



STORMWATER MANAGEMENT PLAN

For

**York Toll Plaza
York, Maine**

Prepared for

Maine Turnpike Authority
Under Contract with Jacobs Engineering

October 14, 2016

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STORMWATER MANAGEMENT PLAN

York Toll Plaza York, Maine

Executive Summary

The Maine Turnpike Authority (MTA) plans to develop a new toll plaza facility at Mile 8.8. Included in this project is the construction of an administrative building with an associated parking lot, access driveway and utilities at Mile 8.8, infill of the existing turnpike median from Mile 9.6 to Mile 8.2 and the removal of existing toll facilities at Mile 7.3.

Stormwater management requirements for this project are identified in the State of Maine Site Location of Development Act General Permit for the Maine Turnpike Authority (General Permit) and its attached Appendix A Memorandum of Agreement for Stormwater Management Between the Maine Department of Transportation, Maine Turnpike Authority and Maine Department of Environmental Protection effective July 19, 2007 (MOA). These documents reference standards found in the Maine Department of Environmental Protection's Chapter 500 Stormwater Management Rules (Chapter 500) including the Chapter 500 Basic, General and Flooding Standards.

Section II.D of the General Permit identifies stormwater and erosion control requirements for different categories of projects including:

- a) A linear portion of a project associated with an existing travel corridor;
- b) A linear portion of a project that is not associated with an existing corridor; and
- c) A non-linear portion of a project.

The proposed construction project includes areas within each of these three categories.

Linear Portion of the Project within an Existing Travel Corridor

The improvements within the existing MTA right of way are considered a linear portion of a project associated with an existing travel corridor. This includes the proposed toll plaza, associated lane widening at Mile 8.8 and the removal of impervious areas associated with the existing toll plaza at Mile 7.3. The project creates approximately 14.21 acres of new impervious area and 8 acres of new developed disturbed/vegetated area.

This area has been designed to meet the General Standards for a linear portion of a project by providing treatment and mitigation for more than 75% of the newly created impervious area associated with the travel corridor.

The new impervious area created is offset in part by the removal of approximately 5 acres of existing impervious area at Mile 7.3, including the administrative building, access driveway, and toll lanes. In addition to the pavement removal, eight of the nine underdrain soil filters proposed (USF-1, USF-2, USF-3, USF-4, USF-5, USF7, USF-8, and USF-9) will treat approximately 5.76 acres of proposed or existing impervious highway surface. This design provides a treatment/mitigation level of 75.5%, which exceeds the required treatment of 75% for the linear portion of a project per Chapter 500 Section 4.C.(5)(c).

Linear Portion of the Project Not Associated with an Existing Travel Corridor and Non-Linear Portion of the Project

The administrative building, access driveway from Chases Pond Road and parking lot at Mile 8.8 are located outside of the existing MTA right of way and are considered a project not associated with an existing travel corridor.

The administrative access driveway from Chases Pond Road to the parking lot, approximately 1,266 linear feet, is considered a linear portion of a project that is not associated with an existing corridor and must meet the General Standards to the extent practicable. The proposed administrative building and associated parking lot are considered a non-linear portion of a project not associated with an existing travel corridor and must meet the General Standards.

Linear Portion Not Associated with an Existing Travel Corridor (Access Driveway)

Treatment is provided for 79% of the access driveway's impervious area and 85.5% of the access driveway's developed area; exceeding the requirements found in Chapter 500.4.C.(5)(c) Exceptions from the General Standards for the linear portion of the project which requires treatment for no less than 75% of the impervious area and 50% of the developed area.

Treatment is provided by roadside buffers and stone bermed buffers. Approximately 580 linear feet of access road is being treated within a proposed underdrain soil filter, USF-6, which is also treats portions of the administrative site.

Non-Linear Portion (Parking area and Administrative Building)

Treatment is provided for 96.7% of the impervious area and 85.9% of the site's developed area associated with the non-linear administrative building site. This treatment level exceeds the required level of 95% and 80%, respectively, pursuant to Chapter 500 4.C.(2)(a)(i).

Treatment is achieved utilizing two of the nine underdrained soil filters (USF-6 and USF-7) proposed for the project.

STORMWATER MANAGEMENT PLAN
York Toll Plaza
York, Maine

1. Introduction

This Stormwater Management Plan has been prepared to address the potential impacts associated with this project due to the proposed modification in stormwater runoff characteristics. The stormwater management controls that are outlined in this plan have been designed to best suit the proposed development and to comply with applicable regulatory requirements.

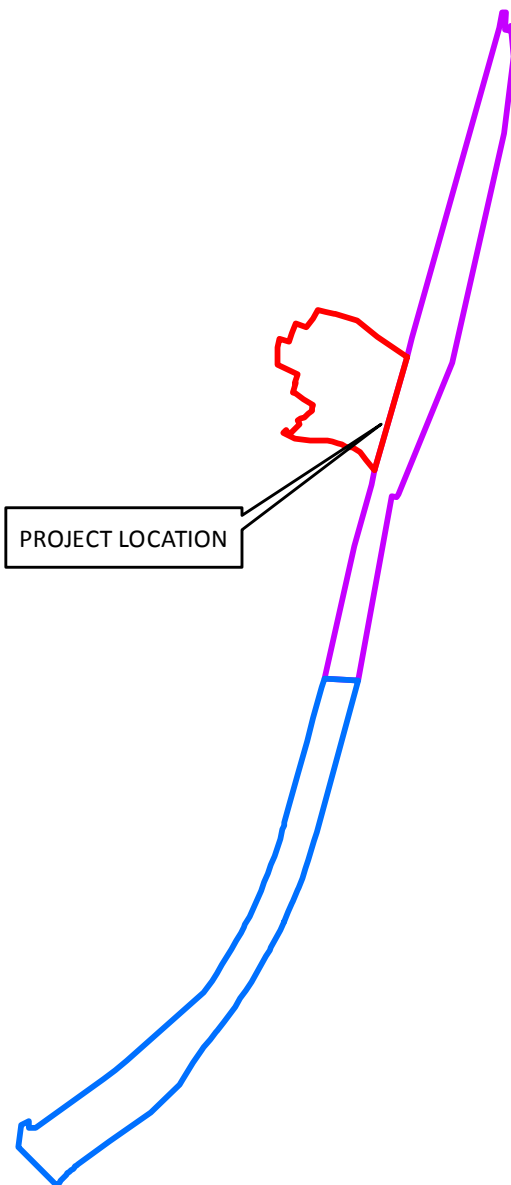
2. Existing Conditions

The project site consists of the Maine Turnpike from Mile 7.0 to Mile 9.5 (MTA Turnpike Sta. 249+45 to Sta. 384+00) as well undeveloped land approximately 32.6 acres in size, within the Town of York, Maine. The 32.6 acre undeveloped land was purchased by the Maine Turnpike Authority to be developed into a new Toll Plaza Administration Building with associated parking and access from Chases Pond Road.




Figure 1 identifies the project location and the three (3) focus areas discussed in this report including the Mile 7.3 project area, the Mile 8.8 project area and the Administrative Building Site.

The project site for the Administrative building, parking lot and driveway are located on 32.6 acres of land acquired by the MTA in 2014. The land is undeveloped property subdivided into 8 parcels with a 50' private right of way as shown on a plan titled Division of Land Plan for The Morrison Family Chases Pond Road, York Maine recorded in the York County Registry of Deeds in in Plan Book 346 Page 46. The property is shown as Lots 145, 146, 148, 150, 152, 154, 156, and 158 on Town of York Tax Map 222.

The property is located in the watershed of unnamed tributaries draining to the Little River and the Cape Neddick River ultimately discharging to the Atlantic Ocean. The property is not located in a lake or urban impaired stream watershed most at risk from development as identified in Maine Department of Environmental Protection Chapter 502.



Legend

-  Administrative Site
-  Mile 7.3 Project Area
-  Mile 8.8 Project Area

PROJECT LOCATION MAP OF SOUTHERN MAINE TOLL PLAZA

SCALE: 1" = 2,000'
DATE: 9/15/2016

LOCATION: MAINE TURNPIKE
YORK, MAINE

INFORMATION: 2011 USGS QUADRANGLE
(YORK HARBOR, MAINE)

75 John Roberts Rd. - Suite 1A
South Portland, ME 04106
Tel. 207-200-2100

WWW.SEBAGOTECHNICS.COM

250 Goddard Rd. - Suite B
Lewiston, ME 04240
Tel. 207-783-5656

Land Cover: The site administrative building site is undeveloped land consisting of wooded land cover. The development site abuts the Maine Turnpike to the east, Chases Pond Road to the west and single family residential properties and undeveloped land to the north and south. The turnpike right of way includes the existing turnpike and abutting shoulder areas in a maintained meadow condition as well as exposed rock outcroppings.

Site Topography: The site of the administrative building and driveway generally drains to the northeast to a large offsite wetland area tributary to the Cape Neddick River. Portions of the site’s east end drains east to the turnpike right of way and then south along the roadway embankment, eventually crossing the turnpike and draining east via unnamed streams and wetlands to the Atlantic Ocean. Slopes on site range from 5% to over 25%.

Stormwater runoff from the turnpike corridor from mile 7.0 to mile 9.6 generally flows in a southeasterly direction towards the Atlantic Ocean via the Little River, the Cape Neddick River and unnamed tributaries. Stormwater is conveyed via closed drainage systems which outlet to roadside ditches that drain to the receiving tributaries prior to discharging into the Atlantic Ocean.

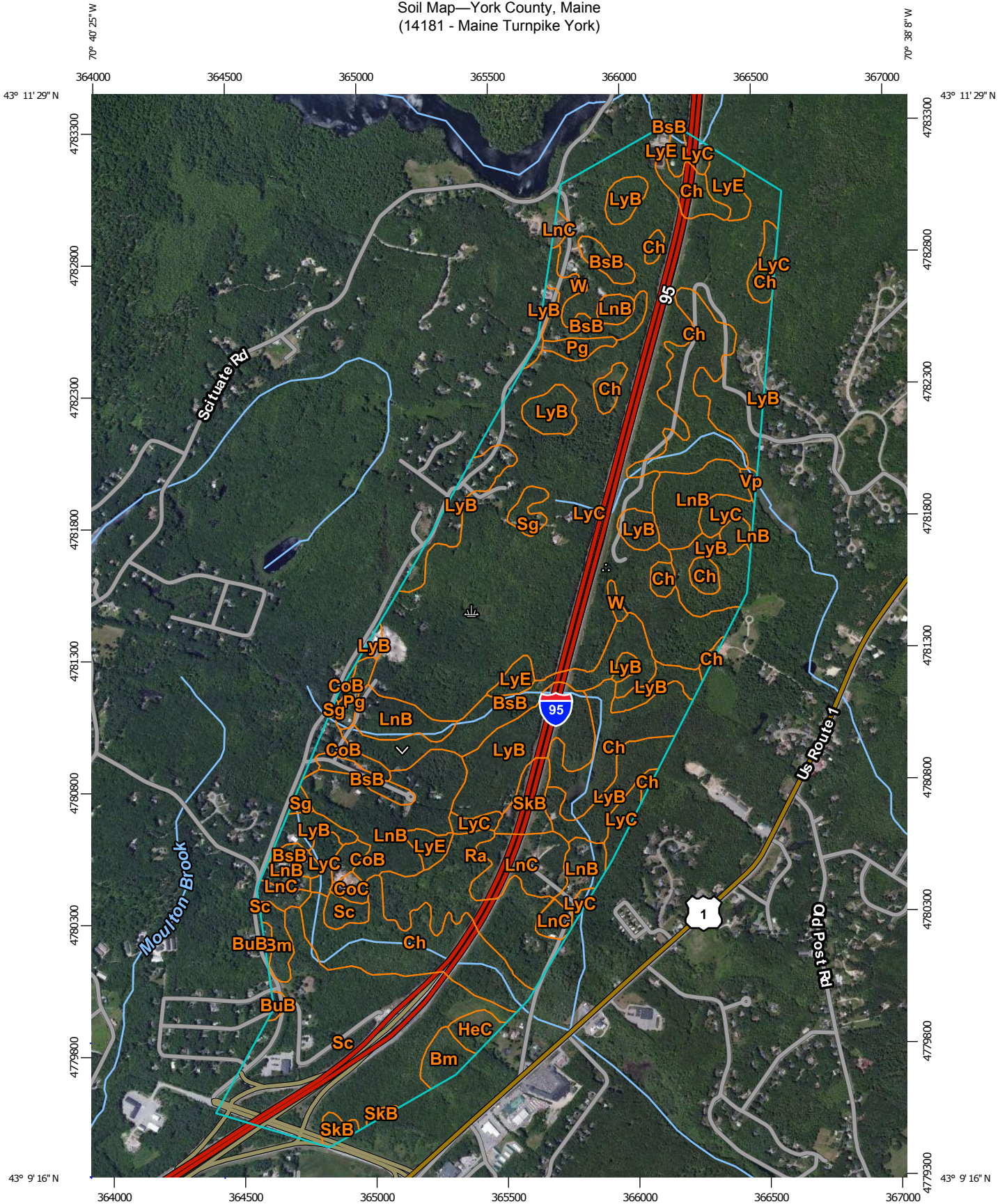
Surface Water Features: Wetland areas occupy areas of the north and south of the proposed administrative building driveway and adjacent to area of the proposed administrative building and parking lot at the turnpike right of way.

Wetland areas exist within the MTA right of way along the travel corridor. Impacts to wetlands are discussed in the project’s Natural Resource Protection Act (NRPA) permit application.

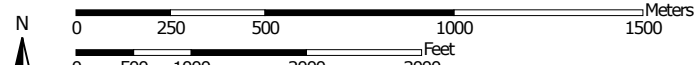
Soils: Soil characteristics were obtained from the Soil Conservation Service (SCS) Medium Intensity Soil Survey of York County. Soils identified in the developed areas of the site (or within proposed buffer areas) are identified below in Table 1. These soil boundaries are identified on the attached watershed maps.

Table 1 –Soil Types and Characteristics		
Soil Type	Symbol	HSG
Lyman Rock Outcrop	LyB/LyC	D
Biddeford Mucky Peat	Bm	D
Brayton/Westbury sandy loam	BsB	D
Chocorua Peat	Ch	D
Hermon sandy loam	HeC	A
Lyman Loam	LnB/LnC	D
Lyman Rock Outcrop	LyB/LyC/LyE	D
Raynam Silt Loam	Ra	B/D
Scantic Silt Loam	Sc	D
Skerry Fine Sandy Loam	SkB	C
Pits, Gravel	Pt	varies

Soil Map—York County, Maine
(14181 - Maine Turnpike York)



Map Scale: 1:20,000 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84








































Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

8/1/2016
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MAP LEGEND

 Area of Interest (AOI)	 Spoil Area
 Soil Map Unit Polygons	 Stony Spot
 Soil Map Unit Lines	 Very Stony Spot
 Soil Map Unit Points	 Wet Spot
 Special Point Features	 Other
 Blowout	 Special Line Features
 Borrow Pit	Water Features
 Clay Spot	 Streams and Canals
 Closed Depression	Transportation
 Gravel Pit	 Rails
 Gravelly Spot	 Interstate Highways
 Landfill	 US Routes
 Lava Flow	 Major Roads
 Marsh or swamp	 Local Roads
 Mine or Quarry	Background
 Miscellaneous Water	 Aerial Photography
 Perennial Water	
 Rock Outcrop	
 Saline Spot	
 Sandy Spot	
 Severely Eroded Spot	
 Sinkhole	
 Slide or Slip	
 Sodic Spot	

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000. Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
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: York County, Maine
Survey Area Data: Version 14, Sep 11, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 20, 2010—Jul 18, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

York County, Maine (ME031)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Bm	Biddeford mucky peat, 0 to 3 percent slopes	12.1	1.2%
BsB	Brayton and Westbury very stony fine sandy loams, 0 to 8 percent slopes	56.3	5.6%
BuB	Buxton silt loam, 3 to 8 percent slopes	2.0	0.2%
Ch	Chocorua peat	127.7	12.8%
CoB	Colton gravelly loamy coarse sand, 0 to 8 percent slopes	9.7	1.0%
CoC	Colton gravelly loamy coarse sand, 8 to 15 percent slopes	2.7	0.3%
HeC	Hermon fine sandy loam, 8 to 15 percent slopes	5.1	0.5%
LnB	Lyman loam, 3 to 8 percent slopes, rocky	84.3	8.4%
LnC	Lyman loam, 8 to 15 percent slopes, rocky	26.5	2.6%
LyB	Lyman-Rock outcrop complex, 3 to 8 percent slopes	110.3	11.0%
LyC	Lyman-Rock outcrop complex, 8 to 15 percent slopes	366.1	36.6%
LyE	Lyman-Rock outcrop complex, 15 to 80 percent slopes	17.5	1.7%
Pg	Pits, gravel	8.1	0.8%
Ra	Raynham silt loam	40.2	4.0%
Sc	Scantic silt loam, 0 to 3 percent slopes	110.3	11.0%
Sg	Sebago peat	5.8	0.6%
SkB	Skerry fine sandy loam, 0 to 8 percent slopes	13.3	1.3%
Vp	Vassalboro peat, ponded	1.1	0.1%
W	Water bodies	1.9	0.2%
Totals for Area of Interest		1,001.1	100.0%

The Hydrologic Soil Group (HSG) designation is based on a rating of the relative permeability of a soil, with Group “A” being extremely permeable such as coarse sand, to Group “D” having low permeability such as clay.

Historic Flooding: The Federal Emergency Management Agency (FEMA) lists the project site as Zone X, “Areas determined to be outside the 500 year floodplain based on the published Flood Insurance Rate Map (FEMA Community Panel Number 2300159 0022 D, dated June 17, 2002).

3. Proposed Development

The Applicant is proposing a 2,400 sf administrative building, parking lot and access driveway outside of the existing right of way. Development within the right of way includes toll plaza construction, lane widening, and lane removals.

Alterations to Land Cover: Completion of the proposed project will result in the following.

Linear Portion of the Project within the right of way from Mile 7.3 through Mile 8.8 project areas.

- | | |
|--|---------------|
| 1. Existing impervious area ¹ | = 42.69 acres |
| 2. Proposed disturbed area ² | = 53 acres |
| 3. Redeveloped impervious area | = 38.5 acres |
| 4. Proposed new impervious area (on previously vegetated surface) ³ | = 14.21 acres |
| 5. Proposed “New” developed disturbed/vegetated area ⁴ | = 8 acres |

Linear portion outside of the right of way (administrative access driveway)

- | | |
|---|--------------|
| 1. Proposed disturbed area | = 2.86 acres |
| 2. Redeveloped impervious area | = 0 acres |
| 3. Proposed new impervious area (on previously vegetated surface) | = 0.58 acres |
| 4. Proposed developed area | = 2.86 acres |
| 5. Existing 7.3 administrative access driveway (to be removed) | = 0.63 acres |

¹ As defined in MDEP Chapter 500 Stormwater Management Rules (500.3.K). Measurements based on existing conditions survey, site aerial photography, on-site observations

² As defined in MDEP Chapter 500 Stormwater Management Rules (500.3.F).

³ As defined in MDEP Chapter 500 Stormwater Management Rules (500.3.K)

⁴ As defined in MDEP Chapter 500 Stormwater Management Rules (500.3.D)

Non Linear Portion of the Project:

- | | |
|---|--------------|
| 1. Proposed disturbed area | = 1.33 acres |
| 2. Redeveloped impervious area | = 0 acres |
| 3. Proposed new impervious area (on previously vegetated surface) | = 0.43 acres |
| 4. Proposed developed area | = 1.33 acres |
| 5. Existing administrative building (to be removed) | = 0.36 acres |

4. Downstream Ponds and Waterbodies

The majority of the administrative building project site off Chases Pond Road is tributary to the Cape Neddick River and the Atlantic Ocean, watersheds which are not listed by the Maine Department of Environmental Protection as impaired or threatened.

The MTA corridor drains in a southeasterly direction to the Little River, the Cape Neddick River and unnamed tributaries prior to outletting at the Atlantic Ocean. The Little River and unnamed tributaries are not listed by the Maine Department of Environmental Protection as impaired or threatened.

5. Regulatory Requirements

Stormwater management requirements for MTA projects are identified in the State of Maine Site Location of Development Act General Permit for the Maine Turnpike Authority (General Permit) and its attached Appendix A Memorandum of Agreement for Stormwater Management Between the Maine Department of Transportation, Maine Turnpike Authority and Maine Department of Environmental Protection effective July 19, 2007 (MOA). These documents reference standards found in the Maine Department of Environmental Protection's Chapter 500 Stormwater Management Rules (Chapter 500) including the Chapter 500 Basic, General and Flooding Standards.

The General Permit Section II.D.1 Basic Standards Requires an Erosion and Sedimentation Control Plan developed by the contractor for all projects in accordance with the Maine Department of Transportation's Best Management Practices for Erosion and Sedimentation Control (BMP's) dated February 2008. All projects meeting the General Permit are required to comply with the Chapter 500 Basic Standards.

The General Permit Section II.D.2 General Standards differentiates requirements for three categories of projects subject to the MDEP Chapter 500 General Standards.

- a) A Linear portion of a project associated with an existing travel corridor shall meet the General Standards to the extent practicable using existing available right of way.
- b) A Linear portion of a project not associated with an existing travel corridor shall meet the General Standards to the extent practicable.

- c) A non-linear portion of a project shall meet the General Standards, except that redevelopment of existing impervious area may qualify for an exemption under DEP's Chapter 500 rules.

The General Permit Section II.D.5 requires that MTA design the project and engineering measures to the extent practicable such that the project drainage avoids adverse impacts to offsite property resulting from project related peak flows.

The following sections describe how this project will address these stormwater management performance standards.

Chapter 500 Basic Standards: These standards include various erosion and sedimentation controls, inspection and maintenance procedures, and general housekeeping requirements. These performance standards are to be addressed by the Contractor's Erosion and Sedimentation Control plan.

An Inspection, Maintenance, and Housekeeping Plan is attached in Appendix 5. This plan outlines requirements for inspection and maintenance of the BMPs proposed for this project.

General Standards: This standard presents minimum treatment thresholds for new non-vegetated areas and new developed areas to be treated by stormwater Best Management Practices (BMPs). The standards are referenced in the Maine Department of Environmental Protection Chapter 500 Stormwater Management Rule, Revision Date August 2015.

General Standard BMPs have been defined by the MDEP and are described thoroughly in their publication "Stormwater Management for Maine: Best Management Practices Manual". Volume III of this manual contains additional information and sizing requirements for the treatment measures proposed for the proposed development.

Urban Impaired Stream Standard: This standard is not applicable to this project.

Flooding Standards: The General Permit requires that MTA design and apply engineering measures to the extent practicable such that the project drainage avoids adverse impacts to offsite property resulting from project related peak flows.

6. Stormwater Management BMPs

In order to meet the applicable regulations, the project will utilize buffers along the access road, two underdrained soil filters within the administrative building development site, and several under drained soil filters within the right of way for treatment of the Maine Turnpike corridor. In addition to these structural and Buffer BMPs, mitigation for new impervious area within the existing highway right of way is provided by the removal and revegetation of existing impervious areas at the existing Mile 7.3 toll plaza.

The BMP locations are indicated on the attached plans contained within Appendix 1 *Watershed Plans and Stormwater Treatment Plans*.

A. Buffers

Buffers are proposed to provide treatment for runoff associated with the proposed access driveway (Linear portion of the project). The buffers have been sized in accordance with the guidelines presented in the Chapter 500 Appendix F Vegetated Buffers and include the following.

- Buffers adjacent to the downhill side of the road
- Stone Bermed Buffer

The locations of the proposed buffers are shown on the plan titled Access Road Buffer/Treatment Plan and is included in Appendix 1: *Watershed Plans and Stormwater Treatment Plans*. The areas treated by these BMPs are summarized in the stormwater treatment calculations attached in Appendix 2: *Stormwater Quality Calculations*.

B. Underdrained Soil Filter

A total of nine (9) underdrained soil filters are proposed to meet the General Standards for portions of the linear access road, non-linear administration building site, and the linear Maine Turnpike travel corridor. An underdrained soil filter designed to meet the General Standards must provide a runoff volume equal to 1" times the tributary impervious area and 0.4" times the tributary landscaped areas. The surface area of the system must be at least equal to 5% the impervious area and 2% of the landscaped area. The runoff volume shall be discharged over a period of time not less than 24 hours and not greater than 48 hours.

A copy of the designs plan and the stormwater treatment calculations for the BMPs are attached in Appendix 1 and Appendix 2.

Table 2 – Underdrain Soil Filter Locations		
Underdrain Filter ID	Station	Treatment Provided
USF-1	263+00, LT	MTA Travel Corridor
USF-2	267+00, LT	MTA Travel Corridor
USF-3	291+00, LT	MTA Travel Corridor
USF-4	295+00, RT	MTA Travel Corridor
USF-5	313+00, RT	MTA Travel Corridor
USF-6	342+00, LT	Admin Access Road, Admin Site
USF-7	342+50, LT	Admin Site, MTA Travel Corridor
USF-8	353+50, RT	MTA Travel Corridor
USF-9	355+00, RT	MTA Travel Corridor

7. Peak Flow Analysis

A hydrologic model has been prepared to evaluate the peak runoff rates at several study points along the Maine Turnpike Travel Corridor to evaluate the project's effect on runoff rates. The modeling calculations are attached in Appendix 3: *HydroCAD Output Pre-Development and Post-Development Model*.

The General Permit requires design and application of engineering measures to the extent practicable such that the project drainage avoids adverse impacts to offsite property resulting from project related peak flows. The closed drainage system has been designed to provide various outfall locations to mitigate the increase in peak runoff being directed to downstream channels.

A. Modeling Technique

In order to evaluate drainage characteristics in pre and post-development conditions, a quantitative analysis was performed to determine peak rates of runoff for the 2, 10, and 25-year storm events. Runoff calculations were performed following the methodology outlined in the USDA Soil Conservation Service's "Urban Hydrology for Small Watersheds, Technical Release #55" and HydroCAD Stormwater Modeling System Software. A 24-hour, SCS Type III storm distribution for the 2, 10, and 25-year storm frequencies were used for analysis.

The 24-hour rainfall values utilized in the hydrologic model for York County are as follows:

Table 3 - Storm Frequency Precipitation (in./24 hr)	
2-year	2.6
10-year	3.3
25-year	6.2

*Appendix H, MDEP Chapter 500, amended date August 2015

B. Drainage Characteristics (Pre and Post-Development Watershed Delineation)

The peak runoff analysis consists of the eight (8) Study Points located along the existing Turnpike travel corridor from Mile 7.0 to Mile 9.6. There are two (2) study points located within the project area identified as 7.3, (SP-1 and SP-2). The remaining six (6) study points are within the Mile 8.8 project area, (SP-100, SP-200, SP-500, SP-700, SP-750 and SP-1000.) All study points are located on the east side of the turnpike corridor.

SP1 represents an existing box culvert located on Newtown Road in York. There is a large wetland complex which has a tributary drainage area of approximately 350 acres, which includes roughly 5,000 linear feet of the Maine Turnpike as well as the existing York Toll plaza and associated administration building. Upstream of the existing box culvert are two large wetland complexes which attenuate runoff from the Maine Turnpike and additional offsite drainage areas. The wetland complex on the west side of the turnpike is connected to the east side wetland via a 54" culvert.

SP2 is located on the east side of the Maine Turnpike at approximate Sta. 299+00 where runoff from the project crosses the existing Right of Way (ROW) line.

SP100 is located at approximate Sta. 311+50 and is a drainage ditch which receives runoff from an existing culvert and conveys runoff from the project across the ROW. There is a wetland complex on the west side of the turnpike which attenuates runoff from both the travel corridor and an offsite area prior to discharging through a 48" cross culvert at Sta. 311+50 to SP100.

SP200 represents the discharge location of a shallow ditch into an existing wetland complex located roughly at the ROW line at Sta. 314+00. There is a wetland complex on the west side of the turnpike which attenuates runoff from both the travel corridor and an offsite area prior to discharging through an 18" cross culvert at Sta. 314+50 to SP200.

SP500 represents the inlet side of an existing cross culvert located along the York Water District maintenance road at approximate Sta. 326+80, just outside the MTA ROW. This study point receives runoff from both the travel corridor as well as a large offsite drainage area which is attenuated by a small wetland complex on the

west side of the travel corridor before discharging through an 18" cross culvert at Sta.327+75. SP500 also receives runoff from a 30" cross culvert at Sta. 331+00 with an upstream wetland complex which attenuates runoff.

SP700 is a wetland complex located on the east side of the travel corridor. Runoff is impounded within this area by the York Water District maintenance roadway to the east and the turnpike embankment sideslope to the west.

SP750 is a small wetland area located at approximate Sta. 349+00 which receives runoff from approximately 550 linear feet of roadway and associated embankment slope.

SP1000 represents the location where a drainage channel on the east side of the right of way enters the Cape Neddick River, immediately downstream of an existing twin 8'x8' box culvert installation under the turnpike. SP1000 represents the location where an unnamed tributary channel originates at the downstream end of an existing 36" culvert located at Sta. 374+75, which crosses the Maine Turnpike in a west to east direction. This culvert, identified as node 8P in the model, drains an approximately 255 acre watershed that includes the York Water District's treatment facility located between the Turnpike and Chases Pond Road. The Cape Neddick River watershed tributary to SP 1000 encompasses an additional 2,130 acres upstream of SP1000 including nearly 2,100 acres impounded at Chases Pond, a water supply reservoir for the York water district.

Portions of the existing York Water District Treatment facility, upstream of Culvert 8P at Sta 374+75 are constructed approximately 2 feet lower than existing highway shoulder elevation and have experienced flooding in larger storm events over the past ten years. The August 2015 Chapter 500 Rule update significantly increases the depth or rainfall in the 25 year and larger storms and the modeling predicts headwater elevations at the existing 36" culvert will inundate portions of the treatment facility's lagoons in these larger events, under existing pre-development conditions.

To protect the highway and the York Water District treatment lagoons from flooding in larger storm events, a new 48-inch diameter culvert is proposed at Sta. 374+75 to parallel the existing 36" culvert. The proposed culvert installation includes an inlet control structure designed to minimize increases in runoff at the Cape Neddick River during the 25-year storm at SP1000.

Due to the elevation of the existing Water District Facility, and the increased design rainfall required by the August 2015 Chapter 500 rules, a moderate increase in runoff at SP100 is anticipated during the 25-year storm.

The Cape Neddick River and Chases Pond watershed area was evaluated in a report by HNTB dated June 28, 2011 on file with the Maine Turnpike Authority. This study included an evaluation of the watershed tributary to the Chases Pond Dam and to

the 8x8 culverts at SP1000. This model was validated to a May 2006 “Mother’s Day Storm” (7.3” of rain) based on rainfall records and dam release records recorded by the York Water District. This modeling has been used in this report to estimate the runoff in the Cape Neddick River at SP1000. The runoff hydrograph from this study model is entered as Link 1L the Hydrocad modeling.

C. Comparison

The watershed areas and times of concentration of the post-development watersheds vary from the existing conditions based on the proposed site development and grading. Table 4 and Table summarize the results of the hydrologic analysis of the project under pre-development and post-development conditions in the Mile 7.3 and Mile 8.8 focus areas.

Table 4 – Stormwater Runoff Summary Table Mile 7.3 Pre-Development vs. Post-Development										
Study Point	Total Watershed Area (Ac)		Percent Impervious		Peak Rates of Runoff (cfs)					
					2-year		10-year		25-year	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
SP1	354.84	355.21	8.9%	7.5%	63.1	60.9	100.5	98.9	121.8	120.8
SP2	2.63	2.15	34.5%	27.1%	4.5	3.3	8.6	6.6	12.1	9.5

The table above indicates that the peak runoff rates will not increase at the Mile 7.3 study points in the post-development condition, which would be expected with the proposed removal of existing impervious surface associated with the existing toll plaza and administration building.

Table 5 – Stormwater Runoff Summary Table Mile 8.8 Pre-Development vs. Post-Development										
Study Point	Total Watershed Area (Ac)		Percent Impervious		Peak Rates of Runoff (cfs)					
					2-year		10-year		25-year	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
SP100	150.5	150.7	6.4%	7.2%	53.4	53.6	84.8	85.2	102.1	102.8
SP200	5.3	4.7	46.8%	51.5%	10.4	9.1	18.5	16.2	25.2	22.1
SP500	83.2	82.9	8.1%	14.1%	21.0	23.8	32.8	42.2	45.3	57.0
SP700	6.7	6.2	16.0%	38%	7.1	7.7	13.8	13.7	19.5	18.8
SP750	1.5	1.2	19.1%	46.6%	2.9	2.9	5.5	5.1	7.7	6.8
SP1000	2,424	2,426.5	7.9%	8.1%	131.0	133.3	227.5	223.7	440.5	452.1

The stormwater water quantity analysis performed to address the Flooding Standard indicates an increase in peak runoff rates in the post development condition of 12 cfs (25%) at SP500 in the 25 year storm event. The increase in flow at this location is due to minor changes in the outfall locations of the highway closed drainage system necessitated by the highway widening. The post development tributary area to this point of analysis has been reduced to the greatest extent

practical while providing safe conveyance and discharge of the closed drainage system within the Turnpike right of way. The velocities within the receiving channel were evaluated during 10-year storm event to confirm that the velocities do not exceed the permissible velocities for the location's soil type and vegetative cover. The peak velocity during the 10-year storm event was calculated to be 3.25 fps, which is less than the permissible 3.5 fps for vegetated Lyman soil.

The stormwater quantity analysis indicates an increase in peak runoff rates in the post development condition of 11.6 cfs (2.2%) at SP1000 during the 25 year storm event.

SP1000 represents the location where a drainage channel on the east side of the right of way enters the Cape Neddick River, immediately downstream of an existing twin existing twin 8'x8' box culvert under the turnpike.

The increase in runoff at this location is due to the proposed removal of an existing 18-inch culvert at STA.365+25 which currently drains east to west through a wetland complex at Station 375+00 and due to the installation of a new 48" culvert with an inlet control structure (node 8P) crossing the turnpike at Station 374+50.

The Maine Turnpike Authority has noted that the 18" culvert at STA 365+25 is undersized, frequently inundated, and is causing flooding concerns within the turnpike right of way and potentially affecting abutting properties. The 18" culvert is to be removed and the runoff tributary to it will be conveyed in the proposed highway ditch line on the east side of the right of way. The runoff will be conveyed north to the existing drainage channel discharging to the main stem of the Cape Neddick River at study point SP1000. The proposed ditch line is within the existing right of way and has capacity to convey the flow without impacting abutting properties.

The capacity of an existing 36" culvert crossing the turnpike at STA 374+50 (model node 8P) will be increased by the installation of a new 48" diameter culvert. The proposed culvert has been sized to reduce the 100 year headwater elevation to elevation 126.0 to mitigate potential flooding conditions at the upstream York Water District facility based on the revised design rainfall depths presented in the August 2015 MDEP Chapter 500 rules. The revised rainfall is significantly larger than the rainfall depth considered when the existing culvert and treatment facility were constructed. An inlet control structure is proposed at the inlet of the new 48" pipe to minimize increases in flow rate to the extent practicable at study point SP1000 during the 25 year storm event.

The receiving channel at SP1000 is the main stem of the Cape Neddick River, immediately downstream of twin 8-foot by 8-foot box culverts. These culverts convey runoff from a watershed in excess of 2,130 acres (3.26 square miles), including the areas tributary to and controlled by the Chases Pond Dam. The total area tributary to SP 1000 is in excess of 2,400 acres. The removal of the 18" culvert

and associated ditching affect the drainage pattern of less than 40 acres, or 1.7% of the overall watershed.

The runoff at SP100 during the 25-year storm is calculated to increase from 440.4cfs to 452.1 cfs from pre-development to post development conditions. This represents a 2.6% increase. The size of the upstream watershed, impoundments at Chases Pond Dam and the large wetlands west of the turnpike, indicates that the peak rate of runoff in the larger watershed will occur much later in a storm event and will not be coincident with the peak runoff from the area affected by project improvements. In addition, flows from the majority of the watershed (2,086 acres, 86%) are controlled by the Chases Pond Dam. As such, the operation of the dam has a significant impact on runoff rates when compared to the proposed project modifications. We anticipate that any calculated increase in runoff at SP1000 due to proposed project improvements will be relatively small when compared to the potential impact of the dam operation. It is our opinion that this variation is within the tolerance of the modeling method's accuracy and project related impacts will not have a significant impact on the receiving waters in the Cape Neddick River during the 25-year storm event.

D. Highway Closed Drainage System

Appendix 5: *Highway Closed Drainage System Watershed Plans and Calculations* includes watershed plans, pipe capacity analysis and pavement spread calculations for the proposed closed drainage system.

The closed drainage system has been sized to convey the 10 year storm without reaching full flow capacity, with a minimum pipe diameter specified of 15-inches for all proposed pipes. Several existing closed drainage networks were retained based on discussions with the Maine Turnpike Authority and their preference to not create a cross trench within the high speed ORT lane if feasible. The results of the closed drainage analysis are contained in Appendix 4.

8. Stormwater Quality Treatment Analysis

A. Linear Portion of the Project Associated with an Existing Travel Corridor (Highway Closed Drainage System)

The development has been designed to provide water quality treatment meeting the General Standards for a linear portion of a project.

The new impervious area created within the existing travel corridor, is partially offset by the removal of approximately 5 acres of existing impervious area at Mile 7.3, including the administrative building, administrative building access driveway, and toll lanes. In addition to the pavement removal, Underdrained Vegetated Soil Filters have been designed to treat runoff from portions of the corridor.

Table 6 – Linear Portion Associated with an Existing Travel Corridor		
	Impervious Area (acre)	Percent of Proposed Imp. Area Treated
Total Proposed Impervious	14.21	100%
Removal	5.07	35.7%
USF-1	0.30	2.1%
USF-2	0.44	3.1%
USF-3	0.99	7.0%
USF-4	0.74	5.2%
USF-5	0.61	4.3%
USF-7	0.38	2.7%
USF-8	1.04	7.3%
USF-9	1.10	7.8%
Total Mitigated Impervious	10.67	75.1%

As can be seen in the table above, the design of the linear portion of the project associated within the existing travel corridor has been designed to meet the General Standards for a linear portion of a project by providing treatment and mitigation for greater than 75% of the newly created impervious area associated with the travel corridor.

**B. Linear Portion of the Project Not Associated with an Existing Travel Corridor
(Administrative Building Access Driveway)**

To achieve the required water quality treatment requirements for the administrative building access driveway, roadside buffers and stoned bermed buffers are proposed. Portions of the access driveway are also treated in the Administrative Building treatment system underdrain soil filter.

The locations of proposed buffers are identified in Appendix 1. Buffer sizing calculations are attached in Appendix 2.

The development has been designed to provide water quality treatment through implementation of approved BMP's which provide treatment for 79% of the access driveway's impervious area and 85.5% of the access driveway's developed area. The proposed treatment provided exceeds the required treatment levels of 75% and 50%, respectively, for the linear portion of the project in accordance with MaineDEP Chapter 500, Section 4.C.(5)(c) amended date August 2015.

C. Non Linear Portion of the Project (Administrative Building and Parking Lot)

To achieve the required water quality treatment for the non-linear portion of the project, two underdrain soil filters (USF-6 and USF-7) are proposed. This treatment measure has been designed and sized in accordance with the current Maine DEP Stormwater Best Management Practices handbook. Water Quality Volumes, BMP sizing volume calculations, and other supporting calculations are attached in Appendix 3.

The Administrative Building project site that is not associated with an existing travel corridor comprises a total of approximately 32.6 acres. Approximately 0.6 acres or 2% of the site is developed.

The development has been designed to provide water quality treatment through implementation of approved BMP's which provides treatment for 96.7% of the impervious area and 85.9% of the developed area, exceeding the required treatment levels.

9. Conclusions

The proposed development has been designed to address stormwater management requirements as identified in the State of Maine Site Location of Development Act General Permit for the Maine Turnpike Authority (General Permit), which requires treatment of a linear portion of a project within an existing corridor, to the greatest extent practicable. The linear portion of the proposed not within an existing travel corridor and the non-linear portion of the project have been designed to meet the stormwater standards of Chapter 500, as last updated August 2015. This analysis results in 75.5% treatment of impervious area of the linear portion within the existing corridor, 79% treatment of impervious area for linear portion of the project not within the existing corridor and 96.7% treatment of non-linear impervious area.

The stormwater water quantity analysis performed to address the Flooding Standard indicates an increase in peak runoff rates in the post development condition of 12 cfs (25%) at SP500 in the 25 year storm event. The increase in flow at this location is due to minor changes in the outfall locations of the highway closed drainage system necessitated by the highway widening. The post development tributary area to this point of analysis has been reduced to the greatest extent practical while providing safe conveyance and discharge of the closed drainage system within the Turnpike right of way. The velocities with the receiving channel were evaluated during 10-year storm event to confirm the velocities do not exceed the permissible velocities for the location's soil type and vegetative cover. The peak velocity during the 10-year storm event was calculated to be 3.25 fps, which is less than the permissible 3.5 fps for vegetated Lyman soil.

The stormwater quantity analysis indicates an increase in peak runoff rates in the post development condition of 11.6 cfs (2.2%) at study point SP1000 during the 25 year storm event.

The receiving channel at SP1000 is the main stem of the Cape Neddick River, immediately down stream of twin 8-foot by 8-foot box culverts crossing the turnpike. Project modifications affecting the flow rate at SP1000 include the removal of an existing 18" culvert at STA 365+25 and the installation of a new 48" culvert at STA 374+50.

The Cape Neddick River culverts at SP1000 convey runoff from a watershed in excess of 2,400 acres including 2,100 acres (3.28 square miles) impounded by Chases Pond Dam. The removal of the 18" culvert and associated ditching affect the drainage pattern of less than 40 acres, or 1.7% of the overall watershed.

The installation of the proposed 48" culvert at STA 374+25 has been designed to mitigate potential flooding based on changes in design rainfall events. In August 2015, the 24 hour, 25-yr design rainfall depth for York County increased (15%) to 6.2" and the 100 year rainfall depth increased 32% to 8.7". Using the current rainfall depths, the existing conditions model indicates potential flooding of portions of the York Water District's treatment facility during the 25 year storm. The proposed culvert and its inlet structure will provide additional capacity to protect the facility in storms up to a 100 year event while mitigating to the extent practicable increases in runoff during a 25 year event.

The size of the upstream watershed and impoundments at Chases Pond Dam and in large wetlands west of the turnpike implies that the peak rate of runoff in the larger watershed will occur later in a storm event and will not be coincident with the peak runoff from the area affected by the project. As such, we anticipate that the small calculated increase in runoff at SP1000 will not have a measurable impact to the receiving waters in the Cape Neddick River during the 25-year storm event.

Prepared by,

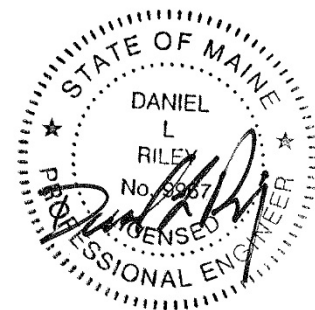
SEBAGO TECHNICS, INC.



Paul D. Ostrowski, P.E.
Project Engineer



Daniel L. Riley, P.E.
Senior Project Manager



October 14, 2016

DLR/PDO:pdo/jf

Appendix 1

Watershed Plans and Stormwater Treatment Plans

ATTACHED SEPARATELY

Appendix 2

Stormwater Quality Calculations

Table 1: MDEP GENERAL STANDARD CALCULATIONS
MTA Administrative Building Access Driveway
Job #14181

LINEAR PORTION OF A PROJECT

AREA ID	Start Sta	End Sta (Ac.)	Roadway Side	Length	Lane Width	Shoulder/Ditch Width	NEW ONSITE IMPERVIOUS AREA (SF.)	NEW ONSITE LANDSCAPED AREA (SF.)	NEW DEVELOPED AREA (SF.)	TREATMENT PROVIDED?	IMPERVIOUS AREA TREATED* (Ac.)	LANDSCAPED AREA TREATED* (Ac.)	DEVELOPED AREA TREATED* (Ac.)	TREATMENT BMP	Reference Table # from Chapter 500 Appendix F Updated August 2015
UNTREATED	20+12.00	20+40.00	LEFT	28	10	20	280	560	840	NO	0.000	0.000	0.000	UNTREATED	
BUFFER A	20+40.00	21+75.00	LEFT	135	10	20	1,350	2,700	4,050	YES	0.031	0.062	0.093	BUFFER (ROADSIDE)	TABLE 7: WOODED, ONE TRAVEL LANE, 50' total (25' meadow inslope, 25' wooded TOS)
BUFFER B	21+75.00	22+65.00	LEFT	90	10	15	900	1,350	2,250	YES	0.021	0.031	0.052	BUFFER (STONE BERMED)	TABLE 6: WOODED, D Soil, 9-15%, ASSUME 35' BERM SPREADER
BUFFER C	22+65.00	23+55.00	LEFT	90	10	35	900	3,150	4,050	YES	0.021	0.072	0.093	BUFFER (ROADSIDE)	TABLE 7: WOODED, ONE TRAVEL LANE, 50' total (30' meadow inslope, 20' wooded TOS)
UNTREATED	23+55.00	24+55.00	LEFT	100	10	15	1,000	1,500	2,500	NO	0.000	0.000	0.000	UNTREATED	
BUFFER D	24+55.00	25+77.00	LEFT	122	10	50	1,220	6,100	7,320	YES	0.028	0.140	0.168	BUFFER (ROADSIDE)	TABLE 7: WOODED, ONE TRAVEL LANE, 50' total (50' meadow inslope)
UNTREATED	25+77.00	26+73.00	LEFT	96	10	15	960	1,440	2,400	NO	0.000	0.000	0.000	UNTREATED	
BUFFER E	26+73.00	27+56.00	LEFT	83	10	30	830	2,490	3,320	YES	0.019	0.057	0.076	BUFFER (ROADSIDE)	TABLE 7: WOODED, ONE TRAVEL LANE, 50' total (30' meadow inslope, 20' wooded TOS)
BMP TREAT	27+56.00	32+78.00	LEFT	522	10	0	5,220	0	5,220	YES	0.120	0.000	0.120	CONSTRUCTED BMP	Underdrain Soil Filter, USF-6
BMP TREAT	27+56.00	32+78.00	LEFT	522	0	50	0	26,100	26,100	YES	0.000	0.599	0.599	CONSTRUCTED BMP	Underdrain Soil Filter, USF-6
							xref								
UNTREATED	20+12.00	21+25.00	RIGHT	113	10	30	1,130	3,390	4,520	NO	0.000	0.000	0.000	UNTREATD	
BUFFER B	21+25.00	24+43.00	RIGHT	318	10	40	3,180	12,720	15,900	YES	0.073	0.292	0.365	BUFFER (STONE BERMED)	TABLE 6: WOODED, D Soil, 9-15%, ASSUME 35' BERM SPREADER
UNTREAT	24+43.00	26+38.00	RIGHT	195	10	30	1,950	5,850	7,800	NO	0.000	0.000	0.000	UNTREATED	
BMP TREAT	26+38.00	32+78.00	RIGHT	640	10	0	6,400	0	6,400	YES	0.147	0.000	0.147	CONSTRUCTED BMP	Underdrain Soil Filter, USF-6
BMP TREAT	26+38.00	32+78.00	RIGHT	640	0	50	0	32,000	32,000	YES	0.000	0.735	0.735	CONSTRUCTED BMP	Underdrain Soil Filter, USF-6
TOTAL (SF.)				2,532.000			25,320.000	99,350.000	124,670.000		0.459	1.988	2.447		

TOTAL NEW IMPERVIOUS AREA (Ac.)	0.581	TOTAL DEVELOPED AREA (Ac.)	2.862
TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (Ac.)	0.459	TOTAL DEV. AREA RECEIVING TREATMENT (Ac.)	2.447
% OF IMPERVIOUS AREA RECEIVING TREATMENT	78.99%	% OF DEV. AREA RECEIVING TREATMENT	85.51%
MINIMUM TREATMENT REQUIRED*	75.00%	MINIMUM TREATMENT REQUIRED*	50.00%
EXCEEDS MINIMUM?	YES	EXCEEDS MINIMUM?	YES

*BASED ON LINEAR PORTION OF THE PROJECT PURSUANT TO MAINEDEP CHAPTER 500, SECTION 4.C.(5).(c) REQUIRING 75% TREATMENT FOR IMPERVIOUS AREA AND NO LESS THAN 50% OF DEVELOPED AREA.

Table 1: MDEP GENERAL STANDARD CALCULATIONS
MTA Administrative Building Access Driveway
Job #14181

NON-LINEAR PORTION OF A PROJECT

AREA ID	NON-LINEAR WATERSHED SIZE (SF.)	NEW NON-LINEAR IMPERVIOUS AREA (SF.)	NEW NON-LINEAR LANDSCAPED AREA (SF.)	NEW NON-LINEAR DEVELOPED AREA (Ac.)	NON-LINEAR TREATMENT PROVIDED?	NON-LINEAR IMPERVIOUS AREA TREATED* (Ac.)	NON-LINEAR LANDSCAPED AREA TREATED* (Ac.)	NON-LINEAR DEVELOPED AREA TREATED* (Ac.)	TREATMENT BMP
USF-6	33,400.000	16,562.000	16,838.000	0.767	YES	0.380	0.387	0.767	UNDERDRAIN SOIL FILTER USF-6
USF-7	16,463.000	1,569.000	14,894.000	0.378	YES	0.036	0.342	0.378	UNDERDRAIN SOIL FILTER USF-7
UNTREATED	8,180.000	616.000	7,564.000	0.188	NO	0.000	0.000	0.000	NONE
TOTAL (Ac.)	58,043.000	18,747.000	39,296.000	1.332		0.416	0.728	1.145	

TOTAL NEW IMPERVIOUS AREA REQUIRING TREATMENT (Ac.)	0.430	TOTAL DEVELOPED AREA REQUIRING TREATMENT (Ac.)	1.332
TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (Ac.)	0.416	TOTAL DEV. AREA RECEIVING TREATMENT (Ac.)	1.145
% OF IMPERVIOUS AREA RECEIVING TREATMENT	96.71%	% OF DEV. AREA RECEIVING TREATMENT	85.91%
MINIMUM TREATMENT REQUIRED	95.00%	MINIMUM TREATMENT REQUIRED	75.00%
EXCEEDS MINIMUM?	YES	EXCEEDS MINIMUM?	YES

SEBAGO TECHNICS, INC.

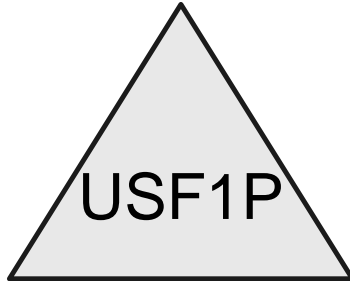
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JOB 14181 - MTA York Toll Plaza
 SHEET NO. 1 OF 1
 CALCULATED BY GJH DATE 9/8/2016
 FILE NAME 14181 WQV CALCS_10-14-16.xlsx PRINT DATE 10/14/2016

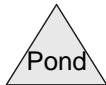
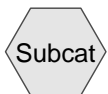
UNDERDRAINED SOIL FILTER									
Task:	Calculate water quality volume per MDEP chapter 500 regulations								
References	1. Maine DEP Chapter 500, Section 4.B.(2)(b) a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area" 2. Maine DEP Best Management Practices Stormwater Manual, Section 7.1 a. "surface should represent 5% of impervious area and 2% of landscaped area"								
Tributary to Underdrained Filter	UDF#1_STA 263+00 LEFT, OLD ADMIN BUILDING								
Landscaped Area	15,094.00	SF		0.347	ac				
Impervious Area	12,835.00	SF		0.295	ac				
Minimum Surface Area									
Required	(2% X Landscaped + 5% X Impervious)								
Total Landscaped Area	15,094.00	SF	Area	301.9	SF				
Total Impervious Area	12,835.00	SF	Area	641.8	SF				
	Required Minimum Surface Area			943.6	SF				
	Provided Surface Area			2,512.0	SF			266.21%	
Channel Protection Volume (CPV)									
Required	(0.4" X Landscaped + 1.0" X Impervious)								
Landscaped Area	15,094.00	SF	Volume	503.1					
Impervious Area	12,835.00	SF	Volume	1,069.6					
	CPV Required			1,572.7	CF	0.036	AF		
	Provided CPV			1,938.0	CF	(Elevation 43.00 to 43.50)		123.23%	
Sediment Pre-Treatment									
	Per Reference 2, Chapter 7.13		"Pretreatment devices shall be provided to minimize discharge of sediment to the soil filter"						
Annual Sediment Load:	50 cubic feet per acre per year of sanded area								
Area to be sanded:	12,835.00	SF							
Sediment Volume	15	CF							
Provided		CF	10-foot wide grass shoulder						



STA261+00 TO
STA264+50



STA263 FILTER
TRENCH



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.347	80	>75% Grass cover, Good, HSG D (USF1)
0.295	98	MTA CORRIDOR (USF1)
0.641	88	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment USF1: STA261+00 TO STA264+50

Runoff Area=27,929 sf 45.96% Impervious Runoff Depth=0.67"
Tc=6.0 min CN=88 Runoff=0.50 cfs 0.036 af

Pond USF1P: STA263 FILTER TRENCH

Peak Elev=43.27' Storage=875 cf Inflow=0.50 cfs 0.036 af
Primary=0.02 cfs 0.036 af Secondary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.036 af

Total Runoff Area = 0.641 ac Runoff Volume = 0.036 af Average Runoff Depth = 0.67"
54.04% Pervious = 0.347 ac 45.96% Impervious = 0.295 ac

Summary for Subcatchment USF1: STA261+00 TO STA264+50

Runoff = 0.50 cfs @ 12.09 hrs, Volume= 0.036 af, Depth= 0.67"

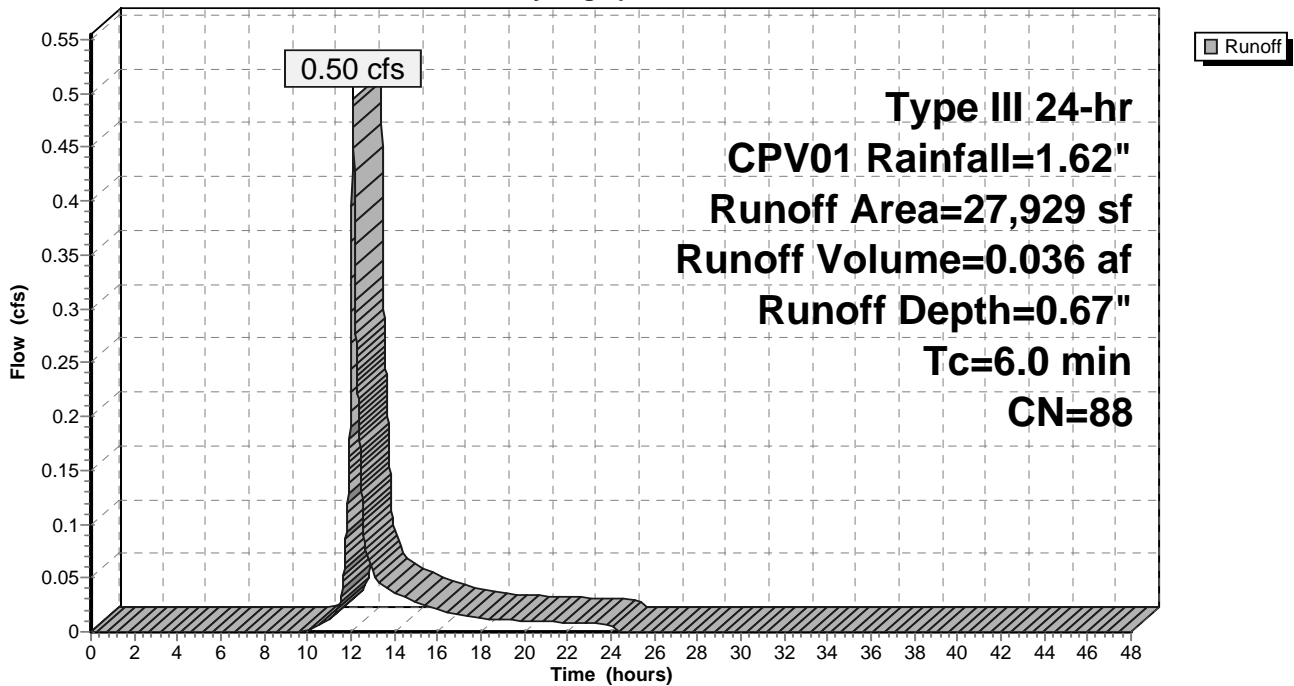
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CPV01 Rainfall=1.62"

Area (sf)	CN	Description
15,094	80	>75% Grass cover, Good, HSG D
* 12,835	98	MTA CORRIDOR
27,929	88	Weighted Average
15,094		54.04% Pervious Area
12,835		45.96% Impervious Area

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

Subcatchment USF1: STA261+00 TO STA264+50

Hydrograph



Summary for Pond USF1P: STA263 FILTER TRENCH

Inflow Area = 0.641 ac, 45.96% Impervious, Inflow Depth = 0.67" for CPV01 event
 Inflow = 0.50 cfs @ 12.09 hrs, Volume= 0.036 af
 Outflow = 0.02 cfs @ 15.93 hrs, Volume= 0.036 af, Atten= 96%, Lag= 230.3 min
 Primary = 0.02 cfs @ 15.93 hrs, Volume= 0.036 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 43.27' @ 15.93 hrs Surf.Area= 3,981 sf Storage= 875 cf

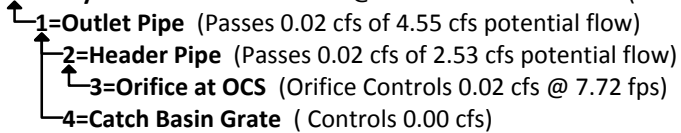
Plug-Flow detention time= 452.2 min calculated for 0.036 af (100% of inflow)
 Center-of-Mass det. time= 452.2 min (1,298.9 - 846.7)

Volume	Invert	Avail.Storage	Storage Description
#1	43.00'	5,240 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

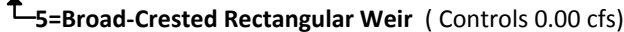
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.00	2,512	0	0
44.00	7,967	5,240	5,240

Device	Routing	Invert	Outlet Devices
#1	Primary	40.57'	12.0" Round Outlet Pipe L= 81.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 40.57' / 40.16' S= 0.0051 '/ Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	40.67'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	40.67'	0.7" Vert. Orifice at OCS C= 0.600
#4	Device 1	43.40'	1.2" x 1.2" Horiz. Catch Basin Grate X 49.00 C= 0.600 Limited to weir flow at low heads
#5	Secondary	43.60'	10.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=0.02 cfs @ 15.93 hrs HW=43.27' (Free Discharge)

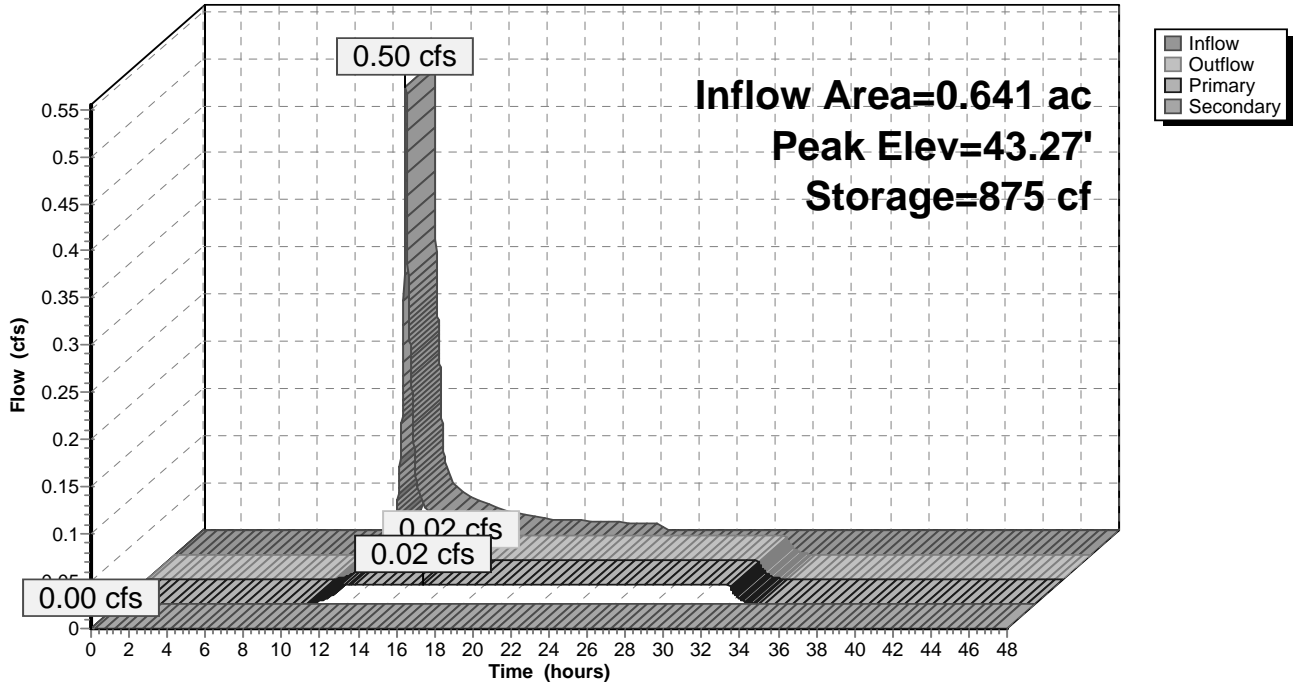


Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=43.00' (Free Discharge)



Pond USF1P: STA263 FILTER TRENCH

Hydrograph



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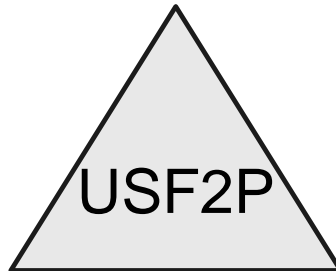
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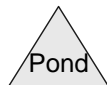
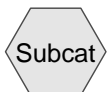
UNDERDRAINED SOIL FILTER									
Task:	Calculate water quality volume per MDEP chapter 500 regulations								
References	1. Maine DEP Chapter 500, Section 4.B.(2)(b) a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area" 2. Maine DEP Best Management Practices Stormwater Manual, Section 7.1 a. "surface should represent 5% of impervious area and 2% of landscaped area"								
Tributary to Underdrained Filter	UDF#2, STA 267+00 LEFT								
Landscaped Area	24,778.00	SF		0.569	ac				
Impervious Area	18,946.00	SF		0.435	ac				
Minimum Surface Area									
Required	(2% X Landscaped + 5% X Impervious)								
Total Landscaped Area	24,778.00	SF	Area	495.6	SF				
Total Impervious Area	18,946.00	SF	Area	947.3	SF				
	Required Minimum Surface Area			1,442.9	SF				
	Provided Surface Area			3,258.0	SF			225.80%	
Channel Protection Volume (CPV)									
Required	(0.4" X Landscaped + 1.0" X Impervious)								
Landscaped Area	24,778.00	SF	Volume	825.9					
Impervious Area	18,946.00	SF	Volume	1,578.8					
	CPV Required			2,404.8	CF	0.055	AF		
	Provided CPV			2,430.0	CF	(Elevation 41.00 to 41.50)		101.05%	
Sediment Pre-Treatment									
	Per Reference 2, Chapter 7.13		"Pretreatment devices shall be provided to minimize discharge of sediment to the soil filter"						
Annual Sediment Load:	50 cubic feet per acre per year of sanded area								
Area to be sanded:	18,946.00	SF							
Sediment Volume	22	CF							
Provided	52	CF	6 Inch Deep Forebay	with area of	104	sf			



STA264+50 to
STA269+50



STA267 FILTER
TRENCH



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.569	80	>75% Grass cover, Good, HSG D (USF2)
0.435	98	MTA CORRIDOR (USF2)
1.004	88	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment USF2: STA264+50 to STA269+50

Runoff Area=43,724 sf 43.33% Impervious Runoff Depth=0.65"
Tc=6.0 min CN=88 Runoff=0.76 cfs 0.055 af

Pond USF2P: STA267 FILTER TRENCH

Peak Elev=42.33' Storage=1,411 cf Inflow=0.76 cfs 0.055 af
Primary=0.03 cfs 0.055 af Secondary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.055 af

Total Runoff Area = 1.004 ac Runoff Volume = 0.055 af Average Runoff Depth = 0.65"
56.67% Pervious = 0.569 ac 43.33% Impervious = 0.435 ac

Summary for Subcatchment USF2: STA264+50 to STA269+50

Runoff = 0.76 cfs @ 12.09 hrs, Volume= 0.055 af, Depth= 0.65"

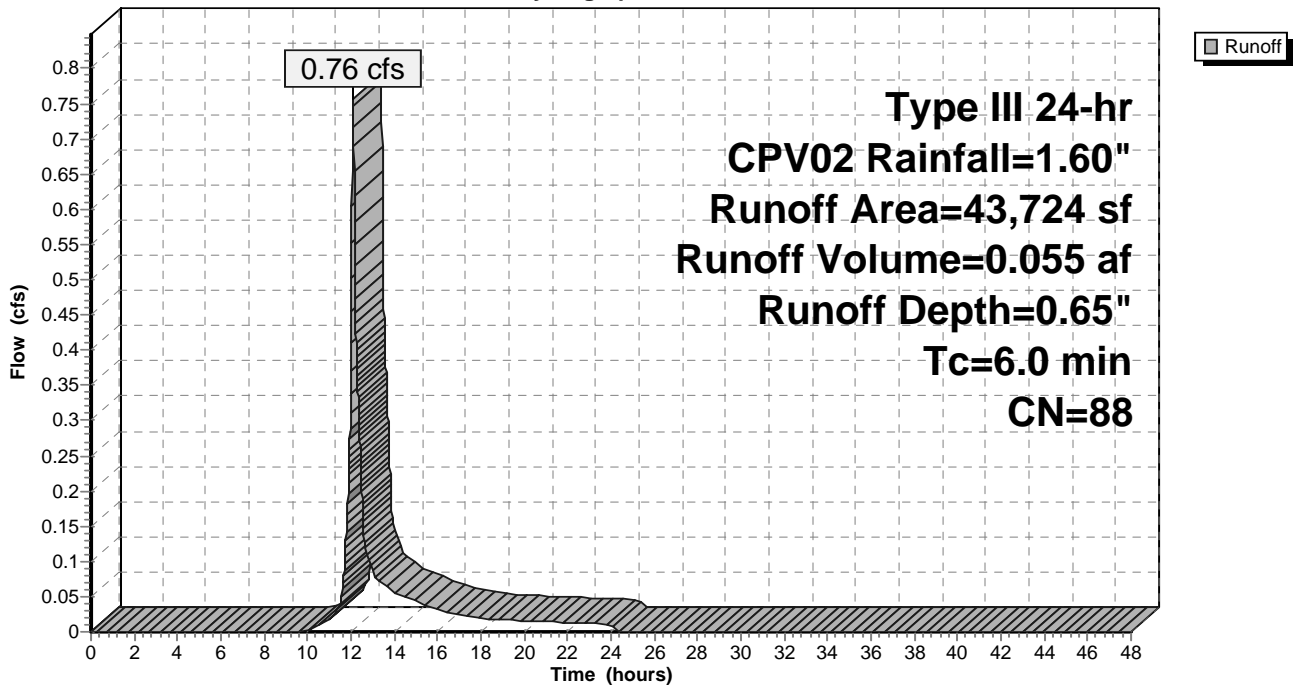
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CPV02 Rainfall=1.60"

Area (sf)	CN	Description
24,778	80	>75% Grass cover, Good, HSG D
* 18,946	98	MTA CORRIDOR
43,724	88	Weighted Average
24,778		56.67% Pervious Area
18,946		43.33% Impervious Area

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

Subcatchment USF2: STA264+50 to STA269+50

Hydrograph



Summary for Pond USF2P: STA267 FILTER TRENCH

Inflow Area = 1.004 ac, 43.33% Impervious, Inflow Depth = 0.65" for CPV02 event
 Inflow = 0.76 cfs @ 12.09 hrs, Volume= 0.055 af
 Outflow = 0.03 cfs @ 16.53 hrs, Volume= 0.055 af, Atten= 96%, Lag= 266.3 min
 Primary = 0.03 cfs @ 16.53 hrs, Volume= 0.055 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 42.33' @ 16.53 hrs Surf.Area= 5,312 sf Storage= 1,411 cf

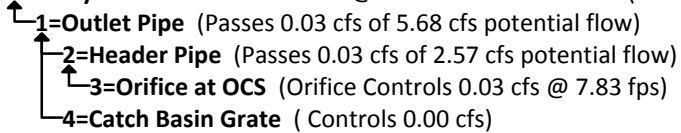
Plug-Flow detention time= 548.9 min calculated for 0.055 af (100% of inflow)
 Center-of-Mass det. time= 549.0 min (1,396.3 - 847.3)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	6,361 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
42.00	3,358	0	0
43.00	9,363	6,361	6,361

Device	Routing	Invert	Outlet Devices
#1	Primary	39.15'	12.0" Round Outlet Pipe L= 62.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 39.15' / 38.53' S= 0.0100'/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	39.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	39.65'	0.8" Vert. Orifice at OCS C= 0.600
#4	Device 1	42.40'	1.2" x 1.2" Horiz. Catch Basin Grate X 49.00 C= 0.600 Limited to weir flow at low heads
#5	Secondary	42.60'	10.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=0.03 cfs @ 16.53 hrs HW=42.33' (Free Discharge)

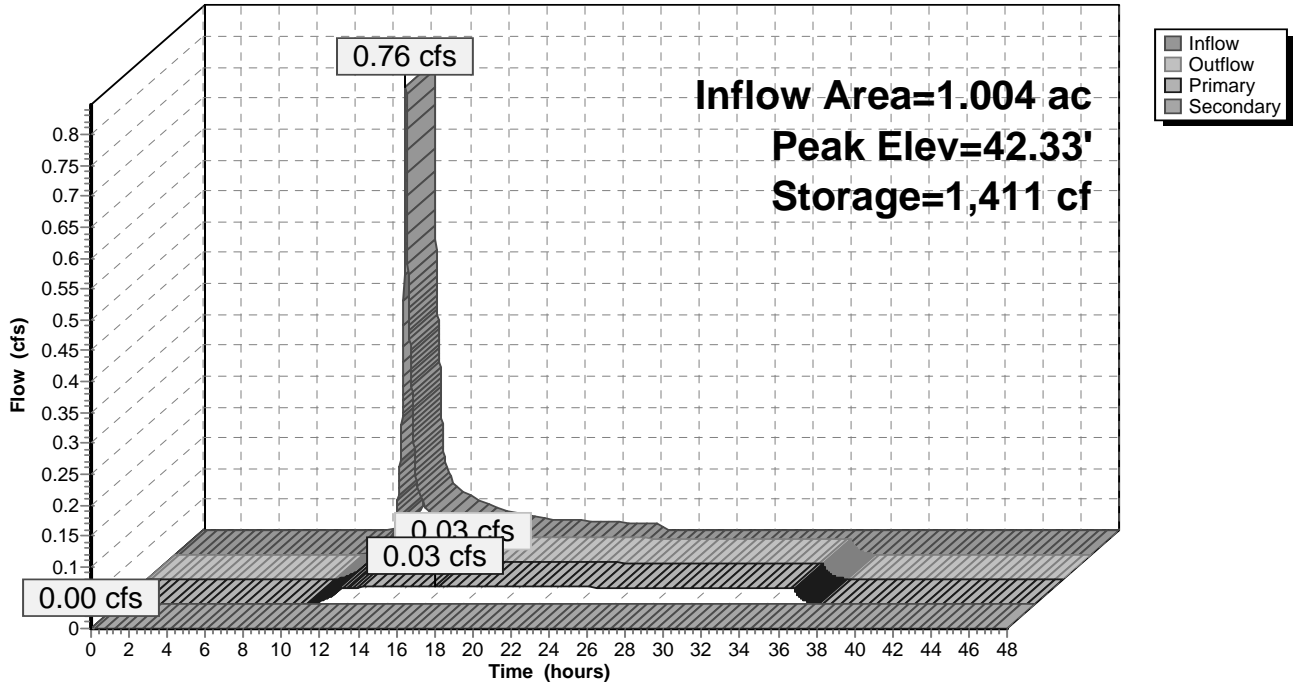


Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)



Pond USF2P: STA267 FILTER TRENCH

Hydrograph



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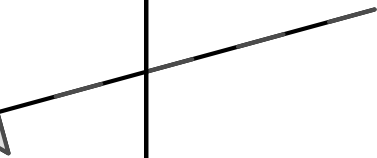
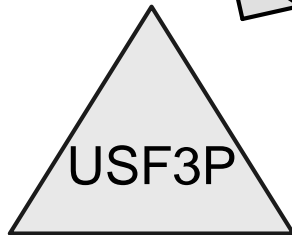
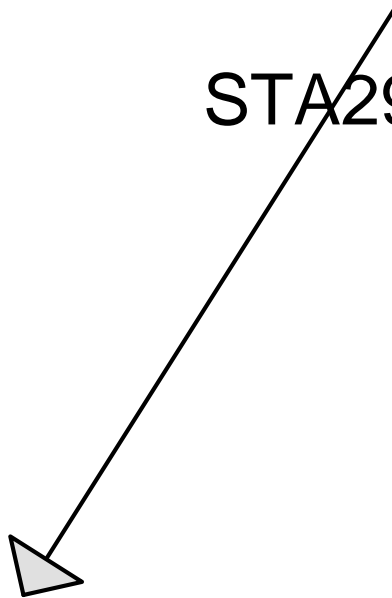
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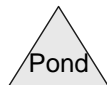
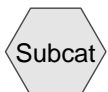
UNDERDRAINED SOIL FILTER										
Task:	Calculate water quality volume per MDEP chapter 500 regulations									
References	1. Maine DEP Chapter 500, Section 4.B.(2)(b) a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area" 2. Maine DEP Best Management Practices Stormwater Manual, Section 7.1 a. "surface should represent 5% of impervious area and 2% of landscaped area"									
Tributary to Underdrained Filter	UDF#3, STA291+00 LEFT									
Landscaped Area	72,500.00	SF		1.664	ac					
Impervious Area	43,180.00	SF		0.991	ac					
Minimum Surface Area										
Required	(2% X Landscaped + 5% X Impervious)									
Total Landscaped Area	72,500.00	SF	Area	1,450.0	SF					
Total Impervious Area	43,180.00	SF	Area	2,159.0	SF					
Required Minimum Surface Area				3,609.0	SF					
Provided Surface Area				3,630.0	SF	100.58%				
Channel Protection Volume (CPV)										
Required	(0.4" X Landscaped + 1.0" X Impervious)									
Landscaped Area	72,500.00	SF	Volume	2,416.7						
Impervious Area	43,180.00	SF	Volume	3,598.3						
CPV Required				6,015.0	CF	0.138	AF			
Provided CPV				6,545.0	CF	(Elevation 83.00 to 84.50)		108.81%		
Sediment Pre-Treatment										
Per Reference 2, Chapter 7.13		"Pretreatment devices shall be provided to minimize discharge of sediment to the soil filter"								
Annual Sediment Load:	50 cubic feet per acre per year of sanded area									
Area to be sanded:	43,180.00	SF								
Sediment Volume	50	CF								
Provided	205	CF	6 Inch Deep Forebay	with area of	409	sf				



STA291+00 LEFT



STA291+00 LEFT UDF



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.664	80	>75% Grass cover, Good, HSG D (USF3)
0.991	98	MTA CORRIDOR (USF3)
2.656	87	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment USF3: STA291+00 LEFT

Runoff Area=115,680 sf 37.33% Impervious Runoff Depth=0.63"
Tc=6.0 min CN=87 Runoff=1.91 cfs 0.139 af

Pond USF3P: STA291+00 LEFT UDF

Peak Elev=83.85' Storage=3,427 cf Inflow=1.91 cfs 0.139 af
Primary=0.08 cfs 0.139 af Secondary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.139 af

Total Runoff Area = 2.656 ac Runoff Volume = 0.139 af Average Runoff Depth = 0.63"
62.67% Pervious = 1.664 ac 37.33% Impervious = 0.991 ac

Summary for Subcatchment USF3: STA291+00 LEFT

Runoff = 1.91 cfs @ 12.09 hrs, Volume= 0.139 af, Depth= 0.63"

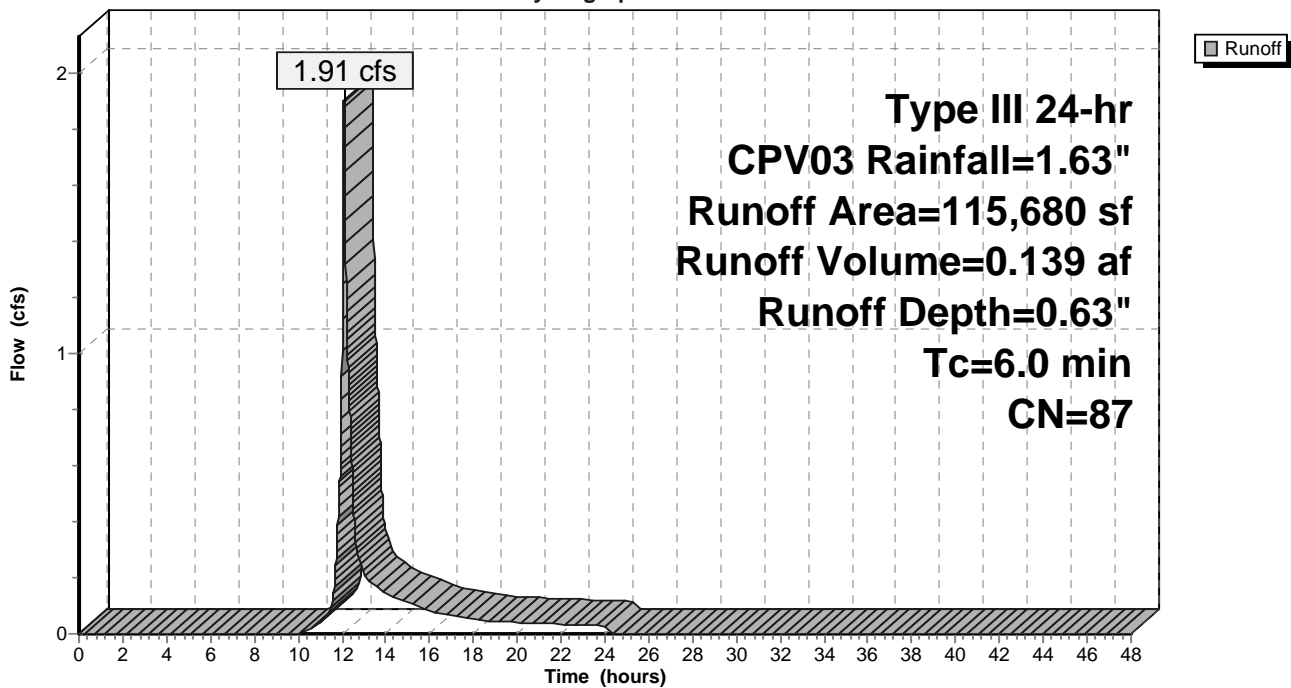
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CPV03 Rainfall=1.63"

Area (sf)	CN	Description
72,500	80	>75% Grass cover, Good, HSG D
* 43,180	98	MTA CORRIDOR
115,680	87	Weighted Average
72,500		62.67% Pervious Area
43,180		37.33% Impervious Area

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

Subcatchment USF3: STA291+00 LEFT

Hydrograph



Summary for Pond USF3P: STA291+00 LEFT UDF

Inflow Area = 2.656 ac, 37.33% Impervious, Inflow Depth = 0.63" for CPV03 event
 Inflow = 1.91 cfs @ 12.09 hrs, Volume= 0.139 af
 Outflow = 0.08 cfs @ 16.05 hrs, Volume= 0.139 af, Atten= 96%, Lag= 237.2 min
 Primary = 0.08 cfs @ 16.05 hrs, Volume= 0.139 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

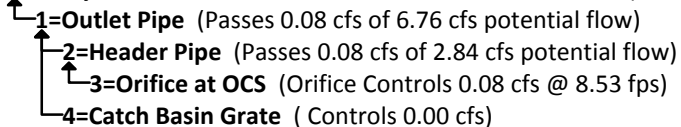
Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 83.85' @ 16.05 hrs Surf.Area= 4,472 sf Storage= 3,427 cf

Plug-Flow detention time= 476.7 min calculated for 0.139 af (100% of inflow)
 Center-of-Mass det. time= 476.7 min (1,328.1 - 851.4)

Volume	Invert	Avail.Storage	Storage Description
#1	83.00'	9,265 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
83.00	3,630	0	0
84.00	4,625	4,128	4,128
85.00	5,650	5,138	9,265

Device	Routing	Invert	Outlet Devices
#1	Primary	80.15'	12.0" Round Outlet Pipe L= 22.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 80.15' / 79.00' S= 0.0523 '/ Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	80.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	80.65'	1.3" Vert. Orifice at OCS C= 0.600
#4	Device 1	84.00'	1.2" x 1.2" Horiz. Catch Basin Grate X 49.00 C= 0.600 Limited to weir flow at low heads
#5	Secondary	84.50'	12.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=0.08 cfs @ 16.05 hrs HW=83.85' (Free Discharge)

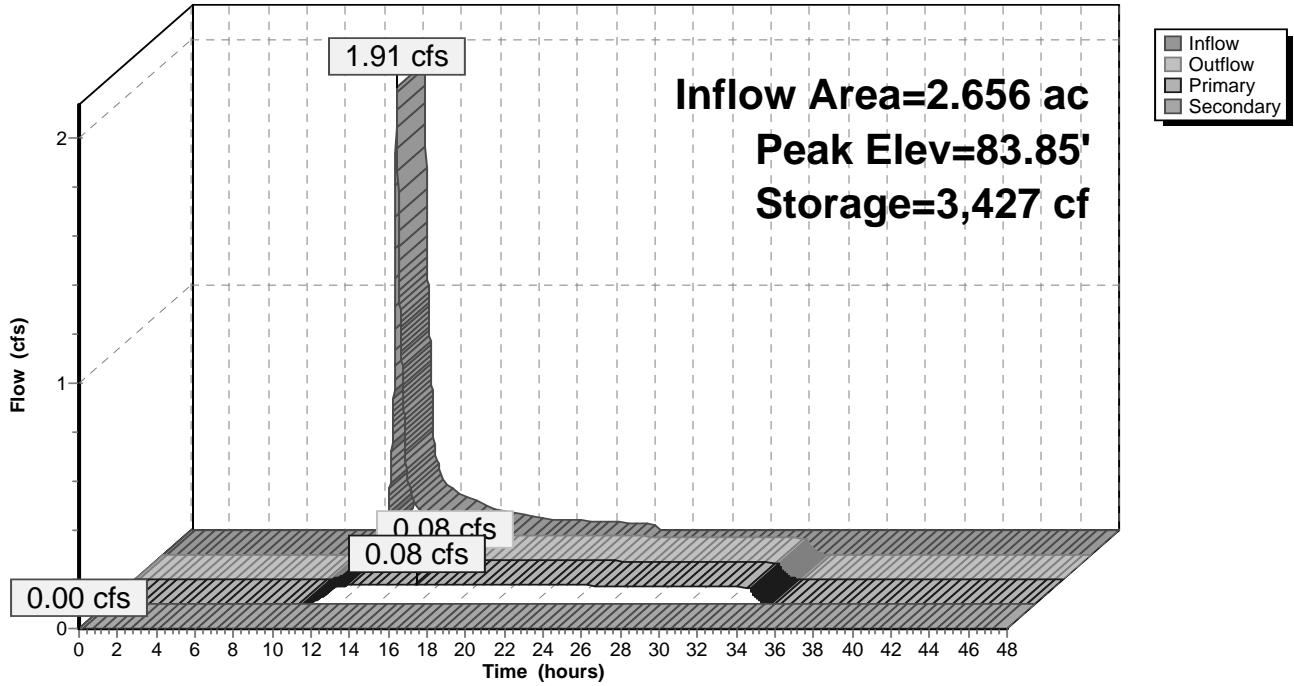


Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=83.00' (Free Discharge)



Pond USF3P: STA291+00 LEFT UDF

Hydrograph

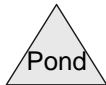
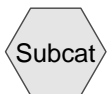
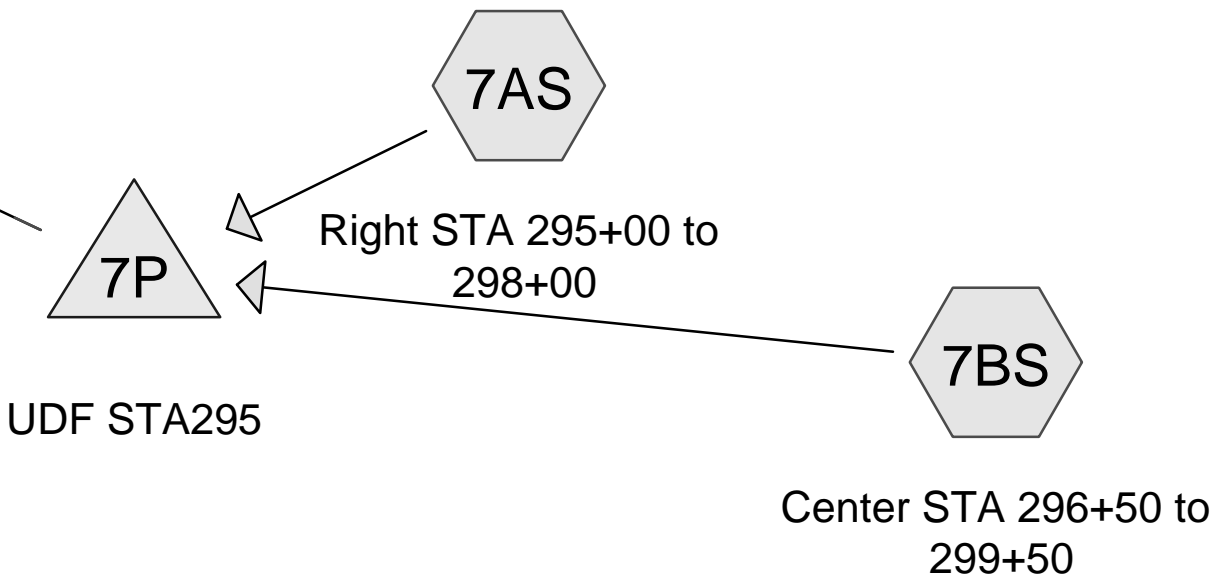


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UNDERDRAINED SOIL FILTER										
Task:	Calculate water quality volume per MDEP chapter 500 regulations									
References	1. Maine DEP Chapter 500, Section 4.B.(2)(b) a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area" 2. Maine DEP Best Management Practices Stormwater Manual, Section 7.1 a. "surface should represent 5% of impervious area and 2% of landscaped area"									
Tributary to Underdrained Filter	UDF#4, STA295+00									
Landscaped Area	38,930.00	SF		0.894	ac					
Impervious Area	32,089.00	SF		0.737	ac					
Minimum Surface Area										
Required	(2% X Landscaped + 5% X Impervious)									
Total Landscaped Area	38,930.00	SF	Area	778.6	SF					
Total Impervious Area	32,089.00	SF	Area	1,604.5	SF					
	Required Minimum Surface Area			2,383.1	SF					
	Provided Surface Area			3,057.0	SF	128.28%				
Channel Protection Volume (CPV)										
Required	(0.4" X Landscaped + 1.0" X Impervious)									
Landscaped Area	38,930.00	SF	Volume	1,297.7						
Impervious Area	32,089.00	SF	Volume	2,674.1						
	CPV Required			3,971.8	CF	0.091	AF			
	Provided CPV			6,086.0	CF	(Elevation 103.00 to 104.50)		153.23%		
Sediment Pre-Treatment										
	Per Reference 2, Chapter 7.13		"Pretreatment devices shall be provided to minimize discharge of sediment to the soil filter"							
Annual Sediment Load:	50 cubic feet per acre per year of sanded area									
Area to be sanded:	32,089.00	SF								
Sediment Volume	37	CF								
Provided	205	CF	6 Inch Deep Forebay	with area of	409	sf				



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.530	74	>75% Grass cover, Good, HSG C (7AS, 7BS)
0.364	65	Brush, Good, HSG C (7AS)
0.242	98	Paved parking, HSG C (7BS)
0.269	98	Unconnected pavement, HSG C (7AS)
1.404	80	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 7AS: Right STA 295+00 to 298+00

Runoff Area=46,170 sf 25.34% Impervious Runoff Depth=0.08"
Tc=6.0 min UI Adjusted CN=73 Runoff=0.03 cfs 0.007 af

Subcatchment 7BS: Center STA 296+50 to 299+50

Runoff Area=14,989 sf 70.24% Impervious Runoff Depth=0.60"
Tc=6.0 min CN=91 Runoff=0.24 cfs 0.017 af

Pond 7P: UDF STA295

Peak Elev=103.07' Storage=215 cf Inflow=0.24 cfs 0.024 af
Primary=0.07 cfs 0.024 af Secondary=0.00 cfs 0.000 af Outflow=0.07 cfs 0.024 af

Total Runoff Area = 1.404 ac Runoff Volume = 0.024 af Average Runoff Depth = 0.21"
63.65% Pervious = 0.894 ac 36.35% Impervious = 0.510 ac

Summary for Subcatchment 7AS: Right STA 295+00 to 298+00

Runoff = 0.03 cfs @ 12.39 hrs, Volume= 0.007 af, Depth= 0.08"

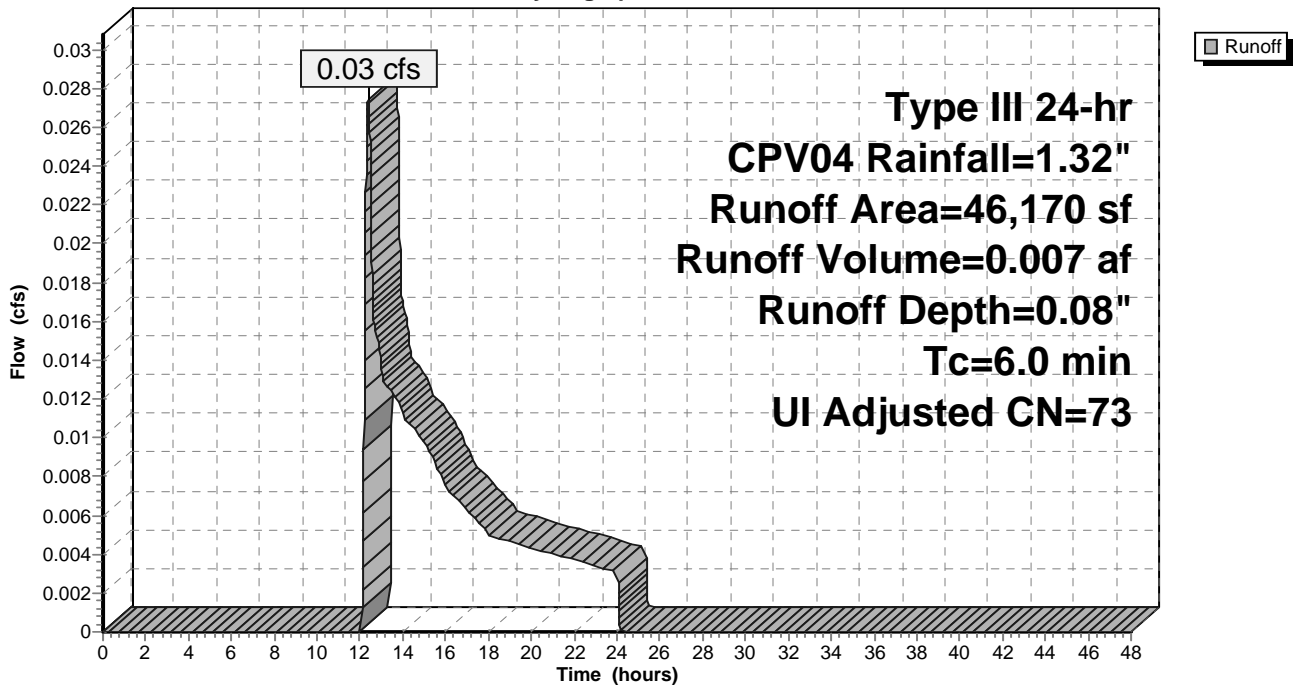
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CPV04 Rainfall=1.32"

Area (sf)	CN	Adj	Description
11,701	98		Unconnected pavement, HSG C
18,631	74		>75% Grass cover, Good, HSG C
15,838	65		Brush, Good, HSG C
46,170	77	73	Weighted Average, UI Adjusted
34,469			74.66% Pervious Area
11,701			25.34% Impervious Area
11,701			100.00% Unconnected

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

Subcatchment 7AS: Right STA 295+00 to 298+00

Hydrograph



Summary for Subcatchment 7BS: Center STA 296+50 to 299+50

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 0.017 af, Depth= 0.60"

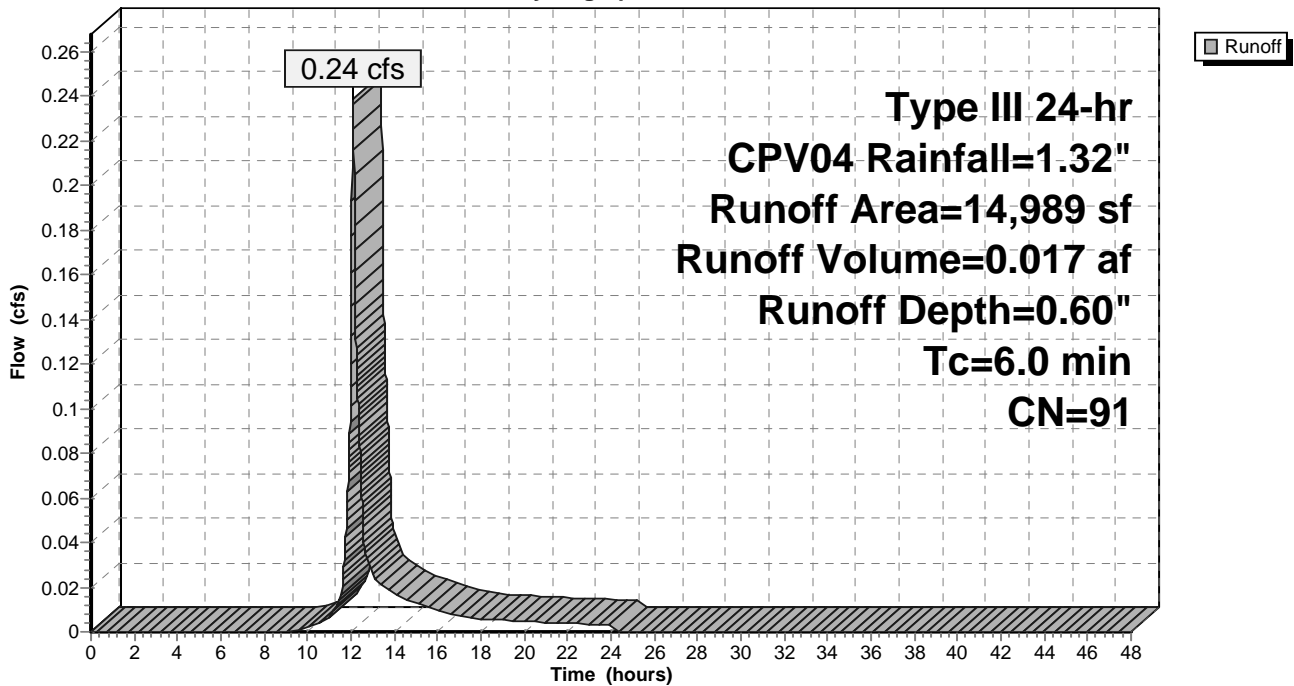
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CPV04 Rainfall=1.32"

Area (sf)	CN	Description
10,528	98	Paved parking, HSG C
4,461	74	>75% Grass cover, Good, HSG C
14,989	91	Weighted Average
4,461		29.76% Pervious Area
10,528		70.24% Impervious Area

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

Subcatchment 7BS: Center STA 296+50 to 299+50

Hydrograph



Summary for Pond 7P: UDF STA295

Inflow Area = 1.404 ac, 36.35% Impervious, Inflow Depth = 0.21" for CPV04 event
 Inflow = 0.24 cfs @ 12.09 hrs, Volume= 0.024 af
 Outflow = 0.07 cfs @ 12.55 hrs, Volume= 0.024 af, Atten= 72%, Lag= 27.7 min
 Primary = 0.07 cfs @ 12.55 hrs, Volume= 0.024 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 103.07' @ 12.55 hrs Surf.Area= 3,002 sf Storage= 215 cf

Plug-Flow detention time= 27.7 min calculated for 0.024 af (100% of inflow)
 Center-of-Mass det. time= 27.8 min (907.8 - 880.0)

Volume	Invert	Avail.Storage	Storage Description
#1	103.00'	9,698 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
103.00	2,952	0	0
104.00	3,639	3,296	3,296
105.00	4,383	4,011	7,307
105.50	5,183	2,392	9,698

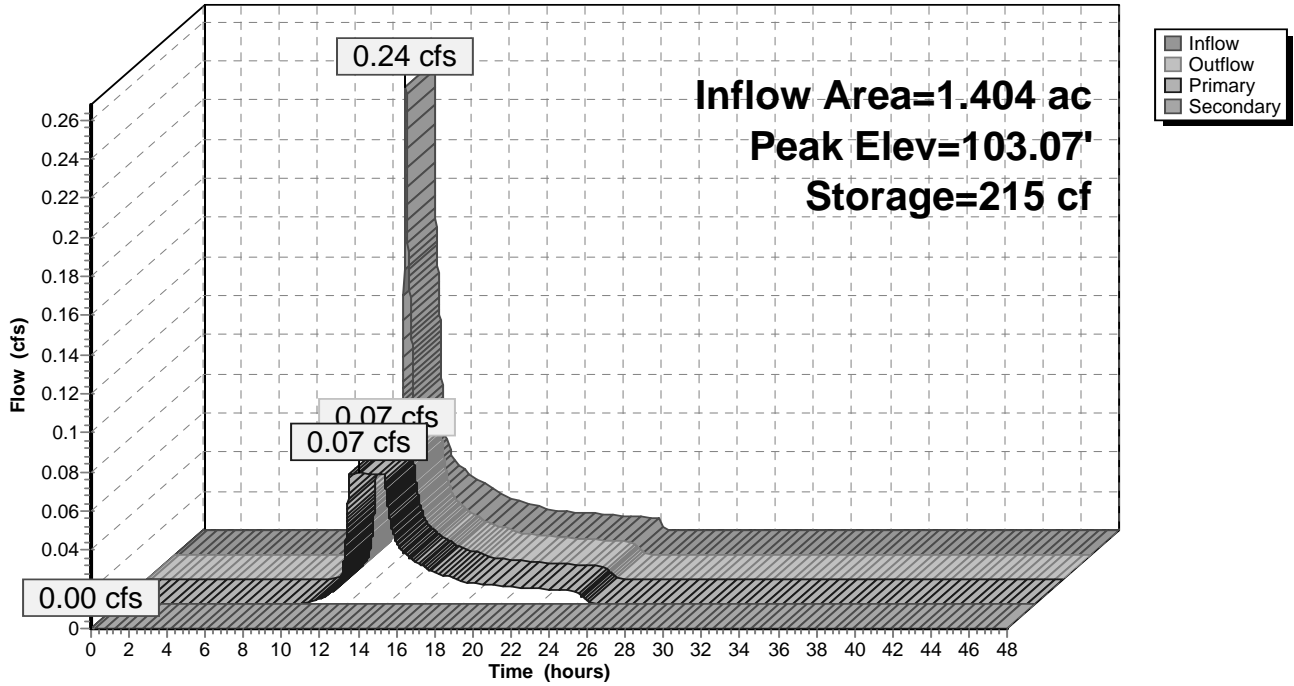
Device	Routing	Invert	Outlet Devices
#1	Primary	101.00'	15.0" Round RCP_Round 15" L= 111.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 101.00' / 96.00' S= 0.0450 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	101.00'	2.0" W x 0.7" H Vert. Orifice/Grate C= 0.600
#3	Device 1	104.50'	6.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Secondary	104.75'	10.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.07 cfs @ 12.55 hrs HW=103.07' (Free Discharge)
 1=RCP_Round 15" (Passes 0.07 cfs of 7.11 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.07 cfs @ 6.88 fps)
 3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=103.00' (Free Discharge)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 7P: UDF STA295

Hydrograph



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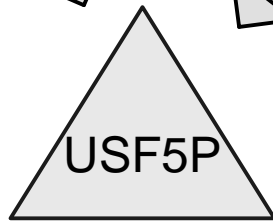
75 John Roberts Road Suite 1A
 South Portland, Maine 04106
 Tel. (207) 200-2100

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 CALCULATED BY GJH DATE 2/10/2016
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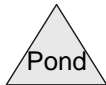
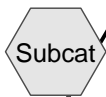
UNDERDRAINED SOIL FILTER									
Task:	Calculate water quality volume per MDEP chapter 500 regulations								
References	1. Maine DEP Chapter 500, Section 4.B.(2)(b) a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area" 2. Maine DEP Best Management Practices Stormwater Manual, Section 7.1 a. "surface should represent 5% of impervious area and 2% of landscaped area"								
Tributary to Underdrained Filter	UDF#5, STA313+00 RIGHT								
Landscaped Area	15,303.00	SF	0.351	ac					
Impervious Area	26,674.00	SF	0.612	ac					
Minimum Surface Area									
Required	(2% X Landscaped + 5% X Impervious)								
Total Landscaped Area	15,303.00	SF	Area	306.1	SF				
Total Impervious Area	26,674.00	SF	Area	1,333.7	SF				
Required Minimum Surface Area			1,639.8	SF					
Provided Surface Area			2,345.0	SF	143.01%				
Channel Protection Volume (CPV)									
Required	(0.4" X Landscaped + 1.0" X Impervious)								
Landscaped Area	15,303.00	SF	Volume	510.1					
Impervious Area	26,674.00	SF	Volume	2,222.8					
CPV Required			2,732.9	CF	0.063	AF			
Provided CPV			2,744.0	CF	(Elevation 115.00 to 116.00)		100.40%		
Sediment Pre-Treatment									
Per Reference 2, Chapter 7.13		"Pretreatment devices shall be provided to minimize discharge of sediment to the soil filter"							
Annual Sediment Load:	50 cubic feet per acre per year of sanded area								
Area to be sanded:	26,674.00	SF							
Sediment Volume	31	CF							
Provided	205	CF	6 Inch Deep Forebay	with area of	409	sf			



313+85 TO 317+90 STA313+00 RIGHT CENTER



STA313+00 RIGHT UDF



Routing Diagram for 14181_8.8POST_STA300-STA350_10-14-16
Prepared by Sebago Technics, Printed 10/14/2016
HydroCAD® 10.00-18 s/n 01856 © 2016 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.351	80	>75% Grass cover, Good, HSG D (USF5)
0.134	98	MTA CORRIDOR (USF5)
0.478	98	MTA PAVEMENT (20S)
0.964	91	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 20S: 313+85 TO 317+90 CENTER

Runoff Area=20,843 sf 100.00% Impervious Runoff Depth=1.18"
Tc=5.0 min CN=98 Runoff=0.64 cfs 0.047 af

Subcatchment USF5: STA313+00 RIGHT

Runoff Area=21,134 sf 27.59% Impervious Runoff Depth=0.39"
Tc=6.0 min CN=85 Runoff=0.20 cfs 0.016 af

Pond USF5P: STA313+00 RIGHT UDF

Peak Elev=115.60' Storage=1,547 cf Inflow=0.84 cfs 0.063 af
Primary=0.03 cfs 0.063 af Secondary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.063 af

Total Runoff Area = 0.964 ac Runoff Volume = 0.063 af Average Runoff Depth = 0.78"
36.46% Pervious = 0.351 ac 63.54% Impervious = 0.612 ac

Summary for Subcatchment 20S: 313+85 TO 317+90 CENTER

Runoff = 0.64 cfs @ 12.07 hrs, Volume= 0.047 af, Depth= 1.18"

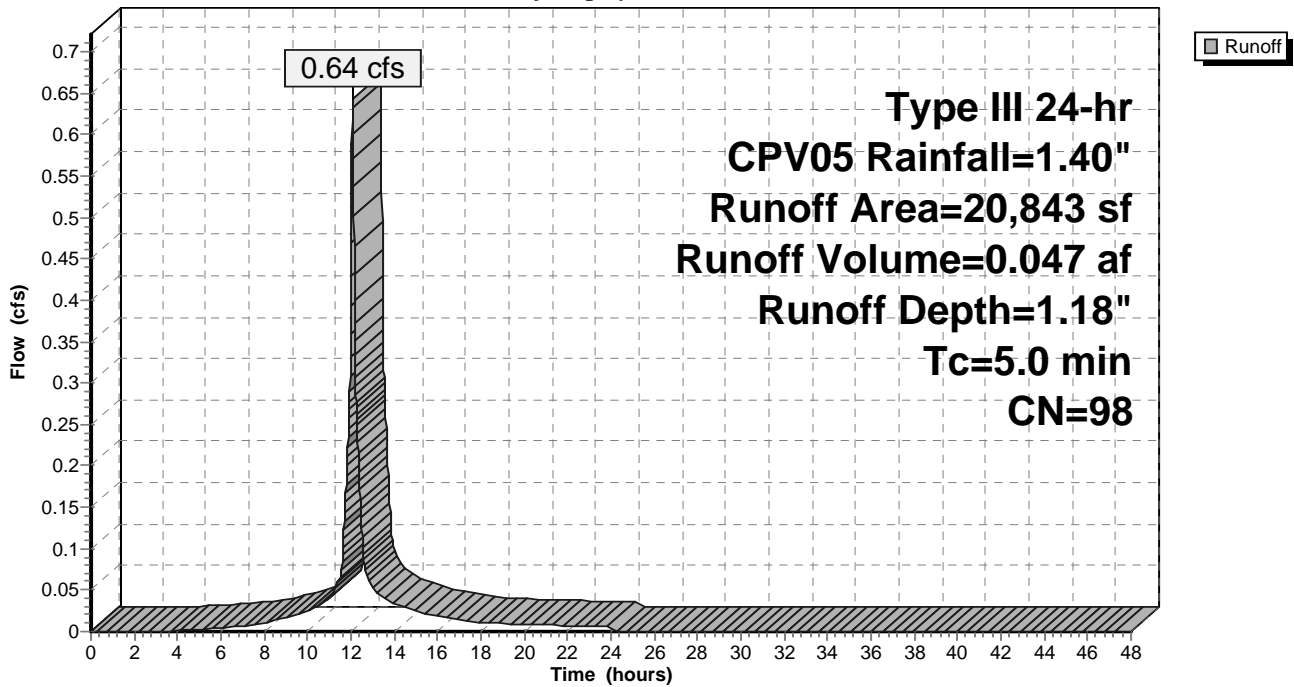
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CPV05 Rainfall=1.40"

	Area (sf)	CN	Description
*	20,843	98	MTA PAVEMENT
	0	80	>75% Grass cover, Good, HSG D
	20,843	98	Weighted Average
	20,843		100.00% Impervious Area

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

Subcatchment 20S: 313+85 TO 317+90 CENTER

Hydrograph



Summary for Subcatchment USF5: STA313+00 RIGHT

Runoff = 0.20 cfs @ 12.10 hrs, Volume= 0.016 af, Depth= 0.39"

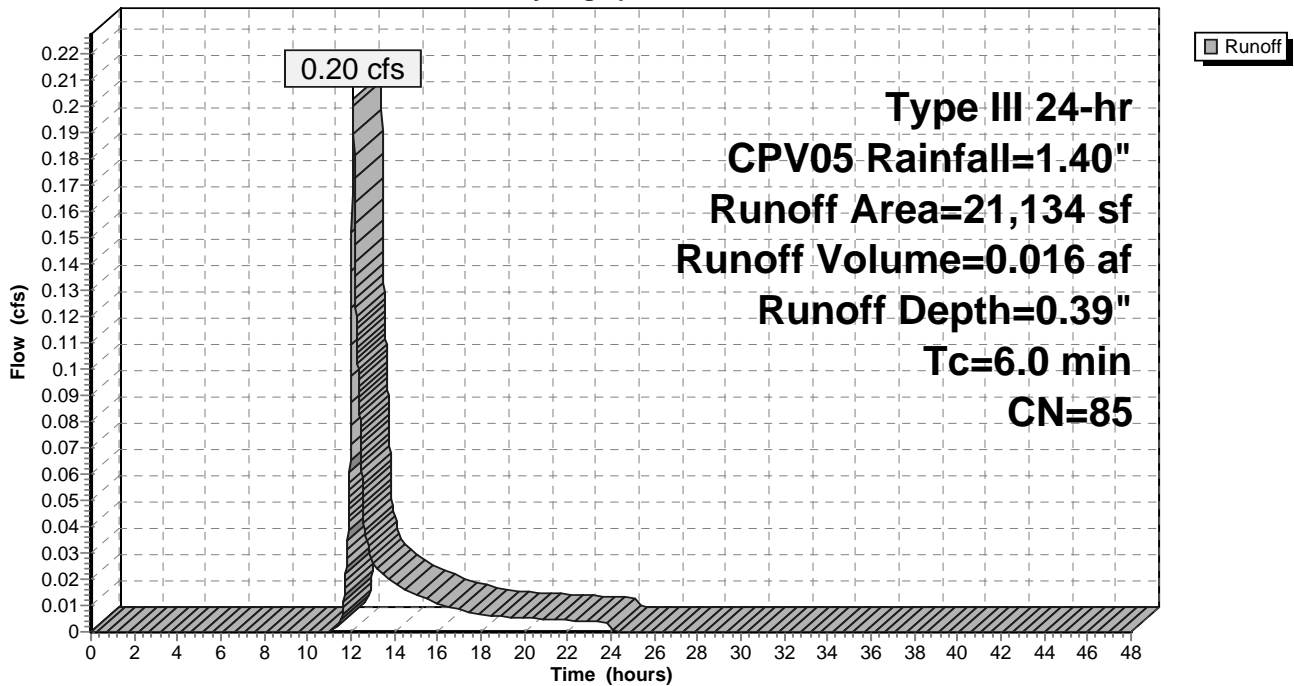
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CPV05 Rainfall=1.40"

Area (sf)	CN	Description
15,303	80	>75% Grass cover, Good, HSG D
* 5,831	98	MTA CORRIDOR
21,134	85	Weighted Average
15,303		72.41% Pervious Area
5,831		27.59% Impervious Area

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

Subcatchment USF5: STA313+00 RIGHT

Hydrograph



Summary for Pond USF5P: STA313+00 RIGHT UDF

Inflow Area = 0.964 ac, 63.54% Impervious, Inflow Depth = 0.78" for CPV05 event
 Inflow = 0.84 cfs @ 12.08 hrs, Volume= 0.063 af
 Outflow = 0.03 cfs @ 15.95 hrs, Volume= 0.063 af, Atten= 97%, Lag= 232.3 min
 Primary = 0.03 cfs @ 15.95 hrs, Volume= 0.063 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 115.60' @ 15.95 hrs Surf.Area= 2,822 sf Storage= 1,547 cf

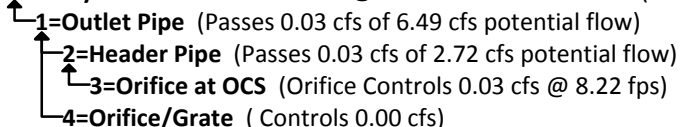
Plug-Flow detention time= 525.8 min calculated for 0.063 af (100% of inflow)
 Center-of-Mass det. time= 525.8 min (1,326.0 - 800.2)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	6,343 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	2,345	0	0
116.00	3,142	2,744	2,744
117.00	4,057	3,600	6,343

Device	Routing	Invert	Outlet Devices
#1	Primary	112.15'	12.0" Round Outlet Pipe L= 63.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 112.15' / 110.00' S= 0.0341 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	112.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	112.65'	0.8" Vert. Orifice at OCS C= 0.600
#4	Device 1	116.00'	1.2" x 1.2" Horiz. Orifice/Grate X 49.00 C= 0.600 Limited to weir flow at low heads
#5	Secondary	117.00'	112.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

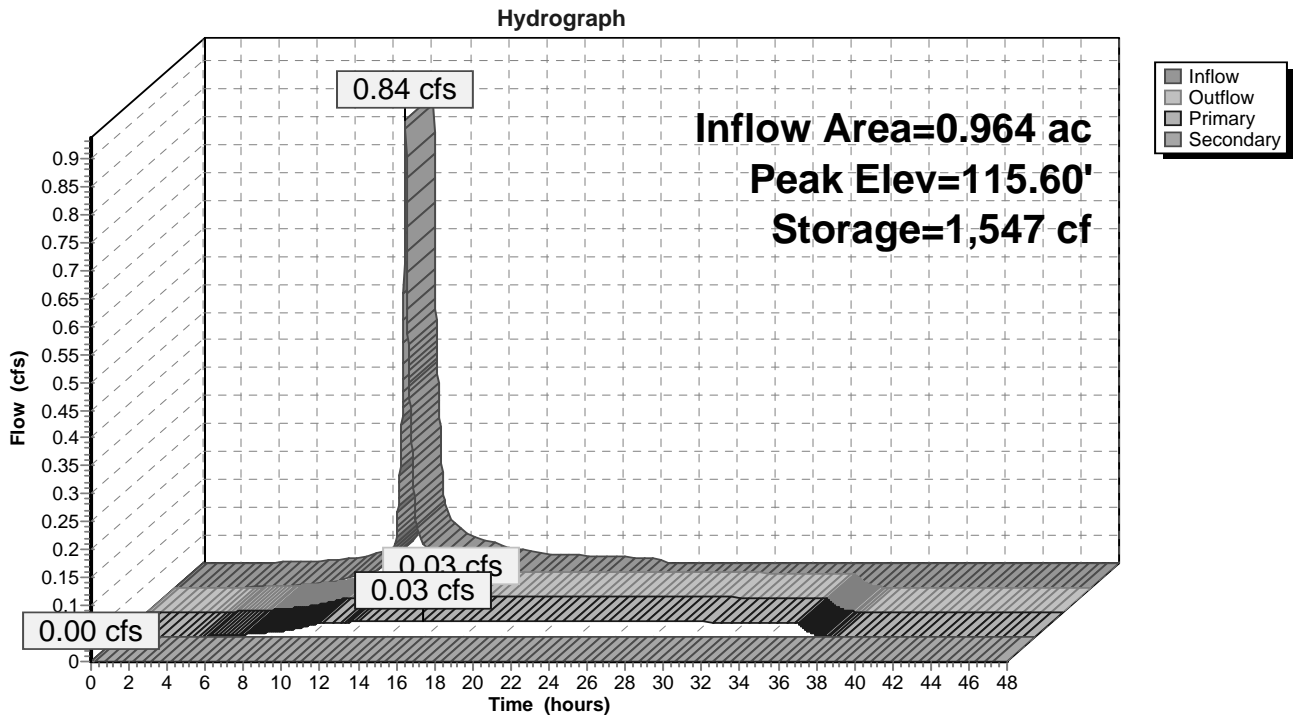
Primary OutFlow Max=0.03 cfs @ 15.95 hrs HW=115.60' (Free Discharge)



Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=115.00' (Free Discharge)



Pond USF5P: STA313+00 RIGHT UDF

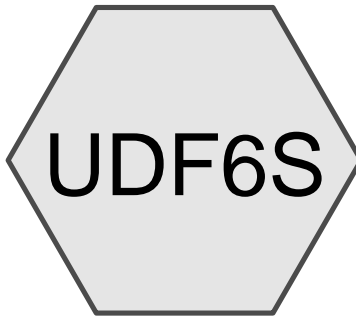


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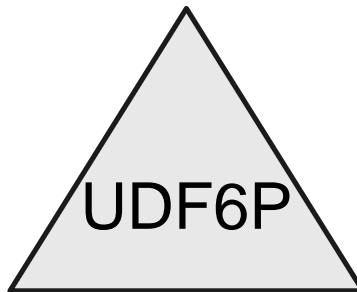
75 John Roberts Road Suite 1A
 South Portland, Maine 04106
 Tel. (207) 200-2100

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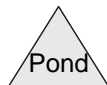
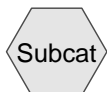
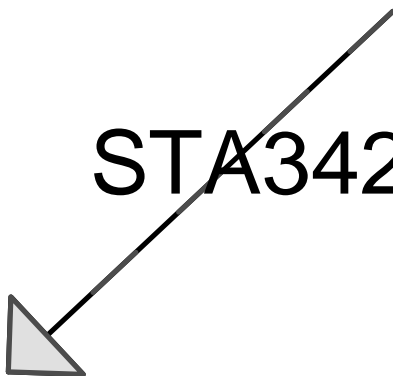
UNDERDRAINED SOIL FILTER									
Task:	Calculate water quality volume per MDEP chapter 500 regulations								
References	1. Maine DEP Chapter 500, Section 4.B.(2)(b) a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area" 2. Maine DEP Best Management Practices Stormwater Manual, Section 7.1 a. "surface should represent 5% of impervious area and 2% of landscaped area"								
Tributary to Underdrained Filter	UDF#6, STA342+00 LEFT, LARGE ADMIN FILTER								
Landscaped Area	74,938.00	SF		1.720	ac				
Impervious Area	28,182.00	SF		0.647	ac				
Minimum Surface Area									
Required	(2% X Landscaped + 5% X Impervious)								
Total Landscaped Area	74,938.00	SF	Area	1,498.8	SF				
Total Impervious Area	28,182.00	SF	Area	1,409.1	SF				
	Required Minimum Surface Area			2,907.9	SF				
	Provided Surface Area			3,067.0	SF				105.47%
Channel Protection Volume (CPV)									
Required	(0.4" X Landscaped + 1.0" X Impervious)								
Landscaped Area	74,938.00	SF	Volume	2,497.9					
Impervious Area	28,182.00	SF	Volume	2,348.5					
	CPV Required			4,846.4	CF	0.111	AF		
	Provided CPV			5,048.0	CF	(Elevation 161.00 to 162.40)			104.16%
Sediment Pre-Treatment									
	Per Reference 2, Chapter 7.13		"Pretreatment devices shall be provided to minimize discharge of sediment to the soil filter"						
Annual Sediment Load:	50 cubic feet per acre per year of sanded area								
Area to be sanded:	28,182.00	SF							
Sediment Volume	32	CF							
Provided	205	CF	6 Inch Deep Forebay	with area of	409	sf			



STA342+00 LEFT,
LARGE



STA342+00 LEFT UDF



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.720	80	>75% Grass cover, Good, HSG D (UDF6S)
0.647	98	MTA CORRIDOR (UDF6S)
2.367	85	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment UDF6S: STA342+00 LEFT, LARGE

Runoff Area=103,120 sf 27.33% Impervious Runoff Depth=0.56"
Tc=6.0 min CN=85 Runoff=1.49 cfs 0.111 af

Pond UDF6P: STA342+00 LEFT UDF

Peak Elev=161.80' Storage=2,700 cf Inflow=1.49 cfs 0.111 af
Primary=0.07 cfs 0.111 af Secondary=0.00 cfs 0.000 af Outflow=0.07 cfs 0.111 af

Total Runoff Area = 2.367 ac Runoff Volume = 0.111 af Average Runoff Depth = 0.56"
72.67% Pervious = 1.720 ac 27.33% Impervious = 0.647 ac

Summary for Subcatchment UDF6S: STA342+00 LEFT, LARGE

Runoff = 1.49 cfs @ 12.10 hrs, Volume= 0.111 af, Depth= 0.56"

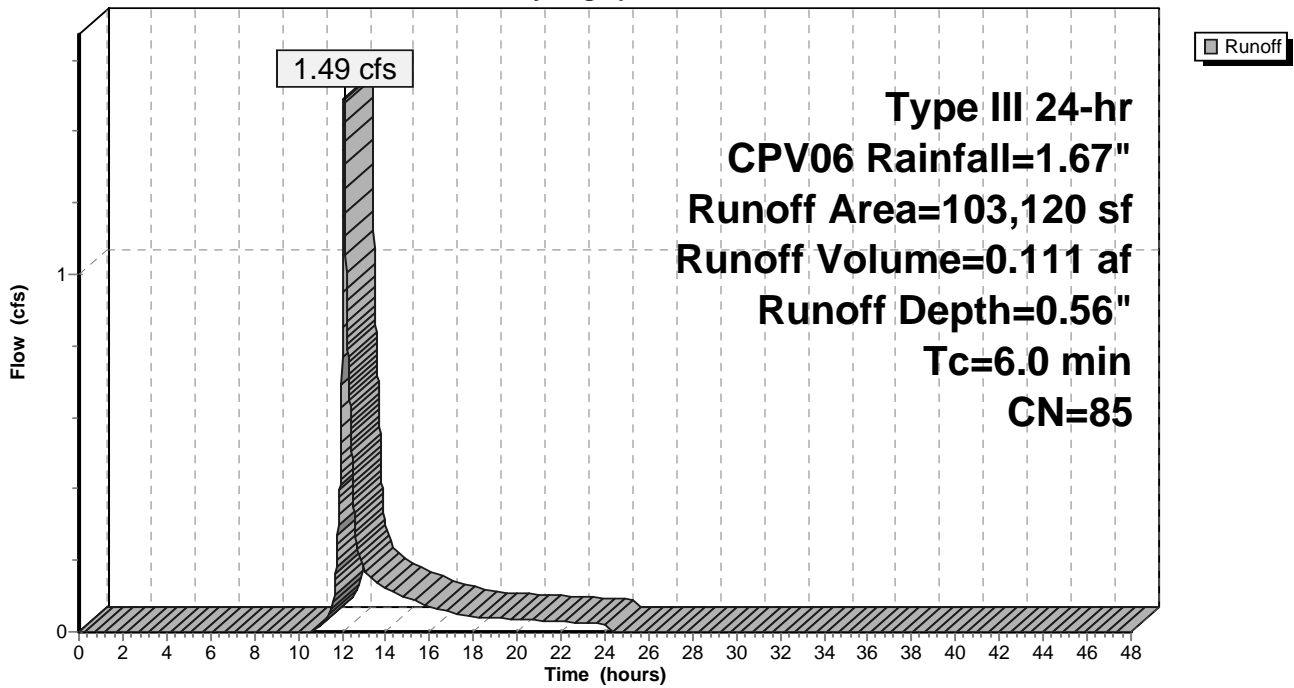
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CPV06 Rainfall=1.67"

Area (sf)	CN	Description
74,938	80	>75% Grass cover, Good, HSG D
* 28,182	98	MTA CORRIDOR
103,120	85	Weighted Average
74,938		72.67% Pervious Area
28,182		27.33% Impervious Area

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

Subcatchment UDF6S: STA342+00 LEFT, LARGE

Hydrograph



Summary for Pond UDF6P: STA342+00 LEFT UDF

Inflow Area = 2.367 ac, 27.33% Impervious, Inflow Depth = 0.56" for CPV06 event
 Inflow = 1.49 cfs @ 12.10 hrs, Volume= 0.111 af
 Outflow = 0.07 cfs @ 16.04 hrs, Volume= 0.111 af, Atten= 96%, Lag= 236.5 min
 Primary = 0.07 cfs @ 16.04 hrs, Volume= 0.111 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

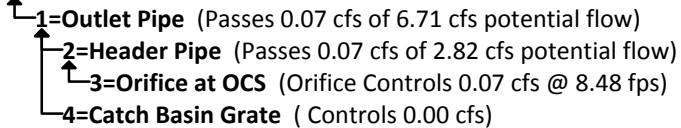
Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 161.80' @ 16.04 hrs Surf.Area= 3,676 sf Storage= 2,700 cf

Plug-Flow detention time= 453.2 min calculated for 0.111 af (100% of inflow)
 Center-of-Mass det. time= 453.2 min (1,312.9 - 859.7)

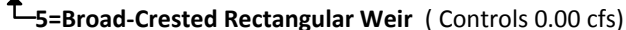
Volume	Invert	Avail.Storage	Storage Description
#1	161.00'	18,832 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
161.00	3,067	0	0
162.00	3,828	3,448	3,448
163.00	4,689	4,259	7,706
164.00	5,549	5,119	12,825
165.00	6,465	6,007	18,832

Device	Routing	Invert	Outlet Devices
#1	Primary	158.15'	12.0" Round Outlet Pipe L= 16.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 158.15' / 157.99' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	158.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	158.65'	1.2" Vert. Orifice at OCS C= 0.600
#4	Device 1	163.00'	1.2" x 1.2" Horiz. Catch Basin Grate X 49 rows C= 0.600 Limited to weir flow at low heads
#5	Secondary	164.50'	12.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

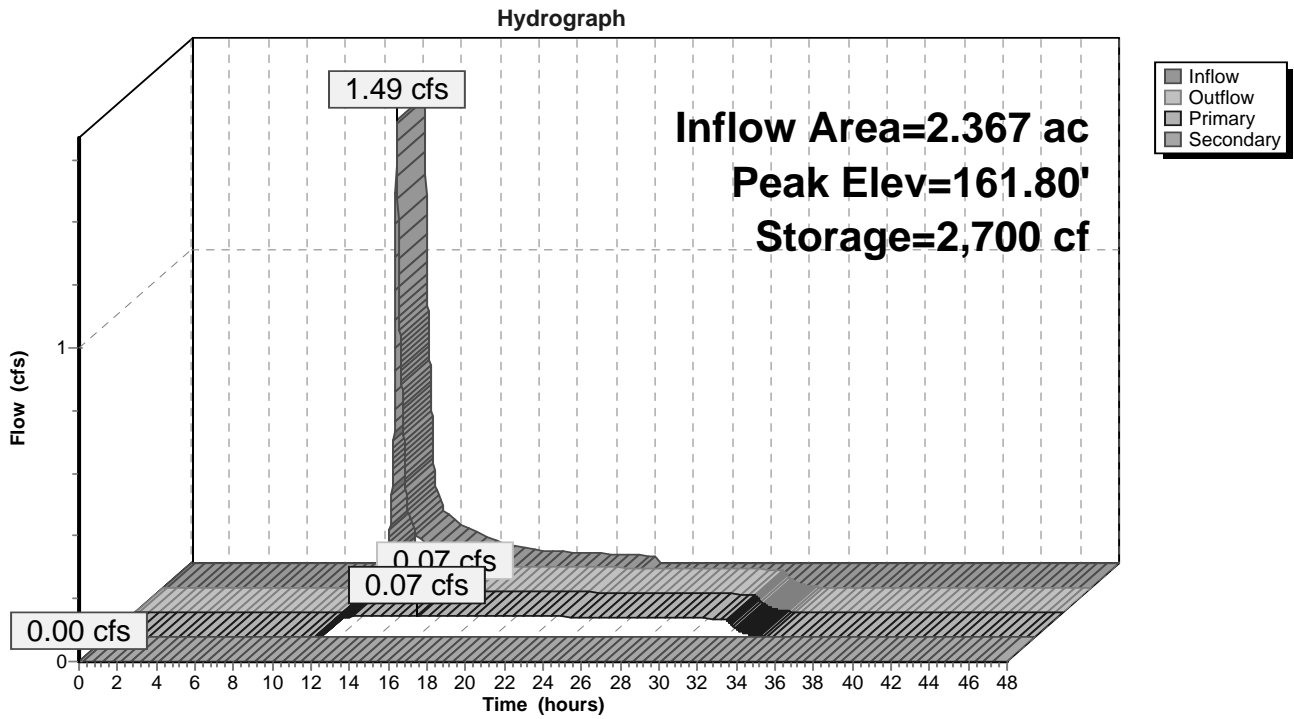
Primary OutFlow Max=0.07 cfs @ 16.04 hrs HW=161.80' (Free Discharge)



Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=161.00' (Free Discharge)



Pond UDF6P: STA342+00 LEFT UDF

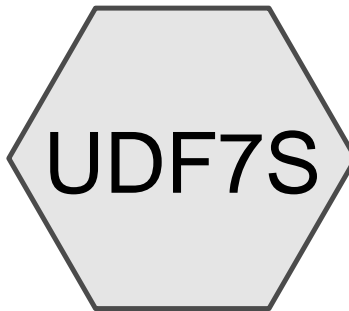


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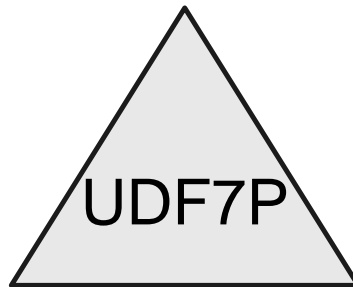
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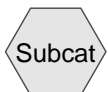
UNDERDRAINED SOIL FILTER										
Task:	Calculate water quality volume per MDEP chapter 500 regulations									
References	1. Maine DEP Chapter 500, Section 4.B.(2)(b) a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area" 2. Maine DEP Best Management Practices Stormwater Manual, Section 7.1 a. "surface should represent 5% of impervious area and 2% of landscaped area"									
Tributary to Underdrained Filter	UDF#7, STA342+50, SMALL ADMIN									
Landscaped Area	9,891.00	SF		0.227	ac					
Impervious Area	18,376.00	SF	342.00	0.422	ac					
Minimum Surface Area										
Required	(2% X Landscaped + 5% X Impervious)									
Total Landscaped Area	9,891.00	SF	Area	197.8	SF					
Total Impervious Area	18,376.00	SF	Area	918.8	SF					
Required Minimum Surface Area				1,116.6	SF					
Provided Surface Area				1,266.0	SF	113.38%				
Channel Protection Volume (CPV)										
Required	(0.4" X Landscaped + 1.0" X Impervious)									
Landscaped Area	9,891.00	SF	Volume	329.7						
Impervious Area	18,376.00	SF	Volume	1,531.3						
CPV Required				1,861.0	CF	0.043	AF			
Provided CPV				1,898.0	CF	(Elevation 162.00 to 163.10)		101.99%		
Sediment Pre-Treatment										
Per Reference 2, Chapter 7.13		"Pretreatment devices shall be provided to minimize discharge of sediment to the soil filter"								
Annual Sediment Load:	50 cubic feet per acre per year of sanded area									
Area to be sanded:	18,376.00	SF								
Sediment Volume	21	CF								
Provided	205	CF	6 Inch Deep Forebay	with area of	409	sf				



STA342+50 LEFT,
SMALL



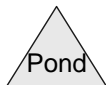
STA342+50 LEFT UDF



Subcat



Reach



Pond



Link

Routing Diagram for 14181_8.8POST_STA300-STA350_10-14-16

Prepared by Sebago Technics, Printed 10/14/2016

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.227	80	>75% Grass cover, Good, HSG D (UDF7S)
0.422	98	MTA CORRIDOR (UDF7S)
0.649	92	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment UDF7S: STA342+50 LEFT, SMALL

Runoff Area=28,267 sf 65.01% Impervious Runoff Depth=0.80"
Tc=6.0 min CN=92 Runoff=0.61 cfs 0.043 af

Pond UDF7P: STA342+50 LEFT UDF

Peak Elev=162.75' Storage=1,095 cf Inflow=0.61 cfs 0.043 af
Primary=0.02 cfs 0.043 af Secondary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.043 af

Total Runoff Area = 0.649 ac Runoff Volume = 0.043 af Average Runoff Depth = 0.80"
34.99% Pervious = 0.227 ac 65.01% Impervious = 0.422 ac

Summary for Subcatchment UDF7S: STA342+50 LEFT, SMALL

Runoff = 0.61 cfs @ 12.09 hrs, Volume= 0.043 af, Depth= 0.80"

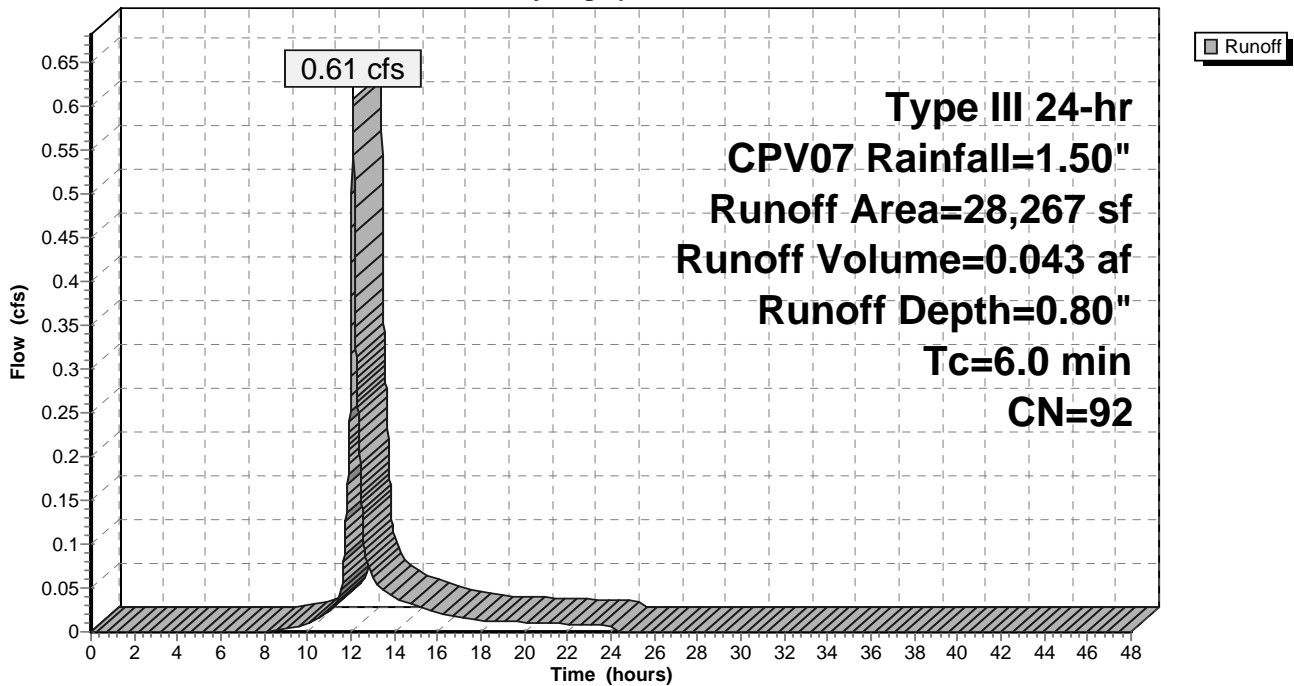
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CPV07 Rainfall=1.50"

Area (sf)	CN	Description
9,891	80	>75% Grass cover, Good, HSG D
* 18,376	98	MTA CORRIDOR
28,267	92	Weighted Average
9,891		34.99% Pervious Area
18,376		65.01% Impervious Area

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

Subcatchment UDF7S: STA342+50 LEFT, SMALL

Hydrograph



Summary for Pond UDF7P: STA342+50 LEFT UDF

Inflow Area = 0.649 ac, 65.01% Impervious, Inflow Depth = 0.80" for CPV07 event
 Inflow = 0.61 cfs @ 12.09 hrs, Volume= 0.043 af
 Outflow = 0.02 cfs @ 15.90 hrs, Volume= 0.043 af, Atten= 96%, Lag= 228.5 min
 Primary = 0.02 cfs @ 15.90 hrs, Volume= 0.043 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

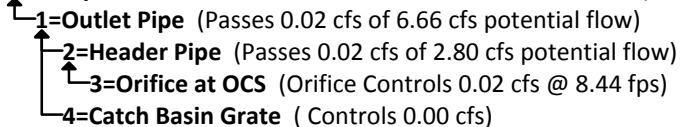
Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 162.75' @ 15.90 hrs Surf.Area= 1,636 sf Storage= 1,095 cf

Plug-Flow detention time= 506.1 min calculated for 0.043 af (100% of inflow)
 Center-of-Mass det. time= 506.0 min (1,334.4 - 828.3)

Volume	Invert	Avail.Storage	Storage Description
#1	162.00'	3,705 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
162.00	1,266	0	0
163.00	1,756	1,511	1,511
164.00	2,632	2,194	3,705

Device	Routing	Invert	Outlet Devices
#1	Primary	159.15'	12.0" Round Outlet Pipe L= 15.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 159.15' / 159.00' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	159.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	159.65'	0.7" Vert. Orifice at OCS C= 0.600
#4	Device 1	163.25'	1.2" x 1.2" Horiz. Catch Basin Grate X 49.00 C= 0.600 Limited to weir flow at low heads
#5	Secondary	163.75'	12.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

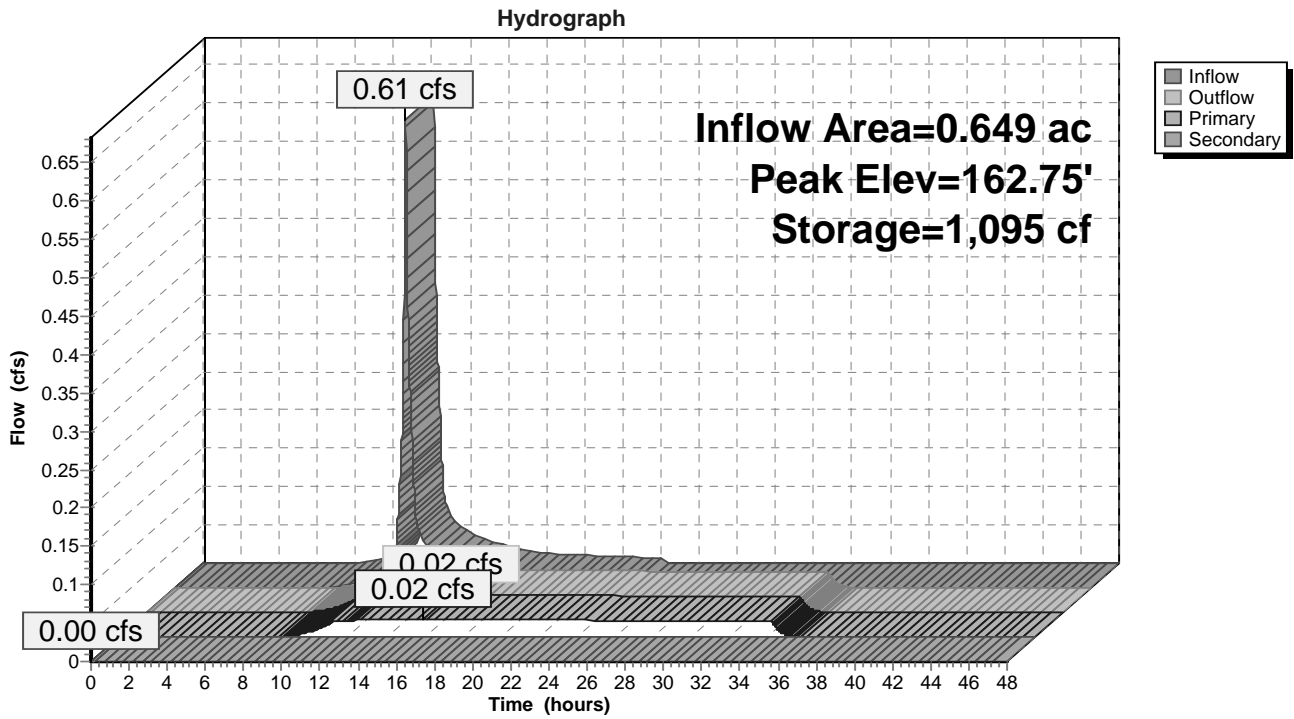
Primary OutFlow Max=0.02 cfs @ 15.90 hrs HW=162.75' (Free Discharge)



Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=162.00' (Free Discharge)



Pond UDF7P: STA342+50 LEFT UDF

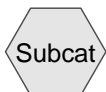
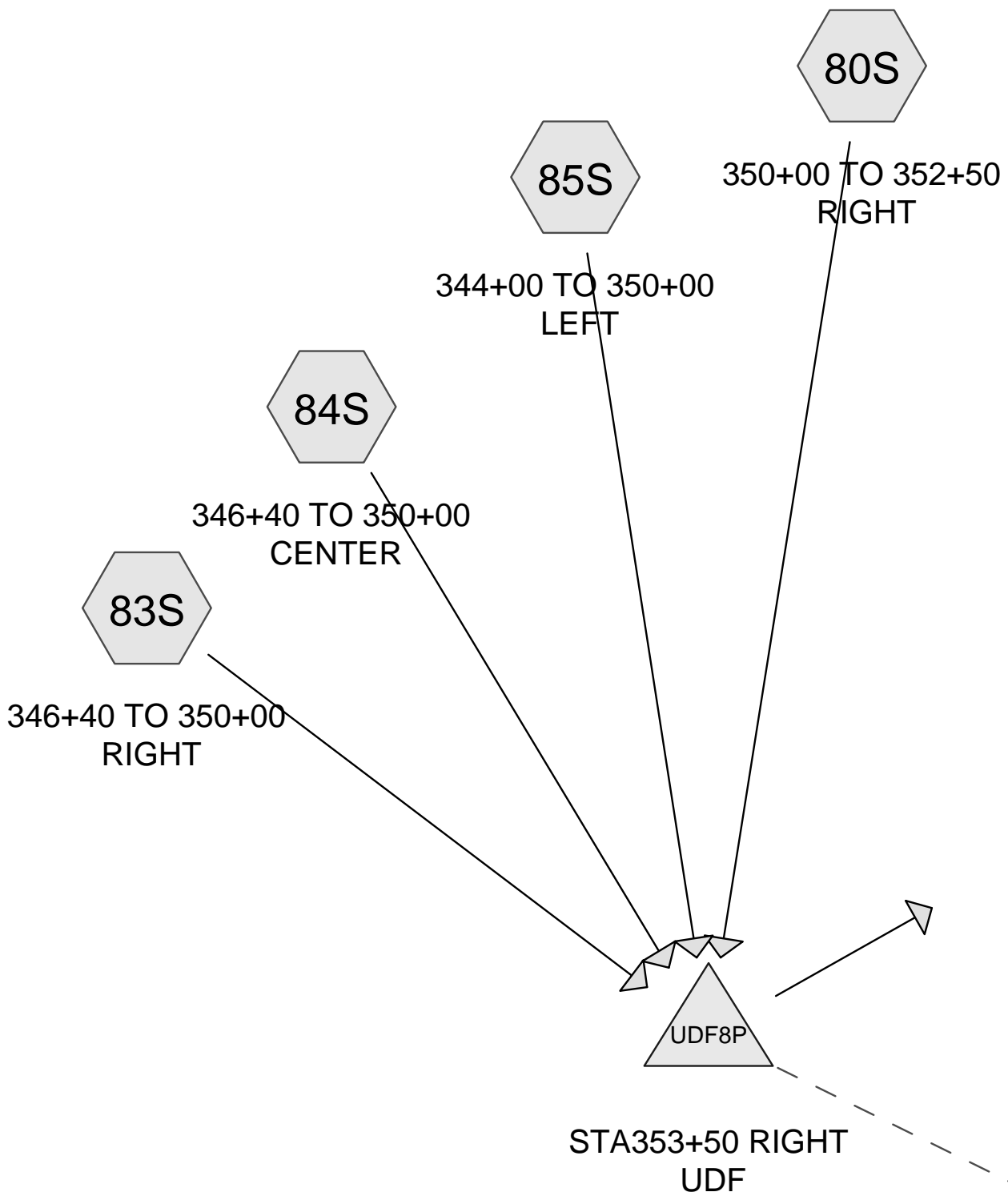


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 FILE NAME 14181 WQV CALCS_10-14-16.xlsx PRINT DATE 10/14/2016

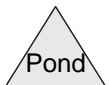
UNDERDRAINED SOIL FILTER									
Task:	Calculate water quality volume per MDEP chapter 500 regulations								
References	1. Maine DEP Chapter 500, Section 4.B.(2)(b) a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area" 2. Maine DEP Best Management Practices Stormwater Manual, Section 7.1 a. "surface should represent 5% of impervious area and 2% of landscaped area"								
Tributary to Underdrained Filter	UDF#8, STA 353+50, RIGHT								
Landscaped Area	13,250.00	SF	0.304	ac					
Impervious Area	73,650.00	SF	1.691	ac					
Minimum Surface Area									
Required	(2% X Landscaped + 5% X Impervious)								
Total Landscaped Area	13,250.00	SF	Area	265.0	SF				
Total Impervious Area	73,650.00	SF	Area	3,682.5	SF				
Required Minimum Surface Area			3,947.5	SF					
Provided Surface Area			2,523.0	SF					63.91%
Channel Protection Volume (CPV)				2,258.0	45160	1.036731			
Required	(0.4" X Landscaped + 1.0" X Impervious)								
Landscaped Area	13,250.00	SF	Volume	441.7					
Impervious Area	73,650.00	SF	Volume	6,137.5					
CPV Required			6,579.2	CF	0.151	AF			
Provided CPV			4,393.0	CF	(Elevation 145.00 to 146.50)		66.77%		
Sediment Pre-Treatment									
Per Reference 2, Chapter 7.13		"Pretreatment devices shall be provided to minimize discharge of sediment to the soil filter"							
Annual Sediment Load:	50 cubic feet per acre per year of sanded area								
Area to be sanded:	73,650.00	SF							
Sediment Volume	85	CF							
Provided	52	CF	6 Inch Deep Forebay	with area of	104	sf			



Subcat



Reach



Pond



Link

Routing Diagram for 14181_8.8 POST_STA350+00-STA380+84_10-14-2016

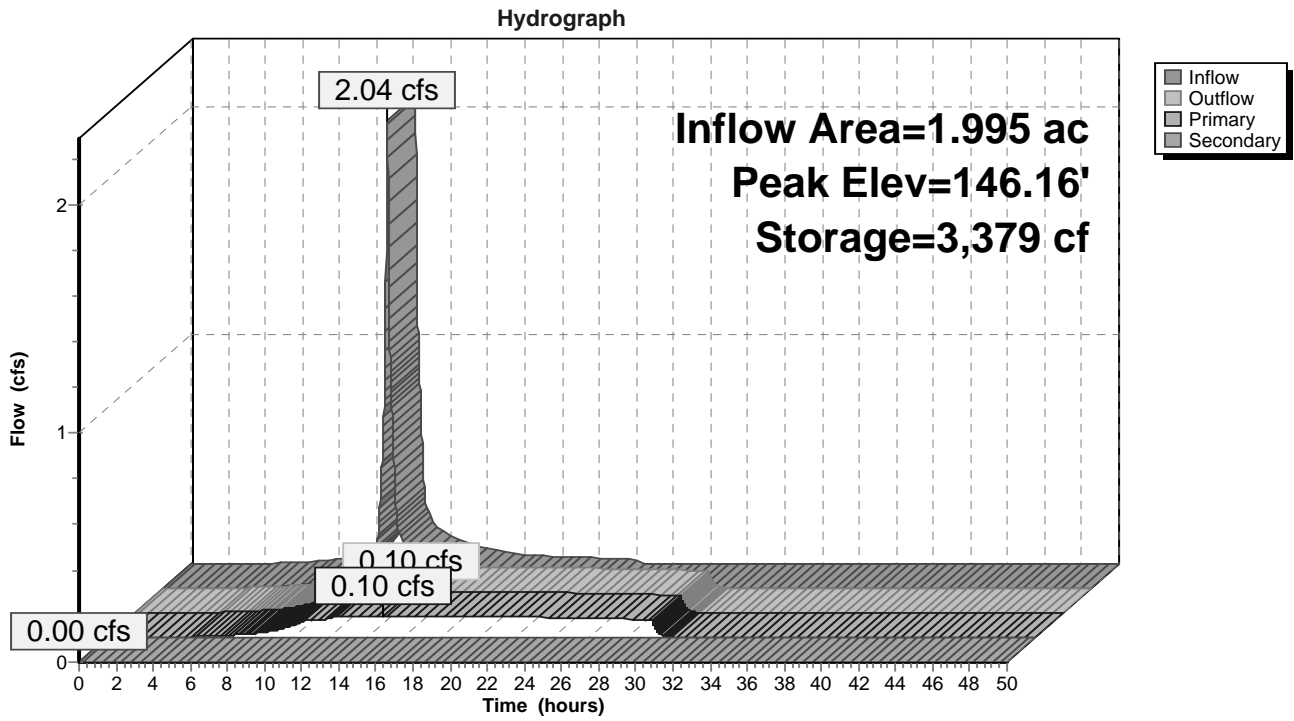
Prepared by Sebago Technics, Printed 10/14/2016

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.304	80	>75% Grass cover, Good, HSG D (83S)
1.179	98	Paved 346+50 - 350+00 (83S, 84S, 85S)
0.240	98	Paved 350+00 - 3352+50 (80S)
0.272	98	paved (83S)
1.995	95	TOTAL AREA

Pond UDF8P: STA353+50 RIGHT UDF

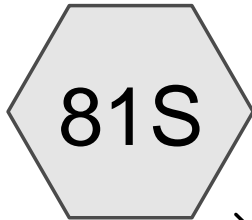


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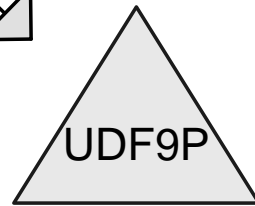
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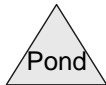
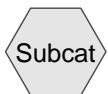
UNDERDRAINED SOIL FILTER									
Task:	Calculate water quality volume per MDEP chapter 500 regulations								
References	1. Maine DEP Chapter 500, Section 4.B.(2)(b) a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area" 2. Maine DEP Best Management Practices Stormwater Manual, Section 7.1 a. "surface should represent 5% of impervious area and 2% of landscaped area"								
Tributary to Underdrained Filter	UDF#9, STA 355+00								
Landscaped Area	5,900.00	SF		0.135	ac				
Impervious Area	48,000.00	SF		1.102	ac				
Minimum Surface Area									
Required	(2% X Landscaped + 5% X Impervious)								
Total Landscaped Area	5,900.00	SF	Area	118.0	SF				
Total Impervious Area	48,000.00	SF	Area	2,400.0	SF				
	Required Minimum Surface Area			2,518.0	SF				
	Provided Surface Area			2,621.0	SF			104.09%	
Channel Protection Volume (CPV)									
Required	(0.4" X Landscaped + 1.0" X Impervious)								
Landscaped Area	5,900.00	SF	Volume	196.7					
Impervious Area	48,000.00	SF	Volume	4,000.0					
	CPV Required			4,196.7	CF	0.096	AF		
	Provided CPV			4,333.0	CF	(Elevation 145.00 to 146.50)		103.25%	
Sediment Pre-Treatment									
	Per Reference 2, Chapter 7.13		"Pretreatment devices shall be provided to minimize discharge of sediment to the soil filter"						
Annual Sediment Load:	50 cubic feet per acre per year of sanded area								
Area to be sanded:	48,000.00	SF							
Sediment Volume	55	CF							
Provided	52	CF	6 Inch Deep Forebay	with area of	104	sf			



Combined 81S and 82S



STA355+00 RIGHT
UDF



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.135	80	>75% Grass cover, Good, HSG D (81S)
0.646	98	PAVED (81S)
0.468	98	PAVED- 82S (81S)
1.249	96	TOTAL AREA

Summary for Pond UDF9P: STA355+00 RIGHT UDF

Inflow Area = 1.249 ac, 89.15% Impervious, Inflow Depth = 0.94" for CPV08 event
 Inflow = 1.36 cfs @ 12.09 hrs, Volume= 0.098 af
 Outflow = 0.05 cfs @ 15.73 hrs, Volume= 0.098 af, Atten= 97%, Lag= 218.3 min
 Primary = 0.05 cfs @ 15.73 hrs, Volume= 0.098 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

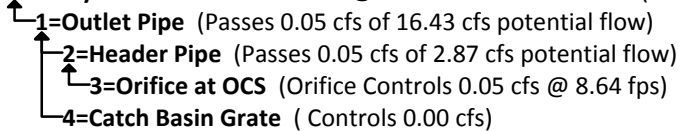
Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 145.91' @ 15.73 hrs Surf.Area= 2,925 sf Storage= 2,519 cf

Plug-Flow detention time= 536.6 min calculated for 0.098 af (100% of inflow)
 Center-of-Mass det. time= 536.7 min (1,339.4 - 802.7)

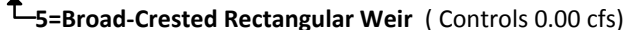
Volume	Invert	Avail.Storage	Storage Description
#1	145.00'	10,439 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.00	2,621	0	0
146.00	2,956	2,789	2,789
147.00	3,486	3,221	6,010
148.00	5,373	4,430	10,439

Device	Routing	Invert	Outlet Devices
#1	Primary	141.43'	18.0" Round Outlet Pipe L= 17.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 141.43' / 141.00' S= 0.0253 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	142.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	142.65'	1.0" Vert. Orifice at OCS C= 0.600
#4	Device 1	146.00'	1.2" W x 1.2" H Vert. Catch Basin Grate X 49.00 C= 0.600
#5	Secondary	146.75'	20.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

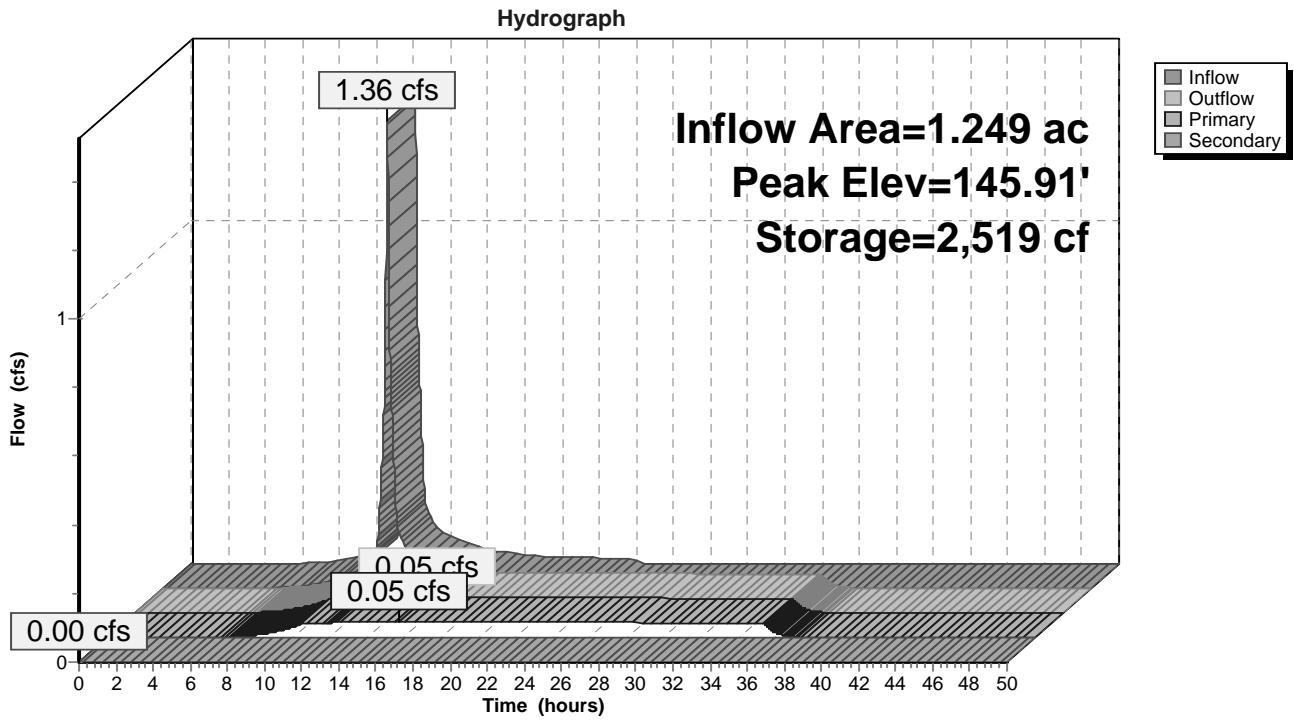
Primary OutFlow Max=0.05 cfs @ 15.73 hrs HW=145.91' (Free Discharge)



Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=145.00' (Free Discharge)



Pond UDF9P: STA355+00 RIGHT UDF

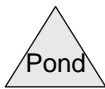
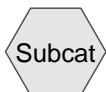
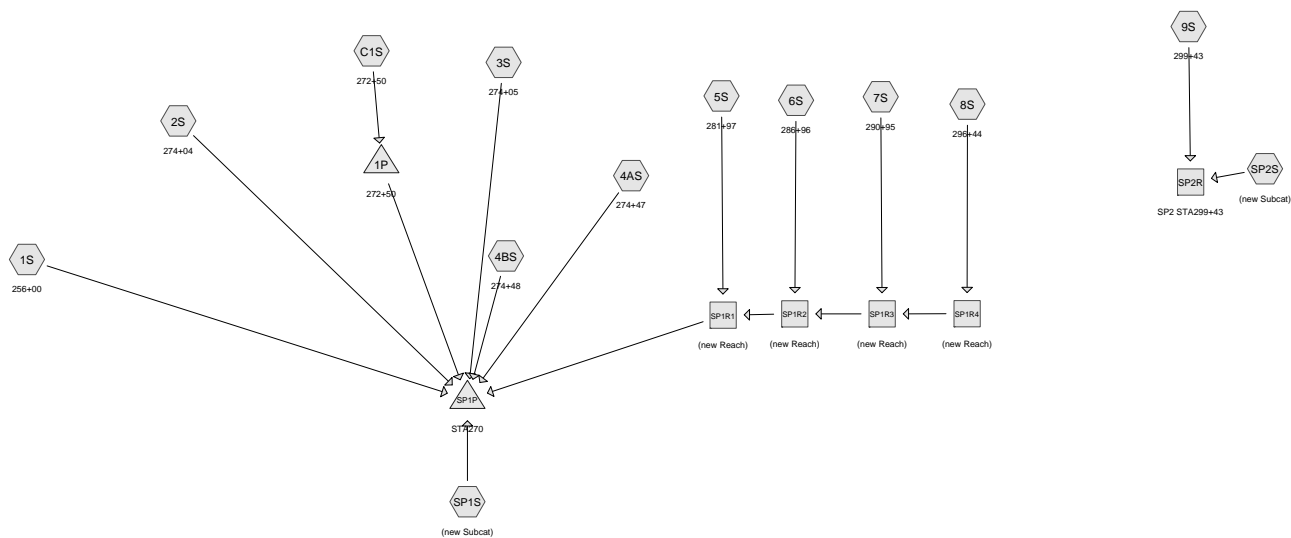


Appendix 3

HydroCAD Output Pre-Development and Post-Development Models

PREDEVELOPMENT

Mile 7.3



Routing Diagram for 14181_7.3 PRE revised_10-14-16
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
32.545	98	(1S, 2S, 3S, 4AS, 4BS, 5S, 6S, 7S, 8S, 9S, C1S, SP1S, SP2S)
0.976	80	>75% Grass cover, Good, HSG D (2S, 4AS, 5S, 6S, 7S, 8S, 9S)
3.010	30	Brush, Good, HSG A (C1S)
6.913	48	Brush, Good, HSG B (SP1S)
6.515	65	Brush, Good, HSG C (C1S, SP1S, SP2S)
46.283	73	Brush, Good, HSG D (C1S, SP1S, SP2S)
6.610	30	Woods, Good, HSG A (C1S)
2.903	55	Woods, Good, HSG B (SP1S)
11.055	70	Woods, Good, HSG C (C1S, SP1S, SP2S)
240.656	77	Woods, Good, HSG D (C1S, SP1S, SP2S)
357.466	76	TOTAL AREA

Notes Listing (all nodes)

Line#	Node Number	Notes
1	SP1P	The outlet culvert is modeled as a 9-ft by 9-ft box. These dimensions have not been field verified.

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: 256+00	Runoff Area=20,700 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=1.58 cfs 0.121 af
Subcatchment 2S: 274+04	Runoff Area=7,769 sf 92.64% Impervious Runoff Depth=2.96" Tc=5.0 min CN=97 Runoff=0.58 cfs 0.044 af
Subcatchment 3S: 274+05	Runoff Area=1,056 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.08 cfs 0.006 af
Subcatchment 4AS: 274+47	Runoff Area=37,371 sf 72.03% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=2.56 cfs 0.182 af
Subcatchment 4BS: 274+48	Runoff Area=2,194 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.17 cfs 0.013 af
Subcatchment 5S: 281+97	Runoff Area=24,741 sf 69.54% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=1.69 cfs 0.120 af
Subcatchment 6S: 286+96	Runoff Area=19,949 sf 70.40% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=1.37 cfs 0.097 af
Subcatchment 7S: 290+95	Runoff Area=27,615 sf 71.11% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=1.89 cfs 0.134 af
Subcatchment 8S: 296+44	Runoff Area=15,034 sf 70.51% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=1.03 cfs 0.073 af
Subcatchment 9S: 299+43	Runoff Area=19,736 sf 71.47% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=1.35 cfs 0.096 af
Subcatchment C1S: 272+50	Runoff Area=215.830 ac 7.66% Impervious Runoff Depth=1.22" Flow Length=3,413' Tc=62.6 min CN=76 Runoff=114.39 cfs 21.981 af
Subcatchment SP1S: (new Subcat)	Runoff Area=135.414 ac 9.12% Impervious Runoff Depth=1.22" Flow Length=1,660' Tc=16.2 min CN=76 Runoff=137.25 cfs 13.791 af
Subcatchment SP2S: (new Subcat)	Runoff Area=94,863 sf 26.77% Impervious Runoff Depth=1.22" Tc=5.0 min CN=76 Runoff=3.14 cfs 0.222 af
Reach SP1R1: (new Reach)	Avg. Flow Depth=0.42' Max Vel=2.22 fps Inflow=3.60 cfs 0.425 af n=0.035 L=394.0' S=0.0152 '/' Capacity=122.04 cfs Outflow=3.58 cfs 0.425 af
Reach SP1R2: (new Reach)	Avg. Flow Depth=0.32' Max Vel=2.60 fps Inflow=2.91 cfs 0.304 af n=0.035 L=461.0' S=0.0282 '/' Capacity=167.34 cfs Outflow=2.86 cfs 0.304 af
Reach SP1R3: (new Reach)	Avg. Flow Depth=0.17' Max Vel=1.75 fps Inflow=2.41 cfs 0.207 af n=0.035 L=440.0' S=0.0273 '/' Capacity=528.57 cfs Outflow=2.21 cfs 0.207 af

Reach SP1R4: (new Reach)

Avg. Flow Depth=0.17' Max Vel=2.48 fps Inflow=1.03 cfs 0.073 af
n=0.035 L=611.0' S=0.0556 '/' Capacity=620.85 cfs Outflow=0.91 cfs 0.073 af

Reach SP2R: SP2 STA299+43

Avg. Flow Depth=0.14' Max Vel=2.23 fps Inflow=4.49 cfs 0.318 af
n=0.035 L=77.0' S=0.0940 '/' Capacity=820.11 cfs Outflow=4.46 cfs 0.318 af

Pond 1P: 272+50

Peak Elev=39.14' Storage=107,610 cf Inflow=114.39 cfs 21.981 af
54.0" Round Culvert n=0.012 L=185.9' S=0.0016 '/' Outflow=79.23 cfs 21.981 af

Pond SP1P: STA270

Peak Elev=38.20' Storage=588,093 cf Inflow=168.60 cfs 36.563 af
Primary=63.12 cfs 35.630 af Secondary=0.00 cfs 0.000 af Outflow=63.12 cfs 35.630 af

Total Runoff Area = 357.466 ac Runoff Volume = 36.881 af Average Runoff Depth = 1.24"
90.90% Pervious = 324.921 ac 9.10% Impervious = 32.545 ac

Summary for Subcatchment 1S: 256+00

Runoff = 1.58 cfs @ 12.07 hrs, Volume= 0.121 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 20,700	98	
20,700		100.00% Impervious Area

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

Summary for Subcatchment 2S: 274+04

Runoff = 0.58 cfs @ 12.07 hrs, Volume= 0.044 af, Depth= 2.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 7,197	98	
572	80	>75% Grass cover, Good, HSG D
7,769	97	Weighted Average
572		7.36% Pervious Area
7,197		92.64% Impervious Area

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

Summary for Subcatchment 3S: 274+05

Runoff = 0.08 cfs @ 12.07 hrs, Volume= 0.006 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 1,056	98	
1,056		100.00% Impervious Area

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

Summary for Subcatchment 4AS: 274+47

Runoff = 2.56 cfs @ 12.07 hrs, Volume= 0.182 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	26,920	98	
	10,451	80	>75% Grass cover, Good, HSG D
	37,371	93	Weighted Average
	10,451		27.97% Pervious Area
	26,920		72.03% Impervious Area

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

Summary for Subcatchment 4BS: 274+48

Runoff = 0.17 cfs @ 12.07 hrs, Volume= 0.013 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	2,194	98	
	2,194		100.00% Impervious Area

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

Summary for Subcatchment 5S: 281+97

Runoff = 1.69 cfs @ 12.07 hrs, Volume= 0.120 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	17,204	98	
	7,537	80	>75% Grass cover, Good, HSG D
	24,741	93	Weighted Average
	7,537		30.46% Pervious Area
	17,204		69.54% Impervious Area

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

Summary for Subcatchment 6S: 286+96

Runoff = 1.37 cfs @ 12.07 hrs, Volume= 0.097 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	14,044	98	
	5,905	80	>75% Grass cover, Good, HSG D
	19,949	93	Weighted Average
	5,905		29.60% Pervious Area
	14,044		70.40% Impervious Area

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

Summary for Subcatchment 7S: 290+95

Runoff = 1.89 cfs @ 12.07 hrs, Volume= 0.134 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	19,638	98	
	7,977	80	>75% Grass cover, Good, HSG D
	27,615	93	Weighted Average
	7,977		28.89% Pervious Area
	19,638		71.11% Impervious Area

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

Summary for Subcatchment 8S: 296+44

Runoff = 1.03 cfs @ 12.07 hrs, Volume= 0.073 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 10,600	98	
4,434	80	>75% Grass cover, Good, HSG D
15,034	93	Weighted Average
4,434		29.49% Pervious Area
10,600		70.51% Impervious Area

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

Summary for Subcatchment 9S: 299+43

Runoff = 1.35 cfs @ 12.07 hrs, Volume= 0.096 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 14,105	98	
5,631	80	>75% Grass cover, Good, HSG D
19,736	93	Weighted Average
5,631		28.53% Pervious Area
14,105		71.47% Impervious Area

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

Summary for Subcatchment C1S: 272+50

Runoff = 114.39 cfs @ 12.87 hrs, Volume= 21.981 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
16.540	98	
6.610	30	Woods, Good, HSG A
3.010	30	Brush, Good, HSG A
1.060	70	Woods, Good, HSG C
1.960	65	Brush, Good, HSG C
156.870	77	Woods, Good, HSG D
29.780	73	Brush, Good, HSG D
215.830	76	Weighted Average
199.290		92.34% Pervious Area
16.540		7.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.2	95	0.1111	0.15		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
6.5	583	0.0900	1.50		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.6	65	0.0600	1.71		Shallow Concentrated Flow, C-D Short Grass Pasture Kv= 7.0 fps
0.2	316	0.0820	33.41	17,640.39	Channel Flow, D-E Area= 528.0 sf Perim= 24.0' r= 22.00' n= 0.100 Heavy timber, flow below branches
4.4	190	0.0210	0.72		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
1.9	259	0.0230	2.27		Shallow Concentrated Flow, F-G Grassed Waterway Kv= 15.0 fps
8.0	275	0.0130	0.57		Shallow Concentrated Flow, G-H Woodland Kv= 5.0 fps
16.2	1,219	0.0070	1.25		Shallow Concentrated Flow, H-I Grassed Waterway Kv= 15.0 fps
14.0	296	0.0050	0.35		Shallow Concentrated Flow, I-J Woodland Kv= 5.0 fps
0.6	115	0.0090	2.96	29.60	Channel Flow, J-K Area= 10.0 sf Perim= 20.0' r= 0.50' n= 0.030 Short grass
62.6	3,413	Total			

Summary for Subcatchment SP1S: (new Subcat)

Runoff = 137.25 cfs @ 12.23 hrs, Volume= 13.791 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 12.354	98	
83.604	77	Woods, Good, HSG D
9.530	70	Woods, Good, HSG C
2.903	55	Woods, Good, HSG B
16.352	73	Brush, Good, HSG D
3.758	65	Brush, Good, HSG C
6.913	48	Brush, Good, HSG B
135.414	76	Weighted Average
123.060		90.88% Pervious Area
12.354		9.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	52	0.0860	0.12		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.8	74	0.0950	1.54		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
3.0	118	0.0170	0.65		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.7	86	0.0930	2.13		Shallow Concentrated Flow, D-E Short Grass Pasture Kv= 7.0 fps
0.6	65	0.0150	1.84		Shallow Concentrated Flow, E-F Grassed Waterway Kv= 15.0 fps
0.2	33	0.0050	3.21	2.52	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.5	249	0.0440	9.20	551.98	Trap/Vee/Rect Channel Flow, G-H Bot.W=3.00' D=2.00' Z= 15.0 & 12.0 '/' Top.W=57.00' n= 0.035 Earth, dense weeds
1.7	343	0.0150	3.41	260.91	Trap/Vee/Rect Channel Flow, H-I Bot.W=9.00' D=1.00' Z= 75.0 & 60.0 '/' Top.W=144.00' n= 0.035 Earth, dense weeds
1.7	640	0.0210	6.40	179.30	Trap/Vee/Rect Channel Flow, I-J Bot.W=2.00' D=2.00' Z= 8.0 & 4.0 '/' Top.W=26.00' n= 0.035 Earth, dense weeds
16.2	1,660	Total			

Summary for Subcatchment SP2S: (new Subcat)

Runoff = 3.14 cfs @ 12.08 hrs, Volume= 0.222 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 25,391	98	
6,568	73	Brush, Good, HSG D
34,718	65	Brush, Good, HSG C
7,912	77	Woods, Good, HSG D
20,274	70	Woods, Good, HSG C
94,863	76	Weighted Average
69,472		73.23% Pervious Area
25,391		26.77% Impervious Area

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

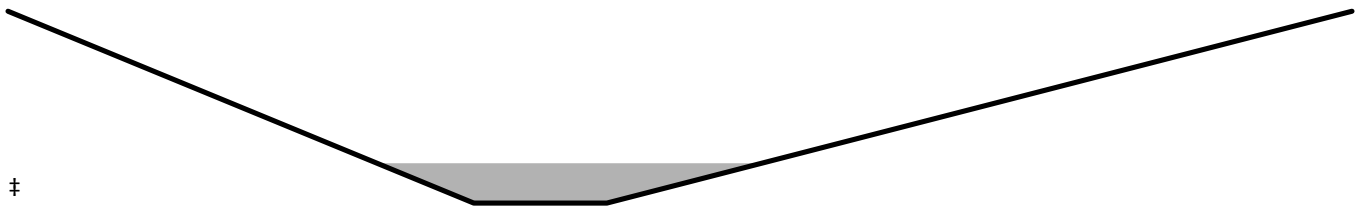
Summary for Reach SP1R1: (new Reach)

Inflow Area = 2.005 ac, 70.40% Impervious, Inflow Depth = 2.54" for 02-YR event
Inflow = 3.60 cfs @ 12.23 hrs, Volume= 0.425 af
Outflow = 3.58 cfs @ 12.30 hrs, Volume= 0.425 af, Atten= 0%, Lag= 4.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.22 fps, Min. Travel Time= 3.0 min
Avg. Velocity = 0.77 fps, Avg. Travel Time= 8.5 min

Peak Storage= 637 cf @ 12.25 hrs
Average Depth at Peak Storage= 0.42'
Bank-Full Depth= 2.00' Flow Area= 22.2 sf, Capacity= 122.04 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.5 5.6 '/' Top Width= 20.20'
Length= 394.0' Slope= 0.0152 '/'
Inlet Invert= 48.00', Outlet Invert= 42.00'



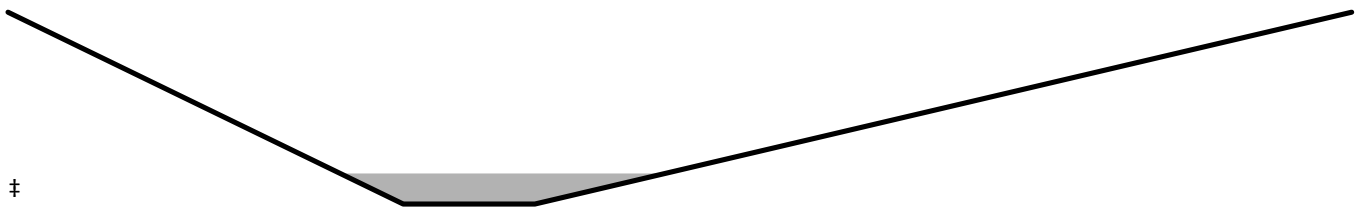
Summary for Reach SP1R2: (new Reach)

Inflow Area = 1.437 ac, 70.74% Impervious, Inflow Depth = 2.54" for 02-YR event
Inflow = 2.91 cfs @ 12.18 hrs, Volume= 0.304 af
Outflow = 2.86 cfs @ 12.26 hrs, Volume= 0.304 af, Atten= 2%, Lag= 4.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.60 fps, Min. Travel Time= 3.0 min
Avg. Velocity = 0.88 fps, Avg. Travel Time= 8.7 min

Peak Storage= 508 cf @ 12.21 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 2.00' Flow Area= 22.4 sf, Capacity= 167.34 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 6.2 '/' Top Width= 20.40'
Length= 461.0' Slope= 0.0282 '/'
Inlet Invert= 61.00', Outlet Invert= 48.00'



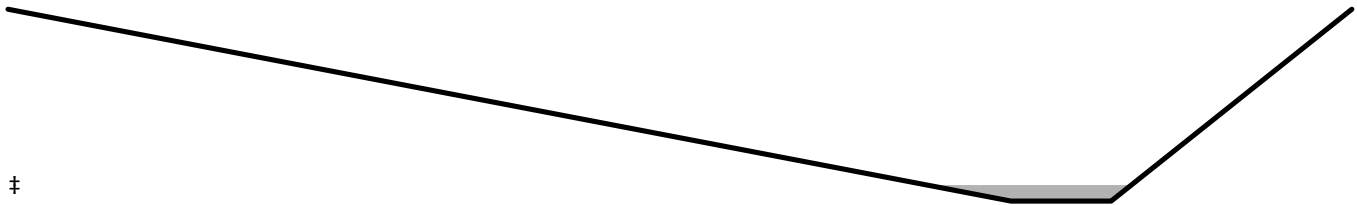
Summary for Reach SP1R3: (new Reach)

Inflow Area = 0.979 ac, 70.90% Impervious, Inflow Depth = 2.54" for 02-YR event
Inflow = 2.41 cfs @ 12.09 hrs, Volume= 0.207 af
Outflow = 2.21 cfs @ 12.21 hrs, Volume= 0.207 af, Atten= 8%, Lag= 7.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.75 fps, Min. Travel Time= 4.2 min
Avg. Velocity = 0.61 fps, Avg. Travel Time= 12.0 min

Peak Storage= 556 cf @ 12.14 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 2.00' Flow Area= 72.0 sf, Capacity= 528.57 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 25.0 6.0 '/' Top Width= 67.00'
Length= 440.0' Slope= 0.0273 '/'
Inlet Invert= 73.00', Outlet Invert= 61.00'



Summary for Reach SP1R4: (new Reach)

Inflow Area = 0.345 ac, 70.51% Impervious, Inflow Depth = 2.54" for 02-YR event
Inflow = 1.03 cfs @ 12.07 hrs, Volume= 0.073 af
Outflow = 0.91 cfs @ 12.18 hrs, Volume= 0.073 af, Atten= 12%, Lag= 6.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.48 fps, Min. Travel Time= 4.1 min
Avg. Velocity = 0.99 fps, Avg. Travel Time= 10.3 min

Peak Storage= 223 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 3.00' Flow Area= 46.6 sf, Capacity= 620.85 cfs

1.30' x 3.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.7 5.8 '/' Top Width= 29.80'
Length= 611.0' Slope= 0.0556 '/'
Inlet Invert= 107.00', Outlet Invert= 73.00'



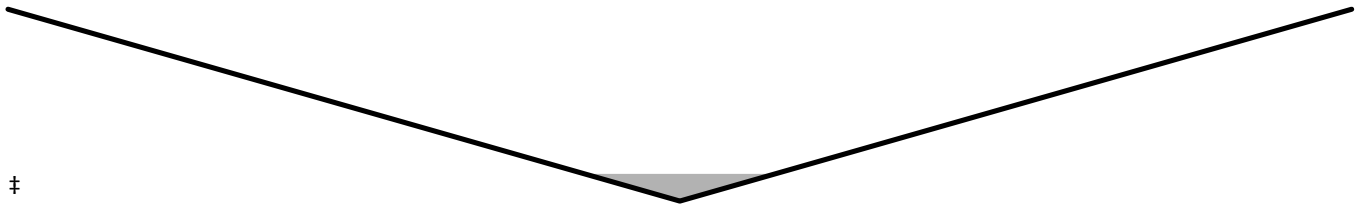
Summary for Reach SP2R: SP2 STA299+43

Inflow Area = 2.631 ac, 34.46% Impervious, Inflow Depth = 1.45" for 02-YR event
 Inflow = 4.49 cfs @ 12.08 hrs, Volume= 0.318 af
 Outflow = 4.46 cfs @ 12.09 hrs, Volume= 0.318 af, Atten= 0%, Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 2.23 fps, Min. Travel Time= 0.6 min
 Avg. Velocity = 0.84 fps, Avg. Travel Time= 1.5 min

Peak Storage= 154 cf @ 12.08 hrs
 Average Depth at Peak Storage= 0.14'
 Bank-Full Depth= 1.00' Flow Area= 100.0 sf, Capacity= 820.11 cfs

0.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
 Side Slope Z-value= 100.0 '/' Top Width= 200.00'
 Length= 77.0' Slope= 0.0940 '/'
 Inlet Invert= 114.24', Outlet Invert= 107.00'



Summary for Pond 1P: 272+50

Inflow Area = 215.830 ac, 7.66% Impervious, Inflow Depth = 1.22" for 02-YR event
 Inflow = 114.39 cfs @ 12.87 hrs, Volume= 21.981 af
 Outflow = 79.23 cfs @ 13.36 hrs, Volume= 21.981 af, Atten= 31%, Lag= 29.2 min
 Primary = 79.23 cfs @ 13.36 hrs, Volume= 21.981 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 39.14' @ 13.36 hrs Surf.Area= 163,251 sf Storage= 107,610 cf

Plug-Flow detention time= 8.9 min calculated for 21.976 af (100% of inflow)
 Center-of-Mass det. time= 8.9 min (915.2 - 906.3)

Volume	Invert	Avail.Storage	Storage Description		
#1	37.00'	1,813,588 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
37.00	2,863	918.2	0	0	2,863
38.00	26,586	2,276.7	12,724	12,724	348,255
39.00	134,675	3,072.1	73,699	86,424	686,822
40.00	393,337	4,851.0	252,723	339,147	1,808,426
41.00	742,346	5,944.1	558,682	897,829	2,747,466
42.00	1,100,908	6,521.2	915,758	1,813,588	3,319,958

Device	Routing	Invert	Outlet Devices
#1	Primary	34.89'	54.0" Round Culvert L= 185.9' Ke= 0.500 Inlet / Outlet Invert= 34.89' / 34.59' S= 0.0016 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 15.90 sf

Primary OutFlow Max=79.23 cfs @ 13.36 hrs HW=39.14' (Free Discharge)

↳ **1=Culvert** (Barrel Controls 79.23 cfs @ 6.57 fps)

Summary for Pond SP1P: STA270

Inflow Area = 354.835 ac, 8.92% Impervious, Inflow Depth = 1.24" for 02-YR event
 Inflow = 168.60 cfs @ 12.25 hrs, Volume= 36.563 af
 Outflow = 63.12 cfs @ 14.52 hrs, Volume= 35.630 af, Atten= 63%, Lag= 136.5 min
 Primary = 63.12 cfs @ 14.52 hrs, Volume= 35.630 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 38.20' @ 14.52 hrs Surf.Area= 538,648 sf Storage= 588,093 cf

Plug-Flow detention time= 156.7 min calculated for 35.623 af (97% of inflow)
 Center-of-Mass det. time= 142.6 min (1,035.6 - 893.0)

Volume	Invert	Avail.Storage	Storage Description
#1	34.00'	7,139,730 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
34.00	25	20.0	0	0	25
35.00	25	20.0	25	25	45
36.00	63,877	2,213.0	21,722	21,747	389,735
37.00	234,622	3,974.0	140,307	162,054	1,256,762
38.00	436,029	4,766.0	330,166	492,220	1,807,620
39.00	1,068,655	9,433.0	729,100	1,221,320	7,080,964
40.00	1,853,982	9,172.0	1,443,404	2,664,724	7,467,497
41.00	2,208,027	10,197.0	2,028,428	4,693,152	9,047,396
42.00	2,693,152	10,069.0	2,446,578	7,139,730	9,254,072

Device	Routing	Invert	Outlet Devices
#1	Primary	36.23'	108.0" W x 108.0" H Box Culvert L= 37.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 36.23' / 36.14' S= 0.0024 '/' Cc= 0.900 n= 0.013, Flow Area= 81.00 sf
#2	Secondary	40.00'	300.0' long x 22.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=63.10 cfs @ 14.52 hrs HW=38.20' (Free Discharge)

↳ **1=Culvert** (Barrel Controls 63.10 cfs @ 4.75 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=34.00' (Free Discharge)

↳ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
32.545	98	(1S, 2S, 3S, 4AS, 4BS, 5S, 6S, 7S, 8S, 9S, C1S, SP1S, SP2S)
0.976	80	>75% Grass cover, Good, HSG D (2S, 4AS, 5S, 6S, 7S, 8S, 9S)
3.010	30	Brush, Good, HSG A (C1S)
6.913	48	Brush, Good, HSG B (SP1S)
6.515	65	Brush, Good, HSG C (C1S, SP1S, SP2S)
46.283	73	Brush, Good, HSG D (C1S, SP1S, SP2S)
6.610	30	Woods, Good, HSG A (C1S)
2.903	55	Woods, Good, HSG B (SP1S)
11.055	70	Woods, Good, HSG C (C1S, SP1S, SP2S)
240.656	77	Woods, Good, HSG D (C1S, SP1S, SP2S)
357.466	76	TOTAL AREA

Notes Listing (all nodes)

Line#	Node Number	Notes
1	SP1P	The outlet culvert is modeled as a 9-ft by 9-ft box. These dimensions have not been field verified.

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: 256+00	Runoff Area=20,700 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=2.36 cfs 0.185 af
Subcatchment 2S: 274+04	Runoff Area=7,769 sf 92.64% Impervious Runoff Depth=4.55" Tc=5.0 min CN=97 Runoff=0.88 cfs 0.068 af
Subcatchment 3S: 274+05	Runoff Area=1,056 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.12 cfs 0.009 af
Subcatchment 4AS: 274+47	Runoff Area=37,371 sf 72.03% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=4.02 cfs 0.293 af
Subcatchment 4BS: 274+48	Runoff Area=2,194 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af
Subcatchment 5S: 281+97	Runoff Area=24,741 sf 69.54% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=2.66 cfs 0.194 af
Subcatchment 6S: 286+96	Runoff Area=19,949 sf 70.40% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=2.15 cfs 0.156 af
Subcatchment 7S: 290+95	Runoff Area=27,615 sf 71.11% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=2.97 cfs 0.217 af
Subcatchment 8S: 296+44	Runoff Area=15,034 sf 70.51% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=1.62 cfs 0.118 af
Subcatchment 9S: 299+43	Runoff Area=19,736 sf 71.47% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=2.12 cfs 0.155 af
Subcatchment C1S: 272+50	Runoff Area=215.830 ac 7.66% Impervious Runoff Depth=2.45" Flow Length=3,413' Tc=62.6 min CN=76 Runoff=237.79 cfs 44.126 af
Subcatchment SP1S: (new Subcat)	Runoff Area=135.414 ac 9.12% Impervious Runoff Depth=2.45" Flow Length=1,660' Tc=16.2 min CN=76 Runoff=285.34 cfs 27.685 af
Subcatchment SP2S: (new Subcat)	Runoff Area=94,863 sf 26.77% Impervious Runoff Depth=2.45" Tc=5.0 min CN=76 Runoff=6.48 cfs 0.445 af
Reach SP1R1: (new Reach)	Avg. Flow Depth=0.53' Max Vel=2.54 fps Inflow=6.02 cfs 0.685 af n=0.035 L=394.0' S=0.0152 '/' Capacity=122.04 cfs Outflow=5.96 cfs 0.685 af
Reach SP1R2: (new Reach)	Avg. Flow Depth=0.41' Max Vel=2.98 fps Inflow=4.81 cfs 0.491 af n=0.035 L=461.0' S=0.0282 '/' Capacity=167.34 cfs Outflow=4.73 cfs 0.491 af
Reach SP1R3: (new Reach)	Avg. Flow Depth=0.22' Max Vel=2.01 fps Inflow=3.88 cfs 0.335 af n=0.035 L=440.0' S=0.0273 '/' Capacity=528.57 cfs Outflow=3.61 cfs 0.335 af

Reach SP1R4: (new Reach)

Avg. Flow Depth=0.22' Max Vel=2.83 fps Inflow=1.62 cfs 0.118 af
n=0.035 L=611.0' S=0.0556 '/' Capacity=620.85 cfs Outflow=1.45 cfs 0.118 af

Reach SP2R: SP2 STA299+43

Avg. Flow Depth=0.18' Max Vel=2.62 fps Inflow=8.61 cfs 0.600 af
n=0.035 L=77.0' S=0.0940 '/' Capacity=820.11 cfs Outflow=8.56 cfs 0.600 af

Pond 1P: 272+50

Peak Elev=40.24' Storage=441,654 cf Inflow=237.79 cfs 44.126 af
54.0" Round Culvert n=0.012 L=185.9' S=0.0016 '/' Outflow=107.97 cfs 44.126 af

Pond SP1P: STA270

Peak Elev=38.93' Storage=1,146,519 cf Inflow=340.87 cfs 73.070 af
Primary=100.49 cfs 72.135 af Secondary=0.00 cfs 0.000 af Outflow=100.49 cfs 72.135 af

Total Runoff Area = 357.466 ac Runoff Volume = 73.670 af Average Runoff Depth = 2.47"
90.90% Pervious = 324.921 ac 9.10% Impervious = 32.545 ac

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: 256+00	Runoff Area=20,700 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=2.99 cfs 0.236 af
Subcatchment 2S: 274+04	Runoff Area=7,769 sf 92.64% Impervious Runoff Depth=5.84" Tc=5.0 min CN=97 Runoff=1.12 cfs 0.087 af
Subcatchment 3S: 274+05	Runoff Area=1,056 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.15 cfs 0.012 af
Subcatchment 4AS: 274+47	Runoff Area=37,371 sf 72.03% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=5.20 cfs 0.385 af
Subcatchment 4BS: 274+48	Runoff Area=2,194 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.32 cfs 0.025 af
Subcatchment 5S: 281+97	Runoff Area=24,741 sf 69.54% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=3.44 cfs 0.255 af
Subcatchment 6S: 286+96	Runoff Area=19,949 sf 70.40% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=2.77 cfs 0.205 af
Subcatchment 7S: 290+95	Runoff Area=27,615 sf 71.11% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=3.84 cfs 0.284 af
Subcatchment 8S: 296+44	Runoff Area=15,034 sf 70.51% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=2.09 cfs 0.155 af
Subcatchment 9S: 299+43	Runoff Area=19,736 sf 71.47% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=2.74 cfs 0.203 af
Subcatchment C1S: 272+50	Runoff Area=215.830 ac 7.66% Impervious Runoff Depth=3.55" Flow Length=3,413' Tc=62.6 min CN=76 Runoff=345.96 cfs 63.909 af
Subcatchment SP1S: (new Subcat)	Runoff Area=135.414 ac 9.12% Impervious Runoff Depth=3.55" Flow Length=1,660' Tc=16.2 min CN=76 Runoff=415.00 cfs 40.097 af
Subcatchment SP2S: (new Subcat)	Runoff Area=94,863 sf 26.77% Impervious Runoff Depth=3.55" Tc=5.0 min CN=76 Runoff=9.41 cfs 0.645 af
Reach SP1R1: (new Reach)	Avg. Flow Depth=0.61' Max Vel=2.74 fps Inflow=8.03 cfs 0.899 af n=0.035 L=394.0' S=0.0152 '/' Capacity=122.04 cfs Outflow=7.96 cfs 0.899 af
Reach SP1R2: (new Reach)	Avg. Flow Depth=0.47' Max Vel=3.22 fps Inflow=6.38 cfs 0.644 af n=0.035 L=461.0' S=0.0282 '/' Capacity=167.34 cfs Outflow=6.28 cfs 0.644 af
Reach SP1R3: (new Reach)	Avg. Flow Depth=0.25' Max Vel=2.17 fps Inflow=5.08 cfs 0.439 af n=0.035 L=440.0' S=0.0273 '/' Capacity=528.57 cfs Outflow=4.76 cfs 0.439 af

Reach SP1R4: (new Reach)

Avg. Flow Depth=0.25' Max Vel=3.04 fps Inflow=2.09 cfs 0.155 af
n=0.035 L=611.0' S=0.0556 '/' Capacity=620.85 cfs Outflow=1.89 cfs 0.155 af

Reach SP2R: SP2 STA299+43

Avg. Flow Depth=0.21' Max Vel=2.86 fps Inflow=12.15 cfs 0.848 af
n=0.035 L=77.0' S=0.0940 '/' Capacity=820.11 cfs Outflow=12.09 cfs 0.848 af

Pond 1P: 272+50

Peak Elev=40.91' Storage=830,895 cf Inflow=345.96 cfs 63.909 af
54.0" Round Culvert n=0.012 L=185.9' S=0.0016 '/' Outflow=117.04 cfs 63.909 af

Pond SP1P: STA270

Peak Elev=39.30' Storage=1,577,210 cf Inflow=487.13 cfs 105.650 af
Primary=121.76 cfs 104.713 af Secondary=0.00 cfs 0.000 af Outflow=121.76 cfs 104.713 af

Total Runoff Area = 357.466 ac Runoff Volume = 106.498 af Average Runoff Depth = 3.58"
90.90% Pervious = 324.921 ac 9.10% Impervious = 32.545 ac

Mile 8.8, STA300+00 to STA350+00

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
14.144	98	(1CS, 2S, 3S, 4S, 5AS, 5BS, 5CS, 5DS, 6BS, 7AS, 7S, C2S, C4S, C5AS, C5BS)
1.584	80	>75% Grass cover, Good, HSG D (1AS, 1BS, 2S, 3S, 4S, 5AS, 5CS, 6BS, 7AS, 7S)
1.650	30	Brush, Good, HSG A (C2S)
25.164	73	Brush, Good, HSG D (100S, 200S, 500S, 700, 700S, 750S, C2S, C5AS, C5BS)
0.940	98	Impervious (C3S)
0.026	98	Paved (11S)
0.560	98	Paved 303+50-311+00 (1AS)
0.315	98	Paved 311+00-313+75 (1BS)
3.969	98	Pavement (100S, 500S, 700, 700S, 750S)
2.880	30	Woods, Good, HSG A (C2S)
201.410	77	Woods, Good, HSG D (100S, 200S, 500S, 700, 700S, 750S, C2S, C3S, C4S, C5AS, C5BS)
1.330	98	pavement (200S)
253.972	78	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1AS: 309+99	Runoff Area=34,148 sf 71.43% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=2.34 cfs 0.166 af
Subcatchment 1BS: 309+99	Runoff Area=19,128 sf 71.72% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=1.31 cfs 0.093 af
Subcatchment 1CS: (new Subcat)	Runoff Area=3,895 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.30 cfs 0.023 af
Subcatchment 2S: 313+87	Runoff Area=19,851 sf 70.45% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=1.36 cfs 0.097 af
Subcatchment 3S: 317+87	Runoff Area=24,474 sf 70.25% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=1.68 cfs 0.119 af
Subcatchment 4S: 322+87	Runoff Area=27,080 sf 70.16% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=1.86 cfs 0.132 af
Subcatchment 5AS: 333+37 CENTER	Runoff Area=25,898 sf 70.54% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=1.77 cfs 0.126 af
Subcatchment 5BS: 333+37 LEFT	Runoff Area=1,340 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.10 cfs 0.008 af
Subcatchment 5CS: 333+60 CENTER	Runoff Area=11,537 sf 60.61% Impervious Runoff Depth=2.35" Tc=5.0 min CN=91 Runoff=0.74 cfs 0.052 af
Subcatchment 5DS: 333+15 RIGHT	Runoff Area=1,431 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.11 cfs 0.008 af
Subcatchment 6BS: 336+61_CENTER	Runoff Area=20,644 sf 63.34% Impervious Runoff Depth=2.35" Tc=5.0 min CN=91 Runoff=1.33 cfs 0.093 af
Subcatchment 7AS: 343+35_A	Runoff Area=13,380 sf 51.89% Impervious Runoff Depth=2.17" Tc=5.0 min CN=89 Runoff=0.80 cfs 0.056 af
Subcatchment 7S: 343+35_A	Runoff Area=13,380 sf 51.89% Impervious Runoff Depth=2.17" Tc=5.0 min CN=89 Runoff=0.80 cfs 0.056 af
Subcatchment 11S: 310+13	Runoff Area=1,152 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.09 cfs 0.007 af
Subcatchment 100S: STA311+50	Runoff Area=2.060 ac 26.21% Impervious Runoff Depth=1.55" Tc=5.0 min CN=81 Runoff=3.86 cfs 0.266 af
Subcatchment 200S: STA311+50	Runoff Area=3.670 ac 36.24% Impervious Runoff Depth=1.69" Flow Length=640' Tc=5.0 min CN=83 Runoff=7.54 cfs 0.517 af

Subcatchment 500S: STA327+00	Runoff Area=5.830 ac 22.30% Impervious Runoff Depth=1.48" Flow Length=925' Tc=16.4 min CN=80 Runoff=7.31 cfs 0.719 af
Subcatchment 700: STA338 RIGHT	Runoff Area=6.435 ac 14.31% Impervious Runoff Depth=1.41" Flow Length=575' Tc=22.4 min CN=79 Runoff=6.75 cfs 0.757 af
Subcatchment 700S: STA338 RIGHT	Runoff Area=6.435 ac 14.31% Impervious Runoff Depth=1.41" Flow Length=575' Tc=22.4 min CN=79 Runoff=6.75 cfs 0.757 af
Subcatchment 750S: STA349	Runoff Area=1.503 ac 19.10% Impervious Runoff Depth=1.48" Flow Length=80' Tc=3.1 min CN=80 Runoff=2.87 cfs 0.185 af
Subcatchment C2S: 311+50	Runoff Area=144.070 ac 4.95% Impervious Runoff Depth=1.22" Flow Length=2,483' Tc=35.1 min CN=76 Runoff=105.01 cfs 14.673 af
Subcatchment C3S: 315+50	Runoff Area=3.010 ac 31.23% Impervious Runoff Depth=1.77" Flow Length=731' Tc=15.0 min CN=84 Runoff=4.71 cfs 0.443 af
Subcatchment C4S: 327+50	Runoff Area=8.040 ac 3.11% Impervious Runoff Depth=1.35" Flow Length=869' Tc=20.2 min CN=78 Runoff=8.34 cfs 0.903 af
Subcatchment C5AS: 331+00	Runoff Area=21.260 ac 5.03% Impervious Runoff Depth=1.35" Flow Length=423' Tc=10.2 min CN=78 Runoff=28.53 cfs 2.387 af
Subcatchment C5BS: 331+00	Runoff Area=46.670 ac 6.84% Impervious Runoff Depth=1.35" Flow Length=1,929' Tc=64.4 min CN=78 Runoff=27.01 cfs 5.239 af
Reach 7AR2: OVERLAND FLOW	Avg. Flow Depth=0.03' Max Vel=1.15 fps Inflow=0.80 cfs 0.056 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=0.75 cfs 0.056 af
Reach 7R: OVERLAND FLOW	Avg. Flow Depth=0.03' Max Vel=1.15 fps Inflow=0.80 cfs 0.056 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=0.75 cfs 0.056 af
Reach 100R: POA STA311+50	Inflow=53.44 cfs 16.221 af Outflow=53.44 cfs 16.221 af
Reach 101R: DITCH 309+90TOSTA311+50	Avg. Flow Depth=0.18' Max Vel=1.78 fps Inflow=3.93 cfs 0.282 af n=0.035 L=170.0' S=0.0206 '/' Capacity=92.78 cfs Outflow=3.82 cfs 0.282 af
Reach 102R: OVERLAND STA309+90	Avg. Flow Depth=0.07' Max Vel=2.54 fps Inflow=3.95 cfs 0.282 af n=0.035 L=60.0' S=0.1300 '/' Capacity=467.03 cfs Outflow=3.93 cfs 0.282 af
Reach 200R: POA STA314+00	Inflow=10.39 cfs 0.865 af Outflow=10.39 cfs 0.865 af
Reach 201R: OVERLAND STA314+00	Inflow=1.36 cfs 0.097 af Outflow=1.36 cfs 0.097 af
Reach 202R: OVERLAND STA314+00	Avg. Flow Depth=0.07' Max Vel=1.88 fps Inflow=2.80 cfs 0.251 af n=0.035 L=325.0' S=0.0769 '/' Capacity=359.26 cfs Outflow=2.72 cfs 0.251 af

Reach 203R: DITCH STA317+00	Avg. Flow Depth=0.25' Max Vel=2.37 fps Inflow=2.81 cfs 0.251 af n=0.035 L=120.0' S=0.0292 '/' Capacity=2,420.87 cfs Outflow=2.80 cfs 0.251 af
Reach 204R: DITCH STA318+00	Avg. Flow Depth=0.19' Max Vel=2.12 fps Inflow=1.86 cfs 0.132 af n=0.035 L=475.0' S=0.0326 '/' Capacity=2,560.64 cfs Outflow=1.66 cfs 0.132 af
Reach 501: POA STA327+00	Inflow=21.01 cfs 8.930 af Outflow=21.01 cfs 8.930 af
Reach 502R: DITCH STA327	Avg. Flow Depth=0.79' Max Vel=2.83 fps Inflow=20.07 cfs 8.212 af n=0.035 L=150.0' S=0.0100 '/' Capacity=142.33 cfs Outflow=20.07 cfs 8.212 af
Reach 503R: DITCH STA329	Avg. Flow Depth=0.77' Max Vel=2.88 fps Inflow=19.58 cfs 7.860 af n=0.035 L=270.0' S=0.0107 '/' Capacity=147.51 cfs Outflow=19.57 cfs 7.860 af
Reach 504R: DITCH STA332	Avg. Flow Depth=0.04' Max Vel=0.38 fps Inflow=0.11 cfs 0.008 af n=0.035 L=300.0' S=0.0067 '/' Capacity=116.22 cfs Outflow=0.07 cfs 0.008 af
Reach 701R: POA STA340+00	Inflow=7.12 cfs 0.813 af Outflow=7.12 cfs 0.813 af
Reach 750R: POA STA349+00	Inflow=2.87 cfs 0.185 af Outflow=2.87 cfs 0.185 af
Reach C4R: DITCH STA327 TO STA313+00	Avg. Flow Depth=0.38' Max Vel=3.19 fps Inflow=5.09 cfs 0.551 af n=0.030 L=1,010.0' S=0.0257 '/' Capacity=545.10 cfs Outflow=4.81 cfs 0.551 af
Reach C5AR1: L-M	Avg. Flow Depth=0.15' Max Vel=0.17 fps Inflow=6.18 cfs 2.348 af n=0.080 L=922.0' S=0.0011 '/' Capacity=108.51 cfs Outflow=4.65 cfs 2.335 af
Reach C5AR2: M-N	Avg. Flow Depth=0.23' Max Vel=1.45 fps Inflow=4.65 cfs 2.335 af n=0.030 L=137.0' S=0.0073 '/' Capacity=69.43 cfs Outflow=4.65 cfs 2.335 af
Reach C5AR3: N-O	Avg. Flow Depth=0.45' Max Vel=7.59 fps Inflow=4.65 cfs 2.335 af n=0.030 L=153.0' S=0.1830 '/' Capacity=38.66 cfs Outflow=4.65 cfs 2.335 af
Pond 701P: (new Pond)	Peak Elev=143.58' Storage=304 cf Inflow=7.12 cfs 0.813 af Primary=7.08 cfs 0.812 af Secondary=0.00 cfs 0.000 af Outflow=7.08 cfs 0.812 af
Pond C2P: 313+00LEFT	Peak Elev=112.08' Storage=170,900 cf Inflow=111.95 cfs 15.673 af Primary=52.70 cfs 15.673 af Secondary=0.00 cfs 0.000 af Outflow=52.70 cfs 15.673 af
Pond C4P: 327+50	Peak Elev=146.01' Storage=0 cf Inflow=8.34 cfs 0.903 af Primary=3.25 cfs 0.352 af Secondary=5.09 cfs 0.551 af Outflow=8.34 cfs 0.903 af
Pond C5AP: (new Pond)	Peak Elev=182.92' Storage=37,717 cf Inflow=28.53 cfs 2.387 af 15.0" Round Culvert n=0.025 L=27.0' S=0.0100 '/' Outflow=6.18 cfs 2.348 af
Pond C5P: 331+00	Peak Elev=144.62' Storage=31,782 cf Inflow=27.38 cfs 7.852 af Primary=19.57 cfs 7.852 af Secondary=0.00 cfs 0.000 af Outflow=19.57 cfs 7.852 af

Total Runoff Area = 253.972 ac Runoff Volume = 27.880 af Average Runoff Depth = 1.32"
91.62% Pervious = 232.688 ac 8.38% Impervious = 21.284 ac

Summary for Subcatchment 1AS: 309+99

Runoff = 2.34 cfs @ 12.07 hrs, Volume= 0.166 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	24,391	98	Paved 303+50-311+00
	9,757	80	>75% Grass cover, Good, HSG D
	34,148	93	Weighted Average
	9,757		28.57% Pervious Area
	24,391		71.43% Impervious Area

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

Summary for Subcatchment 1BS: 309+99

Runoff = 1.31 cfs @ 12.07 hrs, Volume= 0.093 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	13,718	98	Paved 311+00-313+75
	5,410	80	>75% Grass cover, Good, HSG D
	19,128	93	Weighted Average
	5,410		28.28% Pervious Area
	13,718		71.72% Impervious Area

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

Summary for Subcatchment 1CS: (new Subcat)

Runoff = 0.30 cfs @ 12.07 hrs, Volume= 0.023 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	3,895	98	
	3,895		100.00% Impervious Area

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

Summary for Subcatchment 2S: 313+87

Runoff = 1.36 cfs @ 12.07 hrs, Volume= 0.097 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 13,985	98	
5,866	80	>75% Grass cover, Good, HSG D
19,851	93	Weighted Average
5,866		29.55% Pervious Area
13,985		70.45% Impervious Area

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

Summary for Subcatchment 3S: 317+87

Runoff = 1.68 cfs @ 12.07 hrs, Volume= 0.119 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 17,193	98	
7,281	80	>75% Grass cover, Good, HSG D
24,474	93	Weighted Average
7,281		29.75% Pervious Area
17,193		70.25% Impervious Area

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

Summary for Subcatchment 4S: 322+87

Runoff = 1.86 cfs @ 12.07 hrs, Volume= 0.132 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 18,999	98	
8,081	80	>75% Grass cover, Good, HSG D
27,080	93	Weighted Average
8,081		29.84% Pervious Area
18,999		70.16% Impervious Area

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

Summary for Subcatchment 5AS: 333+37 CENTER

Runoff = 1.77 cfs @ 12.07 hrs, Volume= 0.126 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 18,269	98	
7,629	80	>75% Grass cover, Good, HSG D
25,898	93	Weighted Average
7,629		29.46% Pervious Area
18,269		70.54% Impervious Area

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

Summary for Subcatchment 5BS: 333+37 LEFT

Runoff = 0.10 cfs @ 12.07 hrs, Volume= 0.008 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 1,340	98	
1,340		100.00% Impervious Area

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

Summary for Subcatchment 5CS: 333+60 CENTER

Runoff = 0.74 cfs @ 12.07 hrs, Volume= 0.052 af, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	6,992	98	
	4,545	80	>75% Grass cover, Good, HSG D
	11,537	91	Weighted Average
	4,545		39.39% Pervious Area
	6,992		60.61% Impervious Area

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

Summary for Subcatchment 5DS: 333+15 RIGHT

Runoff = 0.11 cfs @ 12.07 hrs, Volume= 0.008 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	1,431	98	
	1,431		100.00% Impervious Area

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

Summary for Subcatchment 6BS: 336+61_CENTER

Runoff = 1.33 cfs @ 12.07 hrs, Volume= 0.093 af, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	13,076	98	
	7,568	80	>75% Grass cover, Good, HSG D
	20,644	91	Weighted Average
	7,568		36.66% Pervious Area
	13,076		63.34% Impervious Area

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

Summary for Subcatchment 7AS: 343+35_A

Runoff = 0.80 cfs @ 12.07 hrs, Volume= 0.056 af, Depth= 2.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 6,943	98	
6,437	80	>75% Grass cover, Good, HSG D
13,380	89	Weighted Average
6,437		48.11% Pervious Area
6,943		51.89% Impervious Area

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

Summary for Subcatchment 7S: 343+35_A

Runoff = 0.80 cfs @ 12.07 hrs, Volume= 0.056 af, Depth= 2.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 6,943	98	
6,437	80	>75% Grass cover, Good, HSG D
13,380	89	Weighted Average
6,437		48.11% Pervious Area
6,943		51.89% Impervious Area

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

Summary for Subcatchment 11S: 310+13

Runoff = 0.09 cfs @ 12.07 hrs, Volume= 0.007 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	1,152	98	Paved
	1,152		100.00% Impervious Area

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

Summary for Subcatchment 100S: STA311+50

Runoff = 3.86 cfs @ 12.08 hrs, Volume= 0.266 af, Depth= 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

	Area (ac)	CN	Description
*	0.540	98	Pavement
	0.620	73	Brush, Good, HSG D
	0.900	77	Woods, Good, HSG D
	2.060	81	Weighted Average
	1.520		73.79% Pervious Area
	0.540		26.21% Impervious Area

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

Summary for Subcatchment 200S: STA311+50

Runoff = 7.54 cfs @ 12.08 hrs, Volume= 0.517 af, Depth= 1.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

	Area (ac)	CN	Description
*	1.330	98	pavement
	1.180	73	Brush, Good, HSG D
	1.160	77	Woods, Good, HSG D
	3.670	83	Weighted Average
	2.340		63.76% Pervious Area
	1.330		36.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	30	0.1500	0.14		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.1	20	0.2500	3.50		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
0.7	590	0.0300	13.83	2,455.21	Trap/Vee/Rect Channel Flow, C-D Bot.W=3.00' D=5.00' Z= 5.0 & 8.0 '/' Top.W=68.00' n= 0.035 Earth, dense weeds
0.6					Direct Entry,
5.0	640	Total			

Summary for Subcatchment 500S: STA327+00

Runoff = 7.31 cfs @ 12.23 hrs, Volume= 0.719 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 1.300	98	Pavement
1.950	73	Brush, Good, HSG D
2.580	77	Woods, Good, HSG D
5.830	80	Weighted Average
4.530		77.70% Pervious Area
1.300		22.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	90	0.0900	0.14		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
4.1	360	0.0440	1.47		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
1.7	475	0.0060	4.66	279.49	Trap/Vee/Rect Channel Flow, C-D Bot.W=5.00' D=3.00' Z= 5.0 '/' Top.W=35.00' n= 0.035 Earth, dense weeds
16.4	925	Total			

Summary for Subcatchment 700: STA338 RIGHT

Runoff = 6.75 cfs @ 12.32 hrs, Volume= 0.757 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
4.405	77	Woods, Good, HSG D
1.109	73	Brush, Good, HSG D
* 0.921	98	Pavement
6.435	79	Weighted Average
5.514		85.69% Pervious Area
0.921		14.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	100	0.0250	0.13		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 3.30"
7.1	300	0.0200	0.71		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
2.4	175	0.0600	1.22		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
22.4	575	Total			

Summary for Subcatchment 700S: STA338 RIGHT

Runoff = 6.75 cfs @ 12.32 hrs, Volume= 0.757 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
4.405	77	Woods, Good, HSG D
1.109	73	Brush, Good, HSG D
* 0.921	98	Pavement
6.435	79	Weighted Average
5.514		85.69% Pervious Area
0.921		14.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	100	0.0250	0.13		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 3.30"
7.1	300	0.0200	0.71		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
2.4	175	0.0600	1.22		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
22.4	575	Total			

Summary for Subcatchment 750S: STA349

Runoff = 2.87 cfs @ 12.05 hrs, Volume= 0.185 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
0.810	77	Woods, Good, HSG D
0.406	73	Brush, Good, HSG D
* 0.287	98	Pavement
1.503	80	Weighted Average
1.216		80.90% Pervious Area
0.287		19.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	30	0.1000	0.18		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 3.30"
0.3	50	0.2000	3.13		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
3.1	80	Total			

Summary for Subcatchment C2S: 311+50

Runoff = 105.01 cfs @ 12.52 hrs, Volume= 14.673 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 7.130	98	
2.880	30	Woods, Good, HSG A
1.650	30	Brush, Good, HSG A
120.910	77	Woods, Good, HSG D
11.500	73	Brush, Good, HSG D
144.070	76	Weighted Average
136.940		95.05% Pervious Area
7.130		4.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	29	0.0760	0.10		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.8	60	0.0333	1.28		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
1.4	115	0.0780	1.40		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
12.9	521	0.0020	0.67		Shallow Concentrated Flow, D-E Grassed Waterway Kv= 15.0 fps
0.8	120	0.0250	2.53	48.11	Channel Flow, E-F Area= 19.0 sf Perim= 29.0' r= 0.66' n= 0.070 Sluggish weedy reaches w/pools
0.3	113	0.0370	6.49	470.44	Channel Flow, F-G Area= 72.5 sf Perim= 129.0' r= 0.56' n= 0.030 Earth, grassed & winding
2.2	124	0.0040	0.95		Shallow Concentrated Flow, G-H Grassed Waterway Kv= 15.0 fps
6.1	361	0.0390	0.99		Shallow Concentrated Flow, H-I Woodland Kv= 5.0 fps
0.9	463	0.0713	9.00	413.84	Channel Flow, I-J Area= 46.0 sf Perim= 82.0' r= 0.56' n= 0.030 Earth, grassed & winding
3.2	123	0.0160	0.63		Shallow Concentrated Flow, J-K Woodland Kv= 5.0 fps
0.4	167	0.0540	7.25	65.26	Channel Flow, K-L Area= 9.0 sf Perim= 18.0' r= 0.50' n= 0.030 Earth, grassed & winding
1.5	287	0.0105	3.20	30.38	Channel Flow, L-M Area= 9.5 sf Perim= 19.0' r= 0.50' n= 0.030 Earth, grassed & winding
35.1	2,483	Total			

Summary for Subcatchment C3S: 315+50

Runoff = 4.71 cfs @ 12.21 hrs, Volume= 0.443 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 0.940	98	Impervious
2.070	77	Woods, Good, HSG D
0.000	73	Brush, Good, HSG D
3.010	84	Weighted Average
2.070		68.77% Pervious Area
0.940		31.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.0	62	0.4840	0.26		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
1.1	101	0.0890	1.49		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.1	22	0.4090	3.20		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
9.8	546	0.0348	0.93		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
15.0	731	Total			

Summary for Subcatchment C4S: 327+50

Runoff = 8.34 cfs @ 12.28 hrs, Volume= 0.903 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 0.250	98	
7.790	77	Woods, Good, HSG D
8.040	78	Weighted Average
7.790		96.89% Pervious Area
0.250		3.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	28	0.0357	0.08		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.5	44	0.0909	1.51		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
3.4	128	0.0156	0.62		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.5	51	0.0980	1.57		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
0.2	24	0.2083	2.28		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
1.1	62	0.0323	0.90		Shallow Concentrated Flow, F-G Woodland Kv= 5.0 fps
0.5	62	0.1613	2.01		Shallow Concentrated Flow, G-H Woodland Kv= 5.0 fps
0.3	28	0.1071	1.64		Shallow Concentrated Flow, H-I Woodland Kv= 5.0 fps
0.5	30	0.0333	0.91		Shallow Concentrated Flow, I-J Woodland Kv= 5.0 fps
0.1	24	0.2917	2.70		Shallow Concentrated Flow, J-K Woodland Kv= 5.0 fps
0.3	27	0.1111	1.67		Shallow Concentrated Flow, K-L Woodland Kv= 5.0 fps
0.4	26	0.0385	0.98		Shallow Concentrated Flow, L-M Woodland Kv= 5.0 fps
0.5	68	0.2353	2.43		Shallow Concentrated Flow, M-N Woodland Kv= 5.0 fps
0.3	24	0.0833	1.44		Shallow Concentrated Flow, N-O Woodland Kv= 5.0 fps
0.4	52	0.1538	1.96		Shallow Concentrated Flow, O-P Woodland Kv= 5.0 fps
5.1	191	0.0157	0.63		Shallow Concentrated Flow, P-Q Woodland Kv= 5.0 fps
20.2	869	Total			

Summary for Subcatchment C5AS: 331+00

Runoff = 28.53 cfs @ 12.15 hrs, Volume= 2.387 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 1.070	98	
17.680	77	Woods, Good, HSG D
2.510	73	Brush, Good, HSG D
21.260	78	Weighted Average
20.190		94.97% Pervious Area
1.070		5.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.0	24	0.0750	0.10		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	81	0.9877	4.97		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
4.3	150	0.0133	0.58		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.8	79	0.1013	1.59		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
0.2	34	0.2059	2.27		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
0.6	55	0.1091	1.65		Shallow Concentrated Flow, F-G Woodland Kv= 5.0 fps
10.2	423	Total			

Summary for Subcatchment C5BS: 331+00

Runoff = 27.01 cfs @ 12.89 hrs, Volume= 5.239 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 3.190	98	
38.700	77	Woods, Good, HSG D
4.780	73	Brush, Good, HSG D
46.670	78	Weighted Average
43.480		93.16% Pervious Area
3.190		6.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	36	0.0972	0.27		Sheet Flow, A-B Grass: Short n= 0.150 P2= 3.30"
3.6	166	0.0120	0.77		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
0.6	56	0.0893	1.49		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
1.8	83	0.0120	0.77		Shallow Concentrated Flow, D-E Short Grass Pasture Kv= 7.0 fps
0.6	40	0.0250	1.11		Shallow Concentrated Flow, E-F Short Grass Pasture Kv= 7.0 fps
1.0	95	0.0526	1.61		Shallow Concentrated Flow, F-G Short Grass Pasture Kv= 7.0 fps
5.0	131	0.0076	0.44		Shallow Concentrated Flow, G-H Woodland Kv= 5.0 fps
0.6	56	0.1071	1.64		Shallow Concentrated Flow, H-I Woodland Kv= 5.0 fps
3.7	108	0.0093	0.48		Shallow Concentrated Flow, I-J Woodland Kv= 5.0 fps
0.3	33	0.1515	1.95		Shallow Concentrated Flow, J-K Woodland Kv= 5.0 fps
0.8	40	0.0250	0.79		Shallow Concentrated Flow, K-L Woodland Kv= 5.0 fps
0.6	63	0.1111	1.67		Shallow Concentrated Flow, L-M Woodland Kv= 5.0 fps
1.4	88	0.0455	1.07		Shallow Concentrated Flow, M-N Woodland Kv= 5.0 fps
30.9	444	0.0023	0.24		Shallow Concentrated Flow, N-O Woodland Kv= 5.0 fps
2.0	103	0.0291	0.85		Shallow Concentrated Flow, O-P Woodland Kv= 5.0 fps
1.0	76	0.0658	1.28		Shallow Concentrated Flow, P-Q Woodland Kv= 5.0 fps
6.2	152	0.0066	0.41		Shallow Concentrated Flow, Q-R Woodland Kv= 5.0 fps
0.5	50	0.1200	1.73		Shallow Concentrated Flow, R-S Woodland Kv= 5.0 fps
0.0	9	1.0000	5.00		Shallow Concentrated Flow, S-T Woodland Kv= 5.0 fps
0.1	12	0.2500	3.50		Shallow Concentrated Flow, T-U Short Grass Pasture Kv= 7.0 fps
1.4	88	0.0227	1.05		Shallow Concentrated Flow, U-V Short Grass Pasture Kv= 7.0 fps
64.4	1,929	Total			

Summary for Reach 7AR2: OVERLAND FLOW

Inflow Area = 0.307 ac, 51.89% Impervious, Inflow Depth = 2.17" for 02-YR event
Inflow = 0.80 cfs @ 12.07 hrs, Volume= 0.056 af
Outflow = 0.75 cfs @ 12.15 hrs, Volume= 0.056 af, Atten= 6%, Lag= 4.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.15 fps, Min. Travel Time= 2.9 min
Avg. Velocity = 0.55 fps, Avg. Travel Time= 6.1 min

Peak Storage= 131 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 1.00' Flow Area= 40.0 sf, Capacity= 354.74 cfs

20.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 20.0 '/' Top Width= 60.00'
Length= 200.0' Slope= 0.0750 '/'
Inlet Invert= 160.00', Outlet Invert= 145.00'



Summary for Reach 7R: OVERLAND FLOW

Inflow Area = 0.307 ac, 51.89% Impervious, Inflow Depth = 2.17" for 02-YR event
Inflow = 0.80 cfs @ 12.07 hrs, Volume= 0.056 af
Outflow = 0.75 cfs @ 12.15 hrs, Volume= 0.056 af, Atten= 6%, Lag= 4.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.15 fps, Min. Travel Time= 2.9 min
Avg. Velocity = 0.55 fps, Avg. Travel Time= 6.1 min

Peak Storage= 131 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 1.00' Flow Area= 40.0 sf, Capacity= 354.74 cfs

20.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 20.0 '/' Top Width= 60.00'
Length= 200.0' Slope= 0.0750 '/'
Inlet Invert= 160.00', Outlet Invert= 145.00'



Summary for Reach 100R: POA STA311+50

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 150.479 ac, 6.38% Impervious, Inflow Depth = 1.29" for 02-YR event
 Inflow = 53.44 cfs @ 13.00 hrs, Volume= 16.221 af
 Outflow = 53.44 cfs @ 13.00 hrs, Volume= 16.221 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 101R: DITCH 309+90TOSTA311+50

[62] Hint: Exceeded Reach 102R OUTLET depth by 0.11' @ 12.11 hrs

Inflow Area = 1.312 ac, 73.47% Impervious, Inflow Depth = 2.58" for 02-YR event
 Inflow = 3.93 cfs @ 12.08 hrs, Volume= 0.282 af
 Outflow = 3.82 cfs @ 12.13 hrs, Volume= 0.282 af, Atten= 3%, Lag= 2.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 1.78 fps, Min. Travel Time= 1.6 min
 Avg. Velocity = 0.44 fps, Avg. Travel Time= 6.4 min

Peak Storage= 366 cf @ 12.10 hrs
 Average Depth at Peak Storage= 0.18'
 Bank-Full Depth= 1.00' Flow Area= 20.0 sf, Capacity= 92.78 cfs

10.00' x 1.00' deep channel, n= 0.035
 Side Slope Z-value= 10.0 '/' Top Width= 30.00'
 Length= 170.0' Slope= 0.0206 '/'
 Inlet Invert= 107.00', Outlet Invert= 103.50'



Summary for Reach 102R: OVERLAND STA309+90

Inflow Area = 1.312 ac, 73.47% Impervious, Inflow Depth = 2.58" for 02-YR event
 Inflow = 3.95 cfs @ 12.07 hrs, Volume= 0.282 af
 Outflow = 3.93 cfs @ 12.08 hrs, Volume= 0.282 af, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 2.54 fps, Min. Travel Time= 0.4 min
 Avg. Velocity = 0.78 fps, Avg. Travel Time= 1.3 min

Peak Storage= 93 cf @ 12.08 hrs
 Average Depth at Peak Storage= 0.07'
 Bank-Full Depth= 1.00' Flow Area= 40.0 sf, Capacity= 467.03 cfs

20.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
 Side Slope Z-value= 20.0 '/' Top Width= 60.00'
 Length= 60.0' Slope= 0.1300 '/'
 Inlet Invert= 114.80', Outlet Invert= 107.00'



Summary for Reach 200R: POA STA314+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 5.309 ac, 46.75% Impervious, Inflow Depth = 1.95" for 02-YR event
 Inflow = 10.39 cfs @ 12.08 hrs, Volume= 0.865 af
 Outflow = 10.39 cfs @ 12.08 hrs, Volume= 0.865 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 201R: OVERLAND STA314+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.456 ac, 70.45% Impervious, Inflow Depth = 2.54" for 02-YR event
 Inflow = 1.36 cfs @ 12.07 hrs, Volume= 0.097 af
 Outflow = 1.36 cfs @ 12.07 hrs, Volume= 0.097 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 202R: OVERLAND STA314+00

[61] Hint: Exceeded Reach 203R outlet invert by 0.07' @ 12.18 hrs

Inflow Area = 1.184 ac, 70.20% Impervious, Inflow Depth = 2.54" for 02-YR event
 Inflow = 2.80 cfs @ 12.15 hrs, Volume= 0.251 af
 Outflow = 2.72 cfs @ 12.22 hrs, Volume= 0.251 af, Atten= 3%, Lag= 4.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 1.88 fps, Min. Travel Time= 2.9 min
 Avg. Velocity= 0.62 fps, Avg. Travel Time= 8.7 min

Peak Storage= 471 cf @ 12.18 hrs
 Average Depth at Peak Storage= 0.07'
 Bank-Full Depth= 1.00' Flow Area= 40.0 sf, Capacity= 359.26 cfs

20.00' x 1.00' deep channel, n= 0.035
 Side Slope Z-value= 20.0 '/' Top Width= 60.00'
 Length= 325.0' Slope= 0.0769 '/'
 Inlet Invert= 126.00', Outlet Invert= 101.00'



Summary for Reach 203R: DITCH STA317+00

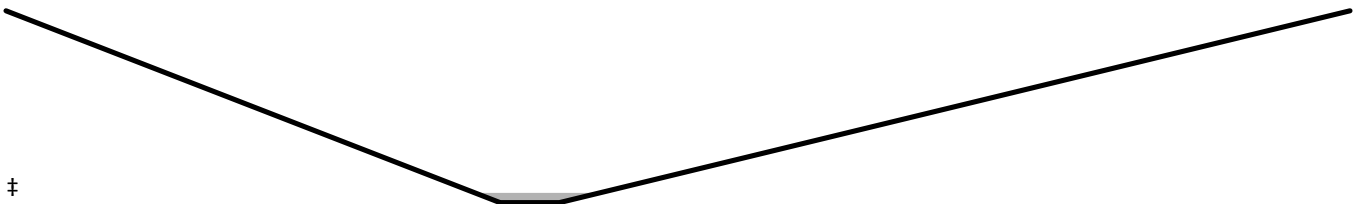
[62] Hint: Exceeded Reach 204R OUTLET depth by 0.08' @ 12.20 hrs

Inflow Area = 1.184 ac, 70.20% Impervious, Inflow Depth = 2.54" for 02-YR event
 Inflow = 2.81 cfs @ 12.12 hrs, Volume= 0.251 af
 Outflow = 2.80 cfs @ 12.15 hrs, Volume= 0.251 af, Atten= 0%, Lag= 1.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 2.37 fps, Min. Travel Time= 0.8 min
 Avg. Velocity = 1.00 fps, Avg. Travel Time= 2.0 min

Peak Storage= 142 cf @ 12.13 hrs
 Average Depth at Peak Storage= 0.25'
 Bank-Full Depth= 5.00' Flow Area= 177.5 sf, Capacity= 2,420.87 cfs

3.00' x 5.00' deep channel, n= 0.035
 Side Slope Z-value= 5.0 8.0 '/' Top Width= 68.00'
 Length= 120.0' Slope= 0.0292 '/'
 Inlet Invert= 129.50', Outlet Invert= 126.00'



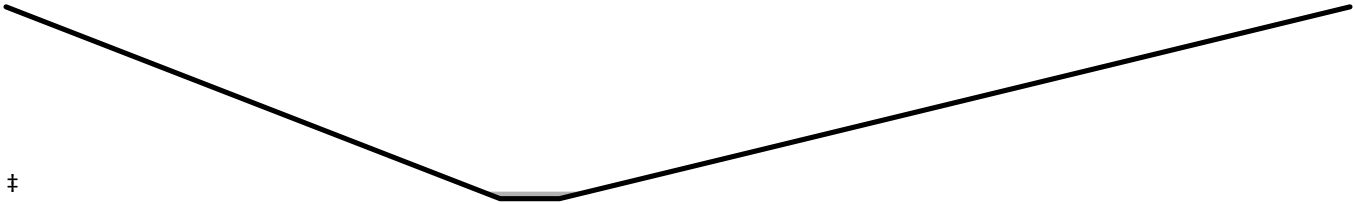
Summary for Reach 204R: DITCH STA318+00

Inflow Area = 0.622 ac, 70.16% Impervious, Inflow Depth = 2.54" for 02-YR event
 Inflow = 1.86 cfs @ 12.07 hrs, Volume= 0.132 af
 Outflow = 1.66 cfs @ 12.17 hrs, Volume= 0.132 af, Atten= 11%, Lag= 6.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 2.12 fps, Min. Travel Time= 3.7 min
 Avg. Velocity = 1.01 fps, Avg. Travel Time= 7.8 min

Peak Storage= 372 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 5.00' Flow Area= 177.5 sf, Capacity= 2,560.64 cfs

3.00' x 5.00' deep channel, n= 0.035
Side Slope Z-value= 5.0 8.0 '/' Top Width= 68.00'
Length= 475.0' Slope= 0.0326 '/'
Inlet Invert= 145.00', Outlet Invert= 129.50'



Summary for Reach 501: POA STA327+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area =	83.197 ac,	8.12% Impervious,	Inflow Depth > 1.29"	for 02-YR event
Inflow =	21.01 cfs @	13.39 hrs,	Volume=	8.930 af
Outflow =	21.01 cfs @	13.39 hrs,	Volume=	8.930 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 502R: DITCH STA327

[62] Hint: Exceeded Reach 503R OUTLET depth by 0.10' @ 12.27 hrs
[79] Warning: Submerged Pond C4P Primary device # 1 OUTLET by 0.26'

Inflow Area =	77.367 ac,	7.05% Impervious,	Inflow Depth > 1.27"	for 02-YR event
Inflow =	20.07 cfs @	13.39 hrs,	Volume=	8.212 af
Outflow =	20.07 cfs @	13.41 hrs,	Volume=	8.212 af, Atten= 0%, Lag= 1.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.83 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 0.91 fps, Avg. Travel Time= 2.8 min

Peak Storage= 1,065 cf @ 13.40 hrs
Average Depth at Peak Storage= 0.79'
Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 142.33 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 5.0 '/' Top Width= 25.00'
Length= 150.0' Slope= 0.0100 '/'
Inlet Invert= 138.50', Outlet Invert= 137.00'



Summary for Reach 503R: DITCH STA329

[79] Warning: Submerged Pond C5P Primary device # 1 INLET by 0.47'

Inflow Area = 69.327 ac, 7.51% Impervious, Inflow Depth > 1.36" for 02-YR event
 Inflow = 19.58 cfs @ 13.36 hrs, Volume= 7.860 af
 Outflow = 19.57 cfs @ 13.40 hrs, Volume= 7.860 af, Atten= 0%, Lag= 2.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 2.88 fps, Min. Travel Time= 1.6 min
 Avg. Velocity = 0.92 fps, Avg. Travel Time= 4.9 min

Peak Storage= 1,835 cf @ 13.38 hrs
 Average Depth at Peak Storage= 0.77'
 Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 147.51 cfs

5.00' x 2.00' deep channel, n= 0.035
 Side Slope Z-value= 5.0 '/' Top Width= 25.00'
 Length= 270.0' Slope= 0.0107 '/'
 Inlet Invert= 141.40', Outlet Invert= 138.50'



Summary for Reach 504R: DITCH STA332

Inflow Area = 0.033 ac, 100.00% Impervious, Inflow Depth = 3.07" for 02-YR event
 Inflow = 0.11 cfs @ 12.07 hrs, Volume= 0.008 af
 Outflow = 0.07 cfs @ 12.37 hrs, Volume= 0.008 af, Atten= 34%, Lag= 18.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 0.38 fps, Min. Travel Time= 13.1 min
 Avg. Velocity = 0.25 fps, Avg. Travel Time= 19.7 min

Peak Storage= 57 cf @ 12.15 hrs
 Average Depth at Peak Storage= 0.04'
 Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 116.22 cfs

5.00' x 2.00' deep channel, n= 0.035
 Side Slope Z-value= 5.0 '/' Top Width= 25.00'
 Length= 300.0' Slope= 0.0067 '/'
 Inlet Invert= 146.00', Outlet Invert= 144.00'



Summary for Reach 701R: POA STA340+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 6.742 ac, 16.02% Impervious, Inflow Depth = 1.45" for 02-YR event
 Inflow = 7.12 cfs @ 12.32 hrs, Volume= 0.813 af
 Outflow = 7.12 cfs @ 12.32 hrs, Volume= 0.813 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 750R: POA STA349+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.503 ac, 19.10% Impervious, Inflow Depth = 1.48" for 02-YR event
 Inflow = 2.87 cfs @ 12.05 hrs, Volume= 0.185 af
 Outflow = 2.87 cfs @ 12.05 hrs, Volume= 0.185 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach C4R: DITCH STA327 TO STA313+00

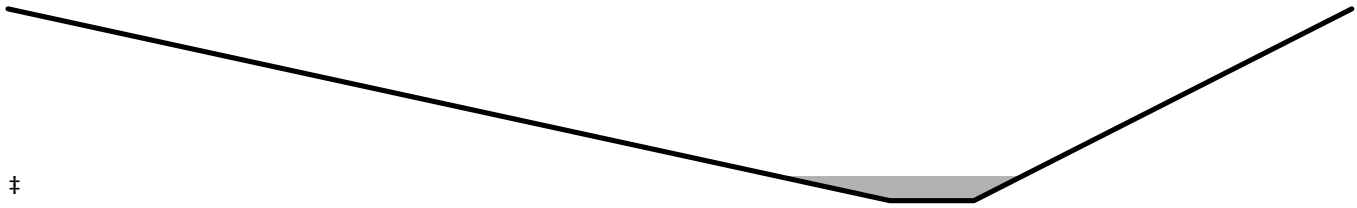
Inflow = 5.09 cfs @ 12.28 hrs, Volume= 0.551 af
 Outflow = 4.81 cfs @ 12.45 hrs, Volume= 0.551 af, Atten= 5%, Lag= 9.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 3.19 fps, Min. Travel Time= 5.3 min
 Avg. Velocity = 1.28 fps, Avg. Travel Time= 13.2 min

Peak Storage= 1,524 cf @ 12.36 hrs
 Average Depth at Peak Storage= 0.38'
 Bank-Full Depth= 3.00' Flow Area= 51.0 sf, Capacity= 545.10 cfs

2.00' x 3.00' deep channel, n= 0.030 Earth, grassed & winding
 Side Slope Z-value= 7.0 3.0 '/' Top Width= 32.00'
 Length= 1,010.0' Slope= 0.0257 '/'
 Inlet Invert= 144.00', Outlet Invert= 118.00'



Summary for Reach C5AR1: L-M

Inflow Area = 21.260 ac, 5.03% Impervious, Inflow Depth > 1.33" for 02-YR event
 Inflow = 6.18 cfs @ 12.66 hrs, Volume= 2.348 af
 Outflow = 4.65 cfs @ 15.91 hrs, Volume= 2.335 af, Atten= 25%, Lag= 195.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 0.17 fps, Min. Travel Time= 88.5 min
 Avg. Velocity = 0.06 fps, Avg. Travel Time= 238.9 min

Peak Storage= 24,704 cf @ 14.44 hrs
 Average Depth at Peak Storage= 0.15'
 Bank-Full Depth= 1.00' Flow Area= 182.0 sf, Capacity= 108.51 cfs

175.00' x 1.00' deep channel, n= 0.080 Earth, long dense weeds
 Side Slope Z-value= 8.0 6.0 '/' Top Width= 189.00'
 Length= 922.0' Slope= 0.0011 '/'
 Inlet Invert= 178.00', Outlet Invert= 177.00'



Summary for Reach C5AR2: M-N

[62] Hint: Exceeded Reach C5AR1 OUTLET depth by 0.11' @ 17.05 hrs

Inflow Area = 21.260 ac, 5.03% Impervious, Inflow Depth > 1.32" for 02-YR event
 Inflow = 4.65 cfs @ 15.91 hrs, Volume= 2.335 af
 Outflow = 4.65 cfs @ 15.95 hrs, Volume= 2.335 af, Atten= 0%, Lag= 2.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.45 fps, Min. Travel Time= 1.6 min
 Avg. Velocity = 0.57 fps, Avg. Travel Time= 4.0 min

Peak Storage= 440 cf @ 15.93 hrs
 Average Depth at Peak Storage= 0.23'
 Bank-Full Depth= 1.00' Flow Area= 21.0 sf, Capacity= 69.43 cfs

11.70' x 1.00' deep channel, n= 0.030 Earth, grassed & winding
 Side Slope Z-value= 10.6 8.0 '/' Top Width= 30.30'
 Length= 137.0' Slope= 0.0073 '/'
 Inlet Invert= 177.00', Outlet Invert= 176.00'



Summary for Reach C5AR3: N-O

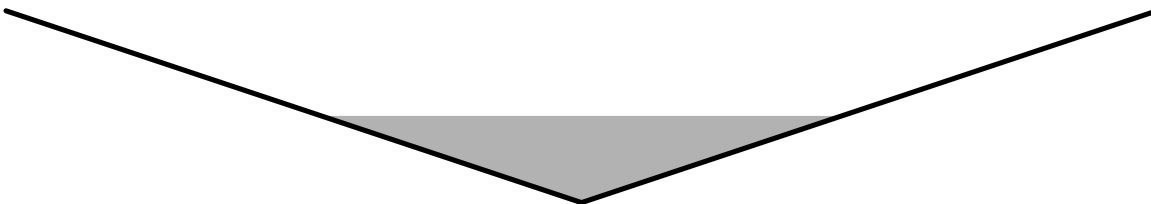
[62] Hint: Exceeded Reach C5AR2 OUTLET depth by 0.22' @ 16.06 hrs

Inflow Area = 21.260 ac, 5.03% Impervious, Inflow Depth > 1.32" for 02-YR event
 Inflow = 4.65 cfs @ 15.95 hrs, Volume= 2.335 af
 Outflow = 4.65 cfs @ 15.96 hrs, Volume= 2.335 af, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 7.59 fps, Min. Travel Time= 0.3 min
 Avg. Velocity = 3.81 fps, Avg. Travel Time= 0.7 min

Peak Storage= 94 cf @ 15.96 hrs
 Average Depth at Peak Storage= 0.45'
 Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 38.66 cfs

0.00' x 1.00' deep channel, n= 0.030 Earth, grassed & winding
 Side Slope Z-value= 3.0 '/' Top Width= 6.00'
 Length= 153.0' Slope= 0.1830 '/'
 Inlet Invert= 176.00', Outlet Invert= 148.00'



Summary for Pond 701P: (new Pond)

Inflow Area = 6.742 ac, 16.02% Impervious, Inflow Depth = 1.45" for 02-YR event
 Inflow = 7.12 cfs @ 12.32 hrs, Volume= 0.813 af
 Outflow = 7.08 cfs @ 12.33 hrs, Volume= 0.812 af, Atten= 1%, Lag= 1.0 min
 Primary = 7.08 cfs @ 12.33 hrs, Volume= 0.812 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 143.58' @ 12.33 hrs Surf.Area= 812 sf Storage= 304 cf

Plug-Flow detention time= 1.4 min calculated for 0.812 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (857.5 - 856.6)

Volume	Invert	Avail.Storage	Storage Description
#1	142.00'	52,314 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
142.00	50	10.0	0	0	50
143.00	100	20.0	74	74	78
144.00	1,770	194.0	764	837	3,043
145.00	28,791	939.0	12,567	13,404	70,216
146.00	50,000	2,000.0	38,911	52,314	318,365

Device	Routing	Invert	Outlet Devices
#1	Primary	142.45'	24.0" Round Culvert L= 26.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 142.45' / 141.96' S= 0.0188 '/' Cc= 0.900 n= 0.013 Concrete pipe, straight & clean, Flow Area= 3.14 sf
#2	Secondary	144.50'	200.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=7.08 cfs @ 12.33 hrs HW=143.58' (Free Discharge)
 ↑1=Culvert (Barrel Controls 7.08 cfs @ 5.61 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=142.00' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C2P: 313+00LEFT

Inflow Area = 147.106 ac, 5.50% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 111.95 cfs @ 12.52 hrs, Volume= 15.673 af
 Outflow = 52.70 cfs @ 13.02 hrs, Volume= 15.673 af, Atten= 53%, Lag= 30.0 min
 Primary = 52.70 cfs @ 13.02 hrs, Volume= 15.673 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 112.08' @ 13.02 hrs Surf.Area= 159,777 sf Storage= 170,900 cf

Plug-Flow detention time= 44.6 min calculated for 15.670 af (100% of inflow)
 Center-of-Mass det. time= 44.6 min (923.8 - 879.3)

Volume	Invert	Avail.Storage	Storage Description
#1	109.00'	2,272,428 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
109.00	19,183	958.9	0	0	19,183
110.00	28,032	1,282.6	23,468	23,468	76,933
111.00	47,773	1,796.1	37,467	60,935	202,748
112.00	157,032	2,961.9	97,139	158,074	644,160
113.00	192,597	3,080.9	174,512	332,586	701,464
114.00	225,197	3,246.6	208,685	541,271	784,958
115.00	262,192	3,905.1	243,460	784,731	1,159,737
116.00	312,689	4,095.9	287,070	1,071,801	1,281,285
117.00	353,942	4,361.6	333,103	1,404,904	1,460,158
118.00	447,427	3,488.1	399,773	1,804,676	2,005,812
119.00	488,375	4,125.0	467,752	2,272,428	2,391,685

Device	Routing	Invert	Outlet Devices
#1	Primary	108.70'	48.0" Round Culvert L= 235.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 108.70' / 108.12' S= 0.0025 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf
#2	Secondary	115.55'	18.0" Round Culvert L= 211.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 115.55' / 109.60' S= 0.0282 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=52.70 cfs @ 13.02 hrs HW=112.08' (Free Discharge)

↑**1=Culvert** (Barrel Controls 52.70 cfs @ 6.27 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=109.00' (Free Discharge)

↑**2=Culvert** (Controls 0.00 cfs)

Summary for Pond C4P: 327+50

Inflow Area = 8.040 ac, 3.11% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 8.34 cfs @ 12.28 hrs, Volume= 0.903 af
 Outflow = 8.34 cfs @ 12.28 hrs, Volume= 0.903 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.25 cfs @ 12.28 hrs, Volume= 0.352 af
 Secondary = 5.09 cfs @ 12.28 hrs, Volume= 0.551 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 146.01' @ 12.28 hrs Surf.Area= 27 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.902 af (100% of inflow)

Center-of-Mass det. time= 0.0 min (860.7 - 860.7)

Volume	Invert	Avail.Storage	Storage Description
#1	146.00'	27,066 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
146.00	22	27.1	0	0	22
147.00	4,250	726.7	1,526	1,526	41,990
148.00	13,227	840.3	8,325	9,851	56,177
149.00	21,540	863.6	17,215	27,066	59,449

Device	Routing	Invert	Outlet Devices
#1	Primary	143.41'	18.0" Round Culvert L= 255.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 143.41' / 139.03' S= 0.0172 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf
#2	Secondary	145.00'	6.5' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=11.57 cfs @ 12.28 hrs HW=146.01' (Free Discharge)

↑**1=Culvert** (Inlet Controls 11.57 cfs @ 6.55 fps)

Secondary OutFlow Max=17.64 cfs @ 12.28 hrs HW=146.01' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Weir Controls 17.64 cfs @ 2.69 fps)

Summary for Pond C5AP: (new Pond)

Inflow Area = 21.260 ac, 5.03% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 28.53 cfs @ 12.15 hrs, Volume= 2.387 af
 Outflow = 6.18 cfs @ 12.66 hrs, Volume= 2.348 af, Atten= 78%, Lag= 30.6 min
 Primary = 6.18 cfs @ 12.66 hrs, Volume= 2.348 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 182.92' @ 12.66 hrs Surf.Area= 24,480 sf Storage= 37,717 cf

Plug-Flow detention time= 94.7 min calculated for 2.348 af (98% of inflow)
 Center-of-Mass det. time= 85.4 min (936.8 - 851.4)

Volume	Invert	Avail.Storage	Storage Description		
#1	180.00'	356,034 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
180.00	5,233	331.6	0	0	5,233
181.00	9,056	413.5	7,058	7,058	10,103
182.00	15,897	572.6	12,317	19,375	22,598
183.00	25,365	730.2	20,448	39,822	38,950
184.00	134,830	3,722.3	72,892	112,714	1,099,109
185.00	171,754	3,831.3	152,920	265,634	1,164,737
185.50	190,000	3,900.0	90,400	356,034	1,207,048

Device	Routing	Invert	Outlet Devices
#1	Primary	180.27'	15.0" Round Culvert L= 27.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 180.27' / 180.00' S= 0.0100 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.23 sf

Primary OutFlow Max=6.18 cfs @ 12.66 hrs HW=182.92' (Free Discharge)

↑**1=Culvert** (Barrel Controls 6.18 cfs @ 5.04 fps)

Summary for Pond C5P: 331+00

Inflow Area = 69.294 ac, 7.46% Impervious, Inflow Depth > 1.36" for 02-YR event
 Inflow = 27.38 cfs @ 12.89 hrs, Volume= 7.852 af
 Outflow = 19.57 cfs @ 13.36 hrs, Volume= 7.852 af, Atten= 29%, Lag= 28.3 min
 Primary = 19.57 cfs @ 13.36 hrs, Volume= 7.852 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 144.62' @ 13.36 hrs Surf.Area= 31,222 sf Storage= 31,782 cf

Plug-Flow detention time= 15.0 min calculated for 7.850 af (100% of inflow)
 Center-of-Mass det. time= 14.9 min (987.4 - 972.5)

Volume	Invert	Avail.Storage	Storage Description		
#1	141.50'	297,542 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
141.50	20	15.0	0	0	20
141.70	50	30.0	7	7	74
142.00	1,500	400.0	182	189	12,735
143.00	3,404	858.6	2,388	2,577	58,671
144.00	23,914	1,161.1	12,113	14,691	107,300
145.00	36,142	1,360.8	29,818	44,509	147,397
146.00	50,955	1,644.8	43,337	87,846	215,340
147.00	64,383	1,674.9	57,538	145,384	223,463
148.00	78,650	1,939.5	71,398	216,782	299,590
149.00	82,890	2,150.0	80,761	297,542	368,124

Device	Routing	Invert	Outlet Devices
#1	Primary	141.70'	30.0" Round Culvert L= 285.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 141.70' / 141.50' S= 0.0007 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
#2	Secondary	147.00'	50.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=19.57 cfs @ 13.36 hrs HW=144.62' (Free Discharge)
 ↑1=Culvert (Barrel Controls 19.57 cfs @ 4.29 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=141.50' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
14.144	98	(1CS, 2S, 3S, 4S, 5AS, 5BS, 5CS, 5DS, 6BS, 7AS, 7S, C2S, C4S, C5AS, C5BS)
1.584	80	>75% Grass cover, Good, HSG D (1AS, 1BS, 2S, 3S, 4S, 5AS, 5CS, 6BS, 7AS, 7S)
1.650	30	Brush, Good, HSG A (C2S)
25.164	73	Brush, Good, HSG D (100S, 200S, 500S, 700, 700S, 750S, C2S, C5AS, C5BS)
0.940	98	Impervious (C3S)
0.026	98	Paved (11S)
0.560	98	Paved 303+50-311+00 (1AS)
0.315	98	Paved 311+00-313+75 (1BS)
3.969	98	Pavement (100S, 500S, 700, 700S, 750S)
2.880	30	Woods, Good, HSG A (C2S)
201.410	77	Woods, Good, HSG D (100S, 200S, 500S, 700, 700S, 750S, C2S, C3S, C4S, C5AS, C5BS)
1.330	98	pavement (200S)
253.972	78	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1AS: 309+99	Runoff Area=34,148 sf 71.43% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=3.67 cfs 0.268 af
Subcatchment 1BS: 309+99	Runoff Area=19,128 sf 71.72% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=2.06 cfs 0.150 af
Subcatchment 1CS: (new Subcat)	Runoff Area=3,895 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.44 cfs 0.035 af
Subcatchment 2S: 313+87	Runoff Area=19,851 sf 70.45% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=2.14 cfs 0.156 af
Subcatchment 3S: 317+87	Runoff Area=24,474 sf 70.25% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=2.63 cfs 0.192 af
Subcatchment 4S: 322+87	Runoff Area=27,080 sf 70.16% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=2.91 cfs 0.212 af
Subcatchment 5AS: 333+37 CENTER	Runoff Area=25,898 sf 70.54% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=2.79 cfs 0.203 af
Subcatchment 5BS: 333+37 LEFT	Runoff Area=1,340 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.15 cfs 0.012 af
Subcatchment 5CS: 333+60 CENTER	Runoff Area=11,537 sf 60.61% Impervious Runoff Depth=3.89" Tc=5.0 min CN=91 Runoff=1.20 cfs 0.086 af
Subcatchment 5DS: 333+15 RIGHT	Runoff Area=1,431 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.16 cfs 0.013 af
Subcatchment 6BS: 336+61_CENTER	Runoff Area=20,644 sf 63.34% Impervious Runoff Depth=3.89" Tc=5.0 min CN=91 Runoff=2.14 cfs 0.153 af
Subcatchment 7AS: 343+35_A	Runoff Area=13,380 sf 51.89% Impervious Runoff Depth=3.68" Tc=5.0 min CN=89 Runoff=1.33 cfs 0.094 af
Subcatchment 7S: 343+35_A	Runoff Area=13,380 sf 51.89% Impervious Runoff Depth=3.68" Tc=5.0 min CN=89 Runoff=1.33 cfs 0.094 af
Subcatchment 11S: 310+13	Runoff Area=1,152 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.13 cfs 0.010 af
Subcatchment 100S: STA311+50	Runoff Area=2.060 ac 26.21% Impervious Runoff Depth=2.90" Tc=5.0 min CN=81 Runoff=7.25 cfs 0.497 af
Subcatchment 200S: STA311+50	Runoff Area=3.670 ac 36.24% Impervious Runoff Depth=3.08" Flow Length=640' Tc=5.0 min CN=83 Runoff=13.70 cfs 0.943 af

Subcatchment 500S: STA327+00	Runoff Area=5.830 ac 22.30% Impervious Runoff Depth=2.81" Flow Length=925' Tc=16.4 min CN=80 Runoff=14.03 cfs 1.363 af
Subcatchment 700: STA338 RIGHT	Runoff Area=6.435 ac 14.31% Impervious Runoff Depth=2.72" Flow Length=575' Tc=22.4 min CN=79 Runoff=13.18 cfs 1.456 af
Subcatchment 700S: STA338 RIGHT	Runoff Area=6.435 ac 14.31% Impervious Runoff Depth=2.72" Flow Length=575' Tc=22.4 min CN=79 Runoff=13.18 cfs 1.456 af
Subcatchment 750S: STA349	Runoff Area=1.503 ac 19.10% Impervious Runoff Depth=2.81" Flow Length=80' Tc=3.1 min CN=80 Runoff=5.49 cfs 0.351 af
Subcatchment C2S: 311+50	Runoff Area=144.070 ac 4.95% Impervious Runoff Depth=2.45" Flow Length=2,483' Tc=35.1 min CN=76 Runoff=216.75 cfs 29.455 af
Subcatchment C3S: 315+50	Runoff Area=3.010 ac 31.23% Impervious Runoff Depth=3.18" Flow Length=731' Tc=15.0 min CN=84 Runoff=8.45 cfs 0.797 af
Subcatchment C4S: 327+50	Runoff Area=8.040 ac 3.11% Impervious Runoff Depth=2.63" Flow Length=869' Tc=20.2 min CN=78 Runoff=16.64 cfs 1.760 af
Subcatchment C5AS: 331+00	Runoff Area=21.260 ac 5.03% Impervious Runoff Depth=2.63" Flow Length=423' Tc=10.2 min CN=78 Runoff=56.85 cfs 4.654 af
Subcatchment C5BS: 331+00	Runoff Area=46.670 ac 6.84% Impervious Runoff Depth=2.63" Flow Length=1,929' Tc=64.4 min CN=78 Runoff=53.99 cfs 10.217 af
Reach 7AR2: OVERLAND FLOW	Avg. Flow Depth=0.04' Max Vel=1.40 fps Inflow=1.33 cfs 0.094 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=1.27 cfs 0.094 af
Reach 7R: OVERLAND FLOW	Avg. Flow Depth=0.04' Max Vel=1.40 fps Inflow=1.33 cfs 0.094 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=1.27 cfs 0.094 af
Reach 100R: POA STA311+50	Inflow=84.76 cfs 32.286 af Outflow=84.76 cfs 32.286 af
Reach 101R: DITCH 309+90TOSTA311+50	Avg. Flow Depth=0.24' Max Vel=2.07 fps Inflow=6.16 cfs 0.453 af n=0.035 L=170.0' S=0.0206 '/' Capacity=92.78 cfs Outflow=6.02 cfs 0.453 af
Reach 102R: OVERLAND STA309+90	Avg. Flow Depth=0.09' Max Vel=3.00 fps Inflow=6.18 cfs 0.453 af n=0.035 L=60.0' S=0.1300 '/' Capacity=467.03 cfs Outflow=6.16 cfs 0.453 af
Reach 200R: POA STA314+00	Inflow=18.49 cfs 1.503 af Outflow=18.49 cfs 1.503 af
Reach 201R: OVERLAND STA314+00	Inflow=2.14 cfs 0.156 af Outflow=2.14 cfs 0.156 af
Reach 202R: OVERLAND STA314+00	Avg. Flow Depth=0.09' Max Vel=2.26 fps Inflow=4.58 cfs 0.404 af n=0.035 L=325.0' S=0.0769 '/' Capacity=359.26 cfs Outflow=4.48 cfs 0.404 af

Reach 203R: DITCH STA317+00	Avg. Flow Depth=0.33' Max Vel=2.73 fps Inflow=4.60 cfs 0.404 af n=0.035 L=120.0' S=0.0292 '/' Capacity=2,420.87 cfs Outflow=4.58 cfs 0.404 af
Reach 204R: DITCH STA318+00	Avg. Flow Depth=0.24' Max Vel=2.43 fps Inflow=2.91 cfs 0.212 af n=0.035 L=475.0' S=0.0326 '/' Capacity=2,560.64 cfs Outflow=2.65 cfs 0.212 af
Reach 501: POA STA327+00	Inflow=32.76 cfs 17.334 af Outflow=32.76 cfs 17.334 af
Reach 502R: DITCH STA327	Avg. Flow Depth=0.99' Max Vel=3.19 fps Inflow=31.24 cfs 15.971 af n=0.035 L=150.0' S=0.0100 '/' Capacity=142.33 cfs Outflow=31.24 cfs 15.971 af
Reach 503R: DITCH STA329	Avg. Flow Depth=0.96' Max Vel=3.25 fps Inflow=30.44 cfs 15.285 af n=0.035 L=270.0' S=0.0107 '/' Capacity=147.51 cfs Outflow=30.44 cfs 15.284 af
Reach 504R: DITCH STA332	Avg. Flow Depth=0.05' Max Vel=0.46 fps Inflow=0.16 cfs 0.013 af n=0.035 L=300.0' S=0.0067 '/' Capacity=116.22 cfs Outflow=0.12 cfs 0.013 af
Reach 701R: POA STA340+00	Inflow=13.77 cfs 1.550 af Outflow=13.77 cfs 1.550 af
Reach 750R: POA STA349+00	Inflow=5.49 cfs 0.351 af Outflow=5.49 cfs 0.351 af
Reach C4R: DITCH STA327 TO STA313+00	Avg. Flow Depth=0.54' Max Vel=3.85 fps Inflow=10.15 cfs 1.074 af n=0.030 L=1,010.0' S=0.0257 '/' Capacity=545.10 cfs Outflow=9.73 cfs 1.074 af
Reach C5AR1: L-M	Avg. Flow Depth=0.20' Max Vel=0.21 fps Inflow=7.61 cfs 4.616 af n=0.080 L=922.0' S=0.0011 '/' Capacity=108.51 cfs Outflow=7.19 cfs 4.602 af
Reach C5AR2: M-N	Avg. Flow Depth=0.30' Max Vel=1.67 fps Inflow=7.19 cfs 4.602 af n=0.030 L=137.0' S=0.0073 '/' Capacity=69.43 cfs Outflow=7.19 cfs 4.601 af
Reach C5AR3: N-O	Avg. Flow Depth=0.53' Max Vel=8.46 fps Inflow=7.19 cfs 4.601 af n=0.030 L=153.0' S=0.1830 '/' Capacity=38.66 cfs Outflow=7.19 cfs 4.601 af
Pond 701P: (new Pond)	Peak Elev=144.14' Storage=1,216 cf Inflow=13.77 cfs 1.550 af Primary=13.30 cfs 1.550 af Secondary=0.00 cfs 0.000 af Outflow=13.30 cfs 1.550 af
Pond C2P: 313+00LEFT	Peak Elev=113.46' Storage=424,190 cf Inflow=230.19 cfs 31.336 af Primary=83.67 cfs 31.336 af Secondary=0.00 cfs 0.000 af Outflow=83.67 cfs 31.336 af
Pond C4P: 327+50	Peak Elev=146.02' Storage=0 cf Inflow=16.64 cfs 1.760 af Primary=6.49 cfs 0.686 af Secondary=10.15 cfs 1.074 af Outflow=16.64 cfs 1.760 af
Pond C5AP: (new Pond)	Peak Elev=183.77' Storage=85,842 cf Inflow=56.85 cfs 4.654 af 15.0" Round Culvert n=0.025 L=27.0' S=0.0100 '/' Outflow=7.61 cfs 4.616 af
Pond C5P: 331+00	Peak Elev=146.24' Storage=100,229 cf Inflow=54.88 cfs 15.273 af Primary=30.43 cfs 15.272 af Secondary=0.00 cfs 0.000 af Outflow=30.43 cfs 15.272 af

Total Runoff Area = 253.972 ac Runoff Volume = 54.629 af Average Runoff Depth = 2.58"
91.62% Pervious = 232.688 ac 8.38% Impervious = 21.284 ac

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1AS: 309+99	Runoff Area=34,148 sf 71.43% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=4.75 cfs 0.351 af
Subcatchment 1BS: 309+99	Runoff Area=19,128 sf 71.72% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=2.66 cfs 0.197 af
Subcatchment 1CS: (new Subcat)	Runoff Area=3,895 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.56 cfs 0.044 af
Subcatchment 2S: 313+87	Runoff Area=19,851 sf 70.45% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=2.76 cfs 0.204 af
Subcatchment 3S: 317+87	Runoff Area=24,474 sf 70.25% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=3.40 cfs 0.252 af
Subcatchment 4S: 322+87	Runoff Area=27,080 sf 70.16% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=3.76 cfs 0.279 af
Subcatchment 5AS: 333+37 CENTER	Runoff Area=25,898 sf 70.54% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=3.60 cfs 0.267 af
Subcatchment 5BS: 333+37 LEFT	Runoff Area=1,340 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.19 cfs 0.015 af
Subcatchment 5CS: 333+60 CENTER	Runoff Area=11,537 sf 60.61% Impervious Runoff Depth=5.15" Tc=5.0 min CN=91 Runoff=1.56 cfs 0.114 af
Subcatchment 5DS: 333+15 RIGHT	Runoff Area=1,431 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.21 cfs 0.016 af
Subcatchment 6BS: 336+61_CENTER	Runoff Area=20,644 sf 63.34% Impervious Runoff Depth=5.15" Tc=5.0 min CN=91 Runoff=2.80 cfs 0.204 af
Subcatchment 7AS: 343+35_A	Runoff Area=13,380 sf 51.89% Impervious Runoff Depth=4.93" Tc=5.0 min CN=89 Runoff=1.76 cfs 0.126 af
Subcatchment 7S: 343+35_A	Runoff Area=13,380 sf 51.89% Impervious Runoff Depth=4.93" Tc=5.0 min CN=89 Runoff=1.76 cfs 0.126 af
Subcatchment 11S: 310+13	Runoff Area=1,152 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.17 cfs 0.013 af
Subcatchment 100S: STA311+50	Runoff Area=2.060 ac 26.21% Impervious Runoff Depth=4.07" Tc=5.0 min CN=81 Runoff=10.11 cfs 0.698 af
Subcatchment 200S: STA311+50	Runoff Area=3.670 ac 36.24% Impervious Runoff Depth=4.28" Flow Length=640' Tc=5.0 min CN=83 Runoff=18.83 cfs 1.308 af

Subcatchment 500S: STA327+00	Runoff Area=5.830 ac 22.30% Impervious Runoff Depth=3.96" Flow Length=925' Tc=16.4 min CN=80 Runoff=19.74 cfs 1.925 af
Subcatchment 700: STA338 RIGHT	Runoff Area=6.435 ac 14.31% Impervious Runoff Depth=3.86" Flow Length=575' Tc=22.4 min CN=79 Runoff=18.68 cfs 2.069 af
Subcatchment 700S: STA338 RIGHT	Runoff Area=6.435 ac 14.31% Impervious Runoff Depth=3.86" Flow Length=575' Tc=22.4 min CN=79 Runoff=18.68 cfs 2.069 af
Subcatchment 750S: STA349	Runoff Area=1.503 ac 19.10% Impervious Runoff Depth=3.96" Flow Length=80' Tc=3.1 min CN=80 Runoff=7.72 cfs 0.496 af
Subcatchment C2S: 311+50	Runoff Area=144.070 ac 4.95% Impervious Runoff Depth=3.55" Flow Length=2,483' Tc=35.1 min CN=76 Runoff=315.03 cfs 42.660 af
Subcatchment C3S: 315+50	Runoff Area=3.010 ac 31.23% Impervious Runoff Depth=4.38" Flow Length=731' Tc=15.0 min CN=84 Runoff=11.55 cfs 1.100 af
Subcatchment C4S: 327+50	Runoff Area=8.040 ac 3.11% Impervious Runoff Depth=3.76" Flow Length=869' Tc=20.2 min CN=78 Runoff=23.79 cfs 2.517 af
Subcatchment C5AS: 331+00	Runoff Area=21.260 ac 5.03% Impervious Runoff Depth=3.76" Flow Length=423' Tc=10.2 min CN=78 Runoff=81.23 cfs 6.655 af
Subcatchment C5BS: 331+00	Runoff Area=46.670 ac 6.84% Impervious Runoff Depth=3.76" Flow Length=1,929' Tc=64.4 min CN=78 Runoff=77.32 cfs 14.608 af
Reach 7AR2: OVERLAND FLOW	Avg. Flow Depth=0.05' Max Vel=1.56 fps Inflow=1.76 cfs 0.126 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=1.69 cfs 0.126 af
Reach 7R: OVERLAND FLOW	Avg. Flow Depth=0.05' Max Vel=1.56 fps Inflow=1.76 cfs 0.126 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=1.69 cfs 0.126 af
Reach 100R: POA STA311+50	Inflow=102.12 cfs 46.972 af Outflow=102.12 cfs 46.972 af
Reach 101R: DITCH 309+90TOSTA311+50	Avg. Flow Depth=0.27' Max Vel=2.25 fps Inflow=7.94 cfs 0.593 af n=0.035 L=170.0' S=0.0206 '/' Capacity=92.78 cfs Outflow=7.80 cfs 0.593 af
Reach 102R: OVERLAND STA309+90	Avg. Flow Depth=0.11' Max Vel=3.28 fps Inflow=7.97 cfs 0.593 af n=0.035 L=60.0' S=0.1300 '/' Capacity=467.03 cfs Outflow=7.94 cfs 0.593 af
Reach 200R: POA STA314+00	Inflow=25.23 cfs 2.043 af Outflow=25.23 cfs 2.043 af
Reach 201R: OVERLAND STA314+00	Inflow=2.76 cfs 0.204 af Outflow=2.76 cfs 0.204 af
Reach 202R: OVERLAND STA314+00	Avg. Flow Depth=0.11' Max Vel=2.50 fps Inflow=6.04 cfs 0.531 af n=0.035 L=325.0' S=0.0769 '/' Capacity=359.26 cfs Outflow=5.91 cfs 0.531 af

Reach 203R: DITCH STA317+00	Avg. Flow Depth=0.38' Max Vel=2.94 fps Inflow=6.06 cfs 0.531 af n=0.035 L=120.0' S=0.0292 '/' Capacity=2,420.87 cfs Outflow=6.04 cfs 0.531 af
Reach 204R: DITCH STA318+00	Avg. Flow Depth=0.27' Max Vel=2.63 fps Inflow=3.76 cfs 0.279 af n=0.035 L=475.0' S=0.0326 '/' Capacity=2,560.64 cfs Outflow=3.47 cfs 0.279 af
Reach 501: POA STA327+00	Inflow=45.31 cfs 24.357 af Outflow=45.31 cfs 24.357 af
Reach 502R: DITCH STA327	Avg. Flow Depth=1.15' Max Vel=3.48 fps Inflow=43.16 cfs 22.432 af n=0.035 L=150.0' S=0.0100 '/' Capacity=142.33 cfs Outflow=43.16 cfs 22.432 af
Reach 503R: DITCH STA329	Avg. Flow Depth=1.05' Max Vel=3.41 fps Inflow=36.53 cfs 21.213 af n=0.035 L=270.0' S=0.0107 '/' Capacity=147.51 cfs Outflow=36.53 cfs 21.212 af
Reach 504R: DITCH STA332	Avg. Flow Depth=0.06' Max Vel=0.50 fps Inflow=0.21 cfs 0.016 af n=0.035 L=300.0' S=0.0067 '/' Capacity=116.22 cfs Outflow=0.15 cfs 0.016 af
Reach 701R: POA STA340+00	Inflow=19.46 cfs 2.195 af Outflow=19.46 cfs 2.195 af
Reach 750R: POA STA349+00	Inflow=7.72 cfs 0.496 af Outflow=7.72 cfs 0.496 af
Reach C4R: DITCH STA327 TO STA313+00	Avg. Flow Depth=0.64' Max Vel=4.23 fps Inflow=14.51 cfs 1.908 af n=0.030 L=1,010.0' S=0.0257 '/' Capacity=545.10 cfs Outflow=14.00 cfs 1.908 af
Reach C5AR1: L-M	Avg. Flow Depth=0.21' Max Vel=0.21 fps Inflow=8.15 cfs 6.616 af n=0.080 L=922.0' S=0.0011 '/' Capacity=108.51 cfs Outflow=7.95 cfs 6.601 af
Reach C5AR2: M-N	Avg. Flow Depth=0.31' Max Vel=1.73 fps Inflow=7.95 cfs 6.601 af n=0.030 L=137.0' S=0.0073 '/' Capacity=69.43 cfs Outflow=7.95 cfs 6.601 af
Reach C5AR3: N-O	Avg. Flow Depth=0.55' Max Vel=8.68 fps Inflow=7.95 cfs 6.601 af n=0.030 L=153.0' S=0.1830 '/' Capacity=38.66 cfs Outflow=7.95 cfs 6.601 af
Pond 701P: (new Pond)	Peak Elev=144.48' Storage=3,558 cf Inflow=19.46 cfs 2.195 af Primary=17.11 cfs 2.195 af Secondary=0.00 cfs 0.000 af Outflow=17.11 cfs 2.195 af
Pond C2P: 313+00LEFT	Peak Elev=114.61' Storage=684,397 cf Inflow=333.95 cfs 45.681 af Primary=100.75 cfs 45.681 af Secondary=0.00 cfs 0.000 af Outflow=100.75 cfs 45.681 af
Pond C4P: 327+50	Peak Elev=146.02' Storage=1 cf Inflow=23.79 cfs 3.128 af Primary=9.28 cfs 1.220 af Secondary=14.51 cfs 1.908 af Outflow=23.79 cfs 3.128 af
Pond C5AP: (new Pond)	Peak Elev=184.15' Storage=133,237 cf Inflow=81.23 cfs 6.655 af 15.0" Round Culvert n=0.025 L=27.0' S=0.0100 '/' Outflow=8.15 cfs 6.616 af
Pond C5P: 331+00	Peak Elev=147.22' Storage=159,921 cf Inflow=79.37 cfs 21.808 af Primary=36.52 cfs 21.196 af Secondary=14.02 cfs 0.612 af Outflow=50.53 cfs 21.808 af

Total Runoff Area = 253.972 ac Runoff Volume = 78.314 af Average Runoff Depth = 3.70"
91.62% Pervious = 232.688 ac 8.38% Impervious = 21.284 ac

Mile 8.8, STA350+00 to STA380+00

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
19.203	98	(8.1AS, 8.1BS, 8.1CS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 8AS, 9AS, 9BS, 10S, 11AS, 11BS, 11CS, 91S, 112S, 113S, 1000S, C6S, C7S, C8AS, C8BS, C8CS)
1.111	89	<50% Grass cover, Poor, HSG D (8AS, 9AS, 10S, 11BS, 11CS)
7.569	77	Brush, Fair, HSG D (8.1CS, C8AS)
32.327	73	Brush, Good, HSG D (8.1AS, 8.1BS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.3CS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 8.7CS, 800S, 1000S, C6S, C7S, C8BS, C8CS)
1.407	98	Pavement (800S)
48.653	79	Woods, Fair, HSG D (8.1CS, C8AS)
183.311	77	Woods, Good, HSG D (8.1AS, 8.1BS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.3CS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 8.7CS, 800S, 1000S, C6S, C7S, C8BS, C8CS)
293.581	78	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 8.1AS:	Runoff Area=121,454 sf 22.13% Impervious Runoff Depth=1.55" Flow Length=430' Tc=28.4 min CN=81 Runoff=2.92 cfs 0.360 af
Subcatchment 8.1BS:	Runoff Area=72,193 sf 1.67% Impervious Runoff Depth=1.28" Flow Length=265' Tc=35.1 min CN=77 Runoff=1.28 cfs 0.177 af
Subcatchment 8.1CS:	Runoff Area=1,067,628 sf 2.41% Impervious Runoff Depth=1.41" Flow Length=1,796' Tc=35.9 min CN=79 Runoff=20.75 cfs 2.884 af
Subcatchment 8.2AS:	Runoff Area=56,291 sf 9.56% Impervious Runoff Depth=1.35" Flow Length=150' Slope=0.0200 '/' Tc=29.2 min CN=78 Runoff=1.15 cfs 0.145 af
Subcatchment 8.2BS:	Runoff Area=93,889 sf 0.00% Impervious Runoff Depth=1.28" Flow Length=372' Tc=28.8 min CN=77 Runoff=1.82 cfs 0.231 af
Subcatchment 8.2CS:	Runoff Area=102,001 sf 12.15% Impervious Runoff Depth=1.35" Flow Length=475' Tc=37.1 min CN=78 Runoff=1.85 cfs 0.263 af
Subcatchment 8.3AS:	Runoff Area=93,437 sf 16.21% Impervious Runoff Depth=1.48" Flow Length=420' Tc=26.1 min CN=80 Runoff=2.21 cfs 0.264 af
Subcatchment 8.3BS:	Runoff Area=50,670 sf 7.32% Impervious Runoff Depth=1.35" Flow Length=135' Slope=0.0220 '/' Tc=45.1 min CN=78 Runoff=0.83 cfs 0.131 af
Subcatchment 8.3CS:	Runoff Area=193,772 sf 0.00% Impervious Runoff Depth=1.28" Flow Length=1,039' Tc=83.9 min CN=77 Runoff=2.07 cfs 0.476 af
Subcatchment 8.4AS:	Runoff Area=71,195 sf 20.23% Impervious Runoff Depth=1.48" Flow Length=260' Tc=13.2 min CN=80 Runoff=2.23 cfs 0.201 af
Subcatchment 8.4BS:	Runoff Area=85,972 sf 0.75% Impervious Runoff Depth=1.28" Flow Length=506' Tc=43.8 min CN=77 Runoff=1.36 cfs 0.211 af
Subcatchment 8.4CS:	Runoff Area=120,213 sf 8.29% Impervious Runoff Depth=1.28" Flow Length=365' Tc=40.2 min CN=77 Runoff=1.98 cfs 0.295 af
Subcatchment 8.5AS:	Runoff Area=129,841 sf 5.72% Impervious Runoff Depth=1.28" Flow Length=150' Tc=17.5 min CN=77 Runoff=3.10 cfs 0.319 af
Subcatchment 8.5BS:	Runoff Area=124,671 sf 3.82% Impervious Runoff Depth=1.35" Flow Length=717' Tc=47.8 min CN=78 Runoff=1.98 cfs 0.321 af
Subcatchment 8.5CS:	Runoff Area=115,586 sf 14.02% Impervious Runoff Depth=1.41" Flow Length=285' Tc=35.7 min CN=79 Runoff=2.26 cfs 0.312 af
Subcatchment 8.6AS:	Runoff Area=63,890 sf 15.73% Impervious Runoff Depth=1.48" Flow Length=445' Tc=27.3 min CN=80 Runoff=1.48 cfs 0.181 af

Subcatchment 8.6BS: Non Contributing Area	Runoff Area=307,280 sf 17.19% Impervious Runoff Depth=1.48" Flow Length=450' Tc=41.5 min CN=80 Runoff=5.86 cfs 0.870 af
Subcatchment 8.6CS:	Runoff Area=420,023 sf 1.26% Impervious Runoff Depth=1.28" Flow Length=875' Tc=59.5 min CN=77 Runoff=5.55 cfs 1.032 af
Subcatchment 8.7CS:	Runoff Area=33,655 sf 0.00% Impervious Runoff Depth=1.22" Flow Length=135' Slope=0.1030 '/' Tc=24.3 min CN=76 Runoff=0.66 cfs 0.079 af
Subcatchment 8AS: 354+34_A	Runoff Area=22,267 sf 56.30% Impervious Runoff Depth=2.64" Tc=5.0 min CN=94 Runoff=1.57 cfs 0.113 af
Subcatchment 9AS: 358+92	Runoff Area=46,654 sf 67.98% Impervious Runoff Depth=2.74" Tc=5.0 min CN=95 Runoff=3.37 cfs 0.245 af
Subcatchment 9BS: 358+92	Runoff Area=6,166 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.47 cfs 0.036 af
Subcatchment 10S: 370+40	Runoff Area=29,978 sf 70.94% Impervious Runoff Depth=2.74" Tc=5.0 min CN=95 Runoff=2.16 cfs 0.157 af
Subcatchment 11AS: 375+70 LEFT	Runoff Area=2,361 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.18 cfs 0.014 af
Subcatchment 11BS: 375+51 CENTER	Runoff Area=22,154 sf 66.93% Impervious Runoff Depth=2.74" Tc=5.0 min CN=95 Runoff=1.60 cfs 0.116 af
Subcatchment 11CS: 375+70 CENTER	Runoff Area=22,485 sf 65.79% Impervious Runoff Depth=2.74" Tc=5.0 min CN=95 Runoff=1.62 cfs 0.118 af
Subcatchment 91S: 359+12	Runoff Area=1,008 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.08 cfs 0.006 af
Subcatchment 112S: 375+59 RIGHT	Runoff Area=797 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.06 cfs 0.005 af
Subcatchment 113S: 380+84	Runoff Area=18,128 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=1.38 cfs 0.106 af
Subcatchment 800S: YWD Pond EAST SIDE	Runoff Area=1,262,903 sf 4.85% Impervious Runoff Depth=1.35" Flow Length=1,350' Tc=47.7 min CN=78 Runoff=20.14 cfs 3.255 af
Subcatchment 1000S:	Runoff Area=389,920 sf 6.69% Impervious Runoff Depth=1.35" Flow Length=862' Tc=24.7 min CN=78 Runoff=8.52 cfs 1.005 af
Subcatchment C6S: 357+50	Runoff Area=30.640 ac 5.81% Impervious Runoff Depth=1.35" Flow Length=1,098' Tc=21.4 min CN=78 Runoff=31.01 cfs 3.440 af
Subcatchment C7S: 365+50	Runoff Area=5.750 ac 5.91% Impervious Runoff Depth=1.35" Flow Length=489' Tc=6.0 min CN=78 Runoff=8.93 cfs 0.645 af

Subcatchment C8AS:	Runoff Area=1,495,142 sf 5.89% Impervious Runoff Depth=1.48" Flow Length=1,646' Tc=50.3 min CN=80 Runoff=25.67 cfs 4.231 af
Subcatchment C8BS:	Runoff Area=1,362,511 sf 7.06% Impervious Runoff Depth=1.35" Flow Length=1,604' Tc=48.3 min CN=78 Runoff=21.51 cfs 3.511 af
Subcatchment C8CS: 375+00	Runoff Area=3,197,116 sf 6.20% Impervious Runoff Depth=1.35" Flow Length=2,622' Tc=43.1 min CN=78 Runoff=53.79 cfs 8.239 af
Reach 1R: road ditch, sta354+34	Avg. Flow Depth=0.10' Max Vel=2.86 fps Inflow=1.57 cfs 0.113 af n=0.035 L=70.0' S=0.1071 '/' Capacity=96.67 cfs Outflow=1.56 cfs 0.113 af
Reach 8.1BR1:	Avg. Flow Depth=0.06' Max Vel=0.40 fps Inflow=0.15 cfs 0.059 af n=0.120 L=286.0' S=0.0500 '/' Capacity=100.71 cfs Outflow=0.15 cfs 0.059 af
Reach 8.1BR2:	Avg. Flow Depth=0.12' Max Vel=0.24 fps Inflow=0.59 cfs 0.220 af n=0.100 L=445.0' S=0.0045 '/' Capacity=36.13 cfs Outflow=0.45 cfs 0.220 af
Reach 8.1BR3:	Avg. Flow Depth=0.21' Max Vel=1.51 fps Inflow=0.83 cfs 0.351 af n=0.050 L=374.0' S=0.0289 '/' Capacity=85.66 cfs Outflow=0.82 cfs 0.351 af
Reach 8.1BR4:	Avg. Flow Depth=0.27' Max Vel=1.63 fps Inflow=2.14 cfs 0.556 af n=0.050 L=171.0' S=0.0213 '/' Capacity=53.25 cfs Outflow=2.14 cfs 0.556 af
Reach 8.2AR1:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.080 L=330.0' S=0.0061 '/' Capacity=82.07 cfs Outflow=0.00 cfs 0.000 af
Reach 8.2BR1:	Avg. Flow Depth=0.16' Max Vel=0.82 fps Inflow=0.59 cfs 0.161 af n=0.120 L=166.0' S=0.0620 '/' Capacity=18.57 cfs Outflow=0.59 cfs 0.161 af
Reach 8.3AR1:	Avg. Flow Depth=0.27' Max Vel=0.91 fps Inflow=1.48 cfs 0.165 af n=0.120 L=230.0' S=0.0391 '/' Capacity=60.12 cfs Outflow=1.24 cfs 0.165 af
Reach 8.3CR1:	Avg. Flow Depth=0.06' Max Vel=0.40 fps Inflow=0.48 cfs 0.178 af n=0.120 L=384.0' S=0.0495 '/' Capacity=68.10 cfs Outflow=0.46 cfs 0.178 af
Reach 8.4CR1:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.120 L=1,440.0' S=0.0178 '/' Capacity=48.74 cfs Outflow=0.00 cfs 0.000 af
Reach 8.6CR1:	Avg. Flow Depth=0.18' Max Vel=1.30 fps Inflow=1.36 cfs 0.544 af n=0.080 L=482.0' S=0.0560 '/' Capacity=30.58 cfs Outflow=1.36 cfs 0.544 af
Reach 8.6CR2:	Avg. Flow Depth=0.00' Max Vel=0.00 fps n=0.120 L=865.0' S=0.0079 '/' Capacity=34.51 cfs Outflow=0.00 cfs 0.000 af
Reach C6R1:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.040 L=338.0' S=0.0414 '/' Capacity=189.62 cfs Outflow=0.00 cfs 0.000 af
Reach C7R1:	Avg. Flow Depth=0.09' Max Vel=1.61 fps Inflow=0.81 cfs 0.028 af n=0.030 L=190.0' S=0.0316 '/' Capacity=1,060.34 cfs Outflow=0.80 cfs 0.028 af

Reach C8AR1:	Avg. Flow Depth=0.12' Max Vel=1.10 fps Inflow=4.57 cfs 4.555 af n=0.100 L=107.5' S=0.0794 '/' Capacity=9,842.09 cfs Outflow=4.57 cfs 4.555 af
Reach C8AR2:	Avg. Flow Depth=0.42' Max Vel=0.94 fps Inflow=4.57 cfs 4.555 af n=0.080 L=810.0' S=0.0099 '/' Capacity=566.71 cfs Outflow=4.56 cfs 4.555 af
Reach C8AR3:	Avg. Flow Depth=0.53' Max Vel=2.54 fps Inflow=4.56 cfs 4.555 af n=0.080 L=22.0' S=0.0909 '/' Capacity=1,210.27 cfs Outflow=4.56 cfs 4.555 af
Reach C8AR6:	Avg. Flow Depth=0.47' Max Vel=1.52 fps Inflow=4.73 cfs 3.395 af n=0.080 L=822.0' S=0.0254 '/' Capacity=382.10 cfs Outflow=4.73 cfs 3.395 af
Reach C8AR7:	Avg. Flow Depth=0.88' Max Vel=0.89 fps Inflow=27.12 cfs 12.005 af n=0.080 L=831.0' S=0.0042 '/' Capacity=1,134.27 cfs Outflow=25.96 cfs 12.004 af
Reach C8BR1:	Avg. Flow Depth=0.16' Max Vel=2.77 fps Inflow=7.14 cfs 4.154 af n=0.030 L=160.0' S=0.0375 '/' Capacity=1,356.35 cfs Outflow=7.14 cfs 4.154 af
Reach C8BR2:	Avg. Flow Depth=0.14' Max Vel=4.78 fps Inflow=7.14 cfs 4.154 af n=0.030 L=31.0' S=0.1210 '/' Capacity=26,509.48 cfs Outflow=7.14 cfs 4.154 af
Reach C8BR3:	Avg. Flow Depth=0.05' Max Vel=1.46 fps Inflow=7.14 cfs 4.154 af n=0.030 L=788.0' S=0.0189 '/' Capacity=41,604.45 cfs Outflow=7.13 cfs 4.153 af
Reach SP1000: POA STA380+00	Inflow=131.04 cfs 202.565 af Outflow=131.04 cfs 202.565 af
Pond 8.1AP:	Peak Elev=207.72' Storage=15,668 cf Inflow=2.92 cfs 0.360 af Outflow=0.00 cfs 0.000 af
Pond 8.1BP:	Peak Elev=203.03' Storage=5,284 cf Inflow=1.28 cfs 0.177 af Outflow=0.15 cfs 0.059 af
Pond 8.1CP:	Peak Elev=158.11' Storage=190,623 cf Inflow=22.20 cfs 7.439 af Outflow=4.73 cfs 3.395 af
Pond 8.2AP: Potentially Non-Contributing	Peak Elev=215.31' Storage=6,319 cf Inflow=1.15 cfs 0.145 af Outflow=0.00 cfs 0.000 af
Pond 8.2BP:	Peak Elev=199.62' Storage=4,309 cf Inflow=1.82 cfs 0.234 af Outflow=0.59 cfs 0.161 af
Pond 8.2CP:	Peak Elev=182.20' Storage=11,450 cf Inflow=1.85 cfs 0.263 af Outflow=0.00 cfs 0.000 af
Pond 8.3AP:	Peak Elev=200.54' Storage=4,500 cf Inflow=2.21 cfs 0.264 af Outflow=1.48 cfs 0.165 af
Pond 8.3BP:	Peak Elev=201.61' Storage=72 cf Inflow=0.83 cfs 0.131 af Outflow=0.83 cfs 0.131 af

Pond 8.3CP:	Peak Elev=155.02' Storage=13,410 cf Inflow=2.07 cfs 0.476 af Outflow=0.48 cfs 0.178 af
Pond 8.4AP:	Peak Elev=207.46' Storage=8,776 cf Inflow=2.23 cfs 0.201 af Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
Pond 8.4BP:	Peak Elev=182.39' Storage=356 cf Inflow=1.36 cfs 0.211 af Outflow=1.36 cfs 0.206 af
Pond 8.4CP:	Peak Elev=161.45' Storage=12,860 cf Inflow=1.98 cfs 0.295 af Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
Pond 8.5AP:	Peak Elev=205.80' Storage=13,744 cf Inflow=3.10 cfs 0.319 af Primary=0.04 cfs 0.004 af Secondary=0.02 cfs 0.002 af Outflow=0.05 cfs 0.005 af
Pond 8.5BP: (new Pond)	Peak Elev=167.95' Storage=10,451 cf Inflow=1.98 cfs 0.321 af Primary=0.13 cfs 0.141 af Secondary=0.00 cfs 0.000 af Outflow=0.13 cfs 0.141 af
Pond 8.5CP:	Peak Elev=159.52' Storage=13,603 cf Inflow=2.26 cfs 0.312 af Outflow=0.00 cfs 0.000 af
Pond 8.6AP:	Peak Elev=198.56' Storage=1,180 cf Inflow=1.48 cfs 0.181 af Outflow=1.48 cfs 0.157 af
Pond 8.6BP:	Peak Elev=156.74' Storage=37,874 cf Inflow=5.86 cfs 0.870 af Outflow=0.00 cfs 0.000 af
Pond 8.6CP1:	Peak Elev=160.77' Storage=18,980 cf Inflow=5.55 cfs 1.032 af Outflow=2.61 cfs 0.671 af
Pond 8.6CP2:	Peak Elev=158.22' Storage=8,409 cf Inflow=2.61 cfs 0.671 af Outflow=1.36 cfs 0.544 af
Pond 8.7CP:	Peak Elev=157.49' Storage=3,427 cf Inflow=0.66 cfs 0.079 af Outflow=0.00 cfs 0.000 af
Pond 800P: Pond on YWD	Peak Elev=119.57' Storage=21,290 cf Inflow=58.05 cfs 25.663 af Outflow=57.81 cfs 25.663 af
Pond C6P: 357+50	Peak Elev=139.62' Storage=21,895 cf Inflow=37.29 cfs 4.479 af Primary=25.58 cfs 4.451 af Secondary=0.81 cfs 0.028 af Tertiary=0.00 cfs 0.000 af Outflow=26.39 cfs 4.479 af
Pond C8AP:	Peak Elev=182.55' Storage=93,380 cf Inflow=27.34 cfs 4.555 af 24.0" Round Culvert n=0.025 L=51.5' S=0.0291 '/ Outflow=4.57 cfs 4.555 af
Pond C8BP:	Peak Elev=163.38' Storage=61,688 cf Inflow=23.63 cfs 4.208 af 18.0" Round Culvert n=0.013 L=51.5' S=0.0097 '/ Outflow=7.14 cfs 4.154 af
Pond C8P: 375+00	Peak Elev=122.51' Storage=3.113 af Inflow=74.44 cfs 21.399 af Primary=42.12 cfs 21.398 af Secondary=0.00 cfs 0.000 af Outflow=42.12 cfs 21.398 af

Link 1L: Cape

02-YR Primary Outflow Imported from 14181.HNTB Chases Pond Model~Pond 8P.hce Inflow=88.26 cfs 176.796 af
Area= 2,130.640 ac 7.98% Imperv. Primary=88.26 cfs 176.796 af

Total Runoff Area = 293.581 ac Runoff Volume = 33.994 af Average Runoff Depth = 1.39"
92.98% Pervious = 272.972 ac 7.02% Impervious = 20.610 ac

Summary for Subcatchment 8.1AS:

Runoff = 2.92 cfs @ 12.40 hrs, Volume= 0.360 af, Depth= 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	26,882	98	
	61,847	77	Woods, Good, HSG D
	32,725	73	Brush, Good, HSG D
	121,454	81	Weighted Average
	94,572		77.87% Pervious Area
	26,882		22.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.8	85	0.0120	0.06		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
3.8	170	0.0220	0.74		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
1.5	130	0.0080	1.44		Shallow Concentrated Flow, C to D Unpaved Kv= 16.1 fps
0.3	45	0.2000	2.24		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
28.4	430	Total			

Summary for Subcatchment 8.1BS:

Runoff = 1.28 cfs @ 12.52 hrs, Volume= 0.177 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	1,205	98	
	63,793	77	Woods, Good, HSG D
	7,195	73	Brush, Good, HSG D
	72,193	77	Weighted Average
	70,988		98.33% Pervious Area
	1,205		1.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.8	145	0.0140	0.07		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
0.7	60	0.0830	1.44		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
1.6	60	0.0160	0.63		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
35.1	265	Total			

Summary for Subcatchment 8.1CS:

Runoff = 20.75 cfs @ 12.52 hrs, Volume= 2.884 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 25,685	98	
929,966	79	Woods, Fair, HSG D
111,977	77	Brush, Fair, HSG D
1,067,628	79	Weighted Average
1,041,943		97.59% Pervious Area
25,685		2.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7	125	0.0560	0.12		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
1.1	125	0.1440	1.90		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
14.3	899	0.0100	1.05	6.30	Trap/Vee/Rect Channel Flow, C to D (reach 8AR2) Bot.W=10.00' D=0.50' Z= 4.0 '/' Top.W=14.00' n= 0.080
3.8	647	0.0150	2.80	1,497.17	Trap/Vee/Rect Channel Flow, D to E (Reach 8AR4) Bot.W=255.00' D=2.00' Z= 4.8 & 7.3 '/' Top.W=279.20' n= 0.100
35.9	1,796	Total			

Summary for Subcatchment 8.2AS:

Runoff = 1.15 cfs @ 12.43 hrs, Volume= 0.145 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 5,384	98	
30,146	77	Woods, Good, HSG D
20,761	73	Brush, Good, HSG D
56,291	78	Weighted Average
50,907		90.44% Pervious Area
5,384		9.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.2	150	0.0200	0.09		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.30"

Summary for Subcatchment 8.2BS:

Runoff = 1.82 cfs @ 12.42 hrs, Volume= 0.231 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 4	98	
91,507	77	Woods, Good, HSG D
2,378	73	Brush, Good, HSG D
93,889	77	Weighted Average
93,885		100.00% Pervious Area
4		0.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	112	0.0270	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	95	0.0740	1.36		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
7.1	165	0.0060	0.39		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
28.8	372	Total			

Summary for Subcatchment 8.2CS:

Runoff = 1.85 cfs @ 12.53 hrs, Volume= 0.263 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
*	12,392	98
	59,368	77 Woods, Good, HSG D
	30,241	73 Brush, Good, HSG D
102,001	78	Weighted Average
89,609		87.85% Pervious Area
12,392		12.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	90	0.0700	0.07		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"
1.8	105	0.0380	0.97		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
14.8	280	0.0040	0.32		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
37.1	475	Total			

Summary for Subcatchment 8.3AS:

Runoff = 2.21 cfs @ 12.38 hrs, Volume= 0.264 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
*	15,142	98
	58,308	77 Woods, Good, HSG D
	19,987	73 Brush, Good, HSG D
93,437	80	Weighted Average
78,295		83.79% Pervious Area
15,142		16.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.2	150	0.0400	0.11		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
3.9	270	0.0520	1.14		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
26.1	420	Total			

Summary for Subcatchment 8.3BS:

Runoff = 0.83 cfs @ 12.67 hrs, Volume= 0.131 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
*	3,710	98
	41,240	77 Woods, Good, HSG D
	5,720	73 Brush, Good, HSG D
	50,670	78 Weighted Average
	46,960	92.68% Pervious Area
	3,710	7.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.1	135	0.0220	0.05		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"

Summary for Subcatchment 8.3CS:

Runoff = 2.07 cfs @ 13.15 hrs, Volume= 0.476 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
*	0	98
	169,677	77 Woods, Good, HSG D
	24,095	73 Brush, Good, HSG D
	193,772	77 Weighted Average
	193,772	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.9	150	0.0700	0.08		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"
0.4	35	0.1100	1.66		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
1.4	70	0.0280	0.84		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
0.4	35	0.1100	1.66		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
5.7	90	0.0110	0.26		Shallow Concentrated Flow, E to F Forest w/Heavy Litter Kv= 2.5 fps
1.1	85	0.0700	1.32		Shallow Concentrated Flow, F to G Woodland Kv= 5.0 fps
26.4	250	0.0040	0.16		Shallow Concentrated Flow, G to H Forest w/Heavy Litter Kv= 2.5 fps
6.0	133	0.0220	0.37		Shallow Concentrated Flow, H to I Forest w/Heavy Litter Kv= 2.5 fps
11.6	191	0.0030	0.27		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
83.9	1,039	Total			

Summary for Subcatchment 8.4AS:

Runoff = 2.23 cfs @ 12.19 hrs, Volume= 0.201 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	14,400	98	
	35,974	77	Woods, Good, HSG D
	20,821	73	Brush, Good, HSG D
	71,195	80	Weighted Average
	56,795		79.77% Pervious Area
	14,400		20.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	56	0.0540	0.10		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	50	0.0200	0.71		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
0.7	94	0.0200	2.12		Shallow Concentrated Flow, C to D Grassed Waterway Kv= 15.0 fps
0.2	30	0.2700	2.60		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
2.2	30	0.0020	0.22		Shallow Concentrated Flow, E to F Woodland Kv= 5.0 fps
13.2	260	Total			

Summary for Subcatchment 8.4BS:

Runoff = 1.36 cfs @ 12.61 hrs, Volume= 0.211 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	642	98	
	84,672	77	Woods, Good, HSG D
	658	73	Brush, Good, HSG D
	85,972	77	Weighted Average
	85,330		99.25% Pervious Area
	642		0.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.8	60	0.0160	0.04		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"
2.8	106	0.0660	0.64		Shallow Concentrated Flow, B to C Forest w/Heavy Litter Kv= 2.5 fps
6.7	170	0.0290	0.43		Shallow Concentrated Flow, C to D Forest w/Heavy Litter Kv= 2.5 fps
7.5	170	0.0230	0.38		Shallow Concentrated Flow, D to E Forest w/Heavy Litter Kv= 2.5 fps
43.8	506	Total			

Summary for Subcatchment 8.4CS:

Runoff = 1.98 cfs @ 12.59 hrs, Volume= 0.295 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
9,964	98	
61,261	77	Woods, Good, HSG D
48,988	73	Brush, Good, HSG D
120,213	77	Weighted Average
110,249		91.71% Pervious Area
9,964		8.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.8	95	0.0100	0.06		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
4.1	145	0.0140	0.59		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
9.3	125	0.0020	0.22		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
40.2	365	Total			

Summary for Subcatchment 8.5AS:

Runoff = 3.10 cfs @ 12.25 hrs, Volume= 0.319 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 7,422	98	
95,282	77	Woods, Good, HSG D
27,137	73	Brush, Good, HSG D
129,841	77	Weighted Average
122,419		94.28% Pervious Area
7,422		5.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.2	80	0.0250	0.08		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
1.3	70	0.0300	0.87		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
17.5	150	Total			

Summary for Subcatchment 8.5BS:

Runoff = 1.98 cfs @ 12.69 hrs, Volume= 0.321 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 4,759	98	
111,701	77	Woods, Good, HSG D
8,211	73	Brush, Good, HSG D
124,671	78	Weighted Average
119,912		96.18% Pervious Area
4,759		3.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.3	65	0.0150	0.04		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"
3.7	115	0.0430	0.52		Shallow Concentrated Flow, B to C Forest w/Heavy Litter Kv= 2.5 fps
1.7	95	0.1360	0.92		Shallow Concentrated Flow, C to D Forest w/Heavy Litter Kv= 2.5 fps
9.4	240	0.0290	0.43		Shallow Concentrated Flow, D to E Forest w/Heavy Litter Kv= 2.5 fps
1.1	80	0.0625	1.25		Shallow Concentrated Flow, E to F Woodland Kv= 5.0 fps
2.6	122	0.0240	0.77		Shallow Concentrated Flow, F to G Woodland Kv= 5.0 fps
47.8	717	Total			

Summary for Subcatchment 8.5CS:

Runoff = 2.26 cfs @ 12.50 hrs, Volume= 0.312 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	16,201	98	
	68,051	77	Woods, Good, HSG D
	31,334	73	Brush, Good, HSG D
	115,586	79	Weighted Average
	99,385		85.98% Pervious Area
	16,201		14.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3	35	0.0140	0.03		Sheet Flow, A to B
					Woods: Dense underbrush n= 0.800 P2= 3.30"
0.8	30	0.0600	0.61		Shallow Concentrated Flow, B to C
					Forest w/Heavy Litter Kv= 2.5 fps
1.4	70	0.0290	0.85		Shallow Concentrated Flow, C to D
					Woodland Kv= 5.0 fps
4.8	80	0.0125	0.28		Shallow Concentrated Flow, C to D
					Forest w/Heavy Litter Kv= 2.5 fps
10.4	70	0.0020	0.11		Shallow Concentrated Flow, D to E
					Forest w/Heavy Litter Kv= 2.5 fps
35.7	285	Total			

Summary for Subcatchment 8.6AS:

Runoff = 1.48 cfs @ 12.40 hrs, Volume= 0.181 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	10,048	98	
	49,320	77	Woods, Good, HSG D
	4,522	73	Brush, Good, HSG D
	63,890	80	Weighted Average
	53,842		84.27% Pervious Area
	10,048		15.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	50	0.0100	0.05		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
2.7	140	0.0290	0.85		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
7.7	180	0.0060	0.39		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
0.9	75	0.0800	1.41		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
27.3	445	Total			

Summary for Subcatchment 8.6BS: Non Contributing Area

Runoff = 5.86 cfs @ 12.59 hrs, Volume= 0.870 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 52,822	98	
189,735	77	Woods, Good, HSG D
64,723	73	Brush, Good, HSG D
307,280	80	Weighted Average
254,458		82.81% Pervious Area
52,822		17.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.1	50	0.0200	0.04		Sheet Flow, Woods: Dense underbrush n= 0.800 P2= 3.30"
1.8	60	0.0125	0.56		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
2.7	95	0.0140	0.59		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
2.6	90	0.0550	0.59		Shallow Concentrated Flow, Forest w/Heavy Litter Kv= 2.5 fps
13.3	155	0.0060	0.19		Shallow Concentrated Flow, Forest w/Heavy Litter Kv= 2.5 fps
41.5	450	Total			

Summary for Subcatchment 8.6CS:

Runoff = 5.55 cfs @ 12.83 hrs, Volume= 1.032 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 5,284	98	
402,314	77	Woods, Good, HSG D
12,425	73	Brush, Good, HSG D
420,023	77	Weighted Average
414,739		98.74% Pervious Area
5,284		1.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.4	105	0.0190	0.08		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
1.1	60	0.0330	0.91		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
0.3	45	0.2900	2.69		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
9.0	195	0.0210	0.36		Shallow Concentrated Flow, D to E Forest w/Heavy Litter Kv= 2.5 fps
12.4	235	0.0040	0.32		Shallow Concentrated Flow, E to F Woodland Kv= 5.0 fps
14.3	235	0.0030	0.27		Shallow Concentrated Flow, F to G Woodland Kv= 5.0 fps
59.5	875	Total			

Summary for Subcatchment 8.7CS:

Runoff = 0.66 cfs @ 12.36 hrs, Volume= 0.079 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 0	98	
21,110	77	Woods, Good, HSG D
12,545	73	Brush, Good, HSG D
33,655	76	Weighted Average
33,655		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.3	135	0.1030	0.09		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"

Summary for Subcatchment 8AS: 354+34_A

Runoff = 1.57 cfs @ 12.07 hrs, Volume= 0.113 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	12,537	98	
	9,730	89	<50% Grass cover, Poor, HSG D
	22,267	94	Weighted Average
	9,730		43.70% Pervious Area
	12,537		56.30% Impervious Area

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

Summary for Subcatchment 9AS: 358+92

Runoff = 3.37 cfs @ 12.07 hrs, Volume= 0.245 af, Depth= 2.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	31,716	98	
	14,938	89	<50% Grass cover, Poor, HSG D
	46,654	95	Weighted Average
	14,938		32.02% Pervious Area
	31,716		67.98% Impervious Area

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

Summary for Subcatchment 9BS: 358+92

Runoff = 0.47 cfs @ 12.07 hrs, Volume= 0.036 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	6,166	98	
	6,166		100.00% Impervious Area

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

Summary for Subcatchment 10S: 370+40

Runoff = 2.16 cfs @ 12.07 hrs, Volume= 0.157 af, Depth= 2.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	21,265	98	
	8,713	89	<50% Grass cover, Poor, HSG D
	29,978	95	Weighted Average
	8,713		29.06% Pervious Area
	21,265		70.94% Impervious Area

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

Summary for Subcatchment 11AS: 375+70 LEFT

Runoff = 0.18 cfs @ 12.07 hrs, Volume= 0.014 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	2,361	98	
	2,361		100.00% Impervious Area

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

Summary for Subcatchment 11BS: 375+51 CENTER

Runoff = 1.60 cfs @ 12.07 hrs, Volume= 0.116 af, Depth= 2.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	14,827	98	
	7,327	89	<50% Grass cover, Poor, HSG D
	22,154	95	Weighted Average
	7,327		33.07% Pervious Area
	14,827		66.93% Impervious Area

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

Summary for Subcatchment 11CS: 375+70 CENTER

Runoff = 1.62 cfs @ 12.07 hrs, Volume= 0.118 af, Depth= 2.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 14,794	98	
7,691	89	<50% Grass cover, Poor, HSG D
22,485	95	Weighted Average
7,691		34.21% Pervious Area
14,794		65.79% Impervious Area

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

Summary for Subcatchment 91S: 359+12

Runoff = 0.08 cfs @ 12.07 hrs, Volume= 0.006 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 1,008	98	
1,008		100.00% Impervious Area

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

Summary for Subcatchment 112S: 375+59 RIGHT

Runoff = 0.06 cfs @ 12.07 hrs, Volume= 0.005 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 797	98	
797		100.00% Impervious Area

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

Summary for Subcatchment 113S: 380+84

Runoff = 1.38 cfs @ 12.07 hrs, Volume= 0.106 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 18,128	98	
18,128		100.00% Impervious Area

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

Summary for Subcatchment 800S: YWD Pond EAST SIDE

Runoff = 20.14 cfs @ 12.67 hrs, Volume= 3.255 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 61,279	98	Pavement
79,827	73	Brush, Good, HSG D
1,121,797	77	Woods, Good, HSG D
1,262,903	78	Weighted Average
1,201,624		95.15% Pervious Area
61,279		4.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.9	300	0.0900	0.18		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
4.3	91	0.0050	0.35		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.9	328	0.0640	6.39	44.70	Channel Flow, C-D Area= 7.0 sf Perim= 12.5' r= 0.56' n= 0.040 Winding stream, pools & shoals
4.9	168		0.57		Lake or Reservoir, D-E Mean Depth= 0.01'
0.4	28	0.0200	1.08		Sheet Flow, E-F Smooth surfaces n= 0.011 P2= 3.30"
7.2	244		0.57		Lake or Reservoir, F-G Mean Depth= 0.01'
2.1	191	0.0050	1.52	33.43	Channel Flow, G-H Area= 22.0 sf Perim= 50.0' r= 0.44' n= 0.040 Winding stream, pools & shoals
47.7	1,350	Total			

Summary for Subcatchment 1000S:

Runoff = 8.52 cfs @ 12.36 hrs, Volume= 1.005 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 26,097	98	
36,572	73	Brush, Good, HSG D
327,251	77	Woods, Good, HSG D
389,920	78	Weighted Average
363,823		93.31% Pervious Area
26,097		6.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	244	0.1350	0.20		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	100	0.2700	2.60		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
1.1	144	0.2010	2.24		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.4	42	0.1480	1.92		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
0.4	61	0.0050	2.30	82.73	Channel Flow, E-F Area= 36.0 sf Perim= 44.0' r= 0.82' n= 0.040 Winding stream, pools & shoals
2.1	271	0.0050	2.15	25.77	Channel Flow, F-G Area= 12.0 sf Perim= 25.0' r= 0.48' n= 0.030 Stream, clean & straight

24.7 862 Total

Summary for Subcatchment C6S: 357+50

Runoff = 31.01 cfs @ 12.30 hrs, Volume= 3.440 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 1.780	98	
24.830	77	Woods, Good, HSG D
4.030	73	Brush, Good, HSG D
30.640	78	Weighted Average
28.860		94.19% Pervious Area
1.780		5.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	31	0.0483	0.09		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.9	94	0.1277	1.79		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.2	31	0.1935	2.20		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.8	94	0.0851	2.04		Shallow Concentrated Flow, D-E Short Grass Pasture Kv= 7.0 fps
1.0	63	0.0476	1.09		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
1.6	177	0.1412	1.88		Shallow Concentrated Flow, F-G Woodland Kv= 5.0 fps
1.1	129	0.0155	2.00		Shallow Concentrated Flow, G-H Unpaved Kv= 16.1 fps
9.9	429	0.0023	0.72		Shallow Concentrated Flow, H-I Grassed Waterway Kv= 15.0 fps
0.1	50	0.0200	7.29	12.87	Pipe Channel, I-J 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015

21.4 1,098 Total

Summary for Subcatchment C7S: 365+50

Runoff = 8.93 cfs @ 12.09 hrs, Volume= 0.645 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
*	0.340	98
	4.610	77 Woods, Good, HSG D
	0.800	73 Brush, Good, HSG D
	5.750	78 Weighted Average
	5.410	94.09% Pervious Area
	0.340	5.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	21	0.1190	0.12		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.2	26	0.2692	2.59		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.3	60	0.4000	3.16		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.1	15	0.1333	1.83		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
0.5	35	0.0571	1.19		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
0.2	58	0.0862	4.73		Shallow Concentrated Flow, F-G Unpaved Kv= 16.1 fps
1.2	113	0.0088	1.51		Shallow Concentrated Flow, G-H Unpaved Kv= 16.1 fps
0.5	161	0.0932	4.92		Shallow Concentrated Flow, H-I Unpaved Kv= 16.1 fps
6.0	489	Total			

Summary for Subcatchment C8As:

Runoff = 25.67 cfs @ 12.69 hrs, Volume= 4.231 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
*	88,039	98
	1,189,371	79 Woods, Fair, HSG D
	217,732	77 Brush, Fair, HSG D
	1,495,142	80 Weighted Average
	1,407,103	94.11% Pervious Area
	88,039	5.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.1	167	0.0120	0.07		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	31	0.0968	1.56		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
1.1	250	0.0240	3.63	18.13	Channel Flow, C-D Area= 5.0 sf Perim= 10.0' r= 0.50' n= 0.040 Mountain streams
0.3	133	0.0977	7.25	29.02	Channel Flow, D-E Area= 4.0 sf Perim= 8.1' r= 0.49' n= 0.040 Mountain streams
0.0	40	0.0500	59.66	8,948.44	Channel Flow, E-F Area= 150.0 sf Perim= 12.0' r= 12.50' n= 0.030 Earth, grassed & winding
9.5	1,025		1.79		Lake or Reservoir, F-G Mean Depth= 0.10'
50.3	1,646	Total			

Summary for Subcatchment C8BS:

Runoff = 21.51 cfs @ 12.71 hrs, Volume= 3.511 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 96,194	98	
1,023,625	77	Woods, Good, HSG D
242,692	73	Brush, Good, HSG D
1,362,511	78	Weighted Average
1,266,317		92.94% Pervious Area
96,194		7.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	90	0.0220	0.08		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
2.9	211	0.0569	1.19		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
16.7	293	0.0034	0.29		Shallow Concentrated Flow, F-G Woodland Kv= 5.0 fps
6.3	153	0.0065	0.40		Shallow Concentrated Flow, G-H Woodland Kv= 5.0 fps
0.1	31	0.0050	3.64	6.44	Pipe Channel, H-I 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015
0.4	144	0.0347	5.81	58.13	Channel Flow, I-J Area= 10.0 sf Perim= 20.0' r= 0.50' n= 0.030 Earth, grassed & winding
0.1	24	0.0050	3.64	6.44	Pipe Channel, J-K 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015
0.1	63	0.0635	7.86	39.32	Channel Flow, K-L Area= 5.0 sf Perim= 10.0' r= 0.50' n= 0.030 Earth, grassed & winding
0.1	23	0.0050	3.64	6.44	Pipe Channel, L-M 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015
0.7	180	0.0194	4.35	23.90	Channel Flow, M-N Area= 5.5 sf Perim= 11.0' r= 0.50' n= 0.030 Earth, grassed & winding
0.1	41	0.0300	8.92	15.77	Pipe Channel, N-O 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015
1.4	115	0.0087	1.40		Shallow Concentrated Flow, O-P Grassed Waterway Kv= 15.0 fps
0.2	65	0.0154	6.39	11.30	Pipe Channel, P-Q 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015
0.5	171	0.0292	5.33	16.00	Channel Flow, Q-R Area= 3.0 sf Perim= 6.0' r= 0.50' n= 0.030 Earth, grassed & winding
48.3	1,604	Total			

Summary for Subcatchment C8CS: 375+00

Runoff = 53.79 cfs @ 12.60 hrs, Volume= 8.239 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 198,255	98	
2,534,660	77	Woods, Good, HSG D
464,201	73	Brush, Good, HSG D
3,197,116	78	Weighted Average
2,998,861		93.80% Pervious Area
198,255		6.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.1	75	0.0450	0.15		Sheet Flow, A to B Grass: Dense n= 0.240 P2= 3.30"
5.3	313	0.0383	0.98		Shallow Concentrated Flow, F-G Woodland Kv= 5.0 fps
2.3	133	0.0376	0.97		Shallow Concentrated Flow, G-H Woodland Kv= 5.0 fps
5.2	538	0.0130	1.71		Shallow Concentrated Flow, H-I Grassed Waterway Kv= 15.0 fps
1.6	182	0.0166	1.93		Shallow Concentrated Flow, I-J Grassed Waterway Kv= 15.0 fps
2.2	119	0.0336	0.92		Shallow Concentrated Flow, J-K Woodland Kv= 5.0 fps
1.8	136	0.0662	1.29		Shallow Concentrated Flow, K-L Woodland Kv= 5.0 fps
4.3	197	0.0228	0.75		Shallow Concentrated Flow, L-M Woodland Kv= 5.0 fps
12.3	929	0.0070	1.25		Shallow Concentrated Flow, M-N Grassed Waterway Kv= 15.0 fps
43.1	2,622	Total			

Summary for Reach 1R: road ditch, sta354+34

Inflow Area = 0.511 ac, 56.30% Impervious, Inflow Depth = 2.64" for 02-YR event
 Inflow = 1.57 cfs @ 12.07 hrs, Volume= 0.113 af
 Outflow = 1.56 cfs @ 12.08 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 2.86 fps, Min. Travel Time= 0.4 min
 Avg. Velocity = 0.79 fps, Avg. Travel Time= 1.5 min

Peak Storage= 38 cf @ 12.08 hrs
 Average Depth at Peak Storage= 0.10'
 Bank-Full Depth= 1.00' Flow Area= 9.0 sf, Capacity= 96.67 cfs

5.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
 Side Slope Z-value= 4.0 '/' Top Width= 13.00'
 Length= 70.0' Slope= 0.1071 '/'
 Inlet Invert= 150.00', Outlet Invert= 142.50'



Summary for Reach 8.1BR1:

Inflow Area = 1.657 ac, 1.67% Impervious, Inflow Depth = 0.43" for 02-YR event
 Inflow = 0.15 cfs @ 15.29 hrs, Volume= 0.059 af
 Outflow = 0.15 cfs @ 15.70 hrs, Volume= 0.059 af, Atten= 2%, Lag= 24.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 0.40 fps, Min. Travel Time= 11.8 min
 Avg. Velocity = 0.27 fps, Avg. Travel Time= 17.7 min

Peak Storage= 103 cf @ 15.50 hrs
 Average Depth at Peak Storage= 0.06'
 Bank-Full Depth= 2.00' Flow Area= 32.0 sf, Capacity= 100.71 cfs

6.00' x 2.00' deep channel, n= 0.120
 Side Slope Z-value= 5.0 '/' Top Width= 26.00'
 Length= 286.0' Slope= 0.0500 '/'
 Inlet Invert= 202.45', Outlet Invert= 188.16'



Summary for Reach 8.1BR2:

Inflow Area = 6.793 ac, 2.92% Impervious, Inflow Depth = 0.39" for 02-YR event
 Inflow = 0.59 cfs @ 13.16 hrs, Volume= 0.220 af
 Outflow = 0.45 cfs @ 14.22 hrs, Volume= 0.220 af, Atten= 24%, Lag= 63.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 0.24 fps, Min. Travel Time= 31.3 min
 Avg. Velocity = 0.11 fps, Avg. Travel Time= 70.1 min

Peak Storage= 839 cf @ 13.70 hrs
 Average Depth at Peak Storage= 0.12'
 Bank-Full Depth= 1.50' Flow Area= 33.8 sf, Capacity= 36.13 cfs

15.00' x 1.50' deep channel, n= 0.100
 Side Slope Z-value= 5.0 '/' Top Width= 30.00'
 Length= 445.0' Slope= 0.0045 '/'
 Inlet Invert= 187.00', Outlet Invert= 185.00'



Summary for Reach 8.1BR3:

Inflow Area = 7.957 ac, 3.56% Impervious, Inflow Depth = 0.53" for 02-YR event
 Inflow = 0.83 cfs @ 12.68 hrs, Volume= 0.351 af
 Outflow = 0.82 cfs @ 12.79 hrs, Volume= 0.351 af, Atten= 1%, Lag= 6.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.51 fps, Min. Travel Time= 4.1 min
 Avg. Velocity = 0.68 fps, Avg. Travel Time= 9.2 min

Peak Storage= 203 cf @ 12.72 hrs
 Average Depth at Peak Storage= 0.21'
 Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 85.66 cfs

2.00' x 2.00' deep channel, n= 0.050
 Side Slope Z-value= 3.0 '/' Top Width= 14.00'
 Length= 374.0' Slope= 0.0289 '/'
 Inlet Invert= 183.79', Outlet Invert= 173.00'



Summary for Reach 8.1BR4:

Inflow Area = 9.930 ac, 3.00% Impervious, Inflow Depth = 0.67" for 02-YR event
 Inflow = 2.14 cfs @ 12.71 hrs, Volume= 0.556 af
 Outflow = 2.14 cfs @ 12.76 hrs, Volume= 0.556 af, Atten= 0%, Lag= 2.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.63 fps, Min. Travel Time= 1.8 min
 Avg. Velocity = 0.54 fps, Avg. Travel Time= 5.2 min

Peak Storage= 225 cf @ 12.73 hrs
 Average Depth at Peak Storage= 0.27'
 Bank-Full Depth= 1.50' Flow Area= 12.8 sf, Capacity= 53.25 cfs

4.00' x 1.50' deep channel, n= 0.050
 Side Slope Z-value= 3.0 '/' Top Width= 13.00'
 Length= 171.0' Slope= 0.0213 '/'
 Inlet Invert= 171.64', Outlet Invert= 168.00'



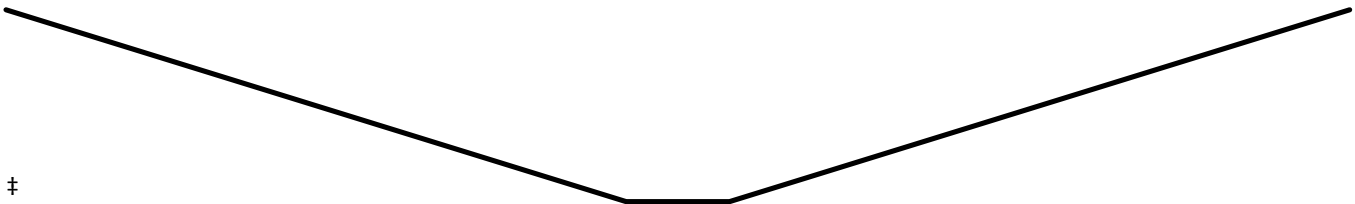
Summary for Reach 8.2AR1:

Inflow Area = 1.292 ac, 9.56% Impervious, Inflow Depth = 0.00" for 02-YR event
 Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 3.00' Flow Area= 42.0 sf, Capacity= 82.07 cfs

2.00' x 3.00' deep channel, n= 0.080
 Side Slope Z-value= 4.0 '/' Top Width= 26.00'
 Length= 330.0' Slope= 0.0061 '/'
 Inlet Invert= 212.50', Outlet Invert= 210.50'



Summary for Reach 8.2BR1:

Inflow Area = 5.136 ac, 3.32% Impervious, Inflow Depth = 0.38" for 02-YR event
 Inflow = 0.59 cfs @ 13.06 hrs, Volume= 0.161 af
 Outflow = 0.59 cfs @ 13.16 hrs, Volume= 0.161 af, Atten= 0%, Lag= 5.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 0.82 fps, Min. Travel Time= 3.4 min
 Avg. Velocity = 0.34 fps, Avg. Travel Time= 8.2 min

Peak Storage= 120 cf @ 13.11 hrs
 Average Depth at Peak Storage= 0.16'
 Bank-Full Depth= 1.00' Flow Area= 8.0 sf, Capacity= 18.57 cfs

4.00' x 1.00' deep channel, n= 0.120
 Side Slope Z-value= 4.0 '/' Top Width= 12.00'
 Length= 166.0' Slope= 0.0620 '/'
 Inlet Invert= 198.45', Outlet Invert= 188.16'



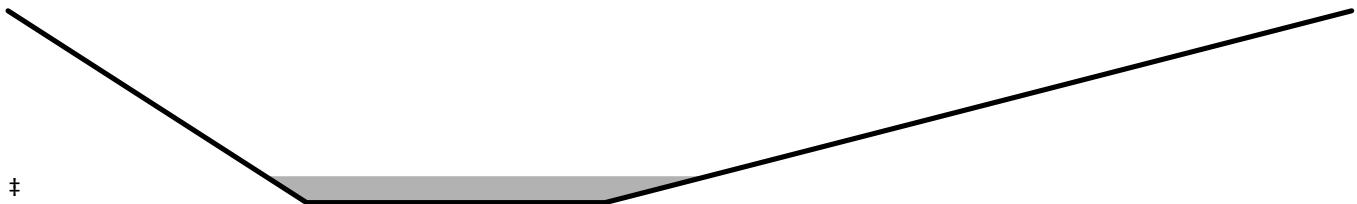
Summary for Reach 8.3AR1:

Inflow Area = 7.860 ac, 18.05% Impervious, Inflow Depth = 0.25" for 02-YR event
 Inflow = 1.48 cfs @ 12.66 hrs, Volume= 0.165 af
 Outflow = 1.24 cfs @ 12.82 hrs, Volume= 0.165 af, Atten= 16%, Lag= 9.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 0.91 fps, Min. Travel Time= 4.2 min
 Avg. Velocity = 0.37 fps, Avg. Travel Time= 10.3 min

Peak Storage= 314 cf @ 12.75 hrs
 Average Depth at Peak Storage= 0.27'
 Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 60.12 cfs

4.00' x 2.00' deep channel, n= 0.120
 Side Slope Z-value= 2.0 5.0 '/' Top Width= 18.00'
 Length= 230.0' Slope= 0.0391 '/'
 Inlet Invert= 194.00', Outlet Invert= 185.00'



Summary for Reach 8.3CR1:

Inflow Area = 4.448 ac, 0.00% Impervious, Inflow Depth = 0.48" for 02-YR event
 Inflow = 0.48 cfs @ 15.61 hrs, Volume= 0.178 af
 Outflow = 0.46 cfs @ 16.19 hrs, Volume= 0.178 af, Atten= 5%, Lag= 34.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 0.40 fps, Min. Travel Time= 16.1 min
 Avg. Velocity = 0.22 fps, Avg. Travel Time= 29.6 min

Peak Storage= 443 cf @ 15.92 hrs
Average Depth at Peak Storage= 0.06'
Bank-Full Depth= 1.00' Flow Area= 30.0 sf, Capacity= 68.10 cfs

20.00' x 1.00' deep channel, n= 0.120
Side Slope Z-value= 10.0 '/' Top Width= 40.00'
Length= 384.0' Slope= 0.0495 '/'
Inlet Invert= 154.00', Outlet Invert= 135.00'



Summary for Reach 8.4CR1:

Inflow Area = 2.760 ac, 8.29% Impervious, Inflow Depth = 0.00" for 02-YR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 26.0 sf, Capacity= 48.74 cfs

5.00' x 2.00' deep channel, n= 0.120
Side Slope Z-value= 4.0 '/' Top Width= 21.00'
Length= 1,440.0' Slope= 0.0178 '/'
Inlet Invert= 160.60', Outlet Invert= 135.00'



Summary for Reach 8.6CR1:

Inflow Area = 10.415 ac, 1.16% Impervious, Inflow Depth = 0.63" for 02-YR event
Inflow = 1.36 cfs @ 14.80 hrs, Volume= 0.544 af
Outflow = 1.36 cfs @ 14.98 hrs, Volume= 0.544 af, Atten= 0%, Lag= 10.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 1.30 fps, Min. Travel Time= 6.2 min

Avg. Velocity = 0.52 fps, Avg. Travel Time= 15.3 min

Peak Storage= 504 cf @ 14.87 hrs

Average Depth at Peak Storage= 0.18'

Bank-Full Depth= 1.00' Flow Area= 9.0 sf, Capacity= 30.58 cfs

5.00' x 1.00' deep channel, n= 0.080

Side Slope Z-value= 4.0 '/' Top Width= 13.00'

Length= 482.0' Slope= 0.0560 '/'

Inlet Invert= 156.00', Outlet Invert= 129.00'



Summary for Reach 8.6CR2:

[43] Hint: Has no inflow (Outflow=Zero)

Bank-Full Depth= 1.00' Flow Area= 34.0 sf, Capacity= 34.51 cfs

30.00' x 1.00' deep channel, n= 0.120

Side Slope Z-value= 4.0 '/' Top Width= 38.00'

Length= 865.0' Slope= 0.0079 '/'

Inlet Invert= 127.80', Outlet Invert= 121.00'



Summary for Reach C6R1:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min

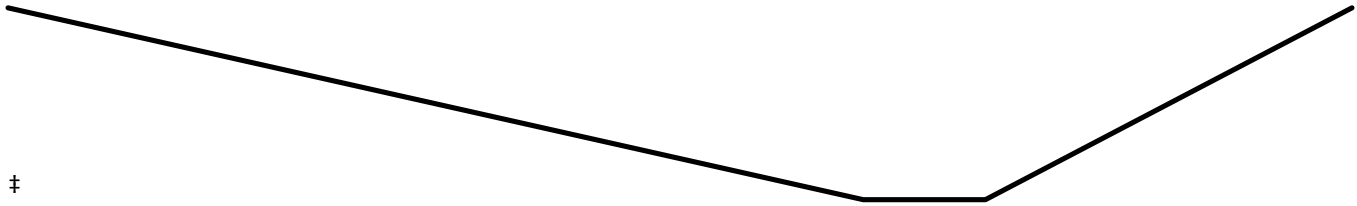
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs

Average Depth at Peak Storage= 0.00'

Bank-Full Depth= 2.00' Flow Area= 24.0 sf, Capacity= 189.62 cfs

2.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
 Side Slope Z-value= 7.0 3.0 '/' Top Width= 22.00'
 Length= 338.0' Slope= 0.0414 '/'
 Inlet Invert= 139.00', Outlet Invert= 125.00'



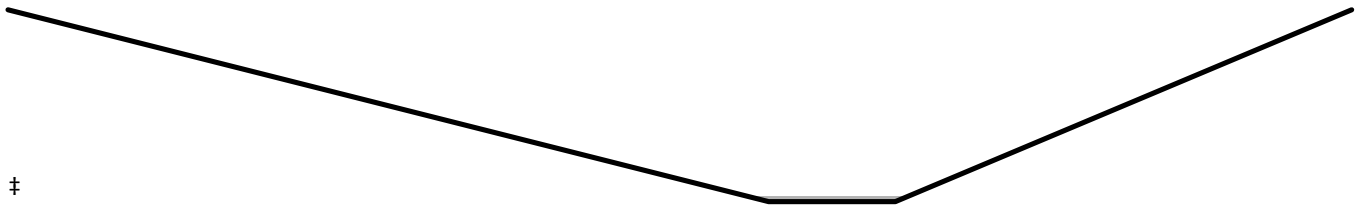
Summary for Reach C7R1:

Inflow = 0.81 cfs @ 12.51 hrs, Volume= 0.028 af
 Outflow = 0.80 cfs @ 12.57 hrs, Volume= 0.028 af, Atten= 1%, Lag= 3.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.61 fps, Min. Travel Time= 2.0 min
 Avg. Velocity = 1.10 fps, Avg. Travel Time= 2.9 min

Peak Storage= 95 cf @ 12.54 hrs
 Average Depth at Peak Storage= 0.09'
 Bank-Full Depth= 3.00' Flow Area= 87.0 sf, Capacity= 1,060.34 cfs

5.00' x 3.00' deep channel, n= 0.030 Earth, grassed & winding
 Side Slope Z-value= 10.0 6.0 '/' Top Width= 53.00'
 Length= 190.0' Slope= 0.0316 '/'
 Inlet Invert= 135.00', Outlet Invert= 129.00'



Summary for Reach C8AR1:

Inflow Area = 43.650 ac, 8.41% Impervious, Inflow Depth = 1.25" for 02-YR event
 Inflow = 4.57 cfs @ 14.80 hrs, Volume= 4.555 af
 Outflow = 4.57 cfs @ 14.85 hrs, Volume= 4.555 af, Atten= 0%, Lag= 2.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.10 fps, Min. Travel Time= 1.6 min
 Avg. Velocity = 0.93 fps, Avg. Travel Time= 1.9 min

Peak Storage= 447 cf @ 14.82 hrs
 Average Depth at Peak Storage= 0.12'
 Bank-Full Depth= 10.00' Flow Area= 680.0 sf, Capacity= 9,842.09 cfs

33.00' x 10.00' deep channel, n= 0.100
 Side Slope Z-value= 3.0 4.0 '/' Top Width= 103.00'
 Length= 107.5' Slope= 0.0794 '/'
 Inlet Invert= 179.54', Outlet Invert= 171.00'



Summary for Reach C8AR2:

Inflow Area = 43.650 ac, 8.41% Impervious, Inflow Depth = 1.25" for 02-YR event
 Inflow = 4.57 cfs @ 14.85 hrs, Volume= 4.555 af
 Outflow = 4.56 cfs @ 15.26 hrs, Volume= 4.555 af, Atten= 0%, Lag= 24.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 0.94 fps, Min. Travel Time= 14.4 min
 Avg. Velocity = 0.51 fps, Avg. Travel Time= 26.6 min

Peak Storage= 3,938 cf @ 15.02 hrs
 Average Depth at Peak Storage= 0.42'
 Bank-Full Depth= 5.00' Flow Area= 150.0 sf, Capacity= 566.71 cfs

10.00' x 5.00' deep channel, n= 0.080
 Side Slope Z-value= 4.0 '/' Top Width= 50.00'
 Length= 810.0' Slope= 0.0099 '/'
 Inlet Invert= 170.00', Outlet Invert= 162.00'



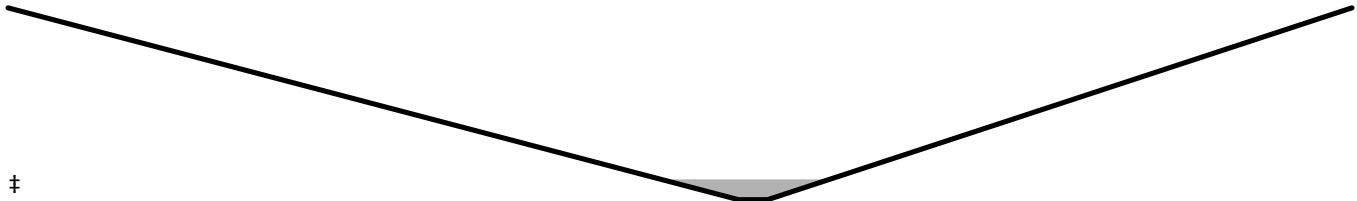
Summary for Reach C8AR3:

Inflow Area = 43.650 ac, 8.41% Impervious, Inflow Depth = 1.25" for 02-YR event
 Inflow = 4.56 cfs @ 15.26 hrs, Volume= 4.555 af
 Outflow = 4.56 cfs @ 15.27 hrs, Volume= 4.555 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 2.54 fps, Min. Travel Time= 0.1 min
 Avg. Velocity = 1.49 fps, Avg. Travel Time= 0.2 min

Peak Storage= 40 cf @ 15.26 hrs
 Average Depth at Peak Storage= 0.53'
 Bank-Full Depth= 5.00' Flow Area= 117.5 sf, Capacity= 1,210.27 cfs

1.00' x 5.00' deep channel, n= 0.080
 Side Slope Z-value= 5.0 4.0 '/' Top Width= 46.00'
 Length= 22.0' Slope= 0.0909 '/'
 Inlet Invert= 161.00', Outlet Invert= 159.00'



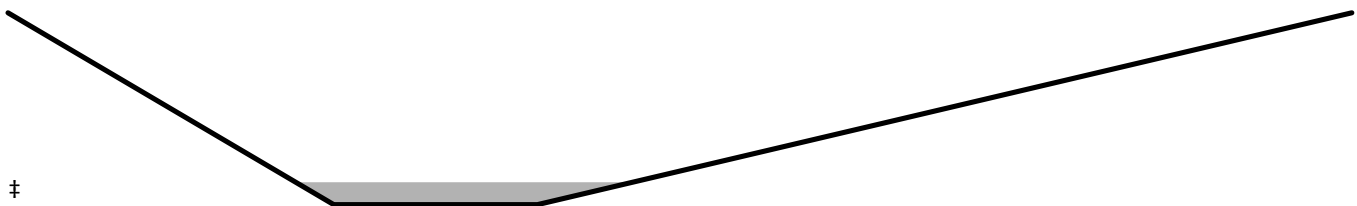
Summary for Reach C8AR6:

Inflow Area = 68.160 ac, 6.25% Impervious, Inflow Depth > 0.60" for 02-YR event
 Inflow = 4.73 cfs @ 19.46 hrs, Volume= 3.395 af
 Outflow = 4.73 cfs @ 19.72 hrs, Volume= 3.395 af, Atten= 0%, Lag= 16.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.52 fps, Min. Travel Time= 9.0 min
 Avg. Velocity = 0.76 fps, Avg. Travel Time= 17.9 min

Peak Storage= 2,552 cf @ 19.57 hrs
 Average Depth at Peak Storage= 0.47'
 Bank-Full Depth= 4.00' Flow Area= 76.0 sf, Capacity= 382.10 cfs

5.00' x 4.00' deep channel, n= 0.080
 Side Slope Z-value= 2.0 5.0 '/' Top Width= 33.00'
 Length= 822.0' Slope= 0.0254 '/'
 Inlet Invert= 155.88', Outlet Invert= 135.00'



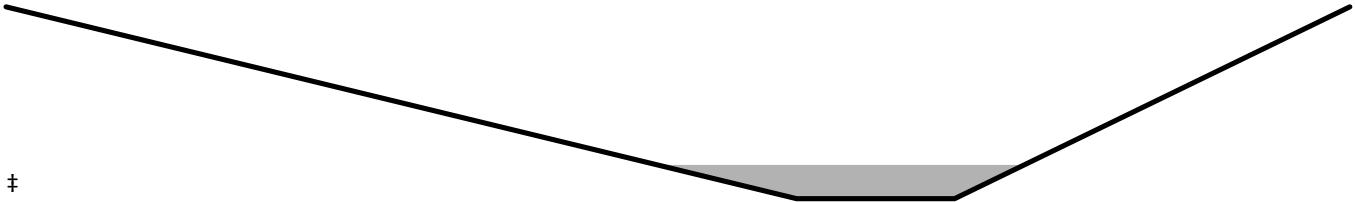
Summary for Reach C8AR7:

Inflow Area = 162.417 ac, 7.42% Impervious, Inflow Depth > 0.89" for 02-YR event
 Inflow = 27.12 cfs @ 12.63 hrs, Volume= 12.005 af
 Outflow = 25.96 cfs @ 13.10 hrs, Volume= 12.004 af, Atten= 4%, Lag= 28.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 0.89 fps, Min. Travel Time= 15.6 min
 Avg. Velocity = 0.34 fps, Avg. Travel Time= 40.8 min

Peak Storage= 24,344 cf @ 12.84 hrs
Average Depth at Peak Storage= 0.88'
Bank-Full Depth= 5.00' Flow Area= 475.0 sf, Capacity= 1,134.27 cfs

20.00' x 5.00' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 20.0 10.0 '/' Top Width= 170.00'
Length= 831.0' Slope= 0.0042 '/'
Inlet Invert= 132.50', Outlet Invert= 129.00'



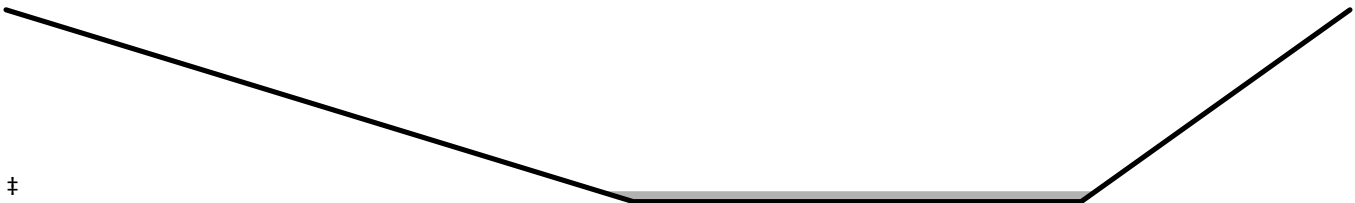
Summary for Reach C8BR1:

Inflow Area = 53.779 ac, 7.81% Impervious, Inflow Depth > 0.93" for 02-YR event
Inflow = 7.14 cfs @ 13.73 hrs, Volume= 4.154 af
Outflow = 7.14 cfs @ 13.76 hrs, Volume= 4.154 af, Atten= 0%, Lag= 1.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.77 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 1.33 fps, Avg. Travel Time= 2.0 min

Peak Storage= 412 cf @ 13.74 hrs
Average Depth at Peak Storage= 0.16'
Bank-Full Depth= 3.00' Flow Area= 90.0 sf, Capacity= 1,356.35 cfs

15.00' x 3.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 7.0 3.0 '/' Top Width= 45.00'
Length= 160.0' Slope= 0.0375 '/'
Inlet Invert= 160.00', Outlet Invert= 154.00'



Summary for Reach C8BR2:

Inflow Area = 53.779 ac, 7.81% Impervious, Inflow Depth > 0.93" for 02-YR event
Inflow = 7.14 cfs @ 13.76 hrs, Volume= 4.154 af
Outflow = 7.14 cfs @ 13.76 hrs, Volume= 4.154 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 4.78 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 3.75 fps, Avg. Travel Time= 0.1 min

Peak Storage= 46 cf @ 13.76 hrs

Average Depth at Peak Storage= 0.14'

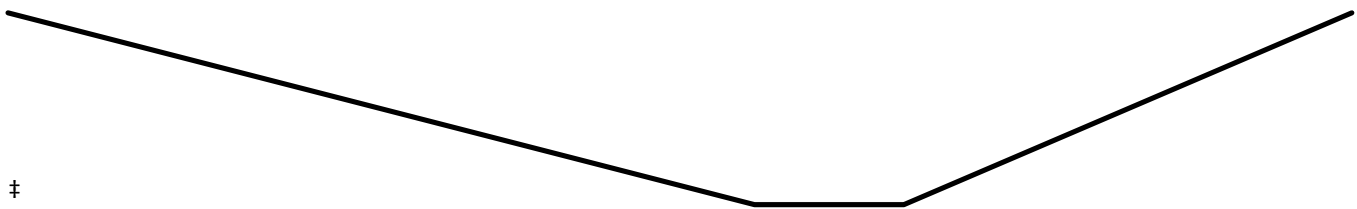
Bank-Full Depth= 10.00' Flow Area= 500.0 sf, Capacity= 26,509.48 cfs

10.00' x 10.00' deep channel, n= 0.030 Earth, grassed & winding

Side Slope Z-value= 5.0 3.0 '/' Top Width= 90.00'

Length= 31.0' Slope= 0.1210 '/'

Inlet Invert= 153.75', Outlet Invert= 150.00'



Summary for Reach C8BR3:

Inflow Area = 53.779 ac, 7.81% Impervious, Inflow Depth > 0.93" for 02-YR event

Inflow = 7.14 cfs @ 13.76 hrs, Volume= 4.154 af

Outflow = 7.13 cfs @ 14.11 hrs, Volume= 4.153 af, Atten= 0%, Lag= 20.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 1.46 fps, Min. Travel Time= 9.0 min

Avg. Velocity = 1.46 fps, Avg. Travel Time= 9.0 min

Peak Storage= 3,846 cf @ 13.96 hrs

Average Depth at Peak Storage= 0.05'

Bank-Full Depth= 10.00' Flow Area= 1,650.0 sf, Capacity= 41,604.45 cfs

100.00' x 10.00' deep channel, n= 0.030 Earth, grassed & winding

Side Slope Z-value= 7.0 6.0 '/' Top Width= 230.00'

Length= 788.0' Slope= 0.0189 '/'

Inlet Invert= 149.89', Outlet Invert= 135.00'



Summary for Reach SP1000: POA STA380+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2,424.221 ac, 7.86% Impervious, Inflow Depth > 1.00" for 02-YR event
 Inflow = 131.04 cfs @ 12.61 hrs, Volume= 202.565 af
 Outflow = 131.04 cfs @ 12.61 hrs, Volume= 202.565 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond 8.1AP:

Inflow Area = 2.788 ac, 22.13% Impervious, Inflow Depth = 1.55" for 02-YR event
 Inflow = 2.92 cfs @ 12.40 hrs, Volume= 0.360 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 207.72' @ 25.63 hrs Surf.Area= 11,025 sf Storage= 15,668 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description			
#1	206.00'	64,483 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
206.00	7,624	339.0	0	0	7,624	
207.00	9,226	361.0	8,412	8,412	8,898	
208.00	11,778	413.0	10,476	18,888	12,125	
209.00	14,330	449.0	13,033	31,922	14,631	
210.00	16,588	464.0	15,445	47,367	15,813	
211.00	17,650	499.0	17,116	64,483	18,538	

Device	Routing	Invert	Outlet Devices																
#1	Primary	210.00'	22.0' long x 3.0' breadth Broad-Crested Rectangular Weir																
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50																
			Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32																

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.00' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 8.1BP:

Inflow Area = 1.657 ac, 1.67% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 1.28 cfs @ 12.52 hrs, Volume= 0.177 af
 Outflow = 0.15 cfs @ 15.29 hrs, Volume= 0.059 af, Atten= 88%, Lag= 166.5 min
 Primary = 0.15 cfs @ 15.29 hrs, Volume= 0.059 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 203.03' @ 15.29 hrs Surf.Area= 5,186 sf Storage= 5,284 cf

Plug-Flow detention time= 372.5 min calculated for 0.059 af (34% of inflow)
 Center-of-Mass det. time= 234.5 min (1,112.2 - 877.6)

Volume	Invert	Avail.Storage	Storage Description
#1	201.00'	11,928 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
201.00	400	0	0
202.00	2,390	1,395	1,395
203.00	5,085	3,738	5,133
204.00	8,505	6,795	11,928

Device	Routing	Invert	Outlet Devices
#1	Primary	203.00'	10.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.14 cfs @ 15.29 hrs HW=203.03' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Weir Controls 0.14 cfs @ 0.46 fps)

Summary for Pond 8.1CP:

Inflow Area = 68.160 ac, 6.25% Impervious, Inflow Depth = 1.31" for 02-YR event
 Inflow = 22.20 cfs @ 12.53 hrs, Volume= 7.439 af
 Outflow = 4.73 cfs @ 19.46 hrs, Volume= 3.395 af, Atten= 79%, Lag= 415.9 min
 Primary = 4.73 cfs @ 19.46 hrs, Volume= 3.395 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 158.11' @ 19.46 hrs Surf.Area= 135,497 sf Storage= 190,623 cf

Plug-Flow detention time= 566.1 min calculated for 3.395 af (46% of inflow)
 Center-of-Mass det. time= 318.7 min (1,376.8 - 1,058.0)

Volume	Invert	Avail.Storage	Storage Description
#1	156.40'	316,039 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.40	35,000	0	0
157.00	123,134	47,440	47,440
159.00	145,465	268,599	316,039

Device	Routing	Invert	Outlet Devices
#1	Primary	158.00'	50.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=4.71 cfs @ 19.46 hrs HW=158.11' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Weir Controls 4.71 cfs @ 0.88 fps)

Summary for Pond 8.2AP: Potentially Non-Contributing

Inflow Area = 1.292 ac, 9.56% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 1.15 cfs @ 12.43 hrs, Volume= 0.145 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 215.31' @ 25.64 hrs Surf.Area= 11,517 sf Storage= 6,319 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	214.00'	17,830 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
214.00	433	80.0	0	0	433
215.00	7,762	597.0	3,343	3,343	28,288
216.00	22,487	1,002.0	14,487	17,830	79,828

Device	Routing	Invert	Outlet Devices
#1	Primary	215.50'	36.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=214.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 8.2BP:

Inflow Area = 5.136 ac, 3.32% Impervious, Inflow Depth = 0.55" for 02-YR event
 Inflow = 1.82 cfs @ 12.42 hrs, Volume= 0.234 af
 Outflow = 0.59 cfs @ 13.06 hrs, Volume= 0.161 af, Atten= 67%, Lag= 38.5 min
 Primary = 0.59 cfs @ 13.06 hrs, Volume= 0.161 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 199.62' @ 13.06 hrs Surf.Area= 9,583 sf Storage= 4,309 cf

Plug-Flow detention time= 222.7 min calculated for 0.161 af (69% of inflow)
 Center-of-Mass det. time= 111.3 min (991.9 - 880.6)

Volume	Invert	Avail.Storage	Storage Description
#1	198.50'	28,064 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
198.50	200	0	0
199.00	2,250	613	613
200.00	13,986	8,118	8,731
201.00	24,680	19,333	28,064

Device	Routing	Invert	Outlet Devices
#1	Primary	199.50'	5.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.59 cfs @ 13.06 hrs HW=199.62' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Weir Controls 0.59 cfs @ 0.95 fps)

Summary for Pond 8.2CP:

Inflow Area = 2.342 ac, 12.15% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 1.85 cfs @ 12.53 hrs, Volume= 0.263 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 182.20' @ 26.14 hrs Surf.Area= 17,761 sf Storage= 11,450 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	181.00'	58,735 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
181.00	500	0	0
182.00	15,600	8,050	8,050
183.00	26,200	20,900	28,950
184.00	33,370	29,785	58,735

Device	Routing	Invert	Outlet Devices
#1	Primary	182.40'	20.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=181.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 8.3AP:

Inflow Area = 7.860 ac, 18.05% Impervious, Inflow Depth = 0.40" for 02-YR event
 Inflow = 2.21 cfs @ 12.38 hrs, Volume= 0.264 af
 Outflow = 1.48 cfs @ 12.66 hrs, Volume= 0.165 af, Atten= 33%, Lag= 16.6 min
 Primary = 1.48 cfs @ 12.66 hrs, Volume= 0.165 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 200.54' @ 12.66 hrs Surf.Area= 3,413 sf Storage= 4,500 cf

Plug-Flow detention time= 191.9 min calculated for 0.164 af (62% of inflow)
 Center-of-Mass det. time= 81.2 min (941.0 - 859.8)

Volume	Invert	Avail.Storage	Storage Description
#1	198.50'	6,209 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
198.50	916	144.0	0	0	916
199.00	1,731	172.0	651	651	1,625
200.00	2,691	278.0	2,193	2,844	5,427
201.00	4,086	269.0	3,364	6,209	5,905

Device	Routing	Invert	Outlet Devices
#1	Primary	200.50'	65.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=1.44 cfs @ 12.66 hrs HW=200.54' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Weir Controls 1.44 cfs @ 0.51 fps)

Summary for Pond 8.3BP:

Inflow Area = 1.163 ac, 7.32% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 0.83 cfs @ 12.67 hrs, Volume= 0.131 af
 Outflow = 0.83 cfs @ 12.68 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.8 min
 Primary = 0.83 cfs @ 12.68 hrs, Volume= 0.131 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 201.61' @ 12.68 hrs Surf.Area= 5,736 sf Storage= 72 cf

Plug-Flow detention time= 1.5 min calculated for 0.131 af (100% of inflow)
 Center-of-Mass det. time= 1.5 min (885.2 - 883.8)

Volume	Invert	Avail.Storage	Storage Description
#1	201.60'	18,071 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
201.60	5,455	0	0
202.00	14,150	3,921	3,921
203.00	14,150	14,150	18,071

Device	Routing	Invert	Outlet Devices
#1	Primary	201.60'	202.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.80 cfs @ 12.68 hrs HW=201.61' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Weir Controls 0.80 cfs @ 0.30 fps)

Summary for Pond 8.3CP:

Inflow Area = 4.448 ac, 0.00% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 2.07 cfs @ 13.15 hrs, Volume= 0.476 af
 Outflow = 0.48 cfs @ 15.61 hrs, Volume= 0.178 af, Atten= 77%, Lag= 147.7 min
 Primary = 0.48 cfs @ 15.61 hrs, Volume= 0.178 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 155.02' @ 15.61 hrs Surf.Area= 20,021 sf Storage= 13,410 cf

Plug-Flow detention time= 356.0 min calculated for 0.178 af (37% of inflow)
 Center-of-Mass det. time= 211.7 min (1,134.7 - 922.9)

Volume	Invert	Avail.Storage	Storage Description
#1	154.30'	34,473 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
154.30	17,065	0	0
155.00	19,950	12,955	12,955
156.00	23,085	21,518	34,473

Device	Routing	Invert	Outlet Devices
#1	Primary	155.00'	50.0' long x 15.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.46 cfs @ 15.61 hrs HW=155.02' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Weir Controls 0.46 cfs @ 0.40 fps)

Summary for Pond 8.4AP:

Inflow Area = 2.927 ac, 15.52% Impervious, Inflow Depth = 0.83" for 02-YR event
 Inflow = 2.23 cfs @ 12.19 hrs, Volume= 0.201 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 207.46' @ 24.77 hrs Surf.Area= 7,718 sf Storage= 8,776 cf

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

Volume	Invert	Avail.Storage	Storage Description		
#1	206.00'	54,709 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
206.00	4,077	240.0	0	0	4,077
207.00	6,895	338.0	5,425	5,425	8,594
208.00	8,749	385.0	7,804	13,228	11,322
209.00	12,565	552.0	10,600	23,828	23,783
210.00	16,428	882.0	14,453	38,281	61,448
211.00	16,428	882.0	16,428	54,709	62,330

Device	Routing	Invert	Outlet Devices
#1	Secondary	210.50'	63.0' long x 13.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.60 2.64 2.70 2.66 2.65 2.66 2.65 2.63
#2	Primary	209.90'	6.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.00' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 8.4BP:

Inflow Area = 1.974 ac, 0.75% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 1.36 cfs @ 12.61 hrs, Volume= 0.211 af
 Outflow = 1.36 cfs @ 12.65 hrs, Volume= 0.206 af, Atten= 0%, Lag= 2.2 min
 Primary = 1.36 cfs @ 12.65 hrs, Volume= 0.206 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 182.39' @ 12.65 hrs Surf.Area= 1,584 sf Storage= 356 cf

Plug-Flow detention time= 21.5 min calculated for 0.206 af (97% of inflow)
 Center-of-Mass det. time= 7.2 min (892.9 - 885.7)

Volume	Invert	Avail.Storage	Storage Description
#1	182.00'	6,770 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
182.00	260	0	0
183.00	3,690	1,975	1,975
184.00	5,900	4,795	6,770

Device	Routing	Invert	Outlet Devices
#1	Primary	182.30'	20.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.35 cfs @ 12.65 hrs HW=182.39' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Weir Controls 1.35 cfs @ 0.79 fps)

Summary for Pond 8.4CP:

Inflow Area = 2.760 ac, 8.29% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 1.98 cfs @ 12.59 hrs, Volume= 0.295 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 161.45' @ 26.27 hrs Surf.Area= 37,975 sf Storage= 12,860 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	161.10'	81,264 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
161.10	34,950	0	0
162.00	42,670	34,929	34,929
163.00	50,000	46,335	81,264

Device	Routing	Invert	Outlet Devices
#1	Primary	161.50'	30.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	161.50'	80.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=161.10' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=161.10' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 8.5AP:

Inflow Area = 2.981 ac, 5.72% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 3.10 cfs @ 12.25 hrs, Volume= 0.319 af
 Outflow = 0.05 cfs @ 24.14 hrs, Volume= 0.005 af, Atten= 98%, Lag= 713.3 min
 Primary = 0.04 cfs @ 24.14 hrs, Volume= 0.004 af
 Secondary = 0.02 cfs @ 24.14 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 205.80' @ 24.14 hrs Surf.Area= 26,367 sf Storage= 13,744 cf

Plug-Flow detention time= 792.1 min calculated for 0.005 af (2% of inflow)
 Center-of-Mass det. time= 591.7 min (1,453.1 - 861.3)

Volume	Invert	Avail.Storage	Storage Description
#1	205.20'	33,614 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
205.20	19,370	650.0	0	0	19,370
206.00	28,880	806.0	19,174	19,174	37,454
206.50	28,880	806.0	14,440	33,614	37,857

Device	Routing	Invert	Outlet Devices
#1	Primary	205.80'	40.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Secondary	205.80'	20.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.02 cfs @ 24.14 hrs HW=205.80' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Weir Controls 0.02 cfs @ 0.15 fps)

Secondary OutFlow Max=0.01 cfs @ 24.14 hrs HW=205.80' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Weir Controls 0.01 cfs @ 0.16 fps)

Summary for Pond 8.5BP: (new Pond)

Inflow Area = 2.862 ac, 3.82% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 1.98 cfs @ 12.69 hrs, Volume= 0.321 af
 Outflow = 0.13 cfs @ 18.02 hrs, Volume= 0.141 af, Atten= 93%, Lag= 319.7 min
 Primary = 0.13 cfs @ 18.02 hrs, Volume= 0.141 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 167.95' @ 18.02 hrs Surf.Area= 17,593 sf Storage= 10,451 cf

Plug-Flow detention time= 643.0 min calculated for 0.141 af (44% of inflow)
 Center-of-Mass det. time= 511.7 min (1,398.0 - 886.3)

Volume	Invert	Avail.Storage	Storage Description
#1	166.80'	33,637 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.80	2,000	0	0
167.00	3,313	531	531
168.00	18,361	10,837	11,368
169.00	26,176	22,269	33,637

Device	Routing	Invert	Outlet Devices
#1	Primary	167.75'	12.0" Round Culvert L= 32.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 167.75' / 167.50' S= 0.0078 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Secondary	168.50'	27.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.13 cfs @ 18.02 hrs HW=167.95' (Free Discharge)

↑**1=Culvert** (Inlet Controls 0.13 cfs @ 1.20 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=166.80' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 8.5CP:

Inflow Area = 9.708 ac, 16.32% Impervious, Inflow Depth = 0.39" for 02-YR event
 Inflow = 2.26 cfs @ 12.50 hrs, Volume= 0.312 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 159.52' @ 26.03 hrs Surf.Area= 18,139 sf Storage= 13,603 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	158.00'	93,198 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
158.00	3,500	0	0
159.00	9,395	6,448	6,448
160.00	26,219	17,807	24,255
161.00	33,641	29,930	54,185
162.00	44,385	39,013	93,198

Device	Routing	Invert	Outlet Devices
#1	Primary	160.60'	40.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=158.00' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 8.6AP:

Inflow Area = 1.467 ac, 15.73% Impervious, Inflow Depth = 1.48" for 02-YR event
 Inflow = 1.48 cfs @ 12.40 hrs, Volume= 0.181 af
 Outflow = 1.48 cfs @ 12.42 hrs, Volume= 0.157 af, Atten= 0%, Lag= 1.0 min
 Primary = 1.48 cfs @ 12.42 hrs, Volume= 0.157 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 198.56' @ 12.42 hrs Surf.Area= 2,848 sf Storage= 1,180 cf

Plug-Flow detention time= 85.4 min calculated for 0.157 af (87% of inflow)
 Center-of-Mass det. time= 26.2 min (887.1 - 860.9)

Volume	Invert	Avail.Storage	Storage Description
#1	198.00'	2,740 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
198.00	1,450	147.0	0	0	1,450
199.00	4,280	230.0	2,740	2,740	3,947

Device	Routing	Invert	Outlet Devices
#1	Primary	198.50'	42.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=1.48 cfs @ 12.42 hrs HW=198.56' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Weir Controls 1.48 cfs @ 0.59 fps)

Summary for Pond 8.6BP:

Inflow Area = 7.054 ac, 17.19% Impervious, Inflow Depth = 1.48" for 02-YR event
 Inflow = 5.86 cfs @ 12.59 hrs, Volume= 0.870 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 156.74' @ 26.39 hrs Surf.Area= 34,651 sf Storage= 37,874 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	155.00'	438,508 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
155.00	7,503	0	0
156.00	24,570	16,037	16,037
157.00	38,240	31,405	47,442
158.00	51,342	44,791	92,233
159.00	65,795	58,569	150,801
160.00	88,790	77,293	228,094
161.00	105,299	97,045	325,138
162.00	121,440	113,370	438,508

Device	Routing	Invert	Outlet Devices
#1	Primary	161.80'	100.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=155.00' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 8.6CP1:

Inflow Area = 9.642 ac, 1.26% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 5.55 cfs @ 12.83 hrs, Volume= 1.032 af
 Outflow = 2.61 cfs @ 13.62 hrs, Volume= 0.671 af, Atten= 53%, Lag= 47.4 min
 Primary = 2.61 cfs @ 13.62 hrs, Volume= 0.671 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 160.77' @ 13.62 hrs Surf.Area= 46,686 sf Storage= 18,980 cf

Plug-Flow detention time= 216.2 min calculated for 0.671 af (65% of inflow)
 Center-of-Mass det. time= 105.7 min (1,006.0 - 900.2)

Volume	Invert	Avail.Storage	Storage Description
#1	160.00'	87,951 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
160.00	2,500	0	0
160.50	30,500	8,250	8,250
160.70	44,125	7,462	15,712
161.00	54,800	14,839	30,551
162.00	60,000	57,400	87,951

Device	Routing	Invert	Outlet Devices
#1	Primary	160.70'	50.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.59 cfs @ 13.62 hrs HW=160.77' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Weir Controls 2.59 cfs @ 0.72 fps)

Summary for Pond 8.6CP2:

Inflow Area = 9.642 ac, 1.26% Impervious, Inflow Depth = 0.83" for 02-YR event
 Inflow = 2.61 cfs @ 13.62 hrs, Volume= 0.671 af
 Outflow = 1.36 cfs @ 14.80 hrs, Volume= 0.544 af, Atten= 48%, Lag= 70.5 min
 Primary = 1.36 cfs @ 14.80 hrs, Volume= 0.544 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 158.22' @ 14.80 hrs Surf.Area= 13,736 sf Storage= 8,409 cf

Plug-Flow detention time= 172.2 min calculated for 0.544 af (81% of inflow)
 Center-of-Mass det. time= 91.6 min (1,097.6 - 1,006.0)

Volume	Invert	Avail.Storage	Storage Description
#1	157.50'	41,223 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
157.50	9,290	0	0
158.00	12,800	5,523	5,523
159.00	17,100	14,950	20,473
160.00	24,400	20,750	41,223

Device	Routing	Invert	Outlet Devices
#1	Primary	158.00'	5.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.36 cfs @ 14.80 hrs HW=158.22' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Weir Controls 1.36 cfs @ 1.25 fps)

Summary for Pond 8.7CP:

Inflow Area = 0.773 ac, 0.00% Impervious, Inflow Depth = 1.22" for 02-YR event
 Inflow = 0.66 cfs @ 12.36 hrs, Volume= 0.079 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 157.49' @ 25.39 hrs Surf.Area= 5,978 sf Storage= 3,427 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	156.50'	16,653 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.50	1,500	0	0
157.00	3,217	1,179	1,179
158.00	8,865	6,041	7,220
159.00	10,000	9,433	16,653

Device	Routing	Invert	Outlet Devices
#1	Primary	157.60'	40.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=156.50' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 800P: Pond on YWD

[79] Warning: Submerged Pond C8P Primary device # 1 INLET by 0.26'

Inflow Area = 293.165 ac, 6.89% Impervious, Inflow Depth > 1.05" for 02-YR event
 Inflow = 58.05 cfs @ 12.83 hrs, Volume= 25.663 af
 Outflow = 57.81 cfs @ 12.91 hrs, Volume= 25.663 af, Atten= 0%, Lag= 4.4 min
 Primary = 57.81 cfs @ 12.91 hrs, Volume= 25.663 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 119.57' @ 12.91 hrs Surf.Area= 26,168 sf Storage= 21,290 cf

Plug-Flow detention time= 9.0 min calculated for 25.663 af (100% of inflow)
 Center-of-Mass det. time= 9.0 min (1,036.0 - 1,027.1)

Volume	Invert	Avail.Storage	Storage Description			
#1	118.00'	712,300 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
118.00	959	441.0	0	0	959	
119.00	19,570	637.0	8,287	8,287	17,781	
120.00	31,765	1,121.0	25,423	33,710	85,497	
121.00	97,714	2,249.0	61,731	95,440	388,005	
122.00	119,554	2,295.0	108,451	203,891	404,793	
123.00	162,662	2,787.0	140,556	344,447	603,780	
124.00	185,002	2,707.0	173,712	518,159	638,864	
125.00	203,425	2,711.0	194,141	712,300	642,075	

Device	Routing	Invert	Outlet Devices
#1	Primary	118.00'	4.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#2	Primary	119.00'	32.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=57.77 cfs @ 12.91 hrs HW=119.57' (Free Discharge)

- 1=Broad-Crested Rectangular Weir (Weir Controls 20.82 cfs @ 3.31 fps)
- 2=Broad-Crested Rectangular Weir (Weir Controls 36.95 cfs @ 2.02 fps)

Summary for Pond C6P: 357+50

Inflow Area = 38.114 ac, 8.60% Impervious, Inflow Depth = 1.41" for 02-YR event
 Inflow = 37.29 cfs @ 12.29 hrs, Volume= 4.479 af
 Outflow = 26.39 cfs @ 12.51 hrs, Volume= 4.479 af, Atten= 29%, Lag= 13.5 min
 Primary = 25.58 cfs @ 12.51 hrs, Volume= 4.451 af
 Secondary = 0.81 cfs @ 12.51 hrs, Volume= 0.028 af
 Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 139.62' @ 12.51 hrs Surf.Area= 40,964 sf Storage= 21,895 cf

Plug-Flow detention time= 6.7 min calculated for 4.479 af (100% of inflow)
Center-of-Mass det. time= 6.7 min (859.2 - 852.5)

Volume	Invert	Avail.Storage	Storage Description
#1	137.00'	344,264 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
137.00	500	250.0	0	0	500
138.00	1,167	359.2	810	810	5,803
139.00	11,959	1,301.5	5,621	6,431	130,334
140.00	67,539	1,621.9	35,973	42,404	204,886
141.00	113,172	3,559.0	89,379	131,783	1,003,523
142.00	155,057	3,703.0	133,566	265,349	1,086,819
142.50	160,618	3,712.0	78,915	344,264	1,092,443

Device	Routing	Invert	Outlet Devices
#1	Primary	136.90'	36.0" Round Culvert STA357+00 L= 225.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 136.90' / 136.56' S= 0.0015 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Secondary	139.22'	18.0" Round Culvert STA365+00 L= 297.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 139.22' / 136.87' S= 0.0079 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#3	Tertiary	140.50'	2.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=25.58 cfs @ 12.51 hrs HW=139.62' (Free Discharge)

↑1=Culvert STA357+00 (Barrel Controls 25.58 cfs @ 5.00 fps)

Secondary OutFlow Max=0.81 cfs @ 12.51 hrs HW=139.62' (Free Discharge)

↑2=Culvert STA365+00 (Inlet Controls 0.81 cfs @ 2.15 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=137.00' (Free Discharge)

↑3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C8AP:

Inflow Area = 43.650 ac, 8.41% Impervious, Inflow Depth = 1.25" for 02-YR event
Inflow = 27.34 cfs @ 12.75 hrs, Volume= 4.555 af
Outflow = 4.57 cfs @ 14.80 hrs, Volume= 4.555 af, Atten= 83%, Lag= 123.4 min
Primary = 4.57 cfs @ 14.80 hrs, Volume= 4.555 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 182.55' @ 14.80 hrs Surf.Area= 259,045 sf Storage= 93,380 cf

Plug-Flow detention time= 256.1 min calculated for 4.555 af (100% of inflow)
Center-of-Mass det. time= 256.0 min (1,141.3 - 885.2)

Volume	Invert	Avail.Storage	Storage Description
#1	181.50'	1,071,217 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
181.50	1,500	160.0	0	0	1,500
182.00	10,000	1,000.0	2,562	2,562	79,041
182.30	238,856	4,275.0	29,773	32,335	1,453,792
183.00	298,639	5,104.0	187,734	220,069	2,072,530
184.00	336,274	5,089.0	317,270	537,340	2,085,722
185.00	363,932	5,071.0	350,012	887,352	2,101,136
185.50	371,541	5,073.0	183,865	1,071,217	2,104,142

Device	Routing	Invert	Outlet Devices
#1	Primary	181.50'	24.0" Round Culvert L= 51.5' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 181.50' / 180.00' S= 0.0291 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf

Primary OutFlow Max=4.57 cfs @ 14.80 hrs HW=182.55' (Free Discharge)

1=Culvert (Inlet Controls 4.57 cfs @ 2.75 fps)

Summary for Pond C8BP:

Inflow Area = 44.071 ac, 5.93% Impervious, Inflow Depth > 1.15" for 02-YR event
 Inflow = 23.63 cfs @ 12.71 hrs, Volume= 4.208 af
 Outflow = 7.14 cfs @ 13.73 hrs, Volume= 4.154 af, Atten= 70%, Lag= 61.2 min
 Primary = 7.14 cfs @ 13.73 hrs, Volume= 4.154 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 163.38' @ 13.73 hrs Surf.Area= 67,705 sf Storage= 61,688 cf

Plug-Flow detention time= 121.9 min calculated for 4.154 af (99% of inflow)
 Center-of-Mass det. time= 109.5 min (1,026.9 - 917.4)

Volume	Invert	Avail.Storage	Storage Description
#1	161.00'	759,850 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
161.00	2,075	247.8	0	0	2,075
162.00	14,443	1,163.1	7,331	7,331	104,844
163.00	52,542	1,444.5	31,511	38,842	163,250
164.00	96,433	2,067.5	73,385	112,227	337,373
165.00	140,706	2,820.8	117,875	230,102	630,416
166.00	195,436	3,605.7	167,323	397,425	1,031,830
167.00	249,936	3,675.8	222,128	619,553	1,072,612
167.50	312,413	3,957.0	140,297	759,850	1,243,423

Device	Routing	Invert	Outlet Devices
#1	Primary	161.50'	18.0" Round Culvert L= 51.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 161.50' / 161.00' S= 0.0097 '/ Cc= 0.900

n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=7.14 cfs @ 13.73 hrs HW=163.38' (Free Discharge)

↳ **1=Culvert** (Inlet Controls 7.14 cfs @ 4.04 fps)

Summary for Pond C8P: 375+00

Inflow Area = 255.203 ac, 7.12% Impervious, Inflow Depth > 1.01" for 02-YR event
 Inflow = 74.44 cfs @ 12.69 hrs, Volume= 21.399 af
 Outflow = 42.12 cfs @ 13.41 hrs, Volume= 21.398 af, Atten= 43%, Lag= 43.3 min
 Primary = 42.12 cfs @ 13.41 hrs, Volume= 21.398 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 122.51' @ 13.41 hrs Surf.Area= 2.097 ac Storage= 3.113 af

Plug-Flow detention time= 37.7 min calculated for 21.398 af (100% of inflow)
 Center-of-Mass det. time= 37.7 min (1,056.2 - 1,018.5)

Volume	Invert	Avail.Storage	Storage Description			
#1	119.30'	35.870 af	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)	
119.30	0.002	45.0	0.000	0.000	0.002	
120.00	0.344	600.0	0.087	0.087	0.656	
121.00	1.056	1,314.7	0.668	0.754	3.156	
122.00	1.726	1,928.6	1.377	2.132	6.794	
123.00	2.480	2,755.9	2.092	4.223	13.874	
124.00	3.363	2,842.9	2.910	7.134	14.766	
125.00	4.356	3,500.4	3.849	10.983	22.385	
126.00	5.236	3,807.1	4.789	15.772	26.481	
127.00	6.360	4,208.5	5.789	21.561	32.359	
128.00	7.120	4,476.8	6.736	28.297	36.617	
129.00	8.035	5,000.0	7.573	35.870	45.676	

Device	Routing	Invert	Outlet Devices							
#1	Primary	119.31'	36.0" Round Culvert L= 199.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.31' / 118.28' S= 0.0052 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf							
#2	Secondary	128.50'	200.0' long x 95.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63							

Primary OutFlow Max=42.13 cfs @ 13.41 hrs HW=122.51' (Free Discharge)

↳ **1=Culvert** (Barrel Controls 42.13 cfs @ 6.94 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=119.30' (Free Discharge)

↳ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 1L: Cape Neddick River by HNTB

Inflow Area = 2,130.640 ac, 7.98% Impervious, Inflow Depth > 1.00" for 02-YR event
Inflow = 88.26 cfs @ 12.40 hrs, Volume= 176.796 af
Primary = 88.26 cfs @ 12.40 hrs, Volume= 176.796 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

02-YR Primary Outflow Imported from 14181.HNTB Chases Pond Model~Pond 8P.hce

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
19.203	98	(8.1AS, 8.1BS, 8.1CS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 8AS, 9AS, 9BS, 10S, 11AS, 11BS, 11CS, 91S, 112S, 113S, 1000S, C6S, C7S, C8AS, C8BS, C8CS)
1.111	89	<50% Grass cover, Poor, HSG D (8AS, 9AS, 10S, 11BS, 11CS)
7.569	77	Brush, Fair, HSG D (8.1CS, C8AS)
32.327	73	Brush, Good, HSG D (8.1AS, 8.1BS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.3CS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 8.7CS, 800S, 1000S, C6S, C7S, C8BS, C8CS)
1.407	98	Pavement (800S)
48.653	79	Woods, Fair, HSG D (8.1CS, C8AS)
183.311	77	Woods, Good, HSG D (8.1AS, 8.1BS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.3CS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 8.7CS, 800S, 1000S, C6S, C7S, C8BS, C8CS)
293.581	78	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 8.1AS:	Runoff Area=121,454 sf 22.13% Impervious Runoff Depth=2.90" Flow Length=430' Tc=28.4 min CN=81 Runoff=5.50 cfs 0.673 af
Subcatchment 8.1BS:	Runoff Area=72,193 sf 1.67% Impervious Runoff Depth=2.54" Flow Length=265' Tc=35.1 min CN=77 Runoff=2.58 cfs 0.351 af
Subcatchment 8.1CS:	Runoff Area=1,067,628 sf 2.41% Impervious Runoff Depth=2.72" Flow Length=1,796' Tc=35.9 min CN=79 Runoff=40.59 cfs 5.547 af
Subcatchment 8.2AS:	Runoff Area=56,291 sf 9.56% Impervious Runoff Depth=2.63" Flow Length=150' Slope=0.0200 '/' Tc=29.2 min CN=78 Runoff=2.28 cfs 0.283 af
Subcatchment 8.2BS:	Runoff Area=93,889 sf 0.00% Impervious Runoff Depth=2.54" Flow Length=372' Tc=28.8 min CN=77 Runoff=3.69 cfs 0.456 af
Subcatchment 8.2CS:	Runoff Area=102,001 sf 12.15% Impervious Runoff Depth=2.63" Flow Length=475' Tc=37.1 min CN=78 Runoff=3.68 cfs 0.513 af
Subcatchment 8.3AS:	Runoff Area=93,437 sf 16.21% Impervious Runoff Depth=2.81" Flow Length=420' Tc=26.1 min CN=80 Runoff=4.24 cfs 0.502 af
Subcatchment 8.3BS:	Runoff Area=50,670 sf 7.32% Impervious Runoff Depth=2.63" Flow Length=135' Slope=0.0220 '/' Tc=45.1 min CN=78 Runoff=1.65 cfs 0.255 af
Subcatchment 8.3CS:	Runoff Area=193,772 sf 0.00% Impervious Runoff Depth=2.54" Flow Length=1,039' Tc=83.9 min CN=77 Runoff=4.22 cfs 0.941 af
Subcatchment 8.4AS:	Runoff Area=71,195 sf 20.23% Impervious Runoff Depth=2.81" Flow Length=260' Tc=13.2 min CN=80 Runoff=4.27 cfs 0.382 af
Subcatchment 8.4BS:	Runoff Area=85,972 sf 0.75% Impervious Runoff Depth=2.54" Flow Length=506' Tc=43.8 min CN=77 Runoff=2.76 cfs 0.418 af
Subcatchment 8.4CS:	Runoff Area=120,213 sf 8.29% Impervious Runoff Depth=2.54" Flow Length=365' Tc=40.2 min CN=77 Runoff=4.04 cfs 0.584 af
Subcatchment 8.5AS:	Runoff Area=129,841 sf 5.72% Impervious Runoff Depth=2.54" Flow Length=150' Tc=17.5 min CN=77 Runoff=6.30 cfs 0.631 af
Subcatchment 8.5BS:	Runoff Area=124,671 sf 3.82% Impervious Runoff Depth=2.63" Flow Length=717' Tc=47.8 min CN=78 Runoff=3.94 cfs 0.627 af
Subcatchment 8.5CS:	Runoff Area=115,586 sf 14.02% Impervious Runoff Depth=2.72" Flow Length=285' Tc=35.7 min CN=79 Runoff=4.41 cfs 0.601 af
Subcatchment 8.6AS:	Runoff Area=63,890 sf 15.73% Impervious Runoff Depth=2.81" Flow Length=445' Tc=27.3 min CN=80 Runoff=2.84 cfs 0.343 af

Subcatchment 8.6BS: Non Contributing Area	Runoff Area=307,280 sf 17.19% Impervious Runoff Depth=2.81" Flow Length=450' Tc=41.5 min CN=80 Runoff=11.23 cfs 1.649 af
Subcatchment 8.6CS:	Runoff Area=420,023 sf 1.26% Impervious Runoff Depth=2.54" Flow Length=875' Tc=59.5 min CN=77 Runoff=11.30 cfs 2.041 af
Subcatchment 8.7CS:	Runoff Area=33,655 sf 0.00% Impervious Runoff Depth=2.45" Flow Length=135' Slope=0.1030 '/' Tc=24.3 min CN=76 Runoff=1.38 cfs 0.158 af
Subcatchment 8AS: 354+34_A	Runoff Area=22,267 sf 56.30% Impervious Runoff Depth=4.21" Tc=5.0 min CN=94 Runoff=2.43 cfs 0.179 af
Subcatchment 9AS: 358+92	Runoff Area=46,654 sf 67.98% Impervious Runoff Depth=4.32" Tc=5.0 min CN=95 Runoff=5.17 cfs 0.386 af
Subcatchment 9BS: 358+92	Runoff Area=6,166 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.70 cfs 0.055 af
Subcatchment 10S: 370+40	Runoff Area=29,978 sf 70.94% Impervious Runoff Depth=4.32" Tc=5.0 min CN=95 Runoff=3.32 cfs 0.248 af
Subcatchment 11AS: 375+70 LEFT	Runoff Area=2,361 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.27 cfs 0.021 af
Subcatchment 11BS: 375+51 CENTER	Runoff Area=22,154 sf 66.93% Impervious Runoff Depth=4.32" Tc=5.0 min CN=95 Runoff=2.45 cfs 0.183 af
Subcatchment 11CS: 375+70 CENTER	Runoff Area=22,485 sf 65.79% Impervious Runoff Depth=4.32" Tc=5.0 min CN=95 Runoff=2.49 cfs 0.186 af
Subcatchment 91S: 359+12	Runoff Area=1,008 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.11 cfs 0.009 af
Subcatchment 112S: 375+59 RIGHT	Runoff Area=797 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.09 cfs 0.007 af
Subcatchment 113S: 380+84	Runoff Area=18,128 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=2.07 cfs 0.162 af
Subcatchment 800S: YWD Pond EAST SIDE	Runoff Area=1,262,903 sf 4.85% Impervious Runoff Depth=2.63" Flow Length=1,350' Tc=47.7 min CN=78 Runoff=40.13 cfs 6.347 af
Subcatchment 1000S:	Runoff Area=389,920 sf 6.69% Impervious Runoff Depth=2.63" Flow Length=862' Tc=24.7 min CN=78 Runoff=16.97 cfs 1.960 af
Subcatchment C6S: 357+50	Runoff Area=30.640 ac 5.81% Impervious Runoff Depth=2.63" Flow Length=1,098' Tc=21.4 min CN=78 Runoff=61.88 cfs 6.708 af
Subcatchment C7S: 365+50	Runoff Area=5.750 ac 5.91% Impervious Runoff Depth=2.63" Flow Length=489' Tc=6.0 min CN=78 Runoff=17.72 cfs 1.259 af

Subcatchment C8AS:	Runoff Area=1,495,142 sf 5.89% Impervious Runoff Depth=2.81" Flow Length=1,646' Tc=50.3 min CN=80 Runoff=49.37 cfs 8.025 af
Subcatchment C8BS:	Runoff Area=1,362,511 sf 7.06% Impervious Runoff Depth=2.63" Flow Length=1,604' Tc=48.3 min CN=78 Runoff=42.84 cfs 6.848 af
Subcatchment C8CS: 375+00	Runoff Area=3,197,116 sf 6.20% Impervious Runoff Depth=2.63" Flow Length=2,622' Tc=43.1 min CN=78 Runoff=107.27 cfs 16.068 af
Reach 1R: road ditch, sta354+34	Avg. Flow Depth=0.13' Max Vel=3.36 fps Inflow=2.43 cfs 0.179 af n=0.035 L=70.0' S=0.1071 '/' Capacity=96.67 cfs Outflow=2.42 cfs 0.179 af
Reach 8.1BR1:	Avg. Flow Depth=0.23' Max Vel=0.95 fps Inflow=1.67 cfs 0.233 af n=0.120 L=286.0' S=0.0500 '/' Capacity=100.71 cfs Outflow=1.58 cfs 0.233 af
Reach 8.1BR2:	Avg. Flow Depth=0.41' Max Vel=0.51 fps Inflow=4.06 cfs 0.823 af n=0.100 L=445.0' S=0.0045 '/' Capacity=36.13 cfs Outflow=3.57 cfs 0.823 af
Reach 8.1BR3:	Avg. Flow Depth=0.49' Max Vel=2.44 fps Inflow=4.19 cfs 1.078 af n=0.050 L=374.0' S=0.0289 '/' Capacity=85.66 cfs Outflow=4.17 cfs 1.078 af
Reach 8.1BR4:	Avg. Flow Depth=0.45' Max Vel=2.15 fps Inflow=5.10 cfs 1.490 af n=0.050 L=171.0' S=0.0213 '/' Capacity=53.25 cfs Outflow=5.10 cfs 1.490 af
Reach 8.2AR1:	Avg. Flow Depth=0.18' Max Vel=0.39 fps Inflow=0.20 cfs 0.082 af n=0.080 L=330.0' S=0.0061 '/' Capacity=82.07 cfs Outflow=0.20 cfs 0.082 af
Reach 8.2BR1:	Avg. Flow Depth=0.35' Max Vel=1.31 fps Inflow=2.52 cfs 0.590 af n=0.120 L=166.0' S=0.0620 '/' Capacity=18.57 cfs Outflow=2.51 cfs 0.590 af
Reach 8.3AR1:	Avg. Flow Depth=0.54' Max Vel=1.32 fps Inflow=4.24 cfs 0.402 af n=0.120 L=230.0' S=0.0391 '/' Capacity=60.12 cfs Outflow=4.16 cfs 0.402 af
Reach 8.3CR1:	Avg. Flow Depth=0.18' Max Vel=0.83 fps Inflow=3.40 cfs 0.644 af n=0.120 L=384.0' S=0.0495 '/' Capacity=68.10 cfs Outflow=3.20 cfs 0.644 af
Reach 8.4CR1:	Avg. Flow Depth=0.19' Max Vel=0.50 fps Inflow=0.74 cfs 0.247 af n=0.120 L=1,440.0' S=0.0178 '/' Capacity=48.74 cfs Outflow=0.54 cfs 0.247 af
Reach 8.6CR1:	Avg. Flow Depth=0.47' Max Vel=2.23 fps Inflow=7.15 cfs 1.616 af n=0.080 L=482.0' S=0.0560 '/' Capacity=30.58 cfs Outflow=7.12 cfs 1.616 af
Reach 8.6CR2:	Avg. Flow Depth=0.00' Max Vel=0.00 fps n=0.120 L=865.0' S=0.0079 '/' Capacity=34.51 cfs Outflow=0.00 cfs 0.000 af
Reach C6R1:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.040 L=338.0' S=0.0414 '/' Capacity=189.62 cfs Outflow=0.00 cfs 0.000 af
Reach C7R1:	Avg. Flow Depth=0.25' Max Vel=2.92 fps Inflow=5.01 cfs 0.357 af n=0.030 L=190.0' S=0.0316 '/' Capacity=1,060.34 cfs Outflow=5.01 cfs 0.357 af

Reach C8AR1:	Avg. Flow Depth=0.17' Max Vel=1.33 fps Inflow=7.79 cfs 8.856 af n=0.100 L=107.5' S=0.0794 '/' Capacity=9,842.09 cfs Outflow=7.79 cfs 8.856 af
Reach C8AR2:	Avg. Flow Depth=0.57' Max Vel=1.12 fps Inflow=7.79 cfs 8.856 af n=0.080 L=810.0' S=0.0099 '/' Capacity=566.71 cfs Outflow=7.78 cfs 8.856 af
Reach C8AR3:	Avg. Flow Depth=0.67' Max Vel=2.91 fps Inflow=7.78 cfs 8.856 af n=0.080 L=22.0' S=0.0909 '/' Capacity=1,210.27 cfs Outflow=7.78 cfs 8.856 af
Reach C8AR6:	Avg. Flow Depth=0.77' Max Vel=2.01 fps Inflow=11.96 cfs 10.358 af n=0.080 L=822.0' S=0.0254 '/' Capacity=382.10 cfs Outflow=11.95 cfs 10.358 af
Reach C8AR7:	Avg. Flow Depth=1.10' Max Vel=1.00 fps Inflow=40.59 cfs 27.488 af n=0.080 L=831.0' S=0.0042 '/' Capacity=1,134.27 cfs Outflow=39.85 cfs 27.485 af
Reach C8BR1:	Avg. Flow Depth=0.20' Max Vel=3.14 fps Inflow=9.98 cfs 8.727 af n=0.030 L=160.0' S=0.0375 '/' Capacity=1,356.35 cfs Outflow=9.98 cfs 8.727 af
Reach C8BR2:	Avg. Flow Depth=0.17' Max Vel=5.32 fps Inflow=9.98 cfs 8.727 af n=0.030 L=31.0' S=0.1210 '/' Capacity=26,509.48 cfs Outflow=9.98 cfs 8.727 af
Reach C8BR3:	Avg. Flow Depth=0.07' Max Vel=1.46 fps Inflow=9.98 cfs 8.727 af n=0.030 L=788.0' S=0.0189 '/' Capacity=41,604.45 cfs Outflow=9.98 cfs 8.727 af
Reach SP1000: POA STA380+00	Inflow=227.51 cfs 379.614 af Outflow=227.51 cfs 379.614 af
Pond 8.1AP:	Peak Elev=208.82' Storage=29,322 cf Inflow=5.50 cfs 0.673 af Outflow=0.00 cfs 0.000 af
Pond 8.1BP:	Peak Elev=203.16' Storage=5,972 cf Inflow=2.58 cfs 0.351 af Outflow=1.67 cfs 0.233 af
Pond 8.1CP:	Peak Elev=158.20' Storage=203,186 cf Inflow=42.95 cfs 14.403 af Outflow=11.96 cfs 10.358 af
Pond 8.2AP: Potentially Non-Contributing	Peak Elev=215.52' Storage=8,977 cf Inflow=2.28 cfs 0.283 af Outflow=0.20 cfs 0.082 af
Pond 8.2BP:	Peak Elev=199.83' Storage=6,487 cf Inflow=3.69 cfs 0.664 af Outflow=2.52 cfs 0.590 af
Pond 8.2CP:	Peak Elev=182.44' Storage=15,857 cf Inflow=3.68 cfs 0.513 af Outflow=0.38 cfs 0.165 af
Pond 8.3AP:	Peak Elev=200.59' Storage=4,656 cf Inflow=4.24 cfs 0.502 af Outflow=4.24 cfs 0.402 af
Pond 8.3BP:	Peak Elev=201.62' Storage=116 cf Inflow=1.65 cfs 0.255 af Outflow=1.65 cfs 0.255 af

Pond 8.3CP:	Peak Elev=155.09' Storage=14,687 cf Inflow=4.22 cfs 0.941 af Outflow=3.40 cfs 0.644 af
Pond 8.4AP:	Peak Elev=208.70' Storage=20,224 cf Inflow=4.27 cfs 0.464 af Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
Pond 8.4BP:	Peak Elev=182.44' Storage=443 cf Inflow=2.76 cfs 0.418 af Outflow=2.76 cfs 0.412 af
Pond 8.4CP:	Peak Elev=161.52' Storage=15,371 cf Inflow=4.04 cfs 0.584 af Primary=0.20 cfs 0.067 af Secondary=0.54 cfs 0.180 af Outflow=0.74 cfs 0.247 af
Pond 8.5AP:	Peak Elev=205.84' Storage=14,710 cf Inflow=6.30 cfs 0.631 af Primary=0.81 cfs 0.208 af Secondary=0.43 cfs 0.110 af Outflow=1.24 cfs 0.317 af
Pond 8.5BP: (new Pond)	Peak Elev=168.22' Storage=15,624 cf Inflow=3.94 cfs 0.627 af Primary=0.67 cfs 0.445 af Secondary=0.00 cfs 0.000 af Outflow=0.67 cfs 0.445 af
Pond 8.5CP:	Peak Elev=160.07' Storage=26,158 cf Inflow=4.41 cfs 0.601 af Outflow=0.00 cfs 0.000 af
Pond 8.6AP:	Peak Elev=198.59' Storage=1,273 cf Inflow=2.84 cfs 0.343 af Outflow=2.84 cfs 0.320 af
Pond 8.6BP:	Peak Elev=157.58' Storage=71,843 cf Inflow=11.23 cfs 1.649 af Outflow=0.00 cfs 0.000 af
Pond 8.6CP1:	Peak Elev=160.87' Storage=23,881 cf Inflow=11.30 cfs 2.041 af Outflow=9.66 cfs 1.680 af
Pond 8.6CP2:	Peak Elev=158.65' Storage=14,683 cf Inflow=9.66 cfs 1.680 af Outflow=6.97 cfs 1.553 af
Pond 8.7CP:	Peak Elev=157.61' Storage=4,201 cf Inflow=1.38 cfs 0.158 af Outflow=0.19 cfs 0.063 af
Pond 800P: Pond on YWD	Peak Elev=119.88' Storage=29,916 cf Inflow=98.84 cfs 55.369 af Outflow=97.83 cfs 55.368 af
Pond C6P: 357+50	Peak Elev=140.33' Storage=66,753 cf Inflow=73.02 cfs 8.586 af Primary=35.26 cfs 8.229 af Secondary=5.01 cfs 0.357 af Tertiary=0.00 cfs 0.000 af Outflow=40.27 cfs 8.586 af
Pond C8AP:	Peak Elev=182.94' Storage=201,463 cf Inflow=54.52 cfs 8.856 af 24.0" Round Culvert n=0.025 L=51.5' S=0.0291 '/' Outflow=7.79 cfs 8.856 af
Pond C8BP:	Peak Elev=164.46' Storage=160,648 cf Inflow=47.18 cfs 8.783 af 18.0" Round Culvert n=0.013 L=51.5' S=0.0097 '/' Outflow=9.98 cfs 8.727 af
Pond C8P: 375+00	Peak Elev=124.32' Storage=8.268 af Inflow=143.42 cfs 47.055 af Primary=59.87 cfs 47.055 af Secondary=0.00 cfs 0.000 af Outflow=59.87 cfs 47.055 af

14181_8.8PRE_STA350-STA380_10-14-16

Type III 24-hr 10-YR Rainfall=4.90"

Prepared by Sebago Technics

Printed 10/14/2016

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Link 1L: Cape 10-YR Primary Outflow Imported from 14181.HNTB Chases Pond Model~Pond 8P.hce Inflow=174.80 cfs 324.084 af
Area= 2,130.640 ac 7.98% Imperv. Primary=174.80 cfs 324.084 af

Total Runoff Area = 293.581 ac Runoff Volume = 65.602 af Average Runoff Depth = 2.68"
92.98% Pervious = 272.972 ac 7.02% Impervious = 20.610 ac

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 8.1AS:	Runoff Area=121,454 sf 22.13% Impervious Runoff Depth=4.07" Flow Length=430' Tc=28.4 min CN=81 Runoff=7.68 cfs 0.945 af
Subcatchment 8.1BS:	Runoff Area=72,193 sf 1.67% Impervious Runoff Depth=3.65" Flow Length=265' Tc=35.1 min CN=77 Runoff=3.73 cfs 0.505 af
Subcatchment 8.1CS:	Runoff Area=1,067,628 sf 2.41% Impervious Runoff Depth=3.86" Flow Length=1,796' Tc=35.9 min CN=79 Runoff=57.63 cfs 7.881 af
Subcatchment 8.2AS:	Runoff Area=56,291 sf 9.56% Impervious Runoff Depth=3.76" Flow Length=150' Slope=0.0200 '/' Tc=29.2 min CN=78 Runoff=3.25 cfs 0.404 af
Subcatchment 8.2BS:	Runoff Area=93,889 sf 0.00% Impervious Runoff Depth=3.65" Flow Length=372' Tc=28.8 min CN=77 Runoff=5.32 cfs 0.656 af
Subcatchment 8.2CS:	Runoff Area=102,001 sf 12.15% Impervious Runoff Depth=3.76" Flow Length=475' Tc=37.1 min CN=78 Runoff=5.27 cfs 0.733 af
Subcatchment 8.3AS:	Runoff Area=93,437 sf 16.21% Impervious Runoff Depth=3.96" Flow Length=420' Tc=26.1 min CN=80 Runoff=5.97 cfs 0.708 af
Subcatchment 8.3BS:	Runoff Area=50,670 sf 7.32% Impervious Runoff Depth=3.76" Flow Length=135' Slope=0.0220 '/' Tc=45.1 min CN=78 Runoff=2.37 cfs 0.364 af
Subcatchment 8.3CS:	Runoff Area=193,772 sf 0.00% Impervious Runoff Depth=3.65" Flow Length=1,039' Tc=83.9 min CN=77 Runoff=6.11 cfs 1.355 af
Subcatchment 8.4AS:	Runoff Area=71,195 sf 20.23% Impervious Runoff Depth=3.96" Flow Length=260' Tc=13.2 min CN=80 Runoff=6.01 cfs 0.540 af
Subcatchment 8.4BS:	Runoff Area=85,972 sf 0.75% Impervious Runoff Depth=3.65" Flow Length=506' Tc=43.8 min CN=77 Runoff=3.98 cfs 0.601 af
Subcatchment 8.4CS:	Runoff Area=120,213 sf 8.29% Impervious Runoff Depth=3.65" Flow Length=365' Tc=40.2 min CN=77 Runoff=5.82 cfs 0.840 af
Subcatchment 8.5AS:	Runoff Area=129,841 sf 5.72% Impervious Runoff Depth=3.65" Flow Length=150' Tc=17.5 min CN=77 Runoff=9.10 cfs 0.908 af
Subcatchment 8.5BS:	Runoff Area=124,671 sf 3.82% Impervious Runoff Depth=3.76" Flow Length=717' Tc=47.8 min CN=78 Runoff=5.64 cfs 0.896 af
Subcatchment 8.5CS:	Runoff Area=115,586 sf 14.02% Impervious Runoff Depth=3.86" Flow Length=285' Tc=35.7 min CN=79 Runoff=6.26 cfs 0.853 af
Subcatchment 8.6AS:	Runoff Area=63,890 sf 15.73% Impervious Runoff Depth=3.96" Flow Length=445' Tc=27.3 min CN=80 Runoff=4.00 cfs 0.484 af

Subcatchment 8.6BS: Non Contributing Area	Runoff Area=307,280 sf 17.19% Impervious Runoff Depth=3.96" Flow Length=450' Tc=41.5 min CN=80 Runoff=15.80 cfs 2.329 af
Subcatchment 8.6CS:	Runoff Area=420,023 sf 1.26% Impervious Runoff Depth=3.65" Flow Length=875' Tc=59.5 min CN=77 Runoff=16.31 cfs 2.936 af
Subcatchment 8.7CS:	Runoff Area=33,655 sf 0.00% Impervious Runoff Depth=3.55" Flow Length=135' Slope=0.1030 '/' Tc=24.3 min CN=76 Runoff=2.00 cfs 0.229 af
Subcatchment 8AS: 354+34_A	Runoff Area=22,267 sf 56.30% Impervious Runoff Depth=5.49" Tc=5.0 min CN=94 Runoff=3.13 cfs 0.234 af
Subcatchment 9AS: 358+92	Runoff Area=46,654 sf 67.98% Impervious Runoff Depth=5.61" Tc=5.0 min CN=95 Runoff=6.62 cfs 0.501 af
Subcatchment 9BS: 358+92	Runoff Area=6,166 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.89 cfs 0.070 af
Subcatchment 10S: 370+40	Runoff Area=29,978 sf 70.94% Impervious Runoff Depth=5.61" Tc=5.0 min CN=95 Runoff=4.25 cfs 0.322 af
Subcatchment 11AS: 375+70 LEFT	Runoff Area=2,361 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.34 cfs 0.027 af
Subcatchment 11BS: 375+51 CENTER	Runoff Area=22,154 sf 66.93% Impervious Runoff Depth=5.61" Tc=5.0 min CN=95 Runoff=3.14 cfs 0.238 af
Subcatchment 11CS: 375+70 CENTER	Runoff Area=22,485 sf 65.79% Impervious Runoff Depth=5.61" Tc=5.0 min CN=95 Runoff=3.19 cfs 0.241 af
Subcatchment 91S: 359+12	Runoff Area=1,008 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.15 cfs 0.011 af
Subcatchment 112S: 375+59 RIGHT	Runoff Area=797 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.12 cfs 0.009 af
Subcatchment 113S: 380+84	Runoff Area=18,128 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=2.62 cfs 0.207 af
Subcatchment 800S: YWD Pond EAST SIDE	Runoff Area=1,262,903 sf 4.85% Impervious Runoff Depth=3.76" Flow Length=1,350' Tc=47.7 min CN=78 Runoff=57.37 cfs 9.075 af
Subcatchment 1000S:	Runoff Area=389,920 sf 6.69% Impervious Runoff Depth=3.76" Flow Length=862' Tc=24.7 min CN=78 Runoff=24.29 cfs 2.802 af
Subcatchment C6S: 357+50	Runoff Area=30.640 ac 5.81% Impervious Runoff Depth=3.76" Flow Length=1,098' Tc=21.4 min CN=78 Runoff=88.52 cfs 9.591 af
Subcatchment C7S: 365+50	Runoff Area=5.750 ac 5.91% Impervious Runoff Depth=3.76" Flow Length=489' Tc=6.0 min CN=78 Runoff=25.28 cfs 1.800 af

Subcatchment C8AS:	Runoff Area=1,495,142 sf 5.89% Impervious Runoff Depth=3.96" Flow Length=1,646' Tc=50.3 min CN=80 Runoff=69.55 cfs 11.333 af
Subcatchment C8BS:	Runoff Area=1,362,511 sf 7.06% Impervious Runoff Depth=3.76" Flow Length=1,604' Tc=48.3 min CN=78 Runoff=61.30 cfs 9.791 af
Subcatchment C8CS: 375+00	Runoff Area=3,197,116 sf 6.20% Impervious Runoff Depth=3.76" Flow Length=2,622' Tc=43.1 min CN=78 Runoff=153.44 cfs 22.974 af
Reach 1R: road ditch, sta354+34	Avg. Flow Depth=0.15' Max Vel=3.67 fps Inflow=3.13 cfs 0.234 af n=0.035 L=70.0' S=0.1071 '/' Capacity=96.67 cfs Outflow=3.12 cfs 0.234 af
Reach 8.1BR1:	Avg. Flow Depth=0.35' Max Vel=1.19 fps Inflow=3.32 cfs 0.387 af n=0.120 L=286.0' S=0.0500 '/' Capacity=100.71 cfs Outflow=3.24 cfs 0.387 af
Reach 8.1BR2:	Avg. Flow Depth=0.67' Max Vel=0.68 fps Inflow=9.26 cfs 1.359 af n=0.100 L=445.0' S=0.0045 '/' Capacity=36.13 cfs Outflow=8.33 cfs 1.359 af
Reach 8.1BR3:	Avg. Flow Depth=0.75' Max Vel=3.06 fps Inflow=9.71 cfs 1.723 af n=0.050 L=374.0' S=0.0289 '/' Capacity=85.66 cfs Outflow=9.68 cfs 1.723 af
Reach 8.1BR4:	Avg. Flow Depth=0.70' Max Vel=2.76 fps Inflow=11.82 cfs 2.318 af n=0.050 L=171.0' S=0.0213 '/' Capacity=53.25 cfs Outflow=11.81 cfs 2.318 af
Reach 8.2AR1:	Avg. Flow Depth=0.41' Max Vel=0.61 fps Inflow=1.01 cfs 0.204 af n=0.080 L=330.0' S=0.0061 '/' Capacity=82.07 cfs Outflow=0.90 cfs 0.204 af
Reach 8.2BR1:	Avg. Flow Depth=0.57' Max Vel=1.70 fps Inflow=6.04 cfs 0.972 af n=0.120 L=166.0' S=0.0620 '/' Capacity=18.57 cfs Outflow=6.03 cfs 0.972 af
Reach 8.3AR1:	Avg. Flow Depth=0.65' Max Vel=1.46 fps Inflow=5.96 cfs 0.608 af n=0.120 L=230.0' S=0.0391 '/' Capacity=60.12 cfs Outflow=5.91 cfs 0.608 af
Reach 8.3CR1:	Avg. Flow Depth=0.25' Max Vel=1.02 fps Inflow=5.87 cfs 1.057 af n=0.120 L=384.0' S=0.0495 '/' Capacity=68.10 cfs Outflow=5.74 cfs 1.057 af
Reach 8.4CR1:	Avg. Flow Depth=0.38' Max Vel=0.75 fps Inflow=3.23 cfs 0.504 af n=0.120 L=1,440.0' S=0.0178 '/' Capacity=48.74 cfs Outflow=1.87 cfs 0.504 af
Reach 8.6CR1:	Avg. Flow Depth=0.64' Max Vel=2.65 fps Inflow=12.79 cfs 2.583 af n=0.080 L=482.0' S=0.0560 '/' Capacity=30.58 cfs Outflow=12.75 cfs 2.583 af
Reach 8.6CR2:	Avg. Flow Depth=0.00' Max Vel=0.00 fps n=0.120 L=865.0' S=0.0079 '/' Capacity=34.51 cfs Outflow=0.00 cfs 0.000 af
Reach C6R1:	Avg. Flow Depth=0.18' Max Vel=1.98 fps Inflow=1.02 cfs 0.040 af n=0.040 L=338.0' S=0.0414 '/' Capacity=189.62 cfs Outflow=1.01 cfs 0.040 af
Reach C7R1:	Avg. Flow Depth=0.31' Max Vel=3.36 fps Inflow=7.95 cfs 0.817 af n=0.030 L=190.0' S=0.0316 '/' Capacity=1,060.34 cfs Outflow=7.95 cfs 0.817 af

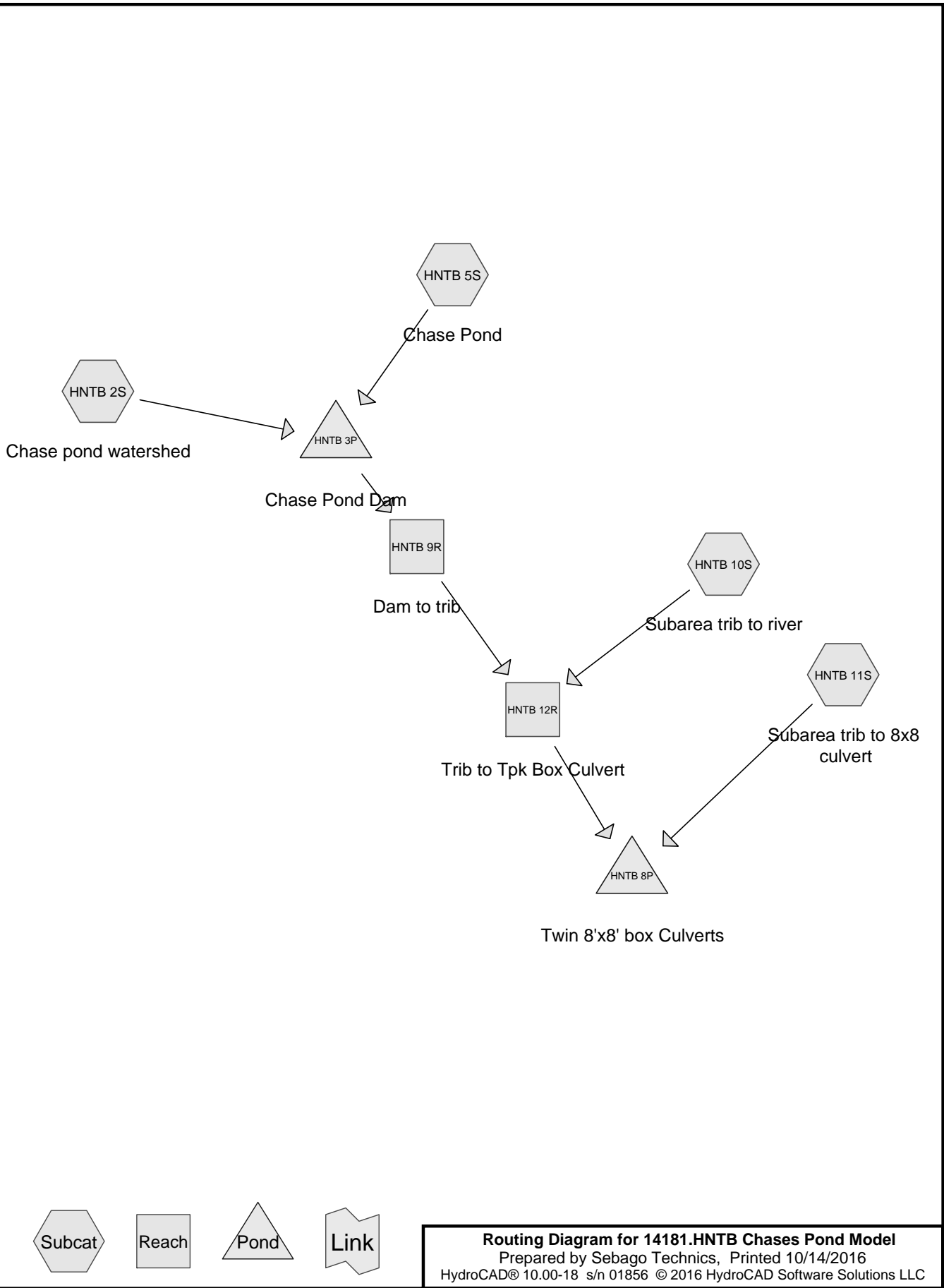
Reach C8AR1:	Avg. Flow Depth=0.21' Max Vel=1.47 fps Inflow=10.46 cfs 12.608 af n=0.100 L=107.5' S=0.0794 '/' Capacity=9,842.09 cfs Outflow=10.46 cfs 12.608 af
Reach C8AR2:	Avg. Flow Depth=0.67' Max Vel=1.23 fps Inflow=10.46 cfs 12.608 af n=0.080 L=810.0' S=0.0099 '/' Capacity=566.71 cfs Outflow=10.45 cfs 12.608 af
Reach C8AR3:	Avg. Flow Depth=0.76' Max Vel=3.13 fps Inflow=10.45 cfs 12.608 af n=0.080 L=22.0' S=0.0909 '/' Capacity=1,210.27 cfs Outflow=10.45 cfs 12.608 af
Reach C8AR6:	Avg. Flow Depth=1.05' Max Vel=2.37 fps Inflow=21.65 cfs 16.443 af n=0.080 L=822.0' S=0.0254 '/' Capacity=382.10 cfs Outflow=21.54 cfs 16.442 af
Reach C8AR7:	Avg. Flow Depth=1.39' Max Vel=1.14 fps Inflow=66.54 cfs 40.944 af n=0.080 L=831.0' S=0.0042 '/' Capacity=1,134.27 cfs Outflow=65.13 cfs 40.938 af
Reach C8BR1:	Avg. Flow Depth=0.22' Max Vel=3.32 fps Inflow=11.63 cfs 12.767 af n=0.030 L=160.0' S=0.0375 '/' Capacity=1,356.35 cfs Outflow=11.63 cfs 12.767 af
Reach C8BR2:	Avg. Flow Depth=0.19' Max Vel=5.55 fps Inflow=11.63 cfs 12.767 af n=0.030 L=31.0' S=0.1210 '/' Capacity=26,509.48 cfs Outflow=11.63 cfs 12.767 af
Reach C8BR3:	Avg. Flow Depth=0.08' Max Vel=1.46 fps Inflow=11.63 cfs 12.767 af n=0.030 L=788.0' S=0.0189 '/' Capacity=41,604.45 cfs Outflow=11.63 cfs 12.766 af
Reach SP1000: POA STA380+00	Inflow=440.51 cfs 601.983 af Outflow=440.51 cfs 601.983 af
Pond 8.1AP:	Peak Elev=209.62' Storage=41,157 cf Inflow=7.68 cfs 0.945 af Outflow=0.00 cfs 0.000 af
Pond 8.1BP:	Peak Elev=203.25' Storage=6,500 cf Inflow=3.73 cfs 0.505 af Outflow=3.32 cfs 0.387 af
Pond 8.1CP:	Peak Elev=158.30' Storage=216,381 cf Inflow=60.63 cfs 20.489 af Outflow=21.65 cfs 16.443 af
Pond 8.2AP: Potentially Non-Contributing	Peak Elev=215.55' Storage=9,479 cf Inflow=3.25 cfs 0.404 af Outflow=1.01 cfs 0.204 af
Pond 8.2BP:	Peak Elev=200.08' Storage=9,953 cf Inflow=8.35 cfs 1.045 af Outflow=6.04 cfs 0.972 af
Pond 8.2CP:	Peak Elev=182.50' Storage=17,137 cf Inflow=5.27 cfs 0.733 af Outflow=1.65 cfs 0.385 af
Pond 8.3AP:	Peak Elev=200.61' Storage=4,736 cf Inflow=5.97 cfs 0.708 af Outflow=5.96 cfs 0.608 af
Pond 8.3BP:	Peak Elev=201.63' Storage=152 cf Inflow=2.37 cfs 0.364 af Outflow=2.36 cfs 0.364 af

Pond 8.3CP:	Peak Elev=155.12' Storage=15,455 cf Inflow=6.11 cfs 1.355 af Outflow=5.87 cfs 1.057 af
Pond 8.4AP:	Peak Elev=209.62' Storage=32,380 cf Inflow=6.01 cfs 0.743 af Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
Pond 8.4BP:	Peak Elev=182.48' Storage=513 cf Inflow=3.98 cfs 0.601 af Outflow=3.97 cfs 0.596 af
Pond 8.4CP:	Peak Elev=161.55' Storage=16,552 cf Inflow=5.82 cfs 0.840 af Primary=0.88 cfs 0.137 af Secondary=2.35 cfs 0.366 af Outflow=3.23 cfs 0.504 af
Pond 8.5AP:	Peak Elev=205.90' Storage=16,425 cf Inflow=9.10 cfs 0.908 af Primary=3.35 cfs 0.389 af Secondary=1.76 cfs 0.205 af Outflow=5.11 cfs 0.594 af
Pond 8.5BP: (new Pond)	Peak Elev=168.46' Storage=20,678 cf Inflow=5.64 cfs 0.896 af Primary=1.33 cfs 0.714 af Secondary=0.00 cfs 0.000 af Outflow=1.33 cfs 0.714 af
Pond 8.5CP:	Peak Elev=160.46' Storage=37,167 cf Inflow=6.26 cfs 0.853 af Outflow=0.00 cfs 0.000 af
Pond 8.6AP:	Peak Elev=198.61' Storage=1,343 cf Inflow=4.00 cfs 0.484 af Outflow=4.00 cfs 0.461 af
Pond 8.6BP:	Peak Elev=158.18' Storage=101,450 cf Inflow=15.80 cfs 2.329 af Outflow=0.00 cfs 0.000 af
Pond 8.6CP1:	Peak Elev=160.93' Storage=27,012 cf Inflow=16.31 cfs 2.936 af Outflow=15.20 cfs 2.576 af
Pond 8.6CP2:	Peak Elev=158.96' Storage=19,821 cf Inflow=15.20 cfs 2.576 af Outflow=12.41 cfs 2.449 af
Pond 8.7CP:	Peak Elev=157.65' Storage=4,447 cf Inflow=2.00 cfs 0.229 af Outflow=1.13 cfs 0.134 af
Pond 800P: Pond on YWD	Peak Elev=120.07' Storage=36,136 cf Inflow=127.89 cfs 81.626 af Outflow=126.91 cfs 81.626 af
Pond C6P: 357+50	Peak Elev=140.84' Storage=114,705 cf Inflow=103.73 cfs 12.196 af Primary=39.21 cfs 11.338 af Secondary=7.95 cfs 0.817 af Tertiary=1.02 cfs 0.040 af Outflow=48.19 cfs 12.196 af
Pond C8AP:	Peak Elev=183.26' Storage=299,608 cf Inflow=78.05 cfs 12.608 af 24.0" Round Culvert n=0.025 L=51.5' S=0.0291 '/ Outflow=10.46 cfs 12.608 af
Pond C8BP:	Peak Elev=165.25' Storage=266,377 cf Inflow=68.40 cfs 12.823 af 18.0" Round Culvert n=0.013 L=51.5' S=0.0097 '/ Outflow=11.63 cfs 12.767 af
Pond C8P: 375+00	Peak Elev=126.00' Storage=15.769 af Inflow=200.12 cfs 69.701 af Primary=74.57 cfs 69.700 af Secondary=0.00 cfs 0.000 af Outflow=74.57 cfs 69.700 af

Link 1L: Cape 25-YR Primary Outflow Imported from 14181.HNTB Chases Pond Model~Pond 8P.hce Inflow=360.51 cfs 520.151 af
Area= 2,130.640 ac 7.98% Imperv. Primary=360.51 cfs 520.151 af

Total Runoff Area = 293.581 ac Runoff Volume = 93.393 af Average Runoff Depth = 3.82"
92.98% Pervious = 272.972 ac 7.02% Impervious = 20.610 ac

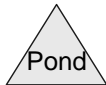
Link Report (HNTB) Chases Pond Model



Subcat



Reach



Pond



Link

Routing Diagram for 14181.HNTB Chases Pond Model
 Prepared by Sebago Technics, Printed 10/14/2016
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14181.HNTB Chases Pond Model

Prepared by Sebago Technics

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
31.180	77	2 acre lots, 12% imp, HSG C (HNTB 10S)
170.000	98	Pond (HNTB 5S)
12.460	76	Woods/grass comb., Fair, HSG C (HNTB 11S)
1,917.000	84	Woods/grass comb., Fair, HSG D (HNTB 2S)
2,130.640	85	TOTAL AREA

14181.HNTB Chases Pond Model

Type III 24-hr 02-YR Rainfall=3.30"

Prepared by Sebago Technics

Printed 10/14/2016

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Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment HNTB 10S: Subarea trib to river Runoff Area=31.180 ac 12.00% Impervious Runoff Depth=1.28"
Flow Length=2,350' Tc=23.3 min CN=77 Runoff=28.76 cfs 3.336 af

Subcatchment HNTB 11S: Subarea trib to 8x8 culvert Runoff Area=12.460 ac 0.00% Impervious Runoff Depth=1.22"
Flow Length=725' Tc=18.6 min CN=76 Runoff=11.93 cfs 1.269 af

Subcatchment HNTB 2S: Chase pond watershed Runoff Area=1,917.000 ac 0.00% Impervious Runoff Depth=1.77"
Tc=25.0 min CN=84 Runoff=2,427.21 cfs 282.184 af

Subcatchment HNTB 5S: Chase Pond Runoff Area=170.000 ac 100.00% Impervious Runoff Depth=3.07"
Tc=21.2 min CN=98 Runoff=361.61 cfs 43.451 af

Reach HNTB 12R: Trib to Tpk Box Culvert Avg. Flow Depth=2.80' Max Vel=5.01 fps Inflow=79.18 cfs 182.069 af
n=0.035 L=950.0' S=0.0103 '/' Capacity=599.53 cfs Outflow=78.69 cfs 181.594 af

Reach HNTB 9R: Dam to trib Avg. Flow Depth=0.92' Max Vel=5.89 fps Inflow=53.37 cfs 178.949 af
n=0.035 L=530.0' S=0.0283 '/' Capacity=1,955.10 cfs Outflow=53.37 cfs 178.734 af

Pond HNTB 3P: Chase Pond Dam Peak Elev=157.46' Storage=258.115 af Inflow=2,769.27 cfs 325.635 af
Outflow=53.37 cfs 178.949 af

Pond HNTB 8P: Twin 8'x8' box Culverts Inflow=88.29 cfs 182.863 af
Primary=88.29 cfs 182.863 af

**Total Runoff Area = 2,130.640 ac Runoff Volume = 330.240 af Average Runoff Depth = 1.86"
91.85% Pervious = 1,956.898 ac 8.15% Impervious = 173.742 ac**

14181.HNTB Chases Pond Model

Type III 24-hr 02-YR Rainfall=3.30"

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Summary for Subcatchment HNTB 10S: Subarea trib to river

Runoff = 28.76 cfs @ 12.34 hrs, Volume= 3.336 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
31.180	77	2 acre lots, 12% imp, HSG C
27.438		88.00% Pervious Area
3.742		12.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	100	0.0162	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
11.1	2,000	0.0400	3.00		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
1.2	250	0.0400	3.50	10.51	Channel Flow, Area= 3.0 sf Perim= 4.0' r= 0.75' n= 0.070 Sluggish weedy reaches w/pools
23.3	2,350	Total			

Summary for Subcatchment HNTB 11S: Subarea trib to 8x8 culvert

Runoff = 11.93 cfs @ 12.27 hrs, Volume= 1.269 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
12.460	76	Woods/grass comb., Fair, HSG C
12.460		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	100	0.0150	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
7.2	625	0.0848	1.46		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
18.6	725	Total			

Summary for Subcatchment HNTB 2S: Chase pond watershed

Runoff = 2,427.21 cfs @ 12.35 hrs, Volume= 282.184 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type III 24-hr 02-YR Rainfall=3.30"

14181.HNTB Chases Pond Model

Type III 24-hr 02-YR Rainfall=3.30"

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Area (ac)	CN	Description
* 1,917.000	84	Woods/grass comb., Fair, HSG D
1,917.000		100.00% Pervious Area

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

Summary for Subcatchment HNTB 5S: Chase Pond

Runoff = 361.61 cfs @ 12.28 hrs, Volume= 43.451 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 170.000	98	Pond
170.000		100.00% Impervious Area

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

Summary for Reach HNTB 12R: Trib to Tpk Box Culvert

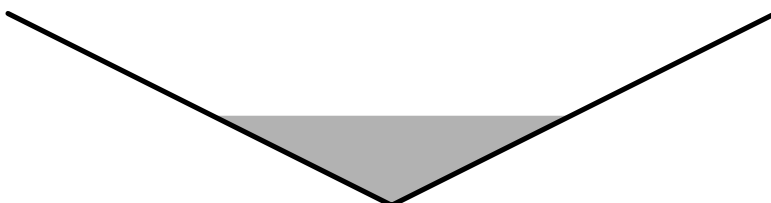
[62] Hint: Exceeded Reach HNTB 9R OUTLET depth by 1.91' @ 12.40 hrs

Inflow Area = 2,118.180 ac, 8.20% Impervious, Inflow Depth > 1.03" for 02-YR event
 Inflow = 79.18 cfs @ 12.35 hrs, Volume= 182.069 af
 Outflow = 78.69 cfs @ 12.45 hrs, Volume= 181.594 af, Atten= 1%, Lag= 5.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.01 fps, Min. Travel Time= 3.2 min
 Avg. Velocity = 4.19 fps, Avg. Travel Time= 3.8 min

Peak Storage= 14,919 cf @ 12.40 hrs
 Average Depth at Peak Storage= 2.80'
 Bank-Full Depth= 6.00' Flow Area= 72.0 sf, Capacity= 599.53 cfs

0.00' x 6.00' deep channel, n= 0.035
 Side Slope Z-value= 2.0 '/' Top Width= 24.00'
 Length= 950.0' Slope= 0.0103 '/'
 Inlet Invert= 130.00', Outlet Invert= 120.20'



14181.HNTB Chases Pond Model

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Type III 24-hr 02-YR Rainfall=3.30"

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Summary for Reach HNTB 9R: Dam to trib

[81] Warning: Exceeded Pond HNTB 3P by 2.20' @ 0.00 hrs

Inflow Area = 2,087.000 ac, 8.15% Impervious, Inflow Depth > 1.03" for 02-YR event
Inflow = 53.37 cfs @ 23.95 hrs, Volume= 178.949 af
Outflow = 53.37 cfs @ 23.99 hrs, Volume= 178.734 af, Atten= 0%, Lag= 2.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.89 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 5.30 fps, Avg. Travel Time= 1.7 min

Peak Storage= 4,804 cf @ 23.97 hrs
Average Depth at Peak Storage= 0.92'
Bank-Full Depth= 6.00' Flow Area= 120.0 sf, Capacity= 1,955.10 cfs

8.00' x 6.00' deep channel, n= 0.035
Side Slope Z-value= 2.0 '/' Top Width= 32.00'
Length= 530.0' Slope= 0.0283 '/'
Inlet Invert= 145.00', Outlet Invert= 130.00'



Summary for Pond HNTB 3P: Chase Pond Dam

Inflow Area = 2,087.000 ac, 8.15% Impervious, Inflow Depth = 1.87" for 02-YR event
Inflow = 2,769.27 cfs @ 12.34 hrs, Volume= 325.635 af
Outflow = 53.37 cfs @ 23.95 hrs, Volume= 178.949 af, Atten= 98%, Lag= 696.7 min
Primary = 53.37 cfs @ 23.95 hrs, Volume= 178.949 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Peak Elev= 157.46' @ 23.95 hrs Surf.Area= 136.327 ac Storage= 258.115 af

Plug-Flow detention time= 1,039.0 min calculated for 178.770 af (55% of inflow)
Center-of-Mass det. time= 925.6 min (1,761.2 - 835.6)

Volume	Invert	Avail.Storage	Storage Description
#1	142.80'	859.250 af	Custom Stage Data (Prismatic) Listed below (Recalc)

14181.HNTB Chases Pond Model

Type III 24-hr 02-YR Rainfall=3.30"

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Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
142.80	0.000	0.000	0.000
154.00	1.000	5.600	5.600
155.00	25.000	13.000	18.600
156.70	135.500	136.425	155.025
157.00	136.000	40.725	195.750
157.70	136.500	95.375	291.125
158.00	137.000	41.025	332.150
159.00	138.000	137.500	469.650
160.00	139.000	138.500	608.150
161.80	140.000	251.100	859.250

Device	Routing	Invert	Outlet Devices
#1	Primary	142.80'	18.0" W x 24.0" H Vert. Orifice/Grate C= 0.600
#2	Primary	157.70'	90.0 deg x 35.5' long Sharp-Crested Vee/Trap Weir Cv= 2.50 (C= 3.13)
#3	Primary	161.80'	300.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=53.37 cfs @ 23.95 hrs HW=157.46' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 53.37 cfs @ 17.79 fps)
- 2=Sharp-Crested Vee/Trap Weir (Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond HNTB 8P: Twin 8'x8' box Culverts

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2,130.640 ac, 8.15% Impervious, Inflow Depth > 1.03" for 02-YR event
 Inflow = 88.29 cfs @ 12.41 hrs, Volume= 182.863 af
 Primary = 88.29 cfs @ 12.41 hrs, Volume= 182.863 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
31.180	77	2 acre lots, 12% imp, HSG C (HNTB 10S)
170.000	98	Pond (HNTB 5S)
12.460	76	Woods/grass comb., Fair, HSG C (HNTB 11S)
1,917.000	84	Woods/grass comb., Fair, HSG D (HNTB 2S)
2,130.640	85	TOTAL AREA

14181.HNTB Chases Pond Model

Type III 24-hr 10-YR Rainfall=4.90"

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Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment HNTB 10S: Subarea trib to river	Runoff Area=31.180 ac 12.00% Impervious Runoff Depth=2.54" Flow Length=2,350' Tc=23.3 min CN=77 Runoff=58.39 cfs 6.599 af
Subcatchment HNTB 11S: Subarea trib to 8x8 culvert	Runoff Area=12.460 ac 0.00% Impervious Runoff Depth=2.45" Flow Length=725' Tc=18.6 min CN=76 Runoff=24.74 cfs 2.547 af
Subcatchment HNTB 2S: Chase pond watershed	Runoff Area=1,917.000 ac 0.00% Impervious Runoff Depth=3.18" Tc=25.0 min CN=84 Runoff=4,354.15 cfs 507.858 af
Subcatchment HNTB 5S: Chase Pond	Runoff Area=170.000 ac 100.00% Impervious Runoff Depth=4.66" Tc=21.2 min CN=98 Runoff=540.85 cfs 66.064 af
Reach HNTB 12R: Trib to Tpk Box Culvert	Avg. Flow Depth=3.77' Max Vel=6.11 fps Inflow=173.30 cfs 327.635 af n=0.035 L=950.0' S=0.0103 '/' Capacity=599.53 cfs Outflow=173.30 cfs 327.189 af
Reach HNTB 9R: Dam to trib	Avg. Flow Depth=1.76' Max Vel=8.42 fps Inflow=171.01 cfs 321.223 af n=0.035 L=530.0' S=0.0283 '/' Capacity=1,955.10 cfs Outflow=171.01 cfs 321.036 af
Pond HNTB 3P: Chase Pond Dam	Peak Elev=158.71' Storage=429.472 af Inflow=4,871.07 cfs 573.922 af Outflow=171.01 cfs 321.223 af
Pond HNTB 8P: Twin 8'x8' box Culverts	Inflow=174.19 cfs 329.736 af Primary=174.19 cfs 329.736 af
Total Runoff Area = 2,130.640 ac Runoff Volume = 583.068 af Average Runoff Depth = 3.28"	
91.85% Pervious = 1,956.898 ac 8.15% Impervious = 173.742 ac	

14181.HNTB Chases Pond Model

Type III 24-hr 25-YR Rainfall=6.20"

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Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment HNTB 10S: Subarea trib to river Runoff Area=31.180 ac 12.00% Impervious Runoff Depth=3.65"
Flow Length=2,350' Tc=23.3 min CN=77 Runoff=84.31 cfs 9.495 af

Subcatchment HNTB 11S: Subarea trib to 8x8 culvert Runoff Area=12.460 ac 0.00% Impervious Runoff Depth=3.55"
Flow Length=725' Tc=18.6 min CN=76 Runoff=35.97 cfs 3.690 af

Subcatchment HNTB 2S: Chase pond watershed Runoff Area=1,917.000 ac 0.00% Impervious Runoff Depth=4.38"
Tc=25.0 min CN=84 Runoff=5,953.24 cfs 700.347 af

Subcatchment HNTB 5S: Chase Pond Runoff Area=170.000 ac 100.00% Impervious Runoff Depth=5.96"
Tc=21.2 min CN=98 Runoff=685.99 cfs 84.457 af

Reach HNTB 12R: Trib to Tpk Box Culvert Avg. Flow Depth=4.94' Max Vel=7.32 fps Inflow=357.78 cfs 522.494 af
n=0.035 L=950.0' S=0.0103 '/ Capacity=599.53 cfs Outflow=357.77 cfs 522.078 af

Reach HNTB 9R: Dam to trib Avg. Flow Depth=2.59' Max Vel=10.34 fps Inflow=352.95 cfs 513.173 af
n=0.035 L=530.0' S=0.0283 '/ Capacity=1,955.10 cfs Outflow=352.94 cfs 512.999 af

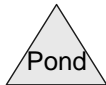
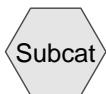
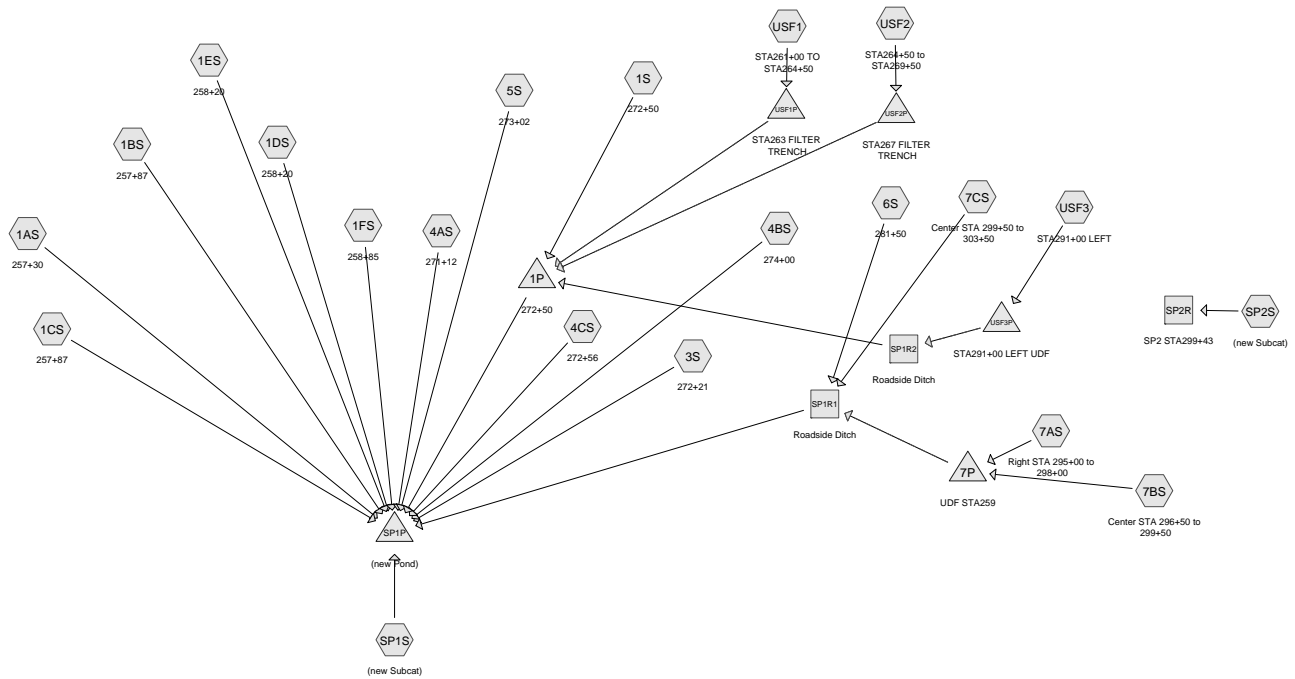
Pond HNTB 3P: Chase Pond Dam Peak Elev=159.57' Storage=548.305 af Inflow=6,611.85 cfs 784.803 af
Outflow=352.95 cfs 513.173 af

Pond HNTB 8P: Twin 8'x8' box Culverts Inflow=359.62 cfs 525.767 af
Primary=359.62 cfs 525.767 af

Total Runoff Area = 2,130.640 ac Runoff Volume = 797.988 af Average Runoff Depth = 4.49"
91.85% Pervious = 1,956.898 ac 8.15% Impervious = 173.742 ac

POSTDEVELOPMENT

Mile 7.3



Routing Diagram for 14181_7.3 POST 10-14-16
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
5.029	98	(1AS, 1BS, 1CS, 1DS, 1ES, 1FS, 3S, 4AS, 4BS, 4CS, 5S, 6S, 7CS, SP2S)
0.697	74	>75% Grass cover, Good, HSG C (6S, 7AS, 7BS, 7CS)
3.732	80	>75% Grass cover, Good, HSG D (1AS, 1BS, 1DS, 1FS, 4AS, 4BS, 4CS, 6S, 7CS, USF1, USF2, USF3)
3.012	30	Brush, Good, HSG A (1S)
6.913	48	Brush, Good, HSG B (SP1S)
6.301	65	Brush, Good, HSG C (1S, 7AS, SP1S, SP2S)
48.649	73	Brush, Good, HSG D (1S, SP1S, SP2S)
1.721	98	MTA CORRIDOR (USF1, USF2, USF3)
9.601	98	MTA PAVE (SP1S)
0.242	98	Paved parking, HSG C (7BS)
0.269	98	Unconnected pavement, HSG C (7AS)
6.614	30	Woods, Good, HSG A (1S)
2.903	55	Woods, Good, HSG B (SP1S)
10.800	70	Woods, Good, HSG C (1S, SP1S, SP2S)
240.662	77	Woods, Good, HSG D (1S, SP1S, SP2S)
10.213	98	iMPERVIOUS (1S)
357.357	76	TOTAL AREA

Notes Listing (all nodes)

Line#	Node Number	Notes
1	SP1P	The outlet culvert is modeled as a 9-ft by 9-ft box. These dimensions have not been field verified.

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1AS: 257+30	Runoff Area=29,080 sf 79.93% Impervious Runoff Depth=2.64" Tc=5.0 min CN=94 Runoff=2.05 cfs 0.147 af
Subcatchment 1BS: 257+87	Runoff Area=3,848 sf 73.93% Impervious Runoff Depth=2.54" Tc=5.0 min CN=93 Runoff=0.26 cfs 0.019 af
Subcatchment 1CS: 257+87	Runoff Area=1,869 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.14 cfs 0.011 af
Subcatchment 1DS: 258+20	Runoff Area=3,745 sf 86.22% Impervious Runoff Depth=2.85" Tc=0.0 min CN=96 Runoff=0.33 cfs 0.020 af
Subcatchment 1ES: 258+20	Runoff Area=1,223 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.09 cfs 0.007 af
Subcatchment 1FS: 258+85	Runoff Area=30,468 sf 80.03% Impervious Runoff Depth=2.64" Tc=5.0 min CN=94 Runoff=2.15 cfs 0.154 af
Subcatchment 1S: 272+50	Runoff Area=210.559 ac 4.85% Impervious Runoff Depth=1.16" Flow Length=3,413' Tc=62.6 min CN=75 Runoff=105.15 cfs 20.393 af
Subcatchment 3S: 272+21	Runoff Area=1,291 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.10 cfs 0.008 af
Subcatchment 4AS: 271+12	Runoff Area=31,230 sf 80.07% Impervious Runoff Depth=2.64" Tc=5.0 min CN=94 Runoff=2.20 cfs 0.158 af
Subcatchment 4BS: 274+00	Runoff Area=37,362 sf 79.73% Impervious Runoff Depth=2.64" Tc=5.0 min CN=94 Runoff=2.63 cfs 0.189 af
Subcatchment 4CS: 272+56	Runoff Area=14,230 sf 80.00% Impervious Runoff Depth=2.64" Tc=5.0 min CN=94 Runoff=1.00 cfs 0.072 af
Subcatchment 5S: 273+02	Runoff Area=852 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.06 cfs 0.005 af
Subcatchment 6S: 281+50	Runoff Area=76,278 sf 71.46% Impervious Runoff Depth=2.45" Tc=5.0 min CN=92 Runoff=5.07 cfs 0.357 af
Subcatchment 7AS: Right STA 295+00 to 298+00	Runoff Area=46,170 sf 25.34% Impervious Runoff Depth=1.05" Tc=6.0 min UI Adjusted CN=73 Runoff=1.23 cfs 0.093 af
Subcatchment 7BS: Center STA 296+50 to 299+50	Runoff Area=14,989 sf 70.24% Impervious Runoff Depth=2.35" Tc=6.0 min CN=91 Runoff=0.93 cfs 0.067 af
Subcatchment 7CS: Center STA 299+50 to 303+50	Runoff Area=19,658 sf 71.51% Impervious Runoff Depth=2.45" Tc=5.0 min CN=92 Runoff=1.31 cfs 0.092 af

Subcatchment SP1S: (new Subcat)	Runoff Area=133.177 ac 7.21% Impervious Runoff Depth=1.16" Flow Length=1,660' Tc=16.2 min CN=75 Runoff=127.24 cfs 12.898 af
Subcatchment SP2S: (new Subcat)	Runoff Area=93,684 sf 27.10% Impervious Runoff Depth=1.28" Tc=5.0 min CN=77 Runoff=3.28 cfs 0.230 af
Subcatchment USF1: STA261+00 TO STA264+50	Runoff Area=27,929 sf 45.96% Impervious Runoff Depth=2.09" Tc=6.0 min CN=88 Runoff=1.56 cfs 0.112 af
Subcatchment USF2: STA264+50 to STA269+50	Runoff Area=43,724 sf 43.33% Impervious Runoff Depth=2.09" Tc=6.0 min CN=88 Runoff=2.45 cfs 0.175 af
Subcatchment USF3: STA291+00 LEFT	Runoff Area=115,680 sf 37.33% Impervious Runoff Depth=2.00" Tc=6.0 min CN=87 Runoff=6.23 cfs 0.443 af
Reach SP1R1: Roadside Ditch	Avg. Flow Depth=0.51' Max Vel=2.83 fps Inflow=6.45 cfs 0.609 af n=0.035 L=351.0' S=0.0199 '/' Capacity=139.65 cfs Outflow=6.14 cfs 0.609 af
Reach SP1R2: Roadside Ditch	Avg. Flow Depth=0.27' Max Vel=2.40 fps Inflow=2.42 cfs 0.443 af n=0.035 L=1,285.0' S=0.0280 '/' Capacity=165.52 cfs Outflow=2.14 cfs 0.443 af
Reach SP2R: SP2 STA299+43	Avg. Flow Depth=0.13' Max Vel=2.06 fps Inflow=3.28 cfs 0.230 af n=0.035 L=77.0' S=0.0940 '/' Capacity=820.11 cfs Outflow=3.26 cfs 0.230 af
Pond 1P: 272+50	Peak Elev=39.06' Storage=94,644 cf Inflow=107.65 cfs 21.122 af 54.0" Round Culvert n=0.012 L=185.9' S=0.0016 '/' Outflow=76.85 cfs 21.122 af
Pond 7P: UDF STA259	Peak Elev=104.18' Storage=3,955 cf Inflow=2.16 cfs 0.160 af Primary=0.08 cfs 0.160 af Secondary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.160 af
Pond SP1P: (new Pond)	Peak Elev=38.15' Storage=563,370 cf Inflow=160.67 cfs 35.418 af Primary=60.90 cfs 34.474 af Secondary=0.00 cfs 0.000 af Outflow=60.90 cfs 34.474 af
Pond USF1P: STA263 FILTER TRENCH	Peak Elev=43.47' Storage=1,772 cf Inflow=1.56 cfs 0.112 af Primary=0.64 cfs 0.112 af Secondary=0.00 cfs 0.000 af Outflow=0.64 cfs 0.112 af
Pond USF2P: STA267 FILTER TRENCH	Peak Elev=42.55' Storage=2,725 cf Inflow=2.45 cfs 0.175 af Primary=0.93 cfs 0.175 af Secondary=0.00 cfs 0.000 af Outflow=0.93 cfs 0.175 af
Pond USF3P: STA291+00 LEFT UDF	Peak Elev=84.57' Storage=6,922 cf Inflow=6.23 cfs 0.443 af Primary=1.87 cfs 0.433 af Secondary=0.56 cfs 0.010 af Outflow=2.42 cfs 0.443 af

**Total Runoff Area = 357.357 ac Runoff Volume = 35.648 af Average Runoff Depth = 1.20"
92.42% Pervious = 330.282 ac 7.58% Impervious = 27.074 ac**

Summary for Subcatchment 1AS: 257+30

Runoff = 2.05 cfs @ 12.07 hrs, Volume= 0.147 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	23,243	98	
	5,837	80	>75% Grass cover, Good, HSG D
	29,080	94	Weighted Average
	5,837		20.07% Pervious Area
	23,243		79.93% Impervious Area

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

Summary for Subcatchment 1BS: 257+87

Runoff = 0.26 cfs @ 12.07 hrs, Volume= 0.019 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	2,845	98	
	1,003	80	>75% Grass cover, Good, HSG D
	3,848	93	Weighted Average
	1,003		26.07% Pervious Area
	2,845		73.93% Impervious Area

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

Summary for Subcatchment 1CS: 257+87

Runoff = 0.14 cfs @ 12.07 hrs, Volume= 0.011 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	1,869	98	
	1,869		100.00% Impervious Area

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

Summary for Subcatchment 1DS: 258+20

[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 0.33 cfs @ 12.00 hrs, Volume= 0.020 af, Depth= 2.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 3,229	98	
516	80	>75% Grass cover, Good, HSG D
3,745	96	Weighted Average
516		13.78% Pervious Area
3,229		86.22% Impervious Area

Summary for Subcatchment 1ES: 258+20

Runoff = 0.09 cfs @ 12.07 hrs, Volume= 0.007 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 1,223	98	
1,223		100.00% Impervious Area

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

Summary for Subcatchment 1FS: 258+85

Runoff = 2.15 cfs @ 12.07 hrs, Volume= 0.154 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 24,385	98	
6,083	80	>75% Grass cover, Good, HSG D
30,468	94	Weighted Average
6,083		19.97% Pervious Area
24,385		80.03% Impervious Area

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

Summary for Subcatchment 1S: 272+50

Runoff = 105.15 cfs @ 12.87 hrs, Volume= 20.393 af, Depth= 1.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 10.213	98	iMPERVIOUS
6.614	30	Woods, Good, HSG A
3.012	30	Brush, Good, HSG A
1.063	70	Woods, Good, HSG C
1.957	65	Brush, Good, HSG C
156.876	77	Woods, Good, HSG D
30.824	73	Brush, Good, HSG D
210.559	75	Weighted Average
200.346		95.15% Pervious Area
10.213		4.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.2	95	0.1111	0.15		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
6.5	583	0.0900	1.50		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.6	65	0.0600	1.71		Shallow Concentrated Flow, C-D Short Grass Pasture Kv= 7.0 fps
0.2	316	0.0820	33.41	17,640.39	Channel Flow, D-E Area= 528.0 sf Perim= 24.0' r= 22.00' n= 0.100 Heavy timber, flow below branches
4.4	190	0.0210	0.72		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
1.9	259	0.0230	2.27		Shallow Concentrated Flow, F-G Grassed Waterway Kv= 15.0 fps
8.0	275	0.0130	0.57		Shallow Concentrated Flow, G-H Woodland Kv= 5.0 fps
16.2	1,219	0.0070	1.25		Shallow Concentrated Flow, H-I Grassed Waterway Kv= 15.0 fps
14.0	296	0.0050	0.35		Shallow Concentrated Flow, I-J Woodland Kv= 5.0 fps
0.6	115	0.0090	2.96	29.60	Channel Flow, J-K Area= 10.0 sf Perim= 20.0' r= 0.50' n= 0.030 Short grass
62.6	3,413	Total			

Summary for Subcatchment 3S: 272+21

Runoff = 0.10 cfs @ 12.07 hrs, Volume= 0.008 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 1,291	98	
1,291		100.00% Impervious Area

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

Summary for Subcatchment 4AS: 271+12

Runoff = 2.20 cfs @ 12.07 hrs, Volume= 0.158 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 25,005	98	
6,225	80	>75% Grass cover, Good, HSG D
31,230	94	Weighted Average
6,225		19.93% Pervious Area
25,005		80.07% Impervious Area

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

Summary for Subcatchment 4BS: 274+00

Runoff = 2.63 cfs @ 12.07 hrs, Volume= 0.189 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 7,572	80	>75% Grass cover, Good, HSG D
29,790	98	
37,362	94	Weighted Average
7,572		20.27% Pervious Area
29,790		79.73% Impervious Area

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

Summary for Subcatchment 4CS: 272+56

Runoff = 1.00 cfs @ 12.07 hrs, Volume= 0.072 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 11,384	98	
2,846	80	>75% Grass cover, Good, HSG D
14,230	94	Weighted Average
2,846		20.00% Pervious Area
11,384		80.00% Impervious Area

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

Summary for Subcatchment 5S: 273+02

Runoff = 0.06 cfs @ 12.07 hrs, Volume= 0.005 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 852	98	
852		100.00% Impervious Area

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

Summary for Subcatchment 6S: 281+50

Runoff = 5.07 cfs @ 12.07 hrs, Volume= 0.357 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	54,510	98	
	5,807	74	>75% Grass cover, Good, HSG C
	15,961	80	>75% Grass cover, Good, HSG D
	76,278	92	Weighted Average
	21,768		28.54% Pervious Area
	54,510		71.46% Impervious Area

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

Summary for Subcatchment 7AS: Right STA 295+00 to 298+00

Runoff = 1.23 cfs @ 12.10 hrs, Volume= 0.093 af, Depth= 1.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Adj	Description
11,701	98		Unconnected pavement, HSG C
18,631	74		>75% Grass cover, Good, HSG C
15,838	65		Brush, Good, HSG C
46,170	77	73	Weighted Average, UI Adjusted
34,469			74.66% Pervious Area
11,701			25.34% Impervious Area
11,701			100.00% Unconnected

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

Summary for Subcatchment 7BS: Center STA 296+50 to 299+50

Runoff = 0.93 cfs @ 12.09 hrs, Volume= 0.067 af, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
10,528	98	Paved parking, HSG C
4,461	74	>75% Grass cover, Good, HSG C
14,989	91	Weighted Average
4,461		29.76% Pervious Area
10,528		70.24% Impervious Area

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

Summary for Subcatchment 7CS: Center STA 299+50 to 303+50

Runoff = 1.31 cfs @ 12.07 hrs, Volume= 0.092 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 14,057	98	
4,138	80	>75% Grass cover, Good, HSG D
1,463	74	>75% Grass cover, Good, HSG C
19,658	92	Weighted Average
5,601		28.49% Pervious Area
14,057		71.51% Impervious Area

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

Summary for Subcatchment SP1S: (new Subcat)

Runoff = 127.24 cfs @ 12.23 hrs, Volume= 12.898 af, Depth= 1.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 9.601	98	MTA PAVE
83.604	77	Woods, Good, HSG D
9.283	70	Woods, Good, HSG C
2.903	55	Woods, Good, HSG B
17.674	73	Brush, Good, HSG D
3.199	65	Brush, Good, HSG C
6.913	48	Brush, Good, HSG B
133.177	75	Weighted Average
123.576		92.79% Pervious Area
9.601		7.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	52	0.0860	0.12		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.8	74	0.0950	1.54		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
3.0	118	0.0170	0.65		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.7	86	0.0930	2.13		Shallow Concentrated Flow, D-E Short Grass Pasture Kv= 7.0 fps
0.6	65	0.0150	1.84		Shallow Concentrated Flow, E-F Grassed Waterway Kv= 15.0 fps
0.2	33	0.0050	3.21	2.52	Pipe Channel, CMP_Round 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.5	249	0.0440	9.20	551.98	Trap/Vee/Rect Channel Flow, G-H Bot.W=3.00' D=2.00' Z= 15.0 & 12.0 '/' Top.W=57.00' n= 0.035 Earth, dense weeds
1.7	343	0.0150	3.41	260.91	Trap/Vee/Rect Channel Flow, H-I Bot.W=9.00' D=1.00' Z= 75.0 & 60.0 '/' Top.W=144.00' n= 0.035 Earth, dense weeds
1.7	640	0.0210	6.40	179.30	Trap/Vee/Rect Channel Flow, I-J Bot.W=2.00' D=2.00' Z= 8.0 & 4.0 '/' Top.W=26.00' n= 0.035 Earth, dense weeds
16.2	1,660	Total			

Summary for Subcatchment SP2S: (new Subcat)

Runoff = 3.28 cfs @ 12.08 hrs, Volume= 0.230 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
25,391	98	*
6,568	73	Brush, Good, HSG D
34,035	65	Brush, Good, HSG C
7,912	77	Woods, Good, HSG D
19,778	70	Woods, Good, HSG C
93,684	77	Weighted Average
68,293		72.90% Pervious Area
25,391		27.10% Impervious Area

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

Summary for Subcatchment USF1: STA261+00 TO STA264+50

Runoff = 1.56 cfs @ 12.09 hrs, Volume= 0.112 af, Depth= 2.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
15,094	80	>75% Grass cover, Good, HSG D
* 12,835	98	MTA CORRIDOR
27,929	88	Weighted Average
15,094		54.04% Pervious Area
12,835		45.96% Impervious Area

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

Summary for Subcatchment USF2: STA264+50 to STA269+50

Runoff = 2.45 cfs @ 12.09 hrs, Volume= 0.175 af, Depth= 2.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
24,778	80	>75% Grass cover, Good, HSG D
* 18,946	98	MTA CORRIDOR
43,724	88	Weighted Average
24,778		56.67% Pervious Area
18,946		43.33% Impervious Area

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

Summary for Subcatchment USF3: STA291+00 LEFT

Runoff = 6.23 cfs @ 12.09 hrs, Volume= 0.443 af, Depth= 2.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
72,500	80	>75% Grass cover, Good, HSG D
* 43,180	98	MTA CORRIDOR
115,680	87	Weighted Average
72,500		62.67% Pervious Area
43,180		37.33% Impervious Area

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

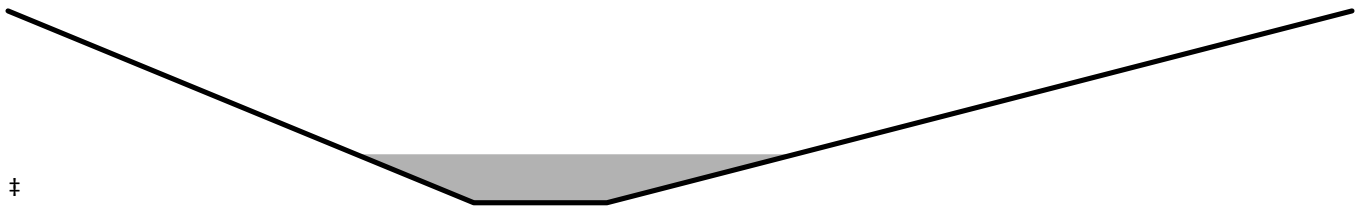
Summary for Reach SP1R1: Roadside Ditch

Inflow Area = 3.606 ac, 57.80% Impervious, Inflow Depth = 2.03" for 02-YR event
 Inflow = 6.45 cfs @ 12.07 hrs, Volume= 0.609 af
 Outflow = 6.14 cfs @ 12.13 hrs, Volume= 0.609 af, Atten= 5%, Lag= 3.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 2.83 fps, Min. Travel Time= 2.1 min
 Avg. Velocity = 0.89 fps, Avg. Travel Time= 6.6 min

Peak Storage= 763 cf @ 12.10 hrs
 Average Depth at Peak Storage= 0.51'
 Bank-Full Depth= 2.00' Flow Area= 22.2 sf, Capacity= 139.65 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
 Side Slope Z-value= 3.5 5.6 '/' Top Width= 20.20'
 Length= 351.0' Slope= 0.0199 '/'
 Inlet Invert= 49.00', Outlet Invert= 42.00'



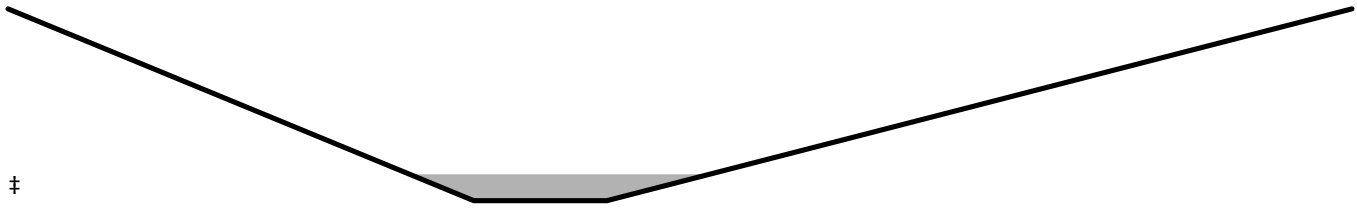
Summary for Reach SP1R2: Roadside Ditch

Inflow Area = 2.656 ac, 37.33% Impervious, Inflow Depth = 2.00" for 02-YR event
 Inflow = 2.42 cfs @ 12.34 hrs, Volume= 0.443 af
 Outflow = 2.14 cfs @ 12.61 hrs, Volume= 0.443 af, Atten= 12%, Lag= 16.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 2.40 fps, Min. Travel Time= 8.9 min
 Avg. Velocity = 0.88 fps, Avg. Travel Time= 24.4 min

Peak Storage= 1,148 cf @ 12.46 hrs
 Average Depth at Peak Storage= 0.27'
 Bank-Full Depth= 2.00' Flow Area= 22.2 sf, Capacity= 165.52 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
 Side Slope Z-value= 3.5 5.6 '/' Top Width= 20.20'
 Length= 1,285.0' Slope= 0.0280 '/'
 Inlet Invert= 78.00', Outlet Invert= 42.00'



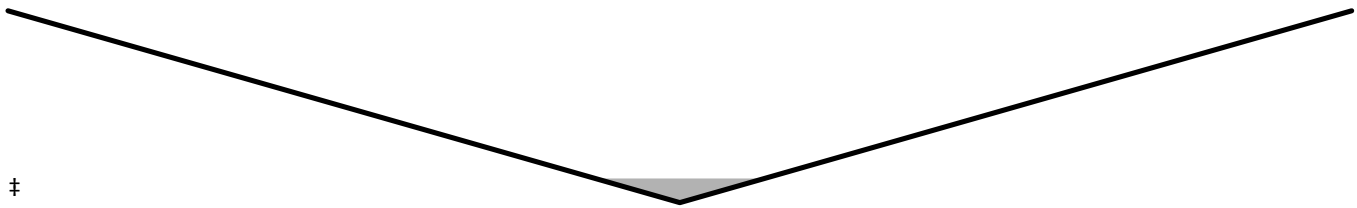
Summary for Reach SP2R: SP2 STA299+43

Inflow Area = 2.151 ac, 27.10% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 3.28 cfs @ 12.08 hrs, Volume= 0.230 af
 Outflow = 3.26 cfs @ 12.10 hrs, Volume= 0.230 af, Atten= 1%, Lag= 1.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 2.06 fps, Min. Travel Time= 0.6 min
 Avg. Velocity = 0.89 fps, Avg. Travel Time= 1.4 min

Peak Storage= 122 cf @ 12.09 hrs
 Average Depth at Peak Storage= 0.13'
 Bank-Full Depth= 1.00' Flow Area= 100.0 sf, Capacity= 820.11 cfs

0.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
 Side Slope Z-value= 100.0 '/' Top Width= 200.00'
 Length= 77.0' Slope= 0.0940 '/'
 Inlet Invert= 114.24', Outlet Invert= 107.00'



Summary for Pond 1P: 272+50

[79] Warning: Submerged Pond USF2P Primary device # 1 OUTLET by 0.53'

Inflow Area = 214.860 ac, 5.55% Impervious, Inflow Depth = 1.18" for 02-YR event
 Inflow = 107.65 cfs @ 12.87 hrs, Volume= 21.122 af
 Outflow = 76.85 cfs @ 13.34 hrs, Volume= 21.122 af, Atten= 29%, Lag= 28.0 min
 Primary = 76.85 cfs @ 13.34 hrs, Volume= 21.122 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 39.06' @ 13.34 hrs Surf.Area= 146,093 sf Storage= 94,644 cf

Plug-Flow detention time= 7.8 min calculated for 21.122 af (100% of inflow)
 Center-of-Mass det. time= 7.8 min (924.9 - 917.1)

Volume	Invert	Avail.Storage	Storage Description
#1	37.00'	1,813,588 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
37.00	2,863	918.2	0	0	2,863
38.00	26,586	2,276.7	12,724	12,724	348,255
39.00	134,675	3,072.1	73,699	86,424	686,822
40.00	393,337	4,851.0	252,723	339,147	1,808,426
41.00	742,346	5,944.1	558,682	897,829	2,747,466
42.00	1,100,908	6,521.2	915,758	1,813,588	3,319,958

Device	Routing	Invert	Outlet Devices
#1	Primary	34.89'	54.0" Round Culvert L= 185.9' Ke= 0.500 Inlet / Outlet Invert= 34.89' / 34.59' S= 0.0016 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 15.90 sf

Primary OutFlow Max=76.85 cfs @ 13.34 hrs HW=39.06' (Free Discharge)

↑**1=Culvert** (Barrel Controls 76.85 cfs @ 6.52 fps)

Summary for Pond 7P: UDF STA259

Inflow Area = 1.404 ac, 36.35% Impervious, Inflow Depth = 1.37" for 02-YR event
 Inflow = 2.16 cfs @ 12.09 hrs, Volume= 0.160 af
 Outflow = 0.08 cfs @ 16.11 hrs, Volume= 0.160 af, Atten= 96%, Lag= 241.1 min
 Primary = 0.08 cfs @ 16.11 hrs, Volume= 0.160 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 104.18' @ 16.11 hrs Surf.Area= 3,771 sf Storage= 3,955 cf

Plug-Flow detention time= 508.1 min calculated for 0.160 af (100% of inflow)
 Center-of-Mass det. time= 508.1 min (1,345.3 - 837.2)

Volume	Invert	Avail.Storage	Storage Description
#1	103.00'	9,698 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
103.00	2,952	0	0
104.00	3,639	3,296	3,296
105.00	4,383	4,011	7,307
105.50	5,183	2,392	9,698

Device	Routing	Invert	Outlet Devices
#1	Primary	101.00'	15.0" Round RCP_Round 15" L= 111.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 101.00' / 96.00' S= 0.0450 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	101.00'	2.0" W x 0.7" H Vert. Orifice/Grate C= 0.600
#3	Device 1	104.50'	6.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Secondary	104.75'	10.0' long x 6.0' breadth Broad-Crested Rectangular Weir

Head (feet)	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00	2.50	3.00	3.50	4.00
	4.50	5.00	5.50											
Coef. (English)	2.37	2.51	2.70	2.68	2.68	2.67	2.65	2.65	2.65	2.65	2.66	2.66	2.67	2.69
	2.72	2.76	2.83											

Primary OutFlow Max=0.08 cfs @ 16.11 hrs HW=104.18' (Free Discharge)

1=RCP_Round 15" (Passes 0.08 cfs of 9.44 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.08 cfs @ 8.54 fps)

3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=103.00' (Free Discharge)

4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond SP1P: (new Pond)

The outlet culvert is modeled as a 9-ft by 9-ft box. These dimensions have not been field verified.

[81] Warning: Exceeded Pond 1P by 1.05' @ 14.93 hrs

Inflow Area =	355.206 ac,	7.46% Impervious,	Inflow Depth =	1.20"	for 02-YR event
Inflow =	160.67 cfs @	12.23 hrs,	Volume=	35.418 af	
Outflow =	60.90 cfs @	14.45 hrs,	Volume=	34.474 af,	Atten= 62%, Lag= 133.0 min
Primary =	60.90 cfs @	14.45 hrs,	Volume=	34.474 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 38.15' @ 14.45 hrs Surf.Area= 513,185 sf Storage= 563,370 cf

Plug-Flow detention time= 160.2 min calculated for 34.467 af (97% of inflow)
 Center-of-Mass det. time= 142.2 min (1,043.0 - 900.8)

Volume	Invert	Avail.Storage	Storage Description		
#1	34.00'	7,139,730 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
34.00	25	20.0	0	0	25
35.00	25	20.0	25	25	45
36.00	63,877	2,213.0	21,722	21,747	389,735
37.00	234,622	3,974.0	140,307	162,054	1,256,762
38.00	436,029	4,766.0	330,166	492,220	1,807,620
39.00	1,068,655	9,433.0	729,100	1,221,320	7,080,964
40.00	1,853,982	9,172.0	1,443,404	2,664,724	7,467,497
41.00	2,208,027	10,197.0	2,028,428	4,693,152	9,047,396
42.00	2,693,152	10,069.0	2,446,578	7,139,730	9,254,072

Device	Routing	Invert	Outlet Devices
#1	Primary	36.23'	108.0" W x 108.0" H Box Culvert L= 37.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 36.23' / 36.14' S= 0.0024 '/ Cc= 0.900 n= 0.013, Flow Area= 81.00 sf
#2	Secondary	40.00'	300.0' long x 22.0' breadth Broad-Crested Rectangular Weir

Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=60.89 cfs @ 14.45 hrs HW=38.15' (Free Discharge)

↳ **1=Culvert** (Barrel Controls 60.89 cfs @ 4.70 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=34.00' (Free Discharge)

↳ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond USF1P: STA263 FILTER TRENCH

Inflow Area = 0.641 ac, 45.96% Impervious, Inflow Depth = 2.09" for 02-YR event
 Inflow = 1.56 cfs @ 12.09 hrs, Volume= 0.112 af
 Outflow = 0.64 cfs @ 12.32 hrs, Volume= 0.112 af, Atten= 59%, Lag= 13.8 min
 Primary = 0.64 cfs @ 12.32 hrs, Volume= 0.112 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 43.47' @ 12.32 hrs Surf.Area= 5,064 sf Storage= 1,772 cf

Plug-Flow detention time= 393.4 min calculated for 0.111 af (100% of inflow)
 Center-of-Mass det. time= 393.5 min (1,207.3 - 813.8)

Volume	Invert	Avail.Storage	Storage Description
#1	43.00'	5,240 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.00	2,512	0	0
44.00	7,967	5,240	5,240

Device	Routing	Invert	Outlet Devices
#1	Primary	40.57'	12.0" Round Outlet Pipe L= 81.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 40.57' / 40.16' S= 0.0051 1/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	40.67'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	40.67'	0.7" Vert. Orifice at OCS C= 0.600
#4	Device 1	43.40'	1.2" x 1.2" Horiz. Catch Basin Grate X 49.00 C= 0.600 Limited to weir flow at low heads
#5	Secondary	43.60'	10.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=0.64 cfs @ 12.32 hrs HW=43.47' (Free Discharge)

↳ **1=Outlet Pipe** (Passes 0.64 cfs of 4.76 cfs potential flow)
 ↳ **2=Header Pipe** (Passes 0.02 cfs of 2.64 cfs potential flow)
 ↳ **3=Orifice at OCS** (Orifice Controls 0.02 cfs @ 8.01 fps)
 ↳ **4=Catch Basin Grate** (Orifice Controls 0.61 cfs @ 1.25 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=43.00' (Free Discharge)

↳ **5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond USF2P: STA267 FILTER TRENCH

Inflow Area = 1.004 ac, 43.33% Impervious, Inflow Depth = 2.09" for 02-YR event
 Inflow = 2.45 cfs @ 12.09 hrs, Volume= 0.175 af
 Outflow = 0.93 cfs @ 12.34 hrs, Volume= 0.175 af, Atten= 62%, Lag= 15.4 min
 Primary = 0.93 cfs @ 12.34 hrs, Volume= 0.175 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 42.55' @ 12.34 hrs Surf.Area= 6,633 sf Storage= 2,725 cf

Plug-Flow detention time= 322.4 min calculated for 0.175 af (100% of inflow)
 Center-of-Mass det. time= 322.6 min (1,136.4 - 813.8)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	6,361 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
42.00	3,358	0	0
43.00	9,363	6,361	6,361

Device	Routing	Invert	Outlet Devices
#1	Primary	39.15'	12.0" Round Outlet Pipe L= 62.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 39.15' / 38.53' S= 0.0100'/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	39.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	39.65'	0.8" Vert. Orifice at OCS C= 0.600
#4	Device 1	42.40'	1.2" x 1.2" Horiz. Catch Basin Grate X 49.00 C= 0.600 Limited to weir flow at low heads
#5	Secondary	42.60'	10.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=0.93 cfs @ 12.34 hrs HW=42.55' (Free Discharge)

- 1=Outlet Pipe (Passes 0.93 cfs of 5.90 cfs potential flow)
- 2=Header Pipe (Passes 0.03 cfs of 2.69 cfs potential flow)
- 3=Orifice at OCS (Orifice Controls 0.03 cfs @ 8.15 fps)
- 4=Catch Basin Grate (Orifice Controls 0.90 cfs @ 1.84 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond USF3P: STA291+00 LEFT UDF

Inflow Area = 2.656 ac, 37.33% Impervious, Inflow Depth = 2.00" for 02-YR event
 Inflow = 6.23 cfs @ 12.09 hrs, Volume= 0.443 af
 Outflow = 2.42 cfs @ 12.34 hrs, Volume= 0.443 af, Atten= 61%, Lag= 15.1 min
 Primary = 1.87 cfs @ 12.34 hrs, Volume= 0.433 af
 Secondary = 0.56 cfs @ 12.34 hrs, Volume= 0.010 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 84.57' @ 12.34 hrs Surf.Area= 5,208 sf Storage= 6,922 cf

Plug-Flow detention time= 264.1 min calculated for 0.443 af (100% of inflow)

Center-of-Mass det. time= 264.2 min (1,081.8 - 817.6)

Volume	Invert	Avail.Storage	Storage Description
#1	83.00'	9,265 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
83.00	3,630	0	0
84.00	4,625	4,128	4,128
85.00	5,650	5,138	9,265

Device	Routing	Invert	Outlet Devices
#1	Primary	80.15'	12.0" Round Outlet Pipe L= 22.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 80.15' / 79.00' S= 0.0523 '/ Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	80.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	80.65'	1.3" Vert. Orifice at OCS C= 0.600
#4	Device 1	84.00'	1.2" x 1.2" Horiz. Catch Basin Grate X 49.00 C= 0.600 Limited to weir flow at low heads
#5	Secondary	84.50'	12.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=1.87 cfs @ 12.34 hrs HW=84.57' (Free Discharge)

- ↳ **1=Outlet Pipe** (Passes 1.87 cfs of 7.49 cfs potential flow)
- ↳ **2=Header Pipe** (Passes 0.09 cfs of 3.18 cfs potential flow)
- ↳ **3=Orifice at OCS** (Orifice Controls 0.09 cfs @ 9.47 fps)
- ↳ **4=Catch Basin Grate** (Orifice Controls 1.78 cfs @ 3.63 fps)

Secondary OutFlow Max=0.55 cfs @ 12.34 hrs HW=84.57' (Free Discharge)

- ↳ **5=Broad-Crested Rectangular Weir** (Weir Controls 0.55 cfs @ 0.67 fps)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
5.029	98	(1AS, 1BS, 1CS, 1DS, 1ES, 1FS, 3S, 4AS, 4BS, 4CS, 5S, 6S, 7CS, SP2S)
0.697	74	>75% Grass cover, Good, HSG C (6S, 7AS, 7BS, 7CS)
3.732	80	>75% Grass cover, Good, HSG D (1AS, 1BS, 1DS, 1FS, 4AS, 4BS, 4CS, 6S, 7CS, USF1, USF2, USF3)
3.012	30	Brush, Good, HSG A (1S)
6.913	48	Brush, Good, HSG B (SP1S)
6.301	65	Brush, Good, HSG C (1S, 7AS, SP1S, SP2S)
48.649	73	Brush, Good, HSG D (1S, SP1S, SP2S)
1.721	98	MTA CORRIDOR (USF1, USF2, USF3)
9.601	98	MTA PAVE (SP1S)
0.242	98	Paved parking, HSG C (7BS)
0.269	98	Unconnected pavement, HSG C (7AS)
6.614	30	Woods, Good, HSG A (1S)
2.903	55	Woods, Good, HSG B (SP1S)
10.800	70	Woods, Good, HSG C (1S, SP1S, SP2S)
240.662	77	Woods, Good, HSG D (1S, SP1S, SP2S)
10.213	98	iMPERVIOUS (1S)
357.357	76	TOTAL AREA

Notes Listing (all nodes)

Line#	Node Number	Notes
1	SP1P	The outlet culvert is modeled as a 9-ft by 9-ft box. These dimensions have not been field verified.

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1AS: 257+30	Runoff Area=29,080 sf 79.93% Impervious Runoff Depth=4.21" Tc=5.0 min CN=94 Runoff=3.18 cfs 0.234 af
Subcatchment 1BS: 257+87	Runoff Area=3,848 sf 73.93% Impervious Runoff Depth=4.10" Tc=5.0 min CN=93 Runoff=0.41 cfs 0.030 af
Subcatchment 1CS: 257+87	Runoff Area=1,869 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.21 cfs 0.017 af
Subcatchment 1DS: 258+20	Runoff Area=3,745 sf 86.22% Impervious Runoff Depth=4.43" Tc=0.0 min CN=96 Runoff=0.49 cfs 0.032 af
Subcatchment 1ES: 258+20	Runoff Area=1,223 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.14 cfs 0.011 af
Subcatchment 1FS: 258+85	Runoff Area=30,468 sf 80.03% Impervious Runoff Depth=4.21" Tc=5.0 min CN=94 Runoff=3.33 cfs 0.245 af
Subcatchment 1S: 272+50	Runoff Area=210.559 ac 4.85% Impervious Runoff Depth=2.37" Flow Length=3,413' Tc=62.6 min CN=75 Runoff=223.43 cfs 41.558 af
Subcatchment 3S: 272+21	Runoff Area=1,291 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.15 cfs 0.012 af
Subcatchment 4AS: 271+12	Runoff Area=31,230 sf 80.07% Impervious Runoff Depth=4.21" Tc=5.0 min CN=94 Runoff=3.41 cfs 0.251 af
Subcatchment 4BS: 274+00	Runoff Area=37,362 sf 79.73% Impervious Runoff Depth=4.21" Tc=5.0 min CN=94 Runoff=4.08 cfs 0.301 af
Subcatchment 4CS: 272+56	Runoff Area=14,230 sf 80.00% Impervious Runoff Depth=4.21" Tc=5.0 min CN=94 Runoff=1.55 cfs 0.115 af
Subcatchment 5S: 273+02	Runoff Area=852 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.10 cfs 0.008 af
Subcatchment 6S: 281+50	Runoff Area=76,278 sf 71.46% Impervious Runoff Depth=3.99" Tc=5.0 min CN=92 Runoff=8.07 cfs 0.582 af
Subcatchment 7AS: Right STA 295+00 to 298+00	Runoff Area=46,170 sf 25.34% Impervious Runoff Depth=2.20" Tc=6.0 min UI Adjusted CN=73 Runoff=2.72 cfs 0.195 af
Subcatchment 7BS: Center STA 296+50 to 299+50	Runoff Area=14,989 sf 70.24% Impervious Runoff Depth=3.89" Tc=6.0 min CN=91 Runoff=1.50 cfs 0.111 af
Subcatchment 7CS: Center STA 299+50 to 303+50	Runoff Area=19,658 sf 71.51% Impervious Runoff Depth=3.99" Tc=5.0 min CN=92 Runoff=2.08 cfs 0.150 af

Subcatchment SP1S: (new Subcat)	Runoff Area=133.177 ac 7.21% Impervious Runoff Depth=2.37" Flow Length=1,660' Tc=16.2 min CN=75 Runoff=270.29 cfs 26.285 af
Subcatchment SP2S: (new Subcat)	Runoff Area=93,684 sf 27.10% Impervious Runoff Depth=2.54" Tc=5.0 min CN=77 Runoff=6.64 cfs 0.455 af
Subcatchment USF1: STA261+00 TO STA264+50	Runoff Area=27,929 sf 45.96% Impervious Runoff Depth=3.57" Tc=6.0 min CN=88 Runoff=2.63 cfs 0.191 af
Subcatchment USF2: STA264+50 to STA269+50	Runoff Area=43,724 sf 43.33% Impervious Runoff Depth=3.57" Tc=6.0 min CN=88 Runoff=4.11 cfs 0.299 af
Subcatchment USF3: STA291+00 LEFT	Runoff Area=115,680 sf 37.33% Impervious Runoff Depth=3.47" Tc=6.0 min CN=87 Runoff=10.63 cfs 0.769 af
Reach SP1R1: Roadside Ditch	Avg. Flow Depth=0.63' Max Vel=3.20 fps Inflow=10.23 cfs 1.039 af n=0.035 L=351.0' S=0.0199 '/' Capacity=139.65 cfs Outflow=9.83 cfs 1.039 af
Reach SP1R2: Roadside Ditch	Avg. Flow Depth=0.50' Max Vel=3.33 fps Inflow=8.91 cfs 0.769 af n=0.035 L=1,285.0' S=0.0280 '/' Capacity=165.52 cfs Outflow=7.12 cfs 0.769 af
Reach SP2R: SP2 STA299+43	Avg. Flow Depth=0.16' Max Vel=2.46 fps Inflow=6.64 cfs 0.455 af n=0.035 L=77.0' S=0.0940 '/' Capacity=820.11 cfs Outflow=6.61 cfs 0.455 af
Pond 1P: 272+50	Peak Elev=40.18' Storage=414,027 cf Inflow=227.10 cfs 42.816 af 54.0" Round Culvert n=0.012 L=185.9' S=0.0016 '/' Outflow=106.62 cfs 42.816 af
Pond 7P: UDF STA259	Peak Elev=104.63' Storage=5,755 cf Inflow=4.21 cfs 0.306 af Primary=1.06 cfs 0.306 af Secondary=0.00 cfs 0.000 af Outflow=1.06 cfs 0.306 af
Pond SP1P: (new Pond)	Peak Elev=38.90' Storage=1,117,656 cf Inflow=330.29 cfs 71.395 af Primary=98.93 cfs 70.447 af Secondary=0.00 cfs 0.000 af Outflow=98.93 cfs 70.447 af
Pond USF1P: STA263 FILTER TRENCH	Peak Elev=43.63' Storage=2,667 cf Inflow=2.63 cfs 0.191 af Primary=1.15 cfs 0.189 af Secondary=0.14 cfs 0.002 af Outflow=1.29 cfs 0.191 af
Pond USF2P: STA267 FILTER TRENCH	Peak Elev=42.71' Storage=3,935 cf Inflow=4.11 cfs 0.299 af Primary=1.35 cfs 0.273 af Secondary=1.00 cfs 0.026 af Outflow=2.36 cfs 0.299 af
Pond USF3P: STA291+00 LEFT UDF	Peak Elev=84.86' Storage=8,459 cf Inflow=10.63 cfs 0.769 af Primary=2.27 cfs 0.614 af Secondary=6.64 cfs 0.155 af Outflow=8.91 cfs 0.769 af

Total Runoff Area = 357.357 ac Runoff Volume = 71.850 af Average Runoff Depth = 2.41"
92.42% Pervious = 330.282 ac 7.58% Impervious = 27.074 ac

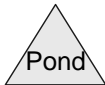
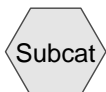
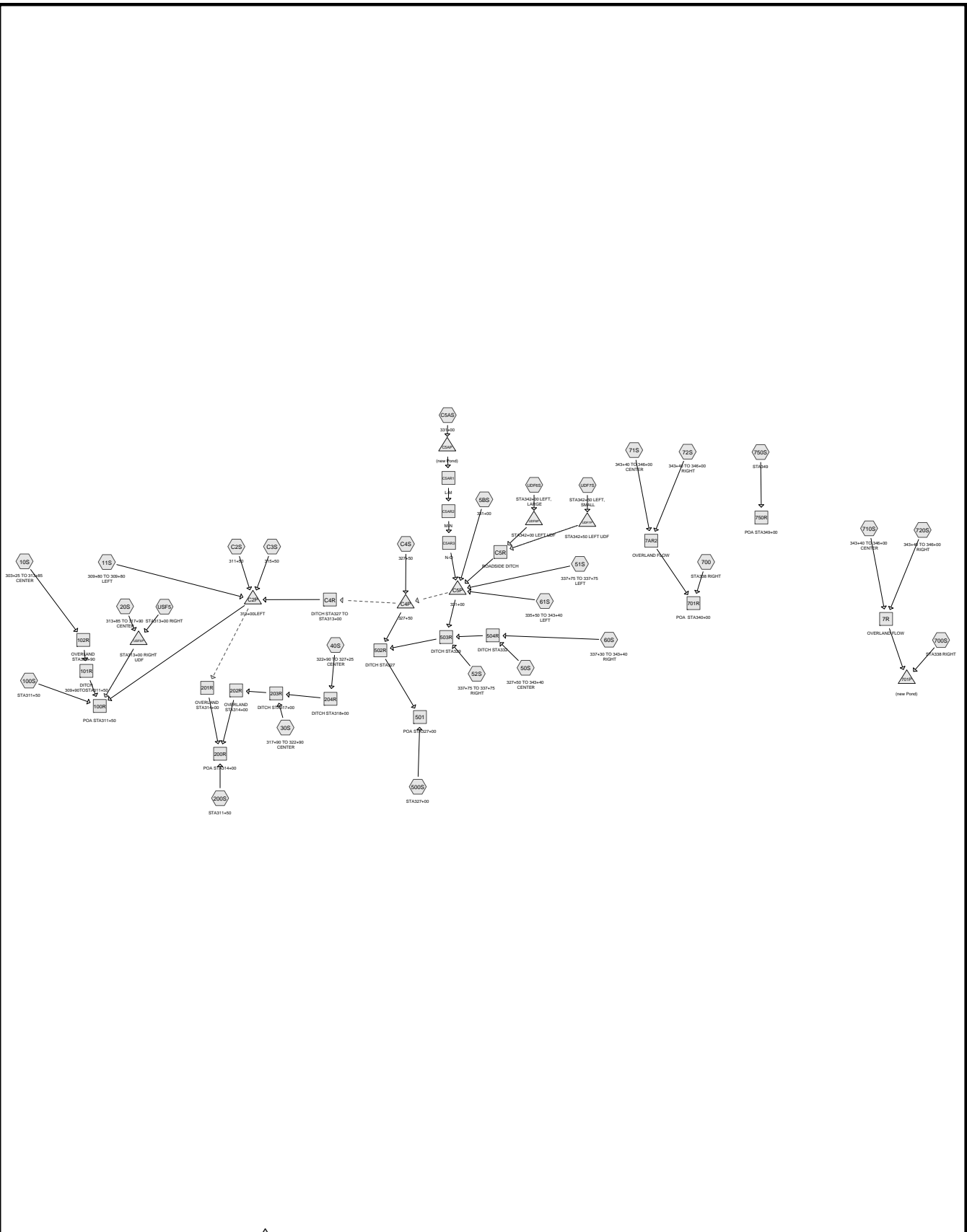
Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1AS: 257+30	Runoff Area=29,080 sf 79.93% Impervious Runoff Depth=5.49" Tc=5.0 min CN=94 Runoff=4.09 cfs 0.306 af
Subcatchment 1BS: 257+87	Runoff Area=3,848 sf 73.93% Impervious Runoff Depth=5.38" Tc=5.0 min CN=93 Runoff=0.53 cfs 0.040 af
Subcatchment 1CS: 257+87	Runoff Area=1,869 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.27 cfs 0.021 af
Subcatchment 1DS: 258+20	Runoff Area=3,745 sf 86.22% Impervious Runoff Depth=5.73" Tc=0.0 min CN=96 Runoff=0.63 cfs 0.041 af
Subcatchment 1ES: 258+20	Runoff Area=1,223 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.18 cfs 0.014 af
Subcatchment 1FS: 258+85	Runoff Area=30,468 sf 80.03% Impervious Runoff Depth=5.49" Tc=5.0 min CN=94 Runoff=4.28 cfs 0.320 af
Subcatchment 1S: 272+50	Runoff Area=210.559 ac 4.85% Impervious Runoff Depth=3.45" Flow Length=3,413' Tc=62.6 min CN=75 Runoff=327.89 cfs 60.591 af
Subcatchment 3S: 272+21	Runoff Area=1,291 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.19 cfs 0.015 af
Subcatchment 4AS: 271+12	Runoff Area=31,230 sf 80.07% Impervious Runoff Depth=5.49" Tc=5.0 min CN=94 Runoff=4.39 cfs 0.328 af
Subcatchment 4BS: 274+00	Runoff Area=37,362 sf 79.73% Impervious Runoff Depth=5.49" Tc=5.0 min CN=94 Runoff=5.25 cfs 0.393 af
Subcatchment 4CS: 272+56	Runoff Area=14,230 sf 80.00% Impervious Runoff Depth=5.49" Tc=5.0 min CN=94 Runoff=2.00 cfs 0.150 af
Subcatchment 5S: 273+02	Runoff Area=852 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.12 cfs 0.010 af
Subcatchment 6S: 281+50	Runoff Area=76,278 sf 71.46% Impervious Runoff Depth=5.27" Tc=5.0 min CN=92 Runoff=10.48 cfs 0.768 af
Subcatchment 7AS: Right STA 295+00 to 298+00	Runoff Area=46,170 sf 25.34% Impervious Runoff Depth=3.26" Tc=6.0 min UI Adjusted CN=73 Runoff=4.05 cfs 0.288 af
Subcatchment 7BS: Center STA 296+50 to 299+50	Runoff Area=14,989 sf 70.24% Impervious Runoff Depth=5.15" Tc=6.0 min CN=91 Runoff=1.96 cfs 0.148 af
Subcatchment 7CS: Center STA 299+50 to 303+50	Runoff Area=19,658 sf 71.51% Impervious Runoff Depth=5.27" Tc=5.0 min CN=92 Runoff=2.70 cfs 0.198 af

Subcatchment SP1S: (new Subcat)	Runoff Area=133.177 ac 7.21% Impervious Runoff Depth=3.45" Flow Length=1,660' Tc=16.2 min CN=75 Runoff=396.56 cfs 38.323 af
Subcatchment SP2S: (new Subcat)	Runoff Area=93,684 sf 27.10% Impervious Runoff Depth=3.65" Tc=5.0 min CN=77 Runoff=9.55 cfs 0.655 af
Subcatchment USF1: STA261+00 TO STA264+50	Runoff Area=27,929 sf 45.96% Impervious Runoff Depth=4.82" Tc=6.0 min CN=88 Runoff=3.49 cfs 0.257 af
Subcatchment USF2: STA264+50 to STA269+50	Runoff Area=43,724 sf 43.33% Impervious Runoff Depth=4.82" Tc=6.0 min CN=88 Runoff=5.47 cfs 0.403 af
Subcatchment USF3: STA291+00 LEFT	Runoff Area=115,680 sf 37.33% Impervious Runoff Depth=4.71" Tc=6.0 min CN=87 Runoff=14.22 cfs 1.042 af
Reach SP1R1: Roadside Ditch	Avg. Flow Depth=0.71' Max Vel=3.43 fps Inflow=13.27 cfs 1.402 af n=0.035 L=351.0' S=0.0199 '/' Capacity=139.65 cfs Outflow=12.80 cfs 1.402 af
Reach SP1R2: Roadside Ditch	Avg. Flow Depth=0.61' Max Vel=3.71 fps Inflow=12.73 cfs 1.042 af n=0.035 L=1,285.0' S=0.0280 '/' Capacity=165.52 cfs Outflow=10.71 cfs 1.042 af
Reach SP2R: SP2 STA299+43	Avg. Flow Depth=0.19' Max Vel=2.69 fps Inflow=9.55 cfs 0.655 af n=0.035 L=77.0' S=0.0940 '/' Capacity=820.11 cfs Outflow=9.50 cfs 0.655 af
Pond 1P: 272+50	Peak Elev=40.85' Storage=790,520 cf Inflow=332.19 cfs 62.293 af 54.0" Round Culvert n=0.012 L=185.9' S=0.0016 '/' Outflow=117.05 cfs 62.293 af
Pond 7P: UDF STA259	Peak Elev=104.79' Storage=6,382 cf Inflow=6.00 cfs 0.435 af Primary=3.05 cfs 0.434 af Secondary=0.16 cfs 0.002 af Outflow=3.21 cfs 0.435 af
Pond SP1P: (new Pond)	Peak Elev=39.29' Storage=1,555,322 cf Inflow=477.25 cfs 103.655 af Primary=120.75 cfs 102.705 af Secondary=0.00 cfs 0.000 af Outflow=120.75 cfs 102.705 af
Pond USF1P: STA263 FILTER TRENCH	Peak Elev=43.70' Storage=3,108 cf Inflow=3.49 cfs 0.257 af Primary=1.32 cfs 0.239 af Secondary=0.84 cfs 0.018 af Outflow=2.16 cfs 0.257 af
Pond USF2P: STA267 FILTER TRENCH	Peak Elev=42.79' Storage=4,539 cf Inflow=5.47 cfs 0.403 af Primary=1.51 cfs 0.342 af Secondary=2.15 cfs 0.061 af Outflow=3.66 cfs 0.403 af
Pond USF3P: STA291+00 LEFT UDF	Peak Elev=84.97' Storage=9,108 cf Inflow=14.22 cfs 1.042 af Primary=2.42 cfs 0.764 af Secondary=10.32 cfs 0.278 af Outflow=12.73 cfs 1.042 af

Total Runoff Area = 357.357 ac Runoff Volume = 104.310 af Average Runoff Depth = 3.50"
92.42% Pervious = 330.282 ac 7.58% Impervious = 27.074 ac

Mile 8.8, STA300+00 to STA350+00



Routing Diagram for 14181_8.8POST_STA300-STA350_10-14-16
 Prepared by Sebago Technics, Printed 10/14/2016
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
12.592	98	(5BS, C2S, C4S, C5AS)
0.090	74	>75% Grass cover, Good, HSG C (10S)
2.299	80	>75% Grass cover, Good, HSG D (UDF6S, UDF7S, USF5)
1.645	30	Brush, Good, HSG A (C2S)
25.794	73	Brush, Good, HSG D (5BS, 100S, 200S, 500S, 700, 700S, 750S, C2S, C3S, C4S, C5AS)
1.314	98	Impervious (C3S)
1.203	98	MTA CORRIDOR (UDF6S, UDF7S, USF5)
7.910	98	MTA PAVEMENT (10S, 11S, 20S, 30S, 40S, 50S, 51S, 52S, 60S, 61S, 71S, 72S, 710S, 720S)
5.841	98	Pavement (100S, 500S, 700, 700S, 750S)
2.883	30	Woods, Good, HSG A (C2S)
188.929	77	Woods, Good, HSG D (5BS, 100S, 200S, 500S, 700, 700S, 750S, C2S, C3S, C4S, C5AS)
1.307	98	pavement (200S)
251.806	78	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 5BS: 331+00	Runoff Area=41.478 ac 9.24% Impervious Runoff Depth=1.41" Flow Length=1,929' Tc=64.4 min CN=79 Runoff=25.32 cfs 4.882 af
Subcatchment 10S: 303+25 TO 313+85 CENTER	Runoff Area=54,402 sf 92.83% Impervious Runoff Depth=2.85" Tc=5.0 min CN=96 Runoff=4.01 cfs 0.296 af
Subcatchment 11S: 309+80 TO 309+80 LEFT	Runoff Area=971 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.07 cfs 0.006 af
Subcatchment 20S: 313+85 TO 317+90 CENTER	Runoff Area=20,843 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=1.59 cfs 0.122 af
Subcatchment 30S: 317+90 TO 322+90 CENTER	Runoff Area=26,755 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=2.04 cfs 0.157 af
Subcatchment 40S: 322+90 TO 327+25 CENTER	Runoff Area=21,605 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=1.65 cfs 0.127 af
Subcatchment 50S: 327+50 TO 343+40 CENTER	Runoff Area=80,647 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=6.15 cfs 0.473 af
Subcatchment 51S: 337+75 TO 337+75 LEFT	Runoff Area=1,672 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.13 cfs 0.010 af
Subcatchment 52S: 337+75 TO 337+75 RIGHT	Runoff Area=2,055 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.16 cfs 0.012 af
Subcatchment 60S: 337+30 TO 343+40 RIGHT	Runoff Area=26,409 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=2.01 cfs 0.155 af
Subcatchment 61S: 335+50 TO 343+40 LEFT	Runoff Area=34,668 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=2.64 cfs 0.203 af
Subcatchment 71S: 343+40 TO 346+00 CENTER	Runoff Area=25,915 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=1.98 cfs 0.152 af
Subcatchment 72S: 343+40 TO 346+00 RIGHT	Runoff Area=13,297 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=1.01 cfs 0.078 af
Subcatchment 100S: STA311+50	Runoff Area=1.659 ac 30.56% Impervious Runoff Depth=1.69" Tc=5.0 min CN=83 Runoff=3.41 cfs 0.234 af
Subcatchment 200S: STA311+50	Runoff Area=3.584 ac 36.47% Impervious Runoff Depth=1.69" Flow Length=640' Tc=5.0 min CN=83 Runoff=7.36 cfs 0.505 af
Subcatchment 500S: STA327+00	Runoff Area=5.749 ac 33.03% Impervious Runoff Depth=1.62" Flow Length=925' Tc=16.4 min CN=82 Runoff=7.94 cfs 0.776 af

Subcatchment 700: STA338 RIGHT	Runoff Area=5.273 ac 27.40% Impervious Runoff Depth=1.62" Flow Length=575' Tc=22.4 min CN=82 Runoff=6.41 cfs 0.711 af
Subcatchment 700S: STA338 RIGHT	Runoff Area=5.273 ac 27.40% Impervious Runoff Depth=1.62" Flow Length=575' Tc=22.4 min CN=82 Runoff=6.41 cfs 0.711 af
Subcatchment 710S: 343+40 TO 346+00 CENTER	Runoff Area=25,915 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=1.98 cfs 0.152 af
Subcatchment 720S: 343+40 TO 346+00 RIGHT	Runoff Area=13,297 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=1.01 cfs 0.078 af
Subcatchment 750S: STA349	Runoff Area=1.170 ac 46.58% Impervious Runoff Depth=1.92" Flow Length=80' Tc=3.1 min CN=86 Runoff=2.93 cfs 0.187 af
Subcatchment C2S: 311+50	Runoff Area=143.813 ac 5.04% Impervious Runoff Depth=1.22" Flow Length=2,483' Tc=35.1 min CN=76 Runoff=104.82 cfs 14.646 af
Subcatchment C3S: 315+50	Runoff Area=3.014 ac 43.60% Impervious Runoff Depth=1.84" Flow Length=731' Tc=15.0 min CN=85 Runoff=4.93 cfs 0.463 af
Subcatchment C4S: 327+50	Runoff Area=8.047 ac 5.51% Impervious Runoff Depth=1.35" Flow Length=869' Tc=20.2 min CN=78 Runoff=8.35 cfs 0.903 af
Subcatchment C5AS: 331+00	Runoff Area=21.245 ac 5.02% Impervious Runoff Depth=1.35" Flow Length=423' Tc=10.2 min CN=78 Runoff=28.51 cfs 2.385 af
Subcatchment UDF6S: STA342+00 LEFT, LARGE	Runoff Area=103,120 sf 27.33% Impervious Runoff Depth=1.84" Tc=6.0 min CN=85 Runoff=5.12 cfs 0.364 af
Subcatchment UDF7S: STA342+50 LEFT, SMALL	Runoff Area=28,267 sf 65.01% Impervious Runoff Depth=2.45" Tc=6.0 min CN=92 Runoff=1.81 cfs 0.132 af
Subcatchment USF5: STA313+00 RIGHT	Runoff Area=21,134 sf 27.59% Impervious Runoff Depth=1.84" Tc=6.0 min CN=85 Runoff=1.05 cfs 0.075 af
Reach 7AR2: OVERLAND FLOW	Avg. Flow Depth=0.07' Max Vel=1.91 fps Inflow=2.99 cfs 0.230 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=2.90 cfs 0.230 af
Reach 7R: OVERLAND FLOW	Avg. Flow Depth=0.07' Max Vel=1.91 fps Inflow=2.99 cfs 0.230 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=2.90 cfs 0.230 af
Reach 100R: POA STA311+50	Inflow=53.62 cfs 16.387 af Outflow=53.62 cfs 16.387 af
Reach 101R: DITCH 309+90TOSTA311+50	Avg. Flow Depth=0.18' Max Vel=1.79 fps Inflow=4.00 cfs 0.296 af n=0.035 L=170.0' S=0.0206 '/' Capacity=92.78 cfs Outflow=3.89 cfs 0.296 af
Reach 102R: OVERLAND STA309+90	Avg. Flow Depth=0.07' Max Vel=2.56 fps Inflow=4.01 cfs 0.296 af n=0.035 L=60.0' S=0.1300 '/' Capacity=467.03 cfs Outflow=4.00 cfs 0.296 af

Reach 200R: POA STA314+00	Inflow=9.09 cfs 0.789 af Outflow=9.09 cfs 0.789 af
Reach 201R: OVERLAND STA314+00	Inflow=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
Reach 202R: OVERLAND STA314+00	Avg. Flow Depth=0.07' Max Vel=1.92 fps Inflow=2.95 cfs 0.284 af n=0.035 L=325.0' S=0.0769 '/' Capacity=359.26 cfs Outflow=2.86 cfs 0.284 af
Reach 203R: DITCH STA317+00	Avg. Flow Depth=0.26' Max Vel=2.41 fps Inflow=2.96 cfs 0.284 af n=0.035 L=120.0' S=0.0292 '/' Capacity=2,420.87 cfs Outflow=2.95 cfs 0.284 af
Reach 204R: DITCH STA318+00	Avg. Flow Depth=0.17' Max Vel=2.05 fps Inflow=1.65 cfs 0.127 af n=0.035 L=475.0' S=0.0326 '/' Capacity=2,560.64 cfs Outflow=1.47 cfs 0.127 af
Reach 501: POA STA327+00	Inflow=23.82 cfs 9.652 af Outflow=23.82 cfs 9.652 af
Reach 502R: DITCH STA327	Avg. Flow Depth=0.80' Max Vel=2.83 fps Inflow=20.21 cfs 8.877 af n=0.035 L=150.0' S=0.0100 '/' Capacity=142.33 cfs Outflow=20.21 cfs 8.876 af
Reach 503R: DITCH STA329	Avg. Flow Depth=0.77' Max Vel=2.89 fps Inflow=19.71 cfs 8.526 af n=0.035 L=270.0' S=0.0107 '/' Capacity=147.51 cfs Outflow=19.71 cfs 8.525 af
Reach 504R: DITCH STA332	Avg. Flow Depth=0.53' Max Vel=1.86 fps Inflow=8.16 cfs 0.628 af n=0.035 L=300.0' S=0.0067 '/' Capacity=116.22 cfs Outflow=7.60 cfs 0.628 af
Reach 701R: POA STA340+00	Inflow=7.65 cfs 0.941 af Outflow=7.65 cfs 0.941 af
Reach 750R: POA STA349+00	Inflow=2.93 cfs 0.187 af Outflow=2.93 cfs 0.187 af
Reach C4R: DITCH STA327 TO STA313+00	Avg. Flow Depth=0.38' Max Vel=3.19 fps Inflow=5.09 cfs 0.551 af n=0.030 L=1,010.0' S=0.0257 '/' Capacity=545.10 cfs Outflow=4.82 cfs 0.551 af
Reach C5AR1: L-M	Avg. Flow Depth=0.15' Max Vel=0.17 fps Inflow=6.18 cfs 2.346 af n=0.080 L=922.0' S=0.0011 '/' Capacity=108.51 cfs Outflow=4.65 cfs 2.333 af
Reach C5AR2: M-N	Avg. Flow Depth=0.23' Max Vel=1.45 fps Inflow=4.65 cfs 2.333 af n=0.030 L=137.0' S=0.0073 '/' Capacity=69.43 cfs Outflow=4.65 cfs 2.333 af
Reach C5AR3: N-O	Avg. Flow Depth=0.45' Max Vel=7.59 fps Inflow=4.65 cfs 2.333 af n=0.030 L=153.0' S=0.1830 '/' Capacity=38.66 cfs Outflow=4.65 cfs 2.333 af
Reach C5R: ROADSIDE DITCH	Avg. Flow Depth=0.10' Max Vel=1.82 fps Inflow=1.07 cfs 0.461 af n=0.035 L=160.0' S=0.0437 '/' Capacity=860.03 cfs Outflow=1.04 cfs 0.460 af
Pond 701P: (new Pond)	Peak Elev=143.63' Storage=349 cf Inflow=7.65 cfs 0.941 af Primary=7.62 cfs 0.941 af Secondary=0.00 cfs 0.000 af Outflow=7.62 cfs 0.941 af

Pond C2P: 313+00LEFT

Peak Elev=112.08' Storage=170,791 cf Inflow=111.84 cfs 15.666 af
Primary=52.69 cfs 15.666 af Secondary=0.00 cfs 0.000 af Outflow=52.69 cfs 15.666 af

Pond C4P: 327+50

Peak Elev=146.01' Storage=0 cf Inflow=8.35 cfs 0.903 af
Primary=3.25 cfs 0.352 af Secondary=5.09 cfs 0.551 af Outflow=8.35 cfs 0.903 af

Pond C5AP: (new Pond)

Peak Elev=182.91' Storage=37,688 cf Inflow=28.51 cfs 2.385 af
15.0" Round Culvert n=0.025 L=27.0' S=0.0100 '/' Outflow=6.18 cfs 2.346 af

Pond C5P: 331+00

Peak Elev=144.56' Storage=29,970 cf Inflow=26.41 cfs 7.888 af
Primary=19.13 cfs 7.886 af Secondary=0.00 cfs 0.000 af Outflow=19.13 cfs 7.886 af

Pond UDF6P: STA342+00 LEFT UDF

Peak Elev=163.06' Storage=7,995 cf Inflow=5.12 cfs 0.364 af
Primary=0.66 cfs 0.329 af Secondary=0.00 cfs 0.000 af Outflow=0.66 cfs 0.329 af

Pond UDF7P: STA342+50 LEFT UDF

Peak Elev=163.37' Storage=2,222 cf Inflow=1.81 cfs 0.132 af
Primary=0.84 cfs 0.131 af Secondary=0.00 cfs 0.000 af Outflow=0.84 cfs 0.131 af

Pond USF5P: STA313+00 RIGHT UDF

Peak Elev=116.19' Storage=3,348 cf Inflow=2.62 cfs 0.197 af
Primary=1.05 cfs 0.191 af Secondary=0.00 cfs 0.000 af Outflow=1.05 cfs 0.191 af

Total Runoff Area = 251.806 ac Runoff Volume = 28.996 af Average Runoff Depth = 1.38"
88.02% Pervious = 221.639 ac 11.98% Impervious = 30.167 ac

Summary for Subcatchment 5BS: 331+00

Runoff = 25.32 cfs @ 12.88 hrs, Volume= 4.882 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 3.833	98	
33.795	77	Woods, Good, HSG D
3.850	73	Brush, Good, HSG D
41.478	79	Weighted Average
37.645		90.76% Pervious Area
3.833		9.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	36	0.0972	0.27		Sheet Flow, A-B Grass: Short n= 0.150 P2= 3.30"
3.6	166	0.0120	0.77		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
0.6	56	0.0893	1.49		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
1.8	83	0.0120	0.77		Shallow Concentrated Flow, D-E Short Grass Pasture Kv= 7.0 fps
0.6	40	0.0250	1.11		Shallow Concentrated Flow, E-F Short Grass Pasture Kv= 7.0 fps
1.0	95	0.0526	1.61		Shallow Concentrated Flow, F-G Short Grass Pasture Kv= 7.0 fps
5.0	131	0.0076	0.44		Shallow Concentrated Flow, G-H Woodland Kv= 5.0 fps
0.6	56	0.1071	1.64		Shallow Concentrated Flow, H-I Woodland Kv= 5.0 fps
3.7	108	0.0093	0.48		Shallow Concentrated Flow, I-J Woodland Kv= 5.0 fps
0.3	33	0.1515	1.95		Shallow Concentrated Flow, J-K Woodland Kv= 5.0 fps
0.8	40	0.0250	0.79		Shallow Concentrated Flow, K-L Woodland Kv= 5.0 fps
0.6	63	0.1111	1.67		Shallow Concentrated Flow, L-M Woodland Kv= 5.0 fps
1.4	88	0.0455	1.07		Shallow Concentrated Flow, M-N Woodland Kv= 5.0 fps
30.9	444	0.0023	0.24		Shallow Concentrated Flow, N-O Woodland Kv= 5.0 fps
2.0	103	0.0291	0.85		Shallow Concentrated Flow, O-P Woodland Kv= 5.0 fps
1.0	76	0.0658	1.28		Shallow Concentrated Flow, P-Q Woodland Kv= 5.0 fps
6.2	152	0.0066	0.41		Shallow Concentrated Flow, Q-R Woodland Kv= 5.0 fps
0.5	50	0.1200	1.73		Shallow Concentrated Flow, R-S Woodland Kv= 5.0 fps
0.0	9	1.0000	5.00		Shallow Concentrated Flow, S-T Woodland Kv= 5.0 fps
0.1	12	0.2500	3.50		Shallow Concentrated Flow, T-U Short Grass Pasture Kv= 7.0 fps
1.4	88	0.0227	1.05		Shallow Concentrated Flow, U-V Short Grass Pasture Kv= 7.0 fps
64.4	1,929	Total			

Summary for Subcatchment 10S: 303+25 TO 313+85 CENTER

Runoff = 4.01 cfs @ 12.07 hrs, Volume= 0.296 af, Depth= 2.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	50,503	98	MTA PAVEMENT
	3,899	74	>75% Grass cover, Good, HSG C
	54,402	96	Weighted Average
	3,899		7.17% Pervious Area
	50,503		92.83% Impervious Area

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

Summary for Subcatchment 11S: 309+80 TO 309+80 LEFT

Runoff = 0.07 cfs @ 12.07 hrs, Volume= 0.006 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	971	98	MTA PAVEMENT
	971		100.00% Impervious Area

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

Summary for Subcatchment 20S: 313+85 TO 317+90 CENTER

Runoff = 1.59 cfs @ 12.07 hrs, Volume= 0.122 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	20,843	98	MTA PAVEMENT
	0	80	>75% Grass cover, Good, HSG D
	20,843	98	Weighted Average
	20,843		100.00% Impervious Area

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

Summary for Subcatchment 30S: 317+90 TO 322+90 CENTER

Runoff = 2.04 cfs @ 12.07 hrs, Volume= 0.157 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 26,755	98	MTA PAVEMENT
0	80	>75% Grass cover, Good, HSG D
26,755	98	Weighted Average
26,755		100.00% Impervious Area

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

Summary for Subcatchment 40S: 322+90 TO 327+25 CENTER

Runoff = 1.65 cfs @ 12.07 hrs, Volume= 0.127 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 21,605	98	MTA PAVEMENT
0	80	>75% Grass cover, Good, HSG D
21,605	98	Weighted Average
21,605		100.00% Impervious Area

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

Summary for Subcatchment 50S: 327+50 TO 343+40 CENTER

Runoff = 6.15 cfs @ 12.07 hrs, Volume= 0.473 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	80,647	98	MTA PAVEMENT
	0	80	>75% Grass cover, Good, HSG D
	80,647	98	Weighted Average
	80,647		100.00% Impervious Area

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

Summary for Subcatchment 51S: 337+75 TO 337+75 LEFT

Runoff = 0.13 cfs @ 12.07 hrs, Volume= 0.010 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	1,672	98	MTA PAVEMENT
	1,672		100.00% Impervious Area

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

Summary for Subcatchment 52S: 337+75 TO 337+75 RIGHT

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 0.012 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	2,055	98	MTA PAVEMENT
	2,055		100.00% Impervious Area

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

Summary for Subcatchment 60S: 337+30 TO 343+40 RIGHT

Runoff = 2.01 cfs @ 12.07 hrs, Volume= 0.155 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 26,409	98	MTA PAVEMENT
26,409		100.00% Impervious Area

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

Summary for Subcatchment 61S: 335+50 TO 343+40 LEFT

Runoff = 2.64 cfs @ 12.07 hrs, Volume= 0.203 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 34,668	98	MTA PAVEMENT
34,668		100.00% Impervious Area

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

Summary for Subcatchment 71S: 343+40 TO 346+00 CENTER

Runoff = 1.98 cfs @ 12.07 hrs, Volume= 0.152 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 25,915	98	MTA PAVEMENT
0	80	>75% Grass cover, Good, HSG D
25,915	98	Weighted Average
25,915		100.00% Impervious Area

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

Summary for Subcatchment 72S: 343+40 TO 346+00 RIGHT

Runoff = 1.01 cfs @ 12.07 hrs, Volume= 0.078 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 13,297	98	MTA PAVEMENT
13,297		100.00% Impervious Area

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

Summary for Subcatchment 100S: STA311+50

Runoff = 3.41 cfs @ 12.08 hrs, Volume= 0.234 af, Depth= 1.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 0.507	98	Pavement
0.245	73	Brush, Good, HSG D
0.907	77	Woods, Good, HSG D
1.659	83	Weighted Average
1.152		69.44% Pervious Area
0.507		30.56% Impervious Area

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

Summary for Subcatchment 200S: STA311+50

Runoff = 7.36 cfs @ 12.08 hrs, Volume= 0.505 af, Depth= 1.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 1.307	98	pavement
1.103	73	Brush, Good, HSG D
1.174	77	Woods, Good, HSG D
3.584	83	Weighted Average
2.277		63.53% Pervious Area
1.307		36.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	30	0.1500	0.14		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.1	20	0.2500	3.50		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
0.7	590	0.0300	13.83	2,455.21	Trap/Vee/Rect Channel Flow, C-D Bot.W=3.00' D=5.00' Z= 5.0 & 8.0 '/' Top.W=68.00' n= 0.035 Earth, dense weeds
0.6					Direct Entry,
5.0	640	Total			

Summary for Subcatchment 500S: STA327+00

Runoff = 7.94 cfs @ 12.23 hrs, Volume= 0.776 af, Depth= 1.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 1.899	98	Pavement
2.669	73	Brush, Good, HSG D
1.181	77	Woods, Good, HSG D
5.749	82	Weighted Average
3.850		66.97% Pervious Area
1.899		33.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	90	0.0900	0.14		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
4.1	360	0.0440	1.47		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
1.7	475	0.0060	4.66	279.49	Trap/Vee/Rect Channel Flow, C-D Bot.W=5.00' D=3.00' Z= 5.0 '/' Top.W=35.00' n= 0.035 Earth, dense weeds
16.4	925	Total			

Summary for Subcatchment 700: STA338 RIGHT

Runoff = 6.41 cfs @ 12.32 hrs, Volume= 0.711 af, Depth= 1.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
2.754	77	Woods, Good, HSG D
1.074	73	Brush, Good, HSG D
* 1.445	98	Pavement
5.273	82	Weighted Average
3.828		72.60% Pervious Area
1.445		27.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	100	0.0250	0.13		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 3.30"
7.1	300	0.0200	0.71		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
2.4	175	0.0600	1.22		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
22.4	575	Total			

Summary for Subcatchment 700S: STA338 RIGHT

Runoff = 6.41 cfs @ 12.32 hrs, Volume= 0.711 af, Depth= 1.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
2.754	77	Woods, Good, HSG D
1.074	73	Brush, Good, HSG D
* 1.445	98	Pavement
5.273	82	Weighted Average
3.828		72.60% Pervious Area
1.445		27.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.9	100	0.0250	0.13		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 3.30"
7.1	300	0.0200	0.71		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
2.4	175	0.0600	1.22		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
22.4	575	Total			

Summary for Subcatchment 710S: 343+40 TO 346+00 CENTER

Runoff = 1.98 cfs @ 12.07 hrs, Volume= 0.152 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 25,915	98	MTA PAVEMENT
0	80	>75% Grass cover, Good, HSG D
25,915	98	Weighted Average
25,915		100.00% Impervious Area

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

Summary for Subcatchment 720S: 343+40 TO 346+00 RIGHT

Runoff = 1.01 cfs @ 12.07 hrs, Volume= 0.078 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 13,297	98	MTA PAVEMENT
13,297		100.00% Impervious Area

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

Summary for Subcatchment 750S: STA349

Runoff = 2.93 cfs @ 12.05 hrs, Volume= 0.187 af, Depth= 1.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
0.417	77	Woods, Good, HSG D
0.208	73	Brush, Good, HSG D
* 0.545	98	Pavement
1.170	86	Weighted Average
0.625		53.42% Pervious Area
0.545		46.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	30	0.1000	0.18		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 3.30"
0.3	50	0.2000	3.13		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
3.1	80				Total

Summary for Subcatchment C2S: 311+50

Runoff = 104.82 cfs @ 12.52 hrs, Volume= 14.646 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 7.250	98	
2.883	30	Woods, Good, HSG A
1.645	30	Brush, Good, HSG A
120.075	77	Woods, Good, HSG D
11.960	73	Brush, Good, HSG D
143.813	76	Weighted Average
136.563		94.96% Pervious Area
7.250		5.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	29	0.0760	0.10		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.8	60	0.0333	1.28		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
1.4	115	0.0780	1.40		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
12.9	521	0.0020	0.67		Shallow Concentrated Flow, D-E Grassed Waterway Kv= 15.0 fps
0.8	120	0.0250	2.53	48.11	Channel Flow, E-F Area= 19.0 sf Perim= 29.0' r= 0.66' n= 0.070 Sluggish weedy reaches w/pools
0.3	113	0.0370	6.49	470.44	Channel Flow, F-G Area= 72.5 sf Perim= 129.0' r= 0.56' n= 0.030 Earth, grassed & winding
2.2	124	0.0040	0.95		Shallow Concentrated Flow, G-H Grassed Waterway Kv= 15.0 fps
6.1	361	0.0390	0.99		Shallow Concentrated Flow, H-I Woodland Kv= 5.0 fps
0.9	463	0.0713	9.00	413.84	Channel Flow, I-J Area= 46.0 sf Perim= 82.0' r= 0.56' n= 0.030 Earth, grassed & winding
3.2	123	0.0160	0.63		Shallow Concentrated Flow, J-K Woodland Kv= 5.0 fps
0.4	167	0.0540	7.25	65.26	Channel Flow, K-L Area= 9.0 sf Perim= 18.0' r= 0.50' n= 0.030 Earth, grassed & winding
1.5	287	0.0105	3.20	30.38	Channel Flow, L-M Area= 9.5 sf Perim= 19.0' r= 0.50' n= 0.030 Earth, grassed & winding
35.1	2,483	Total			

Summary for Subcatchment C3S: 315+50

Runoff = 4.93 cfs @ 12.21 hrs, Volume= 0.463 af, Depth= 1.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 1.314	98	Impervious
0.932	77	Woods, Good, HSG D
0.768	73	Brush, Good, HSG D
3.014	85	Weighted Average
1.700		56.40% Pervious Area
1.314		43.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.0	62	0.4840	0.26		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
1.1	101	0.0890	1.49		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.1	22	0.4090	3.20		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
9.8	546	0.0348	0.93		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
15.0	731	Total			

Summary for Subcatchment C4S: 327+50

Runoff = 8.35 cfs @ 12.28 hrs, Volume= 0.903 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 0.443	98	
7.260	77	Woods, Good, HSG D
0.344	73	Brush, Good, HSG D
8.047	78	Weighted Average
7.604		94.49% Pervious Area
0.443		5.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	28	0.0357	0.08		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.5	44	0.0909	1.51		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
3.4	128	0.0156	0.62		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.5	51	0.0980	1.57		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
0.2	24	0.2083	2.28		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
1.1	62	0.0323	0.90		Shallow Concentrated Flow, F-G Woodland Kv= 5.0 fps
0.5	62	0.1613	2.01		Shallow Concentrated Flow, G-H Woodland Kv= 5.0 fps
0.3	28	0.1071	1.64		Shallow Concentrated Flow, H-I Woodland Kv= 5.0 fps
0.5	30	0.0333	0.91		Shallow Concentrated Flow, I-J Woodland Kv= 5.0 fps
0.1	24	0.2917	2.70		Shallow Concentrated Flow, J-K Woodland Kv= 5.0 fps
0.3	27	0.1111	1.67		Shallow Concentrated Flow, K-L Woodland Kv= 5.0 fps
0.4	26	0.0385	0.98		Shallow Concentrated Flow, L-M Woodland Kv= 5.0 fps
0.5	68	0.2353	2.43		Shallow Concentrated Flow, M-N Woodland Kv= 5.0 fps
0.3	24	0.0833	1.44		Shallow Concentrated Flow, N-O Woodland Kv= 5.0 fps
0.4	52	0.1538	1.96		Shallow Concentrated Flow, O-P Woodland Kv= 5.0 fps
5.1	191	0.0157	0.63		Shallow Concentrated Flow, P-Q Woodland Kv= 5.0 fps
20.2	869	Total			

Summary for Subcatchment C5AS: 331+00

Runoff = 28.51 cfs @ 12.15 hrs, Volume= 2.385 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 1.066	98	
17.680	77	Woods, Good, HSG D
2.499	73	Brush, Good, HSG D
21.245	78	Weighted Average
20.179		94.98% Pervious Area
1.066		5.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.0	24	0.0750	0.10		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	81	0.9877	4.97		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
4.3	150	0.0133	0.58		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.8	79	0.1013	1.59		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
0.2	34	0.2059	2.27		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
0.6	55	0.1091	1.65		Shallow Concentrated Flow, F-G Woodland Kv= 5.0 fps
10.2	423	Total			

Summary for Subcatchment UDF6S: STA342+00 LEFT, LARGE

Runoff = 5.12 cfs @ 12.09 hrs, Volume= 0.364 af, Depth= 1.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
74,938	80	>75% Grass cover, Good, HSG D
* 28,182	98	MTA CORRIDOR
103,120	85	Weighted Average
74,938		72.67% Pervious Area
28,182		27.33% Impervious Area

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

Summary for Subcatchment UDF7S: STA342+50 LEFT, SMALL

Runoff = 1.81 cfs @ 12.09 hrs, Volume= 0.132 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
9,891	80	>75% Grass cover, Good, HSG D
* 18,376	98	MTA CORRIDOR
28,267	92	Weighted Average
9,891		34.99% Pervious Area
18,376		65.01% Impervious Area

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

Summary for Subcatchment USF5: STA313+00 RIGHT

Runoff = 1.05 cfs @ 12.09 hrs, Volume= 0.075 af, Depth= 1.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
15,303	80	>75% Grass cover, Good, HSG D
* 5,831	98	MTA CORRIDOR
21,134	85	Weighted Average
15,303		72.41% Pervious Area
5,831		27.59% Impervious Area

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

Summary for Reach 7AR2: OVERLAND FLOW

Inflow Area = 0.900 ac, 100.00% Impervious, Inflow Depth = 3.07" for 02-YR event
 Inflow = 2.99 cfs @ 12.07 hrs, Volume= 0.230 af
 Outflow = 2.90 cfs @ 12.12 hrs, Volume= 0.230 af, Atten= 3%, Lag= 2.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.91 fps, Min. Travel Time= 1.7 min
 Avg. Velocity = 0.60 fps, Avg. Travel Time= 5.6 min

Peak Storage= 304 cf @ 12.09 hrs
 Average Depth at Peak Storage= 0.07'
 Bank-Full Depth= 1.00' Flow Area= 40.0 sf, Capacity= 354.74 cfs

20.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
 Side Slope Z-value= 20.0 '/' Top Width= 60.00'
 Length= 200.0' Slope= 0.0750 '/'
 Inlet Invert= 160.00', Outlet Invert= 145.00'



Summary for Reach 7R: OVERLAND FLOW

Inflow Area = 0.900 ac, 100.00% Impervious, Inflow Depth = 3.07" for 02-YR event
 Inflow = 2.99 cfs @ 12.07 hrs, Volume= 0.230 af
 Outflow = 2.90 cfs @ 12.12 hrs, Volume= 0.230 af, Atten= 3%, Lag= 2.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.91 fps, Min. Travel Time= 1.7 min
 Avg. Velocity = 0.60 fps, Avg. Travel Time= 5.6 min

Peak Storage= 304 cf @ 12.09 hrs
 Average Depth at Peak Storage= 0.07'
 Bank-Full Depth= 1.00' Flow Area= 40.0 sf, Capacity= 354.74 cfs

20.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
 Side Slope Z-value= 20.0 '/' Top Width= 60.00'
 Length= 200.0' Slope= 0.0750 '/'
 Inlet Invert= 160.00', Outlet Invert= 145.00'



Summary for Reach 100R: POA STA311+50

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 150.721 ac, 7.21% Impervious, Inflow Depth > 1.30" for 02-YR event
 Inflow = 53.62 cfs @ 13.00 hrs, Volume= 16.387 af
 Outflow = 53.62 cfs @ 13.00 hrs, Volume= 16.387 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 101R: DITCH 309+90TOSTA311+50

[62] Hint: Exceeded Reach 102R OUTLET depth by 0.11' @ 12.11 hrs

Inflow Area = 1.249 ac, 92.83% Impervious, Inflow Depth = 2.85" for 02-YR event
 Inflow = 4.00 cfs @ 12.08 hrs, Volume= 0.296 af
 Outflow = 3.89 cfs @ 12.13 hrs, Volume= 0.296 af, Atten= 3%, Lag= 2.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.79 fps, Min. Travel Time= 1.6 min
 Avg. Velocity = 0.46 fps, Avg. Travel Time= 6.1 min

Peak Storage= 370 cf @ 12.10 hrs
 Average Depth at Peak Storage= 0.18'
 Bank-Full Depth= 1.00' Flow Area= 20.0 sf, Capacity= 92.78 cfs

10.00' x 1.00' deep channel, n= 0.035
 Side Slope Z-value= 10.0 '/' Top Width= 30.00'
 Length= 170.0' Slope= 0.0206 '/'
 Inlet Invert= 107.00', Outlet Invert= 103.50'



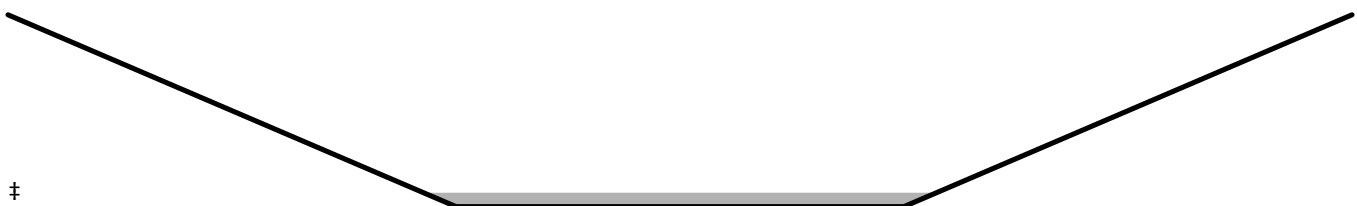
Summary for Reach 102R: OVERLAND STA309+90

Inflow Area = 1.249 ac, 92.83% Impervious, Inflow Depth = 2.85" for 02-YR event
 Inflow = 4.01 cfs @ 12.07 hrs, Volume= 0.296 af
 Outflow = 4.00 cfs @ 12.08 hrs, Volume= 0.296 af, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 2.56 fps, Min. Travel Time= 0.4 min
 Avg. Velocity = 0.79 fps, Avg. Travel Time= 1.3 min

Peak Storage= 94 cf @ 12.07 hrs
 Average Depth at Peak Storage= 0.07'
 Bank-Full Depth= 1.00' Flow Area= 40.0 sf, Capacity= 467.03 cfs

20.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
 Side Slope Z-value= 20.0 '/' Top Width= 60.00'
 Length= 60.0' Slope= 0.1300 '/'
 Inlet Invert= 114.80', Outlet Invert= 107.00'



Summary for Reach 200R: POA STA314+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.694 ac, 51.49% Impervious, Inflow Depth = 2.02" for 02-YR event
 Inflow = 9.09 cfs @ 12.09 hrs, Volume= 0.789 af
 Outflow = 9.09 cfs @ 12.09 hrs, Volume= 0.789 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 201R: OVERLAND STA314+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 202R: OVERLAND STA314+00

[61] Hint: Exceeded Reach 203R outlet invert by 0.07' @ 12.16 hrs

Inflow Area = 1.110 ac, 100.00% Impervious, Inflow Depth = 3.07" for 02-YR event
 Inflow = 2.95 cfs @ 12.12 hrs, Volume= 0.284 af
 Outflow = 2.86 cfs @ 12.20 hrs, Volume= 0.284 af, Atten= 3%, Lag= 5.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 1.92 fps, Min. Travel Time= 2.8 min
 Avg. Velocity = 0.62 fps, Avg. Travel Time= 8.7 min

Peak Storage= 486 cf @ 12.16 hrs
 Average Depth at Peak Storage= 0.07'
 Bank-Full Depth= 1.00' Flow Area= 40.0 sf, Capacity= 359.26 cfs

20.00' x 1.00' deep channel, n= 0.035
 Side Slope Z-value= 20.0 '/' Top Width= 60.00'
 Length= 325.0' Slope= 0.0769 '/'
 Inlet Invert= 126.00', Outlet Invert= 101.00'



Summary for Reach 203R: DITCH STA317+00

[62] Hint: Exceeded Reach 204R OUTLET depth by 0.09' @ 12.20 hrs

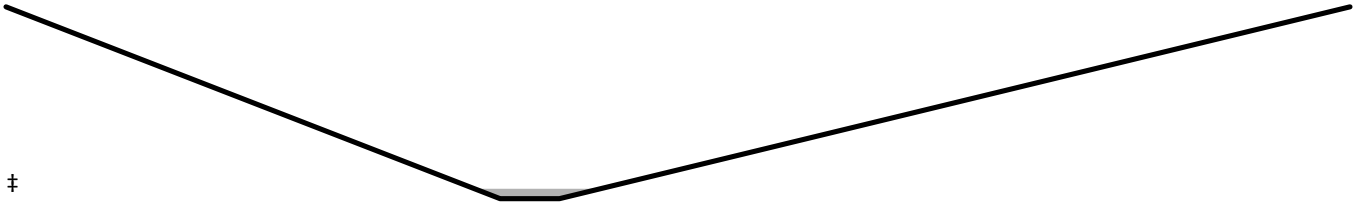
Inflow Area = 1.110 ac, 100.00% Impervious, Inflow Depth = 3.07" for 02-YR event
 Inflow = 2.96 cfs @ 12.09 hrs, Volume= 0.284 af
 Outflow = 2.95 cfs @ 12.12 hrs, Volume= 0.284 af, Atten= 0%, Lag= 1.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 2.41 fps, Min. Travel Time= 0.8 min
 Avg. Velocity = 0.99 fps, Avg. Travel Time= 2.0 min

Peak Storage= 147 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.26'
Bank-Full Depth= 5.00' Flow Area= 177.5 sf, Capacity= 2,420.87 cfs

3.00' x 5.00' deep channel, n= 0.035
Side Slope Z-value= 5.0 8.0 '/' Top Width= 68.00'
Length= 120.0' Slope= 0.0292 '/'
Inlet Invert= 129.50', Outlet Invert= 126.00'



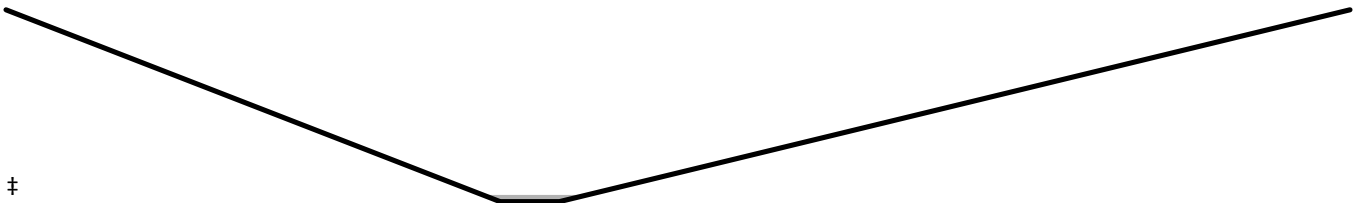
Summary for Reach 204R: DITCH STA318+00

Inflow Area = 0.496 ac, 100.00% Impervious, Inflow Depth = 3.07" for 02-YR event
Inflow = 1.65 cfs @ 12.07 hrs, Volume= 0.127 af
Outflow = 1.47 cfs @ 12.17 hrs, Volume= 0.127 af, Atten= 11%, Lag= 6.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.05 fps, Min. Travel Time= 3.9 min
Avg. Velocity = 1.00 fps, Avg. Travel Time= 7.9 min

Peak Storage= 342 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 5.00' Flow Area= 177.5 sf, Capacity= 2,560.64 cfs

3.00' x 5.00' deep channel, n= 0.035
Side Slope Z-value= 5.0 8.0 '/' Top Width= 68.00'
Length= 475.0' Slope= 0.0326 '/'
Inlet Invert= 145.00', Outlet Invert= 129.50'



Summary for Reach 501: POA STA327+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 82.874 ac, 14.06% Impervious, Inflow Depth > 1.40" for 02-YR event
Inflow = 23.82 cfs @ 12.24 hrs, Volume= 9.652 af
Outflow = 23.82 cfs @ 12.24 hrs, Volume= 9.652 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 502R: DITCH STA327

[62] Hint: Exceeded Reach 503R OUTLET depth by 0.11' @ 12.26 hrs

[79] Warning: Submerged Pond C4P Primary device # 1 OUTLET by 0.27'

Inflow Area = 77.125 ac, 12.64% Impervious, Inflow Depth > 1.38" for 02-YR event
 Inflow = 20.21 cfs @ 13.36 hrs, Volume= 8.877 af
 Outflow = 20.21 cfs @ 13.38 hrs, Volume= 8.876 af, Atten= 0%, Lag= 1.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 2.83 fps, Min. Travel Time= 0.9 min

Avg. Velocity = 1.03 fps, Avg. Travel Time= 2.4 min

Peak Storage= 1,071 cf @ 13.37 hrs

Average Depth at Peak Storage= 0.80'

Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 142.33 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 5.0 '/' Top Width= 25.00'

Length= 150.0' Slope= 0.0100 '/'

Inlet Invert= 138.50', Outlet Invert= 137.00'



Summary for Reach 503R: DITCH STA329

[79] Warning: Submerged Pond C5P Primary device # 1 INLET by 0.47'

Inflow Area = 69.078 ac, 13.47% Impervious, Inflow Depth > 1.48" for 02-YR event
 Inflow = 19.71 cfs @ 13.33 hrs, Volume= 8.526 af
 Outflow = 19.71 cfs @ 13.37 hrs, Volume= 8.525 af, Atten= 0%, Lag= 2.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 2.89 fps, Min. Travel Time= 1.6 min

Avg. Velocity = 1.04 fps, Avg. Travel Time= 4.3 min

Peak Storage= 1,844 cf @ 13.35 hrs

Average Depth at Peak Storage= 0.77'

Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 147.51 cfs

5.00' x 2.00' deep channel, n= 0.035

Side Slope Z-value= 5.0 '/' Top Width= 25.00'

Length= 270.0' Slope= 0.0107 '/'

Inlet Invert= 141.40', Outlet Invert= 138.50'



Summary for Reach 504R: DITCH STA332

Inflow Area = 2.458 ac, 100.00% Impervious, Inflow Depth = 3.07" for 02-YR event
 Inflow = 8.16 cfs @ 12.07 hrs, Volume= 0.628 af
 Outflow = 7.60 cfs @ 12.14 hrs, Volume= 0.628 af, Atten= 7%, Lag= 4.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.86 fps, Min. Travel Time= 2.7 min
 Avg. Velocity = 0.52 fps, Avg. Travel Time= 9.6 min

Peak Storage= 1,230 cf @ 12.10 hrs
 Average Depth at Peak Storage= 0.53'
 Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 116.22 cfs

5.00' x 2.00' deep channel, n= 0.035
 Side Slope Z-value= 5.0 '/' Top Width= 25.00'
 Length= 300.0' Slope= 0.0067 '/'
 Inlet Invert= 146.00', Outlet Invert= 144.00'



Summary for Reach 701R: POA STA340+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 6.173 ac, 37.99% Impervious, Inflow Depth = 1.83" for 02-YR event
 Inflow = 7.65 cfs @ 12.28 hrs, Volume= 0.941 af
 Outflow = 7.65 cfs @ 12.28 hrs, Volume= 0.941 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach 750R: POA STA349+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.170 ac, 46.58% Impervious, Inflow Depth = 1.92" for 02-YR event
 Inflow = 2.93 cfs @ 12.05 hrs, Volume= 0.187 af
 Outflow = 2.93 cfs @ 12.05 hrs, Volume= 0.187 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Reach C4R: DITCH STA327 TO STA313+00

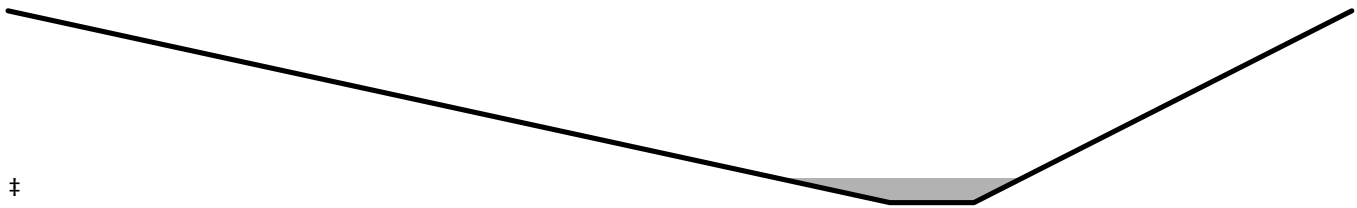
Inflow = 5.09 cfs @ 12.28 hrs, Volume= 0.551 af
Outflow = 4.82 cfs @ 12.45 hrs, Volume= 0.551 af, Atten= 5%, Lag= 9.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 3.19 fps, Min. Travel Time= 5.3 min
Avg. Velocity = 1.28 fps, Avg. Travel Time= 13.2 min

Peak Storage= 1,525 cf @ 12.36 hrs
Average Depth at Peak Storage= 0.38'
Bank-Full Depth= 3.00' Flow Area= 51.0 sf, Capacity= 545.10 cfs

2.00' x 3.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 7.0 3.0 '/' Top Width= 32.00'
Length= 1,010.0' Slope= 0.0257 '/'
Inlet Invert= 144.00', Outlet Invert= 118.00'



Summary for Reach C5AR1: L-M

Inflow Area = 21.245 ac, 5.02% Impervious, Inflow Depth > 1.33" for 02-YR event
Inflow = 6.18 cfs @ 12.66 hrs, Volume= 2.346 af
Outflow = 4.65 cfs @ 15.91 hrs, Volume= 2.333 af, Atten= 25%, Lag= 195.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 0.17 fps, Min. Travel Time= 88.5 min
Avg. Velocity = 0.06 fps, Avg. Travel Time= 238.9 min

Peak Storage= 24,694 cf @ 14.44 hrs
Average Depth at Peak Storage= 0.15'
Bank-Full Depth= 1.00' Flow Area= 182.0 sf, Capacity= 108.51 cfs

175.00' x 1.00' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 8.0 6.0 '/' Top Width= 189.00'
Length= 922.0' Slope= 0.0011 '/'
Inlet Invert= 178.00', Outlet Invert= 177.00'



Summary for Reach C5AR2: M-N

[62] Hint: Exceeded Reach C5AR1 OUTLET depth by 0.11' @ 17.05 hrs

Inflow Area = 21.245 ac, 5.02% Impervious, Inflow Depth > 1.32" for 02-YR event
 Inflow = 4.65 cfs @ 15.91 hrs, Volume= 2.333 af
 Outflow = 4.65 cfs @ 15.95 hrs, Volume= 2.333 af, Atten= 0%, Lag= 2.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.45 fps, Min. Travel Time= 1.6 min
 Avg. Velocity = 0.57 fps, Avg. Travel Time= 4.0 min

Peak Storage= 440 cf @ 15.93 hrs
 Average Depth at Peak Storage= 0.23'
 Bank-Full Depth= 1.00' Flow Area= 21.0 sf, Capacity= 69.43 cfs

11.70' x 1.00' deep channel, n= 0.030 Earth, grassed & winding
 Side Slope Z-value= 10.6 8.0 '/' Top Width= 30.30'
 Length= 137.0' Slope= 0.0073 '/'
 Inlet Invert= 177.00', Outlet Invert= 176.00'



Summary for Reach C5AR3: N-O

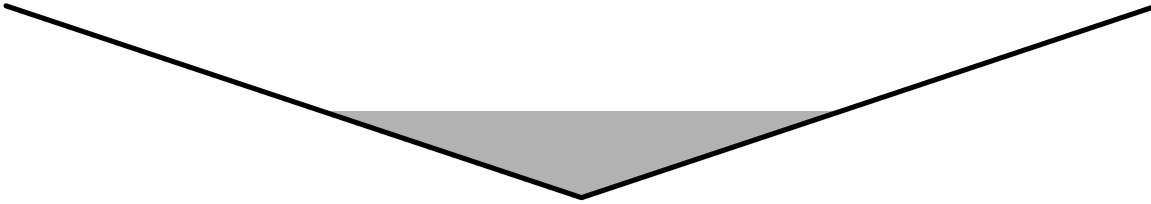
[62] Hint: Exceeded Reach C5AR2 OUTLET depth by 0.22' @ 16.06 hrs

Inflow Area = 21.245 ac, 5.02% Impervious, Inflow Depth > 1.32" for 02-YR event
 Inflow = 4.65 cfs @ 15.95 hrs, Volume= 2.333 af
 Outflow = 4.65 cfs @ 15.96 hrs, Volume= 2.333 af, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 7.59 fps, Min. Travel Time= 0.3 min
 Avg. Velocity = 3.81 fps, Avg. Travel Time= 0.7 min

Peak Storage= 94 cf @ 15.96 hrs
 Average Depth at Peak Storage= 0.45'
 Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 38.66 cfs

0.00' x 1.00' deep channel, n= 0.030 Earth, grassed & winding
 Side Slope Z-value= 3.0 '/' Top Width= 6.00'
 Length= 153.0' Slope= 0.1830 '/'
 Inlet Invert= 176.00', Outlet Invert= 148.00'



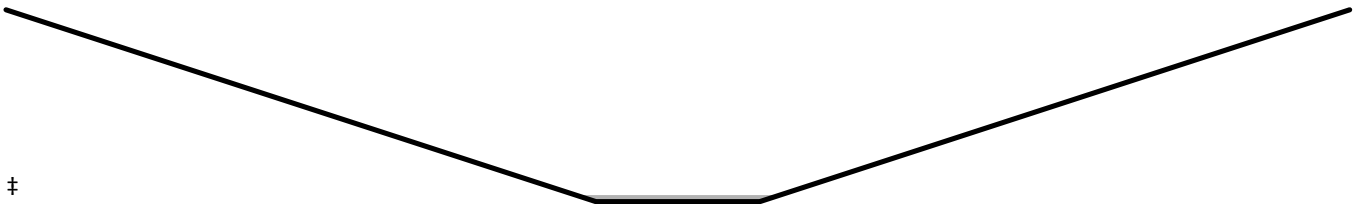
Summary for Reach C5R: ROADSIDE DITCH

Inflow Area = 3.016 ac, 35.44% Impervious, Inflow Depth > 1.83" for 02-YR event
 Inflow = 1.07 cfs @ 12.53 hrs, Volume= 0.461 af
 Outflow = 1.04 cfs @ 12.58 hrs, Volume= 0.460 af, Atten= 2%, Lag= 2.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.82 fps, Min. Travel Time= 1.5 min
 Avg. Velocity = 0.90 fps, Avg. Travel Time= 3.0 min

Peak Storage= 92 cf @ 12.55 hrs
 Average Depth at Peak Storage= 0.10'
 Bank-Full Depth= 3.00' Flow Area= 69.0 sf, Capacity= 860.03 cfs

5.00' x 3.00' deep channel, n= 0.035
 Side Slope Z-value= 6.0 '/' Top Width= 41.00'
 Length= 160.0' Slope= 0.0437 '/'
 Inlet Invert= 156.00', Outlet Invert= 149.00'



Summary for Pond 701P: (new Pond)

Inflow Area = 6.173 ac, 37.99% Impervious, Inflow Depth = 1.83" for 02-YR event
 Inflow = 7.65 cfs @ 12.28 hrs, Volume= 0.941 af
 Outflow = 7.62 cfs @ 12.31 hrs, Volume= 0.941 af, Atten= 0%, Lag= 1.6 min
 Primary = 7.62 cfs @ 12.31 hrs, Volume= 0.941 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 143.63' @ 12.31 hrs Surf.Area= 911 sf Storage= 349 cf

Plug-Flow detention time= 1.5 min calculated for 0.941 af (100% of inflow)
 Center-of-Mass det. time= 1.1 min (829.3 - 828.2)

Volume	Invert	Avail.Storage	Storage Description
#1	142.00'	52,314 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
142.00	50	10.0	0	0	50
143.00	100	20.0	74	74	78
144.00	1,770	194.0	764	837	3,043
145.00	28,791	939.0	12,567	13,404	70,216
146.00	50,000	2,000.0	38,911	52,314	318,365

Device	Routing	Invert	Outlet Devices
#1	Primary	142.45'	24.0" Round Culvert L= 26.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 142.45' / 141.96' S= 0.0188 '/' Cc= 0.900 n= 0.013 Concrete pipe, straight & clean, Flow Area= 3.14 sf
#2	Secondary	144.50'	200.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=7.62 cfs @ 12.31 hrs HW=143.63' (Free Discharge)

↑1=Culvert (Barrel Controls 7.62 cfs @ 5.69 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=142.00' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C2P: 313+00LEFT

Inflow Area = 146.849 ac, 5.85% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 111.84 cfs @ 12.52 hrs, Volume= 15.666 af
 Outflow = 52.69 cfs @ 13.02 hrs, Volume= 15.666 af, Atten= 53%, Lag= 30.0 min
 Primary = 52.69 cfs @ 13.02 hrs, Volume= 15.666 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 112.08' @ 13.02 hrs Surf.Area= 159,754 sf Storage= 170,791 cf

Plug-Flow detention time= 44.5 min calculated for 15.663 af (100% of inflow)
 Center-of-Mass det. time= 44.6 min (923.7 - 879.1)

Volume	Invert	Avail.Storage	Storage Description
#1	109.00'	2,272,428 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
109.00	19,183	958.9	0	0	19,183
110.00	28,032	1,282.6	23,468	23,468	76,933
111.00	47,773	1,796.1	37,467	60,935	202,748
112.00	157,032	2,961.9	97,139	158,074	644,160
113.00	192,597	3,080.9	174,512	332,586	701,464
114.00	225,197	3,246.6	208,685	541,271	784,958
115.00	262,192	3,905.1	243,460	784,731	1,159,737
116.00	312,689	4,095.9	287,070	1,071,801	1,281,285
117.00	353,942	4,361.6	333,103	1,404,904	1,460,158
118.00	447,427	3,488.1	399,773	1,804,676	2,005,812
119.00	488,375	4,125.0	467,752	2,272,428	2,391,685

Device	Routing	Invert	Outlet Devices
#1	Primary	108.70'	48.0" Round Culvert L= 235.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 108.70' / 108.12' S= 0.0025 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf
#2	Secondary	115.55'	18.0" Round Culvert L= 211.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 115.55' / 109.60' S= 0.0282 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=52.69 cfs @ 13.02 hrs HW=112.08' (Free Discharge)

↑**1=Culvert** (Barrel Controls 52.69 cfs @ 6.27 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=109.00' (Free Discharge)

↑**2=Culvert** (Controls 0.00 cfs)

Summary for Pond C4P: 327+50

Inflow Area = 8.047 ac, 5.51% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 8.35 cfs @ 12.28 hrs, Volume= 0.903 af
 Outflow = 8.35 cfs @ 12.28 hrs, Volume= 0.903 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.25 cfs @ 12.28 hrs, Volume= 0.352 af
 Secondary = 5.09 cfs @ 12.28 hrs, Volume= 0.551 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 146.01' @ 12.28 hrs Surf.Area= 27 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.903 af (100% of inflow)

Center-of-Mass det. time= 0.0 min (860.7 - 860.7)

Volume	Invert	Avail.Storage	Storage Description
#1	146.00'	27,066 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
146.00	22	27.1	0	0	22
147.00	4,250	726.7	1,526	1,526	41,990
148.00	13,227	840.3	8,325	9,851	56,177
149.00	21,540	863.6	17,215	27,066	59,449

Device	Routing	Invert	Outlet Devices
#1	Primary	143.41'	18.0" Round Culvert L= 255.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 143.41' / 139.03' S= 0.0172 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf
#2	Secondary	145.00'	6.5' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=11.57 cfs @ 12.28 hrs HW=146.01' (Free Discharge)

↑**1=Culvert** (Inlet Controls 11.57 cfs @ 6.55 fps)

Secondary OutFlow Max=17.64 cfs @ 12.28 hrs HW=146.01' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Weir Controls 17.64 cfs @ 2.69 fps)

Summary for Pond C5AP: (new Pond)

Inflow Area = 21.245 ac, 5.02% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 28.51 cfs @ 12.15 hrs, Volume= 2.385 af
 Outflow = 6.18 cfs @ 12.66 hrs, Volume= 2.346 af, Atten= 78%, Lag= 30.6 min
 Primary = 6.18 cfs @ 12.66 hrs, Volume= 2.346 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 182.91' @ 12.66 hrs Surf.Area= 24,468 sf Storage= 37,688 cf

Plug-Flow detention time= 94.7 min calculated for 2.346 af (98% of inflow)
 Center-of-Mass det. time= 85.4 min (936.8 - 851.4)

Volume	Invert	Avail.Storage	Storage Description		
#1	180.00'	356,034 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
180.00	5,233	331.6	0	0	5,233
181.00	9,056	413.5	7,058	7,058	10,103
182.00	15,897	572.6	12,317	19,375	22,598
183.00	25,365	730.2	20,448	39,822	38,950
184.00	134,830	3,722.3	72,892	112,714	1,099,109
185.00	171,754	3,831.3	152,920	265,634	1,164,737
185.50	190,000	3,900.0	90,400	356,034	1,207,048

Device	Routing	Invert	Outlet Devices
#1	Primary	180.27'	15.0" Round Culvert L= 27.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 180.27' / 180.00' S= 0.0100 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.23 sf

Primary OutFlow Max=6.18 cfs @ 12.66 hrs HW=182.91' (Free Discharge)

↑**1=Culvert** (Barrel Controls 6.18 cfs @ 5.03 fps)

Summary for Pond C5P: 331+00

Inflow Area = 66.573 ac, 10.22% Impervious, Inflow Depth > 1.42" for 02-YR event
 Inflow = 26.41 cfs @ 12.88 hrs, Volume= 7.888 af
 Outflow = 19.13 cfs @ 13.34 hrs, Volume= 7.886 af, Atten= 28%, Lag= 27.3 min
 Primary = 19.13 cfs @ 13.34 hrs, Volume= 7.886 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 144.56' @ 13.34 hrs Surf.Area= 30,490 sf Storage= 29,970 cf

Plug-Flow detention time= 14.5 min calculated for 7.884 af (100% of inflow)
 Center-of-Mass det. time= 14.1 min (1,013.4 - 999.3)

Volume	Invert	Avail.Storage	Storage Description		
#1	141.50'	297,542 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
141.50	20	15.0	0	0	20
141.70	50	30.0	7	7	74
142.00	1,500	400.0	182	189	12,735
143.00	3,404	858.6	2,388	2,577	58,671
144.00	23,914	1,161.1	12,113	14,691	107,300
145.00	36,142	1,360.8	29,818	44,509	147,397
146.00	50,955	1,644.8	43,337	87,846	215,340
147.00	64,383	1,674.9	57,538	145,384	223,463
148.00	78,650	1,939.5	71,398	216,782	299,590
149.00	82,890	2,150.0	80,761	297,542	368,124

Device	Routing	Invert	Outlet Devices
#1	Primary	141.70'	30.0" Round Culvert L= 285.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 141.70' / 141.50' S= 0.0007 ' / ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
#2	Secondary	147.00'	50.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=19.13 cfs @ 13.34 hrs HW=144.56' (Free Discharge)
 ↑1=Culvert (Barrel Controls 19.13 cfs @ 4.27 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=141.50' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond UDF6P: STA342+00 LEFT UDF

Inflow Area = 2.367 ac, 27.33% Impervious, Inflow Depth = 1.84" for 02-YR event
 Inflow = 5.12 cfs @ 12.09 hrs, Volume= 0.364 af
 Outflow = 0.66 cfs @ 12.73 hrs, Volume= 0.329 af, Atten= 87%, Lag= 38.7 min
 Primary = 0.66 cfs @ 12.73 hrs, Volume= 0.329 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 163.06' @ 12.73 hrs Surf.Area= 4,742 sf Storage= 7,995 cf

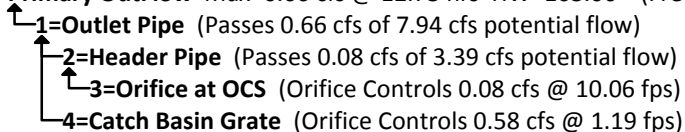
Plug-Flow detention time= 669.5 min calculated for 0.329 af (91% of inflow)
 Center-of-Mass det. time= 622.9 min (1,447.6 - 824.7)

Volume	Invert	Avail.Storage	Storage Description
#1	161.00'	18,832 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

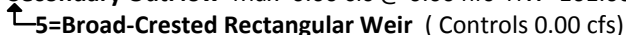
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
161.00	3,067	0	0
162.00	3,828	3,448	3,448
163.00	4,689	4,259	7,706
164.00	5,549	5,119	12,825
165.00	6,465	6,007	18,832

Device	Routing	Invert	Outlet Devices
#1	Primary	158.15'	12.0" Round Outlet Pipe L= 16.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 158.15' / 157.99' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	158.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	158.65'	1.2" Vert. Orifice at OCS C= 0.600
#4	Device 1	163.00'	1.2" x 1.2" Horiz. Catch Basin Grate X 49 rows C= 0.600 Limited to weir flow at low heads
#5	Secondary	164.50'	12.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=0.66 cfs @ 12.73 hrs HW=163.06' (Free Discharge)



Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=161.00' (Free Discharge)



Summary for Pond UDF7P: STA342+50 LEFT UDF

Inflow Area =	0.649 ac, 65.01% Impervious, Inflow Depth = 2.45" for 02-YR event
Inflow =	1.81 cfs @ 12.09 hrs, Volume= 0.132 af
Outflow =	0.84 cfs @ 12.25 hrs, Volume= 0.131 af, Atten= 53%, Lag= 10.2 min
Primary =	0.84 cfs @ 12.25 hrs, Volume= 0.131 af
Secondary =	0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 163.37' @ 12.25 hrs Surf.Area= 2,081 sf Storage= 2,222 cf

Plug-Flow detention time= 492.4 min calculated for 0.131 af (99% of inflow)

Center-of-Mass det. time= 488.7 min (1,285.3 - 796.7)

Volume	Invert	Avail.Storage	Storage Description
#1	162.00'	3,705 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
162.00	1,266	0	0
163.00	1,756	1,511	1,511
164.00	2,632	2,194	3,705

Device	Routing	Invert	Outlet Devices
#1	Primary	159.15'	12.0" Round Outlet Pipe L= 15.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 159.15' / 159.00' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	159.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	159.65'	0.7" Vert. Orifice at OCS C= 0.600
#4	Device 1	163.25'	1.2" x 1.2" Horiz. Catch Basin Grate X 49.00 C= 0.600 Limited to weir flow at low heads
#5	Secondary	163.75'	12.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=0.84 cfs @ 12.25 hrs HW=163.37' (Free Discharge)

- ↳ **1=Outlet Pipe** (Passes 0.84 cfs of 7.29 cfs potential flow)
- ↳ **2=Header Pipe** (Passes 0.02 cfs of 3.09 cfs potential flow)
- ↳ **3=Orifice at OCS** (Orifice Controls 0.02 cfs @ 9.25 fps)
- ↳ **4=Catch Basin Grate** (Orifice Controls 0.82 cfs @ 1.67 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=162.00' (Free Discharge)

- ↳ **5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond USF5P: STA313+00 RIGHT UDF

Inflow Area = 0.964 ac, 63.54% Impervious, Inflow Depth = 2.45" for 02-YR event
 Inflow = 2.62 cfs @ 12.08 hrs, Volume= 0.197 af
 Outflow = 1.05 cfs @ 12.29 hrs, Volume= 0.191 af, Atten= 60%, Lag= 13.0 min
 Primary = 1.05 cfs @ 12.29 hrs, Volume= 0.191 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 116.19' @ 12.29 hrs Surf.Area= 3,313 sf Storage= 3,348 cf

Plug-Flow detention time= 461.0 min calculated for 0.191 af (97% of inflow)
 Center-of-Mass det. time= 441.7 min (1,223.0 - 781.3)

Volume	Invert	Avail.Storage	Storage Description
#1	115.00'	6,343 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
115.00	2,345	0	0
116.00	3,142	2,744	2,744
117.00	4,057	3,600	6,343

Device	Routing	Invert	Outlet Devices
#1	Primary	112.15'	12.0" Round Outlet Pipe L= 63.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 112.15' / 110.00' S= 0.0341 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	112.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	112.65'	0.8" Vert. Orifice at OCS C= 0.600
#4	Device 1	116.00'	1.2" x 1.2" Horiz. Orifice/Grate X 49.00 C= 0.600 Limited to weir flow at low heads
#5	Secondary	117.00'	112.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=1.05 cfs @ 12.29 hrs HW=116.19' (Free Discharge)

- ↑ 1=Outlet Pipe (Passes 1.05 cfs of 7.11 cfs potential flow)
- ↑ 2=Header Pipe (Passes 0.03 cfs of 3.01 cfs potential flow)
- ↑ 3=Orifice at OCS (Orifice Controls 0.03 cfs @ 9.01 fps)
- ↑ 4=Orifice/Grate (Orifice Controls 1.02 cfs @ 2.08 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=115.00' (Free Discharge)

- ↑ 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
12.592	98	(5BS, C2S, C4S, C5AS)
0.090	74	>75% Grass cover, Good, HSG C (10S)
2.299	80	>75% Grass cover, Good, HSG D (UDF6S, UDF7S, USF5)
1.645	30	Brush, Good, HSG A (C2S)
25.794	73	Brush, Good, HSG D (5BS, 100S, 200S, 500S, 700, 700S, 750S, C2S, C3S, C4S, C5AS)
1.314	98	Impervious (C3S)
1.203	98	MTA CORRIDOR (UDF6S, UDF7S, USF5)
7.910	98	MTA PAVEMENT (10S, 11S, 20S, 30S, 40S, 50S, 51S, 52S, 60S, 61S, 71S, 72S, 710S, 720S)
5.841	98	Pavement (100S, 500S, 700, 700S, 750S)
2.883	30	Woods, Good, HSG A (C2S)
188.929	77	Woods, Good, HSG D (5BS, 100S, 200S, 500S, 700, 700S, 750S, C2S, C3S, C4S, C5AS)
1.307	98	pavement (200S)
251.806	78	TOTAL AREA

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 5BS: 331+00	Runoff Area=41.478 ac 9.24% Impervious Runoff Depth=2.72" Flow Length=1,929' Tc=64.4 min CN=79 Runoff=49.66 cfs 9.387 af
Subcatchment 10S: 303+25 TO 313+85 CENTER	Runoff Area=54,402 sf 92.83% Impervious Runoff Depth=4.43" Tc=5.0 min CN=96 Runoff=6.10 cfs 0.461 af
Subcatchment 11S: 309+80 TO 309+80 LEFT	Runoff Area=971 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.11 cfs 0.009 af
Subcatchment 20S: 313+85 TO 317+90 CENTER	Runoff Area=20,843 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=2.38 cfs 0.186 af
Subcatchment 30S: 317+90 TO 322+90 CENTER	Runoff Area=26,755 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=3.05 cfs 0.239 af
Subcatchment 40S: 322+90 TO 327+25 CENTER	Runoff Area=21,605 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=2.46 cfs 0.193 af
Subcatchment 50S: 327+50 TO 343+40 CENTER	Runoff Area=80,647 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=9.19 cfs 0.719 af
Subcatchment 51S: 337+75 TO 337+75 LEFT	Runoff Area=1,672 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.19 cfs 0.015 af
Subcatchment 52S: 337+75 TO 337+75 RIGHT	Runoff Area=2,055 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.23 cfs 0.018 af
Subcatchment 60S: 337+30 TO 343+40 RIGHT	Runoff Area=26,409 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=3.01 cfs 0.236 af
Subcatchment 61S: 335+50 TO 343+40 LEFT	Runoff Area=34,668 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=3.95 cfs 0.309 af
Subcatchment 71S: 343+40 TO 346+00 CENTER	Runoff Area=25,915 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=2.95 cfs 0.231 af
Subcatchment 72S: 343+40 TO 346+00 RIGHT	Runoff Area=13,297 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=1.52 cfs 0.119 af
Subcatchment 100S: STA311+50	Runoff Area=1.659 ac 30.56% Impervious Runoff Depth=3.08" Tc=5.0 min CN=83 Runoff=6.19 cfs 0.426 af
Subcatchment 200S: STA311+50	Runoff Area=3.584 ac 36.47% Impervious Runoff Depth=3.08" Flow Length=640' Tc=5.0 min CN=83 Runoff=13.38 cfs 0.921 af
Subcatchment 500S: STA327+00	Runoff Area=5.749 ac 33.03% Impervious Runoff Depth=2.99" Flow Length=925' Tc=16.4 min CN=82 Runoff=14.73 cfs 1.432 af

Subcatchment 700: STA338 RIGHT	Runoff Area=5.273 ac 27.40% Impervious Runoff Depth=2.99" Flow Length=575' Tc=22.4 min CN=82 Runoff=11.87 cfs 1.314 af
Subcatchment 700S: STA338 RIGHT	Runoff Area=5.273 ac 27.40% Impervious Runoff Depth=2.99" Flow Length=575' Tc=22.4 min CN=82 Runoff=11.87 cfs 1.314 af
Subcatchment 710S: 343+40 TO 346+00 CENTER	Runoff Area=25,915 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=2.95 cfs 0.231 af
Subcatchment 720S: 343+40 TO 346+00 RIGHT	Runoff Area=13,297 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=1.52 cfs 0.119 af
Subcatchment 750S: STA349	Runoff Area=1.170 ac 46.58% Impervious Runoff Depth=3.37" Flow Length=80' Tc=3.1 min CN=86 Runoff=5.07 cfs 0.329 af
Subcatchment C2S: 311+50	Runoff Area=143.813 ac 5.04% Impervious Runoff Depth=2.45" Flow Length=2,483' Tc=35.1 min CN=76 Runoff=216.36 cfs 29.402 af
Subcatchment C3S: 315+50	Runoff Area=3.014 ac 43.60% Impervious Runoff Depth=3.28" Flow Length=731' Tc=15.0 min CN=85 Runoff=8.70 cfs 0.823 af
Subcatchment C4S: 327+50	Runoff Area=8.047 ac 5.51% Impervious Runoff Depth=2.63" Flow Length=869' Tc=20.2 min CN=78 Runoff=16.65 cfs 1.762 af
Subcatchment C5AS: 331+00	Runoff Area=21.245 ac 5.02% Impervious Runoff Depth=2.63" Flow Length=423' Tc=10.2 min CN=78 Runoff=56.81 cfs 4.651 af
Subcatchment UDF6S: STA342+00 LEFT, LARGE	Runoff Area=103,120 sf 27.33% Impervious Runoff Depth=3.28" Tc=6.0 min CN=85 Runoff=9.01 cfs 0.646 af
Subcatchment UDF7S: STA342+50 LEFT, SMALL	Runoff Area=28,267 sf 65.01% Impervious Runoff Depth=3.99" Tc=6.0 min CN=92 Runoff=2.89 cfs 0.216 af
Subcatchment USF5: STA313+00 RIGHT	Runoff Area=21,134 sf 27.59% Impervious Runoff Depth=3.28" Tc=6.0 min CN=85 Runoff=1.85 cfs 0.132 af
Reach 7AR2: OVERLAND FLOW	Avg. Flow Depth=0.09' Max Vel=2.22 fps Inflow=4.47 cfs 0.350 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=4.36 cfs 0.350 af
Reach 7R: OVERLAND FLOW	Avg. Flow Depth=0.09' Max Vel=2.22 fps Inflow=4.47 cfs 0.350 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=4.36 cfs 0.350 af
Reach 100R: POA STA311+50	Inflow=85.23 cfs 32.508 af Outflow=85.23 cfs 32.508 af
Reach 101R: DITCH 309+90TOSTA311+50	Avg. Flow Depth=0.23' Max Vel=2.06 fps Inflow=6.08 cfs 0.461 af n=0.035 L=170.0' S=0.0206 '/' Capacity=92.78 cfs Outflow=5.94 cfs 0.461 af
Reach 102R: OVERLAND STA309+90	Avg. Flow Depth=0.09' Max Vel=2.98 fps Inflow=6.10 cfs 0.461 af n=0.035 L=60.0' S=0.1300 '/' Capacity=467.03 cfs Outflow=6.08 cfs 0.461 af

Reach 200R: POA STA314+00	Inflow=16.19 cfs 1.352 af Outflow=16.19 cfs 1.352 af
Reach 201R: OVERLAND STA314+00	Inflow=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
Reach 202R: OVERLAND STA314+00	Avg. Flow Depth=0.09' Max Vel=2.25 fps Inflow=4.56 cfs 0.431 af n=0.035 L=325.0' S=0.0769 '/' Capacity=359.26 cfs Outflow=4.45 cfs 0.431 af
Reach 203R: DITCH STA317+00	Avg. Flow Depth=0.33' Max Vel=2.72 fps Inflow=4.57 cfs 0.431 af n=0.035 L=120.0' S=0.0292 '/' Capacity=2,420.87 cfs Outflow=4.56 cfs 0.431 af
Reach 204R: DITCH STA318+00	Avg. Flow Depth=0.22' Max Vel=2.31 fps Inflow=2.46 cfs 0.193 af n=0.035 L=475.0' S=0.0326 '/' Capacity=2,560.64 cfs Outflow=2.23 cfs 0.193 af
Reach 501: POA STA327+00	Inflow=42.20 cfs 18.222 af Outflow=42.20 cfs 18.222 af
Reach 502R: DITCH STA327	Avg. Flow Depth=0.99' Max Vel=3.19 fps Inflow=31.48 cfs 16.790 af n=0.035 L=150.0' S=0.0100 '/' Capacity=142.33 cfs Outflow=31.48 cfs 16.789 af
Reach 503R: DITCH STA329	Avg. Flow Depth=0.96' Max Vel=3.26 fps Inflow=30.67 cfs 16.104 af n=0.035 L=270.0' S=0.0107 '/' Capacity=147.51 cfs Outflow=30.66 cfs 16.103 af
Reach 504R: DITCH STA332	Avg. Flow Depth=0.66' Max Vel=2.09 fps Inflow=12.20 cfs 0.955 af n=0.035 L=300.0' S=0.0067 '/' Capacity=116.22 cfs Outflow=11.51 cfs 0.955 af
Reach 701R: POA STA340+00	Inflow=13.73 cfs 1.664 af Outflow=13.73 cfs 1.664 af
Reach 750R: POA STA349+00	Inflow=5.07 cfs 0.329 af Outflow=5.07 cfs 0.329 af
Reach C4R: DITCH STA327 TO STA313+00	Avg. Flow Depth=0.54' Max Vel=3.85 fps Inflow=10.16 cfs 1.075 af n=0.030 L=1,010.0' S=0.0257 '/' Capacity=545.10 cfs Outflow=9.74 cfs 1.075 af
Reach C5AR1: L-M	Avg. Flow Depth=0.20' Max Vel=0.21 fps Inflow=7.61 cfs 4.612 af n=0.080 L=922.0' S=0.0011 '/' Capacity=108.51 cfs Outflow=7.19 cfs 4.598 af
Reach C5AR2: M-N	Avg. Flow Depth=0.30' Max Vel=1.67 fps Inflow=7.19 cfs 4.598 af n=0.030 L=137.0' S=0.0073 '/' Capacity=69.43 cfs Outflow=7.19 cfs 4.598 af
Reach C5AR3: N-O	Avg. Flow Depth=0.53' Max Vel=8.46 fps Inflow=7.19 cfs 4.598 af n=0.030 L=153.0' S=0.1830 '/' Capacity=38.66 cfs Outflow=7.19 cfs 4.598 af
Reach C5R: ROADSIDE DITCH	Avg. Flow Depth=0.21' Max Vel=2.80 fps Inflow=3.77 cfs 0.824 af n=0.035 L=160.0' S=0.0437 '/' Capacity=860.03 cfs Outflow=3.76 cfs 0.824 af
Pond 701P: (new Pond)	Peak Elev=144.15' Storage=1,231 cf Inflow=13.73 cfs 1.664 af Primary=13.35 cfs 1.663 af Secondary=0.00 cfs 0.000 af Outflow=13.35 cfs 1.663 af

Pond C2P: 313+00LEFT

Peak Elev=113.46' Storage=423,662 cf Inflow=229.91 cfs 31.308 af
Primary=83.62 cfs 31.308 af Secondary=0.00 cfs 0.000 af Outflow=83.62 cfs 31.308 af

Pond C4P: 327+50

Peak Elev=146.02' Storage=0 cf Inflow=16.65 cfs 1.762 af
Primary=6.49 cfs 0.687 af Secondary=10.16 cfs 1.075 af Outflow=16.65 cfs 1.762 af

Pond C5AP: (new Pond)

Peak Elev=183.77' Storage=85,769 cf Inflow=56.81 cfs 4.651 af
15.0" Round Culvert n=0.025 L=27.0' S=0.0100 '/' Outflow=7.61 cfs 4.612 af

Pond C5P: 331+00

Peak Elev=146.16' Storage=95,929 cf Inflow=52.69 cfs 15.133 af
Primary=29.87 cfs 15.131 af Secondary=0.00 cfs 0.000 af Outflow=29.87 cfs 15.131 af

Pond UDF6P: STA342+00 LEFT UDF

Peak Elev=163.89' Storage=12,197 cf Inflow=9.01 cfs 0.646 af
Primary=2.31 cfs 0.610 af Secondary=0.00 cfs 0.000 af Outflow=2.31 cfs 0.610 af

Pond UDF7P: STA342+50 LEFT UDF

Peak Elev=163.72' Storage=2,991 cf Inflow=2.89 cfs 0.216 af
Primary=1.63 cfs 0.214 af Secondary=0.00 cfs 0.000 af Outflow=1.63 cfs 0.214 af

Pond USF5P: STA313+00 RIGHT UDF

Peak Elev=116.60' Storage=4,782 cf Inflow=4.20 cfs 0.318 af
Primary=1.86 cfs 0.312 af Secondary=0.00 cfs 0.000 af Outflow=1.86 cfs 0.312 af

Total Runoff Area = 251.806 ac Runoff Volume = 55.840 af Average Runoff Depth = 2.66"
88.02% Pervious = 221.639 ac 11.98% Impervious = 30.167 ac

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 5BS: 331+00	Runoff Area=41.478 ac 9.24% Impervious Runoff Depth=3.86" Flow Length=1,929' Tc=64.4 min CN=79 Runoff=70.54 cfs 13.338 af
Subcatchment 10S: 303+25 TO 313+85 CENTER	Runoff Area=54,402 sf 92.83% Impervious Runoff Depth=5.73" Tc=5.0 min CN=96 Runoff=7.78 cfs 0.596 af
Subcatchment 11S: 309+80 TO 309+80 LEFT	Runoff Area=971 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.14 cfs 0.011 af
Subcatchment 20S: 313+85 TO 317+90 CENTER	Runoff Area=20,843 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=3.01 cfs 0.238 af
Subcatchment 30S: 317+90 TO 322+90 CENTER	Runoff Area=26,755 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=3.87 cfs 0.305 af
Subcatchment 40S: 322+90 TO 327+25 CENTER	Runoff Area=21,605 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=3.12 cfs 0.246 af
Subcatchment 50S: 327+50 TO 343+40 CENTER	Runoff Area=80,647 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=11.66 cfs 0.920 af
Subcatchment 51S: 337+75 TO 337+75 LEFT	Runoff Area=1,672 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.24 cfs 0.019 af
Subcatchment 52S: 337+75 TO 337+75 RIGHT	Runoff Area=2,055 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.30 cfs 0.023 af
Subcatchment 60S: 337+30 TO 343+40 RIGHT	Runoff Area=26,409 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=3.82 cfs 0.301 af
Subcatchment 61S: 335+50 TO 343+40 LEFT	Runoff Area=34,668 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=5.01 cfs 0.395 af
Subcatchment 71S: 343+40 TO 346+00 CENTER	Runoff Area=25,915 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=3.75 cfs 0.296 af
Subcatchment 72S: 343+40 TO 346+00 RIGHT	Runoff Area=13,297 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=1.92 cfs 0.152 af
Subcatchment 100S: STA311+50	Runoff Area=1.659 ac 30.56% Impervious Runoff Depth=4.28" Tc=5.0 min CN=83 Runoff=8.51 cfs 0.591 af
Subcatchment 200S: STA311+50	Runoff Area=3.584 ac 36.47% Impervious Runoff Depth=4.28" Flow Length=640' Tc=5.0 min CN=83 Runoff=18.38 cfs 1.278 af
Subcatchment 500S: STA327+00	Runoff Area=5.749 ac 33.03% Impervious Runoff Depth=4.17" Flow Length=925' Tc=16.4 min CN=82 Runoff=20.41 cfs 1.998 af

Subcatchment 700: STA338 RIGHT	Runoff Area=5.273 ac 27.40% Impervious Runoff Depth=4.17" Flow Length=575' Tc=22.4 min CN=82 Runoff=16.46 cfs 1.833 af
Subcatchment 700S: STA338 RIGHT	Runoff Area=5.273 ac 27.40% Impervious Runoff Depth=4.17" Flow Length=575' Tc=22.4 min CN=82 Runoff=16.46 cfs 1.833 af
Subcatchment 710S: 343+40 TO 346+00 CENTER	Runoff Area=25,915 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=3.75 cfs 0.296 af
Subcatchment 720S: 343+40 TO 346+00 RIGHT	Runoff Area=13,297 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=1.92 cfs 0.152 af
Subcatchment 750S: STA349	Runoff Area=1.170 ac 46.58% Impervious Runoff Depth=4.60" Flow Length=80' Tc=3.1 min CN=86 Runoff=6.83 cfs 0.448 af
Subcatchment C2S: 311+50	Runoff Area=143.813 ac 5.04% Impervious Runoff Depth=3.55" Flow Length=2,483' Tc=35.1 min CN=76 Runoff=314.46 cfs 42.584 af
Subcatchment C3S: 315+50	Runoff Area=3.014 ac 43.60% Impervious Runoff Depth=4.49" Flow Length=731' Tc=15.0 min CN=85 Runoff=11.81 cfs 1.128 af
Subcatchment C4S: 327+50	Runoff Area=8.047 ac 5.51% Impervious Runoff Depth=3.76" Flow Length=869' Tc=20.2 min CN=78 Runoff=23.81 cfs 2.519 af
Subcatchment C5AS: 331+00	Runoff Area=21.245 ac 5.02% Impervious Runoff Depth=3.76" Flow Length=423' Tc=10.2 min CN=78 Runoff=81.17 cfs 6.650 af
Subcatchment UDF6S: STA342+00 LEFT, LARGE	Runoff Area=103,120 sf 27.33% Impervious Runoff Depth=4.49" Tc=6.0 min CN=85 Runoff=12.21 cfs 0.886 af
Subcatchment UDF7S: STA342+50 LEFT, SMALL	Runoff Area=28,267 sf 65.01% Impervious Runoff Depth=5.27" Tc=6.0 min CN=92 Runoff=3.75 cfs 0.285 af
Subcatchment USF5: STA313+00 RIGHT	Runoff Area=21,134 sf 27.59% Impervious Runoff Depth=4.49" Tc=6.0 min CN=85 Runoff=2.50 cfs 0.182 af
Reach 7AR2: OVERLAND FLOW	Avg. Flow Depth=0.10' Max Vel=2.42 fps Inflow=5.67 cfs 0.447 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=5.55 cfs 0.447 af
Reach 7R: OVERLAND FLOW	Avg. Flow Depth=0.10' Max Vel=2.42 fps Inflow=5.67 cfs 0.447 af n=0.035 L=200.0' S=0.0750 '/' Capacity=354.74 cfs Outflow=5.55 cfs 0.447 af
Reach 100R: POA STA311+50	Inflow=102.76 cfs 47.108 af Outflow=102.76 cfs 47.108 af
Reach 101R: DITCH 309+90TOSTA311+50	Avg. Flow Depth=0.27' Max Vel=2.23 fps Inflow=7.75 cfs 0.596 af n=0.035 L=170.0' S=0.0206 '/' Capacity=92.78 cfs Outflow=7.61 cfs 0.596 af
Reach 102R: OVERLAND STA309+90	Avg. Flow Depth=0.11' Max Vel=3.26 fps Inflow=7.78 cfs 0.596 af n=0.035 L=60.0' S=0.1300 '/' Capacity=467.03 cfs Outflow=7.75 cfs 0.596 af

Reach 200R: POA STA314+00	Inflow=22.13 cfs 1.829 af Outflow=22.13 cfs 1.829 af
Reach 201R: OVERLAND STA314+00	Inflow=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
Reach 202R: OVERLAND STA314+00	Avg. Flow Depth=0.11' Max Vel=2.47 fps Inflow=5.88 cfs 0.552 af n=0.035 L=325.0' S=0.0769 '/' Capacity=359.26 cfs Outflow=5.75 cfs 0.552 af
Reach 203R: DITCH STA317+00	Avg. Flow Depth=0.37' Max Vel=2.92 fps Inflow=5.90 cfs 0.552 af n=0.035 L=120.0' S=0.0292 '/' Capacity=2,420.87 cfs Outflow=5.88 cfs 0.552 af
Reach 204R: DITCH STA318+00	Avg. Flow Depth=0.25' Max Vel=2.48 fps Inflow=3.12 cfs 0.246 af n=0.035 L=475.0' S=0.0326 '/' Capacity=2,560.64 cfs Outflow=2.85 cfs 0.246 af
Reach 501: POA STA327+00	Inflow=57.00 cfs 25.454 af Outflow=57.00 cfs 25.454 af
Reach 502R: DITCH STA327	Avg. Flow Depth=1.14' Max Vel=3.46 fps Inflow=42.35 cfs 23.456 af n=0.035 L=150.0' S=0.0100 '/' Capacity=142.33 cfs Outflow=42.34 cfs 23.455 af
Reach 503R: DITCH STA329	Avg. Flow Depth=1.06' Max Vel=3.43 fps Inflow=37.29 cfs 22.316 af n=0.035 L=270.0' S=0.0107 '/' Capacity=147.51 cfs Outflow=37.29 cfs 22.315 af
Reach 504R: DITCH STA332	Avg. Flow Depth=0.75' Max Vel=2.24 fps Inflow=15.47 cfs 1.221 af n=0.035 L=300.0' S=0.0067 '/' Capacity=116.22 cfs Outflow=14.65 cfs 1.221 af
Reach 701R: POA STA340+00	Inflow=18.82 cfs 2.280 af Outflow=18.82 cfs 2.280 af
Reach 750R: POA STA349+00	Inflow=6.83 cfs 0.448 af Outflow=6.83 cfs 0.448 af
Reach C4R: DITCH STA327 TO STA313+00	Avg. Flow Depth=0.64' Max Vel=4.23 fps Inflow=14.53 cfs 1.785 af n=0.030 L=1,010.0' S=0.0257 '/' Capacity=545.10 cfs Outflow=14.02 cfs 1.785 af
Reach C5AR1: L-M	Avg. Flow Depth=0.21' Max Vel=0.21 fps Inflow=8.15 cfs 6.611 af n=0.080 L=922.0' S=0.0011 '/' Capacity=108.51 cfs Outflow=7.95 cfs 6.597 af
Reach C5AR2: M-N	Avg. Flow Depth=0.31' Max Vel=1.73 fps Inflow=7.95 cfs 6.597 af n=0.030 L=137.0' S=0.0073 '/' Capacity=69.43 cfs Outflow=7.95 cfs 6.596 af
Reach C5AR3: N-O	Avg. Flow Depth=0.55' Max Vel=8.68 fps Inflow=7.95 cfs 6.596 af n=0.030 L=153.0' S=0.1830 '/' Capacity=38.66 cfs Outflow=7.95 cfs 6.596 af
Reach C5R: ROADSIDE DITCH	Avg. Flow Depth=0.27' Max Vel=3.17 fps Inflow=5.56 cfs 1.133 af n=0.035 L=160.0' S=0.0437 '/' Capacity=860.03 cfs Outflow=5.55 cfs 1.132 af
Pond 701P: (new Pond)	Peak Elev=144.47' Storage=3,383 cf Inflow=18.82 cfs 2.280 af Primary=16.93 cfs 2.280 af Secondary=0.00 cfs 0.000 af Outflow=16.93 cfs 2.280 af

Pond C2P: 313+00LEFT

Peak Elev=114.60' Storage=683,423 cf Inflow=333.49 cfs 45.508 af
Primary=100.67 cfs 45.508 af Secondary=0.00 cfs 0.000 af Outflow=100.67 cfs 45.508 af

Pond C4P: 327+50

Peak Elev=146.02' Storage=1 cf Inflow=23.81 cfs 2.926 af
Primary=9.29 cfs 1.141 af Secondary=14.53 cfs 1.785 af Outflow=23.81 cfs 2.926 af

Pond C5AP: (new Pond)

Peak Elev=184.15' Storage=133,124 cf Inflow=81.17 cfs 6.650 af
15.0" Round Culvert n=0.025 L=27.0' S=0.0100 '/' Outflow=8.15 cfs 6.611 af

Pond C5P: 331+00

Peak Elev=147.18' Storage=156,904 cf Inflow=75.70 cfs 21.481 af
Primary=36.26 cfs 21.072 af Secondary=10.02 cfs 0.407 af Outflow=46.28 cfs 21.479 af

Pond UDF6P: STA342+00 LEFT UDF

Peak Elev=164.59' Storage=16,259 cf Inflow=12.21 cfs 0.886 af
Primary=3.07 cfs 0.836 af Secondary=0.85 cfs 0.014 af Outflow=3.91 cfs 0.850 af

Pond UDF7P: STA342+50 LEFT UDF

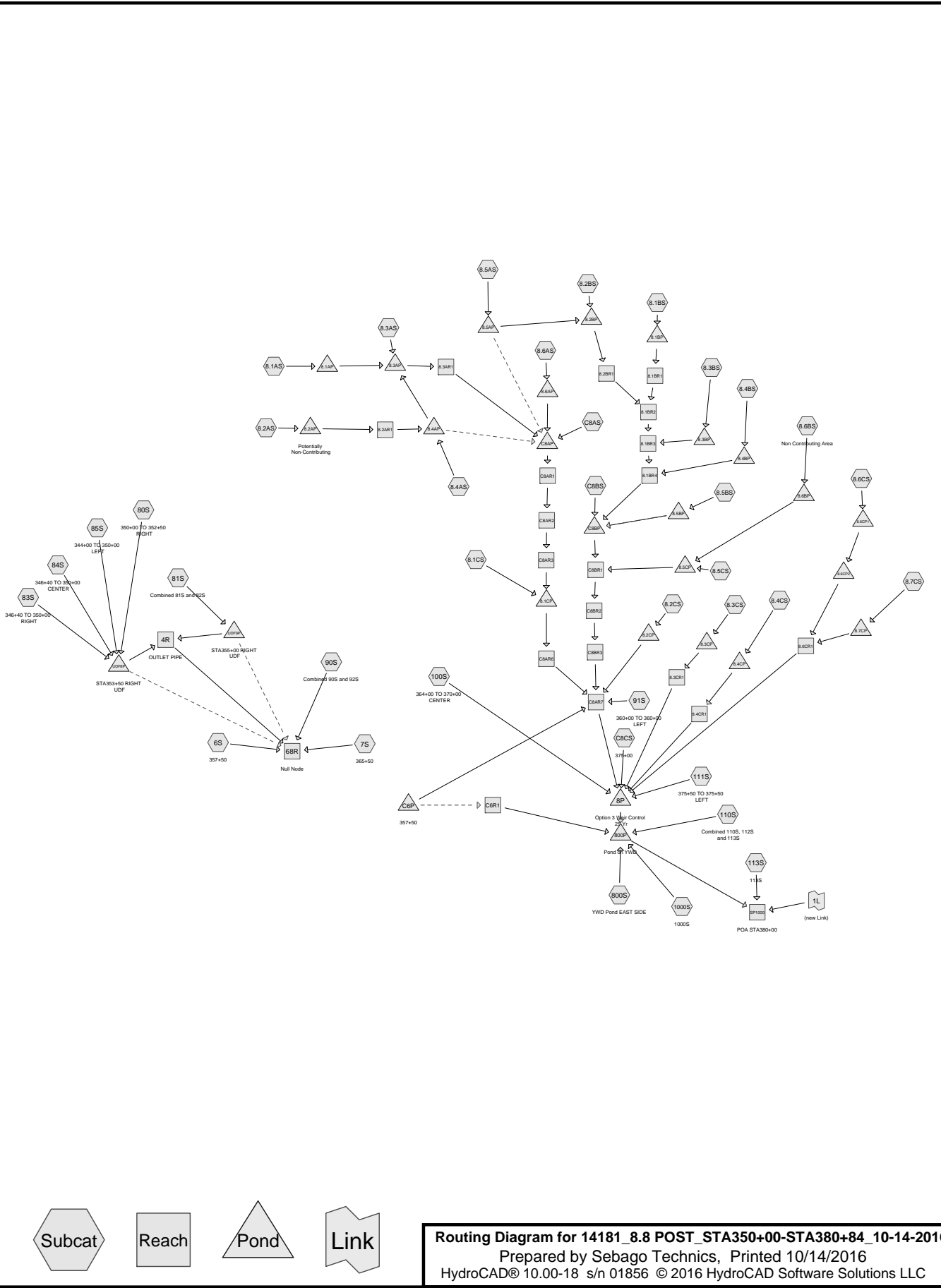
Peak Elev=163.85' Storage=3,318 cf Inflow=3.75 cfs 0.285 af
Primary=1.85 cfs 0.273 af Secondary=0.96 cfs 0.010 af Outflow=2.82 cfs 0.283 af

Pond USF5P: STA313+00 RIGHT UDF

Peak Elev=116.88' Storage=5,859 cf Inflow=5.49 cfs 0.419 af
Primary=2.25 cfs 0.413 af Secondary=0.00 cfs 0.000 af Outflow=2.25 cfs 0.413 af

**Total Runoff Area = 251.806 ac Runoff Volume = 79.503 af Average Runoff Depth = 3.79"
88.02% Pervious = 221.639 ac 11.98% Impervious = 30.167 ac**

Mile 8.8, STA350+00 to STA380+00



Routing Diagram for 14181_8.8 POST_STA350+00-STA380+84_10-14-2016
 Prepared by Sebago Technics, Printed 10/14/2016
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
17.141	98	(7S, 8.1AS, 8.1BS, 8.1CS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 91S, 111S, C8AS, C8BS, C8CS)
0.440	80	>75% Grass cover, Good, HSG D (81S, 83S)
12.730	77	Brush, Fair, HSG D (6S, 7S, 8.1CS, C8AS)
27.512	73	Brush, Good, HSG D (8.1AS, 8.1BS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.3CS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 8.7CS, 800S, 1000S, C8BS, C8CS)
2.366	98	PAVED (81S, 100S, 113S, 1000S)
1.605	98	PAVED CENTER (110S)
0.468	98	PAVED- 82S (81S)
1.757	98	PAVEMENT (6S)
1.179	98	Paved 346+50 - 350+00 (83S, 84S, 85S)
0.240	98	Paved 350+00 - 3352+50 (80S)
1.113	98	Paved 90S 354+35 - 359+60 (90S)
0.031	98	Paved 92S 360+00 to 360+00 (90S)
1.407	98	Pavement (800S)
75.253	79	Woods, Fair, HSG D (6S, 7S, 8.1CS, C8AS)
152.342	77	Woods, Good, HSG D (8.1AS, 8.1BS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.3CS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 8.7CS, 800S, 1000S, C8BS, C8CS)
0.272	98	paved (83S)
295.856	79	TOTAL AREA

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: 357+50	Runoff Area=29.079 ac 6.04% Impervious Runoff Depth=1.48" Flow Length=1,098' Tc=21.4 min CN=80 Runoff=32.66 cfs 3.585 af
Subcatchment 7S: 365+50	Runoff Area=5.717 ac 8.62% Impervious Runoff Depth=1.48" Flow Length=489' Tc=6.0 min CN=80 Runoff=9.84 cfs 0.705 af
Subcatchment 8.1AS:	Runoff Area=121,454 sf 22.13% Impervious Runoff Depth=1.55" Flow Length=430' Tc=28.4 min CN=81 Runoff=2.92 cfs 0.360 af
Subcatchment 8.1BS:	Runoff Area=72,193 sf 1.67% Impervious Runoff Depth=1.28" Flow Length=265' Tc=35.1 min CN=77 Runoff=1.28 cfs 0.177 af
Subcatchment 8.1CS:	Runoff Area=1,047,959 sf 3.84% Impervious Runoff Depth=1.41" Flow Length=1,796' Tc=35.9 min CN=79 Runoff=20.37 cfs 2.831 af
Subcatchment 8.2AS:	Runoff Area=56,291 sf 9.56% Impervious Runoff Depth=1.35" Flow Length=150' Slope=0.0200 '/' Tc=29.2 min CN=78 Runoff=1.15 cfs 0.145 af
Subcatchment 8.2BS:	Runoff Area=93,889 sf 0.00% Impervious Runoff Depth=1.28" Flow Length=372' Tc=28.8 min CN=77 Runoff=1.82 cfs 0.231 af
Subcatchment 8.2CS:	Runoff Area=102,001 sf 12.15% Impervious Runoff Depth=1.35" Flow Length=475' Tc=37.1 min CN=78 Runoff=1.85 cfs 0.263 af
Subcatchment 8.3AS:	Runoff Area=93,437 sf 16.21% Impervious Runoff Depth=1.48" Flow Length=420' Tc=26.1 min CN=80 Runoff=2.21 cfs 0.264 af
Subcatchment 8.3BS:	Runoff Area=50,670 sf 7.32% Impervious Runoff Depth=1.35" Flow Length=135' Slope=0.0220 '/' Tc=45.1 min CN=78 Runoff=0.83 cfs 0.131 af
Subcatchment 8.3CS:	Runoff Area=193,772 sf 0.00% Impervious Runoff Depth=1.28" Flow Length=1,039' Tc=83.9 min CN=77 Runoff=2.07 cfs 0.476 af
Subcatchment 8.4AS:	Runoff Area=71,195 sf 20.23% Impervious Runoff Depth=1.48" Flow Length=260' Tc=13.2 min CN=80 Runoff=2.23 cfs 0.201 af
Subcatchment 8.4BS:	Runoff Area=85,972 sf 0.75% Impervious Runoff Depth=1.28" Flow Length=506' Tc=43.8 min CN=77 Runoff=1.36 cfs 0.211 af
Subcatchment 8.4CS:	Runoff Area=120,213 sf 8.29% Impervious Runoff Depth=1.28" Flow Length=365' Tc=40.2 min CN=77 Runoff=1.98 cfs 0.295 af
Subcatchment 8.5AS:	Runoff Area=129,841 sf 5.72% Impervious Runoff Depth=1.28" Flow Length=150' Tc=17.5 min CN=77 Runoff=3.10 cfs 0.319 af
Subcatchment 8.5BS:	Runoff Area=124,671 sf 3.82% Impervious Runoff Depth=1.35" Flow Length=717' Tc=47.8 min CN=78 Runoff=1.98 cfs 0.321 af

Subcatchment 8.5CS:	Runoff Area=115,586 sf 14.02% Impervious Runoff Depth=1.41" Flow Length=285' Tc=35.7 min CN=79 Runoff=2.26 cfs 0.312 af
Subcatchment 8.6AS:	Runoff Area=63,890 sf 15.73% Impervious Runoff Depth=1.48" Flow Length=445' Tc=27.3 min CN=80 Runoff=1.48 cfs 0.181 af
Subcatchment 8.6BS: Non Contributing Area	Runoff Area=307,280 sf 17.19% Impervious Runoff Depth=1.48" Flow Length=450' Tc=41.5 min CN=80 Runoff=5.86 cfs 0.870 af
Subcatchment 8.6CS:	Runoff Area=420,023 sf 1.26% Impervious Runoff Depth=1.28" Flow Length=875' Tc=59.5 min CN=77 Runoff=5.55 cfs 1.032 af
Subcatchment 8.7CS:	Runoff Area=33,655 sf 0.00% Impervious Runoff Depth=1.22" Flow Length=135' Slope=0.1030 '/' Tc=24.3 min CN=76 Runoff=0.66 cfs 0.079 af
Subcatchment 80S: 350+00 TO 352+50 RIGHT	Runoff Area=10,434 sf 100.00% Impervious Runoff Depth=3.07" Tc=6.0 min CN=98 Runoff=0.77 cfs 0.061 af
Subcatchment 81S: Combined 81S and 82S	Runoff Area=54,400 sf 89.15% Impervious Runoff Depth=2.85" Tc=6.0 min CN=96 Runoff=3.87 cfs 0.296 af
Subcatchment 83S: 346+40 TO 350+00 RIGHT	Runoff Area=40,574 sf 67.34% Impervious Runoff Depth=2.45" Tc=6.0 min CN=92 Runoff=2.60 cfs 0.190 af
Subcatchment 84S: 346+40 TO 350+00 CENTER	Runoff Area=17,680 sf 100.00% Impervious Runoff Depth=3.07" Tc=6.0 min CN=98 Runoff=1.30 cfs 0.104 af
Subcatchment 85S: 344+00 TO 350+00 LEFT	Runoff Area=18,205 sf 100.00% Impervious Runoff Depth=3.07" Tc=6.0 min CN=98 Runoff=1.34 cfs 0.107 af
Subcatchment 90S: Combined 90S and 92S	Runoff Area=49,844 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=3.80 cfs 0.292 af
Subcatchment 91S: 360+00 TO 360+00 LEFT	Runoff Area=1,433 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.11 cfs 0.008 af
Subcatchment 100S: 364+00 TO 370+00 CENTER	Runoff Area=31,359 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=2.39 cfs 0.184 af
Subcatchment 110S: Combined 110S, 112S and 113S	Runoff Area=69,921 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=5.33 cfs 0.410 af
Subcatchment 111S: 375+50 TO 375+50 LEFT	Runoff Area=867 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=0.07 cfs 0.005 af
Subcatchment 113S: 113S	Runoff Area=17,505 sf 100.00% Impervious Runoff Depth=3.07" Tc=5.0 min CN=98 Runoff=1.33 cfs 0.103 af
Subcatchment 800S: YWD Pond EAST SIDE	Runoff Area=1,262,903 sf 4.85% Impervious Runoff Depth=1.35" Flow Length=1,350' Tc=47.7 min CN=78 Runoff=20.14 cfs 3.255 af

Subcatchment 1000S: 1000S	Runoff Area=389,920 sf 6.69% Impervious Runoff Depth=1.35" Flow Length=862' Tc=24.7 min CN=78 Runoff=8.52 cfs 1.005 af
Subcatchment C8AS:	Runoff Area=1,495,142 sf 5.89% Impervious Runoff Depth=1.48" Flow Length=1,646' Tc=50.3 min CN=80 Runoff=25.67 cfs 4.231 af
Subcatchment C8BS:	Runoff Area=1,362,511 sf 7.06% Impervious Runoff Depth=1.35" Flow Length=1,604' Tc=48.3 min CN=78 Runoff=21.51 cfs 3.511 af
Subcatchment C8CS: 375+00	Runoff Area=3,245,079 sf 9.62% Impervious Runoff Depth=1.35" Flow Length=2,622' Tc=43.1 min CN=78 Runoff=54.60 cfs 8.363 af
Reach 4R: OUTLET PIPE	Avg. Flow Depth=0.47' Max Vel=8.27 fps Inflow=3.94 cfs 0.737 af 18.0" Round Pipe n=0.012 L=50.0' S=0.0260 '/' Capacity=18.35 cfs Outflow=3.94 cfs 0.737 af
Reach 8.1BR1:	Avg. Flow Depth=0.06' Max Vel=0.40 fps Inflow=0.15 cfs 0.059 af n=0.120 L=286.0' S=0.0500 '/' Capacity=100.71 cfs Outflow=0.15 cfs 0.059 af
Reach 8.1BR2:	Avg. Flow Depth=0.12' Max Vel=0.24 fps Inflow=0.59 cfs 0.220 af n=0.100 L=445.0' S=0.0045 '/' Capacity=36.13 cfs Outflow=0.45 cfs 0.220 af
Reach 8.1BR3:	Avg. Flow Depth=0.21' Max Vel=1.51 fps Inflow=0.83 cfs 0.351 af n=0.050 L=374.0' S=0.0289 '/' Capacity=85.66 cfs Outflow=0.82 cfs 0.351 af
Reach 8.1BR4:	Avg. Flow Depth=0.27' Max Vel=1.63 fps Inflow=2.14 cfs 0.556 af n=0.050 L=171.0' S=0.0213 '/' Capacity=53.25 cfs Outflow=2.14 cfs 0.556 af
Reach 8.2AR1:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.080 L=330.0' S=0.0061 '/' Capacity=82.07 cfs Outflow=0.00 cfs 0.000 af
Reach 8.2BR1:	Avg. Flow Depth=0.16' Max Vel=0.82 fps Inflow=0.59 cfs 0.161 af n=0.120 L=166.0' S=0.0620 '/' Capacity=82.21 cfs Outflow=0.59 cfs 0.161 af
Reach 8.3AR1:	Avg. Flow Depth=0.27' Max Vel=0.91 fps Inflow=1.48 cfs 0.165 af n=0.120 L=230.0' S=0.0391 '/' Capacity=60.12 cfs Outflow=1.24 cfs 0.165 af
Reach 8.3CR1:	Avg. Flow Depth=0.06' Max Vel=0.40 fps Inflow=0.48 cfs 0.178 af n=0.120 L=384.0' S=0.0495 '/' Capacity=68.10 cfs Outflow=0.46 cfs 0.178 af
Reach 8.4CR1:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.120 L=1,438.0' S=0.0178 '/' Capacity=48.77 cfs Outflow=0.00 cfs 0.000 af
Reach 8.6CR1:	Avg. Flow Depth=0.18' Max Vel=1.30 fps Inflow=1.36 cfs 0.544 af n=0.080 L=482.0' S=0.0560 '/' Capacity=30.58 cfs Outflow=1.36 cfs 0.544 af
Reach 68R: Null Node	Inflow=43.23 cfs 5.340 af Outflow=43.23 cfs 5.340 af
Reach C6R1:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.040 L=338.0' S=0.0414 '/' Capacity=189.62 cfs Outflow=0.00 cfs 0.000 af

Reach C8AR1:	Avg. Flow Depth=0.12' Max Vel=1.10 fps Inflow=4.57 cfs 4.555 af n=0.100 L=107.5' S=0.0794 '/' Capacity=9,842.09 cfs Outflow=4.57 cfs 4.555 af
Reach C8AR2:	Avg. Flow Depth=0.42' Max Vel=0.94 fps Inflow=4.57 cfs 4.555 af n=0.080 L=810.0' S=0.0099 '/' Capacity=2,843.62 cfs Outflow=4.56 cfs 4.555 af
Reach C8AR3:	Avg. Flow Depth=0.53' Max Vel=2.54 fps Inflow=4.56 cfs 4.555 af n=0.080 L=22.0' S=0.0909 '/' Capacity=1,210.27 cfs Outflow=4.56 cfs 4.555 af
Reach C8AR6:	Avg. Flow Depth=0.46' Max Vel=1.52 fps Inflow=4.68 cfs 3.342 af n=0.080 L=822.0' S=0.0254 '/' Capacity=382.10 cfs Outflow=4.68 cfs 3.342 af
Reach C8AR7:	Avg. Flow Depth=0.46' Max Vel=0.62 fps Inflow=7.79 cfs 7.505 af n=0.080 L=831.0' S=0.0042 '/' Capacity=1,134.27 cfs Outflow=7.70 cfs 7.504 af
Reach C8BR1:	Avg. Flow Depth=0.16' Max Vel=2.77 fps Inflow=7.14 cfs 4.155 af n=0.030 L=160.0' S=0.0375 '/' Capacity=1,356.35 cfs Outflow=7.14 cfs 4.155 af
Reach C8BR2:	Avg. Flow Depth=0.14' Max Vel=4.78 fps Inflow=7.14 cfs 4.155 af n=0.030 L=31.0' S=0.1210 '/' Capacity=26,509.48 cfs Outflow=7.14 cfs 4.155 af
Reach C8BR3:	Avg. Flow Depth=0.05' Max Vel=1.46 fps Inflow=7.14 cfs 4.155 af n=0.030 L=788.0' S=0.0189 '/' Capacity=41,604.45 cfs Outflow=7.13 cfs 4.155 af
Reach SP1000: POA STA380+00	Inflow=127.63 cfs 206.914 af Outflow=127.63 cfs 206.914 af
Pond 8.1AP:	Peak Elev=207.72' Storage=15,668 cf Inflow=2.92 cfs 0.360 af Outflow=0.00 cfs 0.000 af
Pond 8.1BP:	Peak Elev=203.03' Storage=5,284 cf Inflow=1.28 cfs 0.177 af Outflow=0.15 cfs 0.059 af
Pond 8.1CP:	Peak Elev=158.11' Storage=190,518 cf Inflow=21.80 cfs 7.386 af Outflow=4.68 cfs 3.342 af
Pond 8.2AP: Potentially Non-Contributing	Peak Elev=215.31' Storage=6,319 cf Inflow=1.15 cfs 0.145 af Outflow=0.00 cfs 0.000 af
Pond 8.2BP:	Peak Elev=199.62' Storage=4,309 cf Inflow=1.82 cfs 0.234 af Outflow=0.59 cfs 0.161 af
Pond 8.2CP:	Peak Elev=182.20' Storage=11,450 cf Inflow=1.85 cfs 0.263 af Outflow=0.00 cfs 0.000 af
Pond 8.3AP:	Peak Elev=200.54' Storage=4,500 cf Inflow=2.21 cfs 0.264 af Outflow=1.48 cfs 0.165 af
Pond 8.3BP:	Peak Elev=201.61' Storage=72 cf Inflow=0.83 cfs 0.131 af Outflow=0.83 cfs 0.131 af

Pond 8.3CP:	Peak Elev=155.02' Storage=13,410 cf Inflow=2.07 cfs 0.476 af Outflow=0.48 cfs 0.178 af
Pond 8.4AP:	Peak Elev=207.46' Storage=8,776 cf Inflow=2.23 cfs 0.201 af Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
Pond 8.4BP:	Peak Elev=182.39' Storage=356 cf Inflow=1.36 cfs 0.211 af Outflow=1.36 cfs 0.206 af
Pond 8.4CP:	Peak Elev=161.45' Storage=12,860 cf Inflow=1.98 cfs 0.295 af Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
Pond 8.5AP:	Peak Elev=205.80' Storage=13,744 cf Inflow=3.10 cfs 0.319 af Primary=0.04 cfs 0.004 af Secondary=0.02 cfs 0.002 af Outflow=0.05 cfs 0.005 af
Pond 8.5BP:	Peak Elev=167.95' Storage=10,451 cf Inflow=1.98 cfs 0.321 af Primary=0.13 cfs 0.142 af Secondary=0.00 cfs 0.000 af Outflow=0.13 cfs 0.142 af
Pond 8.5CP:	Peak Elev=159.52' Storage=13,603 cf Inflow=2.26 cfs 0.312 af Outflow=0.00 cfs 0.000 af
Pond 8.6AP:	Peak Elev=198.56' Storage=1,180 cf Inflow=1.48 cfs 0.181 af Outflow=1.48 cfs 0.157 af
Pond 8.6BP:	Peak Elev=156.74' Storage=37,874 cf Inflow=5.86 cfs 0.870 af Outflow=0.00 cfs 0.000 af
Pond 8.6CP1:	Peak Elev=160.77' Storage=18,980 cf Inflow=5.55 cfs 1.032 af Outflow=2.61 cfs 0.671 af
Pond 8.6CP2:	Peak Elev=158.22' Storage=8,409 cf Inflow=2.61 cfs 0.671 af Outflow=1.36 cfs 0.544 af
Pond 8.7CP:	Peak Elev=157.49' Storage=3,427 cf Inflow=0.66 cfs 0.079 af Outflow=0.00 cfs 0.000 af
Pond 8P: Option 3 Weir Control 25 Yr	Peak Elev=121.86' Storage=1.890 af Inflow=54.94 cfs 16.779 af Primary=30.90 cfs 16.778 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=30.90 cfs 16.778 af
Pond 800P: Pond on YWD	Peak Elev=119.52' Storage=19,926 cf Inflow=51.79 cfs 21.448 af Outflow=51.42 cfs 21.448 af
Pond C6P: 357+50	Peak Elev=0.00' Storage=0 cf Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af
Pond C8AP:	Peak Elev=182.55' Storage=93,380 cf Inflow=27.34 cfs 4.555 af 24.0" Round Culvert n=0.025 L=51.5' S=0.0291 '/' Outflow=4.57 cfs 4.555 af
Pond C8BP:	Peak Elev=163.38' Storage=61,688 cf Inflow=23.63 cfs 4.209 af 18.0" Round Culvert n=0.013 L=51.5' S=0.0097 '/' Outflow=7.14 cfs 4.155 af

Pond UDF8P: STA353+50 RIGHT UDF

Peak Elev=146.97' Storage=6,262 cf Inflow=6.01 cfs 0.462 af
Primary=2.18 cfs 0.441 af Secondary=1.88 cfs 0.021 af Outflow=4.06 cfs 0.462 af

Pond UDF9P: STA355+00 RIGHT UDF

Peak Elev=146.59' Storage=4,618 cf Inflow=3.87 cfs 0.296 af
Primary=1.78 cfs 0.296 af Secondary=0.00 cfs 0.000 af Outflow=1.78 cfs 0.296 af

Link 1L: (new Link)

02-YR Primary Outflow Imported from 14181.HNTB Chases Pond Model~Pond 8P.hce Inflow=88.26 cfs 185.363 af
Area= 2,130.640 ac 7.98% Imperv. Primary=88.26 cfs 185.363 af

Total Runoff Area = 295.856 ac Runoff Volume = 35.114 af Average Runoff Depth = 1.42"
90.68% Pervious = 268.277 ac 9.32% Impervious = 27.579 ac

Summary for Subcatchment 6S: 357+50

Runoff = 32.66 cfs @ 12.30 hrs, Volume= 3.585 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 1.757	98	PAVEMENT
24.062	79	Woods, Fair, HSG D
3.260	77	Brush, Fair, HSG D
29.079	80	Weighted Average
27.322		93.96% Pervious Area
1.757		6.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	31	0.0483	0.09		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.9	94	0.1277	1.79		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.2	31	0.1935	2.20		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.8	94	0.0851	2.04		Shallow Concentrated Flow, D-E Short Grass Pasture Kv= 7.0 fps
1.0	63	0.0476	1.09		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
1.6	177	0.1412	1.88		Shallow Concentrated Flow, F-G Woodland Kv= 5.0 fps
1.1	129	0.0155	2.00		Shallow Concentrated Flow, G-H Unpaved Kv= 16.1 fps
9.9	429	0.0023	0.72		Shallow Concentrated Flow, H-I Grassed Waterway Kv= 15.0 fps
0.1	50	0.0200	7.29	12.87	Pipe Channel, I-J 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015
21.4	1,098	Total			

Summary for Subcatchment 7S: 365+50

Runoff = 9.84 cfs @ 12.09 hrs, Volume= 0.705 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
*	0.493	98
	4.352	79 Woods, Fair, HSG D
	0.872	77 Brush, Fair, HSG D
	5.717	80 Weighted Average
	5.224	91.38% Pervious Area
	0.493	8.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	21	0.1190	0.12		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.2	26	0.2692	2.59		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.3	60	0.4000	3.16		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.1	15	0.1333	1.83		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
0.5	35	0.0571	1.19		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
0.2	58	0.0862	4.73		Shallow Concentrated Flow, F-G Unpaved Kv= 16.1 fps
1.2	113	0.0088	1.51		Shallow Concentrated Flow, G-H Unpaved Kv= 16.1 fps
0.5	161	0.0932	4.92		Shallow Concentrated Flow, H-I Unpaved Kv= 16.1 fps
6.0	489	Total			

Summary for Subcatchment 8.1AS:

Runoff = 2.92 cfs @ 12.40 hrs, Volume= 0.360 af, Depth= 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
*	26,882	98
	61,847	77 Woods, Good, HSG D
	32,725	73 Brush, Good, HSG D
	121,454	81 Weighted Average
	94,572	77.87% Pervious Area
	26,882	22.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.8	85	0.0120	0.06		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
3.8	170	0.0220	0.74		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
1.5	130	0.0080	1.44		Shallow Concentrated Flow, C to D Unpaved Kv= 16.1 fps
0.3	45	0.2000	2.24		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
28.4	430	Total			

Summary for Subcatchment 8.1BS:

Runoff = 1.28 cfs @ 12.52 hrs, Volume= 0.177 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 1,205	98	
63,793	77	Woods, Good, HSG D
7,195	73	Brush, Good, HSG D
72,193	77	Weighted Average
70,988		98.33% Pervious Area
1,205		1.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.8	145	0.0140	0.07		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
0.7	60	0.0830	1.44		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
1.6	60	0.0160	0.63		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
35.1	265	Total			

Summary for Subcatchment 8.1CS:

Runoff = 20.37 cfs @ 12.52 hrs, Volume= 2.831 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
*	40,216	98
	850,939	79 Woods, Fair, HSG D
	156,804	77 Brush, Fair, HSG D
	1,047,959	79 Weighted Average
	1,007,743	96.16% Pervious Area
	40,216	3.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7	125	0.0560	0.12		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
1.1	125	0.1440	1.90		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
14.3	899	0.0100	1.05	6.30	Trap/Vee/Rect Channel Flow, C to D (reach 8AR2) Bot.W=10.00' D=0.50' Z= 4.0 '/' Top.W=14.00' n= 0.080
3.8	647	0.0150	2.80	1,497.17	Trap/Vee/Rect Channel Flow, D to E (Reach 8AR4) Bot.W=255.00' D=2.00' Z= 4.8 & 7.3 '/' Top.W=279.20' n= 0.100
35.9	1,796	Total			

Summary for Subcatchment 8.2AS:

Runoff = 1.15 cfs @ 12.43 hrs, Volume= 0.145 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
*	5,384	98
	30,146	77 Woods, Good, HSG D
	20,761	73 Brush, Good, HSG D
	56,291	78 Weighted Average
	50,907	90.44% Pervious Area
	5,384	9.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.2	150	0.0200	0.09		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.30"

Summary for Subcatchment 8.2BS:

Runoff = 1.82 cfs @ 12.42 hrs, Volume= 0.231 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
*	4	98
91,507	77	Woods, Good, HSG D
2,378	73	Brush, Good, HSG D
93,889	77	Weighted Average
93,885		100.00% Pervious Area
4		0.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	112	0.0270	0.09		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	95	0.0740	1.36		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
7.1	165	0.0060	0.39		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
28.8	372	Total			

Summary for Subcatchment 8.2CS:

Runoff = 1.85 cfs @ 12.53 hrs, Volume= 0.263 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
*	12,392	98
59,368	77	Woods, Good, HSG D
30,241	73	Brush, Good, HSG D
102,001	78	Weighted Average
89,609		87.85% Pervious Area
12,392		12.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	90	0.0700	0.07		Sheet Flow, A t oB Woods: Dense underbrush n= 0.800 P2= 3.30"
1.8	105	0.0380	0.97		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
14.8	280	0.0040	0.32		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
37.1	475	Total			

Summary for Subcatchment 8.3AS:

Runoff = 2.21 cfs @ 12.38 hrs, Volume= 0.264 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 15,142	98	
58,308	77	Woods, Good, HSG D
19,987	73	Brush, Good, HSG D
93,437	80	Weighted Average
78,295		83.79% Pervious Area
15,142		16.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.2	150	0.0400	0.11		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
3.9	270	0.0520	1.14		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
26.1	420	Total			

Summary for Subcatchment 8.3BS:

Runoff = 0.83 cfs @ 12.67 hrs, Volume= 0.131 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 3,710	98	
41,240	77	Woods, Good, HSG D
5,720	73	Brush, Good, HSG D
50,670	78	Weighted Average
46,960		92.68% Pervious Area
3,710		7.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.1	135	0.0220	0.05		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"

Summary for Subcatchment 8.3CS:

Runoff = 2.07 cfs @ 13.15 hrs, Volume= 0.476 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 0	98	
169,677	77	Woods, Good, HSG D
24,095	73	Brush, Good, HSG D
193,772	77	Weighted Average
193,772		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.9	150	0.0700	0.08		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"
0.4	35	0.1100	1.66		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
1.4	70	0.0280	0.84		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
0.4	35	0.1100	1.66		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
5.7	90	0.0110	0.26		Shallow Concentrated Flow, E to F Forest w/Heavy Litter Kv= 2.5 fps
1.1	85	0.0700	1.32		Shallow Concentrated Flow, F to G Woodland Kv= 5.0 fps
26.4	250	0.0040	0.16		Shallow Concentrated Flow, G to H Forest w/Heavy Litter Kv= 2.5 fps
6.0	133	0.0220	0.37		Shallow Concentrated Flow, H to I Forest w/Heavy Litter Kv= 2.5 fps
11.6	191	0.0030	0.27		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
83.9	1,039	Total			

Summary for Subcatchment 8.4AS:

Runoff = 2.23 cfs @ 12.19 hrs, Volume= 0.201 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 14,400	98	
35,974	77	Woods, Good, HSG D
20,821	73	Brush, Good, HSG D
71,195	80	Weighted Average
56,795		79.77% Pervious Area
14,400		20.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	56	0.0540	0.10		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
1.2	50	0.0200	0.71		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
0.7	94	0.0200	2.12		Shallow Concentrated Flow, C to D Grassed Waterway Kv= 15.0 fps
0.2	30	0.2700	2.60		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
2.2	30	0.0020	0.22		Shallow Concentrated Flow, E to F Woodland Kv= 5.0 fps
13.2	260	Total			

Summary for Subcatchment 8.4BS:

Runoff = 1.36 cfs @ 12.61 hrs, Volume= 0.211 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 642	98	
84,672	77	Woods, Good, HSG D
658	73	Brush, Good, HSG D
85,972	77	Weighted Average
85,330		99.25% Pervious Area
642		0.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.8	60	0.0160	0.04		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"
2.8	106	0.0660	0.64		Shallow Concentrated Flow, B to C Forest w/Heavy Litter Kv= 2.5 fps
6.7	170	0.0290	0.43		Shallow Concentrated Flow, C to D Forest w/Heavy Litter Kv= 2.5 fps
7.5	170	0.0230	0.38		Shallow Concentrated Flow, D to E Forest w/Heavy Litter Kv= 2.5 fps
43.8	506	Total			

Summary for Subcatchment 8.4CS:

Runoff = 1.98 cfs @ 12.59 hrs, Volume= 0.295 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 9,964	98	
61,261	77	Woods, Good, HSG D
48,988	73	Brush, Good, HSG D
120,213	77	Weighted Average
110,249		91.71% Pervious Area
9,964		8.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.8	95	0.0100	0.06		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
4.1	145	0.0140	0.59		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
9.3	125	0.0020	0.22		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
40.2	365	Total			

Summary for Subcatchment 8.5AS:

Runoff = 3.10 cfs @ 12.25 hrs, Volume= 0.319 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 7,422	98	
95,282	77	Woods, Good, HSG D
27,137	73	Brush, Good, HSG D
129,841	77	Weighted Average
122,419		94.28% Pervious Area
7,422		5.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.2	80	0.0250	0.08		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
1.3	70	0.0300	0.87		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
17.5	150	Total			

Summary for Subcatchment 8.5BS:

Runoff = 1.98 cfs @ 12.69 hrs, Volume= 0.321 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 4,759	98	
111,701	77	Woods, Good, HSG D
8,211	73	Brush, Good, HSG D
124,671	78	Weighted Average
119,912		96.18% Pervious Area
4,759		3.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.3	65	0.0150	0.04		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"
3.7	115	0.0430	0.52		Shallow Concentrated Flow, B to C Forest w/Heavy Litter Kv= 2.5 fps
1.7	95	0.1360	0.92		Shallow Concentrated Flow, C to D Forest w/Heavy Litter Kv= 2.5 fps
9.4	240	0.0290	0.43		Shallow Concentrated Flow, D to E Forest w/Heavy Litter Kv= 2.5 fps
1.1	80	0.0625	1.25		Shallow Concentrated Flow, E to F Woodland Kv= 5.0 fps
2.6	122	0.0240	0.77		Shallow Concentrated Flow, F to G Woodland Kv= 5.0 fps
47.8	717	Total			

Summary for Subcatchment 8.5CS:

Runoff = 2.26 cfs @ 12.50 hrs, Volume= 0.312 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 16,201	98	
68,051	77	Woods, Good, HSG D
31,334	73	Brush, Good, HSG D
115,586	79	Weighted Average
99,385		85.98% Pervious Area
16,201		14.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3	35	0.0140	0.03		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"
0.8	30	0.0600	0.61		Shallow Concentrated Flow, B to C Forest w/Heavy Litter Kv= 2.5 fps
1.4	70	0.0290	0.85		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
4.8	80	0.0125	0.28		Shallow Concentrated Flow, C to D Forest w/Heavy Litter Kv= 2.5 fps
10.4	70	0.0020	0.11		Shallow Concentrated Flow, D to E Forest w/Heavy Litter Kv= 2.5 fps
35.7	285	Total			

Summary for Subcatchment 8.6AS:

Runoff = 1.48 cfs @ 12.40 hrs, Volume= 0.181 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 10,048	98	
49,320	77	Woods, Good, HSG D
4,522	73	Brush, Good, HSG D
63,890	80	Weighted Average
53,842		84.27% Pervious Area
10,048		15.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	50	0.0100	0.05		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
2.7	140	0.0290	0.85		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
7.7	180	0.0060	0.39		Shallow Concentrated Flow, C to d Woodland Kv= 5.0 fps
0.9	75	0.0800	1.41		Shallow Concentrated Flow, D to E Woodland Kv= 5.0 fps
27.3	445	Total			

Summary for Subcatchment 8.6BS: Non Contributing Area

Runoff = 5.86 cfs @ 12.59 hrs, Volume= 0.870 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 52,822	98	
189,735	77	Woods, Good, HSG D
64,723	73	Brush, Good, HSG D
307,280	80	Weighted Average
254,458		82.81% Pervious Area
52,822		17.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.1	50	0.0200	0.04		Sheet Flow, Woods: Dense underbrush n= 0.800 P2= 3.30"
1.8	60	0.0125	0.56		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
2.7	95	0.0140	0.59		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
2.6	90	0.0550	0.59		Shallow Concentrated Flow, Forest w/Heavy Litter Kv= 2.5 fps
13.3	155	0.0060	0.19		Shallow Concentrated Flow, Forest w/Heavy Litter Kv= 2.5 fps
41.5	450	Total			

Summary for Subcatchment 8.6CS:

Runoff = 5.55 cfs @ 12.83 hrs, Volume= 1.032 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 5,284	98	
402,314	77	Woods, Good, HSG D
12,425	73	Brush, Good, HSG D
420,023	77	Weighted Average
414,739		98.74% Pervious Area
5,284		1.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.4	105	0.0190	0.08		Sheet Flow, A to B Woods: Light underbrush n= 0.400 P2= 3.30"
1.1	60	0.0330	0.91		Shallow Concentrated Flow, B to C Woodland Kv= 5.0 fps
0.3	45	0.2900	2.69		Shallow Concentrated Flow, C to D Woodland Kv= 5.0 fps
9.0	195	0.0210	0.36		Shallow Concentrated Flow, D to E Forest w/Heavy Litter Kv= 2.5 fps
12.4	235	0.0040	0.32		Shallow Concentrated Flow, E to F Woodland Kv= 5.0 fps
14.3	235	0.0030	0.27		Shallow Concentrated Flow, F to G Woodland Kv= 5.0 fps
59.5	875	Total			

Summary for Subcatchment 8.7CS:

Runoff = 0.66 cfs @ 12.36 hrs, Volume= 0.079 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 0	98	
21,110	77	Woods, Good, HSG D
12,545	73	Brush, Good, HSG D
33,655	76	Weighted Average
33,655		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.3	135	0.1030	0.09		Sheet Flow, A to B Woods: Dense underbrush n= 0.800 P2= 3.30"

Summary for Subcatchment 80S: 350+00 TO 352+50 RIGHT

Runoff = 0.77 cfs @ 12.08 hrs, Volume= 0.061 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 10,434	98	Paved 350+00 - 3352+50
10,434		100.00% Impervious Area

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

Summary for Subcatchment 81S: Combined 81S and 82S

Runoff = 3.87 cfs @ 12.08 hrs, Volume= 0.296 af, Depth= 2.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 21,381	98	PAVED
* 6,742	98	PAVED
5,900	80	>75% Grass cover, Good, HSG D
* 20,377	98	PAVED- 82S
54,400	96	Weighted Average
5,900		10.85% Pervious Area
48,500		89.15% Impervious Area

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

Summary for Subcatchment 83S: 346+40 TO 350+00 RIGHT

Runoff = 2.60 cfs @ 12.09 hrs, Volume= 0.190 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 15,462	98	Paved 346+50 - 350+00
* 11,862	98	paved
13,250	80	>75% Grass cover, Good, HSG D
40,574	92	Weighted Average
13,250		32.66% Pervious Area
27,324		67.34% Impervious Area

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

Summary for Subcatchment 84S: 346+40 TO 350+00 CENTER

Runoff = 1.30 cfs @ 12.08 hrs, Volume= 0.104 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 17,680	98	Paved 346+50 - 350+00
17,680		100.00% Impervious Area

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

Summary for Subcatchment 85S: 344+00 TO 350+00 LEFT

Runoff = 1.34 cfs @ 12.08 hrs, Volume= 0.107 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 18,205	98	Paved 346+50 - 350+00
18,205		100.00% Impervious Area

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

Summary for Subcatchment 90S: Combined 90S and 92S

Runoff = 3.80 cfs @ 12.07 hrs, Volume= 0.292 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 48,484	98	Paved 90S 354+35 - 359+60
* 1,360	98	Paved 92S 360+00 to 360+00
49,844	98	Weighted Average
49,844		100.00% Impervious Area

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

Summary for Subcatchment 91S: 360+00 TO 360+00 LEFT

Runoff = 0.11 cfs @ 12.07 hrs, Volume= 0.008 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 1,433	98	
1,433		100.00% Impervious Area

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

Summary for Subcatchment 100S: 364+00 TO 370+00 CENTER

Runoff = 2.39 cfs @ 12.07 hrs, Volume= 0.184 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 31,359	98	PAVED
0	84	50-75% Grass cover, Fair, HSG D
31,359	98	Weighted Average
31,359		100.00% Impervious Area

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

Summary for Subcatchment 110S: Combined 110S, 112S and 113S

Runoff = 5.33 cfs @ 12.07 hrs, Volume= 0.410 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 69,921	98	PAVED CENTER
0	84	50-75% Grass cover, Fair, HSG D
69,921	98	Weighted Average
69,921		100.00% Impervious Area

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

Summary for Subcatchment 111S: 375+50 TO 375+50 LEFT

Runoff = 0.07 cfs @ 12.07 hrs, Volume= 0.005 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 867	98	
867		100.00% Impervious Area

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

Summary for Subcatchment 113S: 113S

Runoff = 1.33 cfs @ 12.07 hrs, Volume= 0.103 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 17,505	98	PAVED
17,505		100.00% Impervious Area

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

Summary for Subcatchment 800S: YWD Pond EAST SIDE

Runoff = 20.14 cfs @ 12.67 hrs, Volume= 3.255 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 61,279	98	Pavement
79,827	73	Brush, Good, HSG D
1,121,797	77	Woods, Good, HSG D
1,262,903	78	Weighted Average
1,201,624		95.15% Pervious Area
61,279		4.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.9	300	0.0900	0.18		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
4.3	91	0.0050	0.35		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.9	328	0.0640	6.39	44.70	Channel Flow, C-D Area= 7.0 sf Perim= 12.5' r= 0.56' n= 0.040 Winding stream, pools & shoals
4.9	168		0.57		Lake or Reservoir, D-E Mean Depth= 0.01'
0.4	28	0.0200	1.08		Sheet Flow, E-F Smooth surfaces n= 0.011 P2= 3.30"
7.2	244		0.57		Lake or Reservoir, F-G Mean Depth= 0.01'
2.1	191	0.0050	1.52	33.43	Channel Flow, G-H Area= 22.0 sf Perim= 50.0' r= 0.44' n= 0.040 Winding stream, pools & shoals
47.7	1,350	Total			

Summary for Subcatchment 1000S: 1000S

Runoff = 8.52 cfs @ 12.36 hrs, Volume= 1.005 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 26,097	98	PAVED
36,572	73	Brush, Good, HSG D
327,251	77	Woods, Good, HSG D
389,920	78	Weighted Average
363,823		93.31% Pervious Area
26,097		6.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	244	0.1350	0.20		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.6	100	0.2700	2.60		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
1.1	144	0.2010	2.24		Shallow Concentrated Flow, C-D Woodland Kv= 5.0 fps
0.4	42	0.1480	1.92		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
0.4	61	0.0050	2.30	82.73	Channel Flow, E-F Area= 36.0 sf Perim= 44.0' r= 0.82' n= 0.040 Winding stream, pools & shoals
2.1	271	0.0050	2.15	25.77	Channel Flow, F-G Area= 12.0 sf Perim= 25.0' r= 0.48' n= 0.030 Stream, clean & straight
24.7	862	Total			

Summary for Subcatchment C8As:

Runoff = 25.67 cfs @ 12.69 hrs, Volume= 4.231 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 88,039	98	
1,189,371	79	Woods, Fair, HSG D
217,732	77	Brush, Fair, HSG D
1,495,142	80	Weighted Average
1,407,103		94.11% Pervious Area
88,039		5.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.1	167	0.0120	0.07		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	31	0.0968	1.56		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
1.1	250	0.0240	3.63	18.13	Channel Flow, C-D Area= 5.0 sf Perim= 10.0' r= 0.50' n= 0.040 Mountain streams
0.3	133	0.0977	7.25	29.02	Channel Flow, D-E Area= 4.0 sf Perim= 8.1' r= 0.49' n= 0.040 Mountain streams
0.0	40	0.0500	59.66	8,948.44	Channel Flow, E-F Area= 150.0 sf Perim= 12.0' r= 12.50' n= 0.030 Earth, grassed & winding
9.5	1,025		1.79		Lake or Reservoir, F-G Mean Depth= 0.10'
50.3	1,646	Total			

Summary for Subcatchment C8BS:

Runoff = 21.51 cfs @ 12.71 hrs, Volume= 3.511 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

	Area (sf)	CN	Description
*	96,194	98	
	1,023,625	77	Woods, Good, HSG D
	242,692	73	Brush, Good, HSG D
	1,362,511	78	Weighted Average
	1,266,317		92.94% Pervious Area
	96,194		7.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	90	0.0220	0.08		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.30"
2.9	211	0.0569	1.19		Shallow Concentrated Flow, E-F Woodland Kv= 5.0 fps
16.7	293	0.0034	0.29		Shallow Concentrated Flow, F-G Woodland Kv= 5.0 fps
6.3	153	0.0065	0.40		Shallow Concentrated Flow, G-H Woodland Kv= 5.0 fps
0.1	31	0.0050	3.64	6.44	Pipe Channel, H-I 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015
0.4	144	0.0347	5.81	58.13	Channel Flow, I-J Area= 10.0 sf Perim= 20.0' r= 0.50' n= 0.030 Earth, grassed & winding
0.1	24	0.0050	3.64	6.44	Pipe Channel, J-K 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015
0.1	63	0.0635	7.86	39.32	Channel Flow, K-L Area= 5.0 sf Perim= 10.0' r= 0.50' n= 0.030 Earth, grassed & winding
0.1	23	0.0050	3.64	6.44	Pipe Channel, L-M 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015
0.7	180	0.0194	4.35	23.90	Channel Flow, M-N Area= 5.5 sf Perim= 11.0' r= 0.50' n= 0.030 Earth, grassed & winding
0.1	41	0.0300	8.92	15.77	Pipe Channel, N-O 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015
1.4	115	0.0087	1.40		Shallow Concentrated Flow, O-P Grassed Waterway Kv= 15.0 fps
0.2	65	0.0154	6.39	11.30	Pipe Channel, P-Q 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.015
0.5	171	0.0292	5.33	16.00	Channel Flow, Q-R Area= 3.0 sf Perim= 6.0' r= 0.50' n= 0.030 Earth, grassed & winding
48.3	1,604	Total			

Summary for Subcatchment C8CS: 375+00

Runoff = 54.60 cfs @ 12.60 hrs, Volume= 8.363 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (sf)	CN	Description
* 312,157	98	
2,468,060	77	Woods, Good, HSG D
464,862	73	Brush, Good, HSG D
3,245,079	78	Weighted Average
2,932,922		90.38% Pervious Area
312,157		9.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.1	75	0.0450	0.15		Sheet Flow, A to B Grass: Dense n= 0.240 P2= 3.30"
5.3	313	0.0383	0.98		Shallow Concentrated Flow, F-G Woodland Kv= 5.0 fps
2.3	133	0.0376	0.97		Shallow Concentrated Flow, G-H Woodland Kv= 5.0 fps
5.2	538	0.0130	1.71		Shallow Concentrated Flow, H-I Grassed Waterway Kv= 15.0 fps
1.6	182	0.0166	1.93		Shallow Concentrated Flow, I-J Grassed Waterway Kv= 15.0 fps
2.2	119	0.0336	0.92		Shallow Concentrated Flow, J-K Woodland Kv= 5.0 fps
1.8	136	0.0662	1.29		Shallow Concentrated Flow, K-L Woodland Kv= 5.0 fps
4.3	197	0.0228	0.75		Shallow Concentrated Flow, L-M Woodland Kv= 5.0 fps
12.3	929	0.0070	1.25		Shallow Concentrated Flow, M-N Grassed Waterway Kv= 15.0 fps
43.1	2,622	Total			

Summary for Reach 4R: OUTLET PIPE

[52] Hint: Inlet/Outlet conditions not evaluated

[79] Warning: Submerged Pond UDF8P Primary device # 1 OUTLET by 0.09'

[79] Warning: Submerged Pond UDF9P Primary device # 1 INLET by 0.34'

Inflow Area = 3.244 ac, 86.45% Impervious, Inflow Depth = 2.73" for 02-YR event
 Inflow = 3.94 cfs @ 12.21 hrs, Volume= 0.737 af
 Outflow = 3.94 cfs @ 12.21 hrs, Volume= 0.737 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Max. Velocity= 8.27 fps, Min. Travel Time= 0.1 min
 Avg. Velocity = 2.86 fps, Avg. Travel Time= 0.3 min

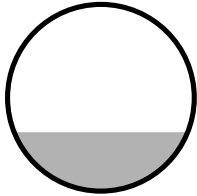
Peak Storage= 24 cf @ 12.21 hrs
 Average Depth at Peak Storage= 0.47'
 Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 18.35 cfs

18.0" Round Pipe

n= 0.012

Length= 50.0' Slope= 0.0260 '/'

Inlet Invert= 141.30', Outlet Invert= 140.00'



Summary for Reach 8.1BR1:

Inflow Area = 1.657 ac, 1.67% Impervious, Inflow Depth = 0.43" for 02-YR event
Inflow = 0.15 cfs @ 15.29 hrs, Volume= 0.059 af
Outflow = 0.15 cfs @ 15.70 hrs, Volume= 0.059 af, Atten= 2%, Lag= 24.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.40 fps, Min. Travel Time= 11.8 min
Avg. Velocity = 0.27 fps, Avg. Travel Time= 17.7 min

Peak Storage= 103 cf @ 15.50 hrs
Average Depth at Peak Storage= 0.06'
Bank-Full Depth= 2.00' Flow Area= 32.0 sf, Capacity= 100.71 cfs

6.00' x 2.00' deep channel, n= 0.120
Side Slope Z-value= 5.0 '/' Top Width= 26.00'
Length= 286.0' Slope= 0.0500 '/'
Inlet Invert= 202.45', Outlet Invert= 188.16'



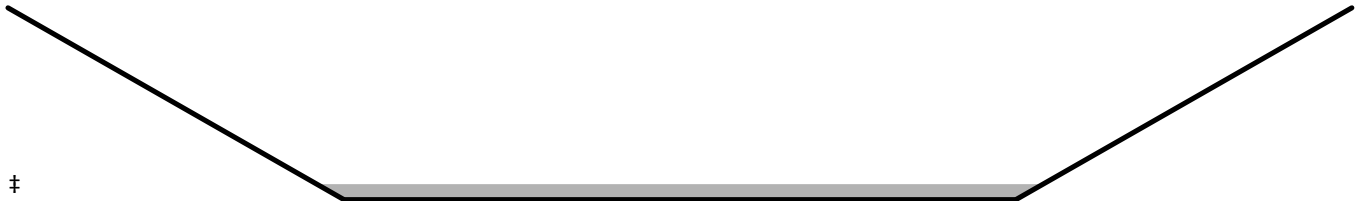
Summary for Reach 8.1BR2:

Inflow Area = 6.793 ac, 2.92% Impervious, Inflow Depth = 0.39" for 02-YR event
Inflow = 0.59 cfs @ 13.16 hrs, Volume= 0.220 af
Outflow = 0.45 cfs @ 14.22 hrs, Volume= 0.220 af, Atten= 24%, Lag= 63.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.24 fps, Min. Travel Time= 31.3 min
Avg. Velocity = 0.11 fps, Avg. Travel Time= 70.1 min

Peak Storage= 839 cf @ 13.70 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 1.50' Flow Area= 33.8 sf, Capacity= 36.13 cfs

15.00' x 1.50' deep channel, n= 0.100
Side Slope Z-value= 5.0 '/' Top Width= 30.00'
Length= 445.0' Slope= 0.0045 '/'
Inlet Invert= 187.00', Outlet Invert= 185.00'



Summary for Reach 8.1BR3:

Inflow Area = 7.957 ac, 3.56% Impervious, Inflow Depth = 0.53" for 02-YR event
Inflow = 0.83 cfs @ 12.68 hrs, Volume= 0.351 af
Outflow = 0.82 cfs @ 12.79 hrs, Volume= 0.351 af, Atten= 1%, Lag= 6.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.51 fps, Min. Travel Time= 4.1 min
Avg. Velocity = 0.68 fps, Avg. Travel Time= 9.2 min

Peak Storage= 203 cf @ 12.72 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 85.66 cfs

2.00' x 2.00' deep channel, n= 0.050
Side Slope Z-value= 3.0 '/' Top Width= 14.00'
Length= 374.0' Slope= 0.0289 '/'
Inlet Invert= 183.79', Outlet Invert= 173.00'



Summary for Reach 8.1BR4:

Inflow Area = 9.930 ac, 3.00% Impervious, Inflow Depth = 0.67" for 02-YR event
Inflow = 2.14 cfs @ 12.71 hrs, Volume= 0.556 af
Outflow = 2.14 cfs @ 12.76 hrs, Volume= 0.556 af, Atten= 0%, Lag= 2.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.63 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 0.55 fps, Avg. Travel Time= 5.2 min

Peak Storage= 225 cf @ 12.73 hrs
Average Depth at Peak Storage= 0.27'
Bank-Full Depth= 1.50' Flow Area= 12.8 sf, Capacity= 53.25 cfs

4.00' x 1.50' deep channel, n= 0.050
Side Slope Z-value= 3.0 '/' Top Width= 13.00'
Length= 171.0' Slope= 0.0213 '/'
Inlet Invert= 171.64', Outlet Invert= 168.00'



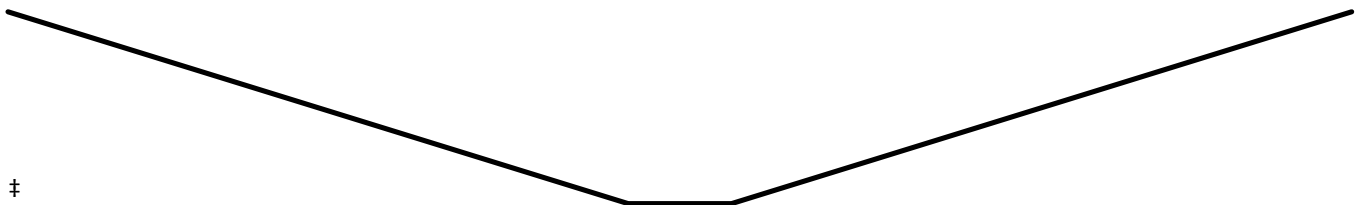
Summary for Reach 8.2AR1:

Inflow Area = 1.292 ac, 9.56% Impervious, Inflow Depth = 0.00" for 02-YR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 42.0 sf, Capacity= 82.07 cfs

2.00' x 3.00' deep channel, n= 0.080
Side Slope Z-value= 4.0 '/' Top Width= 26.00'
Length= 330.0' Slope= 0.0061 '/'
Inlet Invert= 212.50', Outlet Invert= 210.50'



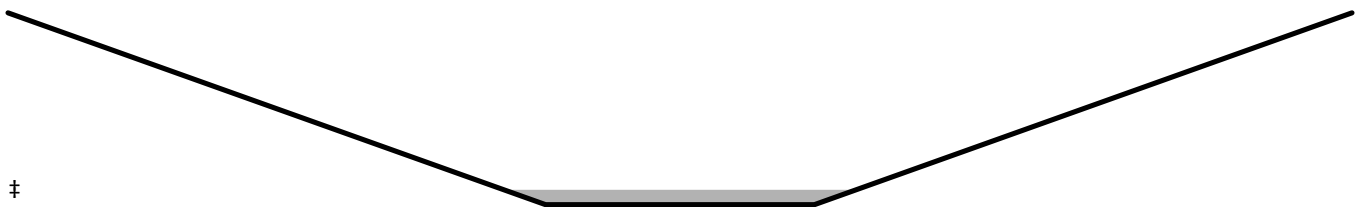
Summary for Reach 8.2BR1:

Inflow Area = 5.136 ac, 3.32% Impervious, Inflow Depth = 0.38" for 02-YR event
Inflow = 0.59 cfs @ 13.06 hrs, Volume= 0.161 af
Outflow = 0.59 cfs @ 13.16 hrs, Volume= 0.161 af, Atten= 0%, Lag= 6.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.82 fps, Min. Travel Time= 3.4 min
Avg. Velocity = 0.37 fps, Avg. Travel Time= 7.4 min

Peak Storage= 120 cf @ 13.11 hrs
Average Depth at Peak Storage= 0.16'
Bank-Full Depth= 2.00' Flow Area= 24.0 sf, Capacity= 82.21 cfs

4.00' x 2.00' deep channel, n= 0.120
Side Slope Z-value= 4.0 '/' Top Width= 20.00'
Length= 166.0' Slope= 0.0620 '/'
Inlet Invert= 198.45', Outlet Invert= 188.16'



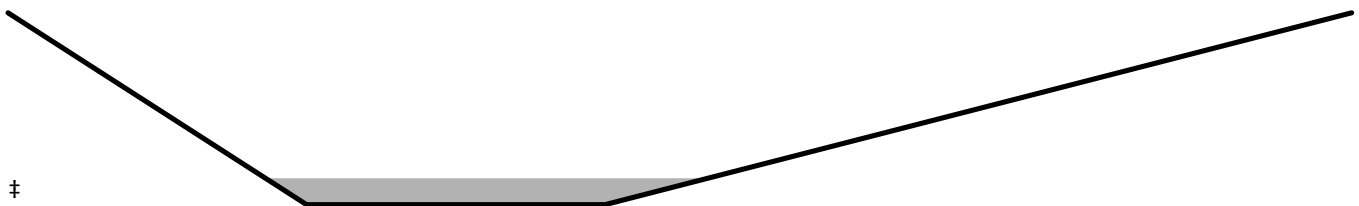
Summary for Reach 8.3AR1:

Inflow Area = 7.860 ac, 18.05% Impervious, Inflow Depth = 0.25" for 02-YR event
Inflow = 1.48 cfs @ 12.66 hrs, Volume= 0.165 af
Outflow = 1.24 cfs @ 12.82 hrs, Volume= 0.165 af, Atten= 16%, Lag= 9.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.91 fps, Min. Travel Time= 4.2 min
Avg. Velocity = 0.37 fps, Avg. Travel Time= 10.3 min

Peak Storage= 314 cf @ 12.75 hrs
Average Depth at Peak Storage= 0.27'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 60.12 cfs

4.00' x 2.00' deep channel, n= 0.120
Side Slope Z-value= 2.0 5.0 '/' Top Width= 18.00'
Length= 230.0' Slope= 0.0391 '/'
Inlet Invert= 194.00', Outlet Invert= 185.00'



Summary for Reach 8.3CR1:

Inflow Area = 4.448 ac, 0.00% Impervious, Inflow Depth = 0.48" for 02-YR event
Inflow = 0.48 cfs @ 15.61 hrs, Volume= 0.178 af
Outflow = 0.46 cfs @ 16.19 hrs, Volume= 0.178 af, Atten= 5%, Lag= 34.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.40 fps, Min. Travel Time= 16.1 min
Avg. Velocity = 0.22 fps, Avg. Travel Time= 29.6 min

Peak Storage= 443 cf @ 15.92 hrs
Average Depth at Peak Storage= 0.06'
Bank-Full Depth= 1.00' Flow Area= 30.0 sf, Capacity= 68.10 cfs

20.00' x 1.00' deep channel, n= 0.120
Side Slope Z-value= 10.0 '/' Top Width= 40.00'
Length= 384.0' Slope= 0.0495 '/'
Inlet Invert= 154.00', Outlet Invert= 135.00'



Summary for Reach 8.4CR1:

Inflow Area = 2.760 ac, 8.29% Impervious, Inflow Depth = 0.00" for 02-YR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 26.0 sf, Capacity= 48.77 cfs

5.00' x 2.00' deep channel, n= 0.120
Side Slope Z-value= 4.0 '/' Top Width= 21.00'
Length= 1,438.0' Slope= 0.0178 '/'
Inlet Invert= 160.60', Outlet Invert= 135.00'



Summary for Reach 8.6CR1:

Inflow Area = 10.415 ac, 1.16% Impervious, Inflow Depth = 0.63" for 02-YR event
Inflow = 1.36 cfs @ 14.80 hrs, Volume= 0.544 af
Outflow = 1.36 cfs @ 14.98 hrs, Volume= 0.544 af, Atten= 0%, Lag= 10.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.30 fps, Min. Travel Time= 6.2 min
Avg. Velocity = 0.52 fps, Avg. Travel Time= 15.3 min

Peak Storage= 504 cf @ 14.87 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.00' Flow Area= 9.0 sf, Capacity= 30.58 cfs

5.00' x 1.00' deep channel, n= 0.080
Side Slope Z-value= 4.0 '/' Top Width= 13.00'
Length= 482.0' Slope= 0.0560 '/'
Inlet Invert= 156.00', Outlet Invert= 129.00'



Summary for Reach 68R: Null Node

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 39.184 ac, 15.82% Impervious, Inflow Depth = 1.64" for 02-YR event
Inflow = 43.23 cfs @ 12.28 hrs, Volume= 5.340 af
Outflow = 43.23 cfs @ 12.28 hrs, Volume= 5.340 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Summary for Reach C6R1:

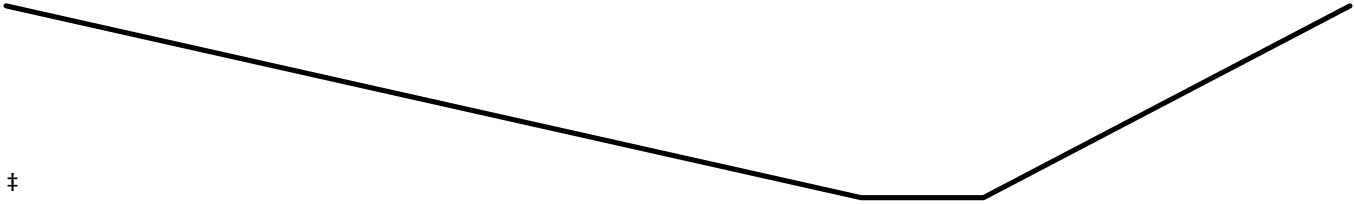
[79] Warning: Submerged Pond C6P Secondary device # 2 OUTLET by 2.13'

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 24.0 sf, Capacity= 189.62 cfs

2.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 7.0 3.0 '/' Top Width= 22.00'
Length= 338.0' Slope= 0.0414 '/'
Inlet Invert= 139.00', Outlet Invert= 125.00'



‡

Summary for Reach C8AR1:

Inflow Area = 43.650 ac, 8.41% Impervious, Inflow Depth = 1.25" for 02-YR event
Inflow = 4.57 cfs @ 14.80 hrs, Volume= 4.555 af
Outflow = 4.57 cfs @ 14.85 hrs, Volume= 4.555 af, Atten= 0%, Lag= 2.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.10 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 0.93 fps, Avg. Travel Time= 1.9 min

Peak Storage= 447 cf @ 14.82 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 10.00' Flow Area= 680.0 sf, Capacity= 9,842.09 cfs

33.00' x 10.00' deep channel, n= 0.100
Side Slope Z-value= 3.0 4.0 '/' Top Width= 103.00'
Length= 107.5' Slope= 0.0794 '/'
Inlet Invert= 179.54', Outlet Invert= 171.00'



‡

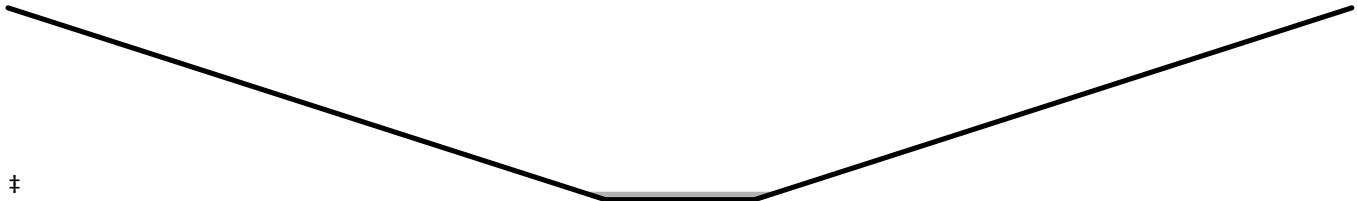
Summary for Reach C8AR2:

Inflow Area = 43.650 ac, 8.41% Impervious, Inflow Depth = 1.25" for 02-YR event
Inflow = 4.57 cfs @ 14.85 hrs, Volume= 4.555 af
Outflow = 4.56 cfs @ 15.26 hrs, Volume= 4.555 af, Atten= 0%, Lag= 24.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.94 fps, Min. Travel Time= 14.4 min
Avg. Velocity = 0.59 fps, Avg. Travel Time= 22.9 min

Peak Storage= 3,932 cf @ 15.02 hrs
Average Depth at Peak Storage= 0.42'
Bank-Full Depth= 10.00' Flow Area= 500.0 sf, Capacity= 2,843.62 cfs

10.00' x 10.00' deep channel, n= 0.080
Side Slope Z-value= 4.0 '/' Top Width= 90.00'
Length= 810.0' Slope= 0.0099 '/'
Inlet Invert= 170.00', Outlet Invert= 162.00'



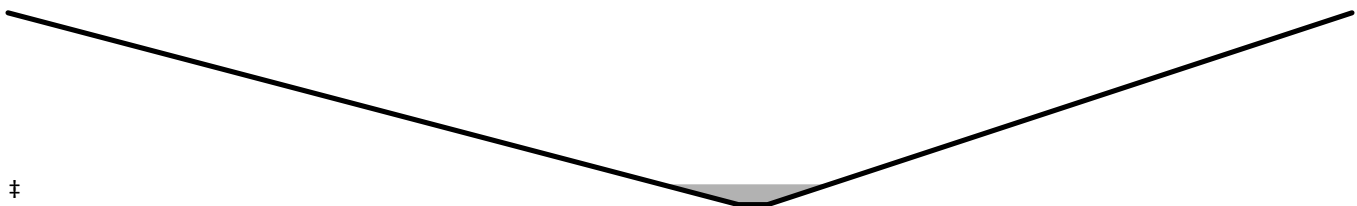
Summary for Reach C8AR3:

Inflow Area = 43.650 ac, 8.41% Impervious, Inflow Depth = 1.25" for 02-YR event
Inflow = 4.56 cfs @ 15.26 hrs, Volume= 4.555 af
Outflow = 4.56 cfs @ 15.26 hrs, Volume= 4.555 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.54 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.50 fps, Avg. Travel Time= 0.2 min

Peak Storage= 40 cf @ 15.26 hrs
Average Depth at Peak Storage= 0.53'
Bank-Full Depth= 5.00' Flow Area= 117.5 sf, Capacity= 1,210.27 cfs

1.00' x 5.00' deep channel, n= 0.080
Side Slope Z-value= 5.0 4.0 '/' Top Width= 46.00'
Length= 22.0' Slope= 0.0909 '/'
Inlet Invert= 161.00', Outlet Invert= 159.00'



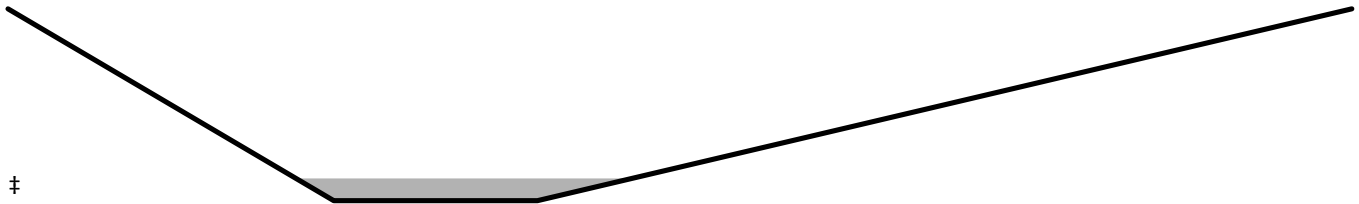
Summary for Reach C8AR6:

Inflow Area = 67.708 ac, 6.78% Impervious, Inflow Depth = 0.59" for 02-YR event
Inflow = 4.68 cfs @ 19.57 hrs, Volume= 3.342 af
Outflow = 4.68 cfs @ 19.83 hrs, Volume= 3.342 af, Atten= 0%, Lag= 16.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.52 fps, Min. Travel Time= 9.0 min
Avg. Velocity = 0.74 fps, Avg. Travel Time= 18.6 min

Peak Storage= 2,533 cf @ 19.68 hrs
Average Depth at Peak Storage= 0.46'
Bank-Full Depth= 4.00' Flow Area= 76.0 sf, Capacity= 382.10 cfs

5.00' x 4.00' deep channel, n= 0.080
Side Slope Z-value= 2.0 5.0 '/' Top Width= 33.00'
Length= 822.0' Slope= 0.0254 '/'
Inlet Invert= 155.88', Outlet Invert= 135.00'



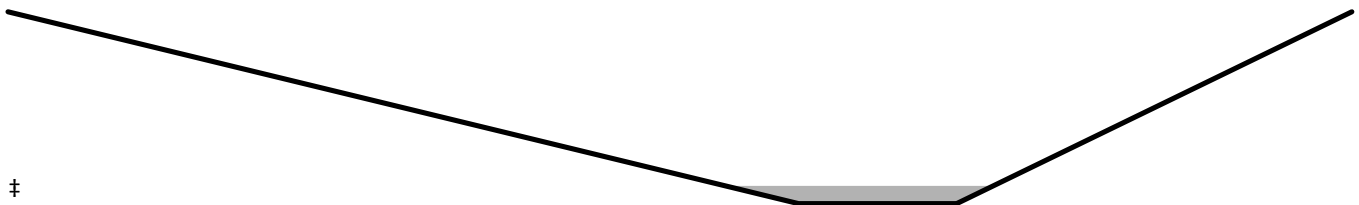
Summary for Reach C8AR7:

Inflow Area = 123.862 ac, 7.36% Impervious, Inflow Depth > 0.73" for 02-YR event
Inflow = 7.79 cfs @ 19.00 hrs, Volume= 7.505 af
Outflow = 7.70 cfs @ 19.68 hrs, Volume= 7.504 af, Atten= 1%, Lag= 41.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.62 fps, Min. Travel Time= 22.4 min
Avg. Velocity = 0.30 fps, Avg. Travel Time= 46.2 min

Peak Storage= 10,340 cf @ 19.31 hrs
Average Depth at Peak Storage= 0.46'
Bank-Full Depth= 5.00' Flow Area= 475.0 sf, Capacity= 1,134.27 cfs

20.00' x 5.00' deep channel, n= 0.080 Earth, long dense weeds
Side Slope Z-value= 20.0 10.0 '/' Top Width= 170.00'
Length= 831.0' Slope= 0.0042 '/'
Inlet Invert= 132.50', Outlet Invert= 129.00'



Summary for Reach C8BR1:

Inflow Area = 53.779 ac, 7.81% Impervious, Inflow Depth > 0.93" for 02-YR event
Inflow = 7.14 cfs @ 13.73 hrs, Volume= 4.155 af
Outflow = 7.14 cfs @ 13.76 hrs, Volume= 4.155 af, Atten= 0%, Lag= 1.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Max. Velocity= 2.77 fps, Min. Travel Time= 1.0 min

Avg. Velocity = 1.31 fps, Avg. Travel Time= 2.0 min

Peak Storage= 412 cf @ 13.74 hrs

Average Depth at Peak Storage= 0.16'

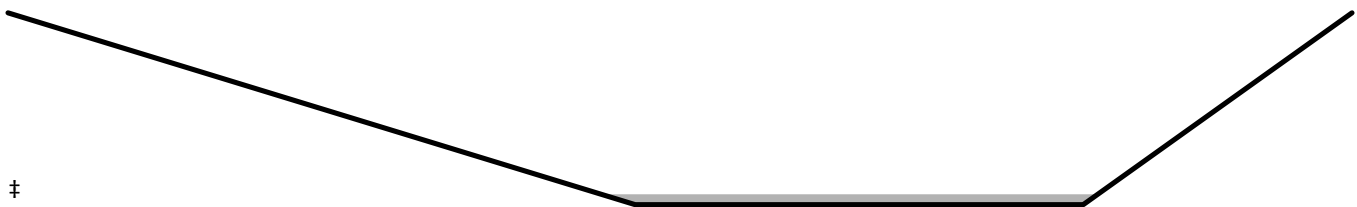
Bank-Full Depth= 3.00' Flow Area= 90.0 sf, Capacity= 1,356.35 cfs

15.00' x 3.00' deep channel, n= 0.030 Earth, grassed & winding

Side Slope Z-value= 7.0 3.0 '/' Top Width= 45.00'

Length= 160.0' Slope= 0.0375 '/'

Inlet Invert= 160.00', Outlet Invert= 154.00'



Summary for Reach C8BR2:

Inflow Area = 53.779 ac, 7.81% Impervious, Inflow Depth > 0.93" for 02-YR event

Inflow = 7.14 cfs @ 13.76 hrs, Volume= 4.155 af

Outflow = 7.14 cfs @ 13.76 hrs, Volume= 4.155 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Max. Velocity= 4.78 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 3.74 fps, Avg. Travel Time= 0.1 min

Peak Storage= 46 cf @ 13.76 hrs

Average Depth at Peak Storage= 0.14'

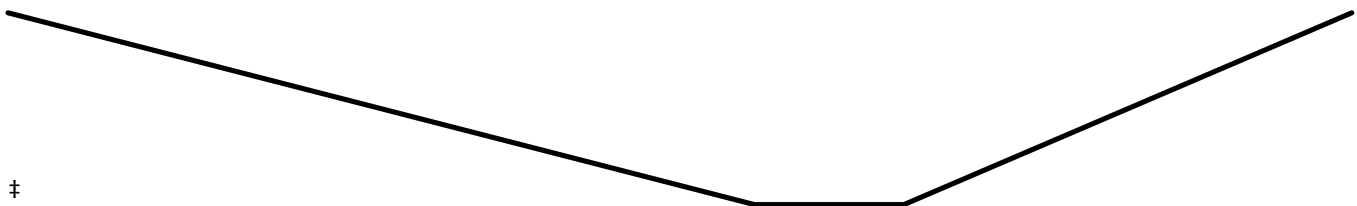
Bank-Full Depth= 10.00' Flow Area= 500.0 sf, Capacity= 26,509.48 cfs

10.00' x 10.00' deep channel, n= 0.030 Earth, grassed & winding

Side Slope Z-value= 5.0 3.0 '/' Top Width= 90.00'

Length= 31.0' Slope= 0.1210 '/'

Inlet Invert= 153.75', Outlet Invert= 150.00'



Summary for Reach C8BR3:

Inflow Area = 53.779 ac, 7.81% Impervious, Inflow Depth > 0.93" for 02-YR event
 Inflow = 7.14 cfs @ 13.76 hrs, Volume= 4.155 af
 Outflow = 7.13 cfs @ 14.11 hrs, Volume= 4.155 af, Atten= 0%, Lag= 20.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Max. Velocity= 1.46 fps, Min. Travel Time= 9.0 min
 Avg. Velocity = 1.46 fps, Avg. Travel Time= 9.0 min

Peak Storage= 3,846 cf @ 13.96 hrs
 Average Depth at Peak Storage= 0.05'
 Bank-Full Depth= 10.00' Flow Area= 1,650.0 sf, Capacity= 41,604.45 cfs

100.00' x 10.00' deep channel, n= 0.030 Earth, grassed & winding
 Side Slope Z-value= 7.0 6.0 '/' Top Width= 230.00'
 Length= 788.0' Slope= 0.0189 '/'
 Inlet Invert= 149.89', Outlet Invert= 135.00'



Summary for Reach SP1000: POA STA380+00

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2,387.312 ac, 8.02% Impervious, Inflow Depth > 1.04" for 02-YR event
 Inflow = 127.63 cfs @ 12.55 hrs, Volume= 206.914 af
 Outflow = 127.63 cfs @ 12.55 hrs, Volume= 206.914 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Summary for Pond 8.1AP:

Inflow Area = 2.788 ac, 22.13% Impervious, Inflow Depth = 1.55" for 02-YR event
 Inflow = 2.92 cfs @ 12.40 hrs, Volume= 0.360 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 207.72' @ 25.63 hrs Surf.Area= 11,025 sf Storage= 15,668 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	206.00'	64,483 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
206.00	7,624	339.0	0	0	7,624
207.00	9,226	361.0	8,412	8,412	8,898
208.00	11,778	413.0	10,476	18,888	12,125
209.00	14,330	449.0	13,033	31,922	14,631
210.00	16,588	464.0	15,445	47,367	15,813
211.00	17,650	499.0	17,116	64,483	18,538

Device	Routing	Invert	Outlet Devices
#1	Primary	210.00'	22.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.00' (Free Discharge)

1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 8.1BP:

Inflow Area = 1.657 ac, 1.67% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 1.28 cfs @ 12.52 hrs, Volume= 0.177 af
 Outflow = 0.15 cfs @ 15.29 hrs, Volume= 0.059 af, Atten= 88%, Lag= 166.5 min
 Primary = 0.15 cfs @ 15.29 hrs, Volume= 0.059 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 203.03' @ 15.29 hrs Surf.Area= 5,186 sf Storage= 5,284 cf

Plug-Flow detention time= 372.5 min calculated for 0.059 af (34% of inflow)
 Center-of-Mass det. time= 234.5 min (1,112.2 - 877.6)

Volume	Invert	Avail.Storage	Storage Description
#1	201.00'	11,928 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
201.00	400	0	0
202.00	2,390	1,395	1,395
203.00	5,085	3,738	5,133
204.00	8,505	6,795	11,928

Device	Routing	Invert	Outlet Devices
#1	Primary	203.00'	10.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.14 cfs @ 15.29 hrs HW=203.03' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Weir Controls 0.14 cfs @ 0.46 fps)

Summary for Pond 8.1CP:

Inflow Area = 67.708 ac, 6.78% Impervious, Inflow Depth = 1.31" for 02-YR event
 Inflow = 21.80 cfs @ 12.53 hrs, Volume= 7.386 af
 Outflow = 4.68 cfs @ 19.57 hrs, Volume= 3.342 af, Atten= 79%, Lag= 422.4 min
 Primary = 4.68 cfs @ 19.57 hrs, Volume= 3.342 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 158.11' @ 19.57 hrs Surf.Area= 135,488 sf Storage= 190,518 cf

Plug-Flow detention time= 570.3 min calculated for 3.342 af (45% of inflow)
 Center-of-Mass det. time= 321.5 min (1,380.7 - 1,059.3)

Volume	Invert	Avail.Storage	Storage Description
#1	156.40'	316,039 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.40	35,000	0	0
157.00	123,134	47,440	47,440
159.00	145,465	268,599	316,039

Device	Routing	Invert	Outlet Devices
#1	Primary	158.00'	50.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=4.65 cfs @ 19.57 hrs HW=158.11' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Weir Controls 4.65 cfs @ 0.87 fps)

Summary for Pond 8.2AP: Potentially Non-Contributing

Inflow Area = 1.292 ac, 9.56% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 1.15 cfs @ 12.43 hrs, Volume= 0.145 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 215.31' @ 25.64 hrs Surf.Area= 11,517 sf Storage= 6,319 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	214.00'	17,830 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
214.00	433	80.0	0	0	433
215.00	7,762	597.0	3,343	3,343	28,288
216.00	22,487	1,002.0	14,487	17,830	79,828

Device	Routing	Invert	Outlet Devices
#1	Primary	215.50'	36.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=214.00' (Free Discharge)

↑-1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 8.2BP:

Inflow Area = 5.136 ac, 3.32% Impervious, Inflow Depth = 0.55" for 02-YR event
 Inflow = 1.82 cfs @ 12.42 hrs, Volume= 0.234 af
 Outflow = 0.59 cfs @ 13.06 hrs, Volume= 0.161 af, Atten= 67%, Lag= 38.5 min
 Primary = 0.59 cfs @ 13.06 hrs, Volume= 0.161 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 199.62' @ 13.06 hrs Surf.Area= 9,583 sf Storage= 4,309 cf

Plug-Flow detention time= 222.7 min calculated for 0.161 af (69% of inflow)
 Center-of-Mass det. time= 111.3 min (991.9 - 880.6)

Volume	Invert	Avail.Storage	Storage Description
#1	198.50'	28,064 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
198.50	200	0	0
199.00	2,250	613	613
200.00	13,986	8,118	8,731
201.00	24,680	19,333	28,064

Device	Routing	Invert	Outlet Devices
#1	Primary	199.50'	5.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.59 cfs @ 13.06 hrs HW=199.62' (Free Discharge)

↑-1=Broad-Crested Rectangular Weir (Weir Controls 0.59 cfs @ 0.95 fps)

Summary for Pond 8.2CP:

Inflow Area = 2.342 ac, 12.15% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 1.85 cfs @ 12.53 hrs, Volume= 0.263 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 182.20' @ 26.14 hrs Surf.Area= 17,761 sf Storage= 11,450 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	181.00'	58,735 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
181.00	500	0	0
182.00	15,600	8,050	8,050
183.00	26,200	20,900	28,950
184.00	33,370	29,785	58,735

Device	Routing	Invert	Outlet Devices
#1	Primary	182.40'	20.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=181.00' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 8.3AP:

Inflow Area = 7.860 ac, 18.05% Impervious, Inflow Depth = 0.40" for 02-YR event
 Inflow = 2.21 cfs @ 12.38 hrs, Volume= 0.264 af
 Outflow = 1.48 cfs @ 12.66 hrs, Volume= 0.165 af, Atten= 33%, Lag= 16.6 min
 Primary = 1.48 cfs @ 12.66 hrs, Volume= 0.165 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 200.54' @ 12.66 hrs Surf.Area= 3,413 sf Storage= 4,500 cf

Plug-Flow detention time= 191.9 min calculated for 0.164 af (62% of inflow)
 Center-of-Mass det. time= 81.2 min (941.0 - 859.8)

Volume	Invert	Avail.Storage	Storage Description
#1	198.50'	6,209 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
198.50	916	144.0	0	0	916
199.00	1,731	172.0	651	651	1,625
200.00	2,691	278.0	2,193	2,844	5,427
201.00	4,086	269.0	3,364	6,209	5,905

Device	Routing	Invert	Outlet Devices
#1	Primary	200.50'	65.0' long x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=1.44 cfs @ 12.66 hrs HW=200.54' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Weir Controls 1.44 cfs @ 0.51 fps)

Summary for Pond 8.3BP:

Inflow Area = 1.163 ac, 7.32% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 0.83 cfs @ 12.67 hrs, Volume= 0.131 af
 Outflow = 0.83 cfs @ 12.68 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.8 min
 Primary = 0.83 cfs @ 12.68 hrs, Volume= 0.131 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 201.61' @ 12.68 hrs Surf.Area= 5,736 sf Storage= 72 cf

Plug-Flow detention time= 1.5 min calculated for 0.131 af (100% of inflow)
 Center-of-Mass det. time= 1.5 min (885.2 - 883.8)

Volume	Invert	Avail.Storage	Storage Description
#1	201.60'	18,071 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
201.60	5,455	0	0
202.00	14,150	3,921	3,921
203.00	14,150	14,150	18,071

Device	Routing	Invert	Outlet Devices
#1	Primary	201.60'	202.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.80 cfs @ 12.68 hrs HW=201.61' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Weir Controls 0.80 cfs @ 0.30 fps)

Summary for Pond 8.3CP:

Inflow Area = 4.448 ac, 0.00% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 2.07 cfs @ 13.15 hrs, Volume= 0.476 af
 Outflow = 0.48 cfs @ 15.61 hrs, Volume= 0.178 af, Atten= 77%, Lag= 147.7 min
 Primary = 0.48 cfs @ 15.61 hrs, Volume= 0.178 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 155.02' @ 15.61 hrs Surf.Area= 20,021 sf Storage= 13,410 cf

Plug-Flow detention time= 356.0 min calculated for 0.178 af (37% of inflow)
 Center-of-Mass det. time= 211.7 min (1,134.7 - 922.9)

Volume	Invert	Avail.Storage	Storage Description
#1	154.30'	34,473 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
154.30	17,065	0	0
155.00	19,950	12,955	12,955
156.00	23,085	21,518	34,473

Device	Routing	Invert	Outlet Devices
#1	Primary	155.00'	50.0' long x 15.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.46 cfs @ 15.61 hrs HW=155.02' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Weir Controls 0.46 cfs @ 0.40 fps)

Summary for Pond 8.4AP:

Inflow Area = 2.927 ac, 15.52% Impervious, Inflow Depth = 0.83" for 02-YR event
 Inflow = 2.23 cfs @ 12.19 hrs, Volume= 0.201 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 207.46' @ 24.77 hrs Surf.Area= 7,718 sf Storage= 8,776 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	206.00'	54,709 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
206.00	4,077	240.0	0	0	4,077
207.00	6,895	338.0	5,425	5,425	8,594
208.00	8,749	385.0	7,804	13,228	11,322
209.00	12,565	552.0	10,600	23,828	23,783
210.00	16,428	882.0	14,453	38,281	61,448
211.00	16,428	882.0	16,428	54,709	62,330

Device	Routing	Invert	Outlet Devices
#1	Secondary	210.50'	63.0' long x 13.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.60 2.64 2.70 2.66 2.65 2.66 2.65 2.63
#2	Primary	209.90'	6.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.00' (Free Discharge)
 ↳2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=206.00' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 8.4BP:

Inflow Area = 1.974 ac, 0.75% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 1.36 cfs @ 12.61 hrs, Volume= 0.211 af
 Outflow = 1.36 cfs @ 12.65 hrs, Volume= 0.206 af, Atten= 0%, Lag= 2.2 min
 Primary = 1.36 cfs @ 12.65 hrs, Volume= 0.206 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 182.39' @ 12.65 hrs Surf.Area= 1,584 sf Storage= 356 cf

Plug-Flow detention time= 21.5 min calculated for 0.206 af (97% of inflow)
 Center-of-Mass det. time= 7.2 min (892.9 - 885.7)

Volume	Invert	Avail.Storage	Storage Description
#1	182.00'	6,770 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
182.00	260	0	0
183.00	3,690	1,975	1,975
184.00	5,900	4,795	6,770

Device	Routing	Invert	Outlet Devices
#1	Primary	182.30'	20.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.35 cfs @ 12.65 hrs HW=182.39' (Free Discharge)

↳ **1=Broad-Crested Rectangular Weir** (Weir Controls 1.35 cfs @ 0.79 fps)

Summary for Pond 8.4CP:

Inflow Area = 2.760 ac, 8.29% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 1.98 cfs @ 12.59 hrs, Volume= 0.295 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 161.45' @ 26.27 hrs Surf.Area= 37,975 sf Storage= 12,860 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	161.10'	81,264 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
161.10	34,950	0	0
162.00	42,670	34,929	34,929
163.00	50,000	46,335	81,264

Device	Routing	Invert	Outlet Devices
#1	Primary	161.50'	30.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	161.50'	80.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=161.10' (Free Discharge)

↳ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=161.10' (Free Discharge)

↳ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 8.5AP:

Inflow Area = 2.981 ac, 5.72% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 3.10 cfs @ 12.25 hrs, Volume= 0.319 af
 Outflow = 0.05 cfs @ 24.14 hrs, Volume= 0.005 af, Atten= 98%, Lag= 713.3 min
 Primary = 0.04 cfs @ 24.14 hrs, Volume= 0.004 af
 Secondary = 0.02 cfs @ 24.14 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Peak Elev= 205.80' @ 24.14 hrs Surf.Area= 26,367 sf Storage= 13,744 cf

Plug-Flow detention time= 792.3 min calculated for 0.005 af (2% of inflow)
Center-of-Mass det. time= 591.7 min (1,453.1 - 861.3)

Volume	Invert	Avail.Storage	Storage Description		
#1	205.20'	33,614 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
205.20	19,370	650.0	0	0	19,370
206.00	28,880	806.0	19,174	19,174	37,454
206.50	28,880	806.0	14,440	33,614	37,857

Device	Routing	Invert	Outlet Devices
#1	Primary	205.80'	40.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Secondary	205.80'	20.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.02 cfs @ 24.14 hrs HW=205.80' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Weir Controls 0.02 cfs @ 0.15 fps)

Secondary OutFlow Max=0.01 cfs @ 24.14 hrs HW=205.80' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Weir Controls 0.01 cfs @ 0.16 fps)

Summary for Pond 8.5BP:

Inflow Area = 2.862 ac, 3.82% Impervious, Inflow Depth = 1.35" for 02-YR event
 Inflow = 1.98 cfs @ 12.69 hrs, Volume= 0.321 af
 Outflow = 0.13 cfs @ 18.02 hrs, Volume= 0.142 af, Atten= 93%, Lag= 319.7 min
 Primary = 0.13 cfs @ 18.02 hrs, Volume= 0.142 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 167.95' @ 18.02 hrs Surf.Area= 17,593 sf Storage= 10,451 cf

Plug-Flow detention time= 651.7 min calculated for 0.142 af (44% of inflow)
Center-of-Mass det. time= 520.9 min (1,407.2 - 886.3)

Volume	Invert	Avail.Storage	Storage Description
#1	166.80'	33,637 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.80	2,000	0	0
167.00	3,313	531	531
168.00	18,361	10,837	11,368
169.00	26,176	22,269	33,637

Device	Routing	Invert	Outlet Devices
#1	Primary	167.75'	12.0" Round Culvert L= 32.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 167.75' / 167.50' S= 0.0078 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Secondary	168.00'	27.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.13 cfs @ 18.02 hrs HW=167.95' (Free Discharge)

↑**1=Culvert** (Inlet Controls 0.13 cfs @ 1.20 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=166.80' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 8.5CP:

Inflow Area = 9.708 ac, 16.32% Impervious, Inflow Depth = 0.39" for 02-YR event
 Inflow = 2.26 cfs @ 12.50 hrs, Volume= 0.312 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 159.52' @ 26.03 hrs Surf.Area= 18,139 sf Storage= 13,603 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	158.00'	93,198 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
158.00	3,500	0	0
159.00	9,395	6,448	6,448
160.00	26,219	17,807	24,255
161.00	33,641	29,930	54,185
162.00	44,385	39,013	93,198

Device	Routing	Invert	Outlet Devices
#1	Primary	160.60'	40.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=158.00' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 8.6AP:

Inflow Area = 1.467 ac, 15.73% Impervious, Inflow Depth = 1.48" for 02-YR event
 Inflow = 1.48 cfs @ 12.40 hrs, Volume= 0.181 af
 Outflow = 1.48 cfs @ 12.42 hrs, Volume= 0.157 af, Atten= 0%, Lag= 1.0 min
 Primary = 1.48 cfs @ 12.42 hrs, Volume= 0.157 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 198.56' @ 12.42 hrs Surf.Area= 2,848 sf Storage= 1,180 cf

Plug-Flow detention time= 85.4 min calculated for 0.157 af (87% of inflow)
 Center-of-Mass det. time= 26.2 min (887.1 - 860.9)

Volume	Invert	Avail.Storage	Storage Description		
#1	198.00'	2,740 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
198.00	1,450	147.0	0	0	1,450
199.00	4,280	230.0	2,740	2,740	3,947

Device	Routing	Invert	Outlet Devices															
#1	Primary	198.50'	42.0' long x 3.0' breadth Broad-Crested Rectangular Weir															
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50															
			Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32															

Primary OutFlow Max=1.48 cfs @ 12.42 hrs HW=198.56' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Weir Controls 1.48 cfs @ 0.59 fps)

Summary for Pond 8.6BP:

Inflow Area = 7.054 ac, 17.19% Impervious, Inflow Depth = 1.48" for 02-YR event
 Inflow = 5.86 cfs @ 12.59 hrs, Volume= 0.870 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 156.74' @ 26.39 hrs Surf.Area= 34,651 sf Storage= 37,874 cf

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

Volume	Invert	Avail.Storage	Storage Description		
#1	155.00'	438,508 cf	Custom Stage Data (Prismatic) Listed below (Recalc)		

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
155.00	7,503	0	0
156.00	24,570	16,037	16,037
157.00	38,240	31,405	47,442
158.00	51,342	44,791	92,233
159.00	65,795	58,569	150,801
160.00	88,790	77,293	228,094
161.00	105,299	97,045	325,138
162.00	121,440	113,370	438,508

Device	Routing	Invert	Outlet Devices
#1	Primary	161.80'	100.0' long x 25.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=155.00' (Free Discharge)

↑-1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 8.6CP1:

Inflow Area = 9.642 ac, 1.26% Impervious, Inflow Depth = 1.28" for 02-YR event
 Inflow = 5.55 cfs @ 12.83 hrs, Volume= 1.032 af
 Outflow = 2.61 cfs @ 13.62 hrs, Volume= 0.671 af, Atten= 53%, Lag= 47.4 min
 Primary = 2.61 cfs @ 13.62 hrs, Volume= 0.671 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 160.77' @ 13.62 hrs Surf.Area= 46,686 sf Storage= 18,980 cf

Plug-Flow detention time= 216.4 min calculated for 0.671 af (65% of inflow)
 Center-of-Mass det. time= 105.7 min (1,006.0 - 900.2)

Volume	Invert	Avail.Storage	Storage Description
#1	160.00'	87,951 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
160.00	2,500	0	0
160.50	30,500	8,250	8,250
160.70	44,125	7,462	15,712
161.00	54,800	14,839	30,551
162.00	60,000	57,400	87,951

Device	Routing	Invert	Outlet Devices
#1	Primary	160.70'	50.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.59 cfs @ 13.62 hrs HW=160.77' (Free Discharge)

↑-1=Broad-Crested Rectangular Weir (Weir Controls 2.59 cfs @ 0.72 fps)

Summary for Pond 8.6CP2:

Inflow Area = 9.642 ac, 1.26% Impervious, Inflow Depth = 0.83" for 02-YR event
 Inflow = 2.61 cfs @ 13.62 hrs, Volume= 0.671 af
 Outflow = 1.36 cfs @ 14.80 hrs, Volume= 0.544 af, Atten= 48%, Lag= 70.5 min
 Primary = 1.36 cfs @ 14.80 hrs, Volume= 0.544 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 158.22' @ 14.80 hrs Surf.Area= 13,736 sf Storage= 8,409 cf

Plug-Flow detention time= 172.2 min calculated for 0.544 af (81% of inflow)
 Center-of-Mass det. time= 91.6 min (1,097.6 - 1,006.0)

Volume	Invert	Avail.Storage	Storage Description
#1	157.50'	41,223 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
157.50	9,290	0	0
158.00	12,800	5,523	5,523
159.00	17,100	14,950	20,473
160.00	24,400	20,750	41,223

Device	Routing	Invert	Outlet Devices
#1	Primary	158.00'	5.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.36 cfs @ 14.80 hrs HW=158.22' (Free Discharge)
 1=Broad-Crested Rectangular Weir (Weir Controls 1.36 cfs @ 1.25 fps)

Summary for Pond 8.7CP:

Inflow Area = 0.773 ac, 0.00% Impervious, Inflow Depth = 1.22" for 02-YR event
 Inflow = 0.66 cfs @ 12.36 hrs, Volume= 0.079 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 157.49' @ 25.39 hrs Surf.Area= 5,978 sf Storage= 3,427 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	156.50'	16,653 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.50	1,500	0	0
157.00	3,217	1,179	1,179
158.00	8,865	6,041	7,220
159.00	10,000	9,433	16,653

Device	Routing	Invert	Outlet Devices
#1	Primary	157.60'	40.0' long x 50.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=156.50' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 8P: Option 3 Weir Control 25 Yr

Inflow Area = 216.721 ac, 8.01% Impervious, Inflow Depth > 0.93" for 02-YR event
 Inflow = 54.94 cfs @ 12.60 hrs, Volume= 16.779 af
 Outflow = 30.90 cfs @ 13.11 hrs, Volume= 16.778 af, Atten= 44%, Lag= 30.3 min
 Primary = 30.90 cfs @ 13.11 hrs, Volume= 16.778 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 121.86' @ 13.11 hrs Surf.Area= 1.619 ac Storage= 1.890 af

Plug-Flow detention time= 32.7 min calculated for 16.775 af (100% of inflow)
 Center-of-Mass det. time= 32.7 min (1,089.6 - 1,057.0)

Volume	Invert	Avail.Storage	Storage Description
#1	119.30'	35.870 af	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
119.30	0.002	45.0	0.000	0.000	0.002
120.00	0.344	600.0	0.087	0.087	0.656
121.00	1.056	1,314.7	0.668	0.755	3.156
122.00	1.726	1,928.6	1.377	2.132	6.794
123.00	2.480	2,755.9	2.092	4.224	13.874
124.00	3.363	2,842.9	2.910	7.134	14.766
125.00	4.356	3,500.4	3.849	10.983	22.386
126.00	5.236	3,807.1	4.789	15.772	26.481
127.00	6.360	4,208.5	5.789	21.561	32.360
128.00	7.120	4,476.8	6.736	28.298	36.618
129.00	8.035	5,000.0	7.573	35.870	45.676

Device	Routing	Invert	Outlet Devices
#1	Primary	119.31'	36.0" Round Culvert L= 199.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.31' / 118.28' S= 0.0052 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Tertiary	119.31'	48.0" Round Culvert L= 199.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 119.31' / 118.28' S= 0.0052 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf
#3	Device 2	123.00'	90.0 deg x 6.5' long Sharp-Crested Vee/Trap Weir Cv= 2.50 (C= 3.13)
#4	Device 2	123.50'	90.0 deg x 4.5' long Sharp-Crested Vee/Trap Weir X 2.00 Cv= 2.50 (C= 3.13)
#5	Secondary	128.50'	200.0' long x 95.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=30.90 cfs @ 13.11 hrs HW=121.86' (Free Discharge)

↑**1=Culvert** (Barrel Controls 30.90 cfs @ 6.51 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=119.30' (Free Discharge)

↑**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=119.30' (Free Discharge)

↑**2=Culvert** (Controls 0.00 cfs)

↑**3=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)

↑**4=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)

Summary for Pond 800P: Pond on YWD

[79] Warning: Submerged Pond 8P Primary device # 1 INLET by 0.21'

[79] Warning: Submerged Pond 8P Tertiary device # 2 INLET by 0.21'

Inflow Area = 256.270 ac, 8.19% Impervious, Inflow Depth > 1.00" for 02-YR event
 Inflow = 51.79 cfs @ 12.77 hrs, Volume= 21.448 af
 Outflow = 51.42 cfs @ 12.84 hrs, Volume= 21.448 af, Atten= 1%, Lag= 3.9 min
 Primary = 51.42 cfs @ 12.84 hrs, Volume= 21.448 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Peak Elev= 119.52' @ 12.84 hrs Surf.Area= 25,518 sf Storage= 19,926 cf

Plug-Flow detention time= 9.6 min calculated for 21.444 af (100% of inflow)

Center-of-Mass det. time= 9.6 min (1,051.5 - 1,041.8)

Volume	Invert	Avail.Storage	Storage Description
#1	118.00'	712,300 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
118.00	959	441.0	0	0	959
119.00	19,570	637.0	8,287	8,287	17,781
120.00	31,765	1,121.0	25,423	33,710	85,497
121.00	97,714	2,249.0	61,731	95,440	388,005
122.00	119,554	2,295.0	108,451	203,891	404,793
123.00	162,662	2,787.0	140,556	344,447	603,780
124.00	185,002	2,707.0	173,712	518,159	638,864
125.00	203,425	2,711.0	194,141	712,300	642,075

Device	Routing	Invert	Outlet Devices
#1	Primary	118.00'	4.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#2	Primary	119.00'	32.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=51.34 cfs @ 12.84 hrs HW=119.52' (Free Discharge)

1=Broad-Crested Rectangular Weir (Weir Controls 19.84 cfs @ 3.27 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 31.51 cfs @ 1.90 fps)

Summary for Pond C6P: 357+50

[43] Hint: Has no inflow (Outflow=Zero)

Volume	Invert	Avail.Storage	Storage Description
#1	137.00'	344,264 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
137.00	500	250.0	0	0	500
138.00	1,167	359.2	810	810	5,803
139.00	11,959	1,301.5	5,621	6,431	130,334
140.00	67,539	1,621.9	35,973	42,404	204,886
141.00	113,172	3,559.0	89,379	131,783	1,003,523
142.00	155,057	3,703.0	133,566	265,349	1,086,819
142.50	160,618	3,712.0	78,915	344,264	1,092,443

Device	Routing	Invert	Outlet Devices
#1	Primary	136.90'	36.0" Round Culvert STA357+00 L= 225.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 136.90' / 136.56' S= 0.0015 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Secondary	139.22'	18.0" Round Culvert STA365+00 L= 297.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 139.22' / 136.87' S= 0.0079 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#3	Tertiary	140.50'	2.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)

↳1=Culvert STA357+00 (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)

↳2=Culvert STA365+00 (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)

↳3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C8AP:

Inflow Area = 43.650 ac, 8.41% Impervious, Inflow Depth = 1.25" for 02-YR event
 Inflow = 27.34 cfs @ 12.75 hrs, Volume= 4.555 af
 Outflow = 4.57 cfs @ 14.80 hrs, Volume= 4.555 af, Atten= 83%, Lag= 123.4 min
 Primary = 4.57 cfs @ 14.80 hrs, Volume= 4.555 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 182.55' @ 14.80 hrs Surf.Area= 259,045 sf Storage= 93,380 cf

Plug-Flow detention time= 256.1 min calculated for 4.555 af (100% of inflow)
 Center-of-Mass det. time= 256.0 min (1,141.3 - 885.2)

Volume	Invert	Avail.Storage	Storage Description		
#1	181.50'	1,071,217 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
181.50	1,500	160.0	0	0	1,500
182.00	10,000	1,000.0	2,562	2,562	79,041
182.30	238,856	4,275.0	29,773	32,335	1,453,792
183.00	298,639	5,104.0	187,734	220,069	2,072,530
184.00	336,274	5,089.0	317,270	537,340	2,085,722
185.00	363,932	5,071.0	350,012	887,352	2,101,136
185.50	371,541	5,073.0	183,865	1,071,217	2,104,142

Device	Routing	Invert	Outlet Devices	
#1	Primary	181.50'	24.0" Round Culvert L= 51.5' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 181.50' / 180.00' S= 0.0291 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf	

Primary OutFlow Max=4.57 cfs @ 14.80 hrs HW=182.55' (Free Discharge)

↳1=Culvert (Inlet Controls 4.57 cfs @ 2.75 fps)

Summary for Pond C8BP:

Inflow Area = 44.071 ac, 5.93% Impervious, Inflow Depth > 1.15" for 02-YR event
 Inflow = 23.63 cfs @ 12.71 hrs, Volume= 4.209 af
 Outflow = 7.14 cfs @ 13.73 hrs, Volume= 4.155 af, Atten= 70%, Lag= 61.2 min
 Primary = 7.14 cfs @ 13.73 hrs, Volume= 4.155 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 163.38' @ 13.73 hrs Surf.Area= 67,705 sf Storage= 61,688 cf

Plug-Flow detention time= 122.1 min calculated for 4.154 af (99% of inflow)
 Center-of-Mass det. time= 109.8 min (1,027.5 - 917.8)

Volume	Invert	Avail.Storage	Storage Description			
#1	161.00'	759,850 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
161.00	2,075	247.8	0	0	2,075	
162.00	14,443	1,163.1	7,331	7,331	104,844	
163.00	52,542	1,444.5	31,511	38,842	163,250	
164.00	96,433	2,067.5	73,385	112,227	337,373	
165.00	140,706	2,820.8	117,875	230,102	630,416	
166.00	195,436	3,605.7	167,323	397,425	1,031,830	
167.00	249,936	3,675.8	222,128	619,553	1,072,612	
167.50	312,413	3,957.0	140,297	759,850	1,243,423	

Device	Routing	Invert	Outlet Devices	
#1	Primary	161.50'	18.0" Round Culvert L= 51.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 161.50' / 161.00' S= 0.0097 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf	

Primary OutFlow Max=7.14 cfs @ 13.73 hrs HW=163.38' (Free Discharge)
 1=Culvert (Inlet Controls 7.14 cfs @ 4.04 fps)

Summary for Pond UDF8P: STA353+50 RIGHT UDF

Inflow Area = 1.995 ac, 84.75% Impervious, Inflow Depth = 2.78" for 02-YR event
 Inflow = 6.01 cfs @ 12.08 hrs, Volume= 0.462 af
 Outflow = 4.06 cfs @ 12.17 hrs, Volume= 0.462 af, Atten= 33%, Lag= 5.1 min
 Primary = 2.18 cfs @ 12.17 hrs, Volume= 0.441 af
 Secondary = 1.88 cfs @ 12.17 hrs, Volume= 0.021 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 146.97' @ 12.17 hrs Surf.Area= 3,830 sf Storage= 6,262 cf

Plug-Flow detention time= 190.1 min calculated for 0.462 af (100% of inflow)
 Center-of-Mass det. time= 190.2 min (962.8 - 772.6)

Volume	Invert	Avail.Storage	Storage Description	
#1	145.00'	10,824 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
145.00	2,650	0	0	
146.00	3,115	2,883	2,883	
147.00	3,850	3,483	6,365	
148.00	5,068	4,459	10,824	

Device	Routing	Invert	Outlet Devices
#1	Primary	142.15'	15.0" Round Outlet Pipe L= 94.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 142.15' / 141.68' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	142.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	142.65'	1.4" Vert. Orifice at OCS C= 0.600
#4	Device 1	146.20'	1.2" x 1.2" Horiz. Catch Basin Grate X 49.00 C= 0.600 Limited to weir flow at low heads
#5	Secondary	146.90'	35.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.18 cfs @ 12.17 hrs HW=146.97' (Free Discharge)

- ↑1=Outlet Pipe (Passes 2.18 cfs of 10.31 cfs potential flow)
- ↑2=Header Pipe (Passes 0.11 cfs of 3.36 cfs potential flow)
- ↑3=Orifice at OCS (Orifice Controls 0.11 cfs @ 9.94 fps)
- ↑4=Catch Basin Grate (Orifice Controls 2.07 cfs @ 4.23 fps)

Secondary OutFlow Max=1.86 cfs @ 12.17 hrs HW=146.97' (Free Discharge)

- ↑5=Broad-Crested Rectangular Weir (Weir Controls 1.86 cfs @ 0.72 fps)

Summary for Pond UDF9P: STA355+00 RIGHT UDF

Inflow Area =	1.249 ac, 89.15% Impervious, Inflow Depth = 2.85" for 02-YR event
Inflow =	3.87 cfs @ 12.08 hrs, Volume= 0.296 af
Outflow =	1.78 cfs @ 12.25 hrs, Volume= 0.296 af, Atten= 54%, Lag= 10.0 min
Primary =	1.78 cfs @ 12.25 hrs, Volume= 0.296 af
Secondary =	0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 146.59' @ 12.25 hrs Surf.Area= 3,268 sf Storage= 4,618 cf

Plug-Flow detention time= 287.9 min calculated for 0.296 af (100% of inflow)
Center-of-Mass det. time= 288.1 min (1,061.2 - 773.2)

Volume	Invert	Avail.Storage	Storage Description
#1	145.00'	10,439 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.00	2,621	0	0
146.00	2,956	2,789	2,789
147.00	3,486	3,221	6,010
148.00	5,373	4,430	10,439

Device	Routing	Invert	Outlet Devices
#1	Primary	141.43'	18.0" Round Outlet Pipe L= 17.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 141.43' / 141.00' S= 0.0253 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	142.65'	8.0" Vert. Header Pipe C= 0.600
#3	Device 2	142.65'	1.0" Vert. Orifice at OCS C= 0.600

#4	Device 1	146.00'	1.2" W x 1.2" H Vert. Catch Basin Grate X 49.00	C= 0.600
#5	Secondary	146.75'	20.0' long x 6.0' breadth Broad-Crested Rectangular Weir	
			Head (feet)	0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00
				4.50 5.00 5.50
			Coef. (English)	2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69
				2.72 2.76 2.83

Primary OutFlow Max=1.78 cfs @ 12.25 hrs HW=146.59' (Free Discharge)

- ↳ **1=Outlet Pipe** (Passes 1.78 cfs of 17.86 cfs potential flow)
- ↳ **2=Header Pipe** (Passes 0.05 cfs of 3.19 cfs potential flow)
- ↳ **3=Orifice at OCS** (Orifice Controls 0.05 cfs @ 9.50 fps)
- ↳ **4=Catch Basin Grate** (Orifice Controls 1.73 cfs @ 3.53 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=145.00' (Free Discharge)

- ↳ **5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 1L: (new Link)

Inflow Area = 2,130.640 ac, 7.98% Impervious, Inflow Depth > 1.04" for 02-YR event
 Inflow = 88.26 cfs @ 12.40 hrs, Volume= 185.363 af
 Primary = 88.26 cfs @ 12.40 hrs, Volume= 185.363 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

02-YR Primary Outflow Imported from 14181.HNTB Chases Pond Model~Pond 8P.hce

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
17.141	98	(7S, 8.1AS, 8.1BS, 8.1CS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 91S, 111S, C8AS, C8BS, C8CS)
0.440	80	>75% Grass cover, Good, HSG D (81S, 83S)
12.730	77	Brush, Fair, HSG D (6S, 7S, 8.1CS, C8AS)
27.512	73	Brush, Good, HSG D (8.1AS, 8.1BS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.3CS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 8.7CS, 800S, 1000S, C8BS, C8CS)
2.366	98	PAVED (81S, 100S, 113S, 1000S)
1.605	98	PAVED CENTER (110S)
0.468	98	PAVED- 82S (81S)
1.757	98	PAVEMENT (6S)
1.179	98	Paved 346+50 - 350+00 (83S, 84S, 85S)
0.240	98	Paved 350+00 - 3352+50 (80S)
1.113	98	Paved 90S 354+35 - 359+60 (90S)
0.031	98	Paved 92S 360+00 to 360+00 (90S)
1.407	98	Pavement (800S)
75.253	79	Woods, Fair, HSG D (6S, 7S, 8.1CS, C8AS)
152.342	77	Woods, Good, HSG D (8.1AS, 8.1BS, 8.2AS, 8.2BS, 8.2CS, 8.3AS, 8.3BS, 8.3CS, 8.4AS, 8.4BS, 8.4CS, 8.5AS, 8.5BS, 8.5CS, 8.6AS, 8.6BS, 8.6CS, 8.7CS, 800S, 1000S, C8BS, C8CS)
0.272	98	paved (83S)
295.856	79	TOTAL AREA

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: 357+50	Runoff Area=29.079 ac 6.04% Impervious Runoff Depth=2.81" Flow Length=1,098' Tc=21.4 min CN=80 Runoff=62.79 cfs 6.799 af
Subcatchment 7S: 365+50	Runoff Area=5.717 ac 8.62% Impervious Runoff Depth=2.81" Flow Length=489' Tc=6.0 min CN=80 Runoff=18.81 cfs 1.337 af
Subcatchment 8.1AS:	Runoff Area=121,454 sf 22.13% Impervious Runoff Depth=2.90" Flow Length=430' Tc=28.4 min CN=81 Runoff=5.50 cfs 0.673 af
Subcatchment 8.1BS:	Runoff Area=72,193 sf 1.67% Impervious Runoff Depth=2.54" Flow Length=265' Tc=35.1 min CN=77 Runoff=2.58 cfs 0.351 af
Subcatchment 8.1CS:	Runoff Area=1,047,959 sf 3.84% Impervious Runoff Depth=2.72" Flow Length=1,796' Tc=35.9 min CN=79 Runoff=39.85 cfs 5.445 af
Subcatchment 8.2AS:	Runoff Area=56,291 sf 9.56% Impervious Runoff Depth=2.63" Flow Length=150' Slope=0.0200 '/' Tc=29.2 min CN=78 Runoff=2.28 cfs 0.283 af
Subcatchment 8.2BS:	Runoff Area=93,889 sf 0.00% Impervious Runoff Depth=2.54" Flow Length=372' Tc=28.8 min CN=77 Runoff=3.69 cfs 0.456 af
Subcatchment 8.2CS:	Runoff Area=102,001 sf 12.15% Impervious Runoff Depth=2.63" Flow Length=475' Tc=37.1 min CN=78 Runoff=3.68 cfs 0.513 af
Subcatchment 8.3AS:	Runoff Area=93,437 sf 16.21% Impervious Runoff Depth=2.81" Flow Length=420' Tc=26.1 min CN=80 Runoff=4.24 cfs 0.502 af
Subcatchment 8.3BS:	Runoff Area=50,670 sf 7.32% Impervious Runoff Depth=2.63" Flow Length=135' Slope=0.0220 '/' Tc=45.1 min CN=78 Runoff=1.65 cfs 0.255 af
Subcatchment 8.3CS:	Runoff Area=193,772 sf 0.00% Impervious Runoff Depth=2.54" Flow Length=1,039' Tc=83.9 min CN=77 Runoff=4.22 cfs 0.941 af
Subcatchment 8.4AS:	Runoff Area=71,195 sf 20.23% Impervious Runoff Depth=2.81" Flow Length=260' Tc=13.2 min CN=80 Runoff=4.27 cfs 0.382 af
Subcatchment 8.4BS:	Runoff Area=85,972 sf 0.75% Impervious Runoff Depth=2.54" Flow Length=506' Tc=43.8 min CN=77 Runoff=2.76 cfs 0.418 af
Subcatchment 8.4CS:	Runoff Area=120,213 sf 8.29% Impervious Runoff Depth=2.54" Flow Length=365' Tc=40.2 min CN=77 Runoff=4.04 cfs 0.584 af
Subcatchment 8.5AS:	Runoff Area=129,841 sf 5.72% Impervious Runoff Depth=2.54" Flow Length=150' Tc=17.5 min CN=77 Runoff=6.30 cfs 0.631 af
Subcatchment 8.5BS:	Runoff Area=124,671 sf 3.82% Impervious Runoff Depth=2.63" Flow Length=717' Tc=47.8 min CN=78 Runoff=3.94 cfs 0.627 af

Subcatchment 8.5CS:	Runoff Area=115,586 sf 14.02% Impervious Runoff Depth=2.72" Flow Length=285' Tc=35.7 min CN=79 Runoff=4.41 cfs 0.601 af
Subcatchment 8.6AS:	Runoff Area=63,890 sf 15.73% Impervious Runoff Depth=2.81" Flow Length=445' Tc=27.3 min CN=80 Runoff=2.84 cfs 0.343 af
Subcatchment 8.6BS: Non Contributing Area	Runoff Area=307,280 sf 17.19% Impervious Runoff Depth=2.81" Flow Length=450' Tc=41.5 min CN=80 Runoff=11.23 cfs 1.649 af
Subcatchment 8.6CS:	Runoff Area=420,023 sf 1.26% Impervious Runoff Depth=2.54" Flow Length=875' Tc=59.5 min CN=77 Runoff=11.30 cfs 2.041 af
Subcatchment 8.7CS:	Runoff Area=33,655 sf 0.00% Impervious Runoff Depth=2.45" Flow Length=135' Slope=0.1030 '/' Tc=24.3 min CN=76 Runoff=1.38 cfs 0.158 af
Subcatchment 80S: 350+00 TO 352+50 RIGHT	Runoff Area=10,434 sf 100.00% Impervious Runoff Depth=4.66" Tc=6.0 min CN=98 Runoff=1.15 cfs 0.093 af
Subcatchment 81S: Combined 81S and 82S	Runoff Area=54,400 sf 89.15% Impervious Runoff Depth=4.43" Tc=6.0 min CN=96 Runoff=5.88 cfs 0.461 af
Subcatchment 83S: 346+40 TO 350+00 RIGHT	Runoff Area=40,574 sf 67.34% Impervious Runoff Depth=3.99" Tc=6.0 min CN=92 Runoff=4.14 cfs 0.310 af
Subcatchment 84S: 346+40 TO 350+00 CENTER	Runoff Area=17,680 sf 100.00% Impervious Runoff Depth=4.66" Tc=6.0 min CN=98 Runoff=1.95 cfs 0.158 af
Subcatchment 85S: 344+00 TO 350+00 LEFT	Runoff Area=18,205 sf 100.00% Impervious Runoff Depth=4.66" Tc=6.0 min CN=98 Runoff=2.00 cfs 0.162 af
Subcatchment 90S: Combined 90S and 92S	Runoff Area=49,844 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=5.68 cfs 0.445 af
Subcatchment 91S: 360+00 TO 360+00 LEFT	Runoff Area=1,433 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.16 cfs 0.013 af
Subcatchment 100S: 364+00 TO 370+00 CENTER	Runoff Area=31,359 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=3.57 cfs 0.280 af
Subcatchment 110S: Combined 110S, 112S and 113S	Runoff Area=69,921 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=7.97 cfs 0.624 af
Subcatchment 111S: 375+50 TO 375+50 LEFT	Runoff Area=867 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=0.10 cfs 0.008 af
Subcatchment 113S: 113S	Runoff Area=17,505 sf 100.00% Impervious Runoff Depth=4.66" Tc=5.0 min CN=98 Runoff=2.00 cfs 0.156 af
Subcatchment 800S: YWD Pond EAST SIDE	Runoff Area=1,262,903 sf 4.85% Impervious Runoff Depth=2.63" Flow Length=1,350' Tc=47.7 min CN=78 Runoff=40.13 cfs 6.347 af

Subcatchment 1000S: 1000S	Runoff Area=389,920 sf 6.69% Impervious Runoff Depth=2.63" Flow Length=862' Tc=24.7 min CN=78 Runoff=16.97 cfs 1.960 af
Subcatchment C8AS:	Runoff Area=1,495,142 sf 5.89% Impervious Runoff Depth=2.81" Flow Length=1,646' Tc=50.3 min CN=80 Runoff=49.37 cfs 8.025 af
Subcatchment C8BS:	Runoff Area=1,362,511 sf 7.06% Impervious Runoff Depth=2.63" Flow Length=1,604' Tc=48.3 min CN=78 Runoff=42.84 cfs 6.848 af
Subcatchment C8CS: 375+00	Runoff Area=3,245,079 sf 9.62% Impervious Runoff Depth=2.63" Flow Length=2,622' Tc=43.1 min CN=78 Runoff=108.88 cfs 16.309 af
Reach 4R: OUTLET PIPE	Avg. Flow Depth=0.51' Max Vel=8.59 fps Inflow=4.50 cfs 1.040 af 18.0" Round Pipe n=0.012 L=50.0' S=0.0260 '/' Capacity=18.35 cfs Outflow=4.50 cfs 1.040 af
Reach 8.1BR1:	Avg. Flow Depth=0.23' Max Vel=0.95 fps Inflow=1.67 cfs 0.233 af n=0.120 L=286.0' S=0.0500 '/' Capacity=100.71 cfs Outflow=1.58 cfs 0.233 af
Reach 8.1BR2:	Avg. Flow Depth=0.41' Max Vel=0.51 fps Inflow=4.06 cfs 0.823 af n=0.100 L=445.0' S=0.0045 '/' Capacity=36.13 cfs Outflow=3.57 cfs 0.823 af
Reach 8.1BR3:	Avg. Flow Depth=0.49' Max Vel=2.44 fps Inflow=4.19 cfs 1.078 af n=0.050 L=374.0' S=0.0289 '/' Capacity=85.66 cfs Outflow=4.17 cfs 1.078 af
Reach 8.1BR4:	Avg. Flow Depth=0.45' Max Vel=2.15 fps Inflow=5.10 cfs 1.490 af n=0.050 L=171.0' S=0.0213 '/' Capacity=53.25 cfs Outflow=5.10 cfs 1.490 af
Reach 8.2AR1:	Avg. Flow Depth=0.18' Max Vel=0.39 fps Inflow=0.20 cfs 0.082 af n=0.080 L=330.0' S=0.0061 '/' Capacity=82.07 cfs Outflow=0.20 cfs 0.082 af
Reach 8.2BR1:	Avg. Flow Depth=0.35' Max Vel=1.31 fps Inflow=2.52 cfs 0.590 af n=0.120 L=166.0' S=0.0620 '/' Capacity=82.21 cfs Outflow=2.51 cfs 0.590 af
Reach 8.3AR1:	Avg. Flow Depth=0.54' Max Vel=1.32 fps Inflow=4.24 cfs 0.402 af n=0.120 L=230.0' S=0.0391 '/' Capacity=60.12 cfs Outflow=4.16 cfs 0.402 af
Reach 8.3CR1:	Avg. Flow Depth=0.18' Max Vel=0.83 fps Inflow=3.40 cfs 0.644 af n=0.120 L=384.0' S=0.0495 '/' Capacity=68.10 cfs Outflow=3.20 cfs 0.644 af
Reach 8.4CR1:	Avg. Flow Depth=0.19' Max Vel=0.50 fps Inflow=0.74 cfs 0.247 af n=0.120 L=1,438.0' S=0.0178 '/' Capacity=48.77 cfs Outflow=0.54 cfs 0.247 af
Reach 8.6CR1:	Avg. Flow Depth=0.47' Max Vel=2.23 fps Inflow=7.15 cfs 1.616 af n=0.080 L=482.0' S=0.0560 '/' Capacity=30.58 cfs Outflow=7.12 cfs 1.616 af
Reach 68R: Null Node	Inflow=80.67 cfs 9.765 af Outflow=80.67 cfs 9.765 af
Reach C6R1:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.040 L=338.0' S=0.0414 '/' Capacity=189.62 cfs Outflow=0.00 cfs 0.000 af

Reach C8AR1:	Avg. Flow Depth=0.17' Max Vel=1.33 fps Inflow=7.79 cfs 8.856 af n=0.100 L=107.5' S=0.0794 '/' Capacity=9,842.09 cfs Outflow=7.79 cfs 8.856 af
Reach C8AR2:	Avg. Flow Depth=0.56' Max Vel=1.12 fps Inflow=7.79 cfs 8.856 af n=0.080 L=810.0' S=0.0099 '/' Capacity=2,843.62 cfs Outflow=7.78 cfs 8.856 af
Reach C8AR3:	Avg. Flow Depth=0.67' Max Vel=2.91 fps Inflow=7.78 cfs 8.856 af n=0.080 L=22.0' S=0.0909 '/' Capacity=1,210.27 cfs Outflow=7.78 cfs 8.856 af
Reach C8AR6:	Avg. Flow Depth=0.77' Max Vel=2.00 fps Inflow=11.81 cfs 10.257 af n=0.080 L=822.0' S=0.0254 '/' Capacity=382.10 cfs Outflow=11.80 cfs 10.256 af
Reach C8AR7:	Avg. Flow Depth=0.81' Max Vel=0.85 fps Inflow=22.19 cfs 19.163 af n=0.080 L=831.0' S=0.0042 '/' Capacity=1,134.27 cfs Outflow=22.10 cfs 19.161 af
Reach C8BR1:	Avg. Flow Depth=0.20' Max Vel=3.15 fps Inflow=10.04 cfs 8.729 af n=0.030 L=160.0' S=0.0375 '/' Capacity=1,356.35 cfs Outflow=10.04 cfs 8.729 af
Reach C8BR2:	Avg. Flow Depth=0.18' Max Vel=5.33 fps Inflow=10.04 cfs 8.729 af n=0.030 L=31.0' S=0.1210 '/' Capacity=26,509.48 cfs Outflow=10.04 cfs 8.729 af
Reach C8BR3:	Avg. Flow Depth=0.07' Max Vel=1.46 fps Inflow=10.04 cfs 8.729 af n=0.030 L=788.0' S=0.0189 '/' Capacity=41,604.45 cfs Outflow=10.04 cfs 8.729 af
Reach SP1000: POA STA380+00	Inflow=214.50 cfs 380.256 af Outflow=214.50 cfs 380.256 af
Pond 8.1AP:	Peak Elev=208.82' Storage=29,322 cf Inflow=5.50 cfs 0.673 af Outflow=0.00 cfs 0.000 af
Pond 8.1BP:	Peak Elev=203.16' Storage=5,972 cf Inflow=2.58 cfs 0.351 af Outflow=1.67 cfs 0.233 af
Pond 8.1CP:	Peak Elev=158.20' Storage=202,960 cf Inflow=42.19 cfs 14.301 af Outflow=11.81 cfs 10.257 af
Pond 8.2AP: Potentially Non-Contributing	Peak Elev=215.52' Storage=8,977 cf Inflow=2.28 cfs 0.283 af Outflow=0.20 cfs 0.082 af
Pond 8.2BP:	Peak Elev=199.83' Storage=6,487 cf Inflow=3.69 cfs 0.664 af Outflow=2.52 cfs 0.590 af
Pond 8.2CP:	Peak Elev=182.44' Storage=15,857 cf Inflow=3.68 cfs 0.513 af Outflow=0.38 cfs 0.165 af
Pond 8.3AP:	Peak Elev=200.59' Storage=4,656 cf Inflow=4.24 cfs 0.502 af Outflow=4.24 cfs 0.402 af
Pond 8.3BP:	Peak Elev=201.62' Storage=116 cf Inflow=1.65 cfs 0.255 af Outflow=1.65 cfs 0.255 af

Pond 8.3CP:	Peak Elev=155.09' Storage=14,687 cf Inflow=4.22 cfs 0.941 af Outflow=3.40 cfs 0.644 af
Pond 8.4AP:	Peak Elev=208.70' Storage=20,224 cf Inflow=4.27 cfs 0.464 af Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
Pond 8.4BP:	Peak Elev=182.44' Storage=443 cf Inflow=2.76 cfs 0.418 af Outflow=2.76 cfs 0.412 af
Pond 8.4CP:	Peak Elev=161.52' Storage=15,371 cf Inflow=4.04 cfs 0.584 af Primary=0.20 cfs 0.067 af Secondary=0.54 cfs 0.180 af Outflow=0.74 cfs 0.247 af
Pond 8.5AP:	Peak Elev=205.84' Storage=14,710 cf Inflow=6.30 cfs 0.631 af Primary=0.81 cfs 0.208 af Secondary=0.43 cfs 0.110 af Outflow=1.24 cfs 0.317 af
Pond 8.5BP:	Peak Elev=168.08' Storage=12,805 cf Inflow=3.94 cfs 0.627 af Primary=0.34 cfs 0.274 af Secondary=1.44 cfs 0.172 af Outflow=1.78 cfs 0.446 af
Pond 8.5CP:	Peak Elev=160.07' Storage=26,158 cf Inflow=4.41 cfs 0.601 af Outflow=0.00 cfs 0.000 af
Pond 8.6AP:	Peak Elev=198.59' Storage=1,273 cf Inflow=2.84 cfs 0.343 af Outflow=2.84 cfs 0.320 af
Pond 8.6BP:	Peak Elev=157.58' Storage=71,843 cf Inflow=11.23 cfs 1.649 af Outflow=0.00 cfs 0.000 af
Pond 8.6CP1:	Peak Elev=160.87' Storage=23,881 cf Inflow=11.30 cfs 2.041 af Outflow=9.66 cfs 1.680 af
Pond 8.6CP2:	Peak Elev=158.65' Storage=14,683 cf Inflow=9.66 cfs 1.680 af Outflow=6.97 cfs 1.553 af
Pond 8.7CP:	Peak Elev=157.61' Storage=4,201 cf Inflow=1.38 cfs 0.158 af Outflow=0.19 cfs 0.063 af
Pond 8P: Option 3 Weir Control 25 Yr	Peak Elev=123.18' Storage=4.677 af Inflow=111.13 cfs 38.265 af Primary=49.61 cfs 38.171 af Secondary=0.00 cfs 0.000 af Tertiary=1.56 cfs 0.093 af Outflow=51.17 cfs 38.265 af
Pond 800P: Pond on YWD	Peak Elev=119.84' Storage=28,913 cf Inflow=93.81 cfs 47.195 af Outflow=93.15 cfs 47.195 af
Pond C6P: 357+50	Peak Elev=0.00' Storage=0 cf Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af
Pond C8AP:	Peak Elev=182.94' Storage=201,463 cf Inflow=54.52 cfs 8.856 af 24.0" Round Culvert n=0.025 L=51.5' S=0.0291 '/' Outflow=7.79 cfs 8.856 af
Pond C8BP:	Peak Elev=164.49' Storage=163,981 cf Inflow=47.18 cfs 8.784 af 18.0" Round Culvert n=0.013 L=51.5' S=0.0097 '/' Outflow=10.04 cfs 8.729 af

Pond UDF8P: STA353+50 RIGHT UDF

Peak Elev=147.07' Storage=6,643 cf Inflow=9.24 cfs 0.723 af
Primary=2.31 cfs 0.608 af Secondary=6.66 cfs 0.115 af Outflow=8.97 cfs 0.723 af

Pond UDF9P: STA355+00 RIGHT UDF

Peak Elev=146.88' Storage=5,608 cf Inflow=5.88 cfs 0.461 af
Primary=2.21 cfs 0.432 af Secondary=2.33 cfs 0.029 af Outflow=4.54 cfs 0.461 af

Link 1L: (new

10-YR Primary Outflow Imported from 14181.HNTB Chases Pond Model~Pond 8P.hce Inflow=174.80 cfs 332.905 af
Area= 2,130.640 ac 7.98% Imperv. Primary=174.80 cfs 332.905 af

Total Runoff Area = 295.856 ac Runoff Volume = 67.184 af Average Runoff Depth = 2.72"
90.68% Pervious = 268.277 ac 9.32% Impervious = 27.579 ac

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: 357+50	Runoff Area=29.079 ac 6.04% Impervious Runoff Depth=3.96" Flow Length=1,098' Tc=21.4 min CN=80 Runoff=88.42 cfs 9.601 af
Subcatchment 7S: 365+50	Runoff Area=5.717 ac 8.62% Impervious Runoff Depth=3.96" Flow Length=489' Tc=6.0 min CN=80 Runoff=26.43 cfs 1.888 af
Subcatchment 8.1AS:	Runoff Area=121,454 sf 22.13% Impervious Runoff Depth=4.07" Flow Length=430' Tc=28.4 min CN=81 Runoff=7.68 cfs 0.945 af
Subcatchment 8.1BS:	Runoff Area=72,193 sf 1.67% Impervious Runoff Depth=3.65" Flow Length=265' Tc=35.1 min CN=77 Runoff=3.73 cfs 0.505 af
Subcatchment 8.1CS:	Runoff Area=1,047,959 sf 3.84% Impervious Runoff Depth=3.86" Flow Length=1,796' Tc=35.9 min CN=79 Runoff=56.56 cfs 7.736 af
Subcatchment 8.2AS:	Runoff Area=56,291 sf 9.56% Impervious Runoff Depth=3.76" Flow Length=150' Slope=0.0200 '/' Tc=29.2 min CN=78 Runoff=3.25 cfs 0.404 af
Subcatchment 8.2BS:	Runoff Area=93,889 sf 0.00% Impervious Runoff Depth=3.65" Flow Length=372' Tc=28.8 min CN=77 Runoff=5.32 cfs 0.656 af
Subcatchment 8.2CS:	Runoff Area=102,001 sf 12.15% Impervious Runoff Depth=3.76" Flow Length=475' Tc=37.1 min CN=78 Runoff=5.27 cfs 0.733 af
Subcatchment 8.3AS:	Runoff Area=93,437 sf 16.21% Impervious Runoff Depth=3.96" Flow Length=420' Tc=26.1 min CN=80 Runoff=5.97 cfs 0.708 af
Subcatchment 8.3BS:	Runoff Area=50,670 sf 7.32% Impervious Runoff Depth=3.76" Flow Length=135' Slope=0.0220 '/' Tc=45.1 min CN=78 Runoff=2.37 cfs 0.364 af
Subcatchment 8.3CS:	Runoff Area=193,772 sf 0.00% Impervious Runoff Depth=3.65" Flow Length=1,039' Tc=83.9 min CN=77 Runoff=6.11 cfs 1.355 af
Subcatchment 8.4AS:	Runoff Area=71,195 sf 20.23% Impervious Runoff Depth=3.96" Flow Length=260' Tc=13.2 min CN=80 Runoff=6.01 cfs 0.540 af
Subcatchment 8.4BS:	Runoff Area=85,972 sf 0.75% Impervious Runoff Depth=3.65" Flow Length=506' Tc=43.8 min CN=77 Runoff=3.98 cfs 0.601 af
Subcatchment 8.4CS:	Runoff Area=120,213 sf 8.29% Impervious Runoff Depth=3.65" Flow Length=365' Tc=40.2 min CN=77 Runoff=5.82 cfs 0.840 af
Subcatchment 8.5AS:	Runoff Area=129,841 sf 5.72% Impervious Runoff Depth=3.65" Flow Length=150' Tc=17.5 min CN=77 Runoff=9.10 cfs 0.908 af
Subcatchment 8.5BS:	Runoff Area=124,671 sf 3.82% Impervious Runoff Depth=3.76" Flow Length=717' Tc=47.8 min CN=78 Runoff=5.64 cfs 0.896 af

Subcatchment 8.5CS:	Runoff Area=115,586 sf 14.02% Impervious Runoff Depth=3.86" Flow Length=285' Tc=35.7 min CN=79 Runoff=6.26 cfs 0.853 af
Subcatchment 8.6AS:	Runoff Area=63,890 sf 15.73% Impervious Runoff Depth=3.96" Flow Length=445' Tc=27.3 min CN=80 Runoff=4.00 cfs 0.484 af
Subcatchment 8.6BS: Non Contributing Area	Runoff Area=307,280 sf 17.19% Impervious Runoff Depth=3.96" Flow Length=450' Tc=41.5 min CN=80 Runoff=15.80 cfs 2.329 af
Subcatchment 8.6CS:	Runoff Area=420,023 sf 1.26% Impervious Runoff Depth=3.65" Flow Length=875' Tc=59.5 min CN=77 Runoff=16.31 cfs 2.936 af
Subcatchment 8.7CS:	Runoff Area=33,655 sf 0.00% Impervious Runoff Depth=3.55" Flow Length=135' Slope=0.1030 '/' Tc=24.3 min CN=76 Runoff=2.00 cfs 0.229 af
Subcatchment 80S: 350+00 TO 352+50 RIGHT	Runoff Area=10,434 sf 100.00% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=1.46 cfs 0.119 af
Subcatchment 81S: Combined 81S and 82S	Runoff Area=54,400 sf 89.15% Impervious Runoff Depth=5.73" Tc=6.0 min CN=96 Runoff=7.51 cfs 0.596 af
Subcatchment 83S: 346+40 TO 350+00 RIGHT	Runoff Area=40,574 sf 67.34% Impervious Runoff Depth=5.27" Tc=6.0 min CN=92 Runoff=5.38 cfs 0.409 af
Subcatchment 84S: 346+40 TO 350+00 CENTER	Runoff Area=17,680 sf 100.00% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=2.47 cfs 0.202 af
Subcatchment 85S: 344+00 TO 350+00 LEFT	Runoff Area=18,205 sf 100.00% Impervious Runoff Depth=5.96" Tc=6.0 min CN=98 Runoff=2.54 cfs 0.208 af
Subcatchment 90S: Combined 90S and 92S	Runoff Area=49,844 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=7.20 cfs 0.568 af
Subcatchment 91S: 360+00 TO 360+00 LEFT	Runoff Area=1,433 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.21 cfs 0.016 af
Subcatchment 100S: 364+00 TO 370+00 CENTER	Runoff Area=31,359 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=4.53 cfs 0.358 af
Subcatchment 110S: Combined 110S, 112S and 113S	Runoff Area=69,921 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=10.11 cfs 0.797 af
Subcatchment 111S: 375+50 TO 375+50 LEFT	Runoff Area=867 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=0.13 cfs 0.010 af
Subcatchment 113S: 113S	Runoff Area=17,505 sf 100.00% Impervious Runoff Depth=5.96" Tc=5.0 min CN=98 Runoff=2.53 cfs 0.200 af
Subcatchment 800S: YWD Pond EAST SIDE	Runoff Area=1,262,903 sf 4.85% Impervious Runoff Depth=3.76" Flow Length=1,350' Tc=47.7 min CN=78 Runoff=57.37 cfs 9.075 af

Subcatchment 1000S: 1000S	Runoff Area=389,920 sf 6.69% Impervious Runoff Depth=3.76" Flow Length=862' Tc=24.7 min CN=78 Runoff=24.29 cfs 2.802 af
Subcatchment C8AS:	Runoff Area=1,495,142 sf 5.89% Impervious Runoff Depth=3.96" Flow Length=1,646' Tc=50.3 min CN=80 Runoff=69.55 cfs 11.333 af
Subcatchment C8BS:	Runoff Area=1,362,511 sf 7.06% Impervious Runoff Depth=3.76" Flow Length=1,604' Tc=48.3 min CN=78 Runoff=61.30 cfs 9.791 af
Subcatchment C8CS: 375+00	Runoff Area=3,245,079 sf 9.62% Impervious Runoff Depth=3.76" Flow Length=2,622' Tc=43.1 min CN=78 Runoff=155.74 cfs 23.318 af
Reach 4R: OUTLET PIPE	Avg. Flow Depth=0.52' Max Vel=8.67 fps Inflow=4.66 cfs 1.267 af 18.0" Round Pipe n=0.012 L=50.0' S=0.0260 '/' Capacity=18.35 cfs Outflow=4.66 cfs 1.267 af
Reach 8.1BR1:	Avg. Flow Depth=0.35' Max Vel=1.19 fps Inflow=3.32 cfs 0.387 af n=0.120 L=286.0' S=0.0500 '/' Capacity=100.71 cfs Outflow=3.24 cfs 0.387 af
Reach 8.1BR2:	Avg. Flow Depth=0.67' Max Vel=0.68 fps Inflow=9.26 cfs 1.359 af n=0.100 L=445.0' S=0.0045 '/' Capacity=36.13 cfs Outflow=8.33 cfs 1.359 af
Reach 8.1BR3:	Avg. Flow Depth=0.75' Max Vel=3.06 fps Inflow=9.71 cfs 1.723 af n=0.050 L=374.0' S=0.0289 '/' Capacity=85.66 cfs Outflow=9.68 cfs 1.723 af
Reach 8.1BR4:	Avg. Flow Depth=0.70' Max Vel=2.76 fps Inflow=11.82 cfs 2.318 af n=0.050 L=171.0' S=0.0213 '/' Capacity=53.25 cfs Outflow=11.81 cfs 2.318 af
Reach 8.2AR1:	Avg. Flow Depth=0.41' Max Vel=0.61 fps Inflow=1.01 cfs 0.204 af n=0.080 L=330.0' S=0.0061 '/' Capacity=82.07 cfs Outflow=0.90 cfs 0.204 af
Reach 8.2BR1:	Avg. Flow Depth=0.57' Max Vel=1.70 fps Inflow=6.04 cfs 0.972 af n=0.120 L=166.0' S=0.0620 '/' Capacity=82.21 cfs Outflow=6.03 cfs 0.972 af
Reach 8.3AR1:	Avg. Flow Depth=0.65' Max Vel=1.46 fps Inflow=5.96 cfs 0.608 af n=0.120 L=230.0' S=0.0391 '/' Capacity=60.12 cfs Outflow=5.91 cfs 0.608 af
Reach 8.3CR1:	Avg. Flow Depth=0.25' Max Vel=1.02 fps Inflow=5.87 cfs 1.057 af n=0.120 L=384.0' S=0.0495 '/' Capacity=68.10 cfs Outflow=5.74 cfs 1.057 af
Reach 8.4CR1:	Avg. Flow Depth=0.38' Max Vel=0.75 fps Inflow=3.23 cfs 0.504 af n=0.120 L=1,438.0' S=0.0178 '/' Capacity=48.77 cfs Outflow=1.87 cfs 0.504 af
Reach 8.6CR1:	Avg. Flow Depth=0.64' Max Vel=2.65 fps Inflow=12.79 cfs 2.583 af n=0.080 L=482.0' S=0.0560 '/' Capacity=30.58 cfs Outflow=12.75 cfs 2.583 af
Reach 68R: Null Node	Inflow=112.15 cfs 13.591 af Outflow=112.15 cfs 13.591 af
Reach C6R1:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.040 L=338.0' S=0.0414 '/' Capacity=189.62 cfs Outflow=0.00 cfs 0.000 af

Reach C8AR1:	Avg. Flow Depth=0.21' Max Vel=1.47 fps Inflow=10.46 cfs 12.608 af n=0.100 L=107.5' S=0.0794 '/' Capacity=9,842.09 cfs Outflow=10.46 cfs 12.608 af
Reach C8AR2:	Avg. Flow Depth=0.67' Max Vel=1.24 fps Inflow=10.46 cfs 12.608 af n=0.080 L=810.0' S=0.0099 '/' Capacity=2,843.62 cfs Outflow=10.45 cfs 12.608 af
Reach C8AR3:	Avg. Flow Depth=0.76' Max Vel=3.13 fps Inflow=10.45 cfs 12.608 af n=0.080 L=22.0' S=0.0909 '/' Capacity=1,210.27 cfs Outflow=10.45 cfs 12.608 af
Reach C8AR6:	Avg. Flow Depth=1.03' Max Vel=2.35 fps Inflow=20.92 cfs 16.299 af n=0.080 L=822.0' S=0.0254 '/' Capacity=382.10 cfs Outflow=20.82 cfs 16.299 af
Reach C8AR7:	Avg. Flow Depth=0.99' Max Vel=0.94 fps Inflow=33.16 cfs 29.469 af n=0.080 L=831.0' S=0.0042 '/' Capacity=1,134.27 cfs Outflow=32.45 cfs 29.466 af
Reach C8BR1:	Avg. Flow Depth=0.22' Max Vel=3.33 fps Inflow=11.71 cfs 12.769 af n=0.030 L=160.0' S=0.0375 '/' Capacity=1,356.35 cfs Outflow=11.71 cfs 12.769 af
Reach C8BR2:	Avg. Flow Depth=0.20' Max Vel=5.56 fps Inflow=11.71 cfs 12.769 af n=0.030 L=31.0' S=0.1210 '/' Capacity=26,509.48 cfs Outflow=11.71 cfs 12.769 af
Reach C8BR3:	Avg. Flow Depth=0.08' Max Vel=1.46 fps Inflow=11.71 cfs 12.769 af n=0.030 L=788.0' S=0.0189 '/' Capacity=41,604.45 cfs Outflow=11.71 cfs 12.769 af
Reach SP1000: POA STA380+00	Inflow=425.50 cfs 599.185 af Outflow=425.50 cfs 599.185 af
Pond 8.1AP:	Peak Elev=209.62' Storage=41,157 cf Inflow=7.68 cfs 0.945 af Outflow=0.00 cfs 0.000 af
Pond 8.1BP:	Peak Elev=203.25' Storage=6,500 cf Inflow=3.73 cfs 0.505 af Outflow=3.32 cfs 0.387 af
Pond 8.1CP:	Peak Elev=158.29' Storage=215,455 cf Inflow=59.57 cfs 20.344 af Outflow=20.92 cfs 16.299 af
Pond 8.2AP: Potentially Non-Contributing	Peak Elev=215.55' Storage=9,479 cf Inflow=3.25 cfs 0.404 af Outflow=1.01 cfs 0.204 af
Pond 8.2BP:	Peak Elev=200.08' Storage=9,953 cf Inflow=8.35 cfs 1.045 af Outflow=6.04 cfs 0.972 af
Pond 8.2CP:	Peak Elev=182.50' Storage=17,137 cf Inflow=5.27 cfs 0.733 af Outflow=1.65 cfs 0.385 af
Pond 8.3AP:	Peak Elev=200.61' Storage=4,736 cf Inflow=5.97 cfs 0.708 af Outflow=5.96 cfs 0.608 af
Pond 8.3BP:	Peak Elev=201.63' Storage=152 cf Inflow=2.37 cfs 0.364 af Outflow=2.36 cfs 0.364 af

Pond 8.3CP:	Peak Elev=155.12' Storage=15,455 cf Inflow=6.11 cfs 1.355 af Outflow=5.87 cfs 1.057 af
Pond 8.4AP:	Peak Elev=209.62' Storage=32,380 cf Inflow=6.01 cfs 0.743 af Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
Pond 8.4BP:	Peak Elev=182.48' Storage=513 cf Inflow=3.98 cfs 0.601 af Outflow=3.97 cfs 0.596 af
Pond 8.4CP:	Peak Elev=161.55' Storage=16,552 cf Inflow=5.82 cfs 0.840 af Primary=0.88 cfs 0.137 af Secondary=2.35 cfs 0.366 af Outflow=3.23 cfs 0.504 af
Pond 8.5AP:	Peak Elev=205.90' Storage=16,425 cf Inflow=9.10 cfs 0.908 af Primary=3.35 cfs 0.389 af Secondary=1.76 cfs 0.205 af Outflow=5.11 cfs 0.594 af
Pond 8.5BP:	Peak Elev=168.15' Storage=14,151 cf Inflow=5.64 cfs 0.896 af Primary=0.49 cfs 0.317 af Secondary=3.79 cfs 0.398 af Outflow=4.28 cfs 0.715 af
Pond 8.5CP:	Peak Elev=160.46' Storage=37,167 cf Inflow=6.26 cfs 0.853 af Outflow=0.00 cfs 0.000 af
Pond 8.6AP:	Peak Elev=198.61' Storage=1,343 cf Inflow=4.00 cfs 0.484 af Outflow=4.00 cfs 0.461 af
Pond 8.6BP:	Peak Elev=158.18' Storage=101,450 cf Inflow=15.80 cfs 2.329 af Outflow=0.00 cfs 0.000 af
Pond 8.6CP1:	Peak Elev=160.93' Storage=27,012 cf Inflow=16.31 cfs 2.936 af Outflow=15.20 cfs 2.576 af
Pond 8.6CP2:	Peak Elev=158.96' Storage=19,821 cf Inflow=15.20 cfs 2.576 af Outflow=12.41 cfs 2.449 af
Pond 8.7CP:	Peak Elev=157.65' Storage=4,447 cf Inflow=2.00 cfs 0.229 af Outflow=1.13 cfs 0.134 af
Pond 8P: Option 3 Weir Control 25 Yr	Peak Elev=123.97' Storage=7.018 af Inflow=160.07 cfs 57.296 af Primary=56.25 cfs 51.958 af Secondary=0.00 cfs 0.000 af Tertiary=31.23 cfs 5.337 af Outflow=87.48 cfs 57.295 af
Pond 800P: Pond on YWD	Peak Elev=120.10' Storage=37,227 cf Inflow=132.37 cfs 69.969 af Outflow=131.68 cfs 69.969 af
Pond C6P: 357+50	Peak Elev=0.00' Storage=0 cf Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af
Pond C8AP:	Peak Elev=183.26' Storage=299,608 cf Inflow=78.05 cfs 12.608 af 24.0" Round Culvert n=0.025 L=51.5' S=0.0291 '/' Outflow=10.46 cfs 12.608 af
Pond C8BP:	Peak Elev=165.29' Storage=273,119 cf Inflow=69.86 cfs 12.824 af 18.0" Round Culvert n=0.013 L=51.5' S=0.0097 '/' Outflow=11.71 cfs 12.769 af

Pond UDF8P: STA353+50 RIGHT UDF

Peak Elev=147.11' Storage=6,808 cf Inflow=11.84 cfs 0.937 af
Primary=2.36 cfs 0.741 af Secondary=9.24 cfs 0.196 af Outflow=11.60 cfs 0.937 af

Pond UDF9P: STA355+00 RIGHT UDF

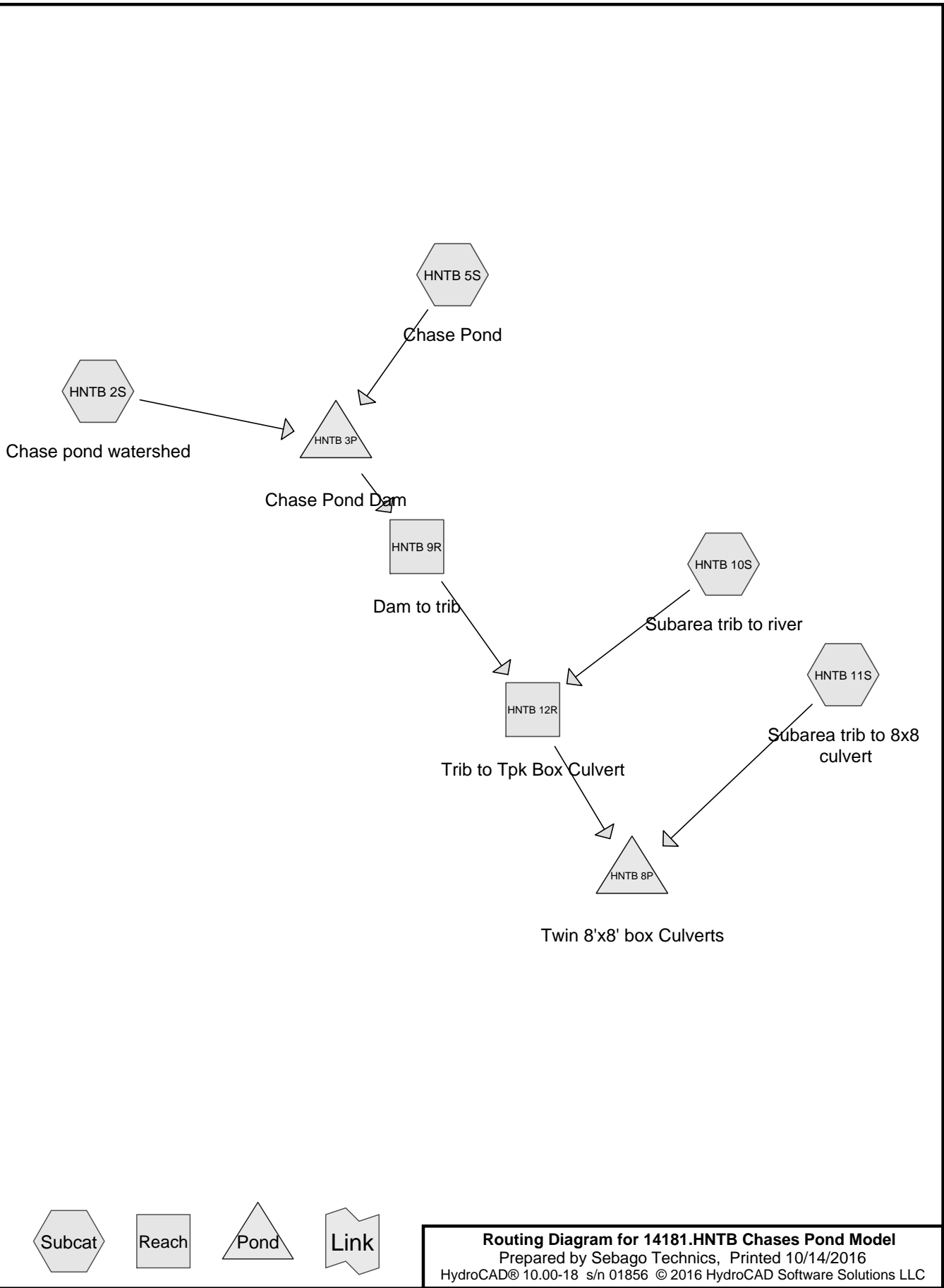
Peak Elev=146.96' Storage=5,865 cf Inflow=7.51 cfs 0.596 af
Primary=2.30 cfs 0.525 af Secondary=4.53 cfs 0.071 af Outflow=6.83 cfs 0.596 af

Link 1L: (new

25-YR Primary Outflow Imported from 14181.HNTB Chases Pond Model~Pond 8P.hce Inflow=360.51 cfs 529.017 af
Area= 2,130.640 ac 7.98% Imperv. Primary=360.51 cfs 529.017 af

Total Runoff Area = 295.856 ac Runoff Volume = 95.313 af Average Runoff Depth = 3.87"
90.68% Pervious = 268.277 ac 9.32% Impervious = 27.579 ac

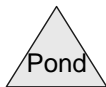
Link Report (HNTB) Chases Pond Model



Subcat



Reach



Pond



Link

14181.HNTB Chases Pond Model

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
31.180	77	2 acre lots, 12% imp, HSG C (HNTB 10S)
170.000	98	Pond (HNTB 5S)
12.460	76	Woods/grass comb., Fair, HSG C (HNTB 11S)
1,917.000	84	Woods/grass comb., Fair, HSG D (HNTB 2S)
2,130.640	85	TOTAL AREA

14181.HNTB Chases Pond Model

Type III 24-hr 02-YR Rainfall=3.30"

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Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment HNTB 10S: Subarea trib to river Runoff Area=31.180 ac 12.00% Impervious Runoff Depth=1.28"
Flow Length=2,350' Tc=23.3 min CN=77 Runoff=28.76 cfs 3.336 af

Subcatchment HNTB 11S: Subarea trib to 8x8 culvert Runoff Area=12.460 ac 0.00% Impervious Runoff Depth=1.22"
Flow Length=725' Tc=18.6 min CN=76 Runoff=11.93 cfs 1.269 af

Subcatchment HNTB 2S: Chase pond watershed Runoff Area=1,917.000 ac 0.00% Impervious Runoff Depth=1.77"
Tc=25.0 min CN=84 Runoff=2,427.21 cfs 282.184 af

Subcatchment HNTB 5S: Chase Pond Runoff Area=170.000 ac 100.00% Impervious Runoff Depth=3.07"
Tc=21.2 min CN=98 Runoff=361.61 cfs 43.451 af

Reach HNTB 12R: Trib to Tpk Box Culvert Avg. Flow Depth=2.80' Max Vel=5.01 fps Inflow=79.18 cfs 182.069 af
n=0.035 L=950.0' S=0.0103 '/' Capacity=599.53 cfs Outflow=78.69 cfs 181.594 af

Reach HNTB 9R: Dam to trib Avg. Flow Depth=0.92' Max Vel=5.89 fps Inflow=53.37 cfs 178.949 af
n=0.035 L=530.0' S=0.0283 '/' Capacity=1,955.10 cfs Outflow=53.37 cfs 178.734 af

Pond HNTB 3P: Chase Pond Dam Peak Elev=157.46' Storage=258.115 af Inflow=2,769.27 cfs 325.635 af
Outflow=53.37 cfs 178.949 af

Pond HNTB 8P: Twin 8'x8' box Culverts Inflow=88.29 cfs 182.863 af
Primary=88.29 cfs 182.863 af

Total Runoff Area = 2,130.640 ac Runoff Volume = 330.240 af Average Runoff Depth = 1.86"
91.85% Pervious = 1,956.898 ac 8.15% Impervious = 173.742 ac

14181.HNTB Chases Pond Model

Type III 24-hr 02-YR Rainfall=3.30"

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Summary for Subcatchment HNTB 10S: Subarea trib to river

Runoff = 28.76 cfs @ 12.34 hrs, Volume= 3.336 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
31.180	77	2 acre lots, 12% imp, HSG C
27.438		88.00% Pervious Area
3.742		12.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	100	0.0162	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
11.1	2,000	0.0400	3.00		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
1.2	250	0.0400	3.50	10.51	Channel Flow, Area= 3.0 sf Perim= 4.0' r= 0.75' n= 0.070 Sluggish weedy reaches w/pools
23.3	2,350	Total			

Summary for Subcatchment HNTB 11S: Subarea trib to 8x8 culvert

Runoff = 11.93 cfs @ 12.27 hrs, Volume= 1.269 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
12.460	76	Woods/grass comb., Fair, HSG C
12.460		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	100	0.0150	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
7.2	625	0.0848	1.46		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
18.6	725	Total			

Summary for Subcatchment HNTB 2S: Chase pond watershed

Runoff = 2,427.21 cfs @ 12.35 hrs, Volume= 282.184 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Type III 24-hr 02-YR Rainfall=3.30"

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Type III 24-hr 02-YR Rainfall=3.30"

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Area (ac)	CN	Description
* 1,917.000	84	Woods/grass comb., Fair, HSG D
1,917.000		100.00% Pervious Area

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

Summary for Subcatchment HNTB 5S: Chase Pond

Runoff = 361.61 cfs @ 12.28 hrs, Volume= 43.451 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
 Type III 24-hr 02-YR Rainfall=3.30"

Area (ac)	CN	Description
* 170.000	98	Pond
170.000		100.00% Impervious Area

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

Summary for Reach HNTB 12R: Trib to Tpk Box Culvert

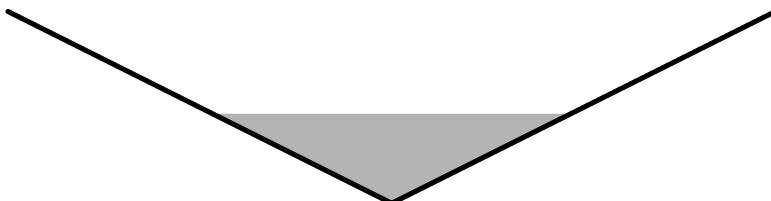
[62] Hint: Exceeded Reach HNTB 9R OUTLET depth by 1.91' @ 12.40 hrs

Inflow Area = 2,118.180 ac, 8.20% Impervious, Inflow Depth > 1.03" for 02-YR event
 Inflow = 79.18 cfs @ 12.35 hrs, Volume= 182.069 af
 Outflow = 78.69 cfs @ 12.45 hrs, Volume= 181.594 af, Atten= 1%, Lag= 5.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.01 fps, Min. Travel Time= 3.2 min
 Avg. Velocity = 4.19 fps, Avg. Travel Time= 3.8 min

Peak Storage= 14,919 cf @ 12.40 hrs
 Average Depth at Peak Storage= 2.80'
 Bank-Full Depth= 6.00' Flow Area= 72.0 sf, Capacity= 599.53 cfs

0.00' x 6.00' deep channel, n= 0.035
 Side Slope Z-value= 2.0 '/' Top Width= 24.00'
 Length= 950.0' Slope= 0.0103 '/'
 Inlet Invert= 130.00', Outlet Invert= 120.20'



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Type III 24-hr 02-YR Rainfall=3.30"

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Summary for Reach HNTB 9R: Dam to trib

[81] Warning: Exceeded Pond HNTB 3P by 2.20' @ 0.00 hrs

Inflow Area = 2,087.000 ac, 8.15% Impervious, Inflow Depth > 1.03" for 02-YR event
Inflow = 53.37 cfs @ 23.95 hrs, Volume= 178.949 af
Outflow = 53.37 cfs @ 23.99 hrs, Volume= 178.734 af, Atten= 0%, Lag= 2.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.89 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 5.30 fps, Avg. Travel Time= 1.7 min

Peak Storage= 4,804 cf @ 23.97 hrs
Average Depth at Peak Storage= 0.92'
Bank-Full Depth= 6.00' Flow Area= 120.0 sf, Capacity= 1,955.10 cfs

8.00' x 6.00' deep channel, n= 0.035
Side Slope Z-value= 2.0 '/' Top Width= 32.00'
Length= 530.0' Slope= 0.0283 '/'
Inlet Invert= 145.00', Outlet Invert= 130.00'



Summary for Pond HNTB 3P: Chase Pond Dam

Inflow Area = 2,087.000 ac, 8.15% Impervious, Inflow Depth = 1.87" for 02-YR event
Inflow = 2,769.27 cfs @ 12.34 hrs, Volume= 325.635 af
Outflow = 53.37 cfs @ 23.95 hrs, Volume= 178.949 af, Atten= 98%, Lag= 696.7 min
Primary = 53.37 cfs @ 23.95 hrs, Volume= 178.949 af

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs
Peak Elev= 157.46' @ 23.95 hrs Surf.Area= 136.327 ac Storage= 258.115 af

Plug-Flow detention time= 1,039.0 min calculated for 178.770 af (55% of inflow)
Center-of-Mass det. time= 925.6 min (1,761.2 - 835.6)

Volume	Invert	Avail.Storage	Storage Description
#1	142.80'	859.250 af	Custom Stage Data (Prismatic) Listed below (Recalc)

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Type III 24-hr 02-YR Rainfall=3.30"

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Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
142.80	0.000	0.000	0.000
154.00	1.000	5.600	5.600
155.00	25.000	13.000	18.600
156.70	135.500	136.425	155.025
157.00	136.000	40.725	195.750
157.70	136.500	95.375	291.125
158.00	137.000	41.025	332.150
159.00	138.000	137.500	469.650
160.00	139.000	138.500	608.150
161.80	140.000	251.100	859.250

Device	Routing	Invert	Outlet Devices
#1	Primary	142.80'	18.0" W x 24.0" H Vert. Orifice/Grate C= 0.600
#2	Primary	157.70'	90.0 deg x 35.5' long Sharp-Crested Vee/Trap Weir Cv= 2.50 (C= 3.13)
#3	Primary	161.80'	300.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=53.37 cfs @ 23.95 hrs HW=157.46' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 53.37 cfs @ 17.79 fps)
- 2=Sharp-Crested Vee/Trap Weir (Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond HNTB 8P: Twin 8'x8' box Culverts

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2,130.640 ac, 8.15% Impervious, Inflow Depth > 1.03" for 02-YR event
 Inflow = 88.29 cfs @ 12.41 hrs, Volume= 182.863 af
 Primary = 88.29 cfs @ 12.41 hrs, Volume= 182.863 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.05 hrs

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
31.180	77	2 acre lots, 12% imp, HSG C (HNTB 10S)
170.000	98	Pond (HNTB 5S)
12.460	76	Woods/grass comb., Fair, HSG C (HNTB 11S)
1,917.000	84	Woods/grass comb., Fair, HSG D (HNTB 2S)
2,130.640	85	TOTAL AREA

14181.HNTB Chases Pond Model

Type III 24-hr 10-YR Rainfall=4.90"

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Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment HNTB 10S: Subarea trib to river	Runoff Area=31.180 ac 12.00% Impervious Runoff Depth=2.54" Flow Length=2,350' Tc=23.3 min CN=77 Runoff=58.39 cfs 6.599 af
Subcatchment HNTB 11S: Subarea trib to 8x8 culvert	Runoff Area=12.460 ac 0.00% Impervious Runoff Depth=2.45" Flow Length=725' Tc=18.6 min CN=76 Runoff=24.74 cfs 2.547 af
Subcatchment HNTB 2S: Chase pond watershed	Runoff Area=1,917.000 ac 0.00% Impervious Runoff Depth=3.18" Tc=25.0 min CN=84 Runoff=4,354.15 cfs 507.858 af
Subcatchment HNTB 5S: Chase Pond	Runoff Area=170.000 ac 100.00% Impervious Runoff Depth=4.66" Tc=21.2 min CN=98 Runoff=540.85 cfs 66.064 af
Reach HNTB 12R: Trib to Tpk Box Culvert	Avg. Flow Depth=3.77' Max Vel=6.11 fps Inflow=173.30 cfs 327.635 af n=0.035 L=950.0' S=0.0103 '/' Capacity=599.53 cfs Outflow=173.30 cfs 327.189 af
Reach HNTB 9R: Dam to trib	Avg. Flow Depth=1.76' Max Vel=8.42 fps Inflow=171.01 cfs 321.223 af n=0.035 L=530.0' S=0.0283 '/' Capacity=1,955.10 cfs Outflow=171.01 cfs 321.036 af
Pond HNTB 3P: Chase Pond Dam	Peak Elev=158.71' Storage=429.472 af Inflow=4,871.07 cfs 573.922 af Outflow=171.01 cfs 321.223 af
Pond HNTB 8P: Twin 8'x8' box Culverts	Inflow=174.19 cfs 329.736 af Primary=174.19 cfs 329.736 af

Total Runoff Area = 2,130.640 ac Runoff Volume = 583.068 af Average Runoff Depth = 3.28"
91.85% Pervious = 1,956.898 ac 8.15% Impervious = 173.742 ac

14181.HNTB Chases Pond Model

Type III 24-hr 25-YR Rainfall=6.20"

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Time span=0.00-50.00 hrs, dt=0.05 hrs, 1001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment HNTB 10S: Subarea trib to river	Runoff Area=31.180 ac 12.00% Impervious Runoff Depth=3.65" Flow Length=2,350' Tc=23.3 min CN=77 Runoff=84.31 cfs 9.495 af
Subcatchment HNTB 11S: Subarea trib to 8x8 culvert	Runoff Area=12.460 ac 0.00% Impervious Runoff Depth=3.55" Flow Length=725' Tc=18.6 min CN=76 Runoff=35.97 cfs 3.690 af
Subcatchment HNTB 2S: Chase pond watershed	Runoff Area=1,917.000 ac 0.00% Impervious Runoff Depth=4.38" Tc=25.0 min CN=84 Runoff=5,953.24 cfs 700.347 af
Subcatchment HNTB 5S: Chase Pond	Runoff Area=170.000 ac 100.00% Impervious Runoff Depth=5.96" Tc=21.2 min CN=98 Runoff=685.99 cfs 84.457 af
Reach HNTB 12R: Trib to Tpk Box Culvert	Avg. Flow Depth=4.94' Max Vel=7.32 fps Inflow=357.78 cfs 522.494 af n=0.035 L=950.0' S=0.0103 '/' Capacity=599.53 cfs Outflow=357.77 cfs 522.078 af
Reach HNTB 9R: Dam to trib	Avg. Flow Depth=2.59' Max Vel=10.34 fps Inflow=352.95 cfs 513.173 af n=0.035 L=530.0' S=0.0283 '/' Capacity=1,955.10 cfs Outflow=352.94 cfs 512.999 af
Pond HNTB 3P: Chase Pond Dam	Peak Elev=159.57' Storage=548.305 af Inflow=6,611.85 cfs 784.803 af Outflow=352.95 cfs 513.173 af
Pond HNTB 8P: Twin 8'x8' box Culverts	Inflow=359.62 cfs 525.767 af Primary=359.62 cfs 525.767 af
Total Runoff Area = 2,130.640 ac Runoff Volume = 797.988 af Average Runoff Depth = 4.49"	
91.85% Pervious = 1,956.898 ac 8.15% Impervious = 173.742 ac	

Appendix 4

Highway Closed Drainage System Calculations

Appendix 5

Inspection, Maintenance and Housekeeping Plan

INSPECTION, MAINTENANCE AND HOUSEKEEPING PLAN

York Toll Plaza York, ME

Introduction

The Maine Turnpike Authority (MTA) will be responsible for maintaining the stormwater management system for the new toll plaza administrative building and associated administrative access driveway and parking. During construction, the site contractor shall be the responsible party for inspecting and maintaining the stormwater management system.

The following plan outlines the anticipated inspection, maintenance, and housekeeping procedures for the stormwater management devices proposed for the toll plaza administrative facilities. The “After Construction” includes recommendations for the administrative lot and access driveway as well the portions of the highway drainage/treatment system.

The procedures outlined in the Inspection, Maintenance, and Housekeeping Plan is provided as an overview of the anticipated practices to be used on this site. In some instances, additional measures may be required due to unexpected conditions. For additional details on any of the erosion and sedimentation control measures or stormwater management devices to be utilized on this project, refer to the most recently revised edition of the “Maine Erosion and Sedimentation Control BMP” manual and/or the “Stormwater Management for Maine: Best Management Practices” manual as published by the MDEP.

Administrative Building, Access Drive, Parking Lot

After Construction

1. **Inspection:** After construction, the owner shall annually inspect the BMPs, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.

2. **Maintenance, and repair:** If a BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner shall take corrective actions to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall record the deficiency and corrective action(s) taken. The following is a list of permanent erosion control and stormwater management measures and the inspection, maintenance, and housekeeping tasks to be performed after construction.
 - A. Vegetated Areas:
 - Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems.
 - Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

 - B. Ditches, Swales, and Other Open Channels:
 - Inspect ditches, swales and other open stormwater channels in the spring, in the late fall, and after heavy rains to remove any obstructions to flow. Remove accumulated sediments and debris, remove woody vegetative growth that could obstruct flow, and repair any erosion of the ditch lining.
 - Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity.
 - Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable.
 - If the ditch has a riprap lining, replace riprap in areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged.

 - C. Culverts:
 - Inspect culverts in the spring, in the late fall, and after heavy rains to remove any obstructions to flow.
 - Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit.
 - Inspect and repair any erosion damage at the culvert's inlet and outlet.

D. Level Lip Spreaders and Ditch Turnouts:

- The level spreader pool should be inspected after significant rainfall events for sediment accumulation and debris that may reduce its capacity. Sediment and debris buildup should be removed once the volume of the pool has been reduced by 25%.
- The level lip must be constructed so that runoff flows slowly over the lip to a sheet flow through the receiving buffer. Repair or reconstruction of the level lip is required when flow from the spreader becomes channelized.
- Do not store snow removed from the street and/or parking lot within the area of a level spreader.

E. Forested / Meadow Buffers

- Inspect and repair any eroded areas within the buffer.
- Reestablish vegetation within the buffer destroyed by post construction activities.

F. Underdrained Grass Filter

- The inlet and outlet of the BMP shall be checked periodically to ensure that flow structures are not blocked by debris. Inspections should be conducted monthly during wet weather conditions from March to November.
- Debris and sediment buildup shall be removed from the forebay and basin upon reaching a 6-inch accumulation within the forebay and 2 inches within the basin, but not less than annually.
- Mowing of grass may be conducted semiannually to a height of no less than 6-inches, with hand held trimmers or push mowers
- Grass filters shall be inspected annually for erosion, destabilization of sideslopes, embankment settling and other signs of structural failure. Corrective action should be taken immediately upon identification of problems.
- Rototill top of filter bed when ponding exceeds 48 hours
- Replace top several inches of filter material when ponding exceeds 72 hours

G. Winter Sanding:

- Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring.
- Accumulations on pavement may be removed by pavement sweeping.
- Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method.

H. Catch Basins:

- Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring.
- Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.

Highway Closed Drainage System

After Construction

1. **Inspection:** After construction, the owner shall annually inspect the BMPs, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
2. **Maintenance, and repair:** If a BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner shall take corrective actions to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall record the deficiency and corrective action(s) taken. The following is a list of permanent erosion control and stormwater management measures and the inspection, maintenance, and housekeeping tasks to be performed after construction.
 - I. Vegetated Areas:
 - Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems.
 - Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.
 - J. Ditches, Swales and Other Open Channels:
 - Inspect ditches, swales, and other open stormwater channels in the spring, in the late fall, and after heavy rains to remove any obstructions to the flow. Remove accumulated sediments and debris, remove woody vegetative growth that could obstruct flow and repair any erosion of the ditch lining.
 - Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity.
 - Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable.
 - Replace riprap in areas where any underlying filter fabric or underlying gravel is showing through the stone or where stones have dislodged.
 - K. Underdrained Grass Filter
 - The inlet and outlet of the BMP shall be checked periodically to ensure that flow structures are not blocked by debris. Inspections should be conducted monthly during wet weather conditions from March to November.
 - Debris and sediment buildup shall be removed from the forebay and basin upon reaching a 6-inch accumulation within the forebay and 2 inches within the basin, but not less than annually.
 - Mowing of grass may be conducted semiannually to a height of no less than 6-inches, with hand held trimmers or push mowers

- Grass filters shall be inspected annually for erosion, destabilization of sideslopes, embankment settling and other signs of structural failure. Corrective action should be taken immediately upon identification of problems.
- Rototill top of filter bed when ponding exceeds 48 hours
- Replace top several inches of filter material when ponding exceeds 72 hours

L. Catch Basins:

- Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring.
- Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.

M. Culverts:

- Inspect culverts in the spring, in the late fall, and after heavy rains to remove any obstructions to flow.
- Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit.
- Inspect and repair any erosion damage at the culvert's inlet and outlet.
- Inspect embankment for erosion, settling, and structural failure.

Attachments

Attachment 1 – Sample Stormwater Inspection and Maintenance Form
Administrative Building, access driveway and Parking Lot

Attachment 2 – Sample Stormwater Inspection and Maintenance Form
Highway Closed Drainage System

Sample Stormwater Inspection and Maintenance Form

York Toll Plaza; York, ME Administrative Building, Access Driveway, and Parking Lot Attachment 1

This log is intended to accompany the stormwater Inspection, Maintenance and Housekeeping Plan for the Administrative Building, Access Driveway, and Parking Lot. The following items shall be checked, cleaned and maintained on a regular basis as specified in the Maintenance Plan and as described in the table below. Qualified personnel familiar with drainage systems and soils shall perform all inspections. Attached is a copy of the construction and post-construction maintenance logs.

Item	Maintenance Required & Frequency	Date Completed	Maintenance Personnel	Comments
Vegetated Areas	Inspect Slopes			
	Replant Bare Areas			
	Check after Major Storms			
Ditches and Swales	Inspect after major rainfall event producing greater than 3" of rain in 2 hours.			
	Repair erosion or damage immediately.			
Level Lip Spreaders	Inspect after significant rainfall			
	Remove sediment if pool volume reduced by 25%			
	Repair the riprap if flow become channelized			
Winter Sanding	Clean annually (Spring)			
	Remove sand and sediment from roadway shoulders			
Underdrained Grass Filter	Inspect inlets/outlets to ensure no blockage from debris			
	Inspect sideslopes annually for erosion, destabilization, and embankment settling.			
Stormtech	Follow manufacturer's recommendations			
Catch Basins and Culverts	Remove accumulated sediment and debris			
	Sump depth			

Sample Stormwater Inspection and Maintenance Form

York Toll Plaza; York, ME Highway Closed Drainage System Attachment 2

This log is intended to accompany the stormwater Inspection, Maintenance and Housekeeping Plan for the Highway Closed Drainage System. The following items shall be checked, cleaned and maintained on a regular basis as specified in the Maintenance Plan and as described in the table below. Qualified personnel familiar with drainage systems and soils shall perform all inspections. Attached is a copy of the construction and post-construction maintenance logs.

Item	Maintenance Required & Frequency	Date Completed	Maintenance Personnel	Comments
Vegetated Areas	Inspect Slopes			
	Replant Bare Areas			
	Check after Major Storms			
Ditches and Swales	Inspect after major rainfall event producing greater than 3" of rain in 2 hours.			
	Repair erosion or damage immediately.			
Underdrained Grass Filter	Inspect inlets/outlets to ensure no blockage from debris			
	Inspect sideslopes annually for erosion, destabilization, and embankment settling.			
Catch Basins and Culverts	Remove accumulated sediment and debris			
	Sump depth			