1.11	0.56	0.56
17.00	0.93	27,015	413.28	0.94	0.47	0.47
18.00	0.75	26,975	413.27	0.76	0.38	0.38
19.00	0.69	26,959	413.27	0.69	0.34	0.34
20.00	0.64	26,950	413.27	0.65	0.32	0.32
21.00	0.60	26,940	413.27	0.60	0.30	0.30
22.00	0.55	26,930	413.27	0.56	0.28	0.28
23.00	0.51	26,920	413.26	0.51	0.26	0.26
24.00	0.47	26,910	413.26	0.47	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

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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

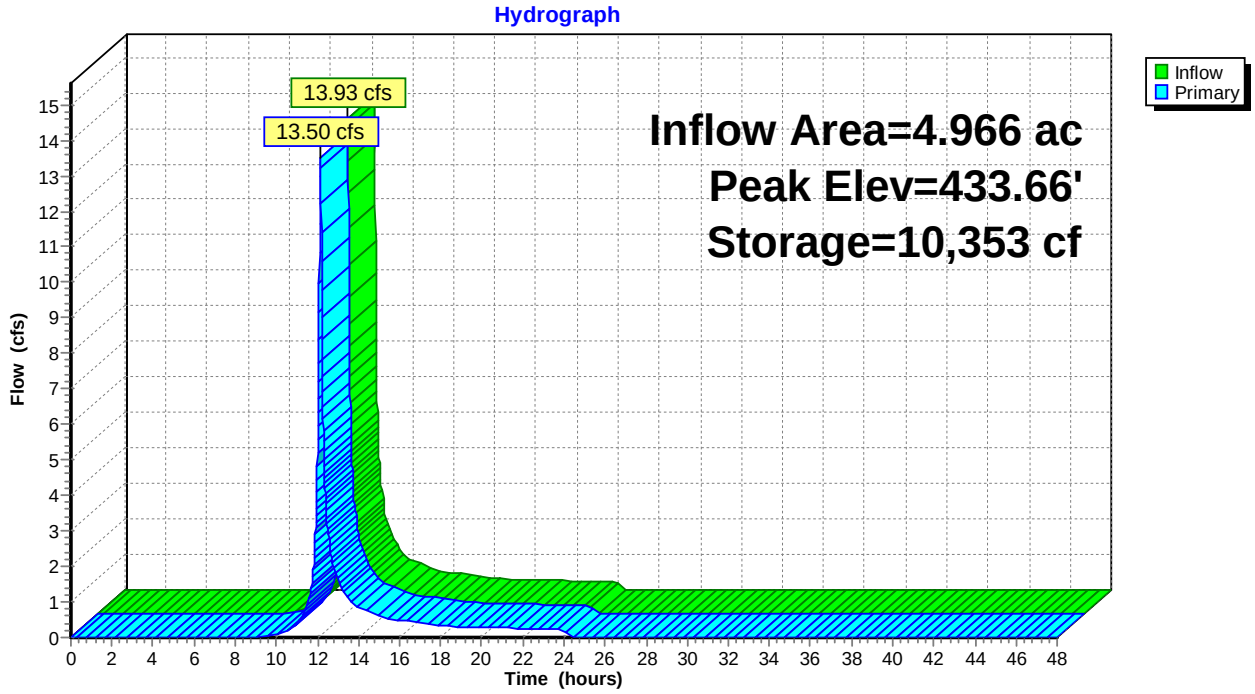
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
431.00	2,415	0	0
435.00	5,362	15,554	15,554

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)

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Pond 39P: FB 5A



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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

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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)

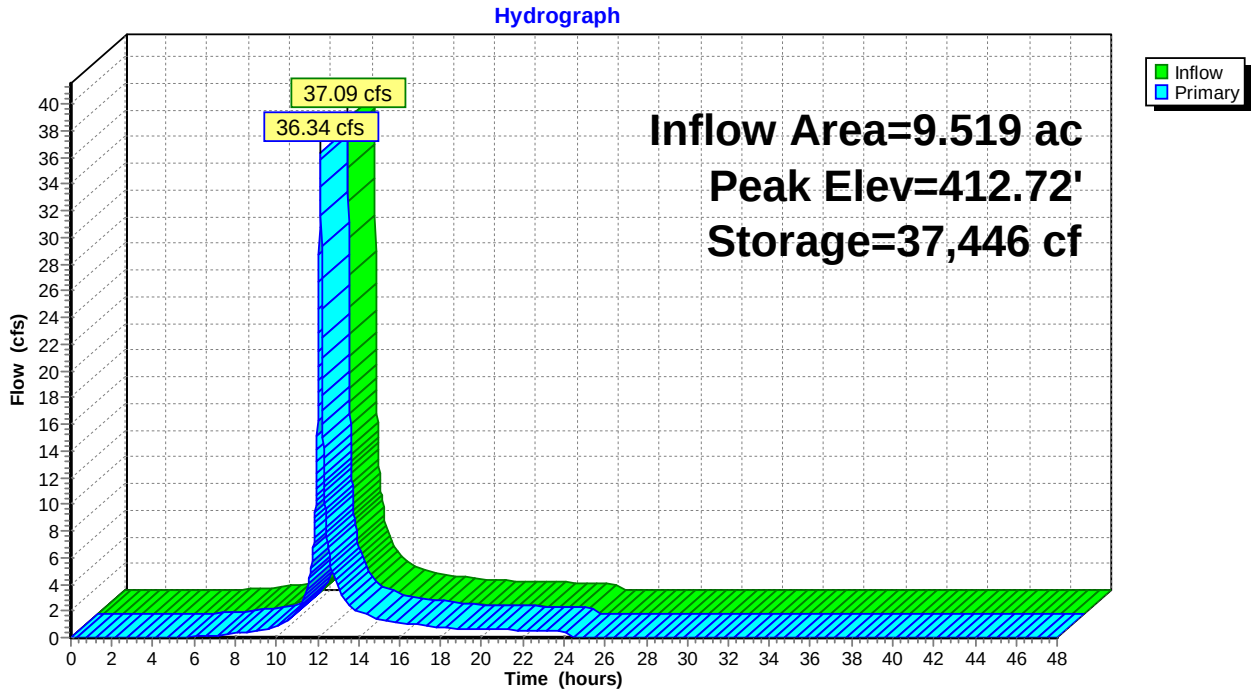
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	47,613 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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

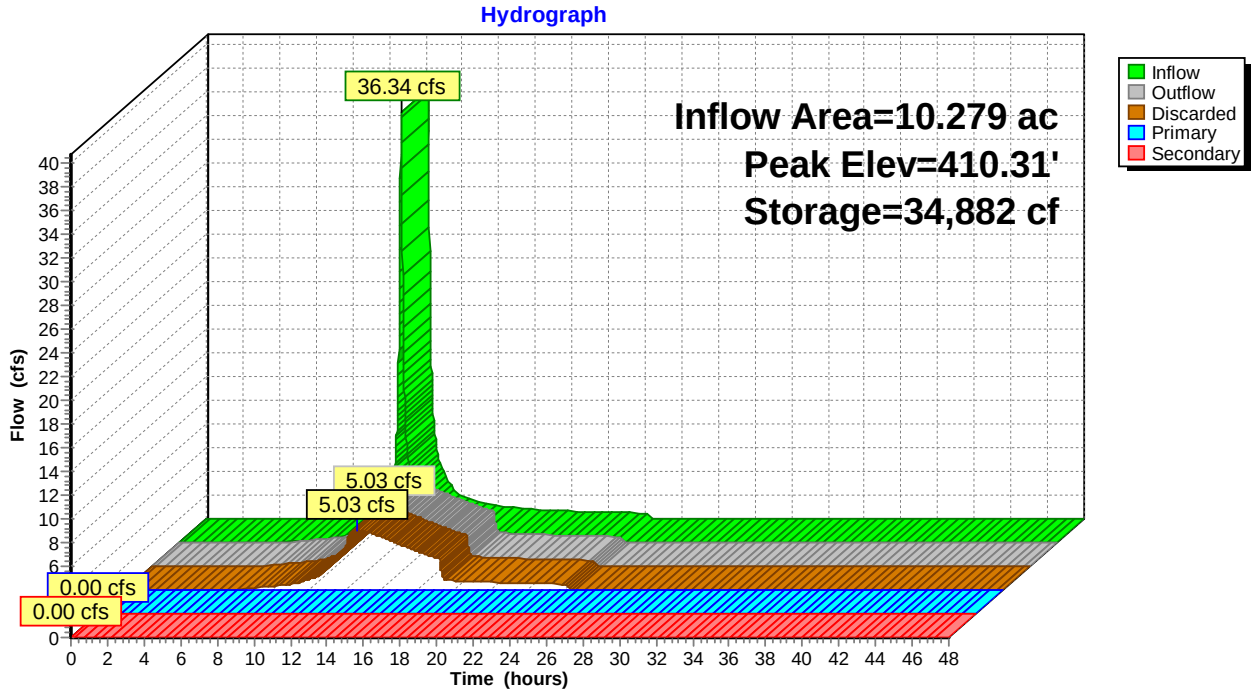
Discarded OutFlow Max=5.03 cfs @ 12.70 hrs HW=410.31' (Free Discharge)
3=Exfiltration (Controls 5.03 cfs)

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)

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Pond 45P: INFIL 1B



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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

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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

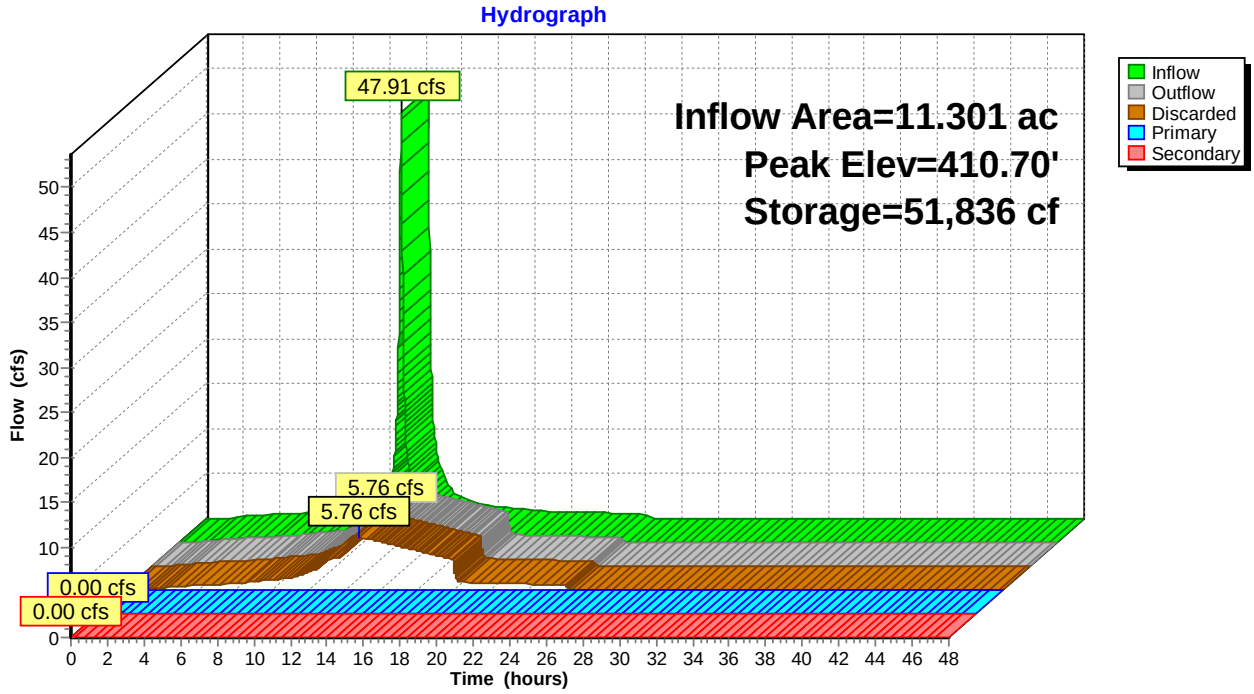
Discarded OutFlow Max=5.76 cfs @ 12.79 hrs HW=410.70' (Free Discharge)
└**3=Exfiltration** (Controls 5.76 cfs)

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)

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Pond 47P: INFIL 1H



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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

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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)

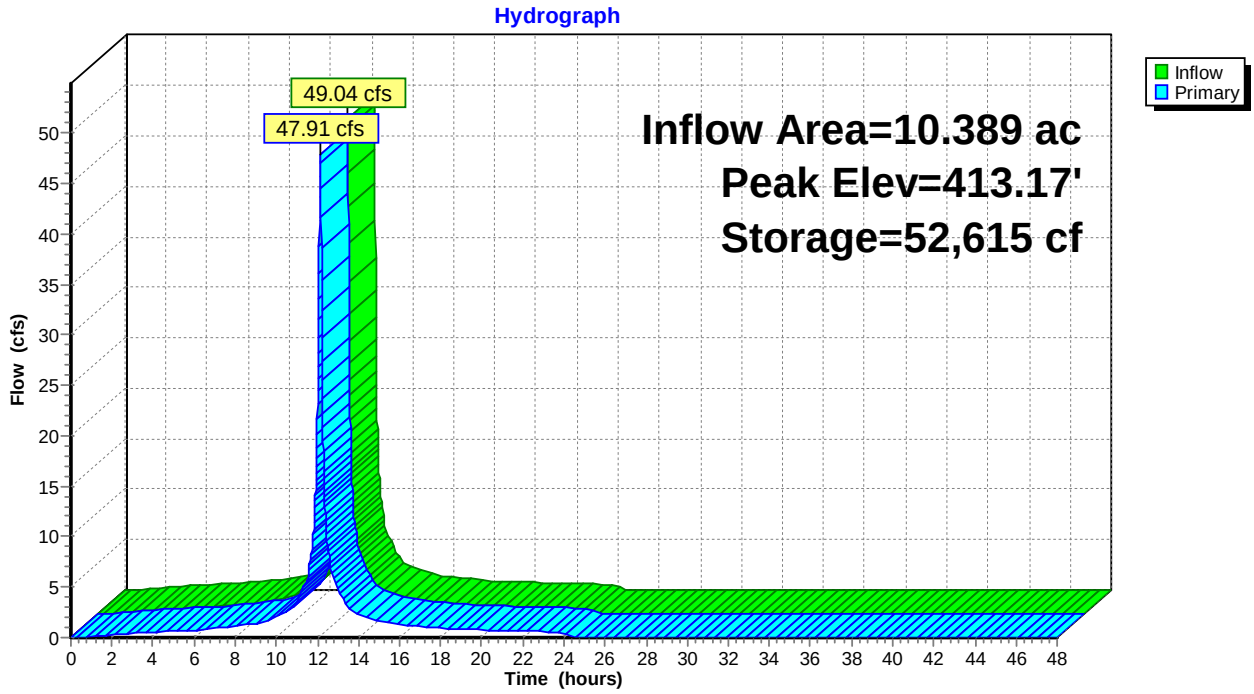
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,056 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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Summary for Pond 53P: Bioretention J basin

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 22.91" for 10-Year event
Inflow = 19.95 cfs @ 12.14 hrs, Volume= 1.489 af
Outflow = 1.56 cfs @ 13.33 hrs, Volume= 0.768 af, Atten= 92%, Lag= 71.2 min
Primary = 1.56 cfs @ 13.33 hrs, Volume= 0.768 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= 411.85' @ 13.33 hrs Surf.Area= 26,842 sf Storage= 40,999 cf

Plug-Flow detention time= 408.7 min calculated for 0.767 af (52% of inflow)
Center-of-Mass det. time= 272.2 min (1,056.0 - 783.9)

Volume	Invert	Avail.Storage	Storage Description
#1	407.83'	72,373 cf	**Custom Stage Data (Prismatic)** Listed below

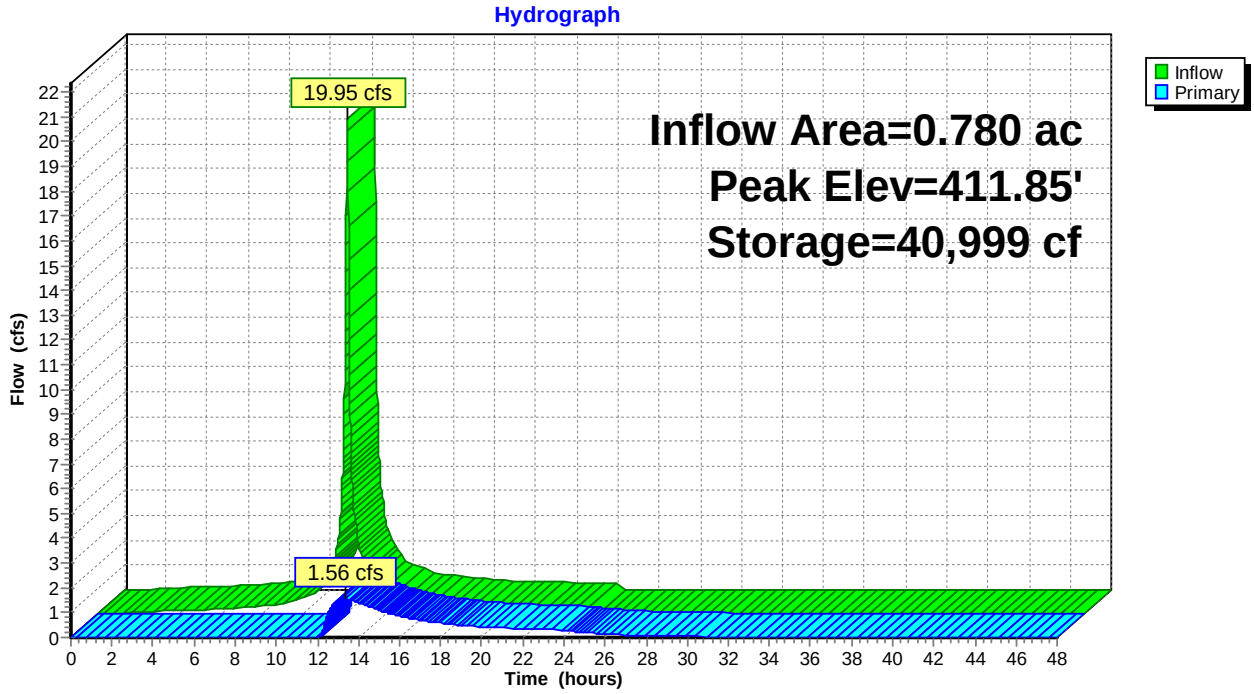
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	24,200	0.0	0	0
408.33	24,200	40.0	4,840	4,840
411.00	24,200	20.0	12,923	17,763
413.00	30,410	100.0	54,610	72,373

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	411.50'	**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=1.56 cfs @ 13.33 hrs HW=411.85' (Free Discharge)
└**1=Culvert** (Passes 1.56 cfs of 6.62 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 1.56 cfs @ 1.90 fps)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 53P: Bioretention J basin



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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	2	407.83	0.00
2.00	0.07	147	407.85	0.00
3.00	0.11	467	407.88	0.00
4.00	0.14	911	407.92	0.00
5.00	0.16	1,453	407.98	0.00
6.00	0.18	2,075	408.04	0.00
7.00	0.24	2,830	408.12	0.00
8.00	0.32	3,849	408.23	0.00
9.00	0.41	5,171	408.40	0.00
10.00	0.66	7,066	408.79	0.00
11.00	1.25	10,198	409.44	0.00
12.00	**9.26**	20,257	411.09	0.00
13.00	**2.08**	**40,697**	**411.84**	**1.48**
14.00	1.05	**40,362**	**411.83**	**1.41**
15.00	0.73	39,038	411.78	1.10
16.00	0.59	37,847	411.74	0.86
17.00	0.50	37,035	411.71	0.70
18.00	0.41	36,364	411.68	0.58
19.00	0.37	35,828	411.66	0.49
20.00	0.35	35,475	411.65	0.43
21.00	0.32	35,202	411.64	0.39
22.00	0.30	34,974	411.63	0.36
23.00	0.28	34,772	411.62	0.33
24.00	0.25	34,585	411.62	0.30
25.00	0.00	33,817	411.59	0.20
26.00	0.00	33,218	411.57	0.14
27.00	0.00	32,803	411.55	0.10
28.00	0.00	32,516	411.54	0.07
29.00	0.00	32,317	411.53	0.05
30.00	0.00	32,171	411.53	0.04
31.00	0.00	32,048	411.52	0.03
32.00	0.00	31,946	411.52	0.03
33.00	0.00	31,860	411.52	0.02
34.00	0.00	31,788	411.51	0.02
35.00	0.00	31,728	411.51	0.02
36.00	0.00	31,677	411.51	0.01
37.00	0.00	31,635	411.51	0.01
38.00	0.00	31,599	411.51	0.01
39.00	0.00	31,569	411.51	0.01
40.00	0.00	31,544	411.50	0.01
41.00	0.00	31,523	411.50	0.01
42.00	0.00	31,506	411.50	0.00
43.00	0.00	31,491	411.50	0.00
44.00	0.00	31,479	411.50	0.00
45.00	0.00	31,469	411.50	0.00
46.00	0.00	31,460	411.50	0.00
47.00	0.00	31,453	411.50	0.00
48.00	0.00	31,447	411.50	0.00

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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
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= 410.71' @ 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	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	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

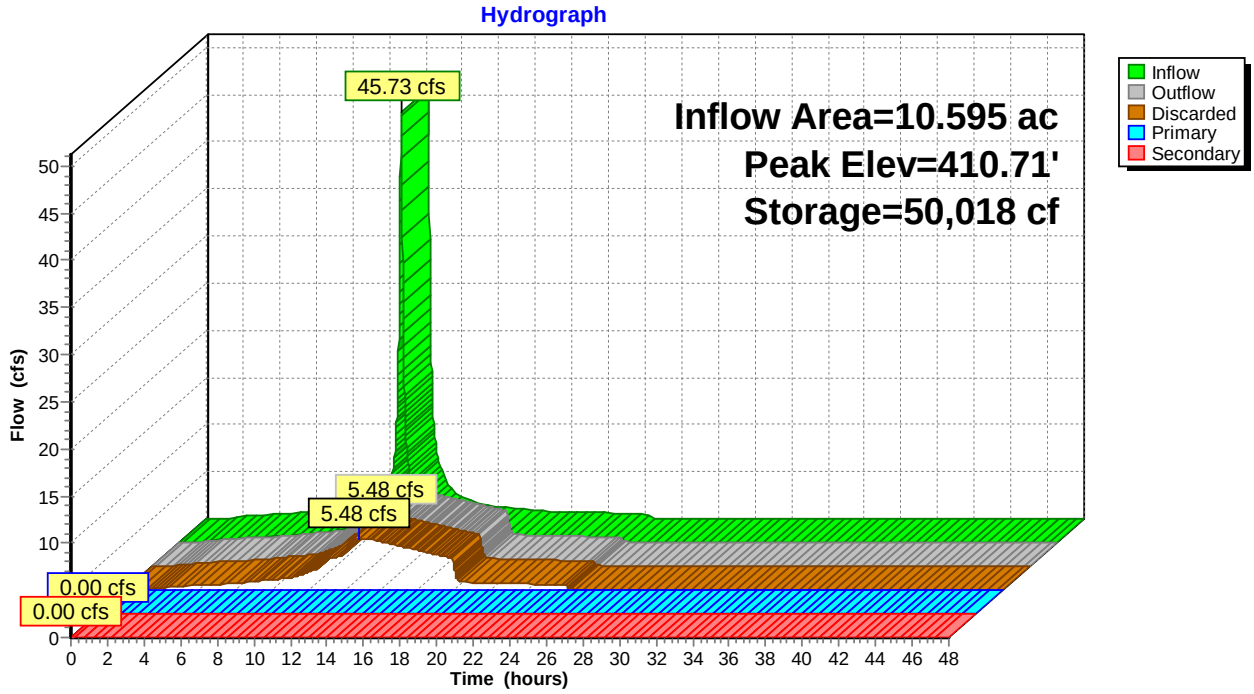
Discarded OutFlow Max=5.48 cfs @ 12.82 hrs HW=410.71' (Free Discharge)
└**3=Exfiltration** (Controls 5.48 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
└**4=Culvert** (Controls 0.00 cfs)
└**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)

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Pond 54P: INFIL 1G



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Hydrograph for Pond 54P: INFIL 1G

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	0.02	2	408.50	0.01	0.01	0.00	0.00
2.00	0.26	80	408.50	0.24	0.24	0.00	0.00
3.00	0.41	133	408.51	0.40	0.40	0.00	0.00
4.00	0.53	173	408.51	0.52	0.52	0.00	0.00
5.00	0.62	205	408.51	0.61	0.61	0.00	0.00
6.00	0.70	232	408.51	0.69	0.69	0.00	0.00
7.00	0.89	293	408.51	0.87	0.87	0.00	0.00
8.00	1.11	364	408.52	1.09	1.09	0.00	0.00
9.00	1.32	436	408.52	1.30	1.30	0.00	0.00
10.00	1.97	638	408.53	1.90	1.90	0.00	0.00
11.00	3.46	1,080	408.55	3.22	3.22	0.00	0.00
12.00	**21.65**	**14,164**	**409.17**	**3.95**	**3.95**	0.00	0.00
13.00	**4.65**	**49,750**	**410.70**	**5.47**	**5.47**	0.00	0.00
14.00	2.31	41,848	410.37	5.14	5.14	0.00	0.00
15.00	1.59	31,175	409.92	4.69	4.69	0.00	0.00
16.00	1.28	20,188	409.44	4.21	4.21	0.00	0.00
17.00	1.08	10,074	408.98	3.77	3.77	0.00	0.00
18.00	0.87	836	408.54	2.49	2.49	0.00	0.00
19.00	0.79	266	408.51	0.79	0.79	0.00	0.00
20.00	0.74	249	408.51	0.74	0.74	0.00	0.00
21.00	0.69	232	408.51	0.69	0.69	0.00	0.00
22.00	0.64	215	408.51	0.64	0.64	0.00	0.00
23.00	0.58	197	408.51	0.59	0.59	0.00	0.00
24.00	0.53	180	408.51	0.54	0.54	0.00	0.00
25.00	0.00	2	408.50	0.01	0.01	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

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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)

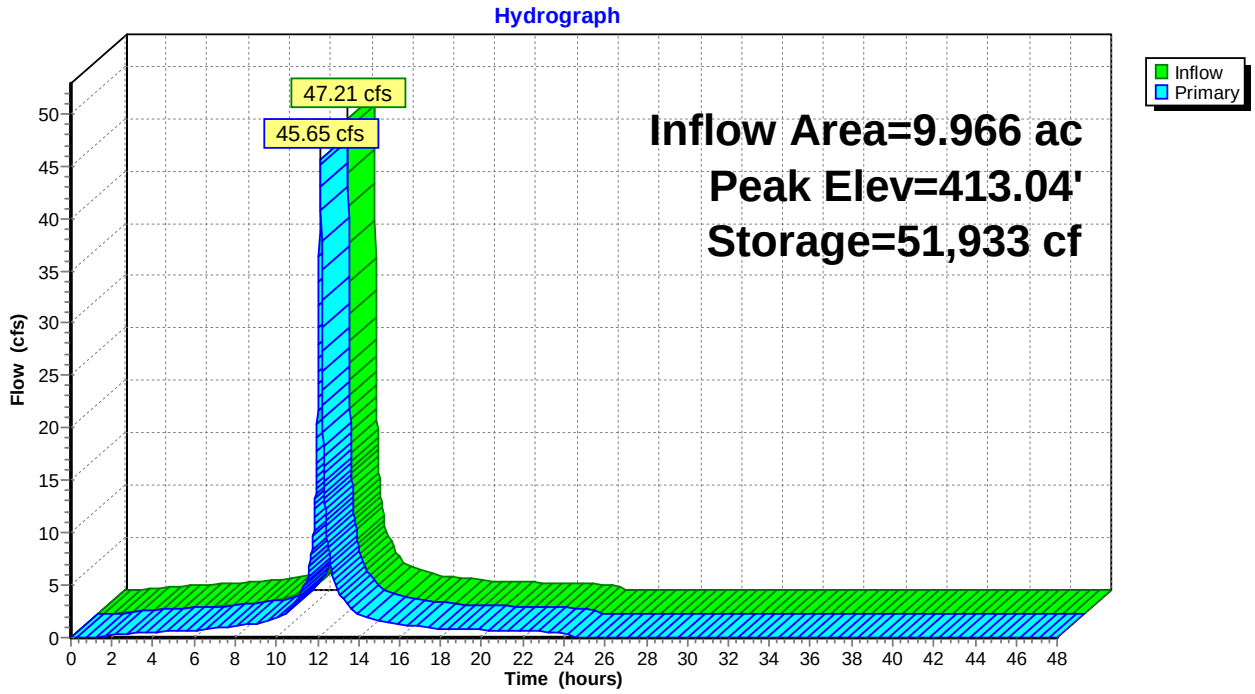
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,884 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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)

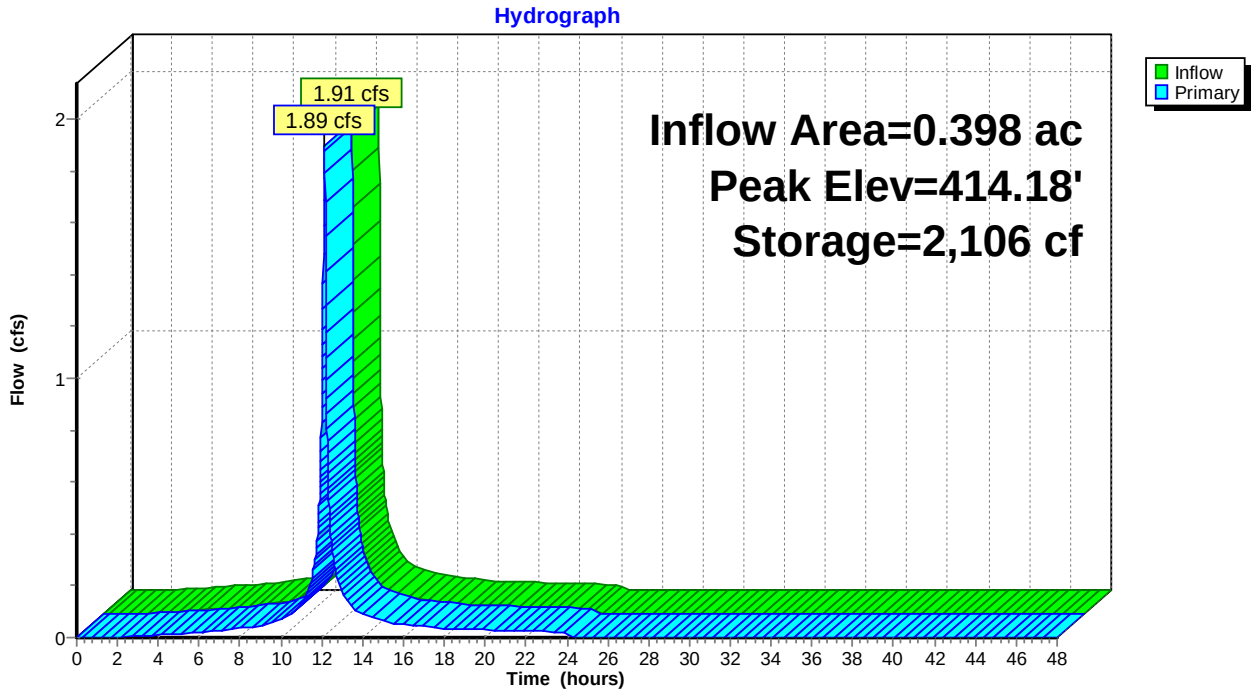
Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	3,024 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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)

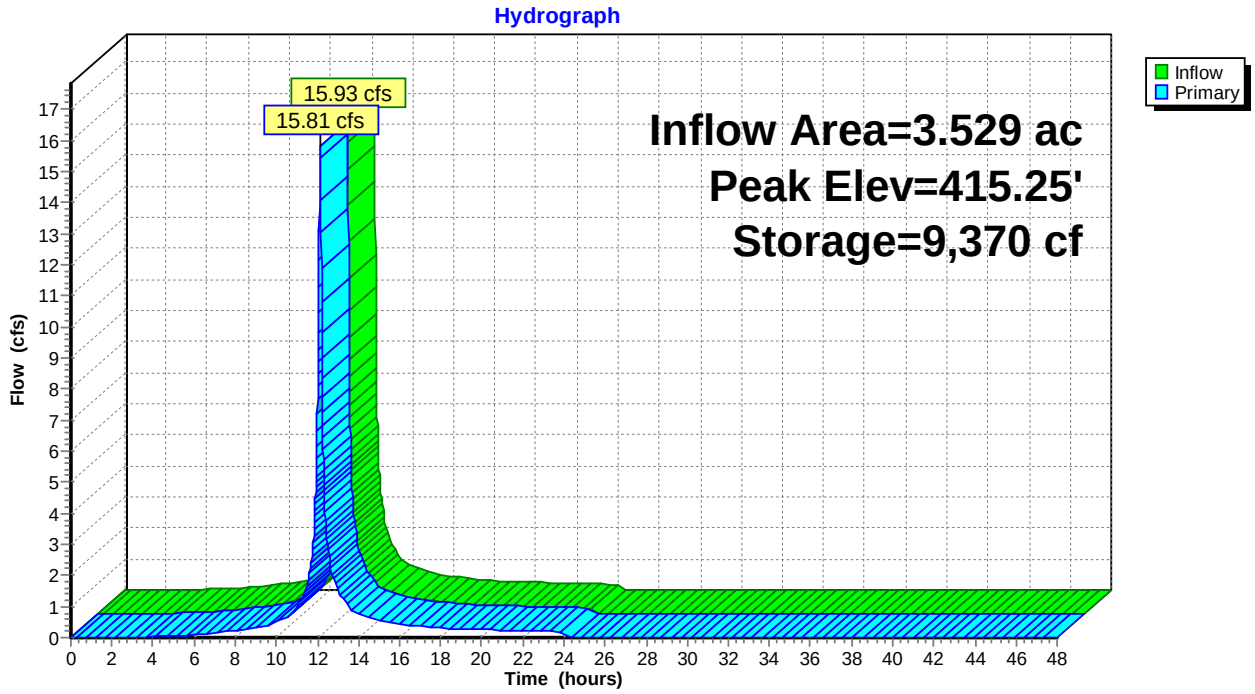
Volume	Invert	Avail.Storage	Storage Description
#1	411.00'	11,023 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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Summary for Pond 63P: Det Pond 1K

Inflow Area = 17.176 ac, 66.33% Impervious, Inflow Depth > 1.64" for 10-Year event
Inflow = 5.75 cfs @ 13.05 hrs, Volume= 2.342 af
Outflow = 4.53 cfs @ 13.94 hrs, Volume= 2.335 af, Atten= 21%, Lag= 53.7 min
Primary = 4.53 cfs @ 13.94 hrs, Volume= 2.335 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= 409.52' @ 13.94 hrs Surf.Area= 9,484 sf Storage= 13,934 cf

Plug-Flow detention time= 99.1 min calculated for 2.334 af (100% of inflow)
Center-of-Mass det. time= 95.2 min (1,117.0 - 1,021.8)

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

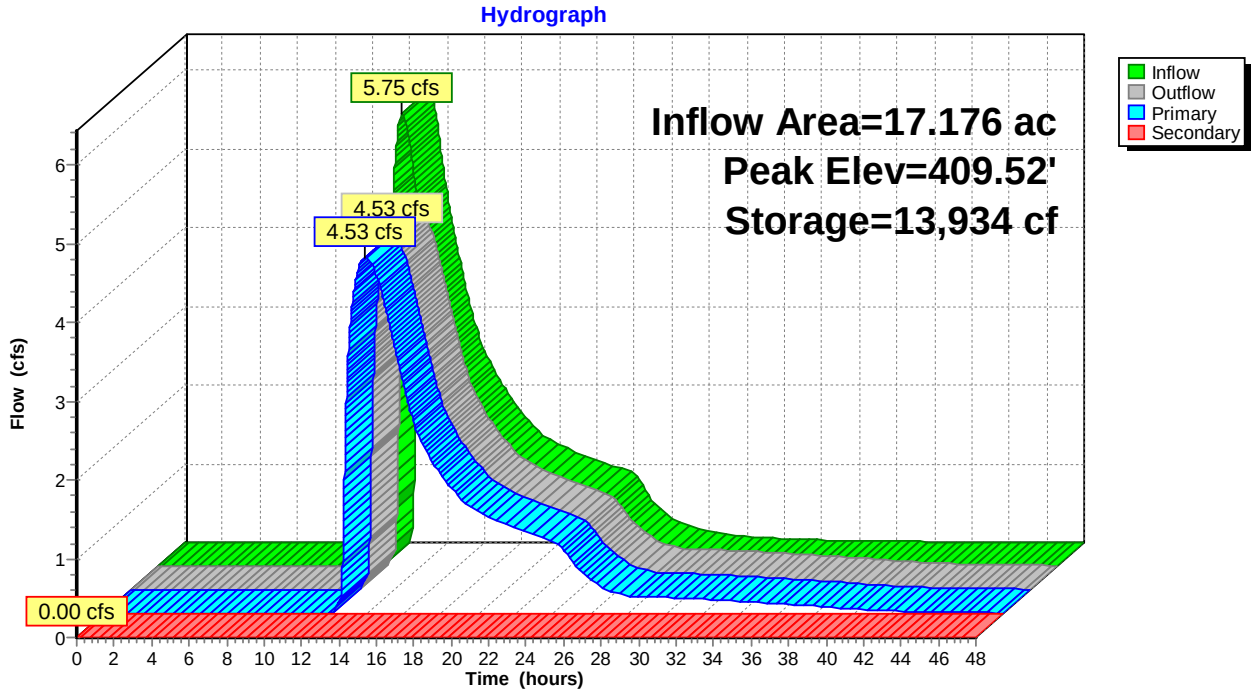
Device	Routing	Invert	Outlet Devices
#1	Primary	407.50'	**24.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.50' / 406.00' S= 0.0037 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	407.50'	**3.0" Vert. Orifice/Grate** 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=4.53 cfs @ 13.94 hrs HW=409.52' (Free Discharge)
└**1=Culvert** (Passes 4.53 cfs of 12.52 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.33 cfs @ 6.63 fps)
├**3=Orifice/Grate** (Orifice Controls 4.20 cfs @ 4.20 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)

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Pond 63P: Det Pond 1K



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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	**5.74**	**10,069**	**409.09**	**3.00**	**3.00**	0.00
14.00	**4.44**	**13,925**	**409.52**	**4.53**	**4.53**	0.00
15.00	3.24	12,153	409.33	3.93	3.93	0.00
16.00	2.44	9,892	409.07	2.90	2.90	0.00
17.00	1.99	8,881	408.94	2.16	2.16	0.00
18.00	1.65	8,388	408.88	1.77	1.77	0.00
19.00	1.39	8,005	408.83	1.48	1.48	0.00
20.00	1.24	7,752	408.80	1.30	1.30	0.00
21.00	1.13	7,575	408.77	1.18	1.18	0.00
22.00	1.05	7,431	408.75	1.08	1.08	0.00
23.00	0.97	7,310	408.74	1.00	1.00	0.00
24.00	0.89	7,191	408.72	0.93	0.93	0.00
25.00	0.52	6,764	408.66	0.67	0.67	0.00
26.00	0.31	6,275	408.60	0.43	0.43	0.00
27.00	0.21	5,907	408.54	0.29	0.29	0.00
28.00	0.14	5,605	408.50	0.22	0.22	0.00
29.00	0.10	5,256	408.45	0.21	0.21	0.00
30.00	0.08	4,825	408.39	0.21	0.21	0.00
31.00	0.06	4,359	408.31	0.20	0.20	0.00
32.00	0.05	3,880	408.24	0.18	0.18	0.00
33.00	0.04	3,402	408.16	0.17	0.17	0.00
34.00	0.03	2,937	408.08	0.16	0.16	0.00
35.00	0.03	2,496	408.00	0.15	0.15	0.00
36.00	0.02	2,087	407.93	0.13	0.13	0.00
37.00	0.02	1,718	407.86	0.11	0.11	0.00
38.00	0.01	1,394	407.80	0.10	0.10	0.00
39.00	0.01	1,120	407.74	0.08	0.08	0.00
40.00	0.01	903	407.70	0.06	0.06	0.00
41.00	0.01	738	407.66	0.05	0.05	0.00
42.00	0.01	618	407.64	0.04	0.04	0.00
43.00	0.01	528	407.62	0.03	0.03	0.00
44.00	0.00	457	407.60	0.02	0.02	0.00
45.00	0.00	400	407.59	0.02	0.02	0.00
46.00	0.00	355	407.58	0.01	0.01	0.00
47.00	0.00	319	407.57	0.01	0.01	0.00
48.00	0.00	290	407.57	0.01	0.01	0.00

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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 = 1.19 cfs @ 12.48 hrs, Volume= 0.231 af, Atten= 78%, Lag= 21.0 min
Primary = 1.19 cfs @ 12.48 hrs, Volume= 0.231 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= 440.09' @ 12.48 hrs Surf.Area= 5,627 sf Storage= 6,204 cf

Plug-Flow detention time= 215.1 min calculated for 0.231 af (64% of inflow)
Center-of-Mass det. time= 92.7 min (957.4 - 864.6)

Volume	Invert	Avail.Storage	Storage Description
#1	436.17'	16,639 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

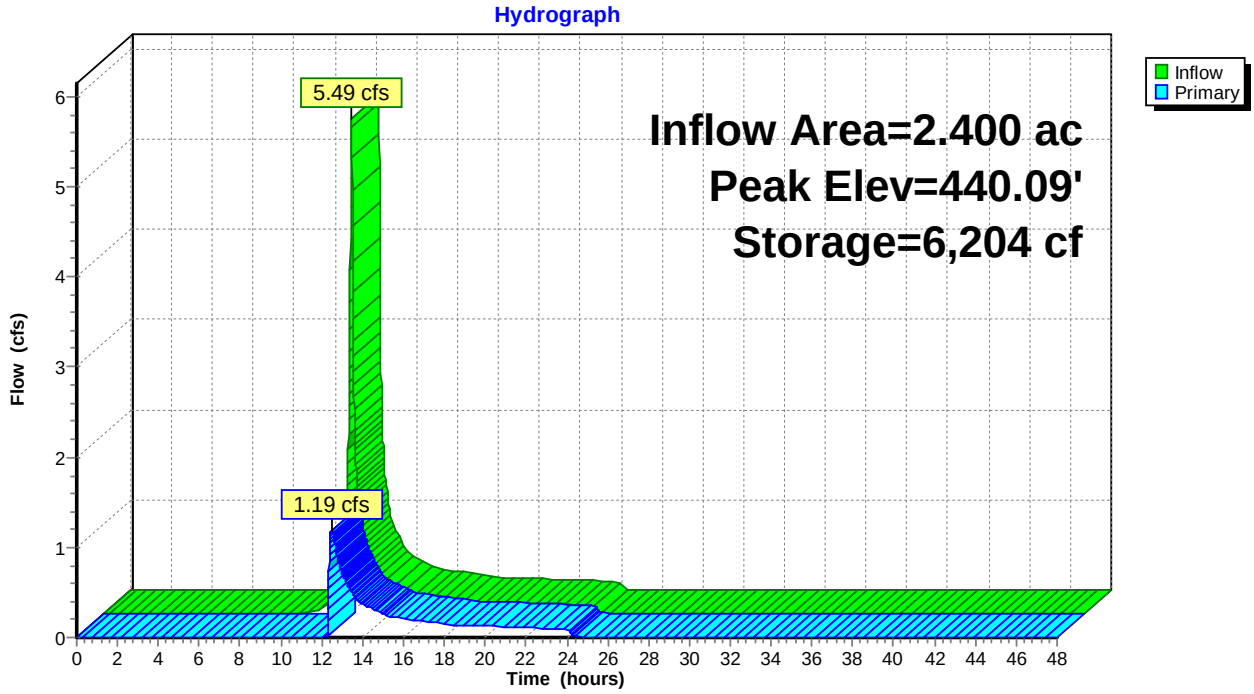
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
436.17	4,171	0.0	0	0
436.83	4,171	40.0	1,101	1,101
439.50	4,171	20.0	2,227	3,328
441.00	7,892	100.0	9,047	12,376
441.50	9,160	100.0	4,263	16,639

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	440.00'	**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=1.15 cfs @ 12.48 hrs HW=440.09' (Free Discharge)
↑—**1=Culvert** (Passes 1.15 cfs of 15.14 cfs potential flow)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 1.15 cfs @ 0.83 fps)

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Pond B4B: Bioretention 4A



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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**	**6,070**	**440.06**	**0.71**
14.00	0.35	5,919	440.04	0.37
15.00	0.25	5,871	440.03	0.26
16.00	0.21	5,848	440.02	0.21
17.00	0.18	5,834	440.02	0.18
18.00	0.14	5,819	440.02	0.15
19.00	0.13	5,813	440.02	0.13
20.00	0.12	5,809	440.02	0.13
21.00	0.12	5,806	440.01	0.12
22.00	0.11	5,802	440.01	0.11
23.00	0.10	5,798	440.01	0.10
24.00	0.09	5,794	440.01	0.09
25.00	0.00	5,730	440.00	0.00
26.00	0.00	5,724	440.00	0.00
27.00	0.00	5,724	440.00	0.00
28.00	0.00	5,724	440.00	0.00
29.00	0.00	5,724	440.00	0.00
30.00	0.00	5,724	440.00	0.00
31.00	0.00	5,724	440.00	0.00
32.00	0.00	5,724	440.00	0.00
33.00	0.00	5,724	440.00	0.00
34.00	0.00	5,724	440.00	0.00
35.00	0.00	5,724	440.00	0.00
36.00	0.00	5,724	440.00	0.00
37.00	0.00	5,724	440.00	0.00
38.00	0.00	5,724	440.00	0.00
39.00	0.00	5,724	440.00	0.00
40.00	0.00	5,724	440.00	0.00
41.00	0.00	5,724	440.00	0.00
42.00	0.00	5,724	440.00	0.00
43.00	0.00	5,724	440.00	0.00
44.00	0.00	5,724	440.00	0.00
45.00	0.00	5,724	440.00	0.00
46.00	0.00	5,724	440.00	0.00
47.00	0.00	5,724	440.00	0.00
48.00	0.00	5,724	440.00	0.00

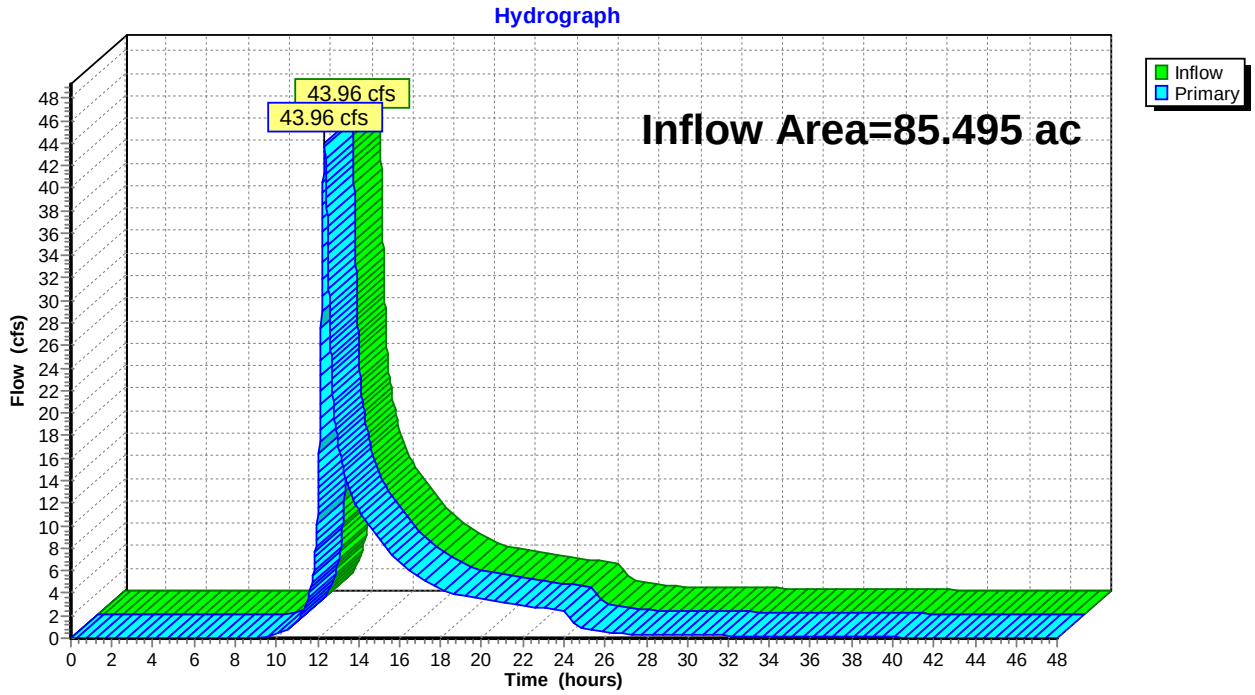
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Summary for Link 29L: DP-1

Inflow Area = 85.495 ac, 51.65% Impervious, Inflow Depth > 1.16" for 10-Year event
Inflow = 43.96 cfs @ 12.35 hrs, Volume= 8.251 af
Primary = 43.96 cfs @ 12.35 hrs, Volume= 8.251 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



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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	0.25	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	0.22	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	0.15	0.00	0.15
8.00	0.00	0.00	0.00	37.00	0.14	0.00	0.14
8.50	0.00	0.00	0.00	37.50	0.13	0.00	0.13
9.00	0.00	0.00	0.00	38.00	0.12	0.00	0.12
9.50	0.11	0.00	0.11	38.50	0.11	0.00	0.11
10.00	0.37	0.00	0.37	39.00	0.10	0.00	0.10
10.50	0.76	0.00	0.76	39.50	0.09	0.00	0.09
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	**35.79**	0.00	**35.79**	41.50	0.05	0.00	0.05
13.00	17.38	0.00	17.38	42.00	0.05	0.00	0.05
13.50	13.53	0.00	13.53	42.50	0.04	0.00	0.04
14.00	11.36	0.00	11.36	43.00	0.04	0.00	0.04
14.50	10.16	0.00	10.16	43.50	0.03	0.00	0.03
15.00	8.88	0.00	8.88	44.00	0.03	0.00	0.03
15.50	7.60	0.00	7.60	44.50	0.03	0.00	0.03
16.00	6.73	0.00	6.73	45.00	0.03	0.00	0.03
16.50	5.98	0.00	5.98	45.50	0.02	0.00	0.02
17.00	5.38	0.00	5.38	46.00	0.02	0.00	0.02
17.50	4.88	0.00	4.88	46.50	0.02	0.00	0.02
18.00	4.42	0.00	4.42	47.00	0.02	0.00	0.02
18.50	4.03	0.00	4.03	47.50	0.02	0.00	0.02
19.00	3.79	0.00	3.79	48.00	0.02	0.00	0.02
19.50	3.60	0.00	3.60				
20.00	3.44	0.00	3.44				
20.50	3.30	0.00	3.30				
21.00	3.16	0.00	3.16				
21.50	3.04	0.00	3.04				
22.00	2.92	0.00	2.92				
22.50	2.81	0.00	2.81				
23.00	2.69	0.00	2.69				
23.50	2.58	0.00	2.58				
24.00	2.48	0.00	2.48				
24.50	1.29	0.00	1.29				
25.00	0.88	0.00	0.88				
25.50	0.71	0.00	0.71				
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	0.30	0.00	0.30				

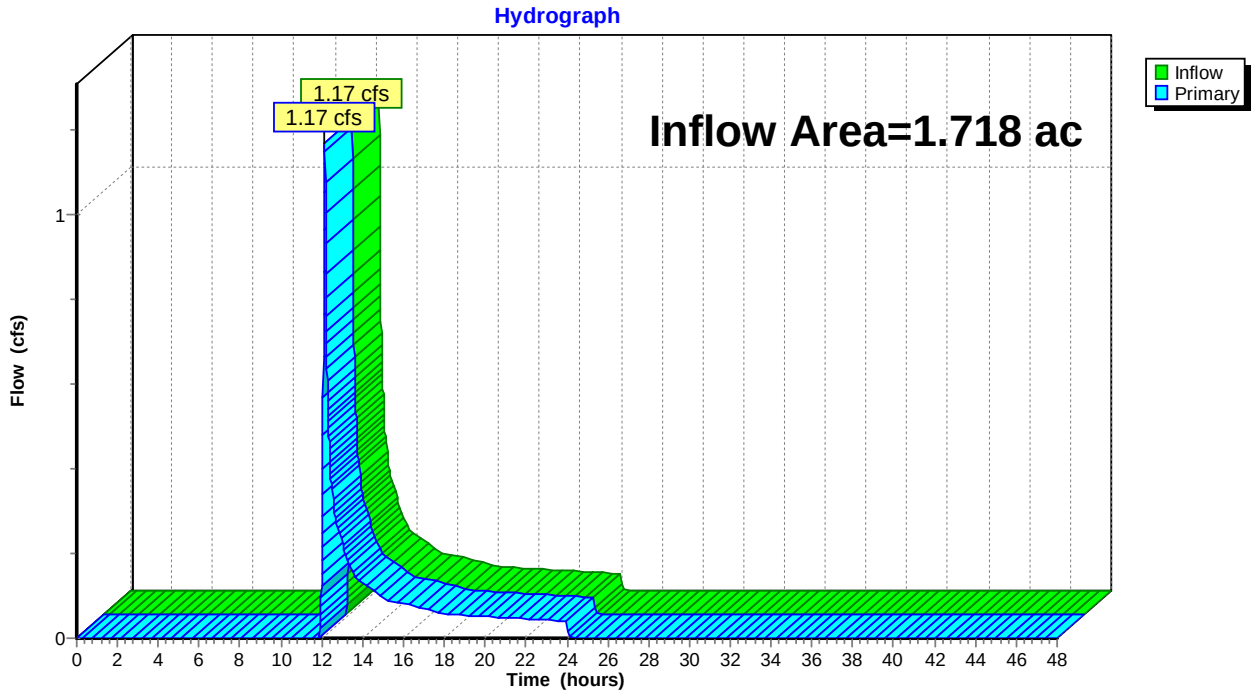
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Summary for Link 30L: DP-2

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



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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				

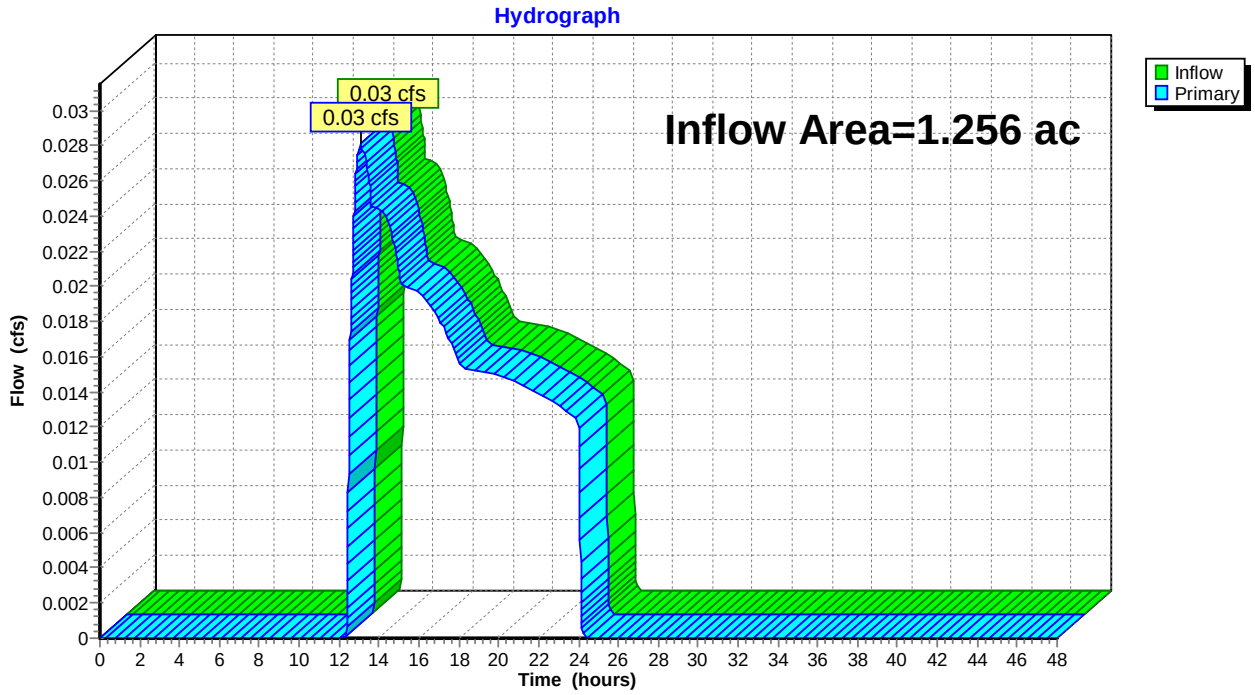
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Summary for Link 31L: DP-3

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



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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				

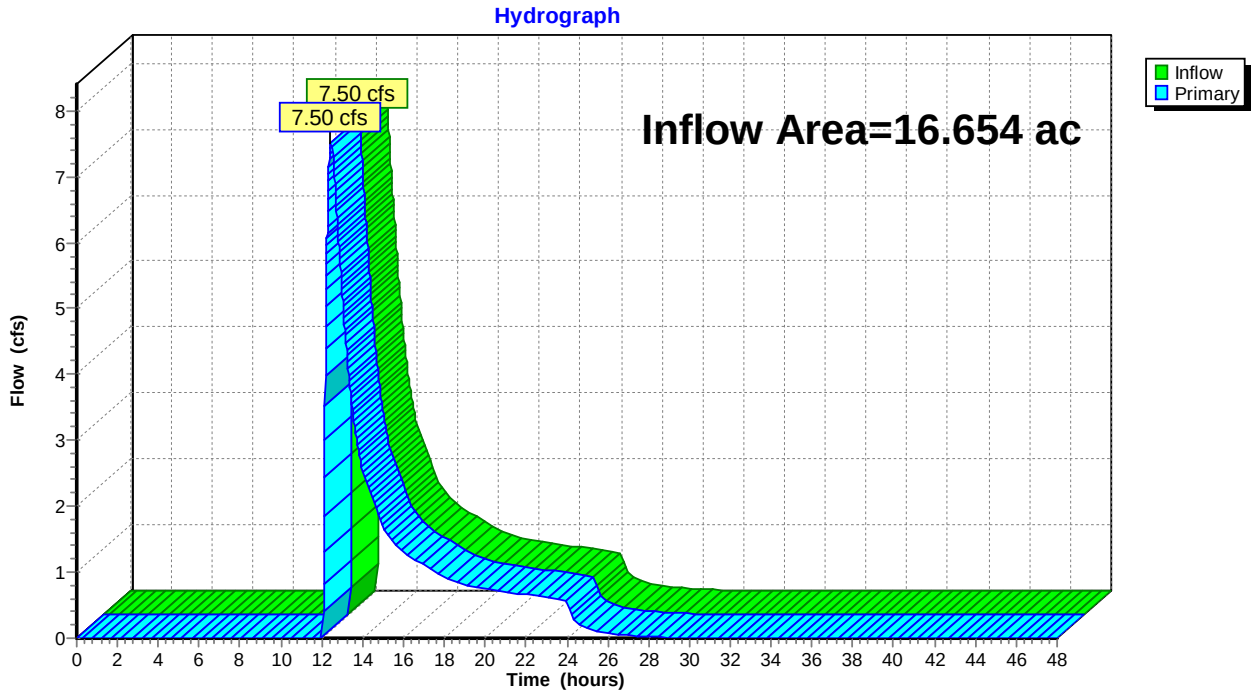
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Summary for Link 32L: DP-4

Inflow Area = 16.654 ac, 29.61% Impervious, Inflow Depth = 1.17" for 10-Year event
Inflow = 7.50 cfs @ 12.44 hrs, Volume= 1.631 af
Primary = 7.50 cfs @ 12.44 hrs, Volume= 1.631 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



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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	**7.46**	0.00	**7.46**	41.50	0.00	0.00	0.00
13.00	5.22	0.00	5.22	42.00	0.00	0.00	0.00
13.50	3.50	0.00	3.50	42.50	0.00	0.00	0.00
14.00	2.55	0.00	2.55	43.00	0.00	0.00	0.00
14.50	2.08	0.00	2.08	43.50	0.00	0.00	0.00
15.00	1.71	0.00	1.71	44.00	0.00	0.00	0.00
15.50	1.47	0.00	1.47	44.50	0.00	0.00	0.00
16.00	1.32	0.00	1.32	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	1.01	0.00	1.01	46.50	0.00	0.00	0.00
18.00	0.92	0.00	0.92	47.00	0.00	0.00	0.00
18.50	0.85	0.00	0.85	47.50	0.00	0.00	0.00
19.00	0.81	0.00	0.81	48.00	0.00	0.00	0.00
19.50	0.78	0.00	0.78				
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	0.23	0.00	0.23				
25.00	0.14	0.00	0.14				
25.50	0.10	0.00	0.10				
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				

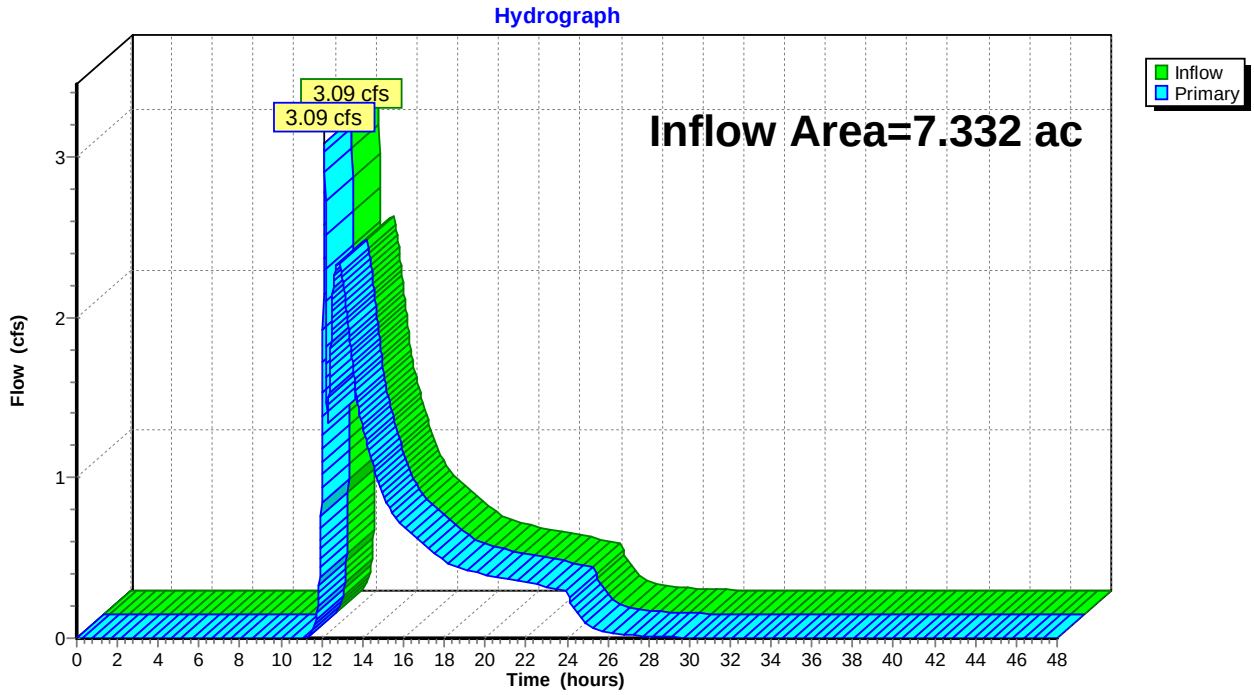
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Summary for Link PDP5: PDP5

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



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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				

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Summary for Subcatchment 6S: PDA-1J

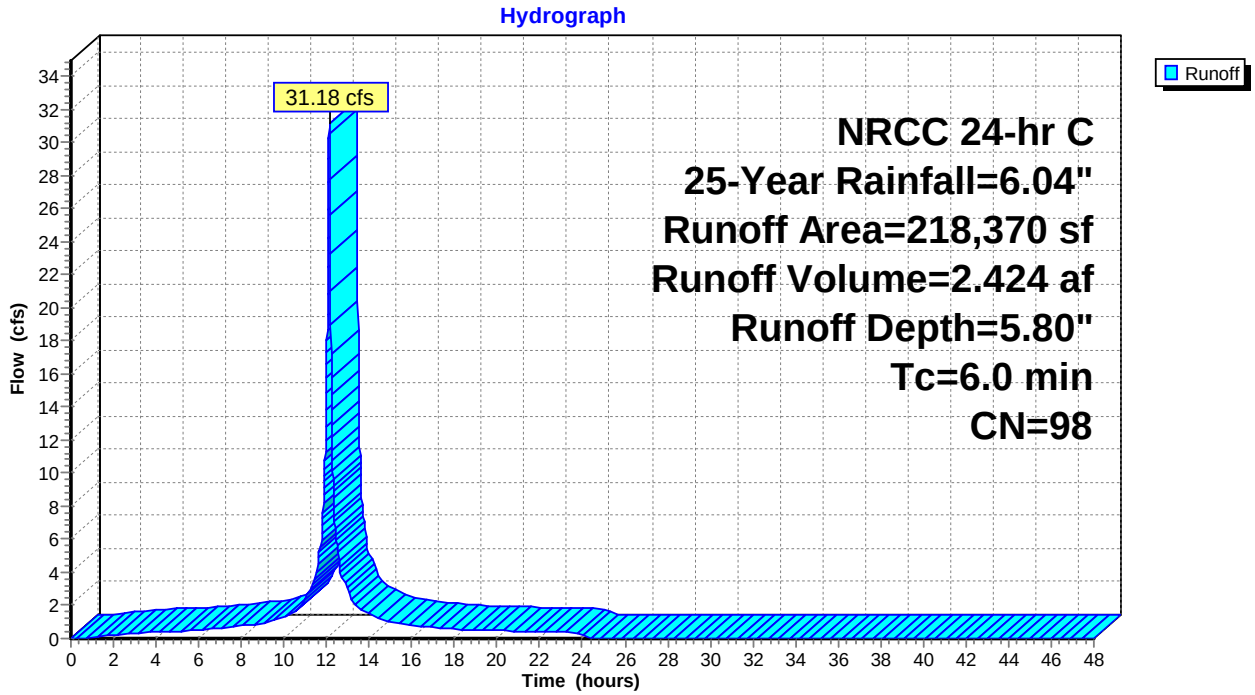
Runoff = 31.18 cfs @ 12.13 hrs, Volume= 2.424 af, Depth= 5.80"
Routed to Pond 37P : FB 1i+J

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

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

Subcatchment 6S: PDA-1J



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Hydrograph for Subcatchment 6S: PDA-1J

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.07
1.50	0.11	0.02	0.15
2.00	0.15	0.04	0.22
2.50	0.19	0.06	0.27
3.00	0.23	0.09	0.31
3.50	0.27	0.12	0.35
4.00	0.32	0.16	0.38
4.50	0.37	0.20	0.41
5.00	0.42	0.24	0.44
5.50	0.47	0.29	0.46
6.00	0.52	0.33	0.48
6.50	0.58	0.39	0.55
7.00	0.64	0.45	0.62
7.50	0.71	0.51	0.69
8.00	0.78	0.58	0.76
8.50	0.87	0.66	0.83
9.00	0.96	0.75	0.90
9.50	1.06	0.85	1.12
10.00	1.19	0.98	1.35
10.50	1.35	1.13	1.58
11.00	1.56	1.34	2.38
11.50	1.89	1.67	3.81
12.00	2.88	2.64	**16.64**
12.50	4.15	3.91	**5.47**
13.00	4.48	4.25	2.89
13.50	4.69	4.46	1.87
14.00	4.85	4.61	1.46
14.50	4.98	4.74	1.23
15.00	5.08	4.85	0.99
15.50	5.17	4.94	0.88
16.00	5.26	5.02	0.82
16.50	5.33	5.09	0.75
17.00	5.40	5.16	0.68
17.50	5.46	5.23	0.62
18.00	5.52	5.28	0.55
18.50	5.57	5.34	0.52
19.00	5.62	5.39	0.50
19.50	5.67	5.44	0.49
20.00	5.72	5.48	0.47
20.50	5.77	5.53	0.46
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	0.36
24.00	**6.04**	**5.80**	0.34
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
29.00	6.04	5.80	0.00
29.50	6.04	5.80	0.00
30.00	6.04	5.80	0.00
30.50	6.04	5.80	0.00
31.00	6.04	5.80	0.00
31.50	6.04	5.80	0.00
32.00	6.04	5.80	0.00
32.50	6.04	5.80	0.00
33.00	6.04	5.80	0.00
33.50	6.04	5.80	0.00
34.00	6.04	5.80	0.00
34.50	6.04	5.80	0.00
35.00	6.04	5.80	0.00
35.50	6.04	5.80	0.00
36.00	6.04	5.80	0.00
36.50	6.04	5.80	0.00
37.00	6.04	5.80	0.00
37.50	6.04	5.80	0.00
38.00	6.04	5.80	0.00
38.50	6.04	5.80	0.00
39.00	6.04	5.80	0.00
39.50	6.04	5.80	0.00
40.00	6.04	5.80	0.00
40.50	6.04	5.80	0.00
41.00	6.04	5.80	0.00
41.50	6.04	5.80	0.00
42.00	6.04	5.80	0.00
42.50	6.04	5.80	0.00
43.00	6.04	5.80	0.00
43.50	6.04	5.80	0.00
44.00	6.04	5.80	0.00
44.50	6.04	5.80	0.00
45.00	6.04	5.80	0.00
45.50	6.04	5.80	0.00
46.00	6.04	5.80	0.00
46.50	6.04	5.80	0.00
47.00	6.04	5.80	0.00
47.50	6.04	5.80	0.00
48.00	6.04	5.80	0.00

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Summary for Subcatchment 26S: PDA-1D

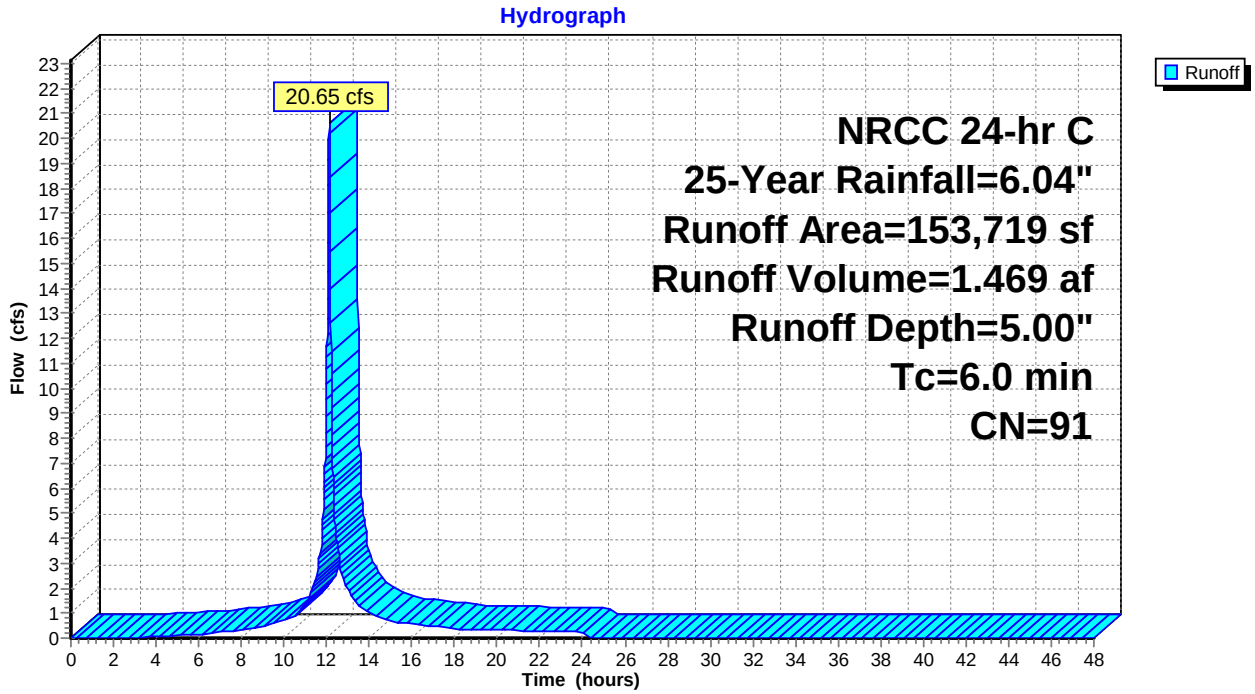
Runoff = 20.65 cfs @ 12.13 hrs, Volume= 1.469 af, Depth= 5.00"
Routed to Pond 60P : FB 1D

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



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Hydrograph for Subcatchment 26S: PDA-1D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.01
3.50	0.27	0.01	0.04
4.00	0.32	0.01	0.06
4.50	0.37	0.02	0.09
5.00	0.42	0.04	0.11
5.50	0.47	0.06	0.14
6.00	0.52	0.08	0.16
6.50	0.58	0.10	0.20
7.00	0.64	0.14	0.24
7.50	0.71	0.17	0.29
8.00	0.78	0.22	0.34
8.50	0.87	0.27	0.39
9.00	0.96	0.33	0.44
9.50	1.06	0.40	0.57
10.00	1.19	0.50	0.72
10.50	1.35	0.62	0.89
11.00	1.56	0.79	1.39
11.50	1.89	1.07	2.32
12.00	2.88	1.96	**10.75**
12.50	4.15	3.16	**3.70**
13.00	4.48	3.48	1.96
13.50	4.69	3.69	1.27
14.00	4.85	3.83	1.00
14.50	4.98	3.96	0.84
15.00	5.08	4.06	0.68
15.50	5.17	4.15	0.61
16.00	5.26	4.23	0.56
16.50	5.33	4.30	0.52
17.00	5.40	4.37	0.47
17.50	5.46	4.43	0.42
18.00	5.52	4.49	0.38
18.50	5.57	4.54	0.36
19.00	5.62	4.59	0.35
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
29.00	6.04	5.00	0.00
29.50	6.04	5.00	0.00
30.00	6.04	5.00	0.00
30.50	6.04	5.00	0.00
31.00	6.04	5.00	0.00
31.50	6.04	5.00	0.00
32.00	6.04	5.00	0.00
32.50	6.04	5.00	0.00
33.00	6.04	5.00	0.00
33.50	6.04	5.00	0.00
34.00	6.04	5.00	0.00
34.50	6.04	5.00	0.00
35.00	6.04	5.00	0.00
35.50	6.04	5.00	0.00
36.00	6.04	5.00	0.00
36.50	6.04	5.00	0.00
37.00	6.04	5.00	0.00
37.50	6.04	5.00	0.00
38.00	6.04	5.00	0.00
38.50	6.04	5.00	0.00
39.00	6.04	5.00	0.00
39.50	6.04	5.00	0.00
40.00	6.04	5.00	0.00
40.50	6.04	5.00	0.00
41.00	6.04	5.00	0.00
41.50	6.04	5.00	0.00
42.00	6.04	5.00	0.00
42.50	6.04	5.00	0.00
43.00	6.04	5.00	0.00
43.50	6.04	5.00	0.00
44.00	6.04	5.00	0.00
44.50	6.04	5.00	0.00
45.00	6.04	5.00	0.00
45.50	6.04	5.00	0.00
46.00	6.04	5.00	0.00
46.50	6.04	5.00	0.00
47.00	6.04	5.00	0.00
47.50	6.04	5.00	0.00
48.00	6.04	5.00	0.00

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

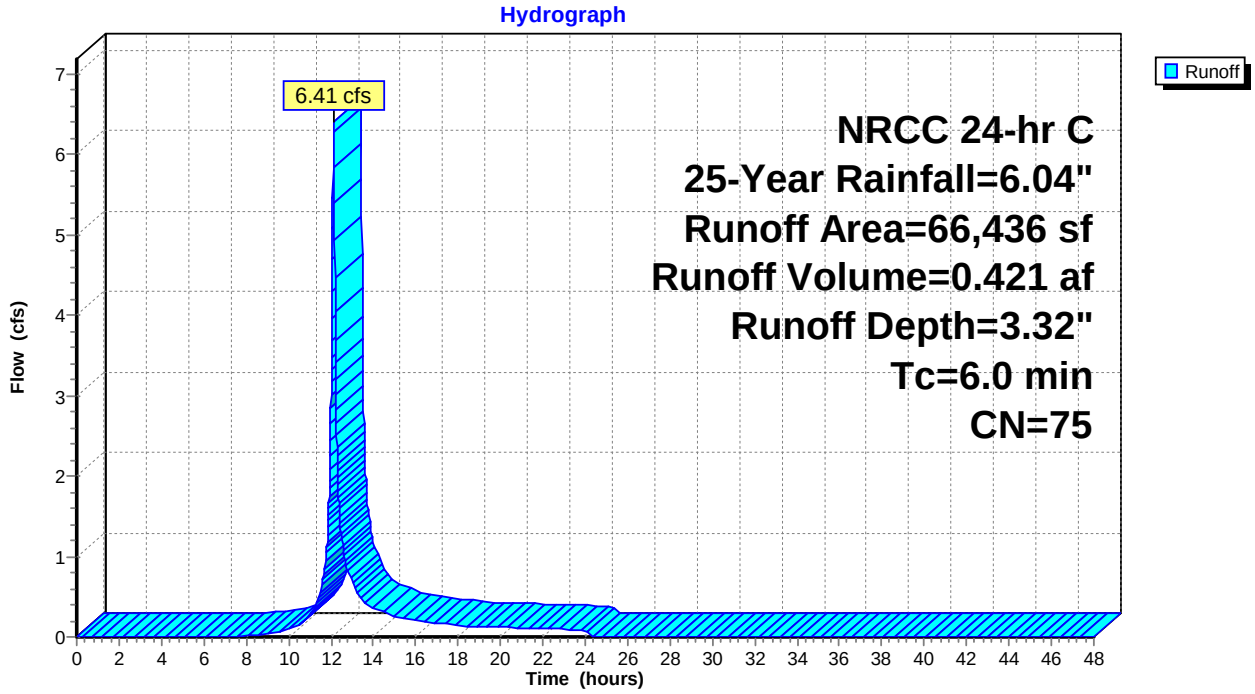
Runoff = 6.41 cfs @ 12.13 hrs, Volume= 0.421 af, Depth= 3.32"
Routed to Pond 29P : Bioretention 4B

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.01
8.50	0.87	0.01	0.03
9.00	0.96	0.02	0.04
9.50	1.06	0.04	0.07
10.00	1.19	0.07	0.10
10.50	1.35	0.11	0.15
11.00	1.56	0.19	0.27
11.50	1.89	0.33	0.52
12.00	2.88	0.88	**3.02**
12.50	4.15	1.78	**1.26**
13.00	4.48	2.04	0.69
13.50	4.69	2.20	0.45
14.00	4.85	2.33	0.36
14.50	4.98	2.43	0.30
15.00	5.08	2.52	0.25
15.50	5.17	2.59	0.22
16.00	5.26	2.66	0.20
16.50	5.33	2.72	0.19
17.00	5.40	2.78	0.17
17.50	5.46	2.83	0.16
18.00	5.52	2.88	0.14
18.50	5.57	2.92	0.13
19.00	5.62	2.96	0.13
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
29.00	6.04	3.32	0.00
29.50	6.04	3.32	0.00
30.00	6.04	3.32	0.00
30.50	6.04	3.32	0.00
31.00	6.04	3.32	0.00
31.50	6.04	3.32	0.00
32.00	6.04	3.32	0.00
32.50	6.04	3.32	0.00
33.00	6.04	3.32	0.00
33.50	6.04	3.32	0.00
34.00	6.04	3.32	0.00
34.50	6.04	3.32	0.00
35.00	6.04	3.32	0.00
35.50	6.04	3.32	0.00
36.00	6.04	3.32	0.00
36.50	6.04	3.32	0.00
37.00	6.04	3.32	0.00
37.50	6.04	3.32	0.00
38.00	6.04	3.32	0.00
38.50	6.04	3.32	0.00
39.00	6.04	3.32	0.00
39.50	6.04	3.32	0.00
40.00	6.04	3.32	0.00
40.50	6.04	3.32	0.00
41.00	6.04	3.32	0.00
41.50	6.04	3.32	0.00
42.00	6.04	3.32	0.00
42.50	6.04	3.32	0.00
43.00	6.04	3.32	0.00
43.50	6.04	3.32	0.00
44.00	6.04	3.32	0.00
44.50	6.04	3.32	0.00
45.00	6.04	3.32	0.00
45.50	6.04	3.32	0.00
46.00	6.04	3.32	0.00
46.50	6.04	3.32	0.00
47.00	6.04	3.32	0.00
47.50	6.04	3.32	0.00
48.00	6.04	3.32	0.00

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Summary for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

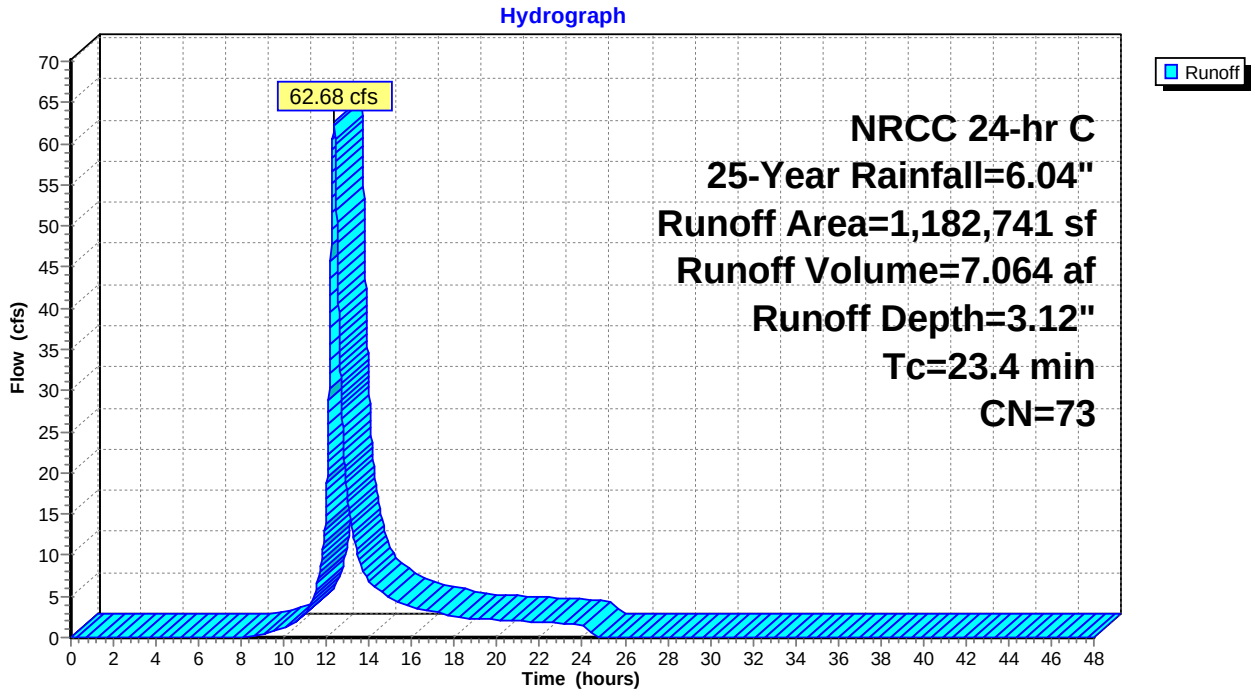
Runoff = 62.68 cfs @ 12.35 hrs, Volume= 7.064 af, Depth= 3.12"
Routed to Link 29L : DP-1

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



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Hydrograph for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.01
8.50	0.87	0.00	0.16
9.00	0.96	0.01	0.38
9.50	1.06	0.03	0.68
10.00	1.19	0.05	1.15
10.50	1.35	0.09	1.79
11.00	1.56	0.15	3.02
11.50	1.89	0.27	5.93
12.00	2.88	0.78	**17.28**
12.50	4.15	1.64	**47.89**
13.00	4.48	1.88	16.59
13.50	4.69	2.04	9.77
14.00	4.85	2.16	6.82
14.50	4.98	2.26	5.72
15.00	5.08	2.35	4.78
15.50	5.17	2.42	3.99
16.00	5.26	2.48	3.68
16.50	5.33	2.54	3.41
17.00	5.40	2.60	3.13
17.50	5.46	2.65	2.86
18.00	5.52	2.70	2.58
18.50	5.57	2.74	2.35
19.00	5.62	2.78	2.27
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
29.00	6.04	3.12	0.00
29.50	6.04	3.12	0.00
30.00	6.04	3.12	0.00
30.50	6.04	3.12	0.00
31.00	6.04	3.12	0.00
31.50	6.04	3.12	0.00
32.00	6.04	3.12	0.00
32.50	6.04	3.12	0.00
33.00	6.04	3.12	0.00
33.50	6.04	3.12	0.00
34.00	6.04	3.12	0.00
34.50	6.04	3.12	0.00
35.00	6.04	3.12	0.00
35.50	6.04	3.12	0.00
36.00	6.04	3.12	0.00
36.50	6.04	3.12	0.00
37.00	6.04	3.12	0.00
37.50	6.04	3.12	0.00
38.00	6.04	3.12	0.00
38.50	6.04	3.12	0.00
39.00	6.04	3.12	0.00
39.50	6.04	3.12	0.00
40.00	6.04	3.12	0.00
40.50	6.04	3.12	0.00
41.00	6.04	3.12	0.00
41.50	6.04	3.12	0.00
42.00	6.04	3.12	0.00
42.50	6.04	3.12	0.00
43.00	6.04	3.12	0.00
43.50	6.04	3.12	0.00
44.00	6.04	3.12	0.00
44.50	6.04	3.12	0.00
45.00	6.04	3.12	0.00
45.50	6.04	3.12	0.00
46.00	6.04	3.12	0.00
46.50	6.04	3.12	0.00
47.00	6.04	3.12	0.00
47.50	6.04	3.12	0.00
48.00	6.04	3.12	0.00

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Summary for Subcatchment 30S: PDA-1A

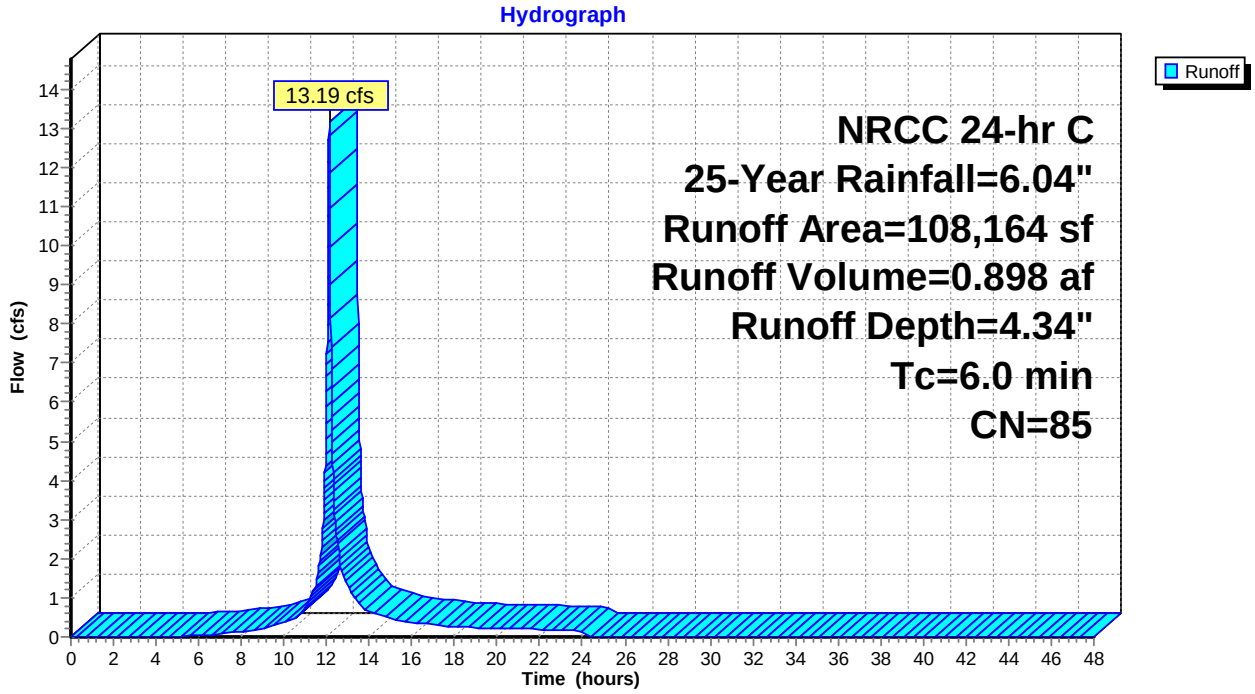
Runoff = 13.19 cfs @ 12.13 hrs, Volume= 0.898 af, Depth= 4.34"
Routed to Pond 3P : Bioretention 1A

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



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Hydrograph for Subcatchment 30S: PDA-1A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.01
5.50	0.47	0.01	0.03
6.00	0.52	0.01	0.04
6.50	0.58	0.02	0.06
7.00	0.64	0.04	0.08
7.50	0.71	0.06	0.11
8.00	0.78	0.08	0.14
8.50	0.87	0.12	0.17
9.00	0.96	0.15	0.20
9.50	1.06	0.20	0.27
10.00	1.19	0.27	0.36
10.50	1.35	0.36	0.47
11.00	1.56	0.49	0.76
11.50	1.89	0.72	1.34
12.00	2.88	1.48	**6.65**
12.50	4.15	2.59	**2.43**
13.00	4.48	2.89	1.30
13.50	4.69	3.09	0.85
14.00	4.85	3.23	0.67
14.50	4.98	3.35	0.56
15.00	5.08	3.44	0.46
15.50	5.17	3.53	0.41
16.00	5.26	3.60	0.38
16.50	5.33	3.68	0.35
17.00	5.40	3.74	0.32
17.50	5.46	3.80	0.29
18.00	5.52	3.85	0.26
18.50	5.57	3.90	0.24
19.00	5.62	3.95	0.23
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
29.00	6.04	4.34	0.00
29.50	6.04	4.34	0.00
30.00	6.04	4.34	0.00
30.50	6.04	4.34	0.00
31.00	6.04	4.34	0.00
31.50	6.04	4.34	0.00
32.00	6.04	4.34	0.00
32.50	6.04	4.34	0.00
33.00	6.04	4.34	0.00
33.50	6.04	4.34	0.00
34.00	6.04	4.34	0.00
34.50	6.04	4.34	0.00
35.00	6.04	4.34	0.00
35.50	6.04	4.34	0.00
36.00	6.04	4.34	0.00
36.50	6.04	4.34	0.00
37.00	6.04	4.34	0.00
37.50	6.04	4.34	0.00
38.00	6.04	4.34	0.00
38.50	6.04	4.34	0.00
39.00	6.04	4.34	0.00
39.50	6.04	4.34	0.00
40.00	6.04	4.34	0.00
40.50	6.04	4.34	0.00
41.00	6.04	4.34	0.00
41.50	6.04	4.34	0.00
42.00	6.04	4.34	0.00
42.50	6.04	4.34	0.00
43.00	6.04	4.34	0.00
43.50	6.04	4.34	0.00
44.00	6.04	4.34	0.00
44.50	6.04	4.34	0.00
45.00	6.04	4.34	0.00
45.50	6.04	4.34	0.00
46.00	6.04	4.34	0.00
46.50	6.04	4.34	0.00
47.00	6.04	4.34	0.00
47.50	6.04	4.34	0.00
48.00	6.04	4.34	0.00

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Summary for Subcatchment 31S: PDA-1C

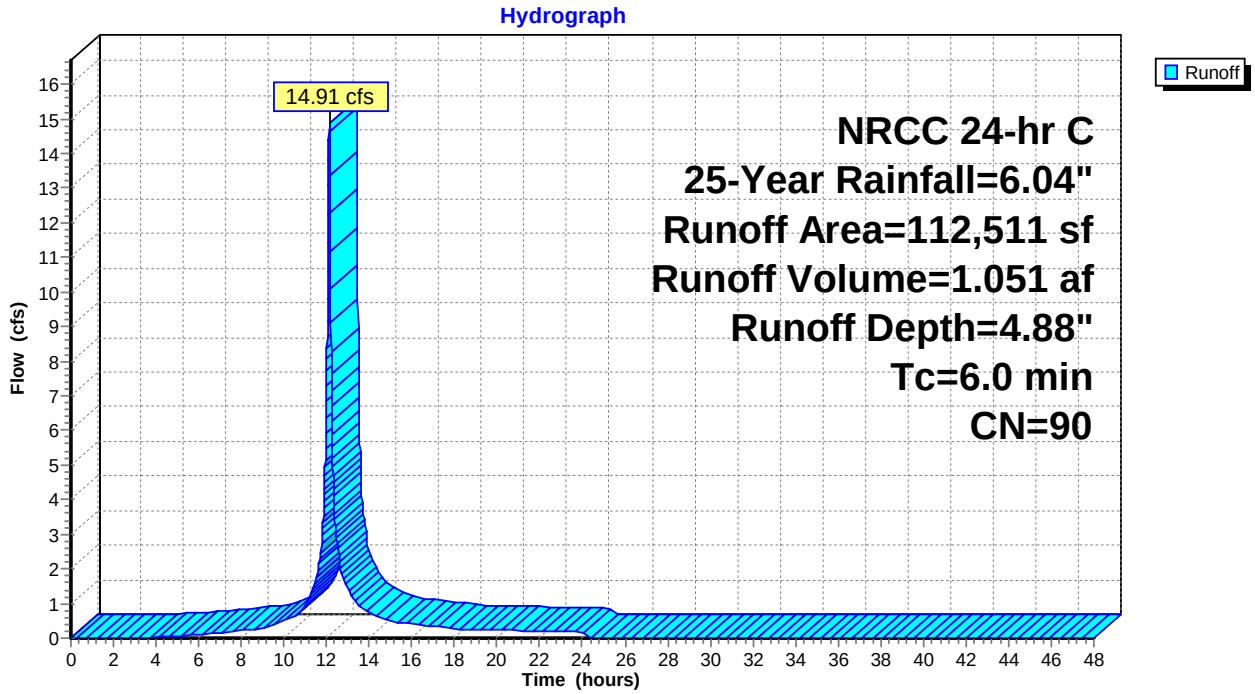
Runoff = 14.91 cfs @ 12.13 hrs, Volume= 1.051 af, Depth= 4.88"
Routed to Pond 32P : FB 1C

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



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Hydrograph for Subcatchment 31S: PDA-1C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.02
4.00	0.32	0.01	0.03
4.50	0.37	0.02	0.05
5.00	0.42	0.03	0.07
5.50	0.47	0.04	0.08
6.00	0.52	0.06	0.10
6.50	0.58	0.09	0.13
7.00	0.64	0.11	0.16
7.50	0.71	0.15	0.19
8.00	0.78	0.19	0.23
8.50	0.87	0.24	0.26
9.00	0.96	0.29	0.30
9.50	1.06	0.36	0.40
10.00	1.19	0.45	0.50
10.50	1.35	0.56	0.62
11.00	1.56	0.73	0.98
11.50	1.89	1.00	1.65
12.00	2.88	1.87	**7.72**
12.50	4.15	3.06	**2.68**
13.00	4.48	3.38	1.42
13.50	4.69	3.58	0.92
14.00	4.85	3.73	0.73
14.50	4.98	3.85	0.61
15.00	5.08	3.96	0.50
15.50	5.17	4.04	0.44
16.00	5.26	4.12	0.41
16.50	5.33	4.20	0.38
17.00	5.40	4.26	0.34
17.50	5.46	4.33	0.31
18.00	5.52	4.38	0.28
18.50	5.57	4.43	0.26
19.00	5.62	4.48	0.25
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
29.00	6.04	4.88	0.00
29.50	6.04	4.88	0.00
30.00	6.04	4.88	0.00
30.50	6.04	4.88	0.00
31.00	6.04	4.88	0.00
31.50	6.04	4.88	0.00
32.00	6.04	4.88	0.00
32.50	6.04	4.88	0.00
33.00	6.04	4.88	0.00
33.50	6.04	4.88	0.00
34.00	6.04	4.88	0.00
34.50	6.04	4.88	0.00
35.00	6.04	4.88	0.00
35.50	6.04	4.88	0.00
36.00	6.04	4.88	0.00
36.50	6.04	4.88	0.00
37.00	6.04	4.88	0.00
37.50	6.04	4.88	0.00
38.00	6.04	4.88	0.00
38.50	6.04	4.88	0.00
39.00	6.04	4.88	0.00
39.50	6.04	4.88	0.00
40.00	6.04	4.88	0.00
40.50	6.04	4.88	0.00
41.00	6.04	4.88	0.00
41.50	6.04	4.88	0.00
42.00	6.04	4.88	0.00
42.50	6.04	4.88	0.00
43.00	6.04	4.88	0.00
43.50	6.04	4.88	0.00
44.00	6.04	4.88	0.00
44.50	6.04	4.88	0.00
45.00	6.04	4.88	0.00
45.50	6.04	4.88	0.00
46.00	6.04	4.88	0.00
46.50	6.04	4.88	0.00
47.00	6.04	4.88	0.00
47.50	6.04	4.88	0.00
48.00	6.04	4.88	0.00

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Summary for Subcatchment 34S: PDA-1K

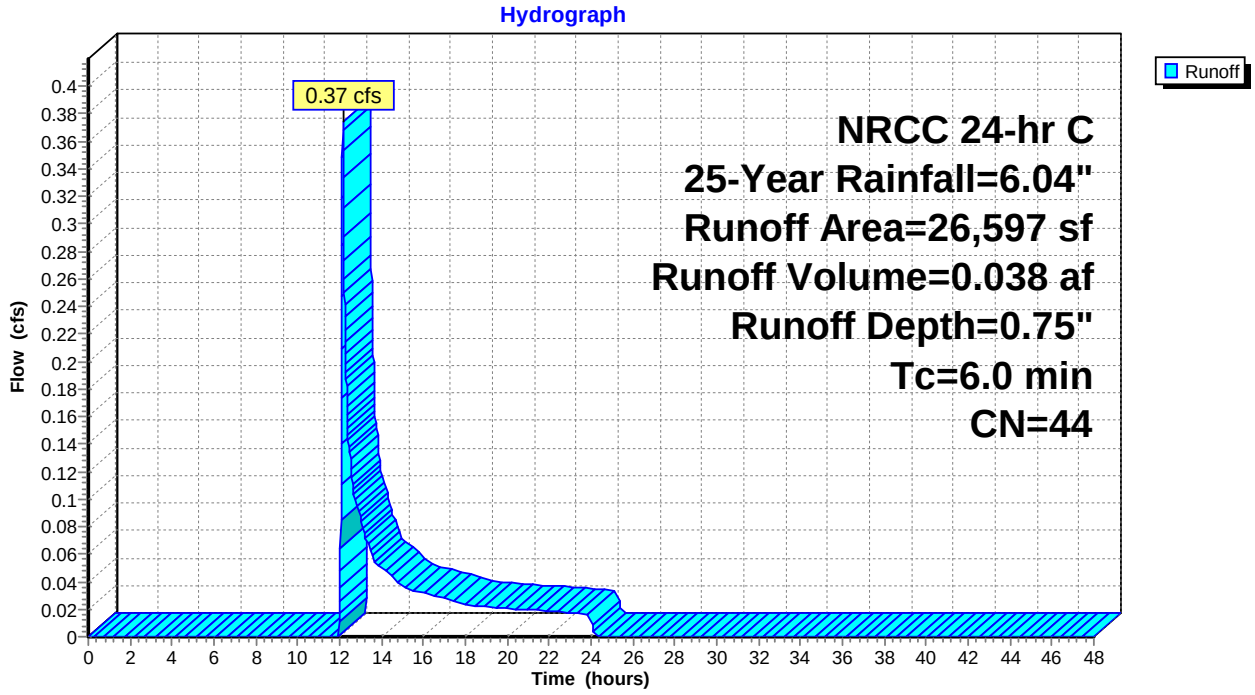
Runoff = 0.37 cfs @ 12.15 hrs, Volume= 0.038 af, Depth= 0.75"
Routed to Pond 63P : Det Pond 1K

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



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Hydrograph for Subcatchment 34S: PDA-1K

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.00
11.50	1.89	0.00	0.00
12.00	2.88	0.01	**0.02**
12.50	4.15	0.18	**0.13**
13.00	4.48	0.26	0.08
13.50	4.69	0.31	0.06
14.00	4.85	0.35	0.05
14.50	4.98	0.39	0.04
15.00	5.08	0.42	0.04
15.50	5.17	0.45	0.03
16.00	5.26	0.48	0.03
16.50	5.33	0.50	0.03
17.00	5.40	0.52	0.03
17.50	5.46	0.54	0.03
18.00	5.52	0.56	0.02
18.50	5.57	0.58	0.02
19.00	5.62	0.60	0.02
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
29.00	6.04	0.75	0.00
29.50	6.04	0.75	0.00
30.00	6.04	0.75	0.00
30.50	6.04	0.75	0.00
31.00	6.04	0.75	0.00
31.50	6.04	0.75	0.00
32.00	6.04	0.75	0.00
32.50	6.04	0.75	0.00
33.00	6.04	0.75	0.00
33.50	6.04	0.75	0.00
34.00	6.04	0.75	0.00
34.50	6.04	0.75	0.00
35.00	6.04	0.75	0.00
35.50	6.04	0.75	0.00
36.00	6.04	0.75	0.00
36.50	6.04	0.75	0.00
37.00	6.04	0.75	0.00
37.50	6.04	0.75	0.00
38.00	6.04	0.75	0.00
38.50	6.04	0.75	0.00
39.00	6.04	0.75	0.00
39.50	6.04	0.75	0.00
40.00	6.04	0.75	0.00
40.50	6.04	0.75	0.00
41.00	6.04	0.75	0.00
41.50	6.04	0.75	0.00
42.00	6.04	0.75	0.00
42.50	6.04	0.75	0.00
43.00	6.04	0.75	0.00
43.50	6.04	0.75	0.00
44.00	6.04	0.75	0.00
44.50	6.04	0.75	0.00
45.00	6.04	0.75	0.00
45.50	6.04	0.75	0.00
46.00	6.04	0.75	0.00
46.50	6.04	0.75	0.00
47.00	6.04	0.75	0.00
47.50	6.04	0.75	0.00
48.00	6.04	0.75	0.00

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Summary for Subcatchment 35S: PDA-2U

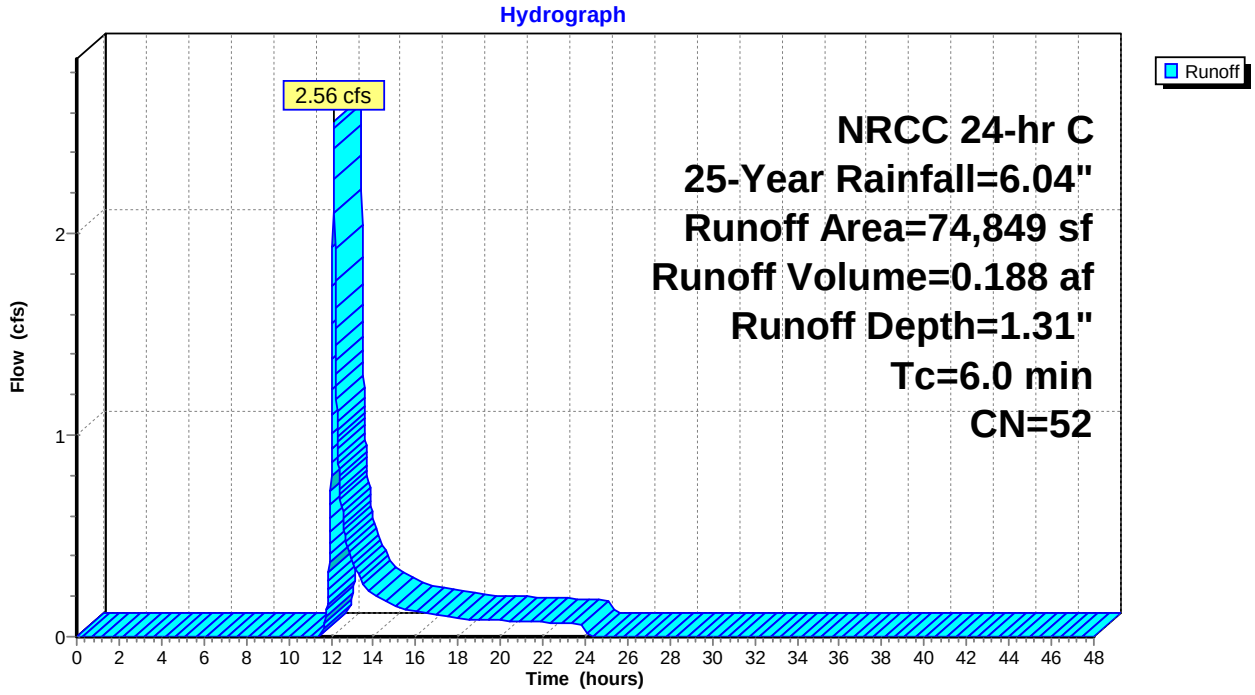
Runoff = 2.56 cfs @ 12.14 hrs, Volume= 0.188 af, Depth= 1.31"
Routed to Link 30L : DP-2

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



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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	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				

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Summary for Subcatchment 36S: PDA-3U

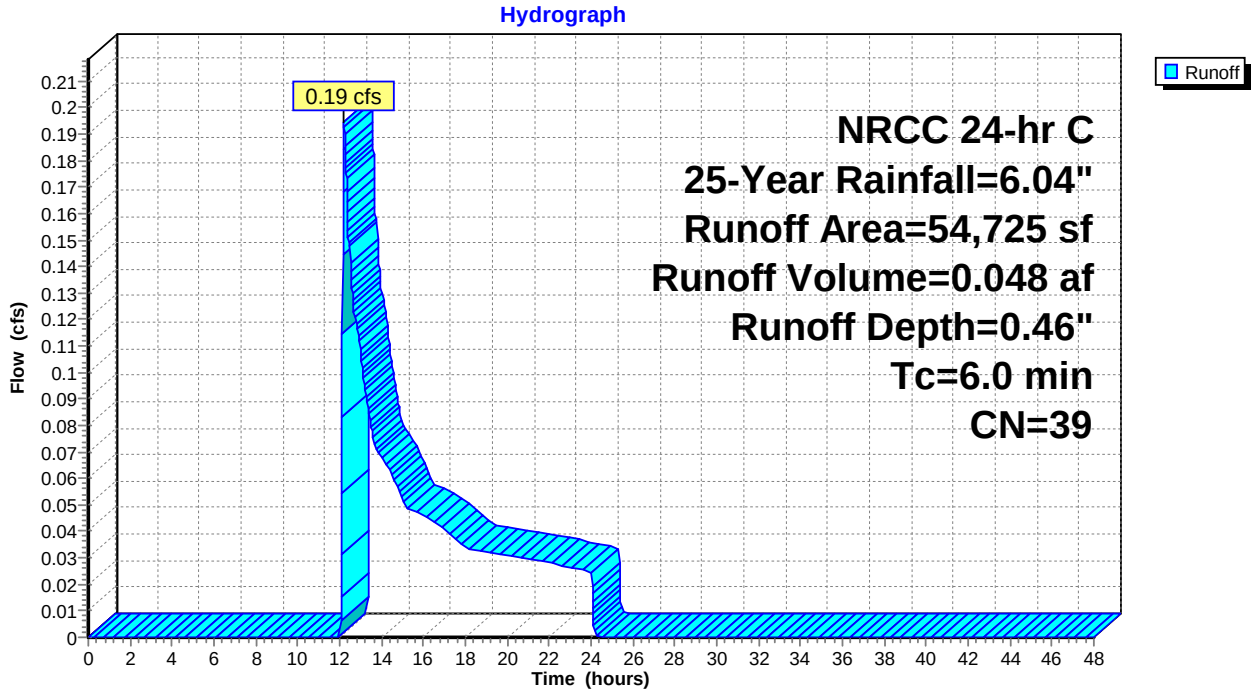
Runoff = 0.19 cfs @ 12.18 hrs, Volume= 0.048 af, Depth= 0.46"
Routed to Link 31L : DP-3

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



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Hydrograph for Subcatchment 36S: PDA-3U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.00
11.50	1.89	0.00	0.00
12.00	2.88	0.00	**0.00**
12.50	4.15	0.06	**0.15**
13.00	4.48	0.11	0.11
13.50	4.69	0.14	0.08
14.00	4.85	0.17	0.07
14.50	4.98	0.20	0.06
15.00	5.08	0.22	0.05
15.50	5.17	0.24	0.05
16.00	5.26	0.25	0.05
16.50	5.33	0.27	0.04
17.00	5.40	0.29	0.04
17.50	5.46	0.30	0.04
18.00	5.52	0.32	0.03
18.50	5.57	0.33	0.03
19.00	5.62	0.34	0.03
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
29.00	6.04	0.46	0.00
29.50	6.04	0.46	0.00
30.00	6.04	0.46	0.00
30.50	6.04	0.46	0.00
31.00	6.04	0.46	0.00
31.50	6.04	0.46	0.00
32.00	6.04	0.46	0.00
32.50	6.04	0.46	0.00
33.00	6.04	0.46	0.00
33.50	6.04	0.46	0.00
34.00	6.04	0.46	0.00
34.50	6.04	0.46	0.00
35.00	6.04	0.46	0.00
35.50	6.04	0.46	0.00
36.00	6.04	0.46	0.00
36.50	6.04	0.46	0.00
37.00	6.04	0.46	0.00
37.50	6.04	0.46	0.00
38.00	6.04	0.46	0.00
38.50	6.04	0.46	0.00
39.00	6.04	0.46	0.00
39.50	6.04	0.46	0.00
40.00	6.04	0.46	0.00
40.50	6.04	0.46	0.00
41.00	6.04	0.46	0.00
41.50	6.04	0.46	0.00
42.00	6.04	0.46	0.00
42.50	6.04	0.46	0.00
43.00	6.04	0.46	0.00
43.50	6.04	0.46	0.00
44.00	6.04	0.46	0.00
44.50	6.04	0.46	0.00
45.00	6.04	0.46	0.00
45.50	6.04	0.46	0.00
46.00	6.04	0.46	0.00
46.50	6.04	0.46	0.00
47.00	6.04	0.46	0.00
47.50	6.04	0.46	0.00
48.00	6.04	0.46	0.00

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Summary for Subcatchment 37S: PDA-1I

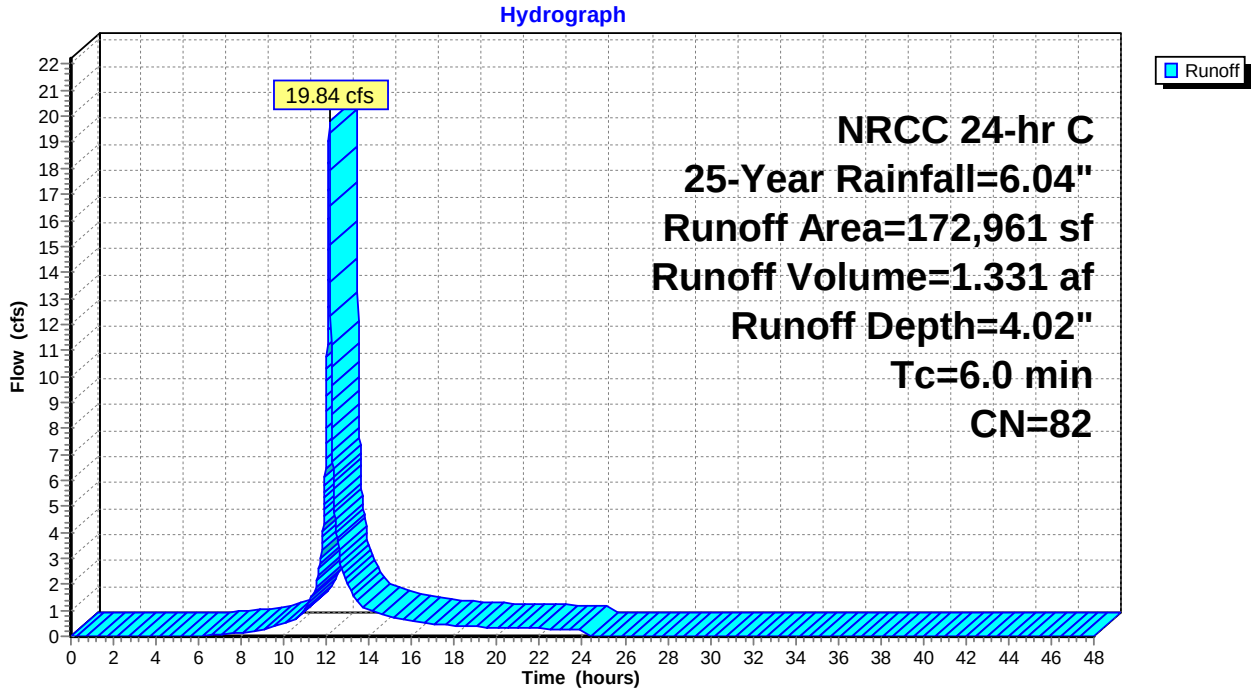
Runoff = 19.84 cfs @ 12.13 hrs, Volume= 1.331 af, Depth= 4.02"
Routed to Pond 37P : FB 1i+J

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



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Hydrograph for Subcatchment 37S: PDA-1I

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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Summary for Subcatchment 38S: PDA-4U

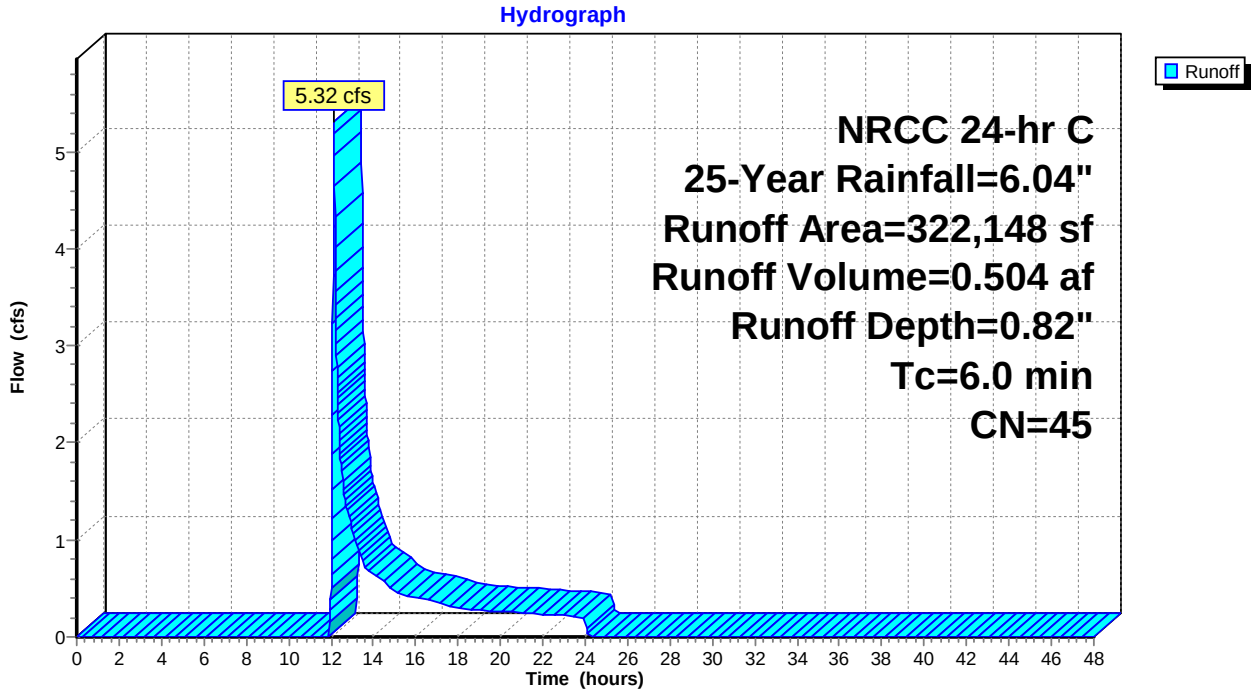
Runoff = 5.32 cfs @ 12.15 hrs, Volume= 0.504 af, Depth= 0.82"
Routed to Link 32L : DP-4

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



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Hydrograph for Subcatchment 38S: PDA-4U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.00
11.50	1.89	0.00	0.00
12.00	2.88	0.01	**0.51**
12.50	4.15	0.21	**1.77**
13.00	4.48	0.29	1.11
13.50	4.69	0.35	0.78
14.00	4.85	0.39	0.65
14.50	4.98	0.43	0.57
15.00	5.08	0.47	0.47
15.50	5.17	0.50	0.43
16.00	5.26	0.53	0.41
16.50	5.33	0.55	0.38
17.00	5.40	0.58	0.35
17.50	5.46	0.60	0.32
18.00	5.52	0.62	0.29
18.50	5.57	0.64	0.28
19.00	5.62	0.66	0.28
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
29.00	6.04	0.82	0.00
29.50	6.04	0.82	0.00
30.00	6.04	0.82	0.00
30.50	6.04	0.82	0.00
31.00	6.04	0.82	0.00
31.50	6.04	0.82	0.00
32.00	6.04	0.82	0.00
32.50	6.04	0.82	0.00
33.00	6.04	0.82	0.00
33.50	6.04	0.82	0.00
34.00	6.04	0.82	0.00
34.50	6.04	0.82	0.00
35.00	6.04	0.82	0.00
35.50	6.04	0.82	0.00
36.00	6.04	0.82	0.00
36.50	6.04	0.82	0.00
37.00	6.04	0.82	0.00
37.50	6.04	0.82	0.00
38.00	6.04	0.82	0.00
38.50	6.04	0.82	0.00
39.00	6.04	0.82	0.00
39.50	6.04	0.82	0.00
40.00	6.04	0.82	0.00
40.50	6.04	0.82	0.00
41.00	6.04	0.82	0.00
41.50	6.04	0.82	0.00
42.00	6.04	0.82	0.00
42.50	6.04	0.82	0.00
43.00	6.04	0.82	0.00
43.50	6.04	0.82	0.00
44.00	6.04	0.82	0.00
44.50	6.04	0.82	0.00
45.00	6.04	0.82	0.00
45.50	6.04	0.82	0.00
46.00	6.04	0.82	0.00
46.50	6.04	0.82	0.00
47.00	6.04	0.82	0.00
47.50	6.04	0.82	0.00
48.00	6.04	0.82	0.00

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Summary for Subcatchment 39S: PDA-5U

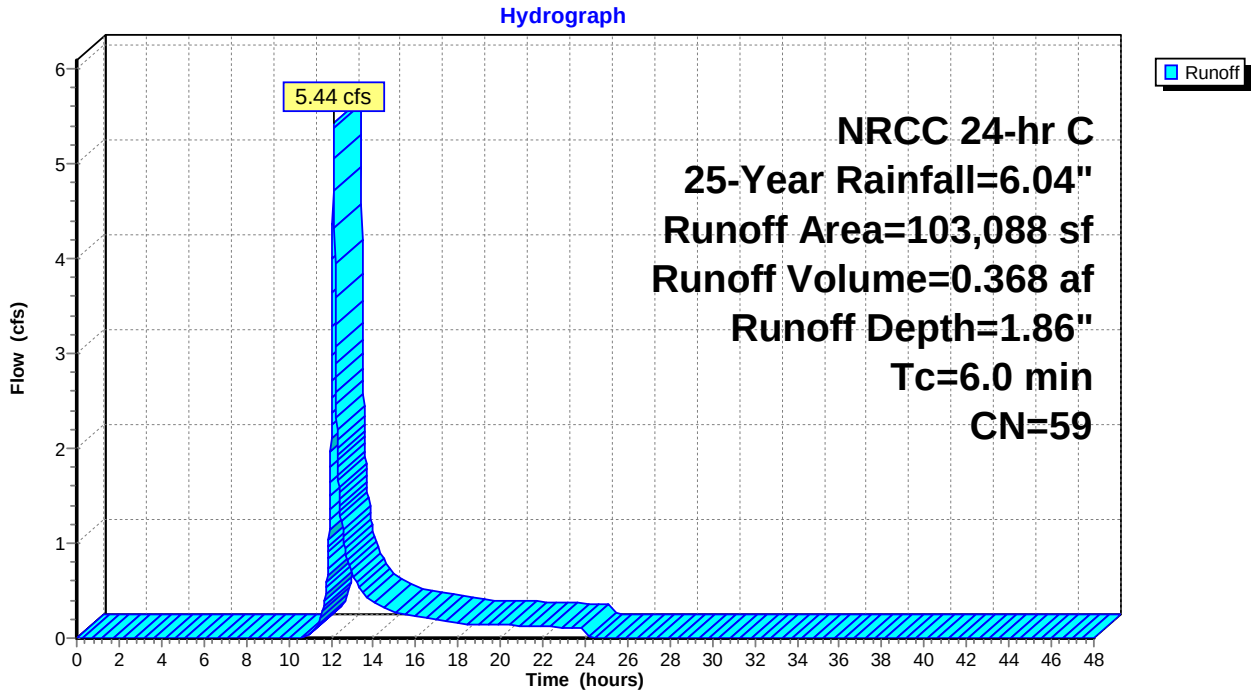
Runoff = 5.44 cfs @ 12.14 hrs, Volume= 0.368 af, Depth= 1.86"
Routed to Link PDP5 : PDP5

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



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Hydrograph for Subcatchment 39S: PDA-5U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.04
11.50	1.89	0.03	0.21
12.00	2.88	0.26	**2.11**
12.50	4.15	0.78	**1.23**
13.00	4.48	0.95	0.70
13.50	4.69	1.07	0.47
14.00	4.85	1.15	0.38
14.50	4.98	1.22	0.33
15.00	5.08	1.28	0.27
15.50	5.17	1.33	0.24
16.00	5.26	1.38	0.23
16.50	5.33	1.43	0.21
17.00	5.40	1.47	0.19
17.50	5.46	1.51	0.18
18.00	5.52	1.54	0.16
18.50	5.57	1.57	0.15
19.00	5.62	1.60	0.15
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
29.00	6.04	1.86	0.00
29.50	6.04	1.86	0.00
30.00	6.04	1.86	0.00
30.50	6.04	1.86	0.00
31.00	6.04	1.86	0.00
31.50	6.04	1.86	0.00
32.00	6.04	1.86	0.00
32.50	6.04	1.86	0.00
33.00	6.04	1.86	0.00
33.50	6.04	1.86	0.00
34.00	6.04	1.86	0.00
34.50	6.04	1.86	0.00
35.00	6.04	1.86	0.00
35.50	6.04	1.86	0.00
36.00	6.04	1.86	0.00
36.50	6.04	1.86	0.00
37.00	6.04	1.86	0.00
37.50	6.04	1.86	0.00
38.00	6.04	1.86	0.00
38.50	6.04	1.86	0.00
39.00	6.04	1.86	0.00
39.50	6.04	1.86	0.00
40.00	6.04	1.86	0.00
40.50	6.04	1.86	0.00
41.00	6.04	1.86	0.00
41.50	6.04	1.86	0.00
42.00	6.04	1.86	0.00
42.50	6.04	1.86	0.00
43.00	6.04	1.86	0.00
43.50	6.04	1.86	0.00
44.00	6.04	1.86	0.00
44.50	6.04	1.86	0.00
45.00	6.04	1.86	0.00
45.50	6.04	1.86	0.00
46.00	6.04	1.86	0.00
46.50	6.04	1.86	0.00
47.00	6.04	1.86	0.00
47.50	6.04	1.86	0.00
48.00	6.04	1.86	0.00

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

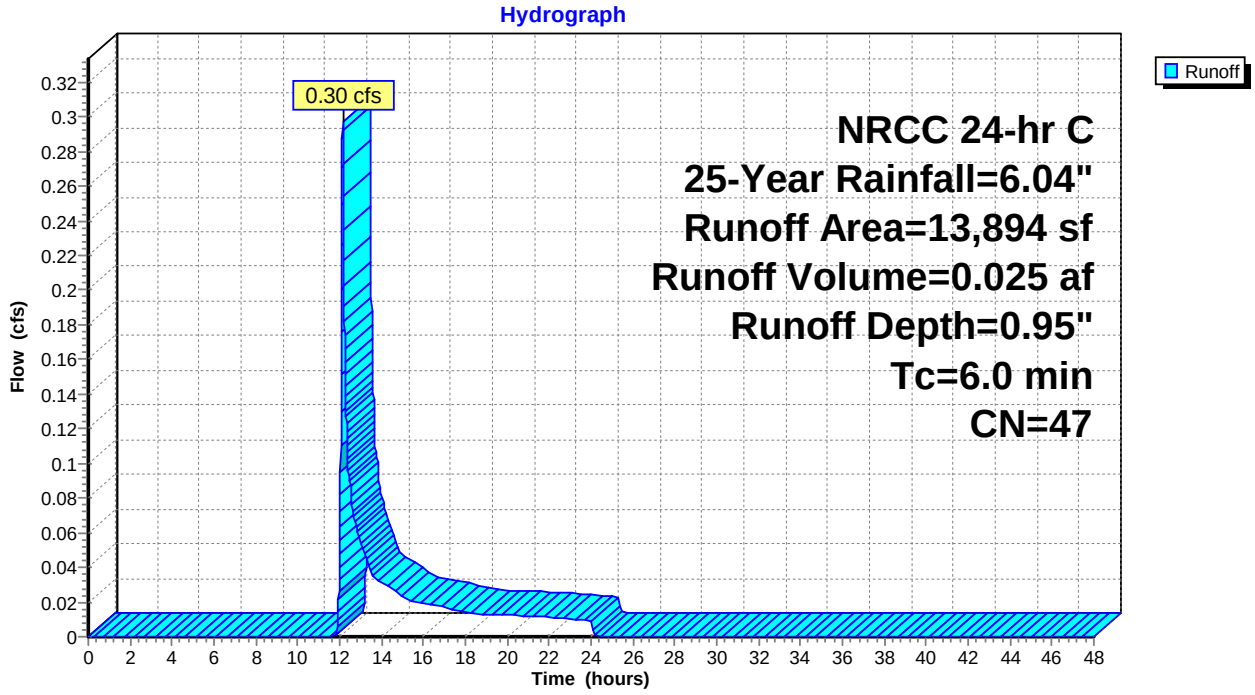
Runoff = 0.30 cfs @ 12.15 hrs, Volume= 0.025 af, Depth= 0.95"
Routed to Pond 37P : FB 1i+J

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.00
11.50	1.89	0.00	0.00
12.00	2.88	0.03	**0.06**
12.50	4.15	0.27	**0.09**
13.00	4.48	0.37	0.05
13.50	4.69	0.43	0.04
14.00	4.85	0.48	0.03
14.50	4.98	0.53	0.03
15.00	5.08	0.57	0.02
15.50	5.17	0.60	0.02
16.00	5.26	0.63	0.02
16.50	5.33	0.66	0.02
17.00	5.40	0.69	0.02
17.50	5.46	0.71	0.02
18.00	5.52	0.73	0.01
18.50	5.57	0.75	0.01
19.00	5.62	0.78	0.01
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
29.00	6.04	0.95	0.00
29.50	6.04	0.95	0.00
30.00	6.04	0.95	0.00
30.50	6.04	0.95	0.00
31.00	6.04	0.95	0.00
31.50	6.04	0.95	0.00
32.00	6.04	0.95	0.00
32.50	6.04	0.95	0.00
33.00	6.04	0.95	0.00
33.50	6.04	0.95	0.00
34.00	6.04	0.95	0.00
34.50	6.04	0.95	0.00
35.00	6.04	0.95	0.00
35.50	6.04	0.95	0.00
36.00	6.04	0.95	0.00
36.50	6.04	0.95	0.00
37.00	6.04	0.95	0.00
37.50	6.04	0.95	0.00
38.00	6.04	0.95	0.00
38.50	6.04	0.95	0.00
39.00	6.04	0.95	0.00
39.50	6.04	0.95	0.00
40.00	6.04	0.95	0.00
40.50	6.04	0.95	0.00
41.00	6.04	0.95	0.00
41.50	6.04	0.95	0.00
42.00	6.04	0.95	0.00
42.50	6.04	0.95	0.00
43.00	6.04	0.95	0.00
43.50	6.04	0.95	0.00
44.00	6.04	0.95	0.00
44.50	6.04	0.95	0.00
45.00	6.04	0.95	0.00
45.50	6.04	0.95	0.00
46.00	6.04	0.95	0.00
46.50	6.04	0.95	0.00
47.00	6.04	0.95	0.00
47.50	6.04	0.95	0.00
48.00	6.04	0.95	0.00

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Summary for Subcatchment 41S: PDA-5A

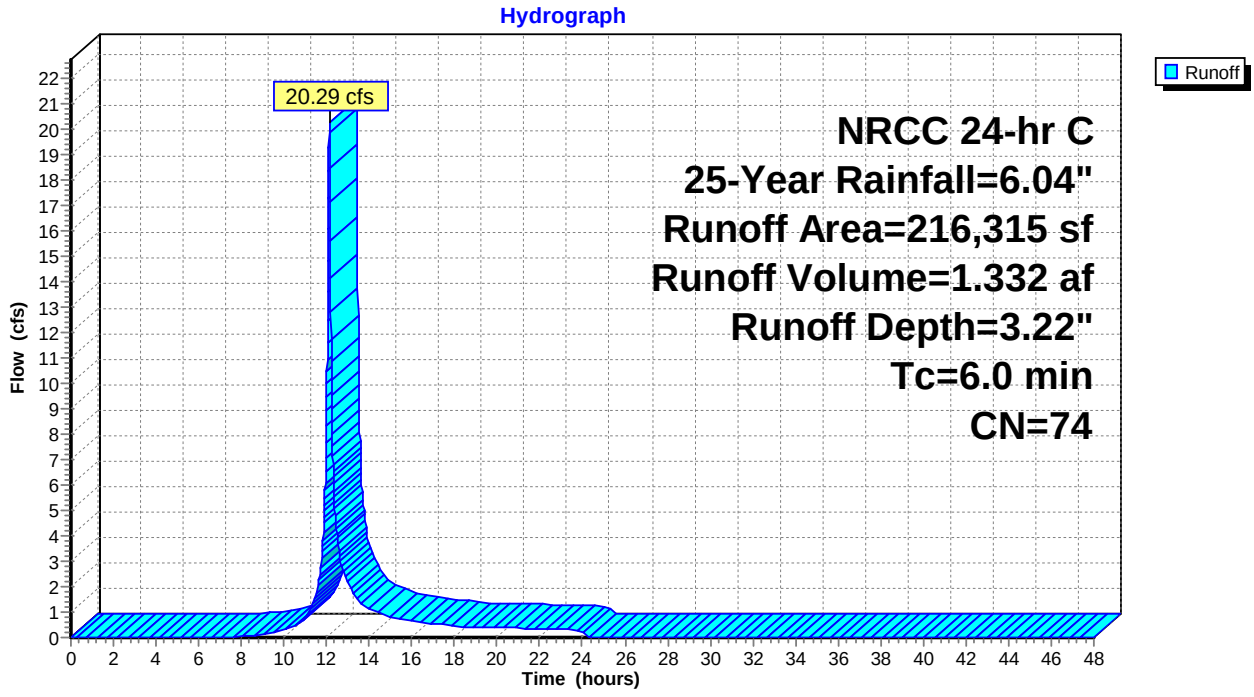
Runoff = 20.29 cfs @ 12.13 hrs, Volume= 1.332 af, Depth= 3.22"
Routed to Pond 39P : FB 5A

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



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Hydrograph for Subcatchment 41S: PDA-5A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.03
8.50	0.87	0.01	0.07
9.00	0.96	0.02	0.11
9.50	1.06	0.03	0.19
10.00	1.19	0.06	0.30
10.50	1.35	0.10	0.44
11.00	1.56	0.17	0.81
11.50	1.89	0.30	1.62
12.00	2.88	0.83	**9.48**
12.50	4.15	1.71	**4.00**
13.00	4.48	1.96	2.19
13.50	4.69	2.12	1.44
14.00	4.85	2.24	1.14
14.50	4.98	2.35	0.97
15.00	5.08	2.43	0.79
15.50	5.17	2.50	0.71
16.00	5.26	2.57	0.66
16.50	5.33	2.63	0.61
17.00	5.40	2.69	0.55
17.50	5.46	2.74	0.50
18.00	5.52	2.79	0.45
18.50	5.57	2.83	0.43
19.00	5.62	2.87	0.41
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
29.00	6.04	3.22	0.00
29.50	6.04	3.22	0.00
30.00	6.04	3.22	0.00
30.50	6.04	3.22	0.00
31.00	6.04	3.22	0.00
31.50	6.04	3.22	0.00
32.00	6.04	3.22	0.00
32.50	6.04	3.22	0.00
33.00	6.04	3.22	0.00
33.50	6.04	3.22	0.00
34.00	6.04	3.22	0.00
34.50	6.04	3.22	0.00
35.00	6.04	3.22	0.00
35.50	6.04	3.22	0.00
36.00	6.04	3.22	0.00
36.50	6.04	3.22	0.00
37.00	6.04	3.22	0.00
37.50	6.04	3.22	0.00
38.00	6.04	3.22	0.00
38.50	6.04	3.22	0.00
39.00	6.04	3.22	0.00
39.50	6.04	3.22	0.00
40.00	6.04	3.22	0.00
40.50	6.04	3.22	0.00
41.00	6.04	3.22	0.00
41.50	6.04	3.22	0.00
42.00	6.04	3.22	0.00
42.50	6.04	3.22	0.00
43.00	6.04	3.22	0.00
43.50	6.04	3.22	0.00
44.00	6.04	3.22	0.00
44.50	6.04	3.22	0.00
45.00	6.04	3.22	0.00
45.50	6.04	3.22	0.00
46.00	6.04	3.22	0.00
46.50	6.04	3.22	0.00
47.00	6.04	3.22	0.00
47.50	6.04	3.22	0.00
48.00	6.04	3.22	0.00

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

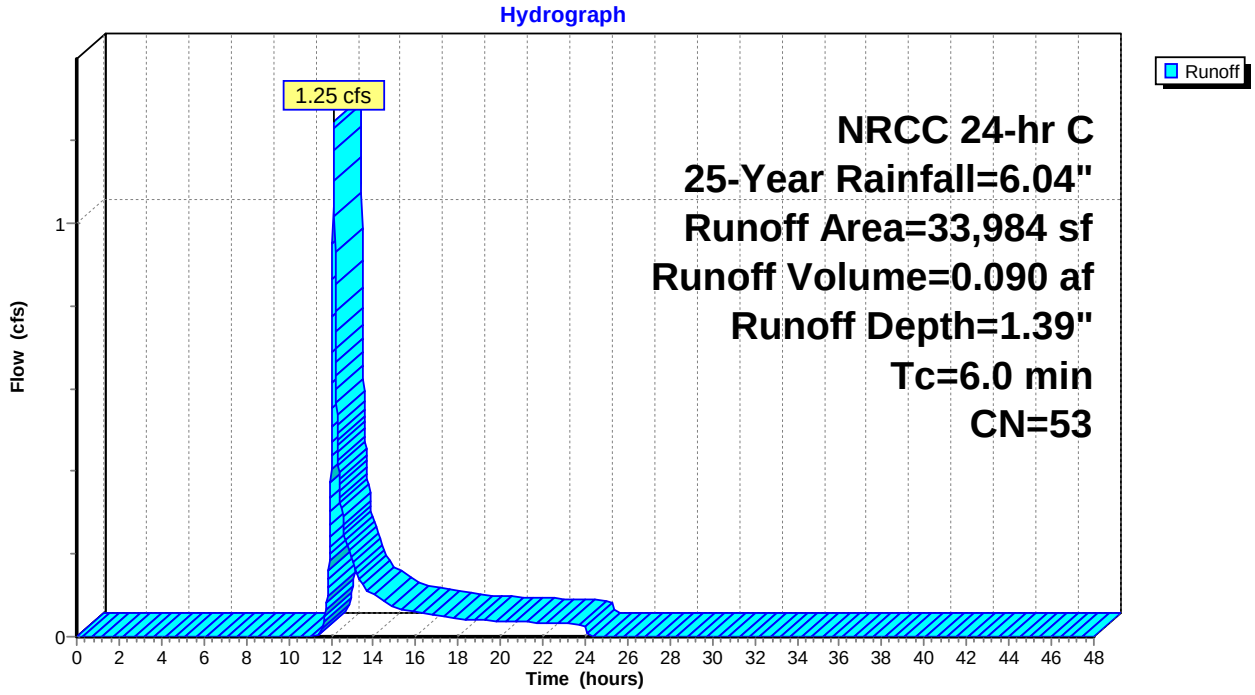
Runoff = 1.25 cfs @ 12.14 hrs, Volume= 0.090 af, Depth= 1.39"
Routed to Pond 53P : Bioretention J basin

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.00
11.50	1.89	0.00	0.01
12.00	2.88	0.12	**0.41**
12.50	4.15	0.50	**0.31**
13.00	4.48	0.63	0.18
13.50	4.69	0.72	0.13
14.00	4.85	0.79	0.10
14.50	4.98	0.85	0.09
15.00	5.08	0.90	0.07
15.50	5.17	0.94	0.07
16.00	5.26	0.98	0.06
16.50	5.33	1.02	0.06
17.00	5.40	1.05	0.05
17.50	5.46	1.08	0.05
18.00	5.52	1.11	0.04
18.50	5.57	1.14	0.04
19.00	5.62	1.17	0.04
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
29.00	6.04	1.39	0.00
29.50	6.04	1.39	0.00
30.00	6.04	1.39	0.00
30.50	6.04	1.39	0.00
31.00	6.04	1.39	0.00
31.50	6.04	1.39	0.00
32.00	6.04	1.39	0.00
32.50	6.04	1.39	0.00
33.00	6.04	1.39	0.00
33.50	6.04	1.39	0.00
34.00	6.04	1.39	0.00
34.50	6.04	1.39	0.00
35.00	6.04	1.39	0.00
35.50	6.04	1.39	0.00
36.00	6.04	1.39	0.00
36.50	6.04	1.39	0.00
37.00	6.04	1.39	0.00
37.50	6.04	1.39	0.00
38.00	6.04	1.39	0.00
38.50	6.04	1.39	0.00
39.00	6.04	1.39	0.00
39.50	6.04	1.39	0.00
40.00	6.04	1.39	0.00
40.50	6.04	1.39	0.00
41.00	6.04	1.39	0.00
41.50	6.04	1.39	0.00
42.00	6.04	1.39	0.00
42.50	6.04	1.39	0.00
43.00	6.04	1.39	0.00
43.50	6.04	1.39	0.00
44.00	6.04	1.39	0.00
44.50	6.04	1.39	0.00
45.00	6.04	1.39	0.00
45.50	6.04	1.39	0.00
46.00	6.04	1.39	0.00
46.50	6.04	1.39	0.00
47.00	6.04	1.39	0.00
47.50	6.04	1.39	0.00
48.00	6.04	1.39	0.00

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Summary for Subcatchment 43S: PDA-1B

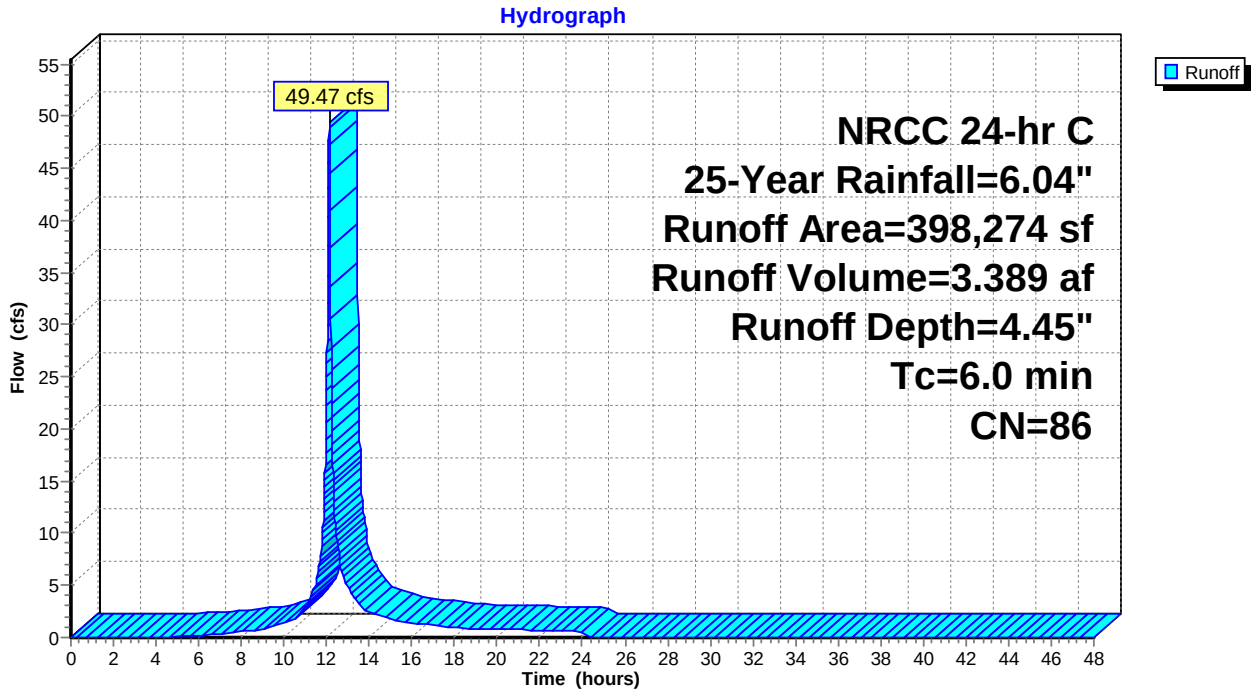
Runoff = 49.47 cfs @ 12.13 hrs, Volume= 3.389 af, Depth= 4.45"
Routed to Pond 44P : FB 1B

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



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Hydrograph for Subcatchment 43S: PDA-1B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.03
5.00	0.42	0.00	0.08
5.50	0.47	0.01	0.14
6.00	0.52	0.02	0.19
6.50	0.58	0.03	0.26
7.00	0.64	0.05	0.35
7.50	0.71	0.07	0.45
8.00	0.78	0.10	0.56
8.50	0.87	0.14	0.67
9.00	0.96	0.18	0.80
9.50	1.06	0.23	1.09
10.00	1.19	0.30	1.42
10.50	1.35	0.39	1.81
11.00	1.56	0.53	2.93
11.50	1.89	0.77	5.11
12.00	2.88	1.56	**25.09**
12.50	4.15	2.68	**9.07**
13.00	4.48	2.99	4.85
13.50	4.69	3.18	3.15
14.00	4.85	3.32	2.48
14.50	4.98	3.44	2.09
15.00	5.08	3.54	1.70
15.50	5.17	3.63	1.51
16.00	5.26	3.71	1.40
16.50	5.33	3.78	1.29
17.00	5.40	3.84	1.18
17.50	5.46	3.90	1.06
18.00	5.52	3.96	0.95
18.50	5.57	4.01	0.90
19.00	5.62	4.05	0.87
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
29.00	6.04	4.45	0.00
29.50	6.04	4.45	0.00
30.00	6.04	4.45	0.00
30.50	6.04	4.45	0.00
31.00	6.04	4.45	0.00
31.50	6.04	4.45	0.00
32.00	6.04	4.45	0.00
32.50	6.04	4.45	0.00
33.00	6.04	4.45	0.00
33.50	6.04	4.45	0.00
34.00	6.04	4.45	0.00
34.50	6.04	4.45	0.00
35.00	6.04	4.45	0.00
35.50	6.04	4.45	0.00
36.00	6.04	4.45	0.00
36.50	6.04	4.45	0.00
37.00	6.04	4.45	0.00
37.50	6.04	4.45	0.00
38.00	6.04	4.45	0.00
38.50	6.04	4.45	0.00
39.00	6.04	4.45	0.00
39.50	6.04	4.45	0.00
40.00	6.04	4.45	0.00
40.50	6.04	4.45	0.00
41.00	6.04	4.45	0.00
41.50	6.04	4.45	0.00
42.00	6.04	4.45	0.00
42.50	6.04	4.45	0.00
43.00	6.04	4.45	0.00
43.50	6.04	4.45	0.00
44.00	6.04	4.45	0.00
44.50	6.04	4.45	0.00
45.00	6.04	4.45	0.00
45.50	6.04	4.45	0.00
46.00	6.04	4.45	0.00
46.50	6.04	4.45	0.00
47.00	6.04	4.45	0.00
47.50	6.04	4.45	0.00
48.00	6.04	4.45	0.00

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Summary for Subcatchment 46S: PDA-1H

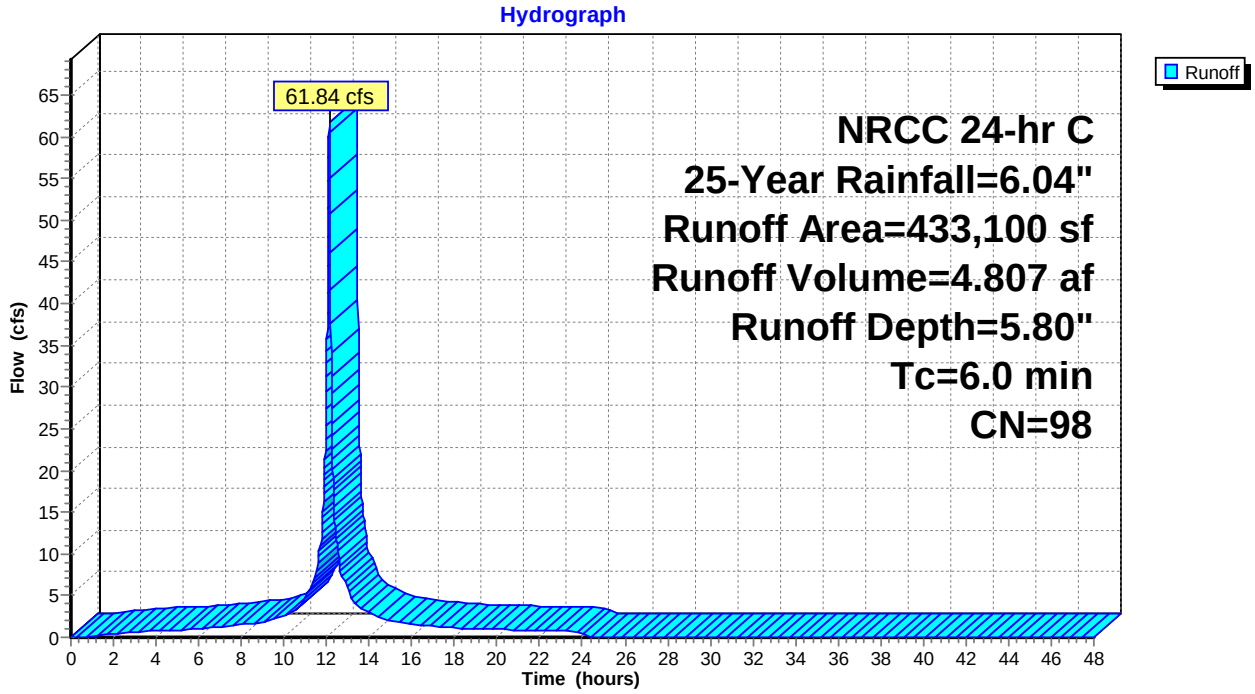
Runoff = 61.84 cfs @ 12.13 hrs, Volume= 4.807 af, Depth= 5.80"
Routed to Pond 51P : FB 1H

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



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Hydrograph for Subcatchment 46S: PDA-1H

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.14
1.50	0.11	0.02	0.30
2.00	0.15	0.04	0.43
2.50	0.19	0.06	0.53
3.00	0.23	0.09	0.62
3.50	0.27	0.12	0.69
4.00	0.32	0.16	0.75
4.50	0.37	0.20	0.81
5.00	0.42	0.24	0.87
5.50	0.47	0.29	0.91
6.00	0.52	0.33	0.96
6.50	0.58	0.39	1.09
7.00	0.64	0.45	1.22
7.50	0.71	0.51	1.36
8.00	0.78	0.58	1.50
8.50	0.87	0.66	1.64
9.00	0.96	0.75	1.78
9.50	1.06	0.85	2.21
10.00	1.19	0.98	2.67
10.50	1.35	1.13	3.14
11.00	1.56	1.34	4.72
11.50	1.89	1.67	7.55
12.00	2.88	2.64	**33.00**
12.50	4.15	3.91	**10.85**
13.00	4.48	4.25	5.72
13.50	4.69	4.46	3.70
14.00	4.85	4.61	2.90
14.50	4.98	4.74	2.44
15.00	5.08	4.85	1.97
15.50	5.17	4.94	1.76
16.00	5.26	5.02	1.62
16.50	5.33	5.09	1.49
17.00	5.40	5.16	1.36
17.50	5.46	5.23	1.23
18.00	5.52	5.28	1.10
18.50	5.57	5.34	1.03
19.00	5.62	5.39	1.00
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
29.00	6.04	5.80	0.00
29.50	6.04	5.80	0.00
30.00	6.04	5.80	0.00
30.50	6.04	5.80	0.00
31.00	6.04	5.80	0.00
31.50	6.04	5.80	0.00
32.00	6.04	5.80	0.00
32.50	6.04	5.80	0.00
33.00	6.04	5.80	0.00
33.50	6.04	5.80	0.00
34.00	6.04	5.80	0.00
34.50	6.04	5.80	0.00
35.00	6.04	5.80	0.00
35.50	6.04	5.80	0.00
36.00	6.04	5.80	0.00
36.50	6.04	5.80	0.00
37.00	6.04	5.80	0.00
37.50	6.04	5.80	0.00
38.00	6.04	5.80	0.00
38.50	6.04	5.80	0.00
39.00	6.04	5.80	0.00
39.50	6.04	5.80	0.00
40.00	6.04	5.80	0.00
40.50	6.04	5.80	0.00
41.00	6.04	5.80	0.00
41.50	6.04	5.80	0.00
42.00	6.04	5.80	0.00
42.50	6.04	5.80	0.00
43.00	6.04	5.80	0.00
43.50	6.04	5.80	0.00
44.00	6.04	5.80	0.00
44.50	6.04	5.80	0.00
45.00	6.04	5.80	0.00
45.50	6.04	5.80	0.00
46.00	6.04	5.80	0.00
46.50	6.04	5.80	0.00
47.00	6.04	5.80	0.00
47.50	6.04	5.80	0.00
48.00	6.04	5.80	0.00

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Summary for Subcatchment 47S: PDA-4A

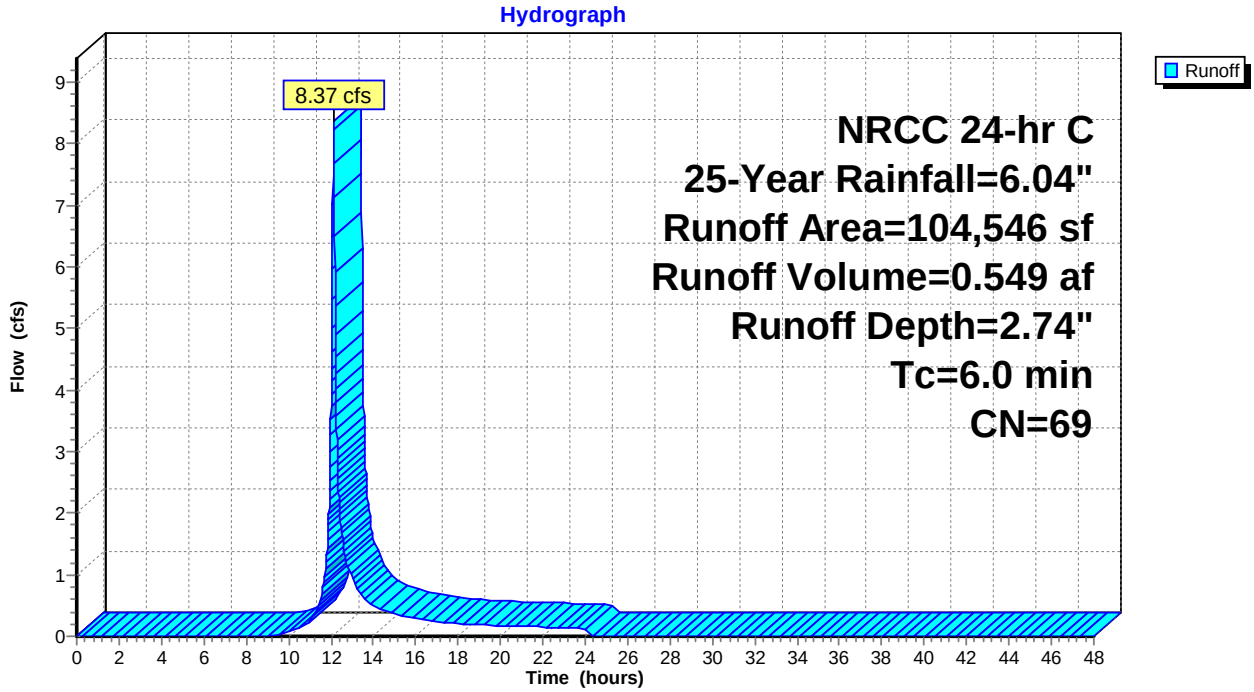
Runoff = 8.37 cfs @ 12.13 hrs, Volume= 0.549 af, Depth= 2.74"
Routed to Pond B4B : Bioretention 4A

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



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Hydrograph for Subcatchment 47S: PDA-4A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.01
9.50	1.06	0.01	0.03
10.00	1.19	0.02	0.07
10.50	1.35	0.04	0.13
11.00	1.56	0.08	0.26
11.50	1.89	0.18	0.57
12.00	2.88	0.60	**3.74**
12.50	4.15	1.36	**1.72**
13.00	4.48	1.59	0.95
13.50	4.69	1.74	0.63
14.00	4.85	1.85	0.50
14.50	4.98	1.94	0.43
15.00	5.08	2.02	0.35
15.50	5.17	2.08	0.31
16.00	5.26	2.14	0.29
16.50	5.33	2.20	0.27
17.00	5.40	2.25	0.25
17.50	5.46	2.30	0.22
18.00	5.52	2.34	0.20
18.50	5.57	2.38	0.19
19.00	5.62	2.42	0.18
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
29.00	6.04	2.74	0.00
29.50	6.04	2.74	0.00
30.00	6.04	2.74	0.00
30.50	6.04	2.74	0.00
31.00	6.04	2.74	0.00
31.50	6.04	2.74	0.00
32.00	6.04	2.74	0.00
32.50	6.04	2.74	0.00
33.00	6.04	2.74	0.00
33.50	6.04	2.74	0.00
34.00	6.04	2.74	0.00
34.50	6.04	2.74	0.00
35.00	6.04	2.74	0.00
35.50	6.04	2.74	0.00
36.00	6.04	2.74	0.00
36.50	6.04	2.74	0.00
37.00	6.04	2.74	0.00
37.50	6.04	2.74	0.00
38.00	6.04	2.74	0.00
38.50	6.04	2.74	0.00
39.00	6.04	2.74	0.00
39.50	6.04	2.74	0.00
40.00	6.04	2.74	0.00
40.50	6.04	2.74	0.00
41.00	6.04	2.74	0.00
41.50	6.04	2.74	0.00
42.00	6.04	2.74	0.00
42.50	6.04	2.74	0.00
43.00	6.04	2.74	0.00
43.50	6.04	2.74	0.00
44.00	6.04	2.74	0.00
44.50	6.04	2.74	0.00
45.00	6.04	2.74	0.00
45.50	6.04	2.74	0.00
46.00	6.04	2.74	0.00
46.50	6.04	2.74	0.00
47.00	6.04	2.74	0.00
47.50	6.04	2.74	0.00
48.00	6.04	2.74	0.00

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

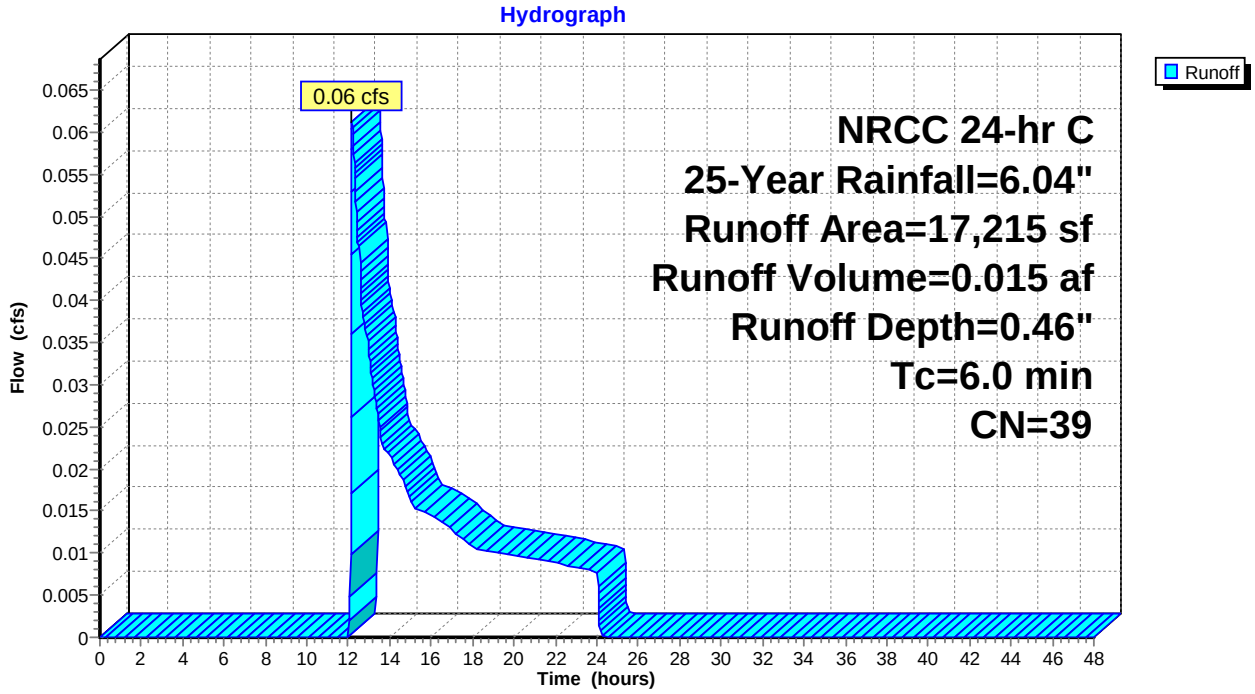
Runoff = 0.06 cfs @ 12.18 hrs, Volume= 0.015 af, Depth= 0.46"
Routed to Pond 55P : FB 1G

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



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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				

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Summary for Subcatchment 49S: PDA-4B

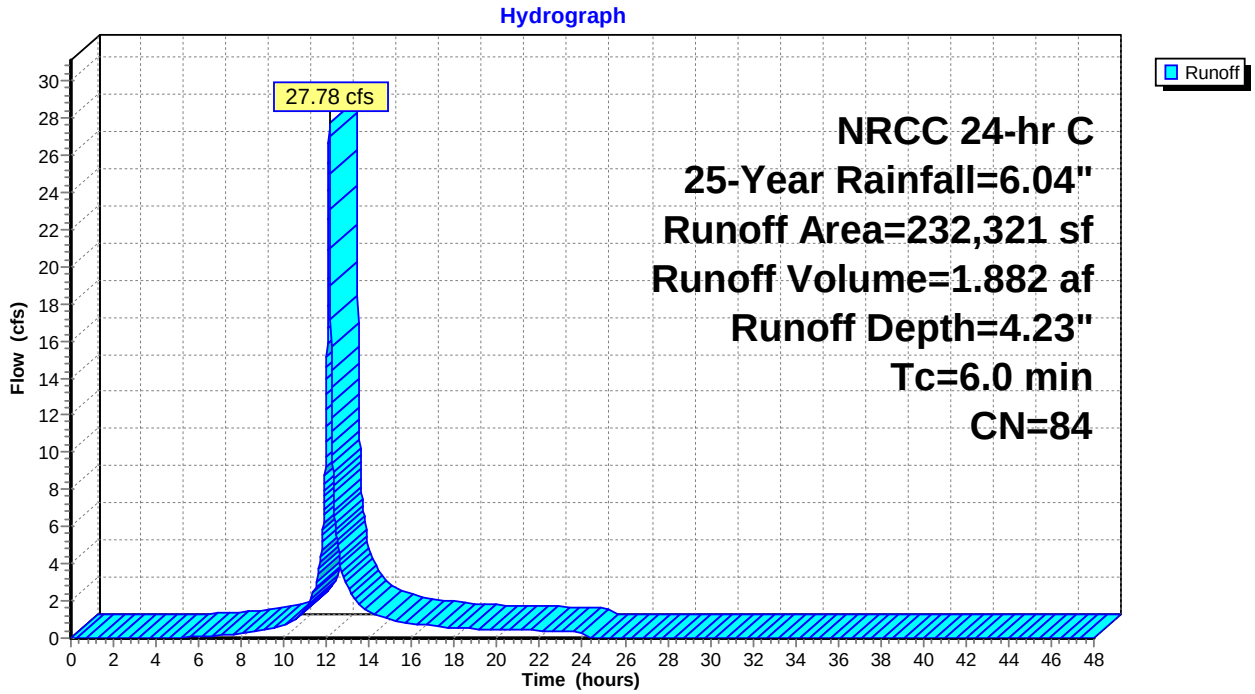
Runoff = 27.78 cfs @ 12.13 hrs, Volume= 1.882 af, Depth= 4.23"
Routed to Pond 29P : Bioretention 4B

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



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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				

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

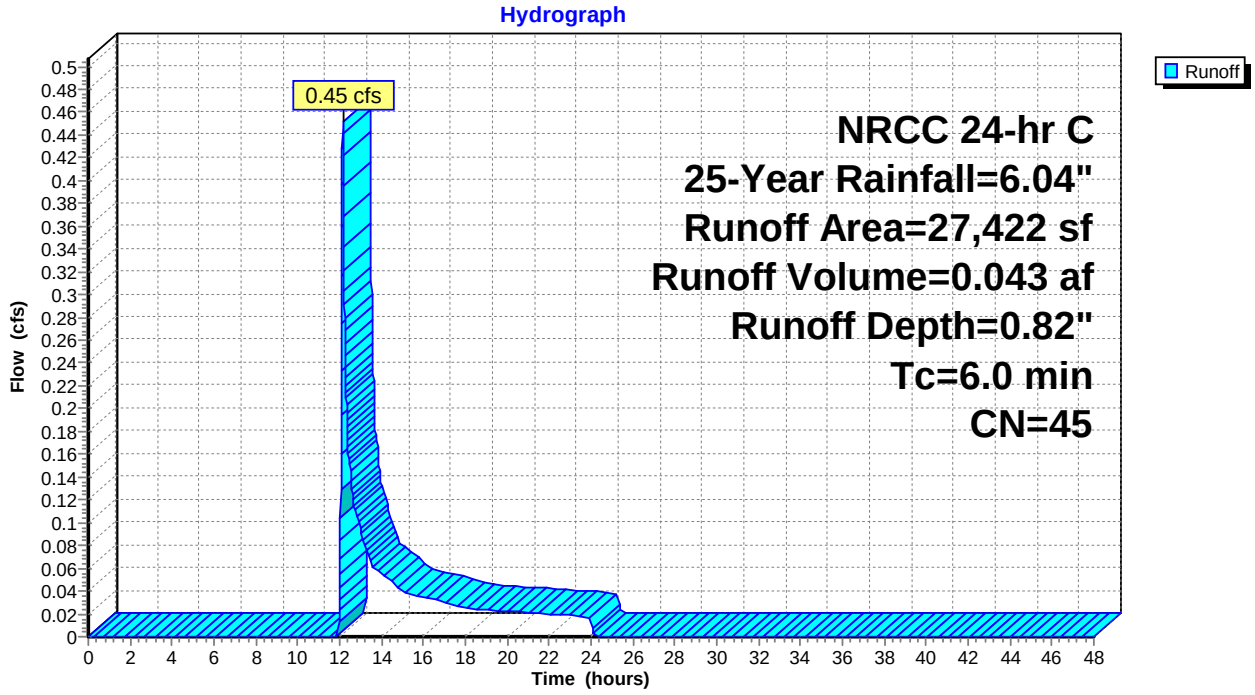
Runoff = 0.45 cfs @ 12.15 hrs, Volume= 0.043 af, Depth= 0.82"
Routed to Pond 54P : INFIL 1G

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



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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	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				

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Summary for Subcatchment 52S: PDA-1G

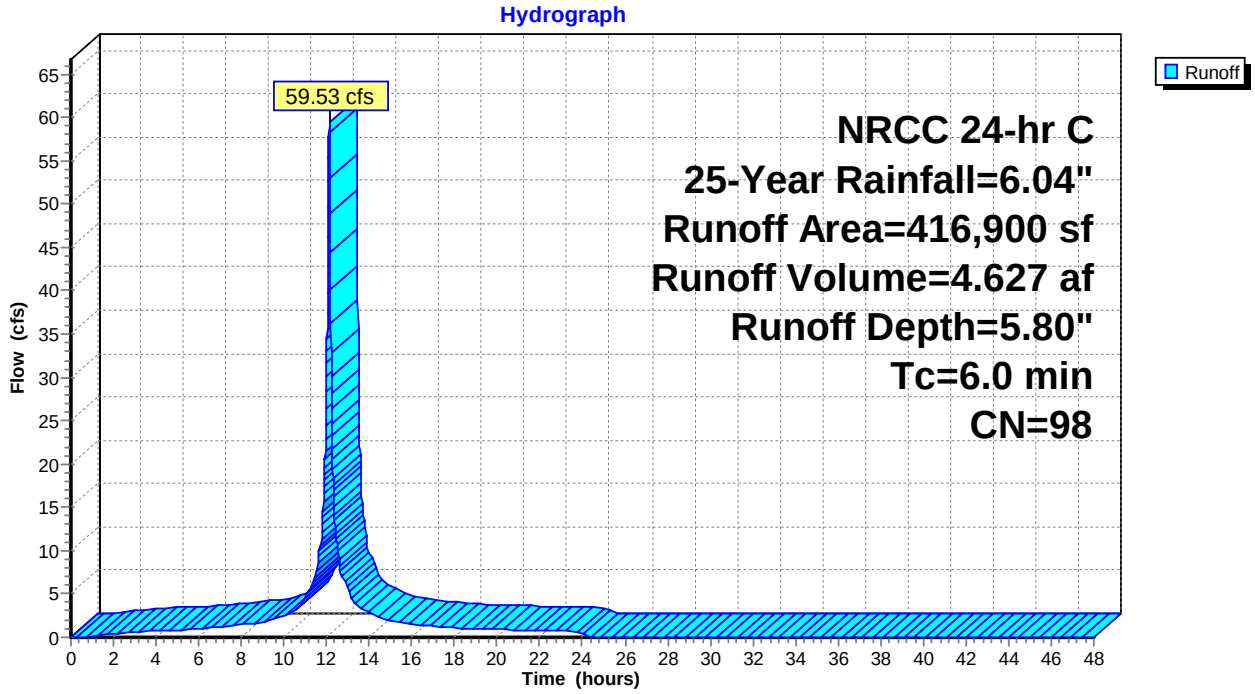
Runoff = 59.53 cfs @ 12.13 hrs, Volume= 4.627 af, Depth= 5.80"
Routed to Pond 55P : FB 1G

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



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Hydrograph for Subcatchment 52S: PDA-1G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.13
1.50	0.11	0.02	0.29
2.00	0.15	0.04	0.42
2.50	0.19	0.06	0.51
3.00	0.23	0.09	0.60
3.50	0.27	0.12	0.66
4.00	0.32	0.16	0.73
4.50	0.37	0.20	0.78
5.00	0.42	0.24	0.83
5.50	0.47	0.29	0.88
6.00	0.52	0.33	0.92
6.50	0.58	0.39	1.05
7.00	0.64	0.45	1.18
7.50	0.71	0.51	1.31
8.00	0.78	0.58	1.45
8.50	0.87	0.66	1.58
9.00	0.96	0.75	1.71
9.50	1.06	0.85	2.13
10.00	1.19	0.98	2.57
10.50	1.35	1.13	3.03
11.00	1.56	1.34	4.55
11.50	1.89	1.67	7.27
12.00	2.88	2.64	**31.76**
12.50	4.15	3.91	**10.44**
13.00	4.48	4.25	5.51
13.50	4.69	4.46	3.56
14.00	4.85	4.61	2.79
14.50	4.98	4.74	2.35
15.00	5.08	4.85	1.90
15.50	5.17	4.94	1.69
16.00	5.26	5.02	1.56
16.50	5.33	5.09	1.44
17.00	5.40	5.16	1.31
17.50	5.46	5.23	1.18
18.00	5.52	5.28	1.05
18.50	5.57	5.34	1.00
19.00	5.62	5.39	0.96
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
29.00	6.04	5.80	0.00
29.50	6.04	5.80	0.00
30.00	6.04	5.80	0.00
30.50	6.04	5.80	0.00
31.00	6.04	5.80	0.00
31.50	6.04	5.80	0.00
32.00	6.04	5.80	0.00
32.50	6.04	5.80	0.00
33.00	6.04	5.80	0.00
33.50	6.04	5.80	0.00
34.00	6.04	5.80	0.00
34.50	6.04	5.80	0.00
35.00	6.04	5.80	0.00
35.50	6.04	5.80	0.00
36.00	6.04	5.80	0.00
36.50	6.04	5.80	0.00
37.00	6.04	5.80	0.00
37.50	6.04	5.80	0.00
38.00	6.04	5.80	0.00
38.50	6.04	5.80	0.00
39.00	6.04	5.80	0.00
39.50	6.04	5.80	0.00
40.00	6.04	5.80	0.00
40.50	6.04	5.80	0.00
41.00	6.04	5.80	0.00
41.50	6.04	5.80	0.00
42.00	6.04	5.80	0.00
42.50	6.04	5.80	0.00
43.00	6.04	5.80	0.00
43.50	6.04	5.80	0.00
44.00	6.04	5.80	0.00
44.50	6.04	5.80	0.00
45.00	6.04	5.80	0.00
45.50	6.04	5.80	0.00
46.00	6.04	5.80	0.00
46.50	6.04	5.80	0.00
47.00	6.04	5.80	0.00
47.50	6.04	5.80	0.00
48.00	6.04	5.80	0.00

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

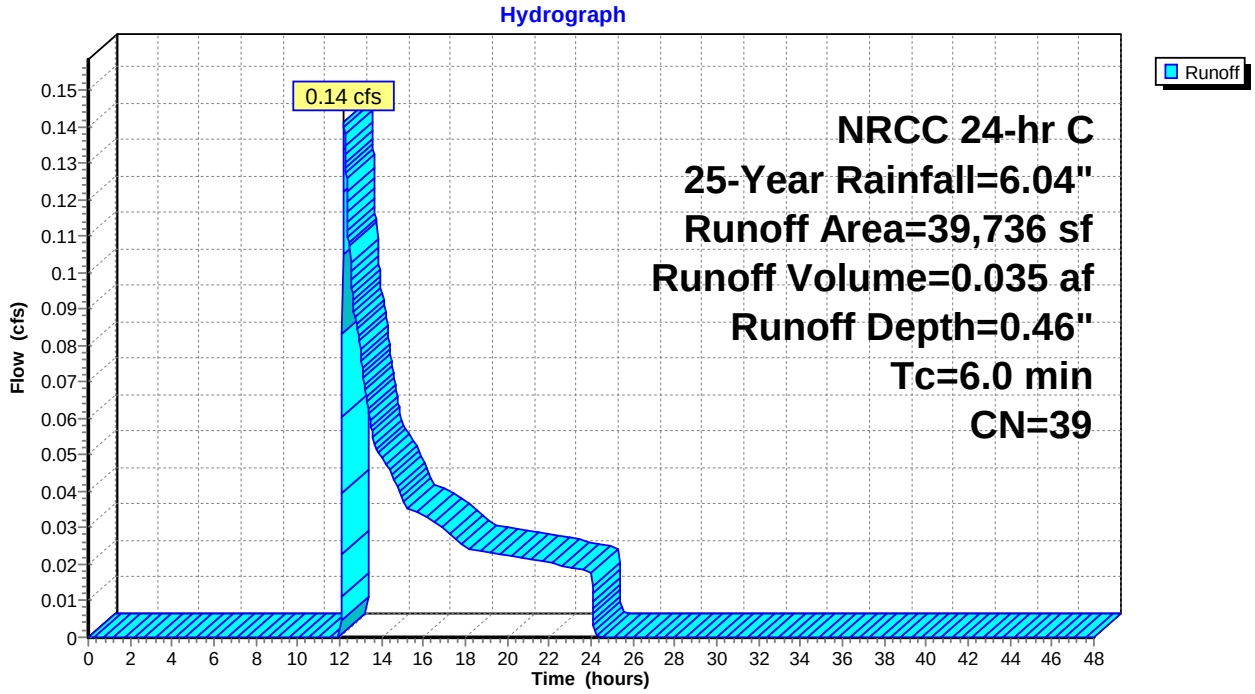
Runoff = 0.14 cfs @ 12.18 hrs, Volume= 0.035 af, Depth= 0.46"
Routed to Pond 47P : INFIL 1H

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



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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				

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Summary for Subcatchment 55S: PDA-1E

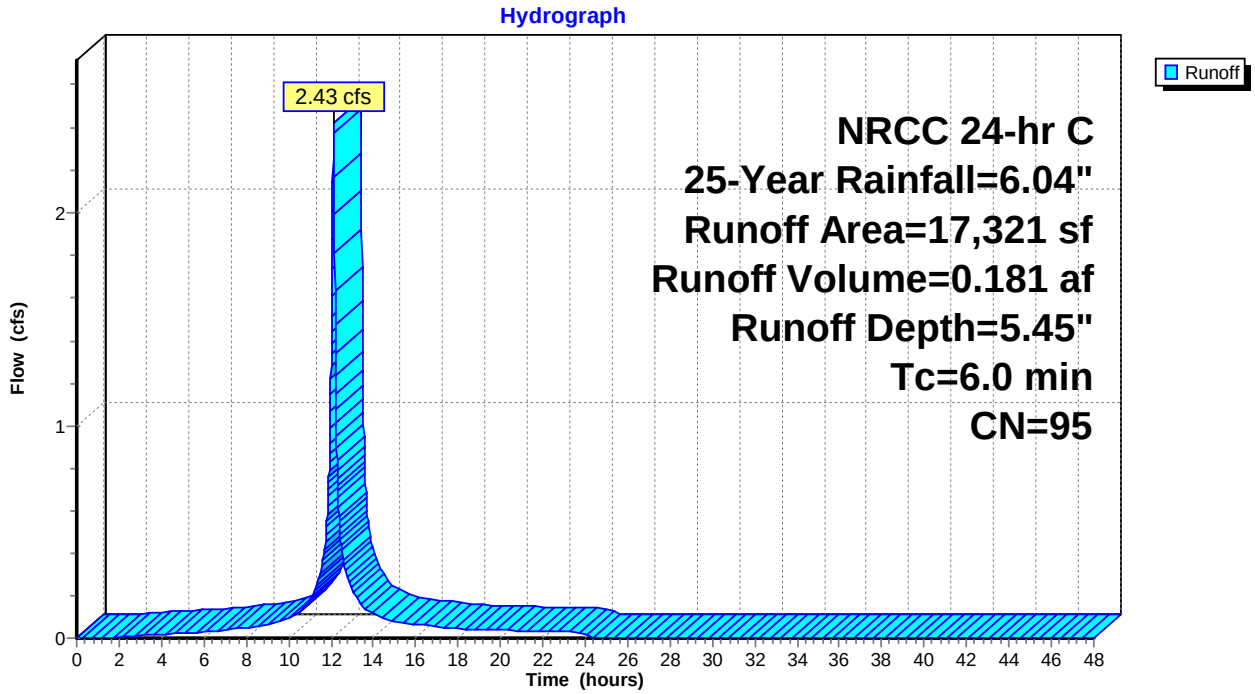
Runoff = 2.43 cfs @ 12.13 hrs, Volume= 0.181 af, Depth= 5.45"
Routed to Pond 59P : FB 1E

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



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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				

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

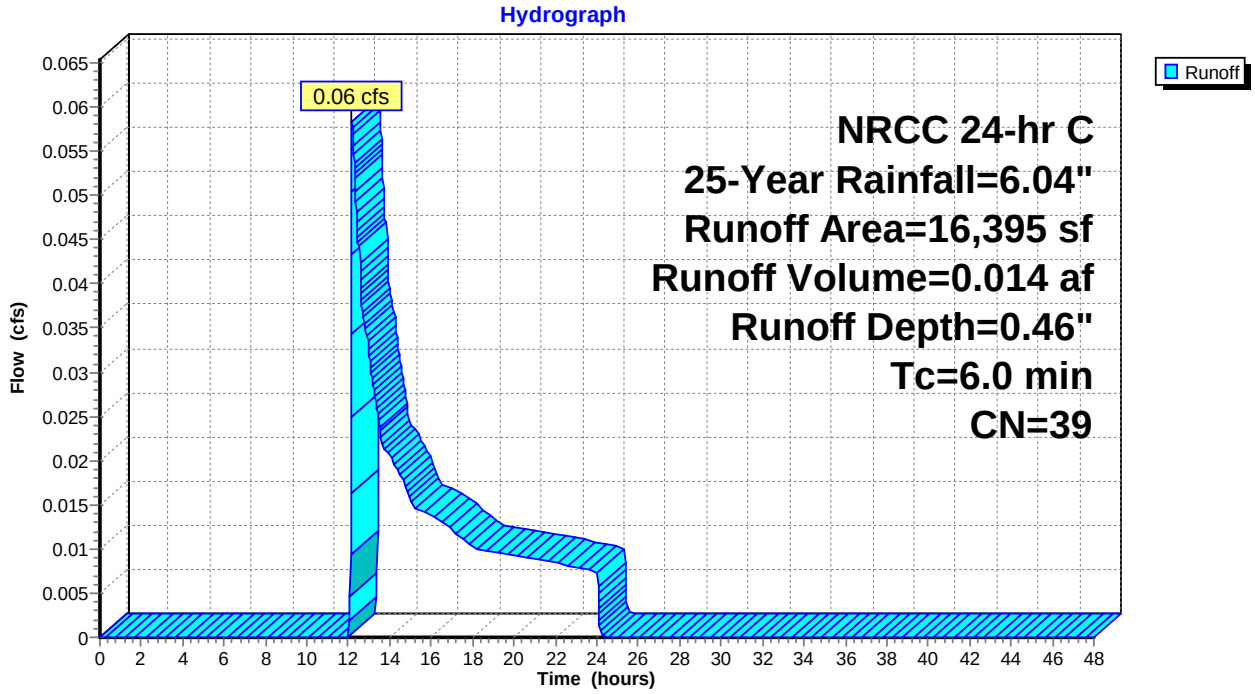
Runoff = 0.06 cfs @ 12.18 hrs, Volume= 0.014 af, Depth= 0.46"
Routed to Pond 44P : FB 1B

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



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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	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				

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

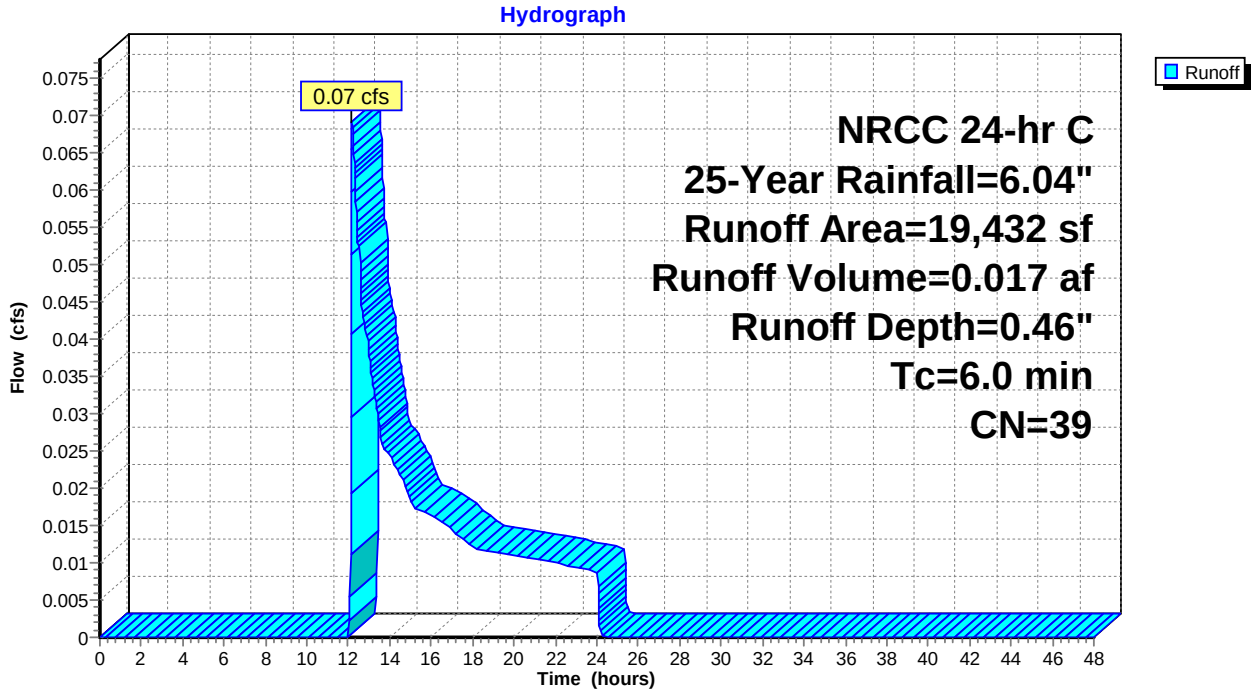
Runoff = 0.07 cfs @ 12.18 hrs, Volume= 0.017 af, Depth= 0.46"
Routed to Pond 51P : FB 1H

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.00
11.50	1.89	0.00	0.00
12.00	2.88	0.00	**0.00**
12.50	4.15	0.06	**0.05**
13.00	4.48	0.11	0.04
13.50	4.69	0.14	0.03
14.00	4.85	0.17	0.02
14.50	4.98	0.20	0.02
15.00	5.08	0.22	0.02
15.50	5.17	0.24	0.02
16.00	5.26	0.25	0.02
16.50	5.33	0.27	0.02
17.00	5.40	0.29	0.01
17.50	5.46	0.30	0.01
18.00	5.52	0.32	0.01
18.50	5.57	0.33	0.01
19.00	5.62	0.34	0.01
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
29.00	6.04	0.46	0.00
29.50	6.04	0.46	0.00
30.00	6.04	0.46	0.00
30.50	6.04	0.46	0.00
31.00	6.04	0.46	0.00
31.50	6.04	0.46	0.00
32.00	6.04	0.46	0.00
32.50	6.04	0.46	0.00
33.00	6.04	0.46	0.00
33.50	6.04	0.46	0.00
34.00	6.04	0.46	0.00
34.50	6.04	0.46	0.00
35.00	6.04	0.46	0.00
35.50	6.04	0.46	0.00
36.00	6.04	0.46	0.00
36.50	6.04	0.46	0.00
37.00	6.04	0.46	0.00
37.50	6.04	0.46	0.00
38.00	6.04	0.46	0.00
38.50	6.04	0.46	0.00
39.00	6.04	0.46	0.00
39.50	6.04	0.46	0.00
40.00	6.04	0.46	0.00
40.50	6.04	0.46	0.00
41.00	6.04	0.46	0.00
41.50	6.04	0.46	0.00
42.00	6.04	0.46	0.00
42.50	6.04	0.46	0.00
43.00	6.04	0.46	0.00
43.50	6.04	0.46	0.00
44.00	6.04	0.46	0.00
44.50	6.04	0.46	0.00
45.00	6.04	0.46	0.00
45.50	6.04	0.46	0.00
46.00	6.04	0.46	0.00
46.50	6.04	0.46	0.00
47.00	6.04	0.46	0.00
47.50	6.04	0.46	0.00
48.00	6.04	0.46	0.00

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Summary for Subcatchment 58S: PDA1-B-IB

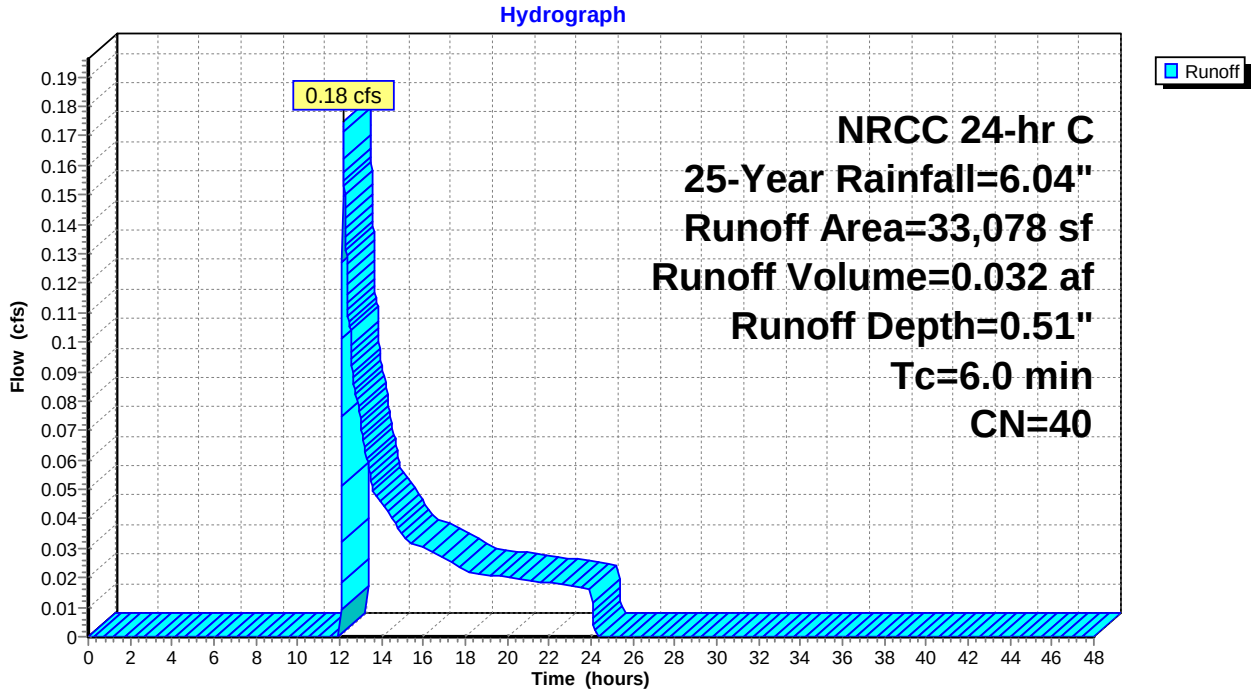
Runoff = 0.18 cfs @ 12.17 hrs, Volume= 0.032 af, Depth= 0.51"
Routed to Pond 45P : INFIL 1B

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



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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				

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Summary for Subcatchment 59S: PDA-1F

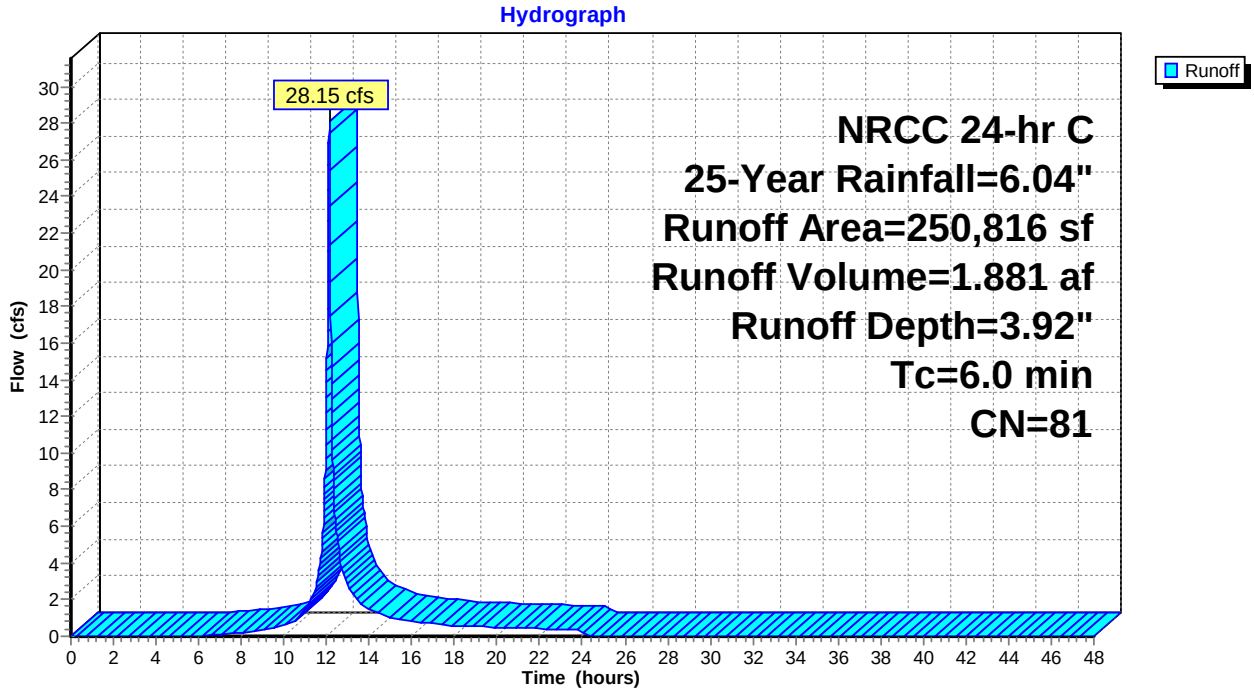
Runoff = 28.15 cfs @ 12.13 hrs, Volume= 1.881 af, Depth= 3.92"
Routed to Pond 26P : Bioretention 1F

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



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Hydrograph for Subcatchment 59S: PDA-1F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.02
6.50	0.58	0.00	0.05
7.00	0.64	0.01	0.09
7.50	0.71	0.02	0.14
8.00	0.78	0.04	0.20
8.50	0.87	0.06	0.26
9.00	0.96	0.08	0.33
9.50	1.06	0.12	0.47
10.00	1.19	0.17	0.64
10.50	1.35	0.24	0.85
11.00	1.56	0.34	1.45
11.50	1.89	0.54	2.64
12.00	2.88	1.22	**13.84**
12.50	4.15	2.25	**5.31**
13.00	4.48	2.53	2.86
13.50	4.69	2.72	1.87
14.00	4.85	2.85	1.48
14.50	4.98	2.96	1.25
15.00	5.08	3.06	1.01
15.50	5.17	3.14	0.90
16.00	5.26	3.21	0.84
16.50	5.33	3.28	0.77
17.00	5.40	3.34	0.71
17.50	5.46	3.40	0.64
18.00	5.52	3.45	0.57
18.50	5.57	3.50	0.54
19.00	5.62	3.54	0.52
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
29.00	6.04	3.92	0.00
29.50	6.04	3.92	0.00
30.00	6.04	3.92	0.00
30.50	6.04	3.92	0.00
31.00	6.04	3.92	0.00
31.50	6.04	3.92	0.00
32.00	6.04	3.92	0.00
32.50	6.04	3.92	0.00
33.00	6.04	3.92	0.00
33.50	6.04	3.92	0.00
34.00	6.04	3.92	0.00
34.50	6.04	3.92	0.00
35.00	6.04	3.92	0.00
35.50	6.04	3.92	0.00
36.00	6.04	3.92	0.00
36.50	6.04	3.92	0.00
37.00	6.04	3.92	0.00
37.50	6.04	3.92	0.00
38.00	6.04	3.92	0.00
38.50	6.04	3.92	0.00
39.00	6.04	3.92	0.00
39.50	6.04	3.92	0.00
40.00	6.04	3.92	0.00
40.50	6.04	3.92	0.00
41.00	6.04	3.92	0.00
41.50	6.04	3.92	0.00
42.00	6.04	3.92	0.00
42.50	6.04	3.92	0.00
43.00	6.04	3.92	0.00
43.50	6.04	3.92	0.00
44.00	6.04	3.92	0.00
44.50	6.04	3.92	0.00
45.00	6.04	3.92	0.00
45.50	6.04	3.92	0.00
46.00	6.04	3.92	0.00
46.50	6.04	3.92	0.00
47.00	6.04	3.92	0.00
47.50	6.04	3.92	0.00
48.00	6.04	3.92	0.00

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

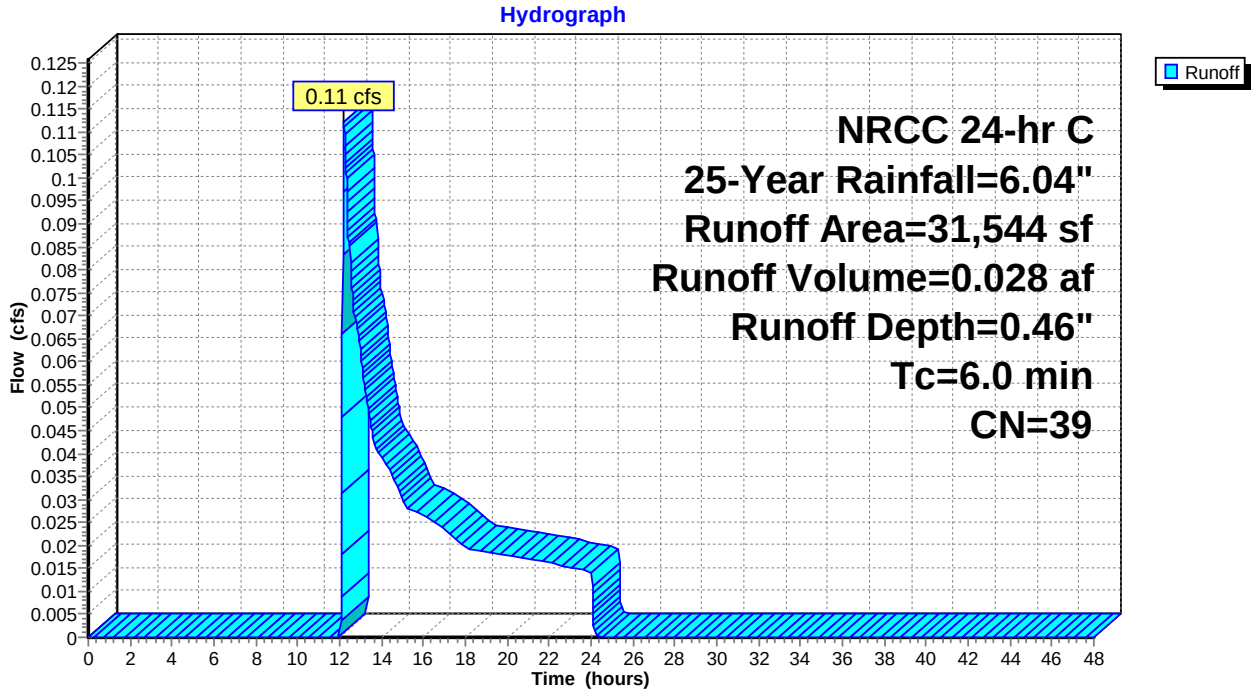
Runoff = 0.11 cfs @ 12.18 hrs, Volume= 0.028 af, Depth= 0.46"
Routed to Pond 31P : Bioretention i

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.03	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.32	0.00	0.00
4.50	0.37	0.00	0.00
5.00	0.42	0.00	0.00
5.50	0.47	0.00	0.00
6.00	0.52	0.00	0.00
6.50	0.58	0.00	0.00
7.00	0.64	0.00	0.00
7.50	0.71	0.00	0.00
8.00	0.78	0.00	0.00
8.50	0.87	0.00	0.00
9.00	0.96	0.00	0.00
9.50	1.06	0.00	0.00
10.00	1.19	0.00	0.00
10.50	1.35	0.00	0.00
11.00	1.56	0.00	0.00
11.50	1.89	0.00	0.00
12.00	2.88	0.00	**0.00**
12.50	4.15	0.06	**0.09**
13.00	4.48	0.11	0.06
13.50	4.69	0.14	0.05
14.00	4.85	0.17	0.04
14.50	4.98	0.20	0.04
15.00	5.08	0.22	0.03
15.50	5.17	0.24	0.03
16.00	5.26	0.25	0.03
16.50	5.33	0.27	0.03
17.00	5.40	0.29	0.02
17.50	5.46	0.30	0.02
18.00	5.52	0.32	0.02
18.50	5.57	0.33	0.02
19.00	5.62	0.34	0.02
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
29.00	6.04	0.46	0.00
29.50	6.04	0.46	0.00
30.00	6.04	0.46	0.00
30.50	6.04	0.46	0.00
31.00	6.04	0.46	0.00
31.50	6.04	0.46	0.00
32.00	6.04	0.46	0.00
32.50	6.04	0.46	0.00
33.00	6.04	0.46	0.00
33.50	6.04	0.46	0.00
34.00	6.04	0.46	0.00
34.50	6.04	0.46	0.00
35.00	6.04	0.46	0.00
35.50	6.04	0.46	0.00
36.00	6.04	0.46	0.00
36.50	6.04	0.46	0.00
37.00	6.04	0.46	0.00
37.50	6.04	0.46	0.00
38.00	6.04	0.46	0.00
38.50	6.04	0.46	0.00
39.00	6.04	0.46	0.00
39.50	6.04	0.46	0.00
40.00	6.04	0.46	0.00
40.50	6.04	0.46	0.00
41.00	6.04	0.46	0.00
41.50	6.04	0.46	0.00
42.00	6.04	0.46	0.00
42.50	6.04	0.46	0.00
43.00	6.04	0.46	0.00
43.50	6.04	0.46	0.00
44.00	6.04	0.46	0.00
44.50	6.04	0.46	0.00
45.00	6.04	0.46	0.00
45.50	6.04	0.46	0.00
46.00	6.04	0.46	0.00
46.50	6.04	0.46	0.00
47.00	6.04	0.46	0.00
47.50	6.04	0.46	0.00
48.00	6.04	0.46	0.00

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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 = 2.39 cfs @ 12.93 hrs, Volume= 1.172 af, Atten= 90%, Lag= 47.9 min
Primary = 2.39 cfs @ 12.93 hrs, Volume= 1.172 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= 413.74' @ 12.93 hrs Surf.Area= 17,242 sf Storage= 42,134 cf

Plug-Flow detention time= 344.0 min calculated for 1.172 af (71% of inflow)
Center-of-Mass det. time= 244.4 min (1,029.3 - 784.8)

Volume	Invert	Avail.Storage	Storage Description
#1	408.66'	82,103 cf	**Custom Stage Data (Prismatic)** Listed below

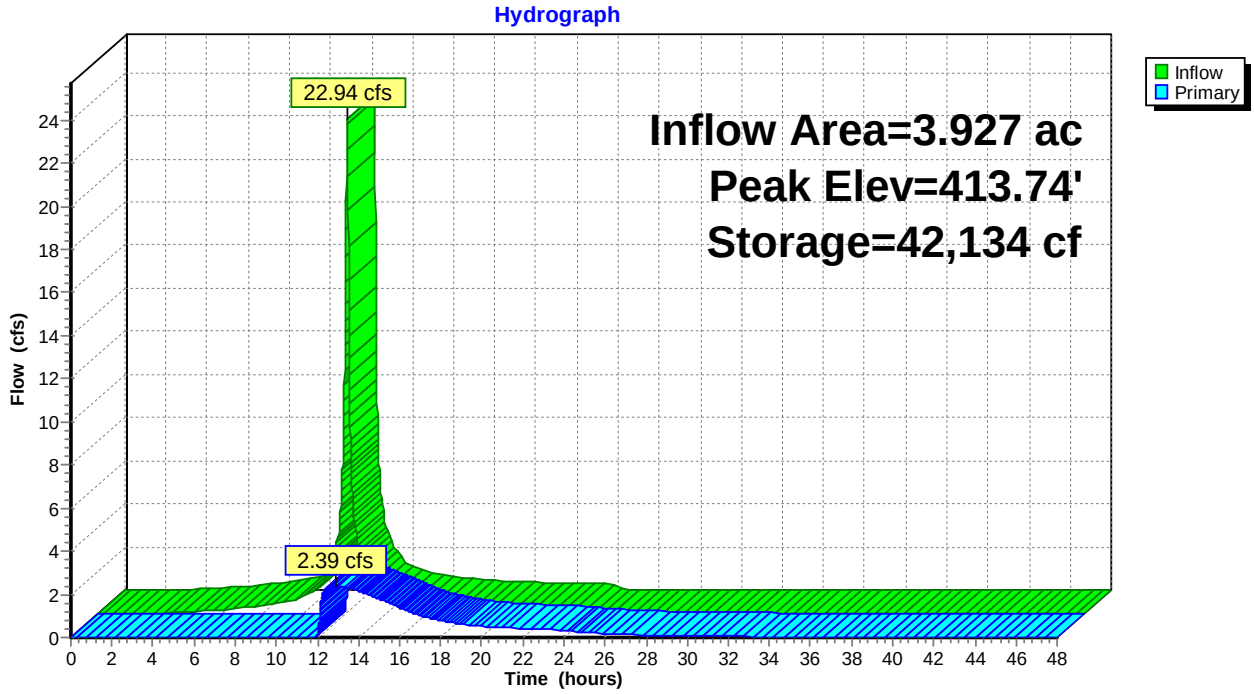
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	14,016	0.0	0	0
409.33	14,016	40.0	3,756	3,756
412.00	14,016	20.0	7,485	11,241
416.00	21,415	100.0	70,862	82,103

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	412.50'	**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=2.39 cfs @ 12.93 hrs HW=413.74' (Free Discharge)
└**1=Culvert** (Passes 2.39 cfs of 17.47 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 2.39 cfs @ 4.38 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 1P: Bioretention 1D



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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**	**23,275**	**412.68**	**0.13**
13.00	**2.24**	**42,118**	**413.74**	**2.39**
14.00	1.12	39,329	413.59	2.15
15.00	0.77	35,651	413.38	1.78
16.00	0.63	32,405	413.19	1.38
17.00	0.53	30,206	413.07	1.02
18.00	0.43	28,701	412.99	0.78
19.00	0.39	27,639	412.93	0.62
20.00	0.36	26,938	412.89	0.53
21.00	0.34	26,437	412.86	0.46
22.00	0.31	26,056	412.84	0.41
23.00	0.29	25,736	412.82	0.37
24.00	0.26	25,451	412.80	0.34
25.00	0.00	24,538	412.75	0.24
26.00	0.00	23,810	412.71	0.17
27.00	0.00	23,283	412.68	0.13
28.00	0.00	22,874	412.66	0.10
29.00	0.00	22,554	412.64	0.08
30.00	0.00	22,303	412.62	0.06
31.00	0.00	22,098	412.61	0.05
32.00	0.00	21,920	412.60	0.05
33.00	0.00	21,765	412.59	0.04
34.00	0.00	21,629	412.59	0.03
35.00	0.00	21,512	412.58	0.03
36.00	0.00	21,409	412.57	0.03
37.00	0.00	21,320	412.57	0.02
38.00	0.00	21,243	412.56	0.02
39.00	0.00	21,175	412.56	0.02
40.00	0.00	21,116	412.56	0.02
41.00	0.00	21,065	412.55	0.01
42.00	0.00	21,021	412.55	0.01
43.00	0.00	20,982	412.55	0.01
44.00	0.00	20,946	412.55	0.01
45.00	0.00	20,912	412.55	0.01
46.00	0.00	20,879	412.54	0.01
47.00	0.00	20,847	412.54	0.01
48.00	0.00	20,817	412.54	0.01

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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 = 6.70 cfs @ 12.22 hrs, Volume= 0.571 af, Atten= 49%, Lag= 5.6 min
Primary = 6.70 cfs @ 12.22 hrs, Volume= 0.571 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= 414.28' @ 12.22 hrs Surf.Area= 10,710 sf Storage= 17,110 cf

Plug-Flow detention time= 202.6 min calculated for 0.571 af (64% of inflow)
Center-of-Mass det. time= 92.9 min (900.0 - 807.1)

Volume	Invert	Avail.Storage	Storage Description
#1	408.66'	31,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

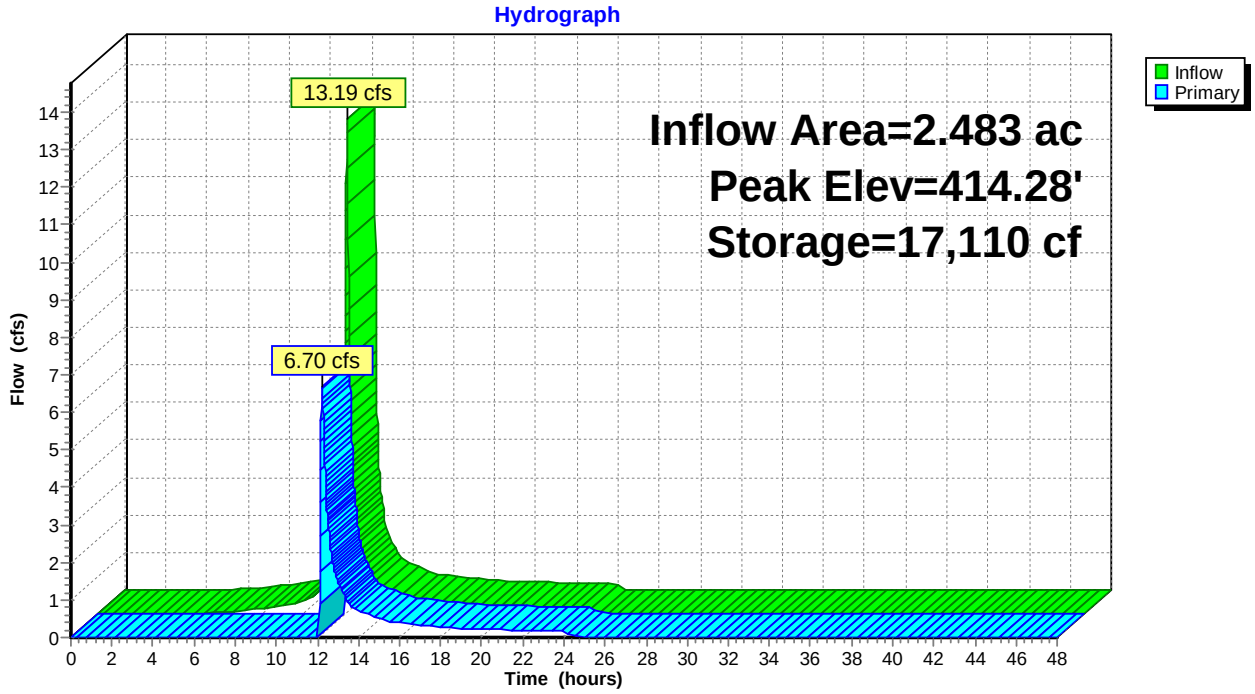
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	8,681	0.0	0	0
409.33	8,681	40.0	2,327	2,327
413.50	8,681	20.0	7,240	9,566
415.00	12,593	100.0	15,956	25,522
415.50	12,817	100.0	6,353	31,874

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	414.00'	**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=6.67 cfs @ 12.22 hrs HW=414.28' (Free Discharge)
↑—**1=Culvert** (Passes 6.67 cfs of 18.77 cfs potential flow)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 6.67 cfs @ 1.50 fps)

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Pond 3P: Bioretention 1A



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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**	**15,261**	**414.10**	**1.51**
14.00	0.67	14,864	414.06	0.71
15.00	0.46	14,688	414.05	0.51
16.00	0.38	14,583	414.03	0.39
17.00	0.32	14,529	414.03	0.33
18.00	0.26	14,475	414.02	0.27
19.00	0.23	14,446	414.02	0.24
20.00	0.22	14,432	414.02	0.22
21.00	0.20	14,419	414.02	0.21
22.00	0.19	14,405	414.02	0.19
23.00	0.17	14,392	414.02	0.18
24.00	0.16	14,378	414.01	0.16
25.00	0.00	14,237	414.00	0.00
26.00	0.00	14,233	414.00	0.00
27.00	0.00	14,233	414.00	0.00
28.00	0.00	14,233	414.00	0.00
29.00	0.00	14,233	414.00	0.00
30.00	0.00	14,233	414.00	0.00
31.00	0.00	14,233	414.00	0.00
32.00	0.00	14,233	414.00	0.00
33.00	0.00	14,233	414.00	0.00
34.00	0.00	14,233	414.00	0.00
35.00	0.00	14,233	414.00	0.00
36.00	0.00	14,233	414.00	0.00
37.00	0.00	14,233	414.00	0.00
38.00	0.00	14,233	414.00	0.00
39.00	0.00	14,233	414.00	0.00
40.00	0.00	14,233	414.00	0.00
41.00	0.00	14,233	414.00	0.00
42.00	0.00	14,233	414.00	0.00
43.00	0.00	14,233	414.00	0.00
44.00	0.00	14,233	414.00	0.00
45.00	0.00	14,233	414.00	0.00
46.00	0.00	14,233	414.00	0.00
47.00	0.00	14,233	414.00	0.00
48.00	0.00	14,233	414.00	0.00

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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)

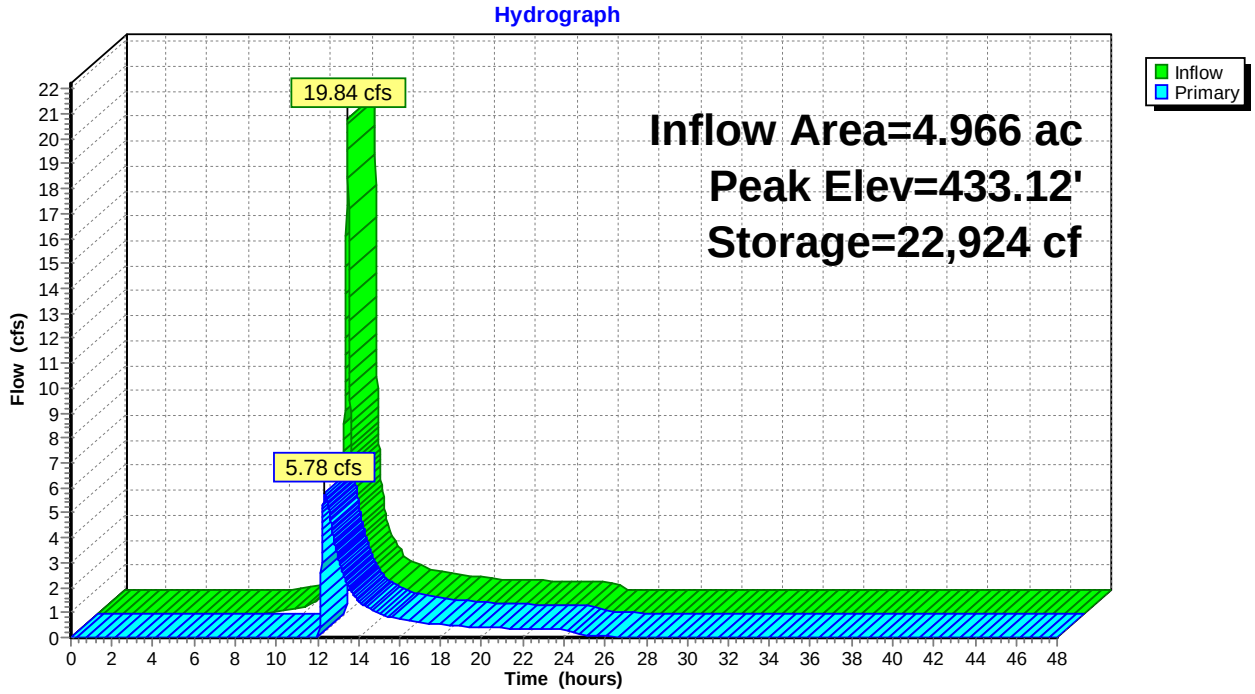
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
428.67	11,465	0.0	0	0
429.33	11,465	40.0	3,027	3,027
432.00	11,465	20.0	6,122	9,149
435.00	15,812	100.0	40,916	50,065

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)

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Pond 22P: Bioretention 5A



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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

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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)

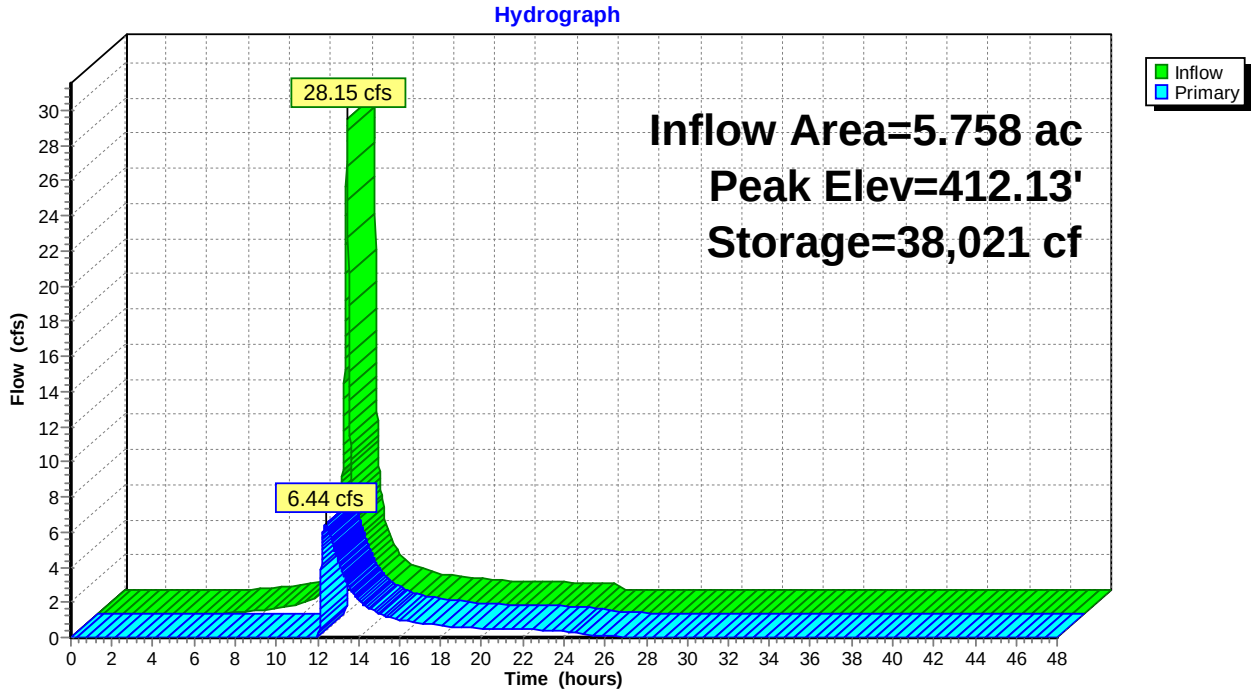
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.66	18,594	0.0	0	0
408.33	18,594	40.0	4,983	4,983
411.00	18,594	20.0	9,929	14,912
414.00	28,345	100.0	70,409	85,321

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)

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Pond 26P: Bioretention 1F



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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

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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 = 9.17 cfs @ 12.35 hrs, Volume= 1.805 af, Atten= 73%, Lag= 13.3 min
Primary = 9.17 cfs @ 12.35 hrs, Volume= 1.805 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= 419.66' @ 12.35 hrs Surf.Area= 19,765 sf Storage= 43,385 cf

Plug-Flow detention time= 179.3 min calculated for 1.804 af (78% of inflow)
Center-of-Mass det. time= 92.3 min (907.2 - 814.9)

Volume	Invert	Avail.Storage	Storage Description
#1	414.67'	94,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

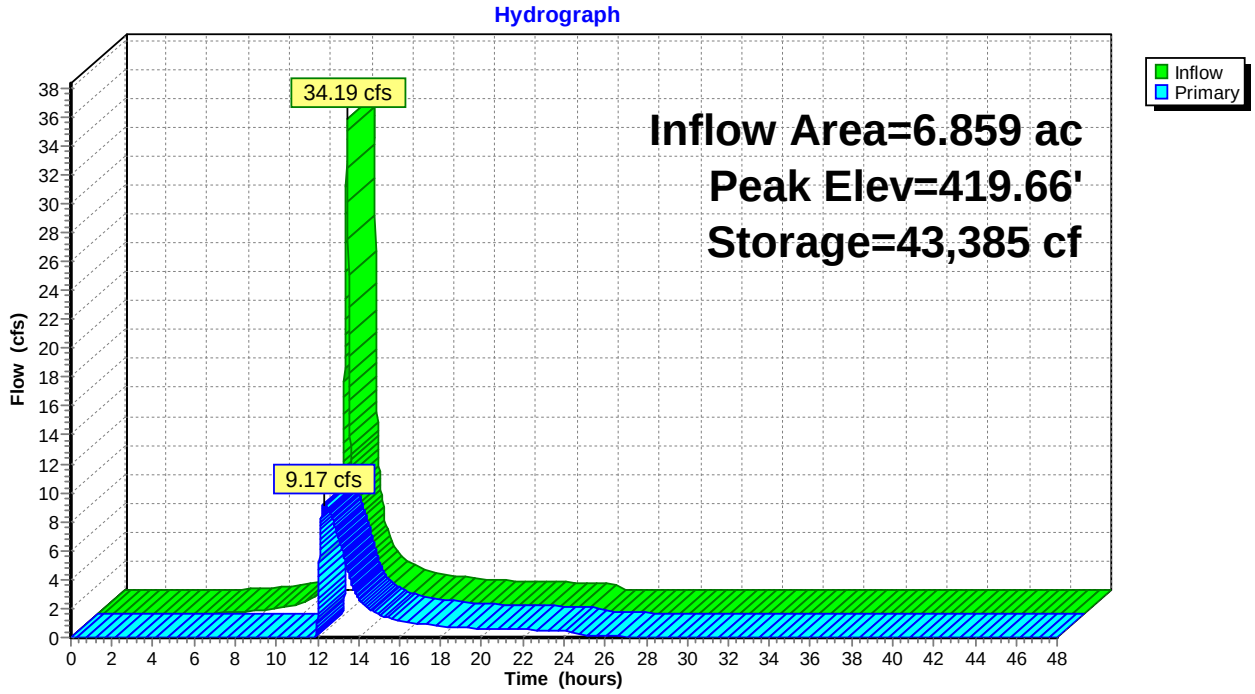
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
414.67	16,541	0.0	0	0
415.33	16,541	40.0	4,367	4,367
418.00	16,541	20.0	8,833	13,200
422.00	24,296	100.0	81,674	94,874

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	418.50'	**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=9.17 cfs @ 12.35 hrs HW=419.66' (Free Discharge)
└**1=Culvert** (Passes 9.17 cfs of 17.53 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 9.17 cfs @ 4.59 fps)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 29P: Bioretention 4B



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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**	**25,716**	**418.73**	**1.39**
13.00	**3.45**	**36,139**	**419.29**	**7.01**
14.00	1.77	28,005	418.85	2.69
15.00	1.22	26,090	418.75	1.58
16.00	1.01	25,246	418.70	1.15
17.00	0.85	24,813	418.68	0.96
18.00	0.69	24,432	418.65	0.79
19.00	0.63	24,168	418.64	0.67
20.00	0.59	24,040	418.63	0.62
21.00	0.55	23,940	418.63	0.58
22.00	0.51	23,827	418.62	0.54
23.00	0.47	23,706	418.61	0.50
24.00	0.43	23,583	418.61	0.46
25.00	0.00	22,653	418.55	0.16
26.00	0.00	22,220	418.53	0.09
27.00	0.00	21,987	418.52	0.05
28.00	0.00	21,861	418.51	0.03
29.00	0.00	21,792	418.50	0.01
30.00	0.00	21,756	418.50	0.01
31.00	0.00	21,736	418.50	0.00
32.00	0.00	21,725	418.50	0.00
33.00	0.00	21,719	418.50	0.00
34.00	0.00	21,716	418.50	0.00
35.00	0.00	21,715	418.50	0.00
36.00	0.00	21,714	418.50	0.00
37.00	0.00	21,713	418.50	0.00
38.00	0.00	21,713	418.50	0.00
39.00	0.00	21,713	418.50	0.00
40.00	0.00	21,713	418.50	0.00
41.00	0.00	21,713	418.50	0.00
42.00	0.00	21,713	418.50	0.00
43.00	0.00	21,713	418.50	0.00
44.00	0.00	21,713	418.50	0.00
45.00	0.00	21,713	418.50	0.00
46.00	0.00	21,713	418.50	0.00
47.00	0.00	21,713	418.50	0.00
48.00	0.00	21,713	418.50	0.00

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Summary for Pond 31P: Bioretention i

Inflow Area = 10.027 ac, 72.74% Impervious, Inflow Depth = 2.30" for 25-Year event
Inflow = 25.42 cfs @ 12.14 hrs, Volume= 1.918 af
Outflow = 4.61 cfs @ 12.55 hrs, Volume= 1.243 af, Atten= 82%, Lag= 24.4 min
Primary = 4.61 cfs @ 12.55 hrs, Volume= 1.243 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= 412.14' @ 12.55 hrs Surf.Area= 24,825 sf Storage= 45,611 cf

Plug-Flow detention time= 302.5 min calculated for 1.242 af (65% of inflow)
Center-of-Mass det. time= 187.3 min (964.7 - 777.4)

Volume	Invert	Avail.Storage	Storage Description
#1	407.83'	93,189 cf	**Custom Stage Data (Prismatic)** Listed below

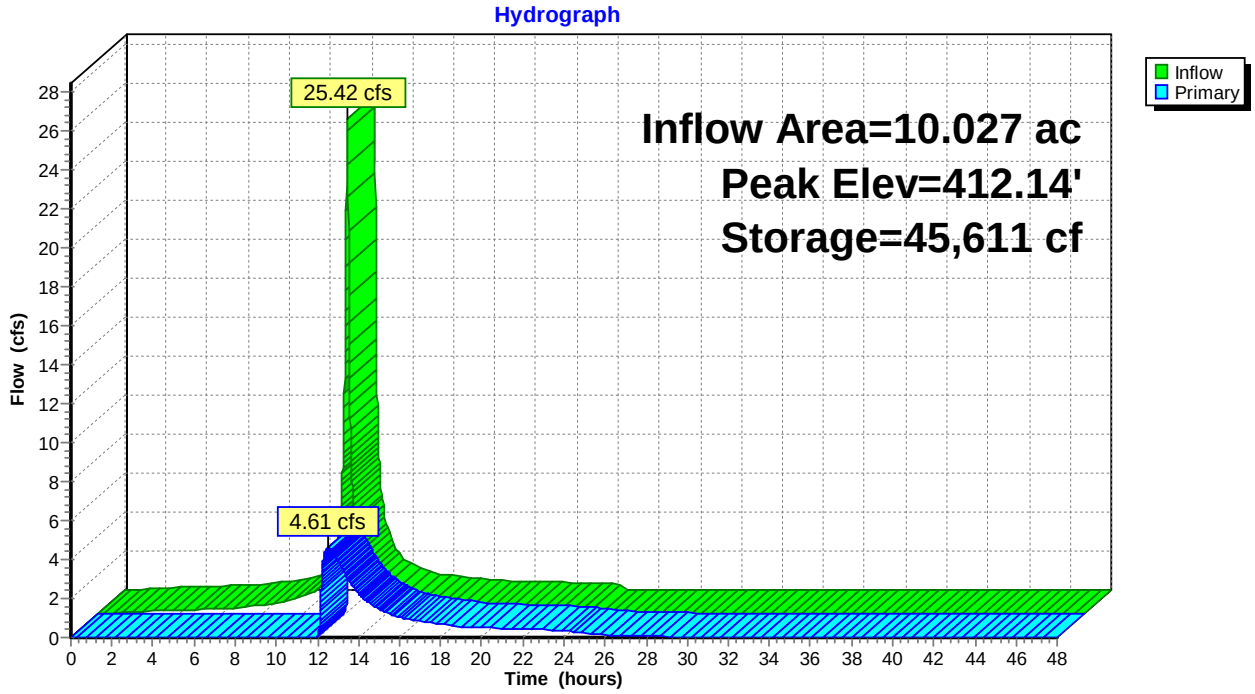
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	22,680	0.0	0	0
408.33	22,680	40.0	4,536	4,536
411.00	22,680	20.0	12,111	16,647
414.00	28,348	100.0	76,542	93,189

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	411.50'	**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=4.60 cfs @ 12.55 hrs HW=412.14' (Free Discharge)
└**1=Culvert** (Passes 4.60 cfs of 7.16 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 4.60 cfs @ 2.56 fps)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 31P: Bioretention i



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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	0.03	14	407.83	0.00
2.00	0.11	268	407.86	0.00
3.00	0.15	739	407.91	0.00
4.00	0.19	1,356	407.98	0.00
5.00	0.22	2,085	408.06	0.00
6.00	0.25	2,921	408.15	0.00
7.00	0.34	3,979	408.27	0.00
8.00	0.45	5,399	408.52	0.00
9.00	0.57	7,220	408.92	0.00
10.00	0.90	9,823	409.50	0.00
11.00	1.67	14,045	410.43	0.00
12.00	**12.13**	**27,413**	**411.42**	**0.00**
13.00	**2.60**	**43,958**	**412.07**	**3.92**
14.00	1.32	39,475	411.89	2.26
15.00	0.91	36,940	411.80	1.46
16.00	0.74	35,413	411.74	1.05
17.00	0.62	34,542	411.70	0.83
18.00	0.51	33,886	411.68	0.68
19.00	0.46	33,396	411.66	0.56
20.00	0.43	33,092	411.64	0.51
21.00	0.40	32,862	411.64	0.46
22.00	0.37	32,667	411.63	0.43
23.00	0.34	32,491	411.62	0.39
24.00	0.32	32,323	411.61	0.36
25.00	0.00	31,462	411.58	0.22
26.00	0.00	30,842	411.56	0.13
27.00	0.00	30,457	411.54	0.08
28.00	0.00	30,218	411.53	0.05
29.00	0.00	30,051	411.53	0.04
30.00	0.00	29,918	411.52	0.03
31.00	0.00	29,813	411.52	0.03
32.00	0.00	29,729	411.51	0.02
33.00	0.00	29,662	411.51	0.02
34.00	0.00	29,609	411.51	0.01
35.00	0.00	29,567	411.51	0.01
36.00	0.00	29,534	411.51	0.01
37.00	0.00	29,507	411.50	0.01
38.00	0.00	29,486	411.50	0.01
39.00	0.00	29,469	411.50	0.00
40.00	0.00	29,456	411.50	0.00
41.00	0.00	29,445	411.50	0.00
42.00	0.00	29,437	411.50	0.00
43.00	0.00	29,430	411.50	0.00
44.00	0.00	29,425	411.50	0.00
45.00	0.00	29,421	411.50	0.00
46.00	0.00	29,417	411.50	0.00
47.00	0.00	29,415	411.50	0.00
48.00	0.00	29,412	411.50	0.00

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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)

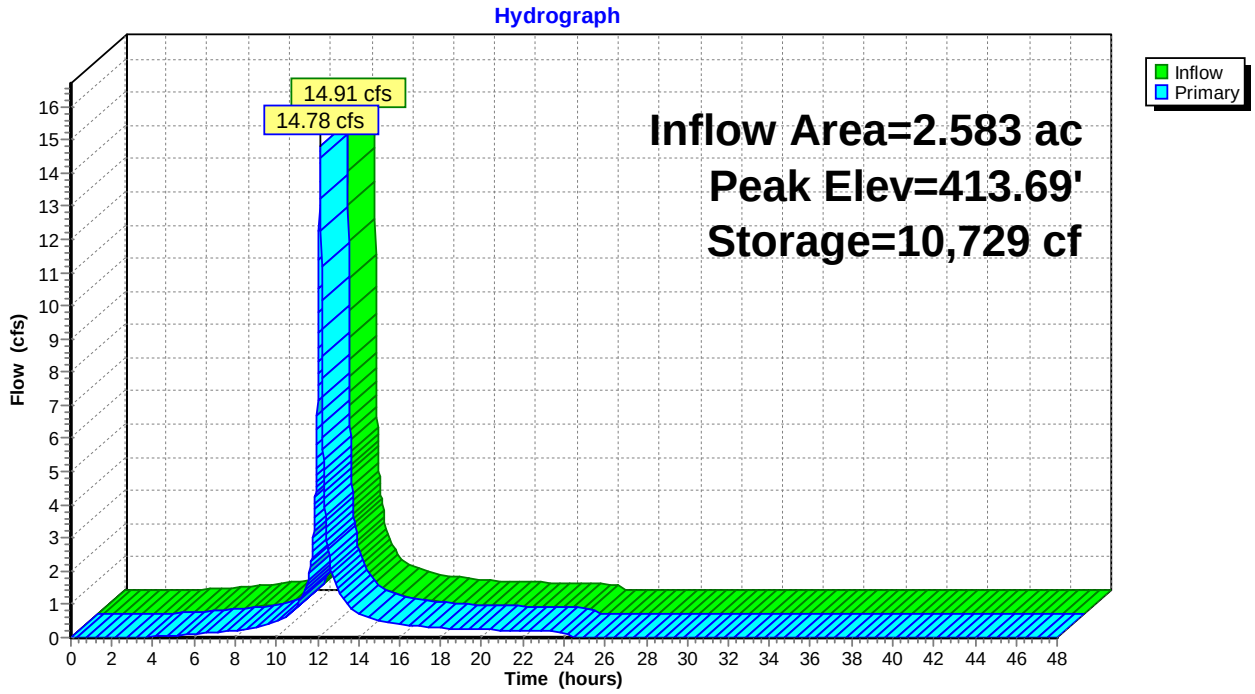
Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	13,740 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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

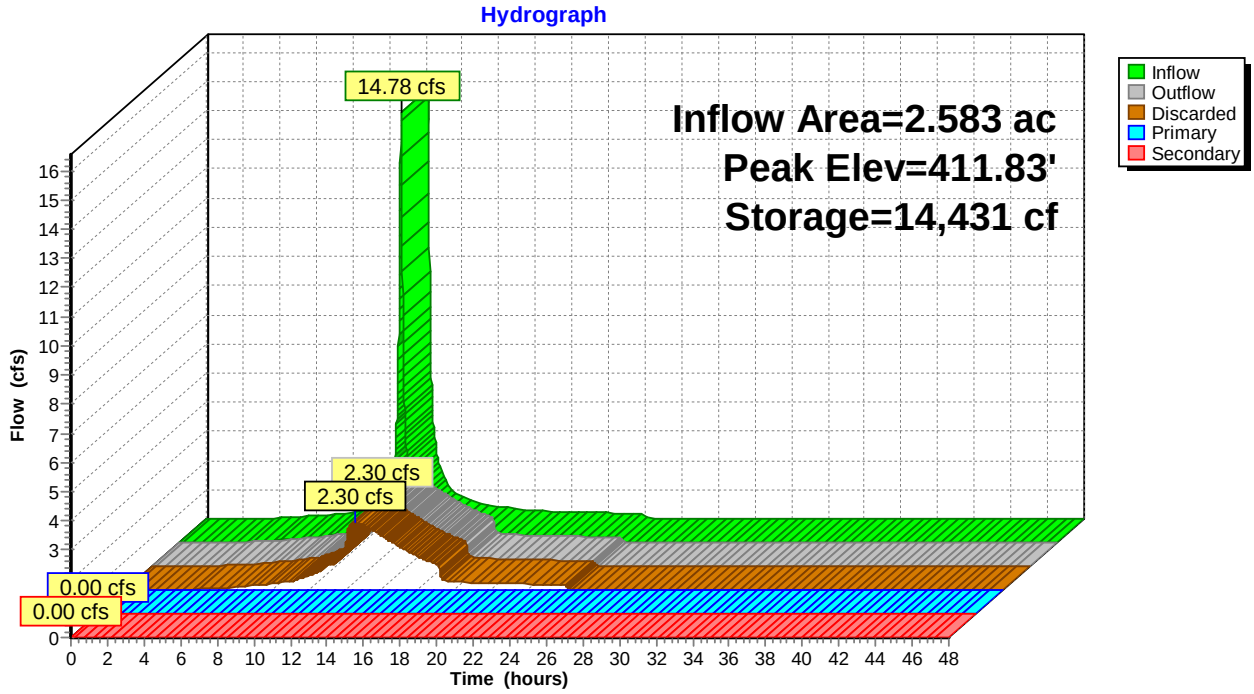
Discarded OutFlow Max=2.30 cfs @ 12.60 hrs HW=411.83' (Free Discharge)
└**3=Exfiltration** (Controls 2.30 cfs)

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)

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Pond 33P: INFIL 1C



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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

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Summary for Pond 37P: FB 1i+J

Inflow Area = 9.303 ac, 78.40% Impervious, Inflow Depth = 4.88" for 25-Year event
Inflow = 51.30 cfs @ 12.13 hrs, Volume= 3.780 af
Outflow = 50.67 cfs @ 12.14 hrs, Volume= 3.780 af, Atten= 1%, Lag= 0.6 min
Primary = 25.34 cfs @ 12.14 hrs, Volume= 1.890 af
Routed to Pond 31P : Bioretention i
Secondary = 25.34 cfs @ 12.14 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' @ 12.14 hrs Surf.Area= 10,270 sf Storage= 29,943 cf (3,137 cf above start)

Plug-Flow detention time= 134.8 min calculated for 3.164 af (84% of inflow)
Center-of-Mass det. time= 2.4 min (774.4 - 772.1)

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

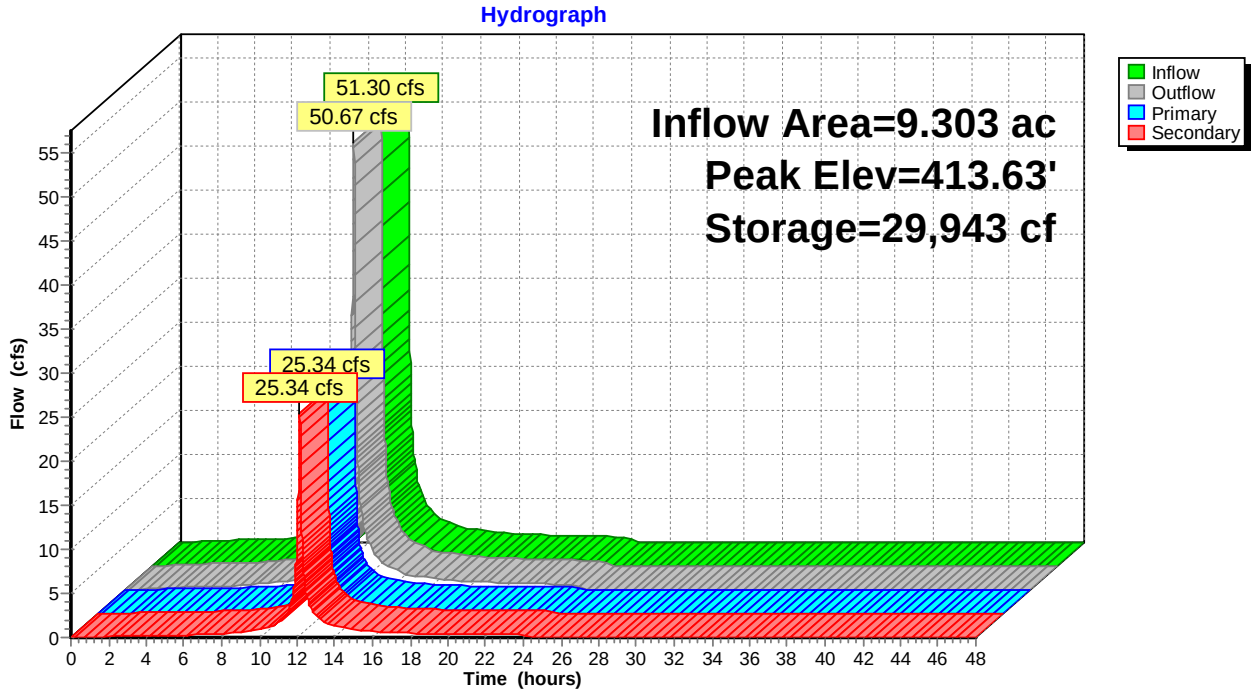
Device	Routing	Invert	Outlet Devices
#1	Primary	413.25'	**40.0' long x 21.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	413.25'	**40.0' long x 21.0' breadth Broad-Crested Rectangular 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=25.32 cfs @ 12.14 hrs HW=413.63' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 25.32 cfs @ 1.66 fps)

Secondary OutFlow Max=25.32 cfs @ 12.14 hrs HW=413.63' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 25.32 cfs @ 1.66 fps)

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Pond 37P: FB 1i+J



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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	0.07	26,819	413.25	0.06	0.03	0.03
2.00	0.22	26,853	413.26	0.21	0.11	0.11
3.00	0.31	26,874	413.26	0.31	0.15	0.15
4.00	0.38	26,890	413.26	0.38	0.19	0.19
5.00	0.44	26,902	413.26	0.43	0.22	0.22
6.00	0.51	26,918	413.26	0.50	0.25	0.25
7.00	0.70	26,958	413.27	0.69	0.34	0.34
8.00	0.91	27,005	413.27	0.90	0.45	0.45
9.00	1.14	27,056	413.28	1.13	0.57	0.57
10.00	1.83	27,133	413.29	1.80	0.90	0.90
11.00	3.43	27,311	413.31	3.34	1.67	1.67
12.00	**26.51**	**28,733**	**413.48**	**24.27**	**12.13**	**12.13**
13.00	**4.94**	**27,478**	**413.33**	**5.07**	**2.54**	**2.54**
14.00	2.52	27,220	413.30	2.55	1.28	1.28
15.00	1.73	27,128	413.29	1.76	0.88	0.88
16.00	1.42	27,090	413.28	1.43	0.71	0.71
17.00	1.19	27,063	413.28	1.20	0.60	0.60
18.00	0.96	27,023	413.28	0.98	0.49	0.49
19.00	0.88	27,003	413.27	0.89	0.44	0.44
20.00	0.83	26,991	413.27	0.83	0.42	0.42
21.00	0.77	26,978	413.27	0.77	0.39	0.39
22.00	0.71	26,965	413.27	0.72	0.36	0.36
23.00	0.66	26,952	413.27	0.66	0.33	0.33
24.00	0.60	26,940	413.27	0.60	0.30	0.30
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

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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

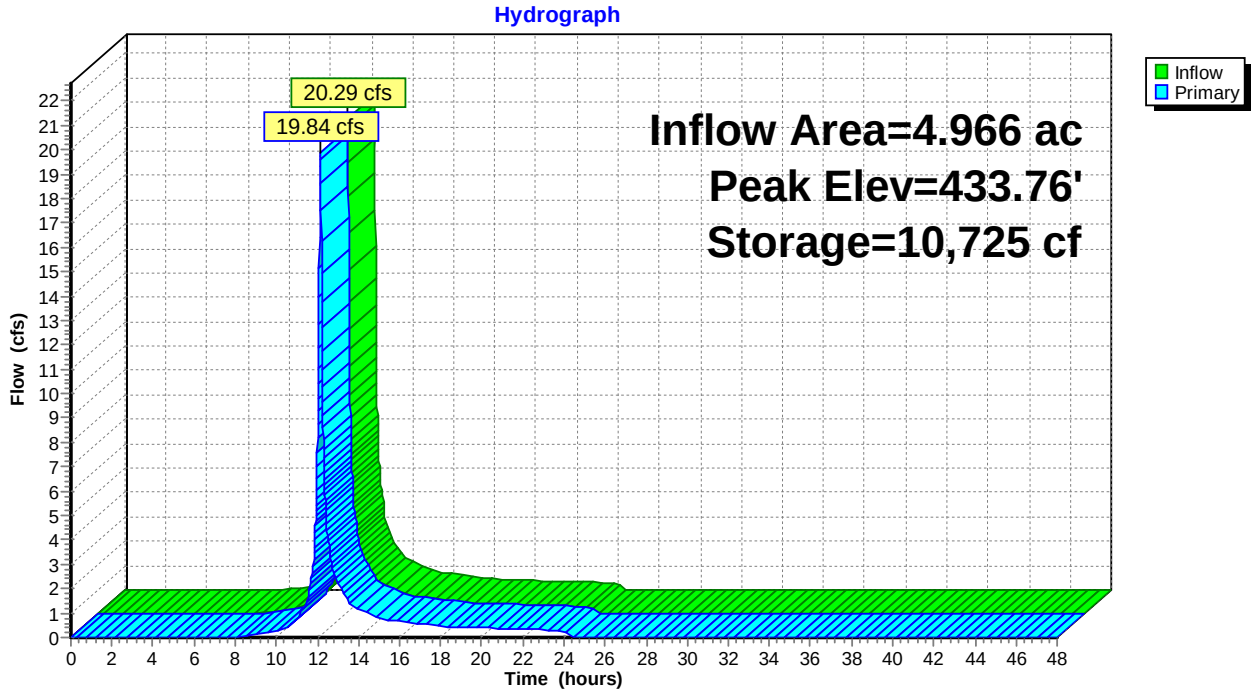
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
431.00	2,415	0	0
435.00	5,362	15,554	15,554

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)

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Pond 39P: FB 5A



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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

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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)

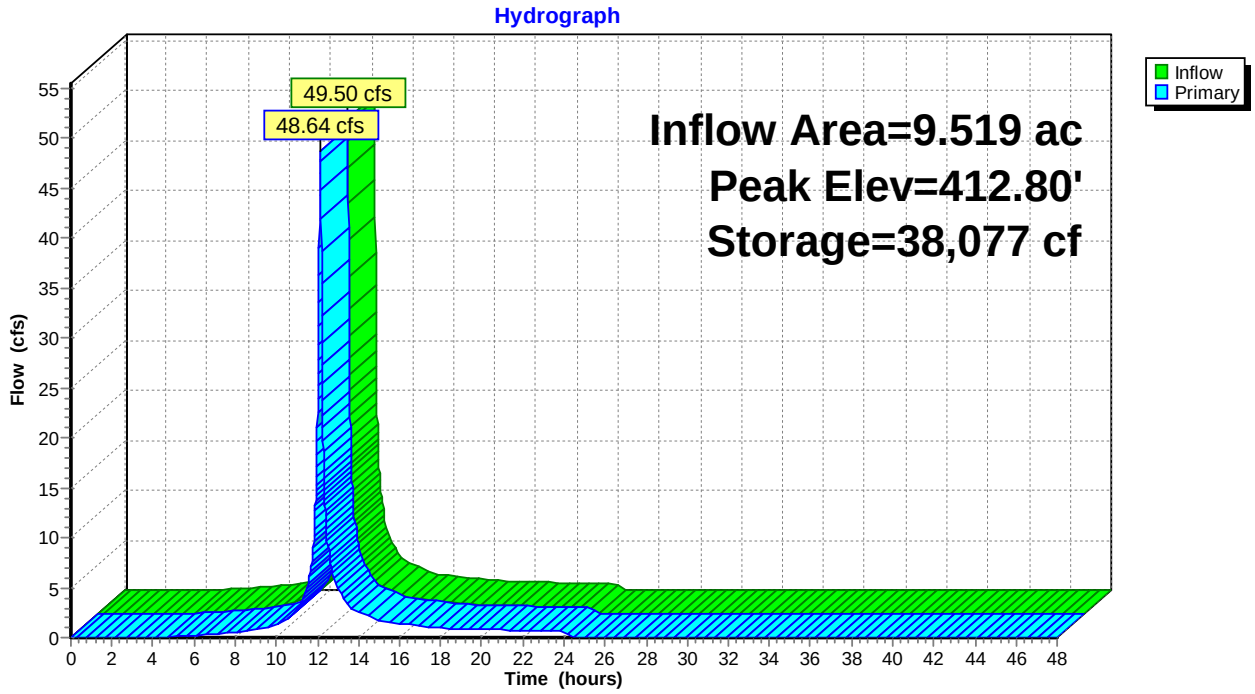
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	47,613 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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

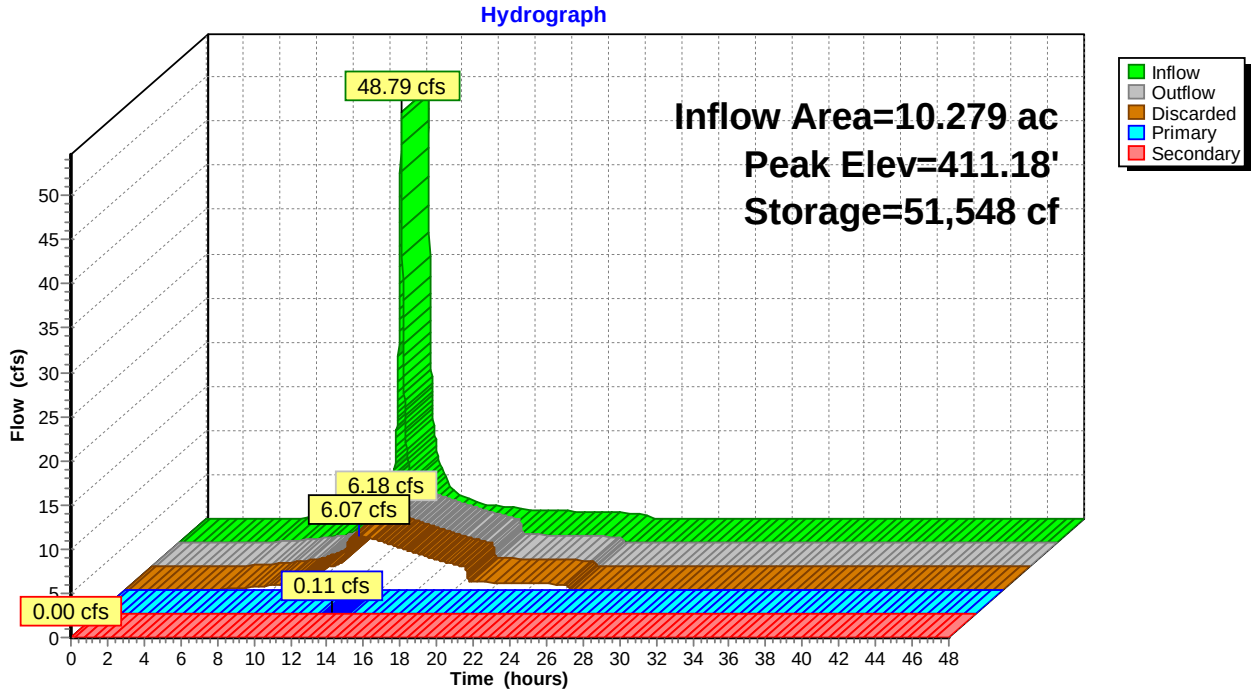
Discarded OutFlow Max=6.07 cfs @ 12.78 hrs HW=411.18' (Free Discharge)
└**3=Exfiltration** (Controls 6.07 cfs)

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)

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Pond 45P: INFIL 1B



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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

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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

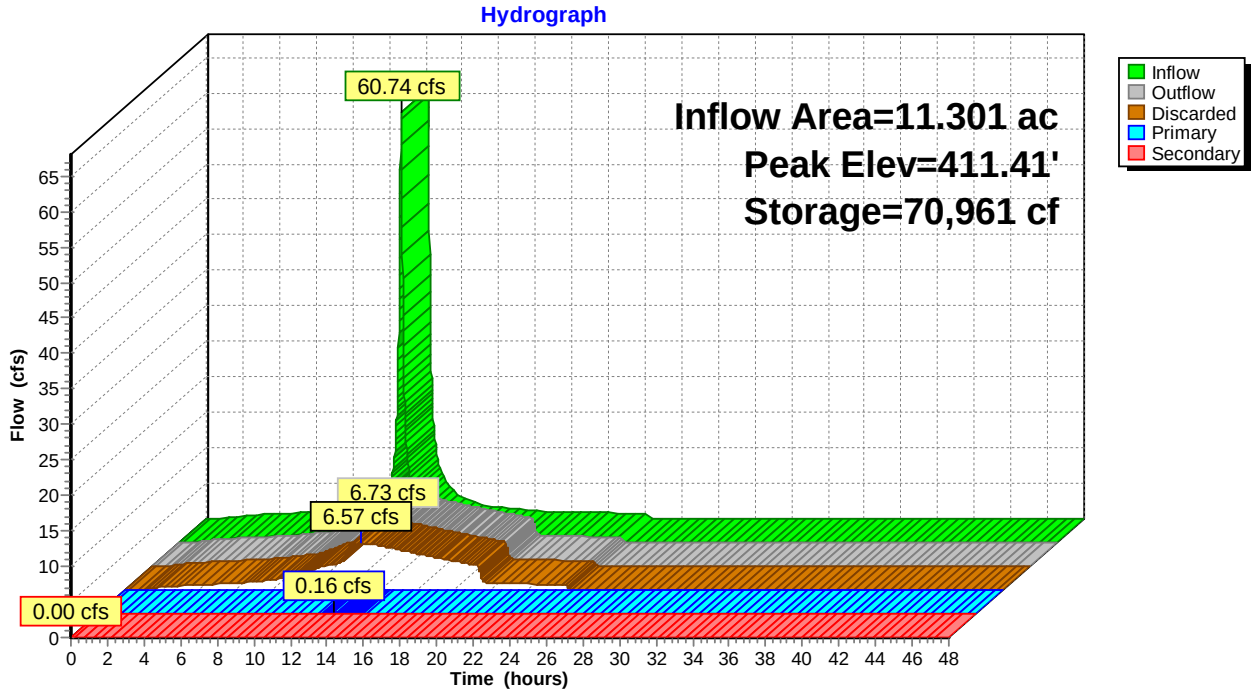
Discarded OutFlow Max=6.57 cfs @ 12.88 hrs HW=411.41' (Free Discharge)
└**3=Exfiltration** (Controls 6.57 cfs)

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)

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Pond 47P: INFIL 1H



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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

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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)

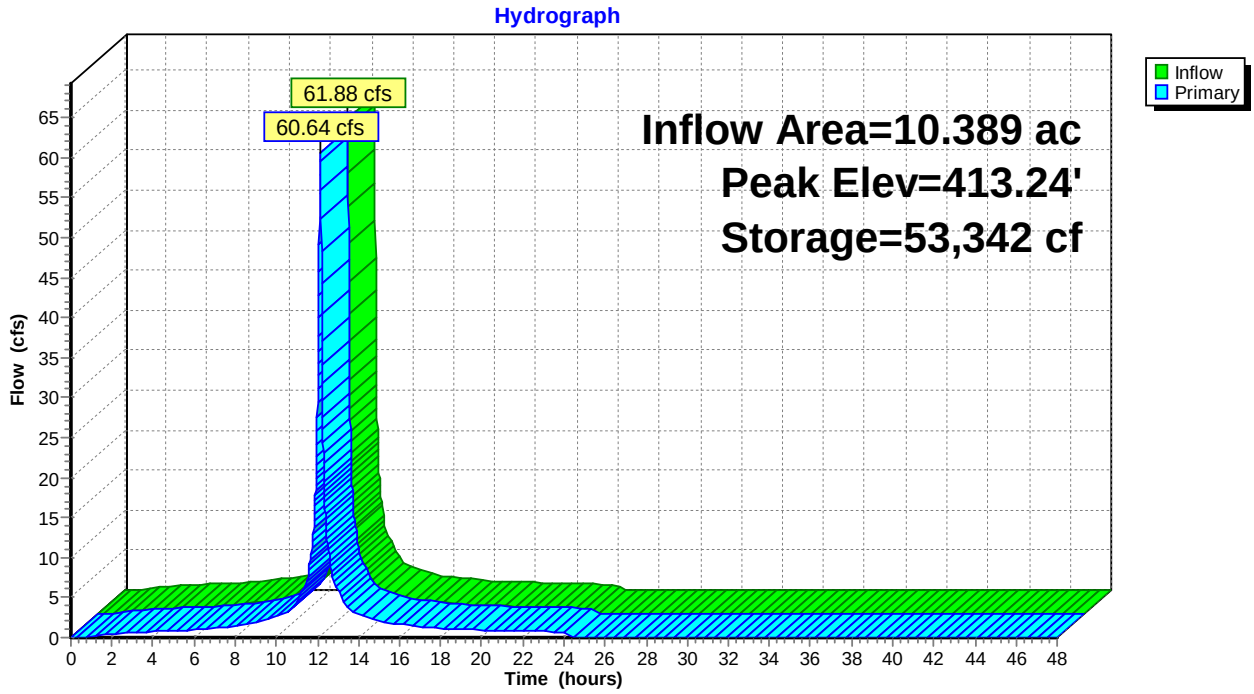
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,056 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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Summary for Pond 53P: Bioretention J basin

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 30.46" for 25-Year event
Inflow = 26.59 cfs @ 12.14 hrs, Volume= 1.980 af
Outflow = 3.76 cfs @ 12.66 hrs, Volume= 1.258 af, Atten= 86%, Lag= 31.3 min
Primary = 3.76 cfs @ 12.66 hrs, Volume= 1.258 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' @ 12.66 hrs Surf.Area= 27,713 sf Storage= 48,655 cf

Plug-Flow detention time= 329.5 min calculated for 1.258 af (64% of inflow)
Center-of-Mass det. time= 212.2 min (992.3 - 780.1)

Volume	Invert	Avail.Storage	Storage Description
#1	407.83'	72,373 cf	**Custom Stage Data (Prismatic)** Listed below

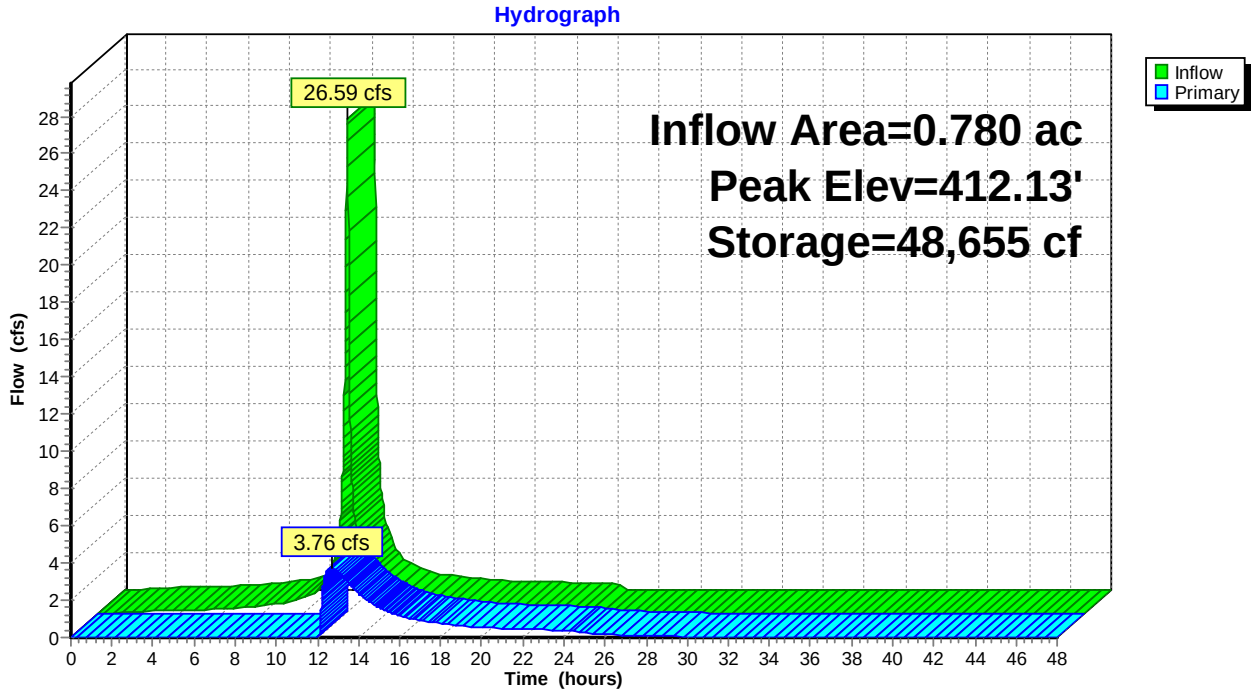
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	24,200	0.0	0	0
408.33	24,200	40.0	4,840	4,840
411.00	24,200	20.0	12,923	17,763
413.00	30,410	100.0	54,610	72,373

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	411.50'	**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=3.76 cfs @ 12.66 hrs HW=412.13' (Free Discharge)
└**1=Culvert** (Passes 3.76 cfs of 6.89 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 3.76 cfs @ 2.55 fps)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 53P: Bioretention J basin



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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	0.03	14	407.83	0.00
2.00	0.11	268	407.86	0.00
3.00	0.15	739	407.91	0.00
4.00	0.19	1,356	407.97	0.00
5.00	0.22	2,085	408.05	0.00
6.00	0.25	2,921	408.13	0.00
7.00	0.34	3,979	408.24	0.00
8.00	0.45	5,399	408.45	0.00
9.00	0.57	7,220	408.82	0.00
10.00	0.90	9,823	409.36	0.00
11.00	1.67	14,045	410.23	0.00
12.00	**12.54**	**27,588**	**411.36**	**0.00**
13.00	**2.72**	**48,048**	**412.11**	**3.56**
14.00	1.38	44,075	411.96	2.36
15.00	0.95	41,221	411.86	1.62
16.00	0.78	39,325	411.79	1.17
17.00	0.65	38,163	411.75	0.93
18.00	0.53	37,299	411.72	0.75
19.00	0.48	36,632	411.69	0.63
20.00	0.45	36,195	411.68	0.55
21.00	0.42	35,882	411.66	0.50
22.00	0.39	35,635	411.65	0.46
23.00	0.36	35,408	411.65	0.42
24.00	0.33	35,186	411.64	0.39
25.00	0.00	34,201	411.60	0.25
26.00	0.00	33,481	411.58	0.16
27.00	0.00	32,985	411.56	0.11
28.00	0.00	32,642	411.54	0.08
29.00	0.00	32,404	411.54	0.05
30.00	0.00	32,238	411.53	0.04
31.00	0.00	32,105	411.53	0.03
32.00	0.00	31,993	411.52	0.03
33.00	0.00	31,900	411.52	0.02
34.00	0.00	31,821	411.51	0.02
35.00	0.00	31,755	411.51	0.02
36.00	0.00	31,700	411.51	0.01
37.00	0.00	31,654	411.51	0.01
38.00	0.00	31,616	411.51	0.01
39.00	0.00	31,583	411.51	0.01
40.00	0.00	31,556	411.51	0.01
41.00	0.00	31,533	411.50	0.01
42.00	0.00	31,514	411.50	0.00
43.00	0.00	31,498	411.50	0.00
44.00	0.00	31,485	411.50	0.00
45.00	0.00	31,473	411.50	0.00
46.00	0.00	31,464	411.50	0.00
47.00	0.00	31,456	411.50	0.00
48.00	0.00	31,450	411.50	0.00

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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
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= 411.45' @ 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	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	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

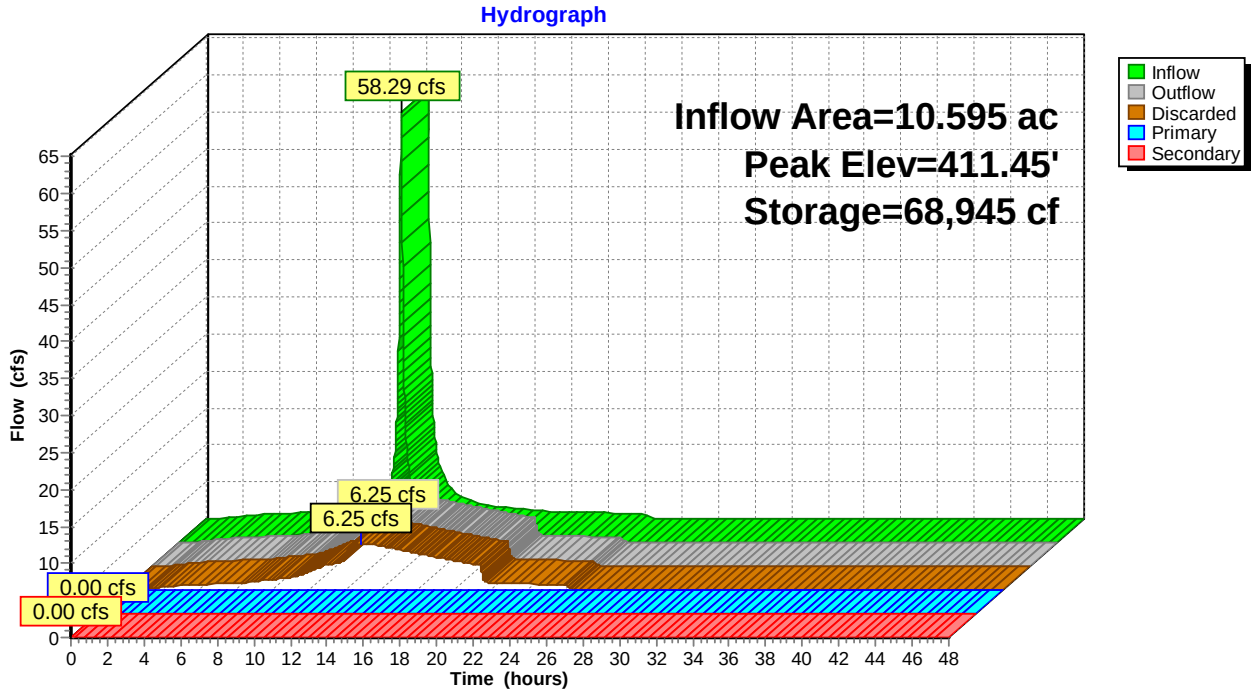
Discarded OutFlow Max=6.25 cfs @ 12.94 hrs HW=411.45' (Free Discharge)
└**3=Exfiltration** (Controls 6.25 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
└**4=Culvert** (Controls 0.00 cfs)
└**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)

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Pond 54P: INFIL 1G



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Hydrograph for Pond 54P: INFIL 1G

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	0.06	14	408.50	0.04	0.04	0.00	0.00
2.00	0.40	127	408.51	0.38	0.38	0.00	0.00
3.00	0.58	190	408.51	0.57	0.57	0.00	0.00
4.00	0.72	237	408.51	0.71	0.71	0.00	0.00
5.00	0.83	273	408.51	0.82	0.82	0.00	0.00
6.00	0.92	305	408.51	0.91	0.91	0.00	0.00
7.00	1.16	381	408.52	1.14	1.14	0.00	0.00
8.00	1.43	469	408.52	1.40	1.40	0.00	0.00
9.00	1.69	558	408.53	1.67	1.67	0.00	0.00
10.00	2.52	813	408.54	2.43	2.43	0.00	0.00
11.00	4.39	1,662	408.58	3.39	3.39	0.00	0.00
12.00	**27.71**	**21,251**	**409.49**	**4.26**	**4.26**	0.00	0.00
13.00	**5.91**	**68,909**	**411.45**	**6.25**	**6.25**	0.00	0.00
14.00	2.91	61,190	411.15	5.94	5.94	0.00	0.00
15.00	2.03	49,553	410.69	5.46	5.46	0.00	0.00
16.00	1.63	37,228	410.18	4.94	4.94	0.00	0.00
17.00	1.37	25,726	409.69	4.45	4.45	0.00	0.00
18.00	1.11	15,010	409.21	3.99	3.99	0.00	0.00
19.00	1.00	5,203	408.75	3.55	3.55	0.00	0.00
20.00	0.94	319	408.52	0.95	0.95	0.00	0.00
21.00	0.87	295	408.51	0.88	0.88	0.00	0.00
22.00	0.81	273	408.51	0.82	0.82	0.00	0.00
23.00	0.74	251	408.51	0.75	0.75	0.00	0.00
24.00	0.68	229	408.51	0.68	0.68	0.00	0.00
25.00	0.00	2	408.50	0.01	0.01	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

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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)

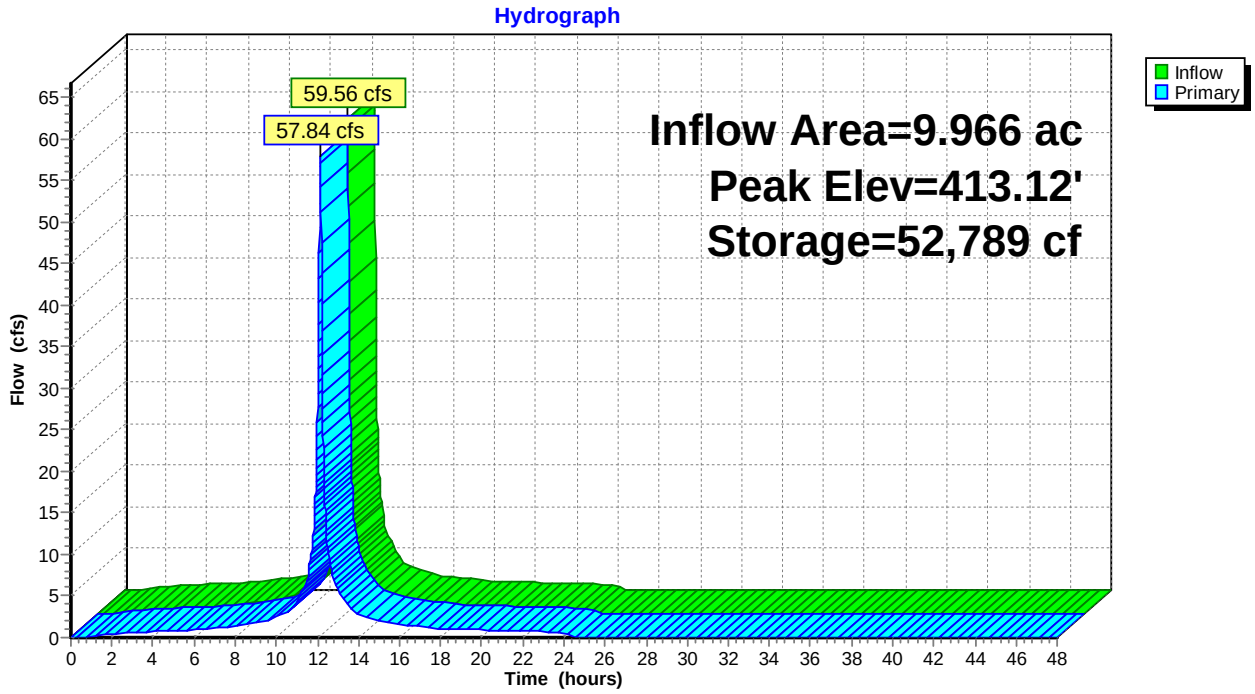
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,884 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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)

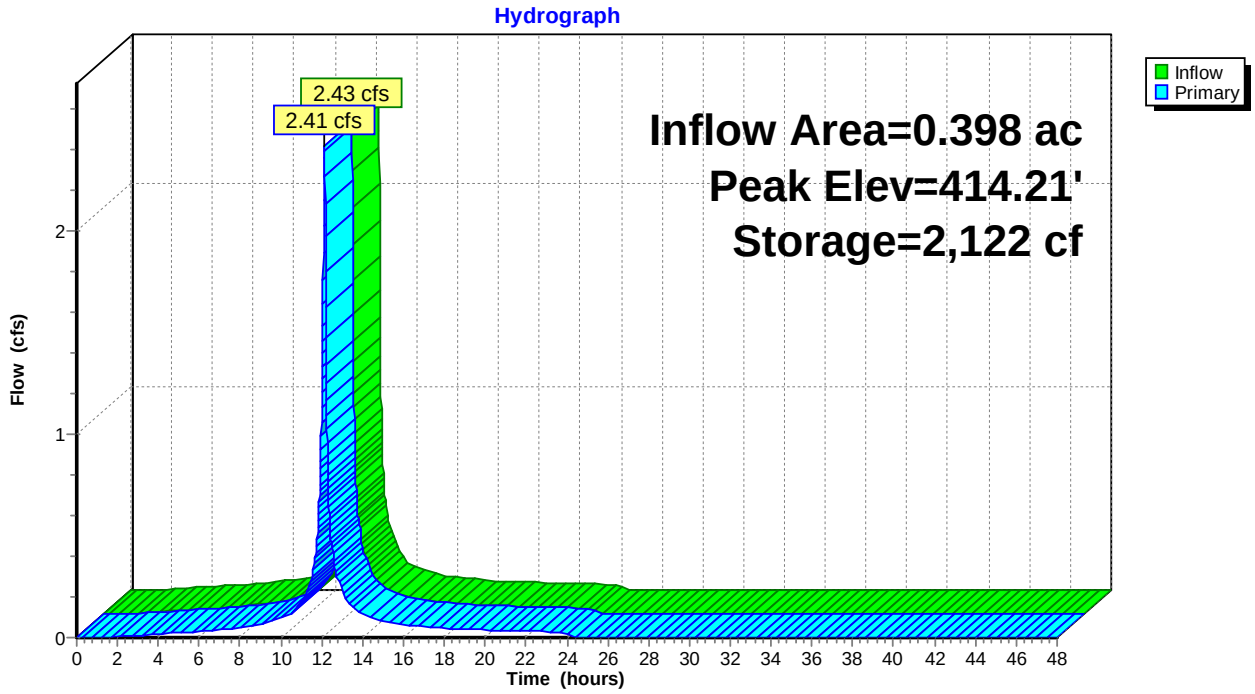
Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	3,024 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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)

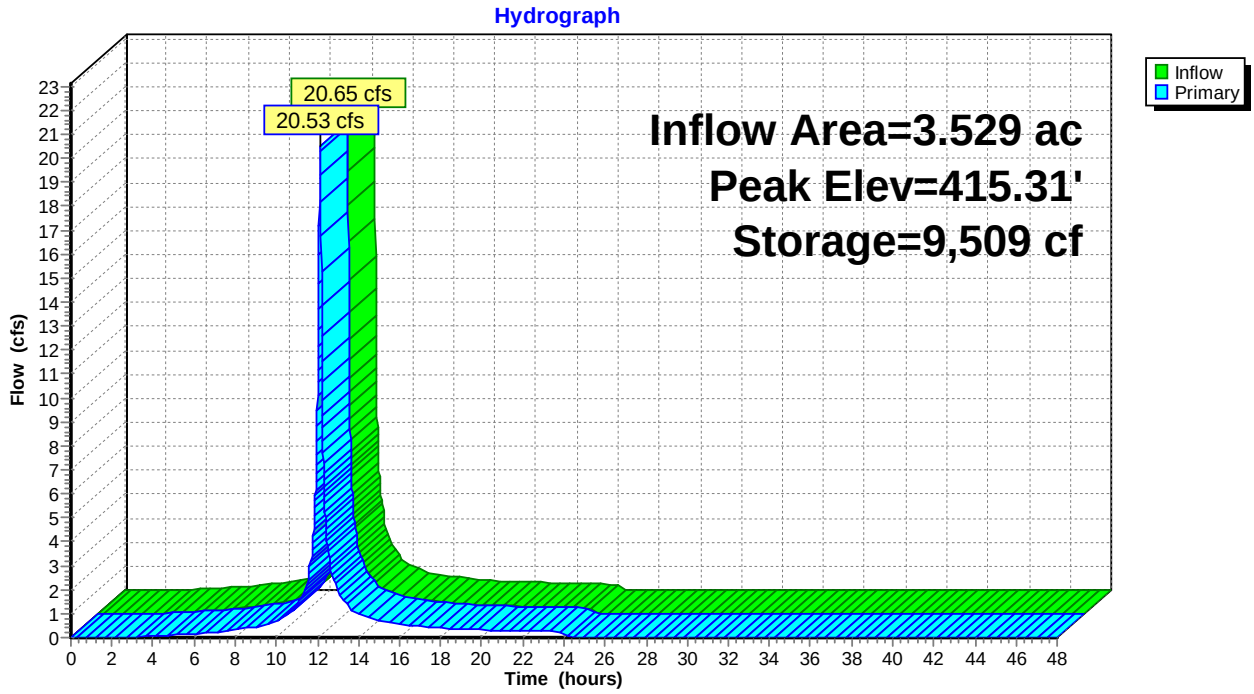
Volume	Invert	Avail.Storage	Storage Description
#1	411.00'	11,023 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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Summary for Pond 63P: Det Pond 1K

Inflow Area = 17.176 ac, 66.33% Impervious, Inflow Depth > 2.69" for 25-Year event
Inflow = 14.62 cfs @ 12.48 hrs, Volume= 3.855 af
Outflow = 9.84 cfs @ 13.35 hrs, Volume= 3.848 af, Atten= 33%, Lag= 51.8 min
Primary = 9.84 cfs @ 13.35 hrs, Volume= 3.848 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= 410.69' @ 13.35 hrs Surf.Area= 12,488 sf Storage= 26,830 cf

Plug-Flow detention time= 76.1 min calculated for 3.848 af (100% of inflow)
Center-of-Mass det. time= 73.4 min (1,037.6 - 964.1)

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

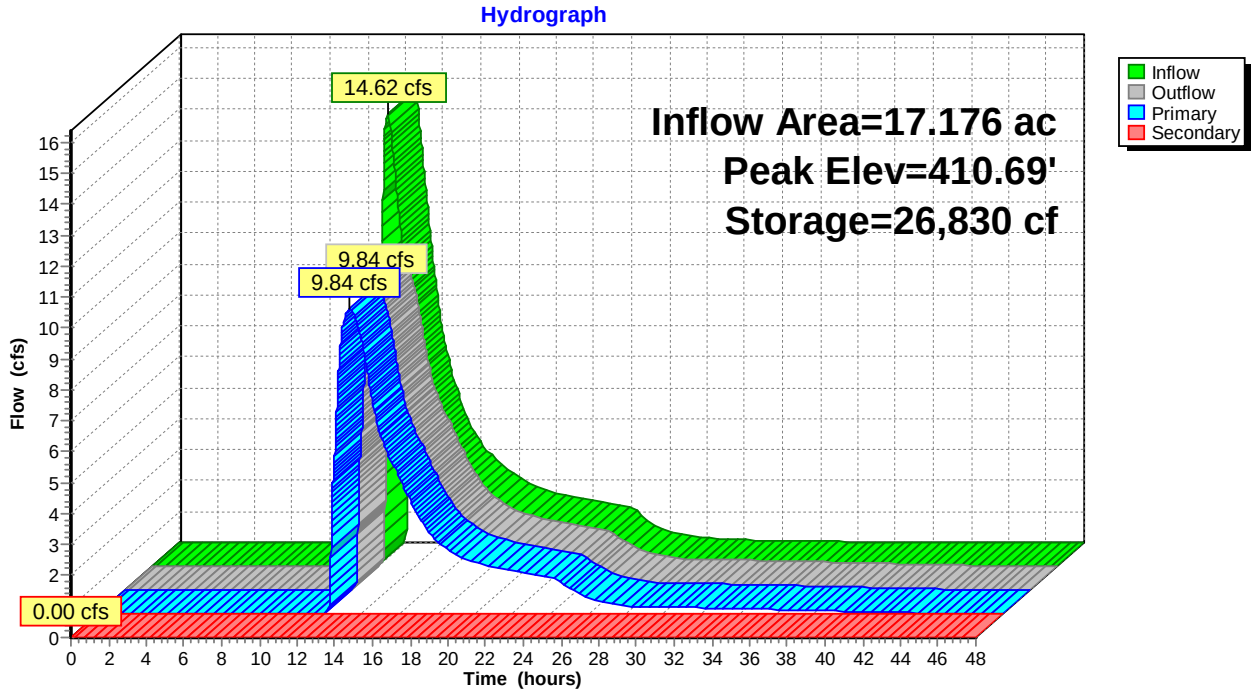
Device	Routing	Invert	Outlet Devices
#1	Primary	407.50'	**24.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.50' / 406.00' S= 0.0037 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	407.50'	**3.0" Vert. Orifice/Grate** 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=9.84 cfs @ 13.35 hrs HW=410.69' (Free Discharge)
└**1=Culvert** (Passes 9.84 cfs of 16.25 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.41 cfs @ 8.43 fps)
├**3=Orifice/Grate** (Orifice Controls 6.71 cfs @ 6.71 fps)
└**4=Orifice/Grate** (Orifice Controls 2.72 cfs @ 3.84 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=407.50' (Free Discharge)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 63P: Det Pond 1K



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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	**11.98**	**25,334**	**410.57**	**9.34**	**9.34**	0.00
14.00	6.81	**23,851**	**410.45**	**8.78**	**8.78**	0.00
15.00	4.48	17,980	409.92	5.77	5.77	0.00
16.00	3.25	13,497	409.47	4.39	4.39	0.00
17.00	2.60	10,382	409.12	3.17	3.17	0.00
18.00	2.13	9,093	408.97	2.33	2.33	0.00
19.00	1.80	8,567	408.90	1.91	1.91	0.00
20.00	1.61	8,267	408.86	1.67	1.67	0.00
21.00	1.47	8,058	408.84	1.52	1.52	0.00
22.00	1.35	7,888	408.81	1.40	1.40	0.00
23.00	1.25	7,742	408.80	1.29	1.29	0.00
24.00	1.15	7,596	408.78	1.19	1.19	0.00
25.00	0.64	7,040	408.70	0.84	0.84	0.00
26.00	0.38	6,449	408.62	0.51	0.51	0.00
27.00	0.24	6,037	408.56	0.34	0.34	0.00
28.00	0.16	5,726	408.52	0.25	0.25	0.00
29.00	0.12	5,412	408.47	0.22	0.22	0.00
30.00	0.09	5,006	408.41	0.21	0.21	0.00
31.00	0.07	4,550	408.34	0.20	0.20	0.00
32.00	0.06	4,074	408.27	0.19	0.19	0.00
33.00	0.05	3,593	408.19	0.18	0.18	0.00
34.00	0.04	3,122	408.11	0.16	0.16	0.00
35.00	0.03	2,671	408.03	0.15	0.15	0.00
36.00	0.02	2,248	407.96	0.14	0.14	0.00
37.00	0.02	1,862	407.89	0.12	0.12	0.00
38.00	0.02	1,519	407.82	0.10	0.10	0.00
39.00	0.01	1,225	407.76	0.09	0.09	0.00
40.00	0.01	985	407.71	0.07	0.07	0.00
41.00	0.01	800	407.68	0.05	0.05	0.00
42.00	0.01	663	407.65	0.04	0.04	0.00
43.00	0.01	562	407.63	0.03	0.03	0.00
44.00	0.00	484	407.61	0.02	0.02	0.00
45.00	0.00	422	407.59	0.02	0.02	0.00
46.00	0.00	373	407.58	0.02	0.02	0.00
47.00	0.00	333	407.58	0.01	0.01	0.00
48.00	0.00	302	407.57	0.01	0.01	0.00

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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 = 5.62 cfs @ 12.20 hrs, Volume= 0.417 af, Atten= 33%, Lag= 3.7 min
Primary = 5.62 cfs @ 12.20 hrs, Volume= 0.417 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= 440.25' @ 12.20 hrs Surf.Area= 6,027 sf Storage= 7,143 cf

Plug-Flow detention time= 151.2 min calculated for 0.417 af (76% of inflow)
Center-of-Mass det. time= 55.2 min (906.4 - 851.2)

Volume	Invert	Avail.Storage	Storage Description
#1	436.17'	16,639 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

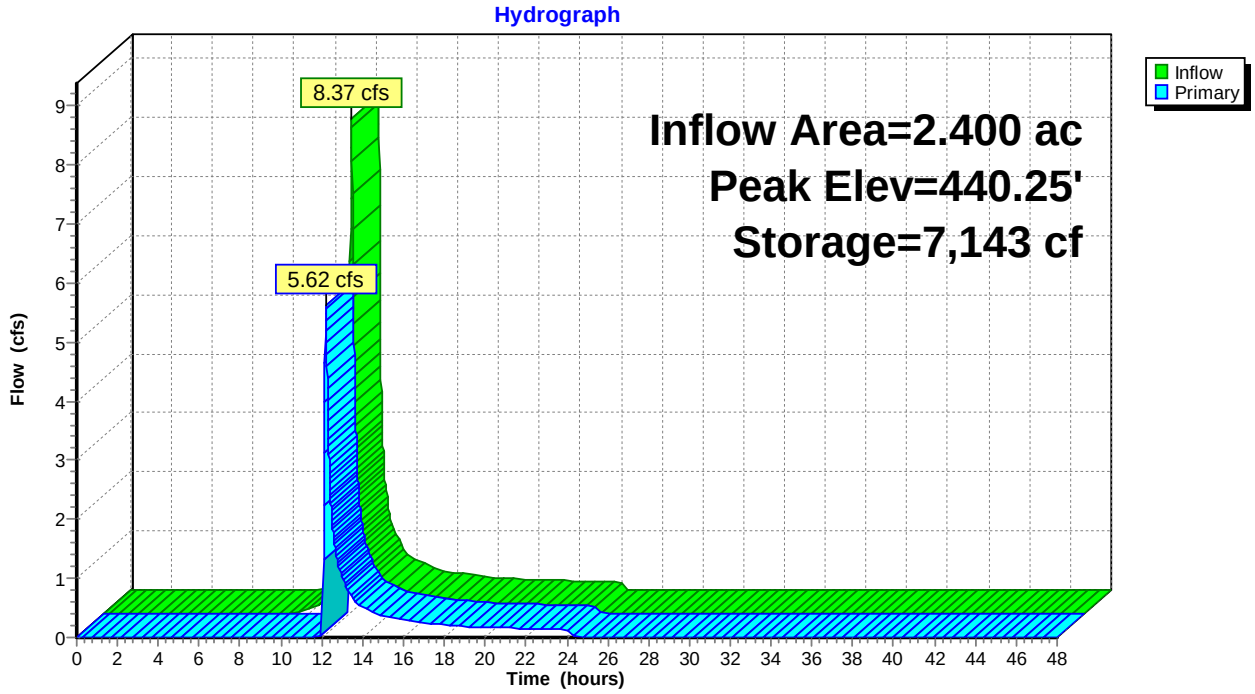
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
436.17	4,171	0.0	0	0
436.83	4,171	40.0	1,101	1,101
439.50	4,171	20.0	2,227	3,328
441.00	7,892	100.0	9,047	12,376
441.50	9,160	100.0	4,263	16,639

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	440.00'	**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=5.58 cfs @ 12.20 hrs HW=440.25' (Free Discharge)
↑—**1=Culvert** (Passes 5.58 cfs of 15.52 cfs potential flow)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 5.58 cfs @ 1.41 fps)

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Pond B4B: Bioretention 4A



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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**	**6,159**	**440.08**	**1.03**
14.00	0.50	5,990	440.05	0.52
15.00	0.35	5,920	440.04	0.37
16.00	0.29	5,887	440.03	0.30
17.00	0.25	5,866	440.03	0.25
18.00	0.20	5,846	440.02	0.21
19.00	0.18	5,836	440.02	0.19
20.00	0.17	5,831	440.02	0.18
21.00	0.16	5,826	440.02	0.16
22.00	0.15	5,821	440.02	0.15
23.00	0.14	5,816	440.02	0.14
24.00	0.13	5,810	440.02	0.13
25.00	0.00	5,731	440.00	0.00
26.00	0.00	5,725	440.00	0.00
27.00	0.00	5,724	440.00	0.00
28.00	0.00	5,724	440.00	0.00
29.00	0.00	5,724	440.00	0.00
30.00	0.00	5,724	440.00	0.00
31.00	0.00	5,724	440.00	0.00
32.00	0.00	5,724	440.00	0.00
33.00	0.00	5,724	440.00	0.00
34.00	0.00	5,724	440.00	0.00
35.00	0.00	5,724	440.00	0.00
36.00	0.00	5,724	440.00	0.00
37.00	0.00	5,724	440.00	0.00
38.00	0.00	5,724	440.00	0.00
39.00	0.00	5,724	440.00	0.00
40.00	0.00	5,724	440.00	0.00
41.00	0.00	5,724	440.00	0.00
42.00	0.00	5,724	440.00	0.00
43.00	0.00	5,724	440.00	0.00
44.00	0.00	5,724	440.00	0.00
45.00	0.00	5,724	440.00	0.00
46.00	0.00	5,724	440.00	0.00
47.00	0.00	5,724	440.00	0.00
48.00	0.00	5,724	440.00	0.00

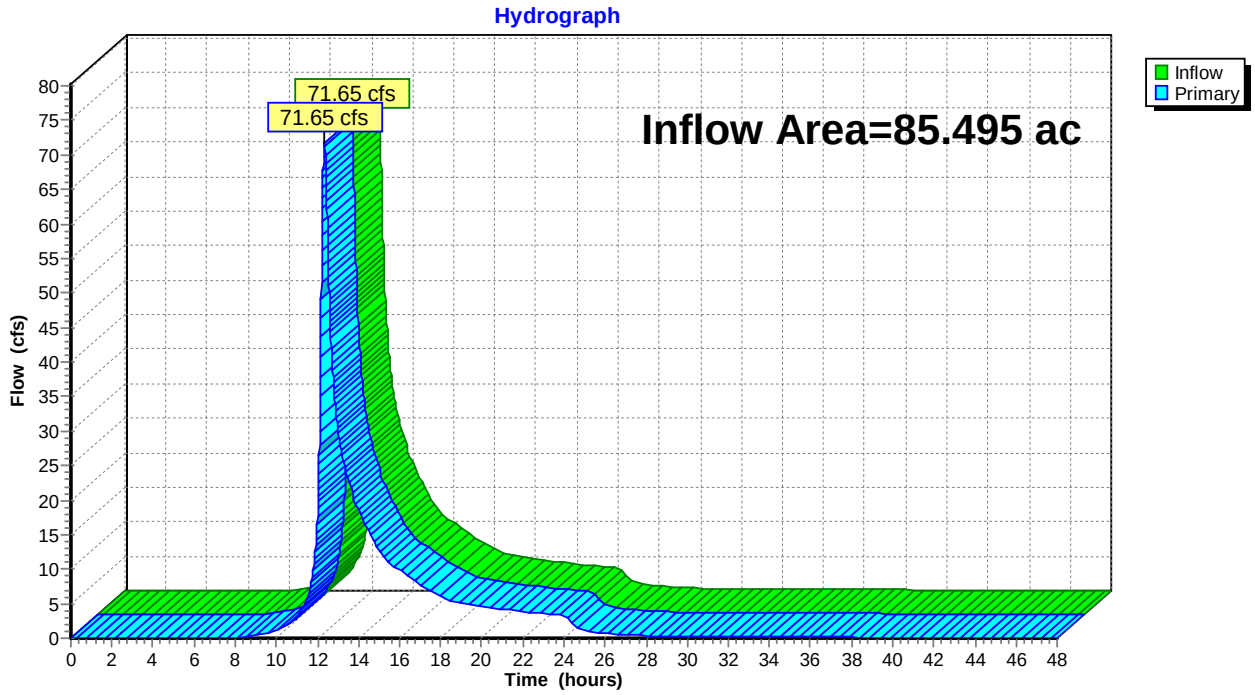
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Summary for Link 29L: DP-1

Inflow Area = 85.495 ac, 51.65% Impervious, Inflow Depth > 1.78" for 25-Year event
Inflow = 71.65 cfs @ 12.35 hrs, Volume= 12.684 af
Primary = 71.65 cfs @ 12.35 hrs, Volume= 12.684 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



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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	0.30	0.00	0.30
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	0.24	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	0.22	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	0.11	0.00	0.11
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	0.08	0.00	0.08
12.00	**17.40**	0.00	**17.40**	41.00	0.07	0.00	0.07
12.50	**58.23**	0.00	**58.23**	41.50	0.06	0.00	0.06
13.00	30.09	0.00	30.09	42.00	0.05	0.00	0.05
13.50	22.97	0.00	22.97	42.50	0.04	0.00	0.04
14.00	18.53	0.00	18.53	43.00	0.04	0.00	0.04
14.50	15.37	0.00	15.37	43.50	0.04	0.00	0.04
15.00	12.84	0.00	12.84	44.00	0.03	0.00	0.03
15.50	11.04	0.00	11.04	44.50	0.03	0.00	0.03
16.00	9.84	0.00	9.84	45.00	0.03	0.00	0.03
16.50	8.70	0.00	8.70	45.50	0.03	0.00	0.03
17.00	7.66	0.00	7.66	46.00	0.02	0.00	0.02
17.50	6.74	0.00	6.74	46.50	0.02	0.00	0.02
18.00	5.96	0.00	5.96	47.00	0.02	0.00	0.02
18.50	5.37	0.00	5.37	47.50	0.02	0.00	0.02
19.00	5.04	0.00	5.04	48.00	0.02	0.00	0.02
19.50	4.77	0.00	4.77				
20.00	4.56	0.00	4.56				
20.50	4.36	0.00	4.36				
21.00	4.18	0.00	4.18				
21.50	4.01	0.00	4.01				
22.00	3.85	0.00	3.85				
22.50	3.70	0.00	3.70				
23.00	3.55	0.00	3.55				
23.50	3.41	0.00	3.41				
24.00	3.26	0.00	3.26				
24.50	1.64	0.00	1.64				
25.00	1.09	0.00	1.09				
25.50	0.85	0.00	0.85				
26.00	0.68	0.00	0.68				
26.50	0.56	0.00	0.56				
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				

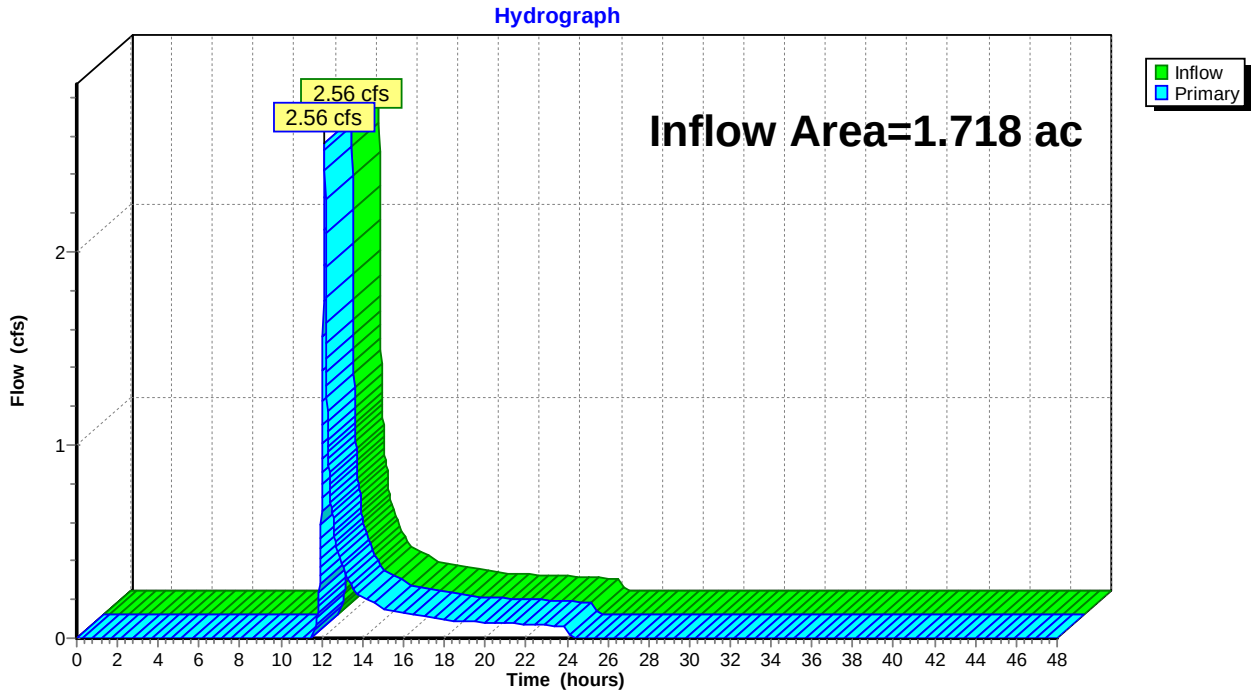
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Summary for Link 30L: DP-2

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



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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				

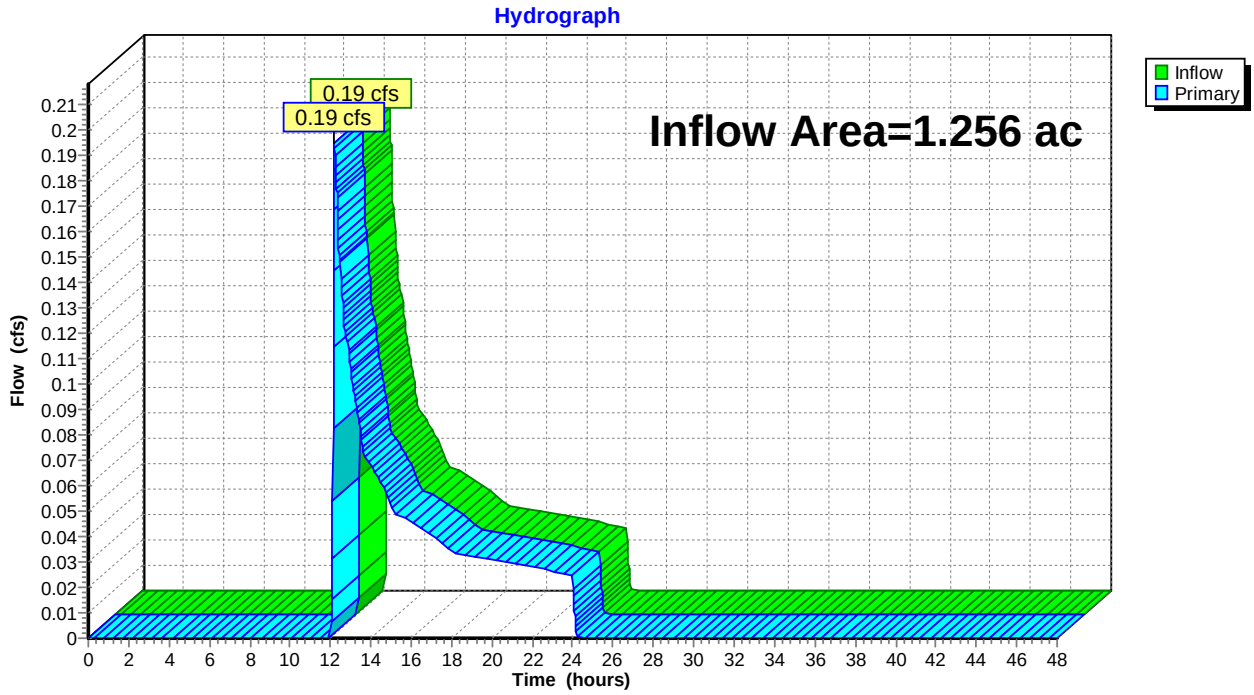
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Summary for Link 31L: DP-3

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



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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				

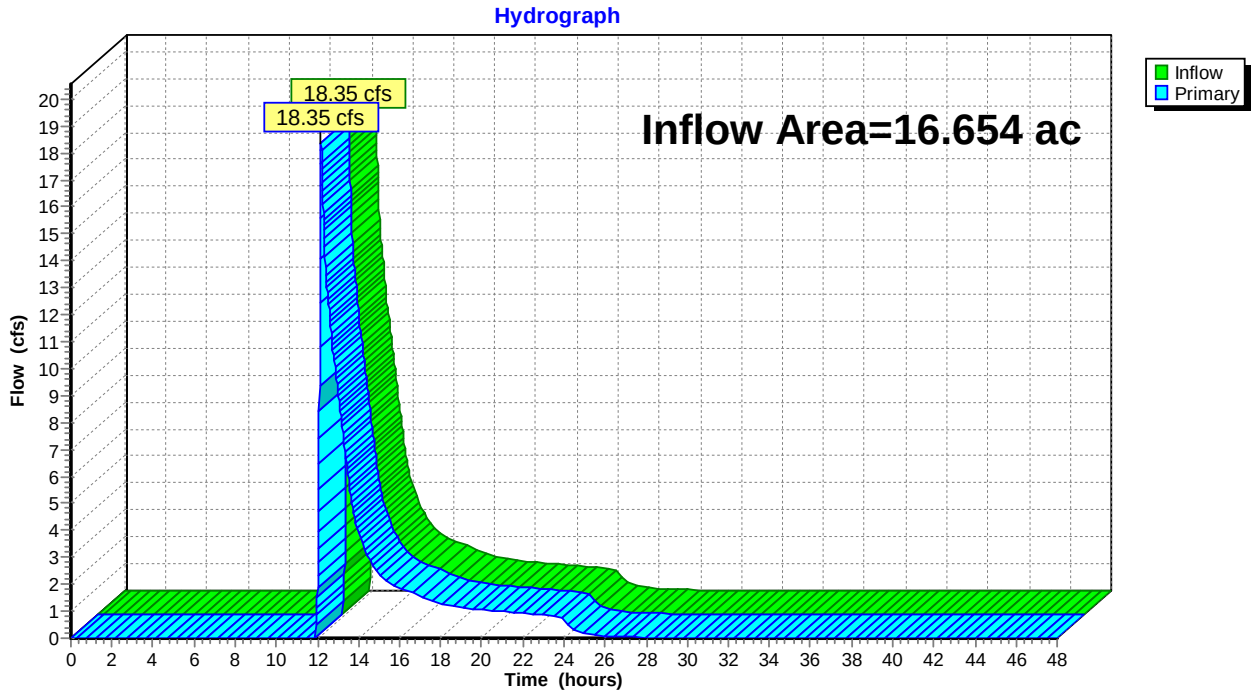
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Summary for Link 32L: DP-4

Inflow Area = 16.654 ac, 29.61% Impervious, Inflow Depth = 1.96" for 25-Year event
Inflow = 18.35 cfs @ 12.18 hrs, Volume= 2.726 af
Primary = 18.35 cfs @ 12.18 hrs, Volume= 2.726 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



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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	**1.90**	0.00	**1.90**	41.00	0.00	0.00	0.00
12.50	**12.65**	0.00	**12.65**	41.50	0.00	0.00	0.00
13.00	9.14	0.00	9.14	42.00	0.00	0.00	0.00
13.50	5.99	0.00	5.99	42.50	0.00	0.00	0.00
14.00	3.86	0.00	3.86	43.00	0.00	0.00	0.00
14.50	3.00	0.00	3.00	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	2.05	0.00	2.05	44.50	0.00	0.00	0.00
16.00	1.85	0.00	1.85	45.00	0.00	0.00	0.00
16.50	1.70	0.00	1.70	45.50	0.00	0.00	0.00
17.00	1.56	0.00	1.56	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	1.09	0.00	1.09				
20.00	1.06	0.00	1.06				
20.50	1.02	0.00	1.02				
21.00	0.99	0.00	0.99				
21.50	0.96	0.00	0.96				
22.00	0.93	0.00	0.93				
22.50	0.89	0.00	0.89				
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	0.30	0.00	0.30				
25.00	0.17	0.00	0.17				
25.50	0.12	0.00	0.12				
26.00	0.09	0.00	0.09				
26.50	0.06	0.00	0.06				
27.00	0.05	0.00	0.05				
27.50	0.03	0.00	0.03				
28.00	0.03	0.00	0.03				
28.50	0.02	0.00	0.02				

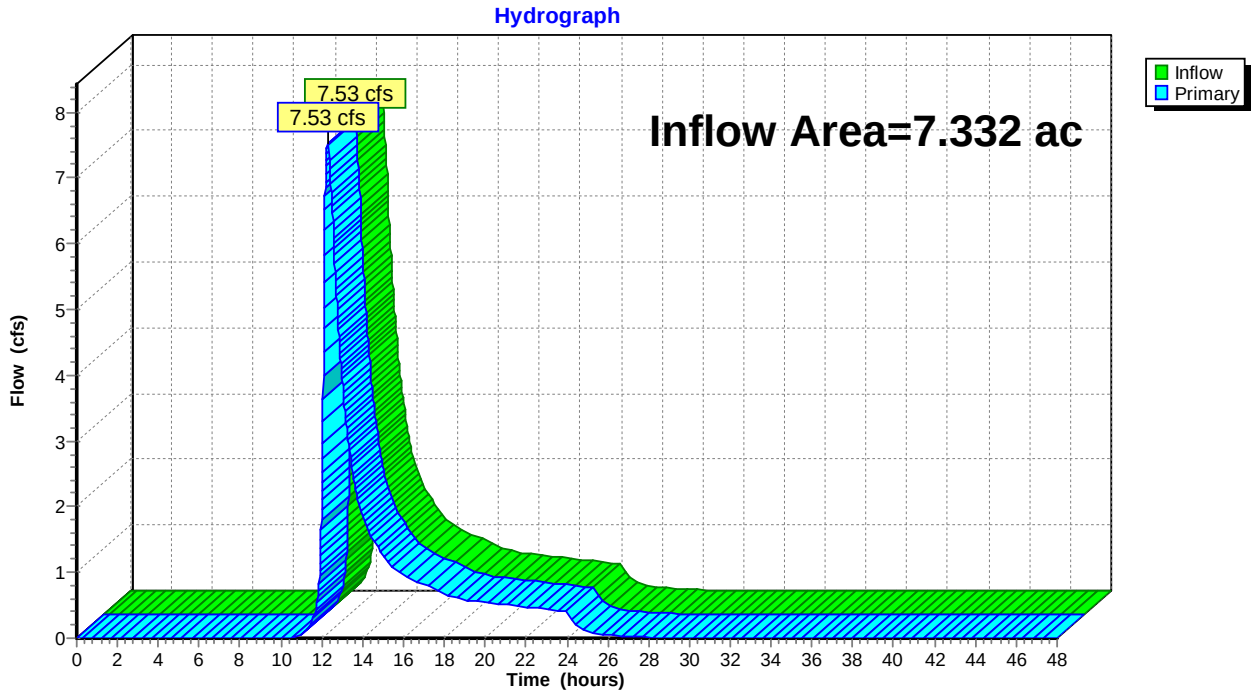
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Summary for Link PDP5: PDP5

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



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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				

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Summary for Subcatchment 6S: PDA-1J

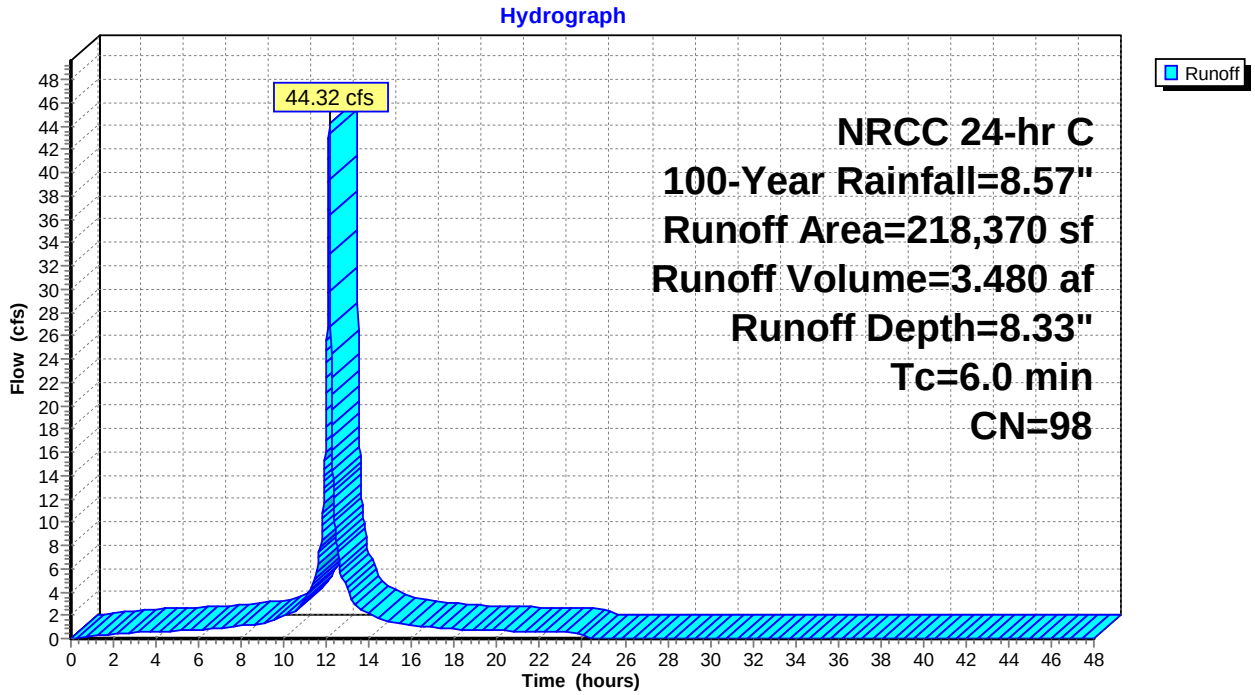
Runoff = 44.32 cfs @ 12.13 hrs, Volume= 3.480 af, Depth= 8.33"
Routed to Pond 37P : FB 1i+J

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

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

Subcatchment 6S: PDA-1J



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Hydrograph for Subcatchment 6S: PDA-1J

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.01	0.18
1.50	0.15	0.04	0.30
2.00	0.21	0.08	0.39
2.50	0.27	0.12	0.45
3.00	0.33	0.17	0.50
3.50	0.39	0.22	0.55
4.00	0.45	0.28	0.59
4.50	0.52	0.34	0.62
5.00	0.59	0.40	0.66
5.50	0.66	0.47	0.69
6.00	0.74	0.54	0.72
6.50	0.82	0.61	0.81
7.00	0.91	0.70	0.90
7.50	1.01	0.80	1.00
8.00	1.11	0.90	1.10
8.50	1.23	1.02	1.19
9.00	1.36	1.14	1.29
9.50	1.51	1.29	1.61
10.00	1.69	1.47	1.93
10.50	1.91	1.68	2.27
11.00	2.21	1.98	3.40
11.50	2.68	2.45	5.43
12.00	4.08	3.85	**23.67**
12.50	5.89	5.65	**7.77**
13.00	6.36	6.12	4.10
13.50	6.66	6.42	2.65
14.00	6.88	6.64	2.08
14.50	7.06	6.82	1.75
15.00	7.21	6.97	1.41
15.50	7.34	7.10	1.26
16.00	7.46	7.22	1.16
16.50	7.56	7.33	1.07
17.00	7.66	7.42	0.97
17.50	7.75	7.51	0.88
18.00	7.83	7.60	0.78
18.50	7.91	7.67	0.74
19.00	7.98	7.74	0.72
19.50	8.05	7.81	0.69
20.00	8.12	7.88	0.67
20.50	8.18	7.94	0.65
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	0.51
24.00	**8.57**	**8.33**	0.48
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
29.00	8.57	8.33	0.00
29.50	8.57	8.33	0.00
30.00	8.57	8.33	0.00
30.50	8.57	8.33	0.00
31.00	8.57	8.33	0.00
31.50	8.57	8.33	0.00
32.00	8.57	8.33	0.00
32.50	8.57	8.33	0.00
33.00	8.57	8.33	0.00
33.50	8.57	8.33	0.00
34.00	8.57	8.33	0.00
34.50	8.57	8.33	0.00
35.00	8.57	8.33	0.00
35.50	8.57	8.33	0.00
36.00	8.57	8.33	0.00
36.50	8.57	8.33	0.00
37.00	8.57	8.33	0.00
37.50	8.57	8.33	0.00
38.00	8.57	8.33	0.00
38.50	8.57	8.33	0.00
39.00	8.57	8.33	0.00
39.50	8.57	8.33	0.00
40.00	8.57	8.33	0.00
40.50	8.57	8.33	0.00
41.00	8.57	8.33	0.00
41.50	8.57	8.33	0.00
42.00	8.57	8.33	0.00
42.50	8.57	8.33	0.00
43.00	8.57	8.33	0.00
43.50	8.57	8.33	0.00
44.00	8.57	8.33	0.00
44.50	8.57	8.33	0.00
45.00	8.57	8.33	0.00
45.50	8.57	8.33	0.00
46.00	8.57	8.33	0.00
46.50	8.57	8.33	0.00
47.00	8.57	8.33	0.00
47.50	8.57	8.33	0.00
48.00	8.57	8.33	0.00

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Summary for Subcatchment 26S: PDA-1D

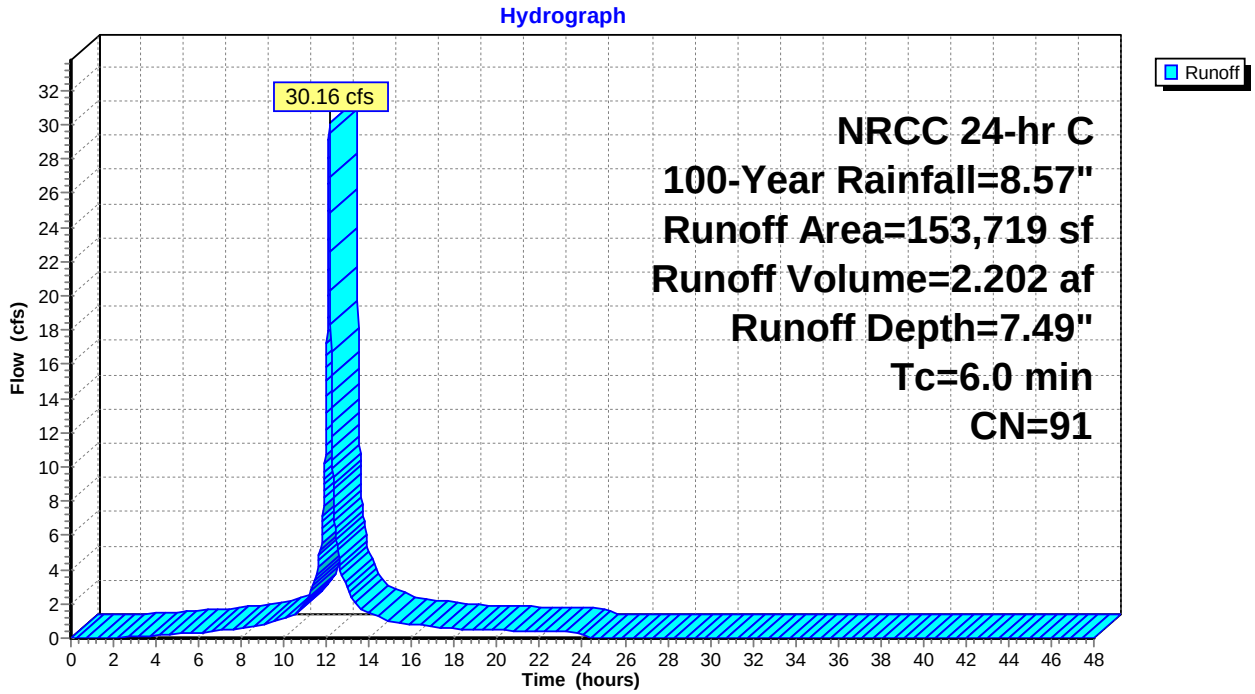
Runoff = 30.16 cfs @ 12.13 hrs, Volume= 2.202 af, Depth= 7.49"
Routed to Pond 60P : FB 1D

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



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Hydrograph for Subcatchment 26S: PDA-1D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.04
3.00	0.33	0.01	0.09
3.50	0.39	0.03	0.13
4.00	0.45	0.05	0.17
4.50	0.52	0.08	0.20
5.00	0.59	0.11	0.24
5.50	0.66	0.15	0.27
6.00	0.74	0.19	0.30
6.50	0.82	0.24	0.37
7.00	0.91	0.30	0.43
7.50	1.01	0.36	0.50
8.00	1.11	0.44	0.58
8.50	1.23	0.53	0.65
9.00	1.36	0.63	0.73
9.50	1.51	0.75	0.93
10.00	1.69	0.90	1.15
10.50	1.91	1.08	1.39
11.00	2.21	1.35	2.14
11.50	2.68	1.78	3.51
12.00	4.08	3.09	**15.87**
12.50	5.89	4.85	**5.35**
13.00	6.36	5.31	2.83
13.50	6.66	5.61	1.83
14.00	6.88	5.82	1.44
14.50	7.06	6.00	1.21
15.00	7.21	6.15	0.98
15.50	7.34	6.27	0.87
16.00	7.46	6.39	0.80
16.50	7.56	6.50	0.74
17.00	7.66	6.59	0.68
17.50	7.75	6.68	0.61
18.00	7.83	6.76	0.55
18.50	7.91	6.83	0.51
19.00	7.98	6.91	0.50
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
29.00	8.57	7.49	0.00
29.50	8.57	7.49	0.00
30.00	8.57	7.49	0.00
30.50	8.57	7.49	0.00
31.00	8.57	7.49	0.00
31.50	8.57	7.49	0.00
32.00	8.57	7.49	0.00
32.50	8.57	7.49	0.00
33.00	8.57	7.49	0.00
33.50	8.57	7.49	0.00
34.00	8.57	7.49	0.00
34.50	8.57	7.49	0.00
35.00	8.57	7.49	0.00
35.50	8.57	7.49	0.00
36.00	8.57	7.49	0.00
36.50	8.57	7.49	0.00
37.00	8.57	7.49	0.00
37.50	8.57	7.49	0.00
38.00	8.57	7.49	0.00
38.50	8.57	7.49	0.00
39.00	8.57	7.49	0.00
39.50	8.57	7.49	0.00
40.00	8.57	7.49	0.00
40.50	8.57	7.49	0.00
41.00	8.57	7.49	0.00
41.50	8.57	7.49	0.00
42.00	8.57	7.49	0.00
42.50	8.57	7.49	0.00
43.00	8.57	7.49	0.00
43.50	8.57	7.49	0.00
44.00	8.57	7.49	0.00
44.50	8.57	7.49	0.00
45.00	8.57	7.49	0.00
45.50	8.57	7.49	0.00
46.00	8.57	7.49	0.00
46.50	8.57	7.49	0.00
47.00	8.57	7.49	0.00
47.50	8.57	7.49	0.00
48.00	8.57	7.49	0.00

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

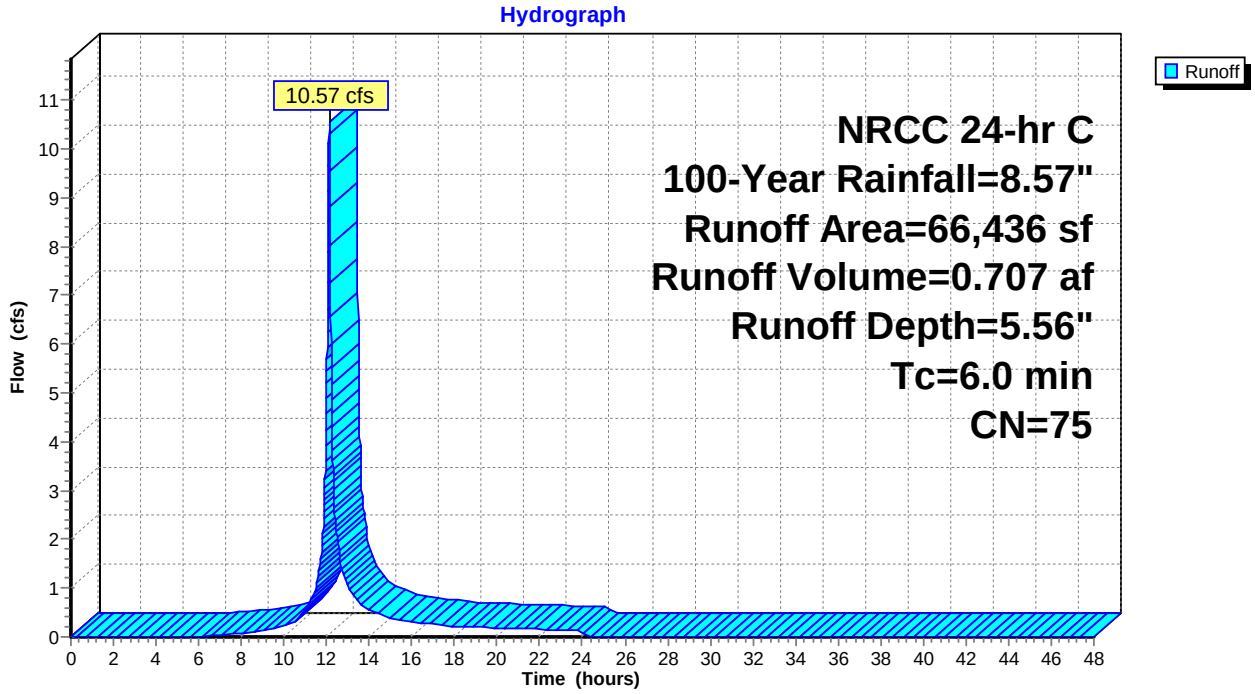
Runoff = 10.57 cfs @ 12.13 hrs, Volume= 0.707 af, Depth= 5.56"
Routed to Pond 29P : Bioretention 4B

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



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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	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				

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Summary for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

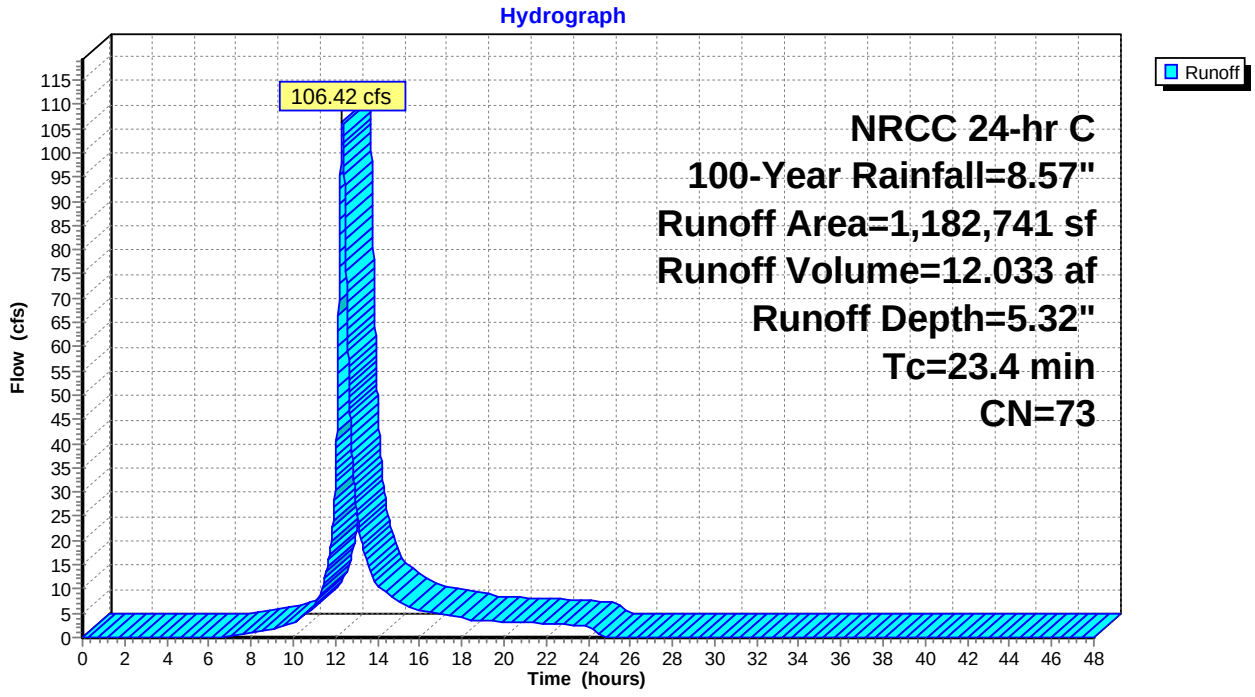
Runoff = 106.42 cfs @ 12.34 hrs, Volume= 12.033 af, Depth= 5.32"
Routed to Link 29L : DP-1

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



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Hydrograph for Subcatchment 28S: Proposed Wetlands/Undeveloped Area

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.05
7.00	0.91	0.01	0.25
7.50	1.01	0.02	0.52
8.00	1.11	0.03	0.83
8.50	1.23	0.06	1.19
9.00	1.36	0.09	1.60
9.50	1.51	0.13	2.21
10.00	1.69	0.20	3.19
10.50	1.91	0.28	4.39
11.00	2.21	0.42	6.73
11.50	2.68	0.67	12.10
12.00	4.08	1.59	**32.06**
12.50	5.89	3.00	**79.86**
13.00	6.36	3.39	26.69
13.50	6.66	3.64	15.49
14.00	6.88	3.83	10.75
14.50	7.06	3.99	8.98
15.00	7.21	4.12	7.48
15.50	7.34	4.23	6.23
16.00	7.46	4.33	5.73
16.50	7.56	4.43	5.30
17.00	7.66	4.51	4.87
17.50	7.75	4.59	4.43
18.00	7.83	4.66	3.99
18.50	7.91	4.73	3.63
19.00	7.98	4.79	3.50
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
29.00	8.57	5.32	0.00
29.50	8.57	5.32	0.00
30.00	8.57	5.32	0.00
30.50	8.57	5.32	0.00
31.00	8.57	5.32	0.00
31.50	8.57	5.32	0.00
32.00	8.57	5.32	0.00
32.50	8.57	5.32	0.00
33.00	8.57	5.32	0.00
33.50	8.57	5.32	0.00
34.00	8.57	5.32	0.00
34.50	8.57	5.32	0.00
35.00	8.57	5.32	0.00
35.50	8.57	5.32	0.00
36.00	8.57	5.32	0.00
36.50	8.57	5.32	0.00
37.00	8.57	5.32	0.00
37.50	8.57	5.32	0.00
38.00	8.57	5.32	0.00
38.50	8.57	5.32	0.00
39.00	8.57	5.32	0.00
39.50	8.57	5.32	0.00
40.00	8.57	5.32	0.00
40.50	8.57	5.32	0.00
41.00	8.57	5.32	0.00
41.50	8.57	5.32	0.00
42.00	8.57	5.32	0.00
42.50	8.57	5.32	0.00
43.00	8.57	5.32	0.00
43.50	8.57	5.32	0.00
44.00	8.57	5.32	0.00
44.50	8.57	5.32	0.00
45.00	8.57	5.32	0.00
45.50	8.57	5.32	0.00
46.00	8.57	5.32	0.00
46.50	8.57	5.32	0.00
47.00	8.57	5.32	0.00
47.50	8.57	5.32	0.00
48.00	8.57	5.32	0.00

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Summary for Subcatchment 30S: PDA-1A

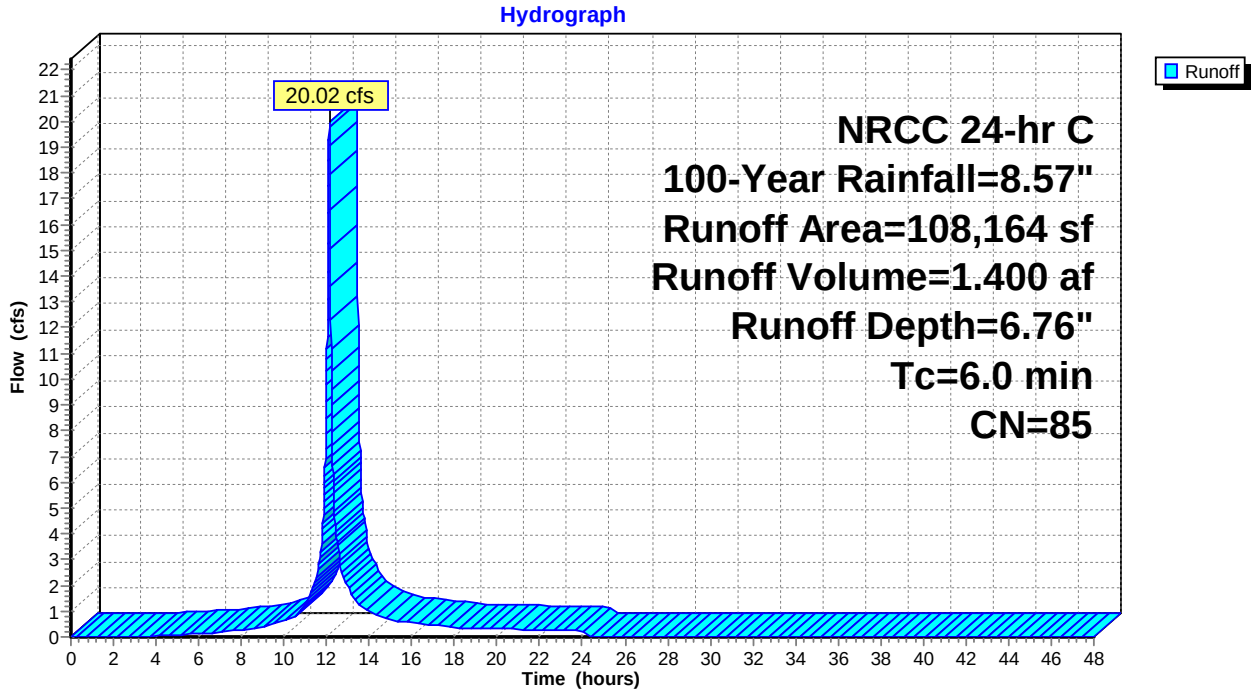
Runoff = 20.02 cfs @ 12.13 hrs, Volume= 1.400 af, Depth= 6.76"
Routed to Pond 3P : Bioretention 1A

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



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Hydrograph for Subcatchment 30S: PDA-1A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.01
4.00	0.45	0.01	0.03
4.50	0.52	0.01	0.05
5.00	0.59	0.03	0.07
5.50	0.66	0.05	0.10
6.00	0.74	0.07	0.12
6.50	0.82	0.10	0.15
7.00	0.91	0.13	0.19
7.50	1.01	0.18	0.23
8.00	1.11	0.23	0.28
8.50	1.23	0.29	0.33
9.00	1.36	0.37	0.38
9.50	1.51	0.46	0.51
10.00	1.69	0.58	0.65
10.50	1.91	0.73	0.81
11.00	2.21	0.95	1.28
11.50	2.68	1.33	2.18
12.00	4.08	2.53	**10.32**
12.50	5.89	4.20	**3.62**
13.00	6.36	4.64	1.93
13.50	6.66	4.93	1.25
14.00	6.88	5.14	0.98
14.50	7.06	5.31	0.83
15.00	7.21	5.45	0.67
15.50	7.34	5.58	0.60
16.00	7.46	5.69	0.55
16.50	7.56	5.79	0.51
17.00	7.66	5.89	0.46
17.50	7.75	5.98	0.42
18.00	7.83	6.05	0.37
18.50	7.91	6.13	0.35
19.00	7.98	6.19	0.34
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
29.00	8.57	6.76	0.00
29.50	8.57	6.76	0.00
30.00	8.57	6.76	0.00
30.50	8.57	6.76	0.00
31.00	8.57	6.76	0.00
31.50	8.57	6.76	0.00
32.00	8.57	6.76	0.00
32.50	8.57	6.76	0.00
33.00	8.57	6.76	0.00
33.50	8.57	6.76	0.00
34.00	8.57	6.76	0.00
34.50	8.57	6.76	0.00
35.00	8.57	6.76	0.00
35.50	8.57	6.76	0.00
36.00	8.57	6.76	0.00
36.50	8.57	6.76	0.00
37.00	8.57	6.76	0.00
37.50	8.57	6.76	0.00
38.00	8.57	6.76	0.00
38.50	8.57	6.76	0.00
39.00	8.57	6.76	0.00
39.50	8.57	6.76	0.00
40.00	8.57	6.76	0.00
40.50	8.57	6.76	0.00
41.00	8.57	6.76	0.00
41.50	8.57	6.76	0.00
42.00	8.57	6.76	0.00
42.50	8.57	6.76	0.00
43.00	8.57	6.76	0.00
43.50	8.57	6.76	0.00
44.00	8.57	6.76	0.00
44.50	8.57	6.76	0.00
45.00	8.57	6.76	0.00
45.50	8.57	6.76	0.00
46.00	8.57	6.76	0.00
46.50	8.57	6.76	0.00
47.00	8.57	6.76	0.00
47.50	8.57	6.76	0.00
48.00	8.57	6.76	0.00

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Summary for Subcatchment 31S: PDA-1C

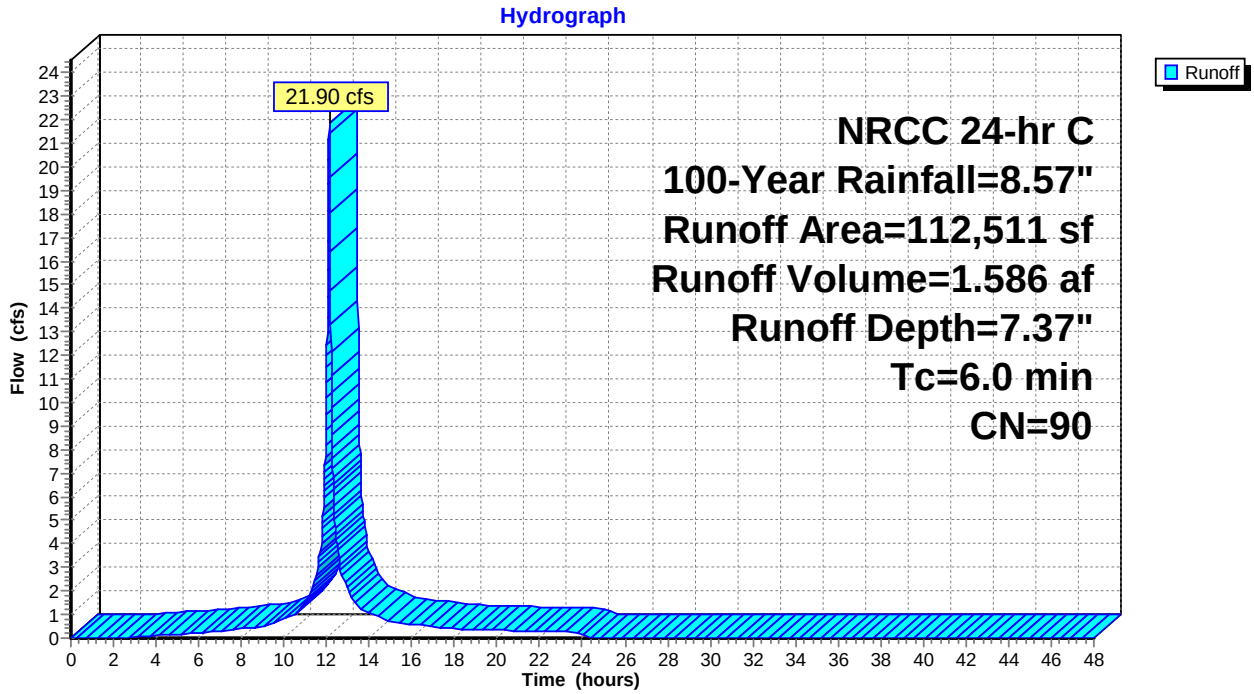
Runoff = 21.90 cfs @ 12.13 hrs, Volume= 1.586 af, Depth= 7.37"
Routed to Pond 32P : FB 1C

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



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Hydrograph for Subcatchment 31S: PDA-1C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.02
3.00	0.33	0.01	0.05
3.50	0.39	0.02	0.08
4.00	0.45	0.04	0.10
4.50	0.52	0.06	0.13
5.00	0.59	0.09	0.16
5.50	0.66	0.12	0.18
6.00	0.74	0.16	0.20
6.50	0.82	0.21	0.25
7.00	0.91	0.26	0.29
7.50	1.01	0.32	0.35
8.00	1.11	0.40	0.40
8.50	1.23	0.48	0.45
9.00	1.36	0.57	0.51
9.50	1.51	0.69	0.66
10.00	1.69	0.84	0.82
10.50	1.91	1.02	0.99
11.00	2.21	1.27	1.53
11.50	2.68	1.69	2.52
12.00	4.08	3.00	**11.49**
12.50	5.89	4.74	**3.89**
13.00	6.36	5.20	2.06
13.50	6.66	5.49	1.34
14.00	6.88	5.70	1.05
14.50	7.06	5.88	0.88
15.00	7.21	6.03	0.71
15.50	7.34	6.16	0.64
16.00	7.46	6.27	0.59
16.50	7.56	6.38	0.54
17.00	7.66	6.48	0.49
17.50	7.75	6.56	0.44
18.00	7.83	6.64	0.40
18.50	7.91	6.72	0.38
19.00	7.98	6.79	0.36
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
29.00	8.57	7.37	0.00
29.50	8.57	7.37	0.00
30.00	8.57	7.37	0.00
30.50	8.57	7.37	0.00
31.00	8.57	7.37	0.00
31.50	8.57	7.37	0.00
32.00	8.57	7.37	0.00
32.50	8.57	7.37	0.00
33.00	8.57	7.37	0.00
33.50	8.57	7.37	0.00
34.00	8.57	7.37	0.00
34.50	8.57	7.37	0.00
35.00	8.57	7.37	0.00
35.50	8.57	7.37	0.00
36.00	8.57	7.37	0.00
36.50	8.57	7.37	0.00
37.00	8.57	7.37	0.00
37.50	8.57	7.37	0.00
38.00	8.57	7.37	0.00
38.50	8.57	7.37	0.00
39.00	8.57	7.37	0.00
39.50	8.57	7.37	0.00
40.00	8.57	7.37	0.00
40.50	8.57	7.37	0.00
41.00	8.57	7.37	0.00
41.50	8.57	7.37	0.00
42.00	8.57	7.37	0.00
42.50	8.57	7.37	0.00
43.00	8.57	7.37	0.00
43.50	8.57	7.37	0.00
44.00	8.57	7.37	0.00
44.50	8.57	7.37	0.00
45.00	8.57	7.37	0.00
45.50	8.57	7.37	0.00
46.00	8.57	7.37	0.00
46.50	8.57	7.37	0.00
47.00	8.57	7.37	0.00
47.50	8.57	7.37	0.00
48.00	8.57	7.37	0.00

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Summary for Subcatchment 34S: PDA-1K

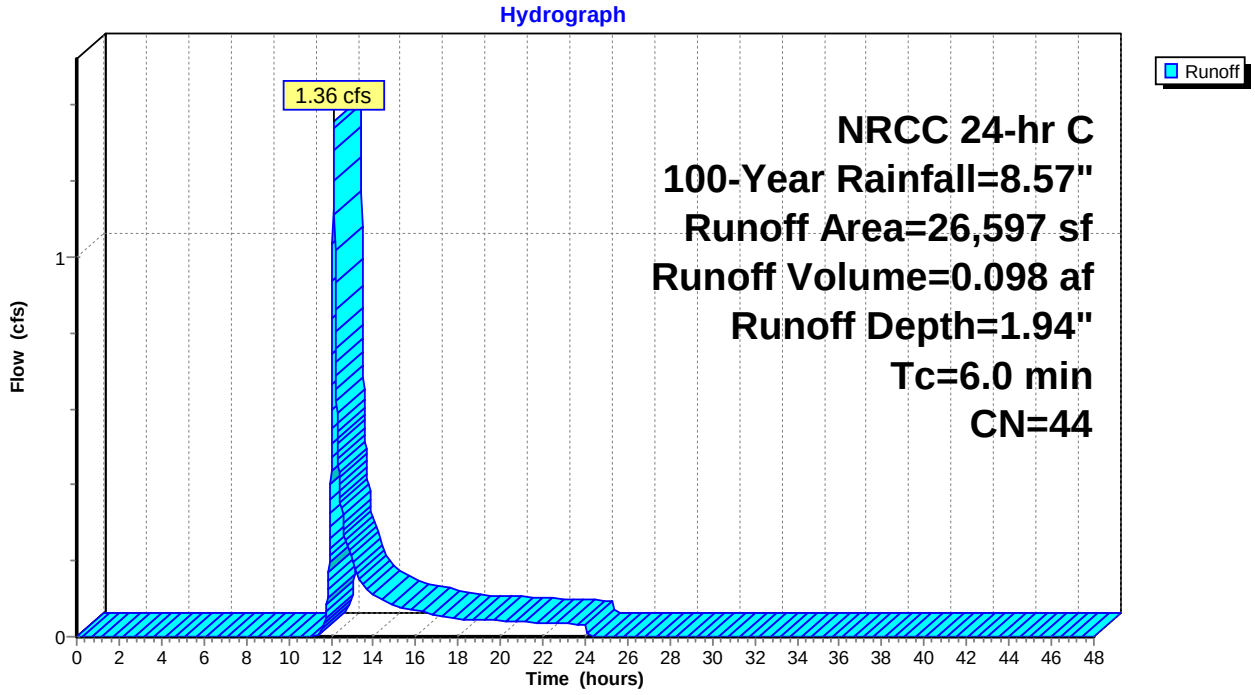
Runoff = 1.36 cfs @ 12.14 hrs, Volume= 0.098 af, Depth= 1.94"
Routed to Pond 63P : Det Pond 1K

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



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Hydrograph for Subcatchment 34S: PDA-1K

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.00	0.00
11.50	2.68	0.00	0.00
12.00	4.08	0.17	**0.44**
12.50	5.89	0.70	**0.34**
13.00	6.36	0.88	0.20
13.50	6.66	1.01	0.14
14.00	6.88	1.10	0.11
14.50	7.06	1.18	0.10
15.00	7.21	1.25	0.08
15.50	7.34	1.31	0.07
16.00	7.46	1.37	0.07
16.50	7.56	1.42	0.06
17.00	7.66	1.47	0.06
17.50	7.75	1.51	0.05
18.00	7.83	1.55	0.05
18.50	7.91	1.59	0.05
19.00	7.98	1.63	0.04
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
29.00	8.57	1.94	0.00
29.50	8.57	1.94	0.00
30.00	8.57	1.94	0.00
30.50	8.57	1.94	0.00
31.00	8.57	1.94	0.00
31.50	8.57	1.94	0.00
32.00	8.57	1.94	0.00
32.50	8.57	1.94	0.00
33.00	8.57	1.94	0.00
33.50	8.57	1.94	0.00
34.00	8.57	1.94	0.00
34.50	8.57	1.94	0.00
35.00	8.57	1.94	0.00
35.50	8.57	1.94	0.00
36.00	8.57	1.94	0.00
36.50	8.57	1.94	0.00
37.00	8.57	1.94	0.00
37.50	8.57	1.94	0.00
38.00	8.57	1.94	0.00
38.50	8.57	1.94	0.00
39.00	8.57	1.94	0.00
39.50	8.57	1.94	0.00
40.00	8.57	1.94	0.00
40.50	8.57	1.94	0.00
41.00	8.57	1.94	0.00
41.50	8.57	1.94	0.00
42.00	8.57	1.94	0.00
42.50	8.57	1.94	0.00
43.00	8.57	1.94	0.00
43.50	8.57	1.94	0.00
44.00	8.57	1.94	0.00
44.50	8.57	1.94	0.00
45.00	8.57	1.94	0.00
45.50	8.57	1.94	0.00
46.00	8.57	1.94	0.00
46.50	8.57	1.94	0.00
47.00	8.57	1.94	0.00
47.50	8.57	1.94	0.00
48.00	8.57	1.94	0.00

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Summary for Subcatchment 35S: PDA-2U

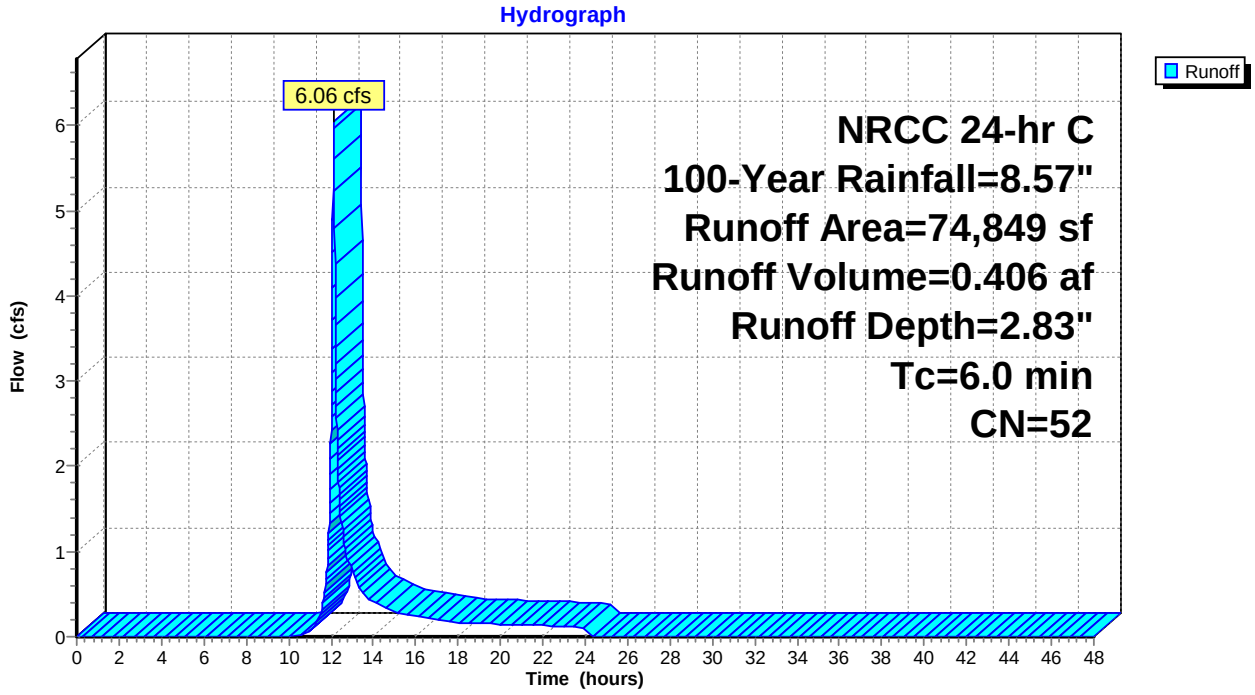
Runoff = 6.06 cfs @ 12.14 hrs, Volume= 0.406 af, Depth= 2.83"
Routed to Link 30L : DP-2

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



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Hydrograph for Subcatchment 35S: PDA-2U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.01	0.07
11.50	2.68	0.07	0.27
12.00	4.08	0.44	**2.43**
12.50	5.89	1.23	**1.35**
13.00	6.36	1.48	0.76
13.50	6.66	1.65	0.51
14.00	6.88	1.77	0.41
14.50	7.06	1.88	0.35
15.00	7.21	1.97	0.29
15.50	7.34	2.05	0.26
16.00	7.46	2.12	0.24
16.50	7.56	2.19	0.23
17.00	7.66	2.25	0.21
17.50	7.75	2.31	0.19
18.00	7.83	2.36	0.17
18.50	7.91	2.40	0.16
19.00	7.98	2.45	0.16
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
29.00	8.57	2.83	0.00
29.50	8.57	2.83	0.00
30.00	8.57	2.83	0.00
30.50	8.57	2.83	0.00
31.00	8.57	2.83	0.00
31.50	8.57	2.83	0.00
32.00	8.57	2.83	0.00
32.50	8.57	2.83	0.00
33.00	8.57	2.83	0.00
33.50	8.57	2.83	0.00
34.00	8.57	2.83	0.00
34.50	8.57	2.83	0.00
35.00	8.57	2.83	0.00
35.50	8.57	2.83	0.00
36.00	8.57	2.83	0.00
36.50	8.57	2.83	0.00
37.00	8.57	2.83	0.00
37.50	8.57	2.83	0.00
38.00	8.57	2.83	0.00
38.50	8.57	2.83	0.00
39.00	8.57	2.83	0.00
39.50	8.57	2.83	0.00
40.00	8.57	2.83	0.00
40.50	8.57	2.83	0.00
41.00	8.57	2.83	0.00
41.50	8.57	2.83	0.00
42.00	8.57	2.83	0.00
42.50	8.57	2.83	0.00
43.00	8.57	2.83	0.00
43.50	8.57	2.83	0.00
44.00	8.57	2.83	0.00
44.50	8.57	2.83	0.00
45.00	8.57	2.83	0.00
45.50	8.57	2.83	0.00
46.00	8.57	2.83	0.00
46.50	8.57	2.83	0.00
47.00	8.57	2.83	0.00
47.50	8.57	2.83	0.00
48.00	8.57	2.83	0.00

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Summary for Subcatchment 36S: PDA-3U

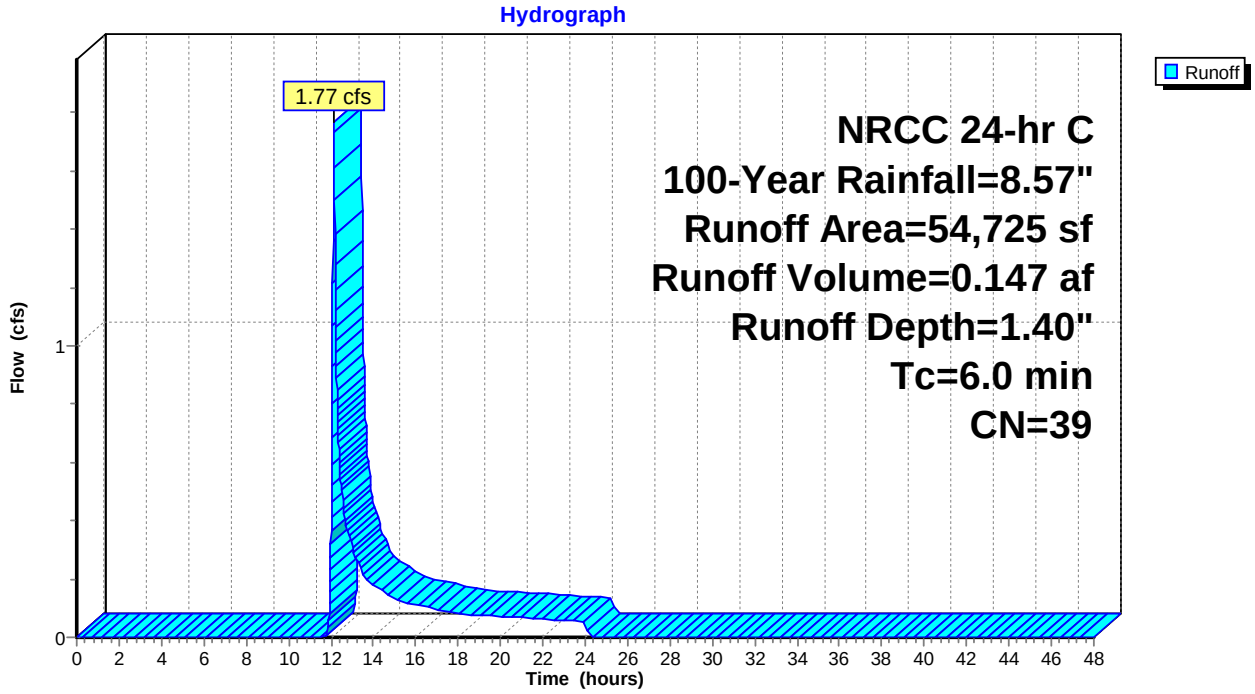
Runoff = 1.77 cfs @ 12.14 hrs, Volume= 0.147 af, Depth= 1.40"
Routed to Link 31L : DP-3

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



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Hydrograph for Subcatchment 36S: PDA-3U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.00	0.00
11.50	2.68	0.00	0.00
12.00	4.08	0.05	**0.37**
12.50	5.89	0.41	**0.52**
13.00	6.36	0.55	0.32
13.50	6.66	0.65	0.22
14.00	6.88	0.72	0.18
14.50	7.06	0.79	0.16
15.00	7.21	0.85	0.13
15.50	7.34	0.89	0.12
16.00	7.46	0.94	0.11
16.50	7.56	0.98	0.10
17.00	7.66	1.02	0.10
17.50	7.75	1.06	0.09
18.00	7.83	1.09	0.08
18.50	7.91	1.12	0.08
19.00	7.98	1.15	0.07
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
29.00	8.57	1.40	0.00
29.50	8.57	1.40	0.00
30.00	8.57	1.40	0.00
30.50	8.57	1.40	0.00
31.00	8.57	1.40	0.00
31.50	8.57	1.40	0.00
32.00	8.57	1.40	0.00
32.50	8.57	1.40	0.00
33.00	8.57	1.40	0.00
33.50	8.57	1.40	0.00
34.00	8.57	1.40	0.00
34.50	8.57	1.40	0.00
35.00	8.57	1.40	0.00
35.50	8.57	1.40	0.00
36.00	8.57	1.40	0.00
36.50	8.57	1.40	0.00
37.00	8.57	1.40	0.00
37.50	8.57	1.40	0.00
38.00	8.57	1.40	0.00
38.50	8.57	1.40	0.00
39.00	8.57	1.40	0.00
39.50	8.57	1.40	0.00
40.00	8.57	1.40	0.00
40.50	8.57	1.40	0.00
41.00	8.57	1.40	0.00
41.50	8.57	1.40	0.00
42.00	8.57	1.40	0.00
42.50	8.57	1.40	0.00
43.00	8.57	1.40	0.00
43.50	8.57	1.40	0.00
44.00	8.57	1.40	0.00
44.50	8.57	1.40	0.00
45.00	8.57	1.40	0.00
45.50	8.57	1.40	0.00
46.00	8.57	1.40	0.00
46.50	8.57	1.40	0.00
47.00	8.57	1.40	0.00
47.50	8.57	1.40	0.00
48.00	8.57	1.40	0.00

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Summary for Subcatchment 37S: PDA-1I

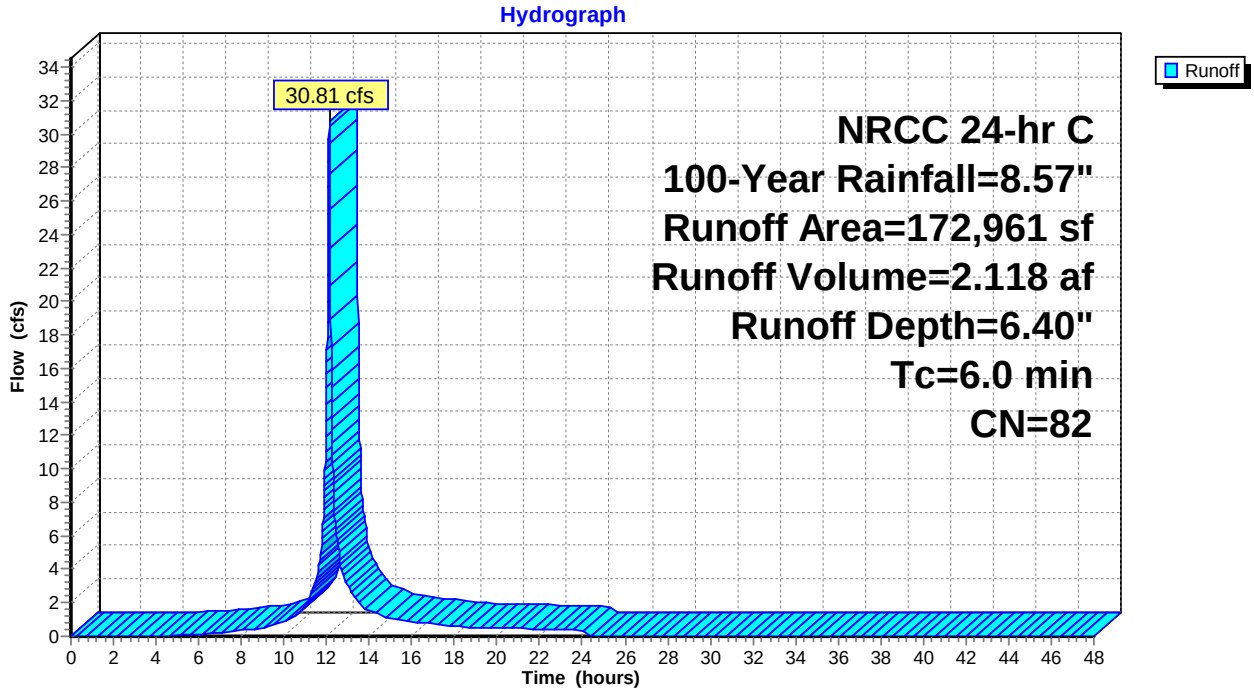
Runoff = 30.81 cfs @ 12.13 hrs, Volume= 2.118 af, Depth= 6.40"
Routed to Pond 37P : FB 1i+J

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



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Hydrograph for Subcatchment 37S: PDA-1I

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.03
5.00	0.59	0.01	0.06
5.50	0.66	0.02	0.10
6.00	0.74	0.04	0.13
6.50	0.82	0.06	0.18
7.00	0.91	0.08	0.23
7.50	1.01	0.12	0.29
8.00	1.11	0.16	0.36
8.50	1.23	0.21	0.44
9.00	1.36	0.27	0.52
9.50	1.51	0.35	0.70
10.00	1.69	0.46	0.91
10.50	1.91	0.59	1.15
11.00	2.21	0.79	1.86
11.50	2.68	1.13	3.22
12.00	4.08	2.27	**15.68**
12.50	5.89	3.88	**5.63**
13.00	6.36	4.32	3.01
13.50	6.66	4.60	1.96
14.00	6.88	4.80	1.54
14.50	7.06	4.97	1.30
15.00	7.21	5.11	1.05
15.50	7.34	5.23	0.94
16.00	7.46	5.35	0.87
16.50	7.56	5.45	0.80
17.00	7.66	5.54	0.73
17.50	7.75	5.63	0.66
18.00	7.83	5.70	0.59
18.50	7.91	5.77	0.56
19.00	7.98	5.84	0.54
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
29.00	8.57	6.40	0.00
29.50	8.57	6.40	0.00
30.00	8.57	6.40	0.00
30.50	8.57	6.40	0.00
31.00	8.57	6.40	0.00
31.50	8.57	6.40	0.00
32.00	8.57	6.40	0.00
32.50	8.57	6.40	0.00
33.00	8.57	6.40	0.00
33.50	8.57	6.40	0.00
34.00	8.57	6.40	0.00
34.50	8.57	6.40	0.00
35.00	8.57	6.40	0.00
35.50	8.57	6.40	0.00
36.00	8.57	6.40	0.00
36.50	8.57	6.40	0.00
37.00	8.57	6.40	0.00
37.50	8.57	6.40	0.00
38.00	8.57	6.40	0.00
38.50	8.57	6.40	0.00
39.00	8.57	6.40	0.00
39.50	8.57	6.40	0.00
40.00	8.57	6.40	0.00
40.50	8.57	6.40	0.00
41.00	8.57	6.40	0.00
41.50	8.57	6.40	0.00
42.00	8.57	6.40	0.00
42.50	8.57	6.40	0.00
43.00	8.57	6.40	0.00
43.50	8.57	6.40	0.00
44.00	8.57	6.40	0.00
44.50	8.57	6.40	0.00
45.00	8.57	6.40	0.00
45.50	8.57	6.40	0.00
46.00	8.57	6.40	0.00
46.50	8.57	6.40	0.00
47.00	8.57	6.40	0.00
47.50	8.57	6.40	0.00
48.00	8.57	6.40	0.00

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Summary for Subcatchment 38S: PDA-4U

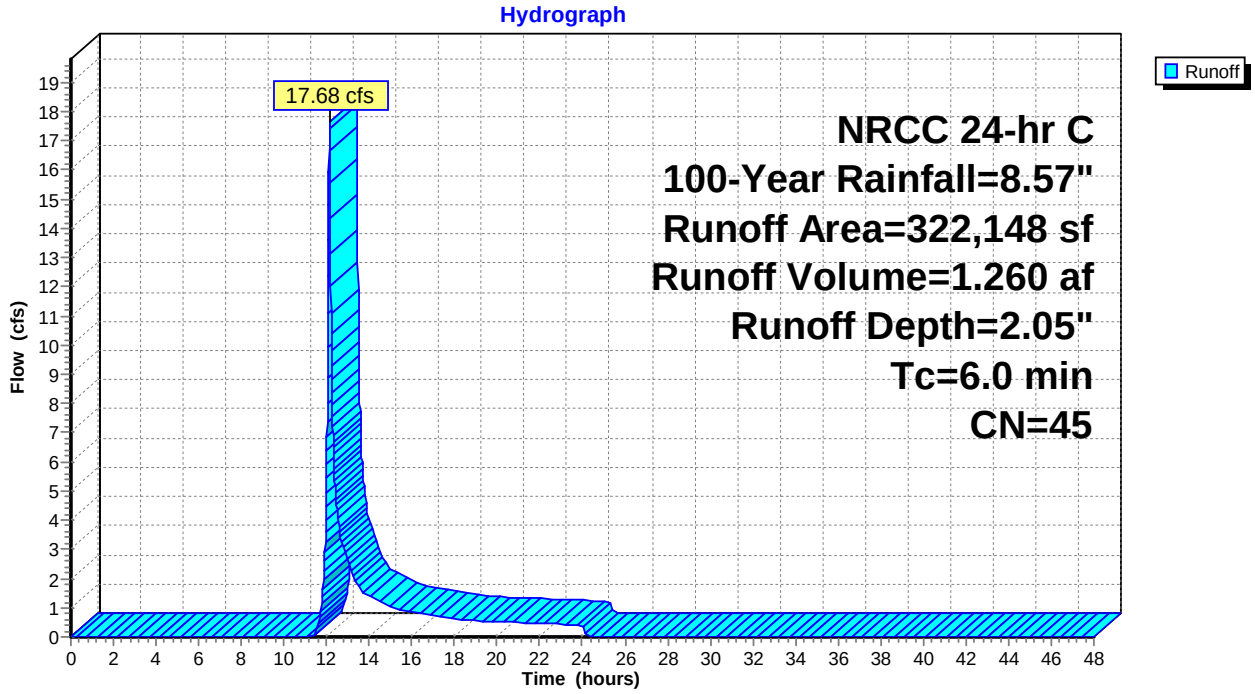
Runoff = 17.68 cfs @ 12.14 hrs, Volume= 1.260 af, Depth= 2.05"
Routed to Link 32L : DP-4

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



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Hydrograph for Subcatchment 38S: PDA-4U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.00	0.00
11.50	2.68	0.00	0.18
12.00	4.08	0.19	**5.94**
12.50	5.89	0.76	**4.36**
13.00	6.36	0.95	2.55
13.50	6.66	1.08	1.74
14.00	6.88	1.18	1.41
14.50	7.06	1.27	1.21
15.00	7.21	1.34	1.00
15.50	7.34	1.40	0.91
16.00	7.46	1.46	0.85
16.50	7.56	1.51	0.79
17.00	7.66	1.56	0.73
17.50	7.75	1.61	0.66
18.00	7.83	1.65	0.60
18.50	7.91	1.69	0.57
19.00	7.98	1.73	0.56
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
29.00	8.57	2.05	0.00
29.50	8.57	2.05	0.00
30.00	8.57	2.05	0.00
30.50	8.57	2.05	0.00
31.00	8.57	2.05	0.00
31.50	8.57	2.05	0.00
32.00	8.57	2.05	0.00
32.50	8.57	2.05	0.00
33.00	8.57	2.05	0.00
33.50	8.57	2.05	0.00
34.00	8.57	2.05	0.00
34.50	8.57	2.05	0.00
35.00	8.57	2.05	0.00
35.50	8.57	2.05	0.00
36.00	8.57	2.05	0.00
36.50	8.57	2.05	0.00
37.00	8.57	2.05	0.00
37.50	8.57	2.05	0.00
38.00	8.57	2.05	0.00
38.50	8.57	2.05	0.00
39.00	8.57	2.05	0.00
39.50	8.57	2.05	0.00
40.00	8.57	2.05	0.00
40.50	8.57	2.05	0.00
41.00	8.57	2.05	0.00
41.50	8.57	2.05	0.00
42.00	8.57	2.05	0.00
42.50	8.57	2.05	0.00
43.00	8.57	2.05	0.00
43.50	8.57	2.05	0.00
44.00	8.57	2.05	0.00
44.50	8.57	2.05	0.00
45.00	8.57	2.05	0.00
45.50	8.57	2.05	0.00
46.00	8.57	2.05	0.00
46.50	8.57	2.05	0.00
47.00	8.57	2.05	0.00
47.50	8.57	2.05	0.00
48.00	8.57	2.05	0.00

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Summary for Subcatchment 39S: PDA-5U

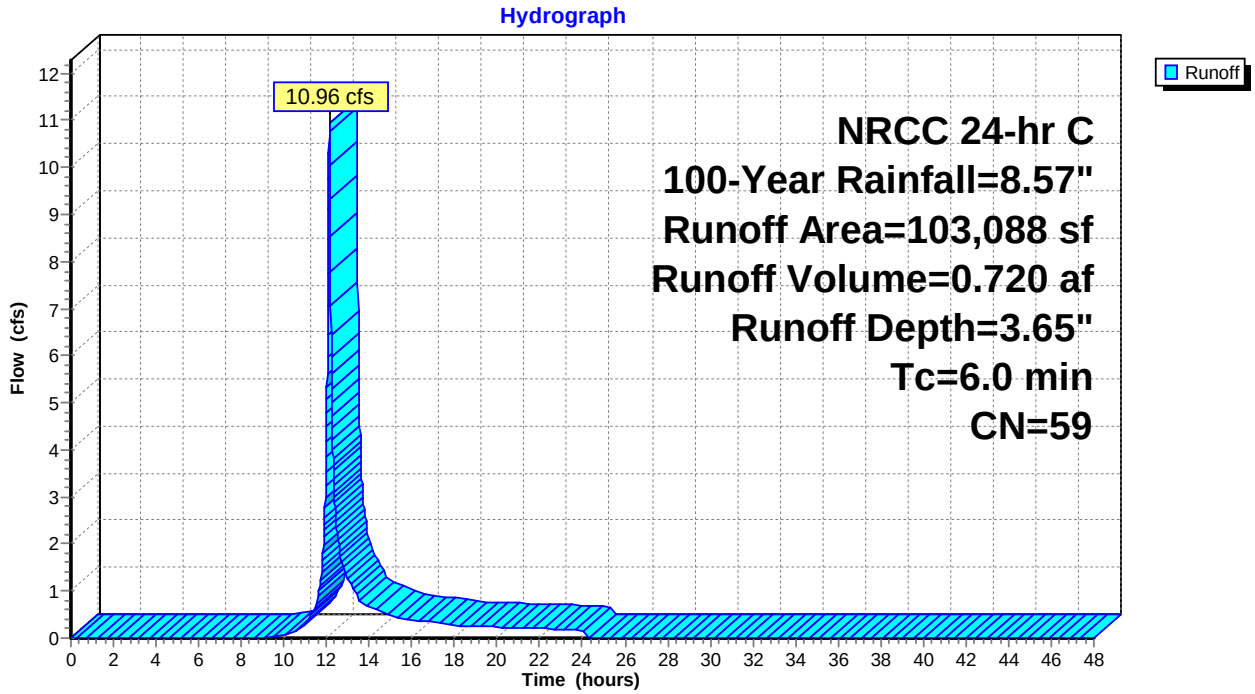
Runoff = 10.96 cfs @ 12.13 hrs, Volume= 0.720 af, Depth= 3.65"
Routed to Link PDP5 : PDP5

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



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Hydrograph for Subcatchment 39S: PDA-5U

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.02
10.00	1.69	0.01	0.07
10.50	1.91	0.04	0.13
11.00	2.21	0.09	0.30
11.50	2.68	0.20	0.70
12.00	4.08	0.75	**4.80**
12.50	5.89	1.77	**2.28**
13.00	6.36	2.07	1.27
13.50	6.66	2.27	0.84
14.00	6.88	2.42	0.67
14.50	7.06	2.55	0.57
15.00	7.21	2.65	0.47
15.50	7.34	2.74	0.42
16.00	7.46	2.83	0.39
16.50	7.56	2.91	0.36
17.00	7.66	2.98	0.33
17.50	7.75	3.04	0.30
18.00	7.83	3.10	0.27
18.50	7.91	3.16	0.26
19.00	7.98	3.21	0.25
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
29.00	8.57	3.65	0.00
29.50	8.57	3.65	0.00
30.00	8.57	3.65	0.00
30.50	8.57	3.65	0.00
31.00	8.57	3.65	0.00
31.50	8.57	3.65	0.00
32.00	8.57	3.65	0.00
32.50	8.57	3.65	0.00
33.00	8.57	3.65	0.00
33.50	8.57	3.65	0.00
34.00	8.57	3.65	0.00
34.50	8.57	3.65	0.00
35.00	8.57	3.65	0.00
35.50	8.57	3.65	0.00
36.00	8.57	3.65	0.00
36.50	8.57	3.65	0.00
37.00	8.57	3.65	0.00
37.50	8.57	3.65	0.00
38.00	8.57	3.65	0.00
38.50	8.57	3.65	0.00
39.00	8.57	3.65	0.00
39.50	8.57	3.65	0.00
40.00	8.57	3.65	0.00
40.50	8.57	3.65	0.00
41.00	8.57	3.65	0.00
41.50	8.57	3.65	0.00
42.00	8.57	3.65	0.00
42.50	8.57	3.65	0.00
43.00	8.57	3.65	0.00
43.50	8.57	3.65	0.00
44.00	8.57	3.65	0.00
44.50	8.57	3.65	0.00
45.00	8.57	3.65	0.00
45.50	8.57	3.65	0.00
46.00	8.57	3.65	0.00
46.50	8.57	3.65	0.00
47.00	8.57	3.65	0.00
47.50	8.57	3.65	0.00
48.00	8.57	3.65	0.00

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

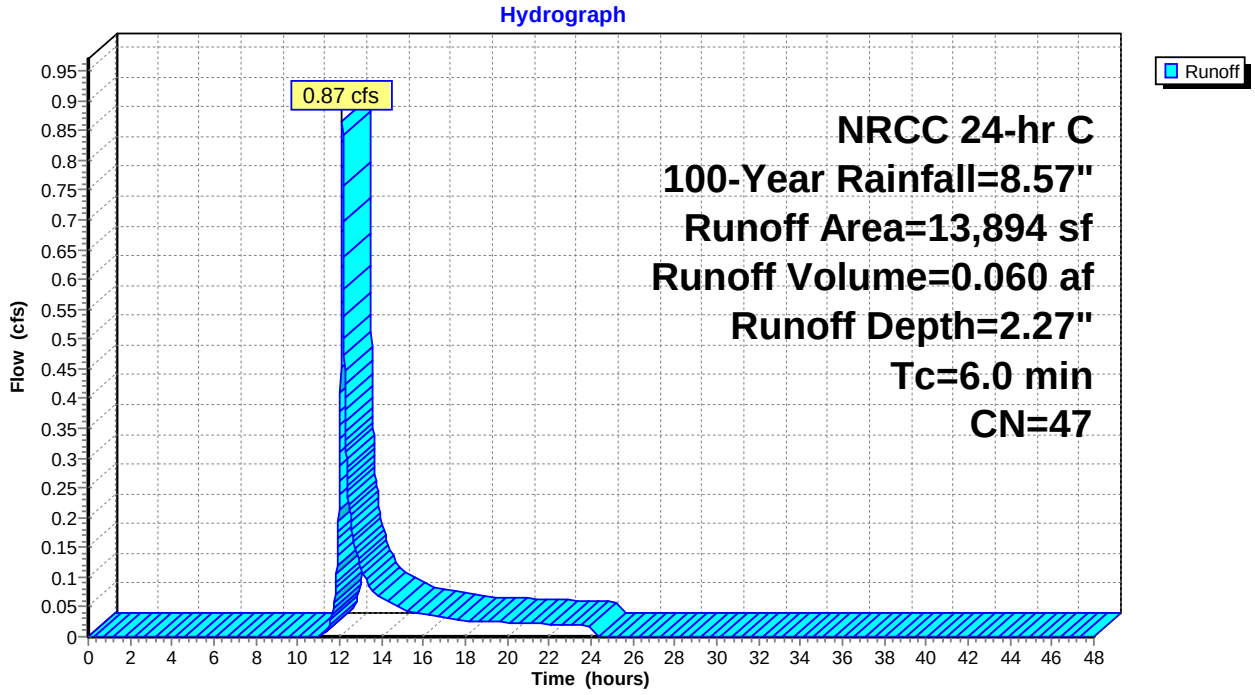
Runoff = 0.87 cfs @ 12.14 hrs, Volume= 0.060 af, Depth= 2.27"
Routed to Pond 37P : FB 1i+J

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



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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	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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Summary for Subcatchment 41S: PDA-5A

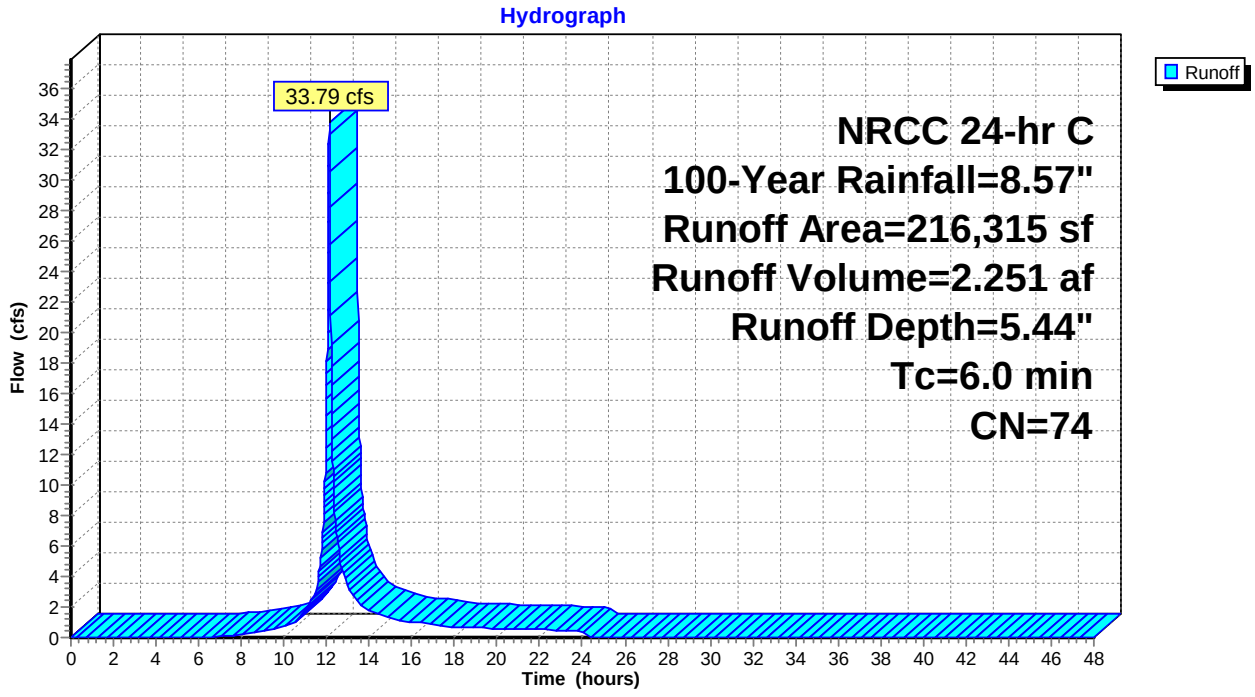
Runoff = 33.79 cfs @ 12.13 hrs, Volume= 2.251 af, Depth= 5.44"
Routed to Pond 39P : FB 5A

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



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Hydrograph for Subcatchment 41S: PDA-5A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.01
6.50	0.82	0.00	0.04
7.00	0.91	0.01	0.09
7.50	1.01	0.02	0.15
8.00	1.11	0.04	0.21
8.50	1.23	0.07	0.29
9.00	1.36	0.10	0.37
9.50	1.51	0.15	0.53
10.00	1.69	0.22	0.74
10.50	1.91	0.31	0.99
11.00	2.21	0.45	1.69
11.50	2.68	0.71	3.11
12.00	4.08	1.66	**16.52**
12.50	5.89	3.09	**6.40**
13.00	6.36	3.49	3.46
13.50	6.66	3.75	2.26
14.00	6.88	3.94	1.79
14.50	7.06	4.10	1.51
15.00	7.21	4.23	1.23
15.50	7.34	4.34	1.10
16.00	7.46	4.44	1.01
16.50	7.56	4.54	0.94
17.00	7.66	4.63	0.85
17.50	7.75	4.71	0.77
18.00	7.83	4.78	0.69
18.50	7.91	4.84	0.66
19.00	7.98	4.91	0.63
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
29.00	8.57	5.44	0.00
29.50	8.57	5.44	0.00
30.00	8.57	5.44	0.00
30.50	8.57	5.44	0.00
31.00	8.57	5.44	0.00
31.50	8.57	5.44	0.00
32.00	8.57	5.44	0.00
32.50	8.57	5.44	0.00
33.00	8.57	5.44	0.00
33.50	8.57	5.44	0.00
34.00	8.57	5.44	0.00
34.50	8.57	5.44	0.00
35.00	8.57	5.44	0.00
35.50	8.57	5.44	0.00
36.00	8.57	5.44	0.00
36.50	8.57	5.44	0.00
37.00	8.57	5.44	0.00
37.50	8.57	5.44	0.00
38.00	8.57	5.44	0.00
38.50	8.57	5.44	0.00
39.00	8.57	5.44	0.00
39.50	8.57	5.44	0.00
40.00	8.57	5.44	0.00
40.50	8.57	5.44	0.00
41.00	8.57	5.44	0.00
41.50	8.57	5.44	0.00
42.00	8.57	5.44	0.00
42.50	8.57	5.44	0.00
43.00	8.57	5.44	0.00
43.50	8.57	5.44	0.00
44.00	8.57	5.44	0.00
44.50	8.57	5.44	0.00
45.00	8.57	5.44	0.00
45.50	8.57	5.44	0.00
46.00	8.57	5.44	0.00
46.50	8.57	5.44	0.00
47.00	8.57	5.44	0.00
47.50	8.57	5.44	0.00
48.00	8.57	5.44	0.00

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

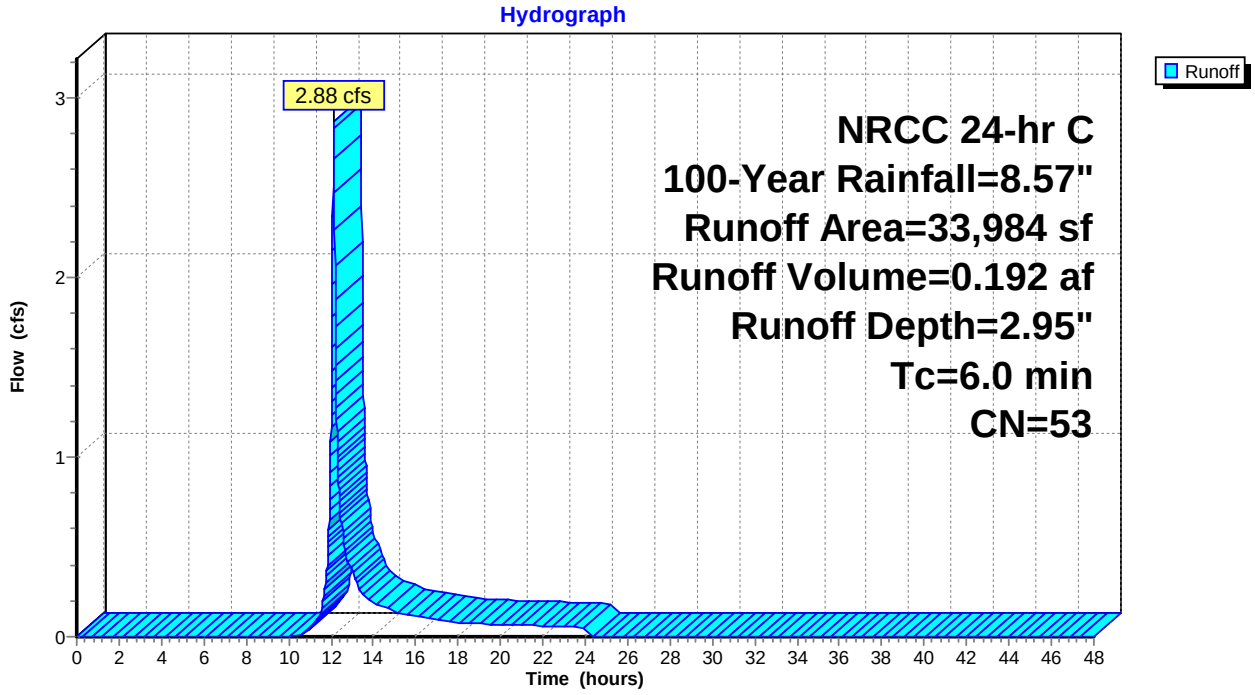
Runoff = 2.88 cfs @ 12.14 hrs, Volume= 0.192 af, Depth= 2.95"
Routed to Pond 53P : Bioretention J basin

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



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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	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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Summary for Subcatchment 43S: PDA-1B

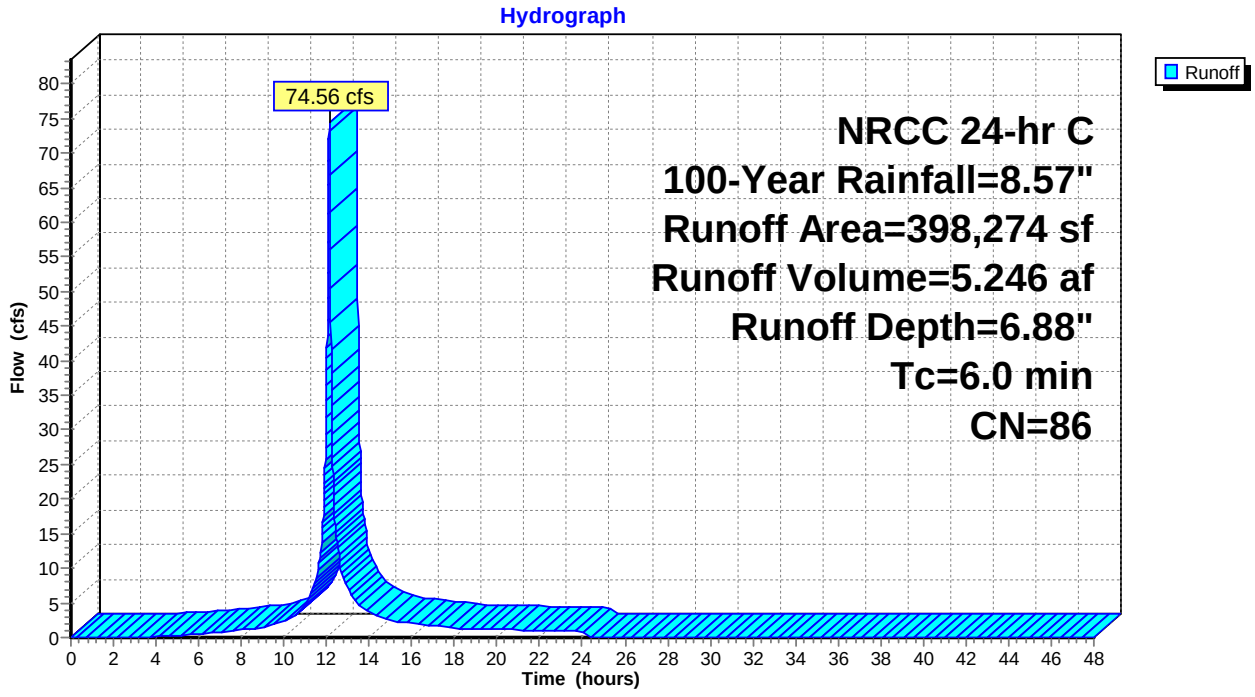
Runoff = 74.56 cfs @ 12.13 hrs, Volume= 5.246 af, Depth= 6.88"
Routed to Pond 44P : FB 1B

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



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Hydrograph for Subcatchment 43S: PDA-1B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.07
4.00	0.45	0.01	0.15
4.50	0.52	0.02	0.24
5.00	0.59	0.04	0.32
5.50	0.66	0.06	0.41
6.00	0.74	0.08	0.49
6.50	0.82	0.11	0.62
7.00	0.91	0.15	0.77
7.50	1.01	0.20	0.93
8.00	1.11	0.26	1.11
8.50	1.23	0.32	1.29
9.00	1.36	0.40	1.49
9.50	1.51	0.50	1.95
10.00	1.69	0.62	2.49
10.50	1.91	0.78	3.08
11.00	2.21	1.01	4.86
11.50	2.68	1.39	8.21
12.00	4.08	2.62	**38.58**
12.50	5.89	4.30	**13.43**
13.00	6.36	4.75	7.14
13.50	6.66	5.04	4.63
14.00	6.88	5.25	3.64
14.50	7.06	5.42	3.06
15.00	7.21	5.57	2.48
15.50	7.34	5.69	2.21
16.00	7.46	5.81	2.04
16.50	7.56	5.91	1.88
17.00	7.66	6.01	1.72
17.50	7.75	6.09	1.55
18.00	7.83	6.17	1.39
18.50	7.91	6.24	1.31
19.00	7.98	6.31	1.27
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
29.00	8.57	6.88	0.00
29.50	8.57	6.88	0.00
30.00	8.57	6.88	0.00
30.50	8.57	6.88	0.00
31.00	8.57	6.88	0.00
31.50	8.57	6.88	0.00
32.00	8.57	6.88	0.00
32.50	8.57	6.88	0.00
33.00	8.57	6.88	0.00
33.50	8.57	6.88	0.00
34.00	8.57	6.88	0.00
34.50	8.57	6.88	0.00
35.00	8.57	6.88	0.00
35.50	8.57	6.88	0.00
36.00	8.57	6.88	0.00
36.50	8.57	6.88	0.00
37.00	8.57	6.88	0.00
37.50	8.57	6.88	0.00
38.00	8.57	6.88	0.00
38.50	8.57	6.88	0.00
39.00	8.57	6.88	0.00
39.50	8.57	6.88	0.00
40.00	8.57	6.88	0.00
40.50	8.57	6.88	0.00
41.00	8.57	6.88	0.00
41.50	8.57	6.88	0.00
42.00	8.57	6.88	0.00
42.50	8.57	6.88	0.00
43.00	8.57	6.88	0.00
43.50	8.57	6.88	0.00
44.00	8.57	6.88	0.00
44.50	8.57	6.88	0.00
45.00	8.57	6.88	0.00
45.50	8.57	6.88	0.00
46.00	8.57	6.88	0.00
46.50	8.57	6.88	0.00
47.00	8.57	6.88	0.00
47.50	8.57	6.88	0.00
48.00	8.57	6.88	0.00

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Summary for Subcatchment 46S: PDA-1H

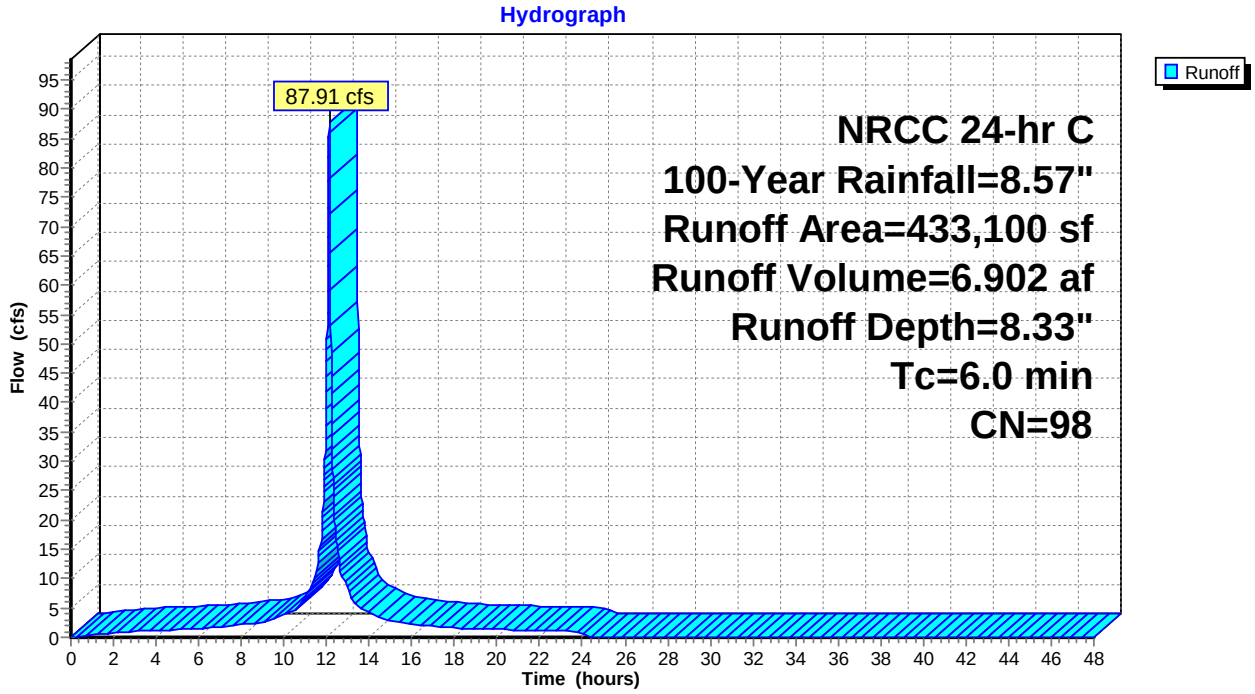
Runoff = 87.91 cfs @ 12.13 hrs, Volume= 6.902 af, Depth= 8.33"
Routed to Pond 51P : FB 1H

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



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Hydrograph for Subcatchment 46S: PDA-1H

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.01
1.00	0.10	0.01	0.36
1.50	0.15	0.04	0.60
2.00	0.21	0.08	0.77
2.50	0.27	0.12	0.89
3.00	0.33	0.17	1.00
3.50	0.39	0.22	1.08
4.00	0.45	0.28	1.16
4.50	0.52	0.34	1.24
5.00	0.59	0.40	1.30
5.50	0.66	0.47	1.36
6.00	0.74	0.54	1.42
6.50	0.82	0.61	1.60
7.00	0.91	0.70	1.79
7.50	1.01	0.80	1.98
8.00	1.11	0.90	2.18
8.50	1.23	1.02	2.37
9.00	1.36	1.14	2.56
9.50	1.51	1.29	3.18
10.00	1.69	1.47	3.84
10.50	1.91	1.68	4.50
11.00	2.21	1.98	6.75
11.50	2.68	2.45	10.77
12.00	4.08	3.85	**46.95**
12.50	5.89	5.65	**15.41**
13.00	6.36	6.12	8.13
13.50	6.66	6.42	5.25
14.00	6.88	6.64	4.12
14.50	7.06	6.82	3.46
15.00	7.21	6.97	2.80
15.50	7.34	7.10	2.49
16.00	7.46	7.22	2.30
16.50	7.56	7.33	2.12
17.00	7.66	7.42	1.93
17.50	7.75	7.51	1.74
18.00	7.83	7.60	1.56
18.50	7.91	7.67	1.47
19.00	7.98	7.74	1.42
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
29.00	8.57	8.33	0.00
29.50	8.57	8.33	0.00
30.00	8.57	8.33	0.00
30.50	8.57	8.33	0.00
31.00	8.57	8.33	0.00
31.50	8.57	8.33	0.00
32.00	8.57	8.33	0.00
32.50	8.57	8.33	0.00
33.00	8.57	8.33	0.00
33.50	8.57	8.33	0.00
34.00	8.57	8.33	0.00
34.50	8.57	8.33	0.00
35.00	8.57	8.33	0.00
35.50	8.57	8.33	0.00
36.00	8.57	8.33	0.00
36.50	8.57	8.33	0.00
37.00	8.57	8.33	0.00
37.50	8.57	8.33	0.00
38.00	8.57	8.33	0.00
38.50	8.57	8.33	0.00
39.00	8.57	8.33	0.00
39.50	8.57	8.33	0.00
40.00	8.57	8.33	0.00
40.50	8.57	8.33	0.00
41.00	8.57	8.33	0.00
41.50	8.57	8.33	0.00
42.00	8.57	8.33	0.00
42.50	8.57	8.33	0.00
43.00	8.57	8.33	0.00
43.50	8.57	8.33	0.00
44.00	8.57	8.33	0.00
44.50	8.57	8.33	0.00
45.00	8.57	8.33	0.00
45.50	8.57	8.33	0.00
46.00	8.57	8.33	0.00
46.50	8.57	8.33	0.00
47.00	8.57	8.33	0.00
47.50	8.57	8.33	0.00
48.00	8.57	8.33	0.00

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Summary for Subcatchment 47S: PDA-4A

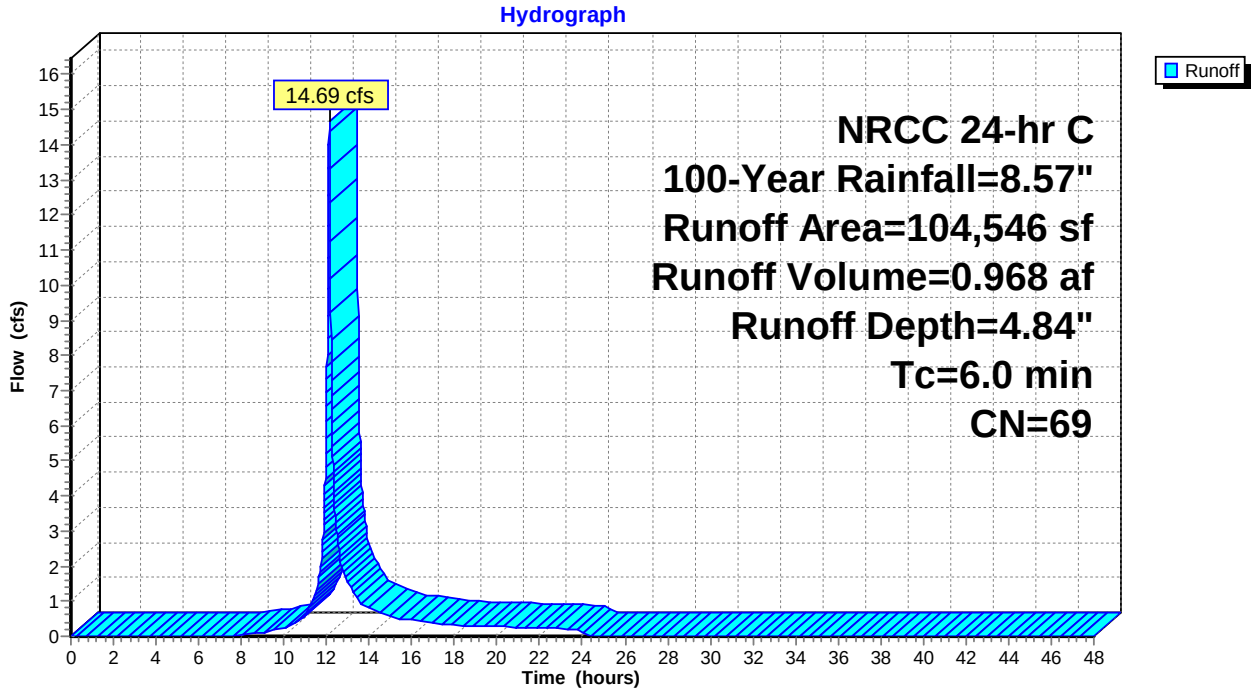
Runoff = 14.69 cfs @ 12.13 hrs, Volume= 0.968 af, Depth= 4.84"
Routed to Pond B4B : Bioretention 4A

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



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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				

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

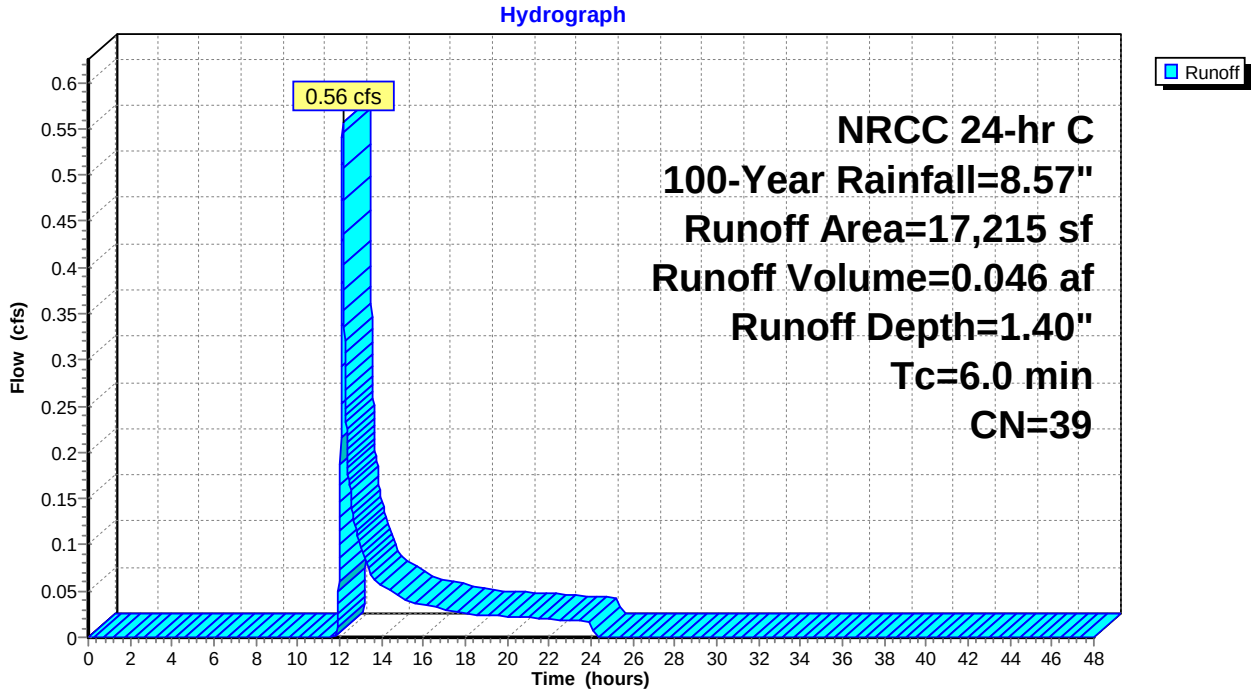
Runoff = 0.56 cfs @ 12.14 hrs, Volume= 0.046 af, Depth= 1.40"
Routed to Pond 55P : FB 1G

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.00	0.00
11.50	2.68	0.00	0.00
12.00	4.08	0.05	**0.12**
12.50	5.89	0.41	**0.16**
13.00	6.36	0.55	0.10
13.50	6.66	0.65	0.07
14.00	6.88	0.72	0.06
14.50	7.06	0.79	0.05
15.00	7.21	0.85	0.04
15.50	7.34	0.89	0.04
16.00	7.46	0.94	0.04
16.50	7.56	0.98	0.03
17.00	7.66	1.02	0.03
17.50	7.75	1.06	0.03
18.00	7.83	1.09	0.03
18.50	7.91	1.12	0.02
19.00	7.98	1.15	0.02
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
29.00	8.57	1.40	0.00
29.50	8.57	1.40	0.00
30.00	8.57	1.40	0.00
30.50	8.57	1.40	0.00
31.00	8.57	1.40	0.00
31.50	8.57	1.40	0.00
32.00	8.57	1.40	0.00
32.50	8.57	1.40	0.00
33.00	8.57	1.40	0.00
33.50	8.57	1.40	0.00
34.00	8.57	1.40	0.00
34.50	8.57	1.40	0.00
35.00	8.57	1.40	0.00
35.50	8.57	1.40	0.00
36.00	8.57	1.40	0.00
36.50	8.57	1.40	0.00
37.00	8.57	1.40	0.00
37.50	8.57	1.40	0.00
38.00	8.57	1.40	0.00
38.50	8.57	1.40	0.00
39.00	8.57	1.40	0.00
39.50	8.57	1.40	0.00
40.00	8.57	1.40	0.00
40.50	8.57	1.40	0.00
41.00	8.57	1.40	0.00
41.50	8.57	1.40	0.00
42.00	8.57	1.40	0.00
42.50	8.57	1.40	0.00
43.00	8.57	1.40	0.00
43.50	8.57	1.40	0.00
44.00	8.57	1.40	0.00
44.50	8.57	1.40	0.00
45.00	8.57	1.40	0.00
45.50	8.57	1.40	0.00
46.00	8.57	1.40	0.00
46.50	8.57	1.40	0.00
47.00	8.57	1.40	0.00
47.50	8.57	1.40	0.00
48.00	8.57	1.40	0.00

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Summary for Subcatchment 49S: PDA-4B

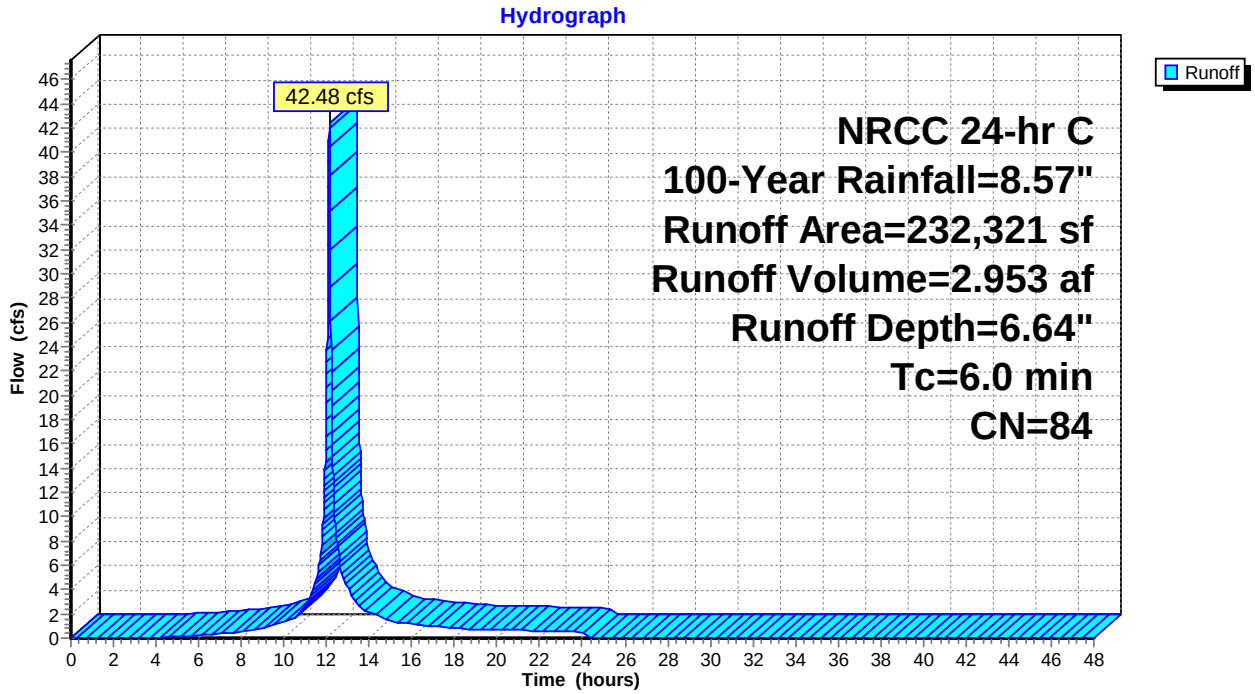
Runoff = 42.48 cfs @ 12.13 hrs, Volume= 2.953 af, Depth= 6.64"
Routed to Pond 29P : Bioretention 4B

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



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Hydrograph for Subcatchment 49S: PDA-4B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.04
4.50	0.52	0.01	0.09
5.00	0.59	0.02	0.13
5.50	0.66	0.04	0.18
6.00	0.74	0.06	0.23
6.50	0.82	0.08	0.30
7.00	0.91	0.11	0.38
7.50	1.01	0.15	0.47
8.00	1.11	0.20	0.56
8.50	1.23	0.26	0.67
9.00	1.36	0.33	0.78
9.50	1.51	0.42	1.04
10.00	1.69	0.53	1.34
10.50	1.91	0.68	1.67
11.00	2.21	0.90	2.67
11.50	2.68	1.26	4.56
12.00	4.08	2.44	**21.81**
12.50	5.89	4.09	**7.71**
13.00	6.36	4.53	4.10
13.50	6.66	4.82	2.67
14.00	6.88	5.02	2.10
14.50	7.06	5.20	1.77
15.00	7.21	5.34	1.43
15.50	7.34	5.46	1.28
16.00	7.46	5.57	1.18
16.50	7.56	5.68	1.09
17.00	7.66	5.77	0.99
17.50	7.75	5.86	0.89
18.00	7.83	5.94	0.80
18.50	7.91	6.01	0.76
19.00	7.98	6.08	0.73
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
29.00	8.57	6.64	0.00
29.50	8.57	6.64	0.00
30.00	8.57	6.64	0.00
30.50	8.57	6.64	0.00
31.00	8.57	6.64	0.00
31.50	8.57	6.64	0.00
32.00	8.57	6.64	0.00
32.50	8.57	6.64	0.00
33.00	8.57	6.64	0.00
33.50	8.57	6.64	0.00
34.00	8.57	6.64	0.00
34.50	8.57	6.64	0.00
35.00	8.57	6.64	0.00
35.50	8.57	6.64	0.00
36.00	8.57	6.64	0.00
36.50	8.57	6.64	0.00
37.00	8.57	6.64	0.00
37.50	8.57	6.64	0.00
38.00	8.57	6.64	0.00
38.50	8.57	6.64	0.00
39.00	8.57	6.64	0.00
39.50	8.57	6.64	0.00
40.00	8.57	6.64	0.00
40.50	8.57	6.64	0.00
41.00	8.57	6.64	0.00
41.50	8.57	6.64	0.00
42.00	8.57	6.64	0.00
42.50	8.57	6.64	0.00
43.00	8.57	6.64	0.00
43.50	8.57	6.64	0.00
44.00	8.57	6.64	0.00
44.50	8.57	6.64	0.00
45.00	8.57	6.64	0.00
45.50	8.57	6.64	0.00
46.00	8.57	6.64	0.00
46.50	8.57	6.64	0.00
47.00	8.57	6.64	0.00
47.50	8.57	6.64	0.00
48.00	8.57	6.64	0.00

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

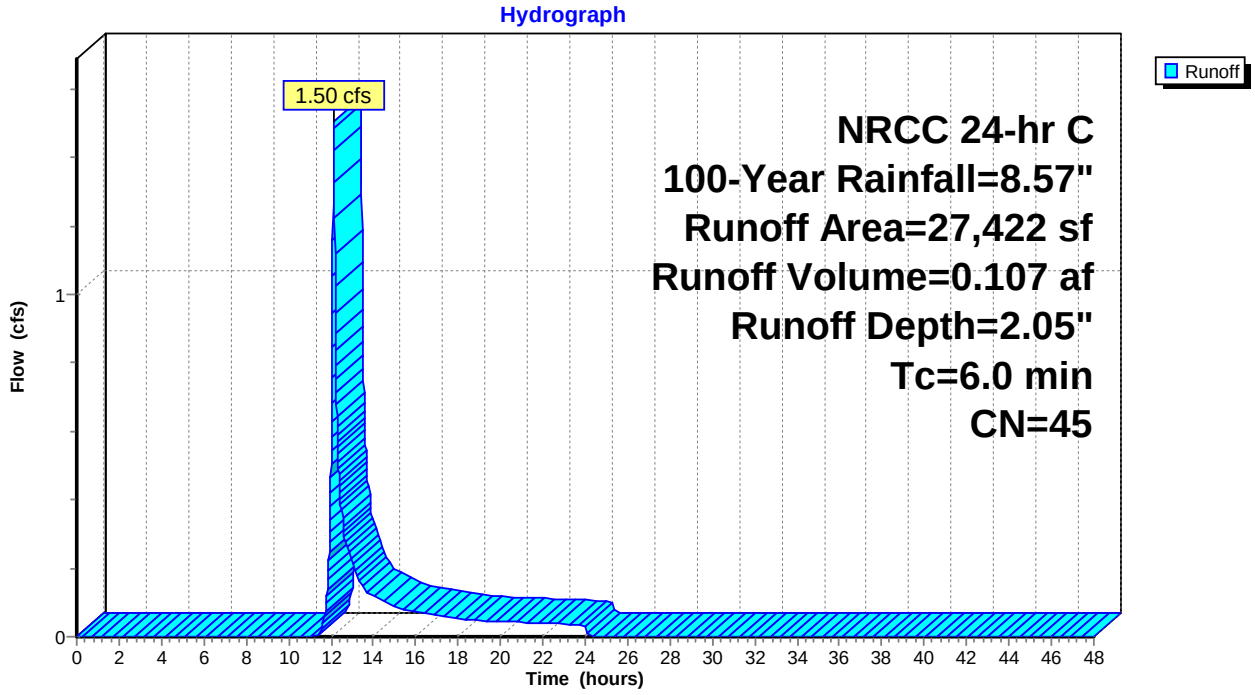
Runoff = 1.50 cfs @ 12.14 hrs, Volume= 0.107 af, Depth= 2.05"
Routed to Pond 54P : INFIL 1G

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.00	0.00
11.50	2.68	0.00	0.02
12.00	4.08	0.19	**0.51**
12.50	5.89	0.76	**0.37**
13.00	6.36	0.95	0.22
13.50	6.66	1.08	0.15
14.00	6.88	1.18	0.12
14.50	7.06	1.27	0.10
15.00	7.21	1.34	0.09
15.50	7.34	1.40	0.08
16.00	7.46	1.46	0.07
16.50	7.56	1.51	0.07
17.00	7.66	1.56	0.06
17.50	7.75	1.61	0.06
18.00	7.83	1.65	0.05
18.50	7.91	1.69	0.05
19.00	7.98	1.73	0.05
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
29.00	8.57	2.05	0.00
29.50	8.57	2.05	0.00
30.00	8.57	2.05	0.00
30.50	8.57	2.05	0.00
31.00	8.57	2.05	0.00
31.50	8.57	2.05	0.00
32.00	8.57	2.05	0.00
32.50	8.57	2.05	0.00
33.00	8.57	2.05	0.00
33.50	8.57	2.05	0.00
34.00	8.57	2.05	0.00
34.50	8.57	2.05	0.00
35.00	8.57	2.05	0.00
35.50	8.57	2.05	0.00
36.00	8.57	2.05	0.00
36.50	8.57	2.05	0.00
37.00	8.57	2.05	0.00
37.50	8.57	2.05	0.00
38.00	8.57	2.05	0.00
38.50	8.57	2.05	0.00
39.00	8.57	2.05	0.00
39.50	8.57	2.05	0.00
40.00	8.57	2.05	0.00
40.50	8.57	2.05	0.00
41.00	8.57	2.05	0.00
41.50	8.57	2.05	0.00
42.00	8.57	2.05	0.00
42.50	8.57	2.05	0.00
43.00	8.57	2.05	0.00
43.50	8.57	2.05	0.00
44.00	8.57	2.05	0.00
44.50	8.57	2.05	0.00
45.00	8.57	2.05	0.00
45.50	8.57	2.05	0.00
46.00	8.57	2.05	0.00
46.50	8.57	2.05	0.00
47.00	8.57	2.05	0.00
47.50	8.57	2.05	0.00
48.00	8.57	2.05	0.00

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Summary for Subcatchment 52S: PDA-1G

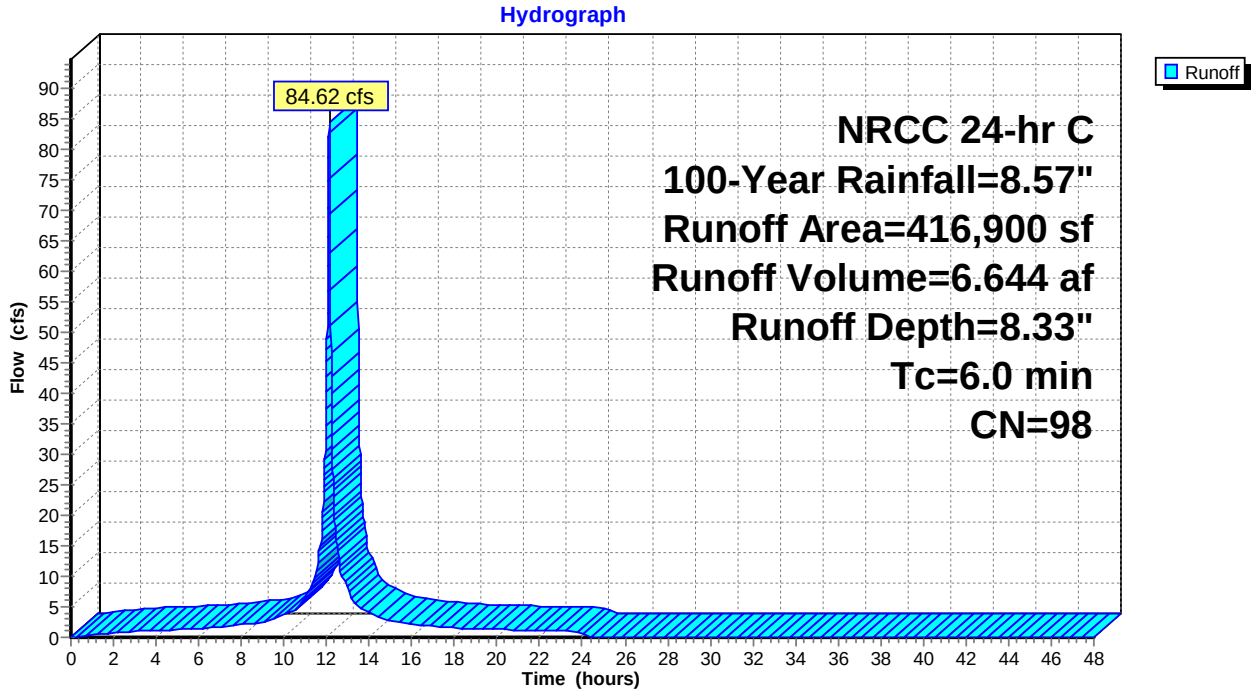
Runoff = 84.62 cfs @ 12.13 hrs, Volume= 6.644 af, Depth= 8.33"
Routed to Pond 55P : FB 1G

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



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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				

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

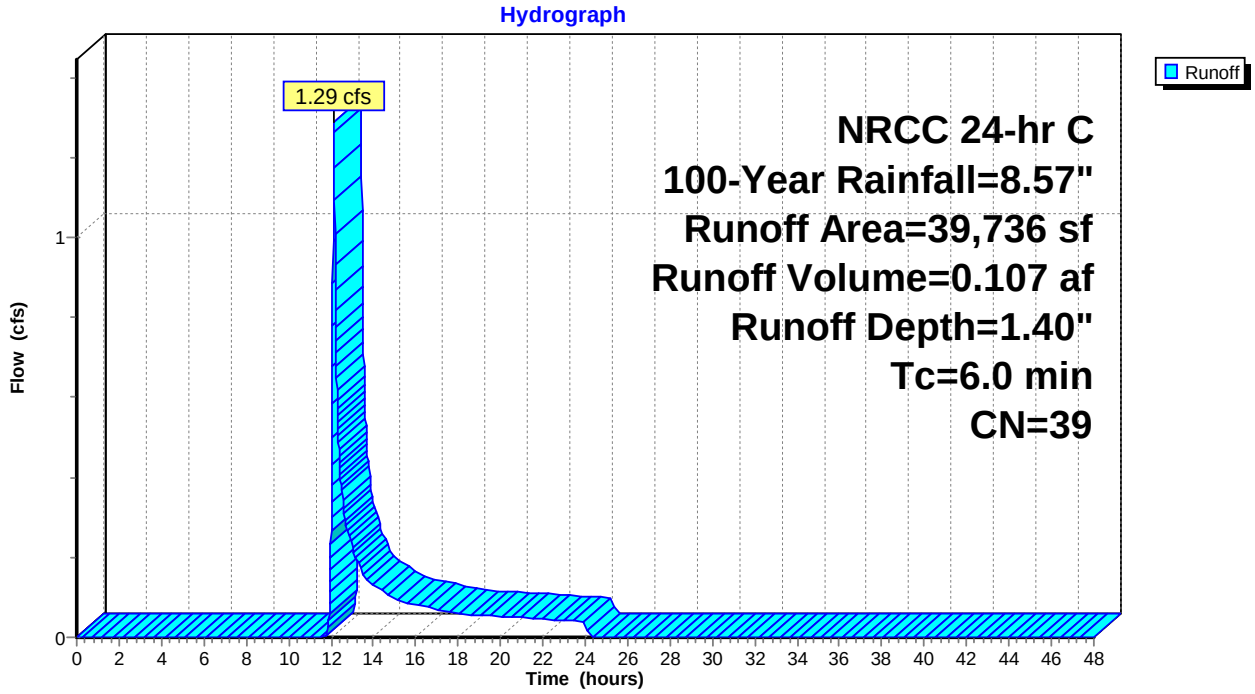
Runoff = 1.29 cfs @ 12.14 hrs, Volume= 0.107 af, Depth= 1.40"
Routed to Pond 47P : INFIL 1H

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.00	0.00
11.50	2.68	0.00	0.00
12.00	4.08	0.05	**0.27**
12.50	5.89	0.41	**0.38**
13.00	6.36	0.55	0.23
13.50	6.66	0.65	0.16
14.00	6.88	0.72	0.13
14.50	7.06	0.79	0.11
15.00	7.21	0.85	0.10
15.50	7.34	0.89	0.09
16.00	7.46	0.94	0.08
16.50	7.56	0.98	0.08
17.00	7.66	1.02	0.07
17.50	7.75	1.06	0.06
18.00	7.83	1.09	0.06
18.50	7.91	1.12	0.06
19.00	7.98	1.15	0.05
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
29.00	8.57	1.40	0.00
29.50	8.57	1.40	0.00
30.00	8.57	1.40	0.00
30.50	8.57	1.40	0.00
31.00	8.57	1.40	0.00
31.50	8.57	1.40	0.00
32.00	8.57	1.40	0.00
32.50	8.57	1.40	0.00
33.00	8.57	1.40	0.00
33.50	8.57	1.40	0.00
34.00	8.57	1.40	0.00
34.50	8.57	1.40	0.00
35.00	8.57	1.40	0.00
35.50	8.57	1.40	0.00
36.00	8.57	1.40	0.00
36.50	8.57	1.40	0.00
37.00	8.57	1.40	0.00
37.50	8.57	1.40	0.00
38.00	8.57	1.40	0.00
38.50	8.57	1.40	0.00
39.00	8.57	1.40	0.00
39.50	8.57	1.40	0.00
40.00	8.57	1.40	0.00
40.50	8.57	1.40	0.00
41.00	8.57	1.40	0.00
41.50	8.57	1.40	0.00
42.00	8.57	1.40	0.00
42.50	8.57	1.40	0.00
43.00	8.57	1.40	0.00
43.50	8.57	1.40	0.00
44.00	8.57	1.40	0.00
44.50	8.57	1.40	0.00
45.00	8.57	1.40	0.00
45.50	8.57	1.40	0.00
46.00	8.57	1.40	0.00
46.50	8.57	1.40	0.00
47.00	8.57	1.40	0.00
47.50	8.57	1.40	0.00
48.00	8.57	1.40	0.00

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Summary for Subcatchment 55S: PDA-1E

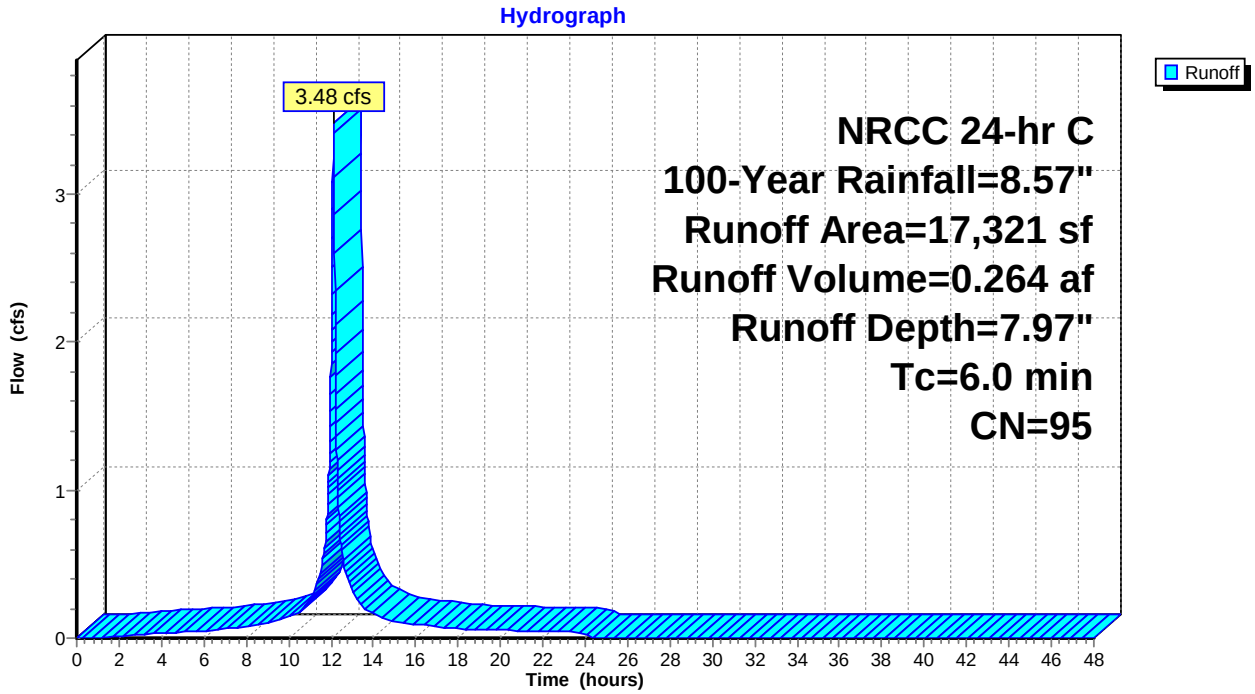
Runoff = 3.48 cfs @ 12.13 hrs, Volume= 0.264 af, Depth= 7.97"
Routed to Pond 59P : FB 1E

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



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Hydrograph for Subcatchment 55S: PDA-1E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.01
2.00	0.21	0.02	0.01
2.50	0.27	0.04	0.02
3.00	0.33	0.07	0.02
3.50	0.39	0.10	0.03
4.00	0.45	0.14	0.03
4.50	0.52	0.18	0.04
5.00	0.59	0.23	0.04
5.50	0.66	0.29	0.04
6.00	0.74	0.34	0.05
6.50	0.82	0.41	0.05
7.00	0.91	0.48	0.06
7.50	1.01	0.57	0.07
8.00	1.11	0.66	0.08
8.50	1.23	0.77	0.09
9.00	1.36	0.88	0.10
9.50	1.51	1.02	0.12
10.00	1.69	1.19	0.15
10.50	1.91	1.40	0.17
11.00	2.21	1.68	0.26
11.50	2.68	2.14	0.42
12.00	4.08	3.51	**1.85**
12.50	5.89	5.30	**0.61**
13.00	6.36	5.77	0.32
13.50	6.66	6.07	0.21
14.00	6.88	6.28	0.16
14.50	7.06	6.47	0.14
15.00	7.21	6.62	0.11
15.50	7.34	6.74	0.10
16.00	7.46	6.86	0.09
16.50	7.56	6.97	0.08
17.00	7.66	7.07	0.08
17.50	7.75	7.16	0.07
18.00	7.83	7.24	0.06
18.50	7.91	7.31	0.06
19.00	7.98	7.38	0.06
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
29.00	8.57	7.97	0.00
29.50	8.57	7.97	0.00
30.00	8.57	7.97	0.00
30.50	8.57	7.97	0.00
31.00	8.57	7.97	0.00
31.50	8.57	7.97	0.00
32.00	8.57	7.97	0.00
32.50	8.57	7.97	0.00
33.00	8.57	7.97	0.00
33.50	8.57	7.97	0.00
34.00	8.57	7.97	0.00
34.50	8.57	7.97	0.00
35.00	8.57	7.97	0.00
35.50	8.57	7.97	0.00
36.00	8.57	7.97	0.00
36.50	8.57	7.97	0.00
37.00	8.57	7.97	0.00
37.50	8.57	7.97	0.00
38.00	8.57	7.97	0.00
38.50	8.57	7.97	0.00
39.00	8.57	7.97	0.00
39.50	8.57	7.97	0.00
40.00	8.57	7.97	0.00
40.50	8.57	7.97	0.00
41.00	8.57	7.97	0.00
41.50	8.57	7.97	0.00
42.00	8.57	7.97	0.00
42.50	8.57	7.97	0.00
43.00	8.57	7.97	0.00
43.50	8.57	7.97	0.00
44.00	8.57	7.97	0.00
44.50	8.57	7.97	0.00
45.00	8.57	7.97	0.00
45.50	8.57	7.97	0.00
46.00	8.57	7.97	0.00
46.50	8.57	7.97	0.00
47.00	8.57	7.97	0.00
47.50	8.57	7.97	0.00
48.00	8.57	7.97	0.00

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

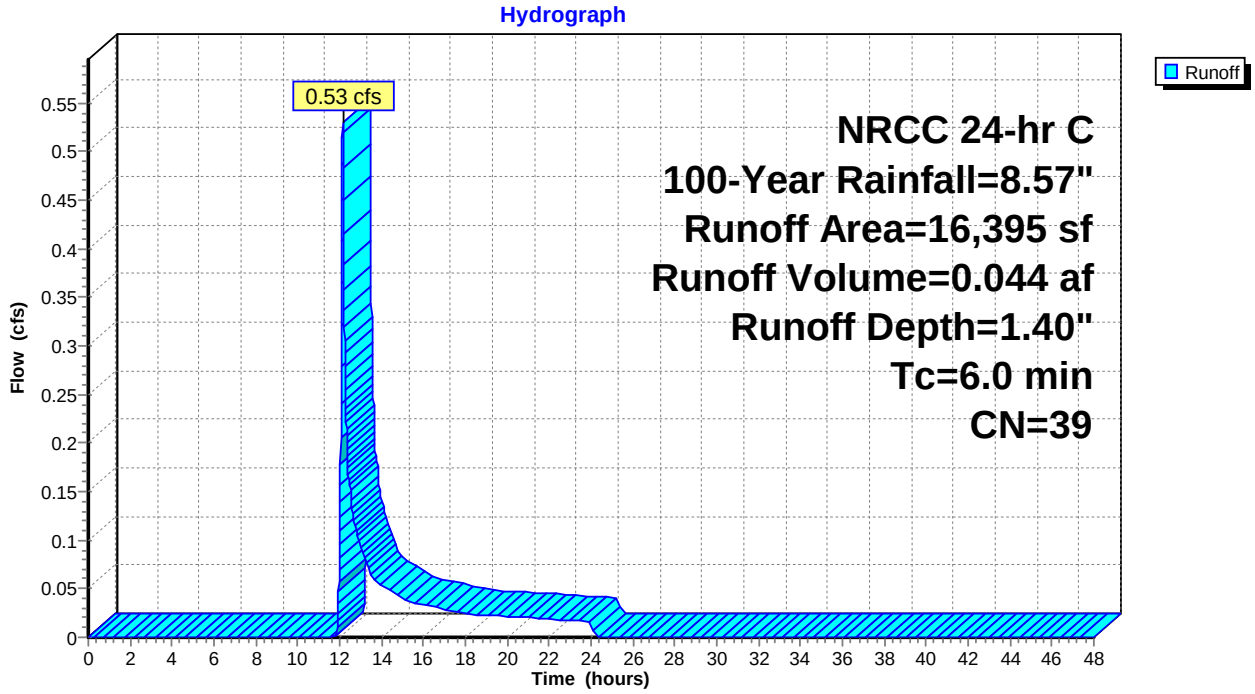
Runoff = 0.53 cfs @ 12.14 hrs, Volume= 0.044 af, Depth= 1.40"
Routed to Pond 44P : FB 1B

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.00	0.00
11.50	2.68	0.00	0.00
12.00	4.08	0.05	**0.11**
12.50	5.89	0.41	**0.16**
13.00	6.36	0.55	0.09
13.50	6.66	0.65	0.07
14.00	6.88	0.72	0.05
14.50	7.06	0.79	0.05
15.00	7.21	0.85	0.04
15.50	7.34	0.89	0.04
16.00	7.46	0.94	0.03
16.50	7.56	0.98	0.03
17.00	7.66	1.02	0.03
17.50	7.75	1.06	0.03
18.00	7.83	1.09	0.02
18.50	7.91	1.12	0.02
19.00	7.98	1.15	0.02
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
29.00	8.57	1.40	0.00
29.50	8.57	1.40	0.00
30.00	8.57	1.40	0.00
30.50	8.57	1.40	0.00
31.00	8.57	1.40	0.00
31.50	8.57	1.40	0.00
32.00	8.57	1.40	0.00
32.50	8.57	1.40	0.00
33.00	8.57	1.40	0.00
33.50	8.57	1.40	0.00
34.00	8.57	1.40	0.00
34.50	8.57	1.40	0.00
35.00	8.57	1.40	0.00
35.50	8.57	1.40	0.00
36.00	8.57	1.40	0.00
36.50	8.57	1.40	0.00
37.00	8.57	1.40	0.00
37.50	8.57	1.40	0.00
38.00	8.57	1.40	0.00
38.50	8.57	1.40	0.00
39.00	8.57	1.40	0.00
39.50	8.57	1.40	0.00
40.00	8.57	1.40	0.00
40.50	8.57	1.40	0.00
41.00	8.57	1.40	0.00
41.50	8.57	1.40	0.00
42.00	8.57	1.40	0.00
42.50	8.57	1.40	0.00
43.00	8.57	1.40	0.00
43.50	8.57	1.40	0.00
44.00	8.57	1.40	0.00
44.50	8.57	1.40	0.00
45.00	8.57	1.40	0.00
45.50	8.57	1.40	0.00
46.00	8.57	1.40	0.00
46.50	8.57	1.40	0.00
47.00	8.57	1.40	0.00
47.50	8.57	1.40	0.00
48.00	8.57	1.40	0.00

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

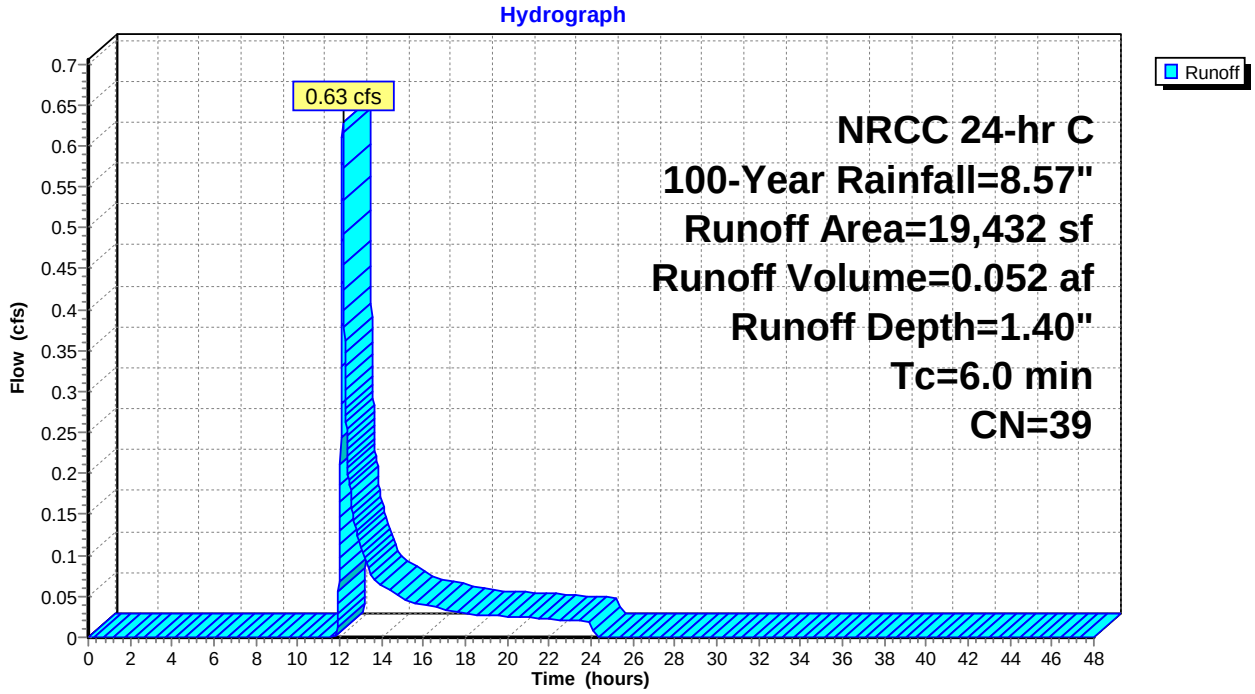
Runoff = 0.63 cfs @ 12.14 hrs, Volume= 0.052 af, Depth= 1.40"
Routed to Pond 51P : FB 1H

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.00	0.00
11.50	2.68	0.00	0.00
12.00	4.08	0.05	**0.13**
12.50	5.89	0.41	**0.18**
13.00	6.36	0.55	0.11
13.50	6.66	0.65	0.08
14.00	6.88	0.72	0.06
14.50	7.06	0.79	0.06
15.00	7.21	0.85	0.05
15.50	7.34	0.89	0.04
16.00	7.46	0.94	0.04
16.50	7.56	0.98	0.04
17.00	7.66	1.02	0.03
17.50	7.75	1.06	0.03
18.00	7.83	1.09	0.03
18.50	7.91	1.12	0.03
19.00	7.98	1.15	0.03
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
29.00	8.57	1.40	0.00
29.50	8.57	1.40	0.00
30.00	8.57	1.40	0.00
30.50	8.57	1.40	0.00
31.00	8.57	1.40	0.00
31.50	8.57	1.40	0.00
32.00	8.57	1.40	0.00
32.50	8.57	1.40	0.00
33.00	8.57	1.40	0.00
33.50	8.57	1.40	0.00
34.00	8.57	1.40	0.00
34.50	8.57	1.40	0.00
35.00	8.57	1.40	0.00
35.50	8.57	1.40	0.00
36.00	8.57	1.40	0.00
36.50	8.57	1.40	0.00
37.00	8.57	1.40	0.00
37.50	8.57	1.40	0.00
38.00	8.57	1.40	0.00
38.50	8.57	1.40	0.00
39.00	8.57	1.40	0.00
39.50	8.57	1.40	0.00
40.00	8.57	1.40	0.00
40.50	8.57	1.40	0.00
41.00	8.57	1.40	0.00
41.50	8.57	1.40	0.00
42.00	8.57	1.40	0.00
42.50	8.57	1.40	0.00
43.00	8.57	1.40	0.00
43.50	8.57	1.40	0.00
44.00	8.57	1.40	0.00
44.50	8.57	1.40	0.00
45.00	8.57	1.40	0.00
45.50	8.57	1.40	0.00
46.00	8.57	1.40	0.00
46.50	8.57	1.40	0.00
47.00	8.57	1.40	0.00
47.50	8.57	1.40	0.00
48.00	8.57	1.40	0.00

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Summary for Subcatchment 58S: PDA1-B-IB

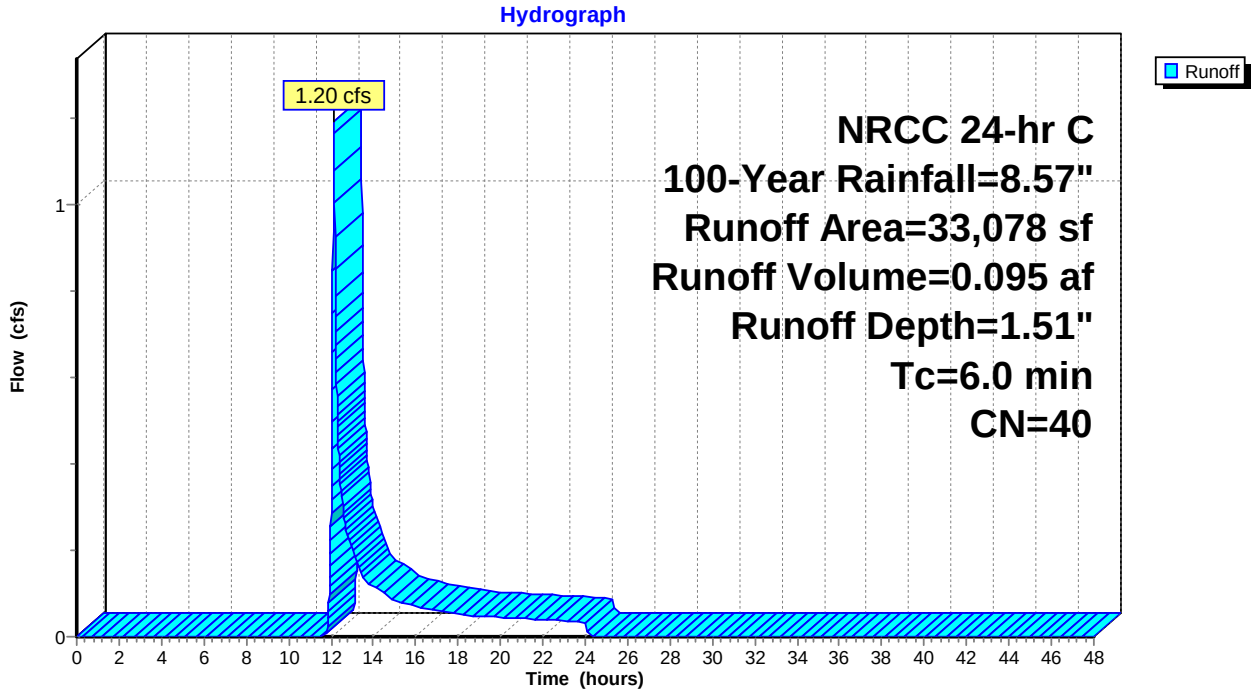
Runoff = 1.20 cfs @ 12.14 hrs, Volume= 0.095 af, Depth= 1.51"
Routed to Pond 45P : INFIL 1B

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



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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				

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Summary for Subcatchment 59S: PDA-1F

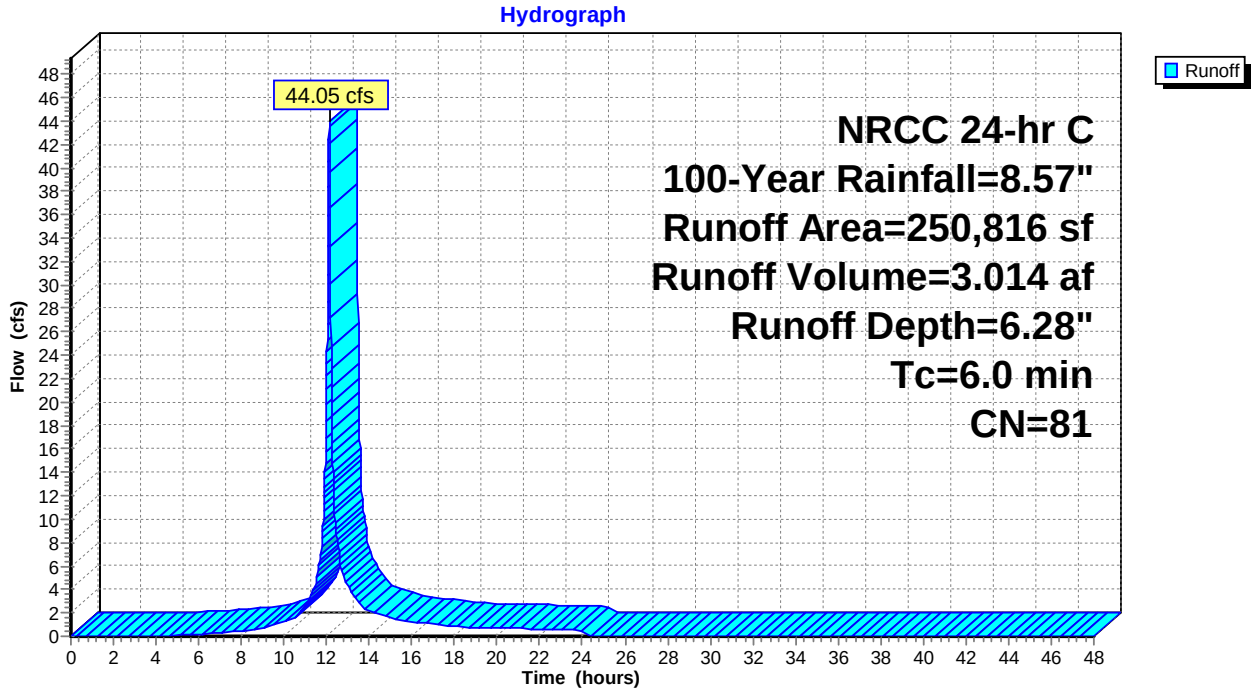
Runoff = 44.05 cfs @ 12.13 hrs, Volume= 3.014 af, Depth= 6.28"
Routed to Pond 26P : Bioretention 1F

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



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Hydrograph for Subcatchment 59S: PDA-1F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.03
5.00	0.59	0.01	0.07
5.50	0.66	0.01	0.11
6.00	0.74	0.03	0.16
6.50	0.82	0.04	0.23
7.00	0.91	0.07	0.30
7.50	1.01	0.10	0.39
8.00	1.11	0.14	0.49
8.50	1.23	0.19	0.59
9.00	1.36	0.24	0.71
9.50	1.51	0.32	0.96
10.00	1.69	0.42	1.26
10.50	1.91	0.55	1.60
11.00	2.21	0.74	2.60
11.50	2.68	1.07	4.53
12.00	4.08	2.19	**22.32**
12.50	5.89	3.78	**8.09**
13.00	6.36	4.21	4.32
13.50	6.66	4.49	2.81
14.00	6.88	4.69	2.21
14.50	7.06	4.86	1.87
15.00	7.21	5.00	1.52
15.50	7.34	5.12	1.35
16.00	7.46	5.23	1.25
16.50	7.56	5.33	1.15
17.00	7.66	5.43	1.05
17.50	7.75	5.51	0.95
18.00	7.83	5.59	0.85
18.50	7.91	5.66	0.80
19.00	7.98	5.72	0.78
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
29.00	8.57	6.28	0.00
29.50	8.57	6.28	0.00
30.00	8.57	6.28	0.00
30.50	8.57	6.28	0.00
31.00	8.57	6.28	0.00
31.50	8.57	6.28	0.00
32.00	8.57	6.28	0.00
32.50	8.57	6.28	0.00
33.00	8.57	6.28	0.00
33.50	8.57	6.28	0.00
34.00	8.57	6.28	0.00
34.50	8.57	6.28	0.00
35.00	8.57	6.28	0.00
35.50	8.57	6.28	0.00
36.00	8.57	6.28	0.00
36.50	8.57	6.28	0.00
37.00	8.57	6.28	0.00
37.50	8.57	6.28	0.00
38.00	8.57	6.28	0.00
38.50	8.57	6.28	0.00
39.00	8.57	6.28	0.00
39.50	8.57	6.28	0.00
40.00	8.57	6.28	0.00
40.50	8.57	6.28	0.00
41.00	8.57	6.28	0.00
41.50	8.57	6.28	0.00
42.00	8.57	6.28	0.00
42.50	8.57	6.28	0.00
43.00	8.57	6.28	0.00
43.50	8.57	6.28	0.00
44.00	8.57	6.28	0.00
44.50	8.57	6.28	0.00
45.00	8.57	6.28	0.00
45.50	8.57	6.28	0.00
46.00	8.57	6.28	0.00
46.50	8.57	6.28	0.00
47.00	8.57	6.28	0.00
47.50	8.57	6.28	0.00
48.00	8.57	6.28	0.00

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

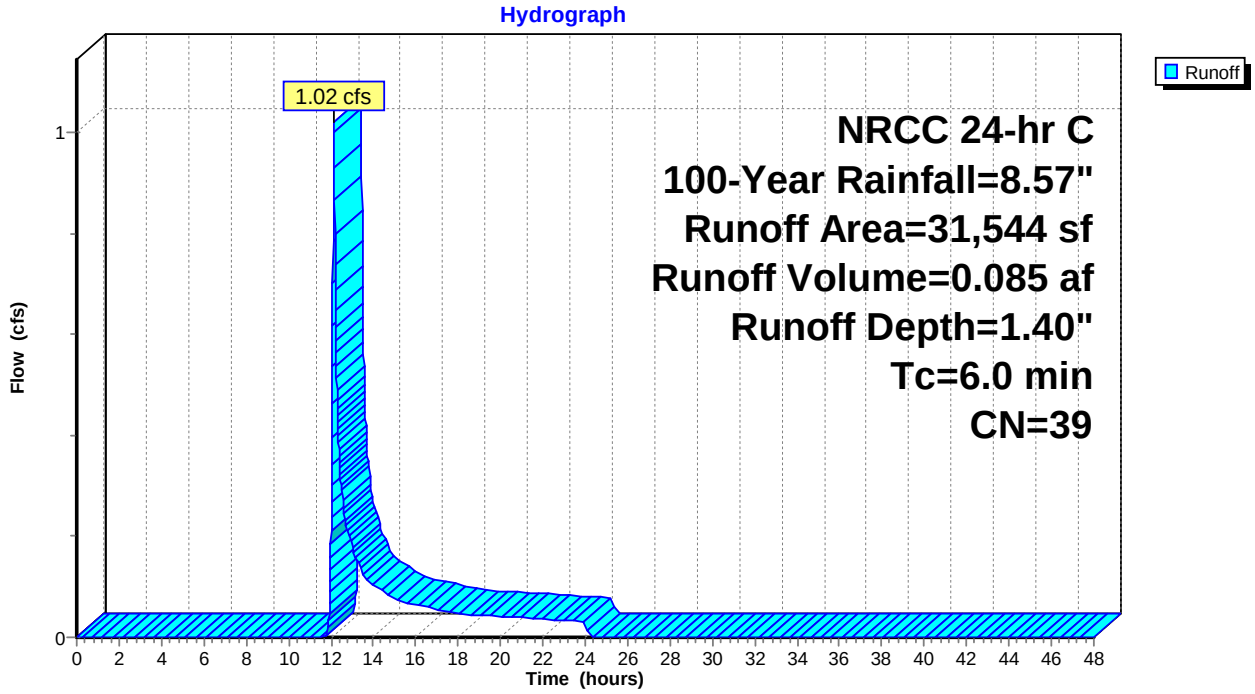
Runoff = 1.02 cfs @ 12.14 hrs, Volume= 0.085 af, Depth= 1.40"
Routed to Pond 31P : Bioretention i

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



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

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.05	0.00	0.00
1.00	0.10	0.00	0.00
1.50	0.15	0.00	0.00
2.00	0.21	0.00	0.00
2.50	0.27	0.00	0.00
3.00	0.33	0.00	0.00
3.50	0.39	0.00	0.00
4.00	0.45	0.00	0.00
4.50	0.52	0.00	0.00
5.00	0.59	0.00	0.00
5.50	0.66	0.00	0.00
6.00	0.74	0.00	0.00
6.50	0.82	0.00	0.00
7.00	0.91	0.00	0.00
7.50	1.01	0.00	0.00
8.00	1.11	0.00	0.00
8.50	1.23	0.00	0.00
9.00	1.36	0.00	0.00
9.50	1.51	0.00	0.00
10.00	1.69	0.00	0.00
10.50	1.91	0.00	0.00
11.00	2.21	0.00	0.00
11.50	2.68	0.00	0.00
12.00	4.08	0.05	**0.21**
12.50	5.89	0.41	**0.30**
13.00	6.36	0.55	0.18
13.50	6.66	0.65	0.13
14.00	6.88	0.72	0.10
14.50	7.06	0.79	0.09
15.00	7.21	0.85	0.08
15.50	7.34	0.89	0.07
16.00	7.46	0.94	0.06
16.50	7.56	0.98	0.06
17.00	7.66	1.02	0.06
17.50	7.75	1.06	0.05
18.00	7.83	1.09	0.05
18.50	7.91	1.12	0.04
19.00	7.98	1.15	0.04
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
29.00	8.57	1.40	0.00
29.50	8.57	1.40	0.00
30.00	8.57	1.40	0.00
30.50	8.57	1.40	0.00
31.00	8.57	1.40	0.00
31.50	8.57	1.40	0.00
32.00	8.57	1.40	0.00
32.50	8.57	1.40	0.00
33.00	8.57	1.40	0.00
33.50	8.57	1.40	0.00
34.00	8.57	1.40	0.00
34.50	8.57	1.40	0.00
35.00	8.57	1.40	0.00
35.50	8.57	1.40	0.00
36.00	8.57	1.40	0.00
36.50	8.57	1.40	0.00
37.00	8.57	1.40	0.00
37.50	8.57	1.40	0.00
38.00	8.57	1.40	0.00
38.50	8.57	1.40	0.00
39.00	8.57	1.40	0.00
39.50	8.57	1.40	0.00
40.00	8.57	1.40	0.00
40.50	8.57	1.40	0.00
41.00	8.57	1.40	0.00
41.50	8.57	1.40	0.00
42.00	8.57	1.40	0.00
42.50	8.57	1.40	0.00
43.00	8.57	1.40	0.00
43.50	8.57	1.40	0.00
44.00	8.57	1.40	0.00
44.50	8.57	1.40	0.00
45.00	8.57	1.40	0.00
45.50	8.57	1.40	0.00
46.00	8.57	1.40	0.00
46.50	8.57	1.40	0.00
47.00	8.57	1.40	0.00
47.50	8.57	1.40	0.00
48.00	8.57	1.40	0.00

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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 = 3.64 cfs @ 12.87 hrs, Volume= 1.988 af, Atten= 89%, Lag= 44.1 min
Primary = 3.64 cfs @ 12.87 hrs, Volume= 1.988 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= 414.84' @ 12.87 hrs Surf.Area= 19,274 sf Storage= 61,596 cf

Plug-Flow detention time= 314.2 min calculated for 1.987 af (81% of inflow)
Center-of-Mass det. time= 232.9 min (1,006.7 - 773.8)

Volume	Invert	Avail.Storage	Storage Description
#1	408.66'	82,103 cf	**Custom Stage Data (Prismatic)** Listed below

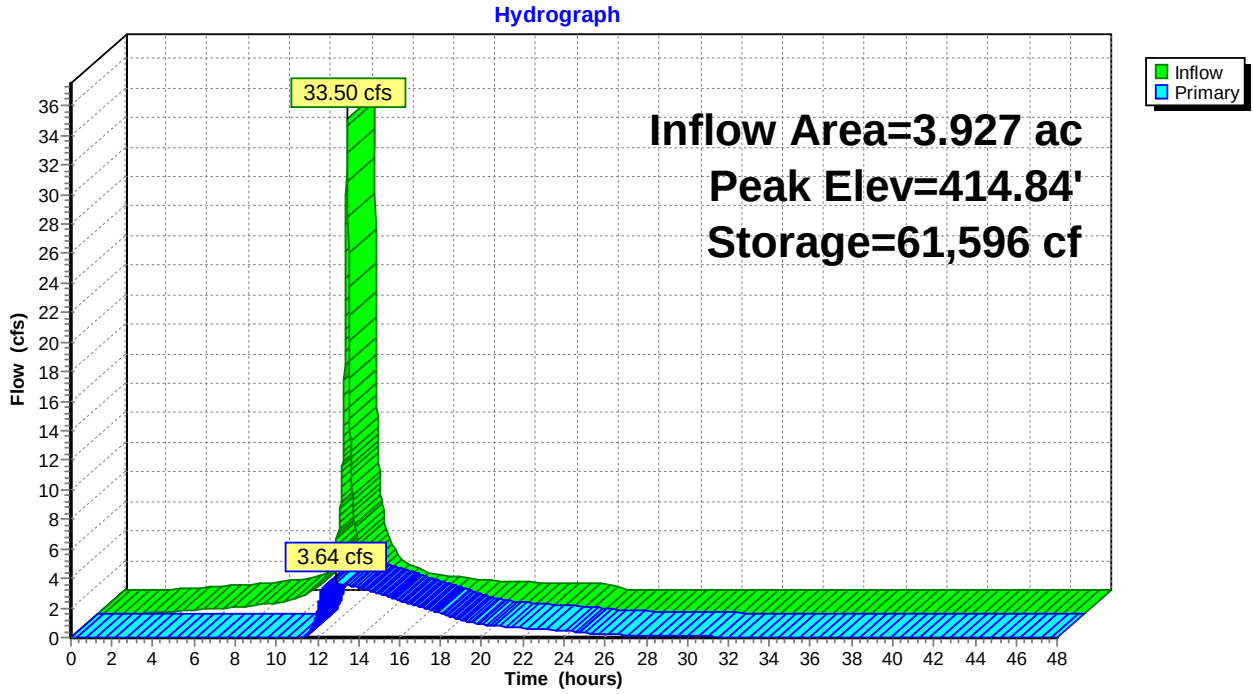
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	14,016	0.0	0	0
409.33	14,016	40.0	3,756	3,756
412.00	14,016	20.0	7,485	11,241
416.00	21,415	100.0	70,862	82,103

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	412.50'	**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=3.64 cfs @ 12.87 hrs HW=414.84' (Free Discharge)
└**1=Culvert** (Passes 3.64 cfs of 19.61 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 3.64 cfs @ 6.68 fps)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 1P: Bioretention 1D



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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**	**35,764**	**413.38**	**1.79**
13.00	**3.21**	**61,496**	**414.84**	**3.64**
14.00	1.61	56,647	414.56	3.37
15.00	1.10	50,112	414.19	2.97
16.00	0.90	43,761	413.84	2.52
17.00	0.76	38,495	413.54	2.07
18.00	0.61	34,302	413.30	1.64
19.00	0.56	31,291	413.13	1.20
20.00	0.52	29,484	413.03	0.91
21.00	0.48	28,368	412.97	0.73
22.00	0.45	27,622	412.92	0.62
23.00	0.41	27,080	412.89	0.54
24.00	0.38	26,645	412.87	0.49
25.00	0.00	25,357	412.80	0.33
26.00	0.00	24,387	412.74	0.22
27.00	0.00	23,703	412.70	0.16
28.00	0.00	23,202	412.68	0.12
29.00	0.00	22,810	412.65	0.10
30.00	0.00	22,504	412.64	0.08
31.00	0.00	22,264	412.62	0.06
32.00	0.00	22,064	412.61	0.05
33.00	0.00	21,890	412.60	0.05
34.00	0.00	21,739	412.59	0.04
35.00	0.00	21,607	412.59	0.03
36.00	0.00	21,492	412.58	0.03
37.00	0.00	21,392	412.57	0.03
38.00	0.00	21,305	412.57	0.02
39.00	0.00	21,230	412.56	0.02
40.00	0.00	21,164	412.56	0.02
41.00	0.00	21,107	412.56	0.01
42.00	0.00	21,057	412.55	0.01
43.00	0.00	21,013	412.55	0.01
44.00	0.00	20,975	412.55	0.01
45.00	0.00	20,940	412.55	0.01
46.00	0.00	20,906	412.55	0.01
47.00	0.00	20,873	412.54	0.01
48.00	0.00	20,841	412.54	0.01

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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 = 16.97 cfs @ 12.17 hrs, Volume= 1.073 af, Atten= 15%, Lag= 2.3 min
Primary = 16.97 cfs @ 12.17 hrs, Volume= 1.073 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= 414.50' @ 12.17 hrs Surf.Area= 11,289 sf Storage= 19,552 cf

Plug-Flow detention time= 157.0 min calculated for 1.073 af (77% of inflow)
Center-of-Mass det. time= 67.4 min (860.9 - 793.5)

Volume	Invert	Avail.Storage	Storage Description
#1	408.66'	31,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

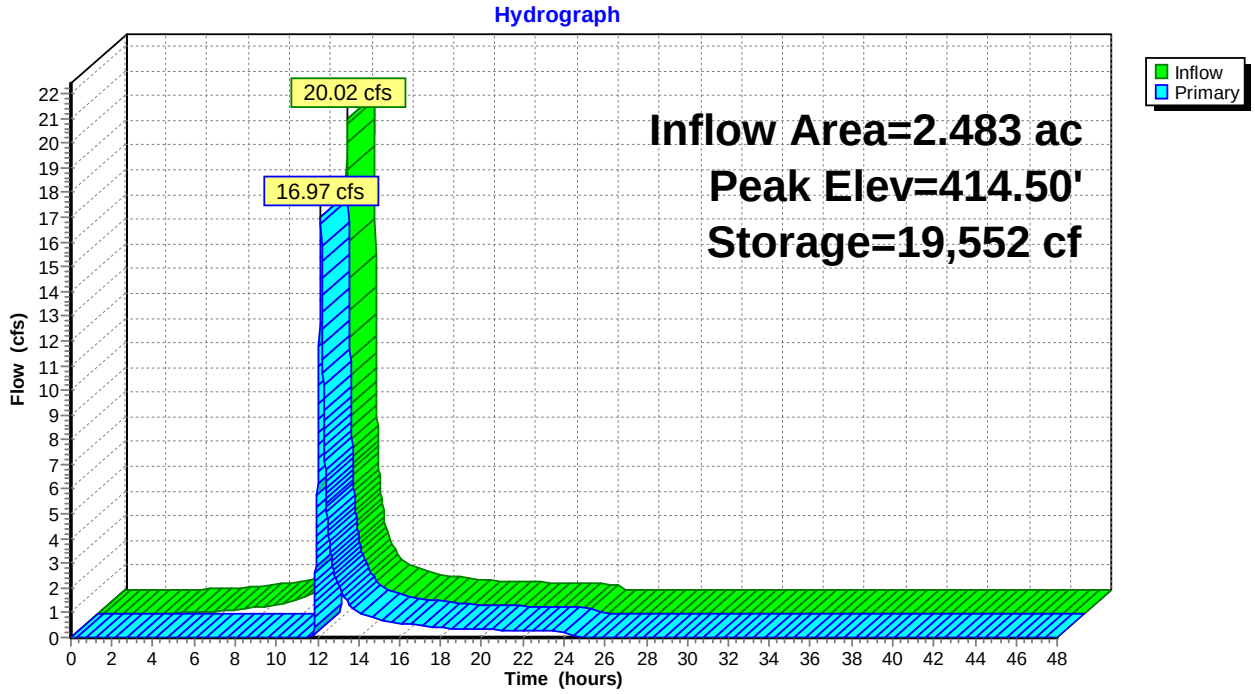
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
408.66	8,681	0.0	0	0
409.33	8,681	40.0	2,327	2,327
413.50	8,681	20.0	7,240	9,566
415.00	12,593	100.0	15,956	25,522
415.50	12,817	100.0	6,353	31,874

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	414.00'	**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=16.95 cfs @ 12.17 hrs HW=414.50' (Free Discharge)
↑—**1=Culvert** (Passes 16.95 cfs of 19.20 cfs potential flow)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 16.95 cfs @ 2.12 fps)

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Pond 3P: Bioretention 1A



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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**	**16,977**	**414.27**	**6.23**
13.00	**1.93**	**15,579**	**414.13**	**2.16**
14.00	0.98	15,028	414.08	1.03
15.00	0.67	14,872	414.06	0.72
16.00	0.55	14,746	414.05	0.58
17.00	0.46	14,666	414.04	0.49
18.00	0.37	14,587	414.04	0.40
19.00	0.34	14,544	414.03	0.35
20.00	0.32	14,524	414.03	0.33
21.00	0.30	14,504	414.03	0.30
22.00	0.28	14,484	414.02	0.28
23.00	0.25	14,464	414.02	0.26
24.00	0.23	14,444	414.02	0.24
25.00	0.00	14,238	414.00	0.01
26.00	0.00	14,233	414.00	0.00
27.00	0.00	14,233	414.00	0.00
28.00	0.00	14,233	414.00	0.00
29.00	0.00	14,233	414.00	0.00
30.00	0.00	14,233	414.00	0.00
31.00	0.00	14,233	414.00	0.00
32.00	0.00	14,233	414.00	0.00
33.00	0.00	14,233	414.00	0.00
34.00	0.00	14,233	414.00	0.00
35.00	0.00	14,233	414.00	0.00
36.00	0.00	14,233	414.00	0.00
37.00	0.00	14,233	414.00	0.00
38.00	0.00	14,233	414.00	0.00
39.00	0.00	14,233	414.00	0.00
40.00	0.00	14,233	414.00	0.00
41.00	0.00	14,233	414.00	0.00
42.00	0.00	14,233	414.00	0.00
43.00	0.00	14,233	414.00	0.00
44.00	0.00	14,233	414.00	0.00
45.00	0.00	14,233	414.00	0.00
46.00	0.00	14,233	414.00	0.00
47.00	0.00	14,233	414.00	0.00
48.00	0.00	14,233	414.00	0.00

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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)

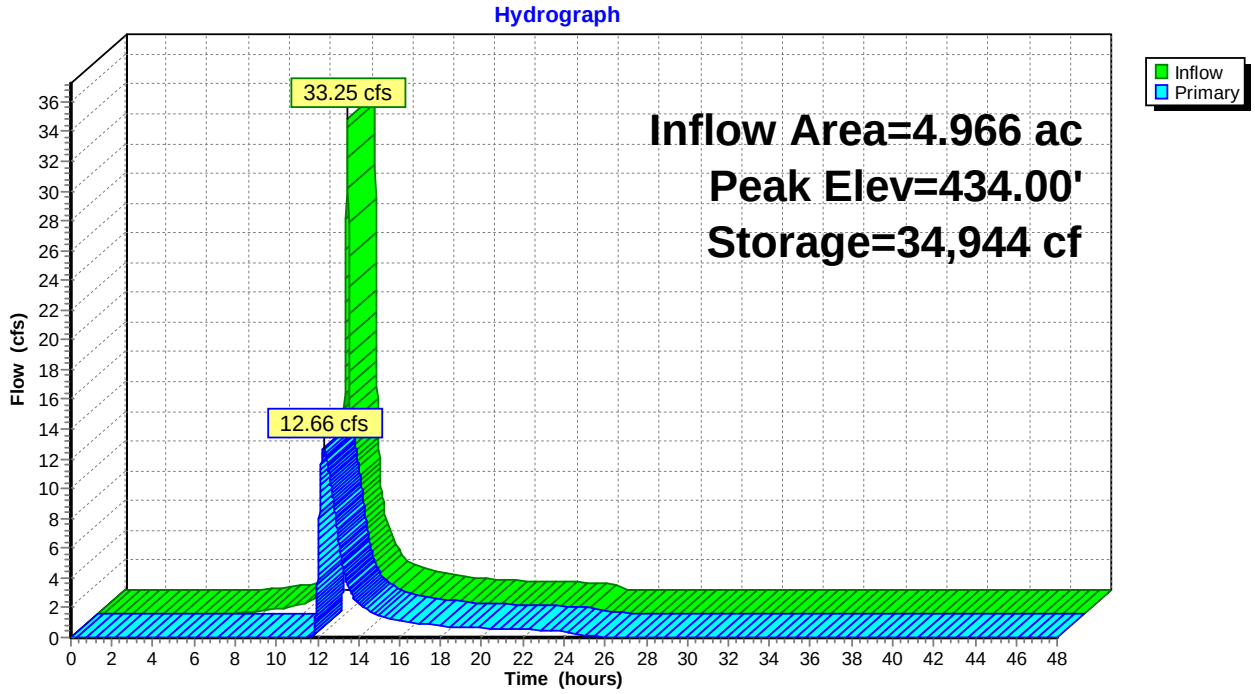
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
428.67	11,465	0.0	0	0
429.33	11,465	40.0	3,027	3,027
432.00	11,465	20.0	6,122	9,149
435.00	15,812	100.0	40,916	50,065

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)

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Pond 22P: Bioretention 5A



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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

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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)

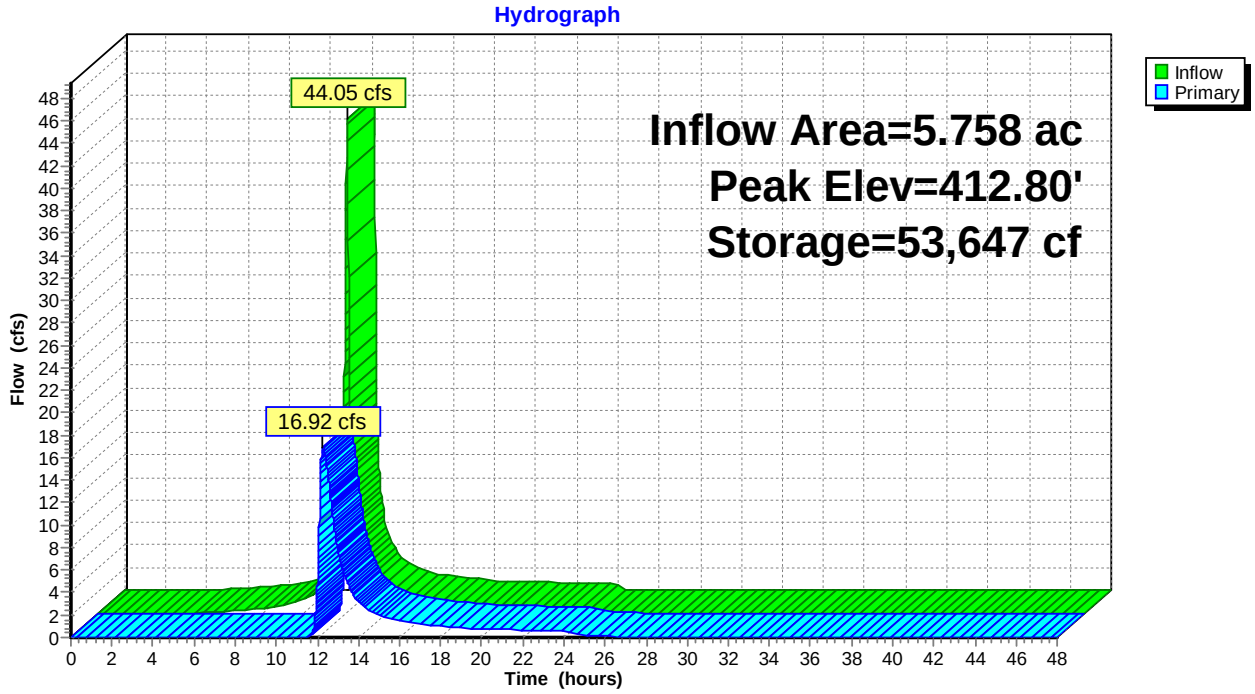
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.66	18,594	0.0	0	0
408.33	18,594	40.0	4,983	4,983
411.00	18,594	20.0	9,929	14,912
414.00	28,345	100.0	70,409	85,321

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)

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Pond 26P: Bioretention 1F



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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

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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 = 13.42 cfs @ 12.36 hrs, Volume= 3.161 af, Atten= 75%, Lag= 13.9 min
Primary = 13.42 cfs @ 12.36 hrs, Volume= 3.161 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= 420.69' @ 12.36 hrs Surf.Area= 21,763 sf Storage= 64,784 cf

Plug-Flow detention time= 147.6 min calculated for 3.160 af (86% of inflow)
Center-of-Mass det. time= 82.9 min (883.7 - 800.8)

Volume	Invert	Avail.Storage	Storage Description
#1	414.67'	94,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

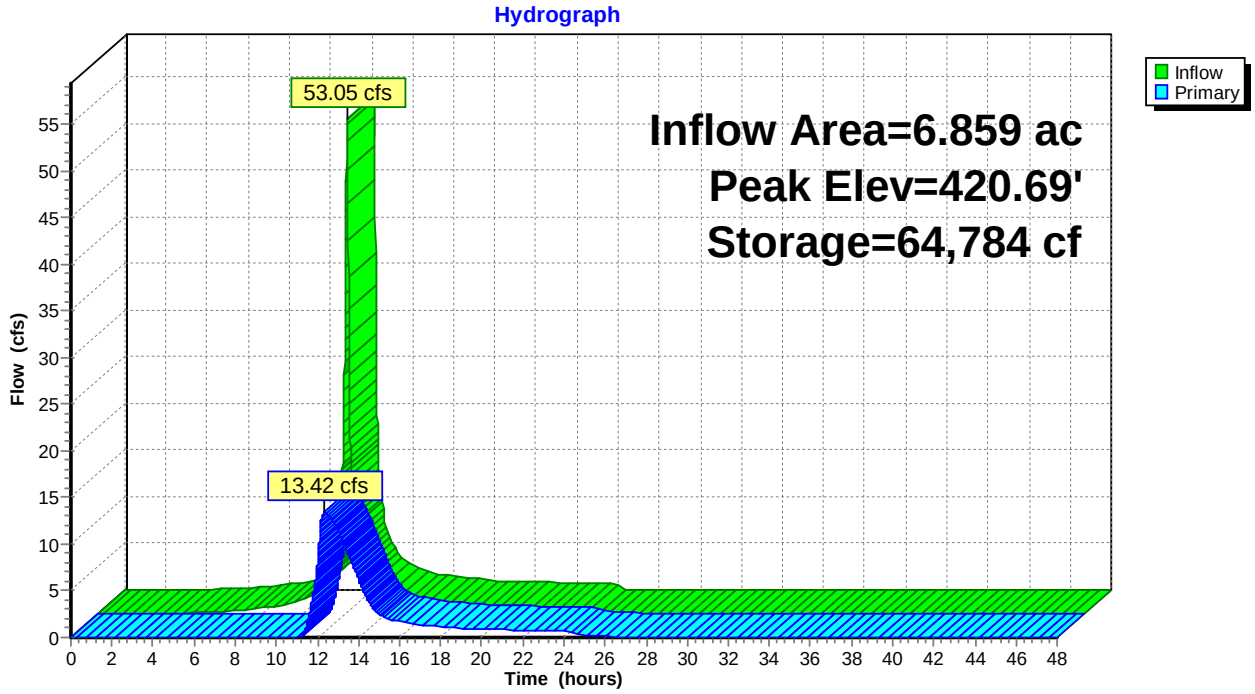
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
414.67	16,541	0.0	0	0
415.33	16,541	40.0	4,367	4,367
418.00	16,541	20.0	8,833	13,200
422.00	24,296	100.0	81,674	94,874

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	418.50'	**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=13.42 cfs @ 12.36 hrs HW=420.69' (Free Discharge)
└**1=Culvert** (Passes 13.42 cfs of 19.54 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 13.42 cfs @ 6.71 fps)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 29P: Bioretention 4B



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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**	**38,434**	**419.41**	**7.77**
13.00	**5.18**	**53,545**	**420.16**	**11.44**
14.00	2.65	34,174	419.19	6.25
15.00	1.81	27,763	418.84	2.54
16.00	1.49	26,321	418.76	1.70
17.00	1.26	25,730	418.73	1.40
18.00	1.02	25,249	418.70	1.15
19.00	0.93	24,896	418.68	0.99
20.00	0.87	24,714	418.67	0.91
21.00	0.81	24,568	418.66	0.85
22.00	0.75	24,428	418.65	0.79
23.00	0.69	24,290	418.65	0.73
24.00	0.63	24,152	418.64	0.67
25.00	0.00	22,849	418.56	0.22
26.00	0.00	22,319	418.53	0.10
27.00	0.00	22,040	418.52	0.06
28.00	0.00	21,889	418.51	0.03
29.00	0.00	21,808	418.51	0.02
30.00	0.00	21,764	418.50	0.01
31.00	0.00	21,740	418.50	0.00
32.00	0.00	21,728	418.50	0.00
33.00	0.00	21,721	418.50	0.00
34.00	0.00	21,717	418.50	0.00
35.00	0.00	21,715	418.50	0.00
36.00	0.00	21,714	418.50	0.00
37.00	0.00	21,713	418.50	0.00
38.00	0.00	21,713	418.50	0.00
39.00	0.00	21,713	418.50	0.00
40.00	0.00	21,713	418.50	0.00
41.00	0.00	21,713	418.50	0.00
42.00	0.00	21,713	418.50	0.00
43.00	0.00	21,713	418.50	0.00
44.00	0.00	21,713	418.50	0.00
45.00	0.00	21,713	418.50	0.00
46.00	0.00	21,713	418.50	0.00
47.00	0.00	21,713	418.50	0.00
48.00	0.00	21,713	418.50	0.00

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Summary for Pond 31P: Bioretention i

Inflow Area = 10.027 ac, 72.74% Impervious, Inflow Depth = 3.49" for 100-Year event
Inflow = 38.65 cfs @ 12.14 hrs, Volume= 2.914 af
Outflow = 7.84 cfs @ 12.45 hrs, Volume= 2.239 af, Atten= 80%, Lag= 18.4 min
Primary = 7.84 cfs @ 12.45 hrs, Volume= 2.239 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= 412.86' @ 12.45 hrs Surf.Area= 26,188 sf Storage= 64,020 cf

Plug-Flow detention time= 245.8 min calculated for 2.238 af (77% of inflow)
Center-of-Mass det. time= 152.5 min (924.5 - 772.1)

Volume	Invert	Avail.Storage	Storage Description
#1	407.83'	93,189 cf	**Custom Stage Data (Prismatic)** Listed below

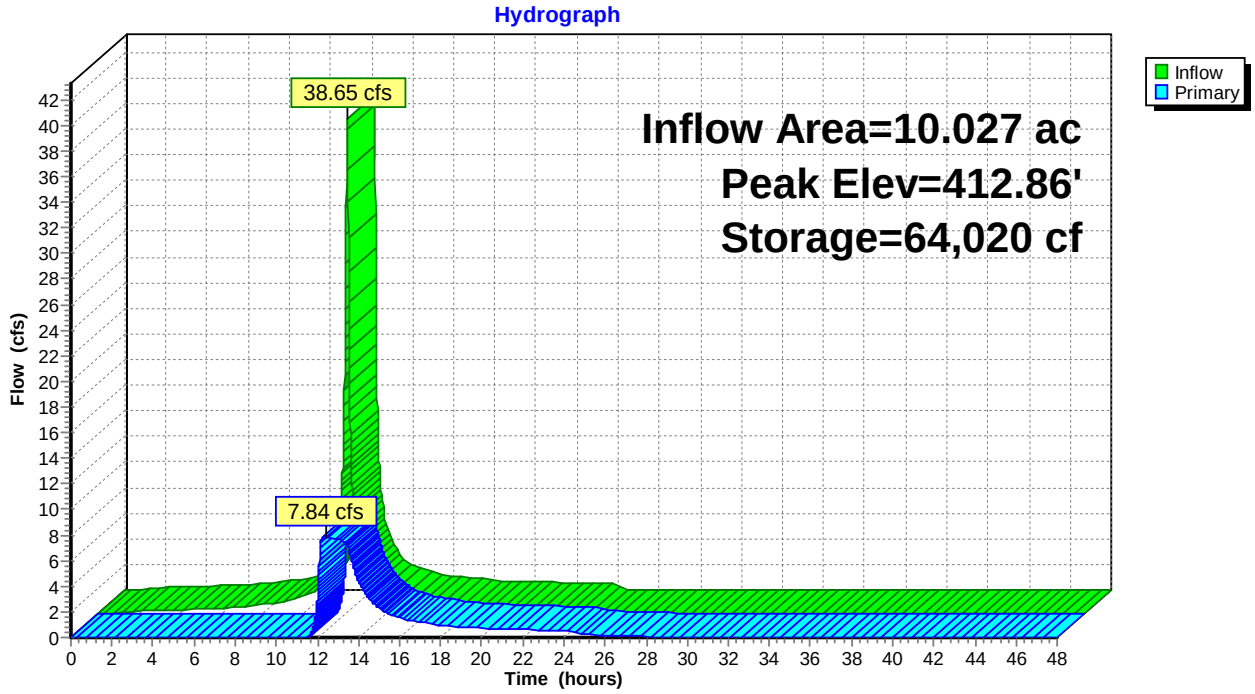
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	22,680	0.0	0	0
408.33	22,680	40.0	4,536	4,536
411.00	22,680	20.0	12,111	16,647
414.00	28,348	100.0	76,542	93,189

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	411.50'	**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=7.84 cfs @ 12.45 hrs HW=412.86' (Free Discharge)
└**1=Culvert** (Barrel Controls 7.84 cfs @ 9.98 fps)
  ├**2=Orifice/Grate** (Passes 7.84 cfs of 12.43 cfs potential flow)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 31P: Bioretention i



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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	0.08	69	407.84	0.00
2.00	0.19	577	407.89	0.00
3.00	0.25	1,371	407.98	0.00
4.00	0.29	2,345	408.09	0.00
5.00	0.36	3,508	408.22	0.00
6.00	0.42	4,902	408.41	0.00
7.00	0.56	6,643	408.79	0.00
8.00	0.73	8,955	409.30	0.00
9.00	0.90	11,873	409.95	0.00
10.00	1.40	15,959	410.85	0.00
11.00	2.58	22,499	411.23	0.00
12.00	**18.60**	**41,448**	**411.97**	**2.95**
13.00	**3.89**	**59,222**	**412.67**	**7.66**
14.00	1.96	45,105	412.12	4.39
15.00	1.35	39,682	411.90	2.33
16.00	1.10	37,234	411.81	1.55
17.00	0.93	36,006	411.76	1.20
18.00	0.75	35,135	411.72	0.97
19.00	0.68	34,502	411.70	0.82
20.00	0.64	34,118	411.68	0.73
21.00	0.60	33,843	411.67	0.67
22.00	0.56	33,618	411.67	0.61
23.00	0.51	33,411	411.66	0.57
24.00	0.47	33,205	411.65	0.53
25.00	0.00	31,966	411.60	0.29
26.00	0.00	31,152	411.57	0.18
27.00	0.00	30,650	411.55	0.11
28.00	0.00	30,338	411.54	0.07
29.00	0.00	30,140	411.53	0.05
30.00	0.00	29,989	411.52	0.04
31.00	0.00	29,869	411.52	0.03
32.00	0.00	29,774	411.51	0.02
33.00	0.00	29,698	411.51	0.02
34.00	0.00	29,638	411.51	0.01
35.00	0.00	29,590	411.51	0.01
36.00	0.00	29,552	411.51	0.01
37.00	0.00	29,521	411.50	0.01
38.00	0.00	29,497	411.50	0.01
39.00	0.00	29,478	411.50	0.00
40.00	0.00	29,463	411.50	0.00
41.00	0.00	29,451	411.50	0.00
42.00	0.00	29,441	411.50	0.00
43.00	0.00	29,434	411.50	0.00
44.00	0.00	29,428	411.50	0.00
45.00	0.00	29,423	411.50	0.00
46.00	0.00	29,419	411.50	0.00
47.00	0.00	29,416	411.50	0.00
48.00	0.00	29,414	411.50	0.00

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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)

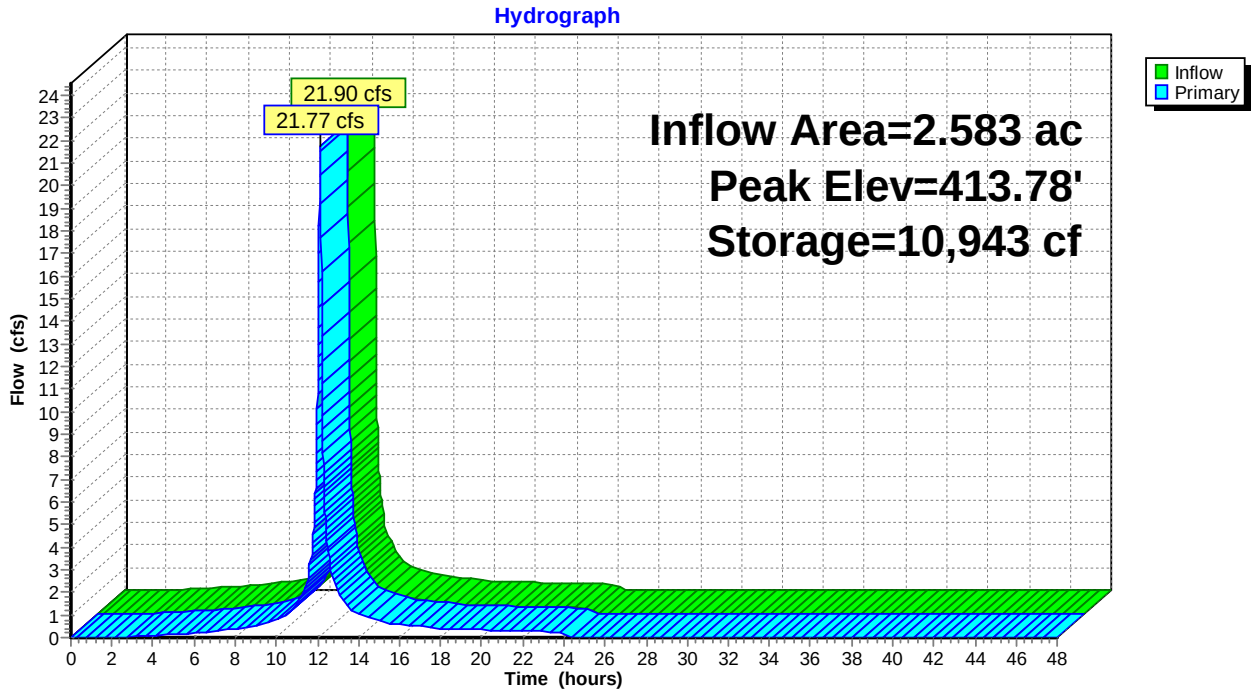
Volume	Invert	Avail.Storage	Storage Description
#1	409.00'	13,740 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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

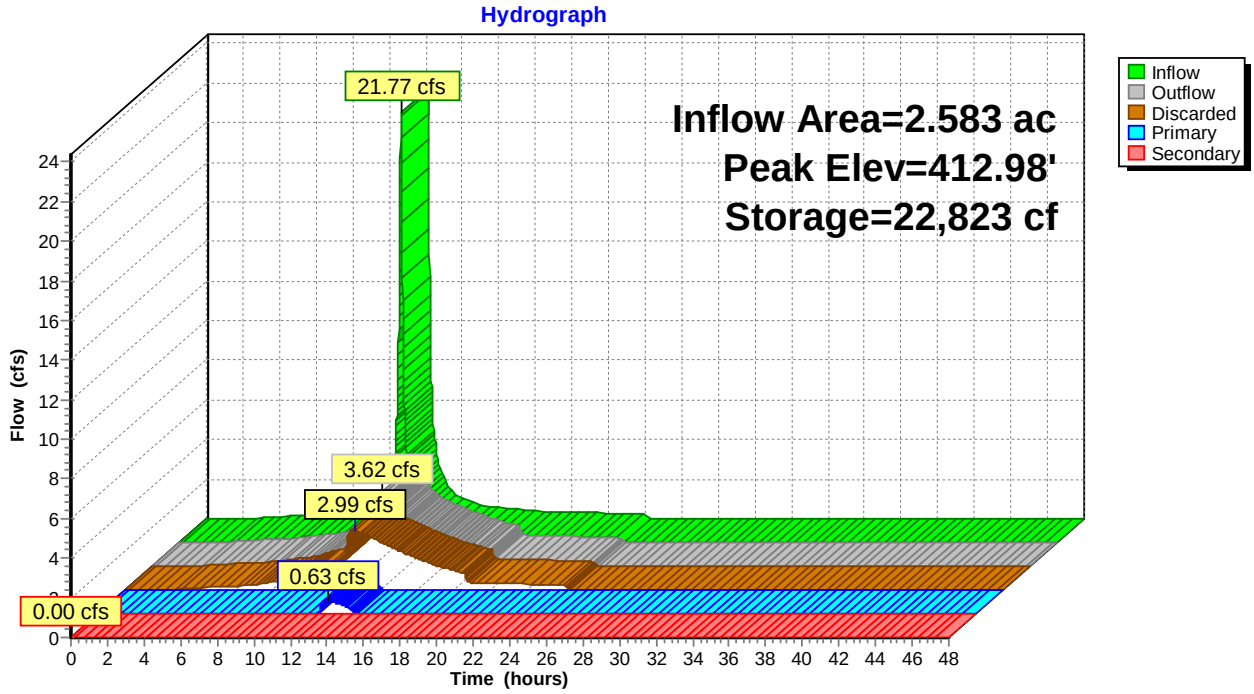
Discarded OutFlow Max=2.99 cfs @ 12.57 hrs HW=412.98' (Free Discharge)
└**3=Exfiltration** (Controls 2.99 cfs)

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)

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Pond 33P: INFIL 1C



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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

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Summary for Pond 37P: FB 1i+J

Inflow Area = 9.303 ac, 78.40% Impervious, Inflow Depth = 7.30" for 100-Year event
Inflow = 75.99 cfs @ 12.13 hrs, Volume= 5.659 af
Outflow = 75.26 cfs @ 12.14 hrs, Volume= 5.659 af, Atten= 1%, Lag= 0.6 min
Primary = 37.63 cfs @ 12.14 hrs, Volume= 2.829 af
Routed to Pond 31P : Bioretention i
Secondary = 37.63 cfs @ 12.14 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' @ 12.14 hrs Surf.Area= 10,413 sf Storage= 30,888 cf (4,082 cf above start)

Plug-Flow detention time= 105.3 min calculated for 5.043 af (89% of inflow)
Center-of-Mass det. time= 2.2 min (767.6 - 765.5)

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

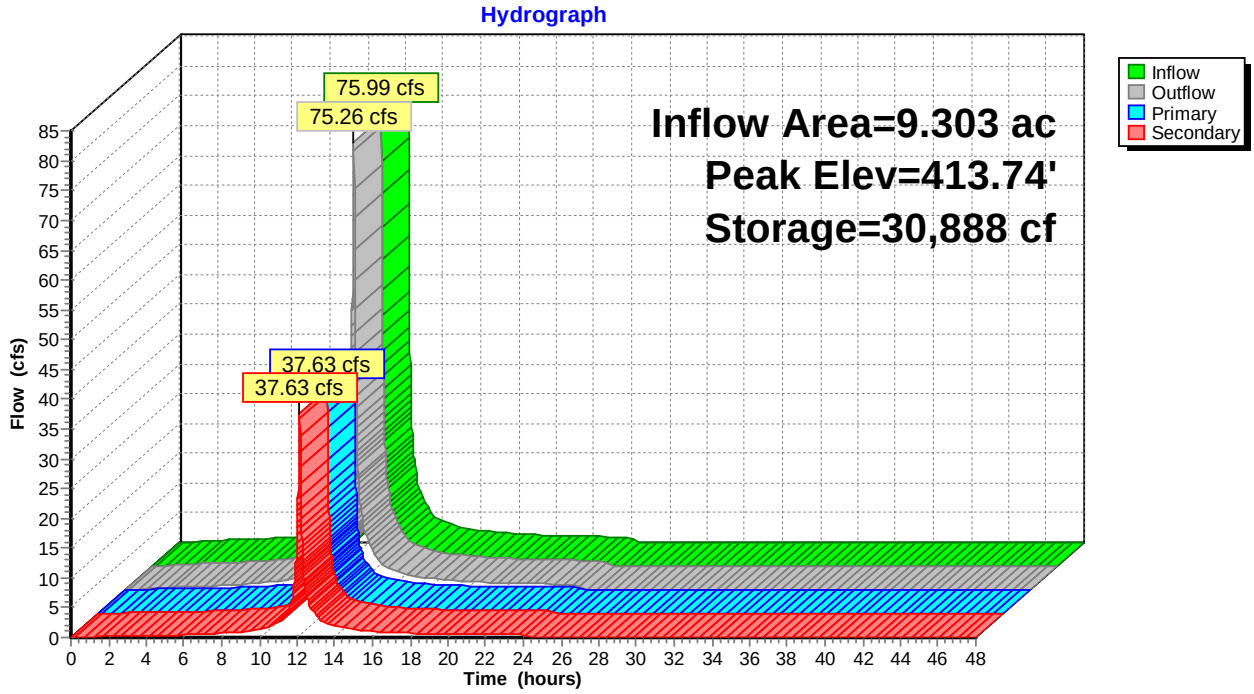
Device	Routing	Invert	Outlet Devices
#1	Primary	413.25'	**40.0' long x 21.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	413.25'	**40.0' long x 21.0' breadth Broad-Crested Rectangular 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=37.56 cfs @ 12.14 hrs HW=413.74' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 37.56 cfs @ 1.90 fps)

Secondary OutFlow Max=37.56 cfs @ 12.14 hrs HW=413.74' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 37.56 cfs @ 1.90 fps)

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Pond 37P: FB 1i+J



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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	0.18	26,842	413.25	0.16	0.08	0.08
2.00	0.39	26,890	413.26	0.38	0.19	0.19
3.00	0.50	26,916	413.26	0.50	0.25	0.25
4.00	0.59	26,936	413.27	0.58	0.29	0.29
5.00	0.72	26,964	413.27	0.71	0.36	0.36
6.00	0.84	26,992	413.27	0.84	0.42	0.42
7.00	1.13	27,054	413.28	1.12	0.56	0.56
8.00	1.46	27,092	413.28	1.45	0.73	0.73
9.00	1.81	27,132	413.29	1.80	0.90	0.90
10.00	2.84	27,249	413.30	2.81	1.40	1.40
11.00	5.26	27,485	413.33	5.16	2.58	2.58
12.00	**39.66**	**29,345**	**413.56**	**36.78**	**18.39**	**18.39**
13.00	**7.23**	**27,679**	**413.36**	**7.42**	**3.71**	**3.71**
14.00	3.68	27,355	413.32	3.72	1.86	1.86
15.00	2.51	27,220	413.30	2.56	1.28	1.28
16.00	2.07	27,165	413.29	2.08	1.04	1.04
17.00	1.73	27,126	413.29	1.75	0.87	0.87
18.00	1.40	27,088	413.28	1.41	0.71	0.71
19.00	1.28	27,073	413.28	1.28	0.64	0.64
20.00	1.20	27,064	413.28	1.20	0.60	0.60
21.00	1.11	27,054	413.28	1.12	0.56	0.56
22.00	1.03	27,037	413.28	1.04	0.52	0.52
23.00	0.95	27,018	413.28	0.96	0.48	0.48
24.00	0.87	27,000	413.27	0.87	0.44	0.44
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

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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

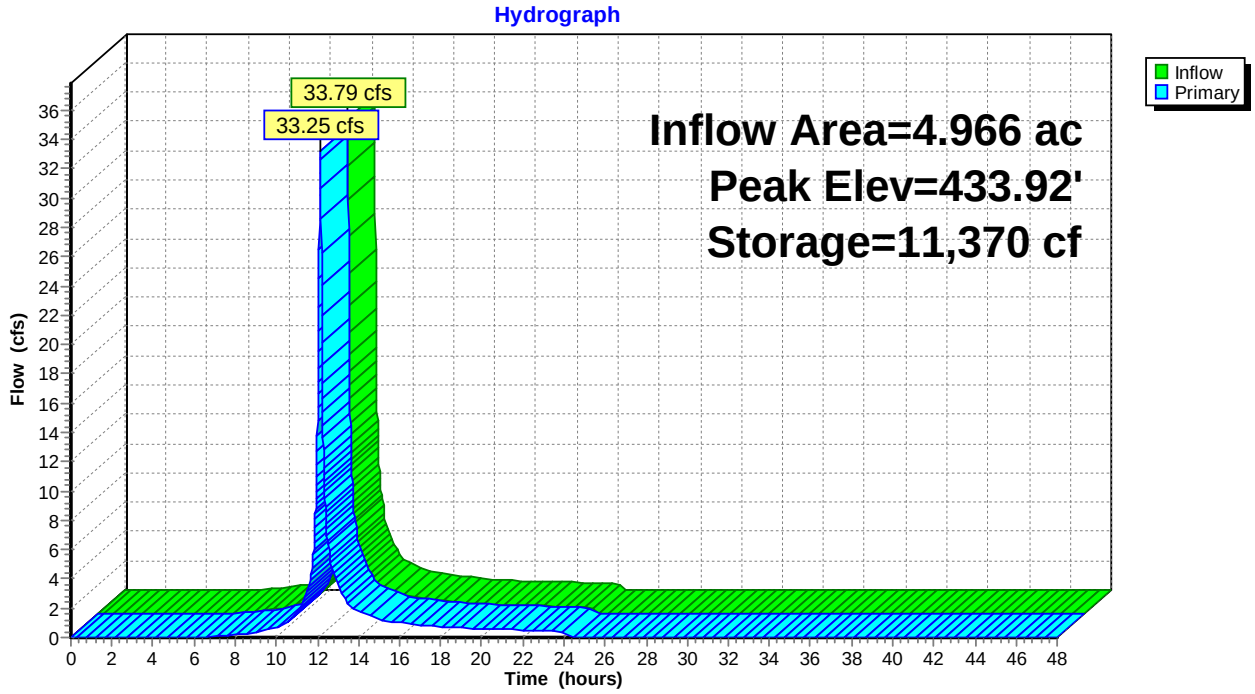
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
431.00	2,415	0	0
435.00	5,362	15,554	15,554

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)

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Pond 39P: FB 5A



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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

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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)

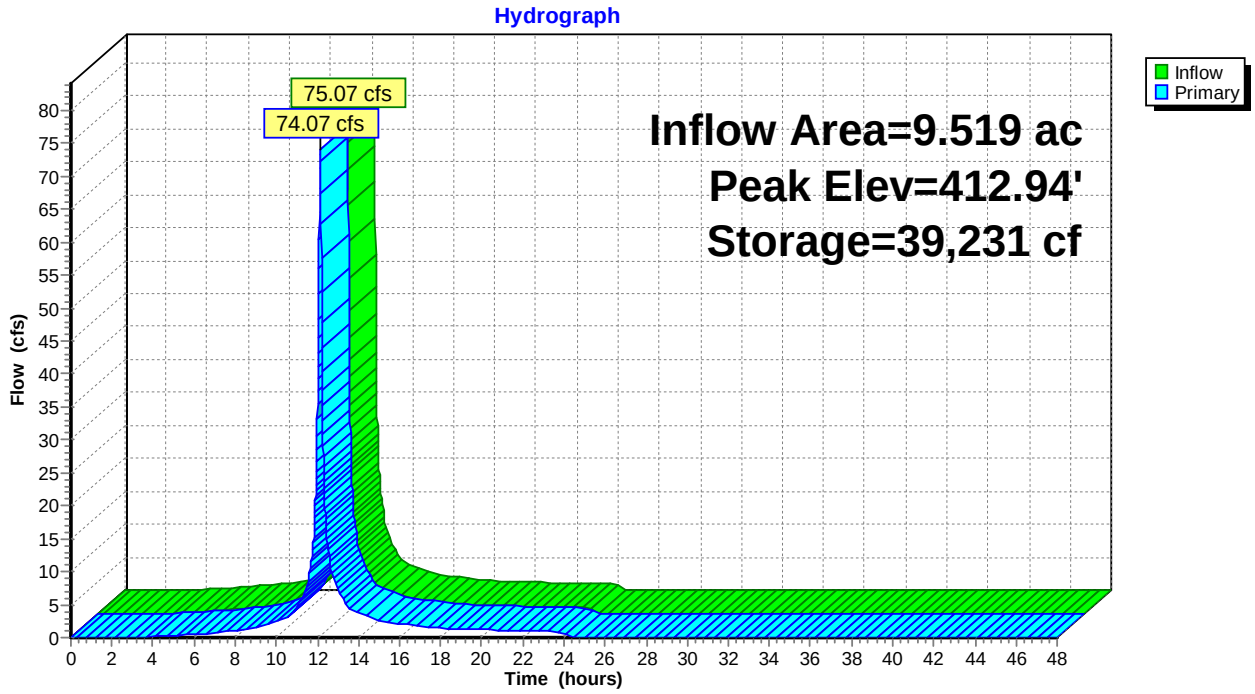
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	47,613 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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

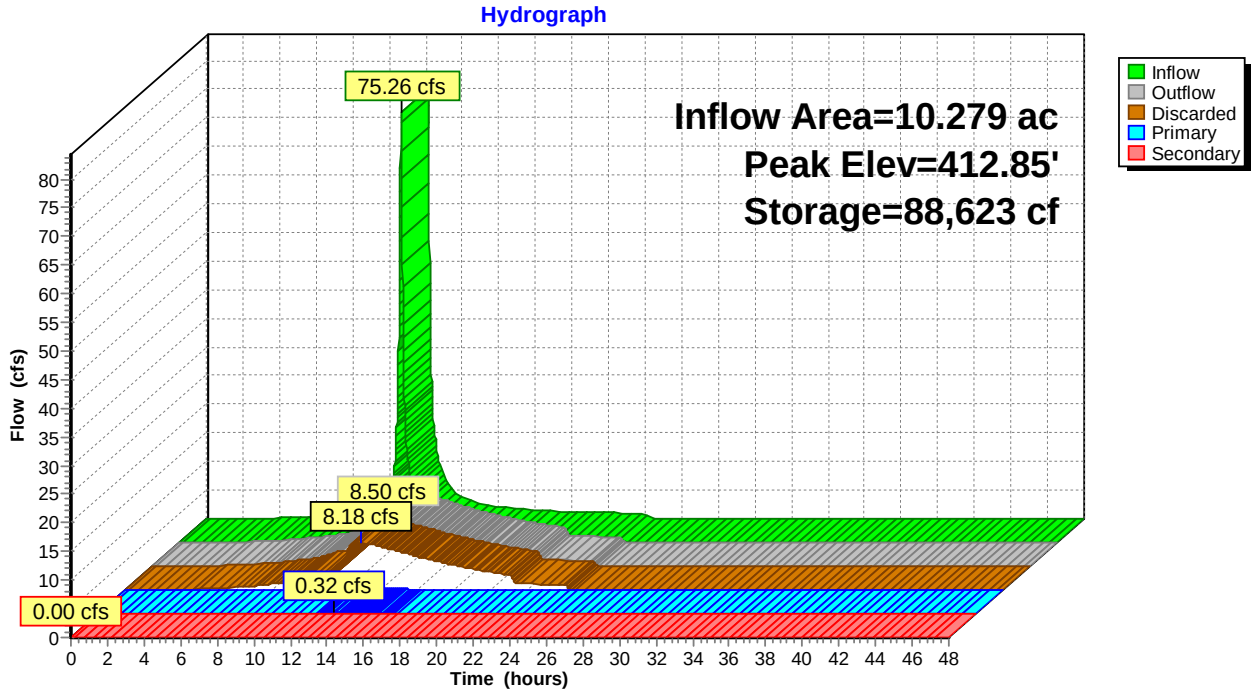
Discarded OutFlow Max=8.18 cfs @ 12.89 hrs HW=412.85' (Free Discharge)
└**3=Exfiltration** (Controls 8.18 cfs)

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)

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Pond 45P: INFIL 1B



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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

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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

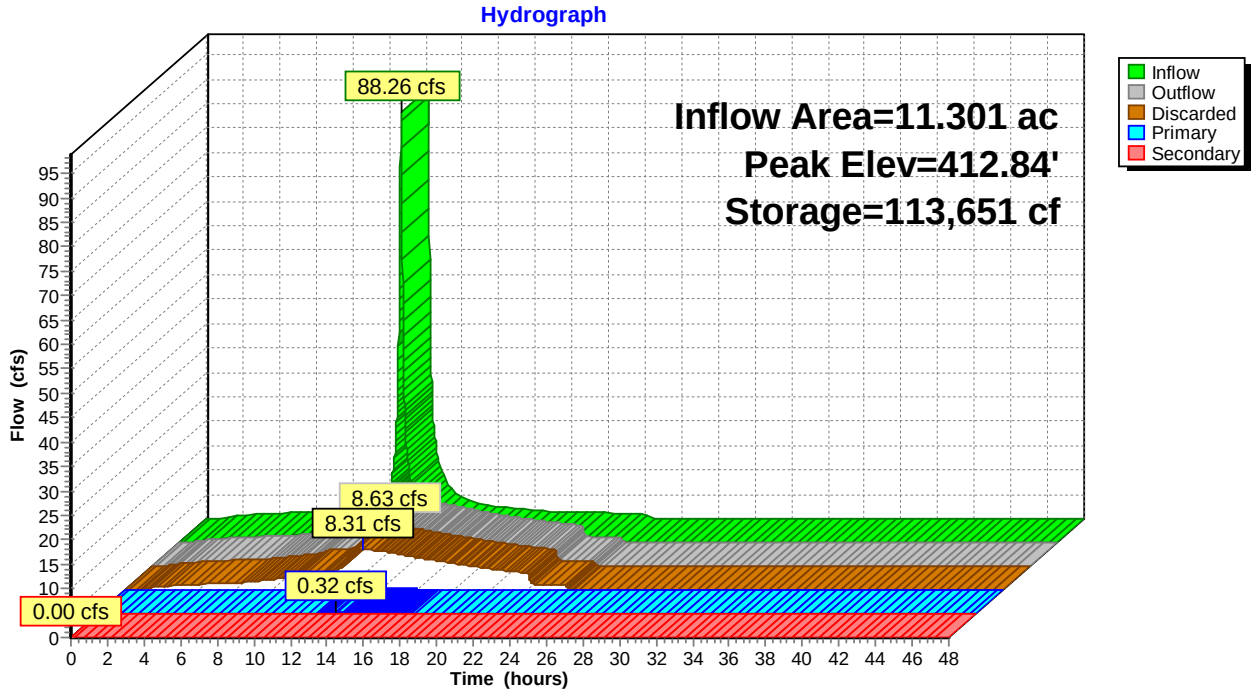
Discarded OutFlow Max=8.31 cfs @ 13.01 hrs HW=412.84' (Free Discharge)
└**3=Exfiltration** (Controls 8.31 cfs)

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)

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Pond 47P: INFIL 1H



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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

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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)

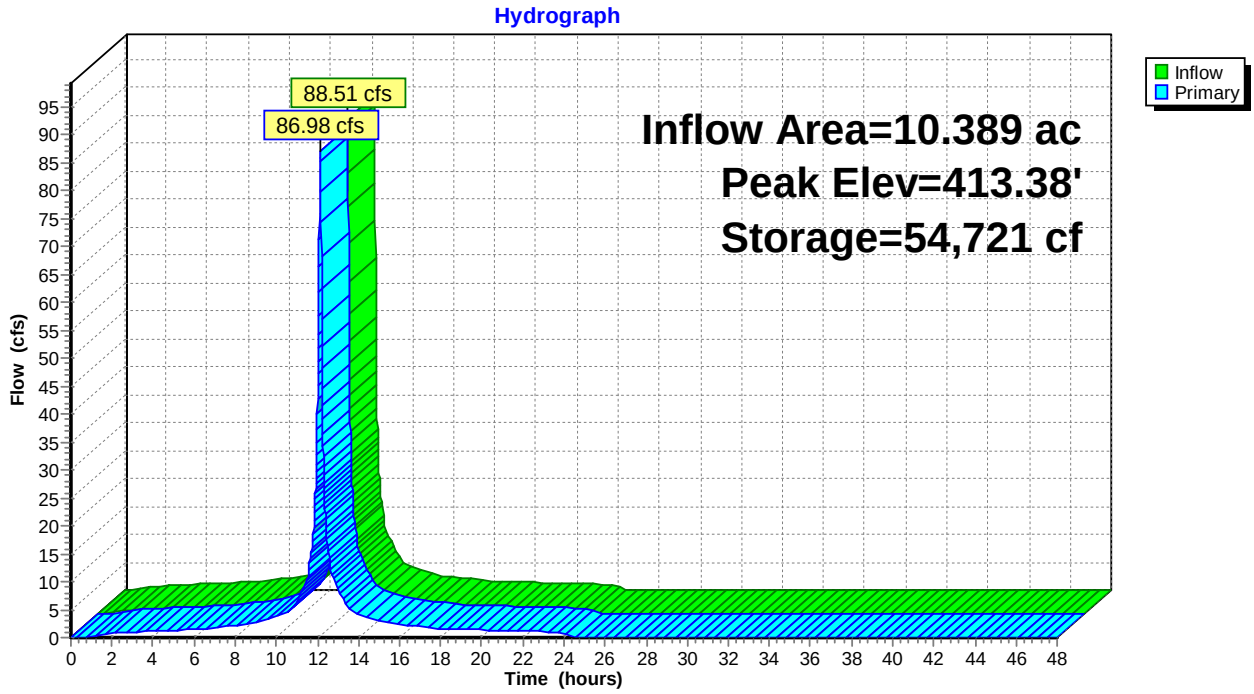
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,056 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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Summary for Pond 53P: Bioretention J basin

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 46.47" for 100-Year event
Inflow = 40.50 cfs @ 12.14 hrs, Volume= 3.021 af
Outflow = 7.54 cfs @ 12.50 hrs, Volume= 2.299 af, Atten= 81%, Lag= 21.9 min
Primary = 7.54 cfs @ 12.50 hrs, Volume= 2.299 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= 412.84' @ 12.50 hrs Surf.Area= 29,927 sf Storage= 68,127 cf

Plug-Flow detention time= 262.7 min calculated for 2.298 af (76% of inflow)
Center-of-Mass det. time= 168.1 min (942.2 - 774.2)

Volume	Invert	Avail.Storage	Storage Description
#1	407.83'	72,373 cf	**Custom Stage Data (Prismatic)** Listed below

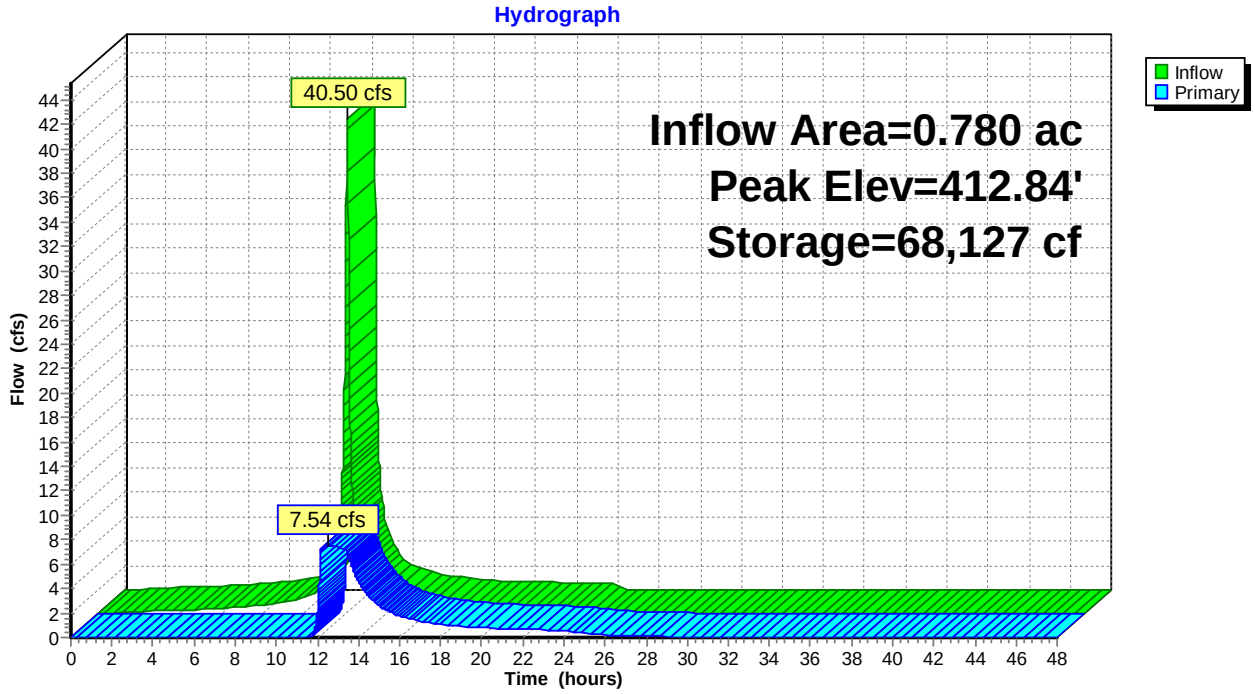
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
407.83	24,200	0.0	0	0
408.33	24,200	40.0	4,840	4,840
411.00	24,200	20.0	12,923	17,763
413.00	30,410	100.0	54,610	72,373

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	411.50'	**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=7.54 cfs @ 12.50 hrs HW=412.84' (Free Discharge)
└**1=Culvert** (Barrel Controls 7.54 cfs @ 9.60 fps)
  └**2=Orifice/Grate** (Passes 7.54 cfs of 10.16 cfs potential flow)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 53P: Bioretention J basin



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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	0.08	69	407.84	0.00
2.00	0.19	577	407.89	0.00
3.00	0.25	1,371	407.97	0.00
4.00	0.29	2,345	408.07	0.00
5.00	0.36	3,508	408.19	0.00
6.00	0.42	4,902	408.34	0.00
7.00	0.56	6,643	408.70	0.00
8.00	0.73	8,955	409.18	0.00
9.00	0.90	11,873	409.78	0.00
10.00	1.40	15,959	410.63	0.00
11.00	2.62	22,542	411.18	0.00
12.00	**19.56**	**42,936**	**411.92**	**2.06**
13.00	**4.07**	**64,312**	**412.70**	**7.41**
14.00	2.05	51,108	412.22	4.59
15.00	1.41	44,943	412.00	2.62
16.00	1.15	41,794	411.88	1.76
17.00	0.97	40,099	411.82	1.35
18.00	0.78	38,915	411.77	1.08
19.00	0.71	38,043	411.74	0.90
20.00	0.67	37,506	411.72	0.79
21.00	0.62	37,127	411.71	0.72
22.00	0.58	36,808	411.70	0.66
23.00	0.53	36,517	411.69	0.61
24.00	0.49	36,240	411.68	0.56
25.00	0.00	34,866	411.63	0.34
26.00	0.00	33,901	411.59	0.21
27.00	0.00	33,276	411.57	0.14
28.00	0.00	32,843	411.55	0.10
29.00	0.00	32,544	411.54	0.07
30.00	0.00	32,336	411.53	0.05
31.00	0.00	32,186	411.53	0.04
32.00	0.00	32,061	411.52	0.03
33.00	0.00	31,957	411.52	0.03
34.00	0.00	31,869	411.52	0.02
35.00	0.00	31,795	411.51	0.02
36.00	0.00	31,734	411.51	0.02
37.00	0.00	31,682	411.51	0.01
38.00	0.00	31,639	411.51	0.01
39.00	0.00	31,603	411.51	0.01
40.00	0.00	31,572	411.51	0.01
41.00	0.00	31,547	411.50	0.01
42.00	0.00	31,526	411.50	0.01
43.00	0.00	31,508	411.50	0.00
44.00	0.00	31,493	411.50	0.00
45.00	0.00	31,480	411.50	0.00
46.00	0.00	31,470	411.50	0.00
47.00	0.00	31,461	411.50	0.00
48.00	0.00	31,454	411.50	0.00

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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
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= 412.87' @ 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	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	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

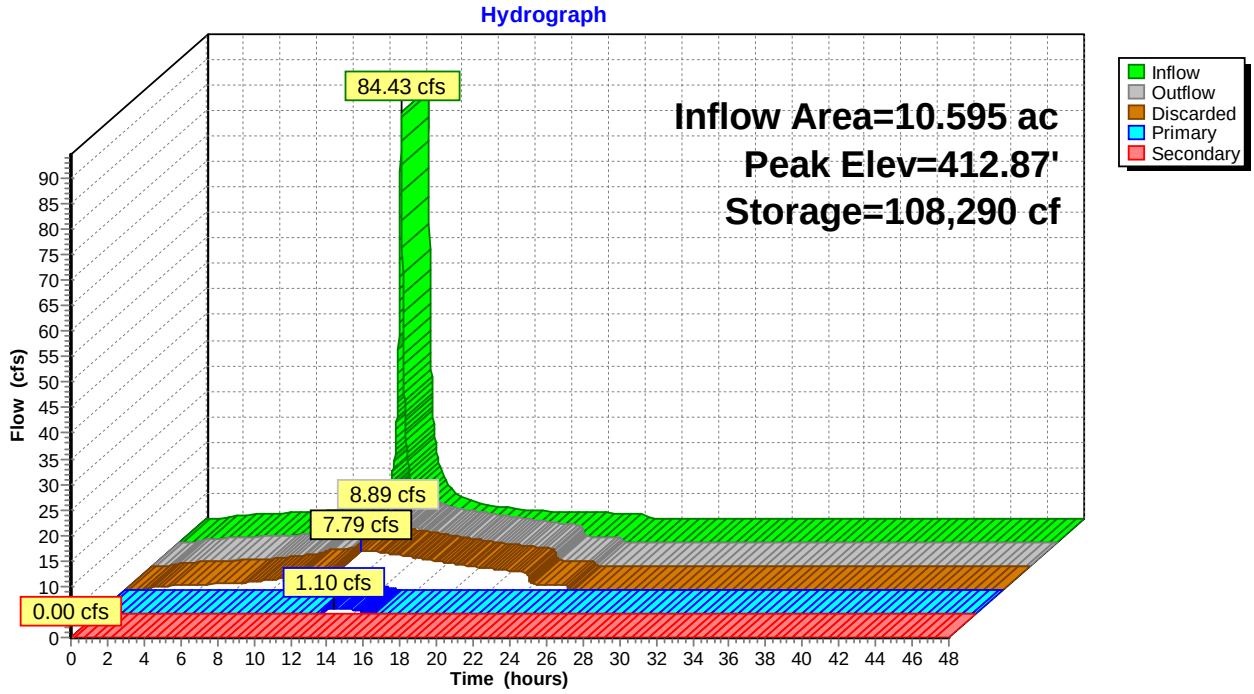
Discarded OutFlow Max=7.79 cfs @ 12.95 hrs HW=412.87' (Free Discharge)
└**3=Exfiltration** (Controls 7.79 cfs)

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)
└**2=Orifice/Grate** (Orifice Controls 1.10 cfs @ 4.11 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=408.50' (Free Discharge)
└**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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Pond 54P: INFIL 1G



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Hydrograph for Pond 54P: INFIL 1G

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	0.29	71	408.50	0.21	0.21	0.00	0.00
2.00	0.72	230	408.51	0.69	0.69	0.00	0.00
3.00	0.95	311	408.52	0.93	0.93	0.00	0.00
4.00	1.11	368	408.52	1.10	1.10	0.00	0.00
5.00	1.24	413	408.52	1.23	1.23	0.00	0.00
6.00	1.36	452	408.52	1.35	1.35	0.00	0.00
7.00	1.70	558	408.53	1.66	1.66	0.00	0.00
8.00	2.07	682	408.53	2.03	2.03	0.00	0.00
9.00	2.44	806	408.54	2.40	2.40	0.00	0.00
10.00	3.63	1,208	408.56	3.37	3.37	0.00	0.00
11.00	6.28	5,250	408.75	3.55	3.55	0.00	0.00
12.00	**40.55**	**38,066**	**410.22**	**4.98**	**4.98**	**0.00**	0.00
13.00	**8.46**	**108,254**	**412.87**	**8.88**	**7.79**	**1.10**	0.00
14.00	4.20	97,877	412.51	8.17	7.39	0.78	0.00
15.00	2.89	83,527	411.99	6.90	6.83	0.07	0.00
16.00	2.35	69,130	411.46	6.26	6.26	0.00	0.00
17.00	1.98	55,402	410.92	5.70	5.70	0.00	0.00
18.00	1.60	42,306	410.39	5.16	5.16	0.00	0.00
19.00	1.45	30,095	409.88	4.64	4.64	0.00	0.00
20.00	1.35	19,291	409.40	4.17	4.17	0.00	0.00
21.00	1.26	9,742	408.97	3.75	3.75	0.00	0.00
22.00	1.17	1,287	408.56	3.38	3.38	0.00	0.00
23.00	1.07	363	408.52	1.08	1.08	0.00	0.00
24.00	0.98	331	408.52	0.99	0.99	0.00	0.00
25.00	0.00	2	408.50	0.01	0.01	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

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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)

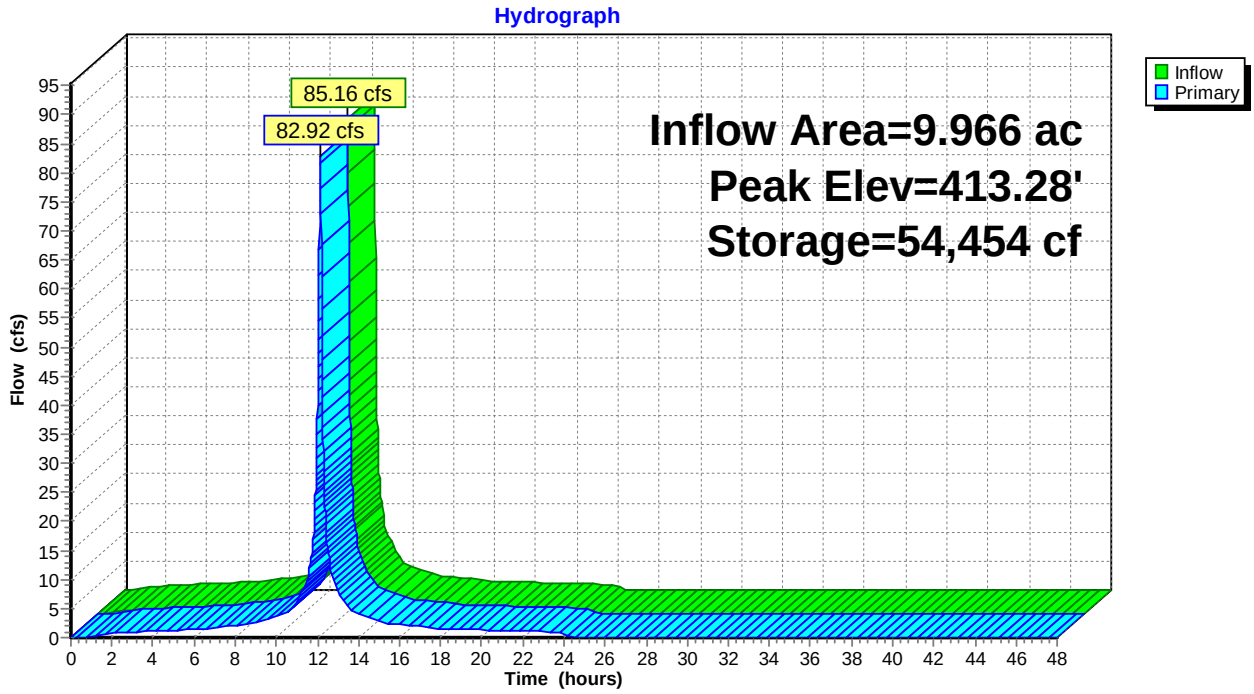
Volume	Invert	Avail.Storage	Storage Description
#1	408.00'	61,884 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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)

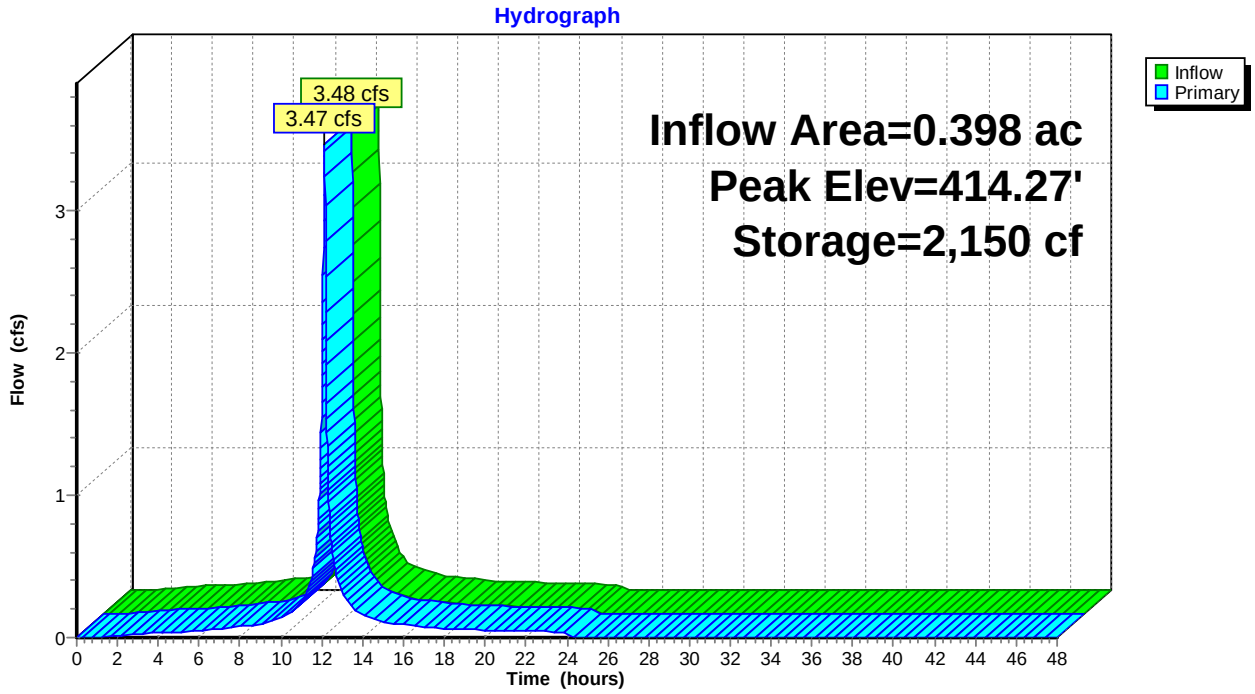
Volume	Invert	Avail.Storage	Storage Description
#1	410.00'	3,024 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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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)

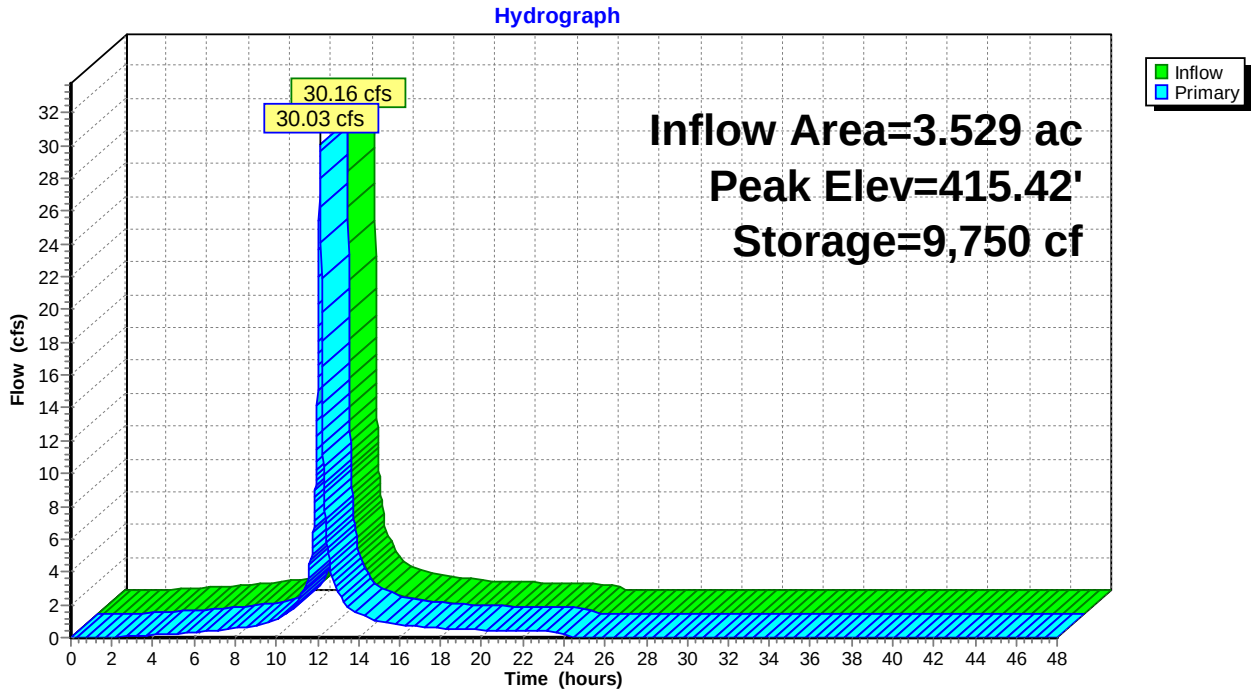
Volume	Invert	Avail.Storage	Storage Description
#1	411.00'	11,023 cf	**Custom Stage Data (Prismatic)** Listed below

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



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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

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Summary for Pond 63P: Det Pond 1K

Inflow Area = 17.176 ac, 66.33% Impervious, Inflow Depth = 4.95" for 100-Year event
Inflow = 32.77 cfs @ 12.26 hrs, Volume= 7.085 af
Outflow = 19.60 cfs @ 13.44 hrs, Volume= 7.078 af, Atten= 40%, Lag= 70.7 min
Primary = 16.80 cfs @ 13.44 hrs, Volume= 6.952 af
Routed to Link 29L : DP-1
Secondary = 2.80 cfs @ 13.44 hrs, Volume= 0.126 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= 413.21' @ 13.44 hrs Surf.Area= 18,942 sf Storage= 66,450 cf

Plug-Flow detention time= 67.2 min calculated for 7.078 af (100% of inflow)
Center-of-Mass det. time= 65.6 min (984.7 - 919.1)

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

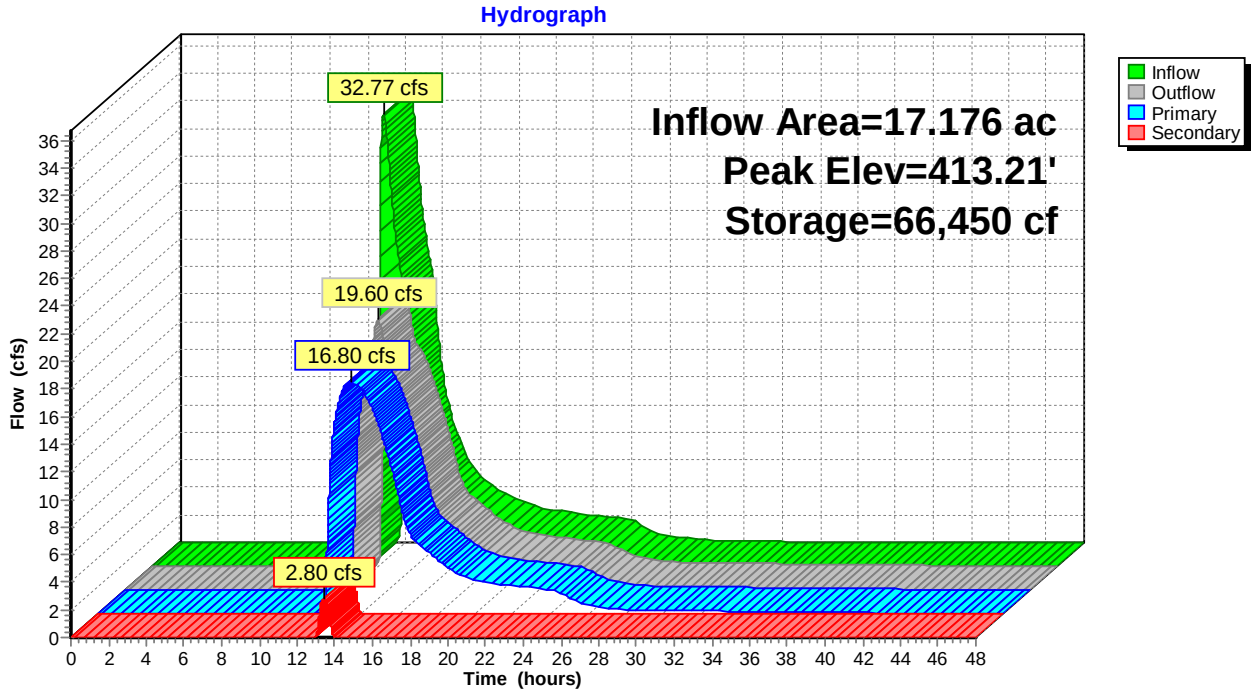
Device	Routing	Invert	Outlet Devices
#1	Primary	407.50'	**24.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 407.50' / 406.00' S= 0.0037 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	407.50'	**3.0" Vert. Orifice/Grate** 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=16.80 cfs @ 13.44 hrs HW=413.21' (Free Discharge)
└**1=Culvert** (Passes 16.80 cfs of 22.61 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.56 cfs @ 11.38 fps)
├**3=Orifice/Grate** (Orifice Controls 10.17 cfs @ 10.17 fps)
└**4=Orifice/Grate** (Orifice Controls 6.07 cfs @ 8.56 fps)

Secondary OutFlow Max=2.79 cfs @ 13.44 hrs HW=413.21' (Free Discharge)
└**5=Broad-Crested Rectangular Weir** (Weir Controls 2.79 cfs @ 1.30 fps)

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Pond 63P: Det Pond 1K



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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	**10.29**	4,155	408.28	0.19	0.19	0.00
13.00	**23.07**	**61,897**	**412.97**	**16.26**	**16.26**	**0.00**
14.00	12.28	**61,672**	**412.96**	**16.24**	**16.24**	**0.00**
15.00	7.01	41,150	411.73	13.20	13.20	0.00
16.00	4.83	22,702	410.35	8.28	8.28	0.00
17.00	3.81	15,827	409.71	5.06	5.06	0.00
18.00	3.09	12,080	409.32	3.91	3.91	0.00
19.00	2.61	9,994	409.08	2.96	2.96	0.00
20.00	2.33	9,236	408.99	2.45	2.45	0.00
21.00	2.15	8,943	408.95	2.21	2.21	0.00
22.00	1.98	8,736	408.92	2.04	2.04	0.00
23.00	1.83	8,539	408.90	1.89	1.89	0.00
24.00	1.69	8,353	408.87	1.74	1.74	0.00
25.00	0.87	7,519	408.77	1.14	1.14	0.00
26.00	0.49	6,734	408.66	0.66	0.66	0.00
27.00	0.30	6,237	408.59	0.42	0.42	0.00
28.00	0.20	5,889	408.54	0.28	0.28	0.00
29.00	0.14	5,591	408.50	0.22	0.22	0.00
30.00	0.10	5,238	408.45	0.21	0.21	0.00
31.00	0.08	4,802	408.38	0.21	0.21	0.00
32.00	0.06	4,334	408.31	0.20	0.20	0.00
33.00	0.05	3,854	408.23	0.18	0.18	0.00
34.00	0.04	3,377	408.16	0.17	0.17	0.00
35.00	0.03	2,913	408.08	0.16	0.16	0.00
36.00	0.03	2,475	408.00	0.14	0.14	0.00
37.00	0.02	2,068	407.93	0.13	0.13	0.00
38.00	0.02	1,702	407.86	0.11	0.11	0.00
39.00	0.01	1,381	407.79	0.10	0.10	0.00
40.00	0.01	1,110	407.74	0.08	0.08	0.00
41.00	0.01	896	407.70	0.06	0.06	0.00
42.00	0.01	733	407.66	0.05	0.05	0.00
43.00	0.01	614	407.64	0.03	0.03	0.00
44.00	0.01	525	407.62	0.03	0.03	0.00
45.00	0.00	455	407.60	0.02	0.02	0.00
46.00	0.00	399	407.59	0.02	0.02	0.00
47.00	0.00	354	407.58	0.01	0.01	0.00
48.00	0.00	319	407.57	0.01	0.01	0.00

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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 = 13.40 cfs @ 12.16 hrs, Volume= 0.836 af, Atten= 9%, Lag= 1.6 min
Primary = 13.40 cfs @ 12.16 hrs, Volume= 0.836 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= 440.43' @ 12.16 hrs Surf.Area= 6,484 sf Storage= 8,295 cf

Plug-Flow detention time= 99.5 min calculated for 0.836 af (86% of inflow)
Center-of-Mass det. time= 34.7 min (867.9 - 833.2)

Volume	Invert	Avail.Storage	Storage Description
#1	436.17'	16,639 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

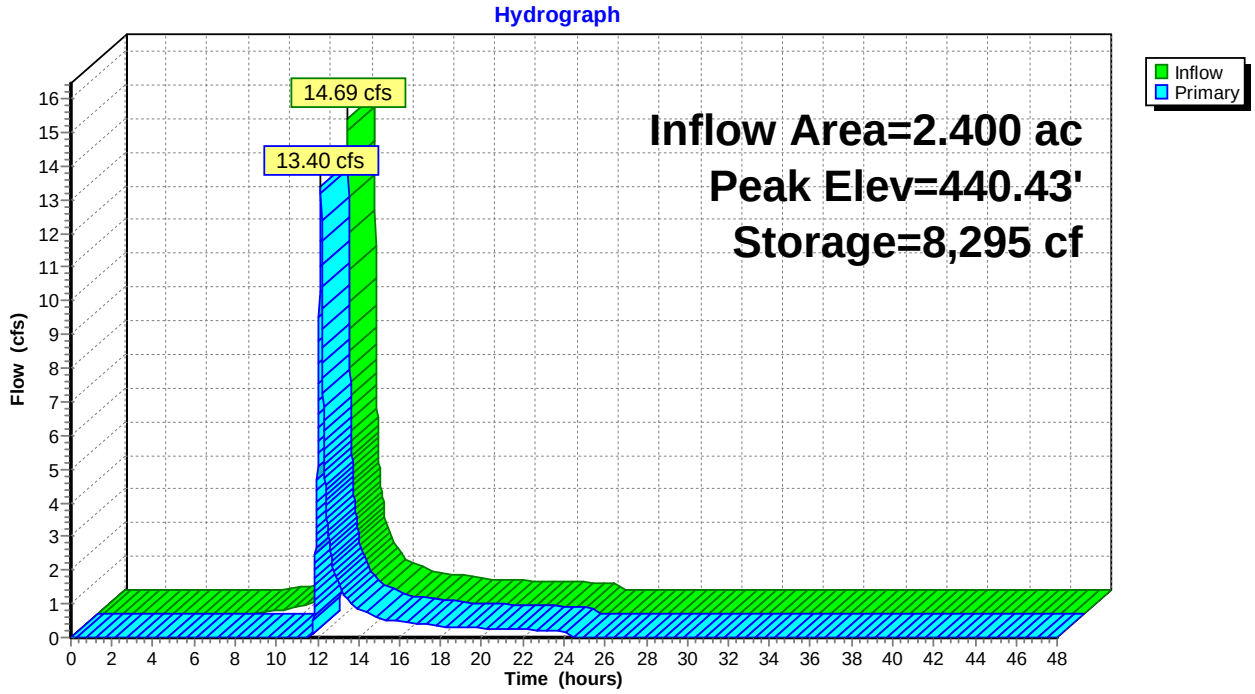
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
436.17	4,171	0.0	0	0
436.83	4,171	40.0	1,101	1,101
439.50	4,171	20.0	2,227	3,328
441.00	7,892	100.0	9,047	12,376
441.50	9,160	100.0	4,263	16,639

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	440.00'	**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=13.39 cfs @ 12.16 hrs HW=440.43' (Free Discharge)
↑—**1=Culvert** (Passes 13.39 cfs of 15.95 cfs potential flow)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 13.39 cfs @ 1.94 fps)

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Pond B4B: Bioretention 4A



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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**	**7,051**	**440.23**	**5.08**
13.00	**1.56**	**6,342**	**440.11**	**1.67**
14.00	0.81	6,103	440.07	0.83
15.00	0.56	6,022	440.05	0.59
16.00	0.46	5,967	440.04	0.47
17.00	0.39	5,934	440.04	0.40
18.00	0.32	5,901	440.03	0.33
19.00	0.29	5,886	440.03	0.29
20.00	0.27	5,877	440.03	0.28
21.00	0.26	5,869	440.03	0.26
22.00	0.24	5,861	440.02	0.24
23.00	0.22	5,852	440.02	0.22
24.00	0.20	5,844	440.02	0.20
25.00	0.00	5,732	440.00	0.01
26.00	0.00	5,725	440.00	0.00
27.00	0.00	5,724	440.00	0.00
28.00	0.00	5,724	440.00	0.00
29.00	0.00	5,724	440.00	0.00
30.00	0.00	5,724	440.00	0.00
31.00	0.00	5,724	440.00	0.00
32.00	0.00	5,724	440.00	0.00
33.00	0.00	5,724	440.00	0.00
34.00	0.00	5,724	440.00	0.00
35.00	0.00	5,724	440.00	0.00
36.00	0.00	5,724	440.00	0.00
37.00	0.00	5,724	440.00	0.00
38.00	0.00	5,724	440.00	0.00
39.00	0.00	5,724	440.00	0.00
40.00	0.00	5,724	440.00	0.00
41.00	0.00	5,724	440.00	0.00
42.00	0.00	5,724	440.00	0.00
43.00	0.00	5,724	440.00	0.00
44.00	0.00	5,724	440.00	0.00
45.00	0.00	5,724	440.00	0.00
46.00	0.00	5,724	440.00	0.00
47.00	0.00	5,724	440.00	0.00
48.00	0.00	5,724	440.00	0.00

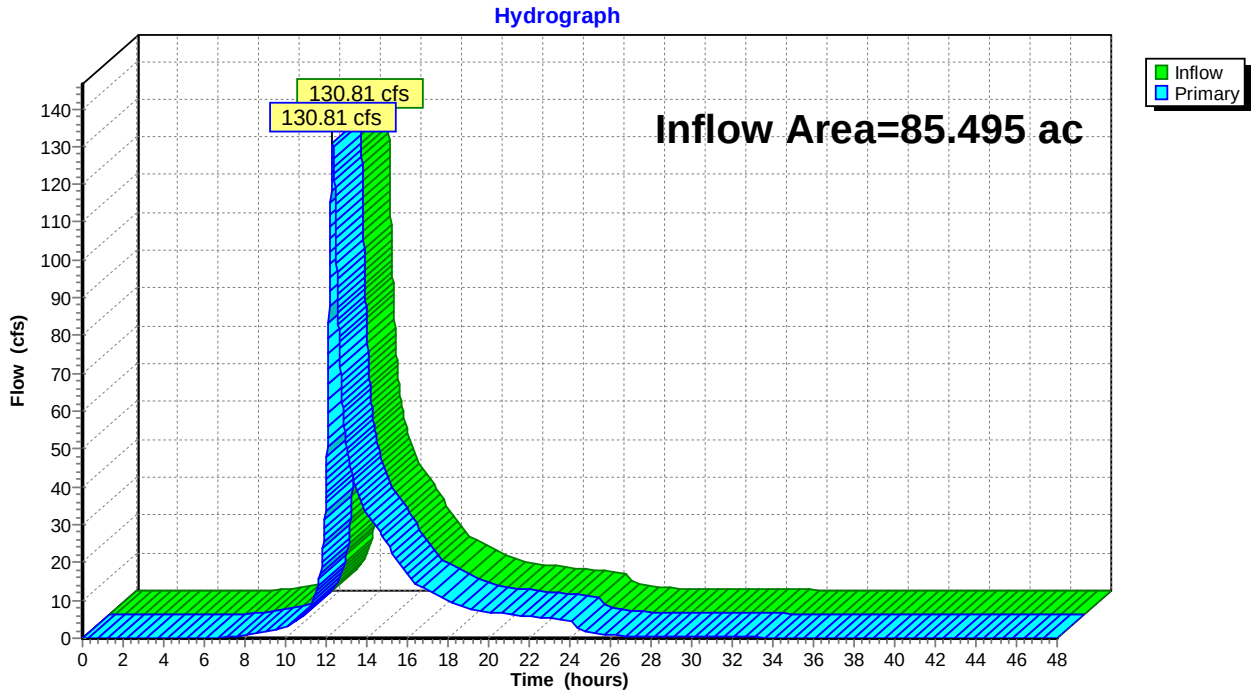
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Summary for Link 29L: DP-1

Inflow Area = 85.495 ac, 51.65% Impervious, Inflow Depth > 3.15" for 100-Year event
Inflow = 130.81 cfs @ 12.33 hrs, Volume= 22.470 af
Primary = 130.81 cfs @ 12.33 hrs, Volume= 22.470 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



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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	0.28	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	0.16	0.00	0.16
8.50	1.19	0.00	1.19	37.50	0.15	0.00	0.15
9.00	1.60	0.00	1.60	38.00	0.14	0.00	0.14
9.50	2.21	0.00	2.21	38.50	0.13	0.00	0.13
10.00	3.19	0.00	3.19	39.00	0.12	0.00	0.12
10.50	4.39	0.00	4.39	39.50	0.11	0.00	0.11
11.00	6.73	0.00	6.73	40.00	0.10	0.00	0.10
11.50	12.30	0.00	12.30	40.50	0.09	0.00	0.09
12.00	**40.27**	0.00	**40.27**	41.00	0.08	0.00	0.08
12.50	**103.51**	0.00	**103.51**	41.50	0.07	0.00	0.07
13.00	51.06	0.00	51.06	42.00	0.06	0.00	0.06
13.50	39.26	0.00	39.26	42.50	0.05	0.00	0.05
14.00	32.82	0.00	32.82	43.00	0.05	0.00	0.05
14.50	28.98	0.00	28.98	43.50	0.04	0.00	0.04
15.00	24.89	0.00	24.89	44.00	0.04	0.00	0.04
15.50	20.89	0.00	20.89	44.50	0.03	0.00	0.03
16.00	17.31	0.00	17.31	45.00	0.03	0.00	0.03
16.50	14.17	0.00	14.17	45.50	0.03	0.00	0.03
17.00	12.49	0.00	12.49	46.00	0.03	0.00	0.03
17.50	11.20	0.00	11.20	46.50	0.02	0.00	0.02
18.00	9.93	0.00	9.93	47.00	0.02	0.00	0.02
18.50	8.79	0.00	8.79	47.50	0.02	0.00	0.02
19.00	8.01	0.00	8.01	48.00	0.02	0.00	0.02
19.50	7.41	0.00	7.41				
20.00	6.97	0.00	6.97				
20.50	6.61	0.00	6.61				
21.00	6.31	0.00	6.31				
21.50	6.04	0.00	6.04				
22.00	5.79	0.00	5.79				
22.50	5.55	0.00	5.55				
23.00	5.32	0.00	5.32				
23.50	5.09	0.00	5.09				
24.00	4.87	0.00	4.87				
24.50	2.36	0.00	2.36				
25.00	1.49	0.00	1.49				
25.50	1.13	0.00	1.13				
26.00	0.88	0.00	0.88				
26.50	0.71	0.00	0.71				
27.00	0.58	0.00	0.58				
27.50	0.48	0.00	0.48				
28.00	0.41	0.00	0.41				
28.50	0.36	0.00	0.36				

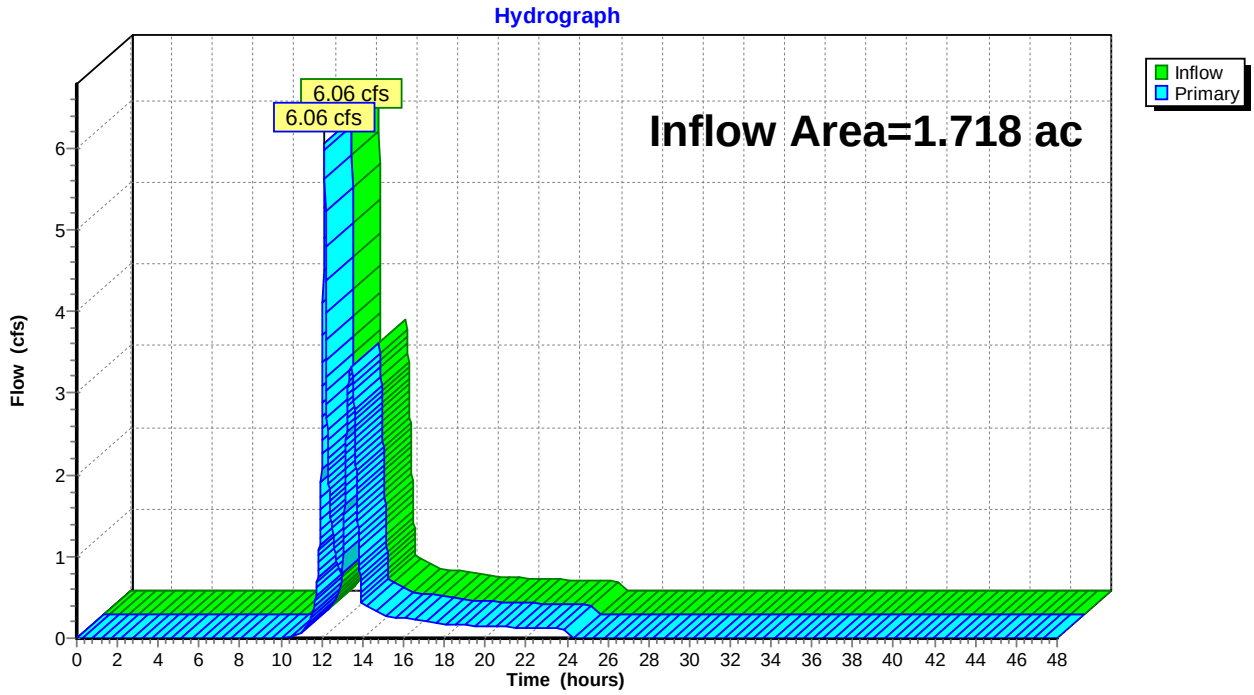
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Summary for Link 30L: DP-2

Inflow Area = 1.718 ac, 0.00% Impervious, Inflow Depth = 3.71" for 100-Year event
Inflow = 6.06 cfs @ 12.14 hrs, Volume= 0.532 af
Primary = 6.06 cfs @ 12.14 hrs, Volume= 0.532 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



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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	3.24	0.00	3.24	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				

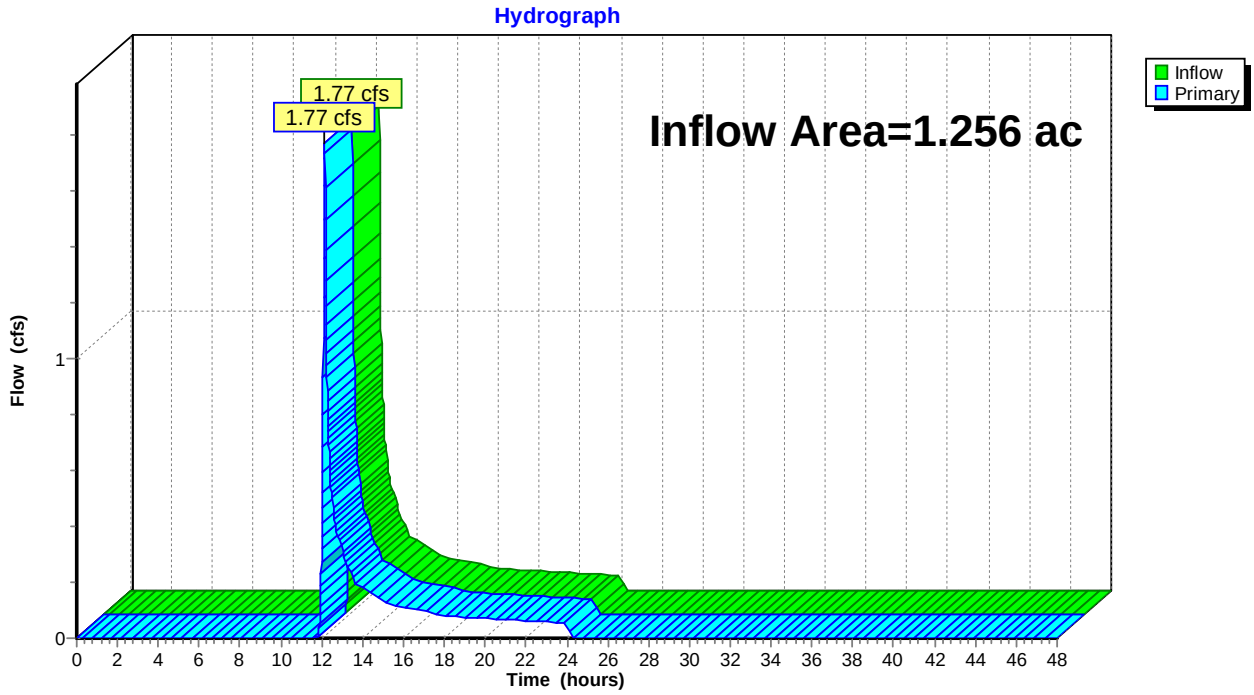
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Summary for Link 31L: DP-3

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



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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				

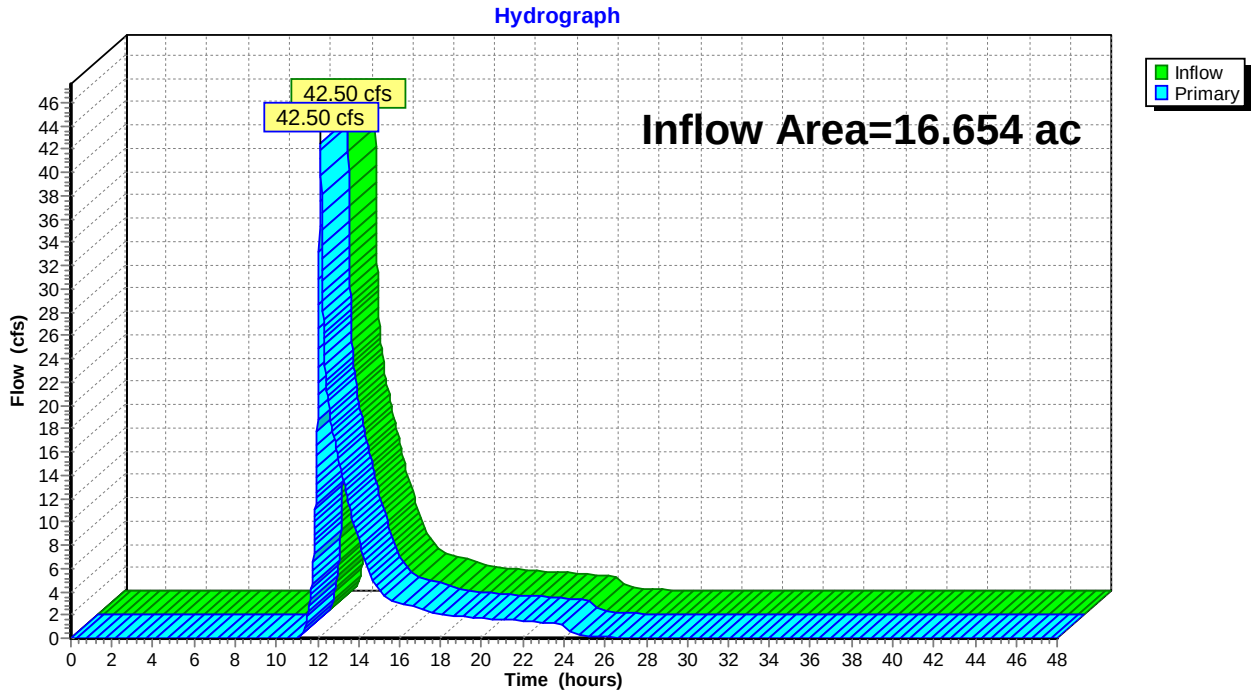
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Summary for Link 32L: DP-4

Inflow Area = 16.654 ac, 29.61% Impervious, Inflow Depth = 3.79" for 100-Year event
Inflow = 42.50 cfs @ 12.15 hrs, Volume= 5.257 af
Primary = 42.50 cfs @ 12.15 hrs, Volume= 5.257 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



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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	1.73	0.00	1.73	40.50	0.00	0.00	0.00
12.00	**18.79**	0.00	**18.79**	41.00	0.00	0.00	0.00
12.50	**20.76**	0.00	**20.76**	41.50	0.00	0.00	0.00
13.00	15.66	0.00	15.66	42.00	0.00	0.00	0.00
13.50	11.81	0.00	11.81	42.50	0.00	0.00	0.00
14.00	8.49	0.00	8.49	43.00	0.00	0.00	0.00
14.50	5.69	0.00	5.69	43.50	0.00	0.00	0.00
15.00	4.14	0.00	4.14	44.00	0.00	0.00	0.00
15.50	3.39	0.00	3.39	44.50	0.00	0.00	0.00
16.00	3.03	0.00	3.03	45.00	0.00	0.00	0.00
16.50	2.76	0.00	2.76	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	2.07	0.00	2.07	47.00	0.00	0.00	0.00
18.50	1.93	0.00	1.93	47.50	0.00	0.00	0.00
19.00	1.84	0.00	1.84	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	1.43	0.00	1.43				
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	0.42	0.00	0.42				
25.00	0.23	0.00	0.23				
25.50	0.14	0.00	0.14				
26.00	0.10	0.00	0.10				
26.50	0.08	0.00	0.08				
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				

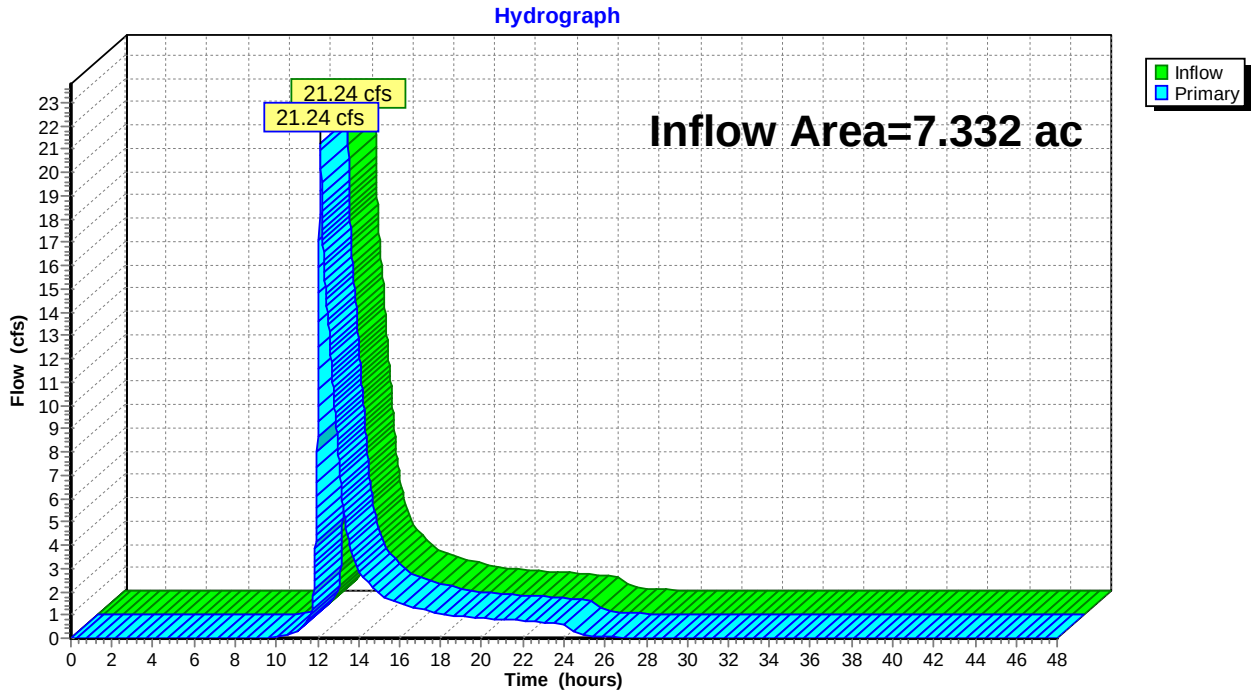
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Summary for Link PDP5: PDP5

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



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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				

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Appendix 6 | Green Infrastructure Worksheets

Version 1.8
Last Updated: 11/09/2015

Total Water Quality Volume Calculation
WQv(acre-feet) = [(P)(Rv)(A)] /12

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	4.70	2.28	49%	0.49	11,623	1i-Bioretention basin
9	6.10	5.01	82%	0.79	24,465	1J -Bioretention basin
10	0.61	0.00	0%	0.05	155	1K -Detention Basin
Subtotal (1-30)	112.46	51.90	46%	0.47	**265,956**	**Subtotal 1**
Total	112.46	51.90	46%	0.47	**265,956**	**Initial WQv**	**6.11**	**af**

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing *(Acre)*	Contributing Impervious *(Acre)*	Notes
Conservation of Natural Areas	0.00	0.00	*minimum 10,000 sf*
Riparian Buffers	0.00	0.00	*maximum contributing length 75 feet to 150 feet*
Filter Strips	0.00	0.00	
Tree Planting	0.00	0.00	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**0.00**	**0.00**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Imperviousness *%*	Runoff Coefficient Rv	WQv *(ft^3)*		
"<<Initial WQv"	112.46	51.90	46%	0.47	265,956		
Subtract Area	0.00	0.00					
WQv adjusted after Area Reductions	**112.46**	**51.90**	46%	0.47	265,956		
Disconnection of Rooftops		0.00					
Adjusted WQv after Area Reduction and Rooftop Disconnect	112.46	51.90	46%	0.47	**265,956**	**6.11**	**af**
WQv reduced by Area Reduction techniques					0	**0.00**	**af**

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Total Water Quality Volume Calculation
WQv(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-Bioretention		
15	6.86	3.36	49%	0.49	17,111	PDA-4B-Bioretention		
16	4.97	2.31	46%	0.47	11,828	PDA-5A-Bioretention		
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								
Subtotal	54.13	7.75	14%	0.18	**49,201**	**Subtotal**	**1.13**	**af**

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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 =	51.90	*acre*
Precipitation	1.4	*in*
Rv	0.95	
Minimum RRv	**100,170**	***ft3***
	2.30	af

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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 Volume	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	12,210	*ft^2*	
Design Depth	2.85	*ft*	
Volume Provided	34,799	*ft^3*	*Storage Volume provided in infiltration basin area (not including pretreatment.*

Determine Runoff Reduction			
RRv	**31,319**	***ft^3***	***90% of the storage provided in the basin or WQv whichever is smaller***
Volume Treated	2,029	*ft^3*	*This is the portion of the WQv that is not reduced/infiltrated*
Sizing √	OK		*The infiltration basin must provide storage equal to or greater than the WQv of the contributing area.*

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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 Volume	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*	*Infiltration practices shall be designed to exfiltrate the entire WQv through the floor of each practice.*
Basal Area Provided	3,499	*ft^2*	
Design Depth	2.85	*ft*	
Volume Provided	9,972	*ft^3*	*Storage Volume provided in infiltration basin area (not including pretreatment.*

Determine Runoff Reduction			
RRv	**8,975**	***ft^3***	***90% of the storage provided in the basin or WQv whichever is smaller***
Volume Treated	874	*ft^3*	*This is the portion of the WQv that is not reduced/infiltrated*
Sizing √	OK		*The infiltration basin must provide storage equal to or greater than the WQv of the contributing area.*

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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 Volume			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	20,483	*ft^2*					
Design Depth	3.35	*ft*					
Volume Provided	68,618	*ft^3*	*Storage Volume provided in infiltration basin area (not including pretreatment.*				
Determine Runoff Reduction							
RRv	**46,465**	***ft^3***	***90% of the storage provided in the basin or WQv whichever is smaller***				
Volume Treated	0	*ft^3*	*This is the portion of the WQv that is not reduced/infiltrated*				
Sizing √	OK		*The infiltration basin must provide storage equal to or greater than the WQv of the contributing area.*				

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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 Volume	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**	***ft^3***	***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 √	OK		*The infiltration basin must provide storage equal to or greater than the WQv of the contributing area.*

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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 planter bed
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	*df*	4	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**8488**	***ft^2***	

Determine Actual Bio-Retention Area

Filter Width	8681	*ft*
Filter Length	1	*ft*
Filter Area	8681	*ft^2*
Actual Volume Provided	9766	*ft^3*

Determine Runoff Reduction

Is the Bioretention contributing flow to another practice?		Select Practice	
RRv	3,906		
RRv applied	**3,906**	***ft^3***	***This is 40% of the storage provided or WQv whichever is less.***
Volume Treated	5,643	*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 √	OK		*Check to be sure Area provided ≥ Af*

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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 planter bed
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	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**10626**	***ft^2***	

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**	***ft^3***	***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 √	OK		*Check to be sure Area provided ≥ Af*	

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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 planter bed
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	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.25	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**18378**	***ft^2***	

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**	***ft^3***	***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 √	OK		*Check to be sure Area provided ≥ Af*	

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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 planter bed
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**
8	4.70	2.28	0.49	0.49	11622.53	1.40	1i-Bioretention basin
Enter Impervious Area Reduced by			49%	0.49	11,623	<<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		11,623	*ft^3*	
Enter Depth of Soil Media	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**9685**	***ft^2***	

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**	***ft^3***	***This is 40% of the storage provided or WQv whichever is less.***
Volume Treated	736	*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 √	OK		*Check to be sure Area provided ≥ Af*

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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 planter bed
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**
9	6.10	5.01	0.82	0.79	24464.75	1.40	1J -Bioretention basin
Enter Impervious Area Reduced by			82%	0.79	24,465	<<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*	

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		24,465	*ft^3*	
Enter Depth of Soil Media	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**20387**	***ft^2***	

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**	***ft^3***	***This is 40% of the storage provided or WQv whichever is less.***	
Volume Treated	12,849	*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 √	OK		*Check to be sure Area provided ≥ Af*	

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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 planter bed
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**
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	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**3672**	***ft^2***	

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**	***ft^3***	***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 √	OK		*Check to be sure Area provided ≥ Af*

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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 planter bed
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**
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	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**14259**	***ft^2***	

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**	***ft^3***	***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 √	OK		*Check to be sure Area provided ≥ Af*	

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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 planter bed
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**
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	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.25	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2	*days*	
Required Filter Area	***Af***	**10753**	***ft^2***	

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**	***ft^3***	***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 √	OK		*Check to be sure Area provided ≥ Af*

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Appendix 7 | Notice of Intent (NOI)*

Colliers
Engineering
& Design

Appendix 8 | MS4 SWPPP Acceptance Form

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:	RDM Group LLC
2. Contact Person:	Avi Pomerantz
3. Street Address:	21 Philips Parkway
4. City/State/Zip:	Montvale, NJ 07645
II. Project Site Information	
5. Project/Site Name:	Neelytown Business Park Development
6. Street Address:	
7. City/State/Zip:	Town of Montgomery, New York, 12549
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

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

Appendix 9 | SPDES General Permit (GP-0-20-001)*

Colliers Engineering & Design

Appendix 10 | Contractor, Owner, SWPPP Preparer Certification Forms*

Colliers
Engineering
& Design

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,

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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 x 3.2 x 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 (ft^3)
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

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:	Entry Time:	Exit Time:
On-site Representative(s) and contact information:	Weather Conditions:	
Name and Address of SPDES Permittee/Title/Phone/Fax Numbers: Contacted: Yes □ No □		

INSPECTION CHECKLIST

SPDES Authority

	Yes	No	N/A		Law, rule or permit citation
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?	

SWPPP Content

	Yes	No	N/A		Law, rule or permit citation
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?	

Recordkeeping

	Yes	No	N/A		Law, rule or permit citation
10.	□	□	□	Are inspections performed as required by the permit (every 7 days and after ½" 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?	

Visual Observations

	Yes	No	N/A		Law, rule or permit citation
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)	

Overall Inspection Rating: ❑ Satisfactory ❑ Marginal ❑ 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:_____

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☐ 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.

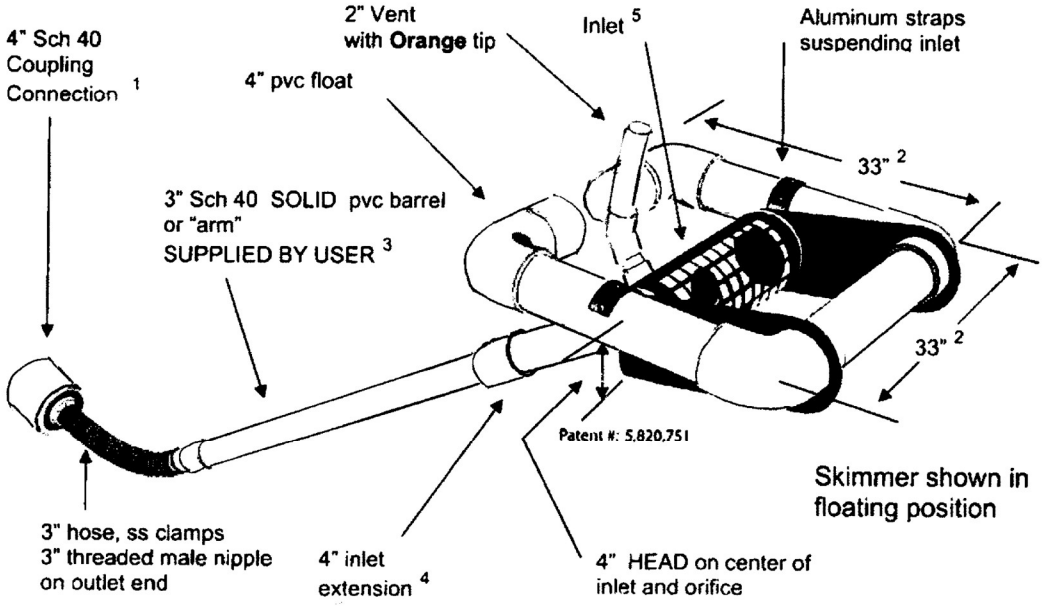
Topsoil

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

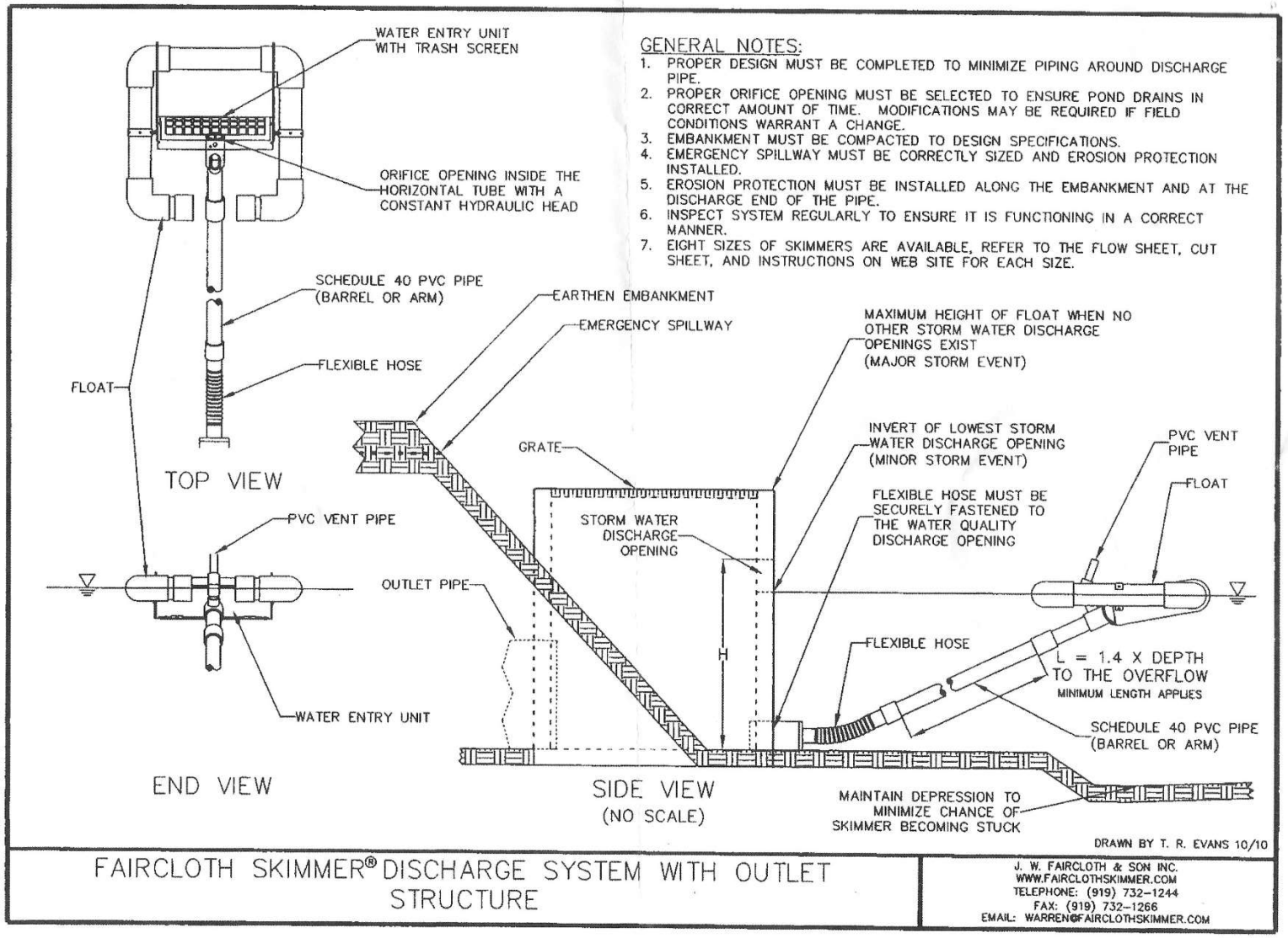
J. W. Faircloth & Son, Inc.

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.

4inchCut TM 11-07 November 14, 2007



FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH OUTLET STRUCTURE

J. W. FAIRCLOTH & SON INC.
WWW.FAIRCLOTHSKIMMER.COM
TELEPHONE: (919) 732-1244
FAX: (919) 732-1266
EMAIL: WARREN@FAIRCLOTHSKIMMER.COM

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

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.

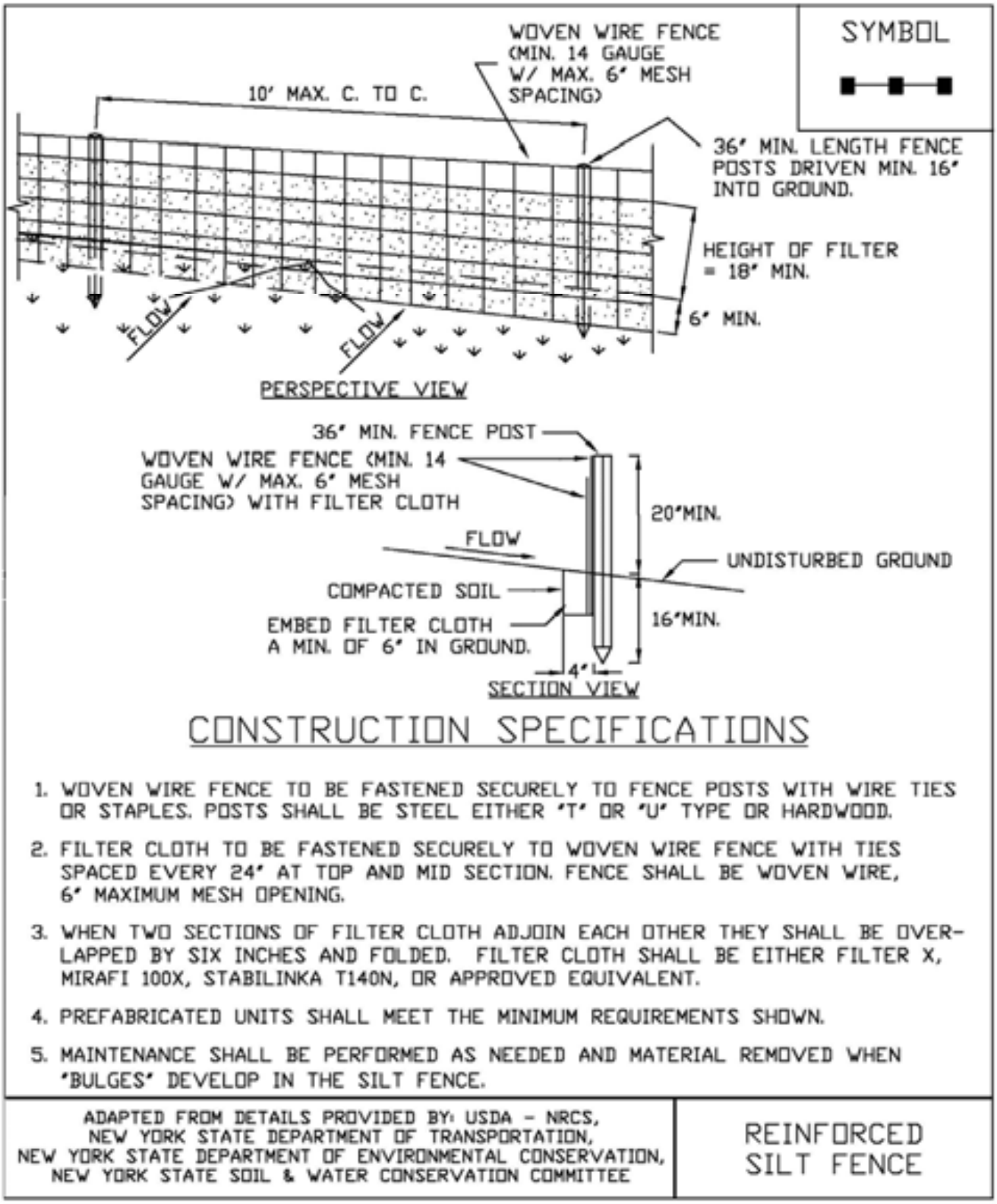
Super Silt Fence



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.

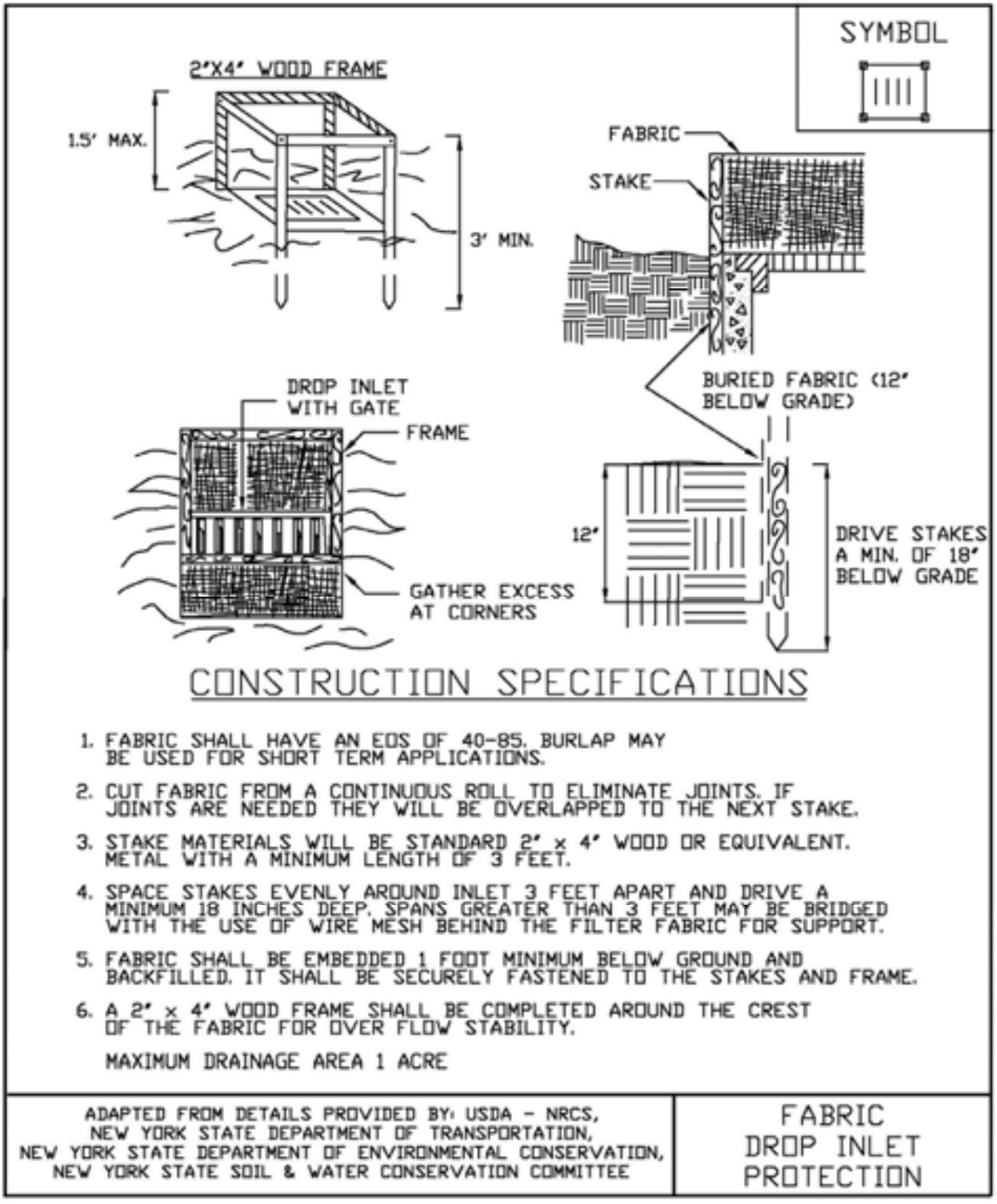
The structure should be inspected after every storm event. Any sediment should be removed and disposed of on the site. Any broken or damaged components should be replaced. Check all materials for proper anchorage and secure as necessary.

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



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 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 Subgrade	Heavy Duty[2] Haul Roads Rough Graded	Test Method
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	-

[1]Light 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.

[2]Heavy 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.

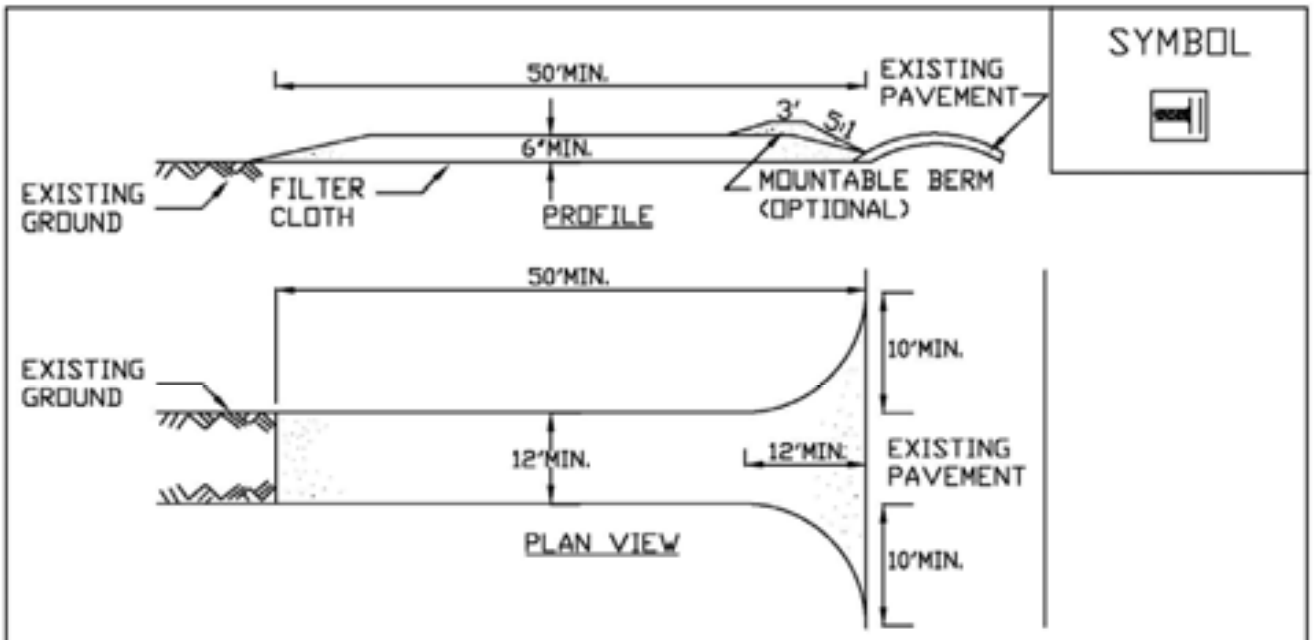
[3]Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.

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



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - 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.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

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

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 function 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 ½ of the design depth of traps I-II, and 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 ¼ 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 Diameter[1] (in.)	Riser Diameter[1] (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

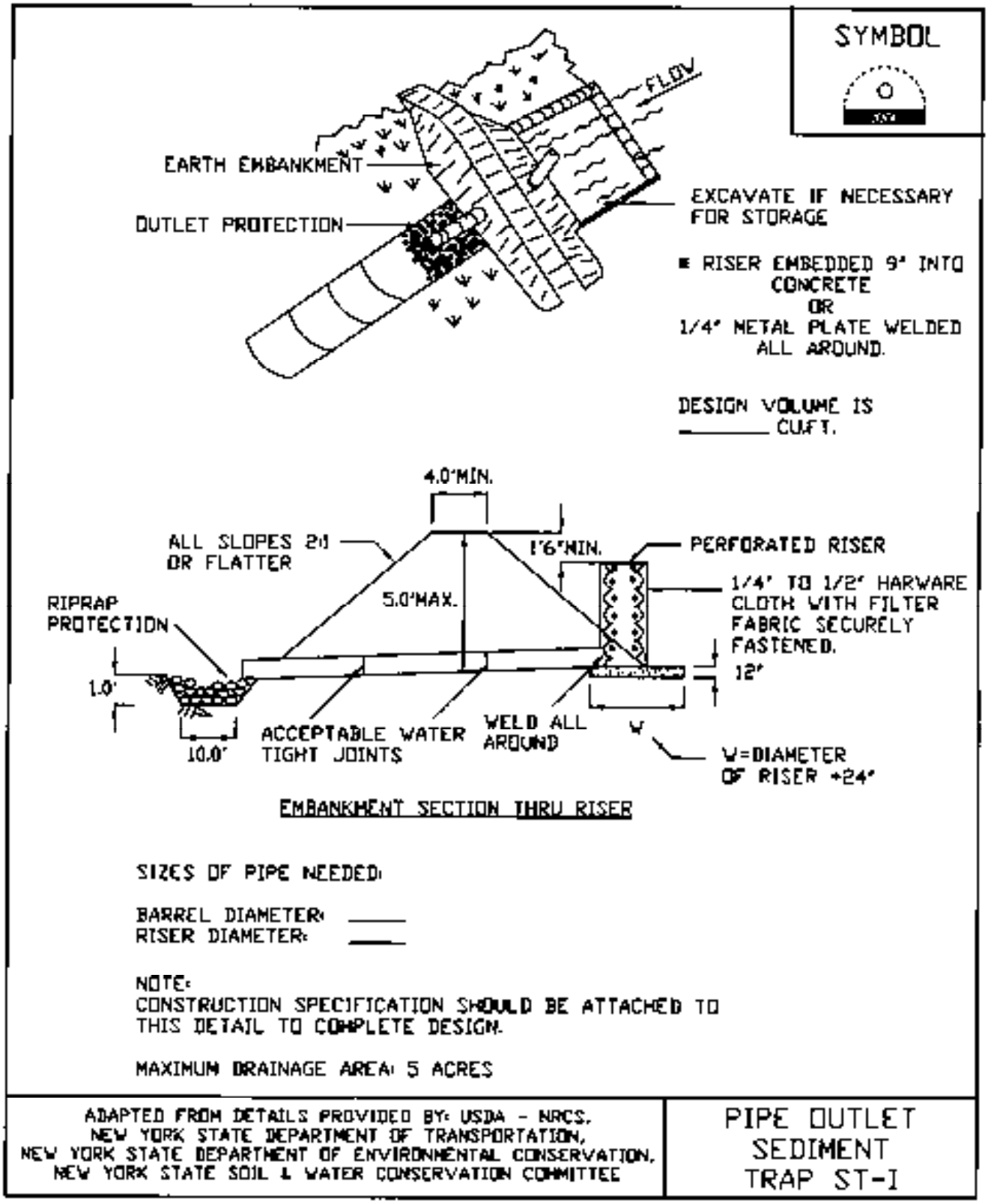


Figure 5.26
Pipe Outlet Sediment Trap: ST-I - Construction Specifications

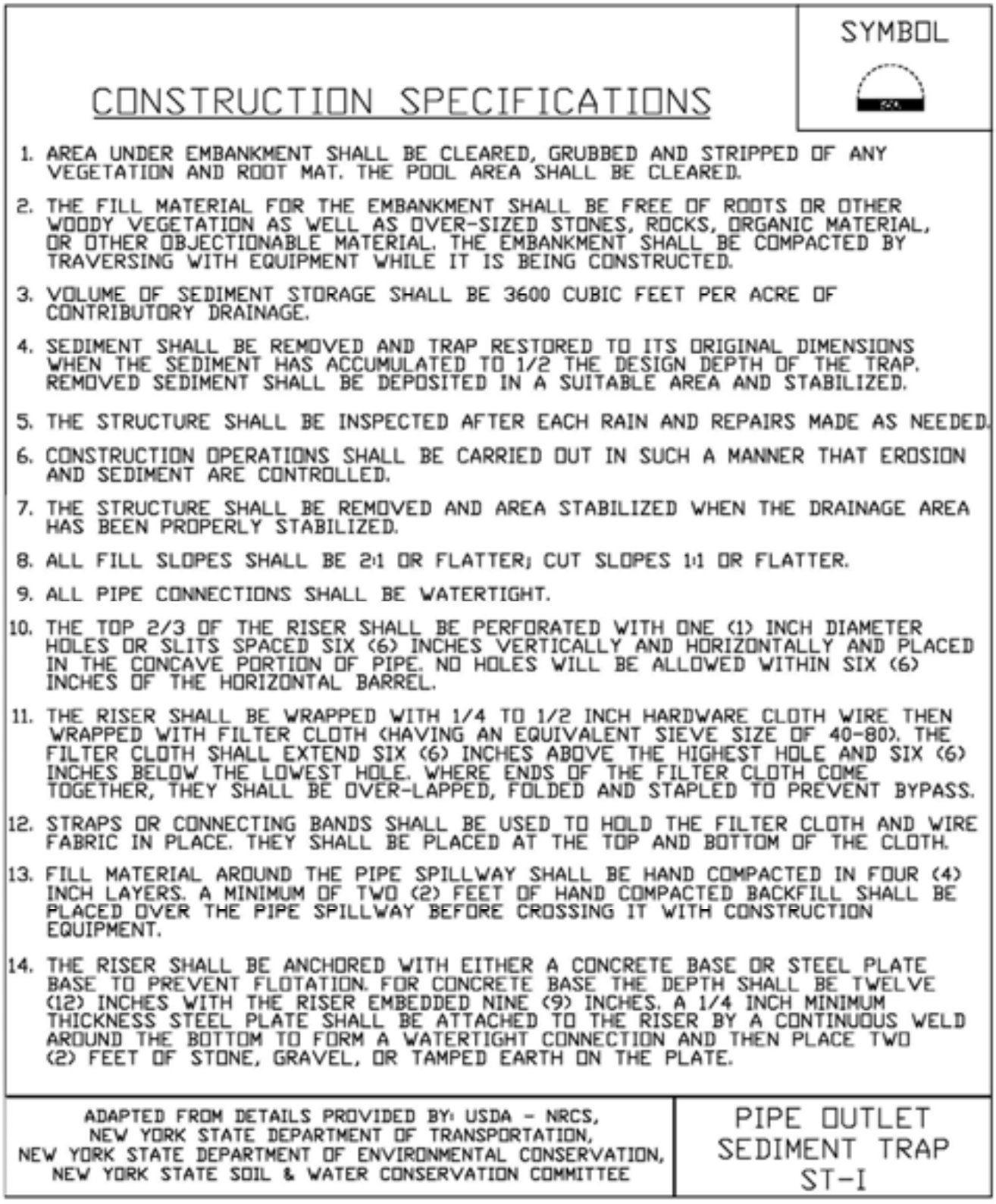
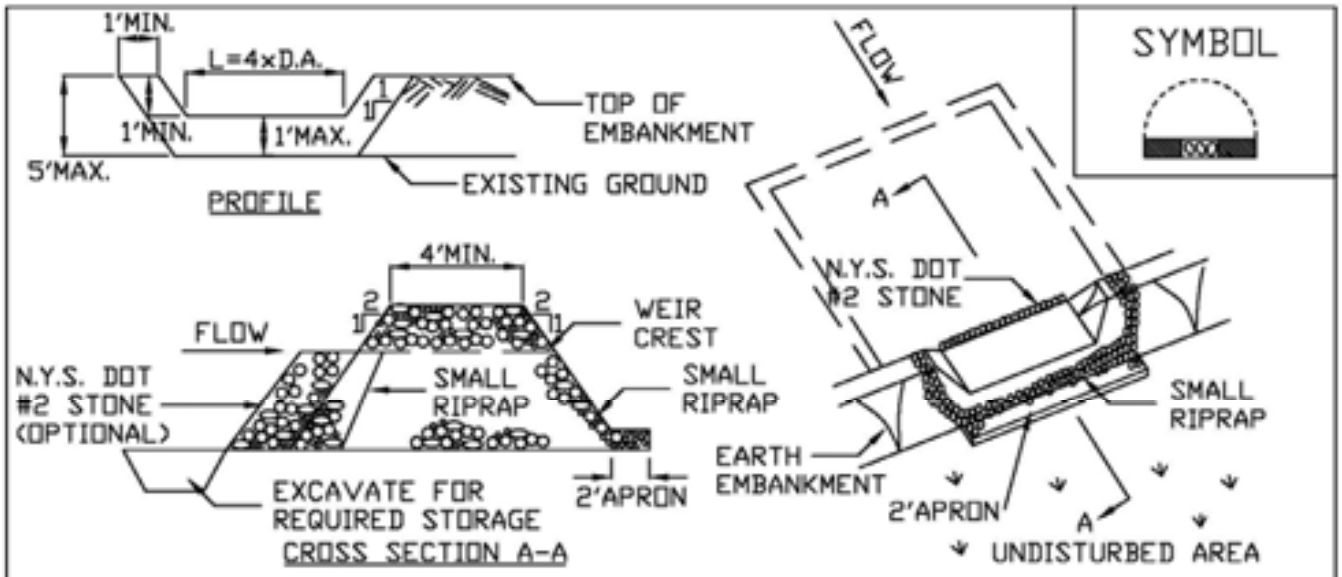


Figure 5.27
Stone Outlet Sediment Trap: ST-II



OPTION: A ONE FOOT LAYER OF N.Y.S. DOT #2 STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE RIPRAP INPLACE OF THE EMBEDDED FILTER CLOTH.

CONSTRUCTION SPECIFICATIONS

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 AND 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. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. 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. IT SHALL BE PLACED ON SITE AND STABILIZED.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT ARE CONTROLLED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

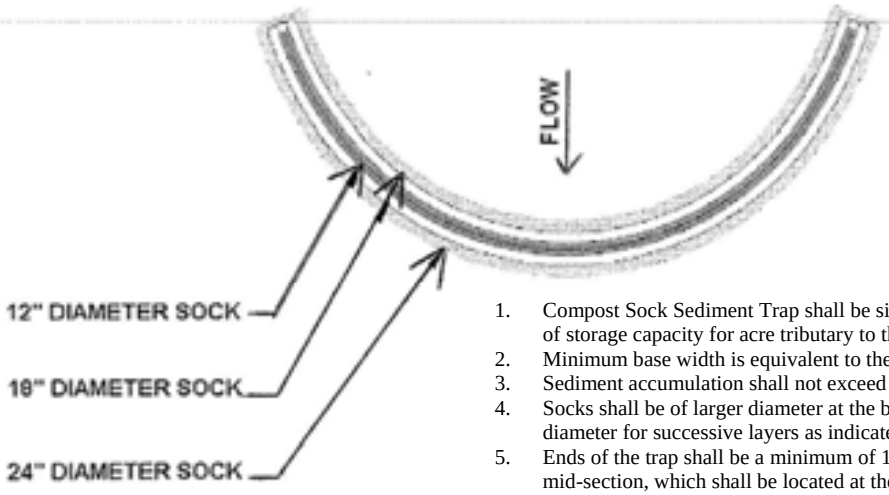
MAXIMUM DRAINAGE AREA 5 ACRES

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

STONE OUTLET SEDIMENT TRAP ST-II

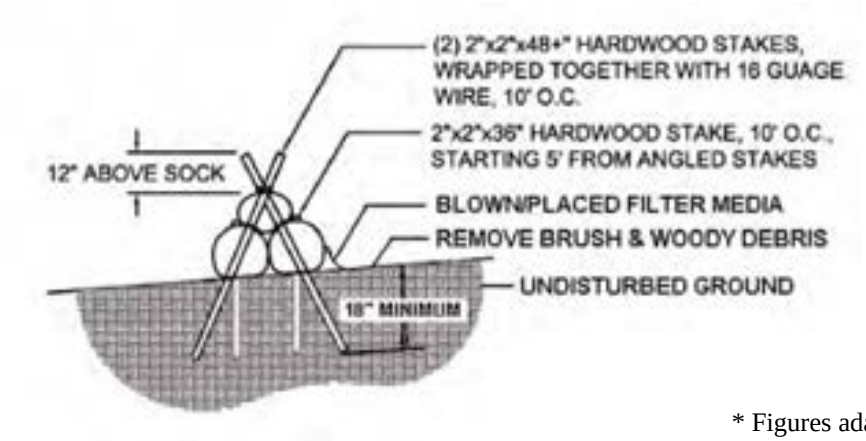
Figure 5.28
Compost Filter Sock Sediment Trap: ST-III

Plan View



1. Compost Sock Sediment Trap shall be sized to provide 3,600 cubic feet of storage capacity for acre tributary to the trap.
2. Minimum base width is equivalent to the height.
3. Sediment accumulation shall not exceed 1/3 the total height of the trap.
4. Socks shall be of larger diameter at the base of the trap and decrease in diameter for successive layers as indicated to the left.
5. Ends of the trap shall be a minimum of 1 foot higher in elevation that the mid-section, which shall be located at the point of discharge.

Staking Detail



* Figures adapted from Filtrexx

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.

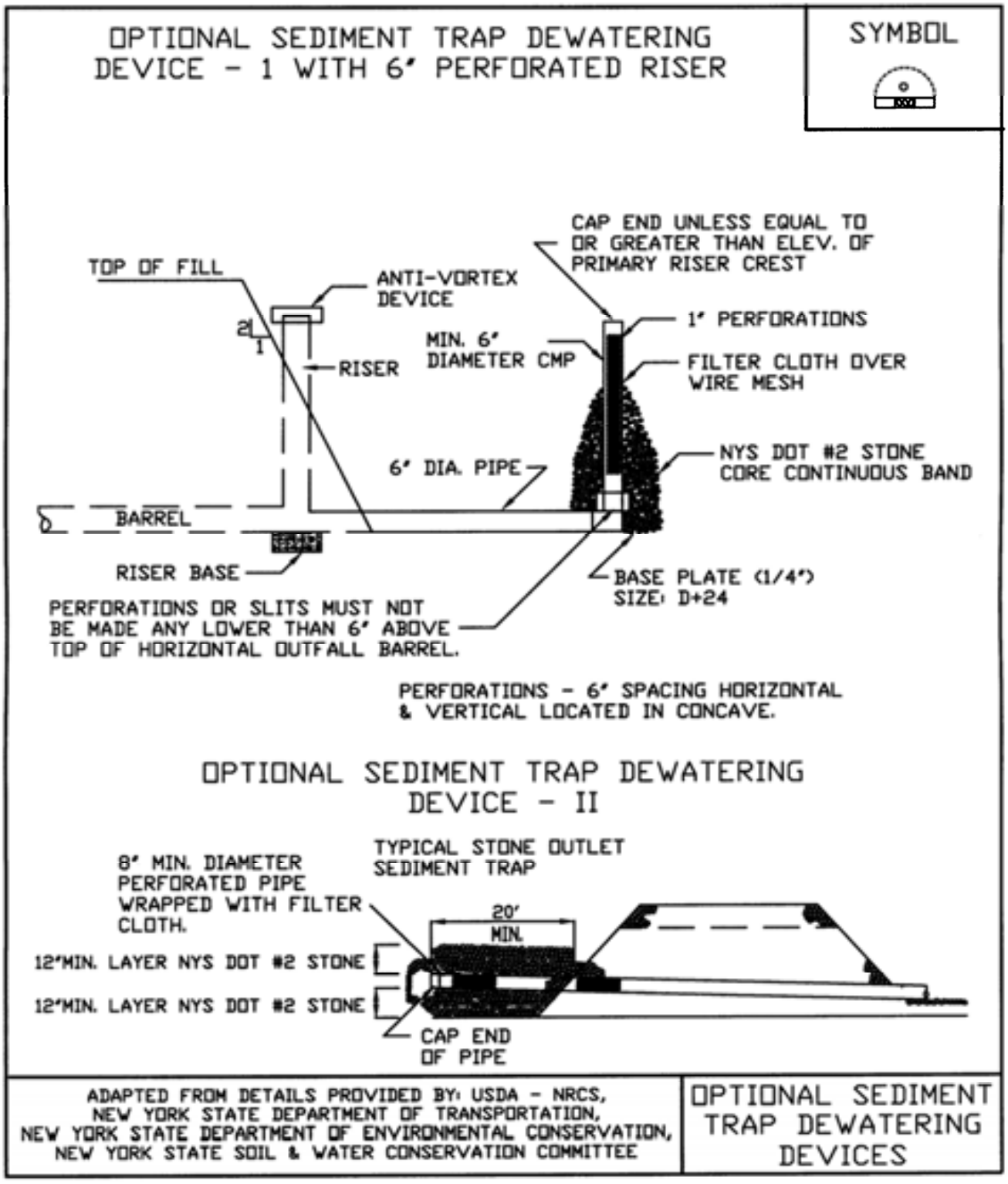
3. Compost sock sediment traps shall provide 3,600 cubic feet storage capacity with 12 inches of freeboard for each tributary drainage acreage. (See manufacturer for anticipated settlement.)

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



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 drainageway 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

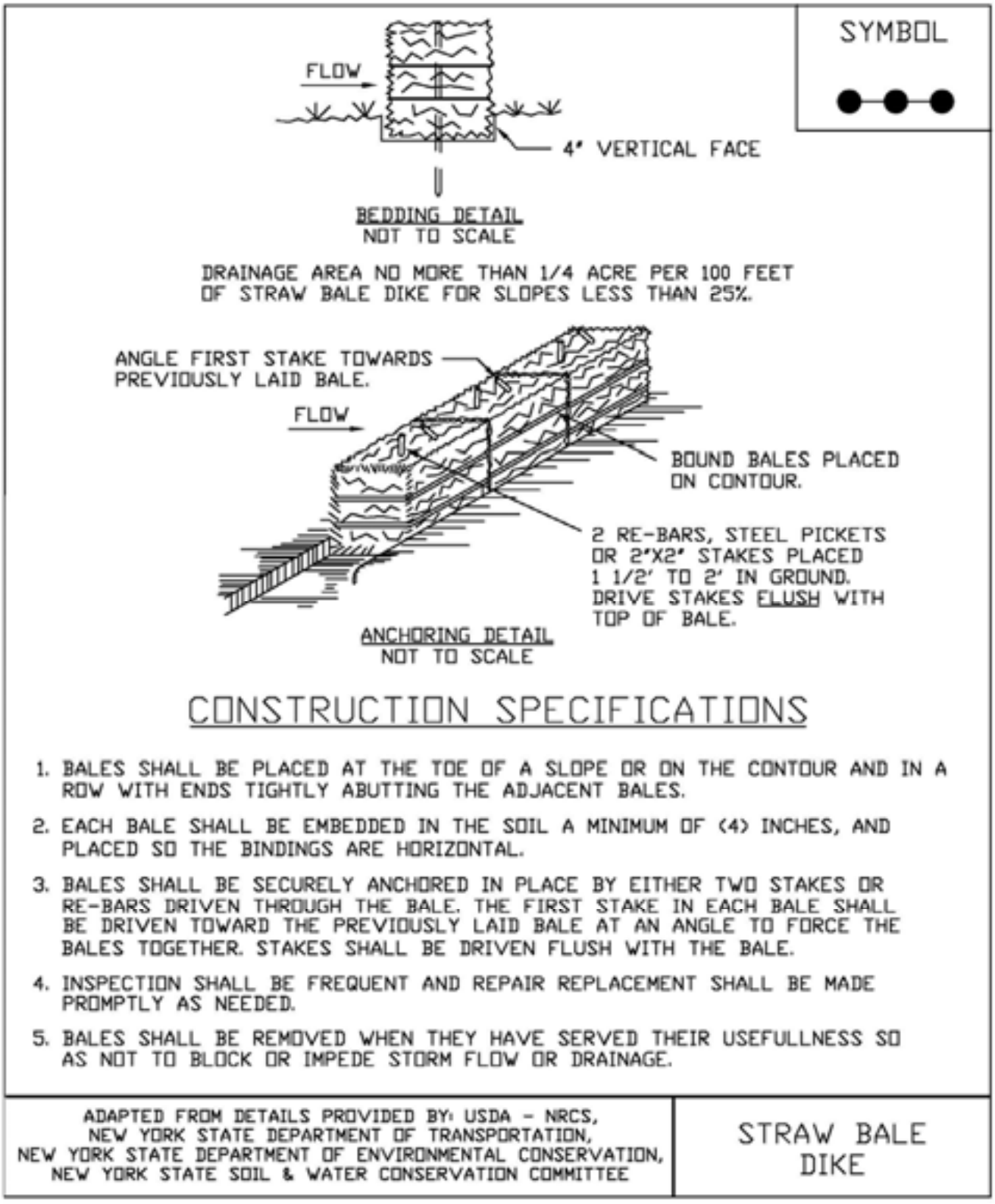
Where slope gradient changes through the drainage area, steepness refers to the steepest slope section contributing to the straw bale dike.

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 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 rainfall 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.

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 Thickness (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)

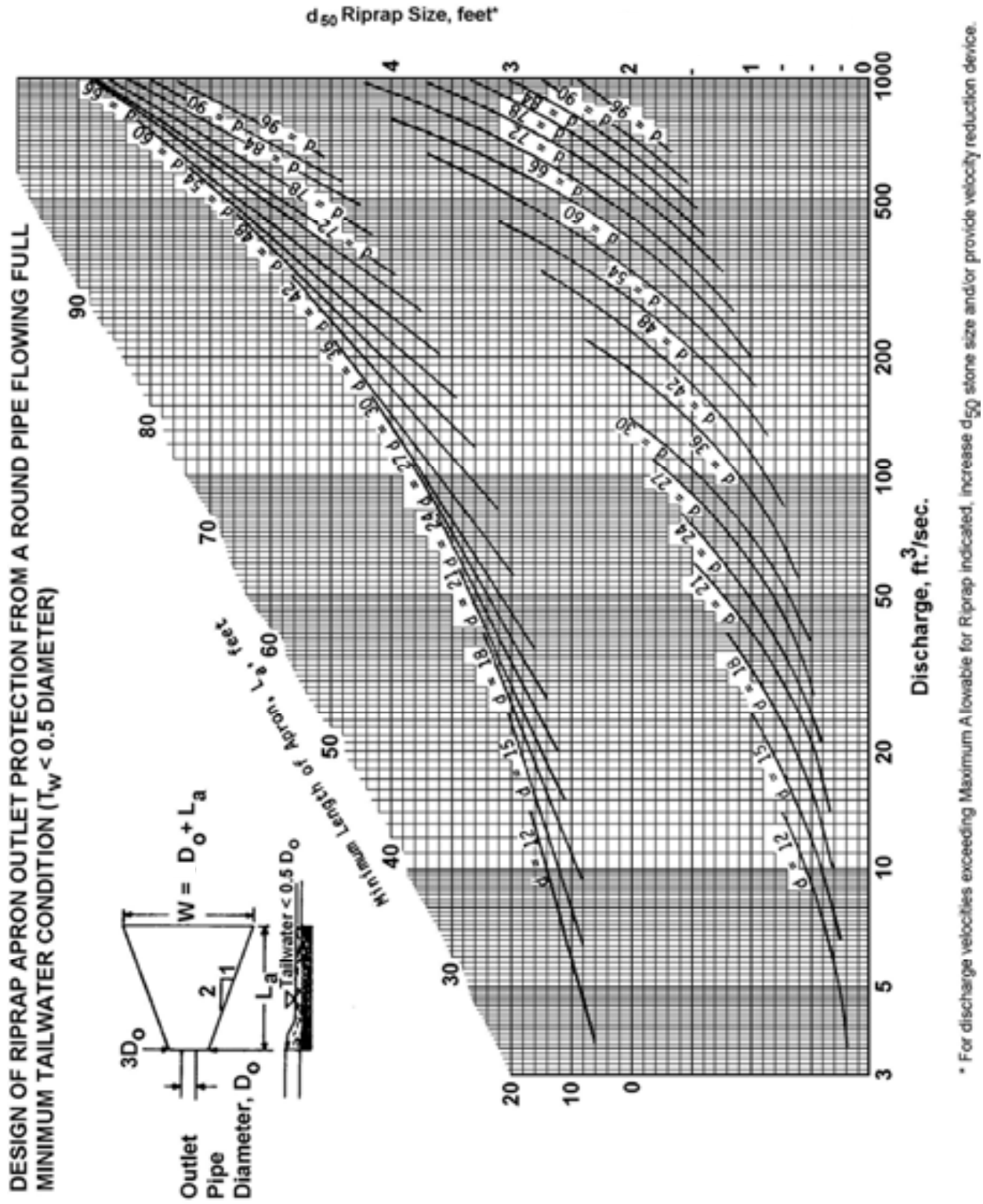


Figure 3.17
Outlet Protection Design—Maximum Tailwater Condition Chart (Design of Outlet Protection from a Round Pipe Flowing Full, Maximum Tailwater Condition: $T_w \geq 0.5D_o$) (USDA - NRCS)

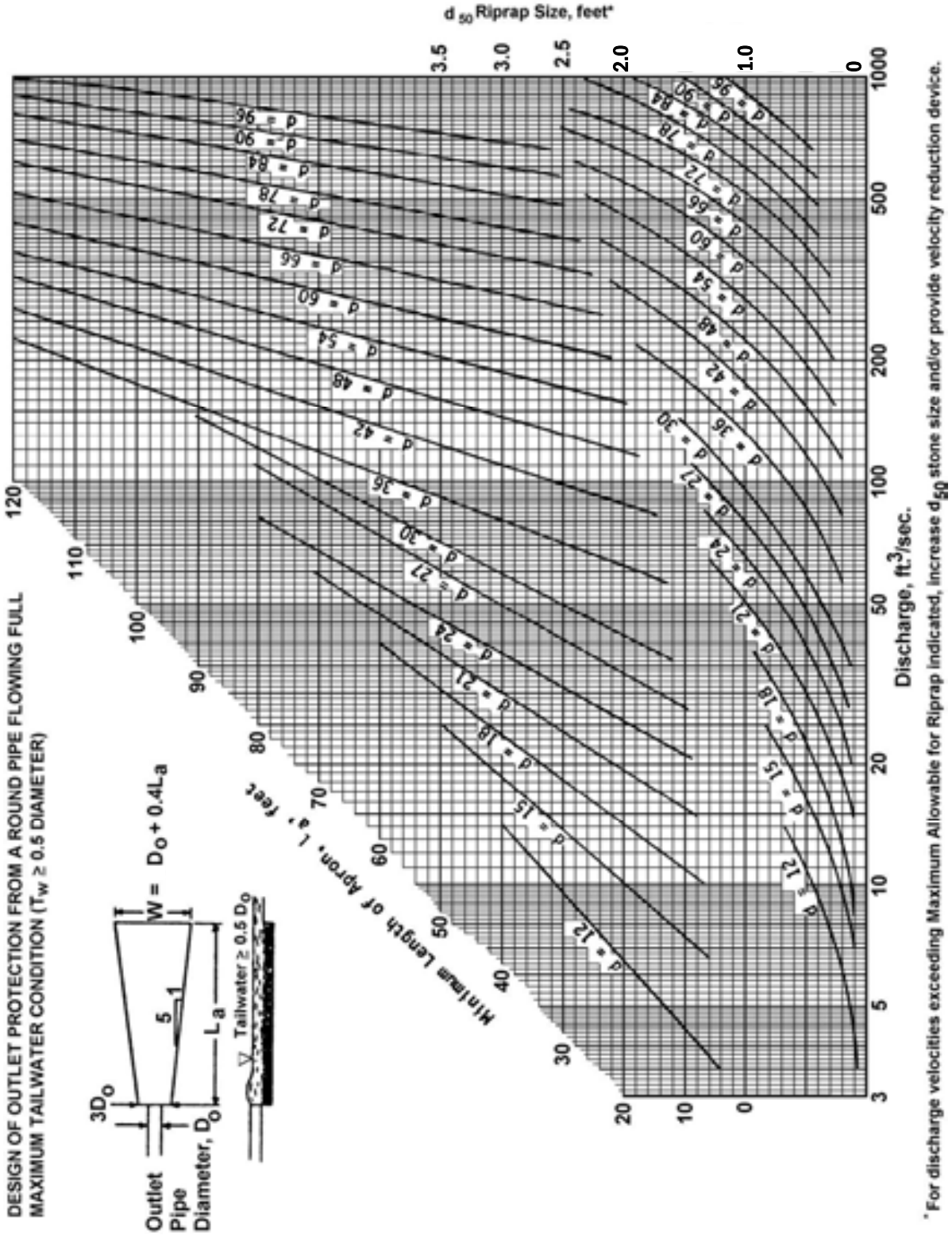


Figure 3.18
Riprap Outlet Protection Detail (1)

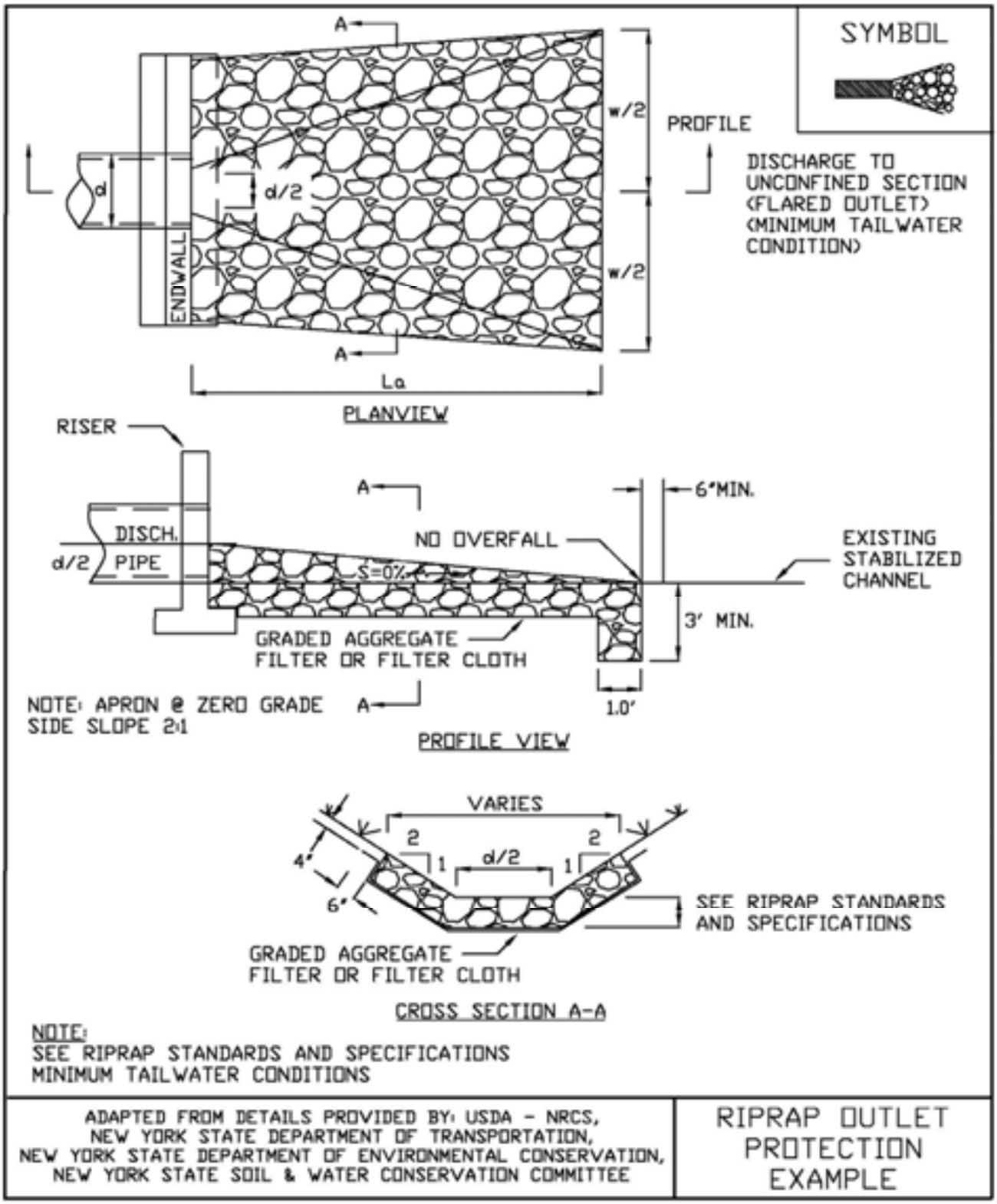


Figure 3.19
Riprap Outlet Protection Detail (2)

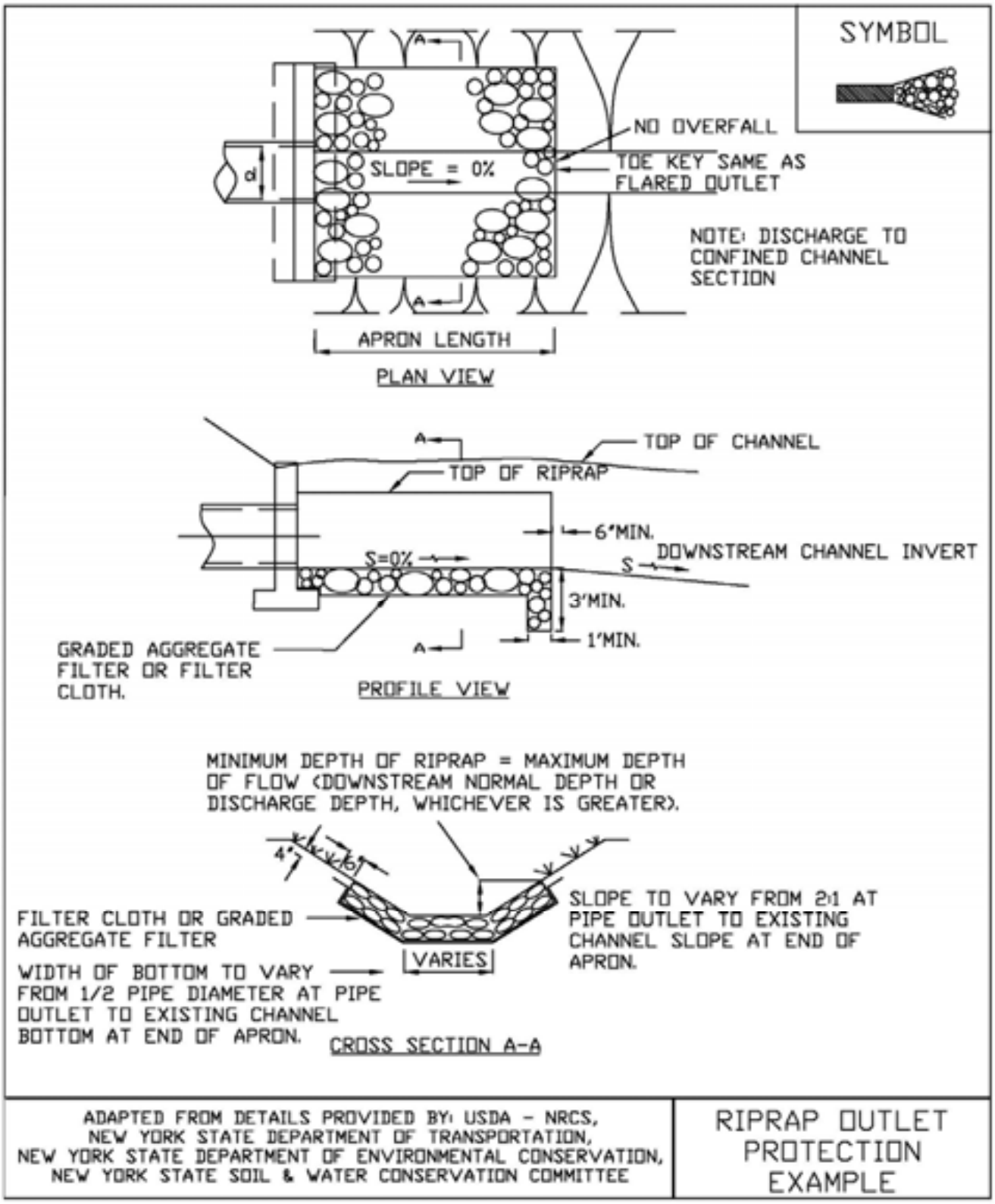
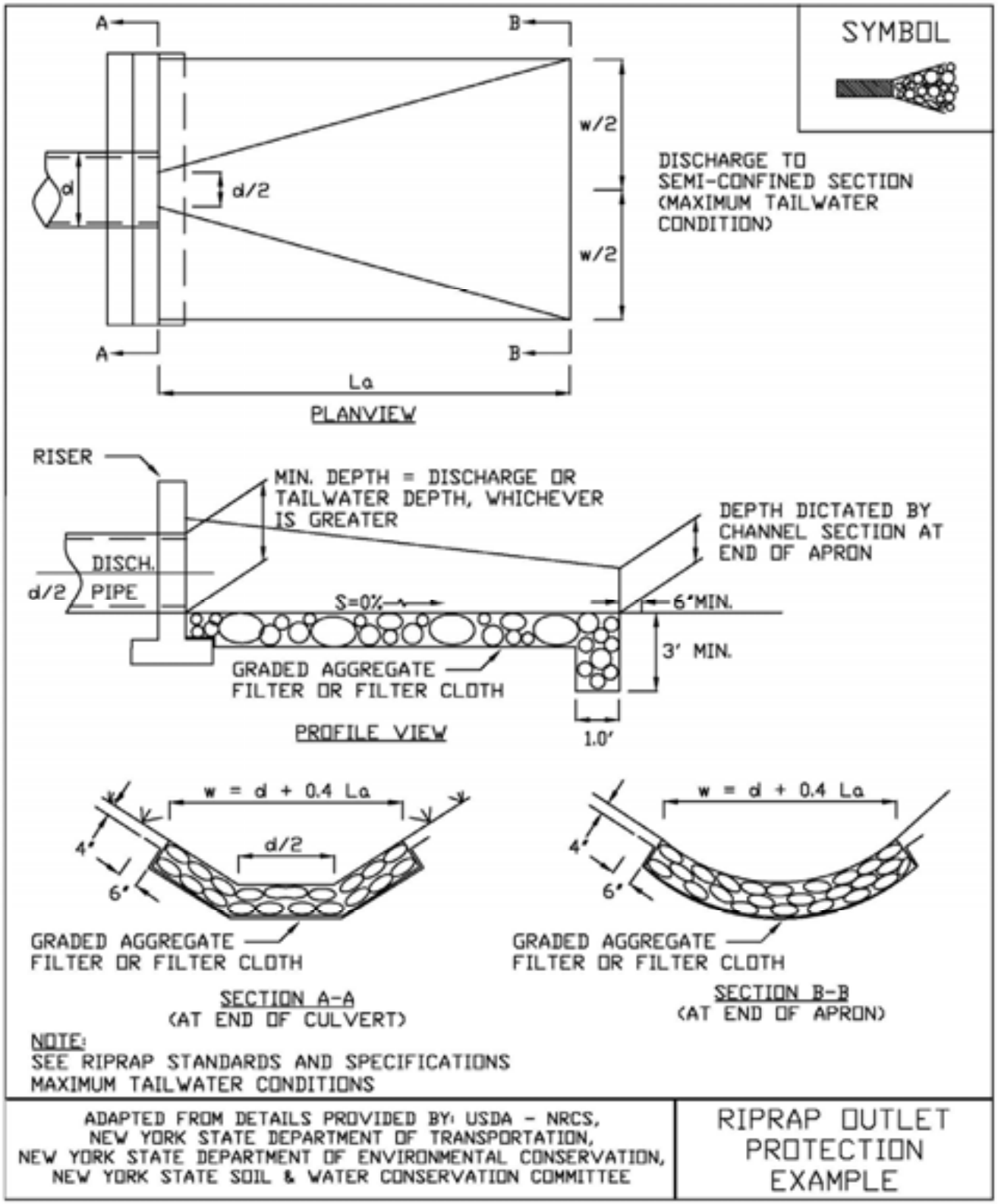


Figure 3.20
Riprap Outlet Protection Detail (3)



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:

$A = 0.01\ Qp$ or, $A = 0.015x$ D.A. (whichever is greater)

where,

A = the basin surface area, acres, measured at the service spillway crest; and

Qp = 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.

$$2(N)(P) = 1.15(L_s) \qquad N = (0.075)(L_s)/P$$

When anti-seep collars are used, the equation for revised seepage length becomes:

Where: Ls = 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 gullying and sediment generation. Often a riprap drop at major points of inflow would eliminate gullying 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 dewatered 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

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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:	Yes	No
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. Construction Notes & Details	Yes	No
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	Yes	No
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	Yes	No
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	Yes	No
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 to14 days as appropriate	____	____

C. Practices Stabilizing Soil (cont'd)	Yes	No
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	Yes	No
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 inspector[1] conduct an assessment of the site prior to the commencement of construction[2] 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 stabilization[3] 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.

CONSTRUCTION DURATION INSPECTIONS

b. Modifications to the SWPPP (To be completed as described below)

The Operator shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

Modification & Reason:

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Appendix 15 | Operation & Maintenance Plan*

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:

(NYS DEC Notice of Termination - January 2015)

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Appendix 16 | Notice of Termination (NOT)

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 HAYSTRAW 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 (HAYSTRAW 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 DESIGNATE; DEVELOP A PLAN TO FIX THE PROBLEMS; FIX THE PROBLEMS; GET BUILDING INSPECTORS OR HIS DESIGNATES 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 TURBID QUANTITIES. 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 HAYSTRAW 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. HAYSTRAW 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 SEEDS 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.

SEQUENCE OF CONSTRUCTION FOR EROSION CONTROL

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 BUT IN NO CASE NO MORE THAN 2 DAYS OR LESS IF RAIN IS PREDICTED AFTER CONSTRUCTION ACTIVITY THE APPLICANT SHALL INSTALL THE SOIL EROSION AND SEDIMENT CONTROLS AS PER THE APPROVED PLANS, WHICH INCLUDES THE SILT FENCES, AND INLET FILTERS AND SLOPE PROTECTING MEASURES. 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 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.

SEQUENCE OF CONSTRUCTION FOR EROSION CONTROL (PHASE 0)

PHASE 0: RIGHT OF WAY IMPROVEMENTS AND ROAD WIDENING
TOTAL LIMIT OF DISTURBANCE: 2.08 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 PIPESSTRUCTURES 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.

SEQUENCE OF CONSTRUCTION FOR EROSION CONTROL (PHASE 1)

PHASE 1: SITE ACCESS, PREPARATION FOR CONSTRUCTION VEHICLES, AND ROADWAY CONSTRUCTION
TOTAL LIMIT OF DISTURBANCE: 11.94 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 PIPESSTRUCTURES 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.

SEQUENCE OF CONSTRUCTION FOR EROSION CONTROL (PHASE 2)

PHASE 2 : PROPOSED BUILDING 2 AND LOADING DOCK CONSTRUCTION
TOTAL LIMIT OF DISTURBANCE: 9.36 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 PIPESSTRUCTURES 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 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 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.

SEQUENCE OF CONSTRUCTION FOR EROSION CONTROL (PHASE 3)

PHASE 3 : PROPOSED BUILDING 2 AND LOADING DOCK CONSTRUCTION
TOTAL LIMIT OF DISTURBANCE: 15.96 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 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 PIPESSTRUCTURES 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 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. 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.

SEQUENCE OF CONSTRUCTION FOR EROSION CONTROL (PHASE 4)

PHASE 4 : PROPOSED BUILDING 1 AND LOADING DOCK CONSTRUCTION
TOTAL LIMIT OF DISTURBANCE: 14.29 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

SEE SOIL EROSION & SEDIMENT CONTROL PLAN PHASES 6-7

PROP. PARTIAL LIMIT OF PHASE 6
TOTAL AREA = ±73,362 SF (±1.68 AC)
(LOD OFFSET 5' FROM SILT FENCE FOR GRAPHICAL PURPOSES)

PROP. LIMIT OF PHASE 0
TOTAL AREA = ±90,647 SF (±2.08 AC)
(LOD OFFSET 5' FROM SILT FENCE FOR GRAPHICAL PURPOSES)

PROP. LIMIT OF PHASE 2
TOTAL AREA = ±416,480 SF (±9.56 AC)
(LOD OFFSET 5' FROM SILT FENCE FOR GRAPHICAL PURPOSES)

PROP. LIMIT OF PHASE 1
TOTAL AREA = ±520,203 SF (±11.94AC)
(LOD OFFSET 5' FROM SILT FENCE FOR GRAPHICAL PURPOSES)

R=100.00'
A=25.20'
LC=25.13'
S09°53'20"W

N17°06'29"E
150.00'

N18°48'17"E
357.89'

TEMPORARY SEDIMENT TRAP 6
TOP = 414, BOTTOM= 410
BASIN AREA = 14,092 SF, 4' DEEP
VOLUME: 22,555 CF

TAX LOT
36 - 1 - 11.221

COIR FIBER BAFFLES TO BE INSTALLED (TYP. OF 3)

POTENTIAL LOCATION OF PROP. SOIL STOCKPILE (TYP.)

PROP. FIBER ROLL (TYP.)

COIR FIBER BAFFLES TO BE INSTALLED (TYP.)

TEMPORARY SEDIMENT TRAP 5
TOP = 414, BOTTOM = 410
BASIN AREA = 11,589 SF, 4' DEEP
VOLUME: 18,545 CF

PROP. AREA OF WETLAND DISTURBANCE = ±766 SF (±0.02 AC)

PROP. CONSTRUCTION ENTRANCE

COIR FIBER BAFFLES TO BE INSTALLED (TYP. OF 3)

POTENTIAL LOCATION FOR PROP. CONCRETE TRUCK WASHOUT

PROP. SILT FENCE (TYP.)

PROP. FIBER ROLL (TYP.)

TEMPORARY SEDIMENT BASIN 2
WITH POROUS BAFFLE , RISER AND SKIMMER (REFER TO DETAILS)
TOP BERM = 416, BOTTOM = 406.83
BASIN AREA = 21,463 SF
TOTAL STORAGE VOLUME: 93,846 SF

PROP. AREA OF WETLAND DISTURBANCE = ±4651 SF (±0.11)

PROP. AREA OF WETLAND DISTURBANCE = ±4,778 SF (±0.11 AC)

POTENTIAL LOCATION OF PROP. CONSTRUCTION STAGING AND MATERIALS STORAGE (TYP.)

POTENTIAL LOCATION OF PROP. CONSTRUCTION STAGING AND MATERIALS STORAGE (TYP.)

PROP. SILT FENCE (TYP.)

PROP. SILT FENCE (TYP.)

PROP. FAIRCLOTH SKIMMER (TYP.)

TEMPORARY SEDIMENT TRAP 3
TOP = 415, BOTTOM = 411
BASIN AREA = 12,593 SF, 4' DEEP
VOLUME: 20,148 CF

COIR FIBER BAFFLES TO BE INSTALLED (TYP. OF 3)

PROP. CONSTRUCTION ENTRANCE

PROP. TEMPORARY DIVERSION SWALE (TYP.)

PROP. FABRIC DROP INLET FILTER PROTECTION (TYP.)

PROP. STONE CHECK DAMN. (TYP.)

SHADED AREA TO BE LAND BANKED AND BUILT IF REQUESTED BY TENANT

APPROXIMATE LIMIT OF 100' WETLAND BUFFER PER NYSDEC ENVIRONMENTAL RESOURCE MAPPER

APPROXIMATE WETLANDS ENVIRONMENTAL RESOURCE MAPPER

ONE 301 NEELYTOWN LLC
S. 36 - B. 1 - LOT
33-1-1 - 427

TEMPORARY SEDIMENT TRAP 1
TOP = 372, BOTTOM = 368
TRAP AREA = 8,205 SF, 4' DEEP
VOLUME: 13,128 CF

POTENTIAL LOCATION OF PROP. SOIL STOCKPILE (TYP.)

PROP. WATER BARS SPACED 100' O.C (REFER TO DETAIL)

COIR FIBER BAFFLES TO BE INSTALLED (TYP. OF 3)

PROP. CONSTRUCTION ENTRANCE

PROP. STRAW BALE DIKES (TYP.)

POTENTIAL LOCATION FOR PROP. CONCRETE TRUCK WASHOUT

POTENTIAL LOCATION OF PROP. CONSTRUCTION STAGING AND MATERIALS STORAGE (TYP.)

COIR FIBER BAFFLES TO BE INSTALLED (TYP. OF 3).

TEMPORARY SEDIMENT BASIN 1
WITH POROUS BAFFLE , RISER AND SKIMMER (REFER TO DETAILS)
TOP BERM = 422, BOTTOM 414.67
BASIN AREA = 24,956 SF
TOTAL STORAGE VOLUME: 106,384 SF

PROPOSED CONDUIT OUTLET PROTECTION (TYP.)

PROP. FAIRCLOTH SKIMMER (TYP.)

R=400.00'
A=116.96'
LC=116.54'
N05°02'55"E

TRAFFIC SIGNAL POLE

SIGN

UTILITY BOX

PAVED DRIVE

PAVED DRIVE

PAVED DRIVE

DAM

NEELYTOWN ROAD

COUNTY ROAD 69

WETLAND "A" AREA = 5.4172 AC.

WETLAND "B" AREA = 2.9553 AC.

LEGEND

- = SILT FENCE
- = INLET PROTECTION
- = STAGING AREA
- = CONSTRUCTION ENTRANCE
- = LIMIT OF DISTURBANCE
- = ANCHORED STABILIZATION EROSION MATTING AREA
- = FAIRCLOTH SKIMMER
- = FIBER ROLL
- = WATER BAR

SEE CONSTRUCTION DETAILS FOR EROSION AND SEDIMENT CONTROL DETAILS

THIS PLAN TO BE UTILIZED FOR EROSION CONTROL PURPOSES ONLY.

TOTAL LIMIT OF DISTURBANCE FOR ENTIRE PROJECT = 87.66 ACRES

PHASE 1 SHALL STOCKPILE ±5,637 CUBIC YARDS OF TOPSOIL AND REQUIRES AN IMPORT OF ±59,752 CUBIC YARDS OF FILL.

PHASE 2 SHALL STOCKPILE ±7,920 CUBIC YARDS OF TOPSOIL AND REQUIRES AN IMPORT OF ±75,047 CUBIC YARDS OF FILL.

TOP 5 INCHES OF TOPSOIL TO BE STOCKPILED.

100 0 100 200
SCALE : 1" = 100'

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4	6/27/25	REVISED PER FEIS SUBMISSION.
5	12/12/25	REVISED PER FEIS COMMENTS.
6	2/17/2026	REVISED PER DOH & DOT COMMENTS.
7	6/5/26	REVISED PER FEIS COMMENTS.

NEELYTOWN BD DEVELOPERS LLC

PRELIMINARY/FINAL MAJOR SITE PLAN & MINOR SUBDIVISION

NEELYTOWN BUSINESS PARK DEVELOPMENT

SECTION 36, BLOCK 1, LOTS 33/11.221/11.23/11.212 /11.211/11.11/10.1 & SECTION 33, BLOCK 1, LOT 91
TOWN OF MONTGOMERY
ORANGE COUNTY, NEW YORK

STATE OF NEW YORK
JESSE BARRETT COKELEY
No. 090987
LICENSED PROFESSIONAL ENGINEER

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-1
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.Y. C.O.A #: 0017609

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SCALE:	DRAWN BY:
AS SHOWN	JG
DESIGNED BY:	REVIEWED BY:
JG	JBC
DATE ISSUED:	PROJECT NUMBER:
5/12/23	21000327A

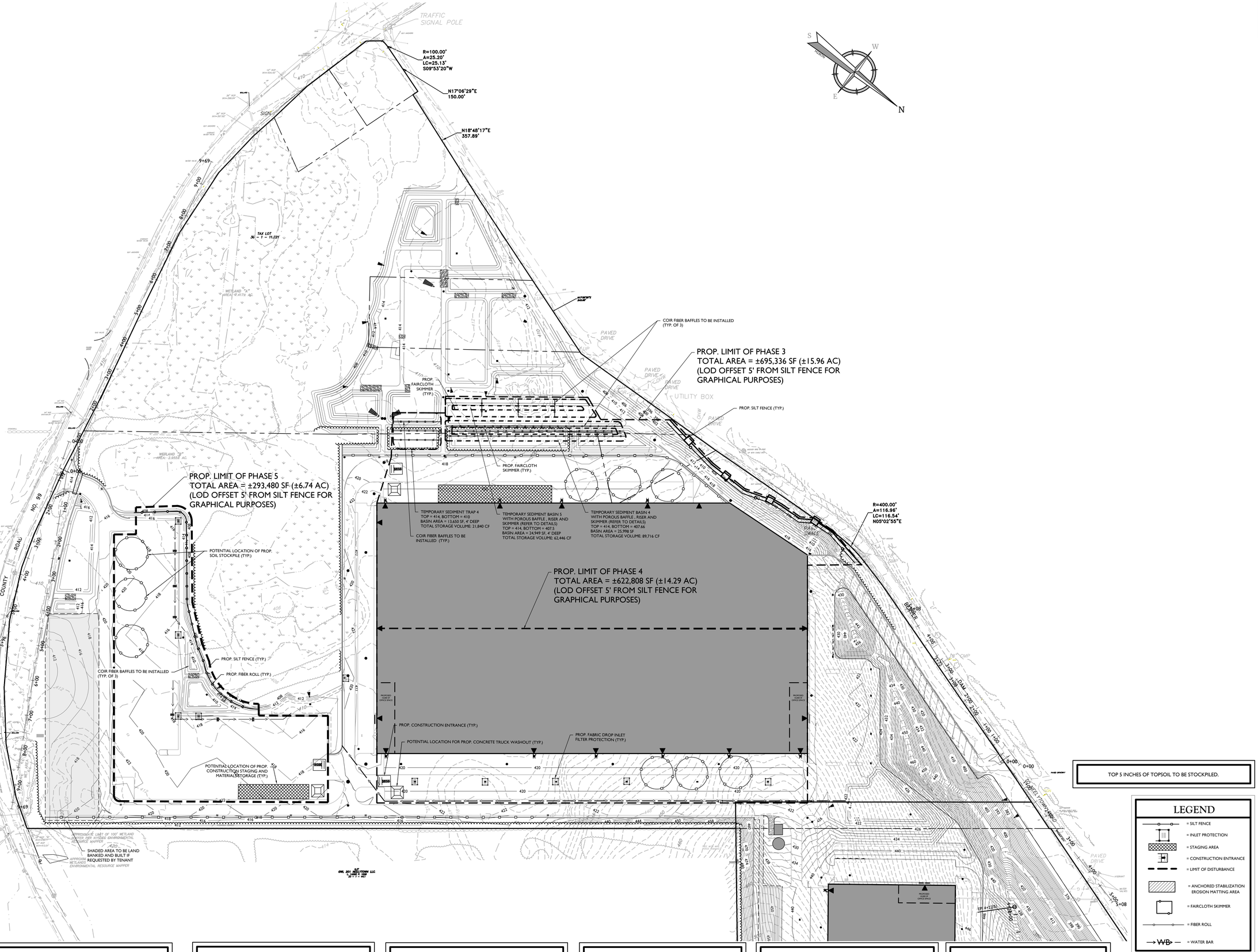
SHEET NAME:
SOIL EROSION & SEDIMENT CONTROL PLAN - PHASES 0-1-2

DRAWING NUMBER:
31 OF 50

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING DOCUMENT BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY DOCUMENTS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.

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Date: 6/5/2026 11:10:00 AM By: jgmcconville on 2026-06-05 - 11:10am



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5	12/12/25	REVISED PER FEIS COMMENTS.
6	2/17/2026	REVISED PER DOH & DOT COMMENTS.
7	6/5/26	REVISED PER FEIS COMMENTS.

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ORANGE COUNTY, NEW YORK

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DESIGNED BY: JG	REVIEWED BY: JBC
DATE ISSUED: 5/12/23	PROJECT NUMBER: 21000327A

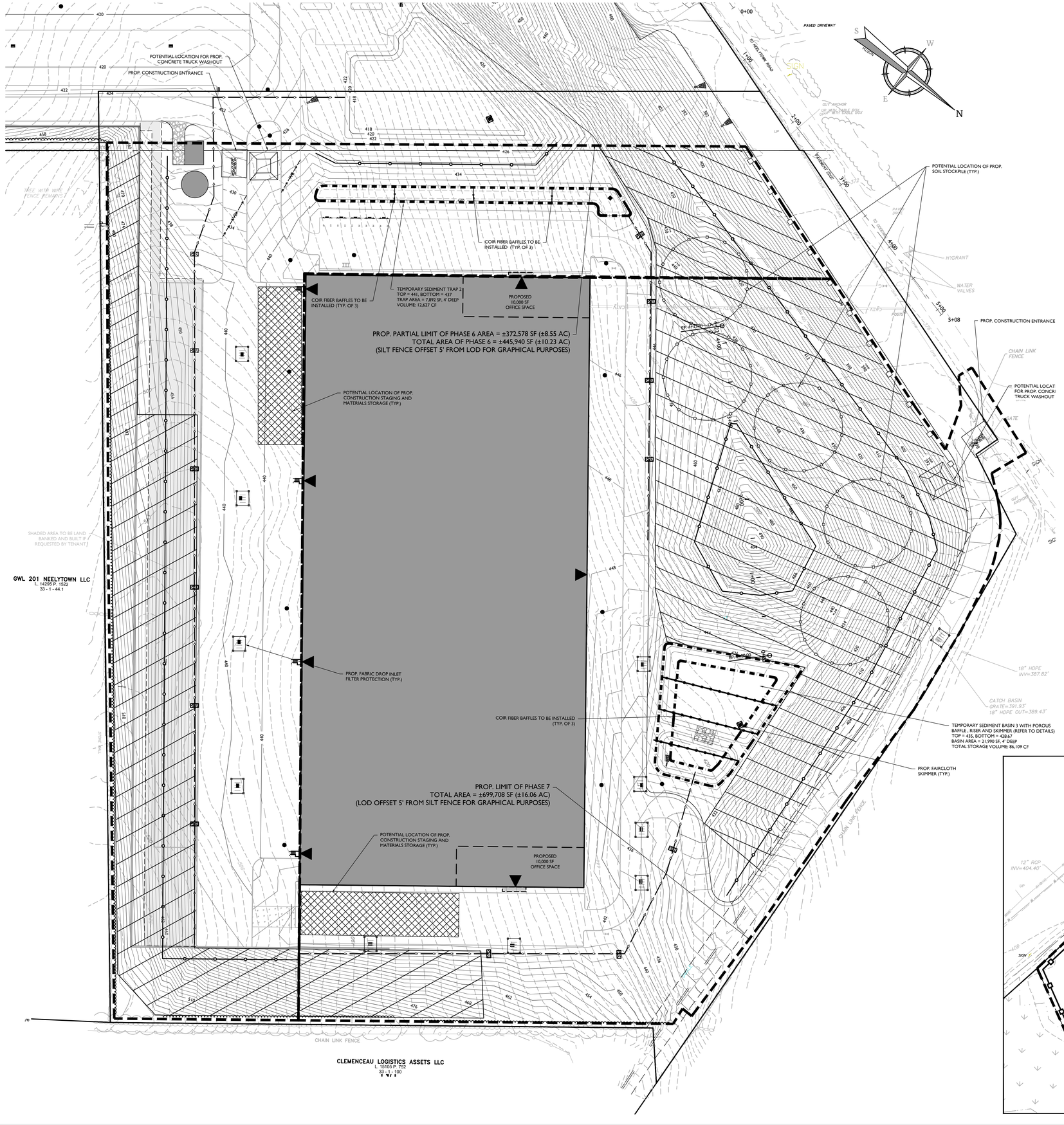
SHEET NAME:
SOIL EROSION & SEDIMENT CONTROL PLAN - PHASES 3-4-5

DRAWING NUMBER:
32 OF 50

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Plot By: JBACKER on 2026-06-05 - 11:08am
I:\21000327A\1-ENGINEERING\Engineering Civil Plans\SITE\Neely SEC 36 Lot 33 - EROSIONAL PHASES 3-4-5



TOP 5 INCHES OF TOPSOIL TO BE STOCKPILED.

PHASE 6 SHALL STOCKPILE ±5,637 CUBIC YARDS OF TOPSOIL AND REQUIRES AN EXCAVATION OF ±441,242 CUBIC YARDS OF CUT.

PHASE 7 SHALL STOCKPILE ±4,263 CUBIC YARDS OF TOPSOIL AND REQUIRES AN IMPORT OF ±70,904 CUBIC YARDS OF FILL.

SEE CONSTRUCTION DETAILS FOR EROSION AND SEDIMENT CONTROL DETAILS

THIS PLAN TO BE UTILIZED FOR EROSION CONTROL PURPOSES ONLY.

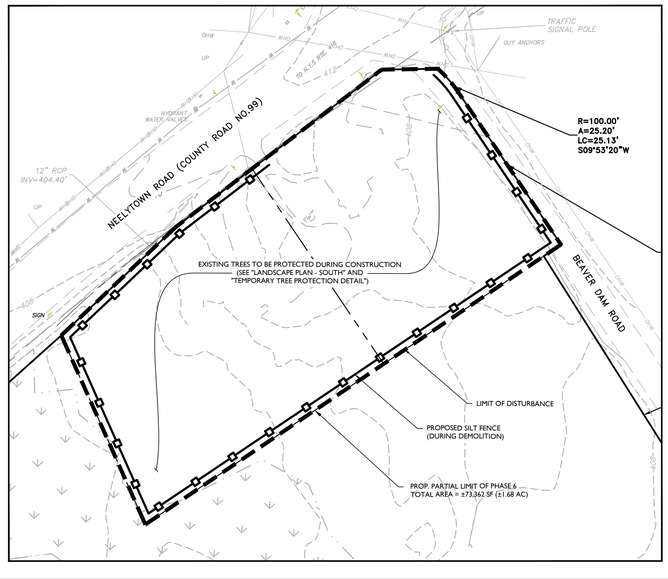
TOTAL LIMIT OF DISTURBANCE FOR ENTIRE PROJECT = 87.66 ACRES

LEGEND

- = SILT FENCE
- = INLET PROTECTION
- = STAGING AREA
- = CONSTRUCTION ENTRANCE
- = LIMIT OF DISTURBANCE
- = ANCHORED STABILIZATION EROSION MATTING AREA
- = FAIRCLOTH SKIMMER
- = FIBER ROLL
- WB = WATER BAR

100 0 100 200

SCALE : 1" = 100'



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5	12/12/25	REVISED PER FEIS COMMENTS.
6	2/17/2026	REVISED PER DOH & DOT COMMENTS.
7	6/5/26	REVISED PER FEIS COMMENTS.

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NEELYTOWN BUSINESS PARK DEVELOPMENT

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TOWN OF MONTGOMERY
ORANGE COUNTY, NEW YORK

STATE OF NEW YORK — JESSE BARRETT COKELEY — No. 090987 — LICENSED PROFESSIONAL ENGINEER

Jesse Barrett Cokeley
NEW YORK LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 090987-1
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DESIGNED BY: JG	REVIEWED BY: JBC
DATE ISSUED: 5/12/23	PROJECT NUMBER: 21000327A

SHEET NAME:

SOIL EROSION & SEDIMENT CONTROL PLAN-PHASES 6-7

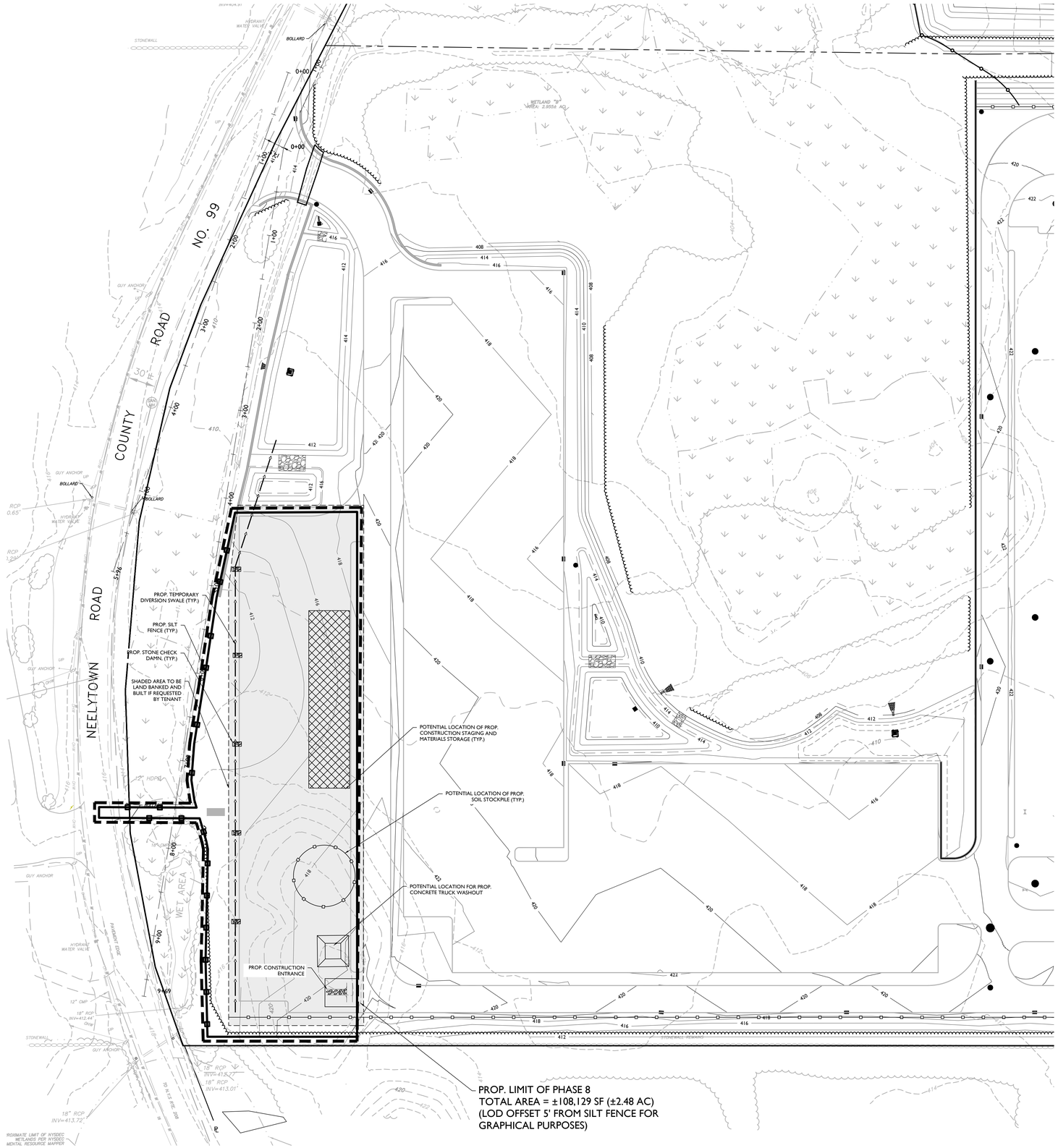
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Date: 5/12/2026 - 11:29am By: JGRAVES on: C:\Projects\21000327A\Engineering\Site Plans\SESC\Sheet\SESC PHASE 6-7



TOP 5 INCHES OF TOPSOIL TO BE STOCKPILED.

PHASE 8 SHALL STOCKPILE ±1,309 CUBIC YARDS OF TOPSOIL AND REQUIRES AN EXCAVATION OF ±1,501 CUBIC YARDS OF CUT.

SEE CONSTRUCTION DETAILS FOR EROSION AND SEDIMENT CONTROL DETAILS

THIS PLAN TO BE UTILIZED FOR EROSION CONTROL PURPOSES ONLY.

TOTAL LIMIT OF DISTURBANCE FOR ENTIRE PROJECT = 87.66 ACRES

LEGEND

- = SILT FENCE
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- = CONSTRUCTION ENTRANCE
- = LIMIT OF DISTURBANCE
- = ANCHORED STABILIZATION EROSION MATTING AREA
- = FAIRCLOTH SKIMMER
- = FIBER ROLL
- WB = WATER BAR

50 0 50 100

SCALE : 1" = 50'

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STATE OF NEW YORK
JESSE BARRETT COKELEY
No. 090987
LICENSED PROFESSIONAL ENGINEER

Jesse Barrett Cokeley
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DESIGNED BY: JG	REVIEWED BY: JBC
DATE ISSUED: 5/12/23	PROJECT NUMBER: 21000327A

SHEET NAME:

SOIL EROSION & SEDIMENT CONTROL PLAN - PHASE 8

DRAWING NUMBER:

34 OF 50

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C:\Jobs\21000327A\21000327A Engineering\Civil Plans\C-SESC.dwg | SAVED: 6/5/2026 10:13:03am | By: JMcDonald | on: 2026-06-05 | XREFS/Bind: Phase 8

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Appendix 17 | Soil Erosion & Sediment Control Plans and Details

DESIGN POINT (TYP)

WETLANDS/ UNDEVELOPED AREA
1,232,340 SF / 28.29 AC
CN = 80
Tc = 23.40 MINUTES

EXISTING DRAINAGE AREA 1
746,958 SF / 17.15 AC
CN = 40
Tc = 30.0 MINUTES

EXISTING DRAINAGE AREA 2
822,574 SF / 18.88 AC
CN = 44
Tc = 55.9 MINUTES

EXISTING DRAINAGE AREA 3
690,451 SF / 15.85 AC
CN = 52
Tc = 49.9 MINUTES

EXISTING DRAINAGE AREA 4
946,387 SF / 21.73 AC
CN = 54
Tc = 22.8 MINUTES

EXISTING DRAINAGE AREA 5
459,922 SF / 10.56 AC
CN = 56
Tc = 21.0 MINUTES

SOIL GROUP A
SOIL GROUP B
SOIL GROUP D

PROPOSED PUMP BUILDING AND WATER STORAGE TANK FOR FIRE PREVENTION MEASURES

WETLAND "A" AREA: 0.280± AC.
WETLAND "A" AREA: 8.908± AC.
WETLAND "B" AREA: 4.813± AC.

APPROXIMATE LIMIT OF NYSDEC WETLANDS PER NYSDEC ENVIRONMENTAL RESOURCE MAPPER

APPROXIMATE LIMIT OF 100' WETLAND BUFFER PER NYSDEC ENVIRONMENTAL RESOURCE MAPPER

STONEWALL REMAINS

CHAIN LINK FENCE

LEGEND:

- DRAINAGE AREA
- FLOW PATH
- # DESIGN POINT
- LIMIT OF NRCS SOIL TYPE

150 0 150 300
SCALE : 1" = 150'

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PRELIMINARY/FINAL
MINOR\MAJOR
SUBDIVISION/SITE PLAN
FOR
RDM GROUP, LLC

TAX LOT: 36-1-33
TAX LOT: 33-1-91

MONTGOMERY
ORANGE COUNTY
NEW YORK

Colliers Engineering & Design
MONTVALE
50 Chestnut Ridge Road, Suite 101
Montvale, NJ 07645
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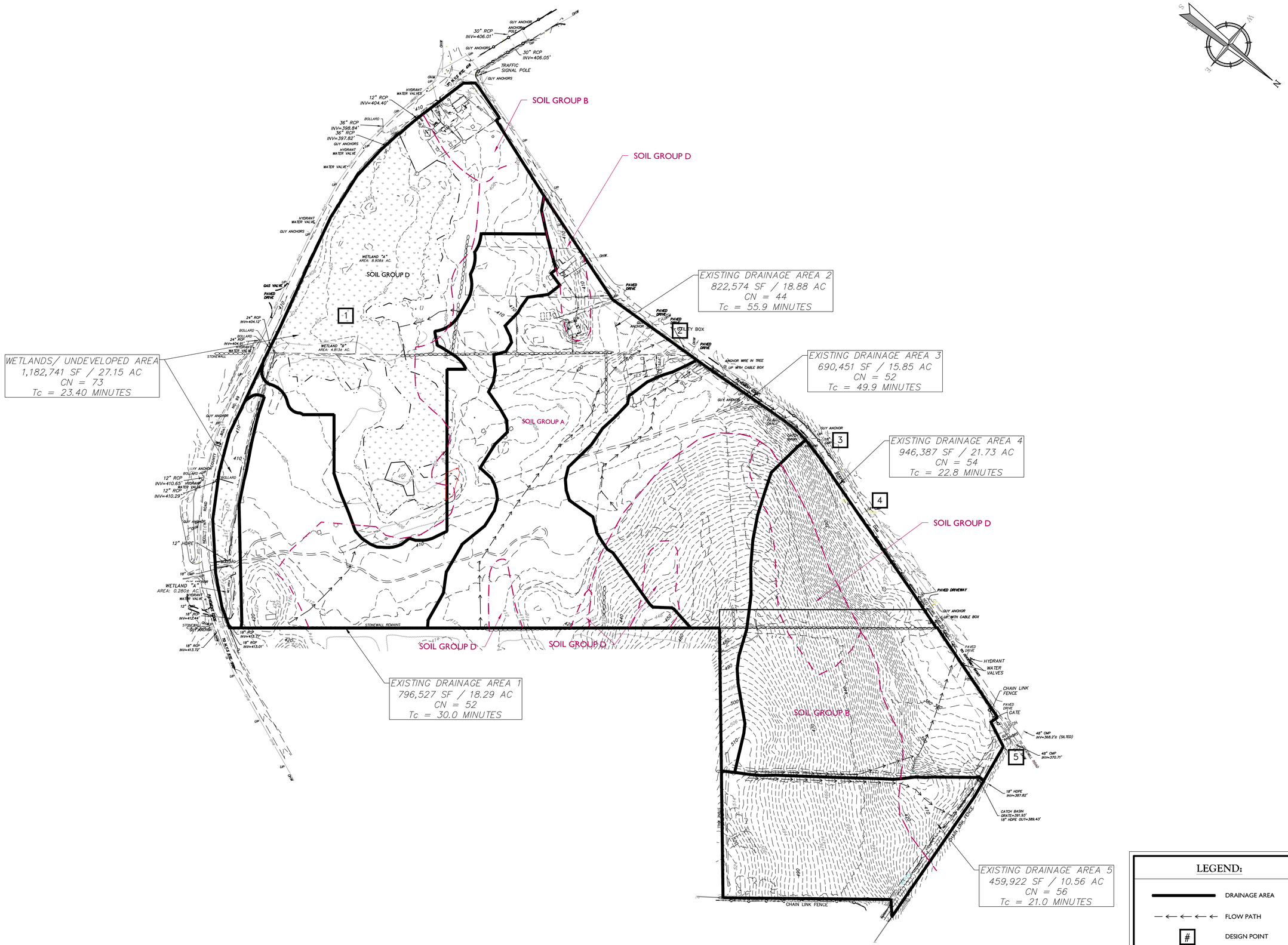
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	5/12/23	JAG	JBC

PROJECT NUMBER: 21000327A
DRAWING NAME: C-DRNG

SHEET TITLE: EXISTING DRAINAGE MAP

SHEET NUMBER: 1 of 2

20210100000316/Engineering/Drainage Mapping/C-DRNG.dwg/C-EX-DRT_DRAINAGE MAP By: JMACKEN



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PRELIMINARY/FINAL
MINOR\MAJOR
SUBDIVISION/SITE PLAN
FOR
RDM GROUP, LLC

TAX LOT: 36-1-33
TAX LOT: 33-1-91

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AS SHOWN	5/12/23	JAG	JRC

PROJECT NUMBER: 21000327A
DRAWING NAME: C-DRNG

SHEET TITLE: EXISTING DRAINAGE MAP

SHEET NUMBER: 1 of 2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2021\21000327A\Engineering\Drainage Maps\C-DRNG_layout 24 X36T_DRAINAGE MAP By JOSHSTEIN

PROPOSED DRAINAGE AREA 1G–IB
27,422 SF / 0.63 AC
CN = 45
Tc = 6.0 MINUTES

SOIL GROUP B

PROPOSED DRAINAGE AREA 1G–FB
17,215 SF / 0.40 AC
CN = 39
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1I+J–FB
13,894 SF / 0.32 AC
CN = 47
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1H–IB
39,736 SF / 0.91 AC
CN = 39
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1I–B
31,544 SF / 0.72 AC
CN = 39
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1B–IB
33,078 SF / 0.76 AC
CN = 40
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1J–B
33,984 SF / 0.78 AC
CN = 53
Tc = 6.0 MINUTES

WETLAND "A"
AREA: 0.280± AC.

SOIL GROUP D

PROPOSED DRAINAGE AREA 1K
26,597 SF / 0.61 AC
CN = 44
Tc = 6.0 MINUTES

GAS VALVE

PROPOSED DRAINAGE AREA 1F
250,816 SF / 5.76 AC
CN = 81
Tc = 6.0 MINUTES

WETLANDS/ UNDEVELOPED
AREA 1,182,741 SF / 27.15 AC
CN = 73
Tc = 23.40 MINUTES

PROPOSED DRAINAGE AREA 2U
74,849 SF / 1.72 AC
CN = 52
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1H–FB
19,432 SF / 0.45 AC
CN = 39
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 3U
54,725 SF / 1.26 AC
CN = 39
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1B–FB
16,395 SF / 0.38 AC
CN = 39
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1I
172,961 SF / 3.97 AC
CN = 82
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1C
112,511 SF / 2.58 AC
CN = 90
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1G
416,900 SF / 9.57 AC
CN = 98
Tc = 6.0 MINUTES

PROPOSED WAREHOUSE 1
850,000 S.F.
140 LOADING SPACES
246 TRAILER SPACES (43 BANKED)
300 PARKING SPACES
FFE = 424.40

PROPOSED DRAINAGE AREA 1E
17,321 SF / 0.40 AC
CN = 95
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1H
433,100 SF / 9.94 AC
CN = 98
Tc = 6.0 MINUTES

SOIL GROUP D

PROPOSED DRAINAGE AREA 1D
153,719 SF / 3.53 AC
CN = 91
Tc = 6.0 MINUTES

PAVED DRIVEWAY

PROPOSED DRAINAGE AREA 4U
322,148 SF / 7.40 AC
CN = 45
Tc = 6.0 MINUTES

WETLAND "A"
AREA: 0.280± AC.

PROPOSED DRAINAGE AREA 4A
104,546 SF / 2.40 AC
CN = 69
Tc = 6.0 MINUTES

SHADED AREA TO BE LAND BANKED AND BUILT IF REQUESTED BY TENANT

SOIL GROUP D

SOIL GROUP D

PROPOSED DRAINAGE AREA 4B–B
66,436 SF / 1.53 AC
CN = 75
Tc = 6.0 MINUTES

PAVED DRIVE

PROPOSED DRAINAGE AREA 1A
108,149 SF / 2.48 AC
CN = 78
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1J
218,370 SF / 5.01 AC
CN = 98
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 1B
398,242 SF / 9.14 AC
CN = 86
Tc = 6.0 MINUTES

PROPOSED WAREHOUSE 2
278,270 S.F.
50 LOADING SPACES
56 LAND BANKED TRAILER SPACES
156 PARKING SPACES
FFE = 444.50

48" CMP
INV=368.2'± (SILTED)

48" CMP
INV=370.71'

PAVED DRIVE

SHADED AREA TO BE LAND BANKED AND BUILT IF REQUESTED BY TENANT

18" HDPE
INV=387.82'

CATCH BASIN
GRATE=391.83'
18" HDPE OUT=389.43'

PROPOSED DRAINAGE AREA 4B
232,321 SF / 5.33 AC
CN = 84
Tc = 6.0 MINUTES

PROPOSED DRAINAGE AREA 5A
216,315 SF / 4.97 AC
CN = 74
Tc = 6.0 MINUTES

WATER LINE AND ACCESS EASEMENT IN FAVOR OF THE TOWN OF MONTGOMERY PER DEED LIBER 5292, PAGE 212

PROPOSED DRAINAGE AREA 5U
103,088 SF / 2.37 AC
CN = 59
Tc = 6.0 MINUTES

LEGEND:

- DRAINAGE AREA
- FLOW PATH
- # DESIGN POINT
- LIMIT OF NRCS SOIL TYPE

150 0 150 300
SCALE : 1" = 150'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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REV	DATE	DRAWN BY	DESCRIPTION

REV	DATE	DRAWN BY	DESCRIPTION
1	8/14/24	JAG	REVISED PER UPDATED PLAN LAYOUT

PRELIMINARY/FINAL
MINOR\MAJOR
SUBDIVISION/SITE PLAN
FOR
RDM GROUP, LLC

TAX LOT: 36-1-33
TAX LOT: 33-1-91

MONTGOMERY
ORANGE COUNTY
NEW YORK

Colliers Engineering & Design
MONTVALE
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PROJECT NUMBER:	DRAWING NAME:
21000327A	C-DRNG

SHEET TITLE:
PROPOSED DRAINAGE MAP

SHEET NUMBER:
2 of 2

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Appendix 18 | Existing & Proposed Drainage Area Maps

Colliers Engineering & Design

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