APPENDIX F
SWPPP

STORMWATER POLLUTION PREVENTION PLAN

RIVER KNOLL

40 CROTON DAM ROAD
TOWN OF OSSINING, NY

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JMC Project 15064

Dated: 12/22/2016

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TABLE OF CONTENTS

APPENDICES

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REFERENCED DRAWINGS FOR SWPPP DESIGN AND DETAILS

JMC, PLLC SITE PLANS

Dwg. No.	Title	Rev. No./Date
SP-2	"Existing Conditions Plan"	12/22/2016
SP-3	"Layout Plan"	12/22/2016
SP-4	"Grading Plan"	12/22/2016
SP-5	"Utilities Plan"	12/22/2016

I. INTRODUCTION

This Stormwater Pollution Prevention Plan has been prepared for the 17.89 acre River Knoll residential development, located in the Town and Village of Ossining**,** Westchester County New York (hereinafter referred to as the "Site"). The site is bounded by Croton Dam Road to the west and residential properties to the north, south and east. 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-0-15-002, effective January 29, 2015.
- Chapter 168 "Stormwater Management and Sediment and Erosion Control" of the Town of Ossining Code.

Glenco Group, LLC proposes to construct a three story 180 unit residential building at the former Stony Lodge Psychiatric Hospital property. The proposed development will include the demolition of existing buildings and driveways and construct a three story 180 unit building with associated driveways, retaining walls, surface parking areas, two stories of underground parking and landscaping. The proposed development will require the use of two infiltration basins, stormwater planters and a micropool extended detention basin to mitigate the stormwater runoff from the site.

II. STORMWATER MANAGEMENT PLANNING

In order to be eligible for coverage under the NYSDEC SPDES General Permit No. GP-0-15-002 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 January 2015.

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

- A construction activity that involves soil disturbances of five (5) or more acres of land.

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 (OPRHP), the site does not contain, nor is it immediately adjacent to any properties listed on the State or National Register of Historic Places.

The applicant has provided additional information to the OPRHP and has agreed to engage in continuing discussions with the OPRHP as the project moves forward with the input of OPRHP.

The Five Step Process for Stormwater Site Planning and Practice Selection

Stormwater management using green infrastructure is summarized in the five step process described below. The five 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.

- **90% Rule** - According to the New York State Stormwater Design Manual, Section 4.1, the water quality volume is determined from the 90% rule. The method is based on 90% of the average annual stormwater runoff volume which must be provided due to impervious surfaces. The Water Quality Volume (denoted as the WQv) is designed to improve water quality sizing to capture and treat 90% of the average annual stormwater runoff volume. The WQv is directly related to the amount of impervious cover created at a site. The average rainfall storm depth for 90% of storms in New York State in one year is used to calculate a volume of runoff. The rainfall depth depends on the location of the site within the state. From this depth of rainfall, the required water quality volume is calculated.

The project is a redevelopment and therefore will comply with the strategies outlined within Chapter 9: Redevelopment Projects of the Design Manual. There are different options to control water quality depending on the redevelopment.

Since the redevelopment results in the creation of additional impervious area, Water Quality Treatment Option II will be utilized which requires treatment for 25% of the existing impervious area, plus 100% of the additional, new impervious area.

The plan proposes that a minimum of 25% of the water quality volume (WQv) from the disturbed area is captured and treated by the implementation of standard practices. When utilizing structural stormwater management practices, these practices should be targeted to treat areas with the greatest pollutant generation potential (e.g. parking areas, service stations, etc).

The NYSDEC Redevelopment Standards include specific criteria for the implementation of surface water quality improvements. A combination of standard and non-standard practices are proposed and all facilities will treat the required water quality volume from the entire contributing area. Therefore, Water Quality Treatment Options II & III will be utilized. According to Option III of the Redevelopment Standards, alternative or non-standard practices such as manufactured treatment devices are acceptable if they treat 75% of the water quality volume from the disturbed areas as well as any additional runoff directed to the practice. According to Option II, standard practices such as subsurface infiltration systems can be sized to treat the water quality volume generated from 25% of the existing impervious area plus 100% of the new impervious area. Green practices such as green roofs and porous pavement can be used towards credit in meeting the water quality volume requirements.

Proposed standard SMP's will effectively treat 100% of the Water Quality Volume (Wqv) for all existing and new impervious areas and the proposed alternative SMP will treat a portion of the redevelopment area.

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

RRv is not required for this project since it is a redevelopment.

<u>Step 4: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume</u>

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 site. This practice is located in an area where the groundwater elevation is acceptable to provide the required separation. According to Section 3.6 of the Design

Manual, 90% of the WQv provided by an Infiltration Practice can be applied towards meeting the RRv criteria.

Step 5: 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.

   - CPv is not required because reduction of the entire CPv volume is achieved at a site through green infrastructure or infiltration systems.

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 (Qp) does not apply in certain conditions, including:

- The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams.

- A downstream analysis reveals that overbank control is not needed.

- If redevelopment results in no increase in impervious area or changes to hydrology that increase the discharge rate from the site, the ten year criteria does not apply.

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 100-year storm control requirement can be waived if:

- The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams.

- Development is prohibited within the ultimate 100-year floodplain

- A downstream analysis reveals that 100-year control is not needed.

- If redevelopment results in no increase in impervious area or changes to hydrology that increase the discharge rate from the site the hundred-year criteria does not apply.

Based on the foregoing, this project is eligible for coverage under NYSDEC SPDES General Permit No. GP-0-15-002.

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 taking into account 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 Technical Report No. 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986.

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 3.41 inches was used in the equation for all 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.

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

8. The New York State Stormwater Management Design Manual, revised January 2015.

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

10. The storm flows for the 1, 10, & 100 year recurrence interval storms were analyzed for the total watershed areas. The Type III distribution design storm for a 24 hour duration was used and 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
1 Year	**2.78**
10 Year	**5.14**
100 Year	**9.30**

http://precip.eas.cornell.edu/

IV. EXISTING CONDITIONS

The existing conditions of the project site consists of the vacant stony lodge psychiatric facility, which contains existing buildings, driveways, grass and wooded areas. Stormwater from the site flows southwest to existing storm sewer structures that lead off site. After stormwater runoff exits the project site, it flows to existing stormwater conveyance systems in Pershing Avenue.

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

- Vegetative cover
- Critical areas
- Topography (contour lines, existing flow paths, steep slopes, etc.)
- Soil (hydrologic soil groups, highly erodible soils, etc.)
- Bedrock, significant geology features

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

Two (2) separate Design Points (1 through 2) were identified for comparing peak rates of runoff in existing and proposed conditions. 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 is the western portion of the site and discharges to Design Point 1, which is an existing catch basin located in Pershing Avenue. Existing Drainage Area 1 consists of the following sub-drainage areas:

<u>Existing Drainage Area 1A (EDA-1A)</u> is 2.63 acres in size and is located in the north corner of the site adjacent to Croton Dam Road. This area consists of parking areas, driveways, woods and grassed areas. This drainage area initially drains north west towards an existing depression which acts as a small detention pond and drains south adjacent to croton dam road towards design point one. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 69 and 14.3 minutes, respectively. Refer to Drawing DA-1 in Appendix H.

<u>Existing Drainage Area 1B (EDA-1B)</u> is 2.34 acres and consist of a portion of the main building, an asphalt parking area, asphalt drives, woods and grass. Runoff from EA-1B flows overland to a depression to the north of the site driveway. The runoff is collected by a drain inlet in the depression and conveyed in a 12” corrugated metal pipe (CMP) to EDA-1C.
The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 74 and 11.4 minutes, respectively. Refer to Drawing DA-1 in Appendix H.

<u>Existing Drainage Area 1C (EDA-1C)</u> is 2.88 acres and consists of a portion of the main building, a 2 story frame building, asphalt drives, a gravel parking area, a few utility buildings, woods and grass. Runoff from EDA-1C flows overland to a depression at the southeast corner of the site. The depression discharges through an existing pipe that extends through the neighboring properties and into the existing catch basin in Pershing Avenue. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 75 and 8.8 minutes, respectively. Refer to Drawing DA-1 in Appendix H.

Existing Drainage Area 2 is the eastern portion of the site and discharges to Design Point 2, which is an existing structure in the southernmost corner of the site. Existing Drainage Area 2 consists of the following sub-drainage areas:

Existing Drainage Area 2A (EDA-2A) is 2.98 acres and consists of a garage and recreation building, a portion of the North Lodge, asphalt parking areas, asphalt drives, woods and grass. Runoff from EDA-2 flows overland to a wetland in the Village of Ossining. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 69 and 5.9 minutes, respectively. Refer to Drawing DA-1 in Appendix H.

Existing Drainage Area 2B (EDA-2B) is 5.79 acres and consists of a portion of the North Lodge, the East Lodge, the West Lodge, the South Cottage, the Administration Building, a garage, a 1 ½ story frame building, asphalt walks and drives, woods and grass. Runoff from EDA-2B flows overland to a swale along the rear property line. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 67 and 12.1 minutes, respectively. Refer to Drawing DA-1 in Appendix H.

Existing Drainage Area 3 (EDA-3) is 0.64 acres and consists of a play area, an asphalt drive, woods and grass. Runoff from EDA-3 flows overland out to Croton Dam Road. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 80 and 7.8 minutes, respectively. Refer to Drawing DA-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	DP-3
1 year	1.72	3.20	0.67
10 year	5.43	15.33	1.89
100 year	9.92	42.12	4.19

V. PROPOSED CONDITIONS

The proposed improvements consist of the 180-unit residential building, associated sidewalks, parking lot, driveway, subsurface parking garage and landscaped areas. The proposed on-site stormwater runoff from the impervious surfaces including building rooftops, driveway, parking areas and sidewalks will be collected and conveyed by drainage manholes and catch basins to a network of high density polyethylene (HDPE) drain pipe installed underground with discharge to proposed infiltration basins and a micropool extended detention basin.

The proposed drainage improvements include standard and green infrastructure stormwater practices, such as infiltration basins with forebays and stormwater planters. The vegetated practices and overland discharges provide multiple opportunities for water quality enhancement and infiltration in addition to the proposed stormwater management practices.

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 Five 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:

- Forest, vegetative cover – The maximum amount of forest and vegetative cover has been maintained and/or provided.
- 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 geology features have been accounted for.

Step 2: Determine Water Quality Treatment Volume (WQv)

This initial calculation of WQv must be revised after green infrastructure techniques are applied. The following method has been used to calculate the WQv.

90% Rule - According to the New York State Stormwater Design Manual, Section 4.1, the water quality volume is determined by the 90% rule. The method is based on 90% of the average annual stormwater runoff volume which must be provided due to impervious surfaces. The WQv is directly related to the amount of impervious cover created at a site. The rainfall depth depends on the location of the site within the state. From this depth of rainfall, the required water quality volume is calculated.

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

Handling of the Runoff Reduction Volume (RRv) is required for the project since it is new development. As permitted in the NYS Stormwater Design Manual, green infrastructure techniques and standard stormwater management practices with RRv capacity can be credited towards the required WQv discussed above when implemented in accordance with the Manual.

Green infrastructure techniques are grouped into two categories:

- Practices resulting in a reduction of contributing area such as preservation/restoration of conservation areas, tree planting, riparian buffers, etc.
- Practices resulting in a reduction of contributing volume such as vegetated swales, pervious pavers, bioretention systems and infiltration systems.

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 which is referred to as the Minimum RRv. The percent reduction is based on the Hydrologic Soil Group(s) (HSG) of the Site and is defined as Specific Reduction Factor.

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

- **Stormwater Planters**
  - This practice filters runoff from portions of building rooftops. Small drainage areas, less than 15,000 square feet can be collected by gutters and roof drain leaders and discharged into stormwater planters that will filter or infiltrate the smaller storms and then discharge the higher storms through risers/standpipes directly into the underground storm pipes to the proposed stormwater management basins. Stormwater Planters act as small basins that treat stormwater as it flows through plant material and a soil matrix and is discharged to the storm drain system. Rooftop runoff from the proposed buildings are treated in other green practices more suitable for the proposed site conditions.
- **Standard Practices with RRv Capacity**
  - **Infiltration Basins –** Two infiltration systems are proposed to treat and retain runoff from the rooftop of the proposed building, parking areas, driveways and sidewalks. These practices are located in areas where the existing groundwater was identified at a lower depth.

The Minimum RRv capacity required must be provided by green infrastructure techniques or standard practices 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.

<u>Step 4: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume</u>

The standard SMP's must be designed to meet additional water quality volume requirements that cannot be addressed by applying the green infrastructure techniques by themselves. The standard SMP's proposed are:

- Ponds

  Wet Extended Detention Ponds (P-3)

  Description

  Pond that treats a portion of the Water Quality Volume by detaining storm flows above a permanent pool for a specified minimum detention time.

  Each Wet Extended Detention Pond has a forebay for pretreatment, an aquatic bench and a permanent pool for treatment, a 12 foot wide maintenance access path, 4 foot horizontal to 1 foot vertical side slopes for added safety and ease for maintenance and outlet control structures to slowly release the water quantity storms to reduce the peak flow rates and provide channel protection.

Step 5: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

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 – Ponds are designed based upon unique physical environmental considerations noted in the NYS Stormwater Management Design Manual (NYSSMDM) Table 7.2 "Physical Feasibility Matrix".

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

3. Pretreatment – All pond provide pretreatment in accordance with NYSSMDM design guidelines.

4. Treatment Geometry – The plan provides water quality treatment in accordance with NYSSMDM guidelines noted Table 6.1 "Water Quality Volume Distributing in Pond Design".

5. Environmental/Landscaping –Extensive landscaping has been provided for each proposed 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.

Tables 1 and 2 below summarize the WQv and RRv required for both design points on the property:

Table 1

Design Point #1 WQv / RRv Calculations Summary – See Appendix C	
Initial Required WQv	15,619 c.f.
Adjusted Required WQv (Redevelopment)	12,000 c.f. (No credit taken)
Minimum RRv Required	3,672 c.f.
RRv Provided	16,399 c.f.
Net WQv Required	0 c.f.

Table 2

Design Point #2 WQv / RRv Calculations Summary – See Appendix C	
Initial Required WQv	6,633 c.f.
Adjusted Required WQv (Area Practice)	5,922 c.f.
Minimum RRv Required	1,587 c.f.
RRv Provided	1,851 c.f.
Net WQv Required	4,776 c.f.

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 DA-2 "Proposed Drainage Area Map" located in Appendix H.

Two (2) separate Design Points were identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, two 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 1 is the western portion of the site and discharges to Design Point 1, which is an existing catch basin located in Pershing Avenue. Proposed Drainage Area 1 consists of the following sub-drainage areas:

Proposed Drainage Area 1A (PDA-1A) is 4.55 acres and consists of a portion of the proposed building, driveways, parking areas, grass areas landscaping and infiltration basin 1A. Runoff from the building roof and parking areas will be collected by roof drain leaders and drain inlets and conveyed in pipes to infiltration basin 1A, which will be constructed in the location of the existing depression. An infiltration rate of two inches per hour was used for Basin 1A. The outflow from the infiltration basin will be conveyed to PDA-1B. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 80 and 10.1 minutes, respectively.

Proposed Drainage Area 1B (PDA-1B) is 3.61 acres and consists of a portion of the proposed building, asphalt parking areas, asphalt drives, pool area, landscaping, woods and grass. Runoff from PDA-1B will be collected by roof drain leaders and drain inlets and conveyed in pipes to a proposed infiltration basin to be constructed in the location of the existing depression to the north of the site driveway. An infiltration rate of four inches per hour was used for Basin 1B. The outflow from the infiltration basin will be conveyed to PDA-1C. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 73 and 8.0 minutes, respectively.

Proposed Drainage Area 1C (PDA-1C) is 2.27 acres and consists of landscaping, woods, grass and a portion of the proposed driveway. The portion of the proposed driveway that drains to this area is in the same location of the existing driveway and is considered redeveloped area. Therefore, the driveway will be treated with a Contech CDS Unit, which is a NYSDEC approved alternative practice. Runoff from PDA-1C will flow overland to a depression located south of the site driveway. The outflow from the depression will be conveyed to a proposed series of pipes located in croton dam road and then discharge into an existing catch basin in Pershing Avenue. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 80 and 10.1 minutes, respectively.

Proposed Drainage Area 2 is the eastern portion of the site and discharges to Design Point 2, which is an existing structure in the southernmost corner of the site. Proposed Drainage Area 2 consists of the following sub-drainage areas:

Proposed Drainage Area 2A (PDA-2A) is 1.66 acres and consists of landscaping, woods and grass. Runoff from PDA-2A flows overland to the wetland in the northeast corner of the site, as in existing conditions. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 63 and 10.7 minutes, respectively.

Proposed Drainage Area 2A (PDA-2B) is 5.20 acres and consists of a portion of the proposed building, asphalt parking areas, asphalt drives, landscaping, woods and grass. Runoff from PDA-2B will be collected by roof drain leaders and drain inlets and conveyed in pipes to a proposed micropool extended detention pond, to be constructed in the location of the existing depression in the southernmost corner of the site. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 70 and 7.6 minutes, respectively. Refer to Drawing DA-2 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 3
Summary of Proposed Peak Rates of Runoff in Proposed Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-1	DP-2
1 year	0.64	0.32
10 year	3.08	11.65
100 year	6.23	33.58

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

Table 4
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	1.72	0.64	63
	10 year	5.43	3.08	43
	100 year	9.92	6.23	37
2	1 year	3.20	0.32	90
	10 year	15.33	11.65	24
	100 year	42.12	33.58	20

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

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," dated 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 conduct an assessment of 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 H 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:

SYM.	HYDRO. SOIL GROUP	DESCRIPTION
ChE	**B**	**Charlton Loam, 25-35% slopes**
CsD	**B**	**Chatfield Charlton , very rocky**
HrF	**D**	**Hollis-Rock Outcrop Complex, very steep**
CrC	**B**	**Charlton Chatfield complex**
LcB	**A/D**	**Leicester Loam, 3-8% slopes**
PnD	**C**	**Paxton Fine Sandy Loam, 15-25% slopes**

On-Site Pollution Prevention

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

- Silt Fence
- Sediment Traps
- Silt Sack
- 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, interceptor swales, stabilized construction entrances, temporary seeding, mulching and sediment traps.

Throughout the construction of the proposed redevelopment, temporary control facilities will be implemented to control on-site erosion and sediment transfer. Interceptor swales, 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 entrance, 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 Entrance consists of AASHTO No. 1 rock. The rock entrance will be a minimum of 50 feet in length by 20 feet in width by 8 inches in depth.

3. Seeding will be used to create a vegetative surface to stabilize disturbed earth until at least 70% 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 “Silt Sacks” 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. Sediments Traps will be used with the permanent SMP's until their contributing areas are stabilized.

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 fourteen 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 50 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.

<u>Solid Waste Management and Portable Sanitary Management</u>

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. Infiltration Basins will be used to treat the runoff volume generated from the developed area and provide improvement to water quality control. The proposed basins will provide water quality for 90% of the average annual stormwater runoff volume. The water quality volume will be retained and higher storms will be released gradually. Refer to the water quality volume calculations, in Appendix C.

2. Wet Extended Detention Pond (NYS DEC Standard Practice P-3) will be used to treat the runoff volume generated from the developed area and provide improvement to water quality control. The proposed basins will provide water quality for 90% of the average annual stormwater runoff volume. The stormwater will be detained and released gradually. The extended detention time will enable sediment and various pollutants to settle out. Refer to "Water Quality Volume Calculations," in Appendix C.

3. Stormwater Planters are proposed at various locations around the proposed walls to collect and filter runoff from portions of the building rooftops. Small drainage areas, less than 15,000 square feet will be collected by gutters and roof drain leaders and discharged into stormwater planters that will infiltrate the smaller storms and then discharge the higher storms through risers/standpipes directly into the underground storm pipes to the proposed stormwater management basins. Stormwater Planters act as small basins that treat stormwater as it flows through plant material and a soil matrix and is discharged to the storm drain system. These practices are elevated above the existing grade, surrounded by a concrete wall and consist of a reservoir with a depth of 12 inches, grass/landscaping with a layer of mulch, 12 inches of sandy loam topsoil and a sand/gravel layer a minimum of 24 inches wide that extends down to

the native soil. Filtration through these layers will enable removal of pollutants and sediment generated by the rooftop and other small impervious areas. Refer to Appendix C for the Runoff Reduction and Water Quality Volume Sizing Calculations.

4. 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.

5. 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. The rip-rap pads will be 10 feet wide by 10 feet long.

6. Seeding of at least 70% 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 7 below:

Table 7
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	Apply full Soil Restoration**	

	of topsoil	
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.

<u>Specifications for Final Stabilization of Graded Areas</u>

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.

A complete fertilizer contains all three of the primary nutrients - nitrogen (N), phosphorus (P) and potassium in the form of potash (K). Typically, a 3-1-2 ratio of nutrients (N-P-K) is used for lawn applications.

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.

Glenco Group, LLC 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 E.

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:

- New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-15-002, effective January 29, 2015.
- Chapter 168 "Stormwater Management and Sediment and Erosion Control" of the Town of Ossining Code.
- New York State Stormwater Management Design Manual, revised January 2016.

The project employs a variety of practices to enhance stormwater quality and reduce peak rates of runoff associated with the proposed improvements. These measures include Infiltration basins, a wet extended detention pond and stormwater planters. These improvements will also mitigate runoff volumes from the proposed improvements as runoff volumes will be slightly reduced or maintained in all the analyzed storms.

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

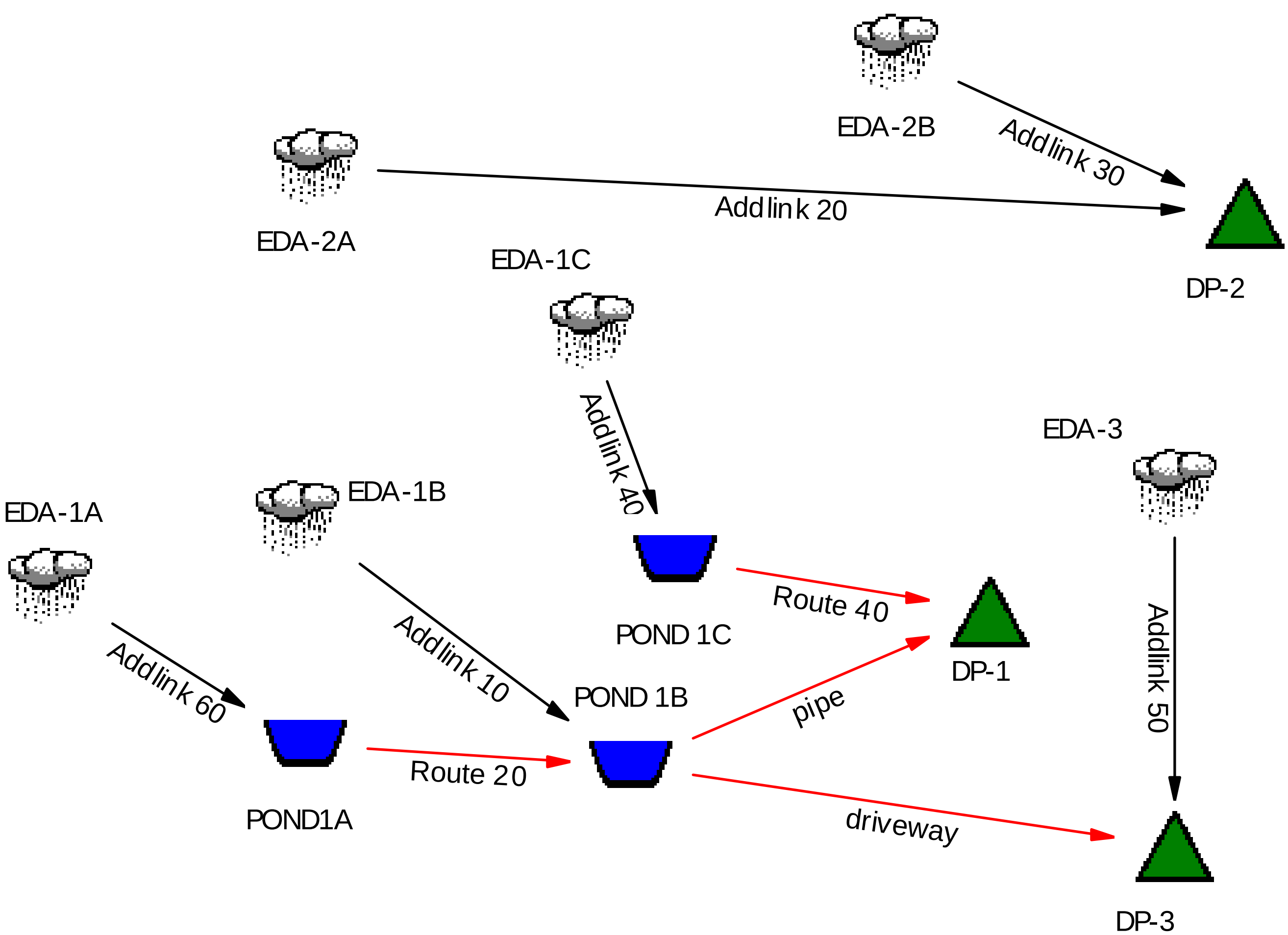
EDA-2B
Addlink 30
EDA-2A
Addlink 20
DP-2
EDA-1C
Addlink 40
EDA-3
EDA-1B
EDA-1A
POND 1C
Route 40
DP-1
Addlink 50
Addlink 10
Addlink 60
POND 1B
pipe
POND1A
Route 20
driveway
DP-3

Table of Contents

Table of Contents (continued)

Table of Contents (continued)

Table of Contents (continued)

Table of Contents (continued)

MASTER DESIGN STORM SUMMARY

Network Storm Collection: OSSINING-JMC

Return Event	Total Depth in	Rainfall Type	RNF ID
1	2.7800	Synthetic Curve	TypeIII 24hr
10	5.1400	Synthetic Curve	TypeIII 24hr
100	9.3000	Synthetic Curve	TypeIII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
*DP-1	JCT	1	14297		12.2500	1.72		
*DP-1	JCT	10	58526		12.2500	5.43		
*DP-1	JCT	100	158593		12.5500	9.92		
*DP-2	JCT	1	16029		12.1500	3.20		
*DP-2	JCT	10	62024		12.1500	15.33		
*DP-2	JCT	100	168373		12.1500	42.12		
*DP-3	JCT	1	2534		12.1000	.67		
*DP-3	JCT	10	7026		12.1000	1.89		
*DP-3	JCT	100	17775		12.1000	4.19		
EDA-1A	AREA	1	5310		12.2000	1.03		
EDA-1A	AREA	10	19694		12.2000	4.59		
EDA-1A	AREA	100	52342		12.2000	12.31		
EDA-1B	AREA	1	6564		12.1500	1.52		
EDA-1B	AREA	10	21061		12.1500	5.30		
EDA-1B	AREA	100	51904		12.1500	12.98		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID		Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
EDA-1C		AREA	1	8586		12.1500	2.17		
EDA-1C		AREA	10	26841		12.1500	7.09		
EDA-1C		AREA	100	65221		12.1000	16.91		
EDA-2A		AREA	1	6017		12.1000	1.42		
EDA-2A		AREA	10	22317		12.1000	6.24		
EDA-2A		AREA	100	59313		12.1000	16.64		
EDA-2B		AREA	1	10012		12.2000	1.91		
EDA-2B		AREA	10	39707		12.1500	9.59		
EDA-2B		AREA	100	109060		12.1500	27.23		
EDA-3		AREA	1	2534		12.1000	.67		
EDA-3		AREA	10	7026		12.1000	1.89		
EDA-3		AREA	100	15969		12.1000	4.19		
POND 1B	IN	POND	1	6564		12.1500	1.52		
POND 1B	IN	POND	10	32538		12.1500	5.30		
POND 1B	IN	POND	100	96030		12.2000	21.26		
+POND 1B	OUT	POND	1	5778		12.2500	1.41	338.59	1073
+POND 1B	OUT	POND	10	31752		12.2500	4.23	338.94	1944
+POND 1B	OUT	POND	100	95243		12.5500	11.12	342.14	19856
POND 1C	IN	POND	1	8586		12.1500	2.17		
POND 1C	IN	POND	10	26841		12.1500	7.09		
POND 1C	IN	POND	100	65221		12.1000	16.91		
POND 1C	OUT	POND	1	8520		12.6000	.52	314.50	2962
POND 1C	OUT	POND	10	26775		12.7000	1.24	315.49	10949
POND 1C	OUT	POND	100	65155		13.0500	1.58	317.39	31800
POND1A	IN	POND	1	5310		12.2000	1.03		
POND1A	IN	POND	10	19694		12.2000	4.59		
POND1A	IN	POND	100	52342		12.2000	12.31		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
POND1A	OUT POND	1	0		11.7000	.00	364.50	5307
POND1A	OUT POND	10	11477		12.9000	.86	364.78	9427
POND1A	OUT POND	100	44125		12.3000	10.45	365.06	14065

Title... Project Date: 9/30/2015
Project Engineer: BD
Project Title: RIVER KNOLL
Project Comments:

DESIGN STORMS SUMMARY

```
 Design Storm File,ID =               OSSINING-JMC


 Storm Tag Name      = 1
 ----------------------------------------------------------------------
 Data Type, File, ID = Synthetic Storm    TypeIII 24hr
 Storm Frequency     = 1 yr
 Total Rainfall Depth= 2.7800 in
 Duration Multiplier =  1
 Resulting Duration  = 24.0000 hrs
 Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs


 Storm Tag Name      =     10
 ----------------------------------------------------------------------
 Data Type, File, ID = Synthetic Storm    TypeIII 24hr
 Storm Frequency     = 10 yr
 Total Rainfall Depth= 5.1400 in
 Duration Multiplier =  1
 Resulting Duration  = 24.0000 hrs
 Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs


 Storm Tag Name      =    100
 ----------------------------------------------------------------------
 Data Type, File, ID = Synthetic Storm    TypeIII 24hr
 Storm Frequency     = 100 yr
 Total Rainfall Depth= 9.3000 in
 Duration Multiplier =  1
 Resulting Duration  = 24.0000 hrs
 Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs
```

DESIGN STORMS SUMMARY

Design Storm File,ID =   OSSINING-JMC

```
Storm Tag Name      = 1
----------------------------------------------------------------------
Data Type, File, ID = Synthetic Storm    TypeIII 24hr
Storm Frequency     = 1 yr
Total Rainfall Depth= 2.7800 in
Duration Multiplier =  1
Resulting Duration  = 24.0000 hrs
Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs


Storm Tag Name      =     10
----------------------------------------------------------------------
Data Type, File, ID = Synthetic Storm    TypeIII 24hr
Storm Frequency     = 10 yr
Total Rainfall Depth= 5.1400 in
Duration Multiplier =  1
Resulting Duration  = 24.0000 hrs
Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs


Storm Tag Name      =    100
----------------------------------------------------------------------
Data Type, File, ID = Synthetic Storm    TypeIII 24hr
Storm Frequency     = 100 yr
Total Rainfall Depth= 9.3000 in
Duration Multiplier =  1
Resulting Duration  = 24.0000 hrs
Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs
```

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.0110	
Hydraulic Length	10.00	ft
2yr, 24hr P	3.4100	in
Slope	.058330	ft/ft
Avg.Velocity	1.37	ft/sec

Segment #1 Time: .0020 hrs

Segment #2: Tc: TR-55 Sheet

Mannings n	.2400	
Hydraulic Length	27.00	ft
2yr, 24hr P	3.4100	in
Slope	.105260	ft/ft
Avg.Velocity	.18	ft/sec

Segment #2 Time: .0416 hrs

Segment #3: Tc: TR-55 Sheet

Mannings n	.4000	
Hydraulic Length	105.00	ft
2yr, 24hr P	3.4100	in
Slope	.104760	ft/ft
Avg.Velocity	.16	ft/sec

Segment #3 Time: .1859 hrs

```
Segment #4:  Tc: TR-55 Shallow

Hydraulic Length   199.00 ft
Slope             .135670 ft/ft
Unpaved

Avg.Velocity         5.94 ft/sec

                                         Segment #4 Time:     .0093 hrs
------------------------------------------------------------------------

                                               =========================
                                                Total Tc:     .2388 hrs
                                               =========================
```

```
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
TIME OF CONCENTRATION CALCULATOR
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::


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Segment #1:  Tc: TR-55 Sheet

Mannings n           .2400
Hydraulic Length   150.00 ft
2yr, 24hr P        3.4100 in
Slope             .097000 ft/ft

Avg.Velocity          .25 ft/sec

                                         Segment #1 Time:     .1695 hrs
------------------------------------------------------------------------

Segment #2:  Tc: TR-55 Shallow

Hydraulic Length   294.00 ft
Slope             .057850 ft/ft
Unpaved

Avg.Velocity         3.88 ft/sec

                                         Segment #2 Time:     .0210 hrs
------------------------------------------------------------------------

                                               =========================
                                                Total Tc:     .1905 hrs
                                               =========================
```

:::
TIME OF CONCENTRATION CALCULATOR
:::

Segment #1: Tc: TR-55 Sheet

Mannings n	.0110	
Hydraulic Length	17.00	ft
2yr, 24hr P	3.4100	in
Slope	.176470	ft/ft
Avg.Velocity	2.38	ft/sec

Segment #1 Time: .0020 hrs

Segment #2: Tc: TR-55 Sheet

Mannings n	.2400	
Hydraulic Length	133.00	ft
2yr, 24hr P	3.4100	in
Slope	.195488	ft/ft
Avg.Velocity	.32	ft/sec

Segment #2 Time: .1163 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length	104.00	ft
Slope	.105769	ft/ft
Paved		
Avg.Velocity	6.61	ft/sec

Segment #3 Time: .0044 hrs

File.... S:\2015\15064\PONDPACK\2016-12-05_bd\15064-EDA.ppw

```
Segment #4:  Tc: TR-55 Shallow

Hydraulic Length    53.00 ft
Slope             .264150 ft/ft
Unpaved

Avg.Velocity         8.29 ft/sec

                                         Segment #4 Time:     .0018 hrs
------------------------------------------------------------------------

Segment #5:  Tc: TR-55 Shallow

Hydraulic Length   107.00 ft
Slope             .028037 ft/ft
Paved

Avg.Velocity         3.40 ft/sec

                                         Segment #5 Time:     .0087 hrs
------------------------------------------------------------------------

Segment #6:  Tc: TR-55 Shallow

Hydraulic Length   297.00 ft
Slope             .117845 ft/ft
Unpaved

Avg.Velocity         5.54 ft/sec

                                         Segment #6 Time:     .0149 hrs
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                                               =========================
                                                Total Tc:     .1480 hrs
                                               =========================
```

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::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
TIME OF CONCENTRATION CALCULATOR
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------------------------------------------------------------------------


Segment #1:  Tc: TR-55 Sheet

Mannings n           .0110
Hydraulic Length   100.00 ft
2yr, 24hr P        3.4100 in
Slope            .080000 ft/ft

Avg.Velocity         2.47 ft/sec

                                         Segment #1 Time:     .0112 hrs
------------------------------------------------------------------------

Segment #2:  Tc: TR-55 Sheet

Mannings n           .4000
Hydraulic Length    50.00 ft
2yr, 24hr P        3.4100 in
Slope            .250000 ft/ft

Avg.Velocity          .19 ft/sec

                                         Segment #2 Time:     .0725 hrs
------------------------------------------------------------------------

Segment #3:  Tc: TR-55 Shallow

Hydraulic Length   359.00 ft
Slope            .194000 ft/ft
Unpaved

Avg.Velocity         7.11 ft/sec

                                         Segment #3 Time:     .0140 hrs
------------------------------------------------------------------------

                                               =========================
                                                Total Tc:     .0978 hrs
                                               =========================
```

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::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
TIME OF CONCENTRATION CALCULATOR
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Segment #1:  Tc: TR-55 Sheet

Mannings n          .4000
Hydraulic Length   150.00 ft
2yr, 24hr P        3.4100 in
Slope             .273330 ft/ft

Avg.Velocity          .25 ft/sec

                                        Segment #1 Time:     .1685 hrs
------------------------------------------------------------------------

Segment #2:  Tc: TR-55 Shallow

Hydraulic Length   765.00 ft
Slope             .161600 ft/ft
Unpaved

Avg.Velocity         6.49 ft/sec

                                        Segment #2 Time:     .0328 hrs
------------------------------------------------------------------------

                                              =========================
                                               Total Tc:     .2013 hrs
                                              =========================
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:::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
TIME OF CONCENTRATION CALCULATOR
:::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::


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Segment #1:  Tc: TR-55 Sheet

Mannings n          .0110
Hydraulic Length    28.00 ft
2yr, 24hr P        3.4100 in
Slope            .142850 ft/ft

Avg.Velocity         2.42 ft/sec

                                          Segment #1 Time:     .0032 hrs
------------------------------------------------------------------------

Segment #2:  Tc: TR-55 Sheet

Mannings n          .2400
Hydraulic Length   122.00 ft
2yr, 24hr P        3.4100 in
Slope            .191800 ft/ft

Avg.Velocity          .31 ft/sec

                                          Segment #2 Time:     .1094 hrs
------------------------------------------------------------------------

Segment #3:  Tc: TR-55 Shallow

Hydraulic Length   117.00 ft
Slope            .287170 ft/ft
Unpaved

Avg.Velocity         8.65 ft/sec

                                          Segment #3 Time:     .0038 hrs
------------------------------------------------------------------------
```

Segment #4: Tc: TR-55 Shallow

Hydraulic Length 238.00 ft
Slope .060500 ft/ft
Paved

Avg.Velocity 5.00 ft/sec

Segment #4 Time: .0132 hrs

=========================
Total Tc: .1296 hrs
=========================

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
IMPERVIOUS	98	.318			98.00
LAWN B	61	1.327			61.00
LAWN D	80	.280			80.00
WOODS B	55	.309			55.00
WOODS D	77	.400			77.00
COMPOSITE AREA & WEIGHTED CN --->		2.634			69.21 (69)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
IMPERVIOUS	98	.237			98.00
LAWN B	61	.940			61.00
LAWN D	80	.695			80.00
WOODS D	77	.471			77.00
COMPOSITE AREA & WEIGHTED CN --->		2.343			73.59 (74)

RUNOFF CURVE NUMBER DATA
::

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
IMPERVIOUS	98	.648			98.00
LAWN B	61	.856			61.00
LAWN C	74	.884			74.00
LAWN D	80	.040			80.00
WOODS B	55	.065			55.00
WOODS C	70	.385			70.00
WOODS D	77	.007			77.00

COMPOSITE AREA & WEIGHTED CN ---> 2.885 74.66 (75)
:::

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
IMPERVIOUS	98	.586			98.00
LAWN B	61	1.611			61.00
LAWN D	80	.249			80.00
WOODS B	55	.539			55.00

COMPOSITE AREA & WEIGHTED CN --->   2.985   68.77 (69)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
IMPERVIOUS	98	.826			98.00
LAWN B	61	2.300			61.00
LAWN C	74	.474			74.00
LAWN D	80	.118			80.00
WOODS B	55	1.610			55.00
WOODS C	70	.372			70.00
WOODS D	77	.053			77.00
COMPOSITE AREA & WEIGHTED CN --->		5.753			66.82 (67)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
IMPERVIOUS	98	.167			98.00
LAWN B	61	.166			61.00
LAWN D	80	.309			80.00
COMPOSITE AREA & WEIGHTED CN --->		.642			79.77 (80)

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 2.7800 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-1A 1
Tc = .2388 hrs
Drainage Area = 2.634 acres Runoff CN= 69
Calc.Increment= .03184 hrs Out.Incr.= .0500 hrs
HYG Volume = 5310 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.6500	.00	.00	.01	.02	.05
11.9000	.09	.17	.29	.49	.72
12.1500	.92	1.03	1.02	.96	.88
12.4000	.81	.74	.66	.57	.49
12.6500	.42	.37	.33	.31	.29
12.9000	.27	.26	.25	.23	.22
13.1500	.21	.21	.20	.20	.20
13.4000	.19	.19	.19	.18	.18
13.6500	.18	.18	.17	.17	.17
13.9000	.17	.16	.16	.16	.15
14.1500	.15	.15	.15	.15	.14
14.4000	.14	.14	.14	.14	.14
14.6500	.14	.13	.13	.13	.13
14.9000	.13	.13	.13	.12	.12
15.1500	.12	.12	.12	.12	.11
15.4000	.11	.11	.11	.11	.11
15.6500	.11	.10	.10	.10	.10
15.9000	.10	.09	.09	.09	.09
16.1500	.09	.09	.09	.09	.08
16.4000	.08	.08	.08	.08	.08
16.6500	.08	.08	.08	.08	.08
16.9000	.08	.08	.07	.07	.07
17.1500	.07	.07	.07	.07	.07
17.4000	.07	.07	.07	.07	.07
17.6500	.06	.06	.06	.06	.06
17.9000	.06	.06	.06	.06	.06
18.1500	.06	.06	.06	.06	.05
18.4000	.05	.05	.05	.05	.05
18.6500	.05	.05	.05	.05	.05
18.9000	.05	.05	.05	.05	.05

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.1500	.05	.05	.05	.05	.05
19.4000	.05	.05	.05	.05	.05
19.6500	.05	.05	.05	.05	.05
19.9000	.05	.05	.05	.05	.05
20.1500	.05	.05	.05	.05	.05
20.4000	.05	.05	.05	.05	.05
20.6500	.04	.04	.04	.04	.04
20.9000	.04	.04	.04	.04	.04
21.1500	.04	.04	.04	.04	.04
21.4000	.04	.04	.04	.04	.04
21.6500	.04	.04	.04	.04	.04
21.9000	.04	.04	.04	.04	.04
22.1500	.04	.04	.04	.04	.04
22.4000	.04	.04	.04	.04	.04
22.6500	.04	.04	.04	.04	.04
22.9000	.04	.04	.04	.04	.04
23.1500	.04	.04	.04	.04	.03
23.4000	.03	.03	.03	.03	.03
23.6500	.03	.03	.03	.03	.03
23.9000	.03	.03	.03	.03	.03
24.1500	.02	.01	.01	.00	.00
24.4000	.00	.00			

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration   = 24.0000 hrs   Rain Depth = 5.1400 in
Rain Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-1A 10
Tc   = .2388 hrs
Drainage Area = 2.634 acres Runoff CN= 69
Calc.Increment= .03184 hrs   Out.Incr.= .0500 hrs
HYG Volume   = 19694 cu.ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.8000	.00	.00	.00	.01	.01
10.0500	.01	.02	.02	.02	.03
10.3000	.03	.04	.04	.05	.05
10.5500	.06	.06	.07	.08	.08
10.8000	.09	.10	.10	.11	.12
11.0500	.13	.14	.15	.16	.18
11.3000	.19	.21	.23	.26	.28
11.5500	.31	.36	.43	.53	.67
11.8000	.85	1.06	1.32	1.68	2.26
12.0500	3.06	3.88	4.45	4.59	4.29
12.3000	3.84	3.39	3.02	2.66	2.32
12.5500	1.98	1.69	1.43	1.24	1.10
12.8000	1.00	.93	.88	.83	.78
13.0500	.74	.71	.68	.66	.64
13.3000	.62	.61	.60	.59	.58
13.5500	.57	.56	.55	.54	.53
13.8000	.52	.51	.50	.49	.48
14.0500	.47	.46	.46	.45	.44
14.3000	.44	.43	.43	.42	.42
14.5500	.41	.41	.40	.40	.39
14.8000	.39	.38	.38	.37	.37
15.0500	.36	.36	.35	.35	.34
15.3000	.34	.33	.33	.32	.32
15.5500	.31	.31	.30	.30	.29
15.8000	.29	.28	.28	.27	.27
16.0500	.26	.26	.25	.25	.25
16.3000	.24	.24	.24	.24	.23
16.5500	.23	.23	.23	.22	.22
16.8000	.22	.22	.22	.21	.21
17.0500	.21	.21	.20	.20	.20

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.3000	.20	.19	.19	.19	.19
17.5500	.19	.18	.18	.18	.18
17.8000	.17	.17	.17	.17	.16
18.0500	.16	.16	.16	.16	.16
18.3000	.15	.15	.15	.15	.15
18.5500	.15	.15	.15	.15	.15
18.8000	.15	.15	.15	.15	.14
19.0500	.14	.14	.14	.14	.14
19.3000	.14	.14	.14	.14	.14
19.5500	.14	.14	.14	.13	.13
19.8000	.13	.13	.13	.13	.13
20.0500	.13	.13	.13	.13	.13
20.3000	.13	.13	.13	.13	.12
20.5500	.12	.12	.12	.12	.12
20.8000	.12	.12	.12	.12	.12
21.0500	.12	.12	.12	.12	.12
21.3000	.12	.12	.12	.11	.11
21.5500	.11	.11	.11	.11	.11
21.8000	.11	.11	.11	.11	.11
22.0500	.11	.11	.11	.11	.11
22.3000	.11	.11	.10	.10	.10
22.5500	.10	.10	.10	.10	.10
22.8000	.10	.10	.10	.10	.10
23.0500	.10	.10	.10	.10	.10
23.3000	.10	.09	.09	.09	.09
23.5500	.09	.09	.09	.09	.09
23.8000	.09	.09	.09	.09	.09
24.0500	.08	.07	.05	.03	.02
24.3000	.01	.01	.00	.00	.00
24.5500	.00				

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.3000 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-1A 100
Tc = .2388 hrs
Drainage Area = 2.634 acres Runoff CN= 69
Calc.Increment= .03184 hrs Out.Incr.= .0500 hrs
HYG Volume = 52342 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.4000	.00	.00	.00	.01	.01
7.6500	.01	.01	.02	.02	.02
7.9000	.02	.03	.03	.03	.04
8.1500	.04	.05	.05	.05	.06
8.4000	.06	.07	.07	.08	.08
8.6500	.09	.10	.10	.11	.11
8.9000	.12	.13	.14	.14	.15
9.1500	.16	.17	.17	.18	.19
9.4000	.20	.21	.22	.23	.23
9.6500	.24	.25	.26	.27	.28
9.9000	.29	.30	.32	.33	.34
10.1500	.35	.37	.38	.40	.41
10.4000	.43	.45	.47	.49	.50
10.6500	.52	.54	.57	.59	.61
10.9000	.63	.65	.68	.70	.73
11.1500	.76	.81	.86	.92	.98
11.4000	1.04	1.11	1.19	1.28	1.43
11.6500	1.67	2.02	2.48	3.04	3.67
11.9000	4.38	5.37	6.93	9.00	11.01
12.1500	12.26	12.31	11.28	9.91	8.63
12.4000	7.57	6.60	5.69	4.84	4.08
12.6500	3.45	2.97	2.63	2.38	2.21
12.9000	2.07	1.95	1.84	1.74	1.66
13.1500	1.58	1.53	1.48	1.45	1.42
13.4000	1.39	1.36	1.34	1.32	1.29
13.6500	1.27	1.24	1.22	1.20	1.17
13.9000	1.15	1.13	1.10	1.08	1.06
14.1500	1.04	1.02	1.01	.99	.98
14.4000	.97	.96	.94	.93	.92
14.6500	.91	.90	.89	.88	.86

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.9000	.85	.84	.83	.82	.81
15.1500	.79	.78	.77	.76	.75
15.4000	.74	.72	.71	.70	.69
15.6500	.68	.67	.65	.64	.63
15.9000	.62	.61	.59	.58	.57
16.1500	.56	.55	.55	.54	.53
16.4000	.53	.52	.52	.51	.51
16.6500	.50	.50	.49	.49	.48
16.9000	.48	.47	.47	.46	.46
17.1500	.45	.45	.44	.44	.43
17.4000	.42	.42	.41	.41	.40
17.6500	.40	.39	.39	.38	.38
17.9000	.37	.37	.36	.36	.35
18.1500	.35	.34	.34	.34	.34
18.4000	.34	.33	.33	.33	.33
18.6500	.33	.33	.32	.32	.32
18.9000	.32	.32	.32	.32	.31
19.1500	.31	.31	.31	.31	.31
19.4000	.30	.30	.30	.30	.30
19.6500	.30	.29	.29	.29	.29
19.9000	.29	.29	.29	.28	.28
20.1500	.28	.28	.28	.28	.28
20.4000	.27	.27	.27	.27	.27
20.6500	.27	.27	.27	.26	.26
20.9000	.26	.26	.26	.26	.26
21.1500	.26	.26	.25	.25	.25
21.4000	.25	.25	.25	.25	.25
21.6500	.24	.24	.24	.24	.24
21.9000	.24	.24	.24	.24	.23
22.1500	.23	.23	.23	.23	.23
22.4000	.23	.23	.22	.22	.22
22.6500	.22	.22	.22	.22	.22
22.9000	.22	.21	.21	.21	.21
23.1500	.21	.21	.21	.21	.20
23.4000	.20	.20	.20	.20	.20
23.6500	.20	.20	.20	.19	.19
23.9000	.19	.19	.19	.18	.15
24.1500	.11	.07	.04	.03	.02
24.4000	.01	.01	.00	.00	.00

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 2.7800 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-1B 1
Tc = .1905 hrs
Drainage Area = 2.343 acres Runoff CN= 74
Calc.Increment= .02540 hrs Out.Incr.= .0500 hrs
HYG Volume = 6564 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.1500	.00	.00	.01	.01	.01
11.4000	.02	.02	.03	.04	.05
11.6500	.07	.10	.14	.19	.26
11.9000	.35	.48	.72	1.04	1.33
12.1500	1.52	1.49	1.34	1.18	1.06
12.4000	.94	.83	.72	.61	.51
12.6500	.44	.39	.36	.33	.32
12.9000	.30	.29	.27	.26	.25
13.1500	.24	.23	.23	.22	.22
13.4000	.22	.21	.21	.21	.21
13.6500	.20	.20	.20	.19	.19
13.9000	.18	.18	.18	.17	.17
14.1500	.17	.17	.16	.16	.16
14.4000	.16	.16	.16	.15	.15
14.6500	.15	.15	.15	.15	.14
14.9000	.14	.14	.14	.14	.14
15.1500	.13	.13	.13	.13	.13
15.4000	.12	.12	.12	.12	.12
15.6500	.11	.11	.11	.11	.11
15.9000	.10	.10	.10	.10	.10
16.1500	.10	.09	.09	.09	.09
16.4000	.09	.09	.09	.09	.09
16.6500	.09	.09	.09	.08	.08
16.9000	.08	.08	.08	.08	.08
17.1500	.08	.08	.08	.08	.07
17.4000	.07	.07	.07	.07	.07
17.6500	.07	.07	.07	.07	.07
17.9000	.06	.06	.06	.06	.06
18.1500	.06	.06	.06	.06	.06
18.4000	.06	.06	.06	.06	.06

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.6500	.06	.06	.06	.06	.06
18.9000	.06	.06	.06	.06	.06
19.1500	.06	.06	.05	.05	.05
19.4000	.05	.05	.05	.05	.05
19.6500	.05	.05	.05	.05	.05
19.9000	.05	.05	.05	.05	.05
20.1500	.05	.05	.05	.05	.05
20.4000	.05	.05	.05	.05	.05
20.6500	.05	.05	.05	.05	.05
20.9000	.05	.05	.05	.05	.05
21.1500	.05	.05	.05	.05	.05
21.4000	.05	.05	.04	.04	.04
21.6500	.04	.04	.04	.04	.04
21.9000	.04	.04	.04	.04	.04
22.1500	.04	.04	.04	.04	.04
22.4000	.04	.04	.04	.04	.04
22.6500	.04	.04	.04	.04	.04
22.9000	.04	.04	.04	.04	.04
23.1500	.04	.04	.04	.04	.04
23.4000	.04	.04	.04	.04	.04
23.6500	.04	.04	.04	.04	.04
23.9000	.03	.03	.03	.03	.02
24.1500	.01	.01	.00	.00	.00
24.4000	.00				

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration   = 24.0000 hrs   Rain Depth = 5.1400 in
Rain Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-1B 10
Tc   = .1905 hrs
Drainage Area = 2.343 acres Runoff CN= 74
Calc.Increment= .02540 hrs   Out.Incr.= .0500 hrs
HYG Volume   = 21061 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.8500	.00	.00	.00	.00	.01
9.1000	.01	.01	.01	.02	.02
9.3500	.02	.03	.03	.03	.04
9.6000	.04	.04	.05	.05	.05
9.8500	.06	.06	.06	.07	.07
10.1000	.08	.08	.09	.09	.10
10.3500	.11	.11	.12	.13	.13
10.6000	.14	.15	.15	.16	.17
10.8500	.18	.19	.20	.21	.22
11.1000	.23	.24	.26	.28	.30
11.3500	.33	.35	.38	.41	.45
11.6000	.52	.63	.79	.99	1.23
11.8500	1.49	1.80	2.27	3.11	4.11
12.1000	4.93	5.30	5.01	4.36	3.73
12.3500	3.26	2.85	2.48	2.11	1.78
12.6000	1.48	1.26	1.10	1.01	.94
12.8500	.88	.84	.80	.76	.72
13.1000	.69	.66	.64	.63	.62
13.3500	.60	.59	.58	.57	.56
13.6000	.56	.55	.54	.53	.52
13.8500	.51	.50	.49	.48	.47
14.1000	.46	.45	.44	.44	.43
14.3500	.43	.42	.42	.41	.41
14.6000	.40	.40	.39	.39	.38
14.8500	.38	.37	.37	.36	.36
15.1000	.35	.35	.34	.34	.33
15.3500	.33	.32	.32	.31	.31
15.6000	.30	.30	.29	.29	.28
15.8500	.28	.27	.26	.26	.25
16.1000	.25	.25	.24	.24	.24

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.3500	.24	.23	.23	.23	.23
16.6000	.22	.22	.22	.22	.21
16.8500	.21	.21	.21	.21	.20
17.1000	.20	.20	.20	.19	.19
17.3500	.19	.19	.19	.18	.18
17.6000	.18	.18	.17	.17	.17
17.8500	.17	.16	.16	.16	.16
18.1000	.16	.15	.15	.15	.15
18.3500	.15	.15	.15	.15	.15
18.6000	.15	.15	.15	.14	.14
18.8500	.14	.14	.14	.14	.14
19.1000	.14	.14	.14	.14	.14
19.3500	.14	.14	.13	.13	.13
19.6000	.13	.13	.13	.13	.13
19.8500	.13	.13	.13	.13	.13
20.1000	.13	.13	.12	.12	.12
20.3500	.12	.12	.12	.12	.12
20.6000	.12	.12	.12	.12	.12
20.8500	.12	.12	.12	.12	.12
21.1000	.12	.11	.11	.11	.11
21.3500	.11	.11	.11	.11	.11
21.6000	.11	.11	.11	.11	.11
21.8500	.11	.11	.11	.11	.11
22.1000	.10	.10	.10	.10	.10
22.3500	.10	.10	.10	.10	.10
22.6000	.10	.10	.10	.10	.10
22.8500	.10	.10	.10	.10	.09
23.1000	.09	.09	.09	.09	.09
23.3500	.09	.09	.09	.09	.09
23.6000	.09	.09	.09	.09	.09
23.8500	.09	.09	.08	.08	.08
24.1000	.06	.04	.02	.01	.01
24.3500	.00	.00	.00		

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.3000 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-1B 100
Tc = .1905 hrs
Drainage Area = 2.343 acres Runoff CN= 74
Calc.Increment= .02540 hrs Out.Incr.= .0500 hrs
HYG Volume = 51904 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.3500	.00	.00	.00	.01	.01
6.6000	.01	.01	.01	.01	.02
6.8500	.02	.02	.02	.03	.03
7.1000	.03	.03	.04	.04	.04
7.3500	.05	.05	.05	.05	.06
7.6000	.06	.06	.07	.07	.07
7.8500	.08	.08	.09	.09	.09
8.1000	.10	.10	.11	.11	.12
8.3500	.12	.13	.13	.14	.15
8.6000	.15	.16	.17	.17	.18
8.8500	.19	.20	.21	.21	.22
9.1000	.23	.24	.25	.26	.26
9.3500	.27	.28	.29	.30	.31
9.6000	.32	.33	.34	.35	.36
9.8500	.37	.38	.39	.41	.42
10.1000	.43	.44	.46	.48	.49
10.3500	.51	.53	.55	.57	.59
10.6000	.61	.63	.65	.67	.69
10.8500	.71	.74	.76	.78	.81
11.1000	.84	.88	.93	.99	1.06
11.3500	1.12	1.20	1.27	1.35	1.46
11.6000	1.66	1.97	2.42	2.97	3.61
11.8500	4.30	5.07	6.21	8.24	10.56
12.1000	12.35	12.98	12.05	10.33	8.72
12.3500	7.54	6.53	5.63	4.77	3.98
12.6000	3.31	2.79	2.44	2.23	2.07
12.8500	1.95	1.84	1.75	1.66	1.58
13.1000	1.50	1.45	1.40	1.37	1.34
13.3500	1.31	1.29	1.27	1.25	1.22
13.6000	1.20	1.18	1.16	1.13	1.11

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
13.8500	1.09	1.07	1.04	1.02	1.00
14.1000	.98	.96	.95	.93	.92
14.3500	.91	.90	.89	.88	.87
14.6000	.86	.85	.83	.82	.81
14.8500	.80	.79	.78	.77	.76
15.1000	.75	.74	.73	.71	.70
15.3500	.69	.68	.67	.66	.65
15.6000	.64	.63	.61	.60	.59
15.8500	.58	.57	.56	.55	.54
16.1000	.53	.52	.51	.51	.50
16.3500	.49	.49	.48	.48	.48
16.6000	.47	.47	.46	.46	.45
16.8500	.45	.44	.44	.43	.43
17.1000	.42	.42	.41	.41	.40
17.3500	.40	.39	.39	.38	.38
17.6000	.37	.37	.36	.36	.35
17.8500	.35	.34	.34	.33	.33
18.1000	.32	.32	.32	.32	.31
18.3500	.31	.31	.31	.31	.31
18.6000	.31	.30	.30	.30	.30
18.8500	.30	.30	.30	.29	.29
19.1000	.29	.29	.29	.29	.28
19.3500	.28	.28	.28	.28	.28
19.6000	.28	.27	.27	.27	.27
19.8500	.27	.27	.27	.26	.26
20.1000	.26	.26	.26	.26	.26
20.3500	.26	.25	.25	.25	.25
20.6000	.25	.25	.25	.25	.25
20.8500	.24	.24	.24	.24	.24
21.1000	.24	.24	.24	.24	.23
21.3500	.23	.23	.23	.23	.23
21.6000	.23	.23	.23	.22	.22
21.8500	.22	.22	.22	.22	.22
22.1000	.22	.22	.21	.21	.21
22.3500	.21	.21	.21	.21	.21
22.6000	.21	.21	.20	.20	.20
22.8500	.20	.20	.20	.20	.20
23.1000	.19	.19	.19	.19	.19
23.3500	.19	.19	.19	.19	.18
23.6000	.18	.18	.18	.18	.18
23.8500	.18	.18	.18	.17	.16
24.1000	.12	.07	.04	.02	.01
24.3500	.01	.00	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration   = 24.0000 hrs   Rain Depth = 2.7800 in
Rain Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-1C 1
Tc   = .1480 hrs
Drainage Area = 2.885 acres Runoff CN= 75
Calc.Increment= .01974 hrs   Out.Incr.= .0500 hrs
HYG Volume   = 8586 cu.ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .0500 hrs

Time on left represents time for first value in each row.

Time hrs					
10.9500	.00	.00	.01	.01	.01
11.2000	.02	.02	.03	.04	.04
11.4500	.05	.06	.08	.10	.13
11.7000	.18	.25	.34	.44	.56
11.9500	.79	1.22	1.68	2.04	2.17
12.2000	1.93	1.63	1.43	1.28	1.13
12.4500	.99	.83	.70	.58	.50
12.7000	.46	.43	.41	.39	.37
12.9500	.36	.34	.33	.31	.30
13.2000	.30	.29	.29	.28	.28
13.4500	.27	.27	.27	.26	.26
13.7000	.25	.25	.24	.24	.23
13.9500	.23	.23	.22	.22	.21
14.2000	.21	.21	.21	.20	.20
14.4500	.20	.20	.20	.19	.19
14.7000	.19	.19	.19	.18	.18
14.9500	.18	.18	.17	.17	.17
15.2000	.17	.16	.16	.16	.16
15.4500	.15	.15	.15	.15	.15
15.7000	.14	.14	.14	.14	.13
15.9500	.13	.13	.13	.12	.12
16.2000	.12	.12	.12	.12	.12
16.4500	.11	.11	.11	.11	.11
16.7000	.11	.11	.11	.11	.10
16.9500	.10	.10	.10	.10	.10
17.2000	.10	.10	.10	.09	.09
17.4500	.09	.09	.09	.09	.09
17.7000	.09	.09	.08	.08	.08
17.9500	.08	.08	.08	.08	.08
18.2000	.08	.08	.08	.08	.08

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.4500	.08	.07	.07	.07	.07
18.7000	.07	.07	.07	.07	.07
18.9500	.07	.07	.07	.07	.07
19.2000	.07	.07	.07	.07	.07
19.4500	.07	.07	.07	.07	.07
19.7000	.07	.07	.07	.07	.07
19.9500	.07	.06	.06	.06	.06
20.2000	.06	.06	.06	.06	.06
20.4500	.06	.06	.06	.06	.06
20.7000	.06	.06	.06	.06	.06
20.9500	.06	.06	.06	.06	.06
21.2000	.06	.06	.06	.06	.06
21.4500	.06	.06	.06	.06	.06
21.7000	.06	.06	.06	.06	.05
21.9500	.05	.05	.05	.05	.05
22.2000	.05	.05	.05	.05	.05
22.4500	.05	.05	.05	.05	.05
22.7000	.05	.05	.05	.05	.05
22.9500	.05	.05	.05	.05	.05
23.2000	.05	.05	.05	.05	.05
23.4500	.05	.05	.05	.05	.05
23.7000	.05	.05	.04	.04	.04
23.9500	.04	.04	.04	.02	.01
24.2000	.00	.00	.00		

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.1400 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-1C 10
Tc = .1480 hrs
Drainage Area = 2.885 acres Runoff CN= 75
Calc.Increment= .01974 hrs Out.Incr.= .0500 hrs
HYG Volume = 26841 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.6000	.00	.00	.00	.00	.01
8.8500	.01	.01	.02	.02	.02
9.1000	.03	.03	.03	.04	.04
9.3500	.04	.05	.05	.06	.06
9.6000	.07	.07	.07	.08	.08
9.8500	.09	.09	.10	.10	.11
10.1000	.12	.12	.13	.14	.15
10.3500	.15	.16	.17	.18	.19
10.6000	.20	.21	.22	.23	.24
10.8500	.25	.26	.27	.29	.30
11.1000	.32	.34	.37	.39	.43
11.3500	.46	.49	.53	.57	.63
11.6000	.75	.92	1.17	1.46	1.81
11.8500	2.17	2.59	3.33	4.77	6.12
12.1000	6.98	7.09	6.08	5.00	4.27
12.3500	3.74	3.25	2.81	2.34	1.95
12.6000	1.62	1.39	1.26	1.18	1.12
12.8500	1.07	1.02	.97	.92	.88
13.1000	.84	.81	.79	.78	.76
13.3500	.75	.74	.73	.71	.70
13.6000	.69	.68	.66	.65	.64
13.8500	.63	.61	.60	.59	.58
14.1000	.57	.56	.55	.54	.54
14.3500	.53	.52	.52	.51	.51
14.6000	.50	.49	.49	.48	.48
14.8500	.47	.46	.46	.45	.44
15.1000	.44	.43	.42	.42	.41
15.3500	.41	.40	.39	.39	.38
15.6000	.37	.37	.36	.35	.35
15.8500	.34	.33	.33	.32	.32

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.1000	.31	.31	.30	.30	.30
16.3500	.29	.29	.29	.28	.28
16.6000	.28	.28	.27	.27	.27
16.8500	.26	.26	.26	.26	.25
17.1000	.25	.25	.24	.24	.24
17.3500	.24	.23	.23	.23	.22
17.6000	.22	.22	.22	.21	.21
17.8500	.21	.20	.20	.20	.20
18.1000	.19	.19	.19	.19	.19
18.3500	.19	.19	.19	.18	.18
18.6000	.18	.18	.18	.18	.18
18.8500	.18	.18	.18	.18	.18
19.1000	.17	.17	.17	.17	.17
19.3500	.17	.17	.17	.17	.17
19.6000	.17	.17	.16	.16	.16
19.8500	.16	.16	.16	.16	.16
20.1000	.16	.16	.16	.16	.15
20.3500	.15	.15	.15	.15	.15
20.6000	.15	.15	.15	.15	.15
20.8500	.15	.15	.15	.15	.15
21.1000	.14	.14	.14	.14	.14
21.3500	.14	.14	.14	.14	.14
21.6000	.14	.14	.14	.14	.14
21.8500	.13	.13	.13	.13	.13
22.1000	.13	.13	.13	.13	.13
22.3500	.13	.13	.13	.13	.12
22.6000	.12	.12	.12	.12	.12
22.8500	.12	.12	.12	.12	.12
23.1000	.12	.12	.12	.12	.11
23.3500	.11	.11	.11	.11	.11
23.6000	.11	.11	.11	.11	.11
23.8500	.11	.11	.11	.11	.09
24.1000	.06	.03	.01	.00	.00
24.3500	.00				

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs   Rain Depth = 9.3000 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-1C 100
Tc = .1480 hrs
Drainage Area = 2.885 acres Runoff CN= 75
Calc.Increment= .01974 hrs   Out.Incr.= .0500 hrs
HYG Volume = 65221 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.0500	.00	.00	.00	.00	.01
6.3000	.01	.01	.01	.02	.02
6.5500	.02	.02	.03	.03	.03
6.8000	.03	.04	.04	.04	.05
7.0500	.05	.05	.06	.06	.06
7.3000	.07	.07	.08	.08	.08
7.5500	.09	.09	.10	.10	.11
7.8000	.11	.11	.12	.12	.13
8.0500	.13	.14	.15	.15	.16
8.3000	.17	.17	.18	.19	.20
8.5500	.21	.22	.22	.23	.24
8.8000	.25	.26	.27	.28	.29
9.0500	.30	.31	.33	.34	.35
9.3000	.36	.37	.38	.39	.41
9.5500	.42	.43	.44	.46	.47
9.8000	.48	.50	.51	.53	.54
10.0500	.55	.57	.59	.61	.63
10.3000	.66	.68	.70	.73	.75
10.5500	.78	.80	.83	.86	.88
10.8000	.91	.94	.97	1.00	1.03
11.0500	1.06	1.11	1.17	1.24	1.32
11.3000	1.41	1.49	1.59	1.68	1.78
11.5500	1.95	2.29	2.76	3.46	4.23
11.8000	5.12	6.01	7.02	8.78	12.21
12.0500	15.22	16.91	16.81	14.19	11.51
12.3000	9.71	8.43	7.27	6.24	5.19
12.5500	4.29	3.56	3.05	2.76	2.58
12.8000	2.44	2.32	2.21	2.10	1.99
13.0500	1.89	1.81	1.75	1.71	1.67
13.3000	1.64	1.61	1.58	1.56	1.53

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
13.5500	1.50	1.47	1.45	1.42	1.39
13.8000	1.36	1.34	1.31	1.28	1.25
14.0500	1.22	1.20	1.18	1.16	1.15
14.3000	1.14	1.12	1.11	1.10	1.08
14.5500	1.07	1.05	1.04	1.03	1.01
14.8000	1.00	.99	.97	.96	.95
15.0500	.93	.92	.91	.89	.88
15.3000	.86	.85	.84	.82	.81
15.5500	.80	.78	.77	.75	.74
15.8000	.73	.71	.70	.68	.67
16.0500	.66	.65	.64	.63	.62
16.3000	.62	.61	.60	.60	.59
16.5500	.59	.58	.57	.57	.56
16.8000	.56	.55	.54	.54	.53
17.0500	.52	.52	.51	.51	.50
17.3000	.49	.49	.48	.48	.47
17.5500	.46	.46	.45	.45	.44
17.8000	.43	.43	.42	.42	.41
18.0500	.40	.40	.39	.39	.39
18.3000	.39	.39	.38	.38	.38
18.5500	.38	.38	.38	.37	.37
18.8000	.37	.37	.37	.36	.36
19.0500	.36	.36	.36	.36	.35
19.3000	.35	.35	.35	.35	.34
19.5500	.34	.34	.34	.34	.34
19.8000	.33	.33	.33	.33	.33
20.0500	.33	.32	.32	.32	.32
20.3000	.32	.32	.31	.31	.31
20.5500	.31	.31	.31	.31	.30
20.8000	.30	.30	.30	.30	.30
21.0500	.30	.30	.29	.29	.29
21.3000	.29	.29	.29	.29	.28
21.5500	.28	.28	.28	.28	.28
21.8000	.28	.28	.27	.27	.27
22.0500	.27	.27	.27	.27	.26
22.3000	.26	.26	.26	.26	.26
22.5500	.26	.25	.25	.25	.25
22.8000	.25	.25	.25	.24	.24
23.0500	.24	.24	.24	.24	.24
23.3000	.23	.23	.23	.23	.23
23.5500	.23	.23	.22	.22	.22
23.8000	.22	.22	.22	.22	.21
24.0500	.19	.12	.05	.02	.01
24.3000	.00	.00	.00		

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 2.7800 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-2A 1
Tc = .0978 hrs
Drainage Area = 2.985 acres Runoff CN= 69
Calc.Increment= .01304 hrs Out.Incr.= .0500 hrs
HYG Volume = 6017 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.6500	.00	.01	.03	.08	.15
11.9000	.25	.45	.83	1.15	1.42
12.1500	1.42	1.13	1.00	.90	.83
12.4000	.73	.64	.52	.44	.37
12.6500	.34	.32	.31	.30	.29
12.9000	.27	.26	.25	.24	.23
13.1500	.23	.22	.22	.22	.21
13.4000	.21	.21	.21	.20	.20
13.6500	.20	.19	.19	.19	.18
13.9000	.18	.18	.17	.17	.17
14.1500	.17	.16	.16	.16	.16
14.4000	.16	.16	.16	.15	.15
14.6500	.15	.15	.15	.15	.14
14.9000	.14	.14	.14	.14	.14
15.1500	.13	.13	.13	.13	.13
15.4000	.12	.12	.12	.12	.12
15.6500	.11	.11	.11	.11	.11
15.9000	.10	.10	.10	.10	.10
16.1500	.10	.10	.10	.09	.09
16.4000	.09	.09	.09	.09	.09
16.6500	.09	.09	.09	.09	.09
16.9000	.08	.08	.08	.08	.08
17.1500	.08	.08	.08	.08	.08
17.4000	.08	.07	.07	.07	.07
17.6500	.07	.07	.07	.07	.07
17.9000	.07	.07	.06	.06	.06
18.1500	.06	.06	.06	.06	.06
18.4000	.06	.06	.06	.06	.06
18.6500	.06	.06	.06	.06	.06
18.9000	.06	.06	.06	.06	.06

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.1500	.06	.06	.06	.06	.06
19.4000	.06	.06	.06	.06	.06
19.6500	.05	.05	.05	.05	.05
19.9000	.05	.05	.05	.05	.05
20.1500	.05	.05	.05	.05	.05
20.4000	.05	.05	.05	.05	.05
20.6500	.05	.05	.05	.05	.05
20.9000	.05	.05	.05	.05	.05
21.1500	.05	.05	.05	.05	.05
21.4000	.05	.05	.05	.05	.05
21.6500	.05	.05	.05	.05	.05
21.9000	.05	.05	.04	.04	.04
22.1500	.04	.04	.04	.04	.04
22.4000	.04	.04	.04	.04	.04
22.6500	.04	.04	.04	.04	.04
22.9000	.04	.04	.04	.04	.04
23.1500	.04	.04	.04	.04	.04
23.4000	.04	.04	.04	.04	.04
23.6500	.04	.04	.04	.04	.04
23.9000	.04	.04	.04	.03	.01
24.1500	.00	.00			

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.1400 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-2A 10
Tc = .0978 hrs
Drainage Area = 2.985 acres Runoff CN= 69
Calc.Increment= .01304 hrs Out.Incr.= .0500 hrs
HYG Volume = 22317 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.7500	.00	.00	.01	.01	.01
10.0000	.02	.02	.03	.03	.04
10.2500	.04	.05	.05	.06	.07
10.5000	.07	.08	.09	.10	.10
10.7500	.11	.12	.13	.14	.15
11.0000	.16	.17	.18	.20	.22
11.2500	.24	.27	.29	.32	.35
11.5000	.38	.45	.56	.72	.95
11.7500	1.19	1.49	1.80	2.19	3.15
12.0000	4.74	5.65	6.24	5.74	4.34
12.2500	3.68	3.22	2.89	2.49	2.15
12.5000	1.73	1.46	1.21	1.10	1.04
12.7500	.99	.95	.91	.87	.83
13.0000	.78	.75	.72	.71	.69
13.2500	.68	.67	.66	.65	.64
13.5000	.63	.62	.61	.60	.59
13.7500	.58	.57	.56	.54	.53
14.0000	.52	.51	.50	.50	.49
14.2500	.49	.48	.48	.47	.47
14.5000	.46	.45	.45	.44	.44
14.7500	.43	.43	.42	.42	.41
15.0000	.41	.40	.39	.39	.38
15.2500	.38	.37	.37	.36	.35
15.5000	.35	.34	.34	.33	.32
15.7500	.32	.31	.31	.30	.30
16.0000	.29	.28	.28	.28	.27
16.2500	.27	.27	.27	.26	.26
16.5000	.26	.26	.25	.25	.25
16.7500	.25	.24	.24	.24	.24
17.0000	.23	.23	.23	.23	.22

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.2500	.22	.22	.22	.21	.21
17.5000	.21	.20	.20	.20	.20
17.7500	.19	.19	.19	.19	.18
18.0000	.18	.18	.18	.18	.17
18.2500	.17	.17	.17	.17	.17
18.5000	.17	.17	.17	.17	.17
18.7500	.17	.17	.16	.16	.16
19.0000	.16	.16	.16	.16	.16
19.2500	.16	.16	.16	.16	.16
19.5000	.15	.15	.15	.15	.15
19.7500	.15	.15	.15	.15	.15
20.0000	.15	.15	.14	.14	.14
20.2500	.14	.14	.14	.14	.14
20.5000	.14	.14	.14	.14	.14
20.7500	.14	.14	.14	.14	.13
21.0000	.13	.13	.13	.13	.13
21.2500	.13	.13	.13	.13	.13
21.5000	.13	.13	.13	.13	.13
21.7500	.13	.13	.12	.12	.12
22.0000	.12	.12	.12	.12	.12
22.2500	.12	.12	.12	.12	.12
22.5000	.12	.12	.12	.11	.11
22.7500	.11	.11	.11	.11	.11
23.0000	.11	.11	.11	.11	.11
23.2500	.11	.11	.11	.11	.10
23.5000	.10	.10	.10	.10	.10
23.7500	.10	.10	.10	.10	.10
24.0000	.10	.07	.02	.01	.00
24.2500	.00				

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.3000 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-2A 100
Tc = .0978 hrs
Drainage Area = 2.985 acres Runoff CN= 69
Calc.Increment= .01304 hrs Out.Incr.= .0500 hrs
HYG Volume = 59313 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.3500	.00	.00	.01	.01	.01
7.6000	.01	.02	.02	.03	.03
7.8500	.03	.04	.04	.04	.05
8.1000	.05	.06	.06	.07	.07
8.3500	.08	.08	.09	.10	.10
8.6000	.11	.12	.12	.13	.14
8.8500	.15	.15	.16	.17	.18
9.1000	.19	.20	.21	.22	.23
9.3500	.24	.25	.26	.27	.28
9.6000	.29	.30	.31	.32	.34
9.8500	.35	.36	.37	.39	.40
10.1000	.42	.43	.45	.47	.49
10.3500	.51	.53	.55	.58	.60
10.6000	.62	.65	.67	.69	.72
10.8500	.74	.77	.80	.82	.86
11.1000	.91	.97	1.04	1.11	1.20
11.3500	1.27	1.36	1.44	1.53	1.78
11.6000	2.16	2.69	3.43	4.16	5.04
11.8500	5.87	6.89	9.49	13.68	15.64
12.1000	16.64	14.89	11.03	9.20	7.96
12.3500	7.05	6.04	5.17	4.14	3.49
12.6000	2.87	2.60	2.45	2.35	2.23
12.8500	2.14	2.03	1.94	1.83	1.76
13.1000	1.68	1.64	1.61	1.59	1.56
13.3500	1.54	1.51	1.48	1.46	1.43
13.6000	1.40	1.38	1.35	1.33	1.30
13.8500	1.27	1.24	1.22	1.19	1.17
14.1000	1.15	1.13	1.12	1.11	1.09
14.3500	1.08	1.07	1.05	1.04	1.03
14.6000	1.01	1.00	.99	.98	.96

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.8500	.95	.94	.92	.91	.90
15.1000	.88	.87	.86	.85	.83
15.3500	.82	.80	.79	.78	.77
15.6000	.75	.74	.72	.71	.70
15.8500	.69	.67	.66	.64	.63
16.1000	.62	.62	.61	.60	.60
16.3500	.59	.58	.58	.57	.57
16.6000	.56	.56	.55	.55	.54
16.8500	.53	.53	.52	.51	.51
17.1000	.50	.50	.49	.49	.48
17.3500	.47	.47	.46	.46	.45
17.6000	.44	.44	.43	.43	.42
17.8500	.41	.41	.40	.40	.39
18.1000	.39	.38	.38	.38	.38
18.3500	.38	.38	.37	.37	.37
18.6000	.37	.37	.37	.36	.36
18.8500	.36	.36	.36	.36	.35
19.1000	.35	.35	.35	.35	.34
19.3500	.34	.34	.34	.34	.34
19.6000	.33	.33	.33	.33	.33
19.8500	.33	.32	.32	.32	.32
20.1000	.32	.31	.31	.31	.31
20.3500	.31	.31	.31	.31	.30
20.6000	.30	.30	.30	.30	.30
20.8500	.30	.29	.29	.29	.29
21.1000	.29	.29	.29	.29	.28
21.3500	.28	.28	.28	.28	.28
21.6000	.28	.28	.27	.27	.27
21.8500	.27	.27	.27	.27	.26
22.1000	.26	.26	.26	.26	.26
22.3500	.26	.26	.25	.25	.25
22.6000	.25	.25	.25	.24	.24
22.8500	.24	.24	.24	.24	.24
23.1000	.23	.23	.23	.23	.23
23.3500	.23	.23	.23	.22	.22
23.6000	.22	.22	.22	.22	.22
23.8500	.22	.21	.21	.21	.15
24.1000	.05	.01	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration   = 24.0000 hrs   Rain Depth = 2.7800 in
Rain Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-2B 1
Tc   = .2013 hrs
Drainage Area = 5.753 acres Runoff CN= 67
Calc.Increment= .02683 hrs   Out.Incr.= .0500 hrs
HYG Volume   = 10012 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.7500	.00	.00	.02	.09	.22
12.0000	.49	.90	1.38	1.78	1.91
12.2500	1.84	1.69	1.57	1.44	1.31
12.5000	1.15	.99	.85	.73	.64
12.7500	.59	.55	.53	.50	.48
13.0000	.46	.44	.42	.41	.40
13.2500	.39	.38	.38	.37	.37
13.5000	.36	.36	.35	.35	.34
13.7500	.34	.33	.33	.32	.32
14.0000	.31	.30	.30	.29	.29
14.2500	.29	.28	.28	.28	.28
14.5000	.27	.27	.27	.27	.26
14.7500	.26	.26	.25	.25	.25
15.0000	.25	.24	.24	.24	.23
15.2500	.23	.23	.23	.22	.22
15.5000	.22	.21	.21	.21	.20
15.7500	.20	.20	.19	.19	.19
16.0000	.18	.18	.18	.17	.17
16.2500	.17	.17	.17	.16	.16
16.5000	.16	.16	.16	.16	.16
16.7500	.15	.15	.15	.15	.15
17.0000	.15	.15	.14	.14	.14
17.2500	.14	.14	.14	.13	.13
17.5000	.13	.13	.13	.13	.13
17.7500	.12	.12	.12	.12	.12
18.0000	.12	.11	.11	.11	.11
18.2500	.11	.11	.11	.11	.11
18.5000	.11	.11	.11	.11	.11
18.7500	.11	.11	.10	.10	.10
19.0000	.10	.10	.10	.10	.10

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.2500	.10	.10	.10	.10	.10
19.5000	.10	.10	.10	.10	.10
19.7500	.10	.10	.10	.10	.09
20.0000	.09	.09	.09	.09	.09
20.2500	.09	.09	.09	.09	.09
20.5000	.09	.09	.09	.09	.09
20.7500	.09	.09	.09	.09	.09
21.0000	.09	.09	.09	.09	.09
21.2500	.09	.08	.08	.08	.08
21.5000	.08	.08	.08	.08	.08
21.7500	.08	.08	.08	.08	.08
22.0000	.08	.08	.08	.08	.08
22.2500	.08	.08	.08	.08	.08
22.5000	.08	.08	.08	.08	.07
22.7500	.07	.07	.07	.07	.07
23.0000	.07	.07	.07	.07	.07
23.2500	.07	.07	.07	.07	.07
23.5000	.07	.07	.07	.07	.07
23.7500	.07	.07	.07	.07	.06
24.0000	.06	.06	.05	.03	.02
24.2500	.01	.00	.00	.00	.00

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.1400 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-2B 10
Tc = .2013 hrs
Drainage Area = 5.753 acres Runoff CN= 67
Calc.Increment= .02683 hrs Out.Incr.= .0500 hrs
HYG Volume = 39707 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.1000	.00	.00	.00	.01	.02
10.3500	.03	.03	.04	.05	.07
10.6000	.08	.09	.10	.12	.13
10.8500	.14	.16	.17	.19	.21
11.1000	.23	.25	.28	.31	.34
11.3500	.38	.42	.46	.51	.57
11.6000	.68	.83	1.07	1.37	1.77
11.8500	2.22	2.77	3.59	5.04	6.88
12.1000	8.59	9.59	9.37	8.38	7.30
12.3500	6.45	5.70	5.02	4.31	3.66
12.6000	3.07	2.61	2.28	2.07	1.93
12.8500	1.82	1.72	1.64	1.56	1.48
13.1000	1.42	1.36	1.32	1.29	1.27
13.3500	1.24	1.22	1.20	1.18	1.17
13.6000	1.15	1.13	1.11	1.09	1.07
13.8500	1.05	1.03	1.01	.99	.97
14.1000	.95	.93	.92	.91	.90
14.3500	.89	.88	.87	.86	.85
14.6000	.84	.83	.82	.81	.80
14.8500	.79	.78	.77	.76	.75
15.1000	.74	.73	.72	.71	.70
15.3500	.69	.68	.67	.66	.65
15.6000	.64	.62	.61	.60	.59
15.8500	.58	.57	.56	.55	.54
16.1000	.53	.52	.51	.51	.50
16.3500	.50	.49	.49	.48	.48
16.6000	.47	.47	.46	.46	.46
16.8500	.45	.45	.44	.44	.43
17.1000	.43	.42	.42	.41	.41
17.3500	.40	.40	.39	.39	.38

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.6000	.38	.37	.37	.36	.36
17.8500	.35	.35	.35	.34	.34
18.1000	.33	.33	.32	.32	.32
18.3500	.32	.32	.32	.32	.31
18.6000	.31	.31	.31	.31	.31
18.8500	.31	.30	.30	.30	.30
19.1000	.30	.30	.30	.29	.29
19.3500	.29	.29	.29	.29	.29
19.6000	.28	.28	.28	.28	.28
19.8500	.28	.28	.27	.27	.27
20.1000	.27	.27	.27	.27	.27
20.3500	.26	.26	.26	.26	.26
20.6000	.26	.26	.26	.25	.25
20.8500	.25	.25	.25	.25	.25
21.1000	.25	.25	.25	.24	.24
21.3500	.24	.24	.24	.24	.24
21.6000	.24	.24	.23	.23	.23
21.8500	.23	.23	.23	.23	.23
22.1000	.23	.22	.22	.22	.22
22.3500	.22	.22	.22	.22	.22
22.6000	.21	.21	.21	.21	.21
22.8500	.21	.21	.21	.21	.20
23.1000	.20	.20	.20	.20	.20
23.3500	.20	.20	.20	.19	.19
23.6000	.19	.19	.19	.19	.19
23.8500	.19	.18	.18	.18	.17
24.1000	.13	.08	.05	.03	.01
24.3500	.01	.00	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.3000 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-2B 100
Tc = .2013 hrs
Drainage Area = 5.753 acres Runoff CN= 67
Calc.Increment= .02683 hrs Out.Incr.= .0500 hrs
HYG Volume = 109060 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.7500	.00	.00	.01	.01	.02
8.0000	.02	.03	.03	.04	.05
8.2500	.06	.07	.07	.08	.09
8.5000	.10	.11	.12	.14	.15
8.7500	.16	.17	.18	.20	.21
9.0000	.23	.24	.26	.27	.29
9.2500	.30	.32	.34	.35	.37
9.5000	.39	.41	.43	.45	.47
9.7500	.49	.51	.53	.55	.57
10.0000	.60	.62	.64	.67	.70
10.2500	.73	.77	.80	.84	.87
10.5000	.91	.95	.99	1.03	1.07
10.7500	1.12	1.16	1.21	1.25	1.30
11.0000	1.35	1.40	1.46	1.54	1.64
11.2500	1.75	1.88	2.01	2.15	2.30
11.5000	2.46	2.67	3.04	3.61	4.46
11.7500	5.51	6.79	8.20	9.80	12.12
12.0000	16.17	21.09	25.27	27.23	25.90
12.2500	22.66	19.36	16.83	14.67	12.75
12.5000	10.86	9.13	7.62	6.44	5.61
12.7500	5.07	4.70	4.42	4.17	3.96
13.0000	3.75	3.57	3.40	3.27	3.16
13.2500	3.09	3.02	2.97	2.91	2.86
13.5000	2.81	2.77	2.72	2.67	2.62
13.7500	2.57	2.52	2.47	2.42	2.37
14.0000	2.32	2.27	2.22	2.18	2.15
14.2500	2.12	2.09	2.07	2.04	2.02
14.5000	2.00	1.97	1.95	1.92	1.90
14.7500	1.88	1.85	1.83	1.80	1.78
15.0000	1.75	1.73	1.71	1.68	1.66

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.2500	1.63	1.61	1.58	1.56	1.53
15.5000	1.51	1.48	1.46	1.43	1.41
15.7500	1.38	1.36	1.33	1.31	1.28
16.0000	1.25	1.23	1.21	1.19	1.17
16.2500	1.16	1.14	1.13	1.12	1.11
16.5000	1.10	1.09	1.08	1.07	1.06
16.7500	1.04	1.03	1.02	1.01	1.00
17.0000	.99	.98	.97	.96	.95
17.2500	.93	.92	.91	.90	.89
17.5000	.88	.87	.86	.84	.83
17.7500	.82	.81	.80	.79	.78
18.0000	.77	.76	.75	.74	.73
18.2500	.73	.72	.72	.72	.71
18.5000	.71	.70	.70	.70	.70
18.7500	.69	.69	.69	.68	.68
19.0000	.68	.67	.67	.67	.66
19.2500	.66	.66	.65	.65	.65
19.5000	.64	.64	.64	.63	.63
19.7500	.63	.62	.62	.62	.61
20.0000	.61	.61	.60	.60	.60
20.2500	.59	.59	.59	.59	.58
20.5000	.58	.58	.58	.57	.57
20.7500	.57	.57	.56	.56	.56
21.0000	.56	.55	.55	.55	.55
21.2500	.54	.54	.54	.54	.53
21.5000	.53	.53	.53	.52	.52
21.7500	.52	.52	.51	.51	.51
22.0000	.51	.50	.50	.50	.50
22.2500	.49	.49	.49	.48	.48
22.5000	.48	.48	.48	.47	.47
22.7500	.47	.46	.46	.46	.46
23.0000	.45	.45	.45	.45	.44
23.2500	.44	.44	.44	.43	.43
23.5000	.43	.43	.42	.42	.42
23.7500	.42	.41	.41	.41	.40
24.0000	.40	.38	.30	.19	.10
24.2500	.06	.03	.02	.01	.00
24.5000	.00	.00			

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 2.7800 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-3 1
Tc = .1296 hrs
Drainage Area = .642 acres Runoff CN= 80
Calc.Increment= .01727 hrs Out.Incr.= .0500 hrs
HYG Volume = 2534 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.0000	.00	.00	.00	.00	.00
10.2500	.00	.00	.00	.01	.01
10.5000	.01	.01	.01	.01	.01
10.7500	.01	.01	.01	.01	.01
11.0000	.02	.02	.02	.02	.02
11.2500	.03	.03	.03	.03	.04
11.5000	.04	.05	.06	.07	.09
11.7500	.12	.15	.18	.22	.30
12.0000	.46	.58	.67	.67	.55
12.2500	.46	.40	.35	.31	.27
12.5000	.22	.18	.15	.13	.12
12.7500	.12	.11	.11	.10	.10
13.0000	.09	.09	.08	.08	.08
13.2500	.08	.08	.08	.08	.07
13.5000	.07	.07	.07	.07	.07
13.7500	.07	.07	.06	.06	.06
14.0000	.06	.06	.06	.06	.06
14.2500	.06	.06	.05	.05	.05
14.5000	.05	.05	.05	.05	.05
14.7500	.05	.05	.05	.05	.05
15.0000	.05	.05	.05	.04	.04
15.2500	.04	.04	.04	.04	.04
15.5000	.04	.04	.04	.04	.04
15.7500	.04	.04	.04	.03	.03
16.0000	.03	.03	.03	.03	.03
16.2500	.03	.03	.03	.03	.03
16.5000	.03	.03	.03	.03	.03
16.7500	.03	.03	.03	.03	.03
17.0000	.03	.03	.03	.03	.03
17.2500	.03	.03	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.5000	.02	.02	.02	.02	.02
17.7500	.02	.02	.02	.02	.02
18.0000	.02	.02	.02	.02	.02
18.2500	.02	.02	.02	.02	.02
18.5000	.02	.02	.02	.02	.02
18.7500	.02	.02	.02	.02	.02
19.0000	.02	.02	.02	.02	.02
19.2500	.02	.02	.02	.02	.02
19.5000	.02	.02	.02	.02	.02
19.7500	.02	.02	.02	.02	.02
20.0000	.02	.02	.02	.02	.02
20.2500	.02	.02	.02	.02	.02
20.5000	.02	.02	.02	.02	.02
20.7500	.02	.02	.02	.02	.02
21.0000	.02	.02	.02	.02	.02
21.2500	.02	.02	.01	.01	.01
21.5000	.01	.01	.01	.01	.01
21.7500	.01	.01	.01	.01	.01
22.0000	.01	.01	.01	.01	.01
22.2500	.01	.01	.01	.01	.01
22.5000	.01	.01	.01	.01	.01
22.7500	.01	.01	.01	.01	.01
23.0000	.01	.01	.01	.01	.01
23.2500	.01	.01	.01	.01	.01
23.5000	.01	.01	.01	.01	.01
23.7500	.01	.01	.01	.01	.01
24.0000	.01	.01	.00	.00	.00

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.1400 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-3 10
Tc = .1296 hrs
Drainage Area = .642 acres Runoff CN= 80
Calc.Increment= .01727 hrs Out.Incr.= .0500 hrs
HYG Volume = 7026 cu.ft

HYDROGRAPH ORDINATES (cfs)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
7.5500	.00	.00	.00	.00	.00
7.8000	.00	.00	.00	.00	.00
8.0500	.01	.01	.01	.01	.01
8.3000	.01	.01	.01	.01	.01
8.5500	.01	.01	.01	.01	.01
8.8000	.02	.02	.02	.02	.02
9.0500	.02	.02	.02	.02	.02
9.3000	.03	.03	.03	.03	.03
9.5500	.03	.03	.03	.04	.04
9.8000	.04	.04	.04	.04	.04
10.0500	.05	.05	.05	.05	.05
10.3000	.06	.06	.06	.06	.07
10.5500	.07	.07	.07	.08	.08
10.8000	.08	.09	.09	.09	.10
11.0500	.10	.10	.11	.12	.13
11.3000	.14	.15	.16	.17	.18
11.5500	.20	.24	.29	.37	.45
11.8000	.55	.64	.76	.98	1.40
12.0500	1.72	1.89	1.84	1.49	1.21
12.3000	1.03	.90	.78	.67	.55
12.5500	.46	.38	.33	.30	.29
12.8000	.27	.26	.25	.24	.22
13.0500	.21	.20	.20	.19	.19
13.3000	.19	.18	.18	.18	.17
13.5500	.17	.17	.17	.16	.16
13.8000	.16	.15	.15	.15	.14
14.0500	.14	.14	.14	.13	.13
14.3000	.13	.13	.13	.13	.12
14.5500	.12	.12	.12	.12	.12
14.8000	.12	.11	.11	.11	.11

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.0500	.11	.11	.10	.10	.10
15.3000	.10	.10	.10	.09	.09
15.5500	.09	.09	.09	.09	.09
15.8000	.08	.08	.08	.08	.08
16.0500	.08	.07	.07	.07	.07
16.3000	.07	.07	.07	.07	.07
16.5500	.07	.07	.07	.07	.07
16.8000	.06	.06	.06	.06	.06
17.0500	.06	.06	.06	.06	.06
17.3000	.06	.06	.06	.06	.05
17.5500	.05	.05	.05	.05	.05
17.8000	.05	.05	.05	.05	.05
18.0500	.05	.05	.05	.05	.05
18.3000	.05	.04	.04	.04	.04
18.5500	.04	.04	.04	.04	.04
18.8000	.04	.04	.04	.04	.04
19.0500	.04	.04	.04	.04	.04
19.3000	.04	.04	.04	.04	.04
19.5500	.04	.04	.04	.04	.04
19.8000	.04	.04	.04	.04	.04
20.0500	.04	.04	.04	.04	.04
20.3000	.04	.04	.04	.04	.04
20.5500	.04	.04	.04	.04	.04
20.8000	.04	.04	.04	.03	.03
21.0500	.03	.03	.03	.03	.03
21.3000	.03	.03	.03	.03	.03
21.5500	.03	.03	.03	.03	.03
21.8000	.03	.03	.03	.03	.03
22.0500	.03	.03	.03	.03	.03
22.3000	.03	.03	.03	.03	.03
22.5500	.03	.03	.03	.03	.03
22.8000	.03	.03	.03	.03	.03
23.0500	.03	.03	.03	.03	.03
23.3000	.03	.03	.03	.03	.03
23.5500	.03	.03	.03	.03	.03
23.8000	.03	.03	.03	.03	.03
24.0500	.02	.01	.00	.00	.00

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.3000 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - EDA-3 100
Tc = .1296 hrs
Drainage Area = .642 acres Runoff CN= 80
Calc.Increment= .01727 hrs Out.Incr.= .0500 hrs
HYG Volume = 15969 cu.ft

HYDROGRAPH ORDINATES (cfs)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
5.0000	.00	.00	.00	.00	.00
5.2500	.00	.00	.00	.00	.01
5.5000	.01	.01	.01	.01	.01
5.7500	.01	.01	.01	.01	.01
6.0000	.01	.01	.01	.01	.01
6.2500	.01	.01	.02	.02	.02
6.5000	.02	.02	.02	.02	.02
6.7500	.02	.02	.02	.02	.03
7.0000	.03	.03	.03	.03	.03
7.2500	.03	.03	.03	.03	.04
7.5000	.04	.04	.04	.04	.04
7.7500	.04	.04	.05	.05	.05
8.0000	.05	.05	.05	.05	.06
8.2500	.06	.06	.06	.06	.07
8.5000	.07	.07	.07	.08	.08
8.7500	.08	.08	.09	.09	.09
9.0000	.09	.10	.10	.10	.11
9.2500	.11	.11	.11	.12	.12
9.5000	.12	.13	.13	.13	.14
9.7500	.14	.14	.15	.15	.15
10.0000	.16	.16	.17	.17	.18
10.2500	.18	.19	.19	.20	.21
10.5000	.21	.22	.22	.23	.24
10.7500	.24	.25	.26	.26	.27
11.0000	.28	.29	.30	.32	.34
11.2500	.36	.38	.40	.42	.45
11.5000	.47	.52	.62	.75	.94
11.7500	1.13	1.36	1.57	1.83	2.30
12.0000	3.24	3.89	4.19	4.01	3.21
12.2500	2.58	2.18	1.90	1.63	1.40

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.5000	1.14	.95	.78	.68	.62
12.7500	.59	.56	.53	.51	.48
13.0000	.46	.44	.42	.40	.39
13.2500	.39	.38	.37	.37	.36
13.5000	.35	.35	.34	.33	.33
13.7500	.32	.31	.31	.30	.30
14.0000	.29	.28	.28	.27	.27
14.2500	.27	.26	.26	.26	.25
14.5000	.25	.25	.24	.24	.24
14.7500	.23	.23	.23	.22	.22
15.0000	.22	.22	.21	.21	.21
15.2500	.20	.20	.20	.19	.19
15.5000	.19	.18	.18	.18	.17
15.7500	.17	.17	.16	.16	.16
16.0000	.15	.15	.15	.15	.14
16.2500	.14	.14	.14	.14	.14
16.5000	.14	.13	.13	.13	.13
16.7500	.13	.13	.13	.12	.12
17.0000	.12	.12	.12	.12	.12
17.2500	.11	.11	.11	.11	.11
17.5000	.11	.11	.11	.10	.10
17.7500	.10	.10	.10	.10	.10
18.0000	.09	.09	.09	.09	.09
18.2500	.09	.09	.09	.09	.09
18.5000	.09	.09	.09	.09	.09
18.7500	.09	.09	.08	.08	.08
19.0000	.08	.08	.08	.08	.08
19.2500	.08	.08	.08	.08	.08
19.5000	.08	.08	.08	.08	.08
19.7500	.08	.08	.08	.08	.08
20.0000	.08	.07	.07	.07	.07
20.2500	.07	.07	.07	.07	.07
20.5000	.07	.07	.07	.07	.07
20.7500	.07	.07	.07	.07	.07
21.0000	.07	.07	.07	.07	.07
21.2500	.07	.07	.07	.07	.07
21.5000	.07	.06	.06	.06	.06
21.7500	.06	.06	.06	.06	.06
22.0000	.06	.06	.06	.06	.06
22.2500	.06	.06	.06	.06	.06
22.5000	.06	.06	.06	.06	.06
22.7500	.06	.06	.06	.06	.06
23.0000	.06	.06	.05	.05	.05
23.2500	.05	.05	.05	.05	.05
23.5000	.05	.05	.05	.05	.05

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
23.7500	.05	.05	.05	.05	.05
24.0000	.05	.04	.02	.01	.00
24.2500	.00	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DP-1

HYG Directory: S:\2015\15064\PONDPACK\2016-12-05_bd\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
PIPE	POND 1B	IN	PIPE	1
ROUTE 40	POND 1C	IN	ROUTE 40	1

INFLOWS TO: DP-1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PIPE	1	5777	12.2500	1.41
	ROUTE 40	1	8520	12.6000	.52

TOTAL FLOW INTO: DP-1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DP-1	1	14297	12.2500	1.72

TOTAL NODE INFLOW...
HYG file =
HYG ID = DP-1
HYG Tag = 1

Peak Discharge = 1.72 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 14297 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.3500	.00	.00	.00	.00	.00
11.6000	.00	.00	.01	.01	.01
11.8500	.01	.02	.02	.04	.07
12.1000	.12	.75	1.58	1.72	1.65
12.3500	1.56	1.47	1.38	1.29	1.20
12.6000	1.12	1.03	.96	.91	.87
12.8500	.84	.81	.79	.77	.75
13.1000	.73	.71	.70	.68	.67
13.3500	.66	.65	.64	.63	.62
13.6000	.61	.60	.59	.58	.57
13.8500	.56	.55	.54	.53	.52
14.1000	.51	.51	.50	.49	.48
14.3500	.48	.47	.46	.46	.45
14.6000	.45	.44	.44	.43	.42
14.8500	.42	.41	.41	.40	.40
15.1000	.39	.39	.38	.38	.37
15.3500	.37	.36	.36	.35	.35
15.6000	.34	.34	.33	.33	.32
15.8500	.32	.32	.31	.31	.30
16.1000	.30	.30	.29	.29	.28
16.3500	.28	.28	.27	.27	.27
16.6000	.27	.26	.26	.26	.25
16.8500	.25	.25	.24	.24	.24
17.1000	.24	.23	.23	.23	.23
17.3500	.22	.22	.22	.22	.21
17.6000	.21	.21	.21	.20	.20
17.8500	.20	.20	.19	.19	.19
18.1000	.19	.18	.18	.18	.18
18.3500	.18	.17	.17	.17	.17
18.6000	.17	.17	.17	.16	.16
18.8500	.16	.16	.16	.16	.16

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.1000	.15	.15	.15	.15	.15
19.3500	.15	.15	.15	.15	.15
19.6000	.15	.14	.14	.14	.14
19.8500	.14	.14	.14	.14	.14
20.1000	.14	.14	.14	.14	.14
20.3500	.13	.13	.13	.13	.13
20.6000	.13	.13	.13	.13	.13
20.8500	.13	.13	.13	.13	.13
21.1000	.12	.12	.12	.12	.12
21.3500	.12	.12	.12	.12	.12
21.6000	.12	.12	.12	.12	.12
21.8500	.12	.12	.11	.11	.11
22.1000	.11	.11	.11	.11	.11
22.3500	.11	.11	.11	.11	.11
22.6000	.11	.11	.11	.11	.11
22.8500	.10	.10	.10	.10	.10
23.1000	.10	.10	.10	.10	.10
23.3500	.10	.10	.10	.10	.10
23.6000	.10	.10	.10	.10	.09
23.8500	.09	.09	.09	.09	.09
24.1000	.09	.09	.08	.08	.07
24.3500	.07	.06	.06	.06	.05
24.6000	.05	.05	.05	.05	.04
24.8500	.04	.04	.04	.04	.04
25.1000	.04	.04	.03	.03	.03
25.3500	.03	.03	.03	.03	.03
25.6000	.03	.03	.03	.03	.03
25.8500	.03	.03	.03	.02	.02
26.1000	.02	.02	.02	.02	.02
26.3500	.02	.02	.02	.02	.02
26.6000	.02	.02	.02	.02	.02
26.8500	.02	.02	.02	.02	.02
27.1000	.02	.02	.02	.02	.02
27.3500	.02	.02	.02	.02	.02
27.6000	.02	.02	.02	.02	.02
27.8500	.02	.02	.02	.02	.02
28.1000	.02	.02	.02	.02	.02
28.3500	.02	.02	.02	.02	.02
28.6000	.02	.02	.02	.02	.02
28.8500	.02	.02	.02	.02	.01
29.1000	.01	.01	.01	.01	.01
29.3500	.01	.01	.01	.01	.01
29.6000	.01	.01	.01	.01	.01
29.8500	.01	.01	.01	.01	.01
30.1000	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
30.3500	.01	.01	.01	.01	.01
30.6000	.01	.01	.01	.01	.01
30.8500	.01	.01	.01	.01	.01
31.1000	.01	.01	.01	.01	.01
31.3500	.01	.01	.01	.01	.01
31.6000	.01	.01	.01	.01	.01
31.8500	.01	.01	.01	.01	.01
32.1000	.01	.01	.01	.01	.01
32.3500	.01	.01	.01	.01	.01
32.6000	.01	.01	.01	.01	.01
32.8500	.01	.01	.01	.01	.01
33.1000	.01	.01	.01	.01	.01
33.3500	.01	.01	.01	.01	.01
33.6000	.01	.01	.01	.01	.01
33.8500	.01	.01	.01	.01	.01
34.1000	.01	.01	.01	.01	.01
34.3500	.01	.01	.01	.01	.01
34.6000	.01	.01	.01	.01	.01
34.8500	.01	.01	.01	.01	.01
35.1000	.01	.01	.01	.01	.01
35.3500	.01	.01	.01	.01	.01
35.6000	.01	.01	.01	.01	.00
35.8500	.00	.00	.00	.00	.00
36.1000	.00	.00	.00	.00	.00
36.3500	.00	.00	.00	.00	.00
36.6000	.00	.00	.00	.00	.00
36.8500	.00	.00	.00	.00	.00
37.1000	.00	.00	.00	.00	.00
37.3500	.00	.00	.00	.00	.00
37.6000	.00	.00	.00	.00	.00
37.8500	.00	.00	.00	.00	.00
38.1000	.00	.00	.00	.00	.00
38.3500	.00	.00	.00	.00	.00
38.6000	.00	.00	.00	.00	.00
38.8500	.00	.00	.00		

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DP-1

HYG Directory: S:\2015\15064\PONDPACK\2016-12-05_bd\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
PIPE	POND 1B	IN	PIPE	10
ROUTE 40	POND 1C	IN	ROUTE 40	10

INFLOWS TO: DP-1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PIPE	10	31752	12.2500	4.23
	ROUTE 40	10	26775	12.7000	1.24

TOTAL FLOW INTO: DP-1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DP-1	10	58526	12.2500	5.43

TOTAL NODE INFLOW...
HYG file =
HYG ID = DP-1
HYG Tag = 10

Peak Discharge = 5.43 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 58526 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.1000	.00	.00	.00	.00	.00
9.3500	.00	.00	.00	.00	.00
9.6000	.00	.00	.01	.01	.01
9.8500	.01	.01	.01	.01	.01
10.1000	.01	.01	.01	.01	.01
10.3500	.02	.02	.02	.02	.02
10.6000	.02	.02	.03	.03	.04
10.8500	.04	.04	.05	.05	.06
11.1000	.07	.07	.08	.10	.16
11.3500	.21	.38	.46	.52	.57
11.6000	.64	.74	.88	1.10	1.39
11.8500	1.72	2.09	2.62	3.45	4.49
12.1000	5.00	5.19	5.35	5.43	5.42
12.3500	5.34	5.20	5.03	4.09	3.49
12.6000	3.36	3.24	3.15	3.09	3.04
12.8500	3.00	2.96	2.92	2.88	2.83
13.1000	2.78	2.74	2.69	2.66	2.62
13.3500	2.59	2.56	2.53	2.51	2.48
13.6000	2.45	2.43	2.40	2.38	2.36
13.8500	2.33	2.31	2.28	2.26	2.24
14.1000	2.21	2.19	2.17	2.15	2.14
14.3500	2.12	2.10	2.09	2.08	2.06
14.6000	2.05	2.03	2.02	2.01	2.00
14.8500	1.98	1.97	1.96	1.95	1.93
15.1000	1.92	1.91	1.90	1.89	1.88
15.3500	1.86	1.84	1.82	1.80	1.78
15.6000	1.74	1.70	1.66	1.62	1.58
15.8500	1.54	1.50	1.46	1.42	1.39
16.1000	1.35	1.32	1.28	1.25	1.22
16.3500	1.19	1.17	1.14	1.12	1.10
16.6000	1.07	1.05	1.03	1.01	.99

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.8500	.97	.96	.94	.93	.91
17.1000	.89	.88	.87	.85	.84
17.3500	.82	.81	.80	.78	.77
17.6000	.76	.75	.74	.73	.71
17.8500	.70	.69	.68	.67	.66
18.1000	.65	.64	.64	.63	.62
18.3500	.61	.61	.60	.59	.59
18.6000	.58	.58	.57	.56	.56
18.8500	.55	.55	.54	.54	.54
19.1000	.53	.53	.52	.52	.51
19.3500	.51	.51	.50	.50	.50
19.6000	.49	.49	.49	.48	.48
19.8500	.48	.47	.47	.47	.46
20.1000	.46	.46	.46	.45	.45
20.3500	.45	.45	.44	.44	.44
20.6000	.44	.43	.43	.43	.43
20.8500	.42	.42	.42	.42	.42
21.1000	.41	.41	.41	.41	.41
21.3500	.40	.40	.40	.40	.40
21.6000	.39	.39	.39	.39	.39
21.8500	.38	.38	.38	.38	.38
22.1000	.37	.37	.37	.37	.37
22.3500	.36	.36	.36	.36	.36
22.6000	.36	.35	.35	.35	.35
22.8500	.35	.34	.34	.34	.34
23.1000	.34	.33	.33	.33	.33
23.3500	.33	.33	.32	.32	.32
23.6000	.32	.32	.31	.31	.31
23.8500	.31	.31	.31	.30	.30
24.1000	.29	.27	.24	.22	.21
24.3500	.20	.19	.18	.17	.16
24.6000	.16	.15	.14	.13	.13
24.8500	.12	.11	.11	.10	.10
25.1000	.10	.09	.09	.08	.08
25.3500	.08	.08	.07	.07	.07
25.6000	.06	.06	.06	.06	.06
25.8500	.05	.05	.05	.05	.05
26.1000	.05	.05	.05	.04	.04
26.3500	.04	.04	.04	.04	.04
26.6000	.04	.04	.04	.04	.03
26.8500	.03	.03	.03	.03	.03
27.1000	.03	.03	.03	.03	.03
27.3500	.03	.03	.03	.03	.02
27.6000	.02	.02	.02	.02	.02
27.8500	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
28.1000	.02	.02	.02	.02	.02
28.3500	.02	.02	.02	.02	.02
28.6000	.02	.02	.02	.02	.02
28.8500	.02	.02	.02	.02	.02
29.1000	.02	.02	.02	.02	.02
29.3500	.02	.02	.02	.02	.02
29.6000	.02	.02	.02	.02	.02
29.8500	.02	.02	.02	.02	.02
30.1000	.02	.02	.02	.02	.02
30.3500	.02	.02	.02	.02	.02
30.6000	.02	.01	.01	.01	.01
30.8500	.01	.01	.01	.01	.01
31.1000	.01	.01	.01	.01	.01
31.3500	.01	.01	.01	.01	.01
31.6000	.01	.01	.01	.01	.01
31.8500	.01	.01	.01	.01	.01
32.1000	.01	.01	.01	.01	.01
32.3500	.01	.01	.01	.01	.01
32.6000	.01	.01	.01	.01	.01
32.8500	.01	.01	.01	.01	.01
33.1000	.01	.01	.01	.01	.01
33.3500	.01	.01	.01	.01	.01
33.6000	.01	.01	.01	.01	.01
33.8500	.01	.01	.01	.01	.01
34.1000	.01	.01	.01	.01	.01
34.3500	.01	.01	.01	.01	.01
34.6000	.01	.01	.01	.01	.01
34.8500	.01	.01	.01	.01	.01
35.1000	.01	.01	.01	.01	.01
35.3500	.01	.01	.01	.01	.01
35.6000	.01	.01	.01	.01	.01
35.8500	.01	.01	.01	.01	.01
36.1000	.01	.01	.01	.01	.01
36.3500	.01	.01	.01	.01	.01
36.6000	.01	.01	.01	.01	.01
36.8500	.01	.01	.01	.01	.01
37.1000	.01	.01	.01	.01	.01
37.3500	.01	.00	.00	.00	.00
37.6000	.00	.00	.00	.00	.00
37.8500	.00	.00	.00	.00	.00
38.1000	.00	.00	.00	.00	.00
38.3500	.00	.00	.00	.00	.00
38.6000	.00	.00	.00	.00	.00
38.8500	.00	.00	.00	.00	.00
39.1000	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
39.3500	.00	.00	.00	.00	.00
39.6000	.00	.00	.00	.00	.00
39.8500	.00	.00	.00	.00	.00
40.1000	.00	.00	.00	.00	.00
40.3500	.00	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DP-1

HYG Directory: S:\2015\15064\PONDPACK\2016-12-05_bd\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
PIPE	POND 1B	IN	PIPE	100
ROUTE 40	POND 1C	IN	ROUTE 40	100

INFLOWS TO: DP-1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PIPE	100	93438	12.5500	8.36
	ROUTE 40	100	65155	13.0500	1.58

TOTAL FLOW INTO: DP-1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DP-1	100	158593	12.5500	9.92

TOTAL NODE INFLOW...
HYG file =
HYG ID = DP-1
HYG Tag = 100

Peak Discharge = 9.92 cfs
Time to Peak = 12.5500 hrs
HYG Volume = 158593 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.6000	.00	.00	.00	.00	.00
6.8500	.00	.00	.00	.00	.00
7.1000	.00	.00	.00	.01	.01
7.3500	.01	.01	.01	.01	.01
7.6000	.01	.01	.01	.01	.01
7.8500	.01	.01	.01	.02	.02
8.1000	.02	.02	.02	.02	.02
8.3500	.02	.02	.03	.03	.03
8.6000	.04	.04	.05	.05	.06
8.8500	.06	.06	.07	.07	.08
9.1000	.13	.17	.20	.29	.35
9.3500	.38	.40	.42	.44	.46
9.6000	.48	.49	.51	.53	.55
9.8500	.57	.60	.62	.64	.67
10.1000	.69	.72	.74	.77	.80
10.3500	.83	.87	.90	.94	.97
10.6000	1.01	1.05	1.09	1.13	1.17
10.8500	1.21	1.26	1.30	1.35	1.40
11.1000	1.45	1.51	1.58	1.67	1.76
11.3500	1.86	1.97	2.08	2.20	2.34
11.6000	2.54	2.86	3.30	3.82	4.37
11.8500	4.93	5.08	5.35	5.80	6.42
12.1000	7.10	7.77	8.36	8.83	9.20
12.3500	9.48	9.68	9.83	9.90	9.92
12.6000	9.90	9.88	9.85	9.81	9.76
12.8500	9.70	9.63	9.56	9.47	9.38
13.1000	9.28	9.17	9.06	8.94	8.81
13.3500	8.68	8.54	8.40	8.24	8.09
13.6000	7.92	7.75	7.58	7.39	7.20
13.8500	6.99	6.77	6.55	6.31	6.06
14.1000	5.79	5.52	4.94	3.77	3.61

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.3500	3.58	3.55	3.52	3.50	3.47
14.6000	3.45	3.43	3.40	3.38	3.35
14.8500	3.33	3.30	3.28	3.25	3.23
15.1000	3.21	3.18	3.16	3.13	3.11
15.3500	3.09	3.06	3.04	3.01	2.99
15.6000	2.96	2.94	2.91	2.89	2.86
15.8500	2.84	2.81	2.79	2.76	2.74
16.1000	2.71	2.69	2.67	2.65	2.63
16.3500	2.61	2.59	2.58	2.56	2.54
16.6000	2.53	2.51	2.50	2.48	2.47
16.8500	2.46	2.44	2.43	2.41	2.40
17.1000	2.39	2.37	2.36	2.35	2.33
17.3500	2.32	2.31	2.29	2.28	2.27
17.6000	2.26	2.24	2.23	2.22	2.20
17.8500	2.19	2.18	2.16	2.15	2.14
18.1000	2.13	2.11	2.10	2.09	2.08
18.3500	2.07	2.06	2.06	2.05	2.04
18.6000	2.03	2.02	2.02	2.01	2.00
18.8500	2.00	1.99	1.98	1.98	1.97
19.1000	1.96	1.96	1.95	1.94	1.94
19.3500	1.93	1.93	1.92	1.91	1.91
19.6000	1.90	1.89	1.89	1.88	1.88
19.8500	1.87	1.86	1.86	1.85	1.85
20.1000	1.84	1.83	1.83	1.82	1.81
20.3500	1.81	1.80	1.80	1.79	1.79
20.6000	1.78	1.77	1.77	1.76	1.76
20.8500	1.75	1.75	1.74	1.73	1.73
21.1000	1.72	1.72	1.71	1.71	1.70
21.3500	1.70	1.69	1.68	1.68	1.67
21.6000	1.67	1.66	1.66	1.66	1.65
21.8500	1.65	1.64	1.64	1.63	1.63
22.1000	1.63	1.62	1.62	1.62	1.61
22.3500	1.59	1.58	1.57	1.56	1.52
22.6000	1.48	1.44	1.40	1.37	1.33
22.8500	1.30	1.26	1.23	1.20	1.17
23.1000	1.14	1.11	1.09	1.06	1.04
23.3500	1.02	1.00	.98	.96	.94
23.6000	.92	.90	.89	.87	.86
23.8500	.84	.83	.82	.80	.79
24.1000	.75	.70	.63	.57	.53
24.3500	.49	.45	.42	.40	.38
24.6000	.37	.35	.33	.32	.30
24.8500	.29	.27	.26	.25	.23
25.1000	.22	.21	.20	.19	.19
25.3500	.18	.17	.16	.16	.15

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
25.6000	.14	.14	.13	.13	.12
25.8500	.12	.11	.11	.10	.10
26.1000	.10	.09	.09	.09	.09
26.3500	.08	.08	.08	.08	.08
26.6000	.07	.07	.07	.07	.07
26.8500	.07	.07	.06	.06	.06
27.1000	.06	.06	.06	.06	.05
27.3500	.05	.05	.05	.05	.05
27.6000	.05	.05	.05	.04	.04
27.8500	.04	.04	.04	.04	.04
28.1000	.04	.04	.04	.04	.04
28.3500	.03	.03	.03	.03	.03
28.6000	.03	.03	.03	.03	.03
28.8500	.03	.03	.03	.03	.03
29.1000	.02	.02	.02	.02	.02
29.3500	.02	.02	.02	.02	.02
29.6000	.02	.02	.02	.02	.02
29.8500	.02	.02	.02	.02	.02
30.1000	.02	.02	.02	.02	.02
30.3500	.02	.02	.02	.02	.02
30.6000	.02	.02	.02	.02	.02
30.8500	.02	.02	.02	.02	.02
31.1000	.02	.02	.02	.02	.02
31.3500	.02	.02	.02	.02	.02
31.6000	.02	.02	.02	.02	.02
31.8500	.02	.02	.02	.02	.02
32.1000	.02	.02	.01	.01	.01
32.3500	.01	.01	.01	.01	.01
32.6000	.01	.01	.01	.01	.01
32.8500	.01	.01	.01	.01	.01
33.1000	.01	.01	.01	.01	.01
33.3500	.01	.01	.01	.01	.01
33.6000	.01	.01	.01	.01	.01
33.8500	.01	.01	.01	.01	.01
34.1000	.01	.01	.01	.01	.01
34.3500	.01	.01	.01	.01	.01
34.6000	.01	.01	.01	.01	.01
34.8500	.01	.01	.01	.01	.01
35.1000	.01	.01	.01	.01	.01
35.3500	.01	.01	.01	.01	.01
35.6000	.01	.01	.01	.01	.01
35.8500	.01	.01	.01	.01	.01
36.1000	.01	.01	.01	.01	.01
36.3500	.01	.01	.01	.01	.01
36.6000	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
36.8500	.01	.01	.01	.01	.01
37.1000	.01	.01	.01	.01	.01
37.3500	.01	.01	.01	.01	.01
37.6000	.01	.01	.01	.01	.01
37.8500	.01	.01	.01	.01	.01
38.1000	.01	.01	.01	.01	.01
38.3500	.01	.01	.01	.01	.01
38.6000	.01	.01	.01	.01	.01
38.8500	.01	.00	.00	.00	.00
39.1000	.00	.00	.00	.00	.00
39.3500	.00	.00	.00	.00	.00
39.6000	.00	.00	.00	.00	.00
39.8500	.00	.00	.00	.00	.00
40.1000	.00	.00	.00	.00	.00
40.3500	.00	.00	.00	.00	.00
40.6000	.00	.00	.00	.00	.00
40.8500	.00	.00	.00	.00	.00
41.1000	.00	.00	.00	.00	.00
41.3500	.00	.00	.00	.00	.00
41.6000	.00	.00	.00	.00	.00
41.8500	.00	.00	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DP-2

HYG Directory: S:\2015\15064\PONDPACK\2016-12-05_bd\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 30	EDA-2B		EDA-2B	1
ADDLINK 20	EDA-2A		EDA-2A	1

INFLOWS TO: DP-2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-2B	1	10012	12.2000	1.91
	EDA-2A	1	6017	12.1000	1.42

TOTAL FLOW INTO: DP-2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DP-2	1	16029	12.1500	3.20

TOTAL NODE INFLOW...
HYG file =
HYG ID = DP-2
HYG Tag = 1

Peak Discharge = 3.20 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 16029 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.6500	.00	.01	.03	.09	.18
11.9000	.33	.67	1.32	2.05	2.81
12.1500	3.20	3.04	2.83	2.60	2.40
12.4000	2.17	1.94	1.67	1.44	1.21
12.6500	1.07	.96	.90	.85	.81
12.9000	.77	.74	.71	.68	.65
13.1500	.63	.62	.61	.60	.59
13.4000	.58	.58	.57	.56	.55
13.6500	.54	.54	.53	.52	.51
13.9000	.50	.49	.48	.47	.47
14.1500	.46	.45	.45	.45	.44
14.4000	.44	.43	.43	.43	.42
14.6500	.42	.41	.41	.40	.40
14.9000	.39	.39	.39	.38	.38
15.1500	.37	.37	.36	.36	.35
15.4000	.35	.34	.34	.33	.33
15.6500	.32	.32	.31	.30	.30
15.9000	.29	.29	.28	.28	.27
16.1500	.27	.27	.26	.26	.26
16.4000	.26	.25	.25	.25	.25
16.6500	.25	.24	.24	.24	.24
16.9000	.23	.23	.23	.23	.22
17.1500	.22	.22	.22	.22	.21
17.4000	.21	.21	.21	.20	.20
17.6500	.20	.20	.19	.19	.19
17.9000	.19	.18	.18	.18	.18
18.1500	.17	.17	.17	.17	.17
18.4000	.17	.17	.17	.17	.17
18.6500	.17	.17	.17	.16	.16
18.9000	.16	.16	.16	.16	.16
19.1500	.16	.16	.16	.16	.16

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.4000	.16	.16	.15	.15	.15
19.6500	.15	.15	.15	.15	.15
19.9000	.15	.15	.15	.15	.15
20.1500	.15	.15	.14	.14	.14
20.4000	.14	.14	.14	.14	.14
20.6500	.14	.14	.14	.14	.14
20.9000	.14	.14	.14	.14	.14
21.1500	.13	.13	.13	.13	.13
21.4000	.13	.13	.13	.13	.13
21.6500	.13	.13	.13	.13	.13
21.9000	.13	.13	.12	.12	.12
22.1500	.12	.12	.12	.12	.12
22.4000	.12	.12	.12	.12	.12
22.6500	.12	.12	.12	.12	.11
22.9000	.11	.11	.11	.11	.11
23.1500	.11	.11	.11	.11	.11
23.4000	.11	.11	.11	.11	.11
23.6500	.11	.10	.10	.10	.10
23.9000	.10	.10	.10	.09	.06
24.1500	.03	.02	.01	.00	.00
24.4000	.00	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DP-2

HYG Directory: S:\2015\15064\PONDPACK\2016-12-05_bd\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 30	EDA-2B		EDA-2B	10
ADDLINK 20	EDA-2A		EDA-2A	10

INFLOWS TO: DP-2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-2B	10	39707	12.1500	9.59
	EDA-2A	10	22317	12.1000	6.24

TOTAL FLOW INTO: DP-2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DP-2	10	62024	12.1500	15.33

TOTAL NODE INFLOW...
HYG file =
HYG ID = DP-2
HYG Tag = 10

Peak Discharge = 15.33 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 62024 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.7500	.00	.00	.01	.01	.01
10.0000	.02	.02	.03	.03	.04
10.2500	.05	.06	.08	.09	.11
10.5000	.13	.15	.16	.18	.21
10.7500	.23	.25	.27	.30	.32
11.0000	.35	.37	.41	.45	.50
11.2500	.55	.61	.67	.74	.81
11.5000	.89	1.02	1.24	1.55	2.02
11.7500	2.56	3.26	4.03	4.96	6.74
12.0000	9.78	12.53	14.83	15.33	13.71
12.2500	12.06	10.52	9.34	8.20	7.16
12.5000	6.04	5.12	4.28	3.71	3.32
12.7500	3.07	2.88	2.73	2.59	2.47
13.0000	2.34	2.23	2.14	2.07	2.02
13.2500	1.98	1.94	1.91	1.88	1.85
13.5000	1.82	1.79	1.76	1.73	1.70
13.7500	1.67	1.63	1.60	1.57	1.54
14.0000	1.51	1.48	1.45	1.43	1.41
14.2500	1.39	1.38	1.36	1.35	1.33
14.5000	1.32	1.30	1.29	1.27	1.26
14.7500	1.24	1.23	1.21	1.20	1.18
15.0000	1.16	1.15	1.13	1.12	1.10
15.2500	1.09	1.07	1.05	1.04	1.02
15.5000	1.00	.99	.97	.96	.94
15.7500	.92	.91	.89	.87	.86
16.0000	.84	.82	.81	.80	.79
16.2500	.78	.77	.76	.76	.75
16.5000	.74	.74	.73	.72	.71
16.7500	.71	.70	.69	.68	.68
17.0000	.67	.66	.66	.65	.64
17.2500	.63	.63	.62	.61	.60

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.5000	.60	.59	.58	.57	.57
17.7500	.56	.55	.54	.54	.53
18.0000	.52	.51	.51	.50	.50
18.2500	.50	.49	.49	.49	.49
18.5000	.48	.48	.48	.48	.48
18.7500	.47	.47	.47	.47	.47
19.0000	.46	.46	.46	.46	.45
19.2500	.45	.45	.45	.45	.44
19.5000	.44	.44	.44	.43	.43
19.7500	.43	.43	.43	.42	.42
20.0000	.42	.42	.41	.41	.41
20.2500	.41	.41	.41	.40	.40
20.5000	.40	.40	.40	.40	.39
20.7500	.39	.39	.39	.39	.39
21.0000	.38	.38	.38	.38	.38
21.2500	.38	.37	.37	.37	.37
21.5000	.37	.36	.36	.36	.36
21.7500	.36	.36	.36	.35	.35
22.0000	.35	.35	.35	.34	.34
22.2500	.34	.34	.34	.34	.33
22.5000	.33	.33	.33	.33	.33
22.7500	.32	.32	.32	.32	.32
23.0000	.32	.31	.31	.31	.31
23.2500	.31	.30	.30	.30	.30
23.5000	.30	.30	.29	.29	.29
23.7500	.29	.29	.29	.28	.28
24.0000	.28	.24	.16	.09	.05
24.2500	.03	.01	.01	.00	.00
24.5000	.00				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DP-2

HYG Directory: S:\2015\15064\PONDPACK\2016-12-05_bd\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 30	EDA-2B		EDA-2B	100
ADDLINK 20	EDA-2A		EDA-2A	100

INFLOWS TO: DP-2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-2B	100	109060	12.1500	27.23
	EDA-2A	100	59313	12.1000	16.64

TOTAL FLOW INTO: DP-2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DP-2	100	168373	12.1500	42.12

TOTAL NODE INFLOW...
HYG file =
HYG ID = DP-2
HYG Tag = 100

Peak Discharge = 42.12 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 168373 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.3500	.00	.00	.01	.01	.01
7.6000	.01	.02	.02	.03	.03
7.8500	.04	.05	.05	.06	.08
8.1000	.09	.10	.11	.12	.14
8.3500	.15	.17	.18	.20	.22
8.6000	.23	.25	.27	.29	.31
8.8500	.33	.35	.37	.40	.42
9.1000	.44	.47	.49	.52	.55
9.3500	.57	.60	.63	.66	.69
9.6000	.72	.75	.78	.81	.84
9.8500	.88	.91	.95	.98	1.02
10.1000	1.06	1.10	1.15	1.20	1.26
10.3500	1.31	1.37	1.43	1.49	1.55
10.6000	1.61	1.68	1.74	1.81	1.88
10.8500	1.95	2.02	2.10	2.17	2.26
11.1000	2.38	2.51	2.69	2.87	3.08
11.3500	3.28	3.51	3.74	3.99	4.45
11.6000	5.20	6.30	7.89	9.67	11.83
11.8500	14.07	16.69	21.62	29.84	36.73
12.1000	41.91	42.12	36.93	31.86	27.32
12.3500	23.88	20.70	17.92	15.00	12.63
12.6000	10.49	9.05	8.06	7.41	6.93
12.8500	6.56	6.21	5.90	5.58	5.32
13.1000	5.09	4.91	4.78	4.68	4.58
13.3500	4.50	4.42	4.35	4.27	4.20
13.6000	4.12	4.05	3.97	3.89	3.82
13.8500	3.74	3.66	3.59	3.51	3.44
14.1000	3.37	3.32	3.27	3.23	3.19
14.3500	3.15	3.11	3.08	3.04	3.00
14.6000	2.96	2.93	2.89	2.85	2.81
14.8500	2.78	2.74	2.70	2.66	2.63

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.1000	2.59	2.55	2.51	2.48	2.44
15.3500	2.40	2.36	2.32	2.28	2.25
15.6000	2.21	2.17	2.13	2.09	2.05
15.8500	2.02	1.98	1.94	1.90	1.86
16.1000	1.83	1.81	1.78	1.76	1.74
16.3500	1.73	1.71	1.69	1.67	1.66
16.6000	1.64	1.62	1.61	1.59	1.57
16.8500	1.56	1.54	1.52	1.50	1.49
17.1000	1.47	1.45	1.44	1.42	1.40
17.3500	1.39	1.37	1.35	1.33	1.32
17.6000	1.30	1.28	1.27	1.25	1.23
17.8500	1.21	1.20	1.18	1.16	1.15
18.1000	1.13	1.12	1.11	1.11	1.10
18.3500	1.10	1.09	1.09	1.08	1.08
18.6000	1.07	1.07	1.06	1.06	1.05
18.8500	1.05	1.04	1.04	1.03	1.03
19.1000	1.02	1.01	1.01	1.01	1.00
19.3500	.99	.99	.99	.98	.97
19.6000	.97	.96	.96	.95	.95
19.8500	.94	.94	.93	.93	.92
20.1000	.92	.91	.91	.91	.90
20.3500	.90	.89	.89	.89	.88
20.6000	.88	.88	.87	.87	.86
20.8500	.86	.86	.85	.85	.85
21.1000	.84	.84	.83	.83	.83
21.3500	.82	.82	.81	.81	.80
21.6000	.80	.80	.79	.79	.79
21.8500	.78	.78	.78	.77	.77
22.1000	.76	.76	.76	.75	.75
22.3500	.74	.74	.74	.73	.73
22.6000	.73	.72	.72	.71	.71
22.8500	.70	.70	.70	.69	.69
23.1000	.68	.68	.68	.67	.67
23.3500	.67	.66	.66	.65	.65
23.6000	.65	.64	.64	.63	.63
23.8500	.63	.62	.62	.61	.53
24.1000	.35	.20	.11	.06	.03
24.3500	.02	.01	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DP-3

HYG Directory: S:\2015\15064\PONDPACK\2016-12-05_bd\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 50	EDA-3		EDA-3	1
DRIVEWAY	POND 1B	IN	DRIVEWAY	1

INFLOWS TO: DP-3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-3	1	2534	12.1000	.67
	DRIVEWAY	1	0	11.2000	.00

TOTAL FLOW INTO: DP-3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DP-3	1	2534	12.1000	.67

TOTAL NODE INFLOW...
HYG file =
HYG ID = DP-3
HYG Tag = 1

Peak Discharge = .67 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 2534 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.0000	.00	.00	.00	.00	.00
10.2500	.00	.00	.00	.01	.01
10.5000	.01	.01	.01	.01	.01
10.7500	.01	.01	.01	.01	.01
11.0000	.02	.02	.02	.02	.02
11.2500	.03	.03	.03	.03	.04
11.5000	.04	.05	.06	.07	.09
11.7500	.12	.15	.18	.22	.30
12.0000	.46	.58	.67	.67	.55
12.2500	.46	.40	.35	.31	.27
12.5000	.22	.18	.15	.13	.12
12.7500	.12	.11	.11	.10	.10
13.0000	.09	.09	.08	.08	.08
13.2500	.08	.08	.08	.08	.07
13.5000	.07	.07	.07	.07	.07
13.7500	.07	.07	.06	.06	.06
14.0000	.06	.06	.06	.06	.06
14.2500	.06	.06	.05	.05	.05
14.5000	.05	.05	.05	.05	.05
14.7500	.05	.05	.05	.05	.05
15.0000	.05	.05	.05	.04	.04
15.2500	.04	.04	.04	.04	.04
15.5000	.04	.04	.04	.04	.04
15.7500	.04	.04	.04	.03	.03
16.0000	.03	.03	.03	.03	.03
16.2500	.03	.03	.03	.03	.03
16.5000	.03	.03	.03	.03	.03
16.7500	.03	.03	.03	.03	.03
17.0000	.03	.03	.03	.03	.03
17.2500	.03	.03	.02	.02	.02
17.5000	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.7500	.02	.02	.02	.02	.02
18.0000	.02	.02	.02	.02	.02
18.2500	.02	.02	.02	.02	.02
18.5000	.02	.02	.02	.02	.02
18.7500	.02	.02	.02	.02	.02
19.0000	.02	.02	.02	.02	.02
19.2500	.02	.02	.02	.02	.02
19.5000	.02	.02	.02	.02	.02
19.7500	.02	.02	.02	.02	.02
20.0000	.02	.02	.02	.02	.02
20.2500	.02	.02	.02	.02	.02
20.5000	.02	.02	.02	.02	.02
20.7500	.02	.02	.02	.02	.02
21.0000	.02	.02	.02	.02	.02
21.2500	.02	.02	.01	.01	.01
21.5000	.01	.01	.01	.01	.01
21.7500	.01	.01	.01	.01	.01
22.0000	.01	.01	.01	.01	.01
22.2500	.01	.01	.01	.01	.01
22.5000	.01	.01	.01	.01	.01
22.7500	.01	.01	.01	.01	.01
23.0000	.01	.01	.01	.01	.01
23.2500	.01	.01	.01	.01	.01
23.5000	.01	.01	.01	.01	.01
23.7500	.01	.01	.01	.01	.01
24.0000	.01	.01	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DP-3

HYG Directory: S:\2015\15064\PONDPACK\2016-12-05_bd\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 50	EDA-3		EDA-3	10
DRIVEWAY	POND 1B	IN	DRIVEWAY	10

INFLOWS TO: DP-3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-3	10	7026	12.1000	1.89
	DRIVEWAY	10	0	8.9000	.00

TOTAL FLOW INTO: DP-3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DP-3	10	7026	12.1000	1.89

TOTAL NODE INFLOW...
HYG file =
HYG ID = DP-3
HYG Tag = 10

Peak Discharge = 1.89 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 7026 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.5500	.00	.00	.00	.00	.00
7.8000	.00	.00	.00	.00	.00
8.0500	.01	.01	.01	.01	.01
8.3000	.01	.01	.01	.01	.01
8.5500	.01	.01	.01	.01	.01
8.8000	.02	.02	.02	.02	.02
9.0500	.02	.02	.02	.02	.02
9.3000	.03	.03	.03	.03	.03
9.5500	.03	.03	.03	.04	.04
9.8000	.04	.04	.04	.04	.04
10.0500	.05	.05	.05	.05	.05
10.3000	.06	.06	.06	.06	.07
10.5500	.07	.07	.07	.08	.08
10.8000	.08	.09	.09	.09	.10
11.0500	.10	.10	.11	.12	.13
11.3000	.14	.15	.16	.17	.18
11.5500	.20	.24	.29	.37	.45
11.8000	.55	.64	.76	.98	1.40
12.0500	1.72	1.89	1.84	1.49	1.21
12.3000	1.03	.90	.78	.67	.55
12.5500	.46	.38	.33	.30	.29
12.8000	.27	.26	.25	.24	.22
13.0500	.21	.20	.20	.19	.19
13.3000	.19	.18	.18	.18	.17
13.5500	.17	.17	.17	.16	.16
13.8000	.16	.15	.15	.15	.14
14.0500	.14	.14	.14	.13	.13
14.3000	.13	.13	.13	.13	.12
14.5500	.12	.12	.12	.12	.12
14.8000	.12	.11	.11	.11	.11
15.0500	.11	.11	.10	.10	.10

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.3000	.10	.10	.10	.09	.09
15.5500	.09	.09	.09	.09	.09
15.8000	.08	.08	.08	.08	.08
16.0500	.08	.07	.07	.07	.07
16.3000	.07	.07	.07	.07	.07
16.5500	.07	.07	.07	.07	.07
16.8000	.06	.06	.06	.06	.06
17.0500	.06	.06	.06	.06	.06
17.3000	.06	.06	.06	.06	.05
17.5500	.05	.05	.05	.05	.05
17.8000	.05	.05	.05	.05	.05
18.0500	.05	.05	.05	.05	.05
18.3000	.05	.04	.04	.04	.04
18.5500	.04	.04	.04	.04	.04
18.8000	.04	.04	.04	.04	.04
19.0500	.04	.04	.04	.04	.04
19.3000	.04	.04	.04	.04	.04
19.5500	.04	.04	.04	.04	.04
19.8000	.04	.04	.04	.04	.04
20.0500	.04	.04	.04	.04	.04
20.3000	.04	.04	.04	.04	.04
20.5500	.04	.04	.04	.04	.04
20.8000	.04	.04	.04	.03	.03
21.0500	.03	.03	.03	.03	.03
21.3000	.03	.03	.03	.03	.03
21.5500	.03	.03	.03	.03	.03
21.8000	.03	.03	.03	.03	.03
22.0500	.03	.03	.03	.03	.03
22.3000	.03	.03	.03	.03	.03
22.5500	.03	.03	.03	.03	.03
22.8000	.03	.03	.03	.03	.03
23.0500	.03	.03	.03	.03	.03
23.3000	.03	.03	.03	.03	.03
23.5500	.03	.03	.03	.03	.03
23.8000	.03	.03	.03	.03	.03
24.0500	.02	.01	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DP-3

HYG Directory: S:\2015\15064\PONDPACK\2016-12-05_bd\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 50	EDA-3		EDA-3	100
DRIVEWAY	POND 1B	IN	DRIVEWAY	100

INFLOWS TO: DP-3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-3	100	15969	12.1000	4.19
	DRIVEWAY	100	1805	12.5500	2.76

TOTAL FLOW INTO: DP-3

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DP-3	100	17775	12.1000	4.19

TOTAL NODE INFLOW...
HYG file =
HYG ID = DP-3
HYG Tag = 100

Peak Discharge = 4.19 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 17775 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
5.0000	.00	.00	.00	.00	.00
5.2500	.00	.00	.00	.00	.01
5.5000	.01	.01	.01	.01	.01
5.7500	.01	.01	.01	.01	.01
6.0000	.01	.01	.01	.01	.01
6.2500	.01	.01	.02	.02	.02
6.5000	.02	.02	.02	.02	.02
6.7500	.02	.02	.02	.02	.03
7.0000	.03	.03	.03	.03	.03
7.2500	.03	.03	.03	.03	.04
7.5000	.04	.04	.04	.04	.04
7.7500	.04	.04	.05	.05	.05
8.0000	.05	.05	.05	.05	.06
8.2500	.06	.06	.06	.06	.07
8.5000	.07	.07	.07	.08	.08
8.7500	.08	.08	.09	.09	.09
9.0000	.09	.10	.10	.10	.11
9.2500	.11	.11	.11	.12	.12
9.5000	.12	.13	.13	.13	.14
9.7500	.14	.14	.15	.15	.15
10.0000	.16	.16	.17	.17	.18
10.2500	.18	.19	.19	.20	.21
10.5000	.21	.22	.22	.23	.24
10.7500	.24	.25	.26	.26	.27
11.0000	.28	.29	.30	.32	.34
11.2500	.36	.38	.40	.42	.45
11.5000	.47	.52	.62	.75	.94
11.7500	1.13	1.36	1.57	1.83	2.30
12.0000	3.24	3.89	4.19	4.01	3.21
12.2500	2.58	2.18	1.90	1.63	2.21
12.5000	3.65	3.71	2.91	1.93	1.11

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.7500	.67	.56	.53	.51	.48
13.0000	.46	.44	.42	.40	.39
13.2500	.39	.38	.37	.37	.36
13.5000	.35	.35	.34	.33	.33
13.7500	.32	.31	.31	.30	.30
14.0000	.29	.28	.28	.27	.27
14.2500	.27	.26	.26	.26	.25
14.5000	.25	.25	.24	.24	.24
14.7500	.23	.23	.23	.22	.22
15.0000	.22	.22	.21	.21	.21
15.2500	.20	.20	.20	.19	.19
15.5000	.19	.18	.18	.18	.17
15.7500	.17	.17	.16	.16	.16
16.0000	.15	.15	.15	.15	.14
16.2500	.14	.14	.14	.14	.14
16.5000	.14	.13	.13	.13	.13
16.7500	.13	.13	.13	.12	.12
17.0000	.12	.12	.12	.12	.12
17.2500	.11	.11	.11	.11	.11
17.5000	.11	.11	.11	.10	.10
17.7500	.10	.10	.10	.10	.10
18.0000	.09	.09	.09	.09	.09
18.2500	.09	.09	.09	.09	.09
18.5000	.09	.09	.09	.09	.09
18.7500	.09	.09	.08	.08	.08
19.0000	.08	.08	.08	.08	.08
19.2500	.08	.08	.08	.08	.08
19.5000	.08	.08	.08	.08	.08
19.7500	.08	.08	.08	.08	.08
20.0000	.08	.07	.07	.07	.07
20.2500	.07	.07	.07	.07	.07
20.5000	.07	.07	.07	.07	.07
20.7500	.07	.07	.07	.07	.07
21.0000	.07	.07	.07	.07	.07
21.2500	.07	.07	.07	.07	.07
21.5000	.07	.06	.06	.06	.06
21.7500	.06	.06	.06	.06	.06
22.0000	.06	.06	.06	.06	.06
22.2500	.06	.06	.06	.06	.06
22.5000	.06	.06	.06	.06	.06
22.7500	.06	.06	.06	.06	.06
23.0000	.06	.06	.05	.05	.05
23.2500	.05	.05	.05	.05	.05
23.5000	.05	.05	.05	.05	.05
23.7500	.05	.05	.05	.05	.05

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
24.0000	.05	.04	.02	.01	.00
24.2500	.00	.00			

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
338.00	-----	1470	0	0	0
340.00	-----	4640	8722	5814	5814
342.15	-----	8740	19748	14153	19967

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
314.00	-----	5347	0	0	0
316.00	-----	11241	24341	16227	16227
317.00	-----	11241	33723	11241	27468
318.00	-----	11241	33723	11241	38709

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
364.00	-----	7822	0	0	0
364.70	-----	16139	35197	8213	8213
365.00	-----	16139	48417	4842	13054
365.25	-----	16139	48417	4035	17089

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 364.00 ft
Increment = .10 ft
Max. Elev.= 365.25 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Weir-XY Points	W0	--->	TW	364.700	365.250
TW SETUP, DS Channel					

OUTLET STRUCTURE INPUT DATA

Structure ID = W0
Structure Type = Weir-XY Points

\# of Openings = 1
WEIR X-Y GROUND POINTS

X, ft	Elev, ft
.00	365.25
12.00	364.70
24.00	364.70
36.00	365.25

Lowest Elev. = 364.70 ft

Weir Coeff. = 2.680000

Weir TW effects (Use adjustment equation)

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 40
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .00 cfs
Max. Q tolerance = .00 cfs

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
364.00	.00	Free Outfall		None contributing
364.10	.00	Free Outfall		None contributing
364.20	.00	Free Outfall		None contributing
364.30	.00	Free Outfall		None contributing
364.40	.00	Free Outfall		None contributing
364.50	.00	Free Outfall		None contributing
364.60	.00	Free Outfall		None contributing
364.70	.00	Free Outfall		W0
364.80	1.15	Free Outfall		W0
364.90	3.62	Free Outfall		W0
365.00	7.32	Free Outfall		W0
365.10	12.32	Free Outfall		W0
365.20	18.68	Free Outfall		W0
365.25	22.39	Free Outfall		W0

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 338.00 ft
Increment = .05 ft
Max. Elev.= 342.15 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Inlet Box	R0	--->	C0	338.480	342.150
Culvert-Circular	C0	--->	TW	337.180	342.150
TW SETUP, DS Channel					

OUTLET STRUCTURE INPUT DATA

```
Structure ID      = R0
Structure Type    = Inlet Box
------------------------------------
# of Openings     =         1
Invert Elev.      =    338.48 ft
Orifice Area      =    9.0000 sq.ft
Orifice Coeff.    =      .600
Weir Length       =     12.00 ft
Weir Coeff.       =     3.330
K, Reverse        =     1.000
Mannings n        =     .0000
Kev,Charged Riser =      .000
Weir Submergence  = No
```

```
              OUTLET STRUCTURE INPUT DATA



              Structure ID      = C0
              Structure Type    = Culvert-Circular
              ------------------------------------
              No. Barrels       =         1
              Barrel Diameter   =    1.0000 ft
              Upstream Invert   =    337.18 ft
              Dnstream Invert   =    334.00 ft
              Horiz. Length     =     50.00 ft
              Barrel Length     =     50.10 ft
              Barrel Slope      =    .06360 ft/ft

              OUTLET CONTROL DATA...
              Mannings n        =     .0120
              Ke                =     .5000  (forward entrance loss)
              Kb                =   .026647  (per ft of full flow)
              Kr                =     .5000  (reverse entrance loss)
              HW Convergence    =      .001  +/- ft

              INLET CONTROL DATA...
              Equation form     =         1
              Inlet Control K   =     .0078
              Inlet Control M   =    2.0000
              Inlet Control c   =    .03790
              Inlet Control Y   =     .6900
              T1 ratio (HW/D)   =      .000
              T2 ratio (HW/D)   =     1.265
              Slope Factor      =     -.500

 Use unsubmerged inlet control Form 1 equ. below T1 elev.
 Use   submerged inlet control Form 1 equ. above T2 elev.

 In transition zone between unsubmerged and submerged inlet control,
 interpolate between flows at T1 & T2...
 At T1 Elev =    337.18 ft  --->  Flow =      2.75 cfs
 At T2 Elev =    338.44 ft  --->  Flow =      3.14 cfs



              Structure ID      = TW
              Structure Type    = TW SETUP, DS Channel
              ------------------------------------
              FREE OUTFALL CONDITIONS SPECIFIED

              CONVERGENCE TOLERANCES...
              Maximum Iterations=    40
              Min. TW tolerance =    .01 ft
              Max. TW tolerance =    .01 ft
              Min. HW tolerance =    .01 ft
              Max. HW tolerance =    .01 ft
              Min.  Q tolerance =    .00 cfs
              Max.  Q tolerance =    .00 cfs
```

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
338.00	.00	Free Outfall		(no Q: R0,C0)
338.05	.00	Free Outfall		(no Q: R0,C0)
338.10	.00	Free Outfall		(no Q: R0,C0)
338.15	.00	Free Outfall		(no Q: R0,C0)
338.20	.00	Free Outfall		(no Q: R0,C0)
338.25	.00	Free Outfall		(no Q: R0,C0)
338.30	.00	Free Outfall		(no Q: R0,C0)
338.35	.00	Free Outfall		(no Q: R0,C0)
338.40	.00	Free Outfall		(no Q: R0,C0)
338.45	.00	Free Outfall		(no Q: R0,C0)
338.48	.00	Free Outfall		(no Q: R0,C0)
338.50	.11	Free Outfall		R0,C0
338.55	.74	Free Outfall		R0,C0
338.60	1.66	Free Outfall		R0,C0
338.65	2.80	Free Outfall		R0,C0
338.70	3.74	Free Outfall		R0,C0
338.75	3.85	Free Outfall		R0,C0
338.80	3.95	Free Outfall		R0,C0
338.85	4.06	Free Outfall		R0,C0
338.90	4.16	Free Outfall		R0,C0
338.95	4.26	Free Outfall		R0,C0
339.00	4.35	Free Outfall		R0,C0
339.05	4.44	Free Outfall		R0,C0
339.10	4.53	Free Outfall		R0,C0
339.15	4.62	Free Outfall		R0,C0
339.20	4.71	Free Outfall		R0,C0
339.25	4.79	Free Outfall		R0,C0
339.30	4.88	Free Outfall		R0,C0
339.35	4.96	Free Outfall		R0,C0
339.40	5.04	Free Outfall		R0,C0
339.45	5.12	Free Outfall		R0,C0
339.50	5.20	Free Outfall		R0,C0
339.55	5.28	Free Outfall		R0,C0
339.60	5.36	Free Outfall		R0,C0
339.65	5.43	Free Outfall		R0,C0
339.70	5.50	Free Outfall		R0,C0
339.75	5.58	Free Outfall		R0,C0
339.80	5.65	Free Outfall		R0,C0

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
339.85	5.72	Free Outfall		R0,C0
339.90	5.79	Free Outfall		R0,C0
339.95	5.86	Free Outfall		R0,C0
340.00	5.93	Free Outfall		R0,C0
340.05	6.00	Free Outfall		R0,C0
340.10	6.07	Free Outfall		R0,C0
340.15	6.13	Free Outfall		R0,C0
340.20	6.20	Free Outfall		R0,C0
340.25	6.26	Free Outfall		R0,C0
340.30	6.33	Free Outfall		R0,C0
340.35	6.39	Free Outfall		R0,C0
340.40	6.46	Free Outfall		R0,C0
340.45	6.52	Free Outfall		R0,C0
340.50	6.58	Free Outfall		R0,C0
340.55	6.64	Free Outfall		R0,C0
340.60	6.71	Free Outfall		R0,C0
340.65	6.77	Free Outfall		R0,C0
340.70	6.82	Free Outfall		R0,C0
340.75	6.88	Free Outfall		R0,C0
340.80	6.94	Free Outfall		R0,C0
340.85	7.00	Free Outfall		R0,C0
340.90	7.06	Free Outfall		R0,C0
340.95	7.12	Free Outfall		R0,C0
341.00	7.17	Free Outfall		R0,C0
341.05	7.23	Free Outfall		R0,C0
341.10	7.29	Free Outfall		R0,C0
341.15	7.34	Free Outfall		R0,C0
341.20	7.40	Free Outfall		R0,C0
341.25	7.45	Free Outfall		R0,C0
341.30	7.51	Free Outfall		R0,C0
341.35	7.56	Free Outfall		R0,C0
341.40	7.61	Free Outfall		R0,C0
341.45	7.67	Free Outfall		R0,C0
341.50	7.72	Free Outfall		R0,C0
341.55	7.77	Free Outfall		R0,C0
341.60	7.82	Free Outfall		R0,C0
341.65	7.88	Free Outfall		R0,C0
341.70	7.93	Free Outfall		R0,C0

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
341.75	7.98	Free Outfall		R0,C0
341.80	8.03	Free Outfall		R0,C0
341.85	8.08	Free Outfall		R0,C0
341.90	8.13	Free Outfall		R0,C0
341.95	8.18	Free Outfall		R0,C0
342.00	8.23	Free Outfall		R0,C0
342.05	8.28	Free Outfall		R0,C0
342.10	8.33	Free Outfall		R0,C0
342.15	8.38	Free Outfall		R0,C0

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 338.00 ft
Increment = .05 ft
Max. Elev.= 342.15 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Weir-XY Points	W0	--->	TW	342.000	342.150
TW SETUP, DS Channel					

OUTLET STRUCTURE INPUT DATA

```
Structure ID      = W0
Structure Type    = Weir-XY Points
------------------------------------
# of Openings     =         1
WEIR X-Y GROUND POINTS

    X, ft     Elev, ft
 ---------   ---------
      .00      342.15
    12.00      342.00
    24.00      342.00
    36.00      342.15

Lowest Elev.      =    342.00 ft

Weir Coeff.       =  2.680000

Weir TW effects     (Use adjustment equation)
```

```
Structure ID      = TW
Structure Type    = TW SETUP, DS Channel
------------------------------------
FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations=    40
Min. TW tolerance =    .01 ft
Max. TW tolerance =    .01 ft
Min. HW tolerance =    .01 ft
Max. HW tolerance =    .01 ft
Min.  Q tolerance =    .00 cfs
Max.  Q tolerance =    .00 cfs
```

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
338.00	.00	Free Outfall		None contributing
338.05	.00	Free Outfall		None contributing
338.10	.00	Free Outfall		None contributing
338.15	.00	Free Outfall		None contributing
338.20	.00	Free Outfall		None contributing
338.25	.00	Free Outfall		None contributing
338.30	.00	Free Outfall		None contributing
338.35	.00	Free Outfall		None contributing
338.40	.00	Free Outfall		None contributing
338.45	.00	Free Outfall		None contributing
338.50	.00	Free Outfall		None contributing
338.55	.00	Free Outfall		None contributing
338.60	.00	Free Outfall		None contributing
338.65	.00	Free Outfall		None contributing
338.70	.00	Free Outfall		None contributing
338.75	.00	Free Outfall		None contributing
338.80	.00	Free Outfall		None contributing
338.85	.00	Free Outfall		None contributing
338.90	.00	Free Outfall		None contributing
338.95	.00	Free Outfall		None contributing
339.00	.00	Free Outfall		None contributing
339.05	.00	Free Outfall		None contributing
339.10	.00	Free Outfall		None contributing
339.15	.00	Free Outfall		None contributing
339.20	.00	Free Outfall		None contributing
339.25	.00	Free Outfall		None contributing
339.30	.00	Free Outfall		None contributing
339.35	.00	Free Outfall		None contributing
339.40	.00	Free Outfall		None contributing
339.45	.00	Free Outfall		None contributing
339.50	.00	Free Outfall		None contributing
339.55	.00	Free Outfall		None contributing
339.60	.00	Free Outfall		None contributing
339.65	.00	Free Outfall		None contributing
339.70	.00	Free Outfall		None contributing
339.75	.00	Free Outfall		None contributing
339.80	.00	Free Outfall		None contributing
339.85	.00	Free Outfall		None contributing

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
339.90	.00	Free Outfall		None contributing
339.95	.00	Free Outfall		None contributing
340.00	.00	Free Outfall		None contributing
340.05	.00	Free Outfall		None contributing
340.10	.00	Free Outfall		None contributing
340.15	.00	Free Outfall		None contributing
340.20	.00	Free Outfall		None contributing
340.25	.00	Free Outfall		None contributing
340.30	.00	Free Outfall		None contributing
340.35	.00	Free Outfall		None contributing
340.40	.00	Free Outfall		None contributing
340.45	.00	Free Outfall		None contributing
340.50	.00	Free Outfall		None contributing
340.55	.00	Free Outfall		None contributing
340.60	.00	Free Outfall		None contributing
340.65	.00	Free Outfall		None contributing
340.70	.00	Free Outfall		None contributing
340.75	.00	Free Outfall		None contributing
340.80	.00	Free Outfall		None contributing
340.85	.00	Free Outfall		None contributing
340.90	.00	Free Outfall		None contributing
340.95	.00	Free Outfall		None contributing
341.00	.00	Free Outfall		None contributing
341.05	.00	Free Outfall		None contributing
341.10	.00	Free Outfall		None contributing
341.15	.00	Free Outfall		None contributing
341.20	.00	Free Outfall		None contributing
341.25	.00	Free Outfall		None contributing
341.30	.00	Free Outfall		None contributing
341.35	.00	Free Outfall		None contributing
341.40	.00	Free Outfall		None contributing
341.45	.00	Free Outfall		None contributing
341.50	.00	Free Outfall		None contributing
341.55	.00	Free Outfall		None contributing
341.60	.00	Free Outfall		None contributing
341.65	.00	Free Outfall		None contributing
341.70	.00	Free Outfall		None contributing
341.75	.00	Free Outfall		None contributing

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
341.80	.00	Free Outfall		None contributing
341.85	.00	Free Outfall		None contributing
341.90	.00	Free Outfall		None contributing
341.95	.00	Free Outfall		None contributing
342.00	.00	Free Outfall		W0
342.05	.44	Free Outfall		W0
342.10	1.50	Free Outfall		W0
342.15	3.19	Free Outfall		W0

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 314.00 ft
Increment = .10 ft
Max. Elev.= 318.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Culvert-Circular	C0	--->	TW	314.000	318.000
TW SETUP, DS Channel					

```
             OUTLET STRUCTURE INPUT DATA



             Structure ID      = C0
             Structure Type    = Culvert-Circular
             ------------------------------------
             No. Barrels       =         1
             Barrel Diameter   =     .6667 ft
             Upstream Invert   =    314.00 ft
             Dnstream Invert   =    312.00 ft
             Horiz. Length     =    300.00 ft
             Barrel Length     =    300.01 ft
             Barrel Slope      =    .00667 ft/ft

             OUTLET CONTROL DATA...
             Mannings n        =     .0120
             Ke                =     .2000  (forward entrance loss)
             Kb                =   .045752  (per ft of full flow)
             Kr                =     .2000  (reverse entrance loss)
             HW Convergence    =      .001  +/- ft

             INLET CONTROL DATA...
             Equation form     =         1
             Inlet Control K   =     .0018
             Inlet Control M   =    2.0000
             Inlet Control c   =    .02920
             Inlet Control Y   =     .7400
             T1 ratio (HW/D)   =     1.058
             T2 ratio (HW/D)   =     1.204
             Slope Factor      =     -.500

Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use   submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...
At T1 Elev =    314.71 ft  --->  Flow =      1.00 cfs
At T2 Elev =    314.80 ft  --->  Flow =      1.14 cfs
```

OUTLET STRUCTURE INPUT DATA

```
Structure ID      = TW
Structure Type    = TW SETUP, DS Channel
------------------------------------
FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations=    40
Min. TW tolerance =    .01 ft
Max. TW tolerance =    .01 ft
Min. HW tolerance =    .01 ft
Max. HW tolerance =    .01 ft
Min.  Q tolerance =    .00 cfs
Max.  Q tolerance =    .00 cfs
```

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
314.00	.00	Free Outfall		None contributing
314.10	.02	Free Outfall		C0
314.20	.10	Free Outfall		C0
314.30	.21	Free Outfall		C0
314.40	.35	Free Outfall		C0
314.50	.52	Free Outfall		C0
314.60	.72	Free Outfall		C0
314.70	.92	Free Outfall		C0
314.80	1.11	Free Outfall		C0
314.90	1.16	Free Outfall		C0
315.00	1.17	Free Outfall		C0
315.10	1.18	Free Outfall		C0
315.20	1.19	Free Outfall		C0
315.30	1.20	Free Outfall		C0
315.40	1.22	Free Outfall		C0
315.50	1.24	Free Outfall		C0
315.60	1.26	Free Outfall		C0
315.70	1.28	Free Outfall		C0
315.80	1.30	Free Outfall		C0
315.90	1.32	Free Outfall		C0
316.00	1.34	Free Outfall		C0
316.10	1.36	Free Outfall		C0
316.20	1.37	Free Outfall		C0
316.30	1.39	Free Outfall		C0
316.40	1.41	Free Outfall		C0
316.50	1.43	Free Outfall		C0
316.60	1.45	Free Outfall		C0
316.70	1.47	Free Outfall		C0
316.80	1.48	Free Outfall		C0
316.90	1.50	Free Outfall		C0
317.00	1.52	Free Outfall		C0
317.10	1.53	Free Outfall		C0
317.20	1.55	Free Outfall		C0
317.30	1.57	Free Outfall		C0
317.40	1.58	Free Outfall		C0
317.50	1.60	Free Outfall		C0
317.60	1.62	Free Outfall		C0
317.70	1.63	Free Outfall		C0

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
317.80	1.65	Free Outfall		C0
317.90	1.66	Free Outfall		C0
318.00	1.68	Free Outfall		C0

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND 1B IN 1
Outflow HYG file = NONE STORED - POND 1B OUT 1

Pond Node Data = POND 1B
Pond Volume Data = POND 1B
Pond Outlet Data = DI
DRIVEWAY CURB

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 338.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
338.00	.00	0	1470	.00	.00	.00
338.05	.00	75	1528	.00	.00	.83
338.10	.00	153	1586	.00	.00	1.70
338.15	.00	234	1646	.00	.00	2.60
338.20	.00	317	1707	.00	.00	3.53
338.25	.00	404	1769	.00	.00	4.49
338.30	.00	494	1832	.00	.00	5.49
338.35	.00	588	1897	.00	.00	6.53
338.40	.00	684	1962	.00	.00	7.60
338.45	.00	784	2029	.00	.00	8.71
338.50	.11	887	2096	.00	.11	9.97
338.55	.74	993	2165	.00	.74	11.78
338.60	1.66	1103	2235	.00	1.66	13.92
338.65	2.80	1217	2306	.00	2.80	16.32
338.70	3.74	1334	2378	.00	3.74	18.57
338.75	3.85	1455	2451	.00	3.85	20.01
338.80	3.95	1579	2525	.00	3.95	21.50
338.85	4.06	1707	2601	.00	4.06	23.03
338.90	4.16	1839	2677	.00	4.16	24.59
338.95	4.26	1975	2755	.00	4.26	26.20

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND 1B IN 1
Outflow HYG file = NONE STORED - POND 1B OUT 1

Pond Node Data = POND 1B
Pond Volume Data = POND 1B
Pond Outlet Data = DI
DRIVEWAY CURB

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	338.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
339.00	4.35	2115	2833	.00	4.35	27.85
339.05	4.44	2258	2913	.00	4.44	29.53
339.10	4.53	2406	2994	.00	4.53	31.27
339.15	4.62	2558	3076	.00	4.62	33.04
339.20	4.71	2714	3159	.00	4.71	34.86
339.25	4.79	2874	3243	.00	4.79	36.72
339.30	4.88	3038	3329	.00	4.88	38.63
339.35	4.96	3207	3415	.00	4.96	40.59
339.40	5.04	3380	3503	.00	5.04	42.59
339.45	5.12	3557	3591	.00	5.12	44.65
339.50	5.20	3739	3681	.00	5.20	46.74
339.55	5.28	3925	3772	.00	5.28	48.89
339.60	5.36	4116	3864	.00	5.36	51.09
339.65	5.43	4311	3957	.00	5.43	53.34
339.70	5.50	4512	4051	.00	5.50	55.64
339.75	5.58	4717	4147	.00	5.58	57.99
339.80	5.65	4926	4243	.00	5.65	60.39
339.85	5.72	5141	4341	.00	5.72	62.84
339.90	5.79	5360	4439	.00	5.79	65.35
339.95	5.86	5585	4539	.00	5.86	67.92

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND 1B IN 1
Outflow HYG file = NONE STORED - POND 1B OUT 1

Pond Node Data = POND 1B
Pond Volume Data = POND 1B
Pond Outlet Data = DI
DRIVEWAY CURB

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 338.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
340.00	5.93	5814	4640	.00	5.93	70.54
340.05	6.00	6048	4721	.00	6.00	73.20
340.10	6.07	6287	4802	.00	6.07	75.92
340.15	6.13	6529	4884	.00	6.13	78.67
340.20	6.20	6775	4967	.00	6.20	81.48
340.25	6.26	7025	5051	.00	6.26	84.32
340.30	6.33	7280	5135	.00	6.33	87.22
340.35	6.39	7539	5220	.00	6.39	90.16
340.40	6.46	7802	5305	.00	6.46	93.15
340.45	6.52	8070	5392	.00	6.52	96.18
340.50	6.58	8341	5479	.00	6.58	99.26
340.55	6.64	8617	5566	.00	6.64	102.39
340.60	6.71	8898	5655	.00	6.71	105.57
340.65	6.77	9183	5744	.00	6.77	108.80
340.70	6.82	9472	5834	.00	6.82	112.07
340.75	6.88	9766	5924	.00	6.88	115.40
340.80	6.94	10065	6015	.00	6.94	118.77
340.85	7.00	10368	6107	.00	7.00	122.20
340.90	7.06	10675	6200	.00	7.06	125.67
340.95	7.12	10988	6293	.00	7.12	129.20

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND 1B IN 1
Outflow HYG file = NONE STORED - POND 1B OUT 1

Pond Node Data = POND 1B
Pond Volume Data = POND 1B
Pond Outlet Data = DI
DRIVEWAY CURB

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 338.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
341.00	7.17	11305	6387	.00	7.17	132.78
341.05	7.23	11626	6481	.00	7.23	136.41
341.10	7.29	11953	6577	.00	7.29	140.10
341.15	7.34	12284	6673	.00	7.34	143.83
341.20	7.40	12620	6770	.00	7.40	147.62
341.25	7.45	12961	6867	.00	7.45	151.46
341.30	7.51	13307	6965	.00	7.51	155.36
341.35	7.56	13658	7064	.00	7.56	159.31
341.40	7.61	14013	7164	.00	7.61	163.32
341.45	7.67	14374	7264	.00	7.67	167.38
341.50	7.72	14740	7365	.00	7.72	171.49
341.55	7.77	15110	7466	.00	7.77	175.67
341.60	7.82	15486	7569	.00	7.82	179.90
341.65	7.88	15867	7672	.00	7.88	184.18
341.70	7.93	16254	7775	.00	7.93	188.52
341.75	7.98	16645	7880	.00	7.98	192.92
341.80	8.03	17041	7985	.00	8.03	197.38
341.85	8.08	17443	8091	.00	8.08	201.90
341.90	8.13	17850	8197	.00	8.13	206.47
341.95	8.18	18263	8304	.00	8.18	211.10

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND 1B IN 1
Outflow HYG file = NONE STORED - POND 1B OUT 1

Pond Node Data = POND 1B
Pond Volume Data = POND 1B
Pond Outlet Data = DI
DRIVEWAY CURB

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 338.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
342.00	8.23	18681	8412	.00	8.23	215.80
342.05	8.72	19104	8521	.00	8.72	220.99
342.10	9.83	19533	8630	.00	9.83	226.86
342.15	11.57	19967	8740	.00	11.57	233.42

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = POND 1B OUT
HYG Tag = 1

Peak Discharge = 1.41 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 5778 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.1500	.00	.00	.00	.00	.00
11.4000	.00	.00	.00	.00	.00
11.6500	.00	.00	.00	.00	.00
11.9000	.00	.00	.00	.00	.00
12.1500	.57	1.33	1.41	1.28	1.14
12.4000	1.02	.91	.80	.69	.60
12.6500	.52	.44	.39	.36	.34
12.9000	.32	.30	.29	.27	.26
13.1500	.25	.24	.23	.23	.23
13.4000	.22	.22	.21	.21	.21
13.6500	.21	.20	.20	.20	.19
13.9000	.19	.18	.18	.18	.17
14.1500	.17	.17	.17	.16	.16
14.4000	.16	.16	.16	.16	.15
14.6500	.15	.15	.15	.15	.15
14.9000	.14	.14	.14	.14	.14
15.1500	.13	.13	.13	.13	.13
15.4000	.13	.12	.12	.12	.12
15.6500	.12	.11	.11	.11	.11
15.9000	.11	.11	.11	.11	.10
16.1500	.10	.10	.10	.10	.10
16.4000	.10	.10	.09	.09	.09
16.6500	.09	.09	.09	.09	.09
16.9000	.09	.09	.09	.08	.08
17.1500	.08	.08	.08	.08	.08
17.4000	.08	.08	.08	.08	.07
17.6500	.07	.07	.07	.07	.07
17.9000	.07	.07	.07	.07	.07
18.1500	.07	.06	.06	.06	.06
18.4000	.06	.06	.06	.06	.06
18.6500	.06	.06	.06	.06	.06

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.9000	.06	.06	.06	.06	.06
19.1500	.06	.06	.06	.06	.06
19.4000	.06	.06	.05	.05	.05
19.6500	.05	.05	.05	.05	.05
19.9000	.05	.05	.05	.05	.05
20.1500	.05	.05	.05	.05	.05
20.4000	.05	.05	.05	.05	.05
20.6500	.05	.05	.05	.05	.05
20.9000	.05	.05	.05	.05	.05
21.1500	.05	.05	.05	.05	.05
21.4000	.05	.05	.05	.05	.05
21.6500	.05	.05	.04	.04	.04
21.9000	.04	.04	.04	.04	.04
22.1500	.04	.04	.04	.04	.04
22.4000	.04	.04	.04	.04	.04
22.6500	.04	.04	.04	.04	.04
22.9000	.04	.04	.04	.04	.04
23.1500	.04	.04	.04	.04	.04
23.4000	.04	.04	.04	.04	.04
23.6500	.04	.04	.04	.04	.04
23.9000	.04	.04	.04	.04	.03
24.1500	.03	.03	.02	.02	.02
24.4000	.01	.01	.01	.01	.01
24.6500	.01	.00	.00	.00	

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = POND 1B OUT
HYG Tag = 10

Peak Discharge =	4.23	cfs
Time to Peak =	12.2500	hrs
HYG Volume =	31752	cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.8500	.00	.00	.00	.00	.00
9.1000	.00	.00	.00	.00	.00
9.3500	.00	.00	.00	.00	.00
9.6000	.00	.00	.00	.00	.00
9.8500	.00	.00	.00	.00	.00
10.1000	.00	.00	.00	.00	.00
10.3500	.00	.00	.00	.00	.00
10.6000	.00	.00	.00	.00	.00
10.8500	.00	.00	.00	.00	.00
11.1000	.00	.00	.00	.02	.07
11.3500	.11	.27	.34	.38	.41
11.6000	.46	.54	.66	.83	1.07
11.8500	1.32	1.60	2.01	2.66	3.47
12.1000	3.85	4.02	4.17	4.23	4.21
12.3500	4.12	3.98	3.80	2.85	2.26
12.6000	2.12	2.00	1.91	1.85	1.80
12.8500	1.76	1.72	1.68	1.64	1.60
13.1000	1.55	1.50	1.46	1.43	1.40
13.3500	1.37	1.34	1.31	1.29	1.26
13.6000	1.24	1.21	1.19	1.17	1.15
13.8500	1.12	1.10	1.08	1.06	1.04
14.1000	1.02	1.00	.98	.96	.95
14.3500	.93	.92	.91	.89	.88
14.6000	.87	.86	.85	.84	.82
14.8500	.81	.80	.79	.78	.77
15.1000	.76	.75	.74	.73	.72
15.3500	.71	.70	.69	.68	.67
15.6000	.66	.65	.64	.63	.62
15.8500	.61	.60	.59	.58	.57
16.1000	.56	.55	.54	.53	.52
16.3500	.52	.51	.50	.50	.49

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.6000	.48	.48	.47	.47	.46
16.8500	.46	.45	.45	.44	.44
17.1000	.43	.43	.42	.42	.41
17.3500	.41	.40	.40	.39	.39
17.6000	.38	.38	.37	.37	.37
17.8500	.36	.36	.35	.35	.34
18.1000	.34	.33	.33	.33	.32
18.3500	.32	.32	.31	.31	.31
18.6000	.31	.31	.30	.30	.30
18.8500	.30	.30	.30	.29	.29
19.1000	.29	.29	.29	.29	.28
19.3500	.28	.28	.28	.28	.28
19.6000	.28	.27	.27	.27	.27
19.8500	.27	.27	.27	.26	.26
20.1000	.26	.26	.26	.26	.26
20.3500	.26	.25	.25	.25	.25
20.6000	.25	.25	.25	.25	.25
20.8500	.24	.24	.24	.24	.24
21.1000	.24	.24	.24	.24	.23
21.3500	.23	.23	.23	.23	.23
21.6000	.23	.23	.23	.23	.22
21.8500	.22	.22	.22	.22	.22
22.1000	.22	.22	.22	.21	.21
22.3500	.21	.21	.21	.21	.21
22.6000	.21	.21	.21	.20	.20
22.8500	.20	.20	.20	.20	.20
23.1000	.20	.20	.19	.19	.19
23.3500	.19	.19	.19	.19	.19
23.6000	.19	.18	.18	.18	.18
23.8500	.18	.18	.18	.18	.17
24.1000	.16	.14	.12	.11	.10
24.3500	.10	.09	.08	.08	.07
24.6000	.06	.06	.05	.05	.04
24.8500	.04	.03	.03	.03	.02
25.1000	.02	.02	.02	.02	.01
25.3500	.01	.01	.01	.01	.01
25.6000	.01	.00	.00	.00	.00

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = POND 1B OUT
HYG Tag = 100

Peak Discharge = 11.12 cfs
Time to Peak = 12.5500 hrs
HYG Volume = 95243 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.3500	.00	.00	.00	.00	.00
6.6000	.00	.00	.00	.00	.00
6.8500	.00	.00	.00	.00	.00
7.1000	.00	.00	.00	.00	.00
7.3500	.00	.00	.00	.00	.00
7.6000	.00	.00	.00	.00	.00
7.8500	.00	.00	.00	.00	.00
8.1000	.00	.00	.00	.00	.00
8.3500	.00	.00	.00	.00	.00
8.6000	.00	.00	.00	.00	.00
8.8500	.00	.00	.00	.00	.00
9.1000	.04	.08	.11	.19	.24
9.3500	.26	.27	.28	.29	.30
9.6000	.31	.32	.33	.34	.35
9.8500	.36	.37	.38	.40	.41
10.1000	.42	.43	.45	.46	.48
10.3500	.49	.51	.53	.55	.57
10.6000	.59	.61	.63	.65	.67
10.8500	.69	.72	.74	.77	.79
11.1000	.82	.86	.90	.95	1.01
11.3500	1.08	1.15	1.22	1.29	1.39
11.6000	1.53	1.79	2.17	2.67	3.21
11.8500	3.76	3.89	4.14	4.56	5.13
12.1000	5.77	6.39	6.94	7.38	7.72
12.3500	7.98	8.17	9.11	10.87	11.12
12.6000	10.47	9.57	8.77	8.32	8.19
12.8500	8.13	8.06	7.98	7.89	7.80
13.1000	7.70	7.59	7.48	7.36	7.23
13.3500	7.10	6.96	6.81	6.66	6.51
13.6000	6.34	6.17	6.00	5.81	5.62
13.8500	5.41	5.20	4.97	4.73	4.48

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.1000	4.22	3.95	3.37	2.20	2.04
14.3500	2.01	1.98	1.96	1.93	1.91
14.6000	1.89	1.86	1.84	1.82	1.80
14.8500	1.77	1.75	1.73	1.70	1.68
15.1000	1.66	1.64	1.62	1.59	1.57
15.3500	1.55	1.52	1.50	1.48	1.46
15.6000	1.43	1.41	1.39	1.36	1.34
15.8500	1.32	1.30	1.27	1.25	1.23
16.1000	1.21	1.18	1.16	1.15	1.13
16.3500	1.11	1.10	1.09	1.07	1.06
16.6000	1.05	1.03	1.02	1.01	1.00
16.8500	.99	.97	.96	.95	.94
17.1000	.93	.92	.91	.90	.89
17.3500	.88	.87	.86	.85	.84
17.6000	.83	.82	.80	.79	.78
17.8500	.77	.76	.75	.74	.73
18.1000	.73	.72	.71	.70	.69
18.3500	.69	.68	.68	.67	.67
18.6000	.66	.66	.65	.65	.64
18.8500	.64	.64	.63	.63	.63
19.1000	.62	.62	.62	.61	.61
19.3500	.61	.60	.60	.60	.59
19.6000	.59	.59	.58	.58	.58
19.8500	.57	.57	.57	.57	.56
20.1000	.56	.56	.55	.55	.55
20.3500	.55	.54	.54	.54	.54
20.6000	.53	.53	.53	.53	.52
20.8500	.52	.52	.52	.51	.51
21.1000	.51	.51	.50	.50	.50
21.3500	.50	.50	.49	.49	.49
21.6000	.49	.48	.48	.48	.48
21.8500	.47	.47	.47	.47	.47
22.1000	.46	.46	.46	.46	.45
22.3500	.45	.45	.45	.44	.44
22.6000	.44	.44	.44	.43	.43
22.8500	.43	.43	.42	.42	.42
23.1000	.42	.41	.41	.41	.41
23.3500	.40	.40	.40	.40	.40
23.6000	.39	.39	.39	.39	.38
23.8500	.38	.38	.38	.37	.37
24.1000	.35	.31	.26	.22	.18
24.3500	.16	.14	.12	.11	.11
24.6000	.10	.09	.09	.08	.07
24.8500	.07	.06	.06	.05	.05
25.1000	.04	.04	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
25.3500	.02	.02	.02	.02	.02
25.6000	.01	.01	.01	.01	.01
25.8500	.01	.01	.01	.00	.00
26.1000	.00				

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND 1C IN 1
Outflow HYG file = NONE STORED - POND 1C OUT 1

Pond Node Data = POND 1C
Pond Volume Data = POND 1C
Pond Outlet Data = PIPE

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 314.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
314.00	.00	0	5347	.00	.00	.00
314.10	.02	547	5590	.00	.02	6.10
314.20	.10	1118	5839	.00	.10	12.52
314.30	.21	1715	6093	.00	.21	19.26
314.40	.35	2337	6353	.00	.35	26.32
314.50	.52	2985	6618	.00	.52	33.70
314.60	.72	3661	6888	.00	.72	41.39
314.70	.92	4363	7164	.00	.92	49.40
314.80	1.11	5094	7445	.00	1.11	57.71
314.90	1.16	5852	7731	.00	1.16	66.19
315.00	1.17	6640	8023	.00	1.17	74.94
315.10	1.18	7457	8321	.00	1.18	84.03
315.20	1.19	8305	8624	.00	1.19	93.46
315.30	1.20	9182	8932	.00	1.20	103.23
315.40	1.22	10091	9245	.00	1.22	113.34
315.50	1.24	11031	9565	.00	1.24	123.81
315.60	1.26	12004	9889	.00	1.26	134.64
315.70	1.28	13010	10219	.00	1.28	145.83
315.80	1.30	14048	10554	.00	1.30	157.39
315.90	1.32	15120	10895	.00	1.32	169.32

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND 1C IN 1
Outflow HYG file = NONE STORED - POND 1C OUT 1

Pond Node Data = POND 1C
Pond Volume Data = POND 1C
Pond Outlet Data = PIPE

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 314.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
316.00	1.34	16227	11241	.00	1.34	181.64
316.10	1.36	17351	11241	.00	1.36	194.15
316.20	1.37	18476	11241	.00	1.37	206.66
316.30	1.39	19599	11241	.00	1.39	219.16
316.40	1.41	20724	11241	.00	1.41	231.67
316.50	1.43	21848	11241	.00	1.43	244.18
316.60	1.45	22972	11241	.00	1.45	256.69
316.70	1.47	24096	11241	.00	1.47	269.20
316.80	1.48	25220	11241	.00	1.48	281.70
316.90	1.50	26344	11241	.00	1.50	294.21
317.00	1.52	27468	11241	.00	1.52	306.72
317.10	1.53	28592	11241	.00	1.53	319.23
317.20	1.55	29717	11241	.00	1.55	331.73
317.30	1.57	30840	11241	.00	1.57	344.24
317.40	1.58	31965	11241	.00	1.58	356.74
317.50	1.60	33089	11241	.00	1.60	369.25
317.60	1.62	34213	11241	.00	1.62	381.76
317.70	1.63	35337	11241	.00	1.63	394.27
317.80	1.65	36461	11241	.00	1.65	406.77
317.90	1.66	37585	11241	.00	1.66	419.27

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND 1C IN 1
Outflow HYG file = NONE STORED - POND 1C OUT 1

Pond Node Data = POND 1C
Pond Volume Data = POND 1C
Pond Outlet Data = PIPE

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 314.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
318.00	1.68	38709	11241	.00	1.68	431.78

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = POND 1C OUT
HYG Tag = 1

Peak Discharge = .52 cfs
Time to Peak = 12.6000 hrs
HYG Volume = 8520 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.9500	.00	.00	.00	.00	.00
11.2000	.00	.00	.00	.00	.00
11.4500	.00	.00	.00	.00	.00
11.7000	.01	.01	.01	.01	.02
11.9500	.02	.04	.07	.12	.18
12.2000	.25	.31	.37	.41	.45
12.4500	.48	.50	.51	.52	.52
12.7000	.52	.51	.51	.50	.50
12.9500	.49	.48	.48	.47	.46
13.2000	.45	.45	.44	.43	.43
13.4500	.42	.41	.40	.40	.39
13.7000	.39	.38	.37	.37	.36
13.9500	.35	.35	.34	.34	.33
14.2000	.33	.32	.32	.31	.31
14.4500	.31	.30	.30	.29	.29
14.7000	.29	.28	.28	.27	.27
14.9500	.27	.26	.26	.26	.25
15.2000	.25	.25	.24	.24	.24
15.4500	.23	.23	.23	.22	.22
15.7000	.22	.21	.21	.21	.21
15.9500	.20	.20	.20	.20	.19
16.2000	.19	.19	.19	.18	.18
16.4500	.18	.18	.17	.17	.17
16.7000	.17	.17	.16	.16	.16
16.9500	.16	.16	.16	.15	.15
17.2000	.15	.15	.15	.14	.14
17.4500	.14	.14	.14	.14	.13
17.7000	.13	.13	.13	.13	.13
17.9500	.13	.12	.12	.12	.12
18.2000	.12	.12	.12	.11	.11
18.4500	.11	.11	.11	.11	.11

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.7000	.11	.10	.10	.10	.10
18.9500	.10	.10	.10	.10	.10
19.2000	.10	.10	.09	.09	.09
19.4500	.09	.09	.09	.09	.09
19.7000	.09	.09	.09	.09	.09
19.9500	.09	.09	.09	.09	.09
20.2000	.09	.08	.08	.08	.08
20.4500	.08	.08	.08	.08	.08
20.7000	.08	.08	.08	.08	.08
20.9500	.08	.08	.08	.08	.08
21.2000	.08	.08	.08	.08	.07
21.4500	.07	.07	.07	.07	.07
21.7000	.07	.07	.07	.07	.07
21.9500	.07	.07	.07	.07	.07
22.2000	.07	.07	.07	.07	.07
22.4500	.07	.07	.07	.07	.07
22.7000	.07	.07	.06	.06	.06
22.9500	.06	.06	.06	.06	.06
23.2000	.06	.06	.06	.06	.06
23.4500	.06	.06	.06	.06	.06
23.7000	.06	.06	.06	.06	.06
23.9500	.06	.06	.06	.06	.06
24.2000	.05	.05	.05	.05	.05
24.4500	.05	.05	.05	.05	.04
24.7000	.04	.04	.04	.04	.04
24.9500	.04	.04	.04	.04	.04
25.2000	.03	.03	.03	.03	.03
25.4500	.03	.03	.03	.03	.03
25.7000	.03	.03	.03	.03	.03
25.9500	.03	.02	.02	.02	.02
26.2000	.02	.02	.02	.02	.02
26.4500	.02	.02	.02	.02	.02
26.7000	.02	.02	.02	.02	.02
26.9500	.02	.02	.02	.02	.02
27.2000	.02	.02	.02	.02	.02
27.4500	.02	.02	.02	.02	.02
27.7000	.02	.02	.02	.02	.02
27.9500	.02	.02	.02	.02	.02
28.2000	.02	.02	.02	.02	.02
28.4500	.02	.02	.02	.02	.02
28.7000	.02	.02	.02	.02	.02
28.9500	.02	.02	.01	.01	.01
29.2000	.01	.01	.01	.01	.01
29.4500	.01	.01	.01	.01	.01
29.7000	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
29.9500	.01	.01	.01	.01	.01
30.2000	.01	.01	.01	.01	.01
30.4500	.01	.01	.01	.01	.01
30.7000	.01	.01	.01	.01	.01
30.9500	.01	.01	.01	.01	.01
31.2000	.01	.01	.01	.01	.01
31.4500	.01	.01	.01	.01	.01
31.7000	.01	.01	.01	.01	.01
31.9500	.01	.01	.01	.01	.01
32.2000	.01	.01	.01	.01	.01
32.4500	.01	.01	.01	.01	.01
32.7000	.01	.01	.01	.01	.01
32.9500	.01	.01	.01	.01	.01
33.2000	.01	.01	.01	.01	.01
33.4500	.01	.01	.01	.01	.01
33.7000	.01	.01	.01	.01	.01
33.9500	.01	.01	.01	.01	.01
34.2000	.01	.01	.01	.01	.01
34.4500	.01	.01	.01	.01	.01
34.7000	.01	.01	.01	.01	.01
34.9500	.01	.01	.01	.01	.01
35.2000	.01	.01	.01	.01	.01
35.4500	.01	.01	.01	.01	.01
35.7000	.01	.01	.00	.00	.00
35.9500	.00	.00	.00	.00	.00
36.2000	.00	.00	.00	.00	.00
36.4500	.00	.00	.00	.00	.00
36.7000	.00	.00	.00	.00	.00
36.9500	.00	.00	.00	.00	.00
37.2000	.00	.00	.00	.00	.00
37.4500	.00	.00	.00	.00	.00
37.7000	.00	.00	.00	.00	.00
37.9500	.00	.00	.00	.00	.00
38.2000	.00	.00	.00	.00	.00
38.4500	.00	.00	.00	.00	.00
38.7000	.00	.00	.00	.00	.00
38.9500	.00				

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = POND 1C OUT
HYG Tag = 10

Peak Discharge = 1.24 cfs
Time to Peak = 12.7000 hrs
HYG Volume = 26775 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.6000	.00	.00	.00	.00	.00
8.8500	.00	.00	.00	.00	.00
9.1000	.00	.00	.00	.00	.00
9.3500	.00	.00	.00	.00	.00
9.6000	.00	.00	.01	.01	.01
9.8500	.01	.01	.01	.01	.01
10.1000	.01	.01	.01	.01	.01
10.3500	.02	.02	.02	.02	.02
10.6000	.02	.02	.03	.03	.04
10.8500	.04	.04	.05	.05	.06
11.1000	.07	.07	.08	.08	.09
11.3500	.10	.11	.13	.14	.16
11.6000	.17	.20	.23	.27	.33
11.8500	.40	.49	.62	.79	1.02
12.1000	1.15	1.17	1.18	1.19	1.20
12.3500	1.21	1.22	1.23	1.23	1.24
12.6000	1.24	1.24	1.24	1.24	1.24
12.8500	1.24	1.24	1.24	1.24	1.24
13.1000	1.23	1.23	1.23	1.23	1.23
13.3500	1.23	1.22	1.22	1.22	1.22
13.6000	1.22	1.22	1.21	1.21	1.21
13.8500	1.21	1.21	1.20	1.20	1.20
14.1000	1.20	1.19	1.19	1.19	1.19
14.3500	1.19	1.18	1.18	1.18	1.18
14.6000	1.18	1.18	1.17	1.17	1.17
14.8500	1.17	1.17	1.17	1.17	1.16
15.1000	1.16	1.16	1.16	1.16	1.16
15.3500	1.15	1.14	1.13	1.12	1.11
15.6000	1.08	1.05	1.02	.99	.96
15.8500	.93	.90	.87	.85	.82
16.1000	.79	.77	.74	.72	.70

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.3500	.68	.66	.64	.62	.61
16.6000	.59	.57	.56	.54	.53
16.8500	.52	.51	.49	.48	.47
17.1000	.46	.45	.44	.43	.42
17.3500	.42	.41	.40	.39	.38
17.6000	.38	.37	.36	.35	.35
17.8500	.34	.34	.33	.33	.32
18.1000	.32	.31	.31	.30	.30
18.3500	.29	.29	.28	.28	.28
18.6000	.27	.27	.27	.26	.26
18.8500	.26	.25	.25	.25	.24
19.1000	.24	.24	.24	.23	.23
19.3500	.23	.23	.22	.22	.22
19.6000	.22	.21	.21	.21	.21
19.8500	.21	.21	.20	.20	.20
20.1000	.20	.20	.20	.20	.19
20.3500	.19	.19	.19	.19	.19
20.6000	.19	.19	.18	.18	.18
20.8500	.18	.18	.18	.18	.18
21.1000	.18	.17	.17	.17	.17
21.3500	.17	.17	.17	.17	.17
21.6000	.17	.16	.16	.16	.16
21.8500	.16	.16	.16	.16	.16
22.1000	.16	.16	.15	.15	.15
22.3500	.15	.15	.15	.15	.15
22.6000	.15	.15	.15	.15	.14
22.8500	.14	.14	.14	.14	.14
23.1000	.14	.14	.14	.14	.14
23.3500	.14	.14	.13	.13	.13
23.6000	.13	.13	.13	.13	.13
23.8500	.13	.13	.13	.13	.13
24.1000	.12	.12	.12	.11	.11
24.3500	.11	.10	.10	.10	.09
24.6000	.09	.09	.09	.09	.08
24.8500	.08	.08	.08	.08	.08
25.1000	.07	.07	.07	.07	.07
25.3500	.07	.06	.06	.06	.06
25.6000	.06	.06	.06	.06	.05
25.8500	.05	.05	.05	.05	.05
26.1000	.05	.05	.05	.04	.04
26.3500	.04	.04	.04	.04	.04
26.6000	.04	.04	.04	.04	.03
26.8500	.03	.03	.03	.03	.03
27.1000	.03	.03	.03	.03	.03
27.3500	.03	.03	.03	.03	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
27.6000	.02	.02	.02	.02	.02
27.8500	.02	.02	.02	.02	.02
28.1000	.02	.02	.02	.02	.02
28.3500	.02	.02	.02	.02	.02
28.6000	.02	.02	.02	.02	.02
28.8500	.02	.02	.02	.02	.02
29.1000	.02	.02	.02	.02	.02
29.3500	.02	.02	.02	.02	.02
29.6000	.02	.02	.02	.02	.02
29.8500	.02	.02	.02	.02	.02
30.1000	.02	.02	.02	.02	.02
30.3500	.02	.02	.02	.02	.02
30.6000	.02	.01	.01	.01	.01
30.8500	.01	.01	.01	.01	.01
31.1000	.01	.01	.01	.01	.01
31.3500	.01	.01	.01	.01	.01
31.6000	.01	.01	.01	.01	.01
31.8500	.01	.01	.01	.01	.01
32.1000	.01	.01	.01	.01	.01
32.3500	.01	.01	.01	.01	.01
32.6000	.01	.01	.01	.01	.01
32.8500	.01	.01	.01	.01	.01
33.1000	.01	.01	.01	.01	.01
33.3500	.01	.01	.01	.01	.01
33.6000	.01	.01	.01	.01	.01
33.8500	.01	.01	.01	.01	.01
34.1000	.01	.01	.01	.01	.01
34.3500	.01	.01	.01	.01	.01
34.6000	.01	.01	.01	.01	.01
34.8500	.01	.01	.01	.01	.01
35.1000	.01	.01	.01	.01	.01
35.3500	.01	.01	.01	.01	.01
35.6000	.01	.01	.01	.01	.01
35.8500	.01	.01	.01	.01	.01
36.1000	.01	.01	.01	.01	.01
36.3500	.01	.01	.01	.01	.01
36.6000	.01	.01	.01	.01	.01
36.8500	.01	.01	.01	.01	.01
37.1000	.01	.01	.01	.01	.01
37.3500	.01	.00	.00	.00	.00
37.6000	.00	.00	.00	.00	.00
37.8500	.00	.00	.00	.00	.00
38.1000	.00	.00	.00	.00	.00
38.3500	.00	.00	.00	.00	.00
38.6000	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
38.8500	.00	.00	.00	.00	.00
39.1000	.00	.00	.00	.00	.00
39.3500	.00	.00	.00	.00	.00
39.6000	.00	.00	.00	.00	.00
39.8500	.00	.00	.00	.00	.00
40.1000	.00	.00	.00	.00	.00
40.3500	.00	.00	.00	.00	

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = POND 1C OUT
HYG Tag = 100

Peak Discharge = 1.58 cfs
Time to Peak = 13.0500 hrs
HYG Volume = 65155 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.0500	.00	.00	.00	.00	.00
6.3000	.00	.00	.00	.00	.00
6.5500	.00	.00	.00	.00	.00
6.8000	.00	.00	.00	.00	.00
7.0500	.00	.00	.00	.00	.01
7.3000	.01	.01	.01	.01	.01
7.5500	.01	.01	.01	.01	.01
7.8000	.01	.01	.01	.01	.02
8.0500	.02	.02	.02	.02	.02
8.3000	.02	.02	.02	.03	.03
8.5500	.03	.04	.04	.05	.05
8.8000	.06	.06	.06	.07	.07
9.0500	.08	.08	.09	.09	.10
9.3000	.11	.12	.13	.14	.15
9.5500	.15	.16	.17	.18	.19
9.8000	.20	.21	.22	.23	.25
10.0500	.26	.27	.28	.30	.31
10.3000	.32	.34	.35	.37	.39
10.5500	.40	.42	.44	.46	.48
10.8000	.50	.52	.54	.56	.58
11.0500	.61	.63	.66	.68	.71
11.3000	.75	.78	.82	.86	.91
11.5500	.95	1.01	1.08	1.13	1.16
11.8000	1.16	1.17	1.19	1.21	1.24
12.0500	1.29	1.33	1.38	1.42	1.45
12.3000	1.48	1.50	1.52	1.53	1.54
12.5500	1.55	1.56	1.56	1.57	1.57
12.8000	1.57	1.57	1.58	1.58	1.58
13.0500	1.58	1.58	1.58	1.58	1.58
13.3000	1.58	1.58	1.58	1.58	1.58
13.5500	1.58	1.58	1.58	1.58	1.58

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
13.8000	1.58	1.58	1.58	1.58	1.58
14.0500	1.58	1.57	1.57	1.57	1.57
14.3000	1.57	1.57	1.57	1.57	1.57
14.5500	1.56	1.56	1.56	1.56	1.56
14.8000	1.56	1.56	1.55	1.55	1.55
15.0500	1.55	1.55	1.55	1.54	1.54
15.3000	1.54	1.54	1.54	1.53	1.53
15.5500	1.53	1.53	1.53	1.52	1.52
15.8000	1.52	1.52	1.52	1.51	1.51
16.0500	1.51	1.51	1.50	1.50	1.50
16.3000	1.50	1.50	1.49	1.49	1.49
16.5500	1.49	1.48	1.48	1.48	1.47
16.8000	1.47	1.47	1.47	1.46	1.46
17.0500	1.46	1.46	1.45	1.45	1.45
17.3000	1.45	1.44	1.44	1.44	1.44
17.5500	1.43	1.43	1.43	1.42	1.42
17.8000	1.42	1.42	1.41	1.41	1.41
18.0500	1.40	1.40	1.40	1.39	1.39
18.3000	1.39	1.38	1.38	1.38	1.38
18.5500	1.37	1.37	1.37	1.36	1.36
18.8000	1.36	1.36	1.35	1.35	1.35
19.0500	1.34	1.34	1.34	1.34	1.33
19.3000	1.33	1.33	1.32	1.32	1.32
19.5500	1.31	1.31	1.31	1.30	1.30
19.8000	1.30	1.30	1.29	1.29	1.29
20.0500	1.28	1.28	1.28	1.27	1.27
20.3000	1.27	1.26	1.26	1.26	1.25
20.5500	1.25	1.25	1.24	1.24	1.24
20.8000	1.23	1.23	1.23	1.22	1.22
21.0500	1.22	1.21	1.21	1.21	1.20
21.3000	1.20	1.20	1.20	1.19	1.19
21.5500	1.19	1.18	1.18	1.18	1.18
21.8000	1.17	1.17	1.17	1.17	1.17
22.0500	1.17	1.16	1.16	1.16	1.16
22.3000	1.15	1.14	1.13	1.12	1.11
22.5500	1.08	1.04	1.00	.97	.94
22.8000	.90	.87	.84	.81	.78
23.0500	.75	.72	.70	.68	.65
23.3000	.63	.61	.59	.58	.56
23.5500	.54	.53	.51	.50	.49
23.8000	.47	.46	.45	.44	.43
24.0500	.42	.41	.39	.37	.36
24.3000	.34	.33	.32	.30	.29
24.5500	.28	.27	.26	.25	.24
24.8000	.23	.22	.21	.20	.19

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
25.0500	.19	.18	.18	.17	.16
25.3000	.16	.15	.15	.14	.14
25.5500	.13	.13	.13	.12	.12
25.8000	.11	.11	.11	.10	.10
26.0500	.10	.09	.09	.09	.09
26.3000	.09	.08	.08	.08	.08
26.5500	.08	.07	.07	.07	.07
26.8000	.07	.07	.07	.06	.06
27.0500	.06	.06	.06	.06	.06
27.3000	.05	.05	.05	.05	.05
27.5500	.05	.05	.05	.05	.04
27.8000	.04	.04	.04	.04	.04
28.0500	.04	.04	.04	.04	.04
28.3000	.04	.03	.03	.03	.03
28.5500	.03	.03	.03	.03	.03
28.8000	.03	.03	.03	.03	.03
29.0500	.03	.02	.02	.02	.02
29.3000	.02	.02	.02	.02	.02
29.5500	.02	.02	.02	.02	.02
29.8000	.02	.02	.02	.02	.02
30.0500	.02	.02	.02	.02	.02
30.3000	.02	.02	.02	.02	.02
30.5500	.02	.02	.02	.02	.02
30.8000	.02	.02	.02	.02	.02
31.0500	.02	.02	.02	.02	.02
31.3000	.02	.02	.02	.02	.02
31.5500	.02	.02	.02	.02	.02
31.8000	.02	.02	.02	.02	.02
32.0500	.02	.02	.02	.01	.01
32.3000	.01	.01	.01	.01	.01
32.5500	.01	.01	.01	.01	.01
32.8000	.01	.01	.01	.01	.01
33.0500	.01	.01	.01	.01	.01
33.3000	.01	.01	.01	.01	.01
33.5500	.01	.01	.01	.01	.01
33.8000	.01	.01	.01	.01	.01
34.0500	.01	.01	.01	.01	.01
34.3000	.01	.01	.01	.01	.01
34.5500	.01	.01	.01	.01	.01
34.8000	.01	.01	.01	.01	.01
35.0500	.01	.01	.01	.01	.01
35.3000	.01	.01	.01	.01	.01
35.5500	.01	.01	.01	.01	.01
35.8000	.01	.01	.01	.01	.01
36.0500	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
36.3000	.01	.01	.01	.01	.01
36.5500	.01	.01	.01	.01	.01
36.8000	.01	.01	.01	.01	.01
37.0500	.01	.01	.01	.01	.01
37.3000	.01	.01	.01	.01	.01
37.5500	.01	.01	.01	.01	.01
37.8000	.01	.01	.01	.01	.01
38.0500	.01	.01	.01	.01	.01
38.3000	.01	.01	.01	.01	.01
38.5500	.01	.01	.01	.01	.01
38.8000	.01	.01	.00	.00	.00
39.0500	.00	.00	.00	.00	.00
39.3000	.00	.00	.00	.00	.00
39.5500	.00	.00	.00	.00	.00
39.8000	.00	.00	.00	.00	.00
40.0500	.00	.00	.00	.00	.00
40.3000	.00	.00	.00	.00	.00
40.5500	.00	.00	.00	.00	.00
40.8000	.00	.00	.00	.00	.00
41.0500	.00	.00	.00	.00	.00
41.3000	.00	.00	.00	.00	.00
41.5500	.00	.00	.00	.00	.00
41.8000	.00	.00	.00	.00	.00
42.0500	.00				

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND1A IN 1
Outflow HYG file = NONE STORED - POND1A OUT 1

Pond Node Data = POND1A
Pond Volume Data = POND1A
Pond Outlet Data = BERM

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 364.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
364.00	.00	0	7822	.00	.00	.00
364.10	.00	832	8828	.00	.00	9.24
364.20	.00	1768	9894	.00	.00	19.64
364.30	.00	2813	11021	.00	.00	31.25
364.40	.00	3974	12210	.00	.00	44.15
364.50	.00	5257	13459	.00	.00	58.41
364.60	.00	6668	14768	.00	.00	74.09
364.70	.00	8213	16139	.00	.00	91.25
364.80	1.15	9826	16139	.00	1.15	110.33
364.90	3.62	11440	16139	.00	3.62	130.73
365.00	7.32	13054	16139	.00	7.32	152.37
365.10	12.32	14668	16139	.00	12.32	175.30
365.20	18.68	16282	16139	.00	18.68	199.59
365.25	22.39	17089	16139	.00	22.39	212.27

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID   = POND1A   OUT
HYG Tag =   1

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.6500	.00	.00	.00	.00	.00
11.9000	.00	.00	.00	.00	.00
12.1500	.00	.00	.00	.00	.00
12.4000	.00	.00	.00	.00	.00
12.6500	.00	.00	.00	.00	.00
12.9000	.00	.00	.00	.00	.00
13.1500	.00	.00	.00	.00	.00
13.4000	.00	.00	.00	.00	.00
13.6500	.00	.00	.00	.00	.00
13.9000	.00	.00	.00	.00	.00
14.1500	.00	.00	.00	.00	.00
14.4000	.00	.00	.00	.00	.00
14.6500	.00	.00	.00	.00	.00
14.9000	.00	.00	.00	.00	.00
15.1500	.00	.00	.00	.00	.00
15.4000	.00	.00	.00	.00	.00
15.6500	.00	.00	.00	.00	.00
15.9000	.00	.00	.00	.00	.00
16.1500	.00	.00	.00	.00	.00
16.4000	.00	.00	.00	.00	.00
16.6500	.00	.00	.00	.00	.00
16.9000	.00	.00	.00	.00	.00
17.1500	.00	.00	.00	.00	.00
17.4000	.00	.00	.00	.00	.00
17.6500	.00	.00	.00	.00	.00
17.9000	.00	.00	.00	.00	.00
18.1500	.00	.00	.00	.00	.00
18.4000	.00	.00	.00	.00	.00
18.6500	.00	.00	.00	.00	.00
18.9000	.00	.00	.00	.00	.00
19.1500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.4000	.00	.00	.00	.00	.00
19.6500	.00	.00	.00	.00	.00
19.9000	.00	.00	.00	.00	.00
20.1500	.00	.00	.00	.00	.00
20.4000	.00	.00	.00	.00	.00
20.6500	.00	.00	.00	.00	.00
20.9000	.00	.00	.00	.00	.00
21.1500	.00	.00	.00	.00	.00
21.4000	.00	.00	.00	.00	.00
21.6500	.00	.00	.00	.00	.00
21.9000	.00	.00	.00	.00	.00
22.1500	.00	.00	.00	.00	.00
22.4000	.00	.00	.00	.00	.00
22.6500	.00	.00	.00	.00	.00
22.9000	.00	.00	.00	.00	.00
23.1500	.00	.00	.00	.00	.00
23.4000	.00	.00	.00	.00	.00
23.6500	.00	.00	.00	.00	.00
23.9000	.00	.00	.00	.00	.00
24.1500	.00	.00	.00	.00	.00
24.4000	.00	.00			

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = POND1A OUT
HYG Tag = 10

Peak Discharge = .86 cfs
Time to Peak = 12.9000 hrs
HYG Volume = 11477 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.8000	.00	.00	.00	.00	.00
10.0500	.00	.00	.00	.00	.00
10.3000	.00	.00	.00	.00	.00
10.5500	.00	.00	.00	.00	.00
10.8000	.00	.00	.00	.00	.00
11.0500	.00	.00	.00	.00	.00
11.3000	.00	.00	.00	.00	.00
11.5500	.00	.00	.00	.00	.00
11.8000	.00	.00	.00	.00	.00
12.0500	.00	.00	.00	.00	.00
12.3000	.00	.00	.00	.00	.15
12.5500	.39	.57	.69	.77	.81
12.8000	.84	.86	.86	.86	.86
13.0500	.84	.83	.81	.80	.78
13.3000	.76	.74	.73	.71	.70
13.5500	.68	.67	.65	.64	.63
13.8000	.62	.60	.59	.58	.57
14.0500	.56	.55	.54	.53	.52
14.3000	.51	.50	.49	.48	.47
14.5500	.47	.46	.45	.45	.44
14.8000	.43	.43	.42	.42	.41
15.0500	.41	.40	.40	.39	.38
15.3000	.38	.37	.37	.36	.36
15.5500	.35	.35	.34	.34	.33
15.8000	.33	.32	.32	.31	.31
16.0500	.30	.30	.29	.29	.28
16.3000	.28	.27	.27	.27	.26
16.5500	.26	.25	.25	.25	.25
16.8000	.24	.24	.24	.23	.23
17.0500	.23	.23	.22	.22	.22
17.3000	.22	.21	.21	.21	.21

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.5500	.20	.20	.20	.20	.19
17.8000	.19	.19	.19	.19	.18
18.0500	.18	.18	.18	.17	.17
18.3000	.17	.17	.17	.16	.16
18.5500	.16	.16	.16	.16	.16
18.8000	.16	.15	.15	.15	.15
19.0500	.15	.15	.15	.15	.15
19.3000	.15	.15	.14	.14	.14
19.5500	.14	.14	.14	.14	.14
19.8000	.14	.14	.14	.14	.14
20.0500	.14	.13	.13	.13	.13
20.3000	.13	.13	.13	.13	.13
20.5500	.13	.13	.13	.13	.13
20.8000	.13	.13	.12	.12	.12
21.0500	.12	.12	.12	.12	.12
21.3000	.12	.12	.12	.12	.12
21.5500	.12	.12	.12	.12	.12
21.8000	.12	.11	.11	.11	.11
22.0500	.11	.11	.11	.11	.11
22.3000	.11	.11	.11	.11	.11
22.5500	.11	.11	.11	.11	.11
22.8000	.10	.10	.10	.10	.10
23.0500	.10	.10	.10	.10	.10
23.3000	.10	.10	.10	.10	.10
23.5500	.10	.10	.10	.09	.09
23.8000	.09	.09	.09	.09	.09
24.0500	.09	.09	.09	.08	.07
24.3000	.07	.06	.05	.05	.04
24.5500	.04	.03	.03	.03	.02
24.8000	.02	.02	.02	.01	.01
25.0500	.01	.01	.01	.01	.01
25.3000	.01	.00	.00	.00	.00
25.5500	.00				

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID   = POND1A   OUT
HYG Tag =   100

Peak Discharge =   10.45 cfs
Time to Peak   =   12.3000 hrs
HYG Volume   =   44125 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.4000	.00	.00	.00	.00	.00
7.6500	.00	.00	.00	.00	.00
7.9000	.00	.00	.00	.00	.00
8.1500	.00	.00	.00	.00	.00
8.4000	.00	.00	.00	.00	.00
8.6500	.00	.00	.00	.00	.00
8.9000	.00	.00	.00	.00	.00
9.1500	.00	.00	.00	.00	.00
9.4000	.00	.00	.00	.00	.00
9.6500	.00	.00	.00	.00	.00
9.9000	.00	.00	.00	.00	.00
10.1500	.00	.00	.00	.00	.00
10.4000	.00	.00	.00	.00	.00
10.6500	.00	.00	.00	.00	.00
10.9000	.00	.00	.00	.00	.00
11.1500	.00	.00	.00	.00	.00
11.4000	.00	.00	.00	.00	.00
11.6500	.00	.00	.00	.00	.00
11.9000	.00	.25	.96	2.46	4.57
12.1500	6.99	9.21	10.34	10.45	9.94
12.4000	9.14	8.24	7.33	6.62	5.88
12.6500	5.16	4.49	3.91	3.48	3.20
12.9000	2.94	2.71	2.51	2.34	2.18
13.1500	2.05	1.93	1.83	1.74	1.66
13.4000	1.60	1.55	1.50	1.46	1.42
13.6500	1.39	1.35	1.33	1.30	1.27
13.9000	1.24	1.22	1.19	1.17	1.15
14.1500	1.13	1.12	1.11	1.10	1.08
14.4000	1.07	1.06	1.04	1.03	1.02
14.6500	1.01	.99	.98	.97	.96
14.9000	.95	.93	.92	.91	.90

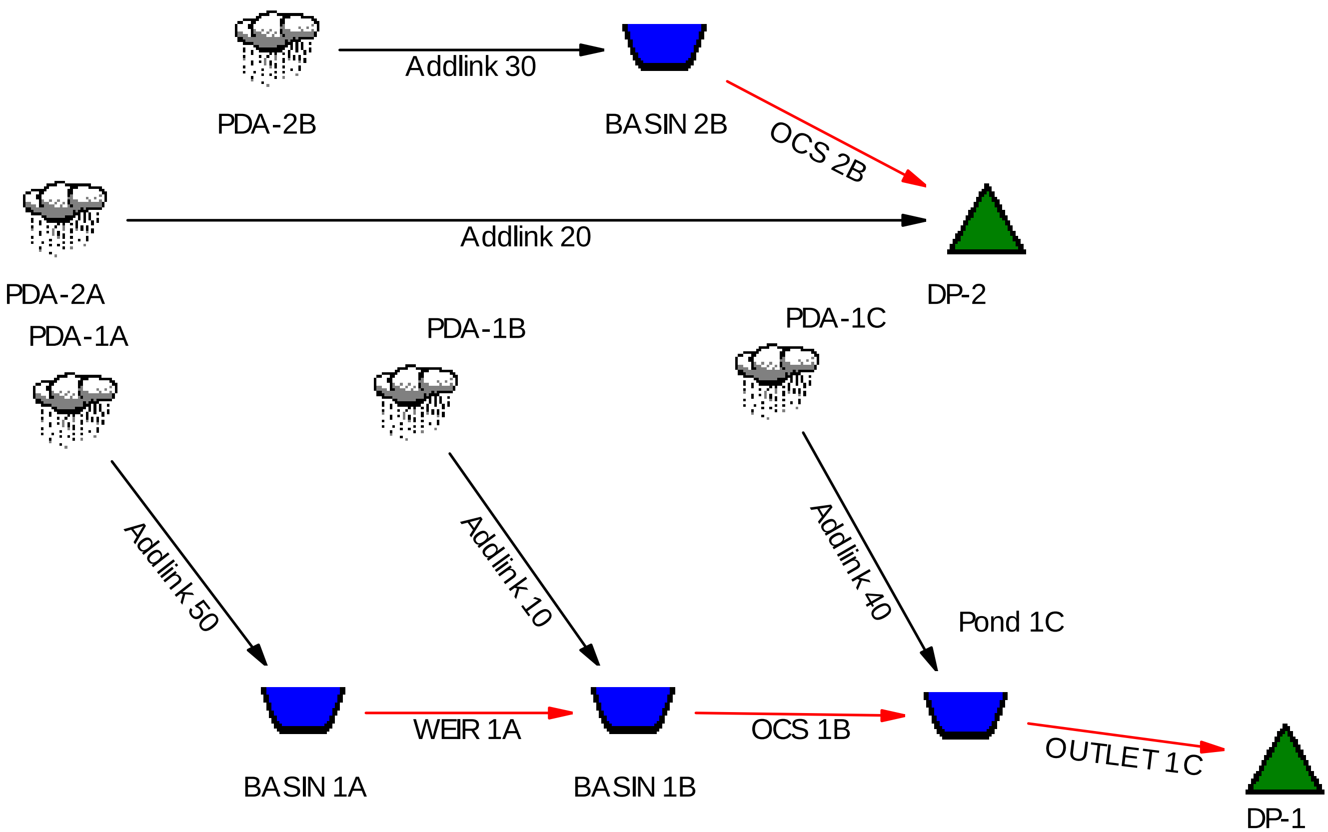
HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.1500	.89	.87	.86	.85	.84
15.4000	.83	.82	.80	.79	.78
15.6500	.77	.76	.75	.73	.72
15.9000	.71	.70	.69	.68	.66
16.1500	.65	.64	.63	.62	.61
16.4000	.60	.59	.58	.57	.57
16.6500	.56	.55	.55	.54	.53
16.9000	.53	.52	.51	.51	.50
17.1500	.50	.49	.48	.48	.47
17.4000	.47	.46	.46	.45	.45
17.6500	.44	.44	.43	.42	.42
17.9000	.41	.41	.40	.40	.39
18.1500	.39	.38	.38	.37	.37
18.4000	.37	.36	.36	.35	.35
18.6500	.35	.35	.34	.34	.34
18.9000	.34	.33	.33	.33	.33
19.1500	.33	.32	.32	.32	.32
19.4000	.32	.32	.31	.31	.31
19.6500	.31	.31	.31	.30	.30
19.9000	.30	.30	.30	.30	.29
20.1500	.29	.29	.29	.29	.29
20.4000	.29	.28	.28	.28	.28
20.6500	.28	.28	.28	.28	.27
20.9000	.27	.27	.27	.27	.27
21.1500	.27	.27	.26	.26	.26
21.4000	.26	.26	.26	.26	.26
21.6500	.25	.25	.25	.25	.25
21.9000	.25	.25	.25	.25	.24
22.1500	.24	.24	.24	.24	.24
22.4000	.24	.24	.23	.23	.23
22.6500	.23	.23	.23	.23	.23
22.9000	.22	.22	.22	.22	.22
23.1500	.22	.22	.22	.22	.21
23.4000	.21	.21	.21	.21	.21
23.6500	.21	.21	.20	.20	.20
23.9000	.20	.20	.20	.20	.19
24.1500	.19	.17	.16	.14	.13
24.4000	.12	.10	.09	.08	.07
24.6500	.06	.05	.05	.04	.04
24.9000	.03	.03	.03	.02	.02
25.1500	.02	.02	.01	.01	.01
25.4000	.01	.01	.01	.01	.01
25.6500	.00	.00	.00	.00	.00

Index of Starting Page Numbers for ID Names

APPENDIX B

PROPOSED HYDROLOGIC CALCULATIONS



PDA-2B
Addlink 30
BASIN 2B
OCS 2B
PDA-2A
Addlink 20
DP-2
PDA-1A
PDA-1B
PDA-1C
Addlink 50
Addlink 10
Addlink 40
Pond 1C
BASIN 1A
WEIR 1A
BASIN 1B
OCS 1B
OUTLET 1C
DP-1

Table of Contents

Table of Contents (continued)

Table of Contents (continued)

Table of Contents (continued)

MASTER DESIGN STORM SUMMARY

Network Storm Collection: OSSINING-JMC

Return Event	Total Depth in	Rainfall Type	RNF ID
1	2.7800	Synthetic Curve	TypeIII 24hr
10	5.1400	Synthetic Curve	TypeIII 24hr
100	9.3000	Synthetic Curve	TypeIII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
BASIN 1A	IN POND	1	17956		12.1500	4.61		
BASIN 1A	IN POND	10	49785		12.1500	12.91		
BASIN 1A	IN POND	100	113148		12.1500	28.43		
BASIN 1A	OUT POND	1	0		9.9500	.00	360.72	8032
BASIN 1A	OUT POND	10	0		7.4500	.00	362.47	32044
BASIN 1A	OUT POND	100	8517		16.3000	.57	365.11	81955
BASIN 1B	IN POND	1	9492		12.1000	2.39		
BASIN 1B	IN POND	10	31287		12.1000	8.65		
BASIN 1B	IN POND	100	86745		12.1000	21.45		
BASIN 1B	OUT POND	1	0		11.3000	.00	344.37	3129
BASIN 1B	OUT POND	10	10966		12.7000	1.00	345.37	13000
BASIN 1B	OUT POND	100	59248		12.5500	3.93	347.00	33264
BASIN 2B	IN POND	1	11241		12.1500	2.68		
BASIN 2B	IN POND	10	40405		12.1000	10.74		
BASIN 2B	IN POND	100	105700		12.1000	28.48		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID		Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
BASIN 2B	OUT	POND	1	4852		16.6000	.15	304.93	7771
BASIN 2B	OUT	POND	10	34017		12.2000	9.42	305.45	10479
BASIN 2B	OUT	POND	100	99311		12.1500	26.29	305.86	12855
*DP-1		JCT	1	4881		12.3500	.64		
*DP-1		JCT	10	28550		12.3500	3.08		
*DP-1		JCT	100	105275		12.6000	6.23		
*DP-2		JCT	1	6928		12.2000	.32		
*DP-2		JCT	10	43645		12.2000	11.65		
*DP-2		JCT	100	127725		12.1500	33.58		
PDA-1A		AREA	1	17956		12.1500	4.61		
PDA-1A		AREA	10	49785		12.1500	12.91		
PDA-1A		AREA	100	113148		12.1500	28.43		
PDA-1B		AREA	1	9492		12.1000	2.39		
PDA-1B		AREA	10	31287		12.1000	8.65		
PDA-1B		AREA	100	78228		12.1000	21.45		
PDA-1C		AREA	1	4896		12.1500	1.18		
PDA-1C		AREA	10	17599		12.1000	4.84		
PDA-1C		AREA	100	46041		12.1000	12.72		
PDA-2A		AREA	1	2076		12.2000	.32		
PDA-2A		AREA	10	9629		12.1500	2.34		
PDA-2A		AREA	100	28414		12.1500	7.29		
PDA-2B		AREA	1	11241		12.1500	2.68		
PDA-2B		AREA	10	40405		12.1000	10.74		
PDA-2B		AREA	100	105700		12.1000	28.48		
POND 1C	IN	POND	1	4896		12.1500	1.18		
POND 1C	IN	POND	10	28565		12.1000	4.90		
POND 1C	IN	POND	100	105289		12.1000	15.34		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
POND 1C	OUT POND	1	4882		12.3500	.64	314.52	844
POND 1C	OUT POND	10	28551		12.3500	3.08	315.30	3292
POND 1C	OUT POND	100	105275		12.6000	6.23	317.06	15355

```
Title... Project Date: 9/30/2015
         Project Engineer: BD
         Project Title: RIVER KNOLL
         Project Comments:

                DESIGN STORMS SUMMARY

 Design Storm File,ID =               OSSINING-JMC


 Storm Tag Name      = 1
 ----------------------------------------------------------------------
 Data Type, File, ID = Synthetic Storm    TypeIII 24hr
 Storm Frequency     = 1 yr
 Total Rainfall Depth= 2.7800 in
 Duration Multiplier =  1
 Resulting Duration  = 24.0000 hrs
 Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs


 Storm Tag Name      =     10
 ----------------------------------------------------------------------
 Data Type, File, ID = Synthetic Storm    TypeIII 24hr
 Storm Frequency     = 10 yr
 Total Rainfall Depth= 5.1400 in
 Duration Multiplier =  1
 Resulting Duration  = 24.0000 hrs
 Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs


 Storm Tag Name      =    100
 ----------------------------------------------------------------------
 Data Type, File, ID = Synthetic Storm    TypeIII 24hr
 Storm Frequency     = 100 yr
 Total Rainfall Depth= 9.3000 in
 Duration Multiplier =  1
 Resulting Duration  = 24.0000 hrs
 Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs
```

DESIGN STORMS SUMMARY

```
Design Storm File,ID =               OSSINING-JMC


Storm Tag Name      = 1
----------------------------------------------------------------------
Data Type, File, ID = Synthetic Storm    TypeIII 24hr
Storm Frequency     = 1 yr
Total Rainfall Depth= 2.7800 in
Duration Multiplier =  1
Resulting Duration  = 24.0000 hrs
Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs


Storm Tag Name      =     10
----------------------------------------------------------------------
Data Type, File, ID = Synthetic Storm    TypeIII 24hr
Storm Frequency     = 10 yr
Total Rainfall Depth= 5.1400 in
Duration Multiplier =  1
Resulting Duration  = 24.0000 hrs
Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs


Storm Tag Name      =    100
----------------------------------------------------------------------
Data Type, File, ID = Synthetic Storm    TypeIII 24hr
Storm Frequency     = 100 yr
Total Rainfall Depth= 9.3000 in
Duration Multiplier =  1
Resulting Duration  = 24.0000 hrs
Resulting Start Time= .0000 hrs  Step= .1000 hrs  End= 24.0000 hrs
```

```
:::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
TIME OF CONCENTRATION CALCULATOR
:::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::


-----------------------------------------------------------------------


Segment #1:  Tc: TR-55 Sheet

Mannings n          .2400
Hydraulic Length    40.00 ft
2yr, 24hr P        3.4100 in
Slope             .142500 ft/ft

Avg.Velocity          .22 ft/sec

                                        Segment #1 Time:     .0505 hrs
-----------------------------------------------------------------------

Segment #2:  Tc: TR-55 Sheet

Mannings n          .4000
Hydraulic Length    60.00 ft
2yr, 24hr P        3.4100 in
Slope             .133300 ft/ft

Avg.Velocity          .15 ft/sec

                                        Segment #2 Time:     .1079 hrs
-----------------------------------------------------------------------

Segment #3:  Tc: TR-55 Shallow

Hydraulic Length   226.00 ft
Slope             .132300 ft/ft
Unpaved

Avg.Velocity         5.87 ft/sec

                                        Segment #3 Time:     .0107 hrs
-----------------------------------------------------------------------

                                              =========================
                                               Total Tc:     .1690 hrs
                                              =========================
```

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

```
Mannings n            .2400
Hydraulic Length    100.00 ft
2yr, 24hr P         3.4100 in
Slope             .200000 ft/ft

Avg.Velocity           .30 ft/sec
```

Segment #1 Time: .0917 hrs

Segment #2: Tc: TR-55 Shallow

```
Hydraulic Length    140.00 ft
Slope             .171430 ft/ft
Unpaved

Avg.Velocity          6.68 ft/sec
```

Segment #2 Time: .0058 hrs

Segment #3: Tc: TR-55 Shallow

```
Hydraulic Length    168.00 ft
Slope             .101100 ft/ft
Paved

Avg.Velocity          6.46 ft/sec
```

Segment #3 Time: .0072 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	1.2270	sq.ft
Wetted Perimeter	3.92	ft
Hydraulic Radius	.31	ft
Slope	.021700	ft/ft
Mannings n	.0120	
Hydraulic Length	184.00	ft
Avg.Velocity	8.43	ft/sec

Segment #4 Time: .0061 hrs

Total Tc: .1108 hrs

```
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
TIME OF CONCENTRATION CALCULATOR
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::


------------------------------------------------------------------------


Segment #1:  Tc: TR-55 Sheet

Mannings n           .2400
Hydraulic Length   100.00 ft
2yr, 24hr P        3.4100 in
Slope            .180000 ft/ft

Avg.Velocity          .29 ft/sec

                                         Segment #1 Time:     .0957 hrs
------------------------------------------------------------------------

Segment #2:  Tc: TR-55 Shallow

Hydraulic Length   292.00 ft
Slope            .123280 ft/ft
Unpaved

Avg.Velocity         5.67 ft/sec

                                         Segment #2 Time:     .0143 hrs
------------------------------------------------------------------------

                                               =========================
                                                Total Tc:     .1100 hrs
                                               =========================
```

```
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
TIME OF CONCENTRATION CALCULATOR
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::


------------------------------------------------------------------------


Segment #1:  Tc: TR-55 Sheet

Mannings n           .2400
Hydraulic Length   100.00 ft
2yr, 24hr P        3.4100 in
Slope             .057000 ft/ft

Avg.Velocity          .18 ft/sec

                                        Segment #1 Time:     .1515 hrs
------------------------------------------------------------------------

Segment #2:  Tc: TR-55 Shallow

Hydraulic Length   571.00 ft
Slope             .140100 ft/ft
Unpaved

Avg.Velocity         6.04 ft/sec

                                        Segment #2 Time:     .0263 hrs
------------------------------------------------------------------------

                                              =========================
                                               Total Tc:     .1778 hrs
                                              =========================
```

```
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
TIME OF CONCENTRATION CALCULATOR
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::


------------------------------------------------------------------------


Segment #1:  Tc: TR-55 Sheet

Mannings n          .2400
Hydraulic Length   100.00 ft
2yr, 24hr P        3.4100 in
Slope            .250000 ft/ft

Avg.Velocity          .33 ft/sec

                                         Segment #1 Time:     .0839 hrs
------------------------------------------------------------------------

Segment #2:  Tc: TR-55 Shallow

Hydraulic Length   563.00 ft
Slope            .049733 ft/ft
Unpaved

Avg.Velocity         3.60 ft/sec

                                         Segment #2 Time:     .0435 hrs
------------------------------------------------------------------------

                                               =========================
                                                Total Tc:     .1274 hrs
                                               =========================
```

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
IMPERVIOUS	98	2.085			98.00
LAWN B	61	1.681			61.00
LAWN D	80	.368			80.00
WOODS B	55	.173			55.00
WOODS D	77	.241			77.00

COMPOSITE AREA & WEIGHTED CN ---> 4.548 80.12 (80)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
IMPERVIOUS	98	.629			98.00
LAWN B	61	1.922			61.00
LAWN D	80	.568			80.00
WOODS D	77	.486			77.00

COMPOSITE AREA & WEIGHTED CN --->   3.605   72.61 (73)

RUNOFF CURVE NUMBER DATA
::

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
LAWN D	80	.021			80.00
IMPERVIOUS	98	.134			98.00
LAWN B	61	.849			61.00
LAWN C	74	1.065			74.00
WOODS C	70	.196			70.00

COMPOSITE AREA & WEIGHTED CN ---> 2.265 70.26 (70)
:::

RUNOFF CURVE NUMBER DATA

::

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
LAWN B	61	1.256			61.00
LAWN D	80	.241			80.00
WOODS B	55	.163			55.00
COMPOSITE AREA & WEIGHTED CN --->		1.660			63.17 (63)

::

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
IMPERVIOUS	98	.941			98.00
LAWN B	61	2.294			61.00
LAWN C	74	.701			74.00
LAWN D	80	.127			80.00
WOODS B	55	.738			55.00
WOODS C	70	.346			70.00
WOODS D	77	.053			77.00

COMPOSITE AREA & WEIGHTED CN ---> 5.200 69.82 (70)

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 2.7800 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-1A 1
Tc = .1690 hrs
Drainage Area = 4.548 acres Runoff CN= 80
Calc.Increment= .02254 hrs Out.Incr.= .0500 hrs
HYG Volume = 17956 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.9000	.00	.00	.00	.01	.01
10.1500	.01	.02	.02	.03	.03
10.4000	.04	.04	.05	.05	.06
10.6500	.06	.07	.07	.08	.09
10.9000	.09	.10	.11	.12	.13
11.1500	.14	.15	.17	.18	.20
11.4000	.22	.24	.27	.30	.36
11.6500	.45	.58	.74	.94	1.16
11.9000	1.42	1.85	2.68	3.60	4.31
12.1500	4.61	4.21	3.59	3.09	2.72
12.4000	2.39	2.09	1.77	1.48	1.23
12.6500	1.06	.94	.87	.82	.78
12.9000	.74	.71	.67	.64	.62
13.1500	.59	.58	.57	.56	.55
13.4000	.54	.53	.52	.51	.51
13.6500	.50	.49	.48	.47	.46
13.9000	.45	.44	.43	.43	.42
14.1500	.41	.40	.40	.40	.39
14.4000	.39	.38	.38	.37	.37
14.6500	.37	.36	.36	.35	.35
14.9000	.34	.34	.33	.33	.33
15.1500	.32	.32	.31	.31	.30
15.4000	.30	.29	.29	.28	.28
15.6500	.27	.27	.26	.26	.26
15.9000	.25	.25	.24	.24	.23
16.1500	.23	.23	.22	.22	.22
16.4000	.22	.21	.21	.21	.21
16.6500	.21	.20	.20	.20	.20
16.9000	.20	.19	.19	.19	.19
17.1500	.19	.18	.18	.18	.18

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.4000	.17	.17	.17	.17	.17
17.6500	.16	.16	.16	.16	.16
17.9000	.15	.15	.15	.15	.14
18.1500	.14	.14	.14	.14	.14
18.4000	.14	.14	.14	.14	.14
18.6500	.14	.14	.14	.13	.13
18.9000	.13	.13	.13	.13	.13
19.1500	.13	.13	.13	.13	.13
19.4000	.13	.13	.13	.13	.12
19.6500	.12	.12	.12	.12	.12
19.9000	.12	.12	.12	.12	.12
20.1500	.12	.12	.12	.12	.12
20.4000	.12	.12	.11	.11	.11
20.6500	.11	.11	.11	.11	.11
20.9000	.11	.11	.11	.11	.11
21.1500	.11	.11	.11	.11	.11
21.4000	.11	.11	.10	.10	.10
21.6500	.10	.10	.10	.10	.10
21.9000	.10	.10	.10	.10	.10
22.1500	.10	.10	.10	.10	.10
22.4000	.10	.10	.10	.09	.09
22.6500	.09	.09	.09	.09	.09
22.9000	.09	.09	.09	.09	.09
23.1500	.09	.09	.09	.09	.09
23.4000	.09	.09	.09	.08	.08
23.6500	.08	.08	.08	.08	.08
23.9000	.08	.08	.08	.07	.05
24.1500	.03	.01	.01	.00	.00
24.4000	.00				

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.1400 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-1A 10
Tc = .1690 hrs
Drainage Area = 4.548 acres Runoff CN= 80
Calc.Increment= .02254 hrs Out.Incr.= .0500 hrs
HYG Volume = 49785 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.4000	.00	.00	.00	.01	.01
7.6500	.01	.01	.02	.02	.02
7.9000	.03	.03	.03	.03	.04
8.1500	.04	.05	.05	.05	.06
8.4000	.06	.07	.07	.08	.08
8.6500	.09	.10	.10	.11	.11
8.9000	.12	.13	.13	.14	.15
9.1500	.16	.16	.17	.18	.19
9.4000	.20	.20	.21	.22	.23
9.6500	.24	.25	.26	.27	.28
9.9000	.29	.30	.31	.32	.33
10.1500	.34	.36	.37	.39	.41
10.4000	.42	.44	.46	.48	.50
10.6500	.52	.54	.56	.58	.60
10.9000	.62	.64	.66	.69	.72
11.1500	.76	.81	.87	.93	.99
11.4000	1.06	1.13	1.20	1.31	1.53
11.6500	1.84	2.29	2.83	3.47	4.15
11.9000	4.89	6.08	8.39	10.81	12.46
12.1500	12.91	11.52	9.61	8.13	7.05
12.4000	6.12	5.29	4.44	3.69	3.07
12.6500	2.61	2.32	2.14	2.01	1.91
12.9000	1.81	1.73	1.64	1.56	1.49
13.1500	1.44	1.40	1.37	1.34	1.32
13.4000	1.29	1.27	1.25	1.23	1.21
13.6500	1.18	1.16	1.14	1.12	1.09
13.9000	1.07	1.05	1.03	1.00	.99
14.1500	.97	.95	.94	.93	.92
14.4000	.91	.90	.89	.88	.87
14.6500	.86	.84	.83	.82	.81

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.9000	.80	.79	.78	.77	.76
15.1500	.75	.73	.72	.71	.70
15.4000	.69	.68	.67	.66	.64
15.6500	.63	.62	.61	.60	.59
15.9000	.58	.57	.55	.54	.53
16.1500	.53	.52	.51	.51	.50
16.4000	.50	.49	.49	.48	.48
16.6500	.47	.47	.46	.46	.45
16.9000	.45	.44	.44	.43	.43
17.1500	.42	.42	.41	.41	.40
17.4000	.40	.39	.39	.38	.38
17.6500	.37	.37	.36	.36	.35
17.9000	.35	.34	.34	.33	.33
18.1500	.33	.32	.32	.32	.32
18.4000	.32	.32	.31	.31	.31
18.6500	.31	.31	.31	.31	.30
18.9000	.30	.30	.30	.30	.30
19.1500	.30	.29	.29	.29	.29
19.4000	.29	.29	.29	.28	.28
19.6500	.28	.28	.28	.28	.28
19.9000	.27	.27	.27	.27	.27
20.1500	.27	.27	.26	.26	.26
20.4000	.26	.26	.26	.26	.26
20.6500	.26	.25	.25	.25	.25
20.9000	.25	.25	.25	.25	.25
21.1500	.24	.24	.24	.24	.24
21.4000	.24	.24	.24	.23	.23
21.6500	.23	.23	.23	.23	.23
21.9000	.23	.23	.22	.22	.22
22.1500	.22	.22	.22	.22	.22
22.4000	.22	.21	.21	.21	.21
22.6500	.21	.21	.21	.21	.21
22.9000	.20	.20	.20	.20	.20
23.1500	.20	.20	.20	.19	.19
23.4000	.19	.19	.19	.19	.19
23.6500	.19	.19	.18	.18	.18
23.9000	.18	.18	.18	.16	.11
24.1500	.06	.03	.01	.01	.00
24.4000	.00	.00			

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.3000 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-1A 100
Tc = .1690 hrs
Drainage Area = 4.548 acres Runoff CN= 80
Calc.Increment= .02254 hrs Out.Incr.= .0500 hrs
HYG Volume = 113148 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
4.8500	.00	.00	.00	.01	.01
5.1000	.01	.01	.02	.02	.02
5.3500	.03	.03	.03	.04	.04
5.6000	.05	.05	.05	.06	.06
5.8500	.06	.07	.07	.07	.08
6.1000	.08	.09	.09	.10	.10
6.3500	.11	.11	.12	.12	.13
6.6000	.13	.14	.14	.15	.16
6.8500	.16	.17	.18	.18	.19
7.1000	.20	.20	.21	.22	.23
7.3500	.23	.24	.25	.26	.27
7.6000	.27	.28	.29	.30	.31
7.8500	.32	.33	.34	.34	.35
8.1000	.36	.38	.39	.40	.42
8.3500	.43	.45	.46	.48	.50
8.6000	.51	.53	.55	.57	.58
8.8500	.60	.62	.64	.66	.68
9.1000	.70	.72	.74	.76	.78
9.3500	.80	.82	.84	.87	.89
9.6000	.91	.93	.96	.98	1.00
9.8500	1.03	1.05	1.07	1.10	1.12
10.1000	1.15	1.19	1.22	1.26	1.30
10.3500	1.34	1.39	1.43	1.47	1.52
10.6000	1.56	1.61	1.65	1.70	1.75
10.8500	1.79	1.84	1.89	1.94	2.00
11.1000	2.08	2.17	2.30	2.43	2.59
11.3500	2.74	2.90	3.06	3.23	3.50
11.6000	4.03	4.79	5.91	7.20	8.69
11.8500	10.23	11.87	14.48	19.55	24.68
12.1000	27.89	28.43	25.06	20.69	17.34

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.3500	14.93	12.88	11.06	9.25	7.67
12.6000	6.35	5.40	4.79	4.42	4.14
12.8500	3.92	3.72	3.53	3.35	3.19
13.1000	3.04	2.93	2.85	2.78	2.73
13.3500	2.68	2.63	2.58	2.54	2.49
13.6000	2.44	2.40	2.35	2.31	2.26
13.8500	2.21	2.17	2.12	2.07	2.03
14.1000	1.99	1.95	1.92	1.90	1.87
14.3500	1.85	1.83	1.81	1.78	1.76
14.6000	1.74	1.72	1.69	1.67	1.65
14.8500	1.63	1.60	1.58	1.56	1.54
15.1000	1.51	1.49	1.47	1.45	1.42
15.3500	1.40	1.38	1.36	1.33	1.31
15.6000	1.29	1.26	1.24	1.22	1.20
15.8500	1.17	1.15	1.13	1.10	1.08
16.1000	1.06	1.05	1.03	1.02	1.01
16.3500	1.00	.99	.98	.97	.96
16.6000	.95	.94	.93	.92	.91
16.8500	.90	.89	.88	.87	.86
17.1000	.85	.84	.83	.82	.81
17.3500	.80	.79	.78	.77	.76
17.6000	.75	.74	.73	.72	.71
17.8500	.70	.69	.68	.67	.66
18.1000	.65	.65	.64	.64	.64
18.3500	.63	.63	.63	.62	.62
18.6000	.62	.61	.61	.61	.60
18.8500	.60	.60	.60	.59	.59
19.1000	.59	.58	.58	.58	.58
19.3500	.57	.57	.57	.56	.56
19.6000	.56	.55	.55	.55	.55
19.8500	.54	.54	.54	.53	.53
20.1000	.53	.52	.52	.52	.52
20.3500	.52	.51	.51	.51	.51
20.6000	.50	.50	.50	.50	.49
20.8500	.49	.49	.49	.49	.49
21.1000	.48	.48	.48	.48	.47
21.3500	.47	.47	.47	.46	.46
21.6000	.46	.46	.45	.45	.45
21.8500	.45	.45	.44	.44	.44
22.1000	.44	.43	.43	.43	.43
22.3500	.42	.42	.42	.42	.42
22.6000	.41	.41	.41	.41	.41
22.8500	.40	.40	.40	.40	.39
23.1000	.39	.39	.39	.39	.38
23.3500	.38	.38	.38	.37	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
23.6000	.37	.37	.36	.36	.36
23.8500	.36	.35	.35	.35	.32
24.1000	.22	.12	.06	.03	.01
24.3500	.01	.00	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 2.7800 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-1B 1
Tc = .1108 hrs
Drainage Area = 3.605 acres Runoff CN= 73
Calc.Increment= .01478 hrs Out.Incr.= .0500 hrs
HYG Volume = 9492 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.2500	.00	.00	.01	.02	.03
11.5000	.04	.05	.08	.11	.17
11.7500	.24	.34	.46	.61	.93
12.0000	1.54	2.02	2.39	2.39	1.92
12.2500	1.65	1.46	1.32	1.16	1.01
12.5000	.83	.70	.58	.52	.49
12.7500	.47	.45	.43	.41	.40
13.0000	.37	.36	.35	.34	.33
13.2500	.33	.32	.32	.31	.31
13.5000	.30	.30	.30	.29	.29
13.7500	.28	.28	.27	.27	.26
14.0000	.26	.25	.25	.24	.24
14.2500	.24	.24	.23	.23	.23
14.5000	.23	.22	.22	.22	.22
14.7500	.21	.21	.21	.21	.20
15.0000	.20	.20	.20	.19	.19
15.2500	.19	.19	.18	.18	.18
15.5000	.17	.17	.17	.17	.16
15.7500	.16	.16	.15	.15	.15
16.0000	.15	.14	.14	.14	.14
16.2500	.14	.14	.13	.13	.13
16.5000	.13	.13	.13	.13	.13
16.7500	.12	.12	.12	.12	.12
17.0000	.12	.12	.12	.11	.11
17.2500	.11	.11	.11	.11	.11
17.5000	.11	.10	.10	.10	.10
17.7500	.10	.10	.10	.09	.09
18.0000	.09	.09	.09	.09	.09
18.2500	.09	.09	.09	.09	.09
18.5000	.09	.09	.09	.09	.09

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.7500	.08	.08	.08	.08	.08
19.0000	.08	.08	.08	.08	.08
19.2500	.08	.08	.08	.08	.08
19.5000	.08	.08	.08	.08	.08
19.7500	.08	.08	.08	.08	.08
20.0000	.08	.07	.07	.07	.07
20.2500	.07	.07	.07	.07	.07
20.5000	.07	.07	.07	.07	.07
20.7500	.07	.07	.07	.07	.07
21.0000	.07	.07	.07	.07	.07
21.2500	.07	.07	.07	.07	.07
21.5000	.07	.07	.07	.07	.06
21.7500	.06	.06	.06	.06	.06
22.0000	.06	.06	.06	.06	.06
22.2500	.06	.06	.06	.06	.06
22.5000	.06	.06	.06	.06	.06
22.7500	.06	.06	.06	.06	.06
23.0000	.06	.06	.06	.06	.06
23.2500	.06	.06	.05	.05	.05
23.5000	.05	.05	.05	.05	.05
23.7500	.05	.05	.05	.05	.05
24.0000	.05	.04	.02	.01	.00
24.2500	.00				

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.1400 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-1B 10
Tc = .1108 hrs
Drainage Area = 3.605 acres Runoff CN= 73
Calc.Increment= .01478 hrs Out.Incr.= .0500 hrs
HYG Volume = 31287 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.0000	.00	.00	.00	.01	.01
9.2500	.02	.02	.02	.03	.03
9.5000	.04	.04	.05	.05	.06
9.7500	.06	.07	.08	.08	.09
10.0000	.09	.10	.11	.11	.12
10.2500	.13	.14	.15	.16	.17
10.5000	.18	.19	.20	.21	.23
10.7500	.24	.25	.26	.28	.29
11.0000	.30	.32	.34	.37	.40
11.2500	.43	.47	.51	.55	.59
11.5000	.64	.73	.90	1.12	1.47
11.7500	1.81	2.25	2.68	3.22	4.39
12.0000	6.52	7.85	8.65	8.20	6.35
12.2500	5.27	4.56	4.06	3.50	3.02
12.5000	2.45	2.06	1.70	1.52	1.42
12.7500	1.35	1.29	1.24	1.18	1.12
13.0000	1.06	1.02	.98	.95	.93
13.2500	.92	.90	.89	.87	.86
13.5000	.85	.83	.82	.80	.79
13.7500	.77	.76	.74	.73	.71
14.0000	.70	.68	.67	.66	.65
14.2500	.65	.64	.63	.62	.62
14.5000	.61	.60	.60	.59	.58
14.7500	.57	.57	.56	.55	.54
15.0000	.54	.53	.52	.51	.51
15.2500	.50	.49	.48	.48	.47
15.5000	.46	.45	.44	.44	.43
15.7500	.42	.41	.41	.40	.39
16.0000	.38	.38	.37	.36	.36
16.2500	.36	.35	.35	.35	.34

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.5000	.34	.34	.33	.33	.33
16.7500	.32	.32	.32	.31	.31
17.0000	.31	.30	.30	.30	.29
17.2500	.29	.29	.28	.28	.28
17.5000	.27	.27	.26	.26	.26
17.7500	.25	.25	.25	.24	.24
18.0000	.24	.23	.23	.23	.23
18.2500	.23	.23	.23	.22	.22
18.5000	.22	.22	.22	.22	.22
18.7500	.22	.22	.22	.21	.21
19.0000	.21	.21	.21	.21	.21
19.2500	.21	.21	.20	.20	.20
19.5000	.20	.20	.20	.20	.20
19.7500	.20	.20	.19	.19	.19
20.0000	.19	.19	.19	.19	.19
20.2500	.19	.19	.19	.18	.18
20.5000	.18	.18	.18	.18	.18
20.7500	.18	.18	.18	.18	.18
21.0000	.18	.17	.17	.17	.17
21.2500	.17	.17	.17	.17	.17
21.5000	.17	.17	.17	.17	.16
21.7500	.16	.16	.16	.16	.16
22.0000	.16	.16	.16	.16	.16
22.2500	.16	.15	.15	.15	.15
22.5000	.15	.15	.15	.15	.15
22.7500	.15	.15	.15	.14	.14
23.0000	.14	.14	.14	.14	.14
23.2500	.14	.14	.14	.14	.14
23.5000	.14	.13	.13	.13	.13
23.7500	.13	.13	.13	.13	.13
24.0000	.13	.10	.04	.01	.00
24.2500	.00	.00			

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration   = 24.0000 hrs   Rain Depth = 9.3000 in
Rain Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-1B 100
Tc   = .1108 hrs
Drainage Area = 3.605 acres Runoff CN= 73
Calc.Increment= .01478 hrs   Out.Incr.= .0500 hrs
HYG Volume   = 78228 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.5000	.00	.00	.00	.01	.01
6.7500	.01	.02	.02	.02	.03
7.0000	.03	.03	.04	.04	.05
7.2500	.05	.06	.06	.06	.07
7.5000	.07	.08	.08	.09	.09
7.7500	.10	.10	.11	.11	.12
8.0000	.12	.13	.14	.14	.15
8.2500	.16	.17	.18	.19	.20
8.5000	.21	.21	.22	.23	.25
8.7500	.26	.27	.28	.29	.30
9.0000	.31	.33	.34	.35	.37
9.2500	.38	.39	.41	.42	.43
9.5000	.45	.46	.48	.49	.51
9.7500	.53	.54	.56	.57	.59
10.0000	.61	.63	.65	.67	.70
10.2500	.72	.75	.78	.81	.84
10.5000	.87	.90	.93	.96	.99
10.7500	1.02	1.06	1.09	1.13	1.16
11.0000	1.20	1.24	1.31	1.38	1.49
11.2500	1.58	1.69	1.79	1.91	2.02
11.5000	2.14	2.42	2.92	3.58	4.58
11.7500	5.51	6.68	7.75	9.07	11.97
12.0000	17.19	20.07	21.45	19.88	15.14
12.2500	12.39	10.59	9.34	7.99	6.87
12.5000	5.54	4.65	3.82	3.40	3.17
12.7500	3.02	2.87	2.75	2.61	2.49
13.0000	2.35	2.25	2.16	2.10	2.05
13.2500	2.02	1.98	1.95	1.92	1.89
13.5000	1.85	1.82	1.78	1.75	1.72
13.7500	1.68	1.65	1.62	1.58	1.55

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.0000	1.51	1.48	1.45	1.43	1.41
14.2500	1.40	1.38	1.37	1.35	1.33
14.5000	1.32	1.30	1.28	1.27	1.25
14.7500	1.23	1.22	1.20	1.18	1.17
15.0000	1.15	1.14	1.12	1.10	1.08
15.2500	1.07	1.05	1.03	1.02	1.00
15.5000	.98	.97	.95	.93	.91
15.7500	.90	.88	.87	.85	.83
16.0000	.81	.80	.79	.78	.77
16.2500	.76	.75	.75	.74	.73
16.5000	.72	.72	.71	.70	.69
16.7500	.69	.68	.67	.66	.66
17.0000	.65	.64	.63	.63	.62
17.2500	.61	.60	.60	.59	.58
17.5000	.57	.57	.56	.55	.54
17.7500	.54	.53	.52	.51	.51
18.0000	.50	.49	.49	.48	.48
18.2500	.48	.48	.47	.47	.47
18.5000	.47	.47	.46	.46	.46
18.7500	.46	.45	.45	.45	.45
19.0000	.45	.44	.44	.44	.44
19.2500	.43	.43	.43	.43	.43
19.5000	.42	.42	.42	.42	.41
19.7500	.41	.41	.41	.40	.40
20.0000	.40	.40	.40	.39	.39
20.2500	.39	.39	.39	.39	.38
20.5000	.38	.38	.38	.38	.37
20.7500	.37	.37	.37	.37	.37
21.0000	.37	.37	.36	.36	.36
21.2500	.36	.36	.35	.35	.35
21.5000	.35	.35	.35	.34	.34
21.7500	.34	.34	.34	.34	.33
22.0000	.33	.33	.33	.33	.33
22.2500	.32	.32	.32	.32	.32
22.5000	.31	.31	.31	.31	.31
22.7500	.31	.30	.30	.30	.30
23.0000	.30	.30	.29	.29	.29
23.2500	.29	.29	.29	.29	.28
23.5000	.28	.28	.28	.28	.27
23.7500	.27	.27	.27	.27	.26
24.0000	.26	.21	.09	.03	.01
24.2500	.00	.00			

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 2.7800 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-1C 1
Tc = .1100 hrs
Drainage Area = 2.265 acres Runoff CN= 70
Calc.Increment= .01467 hrs Out.Incr.= .0500 hrs
HYG Volume = 4896 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.6000	.00	.01	.02	.05	.09
11.8500	.15	.22	.38	.67	.93
12.1000	1.15	1.18	.96	.84	.75
12.3500	.69	.60	.53	.44	.37
12.6000	.31	.28	.26	.25	.24
12.8500	.23	.22	.21	.20	.19
13.1000	.19	.18	.18	.18	.17
13.3500	.17	.17	.17	.17	.16
13.6000	.16	.16	.16	.15	.15
13.8500	.15	.14	.14	.14	.14
14.1000	.13	.13	.13	.13	.13
14.3500	.13	.13	.13	.12	.12
14.6000	.12	.12	.12	.12	.12
14.8500	.11	.11	.11	.11	.11
15.1000	.11	.11	.10	.10	.10
15.3500	.10	.10	.10	.10	.09
15.6000	.09	.09	.09	.09	.09
15.8500	.09	.08	.08	.08	.08
16.1000	.08	.08	.08	.08	.08
16.3500	.07	.07	.07	.07	.07
16.6000	.07	.07	.07	.07	.07
16.8500	.07	.07	.07	.07	.06
17.1000	.06	.06	.06	.06	.06
17.3500	.06	.06	.06	.06	.06
17.6000	.06	.06	.06	.05	.05
17.8500	.05	.05	.05	.05	.05
18.1000	.05	.05	.05	.05	.05
18.3500	.05	.05	.05	.05	.05
18.6000	.05	.05	.05	.05	.05
18.8500	.05	.05	.05	.05	.05

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.1000	.05	.05	.05	.05	.04
19.3500	.04	.04	.04	.04	.04
19.6000	.04	.04	.04	.04	.04
19.8500	.04	.04	.04	.04	.04
20.1000	.04	.04	.04	.04	.04
20.3500	.04	.04	.04	.04	.04
20.6000	.04	.04	.04	.04	.04
20.8500	.04	.04	.04	.04	.04
21.1000	.04	.04	.04	.04	.04
21.3500	.04	.04	.04	.04	.04
21.6000	.04	.04	.04	.04	.04
21.8500	.04	.04	.04	.04	.04
22.1000	.04	.03	.03	.03	.03
22.3500	.03	.03	.03	.03	.03
22.6000	.03	.03	.03	.03	.03
22.8500	.03	.03	.03	.03	.03
23.1000	.03	.03	.03	.03	.03
23.3500	.03	.03	.03	.03	.03
23.6000	.03	.03	.03	.03	.03
23.8500	.03	.03	.03	.03	.02
24.1000	.01	.00	.00		

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration   = 24.0000 hrs   Rain Depth = 5.1400 in
Rain Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-1C 10
Tc   = .1100 hrs
Drainage Area = 2.265 acres Runoff CN= 70
Calc.Increment= .01467 hrs   Out.Incr.= .0500 hrs
HYG Volume   = 17599 cu.ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .0500 hrs

Time on left represents time for first value in each row.

Time hrs					
9.6000	.00	.00	.01	.01	.01
9.8500	.01	.02	.02	.02	.03
10.1000	.03	.03	.04	.04	.05
10.3500	.05	.06	.06	.07	.07
10.6000	.08	.09	.09	.10	.11
10.8500	.11	.12	.13	.13	.14
11.1000	.16	.17	.19	.20	.22
11.3500	.24	.26	.29	.31	.36
11.6000	.45	.57	.75	.93	1.17
11.8500	1.41	1.72	2.37	3.57	4.35
12.1000	4.84	4.61	3.58	3.00	2.60
12.3500	2.33	2.01	1.74	1.41	1.19
12.6000	.98	.88	.82	.78	.75
12.8500	.72	.68	.65	.62	.59
13.1000	.57	.55	.54	.54	.53
13.3500	.52	.51	.50	.49	.49
13.6000	.48	.47	.46	.45	.44
13.8500	.43	.43	.42	.41	.40
14.1000	.39	.39	.38	.38	.37
14.3500	.37	.37	.36	.36	.35
14.6000	.35	.35	.34	.34	.33
14.8500	.33	.32	.32	.32	.31
15.1000	.31	.30	.30	.29	.29
15.3500	.28	.28	.28	.27	.27
15.6000	.26	.26	.25	.25	.24
15.8500	.24	.23	.23	.23	.22
16.1000	.22	.22	.21	.21	.21
16.3500	.21	.20	.20	.20	.20
16.6000	.20	.20	.19	.19	.19
16.8500	.19	.19	.18	.18	.18

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.1000	.18	.18	.17	.17	.17
17.3500	.17	.16	.16	.16	.16
17.6000	.16	.15	.15	.15	.15
17.8500	.15	.14	.14	.14	.14
18.1000	.14	.14	.14	.13	.13
18.3500	.13	.13	.13	.13	.13
18.6000	.13	.13	.13	.13	.13
18.8500	.13	.13	.13	.13	.13
19.1000	.12	.12	.12	.12	.12
19.3500	.12	.12	.12	.12	.12
19.6000	.12	.12	.12	.12	.12
19.8500	.12	.11	.11	.11	.11
20.1000	.11	.11	.11	.11	.11
20.3500	.11	.11	.11	.11	.11
20.6000	.11	.11	.11	.11	.11
20.8500	.11	.10	.10	.10	.10
21.1000	.10	.10	.10	.10	.10
21.3500	.10	.10	.10	.10	.10
21.6000	.10	.10	.10	.10	.10
21.8500	.10	.10	.10	.09	.09
22.1000	.09	.09	.09	.09	.09
22.3500	.09	.09	.09	.09	.09
22.6000	.09	.09	.09	.09	.09
22.8500	.09	.09	.09	.09	.08
23.1000	.08	.08	.08	.08	.08
23.3500	.08	.08	.08	.08	.08
23.6000	.08	.08	.08	.08	.08
23.8500	.08	.08	.08	.08	.06
24.1000	.02	.01	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.3000 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-1C 100
Tc = .1100 hrs
Drainage Area = 2.265 acres Runoff CN= 70
Calc.Increment= .01467 hrs Out.Incr.= .0500 hrs
HYG Volume = 46041 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.1500	.00	.00	.00	.01	.01
7.4000	.01	.01	.02	.02	.02
7.6500	.02	.03	.03	.03	.03
7.9000	.04	.04	.04	.05	.05
8.1500	.05	.06	.06	.07	.07
8.4000	.08	.08	.09	.09	.10
8.6500	.10	.11	.11	.12	.13
8.9000	.13	.14	.15	.15	.16
9.1500	.17	.17	.18	.19	.20
9.4000	.20	.21	.22	.23	.24
9.6500	.25	.26	.27	.27	.28
9.9000	.29	.30	.31	.32	.34
10.1500	.35	.36	.38	.40	.41
10.4000	.43	.44	.46	.48	.50
10.6500	.51	.53	.55	.57	.59
10.9000	.61	.63	.65	.68	.72
11.1500	.76	.82	.87	.94	1.00
11.4000	1.06	1.13	1.20	1.36	1.65
11.6500	2.03	2.60	3.15	3.83	4.46
11.9000	5.25	6.98	10.09	11.84	12.72
12.1500	11.80	8.98	7.40	6.33	5.60
12.4000	4.80	4.13	3.33	2.80	2.30
12.6500	2.05	1.91	1.82	1.73	1.66
12.9000	1.58	1.51	1.42	1.36	1.30
13.1500	1.27	1.24	1.23	1.20	1.18
13.4000	1.16	1.14	1.12	1.10	1.08
13.6500	1.06	1.04	1.02	1.00	.98
13.9000	.96	.94	.92	.90	.88
14.1500	.87	.86	.85	.84	.83
14.4000	.82	.81	.80	.79	.78

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.6500	.77	.76	.75	.74	.73
14.9000	.72	.71	.70	.69	.68
15.1500	.67	.66	.65	.64	.63
15.4000	.62	.61	.60	.59	.58
15.6500	.57	.56	.55	.54	.53
15.9000	.52	.51	.50	.49	.48
16.1500	.47	.47	.46	.46	.45
16.4000	.45	.45	.44	.44	.43
16.6500	.43	.42	.42	.41	.41
16.9000	.41	.40	.40	.39	.39
17.1500	.38	.38	.37	.37	.36
17.4000	.36	.35	.35	.35	.34
17.6500	.34	.33	.33	.32	.32
17.9000	.31	.31	.30	.30	.30
18.1500	.30	.29	.29	.29	.29
18.4000	.29	.29	.29	.28	.28
18.6500	.28	.28	.28	.28	.28
18.9000	.27	.27	.27	.27	.27
19.1500	.27	.27	.27	.26	.26
19.4000	.26	.26	.26	.26	.26
19.6500	.25	.25	.25	.25	.25
19.9000	.25	.25	.25	.24	.24
20.1500	.24	.24	.24	.24	.24
20.4000	.24	.24	.23	.23	.23
20.6500	.23	.23	.23	.23	.23
20.9000	.23	.22	.22	.22	.22
21.1500	.22	.22	.22	.22	.22
21.4000	.22	.21	.21	.21	.21
21.6500	.21	.21	.21	.21	.21
21.9000	.21	.20	.20	.20	.20
22.1500	.20	.20	.20	.20	.20
22.4000	.20	.19	.19	.19	.19
22.6500	.19	.19	.19	.19	.19
22.9000	.18	.18	.18	.18	.18
23.1500	.18	.18	.18	.18	.18
23.4000	.18	.17	.17	.17	.17
23.6500	.17	.17	.17	.17	.17
23.9000	.16	.16	.16	.13	.05
24.1500	.02	.01	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 2.7800 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-2A 1
Tc = .1778 hrs
Drainage Area = 1.660 acres Runoff CN= 63
Calc.Increment= .02371 hrs Out.Incr.= .0500 hrs
HYG Volume = 2076 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.9000	.00	.00	.03	.09	.19
12.1500	.29	.32	.32	.31	.29
12.4000	.28	.25	.22	.19	.16
12.6500	.14	.13	.12	.11	.11
12.9000	.11	.10	.10	.09	.09
13.1500	.09	.09	.08	.08	.08
13.4000	.08	.08	.08	.08	.08
13.6500	.08	.08	.07	.07	.07
13.9000	.07	.07	.07	.07	.07
14.1500	.07	.07	.06	.06	.06
14.4000	.06	.06	.06	.06	.06
14.6500	.06	.06	.06	.06	.06
14.9000	.06	.06	.06	.06	.05
15.1500	.05	.05	.05	.05	.05
15.4000	.05	.05	.05	.05	.05
15.6500	.05	.05	.05	.04	.04
15.9000	.04	.04	.04	.04	.04
16.1500	.04	.04	.04	.04	.04
16.4000	.04	.04	.04	.04	.04
16.6500	.04	.04	.04	.04	.04
16.9000	.03	.03	.03	.03	.03
17.1500	.03	.03	.03	.03	.03
17.4000	.03	.03	.03	.03	.03
17.6500	.03	.03	.03	.03	.03
17.9000	.03	.03	.03	.03	.03
18.1500	.03	.03	.03	.03	.03
18.4000	.03	.03	.03	.03	.03
18.6500	.03	.02	.02	.02	.02
18.9000	.02	.02	.02	.02	.02
19.1500	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.4000	.02	.02	.02	.02	.02
19.6500	.02	.02	.02	.02	.02
19.9000	.02	.02	.02	.02	.02
20.1500	.02	.02	.02	.02	.02
20.4000	.02	.02	.02	.02	.02
20.6500	.02	.02	.02	.02	.02
20.9000	.02	.02	.02	.02	.02
21.1500	.02	.02	.02	.02	.02
21.4000	.02	.02	.02	.02	.02
21.6500	.02	.02	.02	.02	.02
21.9000	.02	.02	.02	.02	.02
22.1500	.02	.02	.02	.02	.02
22.4000	.02	.02	.02	.02	.02
22.6500	.02	.02	.02	.02	.02
22.9000	.02	.02	.02	.02	.02
23.1500	.02	.02	.02	.02	.02
23.4000	.02	.02	.02	.02	.02
23.6500	.02	.02	.02	.02	.02
23.9000	.02	.02	.02	.01	.01
24.1500	.01	.00	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.1400 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-2A 10
Tc = .1778 hrs
Drainage Area = 1.660 acres Runoff CN= 63
Calc.Increment= .02371 hrs Out.Incr.= .0500 hrs
HYG Volume = 9629 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.8000	.00	.00	.01	.01	.01
11.0500	.02	.02	.03	.03	.04
11.3000	.04	.05	.06	.07	.08
11.5500	.10	.12	.15	.21	.28
11.8000	.37	.48	.61	.82	1.22
12.0500	1.71	2.12	2.34	2.23	1.95
12.3000	1.70	1.51	1.34	1.18	1.01
12.5500	.85	.71	.61	.54	.50
12.8000	.47	.45	.42	.41	.39
13.0500	.37	.35	.34	.33	.32
13.3000	.32	.31	.31	.30	.30
13.5500	.30	.29	.29	.28	.28
13.8000	.27	.27	.26	.26	.25
14.0500	.25	.24	.24	.23	.23
14.3000	.23	.23	.22	.22	.22
14.5500	.22	.22	.21	.21	.21
14.8000	.21	.20	.20	.20	.20
15.0500	.19	.19	.19	.18	.18
15.3000	.18	.18	.17	.17	.17
15.5500	.17	.16	.16	.16	.16
15.8000	.15	.15	.15	.14	.14
16.0500	.14	.14	.13	.13	.13
16.3000	.13	.13	.13	.13	.13
16.5500	.12	.12	.12	.12	.12
16.8000	.12	.12	.12	.11	.11
17.0500	.11	.11	.11	.11	.11
17.3000	.11	.10	.10	.10	.10
17.5500	.10	.10	.10	.10	.09
17.8000	.09	.09	.09	.09	.09
18.0500	.09	.09	.09	.08	.08

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.3000	.08	.08	.08	.08	.08
18.5500	.08	.08	.08	.08	.08
18.8000	.08	.08	.08	.08	.08
19.0500	.08	.08	.08	.08	.08
19.3000	.08	.08	.08	.08	.07
19.5500	.07	.07	.07	.07	.07
19.8000	.07	.07	.07	.07	.07
20.0500	.07	.07	.07	.07	.07
20.3000	.07	.07	.07	.07	.07
20.5500	.07	.07	.07	.07	.07
20.8000	.07	.07	.07	.07	.07
21.0500	.07	.06	.06	.06	.06
21.3000	.06	.06	.06	.06	.06
21.5500	.06	.06	.06	.06	.06
21.8000	.06	.06	.06	.06	.06
22.0500	.06	.06	.06	.06	.06
22.3000	.06	.06	.06	.06	.06
22.5500	.06	.06	.06	.06	.06
22.8000	.06	.05	.05	.05	.05
23.0500	.05	.05	.05	.05	.05
23.3000	.05	.05	.05	.05	.05
23.5500	.05	.05	.05	.05	.05
23.8000	.05	.05	.05	.05	.05
24.0500	.04	.03	.02	.01	.00
24.3000	.00	.00	.00		

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration   = 24.0000 hrs   Rain Depth = 9.3000 in
Rain Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-2A 100
Tc   = .1778 hrs
Drainage Area = 1.660 acres Runoff CN= 63
Calc.Increment= .02371 hrs   Out.Incr.= .0500 hrs
HYG Volume   = 28414 cu.ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .0500 hrs

Time on left represents time for first value in each row.

Time hrs					
8.5500	.00	.00	.00	.01	.01
8.8000	.01	.02	.02	.02	.02
9.0500	.03	.03	.04	.04	.04
9.3000	.05	.05	.06	.06	.06
9.5500	.07	.07	.08	.08	.09
9.8000	.09	.10	.10	.11	.12
10.0500	.12	.13	.13	.14	.15
10.3000	.16	.17	.18	.18	.19
10.5500	.20	.21	.22	.24	.25
10.8000	.26	.27	.28	.29	.31
11.0500	.32	.34	.36	.38	.41
11.3000	.44	.48	.51	.55	.59
11.5500	.65	.76	.92	1.15	1.44
11.8000	1.78	2.15	2.57	3.21	4.47
12.0500	5.87	6.91	7.29	6.71	5.71
12.3000	4.86	4.24	3.70	3.21	2.71
12.5500	2.27	1.89	1.61	1.42	1.31
12.8000	1.22	1.16	1.10	1.05	.99
13.0500	.95	.90	.87	.85	.83
13.3000	.81	.80	.78	.77	.76
13.5500	.75	.73	.72	.71	.69
13.8000	.68	.67	.65	.64	.63
14.0500	.61	.60	.59	.58	.57
14.3000	.57	.56	.55	.55	.54
14.5500	.54	.53	.52	.52	.51
14.8000	.50	.50	.49	.48	.48
15.0500	.47	.46	.46	.45	.44
15.3000	.44	.43	.42	.42	.41
15.5500	.40	.40	.39	.38	.38
15.8000	.37	.36	.35	.35	.34

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.0500	.33	.33	.32	.32	.32
16.3000	.31	.31	.31	.30	.30
16.5500	.30	.29	.29	.29	.29
16.8000	.28	.28	.28	.27	.27
17.0500	.27	.26	.26	.26	.26
17.3000	.25	.25	.25	.24	.24
17.5500	.24	.23	.23	.23	.22
17.8000	.22	.22	.22	.21	.21
18.0500	.21	.20	.20	.20	.20
18.3000	.20	.20	.20	.20	.19
18.5500	.19	.19	.19	.19	.19
18.8000	.19	.19	.19	.19	.19
19.0500	.18	.18	.18	.18	.18
19.3000	.18	.18	.18	.18	.18
19.5500	.18	.17	.17	.17	.17
19.8000	.17	.17	.17	.17	.17
20.0500	.17	.17	.16	.16	.16
20.3000	.16	.16	.16	.16	.16
20.5500	.16	.16	.16	.16	.16
20.8000	.16	.15	.15	.15	.15
21.0500	.15	.15	.15	.15	.15
21.3000	.15	.15	.15	.15	.15
21.5500	.14	.14	.14	.14	.14
21.8000	.14	.14	.14	.14	.14
22.0500	.14	.14	.14	.14	.14
22.3000	.13	.13	.13	.13	.13
22.5500	.13	.13	.13	.13	.13
22.8000	.13	.13	.13	.13	.13
23.0500	.12	.12	.12	.12	.12
23.3000	.12	.12	.12	.12	.12
23.5500	.12	.12	.12	.12	.11
23.8000	.11	.11	.11	.11	.11
24.0500	.10	.07	.04	.02	.01
24.3000	.01	.00	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 2.7800 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-2B 1
Tc = .1274 hrs
Drainage Area = 5.200 acres Runoff CN= 70
Calc.Increment= .01698 hrs Out.Incr.= .0500 hrs
HYG Volume = 11241 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.6000	.00	.01	.04	.10	.19
11.8500	.31	.47	.77	1.37	1.98
12.1000	2.50	2.68	2.32	2.00	1.78
12.3500	1.63	1.44	1.27	1.06	.89
12.6000	.75	.66	.61	.58	.56
12.8500	.54	.51	.49	.47	.45
13.1000	.43	.42	.41	.41	.40
13.3500	.40	.39	.39	.38	.38
13.6000	.37	.36	.36	.35	.35
13.8500	.34	.33	.33	.32	.32
14.1000	.31	.31	.30	.30	.30
14.3500	.29	.29	.29	.29	.28
14.6000	.28	.28	.27	.27	.27
14.8500	.26	.26	.26	.25	.25
15.1000	.25	.25	.24	.24	.24
15.3500	.23	.23	.23	.22	.22
15.6000	.21	.21	.21	.20	.20
15.8500	.20	.19	.19	.19	.18
16.1000	.18	.18	.18	.17	.17
16.3500	.17	.17	.17	.17	.17
16.6000	.16	.16	.16	.16	.16
16.8500	.16	.15	.15	.15	.15
17.1000	.15	.15	.14	.14	.14
17.3500	.14	.14	.14	.13	.13
17.6000	.13	.13	.13	.13	.12
17.8500	.12	.12	.12	.12	.12
18.1000	.12	.11	.11	.11	.11
18.3500	.11	.11	.11	.11	.11
18.6000	.11	.11	.11	.11	.11
18.8500	.11	.11	.11	.11	.11

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.1000	.11	.10	.10	.10	.10
19.3500	.10	.10	.10	.10	.10
19.6000	.10	.10	.10	.10	.10
19.8500	.10	.10	.10	.10	.10
20.1000	.10	.10	.10	.09	.09
20.3500	.09	.09	.09	.09	.09
20.6000	.09	.09	.09	.09	.09
20.8500	.09	.09	.09	.09	.09
21.1000	.09	.09	.09	.09	.09
21.3500	.09	.09	.09	.09	.08
21.6000	.08	.08	.08	.08	.08
21.8500	.08	.08	.08	.08	.08
22.1000	.08	.08	.08	.08	.08
22.3500	.08	.08	.08	.08	.08
22.6000	.08	.08	.08	.08	.08
22.8500	.07	.07	.07	.07	.07
23.1000	.07	.07	.07	.07	.07
23.3500	.07	.07	.07	.07	.07
23.6000	.07	.07	.07	.07	.07
23.8500	.07	.07	.07	.07	.05
24.1000	.03	.01	.00	.00	.00

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.1400 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-2B 10
Tc = .1274 hrs
Drainage Area = 5.200 acres Runoff CN= 70
Calc.Increment= .01698 hrs Out.Incr.= .0500 hrs
HYG Volume = 40405 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.5500	.00	.00	.01	.01	.02
9.8000	.02	.03	.04	.04	.05
10.0500	.06	.07	.08	.09	.10
10.3000	.11	.12	.13	.14	.15
10.5500	.17	.18	.19	.21	.22
10.8000	.24	.25	.27	.29	.31
11.0500	.33	.35	.38	.42	.46
11.3000	.50	.54	.59	.64	.70
11.5500	.80	.98	1.22	1.61	2.02
11.8000	2.54	3.08	3.75	5.03	7.51
12.0500	9.50	10.74	10.67	8.76	7.24
12.3000	6.25	5.55	4.82	4.18	3.44
12.5500	2.88	2.39	2.09	1.93	1.83
12.8000	1.74	1.67	1.59	1.52	1.44
13.0500	1.38	1.32	1.28	1.25	1.23
13.3000	1.21	1.20	1.18	1.16	1.14
13.5500	1.12	1.10	1.08	1.06	1.04
13.8000	1.02	1.00	.98	.96	.94
14.0500	.92	.91	.89	.88	.87
14.3000	.86	.85	.84	.84	.82
14.5500	.82	.81	.80	.79	.78
14.8000	.77	.76	.75	.74	.73
15.0500	.72	.71	.70	.69	.68
15.3000	.67	.66	.65	.64	.62
15.5500	.62	.60	.59	.58	.57
15.8000	.56	.55	.54	.53	.52
16.0500	.51	.50	.50	.49	.49
16.3000	.48	.48	.47	.47	.46
16.5500	.46	.45	.45	.44	.44
16.8000	.44	.43	.43	.42	.42

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.0500	.41	.41	.40	.40	.39
17.3000	.39	.38	.38	.37	.37
17.5500	.37	.36	.36	.35	.35
17.8000	.34	.34	.33	.33	.32
18.0500	.32	.31	.31	.31	.31
18.3000	.31	.31	.31	.30	.30
18.5500	.30	.30	.30	.30	.30
18.8000	.29	.29	.29	.29	.29
19.0500	.29	.29	.28	.28	.28
19.3000	.28	.28	.28	.28	.27
19.5500	.27	.27	.27	.27	.27
19.8000	.27	.27	.26	.26	.26
20.0500	.26	.26	.26	.26	.26
20.3000	.25	.25	.25	.25	.25
20.5500	.25	.25	.25	.24	.24
20.8000	.24	.24	.24	.24	.24
21.0500	.24	.24	.24	.23	.23
21.3000	.23	.23	.23	.23	.23
21.5500	.23	.23	.23	.22	.22
21.8000	.22	.22	.22	.22	.22
22.0500	.22	.22	.21	.21	.21
22.3000	.21	.21	.21	.21	.21
22.5500	.21	.21	.20	.20	.20
22.8000	.20	.20	.20	.20	.20
23.0500	.19	.19	.19	.19	.19
23.3000	.19	.19	.19	.19	.19
23.5500	.18	.18	.18	.18	.18
23.8000	.18	.18	.18	.17	.17
24.0500	.15	.07	.03	.01	.00
24.3000	.00	.00			

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.3000 in
Rain Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
HYG File - ID = - PDA-2B 100
Tc = .1274 hrs
Drainage Area = 5.200 acres Runoff CN= 70
Calc.Increment= .01698 hrs Out.Incr.= .0500 hrs
HYG Volume = 105700 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.1500	.00	.00	.01	.01	.02
7.4000	.02	.03	.03	.04	.05
7.6500	.05	.06	.06	.07	.08
7.9000	.08	.09	.10	.10	.11
8.1500	.12	.13	.14	.15	.16
8.4000	.17	.18	.19	.21	.22
8.6500	.23	.24	.26	.27	.28
8.9000	.30	.31	.33	.34	.36
9.1500	.38	.39	.41	.43	.45
9.4000	.47	.48	.50	.52	.54
9.6500	.56	.58	.60	.62	.65
9.9000	.67	.69	.71	.74	.76
10.1500	.79	.83	.86	.90	.93
10.4000	.97	1.01	1.05	1.09	1.13
10.6500	1.17	1.21	1.26	1.30	1.35
10.9000	1.39	1.44	1.49	1.55	1.63
11.1500	1.72	1.85	1.97	2.11	2.25
11.4000	2.40	2.55	2.71	3.03	3.63
11.6500	4.41	5.64	6.86	8.38	9.83
11.9000	11.58	14.93	21.40	26.07	28.48
12.1500	27.51	22.14	17.97	15.30	13.42
12.4000	11.55	9.94	8.13	6.79	5.60
12.6500	4.89	4.50	4.26	4.04	3.87
12.9000	3.68	3.51	3.32	3.17	3.03
13.1500	2.94	2.88	2.83	2.78	2.73
13.4000	2.68	2.64	2.59	2.55	2.50
13.6500	2.45	2.40	2.36	2.31	2.27
13.9000	2.22	2.17	2.12	2.08	2.04
14.1500	2.01	1.98	1.96	1.93	1.91
14.4000	1.89	1.87	1.84	1.82	1.80

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.6500	1.78	1.75	1.73	1.71	1.69
14.9000	1.66	1.64	1.62	1.59	1.57
15.1500	1.55	1.52	1.50	1.48	1.45
15.4000	1.43	1.41	1.38	1.36	1.33
15.6500	1.31	1.29	1.26	1.24	1.22
15.9000	1.19	1.17	1.14	1.13	1.11
16.1500	1.09	1.08	1.07	1.06	1.05
16.4000	1.03	1.02	1.02	1.01	.99
16.6500	.98	.97	.96	.95	.94
16.9000	.93	.92	.91	.90	.89
17.1500	.88	.87	.86	.85	.84
17.4000	.83	.82	.81	.80	.79
17.6500	.78	.77	.76	.74	.73
17.9000	.72	.71	.70	.69	.68
18.1500	.68	.68	.67	.67	.67
18.4000	.66	.66	.66	.65	.65
18.6500	.65	.64	.64	.64	.64
18.9000	.63	.63	.63	.62	.62
19.1500	.62	.61	.61	.61	.60
19.4000	.60	.60	.59	.59	.59
19.6500	.59	.58	.58	.58	.57
19.9000	.57	.57	.56	.56	.56
20.1500	.55	.55	.55	.55	.55
20.4000	.54	.54	.54	.54	.53
20.6500	.53	.53	.53	.52	.52
20.9000	.52	.52	.52	.51	.51
21.1500	.51	.51	.50	.50	.50
21.4000	.50	.49	.49	.49	.49
21.6500	.49	.48	.48	.48	.48
21.9000	.47	.47	.47	.47	.46
22.1500	.46	.46	.46	.45	.45
22.4000	.45	.45	.44	.44	.44
22.6500	.44	.44	.43	.43	.43
22.9000	.43	.42	.42	.42	.41
23.1500	.41	.41	.41	.41	.40
23.4000	.40	.40	.40	.39	.39
23.6500	.39	.39	.38	.38	.38
23.9000	.38	.37	.37	.31	.16
24.1500	.06	.02	.01	.00	.00

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
360.00	-----	10469	0	0	0
362.00	-----	14623	37465	24977	24977
364.00	-----	19342	50783	33855	58832
365.00	-----	21892	61812	20604	79436
366.00	-----	28841	75860	25287	104722

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
344.00	-----	8256	0	0	0
346.00	-----	11978	30178	20119	20119
348.00	-----	16797	42959	28640	48758

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
300.50	-----	65	0	0	0
301.50	-----	291	494	165	165
302.50	-----	665	1396	465	630
303.00	-----	2084	3926	654	1284
304.00	-----	3425	8181	2727	4011
306.00	-----	6484	14622	9748	13759
308.00	-----	9680	24086	16058	29816

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
314.00	-----	1166	0	0	0
316.00	-----	6607	10549	7032	7032
318.00	-----	11901	27375	18250	25283
319.00	-----	11901	35703	11901	37184

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 360.00 ft
Increment = .10 ft
Max. Elev.= 366.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Weir-XY Points	W0	--->	TW	365.000	366.000
TW SETUP, DS Channel					

OUTLET STRUCTURE INPUT DATA

```
Structure ID      = W0
Structure Type    = Weir-XY Points
------------------------------------
# of Openings     =         1
WEIR X-Y GROUND POINTS

    X, ft     Elev, ft
 ---------   ---------
      .00      366.00
     5.00      365.00
    10.00      365.00
    15.00      366.00

Lowest Elev.      =    365.00 ft

Weir Coeff.       =  2.680000

Weir TW effects     (Use adjustment equation)
```

```
Structure ID      = TW
Structure Type    = TW SETUP, DS Channel
------------------------------------
FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations=    40
Min. TW tolerance =    .01 ft
Max. TW tolerance =    .01 ft
Min. HW tolerance =    .01 ft
Max. HW tolerance =    .01 ft
Min.  Q tolerance =    .00 cfs
Max.  Q tolerance =    .00 cfs
```

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
360.00	.00	Free Outfall		None contributing
360.10	.00	Free Outfall		None contributing
360.20	.00	Free Outfall		None contributing
360.30	.00	Free Outfall		None contributing
360.40	.00	Free Outfall		None contributing
360.50	.00	Free Outfall		None contributing
360.60	.00	Free Outfall		None contributing
360.70	.00	Free Outfall		None contributing
360.80	.00	Free Outfall		None contributing
360.90	.00	Free Outfall		None contributing
361.00	.00	Free Outfall		None contributing
361.10	.00	Free Outfall		None contributing
361.20	.00	Free Outfall		None contributing
361.30	.00	Free Outfall		None contributing
361.40	.00	Free Outfall		None contributing
361.50	.00	Free Outfall		None contributing
361.60	.00	Free Outfall		None contributing
361.70	.00	Free Outfall		None contributing
361.80	.00	Free Outfall		None contributing
361.90	.00	Free Outfall		None contributing
362.00	.00	Free Outfall		None contributing
362.10	.00	Free Outfall		None contributing
362.20	.00	Free Outfall		None contributing
362.30	.00	Free Outfall		None contributing
362.40	.00	Free Outfall		None contributing
362.50	.00	Free Outfall		None contributing
362.60	.00	Free Outfall		None contributing
362.70	.00	Free Outfall		None contributing
362.80	.00	Free Outfall		None contributing
362.90	.00	Free Outfall		None contributing
363.00	.00	Free Outfall		None contributing
363.10	.00	Free Outfall		None contributing
363.20	.00	Free Outfall		None contributing
363.30	.00	Free Outfall		None contributing
363.40	.00	Free Outfall		None contributing
363.50	.00	Free Outfall		None contributing
363.60	.00	Free Outfall		None contributing
363.70	.00	Free Outfall		None contributing

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
363.80	.00	Free Outfall		None contributing
363.90	.00	Free Outfall		None contributing
364.00	.00	Free Outfall		None contributing
364.10	.00	Free Outfall		None contributing
364.20	.00	Free Outfall		None contributing
364.30	.00	Free Outfall		None contributing
364.40	.00	Free Outfall		None contributing
364.50	.00	Free Outfall		None contributing
364.60	.00	Free Outfall		None contributing
364.70	.00	Free Outfall		None contributing
364.80	.00	Free Outfall		None contributing
364.90	.00	Free Outfall		None contributing
365.00	.00	Free Outfall		W0
365.10	.45	Free Outfall		W0
365.20	1.37	Free Outfall		W0
365.30	2.67	Free Outfall		W0
365.40	4.35	Free Outfall		W0
365.50	6.41	Free Outfall		W0
365.60	8.87	Free Outfall		W0
365.70	11.73	Free Outfall		W0
365.80	15.01	Free Outfall		W0
365.90	18.72	Free Outfall		W0
366.00	22.88	Free Outfall		W0

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 344.00 ft
Increment = .10 ft
Max. Elev.= 348.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Inlet Box	R0	--->	C0	347.750	348.000
Orifice-Circular	O0	--->	C0	344.600	348.000
Culvert-Circular	C0	--->	TW	344.600	348.000
TW SETUP, DS Channel					

OUTLET STRUCTURE INPUT DATA

```
Structure ID      = R0
Structure Type    = Inlet Box
------------------------------------
# of Openings     =         1
Invert Elev.      =    347.75 ft
Orifice Area      =   16.0000 sq.ft
Orifice Coeff.    =      .600
Weir Length       =     16.00 ft
Weir Coeff.       =     3.330
K, Reverse        =     1.000
Mannings n        =     .0000
Kev,Charged Riser =      .000
Weir Submergence  = No
```

```
Structure ID      = O0
Structure Type    = Orifice-Circular
------------------------------------
# of Openings     =         1
Invert Elev.      =    344.60 ft
Diameter          =    1.0000 ft
Orifice Coeff.    =      .600
```

```
              OUTLET STRUCTURE INPUT DATA



              Structure ID      = C0
              Structure Type    = Culvert-Circular
              ------------------------------------
              No. Barrels       =          1
              Barrel Diameter   =     1.2500 ft
              Upstream Invert   =     344.60 ft
              Dnstream Invert   =     318.00 ft
              Horiz. Length     =     371.00 ft
              Barrel Length     =     371.95 ft
              Barrel Slope      =     .07170 ft/ft

              OUTLET CONTROL DATA...
              Mannings n        =      .0130
              Ke                =      .5000  (forward entrance loss)
              Kb                =    .023225  (per ft of full flow)
              Kr                =      .5000  (reverse entrance loss)
              HW Convergence    =       .001  +/- ft

              INLET CONTROL DATA...
              Equation form     =          1
              Inlet Control K   =      .0078
              Inlet Control M   =     2.0000
              Inlet Control c   =     .03790
              Inlet Control Y   =      .6900
              T1 ratio (HW/D)   =      1.100
              T2 ratio (HW/D)   =      1.261
              Slope Factor      =      -.500

 Use unsubmerged inlet control Form 1 equ. below T1 elev.
 Use   submerged inlet control Form 1 equ. above T2 elev.

 In transition zone between unsubmerged and submerged inlet control,
 interpolate between flows at T1 & T2...
 At T1 Elev =    345.97 ft  --->  Flow =      4.80 cfs
 At T2 Elev =    346.18 ft  --->  Flow =      5.49 cfs



              Structure ID      = TW
              Structure Type    = TW SETUP, DS Channel
              ------------------------------------
              FREE OUTFALL CONDITIONS SPECIFIED

              CONVERGENCE TOLERANCES...
              Maximum Iterations=    40
              Min. TW tolerance =    .01 ft
              Max. TW tolerance =    .01 ft
              Min. HW tolerance =    .01 ft
              Max. HW tolerance =    .01 ft
              Min.  Q tolerance =    .00 cfs
              Max.  Q tolerance =    .00 cfs
```

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
344.00	.00	Free Outfall		(no Q: R0,O0,C0)
344.10	.00	Free Outfall		(no Q: R0,O0,C0)
344.20	.00	Free Outfall		(no Q: R0,O0,C0)
344.30	.00	Free Outfall		(no Q: R0,O0,C0)
344.40	.00	Free Outfall		(no Q: R0,O0,C0)
344.50	.00	Free Outfall		(no Q: R0,O0,C0)
344.60	.00	Free Outfall		(no Q: R0,O0,C0)
344.70	.02	Free Outfall		O0,C0 (no Q: R0)
344.80	.09	Free Outfall		O0,C0 (no Q: R0)
344.90	.18	Free Outfall		O0,C0 (no Q: R0)
345.00	.30	Free Outfall		O0,C0 (no Q: R0)
345.10	.45	Free Outfall		O0,C0 (no Q: R0)
345.20	.63	Free Outfall		O0,C0 (no Q: R0)
345.30	.84	Free Outfall		O0,C0 (no Q: R0)
345.40	1.07	Free Outfall		O0,C0 (no Q: R0)
345.50	1.34	Free Outfall		O0,C0 (no Q: R0)
345.60	1.68	Free Outfall		O0,C0 (no Q: R0)
345.70	1.87	Free Outfall		O0,C0 (no Q: R0)
345.80	2.06	Free Outfall		O0,C0 (no Q: R0)
345.90	2.24	Free Outfall		O0,C0 (no Q: R0)
346.00	2.42	Free Outfall		O0,C0 (no Q: R0)
346.10	2.59	Free Outfall		O0,C0 (no Q: R0)
346.20	2.76	Free Outfall		O0,C0 (no Q: R0)
346.30	2.92	Free Outfall		O0,C0 (no Q: R0)
346.40	3.08	Free Outfall		O0,C0 (no Q: R0)
346.50	3.23	Free Outfall		O0,C0 (no Q: R0)
346.60	3.37	Free Outfall		O0,C0 (no Q: R0)
346.70	3.52	Free Outfall		O0,C0 (no Q: R0)
346.80	3.66	Free Outfall		O0,C0 (no Q: R0)
346.90	3.79	Free Outfall		O0,C0 (no Q: R0)
347.00	3.93	Free Outfall		O0,C0 (no Q: R0)
347.10	4.05	Free Outfall		O0,C0 (no Q: R0)
347.20	4.18	Free Outfall		O0,C0 (no Q: R0)
347.30	4.30	Free Outfall		O0,C0 (no Q: R0)
347.40	4.43	Free Outfall		O0,C0 (no Q: R0)
347.50	4.55	Free Outfall		O0,C0 (no Q: R0)
347.60	4.66	Free Outfall		O0,C0 (no Q: R0)
347.70	4.78	Free Outfall		O0,C0 (no Q: R0)

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
347.75	4.83	Free Outfall		O0,C0 (no Q: R0)
347.80	5.34	Free Outfall		R0,O0,C0
347.90	7.19	Free Outfall		R0,O0,C0
348.00	9.20	Free Outfall		R0,O0,C0

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 314.00 ft
Increment = .10 ft
Max. Elev.= 319.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Culvert-Circular	C0	--->	TW	314.000	319.000
TW SETUP, DS Channel					

```
              OUTLET STRUCTURE INPUT DATA



              Structure ID      = C0
              Structure Type    = Culvert-Circular
              ------------------------------------
              No. Barrels       =         1
              Barrel Diameter   =    1.0000 ft
              Upstream Invert   =    314.00 ft
              Dnstream Invert   =    312.50 ft
              Horiz. Length     =     50.00 ft
              Barrel Length     =     50.02 ft
              Barrel Slope      =    .03000 ft/ft

              OUTLET CONTROL DATA...
              Mannings n        =     .0120
              Ke                =     .5000  (forward entrance loss)
              Kb                =   .026647  (per ft of full flow)
              Kr                =     .5000  (reverse entrance loss)
              HW Convergence    =      .001  +/- ft

              INLET CONTROL DATA...
              Equation form     =         1
              Inlet Control K   =     .0078
              Inlet Control M   =    2.0000
              Inlet Control c   =    .03790
              Inlet Control Y   =     .6900
              T1 ratio (HW/D)   =     1.121
              T2 ratio (HW/D)   =     1.281
              Slope Factor      =     -.500

 Use unsubmerged inlet control Form 1 equ. below T1 elev.
 Use   submerged inlet control Form 1 equ. above T2 elev.

 In transition zone between unsubmerged and submerged inlet control,
 interpolate between flows at T1 & T2...
 At T1 Elev =    315.12 ft  --->  Flow =      2.75 cfs
 At T2 Elev =    315.28 ft  --->  Flow =      3.14 cfs
```

OUTLET STRUCTURE INPUT DATA

```
Structure ID      = TW
Structure Type    = TW SETUP, DS Channel
------------------------------------
FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations=    40
Min. TW tolerance =    .01 ft
Max. TW tolerance =    .01 ft
Min. HW tolerance =    .01 ft
Max. HW tolerance =    .01 ft
Min.  Q tolerance =    .00 cfs
Max.  Q tolerance =    .00 cfs
```

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
314.00	.00	Free Outfall		None contributing
314.10	.03	Free Outfall		C0
314.20	.10	Free Outfall		C0
314.30	.23	Free Outfall		C0
314.40	.40	Free Outfall		C0
314.50	.60	Free Outfall		C0
314.60	.84	Free Outfall		C0
314.70	1.12	Free Outfall		C0
314.80	1.41	Free Outfall		C0
314.90	1.73	Free Outfall		C0
315.00	2.06	Free Outfall		C0
315.10	2.39	Free Outfall		C0
315.20	2.74	Free Outfall		C0
315.30	3.07	Free Outfall		C0
315.40	3.40	Free Outfall		C0
315.50	3.67	Free Outfall		C0
315.60	3.88	Free Outfall		C0
315.70	4.08	Free Outfall		C0
315.80	4.28	Free Outfall		C0
315.90	4.46	Free Outfall		C0
316.00	4.64	Free Outfall		C0
316.10	4.82	Free Outfall		C0
316.20	4.98	Free Outfall		C0
316.30	5.14	Free Outfall		C0
316.40	5.30	Free Outfall		C0
316.50	5.45	Free Outfall		C0
316.60	5.60	Free Outfall		C0
316.70	5.74	Free Outfall		C0
316.80	5.88	Free Outfall		C0
316.90	6.02	Free Outfall		C0
317.00	6.15	Free Outfall		C0
317.10	6.28	Free Outfall		C0
317.20	6.41	Free Outfall		C0
317.30	6.54	Free Outfall		C0
317.40	6.66	Free Outfall		C0
317.50	6.78	Free Outfall		C0
317.60	6.90	Free Outfall		C0
317.70	7.02	Free Outfall		C0

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
317.80	7.13	Free Outfall		C0
317.90	7.24	Free Outfall		C0
318.00	7.36	Free Outfall		C0
318.10	7.47	Free Outfall		C0
318.20	7.57	Free Outfall		C0
318.30	7.68	Free Outfall		C0
318.40	7.79	Free Outfall		C0
318.50	7.89	Free Outfall		C0
318.60	7.99	Free Outfall		C0
318.70	8.09	Free Outfall		C0
318.80	8.19	Free Outfall		C0
318.90	8.29	Free Outfall		C0
319.00	8.39	Free Outfall		C0

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 300.50 ft
Increment = .10 ft
Max. Elev.= 308.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Inlet Box	R0	--->	C0	305.150	308.000
Culvert-Circular	C0	--->	TW	302.000	308.000
Orifice-Circular	O0	--->	TW	304.600	308.000
Orifice-Circular	O1	--->	TW	304.760	308.000
TW SETUP, DS Channel					

OUTLET STRUCTURE INPUT DATA

```
Structure ID      = R0
Structure Type    = Inlet Box
------------------------------------
# of Openings     =         1
Invert Elev.      =    305.15 ft
Orifice Area      =   10.0000 sq.ft
Orifice Coeff.    =      .600
Weir Length       =     16.00 ft
Weir Coeff.       =     3.330
K, Reverse        =     1.000
Mannings n        =     .0000
Kev,Charged Riser =      .000
Weir Submergence  = No
```

OUTLET STRUCTURE INPUT DATA

```
Structure ID      = C0
Structure Type    = Culvert-Circular
------------------------------------
No. Barrels       =         1
Barrel Diameter   =    2.0000 ft
Upstream Invert   =    302.00 ft
Dnstream Invert   =    298.00 ft
Horiz. Length     =     50.00 ft
Barrel Length     =     50.16 ft
Barrel Slope      =    .08000 ft/ft

OUTLET CONTROL DATA...
Mannings n        =     .0130
Ke                =     .5000  (forward entrance loss)
Kb                =   .012411  (per ft of full flow)
Kr                =     .5000  (reverse entrance loss)
HW Convergence    =      .001  +/- ft

INLET CONTROL DATA...
Equation form     =         1
Inlet Control K   =     .0078
Inlet Control M   =    2.0000
Inlet Control c   =    .03790
Inlet Control Y   =     .6900
T1 ratio (HW/D)   =     1.096
T2 ratio (HW/D)   =     1.256
Slope Factor      =     -.500
```

```
Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use   submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...
At T1 Elev =    304.19 ft  --->  Flow =     15.55 cfs
At T2 Elev =    304.51 ft  --->  Flow =     17.77 cfs
```

```
OUTLET STRUCTURE INPUT DATA


Structure ID      = O0
Structure Type    = Orifice-Circular
------------------------------------
# of Openings     =         1
Invert Elev.      =    304.60 ft
Diameter          =     .2500 ft
Orifice Coeff.    =      .600


Structure ID      = O1
Structure Type    = Orifice-Circular
------------------------------------
# of Openings     =         1
Invert Elev.      =    304.76 ft
Diameter          =     .2500 ft
Orifice Coeff.    =      .600


Structure ID      = TW
Structure Type    = TW SETUP, DS Channel
------------------------------------
FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations=    40
Min. TW tolerance =    .01 ft
Max. TW tolerance =    .01 ft
Min. HW tolerance =    .01 ft
Max. HW tolerance =    .01 ft
Min.  Q tolerance =    .00 cfs
Max.  Q tolerance =    .00 cfs
```

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
300.50	.00	Free Outfall		(no Q: R0,C0,O0,O1)
300.60	.00	Free Outfall		(no Q: R0,C0,O0,O1)
300.70	.00	Free Outfall		(no Q: R0,C0,O0,O1)
300.80	.00	Free Outfall		(no Q: R0,C0,O0,O1)
300.90	.00	Free Outfall		(no Q: R0,C0,O0,O1)
301.00	.00	Free Outfall		(no Q: R0,C0,O0,O1)
301.10	.00	Free Outfall		(no Q: R0,C0,O0,O1)
301.20	.00	Free Outfall		(no Q: R0,C0,O0,O1)
301.30	.00	Free Outfall		(no Q: R0,C0,O0,O1)
301.40	.00	Free Outfall		(no Q: R0,C0,O0,O1)
301.50	.00	Free Outfall		(no Q: R0,C0,O0,O1)
301.60	.00	Free Outfall		(no Q: R0,C0,O0,O1)
301.70	.00	Free Outfall		(no Q: R0,C0,O0,O1)
301.80	.00	Free Outfall		(no Q: R0,C0,O0,O1)
301.90	.00	Free Outfall		(no Q: R0,C0,O0,O1)
302.00	.00	Free Outfall		(no Q: R0,C0,O0,O1)
302.10	.00	Free Outfall		(no Q: R0,C0,O0,O1)
302.20	.00	Free Outfall		(no Q: R0,C0,O0,O1)
302.30	.00	Free Outfall		(no Q: R0,C0,O0,O1)
302.40	.00	Free Outfall		(no Q: R0,C0,O0,O1)
302.50	.00	Free Outfall		(no Q: R0,C0,O0,O1)
302.60	.00	Free Outfall		(no Q: R0,C0,O0,O1)
302.70	.00	Free Outfall		(no Q: R0,C0,O0,O1)
302.80	.00	Free Outfall		(no Q: R0,C0,O0,O1)
302.90	.00	Free Outfall		(no Q: R0,C0,O0,O1)
303.00	.00	Free Outfall		(no Q: R0,C0,O0,O1)
303.10	.00	Free Outfall		(no Q: R0,C0,O0,O1)
303.20	.00	Free Outfall		(no Q: R0,C0,O0,O1)
303.30	.00	Free Outfall		(no Q: R0,C0,O0,O1)
303.40	.00	Free Outfall		(no Q: R0,C0,O0,O1)
303.50	.00	Free Outfall		(no Q: R0,C0,O0,O1)
303.60	.00	Free Outfall		(no Q: R0,C0,O0,O1)
303.70	.00	Free Outfall		(no Q: R0,C0,O0,O1)
303.80	.00	Free Outfall		(no Q: R0,C0,O0,O1)
303.90	.00	Free Outfall		(no Q: R0,C0,O0,O1)
304.00	.00	Free Outfall		(no Q: R0,C0,O0,O1)
304.10	.00	Free Outfall		(no Q: R0,C0,O0,O1)
304.20	.00	Free Outfall		(no Q: R0,C0,O0,O1)

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
304.30	.00	Free Outfall		(no Q: R0,C0,O0,O1)
304.40	.00	Free Outfall		(no Q: R0,C0,O0,O1)
304.50	.00	Free Outfall		(no Q: R0,C0,O0,O1)
304.60	.00	Free Outfall		(no Q: R0,C0,O0,O1)
304.70	.02	Free Outfall		O0 (no Q: R0,C0,O1)
304.76	.04	Free Outfall		O0 (no Q: R0,C0,O1)
304.80	.06	Free Outfall		O0,O1 (no Q: R0,C0)
304.90	.13	Free Outfall		O0,O1 (no Q: R0,C0)
305.00	.20	Free Outfall		O0,O1 (no Q: R0,C0)
305.10	.25	Free Outfall		O0,O1 (no Q: R0,C0)
305.15	.28	Free Outfall		O0,O1 (no Q: R0,C0)
305.20	.89	Free Outfall		R0,C0,O0,O1
305.30	3.42	Free Outfall		R0,C0,O0,O1
305.40	7.03	Free Outfall		R0,C0,O0,O1
305.50	11.42	Free Outfall		R0,C0,O0,O1
305.60	16.50	Free Outfall		R0,C0,O0,O1
305.70	22.18	Free Outfall		R0,C0,O0,O1
305.80	25.98	Free Outfall		R0,C0,O0,O1
305.90	26.52	Free Outfall		R0,C0,O0,O1
306.00	27.03	Free Outfall		R0,C0,O0,O1
306.10	27.54	Free Outfall		R0,C0,O0,O1
306.20	28.04	Free Outfall		R0,C0,O0,O1
306.30	28.53	Free Outfall		R0,C0,O0,O1
306.40	29.01	Free Outfall		R0,C0,O0,O1
306.50	29.48	Free Outfall		R0,C0,O0,O1
306.60	29.95	Free Outfall		R0,C0,O0,O1
306.70	30.40	Free Outfall		R0,C0,O0,O1
306.80	30.86	Free Outfall		R0,C0,O0,O1
306.90	31.30	Free Outfall		R0,C0,O0,O1
307.00	31.74	Free Outfall		R0,C0,O0,O1
307.10	32.18	Free Outfall		R0,C0,O0,O1
307.20	32.60	Free Outfall		R0,C0,O0,O1
307.30	33.02	Free Outfall		R0,C0,O0,O1
307.40	33.44	Free Outfall		R0,C0,O0,O1
307.50	33.84	Free Outfall		R0,C0,O0,O1
307.60	34.25	Free Outfall		R0,C0,O0,O1
307.70	34.65	Free Outfall		R0,C0,O0,O1
307.80	35.05	Free Outfall		R0,C0,O0,O1

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
307.90	35.44	Free Outfall		R0,C0,O0,O1
308.00	35.83	Free Outfall		R0,C0,O0,O1

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - BASIN 1A IN 1
Outflow HYG file = NONE STORED - BASIN 1A OUT 1

Pond Node Data = BASIN 1A
Pond Volume Data = BASIN 1A
Pond Outlet Data = BASIN 1A

Infiltration = .43 cfs

INITIAL CONDITIONS

Starting WS Elev = 360.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
360.00	.00	0	10469	.00	.00	.00
360.10	.00	1057	10660	.43	.43	12.16
360.20	.00	2132	10853	.43	.43	24.12
360.30	.00	3227	11048	.43	.43	36.28
360.40	.00	4342	11244	.43	.43	48.67
360.50	.00	5476	11443	.43	.43	61.27
360.60	.00	6630	11643	.43	.43	74.10
360.70	.00	7805	11844	.43	.43	87.14
360.80	.00	8999	12047	.43	.43	100.41
360.90	.00	10214	12253	.43	.43	113.92
361.00	.00	11450	12459	.43	.43	127.64
361.10	.00	12706	12668	.43	.43	141.61
361.20	.00	13984	12878	.43	.43	155.80
361.30	.00	15282	13090	.43	.43	170.22
361.40	.00	16602	13304	.43	.43	184.89
361.50	.00	17943	13520	.43	.43	199.79
361.60	.00	19306	13737	.43	.43	214.93
361.70	.00	20690	13956	.43	.43	230.32
361.80	.00	22097	14176	.43	.43	245.94
361.90	.00	23525	14399	.43	.43	261.82

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - BASIN 1A IN 1
Outflow HYG file = NONE STORED - BASIN 1A OUT 1

Pond Node Data = BASIN 1A
Pond Volume Data = BASIN 1A
Pond Outlet Data = BASIN 1A

Infiltration = .43 cfs

INITIAL CONDITIONS

Starting WS Elev = 360.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
362.00	.00	24977	14623	.43	.43	277.94
362.10	.00	26450	14843	.43	.43	294.31
362.20	.00	27945	15065	.43	.43	310.93
362.30	.00	29463	15289	.43	.43	327.79
362.40	.00	31003	15514	.43	.43	344.90
362.50	.00	32566	15741	.43	.43	362.27
362.60	.00	34151	15970	.43	.43	379.89
362.70	.00	35760	16200	.43	.43	397.76
362.80	.00	37391	16432	.43	.43	415.88
362.90	.00	39046	16665	.43	.43	434.27
363.00	.00	40724	16900	.43	.43	452.92
363.10	.00	42426	17137	.43	.43	471.83
363.20	.00	44152	17375	.43	.43	491.00
363.30	.00	45901	17615	.43	.43	510.44
363.40	.00	47675	17857	.43	.43	530.15
363.50	.00	49473	18100	.43	.43	550.12
363.60	.00	51295	18346	.43	.43	570.37
363.70	.00	53142	18592	.43	.43	590.89
363.80	.00	55013	18840	.43	.43	611.69
363.90	.00	56910	19090	.43	.43	632.76

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - BASIN 1A IN 1
Outflow HYG file = NONE STORED - BASIN 1A OUT 1

Pond Node Data = BASIN 1A
Pond Volume Data = BASIN 1A
Pond Outlet Data = BASIN 1A

Infiltration = .43 cfs

INITIAL CONDITIONS

Starting WS Elev = 360.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
364.00	.00	58832	19342	.43	.43	654.11
364.10	.00	60778	19590	.43	.43	675.74
364.20	.00	62750	19839	.43	.43	697.65
364.30	.00	64746	20090	.43	.43	719.83
364.40	.00	66768	20343	.43	.43	742.29
364.50	.00	68815	20597	.43	.43	765.04
364.60	.00	70888	20853	.43	.43	788.06
364.70	.00	72986	21110	.43	.43	811.38
364.80	.00	75109	21369	.43	.43	834.97
364.90	.00	77259	21630	.43	.43	858.86
365.00	.00	79436	21892	.43	.43	883.04
365.10	.45	81657	22544	.43	.88	908.18
365.20	1.37	83945	23205	.43	1.79	934.52
365.30	2.67	86298	23876	.43	3.09	961.97
365.40	4.35	88720	24557	.43	4.77	990.55
365.50	6.41	91210	25247	.43	6.84	1020.29
365.60	8.87	93770	25947	.43	9.30	1051.19
365.70	11.73	96400	26656	.43	12.16	1083.27
365.80	15.01	99101	27375	.43	15.44	1116.56
365.90	18.72	101875	28103	.43	19.15	1151.09

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - BASIN 1A IN 1
Outflow HYG file = NONE STORED - BASIN 1A OUT 1

Pond Node Data = BASIN 1A
Pond Volume Data = BASIN 1A
Pond Outlet Data = BASIN 1A

Infiltration = .43 cfs

INITIAL CONDITIONS

Starting WS Elev = 360.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
366.00	22.88	104722	28841	.43	23.30	1186.88

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN 1A OUT
HYG Tag = 1

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.9000	.00	.00	.00	.00	.00
10.1500	.00	.00	.00	.00	.00
10.4000	.00	.00	.00	.00	.00
10.6500	.00	.00	.00	.00	.00
10.9000	.00	.00	.00	.00	.00
11.1500	.00	.00	.00	.00	.00
11.4000	.00	.00	.00	.00	.00
11.6500	.00	.00	.00	.00	.00
11.9000	.00	.00	.00	.00	.00
12.1500	.00	.00	.00	.00	.00
12.4000	.00	.00	.00	.00	.00
12.6500	.00	.00	.00	.00	.00
12.9000	.00	.00	.00	.00	.00
13.1500	.00	.00	.00	.00	.00
13.4000	.00	.00	.00	.00	.00
13.6500	.00	.00	.00	.00	.00
13.9000	.00	.00	.00	.00	.00
14.1500	.00	.00	.00	.00	.00
14.4000	.00	.00	.00	.00	.00
14.6500	.00	.00	.00	.00	.00
14.9000	.00	.00	.00	.00	.00
15.1500	.00	.00	.00	.00	.00
15.4000	.00	.00	.00	.00	.00
15.6500	.00	.00	.00	.00	.00
15.9000	.00	.00	.00	.00	.00
16.1500	.00	.00	.00	.00	.00
16.4000	.00	.00	.00	.00	.00
16.6500	.00	.00	.00	.00	.00
16.9000	.00	.00	.00	.00	.00
17.1500	.00	.00	.00	.00	.00
17.4000	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.6500	.00	.00	.00	.00	.00
17.9000	.00	.00	.00	.00	.00
18.1500	.00	.00	.00	.00	.00
18.4000	.00	.00	.00	.00	.00
18.6500	.00	.00	.00	.00	.00
18.9000	.00	.00	.00	.00	.00
19.1500	.00	.00	.00	.00	.00
19.4000	.00	.00	.00	.00	.00
19.6500	.00	.00	.00	.00	.00
19.9000	.00	.00	.00	.00	.00
20.1500	.00	.00	.00	.00	.00
20.4000	.00	.00	.00	.00	.00
20.6500	.00	.00	.00	.00	.00
20.9000	.00	.00	.00	.00	.00
21.1500	.00	.00	.00	.00	.00
21.4000	.00	.00	.00	.00	.00
21.6500	.00	.00	.00	.00	.00
21.9000	.00	.00	.00	.00	.00
22.1500	.00	.00	.00	.00	.00
22.4000	.00	.00	.00	.00	.00
22.6500	.00	.00	.00	.00	.00
22.9000	.00	.00	.00	.00	.00
23.1500	.00	.00	.00	.00	.00
23.4000	.00	.00	.00	.00	.00
23.6500	.00	.00	.00	.00	.00
23.9000	.00	.00	.00	.00	.00
24.1500	.00	.00	.00	.00	.00
24.4000	.00	.00	.00	.00	.00
24.6500	.00	.00	.00	.00	.00
24.9000	.00	.00	.00	.00	.00
25.1500	.00	.00	.00	.00	.00
25.4000	.00	.00	.00	.00	.00
25.6500	.00	.00	.00	.00	.00
25.9000	.00	.00	.00	.00	.00
26.1500	.00	.00	.00	.00	.00
26.4000	.00	.00	.00	.00	.00

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN 1A OUT
HYG Tag = 10

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.4000	.00	.00	.00	.00	.00
7.6500	.00	.00	.00	.00	.00
7.9000	.00	.00	.00	.00	.00
8.1500	.00	.00	.00	.00	.00
8.4000	.00	.00	.00	.00	.00
8.6500	.00	.00	.00	.00	.00
8.9000	.00	.00	.00	.00	.00
9.1500	.00	.00	.00	.00	.00
9.4000	.00	.00	.00	.00	.00
9.6500	.00	.00	.00	.00	.00
9.9000	.00	.00	.00	.00	.00
10.1500	.00	.00	.00	.00	.00
10.4000	.00	.00	.00	.00	.00
10.6500	.00	.00	.00	.00	.00
10.9000	.00	.00	.00	.00	.00
11.1500	.00	.00	.00	.00	.00
11.4000	.00	.00	.00	.00	.00
11.6500	.00	.00	.00	.00	.00
11.9000	.00	.00	.00	.00	.00
12.1500	.00	.00	.00	.00	.00
12.4000	.00	.00	.00	.00	.00
12.6500	.00	.00	.00	.00	.00
12.9000	.00	.00	.00	.00	.00
13.1500	.00	.00	.00	.00	.00
13.4000	.00	.00	.00	.00	.00
13.6500	.00	.00	.00	.00	.00
13.9000	.00	.00	.00	.00	.00
14.1500	.00	.00	.00	.00	.00
14.4000	.00	.00	.00	.00	.00
14.6500	.00	.00	.00	.00	.00
14.9000	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.1500	.00	.00	.00	.00	.00
15.4000	.00	.00	.00	.00	.00
15.6500	.00	.00	.00	.00	.00
15.9000	.00	.00	.00	.00	.00
16.1500	.00	.00	.00	.00	.00
16.4000	.00	.00	.00	.00	.00
16.6500	.00	.00	.00	.00	.00
16.9000	.00	.00	.00	.00	.00
17.1500	.00	.00	.00	.00	.00
17.4000	.00	.00	.00	.00	.00
17.6500	.00	.00	.00	.00	.00
17.9000	.00	.00	.00	.00	.00
18.1500	.00	.00	.00	.00	.00
18.4000	.00	.00	.00	.00	.00
18.6500	.00	.00	.00	.00	.00
18.9000	.00	.00	.00	.00	.00
19.1500	.00	.00	.00	.00	.00
19.4000	.00	.00	.00	.00	.00
19.6500	.00	.00	.00	.00	.00
19.9000	.00	.00	.00	.00	.00
20.1500	.00	.00	.00	.00	.00
20.4000	.00	.00	.00	.00	.00
20.6500	.00	.00	.00	.00	.00
20.9000	.00	.00	.00	.00	.00
21.1500	.00	.00	.00	.00	.00
21.4000	.00	.00	.00	.00	.00
21.6500	.00	.00	.00	.00	.00
21.9000	.00	.00	.00	.00	.00
22.1500	.00	.00	.00	.00	.00
22.4000	.00	.00	.00	.00	.00
22.6500	.00	.00	.00	.00	.00
22.9000	.00	.00	.00	.00	.00
23.1500	.00	.00	.00	.00	.00
23.4000	.00	.00	.00	.00	.00
23.6500	.00	.00	.00	.00	.00
23.9000	.00	.00	.00	.00	.00
24.1500	.00	.00	.00	.00	.00
24.4000	.00	.00	.00	.00	.00
24.6500	.00	.00	.00	.00	.00
24.9000	.00	.00	.00	.00	.00
25.1500	.00	.00	.00	.00	.00
25.4000	.00	.00	.00	.00	.00
25.6500	.00	.00	.00	.00	.00
25.9000	.00	.00	.00	.00	.00
26.1500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
26.4000	.00	.00	.00	.00	.00
26.6500	.00	.00	.00	.00	.00
26.9000	.00	.00	.00	.00	.00
27.1500	.00	.00	.00	.00	.00
27.4000	.00	.00	.00	.00	.00
27.6500	.00	.00	.00	.00	.00
27.9000	.00	.00	.00	.00	.00
28.1500	.00	.00	.00	.00	.00
28.4000	.00	.00	.00	.00	.00
28.6500	.00	.00	.00	.00	.00
28.9000	.00	.00	.00	.00	.00
29.1500	.00	.00	.00	.00	.00
29.4000	.00	.00	.00	.00	.00
29.6500	.00	.00	.00	.00	.00
29.9000	.00	.00	.00	.00	.00
30.1500	.00	.00	.00	.00	.00
30.4000	.00	.00	.00	.00	.00
30.6500	.00	.00	.00	.00	.00
30.9000	.00	.00	.00	.00	.00
31.1500	.00	.00	.00	.00	.00
31.4000	.00	.00	.00	.00	.00
31.6500	.00	.00	.00	.00	.00
31.9000	.00	.00	.00	.00	.00
32.1500	.00	.00	.00	.00	.00
32.4000	.00	.00	.00	.00	.00
32.6500	.00	.00	.00	.00	.00
32.9000	.00	.00	.00	.00	.00
33.1500	.00	.00	.00	.00	.00
33.4000	.00	.00	.00	.00	.00
33.6500	.00	.00	.00	.00	.00
33.9000	.00	.00	.00	.00	.00
34.1500	.00	.00	.00	.00	.00
34.4000	.00	.00	.00	.00	.00
34.6500	.00	.00	.00	.00	.00
34.9000	.00	.00	.00	.00	.00
35.1500	.00	.00	.00	.00	.00
35.4000	.00	.00	.00	.00	.00
35.6500	.00	.00	.00	.00	.00
35.9000	.00	.00	.00	.00	.00
36.1500	.00	.00	.00	.00	.00
36.4000	.00	.00	.00	.00	.00
36.6500	.00	.00	.00	.00	.00
36.9000	.00	.00	.00	.00	.00
37.1500	.00	.00	.00	.00	.00
37.4000	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
37.6500	.00	.00	.00	.00	.00
37.9000	.00	.00	.00	.00	.00
38.1500	.00	.00	.00	.00	.00
38.4000	.00	.00	.00	.00	.00
38.6500	.00	.00	.00	.00	.00
38.9000	.00	.00	.00	.00	.00
39.1500	.00	.00	.00	.00	.00
39.4000	.00	.00	.00	.00	.00
39.6500	.00	.00	.00	.00	.00
39.9000	.00	.00	.00	.00	.00
40.1500	.00	.00	.00	.00	.00
40.4000	.00	.00	.00	.00	.00
40.6500	.00	.00	.00	.00	.00
40.9000	.00	.00	.00	.00	.00
41.1500	.00	.00	.00	.00	.00
41.4000	.00	.00	.00	.00	.00
41.6500	.00	.00	.00	.00	.00
41.9000	.00	.00	.00	.00	.00
42.1500	.00	.00	.00	.00	.00
42.4000	.00	.00	.00	.00	.00
42.6500	.00	.00	.00	.00	.00
42.9000	.00	.00	.00	.00	.00
43.1500	.00	.00	.00	.00	.00
43.4000	.00	.00	.00	.00	.00
43.6500	.00	.00	.00	.00	.00
43.9000	.00	.00	.00	.00	.00
44.1500	.00	.00	.00	.00	.00
44.4000	.00	.00	.00	.00	.00
44.6500	.00	.00	.00	.00	.00
44.9000	.00	.00	.00	.00	.00
45.1500	.00	.00			

```
POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID   = BASIN 1A     OUT
HYG Tag  =    100
-----------------------------------
Peak Discharge =          .57 cfs
Time to Peak   =      16.3000 hrs
HYG Volume     =         8517 cu.ft
-----------------------------------
```

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
4.8500	.00	.00	.00	.00	.00
5.1000	.00	.00	.00	.00	.00
5.3500	.00	.00	.00	.00	.00
5.6000	.00	.00	.00	.00	.00
5.8500	.00	.00	.00	.00	.00
6.1000	.00	.00	.00	.00	.00
6.3500	.00	.00	.00	.00	.00
6.6000	.00	.00	.00	.00	.00
6.8500	.00	.00	.00	.00	.00
7.1000	.00	.00	.00	.00	.00
7.3500	.00	.00	.00	.00	.00
7.6000	.00	.00	.00	.00	.00
7.8500	.00	.00	.00	.00	.00
8.1000	.00	.00	.00	.00	.00
8.3500	.00	.00	.00	.00	.00
8.6000	.00	.00	.00	.00	.00
8.8500	.00	.00	.00	.00	.00
9.1000	.00	.00	.00	.00	.00
9.3500	.00	.00	.00	.00	.00
9.6000	.00	.00	.00	.00	.00
9.8500	.00	.00	.00	.00	.00
10.1000	.00	.00	.00	.00	.00
10.3500	.00	.00	.00	.00	.00
10.6000	.00	.00	.00	.00	.00
10.8500	.00	.00	.00	.00	.00
11.1000	.00	.00	.00	.00	.00
11.3500	.00	.00	.00	.00	.00
11.6000	.00	.00	.00	.00	.00
11.8500	.00	.00	.00	.00	.00
12.1000	.00	.00	.00	.00	.00
12.3500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.6000	.00	.00	.00	.00	.00
12.8500	.00	.00	.00	.00	.00
13.1000	.00	.00	.00	.00	.00
13.3500	.00	.00	.00	.00	.00
13.6000	.00	.00	.00	.00	.00
13.8500	.00	.00	.00	.00	.00
14.1000	.00	.00	.00	.00	.00
14.3500	.00	.00	.00	.00	.00
14.6000	.00	.00	.00	.00	.00
14.8500	.00	.02	.06	.10	.14
15.1000	.17	.21	.24	.27	.29
15.3500	.32	.34	.36	.38	.40
15.6000	.42	.43	.45	.47	.49
15.8500	.51	.52	.54	.55	.56
16.1000	.56	.57	.57	.57	.57
16.3500	.57	.57	.57	.57	.57
16.6000	.57	.56	.56	.56	.55
16.8500	.55	.54	.54	.53	.52
17.1000	.52	.51	.50	.50	.49
17.3500	.48	.47	.47	.46	.45
17.6000	.45	.44	.44	.43	.43
17.8500	.42	.42	.41	.41	.40
18.1000	.39	.39	.38	.38	.37
18.3500	.36	.36	.35	.35	.34
18.6000	.34	.33	.33	.32	.32
18.8500	.31	.31	.30	.30	.29
19.1000	.29	.28	.28	.27	.27
19.3500	.26	.26	.26	.25	.25
19.6000	.24	.24	.24	.23	.23
19.8500	.22	.22	.22	.21	.21
20.1000	.20	.20	.20	.19	.19
20.3500	.19	.18	.18	.18	.17
20.6000	.17	.17	.16	.16	.16
20.8500	.15	.15	.15	.14	.14
21.1000	.14	.14	.13	.13	.13
21.3500	.12	.12	.12	.11	.11
21.6000	.11	.11	.10	.10	.10
21.8500	.10	.09	.09	.09	.09
22.1000	.08	.08	.08	.07	.07
22.3500	.07	.07	.06	.06	.06
22.6000	.06	.05	.05	.05	.05
22.8500	.04	.04	.04	.04	.04
23.1000	.03	.03	.03	.03	.02
23.3500	.02	.02	.02	.01	.01
23.6000	.01	.01	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
23.8500	.00	.00	.00	.00	.00
24.1000	.00	.00	.00	.00	.00
24.3500	.00	.00	.00	.00	.00
24.6000	.00	.00	.00	.00	.00
24.8500	.00	.00	.00	.00	.00
25.1000	.00	.00	.00	.00	.00
25.3500	.00	.00	.00	.00	.00
25.6000	.00	.00	.00	.00	.00
25.8500	.00	.00	.00	.00	.00
26.1000	.00	.00	.00	.00	.00
26.3500	.00	.00	.00	.00	.00
26.6000	.00	.00	.00	.00	.00
26.8500	.00	.00	.00	.00	.00
27.1000	.00	.00	.00	.00	.00
27.3500	.00	.00	.00	.00	.00
27.6000	.00	.00	.00	.00	.00
27.8500	.00	.00	.00	.00	.00
28.1000	.00	.00	.00	.00	.00
28.3500	.00	.00	.00	.00	.00
28.6000	.00	.00	.00	.00	.00
28.8500	.00	.00	.00	.00	.00
29.1000	.00	.00	.00	.00	.00
29.3500	.00	.00	.00	.00	.00
29.6000	.00	.00	.00	.00	.00
29.8500	.00	.00	.00	.00	.00
30.1000	.00	.00	.00	.00	.00
30.3500	.00	.00	.00	.00	.00
30.6000	.00	.00	.00	.00	.00
30.8500	.00	.00	.00	.00	.00
31.1000	.00	.00	.00	.00	.00
31.3500	.00	.00	.00	.00	.00
31.6000	.00	.00	.00	.00	.00
31.8500	.00	.00	.00	.00	.00
32.1000	.00	.00	.00	.00	.00
32.3500	.00	.00	.00	.00	.00
32.6000	.00	.00	.00	.00	.00
32.8500	.00	.00	.00	.00	.00
33.1000	.00	.00	.00	.00	.00
33.3500	.00	.00	.00	.00	.00
33.6000	.00	.00	.00	.00	.00
33.8500	.00	.00	.00	.00	.00
34.1000	.00	.00	.00	.00	.00
34.3500	.00	.00	.00	.00	.00
34.6000	.00	.00	.00	.00	.00
34.8500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
35.1000	.00	.00	.00	.00	.00
35.3500	.00	.00	.00	.00	.00
35.6000	.00	.00	.00	.00	.00
35.8500	.00	.00	.00	.00	.00
36.1000	.00	.00	.00	.00	.00
36.3500	.00	.00	.00	.00	.00
36.6000	.00	.00	.00	.00	.00
36.8500	.00	.00	.00	.00	.00
37.1000	.00	.00	.00	.00	.00
37.3500	.00	.00	.00	.00	.00
37.6000	.00	.00	.00	.00	.00
37.8500	.00	.00	.00	.00	.00
38.1000	.00	.00	.00	.00	.00
38.3500	.00	.00	.00	.00	.00
38.6000	.00	.00	.00	.00	.00
38.8500	.00	.00	.00	.00	.00
39.1000	.00	.00	.00	.00	.00
39.3500	.00	.00	.00	.00	.00
39.6000	.00	.00	.00	.00	.00
39.8500	.00	.00	.00	.00	.00
40.1000	.00	.00	.00	.00	.00
40.3500	.00	.00	.00	.00	.00
40.6000	.00	.00	.00	.00	.00
40.8500	.00	.00	.00	.00	.00
41.1000	.00	.00	.00	.00	.00
41.3500	.00	.00	.00	.00	.00
41.6000	.00	.00	.00	.00	.00
41.8500	.00	.00	.00	.00	.00
42.1000	.00	.00	.00	.00	.00
42.3500	.00	.00	.00	.00	.00
42.6000	.00	.00	.00	.00	.00
42.8500	.00	.00	.00	.00	.00
43.1000	.00	.00	.00	.00	.00
43.3500	.00	.00	.00	.00	.00
43.6000	.00	.00	.00	.00	.00
43.8500	.00	.00	.00	.00	.00
44.1000	.00	.00	.00	.00	.00
44.3500	.00	.00	.00	.00	.00
44.6000	.00	.00	.00	.00	.00
44.8500	.00	.00	.00	.00	.00
45.1000	.00	.00	.00	.00	.00
45.3500	.00	.00	.00	.00	.00
45.6000	.00	.00	.00	.00	.00
45.8500	.00	.00	.00	.00	.00
46.1000	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
46.3500	.00	.00	.00	.00	.00
46.6000	.00	.00	.00	.00	.00
46.8500	.00	.00	.00	.00	.00
47.1000	.00	.00	.00	.00	.00
47.3500	.00	.00	.00	.00	.00
47.6000	.00	.00	.00	.00	.00
47.8500	.00	.00	.00	.00	.00
48.1000	.00	.00	.00	.00	.00
48.3500	.00	.00	.00	.00	.00
48.6000	.00	.00	.00	.00	.00
48.8500	.00	.00	.00	.00	.00
49.1000	.00	.00	.00	.00	.00
49.3500	.00	.00	.00	.00	.00
49.6000	.00	.00	.00	.00	.00
49.8500	.00	.00	.00	.00	.00
50.1000	.00	.00	.00	.00	.00
50.3500	.00	.00	.00	.00	.00
50.6000	.00	.00	.00	.00	.00
50.8500	.00	.00	.00	.00	.00
51.1000	.00	.00	.00	.00	.00
51.3500	.00	.00	.00	.00	.00
51.6000	.00	.00	.00	.00	.00
51.8500	.00	.00	.00	.00	.00
52.1000	.00	.00	.00	.00	.00
52.3500	.00	.00	.00	.00	.00
52.6000	.00	.00	.00	.00	.00
52.8500	.00	.00	.00	.00	.00
53.1000	.00	.00	.00	.00	.00
53.3500	.00	.00	.00	.00	.00
53.6000	.00	.00	.00	.00	.00
53.8500	.00	.00	.00	.00	.00
54.1000	.00	.00	.00	.00	.00
54.3500	.00	.00	.00	.00	.00
54.6000	.00	.00	.00	.00	.00
54.8500	.00	.00	.00	.00	.00
55.1000	.00	.00	.00	.00	.00
55.3500	.00	.00	.00	.00	.00
55.6000	.00	.00	.00	.00	.00
55.8500	.00	.00	.00	.00	.00
56.1000	.00	.00	.00	.00	.00
56.3500	.00	.00	.00	.00	.00
56.6000	.00	.00	.00	.00	.00
56.8500	.00	.00	.00	.00	.00
57.1000	.00	.00	.00	.00	.00
57.3500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
57.6000	.00	.00	.00	.00	.00
57.8500	.00	.00	.00	.00	.00
58.1000	.00	.00	.00	.00	.00
58.3500	.00	.00	.00	.00	.00
58.6000	.00	.00	.00	.00	.00
58.8500	.00	.00	.00	.00	.00
59.1000	.00	.00	.00	.00	.00
59.3500	.00	.00	.00	.00	.00
59.6000	.00	.00	.00	.00	.00
59.8500	.00	.00	.00	.00	.00
60.1000	.00	.00	.00	.00	.00
60.3500	.00	.00	.00	.00	.00
60.6000	.00	.00	.00	.00	.00
60.8500	.00	.00	.00	.00	.00
61.1000	.00	.00	.00	.00	.00
61.3500	.00	.00	.00	.00	.00
61.6000	.00	.00	.00	.00	.00
61.8500	.00	.00	.00	.00	.00
62.1000	.00	.00	.00	.00	.00
62.3500	.00	.00	.00	.00	.00
62.6000	.00	.00	.00	.00	.00
62.8500	.00	.00	.00	.00	.00
63.1000	.00	.00	.00	.00	.00
63.3500	.00	.00	.00	.00	.00
63.6000	.00	.00	.00	.00	.00
63.8500	.00	.00	.00	.00	.00
64.1000	.00	.00	.00	.00	.00
64.3500	.00	.00	.00	.00	.00
64.6000	.00	.00	.00	.00	.00
64.8500	.00	.00	.00	.00	.00
65.1000	.00	.00	.00	.00	.00
65.3500	.00	.00	.00	.00	.00
65.6000	.00	.00	.00	.00	.00
65.8500	.00	.00	.00	.00	.00
66.1000	.00	.00	.00	.00	.00
66.3500	.00	.00	.00	.00	.00
66.6000	.00	.00	.00	.00	.00
66.8500	.00	.00	.00	.00	.00
67.1000	.00	.00	.00	.00	.00
67.3500	.00	.00	.00	.00	.00
67.6000	.00	.00	.00	.00	.00
67.8500	.00	.00	.00	.00	.00
68.1000	.00	.00	.00	.00	.00
68.3500	.00	.00	.00	.00	.00
68.6000	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
68.8500	.00	.00	.00	.00	.00
69.1000	.00	.00	.00	.00	.00
69.3500	.00	.00	.00	.00	.00
69.6000	.00	.00	.00	.00	.00
69.8500	.00	.00	.00	.00	.00
70.1000	.00	.00	.00	.00	.00
70.3500	.00	.00	.00	.00	.00
70.6000	.00	.00	.00	.00	.00
70.8500	.00	.00	.00	.00	.00
71.1000	.00	.00	.00	.00	.00
71.3500	.00	.00	.00	.00	.00
71.6000	.00	.00	.00	.00	.00
71.8500	.00	.00	.00	.00	.00
72.1000	.00	.00	.00	.00	.00
72.3500	.00	.00	.00	.00	.00
72.6000	.00	.00	.00	.00	.00
72.8500	.00	.00	.00	.00	.00
73.1000	.00	.00	.00	.00	.00
73.3500	.00	.00	.00	.00	.00
73.6000	.00	.00	.00	.00	.00
73.8500	.00	.00	.00	.00	.00
74.1000	.00	.00	.00	.00	.00
74.3500	.00	.00	.00	.00	.00
74.6000	.00	.00	.00	.00	.00
74.8500	.00	.00	.00	.00	.00
75.1000	.00	.00	.00	.00	.00
75.3500	.00	.00	.00	.00	.00
75.6000	.00	.00	.00	.00	.00
75.8500	.00	.00	.00	.00	.00
76.1000	.00	.00	.00	.00	.00
76.3500	.00	.00	.00	.00	.00
76.6000	.00	.00	.00	.00	.00
76.8500	.00	.00	.00	.00	.00
77.1000	.00	.00	.00	.00	.00
77.3500	.00	.00	.00	.00	.00
77.6000	.00	.00	.00	.00	.00
77.8500	.00	.00	.00	.00	.00
78.1000	.00	.00	.00	.00	.00
78.3500	.00	.00	.00	.00	.00
78.6000	.00	.00	.00	.00	

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - BASIN 1B IN 1
Outflow HYG file = NONE STORED - BASIN 1B OUT 1

Pond Node Data = BASIN 1B
Pond Volume Data = BASIN 1B
Pond Outlet Data = BASIN 1B

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev = 344.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
344.00	.00	0	8256	.00	.00	.00
344.10	.00	834	8426	.37	.37	9.64
344.20	.00	1685	8597	.37	.37	19.10
344.30	.00	2553	8770	.37	.37	28.74
344.40	.00	3439	8945	.37	.37	38.58
344.50	.00	4343	9122	.37	.37	48.62
344.60	.00	5264	9300	.37	.37	58.86
344.70	.02	6203	9480	.37	.39	69.32
344.80	.09	7160	9662	.37	.46	80.01
344.90	.18	8135	9845	.37	.55	90.94
345.00	.30	9129	10031	.37	.67	102.10
345.10	.45	10141	10218	.37	.82	113.50
345.20	.63	11173	10406	.37	1.00	125.14
345.30	.84	12223	10597	.37	1.21	137.01
345.40	1.07	13292	10789	.37	1.44	149.12
345.50	1.34	14381	10983	.37	1.71	161.49
345.60	1.68	15489	11178	.37	2.05	174.14
345.70	1.87	16616	11376	.37	2.24	186.87
345.80	2.06	17764	11575	.37	2.43	199.81
345.90	2.24	18931	11775	.37	2.61	212.96

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - BASIN 1B IN 1
Outflow HYG file = NONE STORED - BASIN 1B OUT 1

Pond Node Data = BASIN 1B
Pond Volume Data = BASIN 1B
Pond Outlet Data = BASIN 1B

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev = 344.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
346.00	2.42	20119	11978	.37	2.79	226.34
346.10	2.59	21328	12200	.37	2.96	239.94
346.20	2.76	22559	12423	.37	3.13	253.79
346.30	2.92	23812	12649	.37	3.29	267.87
346.40	3.08	25089	12877	.37	3.45	282.21
346.50	3.23	26388	13107	.37	3.60	296.80
346.60	3.37	27710	13338	.37	3.74	311.64
346.70	3.52	29056	13572	.37	3.89	326.73
346.80	3.66	30425	13808	.37	4.03	342.08
346.90	3.79	31817	14046	.37	4.16	357.69
347.00	3.93	33234	14286	.37	4.30	373.56
347.10	4.05	34675	14528	.37	4.42	389.70
347.20	4.18	36140	14772	.37	4.56	406.11
347.30	4.30	37629	15018	.37	4.67	422.77
347.40	4.43	39143	15266	.37	4.80	439.72
347.50	4.55	40682	15516	.37	4.92	456.94
347.60	4.66	42247	15768	.37	5.03	474.44
347.70	4.78	43836	16022	.37	5.15	492.22
347.75	4.83	44640	16150	.37	5.20	501.21
347.80	5.34	45451	16278	.37	5.71	510.72

LEVEL POOL ROUTING DATA

```
HYG Dir          = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow  HYG file = NONE STORED - BASIN 1B     IN  1
Outflow HYG file = NONE STORED - BASIN 1B     OUT 1

Pond Node   Data = BASIN 1B
Pond Volume Data = BASIN 1B
Pond Outlet Data = BASIN 1B

Infiltration =      .37 cfs

INITIAL CONDITIONS
----------------------------------
Starting WS Elev   =   344.00 ft
Starting Volume    =        0 cu.ft
Starting Outflow   =      .00 cfs
Starting Infiltr.  =      .00 cfs
Starting Total Qout=      .00 cfs
Time Increment     =    .0500 hrs
```

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
347.90	7.19	47092	16537	.37	7.57	530.81
348.00	9.20	48758	16797	.37	9.57	551.33

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN 1B OUT
HYG Tag = 1

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.2500	.00	.00	.00	.00	.00
11.5000	.00	.00	.00	.00	.00
11.7500	.00	.00	.00	.00	.00
12.0000	.00	.00	.00	.00	.00
12.2500	.00	.00	.00	.00	.00
12.5000	.00	.00	.00	.00	.00
12.7500	.00	.00	.00	.00	.00
13.0000	.00	.00	.00	.00	.00
13.2500	.00	.00	.00	.00	.00
13.5000	.00	.00	.00	.00	.00
13.7500	.00	.00	.00	.00	.00
14.0000	.00	.00	.00	.00	.00
14.2500	.00	.00	.00	.00	.00
14.5000	.00	.00	.00	.00	.00
14.7500	.00	.00	.00	.00	.00
15.0000	.00	.00	.00	.00	.00
15.2500	.00	.00	.00	.00	.00
15.5000	.00	.00	.00	.00	.00
15.7500	.00	.00	.00	.00	.00
16.0000	.00	.00	.00	.00	.00
16.2500	.00	.00	.00	.00	.00
16.5000	.00	.00	.00	.00	.00
16.7500	.00	.00	.00	.00	.00
17.0000	.00	.00	.00	.00	.00
17.2500	.00	.00	.00	.00	.00
17.5000	.00	.00	.00	.00	.00
17.7500	.00	.00	.00	.00	.00
18.0000	.00	.00	.00	.00	.00
18.2500	.00	.00	.00	.00	.00
18.5000	.00	.00	.00	.00	.00
18.7500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.0000	.00	.00	.00	.00	.00
19.2500	.00	.00	.00	.00	.00
19.5000	.00	.00	.00	.00	.00
19.7500	.00	.00	.00	.00	.00
20.0000	.00	.00	.00	.00	.00
20.2500	.00	.00	.00	.00	.00
20.5000	.00	.00	.00	.00	.00
20.7500	.00	.00	.00	.00	.00
21.0000	.00	.00	.00	.00	.00
21.2500	.00	.00	.00	.00	.00
21.5000	.00	.00	.00	.00	.00
21.7500	.00	.00	.00	.00	.00
22.0000	.00	.00	.00	.00	.00
22.2500	.00	.00	.00	.00	.00
22.5000	.00	.00	.00	.00	.00
22.7500	.00	.00	.00	.00	.00
23.0000	.00	.00	.00	.00	.00
23.2500	.00	.00	.00	.00	.00
23.5000	.00	.00	.00	.00	.00
23.7500	.00	.00	.00	.00	.00
24.0000	.00	.00	.00	.00	.00
24.2500	.00	.00	.00	.00	.00
24.5000	.00	.00	.00	.00	.00
24.7500	.00	.00	.00	.00	.00
25.0000	.00	.00	.00	.00	.00
25.2500	.00	.00	.00	.00	.00
25.5000	.00	.00	.00	.00	.00
25.7500	.00	.00	.00	.00	

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN 1B OUT
HYG Tag = 10

Peak Discharge = 1.00 cfs
Time to Peak = 12.7000 hrs
HYG Volume = 10966 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.0000	.00	.00	.00	.00	.00
9.2500	.00	.00	.00	.00	.00
9.5000	.00	.00	.00	.00	.00
9.7500	.00	.00	.00	.00	.00
10.0000	.00	.00	.00	.00	.00
10.2500	.00	.00	.00	.00	.00
10.5000	.00	.00	.00	.00	.00
10.7500	.00	.00	.00	.00	.00
11.0000	.00	.00	.00	.00	.00
11.2500	.00	.00	.00	.00	.00
11.5000	.00	.00	.00	.00	.00
11.7500	.00	.00	.00	.00	.00
12.0000	.00	.00	.06	.18	.33
12.2500	.47	.60	.71	.80	.88
12.5000	.94	.97	.99	1.00	1.00
12.7500	1.00	1.00	1.00	.99	.98
13.0000	.97	.96	.95	.94	.92
13.2500	.91	.90	.88	.87	.85
13.5000	.84	.83	.81	.80	.79
13.7500	.77	.76	.75	.73	.72
14.0000	.71	.69	.68	.67	.65
14.2500	.64	.63	.62	.61	.60
14.5000	.58	.57	.56	.55	.54
14.7500	.53	.52	.51	.50	.49
15.0000	.48	.47	.46	.45	.44
15.2500	.43	.43	.42	.41	.40
15.5000	.39	.39	.38	.37	.36
15.7500	.35	.35	.34	.33	.32
16.0000	.31	.31	.30	.29	.29
16.2500	.28	.27	.27	.26	.25
16.5000	.25	.24	.24	.23	.22

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.7500	.22	.21	.21	.20	.20
17.0000	.19	.19	.18	.18	.17
17.2500	.17	.16	.16	.15	.15
17.5000	.15	.14	.14	.13	.13
17.7500	.13	.12	.12	.11	.11
18.0000	.10	.10	.10	.09	.09
18.2500	.09	.08	.08	.08	.07
18.5000	.07	.07	.07	.06	.06
18.7500	.06	.06	.05	.05	.05
19.0000	.05	.04	.04	.04	.04
19.2500	.03	.03	.03	.03	.02
19.5000	.02	.02	.02	.02	.02
19.7500	.02	.02	.02	.02	.02
20.0000	.01	.01	.01	.01	.01
20.2500	.01	.01	.01	.01	.01
20.5000	.01	.00	.00	.00	.00
20.7500	.00	.00	.00	.00	.00
21.0000	.00	.00	.00	.00	.00
21.2500	.00	.00	.00	.00	.00
21.5000	.00	.00	.00	.00	.00
21.7500	.00	.00	.00	.00	.00
22.0000	.00	.00	.00	.00	.00
22.2500	.00	.00	.00	.00	.00
22.5000	.00	.00	.00	.00	.00
22.7500	.00	.00	.00	.00	.00
23.0000	.00	.00	.00	.00	.00
23.2500	.00	.00	.00	.00	.00
23.5000	.00	.00	.00	.00	.00
23.7500	.00	.00	.00	.00	.00
24.0000	.00	.00	.00	.00	.00
24.2500	.00	.00	.00	.00	.00
24.5000	.00	.00	.00	.00	.00
24.7500	.00	.00	.00	.00	.00
25.0000	.00	.00	.00	.00	.00
25.2500	.00	.00	.00	.00	.00
25.5000	.00	.00	.00	.00	.00
25.7500	.00	.00	.00	.00	.00
26.0000	.00	.00	.00	.00	.00
26.2500	.00	.00	.00	.00	.00
26.5000	.00	.00	.00	.00	.00
26.7500	.00	.00	.00	.00	.00
27.0000	.00	.00	.00	.00	.00
27.2500	.00	.00	.00	.00	.00
27.5000	.00	.00	.00	.00	.00
27.7500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
28.0000	.00	.00	.00	.00	.00
28.2500	.00	.00	.00	.00	.00
28.5000	.00				

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN 1B OUT
HYG Tag = 100

Peak Discharge = 3.93 cfs
Time to Peak = 12.5500 hrs
HYG Volume = 59248 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.5000	.00	.00	.00	.00	.00
6.7500	.00	.00	.00	.00	.00
7.0000	.00	.00	.00	.00	.00
7.2500	.00	.00	.00	.00	.00
7.5000	.00	.00	.00	.00	.00
7.7500	.00	.00	.00	.00	.00
8.0000	.00	.00	.00	.00	.00
8.2500	.00	.00	.00	.00	.00
8.5000	.00	.00	.00	.00	.00
8.7500	.00	.00	.00	.00	.00
9.0000	.00	.00	.00	.00	.00
9.2500	.00	.00	.00	.00	.00
9.5000	.00	.00	.00	.00	.00
9.7500	.00	.00	.00	.00	.00
10.0000	.00	.00	.00	.00	.00
10.2500	.00	.00	.00	.00	.00
10.5000	.00	.00	.00	.00	.00
10.7500	.00	.00	.00	.00	.00
11.0000	.00	.00	.00	.00	.00
11.2500	.00	.00	.00	.00	.00
11.5000	.00	.00	.01	.03	.08
11.7500	.15	.26	.43	.66	1.00
12.0000	1.62	2.14	2.62	3.02	3.31
12.2500	3.51	3.65	3.75	3.83	3.88
12.5000	3.92	3.93	3.93	3.92	3.90
12.7500	3.88	3.86	3.83	3.81	3.78
13.0000	3.75	3.72	3.69	3.65	3.62
13.2500	3.58	3.55	3.51	3.47	3.44
13.5000	3.40	3.36	3.32	3.29	3.25
13.7500	3.21	3.17	3.13	3.09	3.05
14.0000	3.01	2.97	2.93	2.88	2.84

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.2500	2.80	2.76	2.72	2.68	2.64
14.5000	2.60	2.55	2.51	2.47	2.43
14.7500	2.39	2.35	2.31	2.27	2.23
15.0000	2.20	2.16	2.13	2.09	2.06
15.2500	2.03	2.00	1.97	1.94	1.91
15.5000	1.88	1.86	1.83	1.80	1.78
15.7500	1.76	1.73	1.71	1.69	1.66
16.0000	1.62	1.59	1.56	1.53	1.50
16.2500	1.47	1.44	1.41	1.39	1.37
16.5000	1.34	1.32	1.30	1.29	1.27
16.7500	1.25	1.24	1.22	1.20	1.19
17.0000	1.17	1.15	1.14	1.12	1.11
17.2500	1.09	1.07	1.06	1.05	1.03
17.5000	1.02	1.00	.99	.98	.96
17.7500	.95	.94	.92	.91	.90
18.0000	.88	.87	.86	.84	.83
18.2500	.82	.81	.80	.78	.77
18.5000	.76	.75	.74	.73	.72
18.7500	.71	.70	.69	.68	.67
19.0000	.66	.65	.64	.63	.62
19.2500	.61	.60	.59	.58	.58
19.5000	.57	.56	.55	.54	.53
19.7500	.53	.52	.51	.50	.49
20.0000	.49	.48	.47	.46	.46
20.2500	.45	.44	.44	.43	.42
20.5000	.42	.41	.41	.40	.39
20.7500	.39	.38	.38	.37	.36
21.0000	.36	.35	.35	.34	.34
21.2500	.33	.32	.32	.31	.31
21.5000	.30	.30	.29	.29	.28
21.7500	.28	.27	.27	.27	.26
22.0000	.26	.25	.25	.24	.24
22.2500	.23	.23	.23	.22	.22
22.5000	.21	.21	.20	.20	.19
22.7500	.19	.19	.18	.18	.17
23.0000	.17	.17	.16	.16	.16
23.2500	.15	.15	.15	.14	.14
23.5000	.14	.13	.13	.12	.12
23.7500	.12	.11	.11	.11	.10
24.0000	.10	.09	.09	.08	.08
24.2500	.07	.07	.06	.06	.05
24.5000	.05	.04	.04	.03	.03
24.7500	.02	.02	.02	.02	.02
25.0000	.01	.01	.01	.01	.01
25.2500	.01	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
25.5000	.00	.00	.00	.00	.00
25.7500	.00	.00	.00	.00	.00
26.0000	.00	.00	.00	.00	.00
26.2500	.00	.00	.00	.00	.00
26.5000	.00	.00	.00	.00	.00
26.7500	.00	.00	.00	.00	.00
27.0000	.00	.00	.00	.00	.00
27.2500	.00	.00	.00	.00	.00
27.5000	.00	.00	.00	.00	.00
27.7500	.00	.00	.00	.00	.00
28.0000	.00	.00	.00	.00	.00
28.2500	.00	.00	.00	.00	.00
28.5000	.00	.00	.00	.00	.00
28.7500	.00	.00	.00	.00	.00
29.0000	.00	.00	.00	.00	.00
29.2500	.00	.00	.00	.00	.00
29.5000	.00	.00	.00	.00	.00
29.7500	.00	.00	.00	.00	.00
30.0000	.00	.00	.00	.00	.00
30.2500	.00	.00	.00	.00	.00
30.5000	.00	.00	.00	.00	.00
30.7500	.00	.00	.00	.00	.00
31.0000	.00	.00	.00	.00	.00
31.2500	.00	.00	.00	.00	.00
31.5000	.00	.00	.00	.00	.00
31.7500	.00	.00			

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - BASIN 2B IN 1
Outflow HYG file = NONE STORED - BASIN 2B OUT 1

Pond Node Data = BASIN 2B
Pond Volume Data = BASIN 2B
Pond Outlet Data = OCS 2B

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 300.50 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
300.50	.00	0	65	.00	.00	.00
300.60	.00	7	80	.00	.00	.08
300.70	.00	16	97	.00	.00	.18
300.80	.00	27	116	.00	.00	.30
300.90	.00	39	136	.00	.00	.44
301.00	.00	54	158	.00	.00	.60
301.10	.00	71	181	.00	.00	.79
301.20	.00	90	206	.00	.00	1.00
301.30	.00	112	233	.00	.00	1.25
301.40	.00	137	261	.00	.00	1.52
301.50	.00	165	291	.00	.00	1.83
301.60	.00	195	322	.00	.00	2.17
301.70	.00	229	354	.00	.00	2.54
301.80	.00	266	387	.00	.00	2.95
301.90	.00	306	422	.00	.00	3.40
302.00	.00	350	459	.00	.00	3.89
302.10	.00	398	497	.00	.00	4.42
302.20	.00	450	537	.00	.00	5.00
302.30	.00	506	578	.00	.00	5.62
302.40	.00	566	621	.00	.00	6.28

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - BASIN 2B IN 1
Outflow HYG file = NONE STORED - BASIN 2B OUT 1

Pond Node Data = BASIN 2B
Pond Volume Data = BASIN 2B
Pond Outlet Data = OCS 2B

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 300.50 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
302.50	.00	630	665	.00	.00	7.00
302.60	.00	707	886	.00	.00	7.86
302.70	.00	808	1138	.00	.00	8.98
302.80	.00	936	1422	.00	.00	10.40
302.90	.00	1093	1737	.00	.00	12.15
303.00	.00	1284	2084	.00	.00	14.27
303.10	.00	1499	2203	.00	.00	16.65
303.20	.00	1725	2326	.00	.00	19.17
303.30	.00	1964	2451	.00	.00	21.82
303.40	.00	2215	2581	.00	.00	24.61
303.50	.00	2480	2713	.00	.00	27.56
303.60	.00	2758	2849	.00	.00	30.65
303.70	.00	3050	2988	.00	.00	33.89
303.80	.00	3356	3130	.00	.00	37.29
303.90	.00	3676	3276	.00	.00	40.84
304.00	.00	4011	3425	.00	.00	44.57
304.10	.00	4360	3555	.00	.00	48.45
304.20	.00	4722	3687	.00	.00	52.47
304.30	.00	5098	3822	.00	.00	56.64
304.40	.00	5487	3959	.00	.00	60.96

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - BASIN 2B IN 1
Outflow HYG file = NONE STORED - BASIN 2B OUT 1

Pond Node Data = BASIN 2B
Pond Volume Data = BASIN 2B
Pond Outlet Data = OCS 2B

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 300.50 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
304.50	.00	5890	4099	.00	.00	65.44
304.60	.00	6307	4241	.00	.00	70.07
304.70	.02	6738	4386	.00	.02	74.88
304.76	.04	7004	4473	.00	.04	77.86
304.80	.06	7184	4532	.00	.06	79.88
304.90	.13	7644	4682	.00	.13	85.07
305.00	.20	8120	4834	.00	.20	90.42
305.10	.25	8611	4988	.00	.25	95.93
305.15	.28	8862	5066	.00	.28	98.75
305.20	.89	9118	5144	.00	.89	102.20
305.30	3.42	9640	5303	.00	3.42	110.54
305.40	7.03	10178	5465	.00	7.03	120.12
305.50	11.42	10733	5629	.00	11.42	130.68
305.60	16.50	11304	5795	.00	16.50	142.10
305.70	22.18	11892	5963	.00	22.18	154.31
305.80	25.98	12497	6135	.00	25.98	164.84
305.90	26.52	13119	6308	.00	26.52	172.29
306.00	27.03	13759	6484	.00	27.03	179.90
306.10	27.54	14414	6629	.00	27.54	187.70
306.20	28.04	15085	6775	.00	28.04	195.64

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - BASIN 2B IN 1
Outflow HYG file = NONE STORED - BASIN 2B OUT 1

Pond Node Data = BASIN 2B
Pond Volume Data = BASIN 2B
Pond Outlet Data = OCS 2B

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 300.50 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
306.30	28.53	15769	6923	.00	28.53	203.75
306.40	29.01	16469	7072	.00	29.01	212.00
306.50	29.48	17184	7223	.00	29.48	220.41
306.60	29.95	17914	7376	.00	29.95	228.99
306.70	30.40	18659	7530	.00	30.40	237.73
306.80	30.86	19420	7686	.00	30.86	246.63
306.90	31.30	20196	7843	.00	31.30	255.71
307.00	31.74	20989	8002	.00	31.74	264.95
307.10	32.18	21797	8163	.00	32.18	274.36
307.20	32.60	22621	8325	.00	32.60	283.94
307.30	33.02	23462	8489	.00	33.02	293.71
307.40	33.44	24319	8654	.00	33.44	303.65
307.50	33.84	25193	8821	.00	33.84	313.76
307.60	34.25	26083	8990	.00	34.25	324.07
307.70	34.65	26991	9160	.00	34.65	334.55
307.80	35.05	27915	9332	.00	35.05	345.22
307.90	35.44	28857	9505	.00	35.44	356.08
308.00	35.83	29816	9680	.00	35.83	367.13

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN 2B OUT
HYG Tag = 1

Peak Discharge = .15 cfs
Time to Peak = 16.6000 hrs
HYG Volume = 4852 cu.ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .0500 hrs

Time on left represents time for first value in each row.

Time hrs					
11.6000	.00	.00	.00	.00	.00
11.8500	.00	.00	.00	.00	.00
12.1000	.00	.00	.00	.00	.00
12.3500	.00	.00	.00	.00	.00
12.6000	.00	.00	.00	.00	.00
12.8500	.00	.00	.00	.00	.00
13.1000	.00	.00	.00	.00	.00
13.3500	.00	.00	.00	.00	.00
13.6000	.00	.00	.00	.00	.00
13.8500	.00	.00	.00	.00	.00
14.1000	.01	.01	.01	.01	.01
14.3500	.02	.02	.02	.03	.03
14.6000	.04	.04	.04	.05	.05
14.8500	.06	.06	.07	.07	.08
15.1000	.08	.09	.09	.10	.10
15.3500	.10	.11	.11	.11	.12
15.6000	.12	.12	.12	.13	.13
15.8500	.13	.13	.13	.13	.14
16.1000	.14	.14	.14	.14	.14
16.3500	.14	.14	.14	.14	.14
16.6000	.15	.15	.15	.15	.15
16.8500	.15	.15	.15	.15	.15
17.1000	.15	.15	.15	.15	.15
17.3500	.15	.15	.15	.15	.15
17.6000	.15	.15	.14	.14	.14
17.8500	.14	.14	.14	.14	.14
18.1000	.14	.14	.14	.14	.14
18.3500	.14	.14	.14	.13	.13
18.6000	.13	.13	.13	.13	.13
18.8500	.13	.13	.13	.13	.13
19.1000	.13	.13	.13	.13	.12

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.3500	.12	.12	.12	.12	.12
19.6000	.12	.12	.12	.12	.12
19.8500	.12	.12	.12	.12	.12
20.1000	.12	.12	.11	.11	.11
20.3500	.11	.11	.11	.11	.11
20.6000	.11	.11	.11	.11	.11
20.8500	.11	.11	.11	.11	.11
21.1000	.11	.11	.10	.10	.10
21.3500	.10	.10	.10	.10	.10
21.6000	.10	.10	.10	.10	.10
21.8500	.10	.10	.10	.10	.10
22.1000	.10	.10	.10	.10	.09
22.3500	.09	.09	.09	.09	.09
22.6000	.09	.09	.09	.09	.09
22.8500	.09	.09	.09	.09	.09
23.1000	.09	.09	.09	.09	.09
23.3500	.09	.09	.09	.08	.08
23.6000	.08	.08	.08	.08	.08
23.8500	.08	.08	.08	.08	.08
24.1000	.08	.08	.08	.07	.07
24.3500	.07	.07	.07	.06	.06
24.6000	.06	.06	.06	.06	.06
24.8500	.05	.05	.05	.05	.05
25.1000	.05	.05	.05	.05	.05
25.3500	.04	.04	.04	.04	.04
25.6000	.04	.04	.04	.04	.04
25.8500	.04	.04	.04	.04	.03
26.1000	.03	.03	.03	.03	.03
26.3500	.03	.03	.03	.03	.03
26.6000	.03	.03	.03	.03	.03
26.8500	.03	.03	.03	.03	.03
27.1000	.03	.02	.02	.02	.02
27.3500	.02	.02	.02	.02	.02
27.6000	.02	.02	.02	.02	.02
27.8500	.02	.02	.02	.02	.02
28.1000	.02	.02	.02	.02	.02
28.3500	.02	.02	.02	.02	.02
28.6000	.02	.02	.02	.02	.02
28.8500	.02	.02	.02	.02	.01
29.1000	.01	.01	.01	.01	.01
29.3500	.01	.01	.01	.01	.01
29.6000	.01	.01	.01	.01	.01
29.8500	.01	.01	.01	.01	.01
30.1000	.01	.01	.01	.01	.01
30.3500	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
30.6000	.01	.01	.01	.01	.01
30.8500	.01	.01	.01	.01	.01
31.1000	.01	.01	.01	.01	.01
31.3500	.01	.01	.01	.01	.01
31.6000	.01	.01	.01	.01	.01
31.8500	.01	.01	.01	.01	.01
32.1000	.01	.01	.01	.01	.01
32.3500	.01	.01	.01	.01	.01
32.6000	.01	.01	.01	.01	.01
32.8500	.01	.01	.01	.01	.01
33.1000	.01	.01	.01	.01	.01
33.3500	.01	.01	.01	.01	.01
33.6000	.01	.01	.01	.01	.01
33.8500	.01	.01	.01	.01	.01
34.1000	.01	.01	.01	.01	.01
34.3500	.01	.01	.01	.01	.01
34.6000	.01	.01	.01	.01	.01
34.8500	.01	.01	.01	.01	.01
35.1000	.01	.01	.01	.01	.01
35.3500	.01	.01	.01	.01	.01
35.6000	.01	.01	.01	.01	.01
35.8500	.01	.01	.01	.01	.01
36.1000	.01	.01	.01	.01	.01
36.3500	.01	.01	.01	.01	.01
36.6000	.01	.01	.01	.01	.01
36.8500	.01	.01	.01	.01	.01
37.1000	.01	.01	.01	.01	.01
37.3500	.01	.01	.00	.00	.00
37.6000	.00	.00	.00	.00	.00
37.8500	.00	.00	.00	.00	.00
38.1000	.00	.00	.00	.00	.00
38.3500	.00	.00	.00	.00	.00
38.6000	.00	.00	.00	.00	.00
38.8500	.00	.00	.00	.00	.00
39.1000	.00	.00	.00	.00	.00
39.3500	.00	.00	.00	.00	.00
39.6000	.00	.00	.00	.00	.00
39.8500	.00	.00	.00	.00	.00
40.1000	.00	.00	.00	.00	.00
40.3500	.00	.00	.00	.00	.00
40.6000	.00	.00	.00	.00	.00
40.8500	.00	.00	.00	.00	.00
41.1000	.00	.00	.00	.00	.00
41.3500	.00				

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID   = BASIN 2B   OUT
HYG Tag =   10

Peak Discharge =   9.42 cfs
Time to Peak   =   12.2000 hrs
HYG Volume   =   34017 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.5500	.00	.00	.00	.00	.00
9.8000	.00	.00	.00	.00	.00
10.0500	.00	.00	.00	.00	.00
10.3000	.00	.00	.00	.00	.00
10.5500	.00	.00	.00	.00	.00
10.8000	.00	.00	.00	.00	.00
11.0500	.00	.00	.00	.00	.00
11.3000	.00	.00	.00	.00	.00
11.5500	.00	.00	.00	.00	.00
11.8000	.00	.00	.00	.00	.00
12.0500	.11	1.32	7.97	9.42	8.24
12.3000	7.00	6.17	5.43	4.73	4.04
12.5500	3.39	2.93	2.51	2.21	2.01
12.8000	1.87	1.77	1.68	1.61	1.53
13.0500	1.45	1.39	1.34	1.29	1.26
13.3000	1.24	1.22	1.20	1.18	1.16
13.5500	1.14	1.12	1.10	1.08	1.06
13.8000	1.05	1.03	1.01	.99	.97
14.0500	.95	.93	.91	.90	.89
14.3000	.88	.87	.86	.86	.85
14.5500	.84	.83	.82	.81	.80
14.8000	.79	.78	.77	.76	.75
15.0500	.74	.73	.72	.71	.70
15.3000	.69	.68	.67	.66	.65
15.5500	.64	.63	.62	.61	.60
15.8000	.59	.58	.57	.56	.54
16.0500	.53	.52	.52	.51	.50
16.3000	.49	.49	.48	.48	.47
16.5500	.47	.46	.46	.46	.45
16.8000	.45	.44	.44	.43	.43
17.0500	.42	.42	.41	.41	.40

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.3000	.40	.40	.39	.39	.38
17.5500	.38	.37	.37	.36	.36
17.8000	.35	.35	.34	.34	.33
18.0500	.33	.32	.32	.32	.31
18.3000	.31	.31	.31	.31	.31
18.5500	.30	.30	.30	.30	.30
18.8000	.30	.30	.29	.29	.29
19.0500	.29	.29	.29	.29	.29
19.3000	.28	.28	.28	.28	.28
19.5500	.28	.28	.28	.28	.28
19.8000	.28	.28	.27	.27	.27
20.0500	.27	.27	.27	.27	.27
20.3000	.27	.27	.27	.27	.27
20.5500	.27	.27	.27	.27	.27
20.8000	.27	.27	.27	.27	.27
21.0500	.27	.27	.27	.27	.27
21.3000	.27	.26	.26	.26	.26
21.5500	.26	.26	.26	.26	.26
21.8000	.26	.26	.26	.26	.26
22.0500	.26	.26	.26	.25	.25
22.3000	.25	.25	.25	.25	.25
22.5500	.25	.25	.25	.25	.25
22.8000	.24	.24	.24	.24	.24
23.0500	.24	.24	.24	.24	.24
23.3000	.24	.23	.23	.23	.23
23.5500	.23	.23	.23	.23	.23
23.8000	.23	.23	.22	.22	.22
24.0500	.22	.22	.22	.21	.21
24.3000	.20	.20	.19	.19	.18
24.5500	.18	.17	.17	.17	.16
24.8000	.16	.15	.15	.14	.14
25.0500	.14	.13	.13	.13	.12
25.3000	.12	.12	.11	.11	.11
25.5500	.10	.10	.10	.10	.09
25.8000	.09	.09	.09	.08	.08
26.0500	.08	.08	.07	.07	.07
26.3000	.07	.07	.07	.06	.06
26.5500	.06	.06	.06	.06	.05
26.8000	.05	.05	.05	.05	.05
27.0500	.05	.05	.05	.05	.04
27.3000	.04	.04	.04	.04	.04
27.5500	.04	.04	.04	.04	.04
27.8000	.04	.04	.04	.03	.03
28.0500	.03	.03	.03	.03	.03
28.3000	.03	.03	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
28.5500	.03	.03	.03	.03	.03
28.8000	.03	.03	.03	.03	.03
29.0500	.03	.02	.02	.02	.02
29.3000	.02	.02	.02	.02	.02
29.5500	.02	.02	.02	.02	.02
29.8000	.02	.02	.02	.02	.02
30.0500	.02	.02	.02	.02	.02
30.3000	.02	.02	.02	.02	.02
30.5500	.02	.02	.02	.02	.02
30.8000	.02	.02	.02	.01	.01
31.0500	.01	.01	.01	.01	.01
31.3000	.01	.01	.01	.01	.01
31.5500	.01	.01	.01	.01	.01
31.8000	.01	.01	.01	.01	.01
32.0500	.01	.01	.01	.01	.01
32.3000	.01	.01	.01	.01	.01
32.5500	.01	.01	.01	.01	.01
32.8000	.01	.01	.01	.01	.01
33.0500	.01	.01	.01	.01	.01
33.3000	.01	.01	.01	.01	.01
33.5500	.01	.01	.01	.01	.01
33.8000	.01	.01	.01	.01	.01
34.0500	.01	.01	.01	.01	.01
34.3000	.01	.01	.01	.01	.01
34.5500	.01	.01	.01	.01	.01
34.8000	.01	.01	.01	.01	.01
35.0500	.01	.01	.01	.01	.01
35.3000	.01	.01	.01	.01	.01
35.5500	.01	.01	.01	.01	.01
35.8000	.01	.01	.01	.01	.01
36.0500	.01	.01	.01	.01	.01
36.3000	.01	.01	.01	.01	.01
36.5500	.01	.01	.01	.01	.01
36.8000	.01	.01	.01	.01	.01
37.0500	.01	.01	.01	.01	.01
37.3000	.01	.01	.01	.01	.01
37.5500	.01	.01	.01	.01	.01
37.8000	.01	.01	.01	.01	.01
38.0500	.01	.01	.01	.01	.01
38.3000	.01	.01	.01	.01	.01
38.5500	.01	.01	.01	.01	.01
38.8000	.01	.01	.01	.01	.01
39.0500	.01	.01	.01	.01	.01
39.3000	.01	.00	.00	.00	.00
39.5500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
39.8000	.00	.00	.00	.00	.00
40.0500	.00	.00	.00	.00	.00
40.3000	.00	.00	.00	.00	.00
40.5500	.00	.00	.00	.00	.00
40.8000	.00	.00	.00	.00	.00
41.0500	.00	.00	.00	.00	.00
41.3000	.00	.00	.00	.00	.00
41.5500	.00	.00	.00	.00	.00
41.8000	.00	.00	.00	.00	.00
42.0500	.00	.00	.00	.00	.00
42.3000	.00	.00	.00	.00	.00
42.5500	.00	.00	.00	.00	.00
42.8000	.00	.00	.00	.00	.00
43.0500	.00	.00	.00	.00	.00
43.3000	.00				

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID   = BASIN 2B   OUT
HYG Tag =   100

Peak Discharge =   26.29 cfs
Time to Peak   =   12.1500 hrs
HYG Volume   =   99311 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.1500	.00	.00	.00	.00	.00
7.4000	.00	.00	.00	.00	.00
7.6500	.00	.00	.00	.00	.00
7.9000	.00	.00	.00	.00	.00
8.1500	.00	.00	.00	.00	.00
8.4000	.00	.00	.00	.00	.00
8.6500	.00	.00	.00	.00	.00
8.9000	.00	.00	.00	.00	.00
9.1500	.00	.00	.00	.00	.00
9.4000	.00	.00	.00	.00	.00
9.6500	.00	.00	.00	.00	.00
9.9000	.00	.00	.00	.00	.00
10.1500	.00	.00	.00	.00	.00
10.4000	.00	.00	.00	.00	.00
10.6500	.00	.00	.00	.00	.00
10.9000	.00	.00	.01	.02	.05
11.1500	.08	.13	.18	.22	.26
11.4000	.60	1.54	2.20	2.61	3.04
11.6500	3.69	4.70	5.87	7.20	8.79
11.9000	10.39	12.87	17.63	23.06	26.01
12.1500	26.29	26.08	22.10	17.02	14.63
12.4000	12.72	10.99	9.37	7.78	6.52
12.6500	5.56	4.91	4.51	4.24	4.03
12.9000	3.83	3.65	3.47	3.32	3.19
13.1500	3.07	2.97	2.90	2.84	2.79
13.4000	2.74	2.69	2.65	2.60	2.55
13.6500	2.51	2.46	2.41	2.37	2.32
13.9000	2.27	2.22	2.18	2.13	2.09
14.1500	2.05	2.02	1.99	1.96	1.94
14.4000	1.92	1.89	1.87	1.85	1.83
14.6500	1.80	1.78	1.76	1.73	1.71

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.9000	1.69	1.67	1.64	1.62	1.60
15.1500	1.57	1.55	1.53	1.50	1.48
15.4000	1.46	1.43	1.41	1.39	1.36
15.6500	1.34	1.31	1.29	1.27	1.24
15.9000	1.22	1.20	1.17	1.15	1.13
16.1500	1.11	1.09	1.08	1.07	1.06
16.4000	1.05	1.04	1.03	1.02	1.01
16.6500	1.00	.99	.98	.97	.95
16.9000	.94	.93	.92	.91	.90
17.1500	.89	.89	.88	.87	.86
17.4000	.85	.84	.83	.82	.81
17.6500	.80	.79	.78	.77	.76
17.9000	.75	.74	.73	.72	.71
18.1500	.70	.69	.69	.68	.68
18.4000	.67	.67	.66	.66	.66
18.6500	.66	.65	.65	.65	.64
18.9000	.64	.64	.63	.63	.63
19.1500	.62	.62	.62	.61	.61
19.4000	.61	.61	.60	.60	.60
19.6500	.59	.59	.59	.58	.58
19.9000	.58	.57	.57	.57	.56
20.1500	.56	.56	.56	.55	.55
20.4000	.55	.55	.54	.54	.54
20.6500	.54	.53	.53	.53	.53
20.9000	.53	.52	.52	.52	.52
21.1500	.51	.51	.51	.51	.50
21.4000	.50	.50	.50	.49	.49
21.6500	.49	.49	.48	.48	.48
21.9000	.48	.48	.47	.47	.47
22.1500	.47	.46	.46	.46	.46
22.4000	.45	.45	.45	.45	.44
22.6500	.44	.44	.44	.44	.43
22.9000	.43	.43	.43	.42	.42
23.1500	.42	.42	.41	.41	.41
23.4000	.41	.40	.40	.40	.40
23.6500	.39	.39	.39	.39	.39
23.9000	.38	.38	.38	.36	.32
24.1500	.27	.27	.27	.26	.26
24.4000	.25	.25	.25	.24	.24
24.6500	.23	.23	.22	.22	.21
24.9000	.21	.20	.20	.20	.19
25.1500	.19	.18	.18	.17	.17
25.4000	.16	.16	.15	.15	.15
25.6500	.14	.14	.13	.13	.13
25.9000	.12	.12	.12	.11	.11

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
26.1500	.11	.10	.10	.10	.10
26.4000	.09	.09	.09	.09	.08
26.6500	.08	.08	.08	.08	.07
26.9000	.07	.07	.07	.07	.06
27.1500	.06	.06	.06	.06	.06
27.4000	.06	.05	.05	.05	.05
27.6500	.05	.05	.05	.05	.05
27.9000	.05	.04	.04	.04	.04
28.1500	.04	.04	.04	.04	.04
28.4000	.04	.04	.04	.04	.03
28.6500	.03	.03	.03	.03	.03
28.9000	.03	.03	.03	.03	.03
29.1500	.03	.03	.03	.03	.03
29.4000	.03	.03	.03	.03	.03
29.6500	.03	.03	.02	.02	.02
29.9000	.02	.02	.02	.02	.02
30.1500	.02	.02	.02	.02	.02
30.4000	.02	.02	.02	.02	.02
30.6500	.02	.02	.02	.02	.02
30.9000	.02	.02	.02	.02	.02
31.1500	.02	.02	.02	.02	.02
31.4000	.02	.02	.02	.02	.02
31.6500	.01	.01	.01	.01	.01
31.9000	.01	.01	.01	.01	.01
32.1500	.01	.01	.01	.01	.01
32.4000	.01	.01	.01	.01	.01
32.6500	.01	.01	.01	.01	.01
32.9000	.01	.01	.01	.01	.01
33.1500	.01	.01	.01	.01	.01
33.4000	.01	.01	.01	.01	.01
33.6500	.01	.01	.01	.01	.01
33.9000	.01	.01	.01	.01	.01
34.1500	.01	.01	.01	.01	.01
34.4000	.01	.01	.01	.01	.01
34.6500	.01	.01	.01	.01	.01
34.9000	.01	.01	.01	.01	.01
35.1500	.01	.01	.01	.01	.01
35.4000	.01	.01	.01	.01	.01
35.6500	.01	.01	.01	.01	.01
35.9000	.01	.01	.01	.01	.01
36.1500	.01	.01	.01	.01	.01
36.4000	.01	.01	.01	.01	.01
36.6500	.01	.01	.01	.01	.01
36.9000	.01	.01	.01	.01	.01
37.1500	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
37.4000	.01	.01	.01	.01	.01
37.6500	.01	.01	.01	.01	.01
37.9000	.01	.01	.01	.01	.01
38.1500	.01	.01	.01	.01	.01
38.4000	.01	.01	.01	.01	.01
38.6500	.01	.01	.01	.01	.01
38.9000	.01	.01	.01	.01	.01
39.1500	.01	.01	.01	.01	.01
39.4000	.01	.01	.01	.01	.01
39.6500	.01	.01	.01	.01	.01
39.9000	.01	.01	.01	.00	.00
40.1500	.00	.00	.00	.00	.00
40.4000	.00	.00	.00	.00	.00
40.6500	.00	.00	.00	.00	.00
40.9000	.00	.00	.00	.00	.00
41.1500	.00	.00	.00	.00	.00
41.4000	.00	.00	.00	.00	.00
41.6500	.00	.00	.00	.00	.00
41.9000	.00	.00	.00	.00	.00
42.1500	.00	.00	.00	.00	.00
42.4000	.00	.00	.00	.00	.00
42.6500	.00	.00	.00	.00	.00
42.9000	.00	.00	.00	.00	.00
43.1500	.00	.00	.00	.00	.00
43.4000	.00	.00	.00	.00	.00
43.6500	.00	.00	.00	.00	.00
43.9000	.00	.00			

LEVEL POOL ROUTING DATA

HYG Dir = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND 1C IN 1
Outflow HYG file = NONE STORED - POND 1C OUT 1

Pond Node Data = POND 1C
Pond Volume Data = POND 1C
Pond Outlet Data = BASIN 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 314.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
314.00	.00	0	1166	.00	.00	.00
314.10	.03	125	1333	.00	.03	1.41
314.20	.10	267	1510	.00	.10	3.07
314.30	.23	427	1699	.00	.23	4.98
314.40	.40	607	1899	.00	.40	7.14
314.50	.60	807	2110	.00	.60	9.57
314.60	.84	1029	2332	.00	.84	12.28
314.70	1.12	1274	2565	.00	1.12	15.28
314.80	1.41	1543	2809	.00	1.41	18.55
314.90	1.73	1836	3065	.00	1.73	22.13
315.00	2.06	2156	3331	.00	2.06	26.01
315.10	2.39	2503	3609	.00	2.39	30.20
315.20	2.74	2878	3897	.00	2.74	34.71
315.30	3.07	3283	4197	.00	3.07	39.54
315.40	3.40	3718	4508	.00	3.40	44.71
315.50	3.67	4185	4830	.00	3.67	50.16
315.60	3.88	4684	5163	.00	3.88	55.93
315.70	4.08	5218	5508	.00	4.08	62.06
315.80	4.28	5786	5863	.00	4.28	68.57
315.90	4.46	6391	6229	.00	4.46	75.47

LEVEL POOL ROUTING DATA

HYG Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND 1C   IN 1
Outflow HYG file = NONE STORED - POND 1C   OUT 1

Pond Node   Data = POND 1C
Pond Volume Data = POND 1C
Pond Outlet Data = BASIN 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev   =   314.00 ft
Starting Volume   =   0 cu.ft
Starting Outflow   =   .00 cfs
Starting Infiltr. =   .00 cfs
Starting Total Qout=   .00 cfs
Time Increment   =   .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
316.00	4.64	7032	6607	.00	4.64	82.78
316.10	4.82	7704	6835	.00	4.82	90.42
316.20	4.98	8400	7067	.00	4.98	98.31
316.30	5.14	9118	7302	.00	5.14	106.45
316.40	5.30	9860	7542	.00	5.30	114.86
316.50	5.45	10626	7786	.00	5.45	123.52
316.60	5.60	11417	8033	.00	5.60	132.46
316.70	5.74	12233	8284	.00	5.74	141.67
316.80	5.88	13074	8539	.00	5.88	151.15
316.90	6.02	13941	8798	.00	6.02	160.92
317.00	6.15	14834	9061	.00	6.15	170.97
317.10	6.28	15753	9327	.00	6.28	181.32
317.20	6.41	16700	9598	.00	6.41	191.96
317.30	6.54	17673	9872	.00	6.54	202.90
317.40	6.66	18674	10150	.00	6.66	214.15
317.50	6.78	19703	10433	.00	6.78	225.71
317.60	6.90	20761	10718	.00	6.90	237.58
317.70	7.02	21847	11008	.00	7.02	249.76
317.80	7.13	22962	11302	.00	7.13	262.27
317.90	7.24	24108	11600	.00	7.24	275.11

LEVEL POOL ROUTING DATA

HYG Dir   = S:\2015\15064\PONDPACK\2016-12-05_bd\
Inflow HYG file = NONE STORED - POND 1C   IN 1
Outflow HYG file = NONE STORED - POND 1C   OUT 1

Pond Node   Data = POND 1C
Pond Volume Data = POND 1C
Pond Outlet Data = BASIN 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev   =   314.00 ft
Starting Volume   =   0 cu.ft
Starting Outflow   =   .00 cfs
Starting Infiltr. =   .00 cfs
Starting Total Qout=   .00 cfs
Time Increment   =   .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
318.00	7.36	25283	11901	.00	7.36	288.27
318.10	7.47	26473	11901	.00	7.47	301.61
318.20	7.57	27663	11901	.00	7.57	314.94
318.30	7.68	28853	11901	.00	7.68	328.27
318.40	7.79	30043	11901	.00	7.79	341.60
318.50	7.89	31233	11901	.00	7.89	354.92
318.60	7.99	32423	11901	.00	7.99	368.25
318.70	8.09	33613	11901	.00	8.09	381.58
318.80	8.19	34803	11901	.00	8.19	394.90
318.90	8.29	35993	11901	.00	8.29	408.22
319.00	8.39	37184	11901	.00	8.39	421.54

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID   = POND 1C   OUT
HYG Tag =   1

Peak Discharge = .64 cfs
Time to Peak = 12.3500 hrs
HYG Volume = 4882 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.6000	.00	.00	.00	.00	.00
11.8500	.01	.02	.03	.07	.16
12.1000	.28	.42	.53	.59	.63
12.3500	.64	.64	.63	.60	.57
12.6000	.53	.49	.45	.42	.39
12.8500	.37	.35	.33	.31	.29
13.1000	.27	.26	.25	.24	.23
13.3500	.22	.21	.21	.20	.20
13.6000	.19	.19	.18	.18	.18
13.8500	.17	.17	.17	.16	.16
14.1000	.16	.15	.15	.15	.15
14.3500	.14	.14	.14	.14	.14
14.6000	.13	.13	.13	.13	.13
14.8500	.13	.12	.12	.12	.12
15.1000	.12	.12	.12	.11	.11
15.3500	.11	.11	.11	.11	.11
15.6000	.10	.10	.10	.10	.10
15.8500	.10	.10	.10	.09	.09
16.1000	.09	.09	.09	.09	.09
16.3500	.09	.08	.08	.08	.08
16.6000	.08	.08	.08	.08	.08
16.8500	.08	.08	.07	.07	.07
17.1000	.07	.07	.07	.07	.07
17.3500	.07	.07	.07	.07	.07
17.6000	.06	.06	.06	.06	.06
17.8500	.06	.06	.06	.06	.06
18.1000	.06	.06	.06	.06	.05
18.3500	.05	.05	.05	.05	.05
18.6000	.05	.05	.05	.05	.05
18.8500	.05	.05	.05	.05	.05
19.1000	.05	.05	.05	.05	.05

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.3500	.05	.05	.05	.05	.05
19.6000	.05	.05	.05	.05	.05
19.8500	.04	.04	.04	.04	.04
20.1000	.04	.04	.04	.04	.04
20.3500	.04	.04	.04	.04	.04
20.6000	.04	.04	.04	.04	.04
20.8500	.04	.04	.04	.04	.04
21.1000	.04	.04	.04	.04	.04
21.3500	.04	.04	.04	.04	.04
21.6000	.04	.04	.04	.04	.04
21.8500	.04	.04	.04	.04	.04
22.1000	.04	.04	.04	.04	.04
22.3500	.04	.04	.04	.04	.04
22.6000	.04	.03	.03	.03	.03
22.8500	.03	.03	.03	.03	.03
23.1000	.03	.03	.03	.03	.03
23.3500	.03	.03	.03	.03	.03
23.6000	.03	.03	.03	.03	.03
23.8500	.03	.03	.03	.03	.03
24.1000	.03	.03	.03	.02	.02
24.3500	.02	.02	.02	.02	.02
24.6000	.02	.02	.02	.02	.02
24.8500	.02	.01	.01	.01	.01
25.1000	.01	.01	.01	.01	.01
25.3500	.01	.01	.01	.01	.01
25.6000	.01	.01	.01	.01	.01
25.8500	.01	.01	.01	.01	.01
26.1000	.01	.01	.01	.01	.01
26.3500	.00	.00	.00	.00	.00
26.6000	.00	.00	.00	.00	.00
26.8500	.00	.00	.00	.00	

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = POND 1C OUT
HYG Tag = 10

Peak Discharge = 3.08 cfs
Time to Peak = 12.3500 hrs
HYG Volume = 28551 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.6000	.00	.00	.00	.00	.00
9.8500	.00	.00	.00	.00	.00
10.1000	.00	.01	.01	.01	.01
10.3500	.01	.01	.01	.02	.02
10.6000	.02	.02	.03	.03	.04
10.8500	.04	.05	.06	.06	.07
11.1000	.08	.09	.10	.11	.12
11.3500	.13	.15	.17	.18	.20
11.6000	.23	.27	.33	.41	.52
11.8500	.65	.81	1.04	1.39	1.83
12.1000	2.30	2.69	2.92	3.03	3.07
12.3500	3.08	3.06	3.01	2.94	2.84
12.6000	2.73	2.61	2.50	2.39	2.29
12.8500	2.20	2.12	2.04	1.97	1.90
13.1000	1.84	1.78	1.73	1.68	1.64
13.3500	1.60	1.56	1.53	1.50	1.47
13.6000	1.44	1.41	1.38	1.36	1.33
13.8500	1.31	1.28	1.26	1.23	1.21
14.1000	1.19	1.17	1.14	1.12	1.10
14.3500	1.08	1.07	1.05	1.03	1.01
14.6000	1.00	.98	.96	.95	.93
14.8500	.92	.90	.89	.87	.86
15.1000	.84	.83	.81	.80	.78
15.3500	.77	.76	.74	.73	.72
15.6000	.71	.69	.68	.67	.65
15.8500	.64	.63	.62	.60	.59
16.1000	.58	.57	.56	.55	.54
16.3500	.53	.52	.51	.50	.49
16.6000	.48	.47	.46	.46	.45
16.8500	.44	.43	.42	.41	.41
17.1000	.40	.39	.39	.38	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.3500	.37	.36	.35	.35	.34
17.6000	.33	.33	.32	.31	.31
17.8500	.30	.29	.29	.28	.28
18.1000	.27	.26	.26	.25	.25
18.3500	.24	.24	.23	.23	.23
18.6000	.22	.22	.21	.21	.21
18.8500	.20	.20	.20	.20	.19
19.1000	.19	.19	.18	.18	.18
19.3500	.17	.17	.17	.16	.16
19.6000	.16	.16	.15	.15	.15
19.8500	.15	.15	.14	.14	.14
20.1000	.14	.14	.13	.13	.13
20.3500	.13	.13	.13	.12	.12
20.6000	.12	.12	.12	.12	.12
20.8500	.11	.11	.11	.11	.11
21.1000	.11	.11	.11	.11	.11
21.3500	.11	.10	.10	.10	.10
21.6000	.10	.10	.10	.10	.10
21.8500	.10	.10	.10	.10	.10
22.1000	.10	.10	.10	.10	.10
22.3500	.10	.10	.10	.09	.09
22.6000	.09	.09	.09	.09	.09
22.8500	.09	.09	.09	.09	.09
23.1000	.09	.09	.09	.09	.09
23.3500	.09	.09	.09	.09	.08
23.6000	.08	.08	.08	.08	.08
23.8500	.08	.08	.08	.08	.08
24.1000	.08	.07	.06	.06	.05
24.3500	.05	.04	.04	.04	.03
24.6000	.03	.03	.03	.02	.02
24.8500	.02	.02	.02	.02	.02
25.1000	.02	.02	.02	.02	.02
25.3500	.02	.01	.01	.01	.01
25.6000	.01	.01	.01	.01	.01
25.8500	.01	.01	.01	.01	.01
26.1000	.01	.01	.01	.01	.01
26.3500	.01	.01	.01	.01	.01
26.6000	.01	.01	.01	.01	.01
26.8500	.00	.00	.00	.00	.00
27.1000	.00	.00	.00	.00	.00
27.3500	.00	.00	.00	.00	

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = POND 1C OUT
HYG Tag = 100

Peak Discharge = 6.23 cfs
Time to Peak = 12.6000 hrs
HYG Volume = 105275 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.1500	.00	.00	.00	.00	.00
7.4000	.00	.00	.00	.00	.00
7.6500	.00	.00	.01	.01	.01
7.9000	.01	.01	.01	.01	.01
8.1500	.01	.02	.02	.02	.02
8.4000	.02	.03	.03	.04	.04
8.6500	.05	.05	.06	.06	.07
8.9000	.07	.08	.09	.09	.10
9.1500	.10	.11	.12	.13	.14
9.4000	.15	.15	.16	.17	.18
9.6500	.19	.20	.20	.21	.22
9.9000	.23	.24	.25	.26	.27
10.1500	.28	.29	.31	.32	.33
10.4000	.35	.36	.37	.39	.40
10.6500	.42	.44	.46	.47	.49
10.9000	.51	.53	.55	.57	.59
11.1500	.62	.65	.68	.72	.77
11.4000	.81	.86	.92	.99	1.08
11.6500	1.22	1.43	1.70	2.04	2.43
11.9000	2.87	3.41	3.94	4.47	4.93
12.1500	5.32	5.60	5.78	5.92	6.02
12.4000	6.10	6.16	6.20	6.22	6.23
12.6500	6.22	6.21	6.20	6.19	6.17
12.9000	6.15	6.13	6.11	6.08	6.05
13.1500	6.02	5.99	5.96	5.93	5.89
13.4000	5.86	5.82	5.78	5.75	5.71
13.6500	5.66	5.62	5.58	5.53	5.49
13.9000	5.44	5.39	5.34	5.29	5.24
14.1500	5.18	5.13	5.07	5.01	4.96
14.4000	4.90	4.84	4.77	4.71	4.65
14.6500	4.58	4.51	4.45	4.37	4.30

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.9000	4.23	4.15	4.08	4.00	3.92
15.1500	3.84	3.76	3.68	3.59	3.49
15.4000	3.41	3.30	3.19	3.10	3.01
15.6500	2.92	2.84	2.77	2.70	2.63
15.9000	2.57	2.51	2.46	2.40	2.35
16.1500	2.29	2.24	2.20	2.15	2.11
16.4000	2.07	2.03	1.99	1.95	1.92
16.6500	1.88	1.85	1.82	1.80	1.77
16.9000	1.74	1.72	1.69	1.67	1.65
17.1500	1.62	1.60	1.58	1.56	1.53
17.4000	1.51	1.49	1.47	1.45	1.43
17.6500	1.41	1.39	1.38	1.36	1.34
17.9000	1.32	1.30	1.28	1.26	1.24
18.1500	1.23	1.21	1.19	1.18	1.16
18.4000	1.15	1.13	1.12	1.10	1.09
18.6500	1.08	1.06	1.05	1.04	1.03
18.9000	1.01	1.00	.99	.98	.96
19.1500	.95	.94	.93	.92	.91
19.4000	.90	.89	.88	.87	.86
19.6500	.85	.84	.83	.82	.81
19.9000	.80	.79	.78	.77	.76
20.1500	.75	.74	.73	.73	.72
20.4000	.71	.70	.69	.69	.68
20.6500	.67	.66	.65	.65	.64
20.9000	.63	.63	.62	.61	.61
21.1500	.60	.59	.59	.58	.57
21.4000	.57	.56	.55	.55	.54
21.6500	.53	.53	.52	.51	.51
21.9000	.50	.50	.49	.49	.48
22.1500	.47	.47	.46	.46	.45
22.4000	.45	.44	.44	.43	.42
22.6500	.42	.41	.41	.40	.40
22.9000	.39	.39	.38	.38	.37
23.1500	.37	.36	.36	.35	.35
23.4000	.34	.34	.34	.33	.33
23.6500	.32	.32	.31	.31	.30
23.9000	.30	.29	.29	.28	.27
24.1500	.24	.22	.20	.19	.17
24.4000	.16	.14	.13	.12	.11
24.6500	.10	.09	.09	.08	.08
24.9000	.07	.07	.06	.06	.05
25.1500	.05	.04	.04	.04	.03
25.4000	.03	.03	.03	.03	.02
25.6500	.02	.02	.02	.02	.02
25.9000	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
26.1500	.02	.02	.01	.01	.01
26.4000	.01	.01	.01	.01	.01
26.6500	.01	.01	.01	.01	.01
26.9000	.01	.01	.01	.01	.01
27.1500	.01	.01	.01	.01	.01
27.4000	.01	.01	.01	.01	.01
27.6500	.01	.00	.00	.00	.00
27.9000	.00	.00	.00	.00	.00
28.1500	.00	.00	.00	.00	.00

Index of Starting Page Numbers for ID Names

APPENDIX C

NYSDEC STORMWATER SIZING CALCULATIONS

WATER QUALITY VOLUME WORKSHEET
FOR REDEVELOPMENT PROJECTS

JMC Project:	**15064**
Design Point:	**1**

River Knoll	Drainage Area:	**1A, 1B**

Initial Water Quality Treatment Volume

DESCRIPTION	Design Storm	Area	Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_E	I_N	%I	R_V	WQ_V
VALUE	1.5	9.88	0.98	1.65	26.69	0.290236504	**15,619**
UNITS	In	Ac	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ_V = 1-yr Storm Runoff)						

Runoff Reduction Techniques (Area)

DESCRIPTION	Total Area	Impervious Area
SYMBOL	A	I
Conservation of Natural Areas		
Sheetflow to Riparian Buffers or Filter Strips		
Vegetated Swale		
Tree Planting / Tree Pit		
Disconnection of Rooftop Runoff		
Stream Daylighting		
TOTAL		
UNITS	Ac	Ac

Adjusted Water Quality Treatment Volume from Runoff Reduction Techniques

DESCRIPTION	Design Storm	Area	Adjusted Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_{EA}	I_N	%I	R_V	WQ_V
VALUE	1.5	9.88	0.98	1.65	26.69	0.290236504	**15,619**
UNITS	In	Ac	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ_V = 1-yr Storm Runoff)						

Net Water Quality Treatment Volume for Standard Practices (25% I_E + 100% I_N)

DESCRIPTION	Design Storm	Area	Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_E	I_N	%I	R_V	WQ_V
VALUE	1.5	9.88	0.25	1.65	19.22	0.222981404	**12,000**
UNITS	In	Ac	Ac	Ac	%	CF	CF

Date Printed: 12/22/2016

WATER QUALITY VOLUME WORKSHEET
FOR REDEVELOPMENT PROJECTS

JMC Project: **15064**
Design Point: **2**

River Knoll | Drainage Area: **2A, 2B**

Initial Water Quality Treatment Volume

DESCRIPTION	Design Storm	Area	Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_E	I_N	%I	R_V	WQ_V
VALUE	1.5	6.86	0.19	0.78	14.17	0.177564248	**6,633**
UNITS	In	Ac	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ_V = 1-yr Storm Runoff)						

Runoff Reduction Techniques (Area)

DESCRIPTION	Total Area	Impervious Area
SYMBOL	A	I
Conservation of Natural Areas		
Sheetflow to Riparian Buffers or Filter Strips		
Vegetated Swale		
Tree Planting / Tree Pit		
Disconnection of Rooftop Runoff		
Stream Daylighting		
TOTAL		
UNITS	Ac	Ac

Adjusted Water Quality Treatment Volume from Runoff Reduction Techniques

DESCRIPTION	Design Storm	Area	Adjusted Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_{EA}	I_N	%I	R_V	WQ_V
VALUE	1.5	6.86	0.19	0.78	14.17	0.177564248	**6,633**
UNITS	In	Ac	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ_V = 1-yr Storm Runoff)						

Net Water Quality Treatment Volume for Standard Practices (25% I_E + 100% I_N)

DESCRIPTION	Design Storm	Area	Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_E	I_N	%I	R_V	WQ_V
VALUE	1.5	6.86	0.05	0.78	12.06	0.15852764	**5,922**
UNITS	In	Ac	Ac	Ac	%	CF	CF

Date Printed: 12/22/2016

RUNOFF REDUCTION VOLUME WORKSHEET

JMC Project:	**15064**
Design Point:	**1**

River Knoll	Drainage Area:	**PDA-1**

Total Water Quality Treatment Volume			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Initial Water Quality Volume	WQ_V	**15,619**	CF
Adjusted Water Quality Volume	WQ_V	**12,000**	CF

Minimum Runoff Reduction Volume			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	1.5	In
Total Area of *new* Impervious Cover	Aic	1.77	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.40	
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.95	CF
Impervious Cover targeted for Runoff Reduction [S x Aic]	Ai	0.71	Ac
TOTAL VOLUME Required [RR_V = (P x R_V x Ai) / 12]	RR_V	**3,672**	CF

Runoff Reduction Techniques (Volume)			
GREEN INFRASTRUCTURE PRACTICE / SMP	*SYMBOL*	*VALUE*	*UNITS*
INFILTRATION BASIN 1A	RR_V	12,126	CF
INFILTRATION BASIN 1B	RR_V	4,273	CF
TOTAL	RR_V	**16,399**	CF

Runoff Reduction	
Is Total RR_V > Adjusted WQ_V?	**YES**
Is Total RR_V > Minimum RR_V?	**YES**

Date Printed: 12/22/2016

RUNOFF REDUCTION VOLUME WORKSHEET

JMC Project:	**15064**
Design Point:	**2**

River Knoll	Drainage Area:	**PDA-2**

Total Water Quality Treatment Volume			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Initial Water Quality Volume	WQ_V	**6,633**	CF
Adjusted Water Quality Volume	WQ_V	**5,922**	CF

Minimum Runoff Reduction Volume			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	1.5	In
Total Area of *new* Impervious Cover	Aic	0.77	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.40	
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.95	CF
Impervious Cover targeted for Runoff Reduction [S x Aic]	Ai	0.31	Ac
TOTAL VOLUME Required [RR_V = (P x R_V x Ai) / 12]	RR_V	**1,587**	CF

Runoff Reduction Techniques (Volume)			
GREEN INFRASTRUCTURE PRACTICE / SMP	*SYMBOL*	*VALUE*	*UNITS*
STORMWATER PLANTERS	RR_V	1,851	CF
TOTAL	RR_V	**1,851**	CF

Runoff Reduction	
Is Total RR_V > Adjusted WQ_V ?	**NO**
Is Total RR_V > Minimum RR_V ?	**YES**

Date Printed: 12/22/2016

PROPRIETARY PRACTICE WORKSHEET

JMC Project:	**15064**
Design Point:	**1**
Drainage Area:	**1C**

Continuous Deflective Separation Unit

Rainfall Distribution Type: **III**

Coefficients for the equation unit peak
$[R = I_a / P]$
$[C_i = A \times R^2 + B \times R + C]$

	A	B	C
C_0	-1.774	0.3301	2.4577
C_1	1.8622	-0.7397	-0.4627
C_2	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	0.13	Ac
Area	A	0.29	Ac
Percent Impervious	%I	44.00	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.45	CF
TOTAL VOLUME Required $[WQ_V = (P \times R_V \times A) / 12]$	WQ_V	**697**	CF

Water Quality Peak Flow Calculation

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume	WQ_V	697	CF
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	1.5	In
Time of Concentration	t_c	0.1274	Hr
Runoff Volume $[Q = WQ_V / (A \times 3630)]$	Q	0.67	In
Curve Number $[CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25\ QP)^{½}]$	CN	89.73	
Curve Number	CN	90	
Initial Abstraction $[I_a = 200 / CN - 2]$	I_a	0.23	In
Ratio $[R = I_a / P]$	R	0.15	
$C_0 = A \times R^2 + B \times R + C$	C_0	2.47	
$C_1 = A \times R2 + B \times R + C$	C_1	-0.53	
$C_2 = A \times R2 + B \times R + C$	C_2	-0.16	
Unit Peak Discharge	q_u	652.98	$cfs/mi^2/in$
Peak Discharge $[Q_p = q_u \times A \times Q / 640]$	Q_p	**0.20**	cfs

Proposed Device

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Peak Flow Provided	Q_p	**0.7**	cfs
Water Quality Volume Provided $[WQ_V = 640 \times 3600 \times Q_P / q_u]$	WQ_V	**2,470**	CF
Model Designation		2015-4	
Quantity			

Date Printed: 12/22/2016

STREAM CHANNEL PROTECTION VOLUME Cp_v

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Unified Stormwater Sizing Criteria (See Section 4.4 & Appendix B.2)

RAINFALL DISTRIBUTION TYPE **III**

($R=I_a/P$)	**$C_i=A*R^2+B*R+C$**		**A**	**B**	**C**
	Coefficients for the equation unit peak	**C_0**	-1.774	0.3301	2.4577
	Coefficients for the equation unit peak	**C_1**	1.8622	-0.7397	-0.4627
	Coefficients for the equation unit peak	**C_2**	-0.0648	0.2276	-0.1932

D E S I G N P A R A M E T E R S				
	SYMBOL	UNITS	**PDA-2B**	
TOTAL DEVELOPED AREA	**A**	acres	5.20	
RAINFALL EVENT (1-year recurrence, 24-hr. duration)	**P_1**	inches	2.84	
RUNOFF CURVE NUMBER (proposed)	**CN**		70.00	
TIME OF CONCENTRATION (Use TR-55 equations)	**T_c**	hours	7.74	

D E S I G N C A L C U L A T I O N S					
CHANNEL PROTECTION VOLUME, (Cp_v) ((see Section 4.4 and Appendix B)					
INITIAL ABSTRACTION I_a=(200/CN)-2		**I_a**	inches	0.857	
RATIO $R=I_a/P_1$		**R**		0.30	
$C_0 = A*R^2 +B*R +C$		**C_0**		2.40	
$C_1 = A*R^2 +B*R +C$		**C_1**		-0.52	
$C_2 = A*R^2 +B*R +C$		**C_2**		-0.13	
UNIT PEAK DIS. $q_u=10\wedge(C_0+C_1*Log(T_c)+C_2*(log(T_c))^2)$		**q_u**	$cfs/mi^2/in$	68.21	
RUNOFF (TR-55) $Q=((P_1-I_a)\wedge 2)/(P_1+4*I_a)$		**Q**	inches	0.63	
PEAK DISCHARGE $Q_{p1}=q_u*A*Q$ (TR-5 1 year storm)		**Q_{p1}**	cfs	***0.35***	
RATIO of out/in flow $(q_o/q_i)=14.121*q_u\wedge^{(-0.9703)}$		**(q_o/q_i)**		0.23	
$(V_s/V_r)=0.682-1.43*(q_o/q_i)+1.64*(qo/qi)^2-0.804*(qo/qi)^3$		**(V_s/V_r)**		0.43	
HYG RUNOFF VOLUME V_r=Q*A*3630 (TR-55 1year)		**V_r**	cu. ft.	***11,839***	
			acres-ft	0.27	
REQUIRED STORAGE VOLUME Vs=(Vs/Vr)*V_r (Cpv)		**Vs**	**cu. ft.**	**5,048**	
			acres-ft	0.12	
Provided Runoff Reduction Volume		**RRv**	**CF**	1,850.84	
Net Channel Protection Volume Required				3,196.68	
STORAGE VOLUME PROVIDED	EXDT.tab	**(Cp_v)**	**cu. ft.**	**3,655**	
AVERAGE RELEASE $Q_{avg}=V_s/(24hr*3600sec)$		**Q_{avg}**	cfs	0.06	
MAXIMUM RELEASE $Q_{max}=2*Q_{avg}$		**Q_{max}**	cfs	0.12	

DESIGN OF OUTLET CONTROL STRUCTURE
ORIFII FOR EXTENDED DETENTION OF WATER QUALITY & STREAM CHANNEL PROTECTION VOLUMES

JMC Project No: **15064**
Computed By: BD
Checked BY: DL
Dwg, Ref: DA-1, DA-2

Project: River Knoll
Location: Ossining, NY

DESIGN PARAMETERS		SYMBOL	UNITS	
SUB AREA NAME				PDA-2
DRAINAGE AREA		A	acres	5.20
PRACTICE DESIGNATION				P-1
PRACTICE NAME				Wet Ext. Det.
PERCENTAGE PERMANENT POOL REQUIRED		PPR	%	20%
PERCENTAGE PERMANENT POOL PROVIDED		PPP		20%
PERCENTAGE FOREBAY PRETREATMENT POOL		PFR	%	10%
PERCENTAGE FOREBAY PRETREATMENT POOL PROVIDED		PFP		10%
TOTAL WATER QUALITY VOLUME REQUIRED		**WQvr**	cu. ft.	6,633
PERMANENT POOL REQUIRED Vpool=WQv*PPP		VR_{pool}	cu. ft.	1,327
PERMANENT POOL VOLUME PROVIDED		*VP_{pool}*	*cu. ft.*	*6,448*
FOREBAY PRETREATMENT REQUIRED Vpret=WQv*PFP		VR_{pret}	cu. ft.	663
FOREBAY PRETREATMENT PROVIDED		*VP_{pret}*	*cu. ft.*	*1,715*
ELEVATION PERMANENT POOL (orifice inv. above permanent pool)		E_1	(ft.)	304.50
Elev. Ext. Det. for rest of WQv (Use E-Q-V from PondPack at Volume WQVR)		E_2	(ft.)	304.53
EXTENDED DETENTION ELEV. PROVIDED (rounded UP)		E_{2P}	(ft.)	304.60
DESIGN WATER QUALITY ORIFICE	*(See Section 8.2 Step 6.)*			
VERIFY IF IS ENOUGH PERMANENT POOL PROVIDED				OKAY
VERIFY IF IS ENOUGH FOREBAY POOL PROVIDED				OKAY
EXTENDED DETENTION VOLUME REQUIRED	EDvr=WQvr-VRpool-VRpret	ED_{VR}	(cfs)	4,643
EXTENDED DETENTION VOLUME PROVIDED (to be)	EDvp=WQvp-VPpool	EDvp	cu. ft.	487
AVERAGE DISCHARGE (to be release in 24 hr)	$Q_0=ED_{VP}/(24hr*3600sec)$	Q_0	(cfs)	0.00564
AVERAGE HEAD WATER QUALITY	$H_0=(E_2-E_1)/2$	H_0	(ft.)	0.01
ORIFICE DIAMETER CALCULATION	$D_0=6.166*Q_0^{0.5}/H_0^{0.25}$	D_0	(in.)	1
ORIFICE DIAMETER ROUNDDOWN @ 1/8)		D_W	(in.)	1
ORIFICE DIAMETER PROVIDED	(suggested less than calculated)	D_W	(in.)	3
AVERAGE HEAD PROVIDED	$H_W=(Q_0/(C*\pi*D_W^2/4))^2=(Q_0/(0.02626*D_W^2))^2$	H_W	(ft.)	0.000569
EXTENDED DETENTION ORIFICE ELEV. PROVIDED	$E_{2P}=E_1+Dw/(2*12)+2*Hw$	**E_{2P}**	(ft.)	304.60
WATER QUALITY VOLUME PROVIDED WQ_{VP}	Use E-Q-V from PondPack at **E_{2P}**	WQvp	(cfs)	**6,935**
VERIFY IF ENOUGH WATER QUALITY IS PROVIDED				OKAY
DESIGN CHANNEL PROTECTION ORIFICE	*(See Section 8.2 Step 7.)*			
CHANNEL PROTECTION VOLUME REQUIRED		CP_{VR}	(cu. ft.)	**3,197**
PERMANENT POOL VOLUME PROVIDED		VP_{pool}	(cu. ft.)	6,448
TOTAL CHANNEL PROTECTION VOLUME REQUIRED	$TCP_{VR}=CP_{VR}+VP_{pool}$	**TCP_{VR}**	(cu. ft.)	9,645
ELEVATION PERMANENT POOL (orifice invert above permanent pool)	see above	E_1	(ft.)	304.50
EXTENDED DETENTION ELEV. PROVIDED (rounded,1)	see above	E_{2P}	(ft.)	304.60
EXTENDED DETENTION C_{PV} ELEVATION	Use E-Q-V from PondPack at Volume CPv	E_3	(ft.)	305.15
AVERAGE HEAD WATER QUALITY	$H_0=(E_3-E_1)/2$	H_0	(ft.)	0.32
AVERAGE HEAD CHANNEL PROTECTION	$H_1=(E_3-E_{2P})/2$	H_1	(ft.)	0.27
AVERAGE DISCHARGE (release rate in 24 hr)	$Q_{0C}=CP_{VR}/(24hr*3600sec)$	Q_{0C}	(cfs)	0.0370
AVERAGE DISCHARGE (calculated at WQ orifice)	$Q_W=0.02626*D_W^2*Hw^{0.5}$	Q_W	(cfs)	0.01
DISCHARGE CHANNEL PROTECTION	$Q_{1C}=Q_{0C}-Q_W$	Q_{1C}	(cfs)	0.0314
ORIFICE DIAMETER CALCULATION	$D_{1C}=6.166*Q_{1C}^{0.5}/H_1^{0.25}$	D_{1C}	(in.)	1.508
ORIFICE DIAMETER ROUNDDOWN @ 1/8)		D_{1C}	(in.)	1 4/8
ORIFICE DIAMETER PROVIDED		D_{CP}	(in.)	3
AVERAGE HEAD PROVIDED	$H_W=(Q_{1C}/(C*\pi*D_{CP}/4))^2=(Q_{1C}/(0.02626*D_{CP}^2))^2$	H_{CP}	(ft.)	0.02
EXTENDED DETENTION ELEV. PROVIDED	$E_{2CP}=E_{2P}+Dcp/(2*12)+2*Hcp$	**E_{2CP}**	(ft.)	304.76
TOTAL CHANNEL PROTECTION VOLUME PROVIDED	Use E-Q-V from PondPack at **E_{2CP}**	CPvp	(cu. ft.)	10,103
NET CHANNEL PROTECTION VOLUME PROVIDED	$CP_V=CP_{VP}$-VPpool		(cu. ft.)	**3,655**
VERIFY IF ENOUGH CHANNEL PROTECTION VOLUME IS PROVIDED				OKAY

APPENDIX D

TEST PIT AND PERCOLATION TEST DATA

CARLIN • SIMPSON & ASSOCIATES

Consulting Engineers
Geotechnical & Environmental

MEMO

DATE: **14 December 2016**

TO: **Mr. Brian Darcy, EIT**
JMC

FROM: **Robert B. Simpson, P.E.**
Meredith R. Anke, P.E

RE: **Proposed River Knoll Development**
40 Croton Dam Road
Ossining, New York

JOB NO: **16-207**

In accordance with our proposal dated 7 November 2016, we have performed a Subsurface Soil and Foundation Investigation at the referenced site. The following is a summary of the preliminary geotechnical design recommendations for the proposed stormwater management areas. The recommendations below are considered preliminary in nature and are intended to give guidance in the planning and designing of the new stormwater management system.

We understand that the planned construction will include four (4) new stormwater detention basins. We have been provided with a plan showing the locations of the new basins. During this study, 14 borings (PT-1 through PT-12) and two (2) probes (P-1 and P-2) were performed in the proposed stormwater management areas at the referenced site. The borings and probes were performed at the locations shown on the attached Boring Location Plan. In addition, we inspected two (2) existing monitoring wells (MW-1 and MW-2) that were found in the proposed stormwater management areas on the site. The well locations are also shown on the attached Boring Location Plan. The boring and probe observations are summarized in the following table.

Preliminary Boring and Probe Observations

Boring or Probe No.	Approximate Ground Surface Elevation	Observed Depth to Groundwater (Elevation)	Seasonal High Groundwater Elevation	Depth to Bottom of Existing Fill (Elevation)	Observed Depth to Bedrock (Elevation)
Northwest Basin					
PT-1	+363.5	NE to 11’0”	+355.0	NE	9’0” (+354.5)
PT-2	+363.5	NE to 9’6”	+355.0	NE	9’6” (+354.0)
PT-2A	+363.5	NE to 9’6”	+355.0	NE	9’6” (+354.0)
PT-9	+365.0	NE to 12’0”	+355.0	NE	NE to 12’0”
PT-10	+366.0	NE to 10’0”	+355.0	NE	10’0” (+354.0)
Central West Basin					
PT-3	+339.0	3’0” (+336.0)	+337.0	2’0” (+337.0)	NE to 9’0”
PT-4	+339.0	3’0” (+336.0)	+337.0	2’0” (+337.0)	10’6” (+328.5)
PT-11	+345.0	7’0” (+338.0)	+340.0	NE	8’6” (+336.5)
PT-12	+348.5	NE to 11’0”	+340.0	NE	11’0” (+337.5)

Boring or Probe No.	Approximate Ground Surface Elevation	Observed Depth to Groundwater (Elevation)	Seasonal High Groundwater Elevation	Depth to Bottom of Existing Fill (Elevation)	Observed Depth to Bedrock (Elevation)
Southwest Basin					
PT-5	+317.0	5’6” (+311.5)	+312.0	4’0” (+313.0)	NE to 17’0”
PT-6	+315.0	5’0” (+310.0)	+312.0	5’0” (+310.0)	NE to 12’0”
Southeast Basin					
PT-7	+307.0	NE to 5’0”	--	2’6” (+304.5)	NE to 5’0”
PT-7A	+305.0	9’0” (+296.0)	+299.5	3’0” (+302.0)	NE to 9’0”
PT-8	+305.0	10’0” (+295.0)	+298.0	4’0” (+301.0)	NE to 17’0”
P-1	+307.0	12’6” (+294.5)	+298.0	NR	NE to 15’0”
P-2	+309.0	14’0” (+295.0)	+298.0	NR	NE to 15’0”

NE- Not Encountered NR – Not Recorded

<u>Soil Conditions</u>

1. **Topsoil** – The surface layer in each of the borings, except for PT-7, PT-7A, and PT-8, consists of topsoil, which varies from approximately 0’4” to 0’9” in thickness.

2. **Asphalt** – At the surface in borings PT-7, PT-7A, and PT-8 is asphalt pavement that is approximately 0’2” in thickness.

3. **Existing Fill** – Below the surface layer in borings PT-3 through PT-8 is existing fill that consists of loose to medium dense brown or dark brown coarse to fine SAND, some (to and) Silt, trace (to little) coarse to fine Gravel. Some topsoil and bricks were encountered within the fill at select boring locations. The fill layer continued to depths ranging from 2’0” to 5’0” below the existing ground surface at the boring locations.

4. **Silty Sand with Gravel –** Underlying the surface layers and existing fill in each of the borings are layers of brown, gray, or red brown coarse to fine SAND, little (to and) Silt, trace (to and) coarse to fine Gravel. Ten of the borings were terminated in this stratum at final depths ranging from 5’0” to 17’0” below the ground surface. In the remaining locations, this layer extended to depths ranging from 8’6” to 11’0” beneath the existing ground surface.

5. **Weathered Bedrock** – Borings PT-2, PT-4, PT-10, and PT-12 were terminated at auger refusal on the probable bedrock surface at final depths ranging from 8’6” to 11’0” below the existing ground surface.

<u>Groundwater</u>

- Groundwater was encountered in seven (7) borings and two (2) probes at depths ranging from 3’0” to 14’0” below the existing ground surface. These depths correlate with water levels ranging from approximately elevation +294.5 to elevation +338.0.

- The seasonal high groundwater level was encountered between elevation +298.0 and elevation +355.0 as indicated in the table above.

- The groundwater observations from this study are summarized in the table above.

- We also inspected two (2) existing monitoring wells (MW-1 and MW-2) that were found in the proposed stormwater management areas on the site. The well observations are summarized in the following table.

Monitoring Well Observations

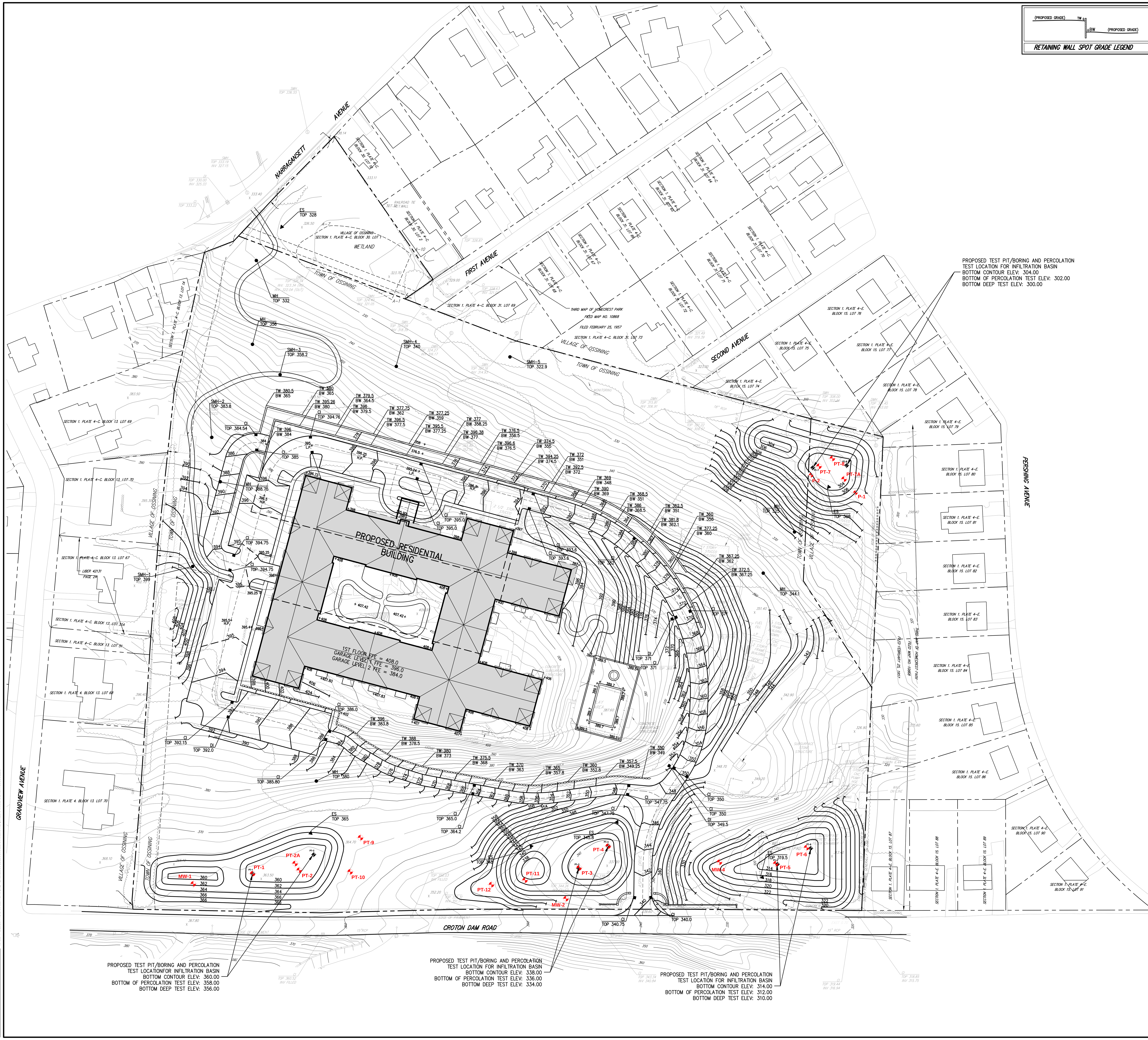
Monitoring Well No.	Approximate Ground Surface Elevation	Depth to Groundwater (Elevation)	Depth to Bottom of Well (Elevation)
MW-1	+363.0	7’6” (+355.5)	7’6” (+355.5)
MW-2	+343.0	5’0” (+338.0)	6’2” (+336.8)

Permeability Test Results

- During this investigation, borehole permeability tests were performed at nine (9) of the boring locations at elevations indicated by JMC. The test results are summarized in the following table.

Borehole Permeability Test Results

Boring No.	Basin Location	Test Depth (Elevation)	Permeability Rate
Northwest Basin			
PT-1	Northwest	5’6” (+358.0)	2.4 in/hr
PT-2	Northwest	5’6” (+358.0)	12.2 in/hr
PT-2A	Northwest	3’6” (+360.0)	3.6 in/hr
PT-9	Northwest	5’0” (+360.0)	2.5 in/hr
PT-10	Northwest	4’0” (+360.0)	4.3 in/hr
Central West Basin			
PT-3	Central West	2’0” (+337.0)	0.0 in/hr
PT-11	Central West	3’0” (+342.0)	4.1 in/hr
Southeast Basin			
PT-7A	Southeast	4’6” (+301.5)	0.0 in/hr
PT-8	Southeast	4’0” (+301.0)	0.0 in/hr



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 RETAINING WALL
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING DRAIN INLET
- EXISTING MANHOLE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- PROPOSED CONCRETE SIDEWALK
- PROPOSED DROP CURB AND RAMP
- PROPOSED FINISHED GRADE
- PROPOSED SPOT GRADE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED TYPE CI DRAIN INLET
- PROPOSED TYPE DI DRAIN INLET
- PROPOSED TRENCH DRAIN
- PROPOSED RIP-RAP SUMP
- PROPOSED HEADWALL
- PROPOSED UNDERGROUND ROOF RUNOFF STORAGE TANK
- PROPOSED WATER QUALITY STRUCTURE
- PROPOSED SUBSURFACE DRAINAGE OUTLET CONTROL STRUCTURE
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT
- PROPOSED HYDRANT
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)
- PROPOSED DOUBLE ARM LIGHTING STANDARD (DESIGN BY OTHERS)
- PROPOSED SINGLE ARM LIGHTING STANDARD (DESIGN BY OTHERS)
- DP-2 BORING LOCATION AND DESIGNATION
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED DITCH OR SWALE
- PROPOSED RIP-RAP
- EXISTING FEATURE TO BE REMOVED

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "TOPOGRAPHY OF PROPERTY PREPARED FOR HOVNANIAN ENTERPRICES, INC.," PREPARED BY THOMAS C. MERRITTS LAND SURVEYORS, P.C., DATED 02/27/2006.

No.	Revision	Date	By

Previous Editions Obsolete

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GRADING PLAN

RIVER KNOLL
40 CROTON DAM ROAD
TOWN OF OSSINING, NEW YORK

PROGRESS PLOTTING

Drawing: 15064-GRAD
Date: 2016-11-22
Time: 2:37 PM
By: PD

Drawn: JSJ		Approved: AG
Scale: 1" = 40'		
Date: 10/02/2015		
Project No: 15064		
15064-GRAD	GRAD	GRAD.scr

Drawing No: SP-2

BORING LOCATION PLAN
CSA 16-207 12.14.16

APPENDIX E

STORMWATER PRACTICE/CDS UNITS OPERATION, MAINTENANCE AND MANAGEMENT INSPECTION CHECKLIST

JMC Project 15064
River Knoll
40 Croton Dam Road
Ossining, 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	• Refer to Figures A5.11, A5.12, A5.13 & A5.14 within the NYSDEC New York State Standard and Specifications for Erosion and Sediment Control
Stone Check Dam	Weekly + After Each Rain	• Correct all damage immediately. • Notify design engineer if significant erosion has occurred between structures as a liner of stone or other suitable material maybe required in this section of the channel. • Remove sediment accumulated behind the dam as needed to allow the channel to drain through the stone check dam and prevent large flows from carrying sediment over the dam. • Replace stones as needed to maintain the design cross section of the structures.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Vegetated Swale/Open Channel/Level Spreader	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.
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 Basin	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.
CDS Water Quality Structure	(See Manufacturer's Maintenance)	• 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:

Glenco Group LLC
Glen Vetromile
670 White Plains Road
Scarsdale, NY 10583
Phone: (914) 472-4521
Fax: (646) 473-1034
Email: glen@glencogroupny.com

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APPENDIX F

STORMWATER PRACTICE/CDS UNITS OPERATION, MAINTENANCE AND MANAGEMENT INSPECTION CHECKLIST

Infiltration Basin Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Runoff diverted		
Soil permeability tested		
Groundwater / bedrock depth		
2. Excavation		
Size and location		
Side slopes stable		
Excavation does not compact subsoils		
3. Embankment		
Barrel		
Anti-seep collar or Filter diaphragm		
Fill material		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Final Excavation		
Drainage area stabilized		
Sediment removed from facility		
Basin floor tilled		
Facility stabilized		
5. Final Inspection		
Pretreatment facility in place		
Inlets / outlets		
Contributing watershed stabilized before flow is routed to the factility		

Comments:

Actions to be Taken:

APPENDIX G

CONTRACTOR CERTIFICATION

JMC Project 15064
River Knoll
40 Croton Dam Road
Town of Ossining, NY

CONTRACTOR'S CERTIFICATION

"I hereby certify that I understand and agree to comply with the terms and conditions 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 terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit 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 there are significant penalties for submitting false information that I do not believe to be true, including the possibility of time 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:_________________________

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APPENDIX H

DRAWINGS

EXISTING DRAINAGE LEGEND

- EXISTING GRADE
- WETLAND LINE
- EXISTING STONE WALL
- WATERSHED BOUNDARY LINE
- LIMIT OF SOIL GROUPS LINE
- FLOW PATH LINE
- CrC (B) — SOIL DESIGNATION AND HYDROLOGIC SOIL GROUP

NOTES:

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY TITLED, "----," PREPARED BY JMC, PLLC, DATED ----.
2. GEOTECHINAL BORING/TEST PIT LOCATIONS DEPICTED ON THIS PLAN WERE TAKEN FROM THE GEOTECHNICAL MEMO TITLED, "PRELIMINARY BORING AND PROBE OBSERVATIONS", DATED 12/14/2016, PREPARED BY CARLIN-SIMPSON & ASSOCIATES.
3. THE SOIL TYPES, HYDROLOGIC SOIL GROUPS AND BOUNDARY INFORMATION SHOWN ON THIS PLAN WERE TAKEN FROM THE UNITED STATES DEPARTMENT OFAGRICULTURE (USDA) WEB SOIL SURVEY.
4. THE TOPOGRAPHIC CONTOURS DEPICTED ON THIS PLAN HAVE BEEN SUPPLEMENTED BY THE WESTCHESTER COUNTY GIS BASE MAP. THE WESTCHESTER COUNTY GIS DATASET CONTAINS CONTOUR LINES MODELED AT A TWO FOOT INTERVAL. THE SOURCE INFORMATION USED IN THE COLLECTION OF THE DATASET WAS PART OF THE NEW YORK STATE DIGITAL ORTHOIMAGERY PROGRAM; PHOTOS TAKEN IN APRIL 2004. THE VERTICAL DATUM IS NAVD88.

   THE COUNTY OF WESTCHESTER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE COMPLETENESS OR ACCURACY OF THE DATA AND ASSUMES NO LIABILITY WHATSOEVER FOR ANY PRODUCT OR ANALYSIS DERIVED FROM OR BASED ON THE DATA.

GIS GEOGRAPHIC INFORMATION SYSTEMS

THE 2-FOOT CONTOURS DEPICTED ON THIS PLAN ARE INTENDED TO BE USED FOR PLANNING & PRELIMINARY ENGINEERING APPLICATIONS. THEY ARE NOT INTENDED TO BE USED IN ENGINEERING DESIGN AND DO NOT NEGATE THE NEED FOR A FIELD SURVEY. THE WESTCHESTER COUNTY GIS DATASET CONTAINS CONTOUR LINES MODELED AT A TWO FOOT INTERVAL. THE SOURCE INFORMATION USED IN THE COLLECTION OF THE DATASET WAS PART OF THE NEW YORK STATE DIGITAL ORTHOIMAGERY PROGRAM; PHOTOS TAKEN IN APRIL 2004. VERTICAL DATUM IS NAVD88.
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No.	Revision	Date	By

APPLICANT/OWNER:
GLENCO
9 RIDGE ROAD
BRONXVILLE, NY 10708

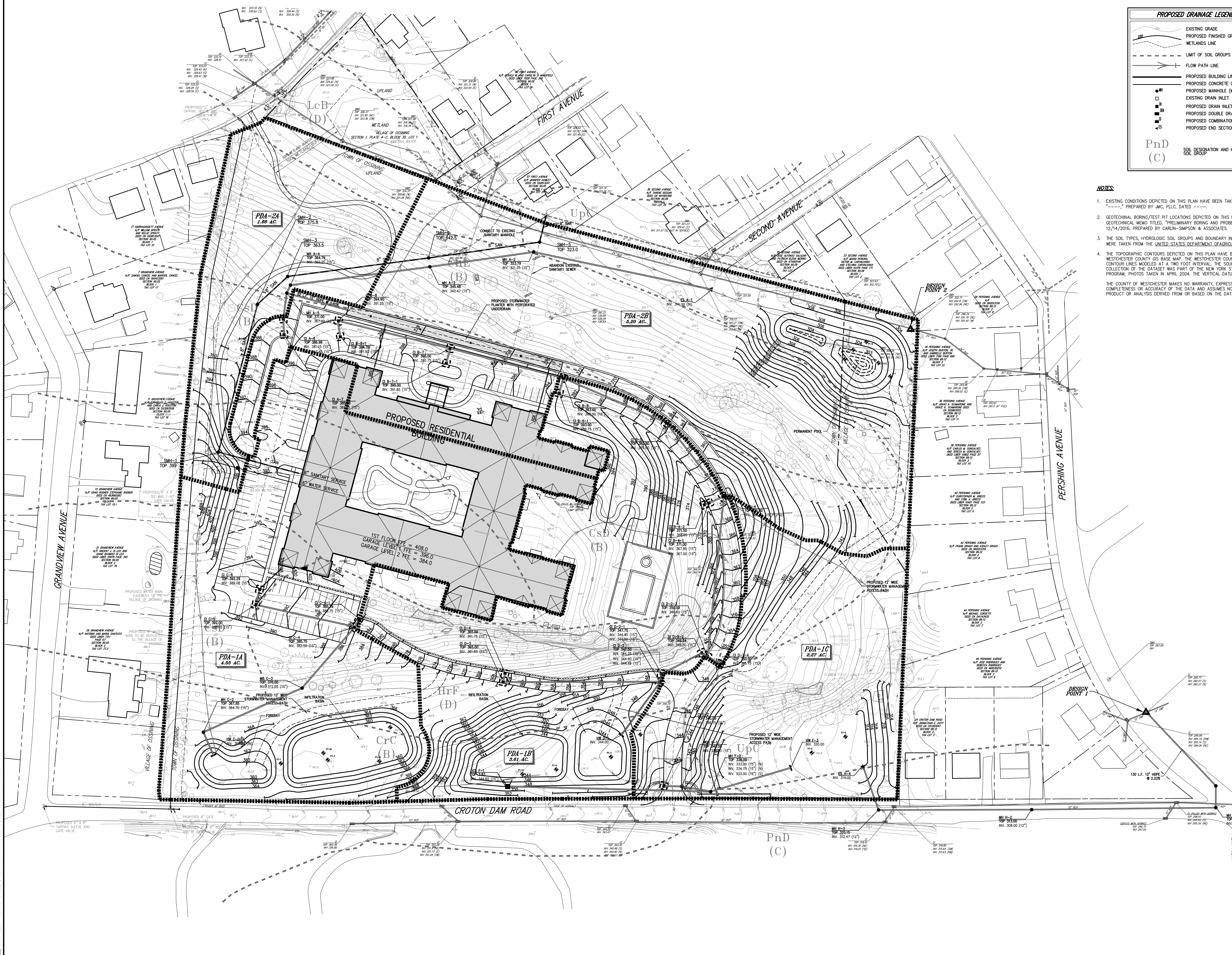
ARCHITECT:
MINNO WASKO
80 LAMBERT LANE
LAMBERTVILLE, NEW JERSEY 08530

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC
JMC Site Development Consultants, LLC
John Meyer Consulting, Inc.
120 BEDFORD ROAD • ARMONK, NY 10504
voice 914.273.5225 • fax 914.273.2102
www.jmcpllc.com

EXISTING DRAINAGE AREA MAP

RIVER KNOLL
40 CROTON DAM ROAD
TOWN OF OSSINING, NEW YORK

Drawn:	JSJ	Approved:	AG
Scale:	1" = 40'		
Date:	XX/XX/2016		
Project No:	15064		
15064-DRAINAGE	EDA	--	
Drawing No:	DA-1		



PROPOSED DRAINAGE LEGEND

- EXISTING GRADE
- PROPOSED FINISHED GRADE
- WETLANDS LINE
- LIMIT OF SOIL GROUPS LINE
- FLOW PATH LINE
- PROPOSED BUILDING LINE
- PROPOSED CONCRETE CURB
- MH — PROPOSED MANHOLE (MH)
- EXISTING DRAIN INLET
- DI — PROPOSED DRAIN INLET (DI)
- DDI — PROPOSED DOUBLE DRAIN INLET (DDI)
- CI — PROPOSED COMBINATION INLET (CI)
- ES — PROPOSED END SECTION (ES)
- PnD (C) — SOIL DESIGNATION AND HYDROLOGIC SOIL GROUP

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40 CROTON DAM ROAD
TOWN OF OSSINING, NEW YORK

Drawn:	JSJ	Approved:	AG
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Project No:	15064		
15064-DRAINAGE	PDA	--	
Drawing No:	DA-2		