STORMWATER POLLUTION PREVENTION PLAN

FIELDHOME AT CATHERINE STREET

2302 CATHERINE STREET
TOWN OF YORKTOWN, NY

RECEIVED
PLANNING DEPARTMENT
APR 23 2025
TOWN OF YORKTOWN

Owner: **Field Home – Holy Comforter**
2302 Catherine Street
Cortlandt Manor, NY 10567

Applicant: **Toll Bros, Inc.**
42 Old Ridgebury Road
Danbury, CT 06810

Prepared by:

JMC Project 23109

Draft: 04/23/2025

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REFERENCED DRAWINGS FOR SWPPP DESIGN AND DETAILS

JMC SITE PLANS

Dwg. No.	Title	Rev. No./Date
C-000	Cover Sheet	04/23/2025
C-010	Overall Existing Conditions Map and Slope Analysis	04/23/2025
C-011	Existing Conditions Map (North)	04/23/2025
C-012	Existing Conditions Map (South)	04/23/2025
C-020	Overall Preliminary Tree Removal Plan	04/23/2025
C-021	Preliminary Tree Removal Plan (North)	04/23/2025
C-022	Preliminary Tree Removal Plan (South)	04/23/2025
C-023	Preliminary Tree Removal Plan Table 1	04/23/2025
C-024	Preliminary Tree Removal Plan Table 2	04/23/2025
C-100	Overall Preliminary Site Layout Plan	04/23/2025
C-101	Preliminary Site Layout Plan (North)	04/23/2025
C-102	Preliminary Site Layout Plan (South)	04/23/2025
C-110	Preliminary Truck Maneuvering Plan	04/23/2025
C-200	Overall Preliminary Site Grading Plan	04/23/2025
C-201	Preliminary Site Grading Plan (North)	04/23/2025
C-202	Preliminary Site Grading Plan (South)	04/23/2025
C-300	Overall Preliminary Site Utilities Plan	04/23/2025
C-301	Preliminary Site Utilities Plan (North)	04/23/2025
C-302	Preliminary Site Utilities Plan (South)	04/23/2025
C-400	Overall Preliminary Construction Phasing Plan	04/23/2025
C-600	Overall Preliminary Site Lighting Plan	04/23/2025
C-601	Preliminary Site Lighting Plan (North)	04/23/2025
C-602	Preliminary Site Lighting Plan (South)	04/23/2025
C-900	Construction Details	04/23/2025
C-901	Construction Details	04/23/2025
C-902	Construction Details	04/23/2025
L-100	Overall Preliminary Site Landscaping Plan	04/23/2025
L-101	Preliminary Site Landscaping Plan (North)	04/23/2025
L-102	Preliminary Site Landscaping Plan (South)	04/23/2025
L-900	Landscaping Details	04/23/2025

I. INTRODUCTION

This Stormwater Pollution Prevention Plan has been prepared for the two parcel, 50.51 acres "Fieldhome at Catherine Street" site, located in the Town of Yorktown, Westchester**,** New York (hereinafter referred to as the "Site"). The site is bordered by Old Crompond Road to the north, the Yorktown Rehabilitation and Nursing Center to the south, Field Street to the east, and Catherine Street to the west. The development has been designed in accordance with the following:

- Requirements of the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-25-001, effective January 29, 2025;
- New York City Environmental Protection (NYCEP, formerly NYCDEP) Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources, amended February 28, 2025;
- New York State Department of Environmental Conservation Stormwater Management Design Manual, last revised July 31, 2024;
- Chapter 248 "Stormwater Management and Erosion and Sediment Control" section of the Town of Yorktown Zoning Code;

The proposed development of this site will include the construction of 118 market-rate residential units, a clubhouse with an associated pool, pickleball courts, access driveways, driving aisles, parking areas, and pedestrian walkways. Stormwater runoff from the site typically flows overland toward the northern portion, where it is collected in an on-site watercourse/channel. This watercourse then directs the stormwater towards two separate headwall and culvert systems, located to the west and east, before exiting the site.

II. STORMWATER MANAGEMENT PLANNING

In order to be eligible for coverage under the NYSDEC SPDES General Permit No. GP-0-25-001 for Stormwater Discharges from Construction Activities, the Stormwater Pollution Prevention

Plan (SWPPP) includes stormwater management practices (SMP's) from the publication "New York State Stormwater Management Design Manual," last revised July 2024.

A Stormwater Pollution Prevention Plan has been prepared for this project because it is a construction activity that involves:

- Soil disturbances of one (1) or more acres of land;
- Watershed Regulations §18-39(b)(4)(i) – Plans for development or sale of land that will result in the disturbance of five (5) or more acres of total land area as described in the definition of "larger common plan of development or sale" in Appendix A of General Permit No. GP-0-15-002;
- Watershed Regulations §18-39(b)(4)(ii) – Construction of a subdivision;
- Watershed Regulations §18-39(b)(4)(iii) – Construction of new industrial, institutional, municipal, commercial, or multi-family residential project that will result in creation of an impervious surface totaling over 40,000 square feet in size;
- Watershed Regulations §18-39(b)(4)(iv) – A land clearing or land grading project, involving two or more acres, located at least in part within the limiting distance of 100 feet of a watercourse or wetland, or within the limiting distance of 300 feet of a reservoir, reservoir stem or controlled lake or on a slope exceeding 15 percent;
- Watershed Regulations §18-39(b)(4)(vii) – Construction of an impervious surface for a new road, for an access road, or for an existing dirt or gravel road as required by paragraph (a)(6) of this section;
- Watershed Regulations §18-39(b)(4)(x) – Construction of an impervious surface in the east of Hudson Watershed in a Designated Main Street Area.
- Town of Yorktown Code §248-6A(2) – Land development activities as defined in §248-3 of this chapter that disturb one or more acres of land and are listed in §248-6A(2)(a) through (w) below shall also include water quantity and water quality controls (postconstruction stormwater runoff controls) designed in conformance with the enhance phosphorus removal standards in the New York State Management Design Manual.

The proposed stormwater facilities have been designed such that the quantity and quality of stormwater runoff during and after construction are not adversely altered or are enhanced when compared to pre-development conditions.

Based on the GIS information provided by the website of the New York State Office of Parks, Recreation and Historic Places, the site does not contain, nor is it immediately adjacent to any properties listed on the State or National Register of Historic Places.

The Six Step Process for Stormwater Site Planning and Practice Selection

Stormwater management using green infrastructure is summarized in the six-step process described below. The six-step process was adhered to when developing this SWPPP. Information is provided in this SWPPP which documents compliance with the required process as follows:

Step 1: Site Planning

Implement planning practices that protect natural resources and utilize the hydrology of the site. Strong consideration must be given to reducing impervious cover to aid in the preservation of natural resources including protecting natural areas, avoiding sensitive areas and minimizing grading and soil disturbance.

Step 2: Determine Water Quality Treatment Volume (WQv)

Determine the required WQv for the site based on the site layout, impervious areas and sub-catchments. This initial calculation of WQv will have to be revised after green infrastructure techniques are applied. The following method has been used to calculate the WQv.

- **Enhanced Phosphorus Removal Standard -** Since the project is located within the East of Hudson watershed, enhanced phosphorus removal must be achieved by the stormwater improvements. For enhanced phosphorus removal, the water quality volume is sized for the 1 year, 24-hour storm event.

Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

RRv is required for this project since it is a new development.

Green infrastructure techniques or standard SMP's with RRv capacity can potentially reduce the required WQv by incorporating combinations of green infrastructure techniques and standard SMP's within each drainage area on the site.

Green infrastructure techniques are grouped into two categories:

- Practices resulting in a reduction of contributing area such as preservation/restoration of conservation areas, vegetated channels, etc.

Apply a combination of green infrastructure techniques and standard SMPs with RRv capacity to provide 100% of the WQv calculated in Step 2. If the RRv calculated in this step is greater than or equal to the WQv in Step 2, the RRv requirement has been met, and Step 4 can be skipped. If the RRv provided cannot meet or exceed 100% of the WQv, the project must, at a minimum, reduce a percentage of the runoff from impervious areas to be constructed on the site. The percent reduction is based on the Hydrologic Soil Group(s) (HSG) of the site and is defined as Specific Reduction Factor (S).

The following green infrastructure techniques and practices are provided in the Design Manual:

- Conservation of Natural Areas
- Standard Practices with RRv Capacity
    - Biofilters and Bioretention Basins
    - Infiltration Practices

The Minimum RRv capacity required must be provided by green infrastructure techniques to verify that the RRv requirement has been met. The RRv that is provided by the green

infrastructure techniques can then be subtracted from the Total Required WQv that must be provided by the SMP's.

Step 4: Determine the minimum RRv Required

The minimum RRv is calculated similar to the WQV. However, it is determined using only the new impervious cover and accounts for the hydrologic soil group present. In no case shall the runoff reduction achieved from the newly constructed impervious area be less than the minimum runoff reduction volume (RRv_{min}).

Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

Apply the standard SMP's to meet additional water quality volume requirements that cannot be addressed by applying the green infrastructure techniques. The standard SMP's with RRv capacity must be implemented to verify that the RRv requirement has been met.

- **Infiltration Practices –** A subsurface infiltration system is proposed to treat and retain runoff from the lower portion of the site.

Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

The Channel Protection Volume (CPv), Overbank Flood Control (Qp) and Extreme Flood Control (Qf) must be met for the plan to be completed. This is accomplished by using practices such as infiltration basins, dry detention basins, etc. to meet water quantity requirements. The following standards must be met:

1. **Stream Channel Protection (CPv)**

   Stream Channel Protection Volume Requirements (CPv) are designed to protect stream channels from erosion. In New York State this goal is accomplished by providing 24-hour extended detention of the one-year, 24-hour storm event, remained from runoff

reduction. Reduction of runoff for meeting stream channel protection objectives, where site conditions allow, is encouraged and the volume reduction achieved through green infrastructure can be deducted from CPv. Trout waters may be exempted from the 24-hour ED requirement, with only 12 hours of extended detention required to meet this criterion. Detention time may be calculated using either a center of mass method or plug flow calculation method.

The Channel Protection Requirements may be waived if:

- Reduction of the entire CPv is achieved at a site through runoff reduction or infiltration systems;
- CPv is not required at sites where the 1-year post-development peak discharge is less than or equal to 2.0 cfs without detention or velocity controls;
- The site directly discharges into a fifth order or larger water body (streams, rivers, lakes) or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of discharge must be adequately protected against scour and erosion by the increased peak discharge.

2. Overbank Flood (Qp) which is the 10-year storm.

Overbank control requires storage to attenuate the post development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates.

The Overbank Flood Control requirement may be waived if:

- The site directly discharges into a fifth order or larger water body (streams, rivers, or lakes) or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of discharge must be adequately protected against scour and erosion by the increased peak discharge.
- A downstream analysis reveals that overbank control is not needed.

3. Extreme Storm (Qf) which is the 100-year storm.

100 Year Control requires storage to attenuate the post development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates.

The Extreme Flood Control requirement may be waived if:

- The site directly discharges into a fifth order or larger water body (streams, rivers, or lakes) or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of discharge must be adequately protected against scour and erosion by the increased peak discharge.
- A downstream analysis reveals that 100-year control is not needed.

Climate Change Considerations

1. Increasing temperature
   a. The proposed project implements design and landscaping practices to consider the increasing temperatures as they relate to Climate Change. Landscaped areas are located to provide mitigation for extreme heat and the urban heat island effect by providing the most amount of shade and/or through the cooling effect of evapotranspiration, which releases water vapor and heat energy to the atmosphere. These landscaped areas include and are in addition to specific green infrastructure practices proposed throughout the project's design. Additional considerations were made in selecting plants species for the project. Species that are native to the surrounding area, as well as species that are resilient to the warmer temperatures were selected. Stormwater discharge locations have been selected to direct runoff to undisturbed and/or riparian areas that will aid in the cooling of stormwater runoff. There are proposed trees adjacent to the open ponds and their outfalls which would provide shade. Detaining water within underground practices will also help keep temperatures down.

2. Increasing precipitation
    a. The proposed hydrologic modeling accounts for the potential increase in precipitation due to climate change by utilizing the upper confidence limits of the Extreme Precipitation Estimates from the NRCC rainfall data. There is generally an 8-20 % increase in precipitation for the typically analyzed 1-, 10-, 100-yr 24hr rainfall events when compared to the average value previously used. This increase will result in systems being oversized during design by providing additional freeboard and storage volume so that they can accommodate the increased depths in the future due to the potential climate changes.

3. Increasing variability in precipitation, including chance of drought
    a. The proposed hydrologic modeling accounts for variability in the precipitation, including chance of drought, by analyzing our conveyance systems under different tailwater conditions to simulate either multiple large storm events in a row or longer rainfall periods. Analyzing storm events back-to-back can also be considered. As far as drought conditions, the proposed landscape plantings are native and any areas of the site that are not irrigated have proposed drought tolerant species.

4. Increasing frequency and severity of flooding
    a. The proposed hydraulic modeling accounts for the potential increase in precipitation due to climate change by utilizing the upper confidence limits of the Intensity Frequency Duration Estimates from the NRCC rainfall data. The aforementioned increase will allow for systems to be oversized during design by providing additional capacity to accommodate the increased flow rates in the future. Site design has been prepared to provide potential flood routes for stormwater runoff. The grading and drainage have been designed to ensure that stormwater runoff will be directed away from buildings and structures and towards landscaped areas, undeveloped areas and/or the on-site stormwater infrastructure. The stormwater infrastructure is also designed with emergency spillways that will direct the runoff towards the aforementioned grassed, undisturbed, and/or undisturbed riparian areas away from buildings and established structures. The site is not within the 100-year flood zone according to the National Flood Insurance Program Flood

Insurance Rate Map (FIRM) No. 36119C0036F, effective date 09/28/2007. Therefore, the project is located in an area where flooding is not a concern.

5. Rising sea level
   a. Site design of grading and drainage has been prepared to ensure that buildings and structures are located above the Base Flood Elevations. Grading and drainage have been prepared to ensure that stormwater runoff will be directed away from buildings and structures towards landscaped areas, undeveloped areas and/or the on-site stormwater infrastructure. The site is not within a tidal area according to the Coastal New York Future Floodplain Mapper and the National Flood Insurance Program Flood Insurance Rate Map (FIRM). Therefore, the project is located in an area where flooding from rising sea levels is not a concern.

6. Increasing storm surge
   a. The proposed project incorporates a design that maintains undisturbed areas, which include but are not limited to (from Table 4.1 in the NYSDEC's Using Natural Measures to Reduce the Risk and Flooding and Erosion):
      i. Riparian Area – The lands bordering streams and rivers. The transition zones between aquatic and upland areas that include the shoreline or bank and portions of the floodplain
      ii. Wetlands, Non-Tidal Freshwater – Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.
      iii. Forests – an ecosystem characterized by at least 10 percent tree canopy cover, at least 1 acre in size and 120 feet in width, which is not primarily under agricultural or other specific non-forest land use.

   In addition to the preservation of existing features, constructed stormwater green infrastructure techniques have been utilized to mimic, accommodate or enhance the natural capture and infiltration of stormwater into the ground to reduce the risk of flooding and erosion to buildings and structures in upland areas. The proposed hydraulic modeling accounts for the potential increase in storm surge due to climate change by utilizing the

upper confidence limits of the Intensity Frequency Duration Estimates from the NRCC rainfall data. The aforementioned increase will allow for systems to be oversized during design by providing additional capacity to accommodate the increased flow rates in the future.

7. Shifting ecology
   a. The proposed project implements design and landscaping practices that consider the potential shifting of the local ecology. While landscaping has been selected to provide species native to the area, due to the potential change in climate temperature, species resilient to the change have also been selected. These selections may introduce plant species not typically native to the surrounding areas. Considerations were made to ensure that planting species selected may still support the significant and natural communities or areas with rare or high-quality wetlands, forests, grasslands, ponds, streams, and other habitat that are essential for the conservation of rare / endangered species.

Based on the foregoing, this project is eligible for coverage under NYSDEC SPDES General Permit No. GP-0-25-001.

III. STUDY METHODOLOGY

Runoff rates were calculated based upon the standards set forth by the United States Department of Agriculture Natural Resources Conservation Service Technical Release 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986. The methodology set forth in TR-55 considers a multitude of characteristics for watershed areas including soil types, soil permeability, vegetative cover, time of concentration, topography, rainfall intensity, ponding areas, etc.

The 1-, 10-, 100-year storm recurrence intervals were reviewed in the design of the stormwater management facilities (see Appendices A & B Existing/Proposed Hydrologic Calculations).

Anticipated drainage conditions were analyzed considering the rate of runoff which will result from the construction of buildings, parking areas and other impervious surfaces associated with the site development.

Base Data and Design Criteria

For the stormwater management analysis, the following base information and methodology were used:

1. The site drainage patterns, and outfall facilities were reviewed by JMC personnel for the purpose of gathering background data and confirming existing mapping of the watershed areas.

2. An Existing Drainage Area Map was developed from the topographical survey. The drainage area map reflects the existing conditions within and around the project area.

3. A Proposed Drainage Area Map was developed from the proposed grading design superimposed over the topographical survey. The drainage area map reflects the proposed conditions within the project area and the existing conditions to remain in the surrounding area.

4. The United States Department of Agriculture (USDA) Web Soil Survey of the site available on its website at http://websoilsurvey.nrcd.usda.gov.

5. Soil Survey of Putnam and Westchester Counties, 1994.

6. The United States Department of Agriculture Natural Resources Conservation Service National Engineering Handbook, Section 4 - Hydrology", dated March 1985.

7. The United States Department of Agriculture Natural Resources Conservation Service Technical Report No. 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986.

8. United States Department of Commerce Weather Bureau Technical Release No. 40 Rainfall Frequency Atlas of the United States.

9. The time of concentration was calculated using the methods described in Chapter 3 of TR-55, Second Edition, June 1986. Manning's kinematics wave equation was used to determine the travel time of sheet flow. The 2-year 24-hour precipitation amount of 3.38/3.55 inches was used in the equation for existing/proposed storm events. The travel time for shallow concentrated flow was computed using Figure 3-1 and Table 3-1 of TR-55. Manning's Equation was used to determine the travel time for channel reaches.

10. All hydrologic calculations were performed with the Bentley PondPack software package version 10.0.

11. All hydraulic calculations were performed with the Civil 3D Storm Sewer Analysis, software package version 13.5.302.0.

12. The New York State Stormwater Management Design Manual, revised July 2024.

13. New York Standards and Specifications for Erosion and Sediment Control, November 2016.

14. The NYCEP Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources, as amended February 28, 2025.

15. New York City Department of Environmental Protection, 2023 Watershed Water Quality Annual Report, July 2024.

16. The storm flows for the 1-, 10-, and 100-year recurrence interval storms were analyzed for the total watershed areas. The mass rainfall for each design storm was taken from the Extreme Precipitation in New York & New England developed by the Natural Resource Conservation Service (NRCS) and the Northeast Regional Climate Center (NRCC) as

follows:

24 Hour Rainfall Amounts

Design Storm Recurrence Interval	Inches of Rainfall Typically Analyzed (Extreme Precipitation Estimates)	Inches of Rainfall "Future Conditions" (Upper Confidence Limits)	Percent Increase (%)
1 Year	2.76	2.97	7.61
10 Year	5.09	5.87	15.32
100 Year	9.24	12.10	30.95

IV. EXISTING CONDITIONS

The existing conditions of the project site consist mainly of forested and forested wetland areas. There is also an existing soccer field that is situated at the southern portion of the site that is currently used by the resident of the Town of Yorktown. The site generally slopes to the north and east. Stormwater within the site flows towards an unnamed stream and adjoining freshwater wetlands on the northern and eastern portion of the site. Flows are then directed to the north and south, eventually discharging to the Hunter Brook.

The following natural features, conservation areas, resource areas and drainage patterns of the project site have been identified and utilized to develop Drawing EDA-1 "Existing Drainage Area Map" which is included in Appendix H:

- Wetlands (jurisdictional, wetland of special concern)
- Waterways (major, perennial, intermittent, springs)
- Buffers (stream, wetland, forest, etc.)
- Floodplains
- Forest, vegetative cover
- Topography (contour lines, existing flow paths, steep slopes, etc.)
- Soil (hydrologic soil groups, highly erodible soils, etc.)
- Bedrock, significant geological features

Based on the USDA Web soil survey, all on-site soils range from well drained to very poorly drained and belong to hydrological group(s) B, C, D. The soil types, boundaries and drainage areas/designations are depicted on Drawing EDA-1 within Appendix H.

Two (2) separate Design Points (1 & 2) were identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, two (2) separate drainage areas were identified in existing conditions based on the existing drainage divides at the site. The numbers included in the name of each drainage area correspond to the Design Point they drain towards.

The following is a description of each of the drainage areas analyzed in the existing conditions analysis:

Existing Drainage Area 1 (EDA-1) is 13.48 acres in size and is located on the Western portion of the site along Catherine Street. This area mainly consists of forested areas, a large portion of the existing soccer field, a portion of an access drive for the Yorktown Rehabilitation and Nursing Center, brush, and water features. This drainage area drains towards the north to an unnamed watercourse. Once within the watercourse, stormwater is conveyed towards a headwall and culvert system, eventually discharging to the Hunter Brook. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 71 and 34.5 minutes, respectively. Refer to Drawing EDA-1 in Appendix H.

Existing Drainage Area 2 (EDA-2) is 38.24 acres in size and is located on the Eastern portion of the site along Field Street. This area mainly consists of forested areas, a small portion of the existing soccer field, a portion of an access drive for the Yorktown Rehabilitation and Nursing Center, brush, wetlands, and water features. This drainage area drains towards the north and east to an unnamed watercourse and on-site wetlands. Once within the watercourse and wetlands, stormwater is conveyed towards a headwall and culvert system, eventually discharging to the Hunter Brook. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 72 and 29.4 minutes, respectively. Refer to Drawing EDA-1 in Appendix H.

The peak rates of runoff to the design points from the drainage areas for each storm are shown in the table below:

Table 1
Summary of Peak Rates of Runoff in Existing Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-1	DP-2
1 year	5.88	19.96
10 year	20.54	66.03
100 year	50.41	157.22

V. PROPOSED CONDITIONS

The proposed development of this site will include the construction of 118 market-rate residential units, a clubhouse with an associated pool, pickleball courts, access driveways, driving aisles, parking areas, and pedestrian walkways. Stormwater runoff from the site typically flows overland toward the northern portion, where it is collected in an on-site watercourse/channel. This watercourse then directs the stormwater towards two separate headwall and culvert systems, located to the west and east, before exiting the site.

The proposed drainage improvements include a variety of stormwater practices, such as vegetated swales, stormwater management ponds, subsurface infiltration systems, filtration bioretention areas, and hydrodynamic separators. After treatment for water quality and peak rate attenuation, stormwater discharges from the ponds will pass through rock outlet protection areas to reduce water depth, velocity, and energy before flowing into the existing wetlands and their buffers. The vegetated practices and overland discharges provide multiple opportunities for water quality enhancement and infiltration in addition to the proposed stormwater management basins.

Furthermore, in addition to these practices, the overall design of the project is consistent with the latest trends in Low Impact Development which includes multiple "disconnected" impervious areas. The project minimizes the use of piped stormwater to convey runoff to the stormwater management detention ponds and does not include any piped connections to existing storm sewer infrastructure after treatment. The combination of stormwater ponds, swales, biofilters

and rock outlet protection discharges provide redundant opportunities to enhance water quality and mitigate stormwater runoff rates from the development areas. The vegetated swales and other overland conveyances of stormwater runoff will result in additional infiltration not considered in the SWPPP's hydrologic model, resulting in a conservative analysis.

This section describes the design and analysis of the proposed conditions used to demonstrate that the SWPPP meets the requirements of the General Permit.

The Six Step Process for Stormwater Site Planning and Practice Selection

Step 1: Site Planning

The following practices and site features were incorporated in the site design:

- Preserving hydrology - Maintaining drainage divides;
- Wetlands and buffers – The site include 1.62 acres of wetlands and 9.89 acres of wetland buffers. The project requires the disturbance of 0 acres of wetlands and 0.27 acres of wetland buffers;
- Floodplain considerations - The site does (does not) lie within the 100-year flood zone according to the National Flood Insurance Program Flood Insurance Rate Map (FIRM) No. 36119C0036F, effective date 09/08/2007;
- Reduction of impervious surfaces such as:
  i. Reduced roadway, driveway & sidewalks widths;
- Forest, vegetative cover – The maximum amount of forest and vegetative cover has been maintained and/or provided;
- Critical areas have been preserved;
- Topography (contour lines, existing flow paths, steep slopes, etc.) has been maintained or disturbed to the minimum extent practicable;
- Soil (hydrologic soil groups, highly erodible soils, etc.);
- Bedrock, significant geological features have been accounted for;

Step 2: Determine Water Quality Treatment Volume (WQv)

Determine the required WQv for the site based on the site layout, impervious areas and sub-catchments. This initial calculation of WQv will have to be revised after green infrastructure techniques are applied. The following method has been used to calculate the WQv.

- **Enhanced Phosphorus Removal Standard -** Since the project is located within the East of Hudson watershed, enhanced phosphorus removal must be achieved by the stormwater improvements. For enhanced phosphorus removal, the water quality volume is sized for the 1 year, 24-hour storm event.

Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

- Conservation of Natural Areas
- Open space and impervious surface reduction
- Vegetated Swales
- Standard Practices with RRv Capacity
    - Biofilters and Bioretention Basins
    - Infiltration Practices

Step 4: Determine the minimum RRv Required

RRv_{min} calculations can be found in Appendix C. RRv_{min} was met through:

- Conservation of Natural Areas
- Standard Practices with RRv Capacity
    - Biofilters and Bioretention Basins
    - Infiltration Practices

Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

- **INFILTRATION SYSTEMS**

Underground Infiltration (I-4)

Description

Underground infiltration systems are practices, typically installed below parking lots and other impervious surfaces, designed to capture and temporarily store stormwater runoff in pre-manufactured pipes, vaults or other modular structures, while infiltrating into the surrounding soils.

- **FILTERING PRACTICES**

Bioretention (F-5)

Description

Filtration bioretention areas are shallow stormwater control that utilize vegetation and engineered filter media to capture and treat stormwater runoff, then return it to the conveyance system through a perforated underdrain system.

- **Non Standard/Alternative SMP's to Address Remaining Water Quality Volume**

    - **Hydrodynamic Separators**

Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

- **INFILTRATION SYSTEMS**

Underground Infiltration (I-4)

Description

Underground infiltration systems are practices, typically installed below parking lots and other impervious surfaces, designed to capture and temporarily store stormwater runoff in pre-manufactured pipes, vaults or other modular structures, while infiltrating into the surrounding soils.

- **FILTERING PRACTICES**

Bioretention (F-5)

Description

Filtration bioretention areas are shallow stormwater control that utilize vegetation and engineered filter media to capture and treat stormwater runoff, then return it to the conveyance system through a perforated underdrain system.

- **ABOVE GROUND SYSTEMS**

  Dry Detention Basin

  Description

  Dry detention basins and dry extended detention basins are surface facilities intended to provide for the temporary storage of stormwater runoff to reduce downstream water quantity impacts.

All practices exceed the required elements of SMP criteria as outlined in Chapter 6 of the NYS Stormwater Management Design Manual. A summary of each category is provided below.

1. Feasibility – Stormwater practices are designed based upon unique physical environmental considerations noted in the NYS Stormwater Management Design Manual (NYSSMDM).

2. Conveyance – The design conveys runoff to the designed stormwater practice in a manner that is safe, minimizes erosion and disruption to natural drainage channel and promotes filtering and infiltration.

3. Pretreatment – All stormwater practices provide pretreatment as required in accordance with NYSSMDM design guidelines.

4. Treatment Geometry – The plan provides water quality treatment in accordance with NYSSMDM guidelines.

5. Environmental/Landscaping –Extensive landscaping has been provided for each proposed stormwater practice to enhance pollutant removal and provide aesthetic enhancement to the property.

6. Maintenance – Maintenance for the environment practices has been provided and is detain

the SWPPP Report as required. Maintenance access is provided in the design plans.

In order to determine the post-development rates of runoff generated on-site, the following drainage areas were analyzed in the post-development conditions. These areas are graphically depicted on Drawing PDA-1 "Proposed Drainage Area Map" located in Appendix H.

Two separate Design Points (1 & 2) were identified for comparing peak rates of runoff in existing and proposed conditions. Several separate drainage areas were identified in proposed conditions based on the proposed drainage divides at the site. The numbers included in the name of each drainage area correspond to the Design Point they drain towards.

The following is a description of each of the drainage areas analyzed in the proposed conditions analysis:

Proposed Drainage Area 1A (1) (PDA-1A) is 0.91 acres in size and is located on the southwestern portion of the site along Catherine Street and adjacent to the Yorktown Rehabilitation and Nursing Center. This area consists of existing grassed and wooded areas and a proposed relocation of the access driveway for the Nursing Center. This drainage area drains overland and towards the north and is collected by the on-site watercourse/channel before being conveyed offset through the headwall at Design Point 1. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 74 and 14.7 minutes, respectively.

Proposed Drainage Area 1B (2) (PDA-1B) is 7.79 acres in size and is located on the southwestern portion of the site adjacent to PDA-1A and along a portion of Catherine Street. This area consists of a large portion of the proposed development which includes pavement, buildings, sidewalks, driveways, roadways, lawn, and woods. Runoff from this drainage area flows overland through lawn, grassed areas, or impervious surfaces to vegetated swales and/or the piped stormwater network. Once within the conveyance system the stormwater flows to a diversion structure that splits the 1-year event from the larger storm events. Volumes up to the 1-year storm event will be diverted to a hydrodynamic separator for pretreatment prior to being infiltrated into the ground via an underground infiltration system (Stormtech MC-4500

chambers). The flows from the larger storm events will be diverted to the on-site detention basin (DB-1) to be temporarily stored to attenuate flows before being discharged towards Design Point 1. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 89 and 14.2 minutes, respectively.

Proposed Drainage Area 1C (3) (PDA-1C) is 4.22 acres in size and is located on the northwestern portion of the site along Catherine Street. This area consists of pavement, buildings, sidewalks, driveways, roadways, parking lots, lawn, a small portion of woods and the amenity space which includes the clubhouse, pickleball courts, and pool. Runoff from this drainage area flows overland through lawn, grassed areas, or impervious surfaces to vegetated swales and/or the piped stormwater network. The runoff is then conveyed to a hydrodynamic separator for pretreatment prior to being discharged in filtration bioretention practice. The 1-year storm event will be filtered through the soil media and then conveyed to Detention Basin DB-1. Flows greater than the 1-year event will be diverted to the detention basin through a riser structure within the practice. Once conveyed to the detention basin the runoff is temporarily stored and attenuated before discharging towards Design Point 1. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 81 and 15.1 minutes, respectively.

Proposed Drainage Area 1D (4) (PDA-1D) is 2.16 acres in size and is located at the northwestern portion of the site along the on-site watercourse/channel. This area consists of lawn, woods, and water features. This drainage area drains towards the on-site watercourse/channel prior to reaching Design Point 1. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 71 and 18.7 minutes, respectively.

Proposed Drainage Area DB-1 (5) (PDA-DB-1) is 1.05 acres in size and is located on the northern portion of the site along the on-site watercourse/channel. This area consists of lawn and Detention Basin 1. Runoff from this drainage area flows directly into the detention basin for temporary storage and flow attenuation before being discharged towards Design Point 1. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 74 and 5 minutes, respectively.

Proposed Drainage Area 2A (6 & 7) (PDA-2A) is 24.04 acres in size and is located on the eastern and southern portion of the site along Field Street and adjacent to the Nursing Center. This area consists of lawn, woods, wetlands, the eastern portion of the existing on-site watercourse/channel, and a proposed 14.3-acre Natural Conservation Area. This drainage area drains towards the wetland and eventually to the watercourse/channel to be conveyed to the eastern headwall designated as Design Point 2. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 73 and 19.7 minutes, respectively.

Proposed Drainage Area 2B (8) (PDA-2B) is 2.05 acres in size and is located on the interior of the site towards the south, just north of PDA-2A. This area consists of pavement, buildings, sidewalks, driveways, and roadways. Runoff from this drainage area flows overland on impervious surfaces to the piped stormwater network. The stormwater is conveyed to a diversion structure that splits the 1-year event from the larger storm events. Volumes up to the 1-year storm event will be diverted to a hydrodynamic separator for pretreatment prior to being infiltrated into the ground via an underground infiltration system (Stormtech MC-3500 chambers). The flows from the larger storm events will be diverted to the on-site detention basin (DB-2) to be temporarily stored to attenuate flows before being discharged towards Design Point 2. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 94 and 5 minutes, respectively.

Proposed Drainage Area 2C (9) (PDA-2C) is 4.75 acres in size and is located within the center of the site. This area consists of pavement, sidewalks, buildings, and lawn. Runoff from this drainage area flows overland through lawn, grassed areas, or impervious surfaces to vegetated swales and/or the piped stormwater network. The runoff is then conveyed to a hydrodynamic separator for pretreatment prior to being discharged in filtration bioretention practice. The 1-year storm event will be filtered through the soil media and then conveyed to Detention Basin DB-2. Flows greater than the 1-year event will be diverted to the detention basin through a riser structure within the practice. Once conveyed to the detention basin the runoff is temporarily stored and attenuated before discharging towards Design Point 2. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 79 and 9.4 minutes, respectively.

Proposed Drainage Area 2D (10) (PDA-2D) is 3.03 acres in size and is located interior to the

site towards the northeast. It is located south of the watercourse/channel and the proposed northern detention basin. This area consists of pavement, sidewalks, buildings, and lawn. Runoff from this drainage area flows overland through lawn, grassed areas, or impervious surfaces to vegetated swales and/or the piped stormwater network. The runoff is then conveyed to a hydrodynamic separator for pretreatment prior to being discharged in filtration bioretention practice. The 1-year storm event will be filtered through the soil media and then conveyed to Detention Basin DB-2. Flows greater than the 1-year event will be diverted to the detention basin through a riser structure within the practice. Once conveyed to the detention basin the runoff is temporarily stored and attenuated before discharging towards Design Point 2. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 86 and 5 minutes, respectively.

Proposed Drainage Area DB-2 (11) (PDA-DB-2) is 1.66 acres in size and is located on the eastern portion of the site along the proposed Natural Conservation Area and the existing on-site wetland. This area consists of lawn and Detention Basin 2. Runoff from this drainage area flows directly into the detention basin for temporary storage and flow attenuation before being discharged towards Design Point 2 The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 74 and 5 minutes, respectively.

Refer to Drawing PDA-1 in Appendix H.

The peak rates of runoff to the design point of each of the analyzed drainage areas for each storm are shown on the table below:

Table 2
Summary of Proposed Peak Rates of Runoff in Proposed Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-1	DP-2
1 year	2.52	17.37
10 year	20.05	64.08
100 year	49.86	156.74

The reductions in peak rates of runoff from proposed to existing conditions are shown on the table below:

Table 3
Percent Reductions in Peak Rates of Runoff (Existing vs. Proposed Conditions)
(Cubic Feet per Second)

Design Point	Storm Recurrence Frequency (Years)	Existing Peak Runoff Rate (cfs)	Proposed Peak Runoff Rate (cfs)	Percent Reduction (%)
1	1 year	5.88	2.52	57.14
	10 year	20.54	20.05	2.39
	100 year	50.41	49.86	1.09
2	1 year	19.96	17.37	12.98
	10 year	66.03	64.08	2.95
	100 year	157.22	156.74	0.31

As demonstrated in Table 4, the proposed stormwater improvements will result in reductions of peak rates of runoff for all storms and design points analyzed.

The one year 24-hour discharge velocity reduction for the proposed to existing are shown on the Table below.

Table 4

The CPv velocity analysis for the two design points
(feet per second)

V=Q/A Velocity = (ft/s) = Discharge (cfs)/Area (sf)	
Design Point 1 (Existing 48" Pipe)	Design Point 1 (Proposed 48" Pipe)
V = 5.88 cfs / 12.57 sf = 0.468 fps	V = 2.52 cfs /12.57 sf = 0.20 fps
Design Point 2 (Existing 60" Pipe)	Design Point 2 (Proposed 60" Pipe)
V=19.96 cfs / 19.63 sf = 1.02 fps	V = 17.37 cfs /19.63 sf = 0.88 fps

As demonstrated in Table 4, the proposed one year 24-hour storm discharge velocities will be reduced at the two design points.

VI. SOIL EROSION & SEDIMENT CONTROL

A potential impact of the proposed development on any soils or slopes will be that of erosion and transport of sediment during construction. An Erosion and Sediment Control Management Program will be established for the proposed development, beginning at the start of construction and continuing throughout its course, as outlined in the "New York State Standards and Specifications for Erosion and Sediment Control," (Blue Book) November 2016. A continuing maintenance program will be implemented for the control of sediment transport and erosion control after construction and throughout the useful life of the project.

The Operator shall have a qualified professional assess the site prior to the commencement of construction and certify that the appropriate erosion and sediment controls, as shown on the Sediment & Erosion Control Plans, have been adequately installed to ensure overall preparedness of the site for the commencement of construction. In addition, the Operator shall have a qualified professional conduct one site inspection at least every seven calendar days and at least two site inspections every seven calendar days when greater than five acres of soil is disturbed at any one time.

Prior to the commencement of construction activity, the owner or operator must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The owner or operator shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the trained contractor. The owner or operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed.
The owner or operator shall have each of the contractors and subcontractors identified above sign a copy of the certification statement provided in Appendix G before they commence any construction activity.

Soil Description

As provided by the United States Department of Agriculture, Soil Conservation Service "Web Soil Survey," soil classifications which exist on the subject site are described below.

Soils are placed into four hydrologic groups: A, B, C, and D. In the definitions of the classes, infiltration rate is the rate at which water enters the soil at the surface and is controlled by the surface conditions. Transmission rate is the rate at which water moves in the soil and is controlled by soil properties. Definitions of the classes are as follows:

A. (Low runoff potential). The soils have a high infiltration rate even when thoroughly wetted. They chiefly consist of deep, well drained to excessively drained sands or gravels. They have a high rate of water transmission.

B. The soils have a moderate infiltration rate when thoroughly wetted. They chiefly are moderately deep to deep, moderately well drained to well drained soils that have moderately fine to moderately coarse textures. They have a moderate rate of water transmission.

C. The soils have a slow infiltration rate when thoroughly wetted. They chiefly have a layer that impedes downward movement of water or have moderately fine to fine texture. They have a slow rate of water transmission.

D. (High runoff potential). The soils have a very slow infiltration rate when thoroughly wetted. They chiefly consist of clay soils that have a high swelling potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. They have a very slow rate of water transmission.

A soil's tendency to erode is also described in the USDA web soil survey. The ratings in this interpretation indicate the hazard of soil loss from unsurfaced areas. The ratings are based on soil erosion factor K, slope, and content of rock fragments. The hazard is described as "slight,"

"moderate," or "SEVERE." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the temporarily unsurfaced / unstabilized during construction may require occasional maintenance, and that simple erosion-control measures are needed; and "SEVERE" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that erosion-control measures are needed.

Per the Soil Survey, the following soils listed below are present at the site. Following this list is a detailed description of each soil type found on the property:

SYMBOL	HSG	DESCRIPTION
PnB	C	Paxton fine sandy loam, 3-8% slopes
PnC	C	Paxton fine sandy loam, 8-15% slopes
PnD	C	Paxton fine sandy loam, 15-25% slopes
PoB	C	Paxton fine sandy loam, 0 to 8 percent slopes, very stony
RdA	D	Ridgebury complex, 0 to 3 percent slopes
RgB	D	Ridgebury complex, 0 to 8 percent slopes, very stony
WdC	C	Woodbridge loam, 8 to 15 percent slopes

PnB, Paxton fine sandy loam, 3-8% slopes

This soil is gently sloping, very deep, and well drained. It is on broad ridges and small hills. Individual areas are irregularly shaped or are long and narrow. Depth to the top of a seasonal high water table is 1.5 to 2.5 feet from February through April. Available water capacity is moderate.

Hydrologic group: C
Erosion Hazard Rating: Slight

PnC, Paxton fine sandy loam, 8-15% slopes

This soil is strongly sloping, very deep, and well drained. It is on the sides and tops of broad ridges and small hills. Individual areas are irregularly shaped or are long and narrow. Depth to the top of a seasonal high water table is 1.5 to 2.5 feet from February through April. Available water capacity is moderate.

Hydrologic group: C
Erosion Hazard Rating: Moderate

PnD, Paxton fine sandy loam, 15-25% slopes

This soil is moderately steep, very deep, and well drained. It is on side slopes of broad ridges and small hills. Individual areas are irregularly shaped or are long and narrow. Depth to the top of a seasonal high water table is 1.5 to 2.5 feet from February through April. Available water capacity is Moderate.

Hydrologic group: C
Erosion Hazard Rating: Severe

PoB, Paxton fine sandy loam, 0 to 8 percent slopes, very stony

This soil is gently sloping, very deep, and well drained. It is on convex hilltops and side slopes. Individual areas are irregularly shaped and range from about 2 to 100 acres in size. Depth to the top of a seasonal high water table is 1.5 to 2.5 feet from February through April. Available water capacity is moderate.

Hydrologic group: C
Erosion Hazard Rating: Slight

RdA, Ridgebury complex, 0 to 3 percent slopes

This soil is nearly level, very deep, and poorly drained and somewhat poorly drained. It is in the uplands and along small drainageways. Depth to the top of a seasonal high water table is within a depth of 1.5 feet from November through May. Available water capacity is moderate.

Hydrologic group: D
Erosion Hazard Rating: Slight

RgB, Ridgebury loam, 2 to 8 percent slopes, very stony.

This soil is gently sloping, very deep, and poorly drained and somewhat poorly drained. It is on the lower parts of hillsides in the uplands and along small drainageways. Depth to the top of a seasonal high water table is Within a depth of 1.5 feet from November through May. Available water capacity is moderate.

Hydrologic group: D
Erosion Hazard Rating: Slight

WdC, Woodbridge loam, 8 to 15 percent slopes

This soil is strongly sloping, very deep, and moderately well drained. It is on the lower parts of hillsides in the uplands. Depth to the top of a seasonal high water table is 1.5 to 2.5 feet below the surface from November through May. Available water capacity is moderate.

Hydrologic group: C
Erosion Hazard Rating: Moderate

On-Site Pollution Prevention

There are temporary pollution prevention measures used to control litter and construction debris on site, such as:

- Temporary Riser and Anti-Vortex Device
- Silt Fence
- Manufactured Insert Inlet Protection
- Stone Check Dam
- Excavated Drop Inlet Protection

There will be inlet protection provided for all storm drains and inlets with the use of curb gutter inlet protection structures and stone & block drop inlet protection, which keep silt, sediment and construction litter and debris out of the on-site stormwater drainage system.

Temporary Control Measures

Temporary control measures and facilities will include silt fences, construction ditches, stabilized construction access, temporary seeding, mulching and sediment traps with temporary riser and anti-vortex devices.

Throughout the construction of the proposed development, temporary control facilities will be implemented to control on-site erosion and sediment transfer. Construction ditches, if required, will be used to direct stormwater runoff to temporary sediment traps for settlement. The sediment traps will be constructed as part of this project will serve as temporary sediment basins to remove sediment and pollutants from the stormwater runoff produced during construction. Descriptions of the temporary sediment & erosion controls that will be used during the development of the site including silt fence, stabilized construction access, seeding, mulching and inlet protection are as follows:

1. Silt Fence is constructed using a geotextile fabric. The fence will be either 18 inches or 30 inches high. The height of the fence can be increased in the event of placing these devices on uncompacted fills or extremely loose undisturbed soils. The fences will not be placed in areas which receive concentrated flows such as ditches, swales and channels nor will the filter fabric material be placed across the entrance to pipes, culverts, spillway structures, sediment traps or basins.

2. Stabilized Construction Access consists of AASHTO No. 1 rock. The rock entrance will be a minimum of 50 feet in length by 24 feet in width by 6 inches in depth.

3. Seeding will be used to create a vegetative surface to stabilize disturbed earth until at least 80% of the disturbed area has a perennial vegetative cover. This amount is required to adequately function as a sediment and erosion control facility. Grass lining will also be used to line temporary channels and the surrounding disturbed areas.

4. Mulching is used as an anchor for seeding and disturbed areas to reduce soil loss due to storm events. These areas will be mulched with straw at a rate of 3 tons per acre such that the mulch forms a continuous blanket. Mulch must be placed after seeding or within 48 hours after seeding is completed.

5. Inlet Protection will be provided for all stormwater basins and inlets with the use of curb & gutter inlet protection and stone & block inlet protection structures, which will keep silt, sediment and construction debris out of the storm system. Existing structures within existing paved areas will be protected using "Manufactured Insert Inlet Protection" inside the structures.

6. Erosion Control Matting will be utilized on slopes and within swales, where applicable, to provide stabilization in advance of vegetation being established. Such matting will be biodegradable to facilitate long term growth of vegetation in swales, on slopes and within stormwater management facilities.

7. Temporary Sediment Basins will be constructed to intercept sediment laden runoff and trap and retain the sediment. The sediment basins are sized to provide a sediment storage volume of 3,600 cubic feet per acre draining to the basin. The Sediment Basins will be used with the permanent SMP's until their contributing drainage areas are stabilized. Once stabilized, the temporary risers will be removed, permanent outlet control structures will be installed and final grading/planting of the sediment basins will be completed for permanent use as Stormwater Management basins. Sediment Basin sizing standards, details and calculations are in the Appendices.

8. Temporary Riser and Anti-Vortex Devices- are placed at the bottom of the temporary sediment basins where they intercept and collect debris and litter from the pond before they can enter the off-site storm drainage system.

9. Stone Check Dams are small barriers of crushed stone which will be laid across the grass swales which are approximately 12 inches high, located every one foot of elevation change along the swales so that the crest elevation of the downstream dam is at the same elevation of the toe of the upstream dam.

10. Construction ditches are temporary swales proposed to intercept sediment laden runoff and divert it through stone check dams to promote an increase in travel time to settle any solids prior to runoff reaching the nearest drain inlet which will have inlet protection.

The contractor shall be responsible for maintaining the temporary sediment and erosion control measures throughout construction. This maintenance will include, but not be limited to, the following tasks:

1. For dust control purposes, moisten all exposed graded areas with water at least twice a day in those areas where soil is exposed and cannot be planted with a temporary cover due to construction operations or the season (December through March).

2. Inspection of erosion and sediment control measures shall be performed at the end of each construction day and immediately following each rainfall event. All required repairs shall be immediately executed by the contractor.

3. Sediment deposits shall be removed when they reach approximately ⅓ the height of the silt fence. All such sediment shall be properly disposed of in fill areas on the site, as directed by the Owner's Field Representative. Fill shall be protected following disposal with mulch, temporary and/or permanent vegetation and be completely circumscribed on the downhill side by silt fence.

4. Rake all exposed areas parallel to the slope during earthwork operations.

5. Following final grading, the disturbed area shall be stabilized with a permanent surface treatment (i.e. turf grass, pavement or sidewalk). During rough grading, areas which are not to be disturbed for seven or more days shall be stabilized with the temporary seed mixture, as defined on the plans. Seed all piles of dirt in exposed soil areas that will not receive a permanent surface treatment.

Concrete Material and Equipment Management

Concrete washouts shall be used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solid for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Solids that are improperly disposed of can clog storm drain pipes and cause flooding. Installing concrete washout facilities not only prevents pollution but also is a matter of good housekeeping at your construction site.

Prefabricated concrete washout containers can be delivered to the site to provide maintenance and disposal of materials. Regular pick-ups of solid and liquid waste materials will be necessary. To prevent leaks on the job site, ensure that prefabricated washout containers are watertight. A self installed concrete washout facility can be utilized although they are much less reliable than prefabricated containers and are prone to leaks. There are many design options for the washout, but they are preferably built below-grade to prevent breaches and reduce the likelihood of runoff. Above-grade structures can also be used if they are sized and constructed correctly and are diligently maintained. One of the most common problems with self-installed concrete washout facilities is that they can leak or be breached as a result of constant use, therefore the contractor shall be sure to use quality materials and inspect the facilities on a daily basis.

Washouts must be sized to handle solids, wash water, and rainfall to prevent overflow. Concrete Washout Systems, Inc. estimates that 7 gallons of wash water are used to wash one truck chute and 50 gallons are used to wash out the hopper of a concrete pump truck.

For larger sites, a below-grade washout should be at least 10 feet wide and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 12-inches of freeboard must be provided. The pit must be lined with plastic sheeting of at least 10-mil thickness without holes or tears to prevent leaching of liquids into the ground. Concrete wash water should never be placed in a pit that is connected to the storm drain system or that drains to nearby waterways.

An above-grade washout can be constructed at least 10 feet wide by 10 feet long and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 4-inches of freeboard must be provided. The washout structures can be constructed with staked straw bales or sandbags double-or triple lined with plastic sheeting of at least 10-mil thickness without holes or tears.

Concrete washout facilities shall not be located within 100 feet of storm drains, open ditches, or water bodies and should be placed in locations that allow for convenient access for concrete trucks. The contractor shall check all concrete washout facilities daily to determine if they have been filled to 75 percent capacity, which is when materials need to be removed. Both above-and below-ground self-installed washouts should be inspected daily to ensure that plastic linings are intact and sidewalls have not been damaged by construction activities. Prefabricated washout containers should be inspected daily as well as to ensure the container is not leaking or nearing 75 percent capacity. Inspectors should also note whether the facilities are being used regularly. Additional signage for washouts may be needed in more convenient locations if concrete truck operators are not utilizing them.

The washout structures must be drained or covered prior to predicted rainstorms to prevent overflows. Hardened solids either whole or broken must be removed and then they may be reused onsite or hauled away for recycling.

Once materials are removed from the concrete washout, a new structure must be built or excavated, or if the previous structure is still intact, inspect it for signs of weakening or damage and make any necessary repairs. Line the structure with new plastic that is free of holes or tears and replace signage if necessary. It is very important that new plastic be used after every cleaning because pumps and concrete removal equipment can damage the existing liner.

Construction Site Chemical Control

The purpose of this management measure is to prevent the generation of nonpoint source pollution from construction sites due to improper handling and usage of nutrients and toxic substances, and to prevent the movement of toxic substances from the construction site.

Many potential pollutants other than sediment are associated with construction activities. These pollutants include pesticides; fertilizers used for vegetative stabilization; petrochemicals; construction chemicals such as concrete products, sealers, and paints; wash water associated with these products; paper; wood; garbage; and sanitary waste.

Disposal of excess pesticides and pesticide-related wastes should conform to registered label directions for the disposal and storage of pesticides and pesticide containers set forth in applicable Federal, State and local regulations that govern their usage, handling, storage, and disposal.

Pesticides should be disposed of through either a licensed waste management firm or a treatment, storage and disposal (TSD) facility. Containers should be triple-rinsed before disposal, and rinse waters should be reused as product.
Other practices include setting aside a locked storage area, tightly closing lids, storing in a cool, dry place, checking containers periodically for leaks or deterioration, maintaining a list of products in storage, using plastic sheeting to line the storage areas, and notifying neighboring property owners prior to spraying.

When storing petroleum products, follow these guidelines:

- Create a shelter around the area with cover and wind protection;
- Line the storage area with a double layer of plastic sheeting or similar material;
- Create an impervious berm around the perimeter with a capacity of 110 percent greater than that of the largest container;
- Clearly label all products;
- Keep tanks off the ground; and
- Keep lids securely fastened.

Post spill procedure information and have persons trained in spill handling on site or on call at all times. Materials for cleaning up spills should be kept on site and easily available. Spills should be cleaned up immediately and the contaminated material properly disposed of. Maintain and wash equipment and machinery in confined areas specifically designed to control runoff.

Thinners or solvents should not be discharged into sanitary or storm systems when cleaning machinery. Use alternative methods for cleaning larger equipment parts, such as high-pressure, high-temperature water washes, or steam cleaning. Equipment-washing detergents can be used, and wash water may be discharged into sanitary sewers if solids are removed from the solution first. (This practice should be verified with the local sewer authority.) Small parts can be cleaned with degreasing solvents, which can then be reused or recycled.

Solid Waste Management and Portable Sanitary Management

The purpose of this management measure is to prevent the potential for solid waste such as construction debris, trash, etc. from construction sites due to improper handling and storage. Debris and litter should be removed periodically from the BMP's and surrounding areas to prevent clogging of pipes and structures. All construction material shall be stored in designated staging areas. Roll-off containers shall be placed on site and all empty containers, construction debris and litter shall be placed in the containers.

Portable sanitary units may be utilized on-site or bathrooms will be provided within construction trailers. A sanitation removal company will be hired to pump/remove any sanitary waste. In the event that portable sanitary units are used and then cleaned after being emptied, the rinse water may not be disposed of to the storm drain system. It shall be contained for later disposal if it can't be disposed of on-site. Remove paper and trash before cleaning the portable sanitary units. The portable sanitary units shall be located away from the storm drain system if possible. Provide over head cover for wash areas if possible. Maintain spill response material and equipment on site to eliminate the potential for contaminants and wash water from entering the storm drain system.

Permanent Control Measures and Facilities for Long Term Protection

Towards the completion of construction, permanent sediment and erosion control measures will be developed for long term erosion protection. The following permanent control measures and facilities have been proposed to be implemented for the project:

1. Grassed Swales will function to provide additional treatment of stormwater runoff by removal of pollutants and will promote a reduction of peak flows and provide runoff infiltration.

2. Bioretention Areas are shallow stormwater control that utilize vegetation and engineered filter media to capture and treat stormwater runoff, then return it to the conveyance system through a perforated underdrain system.

3. Hydrodynamic Separators will be used to provide pretreatment of the water quality flow rate for separating sediment, debris, floatables, etc. from the runoff prior to discharge to the SMP's. The CDS Water Quality Structure has been designed to treat up to the required water quality volume and appropriately handle all storm frequencies without the resuspension of solids. The system will provide 80% TSS removal rate for particles having a mean particle size of 125 microns for stormwater runoff.

4. Subsurface Infiltration Systems are a standard SMP that will be used to treat the runoff volume generated from a portion of the developed area and provide additional water quality

and runoff volume reduction. Smaller storms will be retained, and higher storms will be released gradually. Refer to the Proposed Hydrologic Calculations and Runoff Reduction and Water Quality Volume Sizing Calculations, in Appendix B.

The StormTech MC-3500 and MC-4500 Recharge Chambers are domed shaped fully opened bottom corrugated chambers with perforated side walls. Chambers allow stormwater to be stored within the dome void until it can infiltrate into the ground. They are able to be used for residential, commercial or industrial applications and provide an easy way to treat and dispose of stormwater runoff underground. Water is infiltrated into the ground through the chambers and surrounding crushed stone and will replenish the groundwater as a natural condition.

5. Catch Basins will be used to remove some of the coarse sand and grit sediment before entering the drainage system. Each catch basin will be constructed with an 18-inch-deep sump.

6. Rip-Rap Energy Dissipators At discharge points from the stormwater drainage system into the stormwater management basins, rip-rap pads consisting of angular rocks will be placed to dissipate velocity and reduce the risk of erosion.

7. Seeding of at least 80% perennial vegetative cover will be used to produce a permanent uniform erosion resistant surface. The seeded areas will be mulched with straw at a rate of 2 tons per acre such that the mulch forms a continuous blanket.

Specifications for Soil Restoration

Prior to the final stabilization of the disturbed areas, soil restoration will be required for all vegetated areas to recover the original properties and porosity of the soil. Soil Restoration Requirements are provided on Table 5 below:

Table 5

Soil Restoration Requirements

Type of Soil Disturbance	Soil Restoration Requirement		Comments/Examples
No soil disturbance	Restoration not permitted		Preservation of Natural Features
Minimal soil disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped only – no change in grade	HSG A&B	HSG C&D	Protect area from any ongoing construction activities
	apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Areas of cut or fill	HSG A&B	HSG C&D	Clearing and grubbing
	Aerate and apply 6 inches of topsoil	Apply full Soil Restoration**	
Heavy traffic areas on site (especially) in a zone 5-25 feet around buildings but not within a 5 foot perimeter around foundation walls)	Apply full Soil Restoration (decompaction and compost enhancement)		
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area.
Redevelopment projects	Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.		

* Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.

** Per "Deep Ripping and De-compaction, DEC 2008."

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following full soil restoration steps applied:

1. Apply 3 inches of compost over subsoil.

2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor-mounted disc, or tiller, mixing, and circulating air and compost into subsoils.

3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.

Specifications for Final Stabilization of Graded Areas

Final stabilization of graded areas consists of the placement of topsoil and installation of landscaping (unless the area is to be paved, or a building is to be constructed in the location). Topsoil is to be spread as soon as grading operations are completed. Topsoil is to be placed to a minimum depth of six inches on all embankments, planting areas and seeding/sod areas. The subgrade is to be scarified to a depth of two inches to provide a bond of the topsoil with the subsoil. Topsoil is to be raked to an even surface and cleared of all debris, roots, stones and other unsatisfactory material.

Planting operations shall be conducted under favorable weather conditions as follows:

- Permanent Lawns - April 15 (provided soil is frost-free and not excessively moist) to May 15; August 15 to October 15.
- Temporary Lawn Seeding - if outside of the time periods noted above, the areas shall be seeded immediately on completion of topsoil operations with annual ryegrass (Italian rye) at a rate of six pounds per 1,000 square feet. Temporary lawn installation is permitted provided the soil is frost-free and not excessively moist. The permanent lawn is to be installed the next planting season.

On slopes with a grade of 3 horizontal to 1 vertical or greater, and in swales, a geotextile netting or mat shall be installed for stabilization purposes as shown on the Plans. Seeded areas are to be mulched with straw or hay at an application rate of 70-90 pounds per 1,000 s.f. Straw or hay mulch must be spread uniformly and anchored immediately after spreading to prevent wind blowing. Mulches must be inspected periodically and in particular after rainstorms to check for erosion. If erosion is observed, additional mulch must be applied. Netting shall be inspected after rainstorms for dislocation or failure; any damage shall be repaired immediately.

All denuded surfaces which will be exposed for a period of over two months or more shall be temporarily hydroseeded with (a) perennial ryegrass at a rate of 40 lbs per acre (1.0 lb per 1000 square feet); (b) Certified "Aroostook" winter rye (cereal rye) @ 100 lb per acre (2.5 lb/1000 s.f.) to be used in the months of October and November.

Permanent turfgrass cover is to consist of a seed mixture as follows:

(a) Sunny sites

Kentucky Bluegrass	2.0-2.6 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	0.4-0.6 pounds/1000 square feet

(b) Shady sites

Kentucky Bluegrass	0.8-1.0 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	2.6-3.3 pounds/1000 square feet

All plant materials shall comply with the standards of the American Association Of Nurserymen with respect to height and caliper as described in its publication American Standard for Nursery Stock, latest edition.

VII. CONSTRUCTION PHASE AND POST-CONSTRUCTION MAINTENANCE

During the construction phase and following construction of the project, a number of maintenance measures will be taken with respect to the site maintenance. Measures to be taken included the following:

1. During Construction

A comprehensive sediment and erosion control plan will be in place during the construction period. Maintenance measures for sediment and erosion controls will include:

A qualified professional acceptable to the municipality will be hired by the owner or operator to monitor the installation and maintenance of the sediment and erosion control plans. The qualified professional shall report directly to the Engineering Consultant and shall be responsible for ensuring compliance with the design of the sediment and erosion control plans.

The qualified professional so hired will inspect all sediment and erosion control measures at least every seven calendar days. In the event that there has been a variance with the design of the sediment and erosion control measures so that the ability of the measures to adequately perform the intended function is lessened or compromised and/or the facilities are not adequately maintained, the qualified professional shall be required to report such variance to the Engineering Consultant within 48 hours and shall be empowered to order immediate repairs to the sediment and erosion control measures.

The qualified professional will also be responsible for observing the adequacy of the vegetation growth (trees, shrubs, groundcovers and turfgrasses) in newly graded areas and for ordering additional plantings in the event that the established plant materials do not adequately protect the ground surface from erosion.

2. Following Construction

Site maintenance activities on the property will include:

- Grounds maintenance, including mowing of lawns;
- Planting of trees, shrubs and groundcovers; pruning of trees and shrubs;
- Application of fertilizer and herbicides;
- Maintenance of stormwater management area;

Grounds maintenance on the site will be performed by landscaping contractor.

Fertilizer is typically applied twice in the year - once in the spring and once in the fall. The application of fertilizer is usually necessary to maintain healthy lawn growth due to competition for nutrients with trees and shrubs and since the clippings are often removed. It is not recommended that fertilizer be applied during the summer. It is at this time that lawns are typically dormant.

Fertilizers come in three basic types: (1) Organic; (2) Soluble synthetic and (3) Slow release.

Organic fertilizers are derived from plant or animal waste. Since they are heavier and bulkier than other fertilizers, it is necessary to apply a much greater amount at one time. Soluble synthetic fertilizers are predictable with determining the exact impact on a lawn. However more applications are necessary since their effect is often short term. Slow release fertilizers have a high percentage of nitrogen so quantities that need be handled at one time are smaller. Slow release fertilizers will be utilized by the project.

Per Chapter 863, Article XXVIII of Westchester County Code of Ordinances, no fertilizer containing more than 0% phosphorus shall be used, unless testing confirms the need for additional phosphorus.

Fertilizer shall be applied by the landscape contractor in accordance with the manufacturer's instructions. The application of fertilizer does require some skill on the part of the operator. Should there be a spill of fertilizer, the landscape contractor shall be required to scrape or vacuum it up. The area will then be watered in accordance with the manufacturer's instructions to ensure that the fertilizer becomes soluble and available to plants and does not run off.

Toll Brothers will be responsible for the long-term operation and maintenance of the permanent stormwater management practices. The permanent stormwater management practices shall be maintained in accordance with the Maintenance Inspection Checklists provided in Appendix F.

VIII. CONCLUSION

This Stormwater Pollution Prevention Plan has been prepared to describe the project's pre and post-development stormwater management improvements and its sediment and erosion control improvements to be utilized during construction. The proposed permanent improvements and the interim improvements to be utilized during construction have been designed in accordance with the requirements of the:

- Requirements of the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-25-001, effective January 29, 2025;
- New York City Environmental Protection (NYCEP, formerly NYCDEP) Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources, amended February 28, 2025;
- New York State Department of Environmental Conservation Stormwater Management Design Manual, last revised July 31, 2024;
- Chapter 248 "Stormwater Management and Erosion and Sediment Control" section of the Town of Yorktown Zoning Code;

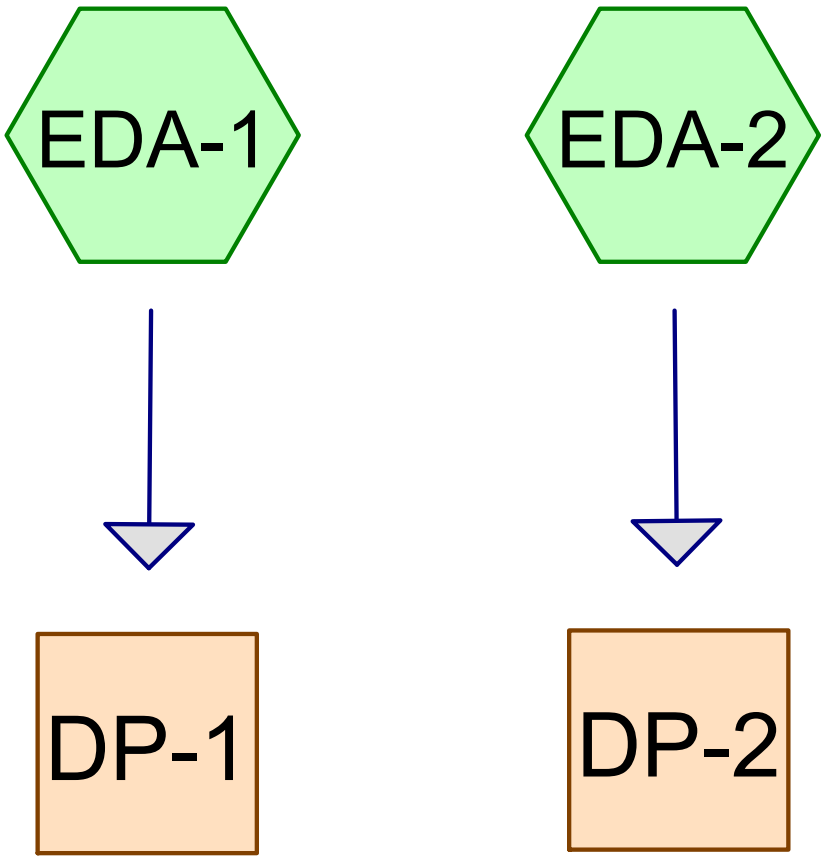
The project employs a variety of practices to enhance stormwater quality and reduce peak rates of runoff associated with the proposed development of this site which include the

construction of 118 market-rate residential units, a clubhouse with an associated pool, pickleball courts, access driveways, driving aisles, parking areas, and pedestrian walkways. These measures include vegetated swales, stormwater management ponds, subsurface infiltration systems, filtration bioretention areas, and hydrodynamic separators.

Based on the foregoing, it is our professional opinion that the proposed improvements will provide water quantity and quality enhancements which exceed the above-mentioned requirements and are not anticipated to have any adverse impacts to the site or any surrounding areas.

APPENDIX A

EXISTING HYDROLOGIC CALCULATIONS



Subcat Reach Pond Link

Routing Diagram for 23109-2025-04-22Fieldhome-Existing
Prepared by JMC PLLC, Printed 4/22/2025
HydroCAD® 10.20-6a s/n 11187 © 2024 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	NY-Fieldhome-Upper Confidence Limits 24-hr S0	1-yr	Default	24.00	1	2.97	
2	10-yr	NY-Fieldhome-Upper Confidence Limits 24-hr S0	10-yr	Default	24.00	1	5.87	
3	100-yr	NY-Fieldhome-Upper Confidence Limits 24-hr S0	100-yr	Default	24.00	1	12.10	

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
4,181	HSG B	EDA-2
1,928,543	HSG C	EDA-1, EDA-2
319,757	HSG D	EDA-2
0	Other	
2,252,481		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Sub Num
0	0	226,276	0	0	226,276	>75% Grass cover, Good	
0	4,181	5,645	0	0	9,826	Paved parking	
0	0	1,696,622	319,757	0	2,016,379	Woods, Good	
0	**4,181**	**1,928,543**	**319,757**	**0**	**2,252,481**	**TOTAL AREA**	

Time span=0.00-72.00 hrs, dt=0.0100 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EDA-1: Runoff Area=587,255 sf 0.96% Impervious Runoff Depth=0.74"
Flow Length=888' Tc=34.5 min CN=71 Runoff=5.88 cfs 36,371 cf

Subcatchment EDA-2: Runoff Area=1,665,226 sf 0.25% Impervious Runoff Depth=0.79"
Flow Length=2,529' Tc=29.4 min CN=72 Runoff=19.96 cfs 109,668 cf

Reach DP-1: Inflow=5.88 cfs 36,371 cf
Outflow=5.88 cfs 36,371 cf

Reach DP-2: Inflow=19.96 cfs 109,668 cf
Outflow=19.96 cfs 109,668 cf

Total Runoff Area = 2,252,481 sf Runoff Volume = 146,039 cf Average Runoff Depth = 0.78"
99.56% Pervious = 2,242,655 sf 0.44% Impervious = 9,826 sf

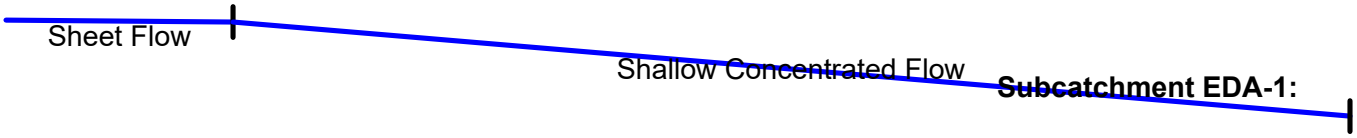
Summary for Subcatchment EDA-1:

Runoff = 5.88 cfs @ 12.46 hrs, Volume= 36,371 cf, Depth= 0.74"
Routed to Reach DP-1 :

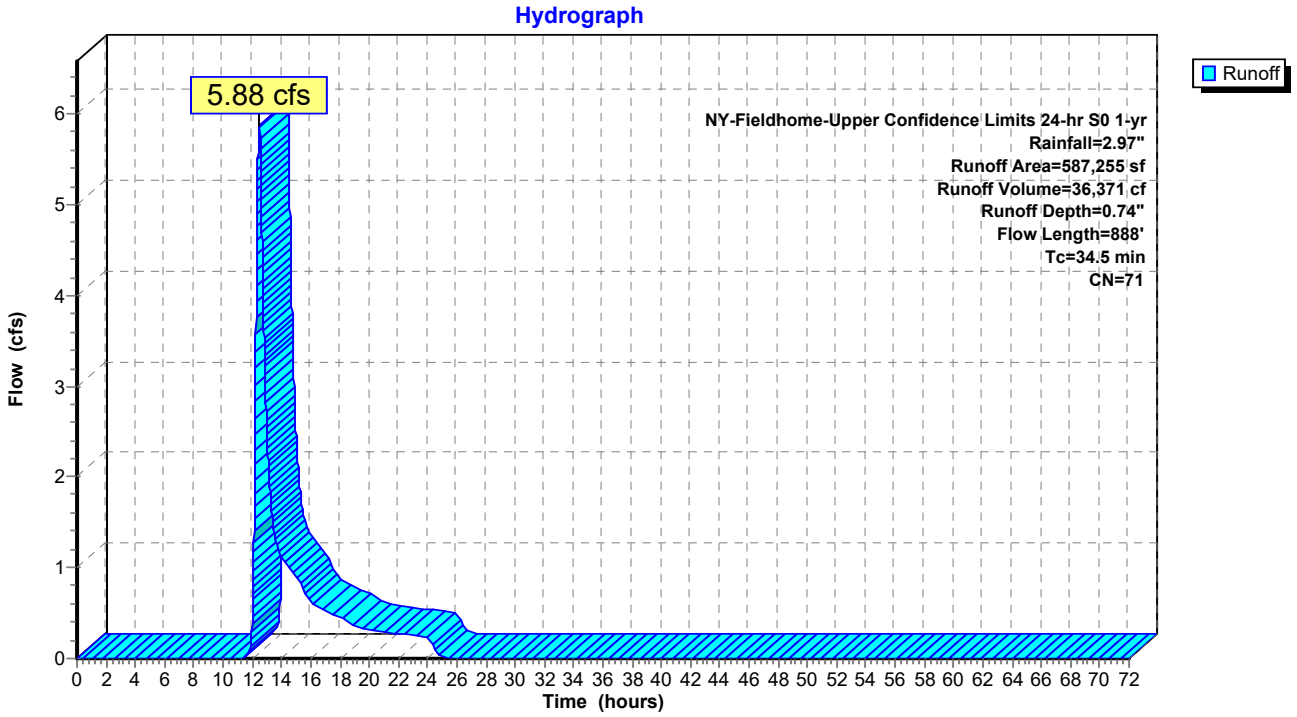
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

Area (sf)	CN	Description
145,444	74	>75% Grass cover, Good, HSG C
5,645	98	Paved parking, HSG C
436,166	70	Woods, Good, HSG C
587,255	71	Weighted Average
581,610		99.04% Pervious Area
5,645		0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.5	150	0.0149	0.08		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.38"
2.0	738	0.1487	6.21		**Shallow Concentrated Flow, Shallow Concentrated Flow** Unpaved Kv= 16.1 fps
34.5	888	Total			



Subcatchment EDA-1:



Hydrograph for Subcatchment EDA-1:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.37	0.00	0.00
9.00	0.46	0.00	0.00
10.00	0.59	0.00	0.00
11.00	0.77	0.00	0.00
12.00	1.64	0.14	**0.44**
13.00	2.20	0.35	**2.49**
14.00	2.38	0.43	1.13
15.00	2.52	0.50	0.90
16.00	2.60	0.54	0.62
17.00	2.68	0.58	0.52
18.00	2.74	0.62	0.46
19.00	2.79	0.64	0.36
20.00	2.83	0.67	0.32
21.00	2.87	0.69	0.29
22.00	2.91	0.71	0.27
23.00	2.94	0.73	0.26
24.00	**2.97**	**0.74**	0.24
25.00	2.97	0.74	0.01
26.00	2.97	0.74	0.00
27.00	2.97	0.74	0.00
28.00	2.97	0.74	0.00
29.00	2.97	0.74	0.00
30.00	2.97	0.74	0.00
31.00	2.97	0.74	0.00
32.00	2.97	0.74	0.00
33.00	2.97	0.74	0.00
34.00	2.97	0.74	0.00
35.00	2.97	0.74	0.00
36.00	2.97	0.74	0.00
37.00	2.97	0.74	0.00
38.00	2.97	0.74	0.00
39.00	2.97	0.74	0.00
40.00	2.97	0.74	0.00
41.00	2.97	0.74	0.00
42.00	2.97	0.74	0.00
43.00	2.97	0.74	0.00
44.00	2.97	0.74	0.00
45.00	2.97	0.74	0.00
46.00	2.97	0.74	0.00
47.00	2.97	0.74	0.00
48.00	2.97	0.74	0.00
49.00	2.97	0.74	0.00
50.00	2.97	0.74	0.00
51.00	2.97	0.74	0.00
52.00	2.97	0.74	0.00
53.00	2.97	0.74	0.00
54.00	2.97	0.74	0.00
55.00	2.97	0.74	0.00
56.00	2.97	0.74	0.00
57.00	2.97	0.74	0.00
58.00	2.97	0.74	0.00
59.00	2.97	0.74	0.00
60.00	2.97	0.74	0.00
61.00	2.97	0.74	0.00
62.00	2.97	0.74	0.00
63.00	2.97	0.74	0.00
64.00	2.97	0.74	0.00
65.00	2.97	0.74	0.00
66.00	2.97	0.74	0.00
67.00	2.97	0.74	0.00
68.00	2.97	0.74	0.00
69.00	2.97	0.74	0.00
70.00	2.97	0.74	0.00
71.00	2.97	0.74	0.00
72.00	2.97	0.74	0.00

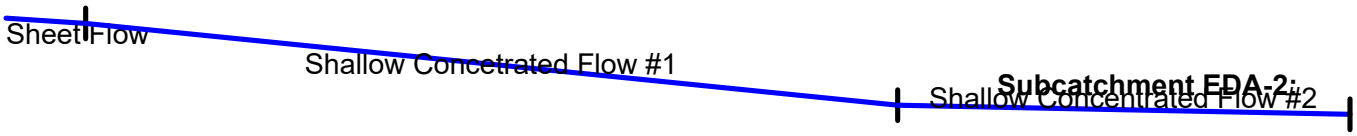
Summary for Subcatchment EDA-2:

Runoff = 19.96 cfs @ 12.39 hrs, Volume= 109,668 cf, Depth= 0.79"
Routed to Reach DP-2 :

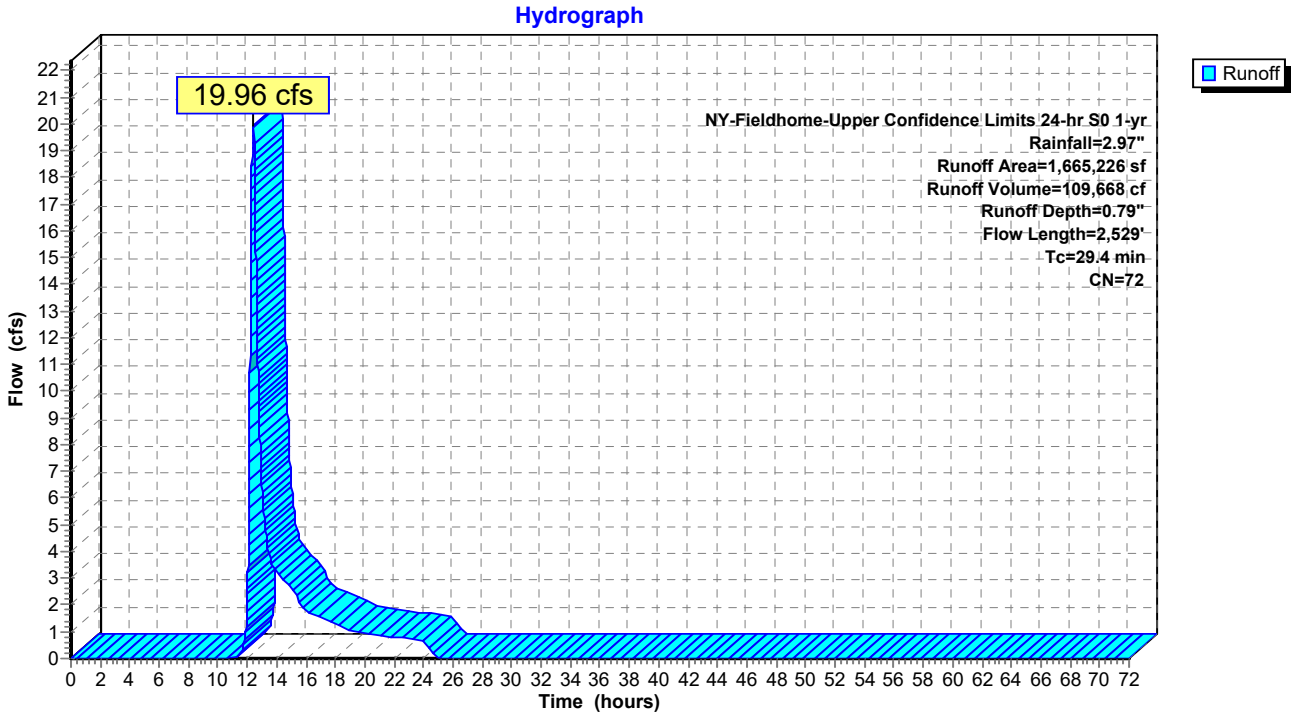
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

Area (sf)	CN	Description
1,260,456	70	Woods, Good, HSG C
319,757	77	Woods, Good, HSG D
80,832	74	>75% Grass cover, Good, HSG C
4,181	98	Paved parking, HSG B
1,665,226	72	Weighted Average
1,661,045		99.75% Pervious Area
4,181		0.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	150	0.0640	0.14		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.38"
5.0	1,528	0.0987	5.06		**Shallow Concentrated Flow, Shallow Concetrated Flow #1** Unpaved Kv= 16.1 fps
6.3	851	0.0197	2.26		**Shallow Concentrated Flow, Shallow Concentrated Flow #2** Unpaved Kv= 16.1 fps
29.4	2,529	Total			



Subcatchment EDA-2:



Hydrograph for Subcatchment EDA-2:

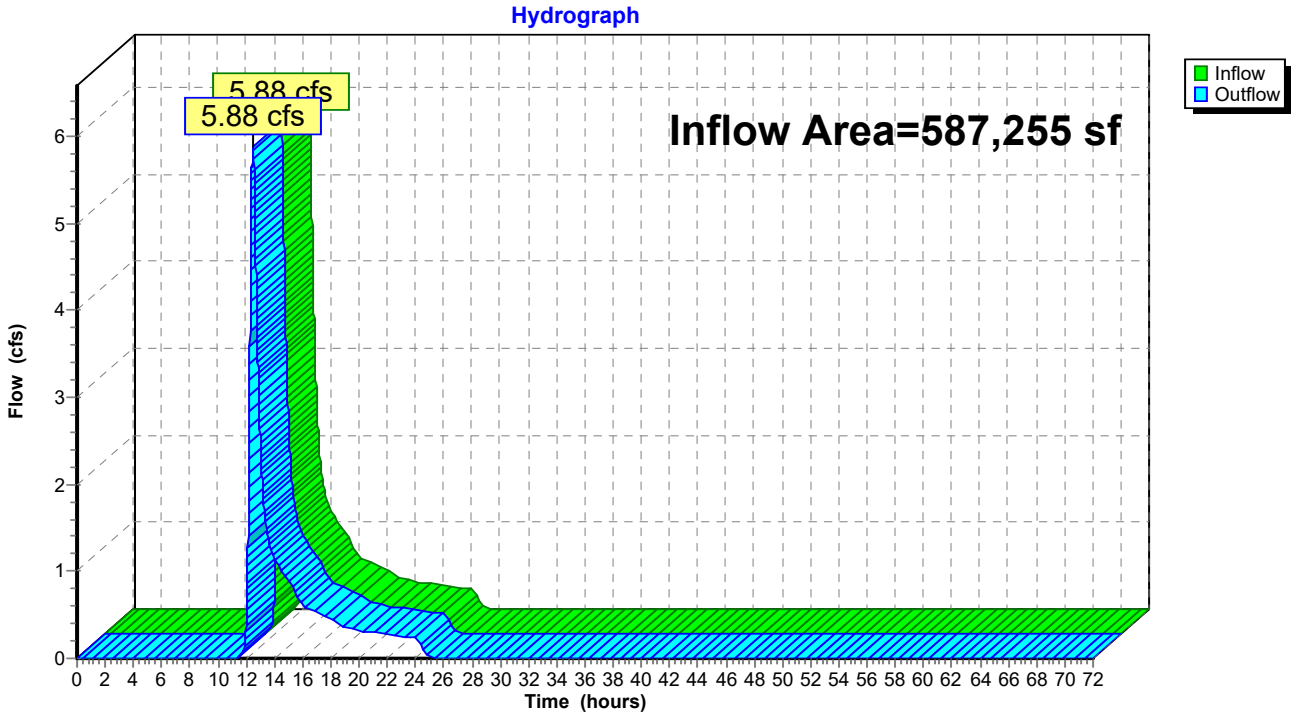
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.37	0.00	0.00
9.00	0.46	0.00	0.00
10.00	0.59	0.00	0.00
11.00	0.77	0.00	0.00
12.00	1.64	0.16	**2.21**
13.00	2.20	0.38	**6.42**
14.00	2.38	0.47	3.29
15.00	2.52	0.54	2.61
16.00	2.60	0.58	1.78
17.00	2.68	0.62	1.52
18.00	2.74	0.66	1.34
19.00	2.79	0.69	1.03
20.00	2.83	0.71	0.93
21.00	2.87	0.73	0.86
22.00	2.91	0.75	0.80
23.00	2.94	0.77	0.75
24.00	**2.97**	**0.79**	0.70
25.00	2.97	0.79	0.02
26.00	2.97	0.79	0.00
27.00	2.97	0.79	0.00
28.00	2.97	0.79	0.00
29.00	2.97	0.79	0.00
30.00	2.97	0.79	0.00
31.00	2.97	0.79	0.00
32.00	2.97	0.79	0.00
33.00	2.97	0.79	0.00
34.00	2.97	0.79	0.00
35.00	2.97	0.79	0.00
36.00	2.97	0.79	0.00
37.00	2.97	0.79	0.00
38.00	2.97	0.79	0.00
39.00	2.97	0.79	0.00
40.00	2.97	0.79	0.00
41.00	2.97	0.79	0.00
42.00	2.97	0.79	0.00
43.00	2.97	0.79	0.00
44.00	2.97	0.79	0.00
45.00	2.97	0.79	0.00
46.00	2.97	0.79	0.00
47.00	2.97	0.79	0.00
48.00	2.97	0.79	0.00
49.00	2.97	0.79	0.00
50.00	2.97	0.79	0.00
51.00	2.97	0.79	0.00
52.00	2.97	0.79	0.00
53.00	2.97	0.79	0.00
54.00	2.97	0.79	0.00
55.00	2.97	0.79	0.00
56.00	2.97	0.79	0.00
57.00	2.97	0.79	0.00
58.00	2.97	0.79	0.00
59.00	2.97	0.79	0.00
60.00	2.97	0.79	0.00
61.00	2.97	0.79	0.00
62.00	2.97	0.79	0.00
63.00	2.97	0.79	0.00
64.00	2.97	0.79	0.00
65.00	2.97	0.79	0.00
66.00	2.97	0.79	0.00
67.00	2.97	0.79	0.00
68.00	2.97	0.79	0.00
69.00	2.97	0.79	0.00
70.00	2.97	0.79	0.00
71.00	2.97	0.79	0.00
72.00	2.97	0.79	0.00

Summary for Reach DP-1:

Inflow Area = 587,255 sf, 0.96% Impervious, Inflow Depth = 0.74" for 1-yr event
Inflow = 5.88 cfs @ 12.46 hrs, Volume= 36,371 cf
Outflow = 5.88 cfs @ 12.46 hrs, Volume= 36,371 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs

Reach DP-1:



Hydrograph for Reach DP-1:

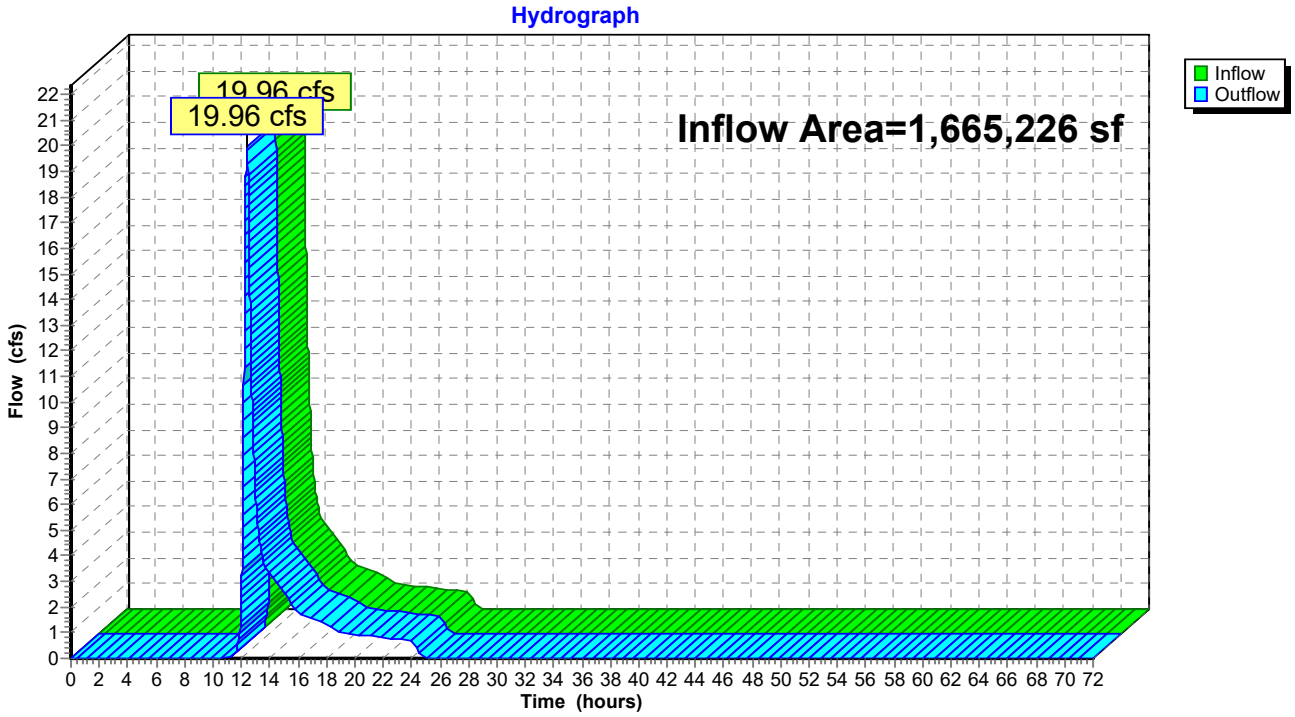
Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.00		0.00
5.00	0.00		0.00
6.00	0.00		0.00
7.00	0.00		0.00
8.00	0.00		0.00
9.00	0.00		0.00
10.00	0.00		0.00
11.00	0.00		0.00
12.00	**0.44**		**0.44**
13.00	**2.49**		**2.49**
14.00	1.13		1.13
15.00	0.90		0.90
16.00	0.62		0.62
17.00	0.52		0.52
18.00	0.46		0.46
19.00	0.36		0.36
20.00	0.32		0.32
21.00	0.29		0.29
22.00	0.27		0.27
23.00	0.26		0.26
24.00	0.24		0.24
25.00	0.01		0.01
26.00	0.00		0.00
27.00	0.00		0.00
28.00	0.00		0.00
29.00	0.00		0.00
30.00	0.00		0.00
31.00	0.00		0.00
32.00	0.00		0.00
33.00	0.00		0.00
34.00	0.00		0.00
35.00	0.00		0.00
36.00	0.00		0.00
37.00	0.00		0.00
38.00	0.00		0.00
39.00	0.00		0.00
40.00	0.00		0.00
41.00	0.00		0.00
42.00	0.00		0.00
43.00	0.00		0.00
44.00	0.00		0.00
45.00	0.00		0.00
46.00	0.00		0.00
47.00	0.00		0.00
48.00	0.00		0.00
49.00	0.00		0.00
50.00	0.00		0.00
51.00	0.00		0.00
52.00	0.00		0.00
53.00	0.00		0.00
54.00	0.00		0.00
55.00	0.00		0.00
56.00	0.00		0.00
57.00	0.00		0.00
58.00	0.00		0.00
59.00	0.00		0.00
60.00	0.00		0.00
61.00	0.00		0.00
62.00	0.00		0.00
63.00	0.00		0.00
64.00	0.00		0.00
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Summary for Reach DP-2:

Inflow Area = 1,665,226 sf, 0.25% Impervious, Inflow Depth = 0.79" for 1-yr event
Inflow = 19.96 cfs @ 12.39 hrs, Volume= 109,668 cf
Outflow = 19.96 cfs @ 12.39 hrs, Volume= 109,668 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs

Reach DP-2:



Hydrograph for Reach DP-2:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.00		0.00
5.00	0.00		0.00
6.00	0.00		0.00
7.00	0.00		0.00
8.00	0.00		0.00
9.00	0.00		0.00
10.00	0.00		0.00
11.00	0.00		0.00
12.00	**2.21**		**2.21**
13.00	**6.42**		**6.42**
14.00	3.29		3.29
15.00	2.61		2.61
16.00	1.78		1.78
17.00	1.52		1.52
18.00	1.34		1.34
19.00	1.03		1.03
20.00	0.93		0.93
21.00	0.86		0.86
22.00	0.80		0.80
23.00	0.75		0.75
24.00	0.70		0.70
25.00	0.02		0.02
26.00	0.00		0.00
27.00	0.00		0.00
28.00	0.00		0.00
29.00	0.00		0.00
30.00	0.00		0.00
31.00	0.00		0.00
32.00	0.00		0.00
33.00	0.00		0.00
34.00	0.00		0.00
35.00	0.00		0.00
36.00	0.00		0.00
37.00	0.00		0.00
38.00	0.00		0.00
39.00	0.00		0.00
40.00	0.00		0.00
41.00	0.00		0.00
42.00	0.00		0.00
43.00	0.00		0.00
44.00	0.00		0.00
45.00	0.00		0.00
46.00	0.00		0.00
47.00	0.00		0.00
48.00	0.00		0.00
49.00	0.00		0.00
50.00	0.00		0.00
51.00	0.00		0.00
52.00	0.00		0.00
53.00	0.00		0.00
54.00	0.00		0.00
55.00	0.00		0.00
56.00	0.00		0.00
57.00	0.00		0.00
58.00	0.00		0.00
59.00	0.00		0.00
60.00	0.00		0.00
61.00	0.00		0.00
62.00	0.00		0.00
63.00	0.00		0.00
64.00	0.00		0.00
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Time span=0.00-72.00 hrs, dt=0.0100 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EDA-1: Runoff Area=587,255 sf 0.96% Impervious Runoff Depth=2.79"
Flow Length=888' Tc=34.5 min CN=71 Runoff=20.54 cfs 136,750 cf

Subcatchment EDA-2: Runoff Area=1,665,226 sf 0.25% Impervious Runoff Depth=2.89"
Flow Length=2,529' Tc=29.4 min CN=72 Runoff=66.03 cfs 400,661 cf

Reach DP-1: Inflow=20.54 cfs 136,750 cf
Outflow=20.54 cfs 136,750 cf

Reach DP-2: Inflow=66.03 cfs 400,661 cf
Outflow=66.03 cfs 400,661 cf

Total Runoff Area = 2,252,481 sf Runoff Volume = 537,411 cf Average Runoff Depth = 2.86"
99.56% Pervious = 2,242,655 sf 0.44% Impervious = 9,826 sf

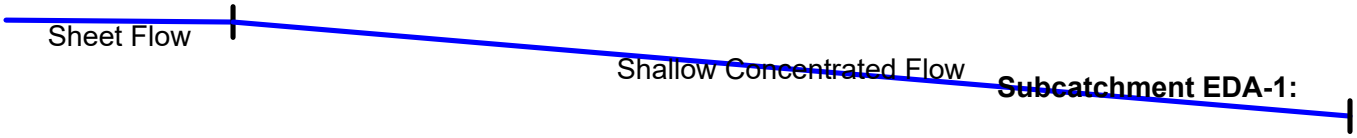
Summary for Subcatchment EDA-1:

Runoff = 20.54 cfs @ 12.45 hrs, Volume= 136,750 cf, Depth= 2.79"
Routed to Reach DP-1 :

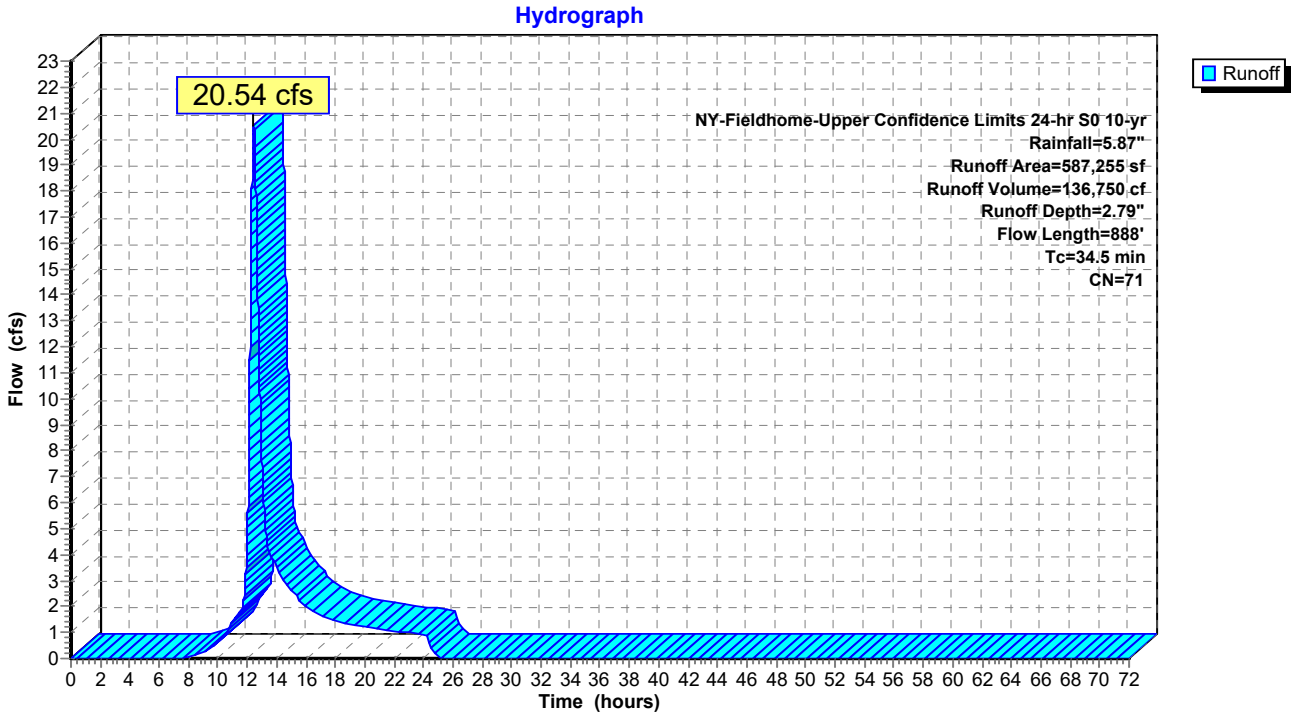
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

Area (sf)	CN	Description
145,444	74	>75% Grass cover, Good, HSG C
5,645	98	Paved parking, HSG C
436,166	70	Woods, Good, HSG C
587,255	71	Weighted Average
581,610		99.04% Pervious Area
5,645		0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.5	150	0.0149	0.08		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.38"
2.0	738	0.1487	6.21		**Shallow Concentrated Flow, Shallow Concentrated Flow** Unpaved Kv= 16.1 fps
34.5	888	Total			



Subcatchment EDA-1:



Hydrograph for Subcatchment EDA-1:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.38	0.00	0.00
5.00	0.50	0.00	0.00
6.00	0.63	0.00	0.00
7.00	0.77	0.00	0.00
8.00	0.93	0.00	0.04
9.00	1.12	0.02	0.24
10.00	1.39	0.07	0.66
11.00	1.76	0.18	1.40
12.00	3.16	0.85	**4.63**
13.00	4.12	1.48	**7.57**
14.00	4.49	1.74	3.48
15.00	4.75	1.93	2.68
16.00	4.94	2.07	1.96
17.00	5.10	2.20	1.67
18.00	5.25	2.30	1.48
19.00	5.37	2.40	1.33
20.00	5.49	2.49	1.22
21.00	5.59	2.57	1.13
22.00	5.69	2.65	1.06
23.00	5.78	2.73	1.00
24.00	**5.87**	**2.79**	0.94
25.00	5.87	2.79	0.05
26.00	5.87	2.79	0.00
27.00	5.87	2.79	0.00
28.00	5.87	2.79	0.00
29.00	5.87	2.79	0.00
30.00	5.87	2.79	0.00
31.00	5.87	2.79	0.00
32.00	5.87	2.79	0.00
33.00	5.87	2.79	0.00
34.00	5.87	2.79	0.00
35.00	5.87	2.79	0.00
36.00	5.87	2.79	0.00
37.00	5.87	2.79	0.00
38.00	5.87	2.79	0.00
39.00	5.87	2.79	0.00
40.00	5.87	2.79	0.00
41.00	5.87	2.79	0.00
42.00	5.87	2.79	0.00
43.00	5.87	2.79	0.00
44.00	5.87	2.79	0.00
45.00	5.87	2.79	0.00
46.00	5.87	2.79	0.00
47.00	5.87	2.79	0.00
48.00	5.87	2.79	0.00
49.00	5.87	2.79	0.00
50.00	5.87	2.79	0.00
51.00	5.87	2.79	0.00
52.00	5.87	2.79	0.00
53.00	5.87	2.79	0.00
54.00	5.87	2.79	0.00
55.00	5.87	2.79	0.00
56.00	5.87	2.79	0.00
57.00	5.87	2.79	0.00
58.00	5.87	2.79	0.00
59.00	5.87	2.79	0.00
60.00	5.87	2.79	0.00
61.00	5.87	2.79	0.00
62.00	5.87	2.79	0.00
63.00	5.87	2.79	0.00
64.00	5.87	2.79	0.00
65.00	5.87	2.79	0.00
66.00	5.87	2.79	0.00
67.00	5.87	2.79	0.00
68.00	5.87	2.79	0.00
69.00	5.87	2.79	0.00
70.00	5.87	2.79	0.00
71.00	5.87	2.79	0.00
72.00	5.87	2.79	0.00

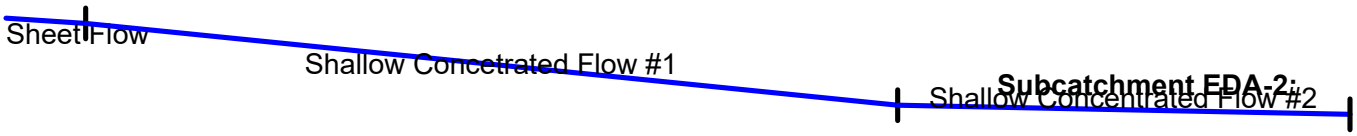
Summary for Subcatchment EDA-2:

Runoff = 66.03 cfs @ 12.38 hrs, Volume= 400,661 cf, Depth= 2.89"
Routed to Reach DP-2 :

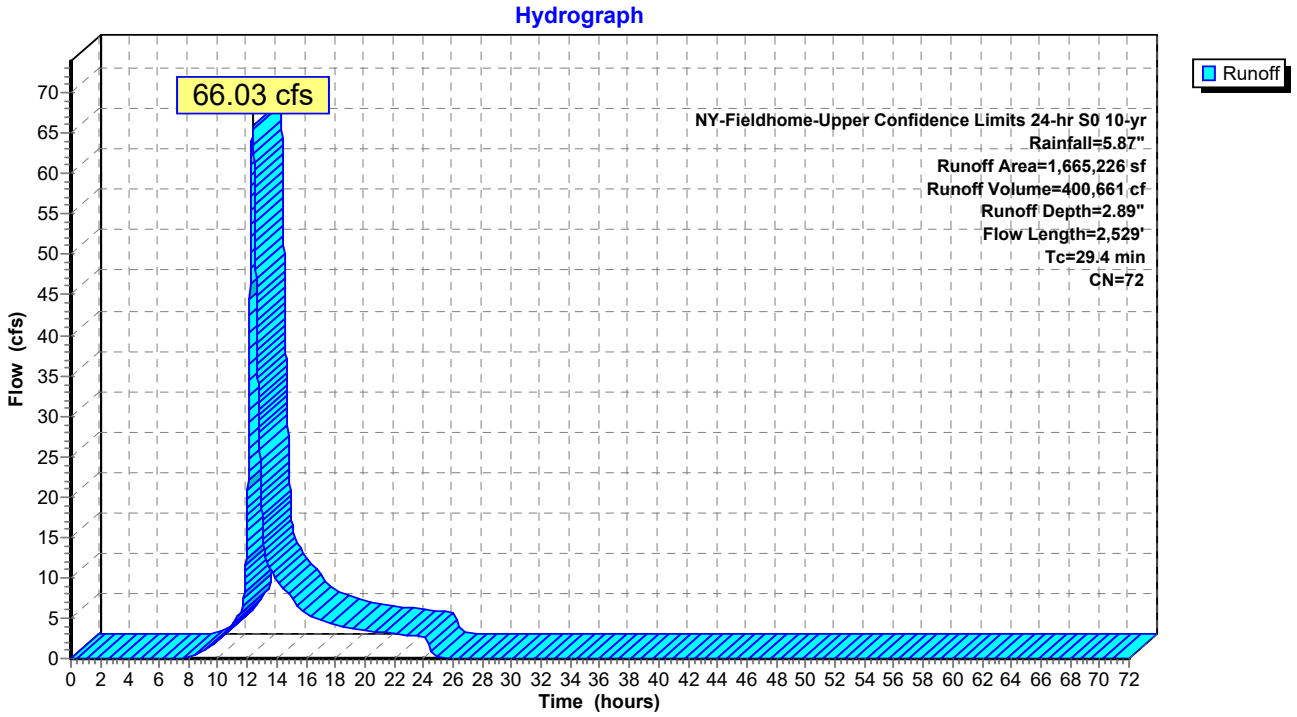
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

Area (sf)	CN	Description
1,260,456	70	Woods, Good, HSG C
319,757	77	Woods, Good, HSG D
80,832	74	>75% Grass cover, Good, HSG C
4,181	98	Paved parking, HSG B
1,665,226	72	Weighted Average
1,661,045		99.75% Pervious Area
4,181		0.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	150	0.0640	0.14		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.38"
5.0	1,528	0.0987	5.06		**Shallow Concentrated Flow, Shallow Concetrated Flow #1** Unpaved Kv= 16.1 fps
6.3	851	0.0197	2.26		**Shallow Concentrated Flow, Shallow Concentrated Flow #2** Unpaved Kv= 16.1 fps
29.4	2,529	Total			



Subcatchment EDA-2:



Hydrograph for Subcatchment EDA-2:

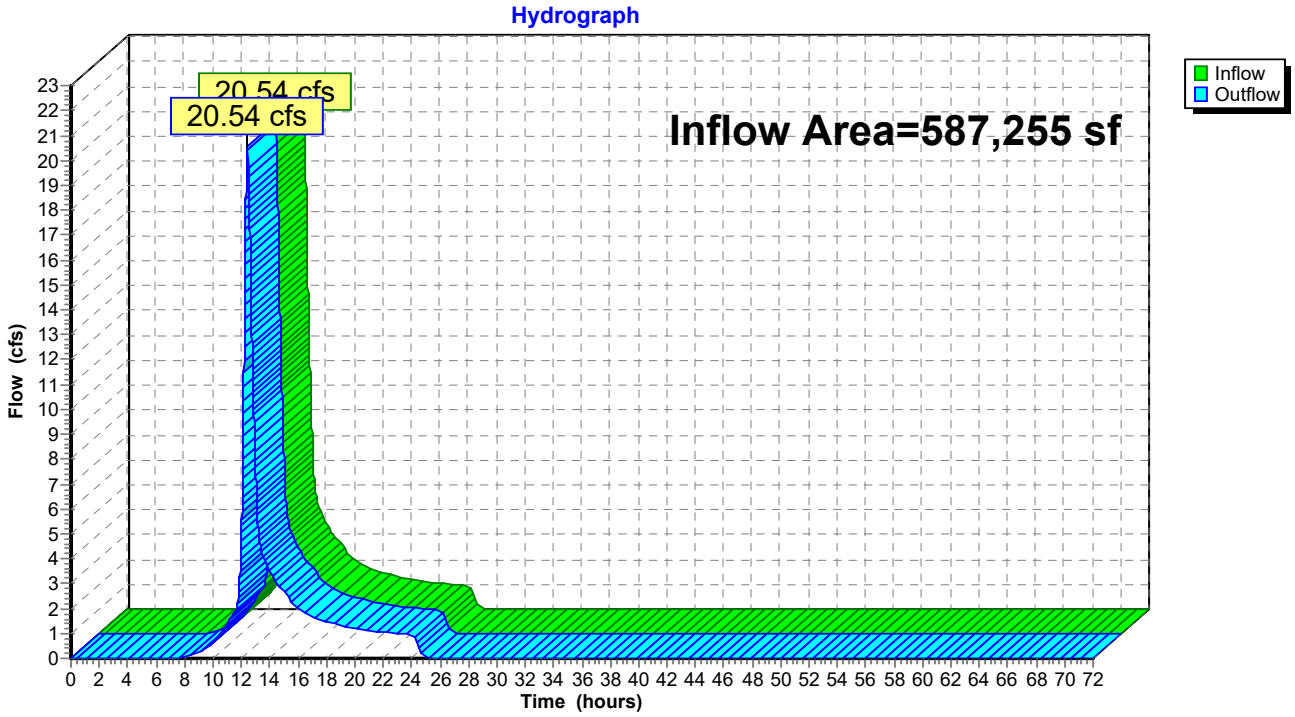
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.38	0.00	0.00
5.00	0.50	0.00	0.00
6.00	0.63	0.00	0.00
7.00	0.77	0.00	0.00
8.00	0.93	0.01	0.25
9.00	1.12	0.03	0.89
10.00	1.39	0.08	2.21
11.00	1.76	0.20	4.51
12.00	3.16	0.90	**17.01**
13.00	4.12	1.55	**17.98**
14.00	4.49	1.81	9.84
15.00	4.75	2.01	7.60
16.00	4.94	2.15	5.55
17.00	5.10	2.28	4.77
18.00	5.25	2.39	4.23
19.00	5.37	2.49	3.80
20.00	5.49	2.58	3.49
21.00	5.59	2.66	3.24
22.00	5.69	2.74	3.03
23.00	5.78	2.82	2.85
24.00	**5.87**	**2.89**	2.71
25.00	5.87	2.89	0.07
26.00	5.87	2.89	0.00
27.00	5.87	2.89	0.00
28.00	5.87	2.89	0.00
29.00	5.87	2.89	0.00
30.00	5.87	2.89	0.00
31.00	5.87	2.89	0.00
32.00	5.87	2.89	0.00
33.00	5.87	2.89	0.00
34.00	5.87	2.89	0.00
35.00	5.87	2.89	0.00
36.00	5.87	2.89	0.00
37.00	5.87	2.89	0.00
38.00	5.87	2.89	0.00
39.00	5.87	2.89	0.00
40.00	5.87	2.89	0.00
41.00	5.87	2.89	0.00
42.00	5.87	2.89	0.00
43.00	5.87	2.89	0.00
44.00	5.87	2.89	0.00
45.00	5.87	2.89	0.00
46.00	5.87	2.89	0.00
47.00	5.87	2.89	0.00
48.00	5.87	2.89	0.00
49.00	5.87	2.89	0.00
50.00	5.87	2.89	0.00
51.00	5.87	2.89	0.00
52.00	5.87	2.89	0.00
53.00	5.87	2.89	0.00
54.00	5.87	2.89	0.00
55.00	5.87	2.89	0.00
56.00	5.87	2.89	0.00
57.00	5.87	2.89	0.00
58.00	5.87	2.89	0.00
59.00	5.87	2.89	0.00
60.00	5.87	2.89	0.00
61.00	5.87	2.89	0.00
62.00	5.87	2.89	0.00
63.00	5.87	2.89	0.00
64.00	5.87	2.89	0.00
65.00	5.87	2.89	0.00
66.00	5.87	2.89	0.00
67.00	5.87	2.89	0.00
68.00	5.87	2.89	0.00
69.00	5.87	2.89	0.00
70.00	5.87	2.89	0.00
71.00	5.87	2.89	0.00
72.00	5.87	2.89	0.00

Summary for Reach DP-1:

Inflow Area = 587,255 sf, 0.96% Impervious, Inflow Depth = 2.79" for 10-yr event
Inflow = 20.54 cfs @ 12.45 hrs, Volume= 136,750 cf
Outflow = 20.54 cfs @ 12.45 hrs, Volume= 136,750 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs

Reach DP-1:



Hydrograph for Reach DP-1:

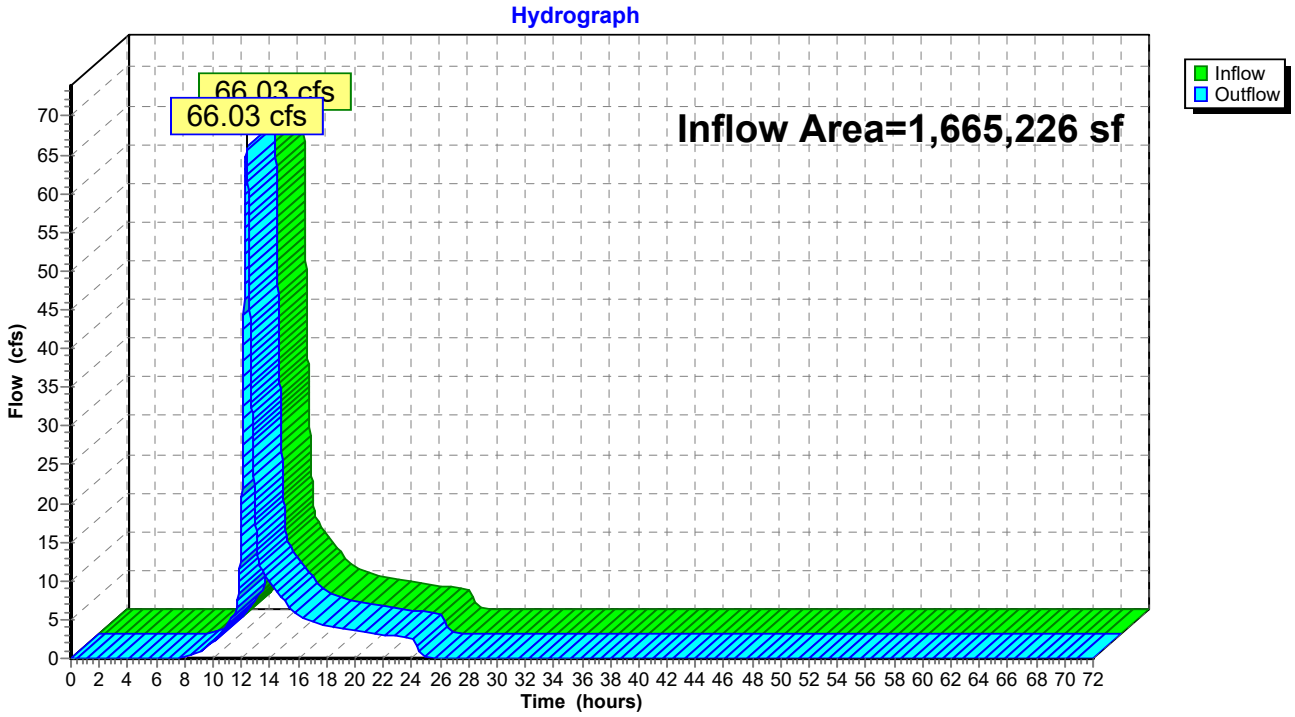
Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.00		0.00
5.00	0.00		0.00
6.00	0.00		0.00
7.00	0.00		0.00
8.00	0.04		0.04
9.00	0.24		0.24
10.00	0.66		0.66
11.00	1.40		1.40
12.00	**4.63**		**4.63**
13.00	**7.57**		**7.57**
14.00	3.48		3.48
15.00	2.68		2.68
16.00	1.96		1.96
17.00	1.67		1.67
18.00	1.48		1.48
19.00	1.33		1.33
20.00	1.22		1.22
21.00	1.13		1.13
22.00	1.06		1.06
23.00	1.00		1.00
24.00	0.94		0.94
25.00	0.05		0.05
26.00	0.00		0.00
27.00	0.00		0.00
28.00	0.00		0.00
29.00	0.00		0.00
30.00	0.00		0.00
31.00	0.00		0.00
32.00	0.00		0.00
33.00	0.00		0.00
34.00	0.00		0.00
35.00	0.00		0.00
36.00	0.00		0.00
37.00	0.00		0.00
38.00	0.00		0.00
39.00	0.00		0.00
40.00	0.00		0.00
41.00	0.00		0.00
42.00	0.00		0.00
43.00	0.00		0.00
44.00	0.00		0.00
45.00	0.00		0.00
46.00	0.00		0.00
47.00	0.00		0.00
48.00	0.00		0.00
49.00	0.00		0.00
50.00	0.00		0.00
51.00	0.00		0.00
52.00	0.00		0.00
53.00	0.00		0.00
54.00	0.00		0.00
55.00	0.00		0.00
56.00	0.00		0.00
57.00	0.00		0.00
58.00	0.00		0.00
59.00	0.00		0.00
60.00	0.00		0.00
61.00	0.00		0.00
62.00	0.00		0.00
63.00	0.00		0.00
64.00	0.00		0.00
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Summary for Reach DP-2:

Inflow Area = 1,665,226 sf, 0.25% Impervious, Inflow Depth = 2.89" for 10-yr event
Inflow = 66.03 cfs @ 12.38 hrs, Volume= 400,661 cf
Outflow = 66.03 cfs @ 12.38 hrs, Volume= 400,661 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs

Reach DP-2:



Hydrograph for Reach DP-2:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	53.00	0.00		0.00
1.00	0.00		0.00	54.00	0.00		0.00
2.00	0.00		0.00	55.00	0.00		0.00
3.00	0.00		0.00	56.00	0.00		0.00
4.00	0.00		0.00	57.00	0.00		0.00
5.00	0.00		0.00	58.00	0.00		0.00
6.00	0.00		0.00	59.00	0.00		0.00
7.00	0.00		0.00	60.00	0.00		0.00
8.00	0.25		0.25	61.00	0.00		0.00
9.00	0.89		0.89	62.00	0.00		0.00
10.00	2.21		2.21	63.00	0.00		0.00
11.00	4.51		4.51	64.00	0.00		0.00
12.00	**17.01**		**17.01**	65.00	0.00		0.00
13.00	**17.98**		**17.98**	66.00	0.00		0.00
14.00	9.84		9.84	67.00	0.00		0.00
15.00	7.60		7.60	68.00	0.00		0.00
16.00	5.55		5.55	69.00	0.00		0.00
17.00	4.77		4.77	70.00	0.00		0.00
18.00	4.23		4.23	71.00	0.00		0.00
19.00	3.80		3.80	72.00	0.00		0.00
20.00	3.49		3.49				
21.00	3.24		3.24				
22.00	3.03		3.03				
23.00	2.85		2.85				
24.00	2.71		2.71				
25.00	0.07		0.07				
26.00	0.00		0.00				
27.00	0.00		0.00				
28.00	0.00		0.00				
29.00	0.00		0.00				
30.00	0.00		0.00				
31.00	0.00		0.00				
32.00	0.00		0.00				
33.00	0.00		0.00				
34.00	0.00		0.00				
35.00	0.00		0.00				
36.00	0.00		0.00				
37.00	0.00		0.00				
38.00	0.00		0.00				
39.00	0.00		0.00				
40.00	0.00		0.00				
41.00	0.00		0.00				
42.00	0.00		0.00				
43.00	0.00		0.00				
44.00	0.00		0.00				
45.00	0.00		0.00				
46.00	0.00		0.00				
47.00	0.00		0.00				
48.00	0.00		0.00				
49.00	0.00		0.00				
50.00	0.00		0.00				
51.00	0.00		0.00				
52.00	0.00		0.00				

Time span=0.00-72.00 hrs, dt=0.0100 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EDA-1: Runoff Area=587,255 sf 0.96% Impervious Runoff Depth=8.28"
Flow Length=888' Tc=34.5 min CN=71 Runoff=50.41 cfs 405,411 cf

Subcatchment EDA-2: Runoff Area=1,665,226 sf 0.25% Impervious Runoff Depth=8.43"
Flow Length=2,529' Tc=29.4 min CN=72 Runoff=157.22 cfs 1,169,484 cf

Reach DP-1: Inflow=50.41 cfs 405,411 cf
Outflow=50.41 cfs 405,411 cf

Reach DP-2: Inflow=157.22 cfs 1,169,484 cf
Outflow=157.22 cfs 1,169,484 cf

Total Runoff Area = 2,252,481 sf Runoff Volume = 1,574,896 cf Average Runoff Depth = 8.39"
99.56% Pervious = 2,242,655 sf 0.44% Impervious = 9,826 sf

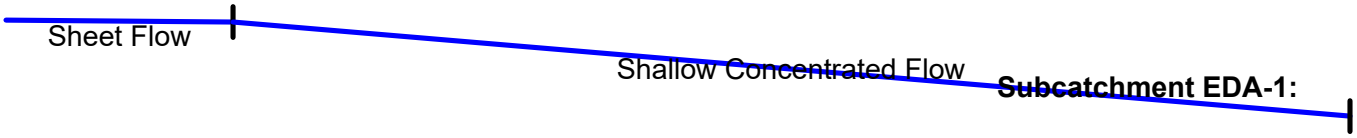
Summary for Subcatchment EDA-1:

Runoff = 50.41 cfs @ 12.42 hrs, Volume= 405,411 cf, Depth= 8.28"
Routed to Reach DP-1 :

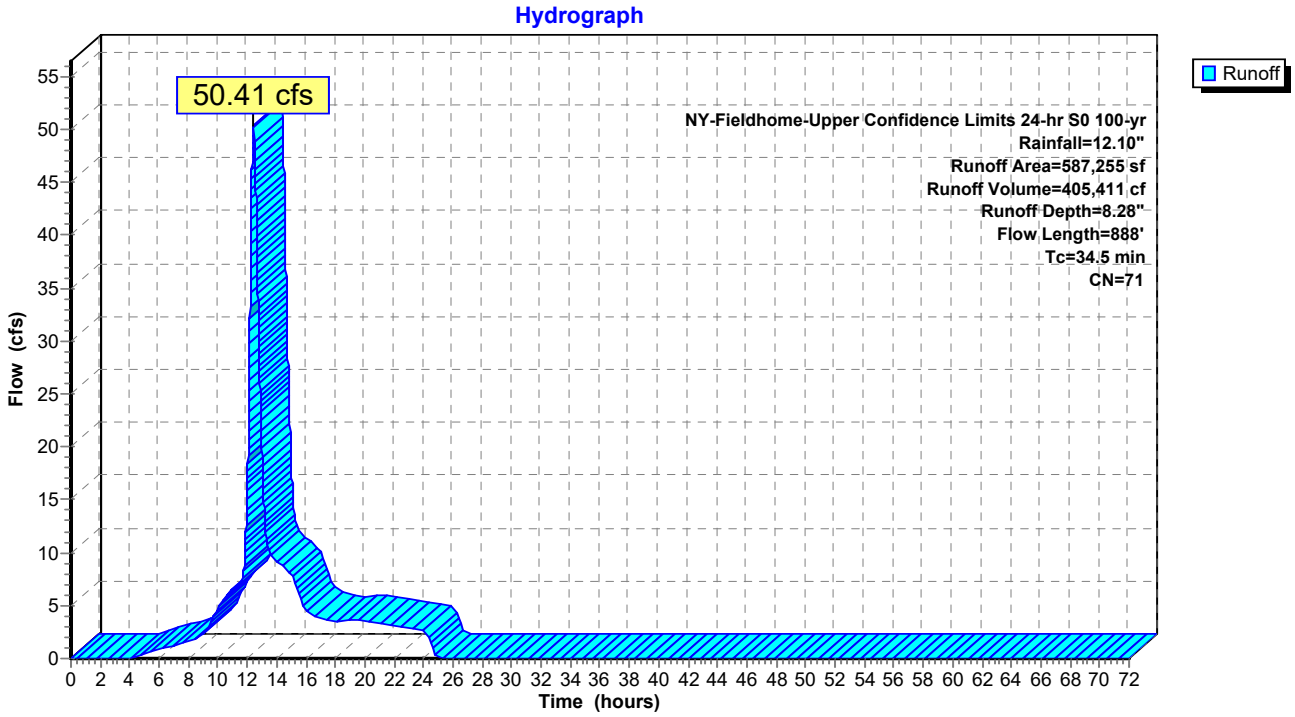
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

Area (sf)	CN	Description
145,444	74	>75% Grass cover, Good, HSG C
5,645	98	Paved parking, HSG C
436,166	70	Woods, Good, HSG C
587,255	71	Weighted Average
581,610		99.04% Pervious Area
5,645		0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.5	150	0.0149	0.08		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.38"
2.0	738	0.1487	6.21		**Shallow Concentrated Flow, Shallow Concentrated Flow** Unpaved Kv= 16.1 fps
34.5	888	Total			



Subcatchment EDA-1:



Hydrograph for Subcatchment EDA-1:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.00	0.00
2.00	0.45	0.00	0.00
3.00	0.70	0.00	0.00
4.00	0.96	0.00	0.04
5.00	1.24	0.04	0.46
6.00	1.54	0.11	0.94
7.00	1.82	0.20	1.18
8.00	2.13	0.32	1.64
9.00	2.50	0.49	2.30
10.00	3.15	0.85	4.73
11.00	3.93	1.34	6.59
12.00	6.42	3.24	**15.88**
13.00	8.21	4.76	**19.16**
14.00	8.97	5.43	9.19
15.00	9.62	6.01	7.88
16.00	9.98	6.34	4.64
17.00	10.29	6.62	3.83
18.00	10.56	6.87	3.37
19.00	10.87	7.15	3.74
20.00	11.15	7.40	3.50
21.00	11.41	7.64	3.26
22.00	11.65	7.87	3.07
23.00	11.88	8.08	2.91
24.00	**12.10**	**8.28**	2.76
25.00	12.10	8.28	0.15
26.00	12.10	8.28	0.00
27.00	12.10	8.28	0.00
28.00	12.10	8.28	0.00
29.00	12.10	8.28	0.00
30.00	12.10	8.28	0.00
31.00	12.10	8.28	0.00
32.00	12.10	8.28	0.00
33.00	12.10	8.28	0.00
34.00	12.10	8.28	0.00
35.00	12.10	8.28	0.00
36.00	12.10	8.28	0.00
37.00	12.10	8.28	0.00
38.00	12.10	8.28	0.00
39.00	12.10	8.28	0.00
40.00	12.10	8.28	0.00
41.00	12.10	8.28	0.00
42.00	12.10	8.28	0.00
43.00	12.10	8.28	0.00
44.00	12.10	8.28	0.00
45.00	12.10	8.28	0.00
46.00	12.10	8.28	0.00
47.00	12.10	8.28	0.00
48.00	12.10	8.28	0.00
49.00	12.10	8.28	0.00
50.00	12.10	8.28	0.00
51.00	12.10	8.28	0.00
52.00	12.10	8.28	0.00
53.00	12.10	8.28	0.00
54.00	12.10	8.28	0.00
55.00	12.10	8.28	0.00
56.00	12.10	8.28	0.00
57.00	12.10	8.28	0.00
58.00	12.10	8.28	0.00
59.00	12.10	8.28	0.00
60.00	12.10	8.28	0.00
61.00	12.10	8.28	0.00
62.00	12.10	8.28	0.00
63.00	12.10	8.28	0.00
64.00	12.10	8.28	0.00
65.00	12.10	8.28	0.00
66.00	12.10	8.28	0.00
67.00	12.10	8.28	0.00
68.00	12.10	8.28	0.00
69.00	12.10	8.28	0.00
70.00	12.10	8.28	0.00
71.00	12.10	8.28	0.00
72.00	12.10	8.28	0.00

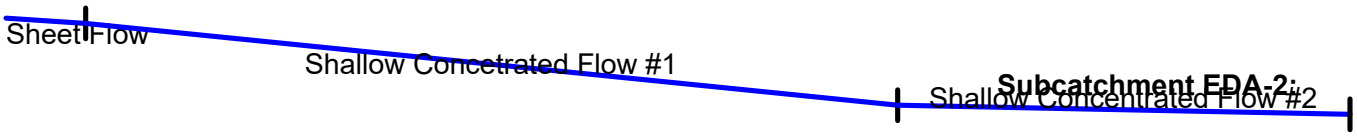
Summary for Subcatchment EDA-2:

Runoff = 157.22 cfs @ 12.35 hrs, Volume= 1,169,484 cf, Depth= 8.43"
Routed to Reach DP-2 :

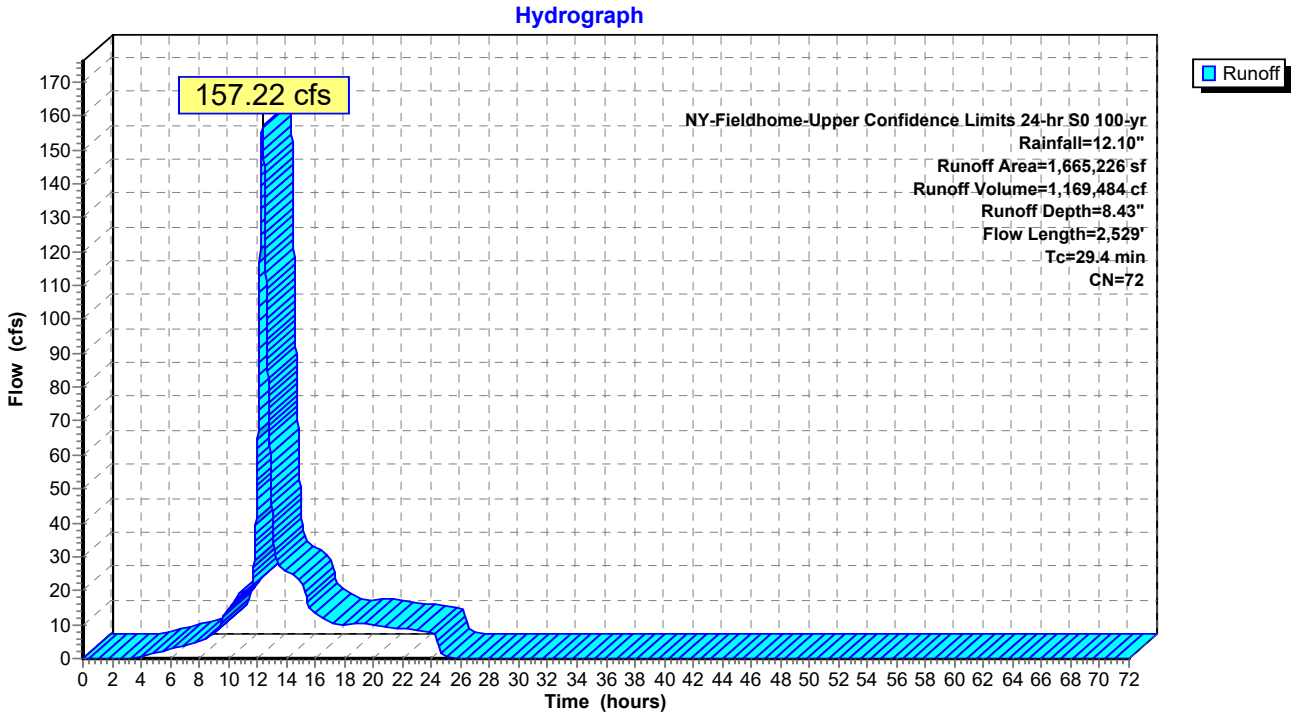
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

Area (sf)	CN	Description
1,260,456	70	Woods, Good, HSG C
319,757	77	Woods, Good, HSG D
80,832	74	>75% Grass cover, Good, HSG C
4,181	98	Paved parking, HSG B
1,665,226	72	Weighted Average
1,661,045		99.75% Pervious Area
4,181		0.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	150	0.0640	0.14		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.38"
5.0	1,528	0.0987	5.06		**Shallow Concentrated Flow, Shallow Concetrated Flow #1** Unpaved Kv= 16.1 fps
6.3	851	0.0197	2.26		**Shallow Concentrated Flow, Shallow Concentrated Flow #2** Unpaved Kv= 16.1 fps
29.4	2,529	Total			



Subcatchment EDA-2:



Hydrograph for Subcatchment EDA-2:

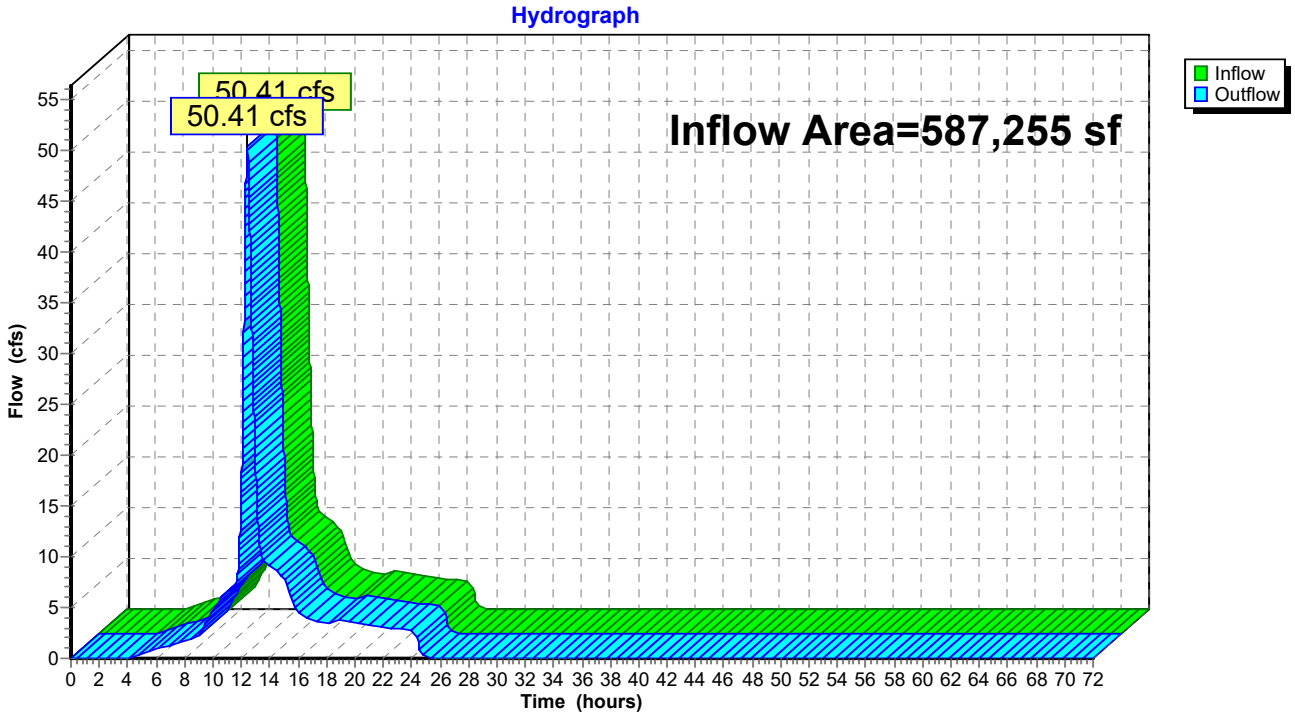
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.00	0.00
2.00	0.45	0.00	0.00
3.00	0.70	0.00	0.00
4.00	0.96	0.01	0.33
5.00	1.24	0.05	1.63
6.00	1.54	0.13	3.04
7.00	1.82	0.22	3.65
8.00	2.13	0.35	5.04
9.00	2.50	0.53	6.99
10.00	3.15	0.90	14.39
11.00	3.93	1.41	19.42
12.00	6.42	3.34	**55.04**
13.00	8.21	4.88	**44.71**
14.00	8.97	5.56	26.29
15.00	9.62	6.14	22.19
16.00	9.98	6.47	12.85
17.00	10.29	6.75	10.82
18.00	10.56	7.00	9.54
19.00	10.87	7.28	10.68
20.00	11.15	7.54	9.93
21.00	11.41	7.78	9.28
22.00	11.65	8.01	8.72
23.00	11.88	8.22	8.25
24.00	**12.10**	**8.43**	7.86
25.00	12.10	8.43	0.20
26.00	12.10	8.43	0.00
27.00	12.10	8.43	0.00
28.00	12.10	8.43	0.00
29.00	12.10	8.43	0.00
30.00	12.10	8.43	0.00
31.00	12.10	8.43	0.00
32.00	12.10	8.43	0.00
33.00	12.10	8.43	0.00
34.00	12.10	8.43	0.00
35.00	12.10	8.43	0.00
36.00	12.10	8.43	0.00
37.00	12.10	8.43	0.00
38.00	12.10	8.43	0.00
39.00	12.10	8.43	0.00
40.00	12.10	8.43	0.00
41.00	12.10	8.43	0.00
42.00	12.10	8.43	0.00
43.00	12.10	8.43	0.00
44.00	12.10	8.43	0.00
45.00	12.10	8.43	0.00
46.00	12.10	8.43	0.00
47.00	12.10	8.43	0.00
48.00	12.10	8.43	0.00
49.00	12.10	8.43	0.00
50.00	12.10	8.43	0.00
51.00	12.10	8.43	0.00
52.00	12.10	8.43	0.00
53.00	12.10	8.43	0.00
54.00	12.10	8.43	0.00
55.00	12.10	8.43	0.00
56.00	12.10	8.43	0.00
57.00	12.10	8.43	0.00
58.00	12.10	8.43	0.00
59.00	12.10	8.43	0.00
60.00	12.10	8.43	0.00
61.00	12.10	8.43	0.00
62.00	12.10	8.43	0.00
63.00	12.10	8.43	0.00
64.00	12.10	8.43	0.00
65.00	12.10	8.43	0.00
66.00	12.10	8.43	0.00
67.00	12.10	8.43	0.00
68.00	12.10	8.43	0.00
69.00	12.10	8.43	0.00
70.00	12.10	8.43	0.00
71.00	12.10	8.43	0.00
72.00	12.10	8.43	0.00

Summary for Reach DP-1:

Inflow Area = 587,255 sf, 0.96% Impervious, Inflow Depth = 8.28" for 100-yr event
Inflow = 50.41 cfs @ 12.42 hrs, Volume= 405,411 cf
Outflow = 50.41 cfs @ 12.42 hrs, Volume= 405,411 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs

Reach DP-1:



Hydrograph for Reach DP-1:

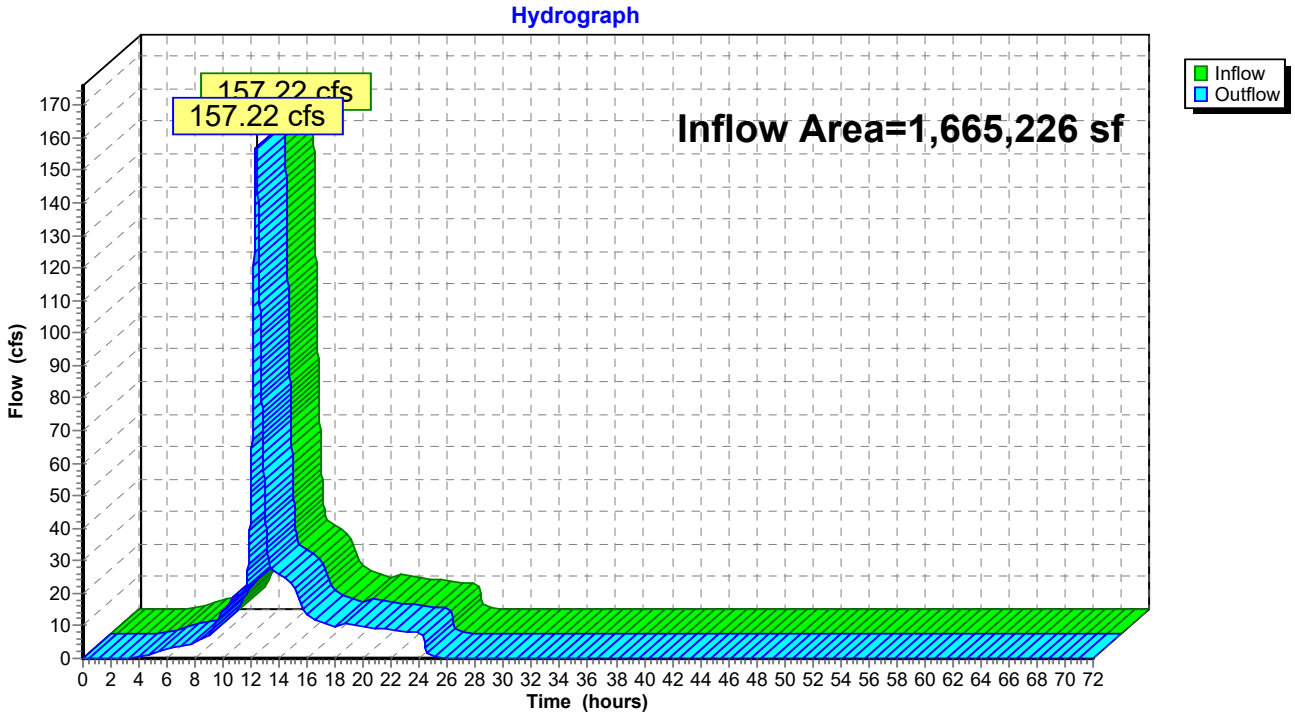
Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.04		0.04
5.00	0.46		0.46
6.00	0.94		0.94
7.00	1.18		1.18
8.00	1.64		1.64
9.00	2.30		2.30
10.00	4.73		4.73
11.00	6.59		6.59
12.00	**15.88**		**15.88**
13.00	**19.16**		**19.16**
14.00	9.19		9.19
15.00	7.88		7.88
16.00	4.64		4.64
17.00	3.83		3.83
18.00	3.37		3.37
19.00	3.74		3.74
20.00	3.50		3.50
21.00	3.26		3.26
22.00	3.07		3.07
23.00	2.91		2.91
24.00	2.76		2.76
25.00	0.15		0.15
26.00	0.00		0.00
27.00	0.00		0.00
28.00	0.00		0.00
29.00	0.00		0.00
30.00	0.00		0.00
31.00	0.00		0.00
32.00	0.00		0.00
33.00	0.00		0.00
34.00	0.00		0.00
35.00	0.00		0.00
36.00	0.00		0.00
37.00	0.00		0.00
38.00	0.00		0.00
39.00	0.00		0.00
40.00	0.00		0.00
41.00	0.00		0.00
42.00	0.00		0.00
43.00	0.00		0.00
44.00	0.00		0.00
45.00	0.00		0.00
46.00	0.00		0.00
47.00	0.00		0.00
48.00	0.00		0.00
49.00	0.00		0.00
50.00	0.00		0.00
51.00	0.00		0.00
52.00	0.00		0.00
53.00	0.00		0.00
54.00	0.00		0.00
55.00	0.00		0.00
56.00	0.00		0.00
57.00	0.00		0.00
58.00	0.00		0.00
59.00	0.00		0.00
60.00	0.00		0.00
61.00	0.00		0.00
62.00	0.00		0.00
63.00	0.00		0.00
64.00	0.00		0.00
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Summary for Reach DP-2:

Inflow Area = 1,665,226 sf, 0.25% Impervious, Inflow Depth = 8.43" for 100-yr event
Inflow = 157.22 cfs @ 12.35 hrs, Volume= 1,169,484 cf
Outflow = 157.22 cfs @ 12.35 hrs, Volume= 1,169,484 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.0100 hrs

Reach DP-2:



Hydrograph for Reach DP-2:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.33		0.33
5.00	1.63		1.63
6.00	3.04		3.04
7.00	3.65		3.65
8.00	5.04		5.04
9.00	6.99		6.99
10.00	14.39		14.39
11.00	19.42		19.42
12.00	**55.04**		**55.04**
13.00	**44.71**		**44.71**
14.00	26.29		26.29
15.00	22.19		22.19
16.00	12.85		12.85
17.00	10.82		10.82
18.00	9.54		9.54
19.00	10.68		10.68
20.00	9.93		9.93
21.00	9.28		9.28
22.00	8.72		8.72
23.00	8.25		8.25
24.00	7.86		7.86
25.00	0.20		0.20
26.00	0.00		0.00
27.00	0.00		0.00
28.00	0.00		0.00
29.00	0.00		0.00
30.00	0.00		0.00
31.00	0.00		0.00
32.00	0.00		0.00
33.00	0.00		0.00
34.00	0.00		0.00
35.00	0.00		0.00
36.00	0.00		0.00
37.00	0.00		0.00
38.00	0.00		0.00
39.00	0.00		0.00
40.00	0.00		0.00
41.00	0.00		0.00
42.00	0.00		0.00
43.00	0.00		0.00
44.00	0.00		0.00
45.00	0.00		0.00
46.00	0.00		0.00
47.00	0.00		0.00
48.00	0.00		0.00
49.00	0.00		0.00
50.00	0.00		0.00
51.00	0.00		0.00
52.00	0.00		0.00
53.00	0.00		0.00
54.00	0.00		0.00
55.00	0.00		0.00
56.00	0.00		0.00
57.00	0.00		0.00
58.00	0.00		0.00
59.00	0.00		0.00
60.00	0.00		0.00
61.00	0.00		0.00
62.00	0.00		0.00
63.00	0.00		0.00
64.00	0.00		0.00
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Events for Subcatchment EDA-1:

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	5.88	36,371	0.74
10-yr	5.87	20.54	136,750	2.79
100-yr	**12.10**	**50.41**	**405,411**	**8.28**

Events for Subcatchment EDA-2:

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	19.96	109,668	0.79
10-yr	5.87	66.03	400,661	2.89
100-yr	**12.10**	**157.22**	**1,169,484**	**8.43**

Events for Reach DP-1:

Event	Inflow (cfs)	Outflow (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	5.88	5.88	**0.00**	**0**
10-yr	20.54	20.54	0.00	0
100-yr	**50.41**	**50.41**	0.00	0

Events for Reach DP-2:

Event	Inflow (cfs)	Outflow (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	19.96	19.96	**0.00**	**0**
10-yr	66.03	66.03	0.00	0
100-yr	**157.22**	**157.22**	0.00	0

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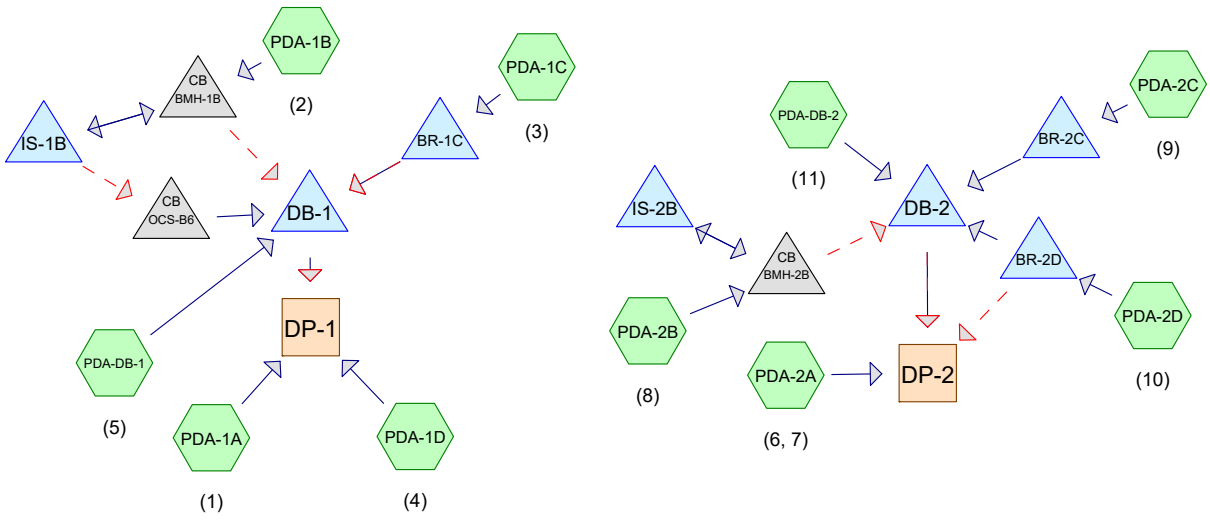
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APPENDIX B

PROPOSED HYDROLOGIC CALCULATIONS



Subcat Reach Pond Link

Routing Diagram for 23109-Fieldhome-Proposed
Prepared by JMC PLLC, Printed 4/22/2025
HydroCAD® 10.20-6a s/n 11187 © 2024 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	NY-Fieldhome-Upper Confidence Limits 24-hr S0	1-yr	Default	24.00	1	2.97	
2	10-yr	NY-Fieldhome-Upper Confidence Limits 24-hr S0	10-yr	Default	24.00	1	5.87	
3	100-yr	NY-Fieldhome-Upper Confidence Limits 24-hr S0	100-yr	Default	24.00	1	12.10	

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
1,931,206	HSG C	PDA-1A, PDA-1B, PDA-1C, PDA-1D, PDA-2A, PDA-2B, PDA-2C, PDA-2D, PDA-DB-1, PDA-DB-2
319,138	HSG D	PDA-2A
0	Other	
2,250,344		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
0	0	823,341	0	0	823,341	>75% Grass cover, Good
0	0	927	0	0	927	Concrete Pad for Utility Equipment
0	0	2,753	0	0	2,753	Paved driveway
0	0	202,216	0	0	202,216	Paved parking, curbs, driveways, sidewalks, roofs, walls
0	0	214,085	0	0	214,085	Paved parking, curbs, drivways, roofs, walls
0	0	38,824	0	0	38,824	Paved sidewalks, roofs, walls
0	0	13,082	0	0	13,082	Paved sidewalks, roofs
0	0	1,220	0	0	1,220	Water Surface (pool)
0	0	634,758	319,138	0	953,896	Woods, Good
0	**0**	**1,931,206**	**319,138**	**0**	**2,250,344**	**TOTAL AREA**

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	PDA-1C	0.00	0.00	260.0	0.0913	0.013	0.0	24.0	0.0	
2	BMH-1B	435.25	433.50	31.3	0.0559	0.012	0.0	24.0	0.0	
3	BMH-1B	435.25	400.00	332.0	0.1062	0.012	0.0	30.0	0.0	
4	BMH-2B	454.75	454.50	9.4	0.0266	0.012	0.0	24.0	0.0	
5	BMH-2B	458.15	394.00	442.2	0.1451	0.012	0.0	30.0	0.0	
6	BR-1C	409.15	399.50	82.6	0.1168	0.012	0.0	15.0	0.0	
7	BR-2C	435.15	430.50	206.9	0.0225	0.012	0.0	18.0	0.0	
8	BR-2D	409.15	399.00	64.4	0.1576	0.012	0.0	18.0	0.0	
9	DB-1	398.00	392.00	52.9	0.1134	0.012	0.0	30.0	0.0	
10	DB-2	394.00	386.00	83.4	0.0959	0.012	0.0	30.0	0.0	
11	IS-1B	433.50	435.25	31.3	-0.0559	0.012	0.0	24.0	0.0	
12	IS-1B	434.50	434.50	6.0	0.0000	0.012	0.0	24.0	0.0	
13	IS-2B	454.50	454.75	9.4	-0.0266	0.012	0.0	24.0	0.0	
14	OCS-B6	434.50	398.00	202.7	0.1801	0.012	0.0	24.0	0.0	

Time span=0.00-72.00 hrs, dt=0.00 hrs, 144001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method w/Net Flows

Subcatchment PDA-1A: (1) Runoff Area=39,498 sf 6.97% Impervious Runoff Depth=0.89"
Flow Length=134' Slope=0.0808 '/' Tc=14.7 min CN=74 Runoff=0.79 cfs 2,927 cf

Subcatchment PDA-1B: (2) Runoff Area=339,348 sf 63.09% Impervious Runoff Depth=1.87"
Flow Length=274' Tc=14.2 min CN=89 Runoff=15.78 cfs 52,959 cf

Subcatchment PDA-1C: (3) Runoff Area=184,184 sf 32.60% Impervious Runoff Depth=1.29"
Flow Length=619' Tc=15.1 min CN=81 Runoff=5.65 cfs 19,807 cf

Subcatchment PDA-1D: (4) Runoff Area=94,273 sf 0.98% Impervious Runoff Depth=0.74"
Flow Length=448' Tc=18.7 min CN=71 Runoff=1.34 cfs 5,839 cf

Subcatchment PDA-2A: (6, 7) Runoff Area=1,047,228 sf 1.25% Impervious Runoff Depth=0.84"
Flow Length=1,846' Tc=19.7 min CN=73 Runoff=16.97 cfs 73,215 cf

Subcatchment PDA-2B: (8) Runoff Area=89,115 sf 85.41% Impervious Runoff Depth=2.32"
Tc=5.0 min CN=94 Runoff=7.19 cfs 17,237 cf

Subcatchment PDA-2C: (9) Runoff Area=206,758 sf 18.78% Impervious Runoff Depth=1.17"
Flow Length=414' Tc=9.4 min CN=79 Runoff=6.79 cfs 20,100 cf

Subcatchment PDA-2D: (10) Runoff Area=131,825 sf 51.04% Impervious Runoff Depth=1.64"
Tc=5.0 min CN=86 Runoff=7.73 cfs 17,981 cf

Subcatchment PDA-DB-1: (5) Runoff Area=45,660 sf 0.00% Impervious Runoff Depth=0.89"
Tc=5.0 min CN=74 Runoff=1.33 cfs 3,384 cf

Subcatchment PDA-DB-2: (11) Runoff Area=72,455 sf 0.00% Impervious Runoff Depth=0.89"
Tc=5.0 min CN=74 Runoff=2.11 cfs 5,369 cf

Reach DP-1: Inflow=2.52 cfs 31,996 cf
Outflow=2.52 cfs 31,996 cf

Reach DP-2: Inflow=17.37 cfs 116,645 cf
Outflow=17.37 cfs 116,645 cf

Pond BMH-1B: Peak Elev=437.74' Inflow=15.78 cfs 52,959 cf
Primary=15.78 cfs 52,958 cf Secondary=0.00 cfs 0 cf Outflow=15.78 cfs 52,958 cf

Pond BMH-2B: Peak Elev=458.11' Inflow=7.19 cfs 17,237 cf
Primary=7.19 cfs 17,239 cf Secondary=0.00 cfs 0 cf Outflow=7.19 cfs 17,239 cf

Pond BR-1C: Peak Elev=413.59' Storage=8,337 cf Inflow=5.65 cfs 19,807 cf
Primary=1.12 cfs 19,888 cf Secondary=0.00 cfs 0 cf Outflow=1.12 cfs 19,888 cf

Pond BR-2C: Peak Elev=439.55' Storage=10,838 cf Inflow=6.79 cfs 20,100 cf
Outflow=0.47 cfs 20,196 cf

Pond BR-2D: Peak Elev=413.57' Storage=8,304 cf Inflow=7.73 cfs 17,981 cf
Primary=0.79 cfs 18,116 cf Secondary=0.00 cfs 0 cf Outflow=0.79 cfs 18,116 cf

Pond DB-1: Peak Elev=398.42' Storage=2,044 cf Inflow=1.41 cfs 23,272 cf
Primary=0.93 cfs 23,231 cf Secondary=0.00 cfs 0 cf Outflow=0.93 cfs 23,231 cf

Pond DB-2: Peak Elev=394.40' Storage=5,043 cf Inflow=2.31 cfs 43,681 cf
Primary=0.91 cfs 43,430 cf Secondary=0.00 cfs 0 cf Outflow=0.91 cfs 43,430 cf

Pond IS-1B: Peak Elev=437.74' Storage=28,379 cf Inflow=15.78 cfs 52,958 cf
Discarded=0.62 cfs 55,529 cf Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.62 cfs 55,529 cf

Pond IS-2B: Peak Elev=458.11' Storage=7,416 cf Inflow=7.19 cfs 17,239 cf
Discarded=0.30 cfs 19,386 cf Primary=0.00 cfs 0 cf Outflow=0.30 cfs 19,386 cf

Pond OCS-B6: Peak Elev=434.50' Inflow=0.00 cfs 0 cf
24.0" Round Culvert n=0.012 L=202.7' S=0.1801 '/' Outflow=0.00 cfs 0 cf

Total Runoff Area = 2,250,344 sf Runoff Volume = 218,818 cf Average Runoff Depth = 1.17"
78.98% Pervious = 1,777,237 sf 21.02% Impervious = 473,107 sf

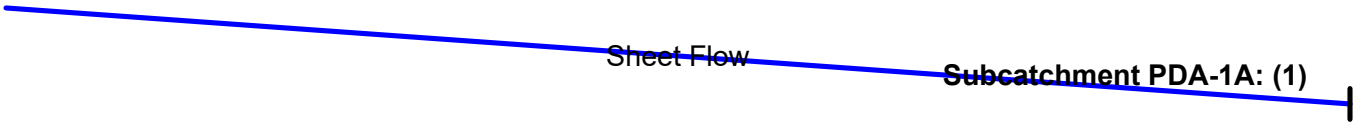
Summary for Subcatchment PDA-1A: (1)

Runoff = 0.79 cfs @ 12.18 hrs, Volume= 2,927 cf, Depth= 0.89"
Routed to Reach DP-1 :

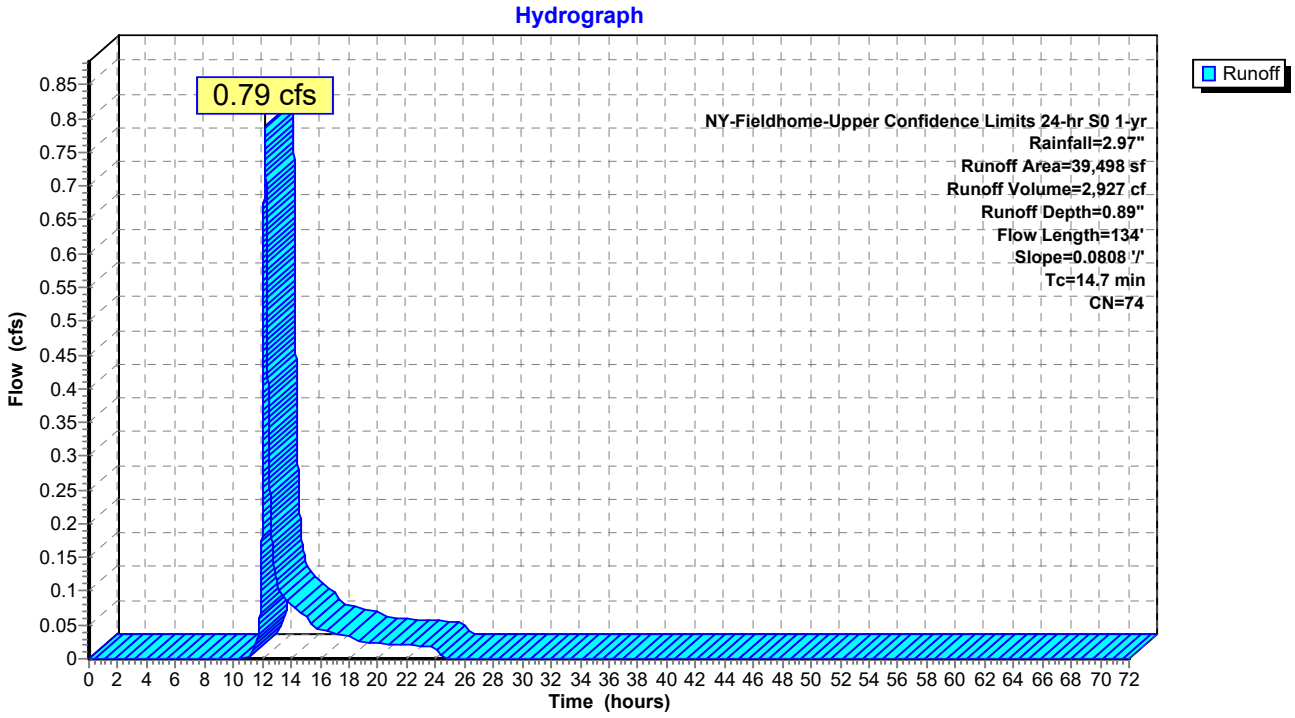
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

	Area (sf)	CN	Description
	23,870	74	>75% Grass cover, Good, HSG C
*	2,753	98	Paved driveway, HSG C
	12,875	70	Woods, Good, HSG C
	39,498	74	Weighted Average
	36,745		93.03% Pervious Area
	2,753		6.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	134	0.0808	0.15		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.55"



Subcatchment PDA-1A: (1)



Hydrograph for Subcatchment PDA-1A: (1)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.37	0.00	0.00
9.00	0.46	0.00	0.00
10.00	0.59	0.00	0.00
11.00	0.77	0.00	0.00
12.00	1.64	0.20	**0.23**
13.00	2.20	0.45	**0.11**
14.00	2.38	0.54	0.08
15.00	2.52	0.62	0.06
16.00	2.60	0.67	0.04
17.00	2.68	0.71	0.04
18.00	2.74	0.75	0.03
19.00	2.79	0.78	0.03
20.00	2.83	0.80	0.02
21.00	2.87	0.83	0.02
22.00	2.91	0.85	0.02
23.00	2.94	0.87	0.02
24.00	**2.97**	**0.89**	0.02
25.00	2.97	0.89	0.00
26.00	2.97	0.89	0.00
27.00	2.97	0.89	0.00
28.00	2.97	0.89	0.00
29.00	2.97	0.89	0.00
30.00	2.97	0.89	0.00
31.00	2.97	0.89	0.00
32.00	2.97	0.89	0.00
33.00	2.97	0.89	0.00
34.00	2.97	0.89	0.00
35.00	2.97	0.89	0.00
36.00	2.97	0.89	0.00
37.00	2.97	0.89	0.00
38.00	2.97	0.89	0.00
39.00	2.97	0.89	0.00
40.00	2.97	0.89	0.00
41.00	2.97	0.89	0.00
42.00	2.97	0.89	0.00
43.00	2.97	0.89	0.00
44.00	2.97	0.89	0.00
45.00	2.97	0.89	0.00
46.00	2.97	0.89	0.00
47.00	2.97	0.89	0.00
48.00	2.97	0.89	0.00
49.00	2.97	0.89	0.00
50.00	2.97	0.89	0.00
51.00	2.97	0.89	0.00
52.00	2.97	0.89	0.00
53.00	2.97	0.89	0.00
54.00	2.97	0.89	0.00
55.00	2.97	0.89	0.00
56.00	2.97	0.89	0.00
57.00	2.97	0.89	0.00
58.00	2.97	0.89	0.00
59.00	2.97	0.89	0.00
60.00	2.97	0.89	0.00
61.00	2.97	0.89	0.00
62.00	2.97	0.89	0.00
63.00	2.97	0.89	0.00
64.00	2.97	0.89	0.00
65.00	2.97	0.89	0.00
66.00	2.97	0.89	0.00
67.00	2.97	0.89	0.00
68.00	2.97	0.89	0.00
69.00	2.97	0.89	0.00
70.00	2.97	0.89	0.00
71.00	2.97	0.89	0.00
72.00	2.97	0.89	0.00

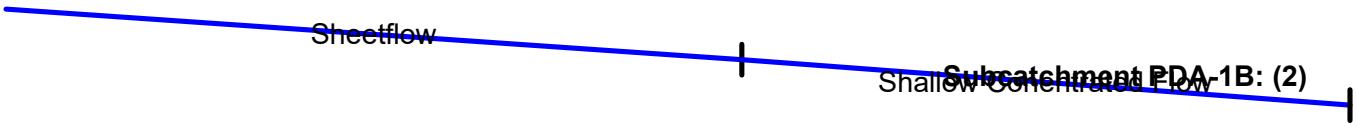
Summary for Subcatchment PDA-1B: (2)

Runoff = 15.78 cfs @ 12.16 hrs, Volume= 52,959 cf, Depth= 1.87"
Routed to Pond BMH-1B :

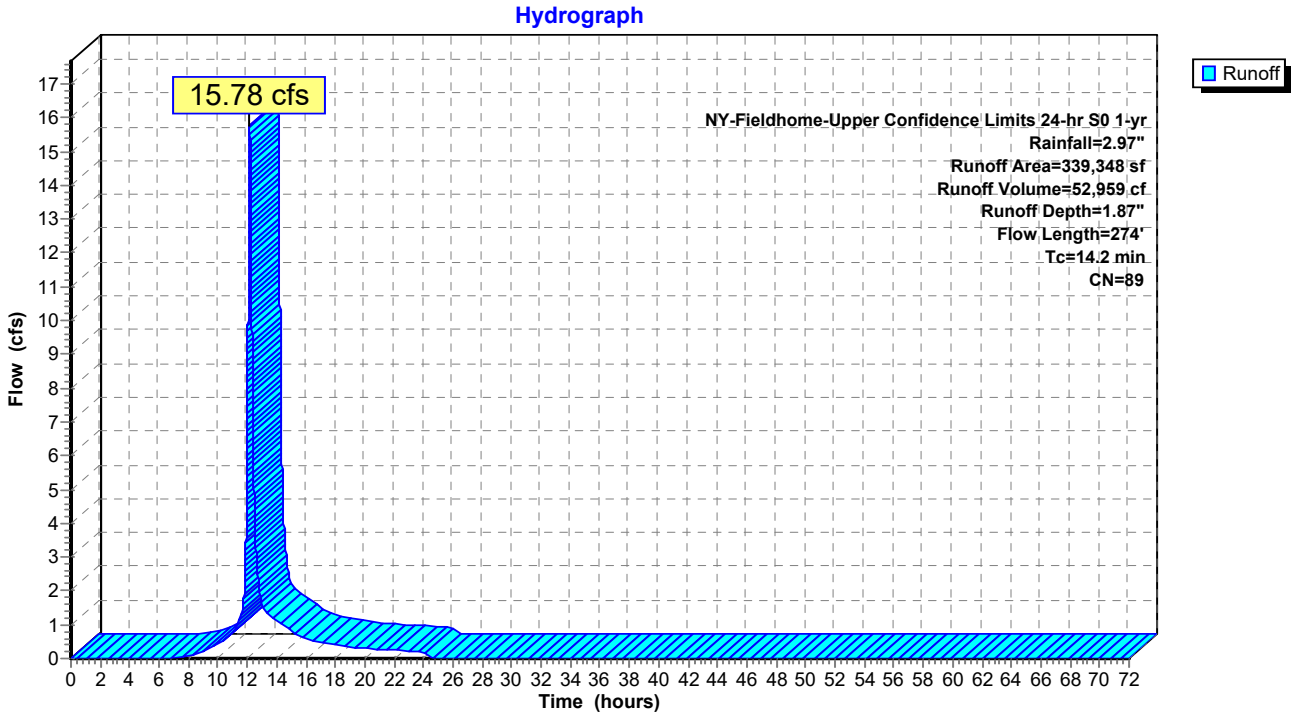
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

	Area (sf)	CN	Description
	121,021	74	>75% Grass cover, Good, HSG C
*	214,085	98	Paved parking, curbs, drivways, roofs, walls HSG C
	4,242	70	Woods, Good, HSG C
	339,348	89	Weighted Average
	125,263		36.91% Pervious Area
	214,085		63.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.8	150	0.1195	0.18		**Sheet Flow, Sheetflow** Woods: Light underbrush n= 0.400 P2= 3.55"
0.4	124	0.1299	5.80		**Shallow Concentrated Flow, Shallow Conentrated Flow** Unpaved Kv= 16.1 fps
14.2	274	Total			



Subcatchment PDA-1B: (2)



Hydrograph for Subcatchment PDA-1B: (2)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.03
8.00	0.37	0.01	0.09
9.00	0.46	0.03	0.18
10.00	0.59	0.08	0.42
11.00	0.77	0.16	0.74
12.00	1.64	0.73	**6.45**
13.00	2.20	1.20	**1.63**
14.00	2.38	1.35	1.12
15.00	2.52	1.47	0.85
16.00	2.60	1.55	0.57
17.00	2.68	1.61	0.49
18.00	2.74	1.67	0.43
19.00	2.79	1.71	0.32
20.00	2.83	1.75	0.29
21.00	2.87	1.78	0.27
22.00	2.91	1.81	0.25
23.00	2.94	1.84	0.23
24.00	**2.97**	**1.87**	0.22
25.00	2.97	1.87	0.00
26.00	2.97	1.87	0.00
27.00	2.97	1.87	0.00
28.00	2.97	1.87	0.00
29.00	2.97	1.87	0.00
30.00	2.97	1.87	0.00
31.00	2.97	1.87	0.00
32.00	2.97	1.87	0.00
33.00	2.97	1.87	0.00
34.00	2.97	1.87	0.00
35.00	2.97	1.87	0.00
36.00	2.97	1.87	0.00
37.00	2.97	1.87	0.00
38.00	2.97	1.87	0.00
39.00	2.97	1.87	0.00
40.00	2.97	1.87	0.00
41.00	2.97	1.87	0.00
42.00	2.97	1.87	0.00
43.00	2.97	1.87	0.00
44.00	2.97	1.87	0.00
45.00	2.97	1.87	0.00
46.00	2.97	1.87	0.00
47.00	2.97	1.87	0.00
48.00	2.97	1.87	0.00
49.00	2.97	1.87	0.00
50.00	2.97	1.87	0.00
51.00	2.97	1.87	0.00
52.00	2.97	1.87	0.00
53.00	2.97	1.87	0.00
54.00	2.97	1.87	0.00
55.00	2.97	1.87	0.00
56.00	2.97	1.87	0.00
57.00	2.97	1.87	0.00
58.00	2.97	1.87	0.00
59.00	2.97	1.87	0.00
60.00	2.97	1.87	0.00
61.00	2.97	1.87	0.00
62.00	2.97	1.87	0.00
63.00	2.97	1.87	0.00
64.00	2.97	1.87	0.00
65.00	2.97	1.87	0.00
66.00	2.97	1.87	0.00
67.00	2.97	1.87	0.00
68.00	2.97	1.87	0.00
69.00	2.97	1.87	0.00
70.00	2.97	1.87	0.00
71.00	2.97	1.87	0.00
72.00	2.97	1.87	0.00

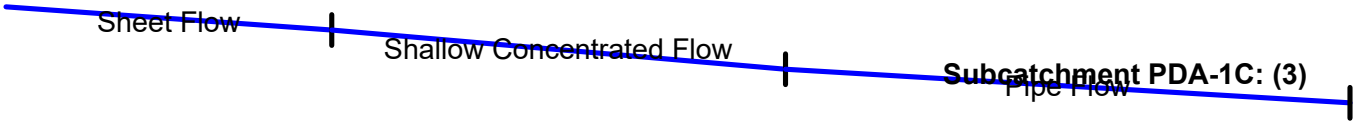
Summary for Subcatchment PDA-1C: (3)

Runoff = 5.65 cfs @ 12.18 hrs, Volume= 19,807 cf, Depth= 1.29"
Routed to Pond BR-1C :

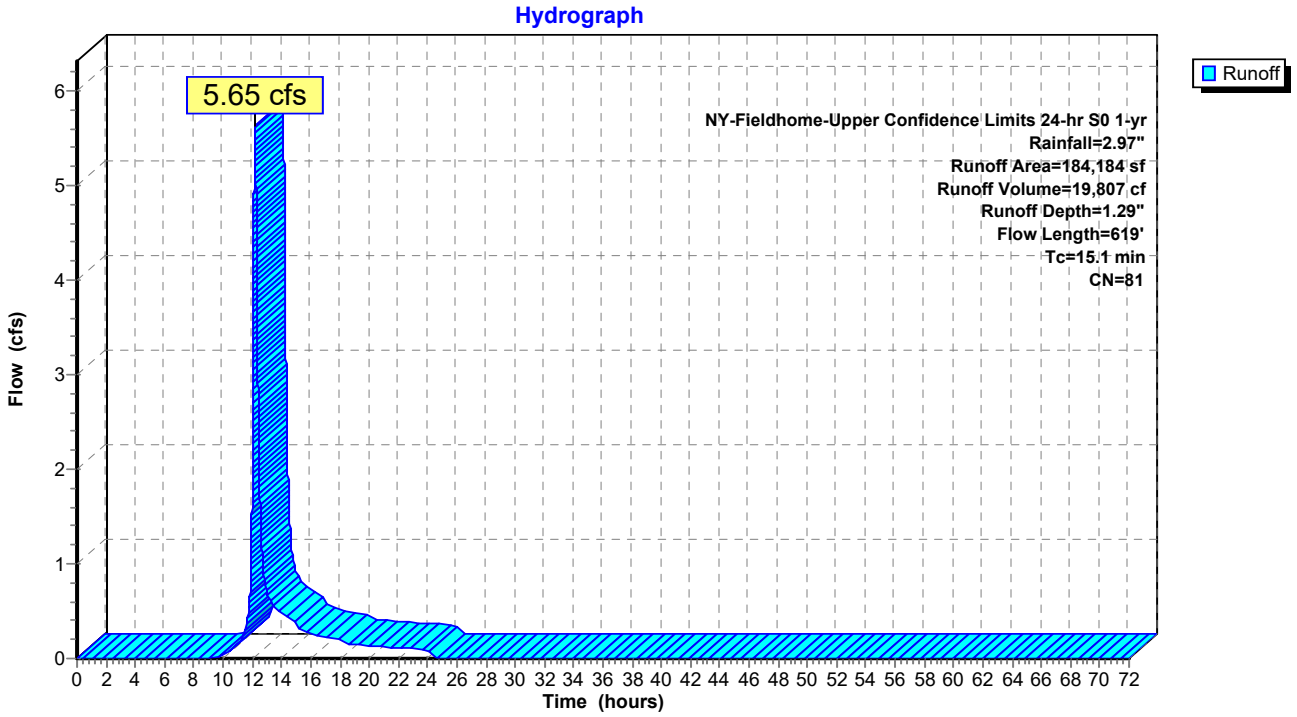
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

	Area (sf)	CN	Description
	107,961	74	>75% Grass cover, Good, HSG C
*	1,220	98	Water Surface (pool), HSG C
	58,823	98	Paved parking, curbs, driveways, sidewalks, roofs, walls, HSG C
	16,180	70	Woods, Good, HSG C
	184,184	81	Weighted Average
	124,141		67.40% Pervious Area
	60,043		32.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	150	0.1091	0.17		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.55"
0.6	209	0.1322	5.85		**Shallow Concentrated Flow, Shallow Concentrated Flow** Unpaved Kv= 16.1 fps
0.2	260	0.0913	21.76	68.36	**Pipe Channel, Pipe Flow** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
15.1	619	Total			



Subcatchment PDA-1C: (3)



Hydrograph for Subcatchment PDA-1C: (3)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.37	0.00	0.00
9.00	0.46	0.00	0.00
10.00	0.59	0.01	0.04
11.00	0.77	0.04	0.16
12.00	1.64	0.39	**1.95**
13.00	2.20	0.74	**0.70**
14.00	2.38	0.86	0.49
15.00	2.52	0.95	0.38
16.00	2.60	1.02	0.26
17.00	2.68	1.07	0.22
18.00	2.74	1.12	0.19
19.00	2.79	1.15	0.15
20.00	2.83	1.19	0.13
21.00	2.87	1.21	0.12
22.00	2.91	1.24	0.11
23.00	2.94	1.27	0.11
24.00	**2.97**	**1.29**	0.10
25.00	2.97	1.29	0.00
26.00	2.97	1.29	0.00
27.00	2.97	1.29	0.00
28.00	2.97	1.29	0.00
29.00	2.97	1.29	0.00
30.00	2.97	1.29	0.00
31.00	2.97	1.29	0.00
32.00	2.97	1.29	0.00
33.00	2.97	1.29	0.00
34.00	2.97	1.29	0.00
35.00	2.97	1.29	0.00
36.00	2.97	1.29	0.00
37.00	2.97	1.29	0.00
38.00	2.97	1.29	0.00
39.00	2.97	1.29	0.00
40.00	2.97	1.29	0.00
41.00	2.97	1.29	0.00
42.00	2.97	1.29	0.00
43.00	2.97	1.29	0.00
44.00	2.97	1.29	0.00
45.00	2.97	1.29	0.00
46.00	2.97	1.29	0.00
47.00	2.97	1.29	0.00
48.00	2.97	1.29	0.00
49.00	2.97	1.29	0.00
50.00	2.97	1.29	0.00
51.00	2.97	1.29	0.00
52.00	2.97	1.29	0.00
53.00	2.97	1.29	0.00
54.00	2.97	1.29	0.00
55.00	2.97	1.29	0.00
56.00	2.97	1.29	0.00
57.00	2.97	1.29	0.00
58.00	2.97	1.29	0.00
59.00	2.97	1.29	0.00
60.00	2.97	1.29	0.00
61.00	2.97	1.29	0.00
62.00	2.97	1.29	0.00
63.00	2.97	1.29	0.00
64.00	2.97	1.29	0.00
65.00	2.97	1.29	0.00
66.00	2.97	1.29	0.00
67.00	2.97	1.29	0.00
68.00	2.97	1.29	0.00
69.00	2.97	1.29	0.00
70.00	2.97	1.29	0.00
71.00	2.97	1.29	0.00
72.00	2.97	1.29	0.00

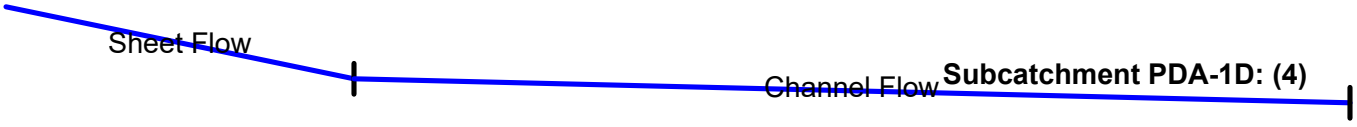
Summary for Subcatchment PDA-1D: (4)

Runoff = 1.34 cfs @ 12.24 hrs, Volume= 5,839 cf, Depth= 0.74"
Routed to Reach DP-1 :

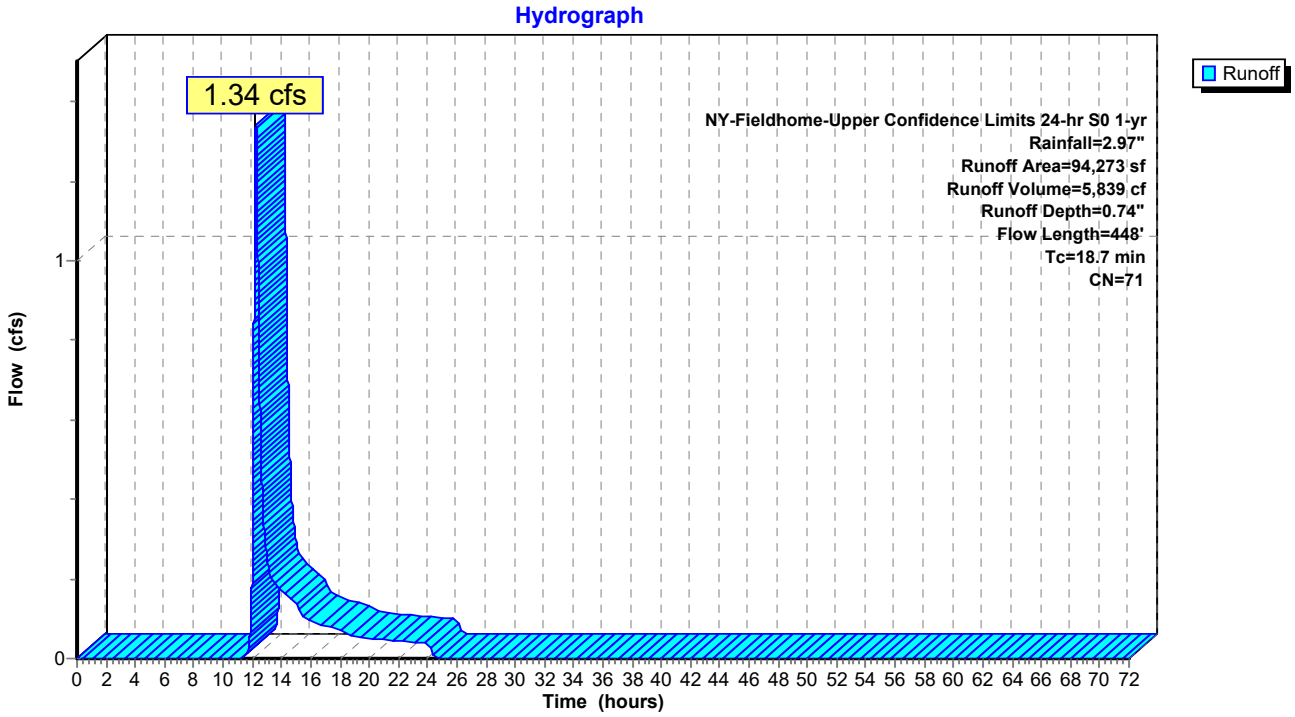
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

	Area (sf)	CN	Description
	23,361	74	>75% Grass cover, Good, HSG C
*	927	98	Concrete Pad for Utility Equipment, HSG C
	69,985	70	Woods, Good, HSG C
	94,273	71	Weighted Average
	93,346		99.02% Pervious Area
	927		0.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	116	0.0979	0.16		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.55"
6.5	332	0.0114	0.85	3.15	**Channel Flow, Channel Flow** Area= 3.7 sf Perim= 9.4' r= 0.39' n= 0.100 Very weedy reaches w/pools
18.7	448	Total			



Subcatchment PDA-1D: (4)



Hydrograph for Subcatchment PDA-1D: (4)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.37	0.00	0.00
9.00	0.46	0.00	0.00
10.00	0.59	0.00	0.00
11.00	0.77	0.00	0.00
12.00	1.64	0.14	**0.24**
13.00	2.20	0.35	**0.25**
14.00	2.38	0.43	0.17
15.00	2.52	0.50	0.14
16.00	2.60	0.54	0.09
17.00	2.68	0.58	0.08
18.00	2.74	0.62	0.07
19.00	2.79	0.64	0.06
20.00	2.83	0.67	0.05
21.00	2.87	0.69	0.05
22.00	2.91	0.71	0.04
23.00	2.94	0.73	0.04
24.00	**2.97**	**0.74**	0.04
25.00	2.97	0.74	0.00
26.00	2.97	0.74	0.00
27.00	2.97	0.74	0.00
28.00	2.97	0.74	0.00
29.00	2.97	0.74	0.00
30.00	2.97	0.74	0.00
31.00	2.97	0.74	0.00
32.00	2.97	0.74	0.00
33.00	2.97	0.74	0.00
34.00	2.97	0.74	0.00
35.00	2.97	0.74	0.00
36.00	2.97	0.74	0.00
37.00	2.97	0.74	0.00
38.00	2.97	0.74	0.00
39.00	2.97	0.74	0.00
40.00	2.97	0.74	0.00
41.00	2.97	0.74	0.00
42.00	2.97	0.74	0.00
43.00	2.97	0.74	0.00
44.00	2.97	0.74	0.00
45.00	2.97	0.74	0.00
46.00	2.97	0.74	0.00
47.00	2.97	0.74	0.00
48.00	2.97	0.74	0.00
49.00	2.97	0.74	0.00
50.00	2.97	0.74	0.00
51.00	2.97	0.74	0.00
52.00	2.97	0.74	0.00
53.00	2.97	0.74	0.00
54.00	2.97	0.74	0.00
55.00	2.97	0.74	0.00
56.00	2.97	0.74	0.00
57.00	2.97	0.74	0.00
58.00	2.97	0.74	0.00
59.00	2.97	0.74	0.00
60.00	2.97	0.74	0.00
61.00	2.97	0.74	0.00
62.00	2.97	0.74	0.00
63.00	2.97	0.74	0.00
64.00	2.97	0.74	0.00
65.00	2.97	0.74	0.00
66.00	2.97	0.74	0.00
67.00	2.97	0.74	0.00
68.00	2.97	0.74	0.00
69.00	2.97	0.74	0.00
70.00	2.97	0.74	0.00
71.00	2.97	0.74	0.00
72.00	2.97	0.74	0.00

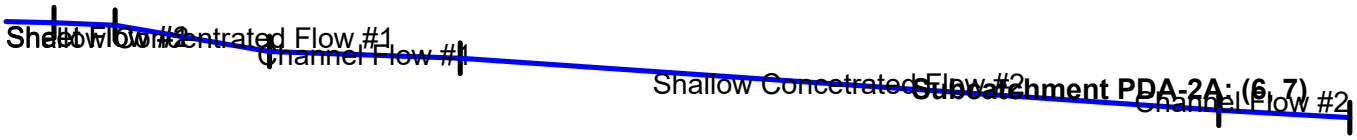
Summary for Subcatchment PDA-2A: (6, 7)

Runoff = 16.97 cfs @ 12.26 hrs, Volume= 73,215 cf, Depth= 0.84"
Routed to Reach DP-2 :

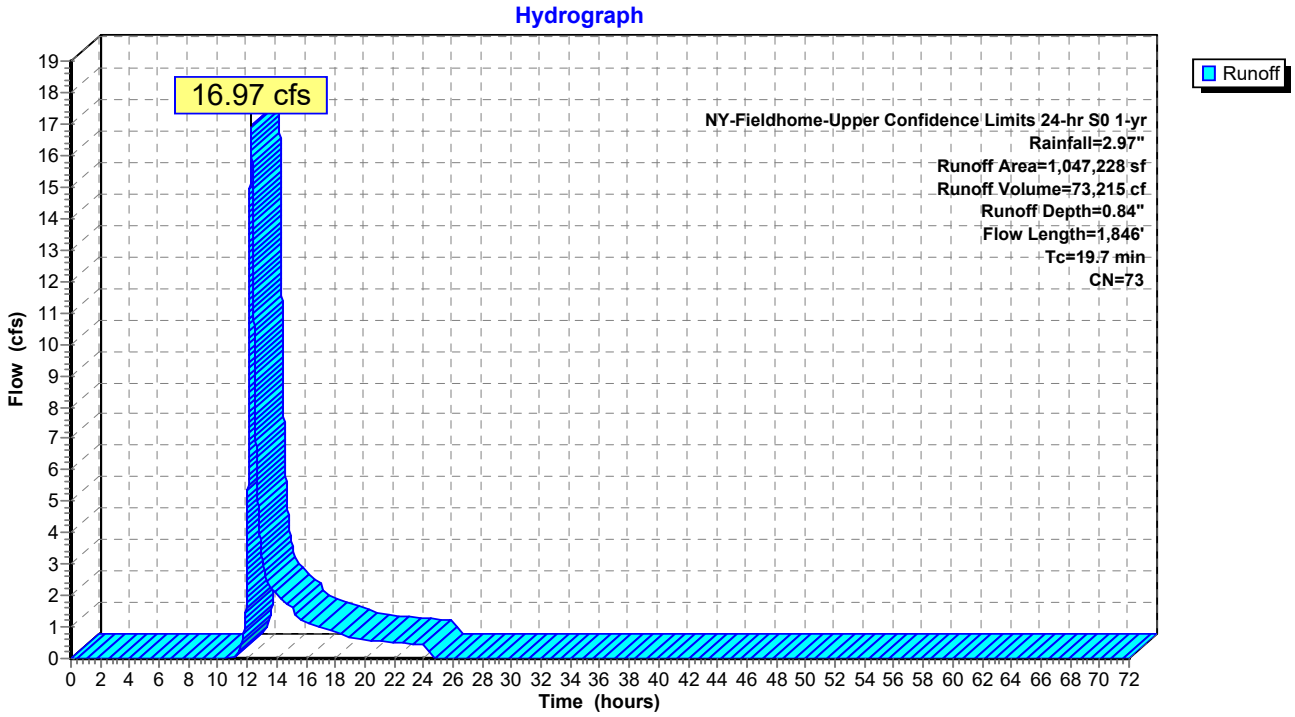
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

Area (sf)	CN	Description
191,228	74	>75% Grass cover, Good, HSG C
13,082	98	Paved sidewalks, roofs, HSG C
523,780	70	Woods, Good, HSG C
319,138	77	Woods, Good, HSG D
1,047,228	73	Weighted Average
1,034,146		98.75% Pervious Area
13,082		1.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	66	0.0299	0.19		**Sheet Flow, Sheet Flow #1** Grass: Short n= 0.150 P2= 3.55"
7.8	84	0.0561	0.18		**Sheet Flow, Sheet Flow #2** Grass: Dense n= 0.240 P2= 3.55"
0.5	212	0.2244	7.63		**Shallow Concentrated Flow, Shallow Concentrated Flow #1** Unpaved Kv= 16.1 fps
0.8	262	0.0469	5.58	10.04	**Channel Flow, Channel Flow #1** Area= 1.8 sf Perim= 4.8' r= 0.38' n= 0.030 Earth, grassed & winding
3.6	1,042	0.0908	4.85		**Shallow Concentrated Flow, Shallow Concetrated Flow #2** Unpaved Kv= 16.1 fps
1.3	180	0.0739	2.33	10.03	**Channel Flow, Channel Flow #2** Area= 4.3 sf Perim= 9.8' r= 0.44' n= 0.100 Very weedy reaches w/pools
19.7	1,846	Total			



Subcatchment PDA-2A: (6, 7)



Hydrograph for Subcatchment PDA-2A: (6, 7)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.37	0.00	0.00
9.00	0.46	0.00	0.00
10.00	0.59	0.00	0.00
11.00	0.77	0.00	0.00
12.00	1.64	0.17	**3.36**
13.00	2.20	0.42	**3.18**
14.00	2.38	0.51	2.10
15.00	2.52	0.58	1.66
16.00	2.60	0.62	1.13
17.00	2.68	0.67	0.97
18.00	2.74	0.70	0.86
19.00	2.79	0.73	0.66
20.00	2.83	0.76	0.60
21.00	2.87	0.78	0.55
22.00	2.91	0.80	0.51
23.00	2.94	0.82	0.48
24.00	**2.97**	**0.84**	0.45
25.00	2.97	0.84	0.00
26.00	2.97	0.84	0.00
27.00	2.97	0.84	0.00
28.00	2.97	0.84	0.00
29.00	2.97	0.84	0.00
30.00	2.97	0.84	0.00
31.00	2.97	0.84	0.00
32.00	2.97	0.84	0.00
33.00	2.97	0.84	0.00
34.00	2.97	0.84	0.00
35.00	2.97	0.84	0.00
36.00	2.97	0.84	0.00
37.00	2.97	0.84	0.00
38.00	2.97	0.84	0.00
39.00	2.97	0.84	0.00
40.00	2.97	0.84	0.00
41.00	2.97	0.84	0.00
42.00	2.97	0.84	0.00
43.00	2.97	0.84	0.00
44.00	2.97	0.84	0.00
45.00	2.97	0.84	0.00
46.00	2.97	0.84	0.00
47.00	2.97	0.84	0.00
48.00	2.97	0.84	0.00
49.00	2.97	0.84	0.00
50.00	2.97	0.84	0.00
51.00	2.97	0.84	0.00
52.00	2.97	0.84	0.00
53.00	2.97	0.84	0.00
54.00	2.97	0.84	0.00
55.00	2.97	0.84	0.00
56.00	2.97	0.84	0.00
57.00	2.97	0.84	0.00
58.00	2.97	0.84	0.00
59.00	2.97	0.84	0.00
60.00	2.97	0.84	0.00
61.00	2.97	0.84	0.00
62.00	2.97	0.84	0.00
63.00	2.97	0.84	0.00
64.00	2.97	0.84	0.00
65.00	2.97	0.84	0.00
66.00	2.97	0.84	0.00
67.00	2.97	0.84	0.00
68.00	2.97	0.84	0.00
69.00	2.97	0.84	0.00
70.00	2.97	0.84	0.00
71.00	2.97	0.84	0.00
72.00	2.97	0.84	0.00

Summary for Subcatchment PDA-2B: (8)

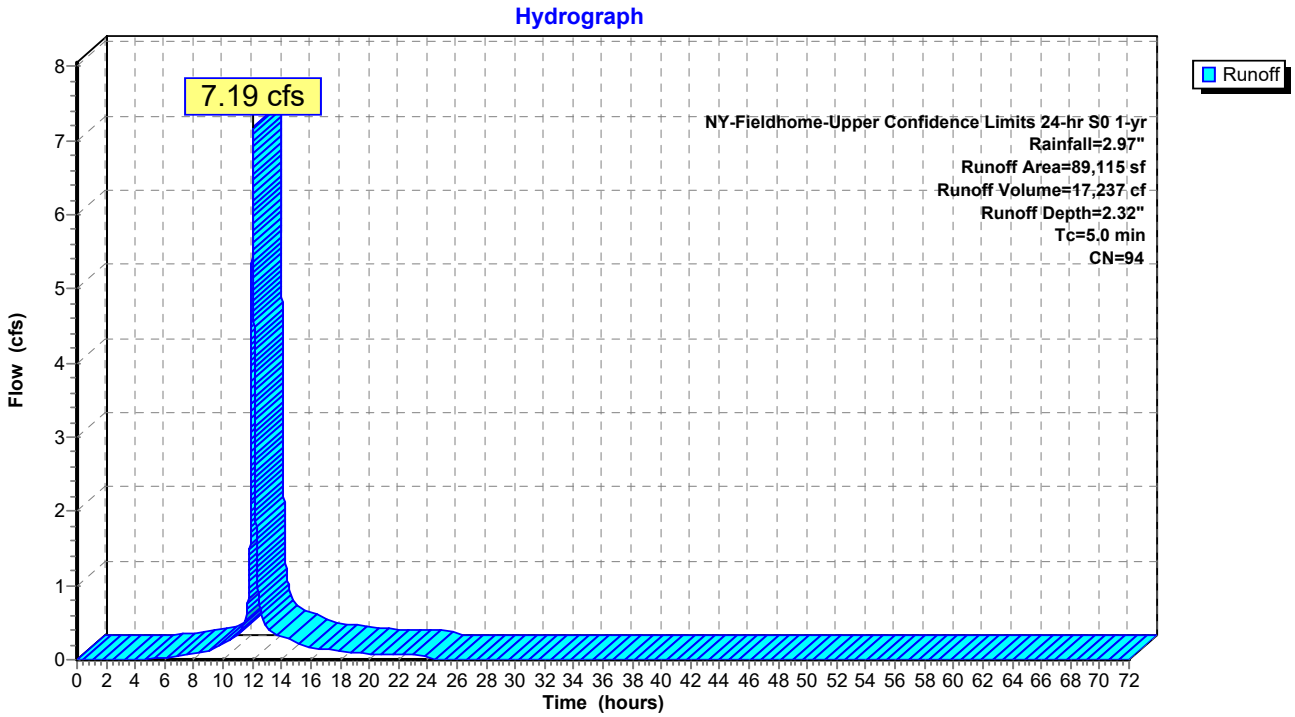
Runoff = 7.19 cfs @ 12.03 hrs, Volume= 17,237 cf, Depth= 2.32"
Routed to Pond BMH-2B :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

Area (sf)	CN	Description
13,002	74	>75% Grass cover, Good, HSG C
76,113	98	Paved parking, curbs, driveways, sidewalks, roofs, walls, HSG C
89,115	94	Weighted Average
13,002		14.59% Pervious Area
76,113		85.41% Impervious Area

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

Subcatchment PDA-2B: (8)



Hydrograph for Subcatchment PDA-2B: (8)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.01
6.00	0.23	0.01	0.03
7.00	0.29	0.03	0.05
8.00	0.37	0.07	0.08
9.00	0.46	0.11	0.11
10.00	0.59	0.20	0.21
11.00	0.77	0.33	0.33
12.00	1.64	1.06	**6.59**
13.00	2.20	1.59	**0.42**
14.00	2.38	1.76	0.31
15.00	2.52	1.89	0.24
16.00	2.60	1.97	0.16
17.00	2.68	2.04	0.14
18.00	2.74	2.10	0.12
19.00	2.79	2.15	0.09
20.00	2.83	2.19	0.08
21.00	2.87	2.22	0.07
22.00	2.91	2.26	0.07
23.00	2.94	2.29	0.06
24.00	**2.97**	**2.32**	0.06
25.00	2.97	2.32	0.00
26.00	2.97	2.32	0.00
27.00	2.97	2.32	0.00
28.00	2.97	2.32	0.00
29.00	2.97	2.32	0.00
30.00	2.97	2.32	0.00
31.00	2.97	2.32	0.00
32.00	2.97	2.32	0.00
33.00	2.97	2.32	0.00
34.00	2.97	2.32	0.00
35.00	2.97	2.32	0.00
36.00	2.97	2.32	0.00
37.00	2.97	2.32	0.00
38.00	2.97	2.32	0.00
39.00	2.97	2.32	0.00
40.00	2.97	2.32	0.00
41.00	2.97	2.32	0.00
42.00	2.97	2.32	0.00
43.00	2.97	2.32	0.00
44.00	2.97	2.32	0.00
45.00	2.97	2.32	0.00
46.00	2.97	2.32	0.00
47.00	2.97	2.32	0.00
48.00	2.97	2.32	0.00
49.00	2.97	2.32	0.00
50.00	2.97	2.32	0.00
51.00	2.97	2.32	0.00
52.00	2.97	2.32	0.00
53.00	2.97	2.32	0.00
54.00	2.97	2.32	0.00
55.00	2.97	2.32	0.00
56.00	2.97	2.32	0.00
57.00	2.97	2.32	0.00
58.00	2.97	2.32	0.00
59.00	2.97	2.32	0.00
60.00	2.97	2.32	0.00
61.00	2.97	2.32	0.00
62.00	2.97	2.32	0.00
63.00	2.97	2.32	0.00
64.00	2.97	2.32	0.00
65.00	2.97	2.32	0.00
66.00	2.97	2.32	0.00
67.00	2.97	2.32	0.00
68.00	2.97	2.32	0.00
69.00	2.97	2.32	0.00
70.00	2.97	2.32	0.00
71.00	2.97	2.32	0.00
72.00	2.97	2.32	0.00

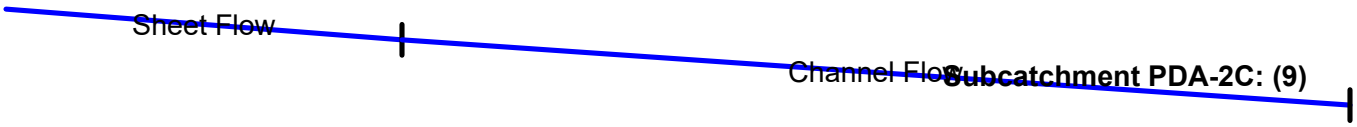
Summary for Subcatchment PDA-2C: (9)

Runoff = 6.79 cfs @ 12.09 hrs, Volume= 20,100 cf, Depth= 1.17"
Routed to Pond BR-2C :

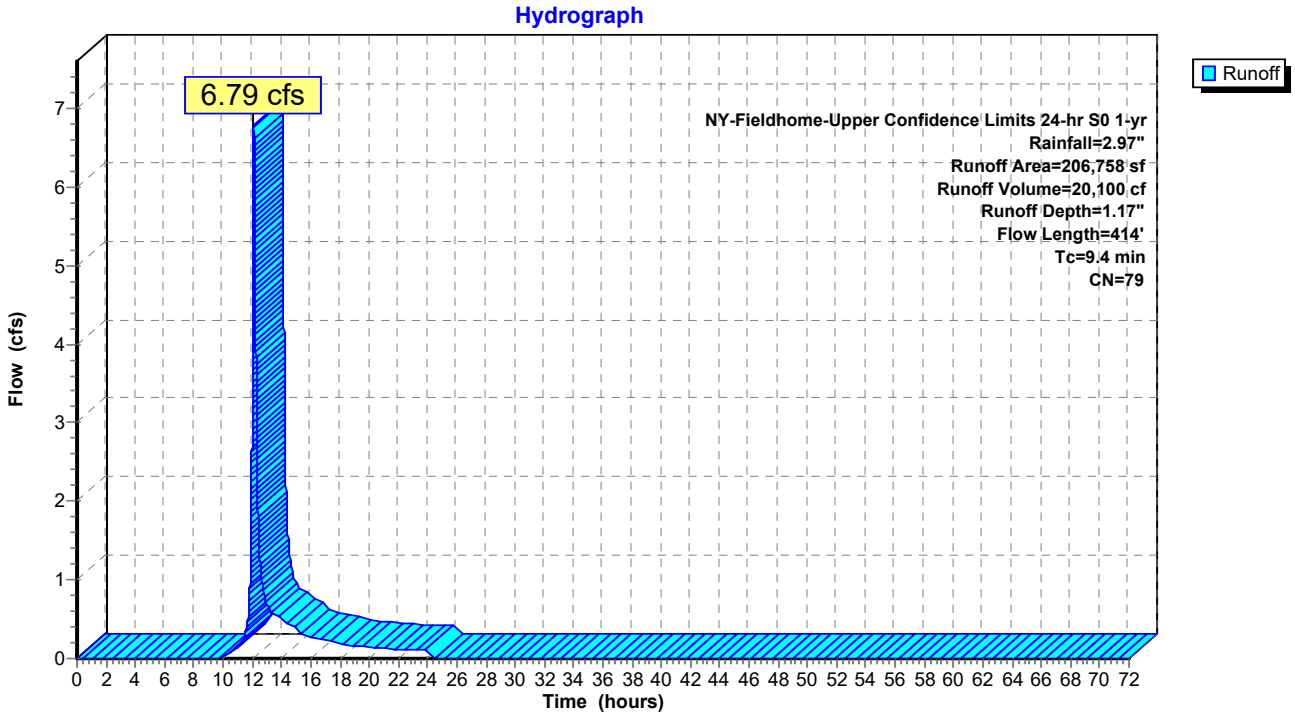
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

	Area (sf)	CN	Description
	167,934	74	>75% Grass cover, Good, HSG C
*	38,824	98	Paved sidewalks, roofs, walls, HSG C
	206,758	79	Weighted Average
	167,934		81.22% Pervious Area
	38,824		18.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	122	0.0365	0.24		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.55"
0.8	292	0.0324	5.89	34.73	**Channel Flow, Channel Flow** Area= 5.9 sf Perim= 11.0' r= 0.54' n= 0.030 Short grass
9.4	414	Total			



Subcatchment PDA-2C: (9)



Hydrograph for Subcatchment PDA-2C: (9)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.37	0.00	0.00
9.00	0.46	0.00	0.00
10.00	0.59	0.00	0.02
11.00	0.77	0.02	0.14
12.00	1.64	0.32	**3.60**
13.00	2.20	0.65	**0.67**
14.00	2.38	0.76	0.50
15.00	2.52	0.85	0.39
16.00	2.60	0.91	0.27
17.00	2.68	0.96	0.23
18.00	2.74	1.00	0.20
19.00	2.79	1.04	0.15
20.00	2.83	1.07	0.14
21.00	2.87	1.09	0.13
22.00	2.91	1.12	0.12
23.00	2.94	1.14	0.11
24.00	**2.97**	**1.17**	0.11
25.00	2.97	1.17	0.00
26.00	2.97	1.17	0.00
27.00	2.97	1.17	0.00
28.00	2.97	1.17	0.00
29.00	2.97	1.17	0.00
30.00	2.97	1.17	0.00
31.00	2.97	1.17	0.00
32.00	2.97	1.17	0.00
33.00	2.97	1.17	0.00
34.00	2.97	1.17	0.00
35.00	2.97	1.17	0.00
36.00	2.97	1.17	0.00
37.00	2.97	1.17	0.00
38.00	2.97	1.17	0.00
39.00	2.97	1.17	0.00
40.00	2.97	1.17	0.00
41.00	2.97	1.17	0.00
42.00	2.97	1.17	0.00
43.00	2.97	1.17	0.00
44.00	2.97	1.17	0.00
45.00	2.97	1.17	0.00
46.00	2.97	1.17	0.00
47.00	2.97	1.17	0.00
48.00	2.97	1.17	0.00
49.00	2.97	1.17	0.00
50.00	2.97	1.17	0.00
51.00	2.97	1.17	0.00
52.00	2.97	1.17	0.00
53.00	2.97	1.17	0.00
54.00	2.97	1.17	0.00
55.00	2.97	1.17	0.00
56.00	2.97	1.17	0.00
57.00	2.97	1.17	0.00
58.00	2.97	1.17	0.00
59.00	2.97	1.17	0.00
60.00	2.97	1.17	0.00
61.00	2.97	1.17	0.00
62.00	2.97	1.17	0.00
63.00	2.97	1.17	0.00
64.00	2.97	1.17	0.00
65.00	2.97	1.17	0.00
66.00	2.97	1.17	0.00
67.00	2.97	1.17	0.00
68.00	2.97	1.17	0.00
69.00	2.97	1.17	0.00
70.00	2.97	1.17	0.00
71.00	2.97	1.17	0.00
72.00	2.97	1.17	0.00

Summary for Subcatchment PDA-2D: (10)

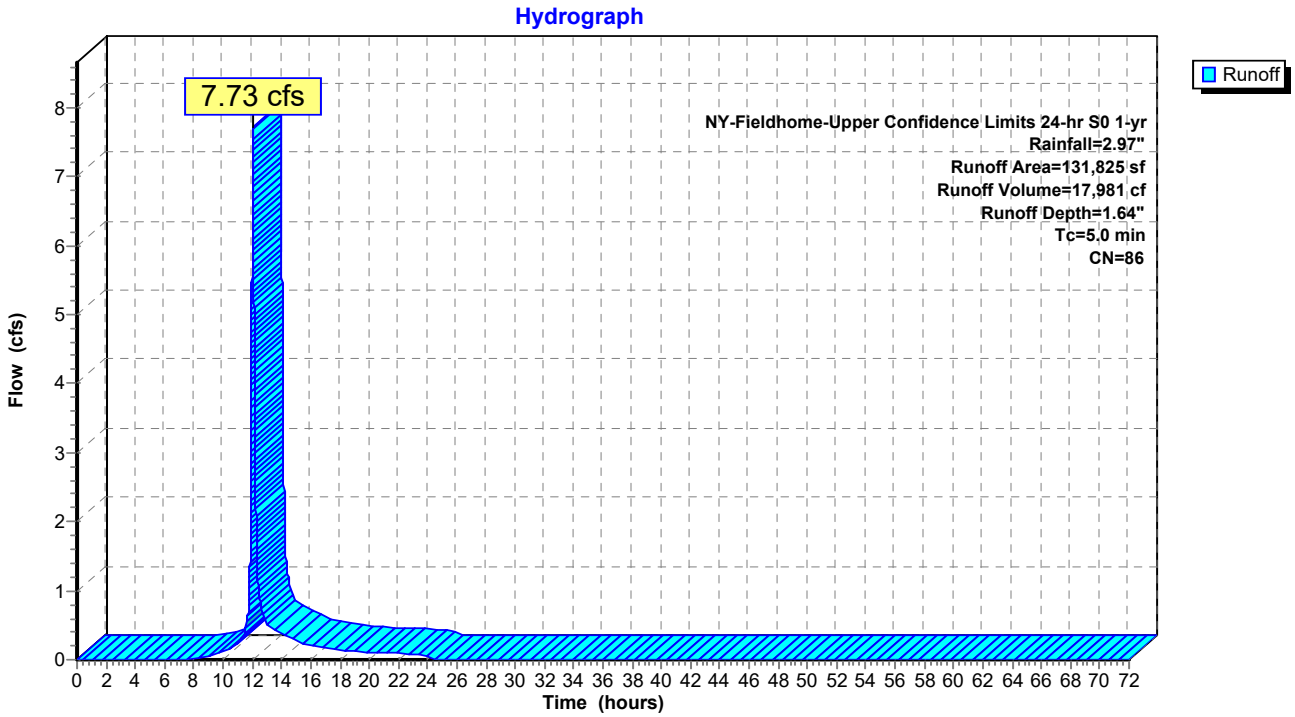
Runoff = 7.73 cfs @ 12.03 hrs, Volume= 17,981 cf, Depth= 1.64"
Routed to Pond BR-2D :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

Area (sf)	CN	Description
64,545	74	>75% Grass cover, Good, HSG C
67,280	98	Paved parking, curbs, driveways, sidewalks, roofs, walls, HSG C
131,825	86	Weighted Average
64,545		48.96% Pervious Area
67,280		51.04% Impervious Area

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

Subcatchment PDA-2D: (10)



Hydrograph for Subcatchment PDA-2D: (10)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.37	0.00	0.01
9.00	0.46	0.01	0.04
10.00	0.59	0.04	0.12
11.00	0.77	0.10	0.24
12.00	1.64	0.58	**6.89**
13.00	2.20	1.01	**0.51**
14.00	2.38	1.15	0.39
15.00	2.52	1.26	0.30
16.00	2.60	1.33	0.20
17.00	2.68	1.39	0.17
18.00	2.74	1.44	0.15
19.00	2.79	1.48	0.12
20.00	2.83	1.52	0.11
21.00	2.87	1.55	0.10
22.00	2.91	1.58	0.09
23.00	2.94	1.61	0.08
24.00	**2.97**	**1.64**	0.08
25.00	2.97	1.64	0.00
26.00	2.97	1.64	0.00
27.00	2.97	1.64	0.00
28.00	2.97	1.64	0.00
29.00	2.97	1.64	0.00
30.00	2.97	1.64	0.00
31.00	2.97	1.64	0.00
32.00	2.97	1.64	0.00
33.00	2.97	1.64	0.00
34.00	2.97	1.64	0.00
35.00	2.97	1.64	0.00
36.00	2.97	1.64	0.00
37.00	2.97	1.64	0.00
38.00	2.97	1.64	0.00
39.00	2.97	1.64	0.00
40.00	2.97	1.64	0.00
41.00	2.97	1.64	0.00
42.00	2.97	1.64	0.00
43.00	2.97	1.64	0.00
44.00	2.97	1.64	0.00
45.00	2.97	1.64	0.00
46.00	2.97	1.64	0.00
47.00	2.97	1.64	0.00
48.00	2.97	1.64	0.00
49.00	2.97	1.64	0.00
50.00	2.97	1.64	0.00
51.00	2.97	1.64	0.00
52.00	2.97	1.64	0.00
53.00	2.97	1.64	0.00
54.00	2.97	1.64	0.00
55.00	2.97	1.64	0.00
56.00	2.97	1.64	0.00
57.00	2.97	1.64	0.00
58.00	2.97	1.64	0.00
59.00	2.97	1.64	0.00
60.00	2.97	1.64	0.00
61.00	2.97	1.64	0.00
62.00	2.97	1.64	0.00
63.00	2.97	1.64	0.00
64.00	2.97	1.64	0.00
65.00	2.97	1.64	0.00
66.00	2.97	1.64	0.00
67.00	2.97	1.64	0.00
68.00	2.97	1.64	0.00
69.00	2.97	1.64	0.00
70.00	2.97	1.64	0.00
71.00	2.97	1.64	0.00
72.00	2.97	1.64	0.00

Summary for Subcatchment PDA-DB-1: (5)

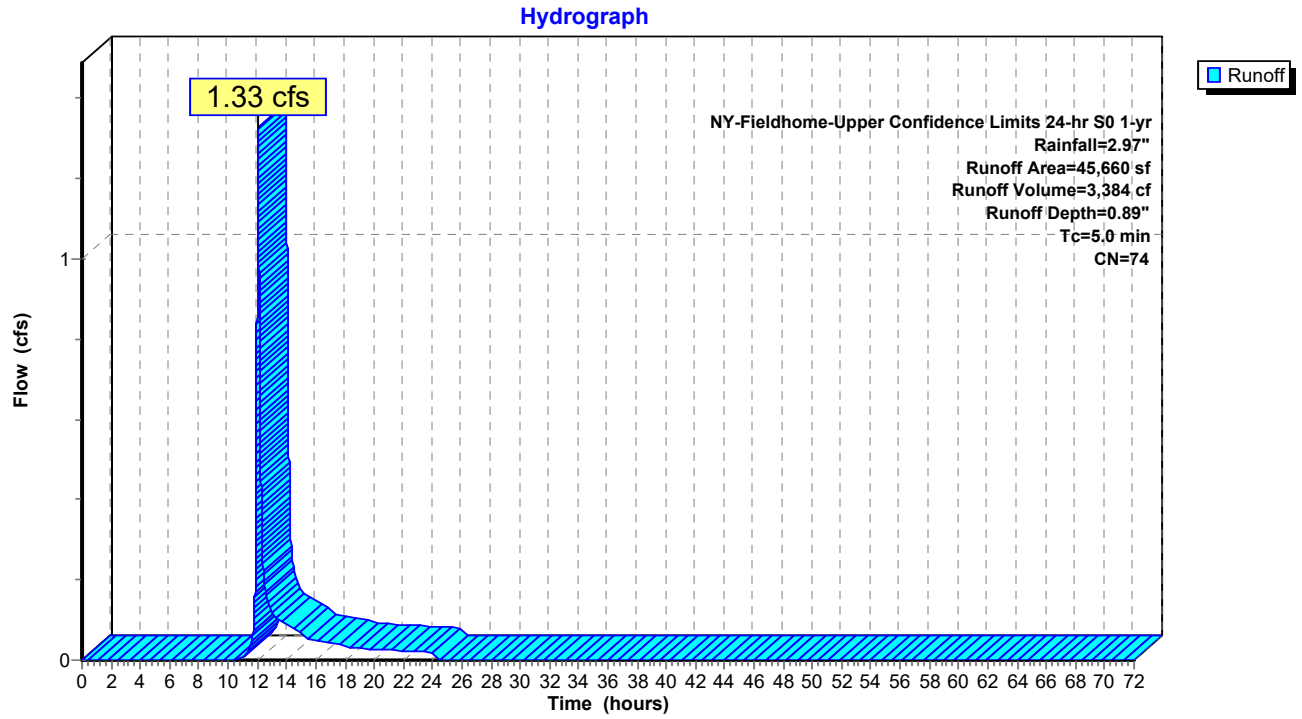
Runoff = 1.33 cfs @ 12.04 hrs, Volume= 3,384 cf, Depth= 0.89"
Routed to Pond DB-1 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

Area (sf)	CN	Description
45,660	74	>75% Grass cover, Good, HSG C
45,660		100.00% Pervious Area

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

Subcatchment PDA-DB-1: (5)



Hydrograph for Subcatchment PDA-DB-1: (5)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.37	0.00	0.00
9.00	0.46	0.00	0.00
10.00	0.59	0.00	0.00
11.00	0.77	0.00	0.01
12.00	1.64	0.20	**1.10**
13.00	2.20	0.45	**0.11**
14.00	2.38	0.54	0.09
15.00	2.52	0.62	0.07
16.00	2.60	0.67	0.05
17.00	2.68	0.71	0.04
18.00	2.74	0.75	0.04
19.00	2.79	0.78	0.03
20.00	2.83	0.80	0.03
21.00	2.87	0.83	0.02
22.00	2.91	0.85	0.02
23.00	2.94	0.87	0.02
24.00	**2.97**	**0.89**	0.02
25.00	2.97	0.89	0.00
26.00	2.97	0.89	0.00
27.00	2.97	0.89	0.00
28.00	2.97	0.89	0.00
29.00	2.97	0.89	0.00
30.00	2.97	0.89	0.00
31.00	2.97	0.89	0.00
32.00	2.97	0.89	0.00
33.00	2.97	0.89	0.00
34.00	2.97	0.89	0.00
35.00	2.97	0.89	0.00
36.00	2.97	0.89	0.00
37.00	2.97	0.89	0.00
38.00	2.97	0.89	0.00
39.00	2.97	0.89	0.00
40.00	2.97	0.89	0.00
41.00	2.97	0.89	0.00
42.00	2.97	0.89	0.00
43.00	2.97	0.89	0.00
44.00	2.97	0.89	0.00
45.00	2.97	0.89	0.00
46.00	2.97	0.89	0.00
47.00	2.97	0.89	0.00
48.00	2.97	0.89	0.00
49.00	2.97	0.89	0.00
50.00	2.97	0.89	0.00
51.00	2.97	0.89	0.00
52.00	2.97	0.89	0.00
53.00	2.97	0.89	0.00
54.00	2.97	0.89	0.00
55.00	2.97	0.89	0.00
56.00	2.97	0.89	0.00
57.00	2.97	0.89	0.00
58.00	2.97	0.89	0.00
59.00	2.97	0.89	0.00
60.00	2.97	0.89	0.00
61.00	2.97	0.89	0.00
62.00	2.97	0.89	0.00
63.00	2.97	0.89	0.00
64.00	2.97	0.89	0.00
65.00	2.97	0.89	0.00
66.00	2.97	0.89	0.00
67.00	2.97	0.89	0.00
68.00	2.97	0.89	0.00
69.00	2.97	0.89	0.00
70.00	2.97	0.89	0.00
71.00	2.97	0.89	0.00
72.00	2.97	0.89	0.00

Summary for Subcatchment PDA-DB-2: (11)

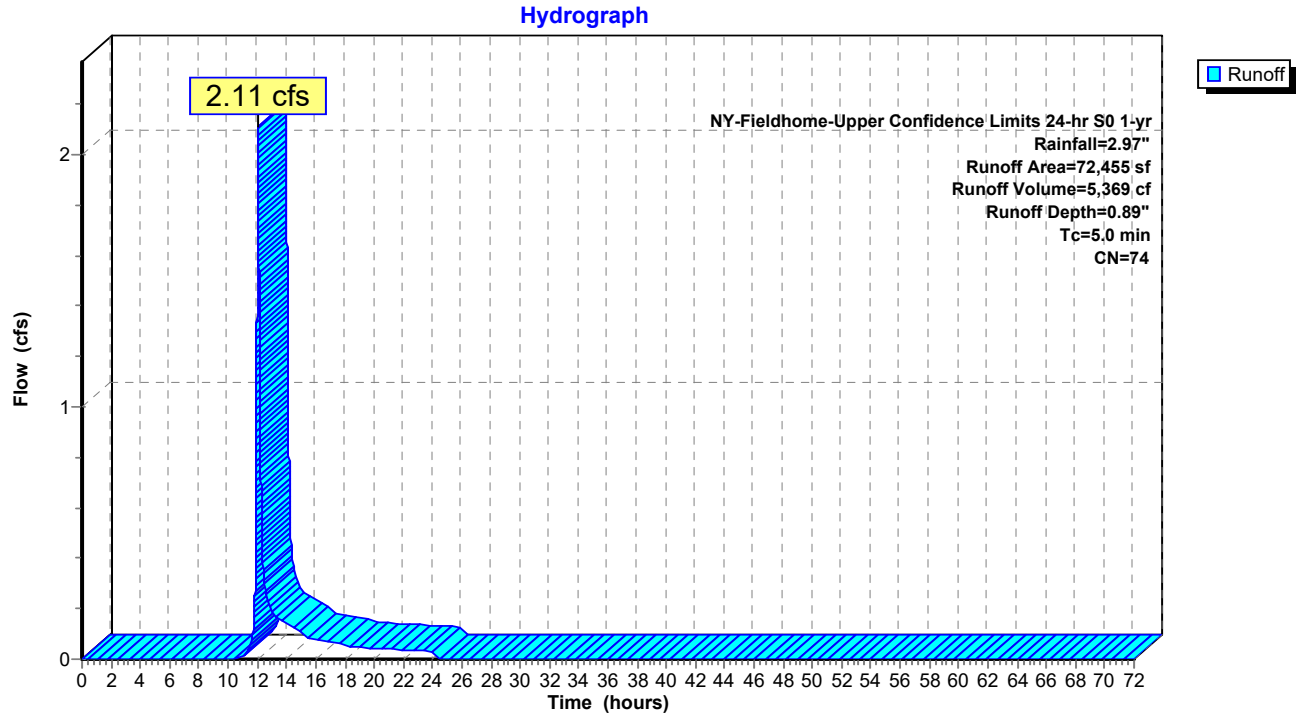
Runoff = 2.11 cfs @ 12.04 hrs, Volume= 5,369 cf, Depth= 0.89"
Routed to Pond DB-2 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 1-yr Rainfall=2.97"

Area (sf)	CN	Description
64,759	74	>75% Grass cover, Good, HSG C
7,696	70	Woods, Good, HSG C
72,455	74	Weighted Average
72,455		100.00% Pervious Area

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

Subcatchment PDA-DB-2: (11)



Hydrograph for Subcatchment PDA-DB-2: (11)

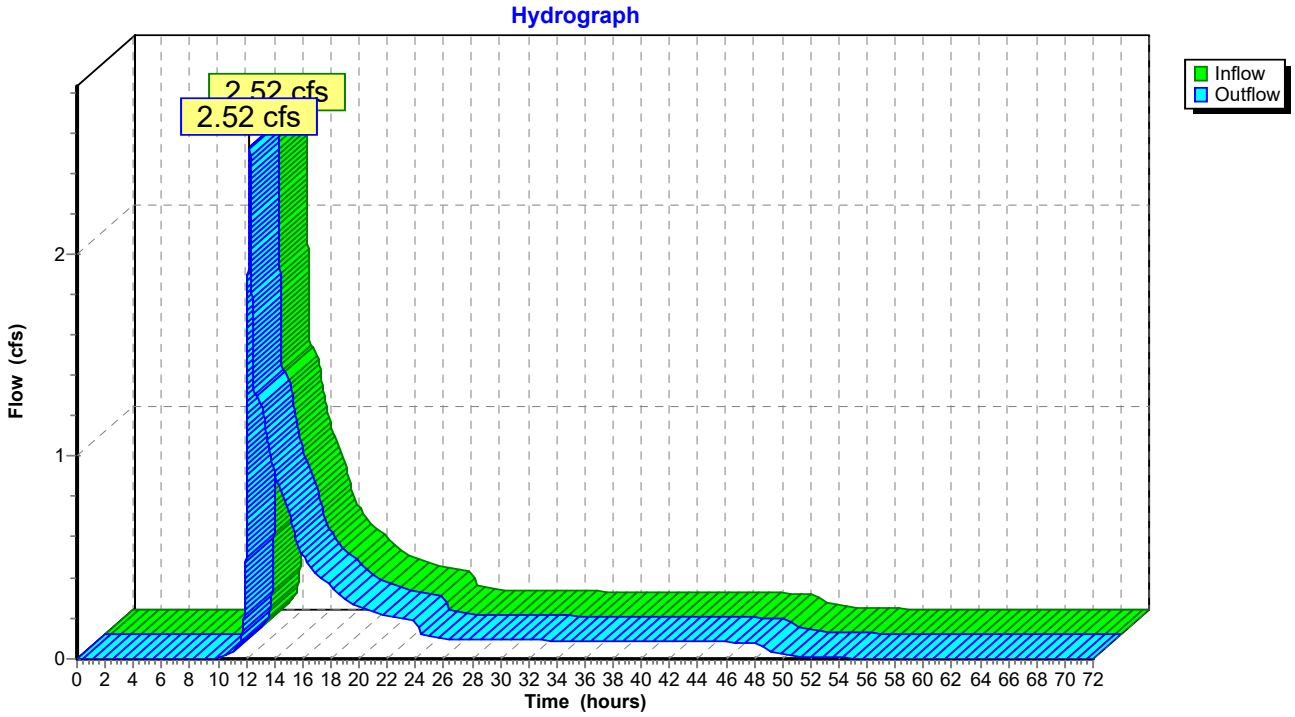
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.37	0.00	0.00
9.00	0.46	0.00	0.00
10.00	0.59	0.00	0.00
11.00	0.77	0.00	0.01
12.00	1.64	0.20	**1.75**
13.00	2.20	0.45	**0.18**
14.00	2.38	0.54	0.14
15.00	2.52	0.62	0.11
16.00	2.60	0.67	0.08
17.00	2.68	0.71	0.07
18.00	2.74	0.75	0.06
19.00	2.79	0.78	0.05
20.00	2.83	0.80	0.04
21.00	2.87	0.83	0.04
22.00	2.91	0.85	0.04
23.00	2.94	0.87	0.03
24.00	**2.97**	**0.89**	0.03
25.00	2.97	0.89	0.00
26.00	2.97	0.89	0.00
27.00	2.97	0.89	0.00
28.00	2.97	0.89	0.00
29.00	2.97	0.89	0.00
30.00	2.97	0.89	0.00
31.00	2.97	0.89	0.00
32.00	2.97	0.89	0.00
33.00	2.97	0.89	0.00
34.00	2.97	0.89	0.00
35.00	2.97	0.89	0.00
36.00	2.97	0.89	0.00
37.00	2.97	0.89	0.00
38.00	2.97	0.89	0.00
39.00	2.97	0.89	0.00
40.00	2.97	0.89	0.00
41.00	2.97	0.89	0.00
42.00	2.97	0.89	0.00
43.00	2.97	0.89	0.00
44.00	2.97	0.89	0.00
45.00	2.97	0.89	0.00
46.00	2.97	0.89	0.00
47.00	2.97	0.89	0.00
48.00	2.97	0.89	0.00
49.00	2.97	0.89	0.00
50.00	2.97	0.89	0.00
51.00	2.97	0.89	0.00
52.00	2.97	0.89	0.00
53.00	2.97	0.89	0.00
54.00	2.97	0.89	0.00
55.00	2.97	0.89	0.00
56.00	2.97	0.89	0.00
57.00	2.97	0.89	0.00
58.00	2.97	0.89	0.00
59.00	2.97	0.89	0.00
60.00	2.97	0.89	0.00
61.00	2.97	0.89	0.00
62.00	2.97	0.89	0.00
63.00	2.97	0.89	0.00
64.00	2.97	0.89	0.00
65.00	2.97	0.89	0.00
66.00	2.97	0.89	0.00
67.00	2.97	0.89	0.00
68.00	2.97	0.89	0.00
69.00	2.97	0.89	0.00
70.00	2.97	0.89	0.00
71.00	2.97	0.89	0.00
72.00	2.97	0.89	0.00

Summary for Reach DP-1:

Inflow = 2.52 cfs @ 12.23 hrs, Volume= 31,996 cf
Outflow = 2.52 cfs @ 12.23 hrs, Volume= 31,996 cf, Atten= 0%, Lag= 0.0 min

Routing by Sim-Route method, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs

Reach DP-1:



Hydrograph for Reach DP-1:

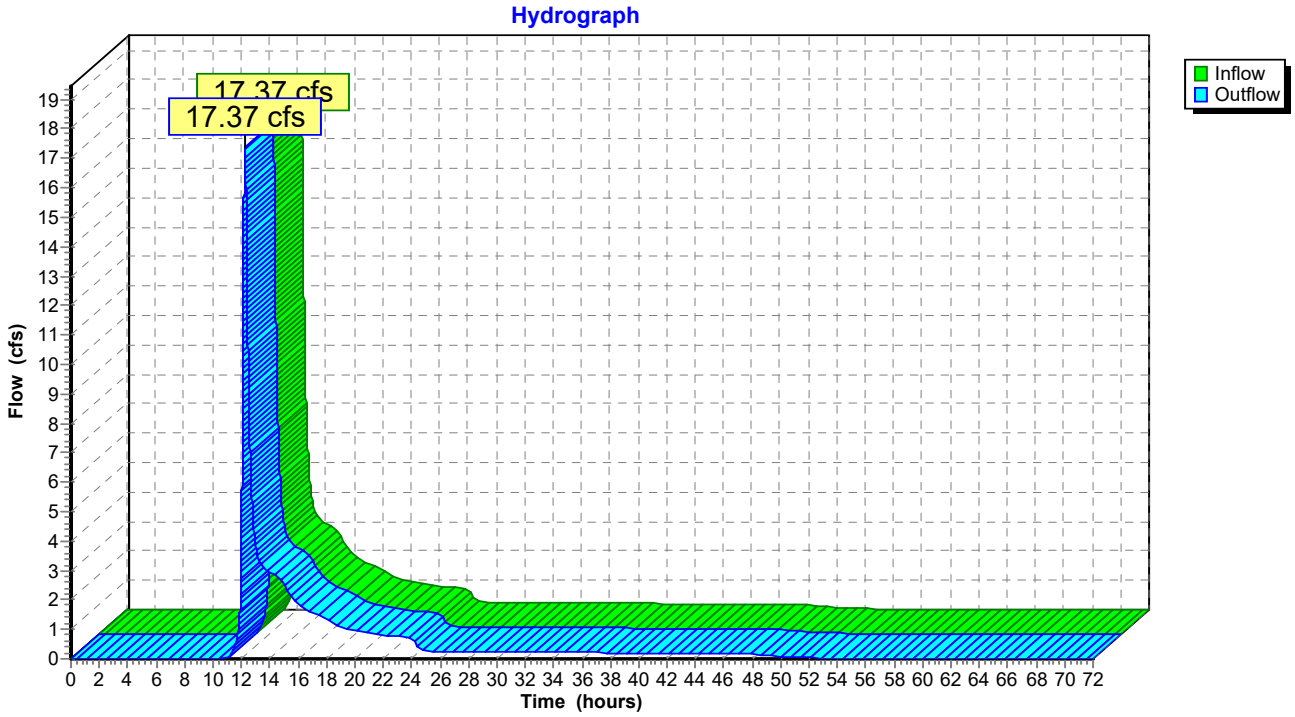
Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.00		0.00
5.00	0.00		0.00
6.00	0.00		0.00
7.00	0.00		0.00
8.00	0.00		0.00
9.00	0.00		0.00
10.00	0.00		0.00
11.00	0.03		0.03
12.00	**0.63**		**0.63**
13.00	**1.29**		**1.29**
14.00	0.93		0.93
15.00	0.72		0.72
16.00	0.51		0.51
17.00	0.42		0.42
18.00	0.36		0.36
19.00	0.29		0.29
20.00	0.25		0.25
21.00	0.23		0.23
22.00	0.21		0.21
23.00	0.20		0.20
24.00	0.19		0.19
25.00	0.11		0.11
26.00	0.10		0.10
27.00	0.10		0.10
28.00	0.09		0.09
29.00	0.09		0.09
30.00	0.09		0.09
31.00	0.09		0.09
32.00	0.09		0.09
33.00	0.09		0.09
34.00	0.09		0.09
35.00	0.09		0.09
36.00	0.09		0.09
37.00	0.09		0.09
38.00	0.09		0.09
39.00	0.09		0.09
40.00	0.09		0.09
41.00	0.09		0.09
42.00	0.08		0.08
43.00	0.08		0.08
44.00	0.08		0.08
45.00	0.08		0.08
46.00	0.08		0.08
47.00	0.08		0.08
48.00	0.08		0.08
49.00	0.04		0.04
50.00	0.02		0.02
51.00	0.01		0.01
52.00	0.01		0.01
53.00	0.01		0.01
54.00	0.01		0.01
55.00	0.00		0.00
56.00	0.00		0.00
57.00	0.00		0.00
58.00	0.00		0.00
59.00	0.00		0.00
60.00	0.00		0.00
61.00	0.00		0.00
62.00	0.00		0.00
63.00	0.00		0.00
64.00	0.00		0.00
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Summary for Reach DP-2:

Inflow = 17.37 cfs @ 12.26 hrs, Volume= 116,645 cf
Outflow = 17.37 cfs @ 12.26 hrs, Volume= 116,645 cf, Atten= 0%, Lag= 0.0 min

Routing by Sim-Route method, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs

Reach DP-2:



Hydrograph for Reach DP-2:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.00		0.00
5.00	0.00		0.00
6.00	0.00		0.00
7.00	0.00		0.00
8.00	0.00		0.00
9.00	0.00		0.00
10.00	0.01		0.01
11.00	0.05		0.05
12.00	**3.52**		**3.50**
13.00	**3.91**		**3.92**
14.00	2.96		2.96
15.00	2.56		2.56
16.00	1.87		1.87
17.00	1.57		1.57
18.00	1.38		1.38
19.00	1.09		1.09
20.00	0.97		0.97
21.00	0.88		0.88
22.00	0.81		0.81
23.00	0.76		0.76
24.00	0.72		0.72
25.00	0.25		0.25
26.00	0.24		0.24
27.00	0.23		0.23
28.00	0.23		0.23
29.00	0.23		0.23
30.00	0.22		0.22
31.00	0.22		0.22
32.00	0.22		0.22
33.00	0.22		0.22
34.00	0.21		0.21
35.00	0.21		0.21
36.00	0.21		0.21
37.00	0.21		0.21
38.00	0.21		0.21
39.00	0.20		0.20
40.00	0.20		0.20
41.00	0.20		0.20
42.00	0.20		0.20
43.00	0.20		0.20
44.00	0.20		0.20
45.00	0.19		0.19
46.00	0.19		0.19
47.00	0.19		0.19
48.00	0.17		0.17
49.00	0.10		0.10
50.00	0.07		0.07
51.00	0.05		0.05
52.00	0.04		0.04
53.00	0.03		0.03
54.00	0.02		0.02
55.00	0.02		0.02
56.00	0.02		0.02
57.00	0.01		0.01
58.00	0.01		0.01
59.00	0.01		0.01
60.00	0.01		0.01
61.00	0.01		0.01
62.00	0.01		0.01
63.00	0.01		0.01
64.00	0.01		0.01
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Summary for Pond BMH-1B:

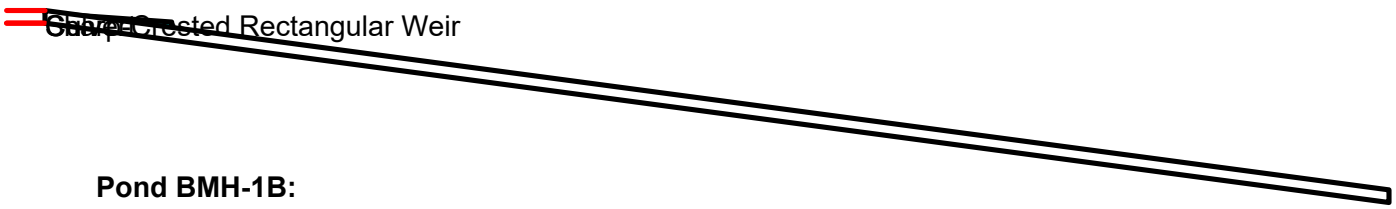
Inflow = 15.78 cfs @ 12.16 hrs, Volume= 52,959 cf
Outflow = 15.78 cfs @ 12.16 hrs, Volume= 52,958 cf, Atten= 0%, Lag= 0.0 min
Primary = 15.78 cfs @ 12.16 hrs, Volume= 52,958 cf
Routed to Pond IS-1B :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond DB-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 437.74' @ 15.58 hrs
Flood Elev= 442.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	435.25'	**24.0" Round Culvert** L= 31.3' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 435.25' / 433.50' S= 0.0559 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	435.25'	**30.0" Round Culvert** L= 332.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 435.25' / 400.00' S= 0.1062 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#3	Device 2	437.75'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

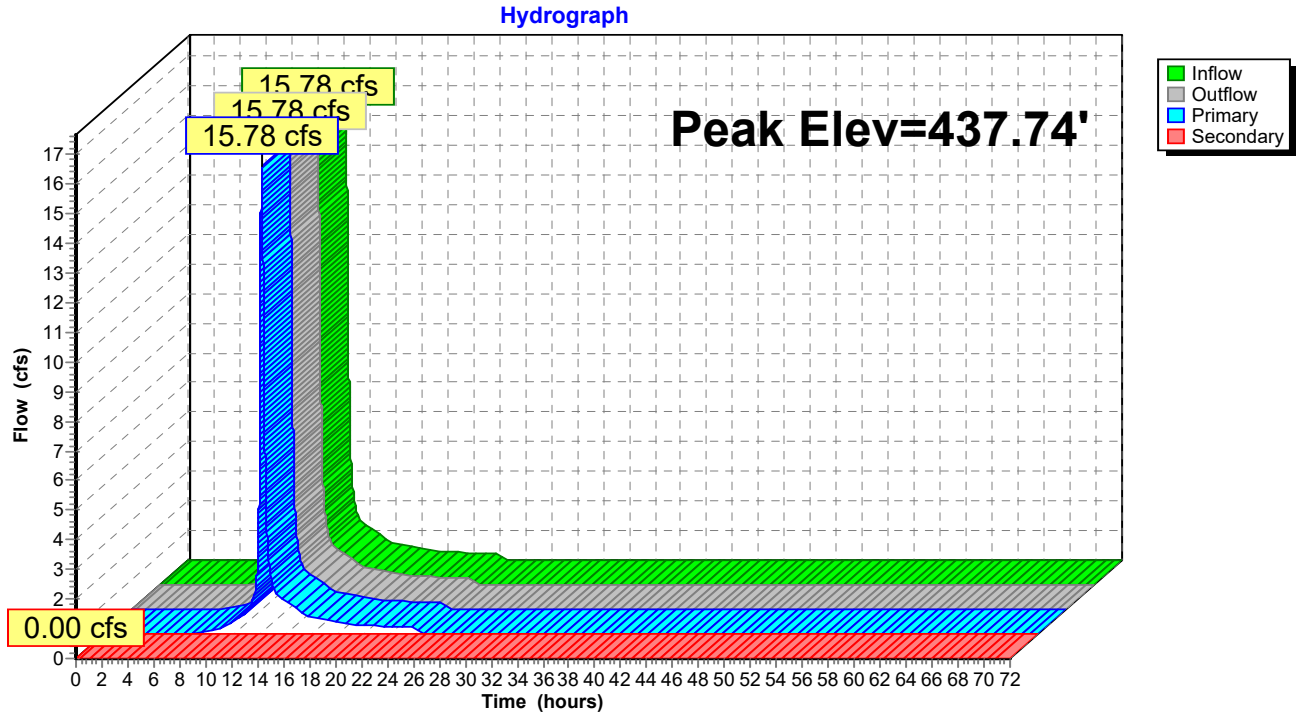
Primary OutFlow Max=15.78 cfs @ 12.16 hrs HW=436.95' TW=434.63' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 15.78 cfs @ 5.55 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=435.25' TW=398.00' (Dynamic Tailwater)
└─**2=Culvert** (Controls 0.00 cfs)
└─**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

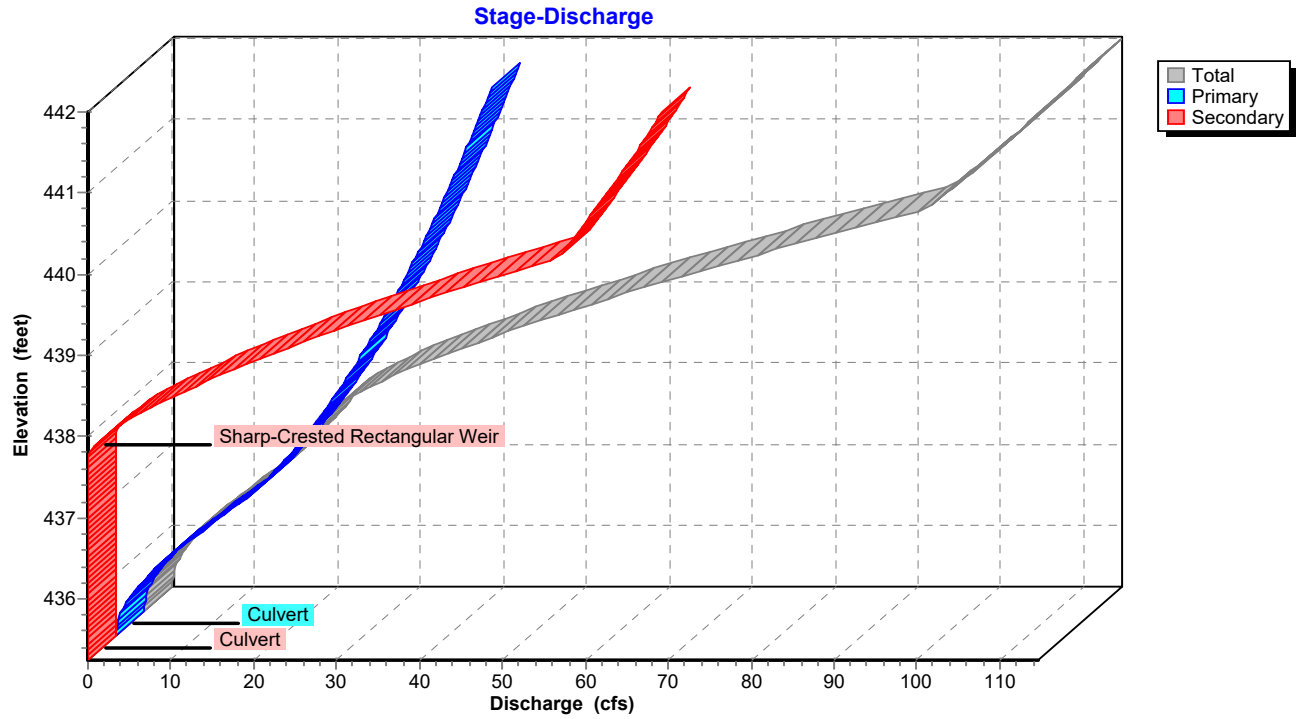


Pond BMH-1B:

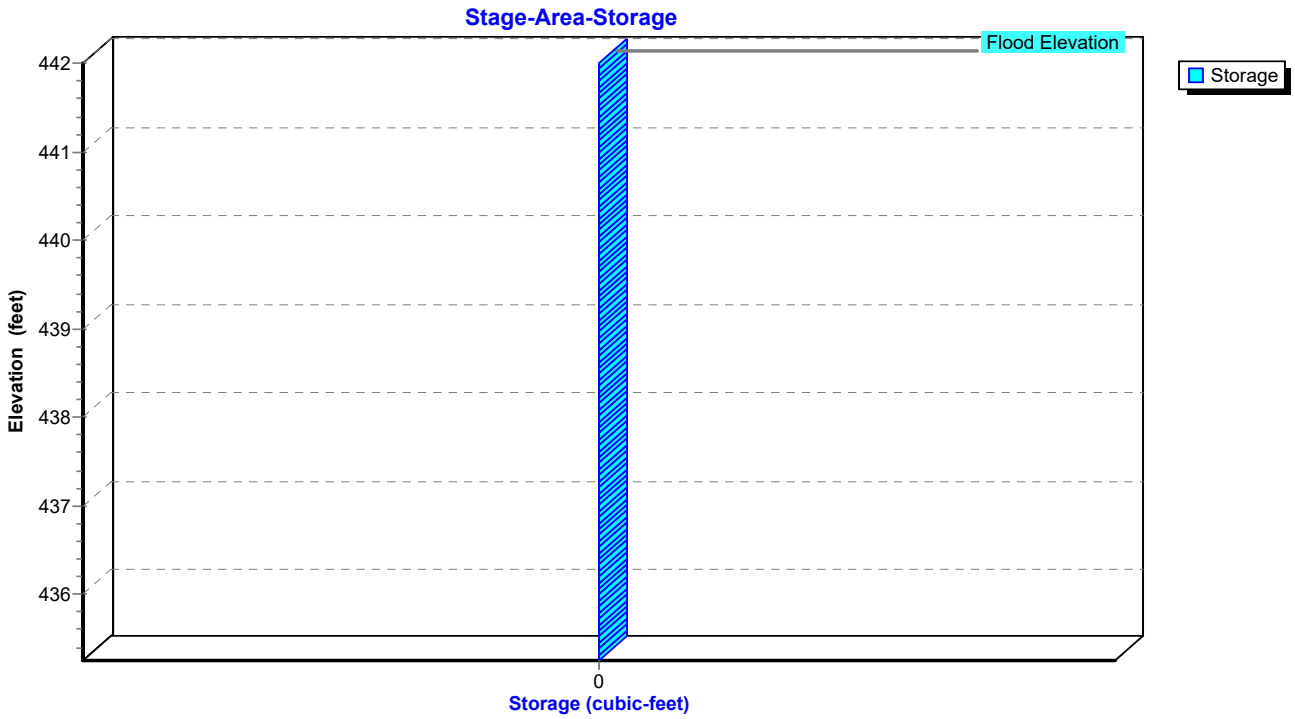
Pond BMH-1B:



Pond BMH-1B:



Pond BMH-1B:


Stage-Area-Storage
Flood Elevation
Storage
442
441
440
439
438
437
436
Elevation (feet)
0
Storage (cubic-feet)

Hydrograph for Pond BMH-1B:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	435.25	0.00	0.00	**0.00**
2.50	0.00	435.25	0.00	0.00	0.00
5.00	0.00	435.25	0.00	0.00	0.00
7.50	0.06	435.33	0.06	0.06	0.00
10.00	**0.42**	435.48	**0.42**	**0.42**	0.00
12.50	**4.18**	436.54	**4.19**	**4.19**	0.00
15.00	0.85	**437.70**	0.85	0.85	0.00
17.50	0.45	**437.60**	0.45	0.45	0.00
20.00	0.29	437.11	0.29	0.29	0.00
22.50	0.24	436.52	0.24	0.24	0.00
25.00	0.00	435.80	0.00	0.00	0.00
27.50	0.00	435.25	0.00	0.00	0.00
30.00	0.00	435.25	0.00	0.00	0.00
32.50	0.00	435.25	0.00	0.00	0.00
35.00	0.00	435.25	0.00	0.00	0.00
37.50	0.00	435.25	0.00	0.00	0.00
40.00	0.00	435.25	0.00	0.00	0.00
42.50	0.00	435.25	0.00	0.00	0.00
45.00	0.00	435.25	0.00	0.00	0.00
47.50	0.00	435.25	0.00	0.00	0.00
50.00	0.00	435.25	0.00	0.00	0.00
52.50	0.00	435.25	0.00	0.00	0.00
55.00	0.00	435.25	0.00	0.00	0.00
57.50	0.00	435.25	0.00	0.00	0.00
60.00	0.00	435.25	0.00	0.00	0.00
62.50	0.00	435.25	0.00	0.00	0.00
65.00	0.00	435.25	0.00	0.00	0.00
67.50	0.00	435.25	0.00	0.00	0.00
70.00	0.00	435.25	0.00	0.00	0.00

Stage-Discharge for Pond BMH-1B:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
435.25	0.00	0.00	0.00
435.35	0.08	0.08	0.00
435.45	0.31	0.31	0.00
435.55	0.69	0.69	0.00
435.65	1.20	1.20	0.00
435.75	1.85	1.85	0.00
435.85	2.61	2.61	0.00
435.95	3.49	3.49	0.00
436.05	4.47	4.47	0.00
436.15	5.54	5.54	0.00
436.25	6.69	6.69	0.00
436.35	7.90	7.90	0.00
436.45	9.18	9.18	0.00
436.55	10.49	10.49	0.00
436.65	11.83	11.83	0.00
436.75	13.17	13.17	0.00
436.85	14.50	14.50	0.00
436.95	15.79	15.79	0.00
437.05	17.00	17.00	0.00
437.15	18.09	18.09	0.00
437.25	18.91	18.91	0.00
437.35	19.83	19.83	0.00
437.45	20.71	20.71	0.00
437.55	21.56	21.56	0.00
437.65	22.37	22.37	0.00
437.75	23.16	23.16	0.00
437.85	24.43	23.92	0.51
437.95	26.10	24.65	1.45
438.05	28.02	25.37	2.65
438.15	30.13	26.06	4.07
438.25	32.41	26.74	5.66
438.35	34.82	27.40	7.42
438.45	37.35	28.05	9.31
438.55	40.00	28.68	11.32
438.65	42.75	29.29	13.46
438.75	45.59	29.90	15.70
438.85	48.52	30.49	18.03
438.95	51.53	31.07	20.46
439.05	54.61	31.64	22.97
439.15	57.77	32.20	25.57
439.25	60.98	32.75	28.23
439.35	64.26	33.29	30.97
439.45	67.60	33.82	33.78
439.55	70.99	34.35	36.64
439.65	74.43	34.87	39.57
439.75	77.92	35.37	42.55
439.85	81.45	35.88	45.58
439.95	85.03	36.37	48.66
440.05	88.64	36.86	51.78
440.15	92.30	37.34	54.95
440.25	95.03	37.82	57.21
440.35	96.26	38.29	57.97
440.45	97.47	38.75	58.72
440.55	98.67	39.21	59.46
440.65	99.85	39.66	60.19
440.75	101.02	40.11	60.91
440.85	102.17	40.55	61.62
440.95	103.32	40.99	62.32
441.05	104.45	41.43	63.02
441.15	105.56	41.86	63.71
441.25	106.67	42.28	64.39
441.35	107.77	42.70	65.06
441.45	108.85	43.12	65.73
441.55	109.92	43.53	66.39
441.65	110.99	43.94	67.05
441.75	112.04	44.34	67.69
441.85	113.08	44.75	68.34
441.95	**114.12**	**45.14**	**68.97**

Stage-Area-Storage for Pond BMH-1B:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
435.25	**0**	437.90	0	440.55	0
435.30	0	437.95	0	440.60	0
435.35	0	438.00	0	440.65	0
435.40	0	438.05	0	440.70	0
435.45	0	438.10	0	440.75	0
435.50	0	438.15	0	440.80	0
435.55	0	438.20	0	440.85	0
435.60	0	438.25	0	440.90	0
435.65	0	438.30	0	440.95	0
435.70	0	438.35	0	441.00	0
435.75	0	438.40	0	441.05	0
435.80	0	438.45	0	441.10	0
435.85	0	438.50	0	441.15	0
435.90	0	438.55	0	441.20	0
435.95	0	438.60	0	441.25	0
436.00	0	438.65	0	441.30	0
436.05	0	438.70	0	441.35	0
436.10	0	438.75	0	441.40	0
436.15	0	438.80	0	441.45	0
436.20	0	438.85	0	441.50	0
436.25	0	438.90	0	441.55	0
436.30	0	438.95	0	441.60	0
436.35	0	439.00	0	441.65	0
436.40	0	439.05	0	441.70	0
436.45	0	439.10	0	441.75	0
436.50	0	439.15	0	441.80	0
436.55	0	439.20	0	441.85	0
436.60	0	439.25	0	441.90	0
436.65	0	439.30	0	441.95	0
436.70	0	439.35	0	442.00	0
436.75	0	439.40	0		
436.80	0	439.45	0		
436.85	0	439.50	0		
436.90	0	439.55	0		
436.95	0	439.60	0		
437.00	0	439.65	0		
437.05	0	439.70	0		
437.10	0	439.75	0		
437.15	0	439.80	0		
437.20	0	439.85	0		
437.25	0	439.90	0		
437.30	0	439.95	0		
437.35	0	440.00	0		
437.40	0	440.05	0		
437.45	0	440.10	0		
437.50	0	440.15	0		
437.55	0	440.20	0		
437.60	0	440.25	0		
437.65	0	440.30	0		
437.70	0	440.35	0		
437.75	0	440.40	0		
437.80	0	440.45	0		
437.85	0	440.50	0		

Summary for Pond BMH-2B:

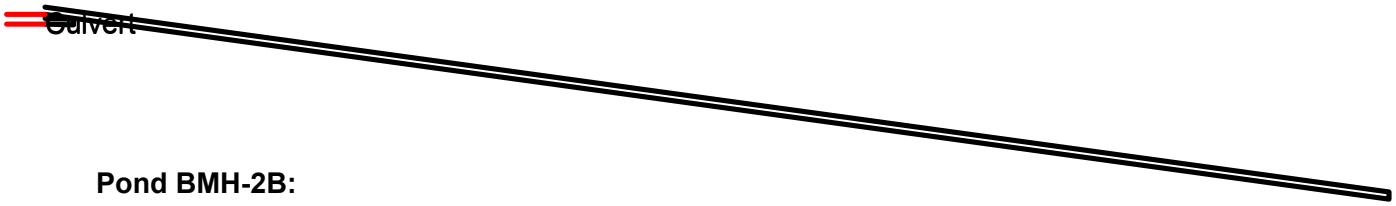
Inflow = 7.19 cfs @ 12.03 hrs, Volume= 17,237 cf
Outflow = 7.19 cfs @ 12.03 hrs, Volume= 17,239 cf, Atten= 0%, Lag= 0.0 min
Primary = 7.19 cfs @ 12.03 hrs, Volume= 17,239 cf
Routed to Pond IS-2B :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond DB-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 458.11' @ 14.11 hrs
Flood Elev= 466.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	454.75'	**24.0" Round Culvert** L= 9.4' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 454.75' / 454.50' S= 0.0266 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	458.15'	**30.0" Round Culvert** L= 442.2' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 458.15' / 394.00' S= 0.1451 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

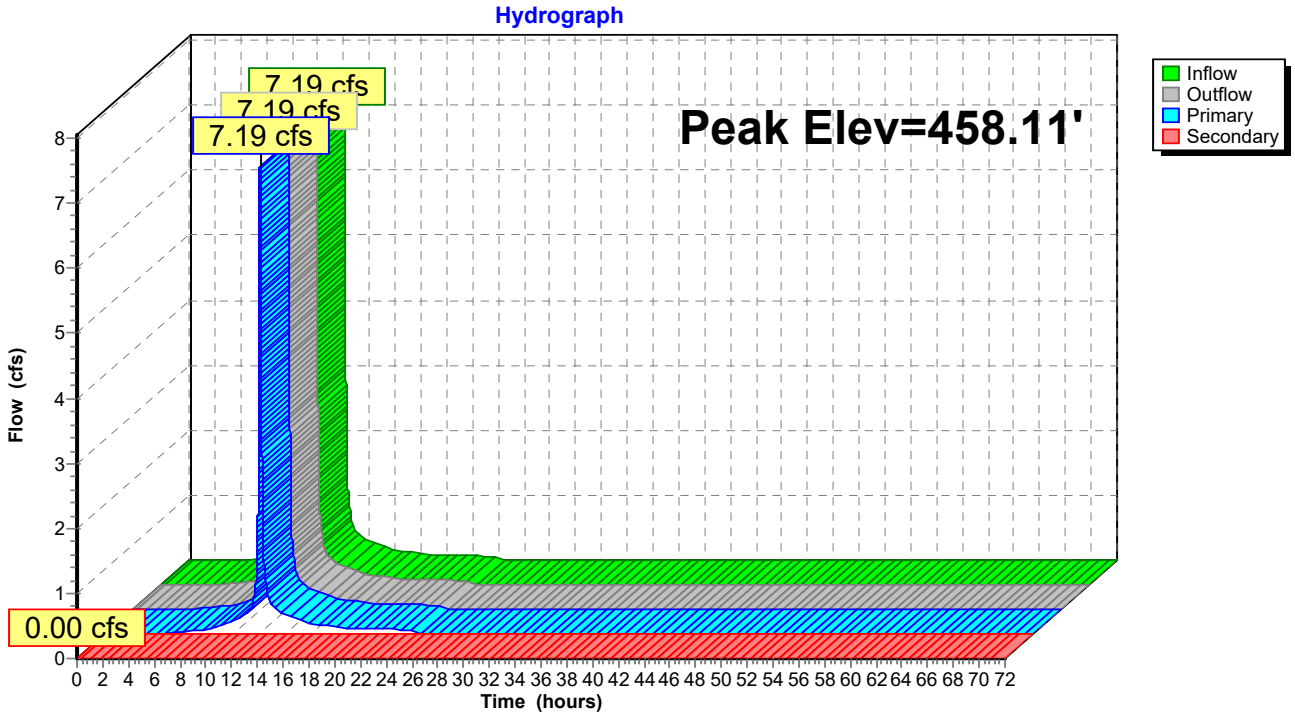
Primary OutFlow Max=7.15 cfs @ 12.03 hrs HW=456.01' TW=455.53' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 7.15 cfs @ 4.88 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=454.75' TW=394.00' (Dynamic Tailwater)
└**2=Culvert** (Controls 0.00 cfs)

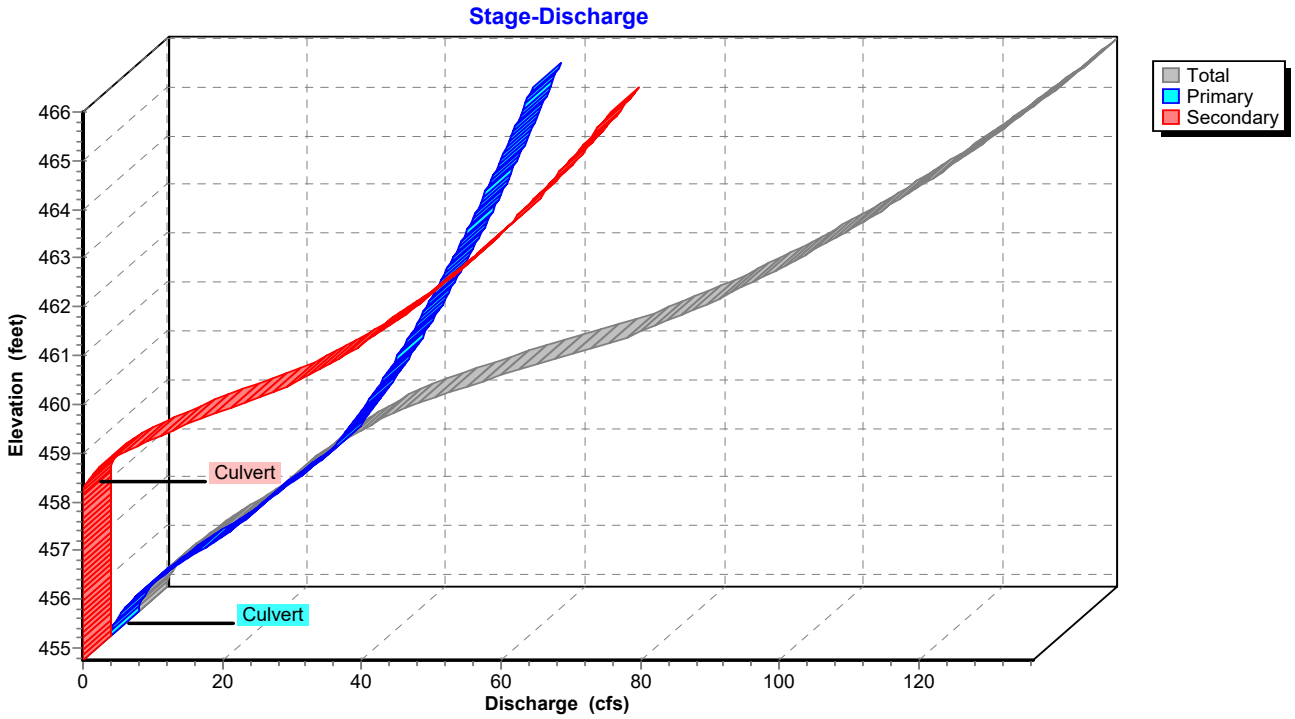


Pond BMH-2B:

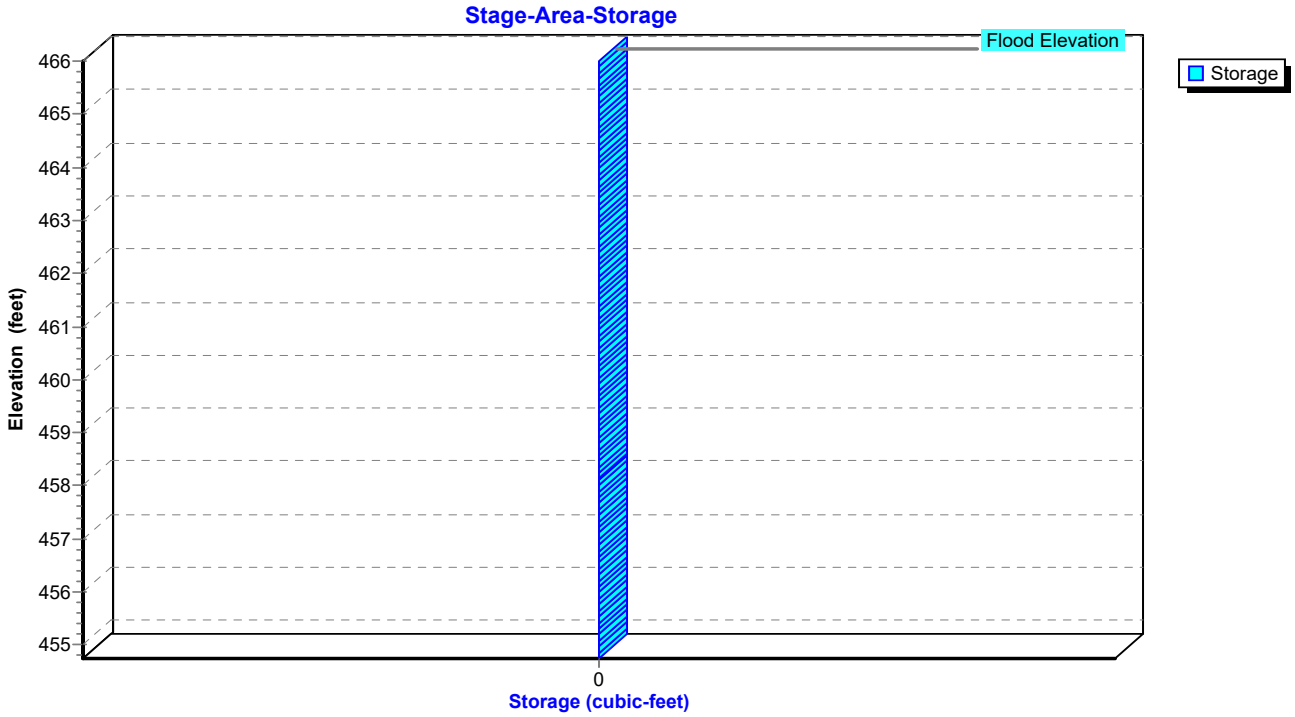
Pond BMH-2B:



Pond BMH-2B:



Pond BMH-2B:


Stage-Area-Storage
Flood Elevation
Storage
466
465
464
463
462
461
460
459
458
457
456
455
Elevation (feet)
0
Storage (cubic-feet)

Hydrograph for Pond BMH-2B:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	454.75	0.00	0.00	**0.00**
2.50	0.00	454.75	0.00	0.00	0.00
5.00	0.01	454.79	0.01	0.01	0.00
7.50	0.06	454.84	0.06	0.06	0.00
10.00	**0.21**	454.91	**0.21**	**0.21**	0.00
12.50	**0.73**	**457.59**	**0.73**	**0.73**	0.00
15.00	0.24	**458.01**	0.24	0.24	0.00
17.50	0.13	457.11	0.13	0.13	0.00
20.00	0.08	456.10	0.08	0.08	0.00
22.50	0.07	455.08	0.07	0.07	0.00
25.00	0.00	454.75	0.00	0.00	0.00
27.50	0.00	454.75	0.00	0.00	0.00
30.00	0.00	454.75	0.00	0.00	0.00
32.50	0.00	454.75	0.00	0.00	0.00
35.00	0.00	454.75	0.00	0.00	0.00
37.50	0.00	454.75	0.00	0.00	0.00
40.00	0.00	454.75	0.00	0.00	0.00
42.50	0.00	454.75	0.00	0.00	0.00
45.00	0.00	454.75	0.00	0.00	0.00
47.50	0.00	454.75	0.00	0.00	0.00
50.00	0.00	454.75	0.00	0.00	0.00
52.50	0.00	454.75	0.00	0.00	0.00
55.00	0.00	454.75	0.00	0.00	0.00
57.50	0.00	454.75	0.00	0.00	0.00
60.00	0.00	454.75	0.00	0.00	0.00
62.50	0.00	454.75	0.00	0.00	0.00
65.00	0.00	454.75	0.00	0.00	0.00
67.50	0.00	454.75	0.00	0.00	0.00
70.00	0.00	454.75	0.00	0.00	0.00

Stage-Discharge for Pond BMH-2B:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
454.75	0.00	0.00	0.00
454.95	0.31	0.31	0.00
455.15	1.12	1.12	0.00
455.35	2.25	2.25	0.00
455.55	3.65	3.65	0.00
455.75	5.29	5.29	0.00
455.95	7.13	7.13	0.00
456.15	9.12	9.12	0.00
456.35	11.23	11.23	0.00
456.55	13.38	13.38	0.00
456.75	15.54	15.54	0.00
456.95	17.61	17.61	0.00
457.15	19.48	19.48	0.00
457.35	20.94	20.94	0.00
457.55	22.66	22.66	0.00
457.75	24.72	24.72	0.00
457.95	26.63	26.63	0.00
458.15	28.40	28.40	0.00
458.35	30.43	30.08	0.35
458.55	33.00	31.64	1.36
458.75	35.74	32.75	2.99
458.95	38.98	33.82	5.15
459.15	42.67	34.87	7.80
459.35	46.74	35.88	10.86
459.55	51.10	36.86	14.24
459.75	55.68	37.82	17.86
459.95	60.35	38.75	21.60
460.15	65.00	39.66	25.34
460.35	69.43	40.55	28.88
460.55	73.36	41.43	31.93
460.75	76.61	42.28	34.33
460.95	79.90	43.12	36.78
461.15	83.02	43.94	39.08
461.35	86.00	44.75	41.26
461.55	88.86	45.54	43.32
461.75	91.61	46.32	45.29
461.95	94.26	47.08	47.18
462.15	96.83	47.83	48.99
462.35	99.32	48.58	50.74
462.55	101.74	49.31	52.44
462.75	104.10	50.03	54.07
462.95	106.40	50.74	55.67
463.15	108.65	51.44	57.21
463.35	110.84	52.13	58.72
463.55	112.99	52.81	60.19
463.75	115.10	53.48	61.62
463.95	117.17	54.15	63.02
464.15	119.19	54.80	64.39
464.35	121.18	55.45	65.73
464.55	123.14	56.09	67.05
464.75	125.06	56.73	68.34
464.95	126.95	57.35	69.60
465.15	128.82	57.97	70.84
465.35	130.65	58.59	72.07
465.55	132.46	59.19	73.27
465.75	134.24	59.79	74.45
465.95	**136.00**	**60.39**	**75.61**

Stage-Area-Storage for Pond BMH-2B:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
454.75	**0**	460.05	0	465.35	0
454.85	0	460.15	0	465.45	0
454.95	0	460.25	0	465.55	0
455.05	0	460.35	0	465.65	0
455.15	0	460.45	0	465.75	0
455.25	0	460.55	0	465.85	0
455.35	0	460.65	0	465.95	0
455.45	0	460.75	0		
455.55	0	460.85	0		
455.65	0	460.95	0		
455.75	0	461.05	0		
455.85	0	461.15	0		
455.95	0	461.25	0		
456.05	0	461.35	0		
456.15	0	461.45	0		
456.25	0	461.55	0		
456.35	0	461.65	0		
456.45	0	461.75	0		
456.55	0	461.85	0		
456.65	0	461.95	0		
456.75	0	462.05	0		
456.85	0	462.15	0		
456.95	0	462.25	0		
457.05	0	462.35	0		
457.15	0	462.45	0		
457.25	0	462.55	0		
457.35	0	462.65	0		
457.45	0	462.75	0		
457.55	0	462.85	0		
457.65	0	462.95	0		
457.75	0	463.05	0		
457.85	0	463.15	0		
457.95	0	463.25	0		
458.05	0	463.35	0		
458.15	0	463.45	0		
458.25	0	463.55	0		
458.35	0	463.65	0		
458.45	0	463.75	0		
458.55	0	463.85	0		
458.65	0	463.95	0		
458.75	0	464.05	0		
458.85	0	464.15	0		
458.95	0	464.25	0		
459.05	0	464.35	0		
459.15	0	464.45	0		
459.25	0	464.55	0		
459.35	0	464.65	0		
459.45	0	464.75	0		
459.55	0	464.85	0		
459.65	0	464.95	0		
459.75	0	465.05	0		
459.85	0	465.15	0		
459.95	0	465.25	0		

Summary for Pond BR-1C:

Inflow Area = 184,184 sf, 32.60% Impervious, Inflow Depth = 1.29" for 1-yr event
Inflow = 5.65 cfs @ 12.18 hrs, Volume= 19,807 cf
Outflow = 1.12 cfs @ 12.68 hrs, Volume= 19,888 cf, Atten= 80%, Lag= 29.7 min
Primary = 1.12 cfs @ 12.68 hrs, Volume= 19,888 cf
Routed to Pond DB-1 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond DB-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 413.59' @ 12.68 hrs Surf.Area= 8,423 sf Storage= 8,337 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 552.4 min (1,408.9 - 856.6)

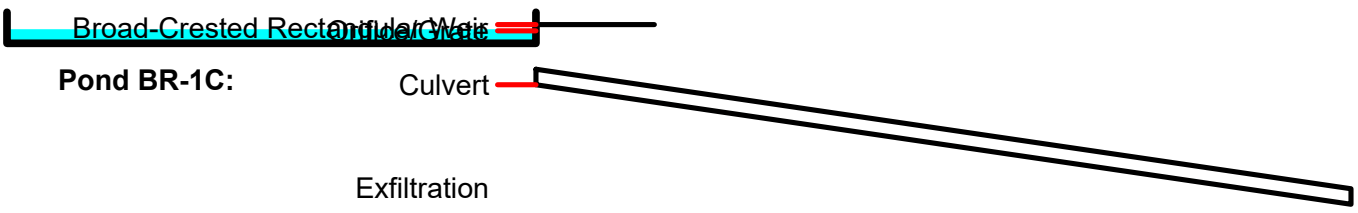
Volume	Invert	Avail.Storage	Storage Description
#1	412.50'	20,960 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
412.50	6,932	451.2	0	0	6,932
414.00	9,026	479.5	11,934	11,934	9,141
415.00	9,026	479.5	9,026	20,960	9,621

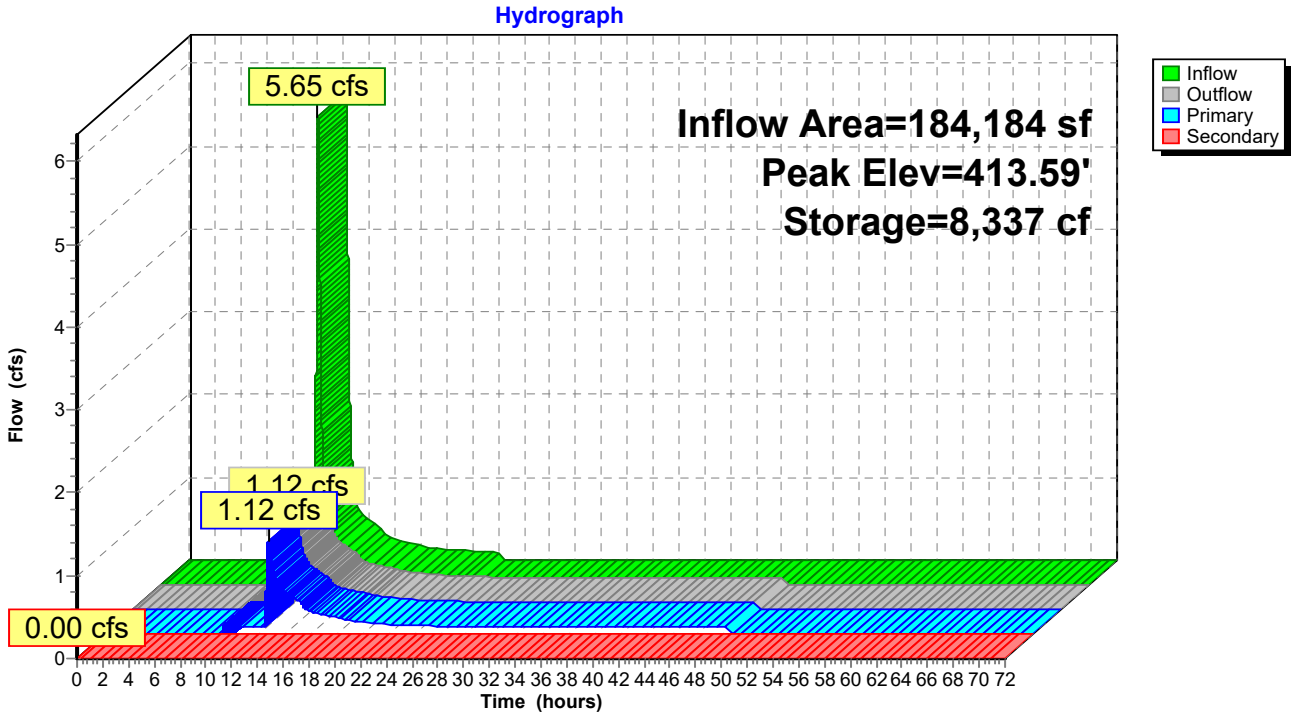
Device	Routing	Invert	Outlet Devices
#1	Primary	409.15'	**15.0" Round Culvert** L= 82.6' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 409.15' / 399.50' S= 0.1168 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	412.50'	**0.500 in/hr Exfiltration over Surface area**
#3	Device 1	413.50'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	414.00'	**20.0' long x 12.0' 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) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=1.12 cfs @ 12.68 hrs HW=413.59' TW=398.36' (Dynamic Tailwater)
└─**1=Culvert** (Passes 1.12 cfs of 14.42 cfs potential flow)
└─**2=Exfiltration** (Exfiltration Controls 0.10 cfs)
└─**3=Orifice/Grate** (Weir Controls 1.02 cfs @ 0.97 fps)

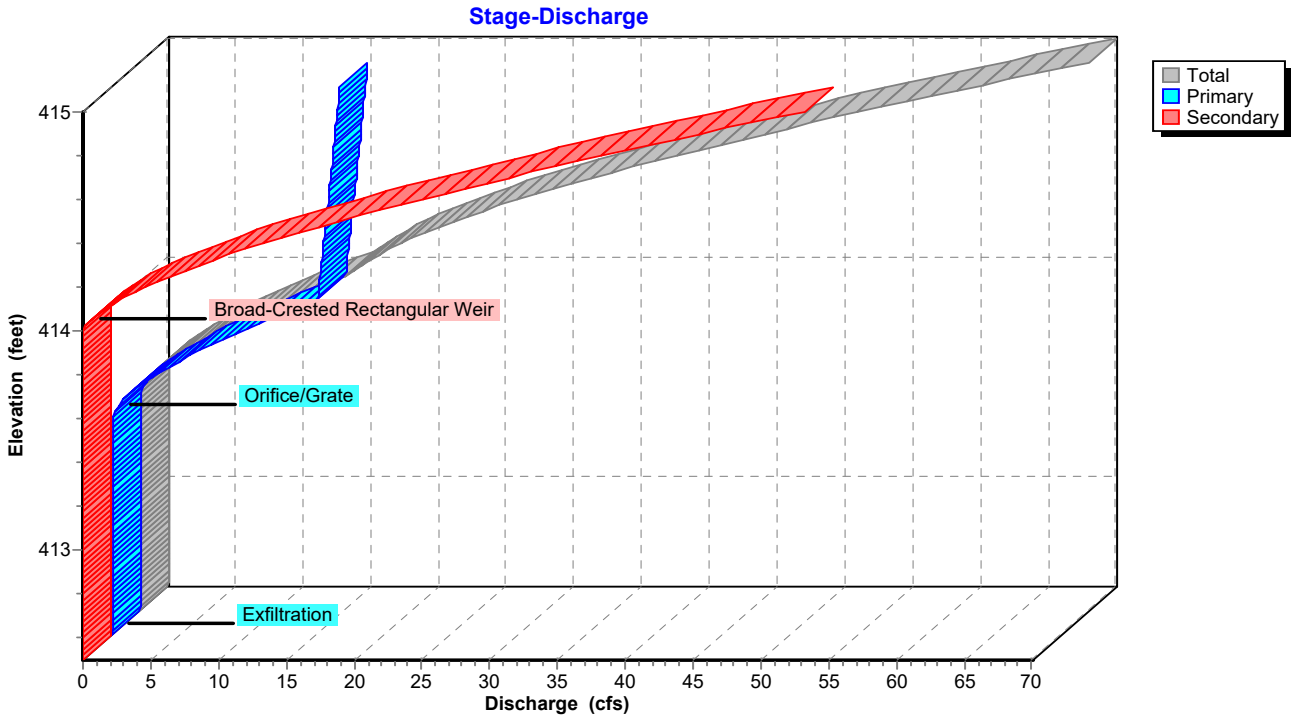
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=412.50' TW=398.00' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)



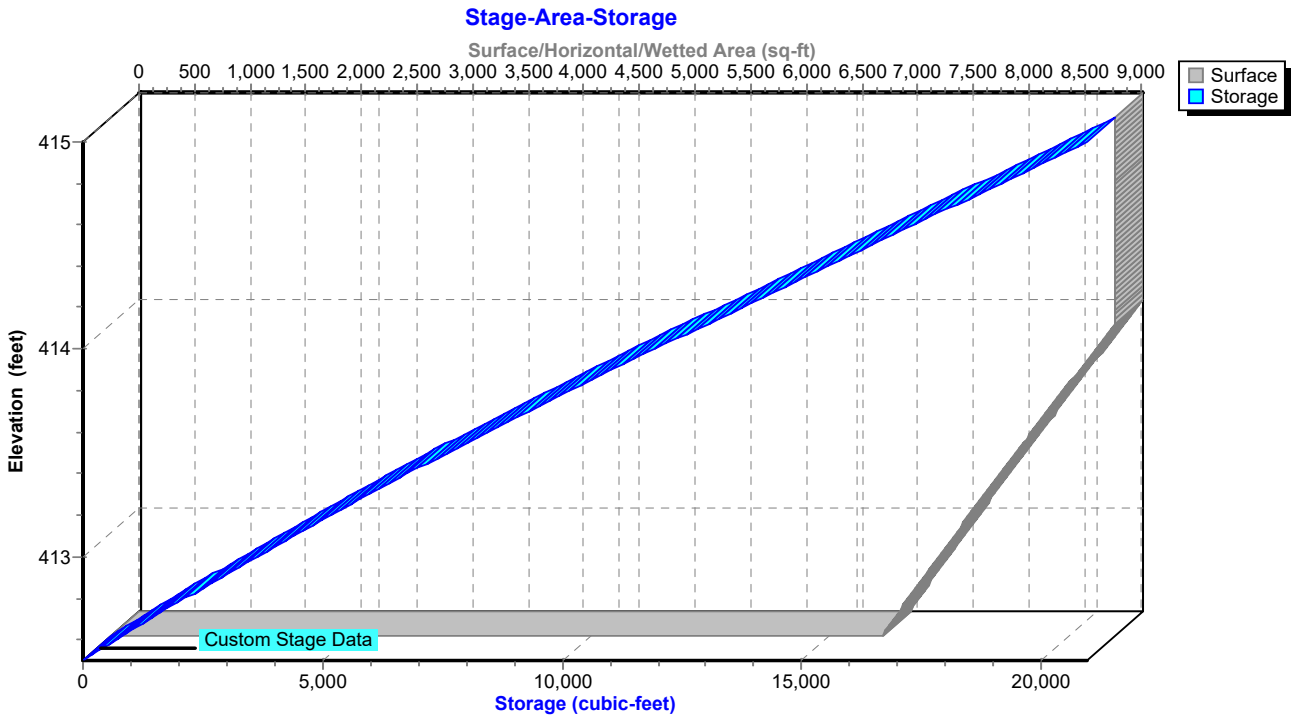
Pond BR-1C:



Pond BR-1C:



Pond BR-1C:


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 5,000 5,500 6,000 6,500 7,000 7,500 8,000 8,500 9,000
Surface
Storage
415
414
413
Elevation (feet)
Custom Stage Data
0
5,000
10,000
15,000
20,000
Storage (cubic-feet)

Hydrograph for Pond BR-1C:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	412.50	0.00	0.00	**0.00**
2.50	0.00	0	412.50	0.00	0.00	0.00
5.00	0.00	0	412.50	0.00	0.00	0.00
7.50	0.00	0	412.50	0.00	0.00	0.00
10.00	**0.04**	0	412.50	0.00	0.00	0.00
12.50	**1.81**	**8,054**	**413.55**	**0.59**	**0.59**	0.00
15.00	0.38	**7,927**	**413.54**	**0.40**	**0.40**	0.00
17.50	0.21	7,776	413.52	0.21	0.21	0.00
20.00	0.13	7,692	413.51	0.14	0.14	0.00
22.50	0.11	7,653	413.51	0.11	0.11	0.00
25.00	0.00	7,365	413.47	0.10	0.10	0.00
27.50	0.00	6,512	413.37	0.09	0.09	0.00
30.00	0.00	5,675	413.26	0.09	0.09	0.00
32.50	0.00	4,853	413.16	0.09	0.09	0.00
35.00	0.00	4,047	413.05	0.09	0.09	0.00
37.50	0.00	3,255	412.95	0.09	0.09	0.00
40.00	0.00	2,477	412.85	0.09	0.09	0.00
42.50	0.00	1,715	412.74	0.08	0.08	0.00
45.00	0.00	967	412.64	0.08	0.08	0.00
47.50	0.00	233	412.53	0.08	0.08	0.00
50.00	0.00	0	412.50	0.00	0.00	0.00
52.50	0.00	0	412.50	0.00	0.00	0.00
55.00	0.00	0	412.50	0.00	0.00	0.00
57.50	0.00	0	412.50	0.00	0.00	0.00
60.00	0.00	0	412.50	0.00	0.00	0.00
62.50	0.00	0	412.50	0.00	0.00	0.00
65.00	0.00	0	412.50	0.00	0.00	0.00
67.50	0.00	0	412.50	0.00	0.00	0.00
70.00	0.00	0	412.50	0.00	0.00	0.00

Stage-Discharge for Pond BR-1C:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
412.50	0.00	0.00	0.00
412.55	0.08	0.08	0.00
412.60	0.08	0.08	0.00
412.65	0.08	0.08	0.00
412.70	0.08	0.08	0.00
412.75	0.08	0.08	0.00
412.80	0.08	0.08	0.00
412.85	0.09	0.09	0.00
412.90	0.09	0.09	0.00
412.95	0.09	0.09	0.00
413.00	0.09	0.09	0.00
413.05	0.09	0.09	0.00
413.10	0.09	0.09	0.00
413.15	0.09	0.09	0.00
413.20	0.09	0.09	0.00
413.25	0.09	0.09	0.00
413.30	0.09	0.09	0.00
413.35	0.09	0.09	0.00
413.40	0.09	0.09	0.00
413.45	0.10	0.10	0.00
413.50	0.10	0.10	0.00
413.55	0.54	0.54	0.00
413.60	1.34	1.34	0.00
413.65	2.38	2.38	0.00
413.70	3.61	3.61	0.00
413.75	5.01	5.01	0.00
413.80	6.55	6.55	0.00
413.85	8.23	8.23	0.00
413.90	10.03	10.03	0.00
413.95	11.95	11.95	0.00
414.00	13.98	13.98	0.00
414.05	15.85	15.27	0.57
414.10	16.99	15.36	1.63
414.15	18.44	15.45	2.99
414.20	20.13	15.54	4.60
414.25	22.08	15.62	6.46
414.30	24.24	15.71	8.53
414.35	26.60	15.80	10.80
414.40	29.14	15.88	13.26
414.45	31.91	15.97	15.94
414.50	34.86	16.06	18.81
414.55	38.00	16.14	21.86
414.60	41.32	16.22	25.10
414.65	44.53	16.31	28.22
414.70	47.84	16.39	31.45
414.75	51.26	16.47	34.78
414.80	54.77	16.56	38.21
414.85	58.45	16.64	41.81
414.90	62.23	16.72	45.51
414.95	66.11	16.80	49.31
415.00	**70.08**	**16.88**	**53.20**

Stage-Area-Storage for Pond BR-1C:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
412.50	6,932	0
412.55	6,997	348
412.60	7,063	700
412.65	7,129	1,055
412.70	7,195	1,413
412.75	7,262	1,774
412.80	7,329	2,139
412.85	7,396	2,507
412.90	7,463	2,878
412.95	7,531	3,253
413.00	7,599	3,632
413.05	7,668	4,013
413.10	7,736	4,398
413.15	7,806	4,787
413.20	7,875	5,179
413.25	7,945	5,574
413.30	8,014	5,973
413.35	8,085	6,376
413.40	8,155	6,782
413.45	8,226	7,191
413.50	8,297	7,604
413.55	8,369	8,021
413.60	8,441	8,441
413.65	8,513	8,865
413.70	8,585	9,293
413.75	8,658	9,724
413.80	8,731	10,158
413.85	8,804	10,597
413.90	8,878	11,039
413.95	8,952	11,485
414.00	**9,026**	11,934
414.05	9,026	12,385
414.10	9,026	12,837
414.15	9,026	13,288
414.20	9,026	13,739
414.25	9,026	14,191
414.30	9,026	14,642
414.35	9,026	15,093
414.40	9,026	15,544
414.45	9,026	15,996
414.50	9,026	16,447
414.55	9,026	16,898
414.60	9,026	17,350
414.65	9,026	17,801
414.70	9,026	18,252
414.75	9,026	18,704
414.80	9,026	19,155
414.85	9,026	19,606
414.90	9,026	20,057
414.95	9,026	20,509
415.00	9,026	**20,960**

Summary for Pond BR-2C:

Inflow Area = 206,758 sf, 18.78% Impervious, Inflow Depth = 1.17" for 1-yr event
Inflow = 6.79 cfs @ 12.09 hrs, Volume= 20,100 cf
Outflow = 0.47 cfs @ 14.25 hrs, Volume= 20,196 cf, Atten= 93%, Lag= 129.5 min
Primary = 0.47 cfs @ 14.25 hrs, Volume= 20,196 cf
Routed to Pond DB-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 439.55' @ 14.25 hrs Surf.Area= 11,548 sf Storage= 10,838 cf

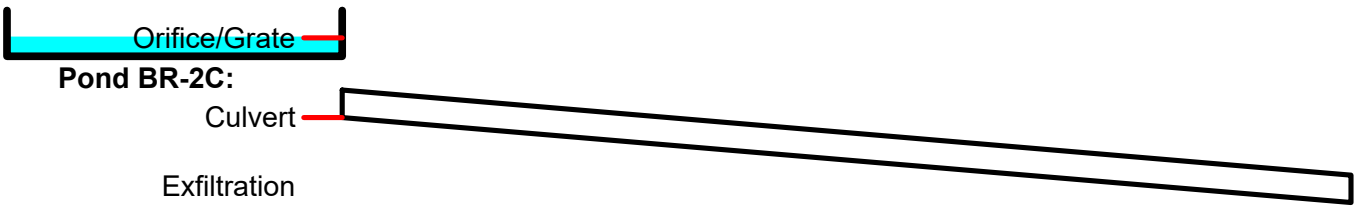
Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 710.5 min (1,568.9 - 858.4)

Volume	Invert	Avail.Storage	Storage Description
#1	438.50'	30,162 cf	**Custom Stage Data (Irregular)**Listed below (Recalc)

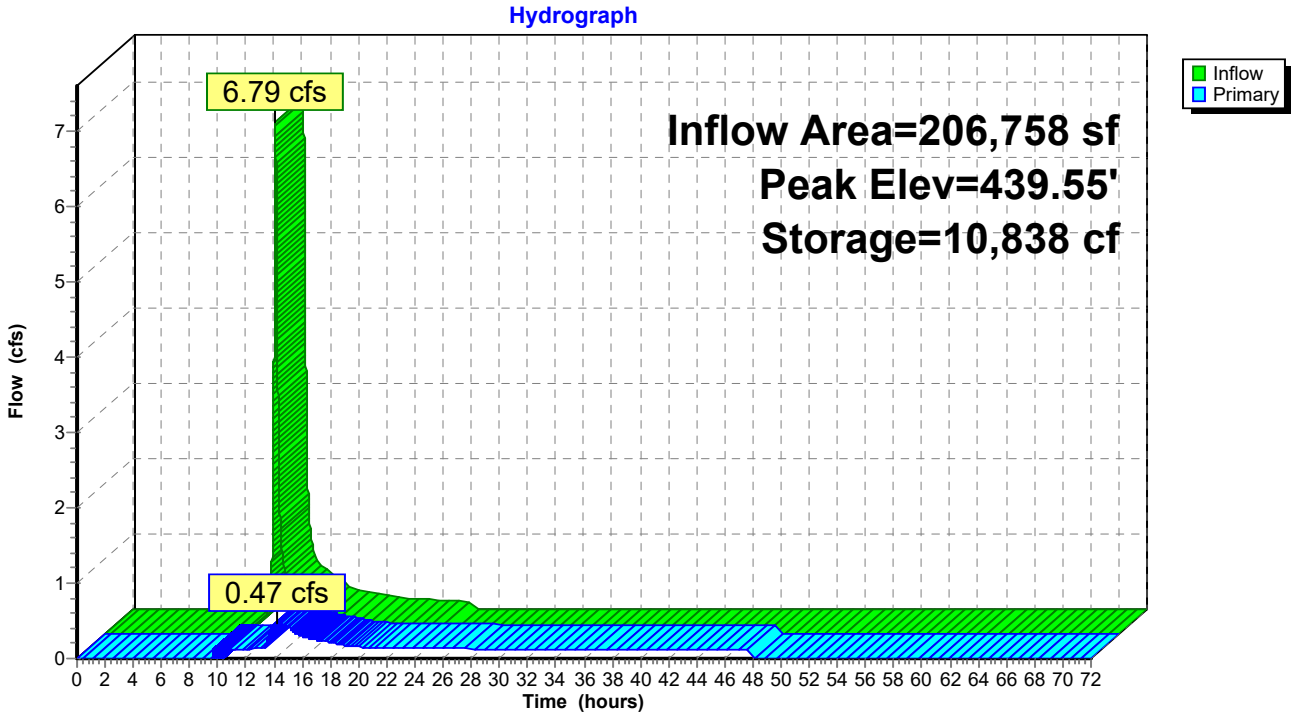
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
438.50	9,155	67.3	0	0	9,155
439.50	11,405	730.2	10,259	10,259	51,227
440.00	12,863	782.2	6,063	16,323	57,496
441.00	14,839	798.0	13,839	30,162	59,634

Device	Routing	Invert	Outlet Devices
#1	Primary	435.15'	**18.0" Round Culvert** L= 206.9' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 435.15' / 430.50' S= 0.0225 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	439.50'	**30.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	438.50'	**0.500 in/hr Exfiltration over Surface area**

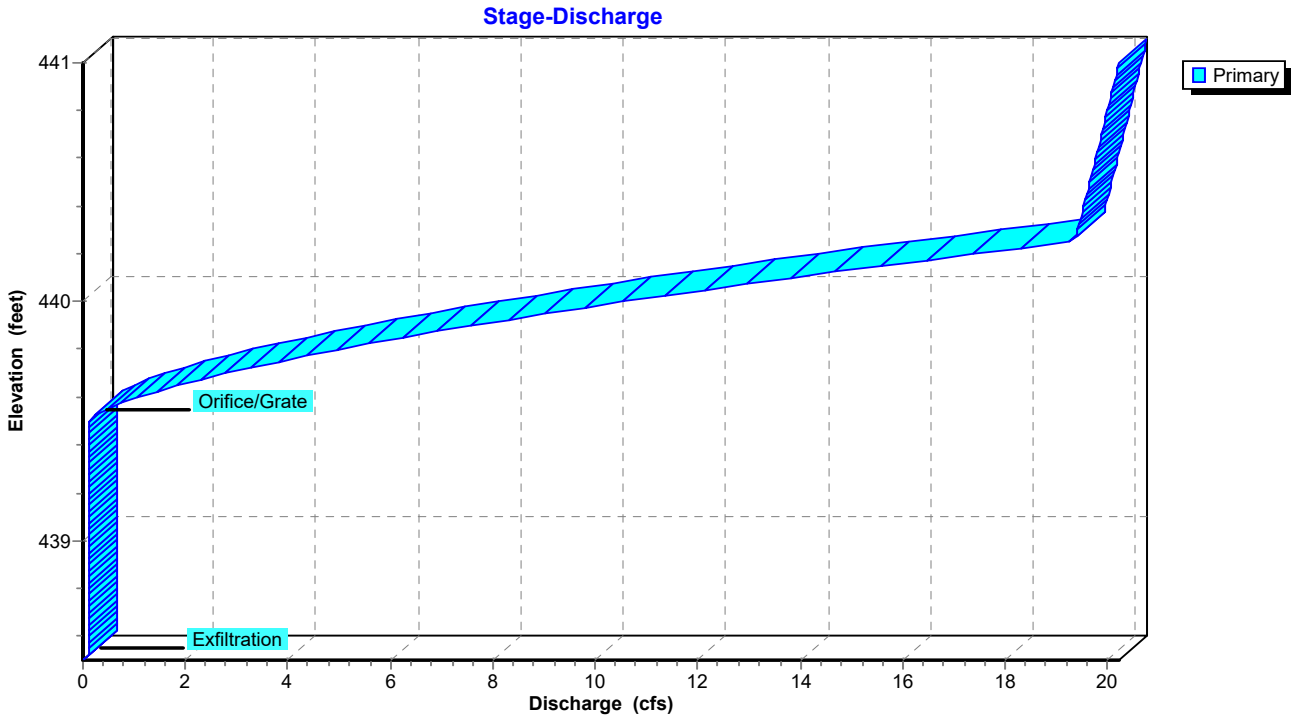
Primary OutFlow Max=0.47 cfs @ 14.25 hrs HW=439.55' TW=394.40' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.47 cfs of 18.53 cfs potential flow)
└─**2=Orifice/Grate** (Weir Controls 0.33 cfs @ 0.73 fps)
└─**3=Exfiltration** (Exfiltration Controls 0.13 cfs)



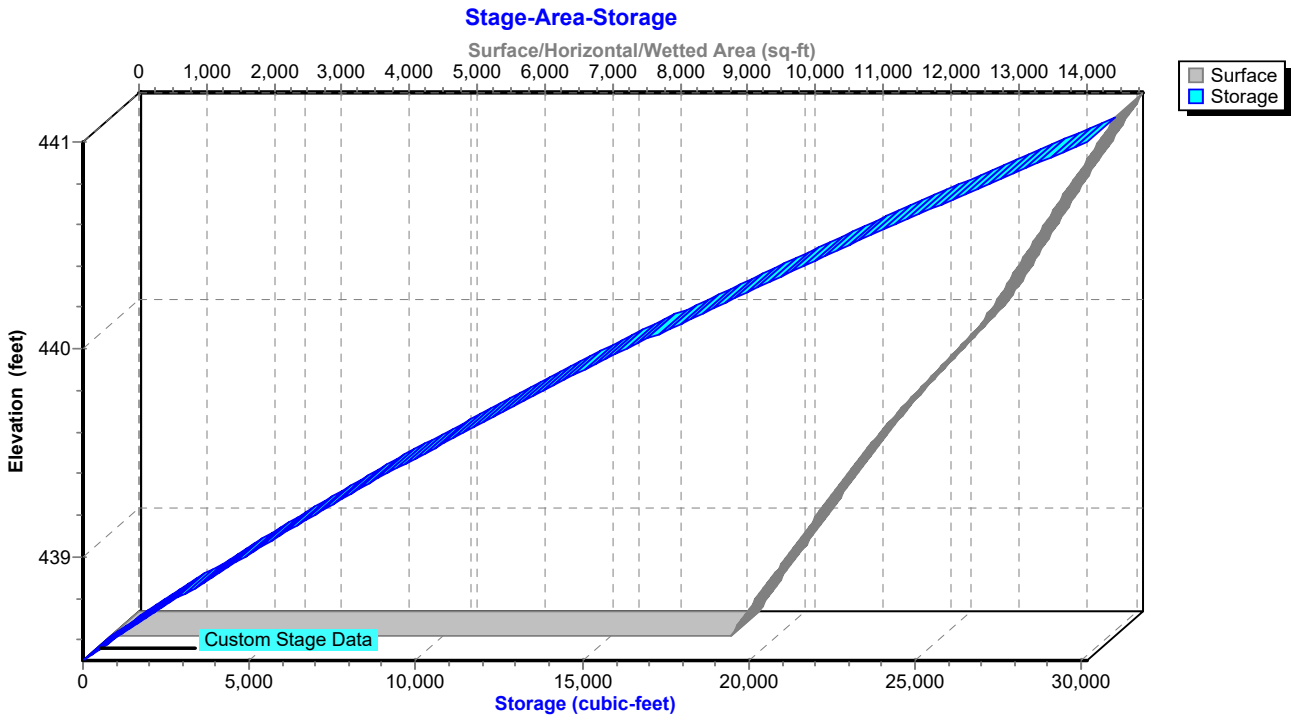
Pond BR-2C:



Pond BR-2C:



Pond BR-2C:


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 11,000 12,000 13,000 14,000
Surface
Storage
441
440
439
Elevation (feet)
Custom Stage Data
0 5,000 10,000 15,000 20,000 25,000 30,000
Storage (cubic-feet)

Hydrograph for Pond BR-2C:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	438.50	0.00
2.50	0.00	0	438.50	0.00
5.00	0.00	0	438.50	0.00
7.50	0.00	0	438.50	0.00
10.00	**0.02**	0	438.50	0.00
12.50	**1.28**	**8,333**	**439.33**	**0.13**
15.00	0.39	**10,782**	**439.55**	**0.42**
17.50	0.21	10,512	439.52	0.23
20.00	0.14	10,349	439.51	0.15
22.50	0.12	10,242	439.50	0.13
25.00	0.00	9,709	439.45	0.13
27.50	0.00	8,546	439.35	0.13
30.00	0.00	7,408	439.24	0.13
32.50	0.00	6,295	439.14	0.12
35.00	0.00	5,207	439.03	0.12
37.50	0.00	4,143	438.93	0.12
40.00	0.00	3,104	438.83	0.11
42.50	0.00	2,088	438.72	0.11
45.00	0.00	1,097	438.62	0.11
47.50	0.00	128	438.51	0.11
50.00	0.00	0	438.50	0.00
52.50	0.00	0	438.50	0.00
55.00	0.00	0	438.50	0.00
57.50	0.00	0	438.50	0.00
60.00	0.00	0	438.50	0.00
62.50	0.00	0	438.50	0.00
65.00	0.00	0	438.50	0.00
67.50	0.00	0	438.50	0.00
70.00	0.00	0	438.50	0.00

Stage-Discharge for Pond BR-2C:

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
438.50	0.00	439.56	0.57	440.62	19.80
438.52	0.11	439.58	0.80	440.64	19.82
438.54	0.11	439.60	1.07	440.66	19.84
438.56	0.11	439.62	1.36	440.68	19.86
438.58	0.11	439.64	1.68	440.70	19.89
438.60	0.11	439.66	2.02	440.72	19.91
438.62	0.11	439.68	2.39	440.74	19.93
438.64	0.11	439.70	2.77	440.76	19.96
438.66	0.11	439.72	3.18	440.78	19.98
438.68	0.11	439.74	3.60	440.80	20.00
438.70	0.11	439.76	4.04	440.82	20.02
438.72	0.11	439.78	4.50	440.84	20.05
438.74	0.11	439.80	4.98	440.86	20.07
438.76	0.11	439.82	5.47	440.88	20.09
438.78	0.11	439.84	5.98	440.90	20.11
438.80	0.11	439.86	6.50	440.92	20.14
438.82	0.11	439.88	7.04	440.94	20.16
438.84	0.11	439.90	7.59	440.96	20.18
438.86	0.12	439.92	8.16	440.98	20.20
438.88	0.12	439.94	8.74	441.00	**20.23**
438.90	0.12	439.96	9.33		
438.92	0.12	439.98	9.94		
438.94	0.12	440.00	10.55		
438.96	0.12	440.02	11.18		
438.98	0.12	440.04	11.83		
439.00	0.12	440.06	12.48		
439.02	0.12	440.08	13.15		
439.04	0.12	440.10	13.83		
439.06	0.12	440.12	14.52		
439.08	0.12	440.14	15.22		
439.10	0.12	440.16	15.93		
439.12	0.12	440.18	16.66		
439.14	0.12	440.20	17.39		
439.16	0.12	440.22	18.13		
439.18	0.12	440.24	18.89		
439.20	0.12	440.26	19.38		
439.22	0.12	440.28	19.40		
439.24	0.12	440.30	19.42		
439.26	0.13	440.32	19.45		
439.28	0.13	440.34	19.47		
439.30	0.13	440.36	19.49		
439.32	0.13	440.38	19.52		
439.34	0.13	440.40	19.54		
439.36	0.13	440.42	19.56		
439.38	0.13	440.44	19.59		
439.40	0.13	440.46	19.61		
439.42	0.13	440.48	19.63		
439.44	0.13	440.50	19.66		
439.46	0.13	440.52	19.68		
439.48	0.13	440.54	19.70		
439.50	0.13	440.56	19.73		
439.52	0.22	440.58	19.75		
439.54	0.37	440.60	19.77		

Stage-Area-Storage for Pond BR-2C:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
438.50	9,155	0
438.55	9,262	460
438.60	9,369	926
438.65	9,477	1,397
438.70	9,585	1,874
438.75	9,694	2,356
438.80	9,804	2,843
438.85	9,914	3,336
438.90	10,025	3,835
438.95	10,137	4,339
439.00	10,249	4,848
439.05	10,362	5,364
439.10	10,475	5,885
439.15	10,589	6,411
439.20	10,704	6,944
439.25	10,819	7,482
439.30	10,935	8,026
439.35	11,052	8,575
439.40	11,169	9,131
439.45	11,287	9,692
439.50	11,405	10,259
439.55	11,547	10,833
439.60	11,690	11,414
439.65	11,833	12,002
439.70	11,978	12,597
439.75	12,123	13,200
439.80	12,269	13,810
439.85	12,416	14,427
439.90	12,564	15,051
439.95	12,713	15,683
440.00	12,863	16,323
440.05	12,958	16,968
440.10	13,054	17,619
440.15	13,150	18,274
440.20	13,247	18,934
440.25	13,344	19,598
440.30	13,441	20,268
440.35	13,539	20,943
440.40	13,636	21,622
440.45	13,735	22,306
440.50	13,833	22,995
440.55	13,932	23,690
440.60	14,032	24,389
440.65	14,131	25,093
440.70	14,231	25,802
440.75	14,332	26,516
440.80	14,433	27,235
440.85	14,534	27,959
440.90	14,635	28,688
440.95	14,737	29,423
441.00	**14,839**	**30,162**

Summary for Pond BR-2D:

Inflow Area = 131,825 sf, 51.04% Impervious, Inflow Depth = 1.64" for 1-yr event
Inflow = 7.73 cfs @ 12.03 hrs, Volume= 17,981 cf
Outflow = 0.79 cfs @ 12.57 hrs, Volume= 18,116 cf, Atten= 90%, Lag= 32.2 min
Primary = 0.79 cfs @ 12.57 hrs, Volume= 18,116 cf
Routed to Pond DB-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach DP-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 413.57' @ 12.57 hrs Surf.Area= 8,646 sf Storage= 8,304 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 602.0 min (1,430.6 - 828.7)

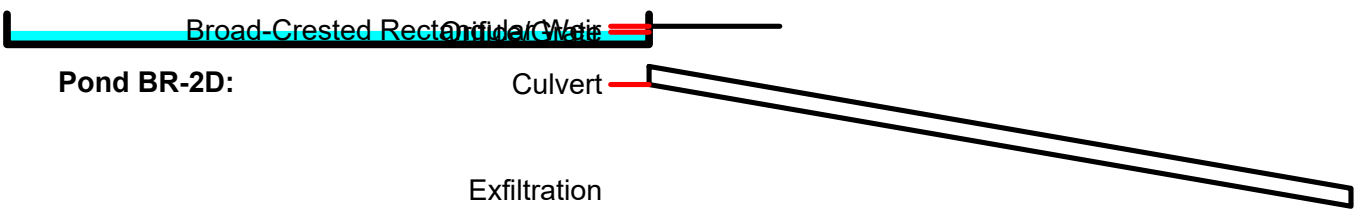
Volume	Invert	Avail.Storage	Storage Description
#1	412.50'	22,336 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
412.50	6,940	530.1	0	0	6,940
414.00	9,390	558.4	12,201	12,201	9,524
415.00	10,899	576.2	10,135	22,336	11,228

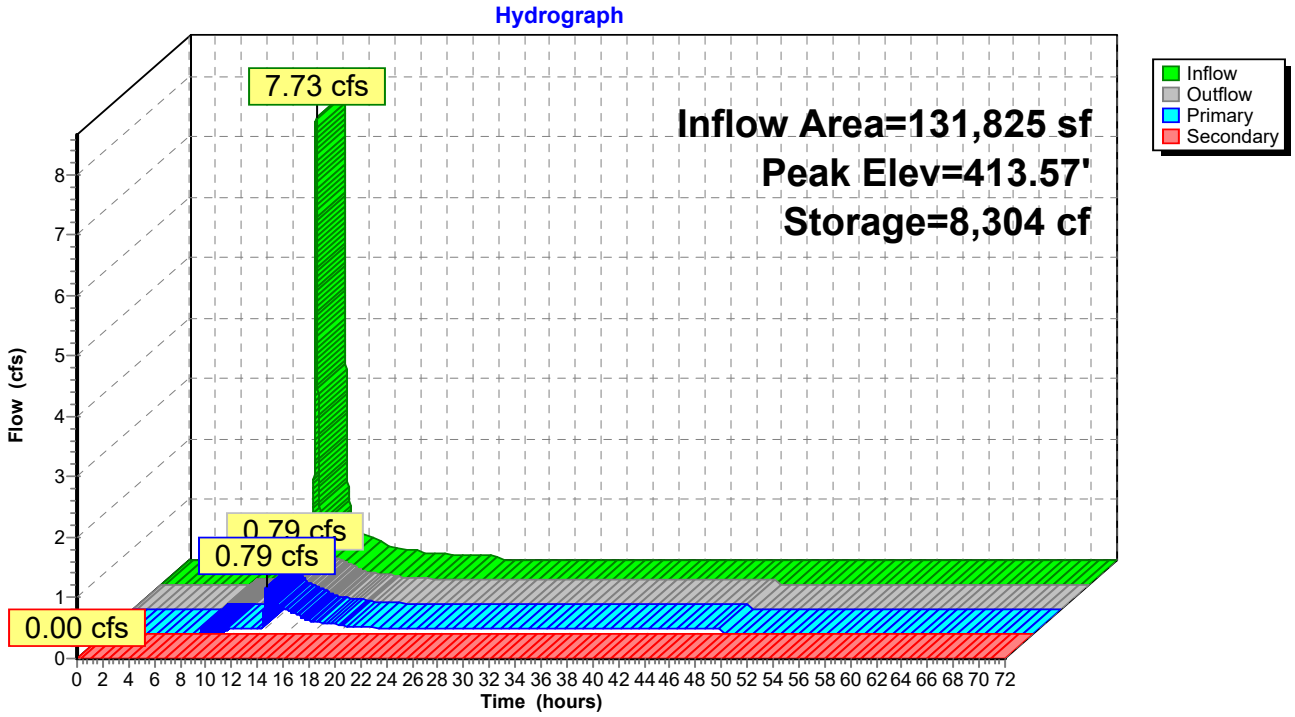
Device	Routing	Invert	Outlet Devices
#1	Primary	409.15'	**18.0" Round Culvert** L= 64.4' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 409.15' / 399.00' S= 0.1576 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	413.50'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	412.50'	**0.500 in/hr Exfiltration over Surface area**
#4	Secondary	414.00'	**20.0' long x 12.0' 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) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=0.79 cfs @ 12.57 hrs HW=413.57' TW=394.32' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.79 cfs of 20.37 cfs potential flow)
└─**2=Orifice/Grate** (Weir Controls 0.69 cfs @ 0.85 fps)
└─**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

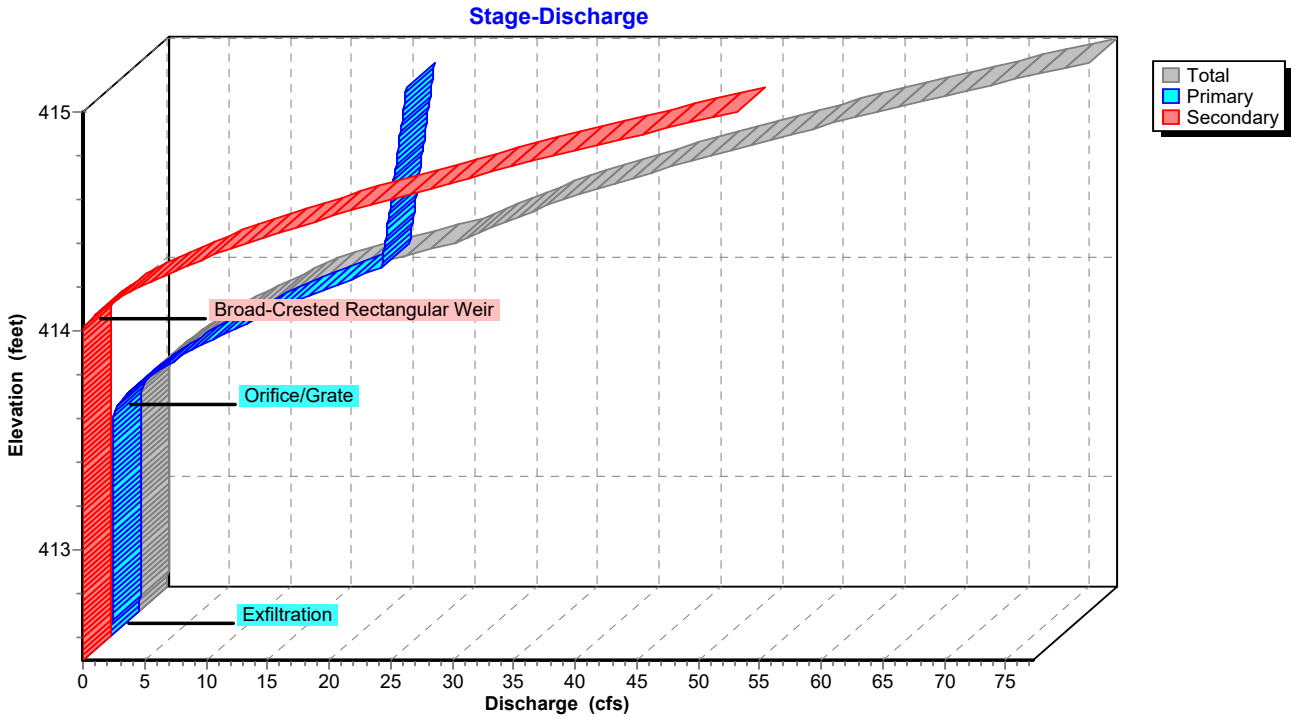
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=412.50' TW=0.00' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)



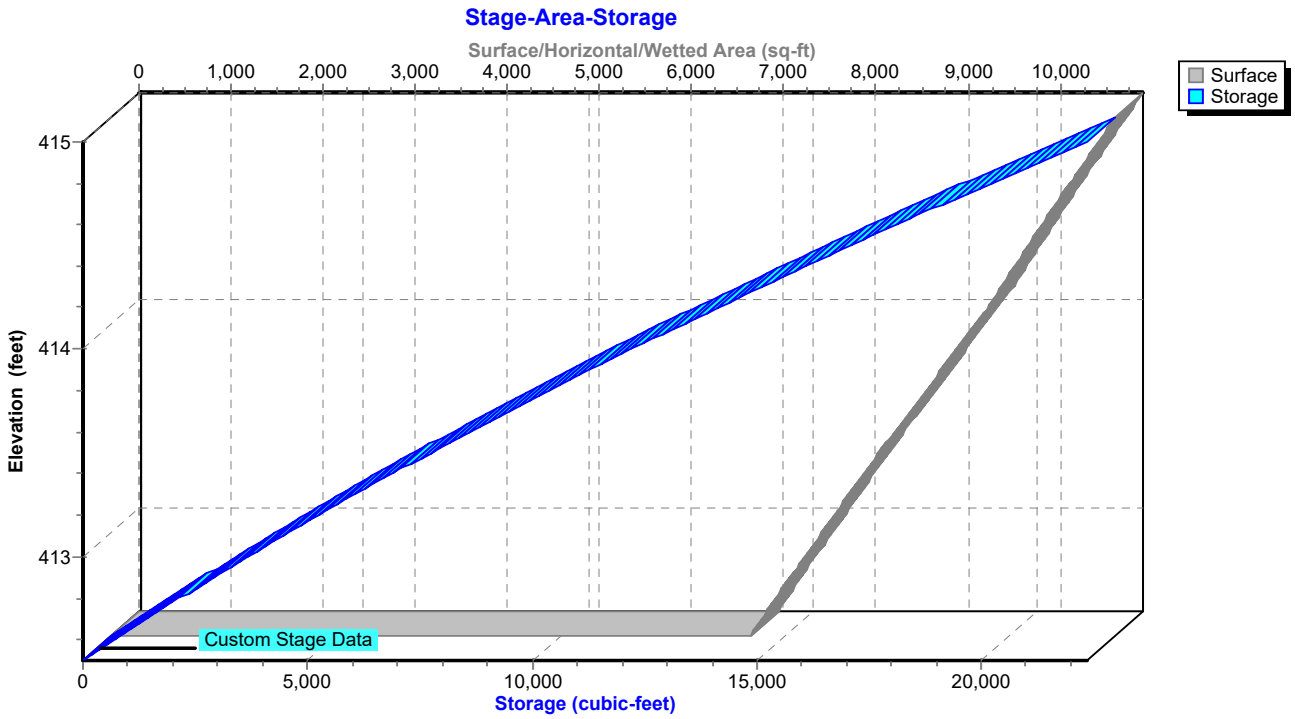
Pond BR-2D:



Pond BR-2D:



Pond BR-2D:


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
Surface
Storage
415
414
413
Elevation (feet)
Custom Stage Data
0
5,000
10,000
15,000
20,000
Storage (cubic-feet)

Hydrograph for Pond BR-2D:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	412.50	0.00	0.00	**0.00**
2.50	0.00	0	412.50	0.00	0.00	0.00
5.00	0.00	0	412.50	0.00	0.00	0.00
7.50	0.00	0	412.50	0.08	0.08	0.00
10.00	**0.12**	29	412.50	0.08	0.08	0.00
12.50	**0.88**	**8,288**	**413.57**	**0.76**	**0.76**	0.00
15.00	0.30	**7,990**	**413.53**	**0.32**	**0.32**	0.00
17.50	0.16	7,849	413.51	0.17	0.17	0.00
20.00	0.11	7,763	413.50	0.11	0.11	0.00
22.50	0.09	7,698	413.50	0.10	0.10	0.00
25.00	0.00	7,280	413.45	0.10	0.10	0.00
27.50	0.00	6,409	413.34	0.10	0.10	0.00
30.00	0.00	5,556	413.24	0.09	0.09	0.00
32.50	0.00	4,721	413.14	0.09	0.09	0.00
35.00	0.00	3,904	413.03	0.09	0.09	0.00
37.50	0.00	3,103	412.93	0.09	0.09	0.00
40.00	0.00	2,320	412.82	0.09	0.09	0.00
42.50	0.00	1,554	412.72	0.08	0.08	0.00
45.00	0.00	805	412.61	0.08	0.08	0.00
47.50	0.00	72	412.51	0.08	0.08	0.00
50.00	0.00	0	412.50	0.00	0.00	0.00
52.50	0.00	0	412.50	0.00	0.00	0.00
55.00	0.00	0	412.50	0.00	0.00	0.00
57.50	0.00	0	412.50	0.00	0.00	0.00
60.00	0.00	0	412.50	0.00	0.00	0.00
62.50	0.00	0	412.50	0.00	0.00	0.00
65.00	0.00	0	412.50	0.00	0.00	0.00
67.50	0.00	0	412.50	0.00	0.00	0.00
70.00	0.00	0	412.50	0.00	0.00	0.00

Stage-Discharge for Pond BR-2D:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
412.50	0.00	0.00	0.00
412.55	0.08	0.08	0.00
412.60	0.08	0.08	0.00
412.65	0.08	0.08	0.00
412.70	0.08	0.08	0.00
412.75	0.08	0.08	0.00
412.80	0.09	0.09	0.00
412.85	0.09	0.09	0.00
412.90	0.09	0.09	0.00
412.95	0.09	0.09	0.00
413.00	0.09	0.09	0.00
413.05	0.09	0.09	0.00
413.10	0.09	0.09	0.00
413.15	0.09	0.09	0.00
413.20	0.09	0.09	0.00
413.25	0.09	0.09	0.00
413.30	0.09	0.09	0.00
413.35	0.10	0.10	0.00
413.40	0.10	0.10	0.00
413.45	0.10	0.10	0.00
413.50	0.10	0.10	0.00
413.55	0.54	0.54	0.00
413.60	1.34	1.34	0.00
413.65	2.38	2.38	0.00
413.70	3.61	3.61	0.00
413.75	5.01	5.01	0.00
413.80	6.55	6.55	0.00
413.85	8.23	8.23	0.00
413.90	10.03	10.03	0.00
413.95	11.95	11.95	0.00
414.00	13.98	13.98	0.00
414.05	16.69	16.12	0.57
414.10	19.97	18.35	1.63
414.15	23.66	20.67	2.99
414.20	26.65	22.06	4.60
414.25	28.64	22.18	6.46
414.30	30.84	22.31	8.53
414.35	33.23	22.44	10.80
414.40	35.82	22.56	13.26
414.45	38.63	22.69	15.94
414.50	41.62	22.81	18.81
414.55	44.80	22.94	21.86
414.60	48.16	23.06	25.10
414.65	51.40	23.18	28.22
414.70	54.75	23.30	31.45
414.75	58.21	23.42	34.78
414.80	61.75	23.54	38.21
414.85	65.47	23.66	41.81
414.90	69.29	23.78	45.51
414.95	73.21	23.90	49.31
415.00	**77.22**	**24.02**	**53.20**

Stage-Area-Storage for Pond BR-2D:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
412.50	6,940	0
412.55	7,016	349
412.60	7,092	702
412.65	7,168	1,058
412.70	7,245	1,418
412.75	7,323	1,783
412.80	7,400	2,151
412.85	7,479	2,523
412.90	7,557	2,899
412.95	7,636	3,278
413.00	7,716	3,662
413.05	7,795	4,050
413.10	7,876	4,442
413.15	7,956	4,838
413.20	8,037	5,237
413.25	8,119	5,641
413.30	8,201	6,049
413.35	8,283	6,461
413.40	8,366	6,878
413.45	8,449	7,298
413.50	8,532	7,722
413.55	8,616	8,151
413.60	8,701	8,584
413.65	8,785	9,021
413.70	8,870	9,463
413.75	8,956	9,908
413.80	9,042	10,358
413.85	9,128	10,812
413.90	9,215	11,271
413.95	9,302	11,734
414.00	9,390	12,201
414.05	9,463	12,673
414.10	9,536	13,148
414.15	9,609	13,626
414.20	9,683	14,108
414.25	9,757	14,594
414.30	9,831	15,084
414.35	9,905	15,578
414.40	9,980	16,075
414.45	10,055	16,576
414.50	10,130	17,080
414.55	10,206	17,589
414.60	10,282	18,101
414.65	10,358	18,617
414.70	10,434	19,137
414.75	10,511	19,660
414.80	10,588	20,188
414.85	10,665	20,719
414.90	10,743	21,254
414.95	10,821	21,793
415.00	**10,899**	**22,336**

Summary for Pond DB-1:

Inflow = 1.41 cfs @ 12.04 hrs, Volume= 23,272 cf
Outflow = 0.93 cfs @ 13.02 hrs, Volume= 23,231 cf, Atten= 34%, Lag= 58.8 min
Primary = 0.93 cfs @ 13.02 hrs, Volume= 23,231 cf
Routed to Reach DP-1 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach DP-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 398.42' @ 13.02 hrs Surf.Area= 5,070 sf Storage= 2,044 cf

Plug-Flow detention time= 78.9 min calculated for 23,231 cf (100% of inflow)
Center-of-Mass det. time= 76.1 min (1,407.0 - 1,330.9)

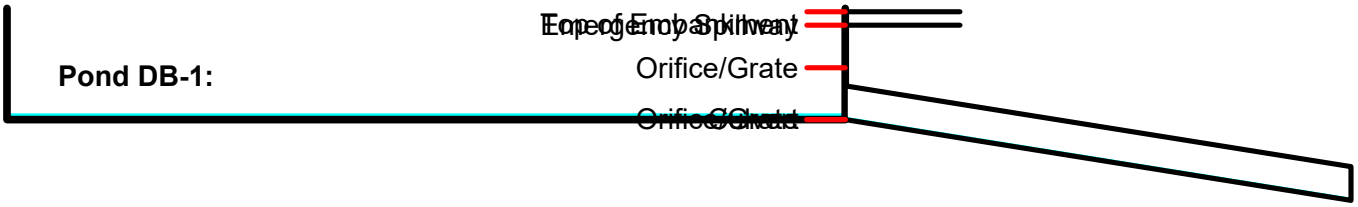
Volume	Invert	Avail.Storage	Storage Description
#1	398.00'	102,303 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
398.00	4,562	329.7	0	0	4,562
400.00	7,186	564.6	11,649	11,649	21,303
402.00	11,122	773.0	18,165	29,814	43,526
404.00	16,322	1,037.5	27,278	57,093	81,677
406.00	23,173	1,283.2	39,295	96,388	127,111
406.25	24,149	1,287.5	5,915	102,303	128,047

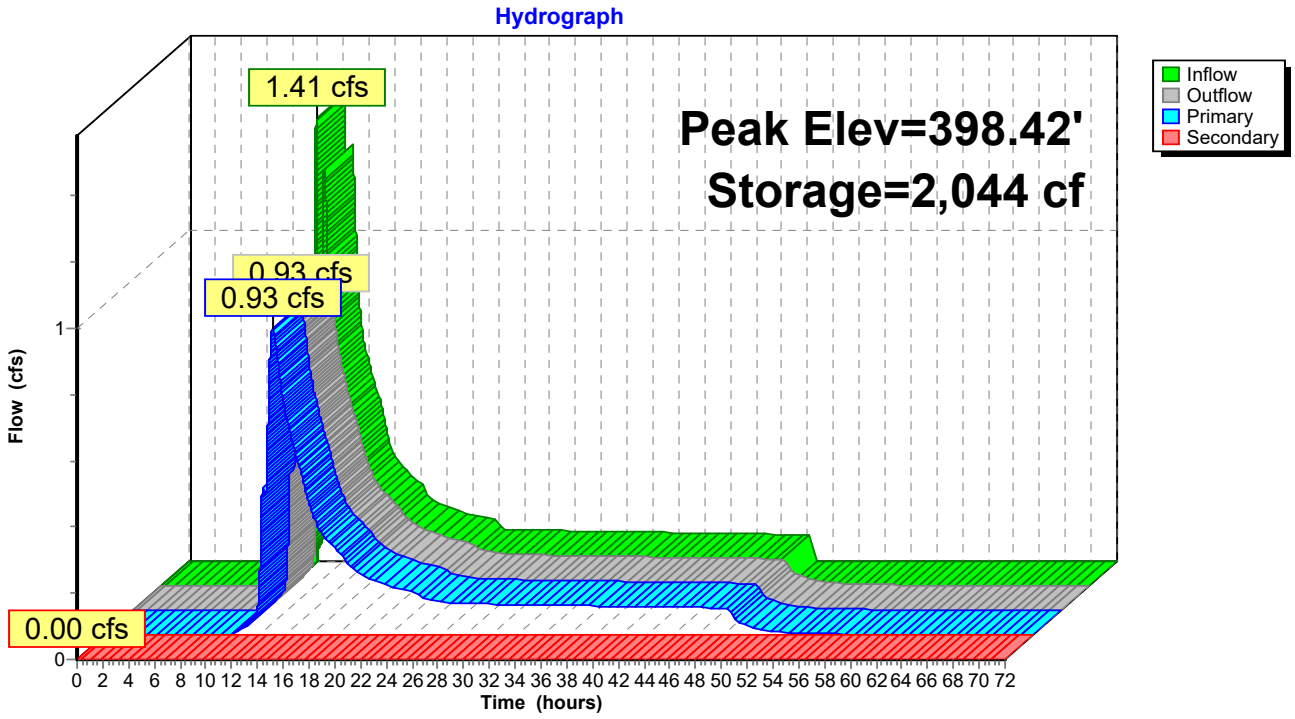
Device	Routing	Invert	Outlet Devices
#1	Primary	398.00'	**30.0" Round Culvert** L= 52.9' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 398.00' / 392.00' S= 0.1134 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	398.00'	**18.5" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	401.85'	**20.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	405.00'	**20.0' long + 7.0 '/' SideZ x 12.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#5	Secondary	406.00'	**645.3' long x 12.0' breadth Top of Embankment** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=0.93 cfs @ 13.02 hrs HW=398.42' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.93 cfs of 1.53 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.93 cfs @ 2.22 fps)
  - **3=Orifice/Grate** (Controls 0.00 cfs)

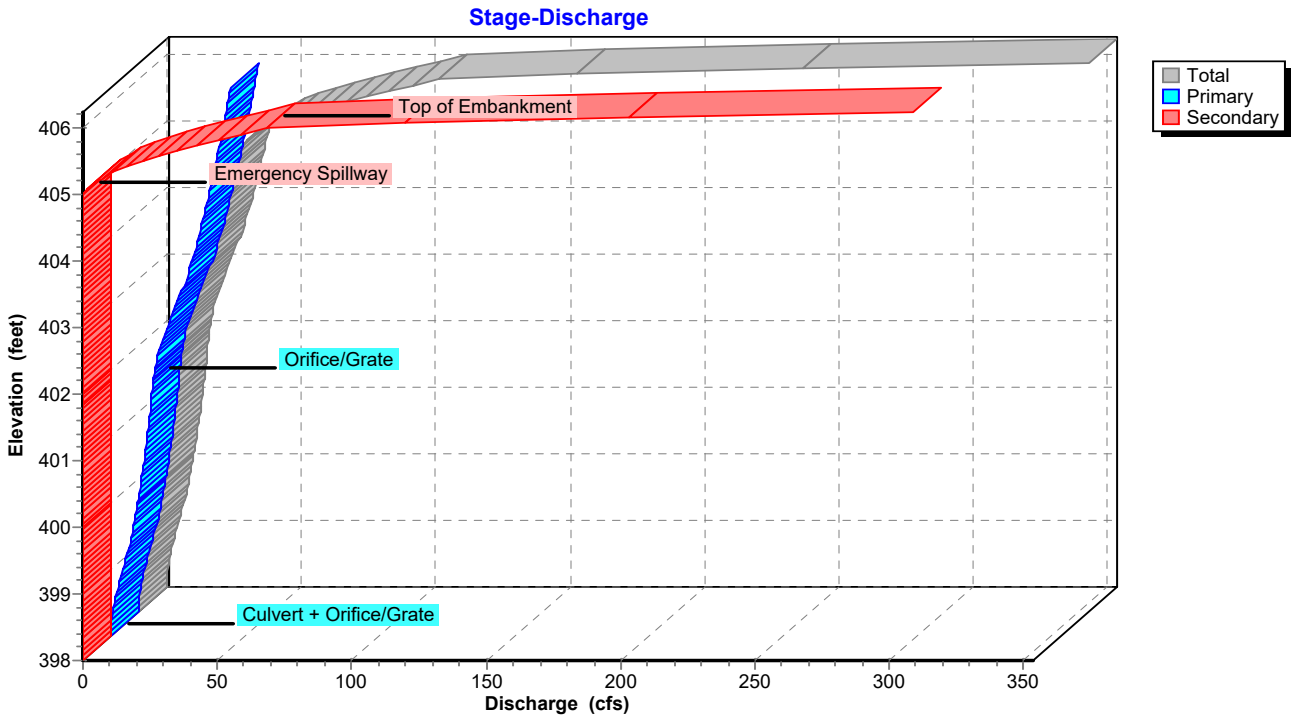
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=398.00' TW=0.00' (Dynamic Tailwater)
- **4=Emergency Spillway** (Controls 0.00 cfs)
- **5=Top of Embankment** (Controls 0.00 cfs)


Pond DB-1:
Orifice/Grate

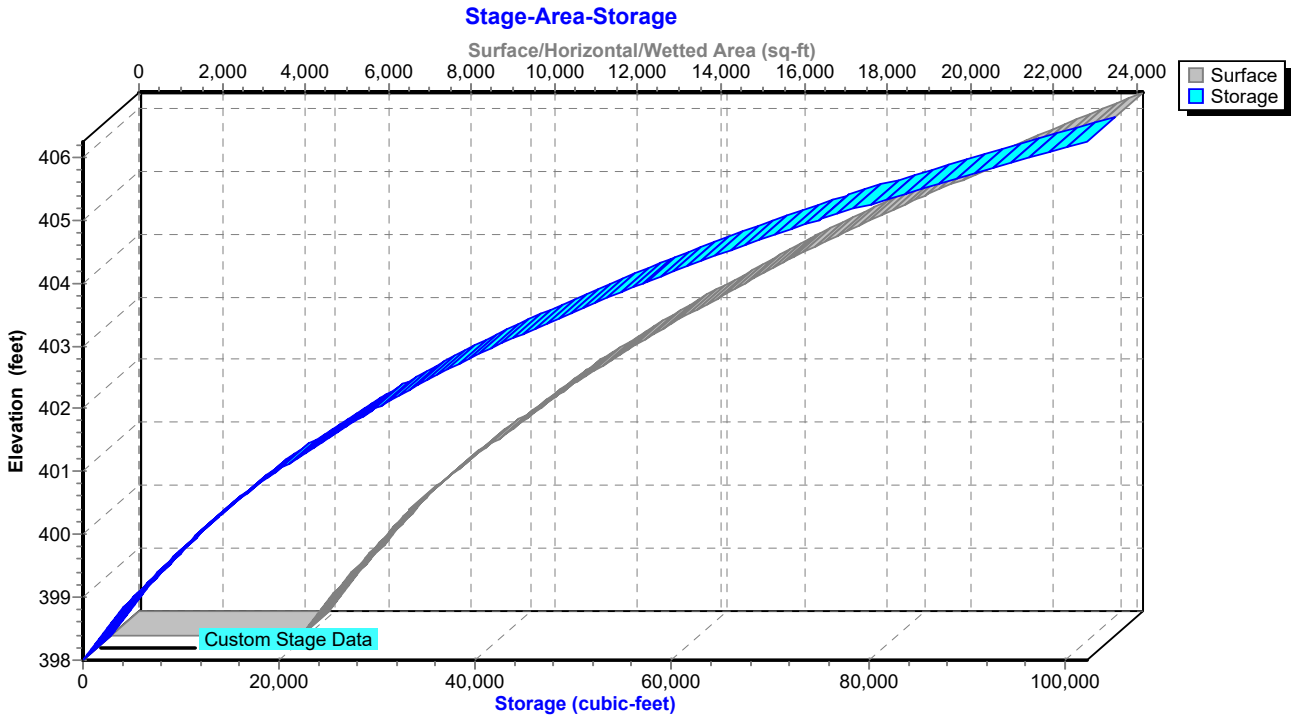
Pond DB-1:


Hydrograph
Inflow
Outflow
Primary
Secondary
1.41 cfs
0.93 cfs
0.93 cfs
0.00 cfs
Peak Elev=398.42'
Storage=2,044 cf
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

Pond DB-1:



Pond DB-1:



Hydrograph for Pond DB-1:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	398.00	0.00	0.00	**0.00**
2.50	0.00	0	398.00	0.00	0.00	0.00
5.00	0.00	0	398.00	0.00	0.00	0.00
7.50	0.00	0	398.00	0.00	0.00	0.00
10.00	**0.00**	124	398.03	0.00	0.00	0.00
12.50	**0.78**	**1,362**	**398.29**	**0.44**	**0.44**	0.00
15.00	0.47	**1,491**	**398.31**	**0.52**	**0.52**	0.00
17.50	0.25	1,063	398.23	0.28	0.28	0.00
20.00	0.16	851	398.18	0.18	0.18	0.00
22.50	0.14	755	398.16	0.14	0.14	0.00
25.00	0.10	650	398.14	0.11	0.11	0.00
27.50	0.09	612	398.13	0.10	0.10	0.00
30.00	0.09	604	398.13	0.09	0.09	0.00
32.50	0.09	598	398.13	0.09	0.09	0.00
35.00	0.09	593	398.13	0.09	0.09	0.00
37.50	0.09	587	398.13	0.09	0.09	0.00
40.00	0.09	581	398.13	0.09	0.09	0.00
42.50	0.08	576	398.12	0.08	0.08	0.00
45.00	0.08	570	398.12	0.08	0.08	0.00
47.50	0.08	564	398.12	0.08	0.08	0.00
50.00	0.00	297	398.06	0.02	0.02	0.00
52.50	0.00	175	398.04	0.01	0.01	0.00
55.00	0.00	123	398.03	0.00	0.00	0.00
57.50	0.00	95	398.02	0.00	0.00	0.00
60.00	0.00	78	398.02	0.00	0.00	0.00
62.50	0.00	66	398.01	0.00	0.00	0.00
65.00	0.00	57	398.01	0.00	0.00	0.00
67.50	0.00	50	398.01	0.00	0.00	0.00
70.00	0.00	45	398.01	0.00	0.00	0.00

Stage-Discharge for Pond DB-1:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
398.00	0.00	0.00	0.00
398.10	0.06	0.06	0.00
398.20	0.22	0.22	0.00
398.30	0.48	0.48	0.00
398.40	0.83	0.83	0.00
398.50	1.26	1.26	0.00
398.60	1.77	1.77	0.00
398.70	2.35	2.35	0.00
398.80	2.98	2.98	0.00
398.90	3.65	3.65	0.00
399.00	4.36	4.36	0.00
399.10	5.09	5.09	0.00
399.20	5.81	5.81	0.00
399.30	6.52	6.52	0.00
399.40	7.17	7.17	0.00
399.50	7.73	7.73	0.00
399.60	8.18	8.18	0.00
399.70	8.66	8.66	0.00
399.80	9.12	9.12	0.00
399.90	9.55	9.55	0.00
400.00	9.96	9.96	0.00
400.10	10.36	10.36	0.00
400.20	10.75	10.75	0.00
400.30	11.11	11.11	0.00
400.40	11.47	11.47	0.00
400.50	11.82	11.82	0.00
400.60	12.16	12.16	0.00
400.70	12.48	12.48	0.00
400.80	12.80	12.80	0.00
400.90	13.12	13.12	0.00
401.00	13.42	13.42	0.00
401.10	13.72	13.72	0.00
401.20	14.01	14.01	0.00
401.30	14.29	14.29	0.00
401.40	14.57	14.57	0.00
401.50	14.85	14.85	0.00
401.60	15.12	15.12	0.00
401.70	15.38	15.38	0.00
401.80	15.64	15.64	0.00
401.90	15.91	15.91	0.00
402.00	16.28	16.28	0.00
402.10	16.75	16.75	0.00
402.20	17.31	17.31	0.00
402.30	17.97	17.97	0.00
402.40	18.71	18.71	0.00
402.50	19.52	19.52	0.00
402.60	20.40	20.40	0.00
402.70	21.33	21.33	0.00
402.80	22.30	22.30	0.00
402.90	23.32	23.32	0.00
403.00	24.35	24.35	0.00
403.10	25.38	25.38	0.00
403.20	26.40	26.40	0.00
403.30	27.39	27.39	0.00
403.40	28.30	28.30	0.00
403.50	29.07	29.07	0.00
403.60	29.81	29.81	0.00
403.70	30.55	30.55	0.00
403.80	31.26	31.26	0.00
403.90	31.94	31.94	0.00
404.00	32.61	32.61	0.00
404.10	33.25	33.25	0.00
404.20	33.88	33.88	0.00
404.30	34.49	34.49	0.00
404.40	35.09	35.09	0.00
404.50	35.67	35.67	0.00
404.60	36.24	36.24	0.00
404.70	36.80	36.80	0.00
404.80	37.35	37.35	0.00
404.90	37.89	37.89	0.00
405.00	38.42	38.42	0.00
405.10	40.61	38.94	1.67
405.20	44.31	39.45	4.85
405.30	49.20	39.96	9.24
405.40	55.20	40.46	14.74
405.50	62.39	40.95	21.44
405.60	70.74	41.43	29.31
405.70	79.52	41.90	37.61
405.80	89.14	42.37	46.77
405.90	99.82	42.84	56.98
406.00	111.39	43.30	68.10
406.10	176.62	43.75	132.87
406.20	**286.31**	**44.20**	**242.12**

Stage-Area-Storage for Pond DB-1:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
398.00	4,562	0
398.10	4,679	462
398.20	4,798	936
398.30	4,918	1,422
398.40	5,039	1,919
398.50	5,162	2,430
398.60	5,287	2,952
398.70	5,413	3,487
398.80	5,540	4,035
398.90	5,669	4,595
399.00	5,800	5,169
399.10	5,932	5,755
399.20	6,065	6,355
399.30	6,200	6,968
399.40	6,336	7,595
399.50	6,474	8,236
399.60	6,614	8,890
399.70	6,755	9,558
399.80	6,897	10,241
399.90	7,041	10,938
400.00	7,186	11,649
400.10	7,362	12,376
400.20	7,541	13,122
400.30	7,722	13,885
400.40	7,905	14,666
400.50	8,090	15,466
400.60	8,277	16,284
400.70	8,466	17,121
400.80	8,658	17,977
400.90	8,851	18,853
401.00	9,047	19,748
401.10	9,245	20,662
401.20	9,445	21,597
401.30	9,647	22,551
401.40	9,851	23,526
401.50	10,058	24,522
401.60	10,266	25,538
401.70	10,477	26,575
401.80	10,690	27,633
401.90	10,905	28,713
402.00	11,122	29,814
402.10	11,358	30,938
402.20	11,597	32,086
402.30	11,839	33,258
402.40	12,082	34,454
402.50	12,329	35,674
402.60	12,578	36,920
402.70	12,829	38,190
402.80	13,083	39,486
402.90	13,339	40,807
403.00	13,598	42,154
403.10	13,859	43,526
403.20	14,123	44,925
403.30	14,389	46,351
403.40	14,658	47,803
403.50	14,929	49,283
403.60	15,202	50,789
403.70	15,479	52,323
403.80	15,757	53,885
403.90	16,038	55,475
404.00	16,322	57,093
404.10	16,636	58,741
404.20	16,953	60,420
404.30	17,273	62,131
404.40	17,596	63,875
404.50	17,922	65,651
404.60	18,252	67,459
404.70	18,584	69,301
404.80	18,919	71,176
404.90	19,257	73,085
405.00	19,598	75,028
405.10	19,942	77,005
405.20	20,289	79,016
405.30	20,639	81,062
405.40	20,992	83,144
405.50	21,348	85,261
405.60	21,707	87,414
405.70	22,069	89,602
405.80	22,434	91,828
405.90	22,802	94,089
406.00	23,173	96,388
406.10	23,561	98,725
406.20	**23,952**	**101,100**

Summary for Pond DB-2:

Inflow = 2.31 cfs @ 12.04 hrs, Volume= 43,681 cf
Outflow = 0.91 cfs @ 14.65 hrs, Volume= 43,430 cf, Atten= 61%, Lag= 157.0 min
Primary = 0.91 cfs @ 14.65 hrs, Volume= 43,430 cf
Routed to Reach DP-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach DP-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 394.40' @ 14.65 hrs Surf.Area= 12,871 sf Storage= 5,043 cf

Plug-Flow detention time= 154.4 min calculated for 43,430 cf (99% of inflow)
Center-of-Mass det. time= 146.1 min (1,572.0 - 1,425.9)

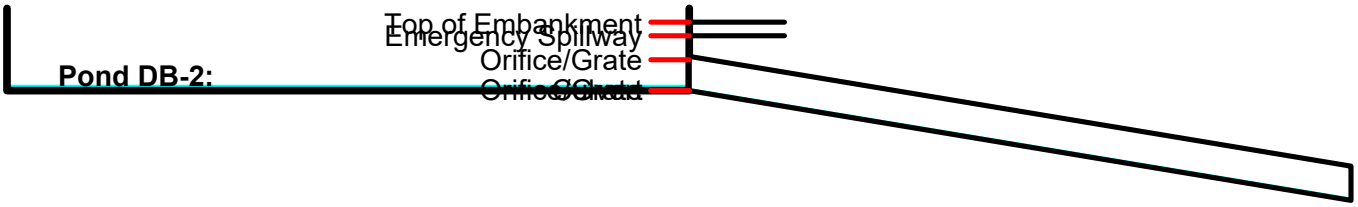
Volume	Invert	Avail.Storage	Storage Description
#1	394.00'	110,650 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
394.00	12,058	689.7	0	0	12,058
396.00	16,336	730.5	28,286	28,286	16,883
398.00	20,868	770.9	37,112	65,398	21,938
399.00	23,219	790.6	22,033	87,431	24,507
400.00	23,219	790.6	23,219	110,650	25,298

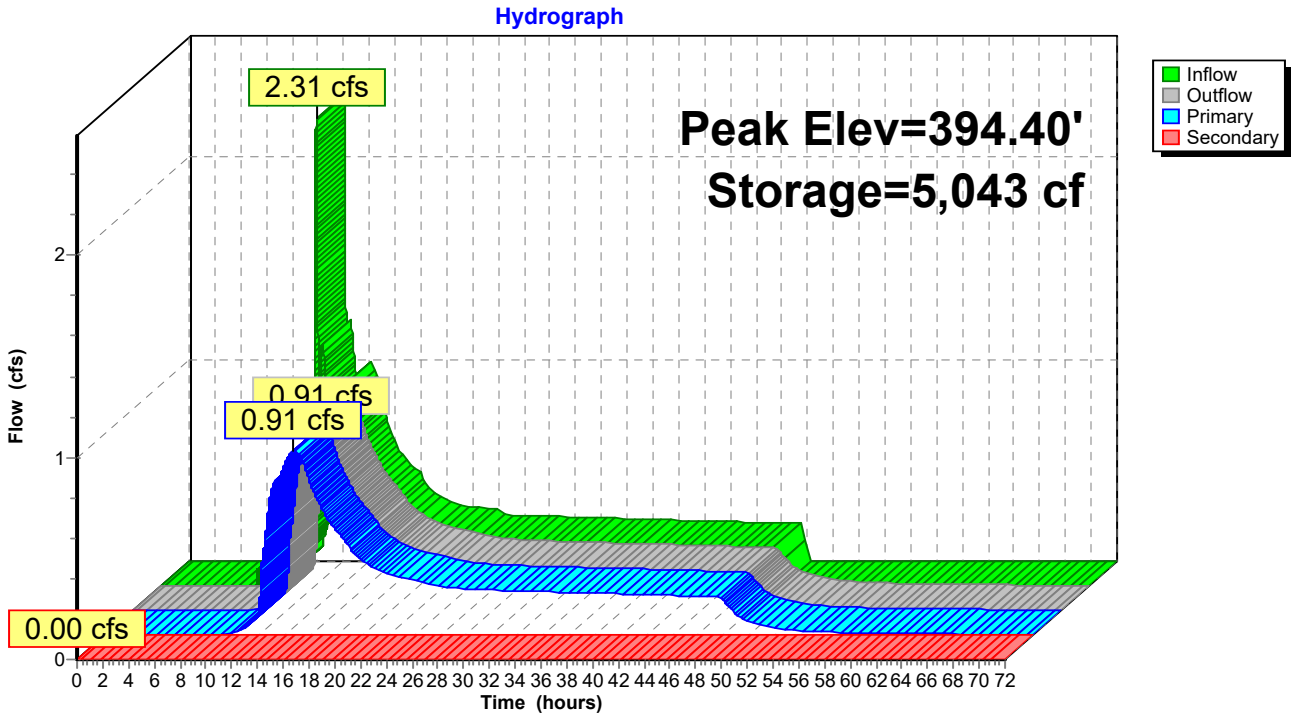
Device	Routing	Invert	Outlet Devices
#1	Primary	394.00'	**30.0" Round Culvert** L= 83.4' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 394.00' / 386.00' S= 0.0959 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	394.00'	**21.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	396.25'	**30.0" W x 18.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	398.00'	**20.0' long + 3.0 '/' SideZ x 12.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#5	Secondary	399.00'	**342.7' long x 12.0' breadth Top of Embankment** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=0.91 cfs @ 14.65 hrs HW=394.40' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.91 cfs of 1.40 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.91 cfs @ 2.17 fps)
  - **3=Orifice/Grate** (Controls 0.00 cfs)

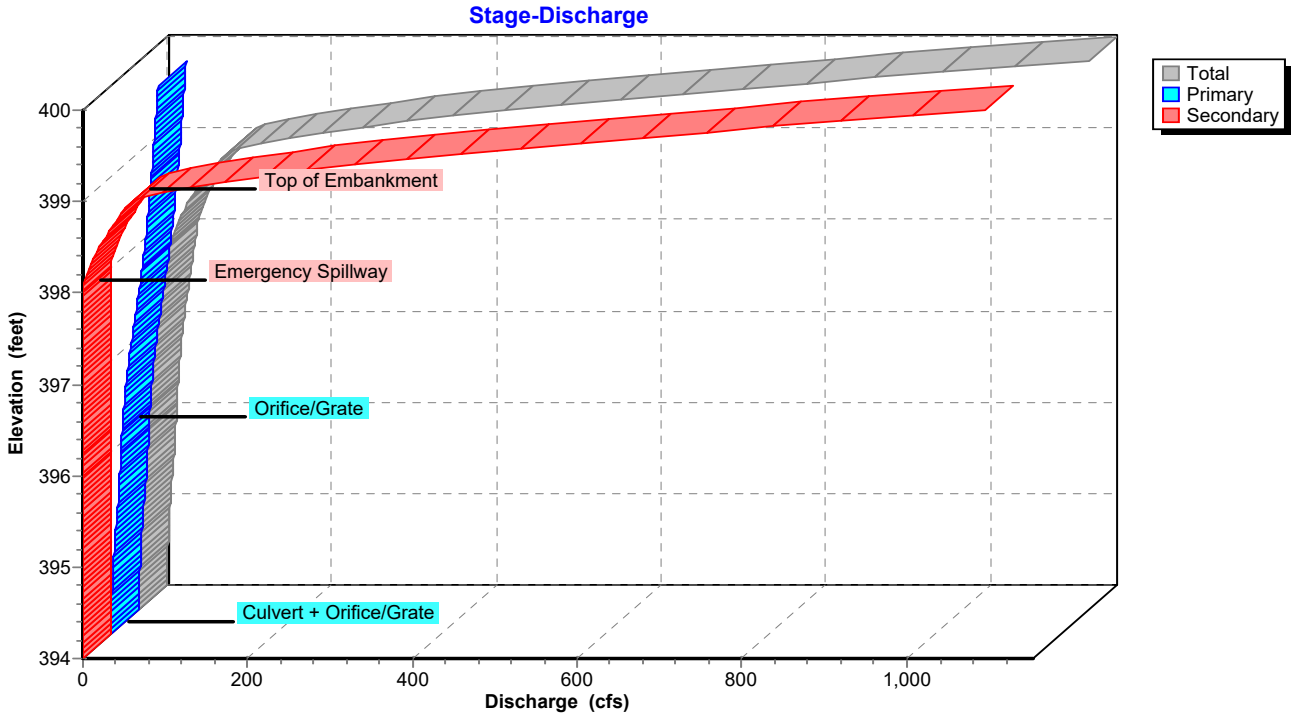
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=394.00' TW=0.00' (Dynamic Tailwater)
- **4=Emergency Spillway** (Controls 0.00 cfs)
- **5=Top of Embankment** (Controls 0.00 cfs)


Pond DB-2:
Top of Embankment
Emergency Spillway
Orifice/Grate

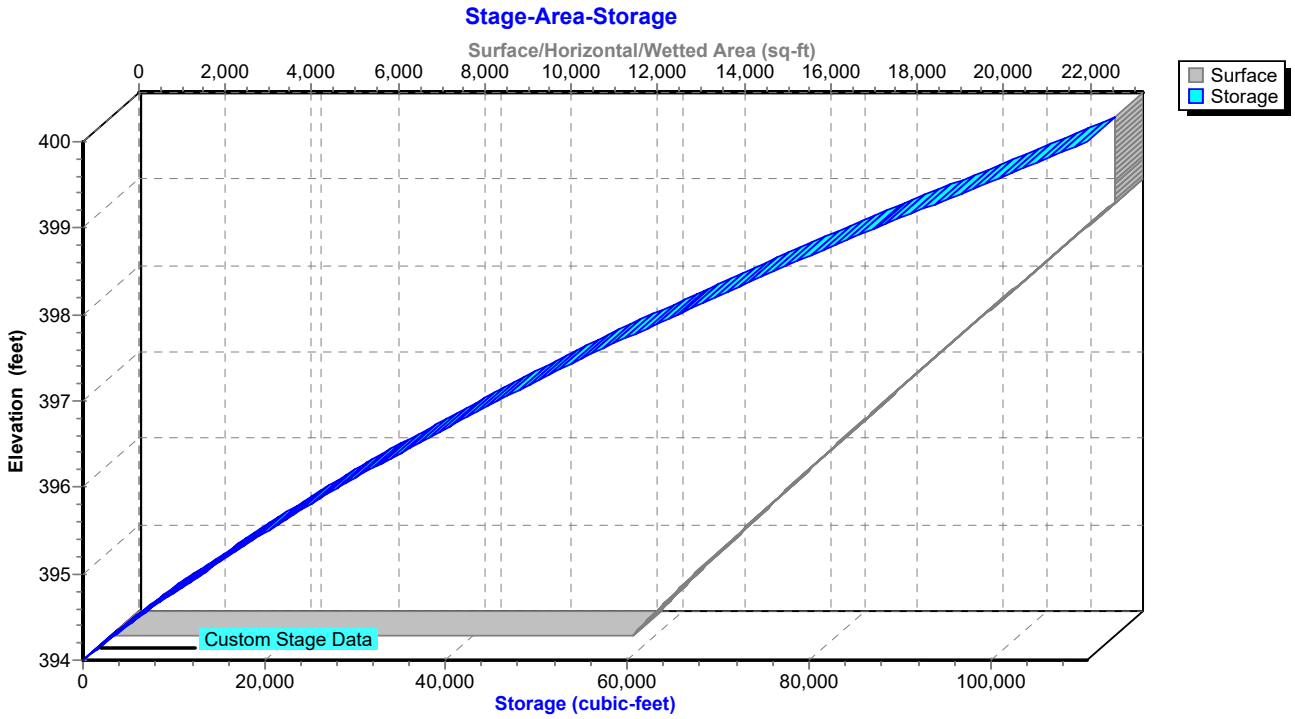
Pond DB-2:


Hydrograph
2.31 cfs
Peak Elev=394.40'
Storage=5,043 cf
0.91 cfs
0.91 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
0
1
2
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
Time (hours)

Pond DB-2:



Pond DB-2:



Hydrograph for Pond DB-2:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	394.00	0.00	0.00	**0.00**
2.50	0.00	0	394.00	0.00	0.00	0.00
5.00	0.00	0	394.00	0.00	0.00	0.00
7.50	0.08	8	394.00	0.00	0.00	0.00
10.00	**0.08**	540	394.04	0.01	0.01	0.00
12.50	**1.19**	**3,745**	**394.30**	**0.52**	**0.52**	0.00
15.00	0.85	**5,009**	**394.40**	**0.90**	**0.90**	0.00
17.50	0.46	3,865	394.31	0.55	0.55	0.00
20.00	0.31	3,119	394.25	0.37	0.37	0.00
22.50	0.27	2,746	394.22	0.29	0.29	0.00
25.00	0.23	2,558	394.21	0.25	0.25	0.00
27.50	0.22	2,444	394.20	0.23	0.23	0.00
30.00	0.22	2,401	394.20	0.22	0.22	0.00
32.50	0.21	2,371	394.19	0.22	0.22	0.00
35.00	0.21	2,343	394.19	0.21	0.21	0.00
37.50	0.20	2,317	394.19	0.21	0.21	0.00
40.00	0.20	2,290	394.19	0.20	0.20	0.00
42.50	0.20	2,264	394.18	0.20	0.20	0.00
45.00	0.19	2,237	394.18	0.19	0.19	0.00
47.50	0.19	2,211	394.18	0.19	0.19	0.00
50.00	0.00	1,307	394.11	0.07	0.07	0.00
52.50	0.00	889	394.07	0.03	0.03	0.00
55.00	0.00	672	394.06	0.02	0.02	0.00
57.50	0.00	539	394.04	0.01	0.01	0.00
60.00	0.00	451	394.04	0.01	0.01	0.00
62.50	0.00	387	394.03	0.01	0.01	0.00
65.00	0.00	339	394.03	0.00	0.00	0.00
67.50	0.00	301	394.02	0.00	0.00	0.00
70.00	0.00	271	394.02	0.00	0.00	0.00

Stage-Discharge for Pond DB-2:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
394.00	0.00	0.00	0.00
394.10	0.06	0.06	0.00
394.20	0.23	0.23	0.00
394.30	0.51	0.51	0.00
394.40	0.89	0.89	0.00
394.50	1.37	1.37	0.00
394.60	1.92	1.92	0.00
394.70	2.56	2.56	0.00
394.80	3.26	3.26	0.00
394.90	4.03	4.03	0.00
395.00	4.84	4.84	0.00
395.10	5.68	5.68	0.00
395.20	6.56	6.56	0.00
395.30	7.44	7.44	0.00
395.40	8.31	8.31	0.00
395.50	9.15	9.15	0.00
395.60	9.93	9.93	0.00
395.70	10.59	10.59	0.00
395.80	11.14	11.14	0.00
395.90	11.73	11.73	0.00
396.00	12.28	12.28	0.00
396.10	12.82	12.82	0.00
396.20	13.33	13.33	0.00
396.30	13.91	13.91	0.00
396.40	14.77	14.77	0.00
396.50	15.77	15.77	0.00
396.60	16.87	16.87	0.00
396.70	18.07	18.07	0.00
396.80	19.34	19.34	0.00
396.90	20.69	20.69	0.00
397.00	22.09	22.09	0.00
397.10	23.56	23.56	0.00
397.20	25.09	25.09	0.00
397.30	26.67	26.67	0.00
397.40	28.30	28.30	0.00
397.50	29.98	29.98	0.00
397.60	31.71	31.71	0.00
397.70	33.48	33.48	0.00
397.80	35.20	35.20	0.00
397.90	36.69	36.69	0.00
398.00	38.05	38.05	0.00
398.10	40.97	39.33	1.64
398.20	45.26	40.55	4.71
398.30	50.55	41.71	8.84
398.40	56.73	42.84	13.89
398.50	63.86	43.92	19.94
398.60	71.88	44.97	26.90
398.70	80.09	45.99	34.09
398.80	88.87	46.99	41.88
398.90	98.38	47.96	50.42
399.00	108.49	48.90	59.58
399.10	147.29	49.83	97.46
399.20	209.81	50.73	159.08
399.30	289.08	51.62	237.46
399.40	382.57	52.49	330.08
399.50	490.53	53.35	437.19
399.60	611.60	54.19	557.41
399.70	734.82	55.01	679.80
399.80	865.60	55.82	809.78
399.90	1,006.22	56.62	949.60
400.00	**1,154.18**	**57.41**	**1,096.76**

Stage-Area-Storage for Pond DB-2:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
394.00	12,058	0
394.10	12,257	1,216
394.20	12,457	2,451
394.30	12,658	3,707
394.40	12,862	4,983
394.50	13,067	6,279
394.60	13,273	7,596
394.70	13,482	8,934
394.80	13,691	10,293
394.90	13,903	11,673
395.00	14,116	13,073
395.10	14,331	14,496
395.20	14,547	15,940
395.30	14,765	17,405
395.40	14,985	18,893
395.50	15,206	20,402
395.60	15,429	21,934
395.70	15,653	23,488
395.80	15,879	25,065
395.90	16,107	26,664
396.00	16,336	28,286
396.10	16,549	29,930
396.20	16,764	31,596
396.30	16,980	33,283
396.40	17,198	34,992
396.50	17,417	36,723
396.60	17,637	38,475
396.70	17,859	40,250
396.80	18,082	42,047
396.90	18,307	43,867
397.00	18,533	45,709
397.10	18,760	47,573
397.20	18,989	49,461
397.30	19,219	51,371
397.40	19,450	53,305
397.50	19,683	55,261
397.60	19,917	57,241
397.70	20,153	59,245
397.80	20,390	61,272
397.90	20,628	63,323
398.00	20,868	65,398
398.10	21,097	67,496
398.20	21,328	69,617
398.30	21,560	71,762
398.40	21,793	73,929
398.50	22,028	76,120
398.60	22,264	78,335
398.70	22,501	80,573
398.80	22,739	82,835
398.90	22,978	85,121
399.00	**23,219**	87,431
399.10	23,219	89,753
399.20	23,219	92,074
399.30	23,219	94,396
399.40	23,219	96,718
399.50	23,219	99,040
399.60	23,219	101,362
399.70	23,219	103,684
399.80	23,219	106,006
399.90	23,219	108,328
400.00	23,219	**110,650**

Summary for Pond IS-1B:

Inflow = 15.78 cfs @ 12.16 hrs, Volume= 52,958 cf
Outflow = 0.62 cfs @ 6.28 hrs, Volume= 55,529 cf, Atten= 96%, Lag= 0.0 min
Discarded = 0.62 cfs @ 6.28 hrs, Volume= 55,529 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond BMH-1B :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond OCS-B6 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 437.74' @ 15.58 hrs Surf.Area= 7,695 sf Storage= 28,379 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 406.7 min (1,231.5 - 824.7)

Volume	Invert	Avail.Storage	Storage Description
#1	432.50'	13,080 cf	**Gravel Fill (Prismatic)** Listed below (Recalc) 53,865 cf Overall - 21,164 cf Embedded = 32,701 cf x 40.0% Voids
#2	433.50'	21,164 cf	**MC-4500 Chambers** Listed below Inside #1
#3	439.50'	101 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		34,345 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
432.50	7,695	0	0
439.50	7,695	53,865	53,865

Elevation (feet)	Cum.Store (cubic-feet)
433.50	0
433.58	504
433.67	1,005
433.75	1,505
433.83	2,002
433.92	2,498
434.00	2,992
434.08	3,484
434.17	3,973
434.25	4,460
434.33	4,945
434.42	5,427
434.50	5,906
434.58	6,382
434.67	6,855
434.75	7,325
434.83	7,792
434.92	8,255
435.00	8,715
435.08	9,170
435.17	9,622
435.25	10,069
435.33	10,513
435.42	10,951
435.50	11,386
435.58	11,815
435.67	12,239
435.75	12,658
435.83	13,072
435.92	13,480
436.00	13,882
436.08	14,279
436.17	14,669
436.25	15,052
436.33	15,429
436.42	15,798
436.50	16,161
436.58	16,516
436.67	16,863
436.75	17,201
436.83	17,531
436.92	17,853
437.00	18,164
437.08	18,466
437.17	18,758
437.25	19,038
437.33	19,307
437.42	19,564
437.50	19,807
437.58	20,037
437.67	20,251

437.75	20,449
437.83	20,628
437.92	20,786
438.00	20,917
438.08	21,006
438.17	21,059
438.25	21,100
438.33	21,133
438.42	21,156
438.50	21,164

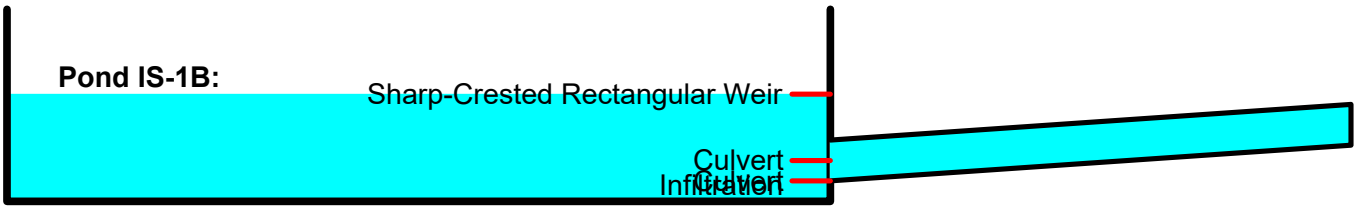
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
439.50	42	0	0
441.90	42	101	101

Device	Routing	Invert	Outlet Devices
#1	Discarded	432.50'	**0.62 cfs Infiltration at all elevations**
#2	Primary	435.25'	**24.0" Round Culvert** L= 31.3' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 433.50' / 435.25' S= -0.0559 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#3	Secondary	437.75'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 3	434.50'	**24.0" Round Culvert** L= 6.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 434.50' / 434.50' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

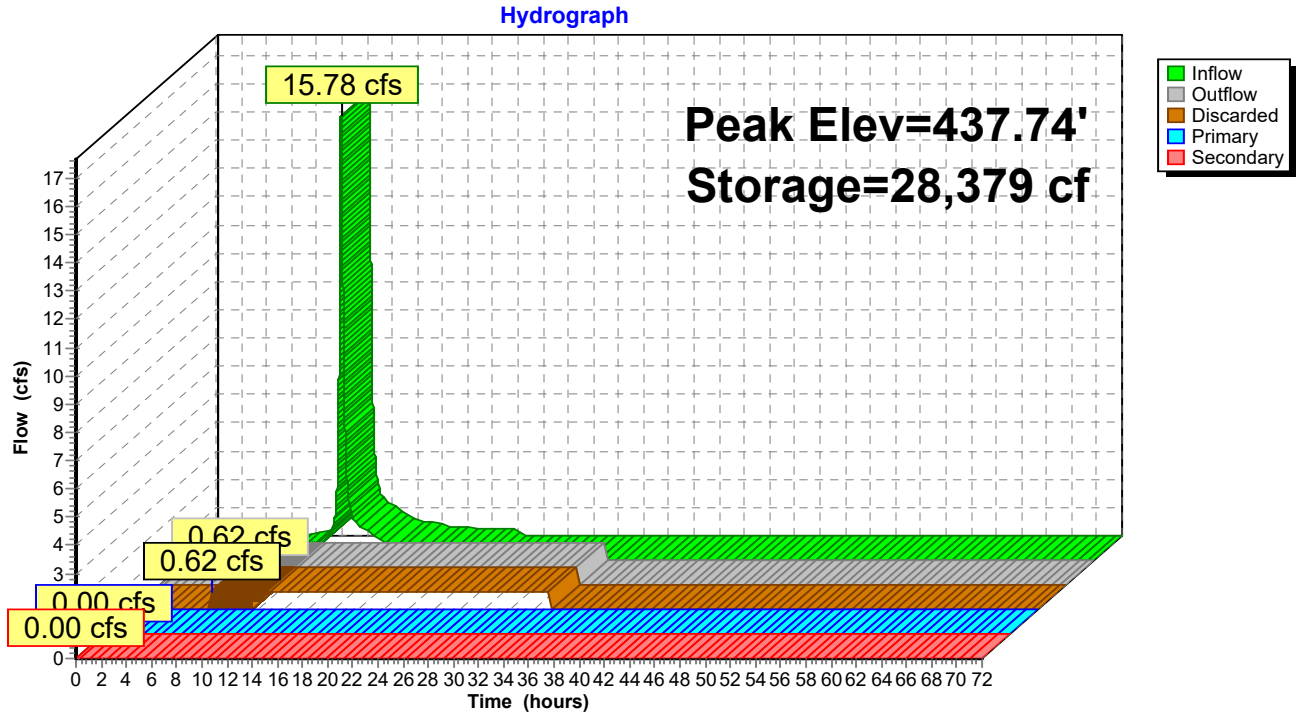
Discarded OutFlow Max=0.62 cfs @ 6.28 hrs HW=432.50' (Free Discharge)
└**1=Infiltration** (Exfiltration Controls 0.62 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=432.50' TW=435.25' (Dynamic Tailwater)
└**2=Culvert** (Controls 0.00 cfs)

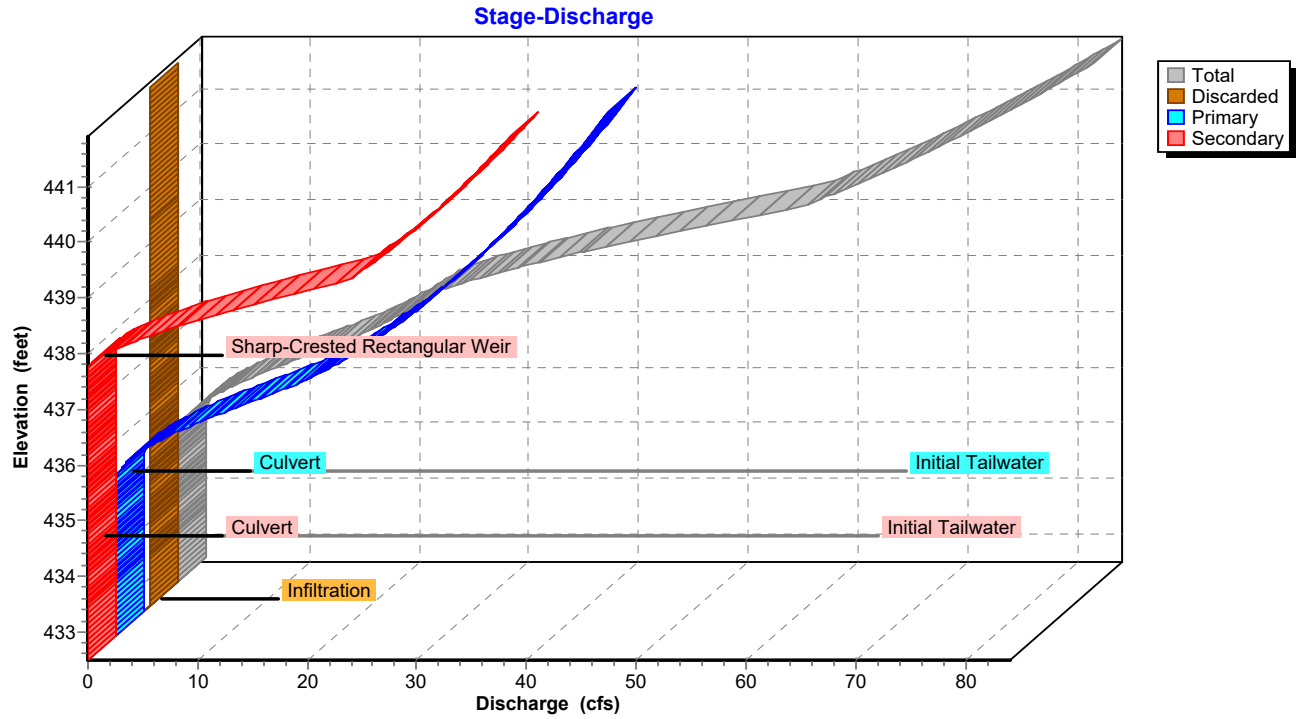
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=432.50' TW=434.50' (Dynamic Tailwater)
└**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**4=Culvert** (Controls 0.00 cfs)



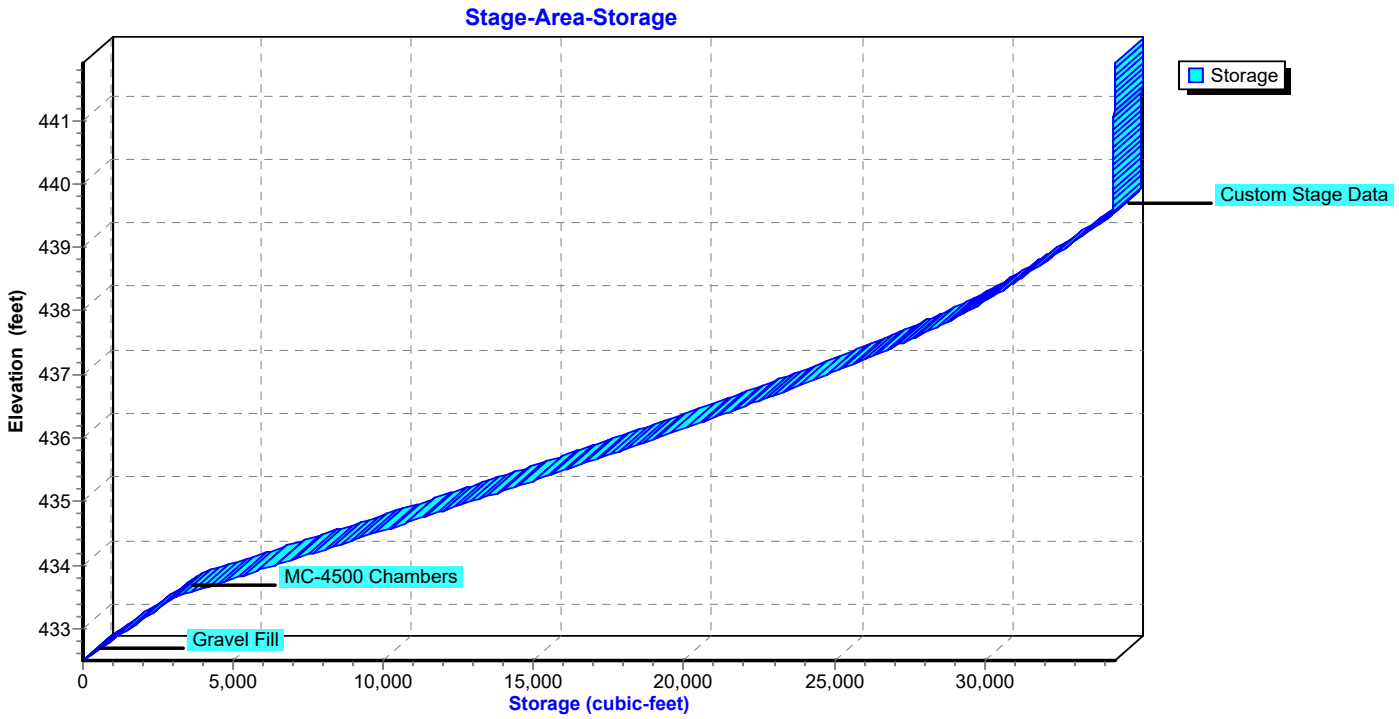
Pond IS-1B:



Pond IS-1B:



Pond IS-1B:


Stage-Area-Storage
Storage
Custom Stage Data
MC-4500 Chambers
Gravel Fill
Elevation (feet)
441
440
439
438
437
436
435
434
433
0
5,000
10,000
15,000
20,000
25,000
30,000
Storage (cubic-feet)

Hydrograph for Pond IS-1B:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	432.50	0.00	0.00	**0.00**	**0.00**
2.50	0.00	0	432.50	0.00	0.00	0.00	0.00
5.00	0.00	0	432.50	**0.00**	**0.00**	0.00	0.00
7.50	0.06	0	432.50	**0.00**	**0.00**	0.00	0.00
10.00	**0.42**	0	432.50	0.62	0.62	0.00	0.00
12.50	**4.19**	21,222	436.36	0.62	0.62	0.00	0.00
15.00	0.85	**28,179**	**437.70**	0.62	0.62	0.00	0.00
17.50	0.45	**27,732**	**437.60**	0.62	0.62	0.00	0.00
20.00	0.29	25,335	437.11	0.62	0.62	0.00	0.00
22.50	0.24	22,124	436.52	0.62	0.62	0.00	0.00
25.00	0.00	17,937	435.80	0.62	0.62	0.00	0.00
27.50	0.00	12,357	434.91	0.62	0.62	0.00	0.00
30.00	0.00	6,777	434.05	0.62	0.62	0.00	0.00
32.50	0.00	1,197	432.89	0.62	0.62	0.00	0.00
35.00	0.00	0	432.50	0.00	0.00	0.00	0.00
37.50	0.00	0	432.50	0.00	0.00	0.00	0.00
40.00	0.00	0	432.50	0.00	0.00	0.00	0.00
42.50	0.00	0	432.50	0.00	0.00	0.00	0.00
45.00	0.00	0	432.50	0.00	0.00	0.00	0.00
47.50	0.00	0	432.50	0.00	0.00	0.00	0.00
50.00	0.00	0	432.50	0.00	0.00	0.00	0.00
52.50	0.00	0	432.50	0.00	0.00	0.00	0.00
55.00	0.00	0	432.50	0.00	0.00	0.00	0.00
57.50	0.00	0	432.50	0.00	0.00	0.00	0.00
60.00	0.00	0	432.50	0.00	0.00	0.00	0.00
62.50	0.00	0	432.50	0.00	0.00	0.00	0.00
65.00	0.00	0	432.50	0.00	0.00	0.00	0.00
67.50	0.00	0	432.50	0.00	0.00	0.00	0.00
70.00	0.00	0	432.50	0.00	0.00	0.00	0.00

Stage-Discharge for Pond IS-1B:

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
432.50	0.00	**0.00**	0.00	0.00
432.70	0.62	**0.62**	0.00	0.00
432.90	0.62	0.62	0.00	0.00
433.10	0.62	0.62	0.00	0.00
433.30	0.62	0.62	0.00	0.00
433.50	0.62	0.62	0.00	0.00
433.70	0.62	0.62	0.00	0.00
433.90	0.62	0.62	0.00	0.00
434.10	0.62	0.62	0.00	0.00
434.30	0.62	0.62	0.00	0.00
434.50	0.62	0.62	0.00	0.00
434.70	0.62	0.62	0.00	0.00
434.90	0.62	0.62	0.00	0.00
435.10	0.62	0.62	0.00	0.00
435.30	0.64	0.62	0.02	0.00
435.50	1.10	0.62	0.48	0.00
435.70	2.13	0.62	1.51	0.00
435.90	3.66	0.62	3.04	0.00
436.10	5.61	0.62	4.99	0.00
436.30	7.91	0.62	7.29	0.00
436.50	10.45	0.62	9.83	0.00
436.70	13.12	0.62	12.50	0.00
436.90	15.78	0.62	15.16	0.00
437.10	18.19	0.62	17.57	0.00
437.30	20.00	0.62	19.38	0.00
437.50	21.76	0.62	21.14	0.00
437.70	23.39	0.62	22.77	0.00
437.90	25.66	0.62	24.29	0.75
438.10	29.00	0.62	25.72	2.66
438.30	32.88	0.62	27.07	5.19
438.50	37.16	0.62	28.36	8.18
438.70	41.75	0.62	29.60	11.54
438.90	46.60	0.62	30.78	15.20
439.10	51.67	0.62	31.92	19.13
439.30	56.93	0.62	33.02	23.28
439.50	59.72	0.62	34.09	25.01
439.70	62.14	0.62	35.12	26.40
439.90	64.47	0.62	36.12	27.73
440.10	66.71	0.62	37.10	28.99
440.30	68.87	0.62	38.05	30.19
440.50	70.96	0.62	38.98	31.36
440.70	72.98	0.62	39.89	32.48
440.90	74.95	0.62	40.77	33.56
441.10	76.87	0.62	41.64	34.61
441.30	78.74	0.62	42.49	35.63
441.50	80.56	0.62	43.32	36.62
441.70	82.34	0.62	44.14	37.58
441.90	**84.08**	0.62	**44.94**	**38.52**

Stage-Area-Storage for Pond IS-1B:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
432.50	0	437.80	28,650
432.60	308	437.90	29,072
432.70	616	438.00	29,479
432.80	923	438.10	29,847
432.90	1,231	438.20	30,189
433.00	1,539	438.30	30,525
433.10	1,847	438.40	30,851
433.20	2,155	438.50	31,166
433.30	2,462	438.60	31,474
433.40	2,770	438.70	31,782
433.50	3,078	438.80	32,090
433.60	3,755	438.90	32,398
433.70	4,409	439.00	32,705
433.80	5,091	439.10	33,013
433.90	5,742	439.20	33,321
434.00	6,412	439.30	33,629
434.10	7,080	439.40	33,937
434.20	7,726	439.50	34,244
434.30	8,398	439.60	34,249
434.40	9,040	439.70	34,253
434.50	9,700	439.80	34,257
434.60	10,356	439.90	34,261
434.70	10,990	440.00	34,265
434.80	11,650	440.10	34,270
434.90	12,278	440.20	34,274
435.00	12,924	440.30	34,278
435.10	13,565	440.40	34,282
435.20	14,184	440.50	34,286
435.30	14,826	440.60	34,291
435.40	15,438	440.70	34,295
435.50	16,066	440.80	34,299
435.60	16,687	440.90	34,303
435.70	17,287	441.00	34,307
435.80	17,907	441.10	34,312
435.90	18,499	441.20	34,316
436.00	19,102	441.30	34,320
436.10	19,700	441.40	34,324
436.20	20,276	441.50	34,328
436.30	20,869	441.60	34,333
436.40	21,434	441.70	34,337
436.50	22,009	441.80	34,341
436.60	22,576	441.90	**34,345**
436.70	23,121		
436.80	23,680		
436.90	24,212		
437.00	24,749		
437.10	25,277		
437.20	25,784		
437.30	26,298		
437.40	26,786		
437.50	27,274		
437.60	27,749		
437.70	28,201		

Summary for Pond IS-2B:

Inflow = 7.19 cfs @ 12.03 hrs, Volume= 17,239 cf
Outflow = 0.30 cfs @ 3.71 hrs, Volume= 19,386 cf, Atten= 96%, Lag= 0.0 min
Discarded = 0.30 cfs @ 3.71 hrs, Volume= 19,386 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond BMH-2B :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 458.11' @ 14.11 hrs Surf.Area= 2,462 sf Storage= 7,416 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 144.3 min (934.5 - 790.2)

Volume	Invert	Avail.Storage	Storage Description
#1	453.50'	3,744 cf	**Gravel Fill (Prismatic)** Listed below (Recalc) 14,157 cf Overall - 4,797 cf Embedded = 9,359 cf x 40.0% Voids
#2	454.50'	4,797 cf	**MC-3500 Chambers** Listed below Inside #1
#3	459.25'	155 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,696 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
453.50	2,462	0	0
459.25	2,462	14,157	14,157

Elevation (feet)	Cum.Store (cubic-feet)
454.50	0
454.58	154
454.67	307
454.75	459
454.83	610
454.92	760
455.00	909
455.08	1,056
455.17	1,203
455.25	1,348
455.33	1,492
455.42	1,635
455.50	1,777
455.58	1,917
455.67	2,055
455.75	2,192
455.83	2,327
455.92	2,461
456.00	2,592
456.08	2,722
456.17	2,850
456.25	2,975
456.33	3,098
456.42	3,219
456.50	3,337
456.58	3,453
456.67	3,565
456.75	3,675
456.83	3,782
456.92	3,886
457.00	3,986
457.08	4,082
457.17	4,175
457.25	4,263
457.33	4,347
457.42	4,426
457.50	4,499
457.58	4,567
457.67	4,628
457.75	4,682
457.83	4,726
457.92	4,756
458.00	4,774
458.08	4,786
458.17	4,795
458.25	4,797

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
459.25	23	0	0
466.00	23	155	155

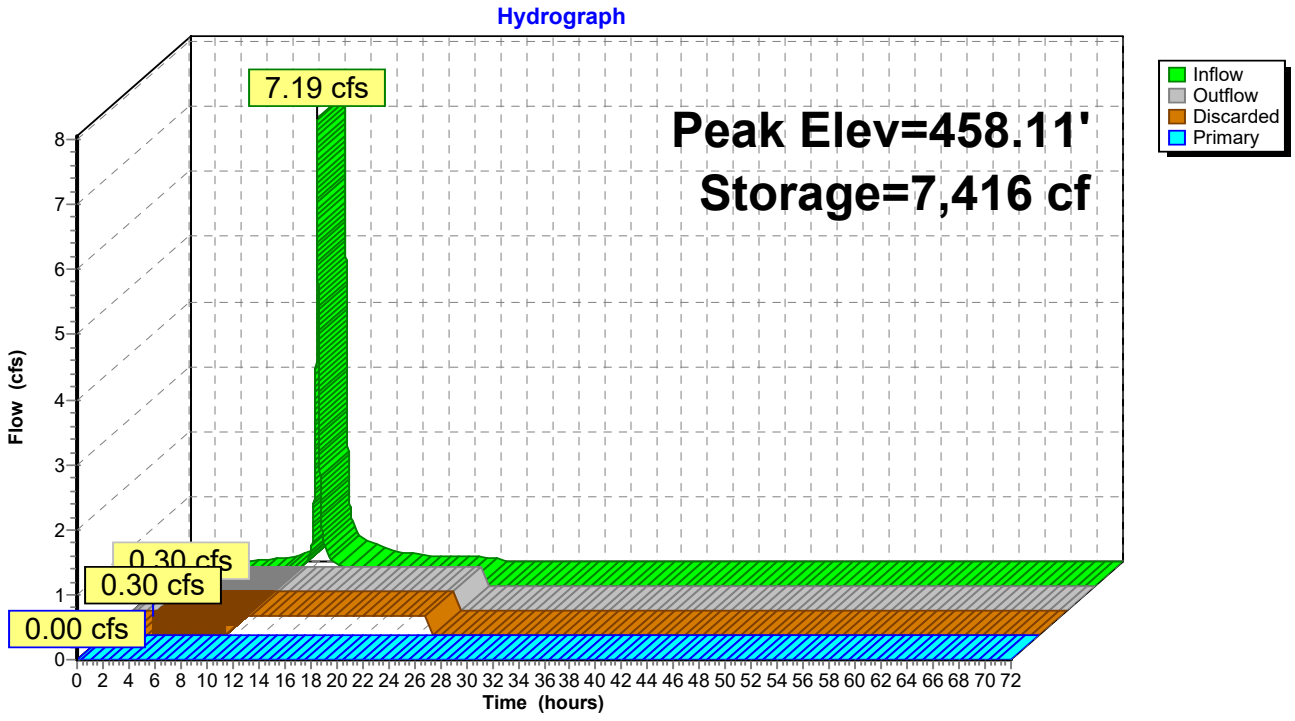
Device	Routing	Invert	Outlet Devices
#1	Discarded	453.50'	**5.250 in/hr Exfiltration over Surface area**
#2	Primary	454.75'	**24.0" Round Culvert**
			L= 9.4' RCP, groove end projecting, Ke= 0.200
			Inlet / Outlet Invert= 454.50' / 454.75' S= -0.0266 '/' Cc= 0.900
			n= 0.012, Flow Area= 3.14 sf

Discarded OutFlow Max=0.30 cfs @ 3.71 hrs HW=453.50' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.30 cfs)

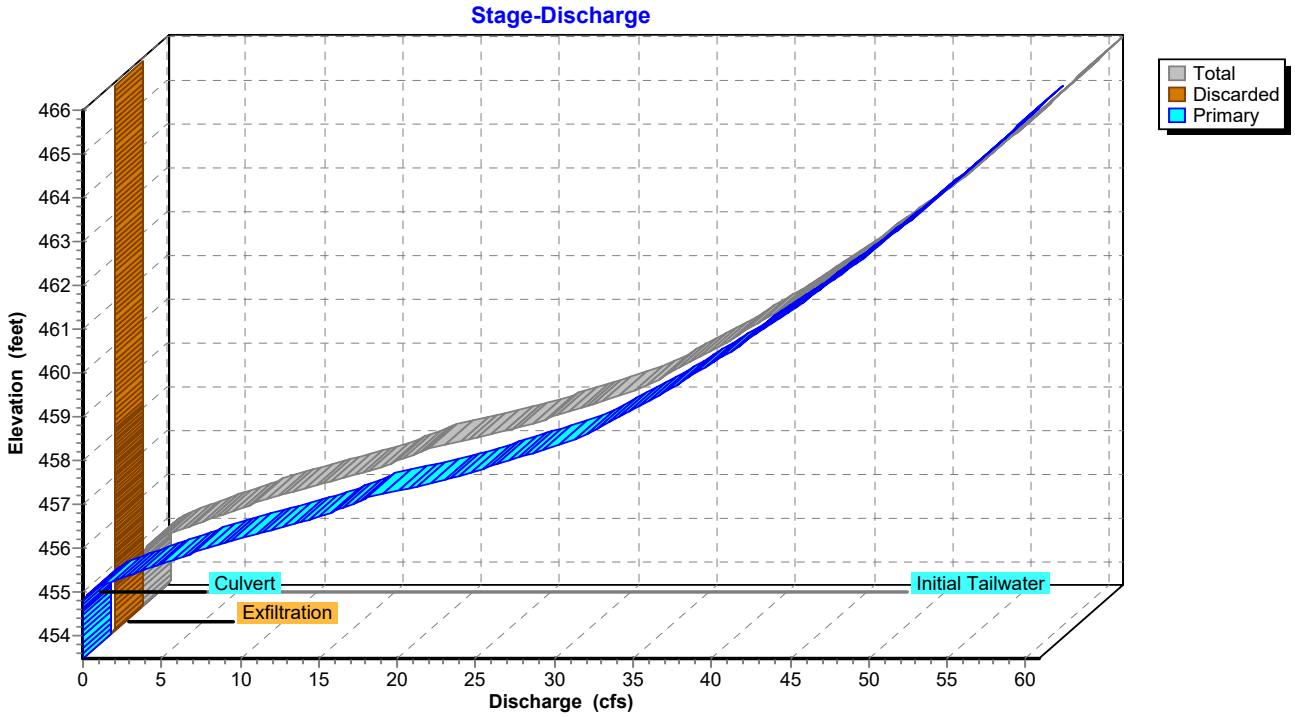
Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=453.50' TW=454.75' (Dynamic Tailwater)
└**2=Culvert** (Controls 0.00 cfs)



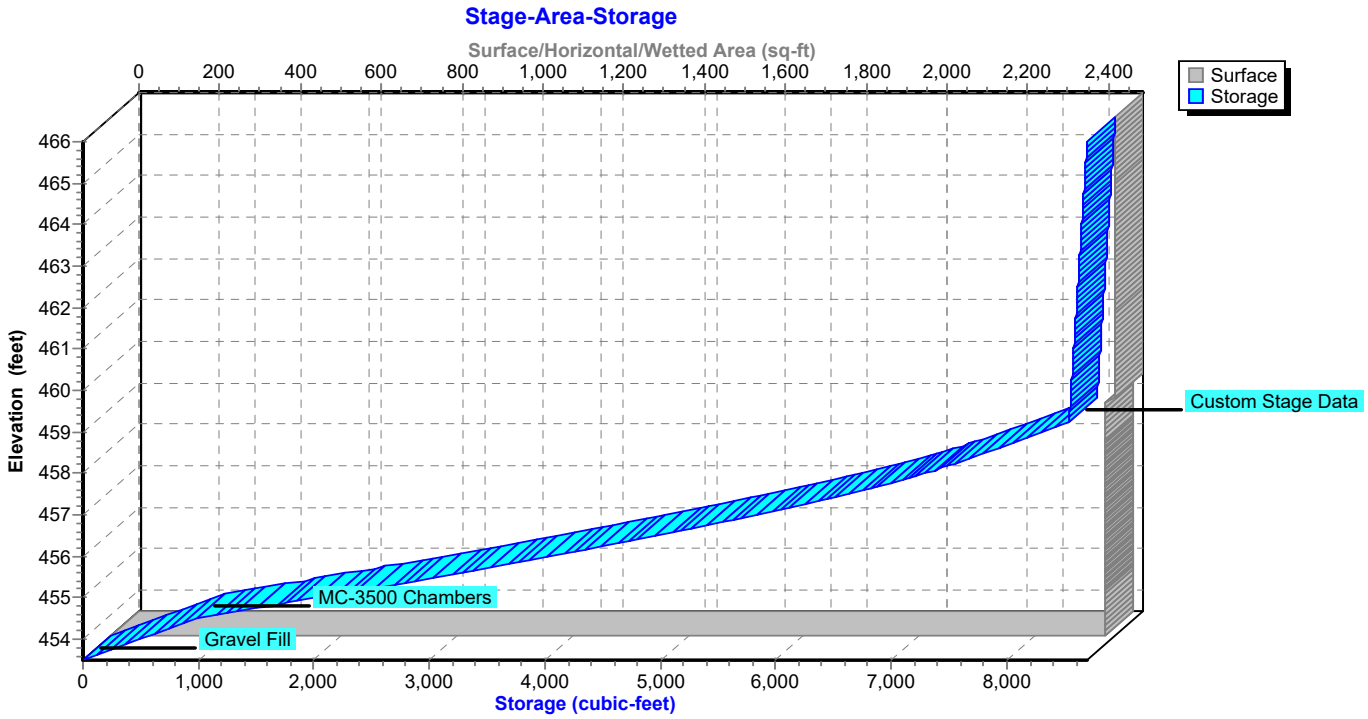
Pond IS-2B:



Pond IS-2B:



Pond IS-2B:



Hydrograph for Pond IS-2B:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	453.50	0.00	0.00	**0.00**
2.50	0.00	0	453.50	**0.00**	**0.00**	0.00
5.00	0.01	0	453.50	**0.30**	**0.30**	0.00
7.50	0.06	0	453.50	0.30	0.30	0.00
10.00	**0.21**	0	453.50	0.30	0.30	0.00
12.50	**0.73**	**6,776**	**457.59**	0.30	0.30	0.00
15.00	0.24	**7,307**	**458.01**	0.30	0.30	0.00
17.50	0.13	6,022	457.11	0.30	0.30	0.00
20.00	0.08	4,209	456.10	0.30	0.30	0.00
22.50	0.07	2,177	455.07	0.30	0.30	0.00
25.00	0.00	0	453.50	0.00	0.00	0.00
27.50	0.00	0	453.50	0.00	0.00	0.00
30.00	0.00	0	453.50	0.00	0.00	0.00
32.50	0.00	0	453.50	0.00	0.00	0.00
35.00	0.00	0	453.50	0.00	0.00	0.00
37.50	0.00	0	453.50	0.00	0.00	0.00
40.00	0.00	0	453.50	0.00	0.00	0.00
42.50	0.00	0	453.50	0.00	0.00	0.00
45.00	0.00	0	453.50	0.00	0.00	0.00
47.50	0.00	0	453.50	0.00	0.00	0.00
50.00	0.00	0	453.50	0.00	0.00	0.00
52.50	0.00	0	453.50	0.00	0.00	0.00
55.00	0.00	0	453.50	0.00	0.00	0.00
57.50	0.00	0	453.50	0.00	0.00	0.00
60.00	0.00	0	453.50	0.00	0.00	0.00
62.50	0.00	0	453.50	0.00	0.00	0.00
65.00	0.00	0	453.50	0.00	0.00	0.00
67.50	0.00	0	453.50	0.00	0.00	0.00
70.00	0.00	0	453.50	0.00	0.00	0.00

Stage-Discharge for Pond IS-2B:

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
453.50	0.00	0.00	0.00
453.70	0.30	0.30	0.00
453.90	0.30	0.30	0.00
454.10	0.30	0.30	0.00
454.30	0.30	0.30	0.00
454.50	0.30	0.30	0.00
454.70	0.30	0.30	0.00
454.90	0.48	0.30	0.18
455.10	1.23	0.30	0.93
455.30	2.52	0.30	2.22
455.50	4.04	0.30	3.74
455.70	5.57	0.30	5.27
455.90	7.27	0.30	6.97
456.10	9.10	0.30	8.81
456.30	11.03	0.30	10.73
456.50	12.99	0.30	12.69
456.70	14.90	0.30	14.60
456.90	16.67	0.30	16.37
457.10	18.09	0.30	17.79
457.30	20.08	0.30	19.78
457.50	22.41	0.30	22.11
457.70	24.52	0.30	24.22
457.90	26.46	0.30	26.16
458.10	28.27	0.30	27.97
458.30	29.97	0.30	29.67
458.50	31.57	0.30	31.27
458.70	32.78	0.30	32.48
458.90	33.86	0.30	33.56
459.10	34.91	**0.30**	34.61
459.30	35.93	**0.30**	35.63
459.50	36.92	0.30	36.62
459.70	37.88	0.30	37.58
459.90	38.82	0.30	38.52
460.10	39.74	0.30	39.44
460.30	40.63	0.30	40.33
460.50	41.51	0.30	41.21
460.70	42.37	0.30	42.07
460.90	43.21	0.30	42.91
461.10	44.04	0.30	43.74
461.30	44.85	0.30	44.55
461.50	45.64	0.30	45.34
461.70	46.42	0.30	46.12
461.90	47.19	0.30	46.89
462.10	47.95	0.30	47.65
462.30	48.69	0.30	48.39
462.50	49.43	0.30	49.13
462.70	50.15	0.30	49.85
462.90	50.86	0.30	50.56
463.10	51.56	0.30	51.26
463.30	52.26	0.30	51.96
463.50	52.94	0.30	52.64
463.70	53.62	0.30	53.31
463.90	54.28	0.30	53.98
464.10	54.94	0.30	54.64
464.30	55.59	0.30	55.29
464.50	56.23	0.30	55.93
464.70	56.87	0.30	56.57
464.90	57.50	0.30	57.20
465.10	58.12	0.30	57.82
465.30	58.73	0.30	58.43
465.50	59.34	0.30	59.04
465.70	59.95	0.30	59.64
465.90	**60.54**	0.30	**60.24**

Stage-Area-Storage for Pond IS-2B:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
453.50	2,462	0
453.70	2,462	197
453.90	2,462	394
454.10	2,462	591
454.30	2,462	788
454.50	2,462	985
454.70	2,462	1,400
454.90	2,462	1,815
455.10	2,462	2,229
455.30	2,462	2,635
455.50	2,462	3,036
455.70	2,462	3,430
455.90	2,462	3,822
456.10	2,462	4,211
456.30	2,462	4,589
456.50	2,462	4,957
456.70	2,462	5,315
456.90	2,462	5,666
457.10	2,462	6,007
457.30	2,462	6,332
457.50	2,462	6,639
457.70	2,462	6,925
457.90	2,462	7,183
458.10	2,462	7,403
458.30	2,462	7,605
458.50	2,462	7,802
458.70	2,462	7,999
458.90	2,462	8,196
459.10	**2,462**	8,393
459.30	**2,485**	8,542
459.50	2,485	8,547
459.70	2,485	8,551
459.90	2,485	8,556
460.10	2,485	8,560
460.30	2,485	8,565
460.50	2,485	8,570
460.70	2,485	8,574
460.90	2,485	8,579
461.10	2,485	8,583
461.30	2,485	8,588
461.50	2,485	8,593
461.70	2,485	8,597
461.90	2,485	8,602
462.10	2,485	8,606
462.30	2,485	8,611
462.50	2,485	8,616
462.70	2,485	8,620
462.90	2,485	8,625
463.10	2,485	8,629
463.30	2,485	8,634
463.50	2,485	8,639
463.70	2,485	8,643
463.90	2,485	8,648
464.10	2,485	8,652
464.30	2,485	8,657
464.50	2,485	8,662
464.70	2,485	8,666
464.90	2,485	8,671
465.10	2,485	8,675
465.30	2,485	8,680
465.50	2,485	8,685
465.70	2,485	8,689
465.90	2,485	**8,694**

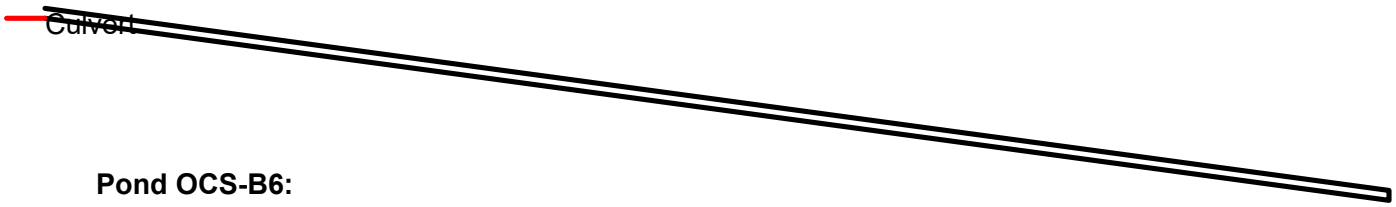
Summary for Pond OCS-B6:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond DB-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 434.50' @ 0.00 hrs

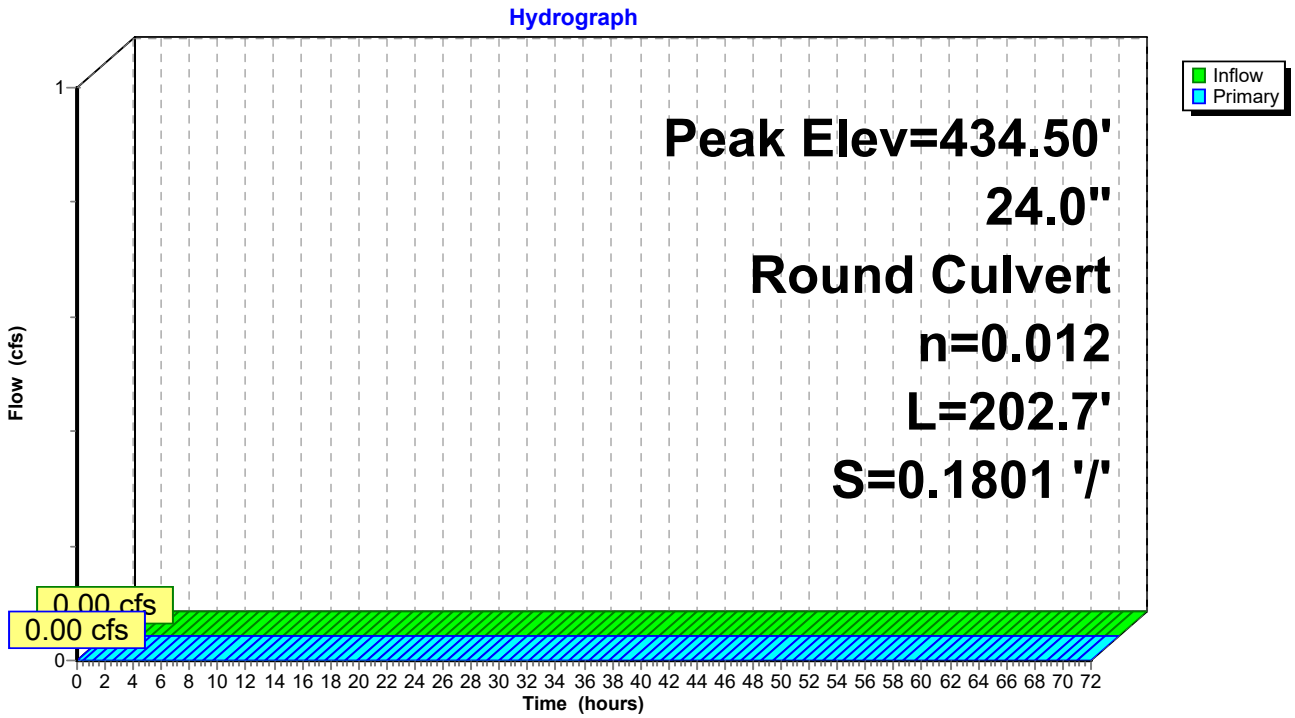
Device	Routing	Invert	Outlet Devices
#1	Primary	434.50'	**24.0" Round Culvert** L= 202.7' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 434.50' / 398.00' S= 0.1801 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=434.50' TW=398.00' (Dynamic Tailwater)
└**1=Culvert** (Controls 0.00 cfs)

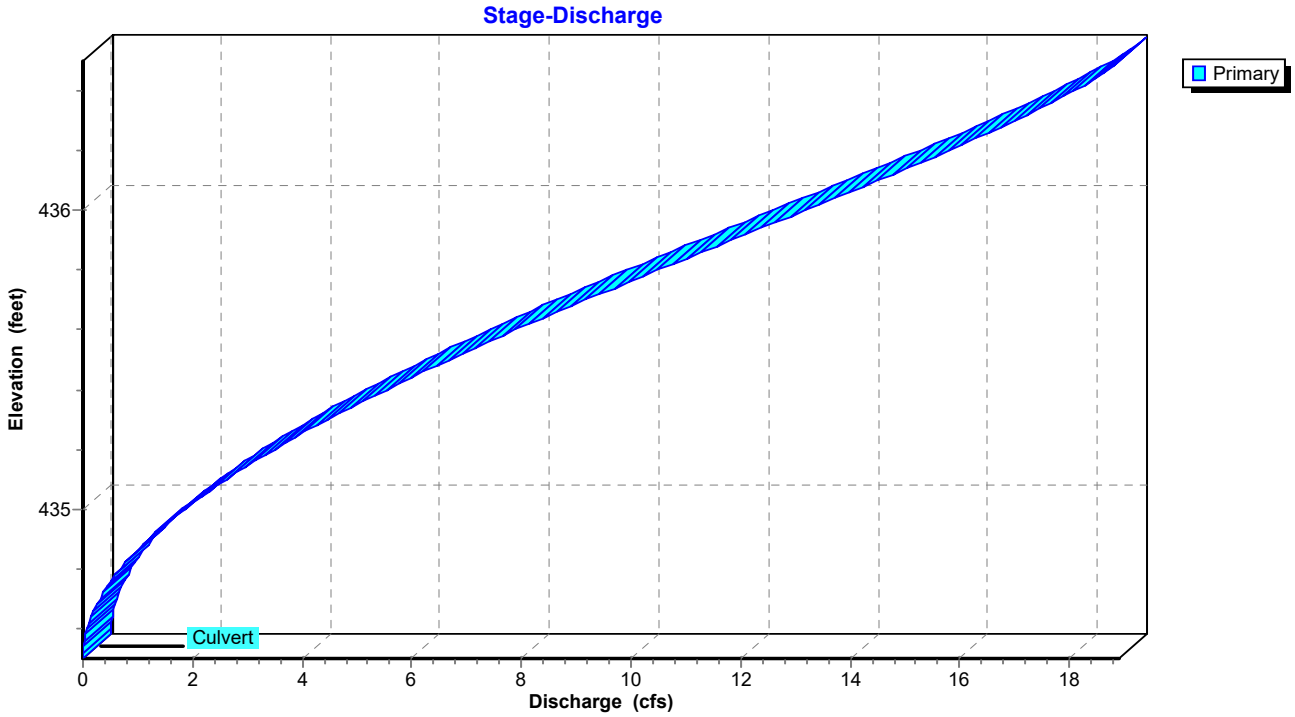


Pond OCS-B6:

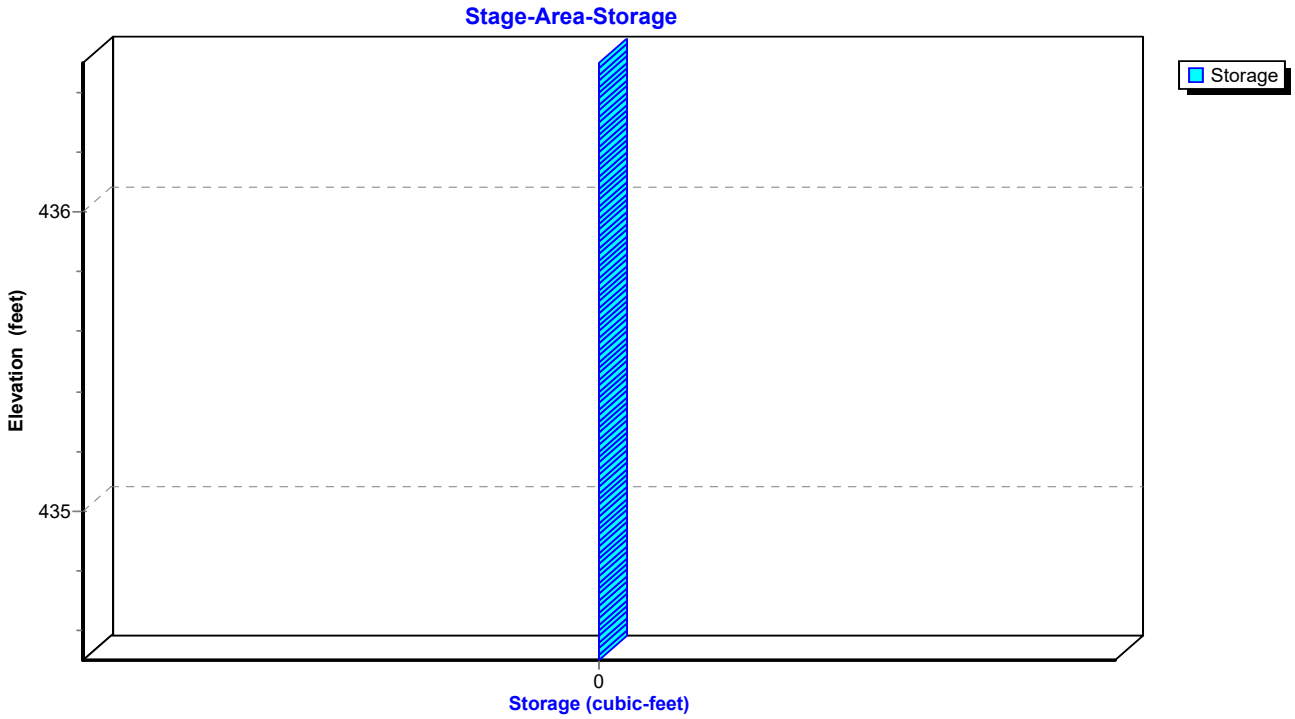
Pond OCS-B6:



Pond OCS-B6:



Pond OCS-B6:



Hydrograph for Pond OCS-B6:

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	**0.00**	**434.50**	**0.00**
1.00	0.00	434.50	0.00
2.00	0.00	434.50	0.00
3.00	0.00	434.50	0.00
4.00	0.00	434.50	0.00
5.00	0.00	434.50	0.00
6.00	0.00	434.50	0.00
7.00	0.00	434.50	0.00
8.00	0.00	434.50	0.00
9.00	0.00	434.50	0.00
10.00	0.00	434.50	0.00
11.00	0.00	434.50	0.00
12.00	0.00	434.50	0.00
13.00	0.00	434.50	0.00
14.00	0.00	434.50	0.00
15.00	0.00	434.50	0.00
16.00	0.00	434.50	0.00
17.00	0.00	434.50	0.00
18.00	0.00	434.50	0.00
19.00	0.00	434.50	0.00
20.00	0.00	434.50	0.00
21.00	0.00	434.50	0.00
22.00	0.00	434.50	0.00
23.00	0.00	434.50	0.00
24.00	0.00	434.50	0.00
25.00	0.00	434.50	0.00
26.00	0.00	434.50	0.00
27.00	0.00	434.50	0.00
28.00	0.00	434.50	0.00
29.00	0.00	434.50	0.00
30.00	0.00	434.50	0.00
31.00	0.00	434.50	0.00
32.00	0.00	434.50	0.00
33.00	0.00	434.50	0.00
34.00	0.00	434.50	0.00
35.00	0.00	434.50	0.00
36.00	0.00	434.50	0.00
37.00	0.00	434.50	0.00
38.00	0.00	434.50	0.00
39.00	0.00	434.50	0.00
40.00	0.00	434.50	0.00
41.00	0.00	434.50	0.00
42.00	0.00	434.50	0.00
43.00	0.00	434.50	0.00
44.00	0.00	434.50	0.00
45.00	0.00	434.50	0.00
46.00	0.00	434.50	0.00
47.00	0.00	434.50	0.00
48.00	0.00	434.50	0.00
49.00	0.00	434.50	0.00
50.00	0.00	434.50	0.00
51.00	0.00	434.50	0.00
52.00	0.00	434.50	0.00
53.00	0.00	434.50	0.00
54.00	0.00	434.50	0.00
55.00	0.00	434.50	0.00
56.00	0.00	434.50	0.00
57.00	0.00	434.50	0.00
58.00	0.00	434.50	0.00
59.00	0.00	434.50	0.00
60.00	0.00	434.50	0.00
61.00	0.00	434.50	0.00
62.00	0.00	434.50	0.00
63.00	0.00	434.50	0.00
64.00	0.00	434.50	0.00
65.00	0.00	434.50	0.00
66.00	0.00	434.50	0.00
67.00	0.00	434.50	0.00
68.00	0.00	434.50	0.00
69.00	0.00	434.50	0.00
70.00	0.00	434.50	0.00
71.00	0.00	434.50	0.00
72.00	0.00	434.50	0.00

Stage-Discharge for Pond OCS-B6:

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
434.50	0.00	435.03	2.07	435.56	7.41	436.09	14.37
434.51	0.00	435.04	2.14	435.57	7.53	436.10	14.50
434.52	0.00	435.05	2.22	435.58	7.65	436.11	14.64
434.53	0.01	435.06	2.29	435.59	7.78	436.12	14.77
434.54	0.01	435.07	2.37	435.60	7.90	436.13	14.90
434.55	0.02	435.08	2.45	435.61	8.03	436.14	15.03
434.56	0.03	435.09	2.53	435.62	8.15	436.15	15.16
434.57	0.04	435.10	2.61	435.63	8.28	436.16	15.28
434.58	0.05	435.11	2.70	435.64	8.41	436.17	15.41
434.59	0.06	435.12	2.78	435.65	8.53	436.18	15.54
434.60	0.08	435.13	2.86	435.66	8.66	436.19	15.67
434.61	0.10	435.14	2.95	435.67	8.79	436.20	15.79
434.62	0.11	435.15	3.04	435.68	8.92	436.21	15.92
434.63	0.13	435.16	3.13	435.69	9.05	436.22	16.04
434.64	0.15	435.17	3.22	435.70	9.18	436.23	16.17
434.65	0.18	435.18	3.31	435.71	9.31	436.24	16.29
434.66	0.20	435.19	3.40	435.72	9.44	436.25	16.41
434.67	0.23	435.20	3.49	435.73	9.57	436.26	16.53
434.68	0.25	435.21	3.58	435.74	9.70	436.27	16.65
434.69	0.28	435.22	3.68	435.75	9.83	436.28	16.77
434.70	0.31	435.23	3.77	435.76	9.96	436.29	16.89
434.71	0.34	435.24	3.87	435.77	10.09	436.30	17.00
434.72	0.38	435.25	3.97	435.78	10.22	436.31	17.12
434.73	0.41	435.26	4.06	435.79	10.36	436.32	17.23
434.74	0.45	435.27	4.16	435.80	10.49	436.33	17.35
434.75	0.48	435.28	4.26	435.81	10.62	436.34	17.46
434.76	0.52	435.29	4.36	435.82	10.76	436.35	17.57
434.77	0.56	435.30	4.47	435.83	10.89	436.36	17.67
434.78	0.60	435.31	4.57	435.84	11.02	436.37	17.78
434.79	0.64	435.32	4.67	435.85	11.16	436.38	17.88
434.80	0.69	435.33	4.78	435.86	11.29	436.39	17.99
434.81	0.73	435.34	4.88	435.87	11.43	436.40	18.09
434.82	0.78	435.35	4.99	435.88	11.56	436.41	18.18
434.83	0.83	435.36	5.10	435.89	11.69	436.42	18.28
434.84	0.88	435.37	5.21	435.90	11.83	436.43	18.37
434.85	0.93	435.38	5.32	435.91	11.96	436.44	18.46
434.86	0.98	435.39	5.43	435.92	12.10	436.45	18.55
434.87	1.04	435.40	5.54	435.93	12.23	436.46	18.63
434.88	1.09	435.41	5.65	435.94	12.37	436.47	18.71
434.89	1.15	435.42	5.76	435.95	12.50	436.48	18.78
434.90	1.20	435.43	5.87	435.96	12.64	436.49	18.85
434.91	1.26	435.44	5.99	435.97	12.77	436.50	**18.91**
434.92	1.32	435.45	6.10	435.98	12.91		
434.93	1.38	435.46	6.22	435.99	13.04		
434.94	1.45	435.47	6.33	436.00	13.17		
434.95	1.51	435.48	6.45	436.01	13.31		
434.96	1.58	435.49	6.57	436.02	13.44		
434.97	1.64	435.50	6.69	436.03	13.58		
434.98	1.71	435.51	6.80	436.04	13.71		
434.99	1.78	435.52	6.92	436.05	13.84		
435.00	1.85	435.53	7.04	436.06	13.98		
435.01	1.92	435.54	7.16	436.07	14.11		
435.02	1.99	435.55	7.29	436.08	14.24		

Stage-Area-Storage for Pond OCS-B6:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
434.50	**0**	435.56	0
434.52	0	435.58	0
434.54	0	435.60	0
434.56	0	435.62	0
434.58	0	435.64	0
434.60	0	435.66	0
434.62	0	435.68	0
434.64	0	435.70	0
434.66	0	435.72	0
434.68	0	435.74	0
434.70	0	435.76	0
434.72	0	435.78	0
434.74	0	435.80	0
434.76	0	435.82	0
434.78	0	435.84	0
434.80	0	435.86	0
434.82	0	435.88	0
434.84	0	435.90	0
434.86	0	435.92	0
434.88	0	435.94	0
434.90	0	435.96	0
434.92	0	435.98	0
434.94	0	436.00	0
434.96	0	436.02	0
434.98	0	436.04	0
435.00	0	436.06	0
435.02	0	436.08	0
435.04	0	436.10	0
435.06	0	436.12	0
435.08	0	436.14	0
435.10	0	436.16	0
435.12	0	436.18	0
435.14	0	436.20	0
435.16	0	436.22	0
435.18	0	436.24	0
435.20	0	436.26	0
435.22	0	436.28	0
435.24	0	436.30	0
435.26	0	436.32	0
435.28	0	436.34	0
435.30	0	436.36	0
435.32	0	436.38	0
435.34	0	436.40	0
435.36	0	436.42	0
435.38	0	436.44	0
435.40	0	436.46	0
435.42	0	436.48	0
435.44	0	436.50	0
435.46	0		
435.48	0		
435.50	0		
435.52	0		
435.54	0		

Time span=0.00-72.00 hrs, dt=0.00 hrs, 144001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method w/Net Flows

Subcatchment PDA-1A: (1) Runoff Area=39,498 sf 6.97% Impervious Runoff Depth=3.08"
Flow Length=134' Slope=0.0808 '/' Tc=14.7 min CN=74 Runoff=2.33 cfs 10,124 cf

Subcatchment PDA-1B: (2) Runoff Area=339,348 sf 63.09% Impervious Runoff Depth=4.61"
Flow Length=274' Tc=14.2 min CN=89 Runoff=29.46 cfs 130,354 cf

Subcatchment PDA-1C: (3) Runoff Area=184,184 sf 32.60% Impervious Runoff Depth=3.77"
Flow Length=619' Tc=15.1 min CN=81 Runoff=13.12 cfs 57,795 cf

Subcatchment PDA-1D: (4) Runoff Area=94,273 sf 0.98% Impervious Runoff Depth=2.79"
Flow Length=448' Tc=18.7 min CN=71 Runoff=4.52 cfs 21,953 cf

Subcatchment PDA-2A: (6, 7) Runoff Area=1,047,228 sf 1.25% Impervious Runoff Depth=2.98"
Flow Length=1,846' Tc=19.7 min CN=73 Runoff=52.64 cfs 260,156 cf

Subcatchment PDA-2B: (8) Runoff Area=89,115 sf 85.41% Impervious Runoff Depth=5.17"
Tc=5.0 min CN=94 Runoff=11.74 cfs 38,378 cf

Subcatchment PDA-2C: (9) Runoff Area=206,758 sf 18.78% Impervious Runoff Depth=3.56"
Flow Length=414' Tc=9.4 min CN=79 Runoff=16.72 cfs 61,403 cf

Subcatchment PDA-2D: (10) Runoff Area=131,825 sf 51.04% Impervious Runoff Depth=4.29"
Tc=5.0 min CN=86 Runoff=15.26 cfs 47,083 cf

Subcatchment PDA-DB-1: (5) Runoff Area=45,660 sf 0.00% Impervious Runoff Depth=3.08"
Tc=5.0 min CN=74 Runoff=3.85 cfs 11,704 cf

Subcatchment PDA-DB-2: (11) Runoff Area=72,455 sf 0.00% Impervious Runoff Depth=3.08"
Tc=5.0 min CN=74 Runoff=6.11 cfs 18,572 cf

Reach DP-1: Inflow=20.05 cfs 161,180 cf
Outflow=20.05 cfs 161,180 cf

Reach DP-2: Inflow=64.08 cfs 399,432 cf
Outflow=64.08 cfs 399,432 cf

Pond BMH-1B: Peak Elev=438.81' Inflow=29.46 cfs 130,354 cf
Primary=19.32 cfs 93,540 cf Secondary=17.12 cfs 36,811 cf Outflow=29.46 cfs 130,351 cf

Pond BMH-2B: Peak Elev=459.52' Inflow=18.38 cfs 39,353 cf
Primary=10.10 cfs 27,091 cf Secondary=13.78 cfs 12,262 cf Outflow=18.46 cfs 39,353 cf

Pond BR-1C: Peak Elev=413.95' Storage=11,488 cf Inflow=13.12 cfs 57,795 cf
Primary=11.96 cfs 57,888 cf Secondary=0.00 cfs 0 cf Outflow=11.96 cfs 57,888 cf

Pond BR-2C: Peak Elev=440.03' Storage=16,723 cf Inflow=16.72 cfs 61,403 cf
Outflow=11.54 cfs 61,529 cf

Pond BR-2D: Peak Elev=413.95' Storage=11,724 cf Inflow=15.26 cfs 47,083 cf
Primary=11.91 cfs 47,172 cf Secondary=0.00 cfs 0 cf Outflow=11.91 cfs 47,172 cf

Pond DB-1: Peak Elev=401.83' Storage=27,963 cf Inflow=38.48 cfs 129,145 cf
Primary=15.72 cfs 129,103 cf Secondary=0.00 cfs 0 cf Outflow=15.72 cfs 129,103 cf

Pond DB-2: Peak Elev=396.09' Storage=29,775 cf Inflow=35.28 cfs 139,535 cf
Primary=12.77 cfs 139,276 cf Secondary=0.00 cfs 0 cf Outflow=12.77 cfs 139,276 cf

Pond IS-1B: Peak Elev=438.53' Storage=31,245 cf Inflow=19.32 cfs 93,540 cf
Discarded=0.62 cfs 72,576 cf Primary=0.00 cfs 0 cf Secondary=8.59 cfs 22,743 cf Outflow=9.21 cfs 95,318 cf

Pond IS-2B: Peak Elev=459.46' Storage=8,546 cf Inflow=10.10 cfs 27,091 cf
Discarded=0.30 cfs 27,207 cf Primary=7.79 cfs 975 cf Outflow=8.09 cfs 28,182 cf

Pond OCS-B6: Peak Elev=435.65' Inflow=8.59 cfs 22,743 cf
24.0" Round Culvert n=0.012 L=202.7' S=0.1801 '/' Outflow=8.59 cfs 22,743 cf

Total Runoff Area = 2,250,344 sf Runoff Volume = 657,523 cf Average Runoff Depth = 3.51"
78.98% Pervious = 1,777,237 sf 21.02% Impervious = 473,107 sf

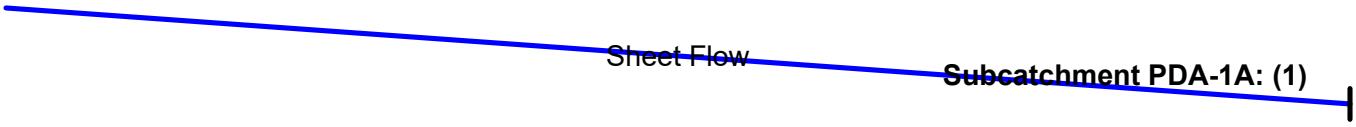
Summary for Subcatchment PDA-1A: (1)

Runoff = 2.33 cfs @ 12.17 hrs, Volume= 10,124 cf, Depth= 3.08"
Routed to Reach DP-1 :

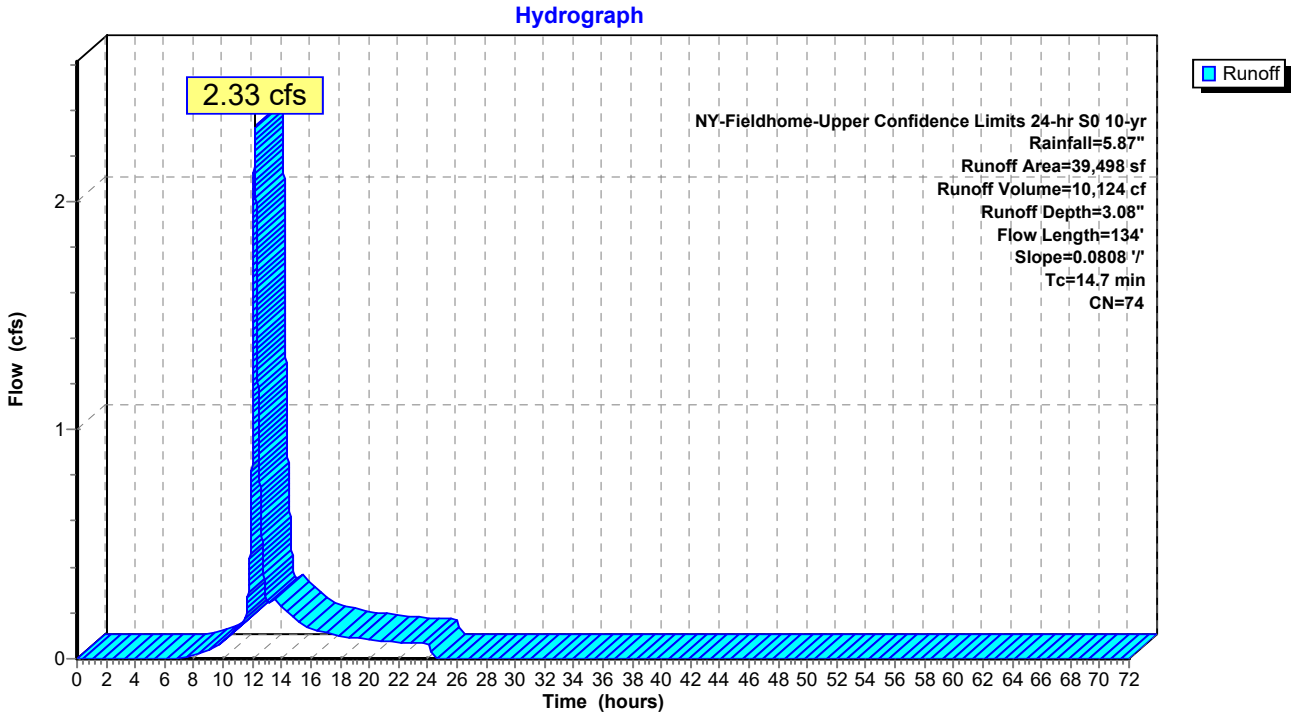
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

	Area (sf)	CN	Description
	23,870	74	>75% Grass cover, Good, HSG C
*	2,753	98	Paved driveway, HSG C
	12,875	70	Woods, Good, HSG C
	39,498	74	Weighted Average
	36,745		93.03% Pervious Area
	2,753		6.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	134	0.0808	0.15		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.55"



Subcatchment PDA-1A: (1)



Hydrograph for Subcatchment PDA-1A: (1)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.38	0.00	0.00
5.00	0.50	0.00	0.00
6.00	0.63	0.00	0.00
7.00	0.77	0.00	0.00
8.00	0.93	0.01	0.02
9.00	1.12	0.04	0.03
10.00	1.39	0.11	0.07
11.00	1.76	0.25	0.14
12.00	3.16	1.01	**1.00**
13.00	4.12	1.69	**0.25**
14.00	4.49	1.96	0.23
15.00	4.75	2.17	0.18
16.00	4.94	2.32	0.13
17.00	5.10	2.45	0.11
18.00	5.25	2.56	0.10
19.00	5.37	2.66	0.09
20.00	5.49	2.76	0.08
21.00	5.59	2.85	0.08
22.00	5.69	2.93	0.07
23.00	5.78	3.00	0.07
24.00	**5.87**	**3.08**	0.07
25.00	5.87	3.08	0.00
26.00	5.87	3.08	0.00
27.00	5.87	3.08	0.00
28.00	5.87	3.08	0.00
29.00	5.87	3.08	0.00
30.00	5.87	3.08	0.00
31.00	5.87	3.08	0.00
32.00	5.87	3.08	0.00
33.00	5.87	3.08	0.00
34.00	5.87	3.08	0.00
35.00	5.87	3.08	0.00
36.00	5.87	3.08	0.00
37.00	5.87	3.08	0.00
38.00	5.87	3.08	0.00
39.00	5.87	3.08	0.00
40.00	5.87	3.08	0.00
41.00	5.87	3.08	0.00
42.00	5.87	3.08	0.00
43.00	5.87	3.08	0.00
44.00	5.87	3.08	0.00
45.00	5.87	3.08	0.00
46.00	5.87	3.08	0.00
47.00	5.87	3.08	0.00
48.00	5.87	3.08	0.00
49.00	5.87	3.08	0.00
50.00	5.87	3.08	0.00
51.00	5.87	3.08	0.00
52.00	5.87	3.08	0.00
53.00	5.87	3.08	0.00
54.00	5.87	3.08	0.00
55.00	5.87	3.08	0.00
56.00	5.87	3.08	0.00
57.00	5.87	3.08	0.00
58.00	5.87	3.08	0.00
59.00	5.87	3.08	0.00
60.00	5.87	3.08	0.00
61.00	5.87	3.08	0.00
62.00	5.87	3.08	0.00
63.00	5.87	3.08	0.00
64.00	5.87	3.08	0.00
65.00	5.87	3.08	0.00
66.00	5.87	3.08	0.00
67.00	5.87	3.08	0.00
68.00	5.87	3.08	0.00
69.00	5.87	3.08	0.00
70.00	5.87	3.08	0.00
71.00	5.87	3.08	0.00
72.00	5.87	3.08	0.00

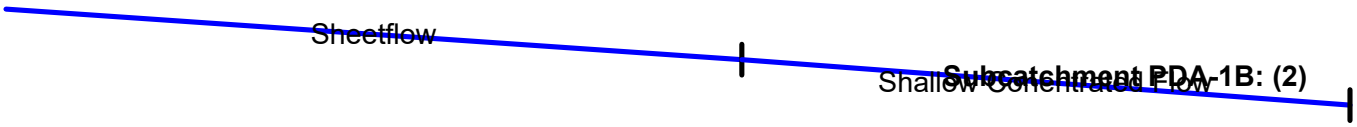
Summary for Subcatchment PDA-1B: (2)

Runoff = 29.46 cfs @ 12.15 hrs, Volume= 130,354 cf, Depth= 4.61"
Routed to Pond BMH-1B :

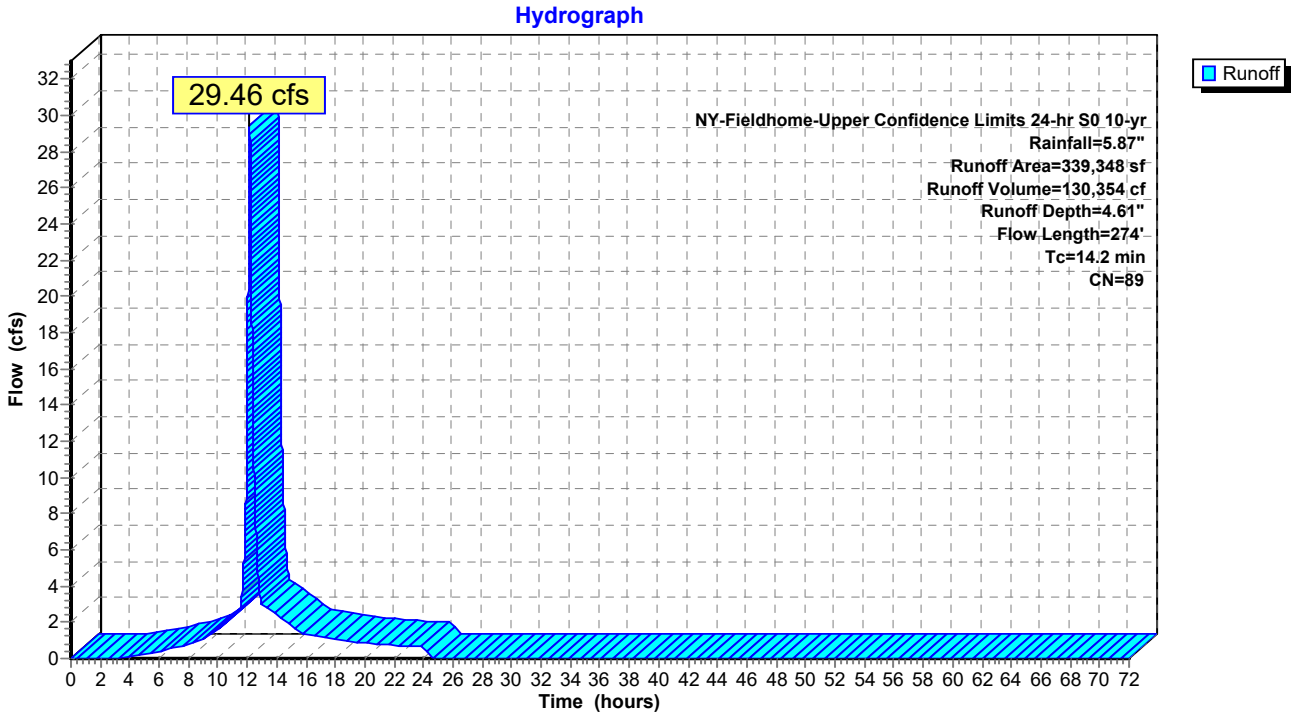
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

	Area (sf)	CN	Description
	121,021	74	>75% Grass cover, Good, HSG C
*	214,085	98	Paved parking, curbs, drivways, roofs, walls HSG C
	4,242	70	Woods, Good, HSG C
	339,348	89	Weighted Average
	125,263		36.91% Pervious Area
	214,085		63.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.8	150	0.1195	0.18		**Sheet Flow, Sheetflow** Woods: Light underbrush n= 0.400 P2= 3.55"
0.4	124	0.1299	5.80		**Shallow Concentrated Flow, Shallow Conentrated Flow** Unpaved Kv= 16.1 fps
14.2	274	Total			



Subcatchment PDA-1B: (2)



Hydrograph for Subcatchment PDA-1B: (2)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.01
4.00	0.38	0.01	0.14
5.00	0.50	0.04	0.27
6.00	0.63	0.09	0.40
7.00	0.77	0.15	0.56
8.00	0.93	0.24	0.76
9.00	1.12	0.36	1.02
10.00	1.39	0.55	1.63
11.00	1.76	0.84	2.53
12.00	3.16	2.04	**14.15**
13.00	4.12	2.94	**2.74**
14.00	4.49	3.28	2.42
15.00	4.75	3.54	1.87
16.00	4.94	3.72	1.35
17.00	5.10	3.87	1.17
18.00	5.25	4.01	1.03
19.00	5.37	4.13	0.93
20.00	5.49	4.24	0.85
21.00	5.59	4.34	0.78
22.00	5.69	4.44	0.73
23.00	5.78	4.53	0.69
24.00	**5.87**	**4.61**	0.65
25.00	5.87	4.61	0.00
26.00	5.87	4.61	0.00
27.00	5.87	4.61	0.00
28.00	5.87	4.61	0.00
29.00	5.87	4.61	0.00
30.00	5.87	4.61	0.00
31.00	5.87	4.61	0.00
32.00	5.87	4.61	0.00
33.00	5.87	4.61	0.00
34.00	5.87	4.61	0.00
35.00	5.87	4.61	0.00
36.00	5.87	4.61	0.00
37.00	5.87	4.61	0.00
38.00	5.87	4.61	0.00
39.00	5.87	4.61	0.00
40.00	5.87	4.61	0.00
41.00	5.87	4.61	0.00
42.00	5.87	4.61	0.00
43.00	5.87	4.61	0.00
44.00	5.87	4.61	0.00
45.00	5.87	4.61	0.00
46.00	5.87	4.61	0.00
47.00	5.87	4.61	0.00
48.00	5.87	4.61	0.00
49.00	5.87	4.61	0.00
50.00	5.87	4.61	0.00
51.00	5.87	4.61	0.00
52.00	5.87	4.61	0.00
53.00	5.87	4.61	0.00
54.00	5.87	4.61	0.00
55.00	5.87	4.61	0.00
56.00	5.87	4.61	0.00
57.00	5.87	4.61	0.00
58.00	5.87	4.61	0.00
59.00	5.87	4.61	0.00
60.00	5.87	4.61	0.00
61.00	5.87	4.61	0.00
62.00	5.87	4.61	0.00
63.00	5.87	4.61	0.00
64.00	5.87	4.61	0.00
65.00	5.87	4.61	0.00
66.00	5.87	4.61	0.00
67.00	5.87	4.61	0.00
68.00	5.87	4.61	0.00
69.00	5.87	4.61	0.00
70.00	5.87	4.61	0.00
71.00	5.87	4.61	0.00
72.00	5.87	4.61	0.00

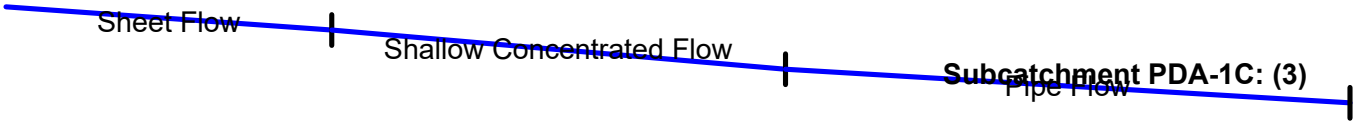
Summary for Subcatchment PDA-1C: (3)

Runoff = 13.12 cfs @ 12.16 hrs, Volume= 57,795 cf, Depth= 3.77"
Routed to Pond BR-1C :

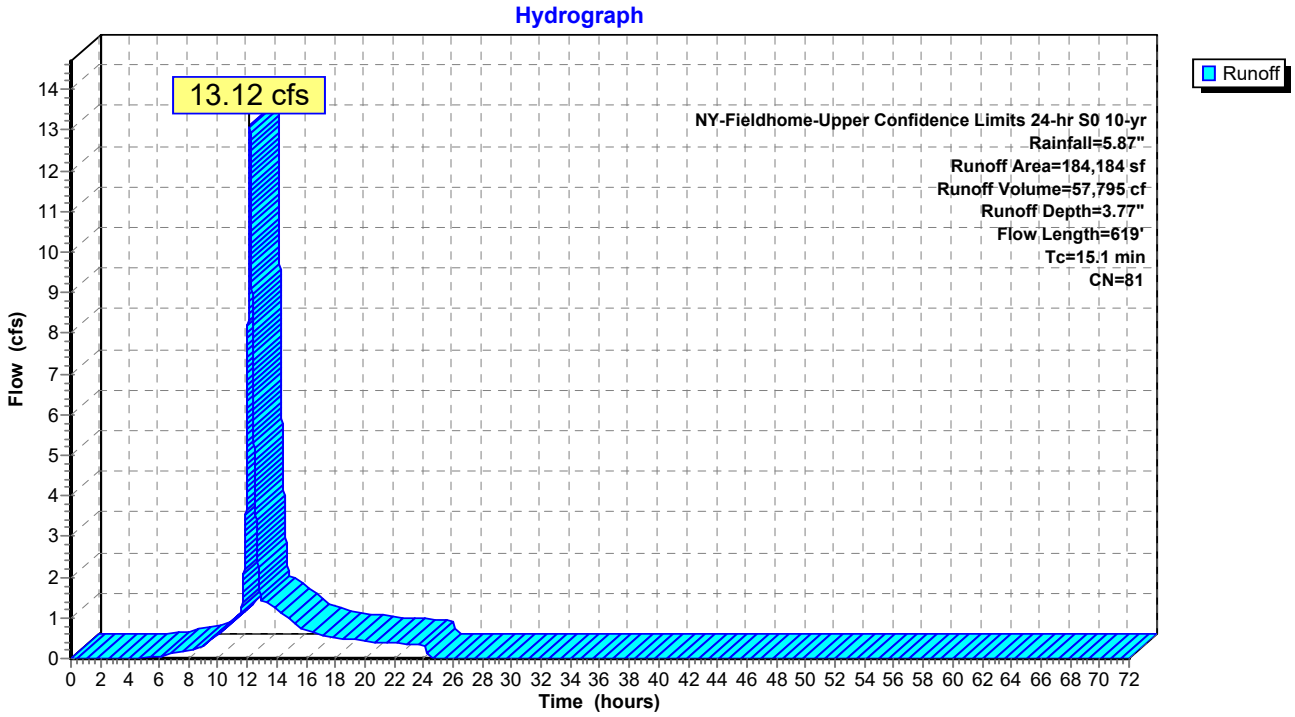
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

	Area (sf)	CN	Description
	107,961	74	>75% Grass cover, Good, HSG C
*	1,220	98	Water Surface (pool), HSG C
	58,823	98	Paved parking, curbs, driveways, sidewalks, roofs, walls, HSG C
	16,180	70	Woods, Good, HSG C
	184,184	81	Weighted Average
	124,141		67.40% Pervious Area
	60,043		32.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	150	0.1091	0.17		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.55"
0.6	209	0.1322	5.85		**Shallow Concentrated Flow, Shallow Concentrated Flow** Unpaved Kv= 16.1 fps
0.2	260	0.0913	21.76	68.36	**Pipe Channel, Pipe Flow** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
15.1	619	Total			



Subcatchment PDA-1C: (3)



Hydrograph for Subcatchment PDA-1C: (3)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.38	0.00	0.00
5.00	0.50	0.00	0.00
6.00	0.63	0.01	0.06
7.00	0.77	0.03	0.12
8.00	0.93	0.08	0.20
9.00	1.12	0.14	0.32
10.00	1.39	0.26	0.57
11.00	1.76	0.46	0.98
12.00	3.16	1.43	**5.84**
13.00	4.12	2.23	**1.36**
14.00	4.49	2.54	1.20
15.00	4.75	2.77	0.93
16.00	4.94	2.94	0.68
17.00	5.10	3.08	0.59
18.00	5.25	3.20	0.52
19.00	5.37	3.32	0.47
20.00	5.49	3.42	0.43
21.00	5.59	3.51	0.40
22.00	5.69	3.60	0.37
23.00	5.78	3.69	0.35
24.00	**5.87**	**3.77**	0.33
25.00	5.87	3.77	0.00
26.00	5.87	3.77	0.00
27.00	5.87	3.77	0.00
28.00	5.87	3.77	0.00
29.00	5.87	3.77	0.00
30.00	5.87	3.77	0.00
31.00	5.87	3.77	0.00
32.00	5.87	3.77	0.00
33.00	5.87	3.77	0.00
34.00	5.87	3.77	0.00
35.00	5.87	3.77	0.00
36.00	5.87	3.77	0.00
37.00	5.87	3.77	0.00
38.00	5.87	3.77	0.00
39.00	5.87	3.77	0.00
40.00	5.87	3.77	0.00
41.00	5.87	3.77	0.00
42.00	5.87	3.77	0.00
43.00	5.87	3.77	0.00
44.00	5.87	3.77	0.00
45.00	5.87	3.77	0.00
46.00	5.87	3.77	0.00
47.00	5.87	3.77	0.00
48.00	5.87	3.77	0.00
49.00	5.87	3.77	0.00
50.00	5.87	3.77	0.00
51.00	5.87	3.77	0.00
52.00	5.87	3.77	0.00
53.00	5.87	3.77	0.00
54.00	5.87	3.77	0.00
55.00	5.87	3.77	0.00
56.00	5.87	3.77	0.00
57.00	5.87	3.77	0.00
58.00	5.87	3.77	0.00
59.00	5.87	3.77	0.00
60.00	5.87	3.77	0.00
61.00	5.87	3.77	0.00
62.00	5.87	3.77	0.00
63.00	5.87	3.77	0.00
64.00	5.87	3.77	0.00
65.00	5.87	3.77	0.00
66.00	5.87	3.77	0.00
67.00	5.87	3.77	0.00
68.00	5.87	3.77	0.00
69.00	5.87	3.77	0.00
70.00	5.87	3.77	0.00
71.00	5.87	3.77	0.00
72.00	5.87	3.77	0.00

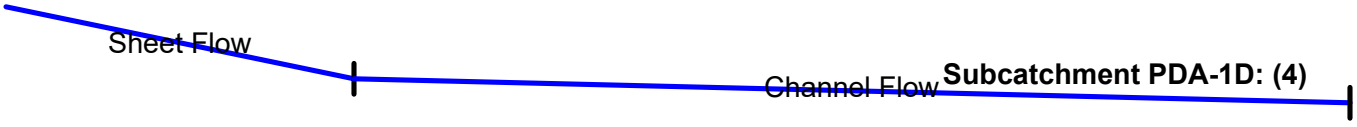
Summary for Subcatchment PDA-1D: (4)

Runoff = 4.52 cfs @ 12.24 hrs, Volume= 21,953 cf, Depth= 2.79"
Routed to Reach DP-1 :

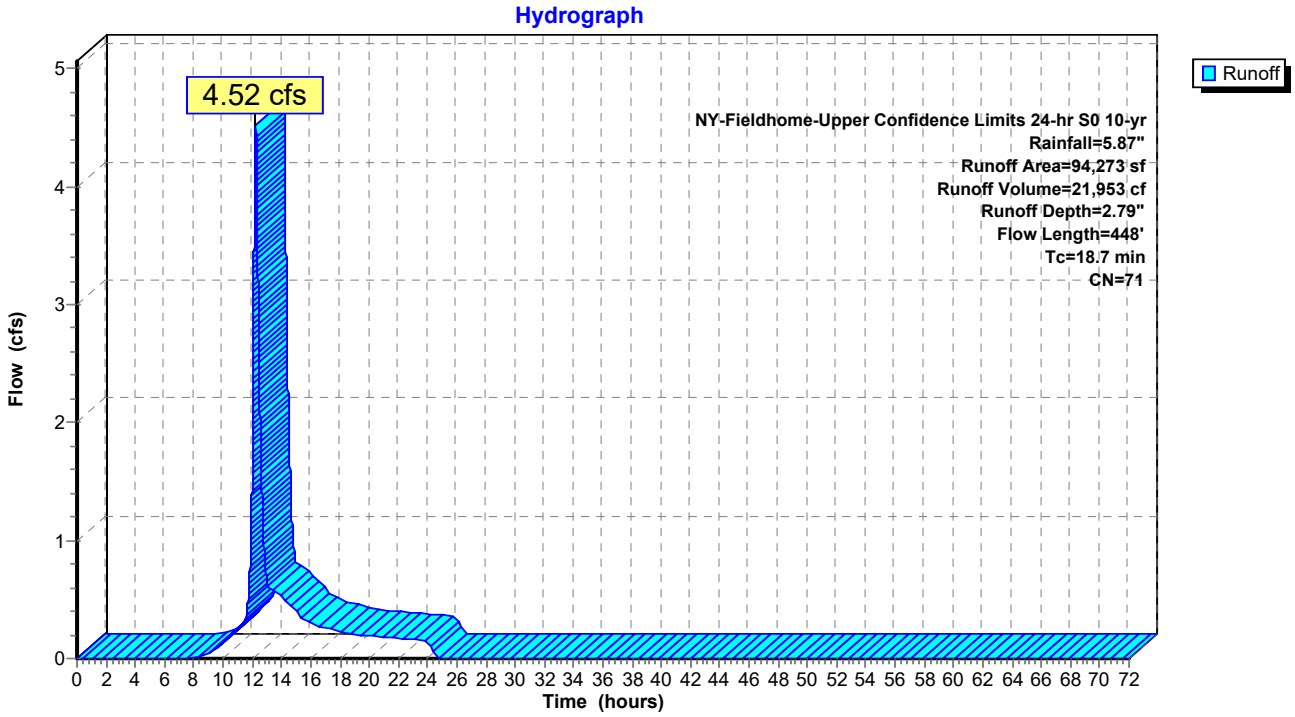
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

	Area (sf)	CN	Description
	23,361	74	>75% Grass cover, Good, HSG C
*	927	98	Concrete Pad for Utility Equipment, HSG C
	69,985	70	Woods, Good, HSG C
	94,273	71	Weighted Average
	93,346		99.02% Pervious Area
	927		0.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	116	0.0979	0.16		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.55"
6.5	332	0.0114	0.85	3.15	**Channel Flow, Channel Flow** Area= 3.7 sf Perim= 9.4' r= 0.39' n= 0.100 Very weedy reaches w/pools
18.7	448	Total			



Subcatchment PDA-1D: (4)



Hydrograph for Subcatchment PDA-1D: (4)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.38	0.00	0.00
5.00	0.50	0.00	0.00
6.00	0.63	0.00	0.00
7.00	0.77	0.00	0.00
8.00	0.93	0.00	0.01
9.00	1.12	0.02	0.05
10.00	1.39	0.07	0.13
11.00	1.76	0.18	0.27
12.00	3.16	0.85	**1.60**
13.00	4.12	1.48	**0.63**
14.00	4.49	1.74	0.52
15.00	4.75	1.93	0.41
16.00	4.94	2.07	0.30
17.00	5.10	2.20	0.26
18.00	5.25	2.30	0.23
19.00	5.37	2.40	0.21
20.00	5.49	2.49	0.19
21.00	5.59	2.57	0.18
22.00	5.69	2.65	0.17
23.00	5.78	2.73	0.16
24.00	**5.87**	**2.79**	0.15
25.00	5.87	2.79	0.00
26.00	5.87	2.79	0.00
27.00	5.87	2.79	0.00
28.00	5.87	2.79	0.00
29.00	5.87	2.79	0.00
30.00	5.87	2.79	0.00
31.00	5.87	2.79	0.00
32.00	5.87	2.79	0.00
33.00	5.87	2.79	0.00
34.00	5.87	2.79	0.00
35.00	5.87	2.79	0.00
36.00	5.87	2.79	0.00
37.00	5.87	2.79	0.00
38.00	5.87	2.79	0.00
39.00	5.87	2.79	0.00
40.00	5.87	2.79	0.00
41.00	5.87	2.79	0.00
42.00	5.87	2.79	0.00
43.00	5.87	2.79	0.00
44.00	5.87	2.79	0.00
45.00	5.87	2.79	0.00
46.00	5.87	2.79	0.00
47.00	5.87	2.79	0.00
48.00	5.87	2.79	0.00
49.00	5.87	2.79	0.00
50.00	5.87	2.79	0.00
51.00	5.87	2.79	0.00
52.00	5.87	2.79	0.00
53.00	5.87	2.79	0.00
54.00	5.87	2.79	0.00
55.00	5.87	2.79	0.00
56.00	5.87	2.79	0.00
57.00	5.87	2.79	0.00
58.00	5.87	2.79	0.00
59.00	5.87	2.79	0.00
60.00	5.87	2.79	0.00
61.00	5.87	2.79	0.00
62.00	5.87	2.79	0.00
63.00	5.87	2.79	0.00
64.00	5.87	2.79	0.00
65.00	5.87	2.79	0.00
66.00	5.87	2.79	0.00
67.00	5.87	2.79	0.00
68.00	5.87	2.79	0.00
69.00	5.87	2.79	0.00
70.00	5.87	2.79	0.00
71.00	5.87	2.79	0.00
72.00	5.87	2.79	0.00

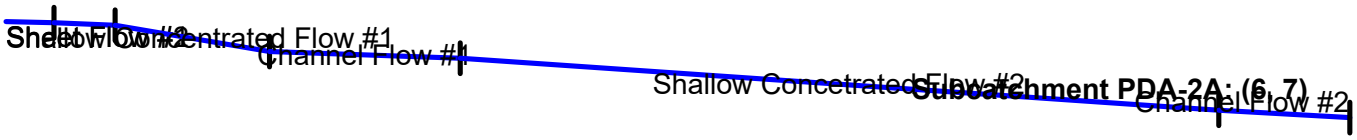
Summary for Subcatchment PDA-2A: (6, 7)

Runoff = 52.64 cfs @ 12.24 hrs, Volume= 260,156 cf, Depth= 2.98"
Routed to Reach DP-2 :

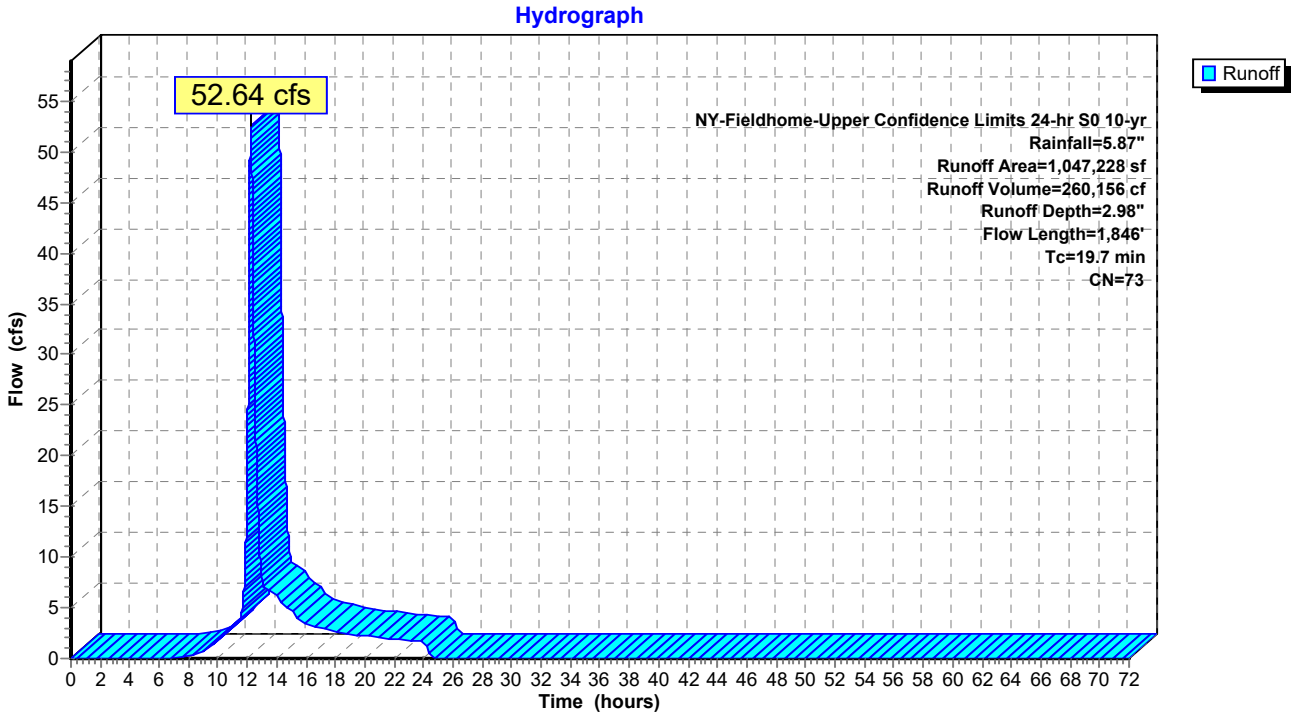
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

Area (sf)	CN	Description
191,228	74	>75% Grass cover, Good, HSG C
13,082	98	Paved sidewalks, roofs, HSG C
523,780	70	Woods, Good, HSG C
319,138	77	Woods, Good, HSG D
1,047,228	73	Weighted Average
1,034,146		98.75% Pervious Area
13,082		1.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	66	0.0299	0.19		**Sheet Flow, Sheet Flow #1** Grass: Short n= 0.150 P2= 3.55"
7.8	84	0.0561	0.18		**Sheet Flow, Sheet Flow #2** Grass: Dense n= 0.240 P2= 3.55"
0.5	212	0.2244	7.63		**Shallow Concentrated Flow, Shallow Concentrated Flow #1** Unpaved Kv= 16.1 fps
0.8	262	0.0469	5.58	10.04	**Channel Flow, Channel Flow #1** Area= 1.8 sf Perim= 4.8' r= 0.38' n= 0.030 Earth, grassed & winding
3.6	1,042	0.0908	4.85		**Shallow Concentrated Flow, Shallow Concetrated Flow #2** Unpaved Kv= 16.1 fps
1.3	180	0.0739	2.33	10.03	**Channel Flow, Channel Flow #2** Area= 4.3 sf Perim= 9.8' r= 0.44' n= 0.100 Very weedy reaches w/pools
19.7	1,846	Total			



Subcatchment PDA-2A: (6, 7)



Hydrograph for Subcatchment PDA-2A: (6, 7)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.38	0.00	0.00
5.00	0.50	0.00	0.00
6.00	0.63	0.00	0.00
7.00	0.77	0.00	0.00
8.00	0.93	0.01	0.29
9.00	1.12	0.04	0.74
10.00	1.39	0.10	1.70
11.00	1.76	0.22	3.38
12.00	3.16	0.95	**18.25**
13.00	4.12	1.62	**7.67**
14.00	4.49	1.89	6.06
15.00	4.75	2.09	4.72
16.00	4.94	2.24	3.46
17.00	5.10	2.36	2.99
18.00	5.25	2.48	2.66
19.00	5.37	2.58	2.40
20.00	5.49	2.67	2.20
21.00	5.59	2.75	2.05
22.00	5.69	2.83	1.92
23.00	5.78	2.91	1.81
24.00	**5.87**	**2.98**	1.71
25.00	5.87	2.98	0.00
26.00	5.87	2.98	0.00
27.00	5.87	2.98	0.00
28.00	5.87	2.98	0.00
29.00	5.87	2.98	0.00
30.00	5.87	2.98	0.00
31.00	5.87	2.98	0.00
32.00	5.87	2.98	0.00
33.00	5.87	2.98	0.00
34.00	5.87	2.98	0.00
35.00	5.87	2.98	0.00
36.00	5.87	2.98	0.00
37.00	5.87	2.98	0.00
38.00	5.87	2.98	0.00
39.00	5.87	2.98	0.00
40.00	5.87	2.98	0.00
41.00	5.87	2.98	0.00
42.00	5.87	2.98	0.00
43.00	5.87	2.98	0.00
44.00	5.87	2.98	0.00
45.00	5.87	2.98	0.00
46.00	5.87	2.98	0.00
47.00	5.87	2.98	0.00
48.00	5.87	2.98	0.00
49.00	5.87	2.98	0.00
50.00	5.87	2.98	0.00
51.00	5.87	2.98	0.00
52.00	5.87	2.98	0.00
53.00	5.87	2.98	0.00
54.00	5.87	2.98	0.00
55.00	5.87	2.98	0.00
56.00	5.87	2.98	0.00
57.00	5.87	2.98	0.00
58.00	5.87	2.98	0.00
59.00	5.87	2.98	0.00
60.00	5.87	2.98	0.00
61.00	5.87	2.98	0.00
62.00	5.87	2.98	0.00
63.00	5.87	2.98	0.00
64.00	5.87	2.98	0.00
65.00	5.87	2.98	0.00
66.00	5.87	2.98	0.00
67.00	5.87	2.98	0.00
68.00	5.87	2.98	0.00
69.00	5.87	2.98	0.00
70.00	5.87	2.98	0.00
71.00	5.87	2.98	0.00
72.00	5.87	2.98	0.00

Summary for Subcatchment PDA-2B: (8)

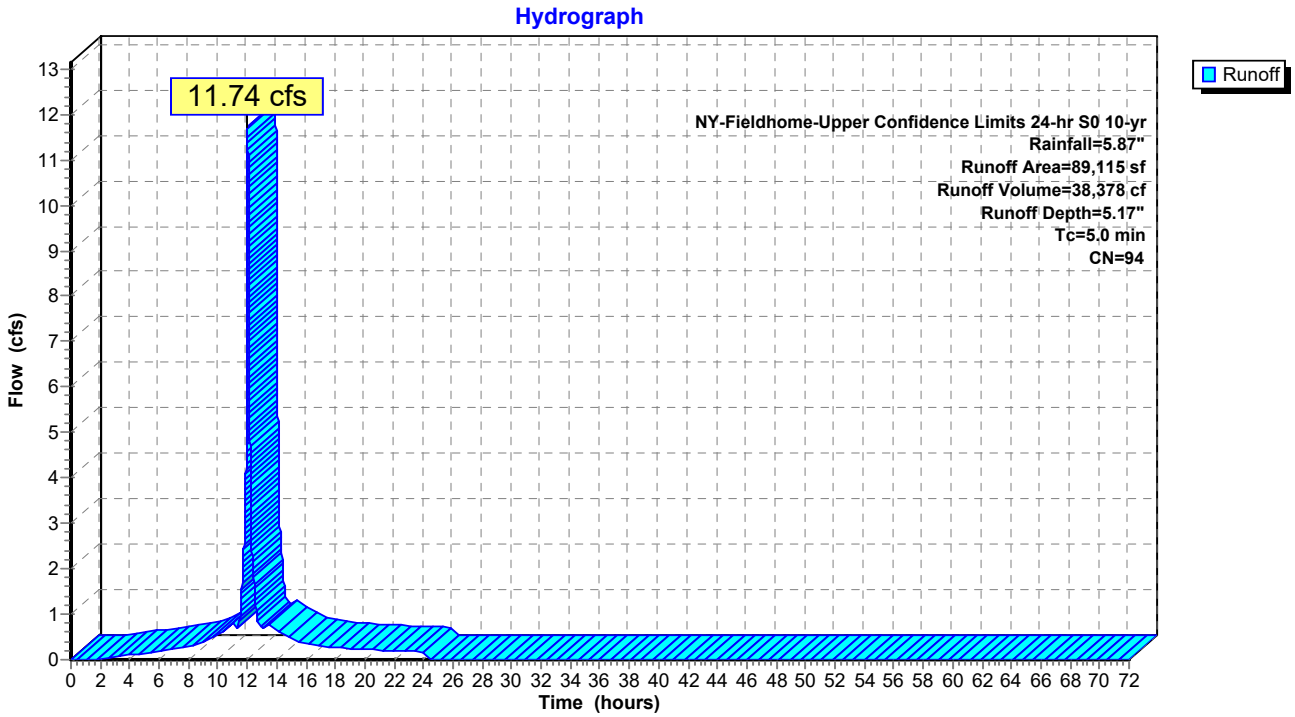
Runoff = 11.74 cfs @ 12.03 hrs, Volume= 38,378 cf, Depth= 5.17"
Routed to Pond BMH-2B :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

Area (sf)	CN	Description
13,002	74	>75% Grass cover, Good, HSG C
76,113	98	Paved parking, curbs, driveways, sidewalks, roofs, walls, HSG C
89,115	94	Weighted Average
13,002		14.59% Pervious Area
76,113		85.41% Impervious Area

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

Subcatchment PDA-2B: (8)



Hydrograph for Subcatchment PDA-2B: (8)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.02
3.00	0.28	0.03	0.07
4.00	0.38	0.07	0.11
5.00	0.50	0.14	0.15
6.00	0.63	0.22	0.19
7.00	0.77	0.32	0.23
8.00	0.93	0.45	0.29
9.00	1.12	0.61	0.36
10.00	1.39	0.84	0.55
11.00	1.76	1.18	0.84
12.00	3.16	2.50	**10.91**
13.00	4.12	3.45	**0.65**
14.00	4.49	3.80	0.63
15.00	4.75	4.06	0.49
16.00	4.94	4.25	0.36
17.00	5.10	4.41	0.31
18.00	5.25	4.55	0.27
19.00	5.37	4.68	0.25
20.00	5.49	4.79	0.23
21.00	5.59	4.89	0.21
22.00	5.69	4.99	0.19
23.00	5.78	5.08	0.18
24.00	**5.87**	**5.17**	0.17
25.00	5.87	5.17	0.00
26.00	5.87	5.17	0.00
27.00	5.87	5.17	0.00
28.00	5.87	5.17	0.00
29.00	5.87	5.17	0.00
30.00	5.87	5.17	0.00
31.00	5.87	5.17	0.00
32.00	5.87	5.17	0.00
33.00	5.87	5.17	0.00
34.00	5.87	5.17	0.00
35.00	5.87	5.17	0.00
36.00	5.87	5.17	0.00
37.00	5.87	5.17	0.00
38.00	5.87	5.17	0.00
39.00	5.87	5.17	0.00
40.00	5.87	5.17	0.00
41.00	5.87	5.17	0.00
42.00	5.87	5.17	0.00
43.00	5.87	5.17	0.00
44.00	5.87	5.17	0.00
45.00	5.87	5.17	0.00
46.00	5.87	5.17	0.00
47.00	5.87	5.17	0.00
48.00	5.87	5.17	0.00
49.00	5.87	5.17	0.00
50.00	5.87	5.17	0.00
51.00	5.87	5.17	0.00
52.00	5.87	5.17	0.00
53.00	5.87	5.17	0.00
54.00	5.87	5.17	0.00
55.00	5.87	5.17	0.00
56.00	5.87	5.17	0.00
57.00	5.87	5.17	0.00
58.00	5.87	5.17	0.00
59.00	5.87	5.17	0.00
60.00	5.87	5.17	0.00
61.00	5.87	5.17	0.00
62.00	5.87	5.17	0.00
63.00	5.87	5.17	0.00
64.00	5.87	5.17	0.00
65.00	5.87	5.17	0.00
66.00	5.87	5.17	0.00
67.00	5.87	5.17	0.00
68.00	5.87	5.17	0.00
69.00	5.87	5.17	0.00
70.00	5.87	5.17	0.00
71.00	5.87	5.17	0.00
72.00	5.87	5.17	0.00

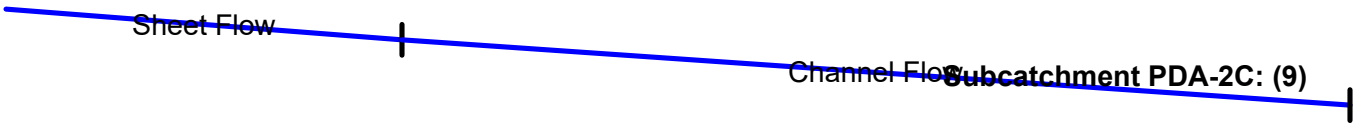
Summary for Subcatchment PDA-2C: (9)

Runoff = 16.72 cfs @ 12.08 hrs, Volume= 61,403 cf, Depth= 3.56"
Routed to Pond BR-2C :

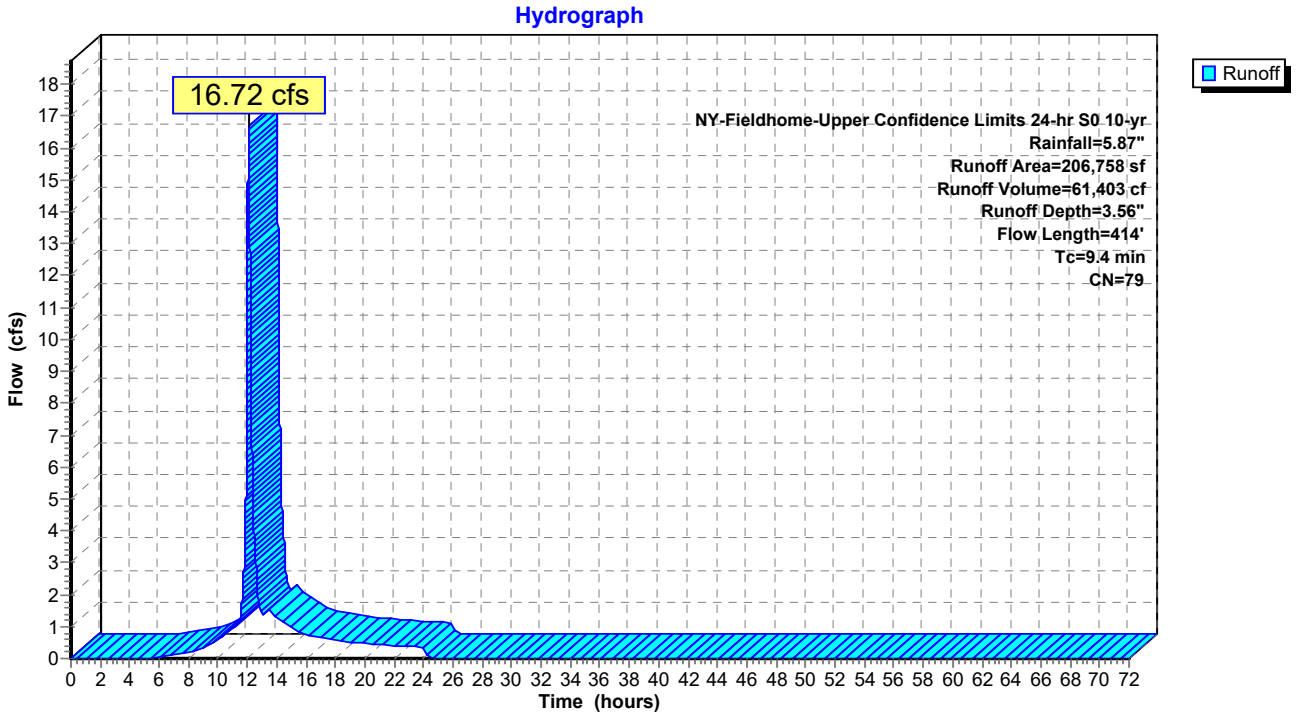
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

	Area (sf)	CN	Description
	167,934	74	>75% Grass cover, Good, HSG C
*	38,824	98	Paved sidewalks, roofs, walls, HSG C
	206,758	79	Weighted Average
	167,934		81.22% Pervious Area
	38,824		18.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	122	0.0365	0.24		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.55"
0.8	292	0.0324	5.89	34.73	**Channel Flow, Channel Flow** Area= 5.9 sf Perim= 11.0' r= 0.54' n= 0.030 Short grass
9.4	414	Total			



Subcatchment PDA-2C: (9)



Hydrograph for Subcatchment PDA-2C: (9)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.38	0.00	0.00
5.00	0.50	0.00	0.00
6.00	0.63	0.00	0.03
7.00	0.77	0.02	0.10
8.00	0.93	0.05	0.19
9.00	1.12	0.11	0.31
10.00	1.39	0.21	0.59
11.00	1.76	0.39	1.06
12.00	3.16	1.30	**10.32**
13.00	4.12	2.06	**1.33**
14.00	4.49	2.36	1.27
15.00	4.75	2.59	1.00
16.00	4.94	2.75	0.73
17.00	5.10	2.89	0.63
18.00	5.25	3.01	0.56
19.00	5.37	3.12	0.51
20.00	5.49	3.23	0.47
21.00	5.59	3.32	0.43
22.00	5.69	3.41	0.41
23.00	5.78	3.49	0.38
24.00	**5.87**	**3.56**	0.36
25.00	5.87	3.56	0.00
26.00	5.87	3.56	0.00
27.00	5.87	3.56	0.00
28.00	5.87	3.56	0.00
29.00	5.87	3.56	0.00
30.00	5.87	3.56	0.00
31.00	5.87	3.56	0.00
32.00	5.87	3.56	0.00
33.00	5.87	3.56	0.00
34.00	5.87	3.56	0.00
35.00	5.87	3.56	0.00
36.00	5.87	3.56	0.00
37.00	5.87	3.56	0.00
38.00	5.87	3.56	0.00
39.00	5.87	3.56	0.00
40.00	5.87	3.56	0.00
41.00	5.87	3.56	0.00
42.00	5.87	3.56	0.00
43.00	5.87	3.56	0.00
44.00	5.87	3.56	0.00
45.00	5.87	3.56	0.00
46.00	5.87	3.56	0.00
47.00	5.87	3.56	0.00
48.00	5.87	3.56	0.00
49.00	5.87	3.56	0.00
50.00	5.87	3.56	0.00
51.00	5.87	3.56	0.00
52.00	5.87	3.56	0.00
53.00	5.87	3.56	0.00
54.00	5.87	3.56	0.00
55.00	5.87	3.56	0.00
56.00	5.87	3.56	0.00
57.00	5.87	3.56	0.00
58.00	5.87	3.56	0.00
59.00	5.87	3.56	0.00
60.00	5.87	3.56	0.00
61.00	5.87	3.56	0.00
62.00	5.87	3.56	0.00
63.00	5.87	3.56	0.00
64.00	5.87	3.56	0.00
65.00	5.87	3.56	0.00
66.00	5.87	3.56	0.00
67.00	5.87	3.56	0.00
68.00	5.87	3.56	0.00
69.00	5.87	3.56	0.00
70.00	5.87	3.56	0.00
71.00	5.87	3.56	0.00
72.00	5.87	3.56	0.00

Summary for Subcatchment PDA-2D: (10)

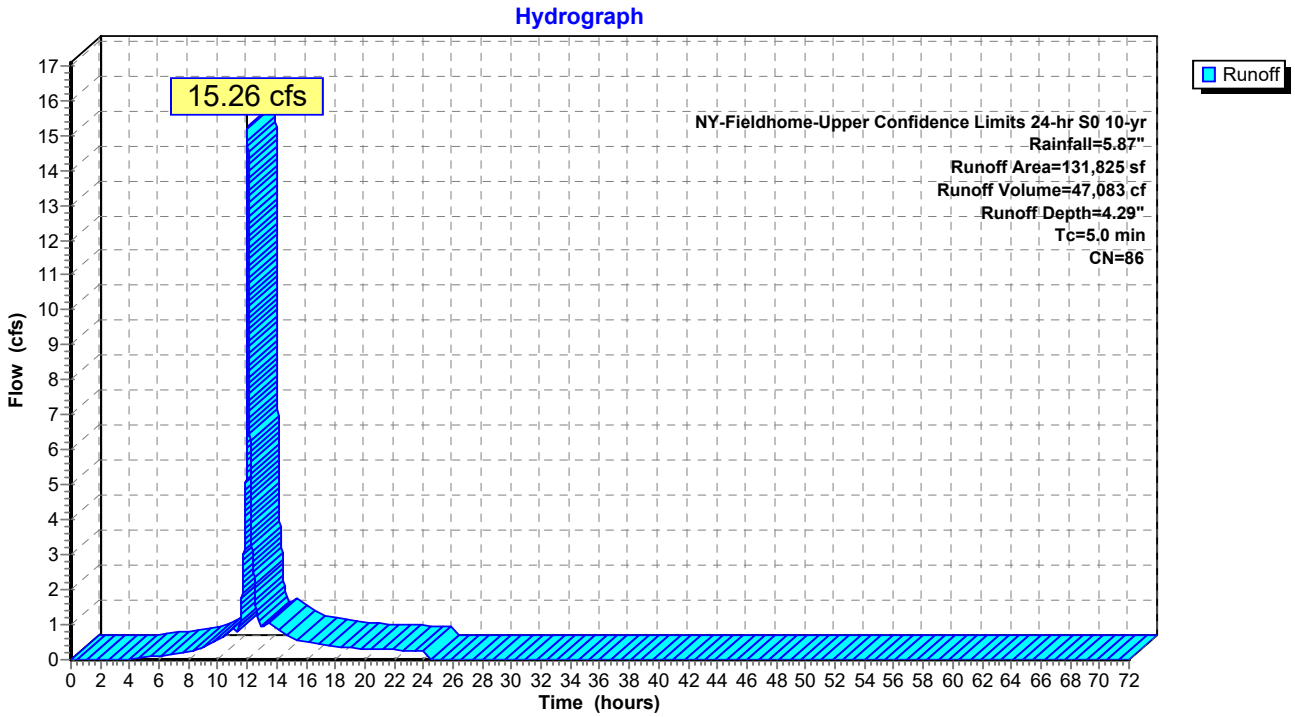
Runoff = 15.26 cfs @ 12.03 hrs, Volume= 47,083 cf, Depth= 4.29"
Routed to Pond BR-2D :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

Area (sf)	CN	Description
64,545	74	>75% Grass cover, Good, HSG C
67,280	98	Paved parking, curbs, driveways, sidewalks, roofs, walls, HSG C
131,825	86	Weighted Average
64,545		48.96% Pervious Area
67,280		51.04% Impervious Area

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

Subcatchment PDA-2D: (10)



Hydrograph for Subcatchment PDA-2D: (10)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.38	0.00	0.02
5.00	0.50	0.02	0.06
6.00	0.63	0.05	0.11
7.00	0.77	0.09	0.17
8.00	0.93	0.16	0.24
9.00	1.12	0.26	0.35
10.00	1.39	0.42	0.58
11.00	1.76	0.67	0.96
12.00	3.16	1.80	**14.04**
13.00	4.12	2.66	**0.88**
14.00	4.49	2.99	0.87
15.00	4.75	3.24	0.68
16.00	4.94	3.41	0.50
17.00	5.10	3.56	0.43
18.00	5.25	3.70	0.39
19.00	5.37	3.82	0.35
20.00	5.49	3.92	0.32
21.00	5.59	4.02	0.29
22.00	5.69	4.12	0.28
23.00	5.78	4.20	0.26
24.00	**5.87**	**4.29**	0.24
25.00	5.87	4.29	0.00
26.00	5.87	4.29	0.00
27.00	5.87	4.29	0.00
28.00	5.87	4.29	0.00
29.00	5.87	4.29	0.00
30.00	5.87	4.29	0.00
31.00	5.87	4.29	0.00
32.00	5.87	4.29	0.00
33.00	5.87	4.29	0.00
34.00	5.87	4.29	0.00
35.00	5.87	4.29	0.00
36.00	5.87	4.29	0.00
37.00	5.87	4.29	0.00
38.00	5.87	4.29	0.00
39.00	5.87	4.29	0.00
40.00	5.87	4.29	0.00
41.00	5.87	4.29	0.00
42.00	5.87	4.29	0.00
43.00	5.87	4.29	0.00
44.00	5.87	4.29	0.00
45.00	5.87	4.29	0.00
46.00	5.87	4.29	0.00
47.00	5.87	4.29	0.00
48.00	5.87	4.29	0.00
49.00	5.87	4.29	0.00
50.00	5.87	4.29	0.00
51.00	5.87	4.29	0.00
52.00	5.87	4.29	0.00
53.00	5.87	4.29	0.00
54.00	5.87	4.29	0.00
55.00	5.87	4.29	0.00
56.00	5.87	4.29	0.00
57.00	5.87	4.29	0.00
58.00	5.87	4.29	0.00
59.00	5.87	4.29	0.00
60.00	5.87	4.29	0.00
61.00	5.87	4.29	0.00
62.00	5.87	4.29	0.00
63.00	5.87	4.29	0.00
64.00	5.87	4.29	0.00
65.00	5.87	4.29	0.00
66.00	5.87	4.29	0.00
67.00	5.87	4.29	0.00
68.00	5.87	4.29	0.00
69.00	5.87	4.29	0.00
70.00	5.87	4.29	0.00
71.00	5.87	4.29	0.00
72.00	5.87	4.29	0.00

Summary for Subcatchment PDA-DB-1: (5)

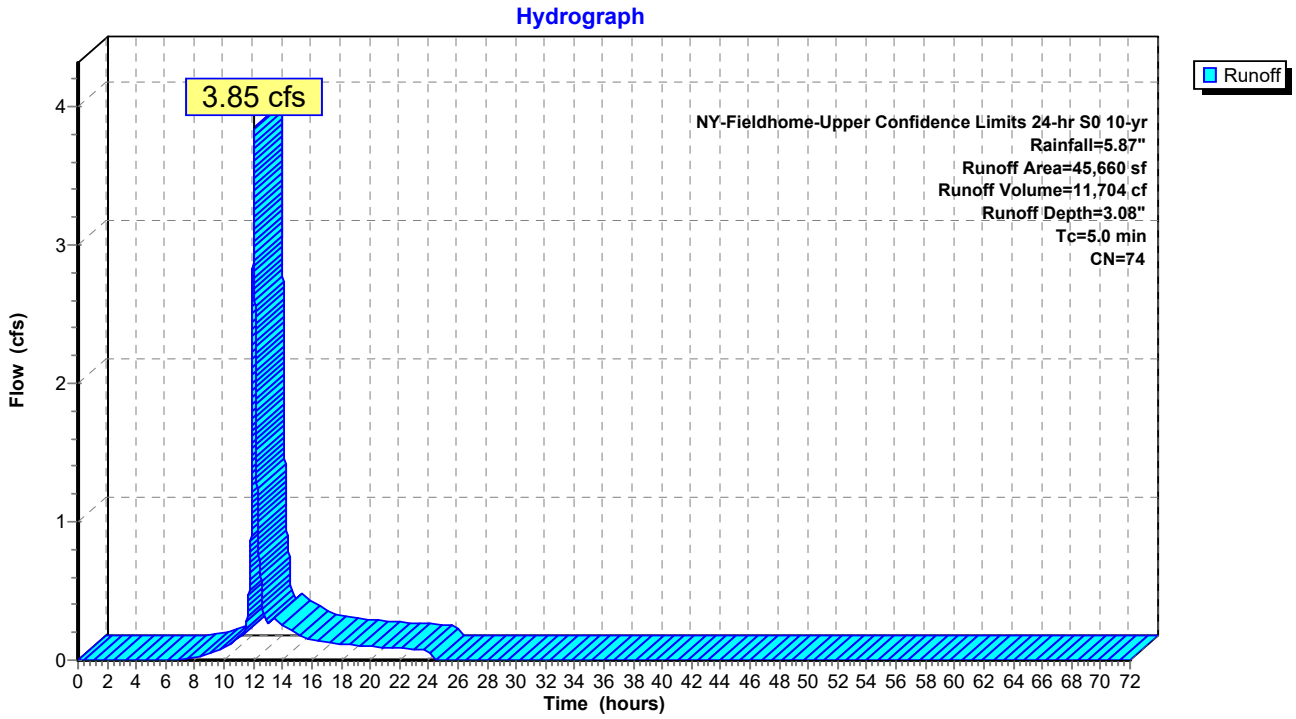
Runoff = 3.85 cfs @ 12.03 hrs, Volume= 11,704 cf, Depth= 3.08"
Routed to Pond DB-1 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

Area (sf)	CN	Description
45,660	74	>75% Grass cover, Good, HSG C
45,660		100.00% Pervious Area

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

Subcatchment PDA-DB-1: (5)



Hydrograph for Subcatchment PDA-DB-1: (5)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.38	0.00	0.00
5.00	0.50	0.00	0.00
6.00	0.63	0.00	0.00
7.00	0.77	0.00	0.00
8.00	0.93	0.01	0.02
9.00	1.12	0.04	0.04
10.00	1.39	0.11	0.09
11.00	1.76	0.25	0.19
12.00	3.16	1.01	**3.47**
13.00	4.12	1.69	**0.25**
14.00	4.49	1.96	0.25
15.00	4.75	2.17	0.20
16.00	4.94	2.32	0.15
17.00	5.10	2.45	0.13
18.00	5.25	2.56	0.12
19.00	5.37	2.66	0.10
20.00	5.49	2.76	0.10
21.00	5.59	2.85	0.09
22.00	5.69	2.93	0.08
23.00	5.78	3.00	0.08
24.00	**5.87**	**3.08**	0.07
25.00	5.87	3.08	0.00
26.00	5.87	3.08	0.00
27.00	5.87	3.08	0.00
28.00	5.87	3.08	0.00
29.00	5.87	3.08	0.00
30.00	5.87	3.08	0.00
31.00	5.87	3.08	0.00
32.00	5.87	3.08	0.00
33.00	5.87	3.08	0.00
34.00	5.87	3.08	0.00
35.00	5.87	3.08	0.00
36.00	5.87	3.08	0.00
37.00	5.87	3.08	0.00
38.00	5.87	3.08	0.00
39.00	5.87	3.08	0.00
40.00	5.87	3.08	0.00
41.00	5.87	3.08	0.00
42.00	5.87	3.08	0.00
43.00	5.87	3.08	0.00
44.00	5.87	3.08	0.00
45.00	5.87	3.08	0.00
46.00	5.87	3.08	0.00
47.00	5.87	3.08	0.00
48.00	5.87	3.08	0.00
49.00	5.87	3.08	0.00
50.00	5.87	3.08	0.00
51.00	5.87	3.08	0.00
52.00	5.87	3.08	0.00
53.00	5.87	3.08	0.00
54.00	5.87	3.08	0.00
55.00	5.87	3.08	0.00
56.00	5.87	3.08	0.00
57.00	5.87	3.08	0.00
58.00	5.87	3.08	0.00
59.00	5.87	3.08	0.00
60.00	5.87	3.08	0.00
61.00	5.87	3.08	0.00
62.00	5.87	3.08	0.00
63.00	5.87	3.08	0.00
64.00	5.87	3.08	0.00
65.00	5.87	3.08	0.00
66.00	5.87	3.08	0.00
67.00	5.87	3.08	0.00
68.00	5.87	3.08	0.00
69.00	5.87	3.08	0.00
70.00	5.87	3.08	0.00
71.00	5.87	3.08	0.00
72.00	5.87	3.08	0.00

Summary for Subcatchment PDA-DB-2: (11)

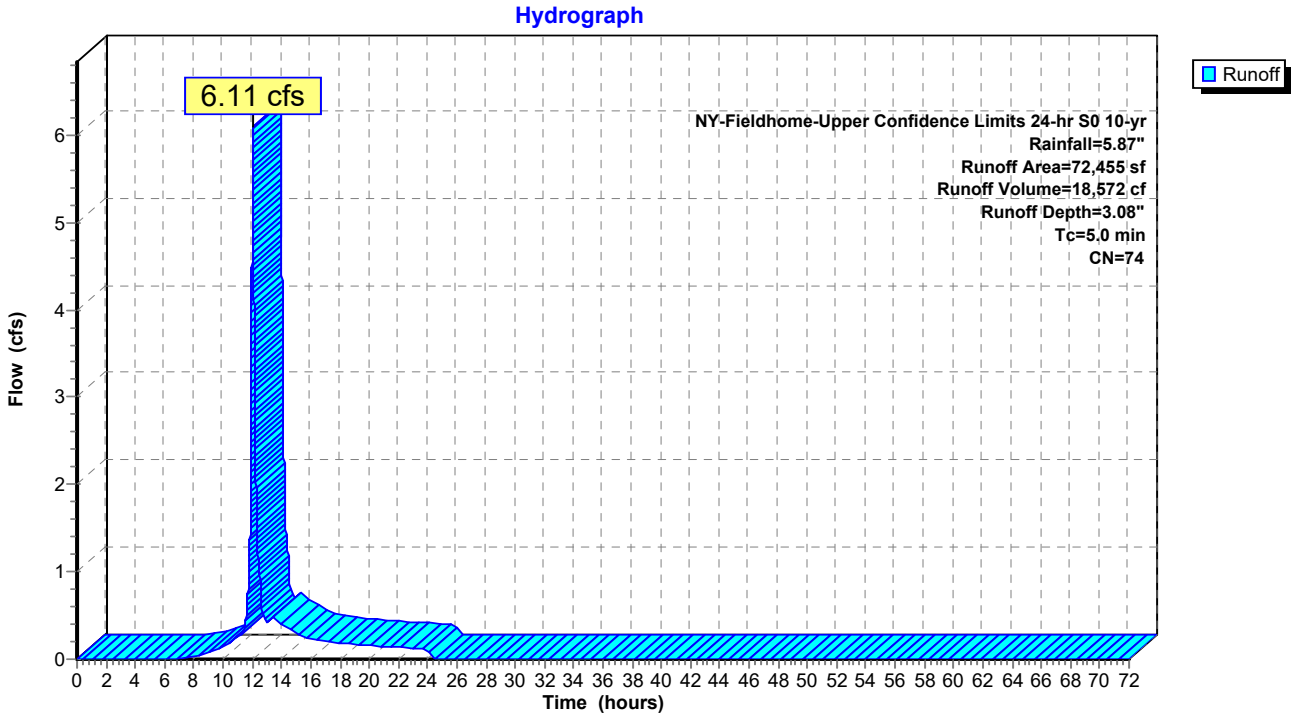
Runoff = 6.11 cfs @ 12.03 hrs, Volume= 18,572 cf, Depth= 3.08"
Routed to Pond DB-2 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 10-yr Rainfall=5.87"

Area (sf)	CN	Description
64,759	74	>75% Grass cover, Good, HSG C
7,696	70	Woods, Good, HSG C
72,455	74	Weighted Average
72,455		100.00% Pervious Area

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

Subcatchment PDA-DB-2: (11)



Hydrograph for Subcatchment PDA-DB-2: (11)

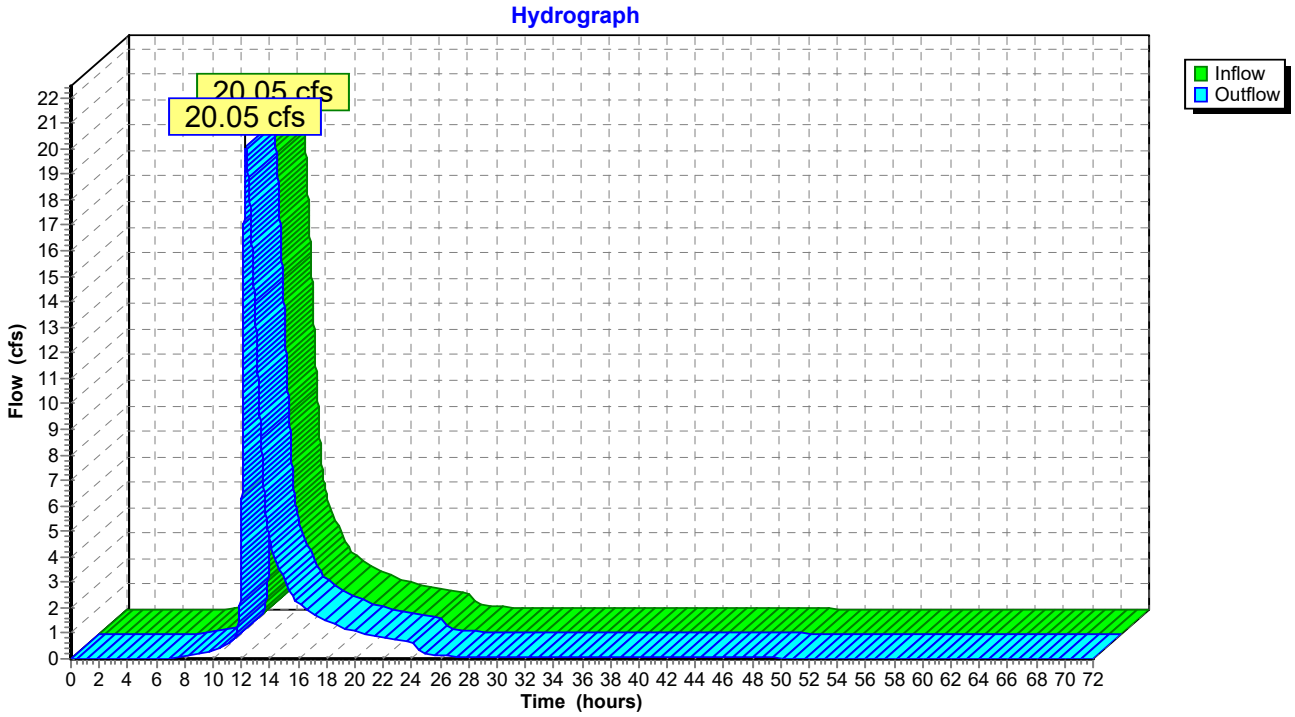
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.38	0.00	0.00
5.00	0.50	0.00	0.00
6.00	0.63	0.00	0.00
7.00	0.77	0.00	0.01
8.00	0.93	0.01	0.03
9.00	1.12	0.04	0.07
10.00	1.39	0.11	0.15
11.00	1.76	0.25	0.30
12.00	3.16	1.01	**5.51**
13.00	4.12	1.69	**0.40**
14.00	4.49	1.96	0.40
15.00	4.75	2.17	0.32
16.00	4.94	2.32	0.23
17.00	5.10	2.45	0.20
18.00	5.25	2.56	0.18
19.00	5.37	2.66	0.17
20.00	5.49	2.76	0.15
21.00	5.59	2.85	0.14
22.00	5.69	2.93	0.13
23.00	5.78	3.00	0.13
24.00	**5.87**	**3.08**	0.12
25.00	5.87	3.08	0.00
26.00	5.87	3.08	0.00
27.00	5.87	3.08	0.00
28.00	5.87	3.08	0.00
29.00	5.87	3.08	0.00
30.00	5.87	3.08	0.00
31.00	5.87	3.08	0.00
32.00	5.87	3.08	0.00
33.00	5.87	3.08	0.00
34.00	5.87	3.08	0.00
35.00	5.87	3.08	0.00
36.00	5.87	3.08	0.00
37.00	5.87	3.08	0.00
38.00	5.87	3.08	0.00
39.00	5.87	3.08	0.00
40.00	5.87	3.08	0.00
41.00	5.87	3.08	0.00
42.00	5.87	3.08	0.00
43.00	5.87	3.08	0.00
44.00	5.87	3.08	0.00
45.00	5.87	3.08	0.00
46.00	5.87	3.08	0.00
47.00	5.87	3.08	0.00
48.00	5.87	3.08	0.00
49.00	5.87	3.08	0.00
50.00	5.87	3.08	0.00
51.00	5.87	3.08	0.00
52.00	5.87	3.08	0.00
53.00	5.87	3.08	0.00
54.00	5.87	3.08	0.00
55.00	5.87	3.08	0.00
56.00	5.87	3.08	0.00
57.00	5.87	3.08	0.00
58.00	5.87	3.08	0.00
59.00	5.87	3.08	0.00
60.00	5.87	3.08	0.00
61.00	5.87	3.08	0.00
62.00	5.87	3.08	0.00
63.00	5.87	3.08	0.00
64.00	5.87	3.08	0.00
65.00	5.87	3.08	0.00
66.00	5.87	3.08	0.00
67.00	5.87	3.08	0.00
68.00	5.87	3.08	0.00
69.00	5.87	3.08	0.00
70.00	5.87	3.08	0.00
71.00	5.87	3.08	0.00
72.00	5.87	3.08	0.00

Summary for Reach DP-1:

Inflow = 20.05 cfs @ 12.32 hrs, Volume= 161,180 cf
Outflow = 20.05 cfs @ 12.32 hrs, Volume= 161,180 cf, Atten= 0%, Lag= 0.0 min

Routing by Sim-Route method, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs

Reach DP-1:



Hydrograph for Reach DP-1:

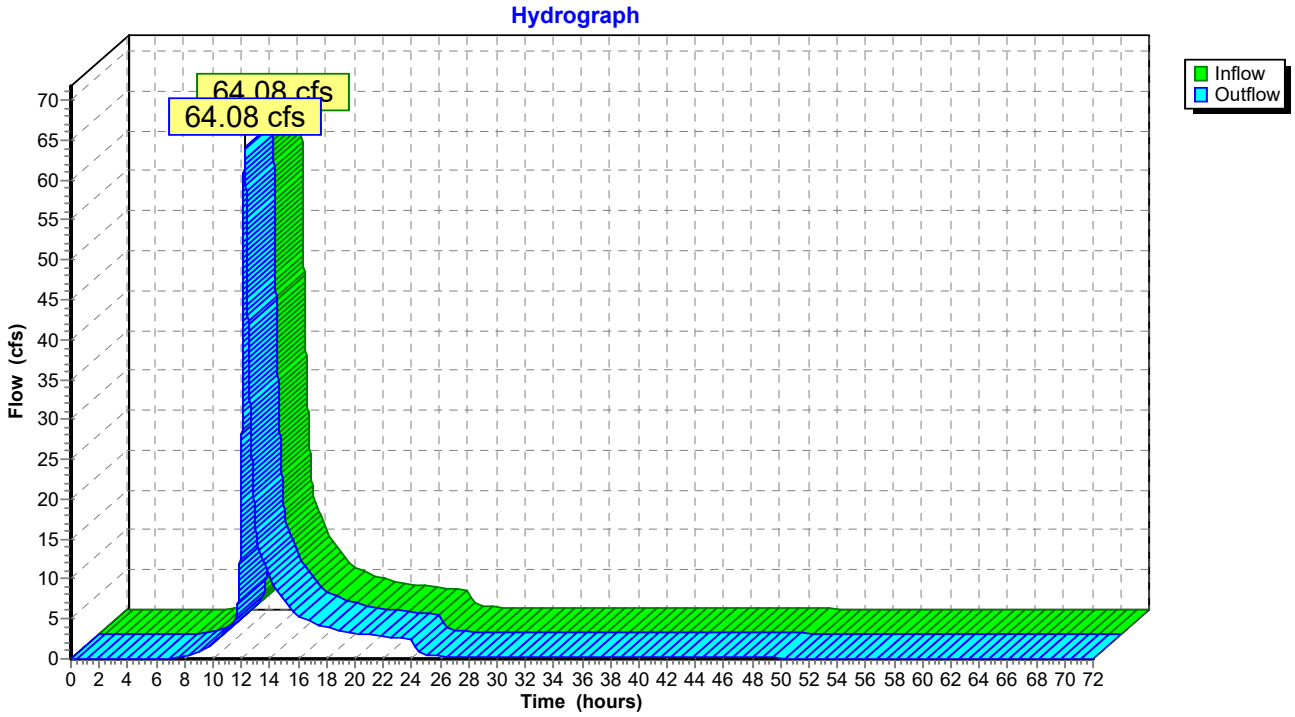
Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.00		0.00
5.00	0.00		0.00
6.00	0.01		0.01
7.00	0.04		0.04
8.00	0.10		0.10
9.00	0.18		0.18
10.00	0.34		0.34
11.00	0.62		0.62
12.00	**4.30**		**4.29**
13.00	**13.27**		**13.28**
14.00	4.66		4.66
15.00	3.21		3.21
16.00	2.17		2.17
17.00	1.75		1.75
18.00	1.47		1.47
19.00	1.25		1.25
20.00	1.09		1.09
21.00	0.96		0.96
22.00	0.85		0.85
23.00	0.76		0.76
24.00	0.69		0.69
25.00	0.20		0.20
26.00	0.12		0.12
27.00	0.10		0.10
28.00	0.10		0.10
29.00	0.09		0.09
30.00	0.09		0.09
31.00	0.09		0.09
32.00	0.09		0.09
33.00	0.09		0.09
34.00	0.09		0.09
35.00	0.09		0.09
36.00	0.09		0.09
37.00	0.09		0.09
38.00	0.09		0.09
39.00	0.09		0.09
40.00	0.09		0.09
41.00	0.09		0.09
42.00	0.09		0.09
43.00	0.08		0.08
44.00	0.08		0.08
45.00	0.08		0.08
46.00	0.08		0.08
47.00	0.08		0.08
48.00	0.08		0.08
49.00	0.06		0.06
50.00	0.03		0.03
51.00	0.02		0.02
52.00	0.01		0.01
53.00	0.01		0.01
54.00	0.01		0.01
55.00	0.00		0.00
56.00	0.00		0.00
57.00	0.00		0.00
58.00	0.00		0.00
59.00	0.00		0.00
60.00	0.00		0.00
61.00	0.00		0.00
62.00	0.00		0.00
63.00	0.00		0.00
64.00	0.00		0.00
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Summary for Reach DP-2:

Inflow = 64.08 cfs @ 12.24 hrs, Volume= 399,432 cf
Outflow = 64.08 cfs @ 12.24 hrs, Volume= 399,432 cf, Atten= 0%, Lag= 0.0 min

Routing by Sim-Route method, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs

Reach DP-2:



Hydrograph for Reach DP-2:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.00		0.00
5.00	0.00		0.00
6.00	0.02		0.02
7.00	0.05		0.05
8.00	0.39		0.39
9.00	0.90		0.89
10.00	1.92		1.92
11.00	3.70		3.70
12.00	**20.09**		**20.02**
13.00	**16.80**		**16.82**
14.00	10.10		10.10
15.00	7.44		7.45
16.00	5.39		5.39
17.00	4.52		4.52
18.00	3.96		3.96
19.00	3.54		3.54
20.00	3.24		3.24
21.00	3.00		3.00
22.00	2.80		2.80
23.00	2.63		2.63
24.00	2.49		2.49
25.00	0.48		0.48
26.00	0.34		0.34
27.00	0.28		0.28
28.00	0.25		0.25
29.00	0.24		0.24
30.00	0.23		0.23
31.00	0.22		0.22
32.00	0.22		0.22
33.00	0.22		0.22
34.00	0.22		0.22
35.00	0.21		0.21
36.00	0.21		0.21
37.00	0.21		0.21
38.00	0.21		0.21
39.00	0.21		0.21
40.00	0.20		0.20
41.00	0.20		0.20
42.00	0.20		0.20
43.00	0.20		0.20
44.00	0.20		0.20
45.00	0.20		0.20
46.00	0.19		0.19
47.00	0.19		0.19
48.00	0.19		0.19
49.00	0.15		0.15
50.00	0.10		0.10
51.00	0.06		0.06
52.00	0.05		0.05
53.00	0.03		0.03
54.00	0.03		0.03
55.00	0.02		0.02
56.00	0.02		0.02
57.00	0.01		0.01
58.00	0.01		0.01
59.00	0.01		0.01
60.00	0.01		0.01
61.00	0.01		0.01
62.00	0.01		0.01
63.00	0.01		0.01
64.00	0.01		0.01
65.00	0.01		0.01
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Summary for Pond BMH-1B:

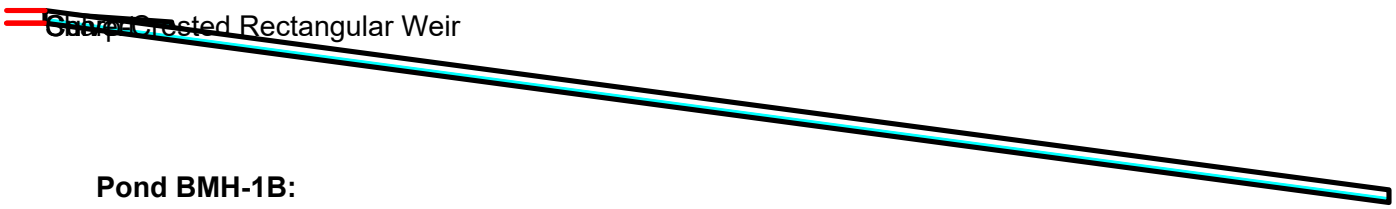
Inflow = 29.46 cfs @ 12.15 hrs, Volume= 130,354 cf
Outflow = 29.46 cfs @ 12.15 hrs, Volume= 130,351 cf, Atten= 0%, Lag= 0.0 min
Primary = 19.32 cfs @ 12.05 hrs, Volume= 93,540 cf
Routed to Pond IS-1B :
Secondary = 17.12 cfs @ 12.20 hrs, Volume= 36,811 cf
Routed to Pond DB-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 438.81' @ 12.20 hrs
Flood Elev= 442.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	435.25'	**24.0" Round Culvert** L= 31.3' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 435.25' / 433.50' S= 0.0559 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	435.25'	**30.0" Round Culvert** L= 332.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 435.25' / 400.00' S= 0.1062 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#3	Device 2	437.75'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

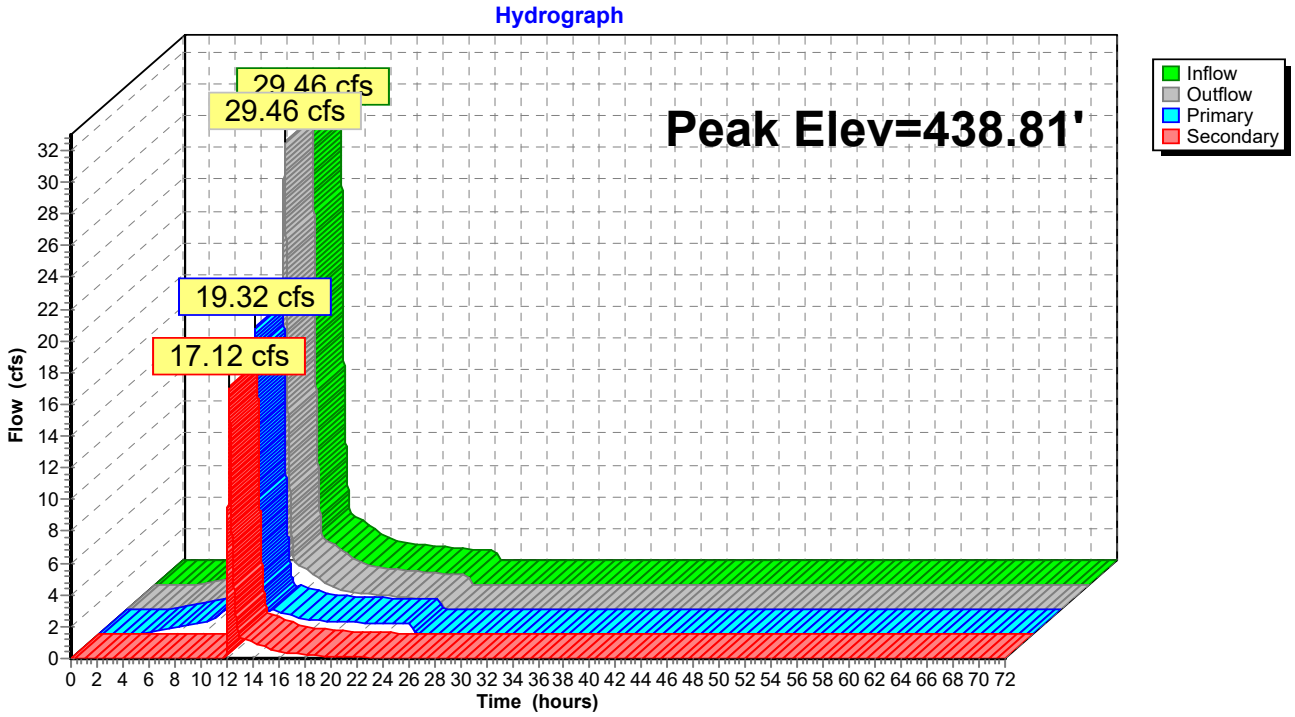
Primary OutFlow Max=19.26 cfs @ 12.05 hrs HW=437.98' TW=436.95' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 19.26 cfs @ 6.13 fps)

Secondary OutFlow Max=17.12 cfs @ 12.20 hrs HW=438.81' TW=400.24' (Dynamic Tailwater)
└─**2=Culvert** (Passes 17.12 cfs of 44.92 cfs potential flow)
└─**3=Sharp-Crested Rectangular Weir** (Weir Controls 17.12 cfs @ 3.37 fps)

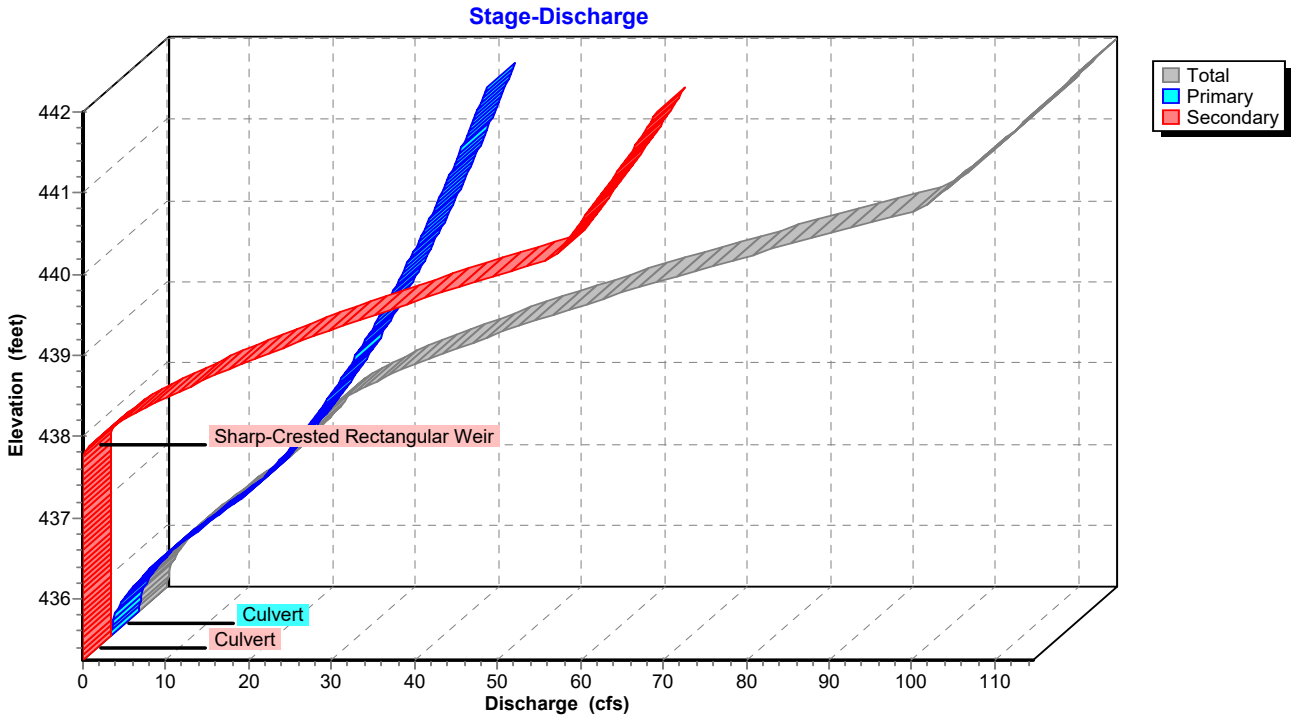


Pond BMH-1B:

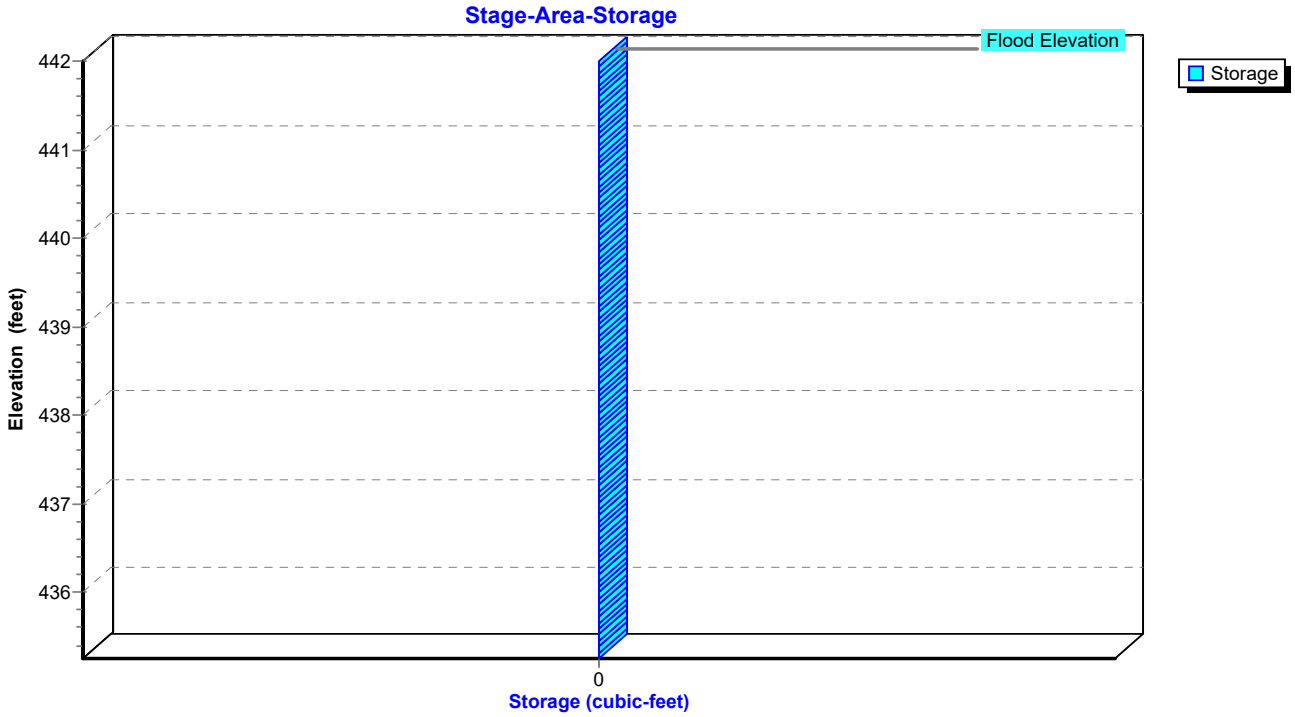
Pond BMH-1B:



Pond BMH-1B:



Pond BMH-1B:


Stage-Area-Storage
Flood Elevation
Storage
442
441
440
439
438
437
436
Elevation (feet)
0
Storage (cubic-feet)

Hydrograph for Pond BMH-1B:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	435.25	0.00	0.00	0.00
2.50	0.00	435.25	0.00	0.00	0.00
5.00	0.27	435.43	0.26	0.26	0.00
7.50	0.65	435.54	0.65	0.65	0.00
10.00	**1.63**	**435.72**	**1.62**	**1.62**	**0.00**
12.50	**8.94**	**438.24**	**8.95**	**3.54**	**5.42**
15.00	1.87	437.88	1.87	1.14	0.72
17.50	1.09	437.82	1.09	0.82	0.28
20.00	0.85	437.79	0.85	0.71	0.13
22.50	0.71	437.77	0.71	0.65	0.06
25.00	0.00	437.39	0.00	0.00	0.00
27.50	0.00	436.35	0.00	0.00	0.00
30.00	0.00	435.42	0.00	0.00	0.00
32.50	0.00	435.25	0.00	0.00	0.00
35.00	0.00	435.25	0.00	0.00	0.00
37.50	0.00	435.25	0.00	0.00	0.00
40.00	0.00	435.25	0.00	0.00	0.00
42.50	0.00	435.25	0.00	0.00	0.00
45.00	0.00	435.25	0.00	0.00	0.00
47.50	0.00	435.25	0.00	0.00	0.00
50.00	0.00	435.25	0.00	0.00	0.00
52.50	0.00	435.25	0.00	0.00	0.00
55.00	0.00	435.25	0.00	0.00	0.00
57.50	0.00	435.25	0.00	0.00	0.00
60.00	0.00	435.25	0.00	0.00	0.00
62.50	0.00	435.25	0.00	0.00	0.00
65.00	0.00	435.25	0.00	0.00	0.00
67.50	0.00	435.25	0.00	0.00	0.00
70.00	0.00	435.25	0.00	0.00	0.00

Stage-Discharge for Pond BMH-1B:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
435.25	0.00	0.00	0.00
435.35	0.08	0.08	0.00
435.45	0.31	0.31	0.00
435.55	0.69	0.69	0.00
435.65	1.20	1.20	0.00
435.75	1.85	1.85	0.00
435.85	2.61	2.61	0.00
435.95	3.49	3.49	0.00
436.05	4.47	4.47	0.00
436.15	5.54	5.54	0.00
436.25	6.69	6.69	0.00
436.35	7.90	7.90	0.00
436.45	9.18	9.18	0.00
436.55	10.49	10.49	0.00
436.65	11.83	11.83	0.00
436.75	13.17	13.17	0.00
436.85	14.50	14.50	0.00
436.95	15.79	15.79	0.00
437.05	17.00	17.00	0.00
437.15	18.09	18.09	0.00
437.25	18.91	18.91	0.00
437.35	19.83	19.83	0.00
437.45	20.71	20.71	0.00
437.55	21.56	21.56	0.00
437.65	22.37	22.37	0.00
437.75	23.16	23.16	0.00
437.85	24.43	23.92	0.51
437.95	26.10	24.65	1.45
438.05	28.02	25.37	2.65
438.15	30.13	26.06	4.07
438.25	32.41	26.74	5.66
438.35	34.82	27.40	7.42
438.45	37.35	28.05	9.31
438.55	40.00	28.68	11.32
438.65	42.75	29.29	13.46
438.75	45.59	29.90	15.70
438.85	48.52	30.49	18.03
438.95	51.53	31.07	20.46
439.05	54.61	31.64	22.97
439.15	57.77	32.20	25.57
439.25	60.98	32.75	28.23
439.35	64.26	33.29	30.97
439.45	67.60	33.82	33.78
439.55	70.99	34.35	36.64
439.65	74.43	34.87	39.57
439.75	77.92	35.37	42.55
439.85	81.45	35.88	45.58
439.95	85.03	36.37	48.66
440.05	88.64	36.86	51.78
440.15	92.30	37.34	54.95
440.25	95.03	37.82	57.21
440.35	96.26	38.29	57.97
440.45	97.47	38.75	58.72
440.55	98.67	39.21	59.46
440.65	99.85	39.66	60.19
440.75	101.02	40.11	60.91
440.85	102.17	40.55	61.62
440.95	103.32	40.99	62.32
441.05	104.45	41.43	63.02
441.15	105.56	41.86	63.71
441.25	106.67	42.28	64.39
441.35	107.77	42.70	65.06
441.45	108.85	43.12	65.73
441.55	109.92	43.53	66.39
441.65	110.99	43.94	67.05
441.75	112.04	44.34	67.69
441.85	113.08	44.75	68.34
441.95	**114.12**	**45.14**	**68.97**

Stage-Area-Storage for Pond BMH-1B:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
435.25	**0**	437.90	0	440.55	0
435.30	0	437.95	0	440.60	0
435.35	0	438.00	0	440.65	0
435.40	0	438.05	0	440.70	0
435.45	0	438.10	0	440.75	0
435.50	0	438.15	0	440.80	0
435.55	0	438.20	0	440.85	0
435.60	0	438.25	0	440.90	0
435.65	0	438.30	0	440.95	0
435.70	0	438.35	0	441.00	0
435.75	0	438.40	0	441.05	0
435.80	0	438.45	0	441.10	0
435.85	0	438.50	0	441.15	0
435.90	0	438.55	0	441.20	0
435.95	0	438.60	0	441.25	0
436.00	0	438.65	0	441.30	0
436.05	0	438.70	0	441.35	0
436.10	0	438.75	0	441.40	0
436.15	0	438.80	0	441.45	0
436.20	0	438.85	0	441.50	0
436.25	0	438.90	0	441.55	0
436.30	0	438.95	0	441.60	0
436.35	0	439.00	0	441.65	0
436.40	0	439.05	0	441.70	0
436.45	0	439.10	0	441.75	0
436.50	0	439.15	0	441.80	0
436.55	0	439.20	0	441.85	0
436.60	0	439.25	0	441.90	0
436.65	0	439.30	0	441.95	0
436.70	0	439.35	0	442.00	0
436.75	0	439.40	0		
436.80	0	439.45	0		
436.85	0	439.50	0		
436.90	0	439.55	0		
436.95	0	439.60	0		
437.00	0	439.65	0		
437.05	0	439.70	0		
437.10	0	439.75	0		
437.15	0	439.80	0		
437.20	0	439.85	0		
437.25	0	439.90	0		
437.30	0	439.95	0		
437.35	0	440.00	0		
437.40	0	440.05	0		
437.45	0	440.10	0		
437.50	0	440.15	0		
437.55	0	440.20	0		
437.60	0	440.25	0		
437.65	0	440.30	0		
437.70	0	440.35	0		
437.75	0	440.40	0		
437.80	0	440.45	0		
437.85	0	440.50	0		

Summary for Pond BMH-2B:

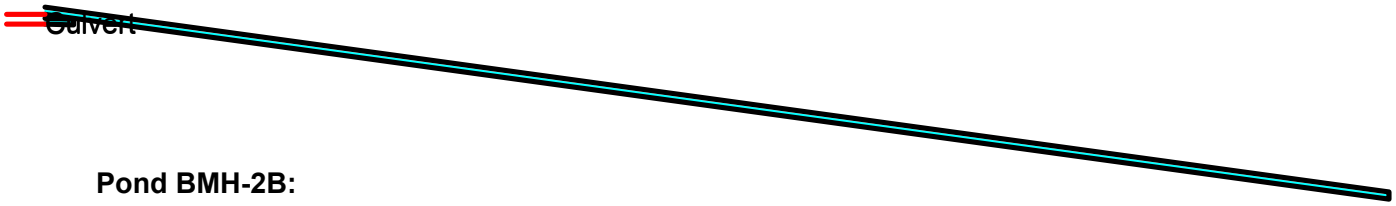
Inflow = 18.38 cfs @ 12.05 hrs, Volume= 39,353 cf
Outflow = 18.46 cfs @ 12.05 hrs, Volume= 39,353 cf, Atten= 0%, Lag= 0.0 min
Primary = 10.10 cfs @ 11.99 hrs, Volume= 27,091 cf
Routed to Pond IS-2B :
Secondary = 13.78 cfs @ 12.05 hrs, Volume= 12,262 cf
Routed to Pond DB-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 459.52' @ 12.05 hrs
Flood Elev= 466.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	454.75'	**24.0" Round Culvert** L= 9.4' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 454.75' / 454.50' S= 0.0266 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	458.15'	**30.0" Round Culvert** L= 442.2' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 458.15' / 394.00' S= 0.1451 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

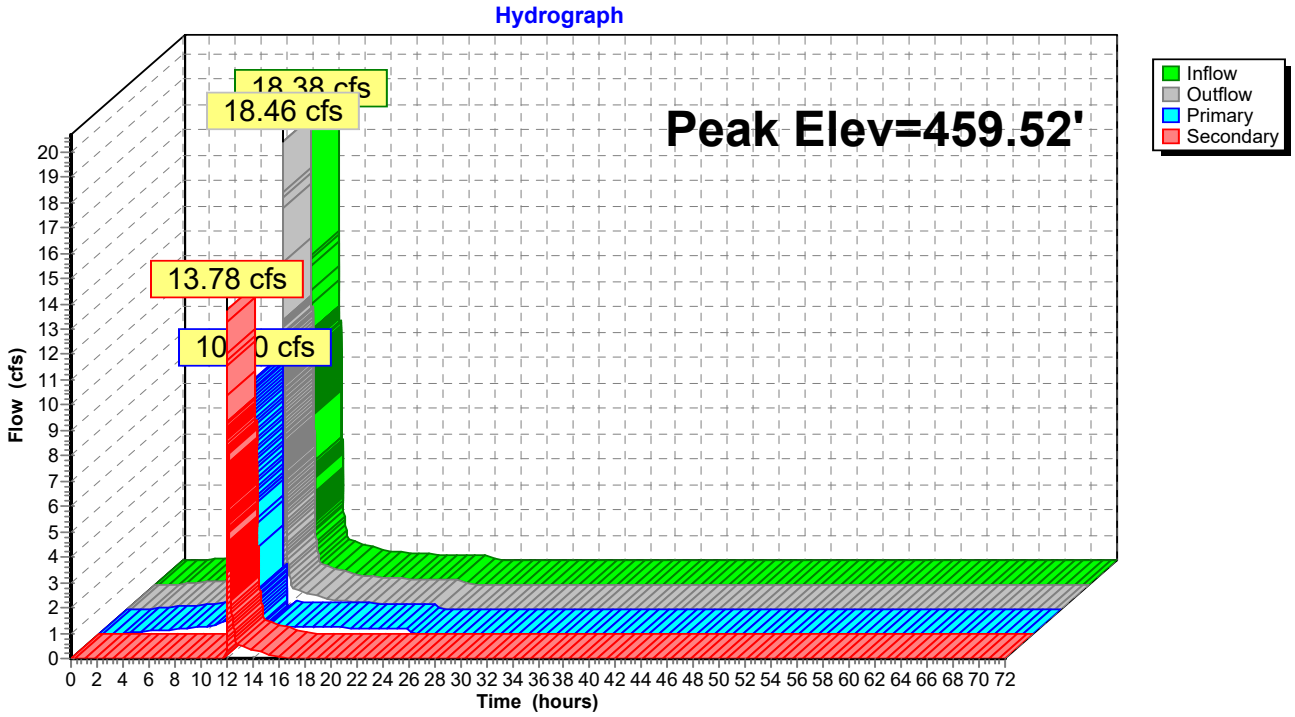
Primary OutFlow Max=9.81 cfs @ 11.99 hrs HW=458.28' TW=458.01' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 9.81 cfs @ 3.12 fps)

Secondary OutFlow Max=13.76 cfs @ 12.05 hrs HW=459.52' TW=394.88' (Dynamic Tailwater)
└**2=Culvert** (Inlet Controls 13.76 cfs @ 4.99 fps)

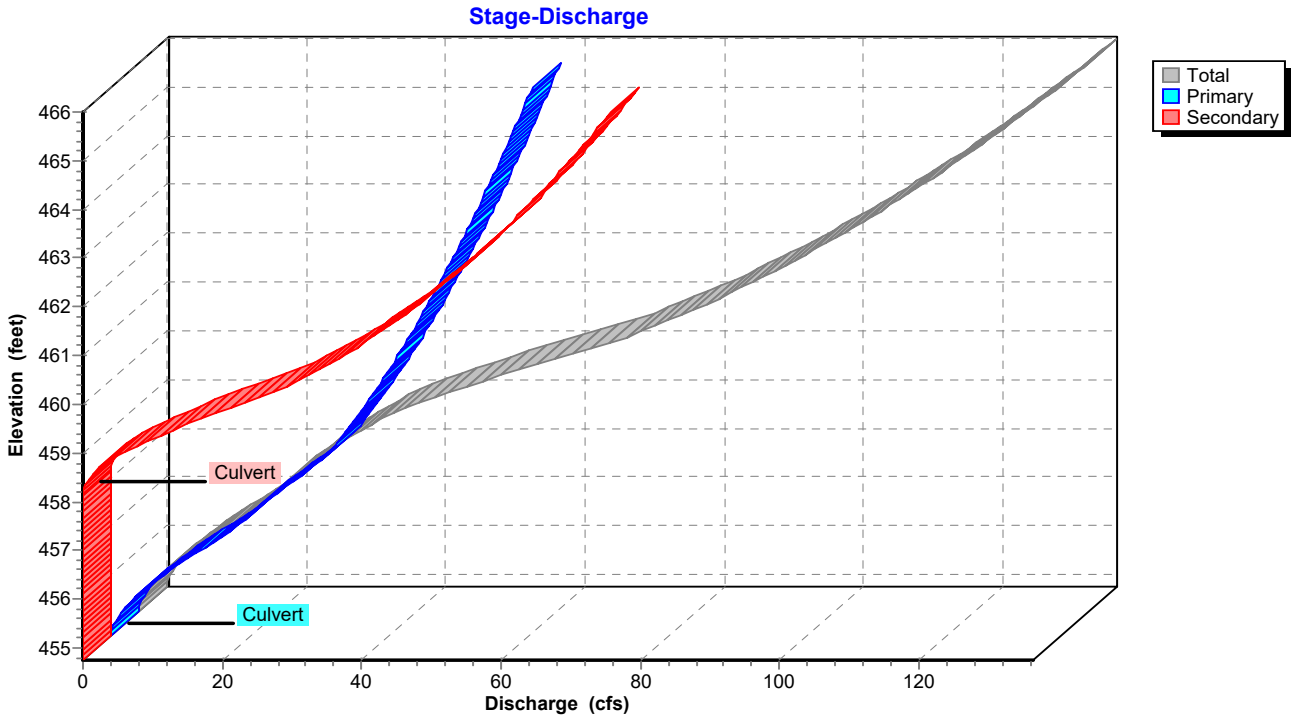


Pond BMH-2B:

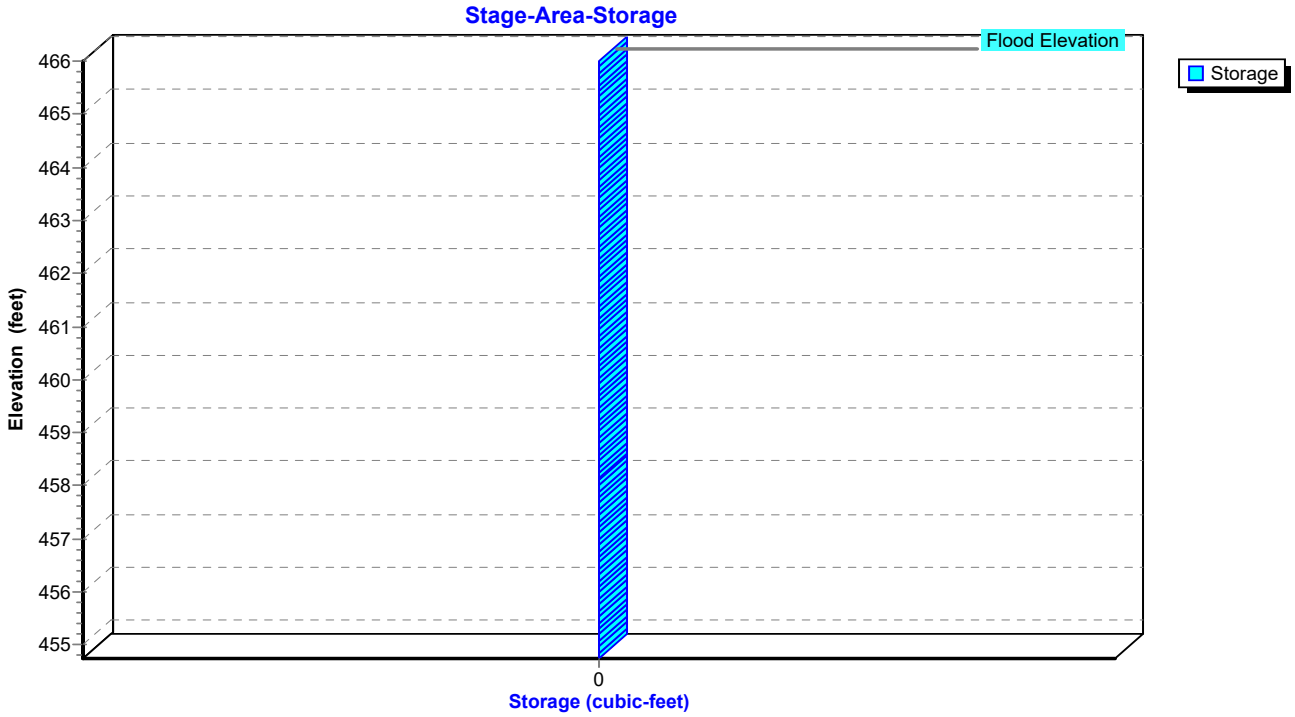
Pond BMH-2B:



Pond BMH-2B:



Pond BMH-2B:


Stage-Area-Storage
Flood Elevation
Storage
466
465
464
463
462
461
460
459
458
457
456
455
Elevation (feet)
0
Storage (cubic-feet)

Hydrograph for Pond BMH-2B:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	454.75	0.00	0.00	0.00
2.50	0.05	454.83	0.05	0.05	0.00
5.00	0.15	454.89	0.15	0.15	0.00
7.50	0.26	454.93	0.26	0.26	0.00
10.00	**0.55**	**455.02**	**0.55**	**0.55**	**0.00**
12.50	**1.59**	**458.56**	**1.59**	**0.18**	**1.41**
15.00	0.49	458.30	0.49	0.29	0.20
17.50	0.29	458.18	0.29	0.28	0.01
20.00	0.23	457.81	0.23	0.23	0.00
22.50	0.19	457.24	0.19	0.19	0.00
25.00	0.00	456.29	0.00	0.00	0.00
27.50	0.00	454.93	0.00	0.00	0.00
30.00	0.00	454.75	0.00	0.00	0.00
32.50	0.00	454.75	0.00	0.00	0.00
35.00	0.00	454.75	0.00	0.00	0.00
37.50	0.00	454.75	0.00	0.00	0.00
40.00	0.00	454.75	0.00	0.00	0.00
42.50	0.00	454.75	0.00	0.00	0.00
45.00	0.00	454.75	0.00	0.00	0.00
47.50	0.00	454.75	0.00	0.00	0.00
50.00	0.00	454.75	0.00	0.00	0.00
52.50	0.00	454.75	0.00	0.00	0.00
55.00	0.00	454.75	0.00	0.00	0.00
57.50	0.00	454.75	0.00	0.00	0.00
60.00	0.00	454.75	0.00	0.00	0.00
62.50	0.00	454.75	0.00	0.00	0.00
65.00	0.00	454.75	0.00	0.00	0.00
67.50	0.00	454.75	0.00	0.00	0.00
70.00	0.00	454.75	0.00	0.00	0.00

Stage-Discharge for Pond BMH-2B:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
454.75	0.00	0.00	0.00
454.95	0.31	0.31	0.00
455.15	1.12	1.12	0.00
455.35	2.25	2.25	0.00
455.55	3.65	3.65	0.00
455.75	5.29	5.29	0.00
455.95	7.13	7.13	0.00
456.15	9.12	9.12	0.00
456.35	11.23	11.23	0.00
456.55	13.38	13.38	0.00
456.75	15.54	15.54	0.00
456.95	17.61	17.61	0.00
457.15	19.48	19.48	0.00
457.35	20.94	20.94	0.00
457.55	22.66	22.66	0.00
457.75	24.72	24.72	0.00
457.95	26.63	26.63	0.00
458.15	28.40	28.40	0.00
458.35	30.43	30.08	0.35
458.55	33.00	31.64	1.36
458.75	35.74	32.75	2.99
458.95	38.98	33.82	5.15
459.15	42.67	34.87	7.80
459.35	46.74	35.88	10.86
459.55	51.10	36.86	14.24
459.75	55.68	37.82	17.86
459.95	60.35	38.75	21.60
460.15	65.00	39.66	25.34
460.35	69.43	40.55	28.88
460.55	73.36	41.43	31.93
460.75	76.61	42.28	34.33
460.95	79.90	43.12	36.78
461.15	83.02	43.94	39.08
461.35	86.00	44.75	41.26
461.55	88.86	45.54	43.32
461.75	91.61	46.32	45.29
461.95	94.26	47.08	47.18
462.15	96.83	47.83	48.99
462.35	99.32	48.58	50.74
462.55	101.74	49.31	52.44
462.75	104.10	50.03	54.07
462.95	106.40	50.74	55.67
463.15	108.65	51.44	57.21
463.35	110.84	52.13	58.72
463.55	112.99	52.81	60.19
463.75	115.10	53.48	61.62
463.95	117.17	54.15	63.02
464.15	119.19	54.80	64.39
464.35	121.18	55.45	65.73
464.55	123.14	56.09	67.05
464.75	125.06	56.73	68.34
464.95	126.95	57.35	69.60
465.15	128.82	57.97	70.84
465.35	130.65	58.59	72.07
465.55	132.46	59.19	73.27
465.75	134.24	59.79	74.45
465.95	**136.00**	**60.39**	**75.61**

Stage-Area-Storage for Pond BMH-2B:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
454.75	**0**	460.05	0	465.35	0
454.85	0	460.15	0	465.45	0
454.95	0	460.25	0	465.55	0
455.05	0	460.35	0	465.65	0
455.15	0	460.45	0	465.75	0
455.25	0	460.55	0	465.85	0
455.35	0	460.65	0	465.95	0
455.45	0	460.75	0		
455.55	0	460.85	0		
455.65	0	460.95	0		
455.75	0	461.05	0		
455.85	0	461.15	0		
455.95	0	461.25	0		
456.05	0	461.35	0		
456.15	0	461.45	0		
456.25	0	461.55	0		
456.35	0	461.65	0		
456.45	0	461.75	0		
456.55	0	461.85	0		
456.65	0	461.95	0		
456.75	0	462.05	0		
456.85	0	462.15	0		
456.95	0	462.25	0		
457.05	0	462.35	0		
457.15	0	462.45	0		
457.25	0	462.55	0		
457.35	0	462.65	0		
457.45	0	462.75	0		
457.55	0	462.85	0		
457.65	0	462.95	0		
457.75	0	463.05	0		
457.85	0	463.15	0		
457.95	0	463.25	0		
458.05	0	463.35	0		
458.15	0	463.45	0		
458.25	0	463.55	0		
458.35	0	463.65	0		
458.45	0	463.75	0		
458.55	0	463.85	0		
458.65	0	463.95	0		
458.75	0	464.05	0		
458.85	0	464.15	0		
458.95	0	464.25	0		
459.05	0	464.35	0		
459.15	0	464.45	0		
459.25	0	464.55	0		
459.35	0	464.65	0		
459.45	0	464.75	0		
459.55	0	464.85	0		
459.65	0	464.95	0		
459.75	0	465.05	0		
459.85	0	465.15	0		
459.95	0	465.25	0		

Summary for Pond BR-1C:

Inflow Area = 184,184 sf, 32.60% Impervious, Inflow Depth = 3.77" for 10-yr event
Inflow = 13.12 cfs @ 12.16 hrs, Volume= 57,795 cf
Outflow = 11.96 cfs @ 12.23 hrs, Volume= 57,888 cf, Atten= 9%, Lag= 4.2 min
Primary = 11.96 cfs @ 12.23 hrs, Volume= 57,888 cf
Routed to Pond DB-1 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond DB-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 413.95' @ 12.23 hrs Surf.Area= 8,952 sf Storage= 11,488 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 211.5 min (1,052.4 - 840.9)

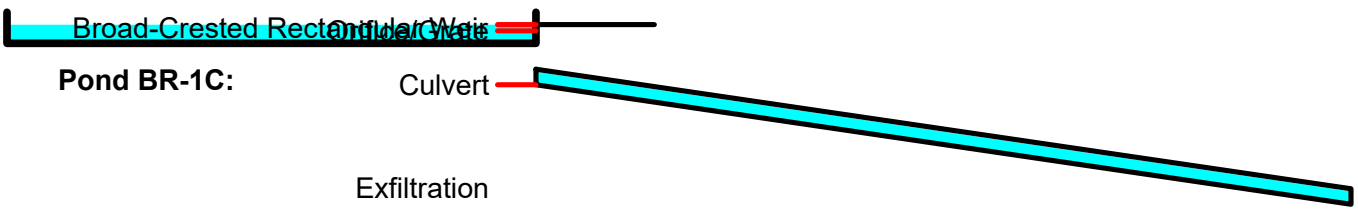
Volume	Invert	Avail.Storage	Storage Description
#1	412.50'	20,960 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
412.50	6,932	451.2	0	0	6,932
414.00	9,026	479.5	11,934	11,934	9,141
415.00	9,026	479.5	9,026	20,960	9,621

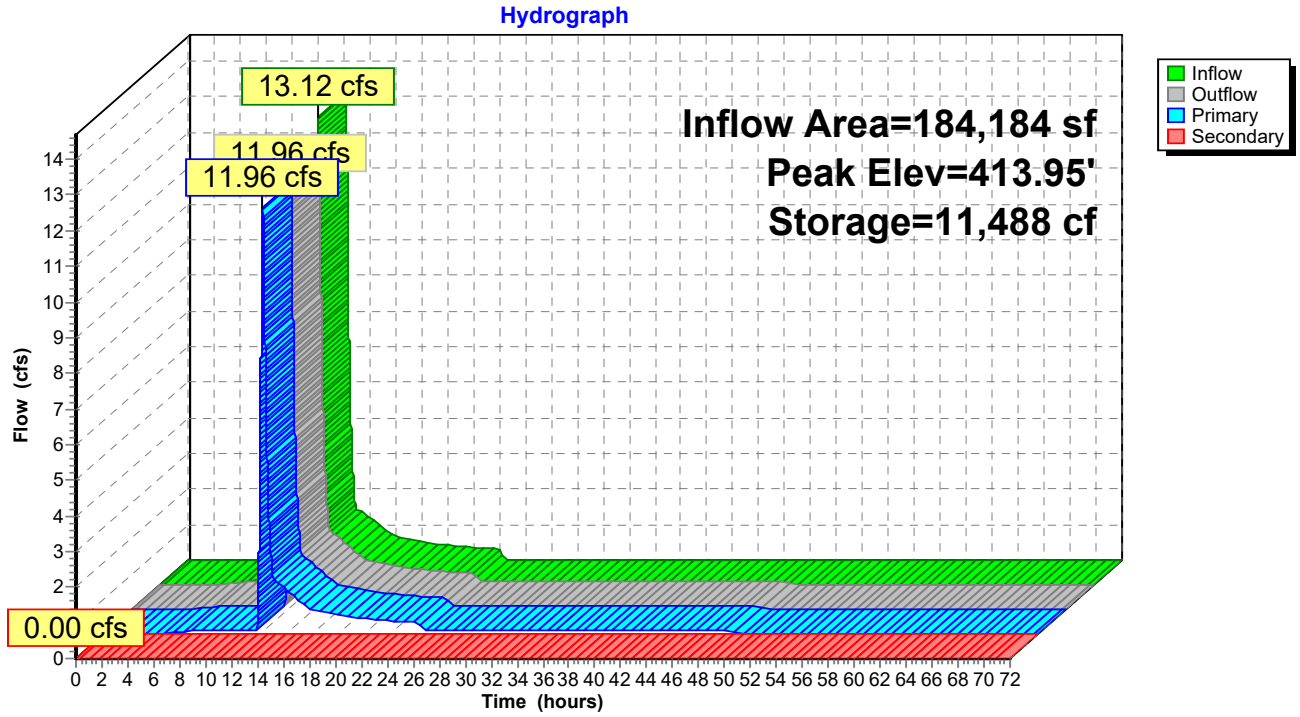
Device	Routing	Invert	Outlet Devices
#1	Primary	409.15'	**15.0" Round Culvert** L= 82.6' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 409.15' / 399.50' S= 0.1168 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	412.50'	**0.500 in/hr Exfiltration over Surface area**
#3	Device 1	413.50'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	414.00'	**20.0' long x 12.0' 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) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=11.96 cfs @ 12.23 hrs HW=413.95' TW=400.68' (Dynamic Tailwater)
└─**1=Culvert** (Passes 11.96 cfs of 15.09 cfs potential flow)
└─**2=Exfiltration** (Exfiltration Controls 0.10 cfs)
└─**3=Orifice/Grate** (Weir Controls 11.86 cfs @ 2.19 fps)

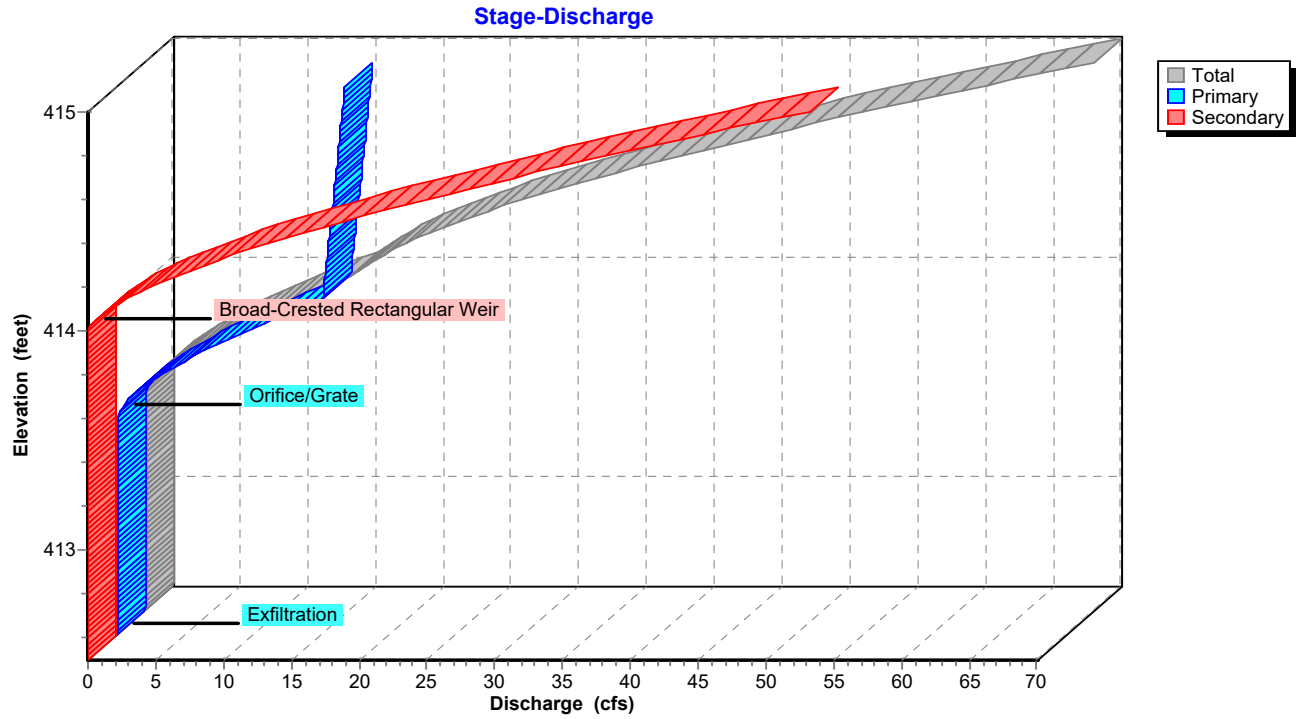
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=412.50' TW=398.00' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)



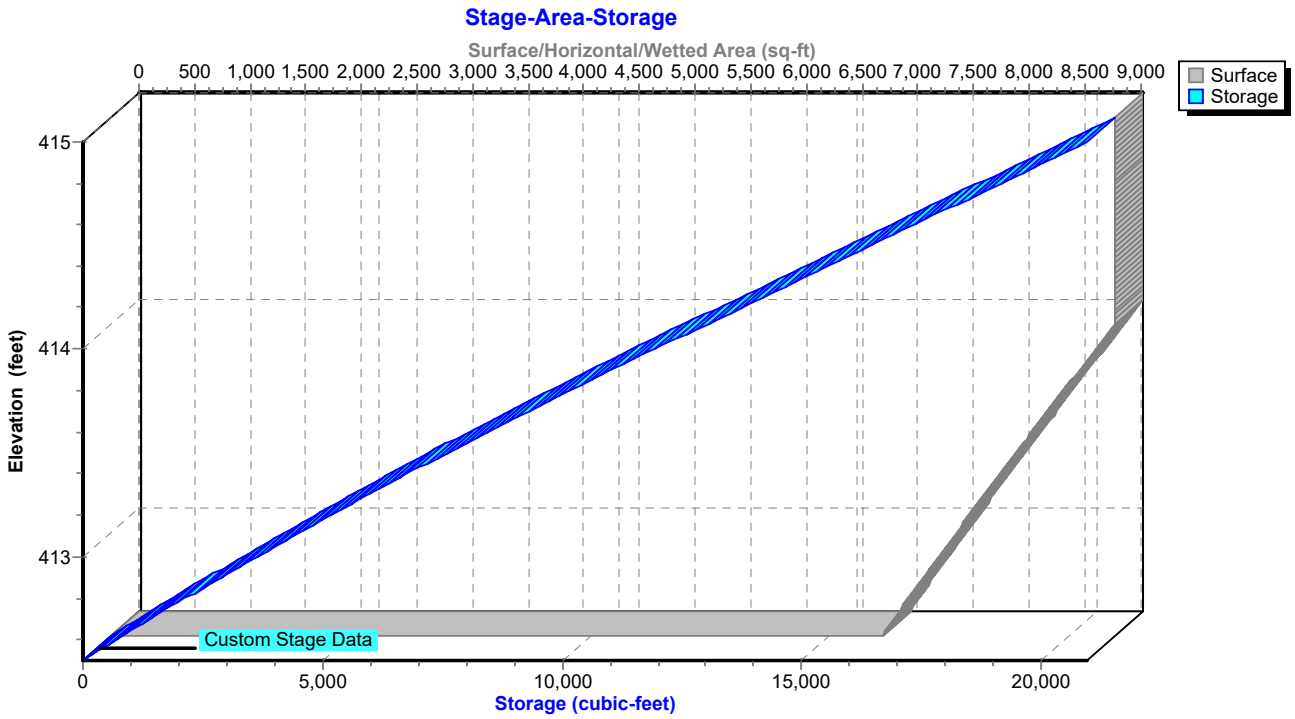
Pond BR-1C:



Pond BR-1C:



Pond BR-1C:


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 5,000 5,500 6,000 6,500 7,000 7,500 8,000 8,500 9,000
Surface
Storage
415
414
413
Elevation (feet)
Custom Stage Data
0
5,000
10,000
15,000
20,000
Storage (cubic-feet)

Hydrograph for Pond BR-1C:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	412.50	0.00	0.00	**0.00**
2.50	0.00	0	412.50	0.00	0.00	0.00
5.00	0.00	0	412.50	0.00	0.00	0.00
7.50	0.16	149	412.52	0.08	0.08	0.00
10.00	**0.57**	**2,256**	**412.82**	**0.09**	**0.09**	0.00
12.50	**4.51**	**10,010**	**413.78**	**6.01**	**6.01**	0.00
15.00	0.93	8,260	413.58	0.96	0.96	0.00
17.50	0.55	8,038	413.55	0.56	0.56	0.00
20.00	0.43	7,955	413.54	0.44	0.44	0.00
22.50	0.36	7,904	413.54	0.37	0.37	0.00
25.00	0.00	7,509	413.49	0.10	0.10	0.00
27.50	0.00	6,654	413.38	0.09	0.09	0.00
30.00	0.00	5,815	413.28	0.09	0.09	0.00
32.50	0.00	4,990	413.18	0.09	0.09	0.00
35.00	0.00	4,181	413.07	0.09	0.09	0.00
37.50	0.00	3,386	412.97	0.09	0.09	0.00
40.00	0.00	2,607	412.86	0.09	0.09	0.00
42.50	0.00	1,842	412.76	0.08	0.08	0.00
45.00	0.00	1,091	412.66	0.08	0.08	0.00
47.50	0.00	355	412.55	0.08	0.08	0.00
50.00	0.00	0	412.50	0.00	0.00	0.00
52.50	0.00	0	412.50	0.00	0.00	0.00
55.00	0.00	0	412.50	0.00	0.00	0.00
57.50	0.00	0	412.50	0.00	0.00	0.00
60.00	0.00	0	412.50	0.00	0.00	0.00
62.50	0.00	0	412.50	0.00	0.00	0.00
65.00	0.00	0	412.50	0.00	0.00	0.00
67.50	0.00	0	412.50	0.00	0.00	0.00
70.00	0.00	0	412.50	0.00	0.00	0.00

Stage-Discharge for Pond BR-1C:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
412.50	0.00	0.00	0.00
412.55	0.08	0.08	0.00
412.60	0.08	0.08	0.00
412.65	0.08	0.08	0.00
412.70	0.08	0.08	0.00
412.75	0.08	0.08	0.00
412.80	0.08	0.08	0.00
412.85	0.09	0.09	0.00
412.90	0.09	0.09	0.00
412.95	0.09	0.09	0.00
413.00	0.09	0.09	0.00
413.05	0.09	0.09	0.00
413.10	0.09	0.09	0.00
413.15	0.09	0.09	0.00
413.20	0.09	0.09	0.00
413.25	0.09	0.09	0.00
413.30	0.09	0.09	0.00
413.35	0.09	0.09	0.00
413.40	0.09	0.09	0.00
413.45	0.10	0.10	0.00
413.50	0.10	0.10	0.00
413.55	0.54	0.54	0.00
413.60	1.34	1.34	0.00
413.65	2.38	2.38	0.00
413.70	3.61	3.61	0.00
413.75	5.01	5.01	0.00
413.80	6.55	6.55	0.00
413.85	8.23	8.23	0.00
413.90	10.03	10.03	0.00
413.95	11.95	11.95	0.00
414.00	13.98	13.98	0.00
414.05	15.85	15.27	0.57
414.10	16.99	15.36	1.63
414.15	18.44	15.45	2.99
414.20	20.13	15.54	4.60
414.25	22.08	15.62	6.46
414.30	24.24	15.71	8.53
414.35	26.60	15.80	10.80
414.40	29.14	15.88	13.26
414.45	31.91	15.97	15.94
414.50	34.86	16.06	18.81
414.55	38.00	16.14	21.86
414.60	41.32	16.22	25.10
414.65	44.53	16.31	28.22
414.70	47.84	16.39	31.45
414.75	51.26	16.47	34.78
414.80	54.77	16.56	38.21
414.85	58.45	16.64	41.81
414.90	62.23	16.72	45.51
414.95	66.11	16.80	49.31
415.00	**70.08**	**16.88**	**53.20**

Stage-Area-Storage for Pond BR-1C:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
412.50	6,932	0
412.55	6,997	348
412.60	7,063	700
412.65	7,129	1,055
412.70	7,195	1,413
412.75	7,262	1,774
412.80	7,329	2,139
412.85	7,396	2,507
412.90	7,463	2,878
412.95	7,531	3,253
413.00	7,599	3,632
413.05	7,668	4,013
413.10	7,736	4,398
413.15	7,806	4,787
413.20	7,875	5,179
413.25	7,945	5,574
413.30	8,014	5,973
413.35	8,085	6,376
413.40	8,155	6,782
413.45	8,226	7,191
413.50	8,297	7,604
413.55	8,369	8,021
413.60	8,441	8,441
413.65	8,513	8,865
413.70	8,585	9,293
413.75	8,658	9,724
413.80	8,731	10,158
413.85	8,804	10,597
413.90	8,878	11,039
413.95	8,952	11,485
414.00	**9,026**	11,934
414.05	9,026	12,385
414.10	9,026	12,837
414.15	9,026	13,288
414.20	9,026	13,739
414.25	9,026	14,191
414.30	9,026	14,642
414.35	9,026	15,093
414.40	9,026	15,544
414.45	9,026	15,996
414.50	9,026	16,447
414.55	9,026	16,898
414.60	9,026	17,350
414.65	9,026	17,801
414.70	9,026	18,252
414.75	9,026	18,704
414.80	9,026	19,155
414.85	9,026	19,606
414.90	9,026	20,057
414.95	9,026	20,509
415.00	9,026	**20,960**

Summary for Pond BR-2C:

Inflow Area = 206,758 sf, 18.78% Impervious, Inflow Depth = 3.56" for 10-yr event
Inflow = 16.72 cfs @ 12.08 hrs, Volume= 61,403 cf
Outflow = 11.54 cfs @ 12.20 hrs, Volume= 61,529 cf, Atten= 31%, Lag= 7.2 min
Primary = 11.54 cfs @ 12.20 hrs, Volume= 61,529 cf
Routed to Pond DB-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 440.03' @ 12.20 hrs Surf.Area= 12,922 sf Storage= 16,723 cf

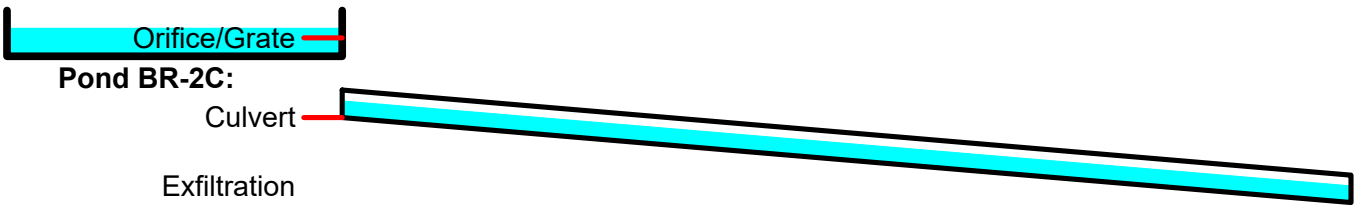
Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 265.5 min (1,108.0 - 842.5)

Volume	Invert	Avail.Storage	Storage Description
#1	438.50'	30,162 cf	**Custom Stage Data (Irregular)**Listed below (Recalc)

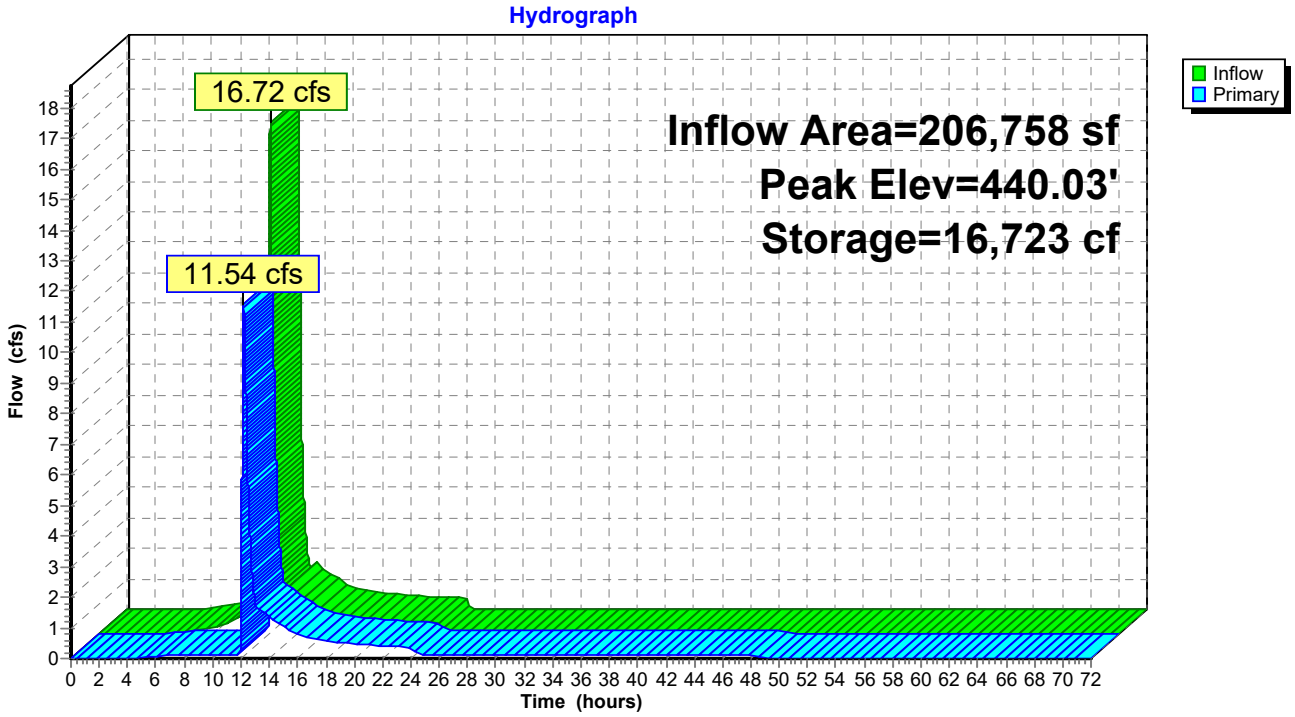
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
438.50	9,155	67.3	0	0	9,155
439.50	11,405	730.2	10,259	10,259	51,227
440.00	12,863	782.2	6,063	16,323	57,496
441.00	14,839	798.0	13,839	30,162	59,634

Device	Routing	Invert	Outlet Devices
#1	Primary	435.15'	**18.0" Round Culvert** L= 206.9' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 435.15' / 430.50' S= 0.0225 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	439.50'	**30.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	438.50'	**0.500 in/hr Exfiltration over Surface area**

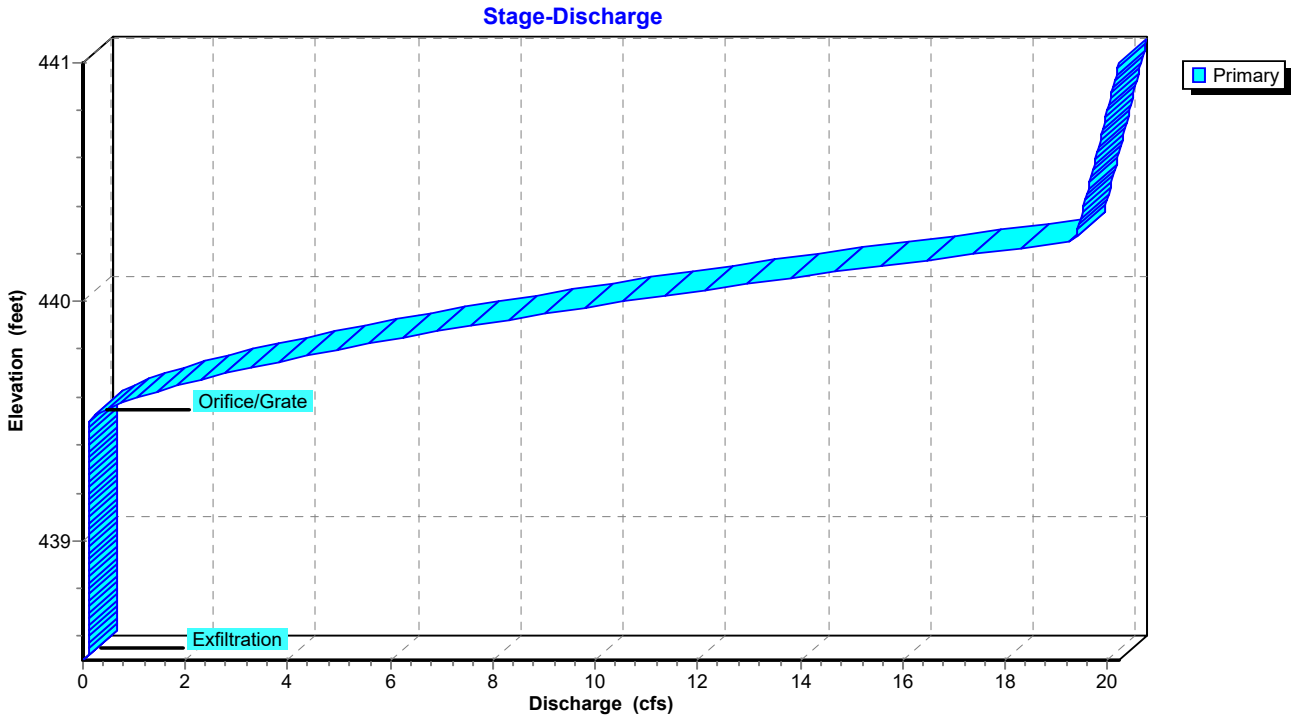
Primary OutFlow Max=11.54 cfs @ 12.20 hrs HW=440.03' TW=395.75' (Dynamic Tailwater)
└─**1=Culvert** (Passes 11.54 cfs of 19.11 cfs potential flow)
└─**2=Orifice/Grate** (Weir Controls 11.39 cfs @ 2.38 fps)
└─**3=Exfiltration** (Exfiltration Controls 0.15 cfs)



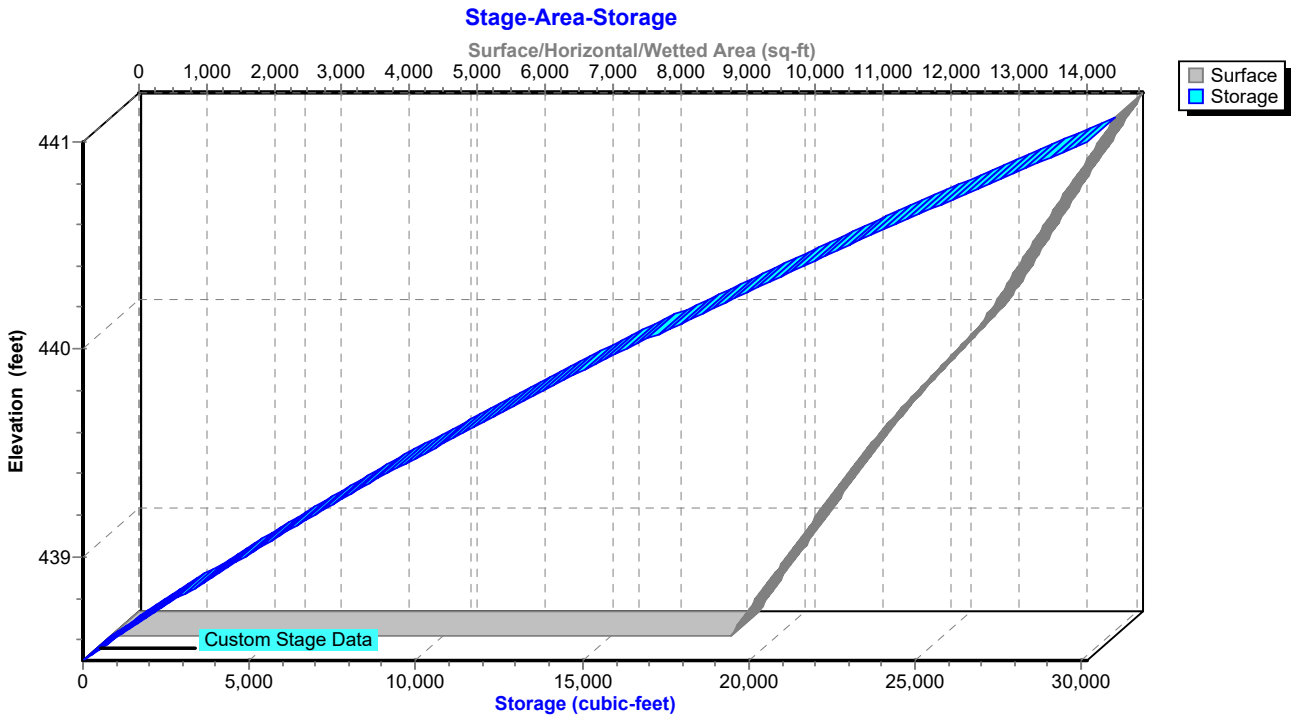
Pond BR-2C:



Pond BR-2C:



Pond BR-2C:


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 11,000 12,000 13,000 14,000
Surface
Storage
441
440
439
Elevation (feet)
Custom Stage Data
0 5,000 10,000 15,000 20,000 25,000 30,000
Storage (cubic-feet)

Hydrograph for Pond BR-2C:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	438.50	0.00
2.50	0.00	0	438.50	0.00
5.00	0.00	0	438.50	0.00
7.50	0.14	30	438.50	0.11
10.00	**0.59**	**1,883**	**438.70**	**0.11**
12.50	**3.52**	**14,111**	**439.82**	**5.58**
15.00	1.00	11,400	439.60	1.05
17.50	0.60	11,003	439.56	0.62
20.00	0.47	10,853	439.55	0.48
22.50	0.39	10,761	439.54	0.40
25.00	0.00	10,150	439.49	0.13
27.50	0.00	8,977	439.39	0.13
30.00	0.00	7,830	439.28	0.13
32.50	0.00	6,707	439.18	0.12
35.00	0.00	5,610	439.07	0.12
37.50	0.00	4,537	438.97	0.12
40.00	0.00	3,489	438.87	0.12
42.50	0.00	2,465	438.76	0.11
45.00	0.00	1,464	438.66	0.11
47.50	0.00	487	438.55	0.11
50.00	0.00	0	438.50	0.00
52.50	0.00	0	438.50	0.00
55.00	0.00	0	438.50	0.00
57.50	0.00	0	438.50	0.00
60.00	0.00	0	438.50	0.00
62.50	0.00	0	438.50	0.00
65.00	0.00	0	438.50	0.00
67.50	0.00	0	438.50	0.00
70.00	0.00	0	438.50	0.00

Stage-Discharge for Pond BR-2C:

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
438.50	0.00	439.56	0.57	440.62	19.80
438.52	0.11	439.58	0.80	440.64	19.82
438.54	0.11	439.60	1.07	440.66	19.84
438.56	0.11	439.62	1.36	440.68	19.86
438.58	0.11	439.64	1.68	440.70	19.89
438.60	0.11	439.66	2.02	440.72	19.91
438.62	0.11	439.68	2.39	440.74	19.93
438.64	0.11	439.70	2.77	440.76	19.96
438.66	0.11	439.72	3.18	440.78	19.98
438.68	0.11	439.74	3.60	440.80	20.00
438.70	0.11	439.76	4.04	440.82	20.02
438.72	0.11	439.78	4.50	440.84	20.05
438.74	0.11	439.80	4.98	440.86	20.07
438.76	0.11	439.82	5.47	440.88	20.09
438.78	0.11	439.84	5.98	440.90	20.11
438.80	0.11	439.86	6.50	440.92	20.14
438.82	0.11	439.88	7.04	440.94	20.16
438.84	0.11	439.90	7.59	440.96	20.18
438.86	0.12	439.92	8.16	440.98	20.20
438.88	0.12	439.94	8.74	441.00	**20.23**
438.90	0.12	439.96	9.33		
438.92	0.12	439.98	9.94		
438.94	0.12	440.00	10.55		
438.96	0.12	440.02	11.18		
438.98	0.12	440.04	11.83		
439.00	0.12	440.06	12.48		
439.02	0.12	440.08	13.15		
439.04	0.12	440.10	13.83		
439.06	0.12	440.12	14.52		
439.08	0.12	440.14	15.22		
439.10	0.12	440.16	15.93		
439.12	0.12	440.18	16.66		
439.14	0.12	440.20	17.39		
439.16	0.12	440.22	18.13		
439.18	0.12	440.24	18.89		
439.20	0.12	440.26	19.38		
439.22	0.12	440.28	19.40		
439.24	0.12	440.30	19.42		
439.26	0.13	440.32	19.45		
439.28	0.13	440.34	19.47		
439.30	0.13	440.36	19.49		
439.32	0.13	440.38	19.52		
439.34	0.13	440.40	19.54		
439.36	0.13	440.42	19.56		
439.38	0.13	440.44	19.59		
439.40	0.13	440.46	19.61		
439.42	0.13	440.48	19.63		
439.44	0.13	440.50	19.66		
439.46	0.13	440.52	19.68		
439.48	0.13	440.54	19.70		
439.50	0.13	440.56	19.73		
439.52	0.22	440.58	19.75		
439.54	0.37	440.60	19.77		

Stage-Area-Storage for Pond BR-2C:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
438.50	9,155	0
438.55	9,262	460
438.60	9,369	926
438.65	9,477	1,397
438.70	9,585	1,874
438.75	9,694	2,356
438.80	9,804	2,843
438.85	9,914	3,336
438.90	10,025	3,835
438.95	10,137	4,339
439.00	10,249	4,848
439.05	10,362	5,364
439.10	10,475	5,885
439.15	10,589	6,411
439.20	10,704	6,944
439.25	10,819	7,482
439.30	10,935	8,026
439.35	11,052	8,575
439.40	11,169	9,131
439.45	11,287	9,692
439.50	11,405	10,259
439.55	11,547	10,833
439.60	11,690	11,414
439.65	11,833	12,002
439.70	11,978	12,597
439.75	12,123	13,200
439.80	12,269	13,810
439.85	12,416	14,427
439.90	12,564	15,051
439.95	12,713	15,683
440.00	12,863	16,323
440.05	12,958	16,968
440.10	13,054	17,619
440.15	13,150	18,274
440.20	13,247	18,934
440.25	13,344	19,598
440.30	13,441	20,268
440.35	13,539	20,943
440.40	13,636	21,622
440.45	13,735	22,306
440.50	13,833	22,995
440.55	13,932	23,690
440.60	14,032	24,389
440.65	14,131	25,093
440.70	14,231	25,802
440.75	14,332	26,516
440.80	14,433	27,235
440.85	14,534	27,959
440.90	14,635	28,688
440.95	14,737	29,423
441.00	**14,839**	**30,162**

Summary for Pond BR-2D:

Inflow Area = 131,825 sf, 51.04% Impervious, Inflow Depth = 4.29" for 10-yr event
Inflow = 15.26 cfs @ 12.03 hrs, Volume= 47,083 cf
Outflow = 11.91 cfs @ 12.08 hrs, Volume= 47,172 cf, Atten= 22%, Lag= 2.9 min
Primary = 11.91 cfs @ 12.08 hrs, Volume= 47,172 cf
Routed to Pond DB-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach DP-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 413.95' @ 12.08 hrs Surf.Area= 9,301 sf Storage= 11,724 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 261.5 min (1,074.3 - 812.8)

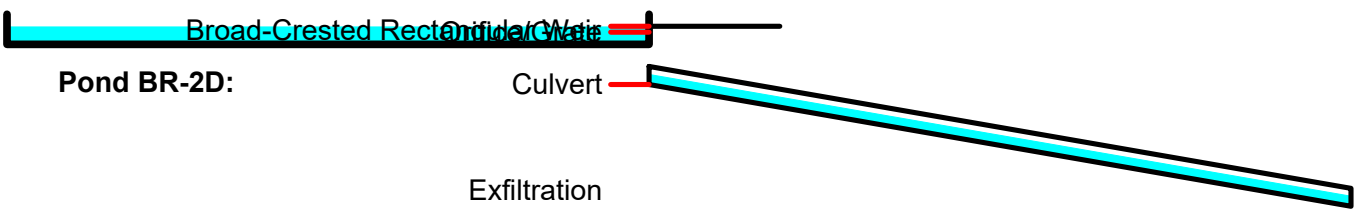
Volume	Invert	Avail.Storage	Storage Description
#1	412.50'	22,336 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
412.50	6,940	530.1	0	0	6,940
414.00	9,390	558.4	12,201	12,201	9,524
415.00	10,899	576.2	10,135	22,336	11,228

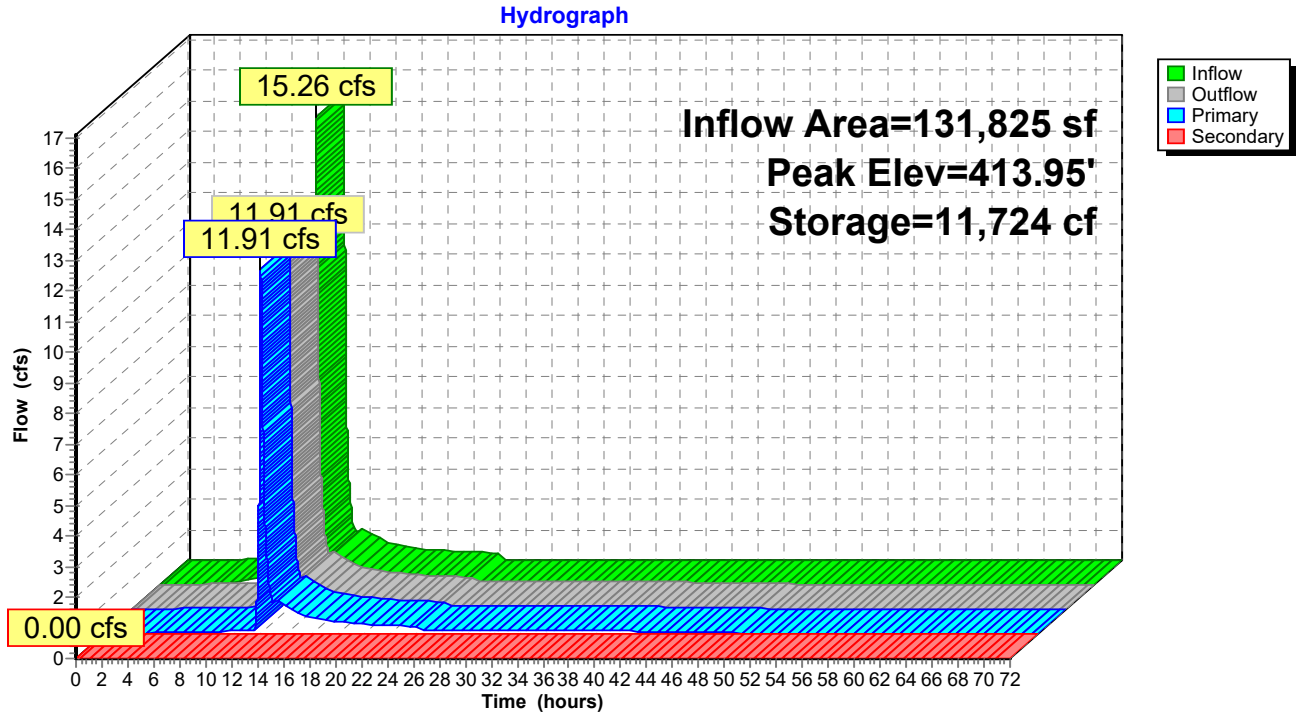
Device	Routing	Invert	Outlet Devices
#1	Primary	409.15'	**18.0" Round Culvert** L= 64.4' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 409.15' / 399.00' S= 0.1576 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	413.50'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	412.50'	**0.500 in/hr Exfiltration over Surface area**
#4	Secondary	414.00'	**20.0' long x 12.0' 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) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=11.91 cfs @ 12.08 hrs HW=413.95' TW=395.06' (Dynamic Tailwater)
└─**1=Culvert** (Passes 11.91 cfs of 21.40 cfs potential flow)
└─**2=Orifice/Grate** (Weir Controls 11.80 cfs @ 2.19 fps)
└─**3=Exfiltration** (Exfiltration Controls 0.11 cfs)

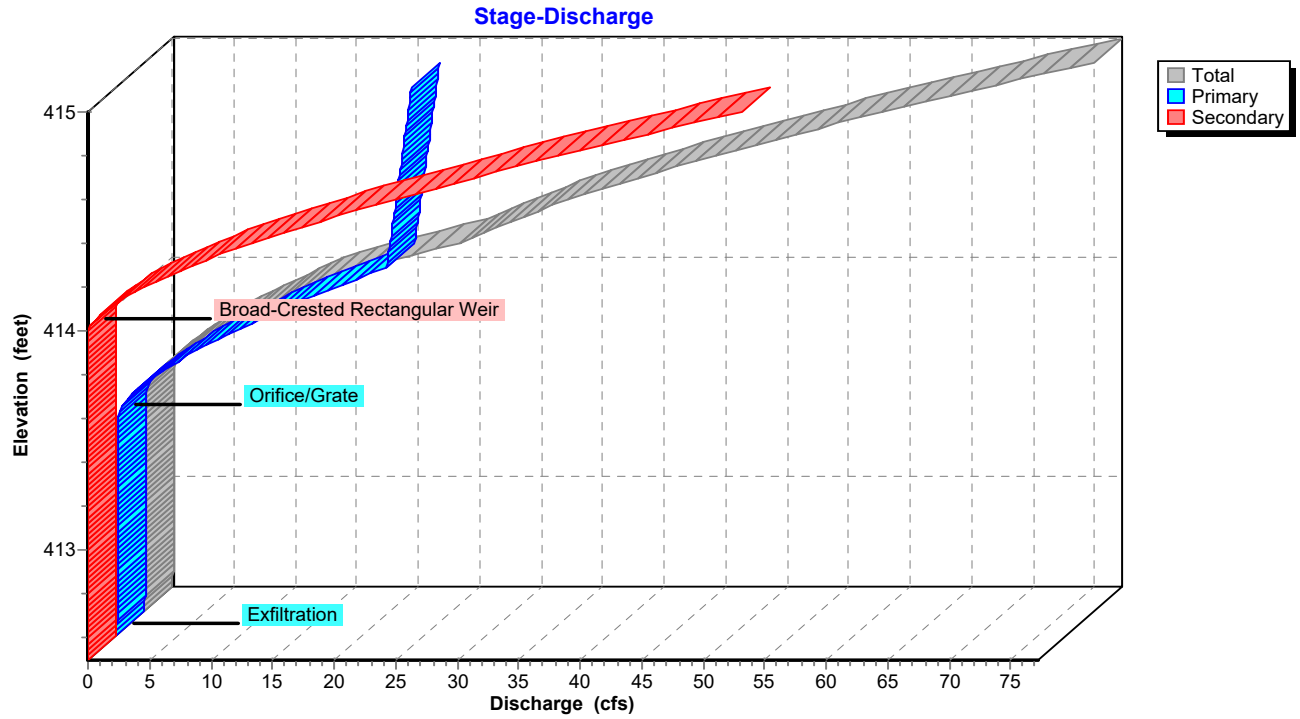
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=412.50' TW=0.00' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)



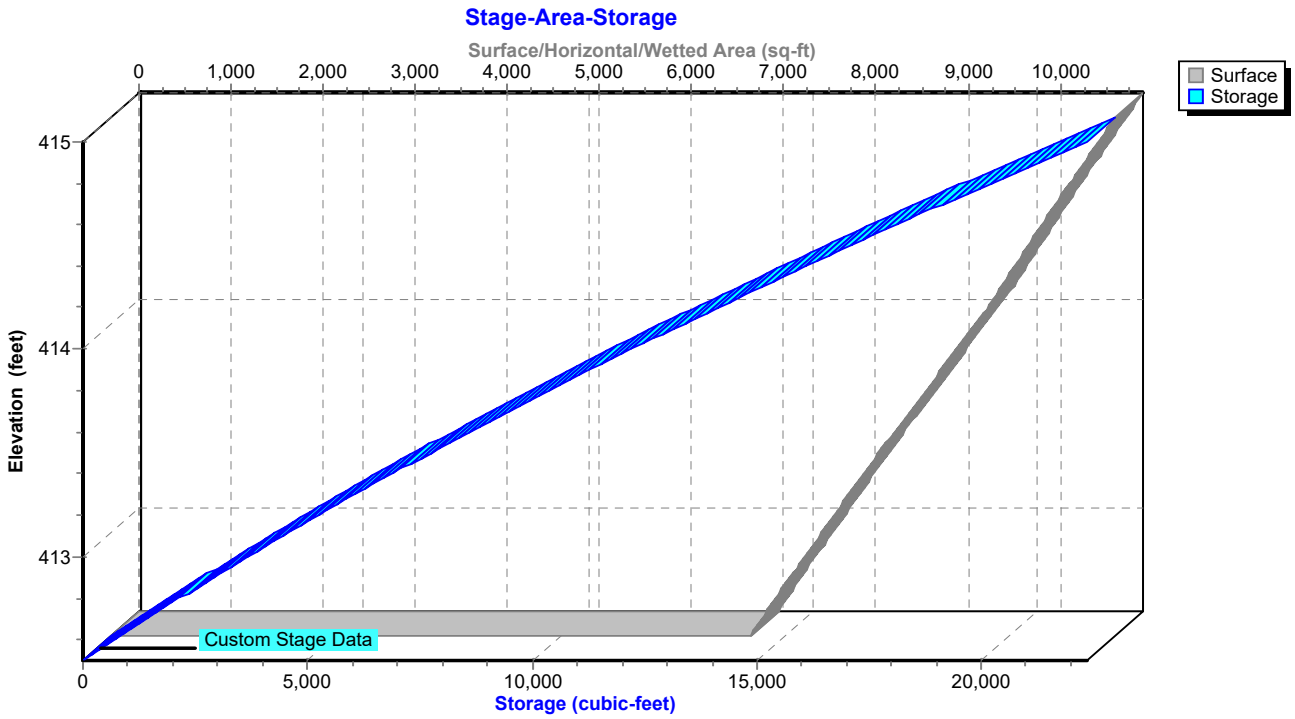
Pond BR-2D:



Pond BR-2D:



Pond BR-2D:


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
Surface
Storage
415
414
413
Elevation (feet)
Custom Stage Data
0
5,000
10,000
15,000
20,000
Storage (cubic-feet)

Hydrograph for Pond BR-2D:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	412.50	0.00	0.00	**0.00**
2.50	0.00	0	412.50	0.00	0.00	0.00
5.00	0.06	0	412.50	0.08	0.08	0.00
7.50	0.21	450	412.56	0.08	0.08	0.00
10.00	**0.58**	**2,850**	**412.89**	**0.09**	**0.09**	0.00
12.50	**2.17**	**9,182**	**413.67**	**2.81**	**2.81**	0.00
15.00	0.68	8,256	413.56	0.71	0.71	0.00
17.50	0.41	8,068	413.54	0.42	0.42	0.00
20.00	0.32	7,997	413.53	0.32	0.32	0.00
22.50	0.27	7,952	413.53	0.27	0.27	0.00
25.00	0.00	7,536	413.48	0.10	0.10	0.00
27.50	0.00	6,660	413.37	0.10	0.10	0.00
30.00	0.00	5,802	413.27	0.09	0.09	0.00
32.50	0.00	4,962	413.17	0.09	0.09	0.00
35.00	0.00	4,139	413.06	0.09	0.09	0.00
37.50	0.00	3,334	412.96	0.09	0.09	0.00
40.00	0.00	2,546	412.85	0.09	0.09	0.00
42.50	0.00	1,775	412.75	0.08	0.08	0.00
45.00	0.00	1,021	412.64	0.08	0.08	0.00
47.50	0.00	283	412.54	0.08	0.08	0.00
50.00	0.00	0	412.50	0.00	0.00	0.00
52.50	0.00	0	412.50	0.00	0.00	0.00
55.00	0.00	0	412.50	0.00	0.00	0.00
57.50	0.00	0	412.50	0.00	0.00	0.00
60.00	0.00	0	412.50	0.00	0.00	0.00
62.50	0.00	0	412.50	0.00	0.00	0.00
65.00	0.00	0	412.50	0.00	0.00	0.00
67.50	0.00	0	412.50	0.00	0.00	0.00
70.00	0.00	0	412.50	0.00	0.00	0.00

Stage-Discharge for Pond BR-2D:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
412.50	0.00	0.00	0.00
412.55	0.08	0.08	0.00
412.60	0.08	0.08	0.00
412.65	0.08	0.08	0.00
412.70	0.08	0.08	0.00
412.75	0.08	0.08	0.00
412.80	0.09	0.09	0.00
412.85	0.09	0.09	0.00
412.90	0.09	0.09	0.00
412.95	0.09	0.09	0.00
413.00	0.09	0.09	0.00
413.05	0.09	0.09	0.00
413.10	0.09	0.09	0.00
413.15	0.09	0.09	0.00
413.20	0.09	0.09	0.00
413.25	0.09	0.09	0.00
413.30	0.09	0.09	0.00
413.35	0.10	0.10	0.00
413.40	0.10	0.10	0.00
413.45	0.10	0.10	0.00
413.50	0.10	0.10	0.00
413.55	0.54	0.54	0.00
413.60	1.34	1.34	0.00
413.65	2.38	2.38	0.00
413.70	3.61	3.61	0.00
413.75	5.01	5.01	0.00
413.80	6.55	6.55	0.00
413.85	8.23	8.23	0.00
413.90	10.03	10.03	0.00
413.95	11.95	11.95	0.00
414.00	13.98	13.98	0.00
414.05	16.69	16.12	0.57
414.10	19.97	18.35	1.63
414.15	23.66	20.67	2.99
414.20	26.65	22.06	4.60
414.25	28.64	22.18	6.46
414.30	30.84	22.31	8.53
414.35	33.23	22.44	10.80
414.40	35.82	22.56	13.26
414.45	38.63	22.69	15.94
414.50	41.62	22.81	18.81
414.55	44.80	22.94	21.86
414.60	48.16	23.06	25.10
414.65	51.40	23.18	28.22
414.70	54.75	23.30	31.45
414.75	58.21	23.42	34.78
414.80	61.75	23.54	38.21
414.85	65.47	23.66	41.81
414.90	69.29	23.78	45.51
414.95	73.21	23.90	49.31
415.00	**77.22**	**24.02**	**53.20**

Stage-Area-Storage for Pond BR-2D:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
412.50	6,940	0
412.55	7,016	349
412.60	7,092	702
412.65	7,168	1,058
412.70	7,245	1,418
412.75	7,323	1,783
412.80	7,400	2,151
412.85	7,479	2,523
412.90	7,557	2,899
412.95	7,636	3,278
413.00	7,716	3,662
413.05	7,795	4,050
413.10	7,876	4,442
413.15	7,956	4,838
413.20	8,037	5,237
413.25	8,119	5,641
413.30	8,201	6,049
413.35	8,283	6,461
413.40	8,366	6,878
413.45	8,449	7,298
413.50	8,532	7,722
413.55	8,616	8,151
413.60	8,701	8,584
413.65	8,785	9,021
413.70	8,870	9,463
413.75	8,956	9,908
413.80	9,042	10,358
413.85	9,128	10,812
413.90	9,215	11,271
413.95	9,302	11,734
414.00	9,390	12,201
414.05	9,463	12,673
414.10	9,536	13,148
414.15	9,609	13,626
414.20	9,683	14,108
414.25	9,757	14,594
414.30	9,831	15,084
414.35	9,905	15,578
414.40	9,980	16,075
414.45	10,055	16,576
414.50	10,130	17,080
414.55	10,206	17,589
414.60	10,282	18,101
414.65	10,358	18,617
414.70	10,434	19,137
414.75	10,511	19,660
414.80	10,588	20,188
414.85	10,665	20,719
414.90	10,743	21,254
414.95	10,821	21,793
415.00	**10,899**	**22,336**

Summary for Pond DB-1:

Inflow = 38.48 cfs @ 12.21 hrs, Volume= 129,145 cf
Outflow = 15.72 cfs @ 12.50 hrs, Volume= 129,103 cf, Atten= 59%, Lag= 17.4 min
Primary = 15.72 cfs @ 12.50 hrs, Volume= 129,103 cf
Routed to Reach DP-1 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach DP-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 401.83' @ 12.50 hrs Surf.Area= 10,756 sf Storage= 27,963 cf

Plug-Flow detention time= 34.0 min calculated for 129,103 cf (100% of inflow)
Center-of-Mass det. time= 33.3 min (962.7 - 929.3)

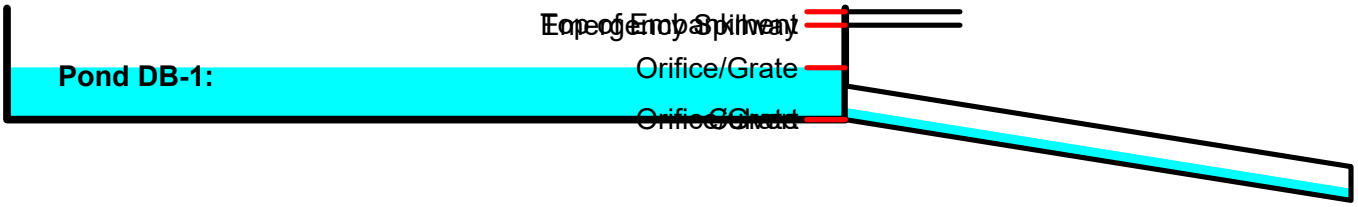
Volume	Invert	Avail.Storage	Storage Description
#1	398.00'	102,303 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
398.00	4,562	329.7	0	0	4,562
400.00	7,186	564.6	11,649	11,649	21,303
402.00	11,122	773.0	18,165	29,814	43,526
404.00	16,322	1,037.5	27,278	57,093	81,677
406.00	23,173	1,283.2	39,295	96,388	127,111
406.25	24,149	1,287.5	5,915	102,303	128,047

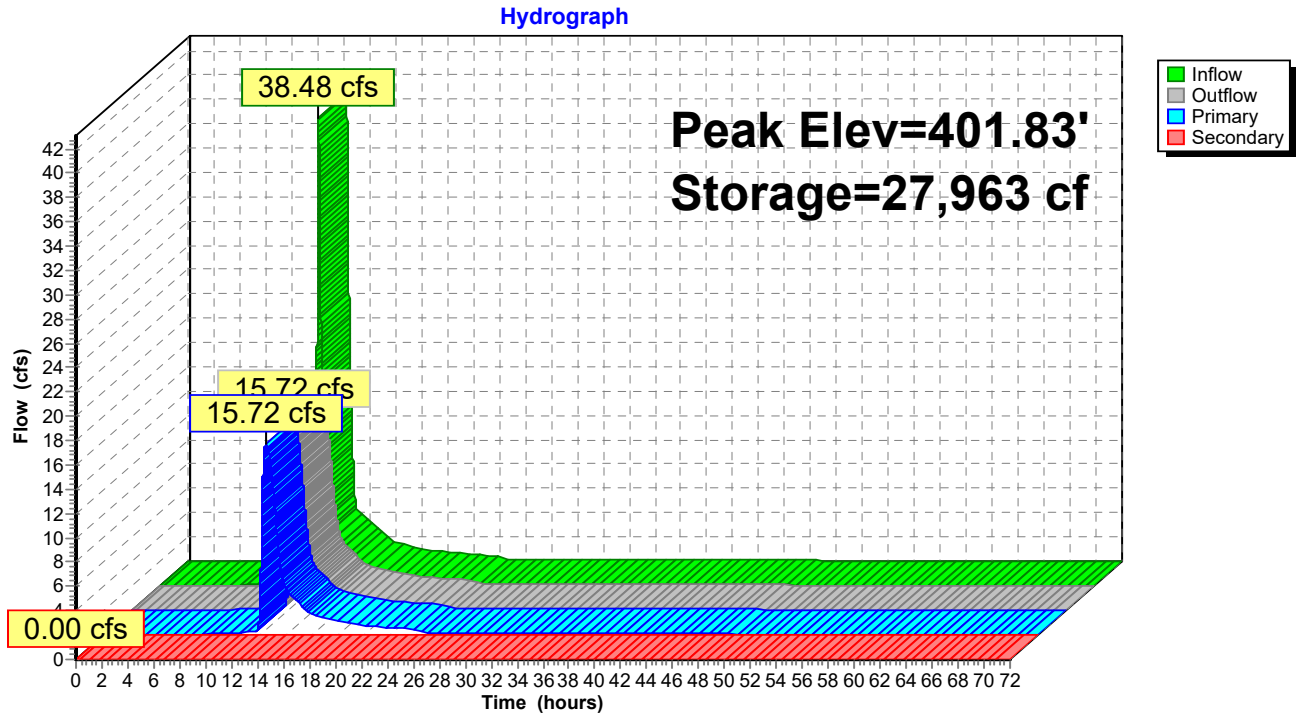
Device	Routing	Invert	Outlet Devices
#1	Primary	398.00'	**30.0" Round Culvert** L= 52.9' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 398.00' / 392.00' S= 0.1134 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	398.00'	**18.5" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	401.85'	**20.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	405.00'	**20.0' long + 7.0 '/' SideZ x 12.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#5	Secondary	406.00'	**645.3' long x 12.0' breadth Top of Embankment** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=15.72 cfs @ 12.50 hrs HW=401.83' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 15.72 cfs of 47.46 cfs potential flow)
└─**2=Orifice/Grate** (Orifice Controls 15.72 cfs @ 8.42 fps)
└─**3=Orifice/Grate** (Controls 0.00 cfs)

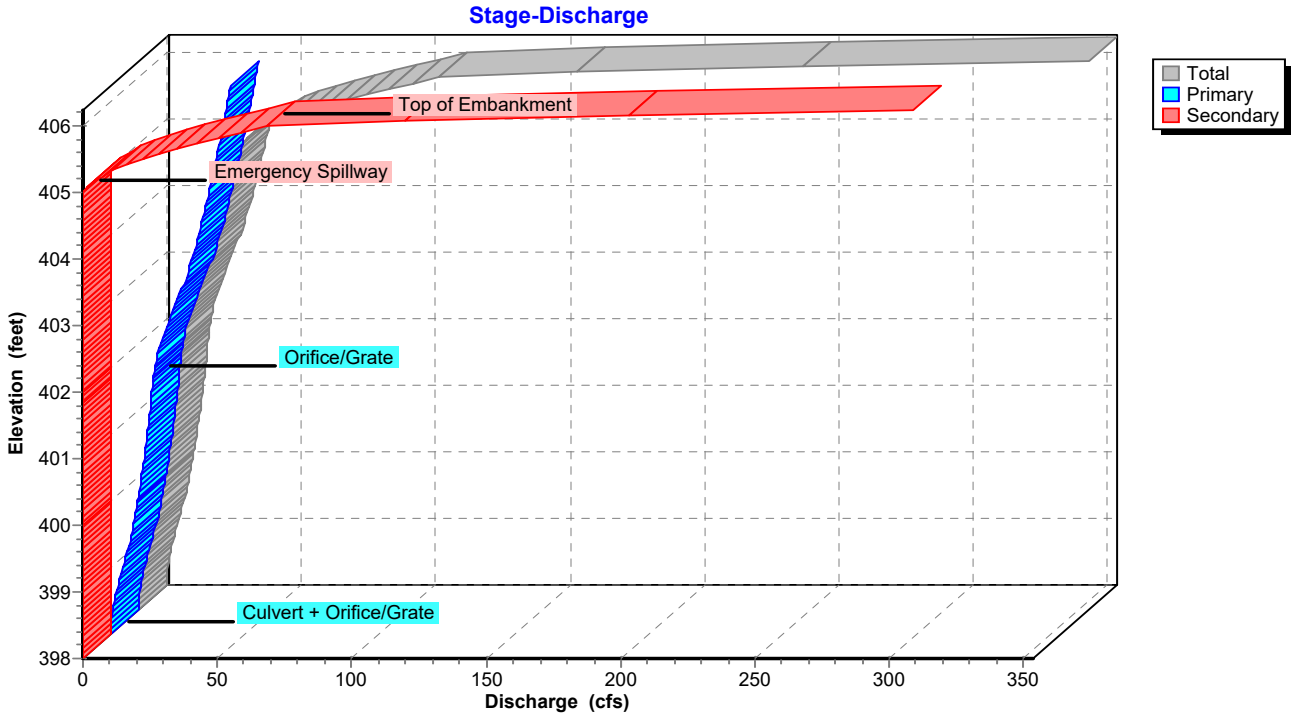
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=398.00' TW=0.00' (Dynamic Tailwater)
└─**4=Emergency Spillway** (Controls 0.00 cfs)
└─**5=Top of Embankment** (Controls 0.00 cfs)


Pond DB-1:
Orifice/Grate

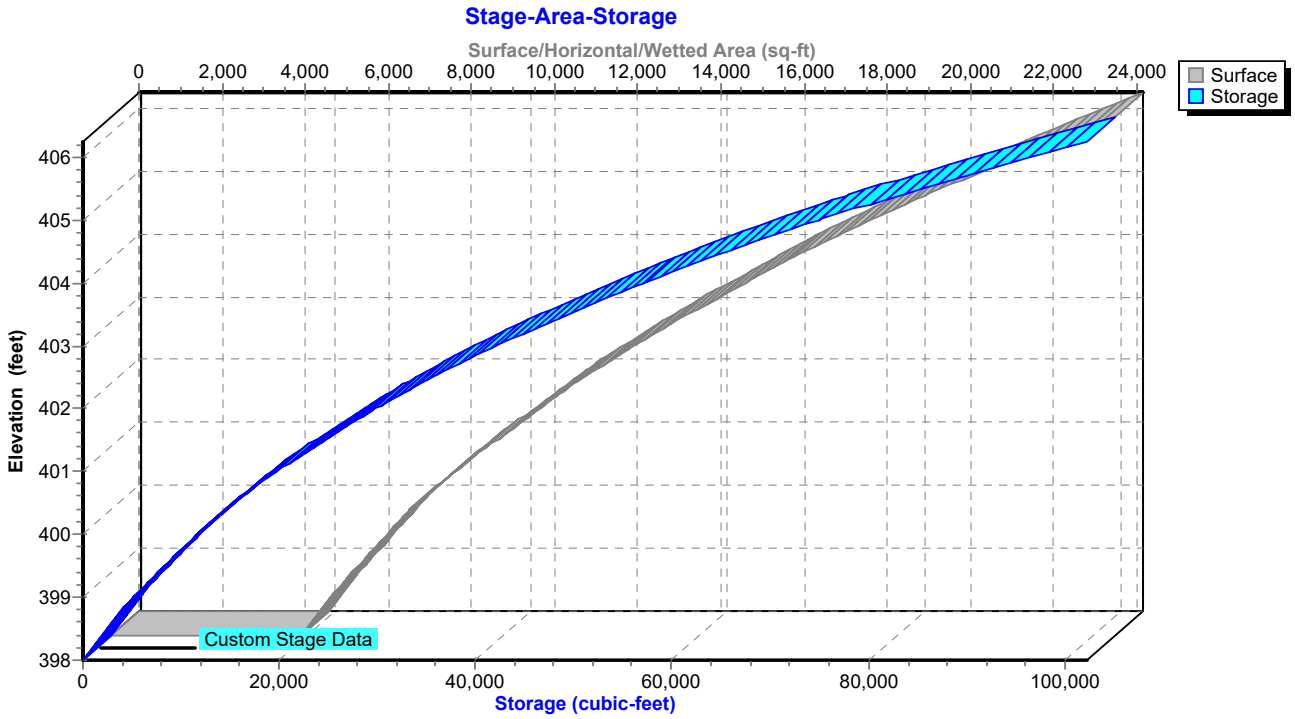
Pond DB-1:


Hydrograph
38.48 cfs
Peak Elev=401.83'
Storage=27,963 cf
15.72 cfs
15.72 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Pond DB-1:



Pond DB-1:



Hydrograph for Pond DB-1:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	398.00	0.00	0.00	**0.00**
2.50	0.00	0	398.00	0.00	0.00	0.00
5.00	0.00	34	398.01	0.00	0.00	0.00
7.50	0.09	456	398.10	0.05	0.05	0.00
10.00	**0.18**	746	398.16	0.14	0.14	0.00
12.50	**15.89**	**27,963**	**401.83**	**15.72**	**15.72**	0.00
15.00	2.43	**3,728**	**398.74**	**2.62**	**2.62**	0.00
17.50	1.17	2,410	398.50	1.25	1.25	0.00
20.00	0.77	1,900	398.40	0.81	0.81	0.00
22.50	0.54	1,572	398.33	0.57	0.57	0.00
25.00	0.10	897	398.19	0.20	0.20	0.00
27.50	0.09	626	398.13	0.10	0.10	0.00
30.00	0.09	606	398.13	0.09	0.09	0.00
32.50	0.09	599	398.13	0.09	0.09	0.00
35.00	0.09	594	398.13	0.09	0.09	0.00
37.50	0.09	588	398.13	0.09	0.09	0.00
40.00	0.09	582	398.13	0.09	0.09	0.00
42.50	0.08	577	398.12	0.08	0.08	0.00
45.00	0.08	571	398.12	0.08	0.08	0.00
47.50	0.08	565	398.12	0.08	0.08	0.00
50.00	0.00	337	398.07	0.03	0.03	0.00
52.50	0.00	188	398.04	0.01	0.01	0.00
55.00	0.00	130	398.03	0.00	0.00	0.00
57.50	0.00	99	398.02	0.00	0.00	0.00
60.00	0.00	80	398.02	0.00	0.00	0.00
62.50	0.00	67	398.01	0.00	0.00	0.00
65.00	0.00	58	398.01	0.00	0.00	0.00
67.50	0.00	51	398.01	0.00	0.00	0.00
70.00	0.00	46	398.01	0.00	0.00	0.00

Stage-Discharge for Pond DB-1:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
398.00	0.00	0.00	0.00
398.10	0.06	0.06	0.00
398.20	0.22	0.22	0.00
398.30	0.48	0.48	0.00
398.40	0.83	0.83	0.00
398.50	1.26	1.26	0.00
398.60	1.77	1.77	0.00
398.70	2.35	2.35	0.00
398.80	2.98	2.98	0.00
398.90	3.65	3.65	0.00
399.00	4.36	4.36	0.00
399.10	5.09	5.09	0.00
399.20	5.81	5.81	0.00
399.30	6.52	6.52	0.00
399.40	7.17	7.17	0.00
399.50	7.73	7.73	0.00
399.60	8.18	8.18	0.00
399.70	8.66	8.66	0.00
399.80	9.12	9.12	0.00
399.90	9.55	9.55	0.00
400.00	9.96	9.96	0.00
400.10	10.36	10.36	0.00
400.20	10.75	10.75	0.00
400.30	11.11	11.11	0.00
400.40	11.47	11.47	0.00
400.50	11.82	11.82	0.00
400.60	12.16	12.16	0.00
400.70	12.48	12.48	0.00
400.80	12.80	12.80	0.00
400.90	13.12	13.12	0.00
401.00	13.42	13.42	0.00
401.10	13.72	13.72	0.00
401.20	14.01	14.01	0.00
401.30	14.29	14.29	0.00
401.40	14.57	14.57	0.00
401.50	14.85	14.85	0.00
401.60	15.12	15.12	0.00
401.70	15.38	15.38	0.00
401.80	15.64	15.64	0.00
401.90	15.91	15.91	0.00
402.00	16.28	16.28	0.00
402.10	16.75	16.75	0.00
402.20	17.31	17.31	0.00
402.30	17.97	17.97	0.00
402.40	18.71	18.71	0.00
402.50	19.52	19.52	0.00
402.60	20.40	20.40	0.00
402.70	21.33	21.33	0.00
402.80	22.30	22.30	0.00
402.90	23.32	23.32	0.00
403.00	24.35	24.35	0.00
403.10	25.38	25.38	0.00
403.20	26.40	26.40	0.00
403.30	27.39	27.39	0.00
403.40	28.30	28.30	0.00
403.50	29.07	29.07	0.00
403.60	29.81	29.81	0.00
403.70	30.55	30.55	0.00
403.80	31.26	31.26	0.00
403.90	31.94	31.94	0.00
404.00	32.61	32.61	0.00
404.10	33.25	33.25	0.00
404.20	33.88	33.88	0.00
404.30	34.49	34.49	0.00
404.40	35.09	35.09	0.00
404.50	35.67	35.67	0.00
404.60	36.24	36.24	0.00
404.70	36.80	36.80	0.00
404.80	37.35	37.35	0.00
404.90	37.89	37.89	0.00
405.00	38.42	38.42	0.00
405.10	40.61	38.94	1.67
405.20	44.31	39.45	4.85
405.30	49.20	39.96	9.24
405.40	55.20	40.46	14.74
405.50	62.39	40.95	21.44
405.60	70.74	41.43	29.31
405.70	79.52	41.90	37.61
405.80	89.14	42.37	46.77
405.90	99.82	42.84	56.98
406.00	111.39	43.30	68.10
406.10	176.62	43.75	132.87
406.20	**286.31**	**44.20**	**242.12**

Stage-Area-Storage for Pond DB-1:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
398.00	4,562	0
398.10	4,679	462
398.20	4,798	936
398.30	4,918	1,422
398.40	5,039	1,919
398.50	5,162	2,430
398.60	5,287	2,952
398.70	5,413	3,487
398.80	5,540	4,035
398.90	5,669	4,595
399.00	5,800	5,169
399.10	5,932	5,755
399.20	6,065	6,355
399.30	6,200	6,968
399.40	6,336	7,595
399.50	6,474	8,236
399.60	6,614	8,890
399.70	6,755	9,558
399.80	6,897	10,241
399.90	7,041	10,938
400.00	7,186	11,649
400.10	7,362	12,376
400.20	7,541	13,122
400.30	7,722	13,885
400.40	7,905	14,666
400.50	8,090	15,466
400.60	8,277	16,284
400.70	8,466	17,121
400.80	8,658	17,977
400.90	8,851	18,853
401.00	9,047	19,748
401.10	9,245	20,662
401.20	9,445	21,597
401.30	9,647	22,551
401.40	9,851	23,526
401.50	10,058	24,522
401.60	10,266	25,538
401.70	10,477	26,575
401.80	10,690	27,633
401.90	10,905	28,713
402.00	11,122	29,814
402.10	11,358	30,938
402.20	11,597	32,086
402.30	11,839	33,258
402.40	12,082	34,454
402.50	12,329	35,674
402.60	12,578	36,920
402.70	12,829	38,190
402.80	13,083	39,486
402.90	13,339	40,807
403.00	13,598	42,154
403.10	13,859	43,526
403.20	14,123	44,925
403.30	14,389	46,351
403.40	14,658	47,803
403.50	14,929	49,283
403.60	15,202	50,789
403.70	15,479	52,323
403.80	15,757	53,885
403.90	16,038	55,475
404.00	16,322	57,093
404.10	16,636	58,741
404.20	16,953	60,420
404.30	17,273	62,131
404.40	17,596	63,875
404.50	17,922	65,651
404.60	18,252	67,459
404.70	18,584	69,301
404.80	18,919	71,176
404.90	19,257	73,085
405.00	19,598	75,028
405.10	19,942	77,005
405.20	20,289	79,016
405.30	20,639	81,062
405.40	20,992	83,144
405.50	21,348	85,261
405.60	21,707	87,414
405.70	22,069	89,602
405.80	22,434	91,828
405.90	22,802	94,089
406.00	23,173	96,388
406.10	23,561	98,725
406.20	**23,952**	**101,100**

Summary for Pond DB-2:

Inflow = 35.28 cfs @ 12.05 hrs, Volume= 139,535 cf
Outflow = 12.77 cfs @ 12.43 hrs, Volume= 139,276 cf, Atten= 64%, Lag= 23.0 min
Primary = 12.77 cfs @ 12.43 hrs, Volume= 139,276 cf
Routed to Reach DP-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach DP-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 396.09' @ 12.43 hrs Surf.Area= 16,529 sf Storage= 29,775 cf

Plug-Flow detention time= 79.8 min calculated for 139,275 cf (100% of inflow)
Center-of-Mass det. time= 76.3 min (1,109.1 - 1,032.8)

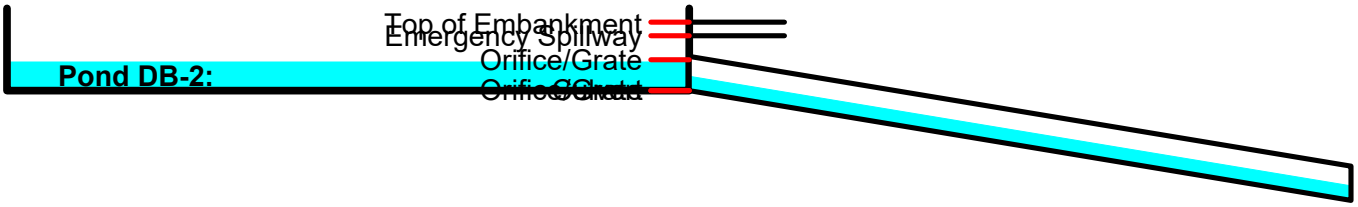
Volume	Invert	Avail.Storage	Storage Description
#1	394.00'	110,650 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
394.00	12,058	689.7	0	0	12,058
396.00	16,336	730.5	28,286	28,286	16,883
398.00	20,868	770.9	37,112	65,398	21,938
399.00	23,219	790.6	22,033	87,431	24,507
400.00	23,219	790.6	23,219	110,650	25,298

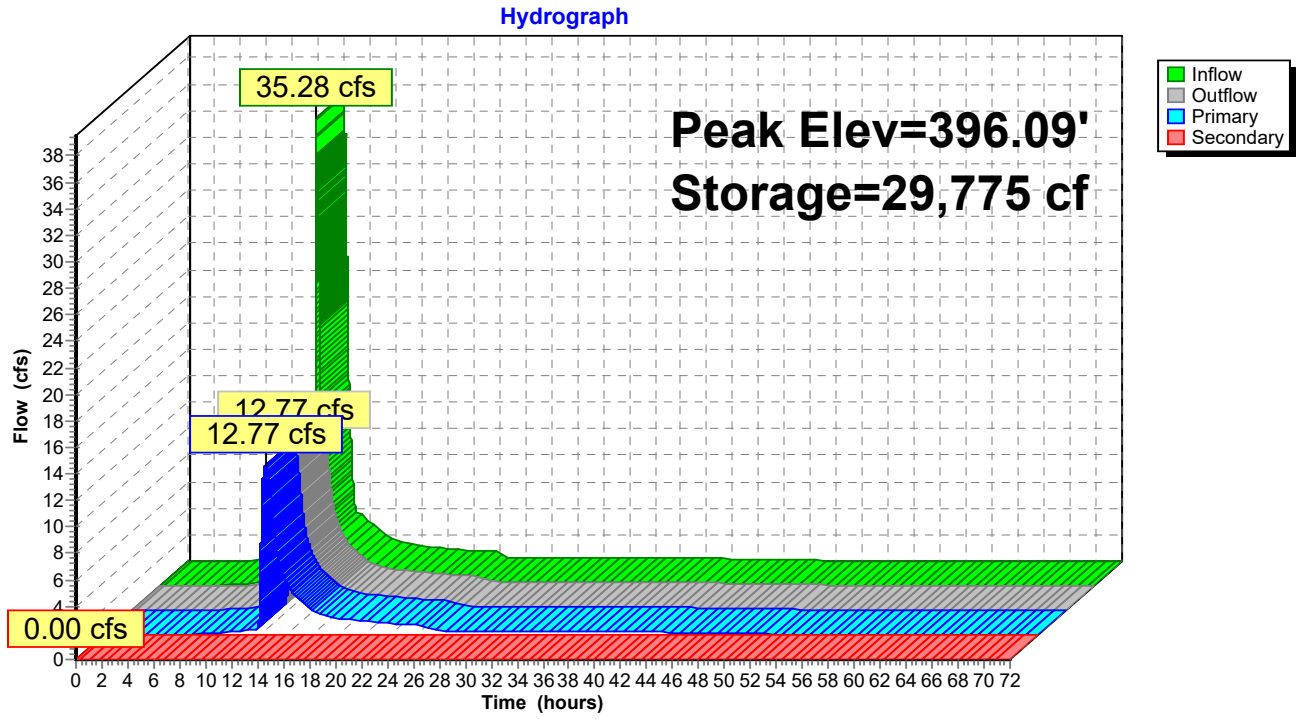
Device	Routing	Invert	Outlet Devices
#1	Primary	394.00'	**30.0" Round Culvert** L= 83.4' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 394.00' / 386.00' S= 0.0959 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	394.00'	**21.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	396.25'	**30.0" W x 18.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	398.00'	**20.0' long + 3.0 '/' SideZ x 12.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#5	Secondary	399.00'	**342.7' long x 12.0' breadth Top of Embankment** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=12.77 cfs @ 12.43 hrs HW=396.09' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 12.77 cfs of 26.98 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 12.77 cfs @ 5.31 fps)
  - **3=Orifice/Grate** (Controls 0.00 cfs)

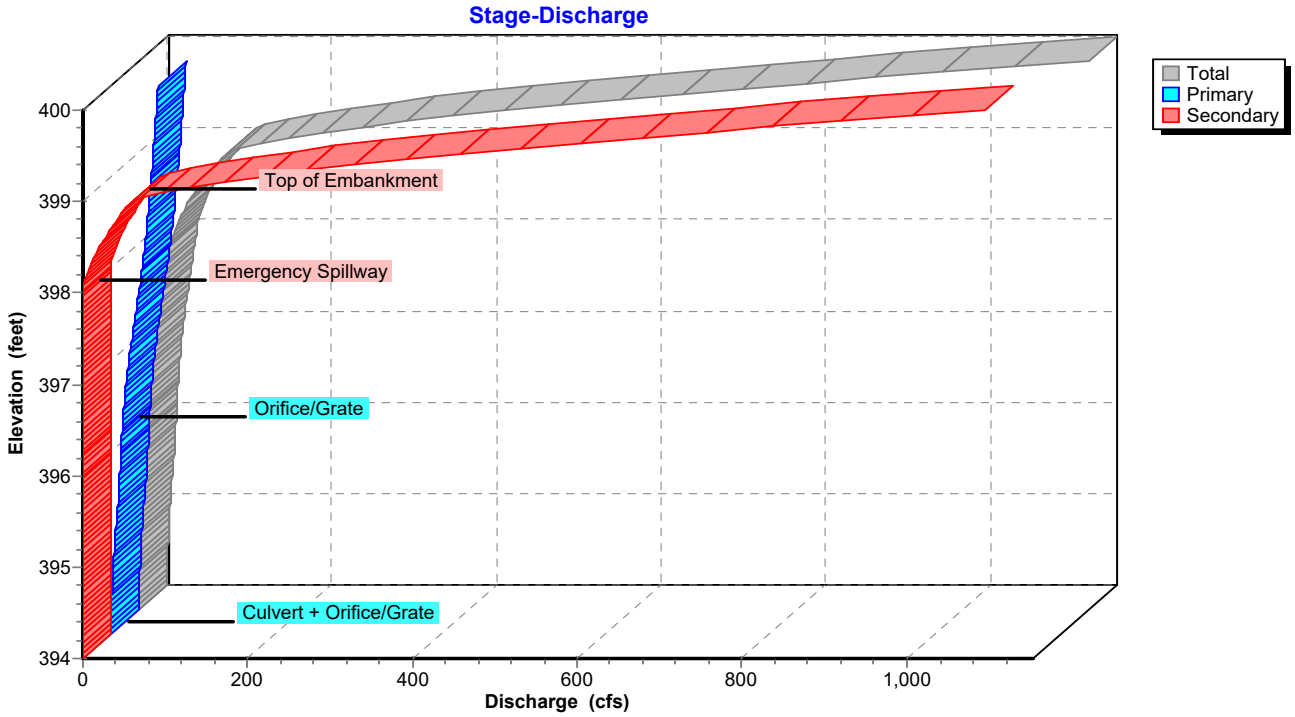
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=394.00' TW=0.00' (Dynamic Tailwater)
- **4=Emergency Spillway** (Controls 0.00 cfs)
- **5=Top of Embankment** (Controls 0.00 cfs)


Pond DB-2:
Top of Embankment
Emergency Spillway
Orifice/Grate

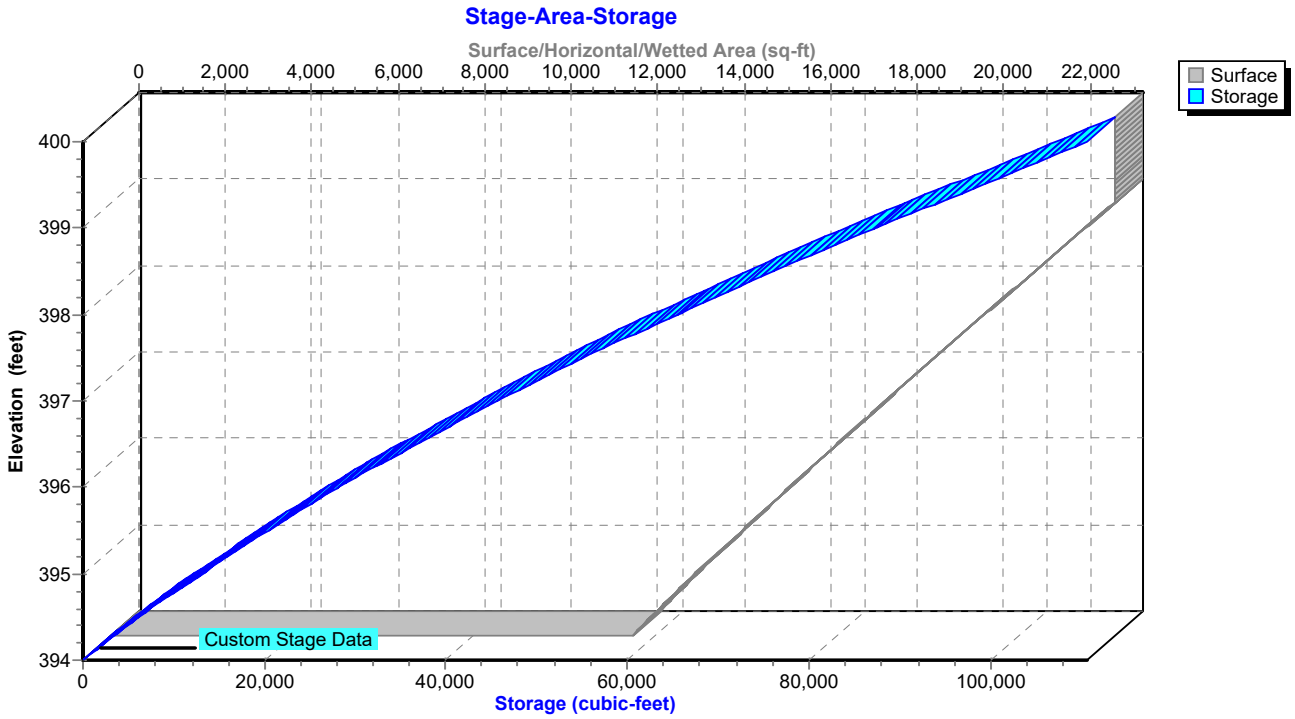
Pond DB-2:


Hydrograph
35.28 cfs
12.77 cfs
12.77 cfs
0.00 cfs
Peak Elev=396.09'
Storage=29,775 cf
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Pond DB-2:



Pond DB-2:



Hydrograph for Pond DB-2:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	394.00	0.00	0.00	**0.00**
2.50	0.00	0	394.00	0.00	0.00	0.00
5.00	0.08	250	394.02	0.00	0.00	0.00
7.50	0.21	1,345	394.11	0.07	0.07	0.00
10.00	**0.35**	**2,404**	**394.20**	**0.22**	**0.22**	0.00
12.50	**10.76**	**29,534**	**396.08**	**12.69**	**12.69**	0.00
15.00	2.28	9,269	394.72	2.73	2.73	0.00
17.50	1.23	6,361	394.51	1.40	1.40	0.00
20.00	0.96	5,387	394.43	1.03	1.03	0.00
22.50	0.80	4,857	394.39	0.85	0.85	0.00
25.00	0.23	3,590	394.29	0.48	0.48	0.00
27.50	0.23	2,621	394.21	0.26	0.26	0.00
30.00	0.22	2,442	394.20	0.23	0.23	0.00
32.50	0.22	2,386	394.19	0.22	0.22	0.00
35.00	0.21	2,354	394.19	0.21	0.21	0.00
37.50	0.21	2,326	394.19	0.21	0.21	0.00
40.00	0.20	2,299	394.19	0.20	0.20	0.00
42.50	0.20	2,273	394.19	0.20	0.20	0.00
45.00	0.19	2,246	394.18	0.20	0.20	0.00
47.50	0.19	2,219	394.18	0.19	0.19	0.00
50.00	0.00	1,553	394.13	0.10	0.10	0.00
52.50	0.00	997	394.08	0.04	0.04	0.00
55.00	0.00	732	394.06	0.02	0.02	0.00
57.50	0.00	578	394.05	0.01	0.01	0.00
60.00	0.00	477	394.04	0.01	0.01	0.00
62.50	0.00	406	394.03	0.01	0.01	0.00
65.00	0.00	354	394.03	0.01	0.01	0.00
67.50	0.00	313	394.03	0.00	0.00	0.00
70.00	0.00	281	394.02	0.00	0.00	0.00

Stage-Discharge for Pond DB-2:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
394.00	0.00	0.00	0.00
394.10	0.06	0.06	0.00
394.20	0.23	0.23	0.00
394.30	0.51	0.51	0.00
394.40	0.89	0.89	0.00
394.50	1.37	1.37	0.00
394.60	1.92	1.92	0.00
394.70	2.56	2.56	0.00
394.80	3.26	3.26	0.00
394.90	4.03	4.03	0.00
395.00	4.84	4.84	0.00
395.10	5.68	5.68	0.00
395.20	6.56	6.56	0.00
395.30	7.44	7.44	0.00
395.40	8.31	8.31	0.00
395.50	9.15	9.15	0.00
395.60	9.93	9.93	0.00
395.70	10.59	10.59	0.00
395.80	11.14	11.14	0.00
395.90	11.73	11.73	0.00
396.00	12.28	12.28	0.00
396.10	12.82	12.82	0.00
396.20	13.33	13.33	0.00
396.30	13.91	13.91	0.00
396.40	14.77	14.77	0.00
396.50	15.77	15.77	0.00
396.60	16.87	16.87	0.00
396.70	18.07	18.07	0.00
396.80	19.34	19.34	0.00
396.90	20.69	20.69	0.00
397.00	22.09	22.09	0.00
397.10	23.56	23.56	0.00
397.20	25.09	25.09	0.00
397.30	26.67	26.67	0.00
397.40	28.30	28.30	0.00
397.50	29.98	29.98	0.00
397.60	31.71	31.71	0.00
397.70	33.48	33.48	0.00
397.80	35.20	35.20	0.00
397.90	36.69	36.69	0.00
398.00	38.05	38.05	0.00
398.10	40.97	39.33	1.64
398.20	45.26	40.55	4.71
398.30	50.55	41.71	8.84
398.40	56.73	42.84	13.89
398.50	63.86	43.92	19.94
398.60	71.88	44.97	26.90
398.70	80.09	45.99	34.09
398.80	88.87	46.99	41.88
398.90	98.38	47.96	50.42
399.00	108.49	48.90	59.58
399.10	147.29	49.83	97.46
399.20	209.81	50.73	159.08
399.30	289.08	51.62	237.46
399.40	382.57	52.49	330.08
399.50	490.53	53.35	437.19
399.60	611.60	54.19	557.41
399.70	734.82	55.01	679.80
399.80	865.60	55.82	809.78
399.90	1,006.22	56.62	949.60
400.00	**1,154.18**	**57.41**	**1,096.76**

Stage-Area-Storage for Pond DB-2:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
394.00	12,058	0
394.10	12,257	1,216
394.20	12,457	2,451
394.30	12,658	3,707
394.40	12,862	4,983
394.50	13,067	6,279
394.60	13,273	7,596
394.70	13,482	8,934
394.80	13,691	10,293
394.90	13,903	11,673
395.00	14,116	13,073
395.10	14,331	14,496
395.20	14,547	15,940
395.30	14,765	17,405
395.40	14,985	18,893
395.50	15,206	20,402
395.60	15,429	21,934
395.70	15,653	23,488
395.80	15,879	25,065
395.90	16,107	26,664
396.00	16,336	28,286
396.10	16,549	29,930
396.20	16,764	31,596
396.30	16,980	33,283
396.40	17,198	34,992
396.50	17,417	36,723
396.60	17,637	38,475
396.70	17,859	40,250
396.80	18,082	42,047
396.90	18,307	43,867
397.00	18,533	45,709
397.10	18,760	47,573
397.20	18,989	49,461
397.30	19,219	51,371
397.40	19,450	53,305
397.50	19,683	55,261
397.60	19,917	57,241
397.70	20,153	59,245
397.80	20,390	61,272
397.90	20,628	63,323
398.00	20,868	65,398
398.10	21,097	67,496
398.20	21,328	69,617
398.30	21,560	71,762
398.40	21,793	73,929
398.50	22,028	76,120
398.60	22,264	78,335
398.70	22,501	80,573
398.80	22,739	82,835
398.90	22,978	85,121
399.00	**23,219**	87,431
399.10	23,219	89,753
399.20	23,219	92,074
399.30	23,219	94,396
399.40	23,219	96,718
399.50	23,219	99,040
399.60	23,219	101,362
399.70	23,219	103,684
399.80	23,219	106,006
399.90	23,219	108,328
400.00	23,219	**110,650**

Summary for Pond IS-1B:

Inflow = 19.32 cfs @ 12.05 hrs, Volume= 93,540 cf
Outflow = 9.21 cfs @ 12.24 hrs, Volume= 95,318 cf, Atten= 52%, Lag= 10.9 min
Discarded = 0.62 cfs @ 2.72 hrs, Volume= 72,576 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond BMH-1B :
Secondary = 8.59 cfs @ 12.24 hrs, Volume= 22,743 cf
Routed to Pond OCS-B6 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 438.53' @ 12.24 hrs Surf.Area= 7,695 sf Storage= 31,245 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 338.6 min (1,143.9 - 805.3)

Volume	Invert	Avail.Storage	Storage Description
#1	432.50'	13,080 cf	**Gravel Fill (Prismatic)**Listed below (Recalc) 53,865 cf Overall - 21,164 cf Embedded = 32,701 cf x 40.0% Voids
#2	433.50'	21,164 cf	**MC-4500 Chambers**Listed below Inside #1
#3	439.50'	101 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)
		34,345 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
432.50	7,695	0	0
439.50	7,695	53,865	53,865

Elevation (feet)	Cum.Store (cubic-feet)
433.50	0
433.58	504
433.67	1,005
433.75	1,505
433.83	2,002
433.92	2,498
434.00	2,992
434.08	3,484
434.17	3,973
434.25	4,460
434.33	4,945
434.42	5,427
434.50	5,906
434.58	6,382
434.67	6,855
434.75	7,325
434.83	7,792
434.92	8,255
435.00	8,715
435.08	9,170
435.17	9,622
435.25	10,069
435.33	10,513
435.42	10,951
435.50	11,386
435.58	11,815
435.67	12,239
435.75	12,658
435.83	13,072
435.92	13,480
436.00	13,882
436.08	14,279
436.17	14,669
436.25	15,052
436.33	15,429
436.42	15,798
436.50	16,161
436.58	16,516
436.67	16,863
436.75	17,201
436.83	17,531
436.92	17,853
437.00	18,164
437.08	18,466
437.17	18,758
437.25	19,038
437.33	19,307
437.42	19,564
437.50	19,807
437.58	20,037
437.67	20,251

437.75	20,449
437.83	20,628
437.92	20,786
438.00	20,917
438.08	21,006
438.17	21,059
438.25	21,100
438.33	21,133
438.42	21,156
438.50	21,164

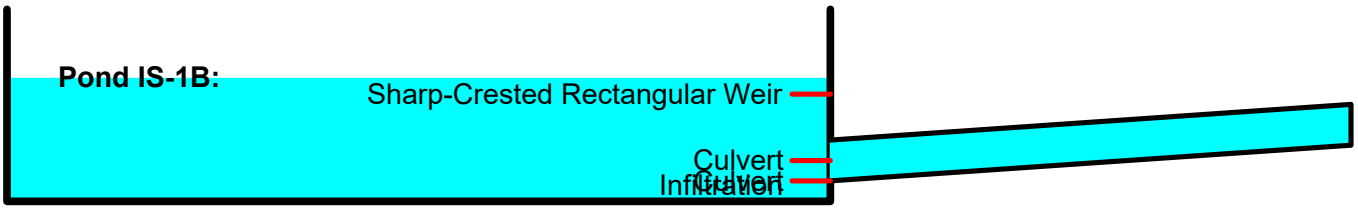
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
439.50	42	0	0
441.90	42	101	101

Device	Routing	Invert	Outlet Devices
#1	Discarded	432.50'	**0.62 cfs Infiltration at all elevations**
#2	Primary	435.25'	**24.0" Round Culvert** L= 31.3' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 433.50' / 435.25' S= -0.0559 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#3	Secondary	437.75'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 3	434.50'	**24.0" Round Culvert** L= 6.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 434.50' / 434.50' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

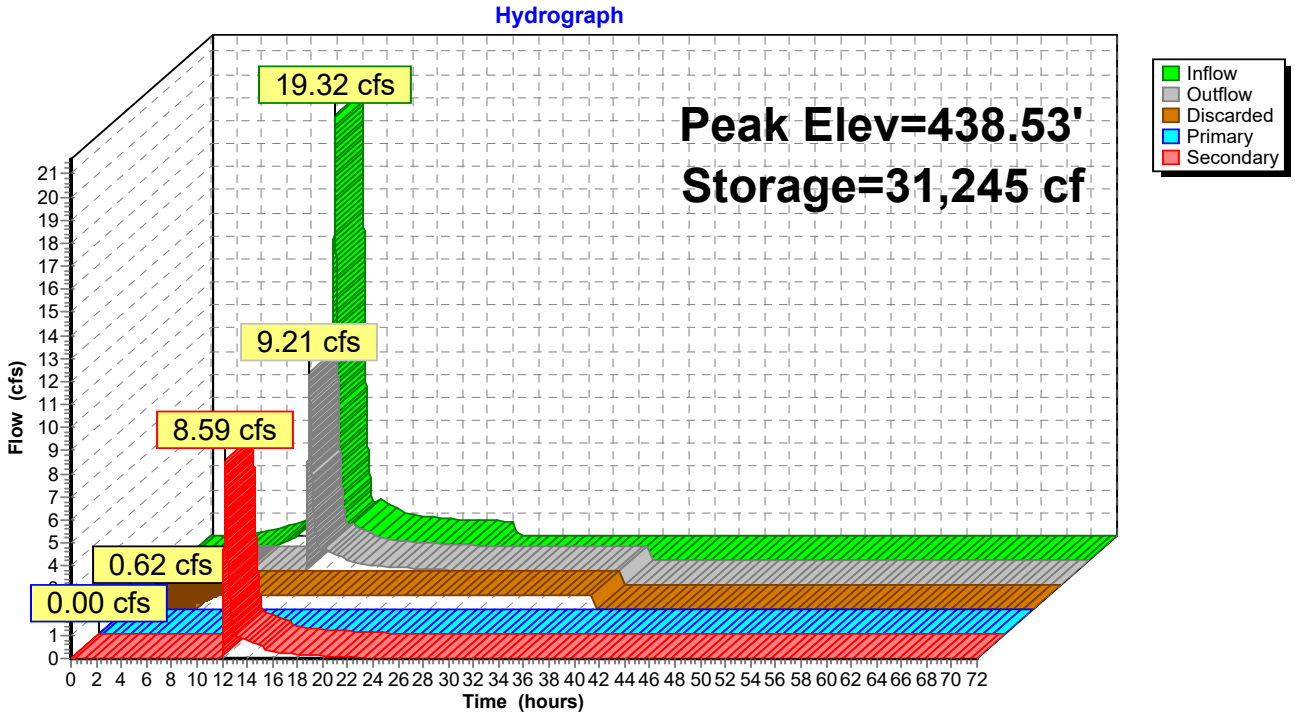
Discarded OutFlow Max=0.62 cfs @ 2.72 hrs HW=432.50' (Free Discharge)
└**1=Infiltration** (Exfiltration Controls 0.62 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=432.50' TW=435.25' (Dynamic Tailwater)
└**2=Culvert** (Controls 0.00 cfs)

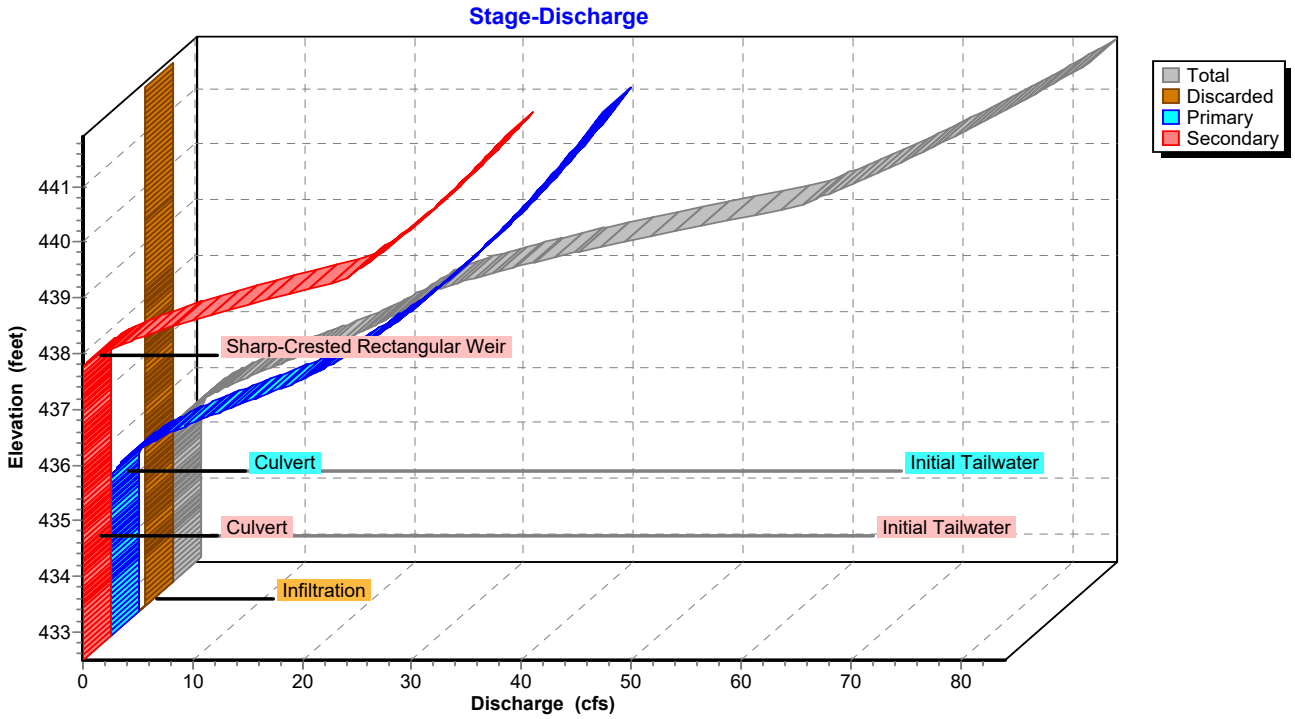
Secondary OutFlow Max=8.59 cfs @ 12.24 hrs HW=438.53' TW=435.65' (Dynamic Tailwater)
└**3=Sharp-Crested Rectangular Weir** (Weir Controls 8.59 cfs @ 2.88 fps)
└**4=Culvert** (Passes 8.59 cfs of 16.65 cfs potential flow)



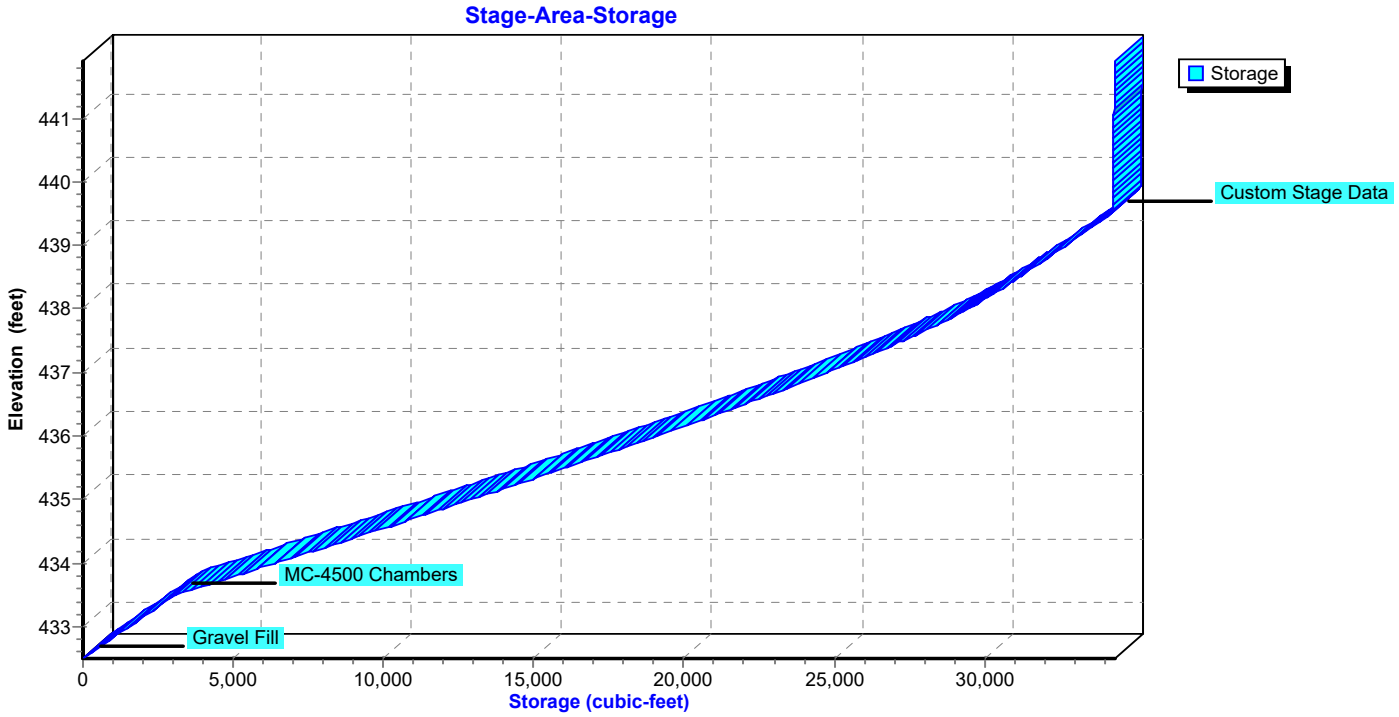
Pond IS-1B:



Pond IS-1B:



Pond IS-1B:


Stage-Area-Storage
Storage
Custom Stage Data
MC-4500 Chambers
Gravel Fill
Elevation (feet)
441
440
439
438
437
436
435
434
433
0
5,000
10,000
15,000
20,000
25,000
30,000
Storage (cubic-feet)

Hydrograph for Pond IS-1B:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	432.50	0.00	0.00	**0.00**	0.00
2.50	0.00	0	432.50	0.00	**0.00**	0.00	0.00
5.00	0.26	0	432.50	0.62	**0.62**	0.00	0.00
7.50	0.65	11	432.50	0.62	0.62	0.00	0.00
10.00	**1.62**	**3,691**	**433.59**	**0.62**	0.62	0.00	**0.00**
12.50	**3.54**	**30,188**	**438.20**	**4.47**	0.62	0.00	**3.85**
15.00	1.14	28,955	437.87	1.17	0.62	0.00	0.55
17.50	0.82	28,713	437.81	0.83	0.62	0.00	0.21
20.00	0.71	28,603	437.79	0.72	0.62	0.00	0.10
22.50	0.65	28,524	437.77	0.66	0.62	0.00	0.04
25.00	0.00	26,738	437.39	0.62	0.62	0.00	0.00
27.50	0.00	21,158	436.35	0.62	0.62	0.00	0.00
30.00	0.00	15,578	435.42	0.62	0.62	0.00	0.00
32.50	0.00	9,998	434.54	0.62	0.62	0.00	0.00
35.00	0.00	4,418	433.70	0.62	0.62	0.00	0.00
37.50	0.00	0	432.50	0.00	0.00	0.00	0.00
40.00	0.00	0	432.50	0.00	0.00	0.00	0.00
42.50	0.00	0	432.50	0.00	0.00	0.00	0.00
45.00	0.00	0	432.50	0.00	0.00	0.00	0.00
47.50	0.00	0	432.50	0.00	0.00	0.00	0.00
50.00	0.00	0	432.50	0.00	0.00	0.00	0.00
52.50	0.00	0	432.50	0.00	0.00	0.00	0.00
55.00	0.00	0	432.50	0.00	0.00	0.00	0.00
57.50	0.00	0	432.50	0.00	0.00	0.00	0.00
60.00	0.00	0	432.50	0.00	0.00	0.00	0.00
62.50	0.00	0	432.50	0.00	0.00	0.00	0.00
65.00	0.00	0	432.50	0.00	0.00	0.00	0.00
67.50	0.00	0	432.50	0.00	0.00	0.00	0.00
70.00	0.00	0	432.50	0.00	0.00	0.00	0.00

Stage-Discharge for Pond IS-1B:

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
432.50	0.00	**0.00**	0.00	0.00
432.70	0.62	**0.62**	0.00	0.00
432.90	0.62	0.62	0.00	0.00
433.10	0.62	0.62	0.00	0.00
433.30	0.62	0.62	0.00	0.00
433.50	0.62	0.62	0.00	0.00
433.70	0.62	0.62	0.00	0.00
433.90	0.62	0.62	0.00	0.00
434.10	0.62	0.62	0.00	0.00
434.30	0.62	0.62	0.00	0.00
434.50	0.62	0.62	0.00	0.00
434.70	0.62	0.62	0.00	0.00
434.90	0.62	0.62	0.00	0.00
435.10	0.62	0.62	0.00	0.00
435.30	0.64	0.62	0.02	0.00
435.50	1.10	0.62	0.48	0.00
435.70	2.13	0.62	1.51	0.00
435.90	3.66	0.62	3.04	0.00
436.10	5.61	0.62	4.99	0.00
436.30	7.91	0.62	7.29	0.00
436.50	10.45	0.62	9.83	0.00
436.70	13.12	0.62	12.50	0.00
436.90	15.78	0.62	15.16	0.00
437.10	18.19	0.62	17.57	0.00
437.30	20.00	0.62	19.38	0.00
437.50	21.76	0.62	21.14	0.00
437.70	23.39	0.62	22.77	0.00
437.90	25.66	0.62	24.29	0.75
438.10	29.00	0.62	25.72	2.66
438.30	32.88	0.62	27.07	5.19
438.50	37.16	0.62	28.36	8.18
438.70	41.75	0.62	29.60	11.54
438.90	46.60	0.62	30.78	15.20
439.10	51.67	0.62	31.92	19.13
439.30	56.93	0.62	33.02	23.28
439.50	59.72	0.62	34.09	25.01
439.70	62.14	0.62	35.12	26.40
439.90	64.47	0.62	36.12	27.73
440.10	66.71	0.62	37.10	28.99
440.30	68.87	0.62	38.05	30.19
440.50	70.96	0.62	38.98	31.36
440.70	72.98	0.62	39.89	32.48
440.90	74.95	0.62	40.77	33.56
441.10	76.87	0.62	41.64	34.61
441.30	78.74	0.62	42.49	35.63
441.50	80.56	0.62	43.32	36.62
441.70	82.34	0.62	44.14	37.58
441.90	**84.08**	0.62	**44.94**	**38.52**

Stage-Area-Storage for Pond IS-1B:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
432.50	0	437.80	28,650
432.60	308	437.90	29,072
432.70	616	438.00	29,479
432.80	923	438.10	29,847
432.90	1,231	438.20	30,189
433.00	1,539	438.30	30,525
433.10	1,847	438.40	30,851
433.20	2,155	438.50	31,166
433.30	2,462	438.60	31,474
433.40	2,770	438.70	31,782
433.50	3,078	438.80	32,090
433.60	3,755	438.90	32,398
433.70	4,409	439.00	32,705
433.80	5,091	439.10	33,013
433.90	5,742	439.20	33,321
434.00	6,412	439.30	33,629
434.10	7,080	439.40	33,937
434.20	7,726	439.50	34,244
434.30	8,398	439.60	34,249
434.40	9,040	439.70	34,253
434.50	9,700	439.80	34,257
434.60	10,356	439.90	34,261
434.70	10,990	440.00	34,265
434.80	11,650	440.10	34,270
434.90	12,278	440.20	34,274
435.00	12,924	440.30	34,278
435.10	13,565	440.40	34,282
435.20	14,184	440.50	34,286
435.30	14,826	440.60	34,291
435.40	15,438	440.70	34,295
435.50	16,066	440.80	34,299
435.60	16,687	440.90	34,303
435.70	17,287	441.00	34,307
435.80	17,907	441.10	34,312
435.90	18,499	441.20	34,316
436.00	19,102	441.30	34,320
436.10	19,700	441.40	34,324
436.20	20,276	441.50	34,328
436.30	20,869	441.60	34,333
436.40	21,434	441.70	34,337
436.50	22,009	441.80	34,341
436.60	22,576	441.90	**34,345**
436.70	23,121		
436.80	23,680		
436.90	24,212		
437.00	24,749		
437.10	25,277		
437.20	25,784		
437.30	26,298		
437.40	26,786		
437.50	27,274		
437.60	27,749		
437.70	28,201		

Summary for Pond IS-2B:

Inflow = 10.10 cfs @ 11.99 hrs, Volume= 27,091 cf
Outflow = 8.09 cfs @ 12.05 hrs, Volume= 28,182 cf, Atten= 20%, Lag= 3.9 min
Discarded = 0.30 cfs @ 12.05 hrs, Volume= 27,207 cf
Primary = 7.79 cfs @ 12.06 hrs, Volume= 975 cf
Routed to Pond BMH-2B :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 459.46' @ 12.05 hrs Surf.Area= 2,485 sf Storage= 8,546 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 197.8 min (979.3 - 777.0)

Volume	Invert	Avail.Storage	Storage Description
#1	453.50'	3,744 cf	**Gravel Fill (Prismatic)** Listed below (Recalc) 14,157 cf Overall - 4,797 cf Embedded = 9,359 cf x 40.0% Voids
#2	454.50'	4,797 cf	**MC-3500 Chambers** Listed below Inside #1
#3	459.25'	155 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,696 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
453.50	2,462	0	0
459.25	2,462	14,157	14,157

Elevation (feet)	Cum.Store (cubic-feet)
454.50	0
454.58	154
454.67	307
454.75	459
454.83	610
454.92	760
455.00	909
455.08	1,056
455.17	1,203
455.25	1,348
455.33	1,492
455.42	1,635
455.50	1,777
455.58	1,917
455.67	2,055
455.75	2,192
455.83	2,327
455.92	2,461
456.00	2,592
456.08	2,722
456.17	2,850
456.25	2,975
456.33	3,098
456.42	3,219
456.50	3,337
456.58	3,453
456.67	3,565
456.75	3,675
456.83	3,782
456.92	3,886
457.00	3,986
457.08	4,082
457.17	4,175
457.25	4,263
457.33	4,347
457.42	4,426
457.50	4,499
457.58	4,567
457.67	4,628
457.75	4,682
457.83	4,726
457.92	4,756
458.00	4,774
458.08	4,786
458.17	4,795
458.25	4,797

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
459.25	23	0	0
466.00	23	155	155

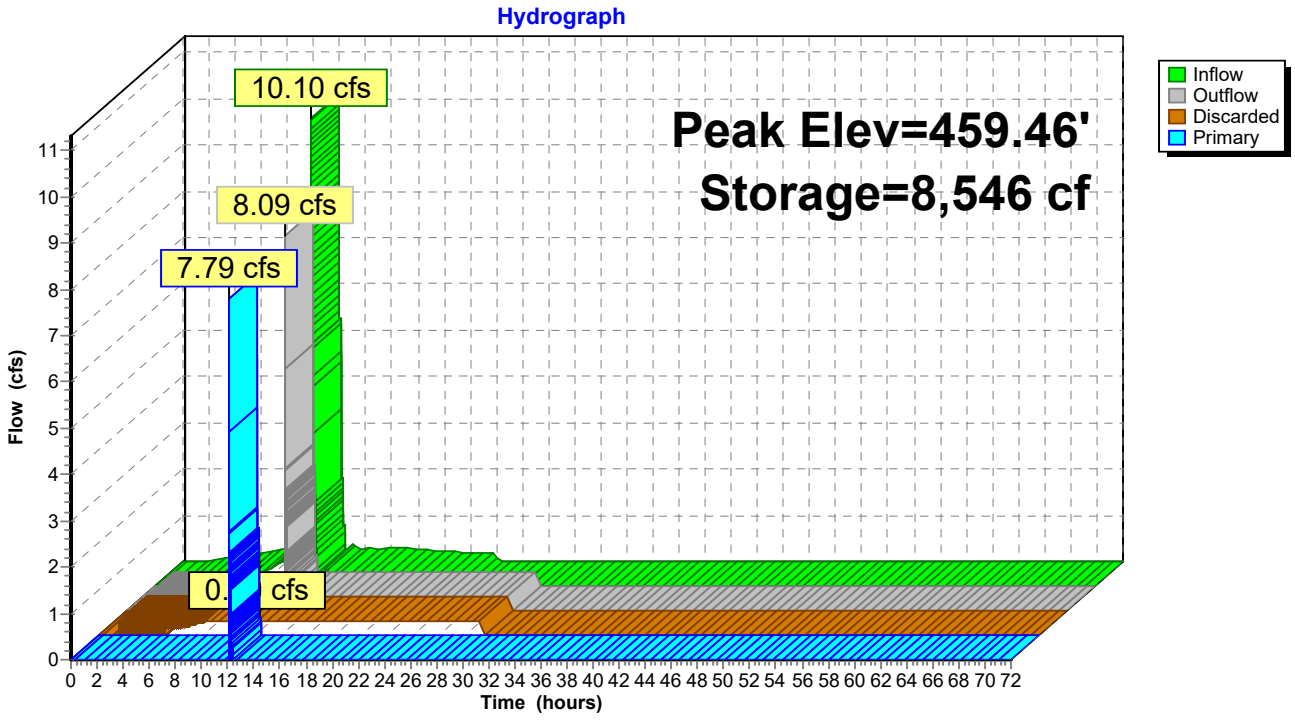
Device	Routing	Invert	Outlet Devices
#1	Discarded	453.50'	**5.250 in/hr Exfiltration over Surface area**
#2	Primary	454.75'	**24.0" Round Culvert**
			L= 9.4' RCP, groove end projecting, Ke= 0.200
			Inlet / Outlet Invert= 454.50' / 454.75' S= -0.0266 '/' Cc= 0.900
			n= 0.012, Flow Area= 3.14 sf

Discarded OutFlow Max=0.30 cfs @ 12.05 hrs HW=459.31' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.30 cfs)

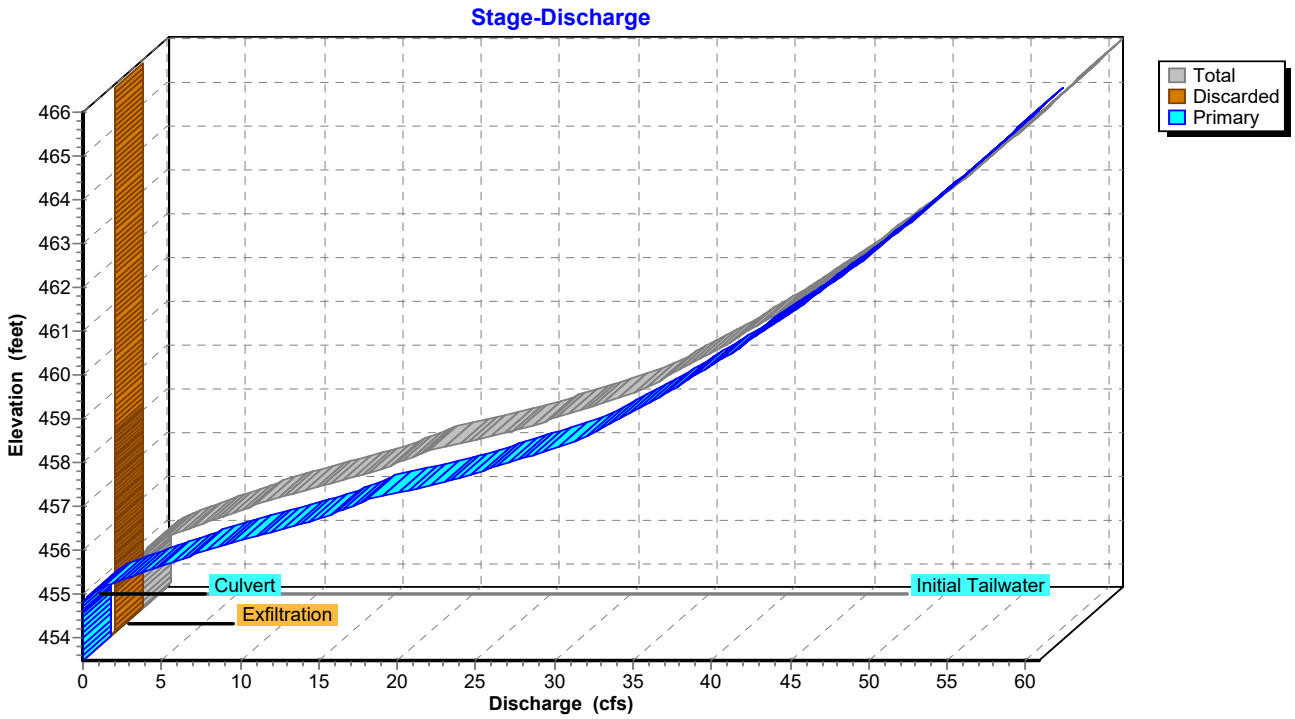
Primary OutFlow Max=5.49 cfs @ 12.06 hrs HW=459.42' TW=459.34' (Dynamic Tailwater)
└**2=Culvert** (Inlet Controls 5.49 cfs @ 1.75 fps)



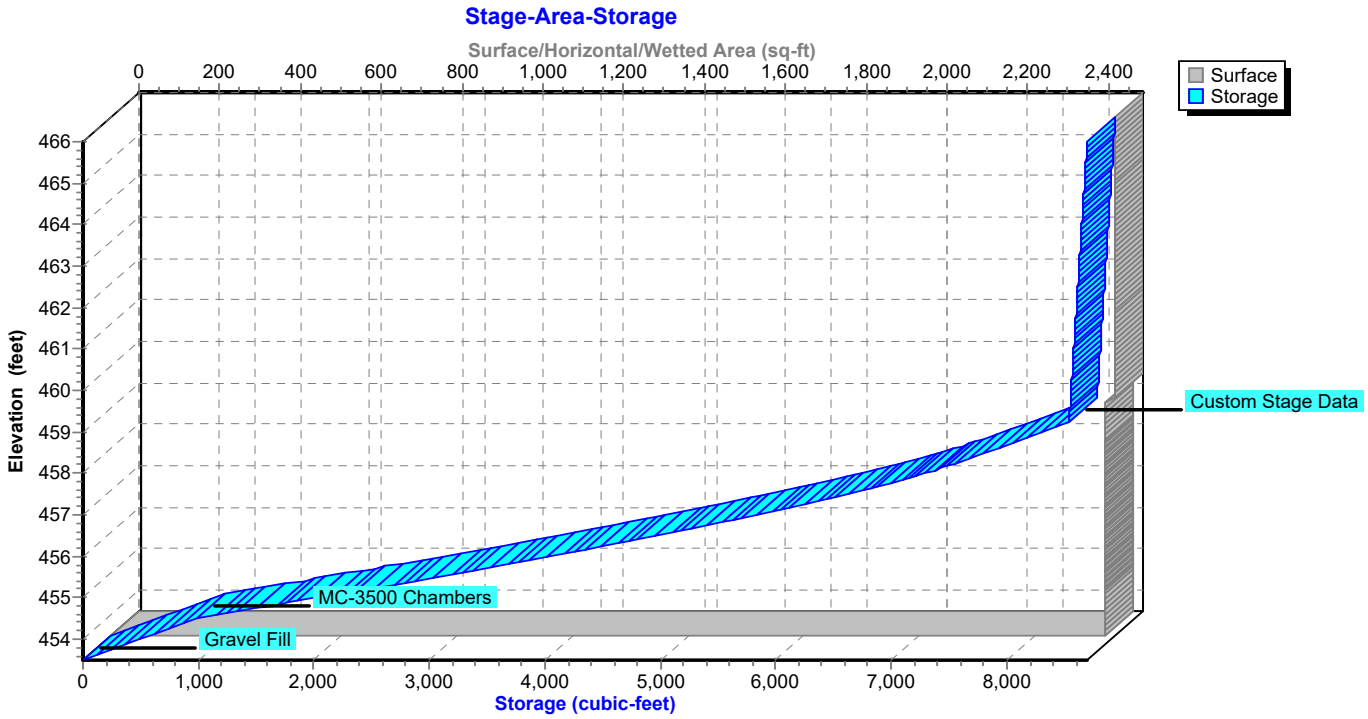
Pond IS-2B:



Pond IS-2B:



Pond IS-2B:



Hydrograph for Pond IS-2B:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	453.50	0.00	0.00	0.00
2.50	0.05	0	453.50	0.00	0.00	0.00
5.00	0.15	0	453.50	0.00	0.00	0.00
7.50	0.26	0	453.50	0.30	0.30	0.00
10.00	**0.55**	**701**	**454.21**	**0.30**	**0.30**	**0.00**
12.50	**0.18**	**7,858**	**458.56**	**0.30**	**0.30**	**0.00**
15.00	0.29	7,607	458.30	0.30	0.30	0.00
17.50	0.28	7,482	458.18	0.30	0.30	0.00
20.00	0.23	7,075	457.81	0.30	0.30	0.00
22.50	0.19	6,235	457.24	0.30	0.30	0.00
25.00	0.00	4,566	456.29	0.30	0.30	0.00
27.50	0.00	1,873	454.93	0.30	0.30	0.00
30.00	0.00	0	453.50	0.00	0.00	0.00
32.50	0.00	0	453.50	0.00	0.00	0.00
35.00	0.00	0	453.50	0.00	0.00	0.00
37.50	0.00	0	453.50	0.00	0.00	0.00
40.00	0.00	0	453.50	0.00	0.00	0.00
42.50	0.00	0	453.50	0.00	0.00	0.00
45.00	0.00	0	453.50	0.00	0.00	0.00
47.50	0.00	0	453.50	0.00	0.00	0.00
50.00	0.00	0	453.50	0.00	0.00	0.00
52.50	0.00	0	453.50	0.00	0.00	0.00
55.00	0.00	0	453.50	0.00	0.00	0.00
57.50	0.00	0	453.50	0.00	0.00	0.00
60.00	0.00	0	453.50	0.00	0.00	0.00
62.50	0.00	0	453.50	0.00	0.00	0.00
65.00	0.00	0	453.50	0.00	0.00	0.00
67.50	0.00	0	453.50	0.00	0.00	0.00
70.00	0.00	0	453.50	0.00	0.00	0.00

Stage-Discharge for Pond IS-2B:

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
453.50	0.00	0.00	0.00
453.70	0.30	0.30	0.00
453.90	0.30	0.30	0.00
454.10	0.30	0.30	0.00
454.30	0.30	0.30	0.00
454.50	0.30	0.30	0.00
454.70	0.30	0.30	0.00
454.90	0.48	0.30	0.18
455.10	1.23	0.30	0.93
455.30	2.52	0.30	2.22
455.50	4.04	0.30	3.74
455.70	5.57	0.30	5.27
455.90	7.27	0.30	6.97
456.10	9.10	0.30	8.81
456.30	11.03	0.30	10.73
456.50	12.99	0.30	12.69
456.70	14.90	0.30	14.60
456.90	16.67	0.30	16.37
457.10	18.09	0.30	17.79
457.30	20.08	0.30	19.78
457.50	22.41	0.30	22.11
457.70	24.52	0.30	24.22
457.90	26.46	0.30	26.16
458.10	28.27	0.30	27.97
458.30	29.97	0.30	29.67
458.50	31.57	0.30	31.27
458.70	32.78	0.30	32.48
458.90	33.86	0.30	33.56
459.10	34.91	**0.30**	34.61
459.30	35.93	**0.30**	35.63
459.50	36.92	0.30	36.62
459.70	37.88	0.30	37.58
459.90	38.82	0.30	38.52
460.10	39.74	0.30	39.44
460.30	40.63	0.30	40.33
460.50	41.51	0.30	41.21
460.70	42.37	0.30	42.07
460.90	43.21	0.30	42.91
461.10	44.04	0.30	43.74
461.30	44.85	0.30	44.55
461.50	45.64	0.30	45.34
461.70	46.42	0.30	46.12
461.90	47.19	0.30	46.89
462.10	47.95	0.30	47.65
462.30	48.69	0.30	48.39
462.50	49.43	0.30	49.13
462.70	50.15	0.30	49.85
462.90	50.86	0.30	50.56
463.10	51.56	0.30	51.26
463.30	52.26	0.30	51.96
463.50	52.94	0.30	52.64
463.70	53.62	0.30	53.31
463.90	54.28	0.30	53.98
464.10	54.94	0.30	54.64
464.30	55.59	0.30	55.29
464.50	56.23	0.30	55.93
464.70	56.87	0.30	56.57
464.90	57.50	0.30	57.20
465.10	58.12	0.30	57.82
465.30	58.73	0.30	58.43
465.50	59.34	0.30	59.04
465.70	59.95	0.30	59.64
465.90	**60.54**	0.30	**60.24**

Stage-Area-Storage for Pond IS-2B:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
453.50	2,462	0
453.70	2,462	197
453.90	2,462	394
454.10	2,462	591
454.30	2,462	788
454.50	2,462	985
454.70	2,462	1,400
454.90	2,462	1,815
455.10	2,462	2,229
455.30	2,462	2,635
455.50	2,462	3,036
455.70	2,462	3,430
455.90	2,462	3,822
456.10	2,462	4,211
456.30	2,462	4,589
456.50	2,462	4,957
456.70	2,462	5,315
456.90	2,462	5,666
457.10	2,462	6,007
457.30	2,462	6,332
457.50	2,462	6,639
457.70	2,462	6,925
457.90	2,462	7,183
458.10	2,462	7,403
458.30	2,462	7,605
458.50	2,462	7,802
458.70	2,462	7,999
458.90	2,462	8,196
459.10	**2,462**	8,393
459.30	**2,485**	8,542
459.50	2,485	8,547
459.70	2,485	8,551
459.90	2,485	8,556
460.10	2,485	8,560
460.30	2,485	8,565
460.50	2,485	8,570
460.70	2,485	8,574
460.90	2,485	8,579
461.10	2,485	8,583
461.30	2,485	8,588
461.50	2,485	8,593
461.70	2,485	8,597
461.90	2,485	8,602
462.10	2,485	8,606
462.30	2,485	8,611
462.50	2,485	8,616
462.70	2,485	8,620
462.90	2,485	8,625
463.10	2,485	8,629
463.30	2,485	8,634
463.50	2,485	8,639
463.70	2,485	8,643
463.90	2,485	8,648
464.10	2,485	8,652
464.30	2,485	8,657
464.50	2,485	8,662
464.70	2,485	8,666
464.90	2,485	8,671
465.10	2,485	8,675
465.30	2,485	8,680
465.50	2,485	8,685
465.70	2,485	8,689
465.90	2,485	**8,694**

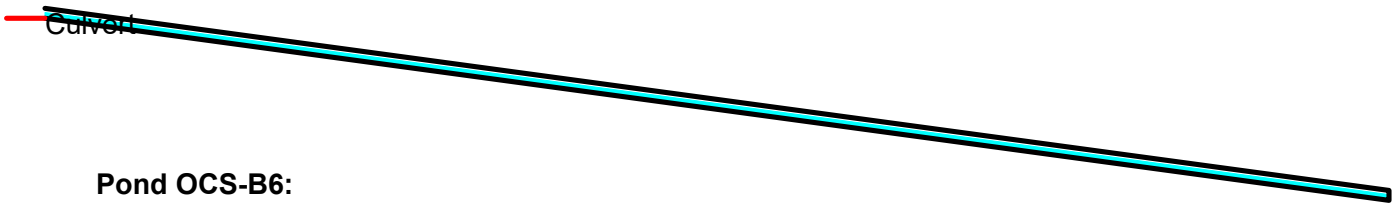
Summary for Pond OCS-B6:

Inflow = 8.59 cfs @ 12.24 hrs, Volume= 22,743 cf
Outflow = 8.59 cfs @ 12.24 hrs, Volume= 22,743 cf, Atten= 0%, Lag= 0.0 min
Primary = 8.59 cfs @ 12.24 hrs, Volume= 22,743 cf
Routed to Pond DB-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 435.65' @ 12.24 hrs

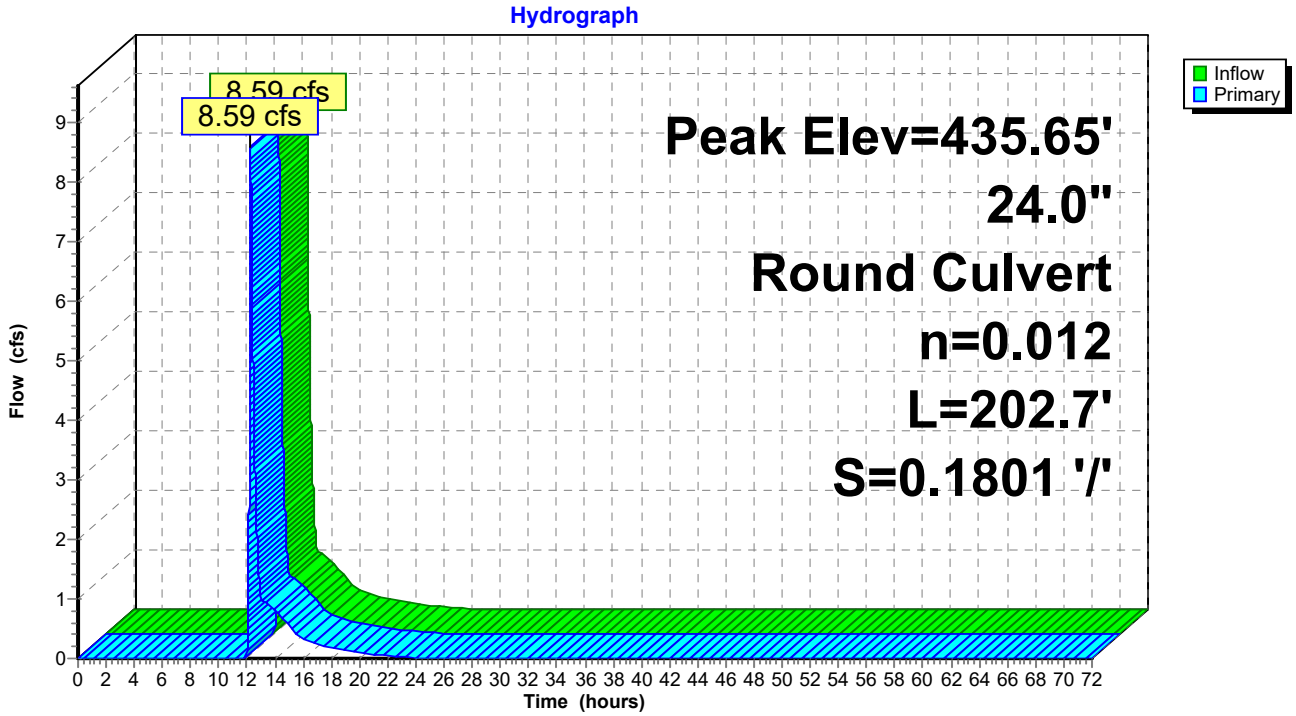
Device	Routing	Invert	Outlet Devices
#1	Primary	434.50'	**24.0" Round Culvert** L= 202.7' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 434.50' / 398.00' S= 0.1801 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=8.59 cfs @ 12.24 hrs HW=435.65' TW=400.71' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 8.59 cfs @ 4.57 fps)

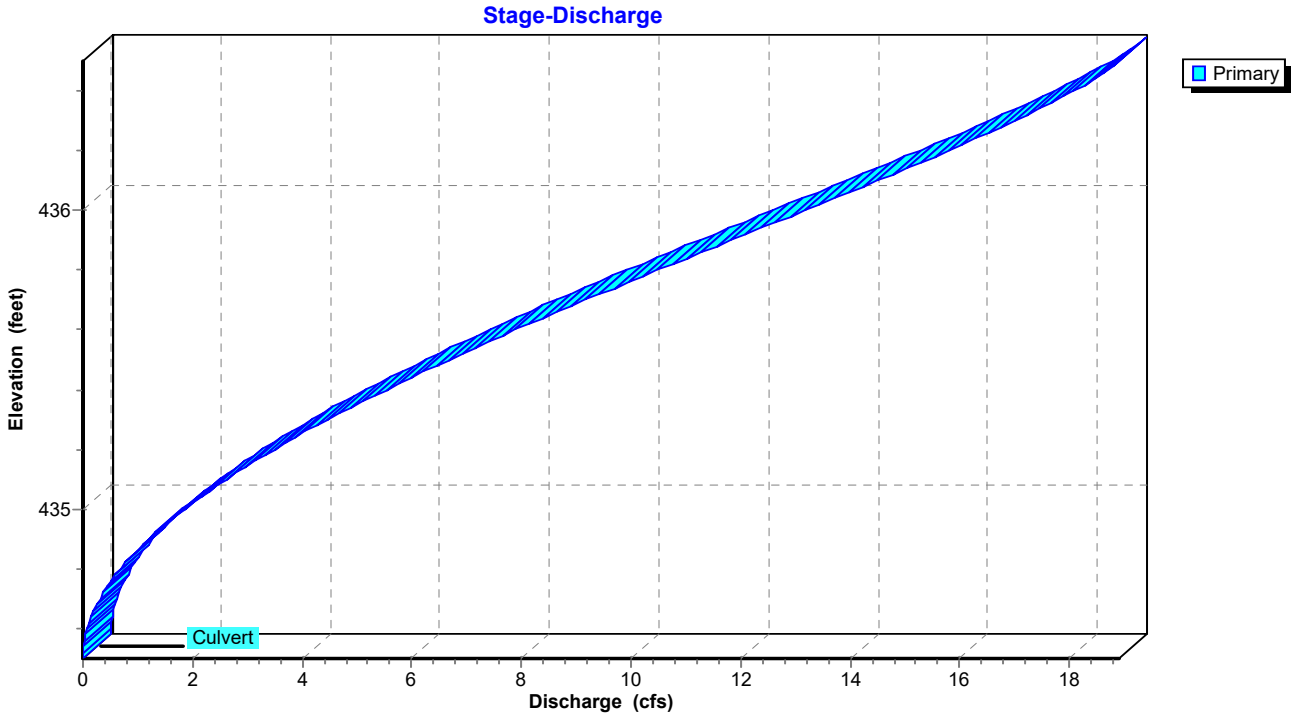


Pond OCS-B6:

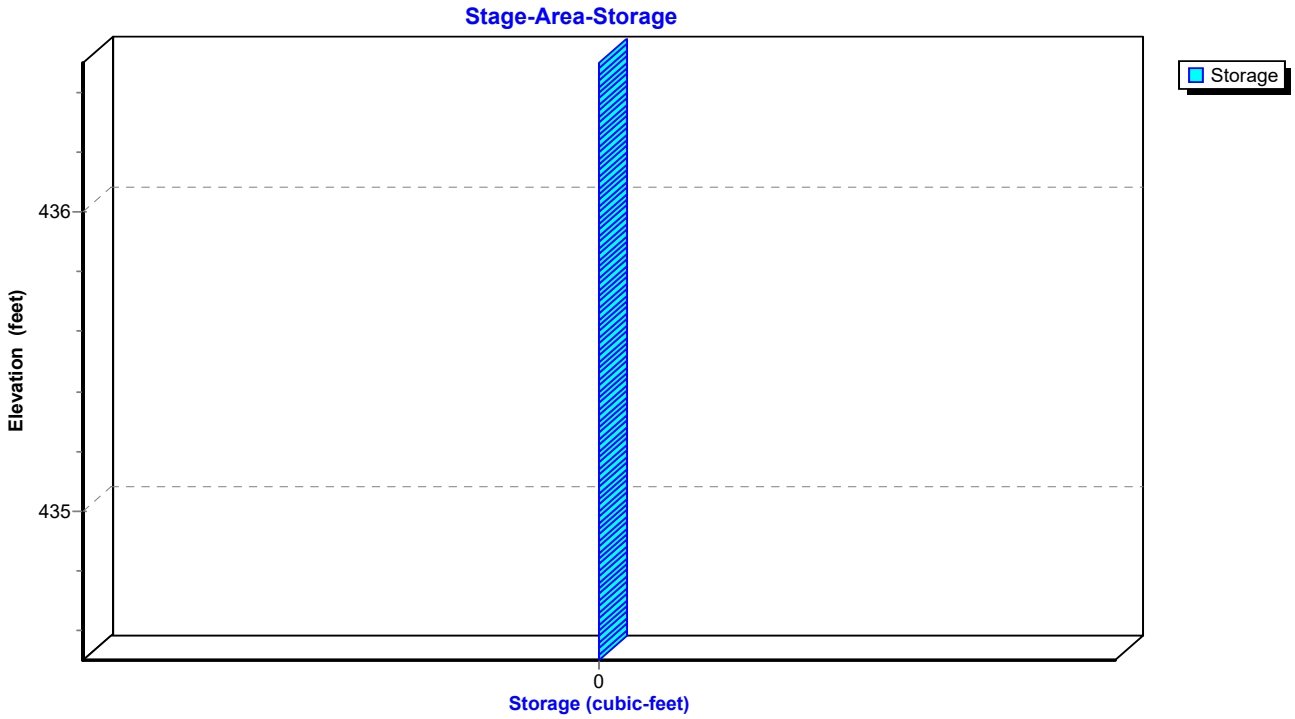
Pond OCS-B6:



Pond OCS-B6:



Pond OCS-B6:



Hydrograph for Pond OCS-B6:

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	434.50	0.00
1.00	0.00	434.50	0.00
2.00	0.00	434.50	0.00
3.00	0.00	434.50	0.00
4.00	0.00	434.50	0.00
5.00	0.00	434.50	0.00
6.00	0.00	434.50	0.00
7.00	0.00	434.50	0.00
8.00	0.00	434.50	0.00
9.00	0.00	434.50	0.00
10.00	0.00	434.50	0.00
11.00	0.00	434.50	0.00
12.00	**0.00**	**434.50**	**0.00**
13.00	**1.02**	**434.87**	**1.02**
14.00	0.80	434.82	0.80
15.00	0.55	434.77	0.55
16.00	0.33	434.71	0.33
17.00	0.24	434.68	0.24
18.00	0.18	434.65	0.18
19.00	0.14	434.63	0.14
20.00	0.10	434.61	0.10
21.00	0.07	434.60	0.07
22.00	0.05	434.58	0.05
23.00	0.03	434.56	0.03
24.00	0.02	434.54	0.02
25.00	0.00	434.50	0.00
26.00	0.00	434.50	0.00
27.00	0.00	434.50	0.00
28.00	0.00	434.50	0.00
29.00	0.00	434.50	0.00
30.00	0.00	434.50	0.00
31.00	0.00	434.50	0.00
32.00	0.00	434.50	0.00
33.00	0.00	434.50	0.00
34.00	0.00	434.50	0.00
35.00	0.00	434.50	0.00
36.00	0.00	434.50	0.00
37.00	0.00	434.50	0.00
38.00	0.00	434.50	0.00
39.00	0.00	434.50	0.00
40.00	0.00	434.50	0.00
41.00	0.00	434.50	0.00
42.00	0.00	434.50	0.00
43.00	0.00	434.50	0.00
44.00	0.00	434.50	0.00
45.00	0.00	434.50	0.00
46.00	0.00	434.50	0.00
47.00	0.00	434.50	0.00
48.00	0.00	434.50	0.00
49.00	0.00	434.50	0.00
50.00	0.00	434.50	0.00
51.00	0.00	434.50	0.00
52.00	0.00	434.50	0.00
53.00	0.00	434.50	0.00
54.00	0.00	434.50	0.00
55.00	0.00	434.50	0.00
56.00	0.00	434.50	0.00
57.00	0.00	434.50	0.00
58.00	0.00	434.50	0.00
59.00	0.00	434.50	0.00
60.00	0.00	434.50	0.00
61.00	0.00	434.50	0.00
62.00	0.00	434.50	0.00
63.00	0.00	434.50	0.00
64.00	0.00	434.50	0.00
65.00	0.00	434.50	0.00
66.00	0.00	434.50	0.00
67.00	0.00	434.50	0.00
68.00	0.00	434.50	0.00
69.00	0.00	434.50	0.00
70.00	0.00	434.50	0.00
71.00	0.00	434.50	0.00
72.00	0.00	434.50	0.00

Stage-Discharge for Pond OCS-B6:

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
434.50	0.00	435.03	2.07	435.56	7.41	436.09	14.37
434.51	0.00	435.04	2.14	435.57	7.53	436.10	14.50
434.52	0.00	435.05	2.22	435.58	7.65	436.11	14.64
434.53	0.01	435.06	2.29	435.59	7.78	436.12	14.77
434.54	0.01	435.07	2.37	435.60	7.90	436.13	14.90
434.55	0.02	435.08	2.45	435.61	8.03	436.14	15.03
434.56	0.03	435.09	2.53	435.62	8.15	436.15	15.16
434.57	0.04	435.10	2.61	435.63	8.28	436.16	15.28
434.58	0.05	435.11	2.70	435.64	8.41	436.17	15.41
434.59	0.06	435.12	2.78	435.65	8.53	436.18	15.54
434.60	0.08	435.13	2.86	435.66	8.66	436.19	15.67
434.61	0.10	435.14	2.95	435.67	8.79	436.20	15.79
434.62	0.11	435.15	3.04	435.68	8.92	436.21	15.92
434.63	0.13	435.16	3.13	435.69	9.05	436.22	16.04
434.64	0.15	435.17	3.22	435.70	9.18	436.23	16.17
434.65	0.18	435.18	3.31	435.71	9.31	436.24	16.29
434.66	0.20	435.19	3.40	435.72	9.44	436.25	16.41
434.67	0.23	435.20	3.49	435.73	9.57	436.26	16.53
434.68	0.25	435.21	3.58	435.74	9.70	436.27	16.65
434.69	0.28	435.22	3.68	435.75	9.83	436.28	16.77
434.70	0.31	435.23	3.77	435.76	9.96	436.29	16.89
434.71	0.34	435.24	3.87	435.77	10.09	436.30	17.00
434.72	0.38	435.25	3.97	435.78	10.22	436.31	17.12
434.73	0.41	435.26	4.06	435.79	10.36	436.32	17.23
434.74	0.45	435.27	4.16	435.80	10.49	436.33	17.35
434.75	0.48	435.28	4.26	435.81	10.62	436.34	17.46
434.76	0.52	435.29	4.36	435.82	10.76	436.35	17.57
434.77	0.56	435.30	4.47	435.83	10.89	436.36	17.67
434.78	0.60	435.31	4.57	435.84	11.02	436.37	17.78
434.79	0.64	435.32	4.67	435.85	11.16	436.38	17.88
434.80	0.69	435.33	4.78	435.86	11.29	436.39	17.99
434.81	0.73	435.34	4.88	435.87	11.43	436.40	18.09
434.82	0.78	435.35	4.99	435.88	11.56	436.41	18.18
434.83	0.83	435.36	5.10	435.89	11.69	436.42	18.28
434.84	0.88	435.37	5.21	435.90	11.83	436.43	18.37
434.85	0.93	435.38	5.32	435.91	11.96	436.44	18.46
434.86	0.98	435.39	5.43	435.92	12.10	436.45	18.55
434.87	1.04	435.40	5.54	435.93	12.23	436.46	18.63
434.88	1.09	435.41	5.65	435.94	12.37	436.47	18.71
434.89	1.15	435.42	5.76	435.95	12.50	436.48	18.78
434.90	1.20	435.43	5.87	435.96	12.64	436.49	18.85
434.91	1.26	435.44	5.99	435.97	12.77	436.50	**18.91**
434.92	1.32	435.45	6.10	435.98	12.91		
434.93	1.38	435.46	6.22	435.99	13.04		
434.94	1.45	435.47	6.33	436.00	13.17		
434.95	1.51	435.48	6.45	436.01	13.31		
434.96	1.58	435.49	6.57	436.02	13.44		
434.97	1.64	435.50	6.69	436.03	13.58		
434.98	1.71	435.51	6.80	436.04	13.71		
434.99	1.78	435.52	6.92	436.05	13.84		
435.00	1.85	435.53	7.04	436.06	13.98		
435.01	1.92	435.54	7.16	436.07	14.11		
435.02	1.99	435.55	7.29	436.08	14.24		

Stage-Area-Storage for Pond OCS-B6:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
434.50	**0**	435.56	0
434.52	0	435.58	0
434.54	0	435.60	0
434.56	0	435.62	0
434.58	0	435.64	0
434.60	0	435.66	0
434.62	0	435.68	0
434.64	0	435.70	0
434.66	0	435.72	0
434.68	0	435.74	0
434.70	0	435.76	0
434.72	0	435.78	0
434.74	0	435.80	0
434.76	0	435.82	0
434.78	0	435.84	0
434.80	0	435.86	0
434.82	0	435.88	0
434.84	0	435.90	0
434.86	0	435.92	0
434.88	0	435.94	0
434.90	0	435.96	0
434.92	0	435.98	0
434.94	0	436.00	0
434.96	0	436.02	0
434.98	0	436.04	0
435.00	0	436.06	0
435.02	0	436.08	0
435.04	0	436.10	0
435.06	0	436.12	0
435.08	0	436.14	0
435.10	0	436.16	0
435.12	0	436.18	0
435.14	0	436.20	0
435.16	0	436.22	0
435.18	0	436.24	0
435.20	0	436.26	0
435.22	0	436.28	0
435.24	0	436.30	0
435.26	0	436.32	0
435.28	0	436.34	0
435.30	0	436.36	0
435.32	0	436.38	0
435.34	0	436.40	0
435.36	0	436.42	0
435.38	0	436.44	0
435.40	0	436.46	0
435.42	0	436.48	0
435.44	0	436.50	0
435.46	0		
435.48	0		
435.50	0		
435.52	0		
435.54	0		

Time span=0.00-72.00 hrs, dt=0.00 hrs, 144001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method w/Net Flows

Subcatchment PDA-1A: (1) Runoff Area=39,498 sf 6.97% Impervious Runoff Depth=8.71"
Flow Length=134' Slope=0.0808 '/' Tc=14.7 min CN=74 Runoff=5.21 cfs 28,675 cf

Subcatchment PDA-1B: (2) Runoff Area=339,348 sf 63.09% Impervious Runoff Depth=10.73"
Flow Length=274' Tc=14.2 min CN=89 Runoff=52.59 cfs 303,534 cf

Subcatchment PDA-1C: (3) Runoff Area=184,184 sf 32.60% Impervious Runoff Depth=9.68"
Flow Length=619' Tc=15.1 min CN=81 Runoff=26.16 cfs 148,558 cf

Subcatchment PDA-1D: (4) Runoff Area=94,273 sf 0.98% Impervious Runoff Depth=8.28"
Flow Length=448' Tc=18.7 min CN=71 Runoff=10.80 cfs 65,081 cf

Subcatchment PDA-2A: (6, 7) Runoff Area=1,047,228 sf 1.25% Impervious Runoff Depth=8.57"
Flow Length=1,846' Tc=19.7 min CN=73 Runoff=120.85 cfs 747,901 cf

Subcatchment PDA-2B: (8) Runoff Area=89,115 sf 85.41% Impervious Runoff Depth=11.37"
Tc=5.0 min CN=94 Runoff=19.81 cfs 84,409 cf

Subcatchment PDA-2C: (9) Runoff Area=206,758 sf 18.78% Impervious Runoff Depth=9.41"
Flow Length=414' Tc=9.4 min CN=79 Runoff=34.34 cfs 162,078 cf

Subcatchment PDA-2D: (10) Runoff Area=131,825 sf 51.04% Impervious Runoff Depth=10.34"
Tc=5.0 min CN=86 Runoff=28.09 cfs 113,636 cf

Subcatchment PDA-DB-1: (5) Runoff Area=45,660 sf 0.00% Impervious Runoff Depth=8.71"
Tc=5.0 min CN=74 Runoff=8.59 cfs 33,148 cf

Subcatchment PDA-DB-2: (11) Runoff Area=72,455 sf 0.00% Impervious Runoff Depth=8.71"
Tc=5.0 min CN=74 Runoff=13.64 cfs 52,600 cf

Reach DP-1: Inflow=49.86 cfs 500,292 cf
Outflow=49.86 cfs 500,292 cf

Reach DP-2: Inflow=156.74 cfs 1,128,380 cf
Outflow=156.74 cfs 1,128,380 cf

Pond BMH-1B: Peak Elev=439.56' Inflow=52.59 cfs 303,534 cf
Primary=15.92 cfs 165,467 cf Secondary=36.79 cfs 138,066 cf Outflow=52.59 cfs 303,532 cf

Pond BMH-2B: Peak Elev=460.59' Inflow=38.79 cfs 87,681 cf
Primary=8.79 cfs 35,334 cf Secondary=32.54 cfs 52,345 cf Outflow=38.79 cfs 87,679 cf

Pond BR-1C: Peak Elev=414.30' Storage=14,599 cf Inflow=26.16 cfs 148,558 cf
Primary=15.70 cfs 142,232 cf Secondary=8.32 cfs 6,372 cf Outflow=24.03 cfs 148,603 cf

Pond BR-2C: Peak Elev=440.68' Storage=25,580 cf Inflow=34.34 cfs 162,078 cf
Outflow=19.87 cfs 162,132 cf

Pond BR-2D: Peak Elev=414.17' Storage=13,792 cf Inflow=28.09 cfs 113,636 cf
Primary=21.50 cfs 112,316 cf Secondary=3.52 cfs 1,348 cf Outflow=25.01 cfs 113,664 cf

Pond DB-1: Peak Elev=404.95' Storage=74,069 cf Inflow=77.49 cfs 406,578 cf
Primary=38.16 cfs 406,536 cf Secondary=0.00 cfs 0 cf Outflow=38.16 cfs 406,536 cf

Pond DB-2: Peak Elev=397.91' Storage=63,427 cf Inflow=84.62 cfs 379,393 cf
Primary=36.76 cfs 379,131 cf Secondary=0.00 cfs 0 cf Outflow=36.76 cfs 379,131 cf

Pond IS-1B: Peak Elev=438.87' Storage=32,309 cf Inflow=15.92 cfs 165,467 cf
Discarded=0.62 cfs 79,263 cf Primary=0.00 cfs 0 cf Secondary=14.66 cfs 86,761 cf Outflow=15.28 cfs 166,023 cf

Pond IS-2B: Peak Elev=460.49' Storage=8,569 cf Inflow=8.79 cfs 35,334 cf
Discarded=0.30 cfs 32,291 cf Primary=18.99 cfs 3,271 cf Outflow=19.30 cfs 35,562 cf

Pond OCS-B6: Peak Elev=436.11' Inflow=14.66 cfs 86,761 cf
24.0" Round Culvert n=0.012 L=202.7' S=0.1801 '/' Outflow=14.66 cfs 86,761 cf

Total Runoff Area = 2,250,344 sf Runoff Volume = 1,739,621 cf Average Runoff Depth = 9.28"
78.98% Pervious = 1,777,237 sf 21.02% Impervious = 473,107 sf

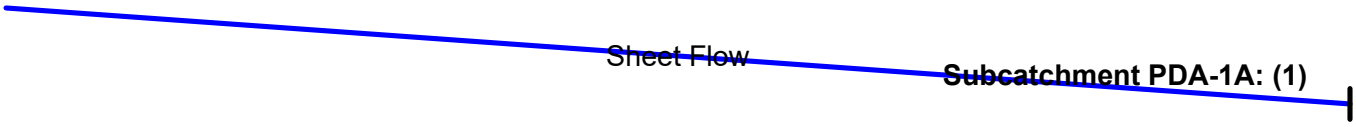
Summary for Subcatchment PDA-1A: (1)

Runoff = 5.21 cfs @ 12.15 hrs, Volume= 28,675 cf, Depth= 8.71"
Routed to Reach DP-1 :

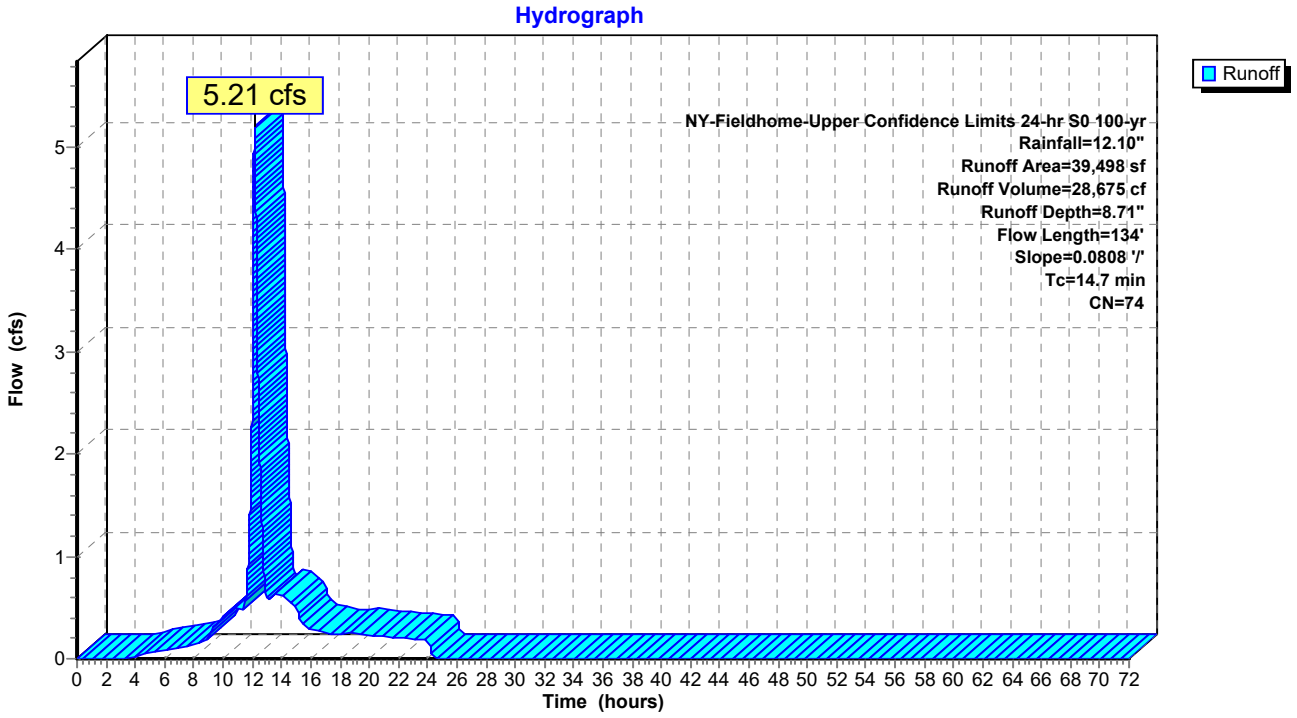
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

	Area (sf)	CN	Description
	23,870	74	>75% Grass cover, Good, HSG C
*	2,753	98	Paved driveway, HSG C
	12,875	70	Woods, Good, HSG C
	39,498	74	Weighted Average
	36,745		93.03% Pervious Area
	2,753		6.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	134	0.0808	0.15		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.55"



Subcatchment PDA-1A: (1)



Hydrograph for Subcatchment PDA-1A: (1)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.00	0.00
2.00	0.45	0.00	0.00
3.00	0.70	0.00	0.00
4.00	0.96	0.02	0.02
5.00	1.24	0.07	0.06
6.00	1.54	0.16	0.09
7.00	1.82	0.27	0.10
8.00	2.13	0.41	0.14
9.00	2.50	0.61	0.19
10.00	3.15	1.00	0.40
11.00	3.93	1.54	0.51
12.00	6.42	3.54	**2.65**
13.00	8.21	5.11	**0.60**
14.00	8.97	5.80	0.63
15.00	9.62	6.39	0.51
16.00	9.98	6.73	0.29
17.00	10.29	7.02	0.25
18.00	10.56	7.27	0.22
19.00	10.87	7.55	0.25
20.00	11.15	7.81	0.23
21.00	11.41	8.06	0.22
22.00	11.65	8.29	0.21
23.00	11.88	8.51	0.20
24.00	**12.10**	**8.71**	0.19
25.00	12.10	8.71	0.00
26.00	12.10	8.71	0.00
27.00	12.10	8.71	0.00
28.00	12.10	8.71	0.00
29.00	12.10	8.71	0.00
30.00	12.10	8.71	0.00
31.00	12.10	8.71	0.00
32.00	12.10	8.71	0.00
33.00	12.10	8.71	0.00
34.00	12.10	8.71	0.00
35.00	12.10	8.71	0.00
36.00	12.10	8.71	0.00
37.00	12.10	8.71	0.00
38.00	12.10	8.71	0.00
39.00	12.10	8.71	0.00
40.00	12.10	8.71	0.00
41.00	12.10	8.71	0.00
42.00	12.10	8.71	0.00
43.00	12.10	8.71	0.00
44.00	12.10	8.71	0.00
45.00	12.10	8.71	0.00
46.00	12.10	8.71	0.00
47.00	12.10	8.71	0.00
48.00	12.10	8.71	0.00
49.00	12.10	8.71	0.00
50.00	12.10	8.71	0.00
51.00	12.10	8.71	0.00
52.00	12.10	8.71	0.00
53.00	12.10	8.71	0.00
54.00	12.10	8.71	0.00
55.00	12.10	8.71	0.00
56.00	12.10	8.71	0.00
57.00	12.10	8.71	0.00
58.00	12.10	8.71	0.00
59.00	12.10	8.71	0.00
60.00	12.10	8.71	0.00
61.00	12.10	8.71	0.00
62.00	12.10	8.71	0.00
63.00	12.10	8.71	0.00
64.00	12.10	8.71	0.00
65.00	12.10	8.71	0.00
66.00	12.10	8.71	0.00
67.00	12.10	8.71	0.00
68.00	12.10	8.71	0.00
69.00	12.10	8.71	0.00
70.00	12.10	8.71	0.00
71.00	12.10	8.71	0.00
72.00	12.10	8.71	0.00

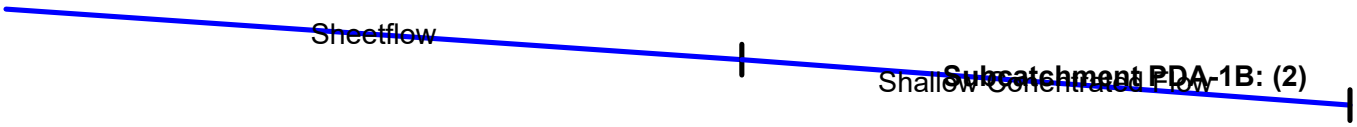
Summary for Subcatchment PDA-1B: (2)

Runoff = 52.59 cfs @ 12.15 hrs, Volume= 303,534 cf, Depth=10.73"
Routed to Pond BMH-1B :

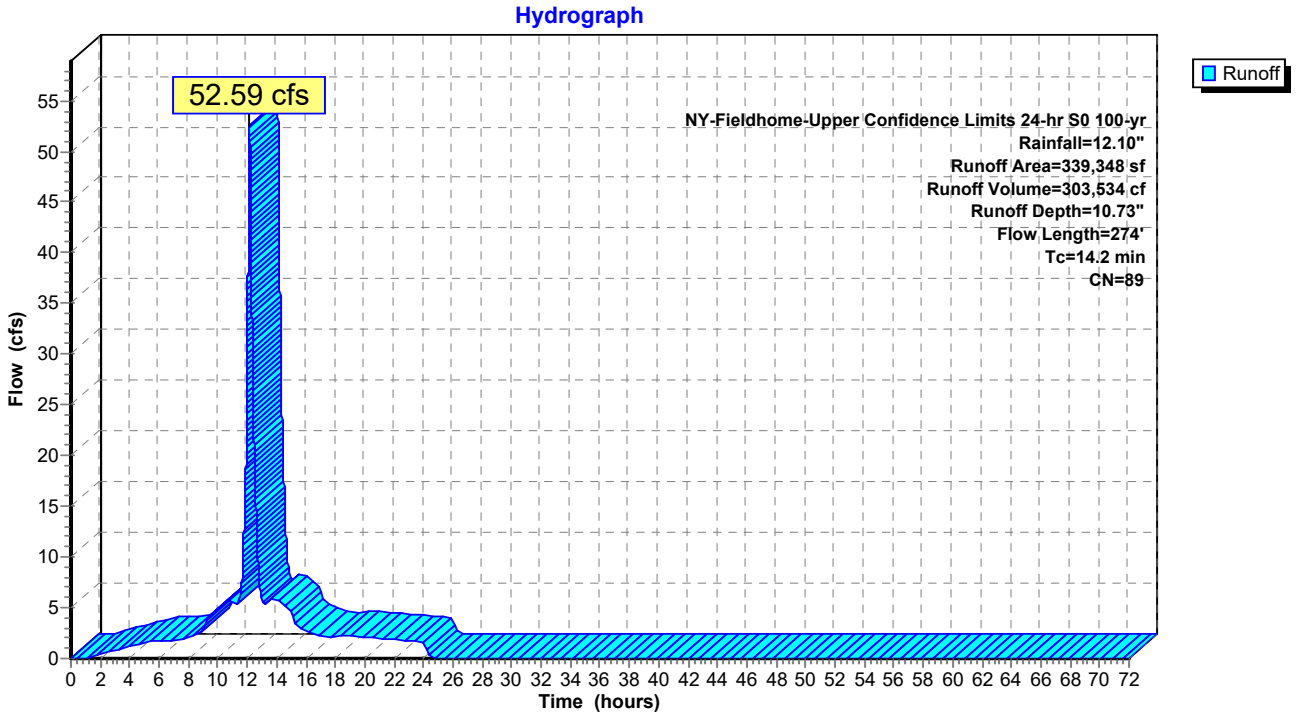
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

	Area (sf)	CN	Description
	121,021	74	>75% Grass cover, Good, HSG C
*	214,085	98	Paved parking, curbs, drivways, roofs, walls HSG C
	4,242	70	Woods, Good, HSG C
	339,348	89	Weighted Average
	125,263		36.91% Pervious Area
	214,085		63.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.8	150	0.1195	0.18		**Sheet Flow, Sheetflow** Woods: Light underbrush n= 0.400 P2= 3.55"
0.4	124	0.1299	5.80		**Shallow Concentrated Flow, Shallow Conentrated Flow** Unpaved Kv= 16.1 fps
14.2	274	Total			



Subcatchment PDA-1B: (2)



Hydrograph for Subcatchment PDA-1B: (2)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.00	0.00
2.00	0.45	0.03	0.38
3.00	0.70	0.12	0.83
4.00	0.96	0.26	1.19
5.00	1.24	0.44	1.52
6.00	1.54	0.66	1.84
7.00	1.82	0.88	1.77
8.00	2.13	1.13	2.13
9.00	2.50	1.45	2.65
10.00	3.15	2.03	4.89
11.00	3.93	2.75	5.80
12.00	6.42	5.14	**27.92**
13.00	8.21	6.89	**5.55**
14.00	8.97	7.64	5.86
15.00	9.62	8.28	4.72
16.00	9.98	8.64	2.68
17.00	10.29	8.94	2.30
18.00	10.56	9.21	2.04
19.00	10.87	9.51	2.30
20.00	11.15	9.79	2.13
21.00	11.41	10.05	1.99
22.00	11.65	10.29	1.87
23.00	11.88	10.52	1.77
24.00	**12.10**	**10.73**	1.68
25.00	12.10	10.73	0.00
26.00	12.10	10.73	0.00
27.00	12.10	10.73	0.00
28.00	12.10	10.73	0.00
29.00	12.10	10.73	0.00
30.00	12.10	10.73	0.00
31.00	12.10	10.73	0.00
32.00	12.10	10.73	0.00
33.00	12.10	10.73	0.00
34.00	12.10	10.73	0.00
35.00	12.10	10.73	0.00
36.00	12.10	10.73	0.00
37.00	12.10	10.73	0.00
38.00	12.10	10.73	0.00
39.00	12.10	10.73	0.00
40.00	12.10	10.73	0.00
41.00	12.10	10.73	0.00
42.00	12.10	10.73	0.00
43.00	12.10	10.73	0.00
44.00	12.10	10.73	0.00
45.00	12.10	10.73	0.00
46.00	12.10	10.73	0.00
47.00	12.10	10.73	0.00
48.00	12.10	10.73	0.00
49.00	12.10	10.73	0.00
50.00	12.10	10.73	0.00
51.00	12.10	10.73	0.00
52.00	12.10	10.73	0.00
53.00	12.10	10.73	0.00
54.00	12.10	10.73	0.00
55.00	12.10	10.73	0.00
56.00	12.10	10.73	0.00
57.00	12.10	10.73	0.00
58.00	12.10	10.73	0.00
59.00	12.10	10.73	0.00
60.00	12.10	10.73	0.00
61.00	12.10	10.73	0.00
62.00	12.10	10.73	0.00
63.00	12.10	10.73	0.00
64.00	12.10	10.73	0.00
65.00	12.10	10.73	0.00
66.00	12.10	10.73	0.00
67.00	12.10	10.73	0.00
68.00	12.10	10.73	0.00
69.00	12.10	10.73	0.00
70.00	12.10	10.73	0.00
71.00	12.10	10.73	0.00
72.00	12.10	10.73	0.00

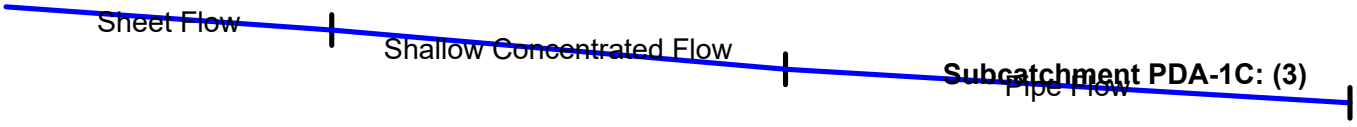
Summary for Subcatchment PDA-1C: (3)

Runoff = 26.16 cfs @ 12.16 hrs, Volume= 148,558 cf, Depth= 9.68"
Routed to Pond BR-1C :

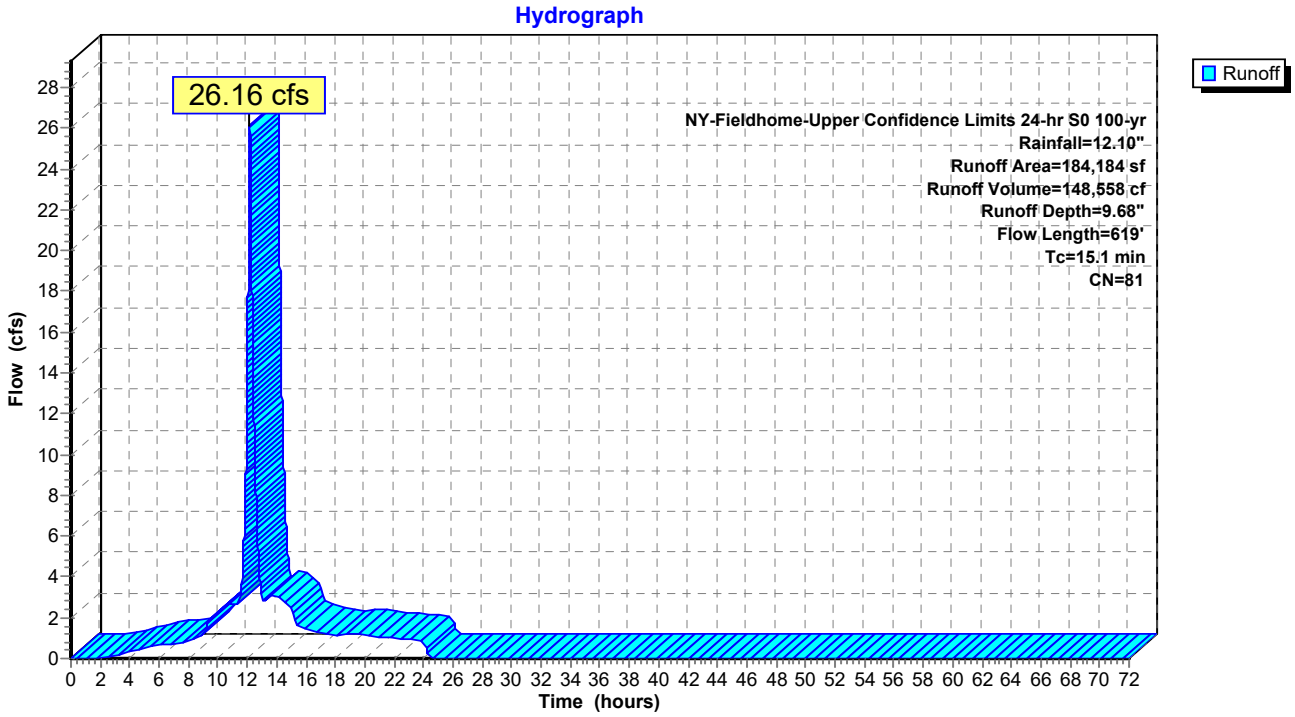
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

	Area (sf)	CN	Description
	107,961	74	>75% Grass cover, Good, HSG C
*	1,220	98	Water Surface (pool), HSG C
	58,823	98	Paved parking, curbs, driveways, sidewalks, roofs, walls, HSG C
	16,180	70	Woods, Good, HSG C
	184,184	81	Weighted Average
	124,141		67.40% Pervious Area
	60,043		32.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	150	0.1091	0.17		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.55"
0.6	209	0.1322	5.85		**Shallow Concentrated Flow, Shallow Concentrated Flow** Unpaved Kv= 16.1 fps
0.2	260	0.0913	21.76	68.36	**Pipe Channel, Pipe Flow** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
15.1	619	Total			



Subcatchment PDA-1C: (3)



Hydrograph for Subcatchment PDA-1C: (3)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.00	0.00
2.00	0.45	0.00	0.00
3.00	0.70	0.02	0.14
4.00	0.96	0.08	0.32
5.00	1.24	0.19	0.50
6.00	1.54	0.34	0.68
7.00	1.82	0.49	0.70
8.00	2.13	0.69	0.89
9.00	2.50	0.94	1.16
10.00	3.15	1.43	2.25
11.00	3.93	2.06	2.77
12.00	6.42	4.26	**13.36**
13.00	8.21	5.94	**2.97**
14.00	8.97	6.66	3.08
15.00	9.62	7.28	2.49
16.00	9.98	7.63	1.42
17.00	10.29	7.93	1.22
18.00	10.56	8.19	1.08
19.00	10.87	8.48	1.22
20.00	11.15	8.75	1.13
21.00	11.41	9.01	1.06
22.00	11.65	9.24	0.99
23.00	11.88	9.47	0.94
24.00	**12.10**	**9.68**	0.89
25.00	12.10	9.68	0.00
26.00	12.10	9.68	0.00
27.00	12.10	9.68	0.00
28.00	12.10	9.68	0.00
29.00	12.10	9.68	0.00
30.00	12.10	9.68	0.00
31.00	12.10	9.68	0.00
32.00	12.10	9.68	0.00
33.00	12.10	9.68	0.00
34.00	12.10	9.68	0.00
35.00	12.10	9.68	0.00
36.00	12.10	9.68	0.00
37.00	12.10	9.68	0.00
38.00	12.10	9.68	0.00
39.00	12.10	9.68	0.00
40.00	12.10	9.68	0.00
41.00	12.10	9.68	0.00
42.00	12.10	9.68	0.00
43.00	12.10	9.68	0.00
44.00	12.10	9.68	0.00
45.00	12.10	9.68	0.00
46.00	12.10	9.68	0.00
47.00	12.10	9.68	0.00
48.00	12.10	9.68	0.00
49.00	12.10	9.68	0.00
50.00	12.10	9.68	0.00
51.00	12.10	9.68	0.00
52.00	12.10	9.68	0.00
53.00	12.10	9.68	0.00
54.00	12.10	9.68	0.00
55.00	12.10	9.68	0.00
56.00	12.10	9.68	0.00
57.00	12.10	9.68	0.00
58.00	12.10	9.68	0.00
59.00	12.10	9.68	0.00
60.00	12.10	9.68	0.00
61.00	12.10	9.68	0.00
62.00	12.10	9.68	0.00
63.00	12.10	9.68	0.00
64.00	12.10	9.68	0.00
65.00	12.10	9.68	0.00
66.00	12.10	9.68	0.00
67.00	12.10	9.68	0.00
68.00	12.10	9.68	0.00
69.00	12.10	9.68	0.00
70.00	12.10	9.68	0.00
71.00	12.10	9.68	0.00
72.00	12.10	9.68	0.00

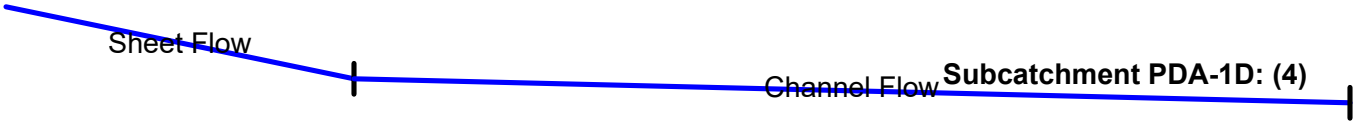
Summary for Subcatchment PDA-1D: (4)

Runoff = 10.80 cfs @ 12.22 hrs, Volume= 65,081 cf, Depth= 8.28"
Routed to Reach DP-1 :

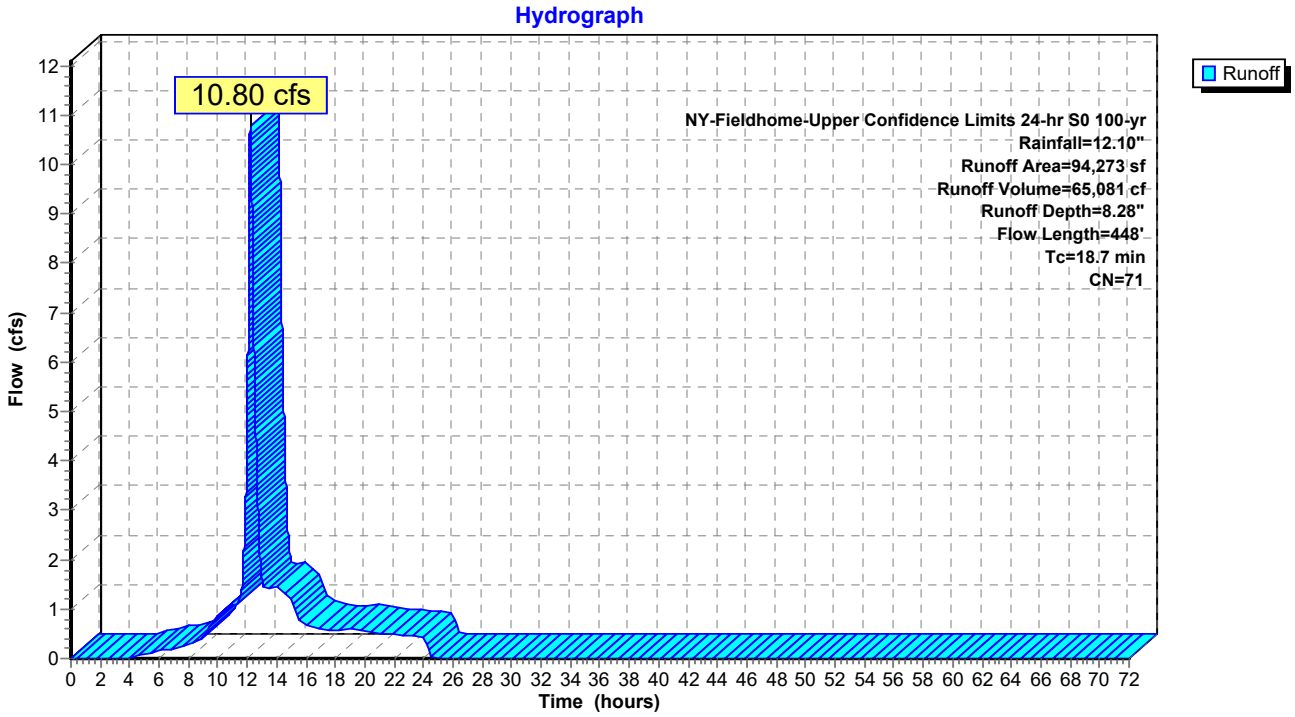
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

	Area (sf)	CN	Description
	23,361	74	>75% Grass cover, Good, HSG C
*	927	98	Concrete Pad for Utility Equipment, HSG C
	69,985	70	Woods, Good, HSG C
	94,273	71	Weighted Average
	93,346		99.02% Pervious Area
	927		0.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	116	0.0979	0.16		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 3.55"
6.5	332	0.0114	0.85	3.15	**Channel Flow, Channel Flow** Area= 3.7 sf Perim= 9.4' r= 0.39' n= 0.100 Very weedy reaches w/pools
18.7	448	Total			



Subcatchment PDA-1D: (4)



Hydrograph for Subcatchment PDA-1D: (4)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.00	0.00
2.00	0.45	0.00	0.00
3.00	0.70	0.00	0.00
4.00	0.96	0.00	0.02
5.00	1.24	0.04	0.09
6.00	1.54	0.11	0.17
7.00	1.82	0.20	0.20
8.00	2.13	0.32	0.29
9.00	2.50	0.49	0.40
10.00	3.15	0.85	0.84
11.00	3.93	1.34	1.11
12.00	6.42	3.24	**4.82**
13.00	8.21	4.76	**1.57**
14.00	8.97	5.43	1.48
15.00	9.62	6.01	1.21
16.00	9.98	6.34	0.69
17.00	10.29	6.62	0.59
18.00	10.56	6.87	0.53
19.00	10.87	7.15	0.60
20.00	11.15	7.40	0.55
21.00	11.41	7.64	0.52
22.00	11.65	7.87	0.49
23.00	11.88	8.08	0.46
24.00	**12.10**	**8.28**	0.44
25.00	12.10	8.28	0.00
26.00	12.10	8.28	0.00
27.00	12.10	8.28	0.00
28.00	12.10	8.28	0.00
29.00	12.10	8.28	0.00
30.00	12.10	8.28	0.00
31.00	12.10	8.28	0.00
32.00	12.10	8.28	0.00
33.00	12.10	8.28	0.00
34.00	12.10	8.28	0.00
35.00	12.10	8.28	0.00
36.00	12.10	8.28	0.00
37.00	12.10	8.28	0.00
38.00	12.10	8.28	0.00
39.00	12.10	8.28	0.00
40.00	12.10	8.28	0.00
41.00	12.10	8.28	0.00
42.00	12.10	8.28	0.00
43.00	12.10	8.28	0.00
44.00	12.10	8.28	0.00
45.00	12.10	8.28	0.00
46.00	12.10	8.28	0.00
47.00	12.10	8.28	0.00
48.00	12.10	8.28	0.00
49.00	12.10	8.28	0.00
50.00	12.10	8.28	0.00
51.00	12.10	8.28	0.00
52.00	12.10	8.28	0.00
53.00	12.10	8.28	0.00
54.00	12.10	8.28	0.00
55.00	12.10	8.28	0.00
56.00	12.10	8.28	0.00
57.00	12.10	8.28	0.00
58.00	12.10	8.28	0.00
59.00	12.10	8.28	0.00
60.00	12.10	8.28	0.00
61.00	12.10	8.28	0.00
62.00	12.10	8.28	0.00
63.00	12.10	8.28	0.00
64.00	12.10	8.28	0.00
65.00	12.10	8.28	0.00
66.00	12.10	8.28	0.00
67.00	12.10	8.28	0.00
68.00	12.10	8.28	0.00
69.00	12.10	8.28	0.00
70.00	12.10	8.28	0.00
71.00	12.10	8.28	0.00
72.00	12.10	8.28	0.00

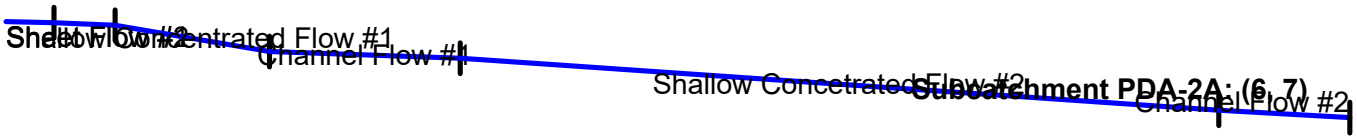
Summary for Subcatchment PDA-2A: (6, 7)

Runoff = 120.85 cfs @ 12.24 hrs, Volume= 747,901 cf, Depth= 8.57"
Routed to Reach DP-2 :

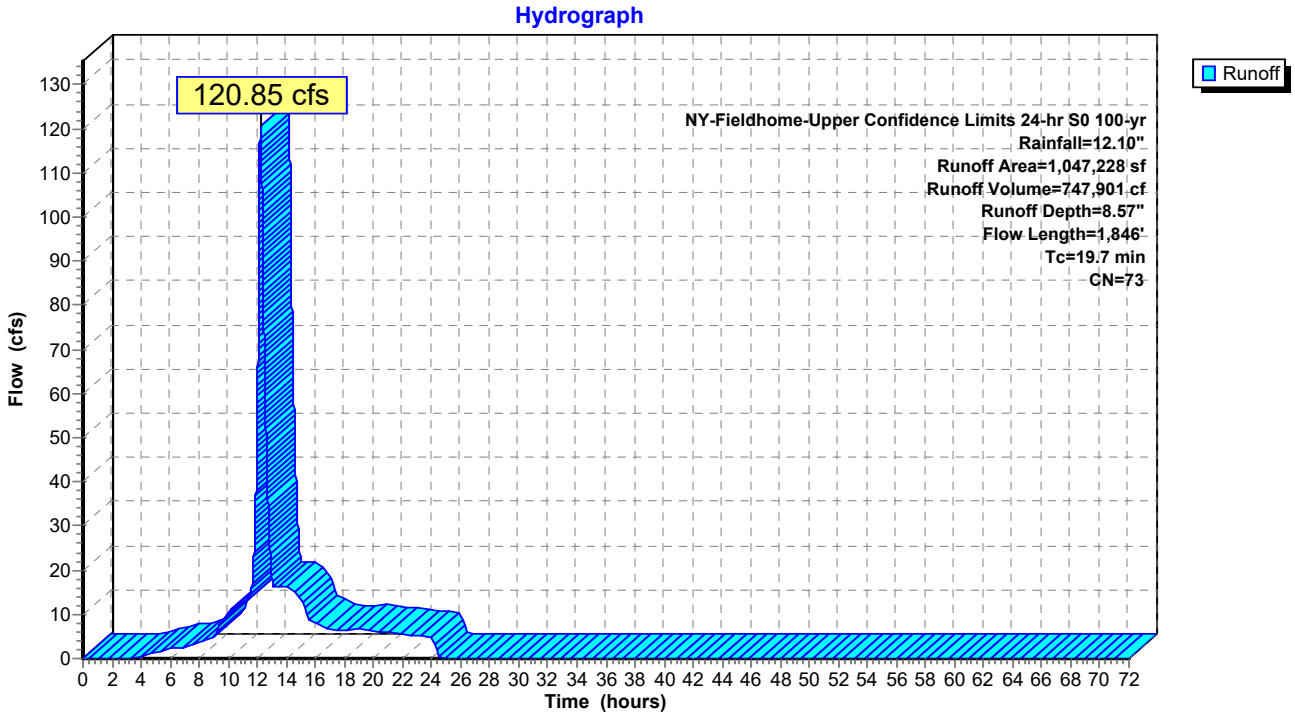
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

Area (sf)	CN	Description
191,228	74	>75% Grass cover, Good, HSG C
13,082	98	Paved sidewalks, roofs, HSG C
523,780	70	Woods, Good, HSG C
319,138	77	Woods, Good, HSG D
1,047,228	73	Weighted Average
1,034,146		98.75% Pervious Area
13,082		1.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	66	0.0299	0.19		**Sheet Flow, Sheet Flow #1** Grass: Short n= 0.150 P2= 3.55"
7.8	84	0.0561	0.18		**Sheet Flow, Sheet Flow #2** Grass: Dense n= 0.240 P2= 3.55"
0.5	212	0.2244	7.63		**Shallow Concentrated Flow, Shallow Concentrated Flow #1** Unpaved Kv= 16.1 fps
0.8	262	0.0469	5.58	10.04	**Channel Flow, Channel Flow #1** Area= 1.8 sf Perim= 4.8' r= 0.38' n= 0.030 Earth, grassed & winding
3.6	1,042	0.0908	4.85		**Shallow Concentrated Flow, Shallow Concetrated Flow #2** Unpaved Kv= 16.1 fps
1.3	180	0.0739	2.33	10.03	**Channel Flow, Channel Flow #2** Area= 4.3 sf Perim= 9.8' r= 0.44' n= 0.100 Very weedy reaches w/pools
19.7	1,846	Total			



Subcatchment PDA-2A: (6, 7)



Hydrograph for Subcatchment PDA-2A: (6, 7)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.00	0.00
2.00	0.45	0.00	0.00
3.00	0.70	0.00	0.00
4.00	0.96	0.01	0.45
5.00	1.24	0.06	1.31
6.00	1.54	0.14	2.22
7.00	1.82	0.24	2.56
8.00	2.13	0.38	3.50
9.00	2.50	0.57	4.82
10.00	3.15	0.95	9.95
11.00	3.93	1.48	12.92
12.00	6.42	3.44	**52.75**
13.00	8.21	4.99	**18.52**
14.00	8.97	5.68	16.72
15.00	9.62	6.27	13.66
16.00	9.98	6.60	7.83
17.00	10.29	6.89	6.71
18.00	10.56	7.14	5.93
19.00	10.87	7.42	6.70
20.00	11.15	7.68	6.21
21.00	11.41	7.92	5.81
22.00	11.65	8.15	5.47
23.00	11.88	8.36	5.18
24.00	**12.10**	**8.57**	4.93
25.00	12.10	8.57	0.01
26.00	12.10	8.57	0.00
27.00	12.10	8.57	0.00
28.00	12.10	8.57	0.00
29.00	12.10	8.57	0.00
30.00	12.10	8.57	0.00
31.00	12.10	8.57	0.00
32.00	12.10	8.57	0.00
33.00	12.10	8.57	0.00
34.00	12.10	8.57	0.00
35.00	12.10	8.57	0.00
36.00	12.10	8.57	0.00
37.00	12.10	8.57	0.00
38.00	12.10	8.57	0.00
39.00	12.10	8.57	0.00
40.00	12.10	8.57	0.00
41.00	12.10	8.57	0.00
42.00	12.10	8.57	0.00
43.00	12.10	8.57	0.00
44.00	12.10	8.57	0.00
45.00	12.10	8.57	0.00
46.00	12.10	8.57	0.00
47.00	12.10	8.57	0.00
48.00	12.10	8.57	0.00
49.00	12.10	8.57	0.00
50.00	12.10	8.57	0.00
51.00	12.10	8.57	0.00
52.00	12.10	8.57	0.00
53.00	12.10	8.57	0.00
54.00	12.10	8.57	0.00
55.00	12.10	8.57	0.00
56.00	12.10	8.57	0.00
57.00	12.10	8.57	0.00
58.00	12.10	8.57	0.00
59.00	12.10	8.57	0.00
60.00	12.10	8.57	0.00
61.00	12.10	8.57	0.00
62.00	12.10	8.57	0.00
63.00	12.10	8.57	0.00
64.00	12.10	8.57	0.00
65.00	12.10	8.57	0.00
66.00	12.10	8.57	0.00
67.00	12.10	8.57	0.00
68.00	12.10	8.57	0.00
69.00	12.10	8.57	0.00
70.00	12.10	8.57	0.00
71.00	12.10	8.57	0.00
72.00	12.10	8.57	0.00

Summary for Subcatchment PDA-2B: (8)

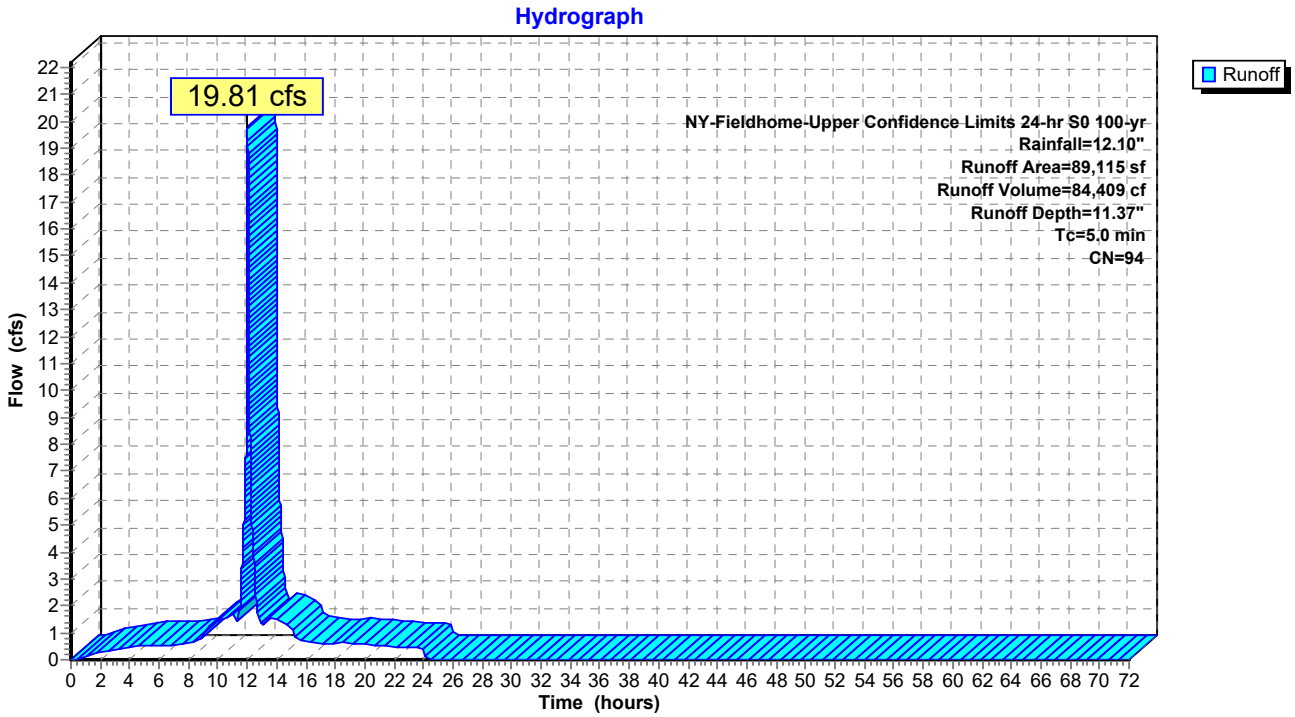
Runoff = 19.81 cfs @ 12.03 hrs, Volume= 84,409 cf, Depth=11.37"
Routed to Pond BMH-2B :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

Area (sf)	CN	Description
13,002	74	>75% Grass cover, Good, HSG C
76,113	98	Paved parking, curbs, driveways, sidewalks, roofs, walls, HSG C
89,115	94	Weighted Average
13,002		14.59% Pervious Area
76,113		85.41% Impervious Area

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

Subcatchment PDA-2B: (8)



Hydrograph for Subcatchment PDA-2B: (8)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.01	0.09
2.00	0.45	0.11	0.26
3.00	0.70	0.27	0.37
4.00	0.96	0.47	0.45
5.00	1.24	0.70	0.52
6.00	1.54	0.98	0.59
7.00	1.82	1.22	0.55
8.00	2.13	1.52	0.64
9.00	2.50	1.87	0.79
10.00	3.15	2.49	1.42
11.00	3.93	3.25	1.72
12.00	6.42	5.71	**18.53**
13.00	8.21	7.49	**1.26**
14.00	8.97	8.25	1.50
15.00	9.62	8.89	1.22
16.00	9.98	9.25	0.69
17.00	10.29	9.56	0.60
18.00	10.56	9.83	0.53
19.00	10.87	10.14	0.60
20.00	11.15	10.42	0.56
21.00	11.41	10.67	0.52
22.00	11.65	10.92	0.49
23.00	11.88	11.15	0.46
24.00	**12.10**	**11.37**	0.44
25.00	12.10	11.37	0.00
26.00	12.10	11.37	0.00
27.00	12.10	11.37	0.00
28.00	12.10	11.37	0.00
29.00	12.10	11.37	0.00
30.00	12.10	11.37	0.00
31.00	12.10	11.37	0.00
32.00	12.10	11.37	0.00
33.00	12.10	11.37	0.00
34.00	12.10	11.37	0.00
35.00	12.10	11.37	0.00
36.00	12.10	11.37	0.00
37.00	12.10	11.37	0.00
38.00	12.10	11.37	0.00
39.00	12.10	11.37	0.00
40.00	12.10	11.37	0.00
41.00	12.10	11.37	0.00
42.00	12.10	11.37	0.00
43.00	12.10	11.37	0.00
44.00	12.10	11.37	0.00
45.00	12.10	11.37	0.00
46.00	12.10	11.37	0.00
47.00	12.10	11.37	0.00
48.00	12.10	11.37	0.00
49.00	12.10	11.37	0.00
50.00	12.10	11.37	0.00
51.00	12.10	11.37	0.00
52.00	12.10	11.37	0.00
53.00	12.10	11.37	0.00
54.00	12.10	11.37	0.00
55.00	12.10	11.37	0.00
56.00	12.10	11.37	0.00
57.00	12.10	11.37	0.00
58.00	12.10	11.37	0.00
59.00	12.10	11.37	0.00
60.00	12.10	11.37	0.00
61.00	12.10	11.37	0.00
62.00	12.10	11.37	0.00
63.00	12.10	11.37	0.00
64.00	12.10	11.37	0.00
65.00	12.10	11.37	0.00
66.00	12.10	11.37	0.00
67.00	12.10	11.37	0.00
68.00	12.10	11.37	0.00
69.00	12.10	11.37	0.00
70.00	12.10	11.37	0.00
71.00	12.10	11.37	0.00
72.00	12.10	11.37	0.00

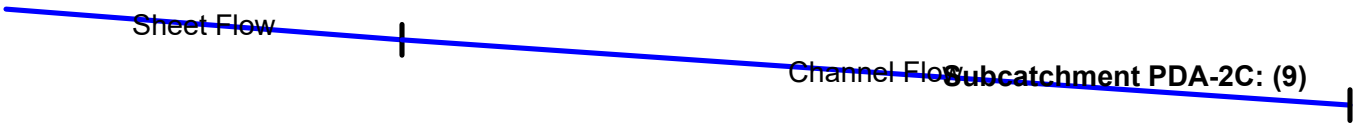
Summary for Subcatchment PDA-2C: (9)

Runoff = 34.34 cfs @ 12.08 hrs, Volume= 162,078 cf, Depth= 9.41"
Routed to Pond BR-2C :

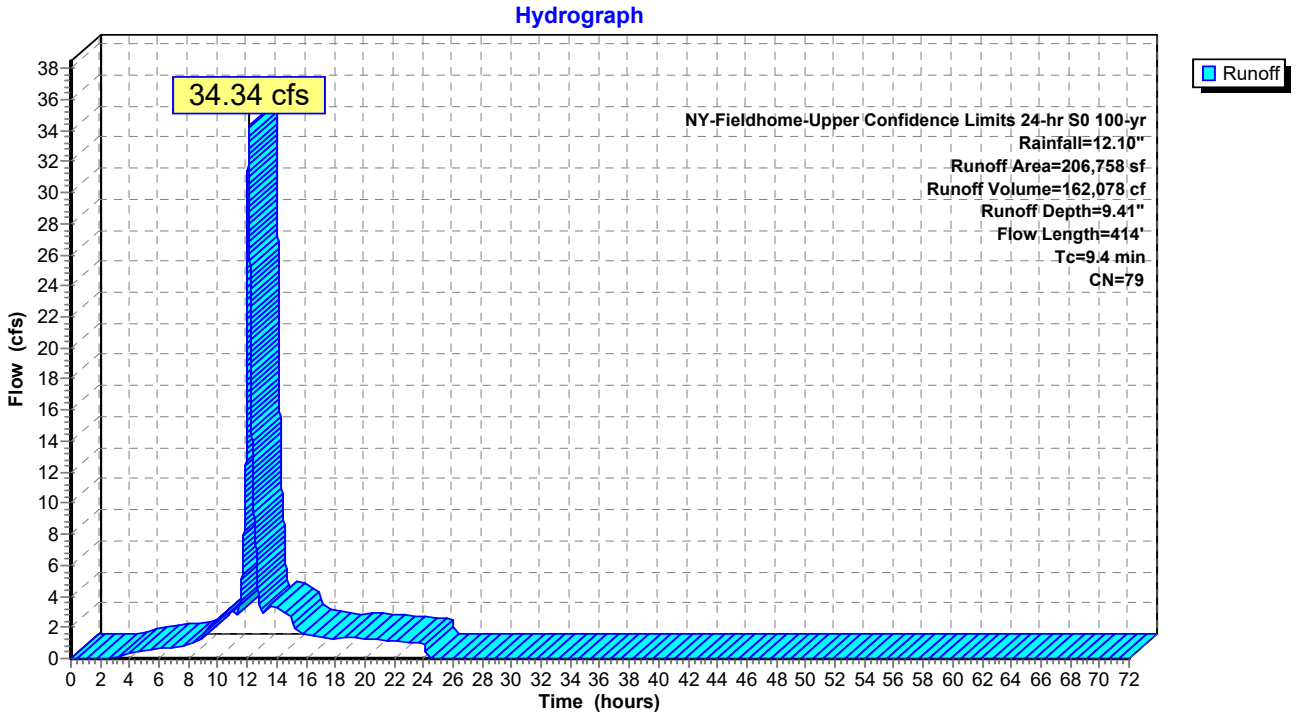
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

	Area (sf)	CN	Description
	167,934	74	>75% Grass cover, Good, HSG C
*	38,824	98	Paved sidewalks, roofs, walls, HSG C
	206,758	79	Weighted Average
	167,934		81.22% Pervious Area
	38,824		18.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	122	0.0365	0.24		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.55"
0.8	292	0.0324	5.89	34.73	**Channel Flow, Channel Flow** Area= 5.9 sf Perim= 11.0' r= 0.54' n= 0.030 Short grass
9.4	414	Total			



Subcatchment PDA-2C: (9)



Hydrograph for Subcatchment PDA-2C: (9)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.00	0.00
2.00	0.45	0.00	0.00
3.00	0.70	0.01	0.11
4.00	0.96	0.06	0.30
5.00	1.24	0.15	0.50
6.00	1.54	0.28	0.70
7.00	1.82	0.42	0.73
8.00	2.13	0.60	0.94
9.00	2.50	0.83	1.25
10.00	3.15	1.30	2.47
11.00	3.93	1.90	3.13
12.00	6.42	4.05	**22.82**
13.00	8.21	5.70	**2.93**
14.00	8.97	6.42	3.36
15.00	9.62	7.03	2.72
16.00	9.98	7.38	1.56
17.00	10.29	7.67	1.34
18.00	10.56	7.93	1.19
19.00	10.87	8.22	1.35
20.00	11.15	8.49	1.25
21.00	11.41	8.74	1.17
22.00	11.65	8.97	1.10
23.00	11.88	9.20	1.04
24.00	**12.10**	**9.41**	0.99
25.00	12.10	9.41	0.00
26.00	12.10	9.41	0.00
27.00	12.10	9.41	0.00
28.00	12.10	9.41	0.00
29.00	12.10	9.41	0.00
30.00	12.10	9.41	0.00
31.00	12.10	9.41	0.00
32.00	12.10	9.41	0.00
33.00	12.10	9.41	0.00
34.00	12.10	9.41	0.00
35.00	12.10	9.41	0.00
36.00	12.10	9.41	0.00
37.00	12.10	9.41	0.00
38.00	12.10	9.41	0.00
39.00	12.10	9.41	0.00
40.00	12.10	9.41	0.00
41.00	12.10	9.41	0.00
42.00	12.10	9.41	0.00
43.00	12.10	9.41	0.00
44.00	12.10	9.41	0.00
45.00	12.10	9.41	0.00
46.00	12.10	9.41	0.00
47.00	12.10	9.41	0.00
48.00	12.10	9.41	0.00
49.00	12.10	9.41	0.00
50.00	12.10	9.41	0.00
51.00	12.10	9.41	0.00
52.00	12.10	9.41	0.00
53.00	12.10	9.41	0.00
54.00	12.10	9.41	0.00
55.00	12.10	9.41	0.00
56.00	12.10	9.41	0.00
57.00	12.10	9.41	0.00
58.00	12.10	9.41	0.00
59.00	12.10	9.41	0.00
60.00	12.10	9.41	0.00
61.00	12.10	9.41	0.00
62.00	12.10	9.41	0.00
63.00	12.10	9.41	0.00
64.00	12.10	9.41	0.00
65.00	12.10	9.41	0.00
66.00	12.10	9.41	0.00
67.00	12.10	9.41	0.00
68.00	12.10	9.41	0.00
69.00	12.10	9.41	0.00
70.00	12.10	9.41	0.00
71.00	12.10	9.41	0.00
72.00	12.10	9.41	0.00

Summary for Subcatchment PDA-2D: (10)

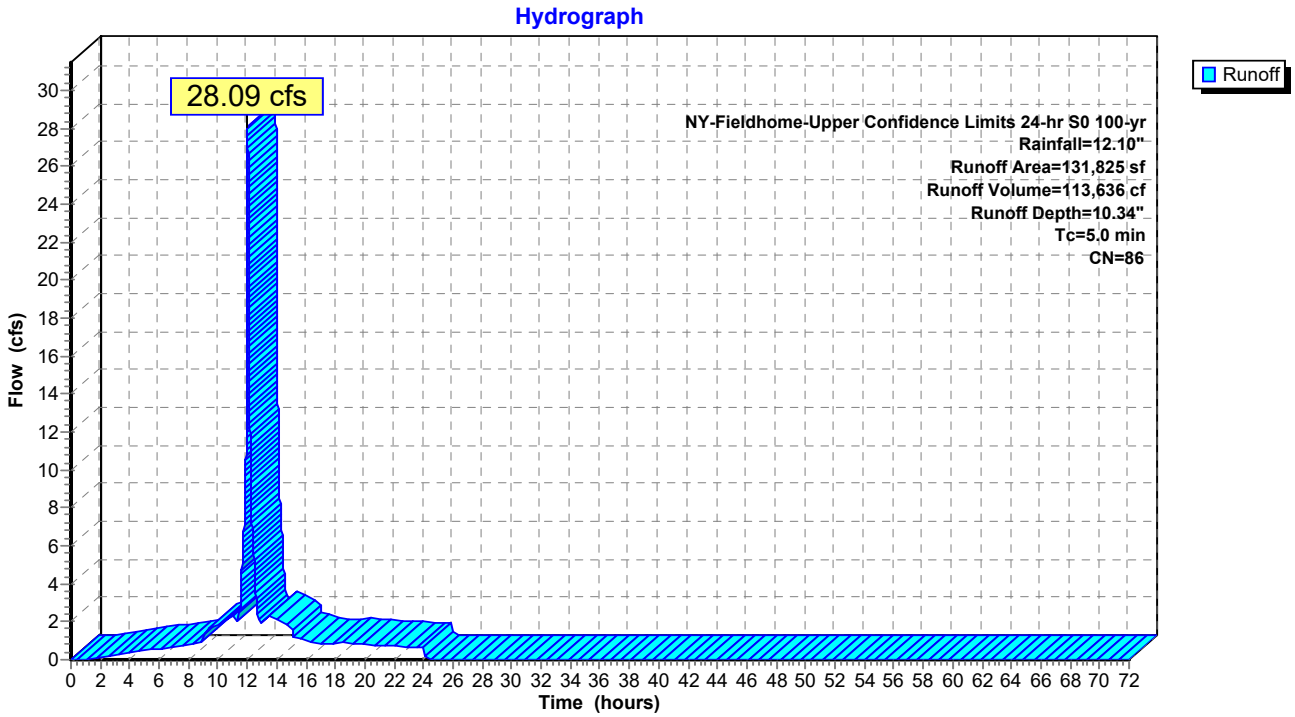
Runoff = 28.09 cfs @ 12.03 hrs, Volume= 113,636 cf, Depth=10.34"
Routed to Pond BR-2D :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

Area (sf)	CN	Description
64,545	74	>75% Grass cover, Good, HSG C
67,280	98	Paved parking, curbs, driveways, sidewalks, roofs, walls, HSG C
131,825	86	Weighted Average
64,545		48.96% Pervious Area
67,280		51.04% Impervious Area

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

Subcatchment PDA-2D: (10)



Hydrograph for Subcatchment PDA-2D: (10)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.00	0.00
2.00	0.45	0.01	0.09
3.00	0.70	0.07	0.25
4.00	0.96	0.18	0.39
5.00	1.24	0.33	0.52
6.00	1.54	0.52	0.64
7.00	1.82	0.71	0.63
8.00	2.13	0.95	0.78
9.00	2.50	1.24	0.99
10.00	3.15	1.79	1.88
11.00	3.93	2.48	2.34
12.00	6.42	4.81	**26.20**
13.00	8.21	6.53	**1.82**
14.00	8.97	7.28	2.17
15.00	9.62	7.91	1.77
16.00	9.98	8.26	1.01
17.00	10.29	8.57	0.87
18.00	10.56	8.83	0.77
19.00	10.87	9.13	0.88
20.00	11.15	9.41	0.81
21.00	11.41	9.66	0.76
22.00	11.65	9.90	0.71
23.00	11.88	10.13	0.68
24.00	**12.10**	**10.34**	0.64
25.00	12.10	10.34	0.00
26.00	12.10	10.34	0.00
27.00	12.10	10.34	0.00
28.00	12.10	10.34	0.00
29.00	12.10	10.34	0.00
30.00	12.10	10.34	0.00
31.00	12.10	10.34	0.00
32.00	12.10	10.34	0.00
33.00	12.10	10.34	0.00
34.00	12.10	10.34	0.00
35.00	12.10	10.34	0.00
36.00	12.10	10.34	0.00
37.00	12.10	10.34	0.00
38.00	12.10	10.34	0.00
39.00	12.10	10.34	0.00
40.00	12.10	10.34	0.00
41.00	12.10	10.34	0.00
42.00	12.10	10.34	0.00
43.00	12.10	10.34	0.00
44.00	12.10	10.34	0.00
45.00	12.10	10.34	0.00
46.00	12.10	10.34	0.00
47.00	12.10	10.34	0.00
48.00	12.10	10.34	0.00
49.00	12.10	10.34	0.00
50.00	12.10	10.34	0.00
51.00	12.10	10.34	0.00
52.00	12.10	10.34	0.00
53.00	12.10	10.34	0.00
54.00	12.10	10.34	0.00
55.00	12.10	10.34	0.00
56.00	12.10	10.34	0.00
57.00	12.10	10.34	0.00
58.00	12.10	10.34	0.00
59.00	12.10	10.34	0.00
60.00	12.10	10.34	0.00
61.00	12.10	10.34	0.00
62.00	12.10	10.34	0.00
63.00	12.10	10.34	0.00
64.00	12.10	10.34	0.00
65.00	12.10	10.34	0.00
66.00	12.10	10.34	0.00
67.00	12.10	10.34	0.00
68.00	12.10	10.34	0.00
69.00	12.10	10.34	0.00
70.00	12.10	10.34	0.00
71.00	12.10	10.34	0.00
72.00	12.10	10.34	0.00

Summary for Subcatchment PDA-DB-1: (5)

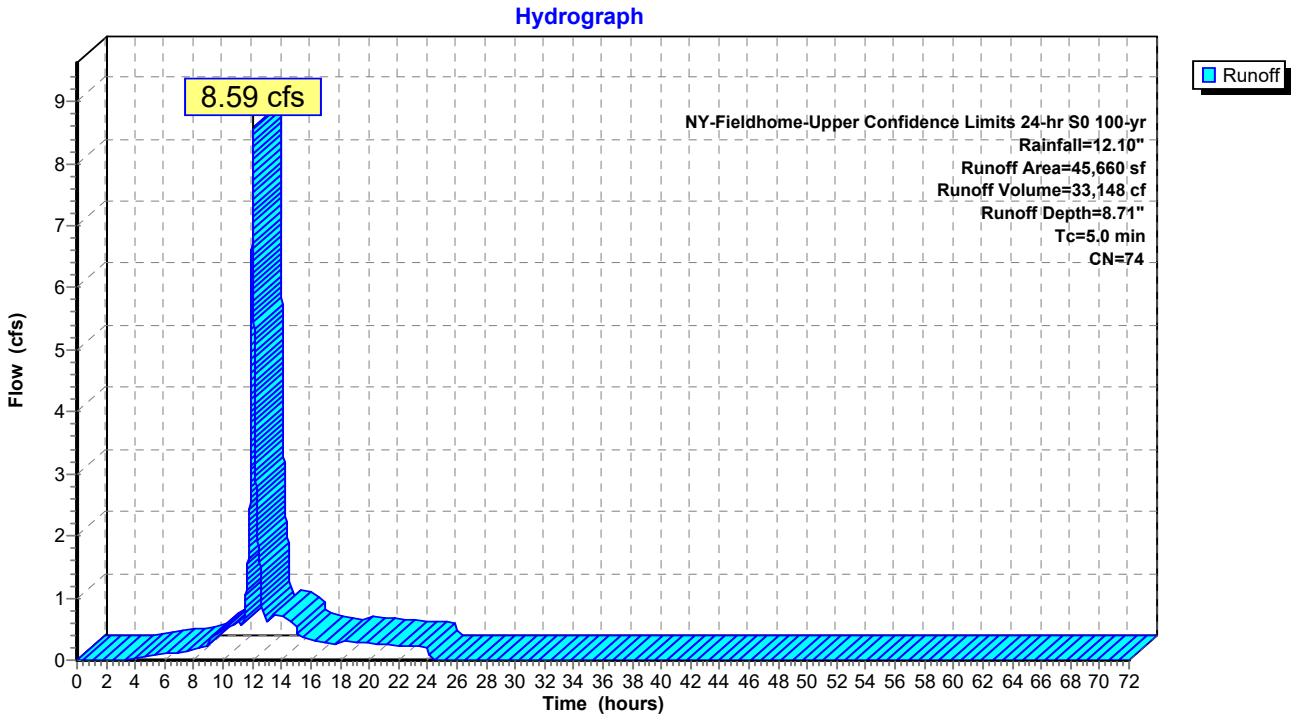
Runoff = 8.59 cfs @ 12.03 hrs, Volume= 33,148 cf, Depth= 8.71"
Routed to Pond DB-1 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

Area (sf)	CN	Description
45,660	74	>75% Grass cover, Good, HSG C
45,660		100.00% Pervious Area

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

Subcatchment PDA-DB-1: (5)



Hydrograph for Subcatchment PDA-DB-1: (5)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.00	0.00
2.00	0.45	0.00	0.00
3.00	0.70	0.00	0.00
4.00	0.96	0.02	0.03
5.00	1.24	0.07	0.07
6.00	1.54	0.16	0.11
7.00	1.82	0.27	0.13
8.00	2.13	0.41	0.17
9.00	2.50	0.61	0.24
10.00	3.15	1.00	0.49
11.00	3.93	1.54	0.65
12.00	6.42	3.54	**7.96**
13.00	8.21	5.11	**0.58**
14.00	8.97	5.80	0.70
15.00	9.62	6.39	0.58
16.00	9.98	6.73	0.33
17.00	10.29	7.02	0.29
18.00	10.56	7.27	0.25
19.00	10.87	7.55	0.29
20.00	11.15	7.81	0.27
21.00	11.41	8.06	0.25
22.00	11.65	8.29	0.24
23.00	11.88	8.51	0.22
24.00	**12.10**	**8.71**	0.21
25.00	12.10	8.71	0.00
26.00	12.10	8.71	0.00
27.00	12.10	8.71	0.00
28.00	12.10	8.71	0.00
29.00	12.10	8.71	0.00
30.00	12.10	8.71	0.00
31.00	12.10	8.71	0.00
32.00	12.10	8.71	0.00
33.00	12.10	8.71	0.00
34.00	12.10	8.71	0.00
35.00	12.10	8.71	0.00
36.00	12.10	8.71	0.00
37.00	12.10	8.71	0.00
38.00	12.10	8.71	0.00
39.00	12.10	8.71	0.00
40.00	12.10	8.71	0.00
41.00	12.10	8.71	0.00
42.00	12.10	8.71	0.00
43.00	12.10	8.71	0.00
44.00	12.10	8.71	0.00
45.00	12.10	8.71	0.00
46.00	12.10	8.71	0.00
47.00	12.10	8.71	0.00
48.00	12.10	8.71	0.00
49.00	12.10	8.71	0.00
50.00	12.10	8.71	0.00
51.00	12.10	8.71	0.00
52.00	12.10	8.71	0.00
53.00	12.10	8.71	0.00
54.00	12.10	8.71	0.00
55.00	12.10	8.71	0.00
56.00	12.10	8.71	0.00
57.00	12.10	8.71	0.00
58.00	12.10	8.71	0.00
59.00	12.10	8.71	0.00
60.00	12.10	8.71	0.00
61.00	12.10	8.71	0.00
62.00	12.10	8.71	0.00
63.00	12.10	8.71	0.00
64.00	12.10	8.71	0.00
65.00	12.10	8.71	0.00
66.00	12.10	8.71	0.00
67.00	12.10	8.71	0.00
68.00	12.10	8.71	0.00
69.00	12.10	8.71	0.00
70.00	12.10	8.71	0.00
71.00	12.10	8.71	0.00
72.00	12.10	8.71	0.00

Summary for Subcatchment PDA-DB-2: (11)

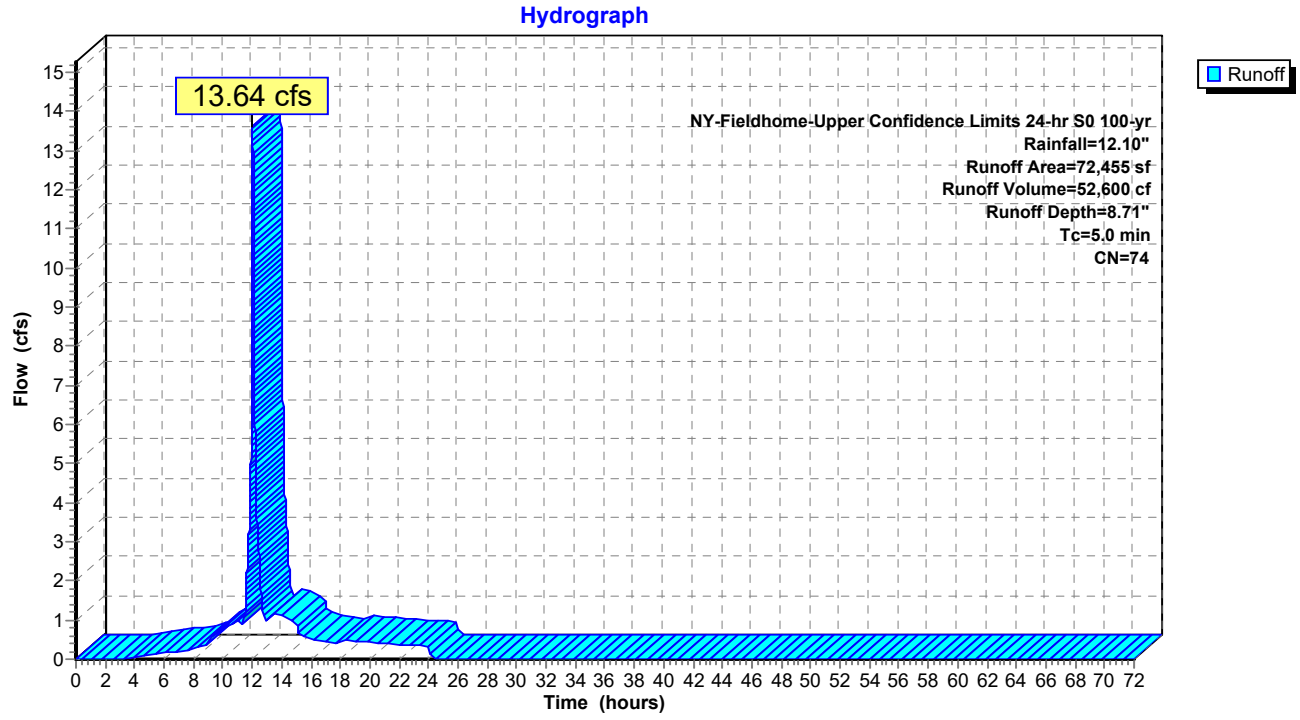
Runoff = 13.64 cfs @ 12.03 hrs, Volume= 52,600 cf, Depth= 8.71"
Routed to Pond DB-2 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
NY-Fieldhome-Upper Confidence Limits 24-hr S0 100-yr Rainfall=12.10"

Area (sf)	CN	Description
64,759	74	>75% Grass cover, Good, HSG C
7,696	70	Woods, Good, HSG C
72,455	74	Weighted Average
72,455		100.00% Pervious Area

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

Subcatchment PDA-DB-2: (11)



Hydrograph for Subcatchment PDA-DB-2: (11)

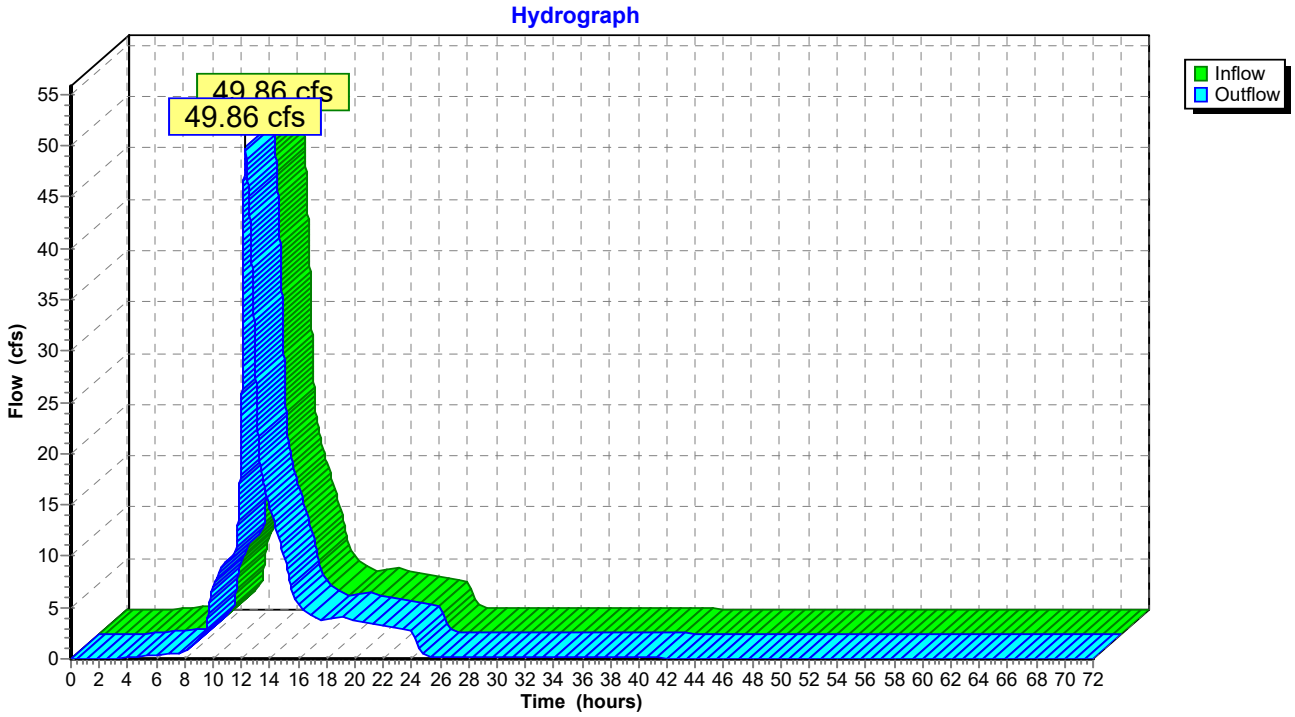
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.22	0.00	0.00
2.00	0.45	0.00	0.00
3.00	0.70	0.00	0.00
4.00	0.96	0.02	0.05
5.00	1.24	0.07	0.12
6.00	1.54	0.16	0.18
7.00	1.82	0.27	0.20
8.00	2.13	0.41	0.27
9.00	2.50	0.61	0.37
10.00	3.15	1.00	0.77
11.00	3.93	1.54	1.03
12.00	6.42	3.54	**12.63**
13.00	8.21	5.11	**0.93**
14.00	8.97	5.80	1.11
15.00	9.62	6.39	0.91
16.00	9.98	6.73	0.52
17.00	10.29	7.02	0.45
18.00	10.56	7.27	0.40
19.00	10.87	7.55	0.46
20.00	11.15	7.81	0.43
21.00	11.41	8.06	0.40
22.00	11.65	8.29	0.38
23.00	11.88	8.51	0.36
24.00	**12.10**	**8.71**	0.34
25.00	12.10	8.71	0.00
26.00	12.10	8.71	0.00
27.00	12.10	8.71	0.00
28.00	12.10	8.71	0.00
29.00	12.10	8.71	0.00
30.00	12.10	8.71	0.00
31.00	12.10	8.71	0.00
32.00	12.10	8.71	0.00
33.00	12.10	8.71	0.00
34.00	12.10	8.71	0.00
35.00	12.10	8.71	0.00
36.00	12.10	8.71	0.00
37.00	12.10	8.71	0.00
38.00	12.10	8.71	0.00
39.00	12.10	8.71	0.00
40.00	12.10	8.71	0.00
41.00	12.10	8.71	0.00
42.00	12.10	8.71	0.00
43.00	12.10	8.71	0.00
44.00	12.10	8.71	0.00
45.00	12.10	8.71	0.00
46.00	12.10	8.71	0.00
47.00	12.10	8.71	0.00
48.00	12.10	8.71	0.00
49.00	12.10	8.71	0.00
50.00	12.10	8.71	0.00
51.00	12.10	8.71	0.00
52.00	12.10	8.71	0.00
53.00	12.10	8.71	0.00
54.00	12.10	8.71	0.00
55.00	12.10	8.71	0.00
56.00	12.10	8.71	0.00
57.00	12.10	8.71	0.00
58.00	12.10	8.71	0.00
59.00	12.10	8.71	0.00
60.00	12.10	8.71	0.00
61.00	12.10	8.71	0.00
62.00	12.10	8.71	0.00
63.00	12.10	8.71	0.00
64.00	12.10	8.71	0.00
65.00	12.10	8.71	0.00
66.00	12.10	8.71	0.00
67.00	12.10	8.71	0.00
68.00	12.10	8.71	0.00
69.00	12.10	8.71	0.00
70.00	12.10	8.71	0.00
71.00	12.10	8.71	0.00
72.00	12.10	8.71	0.00

Summary for Reach DP-1:

Inflow = 49.86 cfs @ 12.28 hrs, Volume= 500,292 cf
Outflow = 49.86 cfs @ 12.28 hrs, Volume= 500,292 cf, Atten= 0%, Lag= 0.0 min

Routing by Sim-Route method, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs

Reach DP-1:



Hydrograph for Reach DP-1:

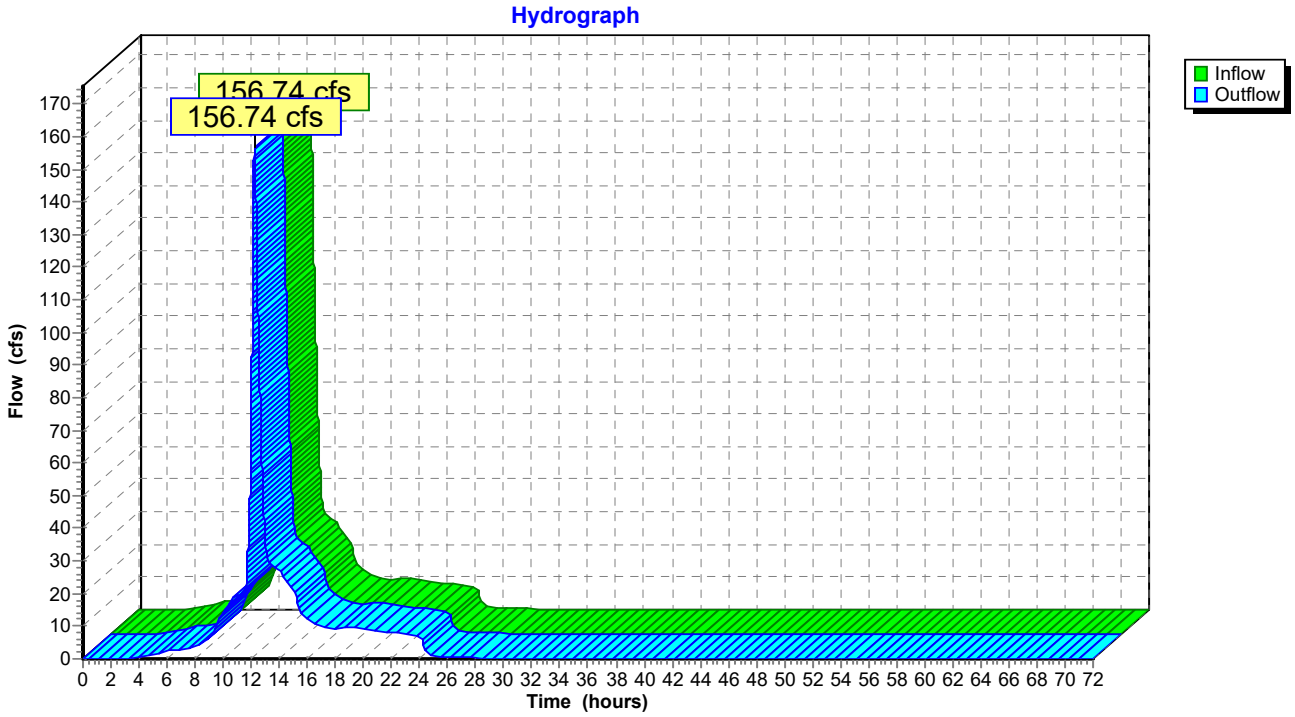
Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.01		0.01
4.00	0.09		0.09
5.00	0.26		0.26
6.00	0.43		0.43
7.00	0.50		0.50
8.00	0.71		0.71
9.00	1.77		1.77
10.00	7.00		7.00
11.00	9.60		9.60
12.00	**22.14**		**22.11**
13.00	**28.81**		**28.83**
14.00	14.83		14.83
15.00	10.19		10.20
16.00	5.23		5.23
17.00	4.21		4.22
18.00	3.63		3.63
19.00	4.10		4.10
20.00	3.78		3.78
21.00	3.48		3.48
22.00	3.23		3.23
23.00	3.02		3.02
24.00	2.84		2.84
25.00	0.40		0.40
26.00	0.15		0.15
27.00	0.11		0.11
28.00	0.10		0.10
29.00	0.10		0.10
30.00	0.09		0.09
31.00	0.09		0.09
32.00	0.09		0.09
33.00	0.09		0.09
34.00	0.09		0.09
35.00	0.09		0.09
36.00	0.09		0.09
37.00	0.09		0.09
38.00	0.09		0.09
39.00	0.09		0.09
40.00	0.09		0.09
41.00	0.09		0.09
42.00	0.09		0.09
43.00	0.08		0.08
44.00	0.08		0.08
45.00	0.08		0.08
46.00	0.08		0.08
47.00	0.08		0.08
48.00	0.08		0.08
49.00	0.07		0.07
50.00	0.03		0.03
51.00	0.02		0.02
52.00	0.01		0.01
53.00	0.01		0.01
54.00	0.01		0.01
55.00	0.00		0.00
56.00	0.00		0.00
57.00	0.00		0.00
58.00	0.00		0.00
59.00	0.00		0.00
60.00	0.00		0.00
61.00	0.00		0.00
62.00	0.00		0.00
63.00	0.00		0.00
64.00	0.00		0.00
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Summary for Reach DP-2:

Inflow = 156.74 cfs @ 12.24 hrs, Volume= 1,128,380 cf
Outflow = 156.74 cfs @ 12.24 hrs, Volume= 1,128,380 cf, Atten= 0%, Lag= 0.0 min

Routing by Sim-Route method, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs

Reach DP-2:



Hydrograph for Reach DP-2:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.01		0.01
4.00	0.50		0.50
5.00	1.44		1.44
6.00	2.45		2.45
7.00	2.87		2.87
8.00	3.92		3.92
9.00	5.87		5.87
10.00	14.02		14.01
11.00	19.60		19.60
12.00	**69.28**		**69.07**
13.00	**36.33**		**36.36**
14.00	27.06		27.06
15.00	21.05		21.06
16.00	12.25		12.25
17.00	10.08		10.08
18.00	8.79		8.79
19.00	9.72		9.72
20.00	9.10		9.10
21.00	8.49		8.50
22.00	7.98		7.98
23.00	7.53		7.53
24.00	7.14		7.14
25.00	0.93		0.93
26.00	0.48		0.48
27.00	0.34		0.34
28.00	0.28		0.28
29.00	0.25		0.25
30.00	0.24		0.24
31.00	0.23		0.23
32.00	0.22		0.22
33.00	0.22		0.22
34.00	0.22		0.22
35.00	0.21		0.21
36.00	0.21		0.21
37.00	0.21		0.21
38.00	0.21		0.21
39.00	0.21		0.21
40.00	0.21		0.21
41.00	0.20		0.20
42.00	0.20		0.20
43.00	0.20		0.20
44.00	0.20		0.20
45.00	0.20		0.20
46.00	0.19		0.19
47.00	0.19		0.19
48.00	0.19		0.19
49.00	0.18		0.18
50.00	0.11		0.11
51.00	0.07		0.07
52.00	0.05		0.05
53.00	0.04		0.04
54.00	0.03		0.03
55.00	0.02		0.02
56.00	0.02		0.02
57.00	0.02		0.02
58.00	0.01		0.01
59.00	0.01		0.01
60.00	0.01		0.01
61.00	0.01		0.01
62.00	0.01		0.01
63.00	0.01		0.01
64.00	0.01		0.01
65.00	0.01		0.01
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Summary for Pond BMH-1B:

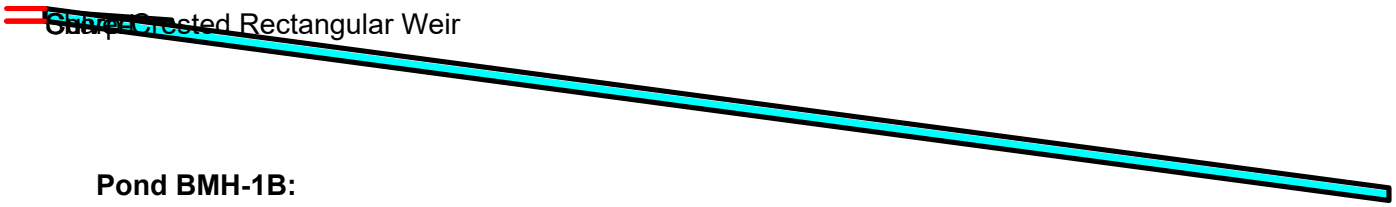
Inflow = 52.59 cfs @ 12.15 hrs, Volume= 303,534 cf
Outflow = 52.59 cfs @ 12.15 hrs, Volume= 303,532 cf, Atten= 0%, Lag= 0.0 min
Primary = 15.92 cfs @ 12.13 hrs, Volume= 165,467 cf
Routed to Pond IS-1B :
Secondary = 36.79 cfs @ 12.15 hrs, Volume= 138,066 cf
Routed to Pond DB-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 439.56' @ 12.15 hrs
Flood Elev= 442.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	435.25'	**24.0" Round Culvert** L= 31.3' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 435.25' / 433.50' S= 0.0559 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	435.25'	**30.0" Round Culvert** L= 332.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 435.25' / 400.00' S= 0.1062 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#3	Device 2	437.75'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

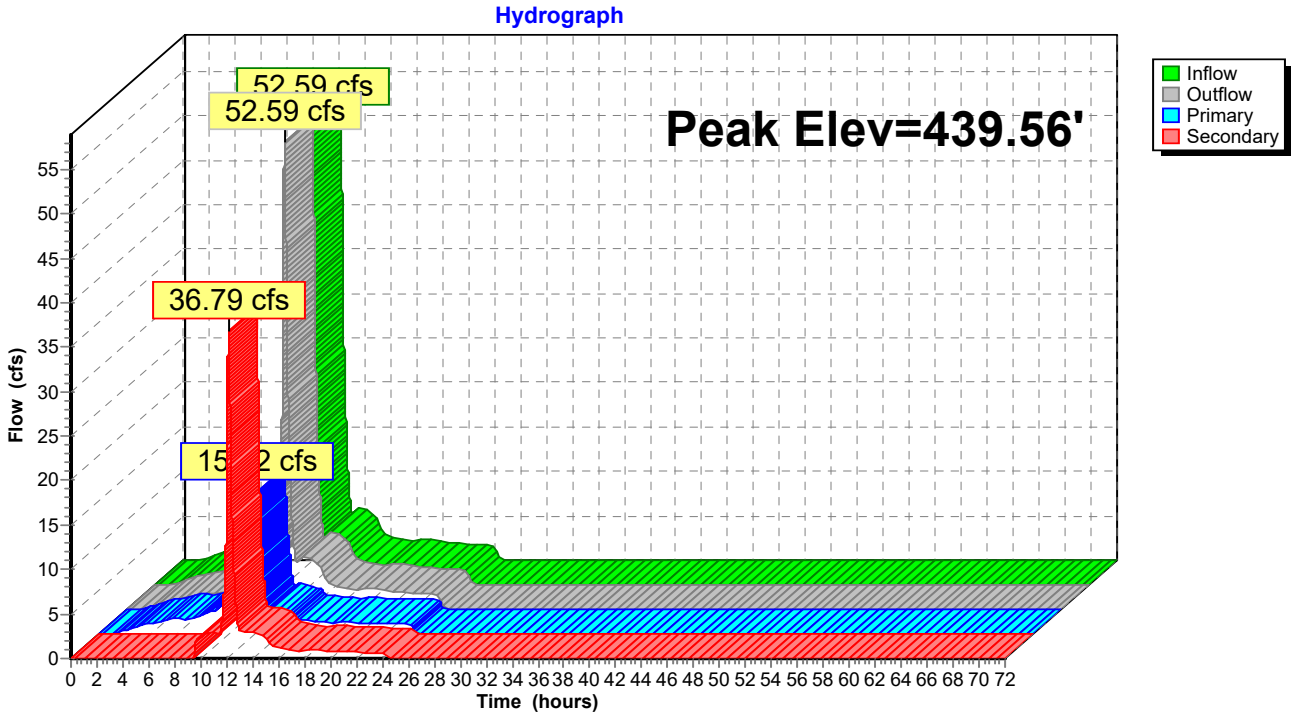
Primary OutFlow Max=15.91 cfs @ 12.13 hrs HW=439.55' TW=438.84' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 15.91 cfs @ 5.06 fps)

Secondary OutFlow Max=36.79 cfs @ 12.15 hrs HW=439.56' TW=403.34' (Dynamic Tailwater)
└─**2=Culvert** (Passes 36.79 cfs of 51.64 cfs potential flow)
└─**3=Sharp-Crested Rectangular Weir** (Weir Controls 36.79 cfs @ 4.39 fps)

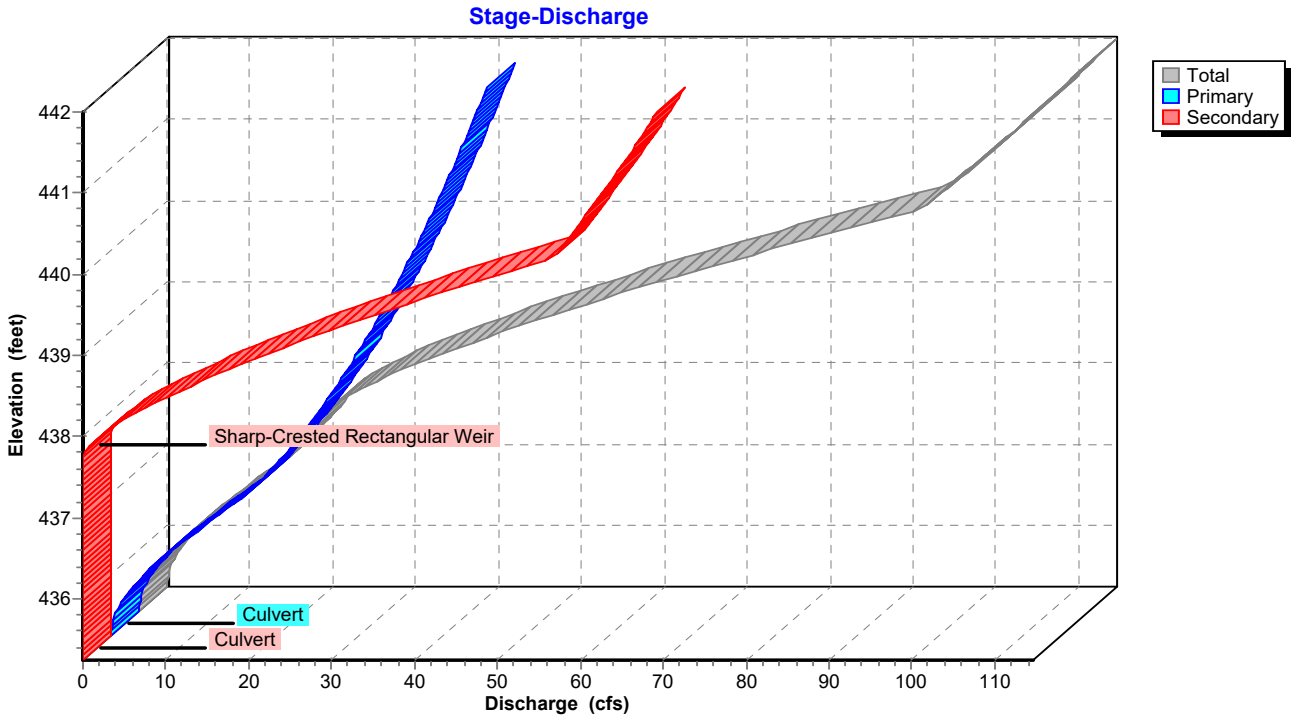


Pond BMH-1B:

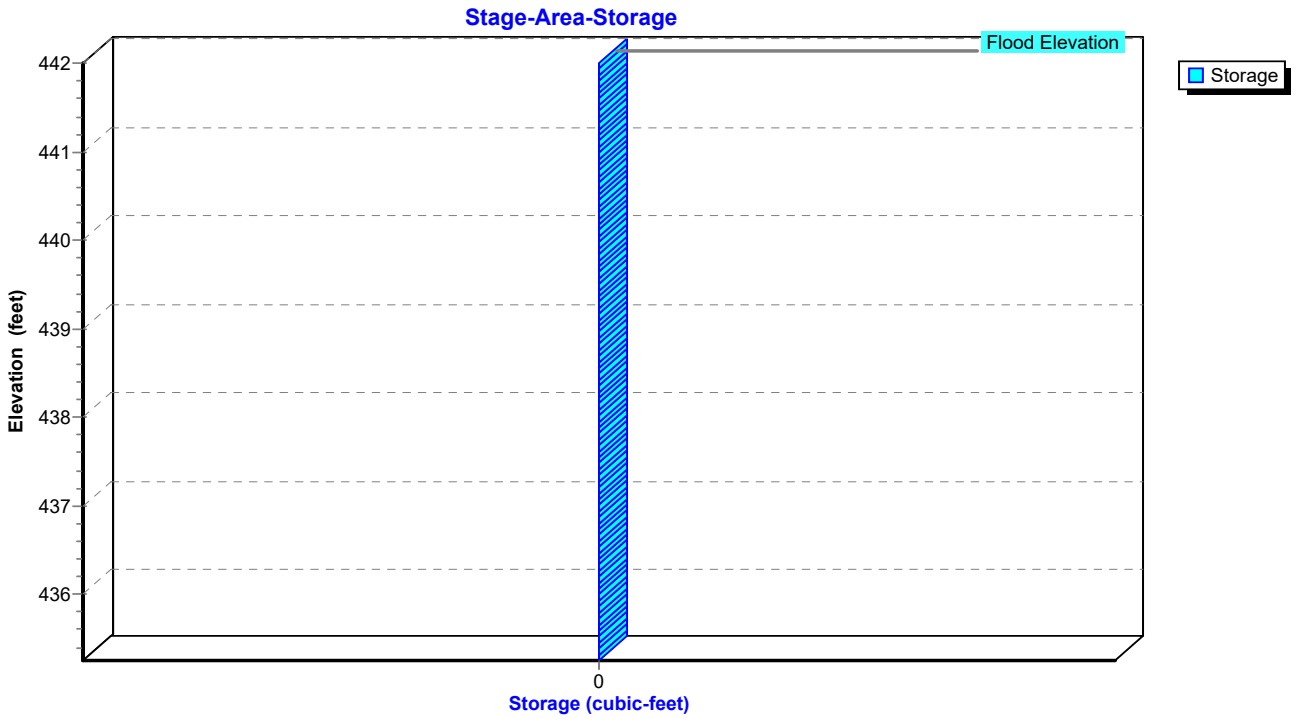
Pond BMH-1B:



Pond BMH-1B:



Pond BMH-1B:


Stage-Area-Storage
Flood Elevation
Storage
442
441
440
439
438
437
436
Elevation (feet)
0
Storage (cubic-feet)

Hydrograph for Pond BMH-1B:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	435.25	0.00	0.00	0.00
2.50	0.62	435.53	0.62	0.62	0.00
5.00	1.52	435.70	1.52	1.52	0.00
7.50	1.94	435.79	1.94	1.94	0.00
10.00	**4.89**	**438.03**	**4.89**	**2.45**	**2.44**
12.50	**18.58**	**438.57**	**18.60**	**6.86**	**11.74**
15.00	4.72	438.03	4.72	2.33	2.38
17.50	2.16	437.89	2.16	1.28	0.88
20.00	2.13	437.89	2.13	1.27	0.86
22.50	1.81	437.87	1.81	1.13	0.68
25.00	0.00	437.47	0.00	0.00	0.00
27.50	0.00	436.42	0.00	0.00	0.00
30.00	0.00	435.48	0.00	0.00	0.00
32.50	0.00	435.25	0.00	0.00	0.00
35.00	0.00	435.25	0.00	0.00	0.00
37.50	0.00	435.25	0.00	0.00	0.00
40.00	0.00	435.25	0.00	0.00	0.00
42.50	0.00	435.25	0.00	0.00	0.00
45.00	0.00	435.25	0.00	0.00	0.00
47.50	0.00	435.25	0.00	0.00	0.00
50.00	0.00	435.25	0.00	0.00	0.00
52.50	0.00	435.25	0.00	0.00	0.00
55.00	0.00	435.25	0.00	0.00	0.00
57.50	0.00	435.25	0.00	0.00	0.00
60.00	0.00	435.25	0.00	0.00	0.00
62.50	0.00	435.25	0.00	0.00	0.00
65.00	0.00	435.25	0.00	0.00	0.00
67.50	0.00	435.25	0.00	0.00	0.00
70.00	0.00	435.25	0.00	0.00	0.00

Stage-Discharge for Pond BMH-1B:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
435.25	0.00	0.00	0.00
435.35	0.08	0.08	0.00
435.45	0.31	0.31	0.00
435.55	0.69	0.69	0.00
435.65	1.20	1.20	0.00
435.75	1.85	1.85	0.00
435.85	2.61	2.61	0.00
435.95	3.49	3.49	0.00
436.05	4.47	4.47	0.00
436.15	5.54	5.54	0.00
436.25	6.69	6.69	0.00
436.35	7.90	7.90	0.00
436.45	9.18	9.18	0.00
436.55	10.49	10.49	0.00
436.65	11.83	11.83	0.00
436.75	13.17	13.17	0.00
436.85	14.50	14.50	0.00
436.95	15.79	15.79	0.00
437.05	17.00	17.00	0.00
437.15	18.09	18.09	0.00
437.25	18.91	18.91	0.00
437.35	19.83	19.83	0.00
437.45	20.71	20.71	0.00
437.55	21.56	21.56	0.00
437.65	22.37	22.37	0.00
437.75	23.16	23.16	0.00
437.85	24.43	23.92	0.51
437.95	26.10	24.65	1.45
438.05	28.02	25.37	2.65
438.15	30.13	26.06	4.07
438.25	32.41	26.74	5.66
438.35	34.82	27.40	7.42
438.45	37.35	28.05	9.31
438.55	40.00	28.68	11.32
438.65	42.75	29.29	13.46
438.75	45.59	29.90	15.70
438.85	48.52	30.49	18.03
438.95	51.53	31.07	20.46
439.05	54.61	31.64	22.97
439.15	57.77	32.20	25.57
439.25	60.98	32.75	28.23
439.35	64.26	33.29	30.97
439.45	67.60	33.82	33.78
439.55	70.99	34.35	36.64
439.65	74.43	34.87	39.57
439.75	77.92	35.37	42.55
439.85	81.45	35.88	45.58
439.95	85.03	36.37	48.66
440.05	88.64	36.86	51.78
440.15	92.30	37.34	54.95
440.25	95.03	37.82	57.21
440.35	96.26	38.29	57.97
440.45	97.47	38.75	58.72
440.55	98.67	39.21	59.46
440.65	99.85	39.66	60.19
440.75	101.02	40.11	60.91
440.85	102.17	40.55	61.62
440.95	103.32	40.99	62.32
441.05	104.45	41.43	63.02
441.15	105.56	41.86	63.71
441.25	106.67	42.28	64.39
441.35	107.77	42.70	65.06
441.45	108.85	43.12	65.73
441.55	109.92	43.53	66.39
441.65	110.99	43.94	67.05
441.75	112.04	44.34	67.69
441.85	113.08	44.75	68.34
441.95	**114.12**	**45.14**	**68.97**

Stage-Area-Storage for Pond BMH-1B:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
435.25	**0**	437.90	0	440.55	0
435.30	0	437.95	0	440.60	0
435.35	0	438.00	0	440.65	0
435.40	0	438.05	0	440.70	0
435.45	0	438.10	0	440.75	0
435.50	0	438.15	0	440.80	0
435.55	0	438.20	0	440.85	0
435.60	0	438.25	0	440.90	0
435.65	0	438.30	0	440.95	0
435.70	0	438.35	0	441.00	0
435.75	0	438.40	0	441.05	0
435.80	0	438.45	0	441.10	0
435.85	0	438.50	0	441.15	0
435.90	0	438.55	0	441.20	0
435.95	0	438.60	0	441.25	0
436.00	0	438.65	0	441.30	0
436.05	0	438.70	0	441.35	0
436.10	0	438.75	0	441.40	0
436.15	0	438.80	0	441.45	0
436.20	0	438.85	0	441.50	0
436.25	0	438.90	0	441.55	0
436.30	0	438.95	0	441.60	0
436.35	0	439.00	0	441.65	0
436.40	0	439.05	0	441.70	0
436.45	0	439.10	0	441.75	0
436.50	0	439.15	0	441.80	0
436.55	0	439.20	0	441.85	0
436.60	0	439.25	0	441.90	0
436.65	0	439.30	0	441.95	0
436.70	0	439.35	0	442.00	0
436.75	0	439.40	0		
436.80	0	439.45	0		
436.85	0	439.50	0		
436.90	0	439.55	0		
436.95	0	439.60	0		
437.00	0	439.65	0		
437.05	0	439.70	0		
437.10	0	439.75	0		
437.15	0	439.80	0		
437.20	0	439.85	0		
437.25	0	439.90	0		
437.30	0	439.95	0		
437.35	0	440.00	0		
437.40	0	440.05	0		
437.45	0	440.10	0		
437.50	0	440.15	0		
437.55	0	440.20	0		
437.60	0	440.25	0		
437.65	0	440.30	0		
437.70	0	440.35	0		
437.75	0	440.40	0		
437.80	0	440.45	0		
437.85	0	440.50	0		

Summary for Pond BMH-2B:

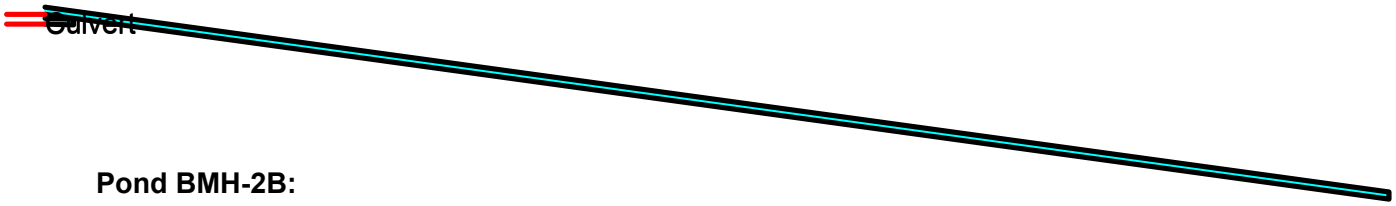
Inflow = 38.79 cfs @ 12.03 hrs, Volume= 87,681 cf
Outflow = 38.79 cfs @ 12.03 hrs, Volume= 87,679 cf, Atten= 0%, Lag= 0.0 min
Primary = 8.79 cfs @ 12.01 hrs, Volume= 35,334 cf
Routed to Pond IS-2B :
Secondary = 32.54 cfs @ 12.03 hrs, Volume= 52,345 cf
Routed to Pond DB-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 460.59' @ 12.03 hrs
Flood Elev= 466.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	454.75'	**24.0" Round Culvert** L= 9.4' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 454.75' / 454.50' S= 0.0266 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	458.15'	**30.0" Round Culvert** L= 442.2' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 458.15' / 394.00' S= 0.1451 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

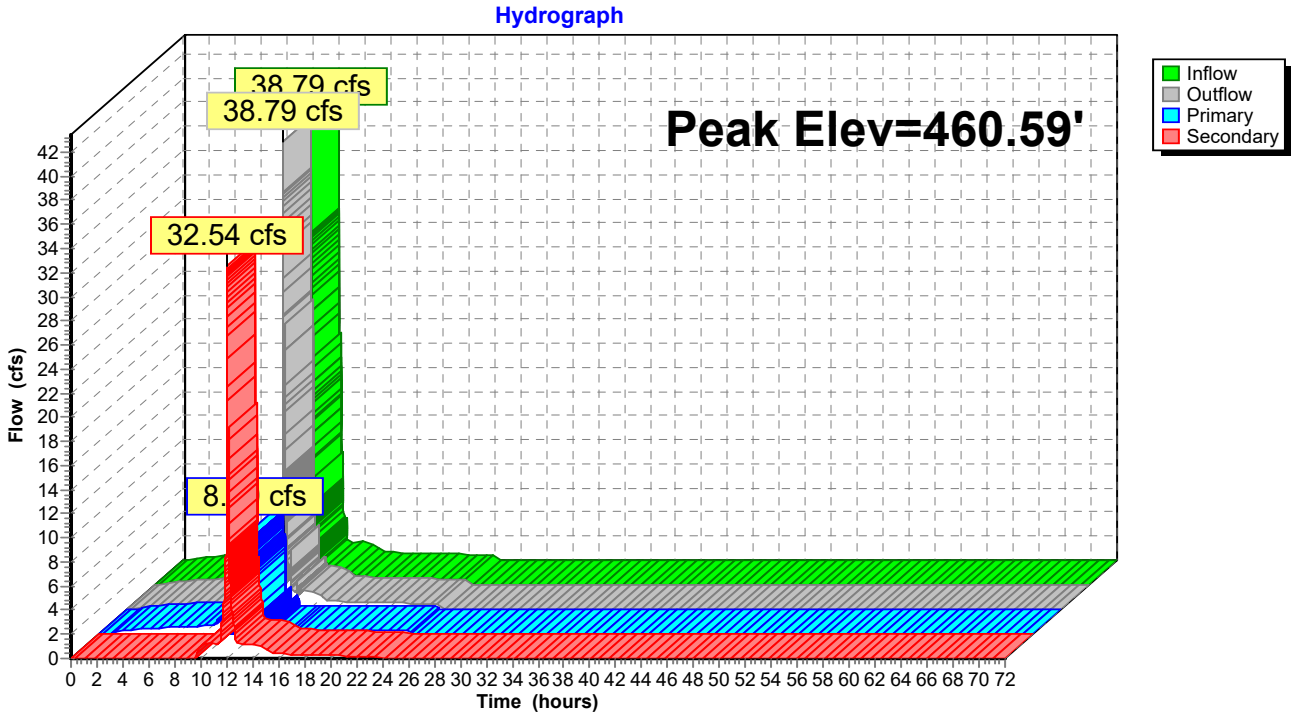
Primary OutFlow Max=11.06 cfs @ 12.01 hrs HW=459.86' TW=459.52' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 11.06 cfs @ 3.52 fps)

Secondary OutFlow Max=31.13 cfs @ 12.03 hrs HW=460.49' TW=396.78' (Dynamic Tailwater)
└**2=Culvert** (Inlet Controls 31.13 cfs @ 6.51 fps)

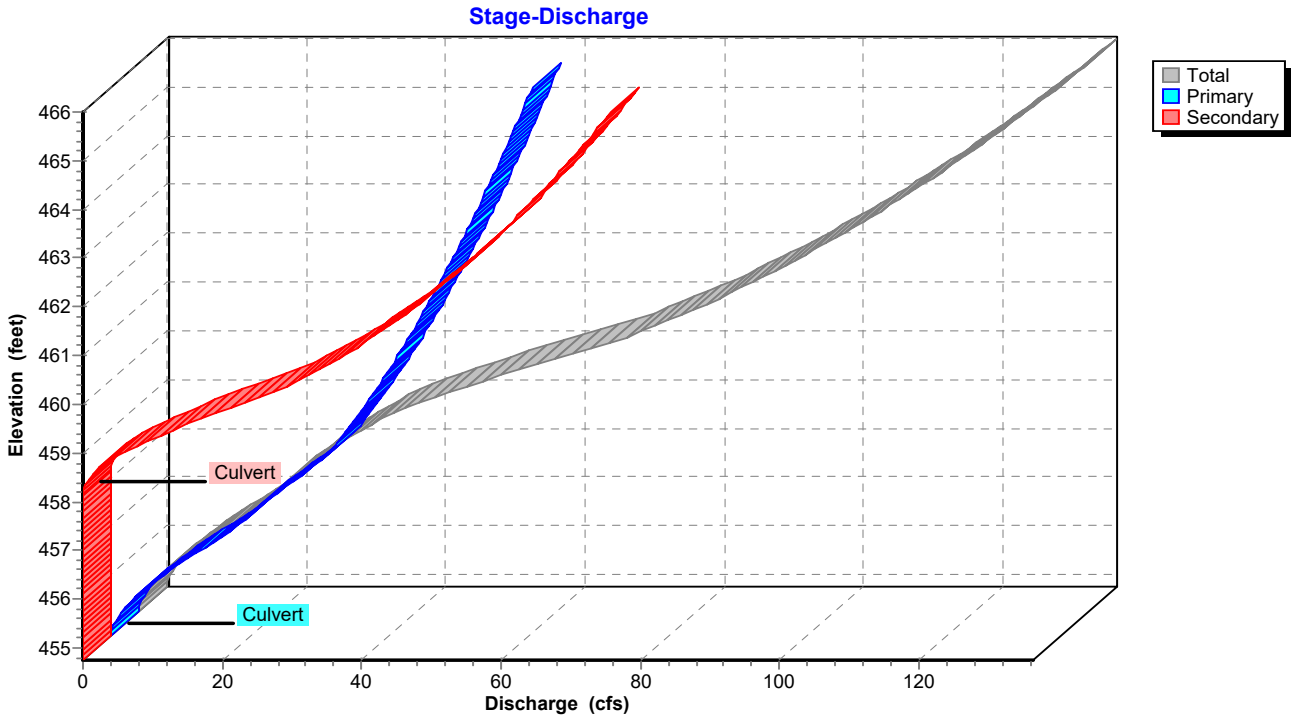


Pond BMH-2B:

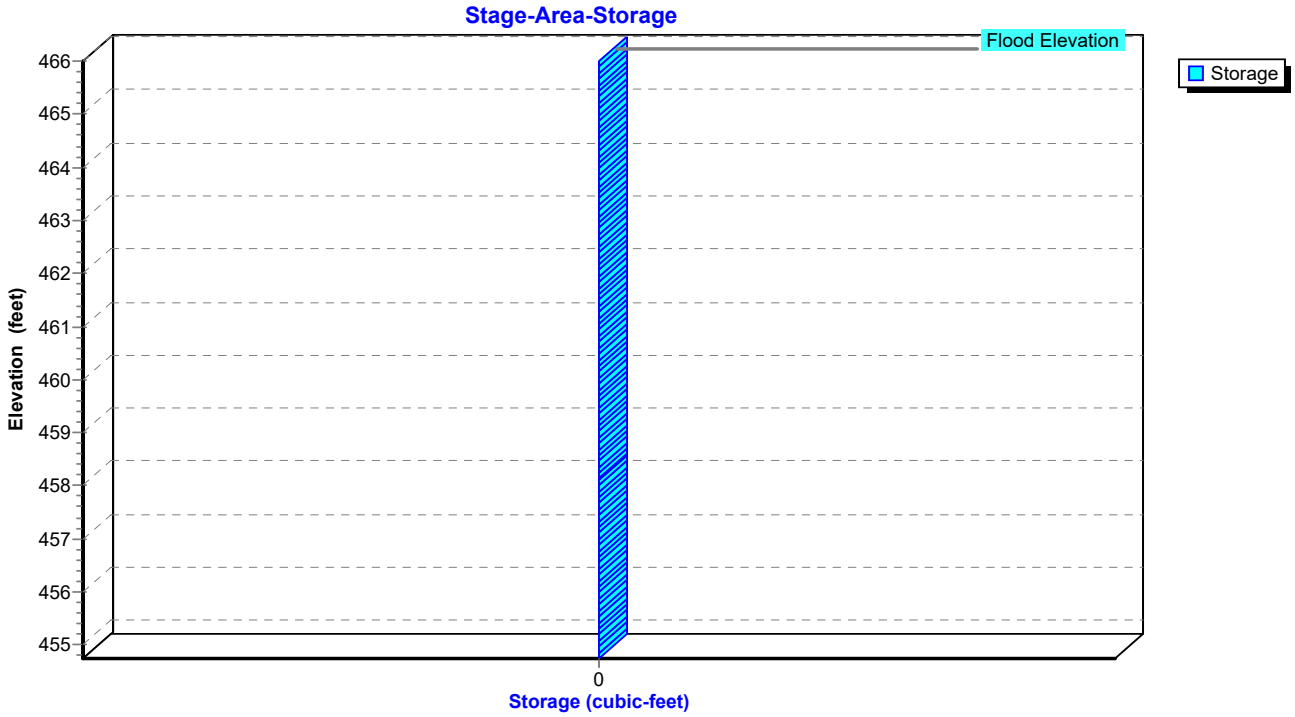
Pond BMH-2B:



Pond BMH-2B:



Pond BMH-2B:


Stage-Area-Storage
Flood Elevation
Storage
Elevation (feet)
466
465
464
463
462
461
460
459
458
457
456
455
0
Storage (cubic-feet)

Hydrograph for Pond BMH-2B:

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	454.75	0.00	0.00	0.00
2.50	0.32	454.95	0.32	0.32	0.00
5.00	0.52	455.01	0.52	0.52	0.00
7.50	0.59	455.66	0.59	0.59	0.00
10.00	**1.59**	**458.51**	**1.10**	**0.00**	**1.10**
12.50	**3.51**	**458.79**	**3.51**	**0.16**	**3.36**
15.00	1.22	458.48	1.22	0.29	0.93
17.50	0.56	458.33	0.56	0.29	0.27
20.00	0.56	458.32	0.56	0.29	0.26
22.50	0.48	458.29	0.48	0.30	0.18
25.00	0.00	457.46	0.00	0.00	0.00
27.50	0.00	455.93	0.00	0.00	0.00
30.00	0.00	454.75	0.00	0.00	0.00
32.50	0.00	454.75	0.00	0.00	0.00
35.00	0.00	454.75	0.00	0.00	0.00
37.50	0.00	454.75	0.00	0.00	0.00
40.00	0.00	454.75	0.00	0.00	0.00
42.50	0.00	454.75	0.00	0.00	0.00
45.00	0.00	454.75	0.00	0.00	0.00
47.50	0.00	454.75	0.00	0.00	0.00
50.00	0.00	454.75	0.00	0.00	0.00
52.50	0.00	454.75	0.00	0.00	0.00
55.00	0.00	454.75	0.00	0.00	0.00
57.50	0.00	454.75	0.00	0.00	0.00
60.00	0.00	454.75	0.00	0.00	0.00
62.50	0.00	454.75	0.00	0.00	0.00
65.00	0.00	454.75	0.00	0.00	0.00
67.50	0.00	454.75	0.00	0.00	0.00
70.00	0.00	454.75	0.00	0.00	0.00

Stage-Discharge for Pond BMH-2B:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
454.75	0.00	0.00	0.00
454.95	0.31	0.31	0.00
455.15	1.12	1.12	0.00
455.35	2.25	2.25	0.00
455.55	3.65	3.65	0.00
455.75	5.29	5.29	0.00
455.95	7.13	7.13	0.00
456.15	9.12	9.12	0.00
456.35	11.23	11.23	0.00
456.55	13.38	13.38	0.00
456.75	15.54	15.54	0.00
456.95	17.61	17.61	0.00
457.15	19.48	19.48	0.00
457.35	20.94	20.94	0.00
457.55	22.66	22.66	0.00
457.75	24.72	24.72	0.00
457.95	26.63	26.63	0.00
458.15	28.40	28.40	0.00
458.35	30.43	30.08	0.35
458.55	33.00	31.64	1.36
458.75	35.74	32.75	2.99
458.95	38.98	33.82	5.15
459.15	42.67	34.87	7.80
459.35	46.74	35.88	10.86
459.55	51.10	36.86	14.24
459.75	55.68	37.82	17.86
459.95	60.35	38.75	21.60
460.15	65.00	39.66	25.34
460.35	69.43	40.55	28.88
460.55	73.36	41.43	31.93
460.75	76.61	42.28	34.33
460.95	79.90	43.12	36.78
461.15	83.02	43.94	39.08
461.35	86.00	44.75	41.26
461.55	88.86	45.54	43.32
461.75	91.61	46.32	45.29
461.95	94.26	47.08	47.18
462.15	96.83	47.83	48.99
462.35	99.32	48.58	50.74
462.55	101.74	49.31	52.44
462.75	104.10	50.03	54.07
462.95	106.40	50.74	55.67
463.15	108.65	51.44	57.21
463.35	110.84	52.13	58.72
463.55	112.99	52.81	60.19
463.75	115.10	53.48	61.62
463.95	117.17	54.15	63.02
464.15	119.19	54.80	64.39
464.35	121.18	55.45	65.73
464.55	123.14	56.09	67.05
464.75	125.06	56.73	68.34
464.95	126.95	57.35	69.60
465.15	128.82	57.97	70.84
465.35	130.65	58.59	72.07
465.55	132.46	59.19	73.27
465.75	134.24	59.79	74.45
465.95	**136.00**	**60.39**	**75.61**

Stage-Area-Storage for Pond BMH-2B:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
454.75	**0**	460.05	0	465.35	0
454.85	0	460.15	0	465.45	0
454.95	0	460.25	0	465.55	0
455.05	0	460.35	0	465.65	0
455.15	0	460.45	0	465.75	0
455.25	0	460.55	0	465.85	0
455.35	0	460.65	0	465.95	0
455.45	0	460.75	0		
455.55	0	460.85	0		
455.65	0	460.95	0		
455.75	0	461.05	0		
455.85	0	461.15	0		
455.95	0	461.25	0		
456.05	0	461.35	0		
456.15	0	461.45	0		
456.25	0	461.55	0		
456.35	0	461.65	0		
456.45	0	461.75	0		
456.55	0	461.85	0		
456.65	0	461.95	0		
456.75	0	462.05	0		
456.85	0	462.15	0		
456.95	0	462.25	0		
457.05	0	462.35	0		
457.15	0	462.45	0		
457.25	0	462.55	0		
457.35	0	462.65	0		
457.45	0	462.75	0		
457.55	0	462.85	0		
457.65	0	462.95	0		
457.75	0	463.05	0		
457.85	0	463.15	0		
457.95	0	463.25	0		
458.05	0	463.35	0		
458.15	0	463.45	0		
458.25	0	463.55	0		
458.35	0	463.65	0		
458.45	0	463.75	0		
458.55	0	463.85	0		
458.65	0	463.95	0		
458.75	0	464.05	0		
458.85	0	464.15	0		
458.95	0	464.25	0		
459.05	0	464.35	0		
459.15	0	464.45	0		
459.25	0	464.55	0		
459.35	0	464.65	0		
459.45	0	464.75	0		
459.55	0	464.85	0		
459.65	0	464.95	0		
459.75	0	465.05	0		
459.85	0	465.15	0		
459.95	0	465.25	0		

Summary for Pond BR-1C:

Inflow Area = 184,184 sf, 32.60% Impervious, Inflow Depth = 9.68" for 100-yr event
Inflow = 26.16 cfs @ 12.16 hrs, Volume= 148,558 cf
Outflow = 24.03 cfs @ 12.22 hrs, Volume= 148,603 cf, Atten= 8%, Lag= 3.6 min
Primary = 15.70 cfs @ 12.22 hrs, Volume= 142,232 cf
Routed to Pond DB-1 :
Secondary = 8.32 cfs @ 12.22 hrs, Volume= 6,372 cf
Routed to Pond DB-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 414.30' @ 12.22 hrs Surf.Area= 9,026 sf Storage= 14,599 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 101.2 min (912.6 - 811.4)

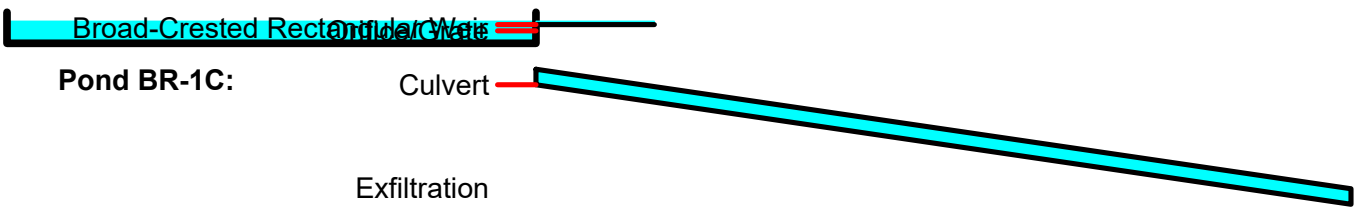
Volume	Invert	Avail.Storage	Storage Description
#1	412.50'	20,960 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
412.50	6,932	451.2	0	0	6,932
414.00	9,026	479.5	11,934	11,934	9,141
415.00	9,026	479.5	9,026	20,960	9,621

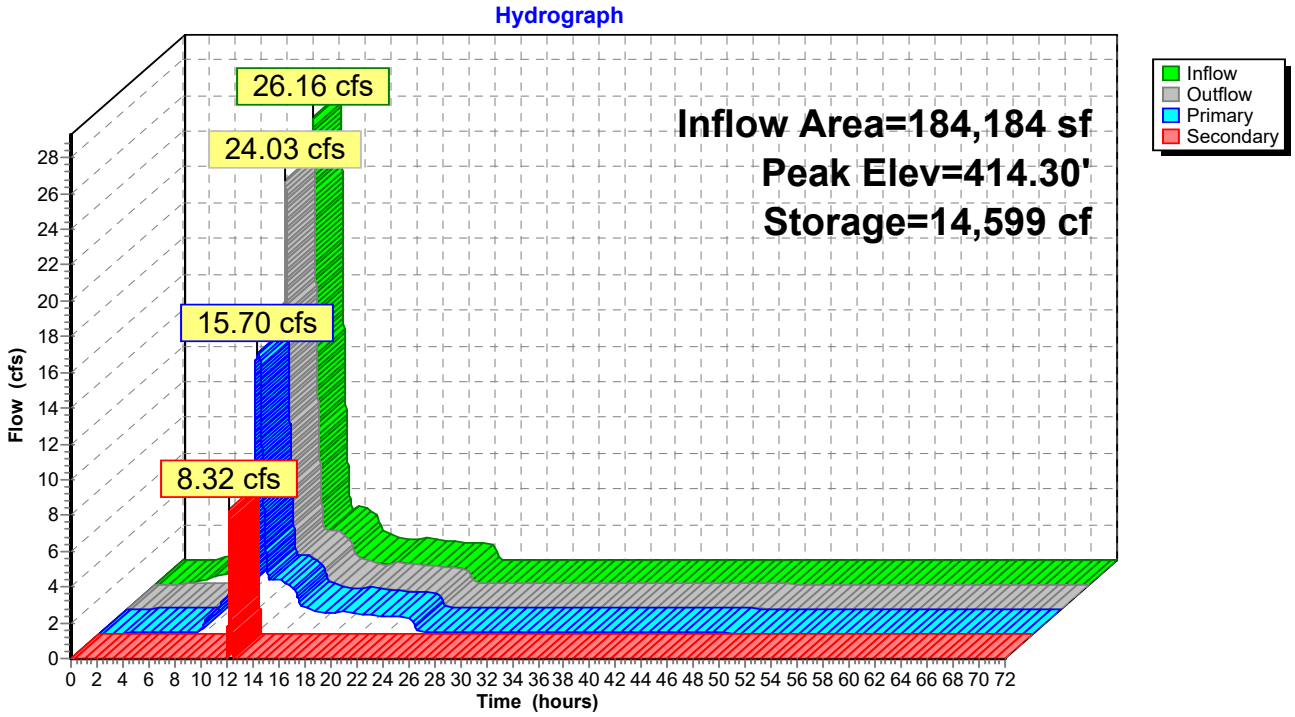
Device	Routing	Invert	Outlet Devices
#1	Primary	409.15'	**15.0" Round Culvert** L= 82.6' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 409.15' / 399.50' S= 0.1168 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	412.50'	**0.500 in/hr Exfiltration over Surface area**
#3	Device 1	413.50'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	414.00'	**20.0' long x 12.0' 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) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=15.70 cfs @ 12.22 hrs HW=414.30' TW=404.12' (Dynamic Tailwater)
└1=**Culvert** (Inlet Controls 15.70 cfs @ 12.80 fps)
└2=**Exfiltration** (Passes < 0.10 cfs potential flow)
└3=**Orifice/Grate** (Passes < 27.83 cfs potential flow)

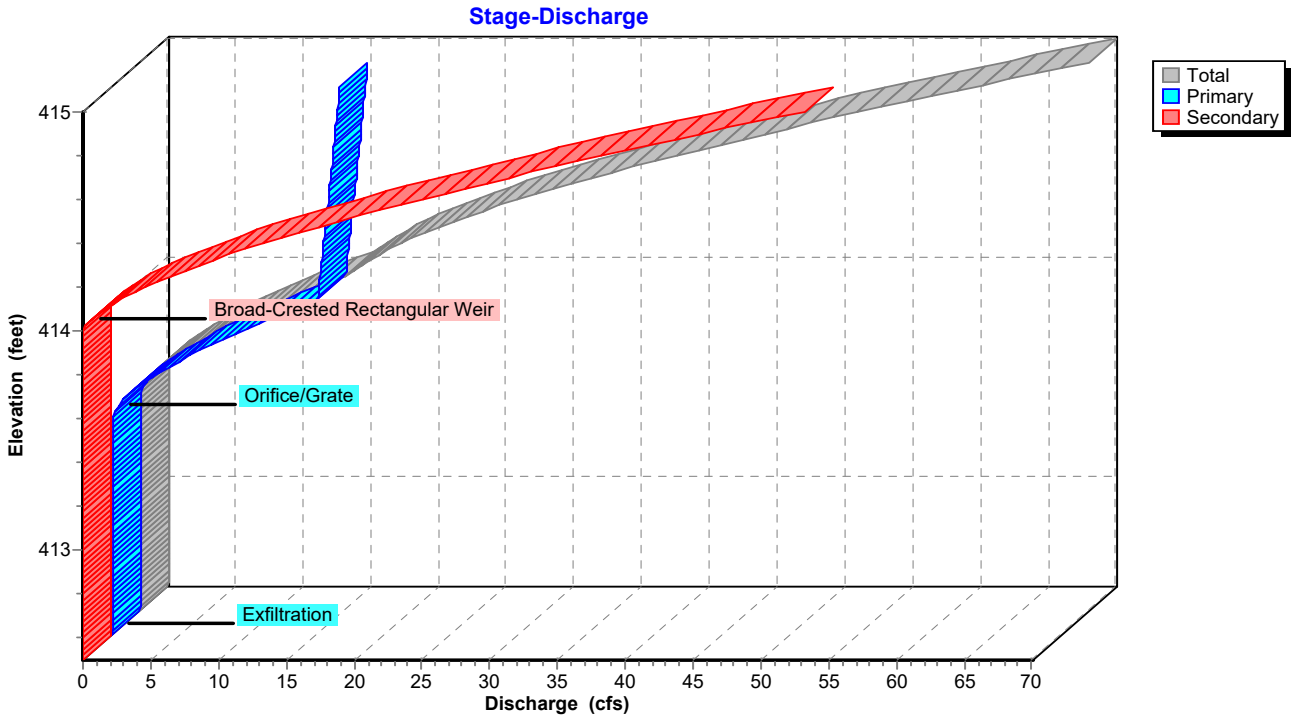
Secondary OutFlow Max=8.32 cfs @ 12.22 hrs HW=414.30' TW=404.12' (Dynamic Tailwater)
└4=**Broad-Crested Rectangular Weir** (Weir Controls 8.32 cfs @ 1.41 fps)



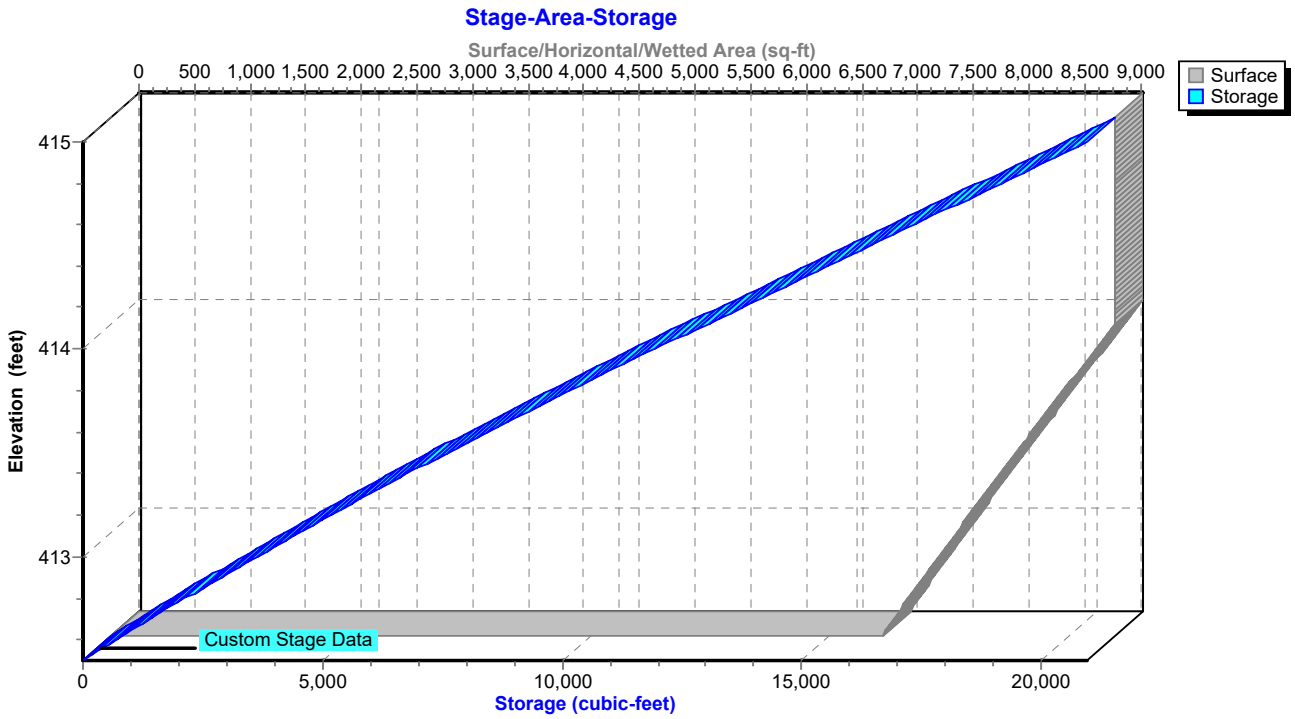
Pond BR-1C:



Pond BR-1C:



Pond BR-1C:


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 5,000 5,500 6,000 6,500 7,000 7,500 8,000 8,500 9,000
Surface
Storage
415
414
413
Elevation (feet)
Custom Stage Data
0
5,000
10,000
15,000
20,000
Storage (cubic-feet)

Hydrograph for Pond BR-1C:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	412.50	0.00	0.00	0.00
2.50	0.04	0	412.50	0.08	0.08	0.00
5.00	0.50	1,744	412.75	0.08	0.08	0.00
7.50	0.79	6,737	413.39	0.09	0.09	0.00
10.00	**2.25**	**8,788**	**413.64**	**2.17**	**2.17**	**0.00**
12.50	**10.07**	**11,653**	**413.97**	**12.70**	**12.70**	**0.00**
15.00	2.49	8,924	413.66	2.54	2.54	0.00
17.50	1.15	8,360	413.59	1.16	1.16	0.00
20.00	1.13	8,350	413.59	1.14	1.14	0.00
22.50	0.97	8,267	413.58	0.97	0.97	0.00
25.00	0.00	7,576	413.50	0.10	0.10	0.00
27.50	0.00	6,720	413.39	0.09	0.09	0.00
30.00	0.00	5,879	413.29	0.09	0.09	0.00
32.50	0.00	5,053	413.18	0.09	0.09	0.00
35.00	0.00	4,243	413.08	0.09	0.09	0.00
37.50	0.00	3,447	412.98	0.09	0.09	0.00
40.00	0.00	2,666	412.87	0.09	0.09	0.00
42.50	0.00	1,900	412.77	0.08	0.08	0.00
45.00	0.00	1,149	412.66	0.08	0.08	0.00
47.50	0.00	411	412.56	0.08	0.08	0.00
50.00	0.00	0	412.50	0.00	0.00	0.00
52.50	0.00	0	412.50	0.00	0.00	0.00
55.00	0.00	0	412.50	0.00	0.00	0.00
57.50	0.00	0	412.50	0.00	0.00	0.00
60.00	0.00	0	412.50	0.00	0.00	0.00
62.50	0.00	0	412.50	0.00	0.00	0.00
65.00	0.00	0	412.50	0.00	0.00	0.00
67.50	0.00	0	412.50	0.00	0.00	0.00
70.00	0.00	0	412.50	0.00	0.00	0.00

Stage-Discharge for Pond BR-1C:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
412.50	0.00	0.00	0.00
412.55	0.08	0.08	0.00
412.60	0.08	0.08	0.00
412.65	0.08	0.08	0.00
412.70	0.08	0.08	0.00
412.75	0.08	0.08	0.00
412.80	0.08	0.08	0.00
412.85	0.09	0.09	0.00
412.90	0.09	0.09	0.00
412.95	0.09	0.09	0.00
413.00	0.09	0.09	0.00
413.05	0.09	0.09	0.00
413.10	0.09	0.09	0.00
413.15	0.09	0.09	0.00
413.20	0.09	0.09	0.00
413.25	0.09	0.09	0.00
413.30	0.09	0.09	0.00
413.35	0.09	0.09	0.00
413.40	0.09	0.09	0.00
413.45	0.10	0.10	0.00
413.50	0.10	0.10	0.00
413.55	0.54	0.54	0.00
413.60	1.34	1.34	0.00
413.65	2.38	2.38	0.00
413.70	3.61	3.61	0.00
413.75	5.01	5.01	0.00
413.80	6.55	6.55	0.00
413.85	8.23	8.23	0.00
413.90	10.03	10.03	0.00
413.95	11.95	11.95	0.00
414.00	13.98	13.98	0.00
414.05	15.85	15.27	0.57
414.10	16.99	15.36	1.63
414.15	18.44	15.45	2.99
414.20	20.13	15.54	4.60
414.25	22.08	15.62	6.46
414.30	24.24	15.71	8.53
414.35	26.60	15.80	10.80
414.40	29.14	15.88	13.26
414.45	31.91	15.97	15.94
414.50	34.86	16.06	18.81
414.55	38.00	16.14	21.86
414.60	41.32	16.22	25.10
414.65	44.53	16.31	28.22
414.70	47.84	16.39	31.45
414.75	51.26	16.47	34.78
414.80	54.77	16.56	38.21
414.85	58.45	16.64	41.81
414.90	62.23	16.72	45.51
414.95	66.11	16.80	49.31
415.00	**70.08**	**16.88**	**53.20**

Stage-Area-Storage for Pond BR-1C:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
412.50	6,932	0
412.55	6,997	348
412.60	7,063	700
412.65	7,129	1,055
412.70	7,195	1,413
412.75	7,262	1,774
412.80	7,329	2,139
412.85	7,396	2,507
412.90	7,463	2,878
412.95	7,531	3,253
413.00	7,599	3,632
413.05	7,668	4,013
413.10	7,736	4,398
413.15	7,806	4,787
413.20	7,875	5,179
413.25	7,945	5,574
413.30	8,014	5,973
413.35	8,085	6,376
413.40	8,155	6,782
413.45	8,226	7,191
413.50	8,297	7,604
413.55	8,369	8,021
413.60	8,441	8,441
413.65	8,513	8,865
413.70	8,585	9,293
413.75	8,658	9,724
413.80	8,731	10,158
413.85	8,804	10,597
413.90	8,878	11,039
413.95	8,952	11,485
414.00	**9,026**	11,934
414.05	9,026	12,385
414.10	9,026	12,837
414.15	9,026	13,288
414.20	9,026	13,739
414.25	9,026	14,191
414.30	9,026	14,642
414.35	9,026	15,093
414.40	9,026	15,544
414.45	9,026	15,996
414.50	9,026	16,447
414.55	9,026	16,898
414.60	9,026	17,350
414.65	9,026	17,801
414.70	9,026	18,252
414.75	9,026	18,704
414.80	9,026	19,155
414.85	9,026	19,606
414.90	9,026	20,057
414.95	9,026	20,509
415.00	9,026	**20,960**

Summary for Pond BR-2C:

Inflow Area = 206,758 sf, 18.78% Impervious, Inflow Depth = 9.41" for 100-yr event
Inflow = 34.34 cfs @ 12.08 hrs, Volume= 162,078 cf
Outflow = 19.87 cfs @ 12.24 hrs, Volume= 162,132 cf, Atten= 42%, Lag= 9.2 min
Primary = 19.87 cfs @ 12.24 hrs, Volume= 162,132 cf
Routed to Pond DB-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 440.68' @ 12.24 hrs Surf.Area= 14,200 sf Storage= 25,580 cf

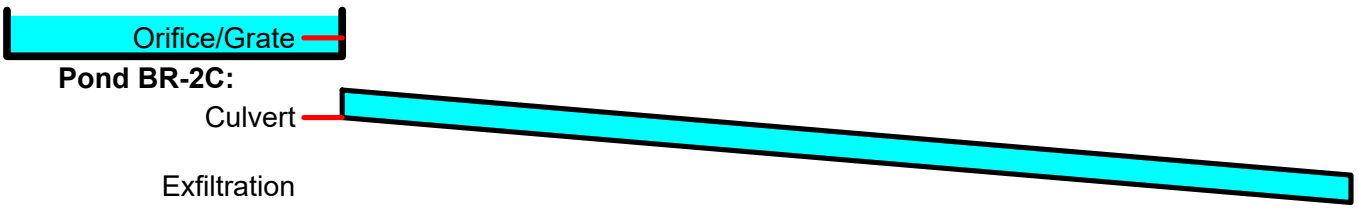
Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 125.6 min (937.8 - 812.2)

Volume	Invert	Avail.Storage	Storage Description
#1	438.50'	30,162 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

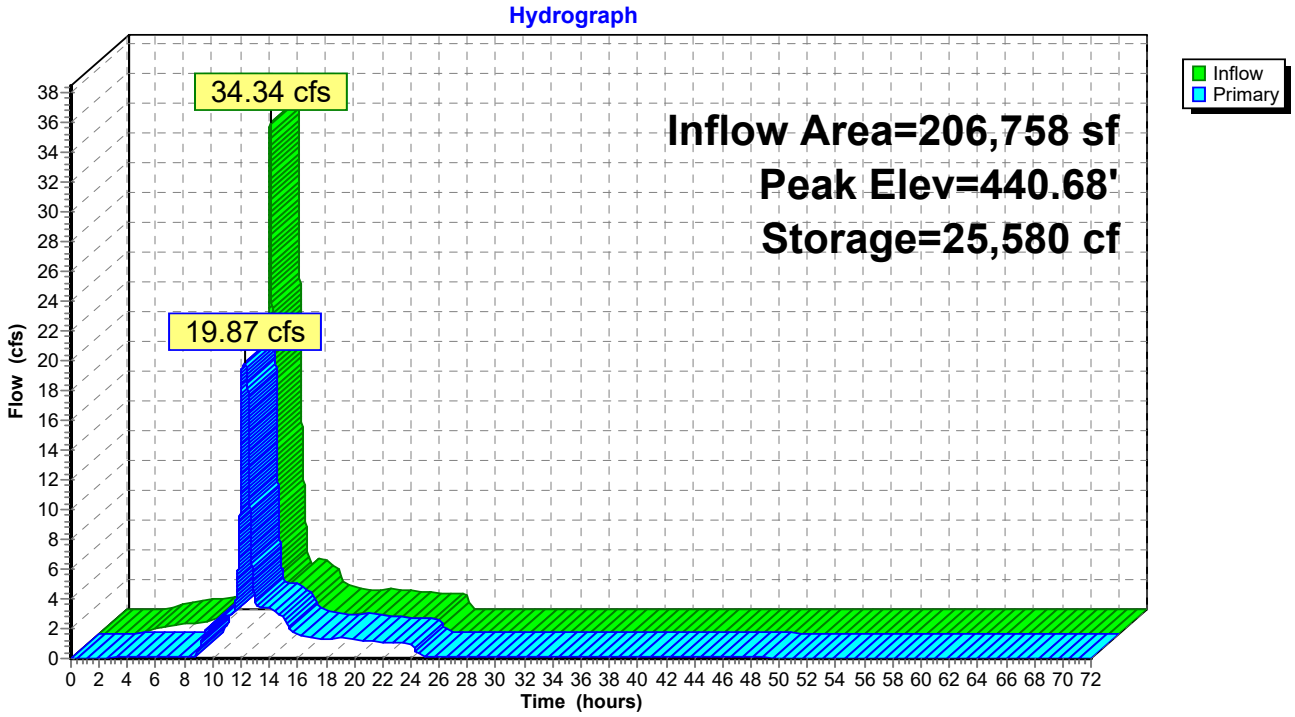
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
438.50	9,155	67.3	0	0	9,155
439.50	11,405	730.2	10,259	10,259	51,227
440.00	12,863	782.2	6,063	16,323	57,496
441.00	14,839	798.0	13,839	30,162	59,634

Device	Routing	Invert	Outlet Devices
#1	Primary	435.15'	**18.0" Round Culvert** L= 206.9' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 435.15' / 430.50' S= 0.0225 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	439.50'	**30.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	438.50'	**0.500 in/hr Exfiltration over Surface area**

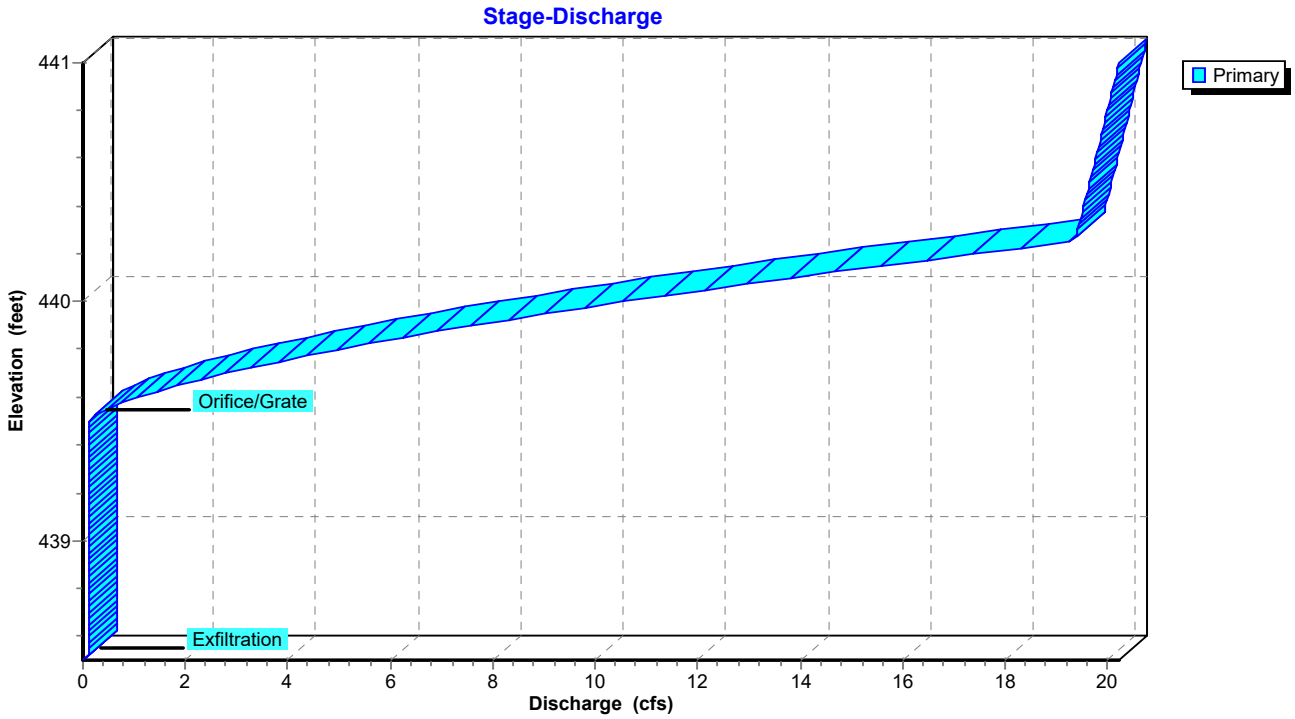
Primary OutFlow Max=19.87 cfs @ 12.24 hrs HW=440.68' TW=397.85' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 19.87 cfs @ 11.24 fps)
└─**2=Orifice/Grate** (Passes < 26.20 cfs potential flow)
└─**3=Exfiltration** (Passes < 0.16 cfs potential flow)



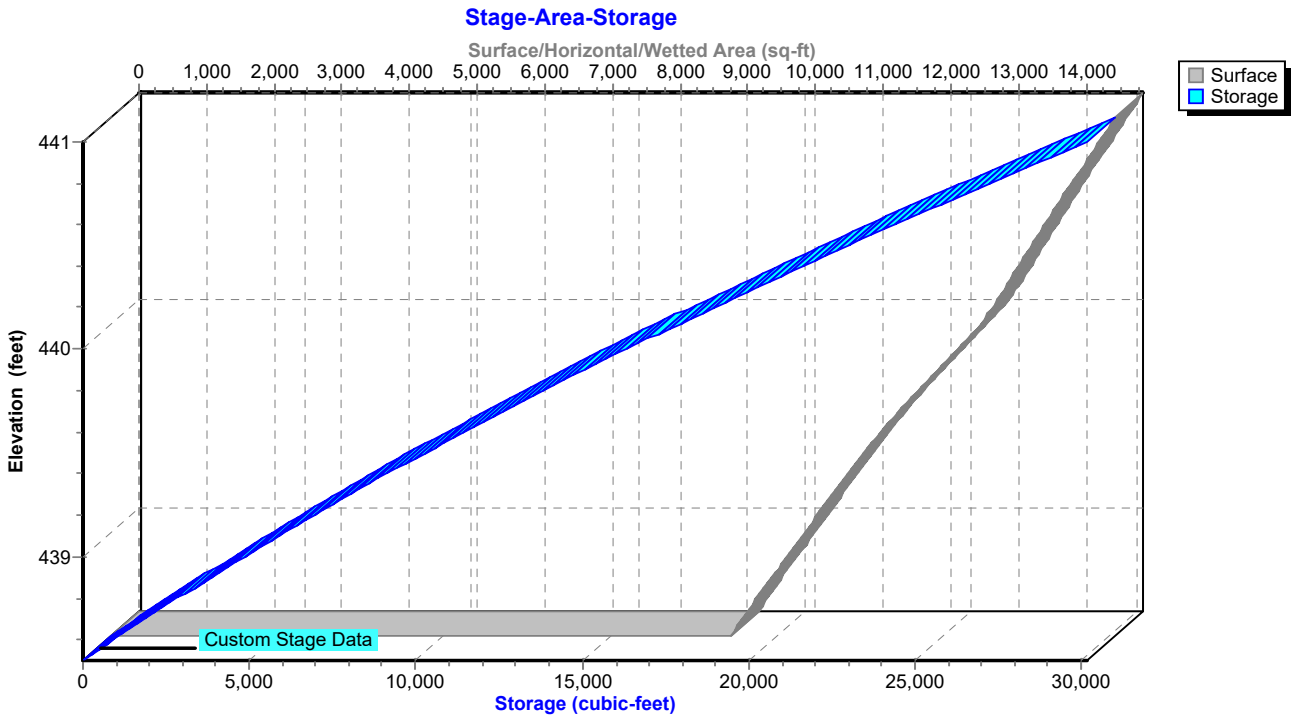
Pond BR-2C:



Pond BR-2C:



Pond BR-2C:


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 11,000 12,000 13,000 14,000
Surface
Storage
441
440
439
Elevation (feet)
Custom Stage Data
0 5,000 10,000 15,000 20,000 25,000 30,000
Storage (cubic-feet)

Hydrograph for Pond BR-2C:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	438.50	0.00
2.50	0.01	0	438.50	0.11
5.00	0.50	1,412	438.65	0.11
7.50	0.83	6,304	439.14	0.12
10.00	**2.47**	**12,316**	**439.68**	**2.32**
12.50	**8.59**	**18,948**	**440.20**	**17.43**
15.00	2.72	12,621	439.70	2.81
17.50	1.26	11,599	439.62	1.29
20.00	1.25	11,580	439.61	1.27
22.50	1.07	11,430	439.60	1.08
25.00	0.00	10,291	439.50	0.14
27.50	0.00	9,115	439.40	0.13
30.00	0.00	7,964	439.29	0.13
32.50	0.00	6,839	439.19	0.12
35.00	0.00	5,739	439.09	0.12
37.50	0.00	4,663	438.98	0.12
40.00	0.00	3,612	438.88	0.12
42.50	0.00	2,585	438.77	0.11
45.00	0.00	1,581	438.67	0.11
47.50	0.00	602	438.57	0.11
50.00	0.00	0	438.50	0.00
52.50	0.00	0	438.50	0.00
55.00	0.00	0	438.50	0.00
57.50	0.00	0	438.50	0.00
60.00	0.00	0	438.50	0.00
62.50	0.00	0	438.50	0.00
65.00	0.00	0	438.50	0.00
67.50	0.00	0	438.50	0.00
70.00	0.00	0	438.50	0.00

Stage-Discharge for Pond BR-2C:

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
438.50	0.00	439.56	0.57	440.62	19.80
438.52	0.11	439.58	0.80	440.64	19.82
438.54	0.11	439.60	1.07	440.66	19.84
438.56	0.11	439.62	1.36	440.68	19.86
438.58	0.11	439.64	1.68	440.70	19.89
438.60	0.11	439.66	2.02	440.72	19.91
438.62	0.11	439.68	2.39	440.74	19.93
438.64	0.11	439.70	2.77	440.76	19.96
438.66	0.11	439.72	3.18	440.78	19.98
438.68	0.11	439.74	3.60	440.80	20.00
438.70	0.11	439.76	4.04	440.82	20.02
438.72	0.11	439.78	4.50	440.84	20.05
438.74	0.11	439.80	4.98	440.86	20.07
438.76	0.11	439.82	5.47	440.88	20.09
438.78	0.11	439.84	5.98	440.90	20.11
438.80	0.11	439.86	6.50	440.92	20.14
438.82	0.11	439.88	7.04	440.94	20.16
438.84	0.11	439.90	7.59	440.96	20.18
438.86	0.12	439.92	8.16	440.98	20.20
438.88	0.12	439.94	8.74	441.00	**20.23**
438.90	0.12	439.96	9.33		
438.92	0.12	439.98	9.94		
438.94	0.12	440.00	10.55		
438.96	0.12	440.02	11.18		
438.98	0.12	440.04	11.83		
439.00	0.12	440.06	12.48		
439.02	0.12	440.08	13.15		
439.04	0.12	440.10	13.83		
439.06	0.12	440.12	14.52		
439.08	0.12	440.14	15.22		
439.10	0.12	440.16	15.93		
439.12	0.12	440.18	16.66		
439.14	0.12	440.20	17.39		
439.16	0.12	440.22	18.13		
439.18	0.12	440.24	18.89		
439.20	0.12	440.26	19.38		
439.22	0.12	440.28	19.40		
439.24	0.12	440.30	19.42		
439.26	0.13	440.32	19.45		
439.28	0.13	440.34	19.47		
439.30	0.13	440.36	19.49		
439.32	0.13	440.38	19.52		
439.34	0.13	440.40	19.54		
439.36	0.13	440.42	19.56		
439.38	0.13	440.44	19.59		
439.40	0.13	440.46	19.61		
439.42	0.13	440.48	19.63		
439.44	0.13	440.50	19.66		
439.46	0.13	440.52	19.68		
439.48	0.13	440.54	19.70		
439.50	0.13	440.56	19.73		
439.52	0.22	440.58	19.75		
439.54	0.37	440.60	19.77		

Stage-Area-Storage for Pond BR-2C:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
438.50	9,155	0
438.55	9,262	460
438.60	9,369	926
438.65	9,477	1,397
438.70	9,585	1,874
438.75	9,694	2,356
438.80	9,804	2,843
438.85	9,914	3,336
438.90	10,025	3,835
438.95	10,137	4,339
439.00	10,249	4,848
439.05	10,362	5,364
439.10	10,475	5,885
439.15	10,589	6,411
439.20	10,704	6,944
439.25	10,819	7,482
439.30	10,935	8,026
439.35	11,052	8,575
439.40	11,169	9,131
439.45	11,287	9,692
439.50	11,405	10,259
439.55	11,547	10,833
439.60	11,690	11,414
439.65	11,833	12,002
439.70	11,978	12,597
439.75	12,123	13,200
439.80	12,269	13,810
439.85	12,416	14,427
439.90	12,564	15,051
439.95	12,713	15,683
440.00	12,863	16,323
440.05	12,958	16,968
440.10	13,054	17,619
440.15	13,150	18,274
440.20	13,247	18,934
440.25	13,344	19,598
440.30	13,441	20,268
440.35	13,539	20,943
440.40	13,636	21,622
440.45	13,735	22,306
440.50	13,833	22,995
440.55	13,932	23,690
440.60	14,032	24,389
440.65	14,131	25,093
440.70	14,231	25,802
440.75	14,332	26,516
440.80	14,433	27,235
440.85	14,534	27,959
440.90	14,635	28,688
440.95	14,737	29,423
441.00	**14,839**	**30,162**

Summary for Pond BR-2D:

Inflow Area = 131,825 sf, 51.04% Impervious, Inflow Depth = 10.34" for 100-yr event
Inflow = 28.09 cfs @ 12.03 hrs, Volume= 113,636 cf
Outflow = 25.01 cfs @ 12.06 hrs, Volume= 113,664 cf, Atten= 11%, Lag= 1.7 min
Primary = 21.50 cfs @ 12.06 hrs, Volume= 112,316 cf
Routed to Pond DB-2 :
Secondary = 3.52 cfs @ 12.06 hrs, Volume= 1,348 cf
Routed to Reach DP-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 414.17' @ 12.06 hrs Surf.Area= 9,635 sf Storage= 13,792 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 132.7 min (918.6 - 785.8)

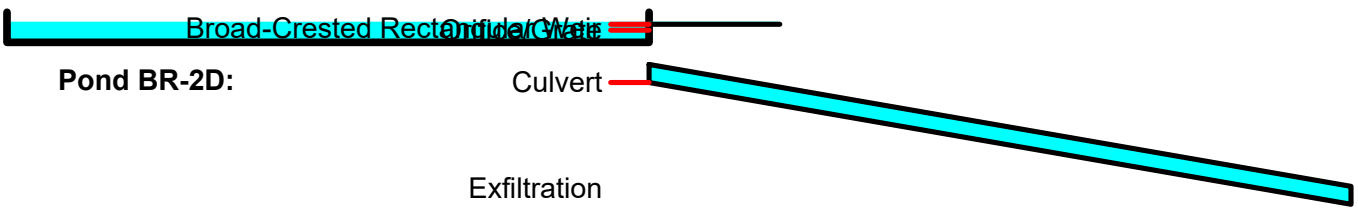
Volume	Invert	Avail.Storage	Storage Description
#1	412.50'	22,336 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
412.50	6,940	530.1	0	0	6,940
414.00	9,390	558.4	12,201	12,201	9,524
415.00	10,899	576.2	10,135	22,336	11,228

Device	Routing	Invert	Outlet Devices
#1	Primary	409.15'	**18.0" Round Culvert** L= 64.4' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 409.15' / 399.00' S= 0.1576 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	413.50'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	412.50'	**0.500 in/hr Exfiltration over Surface area**
#4	Secondary	414.00'	**20.0' long x 12.0' 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) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

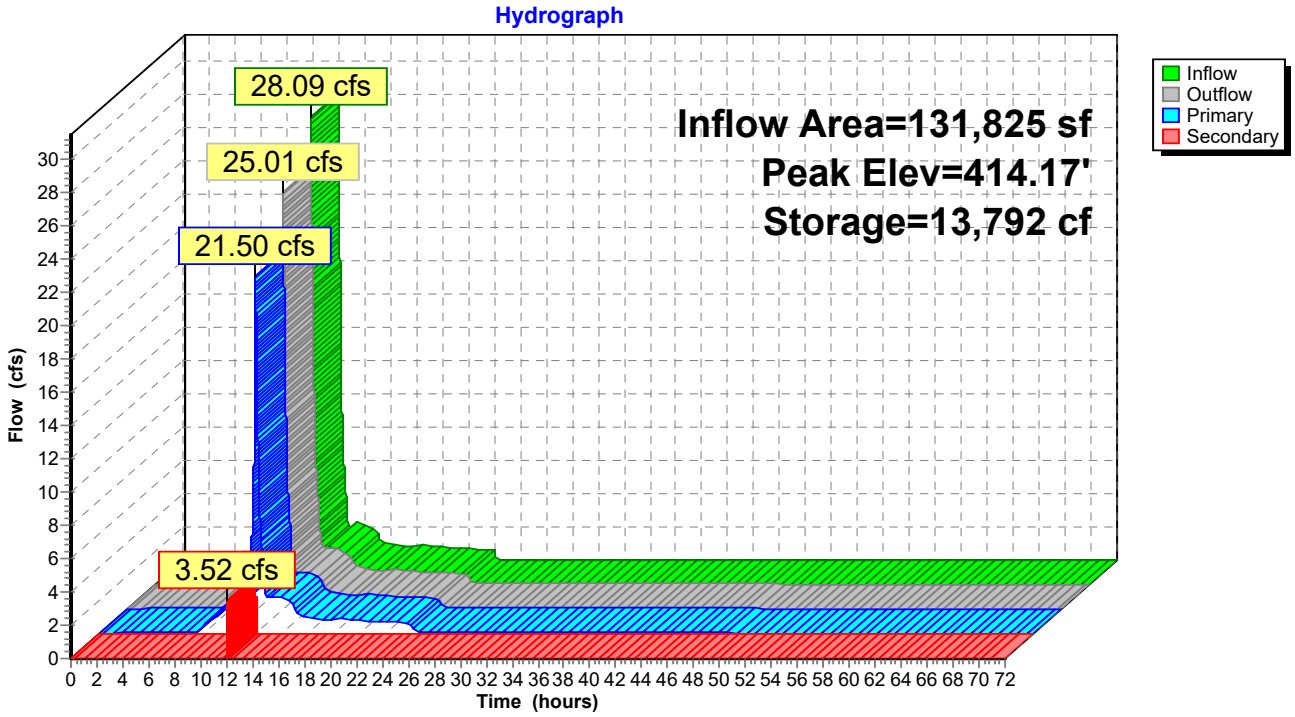
Primary OutFlow Max=21.50 cfs @ 12.06 hrs HW=414.17' TW=397.05' (Dynamic Tailwater)
↑ **1=Culvert** (Passes 21.50 cfs of 21.97 cfs potential flow)
↑ **2=Orifice/Grate** (Weir Controls 21.39 cfs @ 2.67 fps)
3=Exfiltration (Exfiltration Controls 0.11 cfs)

Secondary OutFlow Max=3.52 cfs @ 12.06 hrs HW=414.17' TW=0.00' (Dynamic Tailwater)
↑ **4=Broad-Crested Rectangular Weir** (Weir Controls 3.52 cfs @ 1.05 fps)

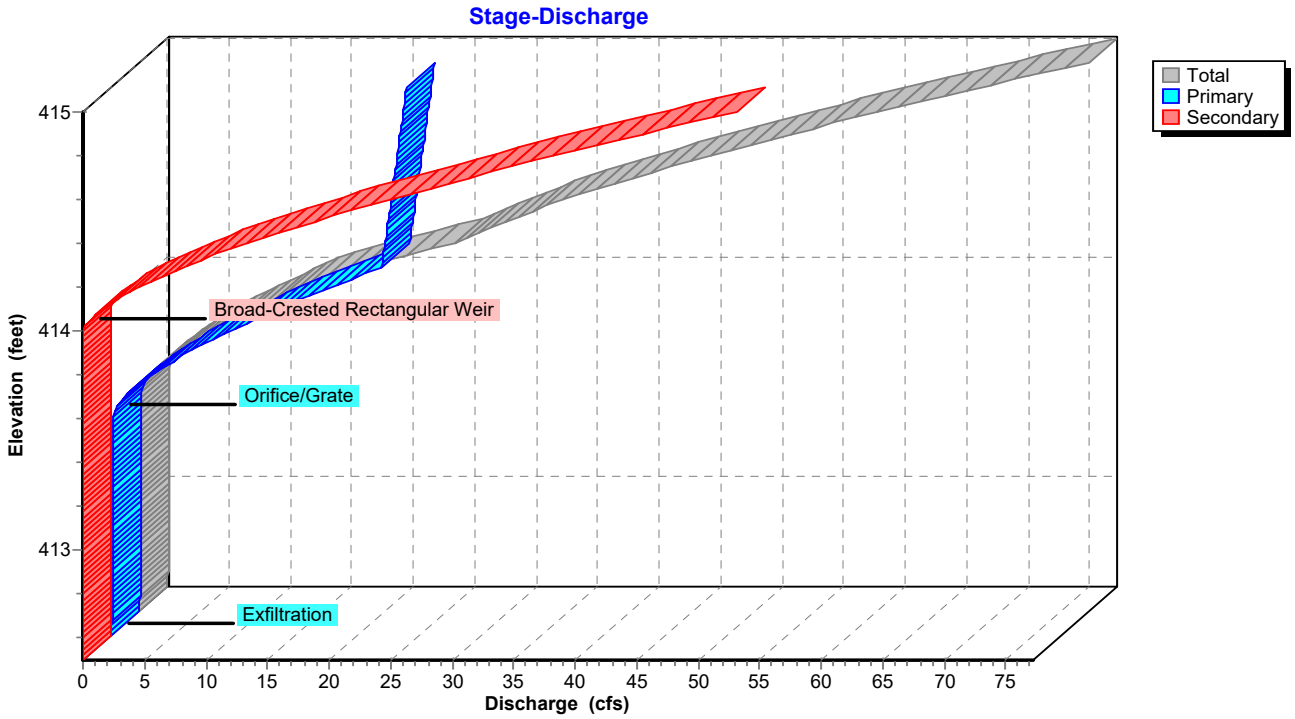


Pond BR-2D:

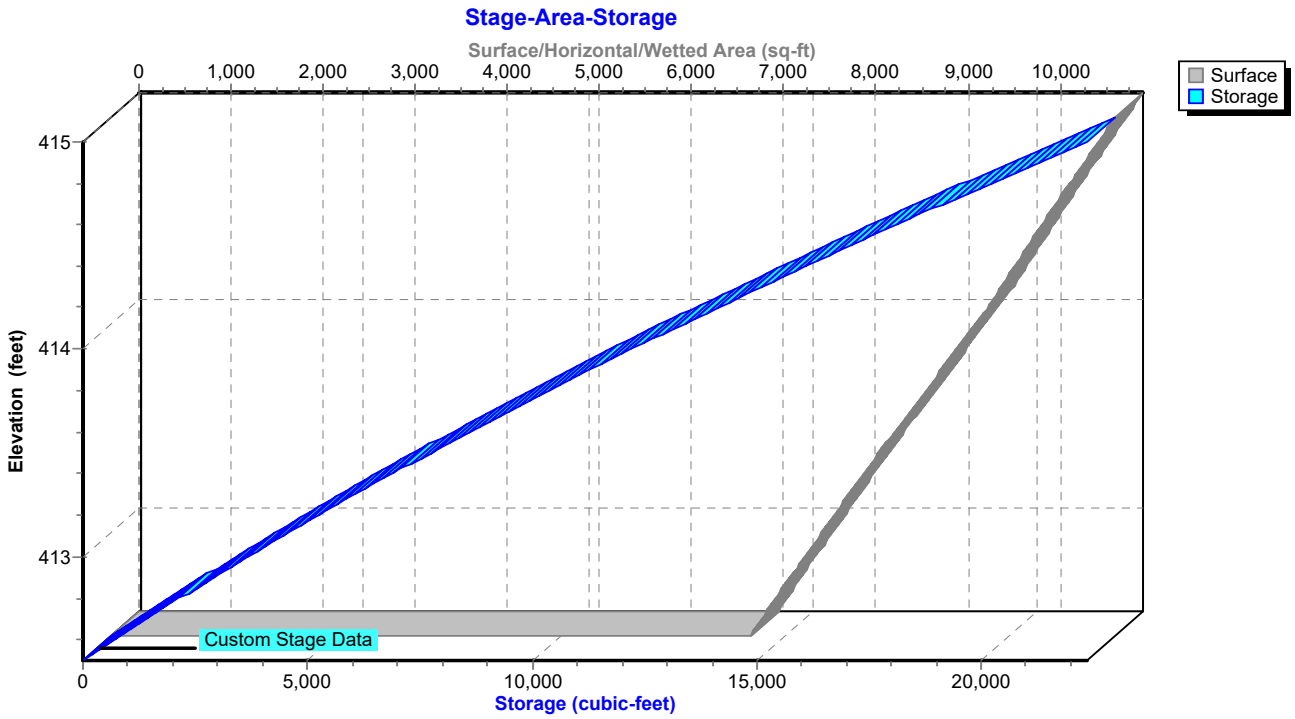
Pond BR-2D:



Pond BR-2D:



Pond BR-2D:


Stage-Area-Storage
Surface/Horizontal/Wetted Area (sq-ft)
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
Surface
Storage
415
414
413
Elevation (feet)
Custom Stage Data
0
5,000
10,000
15,000
20,000
Storage (cubic-feet)

Hydrograph for Pond BR-2D:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	412.50	0.00	0.00	0.00
2.50	0.17	88	412.51	0.08	0.08	0.00
5.00	0.52	2,489	412.85	0.09	0.09	0.00
7.50	0.70	7,057	413.42	0.10	0.10	0.00
10.00	**1.88**	**8,793**	**413.62**	**1.81**	**1.81**	**0.00**
12.50	**5.06**	**10,167**	**413.78**	**5.88**	**5.88**	**0.00**
15.00	1.77	8,790	413.62	1.81	1.81	0.00
17.50	0.82	8,328	413.57	0.83	0.83	0.00
20.00	0.81	8,321	413.57	0.82	0.82	0.00
22.50	0.69	8,252	413.56	0.70	0.70	0.00
25.00	0.00	7,607	413.49	0.10	0.10	0.00
27.50	0.00	6,730	413.38	0.10	0.10	0.00
30.00	0.00	5,870	413.28	0.09	0.09	0.00
32.50	0.00	5,029	413.17	0.09	0.09	0.00
35.00	0.00	4,205	413.07	0.09	0.09	0.00
37.50	0.00	3,398	412.97	0.09	0.09	0.00
40.00	0.00	2,609	412.86	0.09	0.09	0.00
42.50	0.00	1,836	412.76	0.08	0.08	0.00
45.00	0.00	1,081	412.65	0.08	0.08	0.00
47.50	0.00	342	412.55	0.08	0.08	0.00
50.00	0.00	0	412.50	0.00	0.00	0.00
52.50	0.00	0	412.50	0.00	0.00	0.00
55.00	0.00	0	412.50	0.00	0.00	0.00
57.50	0.00	0	412.50	0.00	0.00	0.00
60.00	0.00	0	412.50	0.00	0.00	0.00
62.50	0.00	0	412.50	0.00	0.00	0.00
65.00	0.00	0	412.50	0.00	0.00	0.00
67.50	0.00	0	412.50	0.00	0.00	0.00
70.00	0.00	0	412.50	0.00	0.00	0.00

Stage-Discharge for Pond BR-2D:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
412.50	0.00	0.00	0.00
412.55	0.08	0.08	0.00
412.60	0.08	0.08	0.00
412.65	0.08	0.08	0.00
412.70	0.08	0.08	0.00
412.75	0.08	0.08	0.00
412.80	0.09	0.09	0.00
412.85	0.09	0.09	0.00
412.90	0.09	0.09	0.00
412.95	0.09	0.09	0.00
413.00	0.09	0.09	0.00
413.05	0.09	0.09	0.00
413.10	0.09	0.09	0.00
413.15	0.09	0.09	0.00
413.20	0.09	0.09	0.00
413.25	0.09	0.09	0.00
413.30	0.09	0.09	0.00
413.35	0.10	0.10	0.00
413.40	0.10	0.10	0.00
413.45	0.10	0.10	0.00
413.50	0.10	0.10	0.00
413.55	0.54	0.54	0.00
413.60	1.34	1.34	0.00
413.65	2.38	2.38	0.00
413.70	3.61	3.61	0.00
413.75	5.01	5.01	0.00
413.80	6.55	6.55	0.00
413.85	8.23	8.23	0.00
413.90	10.03	10.03	0.00
413.95	11.95	11.95	0.00
414.00	13.98	13.98	0.00
414.05	16.69	16.12	0.57
414.10	19.97	18.35	1.63
414.15	23.66	20.67	2.99
414.20	26.65	22.06	4.60
414.25	28.64	22.18	6.46
414.30	30.84	22.31	8.53
414.35	33.23	22.44	10.80
414.40	35.82	22.56	13.26
414.45	38.63	22.69	15.94
414.50	41.62	22.81	18.81
414.55	44.80	22.94	21.86
414.60	48.16	23.06	25.10
414.65	51.40	23.18	28.22
414.70	54.75	23.30	31.45
414.75	58.21	23.42	34.78
414.80	61.75	23.54	38.21
414.85	65.47	23.66	41.81
414.90	69.29	23.78	45.51
414.95	73.21	23.90	49.31
415.00	**77.22**	**24.02**	**53.20**

Stage-Area-Storage for Pond BR-2D:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
412.50	6,940	0
412.55	7,016	349
412.60	7,092	702
412.65	7,168	1,058
412.70	7,245	1,418
412.75	7,323	1,783
412.80	7,400	2,151
412.85	7,479	2,523
412.90	7,557	2,899
412.95	7,636	3,278
413.00	7,716	3,662
413.05	7,795	4,050
413.10	7,876	4,442
413.15	7,956	4,838
413.20	8,037	5,237
413.25	8,119	5,641
413.30	8,201	6,049
413.35	8,283	6,461
413.40	8,366	6,878
413.45	8,449	7,298
413.50	8,532	7,722
413.55	8,616	8,151
413.60	8,701	8,584
413.65	8,785	9,021
413.70	8,870	9,463
413.75	8,956	9,908
413.80	9,042	10,358
413.85	9,128	10,812
413.90	9,215	11,271
413.95	9,302	11,734
414.00	9,390	12,201
414.05	9,463	12,673
414.10	9,536	13,148
414.15	9,609	13,626
414.20	9,683	14,108
414.25	9,757	14,594
414.30	9,831	15,084
414.35	9,905	15,578
414.40	9,980	16,075
414.45	10,055	16,576
414.50	10,130	17,080
414.55	10,206	17,589
414.60	10,282	18,101
414.65	10,358	18,617
414.70	10,434	19,137
414.75	10,511	19,660
414.80	10,588	20,188
414.85	10,665	20,719
414.90	10,743	21,254
414.95	10,821	21,793
415.00	**10,899**	**22,336**

Summary for Pond DB-1:

Inflow = 77.49 cfs @ 12.17 hrs, Volume= 406,578 cf
Outflow = 38.16 cfs @ 12.46 hrs, Volume= 406,536 cf, Atten= 51%, Lag= 17.5 min
Primary = 38.16 cfs @ 12.46 hrs, Volume= 406,536 cf
Routed to Reach DP-1 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach DP-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 404.95' @ 12.46 hrs Surf.Area= 19,430 sf Storage= 74,069 cf

Plug-Flow detention time= 27.2 min calculated for 406,533 cf (100% of inflow)
Center-of-Mass det. time= 27.0 min (887.3 - 860.3)

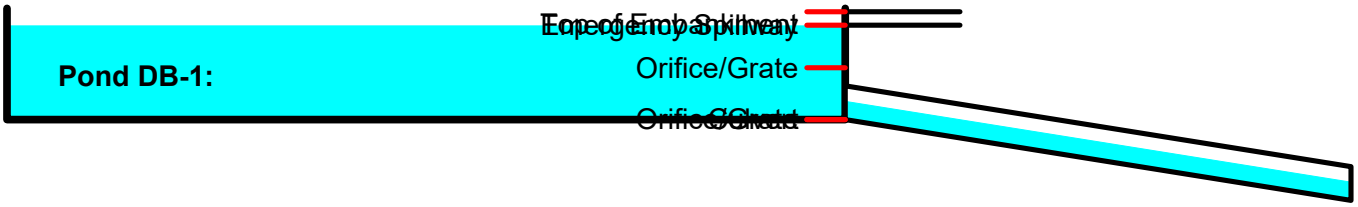
Volume	Invert	Avail.Storage	Storage Description
#1	398.00'	102,303 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
398.00	4,562	329.7	0	0	4,562
400.00	7,186	564.6	11,649	11,649	21,303
402.00	11,122	773.0	18,165	29,814	43,526
404.00	16,322	1,037.5	27,278	57,093	81,677
406.00	23,173	1,283.2	39,295	96,388	127,111
406.25	24,149	1,287.5	5,915	102,303	128,047

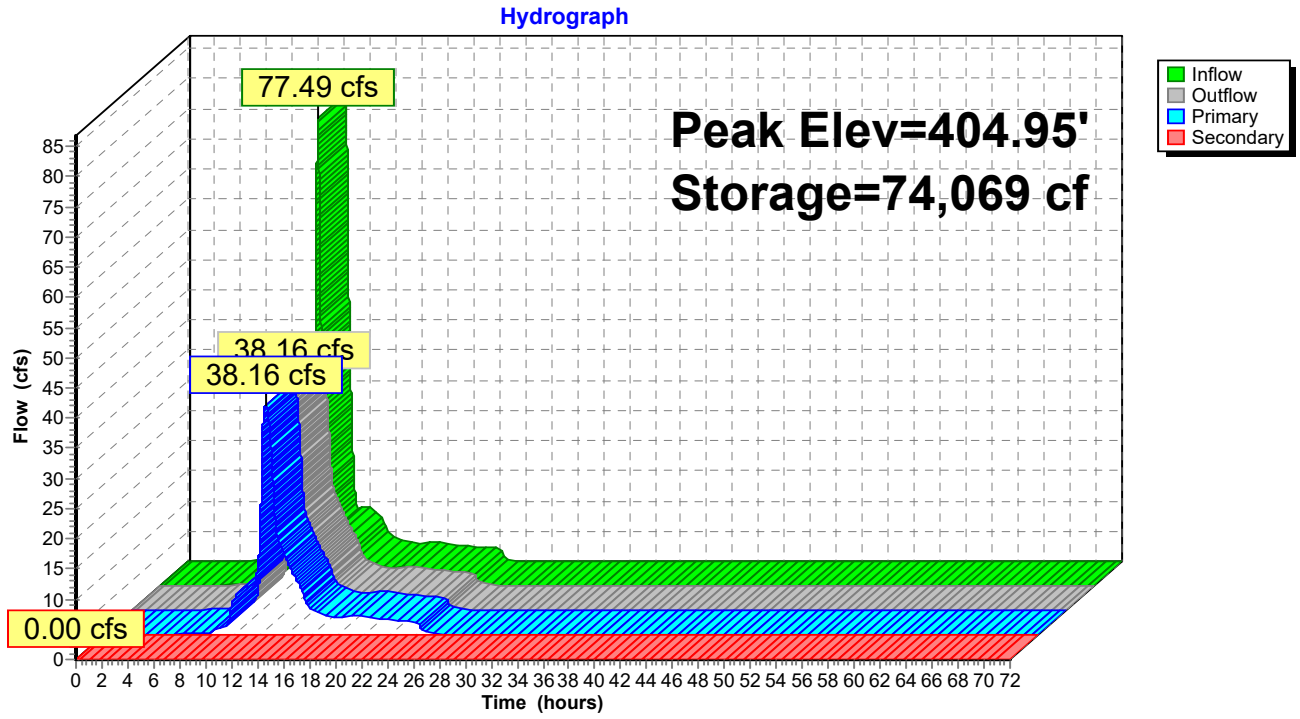
Device	Routing	Invert	Outlet Devices
#1	Primary	398.00'	**30.0" Round Culvert** L= 52.9' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 398.00' / 392.00' S= 0.1134 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	398.00'	**18.5" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	401.85'	**20.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	405.00'	**20.0' long + 7.0 '/' SideZ x 12.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#5	Secondary	406.00'	**645.3' long x 12.0' breadth Top of Embankment** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=38.16 cfs @ 12.46 hrs HW=404.95' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 38.16 cfs of 70.54 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 22.34 cfs @ 11.97 fps)
  - **3=Orifice/Grate** (Orifice Controls 15.82 cfs @ 7.25 fps)

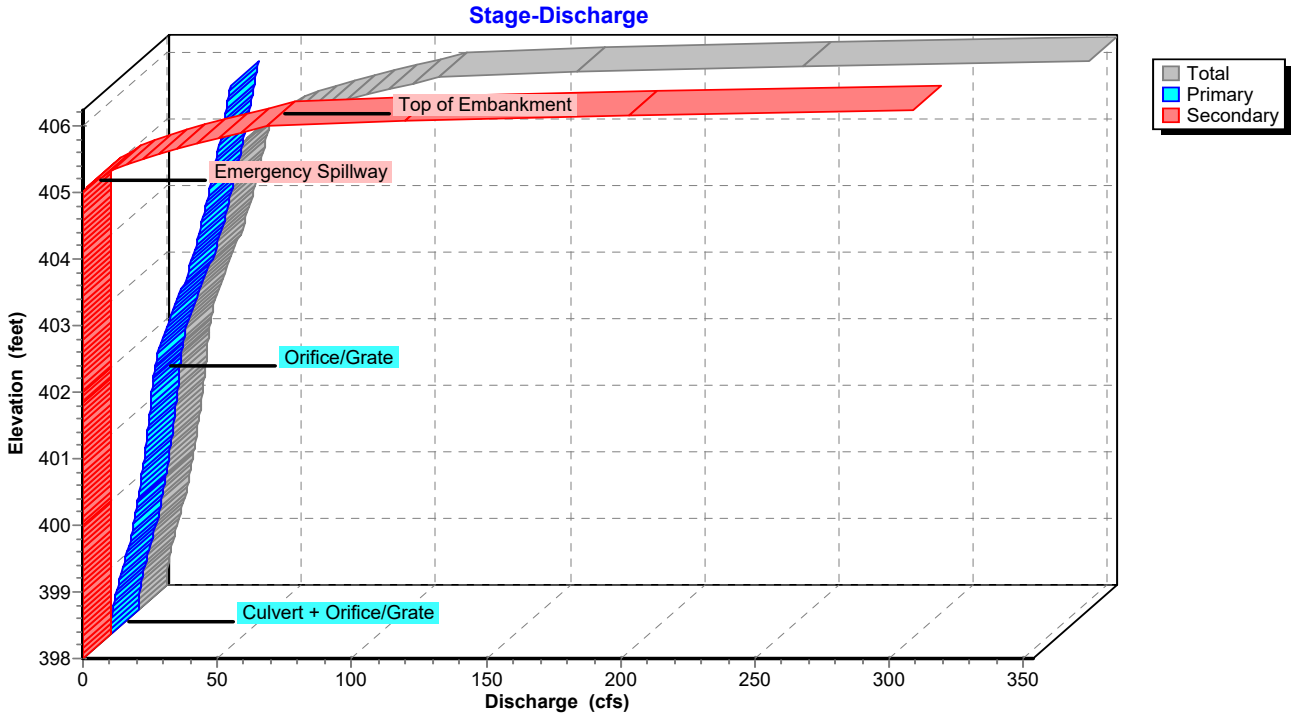
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=398.00' TW=0.00' (Dynamic Tailwater)
- **4=Emergency Spillway** (Controls 0.00 cfs)
- **5=Top of Embankment** (Controls 0.00 cfs)


Pond DB-1:
Orifice/Grate

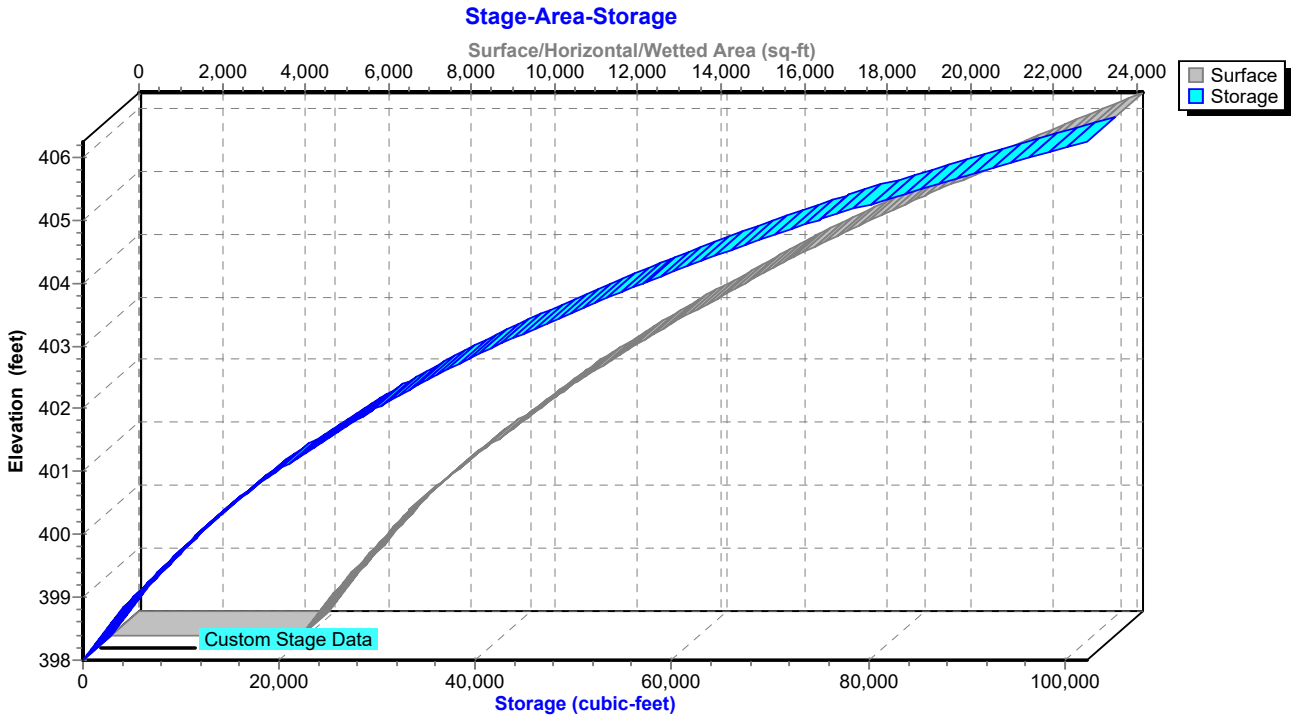
Pond DB-1:


Hydrograph
77.49 cfs
38.16 cfs
38.16 cfs
0.00 cfs
Peak Elev=404.95'
Storage=74,069 cf
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Pond DB-1:



Pond DB-1:



Hydrograph for Pond DB-1:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	398.00	0.00	0.00	**0.00**
2.50	0.08	60	398.01	0.00	0.00	0.00
5.00	0.16	647	398.14	0.11	0.11	0.00
7.50	0.24	932	398.20	0.21	0.21	0.00
10.00	**6.88**	**6,314**	**399.19**	**5.76**	**5.76**	0.00
12.50	**33.25**	**73,672**	**404.93**	**38.05**	**38.05**	0.00
15.00	7.25	9,291	399.66	8.48	8.48	0.00
17.50	2.99	4,140	398.82	3.10	3.10	0.00
20.00	2.93	4,046	398.80	2.99	2.99	0.00
22.50	2.41	3,578	398.72	2.45	2.45	0.00
25.00	0.10	1,289	398.27	0.40	0.40	0.00
27.50	0.09	641	398.14	0.10	0.10	0.00
30.00	0.09	607	398.13	0.09	0.09	0.00
32.50	0.09	600	398.13	0.09	0.09	0.00
35.00	0.09	594	398.13	0.09	0.09	0.00
37.50	0.09	588	398.13	0.09	0.09	0.00
40.00	0.09	583	398.13	0.09	0.09	0.00
42.50	0.08	577	398.12	0.08	0.08	0.00
45.00	0.08	571	398.12	0.08	0.08	0.00
47.50	0.08	566	398.12	0.08	0.08	0.00
50.00	0.00	359	398.08	0.03	0.03	0.00
52.50	0.00	194	398.04	0.01	0.01	0.00
55.00	0.00	133	398.03	0.00	0.00	0.00
57.50	0.00	101	398.02	0.00	0.00	0.00
60.00	0.00	81	398.02	0.00	0.00	0.00
62.50	0.00	68	398.01	0.00	0.00	0.00
65.00	0.00	59	398.01	0.00	0.00	0.00
67.50	0.00	52	398.01	0.00	0.00	0.00
70.00	0.00	46	398.01	0.00	0.00	0.00

Stage-Discharge for Pond DB-1:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
398.00	0.00	0.00	0.00
398.10	0.06	0.06	0.00
398.20	0.22	0.22	0.00
398.30	0.48	0.48	0.00
398.40	0.83	0.83	0.00
398.50	1.26	1.26	0.00
398.60	1.77	1.77	0.00
398.70	2.35	2.35	0.00
398.80	2.98	2.98	0.00
398.90	3.65	3.65	0.00
399.00	4.36	4.36	0.00
399.10	5.09	5.09	0.00
399.20	5.81	5.81	0.00
399.30	6.52	6.52	0.00
399.40	7.17	7.17	0.00
399.50	7.73	7.73	0.00
399.60	8.18	8.18	0.00
399.70	8.66	8.66	0.00
399.80	9.12	9.12	0.00
399.90	9.55	9.55	0.00
400.00	9.96	9.96	0.00
400.10	10.36	10.36	0.00
400.20	10.75	10.75	0.00
400.30	11.11	11.11	0.00
400.40	11.47	11.47	0.00
400.50	11.82	11.82	0.00
400.60	12.16	12.16	0.00
400.70	12.48	12.48	0.00
400.80	12.80	12.80	0.00
400.90	13.12	13.12	0.00
401.00	13.42	13.42	0.00
401.10	13.72	13.72	0.00
401.20	14.01	14.01	0.00
401.30	14.29	14.29	0.00
401.40	14.57	14.57	0.00
401.50	14.85	14.85	0.00
401.60	15.12	15.12	0.00
401.70	15.38	15.38	0.00
401.80	15.64	15.64	0.00
401.90	15.91	15.91	0.00
402.00	16.28	16.28	0.00
402.10	16.75	16.75	0.00
402.20	17.31	17.31	0.00
402.30	17.97	17.97	0.00
402.40	18.71	18.71	0.00
402.50	19.52	19.52	0.00
402.60	20.40	20.40	0.00
402.70	21.33	21.33	0.00
402.80	22.30	22.30	0.00
402.90	23.32	23.32	0.00
403.00	24.35	24.35	0.00
403.10	25.38	25.38	0.00
403.20	26.40	26.40	0.00
403.30	27.39	27.39	0.00
403.40	28.30	28.30	0.00
403.50	29.07	29.07	0.00
403.60	29.81	29.81	0.00
403.70	30.55	30.55	0.00
403.80	31.26	31.26	0.00
403.90	31.94	31.94	0.00
404.00	32.61	32.61	0.00
404.10	33.25	33.25	0.00
404.20	33.88	33.88	0.00
404.30	34.49	34.49	0.00
404.40	35.09	35.09	0.00
404.50	35.67	35.67	0.00
404.60	36.24	36.24	0.00
404.70	36.80	36.80	0.00
404.80	37.35	37.35	0.00
404.90	37.89	37.89	0.00
405.00	38.42	38.42	0.00
405.10	40.61	38.94	1.67
405.20	44.31	39.45	4.85
405.30	49.20	39.96	9.24
405.40	55.20	40.46	14.74
405.50	62.39	40.95	21.44
405.60	70.74	41.43	29.31
405.70	79.52	41.90	37.61
405.80	89.14	42.37	46.77
405.90	99.82	42.84	56.98
406.00	111.39	43.30	68.10
406.10	176.62	43.75	132.87
406.20	**286.31**	**44.20**	**242.12**

Stage-Area-Storage for Pond DB-1:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
398.00	4,562	0
398.10	4,679	462
398.20	4,798	936
398.30	4,918	1,422
398.40	5,039	1,919
398.50	5,162	2,430
398.60	5,287	2,952
398.70	5,413	3,487
398.80	5,540	4,035
398.90	5,669	4,595
399.00	5,800	5,169
399.10	5,932	5,755
399.20	6,065	6,355
399.30	6,200	6,968
399.40	6,336	7,595
399.50	6,474	8,236
399.60	6,614	8,890
399.70	6,755	9,558
399.80	6,897	10,241
399.90	7,041	10,938
400.00	7,186	11,649
400.10	7,362	12,376
400.20	7,541	13,122
400.30	7,722	13,885
400.40	7,905	14,666
400.50	8,090	15,466
400.60	8,277	16,284
400.70	8,466	17,121
400.80	8,658	17,977
400.90	8,851	18,853
401.00	9,047	19,748
401.10	9,245	20,662
401.20	9,445	21,597
401.30	9,647	22,551
401.40	9,851	23,526
401.50	10,058	24,522
401.60	10,266	25,538
401.70	10,477	26,575
401.80	10,690	27,633
401.90	10,905	28,713
402.00	11,122	29,814
402.10	11,358	30,938
402.20	11,597	32,086
402.30	11,839	33,258
402.40	12,082	34,454
402.50	12,329	35,674
402.60	12,578	36,920
402.70	12,829	38,190
402.80	13,083	39,486
402.90	13,339	40,807
403.00	13,598	42,154
403.10	13,859	43,526
403.20	14,123	44,925
403.30	14,389	46,351
403.40	14,658	47,803
403.50	14,929	49,283
403.60	15,202	50,789
403.70	15,479	52,323
403.80	15,757	53,885
403.90	16,038	55,475
404.00	16,322	57,093
404.10	16,636	58,741
404.20	16,953	60,420
404.30	17,273	62,131
404.40	17,596	63,875
404.50	17,922	65,651
404.60	18,252	67,459
404.70	18,584	69,301
404.80	18,919	71,176
404.90	19,257	73,085
405.00	19,598	75,028
405.10	19,942	77,005
405.20	20,289	79,016
405.30	20,639	81,062
405.40	20,992	83,144
405.50	21,348	85,261
405.60	21,707	87,414
405.70	22,069	89,602
405.80	22,434	91,828
405.90	22,802	94,089
406.00	23,173	96,388
406.10	23,561	98,725
406.20	**23,952**	**101,100**

Summary for Pond DB-2:

Inflow = 84.62 cfs @ 12.05 hrs, Volume= 379,393 cf
Outflow = 36.76 cfs @ 12.33 hrs, Volume= 379,131 cf, Atten= 57%, Lag= 16.9 min
Primary = 36.76 cfs @ 12.33 hrs, Volume= 379,131 cf
Routed to Reach DP-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach DP-2 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 397.91' @ 12.33 hrs Surf.Area= 20,640 sf Storage= 63,427 cf

Plug-Flow detention time= 51.5 min calculated for 379,131 cf (100% of inflow)
Center-of-Mass det. time= 50.1 min (948.0 - 897.9)

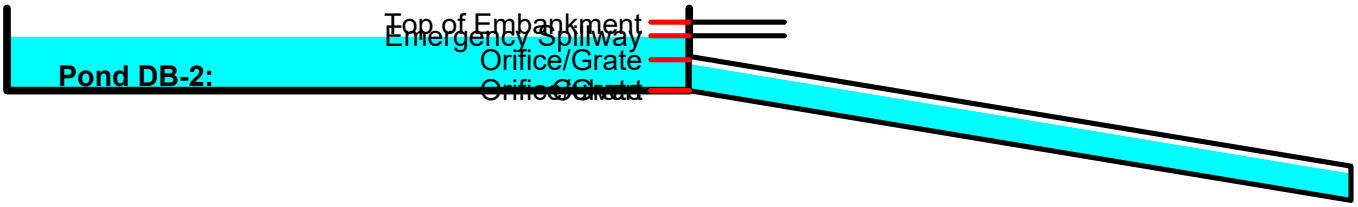
Volume	Invert	Avail.Storage	Storage Description
#1	394.00'	110,650 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
394.00	12,058	689.7	0	0	12,058
396.00	16,336	730.5	28,286	28,286	16,883
398.00	20,868	770.9	37,112	65,398	21,938
399.00	23,219	790.6	22,033	87,431	24,507
400.00	23,219	790.6	23,219	110,650	25,298

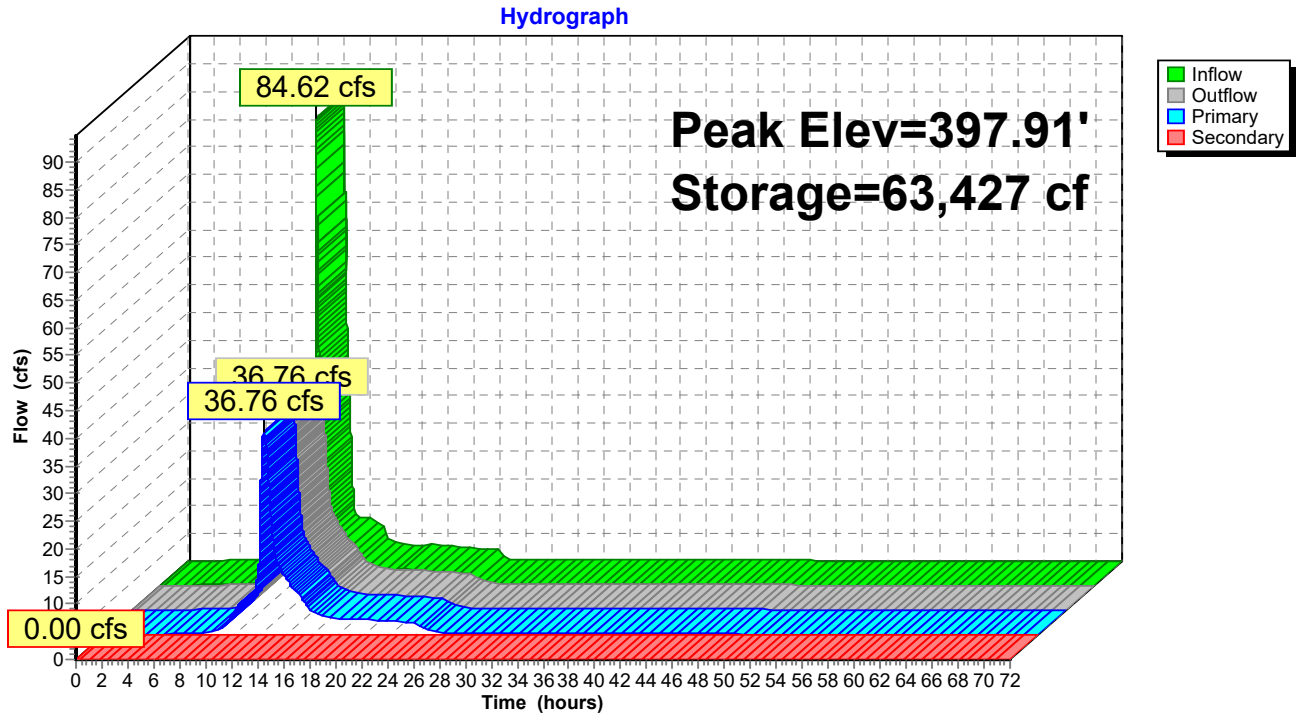
Device	Routing	Invert	Outlet Devices
#1	Primary	394.00'	**30.0" Round Culvert** L= 83.4' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 394.00' / 386.00' S= 0.0959 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	394.00'	**21.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	396.25'	**30.0" W x 18.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	398.00'	**20.0' long + 3.0 '/' SideZ x 12.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#5	Secondary	399.00'	**342.7' long x 12.0' breadth Top of Embankment** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=36.76 cfs @ 12.33 hrs HW=397.91' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 36.76 cfs of 48.14 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 20.16 cfs @ 8.38 fps)
  - **3=Orifice/Grate** (Orifice Controls 16.60 cfs @ 4.43 fps)

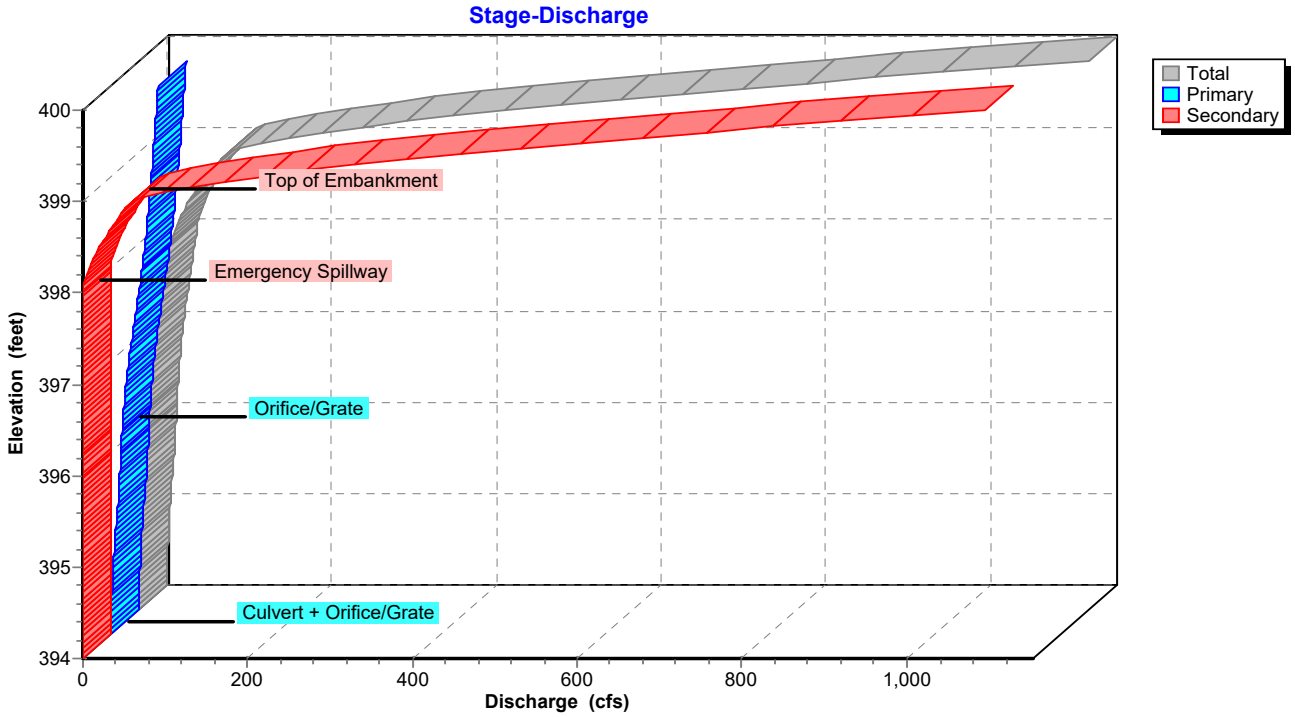
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=394.00' TW=0.00' (Dynamic Tailwater)
- **4=Emergency Spillway** (Controls 0.00 cfs)
- **5=Top of Embankment** (Controls 0.00 cfs)


Pond DB-2:
Top of Embankment
Emergency Spillway
Orifice/Grate

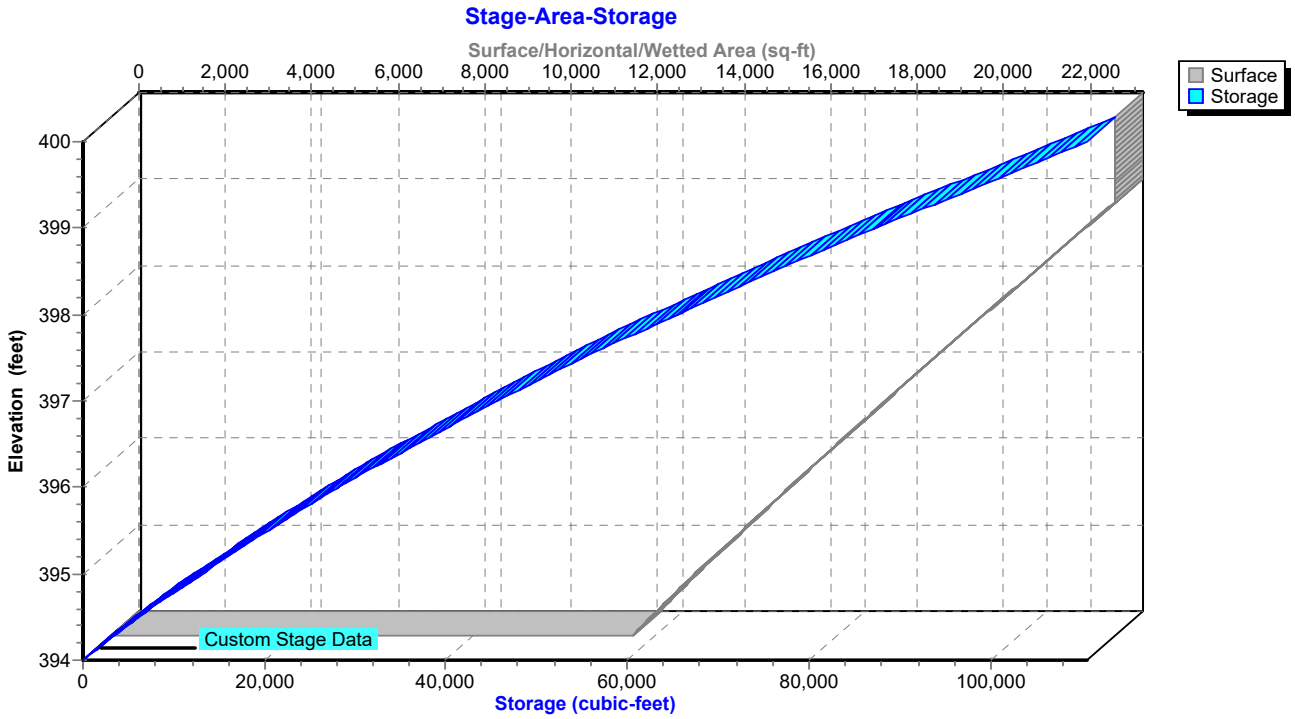
Pond DB-2:


Hydrograph
84.62 cfs
36.76 cfs
36.76 cfs
0.00 cfs
Peak Elev=397.91'
Storage=63,427 cf
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Pond DB-2:



Pond DB-2:



Hydrograph for Pond DB-2:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	394.00	0.00	0.00	**0.00**
2.50	0.19	272	394.02	0.00	0.00	0.00
5.00	0.31	1,852	394.15	0.13	0.13	0.00
7.50	0.45	3,043	394.25	0.35	0.35	0.00
10.00	**6.01**	**11,748**	**394.91**	**4.07**	**4.07**	0.00
12.50	**29.22**	**61,654**	**397.82**	**35.49**	**35.49**	0.00
15.00	6.46	17,324	395.29	7.39	7.39	0.00
17.50	2.82	9,958	394.78	3.08	3.08	0.00
20.00	2.78	9,578	394.75	2.89	2.89	0.00
22.50	2.33	8,654	394.68	2.42	2.42	0.00
25.00	0.23	5,093	394.41	0.93	0.93	0.00
27.50	0.23	2,806	394.23	0.30	0.30	0.00
30.00	0.22	2,478	394.20	0.24	0.24	0.00
32.50	0.22	2,395	394.20	0.22	0.22	0.00
35.00	0.21	2,358	394.19	0.21	0.21	0.00
37.50	0.21	2,329	394.19	0.21	0.21	0.00
40.00	0.20	2,302	394.19	0.21	0.21	0.00
42.50	0.20	2,275	394.19	0.20	0.20	0.00
45.00	0.19	2,249	394.18	0.20	0.20	0.00
47.50	0.19	2,222	394.18	0.19	0.19	0.00
50.00	0.00	1,648	394.14	0.11	0.11	0.00
52.50	0.00	1,036	394.09	0.04	0.04	0.00
55.00	0.00	753	394.06	0.02	0.02	0.00
57.50	0.00	591	394.05	0.01	0.01	0.00
60.00	0.00	486	394.04	0.01	0.01	0.00
62.50	0.00	413	394.03	0.01	0.01	0.00
65.00	0.00	359	394.03	0.01	0.01	0.00
67.50	0.00	317	394.03	0.00	0.00	0.00
70.00	0.00	284	394.02	0.00	0.00	0.00

Stage-Discharge for Pond DB-2:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
394.00	0.00	0.00	0.00
394.10	0.06	0.06	0.00
394.20	0.23	0.23	0.00
394.30	0.51	0.51	0.00
394.40	0.89	0.89	0.00
394.50	1.37	1.37	0.00
394.60	1.92	1.92	0.00
394.70	2.56	2.56	0.00
394.80	3.26	3.26	0.00
394.90	4.03	4.03	0.00
395.00	4.84	4.84	0.00
395.10	5.68	5.68	0.00
395.20	6.56	6.56	0.00
395.30	7.44	7.44	0.00
395.40	8.31	8.31	0.00
395.50	9.15	9.15	0.00
395.60	9.93	9.93	0.00
395.70	10.59	10.59	0.00
395.80	11.14	11.14	0.00
395.90	11.73	11.73	0.00
396.00	12.28	12.28	0.00
396.10	12.82	12.82	0.00
396.20	13.33	13.33	0.00
396.30	13.91	13.91	0.00
396.40	14.77	14.77	0.00
396.50	15.77	15.77	0.00
396.60	16.87	16.87	0.00
396.70	18.07	18.07	0.00
396.80	19.34	19.34	0.00
396.90	20.69	20.69	0.00
397.00	22.09	22.09	0.00
397.10	23.56	23.56	0.00
397.20	25.09	25.09	0.00
397.30	26.67	26.67	0.00
397.40	28.30	28.30	0.00
397.50	29.98	29.98	0.00
397.60	31.71	31.71	0.00
397.70	33.48	33.48	0.00
397.80	35.20	35.20	0.00
397.90	36.69	36.69	0.00
398.00	38.05	38.05	0.00
398.10	40.97	39.33	1.64
398.20	45.26	40.55	4.71
398.30	50.55	41.71	8.84
398.40	56.73	42.84	13.89
398.50	63.86	43.92	19.94
398.60	71.88	44.97	26.90
398.70	80.09	45.99	34.09
398.80	88.87	46.99	41.88
398.90	98.38	47.96	50.42
399.00	108.49	48.90	59.58
399.10	147.29	49.83	97.46
399.20	209.81	50.73	159.08
399.30	289.08	51.62	237.46
399.40	382.57	52.49	330.08
399.50	490.53	53.35	437.19
399.60	611.60	54.19	557.41
399.70	734.82	55.01	679.80
399.80	865.60	55.82	809.78
399.90	1,006.22	56.62	949.60
400.00	**1,154.18**	**57.41**	**1,096.76**

Stage-Area-Storage for Pond DB-2:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
394.00	12,058	0
394.10	12,257	1,216
394.20	12,457	2,451
394.30	12,658	3,707
394.40	12,862	4,983
394.50	13,067	6,279
394.60	13,273	7,596
394.70	13,482	8,934
394.80	13,691	10,293
394.90	13,903	11,673
395.00	14,116	13,073
395.10	14,331	14,496
395.20	14,547	15,940
395.30	14,765	17,405
395.40	14,985	18,893
395.50	15,206	20,402
395.60	15,429	21,934
395.70	15,653	23,488
395.80	15,879	25,065
395.90	16,107	26,664
396.00	16,336	28,286
396.10	16,549	29,930
396.20	16,764	31,596
396.30	16,980	33,283
396.40	17,198	34,992
396.50	17,417	36,723
396.60	17,637	38,475
396.70	17,859	40,250
396.80	18,082	42,047
396.90	18,307	43,867
397.00	18,533	45,709
397.10	18,760	47,573
397.20	18,989	49,461
397.30	19,219	51,371
397.40	19,450	53,305
397.50	19,683	55,261
397.60	19,917	57,241
397.70	20,153	59,245
397.80	20,390	61,272
397.90	20,628	63,323
398.00	20,868	65,398
398.10	21,097	67,496
398.20	21,328	69,617
398.30	21,560	71,762
398.40	21,793	73,929
398.50	22,028	76,120
398.60	22,264	78,335
398.70	22,501	80,573
398.80	22,739	82,835
398.90	22,978	85,121
399.00	**23,219**	87,431
399.10	23,219	89,753
399.20	23,219	92,074
399.30	23,219	94,396
399.40	23,219	96,718
399.50	23,219	99,040
399.60	23,219	101,362
399.70	23,219	103,684
399.80	23,219	106,006
399.90	23,219	108,328
400.00	23,219	**110,650**

Summary for Pond IS-1B:

Inflow = 15.92 cfs @ 12.13 hrs, Volume= 165,467 cf
Outflow = 15.28 cfs @ 12.18 hrs, Volume= 166,023 cf, Atten= 4%, Lag= 2.8 min
Discarded = 0.62 cfs @ 1.14 hrs, Volume= 79,263 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond BMH-1B :
Secondary = 14.66 cfs @ 12.18 hrs, Volume= 86,761 cf
Routed to Pond OCS-B6 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 438.87' @ 12.18 hrs Surf.Area= 7,695 sf Storage= 32,309 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 245.3 min (996.0 - 750.6)

Volume	Invert	Avail.Storage	Storage Description
#1	432.50'	13,080 cf	**Gravel Fill (Prismatic)** Listed below (Recalc) 53,865 cf Overall - 21,164 cf Embedded = 32,701 cf x 40.0% Voids
#2	433.50'	21,164 cf	**MC-4500 Chambers** Listed below Inside #1
#3	439.50'	101 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		34,345 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
432.50	7,695	0	0
439.50	7,695	53,865	53,865

Elevation (feet)	Cum.Store (cubic-feet)
433.50	0
433.58	504
433.67	1,005
433.75	1,505
433.83	2,002
433.92	2,498
434.00	2,992
434.08	3,484
434.17	3,973
434.25	4,460
434.33	4,945
434.42	5,427
434.50	5,906
434.58	6,382
434.67	6,855
434.75	7,325
434.83	7,792
434.92	8,255
435.00	8,715
435.08	9,170
435.17	9,622
435.25	10,069
435.33	10,513
435.42	10,951
435.50	11,386
435.58	11,815
435.67	12,239
435.75	12,658
435.83	13,072
435.92	13,480
436.00	13,882
436.08	14,279
436.17	14,669
436.25	15,052
436.33	15,429
436.42	15,798
436.50	16,161
436.58	16,516
436.67	16,863
436.75	17,201
436.83	17,531
436.92	17,853
437.00	18,164
437.08	18,466
437.17	18,758
437.25	19,038
437.33	19,307
437.42	19,564
437.50	19,807
437.58	20,037
437.67	20,251

437.75	20,449
437.83	20,628
437.92	20,786
438.00	20,917
438.08	21,006
438.17	21,059
438.25	21,100
438.33	21,133
438.42	21,156
438.50	21,164

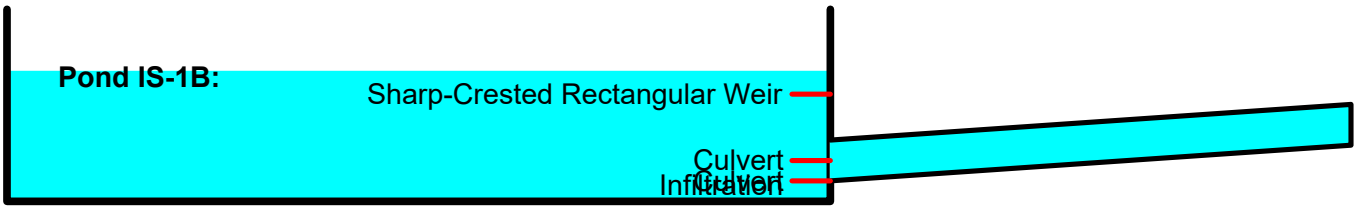
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
439.50	42	0	0
441.90	42	101	101

Device	Routing	Invert	Outlet Devices
#1	Discarded	432.50'	**0.62 cfs Infiltration at all elevations**
#2	Primary	435.25'	**24.0" Round Culvert** L= 31.3' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 433.50' / 435.25' S= -0.0559 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#3	Secondary	437.75'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 3	434.50'	**24.0" Round Culvert** L= 6.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 434.50' / 434.50' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

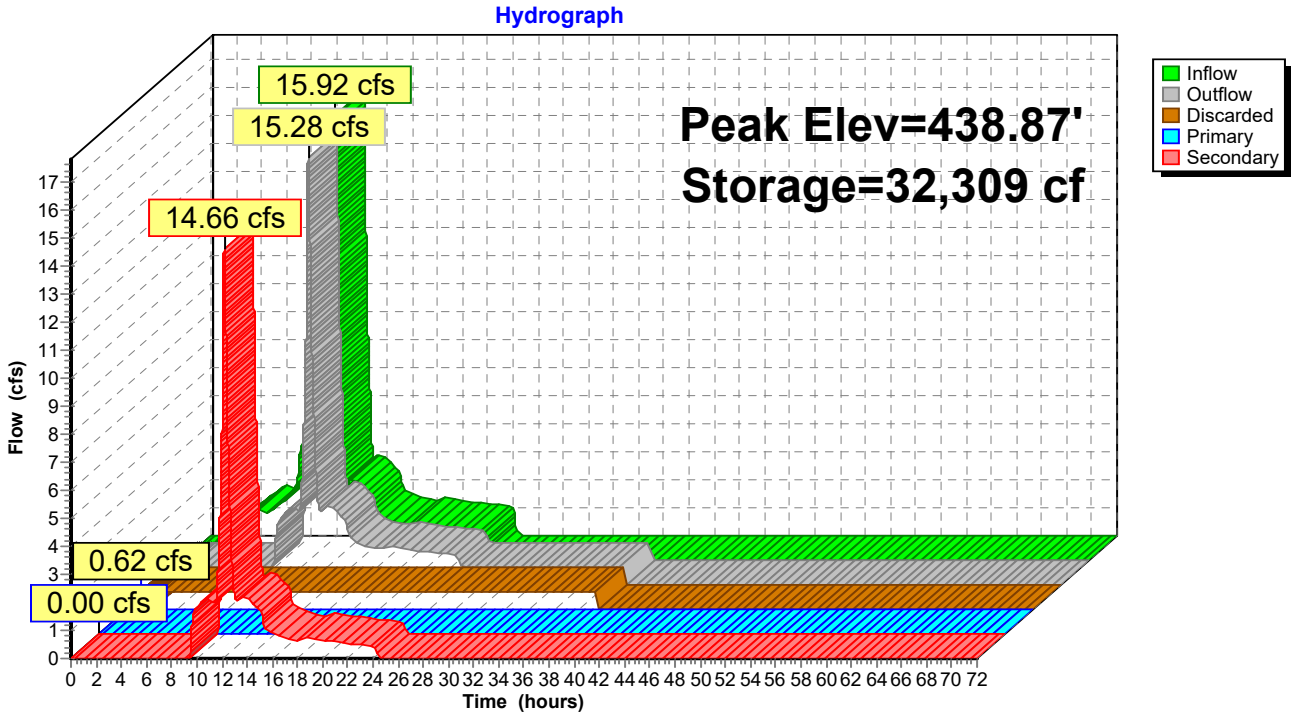
Discarded OutFlow Max=0.62 cfs @ 1.14 hrs HW=432.50' (Free Discharge)
└**1=Infiltration** (Exfiltration Controls 0.62 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=432.50' TW=435.25' (Dynamic Tailwater)
└**2=Culvert** (Controls 0.00 cfs)

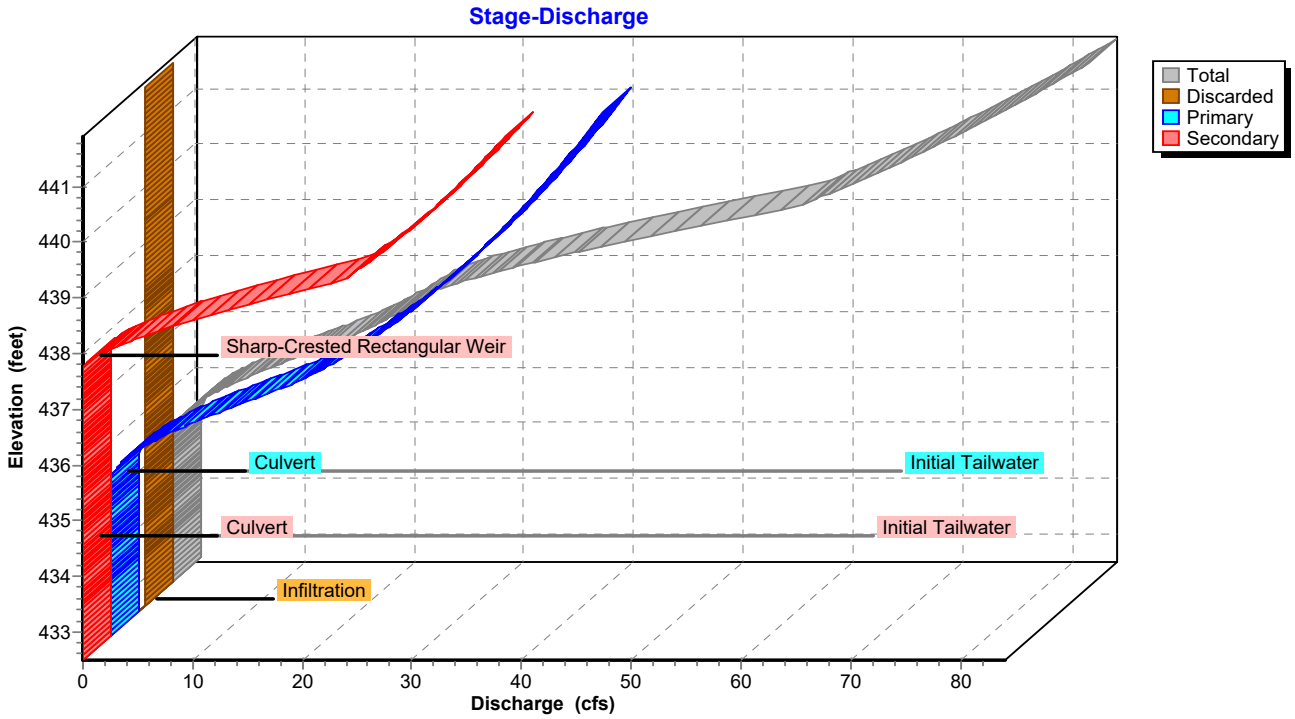
Secondary OutFlow Max=14.66 cfs @ 12.18 hrs HW=438.87' TW=436.11' (Dynamic Tailwater)
└**3=Sharp-Crested Rectangular Weir** (Weir Controls 14.66 cfs @ 3.46 fps)
└**4=Culvert** (Passes 14.66 cfs of 20.02 cfs potential flow)



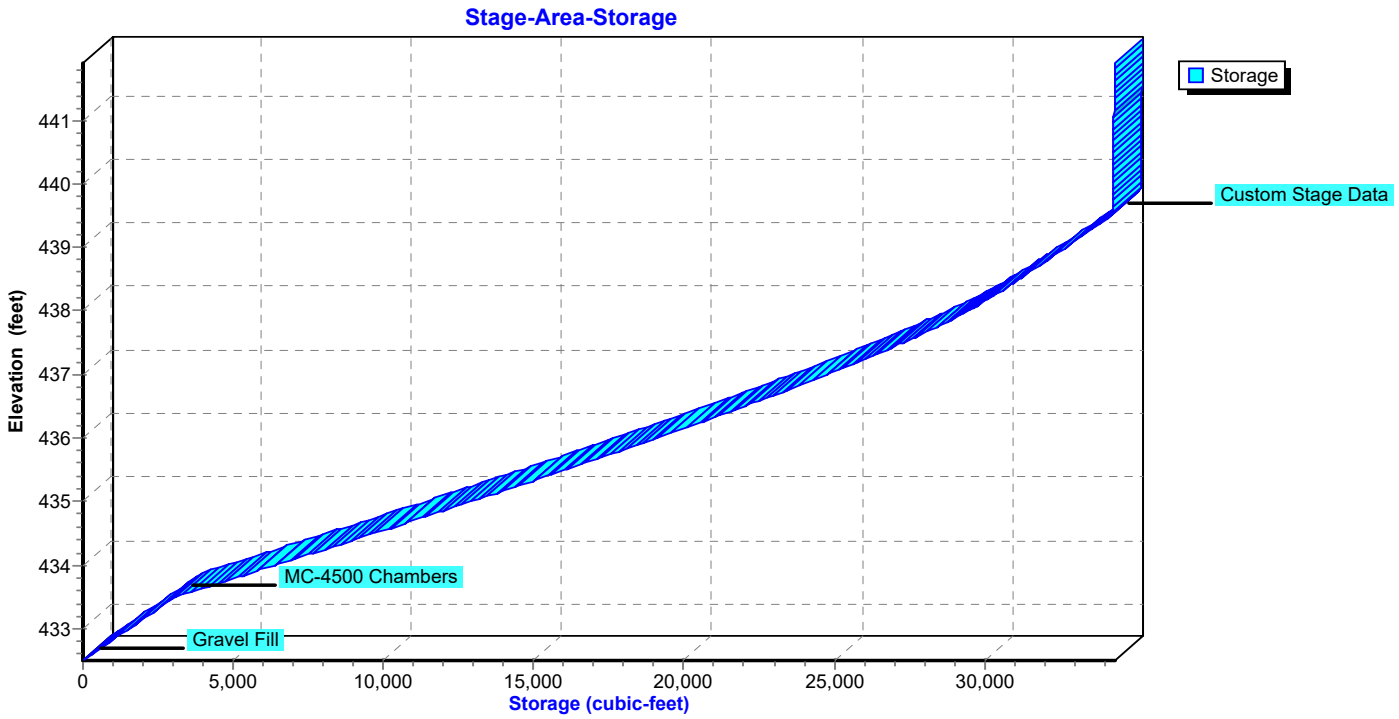
Pond IS-1B:



Pond IS-1B:



Pond IS-1B:


Stage-Area-Storage
Storage
Custom Stage Data
MC-4500 Chambers
Gravel Fill
Elevation (feet)
441
440
439
438
437
436
435
434
433
0
5,000
10,000
15,000
20,000
25,000
30,000
Storage (cubic-feet)

Hydrograph for Pond IS-1B:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	432.50	0.00	**0.00**	**0.00**	0.00
2.50	0.62	1	432.50	0.62	**0.62**	0.00	0.00
5.00	1.52	4,273	433.68	0.62	0.62	0.00	0.00
7.50	1.94	14,169	435.20	0.62	0.62	0.00	0.00
10.00	**2.45**	**29,542**	**438.02**	**2.40**	0.62	0.00	**1.78**
12.50	**6.86**	**30,970**	**438.44**	**7.82**	0.62	0.00	**7.20**
15.00	2.33	29,531	438.01	2.37	0.62	0.00	1.75
17.50	1.28	29,027	437.89	1.29	0.62	0.00	0.67
20.00	1.27	29,017	437.89	1.28	0.62	0.00	0.66
22.50	1.13	28,936	437.87	1.14	0.62	0.00	0.52
25.00	0.00	27,106	437.47	0.62	0.62	0.00	0.00
27.50	0.00	21,526	436.42	0.62	0.62	0.00	0.00
30.00	0.00	15,946	435.48	0.62	0.62	0.00	0.00
32.50	0.00	10,366	434.60	0.62	0.62	0.00	0.00
35.00	0.00	4,786	433.76	0.62	0.62	0.00	0.00
37.50	0.00	0	432.50	0.00	0.00	0.00	0.00
40.00	0.00	0	432.50	0.00	0.00	0.00	0.00
42.50	0.00	0	432.50	0.00	0.00	0.00	0.00
45.00	0.00	0	432.50	0.00	0.00	0.00	0.00
47.50	0.00	0	432.50	0.00	0.00	0.00	0.00
50.00	0.00	0	432.50	0.00	0.00	0.00	0.00
52.50	0.00	0	432.50	0.00	0.00	0.00	0.00
55.00	0.00	0	432.50	0.00	0.00	0.00	0.00
57.50	0.00	0	432.50	0.00	0.00	0.00	0.00
60.00	0.00	0	432.50	0.00	0.00	0.00	0.00
62.50	0.00	0	432.50	0.00	0.00	0.00	0.00
65.00	0.00	0	432.50	0.00	0.00	0.00	0.00
67.50	0.00	0	432.50	0.00	0.00	0.00	0.00
70.00	0.00	0	432.50	0.00	0.00	0.00	0.00

Stage-Discharge for Pond IS-1B:

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
432.50	0.00	**0.00**	0.00	0.00
432.70	0.62	**0.62**	0.00	0.00
432.90	0.62	0.62	0.00	0.00
433.10	0.62	0.62	0.00	0.00
433.30	0.62	0.62	0.00	0.00
433.50	0.62	0.62	0.00	0.00
433.70	0.62	0.62	0.00	0.00
433.90	0.62	0.62	0.00	0.00
434.10	0.62	0.62	0.00	0.00
434.30	0.62	0.62	0.00	0.00
434.50	0.62	0.62	0.00	0.00
434.70	0.62	0.62	0.00	0.00
434.90	0.62	0.62	0.00	0.00
435.10	0.62	0.62	0.00	0.00
435.30	0.64	0.62	0.02	0.00
435.50	1.10	0.62	0.48	0.00
435.70	2.13	0.62	1.51	0.00
435.90	3.66	0.62	3.04	0.00
436.10	5.61	0.62	4.99	0.00
436.30	7.91	0.62	7.29	0.00
436.50	10.45	0.62	9.83	0.00
436.70	13.12	0.62	12.50	0.00
436.90	15.78	0.62	15.16	0.00
437.10	18.19	0.62	17.57	0.00
437.30	20.00	0.62	19.38	0.00
437.50	21.76	0.62	21.14	0.00
437.70	23.39	0.62	22.77	0.00
437.90	25.66	0.62	24.29	0.75
438.10	29.00	0.62	25.72	2.66
438.30	32.88	0.62	27.07	5.19
438.50	37.16	0.62	28.36	8.18
438.70	41.75	0.62	29.60	11.54
438.90	46.60	0.62	30.78	15.20
439.10	51.67	0.62	31.92	19.13
439.30	56.93	0.62	33.02	23.28
439.50	59.72	0.62	34.09	25.01
439.70	62.14	0.62	35.12	26.40
439.90	64.47	0.62	36.12	27.73
440.10	66.71	0.62	37.10	28.99
440.30	68.87	0.62	38.05	30.19
440.50	70.96	0.62	38.98	31.36
440.70	72.98	0.62	39.89	32.48
440.90	74.95	0.62	40.77	33.56
441.10	76.87	0.62	41.64	34.61
441.30	78.74	0.62	42.49	35.63
441.50	80.56	0.62	43.32	36.62
441.70	82.34	0.62	44.14	37.58
441.90	**84.08**	0.62	**44.94**	**38.52**

Stage-Area-Storage for Pond IS-1B:

Elevation (feet)	Storage (cubic-feet)
432.50	0
432.60	308
432.70	616
432.80	923
432.90	1,231
433.00	1,539
433.10	1,847
433.20	2,155
433.30	2,462
433.40	2,770
433.50	3,078
433.60	3,755
433.70	4,409
433.80	5,091
433.90	5,742
434.00	6,412
434.10	7,080
434.20	7,726
434.30	8,398
434.40	9,040
434.50	9,700
434.60	10,356
434.70	10,990
434.80	11,650
434.90	12,278
435.00	12,924
435.10	13,565
435.20	14,184
435.30	14,826
435.40	15,438
435.50	16,066
435.60	16,687
435.70	17,287
435.80	17,907
435.90	18,499
436.00	19,102
436.10	19,700
436.20	20,276
436.30	20,869
436.40	21,434
436.50	22,009
436.60	22,576
436.70	23,121
436.80	23,680
436.90	24,212
437.00	24,749
437.10	25,277
437.20	25,784
437.30	26,298
437.40	26,786
437.50	27,274
437.60	27,749
437.70	28,201
437.80	28,650
437.90	29,072
438.00	29,479
438.10	29,847
438.20	30,189
438.30	30,525
438.40	30,851
438.50	31,166
438.60	31,474
438.70	31,782
438.80	32,090
438.90	32,398
439.00	32,705
439.10	33,013
439.20	33,321
439.30	33,629
439.40	33,937
439.50	34,244
439.60	34,249
439.70	34,253
439.80	34,257
439.90	34,261
440.00	34,265
440.10	34,270
440.20	34,274
440.30	34,278
440.40	34,282
440.50	34,286
440.60	34,291
440.70	34,295
440.80	34,299
440.90	34,303
441.00	34,307
441.10	34,312
441.20	34,316
441.30	34,320
441.40	34,324
441.50	34,328
441.60	34,333
441.70	34,337
441.80	34,341
441.90	**34,345**

Summary for Pond IS-2B:

Inflow = 8.79 cfs @ 12.01 hrs, Volume= 35,334 cf
Outflow = 19.30 cfs @ 12.03 hrs, Volume= 35,562 cf, Atten= 0%, Lag= 1.3 min
Discarded = 0.30 cfs @ 11.96 hrs, Volume= 32,291 cf
Primary = 18.99 cfs @ 12.03 hrs, Volume= 3,271 cf
Routed to Pond BMH-2B :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 460.49' @ 12.03 hrs Surf.Area= 2,485 sf Storage= 8,569 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 245.6 min (944.0 - 686.0)

Volume	Invert	Avail.Storage	Storage Description
#1	453.50'	3,744 cf	**Gravel Fill (Prismatic)** Listed below (Recalc) 14,157 cf Overall - 4,797 cf Embedded = 9,359 cf x 40.0% Voids
#2	454.50'	4,797 cf	**MC-3500 Chambers** Listed below Inside #1
#3	459.25'	155 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		8,696 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
453.50	2,462	0	0
459.25	2,462	14,157	14,157

Elevation (feet)	Cum.Store (cubic-feet)
454.50	0
454.58	154
454.67	307
454.75	459
454.83	610
454.92	760
455.00	909
455.08	1,056
455.17	1,203
455.25	1,348
455.33	1,492
455.42	1,635
455.50	1,777
455.58	1,917
455.67	2,055
455.75	2,192
455.83	2,327
455.92	2,461
456.00	2,592
456.08	2,722
456.17	2,850
456.25	2,975
456.33	3,098
456.42	3,219
456.50	3,337
456.58	3,453
456.67	3,565
456.75	3,675
456.83	3,782
456.92	3,886
457.00	3,986
457.08	4,082
457.17	4,175
457.25	4,263
457.33	4,347
457.42	4,426
457.50	4,499
457.58	4,567
457.67	4,628
457.75	4,682
457.83	4,726
457.92	4,756
458.00	4,774
458.08	4,786
458.17	4,795
458.25	4,797

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
459.25	23	0	0
466.00	23	155	155

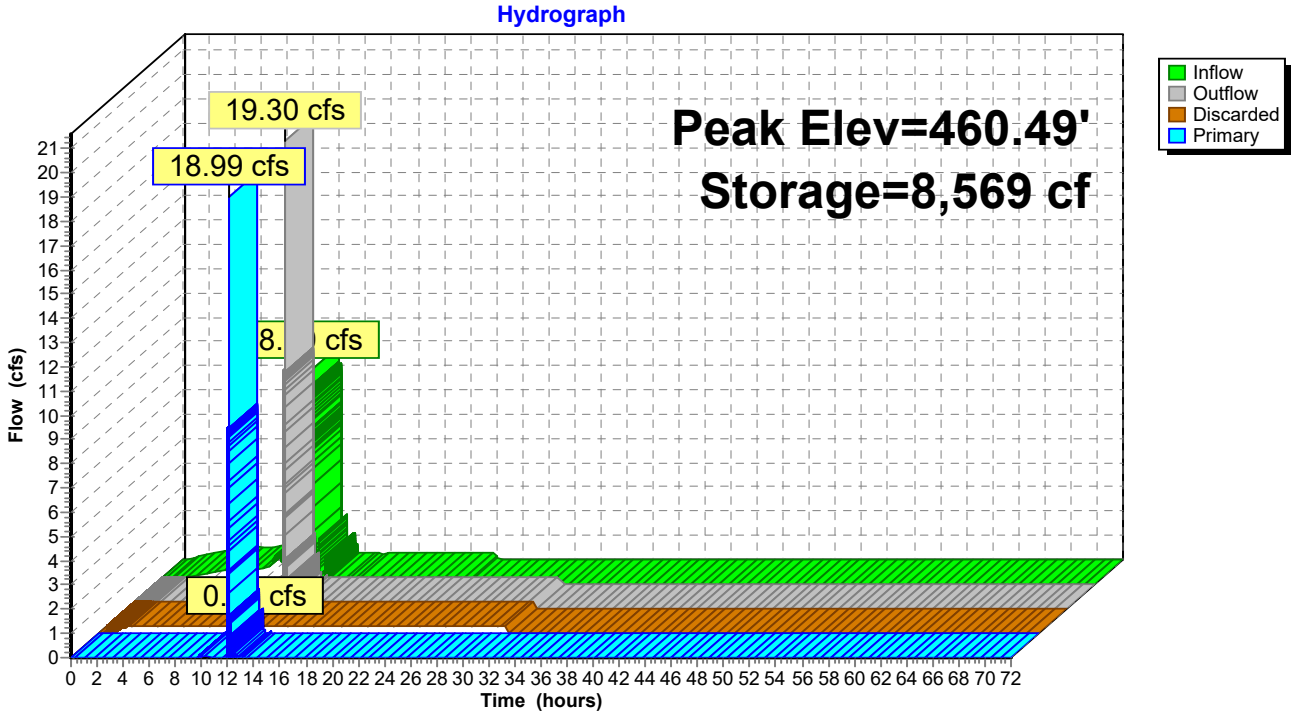
Device	Routing	Invert	Outlet Devices
#1	Discarded	453.50'	**5.250 in/hr Exfiltration over Surface area**
#2	Primary	454.75'	**24.0" Round Culvert**
			L= 9.4' RCP, groove end projecting, Ke= 0.200
			Inlet / Outlet Invert= 454.50' / 454.75' S= -0.0266 '/' Cc= 0.900
			n= 0.012, Flow Area= 3.14 sf

Discarded OutFlow Max=0.30 cfs @ 11.96 hrs HW=459.33' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.30 cfs)

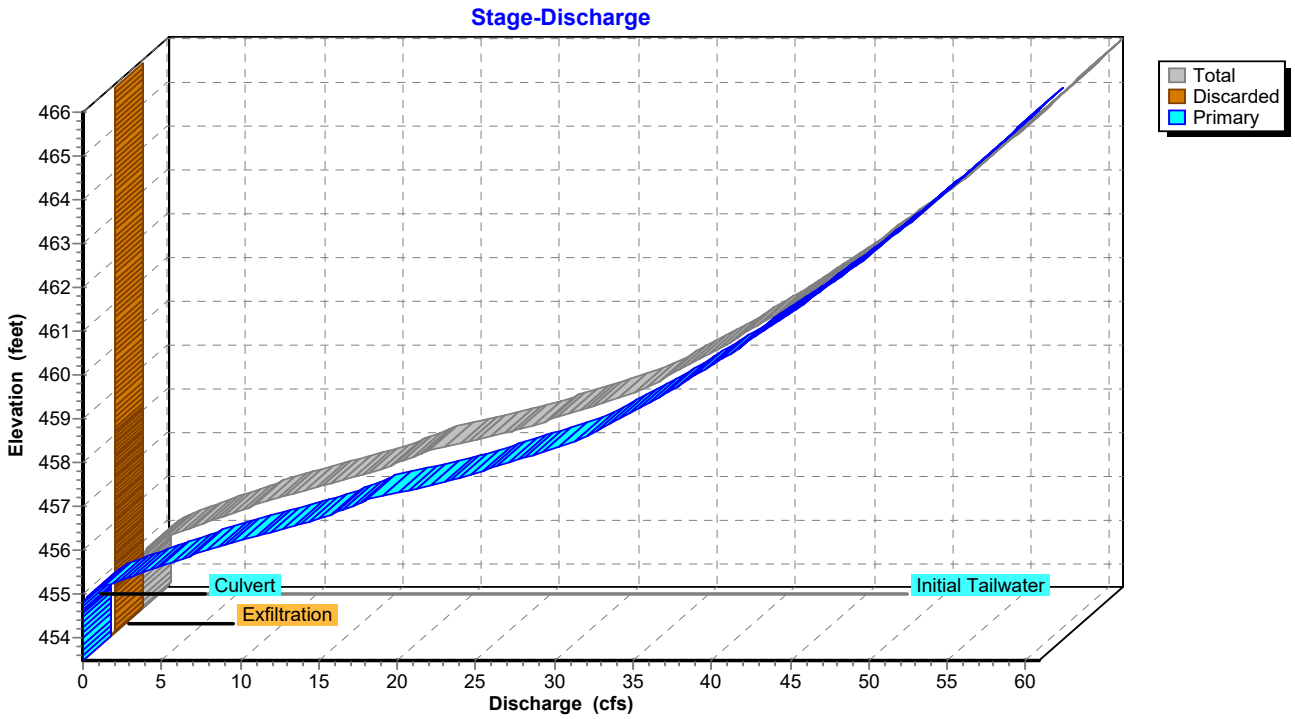
Primary OutFlow Max=14.74 cfs @ 12.03 hrs HW=460.46' TW=459.85' (Dynamic Tailwater)
└**2=Culvert** (Inlet Controls 14.74 cfs @ 4.69 fps)



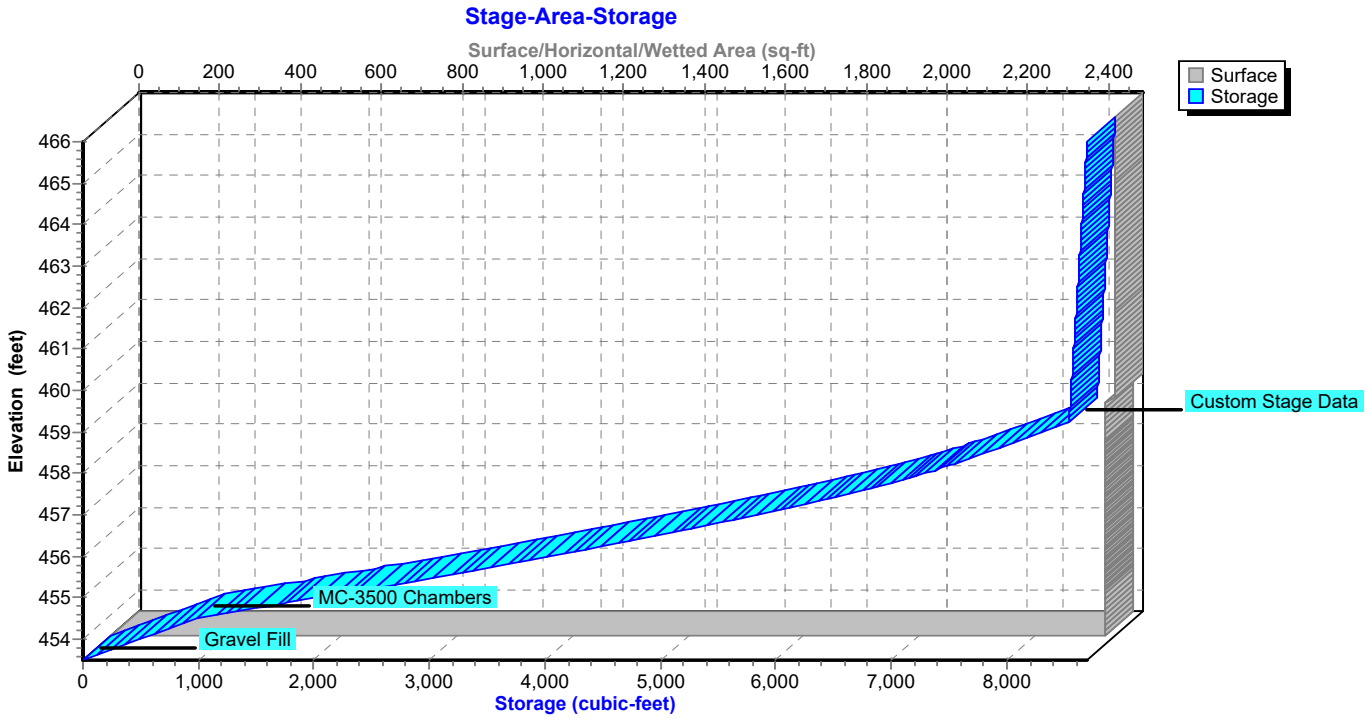
Pond IS-2B:



Pond IS-2B:



Pond IS-2B:



Hydrograph for Pond IS-2B:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	453.50	0.00	0.00	0.00
2.50	0.32	9	453.51	0.30	0.30	0.00
5.00	0.52	1,144	454.57	0.30	0.30	0.00
7.50	0.59	3,329	455.65	0.30	0.30	0.00
10.00	**0.00**	**7,811**	**458.51**	**0.47**	**0.30**	**0.17**
12.50	**0.16**	**8,085**	**458.79**	**0.30**	**0.30**	**0.00**
15.00	0.29	7,781	458.48	0.30	0.30	0.00
17.50	0.29	7,630	458.32	0.30	0.30	0.00
20.00	0.29	7,627	458.32	0.30	0.30	0.00
22.50	0.30	7,598	458.29	0.30	0.30	0.00
25.00	0.00	6,576	457.46	0.30	0.30	0.00
27.50	0.00	3,883	455.93	0.30	0.30	0.00
30.00	0.00	1,190	454.60	0.30	0.30	0.00
32.50	0.00	0	453.50	0.00	0.00	0.00
35.00	0.00	0	453.50	0.00	0.00	0.00
37.50	0.00	0	453.50	0.00	0.00	0.00
40.00	0.00	0	453.50	0.00	0.00	0.00
42.50	0.00	0	453.50	0.00	0.00	0.00
45.00	0.00	0	453.50	0.00	0.00	0.00
47.50	0.00	0	453.50	0.00	0.00	0.00
50.00	0.00	0	453.50	0.00	0.00	0.00
52.50	0.00	0	453.50	0.00	0.00	0.00
55.00	0.00	0	453.50	0.00	0.00	0.00
57.50	0.00	0	453.50	0.00	0.00	0.00
60.00	0.00	0	453.50	0.00	0.00	0.00
62.50	0.00	0	453.50	0.00	0.00	0.00
65.00	0.00	0	453.50	0.00	0.00	0.00
67.50	0.00	0	453.50	0.00	0.00	0.00
70.00	0.00	0	453.50	0.00	0.00	0.00

Stage-Discharge for Pond IS-2B:

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
453.50	0.00	0.00	0.00
453.70	0.30	0.30	0.00
453.90	0.30	0.30	0.00
454.10	0.30	0.30	0.00
454.30	0.30	0.30	0.00
454.50	0.30	0.30	0.00
454.70	0.30	0.30	0.00
454.90	0.48	0.30	0.18
455.10	1.23	0.30	0.93
455.30	2.52	0.30	2.22
455.50	4.04	0.30	3.74
455.70	5.57	0.30	5.27
455.90	7.27	0.30	6.97
456.10	9.10	0.30	8.81
456.30	11.03	0.30	10.73
456.50	12.99	0.30	12.69
456.70	14.90	0.30	14.60
456.90	16.67	0.30	16.37
457.10	18.09	0.30	17.79
457.30	20.08	0.30	19.78
457.50	22.41	0.30	22.11
457.70	24.52	0.30	24.22
457.90	26.46	0.30	26.16
458.10	28.27	0.30	27.97
458.30	29.97	0.30	29.67
458.50	31.57	0.30	31.27
458.70	32.78	0.30	32.48
458.90	33.86	0.30	33.56
459.10	34.91	**0.30**	34.61
459.30	35.93	**0.30**	35.63
459.50	36.92	0.30	36.62
459.70	37.88	0.30	37.58
459.90	38.82	0.30	38.52
460.10	39.74	0.30	39.44
460.30	40.63	0.30	40.33
460.50	41.51	0.30	41.21
460.70	42.37	0.30	42.07
460.90	43.21	0.30	42.91
461.10	44.04	0.30	43.74
461.30	44.85	0.30	44.55
461.50	45.64	0.30	45.34
461.70	46.42	0.30	46.12
461.90	47.19	0.30	46.89
462.10	47.95	0.30	47.65
462.30	48.69	0.30	48.39
462.50	49.43	0.30	49.13
462.70	50.15	0.30	49.85
462.90	50.86	0.30	50.56
463.10	51.56	0.30	51.26
463.30	52.26	0.30	51.96
463.50	52.94	0.30	52.64
463.70	53.62	0.30	53.31
463.90	54.28	0.30	53.98
464.10	54.94	0.30	54.64
464.30	55.59	0.30	55.29
464.50	56.23	0.30	55.93
464.70	56.87	0.30	56.57
464.90	57.50	0.30	57.20
465.10	58.12	0.30	57.82
465.30	58.73	0.30	58.43
465.50	59.34	0.30	59.04
465.70	59.95	0.30	59.64
465.90	**60.54**	0.30	**60.24**

Stage-Area-Storage for Pond IS-2B:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
453.50	2,462	0
453.70	2,462	197
453.90	2,462	394
454.10	2,462	591
454.30	2,462	788
454.50	2,462	985
454.70	2,462	1,400
454.90	2,462	1,815
455.10	2,462	2,229
455.30	2,462	2,635
455.50	2,462	3,036
455.70	2,462	3,430
455.90	2,462	3,822
456.10	2,462	4,211
456.30	2,462	4,589
456.50	2,462	4,957
456.70	2,462	5,315
456.90	2,462	5,666
457.10	2,462	6,007
457.30	2,462	6,332
457.50	2,462	6,639
457.70	2,462	6,925
457.90	2,462	7,183
458.10	2,462	7,403
458.30	2,462	7,605
458.50	2,462	7,802
458.70	2,462	7,999
458.90	2,462	8,196
459.10	**2,462**	8,393
459.30	**2,485**	8,542
459.50	2,485	8,547
459.70	2,485	8,551
459.90	2,485	8,556
460.10	2,485	8,560
460.30	2,485	8,565
460.50	2,485	8,570
460.70	2,485	8,574
460.90	2,485	8,579
461.10	2,485	8,583
461.30	2,485	8,588
461.50	2,485	8,593
461.70	2,485	8,597
461.90	2,485	8,602
462.10	2,485	8,606
462.30	2,485	8,611
462.50	2,485	8,616
462.70	2,485	8,620
462.90	2,485	8,625
463.10	2,485	8,629
463.30	2,485	8,634
463.50	2,485	8,639
463.70	2,485	8,643
463.90	2,485	8,648
464.10	2,485	8,652
464.30	2,485	8,657
464.50	2,485	8,662
464.70	2,485	8,666
464.90	2,485	8,671
465.10	2,485	8,675
465.30	2,485	8,680
465.50	2,485	8,685
465.70	2,485	8,689
465.90	2,485	**8,694**

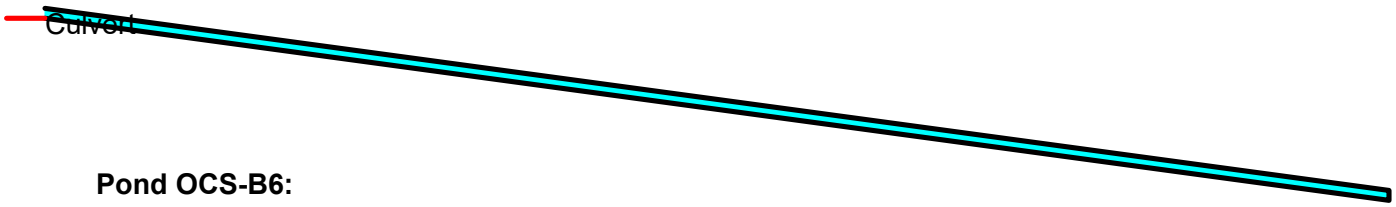
Summary for Pond OCS-B6:

Inflow = 14.66 cfs @ 12.18 hrs, Volume= 86,761 cf
Outflow = 14.66 cfs @ 12.18 hrs, Volume= 86,761 cf, Atten= 0%, Lag= 0.0 min
Primary = 14.66 cfs @ 12.18 hrs, Volume= 86,761 cf
Routed to Pond DB-1 :

Routing by Sim-Route method w/Net Flows, Time Span= 0.00-72.00 hrs, dt= 0.00 hrs
Peak Elev= 436.11' @ 12.18 hrs

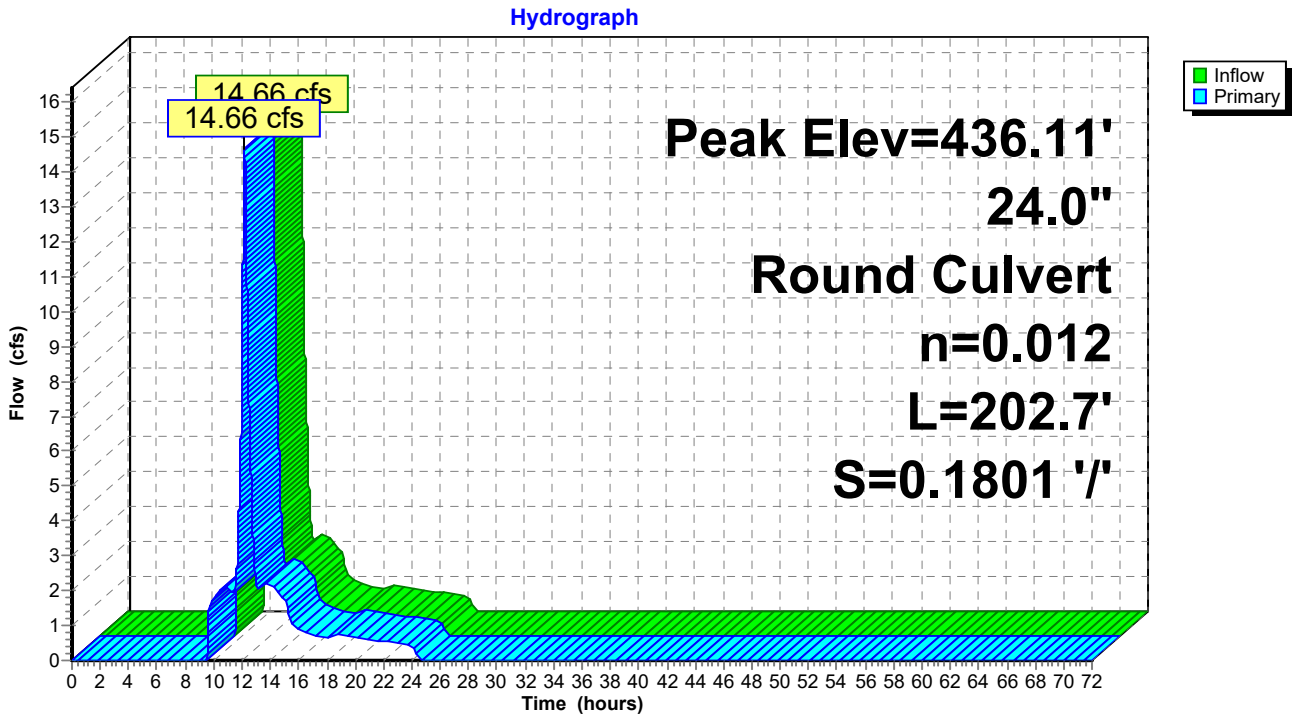
Device	Routing	Invert	Outlet Devices
#1	Primary	434.50'	**24.0" Round Culvert** L= 202.7' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 434.50' / 398.00' S= 0.1801 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=14.66 cfs @ 12.18 hrs HW=436.11' TW=403.69' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 14.66 cfs @ 5.40 fps)

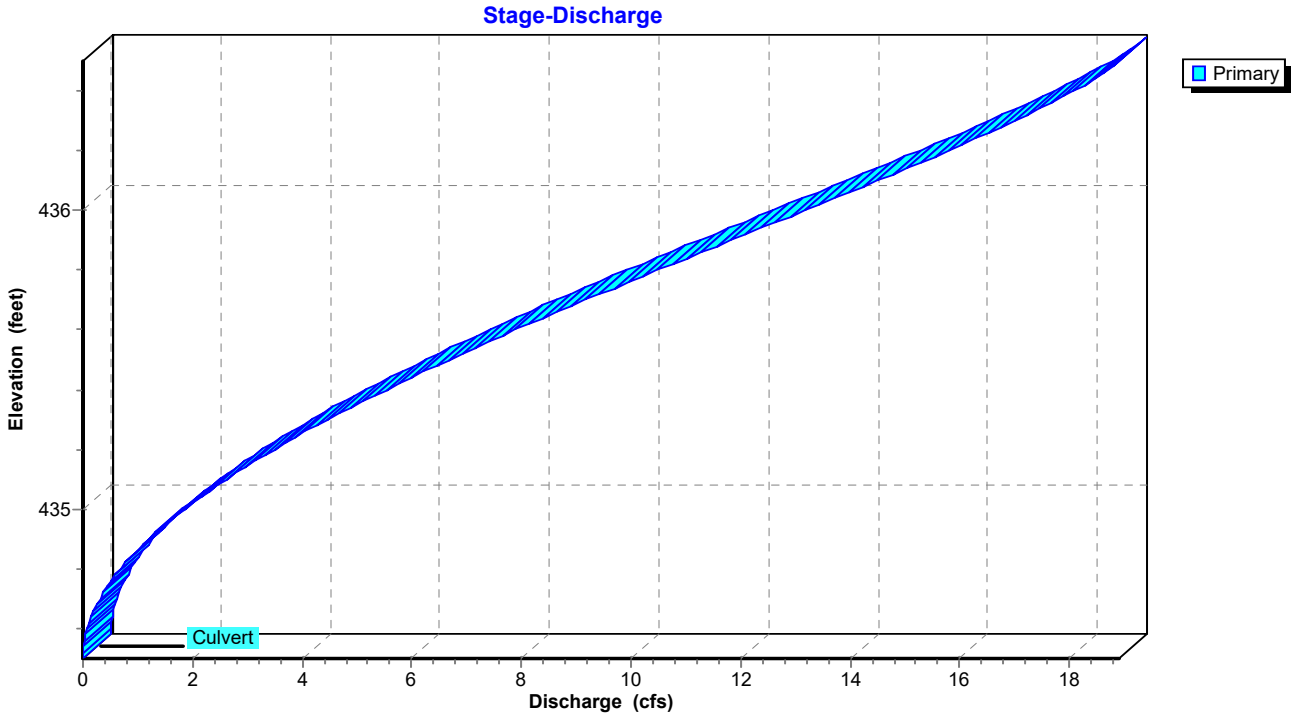


Pond OCS-B6:

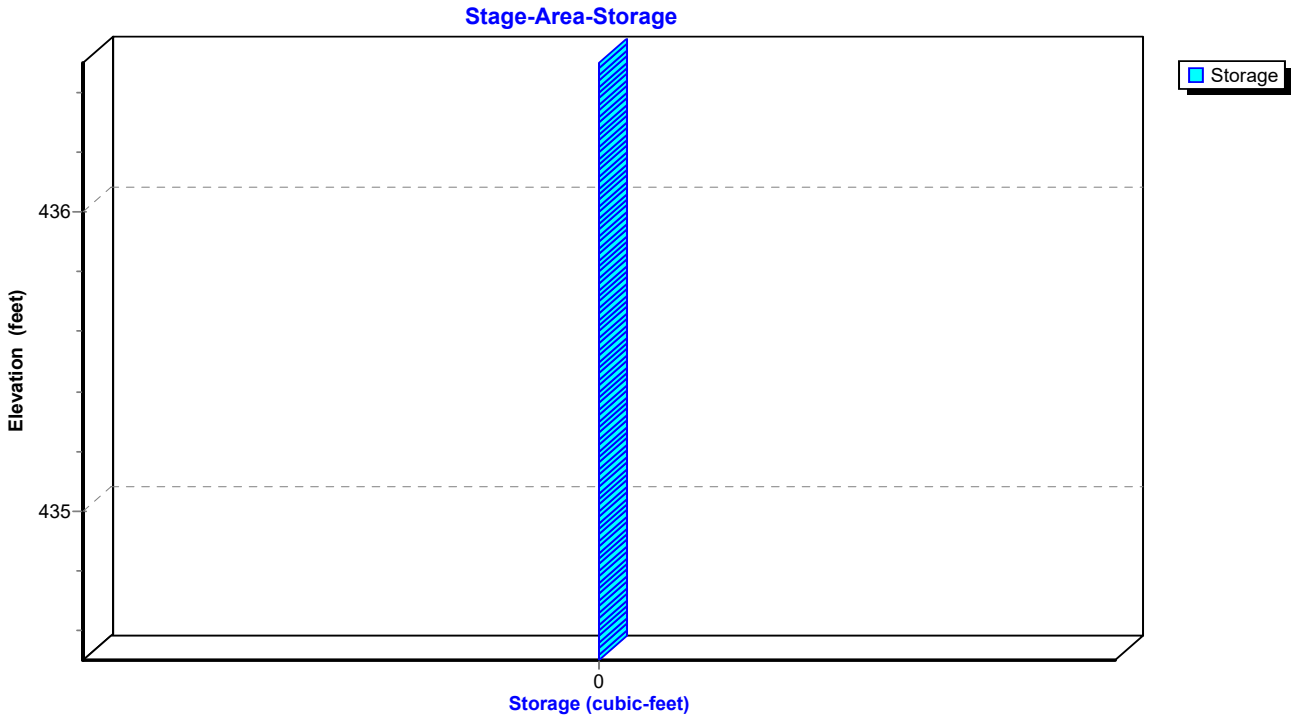
Pond OCS-B6:



Pond OCS-B6:



Pond OCS-B6:



Hydrograph for Pond OCS-B6:

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	434.50	0.00
1.00	0.00	434.50	0.00
2.00	0.00	434.50	0.00
3.00	0.00	434.50	0.00
4.00	0.00	434.50	0.00
5.00	0.00	434.50	0.00
6.00	0.00	434.50	0.00
7.00	0.00	434.50	0.00
8.00	0.00	434.50	0.00
9.00	0.00	434.50	0.00
10.00	1.78	434.99	1.78
11.00	2.12	435.04	2.12
12.00	**8.15**	**435.62**	**8.13**
13.00	**2.21**	**435.05**	**2.21**
14.00	2.21	435.05	2.21
15.00	1.75	434.99	1.75
16.00	0.90	434.84	0.90
17.00	0.74	434.81	0.74
18.00	0.62	434.78	0.62
19.00	0.73	434.81	0.73
20.00	0.66	434.79	0.66
21.00	0.60	434.78	0.60
22.00	0.54	434.77	0.54
23.00	0.50	434.75	0.50
24.00	0.46	434.74	0.46
25.00	0.00	434.50	0.00
26.00	0.00	434.50	0.00
27.00	0.00	434.50	0.00
28.00	0.00	434.50	0.00
29.00	0.00	434.50	0.00
30.00	0.00	434.50	0.00
31.00	0.00	434.50	0.00
32.00	0.00	434.50	0.00
33.00	0.00	434.50	0.00
34.00	0.00	434.50	0.00
35.00	0.00	434.50	0.00
36.00	0.00	434.50	0.00
37.00	0.00	434.50	0.00
38.00	0.00	434.50	0.00
39.00	0.00	434.50	0.00
40.00	0.00	434.50	0.00
41.00	0.00	434.50	0.00
42.00	0.00	434.50	0.00
43.00	0.00	434.50	0.00
44.00	0.00	434.50	0.00
45.00	0.00	434.50	0.00
46.00	0.00	434.50	0.00
47.00	0.00	434.50	0.00
48.00	0.00	434.50	0.00
49.00	0.00	434.50	0.00
50.00	0.00	434.50	0.00
51.00	0.00	434.50	0.00
52.00	0.00	434.50	0.00
53.00	0.00	434.50	0.00
54.00	0.00	434.50	0.00
55.00	0.00	434.50	0.00
56.00	0.00	434.50	0.00
57.00	0.00	434.50	0.00
58.00	0.00	434.50	0.00
59.00	0.00	434.50	0.00
60.00	0.00	434.50	0.00
61.00	0.00	434.50	0.00
62.00	0.00	434.50	0.00
63.00	0.00	434.50	0.00
64.00	0.00	434.50	0.00
65.00	0.00	434.50	0.00
66.00	0.00	434.50	0.00
67.00	0.00	434.50	0.00
68.00	0.00	434.50	0.00
69.00	0.00	434.50	0.00
70.00	0.00	434.50	0.00
71.00	0.00	434.50	0.00
72.00	0.00	434.50	0.00

Stage-Discharge for Pond OCS-B6:

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
434.50	0.00	435.03	2.07	435.56	7.41	436.09	14.37
434.51	0.00	435.04	2.14	435.57	7.53	436.10	14.50
434.52	0.00	435.05	2.22	435.58	7.65	436.11	14.64
434.53	0.01	435.06	2.29	435.59	7.78	436.12	14.77
434.54	0.01	435.07	2.37	435.60	7.90	436.13	14.90
434.55	0.02	435.08	2.45	435.61	8.03	436.14	15.03
434.56	0.03	435.09	2.53	435.62	8.15	436.15	15.16
434.57	0.04	435.10	2.61	435.63	8.28	436.16	15.28
434.58	0.05	435.11	2.70	435.64	8.41	436.17	15.41
434.59	0.06	435.12	2.78	435.65	8.53	436.18	15.54
434.60	0.08	435.13	2.86	435.66	8.66	436.19	15.67
434.61	0.10	435.14	2.95	435.67	8.79	436.20	15.79
434.62	0.11	435.15	3.04	435.68	8.92	436.21	15.92
434.63	0.13	435.16	3.13	435.69	9.05	436.22	16.04
434.64	0.15	435.17	3.22	435.70	9.18	436.23	16.17
434.65	0.18	435.18	3.31	435.71	9.31	436.24	16.29
434.66	0.20	435.19	3.40	435.72	9.44	436.25	16.41
434.67	0.23	435.20	3.49	435.73	9.57	436.26	16.53
434.68	0.25	435.21	3.58	435.74	9.70	436.27	16.65
434.69	0.28	435.22	3.68	435.75	9.83	436.28	16.77
434.70	0.31	435.23	3.77	435.76	9.96	436.29	16.89
434.71	0.34	435.24	3.87	435.77	10.09	436.30	17.00
434.72	0.38	435.25	3.97	435.78	10.22	436.31	17.12
434.73	0.41	435.26	4.06	435.79	10.36	436.32	17.23
434.74	0.45	435.27	4.16	435.80	10.49	436.33	17.35
434.75	0.48	435.28	4.26	435.81	10.62	436.34	17.46
434.76	0.52	435.29	4.36	435.82	10.76	436.35	17.57
434.77	0.56	435.30	4.47	435.83	10.89	436.36	17.67
434.78	0.60	435.31	4.57	435.84	11.02	436.37	17.78
434.79	0.64	435.32	4.67	435.85	11.16	436.38	17.88
434.80	0.69	435.33	4.78	435.86	11.29	436.39	17.99
434.81	0.73	435.34	4.88	435.87	11.43	436.40	18.09
434.82	0.78	435.35	4.99	435.88	11.56	436.41	18.18
434.83	0.83	435.36	5.10	435.89	11.69	436.42	18.28
434.84	0.88	435.37	5.21	435.90	11.83	436.43	18.37
434.85	0.93	435.38	5.32	435.91	11.96	436.44	18.46
434.86	0.98	435.39	5.43	435.92	12.10	436.45	18.55
434.87	1.04	435.40	5.54	435.93	12.23	436.46	18.63
434.88	1.09	435.41	5.65	435.94	12.37	436.47	18.71
434.89	1.15	435.42	5.76	435.95	12.50	436.48	18.78
434.90	1.20	435.43	5.87	435.96	12.64	436.49	18.85
434.91	1.26	435.44	5.99	435.97	12.77	436.50	**18.91**
434.92	1.32	435.45	6.10	435.98	12.91		
434.93	1.38	435.46	6.22	435.99	13.04		
434.94	1.45	435.47	6.33	436.00	13.17		
434.95	1.51	435.48	6.45	436.01	13.31		
434.96	1.58	435.49	6.57	436.02	13.44		
434.97	1.64	435.50	6.69	436.03	13.58		
434.98	1.71	435.51	6.80	436.04	13.71		
434.99	1.78	435.52	6.92	436.05	13.84		
435.00	1.85	435.53	7.04	436.06	13.98		
435.01	1.92	435.54	7.16	436.07	14.11		
435.02	1.99	435.55	7.29	436.08	14.24		

Stage-Area-Storage for Pond OCS-B6:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
434.50	**0**	435.56	0
434.52	0	435.58	0
434.54	0	435.60	0
434.56	0	435.62	0
434.58	0	435.64	0
434.60	0	435.66	0
434.62	0	435.68	0
434.64	0	435.70	0
434.66	0	435.72	0
434.68	0	435.74	0
434.70	0	435.76	0
434.72	0	435.78	0
434.74	0	435.80	0
434.76	0	435.82	0
434.78	0	435.84	0
434.80	0	435.86	0
434.82	0	435.88	0
434.84	0	435.90	0
434.86	0	435.92	0
434.88	0	435.94	0
434.90	0	435.96	0
434.92	0	435.98	0
434.94	0	436.00	0
434.96	0	436.02	0
434.98	0	436.04	0
435.00	0	436.06	0
435.02	0	436.08	0
435.04	0	436.10	0
435.06	0	436.12	0
435.08	0	436.14	0
435.10	0	436.16	0
435.12	0	436.18	0
435.14	0	436.20	0
435.16	0	436.22	0
435.18	0	436.24	0
435.20	0	436.26	0
435.22	0	436.28	0
435.24	0	436.30	0
435.26	0	436.32	0
435.28	0	436.34	0
435.30	0	436.36	0
435.32	0	436.38	0
435.34	0	436.40	0
435.36	0	436.42	0
435.38	0	436.44	0
435.40	0	436.46	0
435.42	0	436.48	0
435.44	0	436.50	0
435.46	0		
435.48	0		
435.50	0		
435.52	0		
435.54	0		

Events for Subcatchment PDA-1A: (1)

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	0.79	2,927	0.89
10-yr	5.87	2.33	10,124	3.08
100-yr	**12.10**	**5.21**	**28,675**	**8.71**

Events for Subcatchment PDA-1B: (2)

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	15.78	52,959	1.87
10-yr	5.87	29.46	130,354	4.61
100-yr	**12.10**	**52.59**	**303,534**	**10.73**

Events for Subcatchment PDA-1C: (3)

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	5.65	19,807	1.29
10-yr	5.87	13.12	57,795	3.77
100-yr	**12.10**	**26.16**	**148,558**	**9.68**

Events for Subcatchment PDA-1D: (4)

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	1.34	5,839	0.74
10-yr	5.87	4.52	21,953	2.79
100-yr	**12.10**	**10.80**	**65,081**	**8.28**

Events for Subcatchment PDA-2A: (6, 7)

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	16.97	73,215	0.84
10-yr	5.87	52.64	260,156	2.98
100-yr	**12.10**	**120.85**	**747,901**	**8.57**

Events for Subcatchment PDA-2B: (8)

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	7.19	17,237	2.32
10-yr	5.87	11.74	38,378	5.17
100-yr	**12.10**	**19.81**	**84,409**	**11.37**

Events for Subcatchment PDA-2C: (9)

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	6.79	20,100	1.17
10-yr	5.87	16.72	61,403	3.56
100-yr	**12.10**	**34.34**	**162,078**	**9.41**

Events for Subcatchment PDA-2D: (10)

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	7.73	17,981	1.64
10-yr	5.87	15.26	47,083	4.29
100-yr	**12.10**	**28.09**	**113,636**	**10.34**

Events for Subcatchment PDA-DB-1: (5)

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	1.33	3,384	0.89
10-yr	5.87	3.85	11,704	3.08
100-yr	**12.10**	**8.59**	**33,148**	**8.71**

Events for Subcatchment PDA-DB-2: (11)

Event	Rainfall (inches)	Runoff (cfs)	Volume (cubic-feet)	Depth (inches)
1-yr	2.97	2.11	5,369	0.89
10-yr	5.87	6.11	18,572	3.08
100-yr	**12.10**	**13.64**	**52,600**	**8.71**

Events for Reach DP-1:

Event	Inflow (cfs)	Outflow (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	2.52	2.52	**0.00**	**0**
10-yr	20.05	20.05	0.00	0
100-yr	**49.86**	**49.86**	0.00	0

Events for Reach DP-2:

Event	Inflow (cfs)	Outflow (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	17.37	17.37	**0.00**	**0**
10-yr	64.08	64.08	0.00	0
100-yr	**156.74**	**156.74**	0.00	0

Events for Pond BMH-1B:

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	15.78	15.78	15.78	0.00	437.74	**0**
10-yr	29.46	29.46	**19.32**	17.12	438.81	0
100-yr	**52.59**	**52.59**	15.92	**36.79**	**439.56**	0

Events for Pond BMH-2B:

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	7.19	7.19	7.19	0.00	458.11	**0**
10-yr	18.38	18.46	**10.10**	13.78	459.52	0
100-yr	**38.79**	**38.79**	8.79	**32.54**	**460.59**	0

Events for Pond BR-1C:

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	5.65	1.12	1.12	0.00	413.59	8,337
10-yr	13.12	11.96	11.96	0.00	413.95	11,488
100-yr	**26.16**	**24.03**	**15.70**	**8.32**	**414.30**	**14,599**

Events for Pond BR-2C:

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	6.79	0.47	439.55	10,838
10-yr	16.72	11.54	440.03	16,723
100-yr	**34.34**	**19.87**	**440.68**	**25,580**

Events for Pond BR-2D:

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	7.73	0.79	0.79	0.00	413.57	8,304
10-yr	15.26	11.91	11.91	0.00	413.95	11,724
100-yr	**28.09**	**25.01**	**21.50**	**3.52**	**414.17**	**13,792**

Events for Pond DB-1:

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	1.41	0.93	0.93	**0.00**	398.42	2,044
10-yr	38.48	15.72	15.72	0.00	401.83	27,963
100-yr	**77.49**	**38.16**	**38.16**	0.00	**404.95**	**74,069**

Events for Pond DB-2:

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	2.31	0.91	0.91	**0.00**	394.40	5,043
10-yr	35.28	12.77	12.77	0.00	396.09	29,775
100-yr	**84.62**	**36.76**	**36.76**	0.00	**397.91**	**63,427**

Events for Pond IS-1B:

Event	Inflow (cfs)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	15.78	0.62	**0.62**	**0.00**	0.00	437.74	28,379
10-yr	**19.32**	9.21	0.62	0.00	8.59	438.53	31,245
100-yr	15.92	**15.28**	0.62	0.00	**14.66**	**438.87**	**32,309**

Events for Pond IS-2B:

Event	Inflow (cfs)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	7.19	0.30	0.30	0.00	458.11	7,416
10-yr	**10.10**	8.09	**0.30**	7.79	459.46	8,546
100-yr	8.79	**19.30**	0.30	**18.99**	**460.49**	**8,569**

Events for Pond OCS-B6:

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
1-yr	0.00	0.00	434.50	**0**
10-yr	8.59	8.59	435.65	0
100-yr	**14.66**	**14.66**	**436.11**	0

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APPENDIX C

NYSDEC STORMWATER SIZING CALCULATIONS

Step 1 - Site Planning

	Practice	Description	Applicable	Project Specific Evaluation
Preservation of Natural Features and Conservation Design	**Preservation of Undisturbed Areas**	Delineate and protect undisturbed forests, native vegetated areas, riparian corridors, water bodies, wetlands, and natural terrain.	Yes	Approximately 21.7+/- Acres of land will remain undisturbed, in its natural state, which accounts for 42.9% of the total project parcel.
	Preservation of Buffers	Delineate and protect naturally vegetated buffers along perennial streams, rivers, shorelines, and wetlands.	Yes	There is an intermittent stream and wetland located on the project site. For the area adjacent to this water body, a 100-ft naturally vegetated buffer will be applied. The only disturbance that will occur within this buffer will include slope grading. This disturbance is necessarry to implement the proposed detention basin adjacent to the buffer.
	Reduction of Clearing and Grading	Limit clearing and grading to the minimum amount needed for roads, driveways, foundations, utilities and stormwater management facilities.	Yes	Clearing and grading will be limited to the area of disturbance and will be minimized to the greatest extent practical. The limits of all proposed clearing will be demarcated in the field with orange construction fencing, prior to construction, to prevent unnecessary removal of trees.
	Locating Development in Less Sensitive Areas	Avoid sensitive resource areas such as floodplains, steep slopes, erodible soils, wetlands, mature forests and critical habitats by locating development to fit the terrain in areas that will create the least impact.	Yes	The site has been designed to avoid sensitive resource areas such as the onsite wetland, to the greatest extent practical.
	Open Space Design	Use clustering, conservation design or open space design to reduce impervious cover, preserve more open space and protect water resources.	Yes	The site layout has been designed to maximize open space. Impervious surfaces have been minimized to the greatest extent practical and approximately 18.6+/- acres within the proposed disturbance will be maintained as vegetated open space.
	Soil Restoration	Restore the original properties and porosity of the soil by deep till and amendment with compost to reduce the generation of runoff and enhance the runoff reduction performance of post construction practices.	Yes	All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual.
	Roadway Reduction	Minimize roadway widths and lengths, below local requirements, to reduce site impervious area	Yes	The project proposes to reduce the roadway width to 24-ft, from the required 26-ft. The roadway flares to 26-ft at hydrant locations to provide necessary clearances for fire access.
	Sidewalk Reduction	Minimize sidewalk lengths and widths, below local requirements, to reduce site impervious area	Yes	Sidewalks are only proposed for the proposed ammenity area or for entrances to the proposed town homes. Sidewalk widths have been minimized to 3-ft for the proposed town homes but maintained at 5-ft for the amenity space.Quantity of sidewalk has been reduced to that required to ensure safe pedestrian access for the amenity space.

Step 1 - Site Planning

Reduction of Impervious Cover	**Driveway Reduction**	Minimize driveway lengths and widths, below local requirements, to reduce site impervious area	Yes	The project proposes to minimize the driveway widths to the extents practical.
	Cul-de-sac Reduction	Minimize the number of cul-de-sacs and incorporate landscaped areas to reduce their impervious cover.	No	The proposed Cul-de-sac does not propose a landscaped center to reduce impervious area. However the overall size was designed to be the minimum area required.
	Building Footprint Reduction	Reduce the impervious footprint of residences and commercial buildings by using alternate or taller buildings while maintaining the same floor to area ratio.	Yes	All new building area has been allocated to efficiently implement the intended use.
	Parking Reduction	Reduce imperviousness on parking lots by eliminating unneeded spaces, providing compact car spaces and efficient parking lanes, reducing stall dimensions below local requirements, using porous pavement surfaces in overflow parking areas, and using multi-storied parking decks where appropriate.	Yes	The project minimizes the number of parking stalls by using the minimum nubmer required for the amenity space and provivind parking within garage spaces and driveways for the town homes. A small amount of spaces are provided around the development.

Step 2 - Calculate Water Quality Volume

Is this project subject to Section 4.3 of the NYS Design Manual for Enhanced Phosphorus Removal?						Yes		
What is the nature of this construction project?			New Construction					
Design Point:	1 & 2							
P=	2.97	inches		*Enter 1 Year 24 Hour Design Storm as P*				
Calculate Required WQv								
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**SMP Description**		
1	0.91	0.06	7	0.11	1,102			
2	7.79	4.91	63	0.62	51,887	Underground Infiltration System		
3	4.23	1.38	33	0.34	15,654	Filtration Bioretention		
4	2.16	0.02	1	0.06	1,373			
5	1.05	0.00	0	0.05	0			
6	9.70	0.30	3	0.08	8,142			
7	14.34	0.00	0	0.05	0	Conservation of Natural Areas		
8	2.05	1.75	85	0.82	18,057	Underground Infiltration System		
9	4.75	0.89	19	0.22	11,207	Filtration Bioretention		
10	3.03	1.54	51	0.51	16,618	Filtration Bioretention		
11	1.66	0.00	0	0.05	0			
12								
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30								
Total	51.66	10.86	21	0.24	**133232**	**Required WQv**	**3.06**	**af**

Steps 3 and 5 - Apply RR Techniques and Standard SMPs

Runoff Reduction Volume and Treated Volumes						
	Runoff Reduction Techiques/Standard SMPs		**Total Contributing Area**	**Total Contributing Impervious Area**	**WQv Reduced (RRv)**	**WQv Treated**
			(acres)	**(acres)**	**(cf)**	**(cf)**
RR Techniques	Conservation of Natural Areas	RR-1	14.34		36,990	
	Sheet Flow to Riparian Buffer/Filter Strip	RR-2	0.00	0.00	0	
	Tree Planting/Tree Pit/Tree Trench	RR-3	0.00	0.00	0	
	Disconnection of Rooftop Runoff	RR-4		0.00	0	
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	0.00	0.00	0	
	Rainwater Harvesting Systems	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	0.00	0.00	0	
	Green Roof (Extensive & Intensive)	RR-10	0.00	0.00	0	
	Stream Daylighting	RR-11				
Standard SMPs w/ RRv Capacity	Infiltration Trench	I-1	0.00	0.00	0	0
	Infiltration Basin	I-2	0.00	0.00	0	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4	11.88	8.41	0	0
	Infiltration Bioretention	F-4	0.00	0.00	0	0
	Filtration Bioretention	F-5	12.00	3.81	22,107	21,372
	Bioslope	F-6	0.00	0.00	0	0
	Dry swale	O-1	0.00	0.00	0	0
Standard SMPs	Micropool Extended Detention	P-1	0.00	0.00		0
	Wet Pond	P-2	0.00	0.00		0
	Wet Extended Detention	P-3	0.00	0.00		0
	Multiple Pond System	P-4	0.00	0.00		0
	Shallow Wetland	W-1	0.00	0.00		0
	Extended Detention Shallow Wetland	W-2	0.00	0.00		0
	Pond/Wetland System	W-3	0.00	0.00		0
	Pocket Wetland	W-4	0.00	0.00		0
	Gravel Wetland	W-5	0.00	0.00		0
	Surface Sand Filter	F-1	0.00	0.00		0
	Underground Sand Filter	F-2	0.00	0.00		0
	Perimeter Sand Filter	F-3	0.00	0.00		0
	Wet Swale	O-2	0.00	0.00		0
Alt. SMPs	Flow Based Alternative Practice	-	17.09	9.58		0
	Volume Based Alternative Practice	-				
	Totals by RR Technique	→	14.34	0.00	36,990	
	Totals by Standard SMP w/RRV	→	23.88	12.22	22,107	21,372
	Totals by Standard SMP	→	0.00	0.00		0
	Totals by Alternative SMP	→	17.09	9.58		0
	Totals (RR Techniques + all SMPs)	→	55.32	21.81	59,097	21,372

(1)

(1) RRv has been provided from the standard SMP practice "Undgerground Infiltration System." The systems infiltrate the WQv for their respective drainage areas which account for an additional 70,196 cf. Accordingly, we meet the requirements for the minimum RRv and WQv treated.

Step 3 - Evaluation of RR Techniques and Standard SMPs with RRv Capacity

	Practice	Description	Applicable	Project Specific Evaluation
RR Techniques	**Conservation of Natural Areas (RR-1)**	Retain the pre-development hydrologic and water quality characteristics of undisturbed natural areas by permanently conserving these areas on a site. Undisturbed natural areas include: forest retention areas; reforestation areas; stream and river corridors; shorelines; wetlands, vernal pools, and associated vegetated buffers; and undisturbed open space.	Yes	Approximately 14.1+/- acres will be placed into permanent conservation, which accounts for 28.4% of the total property.
	Sheet Flow to Riparian Buffer/Filter Strip (RR-2)	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.	No	Sheet flow to riparian buffers or grass filter strips is not proposed at this time. The project proposes treatment by RR techniques, Standard SMPs with RRv capacity, or Standard SMPs without RRv capacity. .
	Tree Planting/Tree Pit/Tree Trench (RR-3)	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.	Yes	Tree plantings are proposed on site. However, credit for these trees will not be taken toward area / volume reduction in the RRv calculations.
	Disconnection of Rooftop Runoff (RR-4)	Direct runoff from rooftop areas and upland overland runoff flow to designated pervious areas to reduce runoff volumes and rates.	Yes	Some of the proposed building roof(s) will be directed to downspouts with splash blocks and vegetated areas, which will promote sheet flow and filtering. However, credit for rooftop disconnect will not be taken toward an impervious area reduction in the RRv calculations.
	Vegetated Swale (RR-5)	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.	Yes	Vegetated swales are proposed throughout the site to convey flows and filtering. However, credit will not be taken toward a volume reduction in the RRv calculations.

Step 3 - Evaluation of RR Techniques and Standard SMPs with RRv Capacity

RR Techniques	**Rain Garden (RR-6)**	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.	No	Rain gardens are not proposed for the project.
	Stormwater Planter (RR-7)	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 water quality.	No	Stormwater Planters are not proposed for projet.
	Rainwater Harvesting System (RR-8)	Capture and store stormwater runoff to be used for irrigation systems or filtered and reused for non-contact activities.	No	A rainwater harvesting system is not proposed for the project.
	Porous Pavement (RR-9)	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.	No	Porous pavement is not propsoed for the project.
	Green Roof (RR-10)	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.	No	Green roofs are not proposed for the project.
	Stream Daylighting (RR-11)	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.	No	Stream daylighting is not proposed for the project.
	Infiltration Trench (I-1)	An infiltration practice that stores the water quality volume in the void spaces of a gravel trench before it is infiltrated into the ground.	No	Infiltration trenches are not proposed for the project.
	Infiltration Basin (I-2)	An infiltration practice that stores the water quality volume in a shallow depression, before it is infiltrated it into the ground.	No	Infiltration basins are not proposed for the project.

Step 3 - Evaluation of RR Techniques and Standard SMPs with RRv Capacity

Standard SMPs with RRv Capacity	**Dry Well (I-3)**	An infiltration practice similar in design to the infiltration trench, and best suited for treatment of rooftop runoff.	No	Dry wells are not proposed for the project.
	Underground Infiltration System (I-4)	An infiltration practice below grade that stores the water quality volume in pre-manufactured pipes, vaults or other modular structures, before it is infiltrated into the ground.	Yes	Underground infiltration systems are proposed on-site to treat new impervious surfaces. Calculations have been provided in the SWPPP.
	Infiltration Bioretention (F-4)	A shallow depression that treats stormwater as it flows through a soil matrix, before it is infiltrated into the ground.	No	Infiltration bioretention is not proposed for the project.
	Filtration Bioretention (F-5)	A shallow depression that treats stormwater as it flows through a soil matrix and is returned to the storm drain system.	Yes	Filtration bioretention will be used to treat new impervious surfaces. Calculations have been provided in the SWPPP.
	Bioslope (F-6)	Permeable engineered soil media that is installed along embankments or other slopes, designed to capture and treat stormwater runoff from adjacent paved areas.	No	Bioslopes are not proposed for the project.
	Dry Swale (O-1)	An open drainage channel or depression explicitly designed to detain and promote the filtration of stormwater runoff into the soil media.	No	Dry Swales are not proposed for the project.

Step 4 - Calcuate Minimum RRv Required

Enter the Soils Data for the site		
Hydrologic Soil Group	Acres	S
A	0.00	55%
B	0.00	40%
C	10.86	30%
D	0.00	20%
Total Area	10.86	

Calculate the Minimum RRv		
S =	**0.30**	
Impervious =	10.86	*acres*
Precipitation	2.97	*inches*
Rv	0.95	
Minimum RRv	**0.766**	***af***
	33367	cf

Conservation of Natural Areas (RR-1)

Design Point:	**1 & 2**	**Drainage Area Number**	7

Design Criteria		
Does the conservation area proposed have a minimum contiguous area of 10,000	Yes	
Is the conservation area permanently protected through establishment of a legal conservation easement?	Yes	
Does the conservation area receive runoff from existing or new impervious areas?	No	
Is Sheet Flow to Riparian Buffer or another area based practice already being used for this area?	No	

Sizing Criteria

	Contributing Area (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)
Required WQv	51.66	10.86	21	0.24	133,232	2.97
Subtract Area Conserved	14.34					
Area Reduction WQv	37.32	10.86		0.24	96,242	2.97

Area Reduction Adjustments

RRv Provided	**36,990**	**cf**

Conservation of Natural Areas (RR-1)

Total Area	14.34	acres
Total RRv Provided	36,990	cf

Underground Infiltration (I-4)

Design Point:	1 & 2

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
2	7.79	4.91	63	0.62	51,887	2.97	Underground Infiltration System

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	3.75	
Is the contributing area to the practice an "Infiltration Restricted" stormwater hotspot?	No	
Is the contributing area to the practice an "Infiltration Prohibited" stormwater hotspot?	No	
Is the contributing area greater than 10 acres?	No	
Enter depth to seasonal high water table (ft)	NE	
Enter depth to bedrock (ft)	2	
Enter pretreatment volume provided (cf)	52959	

Sizing Criteria					
		Value	Units	Notes	
Water Quality Volume	WQv	51887	cf		
Depth of Bottom Stone	db	1.0	ft		
Required Surface Area	Ab	51,887	sf		
Enter Surface Area Provided	Ab	6380	sf	Does not meet design criteria	
Enter Volume of Stone	Vs	10632	cf	Volume of stone shall account for 40% voids	
Enter Volume of System	Vsys	17630	cf	Volume of system shall exclude stone	
Water Quality Volume Provided	WQv	28262	cf	Does not meet sizing criteria	(1)

Determine Runoff Reduction		
RRv Provided	**0**	***cf***

(1) The system has been designed to account for both storage and infiltration. Based on the hydrologic model (Appendix B), the system infiltrates the entire WQv volume of 52,959 cf. Accordingly, the WQv is met.

Underground Infiltration (I-4)

Design Point:	1 & 2

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
8	2.05	1.75	85	0.00	18,057	0.00	Underground Infiltration System

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	5.25	
Is the contributing area to the practice an "Infiltration Restricted" stormwater hotspot?	No	
Is the contributing area to the practice an "Infiltration Prohibited" stormwater hotspot?	No	
Is the contributing area greater than 10 acres?	No	
Enter depth to seasonal high water table (ft)	NE	
Enter depth to bedrock (ft)	2	
Enter pretreatment volume provided (cf)	17237	

Sizing Criteria				
		Value	Units	Notes
Water Quality Volume	WQv	18057	cf	
Depth of Bottom Stone	db	1.0	ft	
Required Surface Area	Ab	18,057	sf	
Enter Surface Area Provided	Ab	2465	sf	Does not meet design criteria
Enter Volume of Stone	Vs	3762.57	cf	Volume of stone shall account for 40% voids
Enter Volume of System	Vsys	4767.34	cf	Volume of system shall exclude stone
Water Quality Volume Provided	WQv	8529.91	cf	Does not meet sizing criteria (1)

Determine Runoff Reduction		
RRv Provided	**0**	***cf***

(1) The system has been designed to account for both storage and infiltration. Based on the hydrologic model (Appendix B), the system infiltrates the entire WQv volume of 17,237 cf. Accordingly, the WQv is met.

Underground Infiltration (I-4)

Total Area	11.88	acres
Total Impervious	8	acres
Total RRv Provided	0	cf
Total WQv Provided	0	cf

Filtration Bioretention (F-5)

Design Point:	1 & 2

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
3	4.23	1.38	33	0.34	15,654	2.97	Filtration Bioretention

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	NE	
Enter depth to bedrock (ft)	NE	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	10	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	6523	sf	
Enter Provided Filter Area	Af	6932	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	16636.8	cf	

Calculate Runoff Reduction			
RRv Provided	**6,655**	***cf***	
WQv Treated	8999	cf	This is the portion of the WQv that is not reduced in the practice.

Filtration Bioretention (F-5)

Design Point:	1 & 2

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
9	4.75	0.89	19	0.22	11,207	2.97	Filtration Bioretention

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	NE	
Enter depth to bedrock (ft)	NE	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	10	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	4670	sf	
Enter Provided Filter Area	Af	9155	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	21972	cf	

Calculate Runoff Reduction			
RRv Provided	**8,789**	***cf***	
WQv Treated	2418	cf	This is the portion of the WQv that is not reduced in the practice.

Filtration Bioretention (F-5)

Design Point:	1 & 2

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
10	3.03	1.54	51	0.51	16,618	2.97	Filtration Bioretention

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	0	Underdrains required
Is the contributing area to the practice a stormwater hotspot?	No	
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?	No	
Is contributing area greater than max. contributing area?	No	
Enter depth to seasonal high water table (ft)	NE	
Enter depth to bedrock (ft)	NE	
Is pretreatment provided, in conformance with Section 6.4.3.1	Yes	
Enter average height of ponding (ft)	0.5	
Enter depth of surface layer (inches)	3	
Enter depth of filter media (ft)	2.5	
Enter depth of drainage layer (inches)	10	
Enter slope of maintenance access (%)	10	
Enter width of maintenance access (ft)	12	

Sizing Criteria				
		Value	Units	Notes
Permeability Flow Rate	k	1	ft/day	
Filter Time	tf	2	days	
Required Filter Area	Af	6924	sf	
Enter Provided Filter Area	Af	6941	sf	
Recalculated Water Quality Volume (based on provided filter area)	WQv calc	16658.4	cf	

Calculate Runoff Reduction			
RRv Provided	**6,663**	***cf***	
WQv Treated	9955	cf	This is the portion of the WQv that is not reduced in the practice.

Filtration Bioretention (F-5)

Total Area	12.00	acres
Total Impervious	4	acres
Total RRv Provided	22,107	cf
Total WQv Provided	21,372	cf

Flow Based Alternative Practice

Design Point:	1 & 2

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (ft^3)	**Precipitation** (in)	**Description**
2	7.79	4.91	63	0.62	51,887	2.97	Underground Infiltration System

Design Criteria		
Is the alternative practice included in the NJCAT Verification Database, NJDEP list of approved Manufactured Treatment Devices or TAPE list of Approved Technologies for General Use Level?	Yes	
Is the flow based practice proposed for area of new development?	Yes	Practice must be included on NYSDEC list for Verified Proprietary Practices for New Development
If proposed for new development, is the practice included on NYSDEC list for Verified Proprietary Practices for New Development?	No	Practice is not approved for new development
Is the practice being designed off-line?	Yes	Design must include flow diversion
If designed off-line, has flow diversion been	Yes	
Enter Extreme Flood peak flow rate (cfs)		Not applicable
Enter alternative practice bypass capacity (cfs)		Not applicable
Enter name and manufacturer of alternative practice	Contech - Casacade Separator (CS-12)	

Sizing Criteria				
		Value	Units	Notes
Water Quality Peak Flow Rate	WQf	15.78	cfs	Taken from hydrologic modeling
Enter Maximum Treatment Flow Rate (MTFR) of Alternative Practice	Q	16.2	cfs	

Determine the Water Quality Volume Treated			
Water Quality Volume Treated	**0**	**cf**	

Flow Based Alternative Practice

Design Point:	1 & 2

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (ft^3)	**Precipitation** (in)	**Description**
3	4.23	1.38	33	0.34	15,654	2.97	Filtration Bioretention

Design Criteria		
Is the alternative practice included in the NJCAT Verification Database, NJDEP list of approved Manufactured Treatment Devices or TAPE list of	Yes	
Is the flow based practice proposed for area of new development?	Yes	Practice must be included on NYSDEC list for Verified Proprietary Practices for New
If proposed for new development, is the practice included on NYSDEC list for Verified Proprietary	No	Practice is not approved for new development
Is the practice being designed off-line?	No	Practice must have adequate bypass capacity
If designed off-line, has flow diversion been	No	FALSE
Enter Extreme Flood peak flow rate (cfs)	26.16	
Enter alternative practice bypass capacity (cfs)	30	
Enter name and manufacturer of alternative practice	Contech - Casacade Separator (CS-8)	

Sizing Criteria				
		Value	Units	Notes
Water Quality Peak Flow Rate	WQf	5.65	cfs	Taken from hydrologic modeling
Enter Maximum Treatment Flow Rate (MTFR) of Alternative Practice	Q	7.2	cfs	

Determine the Water Quality Volume Treated		
Water Quality Volume Treated	**0**	**cf**

Flow Based Alternative Practice

Design Point:	1 & 2

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (ft^3)	**Precipitation** (in)	**Description**
8	2.05	1.75	85	0.82	18,057	2.97	Underground Infiltration System

Design Criteria		
Is the alternative practice included in the NJCAT Verification Database, NJDEP list of approved Manufactured Treatment Devices or TAPE list of	Yes	
Is the flow based practice proposed for area of new development?	Yes	Practice must be included on NYSDEC list for Verified Proprietary Practices for New
If proposed for new development, is the practice included on NYSDEC list for Verified Proprietary	No	Practice is not approved for new development
Is the practice being designed off-line?	Yes	Design must include flow diversion
If designed off-line, has flow diversion been	Yes	
Enter Extreme Flood peak flow rate (cfs)		Not applicable
Enter alternative practice bypass capacity (cfs)		Not applicable
Enter name and manufacturer of alternative practice	Contech - Casacade Separator (CS-8)	

Sizing Criteria				
		Value	Units	Notes
Water Quality Peak Flow Rate	WQf	7.19	cfs	Taken from hydrologic modeling
Enter Maximum Treatment Flow Rate (MTFR) of Alternative Practice	Q	7.2	cfs	

Determine the Water Quality Volume Treated			
Water Quality Volume Treated	**0**	**cf**	

Flow Based Alternative Practice

Design Point:	1 & 2

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (ft^3)	**Precipitation** (in)	**Description**
10	3.03	1.54	51	0.51	16,618	2.97	Filtration Bioretention

Design Criteria		
Is the alternative practice included in the NJCAT Verification Database, NJDEP list of approved Manufactured Treatment Devices or TAPE list of	Yes	
Is the flow based practice proposed for area of new development?	Yes	Practice must be included on NYSDEC list for Verified Proprietary Practices for New
If proposed for new development, is the practice included on NYSDEC list for Verified Proprietary	No	Practice is not approved for new development
Is the practice being designed off-line?	No	Practice must have adequate bypass capacity
If designed off-line, has flow diversion been	No	FALSE
Enter Extreme Flood peak flow rate (cfs)	28.09	
Enter alternative practice bypass capacity (cfs)	30	
Enter name and manufacturer of alternative practice	Contech - Casacade Separator (CS-10)	

Sizing Criteria				
		Value	Units	Notes
Water Quality Peak Flow Rate	WQf	7.73	cfs	Taken from hydrologic modeling
Enter Maximum Treatment Flow Rate (MTFR) of Alternative Practice	Q	11.3	cfs	

Determine the Water Quality Volume Treated			
Water Quality Volume Treated	**0**	**cf**	

Flow Based Alternative Practice

Total Area	17.09	acres
Total Impervious	9.58	acres
Total RRv Provided	0	cf
Total WQv Provided	0	cf

APPENDIX D

SOIL TESTING DATA

CARLIN • SIMPSON & ASSOCIATES, LLC

Consulting Geotechnical and Environmental Engineers

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25 October 2024

Toll Brothers
42 Old Ridgebury Rd.
Danbury, CT 06810

Attn: Mr. Kevney Moses
Land Entitlement Manager, NY Metro

Re: Letter Report on Subsurface Soil and Groundwater Investigation
Proposed Residential Development
Supplemental Stormwater Management System Study
2300 Catherine Street
Cortlandt, NY (CSA Job #23-148)

Dear Mr. Moses:

In accordance with your authorization, we have completed a supplemental subsurface investigation. The purpose of this supplemental investigation was to further determine the nature and engineering properties of the subsurface soil and the groundwater conditions at the site and to preliminarily determine the permeability rate of the site soils. This letter only pertains to the test pits excavated in late August and early September 2024.

To date we have completed two stormwater management system studies. The first letter was prepared with a revised date 17 January 2024 and covers TP-1 through TP-23, including additional test pits TP-13A and TP-13B. Infiltration tests were performed in 10 of these locations. The second stormwater letter prepared was dated 18 June 2024 and covers TP-101 through TP-108. Infiltration tests were not performed at any of these locations due to shallow groundwater, shallow seasonal high groundwater, and shallow bedrock.

Summary of Subsurface Observations – August/September 2024 Investigation

During this supplemental study, thirty (30) test pits were performed to determine the subsurface soil conditions and depth to groundwater within the proposed stormwater system area. Groundwater was not encountered in the test pits to depths ranging from 3’8” to 10’0”. Evidence of seasonal high groundwater (i.e. mottling) was encountered in test pits B-4, B-12, and B-14 at depths of 2’10”, 2’6”, and 1’6” (elevations +441.6, +411.6, and +413.5) below the existing ground surface. Completely weathered bedrock was encountered in 7 of the test pits at depths ranging from 2’0” to 7’0” (elevations +408.0 to +516.7) below the existing ground surface. Excavator bucket refusal was encountered on weathered rock to harder bedrock in 6 test pits at depths ranging from 5’6” to 8’0” (elevations +407.0 to +513.2) below the existing ground surface. Excavator bucket refusal on boulders or cemented sands

occurred in 9 test pits at depths ranging from 4’8” to 8’8” (elevations +423.3 to +518.8) below the existing ground surface.

A summary of the test pit observations can be found in Table 1 below.

Table 1 – Summary of Stormwater Test Pit Observations

Test Pit No.	Existing Ground Surface Elevation	Observed Depth to Groundwater (Elevation)	Depth to Probable Bedrock, Boulders, or Bucket Refusal (Elevation)
B-1	+419.8	NWE	NE to 10’0”
B-2	+425.9	NWE	NE to 10’0”
B-3	+437.7	NWE	BO @ 5’4” (+432.4)
B-4	+444.5	NWE SHGW @ 2’10” (+441.6)	NE to 9’6”
B-5	+443.2	NWE	NE to 7’0”
B-5A	+438.0	NWE	NE to 8’0”
B-6	+445.2	NWE	**3’10” to 6’8” (+441.4 to +438.5)
B-7	+440.9	NWE	NE to 6’0”
B-7A	+436.0	NWE	CS @ 5’8” (+430.3)
B-7B	+434.0	NWE	CS @ 6’6” (+427.5)
B-8	+444.0	NWE	NE to 7’0”
B-9	+434.0	NWE	CWR @ 4’0” (+430.0)
B-9A	+431.0	NWE	CS @ 7’8” (+423.3)
B-10	+436.2	NWE	CWR @ 2’9” (+433.5)
B-11	+416.4	NWE	CWR @ 3’6” (+412.9) WR @ 6’9” (+409.7)
B-12	+414.1	NWE SHGW @ 2’6” (+411.6)	NE to 8’6”
B-13	+418.7	NWE	BR @ 6’10” (+411.9)
B-14	+415.0	NWE SHGW @ 1’6” (+413.5)	CWR @ 7’0” (+408.0) WR @ 8’0” (+407.0)
B-15	+454.2	NWE	CWR @ 2’10” (+451.4) WR @ 7’2” (+447.0)
B-16	+457.1	NWE	NE to 10’0”
B-17	+459.2	NWE	BO @ 8’4” (+450.9)
B-18	+454.2	NWE	BR @ 5’7” (+448.6)
B-18A	Utility Conflict – No Test Pit		
B-19	+455.2	NWE	BO @ 4’8” (+450.5)
B-20	+496.4	NWE	BO @ 8’8” (+487.7)
B-21	+499.5	NWE	BO @ 7’2” (+492.3)
B-22	+523.4	NWE	NE to 8’6”
B-23	+525.8	NWE	CS @ 7’0” (+518.8)
B-24	+518.6	NWE	CWR @ 3’8” (+514.9)
B-25	+518.7	NWE	CWR @ 2’0” (+516.7) WR @ 5’6” (+513.2)

NE – Not Encountered
NWE – No Groundwater Encountered
CWR – Completely Weathered Rock
BR – Excavator Bucket Refusal on Harder Bedrock
WR – Excavator Bucket Refusal on Weathered Bedrock
BO – Excavator Bucket Refusal on Boulders
CS – Excavator Bucket Refusal on Cemented Sands
(**) – Bucket Refusal on Sloping Bedrock or Large Boulder
SHGW – Evidence of Seasonal High Groundwater (i.e. mottling)

Stormwater Management System – August/September 2024 Investigation

We understand that the planned construction will include a new stormwater management system. The stormwater management system will consist of 5 individual underground infiltration basins. The bottom of basin elevations range from +434.33 to +518.50. In addition, 4 bioretention basins are planned across the site and are known as Bioretention Basin 1B-1, 1B-2, 1E, and 2E. The invert elevations of the bioretention basins are unknown at the time of this letter.

During this study, sixteen (16) infiltration tests were performed for the proposed stormwater management areas. The infiltration tests were performed in accordance with NYSDEC procedures. The results of infiltration tests that were performed are summarized in Table 2 below. The vertical permeability rate (K_m) was also calculated using the equation below.

$$K_m = 1.142R_t \times \frac{\left[Ln\left(\frac{h_1}{h_2}\right)\right]}{(t_2 - t_1)}$$

Table 2 – Summary of Infiltration Test Results

Test Pit No.	Existing Ground Surface Elevation	Test Depth	Field Infiltration Rate (in/hr)	Calculated Mean Permeability Rate (in/hr)
B-5	+443.2	4'0" (+439.3)	Less than 1.0	0.04
B-5A	+438.0	4'0" (+434.0)	Presoak 0.90	NA
B-6	+445.2	6'0" (+439.3)	0.0	0.0
B-7	+440.9	2'0" (+439.3)	3.0	0.17
B-7A	+436.0	2'0" (+434.0)	8.5	0.55
B-7B	+434.0	2'0" (+432.0)	7.25	0.46
B-8	+444.0	4'6" (+439.3)	Less than 1.0	0.02
B-9	+434.0	2'0" (+432.2)	2.0	0.11
B-9A	+431.0	2'0" (+429.0)	7.0	0.44
B-10	+436.2	4'0" (+432.2)	12.0	0.88
B-18	+454.2	6'0" (+448.0)	5.0	0.30
B-19	+455.2	7'0" (+448.0)	16.0	1.4
B-20	+496.4	7'0" (+491.5)	9.5	0.65
B-21	+499.5	8'6" (+491.5)	17.75	1.72
B-22	+523.4	6'0" (+516.5)	11.5	0.84
B-22A	+521.0	4'6" (+516.5)	9.75	0.67

Should stormwater management areas be planned in other portions of the property, they should be evaluated on a case-by-case basis. The stormwater management systems must be designed in accordance with the applicable New York State Department of Environmental Conservation (NYSDEC) regulations and the New York State Stormwater Management Design Manual. The testing requirements are outlined in Appendix D of the manual.

GENERAL

The findings, conclusions and recommendations presented in this letter report represent our professional opinions concerning subsurface conditions at the site. The opinions presented are relative to the dates of our sitework and should not be relied on to represent conditions at later dates or at locations not explored.

Regardless of the thoroughness of a geotechnical exploration, there is the possibility that conditions between test pits will differ from those encountered at specific boring or test pit locations. This report has been prepared in accordance with generally accepted geotechnical engineering practice.

This report is provided for the exclusive use of Toll Brothers and the project specific design team and may not be used or relied upon in connection with other projects or by other third parties. Carlin-Simpson & Associates disclaims liability for any such third party use or reliance without express written permission. Use of this report or the findings, conclusions or recommendations by others will be at the sole risk of the user. Carlin-Simpson & Associates is not responsible or liable for the interpretation by others of the data in this report, nor their conclusions, recommendations or opinions.

Thank you for allowing us to assist you with this project. Should you have any questions or comments, please contact this office.

Very truly yours,

CARLIN-SIMPSON & ASSOCIATES, LLC



MICHAL WROBLEWSKI, P.E.
Project Engineer



ROBERT B. SIMPSON, P.E.
Principal



File No. 23-148

Proposed Residential Development
2300 Catherine Street
Cortlandt, NY
23-148

B-5A (Elev. +438)

0'0"-0’8"	Brown topsoil with many roots	
0’8"-3’3"	Brown coarse to fine Sand some (+) Silt, some coarse to fine Gravel, with cobbles	dense, moist
3’3"-8’0”	Brown coarse to fine Sand, some Silt, some coarse to fine Gravel with cemented sands and cobbles	very dense, moist
	No groundwater encountered	

B-7A (Elev. +436)

0’0”-0’8”	Brown topsoil with many roots	
0’8”-2’6”	Brown coarse to fine Sand, some (+) Silt, some coarse to fine Gravel, with cobbles	dense, moist
2’6”-5’8”	Brown coarse to fine SAND, some (+) Silt, some coarse to fine Gravel, with cemented sands	very dense, moist
5’8”	Refusal on excavator in very dense material	
	No groundwater encountered	

B-7B (Elev. +434)

0’0”-0’6”	Brown topsoil with roots	
0’6”-3’0”	Light brown coarse to fine Sand, and Silt, little coarse to fine Gravel	medium dense, moist
3’0”-6’6”	Brown coarse to fine Sand, some (+) Silt, some coarse to fine Gravel, with cemented sands and cobbles	very dense, moist
6’6”	Refusal on excavator in very dense material	
	No groundwater encountered	

B-9A (Elev. +431)

0’0”-0’7”	Brown topsoil with many roots	
0’7”-3’0”	Brown coarse to fine Sand, some (+) Silt, little (+) coarse to fine Gravel, with cobbles	dense, moist
3’0”-7’8”	Brown coarse to fine Sand, some (+) Silt, some coarse to fine Gravel, with cemented sands	very dense, moist
7’8”	Refusal on excavator in very dense material	
	No groundwater encountered	

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Geotechnical & Environmental

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B-1 (Elev. +419.8)

0'0"-0'6"	Brown topsoil with many roots	
0'6"-10'0"	Brown coarse to fine SAND, some (+) Silt, little coarse to fine Gravel	medium dense, moist
	No groundwater encountered	

B-2 (Elev. +425.85)

0'0"-0'8"	Brown topsoil with roots	
0'8"-10'0"	Brown coarse to fine SAND, some (+) Silt, little (-) coarse to fine Gravel, with cobbles, boulders	medium dense, moist
	No groundwater encountered	

B-3 (Elev. +437.7)

0'0"-0'10"	Brown topsoil with many roots	
0'10"-5'4"	Brown coarse to fine SAND, some (+) Silt, little coarse to fine Gravel, with cobbles	medium dense, moist
5'4"	Refusal on boulders	
	No groundwater encountered	

B-4 (Elev. +444.45)

0’0”-0’10”	Brown topsoil	
0’10”-2’10”	Brown coarse to fine SAND, some (-) Silt, little coarse to fine Gravel, with cemented sands	medium dense, moist
2’10”-9’6”	Mottled gray, orange brown coarse to fine SAND, some (+) Silt, with cemented sands	dense, moist
	No groundwater encountered	

B-5 (Elev. +443.2)

0’0”-0’6”	Brown topsoil	
0’6”-3’2”	Brown coarse to fine SAND, some Silt, little coarse to fine Gravel	medium dense, moist
3’2”-7’0”	Brown coarse to fine SAND, some (+) Silt, trace coarse to fine Gravel, with cemented sands, cobbles and boulders	very dense, moist
	No groundwater encountered	

B-6 (Elev. +445.18)

0’0”-0’6”	Brown topsoil	
0’6”-3’10”	Brown coarse to fine SAND, some Silt, trace coarse to fine Gravel, with cobbles	medium dense, moist
3’10”-6’8”	Sloping bedrock or boulder	
	No groundwater encountered	

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B-7 (Elev. +440.9)

0'0"-0'7"	Brown topsoil with many roots	
0'7"-6'0"	Brown coarse to fine SAND, some (+) Silt, trace (+) coarse to fine Gravel, with occasional cobbles, boulders	dense, moist
	No groundwater encountered	

B-8 (Elev. +444.0)

0'0"-0'7"	Brown topsoil with roots	
0'7"-2'6"	Brown coarse to fine SAND, some Silt, trace coarse to fine Gravel	medium dense, moist
2'6"-7'0"	Brown coarse to fine SAND, some (-) Silt, little coarse to fine Gravel, with cemented sands, cobbles	dense, moist
	No groundwater encountered	

B-9 (Elev. +434.0)

0'0"-0'7"	Brown topsoil	
0'7"-4'0"	Brown coarse to fine SAND, little (+) Silt, little (+) coarse to fine Gravel	medium dense, moist
4'0"-7'0"	Brown Sandstone completely weathered	very dense, moist
	No groundwater encountered	

B-10 (Elev. +436.19)

0'0"-0'6"	Brown topsoil	
0'6"-2'9"	Brown coarse to fine SAND, some (+) Silt, little coarse to fine Gravel	dense, moist
2'9"-6'0"	Brown Sandstone completely weathered	very dense, moist
	No groundwater encountered	

B-11 (Elev. +416.36)

0'0"-0'10"	Brown topsoil	
0'10"-3'6"	Brown coarse to fine SAND, little (+) Silt, little coarse to fine Gravel, with occasional cobbles and boulders	medium dense, moist
3'6"-6'9"	Brown Sandstone completely weathered	very dense, moist
6'9"	Refusal on excavator on weathered rock	
	No groundwater encountered	

B-12 (Elev. +414.10)

0'0"-0'7"	Brown topsoil	
0'7"-2'6"	Brown coarse to fine SAND, some Silt, little (+) coarse to fine Gravel, with cobbles (south side mottled)	medium dense, moist
2'6"-7'6"	Mottled gray, orange brown coarse to fine SAND, some (+) Silt	dense, moist
7'6"-8'6"	Mottled gray, orange brown Clayey SILT little (+), coarse to fine Sand	stiff, moist
	No groundwater encountered	

B-13 (Elev. +418.73)

0'0"-0'7"	Brown topsoil	
0'7"-3'6"	Brown course to fine SAND, some (+) Silt, little (-) coarse to fine Gravel	medium dense, moist
3'6"-6'10"	Mottled gray, orange brown coarse to fine SAND, and Silt	dense, moist
6'10"	Refusal on excavator on possible bedrock No groundwater encountered	

B-14 (Elev. +415.0)

0'0"-0'6"	Brown topsoil with roots	
0'6"-1'6"	Brown coarse to fine SAND, some (+) Silt, little coarse to fine Gravel	medium dense, moist
1'6"-7'0"	Mottled gray, orange brown SILT some, coarse to fine Sand	stiff, moist
7'0"-8'0"	Brown Sandstone completely weathered	very dense, moist
8'0"	Refusal on excavator on weathered rock	
	Groundwater encountered @ 7'6" (slow inflow)	

B-15 (Elev. +454.18)

0'0"-0'7"	Brown topsoil	
0'7"-2'10"	Brown coarse to fine SAND, some (-) Silt, some coarse to fine Gravel, with cobbles, boulders	dense, moist
2'10"-7'2"	Brown coarse to fine SAND, some Silt, some coarse to fine Gravel, Sandstone completely weathered	very dense, moist
7'2"	Refusal on excavator on weathered rock	
	No groundwater encountered	

B-16 (Elev. +457.06)

0’0”-0’8”	Brown topsoil	
0’8”-10’0”	Brown coarse to fine SAND, some (-) Silt, some coarse to fine Gravel, with cobbles, boulders	dense, moist
	No groundwater encountered	

B-17 (Elev. +459.16)

0’0”-0’8”	Brown topsoil with many roots	
0’8”-8’4”	Brown coarse to fine SAND, some (-) Silt, some coarse to fine Gravel, with cobbles, boulders	dense, moist
8’4”	Refusal on excavator on boulders	
	No groundwater encountered	

B-18 (Elev. +454.22)

0'0"-1’0"	Dark brown topsoil with roots	
1’0"-4'0"	Brown, coarse to fine Sand, little (+) Silt, little coarse to fine Gravel, with cobbles	medium dense, moist
4'0"-5’7”	Brown coarse to fine Sand, little (+) Silt, little (+) coarse to fine Gravel, with many cobbles, boulders	very dense, moist
5’7”	Refusal on excavator on probable bedrock	
	No groundwater encountered	

B-18A (Elev. +461.10)

Utility Conflict, no test pit

B-19 (+455.19)

0’0”-0’9”	Brown topsoil with roots	
0’9”-4’8”	Brown coarse to fine Sand, some (-) Silt, some coarse to fine Gravel, with cobbles, boulders	dense, moist
4’8”	Refusal on boulders	
	No groundwater encountered	

B-20 (Elev. +496.39)

0’0”-0’10”	Brown topsoil with roots	
0’10”-3’6”	Brown coarse to fine Sand, little (+) Silt, little (+) coarse to fine Gravel, with cobbles	medium dense, moist
3’6”-8’8”	Brown coarse to fine SAND, some (-) Silt, some coarse to fine Gravel, with many cobbles, boulders	very dense, moist
8’8”	Refusal on boulders	
	No groundwater encountered	

B-21 (Elev. +499.52)

0’0”-0’7”	Brown topsoil	
0’7”-4’0”	Brown coarse to fine SAND, little (+) Silt, some (-) coarse to fine Gravel, with cobbles	dense, moist
4’0”-7’2”	Brown coarse to fine SAND, little (+) Silt, some coarse to fine Gravel, with many cobbles, boulders	very dense, moist
7’2”	Refusal on boulders	
	No groundwater encountered	

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B-22 (Elev. +523.39)

0’0”-0’4”	Brown topsoil with roots	
0’4”-4’4”	Brown coarse to fine Sand, little (+) Silt, little (+) coarse to fine Gravel, with cobbles, boulders	dense, moist
4’4”-8’6”	Brown coarse to fine SAND, little (+) Silt, and coarse to fine Gravel, with many cobbles, boulders	very dense, moist
	No groundwater encountered	

B-23 (Elev. +525.75)

0’0”-0’8”	Dark brown topsoil with roots	
0’8”-2’2”	Brown coarse to fine SAND, little (+) Silt, little (+) coarse to fine Gravel, with cobbles	medium dense, moist
2’2”-7’0”	Light brown coarse to fine SAND, little Silt, some coarse to fine Gravel, with many cobbles, boulders	medium dense, moist
	No groundwater encountered Refusal on excavator @ 7’0” (cemented sands)	

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B-24 (Elev. +518.60)

0’0”-0’8”	Dark brown topsoil with roots	
0’8”-3’3”	Light brown coarse to fine SAND, little (+) Silt, little (+) coarse to fine Gravel	medium dense, moist
3’3”-3’8”	Brown coarse to fine SAND, little (+) Silt, and coarse to fine Gravel, with cobbles	very dense, moist
3’8”	Sandstone, completely weathered	
	Refusal on excavator @ 3’8” No groundwater encountered	

B-25 (Elev. +518.71)

0’0”-0’6”	Brown topsoil	
0’6”-2’0”	Brown coarse to fine SAND, little (+) Silt, little (+) coarse to fine Gravel, with occasional cobble	medium dense, moist
2’0”-5’6	Light brown coarse to fine SAND, little (+) Silt, and coarse to fine Gravel (Sandstone, completely weathered)	very dense, moist
	Refusal on excavator @ 5’6” on weathered rock No groundwater encountered	



GENERAL NOTES:

1. GENERAL LAYOUT WAS OBTAINED FROM DRAWINGS PREPARED BY JMC PLLC. ENTITLED PROPOSED TESTING MAP, FIELDHOME AT CATHERINE STREET, DRAWING NO. PTM-1, DATED 12/21/2023.
2. TEST PIT LOCATIONS WERE LAID OUT IN THE FIELD BY CARLIN-SIMPSON & ASSOCIATES (CSA).
3. LOCATIONS ARE APPROXIMATE.

LEGEND:

- TEST PIT LOCATION

ROBERT B. SIMPSON, P.E.
PROFESSIONAL ENGINEER

TEST PIT LOCATION PLAN

PROPOSED DEVELOPMENT
2300 CATHERINE STREET
YORKTOWN, NEW YORK

DRAWN: MW	SCALE: 1" = 80'
CHECKED: RBS	DATE: 24 OCT 24
PROJECT NO.: 23-148	DWG NO.: FIG -1
APPROVED:	

CARLIN-SIMPSON AND ASSOCIATES, LLC
61 Main Street
Sayreville, NJ 08872
Consulting Geotechnical and Environmental Engineers

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 Westchester County, New York

Fieldhome at Catherine Street



April 22, 2025

Preface

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

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

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

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

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

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

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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: 1:3,740 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

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 1:12,000.

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: Westchester County, New York
Survey Area Data: Version 20, Aug 26, 2024

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

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	1.6	3.1%
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	20.4	39.4%
PnD	Paxton fine sandy loam, 15 to 25 percent slopes	3.2	6.1%
PoB	Paxton fine sandy loam, 0 to 8 percent slopes, very stony	8.4	16.2%
RdA	Ridgebury complex, 0 to 3 percent slopes	0.7	1.3%
RgB	Ridgebury complex, 0 to 8 percent slopes, very stony	6.6	12.8%
WdC	Woodbridge loam, 8 to 15 percent slopes	10.8	21.0%
Totals for Area of Interest		**51.7**	**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.

Westchester County, New York

PnB—Paxton fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t2qp
Elevation: 0 to 1,570 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Paxton and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 18 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge

Percent of map unit: 9 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 6 percent
Landform: Drainageways, hills, ground moraines, depressions
Landform position (two-dimensional): Backslope, footslope, toeslope
Landform position (three-dimensional): Head slope, base slope, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Charlton

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

PnC—Paxton fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w66y
Elevation: 0 to 1,320 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Paxton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex

Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 7 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge

Percent of map unit: 6 percent
Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 2 percent
Landform: Hills, ground moraines, depressions, drainageways, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

PnD—Paxton fine sandy loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2w67j
Elevation: 0 to 1,450 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands

Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 8 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge

Percent of map unit: 6 percent
Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 1 percent
Landform: Drainageways, hills, ground moraines, depressions, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

PoB—Paxton fine sandy loam, 0 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w673
Elevation: 0 to 1,340 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge, very stony

Percent of map unit: 8 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 4 percent
Landform: Ground moraines, hills, depressions, drainageways, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Charlton, very stony

Percent of map unit: 3 percent
Landform: Hills

Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

RdA—Ridgebury complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2xfg1
Elevation: 130 to 940 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Ridgebury, loam, and similar soils: 50 percent
Ridgebury, somewhat poorly drained, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ridgebury, Loam

Setting

Landform: Drainageways, hills, ground moraines, depressions, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: loam
Bw - 6 to 10 inches: gravelly fine sandy loam
Bg - 10 to 19 inches: gravelly fine sandy loam
Cd - 19 to 66 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Description of Ridgebury, Somewhat Poorly Drained

Setting

Landform: Hills, ground moraines, depressions, drumlins, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oa - 0 to 1 inches: highly decomposed plant material
A - 1 to 7 inches: loam
Bw - 7 to 13 inches: loam
Bg - 13 to 21 inches: fine sandy loam
Cd - 21 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 10 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: No

Minor Components

Woodbridge, loam

Percent of map unit: 5 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear

Hydric soil rating: No

Sun, very poorly drained

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Leicester, loam

Percent of map unit: 3 percent
Landform: Depressions, drainageways, hills, ground moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Ridgebury, loam, very stony

Percent of map unit: 2 percent
Landform: Drainageways, hills, ground moraines, depressions, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

RgB—Ridgebury complex, 0 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2xfg3
Elevation: 110 to 1,200 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Ridgebury, loam, very stony, and similar soils: 50 percent
Ridgebury, somewhat poorly drained, very stony, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ridgebury, Loam, Very Stony

Setting

Landform: Drainageways, hills, ground moraines, depressions, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave

Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: loam
Bw - 6 to 10 inches: gravelly fine sandy loam
Bg - 10 to 19 inches: gravelly fine sandy loam
Cd - 19 to 66 inches: gravelly loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Description of Ridgebury, Somewhat Poorly Drained, Very Stony

Setting

Landform: Ground moraines, depressions, drumlins, drainageways, hills
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oa - 0 to 1 inches: highly decomposed plant material
A - 1 to 7 inches: loam
Bw - 7 to 13 inches: loam
Bg - 13 to 21 inches: fine sandy loam
Cd - 21 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 10 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: No

Minor Components

Woodbridge, loam, very stony

Percent of map unit: 5 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Sun, very poorly drained, very stony

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Ridgebury, loam, bouldery

Percent of map unit: 3 percent
Landform: Drainageways, hills, ground moraines, depressions, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Paxton, very stony

Percent of map unit: 2 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

WdC—Woodbridge loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w68p
Elevation: 10 to 1,000 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Woodbridge, loam, and similar soils: 82 percent
Minor components: 18 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Loam

Setting

Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 6 inches: loam
Bw1 - 6 to 18 inches: gravelly loam
Bw2 - 18 to 29 inches: gravelly loam
Cd - 29 to 65 inches: gravelly loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D

Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Paxton

Percent of map unit: 8 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury

Percent of map unit: 7 percent
Landform: Ground moraines, depressions, drumlins, drainageways, hills
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton

Percent of map unit: 2 percent
Landform: Hills, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Urban land

Percent of map unit: 1 percent
Hydric soil rating: Unranked

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APPENDIX E

STORMWATER PRACTICE CONSTRUCTION INSPECTION CHECKLISTS

Maintenance Inspection Checklists

Manhole / Catch Basin System Maintenance and Management Inspection Checklist

Structure Name –

Project: _____

Location: _____

Site Status: _____

Date: _____ Time: _____

Inspector Signature: _____

Inspector Name (printed): _____

Structure Number: _____

Inspection/Maintenance Items	Satisfactory (S) or Unsatisfactory (U)	Comments/Corrective Action
1. Inspection (Quarter-annually, After Major Storms)		
1. Accumulated debris or sediment depth exceeds sump or impedes flow from inlet or outlet pipes		
2. Inlet or Outlet Pipe Damaged		
3. Contaminants & Pollutants visible		
4. Cover I Grate functioning properly		
5. Structure: No cracks larger than ½"		
6. Ladder		
7. Mosquito Breeding Habitat		
2. Sediment		
1. Depth of sediment (in inches)*		
2. Depth of oil {in inches)**		
3. Sediment and oil have been removed		

*If measured depth of sediment is greater than 12 inches, the structure shall be cleaned immediately

**Any presence of oil shall be removed immediately

(Provide sketch to show location of Unsatisfactory Items}

Maintenance Inspection Checklists

CDS/Subsurface Water Quality Structures Maintenance and Management Inspection
Structure Name –

Project: _____
Location: _____
Site Status: _____

Date: _____ Time: _____
Inspector Signature: _____

Inspector Name (printed): _____

Maintenance

The surface water quality structure should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities and rainfall frequencies.

Inspection

We recommend ongoing quarterly inspections of the accumulated sediment. Sediment deposition and transport may vary from year to year and quarterly inspections will help insure that systems are cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (i.e. spring and fall).

Inspections should be performed more often in the winter months in climates where sanding operations may lead to rapid accumulations.

Should it be necessary to get inside the system to perform maintenance activities, all appropriate precautions regarding confined space entry and OSHA regulations should be followed.

Inspection Activities	**Suggested Schedule**
• After several storm events or an extreme storm event, inspect for: signs of blockages of the inlet and/or separation screen and sediment accumulation	As Needed
• Inspect for: trash and debris; signs of blockages of the inlet and/or separation screen and sediment accumulation; • Cracking; leakage	Annually
• Inspect that the downstream pipes are free of debris and are operational.	Annually
Maintenance Activities	**Suggested Schedule**
• Structural repairs to structure • Clean and remove debris from structures	As Needed

Cleaning

The Subsurface Water Quality Structure should be cleaned when the level of sediment has reached capacity based on specification from manufacturer in the isolated sump and/or when an appreciable level of hydrocarbons and trash has accumulated.

Cleaning of the Subsurface Water Quality Structure should be done during dry weather conditions when no flow is entering the system. Cleanout of the Subsurface Water Quality Structure with a vacuum truck is generally the most effective and convenient method of excavating pollutants from the system.

To perform cleaning, remove the manhole covers and insert the vacuum hose into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The area outside the screen should be pumped out also if pollutant buildup exists in this area.

Bioretention Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility area cleared		
If designed as exfilter, soil testing for permeability		
Facility location staked out		
2. Excavation		
Size and location		
Lateral slopes completely level		
If designed as exfilter, ensure that excavation does not compact subsoils.		
Longitudinal slopes within design range		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
3. Structural Components		
Stone diaphragm installed correctly		
Outlets installed correctly		
Underdrain		
Pretreatment devices installed		
Soil bed composition and texture		
4. Vegetation		
Complies with planting specs		
Topsoil adequate in composition and placement		
Adequate erosion control measures in place		
5. Final Inspection		
Dimensions		
Proper stone diaphragm		
Proper outlet		
Soil/ filter bed permeability testing		
Effective stand of vegetation and stabilization		
Construction generated sediments removed		
Contributing watershed stabilized before flow is diverted to the practice		

Comments:

Actions to be Taken:

Appendix F: Construction Inspection Checklists

Stormwater/Wetland Pond Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Pre-Construction/Materials and Equipment		
Pre-construction meeting		
Pipe and appurtenances on-site prior to construction and dimensions checked		
1. Material (including protective coating, if specified)		
2. Diameter		
3. Dimensions of metal riser or pre-cast concrete outlet structure		
4. Required dimensions between water control structures (orifices, weirs, etc.) are in accordance with approved plans		
5. Barrel stub for prefabricated pipe structures at proper angle for design barrel slope		
6. Number and dimensions of prefabricated anti-seep collars		
7. Watertight connectors and gaskets		
8. Outlet drain valve		
Project benchmark near pond site		
Equipment for temporary de-watering		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
2. Subgrade Preparation		
Area beneath embankment stripped of all vegetation, topsoil, and organic matter		
3. Pipe Spillway Installation		
Method of installation detailed on plans		
A. Bed preparation		
Installation trench excavated with specified side slopes		
Stable, uniform, dry subgrade of relatively impervious material (If subgrade is wet, contractor shall have defined steps before proceeding with installation)		
Invert at proper elevation and grade		
B. Pipe placement		
Metal / plastic pipe		
1. Watertight connectors and gaskets properly installed		
2. Anti-seep collars properly spaced and having watertight connections to pipe		
3. Backfill placed and tamped by hand under “haunches” of pipe		
4. Remaining backfill placed in max. 8” lifts using small power tamping equipment until 2 ft cover over pipe is reached		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
3. Pipe Spillway Installation		
Concrete pipe		
1. Pipe set on blocks or concrete slab for pouring of low cradle		
2. Pipe installed with rubber gasket joints with no spalling in gasket interface area		
3. Excavation for lower half of anti-seep collar(s) with reinforcing steel set		
4. Entire area where anti-seep collar(s) will come in contact with pipe coated with mastic or other approved waterproof sealant		
5. Low cradle and bottom half of anti-seep collar installed as monolithic pour and of an approved mix		
6. Upper half of anti-seep collar(s) formed with reinforcing steel set		
7. Concrete for collar of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
8. Forms stripped and collar inspected for honeycomb prior to backfilling. Parge if necessary.		
C. Backfilling		
Fill placed in maximum 8” lifts		
Backfill taken minimum 2 ft above top of anti-seep collar elevation before traversing with heavy equipment		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Riser / Outlet Structure Installation		
Riser located within embankment		
A. Metal riser		
Riser base excavated or formed on stable subgrade to design dimensions		
Set on blocks to design elevations and plumbed		
Reinforcing bars placed at right angles and projecting into sides of riser		
Concrete poured so as to fill inside of riser to invert of barrel		
B. Pre-cast concrete structure		
Dry and stable subgrade		
Riser base set to design elevation		
If more than one section, no spalling in gasket interface area; gasket or approved caulking material placed securely		
Watertight and structurally sound collar or gasket joint where structure connects to pipe spillway		
C. Poured concrete structure		
Footing excavated or formed on stable subgrade, to design dimensions with reinforcing steel set		
Structure formed to design dimensions, with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
Forms stripped & inspected for “honeycomb” prior to backfilling; parge if necessary		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
5. Embankment Construction		
Fill material		
Compaction		
Embankment		
1. Fill placed in specified lifts and compacted with appropriate equipment		
2. Constructed to design cross-section, side slopes and top width		
3. Constructed to design elevation plus allowance for settlement		
6. Impounded Area Construction		
Excavated / graded to design contours and side slopes		
Inlet pipes have adequate outfall protection		
Forebay(s)		
Pond benches		
7. Auxiliary (if applicable) and Emergency Spillway Construction		
Spillway located in cut or structurally stabilized with riprap, gabions, concrete, etc.		
Excavated to proper cross-section, side slopes and bottom width		
Entrance channel, crest, and exit channel constructed to design grades and elevations		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
8. Outlet Protection		
A. End section		
Securely in place and properly backfilled		
B. Endwall		
Footing excavated or formed on stable subgrade, to design dimensions and reinforcing steel set, if specified		
Endwall formed to design dimensions with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing, if necessary)		
Forms stripped and structure inspected for “honeycomb” prior to backfilling; parge if necessary		
C. Riprap apron / channel		
Apron / channel excavated to design cross-section with proper transition to existing ground		
Filter fabric in place		
Stone sized as per plan and uniformly place at the thickness specified		
9. Vegetative Stabilization		
Approved seed mixture or sod		
Proper surface preparation and required soil amendments		
Excelsior mat or other stabilization, as per plan		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
10. Miscellaneous		
Drain for ponds having a permanent pool		
Trash rack / anti-vortex device secured to outlet structure		
Trash protection for low flow pipes, orifices, etc.		
Fencing (when required)		
Access road		
Set aside for clean-out maintenance		
11. Stormwater Wetlands		
Adequate water balance		
Variety of depth zones present		
Approved pondscaping plan in place Reinforcement budget for additional plantings		
Plants and materials ordered 6 months prior to construction		
Construction planned to allow for adequate planting and establishment of plant community (April-June planting window)		
Wetland buffer area preserved to maximum extent possible		

Comments:

Actions to be Taken:

APPENDIX F

TEMPORARY EROSION AND SEDIMENT CONTROL I&M CHECKLISTS and PERMANENT STORMWATER PRACTICE OPERATION, MAINTENANCE, and MANAGEMENT INSPECTION CHECKLISTS

JMC Project 23109
Fieldhome at Catherine Street
Catherine Street
Town of Yorktown, NY

Temporary Erosion and Sediment Control Inspection and Maintenance Checklist

Erosion and Sediment Control Measure	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Stabilized Construction Entrance	Daily	• Periodic top dressing with additional aggregate as required • Clean sediment in public right-of-ways immediately
Silt Fence	Weekly + After Each Rain	• Remove & redistribute sediment when bulges develop in the silt fence.
Inlet Protection	Weekly + After Each Rain	• Remove sediment as necessary and replace filter fabric, crushed stone etc. • Any broken and damaged components should be replaced. • Check all materials for proper anchorage and secure as necessary.
Concrete Washout	Daily	• Damaged or leaking facilities shall be deactivated and repaired or replaced immediately.
	After Each Rain	• Pump excess rainwater that has accumulated over hardened concrete to a stabilized area.
		• Remove accumulated hardened material when 75% of the storage capacity of the structure is filled. Replace plastic liner with each cleaning of the washout facility.

Temporary Erosion and Sediment Control Inspection and Maintenance Checklist (Cont'd)

Erosion and Sediment Control Measure	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Temporary Swale	Weekly + After Each Rain	• Immediately remove any sediment and reestablish vegetative cover as required. • Inspect entire swale and surrounding area for rilling and repair as required with the placement of additional topsoil, then seeding and mulching, as outlined in Figure No. 3.14 of the NYSDEC New York State Standards and Specifications for Erosion and Sediment Control.
Temporary Sediment Basin	Weekly + After Each Rain	• Remove and redistribute sediment when it reaches an elevation indicated on the construction documents. • Check for rilling within and around the sediment basin and repair as required. • Remove all sediment and debris from the outlet control structure as maybe required.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Grassed Swale	Monthly	• Check that contributing area is clean of debris. • Confirm vegetation is adequately maintained (mowing, fertilizer, etc.) • Check for rilling/erosion and repair as needed. • Confirm dewatering occurs between storms.
Grassed Swale	Annually + After Major Storms	• Clean sediment and re-vegetate as necessary. • Check condition of outlet and repair as necessary
Rip-Rap Apron/Energy Dissipator and Check Dams	Annually + After Major Storms	• Check for evidence of flows going around the structure. • Check for evidence at downstream toe and repair as needed. • Clean sediment and install additional aggregate as necessary.
Stormwater Management Basin	Monthly	• Check Permanent Pool for undesirable vegetative growth and floatings or floatable debris. Remove as needed. • Check Forebays for sediment and cleanout when it depth <50% design depth. • Check Dry Pond areas for adequate vegetation, undesirable vegetative growth, low flow channels are clear of obstructions, standing water or wet spots and sediment and/or trash accumulation. Repair/remove as necessary.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Stormwater Management Basins	Annually + After Major Storms	• Check adequacy of vegetation and ground cover; for evidence of embankment erosion, animal burrows, unauthorized plantings and cracking, bulging or sliding of dam, clear/properly functioning drains, seeps/leaks on downstream face, failure of slope protection or riprap. Repair/remove as necessary. • Confirm emergency spillway is clear of obstructions and debris. • Confirm all inlets and outlet structures/pipes are operating properly.
Drain Inlets	Monthly	• Check for blockage and/or erosion at top of each inlet. Repair/remove as necessary. • Check for sediment and debris collected within sumps and clean out as necessary.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Bioretention	Routine and As Needed	• Mowing-Frequency depends upon location and desired aesthetic appeal. • Watering-If droughty, watering after the initial year may be required. • Miscellaneous Upkeep-Tasks include trash collection, spot weeding, and removing mulch from overflow device.
	Semi-Annually	• Pruning -Nutrients in runoff often cause biortention vegetation to flourish. • Mulching -Remulch bare areas with fresh mulch
	Annually	• Mulch Removal-Mulch accumulation reduces available water storage volume. Removal of mulch also increases surface infiltration rate of fill soil. • Remove and Replace Dead Plants-Within the first year, 10 percent of plants may die. Survival rates increase with time.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
StormTech Subsurface Retention Facility	(See Maintenance Guidelines in Report)	• Check level of sediment accumulated within the isolator row through the access manhole. If 3 inches of sediment or greater, clean out utilizing a high pressure water nozzle to scour and suspend sediments. • Flush all sediment to access manhole and remove using a vacuum truck.
Hydrodynamic Water Quality Structure	(See Maintenance Guidelines in Report)	• Open access cover for visual inspection and measure the distance from the standing water surface to the sediment pile with a measuring stick or tape. If less than 4 feet, insert hose from vacuum truck into the sump and screen through both access covers to clean out the standing water, layer of oil, sediment, trash, etc. • The screen must be powerwashed to ensure it is free of trash and debris.

The owner/operator responsible for inspection and maintenance as outlined above:

Toll Bros, Inc.
Kevney Moses
42 Old Ridgebury Road
Danbury, CT 06810
Phone: (203) 616-4920
Email: KMoses@TollBrothers.com

APPENDIX G

OWNER'S & CONTRACTOR'S CERTIFICATION

JMC Project 23109
Fieldhome at Catherine Street
Catherine Street
Town of Yorktown, NY

CONTRACTOR'S CERTIFICATION

"I hereby certify under penalty of law that I understand and agree to comply with the requirements of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

Company Name: _____

Address: _____

Telephone Number: _____

Name and Title: _____

Signature: _____ Date: _____

Permit Identification No.: _____

Name and Title of Trained Contractor: _____

Elements of the SWPPP Contractor is responsible for: _____

p:\2023\23109\drainage\reports\2025-04-23_ initial swppp\appendix h - owner's & contractor's certification\nys contractors certification.docx

JMC Project 23109
Fieldhome at Catherine Street
Catherine Street
Town of Yorktown, NY

OWNER'S CERTIFICATION

"I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that the Notice of Intent (NOI) and corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting the NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting the NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which the NOI is being submitted."

Company Name: _____

Address: _____

Telephone Number: _____

Name and Title: _____

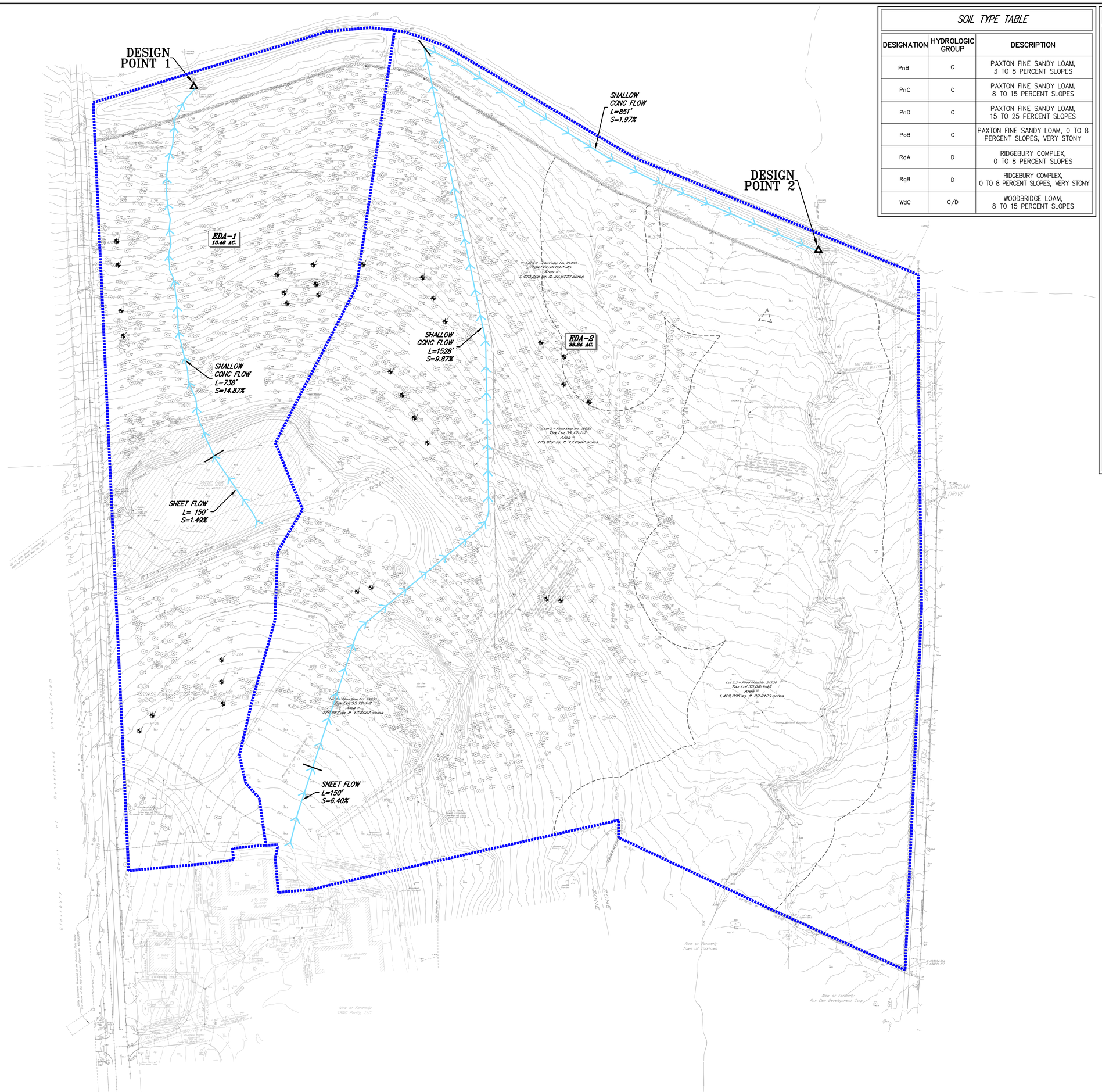
Signature: _____Date: _____

Permit Identification No.:_____

P:\2023\23109\DRAINAGE\REPORTS\2025-04-23_ Initial SWPPP\Appendix H - Owner's & Contractor's Certification\NYS Owners Certification.doc

APPENDIX H

DRAWINGS



SOIL TYPE TABLE

DESIGNATION	HYDROLOGIC GROUP	DESCRIPTION
PnB	C	PAXTON FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES
PnC	C	PAXTON FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES
PnD	C	PAXTON FINE SANDY LOAM, 15 TO 25 PERCENT SLOPES
PoB	C	PAXTON FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES, VERY STONY
RdA	D	RIDGEBURY COMPLEX, 0 TO 8 PERCENT SLOPES
RgB	D	RIDGEBURY COMPLEX, 0 TO 8 PERCENT SLOPES, VERY STONY
WdC	C/D	WOODBRIDGE LOAM, 8 TO 15 PERCENT SLOPES

EXISTING DRAINAGE LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING FENCE
- EXISTING TREE AND DESIGNATION (ID / ABBR.)
- EXISTING WATERCOURSE
- EXISTING PAINT
- EXISTING PARKING WITH NUMBER OF SPACES
- EXISTING STORM DRAIN LINE AND SIZE (36" RCP)
- EXISTING SANITARY LINE AND SIZE (8" SAN.)
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- BORING LOCATION AND DESIGNATION (BORING)
- WATERSHED BOUNDARY LINE
- LIMIT OF SOIL GROUPS LINE
- FLOW PATH LINE
- SOIL DESIGNATION AND HYDROLOGIC SOIL GROUP (NwC (B))

No.	Revision	Date	By
	Previous Editions Obsolete		

APPLICANT:
TOLL BROS., INC.
42 OLD RIDGEBURY ROAD
DANBURY, CT 06810

ARCHITECT:
TOLL BROTHERS
42 OLD RIDGEBURY ROAD
DANBURY, CT 06810

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John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
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EXISTING DRAINAGE AREA MAP

FIELDHOME AT CATHERINE STREET
CATHERINE STREET
TOWN OF YORKTOWN, NEW YORK

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF ARTICLE 145 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

Drawn:	CDF
Approved:	DV
Scale:	1" = 60'
Date:	04/23/2025
Project No:	23109
23109-DRAINAGE	EDA	EDA.SCR

Drawing No:
EDA-1

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DESIGN POINT 1

DESIGN POINT 2

CHANNEL FLOW
L=332'
W=3'
D=1'
S=1.14%

SHEET FLOW
L=116'
S=9.79%

SHALLOW CONC FLOW
L=921.16'
S=6.90%

SHEET FLOW
L=150'
S=5.30%

SHALLOW CONC FLOW
L=209'
S=13.22%

SHALLOW CONC FLOW
L=209'
S=13.22%

SHEET FLOW
L=150'
S=10.91%

SHALLOW CONC FLOW
L=124'
S=12.99%

SHEET FLOW
L=150'
S=11.95%

SHEET FLOW
L=134'
S=8.08%

SHEET FLOW
L=150'
S=16.00%

CHANNEL FLOW
W=12'
D=1'
L=292'
S=3.24%

SHEET FLOW
L=122'
S=3.66%

CHANNEL FLOW
L=1,042'
W=12'
D=1'
S=10.30%

SHALLOW CONC FLOW
L=1,042'
S=9.08%

CHANNEL FLOW
L=262'
W=6'
D=1'
S=4.69%

SHALLOW CONC FLOW
L=212'
S=22.44%

SHEET FLOW
L=84'
S=5.61%

SHEET FLOW
L=66'
S=2.14%

PDA-1A
0.91 AC.

PDA-1B
7.79 AC.

PDA-1C
4.23 AC.

PDA-1D
2.16 AC.

PDA-2A
24.04 AC.

PDA-2B
2.05 AC.

PDA-2C
4.75 AC.

PDA-2D
3.03 AC.

PDA-DB-1
1.05 AC.

PDA-DB-2
1.66 AC.

PROPOSED CONSERVATION EASEMENT AREA ±14.3 ACRES

PROPOSED BIORETENTION BASIN

INFIL 1A

INFIL 1B

INFIL 2B

POOL AREA

CLUBHOUSE

PICKLE-BALL COURTS

PROPOSED SUBSURFACE INFILTRATION

Lot 3.3 – Filed Map No. 21733
Tax Lot 35.08-1-45
Area =
1,429,305 sq. ft. 32.8123 acres

Now or Formerly
Town of Yorktown

Now or Formerly
West Haven, LLC

Now or Formerly
Fox Den Development Corp.

JORDAN DRIVE

ZONE

SOIL TYPE TABLE

DESIGNATION	HYDROLOGIC GROUP	DESCRIPTION
PnB	C	PAXTON FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES
PnC	C	PAXTON FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES
PnD	C	PAXTON FINE SANDY LOAM, 15 TO 25 PERCENT SLOPES
PoB	C	PAXTON FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES, VERY STONY
RdA	D	RIDGEBURY COMPLEX, 0 TO 8 PERCENT SLOPES
RgB	D	RIDGEBURY COMPLEX, 0 TO 8 PERCENT SLOPES, VERY STONY
WdC	C/D	WOODBRIDGE LOAM, 8 TO 15 PERCENT SLOPES

DRAINAGE AREA TABLE

DRAINAGE AREA	AREA (AC)	PROPOSED DISTURBANCE (AC)
PDA-1A	0.91	0.04
PDA-1B	7.79	7.63
PDA-1C	4.23	3.86
PDA-1D	2.16	0.54
PDA-DB-1	1.05	1.05
PDA-2A	24.04	3.94
PDA-2B	2.05	2.05
PDA-2C	4.75	4.75
PDA-2D	3.03	3.03
PDA-DB-2	1.66	1.49

PROPOSED DRAINAGE LEGEND

- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING WETLAND LINE AND DELINEATION
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CURB LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING STONE WALL
- EXISTING FENCE
- EXISTING TREE AND DESIGNATION (ID, ABBR.)
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- EXISTING DRAIN INLET
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- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- BORING LOCATION AND DESIGNATION
- BUILDING SETBACK LINE
- PROPOSED SUBDIVISION LINE
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED DROP CURB & RAMP
- PROPOSED CONCRETE SIDEWALK
- PROPOSED MONOLITHIC CONCRETE SIDEWALK & CURB
- PROPOSED DROP CURB AND RAMP
- PROPOSED SITE DRIVEWAY PAVEMENT
- PROPOSED TOWNHOME DRIVEWAY PAVEMENT
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)
- PROPOSED PATIO
- PROPOSED COVERED DECK
- PROPOSED FENCE
- PROPOSED FINISHED GRADE (200)
- PROPOSED SANITARY SEWER MANHOLE (SMH)
- PROPOSED STORM DRAIN MANHOLE (DMH)
- PROPOSED BYPASS MANHOLE (BMH, DMH)
- PROPOSED TYPE CI DRAIN INLET (CI)
- PROPOSED TYPE DI DRAIN INLET (DI)
- PROPOSED TYPE LI DRAIN INLET (LI)
- PROPOSED HEADWALL (HW)
- PROPOSED WATER QUALITY STRUCTURE (WQS)
- PROPOSED SUBSURFACE DRAINAGE OUTLET CONTROL STRUCTURE (OCS)
- PROPOSED END SECTION (ES)
- PROPOSED CLEANOUT (CO)
- PROPOSED HYDRANT
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED RIP-RAP
- PROPOSED GRASS MAINTENANCE PATH
- WATERSHED BOUNDARY LINE
- LIMIT OF SOIL GROUPS LINE
- FLOW PATH LINE
- SOIL DESIGNATION AND HYDROLOGIC SOIL GROUP (NnC (B))

No.	Revision	Date	By
	Revised Entire Drawing		

APPLICANT
TOLL BROS., INC.
42 OLD RIDGEBURY ROAD
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JMC

PROPOSED DRAINAGE AREA MAP

FIELDHOME AT CATHERINE STREET
CATHERINE STREET
TOWN OF YORKTOWN, NEW YORK

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF ARTICLE 145 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

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23109-DRAINAGE	PDA	PDALS
Drawing No:	PDA-1

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