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# STORMWATER POLLUTION PREVENTION PLAN

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## *Beacon Commons*

**16 West Main Street  
City of Beacon, NY**

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Owner:* Farrell Building Company  
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*Dated:* 10/29/2019

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## **I. INTRODUCTION**

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This Stormwater Pollution Prevention Plan has been prepared for the 1.51-acre Beacon Commons site, located in the City of Beacon, Dutchess County, New York (hereinafter referred to as the "Site"). The site is bordered by residential properties to the north, West Main Street to the south, 2-Way Brewing Company to the east, and Bank Street to the west. The development has been designed in accordance with the following:

- Requirements of the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-15-002, effective January 29, 2015, last modified November 23, 2016.
- Chapter 190 "Stormwater Management and Erosion and Sediment Control" of the City of Beacon Zoning Code
- New York State Stormwater Management Design Manual

The existing site consists of a tall one-story brick building and a parking lot area. The site will be redeveloped with a 62-unit 4-story apartment building comprised of 33 one-bedroom and 29 two-bedroom units.

## **II. STORMWATER MANAGEMENT PLANNING**

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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:

- Soil disturbances of one (1) 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, the site does not contain, nor is it immediately adjacent to any properties listed on the State or National Register of Historic Places.

### **The Six Step Process for Stormwater Site Planning and Practice Selection**

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

#### **Step 1: Site Planning**

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

#### **Step 2: Determine Water Quality Treatment Volume (WQv)**

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

- **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.

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.

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

RRv is required for this project since it is a combination of both new development and redevelopment.

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

Green infrastructure techniques are grouped into two categories:

- Practices resulting in a reduction of contributing area such as preservation/restoration of conservation areas, vegetated channels, etc.
- Practices resulting in a reduction of contributing volume such as green roofs, stormwater planters, and rain gardens.

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

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

- **Conservation of Natural Areas**
  - The majority of the site is developed and has been for decades. There are undisturbed areas that appear large enough that could be planned to be included within a conservation easement. However, the property owner is not planning to designate the area as a conservative easement. Therefore, there is no area to be subtracted from the contributing area for the WQv calculation.
- **Sheet flow to Riparian Buffers or Filter Strips**
  - There are no well vegetated areas on-site downstream of the developed area that lend an opportunity as a buffer and still meet the minimum contributing length of flow. This practice is not practical for this project since these items are typically used in a residential application.

- **Vegetated Swales**
  - The use of sheet flow into vegetated swales cannot be implemented as there is not any location with adequate width and length.
- **Tree Planting / Tree Pits**
  - The project includes tree planting around its perimeter as part of the proposed landscaping plan. There are two small depressed landscaped islands that contain tree plantings to treat stormwater. However, the new trees are not credited towards area reduction for the water quality volume.
- **Disconnection of Rooftop Runoff**
  - This practice is not practical for this project since these items are typically used in a residential application for small rooftop areas.
- **Stream Daylighting**
  - This practice is not possible for this project since there are no existing streams.
- **Rain Gardens**
  - A small rain garden is used to treat runoff from sidewalk areas along the West Main Street frontage of the site.
- **Green Roofs**
  - Green roofs were not considered for this project due to RRV requirements being met via subsurface infiltration and the rain garden.
- **Stormwater Planters**
  - Infiltration planters are typically proposed at various locations around proposed buildings to collect and infiltrate runoff from portions of the building rooftops. Small drainage areas, less than 15,000 square feet can be collected by roof drains and discharged into stormwater planters which infiltrate stormwater prior to entering the underground storm pipes. Stormwater planters could possibly be constructed along Bank Street and at the corner of West Main Street between the building and property line but other green practices are better suited and will not take up space along the right-of-way.
- **Rain Barrels and Cisterns**
  - Underground storage tanks could be installed to collect stormwater runoff to be used for irrigation purposes. At this time the project will not have an irrigation system for the

landscaped areas. There are other green practices proposed to meet the RRv requirements.

- **Porous Paving**

- Porous pavements were not considered for this project because they are better suited for paved areas with low traffic activity. As such the RRv requirements are being met via a subsurface infiltration system and rain garden.

- **Standard Practices with RRv Capacity**

- **Biofilters and Bioretention Basins** – These surface practices cannot be proposed due to the limited landscaped area.
- **Infiltration Practices** – A subsurface infiltration system is proposed to treat and retain runoff from the majority of the site.

The Minimum RRv capacity required must be provided by green infrastructure techniques to verify that the RRv requirement has been met. The RRv that is provided by the green infrastructure techniques can then be subtracted from the Total Required WQv that must be provided by the SMP's.

#### Step 4: Determine the minimum RRv Required

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

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

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

- **Infiltration Practices** – A subsurface infiltration system is proposed to treat and retain runoff from the majority of the site. According to Section 3.6 of the Design Manual, 100% of the WQv provided by an Infiltration Practice can be applied towards meeting the RRv criteria.

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

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

##### **I. 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 for a redevelopment project is not required if there is no increase in impervious area or changes to hydrology that increase the discharge rate. This criterion, as defined in Chapter 4 of New York State Stormwater Design Manual, is not based on a pre versus post-development comparison. However, for a redevelopment project this requirement is relaxed. If the hydrology and hydraulic study shows that the post-construction 1-year 24 hour discharge rate and velocity are less than or equal to the pre-construction discharge rate, providing 24 hour

detention of the 1-year storm to meet the channel protection criteria is not required.

**2. Overbank Flood ( $Q_p$ ) which is the 10 year storm.**

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

**3. Extreme Storm ( $Q_f$ ) which is the 100 year storm.**

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

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

### **III. STUDY METHODOLOGY**

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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, 25, 100-year storm recurrence intervals were reviewed in the design of the stormwater management facilities (see Appendix A 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 National Engineering Handbook, Section 4 - Hydrology", dated March 1985.
7. The United States Department of Agriculture Natural Resources Conservation Service Technical Report No. 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986.
8. 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 3.16 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.

9. All hydrologic calculations were performed with the Bentley PondPack software package version 10.0.
10. The New York State Stormwater Management Design Manual, revised January 2015.
11. New York Standards and Specifications for Erosion and Sediment Control, November 2016.
12. The storm flows for the 1, 10, 25, & 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	2.61
10 Year	4.70
25 Year	5.90
100 Year	8.34

#### **IV. EXISTING CONDITIONS**

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The existing conditions of the project site consists of a tall one story brick building and associated parking lot. Some of the stormwater is collected by a storm sewer system on site

while the rest of the stormwater runs offsite onto West Main Street where it is collected by an undersized rain garden before entering the municipal storm sewer system. After stormwater runoff exits the project site, it all flows to the storm sewer manhole located at the intersection of Bank Street and West Main Street.

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

- Forest, vegetative cover
- Topography (contour lines, existing flow paths, steep slopes, etc.)
- Soil (hydrologic soil groups, highly erodible soils, etc.)

Based on the USDA Web soil survey, all on-site soils are well drained and belong to hydrological group B.

One Design Point (DP-I) was identified for comparing peak rates of runoff in existing and proposed conditions. Three separate drainage areas were identified in existing conditions based on the existing drainage divides at the site.

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

Existing Drainage Area 1A (EDA-1A) is 0.44 acres in size and is located on the northern portion of the site along Bank Street. This area consists of the upper parking area and a portion of the existing building. This drainage area is collected by an on-site storm sewer and drains to the municipal storm system in Bank Street, then towards the manhole at the intersection of Bank Street and West Main Street which is designated as Design Point I.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 84 and 5 minutes, respectively. Refer to Drawing DA-I in Appendix F.

Existing Drainage Area 1B (EDA-1B) is 0.87 acres in size and is located on the southern portion of the site along West Main Street. This area consists of the lower parking area and a portion of the existing building. This drainage area is collected by an existing undersized rain garden area and drains towards the manhole at the intersection of Bank Street and West Main Street, designated as Design Point 1.

The Curve Number (CN) and Time of Concentration (T<sub>c</sub>) for this drainage area are 79 and 5 minutes, respectively. Refer to Drawing DA-1 in Appendix F.

Offsite Drainage Area (Offsite) is 5.57 acres in size and is located to the north and east of the site. This area consists of the nearby residential and business properties uphill from the project site. Under existing conditions, this drainage area runs onto the site and combines with EDA-1A and EDA-1B. The runoff is then collected by on-site drain inlets and pipes within an easement. The runoff drains towards the manhole at the intersection of Bank Street and West Main Street, designated as Design Point 1.

The Curve Number (CN) and Time of Concentration (T<sub>c</sub>) for this drainage area are 75 and 9 minutes, respectively. Refer to Drawing DA-1 in Appendix F.

The peak rates of runoff to the design point 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)**

<b>Storm Recurrence Interval</b>	<b>DP-1</b>
1 year	4.83
10 year	14.87
25 year	21.87
100 year	35.39

The volumes of runoff to the design point are shown in the table below.

**Table 2**  
**Summary of Runoff Volumes in Existing Conditions**  
**(Cubic Feet)**

<b>Storm Recurrence Interval</b>	<b>DP-1</b>
1 year	19,039
10 year	57,123
25 year	82,113
100 year	137,159

## **V. PROPOSED CONDITIONS**

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The proposed improvements consist of the replacing the existing building and parking areas with a four-story residential apartment building totaling 62 one- and two-bedroom units. The associated parking lot will be redeveloped as well.

The proposed drainage improvements include a variety of stormwater practices, such as tree plantings in depressed curb islands, rain garden, subsurface infiltration system, and a hydrodynamic separator water quality structure. After treatment for water quality, stormwater will be discharged from the rain garden and subsurface infiltration system using outlet control structures to control for peak flows.

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

### **The Six Step Process For Stormwater Site Planning and Practice Selection**

#### **Step 1: Site Planning**

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

- Preserving hydrology - Maintaining drainage divides

- Floodplain considerations - The site does not lie within the 100 year flood zone according to the National Flood Insurance Program Flood Insurance Rate Map (FIRM) No. 36027C0463E, effective date 05/02/2012.
- 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.)

#### Step 2: Determine Water Quality Treatment Volume (WQv)

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

- Rain Garden
- Subsurface Infiltration System

#### Step 4: Determine the minimum RRv Required

RRv<sub>min</sub> calculations can be found in Appendix 'B'. RRv<sub>min</sub> was met through

- Rain Garden
- Subsurface Infiltration System

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

### • **INFILTRATION SYSTEMS**

#### Subsurface Infiltration System (I-2)

##### Description

An infiltration practice that stores the water quality volume in underground units, before it is infiltrated into the ground.

Non Standard/Alternative SMP's to Address Remaining Water Quality Volume (for  
Redevelopment Projects)

- **Hydrodynamic Separators**

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

- **INFILTRATION SYSTEMS**

Infiltration Basin (I-2)

Description

An infiltration practice that stores the water quality volume in underground units, before it is infiltrated into the ground.

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

1. Feasibility – Stormwater practices are designed based upon unique physical environmental considerations noted in the NYS Stormwater Management Design Manual (NYSSMDM).
2. Conveyance – The design conveys runoff to the designed stormwater practice in a manner that is safe, minimizes erosion and disruption to natural drainage channel and promotes filtering and infiltration.
3. Pretreatment – All stormwater practices provide pretreatment as required in accordance with NYSSMDM design guidelines.
4. Treatment Geometry – The plan provides water quality treatment in accordance with NYSSMDM

guidelines.

5. Environmental/Landscaping –Extensive landscaping has been provided for each proposed stormwater practice to enhance pollutant removal and provide aesthetic enhancement to the property.
6. Maintenance – Maintenance for the environment practices has been provided and is detain the SWPPP Report as required. Maintenance access is provided in the design plans.

In order to determine the post-development rates of runoff generated on-site, the following drainage areas were analyzed in the post-development conditions. These areas are graphically depicted on Drawing DA-2 "Proposed Drainage Area Map" located in Appendix F.

Similarly, one Design Point (DP-1) was identified for comparing peak rates of runoff in existing and proposed conditions. However, five separate drainage areas were identified in proposed conditions based on the proposed drainage divides at the site.

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

Proposed Drainage Area 1A (PDA-1A) is 1.05 acres in size and is the majority of the developed site. This area consists of the building and upper parking lot area and landscaping. This drainage area drains towards the subsurface infiltration system, where smaller storms are infiltrated, and larger storms are slowly released to the storm sewer system similar to existing conditions. Infiltration rates in the subsurface infiltration system were assumed based on saturated hydraulic conductivity data from the USDA Web Soil Survey.

The Curve Number (CN) and Time of Concentration (T<sub>c</sub>) for this drainage area are 93 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix F.

Proposed Drainage Area 1B (PDA-1B) is 0.12 acres in size and consists of the entrance driveway leading from West Main Street. This drainage area is collected and treated by a First Defense hydrodynamic separator structure located at the intersection of the driveway with West Main



Street. The stormwater is then released to the storm sewer system similar to existing conditions.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 98 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix F.

Proposed Drainage Area IC (PDA-IC) is 0.09 acres in size and consists of the sidewalk and landscape area along the West Main Street frontage. This drainage area is diverted towards a small rain garden where small storm events are allowed to pond and be treated. Larger storm events will be released to the storm sewer system similar to existing conditions. Infiltration rates in the rain garden were assumed based on saturated hydraulic conductivity data from the USDA Web Soil Survey.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 69 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix F.

Proposed Drainage Area ID (PDA-ID) is 0.05 acres in size and consists of the remaining landscaped areas along the West Main Street and Bank Street frontage. This drainage area is allowed to run off the site onto the adjacent sidewalks and roadways where it is captured by the storm sewer system similar to existing conditions.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 65 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix F.

Offsite Drainage Area (Offsite) is 5.57 acres in size and is located to the north and east of the site. This area consists of the nearby residential and business properties uphill from the project site. Under proposed conditions, this drainage area is the same as existing conditions. However, instead of flowing onto the site, the off-site runoff is collected by drain inlets and conveyed to a proposed on-site storm sewer system which bypasses the on-site SMPs and is directed towards the manhole at the intersection of Bank Street and West Main Street, similar to existing conditions.

The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 75 and 9 minutes, respectively. Refer to Drawing DA-1 in Appendix F.

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)**

<b>Storm Recurrence Interval</b>	<b>DP-I</b>
1 year	3.83
10 year	14.27
25 year	20.38
100 year	35.27

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)**

<b>Design Point</b>	<b>Storm Recurrence Frequency (Years)</b>	<b>Existing Peak Runoff Rate (cfs)</b>	<b>Proposed Peak Runoff Rate (cfs)</b>	<b>Percent Reduction (%)</b>
I	1 year	4.83	3.83	20.70
	10 year	14.87	14.27	4.03
	25 year	21.87	20.38	6.81
	100 year	35.39	35.27	0.34

The volumes of runoff are shown in the following Table.

**Table 5**  
**Summary of Runoff Volumes in Proposed Conditions**  
**(Cubic Feet)**

<b>Storm Recurrence Interval</b>	<b>DP-I</b>
1 year	17,342
10 year	55,942
25 year	81,157
100 Year	135,569

The Reductions in Runoff Volumes when comparing in existing and proposed conditions are shown in the Table 6, below:

**Table 6**  
**Summary of Runoff Volumes (Existing & Proposed Conditions)**  
**(Cubic Feet)**

Design Point	Storm Recurrence Frequency (Years)	Total Existing Volume (cf)	Total Proposed Volume (cf)	Percent Reduction (%)
I	1 year	19,039	17,342	8.91
	10 year	57,123	55,942	2.07
	25 year	82,113	81,157	1.16
	100 Year	137,159	135,569	1.16

As demonstrated in Table 4, the proposed stormwater improvements will result in reductions of peak rates of runoff for all storms and design points analyzed. As demonstrated in Table 6, the proposed stormwater improvements will also result in reductions of stormwater runoff volume when comparing existing and proposed conditions.

## **VI. SOIL EROSION & SEDIMENT CONTROL**

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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," 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.

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 E 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:

<b><u>SYM.</u></b>	<b><u>HYDRO.</u></b>	<b><u>SOIL GROUP</u></b>	<b><u>DESCRIPTION</u></b>
DwB	B		Dutchess-Cardigan complex, undulating, rocky

**DwB, Dutchess-Cardigan complex, undulating, rocky**

This soil consists of very deep, well drained Dutchess soils and moderately deep, well drained Cardigan soils that formed in glacial till deposits. It is on hilltops and undulating till plains that are underlain by folded shale bedrock. Dutchess soils are commonly on lower concave slopes and Cardigan soils are commonly on upper slopes, hilltops, and near areas of rock outcrop. This unit consists of about 40 percent Dutchess soils, 30 percent Cardigan soils, and 30 percent other soils and rock outcrop. Depth to the top of a seasonal high water table is more than 6 feet. Available water capacity is low.

Hydrologic group: **B**

Erosion Hazard Rating: **SLIGHT**

#### On-Site Pollution Prevention

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

- Silt Fence
- Baled Erosion Fence
- 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, construction ditches, stabilized construction access, temporary seeding, mulching and sediment traps with temporary riser and anti-vortex devices.

Throughout the construction of the proposed redevelopment, temporary control facilities will be implemented to control on-site erosion and sediment transfer. Construction ditches, if required, will be used to direct stormwater runoff to excavated drop inlet protections for settlement. Descriptions of the temporary sediment & erosion controls that will be used during the development of the site including silt fence, stabilized construction access, seeding, mulching, inlet protection, and haybales are as follows:

1. Silt Fence is constructed using a geotextile fabric. The fence will be either 18 inches or 30 inches high. The height of the fence can be increased in the event of placing these devices on uncompacted fills or extremely loose undisturbed soils. The fences will not be placed in areas which receive concentrated flows such as ditches, swales and channels nor will the filter fabric material be placed across the entrance to pipes, culverts, spillway structures, sediment traps or basins.
2. Stabilized Construction Access consists of AASHTO No. 1 rock. The rock entrance will be a minimum of 50 feet in length by 24 feet in width by 8 inches in depth.
3. Seeding will be used to create a vegetative surface to stabilize disturbed earth until at least 80% of the disturbed area has a perennial vegetative cover. This amount is required to adequately function as a sediment and erosion control facility. Grass lining will also be used to line temporary channels and the surrounding disturbed areas.
4. Mulching is used as an anchor for seeding and disturbed areas to reduce soil loss due to storm events. These areas will be mulched with straw at a rate of 3 tons per acre such that the mulch forms a continuous blanket. Mulch must be placed after seeding or within 48 hours after seeding is completed.
5. Inlet Protection will be provided for all stormwater basins and inlets with the use of curb & gutter inlet protection and stone & block inlet protection structures, which will keep silt, sediment and construction debris out of the storm system. Existing structures within existing paved areas will be protected using “Silt Sacks” inside the structures.

6. Haybales may be used along existing paved areas to intercept sediment from stormwater runoff generated by upstream soil disturbance. Haybales may also be placed around temporary soil stockpile areas on pavement.

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  $\frac{1}{3}$  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.

#### Solid Waste Management and Portable Sanitary Management

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

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

to eliminate the potential for contaminants and wash water from entering the storm drain system.

#### Permanent Control Measures and Facilities for Long Term Protection

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

1. Rain Gardens which are shallow depressions that treat stormwater as it flows through a soil matrix and is either returned to the storm drain system or discharged overland. These practices will consist of a ponding depth of 6 inches, grass/landscaping with a layer of mulch, 12 to 18 inches of soil media, 6 to 12 inches of washed stone, which will enable removal of pollutants and sediment generated by the rooftop and other small impervious areas. Refer to Appendix 'C' for the Typical Rain Garden Runoff Reduction Volume Calculation.
2. First Defense Water Quality Structure will be used to provide pretreatment of the water quality flow rate for separating sediment, debris, floatables, etc. from the runoff prior to discharge to the SMP's. The First Defense Water Quality Structure has been designed to treat up to the required water quality volume and appropriately handle all storm frequencies without the resuspension of solids. The system will provide 80% TSS removal rate for particles having a mean particle size of 125 microns for stormwater runoff.
3. Subsurface Infiltration System (I-2) which is a standard SMP that will be used to treat the runoff volume generated from a portion of the developed area and provide additional water quality and runoff volume reduction. The smaller storms will be retained, and the higher storms will be released gradually. Refer to the Proposed Hydrologic Calculations and Runoff Reduction and Water Quality Volume Sizing Calculations, in Appendices A and B.

The StormTech MC-4500 Recharge Chambers are domed shaped fully opened bottom corrugated chambers with perforated side walls. Chambers allow stormwater to be stored within the dome void until it can infiltrate into the ground. They are able to be used for

residential, commercial or industrial applications and provide an easy way to treat and dispose of stormwater runoff underground. Water is infiltrated into the ground through the chambers and surrounding crushed stone and will replenish the groundwater as a natural condition.

The Isolator Row is a row of StormTech chambers that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as stormwater rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls allow stormwater to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage access of the adjacent stone and chambers from sediment accumulation.

The Isolator Row is designed to capture the "first flush" and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but includes a high flow weir such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other standard chambers. By treating stormwater prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured.

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. 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**

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

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

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

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

1. Apply 3 inches of compost over subsoil.
2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor-mounted disc, or tiller, mixing, and circulating air and compost into subsoils.
3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.

### **Specifications for Final Stabilization of Graded Areas**

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

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

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



soil is frost-free and not excessively moist. The permanent lawn is to be installed the next planting season.

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

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

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

(a) Sunny sites

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

(b) Shady sites

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

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

## **VII. CONSTRUCTION PHASE AND POST-CONSTRUCTION MAINTENANCE**

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

### **I. 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.

Farrell Building Company 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 D.

## **VIII. CONCLUSION**

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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, last modified November 23, 2016.
- Chapter 190 "Stormwater Management and Erosion and Sediment Control" of the City of Beacon Zoning Code.
- New York State Stormwater Management Design Manual.

The project employs a variety of practices to enhance stormwater quality and reduce peak rates

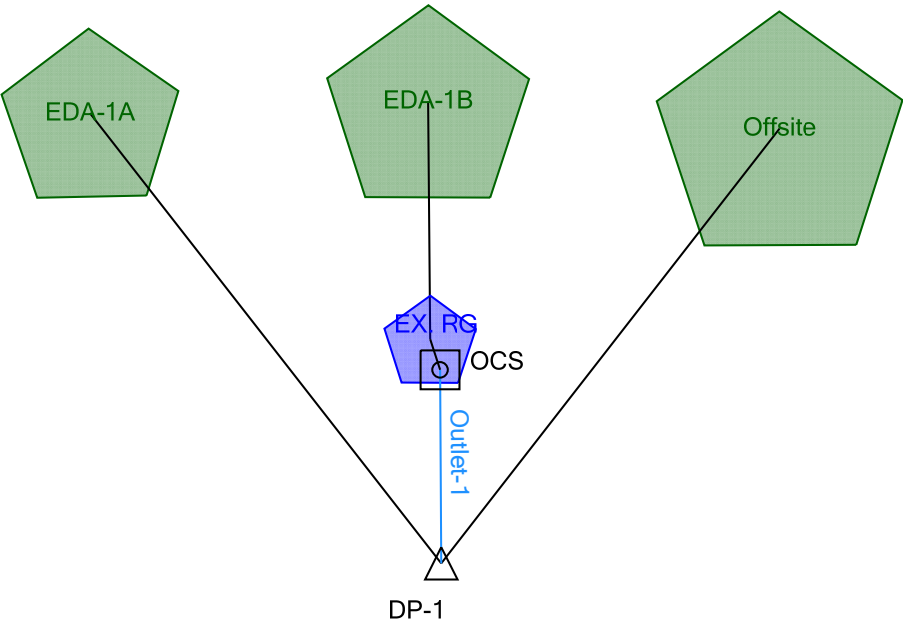
of runoff associated with the proposed improvements. These measures include a subsurface infiltration system, rain garden, and a First Defense water quality structure. These improvements will also mitigate runoff volumes from the proposed improvements as runoff volumes will be slightly reduced or maintained 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.

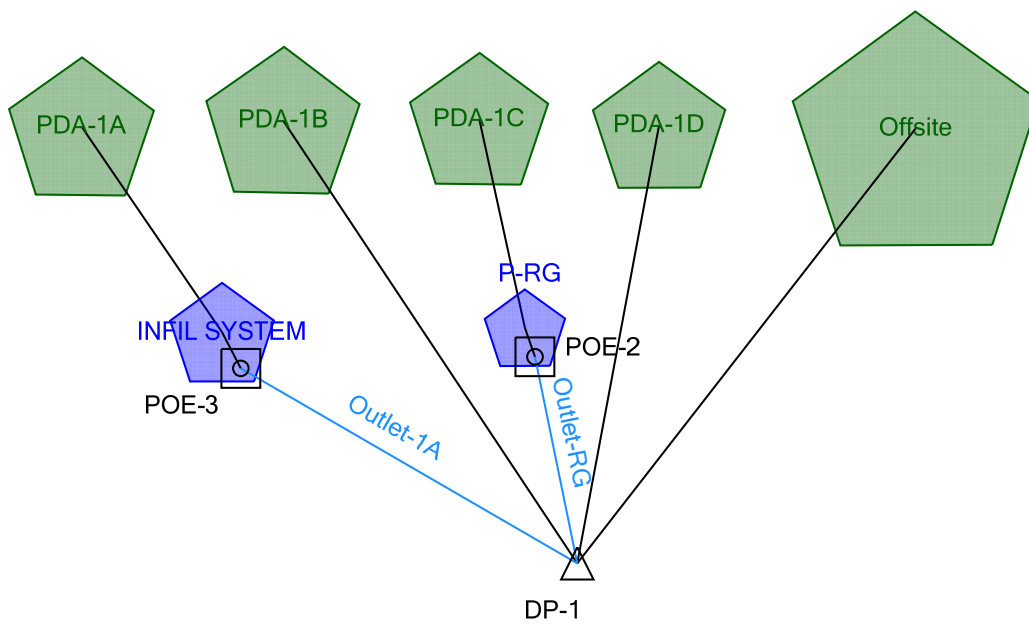
## ***APPENDIX A***

# ***EXISTING/PROPOSED HYDROLOGIC CALCULATIONS***

Scenario: Pre-Development 1 year



## Scenario: Post-Development 1 year





Project Summary	
Title	Beacon Commons Hydrologic Calculations
Engineer	Stephen Spina, PE
Company	JMC, PLLC
Date	10/29/2019

Notes
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Subsection: Master Network Summary

**Catchments Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)
Offsite	Pre-Development 1 year	1	14,440	12.150	3.61
Offsite	Post-Development 1 year	1	14,440	12.150	3.61
Offsite	Pre-Development 10 year	10	44,577	12.150	11.79
Offsite	Post-Development 10 year	10	44,577	12.150	11.79
Offsite	Pre-Development 25 year	25	64,543	12.150	17.03
Offsite	Post-Development 25 year	25	64,543	12.150	17.03
Offsite	Pre-Development 100 year	100	108,015	12.100	28.14
Offsite	Post-Development 100 year	100	108,015	12.100	28.14
EDA-1A	Pre-Development 1 year	1	1,901	12.100	0.55
EDA-1A	Pre-Development 10 year	10	4,740	12.100	1.34
EDA-1A	Pre-Development 25 year	25	6,489	12.100	1.80
EDA-1A	Pre-Development 100 year	100	10,158	12.100	2.75
EDA-1B	Pre-Development 1 year	1	2,866	12.100	0.81
EDA-1B	Pre-Development 10 year	10	8,002	12.100	2.29
EDA-1B	Pre-Development 25 year	25	11,288	12.100	3.20
EDA-1B	Pre-Development 100 year	100	18,316	12.100	5.08
PDA-1A	Post-Development 1 year	1	7,153	12.100	1.97
PDA-1A	Post-Development 10 year	10	14,828	12.100	3.91
PDA-1A	Post-Development 25 year	25	19,312	12.100	5.00
PDA-1A	Post-Development 100 year	100	28,492	12.100	7.20
PDA-1B	Post-Development 1 year	1	1,024	12.100	0.26
PDA-1B	Post-Development 10 year	10	1,920	12.100	0.47
PDA-1B	Post-Development 25 year	25	2,436	12.100	0.59
PDA-1B	Post-Development 100 year	100	3,484	12.100	0.83

## Subsection: Master Network Summary

### Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)
PDA-1C	Post-Development 1 year	1	151	12.100	0.04
PDA-1C	Post-Development 10 year	10	557	12.100	0.16
PDA-1C	Post-Development 25 year	25	842	12.100	0.24
PDA-1C	Post-Development 100 year	100	1,483	12.100	0.42
PDA-1D	Post-Development 1 year	1	60	12.150	0.01
PDA-1D	Post-Development 10 year	10	259	12.100	0.07
PDA-1D	Post-Development 25 year	25	405	12.100	0.12
PDA-1D	Post-Development 100 year	100	741	12.100	0.21

### Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)
DP-1	Pre-Development 1 year	1	19,039	12.150	4.83
DP-1	Post-Development 1 year	1	17,342	12.150	3.83
DP-1	Pre-Development 10 year	10	57,123	12.150	14.87
DP-1	Post-Development 10 year	10	55,942	12.150	14.27
DP-1	Pre-Development 25 year	25	82,113	12.100	21.87
DP-1	Post-Development 25 year	25	81,157	12.150	20.38
DP-1	Pre-Development 100 year	100	137,159	12.100	35.39
DP-1	Post-Development 100 year	100	135,569	12.150	35.27

### Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft <sup>3</sup> )
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## Subsection: Master Network Summary

### Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft <sup>3</sup> )
EX. RG (IN)	Pre-Development 1 year	1	2,866	12.100	0.81	(N/A)	(N/A)
EX. RG (OUT)	Pre-Development 1 year	1	2,698	12.100	0.76	30.56	105
EX. RG (IN)	Pre-Development 10 year	10	8,002	12.100	2.29	(N/A)	(N/A)
EX. RG (OUT)	Pre-Development 10 year	10	7,806	12.150	1.95	31.75	425
EX. RG (IN)	Pre-Development 25 year	25	11,288	12.100	3.20	(N/A)	(N/A)
EX. RG (OUT)	Pre-Development 25 year	25	11,080	12.100	3.20	31.88	497
EX. RG (IN)	Pre-Development 100 year	100	18,316	12.100	5.08	(N/A)	(N/A)
EX. RG (OUT)	Pre-Development 100 year	100	18,986	12.050	4.50	32.00	581
P-RG (IN)	Post-Development 1 year	1	151	12.100	0.04	(N/A)	(N/A)
P-RG (OUT)	Post-Development 1 year	1	0	0.000	0.00	35.41	64
P-RG (IN)	Post-Development 10 year	10	557	12.100	0.16	(N/A)	(N/A)
P-RG (OUT)	Post-Development 10 year	10	310	12.050	0.18	35.51	85
P-RG (IN)	Post-Development 25 year	25	842	12.100	0.24	(N/A)	(N/A)
P-RG (OUT)	Post-Development 25 year	25	578	12.100	0.25	35.51	85
P-RG (IN)	Post-Development 100 year	100	1,483	12.100	0.42	(N/A)	(N/A)

Subsection: Master Network Summary

**Pond Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft <sup>3</sup> )	Time to Peak (hours)	Peak Flow (ft <sup>3</sup> /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft <sup>3</sup> )
P-RG (OUT)	Post-Development 100 year	100	1,204	12.100	0.42	35.52	87
INFIL SYSTEM (IN)	Post-Development 1 year	1	7,153	12.100	1.97	(N/A)	(N/A)
INFIL SYSTEM (OUT)	Post-Development 1 year	1	1,818	12.550	0.30	31.91	3,675
INFIL SYSTEM (IN)	Post-Development 10 year	10	14,828	12.100	3.91	(N/A)	(N/A)
INFIL SYSTEM (OUT)	Post-Development 10 year	10	8,876	12.250	1.96	33.36	5,686
INFIL SYSTEM (IN)	Post-Development 25 year	25	19,312	12.100	5.00	(N/A)	(N/A)
INFIL SYSTEM (OUT)	Post-Development 25 year	25	13,195	12.200	2.86	34.31	6,775
INFIL SYSTEM (IN)	Post-Development 100 year	100	28,492	12.100	7.20	(N/A)	(N/A)
INFIL SYSTEM (OUT)	Post-Development 100 year	100	22,125	12.150	5.98	35.51	7,737

Subsection: Time-Depth Curve  
 Label: Time-Depth - 1  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Time-Depth Curve: 1 year

Label	1 year
Start Time	0.000 hours
Increment	0.100 hours
End Time	24.000 hours
Return Event	1 years

### CUMULATIVE RAINFALL (in)

Output Time Increment = 0.100 hours

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

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
0.500	0.0	0.0	0.0	0.0	0.0
1.000	0.0	0.0	0.0	0.0	0.0
1.500	0.0	0.0	0.0	0.0	0.0
2.000	0.1	0.1	0.1	0.1	0.1
2.500	0.1	0.1	0.1	0.1	0.1
3.000	0.1	0.1	0.1	0.1	0.1
3.500	0.1	0.1	0.1	0.1	0.1
4.000	0.1	0.1	0.1	0.1	0.1
4.500	0.1	0.1	0.1	0.1	0.1
5.000	0.1	0.2	0.2	0.2	0.2
5.500	0.2	0.2	0.2	0.2	0.2
6.000	0.2	0.2	0.2	0.2	0.2
6.500	0.2	0.2	0.2	0.2	0.2
7.000	0.2	0.2	0.2	0.3	0.3
7.500	0.3	0.3	0.3	0.3	0.3
8.000	0.3	0.3	0.3	0.3	0.3
8.500	0.3	0.3	0.4	0.4	0.4
9.000	0.4	0.4	0.4	0.4	0.4
9.500	0.4	0.4	0.5	0.5	0.5
10.000	0.5	0.5	0.5	0.5	0.5
10.500	0.6	0.6	0.6	0.6	0.6
11.000	0.7	0.7	0.7	0.7	0.7
11.500	0.8	0.8	0.9	1.0	1.1
12.000	1.3	1.5	1.6	1.7	1.8
12.500	1.8	1.9	1.9	1.9	1.9
13.000	2.0	2.0	2.0	2.0	2.0
13.500	2.0	2.1	2.1	2.1	2.1
14.000	2.1	2.1	2.1	2.2	2.2
14.500	2.2	2.2	2.2	2.2	2.2
15.000	2.2	2.2	2.2	2.3	2.3
15.500	2.3	2.3	2.3	2.3	2.3
16.000	2.3	2.3	2.3	2.3	2.3
16.500	2.3	2.4	2.4	2.4	2.4
17.000	2.4	2.4	2.4	2.4	2.4

Subsection: Time-Depth Curve  
 Label: Time-Depth - 1  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 0.100 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
17.500	2.4	2.4	2.4	2.4	2.4
18.000	2.4	2.4	2.4	2.4	2.4
18.500	2.4	2.4	2.5	2.5	2.5
19.000	2.5	2.5	2.5	2.5	2.5
19.500	2.5	2.5	2.5	2.5	2.5
20.000	2.5	2.5	2.5	2.5	2.5
20.500	2.5	2.5	2.5	2.5	2.5
21.000	2.5	2.5	2.5	2.5	2.5
21.500	2.5	2.5	2.6	2.6	2.6
22.000	2.6	2.6	2.6	2.6	2.6
22.500	2.6	2.6	2.6	2.6	2.6
23.000	2.6	2.6	2.6	2.6	2.6
23.500	2.6	2.6	2.6	2.6	2.6
24.000	2.6	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time of Concentration Calculations

Label: EDA-1A

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time of Concentration Results

---

Segment #1: TR-55 Sheet Flow

---

Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.140 ft/ft
2 Year 24 Hour Depth	3.2 in
Average Velocity	0.37 ft/s
Segment Time of Concentration	0.075 hours

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Segment #2: TR-55 Channel Flow

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Flow Area	4.9 ft <sup>2</sup>
Hydraulic Length	455.00 ft
Manning's n	0.011
Slope	0.039 ft/ft
Wetted Perimeter	7.85 ft
Average Velocity	19.54 ft/s
Segment Time of Concentration	0.006 hours

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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations

Label: EDA-1A

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

#### ==== SCS Channel Flow

$$T_c = \frac{R}{V}$$
$$R = Q_a / W_p$$
$$V = (1.49 * (R^{2/3}) * (S_f^{-0.5})) / n$$

Where:

$(L_f / V) / 3600$

R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

#### ==== SCS TR-55 Sheet Flow

$$T_c = \frac{(0.007 * ((n * L_f)^{0.8}))}{((P^{0.5}) * (S_f^{0.4}))}$$

Where:

Tc= Time of concentration, hours  
n= Manning's n  
Lf= Flow length, feet  
P= 2yr, 24hr Rain depth, inches  
Sf= Slope, %



Subsection: Time of Concentration Calculations

Label: EDA-1B

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time of Concentration Results

---

Segment #1: TR-55 Sheet Flow

---

Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.140 ft/ft
2 Year 24 Hour Depth	3.2 in
Average Velocity	0.37 ft/s
Segment Time of Concentration	0.075 hours

---

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Segment #2: TR-55 Shallow Concentrated Flow

---

Hydraulic Length	145.00 ft
Is Paved?	True
Slope	0.055 ft/ft
Average Velocity	4.77 ft/s
Segment Time of Concentration	0.008 hours

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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.084 hours
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Subsection: Time of Concentration Calculations

Label: EDA-1B

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

#### ==== SCS Channel Flow

Tc =  $R = Qa / Wp$   
 $V = (1.49 * (R^{2/3}) * (Sf^{*-0.5})) / n$

Where:  $(Lf / V) / 3600$   
R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

#### ==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:  
 $V = 16.1345 * (Sf^{*0.5})$

Paved Surface:  
 $V = 20.3282 * (Sf^{*0.5})$

Where:  $(Lf / V) / 3600$   
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
Tc= Time of concentration, hours  
Lf= Flow length, feet

Subsection: Time of Concentration Calculations

Label: Offsite

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time of Concentration Results

---

Segment #1: TR-55 Sheet Flow

---

Hydraulic Length	100.00 ft
Manning's n	0.150
Slope	0.070 ft/ft
2 Year 24 Hour Depth	3.2 in
Average Velocity	0.28 ft/s
Segment Time of Concentration	0.100 hours

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Segment #2: TR-55 Shallow Concentrated Flow

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Hydraulic Length	884.00 ft
Is Paved?	False
Slope	0.104 ft/ft
Average Velocity	5.20 ft/s
Segment Time of Concentration	0.047 hours

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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.147 hours
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Subsection: Time of Concentration Calculations  
Label: Offsite  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

**==== SCS Channel Flow**

Tc =  $R = Qa / Wp$   
 $V = (1.49 * (R^{2/3}) * (Sf^{*-0.5})) / n$

Where:  $(Lf / V) / 3600$   
R= Hydraulic radius  
Aq= Flow area, square feet  
Wp= Wetted perimeter, feet  
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
n= Manning's n  
Tc= Time of concentration, hours  
Lf= Flow length, feet

**==== SCS TR-55 Shallow Concentration Flow**

Tc = Unpaved surface:  
 $V = 16.1345 * (Sf^{*0.5})$

Paved Surface:  
 $V = 20.3282 * (Sf^{*0.5})$

Where:  $(Lf / V) / 3600$   
V= Velocity, ft/sec  
Sf= Slope, ft/ft  
Tc= Time of concentration, hours  
Lf= Flow length, feet

Subsection: Time of Concentration Calculations

Label: PDA-1A

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time of Concentration Results

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Segment #1: User Defined Tc

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Time of Concentration	0.083 hours
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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1A  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations

Label: PDA-1B

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time of Concentration Results

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Segment #1: User Defined Tc

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Time of Concentration	0.083 hours
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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1B  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours



Subsection: Time of Concentration Calculations

Label: PDA-1C

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time of Concentration Results

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Segment #1: User Defined Tc

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Time of Concentration	0.083 hours
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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1C  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations

Label: PDA-1D

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Time of Concentration Results

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Segment #1: User Defined Tc

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Time of Concentration	0.083 hours
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Time of Concentration (Composite)

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Time of Concentration (Composite)	0.083 hours
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Subsection: Time of Concentration Calculations  
Label: PDA-1D  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

**==== User Defined**

Tc = Value entered by user  
Where: Tc= Time of concentration, hours

Subsection: Runoff CN-Area  
 Label: EDA-1A  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	12,721	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	202	0.0	0.0	61.000
Woods - good - Soil B	55.000	6,072	0.0	0.0	55.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	18,995	(N/A)	(N/A)	83.861

Subsection: Runoff CN-Area  
 Label: EDA-1B  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	19,882	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	7,010	0.0	0.0	61.000
Woods - good - Soil B	55.000	10,870	0.0	0.0	55.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	37,762	(N/A)	(N/A)	78.754

Subsection: Runoff CN-Area  
 Label: Offsite  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft²)	C (%)	UC (%)	Adjusted CN
Residential Districts - 1/3 acre - Soil B	72.000	200,376	0.0	0.0	72.000
Urban Districts - Commercial & Business - Soil B	92.000	42,253	0.0	0.0	92.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	242,629	(N/A)	(N/A)	75.483

Subsection: Runoff CN-Area  
 Label: PDA-1A  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	39,062	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	6,553	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	45,615	(N/A)	(N/A)	92.685



Subsection: Runoff CN-Area  
 Label: PDA-1B  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	5,165	0.0	0.0	98.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	5,165	(N/A)	(N/A)	98.000

Subsection: Runoff CN-Area  
 Label: PDA-1C  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	878	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	2,962	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	3,840	(N/A)	(N/A)	69.460

Subsection: Runoff CN-Area  
 Label: PDA-1D  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil B	98.000	237	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil B	61.000	1,898	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	2,135	(N/A)	(N/A)	65.107

Subsection: Unit Hydrograph Summary  
 Label: EDA-1A  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	18,995 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.111 hours
Flow (Peak, Computed)	0.55 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.55 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	18,995 ft <sup>2</sup>
Maximum Retention (Pervious)	1.9 in
Maximum Retention (Pervious, 20 percent)	0.4 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.2 in
Runoff Volume (Pervious)	1,903 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1,901 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.93 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EDA-1A  
Scenario: Pre-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: EDA-1A  
Scenario: Pre-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

Storm Event	10 years
Return Event	10 years
Duration	24.000 hours
Depth	4.7 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	18,995 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	1.34 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	1.34 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	18,995 ft <sup>2</sup>
Maximum Retention (Pervious)	1.9 in
Maximum Retention (Pervious, 20 percent)	0.4 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.0 in
Runoff Volume (Pervious)	4,744 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	4,740 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.93 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EDA-1A  
Scenario: Pre-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: EDA-1A  
Scenario: Pre-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

Storm Event	25 years
Return Event	25 years
Duration	24.000 hours
Depth	5.9 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	18,995 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	1.80 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	1.80 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	18,995 ft <sup>2</sup>
Maximum Retention (Pervious)	1.9 in
Maximum Retention (Pervious, 20 percent)	0.4 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.1 in
Runoff Volume (Pervious)	6,495 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	6,489 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.93 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: EDA-1A  
Scenario: Pre-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: EDA-1A  
Scenario: Pre-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

Storm Event	100 years
Return Event	100 years
Duration	24.000 hours
Depth	8.3 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	18,995 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	2.75 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	2.75 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	18,995 ft <sup>2</sup>
Maximum Retention (Pervious)	1.9 in
Maximum Retention (Pervious, 20 percent)	0.4 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	6.4 in
Runoff Volume (Pervious)	10,166 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	10,158 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.93 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EDA-1A  
Scenario: Pre-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
 Label: EDA-1B  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.084 hours
Area (User Defined)	37,762 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.115 hours
Flow (Peak, Computed)	0.82 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.81 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	79.000
Area (User Defined)	37,762 ft <sup>2</sup>
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.9 in
Runoff Volume (Pervious)	2,870 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	2,866 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.084 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	11.71 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EDA-1B  
Scenario: Pre-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.224 hours
Total unit time, Tb	0.280 hours

Subsection: Unit Hydrograph Summary  
 Label: EDA-1B  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

Storm Event	10 years
Return Event	10 years
Duration	24.000 hours
Depth	4.7 in
Time of Concentration (Composite)	0.084 hours
Area (User Defined)	37,762 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.104 hours
Flow (Peak, Computed)	2.29 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	2.29 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	79.000
Area (User Defined)	37,762 ft <sup>2</sup>
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.5 in
Runoff Volume (Pervious)	8,009 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	8,002 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.084 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	11.71 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EDA-1B  
Scenario: Pre-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.224 hours
Total unit time, Tb	0.280 hours

Subsection: Unit Hydrograph Summary  
Label: EDA-1B  
Scenario: Pre-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

Storm Event	25 years
Return Event	25 years
Duration	24.000 hours
Depth	5.9 in
Time of Concentration (Composite)	0.084 hours
Area (User Defined)	37,762 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.104 hours
Flow (Peak, Computed)	3.20 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	3.20 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	79.000
Area (User Defined)	37,762 ft <sup>2</sup>
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.6 in
Runoff Volume (Pervious)	11,299 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	11,288 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.084 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	11.71 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: EDA-1B  
Scenario: Pre-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.224 hours
Total unit time, Tb	0.280 hours

Subsection: Unit Hydrograph Summary  
Label: EDA-1B  
Scenario: Pre-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

Storm Event	100 years
Return Event	100 years
Duration	24.000 hours
Depth	8.3 in
Time of Concentration (Composite)	0.084 hours
Area (User Defined)	37,762 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.104 hours
Flow (Peak, Computed)	5.08 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	5.08 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	79.000
Area (User Defined)	37,762 ft <sup>2</sup>
Maximum Retention (Pervious)	2.7 in
Maximum Retention (Pervious, 20 percent)	0.5 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.8 in
Runoff Volume (Pervious)	18,331 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	18,316 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.084 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	11.71 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EDA-1B  
Scenario: Pre-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.224 hours
Total unit time, Tb	0.280 hours

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.147 hours
Area (User Defined)	242,629 ft <sup>2</sup>
Computational Time Increment	0.020 hours
Time to Peak (Computed)	12.151 hours
Flow (Peak, Computed)	3.61 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	3.61 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	75.000
Area (User Defined)	242,629 ft <sup>2</sup>
Maximum Retention (Pervious)	3.3 in
Maximum Retention (Pervious, 20 percent)	0.7 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.7 in
Runoff Volume (Pervious)	14,471 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	14,440 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.147 hours
Computational Time Increment	0.020 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	43.00 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.098 hours
Unit receding limb, Tr	0.391 hours
Total unit time, Tb	0.489 hours

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Pre-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.147 hours
Area (User Defined)	242,629 ft <sup>2</sup>
Computational Time Increment	0.020 hours
Time to Peak (Computed)	12.151 hours
Flow (Peak, Computed)	3.61 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	3.61 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	75.000
Area (User Defined)	242,629 ft <sup>2</sup>
Maximum Retention (Pervious)	3.3 in
Maximum Retention (Pervious, 20 percent)	0.7 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.7 in
Runoff Volume (Pervious)	14,471 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	14,440 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.147 hours
Computational Time Increment	0.020 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	43.00 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Pre-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.098 hours
Unit receding limb, Tr	0.391 hours
Total unit time, Tb	0.489 hours

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

Storm Event	10 years
Return Event	10 years
Duration	24.000 hours
Depth	4.7 in
Time of Concentration (Composite)	0.147 hours
Area (User Defined)	242,629 ft <sup>2</sup>
Computational Time Increment	0.020 hours
Time to Peak (Computed)	12.132 hours
Flow (Peak, Computed)	11.97 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	11.79 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	75.000
Area (User Defined)	242,629 ft <sup>2</sup>
Maximum Retention (Pervious)	3.3 in
Maximum Retention (Pervious, 20 percent)	0.7 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.2 in
Runoff Volume (Pervious)	44,650 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	44,577 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.147 hours
Computational Time Increment	0.020 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	43.00 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.098 hours
Unit receding limb, Tr	0.391 hours
Total unit time, Tb	0.489 hours

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Pre-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

Storm Event	10 years
Return Event	10 years
Duration	24.000 hours
Depth	4.7 in
Time of Concentration (Composite)	0.147 hours
Area (User Defined)	242,629 ft <sup>2</sup>
Computational Time Increment	0.020 hours
Time to Peak (Computed)	12.132 hours
Flow (Peak, Computed)	11.97 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	11.79 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	75.000
Area (User Defined)	242,629 ft <sup>2</sup>
Maximum Retention (Pervious)	3.3 in
Maximum Retention (Pervious, 20 percent)	0.7 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.2 in
Runoff Volume (Pervious)	44,650 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	44,577 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.147 hours
Computational Time Increment	0.020 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	43.00 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Pre-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.098 hours
Unit receding limb, Tr	0.391 hours
Total unit time, Tb	0.489 hours

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

Storm Event	25 years
Return Event	25 years
Duration	24.000 hours
Depth	5.9 in
Time of Concentration (Composite)	0.147 hours
Area (User Defined)	242,629 ft <sup>2</sup>
Computational Time Increment	0.020 hours
Time to Peak (Computed)	12.132 hours
Flow (Peak, Computed)	17.34 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	17.03 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	75.000
Area (User Defined)	242,629 ft <sup>2</sup>
Maximum Retention (Pervious)	3.3 in
Maximum Retention (Pervious, 20 percent)	0.7 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.2 in
Runoff Volume (Pervious)	64,641 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	64,543 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.147 hours
Computational Time Increment	0.020 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	43.00 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.098 hours
Unit receding limb, Tr	0.391 hours
Total unit time, Tb	0.489 hours

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Pre-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

Storm Event	25 years
Return Event	25 years
Duration	24.000 hours
Depth	5.9 in
Time of Concentration (Composite)	0.147 hours
Area (User Defined)	242,629 ft <sup>2</sup>
Computational Time Increment	0.020 hours
Time to Peak (Computed)	12.132 hours
Flow (Peak, Computed)	17.34 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	17.03 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	75.000
Area (User Defined)	242,629 ft <sup>2</sup>
Maximum Retention (Pervious)	3.3 in
Maximum Retention (Pervious, 20 percent)	0.7 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.2 in
Runoff Volume (Pervious)	64,641 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	64,543 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.147 hours
Computational Time Increment	0.020 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	43.00 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Pre-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.098 hours
Unit receding limb, Tr	0.391 hours
Total unit time, Tb	0.489 hours

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

Storm Event	100 years
Return Event	100 years
Duration	24.000 hours
Depth	8.3 in
Time of Concentration (Composite)	0.147 hours
Area (User Defined)	242,629 ft <sup>2</sup>
Computational Time Increment	0.020 hours
Time to Peak (Computed)	12.132 hours
Flow (Peak, Computed)	28.69 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	28.14 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	75.000
Area (User Defined)	242,629 ft <sup>2</sup>
Maximum Retention (Pervious)	3.3 in
Maximum Retention (Pervious, 20 percent)	0.7 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.3 in
Runoff Volume (Pervious)	108,162 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	108,015 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.147 hours
Computational Time Increment	0.020 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	43.00 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.098 hours
Unit receding limb, Tr	0.391 hours
Total unit time, Tb	0.489 hours

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Pre-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

Storm Event	100 years
Return Event	100 years
Duration	24.000 hours
Depth	8.3 in
Time of Concentration (Composite)	0.147 hours
Area (User Defined)	242,629 ft <sup>2</sup>
Computational Time Increment	0.020 hours
Time to Peak (Computed)	12.132 hours
Flow (Peak, Computed)	28.69 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	28.14 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	75.000
Area (User Defined)	242,629 ft <sup>2</sup>
Maximum Retention (Pervious)	3.3 in
Maximum Retention (Pervious, 20 percent)	0.7 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.3 in
Runoff Volume (Pervious)	108,162 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	108,015 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.147 hours
Computational Time Increment	0.020 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	43.00 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: Pre-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.098 hours
Unit receding limb, Tr	0.391 hours
Total unit time, Tb	0.489 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1A  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	45,615 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	1.97 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	1.97 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	93.000
Area (User Defined)	45,615 ft <sup>2</sup>
Maximum Retention (Pervious)	0.8 in
Maximum Retention (Pervious, 20 percent)	0.2 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.9 in
Runoff Volume (Pervious)	7,158 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	7,153 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	14.24 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1A  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1A  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

Storm Event	10 years
Return Event	10 years
Duration	24.000 hours
Depth	4.7 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	45,615 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	3.91 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	3.91 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	93.000
Area (User Defined)	45,615 ft <sup>2</sup>
Maximum Retention (Pervious)	0.8 in
Maximum Retention (Pervious, 20 percent)	0.2 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.9 in
Runoff Volume (Pervious)	14,839 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	14,828 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	14.24 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1A  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	0.056 hours
Unit receding limb, $T_r$	0.222 hours
Total unit time, $T_b$	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1A  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

Storm Event	25 years
Return Event	25 years
Duration	24.000 hours
Depth	5.9 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	45,615 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	5.00 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	5.00 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	93.000
Area (User Defined)	45,615 ft <sup>2</sup>
Maximum Retention (Pervious)	0.8 in
Maximum Retention (Pervious, 20 percent)	0.2 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.1 in
Runoff Volume (Pervious)	19,325 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	19,312 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	14.24 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: PDA-1A  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
 Label: PDA-1A  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Storm Event	100 years
Return Event	100 years
Duration	24.000 hours
Depth	8.3 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	45,615 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	7.20 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	7.20 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	93.000
Area (User Defined)	45,615 ft <sup>2</sup>
Maximum Retention (Pervious)	0.8 in
Maximum Retention (Pervious, 20 percent)	0.2 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.5 in
Runoff Volume (Pervious)	28,510 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	28,492 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	14.24 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1A  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1B  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	5,165 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	0.26 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.26 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5,165 ft <sup>2</sup>
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.4 in
Runoff Volume (Pervious)	1,024 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1,024 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	1.61 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1B  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1B  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

Storm Event	10 years
Return Event	10 years
Duration	24.000 hours
Depth	4.7 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	5,165 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	0.47 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.47 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5,165 ft <sup>2</sup>
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.5 in
Runoff Volume (Pervious)	1,921 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1,920 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	1.61 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1B  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	0.056 hours
Unit receding limb, $T_r$	0.222 hours
Total unit time, $T_b$	0.278 hours

Subsection: Unit Hydrograph Summary  
 Label: PDA-1B  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

Storm Event	25 years
Return Event	25 years
Duration	24.000 hours
Depth	5.9 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	5,165 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	0.59 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.59 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5,165 ft <sup>2</sup>
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	5.7 in
Runoff Volume (Pervious)	2,437 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	2,436 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	1.61 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: PDA-1B  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	0.056 hours
Unit receding limb, $T_r$	0.222 hours
Total unit time, $T_b$	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1B  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

Storm Event	100 years
Return Event	100 years
Duration	24.000 hours
Depth	8.3 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	5,165 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.100 hours
Flow (Peak, Computed)	0.83 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.83 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	5,165 ft <sup>2</sup>
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	8.1 in
Runoff Volume (Pervious)	3,486 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	3,484 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	1.61 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1B  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	0.056 hours
Unit receding limb, $T_r$	0.222 hours
Total unit time, $T_b$	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1C  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	3,840 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.122 hours
Flow (Peak, Computed)	0.04 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.04 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	69.000
Area (User Defined)	3,840 ft <sup>2</sup>
Maximum Retention (Pervious)	4.5 in
Maximum Retention (Pervious, 20 percent)	0.9 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.5 in
Runoff Volume (Pervious)	151 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	151 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	1.20 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1C  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1C  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

Storm Event	10 years
Return Event	10 years
Duration	24.000 hours
Depth	4.7 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	3,840 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.111 hours
Flow (Peak, Computed)	0.16 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.16 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	69.000
Area (User Defined)	3,840 ft <sup>2</sup>
Maximum Retention (Pervious)	4.5 in
Maximum Retention (Pervious, 20 percent)	0.9 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.7 in
Runoff Volume (Pervious)	558 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	557 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	1.20 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1C  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1C  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

Storm Event	25 years
Return Event	25 years
Duration	24.000 hours
Depth	5.9 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	3,840 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.111 hours
Flow (Peak, Computed)	0.24 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.24 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	69.000
Area (User Defined)	3,840 ft <sup>2</sup>
Maximum Retention (Pervious)	4.5 in
Maximum Retention (Pervious, 20 percent)	0.9 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.6 in
Runoff Volume (Pervious)	843 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	842 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	1.20 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: PDA-1C  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1C  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

Storm Event	100 years
Return Event	100 years
Duration	24.000 hours
Depth	8.3 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	3,840 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.111 hours
Flow (Peak, Computed)	0.43 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.42 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	69.000
Area (User Defined)	3,840 ft <sup>2</sup>
Maximum Retention (Pervious)	4.5 in
Maximum Retention (Pervious, 20 percent)	0.9 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.6 in
Runoff Volume (Pervious)	1,485 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1,483 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	1.20 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1C  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	0.056 hours
Unit receding limb, $T_r$	0.222 hours
Total unit time, $T_b$	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1D  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

Storm Event	1 year
Return Event	1 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	2,135 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.122 hours
Flow (Peak, Computed)	0.01 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.150 hours
Flow (Peak Interpolated Output)	0.01 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	65.000
Area (User Defined)	2,135 ft <sup>2</sup>
Maximum Retention (Pervious)	5.4 in
Maximum Retention (Pervious, 20 percent)	1.1 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.3 in
Runoff Volume (Pervious)	60 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	60 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	0.67 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1D  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1D  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

Storm Event	10 years
Return Event	10 years
Duration	24.000 hours
Depth	4.7 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	2,135 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.111 hours
Flow (Peak, Computed)	0.07 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.07 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	65.000
Area (User Defined)	2,135 ft <sup>2</sup>
Maximum Retention (Pervious)	5.4 in
Maximum Retention (Pervious, 20 percent)	1.1 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.5 in
Runoff Volume (Pervious)	259 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	259 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	0.67 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1D  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	0.056 hours
Unit receding limb, $T_r$	0.222 hours
Total unit time, $T_b$	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1D  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

Storm Event	25 years
Return Event	25 years
Duration	24.000 hours
Depth	5.9 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	2,135 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.111 hours
Flow (Peak, Computed)	0.12 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.12 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	65.000
Area (User Defined)	2,135 ft <sup>2</sup>
Maximum Retention (Pervious)	5.4 in
Maximum Retention (Pervious, 20 percent)	1.1 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.3 in
Runoff Volume (Pervious)	405 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	405 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	0.67 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: PDA-1D  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

SCS Unit Hydrograph Parameters	
Unit peak time, Tp	0.056 hours
Unit receding limb, Tr	0.222 hours
Total unit time, Tb	0.278 hours

Subsection: Unit Hydrograph Summary  
Label: PDA-1D  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

Storm Event	100 years
Return Event	100 years
Duration	24.000 hours
Depth	8.3 in
Time of Concentration (Composite)	0.083 hours
Area (User Defined)	2,135 ft <sup>2</sup>
Computational Time Increment	0.011 hours
Time to Peak (Computed)	12.111 hours
Flow (Peak, Computed)	0.21 ft <sup>3</sup> /s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	12.100 hours
Flow (Peak Interpolated Output)	0.21 ft <sup>3</sup> /s
Drainage Area	
SCS CN (Composite)	65.000
Area (User Defined)	2,135 ft <sup>2</sup>
Maximum Retention (Pervious)	5.4 in
Maximum Retention (Pervious, 20 percent)	1.1 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.2 in
Runoff Volume (Pervious)	742 ft <sup>3</sup>
Hydrograph Volume (Area under Hydrograph curve)	
Volume	741 ft <sup>3</sup>
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.083 hours
Computational Time Increment	0.011 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	0.67 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: PDA-1D  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	0.056 hours
Unit receding limb, $T_r$	0.222 hours
Total unit time, $T_b$	0.278 hours

Subsection: Addition Summary

Label: DP-1

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

### Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Outlet-1A	INFIL SYSTEM
<Catchment to Outflow Node>	Offsite
<Catchment to Outflow Node>	PDA-1D
<Catchment to Outflow Node>	PDA-1B
Outlet-RG	P-RG

### Node Inflows

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	Outlet-1A	1,818	12.550	0.30
Flow (From)	Offsite	14,440	12.150	3.61
Flow (From)	PDA-1D	60	12.150	0.01
Flow (From)	PDA-1B	1,024	12.100	0.26
Flow (From)	Outlet-RG	0	0.000	0.00
Flow (In)	DP-1	17,342	12.150	3.83

Subsection: Addition Summary  
 Label: DP-1  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
<Catchment to Outflow Node>	Offsite
Outlet-1	EX. RG

### Node Inflows

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1A	1,901	12.100	0.55
Flow (From)	Offsite	14,440	12.150	3.61
Flow (From)	Outlet-1	2,698	12.100	0.76
Flow (In)	DP-1	19,039	12.150	4.83

Subsection: Addition Summary

Label: DP-1

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

### Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Outlet-1A	INFIL SYSTEM
<Catchment to Outflow Node>	Offsite
<Catchment to Outflow Node>	PDA-1D
<Catchment to Outflow Node>	PDA-1B
Outlet-RG	P-RG

### Node Inflows

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	Outlet-1A	8,876	12.250	1.96
Flow (From)	Offsite	44,577	12.150	11.79
Flow (From)	PDA-1D	259	12.100	0.07
Flow (From)	PDA-1B	1,920	12.100	0.47
Flow (From)	Outlet-RG	310	12.050	0.18
Flow (In)	DP-1	55,942	12.150	14.27

Subsection: Addition Summary

Label: DP-1

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

### Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
<Catchment to Outflow Node>	Offsite
Outlet-1	EX. RG

### Node Inflows

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1A	4,740	12.100	1.34
Flow (From)	Offsite	44,577	12.150	11.79
Flow (From)	Outlet-1	7,806	12.150	1.95
Flow (In)	DP-1	57,123	12.150	14.87

Subsection: Addition Summary

Label: DP-1

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

### Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Outlet-1A	INFIL SYSTEM
<Catchment to Outflow Node>	Offsite
<Catchment to Outflow Node>	PDA-1D
<Catchment to Outflow Node>	PDA-1B
Outlet-RG	P-RG

### Node Inflows

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	Outlet-1A	13,195	12.200	2.86
Flow (From)	Offsite	64,543	12.150	17.03
Flow (From)	PDA-1D	405	12.100	0.12
Flow (From)	PDA-1B	2,436	12.100	0.59
Flow (From)	Outlet-RG	578	12.100	0.25
Flow (In)	DP-1	81,157	12.150	20.38



Subsection: Addition Summary

Label: DP-1

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

### Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
<Catchment to Outflow Node>	Offsite
Outlet-1	EX. RG

### Node Inflows

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1A	6,489	12.100	1.80
Flow (From)	Offsite	64,543	12.150	17.03
Flow (From)	Outlet-1	11,080	12.100	3.20
Flow (In)	DP-1	82,113	12.100	21.87

Subsection: Addition Summary

Label: DP-1

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

### Summary for Hydrograph Addition at 'DP-1'

Upstream Link	Upstream Node
Outlet-1A	INFIL SYSTEM
<Catchment to Outflow Node>	Offsite
<Catchment to Outflow Node>	PDA-1D
<Catchment to Outflow Node>	PDA-1B
Outlet-RG	P-RG

### Node Inflows

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	Outlet-1A	22,125	12.150	5.98
Flow (From)	Offsite	108,015	12.100	28.14
Flow (From)	PDA-1D	741	12.100	0.21
Flow (From)	PDA-1B	3,484	12.100	0.83
Flow (From)	Outlet-RG	1,204	12.100	0.42
Flow (In)	DP-1	135,569	12.150	35.27

Subsection: Addition Summary

Label: DP-1

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Summary for Hydrograph Addition at 'DP-1'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1A
<Catchment to Outflow Node>	Offsite
Outlet-1	EX. RG

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1A	10,158	12.100	2.75
Flow (From)	Offsite	108,015	12.100	28.14
Flow (From)	Outlet-1	18,986	12.050	4.50
Flow (In)	DP-1	137,159	12.100	35.39

Subsection: Time vs. Elevation  
 Label: EX. RG (IN)  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.10	29.10	29.10	29.10	29.10
0.250	29.10	29.10	29.10	29.10	29.10
0.500	29.10	29.10	29.10	29.10	29.10
0.750	29.10	29.10	29.10	29.10	29.10
1.000	29.10	29.10	29.10	29.10	29.10
1.250	29.10	29.10	29.10	29.10	29.10
1.500	29.10	29.10	29.10	29.10	29.10
1.750	29.10	29.10	29.10	29.10	29.10
2.000	29.10	29.10	29.10	29.10	29.10
2.250	29.10	29.10	29.10	29.10	29.10
2.500	29.10	29.10	29.10	29.10	29.10
2.750	29.10	29.10	29.10	29.10	29.10
3.000	29.10	29.10	29.10	29.10	29.10
3.250	29.10	29.10	29.10	29.10	29.10
3.500	29.10	29.10	29.10	29.10	29.10
3.750	29.10	29.10	29.10	29.10	29.10
4.000	29.10	29.10	29.10	29.10	29.10
4.250	29.10	29.10	29.10	29.10	29.10
4.500	29.10	29.10	29.10	29.10	29.10
4.750	29.10	29.10	29.10	29.10	29.10
5.000	29.10	29.10	29.10	29.10	29.10
5.250	29.10	29.10	29.10	29.10	29.10
5.500	29.10	29.10	29.10	29.10	29.10
5.750	29.10	29.10	29.10	29.10	29.10
6.000	29.10	29.10	29.10	29.10	29.10
6.250	29.10	29.10	29.10	29.10	29.10
6.500	29.10	29.10	29.10	29.10	29.10
6.750	29.10	29.10	29.10	29.10	29.10
7.000	29.10	29.10	29.10	29.10	29.10
7.250	29.10	29.10	29.10	29.10	29.10
7.500	29.10	29.10	29.10	29.10	29.10
7.750	29.10	29.10	29.10	29.10	29.10
8.000	29.10	29.10	29.10	29.10	29.10
8.250	29.10	29.10	29.10	29.10	29.10
8.500	29.10	29.10	29.10	29.10	29.10
8.750	29.10	29.10	29.10	29.10	29.10
9.000	29.10	29.10	29.10	29.10	29.10
9.250	29.10	29.10	29.10	29.10	29.10
9.500	29.10	29.10	29.10	29.10	29.10
9.750	29.10	29.10	29.10	29.10	29.10
10.000	29.10	29.10	29.10	29.10	29.10
10.250	29.10	29.10	29.10	29.11	29.13

Subsection: Time vs. Elevation  
 Label: EX. RG (IN)  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	29.16	29.20	29.24	29.30	29.37
10.750	29.45	29.54	29.61	29.64	29.67
11.000	29.69	29.73	29.76	29.80	29.85
11.250	29.91	29.93	29.95	29.95	29.96
11.500	29.97	29.98	29.99	30.02	30.06
11.750	30.10	30.13	30.16	30.19	30.26
12.000	30.38	30.49	30.56	30.55	30.46
12.250	30.37	30.33	30.30	30.26	30.23
12.500	30.20	30.17	30.14	30.13	30.12
12.750	30.12	30.11	30.11	30.11	30.10
13.000	30.10	30.09	30.08	30.08	30.07
13.250	30.07	30.07	30.07	30.06	30.06
13.500	30.06	30.06	30.05	30.05	30.05
13.750	30.05	30.04	30.04	30.04	30.04
14.000	30.03	30.03	30.03	30.03	30.02
14.250	30.02	30.02	30.02	30.02	30.02
14.500	30.02	30.02	30.01	30.01	30.01
14.750	30.01	30.01	30.01	30.01	30.01
15.000	30.00	30.00	30.00	30.00	30.00
15.250	30.00	30.00	29.99	29.99	29.99
15.500	29.99	29.99	29.99	29.99	29.98
15.750	29.98	29.98	29.98	29.98	29.98
16.000	29.98	29.97	29.97	29.97	29.97
16.250	29.97	29.97	29.97	29.97	29.97
16.500	29.97	29.97	29.97	29.97	29.97
16.750	29.97	29.96	29.96	29.96	29.96
17.000	29.96	29.96	29.96	29.96	29.96
17.250	29.96	29.96	29.96	29.96	29.96
17.500	29.96	29.96	29.95	29.95	29.95
17.750	29.95	29.95	29.95	29.95	29.95
18.000	29.95	29.95	29.95	29.95	29.95
18.250	29.95	29.95	29.95	29.95	29.95
18.500	29.95	29.95	29.95	29.95	29.95
18.750	29.95	29.95	29.95	29.94	29.94
19.000	29.94	29.94	29.94	29.94	29.94
19.250	29.94	29.94	29.94	29.94	29.94
19.500	29.94	29.94	29.94	29.94	29.94
19.750	29.94	29.94	29.94	29.94	29.94
20.000	29.94	29.94	29.94	29.94	29.94
20.250	29.94	29.94	29.94	29.94	29.94
20.500	29.94	29.94	29.94	29.94	29.94
20.750	29.94	29.94	29.94	29.94	29.94

Subsection: Time vs. Elevation  
 Label: EX. RG (IN)  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	29.94	29.94	29.94	29.94	29.94
21.250	29.94	29.94	29.94	29.94	29.94
21.500	29.94	29.94	29.94	29.94	29.94
21.750	29.94	29.94	29.94	29.94	29.93
22.000	29.93	29.93	29.93	29.93	29.93
22.250	29.93	29.93	29.93	29.93	29.93
22.500	29.93	29.93	29.93	29.93	29.93
22.750	29.93	29.93	29.93	29.93	29.93
23.000	29.93	29.93	29.93	29.93	29.93
23.250	29.93	29.93	29.93	29.93	29.93
23.500	29.93	29.93	29.93	29.93	29.93
23.750	29.93	29.93	29.93	29.93	29.93
24.000	29.93	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: EX. RG (IN)  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.10	29.10	29.10	29.10	29.10
0.250	29.10	29.10	29.10	29.10	29.10
0.500	29.10	29.10	29.10	29.10	29.10
0.750	29.10	29.10	29.10	29.10	29.10
1.000	29.10	29.10	29.10	29.10	29.10
1.250	29.10	29.10	29.10	29.10	29.10
1.500	29.10	29.10	29.10	29.10	29.10
1.750	29.10	29.10	29.10	29.10	29.10
2.000	29.10	29.10	29.10	29.10	29.10
2.250	29.10	29.10	29.10	29.10	29.10
2.500	29.10	29.10	29.10	29.10	29.10
2.750	29.10	29.10	29.10	29.10	29.10
3.000	29.10	29.10	29.10	29.10	29.10
3.250	29.10	29.10	29.10	29.10	29.10
3.500	29.10	29.10	29.10	29.10	29.10
3.750	29.10	29.10	29.10	29.10	29.10
4.000	29.10	29.10	29.10	29.10	29.10
4.250	29.10	29.10	29.10	29.10	29.10
4.500	29.10	29.10	29.10	29.10	29.10
4.750	29.10	29.10	29.10	29.10	29.10
5.000	29.10	29.10	29.10	29.10	29.10
5.250	29.10	29.10	29.10	29.10	29.10
5.500	29.10	29.10	29.10	29.10	29.10
5.750	29.10	29.10	29.10	29.10	29.10
6.000	29.10	29.10	29.10	29.10	29.10
6.250	29.10	29.10	29.10	29.10	29.10
6.500	29.10	29.10	29.10	29.10	29.10
6.750	29.10	29.10	29.10	29.10	29.10
7.000	29.10	29.10	29.10	29.10	29.10
7.250	29.10	29.10	29.10	29.10	29.10
7.500	29.10	29.10	29.10	29.10	29.10
7.750	29.10	29.10	29.10	29.10	29.10
8.000	29.10	29.10	29.11	29.12	29.15
8.250	29.18	29.21	29.25	29.30	29.36
8.500	29.42	29.49	29.56	29.61	29.64
8.750	29.66	29.68	29.71	29.74	29.77
9.000	29.81	29.84	29.89	29.92	29.93
9.250	29.94	29.94	29.94	29.95	29.95
9.500	29.95	29.95	29.96	29.96	29.96
9.750	29.96	29.97	29.97	29.97	29.97
10.000	29.98	29.98	29.98	29.99	29.99
10.250	30.00	30.00	30.01	30.01	30.02

Subsection: Time vs. Elevation  
 Label: EX. RG (IN)  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	30.02	30.03	30.03	30.04	30.04
10.750	30.05	30.05	30.06	30.07	30.07
11.000	30.08	30.09	30.10	30.10	30.11
11.250	30.12	30.12	30.13	30.14	30.15
11.500	30.16	30.17	30.20	30.25	30.31
11.750	30.38	30.45	30.53	30.62	30.80
12.000	31.14	31.44	31.67	31.75	31.66
12.250	31.40	31.15	30.91	30.73	30.60
12.500	30.46	30.38	30.32	30.28	30.27
12.750	30.25	30.24	30.23	30.23	30.22
13.000	30.21	30.20	30.19	30.19	30.18
13.250	30.18	30.18	30.17	30.17	30.17
13.500	30.17	30.16	30.16	30.16	30.16
13.750	30.15	30.15	30.15	30.15	30.14
14.000	30.14	30.14	30.14	30.14	30.13
14.250	30.13	30.13	30.13	30.13	30.13
14.500	30.13	30.13	30.12	30.12	30.12
14.750	30.12	30.12	30.12	30.12	30.11
15.000	30.11	30.11	30.11	30.11	30.11
15.250	30.11	30.11	30.10	30.10	30.10
15.500	30.10	30.10	30.10	30.09	30.09
15.750	30.09	30.08	30.08	30.08	30.07
16.000	30.07	30.07	30.06	30.06	30.06
16.250	30.06	30.06	30.06	30.05	30.05
16.500	30.05	30.05	30.05	30.05	30.04
16.750	30.04	30.04	30.04	30.04	30.04
17.000	30.04	30.03	30.03	30.03	30.03
17.250	30.03	30.03	30.03	30.02	30.02
17.500	30.02	30.02	30.02	30.02	30.02
17.750	30.01	30.01	30.01	30.01	30.01
18.000	30.01	30.00	30.00	30.00	30.00
18.250	30.00	30.00	30.00	30.00	30.00
18.500	30.00	30.00	30.00	30.00	30.00
18.750	30.00	30.00	30.00	30.00	30.00
19.000	29.99	29.99	29.99	29.99	29.99
19.250	29.99	29.99	29.99	29.99	29.99
19.500	29.99	29.99	29.99	29.99	29.99
19.750	29.99	29.99	29.99	29.99	29.99
20.000	29.99	29.99	29.99	29.98	29.98
20.250	29.98	29.98	29.98	29.98	29.98
20.500	29.98	29.98	29.98	29.98	29.98
20.750	29.98	29.98	29.98	29.98	29.98



Subsection: Time vs. Elevation  
 Label: EX. RG (IN)  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	29.98	29.98	29.98	29.98	29.98
21.250	29.98	29.98	29.98	29.98	29.98
21.500	29.98	29.98	29.97	29.97	29.97
21.750	29.97	29.97	29.97	29.97	29.97
22.000	29.97	29.97	29.97	29.97	29.97
22.250	29.97	29.97	29.97	29.97	29.97
22.500	29.97	29.97	29.97	29.97	29.97
22.750	29.97	29.97	29.97	29.97	29.97
23.000	29.97	29.97	29.96	29.96	29.96
23.250	29.96	29.96	29.96	29.96	29.96
23.500	29.96	29.96	29.96	29.96	29.96
23.750	29.96	29.96	29.96	29.96	29.96
24.000	29.96	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
Label: EX. RG (IN)  
Scenario: Pre-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.10	29.10	29.10	29.10	29.10
0.250	29.10	29.10	29.10	29.10	29.10
0.500	29.10	29.10	29.10	29.10	29.10
0.750	29.10	29.10	29.10	29.10	29.10
1.000	29.10	29.10	29.10	29.10	29.10
1.250	29.10	29.10	29.10	29.10	29.10
1.500	29.10	29.10	29.10	29.10	29.10
1.750	29.10	29.10	29.10	29.10	29.10
2.000	29.10	29.10	29.10	29.10	29.10
2.250	29.10	29.10	29.10	29.10	29.10
2.500	29.10	29.10	29.10	29.10	29.10
2.750	29.10	29.10	29.10	29.10	29.10
3.000	29.10	29.10	29.10	29.10	29.10
3.250	29.10	29.10	29.10	29.10	29.10
3.500	29.10	29.10	29.10	29.10	29.10
3.750	29.10	29.10	29.10	29.10	29.10
4.000	29.10	29.10	29.10	29.10	29.10
4.250	29.10	29.10	29.10	29.10	29.10
4.500	29.10	29.10	29.10	29.10	29.10
4.750	29.10	29.10	29.10	29.10	29.10
5.000	29.10	29.10	29.10	29.10	29.10
5.250	29.10	29.10	29.10	29.10	29.10
5.500	29.10	29.10	29.10	29.10	29.10
5.750	29.10	29.10	29.10	29.10	29.10
6.000	29.10	29.10	29.10	29.10	29.10
6.250	29.10	29.10	29.10	29.10	29.10
6.500	29.10	29.10	29.10	29.10	29.10
6.750	29.10	29.10	29.10	29.10	29.10
7.000	29.10	29.10	29.11	29.12	29.14
7.250	29.17	29.20	29.24	29.28	29.33
7.500	29.39	29.45	29.51	29.58	29.62
7.750	29.64	29.66	29.68	29.70	29.73
8.000	29.75	29.78	29.82	29.85	29.89
8.250	29.92	29.93	29.94	29.94	29.94
8.500	29.94	29.95	29.95	29.95	29.95
8.750	29.96	29.96	29.96	29.96	29.97
9.000	29.97	29.97	29.98	29.98	29.98
9.250	29.99	29.99	29.99	30.00	30.00
9.500	30.00	30.01	30.01	30.01	30.02
9.750	30.02	30.03	30.03	30.03	30.04
10.000	30.04	30.05	30.05	30.06	30.06
10.250	30.07	30.08	30.08	30.09	30.10

Subsection: Time vs. Elevation  
 Label: EX. RG (IN)  
 Scenario: Pre-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	30.10	30.11	30.11	30.11	30.12
10.750	30.12	30.12	30.13	30.13	30.13
11.000	30.14	30.14	30.15	30.15	30.16
11.250	30.17	30.18	30.20	30.21	30.22
11.500	30.23	30.25	30.30	30.37	30.45
11.750	30.56	30.66	30.77	30.92	31.19
12.000	31.62	31.83	31.88	31.85	31.78
12.250	31.69	31.56	31.35	31.14	30.91
12.500	30.71	30.55	30.43	30.38	30.35
12.750	30.34	30.32	30.31	30.30	30.28
13.000	30.27	30.26	30.25	30.24	30.24
13.250	30.23	30.23	30.23	30.22	30.22
13.500	30.22	30.21	30.21	30.21	30.20
13.750	30.20	30.20	30.19	30.19	30.18
14.000	30.18	30.18	30.17	30.17	30.17
14.250	30.17	30.17	30.17	30.16	30.16
14.500	30.16	30.16	30.16	30.16	30.15
14.750	30.15	30.15	30.15	30.15	30.15
15.000	30.14	30.14	30.14	30.14	30.14
15.250	30.13	30.13	30.13	30.13	30.13
15.500	30.13	30.12	30.12	30.12	30.12
15.750	30.12	30.12	30.11	30.11	30.11
16.000	30.11	30.11	30.11	30.10	30.10
16.250	30.10	30.10	30.10	30.10	30.10
16.500	30.10	30.10	30.09	30.09	30.09
16.750	30.09	30.09	30.08	30.08	30.08
17.000	30.08	30.08	30.07	30.07	30.07
17.250	30.07	30.07	30.07	30.06	30.06
17.500	30.06	30.06	30.05	30.05	30.05
17.750	30.05	30.05	30.04	30.04	30.04
18.000	30.04	30.04	30.04	30.03	30.03
18.250	30.03	30.03	30.03	30.03	30.03
18.500	30.03	30.03	30.03	30.03	30.03
18.750	30.03	30.03	30.03	30.03	30.02
19.000	30.02	30.02	30.02	30.02	30.02
19.250	30.02	30.02	30.02	30.02	30.02
19.500	30.02	30.02	30.02	30.02	30.02
19.750	30.01	30.01	30.01	30.01	30.01
20.000	30.01	30.01	30.01	30.01	30.01
20.250	30.01	30.01	30.01	30.01	30.01
20.500	30.01	30.01	30.01	30.01	30.01
20.750	30.00	30.00	30.00	30.00	30.00

Subsection: Time vs. Elevation  
 Label: EX. RG (IN)  
 Scenario: Pre-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	30.00	30.00	30.00	30.00	30.00
21.250	30.00	30.00	30.00	30.00	30.00
21.500	30.00	30.00	30.00	30.00	30.00
21.750	30.00	30.00	30.00	29.99	29.99
22.000	29.99	29.99	29.99	29.99	29.99
22.250	29.99	29.99	29.99	29.99	29.99
22.500	29.99	29.99	29.99	29.99	29.99
22.750	29.99	29.99	29.99	29.99	29.99
23.000	29.98	29.98	29.98	29.98	29.98
23.250	29.98	29.98	29.98	29.98	29.98
23.500	29.98	29.98	29.98	29.98	29.98
23.750	29.98	29.98	29.98	29.98	29.98
24.000	29.98	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation

Label: EX. RG (IN)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.10	29.10	29.10	29.10	29.10
0.250	29.10	29.10	29.10	29.10	29.10
0.500	29.10	29.10	29.10	29.10	29.10
0.750	29.10	29.10	29.10	29.10	29.10
1.000	29.10	29.10	29.10	29.10	29.10
1.250	29.10	29.10	29.10	29.10	29.10
1.500	29.10	29.10	29.10	29.10	29.10
1.750	29.10	29.10	29.10	29.10	29.10
2.000	29.10	29.10	29.10	29.10	29.10
2.250	29.10	29.10	29.10	29.10	29.10
2.500	29.10	29.10	29.10	29.10	29.10
2.750	29.10	29.10	29.10	29.10	29.10
3.000	29.10	29.10	29.10	29.10	29.10
3.250	29.10	29.10	29.10	29.10	29.10
3.500	29.10	29.10	29.10	29.10	29.10
3.750	29.10	29.10	29.10	29.10	29.10
4.000	29.10	29.10	29.10	29.10	29.10
4.250	29.10	29.10	29.10	29.10	29.10
4.500	29.10	29.10	29.10	29.10	29.10
4.750	29.10	29.10	29.10	29.10	29.10
5.000	29.10	29.10	29.10	29.10	29.10
5.250	29.10	29.10	29.10	29.10	29.10
5.500	29.10	29.10	29.11	29.12	29.15
5.750	29.17	29.21	29.25	29.29	29.34
6.000	29.40	29.45	29.52	29.58	29.62
6.250	29.64	29.66	29.68	29.70	29.72
6.500	29.75	29.78	29.81	29.85	29.88
6.750	29.92	29.93	29.93	29.94	29.94
7.000	29.94	29.94	29.94	29.95	29.95
7.250	29.95	29.95	29.95	29.96	29.96
7.500	29.96	29.96	29.97	29.97	29.97
7.750	29.97	29.97	29.98	29.98	29.98
8.000	29.98	29.99	29.99	29.99	30.00
8.250	30.00	30.01	30.01	30.01	30.02
8.500	30.02	30.03	30.03	30.04	30.04
8.750	30.05	30.05	30.06	30.06	30.07
9.000	30.07	30.08	30.08	30.09	30.09
9.250	30.10	30.10	30.11	30.11	30.11
9.500	30.11	30.12	30.12	30.12	30.12
9.750	30.13	30.13	30.13	30.13	30.14
10.000	30.14	30.14	30.15	30.15	30.15
10.250	30.16	30.16	30.17	30.17	30.18

Subsection: Time vs. Elevation

Label: EX. RG (IN)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	30.18	30.19	30.19	30.20	30.20
10.750	30.21	30.21	30.22	30.23	30.23
11.000	30.24	30.24	30.25	30.27	30.28
11.250	30.30	30.32	30.34	30.35	30.37
11.500	30.39	30.44	30.51	30.62	30.76
11.750	30.95	31.15	31.36	31.60	31.81
12.000	31.97	32.00	32.00	32.00	32.00
12.250	32.00	32.00	31.87	31.65	31.51
12.500	31.28	31.03	30.78	30.62	30.54
12.750	30.50	30.48	30.46	30.44	30.42
13.000	30.40	30.38	30.36	30.35	30.35
13.250	30.34	30.34	30.33	30.33	30.32
13.500	30.32	30.31	30.30	30.30	30.29
13.750	30.29	30.28	30.28	30.27	30.27
14.000	30.26	30.26	30.25	30.25	30.25
14.250	30.24	30.24	30.24	30.24	30.23
14.500	30.23	30.23	30.22	30.22	30.22
14.750	30.22	30.21	30.21	30.21	30.21
15.000	30.20	30.20	30.20	30.20	30.19
15.250	30.19	30.19	30.19	30.18	30.18
15.500	30.18	30.17	30.17	30.17	30.17
15.750	30.16	30.16	30.16	30.16	30.15
16.000	30.15	30.15	30.15	30.14	30.14
16.250	30.14	30.14	30.14	30.14	30.14
16.500	30.14	30.14	30.13	30.13	30.13
16.750	30.13	30.13	30.13	30.13	30.13
17.000	30.12	30.12	30.12	30.12	30.12
17.250	30.12	30.12	30.12	30.12	30.11
17.500	30.11	30.11	30.11	30.11	30.11
17.750	30.11	30.11	30.10	30.10	30.10
18.000	30.10	30.10	30.10	30.10	30.10
18.250	30.10	30.10	30.09	30.09	30.09
18.500	30.09	30.09	30.09	30.09	30.09
18.750	30.09	30.09	30.09	30.08	30.08
19.000	30.08	30.08	30.08	30.08	30.08
19.250	30.08	30.08	30.08	30.08	30.07
19.500	30.07	30.07	30.07	30.07	30.07
19.750	30.07	30.07	30.07	30.07	30.07
20.000	30.06	30.06	30.06	30.06	30.06
20.250	30.06	30.06	30.06	30.06	30.06
20.500	30.06	30.06	30.06	30.06	30.05
20.750	30.05	30.05	30.05	30.05	30.05

Subsection: Time vs. Elevation

Label: EX. RG (IN)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	30.05	30.05	30.05	30.05	30.05
21.250	30.05	30.05	30.05	30.05	30.04
21.500	30.04	30.04	30.04	30.04	30.04
21.750	30.04	30.04	30.04	30.04	30.04
22.000	30.04	30.04	30.04	30.04	30.03
22.250	30.03	30.03	30.03	30.03	30.03
22.500	30.03	30.03	30.03	30.03	30.03
22.750	30.03	30.03	30.03	30.02	30.02
23.000	30.02	30.02	30.02	30.02	30.02
23.250	30.02	30.02	30.02	30.02	30.02
23.500	30.02	30.02	30.02	30.01	30.01
23.750	30.01	30.01	30.01	30.01	30.01
24.000	30.01	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: INFIL SYSTEM (IN)  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.15	29.15	29.15	29.15	29.15
0.250	29.15	29.15	29.15	29.15	29.15
0.500	29.15	29.15	29.15	29.15	29.15
0.750	29.15	29.15	29.15	29.15	29.15
1.000	29.15	29.15	29.15	29.15	29.15
1.250	29.15	29.15	29.15	29.15	29.15
1.500	29.15	29.15	29.15	29.15	29.15
1.750	29.15	29.15	29.15	29.15	29.15
2.000	29.15	29.15	29.15	29.15	29.15
2.250	29.15	29.15	29.15	29.15	29.15
2.500	29.15	29.15	29.15	29.15	29.15
2.750	29.15	29.15	29.15	29.15	29.15
3.000	29.15	29.15	29.15	29.15	29.15
3.250	29.15	29.15	29.15	29.15	29.15
3.500	29.15	29.15	29.15	29.15	29.15
3.750	29.15	29.15	29.15	29.15	29.15
4.000	29.15	29.15	29.15	29.15	29.15
4.250	29.15	29.15	29.15	29.15	29.15
4.500	29.15	29.15	29.15	29.15	29.15
4.750	29.15	29.15	29.15	29.15	29.15
5.000	29.15	29.15	29.15	29.15	29.15
5.250	29.15	29.15	29.15	29.15	29.15
5.500	29.15	29.15	29.15	29.15	29.15
5.750	29.15	29.15	29.15	29.16	29.16
6.000	29.16	29.16	29.16	29.16	29.16
6.250	29.16	29.16	29.16	29.16	29.17
6.500	29.17	29.17	29.17	29.17	29.17
6.750	29.17	29.18	29.18	29.18	29.18
7.000	29.18	29.18	29.19	29.19	29.19
7.250	29.19	29.20	29.20	29.20	29.20
7.500	29.20	29.21	29.21	29.21	29.22
7.750	29.22	29.22	29.22	29.23	29.23
8.000	29.23	29.24	29.24	29.24	29.25
8.250	29.25	29.26	29.26	29.26	29.27
8.500	29.27	29.28	29.28	29.29	29.29
8.750	29.30	29.30	29.31	29.31	29.32
9.000	29.33	29.33	29.34	29.35	29.35
9.250	29.36	29.37	29.37	29.38	29.39
9.500	29.40	29.41	29.41	29.42	29.43
9.750	29.44	29.45	29.46	29.47	29.48
10.000	29.49	29.50	29.51	29.52	29.53
10.250	29.54	29.55	29.56	29.57	29.59



Subsection: Time vs. Elevation  
 Label: INFIL SYSTEM (IN)  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	29.60	29.61	29.63	29.64	29.65
10.750	29.66	29.68	29.69	29.70	29.71
11.000	29.72	29.73	29.75	29.76	29.78
11.250	29.80	29.82	29.84	29.86	29.88
11.500	29.91	29.94	29.98	30.02	30.08
11.750	30.15	30.22	30.30	30.39	30.51
12.000	30.67	30.88	31.10	31.31	31.47
12.250	31.59	31.69	31.78	31.84	31.87
12.500	31.90	31.91	31.90	31.90	31.89
12.750	31.89	31.88	31.87	31.86	31.85
13.000	31.85	31.84	31.83	31.82	31.81
13.250	31.81	31.80	31.80	31.79	31.79
13.500	31.78	31.78	31.77	31.77	31.77
13.750	31.76	31.76	31.75	31.75	31.75
14.000	31.75	31.74	31.74	31.74	31.73
14.250	31.73	31.73	31.73	31.73	31.72
14.500	31.72	31.72	31.72	31.72	31.72
14.750	31.71	31.71	31.71	31.71	31.71
15.000	31.71	31.71	31.70	31.70	31.70
15.250	31.70	31.70	31.70	31.70	31.70
15.500	31.69	31.69	31.69	31.69	31.69
15.750	31.69	31.69	31.69	31.68	31.68
16.000	31.68	31.68	31.68	31.68	31.68
16.250	31.68	31.67	31.67	31.67	31.67
16.500	31.67	31.67	31.67	31.67	31.67
16.750	31.67	31.67	31.67	31.67	31.67
17.000	31.66	31.66	31.66	31.66	31.66
17.250	31.66	31.66	31.66	31.66	31.66
17.500	31.66	31.66	31.66	31.66	31.66
17.750	31.66	31.66	31.65	31.65	31.65
18.000	31.65	31.65	31.65	31.65	31.65
18.250	31.65	31.65	31.65	31.65	31.65
18.500	31.65	31.65	31.65	31.65	31.65
18.750	31.65	31.65	31.65	31.65	31.64
19.000	31.64	31.64	31.64	31.64	31.64
19.250	31.64	31.64	31.64	31.64	31.64
19.500	31.64	31.64	31.63	31.63	31.63
19.750	31.63	31.63	31.63	31.63	31.63
20.000	31.63	31.63	31.62	31.62	31.62
20.250	31.62	31.62	31.62	31.62	31.62
20.500	31.62	31.61	31.61	31.61	31.61
20.750	31.61	31.61	31.61	31.61	31.60

Subsection: Time vs. Elevation  
 Label: INFIL SYSTEM (IN)  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	31.60	31.60	31.60	31.60	31.60
21.250	31.59	31.59	31.59	31.59	31.59
21.500	31.59	31.59	31.58	31.58	31.58
21.750	31.58	31.58	31.58	31.57	31.57
22.000	31.57	31.57	31.57	31.57	31.56
22.250	31.56	31.56	31.56	31.56	31.55
22.500	31.55	31.55	31.55	31.55	31.54
22.750	31.54	31.54	31.54	31.54	31.53
23.000	31.53	31.53	31.53	31.53	31.52
23.250	31.52	31.52	31.52	31.51	31.51
23.500	31.51	31.51	31.51	31.50	31.50
23.750	31.50	31.50	31.49	31.49	31.49
24.000	31.49	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
Label: INFIL SYSTEM (IN)  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.15	29.15	29.15	29.15	29.15
0.250	29.15	29.15	29.15	29.15	29.15
0.500	29.15	29.15	29.15	29.15	29.15
0.750	29.15	29.15	29.15	29.15	29.15
1.000	29.15	29.15	29.15	29.15	29.15
1.250	29.15	29.15	29.15	29.15	29.15
1.500	29.15	29.15	29.15	29.15	29.15
1.750	29.15	29.15	29.15	29.15	29.15
2.000	29.15	29.15	29.15	29.15	29.15
2.250	29.15	29.15	29.15	29.15	29.15
2.500	29.15	29.15	29.15	29.15	29.15
2.750	29.15	29.15	29.15	29.15	29.15
3.000	29.15	29.15	29.15	29.15	29.15
3.250	29.15	29.15	29.15	29.15	29.15
3.500	29.15	29.15	29.15	29.15	29.16
3.750	29.16	29.16	29.16	29.16	29.16
4.000	29.16	29.16	29.17	29.17	29.17
4.250	29.17	29.17	29.18	29.18	29.18
4.500	29.18	29.18	29.19	29.19	29.19
4.750	29.19	29.20	29.20	29.20	29.21
5.000	29.21	29.21	29.21	29.22	29.22
5.250	29.22	29.23	29.23	29.23	29.24
5.500	29.24	29.24	29.25	29.25	29.26
5.750	29.26	29.26	29.27	29.27	29.27
6.000	29.28	29.28	29.29	29.29	29.30
6.250	29.30	29.30	29.31	29.31	29.32
6.500	29.32	29.33	29.34	29.34	29.35
6.750	29.35	29.36	29.36	29.37	29.38
7.000	29.38	29.39	29.40	29.40	29.41
7.250	29.42	29.42	29.43	29.44	29.45
7.500	29.45	29.46	29.47	29.48	29.49
7.750	29.49	29.50	29.51	29.52	29.53
8.000	29.54	29.55	29.56	29.57	29.58
8.250	29.59	29.60	29.61	29.62	29.63
8.500	29.64	29.65	29.66	29.67	29.68
8.750	29.69	29.70	29.71	29.72	29.73
9.000	29.74	29.75	29.77	29.78	29.79
9.250	29.80	29.82	29.83	29.85	29.86
9.500	29.88	29.90	29.91	29.93	29.95
9.750	29.96	29.98	30.00	30.02	30.04
10.000	30.06	30.08	30.10	30.13	30.15
10.250	30.17	30.19	30.20	30.22	30.24

Subsection: Time vs. Elevation  
 Label: INFIL SYSTEM (IN)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	30.26	30.29	30.31	30.33	30.35
10.750	30.38	30.40	30.43	30.46	30.48
11.000	30.51	30.54	30.57	30.60	30.63
11.250	30.67	30.71	30.75	30.80	30.84
11.500	30.89	30.95	31.01	31.09	31.20
11.750	31.33	31.48	31.66	31.85	32.07
12.000	32.37	32.68	32.99	33.23	33.34
12.250	33.36	33.33	33.28	33.20	33.10
12.500	32.99	32.87	32.75	32.63	32.53
12.750	32.45	32.38	32.32	32.27	32.22
13.000	32.18	32.15	32.12	32.09	32.07
13.250	32.04	32.02	32.01	31.99	31.98
13.500	31.96	31.95	31.94	31.93	31.92
13.750	31.91	31.90	31.89	31.89	31.88
14.000	31.87	31.87	31.86	31.85	31.85
14.250	31.84	31.84	31.83	31.83	31.83
14.500	31.82	31.82	31.81	31.81	31.81
14.750	31.81	31.80	31.80	31.80	31.79
15.000	31.79	31.79	31.79	31.78	31.78
15.250	31.78	31.78	31.77	31.77	31.77
15.500	31.77	31.76	31.76	31.76	31.76
15.750	31.75	31.75	31.75	31.75	31.74
16.000	31.74	31.74	31.74	31.73	31.73
16.250	31.73	31.73	31.73	31.73	31.72
16.500	31.72	31.72	31.72	31.72	31.72
16.750	31.72	31.71	31.71	31.71	31.71
17.000	31.71	31.71	31.71	31.71	31.71
17.250	31.70	31.70	31.70	31.70	31.70
17.500	31.70	31.70	31.70	31.70	31.70
17.750	31.69	31.69	31.69	31.69	31.69
18.000	31.69	31.69	31.69	31.69	31.68
18.250	31.68	31.68	31.68	31.68	31.68
18.500	31.68	31.68	31.68	31.68	31.68
18.750	31.68	31.68	31.68	31.68	31.68
19.000	31.68	31.68	31.68	31.68	31.68
19.250	31.67	31.67	31.67	31.67	31.67
19.500	31.67	31.67	31.67	31.67	31.67
19.750	31.67	31.67	31.67	31.67	31.67
20.000	31.67	31.67	31.67	31.67	31.67
20.250	31.67	31.67	31.67	31.67	31.67
20.500	31.67	31.67	31.67	31.67	31.67
20.750	31.67	31.67	31.67	31.67	31.66

Subsection: Time vs. Elevation  
 Label: INFIL SYSTEM (IN)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	31.66	31.66	31.66	31.66	31.66
21.250	31.66	31.66	31.66	31.66	31.66
21.500	31.66	31.66	31.66	31.66	31.66
21.750	31.66	31.66	31.66	31.66	31.66
22.000	31.66	31.66	31.66	31.66	31.66
22.250	31.66	31.66	31.66	31.66	31.66
22.500	31.66	31.66	31.66	31.66	31.66
22.750	31.66	31.66	31.66	31.66	31.66
23.000	31.66	31.66	31.65	31.65	31.65
23.250	31.65	31.65	31.65	31.65	31.65
23.500	31.65	31.65	31.65	31.65	31.65
23.750	31.65	31.65	31.65	31.65	31.65
24.000	31.65	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: INFIL SYSTEM (IN)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.15	29.15	29.15	29.15	29.15
0.250	29.15	29.15	29.15	29.15	29.15
0.500	29.15	29.15	29.15	29.15	29.15
0.750	29.15	29.15	29.15	29.15	29.15
1.000	29.15	29.15	29.15	29.15	29.15
1.250	29.15	29.15	29.15	29.15	29.15
1.500	29.15	29.15	29.15	29.15	29.15
1.750	29.15	29.15	29.15	29.15	29.15
2.000	29.15	29.15	29.15	29.15	29.15
2.250	29.15	29.15	29.15	29.15	29.15
2.500	29.15	29.15	29.15	29.15	29.15
2.750	29.15	29.15	29.15	29.15	29.15
3.000	29.15	29.16	29.16	29.16	29.16
3.250	29.16	29.16	29.16	29.17	29.17
3.500	29.17	29.17	29.18	29.18	29.18
3.750	29.18	29.19	29.19	29.19	29.19
4.000	29.20	29.20	29.20	29.21	29.21
4.250	29.22	29.22	29.22	29.23	29.23
4.500	29.23	29.24	29.24	29.25	29.25
4.750	29.26	29.26	29.27	29.27	29.27
5.000	29.28	29.28	29.29	29.29	29.30
5.250	29.30	29.31	29.31	29.32	29.33
5.500	29.33	29.34	29.34	29.35	29.35
5.750	29.36	29.36	29.37	29.38	29.38
6.000	29.39	29.39	29.40	29.41	29.41
6.250	29.42	29.43	29.43	29.44	29.45
6.500	29.45	29.46	29.47	29.48	29.49
6.750	29.49	29.50	29.51	29.52	29.53
7.000	29.54	29.55	29.56	29.57	29.58
7.250	29.59	29.60	29.61	29.62	29.63
7.500	29.64	29.65	29.66	29.66	29.67
7.750	29.68	29.69	29.70	29.70	29.71
8.000	29.72	29.73	29.74	29.75	29.76
8.250	29.77	29.78	29.80	29.81	29.82
8.500	29.84	29.85	29.86	29.88	29.89
8.750	29.91	29.93	29.94	29.96	29.98
9.000	30.00	30.02	30.04	30.06	30.08
9.250	30.10	30.12	30.15	30.16	30.18
9.500	30.20	30.22	30.24	30.26	30.28
9.750	30.30	30.32	30.34	30.36	30.38
10.000	30.40	30.43	30.45	30.47	30.50
10.250	30.52	30.55	30.58	30.61	30.63

Subsection: Time vs. Elevation  
 Label: INFIL SYSTEM (IN)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	30.66	30.70	30.73	30.76	30.79
10.750	30.83	30.86	30.90	30.94	30.98
11.000	31.02	31.06	31.10	31.14	31.19
11.250	31.24	31.30	31.35	31.42	31.48
11.500	31.55	31.62	31.71	31.81	31.92
11.750	32.05	32.19	32.34	32.50	32.70
12.000	33.02	33.41	33.82	34.16	34.31
12.250	34.27	34.18	34.08	33.97	33.83
12.500	33.66	33.49	33.32	33.15	33.00
12.750	32.86	32.73	32.62	32.53	32.45
13.000	32.38	32.32	32.27	32.23	32.19
13.250	32.16	32.13	32.11	32.09	32.07
13.500	32.06	32.04	32.03	32.01	32.00
13.750	31.99	31.98	31.97	31.96	31.95
14.000	31.94	31.93	31.92	31.92	31.91
14.250	31.90	31.90	31.89	31.89	31.88
14.500	31.88	31.87	31.87	31.86	31.86
14.750	31.86	31.85	31.85	31.85	31.84
15.000	31.84	31.84	31.83	31.83	31.83
15.250	31.82	31.82	31.82	31.81	31.81
15.500	31.81	31.80	31.80	31.80	31.79
15.750	31.79	31.79	31.79	31.78	31.78
16.000	31.78	31.77	31.77	31.77	31.76
16.250	31.76	31.76	31.76	31.76	31.75
16.500	31.75	31.75	31.75	31.75	31.75
16.750	31.74	31.74	31.74	31.74	31.74
17.000	31.74	31.73	31.73	31.73	31.73
17.250	31.73	31.73	31.73	31.72	31.72
17.500	31.72	31.72	31.72	31.72	31.72
17.750	31.72	31.71	31.71	31.71	31.71
18.000	31.71	31.71	31.71	31.71	31.70
18.250	31.70	31.70	31.70	31.70	31.70
18.500	31.70	31.70	31.70	31.70	31.70
18.750	31.70	31.70	31.69	31.69	31.69
19.000	31.69	31.69	31.69	31.69	31.69
19.250	31.69	31.69	31.69	31.69	31.69
19.500	31.69	31.69	31.69	31.69	31.69
19.750	31.69	31.69	31.69	31.69	31.69
20.000	31.69	31.68	31.68	31.68	31.68
20.250	31.68	31.68	31.68	31.68	31.68
20.500	31.68	31.68	31.68	31.68	31.68
20.750	31.68	31.68	31.68	31.68	31.68

Subsection: Time vs. Elevation

Label: INFIL SYSTEM (IN)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	31.68	31.68	31.68	31.68	31.68
21.250	31.68	31.68	31.68	31.68	31.68
21.500	31.68	31.68	31.67	31.67	31.67
21.750	31.67	31.67	31.67	31.67	31.67
22.000	31.67	31.67	31.67	31.67	31.67
22.250	31.67	31.67	31.67	31.67	31.67
22.500	31.67	31.67	31.67	31.67	31.67
22.750	31.67	31.67	31.67	31.67	31.67
23.000	31.67	31.67	31.67	31.67	31.67
23.250	31.66	31.66	31.66	31.66	31.66
23.500	31.66	31.66	31.66	31.66	31.66
23.750	31.66	31.66	31.66	31.66	31.66
24.000	31.66	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time vs. Elevation

Label: INFIL SYSTEM (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	29.15	29.15	29.15	29.15	29.15
0.250	29.15	29.15	29.15	29.15	29.15
0.500	29.15	29.15	29.15	29.15	29.15
0.750	29.15	29.15	29.15	29.15	29.15
1.000	29.15	29.15	29.15	29.15	29.15
1.250	29.15	29.15	29.15	29.15	29.15
1.500	29.15	29.15	29.15	29.15	29.15
1.750	29.15	29.15	29.15	29.15	29.15
2.000	29.15	29.15	29.15	29.15	29.15
2.250	29.16	29.16	29.16	29.16	29.16
2.500	29.17	29.17	29.17	29.18	29.18
2.750	29.18	29.19	29.19	29.19	29.20
3.000	29.20	29.21	29.21	29.21	29.22
3.250	29.22	29.23	29.23	29.24	29.25
3.500	29.25	29.26	29.26	29.27	29.28
3.750	29.28	29.29	29.29	29.30	29.31
4.000	29.31	29.32	29.33	29.34	29.34
4.250	29.35	29.36	29.37	29.37	29.38
4.500	29.39	29.40	29.40	29.41	29.42
4.750	29.43	29.44	29.45	29.45	29.46
5.000	29.47	29.48	29.49	29.50	29.51
5.250	29.52	29.53	29.53	29.54	29.55
5.500	29.56	29.57	29.58	29.59	29.60
5.750	29.61	29.62	29.63	29.64	29.65
6.000	29.66	29.66	29.67	29.68	29.68
6.250	29.69	29.70	29.71	29.71	29.72
6.500	29.73	29.74	29.75	29.76	29.77
6.750	29.78	29.79	29.80	29.82	29.83
7.000	29.84	29.85	29.87	29.88	29.89
7.250	29.91	29.92	29.94	29.95	29.97
7.500	29.98	30.00	30.02	30.03	30.05
7.750	30.07	30.09	30.11	30.12	30.14
8.000	30.16	30.17	30.19	30.21	30.22
8.250	30.24	30.26	30.27	30.29	30.31
8.500	30.33	30.35	30.37	30.39	30.41
8.750	30.44	30.46	30.48	30.51	30.53
9.000	30.55	30.58	30.61	30.63	30.66
9.250	30.69	30.72	30.75	30.78	30.81
9.500	30.84	30.87	30.91	30.94	30.97
9.750	31.01	31.04	31.08	31.12	31.15
10.000	31.19	31.23	31.27	31.31	31.36
10.250	31.40	31.44	31.49	31.54	31.59

Subsection: Time vs. Elevation

Label: INFIL SYSTEM (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	31.64	31.69	31.73	31.77	31.81
10.750	31.84	31.87	31.90	31.92	31.95
11.000	31.97	31.99	32.01	32.03	32.05
11.250	32.08	32.10	32.13	32.15	32.18
11.500	32.21	32.24	32.29	32.36	32.46
11.750	32.58	32.73	32.91	33.12	33.44
12.000	33.97	34.69	35.31	35.51	35.35
12.250	35.06	34.82	34.62	34.45	34.27
12.500	34.10	33.93	33.75	33.57	33.41
12.750	33.25	33.11	32.98	32.87	32.76
13.000	32.66	32.57	32.50	32.43	32.38
13.250	32.34	32.30	32.27	32.24	32.22
13.500	32.20	32.18	32.16	32.15	32.14
13.750	32.12	32.11	32.10	32.09	32.08
14.000	32.07	32.06	32.05	32.04	32.03
14.250	32.02	32.01	32.01	32.00	31.99
14.500	31.99	31.98	31.98	31.97	31.96
14.750	31.96	31.95	31.95	31.94	31.94
15.000	31.93	31.93	31.93	31.92	31.92
15.250	31.91	31.91	31.90	31.90	31.89
15.500	31.89	31.88	31.88	31.88	31.87
15.750	31.87	31.86	31.86	31.85	31.85
16.000	31.85	31.84	31.84	31.83	31.83
16.250	31.83	31.82	31.82	31.82	31.81
16.500	31.81	31.81	31.81	31.80	31.80
16.750	31.80	31.80	31.79	31.79	31.79
17.000	31.79	31.79	31.78	31.78	31.78
17.250	31.78	31.78	31.77	31.77	31.77
17.500	31.77	31.77	31.76	31.76	31.76
17.750	31.76	31.76	31.76	31.75	31.75
18.000	31.75	31.75	31.75	31.74	31.74
18.250	31.74	31.74	31.74	31.74	31.74
18.500	31.74	31.73	31.73	31.73	31.73
18.750	31.73	31.73	31.73	31.73	31.73
19.000	31.73	31.73	31.73	31.73	31.73
19.250	31.72	31.72	31.72	31.72	31.72
19.500	31.72	31.72	31.72	31.72	31.72
19.750	31.72	31.72	31.72	31.72	31.72
20.000	31.72	31.72	31.71	31.71	31.71
20.250	31.71	31.71	31.71	31.71	31.71
20.500	31.71	31.71	31.71	31.71	31.71
20.750	31.71	31.71	31.71	31.71	31.71

Subsection: Time vs. Elevation

Label: INFIL SYSTEM (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	31.71	31.71	31.71	31.70	31.70
21.250	31.70	31.70	31.70	31.70	31.70
21.500	31.70	31.70	31.70	31.70	31.70
21.750	31.70	31.70	31.70	31.70	31.70
22.000	31.70	31.70	31.70	31.70	31.70
22.250	31.70	31.70	31.69	31.69	31.69
22.500	31.69	31.69	31.69	31.69	31.69
22.750	31.69	31.69	31.69	31.69	31.69
23.000	31.69	31.69	31.69	31.69	31.69
23.250	31.69	31.69	31.69	31.69	31.69
23.500	31.68	31.68	31.68	31.68	31.68
23.750	31.68	31.68	31.68	31.68	31.68
24.000	31.68	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: P-RG (IN)  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	35.00	35.00	35.00	35.00	35.00
0.250	35.00	35.00	35.00	35.00	35.00
0.500	35.00	35.00	35.00	35.00	35.00
0.750	35.00	35.00	35.00	35.00	35.00
1.000	35.00	35.00	35.00	35.00	35.00
1.250	35.00	35.00	35.00	35.00	35.00
1.500	35.00	35.00	35.00	35.00	35.00
1.750	35.00	35.00	35.00	35.00	35.00
2.000	35.00	35.00	35.00	35.00	35.00
2.250	35.00	35.00	35.00	35.00	35.00
2.500	35.00	35.00	35.00	35.00	35.00
2.750	35.00	35.00	35.00	35.00	35.00
3.000	35.00	35.00	35.00	35.00	35.00
3.250	35.00	35.00	35.00	35.00	35.00
3.500	35.00	35.00	35.00	35.00	35.00
3.750	35.00	35.00	35.00	35.00	35.00
4.000	35.00	35.00	35.00	35.00	35.00
4.250	35.00	35.00	35.00	35.00	35.00
4.500	35.00	35.00	35.00	35.00	35.00
4.750	35.00	35.00	35.00	35.00	35.00
5.000	35.00	35.00	35.00	35.00	35.00
5.250	35.00	35.00	35.00	35.00	35.00
5.500	35.00	35.00	35.00	35.00	35.00
5.750	35.00	35.00	35.00	35.00	35.00
6.000	35.00	35.00	35.00	35.00	35.00
6.250	35.00	35.00	35.00	35.00	35.00
6.500	35.00	35.00	35.00	35.00	35.00
6.750	35.00	35.00	35.00	35.00	35.00
7.000	35.00	35.00	35.00	35.00	35.00
7.250	35.00	35.00	35.00	35.00	35.00
7.500	35.00	35.00	35.00	35.00	35.00
7.750	35.00	35.00	35.00	35.00	35.00
8.000	35.00	35.00	35.00	35.00	35.00
8.250	35.00	35.00	35.00	35.00	35.00
8.500	35.00	35.00	35.00	35.00	35.00
8.750	35.00	35.00	35.00	35.00	35.00
9.000	35.00	35.00	35.00	35.00	35.00
9.250	35.00	35.00	35.00	35.00	35.00
9.500	35.00	35.00	35.00	35.00	35.00
9.750	35.00	35.00	35.00	35.00	35.00
10.000	35.00	35.00	35.00	35.00	35.00
10.250	35.00	35.00	35.00	35.00	35.00

Subsection: Time vs. Elevation  
 Label: P-RG (IN)  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	35.00	35.00	35.00	35.00	35.00
10.750	35.00	35.00	35.00	35.00	35.00
11.000	35.00	35.00	35.00	35.00	35.00
11.250	35.00	35.00	35.00	35.00	35.00
11.500	35.00	35.00	35.00	35.00	35.00
11.750	35.00	35.00	35.00	35.01	35.01
12.000	35.03	35.06	35.09	35.13	35.16
12.250	35.19	35.21	35.23	35.25	35.26
12.500	35.28	35.29	35.30	35.30	35.31
12.750	35.31	35.32	35.33	35.33	35.33
13.000	35.34	35.34	35.35	35.35	35.35
13.250	35.36	35.36	35.36	35.36	35.37
13.500	35.37	35.37	35.37	35.38	35.38
13.750	35.38	35.38	35.38	35.39	35.39
14.000	35.39	35.39	35.39	35.39	35.39
14.250	35.40	35.40	35.40	35.40	35.40
14.500	35.40	35.40	35.40	35.40	35.40
14.750	35.40	35.40	35.41	35.41	35.41
15.000	35.41	35.41	35.41	35.41	35.41
15.250	35.41	35.41	35.41	35.41	35.41
15.500	35.41	35.41	35.41	35.41	35.41
15.750	35.41	35.41	35.41	35.40	35.40
16.000	35.40	35.40	35.40	35.40	35.40
16.250	35.40	35.40	35.40	35.40	35.40
16.500	35.40	35.39	35.39	35.39	35.39
16.750	35.39	35.39	35.39	35.39	35.39
17.000	35.39	35.39	35.38	35.38	35.38
17.250	35.38	35.38	35.38	35.38	35.38
17.500	35.38	35.37	35.37	35.37	35.37
17.750	35.37	35.37	35.37	35.37	35.36
18.000	35.36	35.36	35.36	35.36	35.36
18.250	35.36	35.35	35.35	35.35	35.35
18.500	35.35	35.35	35.35	35.35	35.34
18.750	35.34	35.34	35.34	35.34	35.34
19.000	35.34	35.33	35.33	35.33	35.33
19.250	35.33	35.33	35.33	35.33	35.32
19.500	35.32	35.32	35.32	35.32	35.32
19.750	35.32	35.32	35.32	35.31	35.31
20.000	35.31	35.31	35.31	35.31	35.31
20.250	35.31	35.30	35.30	35.30	35.30
20.500	35.30	35.30	35.30	35.30	35.30
20.750	35.29	35.29	35.29	35.29	35.29

Subsection: Time vs. Elevation  
 Label: P-RG (IN)  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	35.29	35.29	35.29	35.28	35.28
21.250	35.28	35.28	35.28	35.28	35.28
21.500	35.28	35.28	35.28	35.27	35.27
21.750	35.27	35.27	35.27	35.27	35.27
22.000	35.27	35.27	35.26	35.26	35.26
22.250	35.26	35.26	35.26	35.26	35.26
22.500	35.26	35.26	35.25	35.25	35.25
22.750	35.25	35.25	35.25	35.25	35.25
23.000	35.25	35.25	35.24	35.24	35.24
23.250	35.24	35.24	35.24	35.24	35.24
23.500	35.24	35.24	35.23	35.23	35.23
23.750	35.23	35.23	35.23	35.23	35.23
24.000	35.23	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: P-RG (IN)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	35.00	35.00	35.00	35.00	35.00
0.250	35.00	35.00	35.00	35.00	35.00
0.500	35.00	35.00	35.00	35.00	35.00
0.750	35.00	35.00	35.00	35.00	35.00
1.000	35.00	35.00	35.00	35.00	35.00
1.250	35.00	35.00	35.00	35.00	35.00
1.500	35.00	35.00	35.00	35.00	35.00
1.750	35.00	35.00	35.00	35.00	35.00
2.000	35.00	35.00	35.00	35.00	35.00
2.250	35.00	35.00	35.00	35.00	35.00
2.500	35.00	35.00	35.00	35.00	35.00
2.750	35.00	35.00	35.00	35.00	35.00
3.000	35.00	35.00	35.00	35.00	35.00
3.250	35.00	35.00	35.00	35.00	35.00
3.500	35.00	35.00	35.00	35.00	35.00
3.750	35.00	35.00	35.00	35.00	35.00
4.000	35.00	35.00	35.00	35.00	35.00
4.250	35.00	35.00	35.00	35.00	35.00
4.500	35.00	35.00	35.00	35.00	35.00
4.750	35.00	35.00	35.00	35.00	35.00
5.000	35.00	35.00	35.00	35.00	35.00
5.250	35.00	35.00	35.00	35.00	35.00
5.500	35.00	35.00	35.00	35.00	35.00
5.750	35.00	35.00	35.00	35.00	35.00
6.000	35.00	35.00	35.00	35.00	35.00
6.250	35.00	35.00	35.00	35.00	35.00
6.500	35.00	35.00	35.00	35.00	35.00
6.750	35.00	35.00	35.00	35.00	35.00
7.000	35.00	35.00	35.00	35.00	35.00
7.250	35.00	35.00	35.00	35.00	35.00
7.500	35.00	35.00	35.00	35.00	35.00
7.750	35.00	35.00	35.00	35.00	35.00
8.000	35.00	35.00	35.00	35.00	35.00
8.250	35.00	35.00	35.00	35.00	35.00
8.500	35.00	35.00	35.00	35.00	35.00
8.750	35.00	35.00	35.00	35.00	35.00
9.000	35.00	35.00	35.00	35.00	35.00
9.250	35.00	35.00	35.00	35.00	35.00
9.500	35.00	35.00	35.00	35.00	35.00
9.750	35.00	35.00	35.00	35.00	35.00
10.000	35.00	35.00	35.00	35.00	35.00
10.250	35.00	35.00	35.00	35.00	35.00

Subsection: Time vs. Elevation  
 Label: P-RG (IN)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	35.00	35.01	35.01	35.01	35.01
10.750	35.01	35.01	35.02	35.02	35.02
11.000	35.03	35.03	35.03	35.04	35.04
11.250	35.05	35.05	35.06	35.06	35.07
11.500	35.08	35.09	35.10	35.12	35.14
11.750	35.16	35.20	35.24	35.29	35.36
12.000	35.47	35.51	35.51	35.51	35.50
12.250	35.50	35.50	35.50	35.50	35.50
12.500	35.50	35.50	35.50	35.50	35.50
12.750	35.50	35.50	35.50	35.50	35.50
13.000	35.50	35.50	35.50	35.50	35.50
13.250	35.50	35.50	35.50	35.50	35.50
13.500	35.50	35.50	35.50	35.50	35.50
13.750	35.50	35.50	35.50	35.50	35.50
14.000	35.50	35.50	35.50	35.50	35.50
14.250	35.50	35.50	35.50	35.50	35.50
14.500	35.50	35.50	35.50	35.50	35.50
14.750	35.50	35.50	35.50	35.50	35.50
15.000	35.50	35.50	35.50	35.50	35.50
15.250	35.50	35.50	35.50	35.50	35.50
15.500	35.50	35.50	35.50	35.50	35.50
15.750	35.50	35.50	35.50	35.50	35.50
16.000	35.50	35.50	35.50	35.50	35.50
16.250	35.50	35.50	35.50	35.50	35.50
16.500	35.50	35.50	35.50	35.50	35.50
16.750	35.50	35.50	35.50	35.50	35.50
17.000	35.50	35.50	35.50	35.50	35.50
17.250	35.50	35.50	35.50	35.50	35.50
17.500	35.50	35.50	35.50	35.50	35.50
17.750	35.50	35.50	35.50	35.50	35.50
18.000	35.50	35.50	35.50	35.50	35.50
18.250	35.50	35.50	35.50	35.50	35.50
18.500	35.50	35.50	35.50	35.50	35.50
18.750	35.50	35.50	35.50	35.50	35.50
19.000	35.50	35.50	35.50	35.50	35.50
19.250	35.50	35.50	35.50	35.50	35.50
19.500	35.50	35.50	35.50	35.50	35.50
19.750	35.50	35.50	35.50	35.50	35.50
20.000	35.50	35.50	35.50	35.50	35.50
20.250	35.50	35.50	35.50	35.50	35.50
20.500	35.50	35.50	35.50	35.49	35.49
20.750	35.49	35.49	35.49	35.49	35.49



Subsection: Time vs. Elevation

Label: P-RG (IN)

Scenario: Post-Development 10 year

Return Event: 10 years

Storm Event: 10 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	35.49	35.49	35.49	35.49	35.49
21.250	35.49	35.49	35.49	35.49	35.49
21.500	35.49	35.49	35.48	35.48	35.48
21.750	35.48	35.48	35.48	35.48	35.48
22.000	35.48	35.48	35.48	35.48	35.48
22.250	35.48	35.47	35.47	35.47	35.47
22.500	35.47	35.47	35.47	35.47	35.47
22.750	35.47	35.47	35.47	35.46	35.46
23.000	35.46	35.46	35.46	35.46	35.46
23.250	35.46	35.46	35.46	35.45	35.45
23.500	35.45	35.45	35.45	35.45	35.45
23.750	35.45	35.45	35.45	35.44	35.44
24.000	35.44	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: P-RG (IN)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	35.00	35.00	35.00	35.00	35.00
0.250	35.00	35.00	35.00	35.00	35.00
0.500	35.00	35.00	35.00	35.00	35.00
0.750	35.00	35.00	35.00	35.00	35.00
1.000	35.00	35.00	35.00	35.00	35.00
1.250	35.00	35.00	35.00	35.00	35.00
1.500	35.00	35.00	35.00	35.00	35.00
1.750	35.00	35.00	35.00	35.00	35.00
2.000	35.00	35.00	35.00	35.00	35.00
2.250	35.00	35.00	35.00	35.00	35.00
2.500	35.00	35.00	35.00	35.00	35.00
2.750	35.00	35.00	35.00	35.00	35.00
3.000	35.00	35.00	35.00	35.00	35.00
3.250	35.00	35.00	35.00	35.00	35.00
3.500	35.00	35.00	35.00	35.00	35.00
3.750	35.00	35.00	35.00	35.00	35.00
4.000	35.00	35.00	35.00	35.00	35.00
4.250	35.00	35.00	35.00	35.00	35.00
4.500	35.00	35.00	35.00	35.00	35.00
4.750	35.00	35.00	35.00	35.00	35.00
5.000	35.00	35.00	35.00	35.00	35.00
5.250	35.00	35.00	35.00	35.00	35.00
5.500	35.00	35.00	35.00	35.00	35.00
5.750	35.00	35.00	35.00	35.00	35.00
6.000	35.00	35.00	35.00	35.00	35.00
6.250	35.00	35.00	35.00	35.00	35.00
6.500	35.00	35.00	35.00	35.00	35.00
6.750	35.00	35.00	35.00	35.00	35.00
7.000	35.00	35.00	35.00	35.00	35.00
7.250	35.00	35.00	35.00	35.00	35.00
7.500	35.00	35.00	35.00	35.00	35.00
7.750	35.00	35.00	35.00	35.00	35.00
8.000	35.00	35.00	35.00	35.00	35.00
8.250	35.00	35.00	35.00	35.00	35.00
8.500	35.00	35.00	35.00	35.00	35.00
8.750	35.00	35.00	35.00	35.00	35.00
9.000	35.00	35.00	35.00	35.00	35.00
9.250	35.00	35.00	35.00	35.00	35.00
9.500	35.00	35.00	35.00	35.00	35.01
9.750	35.01	35.01	35.01	35.01	35.01
10.000	35.02	35.02	35.02	35.02	35.03
10.250	35.03	35.03	35.04	35.04	35.04

Subsection: Time vs. Elevation  
 Label: P-RG (IN)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

### Time vs. Elevation (ft)

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	35.05	35.05	35.06	35.06	35.07
10.750	35.07	35.08	35.08	35.09	35.10
11.000	35.11	35.11	35.12	35.13	35.14
11.250	35.15	35.16	35.18	35.19	35.20
11.500	35.22	35.24	35.26	35.29	35.33
11.750	35.37	35.43	35.50	35.51	35.50
12.000	35.51	35.51	35.51	35.51	35.51
12.250	35.51	35.51	35.50	35.50	35.50
12.500	35.50	35.50	35.50	35.50	35.50
12.750	35.50	35.50	35.50	35.50	35.50
13.000	35.50	35.50	35.50	35.50	35.50
13.250	35.50	35.50	35.50	35.50	35.50
13.500	35.50	35.50	35.50	35.50	35.50
13.750	35.50	35.50	35.50	35.50	35.50
14.000	35.50	35.50	35.50	35.50	35.50
14.250	35.50	35.50	35.50	35.50	35.50
14.500	35.50	35.50	35.50	35.50	35.50
14.750	35.50	35.50	35.50	35.50	35.50
15.000	35.50	35.50	35.50	35.50	35.50
15.250	35.50	35.50	35.50	35.50	35.50
15.500	35.50	35.50	35.50	35.50	35.50
15.750	35.50	35.50	35.50	35.50	35.50
16.000	35.50	35.50	35.50	35.50	35.50
16.250	35.50	35.50	35.50	35.50	35.50
16.500	35.50	35.50	35.50	35.50	35.50
16.750	35.50	35.50	35.50	35.50	35.50
17.000	35.50	35.50	35.50	35.50	35.50
17.250	35.50	35.50	35.50	35.50	35.50
17.500	35.50	35.50	35.50	35.50	35.50
17.750	35.50	35.50	35.50	35.50	35.50
18.000	35.50	35.50	35.50	35.50	35.50
18.250	35.50	35.50	35.50	35.50	35.50
18.500	35.50	35.50	35.50	35.50	35.50
18.750	35.50	35.50	35.50	35.50	35.50
19.000	35.50	35.50	35.50	35.50	35.50
19.250	35.50	35.50	35.50	35.50	35.50
19.500	35.50	35.50	35.50	35.50	35.50
19.750	35.50	35.50	35.50	35.50	35.50
20.000	35.50	35.50	35.50	35.50	35.50
20.250	35.50	35.50	35.50	35.50	35.50
20.500	35.50	35.50	35.50	35.50	35.50
20.750	35.50	35.50	35.50	35.50	35.50

Subsection: Time vs. Elevation

Label: P-RG (IN)

Scenario: Post-Development 25 year

Return Event: 25 years

Storm Event: 25 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	35.50	35.50	35.50	35.50	35.50
21.250	35.50	35.50	35.50	35.50	35.50
21.500	35.50	35.50	35.50	35.50	35.50
21.750	35.50	35.50	35.50	35.50	35.50
22.000	35.50	35.50	35.50	35.50	35.50
22.250	35.50	35.50	35.50	35.50	35.50
22.500	35.50	35.50	35.50	35.50	35.50
22.750	35.50	35.50	35.50	35.50	35.50
23.000	35.50	35.50	35.50	35.50	35.50
23.250	35.50	35.50	35.50	35.50	35.50
23.500	35.50	35.50	35.50	35.50	35.50
23.750	35.50	35.50	35.50	35.49	35.49
24.000	35.49	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation

Label: P-RG (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	35.00	35.00	35.00	35.00	35.00
0.250	35.00	35.00	35.00	35.00	35.00
0.500	35.00	35.00	35.00	35.00	35.00
0.750	35.00	35.00	35.00	35.00	35.00
1.000	35.00	35.00	35.00	35.00	35.00
1.250	35.00	35.00	35.00	35.00	35.00
1.500	35.00	35.00	35.00	35.00	35.00
1.750	35.00	35.00	35.00	35.00	35.00
2.000	35.00	35.00	35.00	35.00	35.00
2.250	35.00	35.00	35.00	35.00	35.00
2.500	35.00	35.00	35.00	35.00	35.00
2.750	35.00	35.00	35.00	35.00	35.00
3.000	35.00	35.00	35.00	35.00	35.00
3.250	35.00	35.00	35.00	35.00	35.00
3.500	35.00	35.00	35.00	35.00	35.00
3.750	35.00	35.00	35.00	35.00	35.00
4.000	35.00	35.00	35.00	35.00	35.00
4.250	35.00	35.00	35.00	35.00	35.00
4.500	35.00	35.00	35.00	35.00	35.00
4.750	35.00	35.00	35.00	35.00	35.00
5.000	35.00	35.00	35.00	35.00	35.00
5.250	35.00	35.00	35.00	35.00	35.00
5.500	35.00	35.00	35.00	35.00	35.00
5.750	35.00	35.00	35.00	35.00	35.00
6.000	35.00	35.00	35.00	35.00	35.00
6.250	35.00	35.00	35.00	35.00	35.00
6.500	35.00	35.00	35.00	35.00	35.00
6.750	35.00	35.00	35.00	35.00	35.00
7.000	35.00	35.00	35.00	35.00	35.00
7.250	35.00	35.00	35.00	35.00	35.00
7.500	35.00	35.00	35.00	35.00	35.00
7.750	35.00	35.00	35.00	35.00	35.00
8.000	35.00	35.00	35.00	35.00	35.00
8.250	35.00	35.00	35.01	35.01	35.01
8.500	35.01	35.01	35.01	35.02	35.02
8.750	35.02	35.02	35.02	35.03	35.03
9.000	35.03	35.04	35.04	35.04	35.05
9.250	35.05	35.06	35.06	35.07	35.07
9.500	35.08	35.08	35.09	35.09	35.10
9.750	35.11	35.11	35.12	35.13	35.14
10.000	35.14	35.15	35.16	35.17	35.18
10.250	35.19	35.20	35.21	35.22	35.23

Subsection: Time vs. Elevation

Label: P-RG (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.500	35.24	35.26	35.27	35.28	35.30
10.750	35.31	35.33	35.34	35.36	35.37
11.000	35.39	35.41	35.43	35.45	35.47
11.250	35.50	35.50	35.50	35.50	35.50
11.500	35.50	35.50	35.50	35.50	35.50
11.750	35.50	35.51	35.51	35.51	35.51
12.000	35.52	35.52	35.52	35.52	35.51
12.250	35.51	35.51	35.51	35.51	35.51
12.500	35.50	35.50	35.50	35.50	35.50
12.750	35.50	35.50	35.50	35.50	35.50
13.000	35.50	35.50	35.50	35.50	35.50
13.250	35.50	35.50	35.50	35.50	35.50
13.500	35.50	35.50	35.50	35.50	35.50
13.750	35.50	35.50	35.50	35.50	35.50
14.000	35.50	35.50	35.50	35.50	35.50
14.250	35.50	35.50	35.50	35.50	35.50
14.500	35.50	35.50	35.50	35.50	35.50
14.750	35.50	35.50	35.50	35.50	35.50
15.000	35.50	35.50	35.50	35.50	35.50
15.250	35.50	35.50	35.50	35.50	35.50
15.500	35.50	35.50	35.50	35.50	35.50
15.750	35.50	35.50	35.50	35.50	35.50
16.000	35.50	35.50	35.50	35.50	35.50
16.250	35.50	35.50	35.50	35.50	35.50
16.500	35.50	35.50	35.50	35.50	35.50
16.750	35.50	35.50	35.50	35.50	35.50
17.000	35.50	35.50	35.50	35.50	35.50
17.250	35.50	35.50	35.50	35.50	35.50
17.500	35.50	35.50	35.50	35.50	35.50
17.750	35.50	35.50	35.50	35.50	35.50
18.000	35.50	35.50	35.50	35.50	35.50
18.250	35.50	35.50	35.50	35.50	35.50
18.500	35.50	35.50	35.50	35.50	35.50
18.750	35.50	35.50	35.50	35.50	35.50
19.000	35.50	35.50	35.50	35.50	35.50
19.250	35.50	35.50	35.50	35.50	35.50
19.500	35.50	35.50	35.50	35.50	35.50
19.750	35.50	35.50	35.50	35.50	35.50
20.000	35.50	35.50	35.50	35.50	35.50
20.250	35.50	35.50	35.50	35.50	35.50
20.500	35.50	35.50	35.50	35.50	35.50
20.750	35.50	35.50	35.50	35.50	35.50

Subsection: Time vs. Elevation

Label: P-RG (IN)

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Elevation (ft)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
21.000	35.50	35.50	35.50	35.50	35.50
21.250	35.50	35.50	35.50	35.50	35.50
21.500	35.50	35.50	35.50	35.50	35.50
21.750	35.50	35.50	35.50	35.50	35.50
22.000	35.50	35.50	35.50	35.50	35.50
22.250	35.50	35.50	35.50	35.50	35.50
22.500	35.50	35.50	35.50	35.50	35.50
22.750	35.50	35.50	35.50	35.50	35.50
23.000	35.50	35.50	35.50	35.50	35.50
23.250	35.50	35.50	35.50	35.50	35.50
23.500	35.50	35.50	35.50	35.50	35.50
23.750	35.50	35.50	35.50	35.50	35.50
24.000	35.50	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	0	0
9.750	0	0	0	0	0
10.000	0	0	0	0	0
10.250	0	0	0	0	0



Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

### Time vs. Volume (ft<sup>3</sup>)

Output Time increment = 0.050 hours

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	0	0	0	0	1
10.750	2	3	6	7	8
11.000	9	10	12	15	18
11.250	22	25	26	26	27
11.500	28	29	30	33	37
11.750	42	45	49	53	61
12.000	78	94	105	105	90
12.250	77	71	66	62	58
12.500	53	49	47	45	44
12.750	44	43	43	42	42
13.000	41	41	40	39	39
13.250	38	38	38	38	37
13.500	37	37	37	36	36
13.750	36	35	35	35	35
14.000	34	34	34	34	33
14.250	33	33	33	33	33
14.500	33	33	32	32	32
14.750	32	32	32	32	31
15.000	31	31	31	31	31
15.250	31	30	30	30	30
15.500	30	30	30	29	29
15.750	29	29	29	29	29
16.000	29	28	28	28	28
16.250	28	28	28	28	28
16.500	28	28	28	28	27
16.750	27	27	27	27	27
17.000	27	27	27	27	27
17.250	27	27	27	27	27
17.500	27	26	26	26	26
17.750	26	26	26	26	26
18.000	26	26	26	26	26
18.250	26	26	26	26	26
18.500	26	26	26	26	26
18.750	26	26	26	26	26
19.000	26	26	25	25	25
19.250	25	25	25	25	25
19.500	25	25	25	25	25
19.750	25	25	25	25	25
20.000	25	25	25	25	25
20.250	25	25	25	25	25
20.500	25	25	25	25	25
20.750	25	25	25	25	25

Subsection: Time vs. Volume  
 Label: EX. RG  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	25	25	25	25	25
21.250	25	25	25	25	25
21.500	25	25	25	25	25
21.750	25	25	25	25	25
22.000	25	25	25	25	25
22.250	25	25	25	25	25
22.500	25	25	25	24	24
22.750	24	24	24	24	24
23.000	24	24	24	24	24
23.250	24	24	24	24	24
23.500	24	24	24	24	24
23.750	24	24	24	24	24
24.000	24	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: EX. RG  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	1
8.500	1	3	4	6	7
8.750	8	8	10	11	13
9.000	15	17	21	23	24
9.250	25	25	25	26	26
9.500	26	26	27	27	27
9.750	27	28	28	28	28
10.000	29	29	29	30	30
10.250	31	31	31	32	32

Subsection: Time vs. Volume  
 Label: EX. RG  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	33	34	34	35	35
10.750	36	37	37	38	39
11.000	39	40	41	42	43
11.250	44	45	45	46	47
11.500	48	50	54	59	67
11.750	77	88	101	116	149
12.000	225	308	389	425	382
12.250	296	227	171	137	112
12.500	90	78	70	64	62
12.750	60	59	58	57	55
13.000	54	53	52	52	51
13.250	51	51	50	50	50
13.500	50	49	49	49	48
13.750	48	48	47	47	47
14.000	46	46	46	46	46
14.250	45	45	45	45	45
14.500	45	45	44	44	44
14.750	44	44	44	44	43
15.000	43	43	43	43	43
15.250	43	42	42	42	42
15.500	42	42	41	41	41
15.750	40	40	39	39	39
16.000	38	38	38	37	37
16.250	37	37	37	37	36
16.500	36	36	36	36	36
16.750	35	35	35	35	35
17.000	35	34	34	34	34
17.250	34	34	34	33	33
17.500	33	33	33	33	32
17.750	32	32	32	32	32
18.000	32	31	31	31	31
18.250	31	31	31	31	31
18.500	31	31	31	31	31
18.750	31	31	31	30	30
19.000	30	30	30	30	30
19.250	30	30	30	30	30
19.500	30	30	30	30	30
19.750	30	30	30	30	30
20.000	29	29	29	29	29
20.250	29	29	29	29	29
20.500	29	29	29	29	29
20.750	29	29	29	29	29

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 10 year

Return Event: 10 years

Storm Event: 10 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	29	29	29	29	29
21.250	29	29	29	29	28
21.500	28	28	28	28	28
21.750	28	28	28	28	28
22.000	28	28	28	28	28
22.250	28	28	28	28	28
22.500	28	28	28	28	28
22.750	28	28	28	28	28
23.000	27	27	27	27	27
23.250	27	27	27	27	27
23.500	27	27	27	27	27
23.750	27	27	27	27	27
24.000	27	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	1
7.500	1	2	3	5	6
7.750	7	7	8	9	10
8.000	12	14	15	18	21
8.250	23	24	25	25	25
8.500	25	26	26	26	26
8.750	27	27	27	27	28
9.000	28	28	28	29	29
9.250	29	30	30	30	31
9.500	31	32	32	32	33
9.750	33	34	34	34	35
10.000	35	36	36	37	38
10.250	38	39	40	41	42

Subsection: Time vs. Volume  
 Label: EX. RG  
 Scenario: Pre-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	42	42	43	43	44
10.750	44	44	45	45	46
11.000	46	46	47	48	49
11.250	50	52	53	54	56
11.500	57	61	66	76	89
11.750	105	122	144	174	236
12.000	366	471	497	479	443
12.250	398	344	280	226	173
12.500	133	104	85	77	74
12.750	71	70	68	66	64
13.000	62	61	60	59	58
13.250	58	57	57	56	56
13.500	56	55	55	54	54
13.750	53	53	53	52	52
14.000	51	51	50	50	50
14.250	50	50	49	49	49
14.500	49	49	48	48	48
14.750	48	48	47	47	47
15.000	47	47	46	46	46
15.250	46	46	45	45	45
15.500	45	44	44	44	44
15.750	44	43	43	43	43
16.000	43	43	42	42	42
16.250	42	42	42	42	42
16.500	42	41	41	41	41
16.750	40	40	40	40	40
17.000	39	39	39	39	38
17.250	38	38	38	38	37
17.500	37	37	37	36	36
17.750	36	36	36	35	35
18.000	35	35	35	34	34
18.250	34	34	34	34	34
18.500	34	34	34	34	34
18.750	34	34	34	34	33
19.000	33	33	33	33	33
19.250	33	33	33	33	33
19.500	33	33	33	33	33
19.750	32	32	32	32	32
20.000	32	32	32	32	32
20.250	32	32	32	32	32
20.500	32	32	32	32	31
20.750	31	31	31	31	31

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 25 year

Return Event: 25 years

Storm Event: 25 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	31	31	31	31	31
21.250	31	31	31	31	31
21.500	31	31	31	31	31
21.750	30	30	30	30	30
22.000	30	30	30	30	30
22.250	30	30	30	30	30
22.500	30	30	30	30	30
22.750	30	30	29	29	29
23.000	29	29	29	29	29
23.250	29	29	29	29	29
23.500	29	29	29	29	29
23.750	29	29	29	29	28
24.000	28	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	1
6.000	1	2	3	5	6
6.250	7	7	8	9	10
6.500	12	13	15	18	20
6.750	23	24	25	25	25
7.000	25	25	26	26	26
7.250	26	26	26	27	27
7.500	27	27	27	28	28
7.750	28	28	29	29	29
8.000	29	30	30	30	31
8.250	31	31	32	32	33
8.500	33	34	34	35	35
8.750	36	36	37	37	38
9.000	39	39	40	40	41
9.250	42	42	42	43	43
9.500	43	43	44	44	44
9.750	45	45	45	46	46
10.000	46	47	47	47	48
10.250	49	49	50	50	51

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	51	52	53	53	54
10.750	55	55	56	57	57
11.000	58	59	60	62	64
11.250	67	69	71	74	77
11.500	79	86	98	116	142
11.750	181	228	282	361	460
12.000	556	581	581	581	581
12.250	581	581	495	378	329
12.500	262	198	145	117	102
12.750	96	93	89	86	83
13.000	80	78	76	74	73
13.250	72	72	71	70	69
13.500	69	68	67	66	66
13.750	65	64	64	63	62
14.000	61	61	60	60	59
14.250	59	59	58	58	58
14.500	57	57	57	56	56
14.750	56	55	55	55	54
15.000	54	54	53	53	53
15.250	52	52	52	51	51
15.500	51	50	50	50	50
15.750	49	49	49	48	48
16.000	48	47	47	47	47
16.250	47	46	46	46	46
16.500	46	46	46	45	45
16.750	45	45	45	45	45
17.000	45	44	44	44	44
17.250	44	44	44	43	43
17.500	43	43	43	43	43
17.750	43	42	42	42	42
18.000	42	42	42	41	41
18.250	41	41	41	41	41
18.500	41	41	41	40	40
18.750	40	40	40	40	40
19.000	40	40	40	39	39
19.250	39	39	39	39	39
19.500	39	39	39	38	38
19.750	38	38	38	38	38
20.000	38	38	38	37	37
20.250	37	37	37	37	37
20.500	37	37	37	37	37
20.750	37	37	36	36	36

Subsection: Time vs. Volume

Label: EX. RG

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	36	36	36	36	36
21.250	36	36	36	36	36
21.500	35	35	35	35	35
21.750	35	35	35	35	35
22.000	35	35	35	35	35
22.250	34	34	34	34	34
22.500	34	34	34	34	34
22.750	34	34	34	34	33
23.000	33	33	33	33	33
23.250	33	33	33	33	33
23.500	33	33	32	32	32
23.750	32	32	32	32	32
24.000	32	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
Label: INFIL SYSTEM  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	1	1
5.500	1	1	2	2	2
5.750	3	3	4	4	5
6.000	5	6	6	7	8
6.250	8	9	10	11	12
6.500	13	14	15	16	17
6.750	18	19	20	22	23
7.000	25	26	27	29	31
7.250	32	34	36	37	39
7.500	41	43	45	47	49
7.750	51	53	56	58	60
8.000	63	65	68	70	73
8.250	76	79	82	85	88
8.500	92	95	99	103	106
8.750	110	115	119	123	128
9.000	132	137	142	147	152
9.250	157	162	168	173	179
9.500	185	191	197	203	210
9.750	216	223	230	237	244
10.000	251	258	266	274	282
10.250	290	299	308	317	327

Subsection: Time vs. Volume  
 Label: INFIL SYSTEM  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	337	347	357	368	377
10.750	384	392	400	409	417
11.000	427	436	446	458	470
11.250	483	498	513	530	548
11.500	575	622	680	755	850
11.750	967	1,072	1,196	1,339	1,526
12.000	1,791	2,114	2,454	2,773	3,019
12.250	3,206	3,361	3,484	3,572	3,630
12.500	3,663	3,675	3,675	3,668	3,658
12.750	3,647	3,636	3,624	3,612	3,600
13.000	3,587	3,574	3,562	3,550	3,539
13.250	3,530	3,521	3,512	3,504	3,497
13.500	3,490	3,484	3,478	3,472	3,467
13.750	3,461	3,456	3,451	3,447	3,442
14.000	3,437	3,433	3,429	3,425	3,421
14.250	3,417	3,414	3,411	3,408	3,405
14.500	3,403	3,400	3,398	3,395	3,393
14.750	3,391	3,389	3,387	3,384	3,382
15.000	3,380	3,378	3,376	3,374	3,372
15.250	3,370	3,368	3,366	3,365	3,363
15.500	3,361	3,359	3,357	3,355	3,353
15.750	3,351	3,349	3,347	3,345	3,344
16.000	3,342	3,340	3,338	3,336	3,335
16.250	3,333	3,332	3,330	3,329	3,328
16.500	3,327	3,326	3,325	3,324	3,323
16.750	3,322	3,321	3,320	3,319	3,318
17.000	3,317	3,316	3,315	3,314	3,313
17.250	3,312	3,312	3,311	3,310	3,309
17.500	3,308	3,307	3,307	3,306	3,305
17.750	3,304	3,303	3,302	3,302	3,301
18.000	3,300	3,299	3,298	3,298	3,297
18.250	3,296	3,296	3,295	3,295	3,294
18.500	3,293	3,293	3,292	3,292	3,291
18.750	3,290	3,289	3,289	3,288	3,287
19.000	3,286	3,285	3,284	3,283	3,282
19.250	3,281	3,280	3,279	3,277	3,276
19.500	3,275	3,274	3,272	3,271	3,270
19.750	3,268	3,267	3,265	3,264	3,262
20.000	3,260	3,259	3,257	3,255	3,254
20.250	3,252	3,250	3,248	3,247	3,245
20.500	3,243	3,241	3,239	3,237	3,235
20.750	3,233	3,231	3,229	3,227	3,225

Subsection: Time vs. Volume  
 Label: INFIL SYSTEM  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	3,223	3,221	3,218	3,216	3,214
21.250	3,212	3,210	3,207	3,205	3,203
21.500	3,200	3,198	3,195	3,193	3,190
21.750	3,188	3,185	3,183	3,180	3,177
22.000	3,175	3,172	3,169	3,167	3,164
22.250	3,161	3,158	3,156	3,153	3,150
22.500	3,147	3,144	3,141	3,138	3,135
22.750	3,132	3,129	3,126	3,123	3,120
23.000	3,117	3,113	3,110	3,107	3,104
23.250	3,100	3,097	3,094	3,090	3,087
23.500	3,083	3,080	3,077	3,073	3,069
23.750	3,066	3,062	3,059	3,055	3,051
24.000	3,048	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: INFIL SYSTEM  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	1	1
3.500	2	2	3	3	4
3.750	5	6	7	8	9
4.000	10	11	12	13	15
4.250	16	17	19	21	22
4.500	24	26	27	29	31
4.750	33	35	37	39	41
5.000	44	46	48	50	53
5.250	55	58	60	63	65
5.500	68	70	73	76	79
5.750	82	84	87	90	93
6.000	96	99	102	106	109
6.250	112	116	119	123	126
6.500	130	134	138	142	146
6.750	151	155	160	164	169
7.000	174	179	184	189	194
7.250	199	204	210	215	221
7.500	227	233	239	245	251
7.750	257	263	270	276	283
8.000	290	296	303	311	318
8.250	326	334	342	350	359
8.500	368	376	382	388	395
8.750	402	409	417	425	433
9.000	442	451	460	469	479
9.250	489	499	510	521	533
9.500	544	556	579	606	635
9.750	663	693	723	754	786
10.000	819	852	887	922	959
10.250	988	1,017	1,047	1,078	1,110

Subsection: Time vs. Volume  
 Label: INFIL SYSTEM  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	1,143	1,178	1,213	1,249	1,287
10.750	1,325	1,365	1,405	1,446	1,489
11.000	1,533	1,578	1,625	1,675	1,729
11.250	1,787	1,848	1,913	1,982	2,055
11.500	2,132	2,218	2,320	2,447	2,607
11.750	2,804	3,036	3,303	3,591	3,920
12.000	4,344	4,789	5,202	5,516	5,664
12.250	5,686	5,651	5,580	5,478	5,353
12.500	5,208	5,049	4,883	4,722	4,582
12.750	4,464	4,363	4,275	4,200	4,135
13.000	4,078	4,029	3,985	3,945	3,910
13.250	3,878	3,849	3,824	3,800	3,779
13.500	3,760	3,742	3,725	3,710	3,696
13.750	3,683	3,670	3,658	3,647	3,636
14.000	3,626	3,616	3,607	3,598	3,590
14.250	3,582	3,575	3,569	3,563	3,557
14.500	3,551	3,546	3,541	3,536	3,532
14.750	3,527	3,523	3,518	3,514	3,510
15.000	3,506	3,502	3,498	3,494	3,490
15.250	3,487	3,483	3,479	3,476	3,472
15.500	3,468	3,464	3,461	3,457	3,454
15.750	3,450	3,446	3,443	3,439	3,436
16.000	3,432	3,428	3,425	3,422	3,419
16.250	3,416	3,413	3,411	3,408	3,406
16.500	3,404	3,401	3,399	3,397	3,396
16.750	3,394	3,392	3,390	3,388	3,387
17.000	3,385	3,383	3,381	3,380	3,378
17.250	3,376	3,375	3,373	3,372	3,370
17.500	3,368	3,367	3,365	3,364	3,362
17.750	3,361	3,359	3,357	3,356	3,354
18.000	3,353	3,351	3,350	3,348	3,347
18.250	3,346	3,345	3,344	3,343	3,342
18.500	3,341	3,340	3,340	3,339	3,338
18.750	3,338	3,337	3,336	3,336	3,335
19.000	3,335	3,334	3,334	3,333	3,333
19.250	3,332	3,332	3,331	3,331	3,330
19.500	3,330	3,329	3,329	3,328	3,328
19.750	3,327	3,327	3,326	3,326	3,325
20.000	3,325	3,324	3,324	3,323	3,323
20.250	3,323	3,322	3,322	3,321	3,321
20.500	3,321	3,320	3,320	3,320	3,319
20.750	3,319	3,318	3,318	3,318	3,317



Subsection: Time vs. Volume  
 Label: INFIL SYSTEM  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	3,317	3,317	3,316	3,316	3,316
21.250	3,315	3,315	3,314	3,314	3,314
21.500	3,313	3,313	3,313	3,312	3,312
21.750	3,312	3,311	3,311	3,311	3,310
22.000	3,310	3,310	3,309	3,309	3,308
22.250	3,308	3,308	3,307	3,307	3,307
22.500	3,306	3,306	3,306	3,305	3,305
22.750	3,305	3,304	3,304	3,304	3,303
23.000	3,303	3,303	3,302	3,302	3,301
23.250	3,301	3,301	3,300	3,300	3,300
23.500	3,299	3,299	3,299	3,298	3,298
23.750	3,298	3,297	3,297	3,297	3,296
24.000	3,296	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: INFIL SYSTEM  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	1	1	1	2	3
3.000	3	4	5	6	7
3.250	8	10	11	12	14
3.500	16	17	19	21	23
3.750	25	27	29	31	34
4.000	36	38	41	43	46
4.250	49	51	54	57	60
4.500	63	66	69	73	76
4.750	79	83	86	89	93
5.000	97	100	104	108	111
5.250	115	119	123	127	131
5.500	135	139	143	147	152
5.750	156	160	164	169	173
6.000	178	182	187	191	196
6.250	201	206	211	216	222
6.500	227	233	239	245	251
6.750	257	263	270	276	283
7.000	290	297	304	311	318
7.250	325	333	341	348	356
7.500	364	372	378	384	389
7.750	395	401	407	414	420
8.000	427	434	441	449	457
8.250	465	474	483	492	502
8.500	512	522	533	544	556
8.750	577	604	631	660	689
9.000	719	750	782	814	848
9.250	882	918	954	983	1,011
9.500	1,040	1,069	1,099	1,130	1,161
9.750	1,193	1,226	1,259	1,293	1,328
10.000	1,364	1,400	1,437	1,475	1,514
10.250	1,554	1,596	1,639	1,684	1,730

Subsection: Time vs. Volume  
 Label: INFIL SYSTEM  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	1,777	1,826	1,876	1,928	1,981
10.750	2,035	2,091	2,148	2,205	2,265
11.000	2,325	2,388	2,453	2,522	2,596
11.250	2,675	2,759	2,848	2,941	3,039
11.500	3,141	3,256	3,387	3,535	3,703
11.750	3,888	4,092	4,309	4,528	4,810
12.000	5,241	5,757	6,253	6,625	6,775
12.250	6,742	6,654	6,545	6,415	6,256
12.500	6,061	5,853	5,634	5,413	5,214
12.750	5,031	4,860	4,705	4,573	4,460
13.000	4,362	4,277	4,205	4,143	4,091
13.250	4,048	4,011	3,978	3,949	3,922
13.500	3,897	3,874	3,854	3,834	3,816
13.750	3,800	3,784	3,769	3,755	3,741
14.000	3,728	3,716	3,704	3,693	3,683
14.250	3,674	3,665	3,657	3,649	3,642
14.500	3,635	3,628	3,622	3,615	3,610
14.750	3,604	3,598	3,593	3,588	3,582
15.000	3,577	3,572	3,567	3,562	3,557
15.250	3,553	3,548	3,543	3,538	3,534
15.500	3,529	3,524	3,520	3,515	3,511
15.750	3,506	3,501	3,497	3,492	3,488
16.000	3,483	3,479	3,474	3,470	3,466
16.250	3,463	3,459	3,456	3,453	3,450
16.500	3,447	3,445	3,442	3,439	3,437
16.750	3,435	3,432	3,430	3,428	3,426
17.000	3,423	3,421	3,419	3,417	3,415
17.250	3,413	3,411	3,409	3,407	3,405
17.500	3,403	3,401	3,399	3,397	3,395
17.750	3,393	3,391	3,389	3,387	3,385
18.000	3,383	3,381	3,379	3,377	3,375
18.250	3,374	3,373	3,371	3,370	3,369
18.500	3,368	3,367	3,366	3,365	3,364
18.750	3,364	3,363	3,362	3,361	3,361
19.000	3,360	3,359	3,359	3,358	3,357
19.250	3,357	3,356	3,355	3,355	3,354
19.500	3,354	3,353	3,352	3,352	3,351
19.750	3,350	3,350	3,349	3,349	3,348
20.000	3,347	3,347	3,346	3,346	3,345
20.250	3,345	3,344	3,344	3,343	3,343
20.500	3,342	3,342	3,341	3,341	3,340
20.750	3,340	3,339	3,339	3,338	3,338

Subsection: Time vs. Volume  
 Label: INFIL SYSTEM  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	3,337	3,337	3,337	3,336	3,336
21.250	3,335	3,335	3,334	3,334	3,333
21.500	3,333	3,332	3,332	3,332	3,331
21.750	3,331	3,330	3,330	3,329	3,329
22.000	3,328	3,328	3,328	3,327	3,327
22.250	3,326	3,326	3,325	3,325	3,324
22.500	3,324	3,324	3,323	3,323	3,322
22.750	3,322	3,321	3,321	3,320	3,320
23.000	3,320	3,319	3,319	3,318	3,318
23.250	3,317	3,317	3,316	3,316	3,316
23.500	3,315	3,315	3,314	3,314	3,313
23.750	3,313	3,312	3,312	3,312	3,311
24.000	3,311	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume

Label: INFIL SYSTEM

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	1	1	2	3	4
2.250	5	6	7	9	11
2.500	13	14	17	19	21
2.750	24	26	29	32	35
3.000	38	41	45	48	52
3.250	56	59	63	67	71
3.500	76	80	84	89	93
3.750	98	103	108	113	118
4.000	123	128	133	139	144
4.250	150	155	161	167	172
4.500	178	184	190	196	202
4.750	209	215	221	228	234
5.000	240	247	253	260	267
5.250	273	280	287	294	301
5.500	308	315	322	329	336
5.750	343	350	357	365	372
6.000	377	382	387	392	397
6.250	403	409	415	421	428
6.500	435	442	449	456	464
6.750	472	480	489	498	507
7.000	516	525	535	545	556
7.250	573	596	620	644	669
7.500	695	721	748	775	803
7.750	831	860	890	920	951
8.000	977	1,000	1,024	1,049	1,075
8.250	1,101	1,129	1,157	1,186	1,216
8.500	1,247	1,279	1,312	1,345	1,380
8.750	1,415	1,451	1,488	1,525	1,564
9.000	1,604	1,644	1,686	1,729	1,772
9.250	1,817	1,863	1,909	1,957	2,005
9.500	2,055	2,105	2,157	2,208	2,261
9.750	2,315	2,370	2,425	2,482	2,540
10.000	2,599	2,659	2,721	2,784	2,850
10.250	2,917	2,985	3,055	3,126	3,200

Subsection: Time vs. Volume

Label: INFIL SYSTEM

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	3,276	3,350	3,418	3,479	3,534
10.750	3,583	3,628	3,668	3,705	3,738
11.000	3,769	3,798	3,828	3,858	3,890
11.250	3,925	3,961	4,000	4,039	4,080
11.500	4,120	4,169	4,239	4,339	4,476
11.750	4,647	4,854	5,101	5,379	5,791
12.000	6,424	7,110	7,582	7,737	7,613
12.250	7,399	7,215	7,055	6,913	6,744
12.500	6,560	6,374	6,164	5,949	5,747
12.750	5,549	5,366	5,199	5,043	4,895
13.000	4,756	4,634	4,530	4,441	4,366
13.250	4,303	4,248	4,203	4,163	4,130
13.500	4,100	4,075	4,052	4,032	4,013
13.750	3,995	3,978	3,961	3,945	3,929
14.000	3,914	3,899	3,884	3,871	3,858
14.250	3,846	3,835	3,824	3,814	3,805
14.500	3,796	3,787	3,779	3,771	3,763
14.750	3,755	3,748	3,740	3,733	3,726
15.000	3,719	3,712	3,705	3,698	3,692
15.250	3,685	3,678	3,672	3,665	3,659
15.500	3,652	3,645	3,639	3,632	3,626
15.750	3,619	3,613	3,606	3,600	3,593
16.000	3,587	3,580	3,574	3,568	3,563
16.250	3,557	3,553	3,548	3,544	3,539
16.500	3,535	3,532	3,528	3,524	3,521
16.750	3,517	3,514	3,511	3,508	3,505
17.000	3,501	3,498	3,495	3,492	3,489
17.250	3,486	3,483	3,481	3,478	3,475
17.500	3,472	3,469	3,466	3,463	3,460
17.750	3,458	3,455	3,452	3,449	3,446
18.000	3,443	3,441	3,438	3,435	3,433
18.250	3,431	3,429	3,427	3,426	3,424
18.500	3,423	3,421	3,420	3,419	3,417
18.750	3,416	3,415	3,414	3,413	3,412
19.000	3,411	3,410	3,409	3,408	3,407
19.250	3,406	3,405	3,404	3,404	3,403
19.500	3,402	3,401	3,400	3,399	3,398
19.750	3,397	3,397	3,396	3,395	3,394
20.000	3,393	3,392	3,391	3,391	3,390
20.250	3,389	3,388	3,388	3,387	3,386
20.500	3,385	3,385	3,384	3,383	3,383
20.750	3,382	3,381	3,381	3,380	3,379

Subsection: Time vs. Volume

Label: INFIL SYSTEM

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	3,379	3,378	3,378	3,377	3,376
21.250	3,376	3,375	3,374	3,374	3,373
21.500	3,372	3,372	3,371	3,370	3,370
21.750	3,369	3,369	3,368	3,367	3,367
22.000	3,366	3,365	3,365	3,364	3,364
22.250	3,363	3,362	3,362	3,361	3,360
22.500	3,360	3,359	3,358	3,358	3,357
22.750	3,357	3,356	3,355	3,355	3,354
23.000	3,353	3,353	3,352	3,351	3,351
23.250	3,350	3,350	3,349	3,348	3,348
23.500	3,347	3,346	3,346	3,345	3,345
23.750	3,344	3,343	3,343	3,342	3,341
24.000	3,341	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: P-RG  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**Time vs. Volume (ft³)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	0	0
9.750	0	0	0	0	0
10.000	0	0	0	0	0
10.250	0	0	0	0	0



Subsection: Time vs. Volume  
 Label: P-RG  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	0	0	0	0	0
10.750	0	0	0	0	0
11.000	0	0	0	0	0
11.250	0	0	0	0	0
11.500	0	0	0	0	0
11.750	0	0	0	1	2
12.000	4	7	12	17	21
12.250	25	29	32	35	38
12.500	40	42	43	44	45
12.750	46	47	48	49	50
13.000	51	51	52	53	53
13.250	54	54	55	55	56
13.500	56	57	57	58	58
13.750	59	59	59	60	60
14.000	60	60	61	61	61
14.250	61	62	62	62	62
14.500	62	63	63	63	63
14.750	63	63	63	63	63
15.000	64	64	64	64	64
15.250	64	64	64	64	64
15.500	64	64	64	64	64
15.750	63	63	63	63	63
16.000	63	63	63	63	62
16.250	62	62	62	62	62
16.500	61	61	61	61	61
16.750	61	60	60	60	60
17.000	60	59	59	59	59
17.250	59	58	58	58	58
17.500	57	57	57	57	57
17.750	56	56	56	56	55
18.000	55	55	55	54	54
18.250	54	54	53	53	53
18.500	53	52	52	52	52
18.750	51	51	51	51	51
19.000	50	50	50	50	49
19.250	49	49	49	48	48
19.500	48	48	48	47	47
19.750	47	47	47	46	46
20.000	46	46	45	45	45
20.250	45	45	44	44	44
20.500	44	44	43	43	43
20.750	43	43	42	42	42

Subsection: Time vs. Volume  
 Label: P-RG  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	42	42	41	41	41
21.250	41	41	41	40	40
21.500	40	40	40	39	39
21.750	39	39	39	39	38
22.000	38	38	38	38	37
22.250	37	37	37	37	37
22.500	36	36	36	36	36
22.750	36	35	35	35	35
23.000	35	35	34	34	34
23.250	34	34	34	34	33
23.500	33	33	33	33	33
23.750	32	32	32	32	32
24.000	32	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: P-RG  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	0	0
9.750	0	0	0	0	0
10.000	0	0	0	0	0
10.250	0	0	0	0	0

Subsection: Time vs. Volume  
 Label: P-RG  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	1	1	1	1	1
10.750	1	2	2	2	3
11.000	3	3	4	4	5
11.250	6	6	7	8	9
11.500	10	11	13	15	18
11.750	22	27	34	42	55
12.000	77	85	84	84	84
12.250	84	83	84	83	83
12.500	83	83	83	83	83
12.750	83	83	83	83	83
13.000	83	83	83	83	83
13.250	83	83	83	83	83
13.500	83	83	83	83	83
13.750	83	83	83	83	83
14.000	83	83	83	83	83
14.250	83	83	83	83	83
14.500	83	83	83	83	83
14.750	83	83	83	83	83
15.000	83	83	83	83	83
15.250	83	83	83	83	83
15.500	83	83	83	83	83
15.750	83	83	83	83	83
16.000	83	83	83	83	83
16.250	83	83	83	83	83
16.500	83	83	83	83	83
16.750	83	83	83	83	83
17.000	83	83	83	83	83
17.250	83	83	83	83	83
17.500	83	83	83	83	83
17.750	83	83	83	83	83
18.000	83	83	83	83	83
18.250	83	83	83	83	83
18.500	83	83	83	83	83
18.750	83	83	83	83	83
19.000	83	83	83	83	83
19.250	83	83	83	83	83
19.500	83	83	83	83	83
19.750	83	83	83	83	83
20.000	82	82	82	82	82
20.250	82	82	82	82	82
20.500	82	82	82	82	81
20.750	81	81	81	81	81

Subsection: Time vs. Volume  
 Label: P-RG  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	81	81	81	81	80
21.250	80	80	80	80	80
21.500	80	80	79	79	79
21.750	79	79	79	79	78
22.000	78	78	78	78	78
22.250	77	77	77	77	77
22.500	77	76	76	76	76
22.750	76	76	75	75	75
23.000	75	75	74	74	74
23.250	74	74	73	73	73
23.500	73	73	72	72	72
23.750	72	72	71	71	71
24.000	71	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: P-RG  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	0	0	0	0
8.500	0	0	0	0	0
8.750	0	0	0	0	0
9.000	0	0	0	0	0
9.250	0	0	0	0	0
9.500	0	0	0	1	1
9.750	1	1	1	1	2
10.000	2	2	2	3	3
10.250	3	4	4	5	5

Subsection: Time vs. Volume  
 Label: P-RG  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

### Time vs. Volume (ft<sup>3</sup>)

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	6	6	7	8	8
10.750	9	10	11	12	13
11.000	14	15	16	17	19
11.250	20	22	24	26	28
11.500	30	33	37	42	49
11.750	57	69	83	84	84
12.000	85	85	85	85	84
12.250	84	84	84	84	83
12.500	83	83	83	83	83
12.750	83	83	83	83	83
13.000	83	83	83	83	83
13.250	83	83	83	83	83
13.500	83	83	83	83	83
13.750	83	83	83	83	83
14.000	83	83	83	83	83
14.250	83	83	83	83	83
14.500	83	83	83	83	83
14.750	83	83	83	83	83
15.000	83	83	83	83	83
15.250	83	83	83	83	83
15.500	83	83	83	83	83
15.750	83	83	83	83	83
16.000	83	83	83	83	83
16.250	83	83	83	83	83
16.500	83	83	83	83	83
16.750	83	83	83	83	83
17.000	83	83	83	83	83
17.250	83	83	83	83	83
17.500	83	83	83	83	83
17.750	83	83	83	83	83
18.000	83	83	83	83	83
18.250	83	83	83	83	83
18.500	83	83	83	83	83
18.750	83	83	83	83	83
19.000	83	83	83	83	83
19.250	83	83	83	83	83
19.500	83	83	83	83	83
19.750	83	83	83	83	83
20.000	83	83	83	83	83
20.250	83	83	83	83	83
20.500	83	83	83	83	83
20.750	83	83	83	83	83

Subsection: Time vs. Volume  
 Label: P-RG  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	83	83	83	83	83
21.250	83	83	83	83	83
21.500	83	83	83	83	83
21.750	83	83	83	83	83
22.000	83	83	83	83	83
22.250	83	83	83	83	83
22.500	83	83	83	83	83
22.750	83	83	83	83	83
23.000	83	83	83	83	83
23.250	83	83	82	82	82
23.500	82	82	82	82	82
23.750	82	82	82	82	82
24.000	81	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time vs. Volume

Label: P-RG

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
0.000	0	0	0	0	0
0.250	0	0	0	0	0
0.500	0	0	0	0	0
0.750	0	0	0	0	0
1.000	0	0	0	0	0
1.250	0	0	0	0	0
1.500	0	0	0	0	0
1.750	0	0	0	0	0
2.000	0	0	0	0	0
2.250	0	0	0	0	0
2.500	0	0	0	0	0
2.750	0	0	0	0	0
3.000	0	0	0	0	0
3.250	0	0	0	0	0
3.500	0	0	0	0	0
3.750	0	0	0	0	0
4.000	0	0	0	0	0
4.250	0	0	0	0	0
4.500	0	0	0	0	0
4.750	0	0	0	0	0
5.000	0	0	0	0	0
5.250	0	0	0	0	0
5.500	0	0	0	0	0
5.750	0	0	0	0	0
6.000	0	0	0	0	0
6.250	0	0	0	0	0
6.500	0	0	0	0	0
6.750	0	0	0	0	0
7.000	0	0	0	0	0
7.250	0	0	0	0	0
7.500	0	0	0	0	0
7.750	0	0	0	0	0
8.000	0	0	0	0	0
8.250	0	1	1	1	1
8.500	1	1	2	2	2
8.750	2	3	3	3	4
9.000	4	5	5	5	6
9.250	7	7	8	8	9
9.500	10	10	11	12	13
9.750	14	15	16	17	18
10.000	19	20	21	23	24
10.250	26	27	29	30	32

Subsection: Time vs. Volume

Label: P-RG

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

### Time vs. Volume (ft<sup>3</sup>)

Output Time increment = 0.050 hours

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
10.500	34	36	38	41	43
10.750	46	48	51	54	57
11.000	61	64	68	72	77
11.250	82	83	83	83	83
11.500	83	83	83	83	84
11.750	84	84	84	84	85
12.000	86	87	87	86	85
12.250	85	85	84	84	84
12.500	84	84	83	83	83
12.750	83	83	83	83	83
13.000	83	83	83	83	83
13.250	83	83	83	83	83
13.500	83	83	83	83	83
13.750	83	83	83	83	83
14.000	83	83	83	83	83
14.250	83	83	83	83	83
14.500	83	83	83	83	83
14.750	83	83	83	83	83
15.000	83	83	83	83	83
15.250	83	83	83	83	83
15.500	83	83	83	83	83
15.750	83	83	83	83	83
16.000	83	83	83	83	83
16.250	83	83	83	83	83
16.500	83	83	83	83	83
16.750	83	83	83	83	83
17.000	83	83	83	83	83
17.250	83	83	83	83	83
17.500	83	83	83	83	83
17.750	83	83	83	83	83
18.000	83	83	83	83	83
18.250	83	83	83	83	83
18.500	83	83	83	83	83
18.750	83	83	83	83	83
19.000	83	83	83	83	83
19.250	83	83	83	83	83
19.500	83	83	83	83	83
19.750	83	83	83	83	83
20.000	83	83	83	83	83
20.250	83	83	83	83	83
20.500	83	83	83	83	83
20.750	83	83	83	83	83

Subsection: Time vs. Volume

Label: P-RG

Scenario: Post-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Time vs. Volume (ft<sup>3</sup>)**

**Output Time increment = 0.050 hours**

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

Time (hours)	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )	Volume (ft <sup>3</sup> )
21.000	83	83	83	83	83
21.250	83	83	83	83	83
21.500	83	83	83	83	83
21.750	83	83	83	83	83
22.000	83	83	83	83	83
22.250	83	83	83	83	83
22.500	83	83	83	83	83
22.750	83	83	83	83	83
23.000	83	83	83	83	83
23.250	83	83	83	83	83
23.500	83	83	83	83	83
23.750	83	83	83	83	83
24.000	83	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation-Area Volume Curve

Label: EX. RG

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sqr (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
29.10	0.0	0	0	0	0
30.00	0.0	103	103	31	31
31.50	0.0	307	588	294	325
32.00	0.0	752	1,539	257	581

Subsection: Elevation vs. Volume Curve  
Label: INFIL SYSTEM  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

### Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft <sup>3</sup> )
29.15	0
29.90	560
30.15	961
30.40	1,359
30.65	1,754
30.90	2,146
31.15	2,534
31.40	2,917
31.65	3,295
31.90	3,668
32.15	4,034
32.40	4,393
32.65	4,744
32.90	5,086
33.15	5,419
33.40	5,740
33.65	6,049
33.90	6,343
34.15	6,619
34.40	6,870
34.65	7,082
34.90	7,278
35.90	8,025

Subsection: Elevation-Area Volume Curve

Label: P-RG

Scenario: Post-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sqr (A1*A2) (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume (Total) (ft <sup>3</sup> )
35.00	0.0	120	0	0	0
36.00	0.0	339	661	220	220

Subsection: Composite Rating Curve  
 Label: Ex. Composite Outlet Structure  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

#### Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
29.10	0.00	(N/A)	0.00
29.60	0.00	(N/A)	0.00
29.64	0.00	(N/A)	0.00
29.91	0.00	(N/A)	0.00
30.10	0.11	(N/A)	0.00
30.60	0.82	(N/A)	0.00
31.10	1.39	(N/A)	0.00
31.60	1.83	(N/A)	0.00
31.76	1.96	(N/A)	0.00
32.00	4.50	(N/A)	0.00

#### Contributing Structures

(no Q: Riser - 1, Orifice - 1, Culvert - 1)  
 (no Q: Riser - 1, Orifice - 1, Culvert - 1)  
 (no Q: Riser - 1, Orifice - 1, Culvert - 1)  
 (no Q: Riser - 1, Orifice - 1, Culvert - 1)  
 Orifice - 1, Culvert - 1  
 (no Q: Riser - 1)  
 Orifice - 1, Culvert - 1  
 (no Q: Riser - 1)  
 Orifice - 1, Culvert - 1  
 (no Q: Riser - 1)  
 Orifice - 1, Culvert - 1  
 (no Q: Riser - 1)  
 Orifice - 1, Culvert - 1  
 (no Q: Riser - 1)  
 Riser - 1, Orifice - 1, Culvert - 1

Subsection: Composite Rating Curve  
 Label: RG Composite Outlet Structure  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

#### Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
35.00	0.00	(N/A)	0.00
35.50	0.00	(N/A)	0.00
36.00	10.61	(N/A)	0.00

#### Contributing Structures

None Contributing
Riser - 1
Riser - 1



Return Event: 1 years  
Storm Event: 1 year

Water Surface Elevation (ft)	Flow (ft <sup>3</sup> /s)	Tailwater Elevation (ft)	Convergence Error (ft)
29.15	0.00	(N/A)	0.00
29.65	0.00	(N/A)	0.00
30.15	0.00	(N/A)	0.00
30.60	0.00	(N/A)	0.00
30.65	0.00	(N/A)	0.00
31.15	0.00	(N/A)	0.00
31.65	0.00	(N/A)	0.00
32.15	0.58	(N/A)	0.00
32.65	1.37	(N/A)	0.00
33.15	1.81	(N/A)	0.00
33.65	2.17	(N/A)	0.00
34.00	2.39	(N/A)	0.00
34.15	2.56	(N/A)	0.00
34.65	3.53	(N/A)	0.00
35.15	4.84	(N/A)	0.00
35.65	6.40	(N/A)	0.00
35.90	7.25	(N/A)	0.00

[illegible]

Subsection: Composite Rating Curve  
Label: SIS Composite Outlet Structure  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

#### Composite Outflow Summary

Contributing Structures
Orifice - 1,Culvert - 1,Weir - 1
Orifice - 1,Culvert - 1,Weir - 1
Orifice - 1,Culvert - 1,Weir - 1
Orifice - 1,Culvert - 1,Weir - 1

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: EX. RG  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.00 ft <sup>3</sup> /s
Initial Conditions	
Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
29.10	0.00	0	0	0.00	0.00	0.00
29.60	0.00	5	32	0.00	0.00	0.06
29.64	0.00	7	37	0.00	0.00	0.08
29.91	0.00	23	83	0.00	0.00	0.25
30.10	0.11	42	113	0.00	0.11	0.57
30.60	0.82	112	172	0.00	0.82	2.07
31.10	1.39	215	242	0.00	1.39	3.78
31.60	1.83	359	380	0.00	1.84	5.83
31.76	1.96	430	514	0.00	1.96	6.75
32.00	4.50	581	752	0.00	4.51	10.96

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: EX. RG  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.00 ft <sup>3</sup> /s
Initial Conditions	
Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
29.10	0.00	0	0	0.00	0.00	0.00
29.60	0.00	5	32	0.00	0.00	0.06
29.64	0.00	7	37	0.00	0.00	0.08
29.91	0.00	23	83	0.00	0.00	0.25
30.10	0.11	42	113	0.00	0.11	0.57
30.60	0.82	112	172	0.00	0.82	2.07
31.10	1.39	215	242	0.00	1.39	3.78
31.60	1.83	359	380	0.00	1.84	5.83
31.76	1.96	430	514	0.00	1.96	6.75
32.00	4.50	581	752	0.00	4.51	10.96

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: EX. RG  
 Scenario: Pre-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.00 ft <sup>3</sup> /s
Initial Conditions	
Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
29.10	0.00	0	0	0.00	0.00	0.00
29.60	0.00	5	32	0.00	0.00	0.06
29.64	0.00	7	37	0.00	0.00	0.08
29.91	0.00	23	83	0.00	0.00	0.25
30.10	0.11	42	113	0.00	0.11	0.57
30.60	0.82	112	172	0.00	0.82	2.07
31.10	1.39	215	242	0.00	1.39	3.78
31.60	1.83	359	380	0.00	1.84	5.83
31.76	1.96	430	514	0.00	1.96	6.75
32.00	4.50	581	752	0.00	4.51	10.96

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: EX. RG  
 Scenario: Pre-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.00 ft <sup>3</sup> /s
Initial Conditions	
Elevation (Water Surface, Initial)	29.10 ft
Volume (Initial)	0 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
29.10	0.00	0	0	0.00	0.00	0.00
29.60	0.00	5	32	0.00	0.00	0.06
29.64	0.00	7	37	0.00	0.00	0.08
29.91	0.00	23	83	0.00	0.00	0.25
30.10	0.11	42	113	0.00	0.11	0.57
30.60	0.82	112	172	0.00	0.82	2.07
31.10	1.39	215	242	0.00	1.39	3.78
31.60	1.83	359	380	0.00	1.84	5.83
31.76	1.96	430	514	0.00	1.96	6.75
32.00	4.50	581	752	0.00	4.51	10.96

Subsection: Level Pool Pond Routing Summary  
Label: EX. RG (IN)  
Scenario: Pre-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

Infiltration				
Infiltration Method (Computed)		Constant		
Infiltration Rate (Constant)		0.00 ft³/s		
Initial Conditions				
Elevation (Water Surface, Initial)		29.10 ft		
Volume (Initial)		0 ft³		
Flow (Initial Outlet)		0.00 ft³/s		
Flow (Initial Infiltration)		0.00 ft³/s		
Flow (Initial, Total)		0.00 ft³/s		
Time Increment		0.050 hours		
Inflow/Outflow Hydrograph Summary				
Flow (Peak In)		0.81 ft³/s	Time to Peak (Flow, In)	12.100 hours
Infiltration (Peak)		0.00 ft³/s	Time to Peak (Infiltration)	10.850 hours
Flow (Peak Outlet)		0.76 ft³/s	Time to Peak (Flow, Outlet)	12.100 hours
Peak Conditions				
Elevation (Water Surface, Peak)		30.56 ft		
Volume (Peak)		105 ft³		
Mass Balance (ft³)				
Volume (Initial)		0 ft³		
Volume (Total Inflow)		2,866 ft³		
Volume (Total Infiltration)		145 ft³		
Volume (Total Outlet Outflow)		2,698 ft³		
Volume (Retained)		23 ft³		
Volume (Unrouted)		-1 ft³		
Error (Mass Balance)		0.0 %		

Subsection: Level Pool Pond Routing Summary  
Label: EX. RG (IN)  
Scenario: Pre-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

Infiltration			
Infiltration Method (Computed)		Constant	
Infiltration Rate (Constant)		0.00 ft³/s	
Initial Conditions			
Elevation (Water Surface, Initial)		29.10 ft	
Volume (Initial)		0 ft³	
Flow (Initial Outlet)		0.00 ft³/s	
Flow (Initial Infiltration)		0.00 ft³/s	
Flow (Initial, Total)		0.00 ft³/s	
Time Increment		0.050 hours	
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)		2.29 ft³/s	Time to Peak (Flow, In)
Infiltration (Peak)		0.00 ft³/s	Time to Peak (Infiltration)
Flow (Peak Outlet)		1.95 ft³/s	Time to Peak (Flow, Outlet)
			12.100 hours
			8.650 hours
			12.150 hours
Elevation (Water Surface, Peak)		31.75 ft	
Volume (Peak)		425 ft³	
Mass Balance (ft³)			
Volume (Initial)		0 ft³	
Volume (Total Inflow)		8,002 ft³	
Volume (Total Infiltration)		169 ft³	
Volume (Total Outlet Outflow)		7,806 ft³	
Volume (Retained)		24 ft³	
Volume (Unrouted)		-3 ft³	
Error (Mass Balance)		0.0 %	



Subsection: Level Pool Pond Routing Summary  
Label: EX. RG (IN)  
Scenario: Pre-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

Infiltration				
Infiltration Method (Computed)		Constant		
Infiltration Rate (Constant)		0.00 ft³/s		
Initial Conditions				
Elevation (Water Surface, Initial)		29.10 ft		
Volume (Initial)		0 ft³		
Flow (Initial Outlet)		0.00 ft³/s		
Flow (Initial Infiltration)		0.00 ft³/s		
Flow (Initial, Total)		0.00 ft³/s		
Time Increment		0.050 hours		
Inflow/Outflow Hydrograph Summary				
Flow (Peak In)		3.20 ft³/s	Time to Peak (Flow, In)	12.100 hours
Infiltration (Peak)		0.00 ft³/s	Time to Peak (Infiltration)	7.700 hours
Flow (Peak Outlet)		3.20 ft³/s	Time to Peak (Flow, Outlet)	12.100 hours
Peak Conditions				
Elevation (Water Surface, Peak)		31.88 ft		
Volume (Peak)		497 ft³		
Mass Balance (ft³)				
Volume (Initial)		0 ft³		
Volume (Total Inflow)		11,288 ft³		
Volume (Total Infiltration)		179 ft³		
Volume (Total Outlet Outflow)		11,080 ft³		
Volume (Retained)		24 ft³		
Volume (Unrouted)		-4 ft³		
Error (Mass Balance)		0.0 %		

Subsection: Level Pool Pond Routing Summary  
Label: EX. RG (IN)  
Scenario: Pre-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

Infiltration				
Infiltration Method (Computed)		Constant		
Infiltration Rate (Constant)		0.00 ft³/s		
Initial Conditions				
Elevation (Water Surface, Initial)		29.10 ft		
Volume (Initial)		0 ft³		
Flow (Initial Outlet)		0.00 ft³/s		
Flow (Initial Infiltration)		0.00 ft³/s		
Flow (Initial, Total)		0.00 ft³/s		
Time Increment		0.050 hours		
Inflow/Outflow Hydrograph Summary				
Flow (Peak In)		3.20 ft³/s	Time to Peak (Flow, In)	12.100 hours
Infiltration (Peak)		0.00 ft³/s	Time to Peak (Infiltration)	7.700 hours
Flow (Peak Outlet)		3.20 ft³/s	Time to Peak (Flow, Outlet)	12.100 hours
Peak Conditions				
Elevation (Water Surface, Peak)		31.88 ft		
Volume (Peak)		497 ft³		
Mass Balance (ft³)				
Volume (Initial)		0 ft³		
Volume (Total Inflow)		11,288 ft³		
Volume (Total Infiltration)		179 ft³		
Volume (Total Outlet Outflow)		11,080 ft³		
Volume (Retained)		24 ft³		
Volume (Unrouted)		-4 ft³		
Error (Mass Balance)		0.0 %		

Subsection: Pond Infiltration Hydrograph  
 Label: EX. RG (INF)  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	15.250 hours
Hydrograph Volume	144 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
10.600	0.00	0.00	0.00	0.00	0.00
10.850	0.00	0.00	0.00	0.00	0.00
11.100	0.00	0.00	0.00	0.00	0.00
11.350	0.00	0.00	0.00	0.00	0.00
11.600	0.00	0.00	0.00	0.00	0.00
11.850	0.00	0.00	0.00	0.00	0.00
12.100	0.00	0.00	0.00	0.00	0.00
12.350	0.00	0.00	0.00	0.00	0.00
12.600	0.00	0.00	0.00	0.00	0.00
12.850	0.00	0.00	0.00	0.00	0.00
13.100	0.00	0.00	0.00	0.00	0.00
13.350	0.00	0.00	0.00	0.00	0.00
13.600	0.00	0.00	0.00	0.00	0.00
13.850	0.00	0.00	0.00	0.00	0.00
14.100	0.00	0.00	0.00	0.00	0.00
14.350	0.00	0.00	0.00	0.00	0.00
14.600	0.00	0.00	0.00	0.00	0.00
14.850	0.00	0.00	0.00	0.00	0.00
15.100	0.00	0.00	0.00	0.00	0.00
15.350	0.00	0.00	0.00	0.00	0.00
15.600	0.00	0.00	0.00	0.00	0.00
15.850	0.00	0.00	0.00	0.00	0.00
16.100	0.00	0.00	0.00	0.00	0.00
16.350	0.00	0.00	0.00	0.00	0.00
16.600	0.00	0.00	0.00	0.00	0.00
16.850	0.00	0.00	0.00	0.00	0.00
17.100	0.00	0.00	0.00	0.00	0.00
17.350	0.00	0.00	0.00	0.00	0.00
17.600	0.00	0.00	0.00	0.00	0.00
17.850	0.00	0.00	0.00	0.00	0.00
18.100	0.00	0.00	0.00	0.00	0.00
18.350	0.00	0.00	0.00	0.00	0.00
18.600	0.00	0.00	0.00	0.00	0.00
18.850	0.00	0.00	0.00	0.00	0.00
19.100	0.00	0.00	0.00	0.00	0.00
19.350	0.00	0.00	0.00	0.00	0.00
19.600	0.00	0.00	0.00	0.00	0.00
19.850	0.00	0.00	0.00	0.00	0.00
20.100	0.00	0.00	0.00	0.00	0.00

Subsection: Pond Infiltration Hydrograph  
 Label: EX. RG (INF)  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
20.350	0.00	0.00	0.00	0.00	0.00
20.600	0.00	0.00	0.00	0.00	0.00
20.850	0.00	0.00	0.00	0.00	0.00
21.100	0.00	0.00	0.00	0.00	0.00
21.350	0.00	0.00	0.00	0.00	0.00
21.600	0.00	0.00	0.00	0.00	0.00
21.850	0.00	0.00	0.00	0.00	0.00
22.100	0.00	0.00	0.00	0.00	0.00
22.350	0.00	0.00	0.00	0.00	0.00
22.600	0.00	0.00	0.00	0.00	0.00
22.850	0.00	0.00	0.00	0.00	0.00
23.100	0.00	0.00	0.00	0.00	0.00
23.350	0.00	0.00	0.00	0.00	0.00
23.600	0.00	0.00	0.00	0.00	0.00
23.850	0.00	0.00	0.00	0.00	(N/A)

Subsection: Pond Infiltration Hydrograph  
 Label: EX. RG (INF)  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	13.750 hours
Hydrograph Volume	168 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
8.350	0.00	0.00	0.00	0.00	0.00
8.600	0.00	0.00	0.00	0.00	0.00
8.850	0.00	0.00	0.00	0.00	0.00
9.100	0.00	0.00	0.00	0.00	0.00
9.350	0.00	0.00	0.00	0.00	0.00
9.600	0.00	0.00	0.00	0.00	0.00
9.850	0.00	0.00	0.00	0.00	0.00
10.100	0.00	0.00	0.00	0.00	0.00
10.350	0.00	0.00	0.00	0.00	0.00
10.600	0.00	0.00	0.00	0.00	0.00
10.850	0.00	0.00	0.00	0.00	0.00
11.100	0.00	0.00	0.00	0.00	0.00
11.350	0.00	0.00	0.00	0.00	0.00
11.600	0.00	0.00	0.00	0.00	0.00
11.850	0.00	0.00	0.00	0.00	0.00
12.100	0.00	0.00	0.00	0.00	0.00
12.350	0.00	0.00	0.00	0.00	0.00
12.600	0.00	0.00	0.00	0.00	0.00
12.850	0.00	0.00	0.00	0.00	0.00
13.100	0.00	0.00	0.00	0.00	0.00
13.350	0.00	0.00	0.00	0.00	0.00
13.600	0.00	0.00	0.00	0.00	0.00
13.850	0.00	0.00	0.00	0.00	0.00
14.100	0.00	0.00	0.00	0.00	0.00
14.350	0.00	0.00	0.00	0.00	0.00
14.600	0.00	0.00	0.00	0.00	0.00
14.850	0.00	0.00	0.00	0.00	0.00
15.100	0.00	0.00	0.00	0.00	0.00
15.350	0.00	0.00	0.00	0.00	0.00
15.600	0.00	0.00	0.00	0.00	0.00
15.850	0.00	0.00	0.00	0.00	0.00
16.100	0.00	0.00	0.00	0.00	0.00
16.350	0.00	0.00	0.00	0.00	0.00
16.600	0.00	0.00	0.00	0.00	0.00
16.850	0.00	0.00	0.00	0.00	0.00
17.100	0.00	0.00	0.00	0.00	0.00
17.350	0.00	0.00	0.00	0.00	0.00
17.600	0.00	0.00	0.00	0.00	0.00
17.850	0.00	0.00	0.00	0.00	0.00

Subsection: Pond Infiltration Hydrograph  
 Label: EX. RG (INF)  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
18.100	0.00	0.00	0.00	0.00	0.00
18.350	0.00	0.00	0.00	0.00	0.00
18.600	0.00	0.00	0.00	0.00	0.00
18.850	0.00	0.00	0.00	0.00	0.00
19.100	0.00	0.00	0.00	0.00	0.00
19.350	0.00	0.00	0.00	0.00	0.00
19.600	0.00	0.00	0.00	0.00	0.00
19.850	0.00	0.00	0.00	0.00	0.00
20.100	0.00	0.00	0.00	0.00	0.00
20.350	0.00	0.00	0.00	0.00	0.00
20.600	0.00	0.00	0.00	0.00	0.00
20.850	0.00	0.00	0.00	0.00	0.00
21.100	0.00	0.00	0.00	0.00	0.00
21.350	0.00	0.00	0.00	0.00	0.00
21.600	0.00	0.00	0.00	0.00	0.00
21.850	0.00	0.00	0.00	0.00	0.00
22.100	0.00	0.00	0.00	0.00	0.00
22.350	0.00	0.00	0.00	0.00	0.00
22.600	0.00	0.00	0.00	0.00	0.00
22.850	0.00	0.00	0.00	0.00	0.00
23.100	0.00	0.00	0.00	0.00	0.00
23.350	0.00	0.00	0.00	0.00	0.00
23.600	0.00	0.00	0.00	0.00	0.00
23.850	0.00	0.00	0.00	0.00	(N/A)

Subsection: Pond Infiltration Hydrograph  
 Label: EX. RG (INF)  
 Scenario: Pre-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	13.100 hours
Hydrograph Volume	178 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
7.350	0.00	0.00	0.00	0.00	0.00
7.600	0.00	0.00	0.00	0.00	0.00
7.850	0.00	0.00	0.00	0.00	0.00
8.100	0.00	0.00	0.00	0.00	0.00
8.350	0.00	0.00	0.00	0.00	0.00
8.600	0.00	0.00	0.00	0.00	0.00
8.850	0.00	0.00	0.00	0.00	0.00
9.100	0.00	0.00	0.00	0.00	0.00
9.350	0.00	0.00	0.00	0.00	0.00
9.600	0.00	0.00	0.00	0.00	0.00
9.850	0.00	0.00	0.00	0.00	0.00
10.100	0.00	0.00	0.00	0.00	0.00
10.350	0.00	0.00	0.00	0.00	0.00
10.600	0.00	0.00	0.00	0.00	0.00
10.850	0.00	0.00	0.00	0.00	0.00
11.100	0.00	0.00	0.00	0.00	0.00
11.350	0.00	0.00	0.00	0.00	0.00
11.600	0.00	0.00	0.00	0.00	0.00
11.850	0.00	0.00	0.00	0.00	0.00
12.100	0.00	0.00	0.00	0.00	0.00
12.350	0.00	0.00	0.00	0.00	0.00
12.600	0.00	0.00	0.00	0.00	0.00
12.850	0.00	0.00	0.00	0.00	0.00
13.100	0.00	0.00	0.00	0.00	0.00
13.350	0.00	0.00	0.00	0.00	0.00
13.600	0.00	0.00	0.00	0.00	0.00
13.850	0.00	0.00	0.00	0.00	0.00
14.100	0.00	0.00	0.00	0.00	0.00
14.350	0.00	0.00	0.00	0.00	0.00
14.600	0.00	0.00	0.00	0.00	0.00
14.850	0.00	0.00	0.00	0.00	0.00
15.100	0.00	0.00	0.00	0.00	0.00
15.350	0.00	0.00	0.00	0.00	0.00
15.600	0.00	0.00	0.00	0.00	0.00
15.850	0.00	0.00	0.00	0.00	0.00
16.100	0.00	0.00	0.00	0.00	0.00
16.350	0.00	0.00	0.00	0.00	0.00
16.600	0.00	0.00	0.00	0.00	0.00
16.850	0.00	0.00	0.00	0.00	0.00

Subsection: Pond Infiltration Hydrograph  
 Label: EX. RG (INF)  
 Scenario: Pre-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
17.100	0.00	0.00	0.00	0.00	0.00
17.350	0.00	0.00	0.00	0.00	0.00
17.600	0.00	0.00	0.00	0.00	0.00
17.850	0.00	0.00	0.00	0.00	0.00
18.100	0.00	0.00	0.00	0.00	0.00
18.350	0.00	0.00	0.00	0.00	0.00
18.600	0.00	0.00	0.00	0.00	0.00
18.850	0.00	0.00	0.00	0.00	0.00
19.100	0.00	0.00	0.00	0.00	0.00
19.350	0.00	0.00	0.00	0.00	0.00
19.600	0.00	0.00	0.00	0.00	0.00
19.850	0.00	0.00	0.00	0.00	0.00
20.100	0.00	0.00	0.00	0.00	0.00
20.350	0.00	0.00	0.00	0.00	0.00
20.600	0.00	0.00	0.00	0.00	0.00
20.850	0.00	0.00	0.00	0.00	0.00
21.100	0.00	0.00	0.00	0.00	0.00
21.350	0.00	0.00	0.00	0.00	0.00
21.600	0.00	0.00	0.00	0.00	0.00
21.850	0.00	0.00	0.00	0.00	0.00
22.100	0.00	0.00	0.00	0.00	0.00
22.350	0.00	0.00	0.00	0.00	0.00
22.600	0.00	0.00	0.00	0.00	0.00
22.850	0.00	0.00	0.00	0.00	0.00
23.100	0.00	0.00	0.00	0.00	0.00
23.350	0.00	0.00	0.00	0.00	0.00
23.600	0.00	0.00	0.00	0.00	0.00
23.850	0.00	0.00	0.00	0.00	(N/A)



Subsection: Pond Infiltration Hydrograph  
 Label: EX. RG (INF)  
 Scenario: Pre-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	12.100 hours
Hydrograph Volume	195 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
5.850	0.00	0.00	0.00	0.00	0.00
6.100	0.00	0.00	0.00	0.00	0.00
6.350	0.00	0.00	0.00	0.00	0.00
6.600	0.00	0.00	0.00	0.00	0.00
6.850	0.00	0.00	0.00	0.00	0.00
7.100	0.00	0.00	0.00	0.00	0.00
7.350	0.00	0.00	0.00	0.00	0.00
7.600	0.00	0.00	0.00	0.00	0.00
7.850	0.00	0.00	0.00	0.00	0.00
8.100	0.00	0.00	0.00	0.00	0.00
8.350	0.00	0.00	0.00	0.00	0.00
8.600	0.00	0.00	0.00	0.00	0.00
8.850	0.00	0.00	0.00	0.00	0.00
9.100	0.00	0.00	0.00	0.00	0.00
9.350	0.00	0.00	0.00	0.00	0.00
9.600	0.00	0.00	0.00	0.00	0.00
9.850	0.00	0.00	0.00	0.00	0.00
10.100	0.00	0.00	0.00	0.00	0.00
10.350	0.00	0.00	0.00	0.00	0.00
10.600	0.00	0.00	0.00	0.00	0.00
10.850	0.00	0.00	0.00	0.00	0.00
11.100	0.00	0.00	0.00	0.00	0.00
11.350	0.00	0.00	0.00	0.00	0.00
11.600	0.00	0.00	0.00	0.00	0.00
11.850	0.00	0.00	0.00	0.00	0.00
12.100	0.00	0.00	0.00	0.00	0.00
12.350	0.00	0.00	0.00	0.00	0.00
12.600	0.00	0.00	0.00	0.00	0.00
12.850	0.00	0.00	0.00	0.00	0.00
13.100	0.00	0.00	0.00	0.00	0.00
13.350	0.00	0.00	0.00	0.00	0.00
13.600	0.00	0.00	0.00	0.00	0.00
13.850	0.00	0.00	0.00	0.00	0.00
14.100	0.00	0.00	0.00	0.00	0.00
14.350	0.00	0.00	0.00	0.00	0.00
14.600	0.00	0.00	0.00	0.00	0.00
14.850	0.00	0.00	0.00	0.00	0.00
15.100	0.00	0.00	0.00	0.00	0.00
15.350	0.00	0.00	0.00	0.00	0.00

Subsection: Pond Infiltration Hydrograph  
 Label: EX. RG (INF)  
 Scenario: Pre-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
15.600	0.00	0.00	0.00	0.00	0.00
15.850	0.00	0.00	0.00	0.00	0.00
16.100	0.00	0.00	0.00	0.00	0.00
16.350	0.00	0.00	0.00	0.00	0.00
16.600	0.00	0.00	0.00	0.00	0.00
16.850	0.00	0.00	0.00	0.00	0.00
17.100	0.00	0.00	0.00	0.00	0.00
17.350	0.00	0.00	0.00	0.00	0.00
17.600	0.00	0.00	0.00	0.00	0.00
17.850	0.00	0.00	0.00	0.00	0.00
18.100	0.00	0.00	0.00	0.00	0.00
18.350	0.00	0.00	0.00	0.00	0.00
18.600	0.00	0.00	0.00	0.00	0.00
18.850	0.00	0.00	0.00	0.00	0.00
19.100	0.00	0.00	0.00	0.00	0.00
19.350	0.00	0.00	0.00	0.00	0.00
19.600	0.00	0.00	0.00	0.00	0.00
19.850	0.00	0.00	0.00	0.00	0.00
20.100	0.00	0.00	0.00	0.00	0.00
20.350	0.00	0.00	0.00	0.00	0.00
20.600	0.00	0.00	0.00	0.00	0.00
20.850	0.00	0.00	0.00	0.00	0.00
21.100	0.00	0.00	0.00	0.00	0.00
21.350	0.00	0.00	0.00	0.00	0.00
21.600	0.00	0.00	0.00	0.00	0.00
21.850	0.00	0.00	0.00	0.00	0.00
22.100	0.00	0.00	0.00	0.00	0.00
22.350	0.00	0.00	0.00	0.00	0.00
22.600	0.00	0.00	0.00	0.00	0.00
22.850	0.00	0.00	0.00	0.00	0.00
23.100	0.00	0.00	0.00	0.00	0.00
23.350	0.00	0.00	0.00	0.00	0.00
23.600	0.00	0.00	0.00	0.00	0.00
23.850	0.00	0.00	0.00	0.00	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX. RG (OUT)  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Peak Discharge	0.76 ft <sup>3</sup> /s
Time to Peak	12.100 hours
Hydrograph Volume	2,698 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.250	0.00	0.01	0.02	0.02	0.03
11.500	0.03	0.04	0.05	0.06	0.08
11.750	0.11	0.15	0.19	0.24	0.33
12.000	0.51	0.66	0.76	0.76	0.62
12.250	0.50	0.44	0.39	0.34	0.29
12.500	0.24	0.20	0.17	0.15	0.14
12.750	0.13	0.13	0.12	0.11	0.11
13.000	0.10	0.10	0.10	0.09	0.09
13.250	0.09	0.09	0.09	0.09	0.08
13.500	0.08	0.08	0.08	0.08	0.08
13.750	0.08	0.07	0.07	0.07	0.07
14.000	0.07	0.07	0.07	0.06	0.06
14.250	0.06	0.06	0.06	0.06	0.06
14.500	0.06	0.06	0.06	0.06	0.06
14.750	0.06	0.06	0.05	0.05	0.05
15.000	0.05	0.05	0.05	0.05	0.05
15.250	0.05	0.05	0.05	0.05	0.05
15.500	0.04	0.04	0.04	0.04	0.04
15.750	0.04	0.04	0.04	0.04	0.04
16.000	0.04	0.04	0.04	0.04	0.03
16.250	0.03	0.03	0.03	0.03	0.03
16.500	0.03	0.03	0.03	0.03	0.03
16.750	0.03	0.03	0.03	0.03	0.03
17.000	0.03	0.03	0.03	0.03	0.03
17.250	0.03	0.03	0.03	0.03	0.03
17.500	0.03	0.03	0.02	0.02	0.02
17.750	0.02	0.02	0.02	0.02	0.02
18.000	0.02	0.02	0.02	0.02	0.02
18.250	0.02	0.02	0.02	0.02	0.02
18.500	0.02	0.02	0.02	0.02	0.02
18.750	0.02	0.02	0.02	0.02	0.02
19.000	0.02	0.02	0.02	0.02	0.02
19.250	0.02	0.02	0.02	0.02	0.02
19.500	0.02	0.02	0.02	0.02	0.02
19.750	0.02	0.02	0.02	0.02	0.02
20.000	0.02	0.02	0.02	0.02	0.02
20.250	0.02	0.02	0.02	0.02	0.02
20.500	0.02	0.02	0.02	0.02	0.02
20.750	0.02	0.02	0.02	0.02	0.02

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX. RG (OUT)  
 Scenario: Pre-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.000	0.02	0.02	0.02	0.02	0.02
21.250	0.02	0.01	0.01	0.01	0.01
21.500	0.01	0.01	0.01	0.01	0.01
21.750	0.01	0.01	0.01	0.01	0.01
22.000	0.01	0.01	0.01	0.01	0.01
22.250	0.01	0.01	0.01	0.01	0.01
22.500	0.01	0.01	0.01	0.01	0.01
22.750	0.01	0.01	0.01	0.01	0.01
23.000	0.01	0.01	0.01	0.01	0.01
23.250	0.01	0.01	0.01	0.01	0.01
23.500	0.01	0.01	0.01	0.01	0.01
23.750	0.01	0.01	0.01	0.01	0.01
24.000	0.01	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX. RG (OUT)  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

Peak Discharge	1.95 ft <sup>3</sup> /s
Time to Peak	12.150 hours
Hydrograph Volume	7,806 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
9.100	0.00	0.00	0.01	0.02	0.02
9.350	0.02	0.02	0.02	0.02	0.02
9.600	0.03	0.03	0.03	0.03	0.03
9.850	0.03	0.03	0.04	0.04	0.04
10.100	0.04	0.04	0.05	0.05	0.05
10.350	0.05	0.06	0.06	0.06	0.06
10.600	0.07	0.07	0.07	0.08	0.08
10.850	0.08	0.09	0.09	0.09	0.10
11.100	0.10	0.11	0.12	0.13	0.14
11.350	0.15	0.16	0.17	0.19	0.21
11.600	0.25	0.32	0.40	0.50	0.61
11.850	0.73	0.84	1.04	1.42	1.69
12.100	1.89	1.95	1.88	1.66	1.43
12.350	1.17	0.97	0.82	0.62	0.51
12.600	0.42	0.37	0.34	0.33	0.31
12.850	0.30	0.29	0.27	0.26	0.24
13.100	0.24	0.23	0.22	0.22	0.22
13.350	0.21	0.21	0.21	0.20	0.20
13.600	0.19	0.19	0.19	0.18	0.18
13.850	0.18	0.17	0.17	0.17	0.16
14.100	0.16	0.16	0.15	0.15	0.15
14.350	0.15	0.15	0.15	0.14	0.14
14.600	0.14	0.14	0.14	0.13	0.13
14.850	0.13	0.13	0.13	0.13	0.12
15.100	0.12	0.12	0.12	0.12	0.11
15.350	0.11	0.11	0.11	0.11	0.11
15.600	0.10	0.10	0.10	0.10	0.10
15.850	0.09	0.09	0.09	0.09	0.09
16.100	0.09	0.08	0.08	0.08	0.08
16.350	0.08	0.08	0.08	0.08	0.08
16.600	0.08	0.08	0.08	0.07	0.07
16.850	0.07	0.07	0.07	0.07	0.07
17.100	0.07	0.07	0.07	0.07	0.07
17.350	0.06	0.06	0.06	0.06	0.06
17.600	0.06	0.06	0.06	0.06	0.06
17.850	0.06	0.06	0.05	0.05	0.05
18.100	0.05	0.05	0.05	0.05	0.05
18.350	0.05	0.05	0.05	0.05	0.05
18.600	0.05	0.05	0.05	0.05	0.05

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX. RG (OUT)  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

# **HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
18.850	0.05	0.05	0.05	0.05	0.05
19.100	0.05	0.05	0.05	0.05	0.05
19.350	0.05	0.05	0.05	0.04	0.04
19.600	0.04	0.04	0.04	0.04	0.04
19.850	0.04	0.04	0.04	0.04	0.04
20.100	0.04	0.04	0.04	0.04	0.04
20.350	0.04	0.04	0.04	0.04	0.04
20.600	0.04	0.04	0.04	0.04	0.04
20.850	0.04	0.04	0.04	0.04	0.04
21.100	0.04	0.04	0.04	0.04	0.04
21.350	0.04	0.04	0.04	0.04	0.04
21.600	0.04	0.04	0.04	0.04	0.04
21.850	0.04	0.04	0.03	0.03	0.03
22.100	0.03	0.03	0.03	0.03	0.03
22.350	0.03	0.03	0.03	0.03	0.03
22.600	0.03	0.03	0.03	0.03	0.03
22.850	0.03	0.03	0.03	0.03	0.03
23.100	0.03	0.03	0.03	0.03	0.03
23.350	0.03	0.03	0.03	0.03	0.03
23.600	0.03	0.03	0.03	0.03	0.03
23.850	0.03	0.03	0.03	0.03	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX. RG (OUT)  
 Scenario: Pre-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

Peak Discharge	3.20 ft <sup>3</sup> /s
Time to Peak	12.100 hours
Hydrograph Volume	11,080 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
8.200	0.00	0.00	0.01	0.01	0.02
8.450	0.02	0.02	0.02	0.02	0.02
8.700	0.02	0.03	0.03	0.03	0.03
8.950	0.03	0.03	0.03	0.04	0.04
9.200	0.04	0.04	0.04	0.05	0.05
9.450	0.05	0.05	0.05	0.06	0.06
9.700	0.06	0.06	0.06	0.07	0.07
9.950	0.07	0.07	0.08	0.08	0.08
10.200	0.09	0.09	0.09	0.10	0.10
10.450	0.11	0.11	0.12	0.12	0.12
10.700	0.13	0.13	0.14	0.14	0.15
10.950	0.15	0.16	0.17	0.17	0.18
11.200	0.20	0.21	0.23	0.24	0.26
11.450	0.27	0.29	0.33	0.39	0.49
11.700	0.61	0.76	0.89	1.02	1.18
11.950	1.46	1.85	2.74	3.20	2.89
12.200	2.21	1.91	1.80	1.61	1.43
12.450	1.17	0.95	0.75	0.58	0.50
12.700	0.47	0.44	0.42	0.41	0.39
12.950	0.37	0.35	0.33	0.32	0.31
13.200	0.30	0.30	0.29	0.29	0.28
13.450	0.28	0.27	0.27	0.26	0.26
13.700	0.25	0.25	0.24	0.24	0.23
13.950	0.23	0.22	0.22	0.21	0.21
14.200	0.21	0.20	0.20	0.20	0.20
14.450	0.20	0.19	0.19	0.19	0.19
14.700	0.18	0.18	0.18	0.18	0.17
14.950	0.17	0.17	0.17	0.16	0.16
15.200	0.16	0.16	0.15	0.15	0.15
15.450	0.15	0.14	0.14	0.14	0.14
15.700	0.13	0.13	0.13	0.13	0.12
15.950	0.12	0.12	0.12	0.11	0.11
16.200	0.11	0.11	0.11	0.11	0.11
16.450	0.11	0.11	0.10	0.10	0.10
16.700	0.10	0.10	0.10	0.10	0.10
16.950	0.10	0.09	0.09	0.09	0.09
17.200	0.09	0.09	0.09	0.09	0.09
17.450	0.08	0.08	0.08	0.08	0.08
17.700	0.08	0.08	0.08	0.08	0.07

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX. RG (OUT)  
 Scenario: Pre-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
17.950	0.07	0.07	0.07	0.07	0.07
18.200	0.07	0.07	0.07	0.07	0.07
18.450	0.07	0.07	0.07	0.07	0.07
18.700	0.07	0.07	0.06	0.06	0.06
18.950	0.06	0.06	0.06	0.06	0.06
19.200	0.06	0.06	0.06	0.06	0.06
19.450	0.06	0.06	0.06	0.06	0.06
19.700	0.06	0.06	0.06	0.06	0.06
19.950	0.06	0.06	0.06	0.06	0.06
20.200	0.06	0.06	0.06	0.06	0.05
20.450	0.05	0.05	0.05	0.05	0.05
20.700	0.05	0.05	0.05	0.05	0.05
20.950	0.05	0.05	0.05	0.05	0.05
21.200	0.05	0.05	0.05	0.05	0.05
21.450	0.05	0.05	0.05	0.05	0.05
21.700	0.05	0.05	0.05	0.05	0.05
21.950	0.05	0.05	0.05	0.05	0.05
22.200	0.05	0.05	0.05	0.04	0.04
22.450	0.04	0.04	0.04	0.04	0.04
22.700	0.04	0.04	0.04	0.04	0.04
22.950	0.04	0.04	0.04	0.04	0.04
23.200	0.04	0.04	0.04	0.04	0.04
23.450	0.04	0.04	0.04	0.04	0.04
23.700	0.04	0.04	0.04	0.04	0.04
23.950	0.04	0.04	(N/A)	(N/A)	(N/A)



Subsection: Pond Routed Hydrograph (total out)  
 Label: EX. RG (OUT)  
 Scenario: Pre-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Peak Discharge	4.50 ft <sup>3</sup> /s
Time to Peak	12.150 hours
Hydrograph Volume	18,986 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
6.700	0.00	0.00	0.01	0.01	0.02
6.950	0.02	0.02	0.02	0.02	0.02
7.200	0.02	0.02	0.02	0.03	0.03
7.450	0.03	0.03	0.03	0.03	0.03
7.700	0.03	0.03	0.04	0.04	0.04
7.950	0.04	0.04	0.04	0.04	0.05
8.200	0.05	0.05	0.05	0.06	0.06
8.450	0.06	0.06	0.07	0.07	0.07
8.700	0.07	0.08	0.08	0.08	0.08
8.950	0.09	0.09	0.09	0.10	0.10
9.200	0.10	0.11	0.11	0.11	0.12
9.450	0.12	0.12	0.13	0.13	0.14
9.700	0.14	0.14	0.15	0.15	0.15
9.950	0.16	0.16	0.17	0.17	0.18
10.200	0.18	0.19	0.20	0.20	0.21
10.450	0.22	0.22	0.23	0.24	0.25
10.700	0.25	0.26	0.27	0.28	0.29
10.950	0.29	0.30	0.31	0.33	0.35
11.200	0.37	0.39	0.42	0.44	0.47
11.450	0.50	0.52	0.59	0.70	0.85
11.700	1.00	1.22	1.43	1.61	1.84
11.950	2.54	4.14	4.50	4.50	4.50
12.200	4.50	4.50	4.50	3.17	1.87
12.450	1.76	1.55	1.30	1.02	0.85
12.700	0.73	0.68	0.65	0.62	0.59
12.950	0.56	0.53	0.51	0.49	0.47
13.200	0.46	0.45	0.44	0.44	0.43
13.450	0.42	0.41	0.41	0.40	0.39
13.700	0.38	0.38	0.37	0.36	0.35
13.950	0.34	0.34	0.33	0.32	0.32
14.200	0.31	0.31	0.31	0.30	0.30
14.450	0.30	0.29	0.29	0.28	0.28
14.700	0.28	0.27	0.27	0.27	0.26
14.950	0.26	0.25	0.25	0.25	0.24
15.200	0.24	0.24	0.23	0.23	0.22
15.450	0.22	0.22	0.21	0.21	0.21
15.700	0.20	0.20	0.19	0.19	0.19
15.950	0.18	0.18	0.18	0.17	0.17
16.200	0.17	0.17	0.17	0.16	0.16

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX. RG (OUT)  
 Scenario: Pre-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
16.450	0.16	0.16	0.16	0.15	0.15
16.700	0.15	0.15	0.15	0.15	0.15
16.950	0.14	0.14	0.14	0.14	0.14
17.200	0.14	0.13	0.13	0.13	0.13
17.450	0.13	0.13	0.12	0.12	0.12
17.700	0.12	0.12	0.11	0.11	0.11
17.950	0.11	0.11	0.11	0.11	0.10
18.200	0.10	0.10	0.10	0.10	0.10
18.450	0.10	0.10	0.10	0.10	0.10
18.700	0.10	0.10	0.10	0.10	0.10
18.950	0.10	0.10	0.10	0.10	0.09
19.200	0.09	0.09	0.09	0.09	0.09
19.450	0.09	0.09	0.09	0.09	0.09
19.700	0.09	0.09	0.09	0.09	0.09
19.950	0.09	0.09	0.09	0.09	0.08
20.200	0.08	0.08	0.08	0.08	0.08
20.450	0.08	0.08	0.08	0.08	0.08
20.700	0.08	0.08	0.08	0.08	0.08
20.950	0.08	0.08	0.08	0.08	0.08
21.200	0.08	0.08	0.08	0.08	0.08
21.450	0.08	0.07	0.07	0.07	0.07
21.700	0.07	0.07	0.07	0.07	0.07
21.950	0.07	0.07	0.07	0.07	0.07
22.200	0.07	0.07	0.07	0.07	0.07
22.450	0.07	0.07	0.07	0.07	0.07
22.700	0.07	0.07	0.06	0.06	0.06
22.950	0.06	0.06	0.06	0.06	0.06
23.200	0.06	0.06	0.06	0.06	0.06
23.450	0.06	0.06	0.06	0.06	0.06
23.700	0.06	0.06	0.06	0.06	0.06
23.950	0.06	0.06	(N/A)	(N/A)	(N/A)

Subsection: Pond Inflow Summary  
Label: EX. RG (IN)  
Scenario: Pre-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

**Summary for Hydrograph Addition at 'EX. RG'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1B

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1B	2,866	12.100	0.81
Flow (In)	EX. RG	2,866	12.100	0.81

Subsection: Pond Inflow Summary  
Label: EX. RG (IN)  
Scenario: Pre-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

**Summary for Hydrograph Addition at 'EX. RG'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1B

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1B	8,002	12.100	2.29
Flow (In)	EX. RG	8,002	12.100	2.29

Subsection: Pond Inflow Summary  
Label: EX. RG (IN)  
Scenario: Pre-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

**Summary for Hydrograph Addition at 'EX. RG'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1B

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1B	11,288	12.100	3.20
Flow (In)	EX. RG	11,288	12.100	3.20

Subsection: Pond Inflow Summary

Label: EX. RG (IN)

Scenario: Pre-Development 100 year

Return Event: 100 years

Storm Event: 100 years

**Summary for Hydrograph Addition at 'EX. RG'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EDA-1B

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EDA-1B	18,316	12.100	5.08
Flow (In)	EX. RG	18,316	12.100	5.08

Subsection: Pond Infiltration Hydrograph  
Label: INFIL SYSTEM (INF)  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

Peak Discharge	0.04 ft <sup>3</sup> /s
Time to Peak	15.150 hours
Hydrograph Volume	2,288 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
6.250	0.00	0.00	0.00	0.00	0.00
6.500	0.00	0.00	0.00	0.00	0.00
6.750	0.00	0.00	0.00	0.00	0.00
7.000	0.00	0.00	0.00	0.00	0.00
7.250	0.00	0.00	0.00	0.00	0.00
7.500	0.00	0.00	0.01	0.01	0.01
7.750	0.01	0.01	0.01	0.01	0.01
8.000	0.01	0.01	0.01	0.01	0.01
8.250	0.01	0.01	0.01	0.01	0.01
8.500	0.01	0.01	0.01	0.01	0.01
8.750	0.01	0.01	0.01	0.01	0.01
9.000	0.02	0.02	0.02	0.02	0.02
9.250	0.02	0.02	0.02	0.02	0.02
9.500	0.02	0.02	0.02	0.02	0.02
9.750	0.02	0.03	0.03	0.03	0.03
10.000	0.03	0.03	0.03	0.03	0.03
10.250	0.03	0.03	0.04	0.04	0.04
10.500	0.04	0.04	0.04	0.04	0.04
10.750	0.04	0.04	0.04	0.04	0.04
11.000	0.04	0.04	0.04	0.04	0.04
11.250	0.04	0.04	0.04	0.04	0.04
11.500	0.04	0.04	0.04	0.04	0.04
11.750	0.04	0.04	0.04	0.04	0.04
12.000	0.04	0.04	0.04	0.04	0.04
12.250	0.04	0.04	0.04	0.04	0.04
12.500	0.04	0.04	0.04	0.04	0.04
12.750	0.04	0.04	0.04	0.04	0.04
13.000	0.04	0.04	0.04	0.04	0.04
13.250	0.04	0.04	0.04	0.04	0.04
13.500	0.04	0.04	0.04	0.04	0.04
13.750	0.04	0.04	0.04	0.04	0.04
14.000	0.04	0.04	0.04	0.04	0.04
14.250	0.04	0.04	0.04	0.04	0.04
14.500	0.04	0.04	0.04	0.04	0.04
14.750	0.04	0.04	0.04	0.04	0.04
15.000	0.04	0.04	0.04	0.04	0.04
15.250	0.04	0.04	0.04	0.04	0.04
15.500	0.04	0.04	0.04	0.04	0.04
15.750	0.04	0.04	0.04	0.04	0.04

Subsection: Pond Infiltration Hydrograph  
Label: INFIL SYSTEM (INF)  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

# **HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
16.000	0.04	0.04	0.04	0.04	0.04
16.250	0.04	0.04	0.04	0.04	0.04
16.500	0.04	0.04	0.04	0.04	0.04
16.750	0.04	0.04	0.04	0.04	0.04
17.000	0.04	0.04	0.04	0.04	0.04
17.250	0.04	0.04	0.04	0.04	0.04
17.500	0.04	0.04	0.04	0.04	0.04
17.750	0.04	0.04	0.04	0.04	0.04
18.000	0.04	0.04	0.04	0.04	0.04
18.250	0.04	0.04	0.04	0.04	0.04
18.500	0.04	0.04	0.04	0.04	0.04
18.750	0.04	0.04	0.04	0.04	0.04
19.000	0.04	0.04	0.04	0.04	0.04
19.250	0.04	0.04	0.04	0.04	0.04
19.500	0.04	0.04	0.04	0.04	0.04
19.750	0.04	0.04	0.04	0.04	0.04
20.000	0.04	0.04	0.04	0.04	0.04
20.250	0.04	0.04	0.04	0.04	0.04
20.500	0.04	0.04	0.04	0.04	0.04
20.750	0.04	0.04	0.04	0.04	0.04
21.000	0.04	0.04	0.04	0.04	0.04
21.250	0.04	0.04	0.04	0.04	0.04
21.500	0.04	0.04	0.04	0.04	0.04
21.750	0.04	0.04	0.04	0.04	0.04
22.000	0.04	0.04	0.04	0.04	0.04
22.250	0.04	0.04	0.04	0.04	0.04
22.500	0.04	0.04	0.04	0.04	0.04
22.750	0.04	0.04	0.04	0.04	0.04
23.000	0.04	0.04	0.04	0.04	0.04
23.250	0.04	0.04	0.04	0.04	0.04
23.500	0.04	0.04	0.04	0.04	0.04
23.750	0.04	0.04	0.04	0.04	0.04
24.000	0.04	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Pond Infiltration Hydrograph  
 Label: INFIL SYSTEM (INF)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

Peak Discharge	0.04 ft <sup>3</sup> /s
Time to Peak	13.700 hours
Hydrograph Volume	2,655 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
3.950	0.00	0.00	0.00	0.00	0.00
4.200	0.00	0.00	0.00	0.00	0.00
4.450	0.00	0.00	0.00	0.00	0.00
4.700	0.00	0.00	0.00	0.00	0.00
4.950	0.00	0.01	0.01	0.01	0.01
5.200	0.01	0.01	0.01	0.01	0.01
5.450	0.01	0.01	0.01	0.01	0.01
5.700	0.01	0.01	0.01	0.01	0.01
5.950	0.01	0.01	0.01	0.01	0.01
6.200	0.01	0.01	0.01	0.01	0.01
6.450	0.01	0.02	0.02	0.02	0.02
6.700	0.02	0.02	0.02	0.02	0.02
6.950	0.02	0.02	0.02	0.02	0.02
7.200	0.02	0.02	0.02	0.02	0.02
7.450	0.03	0.03	0.03	0.03	0.03
7.700	0.03	0.03	0.03	0.03	0.03
7.950	0.03	0.03	0.03	0.03	0.04
8.200	0.04	0.04	0.04	0.04	0.04
8.450	0.04	0.04	0.04	0.04	0.04
8.700	0.04	0.04	0.04	0.04	0.04
8.950	0.04	0.04	0.04	0.04	0.04
9.200	0.04	0.04	0.04	0.04	0.04
9.450	0.04	0.04	0.04	0.04	0.04
9.700	0.04	0.04	0.04	0.04	0.04
9.950	0.04	0.04	0.04	0.04	0.04
10.200	0.04	0.04	0.04	0.04	0.04
10.450	0.04	0.04	0.04	0.04	0.04
10.700	0.04	0.04	0.04	0.04	0.04
10.950	0.04	0.04	0.04	0.04	0.04
11.200	0.04	0.04	0.04	0.04	0.04
11.450	0.04	0.04	0.04	0.04	0.04
11.700	0.04	0.04	0.04	0.04	0.04
11.950	0.04	0.04	0.04	0.04	0.04
12.200	0.04	0.04	0.04	0.04	0.04
12.450	0.04	0.04	0.04	0.04	0.04
12.700	0.04	0.04	0.04	0.04	0.04
12.950	0.04	0.04	0.04	0.04	0.04
13.200	0.04	0.04	0.04	0.04	0.04
13.450	0.04	0.04	0.04	0.04	0.04

Subsection: Pond Infiltration Hydrograph  
 Label: INFIL SYSTEM (INF)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
13.700	0.04	0.04	0.04	0.04	0.04
13.950	0.04	0.04	0.04	0.04	0.04
14.200	0.04	0.04	0.04	0.04	0.04
14.450	0.04	0.04	0.04	0.04	0.04
14.700	0.04	0.04	0.04	0.04	0.04
14.950	0.04	0.04	0.04	0.04	0.04
15.200	0.04	0.04	0.04	0.04	0.04
15.450	0.04	0.04	0.04	0.04	0.04
15.700	0.04	0.04	0.04	0.04	0.04
15.950	0.04	0.04	0.04	0.04	0.04
16.200	0.04	0.04	0.04	0.04	0.04
16.450	0.04	0.04	0.04	0.04	0.04
16.700	0.04	0.04	0.04	0.04	0.04
16.950	0.04	0.04	0.04	0.04	0.04
17.200	0.04	0.04	0.04	0.04	0.04
17.450	0.04	0.04	0.04	0.04	0.04
17.700	0.04	0.04	0.04	0.04	0.04
17.950	0.04	0.04	0.04	0.04	0.04
18.200	0.04	0.04	0.04	0.04	0.04
18.450	0.04	0.04	0.04	0.04	0.04
18.700	0.04	0.04	0.04	0.04	0.04
18.950	0.04	0.04	0.04	0.04	0.04
19.200	0.04	0.04	0.04	0.04	0.04
19.450	0.04	0.04	0.04	0.04	0.04
19.700	0.04	0.04	0.04	0.04	0.04
19.950	0.04	0.04	0.04	0.04	0.04
20.200	0.04	0.04	0.04	0.04	0.04
20.450	0.04	0.04	0.04	0.04	0.04
20.700	0.04	0.04	0.04	0.04	0.04
20.950	0.04	0.04	0.04	0.04	0.04
21.200	0.04	0.04	0.04	0.04	0.04
21.450	0.04	0.04	0.04	0.04	0.04
21.700	0.04	0.04	0.04	0.04	0.04
21.950	0.04	0.04	0.04	0.04	0.04
22.200	0.04	0.04	0.04	0.04	0.04
22.450	0.04	0.04	0.04	0.04	0.04
22.700	0.04	0.04	0.04	0.04	0.04
22.950	0.04	0.04	0.04	0.04	0.04
23.200	0.04	0.04	0.04	0.04	0.04
23.450	0.04	0.04	0.04	0.04	0.04
23.700	0.04	0.04	0.04	0.04	0.04
23.950	0.04	0.04	(N/A)	(N/A)	(N/A)

Subsection: Pond Infiltration Hydrograph  
 Label: INFIL SYSTEM (INF)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

Peak Discharge	0.04 ft <sup>3</sup> /s
Time to Peak	13.050 hours
Hydrograph Volume	2,806 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
3.250	0.00	0.00	0.00	0.00	0.00
3.500	0.00	0.00	0.00	0.00	0.00
3.750	0.00	0.00	0.00	0.00	0.00
4.000	0.00	0.00	0.00	0.00	0.01
4.250	0.01	0.01	0.01	0.01	0.01
4.500	0.01	0.01	0.01	0.01	0.01
4.750	0.01	0.01	0.01	0.01	0.01
5.000	0.01	0.01	0.01	0.01	0.01
5.250	0.01	0.01	0.01	0.01	0.02
5.500	0.02	0.02	0.02	0.02	0.02
5.750	0.02	0.02	0.02	0.02	0.02
6.000	0.02	0.02	0.02	0.02	0.02
6.250	0.02	0.02	0.02	0.02	0.03
6.500	0.03	0.03	0.03	0.03	0.03
6.750	0.03	0.03	0.03	0.03	0.03
7.000	0.03	0.03	0.03	0.04	0.04
7.250	0.04	0.04	0.04	0.04	0.04
7.500	0.04	0.04	0.04	0.04	0.04
7.750	0.04	0.04	0.04	0.04	0.04
8.000	0.04	0.04	0.04	0.04	0.04
8.250	0.04	0.04	0.04	0.04	0.04
8.500	0.04	0.04	0.04	0.04	0.04
8.750	0.04	0.04	0.04	0.04	0.04
9.000	0.04	0.04	0.04	0.04	0.04
9.250	0.04	0.04	0.04	0.04	0.04
9.500	0.04	0.04	0.04	0.04	0.04
9.750	0.04	0.04	0.04	0.04	0.04
10.000	0.04	0.04	0.04	0.04	0.04
10.250	0.04	0.04	0.04	0.04	0.04
10.500	0.04	0.04	0.04	0.04	0.04
10.750	0.04	0.04	0.04	0.04	0.04
11.000	0.04	0.04	0.04	0.04	0.04
11.250	0.04	0.04	0.04	0.04	0.04
11.500	0.04	0.04	0.04	0.04	0.04
11.750	0.04	0.04	0.04	0.04	0.04
12.000	0.04	0.04	0.04	0.04	0.04
12.250	0.04	0.04	0.04	0.04	0.04
12.500	0.04	0.04	0.04	0.04	0.04
12.750	0.04	0.04	0.04	0.04	0.04

Subsection: Pond Infiltration Hydrograph  
 Label: INFIL SYSTEM (INF)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
13.000	0.04	0.04	0.04	0.04	0.04
13.250	0.04	0.04	0.04	0.04	0.04
13.500	0.04	0.04	0.04	0.04	0.04
13.750	0.04	0.04	0.04	0.04	0.04
14.000	0.04	0.04	0.04	0.04	0.04
14.250	0.04	0.04	0.04	0.04	0.04
14.500	0.04	0.04	0.04	0.04	0.04
14.750	0.04	0.04	0.04	0.04	0.04
15.000	0.04	0.04	0.04	0.04	0.04
15.250	0.04	0.04	0.04	0.04	0.04
15.500	0.04	0.04	0.04	0.04	0.04
15.750	0.04	0.04	0.04	0.04	0.04
16.000	0.04	0.04	0.04	0.04	0.04
16.250	0.04	0.04	0.04	0.04	0.04
16.500	0.04	0.04	0.04	0.04	0.04
16.750	0.04	0.04	0.04	0.04	0.04
17.000	0.04	0.04	0.04	0.04	0.04
17.250	0.04	0.04	0.04	0.04	0.04
17.500	0.04	0.04	0.04	0.04	0.04
17.750	0.04	0.04	0.04	0.04	0.04
18.000	0.04	0.04	0.04	0.04	0.04
18.250	0.04	0.04	0.04	0.04	0.04
18.500	0.04	0.04	0.04	0.04	0.04
18.750	0.04	0.04	0.04	0.04	0.04
19.000	0.04	0.04	0.04	0.04	0.04
19.250	0.04	0.04	0.04	0.04	0.04
19.500	0.04	0.04	0.04	0.04	0.04
19.750	0.04	0.04	0.04	0.04	0.04
20.000	0.04	0.04	0.04	0.04	0.04
20.250	0.04	0.04	0.04	0.04	0.04
20.500	0.04	0.04	0.04	0.04	0.04
20.750	0.04	0.04	0.04	0.04	0.04
21.000	0.04	0.04	0.04	0.04	0.04
21.250	0.04	0.04	0.04	0.04	0.04
21.500	0.04	0.04	0.04	0.04	0.04
21.750	0.04	0.04	0.04	0.04	0.04
22.000	0.04	0.04	0.04	0.04	0.04
22.250	0.04	0.04	0.04	0.04	0.04
22.500	0.04	0.04	0.04	0.04	0.04
22.750	0.04	0.04	0.04	0.04	0.04
23.000	0.04	0.04	0.04	0.04	0.04
23.250	0.04	0.04	0.04	0.04	0.04
23.500	0.04	0.04	0.04	0.04	0.04

Subsection: Pond Infiltration Hydrograph  
Label: INFIL SYSTEM (INF)  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
23.750	0.04	0.04	0.04	0.04	0.04
24.000	0.04	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Pond Infiltration Hydrograph  
 Label: INFIL SYSTEM (INF)  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Peak Discharge	0.04 ft <sup>3</sup> /s
Time to Peak	12.000 hours
Hydrograph Volume	3,026 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
2.400	0.00	0.00	0.00	0.00	0.00
2.650	0.00	0.00	0.00	0.00	0.00
2.900	0.00	0.00	0.00	0.00	0.01
3.150	0.01	0.01	0.01	0.01	0.01
3.400	0.01	0.01	0.01	0.01	0.01
3.650	0.01	0.01	0.01	0.01	0.01
3.900	0.01	0.01	0.01	0.01	0.02
4.150	0.02	0.02	0.02	0.02	0.02
4.400	0.02	0.02	0.02	0.02	0.02
4.650	0.02	0.02	0.02	0.02	0.03
4.900	0.03	0.03	0.03	0.03	0.03
5.150	0.03	0.03	0.03	0.03	0.03
5.400	0.03	0.03	0.04	0.04	0.04
5.650	0.04	0.04	0.04	0.04	0.04
5.900	0.04	0.04	0.04	0.04	0.04
6.150	0.04	0.04	0.04	0.04	0.04
6.400	0.04	0.04	0.04	0.04	0.04
6.650	0.04	0.04	0.04	0.04	0.04
6.900	0.04	0.04	0.04	0.04	0.04
7.150	0.04	0.04	0.04	0.04	0.04
7.400	0.04	0.04	0.04	0.04	0.04
7.650	0.04	0.04	0.04	0.04	0.04
7.900	0.04	0.04	0.04	0.04	0.04
8.150	0.04	0.04	0.04	0.04	0.04
8.400	0.04	0.04	0.04	0.04	0.04
8.650	0.04	0.04	0.04	0.04	0.04
8.900	0.04	0.04	0.04	0.04	0.04
9.150	0.04	0.04	0.04	0.04	0.04
9.400	0.04	0.04	0.04	0.04	0.04
9.650	0.04	0.04	0.04	0.04	0.04
9.900	0.04	0.04	0.04	0.04	0.04
10.150	0.04	0.04	0.04	0.04	0.04
10.400	0.04	0.04	0.04	0.04	0.04
10.650	0.04	0.04	0.04	0.04	0.04
10.900	0.04	0.04	0.04	0.04	0.04
11.150	0.04	0.04	0.04	0.04	0.04
11.400	0.04	0.04	0.04	0.04	0.04
11.650	0.04	0.04	0.04	0.04	0.04
11.900	0.04	0.04	0.04	0.04	0.04

Subsection: Pond Infiltration Hydrograph  
 Label: INFIL SYSTEM (INF)  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

# **HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.150	0.04	0.04	0.04	0.04	0.04
12.400	0.04	0.04	0.04	0.04	0.04
12.650	0.04	0.04	0.04	0.04	0.04
12.900	0.04	0.04	0.04	0.04	0.04
13.150	0.04	0.04	0.04	0.04	0.04
13.400	0.04	0.04	0.04	0.04	0.04
13.650	0.04	0.04	0.04	0.04	0.04
13.900	0.04	0.04	0.04	0.04	0.04
14.150	0.04	0.04	0.04	0.04	0.04
14.400	0.04	0.04	0.04	0.04	0.04
14.650	0.04	0.04	0.04	0.04	0.04
14.900	0.04	0.04	0.04	0.04	0.04
15.150	0.04	0.04	0.04	0.04	0.04
15.400	0.04	0.04	0.04	0.04	0.04
15.650	0.04	0.04	0.04	0.04	0.04
15.900	0.04	0.04	0.04	0.04	0.04
16.150	0.04	0.04	0.04	0.04	0.04
16.400	0.04	0.04	0.04	0.04	0.04
16.650	0.04	0.04	0.04	0.04	0.04
16.900	0.04	0.04	0.04	0.04	0.04
17.150	0.04	0.04	0.04	0.04	0.04
17.400	0.04	0.04	0.04	0.04	0.04
17.650	0.04	0.04	0.04	0.04	0.04
17.900	0.04	0.04	0.04	0.04	0.04
18.150	0.04	0.04	0.04	0.04	0.04
18.400	0.04	0.04	0.04	0.04	0.04
18.650	0.04	0.04	0.04	0.04	0.04
18.900	0.04	0.04	0.04	0.04	0.04
19.150	0.04	0.04	0.04	0.04	0.04
19.400	0.04	0.04	0.04	0.04	0.04
19.650	0.04	0.04	0.04	0.04	0.04
19.900	0.04	0.04	0.04	0.04	0.04
20.150	0.04	0.04	0.04	0.04	0.04
20.400	0.04	0.04	0.04	0.04	0.04
20.650	0.04	0.04	0.04	0.04	0.04
20.900	0.04	0.04	0.04	0.04	0.04
21.150	0.04	0.04	0.04	0.04	0.04
21.400	0.04	0.04	0.04	0.04	0.04
21.650	0.04	0.04	0.04	0.04	0.04
21.900	0.04	0.04	0.04	0.04	0.04
22.150	0.04	0.04	0.04	0.04	0.04
22.400	0.04	0.04	0.04	0.04	0.04
22.650	0.04	0.04	0.04	0.04	0.04

Subsection: Pond Infiltration Hydrograph  
Label: INFIL SYSTEM (INF)  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
22.900	0.04	0.04	0.04	0.04	0.04
23.150	0.04	0.04	0.04	0.04	0.04
23.400	0.04	0.04	0.04	0.04	0.04
23.650	0.04	0.04	0.04	0.04	0.04
23.900	0.04	0.04	0.04	(N/A)	(N/A)



Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: INFIL SYSTEM  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.04 ft <sup>3</sup> /s
Initial Conditions	
Elevation (Water Surface, Initial)	29.15 ft
Volume (Initial)	0 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
29.15	0.00	0	0	0.00	0.00	0.00
29.65	0.00	373	0	0.04	0.04	4.19
30.15	0.00	961	0	0.04	0.04	10.72
30.60	0.00	1,675	0	0.04	0.04	18.65
30.65	0.00	1,754	0	0.04	0.04	19.53
31.15	0.00	2,534	0	0.04	0.04	28.20
31.65	0.00	3,295	0	0.04	0.04	36.65
32.15	0.58	4,034	0	0.04	0.62	45.44
32.65	1.37	4,744	0	0.04	1.41	54.13
33.15	1.81	5,419	0	0.04	1.86	62.07
33.65	2.17	6,049	0	0.04	2.22	69.43
34.00	2.39	6,453	0	0.04	2.43	74.13
34.15	2.56	6,619	0	0.04	2.60	76.15
34.65	3.53	7,082	0	0.04	3.57	82.26
35.15	4.84	7,465	0	0.04	4.88	87.82
35.65	6.40	7,838	0	0.04	6.44	93.53
35.90	7.25	8,025	0	0.04	7.30	96.46

Subsection: Level Pool Pond Routing Summary  
Label: INFIL SYSTEM (IN)  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

Infiltration				
Infiltration Method (Computed)		Constant		
Infiltration Rate (Constant)		0.04 ft³/s		
Initial Conditions				
Elevation (Water Surface, Initial)		29.15 ft		
Volume (Initial)		0 ft³		
Flow (Initial Outlet)		0.00 ft³/s		
Flow (Initial Infiltration)		0.00 ft³/s		
Flow (Initial, Total)		0.00 ft³/s		
Time Increment		0.050 hours		
Inflow/Outflow Hydrograph Summary				
Flow (Peak In)		1.97 ft³/s	Time to Peak (Flow, In)	12.100 hours
Infiltration (Peak)		0.04 ft³/s	Time to Peak (Infiltration)	10.700 hours
Flow (Peak Outlet)		0.30 ft³/s	Time to Peak (Flow, Outlet)	12.550 hours
Elevation (Water Surface, Peak)		31.91 ft		
Volume (Peak)		3,675 ft³		
Mass Balance (ft³)				
Volume (Initial)		0 ft³		
Volume (Total Inflow)		7,153 ft³		
Volume (Total Infiltration)		2,297 ft³		
Volume (Total Outlet Outflow)		1,818 ft³		
Volume (Retained)		3,040 ft³		
Volume (Unrouted)		2 ft³		
Error (Mass Balance)		0.0 %		

Subsection: Level Pool Pond Routing Summary  
Label: INFIL SYSTEM (IN)  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

Infiltration			
Infiltration Method (Computed)		Constant	
Infiltration Rate (Constant)		0.04 ft³/s	
Initial Conditions			
Elevation (Water Surface, Initial)		29.15 ft	
Volume (Initial)		0 ft³	
Flow (Initial Outlet)		0.00 ft³/s	
Flow (Initial Infiltration)		0.00 ft³/s	
Flow (Initial, Total)		0.00 ft³/s	
Time Increment		0.050 hours	
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)		3.91 ft³/s	Time to Peak (Flow, In)
Infiltration (Peak)		0.04 ft³/s	Time to Peak (Infiltration)
Flow (Peak Outlet)		1.96 ft³/s	Time to Peak (Flow, Outlet)
			12.100 hours
			8.550 hours
			12.250 hours
Peak Conditions			
Elevation (Water Surface, Peak)		33.36 ft	
Volume (Peak)		5,686 ft³	
Mass Balance (ft³)			
Volume (Initial)		0 ft³	
Volume (Total Inflow)		14,828 ft³	
Volume (Total Infiltration)		2,664 ft³	
Volume (Total Outlet Outflow)		8,876 ft³	
Volume (Retained)		3,288 ft³	
Volume (Unrouted)		0 ft³	
Error (Mass Balance)		0.0 %	

Subsection: Level Pool Pond Routing Summary  
Label: INFIL SYSTEM (IN)  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

Infiltration				
Infiltration Method (Computed)		Constant		
Infiltration Rate (Constant)		0.04 ft³/s		
Initial Conditions				
Elevation (Water Surface, Initial)		29.15 ft		
Volume (Initial)		0 ft³		
Flow (Initial Outlet)		0.00 ft³/s		
Flow (Initial Infiltration)		0.00 ft³/s		
Flow (Initial, Total)		0.00 ft³/s		
Time Increment		0.050 hours		
Inflow/Outflow Hydrograph Summary				
Flow (Peak In)		5.00 ft³/s	Time to Peak (Flow, In)	12.100 hours
Infiltration (Peak)		0.04 ft³/s	Time to Peak (Infiltration)	7.600 hours
Flow (Peak Outlet)		2.86 ft³/s	Time to Peak (Flow, Outlet)	12.200 hours
Peak Conditions				
Elevation (Water Surface, Peak)		34.31 ft		
Volume (Peak)		6,775 ft³		
Mass Balance (ft³)				
Volume (Initial)		0 ft³		
Volume (Total Inflow)		19,312 ft³		
Volume (Total Infiltration)		2,815 ft³		
Volume (Total Outlet Outflow)		13,195 ft³		
Volume (Retained)		3,301 ft³		
Volume (Unrouted)		-1 ft³		
Error (Mass Balance)		0.0 %		

Subsection: Level Pool Pond Routing Summary  
 Label: INFIL SYSTEM (IN)  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Infiltration			
Infiltration Method (Computed)		Constant	
Infiltration Rate (Constant)		0.04 ft³/s	
Initial Conditions			
Elevation (Water Surface, Initial)		29.15 ft	
Volume (Initial)		0 ft³	
Flow (Initial Outlet)		0.00 ft³/s	
Flow (Initial Infiltration)		0.00 ft³/s	
Flow (Initial, Total)		0.00 ft³/s	
Time Increment		0.050 hours	
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)		7.20 ft³/s	Time to Peak (Flow, In)
Infiltration (Peak)		0.04 ft³/s	Time to Peak (Infiltration)
Flow (Peak Outlet)		5.98 ft³/s	Time to Peak (Flow, Outlet)
Elevation (Water Surface, Peak)		35.51 ft	
Volume (Peak)		7,737 ft³	
Mass Balance (ft³)			
Volume (Initial)		0 ft³	
Volume (Total Inflow)		28,492 ft³	
Volume (Total Infiltration)		3,035 ft³	
Volume (Total Outlet Outflow)		22,125 ft³	
Volume (Retained)		3,327 ft³	
Volume (Unrouted)		-5 ft³	
Error (Mass Balance)		0.0 %	

Subsection: Pond Routed Hydrograph (total out)  
 Label: INFIL SYSTEM (OUT)  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Peak Discharge	0.30 ft <sup>3</sup> /s
Time to Peak	12.550 hours
Hydrograph Volume	1,817 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.250	0.00	0.05	0.15	0.21	0.26
12.500	0.29	0.30	0.29	0.29	0.28
12.750	0.27	0.26	0.26	0.25	0.24
13.000	0.23	0.22	0.21	0.20	0.19
13.250	0.18	0.18	0.17	0.16	0.16
13.500	0.15	0.15	0.14	0.14	0.13
13.750	0.13	0.13	0.12	0.12	0.11
14.000	0.11	0.11	0.10	0.10	0.10
14.250	0.10	0.09	0.09	0.09	0.09
14.500	0.08	0.08	0.08	0.08	0.08
14.750	0.07	0.07	0.07	0.07	0.07
15.000	0.07	0.06	0.06	0.06	0.06
15.250	0.06	0.06	0.06	0.05	0.05
15.500	0.05	0.05	0.05	0.05	0.05
15.750	0.04	0.04	0.04	0.04	0.04
16.000	0.04	0.03	0.03	0.03	0.03
16.250	0.03	0.03	0.03	0.03	0.03
16.500	0.02	0.02	0.02	0.02	0.02
16.750	0.02	0.02	0.02	0.02	0.02
17.000	0.02	0.02	0.02	0.01	0.01
17.250	0.01	0.01	0.01	0.01	0.01
17.500	0.01	0.01	0.01	0.01	0.01
17.750	0.01	0.01	0.01	0.01	0.00
18.000	0.00	0.00	0.00	0.00	0.00
18.250	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: INFIL SYSTEM (OUT)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

Peak Discharge	1.96 ft <sup>3</sup> /s
Time to Peak	12.250 hours
Hydrograph Volume	8,876 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.800	0.00	0.01	0.23	0.49	0.92
12.050	1.40	1.67	1.87	1.95	1.96
12.300	1.94	1.90	1.85	1.77	1.67
12.550	1.57	1.46	1.35	1.19	1.06
12.800	0.94	0.85	0.76	0.69	0.63
13.050	0.57	0.54	0.51	0.48	0.46
13.300	0.43	0.41	0.39	0.38	0.36
13.550	0.35	0.33	0.32	0.31	0.30
13.800	0.29	0.28	0.27	0.26	0.26
14.050	0.25	0.24	0.23	0.23	0.22
14.300	0.22	0.21	0.21	0.20	0.20
14.550	0.19	0.19	0.19	0.18	0.18
14.800	0.18	0.17	0.17	0.17	0.16
15.050	0.16	0.16	0.15	0.15	0.15
15.300	0.15	0.14	0.14	0.14	0.13
15.550	0.13	0.13	0.13	0.12	0.12
15.800	0.12	0.11	0.11	0.11	0.11
16.050	0.10	0.10	0.10	0.10	0.09
16.300	0.09	0.09	0.09	0.09	0.08
16.550	0.08	0.08	0.08	0.08	0.08
16.800	0.08	0.07	0.07	0.07	0.07
17.050	0.07	0.07	0.07	0.06	0.06
17.300	0.06	0.06	0.06	0.06	0.06
17.550	0.06	0.05	0.05	0.05	0.05
17.800	0.05	0.05	0.05	0.05	0.04
18.050	0.04	0.04	0.04	0.04	0.04
18.300	0.04	0.04	0.04	0.04	0.04
18.550	0.04	0.03	0.03	0.03	0.03
18.800	0.03	0.03	0.03	0.03	0.03
19.050	0.03	0.03	0.03	0.03	0.03
19.300	0.03	0.03	0.03	0.03	0.03
19.550	0.03	0.03	0.03	0.03	0.03
19.800	0.02	0.02	0.02	0.02	0.02
20.050	0.02	0.02	0.02	0.02	0.02
20.300	0.02	0.02	0.02	0.02	0.02
20.550	0.02	0.02	0.02	0.02	0.02
20.800	0.02	0.02	0.02	0.02	0.02
21.050	0.02	0.02	0.02	0.02	0.02
21.300	0.02	0.02	0.01	0.01	0.01

Subsection: Pond Routed Hydrograph (total out)  
 Label: INFIL SYSTEM (OUT)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.550	0.01	0.01	0.01	0.01	0.01
21.800	0.01	0.01	0.01	0.01	0.01
22.050	0.01	0.01	0.01	0.01	0.01
22.300	0.01	0.01	0.01	0.01	0.01
22.550	0.01	0.01	0.01	0.01	0.01
22.800	0.01	0.01	0.01	0.01	0.01
23.050	0.01	0.01	0.01	0.00	0.00
23.300	0.00	0.00	0.00	0.00	0.00
23.550	0.00	0.00	0.00	0.00	0.00
23.800	0.00	0.00	0.00	0.00	(N/A)



Subsection: Pond Routed Hydrograph (total out)  
 Label: INFIL SYSTEM (OUT)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

Peak Discharge	2.86 ft <sup>3</sup> /s
Time to Peak	12.200 hours
Hydrograph Volume	13,195 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.550	0.00	0.07	0.19	0.32	0.46
11.800	0.64	0.88	1.13	1.41	1.70
12.050	2.00	2.28	2.57	2.86	2.80
12.300	2.63	2.48	2.37	2.28	2.18
12.550	2.06	1.93	1.81	1.68	1.56
12.800	1.45	1.33	1.18	1.05	0.94
13.050	0.85	0.77	0.70	0.64	0.59
13.300	0.56	0.53	0.51	0.49	0.47
13.550	0.45	0.44	0.42	0.41	0.39
13.800	0.38	0.37	0.36	0.35	0.34
14.050	0.33	0.32	0.31	0.30	0.29
14.300	0.29	0.28	0.27	0.27	0.26
14.550	0.26	0.25	0.25	0.24	0.24
14.800	0.24	0.23	0.23	0.22	0.22
15.050	0.22	0.21	0.21	0.20	0.20
15.300	0.20	0.19	0.19	0.19	0.18
15.550	0.18	0.17	0.17	0.17	0.16
15.800	0.16	0.16	0.15	0.15	0.15
16.050	0.14	0.14	0.14	0.13	0.13
16.300	0.13	0.12	0.12	0.12	0.12
16.550	0.12	0.11	0.11	0.11	0.11
16.800	0.11	0.10	0.10	0.10	0.10
17.050	0.10	0.10	0.09	0.09	0.09
17.300	0.09	0.09	0.09	0.09	0.08
17.550	0.08	0.08	0.08	0.08	0.08
17.800	0.07	0.07	0.07	0.07	0.07
18.050	0.07	0.07	0.06	0.06	0.06
18.300	0.06	0.06	0.06	0.06	0.06
18.550	0.06	0.06	0.05	0.05	0.05
18.800	0.05	0.05	0.05	0.05	0.05
19.050	0.05	0.05	0.05	0.05	0.05
19.300	0.05	0.05	0.05	0.05	0.05
19.550	0.04	0.04	0.04	0.04	0.04
19.800	0.04	0.04	0.04	0.04	0.04
20.050	0.04	0.04	0.04	0.04	0.04
20.300	0.04	0.04	0.04	0.04	0.04
20.550	0.04	0.04	0.04	0.04	0.03
20.800	0.03	0.03	0.03	0.03	0.03
21.050	0.03	0.03	0.03	0.03	0.03

Subsection: Pond Routed Hydrograph (total out)  
 Label: INFIL SYSTEM (OUT)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.300	0.03	0.03	0.03	0.03	0.03
21.550	0.03	0.03	0.03	0.03	0.03
21.800	0.03	0.03	0.03	0.03	0.03
22.050	0.03	0.03	0.02	0.02	0.02
22.300	0.02	0.02	0.02	0.02	0.02
22.550	0.02	0.02	0.02	0.02	0.02
22.800	0.02	0.02	0.02	0.02	0.02
23.050	0.02	0.02	0.02	0.02	0.02
23.300	0.02	0.02	0.02	0.02	0.02
23.550	0.02	0.01	0.01	0.01	0.01
23.800	0.01	0.01	0.01	0.01	0.01

Subsection: Pond Routed Hydrograph (total out)  
 Label: INFIL SYSTEM (OUT)  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Peak Discharge	5.98 ft <sup>3</sup> /s
Time to Peak	12.150 hours
Hydrograph Volume	22,125 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
10.500	0.00	0.04	0.10	0.14	0.19
10.750	0.22	0.26	0.29	0.32	0.34
11.000	0.37	0.39	0.42	0.44	0.47
11.250	0.49	0.52	0.55	0.58	0.63
11.500	0.67	0.73	0.81	0.92	1.07
11.750	1.26	1.44	1.60	1.79	2.02
12.000	2.37	3.63	5.33	5.98	5.46
12.250	4.61	3.98	3.47	3.14	2.80
12.500	2.50	2.34	2.23	2.11	2.00
12.750	1.89	1.78	1.67	1.57	1.47
13.000	1.38	1.25	1.13	1.03	0.95
13.250	0.88	0.82	0.77	0.72	0.68
13.500	0.65	0.62	0.60	0.58	0.56
13.750	0.55	0.53	0.52	0.51	0.50
14.000	0.48	0.47	0.46	0.45	0.44
14.250	0.43	0.42	0.41	0.41	0.40
14.500	0.39	0.38	0.38	0.37	0.36
14.750	0.36	0.35	0.35	0.34	0.34
15.000	0.33	0.32	0.32	0.31	0.31
15.250	0.30	0.30	0.29	0.29	0.28
15.500	0.28	0.27	0.27	0.26	0.26
15.750	0.25	0.25	0.24	0.24	0.23
16.000	0.23	0.22	0.22	0.21	0.21
16.250	0.20	0.20	0.20	0.19	0.19
16.500	0.19	0.18	0.18	0.18	0.18
16.750	0.17	0.17	0.17	0.17	0.16
17.000	0.16	0.16	0.16	0.15	0.15
17.250	0.15	0.15	0.14	0.14	0.14
17.500	0.14	0.14	0.13	0.13	0.13
17.750	0.13	0.12	0.12	0.12	0.12
18.000	0.12	0.11	0.11	0.11	0.11
18.250	0.11	0.10	0.10	0.10	0.10
18.500	0.10	0.10	0.10	0.10	0.09
18.750	0.09	0.09	0.09	0.09	0.09
19.000	0.09	0.09	0.09	0.09	0.09
19.250	0.09	0.09	0.08	0.08	0.08
19.500	0.08	0.08	0.08	0.08	0.08
19.750	0.08	0.08	0.08	0.08	0.08
20.000	0.08	0.08	0.07	0.07	0.07

Subsection: Pond Routed Hydrograph (total out)  
 Label: INFIL SYSTEM (OUT)  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
20.250	0.07	0.07	0.07	0.07	0.07
20.500	0.07	0.07	0.07	0.07	0.07
20.750	0.07	0.07	0.07	0.07	0.07
21.000	0.06	0.06	0.06	0.06	0.06
21.250	0.06	0.06	0.06	0.06	0.06
21.500	0.06	0.06	0.06	0.06	0.06
21.750	0.06	0.06	0.06	0.06	0.06
22.000	0.06	0.05	0.05	0.05	0.05
22.250	0.05	0.05	0.05	0.05	0.05
22.500	0.05	0.05	0.05	0.05	0.05
22.750	0.05	0.05	0.05	0.05	0.05
23.000	0.05	0.04	0.04	0.04	0.04
23.250	0.04	0.04	0.04	0.04	0.04
23.500	0.04	0.04	0.04	0.04	0.04
23.750	0.04	0.04	0.04	0.04	0.04
24.000	0.04	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Pond Inflow Summary  
 Label: INFIL SYSTEM (IN)  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**Summary for Hydrograph Addition at 'INFIL SYSTEM'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1A

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	PDA-1A	7,153	12.100	1.97
Flow (In)	INFIL SYSTEM	7,153	12.100	1.97

Subsection: Pond Inflow Summary  
 Label: INFIL SYSTEM (IN)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**Summary for Hydrograph Addition at 'INFIL SYSTEM'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1A

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	PDA-1A	14,828	12.100	3.91
Flow (In)	INFIL SYSTEM	14,828	12.100	3.91

Subsection: Pond Inflow Summary  
 Label: INFIL SYSTEM (IN)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

**Summary for Hydrograph Addition at 'INFIL SYSTEM'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1A

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	PDA-1A	19,312	12.100	5.00
Flow (In)	INFIL SYSTEM	19,312	12.100	5.00

Subsection: Pond Inflow Summary  
Label: INFIL SYSTEM (IN)  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

**Summary for Hydrograph Addition at 'INFIL SYSTEM'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1A

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	PDA-1A	28,492	12.100	7.20
Flow (In)	INFIL SYSTEM	28,492	12.100	7.20



Subsection: Diverted Hydrograph

Label: Outlet-1

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

Peak Discharge	0.76 ft <sup>3</sup> /s
Time to Peak	12.100 hours
Hydrograph Volume	2,698 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.250	0.00	0.01	0.02	0.02	0.03
11.500	0.03	0.04	0.05	0.06	0.08
11.750	0.11	0.15	0.19	0.24	0.33
12.000	0.51	0.66	0.76	0.76	0.62
12.250	0.50	0.44	0.39	0.34	0.29
12.500	0.24	0.20	0.17	0.15	0.14
12.750	0.13	0.13	0.12	0.11	0.11
13.000	0.10	0.10	0.10	0.09	0.09
13.250	0.09	0.09	0.09	0.09	0.08
13.500	0.08	0.08	0.08	0.08	0.08
13.750	0.08	0.07	0.07	0.07	0.07
14.000	0.07	0.07	0.07	0.06	0.06
14.250	0.06	0.06	0.06	0.06	0.06
14.500	0.06	0.06	0.06	0.06	0.06
14.750	0.06	0.06	0.05	0.05	0.05
15.000	0.05	0.05	0.05	0.05	0.05
15.250	0.05	0.05	0.05	0.05	0.05
15.500	0.04	0.04	0.04	0.04	0.04
15.750	0.04	0.04	0.04	0.04	0.04
16.000	0.04	0.04	0.04	0.04	0.03
16.250	0.03	0.03	0.03	0.03	0.03
16.500	0.03	0.03	0.03	0.03	0.03
16.750	0.03	0.03	0.03	0.03	0.03
17.000	0.03	0.03	0.03	0.03	0.03
17.250	0.03	0.03	0.03	0.03	0.03
17.500	0.03	0.03	0.02	0.02	0.02
17.750	0.02	0.02	0.02	0.02	0.02
18.000	0.02	0.02	0.02	0.02	0.02
18.250	0.02	0.02	0.02	0.02	0.02
18.500	0.02	0.02	0.02	0.02	0.02
18.750	0.02	0.02	0.02	0.02	0.02
19.000	0.02	0.02	0.02	0.02	0.02
19.250	0.02	0.02	0.02	0.02	0.02
19.500	0.02	0.02	0.02	0.02	0.02
19.750	0.02	0.02	0.02	0.02	0.02
20.000	0.02	0.02	0.02	0.02	0.02
20.250	0.02	0.02	0.02	0.02	0.02
20.500	0.02	0.02	0.02	0.02	0.02
20.750	0.02	0.02	0.02	0.02	0.02

Subsection: Diverted Hydrograph

Label: Outlet-1

Scenario: Pre-Development 1 year

Return Event: 1 years

Storm Event: 1 year

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.000	0.02	0.02	0.02	0.02	0.02
21.250	0.02	0.01	0.01	0.01	0.01
21.500	0.01	0.01	0.01	0.01	0.01
21.750	0.01	0.01	0.01	0.01	0.01
22.000	0.01	0.01	0.01	0.01	0.01
22.250	0.01	0.01	0.01	0.01	0.01
22.500	0.01	0.01	0.01	0.01	0.01
22.750	0.01	0.01	0.01	0.01	0.01
23.000	0.01	0.01	0.01	0.01	0.01
23.250	0.01	0.01	0.01	0.01	0.01
23.500	0.01	0.01	0.01	0.01	0.01
23.750	0.01	0.01	0.01	0.01	0.01
24.000	0.01	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Diverted Hydrograph  
 Label: Outlet-1  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

Peak Discharge	1.95 ft <sup>3</sup> /s
Time to Peak	12.150 hours
Hydrograph Volume	7,806 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
9.100	0.00	0.00	0.01	0.02	0.02
9.350	0.02	0.02	0.02	0.02	0.02
9.600	0.03	0.03	0.03	0.03	0.03
9.850	0.03	0.03	0.04	0.04	0.04
10.100	0.04	0.04	0.05	0.05	0.05
10.350	0.05	0.06	0.06	0.06	0.06
10.600	0.07	0.07	0.07	0.08	0.08
10.850	0.08	0.09	0.09	0.09	0.10
11.100	0.10	0.11	0.12	0.13	0.14
11.350	0.15	0.16	0.17	0.19	0.21
11.600	0.25	0.32	0.40	0.50	0.61
11.850	0.73	0.84	1.04	1.42	1.69
12.100	1.89	1.95	1.88	1.66	1.43
12.350	1.17	0.97	0.82	0.62	0.51
12.600	0.42	0.37	0.34	0.33	0.31
12.850	0.30	0.29	0.27	0.26	0.24
13.100	0.24	0.23	0.22	0.22	0.22
13.350	0.21	0.21	0.21	0.20	0.20
13.600	0.19	0.19	0.19	0.18	0.18
13.850	0.18	0.17	0.17	0.17	0.16
14.100	0.16	0.16	0.15	0.15	0.15
14.350	0.15	0.15	0.15	0.14	0.14
14.600	0.14	0.14	0.14	0.13	0.13
14.850	0.13	0.13	0.13	0.13	0.12
15.100	0.12	0.12	0.12	0.12	0.11
15.350	0.11	0.11	0.11	0.11	0.11
15.600	0.10	0.10	0.10	0.10	0.10
15.850	0.09	0.09	0.09	0.09	0.09
16.100	0.09	0.08	0.08	0.08	0.08
16.350	0.08	0.08	0.08	0.08	0.08
16.600	0.08	0.08	0.08	0.07	0.07
16.850	0.07	0.07	0.07	0.07	0.07
17.100	0.07	0.07	0.07	0.07	0.07
17.350	0.06	0.06	0.06	0.06	0.06
17.600	0.06	0.06	0.06	0.06	0.06
17.850	0.06	0.06	0.05	0.05	0.05
18.100	0.05	0.05	0.05	0.05	0.05
18.350	0.05	0.05	0.05	0.05	0.05
18.600	0.05	0.05	0.05	0.05	0.05

Subsection: Diverted Hydrograph  
 Label: Outlet-1  
 Scenario: Pre-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
18.850	0.05	0.05	0.05	0.05	0.05
19.100	0.05	0.05	0.05	0.05	0.05
19.350	0.05	0.05	0.05	0.04	0.04
19.600	0.04	0.04	0.04	0.04	0.04
19.850	0.04	0.04	0.04	0.04	0.04
20.100	0.04	0.04	0.04	0.04	0.04
20.350	0.04	0.04	0.04	0.04	0.04
20.600	0.04	0.04	0.04	0.04	0.04
20.850	0.04	0.04	0.04	0.04	0.04
21.100	0.04	0.04	0.04	0.04	0.04
21.350	0.04	0.04	0.04	0.04	0.04
21.600	0.04	0.04	0.04	0.04	0.04
21.850	0.04	0.04	0.03	0.03	0.03
22.100	0.03	0.03	0.03	0.03	0.03
22.350	0.03	0.03	0.03	0.03	0.03
22.600	0.03	0.03	0.03	0.03	0.03
22.850	0.03	0.03	0.03	0.03	0.03
23.100	0.03	0.03	0.03	0.03	0.03
23.350	0.03	0.03	0.03	0.03	0.03
23.600	0.03	0.03	0.03	0.03	0.03
23.850	0.03	0.03	0.03	0.03	(N/A)

Subsection: Diverted Hydrograph  
 Label: Outlet-1  
 Scenario: Pre-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

Peak Discharge	3.20 ft <sup>3</sup> /s
Time to Peak	12.100 hours
Hydrograph Volume	11,080 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
8.200	0.00	0.00	0.01	0.01	0.02
8.450	0.02	0.02	0.02	0.02	0.02
8.700	0.02	0.03	0.03	0.03	0.03
8.950	0.03	0.03	0.03	0.04	0.04
9.200	0.04	0.04	0.04	0.05	0.05
9.450	0.05	0.05	0.05	0.06	0.06
9.700	0.06	0.06	0.06	0.07	0.07
9.950	0.07	0.07	0.08	0.08	0.08
10.200	0.09	0.09	0.09	0.10	0.10
10.450	0.11	0.11	0.12	0.12	0.12
10.700	0.13	0.13	0.14	0.14	0.15
10.950	0.15	0.16	0.17	0.17	0.18
11.200	0.20	0.21	0.23	0.24	0.26
11.450	0.27	0.29	0.33	0.39	0.49
11.700	0.61	0.76	0.89	1.02	1.18
11.950	1.46	1.85	2.74	3.20	2.89
12.200	2.21	1.91	1.80	1.61	1.43
12.450	1.17	0.95	0.75	0.58	0.50
12.700	0.47	0.44	0.42	0.41	0.39
12.950	0.37	0.35	0.33	0.32	0.31
13.200	0.30	0.30	0.29	0.29	0.28
13.450	0.28	0.27	0.27	0.26	0.26
13.700	0.25	0.25	0.24	0.24	0.23
13.950	0.23	0.22	0.22	0.21	0.21
14.200	0.21	0.20	0.20	0.20	0.20
14.450	0.20	0.19	0.19	0.19	0.19
14.700	0.18	0.18	0.18	0.18	0.17
14.950	0.17	0.17	0.17	0.16	0.16
15.200	0.16	0.16	0.15	0.15	0.15
15.450	0.15	0.14	0.14	0.14	0.14
15.700	0.13	0.13	0.13	0.13	0.12
15.950	0.12	0.12	0.12	0.11	0.11
16.200	0.11	0.11	0.11	0.11	0.11
16.450	0.11	0.11	0.10	0.10	0.10
16.700	0.10	0.10	0.10	0.10	0.10
16.950	0.10	0.09	0.09	0.09	0.09
17.200	0.09	0.09	0.09	0.09	0.09
17.450	0.08	0.08	0.08	0.08	0.08
17.700	0.08	0.08	0.08	0.08	0.07

Subsection: Diverted Hydrograph  
 Label: Outlet-1  
 Scenario: Pre-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
17.950	0.07	0.07	0.07	0.07	0.07
18.200	0.07	0.07	0.07	0.07	0.07
18.450	0.07	0.07	0.07	0.07	0.07
18.700	0.07	0.07	0.06	0.06	0.06
18.950	0.06	0.06	0.06	0.06	0.06
19.200	0.06	0.06	0.06	0.06	0.06
19.450	0.06	0.06	0.06	0.06	0.06
19.700	0.06	0.06	0.06	0.06	0.06
19.950	0.06	0.06	0.06	0.06	0.06
20.200	0.06	0.06	0.06	0.06	0.05
20.450	0.05	0.05	0.05	0.05	0.05
20.700	0.05	0.05	0.05	0.05	0.05
20.950	0.05	0.05	0.05	0.05	0.05
21.200	0.05	0.05	0.05	0.05	0.05
21.450	0.05	0.05	0.05	0.05	0.05
21.700	0.05	0.05	0.05	0.05	0.05
21.950	0.05	0.05	0.05	0.05	0.05
22.200	0.05	0.05	0.05	0.04	0.04
22.450	0.04	0.04	0.04	0.04	0.04
22.700	0.04	0.04	0.04	0.04	0.04
22.950	0.04	0.04	0.04	0.04	0.04
23.200	0.04	0.04	0.04	0.04	0.04
23.450	0.04	0.04	0.04	0.04	0.04
23.700	0.04	0.04	0.04	0.04	0.04
23.950	0.04	0.04	(N/A)	(N/A)	(N/A)

Subsection: Diverted Hydrograph  
 Label: Outlet-1  
 Scenario: Pre-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Peak Discharge	4.50 ft <sup>3</sup> /s
Time to Peak	12.150 hours
Hydrograph Volume	18,986 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
6.700	0.00	0.00	0.01	0.01	0.02
6.950	0.02	0.02	0.02	0.02	0.02
7.200	0.02	0.02	0.02	0.03	0.03
7.450	0.03	0.03	0.03	0.03	0.03
7.700	0.03	0.03	0.04	0.04	0.04
7.950	0.04	0.04	0.04	0.04	0.05
8.200	0.05	0.05	0.05	0.06	0.06
8.450	0.06	0.06	0.07	0.07	0.07
8.700	0.07	0.08	0.08	0.08	0.08
8.950	0.09	0.09	0.09	0.10	0.10
9.200	0.10	0.11	0.11	0.11	0.12
9.450	0.12	0.12	0.13	0.13	0.14
9.700	0.14	0.14	0.15	0.15	0.15
9.950	0.16	0.16	0.17	0.17	0.18
10.200	0.18	0.19	0.20	0.20	0.21
10.450	0.22	0.22	0.23	0.24	0.25
10.700	0.25	0.26	0.27	0.28	0.29
10.950	0.29	0.30	0.31	0.33	0.35
11.200	0.37	0.39	0.42	0.44	0.47
11.450	0.50	0.52	0.59	0.70	0.85
11.700	1.00	1.22	1.43	1.61	1.84
11.950	2.54	4.14	4.50	4.50	4.50
12.200	4.50	4.50	4.50	3.17	1.87
12.450	1.76	1.55	1.30	1.02	0.85
12.700	0.73	0.68	0.65	0.62	0.59
12.950	0.56	0.53	0.51	0.49	0.47
13.200	0.46	0.45	0.44	0.44	0.43
13.450	0.42	0.41	0.41	0.40	0.39
13.700	0.38	0.38	0.37	0.36	0.35
13.950	0.34	0.34	0.33	0.32	0.32
14.200	0.31	0.31	0.31	0.30	0.30
14.450	0.30	0.29	0.29	0.28	0.28
14.700	0.28	0.27	0.27	0.27	0.26
14.950	0.26	0.25	0.25	0.25	0.24
15.200	0.24	0.24	0.23	0.23	0.22
15.450	0.22	0.22	0.21	0.21	0.21
15.700	0.20	0.20	0.19	0.19	0.19
15.950	0.18	0.18	0.18	0.17	0.17
16.200	0.17	0.17	0.17	0.16	0.16

Subsection: Diverted Hydrograph  
 Label: Outlet-1  
 Scenario: Pre-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
16.450	0.16	0.16	0.16	0.15	0.15
16.700	0.15	0.15	0.15	0.15	0.15
16.950	0.14	0.14	0.14	0.14	0.14
17.200	0.14	0.13	0.13	0.13	0.13
17.450	0.13	0.13	0.12	0.12	0.12
17.700	0.12	0.12	0.11	0.11	0.11
17.950	0.11	0.11	0.11	0.11	0.10
18.200	0.10	0.10	0.10	0.10	0.10
18.450	0.10	0.10	0.10	0.10	0.10
18.700	0.10	0.10	0.10	0.10	0.10
18.950	0.10	0.10	0.10	0.10	0.09
19.200	0.09	0.09	0.09	0.09	0.09
19.450	0.09	0.09	0.09	0.09	0.09
19.700	0.09	0.09	0.09	0.09	0.09
19.950	0.09	0.09	0.09	0.09	0.08
20.200	0.08	0.08	0.08	0.08	0.08
20.450	0.08	0.08	0.08	0.08	0.08
20.700	0.08	0.08	0.08	0.08	0.08
20.950	0.08	0.08	0.08	0.08	0.08
21.200	0.08	0.08	0.08	0.08	0.08
21.450	0.08	0.07	0.07	0.07	0.07
21.700	0.07	0.07	0.07	0.07	0.07
21.950	0.07	0.07	0.07	0.07	0.07
22.200	0.07	0.07	0.07	0.07	0.07
22.450	0.07	0.07	0.07	0.07	0.07
22.700	0.07	0.07	0.06	0.06	0.06
22.950	0.06	0.06	0.06	0.06	0.06
23.200	0.06	0.06	0.06	0.06	0.06
23.450	0.06	0.06	0.06	0.06	0.06
23.700	0.06	0.06	0.06	0.06	0.06
23.950	0.06	0.06	(N/A)	(N/A)	(N/A)



Subsection: Diverted Hydrograph  
 Label: Outlet-1A  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Peak Discharge	0.30 ft <sup>3</sup> /s
Time to Peak	12.550 hours
Hydrograph Volume	1,817 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.250	0.00	0.05	0.15	0.21	0.26
12.500	0.29	0.30	0.29	0.29	0.28
12.750	0.27	0.26	0.26	0.25	0.24
13.000	0.23	0.22	0.21	0.20	0.19
13.250	0.18	0.18	0.17	0.16	0.16
13.500	0.15	0.15	0.14	0.14	0.13
13.750	0.13	0.13	0.12	0.12	0.11
14.000	0.11	0.11	0.10	0.10	0.10
14.250	0.10	0.09	0.09	0.09	0.09
14.500	0.08	0.08	0.08	0.08	0.08
14.750	0.07	0.07	0.07	0.07	0.07
15.000	0.07	0.06	0.06	0.06	0.06
15.250	0.06	0.06	0.06	0.05	0.05
15.500	0.05	0.05	0.05	0.05	0.05
15.750	0.04	0.04	0.04	0.04	0.04
16.000	0.04	0.03	0.03	0.03	0.03
16.250	0.03	0.03	0.03	0.03	0.03
16.500	0.02	0.02	0.02	0.02	0.02
16.750	0.02	0.02	0.02	0.02	0.02
17.000	0.02	0.02	0.02	0.01	0.01
17.250	0.01	0.01	0.01	0.01	0.01
17.500	0.01	0.01	0.01	0.01	0.01
17.750	0.01	0.01	0.01	0.01	0.00
18.000	0.00	0.00	0.00	0.00	0.00
18.250	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Diverted Hydrograph  
 Label: Outlet-1A  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

Peak Discharge	1.96 ft <sup>3</sup> /s
Time to Peak	12.250 hours
Hydrograph Volume	8,876 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.800	0.00	0.01	0.23	0.49	0.92
12.050	1.40	1.67	1.87	1.95	1.96
12.300	1.94	1.90	1.85	1.77	1.67
12.550	1.57	1.46	1.35	1.19	1.06
12.800	0.94	0.85	0.76	0.69	0.63
13.050	0.57	0.54	0.51	0.48	0.46
13.300	0.43	0.41	0.39	0.38	0.36
13.550	0.35	0.33	0.32	0.31	0.30
13.800	0.29	0.28	0.27	0.26	0.26
14.050	0.25	0.24	0.23	0.23	0.22
14.300	0.22	0.21	0.21	0.20	0.20
14.550	0.19	0.19	0.19	0.18	0.18
14.800	0.18	0.17	0.17	0.17	0.16
15.050	0.16	0.16	0.15	0.15	0.15
15.300	0.15	0.14	0.14	0.14	0.13
15.550	0.13	0.13	0.13	0.12	0.12
15.800	0.12	0.11	0.11	0.11	0.11
16.050	0.10	0.10	0.10	0.10	0.09
16.300	0.09	0.09	0.09	0.09	0.08
16.550	0.08	0.08	0.08	0.08	0.08
16.800	0.08	0.07	0.07	0.07	0.07
17.050	0.07	0.07	0.07	0.06	0.06
17.300	0.06	0.06	0.06	0.06	0.06
17.550	0.06	0.05	0.05	0.05	0.05
17.800	0.05	0.05	0.05	0.05	0.04
18.050	0.04	0.04	0.04	0.04	0.04
18.300	0.04	0.04	0.04	0.04	0.04
18.550	0.04	0.03	0.03	0.03	0.03
18.800	0.03	0.03	0.03	0.03	0.03
19.050	0.03	0.03	0.03	0.03	0.03
19.300	0.03	0.03	0.03	0.03	0.03
19.550	0.03	0.03	0.03	0.03	0.03
19.800	0.02	0.02	0.02	0.02	0.02
20.050	0.02	0.02	0.02	0.02	0.02
20.300	0.02	0.02	0.02	0.02	0.02
20.550	0.02	0.02	0.02	0.02	0.02
20.800	0.02	0.02	0.02	0.02	0.02
21.050	0.02	0.02	0.02	0.02	0.02
21.300	0.02	0.02	0.01	0.01	0.01

Subsection: Diverted Hydrograph  
 Label: Outlet-1A  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.550	0.01	0.01	0.01	0.01	0.01
21.800	0.01	0.01	0.01	0.01	0.01
22.050	0.01	0.01	0.01	0.01	0.01
22.300	0.01	0.01	0.01	0.01	0.01
22.550	0.01	0.01	0.01	0.01	0.01
22.800	0.01	0.01	0.01	0.01	0.01
23.050	0.01	0.01	0.01	0.00	0.00
23.300	0.00	0.00	0.00	0.00	0.00
23.550	0.00	0.00	0.00	0.00	0.00
23.800	0.00	0.00	0.00	0.00	(N/A)

Subsection: Diverted Hydrograph  
 Label: Outlet-1A  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

Peak Discharge	2.86 ft <sup>3</sup> /s
Time to Peak	12.200 hours
Hydrograph Volume	13,195 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.550	0.00	0.07	0.19	0.32	0.46
11.800	0.64	0.88	1.13	1.41	1.70
12.050	2.00	2.28	2.57	2.86	2.80
12.300	2.63	2.48	2.37	2.28	2.18
12.550	2.06	1.93	1.81	1.68	1.56
12.800	1.45	1.33	1.18	1.05	0.94
13.050	0.85	0.77	0.70	0.64	0.59
13.300	0.56	0.53	0.51	0.49	0.47
13.550	0.45	0.44	0.42	0.41	0.39
13.800	0.38	0.37	0.36	0.35	0.34
14.050	0.33	0.32	0.31	0.30	0.29
14.300	0.29	0.28	0.27	0.27	0.26
14.550	0.26	0.25	0.25	0.24	0.24
14.800	0.24	0.23	0.23	0.22	0.22
15.050	0.22	0.21	0.21	0.20	0.20
15.300	0.20	0.19	0.19	0.19	0.18
15.550	0.18	0.17	0.17	0.17	0.16
15.800	0.16	0.16	0.15	0.15	0.15
16.050	0.14	0.14	0.14	0.13	0.13
16.300	0.13	0.12	0.12	0.12	0.12
16.550	0.12	0.11	0.11	0.11	0.11
16.800	0.11	0.10	0.10	0.10	0.10
17.050	0.10	0.10	0.09	0.09	0.09
17.300	0.09	0.09	0.09	0.09	0.08
17.550	0.08	0.08	0.08	0.08	0.08
17.800	0.07	0.07	0.07	0.07	0.07
18.050	0.07	0.07	0.06	0.06	0.06
18.300	0.06	0.06	0.06	0.06	0.06
18.550	0.06	0.06	0.05	0.05	0.05
18.800	0.05	0.05	0.05	0.05	0.05
19.050	0.05	0.05	0.05	0.05	0.05
19.300	0.05	0.05	0.05	0.05	0.05
19.550	0.04	0.04	0.04	0.04	0.04
19.800	0.04	0.04	0.04	0.04	0.04
20.050	0.04	0.04	0.04	0.04	0.04
20.300	0.04	0.04	0.04	0.04	0.04
20.550	0.04	0.04	0.04	0.04	0.03
20.800	0.03	0.03	0.03	0.03	0.03
21.050	0.03	0.03	0.03	0.03	0.03

Subsection: Diverted Hydrograph  
 Label: Outlet-1A  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**  
**Time on left represents time for first value in each row.**

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.300	0.03	0.03	0.03	0.03	0.03
21.550	0.03	0.03	0.03	0.03	0.03
21.800	0.03	0.03	0.03	0.03	0.03
22.050	0.03	0.03	0.02	0.02	0.02
22.300	0.02	0.02	0.02	0.02	0.02
22.550	0.02	0.02	0.02	0.02	0.02
22.800	0.02	0.02	0.02	0.02	0.02
23.050	0.02	0.02	0.02	0.02	0.02
23.300	0.02	0.02	0.02	0.02	0.02
23.550	0.02	0.01	0.01	0.01	0.01
23.800	0.01	0.01	0.01	0.01	0.01

Subsection: Diverted Hydrograph  
 Label: Outlet-1A  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Peak Discharge	5.98 ft <sup>3</sup> /s
Time to Peak	12.150 hours
Hydrograph Volume	22,125 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
10.500	0.00	0.04	0.10	0.14	0.19
10.750	0.22	0.26	0.29	0.32	0.34
11.000	0.37	0.39	0.42	0.44	0.47
11.250	0.49	0.52	0.55	0.58	0.63
11.500	0.67	0.73	0.81	0.92	1.07
11.750	1.26	1.44	1.60	1.79	2.02
12.000	2.37	3.63	5.33	5.98	5.46
12.250	4.61	3.98	3.47	3.14	2.80
12.500	2.50	2.34	2.23	2.11	2.00
12.750	1.89	1.78	1.67	1.57	1.47
13.000	1.38	1.25	1.13	1.03	0.95
13.250	0.88	0.82	0.77	0.72	0.68
13.500	0.65	0.62	0.60	0.58	0.56
13.750	0.55	0.53	0.52	0.51	0.50
14.000	0.48	0.47	0.46	0.45	0.44
14.250	0.43	0.42	0.41	0.41	0.40
14.500	0.39	0.38	0.38	0.37	0.36
14.750	0.36	0.35	0.35	0.34	0.34
15.000	0.33	0.32	0.32	0.31	0.31
15.250	0.30	0.30	0.29	0.29	0.28
15.500	0.28	0.27	0.27	0.26	0.26
15.750	0.25	0.25	0.24	0.24	0.23
16.000	0.23	0.22	0.22	0.21	0.21
16.250	0.20	0.20	0.20	0.19	0.19
16.500	0.19	0.18	0.18	0.18	0.18
16.750	0.17	0.17	0.17	0.17	0.16
17.000	0.16	0.16	0.16	0.15	0.15
17.250	0.15	0.15	0.14	0.14	0.14
17.500	0.14	0.14	0.13	0.13	0.13
17.750	0.13	0.12	0.12	0.12	0.12
18.000	0.12	0.11	0.11	0.11	0.11
18.250	0.11	0.10	0.10	0.10	0.10
18.500	0.10	0.10	0.10	0.10	0.09
18.750	0.09	0.09	0.09	0.09	0.09
19.000	0.09	0.09	0.09	0.09	0.09
19.250	0.09	0.09	0.08	0.08	0.08
19.500	0.08	0.08	0.08	0.08	0.08
19.750	0.08	0.08	0.08	0.08	0.08
20.000	0.08	0.08	0.07	0.07	0.07

Subsection: Diverted Hydrograph  
 Label: Outlet-1A  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
20.250	0.07	0.07	0.07	0.07	0.07
20.500	0.07	0.07	0.07	0.07	0.07
20.750	0.07	0.07	0.07	0.07	0.07
21.000	0.06	0.06	0.06	0.06	0.06
21.250	0.06	0.06	0.06	0.06	0.06
21.500	0.06	0.06	0.06	0.06	0.06
21.750	0.06	0.06	0.06	0.06	0.06
22.000	0.06	0.05	0.05	0.05	0.05
22.250	0.05	0.05	0.05	0.05	0.05
22.500	0.05	0.05	0.05	0.05	0.05
22.750	0.05	0.05	0.05	0.05	0.05
23.000	0.05	0.04	0.04	0.04	0.04
23.250	0.04	0.04	0.04	0.04	0.04
23.500	0.04	0.04	0.04	0.04	0.04
23.750	0.04	0.04	0.04	0.04	0.04
24.000	0.04	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Diverted Hydrograph  
 Label: Outlet-RG  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	8.000 hours
Hydrograph Volume	0 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
0.000	0.00	0.00	(N/A)	(N/A)	(N/A)



Subsection: Diverted Hydrograph  
 Label: Outlet-RG  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

Peak Discharge	0.18 ft <sup>3</sup> /s
Time to Peak	12.050 hours
Hydrograph Volume	308 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.000	0.00	0.18	0.12	0.16	0.08
12.250	0.10	0.07	0.07	0.05	0.05
12.500	0.04	0.03	0.02	0.02	0.02
12.750	0.02	0.02	0.02	0.02	0.02
13.000	0.02	0.02	0.01	0.01	0.01
13.250	0.01	0.01	0.01	0.01	0.01
13.500	0.01	0.01	0.01	0.01	0.01
13.750	0.01	0.01	0.01	0.01	0.01
14.000	0.01	0.01	0.01	0.01	0.01
14.250	0.01	0.01	0.01	0.01	0.01
14.500	0.01	0.01	0.01	0.01	0.01
14.750	0.01	0.01	0.01	0.01	0.01
15.000	0.01	0.01	0.01	0.01	0.01
15.250	0.01	0.01	0.01	0.01	0.01
15.500	0.00	0.00	0.00	0.00	0.00
15.750	0.00	0.00	0.00	0.00	0.00
16.000	0.00	0.00	0.00	0.00	0.00
16.250	0.00	0.00	0.00	0.00	0.00
16.500	0.00	0.00	0.00	0.00	0.00
16.750	0.00	0.00	0.00	0.00	0.00
17.000	0.00	0.00	0.00	0.00	0.00
17.250	0.00	0.00	0.00	0.00	0.00
17.500	0.00	0.00	0.00	0.00	0.00
17.750	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Diverted Hydrograph  
Label: Outlet-RG  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

Peak Discharge	0.25 ft <sup>3</sup> /s
Time to Peak	12.100 hours
Hydrograph Volume	574 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.800	0.00	0.01	0.13	0.09	0.21
12.050	0.20	0.25	0.20	0.16	0.12
12.300	0.12	0.10	0.09	0.07	0.06
12.550	0.05	0.04	0.03	0.03	0.03
12.800	0.03	0.03	0.03	0.03	0.02
13.050	0.02	0.02	0.02	0.02	0.02
13.300	0.02	0.02	0.02	0.02	0.02
13.550	0.02	0.02	0.02	0.02	0.02
13.800	0.02	0.02	0.02	0.02	0.01
14.050	0.01	0.01	0.01	0.01	0.01
14.300	0.01	0.01	0.01	0.01	0.01
14.550	0.01	0.01	0.01	0.01	0.01
14.800	0.01	0.01	0.01	0.01	0.01
15.050	0.01	0.01	0.01	0.01	0.01
15.300	0.01	0.01	0.01	0.01	0.01
15.550	0.01	0.01	0.01	0.01	0.01
15.800	0.01	0.01	0.01	0.01	0.01
16.050	0.01	0.01	0.01	0.01	0.01
16.300	0.01	0.01	0.01	0.01	0.01
16.550	0.01	0.01	0.01	0.00	0.00
16.800	0.00	0.00	0.00	0.00	0.00
17.050	0.00	0.00	0.00	0.00	0.00
17.300	0.00	0.00	0.00	0.00	0.00
17.550	0.00	0.00	0.00	0.00	0.00
17.800	0.00	0.00	0.00	0.00	0.00
18.050	0.00	0.00	0.00	0.00	0.00
18.300	0.00	0.00	0.00	0.00	0.00
18.550	0.00	0.00	0.00	0.00	0.00
18.800	0.00	0.00	0.00	0.00	0.00
19.050	0.00	0.00	0.00	0.00	0.00
19.300	0.00	0.00	0.00	0.00	0.00
19.550	0.00	0.00	0.00	0.00	0.00
19.800	0.00	0.00	0.00	0.00	0.00
20.050	0.00	0.00	0.00	0.00	0.00
20.300	0.00	0.00	0.00	0.00	(N/A)

Subsection: Diverted Hydrograph  
 Label: Outlet-RG  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Peak Discharge	0.42 ft <sup>3</sup> /s
Time to Peak	12.100 hours
Hydrograph Volume	1,204 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.250	0.00	0.03	0.02	0.03	0.03
11.500	0.04	0.04	0.05	0.06	0.08
11.750	0.10	0.12	0.14	0.17	0.24
12.000	0.35	0.40	0.42	0.36	0.26
12.250	0.22	0.19	0.17	0.15	0.12
12.500	0.10	0.08	0.07	0.06	0.06
12.750	0.06	0.05	0.05	0.05	0.04
13.000	0.04	0.04	0.04	0.04	0.04
13.250	0.04	0.04	0.04	0.03	0.03
13.500	0.03	0.03	0.03	0.03	0.03
13.750	0.03	0.03	0.03	0.03	0.03
14.000	0.03	0.03	0.03	0.02	0.02
14.250	0.02	0.02	0.02	0.02	0.02
14.500	0.02	0.02	0.02	0.02	0.02
14.750	0.02	0.02	0.02	0.02	0.02
15.000	0.02	0.02	0.02	0.02	0.02
15.250	0.02	0.02	0.02	0.02	0.02
15.500	0.02	0.02	0.02	0.01	0.01
15.750	0.01	0.01	0.01	0.01	0.01
16.000	0.01	0.01	0.01	0.01	0.01
16.250	0.01	0.01	0.01	0.01	0.01
16.500	0.01	0.01	0.01	0.01	0.01
16.750	0.01	0.01	0.01	0.01	0.01
17.000	0.01	0.01	0.01	0.01	0.01
17.250	0.01	0.01	0.01	0.01	0.01
17.500	0.01	0.01	0.01	0.01	0.01
17.750	0.01	0.01	0.01	0.01	0.01
18.000	0.01	0.01	0.01	0.01	0.01
18.250	0.01	0.01	0.01	0.01	0.01
18.500	0.01	0.01	0.01	0.01	0.01
18.750	0.01	0.01	0.01	0.01	0.01
19.000	0.01	0.01	0.01	0.01	0.00
19.250	0.00	0.00	0.00	0.00	0.00
19.500	0.00	0.00	0.00	0.00	0.00
19.750	0.00	0.00	0.00	0.00	0.00
20.000	0.00	0.00	0.00	0.00	0.00
20.250	0.00	0.00	0.00	0.00	0.00
20.500	0.00	0.00	0.00	0.00	0.00
20.750	0.00	0.00	0.00	0.00	0.00

Subsection: Diverted Hydrograph  
 Label: Outlet-RG  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.000	0.00	0.00	0.00	0.00	0.00
21.250	0.00	0.00	0.00	0.00	0.00
21.500	0.00	0.00	0.00	0.00	0.00
21.750	0.00	0.00	0.00	0.00	0.00
22.000	0.00	0.00	0.00	0.00	0.00
22.250	0.00	0.00	0.00	0.00	0.00
22.500	0.00	0.00	0.00	0.00	0.00
22.750	0.00	0.00	0.00	0.00	0.00
23.000	0.00	0.00	0.00	0.00	0.00
23.250	0.00	0.00	0.00	0.00	0.00
23.500	0.00	0.00	0.00	0.00	0.00
23.750	0.00	0.00	0.00	0.00	0.00
24.000	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: P-RG  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.00 ft <sup>3</sup> /s
Initial Conditions	
Elevation (Water Surface, Initial)	35.00 ft
Volume (Initial)	0 ft <sup>3</sup>
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ft <sup>3</sup> )	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
35.00	0.00	0	120	0.00	0.00	0.00
35.50	0.00	83	216	0.00	0.00	0.92
36.00	10.61	220	339	0.00	10.61	13.06

Subsection: Level Pool Pond Routing Summary  
Label: P-RG (IN)  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

Infiltration				
Infiltration Method (Computed)		Constant		
Infiltration Rate (Constant)		0.00 ft³/s		
Initial Conditions				
Elevation (Water Surface, Initial)		35.00 ft		
Volume (Initial)		0 ft³		
Flow (Initial Outlet)		0.00 ft³/s		
Flow (Initial Infiltration)		0.00 ft³/s		
Flow (Initial, Total)		0.00 ft³/s		
Time Increment		0.050 hours		
Inflow/Outflow Hydrograph Summary				
Flow (Peak In)		0.04 ft³/s	Time to Peak (Flow, In)	12.100 hours
Infiltration (Peak)		0.00 ft³/s	Time to Peak (Infiltration)	15.350 hours
Flow (Peak Outlet)		0.00 ft³/s	Time to Peak (Flow, Outlet)	0.000 hours
Peak Conditions				
Elevation (Water Surface, Peak)		35.41 ft		
Volume (Peak)		64 ft³		
Mass Balance (ft³)				
Volume (Initial)		0 ft³		
Volume (Total Inflow)		151 ft³		
Volume (Total Infiltration)		113 ft³		
Volume (Total Outlet Outflow)		0 ft³		
Volume (Retained)		32 ft³		
Volume (Unrouted)		-6 ft³		
Error (Mass Balance)		3.9 %		

Subsection: Level Pool Pond Routing Summary  
Label: P-RG (IN)  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

Infiltration			
Infiltration Method (Computed)		Constant	
Infiltration Rate (Constant)		0.00 ft³/s	
Initial Conditions			
Elevation (Water Surface, Initial)		35.00 ft	
Volume (Initial)		0 ft³	
Flow (Initial Outlet)		0.00 ft³/s	
Flow (Initial Infiltration)		0.00 ft³/s	
Flow (Initial, Total)		0.00 ft³/s	
Time Increment		0.050 hours	
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)		0.16 ft³/s	Time to Peak (Flow, In)
Infiltration (Peak)		0.00 ft³/s	Time to Peak (Infiltration)
Flow (Peak Outlet)		0.18 ft³/s	Time to Peak (Flow, Outlet)
Elevation (Water Surface, Peak)		35.51 ft	
Volume (Peak)		85 ft³	
Mass Balance (ft³)			
Volume (Initial)		0 ft³	
Volume (Total Inflow)		557 ft³	
Volume (Total Infiltration)		174 ft³	
Volume (Total Outlet Outflow)		310 ft³	
Volume (Retained)		70 ft³	
Volume (Unrouted)		-3 ft³	
Error (Mass Balance)		0.5 %	

Subsection: Level Pool Pond Routing Summary  
Label: P-RG (IN)  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

Infiltration			
Infiltration Method (Computed)		Constant	
Infiltration Rate (Constant)		0.00 ft³/s	
Initial Conditions			
Elevation (Water Surface, Initial)		35.00 ft	
Volume (Initial)		0 ft³	
Flow (Initial Outlet)		0.00 ft³/s	
Flow (Initial Infiltration)		0.00 ft³/s	
Flow (Initial, Total)		0.00 ft³/s	
Time Increment		0.050 hours	
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)		0.24 ft³/s	Time to Peak (Flow, In)
Infiltration (Peak)		0.00 ft³/s	Time to Peak (Infiltration)
Flow (Peak Outlet)		0.25 ft³/s	Time to Peak (Flow, Outlet)
Elevation (Water Surface, Peak)		35.51 ft	
Volume (Peak)		85 ft³	
Mass Balance (ft³)			
Volume (Initial)		0 ft³	
Volume (Total Inflow)		842 ft³	
Volume (Total Infiltration)		183 ft³	
Volume (Total Outlet Outflow)		578 ft³	
Volume (Retained)		81 ft³	
Volume (Unrouted)		-1 ft³	
Error (Mass Balance)		0.1 %	



Subsection: Level Pool Pond Routing Summary  
Label: P-RG (IN)  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

Infiltration			
Infiltration Method (Computed)		Constant	
Infiltration Rate (Constant)		0.00 ft³/s	
Initial Conditions			
Elevation (Water Surface, Initial)		35.00 ft	
Volume (Initial)		0 ft³	
Flow (Initial Outlet)		0.00 ft³/s	
Flow (Initial Infiltration)		0.00 ft³/s	
Flow (Initial, Total)		0.00 ft³/s	
Time Increment		0.050 hours	
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)		0.42 ft³/s	Time to Peak (Flow, In)
Infiltration (Peak)		0.00 ft³/s	Time to Peak (Infiltration)
Flow (Peak Outlet)		0.42 ft³/s	Time to Peak (Flow, Outlet)
Elevation (Water Surface, Peak)		35.52 ft	
Volume (Peak)		87 ft³	
Mass Balance (ft³)			
Volume (Initial)		0 ft³	
Volume (Total Inflow)		1,483 ft³	
Volume (Total Infiltration)		197 ft³	
Volume (Total Outlet Outflow)		1,204 ft³	
Volume (Retained)		82 ft³	
Volume (Unrouted)		0 ft³	
Error (Mass Balance)		0.0 %	

Subsection: Pond Infiltration Hydrograph  
 Label: P-RG (INF)  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	15.350 hours
Hydrograph Volume	113 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.150	0.00	0.00	0.00	0.00	0.00
12.400	0.00	0.00	0.00	0.00	0.00
12.650	0.00	0.00	0.00	0.00	0.00
12.900	0.00	0.00	0.00	0.00	0.00
13.150	0.00	0.00	0.00	0.00	0.00
13.400	0.00	0.00	0.00	0.00	0.00
13.650	0.00	0.00	0.00	0.00	0.00
13.900	0.00	0.00	0.00	0.00	0.00
14.150	0.00	0.00	0.00	0.00	0.00
14.400	0.00	0.00	0.00	0.00	0.00
14.650	0.00	0.00	0.00	0.00	0.00
14.900	0.00	0.00	0.00	0.00	0.00
15.150	0.00	0.00	0.00	0.00	0.00
15.400	0.00	0.00	0.00	0.00	0.00
15.650	0.00	0.00	0.00	0.00	0.00
15.900	0.00	0.00	0.00	0.00	0.00
16.150	0.00	0.00	0.00	0.00	0.00
16.400	0.00	0.00	0.00	0.00	0.00
16.650	0.00	0.00	0.00	0.00	0.00
16.900	0.00	0.00	0.00	0.00	0.00
17.150	0.00	0.00	0.00	0.00	0.00
17.400	0.00	0.00	0.00	0.00	0.00
17.650	0.00	0.00	0.00	0.00	0.00
17.900	0.00	0.00	0.00	0.00	0.00
18.150	0.00	0.00	0.00	0.00	0.00
18.400	0.00	0.00	0.00	0.00	0.00
18.650	0.00	0.00	0.00	0.00	0.00
18.900	0.00	0.00	0.00	0.00	0.00
19.150	0.00	0.00	0.00	0.00	0.00
19.400	0.00	0.00	0.00	0.00	0.00
19.650	0.00	0.00	0.00	0.00	0.00
19.900	0.00	0.00	0.00	0.00	0.00
20.150	0.00	0.00	0.00	0.00	0.00
20.400	0.00	0.00	0.00	0.00	0.00
20.650	0.00	0.00	0.00	0.00	0.00
20.900	0.00	0.00	0.00	0.00	0.00
21.150	0.00	0.00	0.00	0.00	0.00
21.400	0.00	0.00	0.00	0.00	0.00
21.650	0.00	0.00	0.00	0.00	0.00

Subsection: Pond Infiltration Hydrograph  
 Label: P-RG (INF)  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.900	0.00	0.00	0.00	0.00	0.00
22.150	0.00	0.00	0.00	0.00	0.00
22.400	0.00	0.00	0.00	0.00	0.00
22.650	0.00	0.00	0.00	0.00	0.00
22.900	0.00	0.00	0.00	0.00	0.00
23.150	0.00	0.00	0.00	0.00	0.00
23.400	0.00	0.00	0.00	0.00	0.00
23.650	0.00	0.00	0.00	0.00	0.00
23.900	0.00	0.00	0.00	(N/A)	(N/A)

Subsection: Pond Infiltration Hydrograph  
 Label: P-RG (INF)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	16.050 hours
Hydrograph Volume	172 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.650	0.00	0.00	0.00	0.00	0.00
11.900	0.00	0.00	0.00	0.00	0.00
12.150	0.00	0.00	0.00	0.00	0.00
12.400	0.00	0.00	0.00	0.00	0.00
12.650	0.00	0.00	0.00	0.00	0.00
12.900	0.00	0.00	0.00	0.00	0.00
13.150	0.00	0.00	0.00	0.00	0.00
13.400	0.00	0.00	0.00	0.00	0.00
13.650	0.00	0.00	0.00	0.00	0.00
13.900	0.00	0.00	0.00	0.00	0.00
14.150	0.00	0.00	0.00	0.00	0.00
14.400	0.00	0.00	0.00	0.00	0.00
14.650	0.00	0.00	0.00	0.00	0.00
14.900	0.00	0.00	0.00	0.00	0.00
15.150	0.00	0.00	0.00	0.00	0.00
15.400	0.00	0.00	0.00	0.00	0.00
15.650	0.00	0.00	0.00	0.00	0.00
15.900	0.00	0.00	0.00	0.00	0.00
16.150	0.00	0.00	0.00	0.00	0.00
16.400	0.00	0.00	0.00	0.00	0.00
16.650	0.00	0.00	0.00	0.00	0.00
16.900	0.00	0.00	0.00	0.00	0.00
17.150	0.00	0.00	0.00	0.00	0.00
17.400	0.00	0.00	0.00	0.00	0.00
17.650	0.00	0.00	0.00	0.00	0.00
17.900	0.00	0.00	0.00	0.00	0.00
18.150	0.00	0.00	0.00	0.00	0.00
18.400	0.00	0.00	0.00	0.00	0.00
18.650	0.00	0.00	0.00	0.00	0.00
18.900	0.00	0.00	0.00	0.00	0.00
19.150	0.00	0.00	0.00	0.00	0.00
19.400	0.00	0.00	0.00	0.00	0.00
19.650	0.00	0.00	0.00	0.00	0.00
19.900	0.00	0.00	0.00	0.00	0.00
20.150	0.00	0.00	0.00	0.00	0.00
20.400	0.00	0.00	0.00	0.00	0.00
20.650	0.00	0.00	0.00	0.00	0.00
20.900	0.00	0.00	0.00	0.00	0.00
21.150	0.00	0.00	0.00	0.00	0.00

Subsection: Pond Infiltration Hydrograph  
 Label: P-RG (INF)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.400	0.00	0.00	0.00	0.00	0.00
21.650	0.00	0.00	0.00	0.00	0.00
21.900	0.00	0.00	0.00	0.00	0.00
22.150	0.00	0.00	0.00	0.00	0.00
22.400	0.00	0.00	0.00	0.00	0.00
22.650	0.00	0.00	0.00	0.00	0.00
22.900	0.00	0.00	0.00	0.00	0.00
23.150	0.00	0.00	0.00	0.00	0.00
23.400	0.00	0.00	0.00	0.00	0.00
23.650	0.00	0.00	0.00	0.00	0.00
23.900	0.00	0.00	0.00	(N/A)	(N/A)

Subsection: Pond Infiltration Hydrograph  
 Label: P-RG (INF)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	15.900 hours
Hydrograph Volume	180 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.150	0.00	0.00	0.00	0.00	0.00
11.400	0.00	0.00	0.00	0.00	0.00
11.650	0.00	0.00	0.00	0.00	0.00
11.900	0.00	0.00	0.00	0.00	0.00
12.150	0.00	0.00	0.00	0.00	0.00
12.400	0.00	0.00	0.00	0.00	0.00
12.650	0.00	0.00	0.00	0.00	0.00
12.900	0.00	0.00	0.00	0.00	0.00
13.150	0.00	0.00	0.00	0.00	0.00
13.400	0.00	0.00	0.00	0.00	0.00
13.650	0.00	0.00	0.00	0.00	0.00
13.900	0.00	0.00	0.00	0.00	0.00
14.150	0.00	0.00	0.00	0.00	0.00
14.400	0.00	0.00	0.00	0.00	0.00
14.650	0.00	0.00	0.00	0.00	0.00
14.900	0.00	0.00	0.00	0.00	0.00
15.150	0.00	0.00	0.00	0.00	0.00
15.400	0.00	0.00	0.00	0.00	0.00
15.650	0.00	0.00	0.00	0.00	0.00
15.900	0.00	0.00	0.00	0.00	0.00
16.150	0.00	0.00	0.00	0.00	0.00
16.400	0.00	0.00	0.00	0.00	0.00
16.650	0.00	0.00	0.00	0.00	0.00
16.900	0.00	0.00	0.00	0.00	0.00
17.150	0.00	0.00	0.00	0.00	0.00
17.400	0.00	0.00	0.00	0.00	0.00
17.650	0.00	0.00	0.00	0.00	0.00
17.900	0.00	0.00	0.00	0.00	0.00
18.150	0.00	0.00	0.00	0.00	0.00
18.400	0.00	0.00	0.00	0.00	0.00
18.650	0.00	0.00	0.00	0.00	0.00
18.900	0.00	0.00	0.00	0.00	0.00
19.150	0.00	0.00	0.00	0.00	0.00
19.400	0.00	0.00	0.00	0.00	0.00
19.650	0.00	0.00	0.00	0.00	0.00
19.900	0.00	0.00	0.00	0.00	0.00
20.150	0.00	0.00	0.00	0.00	0.00
20.400	0.00	0.00	0.00	0.00	0.00
20.650	0.00	0.00	0.00	0.00	0.00

Subsection: Pond Infiltration Hydrograph  
 Label: P-RG (INF)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
20.900	0.00	0.00	0.00	0.00	0.00
21.150	0.00	0.00	0.00	0.00	0.00
21.400	0.00	0.00	0.00	0.00	0.00
21.650	0.00	0.00	0.00	0.00	0.00
21.900	0.00	0.00	0.00	0.00	0.00
22.150	0.00	0.00	0.00	0.00	0.00
22.400	0.00	0.00	0.00	0.00	0.00
22.650	0.00	0.00	0.00	0.00	0.00
22.900	0.00	0.00	0.00	0.00	0.00
23.150	0.00	0.00	0.00	0.00	0.00
23.400	0.00	0.00	0.00	0.00	0.00
23.650	0.00	0.00	0.00	0.00	0.00
23.900	0.00	0.00	0.00	(N/A)	(N/A)

Subsection: Pond Infiltration Hydrograph  
 Label: P-RG (INF)  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	15.500 hours
Hydrograph Volume	194 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
9.900	0.00	0.00	0.00	0.00	0.00
10.150	0.00	0.00	0.00	0.00	0.00
10.400	0.00	0.00	0.00	0.00	0.00
10.650	0.00	0.00	0.00	0.00	0.00
10.900	0.00	0.00	0.00	0.00	0.00
11.150	0.00	0.00	0.00	0.00	0.00
11.400	0.00	0.00	0.00	0.00	0.00
11.650	0.00	0.00	0.00	0.00	0.00
11.900	0.00	0.00	0.00	0.00	0.00
12.150	0.00	0.00	0.00	0.00	0.00
12.400	0.00	0.00	0.00	0.00	0.00
12.650	0.00	0.00	0.00	0.00	0.00
12.900	0.00	0.00	0.00	0.00	0.00
13.150	0.00	0.00	0.00	0.00	0.00
13.400	0.00	0.00	0.00	0.00	0.00
13.650	0.00	0.00	0.00	0.00	0.00
13.900	0.00	0.00	0.00	0.00	0.00
14.150	0.00	0.00	0.00	0.00	0.00
14.400	0.00	0.00	0.00	0.00	0.00
14.650	0.00	0.00	0.00	0.00	0.00
14.900	0.00	0.00	0.00	0.00	0.00
15.150	0.00	0.00	0.00	0.00	0.00
15.400	0.00	0.00	0.00	0.00	0.00
15.650	0.00	0.00	0.00	0.00	0.00
15.900	0.00	0.00	0.00	0.00	0.00
16.150	0.00	0.00	0.00	0.00	0.00
16.400	0.00	0.00	0.00	0.00	0.00
16.650	0.00	0.00	0.00	0.00	0.00
16.900	0.00	0.00	0.00	0.00	0.00
17.150	0.00	0.00	0.00	0.00	0.00
17.400	0.00	0.00	0.00	0.00	0.00
17.650	0.00	0.00	0.00	0.00	0.00
17.900	0.00	0.00	0.00	0.00	0.00
18.150	0.00	0.00	0.00	0.00	0.00
18.400	0.00	0.00	0.00	0.00	0.00
18.650	0.00	0.00	0.00	0.00	0.00
18.900	0.00	0.00	0.00	0.00	0.00
19.150	0.00	0.00	0.00	0.00	0.00
19.400	0.00	0.00	0.00	0.00	0.00



Subsection: Pond Infiltration Hydrograph  
 Label: P-RG (INF)  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
19.650	0.00	0.00	0.00	0.00	0.00
19.900	0.00	0.00	0.00	0.00	0.00
20.150	0.00	0.00	0.00	0.00	0.00
20.400	0.00	0.00	0.00	0.00	0.00
20.650	0.00	0.00	0.00	0.00	0.00
20.900	0.00	0.00	0.00	0.00	0.00
21.150	0.00	0.00	0.00	0.00	0.00
21.400	0.00	0.00	0.00	0.00	0.00
21.650	0.00	0.00	0.00	0.00	0.00
21.900	0.00	0.00	0.00	0.00	0.00
22.150	0.00	0.00	0.00	0.00	0.00
22.400	0.00	0.00	0.00	0.00	0.00
22.650	0.00	0.00	0.00	0.00	0.00
22.900	0.00	0.00	0.00	0.00	0.00
23.150	0.00	0.00	0.00	0.00	0.00
23.400	0.00	0.00	0.00	0.00	0.00
23.650	0.00	0.00	0.00	0.00	0.00
23.900	0.00	0.00	0.00	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: P-RG (OUT)  
 Scenario: Post-Development 1 year

Return Event: 1 years  
 Storm Event: 1 year

Peak Discharge	0.00 ft <sup>3</sup> /s
Time to Peak	8.000 hours
Hydrograph Volume	0 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
0.000	0.00	0.00	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: P-RG (OUT)  
 Scenario: Post-Development 10 year

Return Event: 10 years  
 Storm Event: 10 years

Peak Discharge	0.18 ft <sup>3</sup> /s
Time to Peak	12.050 hours
Hydrograph Volume	308 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
12.000	0.00	0.18	0.12	0.16	0.08
12.250	0.10	0.07	0.07	0.05	0.05
12.500	0.04	0.03	0.02	0.02	0.02
12.750	0.02	0.02	0.02	0.02	0.02
13.000	0.02	0.02	0.01	0.01	0.01
13.250	0.01	0.01	0.01	0.01	0.01
13.500	0.01	0.01	0.01	0.01	0.01
13.750	0.01	0.01	0.01	0.01	0.01
14.000	0.01	0.01	0.01	0.01	0.01
14.250	0.01	0.01	0.01	0.01	0.01
14.500	0.01	0.01	0.01	0.01	0.01
14.750	0.01	0.01	0.01	0.01	0.01
15.000	0.01	0.01	0.01	0.01	0.01
15.250	0.01	0.01	0.01	0.01	0.01
15.500	0.00	0.00	0.00	0.00	0.00
15.750	0.00	0.00	0.00	0.00	0.00
16.000	0.00	0.00	0.00	0.00	0.00
16.250	0.00	0.00	0.00	0.00	0.00
16.500	0.00	0.00	0.00	0.00	0.00
16.750	0.00	0.00	0.00	0.00	0.00
17.000	0.00	0.00	0.00	0.00	0.00
17.250	0.00	0.00	0.00	0.00	0.00
17.500	0.00	0.00	0.00	0.00	0.00
17.750	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: P-RG (OUT)  
 Scenario: Post-Development 25 year

Return Event: 25 years  
 Storm Event: 25 years

Peak Discharge	0.25 ft <sup>3</sup> /s
Time to Peak	12.100 hours
Hydrograph Volume	574 ft <sup>3</sup>

### HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)

Output Time Increment = 0.050 hours

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.800	0.00	0.01	0.13	0.09	0.21
12.050	0.20	0.25	0.20	0.16	0.12
12.300	0.12	0.10	0.09	0.07	0.06
12.550	0.05	0.04	0.03	0.03	0.03
12.800	0.03	0.03	0.03	0.03	0.02
13.050	0.02	0.02	0.02	0.02	0.02
13.300	0.02	0.02	0.02	0.02	0.02
13.550	0.02	0.02	0.02	0.02	0.02
13.800	0.02	0.02	0.02	0.02	0.01
14.050	0.01	0.01	0.01	0.01	0.01
14.300	0.01	0.01	0.01	0.01	0.01
14.550	0.01	0.01	0.01	0.01	0.01
14.800	0.01	0.01	0.01	0.01	0.01
15.050	0.01	0.01	0.01	0.01	0.01
15.300	0.01	0.01	0.01	0.01	0.01
15.550	0.01	0.01	0.01	0.01	0.01
15.800	0.01	0.01	0.01	0.01	0.01
16.050	0.01	0.01	0.01	0.01	0.01
16.300	0.01	0.01	0.01	0.01	0.01
16.550	0.01	0.01	0.01	0.00	0.00
16.800	0.00	0.00	0.00	0.00	0.00
17.050	0.00	0.00	0.00	0.00	0.00
17.300	0.00	0.00	0.00	0.00	0.00
17.550	0.00	0.00	0.00	0.00	0.00
17.800	0.00	0.00	0.00	0.00	0.00
18.050	0.00	0.00	0.00	0.00	0.00
18.300	0.00	0.00	0.00	0.00	0.00
18.550	0.00	0.00	0.00	0.00	0.00
18.800	0.00	0.00	0.00	0.00	0.00
19.050	0.00	0.00	0.00	0.00	0.00
19.300	0.00	0.00	0.00	0.00	0.00
19.550	0.00	0.00	0.00	0.00	0.00
19.800	0.00	0.00	0.00	0.00	0.00
20.050	0.00	0.00	0.00	0.00	0.00
20.300	0.00	0.00	0.00	0.00	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: P-RG (OUT)  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

Peak Discharge	0.42 ft <sup>3</sup> /s
Time to Peak	12.100 hours
Hydrograph Volume	1,204 ft <sup>3</sup>

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
11.250	0.00	0.03	0.02	0.03	0.03
11.500	0.04	0.04	0.05	0.06	0.08
11.750	0.10	0.12	0.14	0.17	0.24
12.000	0.35	0.40	0.42	0.36	0.26
12.250	0.22	0.19	0.17	0.15	0.12
12.500	0.10	0.08	0.07	0.06	0.06
12.750	0.06	0.05	0.05	0.05	0.04
13.000	0.04	0.04	0.04	0.04	0.04
13.250	0.04	0.04	0.04	0.03	0.03
13.500	0.03	0.03	0.03	0.03	0.03
13.750	0.03	0.03	0.03	0.03	0.03
14.000	0.03	0.03	0.03	0.02	0.02
14.250	0.02	0.02	0.02	0.02	0.02
14.500	0.02	0.02	0.02	0.02	0.02
14.750	0.02	0.02	0.02	0.02	0.02
15.000	0.02	0.02	0.02	0.02	0.02
15.250	0.02	0.02	0.02	0.02	0.02
15.500	0.02	0.02	0.02	0.01	0.01
15.750	0.01	0.01	0.01	0.01	0.01
16.000	0.01	0.01	0.01	0.01	0.01
16.250	0.01	0.01	0.01	0.01	0.01
16.500	0.01	0.01	0.01	0.01	0.01
16.750	0.01	0.01	0.01	0.01	0.01
17.000	0.01	0.01	0.01	0.01	0.01
17.250	0.01	0.01	0.01	0.01	0.01
17.500	0.01	0.01	0.01	0.01	0.01
17.750	0.01	0.01	0.01	0.01	0.01
18.000	0.01	0.01	0.01	0.01	0.01
18.250	0.01	0.01	0.01	0.01	0.01
18.500	0.01	0.01	0.01	0.01	0.01
18.750	0.01	0.01	0.01	0.01	0.01
19.000	0.01	0.01	0.01	0.01	0.00
19.250	0.00	0.00	0.00	0.00	0.00
19.500	0.00	0.00	0.00	0.00	0.00
19.750	0.00	0.00	0.00	0.00	0.00
20.000	0.00	0.00	0.00	0.00	0.00
20.250	0.00	0.00	0.00	0.00	0.00
20.500	0.00	0.00	0.00	0.00	0.00
20.750	0.00	0.00	0.00	0.00	0.00

Subsection: Pond Routed Hydrograph (total out)  
 Label: P-RG (OUT)  
 Scenario: Post-Development 100 year

Return Event: 100 years  
 Storm Event: 100 years

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 0.050 hours**

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

Time (hours)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
21.000	0.00	0.00	0.00	0.00	0.00
21.250	0.00	0.00	0.00	0.00	0.00
21.500	0.00	0.00	0.00	0.00	0.00
21.750	0.00	0.00	0.00	0.00	0.00
22.000	0.00	0.00	0.00	0.00	0.00
22.250	0.00	0.00	0.00	0.00	0.00
22.500	0.00	0.00	0.00	0.00	0.00
22.750	0.00	0.00	0.00	0.00	0.00
23.000	0.00	0.00	0.00	0.00	0.00
23.250	0.00	0.00	0.00	0.00	0.00
23.500	0.00	0.00	0.00	0.00	0.00
23.750	0.00	0.00	0.00	0.00	0.00
24.000	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Pond Inflow Summary  
Label: P-RG (IN)  
Scenario: Post-Development 1 year

Return Event: 1 years  
Storm Event: 1 year

**Summary for Hydrograph Addition at 'P-RG'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1C

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	PDA-1C	151	12.100	0.04
Flow (In)	P-RG	151	12.100	0.04

Subsection: Pond Inflow Summary  
Label: P-RG (IN)  
Scenario: Post-Development 10 year

Return Event: 10 years  
Storm Event: 10 years

**Summary for Hydrograph Addition at 'P-RG'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1C

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	PDA-1C	557	12.100	0.16
Flow (In)	P-RG	557	12.100	0.16



Subsection: Pond Inflow Summary  
Label: P-RG (IN)  
Scenario: Post-Development 25 year

Return Event: 25 years  
Storm Event: 25 years

**Summary for Hydrograph Addition at 'P-RG'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1C

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	PDA-1C	842	12.100	0.24
Flow (In)	P-RG	842	12.100	0.24

Subsection: Pond Inflow Summary  
Label: P-RG (IN)  
Scenario: Post-Development 100 year

Return Event: 100 years  
Storm Event: 100 years

**Summary for Hydrograph Addition at 'P-RG'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	PDA-1C

**Node Inflows**

Inflow Type	Element	Volume (ft <sup>3</sup> )	Time to Peak (hours)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	PDA-1C	1,483	12.100	0.42
Flow (In)	P-RG	1,483	12.100	0.42

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## ***APPENDIX B***

# ***NYSDEC STORMWATER SIZING CALCULATIONS***

**RUNOFF REDUCTION VOLUME, WATER QUALITY VOLUME AND  
STREAM CHANNEL PROTECTION SIZING CALCULATIONS**

***Beacon Commons***  
**16 West Main Street**  
**Beacon, NY**

JMC Project: **18119**

Drawing Reference: **DA-1, DA-2**

Computed by: **MT**

Checked by: **SS**

*Date Printed: 10/29/2019*

# WATER QUALITY VOLUME WORKSHEET

JMC Project: **18119**  
Design Point: **1**

<b>Beacon Commons</b>	Drainage Area:	<b>1A, 1B, 1C, 1D</b>
-----------------------	----------------	-----------------------

## Initial Water Quality Treatment Volume

DESCRIPTION	Design Storm	Area	Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I	%I	R <sub>V</sub>	WQ <sub>V</sub>
VALUE	1.4	1.30	1.05	80.26	0.772297035	<b>5,112</b>
UNITS	In	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ <sub>V</sub> = 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		
<b>TOTAL</b>		
UNITS	Ac	Ac

## Adjusted Water Quality Treatment Volume

DESCRIPTION	Design Storm	Area	Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I	%I	R <sub>V</sub>	WQ <sub>V</sub>
VALUE	1.4	1.30	1.05	80.26	0.772297035	<b>5,112</b>
UNITS	In	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ <sub>V</sub> = 1-yr Storm Runoff)					

## Net Water Quality Treatment Volume = Adjusted WQ<sub>V</sub> - Provided RR<sub>V</sub>

<b>Initial Water Quality Treatment Volume</b>	5,112	CF
<b>Adjusted Water Quality Treatment Volume</b>	5,112	CF
<b>Provided Runoff Reduction Volume</b>	4,482	CF
<b>Net Water Quality Treatment Volume</b>	<b>630</b>	CF

**RUNOFF REDUCTION VOLUME WORKSHEET**JMC Project: **18119**Design Point: **1****Beacon Commons**Drainage Area: **1A, 1B, 1C, 1D****Total Water Quality Treatment Volume**

DESCRIPTION	SYMBOL	VALUE	UNITS
Initial Water Quality Volume	WQ <sub>V</sub>	<b>5,112</b>	CF
Adjusted Water Quality Volume	WQ <sub>V</sub>	<b>5,112</b>	CF

**Minimum Runoff Reduction Volume**

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number] <b>or</b> [1-yr Storm Depth]	P	1.4	In
Total Area of <i>new</i> Impervious Cover	A <sub>ic</sub>	0.30	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.40	
Runoff Coefficient [0.05 + 0.009 x %I]	R <sub>V</sub>	0.95	CF
Impervious Cover targeted for Runoff Reduction [S x A <sub>ic</sub> ]	A <sub>i</sub>	0.12	Ac
<b>TOTAL VOLUME Required [RR<sub>V</sub> = (P x R<sub>V</sub> x A<sub>i</sub>) / 12]</b>	RR <sub>V</sub>	<b>573</b>	CF

**Runoff Reduction Techniques (Volume)**

GREEN INFRASTRUCTURE PRACTICE / SMP	SYMBOL	VALUE	UNITS
<b>Rain Garden</b>	RR <sub>V</sub>	115	CF
<b>Subsurface Infiltration System</b>	RR <sub>V</sub>	4,368	CF
	RR <sub>V</sub>		CF
	RR <sub>V</sub>		CF
	RR <sub>V</sub>		CF
	RR <sub>V</sub>		CF
	RR <sub>V</sub>		CF
	RR <sub>V</sub>		CF
	RR <sub>V</sub>		CF
	RR <sub>V</sub>		CF
	RR <sub>V</sub>		CF
<b>TOTAL</b>	RR <sub>V</sub>	<b>4,482</b>	CF

**Runoff Reduction**

Is Total RR <sub>V</sub> > Adjusted WQ <sub>V</sub> ?	<b>NO</b>
Is Total RR <sub>V</sub> > Minimum RR <sub>V</sub> ?	<b>YES</b>

# RAIN GARDEN WORKSHEET

JMC Project: **18119**

Design Point: **1**

Drainage Area: **1C**

## Rain Garden

### Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.02	Ac
Area	A	0.09	Ac
Percent Impervious	%I	22.86	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	$R_V$	0.26	CF
<b>TOTAL VOLUME Required</b> $[WQ_V = (P \times R_V \times A) / 12]$	$WQ_V$	<b>115</b>	CF
Design Storm [1-yr Storm Depth]	P		In
<b>TOTAL VOLUME Required (TMDL)</b> $[WQ_V = 1\text{-yr Storm Runoff}]$	$WQ_V$		CF

### Proposed Rain Garden

DESCRIPTION	SYMBOL	VALUE	UNITS
Rain Garden surface AREA	$A_{RG}$	130.00	SF
DEPTH of the Soil Media	$D_{SM}$	1.00	Ft
DEPTH of the Drainage Layer	$D_{DL}$	0.50	Ft
DEPTH of Ponding above surface	$D_P$	0.50	Ft
Porosity of the Soil Media	$n_{SM}$	20%	%
Porosity of the Drainage Layer	$n_{DL}$	40%	%
VOLUME provided in Soil Media $[V_{SM} = A_{RG} \times D_{SM} \times n_{SM}]$	$V_{SM}$	26.00	CF
VOLUME provided in Drainage Layer $[V_{DL} = A_{RG} \times D_{DL} \times n_{DL}]$	$V_{DL}$	26.00	CF
VOLUME provided in Ponding Area $[D_P \times A_{RG}]$		65.00	CF
<b>TOTAL VOLUME Provided</b> $[WQ_V \leq V_{SM} + V_{DL} + (D_P \times A_{RG})]$	$WQ_V$	<b>117</b>	CF

### Runoff Reduction

DESCRIPTION	SYMBOL	VALUE	UNITS
100% Runoff Reduction capacity in HSG A and B (no underdrains)	$RR_V$	<b>115</b>	CF
40% Runoff Reduction capacity in HSG C and D (with underdrains)	$RR_V$	<b>46</b>	CF

# INFILTRATION WORKSHEET

JMC Project: **18119**Design Point: **1**Drainage Area: **1A**

## *Subsurface Infiltration System*

### Site Data for Drainage Area to be Treated by Practice

DESCRIPTION	SYMBOL	VALUE	UNITS
Design Storm [90% Rainfall Event Number]	P	1.4	In
Impervious Area	I	0.90	Ac
Area	A	1.05	Ac
Percent Impervious	%I	85.63	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	$R_v$	0.82	CF
<b>TOTAL VOLUME Required</b> $[WQ_v = (P \times R_v \times A) / 12]$	$WQ_v$	<b>4,368</b>	CF
Design Storm [1-yr Storm Depth]	P		In
<b>TOTAL VOLUME Required (TMDL)</b> $[WQ_v = 1\text{-yr Storm Runoff}]$	$WQ_v$		CF

### Minimum Infiltration Basin Area

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	$WQ_v$	4,368	CF
Depth of the Basin	$d_b$	6.75	Ft
<b>Required Bottom Area of Infiltration Basin</b> $[A_p = WQ_v / d_b]$	$A_p$	<b>647.05</b>	SF

### Proposed Infiltration Trench

DESCRIPTION	SYMBOL	VALUE	UNITS
Provided Bottom Area of Infiltration Basin		2,056.00	SF
<b>Total Area of Infiltration Basin Provided</b>	$A_p$	<b>2,056.00</b>	SF

### Runoff Reduction

DESCRIPTION	SYMBOL	VALUE	UNITS
100% Runoff Reduction capacity	$RR_v$	<b>4,368</b>	CF

**PROPRIETARY PRACTICE WORKSHEET**JMC Project: **18119**Design Point: **1**Drainage Area: **1B****First Defense Unit**Rainfall Distribution Type: **III**

	A	B	C
Coefficients for the equation unit peak $C_0$	-1.774	0.3301	2.4577
$[R = I_a / P]$ $C_1$	1.8622	-0.7397	-0.4627
$[C_i = A \times R^2 + B \times R + C]$ $C_2$	-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	1.4	In
Impervious Area	I	0.12	Ac
Area	A	0.12	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient $[0.05 + 0.009 \times \%I]$	$R_v$	0.95	CF
<b>TOTAL VOLUME Required</b> $[WQ_v = (P \times R_v \times A) / 12]$	$WQ_v$	<b>572</b>	CF
Design Storm [1-yr Storm Depth]	P		In
<b>TOTAL VOLUME Required (TMDL)</b> $[WQ_v = 1\text{-yr Storm Runoff}]$	$WQ_v$		CF

**Water Quality Peak Flow Calculation**

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	$WQ_v$	572	CF
Design Storm [90% Rainfall Event Number] <b>or</b> [1-yr Storm Depth]	P	1.4	In
Time of Concentration	$t_c$	0.0833	Hr
Runoff Volume $[Q = WQ_v / (A \times 3630)]$	Q	1.33	In
Curve Number $[CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25 QP)^{1/2})]$	CN	99.40	
Curve Number	CN	98	
Initial Abstraction $[I_a = 200 / CN - 2]$	$I_a$	0.04	In
Ratio $[R = I_a / P]$	R	0.03	
$C_0 = A \times R^2 + B \times R + C$	$C_0$	2.47	
$C_1 = A \times R^2 + B \times R + C$	$C_1$	-0.48	
$C_2 = A \times R^2 + B \times R + C$	$C_2$	-0.19	
Unit Peak Discharge	$q_u$	588.00	cfs/mi <sup>2</sup> /in
<b>Peak Discharge</b> $[Q_p = q_u \times A \times Q / 640]$	$Q_p$	<b>0.14</b>	cfs

**Proposed Device**

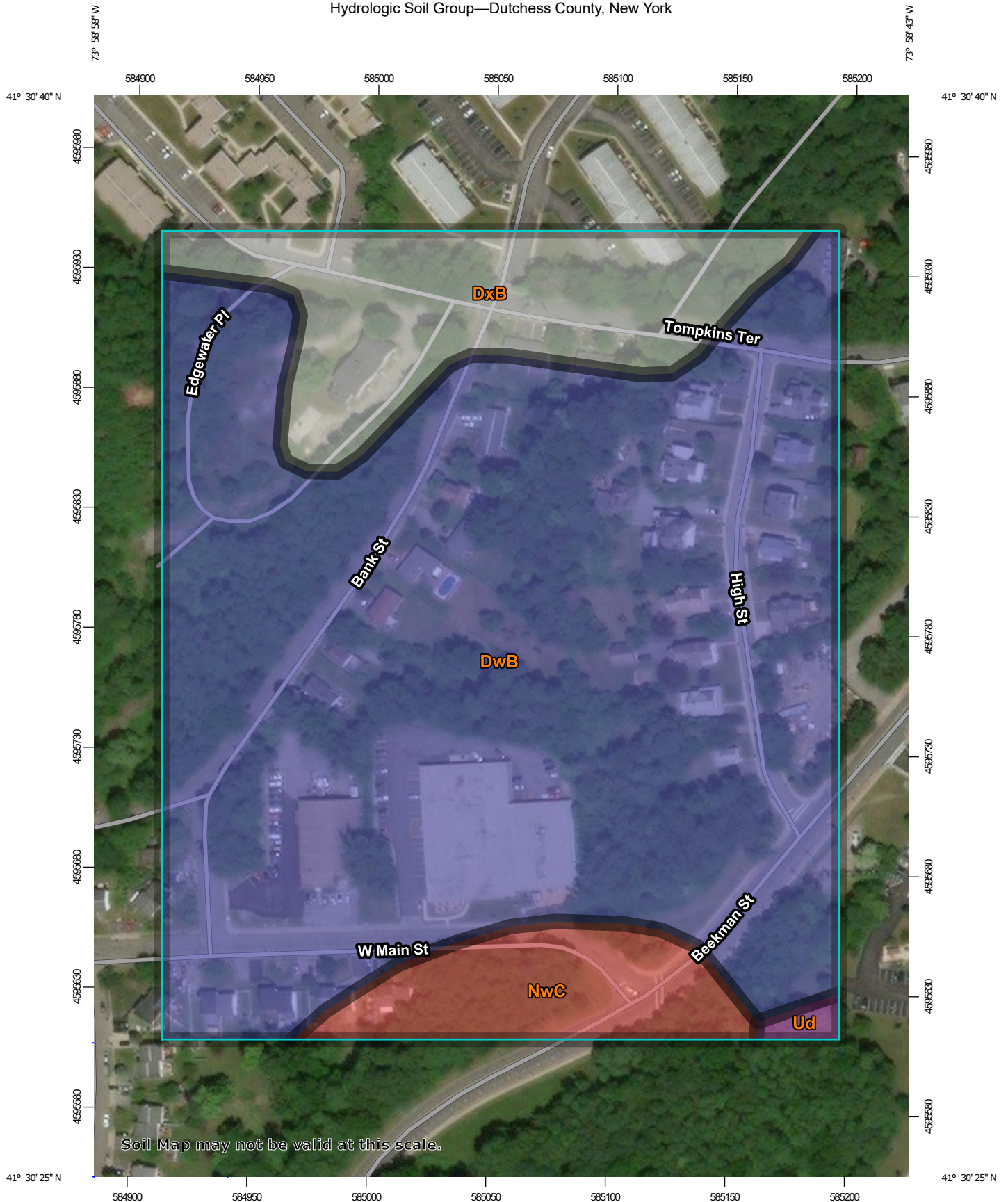
DESCRIPTION	SYMBOL	VALUE	UNITS
<b>Water Quality Peak Flow Provided</b>	$Q_p$	<b>0.84</b>	cfs
<b>Water Quality Volume Provided</b> $[WQ_v = 640 \times 3600 \times Q_p / q_u]$	$WQ_v$	<b>3,291</b>	CF
Model Designation	3' FIRST DEFENSE		
Quantity		1	

## ***APPENDIX C***

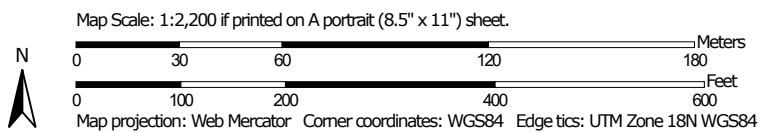
### ***USDA WEB SOIL SURVEY DATA***



# Hydrologic Soil Group—Dutchess County, New York



Soil Map may not be valid at this scale.



Natural Resources  
Conservation Service

Web Soil Survey  
National Cooperative Soil Survey

9/23/2019  
Page 1 of 4

## MAP LEGEND

### Area of Interest (AOI)









 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons





 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Lines

 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Points





 A  
 A/D  
 B  
 B/D

 C  
 C/D  
 D  
 Not rated or not available


### Water Features

 Streams and Canals

### Transportation

 Rails  
 Interstate Highways  
 US Routes  
 Major Roads  
 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Dutchess County, New York  
 Survey Area Data: Version 15, Sep 2, 2018

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

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

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

## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
DwB	Dutchess-Cardigan complex, undulating, rocky	B	18.4	77.8%
DxB	Dutchess-Cardigan-Urban land complex, undulating, rocky		3.4	14.6%
NwC	Nassau-Cardigan complex, rolling, very rocky	D	1.7	7.2%
Ud	Udorthents, smoothed	A	0.1	0.5%
<b>Totals for Area of Interest</b>			<b>23.7</b>	<b>100.0%</b>

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

## Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

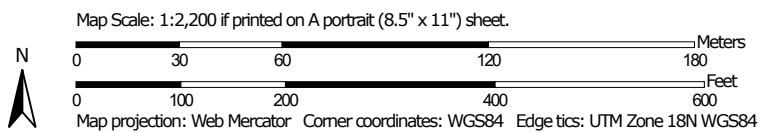
*Tie-break Rule:* Higher



# Drainage Class—Dutchess County, New York



Soil Map may not be valid at this scale.



**Natural Resources  
Conservation Service**

Web Soil Survey  
National Cooperative Soil Survey

9/23/2019  
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









## MAP LEGEND

### Area of Interest (AOI)






 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons


- |   |                              |   |                              |
|---|------------------------------|---|------------------------------|
|  | Excessively drained          |  | Excessively drained          |
|  | Somewhat excessively drained |  | Somewhat excessively drained |
|  | Well drained                 |  | Well drained                 |
|  | Moderately well drained      |  | Moderately well drained      |
|  | Somewhat poorly drained      |  | Somewhat poorly drained      |
|  | Poorly drained               |  | Poorly drained               |
|  | Very poorly drained          |  | Very poorly drained          |
|  | Subaqueous                   |  | Subaqueous                   |
|  | Not rated or not available   |  | Not rated or not available   |

#### Soil Rating Lines






- |   |                              |
|---|------------------------------|
|    | Excessively drained          |
|    | Somewhat excessively drained |
|    | Well drained                 |
|    | Moderately well drained      |
|  | Somewhat poorly drained      |
|  | Poorly drained               |
|  | Very poorly drained          |
|  | Subaqueous                   |
|  | Not rated or not available   |

#### Soil Rating Points


### Water Features

 Streams and Canals

### Transportation

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

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Dutchess County, New York  
Survey Area Data: Version 15, Sep 2, 2018

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

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

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

## Drainage Class

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
DwB	Dutchess-Cardigan complex, undulating, rocky	Well drained	18.4	77.8%
DxB	Dutchess-Cardigan-Urban land complex, undulating, rocky	Well drained	3.4	14.6%
NwC	Nassau-Cardigan complex, rolling, very rocky	Well drained	1.7	7.2%
Ud	Udorthents, smoothed	Well drained	0.1	0.5%
<b>Totals for Area of Interest</b>			<b>23.7</b>	<b>100.0%</b>

## Description

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

## Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

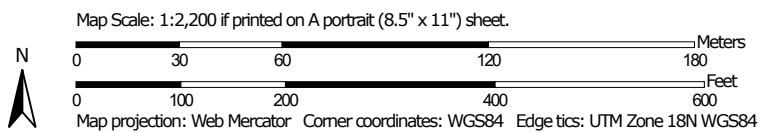
*Tie-break Rule:* Higher



# Saturated Hydraulic Conductivity (Ksat)—Dutchess County, New York



Soil Map may not be valid at this scale.



**Natural Resources  
Conservation Service**

Web Soil Survey  
National Cooperative Soil Survey

9/23/2019  
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## MAP LEGEND

### Area of Interest (AOI)





 Area of Interest (AOI)

### Background





 Aerial Photography

### Soils





#### Soil Rating Polygons

-   $\leq 7.9787$
-   $> 7.9787$  and  $\leq 9.0000$
-   $> 9.0000$  and  $\leq 23.9909$
-  Not rated or not available


#### Soil Rating Lines

-   $\leq 7.9787$
-   $> 7.9787$  and  $\leq 9.0000$
-   $> 9.0000$  and  $\leq 23.9909$
-  Not rated or not available


#### Soil Rating Points

-   $\leq 7.9787$
-   $> 7.9787$  and  $\leq 9.0000$
-   $> 9.0000$  and  $\leq 23.9909$
-  Not rated or not available

### Water Features

 Streams and Canals

### Transportation

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

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Dutchess County, New York  
Survey Area Data: Version 15, Sep 2, 2018

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

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

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

## Saturated Hydraulic Conductivity (Ksat)

Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
DwB	Dutchess-Cardigan complex, undulating, rocky	9.0000	18.4	77.8%
DxB	Dutchess-Cardigan-Urban land complex, undulating, rocky	9.0000	3.4	14.6%
NwC	Nassau-Cardigan complex, rolling, very rocky	7.9787	1.7	7.2%
Ud	Udorthents, smoothed	23.9909	0.1	0.5%
<b>Totals for Area of Interest</b>			<b>23.7</b>	<b>100.0%</b>

### Description

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

### Rating Options

*Units of Measure:* micrometers per second

*Aggregation Method:* Dominant Component

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Fastest

*Interpret Nulls as Zero:* No

*Layer Options (Horizon Aggregation Method):* Depth Range (Weighted Average)

*Top Depth:* 0

*Bottom Depth:* 72

*Units of Measure:* Inches

## ***APPENDIX D***

# ***STORMWATER PRACTICE OPERATION, MAINTENANCE AND MANAGEMENT INSPECTION CHECKLIST***

**Temporary Erosion and Sediment Control Inspection and Maintenance Checklist**

<b>Erosion and Sediment Control Measure</b>	<b>Inspection/Maintenance Intervals</b>	<b>Inspection/Maintenance Requirements</b>
Stabilized Construction Entrance	Daily	<ul style="list-style-type: none"><li>• Periodic top dressing with additional aggregate as required</li><li>• Clean sediment in public right-of-ways immediately</li></ul>
Silt Fence	Weekly + After Each Rain	<ul style="list-style-type: none"><li>• Remove &amp; redistribute sediment when bulges develop in the silt fence.</li></ul>
Inlet Protection	Weekly + After Each Rain	<ul style="list-style-type: none"><li>• Remove sediment as necessary and replace filter fabric, crushed stone etc.</li><li>• Any broken and damaged components should be replaced.</li><li>• Check all materials for proper anchorage and secure as necessary.</li></ul>

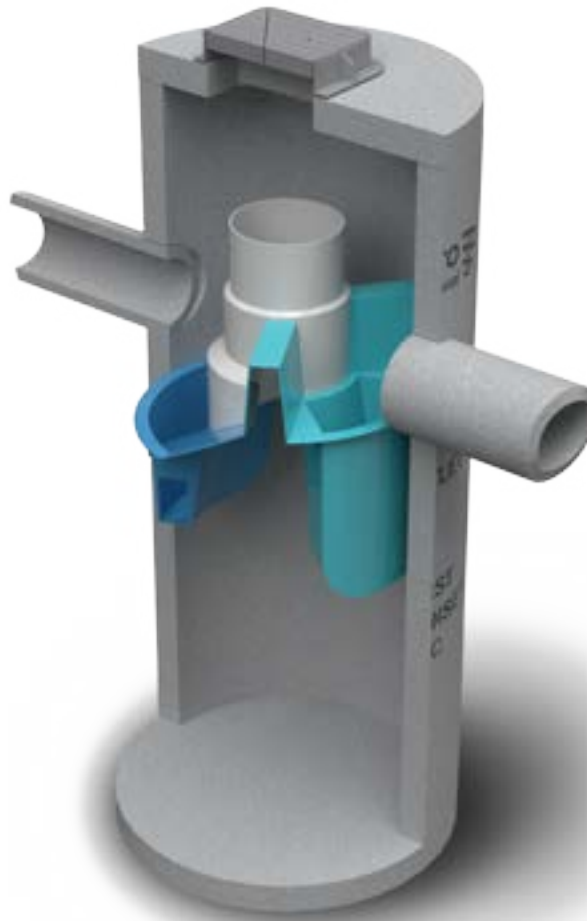
**Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)**

<b>Stormwater Management Practice</b>	<b>Inspection/Maintenance Intervals</b>	<b>Inspection/Maintenance Requirements</b>
StormTech Subsurface Infiltration Facility	(See Maintenance Guidelines in Appendix D)	<ul style="list-style-type: none"> <li>• Check level of sediment accumulated within the isolator row through the access manhole. If 3 inches of sediment or greater, clean out utilizing a high pressure water nozzle to scour and suspend sediments.</li> <li>• Flush all sediment to access manhole and remove using a vacuum truck.</li> </ul>
Drain Inlets	Monthly	<ul style="list-style-type: none"> <li>• Check for blockage and/or erosion at top of each inlet. Repair/remove as necessary.</li> <li>• Check for sediment and debris collected within sumps and clean out as necessary.</li> </ul>
First Defense Water Quality Structure	(See Maintenance Guidelines in Appendix D)	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The screen must be powerwashed to ensure it is free of trash and debris.</li> </ul>

The owner/operator responsible for inspection and maintenance as outlined above:

Farrell Building Company  
Mr. Stephen Zagoren  
2317 Montauk Highway  
Bridgehampton, NY 11932  
Phone: (631) 766-0023  
Fax:  
Email: zags1413@gmail.com

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## Operation and Maintenance Manual

**First Defense® and First Defense® High Capacity**

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Vortex Separator for Stormwater Treatment



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<b>4</b>	<b>MODEL SIZES &amp; CONFIGURATIONS</b> <ul style="list-style-type: none"><li>- FIRST DEFENSE® COMPONENTS</li></ul>
<b>5</b>	<b>MAINTENANCE</b> <ul style="list-style-type: none"><li>- OVERVIEW</li><li>- MAINTENANCE EQUIPMENT CONSIDERATIONS</li><li>- DETERMINING YOUR MAINTENANCE SCHEDULE</li></ul>
<b>6</b>	<b>MAINTENANCE PROCEDURES</b> <ul style="list-style-type: none"><li>- INSPECTION</li><li>- FLOATABLES AND SEDIMENT CLEAN OUT</li></ul>
<b>8</b>	<b>FIRST DEFENSE® INSTALLATION LOG</b>
<b>9</b>	<b>FIRST DEFENSE® INSPECTION AND MAINTENANCE LOG</b>

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**DISCLAIMER:** Information and data contained in this manual is exclusively for the purpose of assisting in the operation and maintenance of Hydro International plc's First Defense®. No warranty is given nor can liability be accepted for use of this information for any other purpose. Hydro International plc has a policy of continuous product development and reserves the right to amend specifications without notice.

## HYDRO MAINTENANCE SERVICES

Hydro International has been engineering stormwater treatment systems for over 30 years. We understand the mechanics of removing pollutants from stormwater and how to keep systems running at an optimal level.

### NOBODY KNOWS OUR SYSTEMS BETTER THAN WE DO



### AVOID SERVICE NEGLIGENCE

Sanitation services providers not intimately familiar with stormwater treatment systems are at risk of the following:

- Inadvertently breaking parts or failing to clean/replace system components appropriately.
- Charging you for more frequent maintenance because they lacked the tools to service your system properly in the first place.
- Billing you for replacement parts that might have been covered under your Hydro warranty plan
- Charging for maintenance that may not yet have been required.

### LEAVE THE DIRTY WORK TO US

Trash, sediment and polluted water is stored inside treatment systems until they are removed by our team with a vactor truck. Sometimes teams must physically enter the system chambers in order to prepare the system for maintenance and install any replacement parts. Services include but are not limited to:

- Solids removal
- Removal of liquid pollutants
- Replacement media installation (when applicable)



## BETTER TOOLS, BETTER RESULTS

Not all vacuum trucks are created equal. Appropriate tools and suction power are needed to service stormwater systems appropriately. Companies who don't specialize in stormwater treatment won't have the tools to properly clean systems or install new parts.

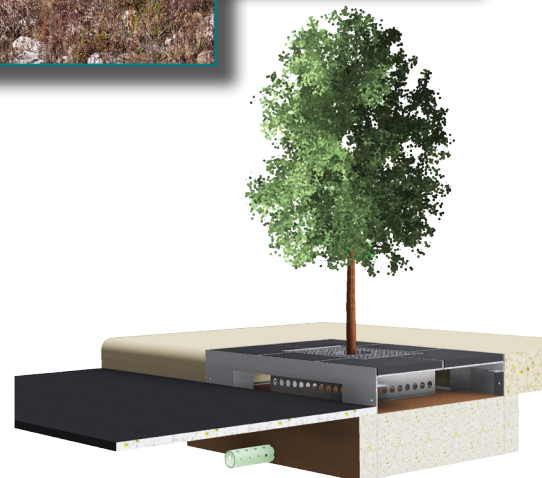


## SERVICE WARRANTY

Make sure you're not paying for service that is covered under your warranty plan. Only Hydro International's service teams can identify tune-ups that should be on us, not you.

## TREATMENT SYSTEMS SERVICED BY HYDRO:

- Stormwater filters
- Stormwater separators
- Baffle boxes
- Biofilters/biorention systems
- Storage structures
- Catch basins
- Stormwater ponds
- Permeable pavement



SAVE TIME & MONEY: CALL HYDRO FOR A QUOTE

**1 (888) 382-7808**

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# I. First Defense® by Hydro International

## Introduction

The First Defense® is an enhanced vortex separator that combines an effective and economical stormwater treatment chamber with an integral peak flow bypass. It efficiently removes total suspended solids (TSS), trash and hydrocarbons from stormwater runoff without washing out previously captured pollutants. The First Defense® is available in several model configurations (refer to *Section II. Model Sizes & Configurations*, page 4) to accommodate a wide range of pipe sizes, peak flows and depth constraints.

## Operation

The First Defense® operates on simple fluid hydraulics. It is self-activating, has no moving parts, no external power requirement and is fabricated with durable non-corrosive components. No manual procedures are required to operate the unit and maintenance is limited to monitoring accumulations of stored pollutants and periodic clean-outs. The First Defense® has been designed to allow for easy and safe access for inspection, monitoring and clean-out procedures. Neither entry into the unit nor removal of the internal components is necessary for maintenance, thus safety concerns related to confined-space-entry are avoided.

## Pollutant Capture and Retention

The internal components of the First Defense® have been designed to optimize pollutant capture. Sediment is captured and retained in the base of the unit, while oil and floatables are stored on the water surface in the inner volume (Fig.1).

The pollutant storage volumes are isolated from the built-in bypass chamber to prevent washout during high-flow storm events. The sump of the First Defense® retains a standing water level between storm events. This ensures a quiescent flow regime at the onset of a storm, preventing resuspension and washout of pollutants captured during previous events.

Accessories such as oil absorbent pads are available for enhanced oil removal and storage. Due to the separation of the oil and floatable storage volume from the outlet, the potential for washout of stored pollutants between clean-outs is minimized.

## Applications

- Stormwater treatment at the point of entry into the drainage line
- Sites constrained by space, topography or drainage profiles with limited slope and depth of cover
- Retrofit installations where stormwater treatment is placed on or tied into an existing storm drain line
- Pretreatment for filters, infiltration and storage

## Advantages

- Inlet options include surface grate or multiple inlet pipes
- Integral high capacity bypass conveys large peak flows without the need for "offline" arrangements using separate junction manholes
- Proven to prevent pollutant washout at up to 500% of its treatment flow
- Long flow path through the device ensures a long residence time within the treatment chamber, enhancing pollutant settling
- Delivered to site pre-assembled and ready for installation

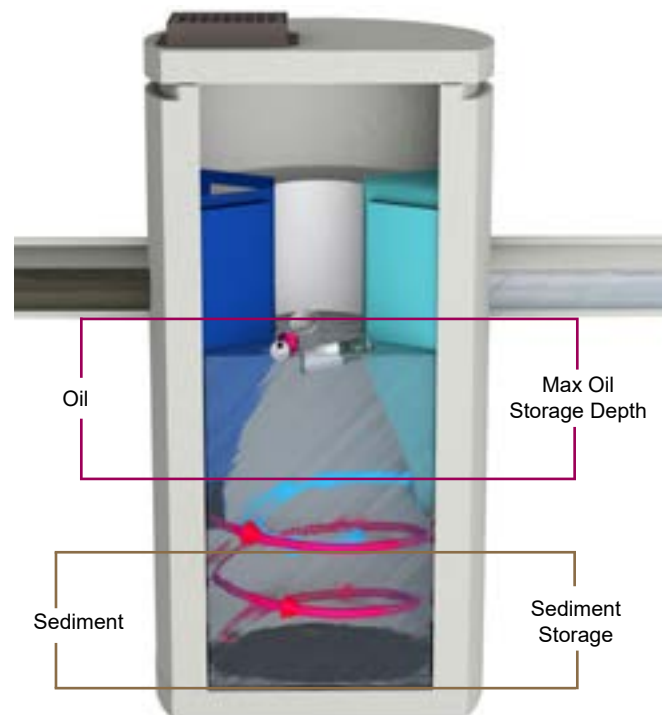


Fig.1 Pollutant storage volumes in the First Defense®.

## II. Model Sizes & Configurations

The First Defense® inlet and internal bypass arrangements are available in several model sizes and configurations. The components of the First Defense®-4HC and First Defense®-6HC have modified geometries as to allow greater design flexibility needed to accommodate various site constraints.

All First Defense® models include the internal components that are designed to remove and retain total suspended solids (TSS), gross solids, floatable trash and hydrocarbons (Fig.2a - 2b). First Defense® model parameters and design criteria are shown in Table 1.

### First Defense® Components

- |                    |                             |                         |
|--------------------|-----------------------------|-------------------------|
| 1. Built-In Bypass | 4. Floatables Draw-off Port | 7. Sediment Storage     |
| 2. Inlet Pipe      | 5. Outlet Pipe              | 8. Inlet Grate or Cover |
| 3. Inlet Chute     | 6. Floatables Storage       |                         |

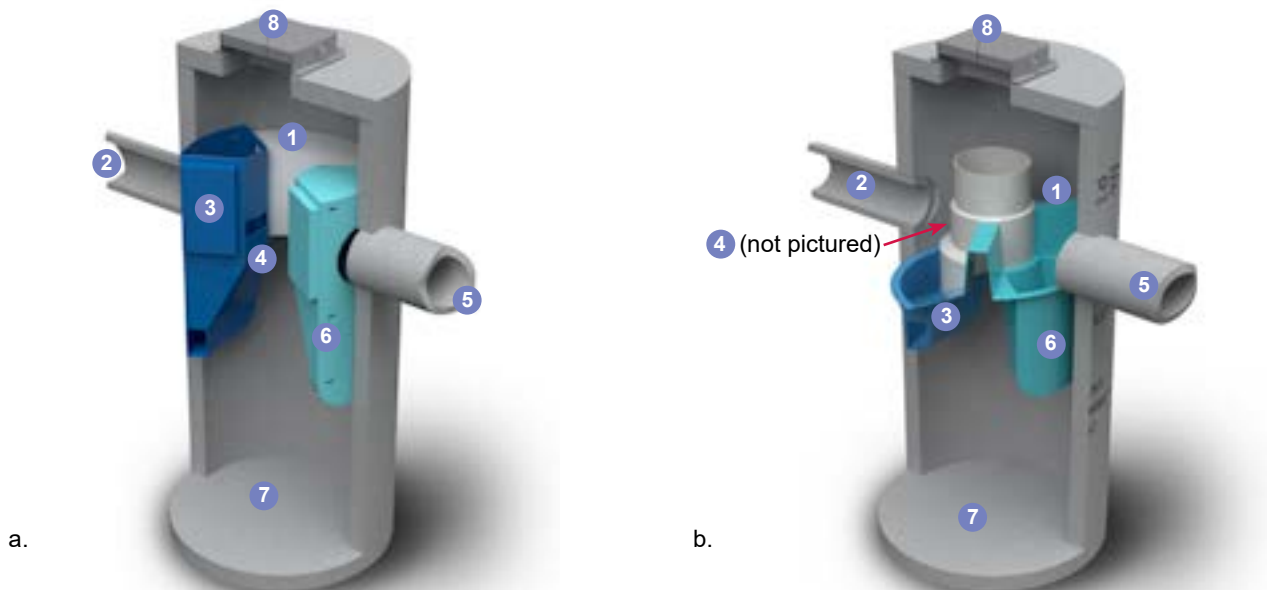


Fig.2a) First Defense®-4 and First Defense®-6; b) First Defense®-4HC and First Defense®-6HC, with higher capacity dual internal bypass and larger maximum pipe diameter.

First Defense® High Capacity Model Number	Diameter	Typical TSS Treatment Flow Rates		Peak Online Flow Rate	Maximum Pipe Diameter <sup>1</sup>	Oil Storage Capacity	Typical Sediment Storage Capacity <sup>2</sup>	Minimum Distance from Outlet Invert to Top of Rim <sup>3</sup>	Standard Distance from Outlet Invert to Sump Floor
		NJDEP Certified	106µm						
	(ft / m)	(cfs / L/s)	(cfs / L/s)	(cfs / L/s)	(in / mm)	(gal / L)	(yd³ / m³)	(ft / m)	(ft / m)
FD-3HC	3 / 0.9	0.84 / 23.7	1.60 / 45.3	15 / 424	18 / 457	125 / 473	0.4 / 0.3	2.0 - 3.5 / 0.6 - 1.0	3.71 / 1.13
FD-4HC	4 / 1.2	1.50 / 42.4	1.88 / 50.9	18 / 510	24 / 600	191 / 723	0.7 / 0.5	2.3 - 3.9 / 0.7 - 1.2	4.97 / 1.5
FD-5HC	5 / 1.5	2.34 / 66.2	2.94 / 82.1	20 / 566	24 / 609	300 / 1135	1.1 / .84	2.5 - 4.5 / 0.7 - 1.3	5.19 / 1.5
FD-6HC	6 / 1.8	3.38 / 95.7	4.73 / 133.9	32 / 906	30 / 750	496 / 1,878	1.6 / 1.2	3.0 - 5.1 / 0.9 - 1.6	5.97 / 1.8
FD-8HC	8 / 2.4	6.00 / 169.9	7.52 / 212.9	50 / 1,415	48 / 1219	1120 / 4239	2.8 / 2.1	3.0 - 6.0 / 0.9 - 1.8	7.40 / 2.2

<sup>1</sup>Contact Hydro International when larger pipe sizes are required.

<sup>2</sup>Contact Hydro International when custom sediment storage capacity is required.

<sup>3</sup>Minimum distance for models depends on pipe diameter.

## III. Maintenance

### Overview

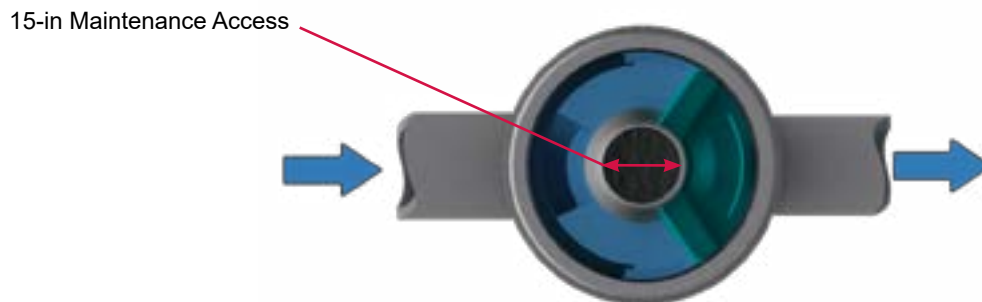
The First Defense® protects the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captured pollutants is essential to the continuous, long-term functioning of the First Defense®. The First Defense® will capture and retain sediment and oil until the sediment and oil storage volumes are full to capacity. When sediment and oil storage capacities are reached, the First Defense® will no longer be able to store removed sediment and oil. Maximum pollutant storage capacities are provided in Table 1.

The First Defense® allows for easy and safe inspection, monitoring and clean-out procedures. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables. Access ports are located in the top of the manhole.

Maintenance events may include Inspection, Oil & Floatables Removal, and Sediment Removal. Maintenance events do not require entry into the First Defense®, nor do they require the internal components of the First Defense® to be removed. In the case of inspection and floatables removal, a vactor truck is not required. However, a vactor truck is required if the maintenance event is to include oil removal and/or sediment removal.

### Maintenance Equipment Considerations

The internal components of the First Defense®-HC have a centrally located circular shaft through which the sediment storage sump can be accessed with a sump vac hose. The open diameter of this access shaft is 15 inches in diameter (Fig.3). Therefore, the nozzle fitting of any vactor hose used for maintenance should be less than 15 inches in diameter.



*Fig.3 The central opening to the sump of the First Defense®-HC is 15 inches in diameter.*

### Determining Your Maintenance Schedule

The frequency of clean out is determined in the field after installation. During the first year of operation, the unit should be inspected every six months to determine the rate of sediment and floatables accumulation. A simple probe such as a Sludge-Judge® can be used to determine the level of accumulated solids stored in the sump. This information can be recorded in the maintenance log (see page 9) to establish a routine maintenance schedule.

The vactor procedure, including both sediment and oil / floatables removal, for a 6-ft First Defense® typically takes less than 30 minutes and removes a combined water/oil volume of about 765 gallons.

### Inspection Procedures

1. Set up any necessary safety equipment around the access port or grate of the First Defense® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the grate or lid to the manhole.
3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities. Fig.4 shows the standing water level that should be observed.
4. Without entering the vessel, use the pole with the skimmer net to remove floatables and loose debris from the components and water surface.
5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel.
6. On the Maintenance Log (see page 9), record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.
7. Securely replace the grate or lid.
8. Take down safety equipment.
9. Notify Hydro International of any irregularities noted during inspection.

### Floatables and Sediment Clean Out

Floatables clean out is typically done in conjunction with sediment removal. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables (Fig.5).

Floatables and loose debris can also be netted with a skimmer and pole. The access port located at the top of the manhole provides unobstructed access for a vactor hose and skimmer pole to be lowered to the base of the sump.

### Scheduling

- Floatables and sump clean out are typically conducted once a year during any season.
- Floatables and sump clean out should occur as soon as possible following a spill in the contributing drainage area.



*Fig.4 Floatables are removed with a vactor hose (First Defense model FD-4, shown).*

### Recommended Equipment

- Safety Equipment (traffic cones, etc)
- Crow bar or other tool to remove grate or lid
- Pole with skimmer or net (if only floatables are being removed)
- Sediment probe (such as a Sludge Judge®)
- Vactor truck (flexible hose recommended)
- First Defense® Maintenance Log

### Floatables and sediment Clean Out Procedures

1. Set up any necessary safety equipment around the access port or grate of the First Defense® as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the grate or lid to the manhole.
3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities.
4. Remove oil and floatables stored on the surface of the water with the vactor hose (Fig.5) or with the skimmer or net (not pictured).
5. Using a sediment probe such as a Sludge Judge®, measure the depth of sediment that has collected in the sump of the vessel and record it in the Maintenance Log (page 9).
6. Once all floatables have been removed, drop the vactor hose to the base of the sump. Vactor out the sediment and gross debris off the sump floor (Fig.5).
7. Retract the vactor hose from the vessel.
8. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components, blockages, or irregularly high or low water levels.
9. Securely replace the grate or lid.



Fig.5 Sediment is removed with a vactor hose (First Defense model FD-4, shown).

## Maintenance at a Glance

Inspection	<ul style="list-style-type: none"> <li>- Regularly during first year of installation</li> <li>- Every 6 months after the first year of installation</li> </ul>
Oil and Floatables Removal	<ul style="list-style-type: none"> <li>- Once per year, with sediment removal</li> <li>- Following a spill in the drainage area</li> </ul>
Sediment Removal	<ul style="list-style-type: none"> <li>- Once per year or as needed</li> <li>- Following a spill in the drainage area</li> </ul>

NOTE: For most clean outs the entire volume of liquid does not need to be removed from the manhole. Only remove the first few inches of oils and floatables from the water surface to reduce the total volume of liquid removed during a clean out.



## First Defense® Installation Log

HYDRO INTERNATIONAL REFERENCE NUMBER:	
SITE NAME:	
SITE LOCATION:	
OWNER:	CONTRACTOR:
CONTACT NAME:	CONTACT NAME:
COMPANY NAME:	COMPANY NAME:
ADDRESS:	ADDRESS:
TELEPHONE:	TELEPHONE:
FAX:	FAX:

INSTALLATION DATE:     /     /

MODEL SIZE (CIRCLE ONE):     FD-4     FD-4HC     FD-6     FD-6HC

INLET (CIRCLE ALL THAT APPLY):    GRATED INLET (CATCH BASIN)    INLET PIPE (FLOW THROUGH)

# First Defense® Inspection and Maintenance Log

[illegible]

# DO IT RIGHT THE FIRST TIME

LEARN MORE AT [HYDRO-INT.COM/SERVICE](http://HYDRO-INT.COM/SERVICE)



**CALL 1 (888) 382-7808 TO SCHEDULE AN INSPECTION**

## Stormwater Solutions

94 Hutchins Drive  
Portland, ME 04102

Tel: (207) 756-6200  
Fax: (207) 756-6212  
[stormwaterinquiry@hydro-int.com](mailto:stormwaterinquiry@hydro-int.com)

[www.hydro-int.com](http://www.hydro-int.com)

Turning Water Around...®



**Save Valuable Land and  
Protect Water Resources**



**Isolator<sup>®</sup> Row O&M Manual**  
StormTech<sup>®</sup> Chamber System for Stormwater Management

# 1.0 The Isolator<sup>®</sup> Row

## 1.1 INTRODUCTION

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row is a patented technique to inexpensively enhance Total Suspended Solids (TSS) removal and provide easy access for inspection and maintenance.



*Looking down the Isolator Row from the manhole opening, woven geotextile is shown between the chamber and stone base.*

## 1.2 THE ISOLATOR ROW

The Isolator Row is a row of StormTech chambers, either SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-4500 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as storm water rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC-310-3 and SC-740 models) allow storm water to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

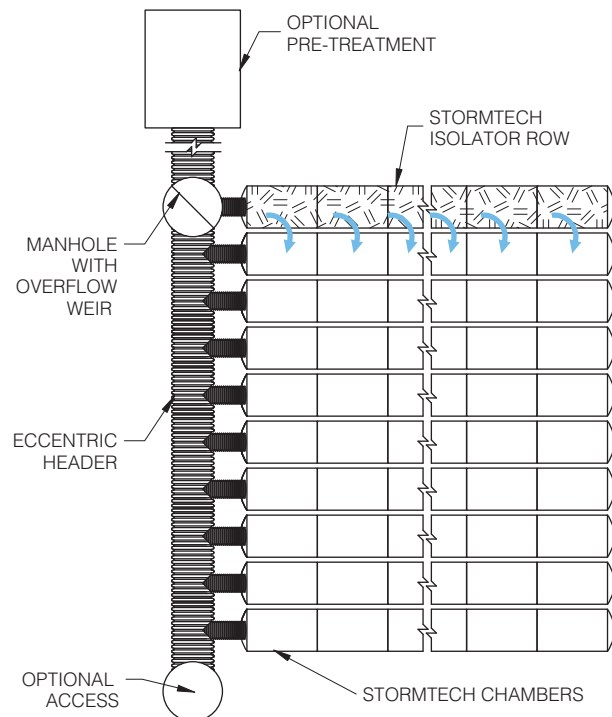
Two different fabrics are used for the Isolator Row. A woven geotextile fabric is placed between the stone and the Isolator Row chambers. The tough geotextile provides a media for storm water filtration and provides a durable surface for maintenance operations. It is also designed to prevent scour of the underlying stone and remain intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the perforations in the sidewall of the chamber. The non-woven fabric is not required over the DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row is typically designed to capture the “first flush” and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but typically includes a high flow weir such that storm water flowrates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other chambers.

The Isolator Row may also be part of a treatment train. By treating storm water prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured. Pre-treatment best management practices can be as simple as deep sump catch basins, oil-water separators or can be innovative storm water treatment devices. The design of the treatment train and selection of pretreatment devices by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, the Isolator Row is recommended by StormTech as an effective means to minimize maintenance requirements and maintenance costs.

*Note: See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row.*

### StormTech Isolator Row with Overflow Spillway (not to scale)





## 2.0 Isolator Row Inspection/Maintenance



### 2.1 INSPECTION

The frequency of Inspection and Maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean-out should be performed.

### 2.2 MAINTENANCE

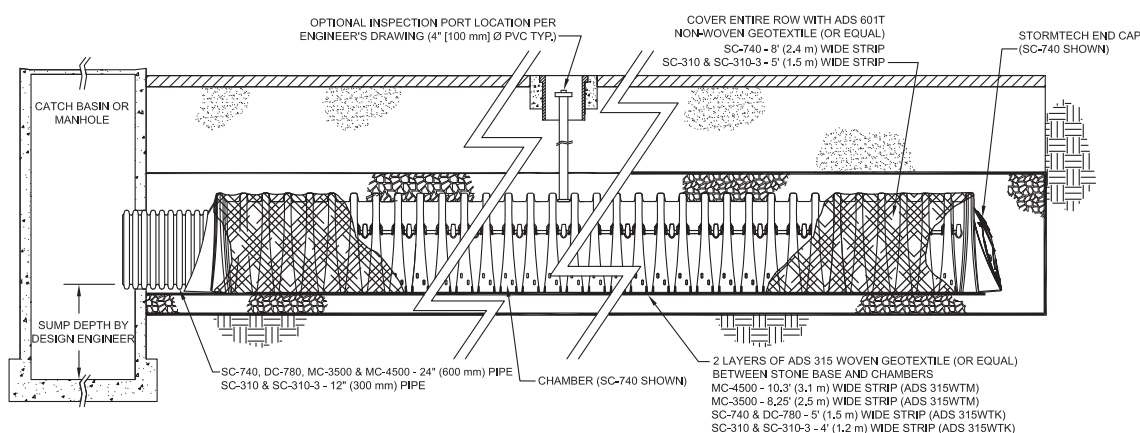
The Isolator Row was designed to reduce the cost of periodic maintenance. By “isolating” sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.



*Examples of culvert cleaning nozzles appropriate for Isolator Row maintenance. (These are not StormTech products.)*

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45” are best. Most JetVac reels have 400 feet of hose allowing maintenance of an Isolator Row up to 50 chambers long. **The JetVac process shall only be performed on StormTech Isolator Rows that have AASHTO class 1 woven geotextile (as specified by StormTech) over their angular base stone.**

#### StormTech Isolator Row (not to scale)



**NOTE:** NON-WOVEN FABRIC IS ONLY REQUIRED OVER THE INLET PIPE CONNECTION INTO THE END CAP FOR DC-780, MC-3500 AND MC-4500 CHAMBER MODELS AND IS NOT REQUIRED OVER THE ENTIRE ISOLATOR ROW.

## 3.0 Isolator Row Step By Step Maintenance Procedures

### Step 1) Inspect Isolator Row for sediment

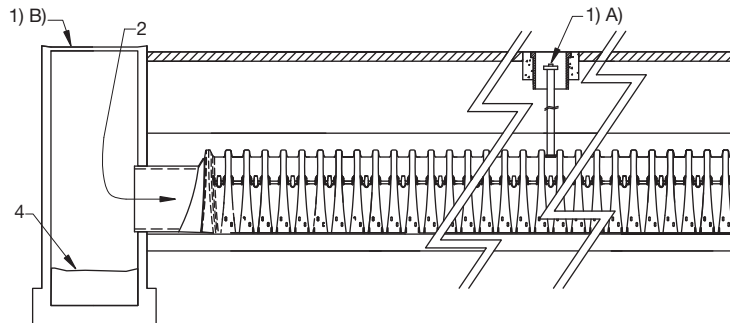
#### A) Inspection ports (if present)

- i. Remove lid from floor box frame
- ii. Remove cap from inspection riser
- iii. Using a flashlight and stadia rod, measure depth of sediment and record results on maintenance log.
- iv. If sediment is at, or above, 3 inch depth proceed to Step 2. If not proceed to step 3.

#### B) All Isolator Rows

- i. Remove cover from manhole at upstream end of Isolator Row
- ii. Using a flashlight, inspect down Isolator Row through outlet pipe
  1. Mirrors on poles or cameras may be used to avoid a confined space entry
  2. Follow OSHA regulations for confined space entry if entering manhole
- iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches) proceed to Step 2. If not proceed to Step 3.

StormTech Isolator Row (not to scale)



### Step 2) Clean out Isolator Row using the JetVac process

- A) A fixed culvert cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
- B) Apply multiple passes of JetVac until backflush water is clean
- C) Vacuum manhole sump as required

### Step 3) Replace all caps, lids and covers, record observations and actions

### Step 4) Inspect & clean catch basins and manholes upstream of the StormTech system

### Sample Maintenance Log

Date	Stadia Rod Readings		Sediment Depth (1) - (2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/01	6.3 ft.	none		New installation. Fixed point is CI frame at grade	djm
9/24/01		6.2	0.1 ft.	Some grit felt	sm
6/20/03		5.8	0.5 ft.	Mucky feel, debris visible in manhole and in Isolator row, maintenance due	rv
7/7/03	6.3 ft.		0	System jetted and vacuumed	djm



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 860.529.8188 | 888.892.2694 | fax 866.328.8401 | www.stormtech.com

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## ***APPENDIX E***

### ***CONTRACTOR'S CERTIFICATION***





Site Planning  
Civil Engineering  
Landscape Architecture  
Land Surveying  
Transportation Engineering

Environmental Studies  
Entitlements  
Construction Services  
3D Visualization  
Laser Scanning

JMC Project 18119  
Beacon Commons  
16 West Main Street  
City of Beacon, NY

### CONTRACTOR'S CERTIFICATION

"I hereby certify under penalty of law 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 that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Permit Identification No.: \_\_\_\_\_

Name and Title of Trained Contractor: \_\_\_\_\_

Elements of the SWPPP Contractor is responsible for: \_\_\_\_\_

p:\2018\18119\drainage\reports\18119-nys contractors certification.docx

## ***APPENDIX F***

## ***DRAWINGS***



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SOIL TYPE TABLE		
DESIGNATION	HYDROLOGIC GROUP	DESCRIPTION
DwB	B	DUTCHESS-CARDIGAN COMPLEX, UNDULATING, ROCKY

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

[illegible]

EXISTING DRAINAGE  
AREA MAP

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BEACON COMMONS  
16 WEST MAIN STREET  
BEACON, NY 12508

<p>APPLICANT / OWNER:</p> <p>FARRELL BUILDING COMPANY 2317 MONTAUK HIGHWAY BRIDGEHAMPTON, NY 11932</p>	<p>ARCHITECT:</p> <p>ARYEH SIEGEL ARCHITECT 84 MASON CIRCLE BEACON, NY 12508</p>
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**JMC Planning, Engineering, Landscape  
Architecture & Land Surveying, PLLC**  
**JMC Site Development Consultants, LLC**

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**John Meyer Consulting, Inc.**

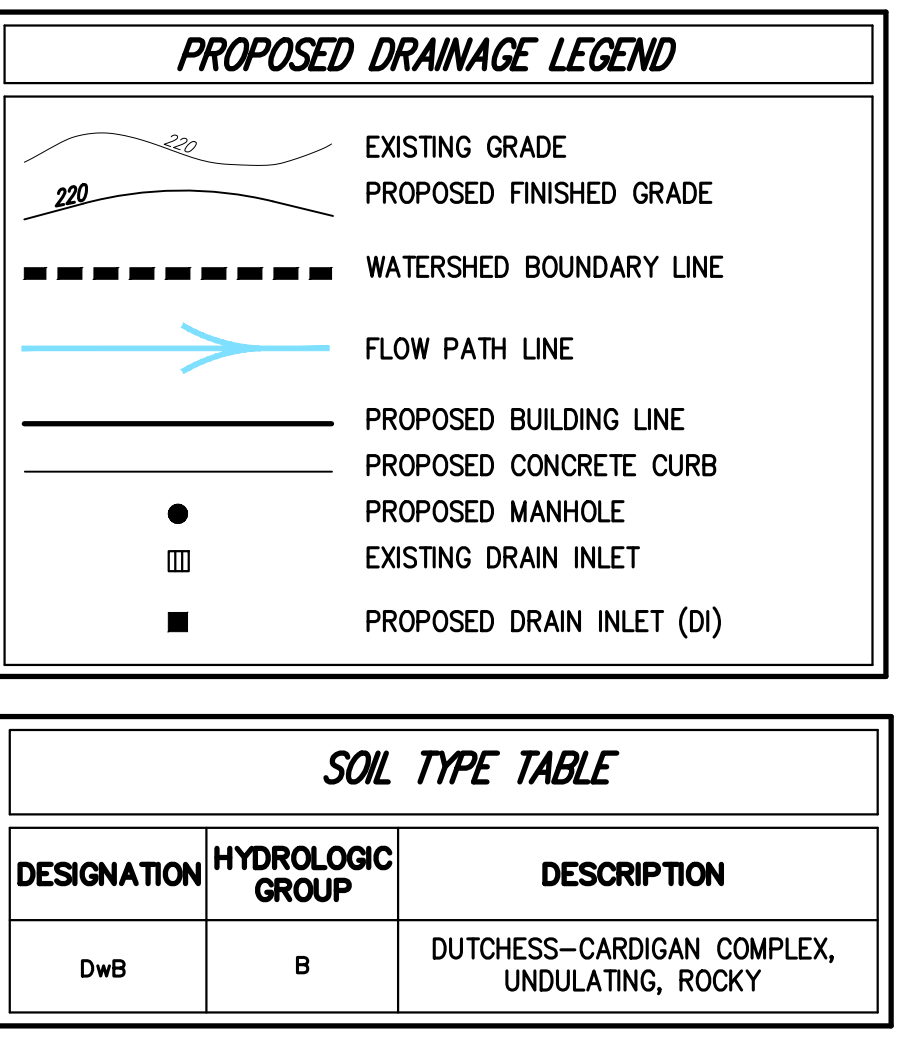
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DESIGNATION	HYDROLOGIC GROUP	DESCRIPTION
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[illegible]

# PROPOSED DRAINAGE AREA MAP

BEACON COMMONS  
16 WEST MAIN STREET  
BEACON, NY 12508

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