2026 Update to the Inflow Design Flood Control System Plan

for the:

C-Pond CCR Surface Impoundment
Greenidge Power Generating Station

October 2026

Prepared for:

GREENIDGE GENERATION

Greenidge Generation LLC
590 Plant Road
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Prepared by:

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PN 076-A0012-06

Executive Summary

This report was prepared to evaluate the Greenidge Power Generating Station's C-Pond against the hydrologic and hydraulic capacity requirements for coal combustion residual (CCR) surface impoundments as laid out in 40 C.F.R. § 257.82. This plan shows that C-Pond meets all requirements as supported by the provided engineering calculations.

The flood hazard potential was recently downgraded to a low hazard potential (EnSol, Inc, September 2026). Despite this, C-Pond was modeled with a design flood event of 8.16-inches, which is greater than a 1,000-year design flood based on the precipitation frequencies published by the USGS National Oceanic and Atmospheric Administration's (NOAA's) precipitation frequency data server (Atlas 14, Volume 10, version 3), significantly exceeding the inflow design flood recurrence frequency of 100 years required by 40 C.F.R. § 257.82(a)(3)(iii).

Even though the model incorporated many conservative assumptions, the modeled results support that C-Pond adequately manages peak inflow into the surface impoundment as required by 40 C.F.R. § 257.82(a)(1) because the impoundment contained the runoff without overtopping. Further, the modeled results support that C-Pond can adequately manage peak flow from the surface impoundment as required by 40 C.F.R. § 257.82(a)(2) because no discharge occurs from the design flood due to the design of the impoundment as an infiltration basin. However, if infiltration is assumed to be negligible, the peak flow is adequately conveyed via the discharge culvert without the pipe becoming inundated.

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Figure 1. Watershed Map

Attachments

1 Precipitation Frequency Estimates from NOAA and the Northeast Regional Climate Center
2 HydroCAD Model with Infiltration
3 HydroCAD Model without Infiltration

History of Revisions

Revision	Date	Notes
0	January 9, 2023	Initial – AECOM (Latham, NY)
1	October 2026	Updated stormwater model, figures, tables, and text for current site conditions

1. Introduction

1.1 Regulatory Basis and Applicability

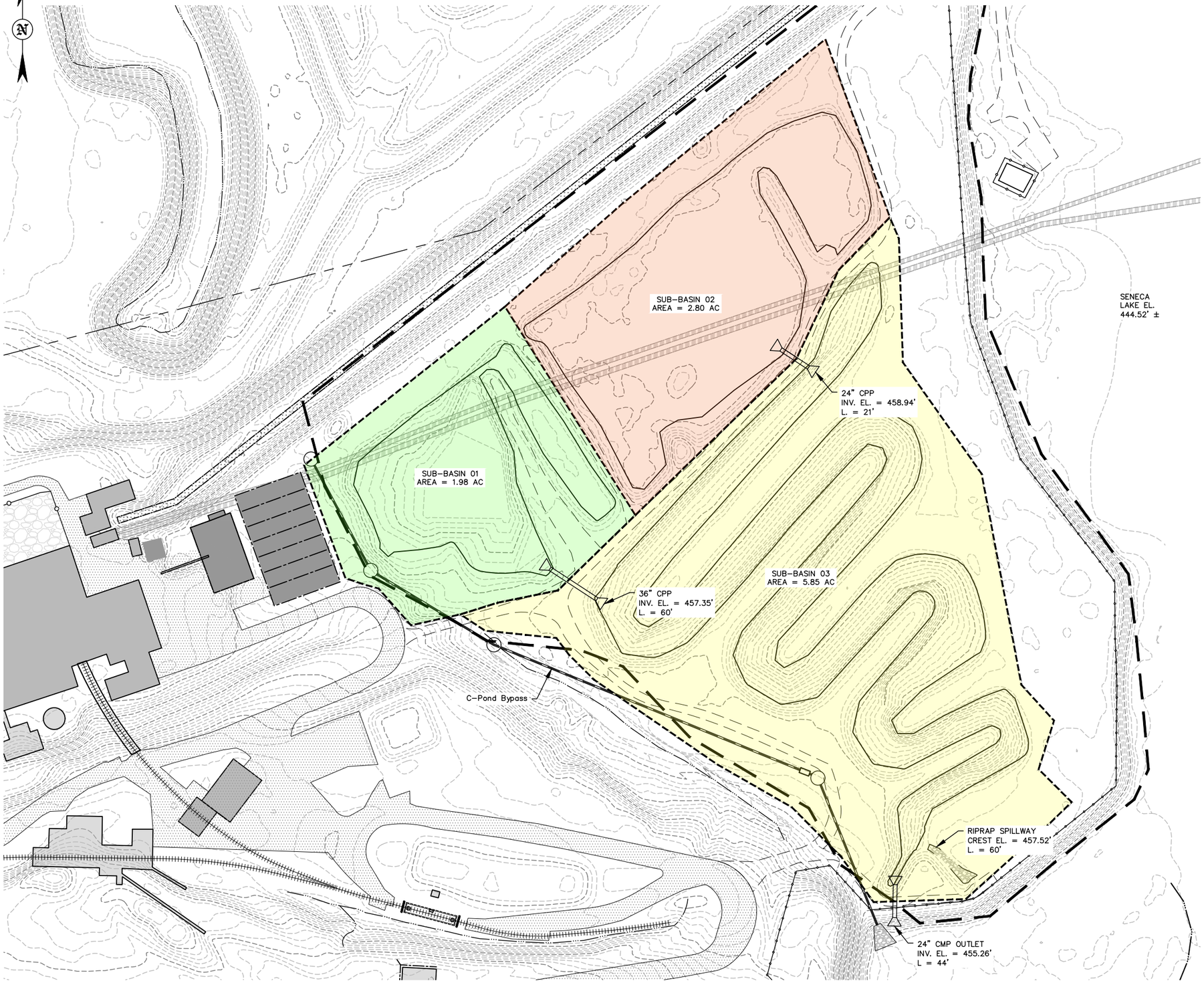
EnSol, Inc. (EnSol) has prepared this amendment to the initial Inflow Design Flood Control System Plan (AECOM, January 9, 2023) for the C-Pond owned by Greenidge Generation LLC (Greenidge), in accordance with sections of the federal Coal Combustion Residuals (CCR) regulations, that address hydrologic and hydraulic capacity requirements for CCR surface impoundments, 40 C.F.R. § 257.82. Amendment to this plan was in advance of the five-year periodic revision frequency required by § 257.82(c)(4) due to a change in conditions that substantially affect the initial plan as described in Section 1.2. Consistent with § 257.82(d), this plan shall be placed in the facility's operating record (§ 257.105(g)), then within 30 days, the document will be uploaded to the Facility's publicly accessible website (https://greenidgeccr.com/) (§ 257.107(g)), and the State Director will be notified of the amended plan's availability (§ 257.106(g)).

1.2 Facility and CCR Unit Description

The Greenidge Power Generating Station (Greenidge Station) is an electrical generating plant in the Town of Torrey, Yates County, New York that is owned by Greenidge. Greenidge Station burns natural gas with the ability to co-fire with up to 19% wood biomass. Historically, C-Pond was used as a bottom ash sluice pond. The facility transitioned from coal to natural gas in 2017 after coal combustion was ceased in 2011. Thus, C-Pond has not received CCR waste streams since 2011, but it was still being used to manage non-CCR waste streams and stormwater. In October 2023, a bypass pipe network was installed to redirect all influent from C-Pond. Following the completion of the C-Pond bypass, C-Pond no longer receives any influent beyond direct rainfall.

The current watershed plan of the C-Pond is provided in Figure 1. When C-Pond was in use, the bottom ash was sluiced into sub-basin 01 from which settled bottom ash would periodically be harvested for beneficial use by local municipalities as a road traction agent or for disposal in a nearby landfill. C-Pond was constructed and designed as an infiltration basin that provided hydraulic residence time and treatment of process flow prior to being discharged to Seneca Lake in accordance with Greenidge Station's State Pollutant Discharge Elimination System (SPDES) permit. The remaining water would either enter the sinuous discharge channel (sub-basin 03) directly or overtop an earthen berm into the overflow area (sub-basin 02) during periods of high flow.

As mentioned above, since installing the bypass pipe, shown in Figure 1, along the western boundary of C-Pond, all influent has been cut-off. The only influent to the impoundment is direct precipitation. Due to the impoundment's design as an infiltration basin, the impoundment does not hold water, typically dries out between precipitation events, and does not discharge. Discharge from the sinuous channel was regulated as Outfall 002 by the SPDES permit. Outfall 002, which is now associated with discharge from the bypass pipe, flows south-southeast overland before discharging to Seneca Lake, a Class B(T) receiving water.



NOTES:

1. BASE MAPPING (PLANIMETRICS) AND CURRENT TOPOGRAPHY GENERATED FROM DATA PROVIDED BY GREENIDGE GENERATION LLC., AND FROM A FIELD SURVEY BY RICHARD L. WILLSON, LS., DATED APRIL 25, 2018.
2. EXISTING GRADE SHOWN INCLUDES INTERPRETTED C-POND, SERPENTINE CHANNEL BOTTOM DATA AND EXISTING GRADE ADJACENT TO DISCHARGE PIPING FROM ENSOL INC., DATED JUNE 2022.
3. SITE COORDINATE PROJECTION SHOWN IN NAD27 STATE PLANE CENTRAL, US SURVEY FOOT.
4. SITE VERTICAL DATUM IS IN LOCAL PLANT DATUM.
5. SUB-BASIN LOCATIONS AND CULVERT LOCATIONS OBTAINED FROM AECOM FIGURE 1 – WATERSHED MAP, AND UPDATED USING ACAD WATERSHED TOOLS IN JULY, 2026. INFORMATION SHOULD BE CONSIDERED APPROXIMATE.
6. SENECA LAKE ELEVATION IS A CALCULATED AVERAGE FOR 12/11/25 TAKEN AT GENEVA BAY THE NYS CANAL CORP IN NAVD88. ELEVATION IS ADJUSTED BY 0.3 FT TO THE ELEVATION OF DRESDEN AND RAISED BY A CONVERSION OF 1.0255 FT TO LOCAL PLANT DATUM.
7. ASSUMED GROUND ELEVATION OF 446.0' UNDER THE UNIT 4 INTAKE PIPE FROM EARTHWORK BESIDE INTAKE PIPE TAKEN FROM THE C-PL-12192 DRAWING, PROVIDED BY GREENIDGE GENERATION LLC. BY GILBERT ASSOCIATES INC. DATED 1953.
8. APPROXIMATE LIMIT OF CCR FROM THE AECOM BORING LOCATION PLAN, SHEET P-01 OF PROJECT 60686548.

LEGEND:

- MAJOR CONTOURS (500)
- MINOR CONTOURS (498)
- APPROXIMATE LIMIT OF CCR
- SUB-BASIN BOUNDARY
- CULVERT
- PROPERTY BOUNDARY
- RAILROAD
- DRAINAGE SWALE/SURFACE WATER
- ROAD
- CONCRETE
- GRAVEL
- BUILDING

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145 SECTION 7209, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY.

NO.	REVISION	BY	DATE

EnSol
EnSol, Inc.
3000 Alt. Blvd.,
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716.285.3920

CLIENT:
GREENIDGE GENERATION LLC

GREENIDGE GENERATION

SITE:
GREENIDGE POWER GENERATING STATION
CITY OF DRESDEN
COUNTY OF YATES
STATE OF NEW YORK

PROJECT:
AMENDED INFLOW DESIGN FLOOD CONTROL SYSTEM PLAN

TITLE:
WATERSHED MAP

ISSUE:

DES:	DRN:	CHK:
BAMA	KLK	BAMA

PROJECT NO:	DATE:
076-A0012	JULY 2026

GRAPHIC SCALE: 0' 60' 120'

FILE: Watershed Map.dwg

REV NO:	FIGURE:
0	1

Y:\Greenidge Generation LLC\CAD\Watershed Map.dwg, 10/30/2026 7:24:38 AM

2. Hydrologic Analysis

2.1 Design Storm

The inflow design flood is specified in § 257.82(a)(3) based on the hazard potential classification of the surface impoundment. An initial hazard potential classification was prepared for C-Pond in accordance with § 257.73 (AECOM, January 9, 2023). Based on the evaluation at that time, C-Pond was given a significant hazard potential. Thus, the initial Inflow Design Flood Control System Plan appropriately utilized a 1,000-year design flood per § 257.82(a)(3)(ii).

Due to the changes to C-Pond described in Section 1.2, the hazard potential classification was re-evaluated in the amended Hazard Potential Classification (EnSol, Inc, August 2026). Based on the current operation of the C-Pond, the hazard potential classification was downgraded to low. Thus, the 100-year flood would be appropriate for this analysis per § 257.82(a)(3)(iii). However, for consistency with the initial Inflow Design Flood Control System Plan and to support the low hazard classification, a higher frequency design storm was used herein. The actual recurrence frequency depends on the source of the rainfall data as discussed in Section 2.2.

2.2 Rainfall Data

The precipitation estimates were obtained from the USGS National Oceanic and Atmospheric Administration's (NOAA's) precipitation frequency data server (Atlas 14, Volume 10, version 3)[1] and the Northwest Regional Climate Center within Cornell University. Both precipitation tables are provided in Attachment 1.

Stormwater modeling for the State of New York typically utilizes the database of extreme precipitation estimates managed by the Northwest Regional Climate Center (NRCC) within Cornell University. Cornell's database tends to be more conservative and in the State's opinion more representative of storms experienced in New York. Unfortunately, the highest storm recurrence provided by Cornell's database is the 500-year storm. The precipitation depth for a 24-hour, 500-year storm was reported to be 8.16 inches in Cornell's database. In NOAA's database, the precipitation depth for the 24-hour, 1,000-year storm was reported to be 7.51 inches. Thus, Cornell's 500-year storm provides a more conservation estimate of total precipitation than NOAA's 1,000-year storm. For this reason, the design storm used in the hydraulic analyses was an 8.16-inch storm with a site-specific rainfall distribution

2.3 Runoff Calculations

The watershed areas for the three C-Pond impoundment sub-basins were determined using topographical information provided by Richards L. Willson, LS. from a field survey conducted on April 25, 2018. The total drainage area for the C-Pond under its current operating condition is 10.63 acres. Table 2-1 provides a breakdown of each sub-basin.

[1] Note that Penn Yan, New York was listed as the location name, but the map on the 3rd page of the NOAA report clearly shows the Greenidge Station as the chosen location.

TABLE 2-1: SUB-BASIN WATERSHED AREAS

Sub-Basin	Description	Watershed Area (ac)
01	Former Pond	1.98
02	Former Overflow Area	2.80
03	Former Serpentine Outlet Channel	5.85

Runoff was calculated using the SCS TR-20 Method. The hydrologic soil group of the entire area was conservatively assumed to be Group D, providing minimal infiltration and maximum runoff. Landcover within the watershed includes an unimproved access road but is primarily covered with significant vegetation including tall grasses, thick common reeds, young woody vegetation (particularly in the overflow area), and a stand of mature growth trees along the eastern edge. Despite that, the SCS curve numbers or CN values, were conservatively set to be highly impervious, i.e., 98. This CN value is typically used for a water surface and cover types like roofs or paved streets and parking lots which again allows very little infiltration and quickly produces maximum runoff volume.

3. Hydraulic Analyses

3.1 Process Flows

There are no inflows to the system other than direct stormwater.

3.2 Storage Capacity

Bathymetry of the C-Pond, its overflow area, and serpentine channel was constructed using soundings collected with a graduated staff by EnSol, Inc. in June 2022. Stage-storage curves were constructed to estimate storage capacity of each sub-basin area independently by calculating the difference in area between each 1-foot contour interval and summing for a cumulative volume. Storage capacities of each sub-basin are summarized in Table 3-1.

TABLE 3-1: SUB-BASIN STORAGE CAPACITY SUMMARY

Sub-Basin	Top of Embankment Elevation (ft)	Depth of Sub-Basin (ft)	Top of Embankment Area (acre)	Storage Volume (acre-feet)
01	459.0	8.0	1.237	4.150
02	457.0	3.0	1.932	3.266
03	457.0	7.0	2.511	7.554

3.3 Discharge Analysis

Two models were constructed within HydroCAD® ver 10.10-5a (HydroCAD Software Solutions LLC, 2020). One recognized the infiltration that occurs from C-Pond, which as mentioned above was designed as an infiltration basin, and one assumed no infiltration. Reports from the two models are included in Attachments 2 and 3. Routing of the surface water for both models begins with stormwater that directly enters each subbasin. Sub-basin 01, the former Pond, has two outlets. The primary outlet is a 60-ft long, 36-in diameter corrugated plastic pipe located in the southeast corner with an invert elevation of 457.35 ft. The primary outlet discharges into the former sinuous channel (sub-basin 03). The secondary outlet is a 10-ft wide broad crested weir that discharges into the former overflow area (sub-basin 02). Preliminary evaluation showed that this emergency overflow weir was not activated in either model and therefore it was not included in the final models presented in Attachments 2 and 3.

Sub-basin 02, the former overflow area has one outlet. The single outlet is a 21-ft long, 24-in diameter corrugated plastic pipe located in the southeast/south central corner with an invert elevation of 458.94 ft. This outlet also discharges into the former sinuous channel (sub-basin 03).

Sub-basin 03, the former sinuous channel, receives the discharge from sub-basins 01 and 02 at its northern end. Water flows through the 2,300-ft channel to one of two outlets. The primary outlet is a 44-ft long, 24-in diameter corrugated metal pipe located at the southern end with an invert elevation of 455.26 ft. The primary outlet discharges into a shallow channel and eventually to Seneca Lake. The secondary outlet is a rip-rap lined emergency spillway with a length of 60-ft and a minimum crest elevation of 457.52 ft. Similar to the secondary outlet for sub-basin 01, preliminary evaluation showed that this emergency overflow weir was not activated in either model and therefore it was not included in the final models presented in Attachments 2 and 3.

In the HydroCAD model that included infiltration (Attachment 3), exfiltration from each sub-basin was assumed to be free discharge at a rate of 0.5 inches per hour. This rate was conservatively estimated based on compacted (90% standard proctor dry density) hydraulic conductivity testing of fly ash samples taken from the impoundment as presented in a draft subsurface investigation data report (AECOM, September 1, 2023).

4. Results

4.1 Inflow Analysis

The results of the stormwater runoff for both HydroCAD models are the same and are summarized in Table 4-1.

TABLE 4-1: SUB-BASIN HYDROLOGIC RESULTS

Sub-Basin	Maximum Runoff Flow Rate (cfs)	Time of Concentration (minutes)	Runoff Volume (acre-feet)	Runoff Depth (inches)
01	17.24	6.0	1.307	7.92
02	24.38	6.0	1.848	7.92
03	50.94	6.0	3.861	7.92

cfs = cubic feet per second

The time of concentration and runoff depth for all three sub-basins was the same at 6.0 minutes and 7.92 inches. However, the maximum velocity and volume of runoff increased with increasing watershed area from sub-basin 01 to sub-basin 03.

4.2 Outflow Analysis

The results of the HydroCAD hydraulic analysis for the models with and without infiltration are summarized in Table 4.2.

TABLE 4-2: SUB-BASIN HYDRAULIC RESULTS

Sub-Basin	Initial Water Surface Elev. (feet)	Without Infiltration		With Infiltration		
		Max. Water Surface Elev. (feet)	Max. Discharge Flow Rate (cfs)	Max. Water Surface Elev. (feet)	Max. Discharge Flow Rate (cfs)	Max. Infiltration (cfs)
01	452.0	455.76	0.00	455.12	0.00	0.32
02	455.0	456.22	0.00	455.76	0.00	0.85
03	451.0	455.28	0.00	454.78	0.00	1.09

As shown, even without considering infiltration, sub-basins 01 and 02 will not exceed their storage capacity, maximum elevations reached will not exceed their outlet invert elevations, and thus no discharge will occur under the design flood. The maximum water surface elevation in sub-basin 03 in the no infiltration model is 0.02 feet above the invert of the discharge pipe resulting in a maximum velocity of 0.04 feet per second, but an insignificant flowrate. Accounting for the infiltration, which is a better estimate of the true condition, results in no discharge to surface water.

5. Conclusions

Based on the use of Cornell's extreme flood estimates, the assumption of Group D hydrologic soil group, and the use of a CN number commonly associated with impervious areas such as a water surface, parking lots and roofs, the stormwater model was highly conservative. Additionally, the hydraulic modeling considered the case where infiltration was assumed to be negligible. Despite the compounding conservativism, the modeled results presented support that the C-Pond impoundment is designed, constructed, operated, and maintained in a manner that meets the performance requirements of § 257.82(a).

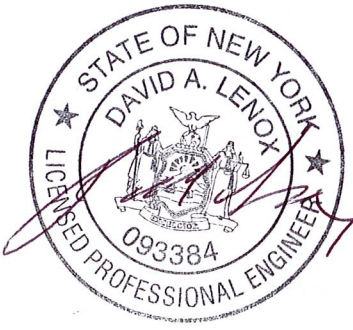
Specifically, § 257.82(a)(1) states, "[t]he inflow design flood control system must adequately manage flow into the CCR unit during and following the peak discharge of the inflow design flood." The modeled results show that all inflows are adequately stored by the three sub-basins that comprise the C-Pond area without use of the overflow weir or the emergency spillway. Section 257.82(a)(2) states, "the inflow design flood control system must adequately manage flow from the CCR unit to collect and control the peak discharge resulting from the inflow design flood." The modeled results show that routing through the system resulted in, at most, insignificant discharge that was adequately conveyed by the discharge structures under the design flood conditions.

6. Certification

I hereby certify that I reviewed inflow design flood control system report for C-Pond, located at the Greenidge Power Generating Station owned and operated by Greenidge Generation LLC, and the associated performance standards required by federal regulation 40 C.F.R. Part 257 Subpart D - Standards for the Disposal of Coal Combustion Residuals (CCR) in Landfills and Surface Impoundments published April 17, 2015 and last amended on May 8, 2024. To the best of my knowledge, information, and belief, the C-Pond CCR surface impoundment has been designed and constructed, and at the time of this report, is being operated and maintained, to meet the requirements specified in 40 C.F.R. Section 257.82 - Hydrologic and hydraulic capacity requirements for CCR surface impoundments.

I am a duly licensed professional engineer in the State of New York.

David A. Lenox, P.E.
NYSPE LIC # 0933384



10/29/2026

Attachment 1

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Precipitation Frequency Estimates from NOAA and the Northeast Regional Climate Center

NOAA Atlas 14, Volume 10, Version 3
Location name: Penn Yan, New York, USA*
Latitude: 42.6803°, Longitude: -76.945°
Elevation: 455 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.282 (0.220-0.355)	0.344 (0.268-0.434)	0.446 (0.346-0.563)	0.531 (0.410-0.675)	0.648 (0.485-0.857)	0.735 (0.540-0.991)	0.828 (0.592-1.16)	0.936 (0.630-1.32)	1.10 (0.710-1.60)	1.23 (0.777-1.82)
10-min	0.399 (0.312-0.503)	0.488 (0.380-0.615)	0.633 (0.491-0.800)	0.753 (0.581-0.956)	0.918 (0.687-1.22)	1.04 (0.764-1.40)	1.17 (0.838-1.64)	1.33 (0.893-1.87)	1.55 (1.00-2.26)	1.74 (1.10-2.58)
15-min	0.470 (0.367-0.592)	0.574 (0.447-0.723)	0.744 (0.578-0.941)	0.885 (0.684-1.12)	1.08 (0.809-1.43)	1.22 (0.900-1.65)	1.38 (0.986-1.93)	1.56 (1.05-2.20)	1.82 (1.18-2.66)	2.05 (1.30-3.04)
30-min	0.634 (0.495-0.798)	0.774 (0.604-0.976)	1.00 (0.779-1.27)	1.19 (0.922-1.52)	1.46 (1.09-1.93)	1.65 (1.21-2.23)	1.86 (1.33-2.60)	2.10 (1.42-2.97)	2.46 (1.59-3.58)	2.76 (1.75-4.09)
60-min	0.798 (0.623-1.00)	0.975 (0.760-1.23)	1.26 (0.981-1.60)	1.50 (1.16-1.91)	1.83 (1.37-2.42)	2.08 (1.53-2.80)	2.34 (1.67-3.27)	2.65 (1.78-3.74)	3.09 (2.00-4.51)	3.47 (2.20-5.14)
2-hr	0.987 (0.775-1.24)	1.19 (0.935-1.49)	1.53 (1.19-1.92)	1.81 (1.40-2.28)	2.19 (1.66-2.90)	2.47 (1.84-3.34)	2.78 (2.02-3.92)	3.18 (2.15-4.47)	3.82 (2.48-5.52)	4.37 (2.78-6.43)
3-hr	1.11 (0.875-1.38)	1.34 (1.05-1.67)	1.70 (1.34-2.13)	2.01 (1.56-2.52)	2.43 (1.84-3.20)	2.73 (2.04-3.68)	3.07 (2.25-4.33)	3.52 (2.38-4.93)	4.26 (2.77-6.14)	4.92 (3.13-7.20)
6-hr	1.36 (1.07-1.68)	1.62 (1.28-2.01)	2.05 (1.62-2.55)	2.41 (1.89-3.01)	2.90 (2.21-3.79)	3.26 (2.44-4.36)	3.66 (2.69-5.11)	4.18 (2.84-5.81)	5.04 (3.29-7.20)	5.80 (3.71-8.42)
12-hr	1.64 (1.31-2.02)	1.96 (1.56-2.41)	2.47 (1.96-3.05)	2.90 (2.28-3.60)	3.49 (2.67-4.51)	3.92 (2.94-5.17)	4.40 (3.21-6.01)	4.97 (3.40-6.84)	5.85 (3.84-8.29)	6.61 (4.24-9.52)
24-hr	1.95 (1.56-2.38)	2.32 (1.85-2.83)	2.93 (2.33-3.59)	3.43 (2.72-4.23)	4.13 (3.16-5.28)	4.65 (3.49-6.05)	5.20 (3.79-6.99)	5.83 (4.00-7.95)	6.75 (4.45-9.48)	7.51 (4.83-10.7)
2-day	2.26 (1.82-2.74)	2.69 (2.16-3.26)	3.39 (2.71-4.12)	3.97 (3.16-4.85)	4.77 (3.67-6.05)	5.37 (4.04-6.93)	6.00 (4.39-8.00)	6.72 (4.64-9.10)	7.77 (5.15-10.8)	8.63 (5.58-12.2)
3-day	2.48 (2.00-3.00)	2.94 (2.37-3.56)	3.69 (2.97-4.48)	4.32 (3.45-5.25)	5.17 (4.00-6.53)	5.82 (4.40-7.48)	6.49 (4.76-8.62)	7.27 (5.03-9.79)	8.39 (5.57-11.6)	9.32 (6.04-13.1)
4-day	2.67 (2.16-3.22)	3.15 (2.55-3.80)	3.94 (3.17-4.76)	4.59 (3.68-5.57)	5.49 (4.25-6.91)	6.16 (4.66-7.89)	6.87 (5.04-9.08)	7.68 (5.32-10.3)	8.85 (5.89-12.2)	9.81 (6.37-13.8)
7-day	3.18 (2.58-3.80)	3.70 (3.00-4.43)	4.55 (3.68-5.47)	5.25 (4.23-6.34)	6.22 (4.84-7.78)	6.96 (5.29-8.85)	7.72 (5.69-10.1)	8.59 (5.98-11.5)	9.84 (6.57-13.5)	10.9 (7.07-15.2)
10-day	3.65 (2.98-4.36)	4.21 (3.43-5.02)	5.11 (4.15-6.12)	5.86 (4.72-7.04)	6.88 (5.36-8.57)	7.66 (5.84-9.70)	8.47 (6.25-11.0)	9.38 (6.54-12.4)	10.7 (7.14-14.6)	11.7 (7.64-16.3)
20-day	5.12 (4.20-6.06)	5.75 (4.71-6.82)	6.78 (5.54-8.07)	7.64 (6.20-9.13)	8.82 (6.91-10.9)	9.72 (7.43-12.2)	10.6 (7.85-13.7)	11.6 (8.16-15.3)	13.0 (8.73-17.6)	14.0 (9.19-19.3)
30-day	6.36 (5.23-7.50)	7.04 (5.79-8.32)	8.17 (6.69-9.68)	9.11 (7.42-10.8)	10.4 (8.16-12.7)	11.4 (8.72-14.2)	12.4 (9.13-15.8)	13.4 (9.43-17.5)	14.8 (9.96-19.9)	15.8 (10.4-21.6)
45-day	7.92 (6.54-9.30)	8.67 (7.15-10.2)	9.89 (8.13-11.7)	10.9 (8.91-12.9)	12.3 (9.68-15.0)	13.4 (10.3-16.5)	14.5 (10.7-18.3)	15.5 (11.0-20.2)	16.9 (11.4-22.6)	17.8 (11.7-24.3)
60-day	9.24 (7.65-10.8)	10.0 (8.29-11.8)	11.3 (9.33-13.3)	12.4 (10.2-14.7)	13.9 (10.9-16.8)	15.1 (11.6-18.5)	16.2 (11.9-20.3)	17.2 (12.2-22.3)	18.5 (12.6-24.7)	19.4 (12.8-26.3)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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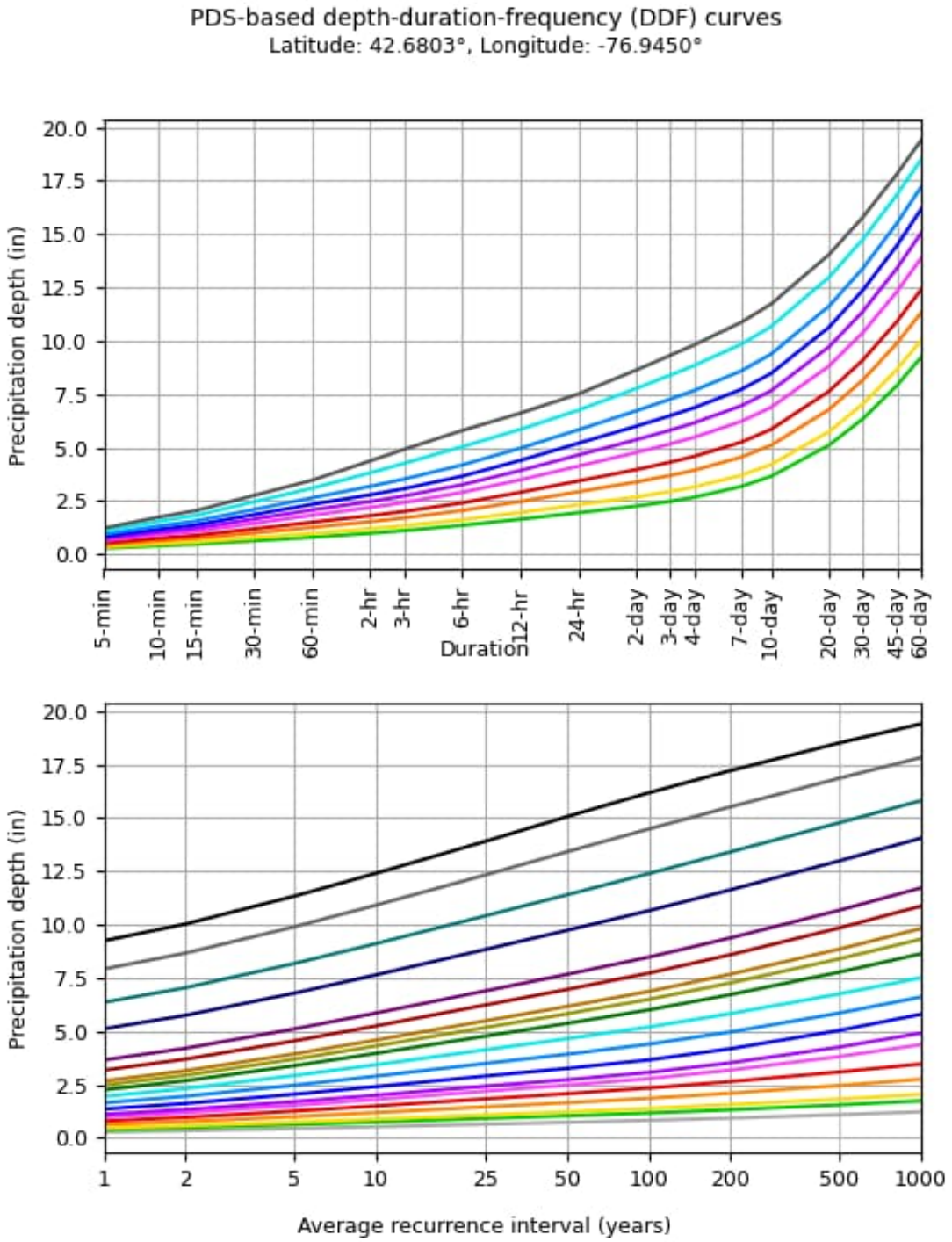
PF graphical



NOAA Atlas 14, Volume 10, Version 3

Created (GMT): Fri Aug 21 17:49:13 2026

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Maps & aerials

Small scale terrain

Large scale terrain

Large scale map

Large scale aerial

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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point

Smoothing	Yes
State	
Location	Dresden, New York
Latitude	42.683 degrees North
Longitude	76.958 degrees West
Elevation	150 feet
Date/Time	Fri Aug 21 2026 12:55:38 GMT-0400 (Eastern Daylight Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.66	0.82	1.01	**1yr**	0.71	0.91	1.14	1.37	1.62	1.91	2.15	**1yr**	1.69	2.07	2.46	2.95	3.38	**1yr**
2yr	0.31	0.48	0.60	0.79	1.00	1.22	**2yr**	0.86	1.11	1.38	1.64	1.92	2.23	2.50	**2yr**	1.98	2.40	2.82	3.33	3.80	**2yr**
5yr	0.37	0.58	0.72	0.97	1.24	1.53	**5yr**	1.07	1.36	1.73	2.06	2.40	2.76	3.11	**5yr**	2.45	2.99	3.49	4.04	4.61	**5yr**
10yr	0.42	0.65	0.83	1.12	1.46	1.82	**10yr**	1.26	1.60	2.06	2.44	2.84	3.25	3.67	**10yr**	2.88	3.53	4.10	4.69	5.33	**10yr**
25yr	0.49	0.78	0.99	1.37	1.82	2.27	**25yr**	1.57	1.97	2.58	3.05	3.54	4.03	4.57	**25yr**	3.57	4.39	5.07	5.71	6.47	**25yr**
50yr	0.56	0.89	1.14	1.60	2.15	2.70	**50yr**	1.86	2.32	3.07	3.63	4.19	4.74	5.40	**50yr**	4.20	5.19	5.95	6.63	7.49	**50yr**
100yr	0.63	1.02	1.31	1.86	2.54	3.21	**100yr**	2.19	2.73	3.66	4.31	4.95	5.58	6.38	**100yr**	4.94	6.14	7.00	7.69	8.68	**100yr**
200yr	0.72	1.18	1.53	2.18	3.01	3.81	**200yr**	2.60	3.21	4.34	5.11	5.85	6.57	7.55	**200yr**	5.82	7.26	8.22	8.94	10.06	**200yr**
500yr	0.86	1.42	1.85	2.69	3.77	4.79	**500yr**	3.25	3.99	5.46	6.41	7.31	8.16	9.43	**500yr**	7.22	9.07	10.19	10.89	12.24	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.21	0.32	0.39	0.52	0.64	0.71	**1yr**	0.55	0.69	0.77	1.05	1.42	1.76	1.79	**1yr**	1.56	1.72	2.23	2.65	3.16	**1yr**
2yr	0.31	0.47	0.58	0.79	0.97	1.08	**2yr**	0.84	1.06	1.21	1.49	1.80	2.17	2.38	**2yr**	1.92	2.29	2.72	3.22	3.70	**2yr**
5yr	0.34	0.53	0.66	0.90	1.14	1.29	**5yr**	0.99	1.27	1.42	1.72	2.13	2.54	2.85	**5yr**	2.25	2.74	3.21	3.72	4.24	**5yr**
10yr	0.38	0.58	0.72	1.00	1.30	1.46	**10yr**	1.12	1.43	1.59	1.93	2.41	2.85	3.15	**10yr**	2.52	3.03	3.59	4.11	4.68	**10yr**
25yr	0.43	0.66	0.82	1.17	1.53	1.71	**25yr**	1.32	1.67	1.86	2.24	2.83	3.30	3.64	**25yr**	2.92	3.50	4.14	4.67	5.31	**25yr**
50yr	0.48	0.73	0.90	1.30	1.75	1.92	**50yr**	1.51	1.88	2.09	2.53	3.20	3.68	4.04	**50yr**	3.26	3.89	4.59	5.12	5.83	**50yr**
100yr	0.53	0.80	1.00	1.45	1.99	2.17	**100yr**	1.71	2.12	2.34	2.84	3.63	4.10	4.47	**100yr**	3.63	4.30	5.09	5.57	6.36	**100yr**
200yr	0.59	0.89	1.12	1.62	2.26	2.47	**200yr**	1.95	2.41	2.64	3.20	4.11	4.56	4.93	**200yr**	4.04	4.74	5.61	6.05	6.92	**200yr**
500yr	0.67	1.00	1.29	1.88	2.67	2.93	**500yr**	2.30	2.87	3.12	3.78	4.89	5.23	5.57	**500yr**	4.63	5.36	6.37	6.69	7.69	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.29	0.46	0.56	0.75	0.92	1.03	**1yr**	0.79	1.00	1.14	1.40	1.74	2.07	2.32	**1yr**	1.83	2.23	2.67	3.18	3.57	**1yr**
2yr	0.33	0.50	0.62	0.84	1.04	1.17	**2yr**	0.89	1.15	1.30	1.59	1.94	2.31	2.64	**2yr**	2.05	2.54	3.00	3.45	3.94	**2yr**
5yr	0.40	0.62	0.77	1.05	1.34	1.50	**5yr**	1.16	1.47	1.65	1.98	2.41	3.03	3.37	**5yr**	2.69	3.24	3.80	4.40	5.03	**5yr**
10yr	0.48	0.73	0.91	1.27	1.64	1.82	**10yr**	1.41	1.78	1.99	2.37	2.87	3.72	4.22	**10yr**	3.30	4.05	4.63	5.33	6.08	**10yr**
25yr	0.61	0.92	1.15	1.64	2.15	2.36	**25yr**	1.86	2.31	2.55	3.01	3.64	4.91	5.60	**25yr**	4.34	5.39	6.06	6.89	7.84	**25yr**
50yr	0.72	1.09	1.36	1.96	2.64	2.87	**50yr**	2.28	2.81	3.08	3.59	4.35	6.05	6.94	**50yr**	5.35	6.68	7.44	8.39	9.54	**50yr**
100yr	0.86	1.31	1.64	2.36	3.24	3.50	**100yr**	2.80	3.42	3.72	4.28	5.20	7.48	8.62	**100yr**	6.62	8.29	9.15	10.25	11.64	**100yr**
200yr	1.03	1.55	1.97	2.85	3.97	4.27	**200yr**	3.43	4.17	4.49	5.11	6.21	9.25	10.72	**200yr**	8.18	10.30	11.23	12.56	14.23	**200yr**
500yr	1.31	1.96	2.52	3.66	5.20	5.56	**500yr**	4.49	5.43	5.77	6.46	7.87	12.28	14.32	**500yr**	10.87	13.77	14.76	16.44	18.60	**500yr**

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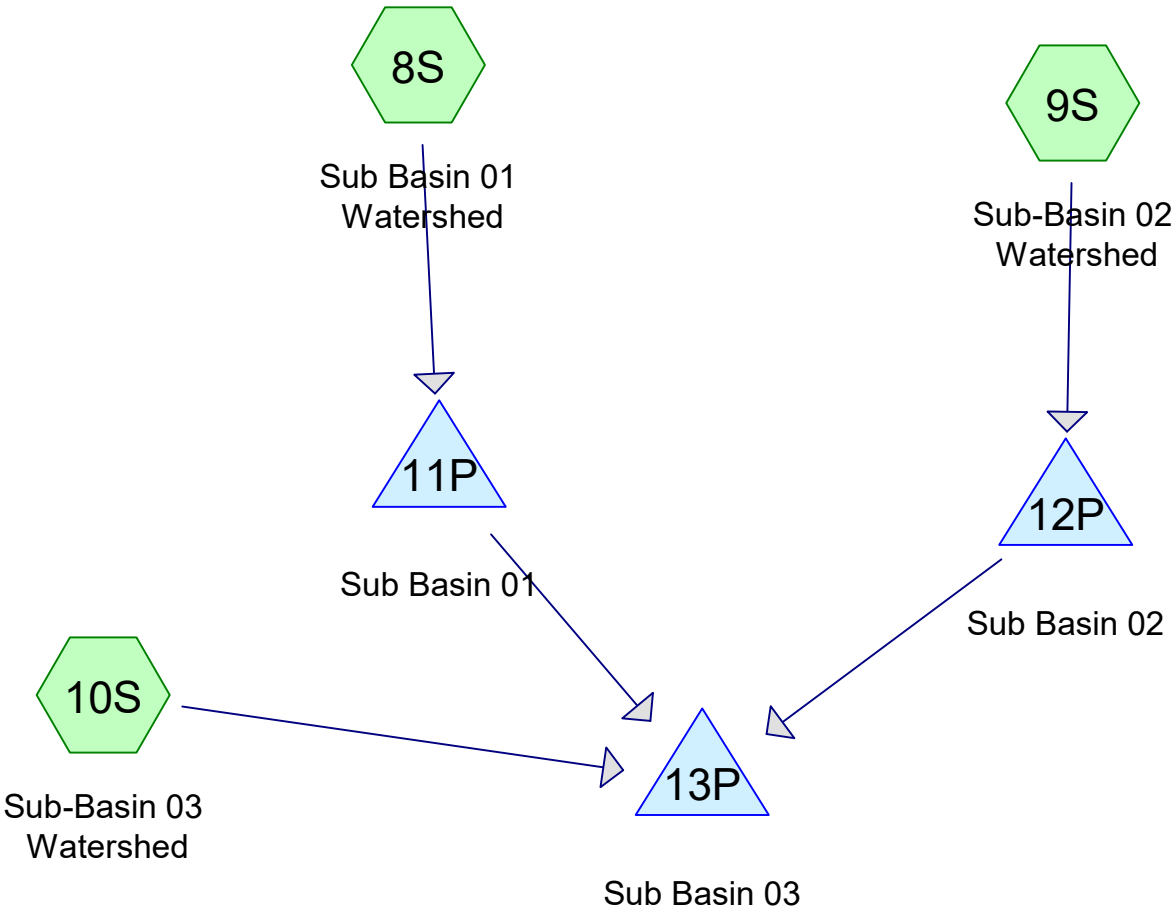
Attachment 2

ENGINEERING + ENVIRONMENTAL

HydroCAD Model with Infiltration



Subcat Reach Pond Link

Routing Diagram for C-Pond with infiltration
Prepared by LG, Printed 7/28/2026
HydroCAD® 10.10-5a s/n 07607 © 2020 HydroCAD Software Solutions LLC

Summary for Subcatchment 8S: Sub Basin 01 Watershed

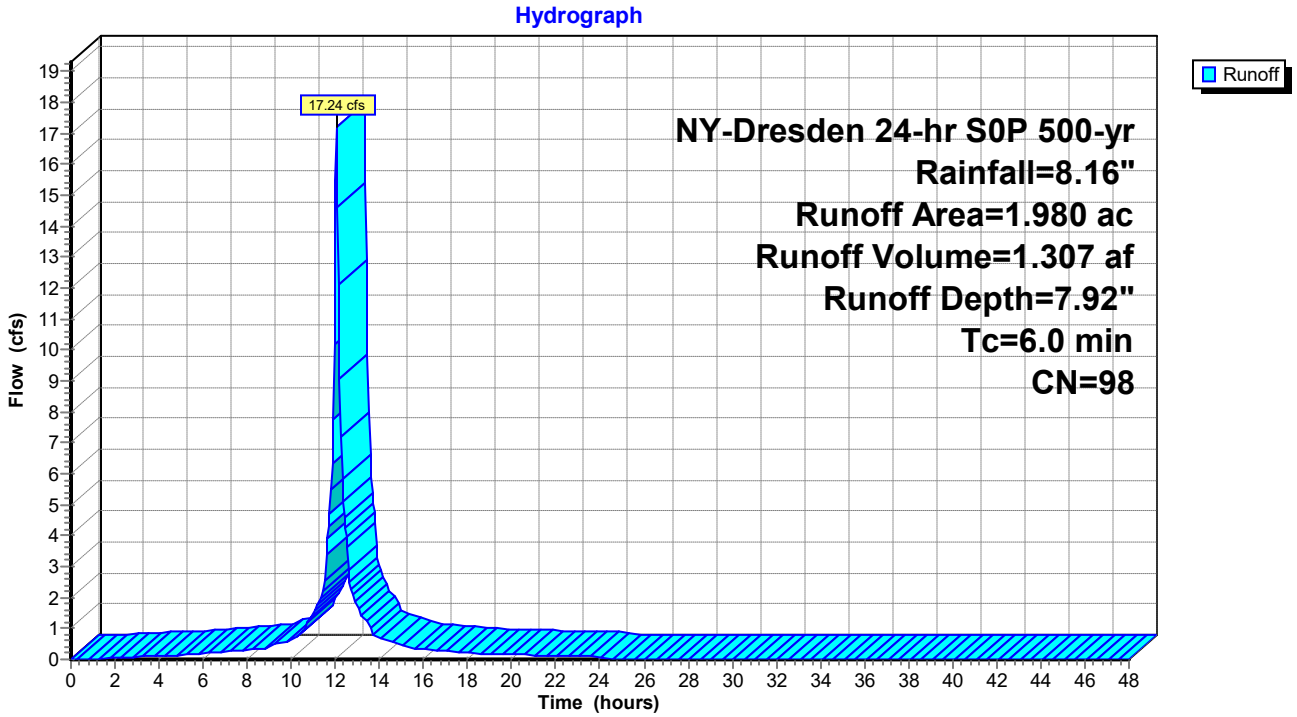
Runoff = 17.24 cfs @ 12.04 hrs, Volume= 1.307 af, Depth= 7.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NY-Dresden 24-hr S0P 500-yr Rainfall=8.16"

Area (ac)	CN	Description
1.980	98	Water Surface, 0% imp, HSG D
1.980		100.00% Pervious Area

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

Subcatchment 8S: Sub Basin 01 Watershed



Summary for Subcatchment 9S: Sub-Basin 02 Watershed

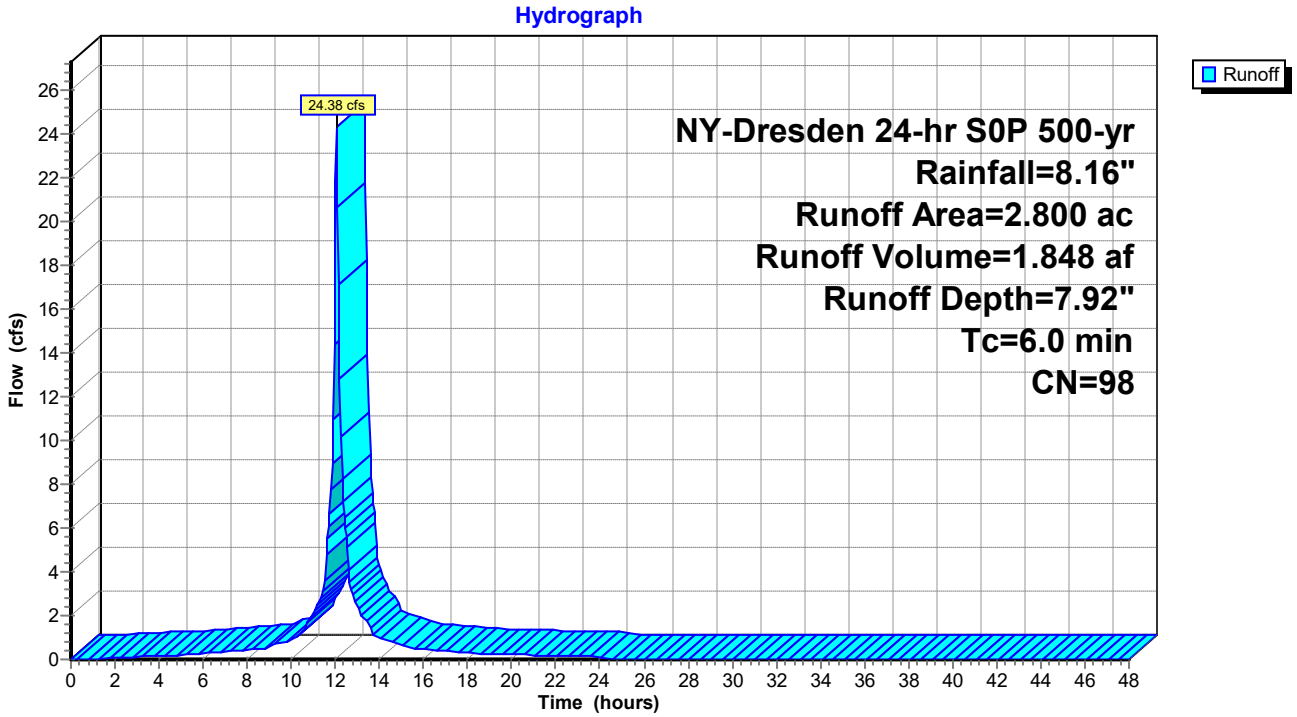
Runoff = 24.38 cfs @ 12.04 hrs, Volume= 1.848 af, Depth= 7.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NY-Dresden 24-hr S0P 500-yr Rainfall=8.16"

Area (ac)	CN	Description
2.800	98	Water Surface, 0% imp, HSG D
2.800		100.00% Pervious Area

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

Subcatchment 9S: Sub-Basin 02 Watershed



Summary for Subcatchment 10S: Sub-Basin 03 Watershed

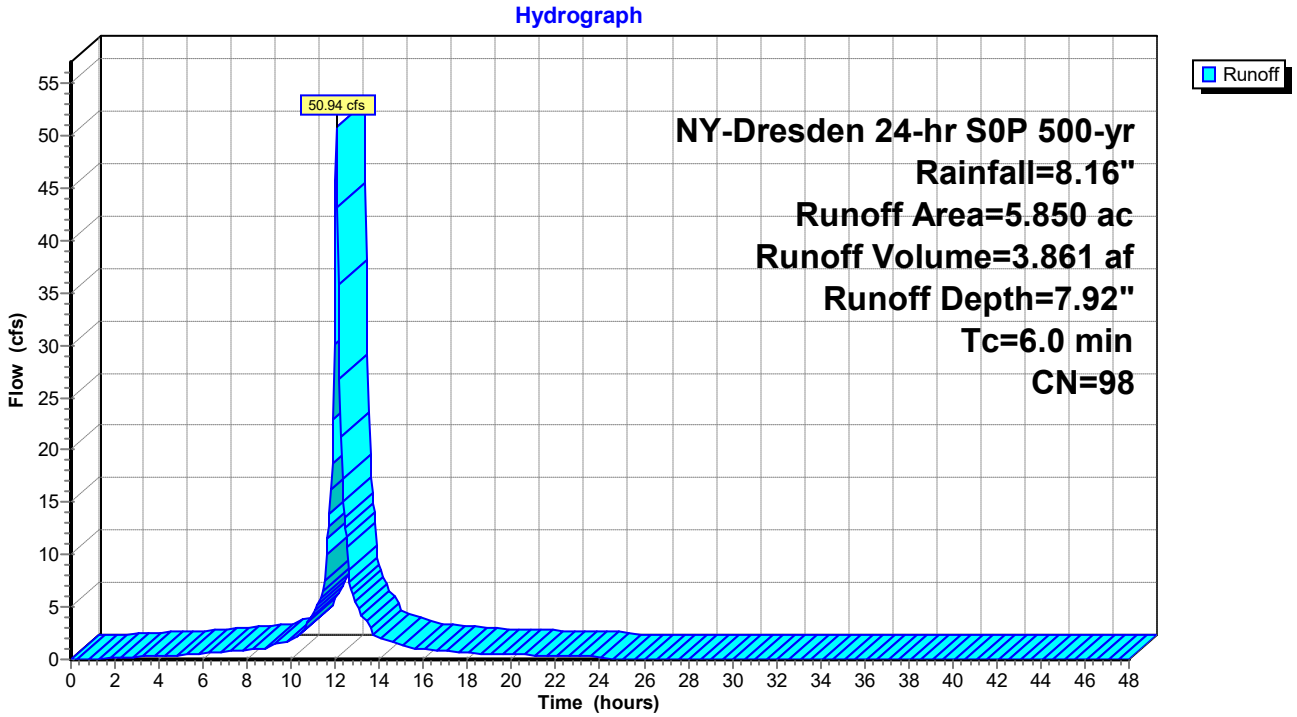
Runoff = 50.94 cfs @ 12.04 hrs, Volume= 3.861 af, Depth= 7.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NY-Dresden 24-hr S0P 500-yr Rainfall=8.16"

Area (ac)	CN	Description
5.850	98	Water Surface, 0% imp, HSG D
5.850		100.00% Pervious Area

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

Subcatchment 10S: Sub-Basin 03 Watershed



Summary for Pond 11P: Sub Basin 01

Inflow Area = 1.980 ac, 0.00% Impervious, Inflow Depth = 7.92" for 500-yr event
Inflow = 17.24 cfs @ 12.04 hrs, Volume= 1.307 af
Outflow = 0.32 cfs @ 16.08 hrs, Volume= 0.894 af, Atten= 98%, Lag= 242.1 min
Discarded = 0.32 cfs @ 16.08 hrs, Volume= 0.894 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 455.12' @ 16.08 hrs Surf.Area= 0.448 ac Storage= 0.998 af

Plug-Flow detention time= 926.7 min calculated for 0.894 af (68% of inflow)
Center-of-Mass det. time= 848.9 min (1,587.7 - 738.9)

Volume	Invert	Avail.Storage	Storage Description
#1	452.00'	4.150 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

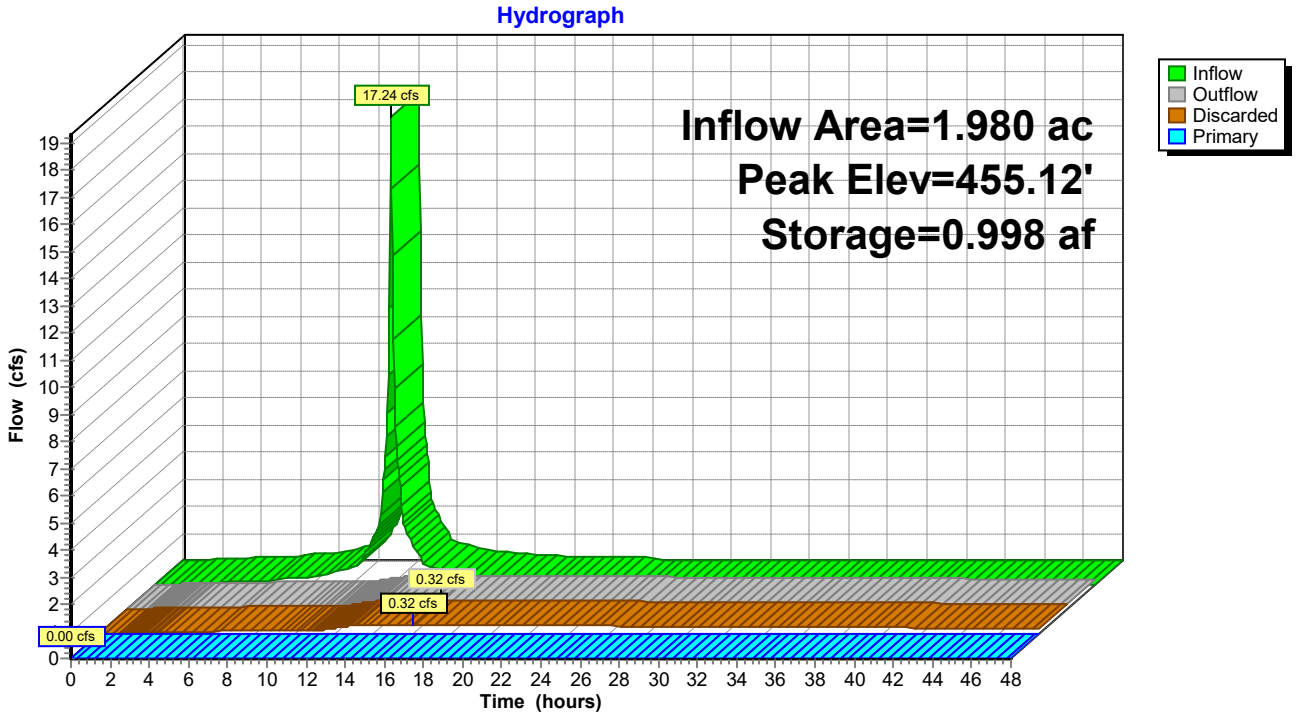
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
452.00	0.186	0.000	0.000
453.00	0.281	0.234	0.234
454.00	0.352	0.317	0.550
455.00	0.433	0.392	0.943
456.00	0.555	0.494	1.436
457.00	0.804	0.680	2.116
458.00	1.013	0.909	3.025
459.00	1.237	1.125	4.150

Device	Routing	Invert	Outlet Devices
#1	Primary	457.35'	**36.0" Round Culvert** L= 60.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 457.35' / 457.35' S= 0.0000 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 7.07 sf
#2	Discarded	452.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 447.00'

Discarded OutFlow Max=0.32 cfs @ 16.08 hrs HW=455.12' (Free Discharge)
↑**2=Exfiltration** (Controls 0.32 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=452.00' TW=451.00' (Dynamic Tailwater)
↑**1=Culvert** (Controls 0.00 cfs)

Pond 11P: Sub Basin 01



Summary for Pond 12P: Sub Basin 02

Inflow Area = 2.800 ac, 0.00% Impervious, Inflow Depth = 7.92" for 500-yr event
Inflow = 24.38 cfs @ 12.04 hrs, Volume= 1.848 af
Outflow = 0.85 cfs @ 14.37 hrs, Volume= 1.849 af, Atten= 96%, Lag= 139.8 min
Discarded = 0.85 cfs @ 14.37 hrs, Volume= 1.849 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 455.76' @ 14.37 hrs Surf.Area= 1.556 ac Storage= 1.109 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 502.4 min (1,241.3 - 738.9)

Volume	Invert	Avail.Storage	Storage Description
#1	455.00'	3.266 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

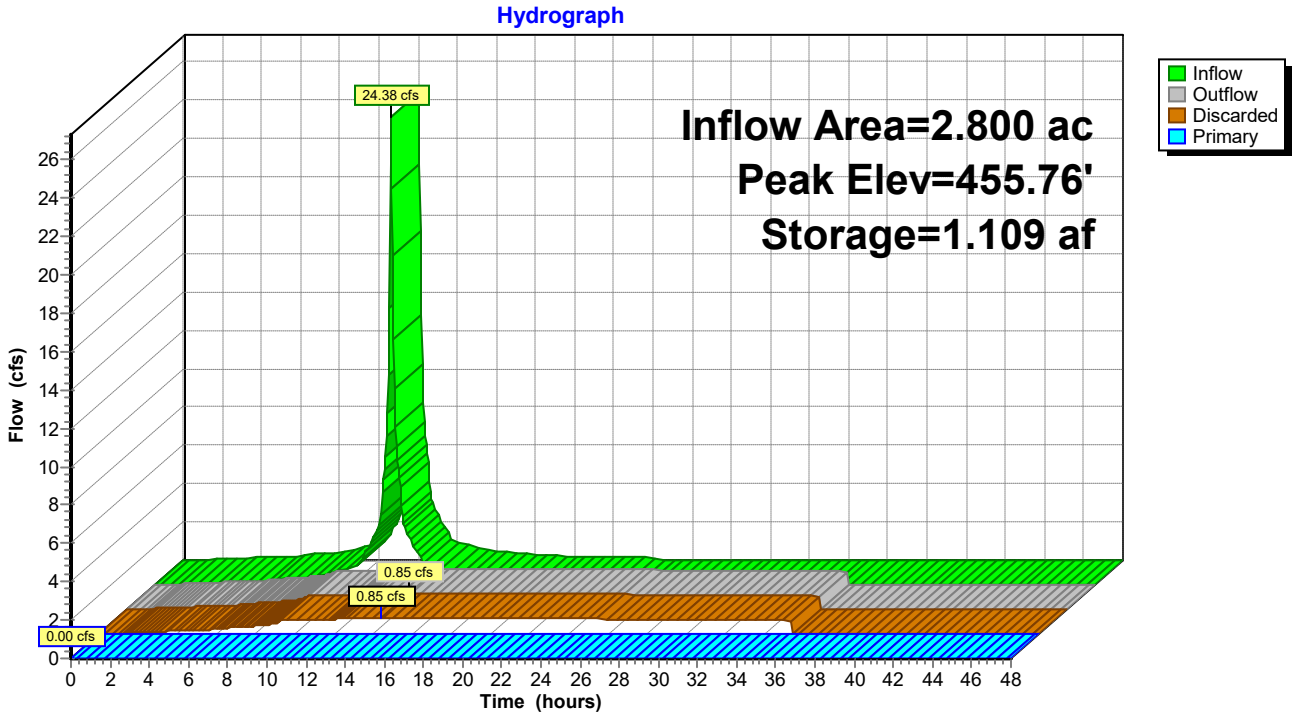
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
455.00	1.370	0.000	0.000
456.00	1.615	1.492	1.492
457.00	1.932	1.774	3.266

Device	Routing	Invert	Outlet Devices
#1	Primary	458.94'	**24.0" Round Culvert** L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 458.94' / 458.94' S= 0.0000 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 3.14 sf
#2	Discarded	455.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 447.00'

Discarded OutFlow Max=0.85 cfs @ 14.37 hrs HW=455.76' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.85 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=455.00' TW=451.00' (Dynamic Tailwater)
↑—**1=Culvert** (Controls 0.00 cfs)

Pond 12P: Sub Basin 02



Summary for Pond 13P: Sub Basin 03

Inflow Area = 10.630 ac, 0.00% Impervious, Inflow Depth = 4.36" for 500-yr event
Inflow = 50.94 cfs @ 12.04 hrs, Volume= 3.861 af
Outflow = 1.09 cfs @ 15.43 hrs, Volume= 2.779 af, Atten= 98%, Lag= 203.1 min
Discarded = 1.09 cfs @ 15.43 hrs, Volume= 2.779 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 454.78' @ 15.43 hrs Surf.Area= 1.576 ac Storage= 3.004 af

Plug-Flow detention time= 952.9 min calculated for 2.779 af (72% of inflow)
Center-of-Mass det. time= 879.5 min (1,618.4 - 738.9)

Volume	Invert	Avail.Storage	Storage Description
#1	451.00'	7.554 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

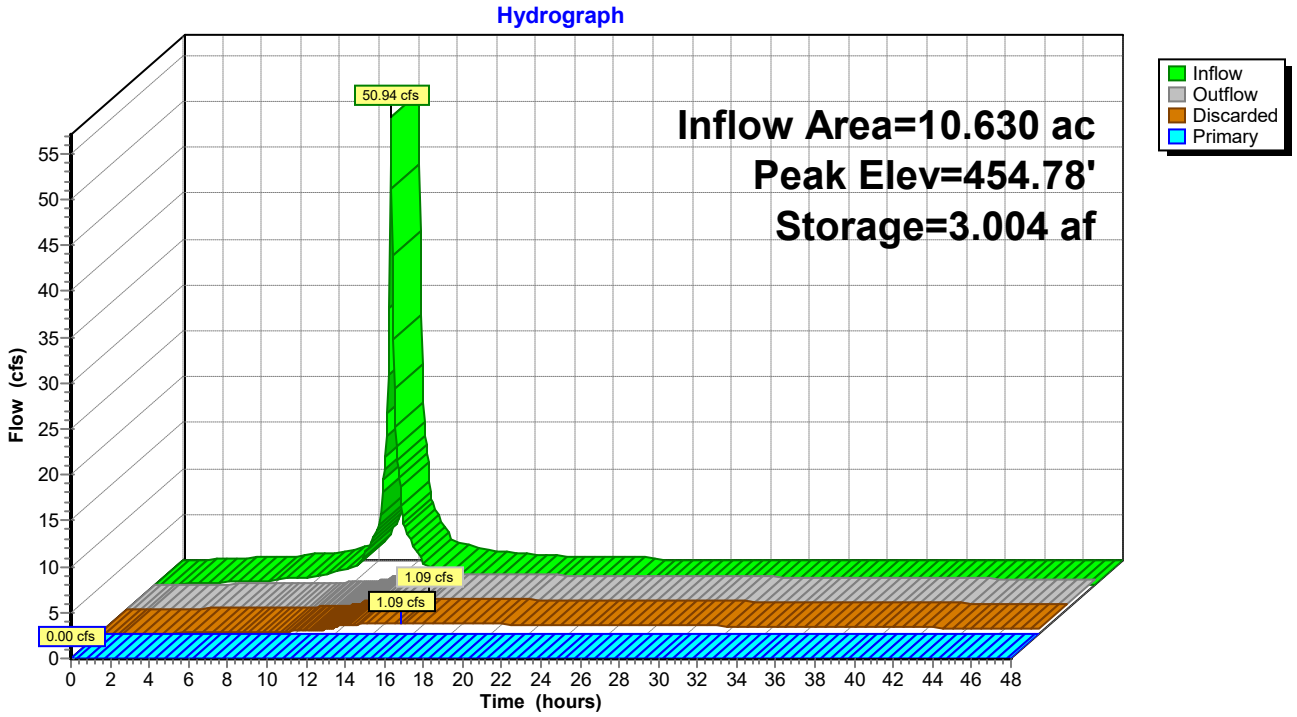
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
451.00	0.070	0.000	0.000
452.00	0.417	0.244	0.244
453.00	0.832	0.625	0.868
454.00	1.249	1.040	1.909
455.00	1.670	1.459	3.368
456.00	2.095	1.882	5.251
457.00	2.511	2.303	7.554

Device	Routing	Invert	Outlet Devices
#1	Primary	455.26'	**24.0" Round Culvert** L= 44.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 455.26' / 455.26' S= 0.0000 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Discarded	451.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 447.00'

Discarded OutFlow Max=1.09 cfs @ 15.43 hrs HW=454.78' (Free Discharge)
↑—**2=Exfiltration** (Controls 1.09 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=451.00' (Free Discharge)
↑—**1=Culvert** (Controls 0.00 cfs)

Pond 13P: Sub Basin 03

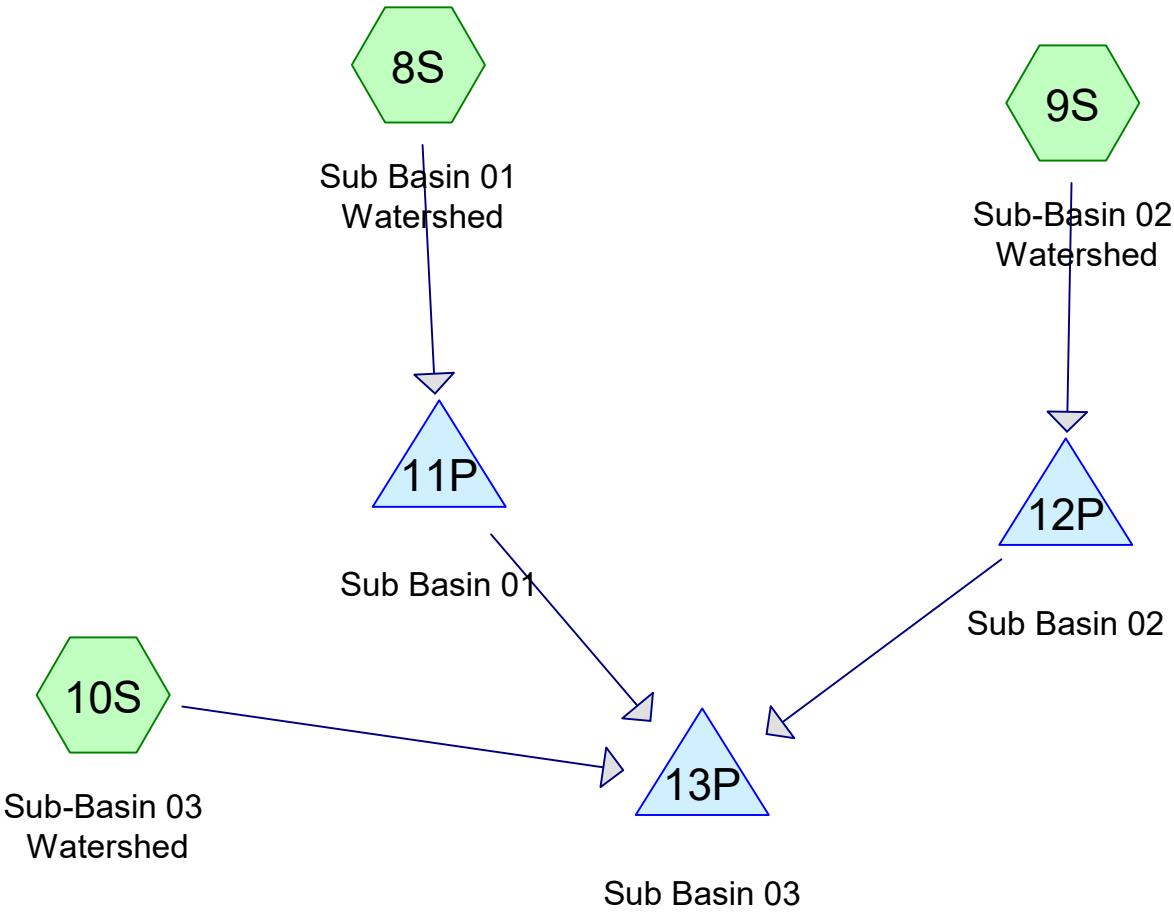


Attachment 3

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

HydroCAD Model without Infiltration



Subcat Reach Pond Link

Routing Diagram for C-Pond
Prepared by LG, Printed 7/27/2026
HydroCAD® 10.10-5a s/n 07607 © 2020 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	500-yr	NY-Dresden 24-hr S0P	500-yr	Default	24.00	1	8.16	2

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
10.630	HSG D	8S, 9S, 10S
0.000	Other	

Summary for Subcatchment 8S: Sub Basin 01 Watershed

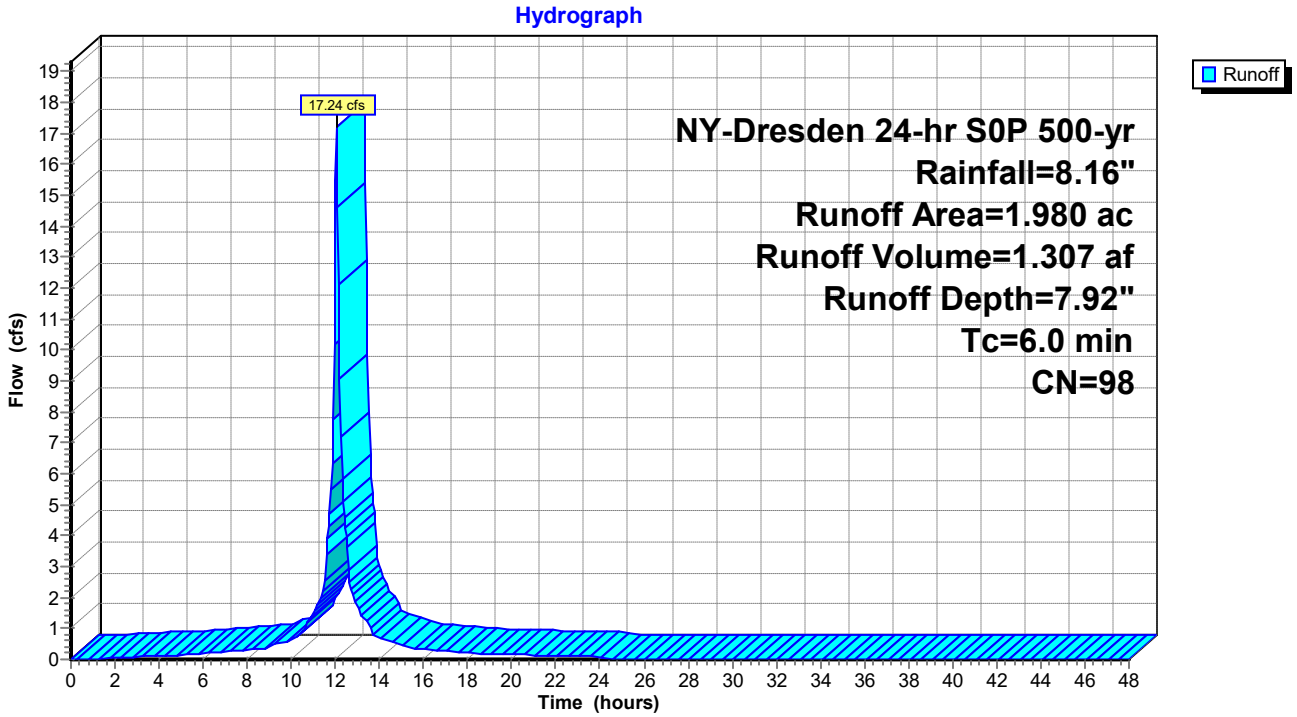
Runoff = 17.24 cfs @ 12.04 hrs, Volume= 1.307 af, Depth= 7.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NY-Dresden 24-hr S0P 500-yr Rainfall=8.16"

Area (ac)	CN	Description
1.980	98	Water Surface, 0% imp, HSG D
1.980		100.00% Pervious Area

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

Subcatchment 8S: Sub Basin 01 Watershed



Summary for Subcatchment 9S: Sub-Basin 02 Watershed

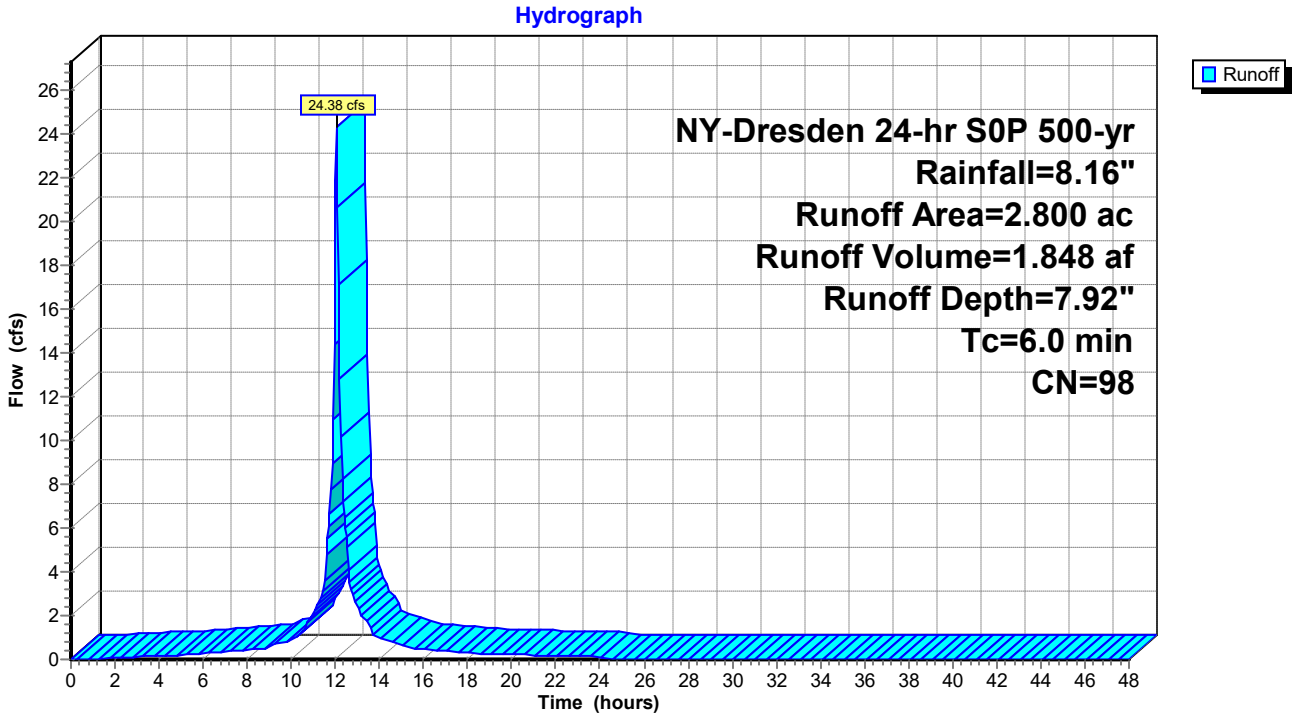
Runoff = 24.38 cfs @ 12.04 hrs, Volume= 1.848 af, Depth= 7.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NY-Dresden 24-hr S0P 500-yr Rainfall=8.16"

Area (ac)	CN	Description
2.800	98	Water Surface, 0% imp, HSG D
2.800		100.00% Pervious Area

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

Subcatchment 9S: Sub-Basin 02 Watershed



Summary for Subcatchment 10S: Sub-Basin 03 Watershed

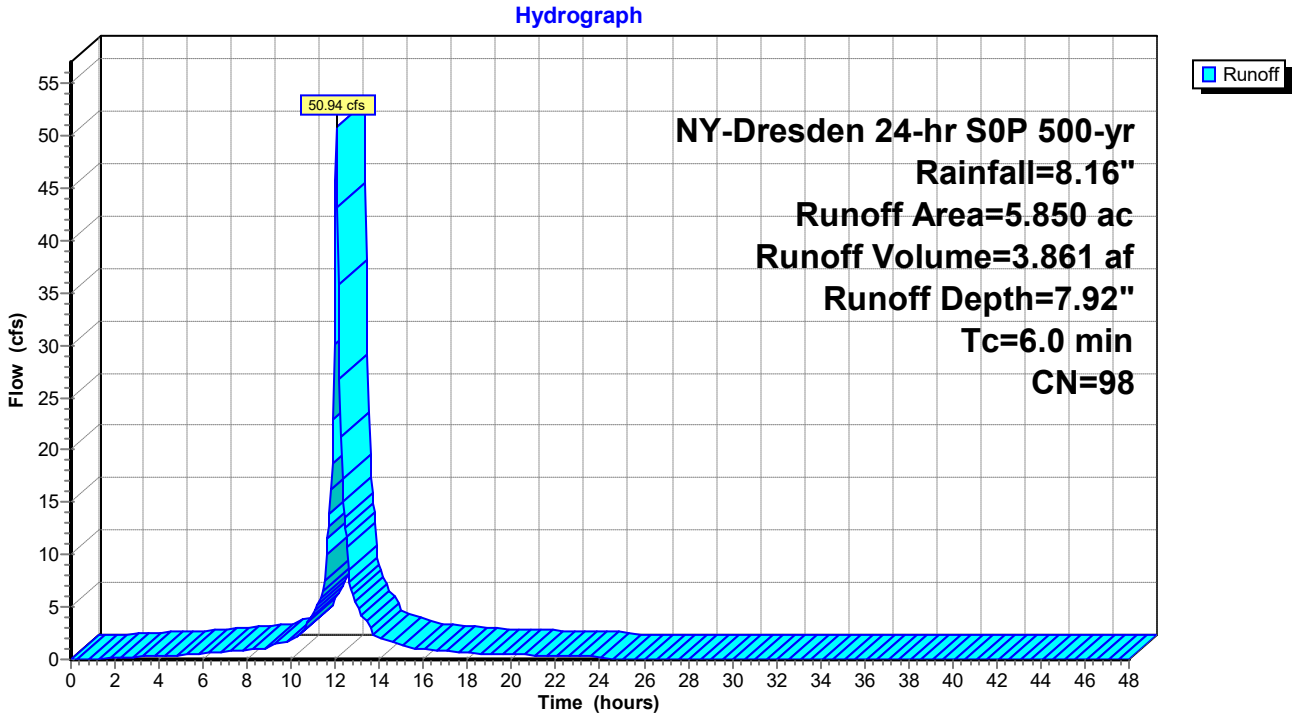
Runoff = 50.94 cfs @ 12.04 hrs, Volume= 3.861 af, Depth= 7.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NY-Dresden 24-hr S0P 500-yr Rainfall=8.16"

Area (ac)	CN	Description
5.850	98	Water Surface, 0% imp, HSG D
5.850		100.00% Pervious Area

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

Subcatchment 10S: Sub-Basin 03 Watershed



Summary for Pond 11P: Sub Basin 01

Inflow Area = 1.980 ac, 0.00% Impervious, Inflow Depth = 7.92" for 500-yr event
Inflow = 17.24 cfs @ 12.04 hrs, Volume= 1.307 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

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 455.76' @ 24.40 hrs Surf.Area= 0.526 ac Storage= 1.307 af

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

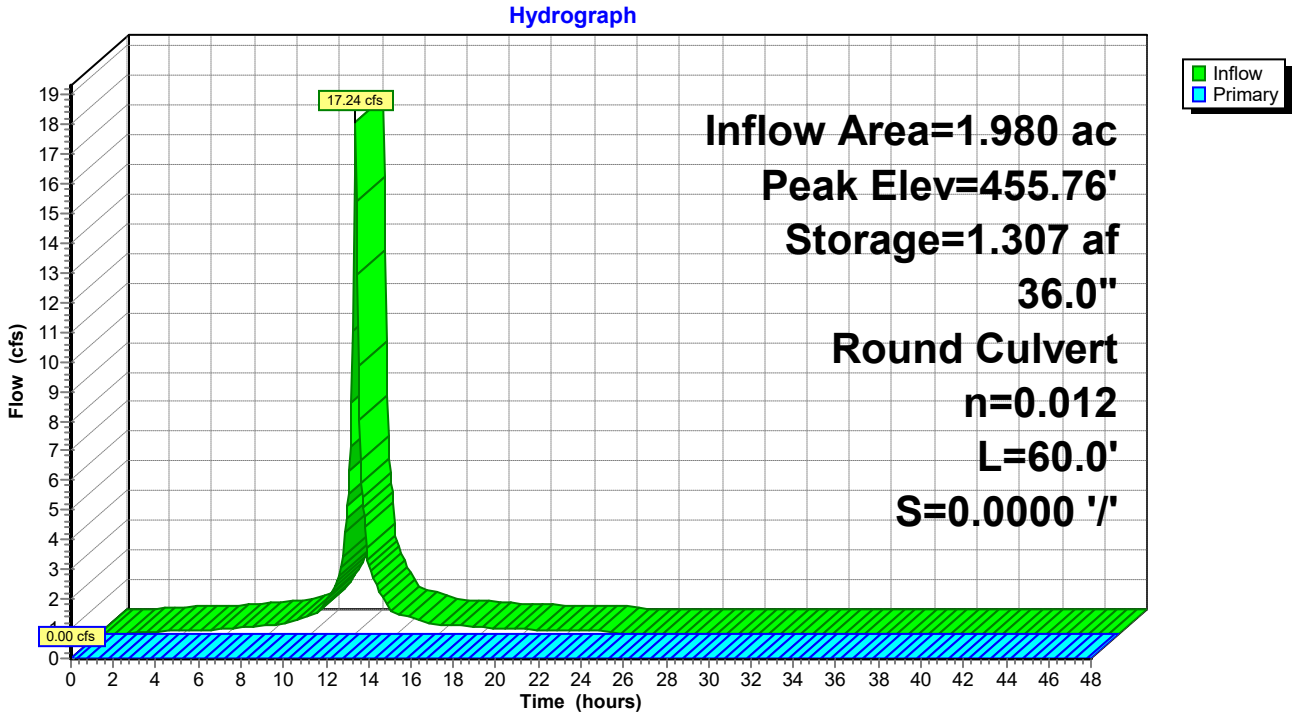
Volume	Invert	Avail.Storage	Storage Description
#1	452.00'	4.150 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
452.00	0.186	0.000	0.000
453.00	0.281	0.234	0.234
454.00	0.352	0.317	0.550
455.00	0.433	0.392	0.943
456.00	0.555	0.494	1.436
457.00	0.804	0.680	2.116
458.00	1.013	0.909	3.025
459.00	1.237	1.125	4.150

Device	Routing	Invert	Outlet Devices
#1	Primary	457.35'	**36.0" Round Culvert** L= 60.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 457.35' / 457.35' S= 0.0000 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=452.00' TW=451.00' (Dynamic Tailwater)
1=Culvert (Controls 0.00 cfs)

Pond 11P: Sub Basin 01



Summary for Pond 12P: Sub Basin 02

Inflow Area = 2.800 ac, 0.00% Impervious, Inflow Depth = 7.92" for 500-yr event
Inflow = 24.38 cfs @ 12.04 hrs, Volume= 1.848 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

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 456.22' @ 24.40 hrs Surf.Area= 1.683 ac Storage= 1.848 af

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

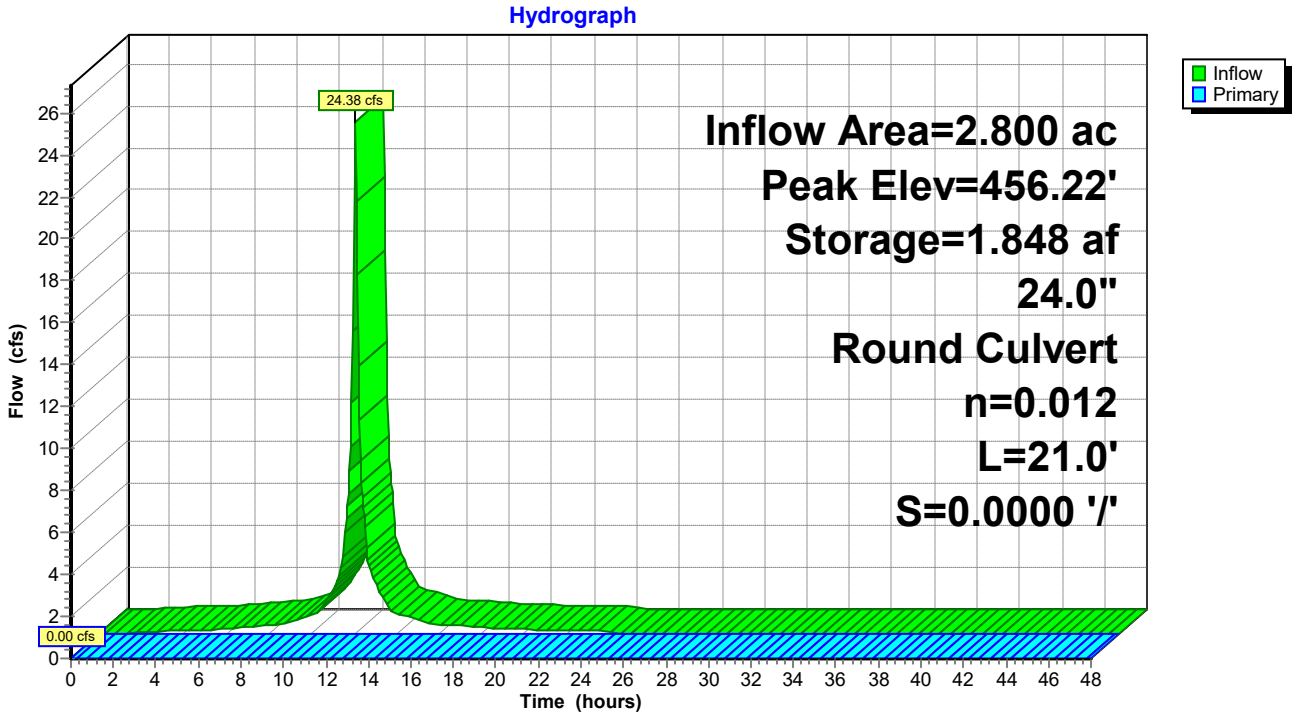
Volume	Invert	Avail.Storage	Storage Description
#1	455.00'	3.266 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
455.00	1.370	0.000	0.000
456.00	1.615	1.493	1.493
457.00	1.932	1.774	3.266

Device	Routing	Invert	Outlet Devices
#1	Primary	458.94'	**24.0" Round Culvert** L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 458.94' / 458.94' S= 0.0000 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=455.00' TW=451.00' (Dynamic Tailwater)
↑—**1=Culvert** (Controls 0.00 cfs)

Pond 12P: Sub Basin 02



Summary for Pond 13P: Sub Basin 03

Inflow Area = 10.630 ac, 0.00% Impervious, Inflow Depth = 4.36" for 500-yr event
Inflow = 50.94 cfs @ 12.04 hrs, Volume= 3.861 af
Outflow = 0.00 cfs @ 24.34 hrs, Volume= 0.000 af, Atten= 100%, Lag= 737.5 min
Primary = 0.00 cfs @ 24.34 hrs, Volume= 0.000 af

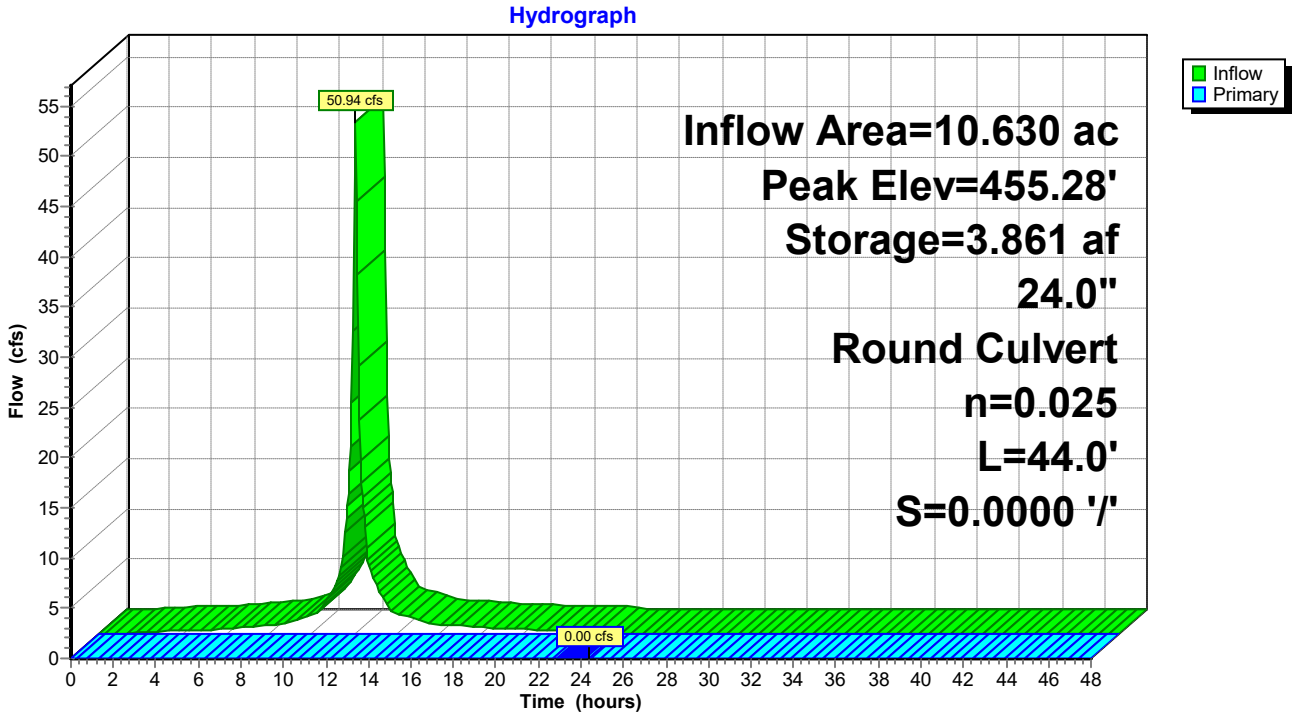
Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 455.28' @ 24.34 hrs Surf.Area= 1.791 ac Storage= 3.861 af

Plug-Flow detention time= 2,088.5 min calculated for 0.000 af (0% of inflow)
Center-of-Mass det. time= 1,408.3 min (2,147.1 - 738.9)

Volume	Invert	Avail.Storage	Storage Description
#1	451.00'	7.554 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
451.00	0.070	0.000	0.000
452.00	0.417	0.244	0.244
453.00	0.832	0.625	0.868
454.00	1.249	1.041	1.909
455.00	1.670	1.460	3.368
456.00	2.095	1.883	5.251
457.00	2.511	2.303	7.554

Device	Routing	Invert	Outlet Devices
#1	Primary	455.26'	**24.0" Round Culvert** L= 44.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 455.26' / 455.26' S= 0.0000 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf

Primary OutFlow Max=0.00 cfs @ 24.34 hrs HW=455.28' (Free Discharge)
1=Culvert (Barrel Controls 0.00 cfs @ 0.04 fps)

Pond 13P: Sub Basin 03