WK DICKSON
community infrastructure consultants

City of Rocky Mount
Battleboro Stormwater Study

February 2016

CITY OF ROCKY MOUNT

BATTLEBORO
STORMWATER STUDY

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Prepared for

City of Rocky Mount
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The City of Rocky Mount selected WK Dickson to complete a stormwater study for Battleboro Township located in the northeastern portion of the City's limits. The goals of the Battleboro Stormwater Study are to: (1) conduct public outreach to engage residents of Battleboro and receive feedback regarding drainage concerns, (2) determine the existing level of service of the primary closed and open drainage systems, and (3) identify and recommend feasible improvement projects that will, to the maximum extent practicable, reduce the frequency and severity of flooding for citizens. The enclosed study includes an overview of public input and engagement activities, the Existing and Future Conditions Hydrologic and Hydraulic Analyses, Design Alternative Analysis, and conclusions and recommendations.

Existing Conditions Analysis

An Existing Conditions Analysis was conducted in order to evaluate the existing hydrologic and hydraulic characteristics of the Battleboro study area. The analysis was conducted to determine the performance of five (5) major culvert crossings, as well as other selected open and closed systems throughout the study area.

Citizen input, GIS inventory data, topographic surveys, and field work findings were used to develop the existing conditions model. Runoff curve numbers (RCNs) and flow paths associated with existing conditions were determined by using aerial photography, existing land use classifications, and State LiDAR contour data.

At select locations where flooding has been reported approximate high water mark elevations and flooding characteristics were documented. This information was compared to modeling results in order to validate the findings of the Existing Conditions Analysis. The Existing Conditions Analysis showed that the majority of the modeled systems, approximately 80 percent meet or exceed current City design standards. Additionally, the analysis corroborated some flooding problems submitted by citizens and revealed several of the primary system's components that do not meet the City of Rocky Mount's design standards may cause flooding. A complete summary of the Existing Conditions Analysis can be found in Section 2 of this report.

Future Conditions Analysis

A Future Conditions Analysis was completed to determine the projected performance of existing drainage infrastructure under ultimate build-out conditions as specified by zoning and future land use designations. Land use changes for future conditions primarily affects two (2) basins within the study area. Overall system performance is not significantly affected when considering these future land use changes. The Future Conditions Analysis results indicate approximately 80% of the modeled system will continue to meet or exceed current City Design Standards. A complete summary of the Future Conditions Analysis is found in Section 3 of this report.

Alternative Analysis

An Alternative Analysis was completed to identify improvements that may be practical to implement to mitigate identified flooding issues and improve drainage system performance. Six (6) potential alternatives were selected after discussion of the Existing Conditions Analysis with City staff. The alternatives were divided into two (2) categories: public and private property improvements projects. The public alternatives were ranked in priority based on public health and safety impacts, cost effectiveness, implementation feasibility, and flood mitigation potential.

Public Improvement Projects

- ***Alternative #1: Three Sisters Park Culverts Replacement*** – Alternative #1 includes upsizing the two existing 24″ RCP culvert crossings located along the Three Sisters Park walking trail. The 24″ RCP will be replaced with twin 36″ RCPs at both crossings. This alternative was evaluated due to its potential to help reduce the frequency and severity of flooding for residents upstream of the park. Upsizing these crossings will improve the performance of the upstream system by lowering the water surface elevations.

- ***Alternative #2A: East Bridges Street Drainage Improvements*** – Alternative #2A includes abandoning the closed pipe under the home at 125 East Bridges Street. The flow will be routed along the north side of East Bridges Street and through a proposed culvert crossing adjacent to the East Bridges Street and Gainor Avenue intersection. The proposed culvert will tie-in to the Alternative #2B along Gainor Avenue. This alternative was primarily evaluated for public health and safety reasons. The proposed improvements will mitigate the crawl space flooding for this property and decommission the section of closed pipe system located under the private residence. Additionally, it will improve the performance of the East Bridges Street system.

- ***Alternative #2B: Gainor Avenue Drainage Improvements (NCDOT)*** – Alternative #2B includes constructing an open swale section and upsizing the existing system along Gainor Avenue to bring it up to a 25-year level of service. This alternative was evaluated separately from Alternative #2A due to the system's location within the NCDOT right-of-way.

- ***Alternative #3: Viverette Avenue Culvert Replacement*** – Alternative #3 includes upsizing the existing 15″ RCP with elliptical 30″ x 19″ RCP. The proposed upsized pipe will lower backwater at the pipe inlet by increasing the flow capacity and reduce the frequency of routine clogging.

- ***Alternative #4: Marriott/Hathaway Street Drainage Improvements (NCDOT)*** – Alternative #4 includes replacing a small segment of 15″ RCP with 24″ RCP. The undersized existing pipe acts as a choking point. Upsizing the existing pipe will allow

the upstream system to perform at an increased level of service. These proposed improvements are located within the NCDOT right-of-way.

Private Property Improvement Projects

Two (2) drainage improvement projects have been identified to address drainage issues on private property. The projects were identified based on feedback received through the public questionnaires and public meetings. Since the drainage concerns reported on these properties are considered private drainage issues, they are not eligible for City capital improvement funding. However, the City has provided improvements to assist the affected private properties in resolving their specific issues and to provide examples of how residents can implement solutions to common drainage issues throughout the study area.

- ***Alternative #5: West Bridges Street and Railroad Street Drainage Improvements*** – Alternative #5 focuses on diverting flow away from the building located near the intersection of West Bridges and Railroad Streets. The potential improvements include re-grading the site and adding swales to create positive drainage, constructing berms to prevent roof runoff from entering crawl space, and plugging an existing pipe that carries flow under the building. These potential improvements will help to reduce the severity and frequency of the reported crawl space flooding.

- ***Alternative #6: Marriott Street and Crape Myrtle Street Drainage Improvements*** – Alternative #6 focuses on conveying drainage away from a relative low point (4831 Marriott Street) which receives and holds the majority of the runoff from surrounding residential properties. The proposed improvements entail installing a yard inlet at the low spot that will connect to a French drain and open swale. These improvements will tie-in to the existing public drainage system located along Marriott Street and provide drainage relief for the residents in this area.

General Private Alternative

The majority of the complaints received from residents were related to yard ponding and water in crawl spaces. Both of these issues are attributed to the extremely flat topography coupled with poor draining soils which are characteristic. To address individual private yard ponding issues, the following measures may be implemented by property owners:

- Import soils to fill in relative low spots in yards where ponding occurs;
- Add soil amendments to existing soils to improve drainage;
- Construct a French drain to direct water away from the low spot in yard;
- Re-grade the yard or create a berm to redirect and drain water away from low spots; and/or
- Add rain barrels to roof downspouts to collect runoff and prevent from collecting in yard.

To address wet crawl space issues, the following measures may be implemented by property owners:

- Install gutters and direct downspouts away from the crawl space;
- Re-grade the property to re-direct and drain water away from the house foundation;
- Install a sump pump and/or dehumidifier in the crawl space to remove standing water and moisture; and
- Construct a French drain to direct water away from the low spot in yard.

Conclusions and Recommendations

The findings of the study indicate that some of the reported flooding issues within the Battleboro study area are attributed to undersized and underperforming drainage systems. A portion of the collected public input reflects nuisance ponding on private property caused primarily by extremely flat topography and a lack of private drainage systems capable of conveying stormwater flow from private properties to the public drainage system. Based on these findings and discussion with City staff, six (6) alternatives were selected for evaluation. Of these six (6) alternative, four (4) were categorized as public. It should also be noted that several of the proposed projects are located within NCDOT right-of-way.

For the public improvement projects, estimated costs were calculated and they were given a priority ranking to help the City make planning-level decisions regarding implementation stormwater improvement projects. A summary of the costs and rankings for the public projects are provided in Table ES-1.

Table ES-1: Summary of Costs and Ranking for Public Improvement Projects

Rank	Project Name	Cost
1	Three Sisters Park Culverts Replacement	$47,200
1	East Bridges Street Drainage Improvements	$44,500
2	Viverette Street Culvert Replacement	$36,600
3	Marriott/Hathaway Streets Drainage Improvements (NCDOT)	$8,900
4	Gainor Avenue Drainage Improvements (NCDOT)	$333,200

SECTION 1
PUBLIC INPUT AND OUTREACH

Drainage problems in the Battleboro study area consist of yard, HVAC, and crawl space flooding. An initial list of drainage problems in the watershed was compiled from the following sources:

- Resident feedback obtained from completed questionnaires;
- Resident feedback collected at the public meeting held on April 15, 2015;
- Feedback collected during on-site resident interviews conducted by WK Dickson staff on May 14, 2015 and May 26, 2015 while conducting field investigations to collect hydraulic data for modeling; and
- Telephone interviews conducted by WK Dickson staff of select property owners to help clarify historical flooding.

Forty-one (41) questionnaires completed by residents were applicable to the Battleboro study area. The residents provided information regarding the frequency, location, and severity of flooding. A copy of the tabular questionnaire results is included in Appendix A.

The feedback obtained during field visits and through on-site interviews with residents was solicited to help determine where the existing drainage system was inadequately sized or in some cases where a lack of a drainage system was creating an issue. A copy of the on-site resident interviews conducted by WK Dickson staff is included in Appendix A. The feedback including existing flooding locations is summarized for the Battleboro study area on Figure 1-1.

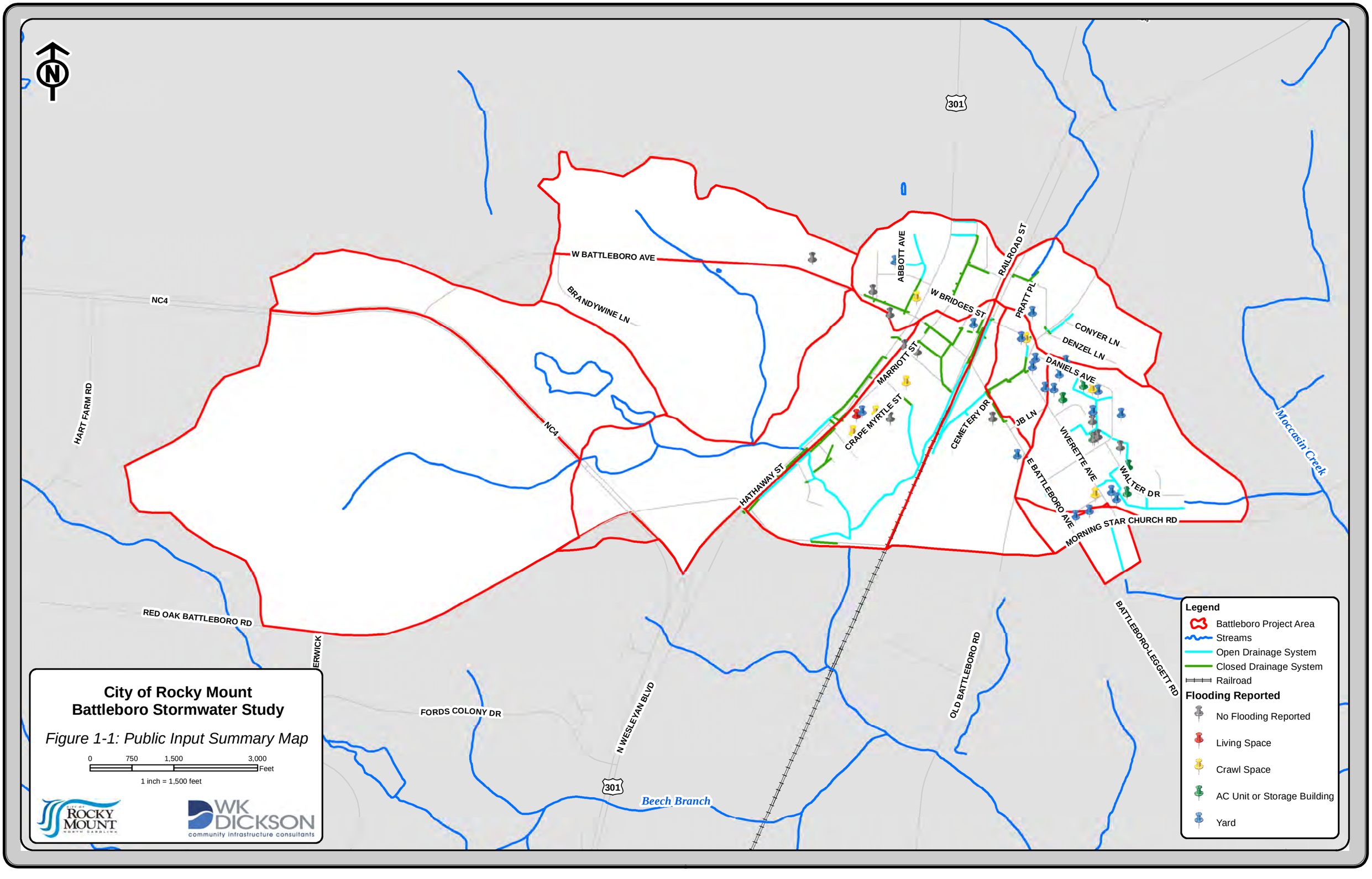
To supplement the information obtained from questionnaires and on-site interviews, phone calls were made to five (5) property owners located in proximity to several historical areas of flooding. The telephone conversations provided information about flooding to help clarify the duration, frequency, and inundation depths experienced at these locations. A summary of the telephone calls conducted with residents is included in Appendix A. The following table summarizes the type and location of flooding that was collected from residents for this project:

Table 1-1: Summary of Historical Flooding from Resident Feedback

Flooding Description	Project Area					
	1	2	3	4	5	6
Yard	13	4	1	1	-	2
HVAC	4	-	-	-	-	-
Crawl Space	-	-	1	1	-	3
Living Space	-	-	-	-	-	-

As shown in Table 1-1, over half of the complaints received were in reference to yard ponding. In some cases, the problems may be caused by the lack of a public drainage system where surface runoff can drain to along the road. It is not uncommon for surface runoff to

collect in the front and side yard of a home and stay up for one to two days at a time. In several cases, the driveways used to access a home were set lower than the surrounding yard and are vulnerable to flooding multiple times per year. A review of the NRCS soils map shows the predominant soil in the area of numerous received complaints is Exum which is a relatively poor draining sandy loam. If these areas of Battleboro had well-draining soils, this most likely would have masked some of the shortcomings with the existing drainage system.


N
301
W BATTLEBORO AVE
BRANDYWINE LN
NC4
HART FARM RD
ABBOTT AVE
W BRIDGES ST
RAILROAD ST
PRATT PL
CONYER LN
DENZEL LN
DANIELS AVE
MARRIOTT ST
CRAPE MYRTLE ST
CEMETERY DR
JB LN
VIVERETTE AVE
WALTER DR
E BATTLEBORO AVE
MORNING STAR CHURCH RD
HATHAWAY ST
Moccasin Creek
RED OAK BATTLEBORO RD
FORDS COLONY DR
N WESLEYAN BLVD
OLD BATTLEBORO RD
BATTLEBORO-LEGGETT RD
Beech Branch
City of Rocky Mount
Battleboro Stormwater Study
Figure 1-1: Public Input Summary Map
0 750 1,500 3,000 Feet
1 inch = 1,500 feet
ROCKY MOUNT
WK DICKSON
community infrastructure consultants
Legend
Battleboro Project Area
Streams
Open Drainage System
Closed Drainage System
Railroad
Flooding Reported
No Flooding Reported
Living Space
Crawl Space
AC Unit or Storage Building
Yard

SECTION 2
EXISTING CONDITIONS ANALYSIS

An Existing Conditions Analysis was conducted in order to evaluate the existing hydrologic and hydraulic characteristics of the Battleboro study area. This analysis was conducted to determine the performance of major culvert crossings and select open and closed systems throughout the study area.

Citizen input, GIS inventory data, topographic surveys, and field work findings were all used to develop the existing conditions model. Drainage areas, runoff curve numbers (RCNs), and flow paths associated with existing conditions were determined by using aerial photography, existing land use classifications, and State LiDAR contour data. Detailed descriptions of the model parameters are included in Appendices B and C. Peak flows were developed for the 2-, 10-, 25-, 50-, and 100-year storm events. The EPA SWMM model used to evaluate the existing conditions systems includes overland and channel routing prior to reaching the closed system. Once flow has been collected and directed into the closed drainage system, SWMM continues to perform storage routing in the closed conduits and in the downstream receiving channel.

It is common for the storage of runoff volume and peak flow attenuation to be achieved at the upstream side of each major culvert crossing. The amount of storage attenuation that is achieved is a function of culvert sizing, surrounding upstream conditions and the embankment height of the crossing. More storage and attenuation is achieved with higher embankments.

The pipe size and embankment height relationship for the majority of the culvert crossings in the Battleboro study area do not result in significant attenuation, with the exception of the 36" RCP under the CSX Railroad crossing. This embankment and culvert will attenuate flows in the 50- and 100-year flood events behind the railroad however there is very little attenuation occurring in the more frequent storm events such as the 10- and 25-year events. Additionally, the City does not hold property rights or right-of-way to all of the areas upstream of the culverts, so it is not guaranteed that these conditions will exist in the future. For these reasons, storage and attenuation that may be present at these locations was not included as part of the modeling assumptions. Additionally, it should be noted that flow attenuation that may be generated from the existing ponds located in Basin A-2 were not included in the study modeling.

As discussed in Appendix B of the report, the model was validated with USGS Regional Regression equations and Hydraflow Express. Modeling results were also compared and cross referenced with public input and City staff observations as part of the validation process. This public input and outreach included collecting drainage complaints questionnaires, conducting a public meeting, conducting on-site and phone interviews, and reaching out to NCDOT maintenance staff. A detailed summary of this effort is found in Section 1, Public Input and Outreach.

Stormwater Guidelines & Design Requirements

Stormwater design requirements were obtained from the City of Rocky Mount Stormwater Design Manual dated December 2006. They are consistent with those practices found in the North Carolina Department of Transportation (NCDOT) storm water manual entitled "Guidelines for Drainage Studies and Hydraulic Design" dated 1999. The following design standards and criteria were used to evaluate the performance of the existing drainage system and road crossings in this study:

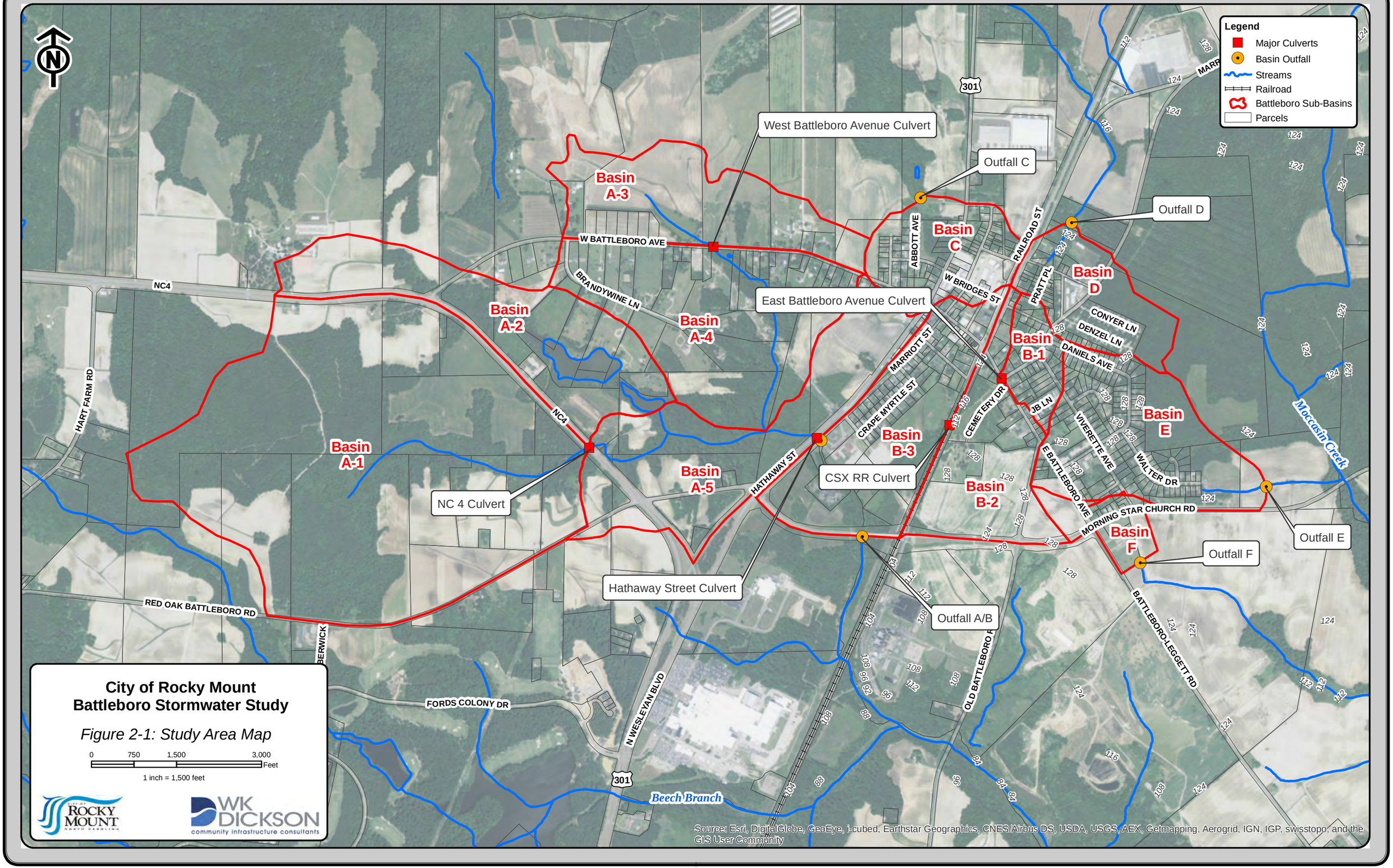
- Residential Local and Collector Roadways – 25-year design storm with 1 foot of freeboard;
- Commercial Local and Collector Roadways – 50-year design storm with 0.5 foot of freeboard;
- Industrial Local and Collector Roadways – 50-year design storm with 0.5 foot of freeboard;
- Minor and Major Arterial Roadways – 50-year design storm with 0.5 foot of freeboard; and
- HW/D (the ratio of headwater depth to culvert depth) <1.2.

Modeled System Components

For the purposes of hydrologic and hydraulic analysis, the study area was broken out into twelve (12) sub-basins which have been delineated based on common points of confluence and/or ultimate outfall locations. A summary of the study area sub-basins is shown below and is illustrated on the Study Area Map (Figure 2-1). The study area includes approximately 35,000 LF of open and closed drainage systems and five (5) culvert crossing over major or primary roadways.

Table 2-1: Sub-Basin Summary

Sub-Basin	Area (ac)	Common Outfall	Ultimate Outfall
A-1	485	NC 4	Outfall A/B (Beech Branch)
A-2	132	Hathaway Street	Outfall A/B (Beech Branch)
A-3	104	West Battleboro Avenue	Outfall A/B (Beech Branch)
A-4	166	Hathaway Street	Outfall A/B (Beech Branch)
A-5	122	Hathaway Street	Outfall A/B (Beech Branch)
B-1	26	East Battleboro Avenue	Outfall A/B (Beech Branch)
B-2	85	CSX Railroad	Outfall A/B (Beech Branch)
B-3	121	Outfall A/B	Outfall A/B (Beech Branch)
C	63	Outfall C	Outfall C (Unnamed Tributary to Swift Creek)
D	60	Outfall D	Outfall D (Unnamed Tributary to Swift Creek)
E	115	Outfall E	Outfall E (Moccasin Creek)
F	25	Outfall F	Outfall F (Moccasin Creek)


Legend
Major Culverts
Basin Outfall
Streams
Railroad
Battleboro Sub-Basins
Parcels
West Battleboro Avenue Culvert
East Battleboro Avenue Culvert
NC 4 Culvert
Hathaway Street Culvert
CSX RR Culvert
Outfall A/B
Outfall C
Outfall D
Outfall E
Outfall F
Basin A-1
Basin A-2
Basin A-3
Basin A-4
Basin A-5
Basin B-1
Basin B-2
Basin B-3
Basin C
Basin D
Basin E
Basin F
W BATTLEBORO AVE
BRANDYWINE LN
NC4
HART FARM RD
BERWICK
RED OAK BATTLEBORO RD
FORDS COLONY DR
N WESLEYAN BLVD
301
HATHAWAY ST
CRAPE MYRTLE ST
MARRIOTT ST
ABBOTT AVE
RAILROAD ST
W BRIDGES ST
PRATT PL
CONYER LN
DENZEL LN
DANIELS AVE
CEMETERY DR
JB LN
VIVERETTE AVE
WALTER DR
E BATTLEBORO AVE
MORNING STAR CHURCH RD
BATTLEBORO-LEGGETT RD
OLD BATTLEBORO R
Beech Branch
Moccasin Creek
City of Rocky Mount
Battleboro Stormwater Study
Figure 2-1: Study Area Map
0 750 1,500 3,000 Feet
1 inch = 1,500 feet
ROCKY MOUNT NORTH CAROLINA
WK DICKSON
community infrastructure consultants
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Within each sub-basin, existing drainage systems were reviewed and further organized into project areas. Project areas have similar system characteristics, surrounding land use, and known drainage and flooding issues as discovered from public input and City maintenance records. A summary of each project area is shown below.

Table 2-2: Project Area Summary

Project Area	Area (ac)	Open System (LF)	Closed System (LF)
1	109	4,737	361
2	66	3,062	1,500
3	24	948	1,340
4	23	-	2,218
5	8	663	1,715
6	114	5,460	1,373

Prior to the beginning the modeling for this study, a series of discussions and meetings was held with City staff to determine which project areas would be modeled in detail. The project areas selected for modeling and their system characteristics are shown below in Table 2-3 and illustrated in the Overall Project Area Map (Figure 2-2).

Table 2-3: Project Areas Selected for Modeling

Project Area	Area (ac)	Open System	Closed System
1	109	4,737	361
2	66	3,062	1,500
4	23	-	2,218
5	8	663	1,715
6	114	2,610	1,373

Major Culvert Crossing

Five (5) major culvert crossings have been identified within the study area. These crossings convey stormwater flow under a major or primary roadway and were analyzed to determine the existing level of service they provide for the roadway. Understanding the level of performance these culverts provide is critical to evaluating the public safety needs of the study area. A summary of the major culvert crossings existing conditions level of service and the relative water surface elevations (WSEL) are shown in Tables 2-4 and 2-5.

Table 2-4: Major Culvert Crossings – Existing Condition Analysis

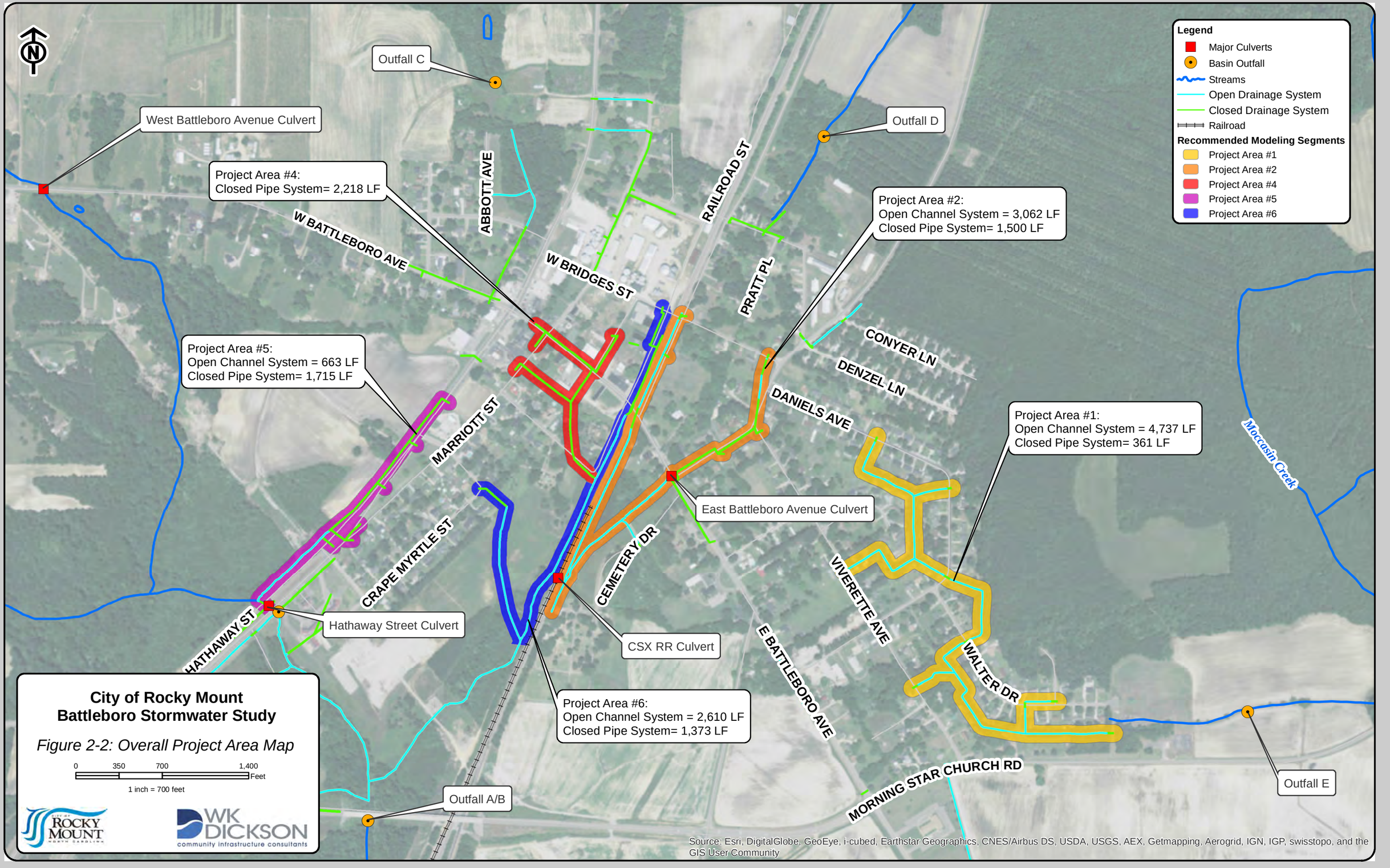
Location	Culvert Size	Required Level of Service (years)	Actual Level of Service (years)
NC 4	Twin 42″ Diameter RCP	50	100
West Battleboro Avenue	36″ Diameter RCP	50	**10**
East Battleboro Avenue	24″ Diameter RCP	25	100
Hathaway Street (Hwy 301)	12′ x 6′ RCBC	50	100
CSX Railroad	36″ Diameter RCP	100	100

*Bold text indicates design requirement not met.

Table 2-5: Existing Roadway Culvert Performance with Water Surface Elevations

Location	Minimum Elevation at Top of Road (feet NAVD)	Calculated Water Surface Elevations (feet NAVD)			
		2-year (cfs)	10-year (cfs)	25-year (cfs)	100-year (cfs)
NC 4	111.42	104.80	106.57	107.89	109.82
West Battleboro Avenue	121.69	117.51	119.71	**121.99**	**122.16**
East Battleboro Avenue	126.75	121.97	122.37	122.70	123.17
Hathaway Street (Hwy 301)	99.24	95.18	96.31	97.13	98.22
CSX Railroad	121.47	108.95	110.43	111.52	112.86

[1]Bold print with shading indicates roadway overtopping.
[2]All elevations reported are referenced to North American Vertical Datum of 1988 (NAVD 1988).


Legend
Major Culverts
Basin Outfall
Streams
Open Drainage System
Closed Drainage System
Railroad
Recommended Modeling Segments
Project Area #1
Project Area #2
Project Area #4
Project Area #5
Project Area #6
Outfall C
Outfall D
West Battleboro Avenue Culvert
Project Area #4:
Closed Pipe System= 2,218 LF
Project Area #2:
Open Channel System = 3,062 LF
Closed Pipe System= 1,500 LF
Project Area #5:
Open Channel System = 663 LF
Closed Pipe System= 1,715 LF
Project Area #1:
Open Channel System = 4,737 LF
Closed Pipe System= 361 LF
East Battleboro Avenue Culvert
Hathaway Street Culvert
CSX RR Culvert
Project Area #6:
Open Channel System = 2,610 LF
Closed Pipe System= 1,373 LF
Outfall A/B
Outfall E
ABBOTT AVE
RAILROAD ST
W BATTLEBORO AVE
W BRIDGES ST
PRATT PL
CONYER LN
DENZEL LN
DANIELS AVE
MARRIOTT ST
CRAPE MYRTLE ST
CEMETERY DR
VIVERETTE AVE
WALTER DR
E BATTLEBORO AVE
HATHAWAY ST
MORNING STAR CHURCH RD
Moccasin Creek
City of Rocky Mount
Battleboro Stormwater Study
Figure 2-2: Overall Project Area Map
0 350 700 1,400
Feet
1 inch = 700 feet
ROCKY MOUNT
WK DICKSON
community infrastructure consultants
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Primary System Analysis by Project Area

Project areas were selected and sub-divided based on system connectivity and the volume of public input and stormwater questionnaires that were received. To analyze the various project areas, two (2) independent SWMM models were developed, one for each primary outfall. The first model was used to analyze Project Area 1 while the second model was used to analyze the remainder of the project areas (Project Areas 2, 4, 5, and 6). Outlined below are brief descriptions of each project area and the results of the existing condition analysis.

Project Area 1

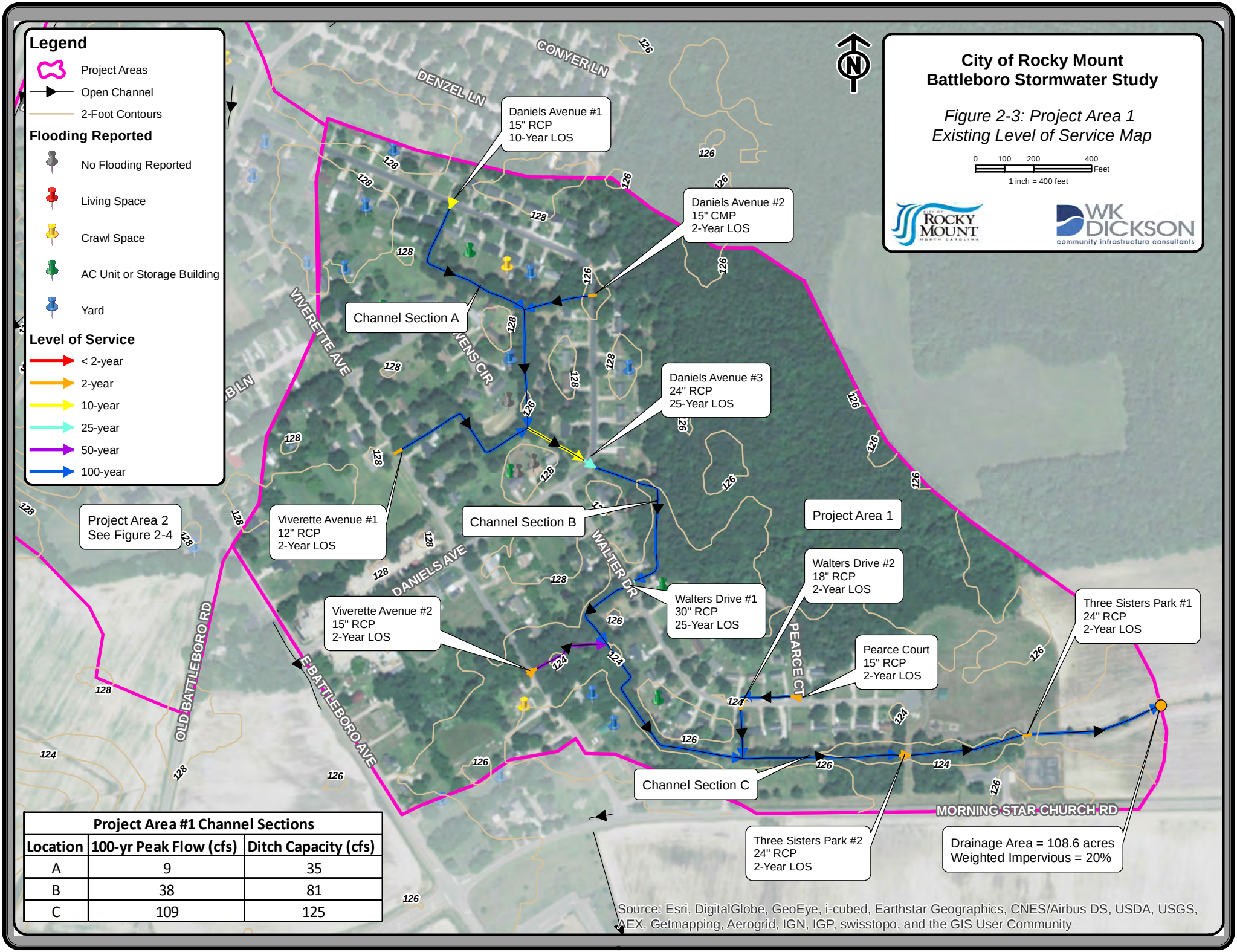
Project Area 1 consists of 108 acres of residential area including portions of Daniels Avenue, Owens Circle, Pearce Court, Viverette Avenue, and Walter Drive as shown on Figure 2-3. The drainage system in Project Area 1 consists primarily of open system ditches and roadway culvert crossings ranging in size from 12" to 24" and outfalls downstream of Three Sisters Park located along Morning Star Church Road. A summary of the Existing Conditions Analysis for Project Area 1 is shown below in Table 2-6.

Table 2-6: Project Area 1 System Performance

Location	Size/Material	Required Level of Service (years)	Actual Level of Service (years)
Daniels Avenue #1	15" RCP	25	**10**
Ditch Section A	N/A	10	100
Daniels Avenue #2	15" CMP	25	**2**
Daniels Avenue #3	24" RCP	25	25
Ditch Section B	N/A	10	100
Viverette Avenue #1	12" RCP	25	**2**
Viverette Avenue #2	15" RCP	25	**2**
Pearce Court	15" RCP	25	**2**
Walter Drive #1	30" RCP	25	25
Ditch Section C	N/A	10	100
Walter Drive #2	18" RCP	25	**2**
Three Sisters Park	24" RCP	25	**2**

*Bold text indicates design requirement not met.

As shown in Table 2-6, the majority of the pipes in Project Area 1 do not meet existing City design standards. During field visits, locations were observed where roadside ditches are very shallow and/or not well-defined. However, reports of roadway overtopping during large rain events were not received from residents in this area. The most common public input received for this project area reflects yard, AC unit, and/or storage building flooding. In some cases, these reports are likely the result of public drainage flowing onto private property where inadequate public infrastructure exists while for other cases they are private drainage issues.



Project Area #1 Channel Sections		
Location	100-yr Peak Flow (cfs)	Ditch Capacity (cfs)
A	9	35
B	38	81
C	109	125

Project Area 2

Project Area 2 consists of 66 acres of residential area including portions of East Bridges Street, Daniels Avenue, Gainor Avenue, and East Battleboro Avenue as shown on Figure 2-4. The drainage system in Project Area 2 consists primarily of closed pipe ranging in size from 12" to 36"and open ditch system. The system outfalls at the CSX Railroad culvert. A summary of the Existing Conditions Analysis for Project Area 2 is shown below in Table 2-7.

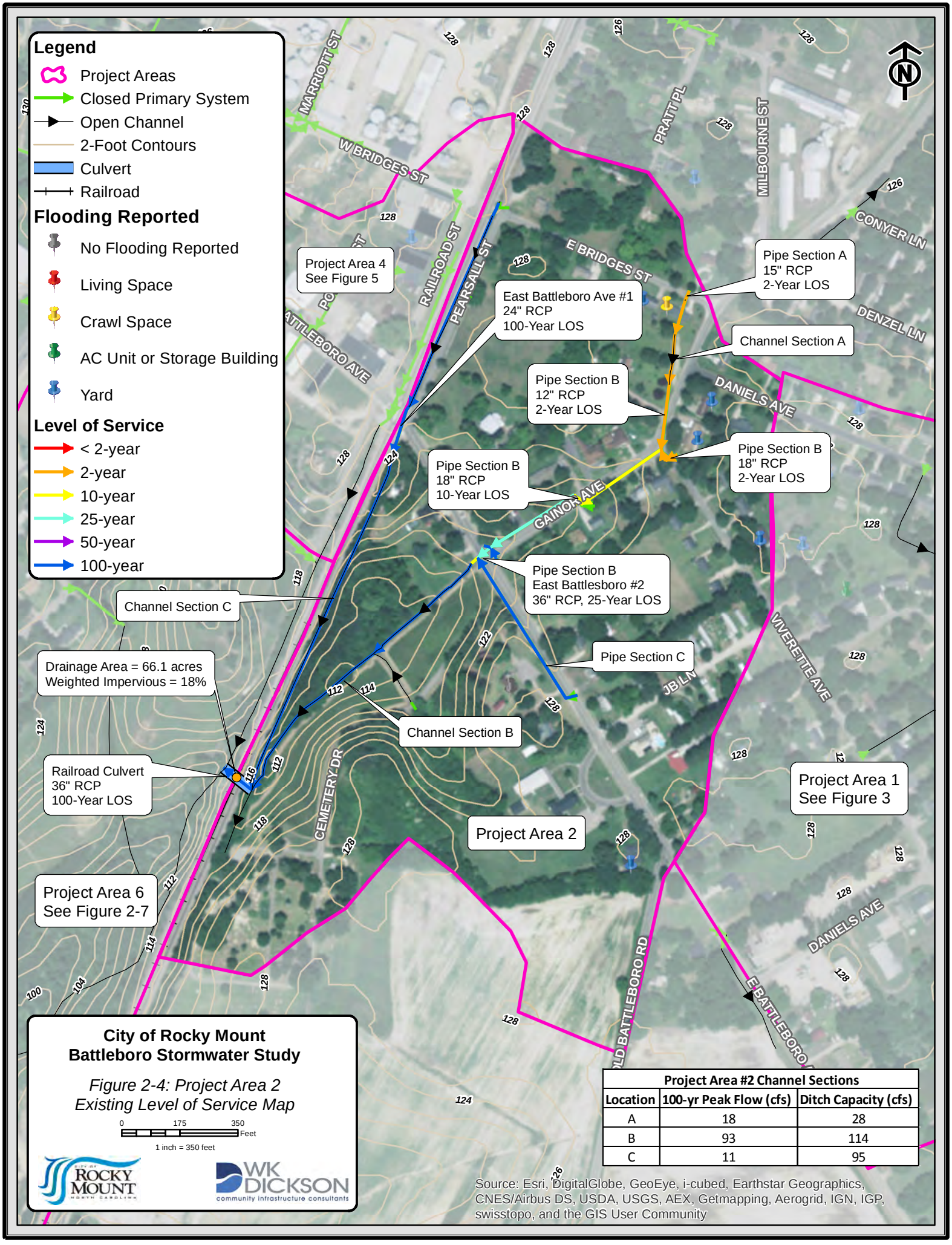
Table 2-7: Project Area 2 System Performance

Location	Size/Material	Required Level of Service (years)	Actual Level of Service (years)
Pipe Section A	12" to 15" RCP	25	**2**
Pipe Section B	18" to 36" RCP	25	**<2 to 25**
Pipe Section C	15" RCP	25	100
Channel Section A	N/A	10	100
Channel Section B	N/A	10	100
Channel Section C	N/A	10	100

*Bold text indicates design requirement not met.

Project Area 2 includes five (5) drainage complaints with regards to yard ponding and one (1) complaint received reported crawl space flooding. The primary cause of the yard ponding is lack of positive drainage to an existing inlet or roadside ditch that can convey storm flows away from the yard. Much of the upper limits of this system (near Sections A and B) is providing a 2-year level of service. However, this does not appear to be creating a flooding situation that is affecting residents. Along the lower limits of Gainor Avenue, East Battleboro Avenue and through the cemetery, the existing drainage system is providing between a 25- and 100-year level of service.

Project Area 2 is located adjacent to the one of the areas in Battleboro that received the majority of the drainage complaints, Project Area 1. Several properties along Viverette Avenue and East Battleboro Avenue are experiencing yard and driveway ponding due to the lack of a public drainage system at the road.



Project Area #2 Channel Sections		
Location	100-yr Peak Flow (cfs)	Ditch Capacity (cfs)
A	18	28
B	93	114
C	11	95

Project Area 4

Project Area 4 consists of 17 acres and includes residential, commercial and industrial land use as shown on Figure 2-5. The drainage system in Project Area 4 consists primarily of closed pipe ranging in size from 12″ to 24″ and outfalls south of Ethridge Street. A summary of the Existing Conditions Analysis for Project Area 4 is shown below in Table 2-8.

Table 2-8: Project Area 4 System Performance

Location	Size/Material	Required Level of Service (years)	Actual Level of Service (years)
Pipe Section A	12″ to 24″ RCP	25	**<2 to 100**
Pipe Section B	15″ to 18″ RCP	25	**2**
Pipe Section C	18″ to 24″ RCP	25	**<2 to 100**
Channel Section A	N/A	10	100

*Bold text indicates design requirement not met.

The majority of the closed system in this area does not meet existing City design standards. Pipe segments at the top and very bottom of the system provide less than a 2-year level of service. The only public input received in this project area was from the commercial warehouse facility located at the corner of West Bridges and Railroad Streets. This property owner reported water ponding under the building located on the south of warehouse.

Project Area 5

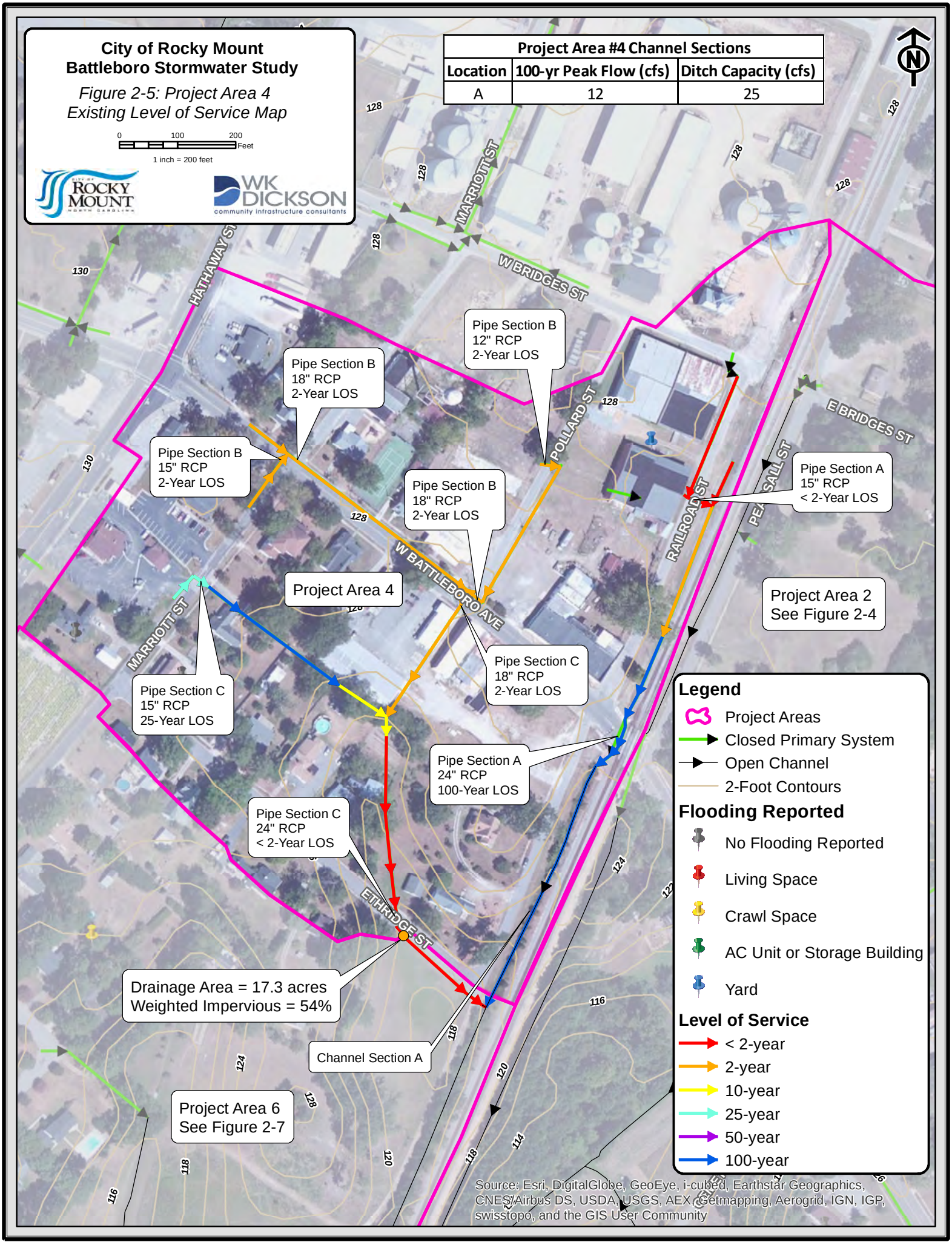
Project Area 5 is located along a narrow corridor of Hathaway Street (Highway 301) just south of Ethridge Street and west of Crape Myrtle Street (See Figure 2-6). It is primarily a closed drainage system that collects runoff from the immediate vicinity of Hathaway Street (Highway 301) and conveys it to a small closed drainage system located just west of the highway. The lower end of this system is a 500 foot long open roadside ditch that is unmaintained. The existing drainage area for this drainage system is very small and with the exception of one closed pipe the system is meeting a 100-year level of service. A summary of the existing conditions analysis for Project Area 5 is shown below in Table 2-9.

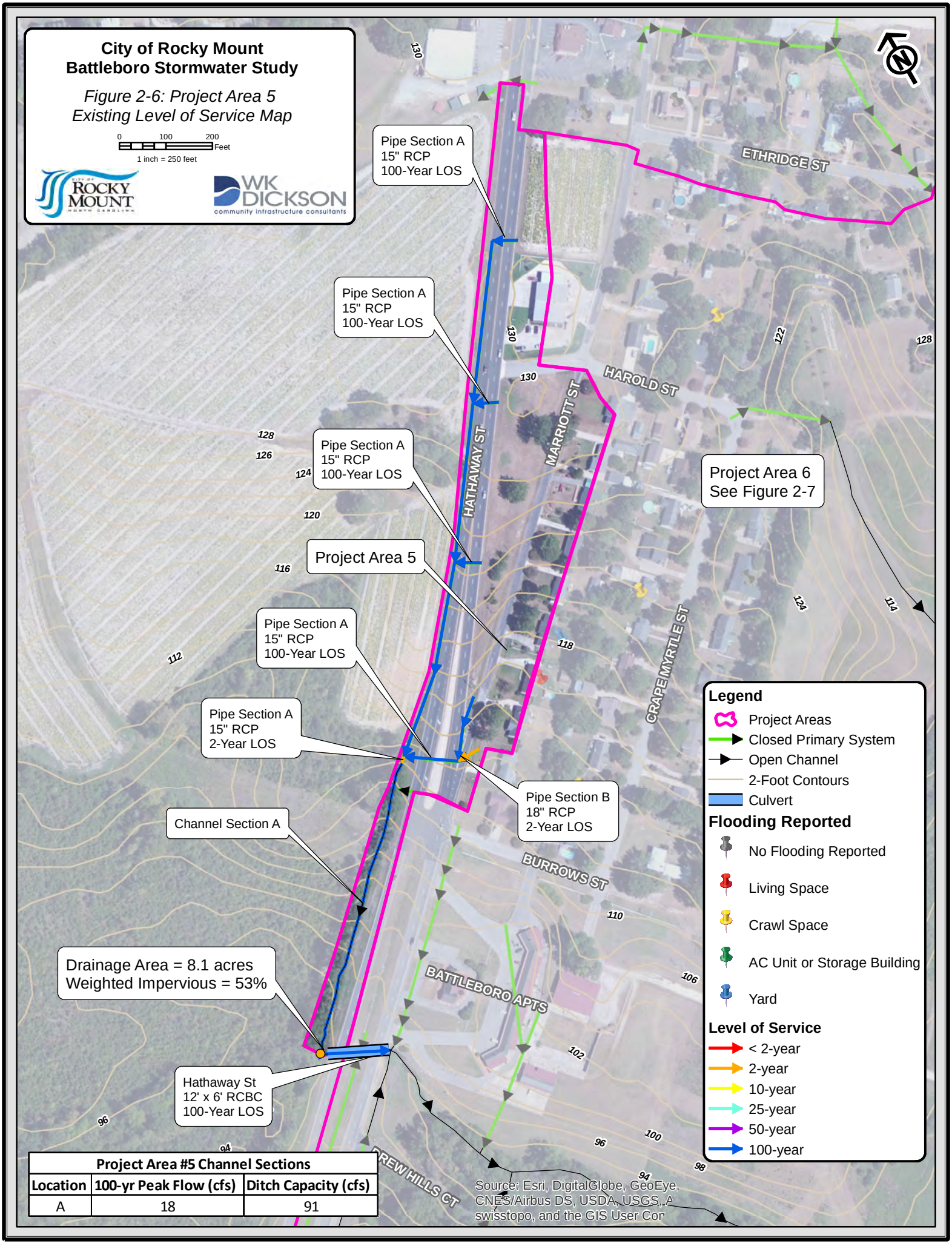
Table 2-9: Project Area 5 System Performance

Location	Size/Material	Required Level of Service (years)	Actual Level of Service (years)
Pipe Section A	15″ RCP	50	100
Pipe Section B	15″ RCP	50	**2**
Channel Section A	N/A	50	100

*Bold text indicates design requirement not met.

There was one (1) public comment entry from this project area indicating ponding near a residential driveway culvert along Marriot Street. All of the driveway pipes in Project Area 5 along Marriot Street ultimately drain to pipe section B.


City of Rocky Mount
Battleboro Stormwater Study
Figure 2-5: Project Area 4
Existing Level of Service Map
0 100 200 Feet
1 inch = 200 feet
ROCKY MOUNT
WK DICKSON
community infrastructure consultants
Project Area #4 Channel Sections
Location | 100-yr Peak Flow (cfs) | Ditch Capacity (cfs)
A | 12 | 25
N
HATHAWAY ST
MARRIOTT ST
W BRIDGES ST
E BRIDGES ST
POLLARD ST
RAILROAD ST
PEANUT SAIL ST
W BATTLEBORO AVE
ETHRIDGE ST
Pipe Section B
12" RCP
2-Year LOS
Pipe Section B
18" RCP
2-Year LOS
Pipe Section B
15" RCP
2-Year LOS
Pipe Section B
18" RCP
2-Year LOS
Pipe Section A
15" RCP
< 2-Year LOS
Project Area 4
Project Area 2
See Figure 2-4
Pipe Section C
15" RCP
25-Year LOS
Pipe Section C
18" RCP
2-Year LOS
Pipe Section A
24" RCP
100-Year LOS
Pipe Section C
24" RCP
< 2-Year LOS
Drainage Area = 17.3 acres
Weighted Impervious = 54%
Channel Section A
Project Area 6
See Figure 2-7
Legend
Project Areas
Closed Primary System
Open Channel
2-Foot Contours
Flooding Reported
No Flooding Reported
Living Space
Crawl Space
AC Unit or Storage Building
Yard
Level of Service
< 2-year
2-year
10-year
25-year
50-year
100-year
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Project Area #5 Channel Sections		
Location	100-yr Peak Flow (cfs)	Ditch Capacity (cfs)
A	18	91

Project Area 6

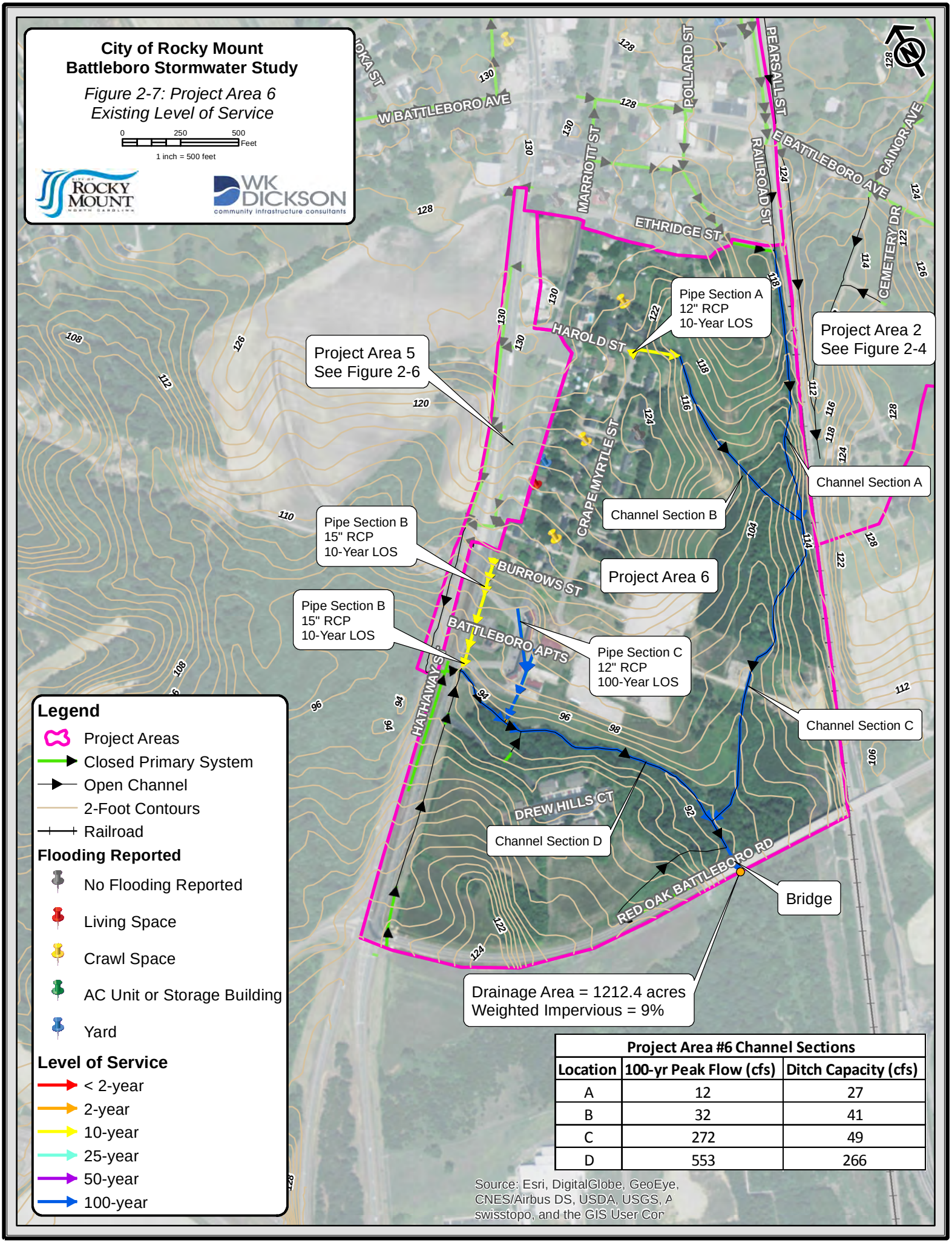
Project Area 6 consists of 114 acres of single family and multi-family residential area as shown on the Figure 2-7 and includes portions of Harold, Crape Myrtle and Burrows Streets. The drainage system in Project Area 6 consists primarily of swales, channels and streams, and a few segments of closed pipe. A summary of the Existing Conditions Analysis for Project Area 6 is shown below in Table 2-10.

Table 2-10: Project Area 6 System Performance

Location	Size/Material	Required Level of Service (years)	Actual Level of Service (years)
Pipe Section A	12″ RCP	25	**10**
Pipe Section B	15″ to 18″ RCP	25	**10**
Pipe Section C	12″ to 15″ RCP	10	100
Channel Section A	N/A	10	100
Channel Section B	N/A	10	100
Channel Section C	N/A	10	100
Channel Section D	N/A	10	100

*Bold text indicates design requirement not met.

Multiple entries from residents of Project Area 6 indicate crawl space flooding and yard ponding at properties located on Crape Myrtle and Marriot Streets. The common rear property line for homes along these two roads is a relative low point with no access to a public drainage system.



Project Area #6 Channel Sections		
Location	100-yr Peak Flow (cfs)	Ditch Capacity (cfs)
A	12	27
B	32	41
C	272	49
D	553	266

The primary change to land use will occur in Basin A where over 500 acres of low density residential land use will potentially replace existing agricultural land use. In addition, approximately 40 acres of heavy industrial land use is zoned to replace existing agricultural land use in Basins A and B. These land use changes will only impact the culverts located at Hathaway Street (Hwy 301) and NC 4. There are no land use or peak flow changes proposed for the remainder of the Battleboro study area. The following tables summarize the peak flow changes and the resultant water surface elevations that will be experienced at Hathaway Street (Hwy 301) and NC 4 with the potential changes in land use.

Table 3-1: Culvert Performance – Comparison of Existing and Future Conditions at Hathaway Street (Hwy 301)

Flood Frequency	Existing Water Surface Elevations (feet NAVD 1988)	Future Water Surface Elevations (feet NAVD 1988)	Existing Conditions Peak Flow (cfs)	Future Conditions Peak Flow (cfs)
10-Year	96.31	96.42	327	345
25-Year	97.13	97.23	427	442
50-Year	97.64	97.74	485	498
100-Year	98.22	98.30	547	558

*The roadway elevation is 99.24 feet NAVD 1988.

Table 3-2: Culvert Performance – Comparison of Existing and Future Conditions at NC 4

Flood Frequency	Existing Water Surface Elevations (feet NAVD 1988)	Future Water Surface Elevations (feet NAVD 1988)	Existing Conditions Peak Flow (cfs)	Future Conditions Peak Flow (cfs)
10-Year	106.57	107.55	141	165
25-Year	107.89	108.84	174	196
50-Year	108.80	109.72	195	215
100-Year	109.82	110.71	216	234

*The roadway elevation is 111.42 feet NAVD 1988.

As shown in Tables 3-1 and 3-2, there will be some appreciable increases to peak flows at Hathaway Street and NC 4 but both culverts will continue to exceed a 100-year level of service with the future conditions land use conditions.

SECTION 4
ALTERNATIVE ANALYSIS

The Alternative Analysis was completed to identify improvements to the existing drainage system that would mitigate known and identified flooding issues. The Existing Conditions Analysis confirmed some flooding problems submitted by citizens and revealed several of the primary system's components do not meet the City of Rocky Mount's design standards which may contribute to flooding. The majority of these undersized systems has not received drainage complaints from residents and do not appear to be causing significant flooding issues. For this reason, the focus of the Alternatives Analysis was to alleviate the known historical flooding complaints.

Prior to developing the Alternatives Analysis, a meeting was held with City staff on November 5, 2015 to help identify those areas of the existing drainage system that were adversely impacting flooding and affecting local residents. To make the best use of capital funding, alternatives were not developed for those parts of the study area that did not receive drainage complaints. The alternatives presented in this section of the report have been divided into two categories, public and private projects. Several of the areas receiving complaints were on private properties that flooded due to the runoff generated on those private properties themselves or neighboring private property. During discussions with City staff, a series of drainage improvements for private properties have been evaluated and are presented in this study to assist property owners with mitigating these private flooding issues. The private drainage improvement alternatives have been presented in this report for informational purposes and are not prioritized with the public drainage improvement alternatives.

The existing conditions SWMM model with future conditions land use was modified to create the proposed conditions alternatives. As noted in the Existing Conditions Analysis (Section 2) of the report, there were minor changes to land use in the upper limits of the Battleboro watershed. These changes had little impact to the existing conditions flows and those used for the proposed evaluated alternatives.

Public Drainage Improvement Projects

A total of four (4) public drainage improvement projects have been identified to manage flooding in the Battleboro study area. The projects were identified from a variety of sources including City staff, public questionnaires, public meetings, and hydrologic and hydraulic models. Ponding predominately occurs in roadways, yards, or crawl spaces. This section of the report presents the identified public drainage improvement projects that will help to mitigate future flooding in the Battleboro study area. Table 4-1 lists the public projects that were evaluated as part of this study.

Table 4-1: Summary of Alternatives for Public Drainage Projects

Alt #	Name	Description	Alternative Objectives
1	Three Sisters Park Culverts Replacement	Upsize the two existing 24″ diameter RCP crossings with twin 36″ diameter RCPs.	Reduce the upstream water surface at the park to maximize the performance of upstream drainage system.
2A	East Bridges Street Drainage Improvements	Abandon the closed pipe under the home at 125 East Bridges Street and reroute flow.	Eliminate the crawl space flooding at 125 East Bridges Street and bring road up to a 25-year level of service.
2B	Gainor Drainage Avenue Improvements (NCDOT)	Construct 290 linear feet of open swale and upsize Gainor Avenue system.	Bring existing system up to a 25-year level of service.
3	Viverette Avenue Culvert Replacement	Replace 40 linear feet of existing 15″ diameter RCP with 30″x 19″ elliptical Class IV concrete pipe.	Bring road up to a 25-year level of service and reduce the potential for debris blockage at this culvert.
4	Marriott/Hathaway Streets Drainage Improvements (NCDOT)	Replace 16 linear feet of existing 15″ diameter RCP with 24″ diameter RCP.	Bring road up to a 50-year level of service.

Alternative #1 – Three Sisters Park Culvert Replacement

There are two walking trails at Three Sisters Park that connect the parking lot to the remainder of the park. These trails cross the open channel primary drainage system serving Project Area 1 and are located near the outfall of the study. These two culvert crossings have existing 24-inch diameter RCPs which are currently performing at a 2-year level of service. The open channel system upstream and downstream of these culverts is currently performing at a 100-year level of service. Due to the flat nature of the watershed and relatively high overtopping elevation for the walking trail, these culverts are acting as a choke point for the upstream drainage system serving Project Area 1 (See Figure 4-1).

It was observed that upstream culverts invert elevations for Viverette Street, Walters Drive and Daniels Street are 122.17', 121.79' and 122.48', respectively; while the overtopping elevation at the Three Sisters Park crossings is at elevation 124.9 feet. This comparison of elevations illustrates how the reduced level of service at the park culverts creates high downstream tailwaters that back up through the system and reduce system capacity.

For this reason, a sensitivity analysis was prepared to determine the optimal cost benefit for the upsizing of the Three Sisters Park culverts. The results of this analysis support designing the park culverts for the 100-year storm. When sized for the 100-year storm replacement of the park culverts also increase the level of service for two upstream culverts in the Project Area 1 system.

As a result of the Three Sisters Park culverts replacement, water surface elevations will be lowered throughout the system and the performance of the Pearce Court culvert and Walter Drive #2 will improve from a 2-year level of service to a 10-year level of service.

The preliminary estimated cost for this alternative is $47,200 and as shown in Figure 4-1, involves the following improvements:

- 84 linear feet of twin 36" diameter RCP;
- Installation of concrete headwalls at the upstream and downstream faces the culverts;
- A rip-rap energy dissipater pad on the downstream end of the culverts; and
- Removal and replacement of asphalt greenway trail.

Alternative #2A – East Bridges Street Drainage Improvements

The resident of 125 East Bridges Street has reported routine yard and crawl space flooding. As shown on Figure 4-2, an existing 15-inch diameter RCP conveys runoff from East Bridges Street under the home at this location and ultimately connects to the primary system located on Gainor Avenue. This existing system is operating at a 2-year level of service which is below the current City standard of 25-year for residential local and collector roadways.

A field visit was conducted to investigate the reported flooding and to verify the presence of the stormwater pipe underneath the home. During the field visit, the pipe going under the home was visually confirmed and a number of variables were observed which could contribute to the reported yard and crawl space flooding. The crawl space flooding can be likely attributed to negative yard slope towards the home and the gutter downspout locations.

Neither a condition assessment nor a crawl space investigation was conducted as part of this study to verify the causes of crawl space flooding or to confirm the condition of the 15" RCP under the home.

Alternative #2A includes the installation of 18" RCP and a drop inlet along East Bridges Street will allow the City to plug and abandon the RCP located under the home. The preliminary estimated cost for this alternative is $44,500 and shown in Figure 4-2 includes the following drainage improvements:

- Plug the existing 15-inch diameter RCP at both the upstream and downstream ends and fill with grout;
- Remove and replace the existing driveway culvert at 128 East Bridges Street. A flared end section is proposed at both ends of this proposed pipe;
- Repair concrete driveway;
- Install 64 linear feet of 18" RCP along north side of East Bridges Street;
- Install 35 linear feet of 18" RCP across East Bridges Street; and
- Install new drop inlet at intersection of East Bridges Street and Gainor Avenue.

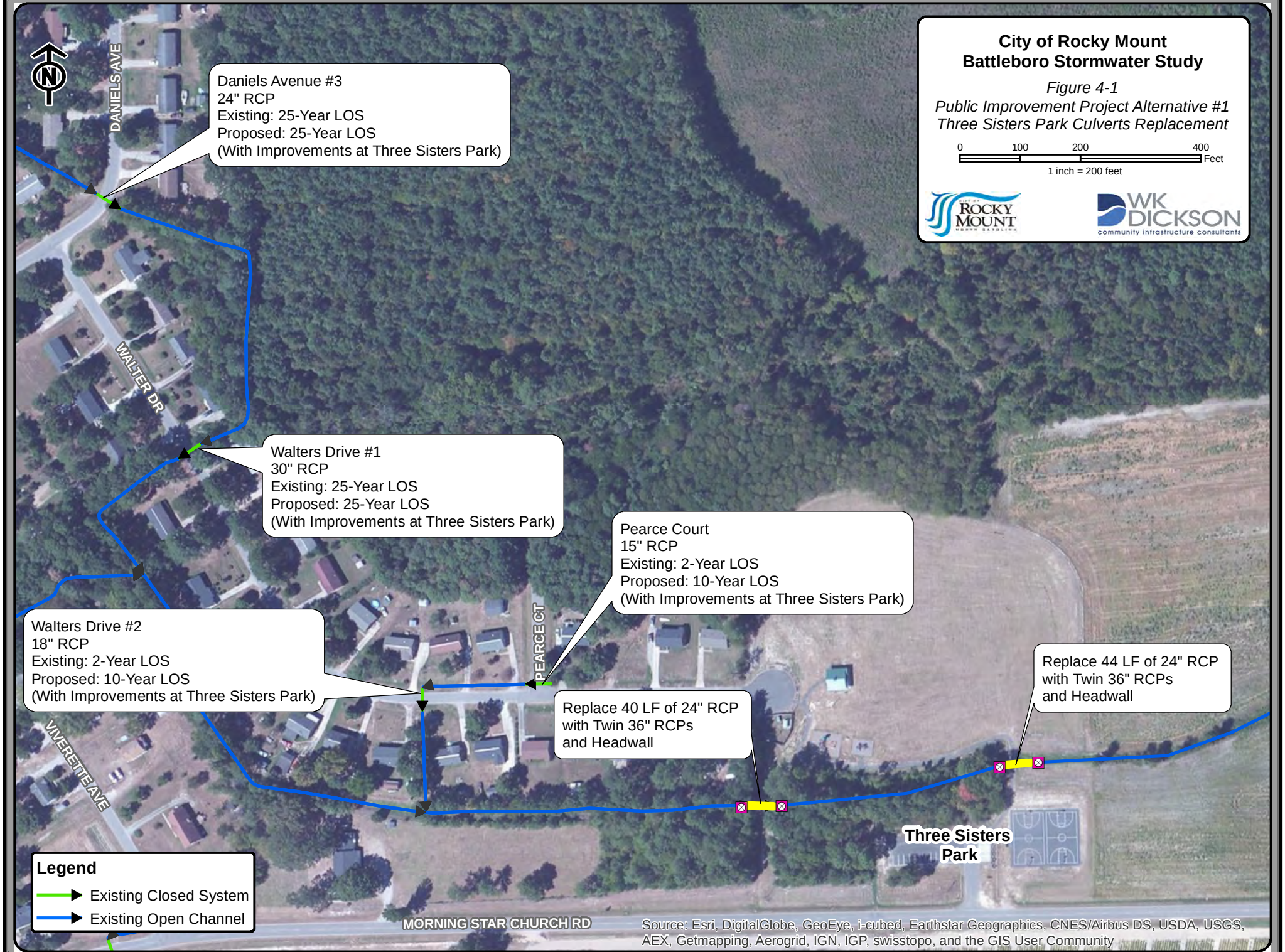
A detailed breakdown of the cost estimate prepared for this alternative is found in Appendix H.

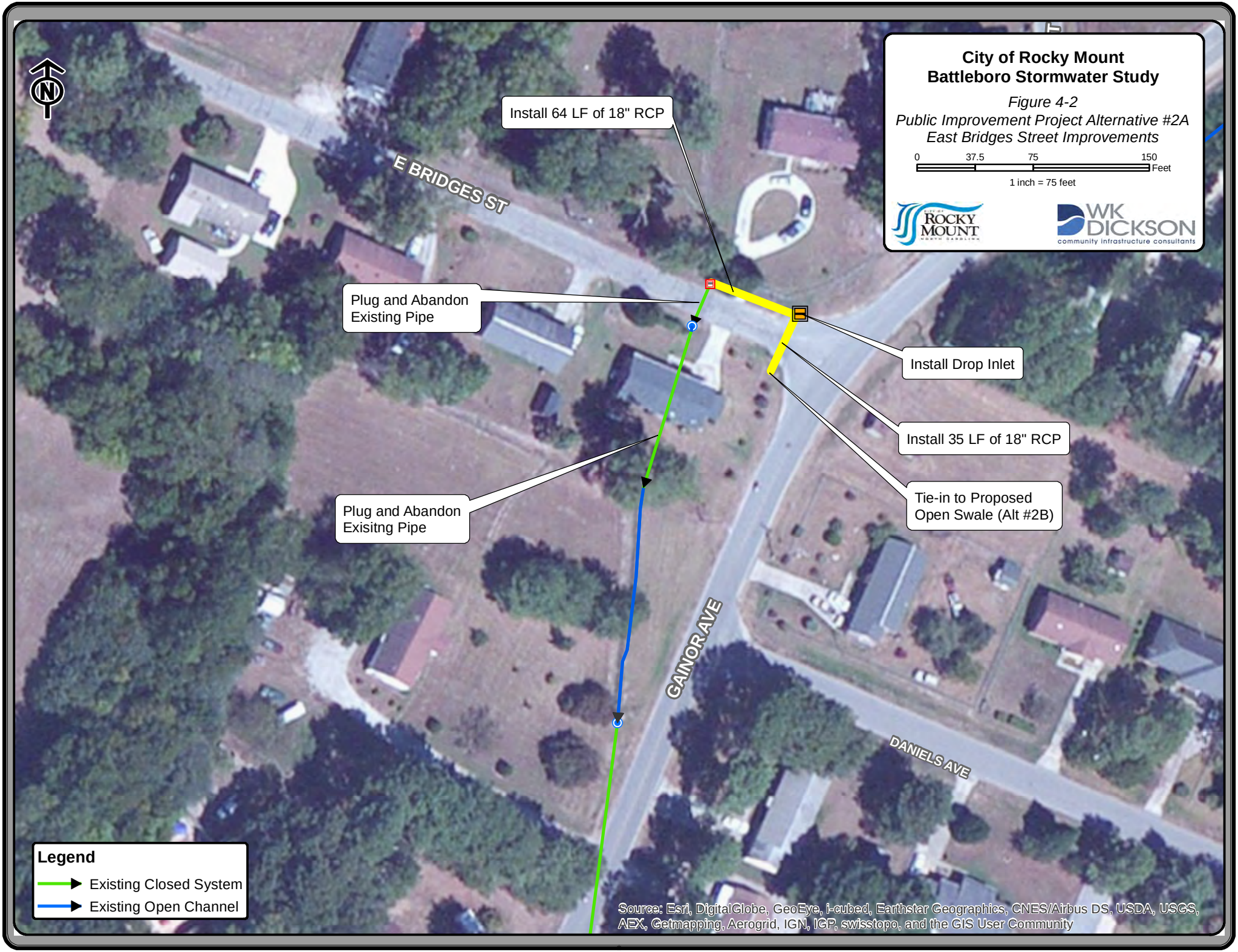
Alternative #2B – East Bridges Street and Gainor Avenue Improvements (NCDOT)

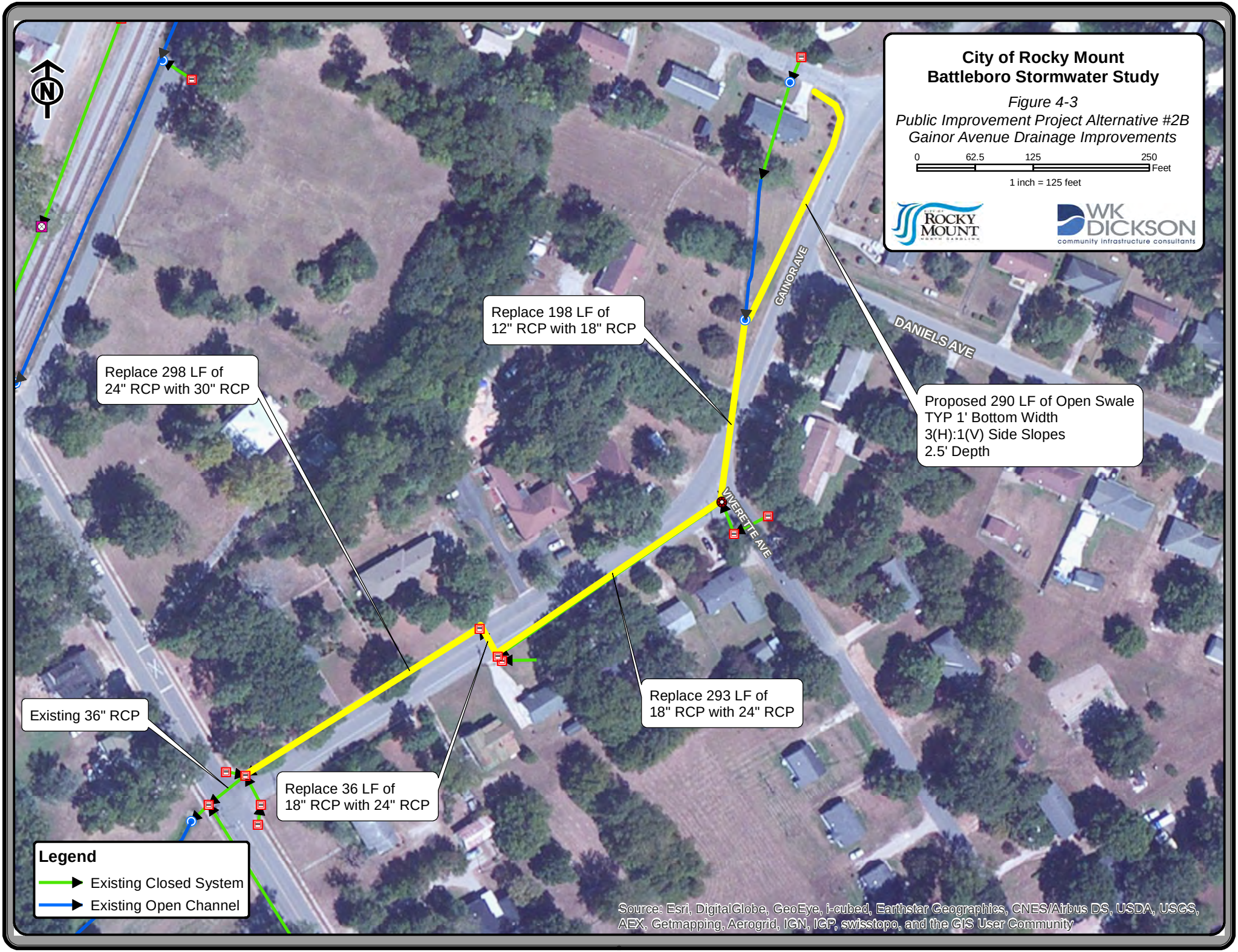
The existing System along Gainor Avenue between East Bridges Street and East Battleboro Avenue is providing between a 2- and 25-year level of service. In order to bring this entire system up to the required 25-year level of service, the following drainage improvements are proposed (See Figure 4-3):

- Construct 290 linear feet of open swale from the front yard of 125 East Bridges Street to the downstream connection with the existing open swale. This swale is approximately 2.5 feet deep, 3(H):1(V) side slopes, 1 foot bottom width, and grass lined;
- Replace 198 linear feet of 12" RCP with 18" RCP along Gainor Avenue;
- Replace 329 linear feet of 18" RCP with 24" RCP along Gainor Avenue;
- Replace 298 linear feet of 24" RCP with 30" RCP along Gainor Avenue; and
- Replace 3 drainage structures (2 inlets and 1 manhole).

The proposed swale considered for this alternative was sized for the 25-year storm. The preliminary estimated cost for this alternative is $333,200. A detailed breakdown of the cost estimate prepared for this alternative is found in Appendix H.


City of Rocky Mount
Battleboro Stormwater Study
Figure 4-1
Public Improvement Project Alternative #1
Three Sisters Park Culverts Replacement
0 100 200 400 Feet
1 inch = 200 feet
ROCKY MOUNT
WK DICKSON
community infrastructure consultants
N
DANIELS AVE
WALTER DR
PEARCE CT
VIVERETTE AVE
MORNING STAR CHURCH RD
Daniels Avenue #3
24" RCP
Existing: 25-Year LOS
Proposed: 25-Year LOS
(With Improvements at Three Sisters Park)
Walters Drive #1
30" RCP
Existing: 25-Year LOS
Proposed: 25-Year LOS
(With Improvements at Three Sisters Park)
Pearce Court
15" RCP
Existing: 2-Year LOS
Proposed: 10-Year LOS
(With Improvements at Three Sisters Park)
Walters Drive #2
18" RCP
Existing: 2-Year LOS
Proposed: 10-Year LOS
(With Improvements at Three Sisters Park)
Replace 40 LF of 24" RCP
with Twin 36" RCPs
and Headwall
Replace 44 LF of 24" RCP
with Twin 36" RCPs
and Headwall
Three Sisters
Park
Legend
Existing Closed System
Existing Open Channel
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community


City of Rocky Mount
Battleboro Stormwater Study
Figure 4-2
Public Improvement Project Alternative #2A
East Bridges Street Improvements
0
37.5
75
150
Feet
1 inch = 75 feet
Install 64 LF of 18" RCP
E BRIDGES ST
Plug and Abandon
Existing Pipe
Install Drop Inlet
Install 35 LF of 18" RCP
Tie-in to Proposed
Open Swale (Alt #2B)
Plug and Abandon
Exisitng Pipe
GAINOR AVE
DANIELS AVE
Legend
Existing Closed System
Existing Open Channel
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community


City of Rocky Mount
Battleboro Stormwater Study
Figure 4-3
Public Improvement Project Alternative #2B
Gainor Avenue Drainage Improvements
0
62.5
125
250
Feet
1 inch = 125 feet
ROCKY MOUNT
WK DICKSON
community infrastructure consultants
GAINOR AVE
DANIELS AVE
VIVERETTE AVE
Replace 198 LF of
12" RCP with 18" RCP
Replace 298 LF of
24" RCP with 30" RCP
Proposed 290 LF of Open Swale
TYP 1' Bottom Width
3(H):1(V) Side Slopes
2.5' Depth
Replace 293 LF of
18" RCP with 24" RCP
Existing 36" RCP
Replace 36 LF of
18" RCP with 24" RCP
Legend
Existing Closed System
Existing Open Channel
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Alternative #3 – Viverette Avenue Culvert Replacement

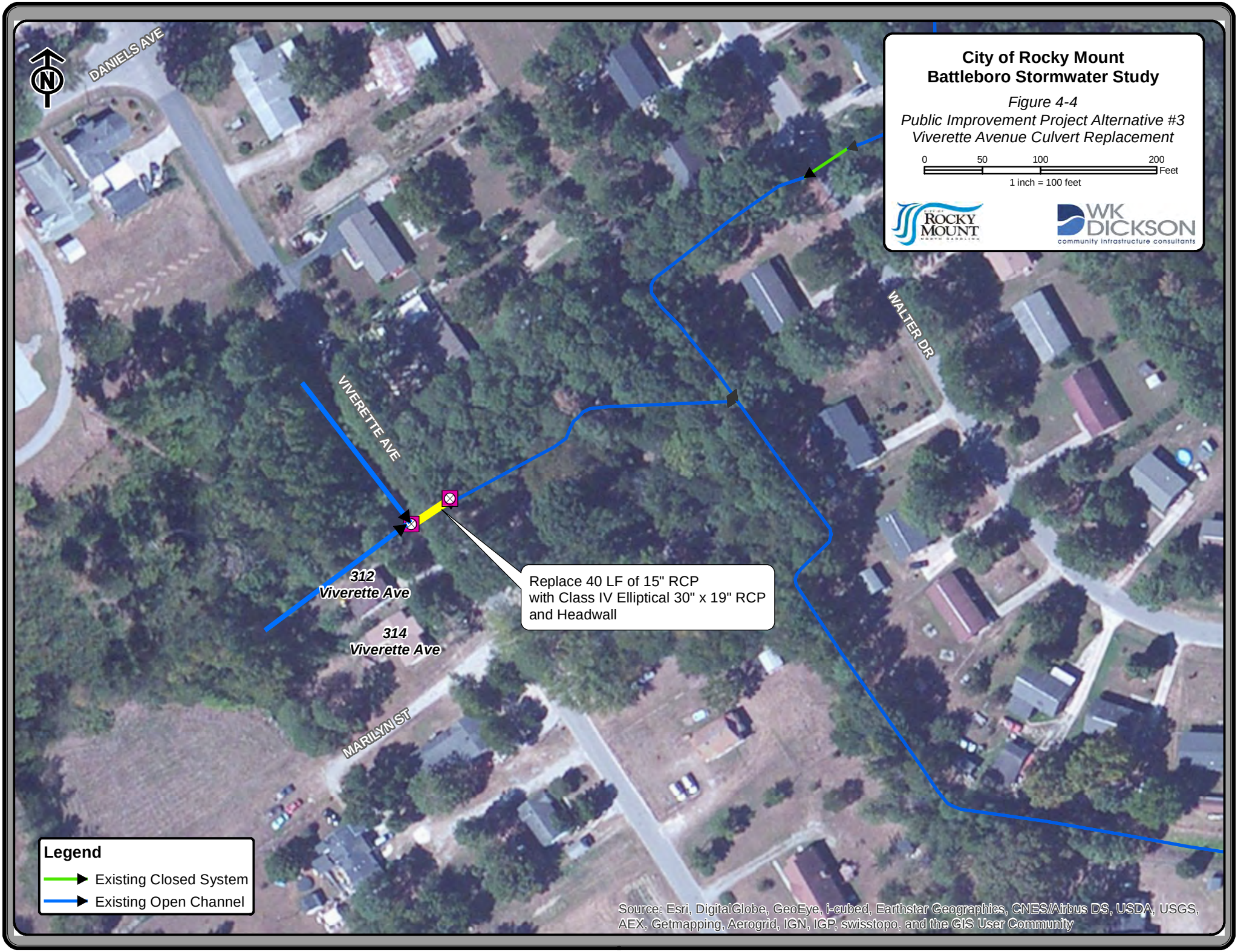
The existing 15-inch diameter RCP located near 314 Viverette Avenue is providing a 2-year level of service which causes both roadway and upstream yard ponding. The culvert has a history of clogging due to routine passage of debris from the upstream drainage area. When clogged and/or during heavy rains, the backwater from this culvert creates temporary ponding in the front yards of 312 and 314 Viverette Avenue. The proposed design alternative focused on determining a culvert size that would minimize the potential for debris blockage while maximizing level of service. Installation of a significantly larger pipe is not feasible at this location due to limited cover and shallow system elevations.

A 30-inch by 19-inch elliptical RCP has been selected to replace the existing 15" RCP and will provide a 10-year level of service. If completed in combination with the Three Sisters Park culvert improvements (Alternative #1), the proposed 30-inch by 19-inch elliptical RCP will provide a 25-year level of service.

The preliminary estimated cost for this alternative is $36,600 and a detailed cost breakdown of is provided in Appendix H. As shown in Figure 4-4, Alternative #3 involves the following drainage improvements:

- Replace 40 linear feet of existing 15" diameter RCP with a 30-inch by 19-inch elliptical Class IV RCP. Class IV concrete is required to eliminate structural issues with the minimum cover that will be provided;
- Lower the upstream invert approximately 0.5 feet from the existing invert elevation to increase slope and provide positive drainage; and
- Install concrete headwalls at both the upstream and downstream ends; and
- Remove and replace asphalt road along pipe alignment.

The proposed upsizing of the culvert at this Viverette Avenue crossing will reduce nuisance yard ponding at 312 and 314 Viverette Street. Additionally, the larger culvert will increase flow capacity at the road and reduce the potential for clogging.


DANIELS AVE
VIVERETTE AVE
WALTER DR
MARILYN ST
312
Viverette Ave
314
Viverette Ave
Replace 40 LF of 15" RCP
with Class IV Elliptical 30" x 19" RCP
and Headwall
City of Rocky Mount
Battleboro Stormwater Study
Figure 4-4
Public Improvement Project Alternative #3
Viverette Avenue Culvert Replacement
0
50
100
200
Feet
1 inch = 100 feet
ROCKY MOUNT
WK DICKSON
community infrastructure consultants
Legend
Existing Closed System
Existing Open Channel
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Alternative #4 – Marriott /Hathaway Streets Drainage Improvements (NCDOT)

As shown on Figure 4-5, the existing 18-inch diameter RCP located on the eastern side of Hathaway Street at the intersection with Marriott Street is providing a 2-year level of service, and has been reported to back up and create standing water in the adjacent residential property. The culvert directly downstream at this location going under Hathaway is currently provides 100-year level of service, however there is a 15-inch diameter RCP located just west of Hathaway Street that is causing the upstream system to flood. This downstream 15-inch diameter RCP has a much larger drainage area and as a result is causing the upstream system to flood. It should be noted that the size and material for culvert crossing at Hathaway Street was not included in the database provided by the City, and field verification during this study was not possible due to difficult access. Therefore, for modeling purposes, this NCDOT crossing was assumed to be 18" RCP.

Alternative #4 involves upsizing the undersized 15-inch diameter RCP as shown in Figure 4-5 and will reduce the tailwater and allow the upstream 18" RCP at Marriott Street to function as designed at a 25-year level of service. The preliminary estimated cost for this alternative is $8,900 and includes replacement of 16 linear feet of existing 15-inch diameter RCP with a 24-inch diameter RCP. A detailed breakdown of the estimated cost is found in Appendix H. It is recommended that prior to implementation of this alternative that the assumed pipe size be verified.

City of Rocky Mount
Battleboro Stormwater Study
Figure 4-5
Public Improvement Project Alternative #4
Marriott/Hathaway Streets Drainage Improvement
0
37.5
75
150
Feet
1 inch = 75 feet
Replace 16 LF of 15" RCP with 24" RCP
18" RCP
Existing: 2-Year LOS
Proposed: 25-year LOS
18" RCP (Assumed)
Existing: 100-Year LOS
Proposed: 100-year LOS
HATHAWAY ST
HATHAWAY ST
BURROWS ST
CRAPE MYRTLE ST
Legend
Existing Closed System
Existing Open Channel
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Private Drainage Improvement Projects

Two (2) drainage improvement projects have been identified to address drainage issues on private property. The projects were identified based on feedback received through the public questionnaires and public meetings. Table 4-2 lists the private projects that were evaluated as part of this study. Because the drainage concerns reported on these properties are considered private drainage issues, they are not eligible for City capital improvement funding. However, the City has included a schematic drawing and cost estimate in this report to assist the affected private properties in planning on how these issues may be resolved and to provide examples of how residents can implement solutions to common drainage issues throughout the study area.

Table 4-2: Summary of Alternatives for Private Drainage Projects

Alt #	Name	Description	Alternative Objectives
5	West Bridges and Railroad Streets Drainage Improvements	Incorporate on-site measures to divert flow away from building to existing public drainage system (e.g. berms, gutters, swales).	Prevent water from ponding under and around building at 5160 Railroad Street.
6	Marriott and Crape Myrtle Streets Drainage Improvements	Install yard inlet with French drain and open swale to connect to existing drainage system along Marriot Street.	Reduce frequency and severity of yard flooding for residents along Marriott and Crape Myrtle Streets.

Alternative #5 – West Bridges and Railroad Street Drainage Improvements

The southernmost building located at 5160 Railroad Street is experiencing crawl space flooding. The existing building does not have a gutter or downspouts to convey runoff away from the building. Runoff from the structure roof and the surrounding yard area drains under the building and ultimately connects to an existing public pipe system along Railroad Street.

The City has a public drainage system along Railroad Street and Pollard Street that is set low enough to accept this runoff should measures be taken to direct flow into these two systems. There are a number of different options that could be implemented to mitigate this crawl space flooding. The optimum solution will require a detailed evaluation by the owner to determine what works best for their future use of the property and available budget. The potential options include the following:

- Raising the grade around the building foundation to create positive drainage and/or creating a small berm on either side of the building that prevents the runoff that falls off the roof from finding a path under the building.
- Grading a series of open swales that redirect storm runoff away from the building to the public drainage inlets located on the eastern and western side of the property.

This alternative would include plugging the existing 15-inch RCPs located underneath this building.

- Installing a gutter system on either side of the roof that is directly connected to the public drainage system.

The preliminary estimated cost for this alternative as shown on Figure 4-6 is approximately $19,900. A detailed cost breakdown is included in Appendix H.

Alternative #6 – Marriott Street and Crape Myrtle Street Drainage Improvements

The property owner at 4831 Marriott Street is experiencing yard and driveway ponding as a result of runoff from adjacent uphill neighbors. The yard will stay wet for several days at a time causing damage to the wooden fence and presenting a safety issue to the property owner as freezing temperatures could result in his driveway becoming icy. There is no public runoff that is contributing to this problem. Elevation measurements were collected from the low point in the yard to the invert of the driveway culvert along Marriott Street. These elevation measurements revealed that there is approximately a 2-foot elevation drop and therefore, potential for a gravity-based solution exists. The following are two viable options to reduce the frequency and duration of standing water in the yard and potential for water to pass over the driveway:

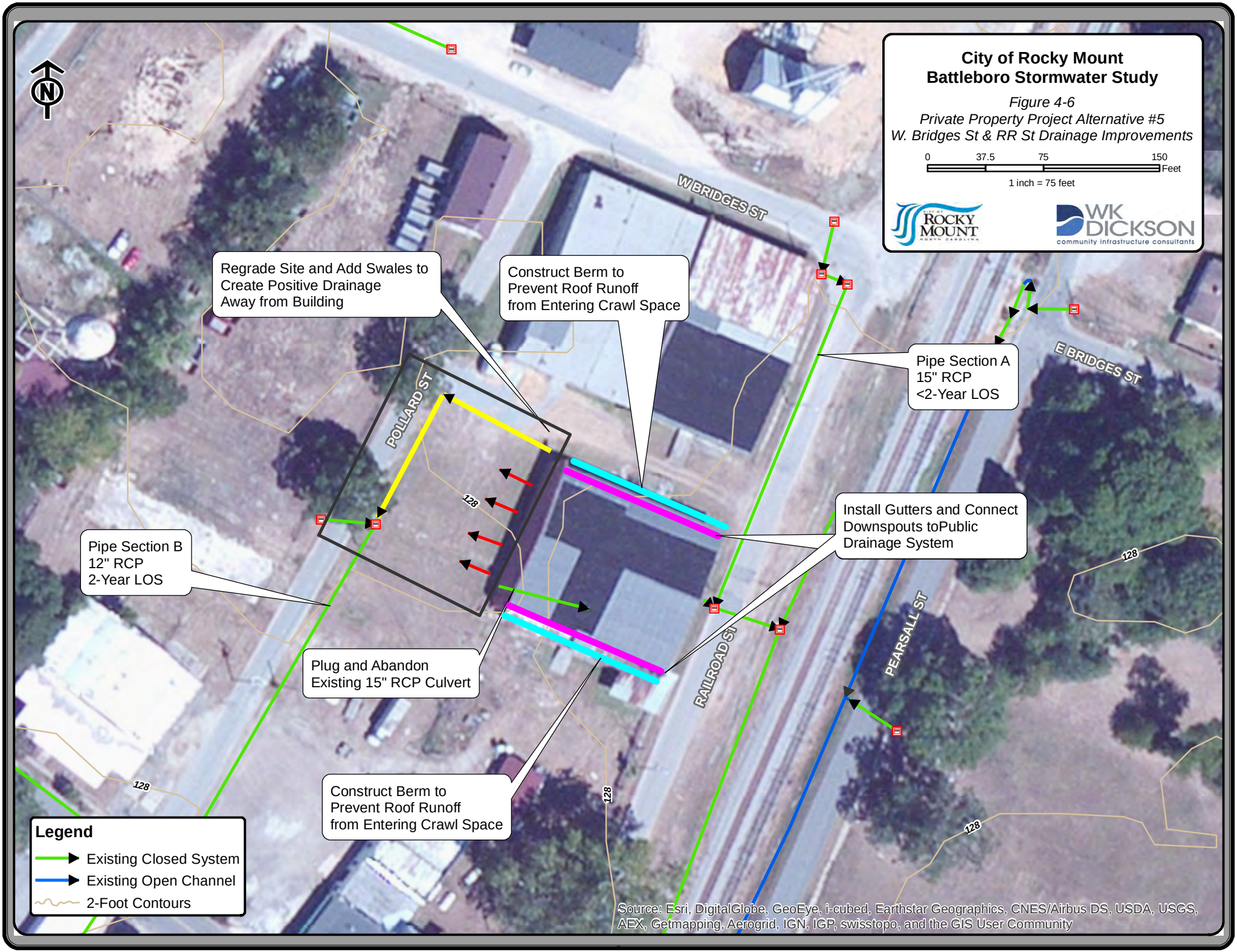
Option #1:

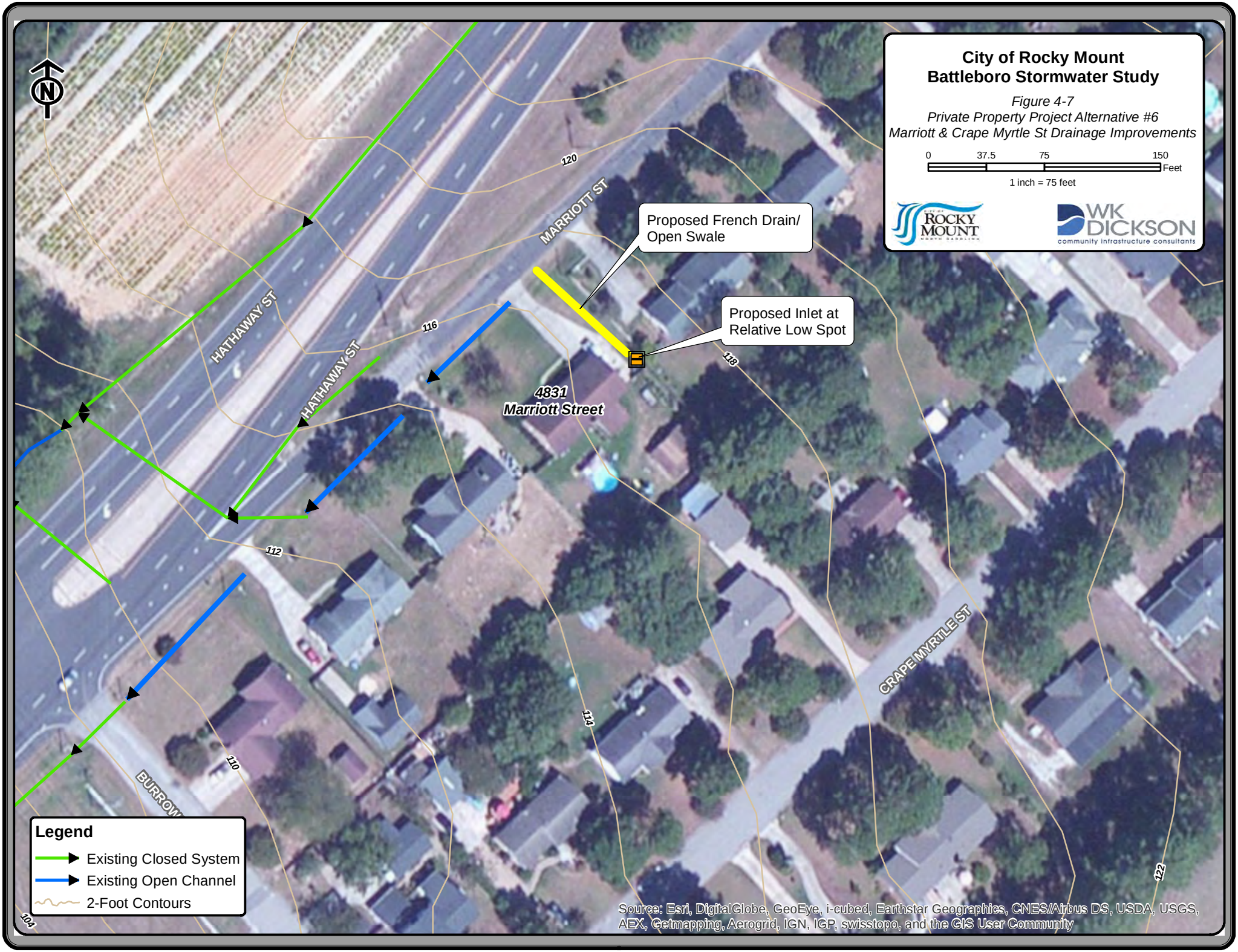
- Construct a French drain with a 6-inch perforated pipe that has a small grate inlet at the surface (small plastic or fiberglass grate inlet approximately 12-inch by 12-inches). The French drain will outfall at the open ditch running along Marriott Street.
- Increase the size of and lower the existing overland swale from the fence to the roadside ditch.

Option #2:

- Lower the existing open swale by as much as one foot to increase the slope of the grass swale and reduce the frequency water gets the fence and driveway wet.

Neither of these alternatives will eliminate standing water in a 10-year or larger storm event but they will significantly reduce the frequency and duration of standing water. Option#1 is recommended as it will further reduce the amount of standing water that is experienced in the backyard when compared to Option#2. Figure 4-7 shows the improvements for the recommended option (Option #1). The preliminary estimated cost for this alternative as shown on Figure 4-7 is approximately $4,900. A detailed cost breakdown is included in Appendix H.


City of Rocky Mount
Battleboro Stormwater Study
Figure 4-6
Private Property Project Alternative #5
W. Bridges St & RR St Drainage Improvements
0
37.5
75
150
Feet
1 inch = 75 feet
ROCKY MOUNT
WK DICKSON
community infrastructure consultants
W BRIDGES ST
E BRIDGES ST
POLLARD ST
RAILROAD ST
PEARSALL ST
128
Regrade Site and Add Swales to Create Positive Drainage Away from Building
Construct Berm to Prevent Roof Runoff from Entering Crawl Space
Pipe Section A
15" RCP
<2-Year LOS
Pipe Section B
12" RCP
2-Year LOS
Install Gutters and Connect Downspouts toPublic Drainage System
Plug and Abandon Existing 15" RCP Culvert
Construct Berm to Prevent Roof Runoff from Entering Crawl Space
Legend
Existing Closed System
Existing Open Channel
2-Foot Contours
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community


City of Rocky Mount
Battleboro Stormwater Study
Figure 4-7
Private Property Project Alternative #6
Marriott & Crape Myrtle St Drainage Improvements
0
37.5
75
150
Feet
1 inch = 75 feet
Proposed French Drain/
Open Swale
Proposed Inlet at
Relative Low Spot
MARRIOTT ST
HATHAWAY ST
HATHAWAY ST
4831
Marriott Street
CRAPE MYRTLE ST
BURROW
120
116
118
112
110
114
122
104
Legend
Existing Closed System
Existing Open Channel
2-Foot Contours
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

General Private Alternative

As noted in Section 1 - Public Input and Outreach, the majority of the complaints received from residents were related to yard ponding and water in crawl spaces. Both of these issues are attributed to the extremely flat topography coupled with poor draining soils which are characteristic throughout Project Area 1. To address individual private yard ponding issues, the following measures may be implemented by property owners:

- Import soils to fill in relative low spots in yards where ponding occurs;
- Add soil amendments to existing soils to improve drainage;
- Construct a French drain to direct water away from the low spot in yard;
- Re-grade the yard or create a berm to redirect and drain water away from low spots; and/or
- Add rain barrels to roof downspouts to collect runoff and prevent from collecting in yard.

To address wet crawl space issues, the following measures may be implemented by property owners:

- Install gutters and direct downspouts away from the crawl space;
- Re-grade the property to re-direct and drain water away from the house foundation;
- Install a sump pump and/or dehumidifier in the crawl space to remove standing water and moisture; and
- Construct a French drain to direct water away from the low spot in yard.

Preliminary Cost Estimates

The cost estimates provided as part of this study were prepared to assist City staff in making planning level decisions and prioritizing improvements. These cost estimates are not final design estimates, and were developed using recent bid tabulations from NCDOT projects and other communities within North Carolina. The cost estimates include a construction contingency as well as anticipated legal, engineering, and administrative costs. The cost estimates are based on 2015 costs, and should be updated in future years as the City's capital plan is revisited. A detailed breakdown of the costs for each public improvement project is included in Appendix H.

Priority Rankings

Table 4-3 provides a summary and priority ranking for identified projects. The public improvement projects were prioritized based on the following criteria:

- Public Health and Safety – potential impact of flooding on public health and safety. Generally, refers to flooding in and around habitable structures;
- Severity of Street Flooding –impact of flood depths to or through an area;
- Cost Effectiveness – the benefit/cost of the proposed improvements;
- Effect of Improvements – the number of drainage issues resolved and the number of citizens positively affected;
- Constructability – relative constructability of the project including site constraints, traffic and neighborhood impacts, and impacts on adjacent property owners.

Table 4-3: Priority Rankings of Alternatives

Priority Ranking	Name	Project Cost ($)
1	Three Sisters Park Culverts Replacement	$47,200
1	East Bridges Street Drainage Improvements	$44,500
2	Viverette Street Culvert Replacement	$36,600
3	Marriott/Hathaway Streets Drainage Improvements (NCDOT)	$8,900
4	Gainor Avenue Drainage Improvements (NCDOT)	$333,200

Based on the prioritization criteria, Alternative #1 - Three Sisters Park Culverts Replacement and Alternative #2A - East Bridges Street Drainage Improvements were both ranked at the top. The Three Sisters Park Culverts Replacement Project was ranked at the top due to the effect of the improvements and constructability. The project is located in a public park with minimal impacts to traffic and adjacent property owners. The proposed replacement at the two culvert crossings will improve system performance in Project Area 1.

The East Bridges and Gainor Avenue Improvements Project was ranked at the top primarily for public health and safety reasons. The existing system consists of an existing undersized pipe segment that is conveying flow underneath a private habitable structure. The proposed improvements will plug the existing pipe to prevent it from carrying flow and divert this flow.

SECTION 5
CONCLUSIONS

As previously mentioned, the goals of this study include: (1) conduct public outreach to engage residents of Battleboro and receive feedback regarding drainage concerns, (2) determine the existing level of service of the primary closed and open drainage systems, and (3) identify and recommend feasible improvement projects that will, to the maximum extent practicable, reduce the frequency and severity of flooding for citizens. It should be noted that based on discussion with City staff, the decision was made to focus on mitigating flooding for the known historical areas of flooding and not systematically developing projects that bring the drainage system up to a specific level of service.

Existing Conditions Analysis

The Existing Conditions Analysis confirmed flooding problems reported by citizens and revealed that several of the primary system components do not meet the City of Rocky Mount's design standards and may contribute to flooding. The following conclusions can be drawn from the Existing Conditions Analysis:

Project Area 1

- The lower end of Project Area 1 is providing a 2-year level of service and contributes to the underperformance of the upstream drainage system.
- The open system ditches in Project Area 1 are adequately sized and when properly maintained do not contribute to flooding in the project area.

Project Area 2

- The upper end of the system is providing 2-year level of service and includes a public drainage pipe that is located under a private residential structure.

Project Area 4

- The majority of the drainage system in Project Area 4 is providing a 2-year level of service. The only drainage complaint received in this study area does not appear to be attributed to the undersized public drainage system. The drainage complaint received for crawl space flooding near the Railroad Street and West Bridge Street intersection appears to be a result of runoff generated from the roof of the commercial building at this property.

Project Area 5

- With the exception of one pipe segment, the closed Project Area 5 pipe system exceeds the required 50-year level of service.
- An undersized 15-inch diameter RCP along Hathaway Street is contributing to the flooding on the opposite side of the road along Marriott Street.

Project Area 6

- The public drainage system in Project Area 6 is providing between a 10- and 100-year level of service.
- The primary issue with the drainage system in Project Area 6 is the runoff being conveyed to the rear of private properties between Crape Myrtle Street and Marriott Street. The yard ponding becomes worse the further down the hill the property is located. This runoff is not generated from public roads and appears to be a private drainage issue.

Alternative Analysis

The alternatives presented in Section 4 were identified improvements that may be practical to implement to address known flooding issues. Six (6) projects were selected after discussion of the Existing Conditions Analysis results with City staff. Four (4) projects were categorized as public improvement projects while two (2) as private improvement projects. Based on the prioritization criteria, two (2) public projects received the top ranking for implementation: Alternative #1 - Three Sisters Park Culverts Replacement and Alternative #2A - East Bridges Drainage Improvements. Alternatives provided on private properties were included in this study to assist residents with reducing their flooding issues. If the homeowner decides to move forward with the identified project the City does not guarantee performance or the elimination of future flooding. It should be noted that all projects presented in this stormwater study are planning level.

Appendix A:

Citizen Input

List of Contents:

1. Questionnaire Summary Table
2. Field Interview Summary Sheets
3. Telephone Conversation Log Sheets
4. Meeting Minutes – Public Meeting #1 (March 31, 2015)

Survey Results from 04/15/15

Contact Information				*Water in storage building?*	*Water on air condition units?*	*Water in crawl space?*	*Water up to, or in the living space?*	*Yard flooding from stream/ditch?*	*Yard flooding from street runoff?*	*Yard flooding from adjacent property?*	*If flooding has occurred, please list the approximate date(s), location, and indicate depth of flooding.*		
Name	*Project Area*	*Address*	*How long have you lived here?*	*Response*	*Response*	*Response*	*Response*	*Response*	*Response*	*Response*	*Date*	*Location*	*Depth of Water*
Gregory King	1	122 Daniels Ave	11 years			Every time it rains				Every time it rains	03/27/2015	back of property	1-2 feet
Jacqueline King	1	122 Daniels Ave	11 years			Every time it rains				Every time it rains	03/27/2015	back of property	1 foot to 2 feet
Rachel Battle	1	314 Viverette Ave	53 years			Every time it rains	Every time it rains	Every time it rains	More than 3 times per year	Every time it rains	When it rains	Home/address	6 to 18"
James Thomas	1	PO Box 202 (142 Daniels Ave)	almost 20 years	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced			
Beu & James Sharp	1	109 Marilyn St	25 years					Every time it rains		Every time it rains	03/27/2015	109 Marilynn St	12 inches
Constance Z. Malloy	1	141 Daniels Ave.	10										
Mildred Caudle	1	124 Daniels Ave	35 yrs 4 months					More than 3 times per year		More than 3 times per year	1999	ditch	almost to car port
Pattie Mae Hill	1	109 Walter Dr	over 30 years	2-3 times per year	2-3 times per year			2-3 times per year	2-3 times per year	2-3 times per year		front/back yard	
Walter Lee Bullock, Jr	1	118 Daniels Ave	28 yrs		2-3 times per year			2-3 times per year	2-3 times per year			backyard	
LIzzie King	1	109 Daniels Ave	41 years							More than 3 times per year	Winter of 2014 & 2015	in Backyard	not very deep
Marjorie Throne	1	114 Walter Dr	34 years		Less than once per year								
James & Rosamae Tucker	1	PO Box 105 (115 Owens Cir)	40 years										
Phyllis Conyers	1	110 Daniels Avenue	22 years										
Rounie & Kathleen WMS	1	144 Daniels St	33 years		More than 3 times per year			More than 3 times per year	More than 3 times per year			Back yard	Any time it rains hard
Walter Lee Bullock	1	118 Daniels Ave	28 years					Every time it rains					
Cynthia Thompson	1	103 Walter Drive	33 years										
Michael M. & Dorothy Tucker	1	P.O. Box 388 (105 Viverette Ave)	45					Every time it rains	Every time it rains	Every time it rains	03/27/2015	on property, back & front yard	ankle deep
Christine Sutton	2	123 E Bridges St.	30 yrs			Every time it rains		Every time it rains	Every time it rains	Every time it rains	03/19/2015		
Rose Hunter	2	1531 Springfield Rd/5113 Gainor A	16 yrs			Every time it rains	Every time it rains	Every time it rains		Every time it rains			
Mary Parker	2	121 E Bridges St	35	Never experienced	Never experienced	Never experienced	Never experienced	Every time it rains	Never experienced	Every time it rains			
Franklie & Frances Batts	2	5141 Gainor Ave	37 yrs						Every time it rains				
Eugene Lyons	2	5137 Gainor Ave	37 years							2-3 times per year			
Joseph Danyi	4	112 Ethridge St	6 months	Less than once per yea	Less than once per y	Every time it rains	Once per year	Never experienced	Never experienced	Every time it rains	Every time it rains	back yard	up to 6 inches
Floyd Holmes	4	5001 Marriott St	25 years	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced			
RH & ID Marriott	4	5005 Hathaway St	1990										
Gwen Johnson	5	4841 Marriott St	40 yrs					Every time it rains					
Leon J Wright	6	4831 Marriott Street		Every time it rains	Every time it rains	Every time it rains	Every time it rains	Every time it rains	Every time it rains	Every time it rains	03/24/2015	Front Drive/Yard	1/4 to 1/2 inch
MariLynne Baker	6	4804 Crepe Myrtle St	29 yrs			Every time it rains			Every time it rains	Every time it rains	with heavy rain	yard & drive	Covers the parking area at the end of the driveway
Albert R. Jones	6	4824 Crepe Myrtle St	19 yrs	Never experienced	Never experienced	Every time it rains	Never experienced	Never experienced	Every time it rains	Every time it rains	Every time it rains	4824 Crape Myrtle St	2 1/2"
	6	4829 Crepe Myrtle St	38 years										
Lynn K Bulluck	6	204 Harold St	19 yrs			Every time it rains				Every time it rains	All the time	Front & back yard	2 inches
Williamson Milgrom	4 and 6	7001 Thames Ct	72 yrs	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced			
Lorrans/Elbert Dickens	N/A	14045 NC 33 HW	12 years			Less than once per year			Less than once per year				
Patricia Carmichael	N/A	241 East Battleboro Ave	9					Every time it rains	More than 3 times per year	More than 3 times per year		Driveway area	2-3"
Kearney & Co., LLC	N/A	1705 S. Beckford Dr	8 years										
	N/A	103 Abbott Ave	15 years					Less than once per year	Less than once per year	Less than once per year		Front Drive Sides of House	3"
Ms. Mary P. King	N/A	101 Ioka St	18+ years										
Frank W Fisher Jr	N/A	620 W. Battleboro Av.	74 years					Every time it rains					
Curtis Andrews	N/A	409 W Battleboro Ave	27 yrs										
Bruce Baker	No Address Provided		2 years	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced			
St John's Episcopal Church		211 E Battleboro Av	Church 1896	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced	Never experienced			
Barbara Tucker		P.O. Box 51	about 40 years										

SUMMARY OF FIELD INTERVIEWS

SUBJECT: Battleboro Watershed Study –Overview of Flooding
PROJECT NUMBER: 20140160.00.RA
COMPLETED BY: David Kiker
DATE: May 14, 2015

1. 119 Walter Drive **(Project Area #1)**: Spoke with resident at 119 Walter Drive (son of Yvonne C. Fenner) about flooding concerns. Resident has lived there for 35 years and with the exception of Hurricane Floyd (1999) has not seen much flooding. Resident said he had never seen Walter Street overtop with regards to flooding. He said water will makes its way into the ditch and through the culvert with no overtopping.

2. Spoke with Jessie Smith at 232 Battleboro Avenue (**Project Area #2**) about flooding concerns. Approximately 20 times a year his driveway floods as a result of an insufficient drainage(no drainage system). Stormwater runoff collects at the low point in the system which happens to be his driveway and nearby ditch. His driveway gets to a depth of 4" deep and stays up for about 3 days. There is a ditch system that holds runoff from the real small storms but if the rain is of a larger magnitude it results in flooding. An inspection of the ditch on the northern side of his property revealed that it does not have positive drainage to a downstream system. In other words, the conveyance system looks like a ditch but it is really a moat. There are numerous driveways along Viverette Avenue that do not have driveway culverts under them which is preventing the runoff from going downstream. In addition, there is no roadway drainage swale once you get by the driveway culverts.

*See Summary of Field Interviews dated December 10, 2015 regarding 232 Battleboro Avenue

Front Yard at 232 Battleboro Avenue

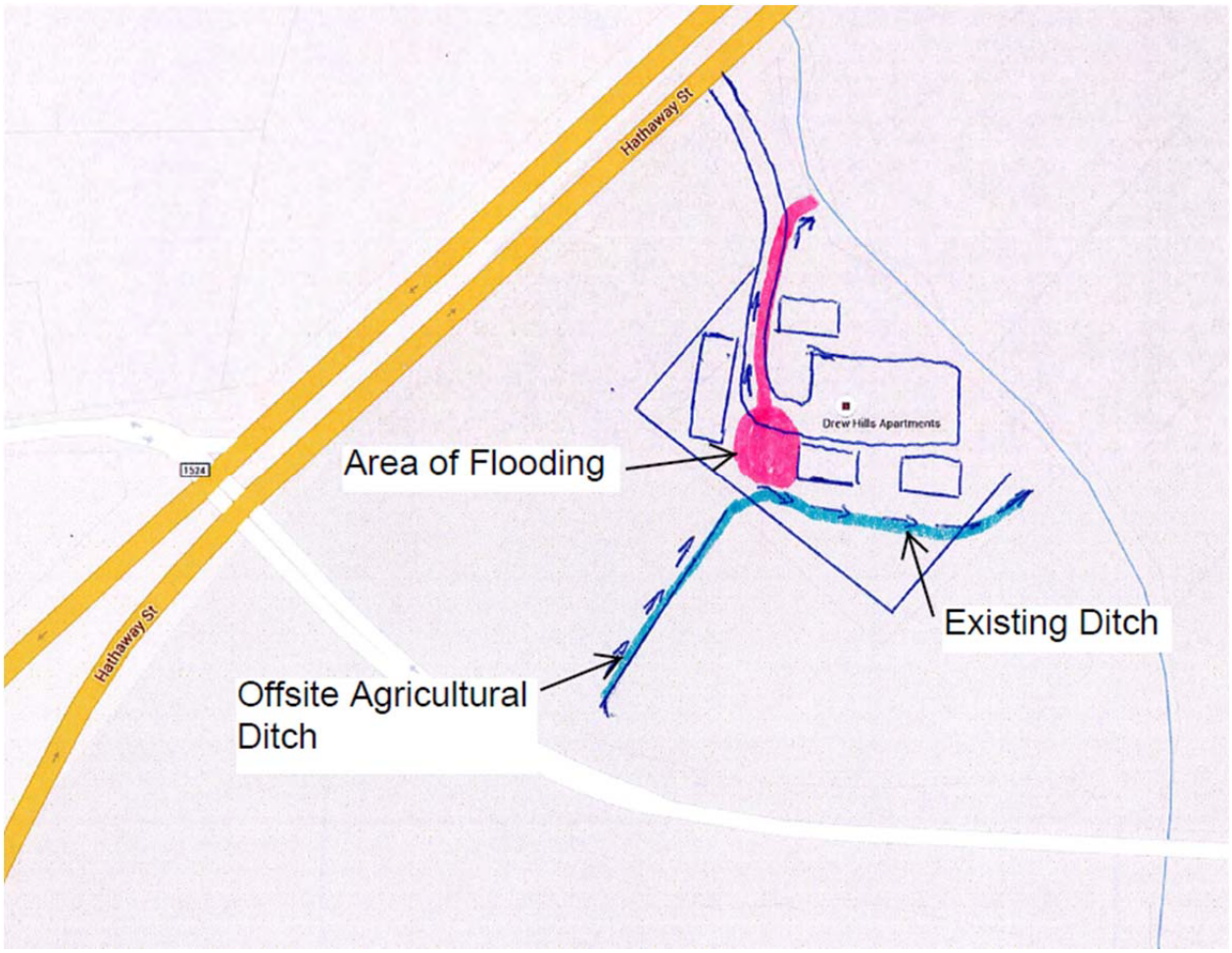
Summary of Flooding 232 Battleboro Ave

3. Spoke with Michael Tucker at 105 Viverette Avenue **(Project Area #2)** about flooding concerns. Approximately 20 times a year his driveway and yard floods as a result of an insufficient drainage system (no drainage system) that can convey the stormwater runoff off his property. Water will get as high as 6" and will stay up for days at a time. I asked Michael if floodwaters were coming off the road and entering his property. He said no. He said the problem was caused by the runoff that is generated by the rainfall that lands on his property. The adjacent home has a similar problem. Soils appear to be very poorly draining as the property does not have a significant area of impervious cover.

Driveway at 105 Viverette Avenue

Roadway Section at 105 Viverette – Looking SE

4. Drew Hill Apartments **(Project Area #6)**: Spoke with property manager who indicated that they have an issue with offsite storm drainage flooding the back side of the apartments. This flooding is not attributed to the main tributary to Beech Branch. This problem occurs after most n summer storms.



Roadway Section at 105 Viverette – Looking SE

SUMMARY OF FIELD INTERVIEWS

SUBJECT: Battleboro Watershed Study
PROJECT NUMBER: 20140160.00.RA
COMPLETED BY: David Kiker
DATE: December 1, 2015

1. **4831 Marriott Street (Project Area #6)**: Spoke with resident at 4831 Marriott Street (Leon Wright) about nuisance yard flooding. Resident has lived there for 1 year and with every significant rainfall event his back yard gets very wet which drains to the front driveway and flanking grass areas. In the winter, the driveway is going to freeze over as the yard drains downhill. Mr. Wright constructed a very small ditch (2 feet wide and 2 inches deep) that provides some relief but not enough. The yard remains wet for several days at a time as runoff from the adjacent uphill yards drains to the low spot.

   A series of elevation shots were taken with a level that showed 2.0 feet of elevation change from the low spot in the yard to the invert of the driveway culvert at this property. A concrete yard inlet with a small diameter RCP will result in a pipe that does not have positive drainage due to the limited elevation change (2.0 feet). The slope from the low point in the yard to the pipe is too flat for this alternative. The following are viable alternatives were discussed with the property owner that will reduce the duration and frequency of standing water at this property:

   - Alt#1: Construct a French drain with a 6" perforated pipe that has a small grate inlet at the surface (not a NCDOT inlet but a small plastic or fiberglass grate inlet). In addition, this alternative involves increasing the size of and lowering the existing overland swale from the fence to the roadside ditch. The French drain will outfall at the open ditch running along Marriott Street.
   - Alt#2: Lower the existing open swale as much as a foot to increase the slope of the grass swale and reduce the frequency water gets fence and driveway wet.

   Neither of these alternatives will eliminate flooding in a 10-year or larger flood event but they will significantly reduce the frequency and duration of standing water. Alt#1 (French drain and improved overland ditch) is recommended as it will minimize the amount of standing water that is experienced in the back yard. Kiker told Mr. Wright that the City has broken its projects into two categories for the Masterplan. The first is public projects that involve runoff generated from City maintained property such as roads. The second type is private projects that involve

runoff generated on private property. Kiker told Mr. Wright that his issue is being caused by the adjacent private properties and that the City would be providing a conceptual plan to mitigate flooding on his property but they will not be getting involved with the construction or funding of the improvements themselves.

Standing Water at 4831 Marriott Street

Driveway and Swale at 4831 Marriott

2. **4837 Crepe Myrtle Street (Project Area #6):** Spoke with Roy Barnes Jr. at 4837 Crepe Myrtle Street regarding the standing water in the rear of his property. The standing water is in an open ditch at the outfall of the 12" diameter closed drainage system located at the intersection of Crepe Myrtle Street and Harold Street. Mr. Barnes is concerned that the water that ponds in this ditch will provide the habitat for mosquitos. He is not as concerned about flooding. This ponded water is located on a private farm and is about 50 feet from the back of Mr. Barnes property. Mr. Barnes' property does not get flooded as a result of the runoff passing through the downstream open ditch. The ditch was filled in by the farmer about 10 years ago and is no longer a uniform well-maintained trapezoidal ditch that has positive drainage. Mr. Barnes said that the City came out about 6 months ago and cleaned out a 100 foot long reach but did not extend the clearing to the ditch outfall which is about 600 feet further. The ditch now holds less water than prior to this City maintenance but it is still not ideal. The farmer's equipment creates tire ruts that cause standing water in the ditch. The existing ditch is filled with wetland plants and is about 20 feet wide and 2 feet deep on average. Mr. Barnes would like to see the ditch cleaned out through the farm field until it ties in with the downstream channel.

Ponding Water in Open Ditch on Private Farm

SUMMARY OF FIELD INTERVIEWS

SUBJECT: Battleboro Watershed Study –Overview of Flooding
PROJECT NUMBER: 20140160.00.RA
COMPLETED BY: Jason Kennedy and Ebony Hagans
DATE: December 10, 2015

1. A second site visit was conducted for 232 East Battleboro Avenue to corroborate Mr. Smith's feedback. Mr. Holt, the next door neighbor, was interviewed and stated that he does not think public drainage comes on to his or Mr. Smith's property. He believes the flooding on his neighbor's property is due to the lack of maintenance of a private drainage swale located on Mr. Smith's and the rear abutting property. Mr. Holt indicated that he has to keep his ditches cleared out and if he does not do so routinely then he experiences flooding similar to that reported by Mr. Smith.

2. It is recommended that City Maintenance personnel monitor this location during heavy rains to record their observations to help determine what is causing private flooding at this location.

WK DICKSON
community infrastructure consultants

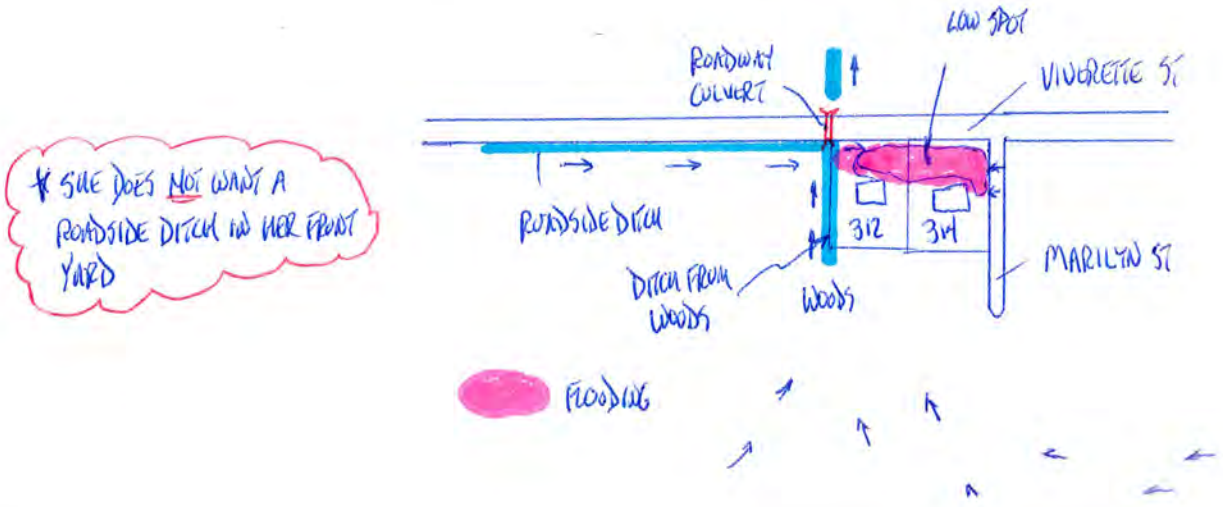
TELEPHONE CONVERSATION RECORD

Subject:	Flooding @ 314 Viverette Street (Project Area #1)		
Date:	6/01/15	Time:	4:30 am
Job No:	20140160.00.RA	Author:	David Kiker, PE

Contacting: Rachel Battle (252) 343-8431

DETAILS OF CONVERSATION:

Rachel is experiencing flooding from runoff coming from both Marilyn Street and from the Viverette Drainage system running adjacent to her neighbor's yard (312 Viverette Street). Water will get under her structure and also pond in the low spot in the front of the home. She no longer accesses her home at the front due to flooding. Water collects at the front 20+ times a year and gets to a depth of 4". Rachel said the culvert under Viverette is vulnerable to getting blocked and the City comes out after storm events to clean it out. The water goes down very slowly unless someone comes out and cleans the culvert out. It does not go over her first step of the home. She indicated that the road was paved in 1962 and the people that did it messed up the drainage. She has lived her over 60 years. She has relayed this information to Donald Perry about 2 years ago and is concerned things are going so slowly. She does not want a roadside ditch in her front yard.



Findings: Viverette culvert is providing 2-year level of service

Design Alternative: Consider culvert replacement at Viverette and other downstream system improvements

TELEPHONE CONVERSATION RECORD

Subject:	Flooding @ 123 E. Bridges St (Project Area #2)		
Date:	6/15/15	Time:	12:30 pm
Job No:	20140160.00.RA	Author:	David Kiker, PE

Contacting: Christine Sutton (252) 446-2809

DETAILS OF CONVERSATION:

Flooding is occurring both in the front and in the rear. It floods about twice/year and keeps her from accessing her car. Last winter water froze inside her screened in porch area after water backed up in ditch and filled up yard. Water is coming from the Bullock property into her yard in the back. She just added gutters to her house (2 months ago). Since then they have not had a significant storm event. She felt the ditches are not cleaned out enough. Christine offered to provide us pictures but she does not know how to get them off her phone. She works at the senior citizen center on Tues and Thursday and we are welcome to stop in to look at the pictures.

Actions/Recommendations:

Verify if ditch sizing is adequate and identify source of clogging

Distribution: file

TELEPHONE CONVERSATION RECORD

Subject: Flooding @ Warehouse Buildings near W. Bridges St and RR St. (Project Area #4)

Date: 7/8/15 Time: 10:30 am

Job No: 20140160.00.RA Author: David Kiker, PE

Contacting: Curtis Andrews (252) 813-2910

DETAILS OF CONVERSATION:

Curtis said only his building to the south was experiencing flooding under the building (not the one adjacent to W. Bridges). Curtis said the City had told him about 7 years ago that they would fix his problem. I asked Curtis to describe the flooding and where was the source of the stormwater runoff. Curtis said it would fill his ditch and pond up under his building. I asked if the water was coming from the Pollard Street direction or from Railroad Street. He said he didn't know.

At Railroad Street Looking West

At Pollard Street Looking East

Actions/Recommendations: Flooding appears to be a private drainage problem that City has agreed to assist with. Further validation of existing flooding is necessary before this conclusion can be drawn.

TELEPHONE CONVERSATION RECORD

Subject: Flooding @ Warehouse Buildings near W. Bridges St and RR St. (Project Area #4)

Date: 7/8/15 Time: 10:30 am

Job No: 20140160.00.RA Author: David Kiker, PE

Contacting: Jean Smith (252) 446-3636

DETAILS OF CONVERSATION:

I asked Jean to describe the flooding in front of the Battleboro Produce Inc. building. It happens quite often however the flooding is very shallow (1" deep) and stays up 6 to 24 hours. It does not appear to go anywhere (neither over the road or along the northern grassed areas). It just stays up and ponds. Jean checked in with a co-worker who had been around for 20 years and he also never remembered runoff cresting W. Bridges and going into the warehouse property on the other side of the road.

Actions/Recommendations:

Distribution: file

WK DICKSON
community infrastructure consultants

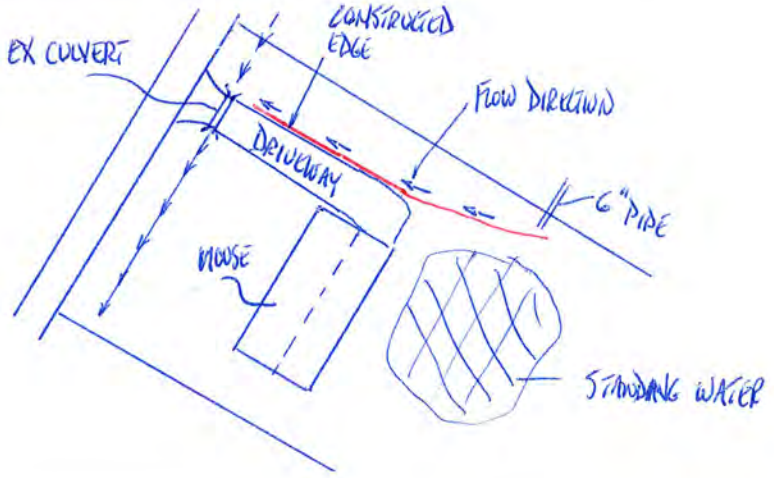
TELEPHONE CONVERSATION RECORD

Subject:	Flooding @ 4831 Marriott Street (Project Area #5)		
Date:	6/01/15	Time:	3:30 am
Job No:	20140160.00.RA	Author:	David Kiker, PE

Contacting: Leon Wright (757) 375-6392

DETAILS OF CONVERSATION:

Leon indicated that he was experiencing flooding in both the front and back of his property. They both impact him equally. His driveway culvert has been cracked (potentially by last year earthquake) and has a difficult time keeping up with the incoming water that runs down the roadside ditch. The backyard has a small 6" pipe that comes from the adjacent property that outfalls on his property and has nowhere to go. This results in approximately 1" to 2" of standing water after significant rainfall events. Leon has tried to create a small conveyance system that directs flow towards the front of the house and alongside the driveway (eventually outfalling into the swale that goes through the driveway culvert). Leon said he would be willing to take a photo or two and send them to me to support what is happening at his property.



Actions/Recommendations:

Verify sizing and damage to driveway pipe

Distribution: file

M E E T I N G M I N U T E S

720 Corporate Center Drive, Raleigh, North Carolina 27607 919.782.0495

DATE: April 15, 2015

TO: Donald Perry

FROM: Ebony Hagans

WKD #: 20140160.00.RA (Battleboro Stormwater Study)

Battleboro Stormwater Study
Public Meeting #1 – March 31, 2015
5:00 PM to 7:00 PM at M.C. Braswell Cultural & Educational Development Center

Battleboro Design Team Participants:

- Mr. Jonathan Boone – Director of Public Works, City of Rocky Mount
- Ms. Ebony Hagans – Project Engineer, WK Dickson
- Mr. Jason Kennedy – Project Manager, WK Dickson
- Mr. Donald Perry – Stormwater Engineer, City of Rocky Mount

Citizen Input

A copy of the sign-in sheet from the public meeting is attached. Below is a summary of the comments obtained from those in attendance.

- **5141 Gaynor Avenue (Frances Batts)**
  - Any time it rains heavy and hard, water ponds up in Ms. Batt's yard especially on the right-hand side; water pours in from neighbor's property.
  - The water gets ankle deep in driveway.
  - This occurs at least six times per year with the most recent occurrence happening last week.

- **409 West Battleboro Avenue (Curtis Andrews)**
  - Mr. Andrews had no complaints about his primary residence.

- He owns several properties in the project area, one of which is a warehouse on West Bridges. There is a ditch that runs underneath it and the ground is always wet.
    - Mr. Andrews has called the City several times to complain and nothing has been done.
- He believes it is a City-wide maintenance issue. Trash and debris is allowed to pile up and eventually blocks ditches, inlets, etc. Needs to be a better way to deal with the trash and debris collection/removal.

- **428 East Battleboro Avenue**
    - The resident stated that water gets under home every time it rains. There is no place for the water to go when it rains. No ditch for water to collect.
    - Standing water currently in yard from yesterday's rain; every time it rains, several inches of water remains in yard for over 24 hours.

- **5731 Gainor Avenue (Eugene Lyons)**
    - Mr. Lyons believes that the flooding problem for the residents along Gainor Avenue comes from Viverette Avenue.
        - Viverette Avenue has ditches and drainage but it does not appear to be sloped properly.
        - Flooding problem could be helped if this area is regarded.

- **105 Walter Drive**
    - Water stands in the street in front of residence; it covers the pavement.
    - There are ditches on both sides of the road. However, the water may not be getting into ditches.

- **401 Viverette Avenue (Martha Mercer)**
    - Ms. Mercer's yard ponds anywhere between three to six inches of water during a heavy rain and about 1 - 1½ inches every time it rains.
    - Her home has never gotten wet but water accumulates in the yard.
    - Ms. Mercer's neighbor at **405 Viverette Avenue (Ms. Sharpe)** has similar complaint.

- **133 Pratt Place**
    - Extremely flat area, water gets into yard and around house during heavy rain. The water will get between three to four inches high.

- **109 Marilyn Street (Geraldine Pearce)**
    - Ms. Pearce is the only resident on the street.

- Entire yard gets wet every time it rains. It gets up to 6 inches on wheelchair ramp connected to home.
- Water runs under house but has never reached living space.
- Water comes from the adjacent property and street. The water will stand for up to 3 days because the water has nowhere to go.
- Sister lives on adjacent property (400 Viverette Avenue). Water runs from this property onto Marilyn Street; when the ditches on Viverette end, there is nowhere for the water to go.

- **113 Owens Circle (Catherine Arrington)**
  - Ms. Arrington lives in a cul-de-sac. The ditches fill up but they never appear to overflow.
  - Water pools in yard and around area in front on stairs at front door. This occurs every time it rains.

- **122 Daniels Avenue (Jackie and Gregory King)**
  - Water floods the backyard. It is still wet from yesterday's rain.
  - This has always been a problem. The water never reaches the ditch. Several years ago, the Kings along with their adjacent back neighbor tried re-grading properties to help alleviate flooding.
    - Neighbor has recently re-graded again. This causes water to pool in their backyard.

- **108 Daniels Avenue (Vertella Clark)**
  - Water stands in front near the mailboxes, the ditch frequently gets blocked.
  - Water pools in yard and surrounds pecan tree; it is still water from rain on yesterday.

- **121 East Bridges Street (Mary Parker)**
  - Ms. Parker is experiencing yard flooding.
  - There is standing water in ditch lines.

- **123 East Bridges Street (Christine Sutton)**
  - Ms. Sutton stated that she is experiencing structural flooding.
  - She will provide pictures via email after the meeting.

- **105 Viverette Avenue (Michael and Dorothy Tucker)**
  - The Tuckers experience water ponding in their yard.

    - They provided a phone number and requested interview during field visit.
- **107 Viverette Avenue (Albert and Mary Williams)**
    - Mr. and Mrs. Williams are experiencing yard flooding.

- **101 Owens Circle (Tashika Yellorday)**
    - Ms. Yellorday stated that she is experiencing structural flooding.

- **314 Viverette Avenue (Racheal Battle)**
    - The property is located at corner of Viverette and dirt road.
    - Drainage from the road and other adjacent properties causes flooding on this parcel.
    - Ms. Battle expressed that there is a long history of communication with the City regarding these issues.
    - She provided a phone number and requested interviewduring field visit.

- **Miscellaneous**
    - The ditch at the intersection of Daniels Avenue and East Battleboro fills up and water gets onto the road every time there is a big rain storm.

Sign In Sheet

Battleboro Public Meeting - March 31, 2015

	Name	Address	Telephone #	Email Address
1	RACHEL BATTLE	314 VIVERETTE AVE BATTLEBORO, NC 27809	252-343-8431	
2	Christine SUTTON	123 E Bridges st BATTleboro, N.C. 27809	252-446-2809	
3	CURTIS ANDREWS	409 W. Battleboro Ave Battleboro NC 27809	252 813 2910	curtandrews@hotmail.com
4	UTEEN C. Hargrove	119 Daniel Ave, Battleboro NC 27809	252 442-6581	
5	JANICE Sharpe	P.O. Box 100 / 405 Viverette Ave Battleboro N.C. 27809	-1917-609-7071	
6	LAURA Mercer	401 Viverette Ave. BATTLEboro N.C. 27809		
7	Charity STAGG	133 PRATT Pl. BATTLEboro N.C. 27809		
8	Bryan Kim	P.O. Box 41 - Battleboro N.C	977-0916 -904-9050	
9	Vitella Clark	108 Daniels Ave. Battleboro N.C. 27809	(252)813-6686	
10				
11				
12				
13				
14				
15				

Sign In Sheet

Battleboro Public Meeting - March 31, 2015

	Name	Address	Telephone #	Email Address
1	Mary Parker	121 East Bridges St. Battleboro NC.	252-442-4722	
2	Mary P. Williams	20 Box 266 Battleboro, N.C.	252-813.6656	
3	Albert Williams	PO Box 266 Battleboro NC.	252-813-3663	
4	Frances Batts	PO Box 15 Battleboro, NC	252 977 7179	
5	Mary Beamon	PO Box 16 " "	252 446-8905	
6	Barbara Tucker	PO Box 51 Battleboro nc	252-4 200 4990	
7	Michael Surles	P.O. Box 388 Battleboro	252-446-8361	
8	Dorothy Surles	P.O. Box 388 Battleboro	252-446-8361	
9	Columbus + Emma Johnson	P.O. 786, 139 Daniels ave. Battleboro NC,	2529777404	
10	Everett Lyons	P.O. Box 122 Battleboro N.C.		
11	Martha Mann	P.O. Box 844 Battleboro, N.C.	(252) 446 7091	167 Walter Dr.
12	Beatrice Stamper	P.O. Box 573 Battleboro N.C.	252 446-1873	109 Marilyn St.
13	Jacqueline King	PO Box 41 122 Daniels Ave Battleboro NC 27809	252-977-0916 Home 252-32-1065 Cell	jackie.m.king@cummins.com
14	Geraldine Pearce	P.O. Box 441 Battleboro N.C 27809	400 Watson St Vivierette St Battleboro N.C 27809	
15	Catherine McArthur	PO Box 414 Battleboro NC 2789	herbladync@yahoo.com	

M E M O R A N D U M

WK DICKSON
community infrastructure consultants

720 Corporate Center Drive Raleigh, North Carolina 27607 919.782.0495 tel.

TO: **Donald Perry, City of Rocky Mount**

FROM: **Jason Kennedy, P.E.**

DATE: **3-31-16**

RE: **Battleboro Stormwater Study Public Meeting #2 (February 23, 2016)**

The City of Rocky Mount held the second public meeting for the Battleboro Stormwater Study on Tuesday, February 23, 2016 at the M.C. Braswell Cultural & Educational Development Center located at 649 Morningstar Church Road, Battleboro North Carolina at 6:00 pm.

At this meeting Donald Perry of the City of Rocky Mount and Jason Kennedy of WK Dickson presented the findings of the Battleboro stormwater study and the resulting recommendations for public infrastructure improvement projects. Attached to this memo is the presentation that was provided at the meeting and the list of attendees at the meeting.

Findings of the study indicate that approximately 80% of the existing public drainage infrastructure within the study area is meeting or exceeding the current city design standard criteria. Many residents within the study area previously submitted input of drainage issues that they have observed. Issues that were submitted were evaluated and categorized as either public or private drainage issues. Public issues are those caused by insufficient or inadequately performing public drainage systems along the public right of ways and roadways. Private drainage issues are those that are caused by insufficient or inadequately performing drainage systems located on private property.

Recommendations resulting from the study include five (5) public drainage improvement projects to address public drainage issues as well as general best practices and typical private property drainage improvement projects that may be implemented by private property owners.

After the presentation was complete, property owners of several locations requested that their drainage issues be re-evaluated to determine if it may be categorized as a public issue. These properties include:

105 and 107 Viverette Avenue and 232 East Battleboro Avenue
These 3 property owners indicated that their properties are unable to drain because there is not a sufficient roadside ditch along Viverette Ave.

135 Daniels Avenue
The owner of this property indicated that a public drainage ditch routinely fills up and creates ponding on his property.

Battleboro Apartments
The owner of this property reported that public drainage from Crepe Myrtle and Marriot St flows overland to the Battleboro apartments, overwhelms the public system at this location and has recently resulted in the formation of a sink hole near a public pipe system.

It is recommended that City maintenance staff routinely check the above noted locations during and after rain events to verify if insufficient or inadequately sized public drainage infrastructure is the cause of these issues. Inspection of the sink hole described at the Battleboro Apartments should be investigated as soon as possible.

End of Memorandum.

Attachments:
Public Meeting #2 Attendee List
Public Meeting #2 Presentation

WK DICKSON
community infrastructure consultants

WKD NO. _____

SHEET NO. _____ OF _____

JOB NAME BATTLEBORO PUBLIC MEETING COMPUTED BY _____ DATE 2/23/16

CLIENT _____ CHECKED BY _____ DATE _____

NAME	ADDRESS	EMAIL OR PHONE
Martha [illegible]	107 Walter Dr.	(252) 446 7091
Dorothy Tucker	105 Viverette Ave.	(252-446-8361
Michael Tucker	105 Viverette Ave.	(252-446-8361
Laura Phillips	207 Viverette Ave	
Jackie King	122 Daniels Ave	jackie.m.king@Cummins.com
Gregory King	122 Daniels Ave	382-1065 904-9050
Mary Williams	107 Viverette Ave	252-813-6756
Albert Williams	107 Viverette Ave	252-8133663
Emma Stallings	5213 Pearsall St.	252-903-0334
Leon & Theresa Wright	4831 MARRIOTT ST	757-375-6392
Vertellar Clark	108 Daniels Ave.	(252) 813-6686
Cynthia Thompson	103 Walter Drive	NN053@Cummins
Barbara Tucker	428 East Battleboro	Battleboro NC
Frances Batts	5141 Gainor Ave Battleboro N.C	977-7179
Mary Parker	121 East Bridges St. Battleboro, N.C. 27809	Mary-Bowls@yahoo.com
Christine Sutton	123 E Bridges St. Battleboro, N.C. 27809	
Fred Batts	5141 GAINOR AVE BATTLEBORO N.C. 977-7179	

WK DICKSON
community infrastructure consultants

WKD NO. _____

SHEET NO. _____ OF _____

JOB NAME _____ COMPUTED BY _____ DATE _____

CLIENT _____ CHECKED BY _____ DATE _____

Name	Address	Email - or Phone
Rachel Battee	314 Viverette Ave	252-343-8431
Beatrice Sharpe	109 Marilyn St	B.Sharpe@earthlink.net
William A. Knight	551 Morning Star Ch Rd	bkni@msn.com
Constance M. Hymas	202 Viverette Ave	252-977-2345
FRANK Smith	135 DANIEL AVE.	~~252-9~~ ~~FRANK E. Smith~~
Sherman Arrington	5146 NC 48 Battleboro, NC.	PRECISEENOUGH@ EMBARQMAIL.COM
Bessie B Hankerson	105 Daniel Ave Battleboro NC	252 823-8262
Jesse W. Smith Jr. Jean T. Smith	232 E Battleboro Ave. Battleboro NC 27809	JSmith101@suddenlink.net

Battleboro Stormwater Study

Public Meeting #2

Study Findings

February 23, 2016

CITY OF ROCKY MOUNT NORTH CAROLINA

WK DICKSON

Project Team

- **City Staff**
  - **Jonathan Boone : Public Works Director**
  - **Donald Perry: Stormwater Engineer**
  - **Brad Kerr: City Engineer**
  - **Ed White: Maintenance Superintendent**
- **WK Dickson Staff**
  - **Jason Kennedy: Project Manager**
  - **David Kiker: Task Manager**
  - **Ebony Hagans: Project Engineer**

Rocky Mount Public Works Stormwater Management

Overview

- Maintenance, repair and replacement of city's drainage system
- Inventories and Master Planning
- Plan Reviews and Inspection
- Public Education and Outreach

Battleboro Stormwater Study

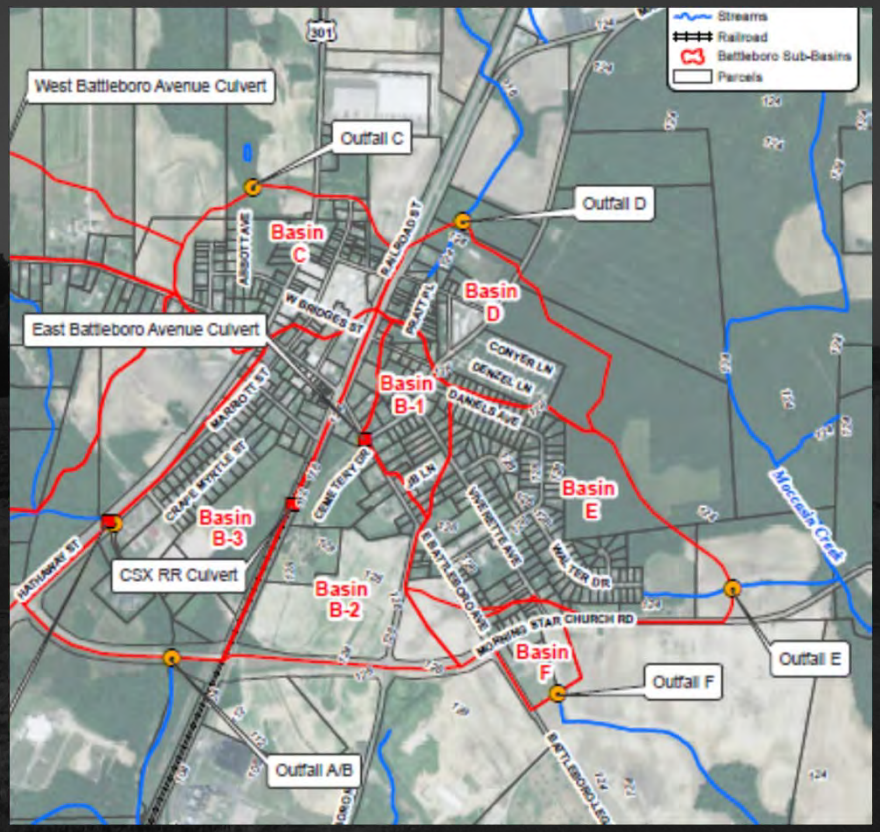
Goals:

1. Conduct Public Outreach
2. Evaluate Drainage System Performance
3. Identify Improvement Projects

Battleboro Stormwater Study

Study Area

- Approximately 1,500 acres
- 15,000 LF of pipe system
- 20,800 LF of open system



Battleboro Study Area Map

1. Public Outreach

- **Resident Questionnaires**
- **Public Meeting (March 2015)**
- **Field interviews and phone calls**

Summary of Public input

Ponding Location	Yard	HVAC	Crawl Space	Living Space
# of Reports	20 (48%)	4 (10%)	5 (12%)	0

2. Drainage System Performance

2. Drainage System Performance

How well does your drainage system work?

Photo take from: http://maiyamayhem.tumblr.com

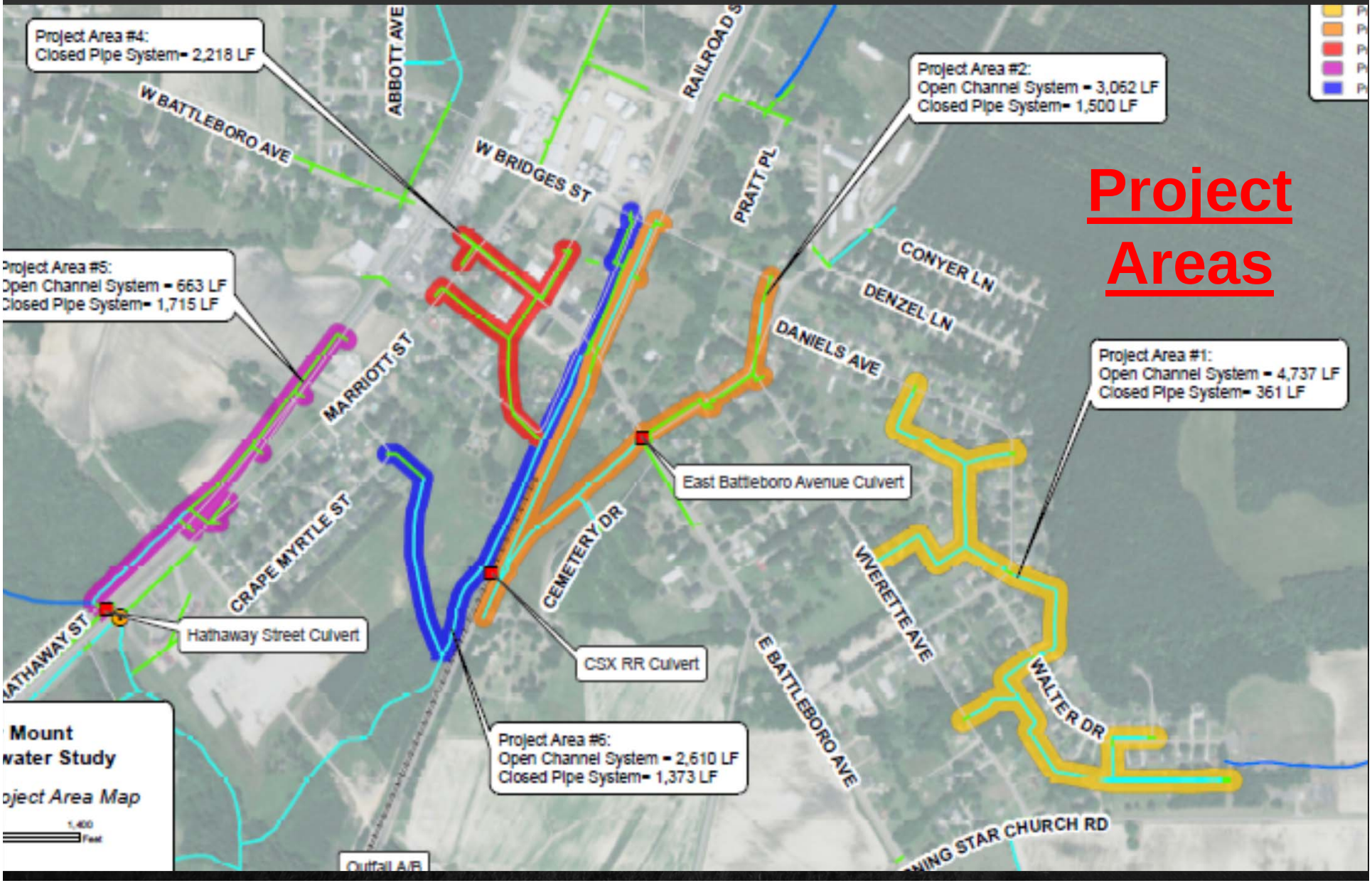
Drainage System Performance

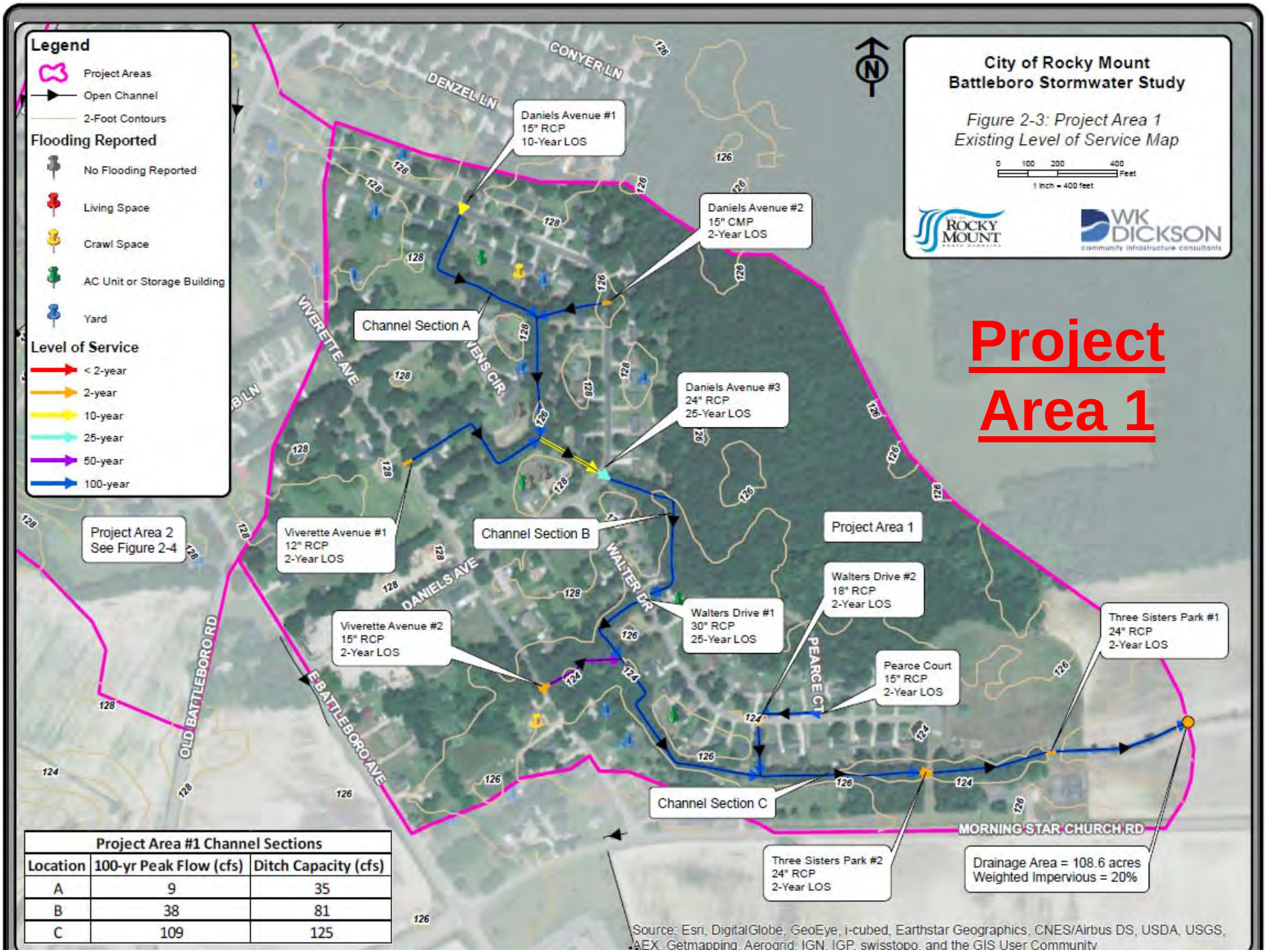
80% of system meets design standards

- **Residential Roadways :**
  - **25-year design storm (6.48”/24 hours)**
- **Commercial Roadways:**
  - **50-year design storm (7.20”/24 hours)**

Hathaway Street Culvert

2. Drainage System Performance

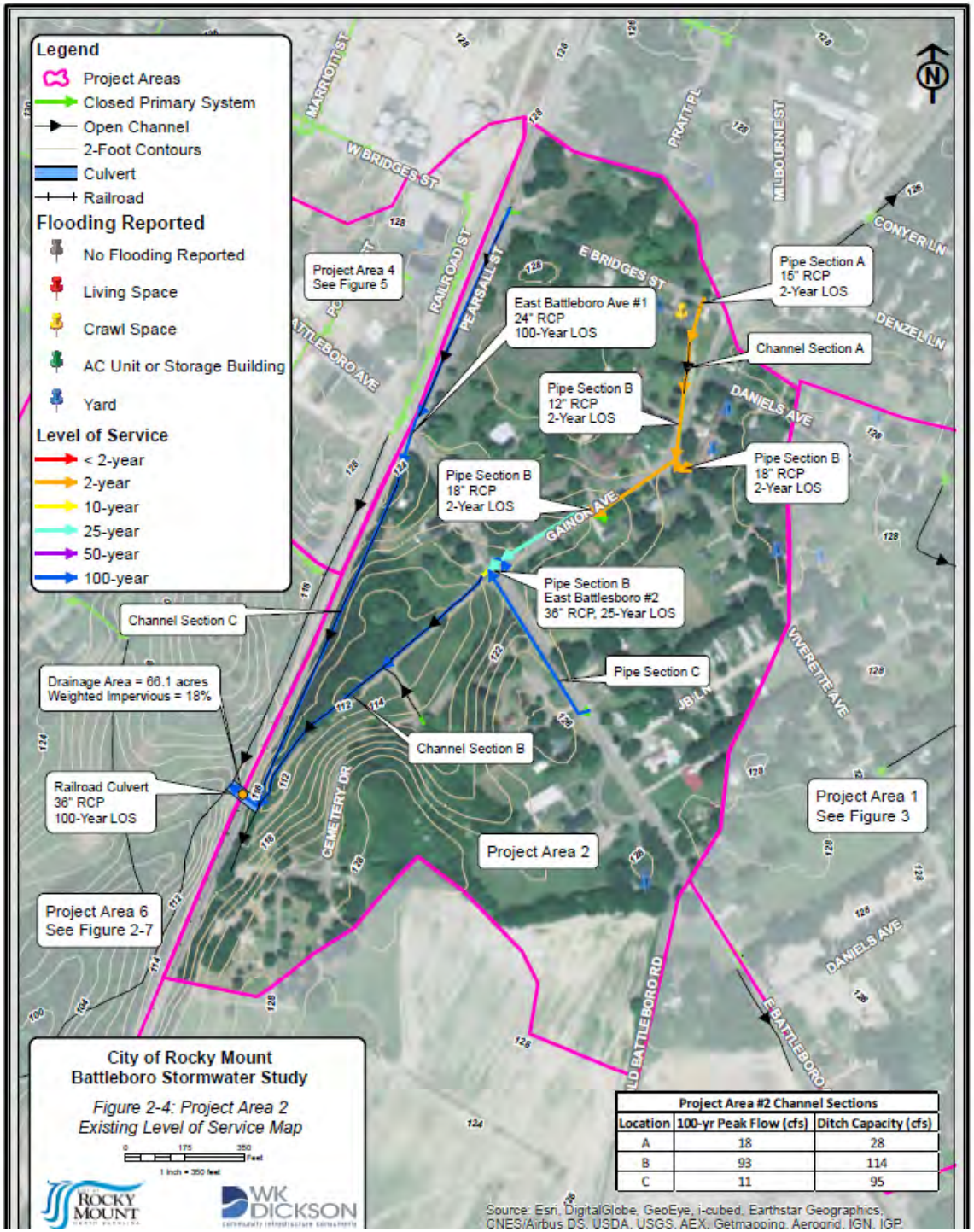


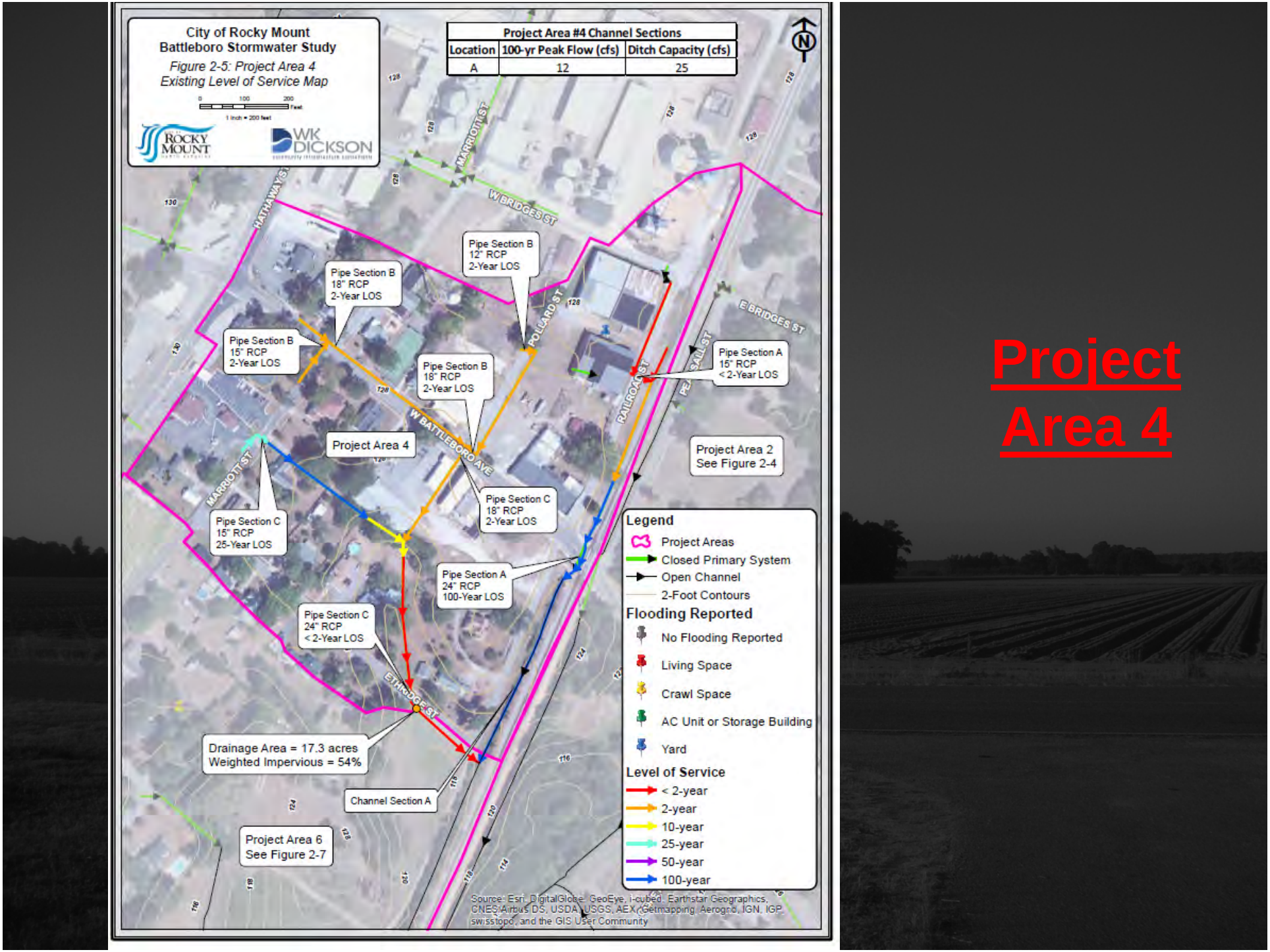


Project Area 1

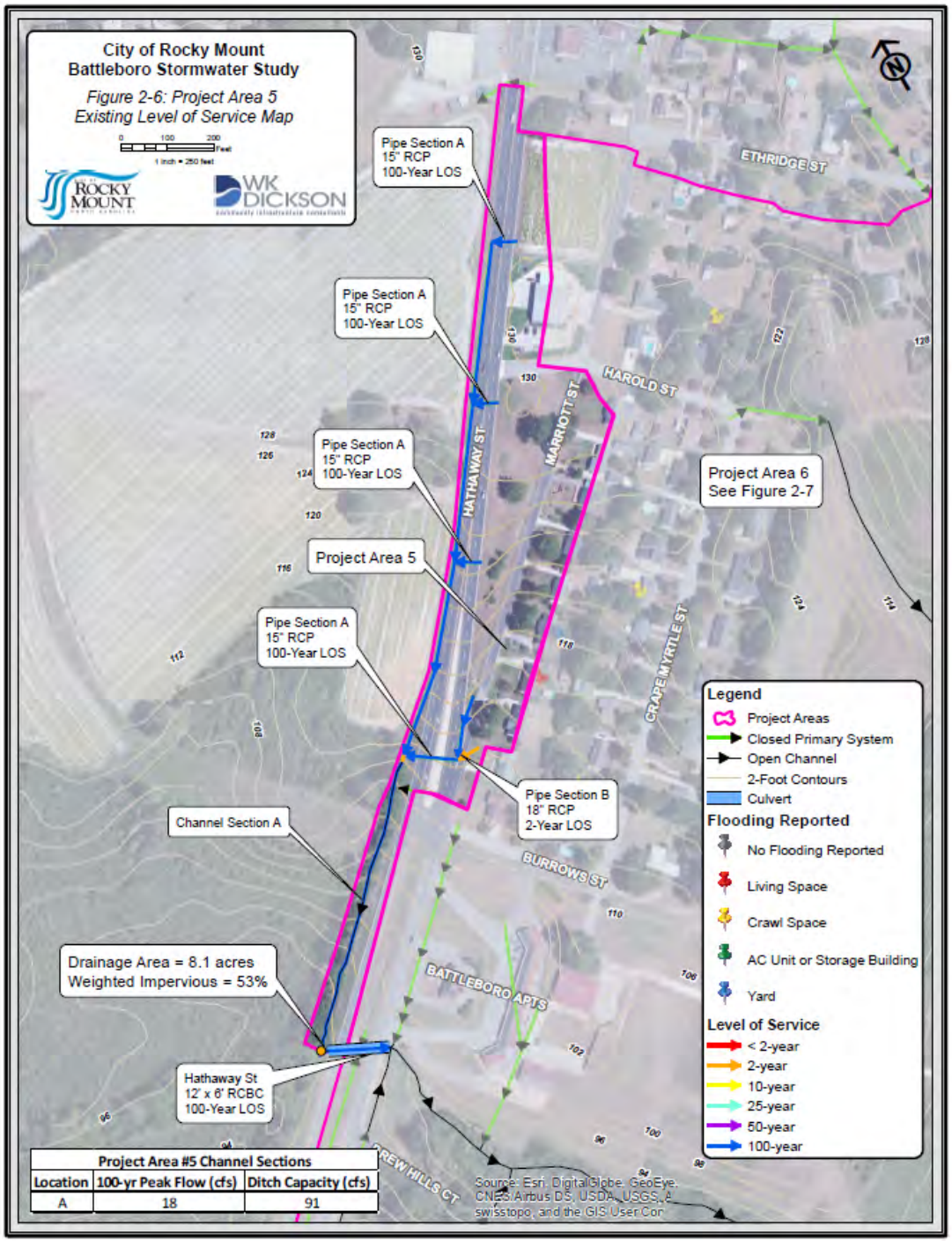
Project Area #1 Channel Sections		
Location	100-yr Peak Flow (cfs)	Ditch Capacity (cfs)
A	9	35
B	38	81
C	109	125

Project Area 2

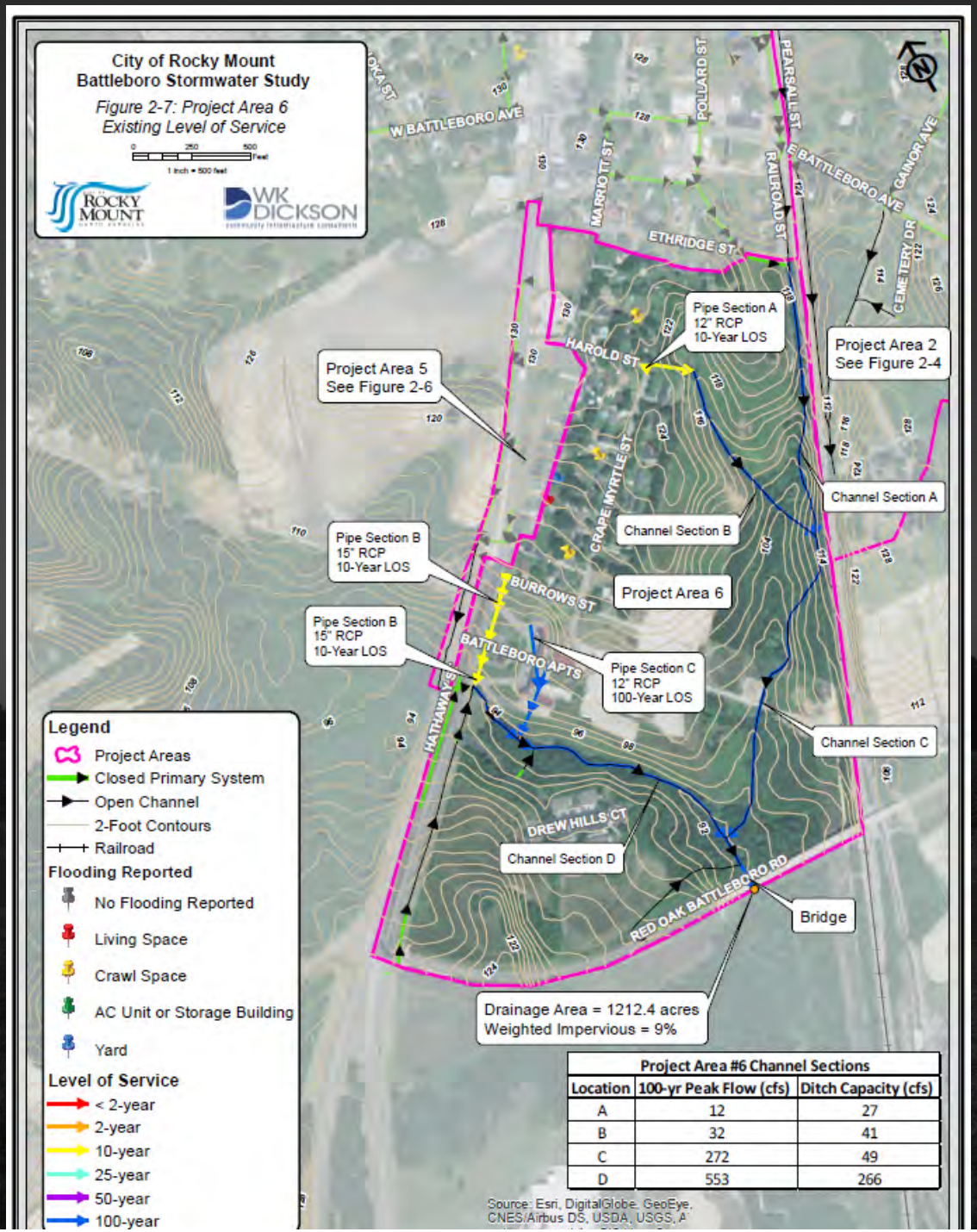




Project Area 4



Project Area 5



Project Area #6 Channel Sections		
Location	100-yr Peak Flow (cfs)	Ditch Capacity (cfs)
A	12	27
B	32	41
C	272	49
D	553	266

Project Area 6

2. Drainage System Performance

Common issues include Found:

- **Flat topography,**
- **Poor draining soils;**
- **Private infrastructure**

Open Channel (Three Sisters Park)

2. Drainage System Performance

80% meets design standards

3. Identify Improvement Projects

Objective:

Identify feasible improvements that will:

Increase system performance

&

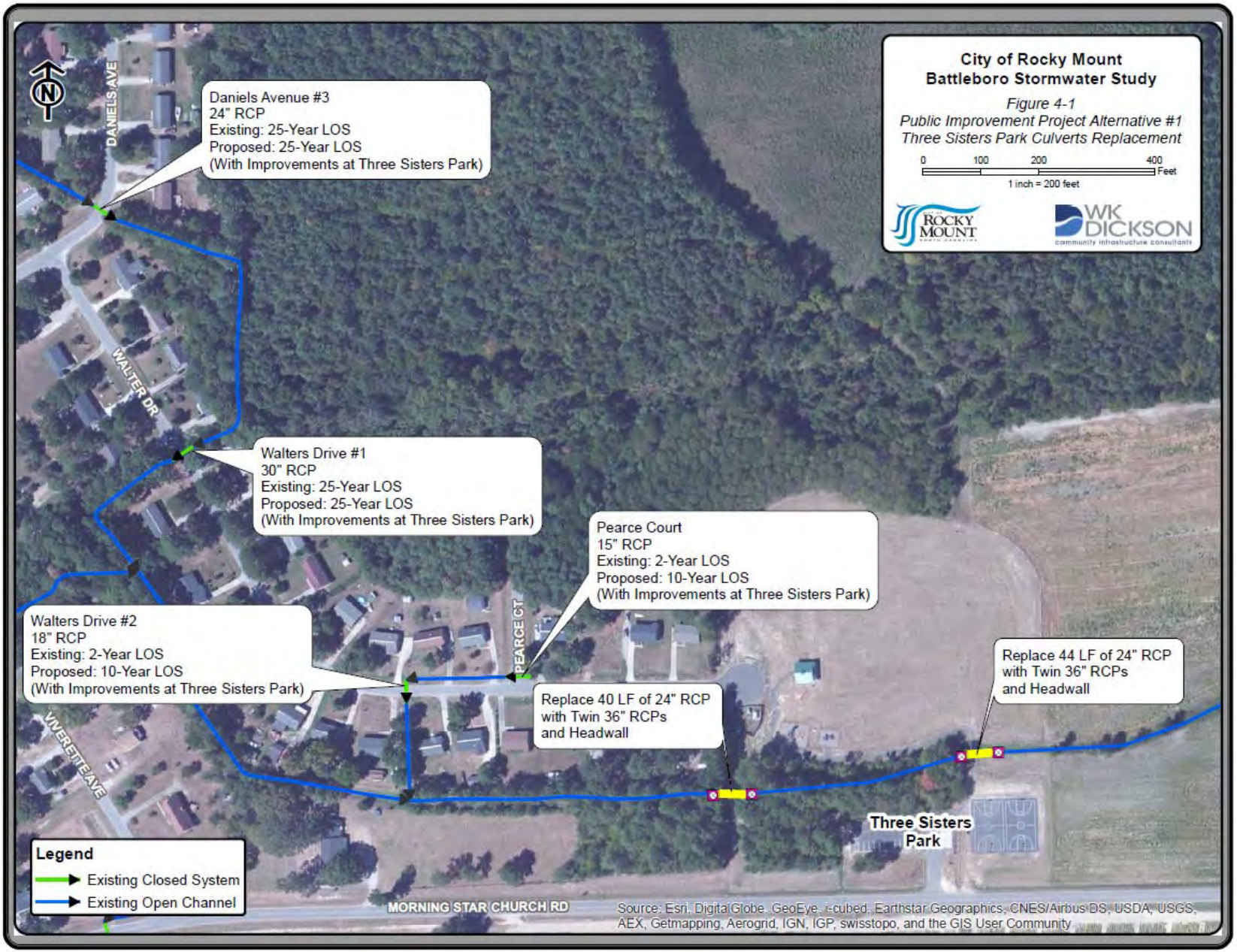
reduce frequency and severity of ponding water

3. Identify Improvement Projects

Summary of Costs and Ranking for Public Improvement Projects

Project (Alternative) Name	Est. Cost
Three Sisters Park Culverts Replacement	$47,200
East Bridges Street Drainage Improvements	$44,500
Viverette Street Culvert Replacement	$36,600
Marriott/Hathaway Streets Drainage Improvements (NCDOT)	$8,900
Gainor Avenue Drainage Improvements (NCDOT)	$333,200

Alternative #1 Three Sisters Park



Alternative #1
Three Sisters Park Culverts Replacement

What:

- **Upsize the 2 existing 24” RCP crossings with twin 36” RCPs**

Why:

- **Reduce water surface elevations at park**
- **Improve performance of upstream system**
- **Increase LOS at Pearce Court and Walter Drive #2**

Estimated Cost $47,200

Greenway Trail at Three Sisters Park

Existing Greenway Culvert Crossing (24” RCP)

Alternative #2A East Bridges St.

Alternative #2A
East Bridges Street Improvements

What?

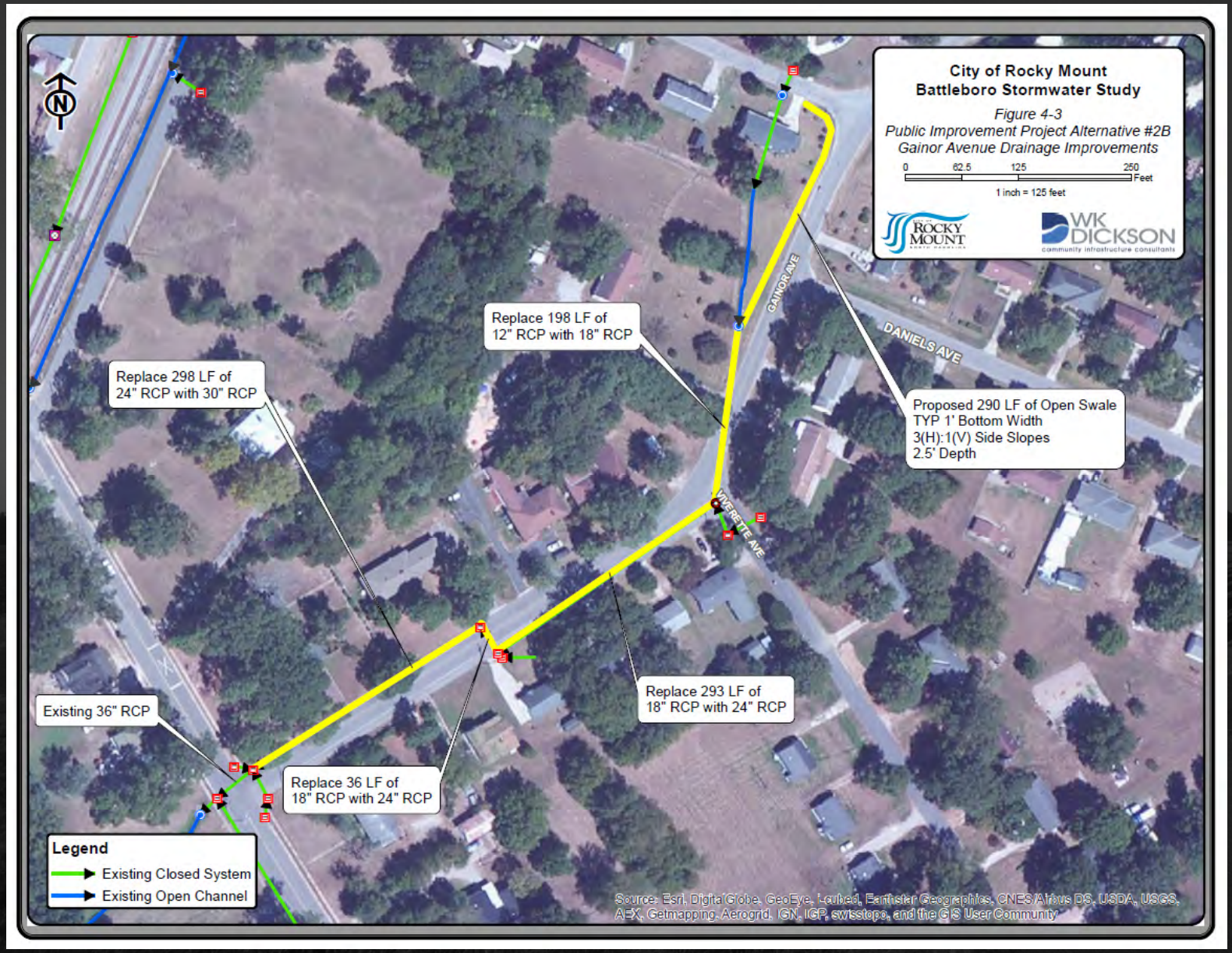
- Install 18” RCP and inlet
- Plug and abandon existing RCP
- Decommission pipe section under private residence

Why?

- Direct flow away from residence
- Improve pipe system level of service

Estimated Cost: $44,500

Alternative #2B Gainor Ave (NCDOT)



Alternative #2B
Gainor Avenue Improvements (NCDOT)

What:

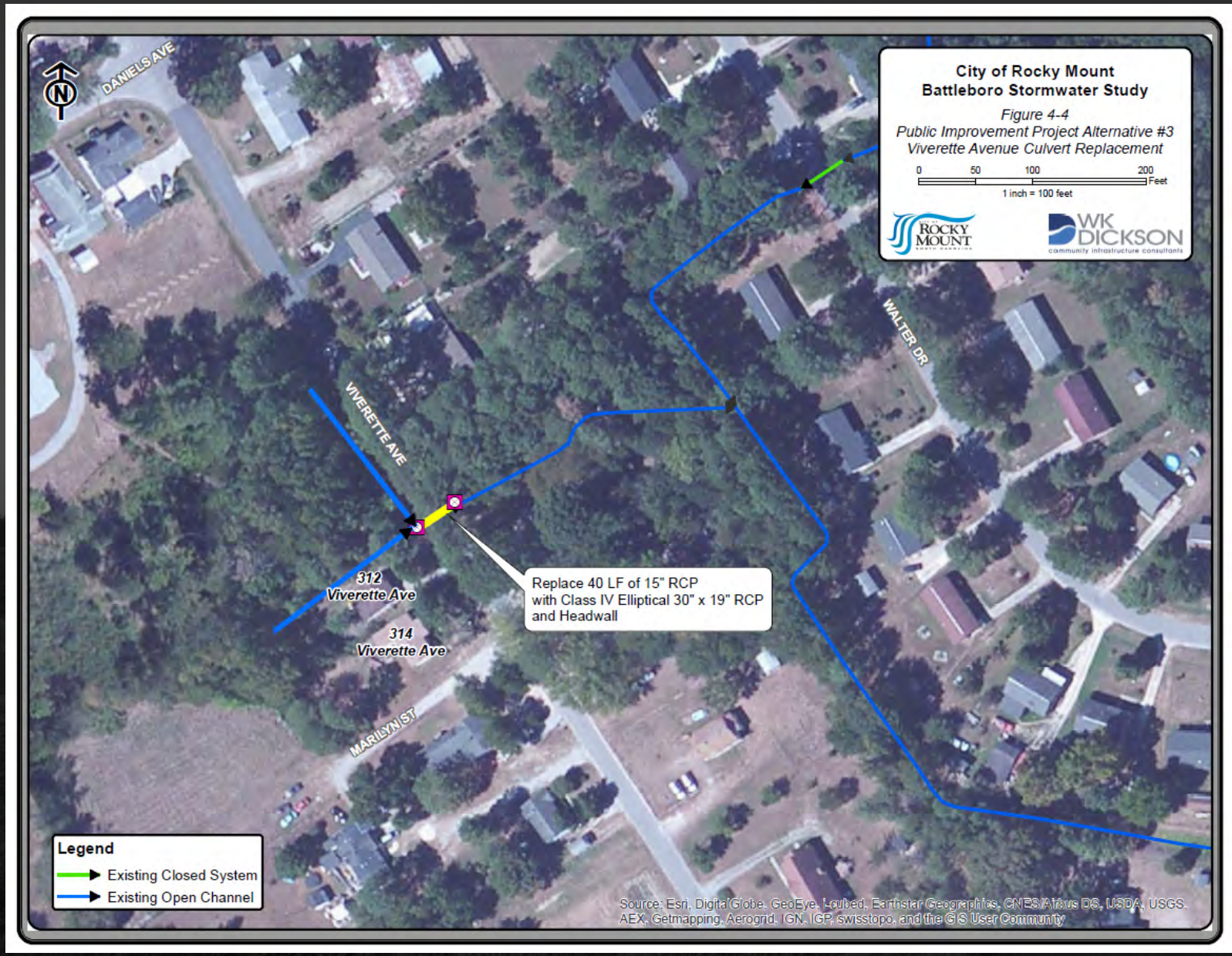
- Upsize existing system along Gainor Avenue

Why:

- Improve system to the required 25-year Level of Service (LOS)

Estimated Cost: $333,200

Alternative #3 Viverette Ave.



Alternative #3
Viverette Avenue Culvert Replacement

What:

- **Upsize existing 15” RCP with 30” x 19” elliptical concrete pipe**

Why:

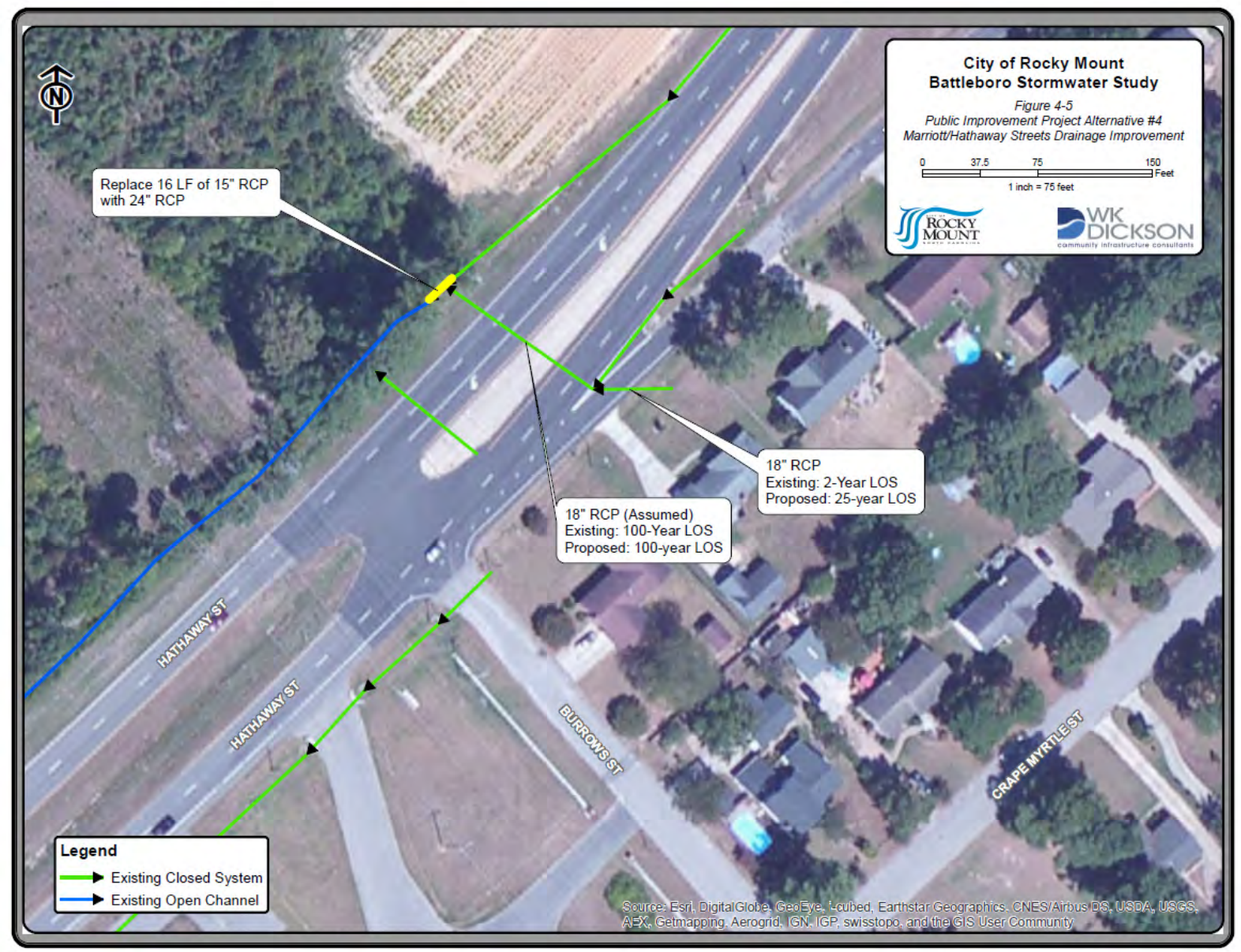
- **Achieve 10-year LOS**
- **25-year LOS when coupled with Alternative #1 (Three Sisters Park Culverts Replacement)**
- **Reduce potential for debris blockage**
- **Alleviate ponding in surrounding yards (312 and 314)**

Estimated Cost: $36,600

Viverette Avenue Culvert Replacement – Upstream End

Viverette Avenue Culvert Replacement – Upstream End

Alternative #4 Hathaway/Marriott (NCDOT)



Alternative #4
Marriott/Hathaway Streets Drainage Improvements (NCDOT)

What:

- Replace existing 15” RCP with 24” RCP

Why:

- Reduce the tailwater effect on upstream pipe
- Improve performance to 100-year LOS
- Eliminate standing water at the Marriot Street Culvert

Estimated Alternative Cost $8,900

3. Identify Improvement Projects

Summary of Costs and Ranking for Public Improvement Projects

Project (Alternative) Name	Est. Cost
Three Sisters Park Culverts Replacement	$47,200
East Bridges Street Drainage Improvements	$44,500
Viverette Street Culvert Replacement	$36,600
Marriott/Hathaway Streets Drainage Improvements (NCDOT)	$8,900
Gainor Avenue Drainage Improvements (NCDOT)	$333,200

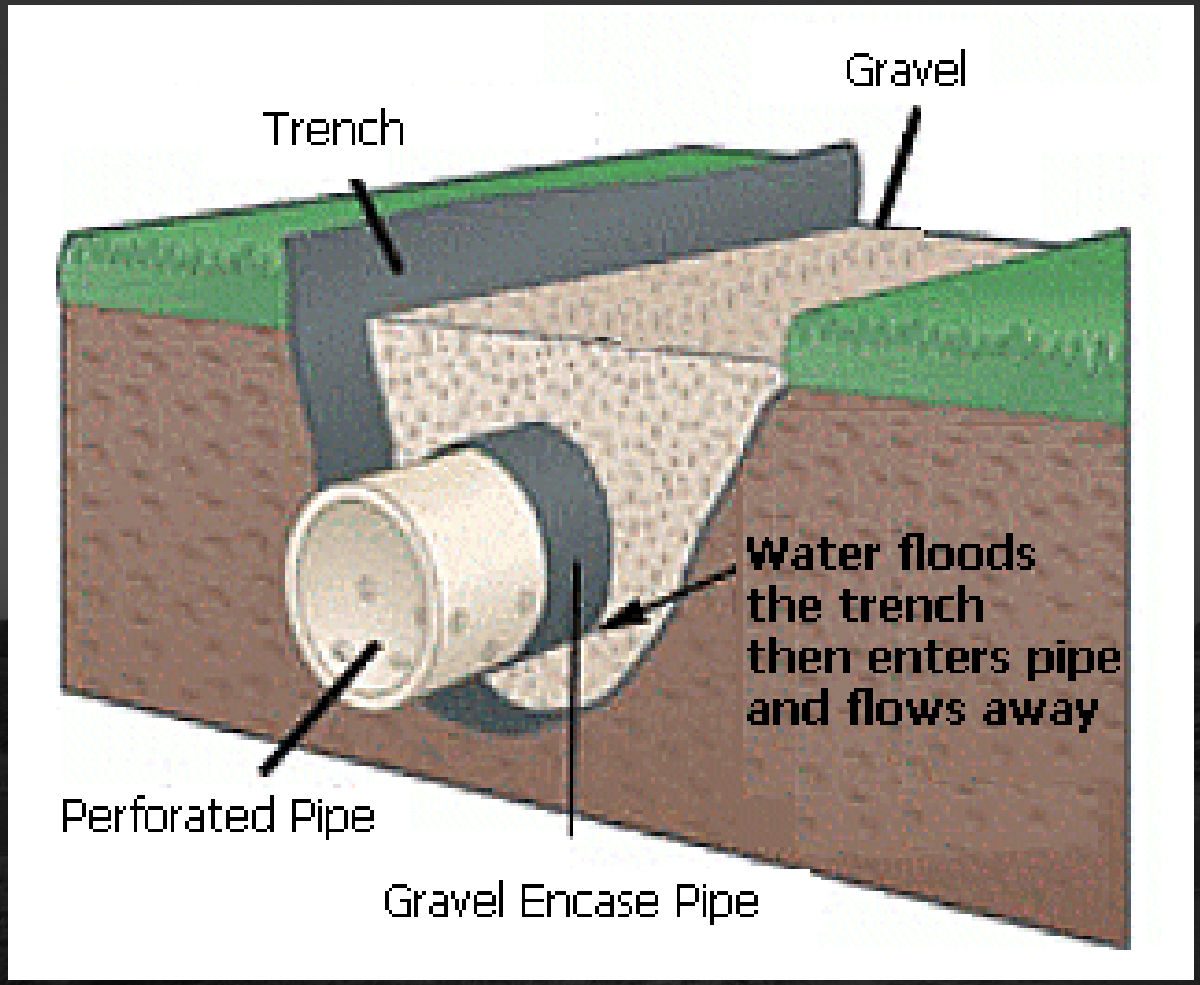
Best Practices for Private Property Drainage Issues

Yard Ponding Issues

- Routine maintenance – keep ditches clean
- Import soils to fill in yard low spots
- Construct French drain
- Re-grade yard or create berm to redirect water
- Add rain barrels to capture roof runoff

Rain Barrels

French Drains



Wet Crawl Space

- Install gutters and redirect downspouts
- Construct French drain
- Re-grade yard or create berm to redirect water away from house foundation
- Install sump pump and/or dehumidifier

What's Next?

- Prioritization of improvements project
- Coordination with NCDOT
- Select projects for implementation

Questions?

Contact information:

Donald Perry
donald.perry@rockymountnc.gov

Jason Kennedy
Jkennedy@wkdickson.com

Appendix B:
Hydrologic Analysis

APPENDIX B
HYDROLOGIC ANALYSIS

The purpose of the hydrologic analysis is to estimate the magnitude of selected frequency floods for sub-basins within the watershed. The Environmental Protection Agency (EPA) Storm Water Management Model (SWMM) was used to model the drainage systems located within the Battleboro Stormwater study area.

The SWMM computer model (Version 5.1) simulates the surface runoff response to precipitation for an interconnected system of surfaces, channels, closed pipe systems, culverts, and ponds. SWMM is an ideal model for a complex drainage system such as the one seen in the Battleboro study area. This model combines hydrology and hydraulics and allows the user to evaluate system improvements that not only reduce upstream flooding but allow the user to determine downstream impacts as well. Combining hydrology and hydraulics eliminates the need to iterate between a hydrologic model and a hydraulic model to produce reasonable flows.

Input data for the model was developed using topographic, landuse, and soils maps in GIS to delineate and calculate the basin areas, percent impervious, and Natural Resources Conservation Service (NRCS) hydrologic parameters. The SWMM model offers a variety of methods for simulating the rainfall-runoff response, hydrograph development, channel and pond routing. The selection of methods for the analyses is based on the study's objectives, data availability, and watershed characteristics. The precipitation data for the 24-hour duration, Type II storm was used to represent the synthetic rainfall event. SWMM has a unique method of estimating surface runoff based on a percent impervious for the given sub-basin and a modified NRCS curve number approach. Unit hydrographs are translated using the watershed basin and slope parameters unique to SWMM.

Sub-basin Delineation and Connectivity

The Battleboro study area was delineated into twelve (12) sub-basins using digital topographic maps with 2-foot contour intervals obtained from NCDOT GIS database. The stormwater inventory data provided by the City was used along with information collected in the field to further refine the sub-basin boundaries. The sub-basin divisions were selected at hydrologically and hydraulically significant points, such as major roadway crossings, secondary system convergences, and known problem areas. The sub-basin sizes ranged from 0.3 to 485 acres. The Watershed Map included as Appendix D-5 illustrates the sub-basin and hydrologic connectivity for the studied systems.

Soils

The NRCS curve number method uses basin characteristics, such as soil types and land use, to compute the runoff response. The infiltration rate of a soil influences the volume of surface runoff that results from given storm events. Soils with high infiltration rates produce lower runoff than soils with lower infiltration rates. The Natural Resources Conservation Service has prepared soil maps for Nash and Edgecombe Counties that identify soil groups.

This data is available digitally and was obtained for the Battleboro study area. The primary groups (A, B, C, and D) correspond to decreasing rates of infiltration. A general description of the soil groups found in the Battleboro study area is presented in Table B-1. These descriptions were taken from the USDA, SCS, NEH-4 (1972).

Table B–1: Hydrologic Soils Groups

Soil Group	Description
A	Group A soils have high infiltration rates even when thoroughly wetted and consist chiefly of deep, well to excessively drained sand or gravels. These soils have a high rate of water transmission. (greater than 0.3 inch per hour)
B	Group B soils have moderate infiltration rates even when thoroughly wetted and consist chiefly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse texture. These soils have a moderate rate of water transmission. (0.15 to 0.3 inch per hour)
C	Group C soils have slow infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water, or soils with moderately fine to fine texture. These soils have a slow rate of water transmission. (0.5 to 0.15 inch per hour)
D	Group D soils have a very slow infiltration rate when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a clay plan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have a very slow rate of water transmission. (0 to 0.05 inch per hour)
A/D B/D C/D	The first letter applies to the drained condition and the second to the undrained condition. For the purpose of hydrologic soil group, adequately drained means that the seasonal high water table is kept at least 60 centimeters (24 inches) below the surface.

Soils within the Battleboro study area are predominantly NRCS hydrologic soil group A (See Table B-2 and Appendix D).

Table B–2: Area Distribution of Hydrologic Soil Groups

Soil Group	Total Area (acre)	Percent of Total Area
A	778	51%
A/D	129	8%
B	115	8%
B/D	174	11%
C	196	13%
C/D	20	1%
D	98	6%

As shown on the Soils Map included in Appendix D, the remaining percentage of the Battleboro study area is composed of water (W).

Land Use

Land use is the watershed cover condition as it relates to the actual type of development and zoning within the watershed. Land use influences the runoff characteristics of a watershed, and combined with other basin characteristics, is used to determine the NRCS curve number for the basin.

The existing zoned land uses for the Battleboro study area were provided by the City of Rocky Mount and Nash County. These land uses were used to develop the peak flows for the watershed. Eleven (11) land use categories were delineated within the Battleboro study area based on the information provided and field observation of the current uses (See Appendix D).

In its entirety, Battleboro study area covers an area of approximately 1,500 acres (2.3 square miles). Approximately 75% of the study area is currently not developed to its zoned land use. It is assumed that the undeveloped areas in the watershed will be developed as currently zoned. Percentages of each existing and future land use groups and the correlating acreage are listed in Tables B-3 and B-4.

Table B–3: Existing Land Use/Zoning Groups

Land Use Group Name (Zoning Code)	Percent of Basin Area of Selected Land Use	
	Total Area (acre)	Percent of Total Area
Agricultural (A-1)	1,153	75.8%
Commercial Corridor District (B-2)	3	0.2%
Central Business District (B-4)	5	0.3%
Commercial Services District (B-5)	18	1.2%
Heavy Industrial (I-2)	2	0.1%
Manufactured Home Park (MHP)	16	1.1%
Office/Institutional (O-I)	2	0.1%
Residential – Low Density Single Family (R-10)	136	8.9%
Residential – Medium Density Single Family (R-6)	44	2.9%
Residential – High Density Multi-Family (R-6MFA)	13	0.9%
Right-of-Way	129	8.5%

Table B–4: Future Land Use/Zoning Groups

Land Use Group Name (Zoning Code)	Percent of Basin Area of Selected Land Use	
	Total Area (acre)	Percent of Total Area
Agricultural (A-1)	614	40.3%
Commercial Corridor District (B-2)	3	0.2%
Central Business District (B-4)	5	0.3%
Commercial Services District (B-5)	18	1.2%
Heavy Industrial (I-2)	40	2.6%
Manufactured Home Park (MHP)	16	1.1%
Office/Institutional (O-I)	2	0.1%
Residential – High Density Multi-Family (R-6MFA)	13	0.9%
Residential – Medium Density Single Family (R-6)	44	2.9%
Residential – Low Density Single Family (R-10)	573	37.7%
Right-of-Way	194	12.7%

NRCS Curve Numbers for Pervious Areas

The NRCS curve number approach was used in computing the runoff response in SWMM. Runoff curve numbers (RCNs) were generated for the pervious areas of the sub-basins using the NRCS document entitled Urban Hydrology for Small Watersheds, dated June 1986 and commonly referred to as TR-55. This method relates the drainage characteristics of soil group, land use category, and antecedent moisture conditions to assign a runoff curve number. The runoff curve number and an estimate of the initial surface moisture storage capacity are used to calculate a total runoff depth for a storm in a basin.

The antecedent moisture condition (AMC) refers to the total rainfall in a five-day period preceding a storm and relates to the soil moisture condition at the beginning of the storm event. The AMC value can be used as a calibration tool in the hydrologic computations where AMC-1 represents "dry" conditions and AMC-3 represents "wet" conditions. The average antecedent moisture conditions (AMC-2) are generally considered most representative for the humid southeastern portion of the country and were used for the hydrologic calculations in this study.

The impervious percentage for each sub-basin was calculated. Runoff curve numbers were then determined for each sub-basin assuming the remaining pervious area was open space. The curve numbers used for this study are listed in Table B-5. It should be noted that these values come from the City of Rocky Mount Design Manual and differ slightly from the values presented in the standard TR-55 document.

Table B–5: Curve Numbers Based on Land Use and Soil Groups

Land Use Category	Soil Group			
	A	B	C	D
Agricultural[1]	62	71	78	81
Commercial Corridor District[2]	68	79	86	89
Central Business District[2]	68	79	86	89
Commercial Services District[2]	68	79	86	89
Heavy Industrial[2]	68	79	86	89
Manufactured Home Park[2]	68	79	86	89
Office/Institutional[2]	68	79	86	89
Residential – High Density Multi-Family[3]	49	69	79	84
Residential – Medium Density Single Family[3]	49	69	79	84
Residential – Low Density Single Family[4]	39	61	74	80

Source: *City of Rocky Mount Stormwater Design Manual, December 2006.*

[1]Assumed Cultivated Land; [2]Poor Condition Open Space: Grass Cover<50%; [3]Fair Condition Open Space: Grass Cover 50% - 75; [4]Good Condition Open Space: Grass Cover>75%

For each sub-basin, the curve number for the pervious section of the sub-basin was determined and weighted by area to calculate the composite curve number for each sub-basin. The composite pervious curve numbers for the sub-basins within the Battleboro study area range from the 61 to the 81. The lower curve numbers are located where the land use is low density residential and the hydrologic soils group is A. The higher curve numbers represent commercial, industrial, and business land uses with significant impervious areas. A summary of the hydrologic input data including the pervious runoff curve numbers and percent impervious is shown in Table B-6. Drainage basins referenced below are also shown on the Watershed Map (See Appendix D-5).

Table B–6: Summary of Hydrologic Input Data

Drainage Basin ID	Drainage Area (acre)	Existing Pervious RCN	Existing Percent Impervious (%)	Future Pervious RCN	Future Percent Impervious (%)	Basin Slope (%)	Basin Width (feet)
A-1	473	69	3%	69	22%	0.37%	2,750
A-2	132	72	9%	72	25%	0.56%	948
A-3	104	74	2%	74	2%	0.45%	1,690
A-4	166	70	6%	70	6%	0.82%	2,287
A-5	150	67	14%	67	17%	0.49%	1,769
B-1	26	72	22%	72	22%	0.64%	790
B-2	85	64	18%	64	18%	0.48%	1,494
B-3	121	61	24%	61	24%	0.85%	1,243
C	63	65	23%	65	23%	0.87%	1,495
D	60	81	15%	81	15%	0.25%	1,089
E	115	73	17%	73	17%	0.13%	1,099
F	25	75	16%	75	16%	0.18%	946

Drainage Basin ID	Drainage Area (acre)	Existing Pervious RCN	Existing Percent Impervious (%)	Future Pervious RCN	Future Percent Impervious (%)	Basin Slope (%)	Basin Width (feet)
Area #1-10	2.5	76	35%	76	35%	0.31%	164
Area #1 -20	7.2	74	30%	74	30%	0.36%	285
Area #1-30	1.7	74	27%	74	27%	0.38%	145
Area #1-40	7.4	74	18%	74	18%	0.30%	479
Area #1 -50	5.9	74	29%	74	29%	0.38%	244
Area #1 -60	6.3	74	26%	74	26%	0.62%	424
Area #1-70	3.8	74	30%	74	30%	0.64%	262
Area #1-80	2.7	74	48%	74	48%	0.51%	301
Area #1-90	11.6	70	20%	70	20%	0.27%	345
Area #1 -100	5.6	67	22%	67	22%	0.41%	252
Area #1 -110	1.8	48	25%	48	25%	0.44%	176
Area #1 -120	2.6	72	33%	72	33%	0.59%	165
Area #1 -130	6.0	48	31%	48	31%	0.58%	380
Area #1-140	42.8	59	10%	59	10%	0.36%	568
Area #1-150	0.8	80	71%	80	71%	0.44%	75

Hydrograph Translation

NRCS methodologies typically use a time of concentration parameter to help calculate the response of the watershed to rainfall. SWMM uses watershed basin width and slope parameters to create the unit hydrograph used in the model that will translate the rainfall into runoff. The watershed width is a parameter unique to SWMM that helps define the watershed shape by taking the watershed area and dividing it by the length of the longest flow path. Additionally, SWMM requires input of a basin slope in the calculations used to translate the hydrograph. The basin slope is the maximum grade change from the upstream end of the watershed to the downstream end divided by the length of the longest flow path. As part of the peak flow comparison and validation process, the watershed widths for each of the sub-basins were adjusted to produce more reasonable flows. Adjusting the watershed width parameters is a common method for calibrating models for areas with gradual slopes and moderate conveyance systems. The sub-basin slopes and widths are included in Table B-6.

Channel/Storage Routing

Flood peaks attenuate or reduce as they travel downstream due to the storage characteristic of the channel itself. Channel routing was simulated in the hydraulic block of SWMM. Routing was modeled using dynamic wave routing. Dynamic wave routing uses the actual shape and condition of the stream channel that is input into the hydraulic model to calculate the attenuated downstream flows.

Rainfall

Rainfall distributions for Rocky Mount were derived using the NRCS Type II standard distribution. Total rainfall depths for the modeled frequency storms were obtained from the City of Rocky Mount's Stormwater Design Manual. Table B-7 shows the total rainfall depths used for this study.

Table B–7: Design Storm Rainfall Depths

Design Storm	Rainfall Depth (in)
2-year, 24-hour	3.60
10-year, 24-hour	5.28
25-year, 24-hour	6.48
50-year, 24-hour	7.20
100-year, 24-hour	8.00

Source: *City of Rocky Mount Stormwater Design Manual, December 2006.*

Summary of Hydrologic Model Results

The EPA SWMM model was used to compute peak runoff for the 2-, 10-, 25-, 50- and 100-year design storms for the existing conditions. The results of the existing conditions hydrologic model are summarized in Table B-8.

Table B–8 : Existing Flows from SWMM

SWMM Link	Road Name / Location	Storm Event				
		2-year (cfs)	10-year (cfs)	25-year (cfs)	50-year (cfs)	100-year (cfs)
NC-4_Culvert	NC-4	45	110	153	175	199
W_Battleboro _Ave_Culvert	West Battleboro Avenue	22	49	73	99	90
Hathaway_St _Culvert	Hathaway Street	127	270	378	502	812
Railroad_Culvert	CSX Railroad	38	55	64	75	152

Comparison and Validation of Peak Flows

For comparison purposes, peaks flows were estimated using Hydraflow Express based on NRCS methodologies. Table B-9 compares the peak flows determined from the Hydraflow Express versus the peak flows from the initial (unadjusted) EPA SWMM model.

Table B–9 : Comparison of Existing Conditions Peak Flows at NC-4 Culvert

Model	Storm Event				
	2-year (cfs)	10-year (cfs)	25-year (cfs)	50-year (cfs)	100-year (cfs)
SWMM Model	45	110	153	175	199
Hydraflow Express (SCS)	94	211	307	367	435

Table B–10: Comparison of Existing Conditions Peak Flows at Hathaway Street (Hwy 301)

Model	Storm Event				
	2-year (cfs)	10-year (cfs)	25-year (cfs)	50-year (cfs)	100-year (cfs)
SWMM Model	127	270	378	437	502
Hydraflow Express (SCS)	173	385	559	668	793

The EPA flows for the larger storms are significantly lower than those calculated using Hydraflow Express. This is attributed primarily to the very low percent impervious value assumed for the agricultural landuse compared to the relatively high RCN value associated agricultural landuse (used in the Hydraflow Express model). For this reason, adjustments were made to the EPA SWMM model to generate more runoff in the basins with large areas of agricultural landuse. The following table summarizes the percent impervious values assumed to correct the SWMM model for this inconsistency:

Table B–11: Validation Changes to Percent Impervious Input Values

Sub-Basin	Original Percent Impervious Value	Final Percent Impervious Value
A-1	3	13
A-2	9	19
A-3	2	12
A-4	6	16
A-5	14	24
#2-120	9	12
#2-130	25	30
#6-60	25	33

EPA SWMM attenuates peak flows by routing the flows through the system of culverts, closed pipes, overland flow, and channel reaches. The upper limits of the Battleboro study area are very flat and include a signification amount of attenuation in the row crops and contributing drainage ditches. The EPA SWMM model includes overland and channel routing prior to reaching the closed system. Once flow has been collected and directed into the closed drainage system, SWMM continues to perform storage routing in the closed conduits, and, finally, in the downstream receiving channel. The combined storage routing

of the overland flow, pipes, and open channels validates the reductions seen when comparing Hydraflow Express with EPA SWMM's model results in the larger storms. In addition, the historical complaints and feedback from NCDOT personnel lines up well with the final adjusted EPA SWMM model. The following two tables show the final validated peak flows generated using SWMM and Hydraflow Express:

Table B–12: Comparison of Validated SWMM Model at NC-4 Culvert

Model	Storm Event				
	2-year (cfs)	10-year (cfs)	25-year (cfs)	50-year (cfs)	100-year (cfs)
SWMM Model	81	141	174	195	216
Hydraflow Express (SCS)	94	211	307	367	435

Table B–13: Comparison of Validated SWMM Model at Hathaway Street (Hwy 301)

Model	Storm Event				
	2-year (cfs)	10-year (cfs)	25-year (cfs)	50-year (cfs)	100-year (cfs)
SWMM Model	179	327	427	485	547
Hydraflow Express (SCS)	173	385	559	668	793

Appendix C:
Hydraulic Analysis

APPENDIX C
HYDRAULIC ANALYSIS

The purpose of the hydraulic modeling analysis is to determine an existing level of flooding for the stormwater drainage network and to develop proposed solutions to mitigate this flooding. EPA SWMM was chosen as the hydrologic/hydraulic model because of its ability to model complex drainage systems, including the combination of open and closed systems located in the Battleboro Stormwater study area.

Stormwater Inventory and Field Survey

The City of Rocky Mount provided a stormwater inventory of the existing drainage systems. However, the data did not include survey grade elevations. To augment the data, WK Dickson collected survey grade inventory data at the following locations:

- Hathaway Street (Hwy 301)
- NC 4
- West Battleboro Avenue
- West Battleboro Avenue
- CSX Railroad

The data was collected using NAD 83 horizontal datum. Vertical elevations of the structures are based on NAVD 88. The stormwater inventory data is a useful tool for delineating watersheds and performing conceptual modeling, however a more detailed survey will be required for specific project final design.

SWMM Model

SWMM is a dynamic rainfall-runoff model capable of modeling the hydrologic response of a watershed and hydraulic routing throughout a stormwater conveyance system. The model calculates the effect of backwater, flat or negative slopes, energy losses, and minor head losses associated with bends, entrances, and exits.

Input data for the SWMM EXTRAN (hydraulics) computer model include the following:

- Conveyance pipes including structure inverts, pipe sizes, materials, and lengths;
- Open channel cross section geometries;
- Roughness coefficients (Manning's 'n' values) for pipes and channels;
- Energy loss coefficients for flow in the pipes and channels; and
- Overland flow characteristics.

SWMM provides an accurate evaluation of the existing and proposed conditions because it combines hydrology and hydraulics while accounting for the routing effects of the channel and over bank storage areas. Because hydrology and hydraulics are combined, changes to peak flows or water surface elevations resulting from proposed modifications to the existing channels or culverts are calculated in the model in one step. Additionally, changes to flows

from proposed pipes and channel improvements are seen both upstream and downstream, reducing the potential for a stormwater system having increased flooding downstream.

Roughness Coefficients

Manning's roughness coefficients, or 'n' values, represent the resistance to flow, and influence the flow capacity of pipes, channels, and floodplains. The EPA SWMM model uses these coefficients to compute friction loss longitudinally in the pipes, channels, and floodplains. The roughness value is a function of the type and density of the vegetation, channel bottom and stream bank material, degree of channel meandering, and depth of flow.

Roughness coefficients were determined for all channel reaches for which hydraulic analyses were performed. Manning 'n' values for the channels ranged between 0.03 and 0.08 throughout the City. All roughness coefficients were estimated through field observation, and by referencing standard engineering manuals.

Energy Loss Coefficients

Contraction and expansion of flow produces energy losses caused by the transition. The magnitude of these losses is related to the velocity and the estimated loss coefficient. Where the transitions are gradual, the losses are small. At abrupt changes in cross-sectional area, the losses are higher. Energy losses resulting from expansion are greater than losses associated with contraction. Energy loss coefficients used for the Battleboro Stormwater study area SWMM models are presented in Table C-1 below:

Table C–1: Energy Loss Coefficients

Type of Transition	Expansion	Contraction
None	0	0
Manhole/Inlet	0.7	0.5
Open Channel	1	0.2 to 0.5 – Headwall and 0.9 - Projecting

Additional energy losses for structures having bends were divided between the two joining pipes. The bend losses used for this project are based on NCDOT values, and are shown below in Table C-2.

Table C–2: Bend Loss Coefficients

Angle (°)	Loss Coefficient	Angle (°)	Loss Coefficient
90	0.70	40	0.38
80	0.66	30	0.28
70	0.61	25	0.22
60	0.55	20	0.16
50	0.47	15	0.10

Starting Water Surface Elevation

The downstream limit of the Battleboro Stormwater study area is located near Coleman Avenue. The starting water surface elevations for the SWMM models were generated using the normal depth method based of the channel slopes at each outfall. The slopes used in model are listed in Table C-3.

Table C–3: Slopes Used to Set Starting Water Elevations

Storm Event	Slope (ft/ft)
System 1	0.004
Systems 2 through 6	0.003

Model Run Descriptions and Assumptions

The EPA SWMM model was used to compute flood elevations at each structure located in the Battleboro Stormwater study area for the 2-, 10-, 25-, 50- and 100-year storm events. A hard copy of the SWMM output is included in Appendix G and digital copy of the SWMM model is included on the CD in Appendix J.

The hydraulic analysis for this study is based only on the condition of unobstructed flow. Therefore, flood elevations shown on the profiles are considered valid only if hydraulic structures remain unobstructed and do not fail. Flood elevations may be raised by debris blockage of the channel or floodplain.

Model Validation

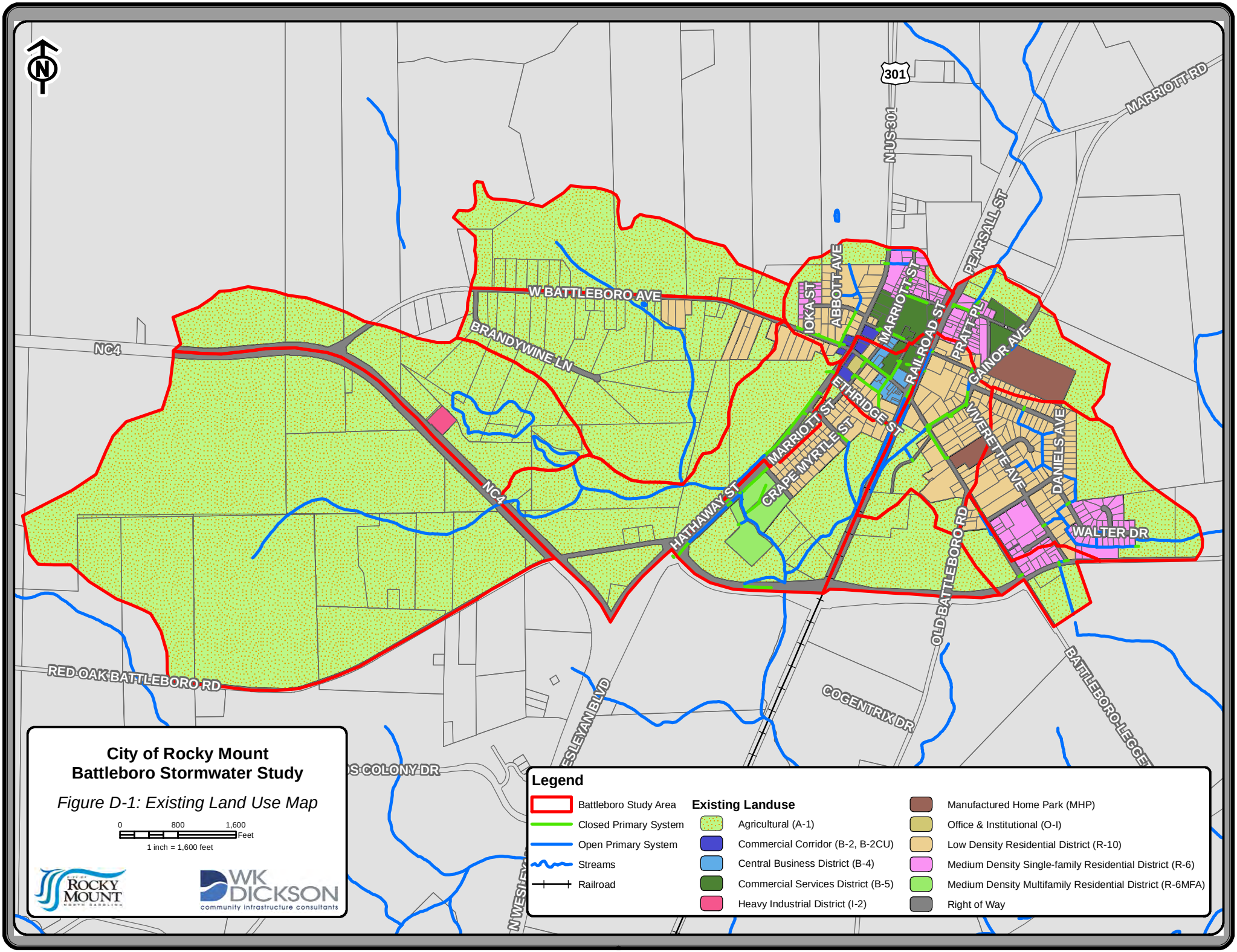
Efforts were made to verify the model for various storm events. The focus of the model validation efforts centered on a confirming peak flows were consistent with other industry methods of generating flows. Because this project did not have historical flooding along streams with large drainage areas and roadways with a history of overtopping, there were no historical high water marks which could be used to calibrate EPA SWMM model results. As a result, the input data found in the SWMM model was not adjusted to generate high water marks collected from historical flooding. Model results were consistent with feedback obtained from NCDOT regarding a lack of roadway overtopping in the study area. A more detailed description of this model validation effort is provided in Appendix B.

Appendix D:

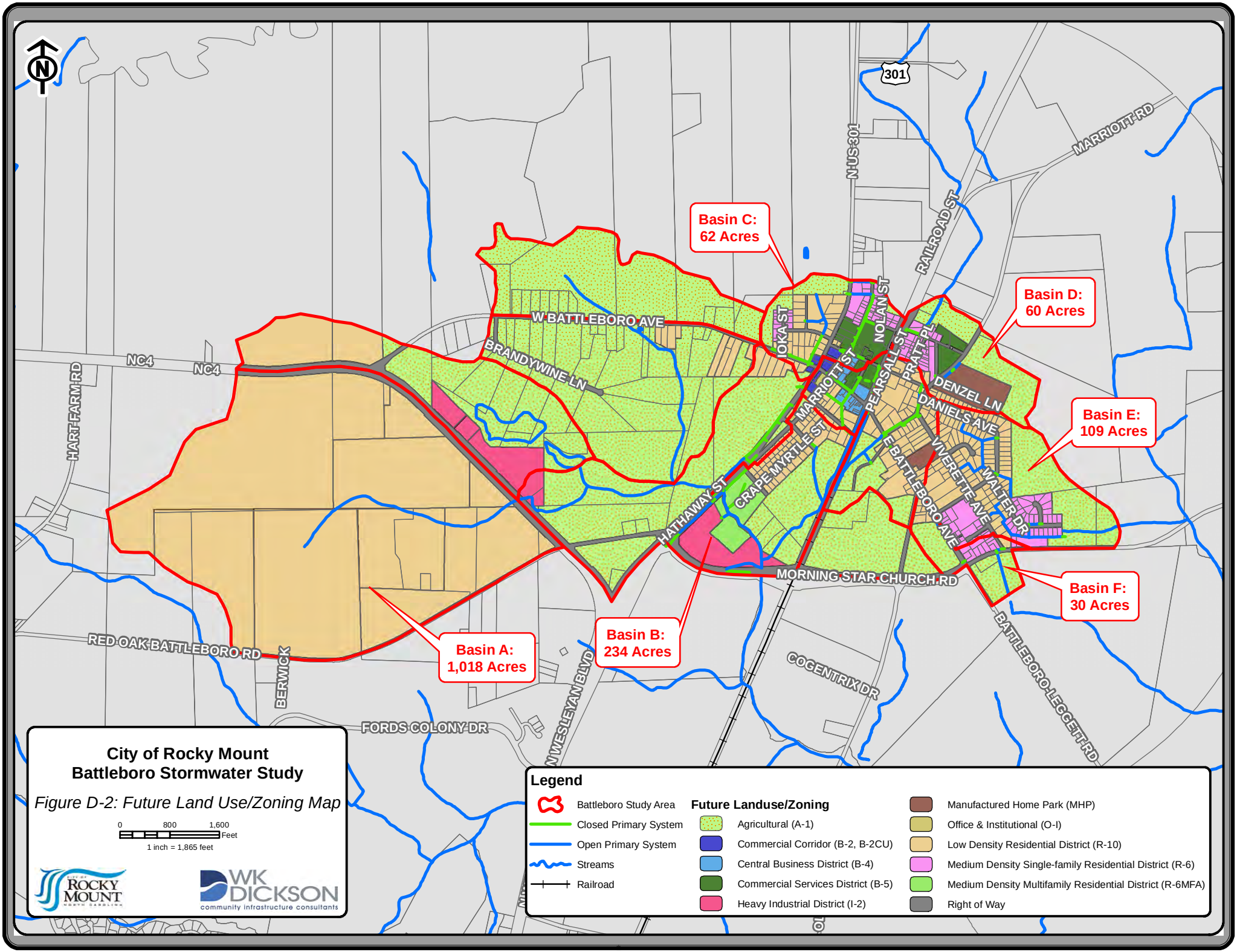
Maps

List of Contents:

1. Existing Land Use Map
2. Future Land Use Map
3. Soils Map
4. Impervious Cover Map
5. Watershed Map



N
301
N US 301
MARRIOTT RD
PEARSALL ST
W BATTLEBORO AVE
BRANDYWINE LN
NC4
IOKA ST
ABBOTT AVE
MARRIOTT ST
RAILROAD ST
PRATT PL
GAINOR AVE
ETHRIDGE ST
MARRIOTT ST
CRAPE MYRTLE ST
VIVERETTE AVE
DANIELS AVE
WALTER DR
HATHAWAY ST
OLD BATTLEBORO RD
RED OAK BATTLEBORO RD
COGENTRIX DR
BATTLEBORO-LEGGE
ESLEYAN BLVD
S COLONY DR
N WESLEY
City of Rocky Mount
Battleboro Stormwater Study
Figure D-1: Existing Land Use Map
0
800
1,600
Feet
1 inch = 1,600 feet
Legend
Battleboro Study Area
Closed Primary System
Open Primary System
Streams
Railroad
Existing Landuse
Agricultural (A-1)
Commercial Corridor (B-2, B-2CU)
Central Business District (B-4)
Commercial Services District (B-5)
Heavy Industrial District (I-2)
Manufactured Home Park (MHP)
Office & Institutional (O-I)
Low Density Residential District (R-10)
Medium Density Single-family Residential District (R-6)
Medium Density Multifamily Residential District (R-6MFA)
Right of Way
ROCKY MOUNT
WK DICKSON
community infrastructure consultants


Basin C:
62 Acres
Basin D:
60 Acres
Basin E:
109 Acres
Basin F:
30 Acres
Basin B:
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Basin A:
1,018 Acres
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BRANDYWINE LN
NC4
HARTFARM RD
N US 301
301
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NOLAN ST
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MORNING STAR CHURCH RD
RED OAK BATTLEBORO RD
BERWICK
FORDS COLONY DR
WESLEYAN BLVD
COGENTRIX DR
BATTLEBORO LEGGETT RD
City of Rocky Mount
Battleboro Stormwater Study
Figure D-2: Future Land Use/Zoning Map
0 800 1,600 Feet
1 inch = 1,865 feet
ROCKY MOUNT
WK DICKSON
community infrastructure consultants
Legend
Battleboro Study Area
Closed Primary System
Open Primary System
Streams
Railroad
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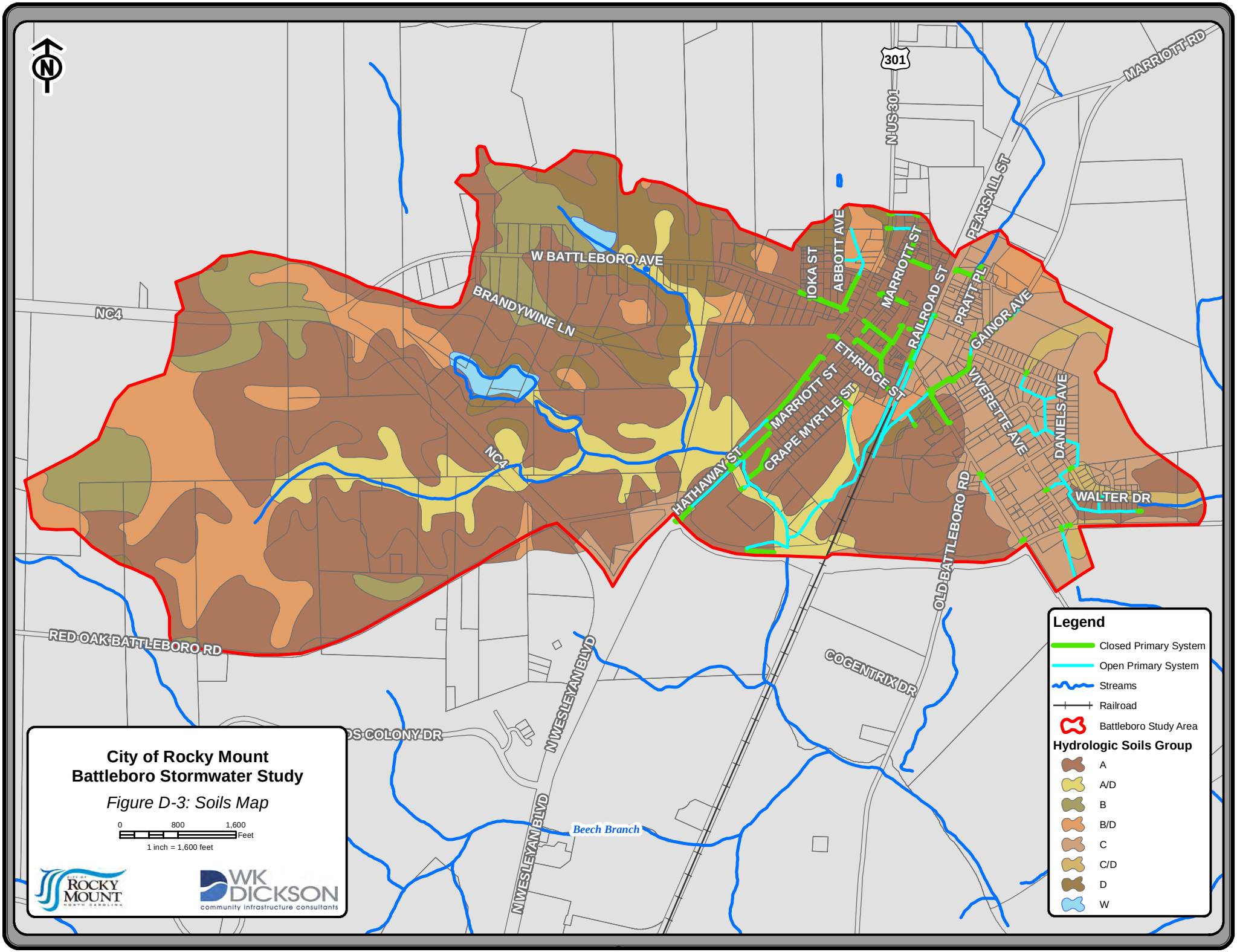
Right of Way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BRANDYWINE LN
NC4
NC4
RED OAK BATTLEBORO RD
N WESLEYAN BLVD
N WESLEYAN BLVD
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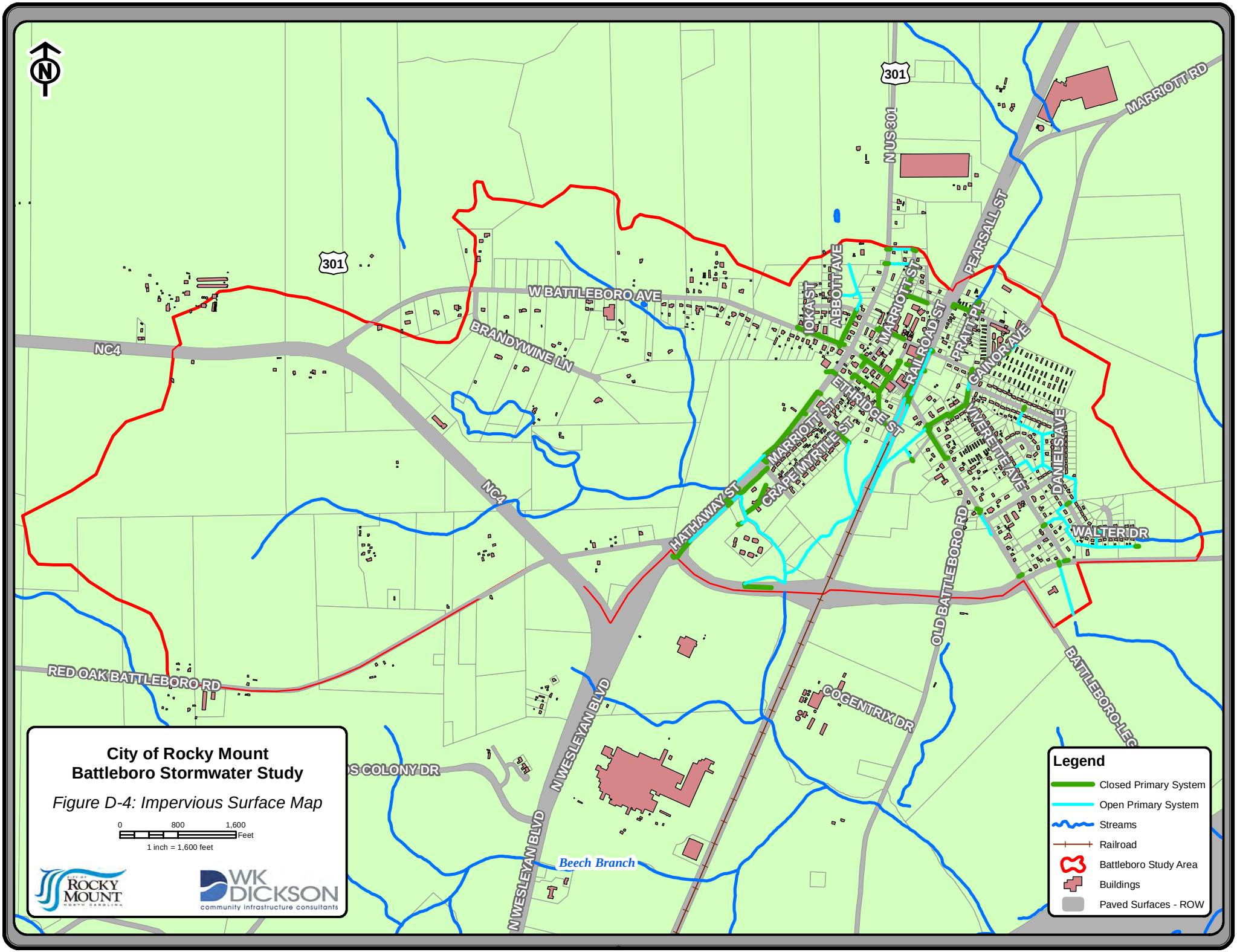
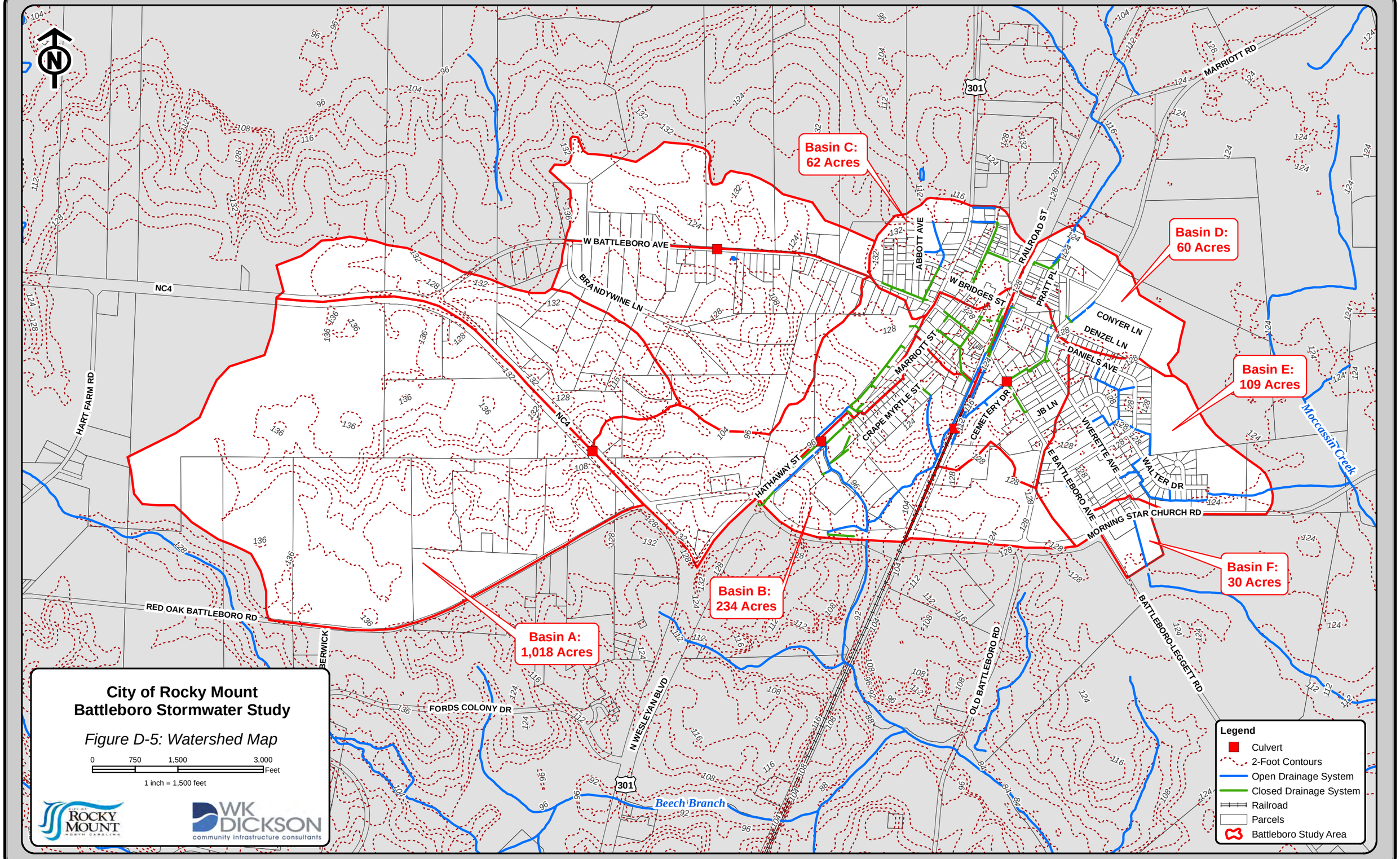
PEARSALL ST
N US 301
301
MARRIOTT RD
Beech Branch
City of Rocky Mount
Battleboro Stormwater Study
Figure D-3: Soils Map
0
800
1,600
Feet
1 inch = 1,600 feet
Legend
Closed Primary System
Open Primary System
Streams
Railroad
Battleboro Study Area
Hydrologic Soils Group
A
A/D
B
B/D
C
C/D
D
W


N
301
301
MARRIOTT RD
N US 301
PEARSALL ST
W BATTLEBORO AVE
BRANDYWINE LN
NC4
NC4
OAK ST
ABBOTT AVE
MARRIOTT ST
RAILROAD ST
PRATT PL
CANOPY AVE
ETHERIDGE ST
MARRIOTT ST
CRAPE MYRTLE ST
HATHAWAY ST
DANIEL ST AVE
WALTER DR
OLD BATTLEBORO RD
RED OAK BATTLEBORO RD
N WESLEYAN BLVD
N WESLEYAN BLVD
COGENTRIX DR
BATTLEBORO-LEG
Beech Branch
City of Rocky Mount
Battleboro Stormwater Study
Figure D-4: Impervious Surface Map
0
800
1,600
Feet
1 inch = 1,600 feet
ROCKY MOUNT
WK DICKSON
community infrastructure consultants
Legend
Closed Primary System
Open Primary System
Streams
Railroad
Battleboro Study Area
Buildings
Paved Surfaces - ROW


Basin A:
1,018 Acres
Basin B:
234 Acres
Basin C:
62 Acres
Basin D:
60 Acres
Basin E:
109 Acres
Basin F:
30 Acres
W BATTLEBORO AVE
BRANDYWINE LN
NC4
HART FARM RD
RED OAK BATTLEBORO RD
FORDS COLONY DR
N WESLEYAN BLVD
HATHAWAY ST
MARRIOTT ST
CRAPE MYRTLE ST
ABBOTT AVE
RAILROAD ST
W BRIDGES ST
PRATT PL
CONYER LN
DENZEL LN
DANIELS AVE
CEMETERY DR
JB LN
VIVERETTE AVE
WALTER DR
E BATTLEBORO AVE
MORNING STAR CHURCH RD
MARRIOTT RD
OLD BATTLEBORO RD
BATTLEBORO-LEGGETT RD
301
Beech Branch
Moccasin Creek
City of Rocky Mount
Battleboro Stormwater Study
Figure D-5: Watershed Map
0 750 1,500 3,000 Feet
1 inch = 1,500 feet
Legend
Culvert
2-Foot Contours
Open Drainage System
Closed Drainage System
Railroad
Parcels
Battleboro Study Area

Appendix E:
Hydrology Calculations

List of Contents:

1. Pervious Runoff Curve Numbers

SCS Runoff Curve Number - Existing Conditions

Project: Battleboro Stormwater Study
Prepared by :EVH
Checked by:
Date: April 2015

Basin: A-1

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Agricultural (A-1)	A	62	268.45	0.41945	16644
Agricultural (A-1)	A/D	81	34.70	0.05423	2811
Agricultural (A-1)	B	71	48.99	0.07654	3478
Agricultural (A-1)	B/D	81	104.62	0.16347	8474
Agricultural (A-1)	D	81	0.70	0.00110	57
		Totals =	457.47	0.71479	31464

Total (weighted) RCN = total product/total area = 68.78

RCN used = 69

Basin: A-2

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Agricultural (A-1)	A	62	53.31	0.08330	3305
Agricultural (A-1)	A/D	81	5.72	0.00894	463
Agricultural (A-1)	B	71	19.05	0.02977	1353
Agricultural (A-1)	B/D	81	21.85	0.03414	1770
Agricultural (A-1)	D	81	9.17	0.01433	743
Heavy Industrial (I-2)	A	68	2.00	0.00312	136
Water (W)	-	100	8.61	0.01345	861
		Totals =	119.71	0.18705	8631

Total (weighted) RCN = total product/total area = 72.10

RCN used = 72

Basin: A-3

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Agricultural (A-1)	A	62	30.34	0.04741	1881
Agricultural (A-1)	A/D	81	3.91	0.00611	317
Agricultural (A-1)	B	71	24.81	0.03876	1761
Agricultural (A-1)	B/D	81	2.90	0.00453	235
Agricultural (A-1)	D	81	36.36	0.05681	2945
Water (W)	-	100	3.39	0.00529	339
		Totals =	101.70	0.15891	7478

Total (weighted) RCN = total product/total area = 73.53

RCN used = 74

SCS Runoff Curve Number - Existing Conditions

Project: Battleboro Stormwater Study
Prepared by :EVH
Checked by:
Date: April 2015

Basin: A-4

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Agricultural (A-1)	A	62	75.48	0.11793	4680
Agricultural (A-1)	A/D	81	22.97	0.03589	1861
Agricultural (A-1)	B	71	13.24	0.02069	940
Agricultural (A-1)	B/D	81	6.28	0.00981	509
Agricultural (A-1)	D	81	28.62	0.04472	2318
Residential – Low Density Single Family (R-10)	A	39	3.53	0.00551	137
Residential – Low Density Single Family (R-10)	A/D	80	0.82	0.00128	66
Residential – Low Density Single Family (R-10)	B/D	80	2.54	0.00396	203
Residential – Low Density Single Family (R-10)	D	80	2.33	0.00364	186
		Totals =	155.80	0.24344	10900

Total (weighted) RCN = total product/total area = 69.96

RCN used = 70

Basin: A-5

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Agricultural (A-1)	A	62	77.60	0.12125	4811
Agricultural (A-1)	A/D	81	32.77	0.05120	2654
Agricultural (A-1)	B/D	81	2.48	0.00387	201
Agricultural (A-1)	C	78	7.04	0.01100	549
Agricultural (A-1)	D	81	0.37	0.00058	30
Commercial Corridor District (B-2)	A	68	0.47	0.00074	32
Office/Institutional (O-I)	A	68	0.41	0.00063	28
Residential – Low Density Single Family (R-10)	A	39	5.22	0.00816	204
		Totals =	126.36	0.19743	8509

Total (weighted) RCN = total product/total area = 67.34

RCN used = 67

Basin: B-1

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Manufactured Home Park (MHP)	A	68	0.32	0.00050	22
Manufactured Home Park (MHP)	C	86	2.40	0.00376	207
Residential – Low Density Single Family (R-10)	A	39	1.75	0.00273	68
Residential – Low Density Single Family (R-10)	C	74	15.18	0.02372	1123
Residential – Low Density Single Family (R-10)	D	80	0.02	0.00003	2
Residential – Medium Density Single Family (R-6)	D	84	0.33	0.00051	27
		Totals =	20.00	0.03125	1449

Total (weighted) RCN = total product/total area = 72.46

RCN used = 72

SCS Runoff Curve Number - Existing Conditions

Project: Battleboro Stormwater Study
Prepared by :EVH
Checked by:
Date: April 2015

Basin: B-2

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Agricultural (A-1)	A	62	48.41	0.07564	3002
Agricultural (A-1)	A/D	81	0.88	0.00137	71
Agricultural (A-1)	B/D	81	2.04	0.00319	165
Agricultural (A-1)	C	78	1.80	0.00281	140
Agricultural (A-1)	D	81	2.84	0.00443	230
Manufactured Home Park (MHP)	A	68	0.32	0.00050	22
Residential – Low Density Single Family (R-10)	A	39	5.60	0.00874	218
Residential – Low Density Single Family (R-10)	B/D	80	0.74	0.00115	59
Residential – Low Density Single Family (R-10)	C	74	5.91	0.00923	437
Residential – Low Density Single Family (R-10)	D	80	1.47	0.00229	117
Residential – Medium Density Single Family (R-6)	C	79	0.09	0.00015	7
		Totals =	70.09	0.10951	4469

Total (weighted) RCN = total product/total area = 63.76

RCN used = 64

Basin: B-3

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Agricultural (A-1)	A	62	28.96	0.04525	1796
Agricultural (A-1)	A/D	81	14.27	0.02230	1156
Agricultural (A-1)	B/D	81	4.45	0.00696	361
Agricultural (A-1)	C	78	0.06	0.00009	4
Agricultural (A-1)	D	81	0.67	0.00105	54
Commercial Corridor District (B-2)	A	68	0.60	0.00093	41
Central Business District (B-4)	A	68	4.28	0.00669	291
Commercial Services District (B-5)	A	68	3.37	0.00526	229
Office/Institutional (O-I)	A	68	1.51	0.00235	102
Residential – Low Density Single Family (R-10)	A	39	19.84	0.03099	774
Residential – Low Density Single Family (R-10)	A/D	80	1.18	0.00184	94
Residential – Low Density Single Family (R-10)	B/D	80	0.96	0.00150	77
Residential – High Density Single Family (R-6MFA)	A	49	9.98	0.01560	489
Residential – High Density Single Family (R-6MFA)	A/D	84	2.13	0.00333	179
		Totals =	92.25	0.14414	5647

Total (weighted) RCN = total product/total area = 61.21

RCN used = 61

SCS Runoff Curve Number - Existing Conditions

Project: Battleboro Stormwater Study
Prepared by :EVH
Checked by:
Date: April 2015

Basin: C

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Agricultural (A-1)	A	62	3.83	0.00598	237
Agricultural (A-1)	B	71	0.17	0.00026	12
Agricultural (A-1)	B/D	81	2.46	0.00385	199
Agricultural (A-1)	D	81	5.60	0.00875	454
Commercial Corridor District (B-2)	A	68	2.25	0.00351	153
Central Business District (B-4)	A	68	0.62	0.00096	42
Commercial Services District (B-5)	A	68	7.98	0.01246	542
Commercial Services District (B-5)	B/D	89	0.36	0.00056	32
Commercial Services District (B-5)	D	89	0.01	0.00001	1
Residential – Low Density Single Family (R-10)	A	39	7.52	0.01174	293
Residential – Low Density Single Family (R-10)	B/D	80	6.21	0.00970	497
Residential – Low Density Single Family (R-10)	D	80	2.57	0.00401	205
Residential – Medium Density Single Family (R-6)	A	49	8.20	0.01281	402
Residential – Medium Density Single Family (R-6)	B/D	84	0.01	0.00001	1
Residential – Medium Density Single Family (R-6)	D	84	0.67	0.00105	56
		Totals =	48.44	0.07568	3126

Total (weighted) RCN = total product/total area = 64.54

RCN used = 65

Basin: D

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Agricultural (A-1)	B/D	81	6.25	0.00977	507
Agricultural (A-1)	C	78	14.16	0.02212	1104
Agricultural (A-1)	C/D	81	2.77	0.00433	224
Commercial Services District (B-5)	B/D	89	2.29	0.00358	204
Commercial Services District (B-5)	C	86	2.59	0.00404	223
Manufactured Home Park (MHP)	C	86	8.21	0.01282	706
Manufactured Home Park (MHP)	C/D	89	3.33	0.00520	296
Residential – Low Density Single Family (R-10)	C	74	2.55	0.00399	189
Residential – Low Density Single Family (R-10)	C/D	80	0.27	0.00042	22
Residential – Medium Density Single Family (R-6)	B/D	84	0.15	0.00023	13
Residential – Medium Density Single Family (R-6)	C	79	8.20	0.01280	647
		Totals =	50.76	0.07931	4134

Total (weighted) RCN = total product/total area = 81.44

RCN used = 81

SCS Runoff Curve Number - Existing Conditions

Project: Battleboro Stormwater Study
Prepared by :EVH
Checked by:
Date: April 2015

Basin: E

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Agricultural (A-1)	A	62	10.97	0.01714	680
Agricultural (A-1)	C	78	21.63	0.03380	1687
Agricultural (A-1)	C/D	81	4.48	0.00699	362
Manufactured Home Park (MHP)	C	86	0.52	0.00081	45
Residential – Low Density Single Family (R-10)	A	39	0.67	0.00105	26
Residential – Low Density Single Family (R-10)	C	74	37.70	0.05891	2790
Residential – Low Density Single Family (R-10)	C/D	80	0.71	0.00111	57
Residential – Medium Density Single Family (R-6)	A	49	5.12	0.00800	251
Residential – Medium Density Single Family (R-6)	C	79	11.04	0.01725	872
Residential – Medium Density Single Family (R-6)	C/D	84	3.58	0.00559	300
		Totals =	96.42	0.15066	7071

Total (weighted) RCN = total product/total area = 73.34

RCN used = 73

Basin: F

Landuse	Soil Group	RCN	Area (Acres)	Area (Sq. Mi.)	Product of RCN and Area
Agricultural (A-1)	A	62	4.34	0.00678	269
Agricultural (A-1)	C	78	8.99	0.01405	701
Agricultural (A-1)	C/D	81	2.31	0.00361	187
Residential – Low Density Single Family (R-10)	A	39	0.01	0.00002	0
Residential – Low Density Single Family (R-10)	C	74	0.53	0.00082	39
Residential – Low Density Single Family (R-10)	C/D	80	0.09	0.00015	8
Residential – Medium Density Single Family (R-6)	A	49	0.11	0.00016	5
Residential – Medium Density Single Family (R-6)	C	79	4.00	0.00625	316
Residential – Medium Density Single Family (R-6)	C/D	84	0.31	0.00048	26
		Totals =	20.68	0.03232	1551

Total (weighted) RCN = total product/total area = 75.00

RCN used = 75

Appendix F:
SWMM Hydrologic Input

List of Contents:

1. Summary Table with SWMM Input

SWMM Hydrologic Input - Summary Table							
Drainage Basin ID	**Drainage Area (Acres)**	**Existing Pervious RCN**	**Existing Percent Impervious (%)**	**Future Pervious RCN**	**Future Percent Impervious (%)**	**Basin Slope (%)**	**Basin Width (feet)**
A-1	473	69	3%	69	22%	0.37%	2,750
A-2	132	72	9%	72	25%	0.56%	948
A-3	104	74	2%	74	2%	0.45%	1,690
A-4	166	70	6%	70	6%	0.82%	2,287
A-5	150	67	14%	67	17%	0.49%	1,769
B-1	26	72	22%	72	22%	0.64%	790
B-2	85	64	18%	64	18%	0.48%	1,494
B-3	121	61	24%	61	24%	0.85%	1,243
C	63	65	23%	65	23%	0.87%	1,495
D	60	81	15%	81	15%	0.25%	1,089
E	115	73	17%	73	17%	0.13%	1,099
F	25	75	16%	75	16%	0.18%	946
Area #1-10	2.5	76	35%	76	35%	0.31%	164
Area #1 -20	7.2	74	30%	74	30%	0.36%	285
Area #1-30	1.7	74	27%	74	27%	0.38%	145
Area #1-40	7.4	74	18%	74	18%	0.30%	479
Area #1 -50	5.9	74	29%	74	29%	0.38%	244
Area #1 -60	6.3	74	26%	74	26%	0.62%	424
Area #1-70	3.8	74	30%	74	30%	0.64%	262
Area #1-80	2.7	74	48%	74	48%	0.51%	301
Area #1-90	11.6	70	20%	70	20%	0.27%	345
Area #1 -100	5.6	67	22%	67	22%	0.41%	252
Area #1 -110	1.8	48	25%	48	25%	0.44%	176
Area #1 -120	2.6	72	33%	72	33%	0.59%	165
Area #1 -130	6	48	31%	48	31%	0.58%	380
Area #1-140	42.8	59	10%	59	10%	0.36%	568
Area #1-150	0.8	80	71%	80	71%	0.44%	75

Appendix G:
SWMM Output

List of Contents:

1. Existing Conditions Output Report – Project Area 1
    a. 2-year Storm Event
    b. 10-year Storm Event
    c. 25-year Storm Event
    d. 50-year Storm Event
    e. 100-year Storm Event

2. Existing Conditions Output Report – Project Areas 2, 4, 5, and 6
    a. 2-year Storm Event
    b. 10-year Storm Event
    c. 25-year Storm Event
    d. 50-year Storm Event
    e. 100-year Storm Event

3. Future Conditions Output Report – Project Areas 2, 4, 5, and 6
    a. 2-year Storm Event
    b. 10-year Storm Event
    c. 25-year Storm Event
    d. 50-year Storm Event
    e. 100-year Storm Event

4. Alternatives Output Report – Project Area 1
    a. 2-year Storm Event
    b. 10-year Storm Event
    c. 25-year Storm Event
    d. 50-year Storm Event
    e. 100-year Storm Event

5. Alternatives Output Report – Project Areas 2, 4, 5, and 6
    a. 2-year Storm Event
    b. 10-year Storm Event
    c. 25-year Storm Event
    d. 50-year Storm Event
    e. 100-year Storm Event

Existing Conditions - Project Area 1 (2-Year)

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Existing Conditions - Project Area 1 (2-Year)

***********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
***********************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-29-2015 00:00:00
Ending Date .............. MAY-01-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 02: maximum depth increased for Node 126-128_Daniels

WARNING 02: maximum depth increased for Node 138-140_Daniels

WARNING 02: maximum depth increased for Node D/S_Viverette_2

WARNING 02: maximum depth increased for Node U/S_Park#2

WARNING 02: maximum depth increased for Node D/S_Park#2

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......        32.556         3.596
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........        15.602         1.723
Surface Runoff ...........        16.541         1.827
Final Surface Storage ....         0.426         0.047
Continuity Error (%) .....        -0.038


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......        16.541         5.390
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........        16.538         5.389
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.003         0.001
Continuity Error (%) .....         0.000


**************************
Time-Step Critical Elements
**************************
Link 24_RCP_Park#2 (51.89%)
```

Link 24_RCP_Park#1 (24.05%)
Link 24_RCP_Daniels_3 (2.14%)

****
Highest Flow Instability Indexes
****
All links are stable.

****
Routing Time Step Summary
****

Minimum Time Step	:	0.50 sec
Average Time Step	:	5.91 sec
Maximum Time Step	:	15.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	2.00

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Area#1-10	3.60	0.00	0.00	1.12	2.43	0.16	2.68	0.677
Area#1-20	3.60	0.00	0.00	1.29	2.27	0.44	6.33	0.630
Area#1-30	3.60	0.00	0.00	1.32	2.23	0.11	1.75	0.619
Area#1-40	3.60	0.00	0.00	1.50	2.05	0.41	5.57	0.571
Area#1-50	3.60	0.00	0.00	1.30	2.25	0.36	5.14	0.626
Area#1-60	3.60	0.00	0.00	1.34	2.21	0.38	6.20	0.615
Area#1-70	3.60	0.00	0.00	1.27	2.28	0.23	4.03	0.635
Area#1-80	3.60	0.00	0.00	0.94	2.62	0.19	3.79	0.729
Area#1-90	3.60	0.00	0.00	1.64	1.91	0.60	6.64	0.532
Area#1-100	3.60	0.00	0.00	1.67	1.88	0.29	3.83	0.523
Area#1-110	3.60	0.00	0.00	2.05	1.50	0.07	1.23	0.417
Area#1-120	3.60	0.00	0.00	1.28	2.28	0.16	2.71	0.633
Area#1-130	3.60	0.00	0.00	0.79	2.77	0.45	9.01	0.770
Area#1-140	3.60	0.00	0.00	2.29	1.26	1.47	10.91	0.351
Area#1-150	3.60	0.00	0.00	0.43	3.13	0.07	1.37	0.869

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
U/S_Daniels_1	JUNCTION	0.23	0.98	126.51	0 13:00
D/S_Daniels_1	JUNCTION	0.19	0.79	126.17	0 13:00
126-128_Daniels	JUNCTION	0.38	1.63	125.61	0 13:08
U/S_Daniels_2	JUNCTION	0.19	0.77	125.74	0 13:00
D/S_Daniels_2	JUNCTION	0.18	1.00	125.62	0 13:08
138-140_Daniels	JUNCTION	0.62	2.43	125.56	0 13:09
U/S_Viverette_1	JUNCTION	0.50	3.43	127.38	0 13:00
D/S_Viverette_1	JUNCTION	0.44	1.97	125.58	0 13:09
U/S_Daniels_3	JUNCTION	0.99	3.05	125.54	0 13:09
D/S_Daniels_3	JUNCTION	0.81	2.27	124.75	0 13:15
U/S_Walter_1	JUNCTION	0.72	2.36	124.55	0 13:17
D/S_Walter_1	JUNCTION	0.85	2.36	124.15	0 13:30
U/S_Viverette_2	JUNCTION	0.42	2.16	125.04	0 13:00
D/S_Viverette_2	JUNCTION	0.57	1.91	124.08	0 13:32
108-110_Walter	JUNCTION	1.03	2.57	124.07	0 13:31
U/S_Pearce	JUNCTION	0.32	1.56	123.81	0 13:35
D/S_Pearce	JUNCTION	0.28	1.66	123.81	0 13:35
U/S_Walter_2	JUNCTION	0.63	2.56	123.81	0 13:35
D/S_Walter_2	JUNCTION	0.66	2.63	123.78	0 13:35
120-122_Walter	JUNCTION	0.78	2.78	123.78	0 13:35

U/S_Park#1	JUNCTION	1.25	3.75	123.13	0	13:38
D/S_Park#1	JUNCTION	0.81	1.87	121.00	0	13:00
U/S_Park#2	JUNCTION	1.42	4.26	123.76	0	13:35
D/S_Park#2	JUNCTION	1.30	3.71	123.16	0	13:38
Outfall	OUTFALL	0.81	1.87	120.62	0	13:00

****
Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
U/S_Daniels_1	JUNCTION	2.68	2.68	0 13:00	0.162	0.162
D/S_Daniels_1	JUNCTION	0.00	2.68	0 13:00	0.000	0.162
126-128_Daniels	JUNCTION	6.33	10.30	0 13:00	0.443	0.711
U/S_Daniels_2	JUNCTION	1.75	1.75	0 13:00	0.106	0.106
D/S_Daniels_2	JUNCTION	0.00	1.74	0 13:00	0.000	0.106
138-140_Daniels	JUNCTION	5.14	16.37	0 13:00	0.358	1.484
U/S_Viverette_1	JUNCTION	5.57	5.57	0 13:00	0.414	0.414
D/S_Viverette_1	JUNCTION	0.00	5.53	0 13:00	0.000	0.414
U/S_Daniels_3	JUNCTION	6.20	17.75	0 13:01	0.375	1.858
D/S_Daniels_3	JUNCTION	0.00	16.98	0 13:04	0.000	1.858
U/S_Walter_1	JUNCTION	4.02	18.99	0 13:00	0.234	2.092
D/S_Walter_1	JUNCTION	0.00	18.44	0 13:11	0.000	2.092
U/S_Viverette_2	JUNCTION	6.64	6.64	0 13:00	0.602	0.602
D/S_Viverette_2	JUNCTION	3.79	10.41	0 13:00	0.191	0.793
108-110_Walter	JUNCTION	3.83	29.83	0 13:00	0.287	3.171
U/S_Pearce	JUNCTION	1.37	1.37	0 12:59	0.066	0.066
D/S_Pearce	JUNCTION	0.00	1.33	0 13:00	0.000	0.066
U/S_Walter_2	JUNCTION	2.71	3.27	0 12:46	0.158	0.224
D/S_Walter_2	JUNCTION	0.00	2.92	0 12:45	0.000	0.224
120-122_Walter	JUNCTION	10.24	37.70	0 13:00	0.528	3.924
U/S_Park#1	JUNCTION	0.00	27.72	0 13:33	0.000	3.923
D/S_Park#1	JUNCTION	10.90	34.67	0 13:00	1.466	5.389
U/S_Park#2	JUNCTION	0.00	30.07	0 13:01	0.000	3.923
D/S_Park#2	JUNCTION	0.00	27.87	0 13:04	0.000	3.923
Outfall	OUTFALL	0.00	34.59	0 13:00	0.000	5.389

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Node Surcharge Summary
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No nodes were surcharged.

****
Node Flooding Summary
****

No nodes were flooded.

****
Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Outfall	98.95	10.71	34.59	5.389
System	98.95	10.71	34.59	5.389

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Link Flow Summary
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Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
15_RCP_Daniels_1	CONDUIT	2.68	0	13:00	2.95	0.64	0.70
Over_15_RCP_Daniels_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_1	CHANNEL	2.58	0	13:00	0.83	0.01	0.26
15_CMP_Daniels_2	CONDUIT	1.74	0	13:00	2.55	0.47	0.69
Over_15_CMP_Daniels_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_2	CONDUIT	1.40	0	13:00	0.64	0.03	0.44
CHANNEL_3	CHANNEL	7.86	0	13:00	1.02	0.02	0.30
CHANNEL_4	CONDUIT	3.61	0	13:14	0.44	0.05	0.55
12_RCP_Viverette_1	CONDUIT	5.53	0	13:00	7.05	1.54	1.00
Over_12_RCP_Viverette_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_5	CONDUIT	13.27	0	13:09	0.72	0.10	0.68
24_RCP_Daniels_3	CONDUIT	16.98	0	13:04	5.41	5.17	1.00
Over_24_RCP_Daniels_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_6	CONDUIT	16.57	0	13:10	0.93	0.21	0.51
15_RCP_Viverette_2	CONDUIT	6.62	0	13:00	5.40	0.77	1.00
Over_15_RCP_Viverette_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_7	CONDUIT	9.87	0	13:00	0.99	0.07	0.56
15_RCP_Pearce	CONDUIT	1.33	0	13:00	3.60	0.43	1.00
Over_15_RCP_Pearce	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
18_RCP_Walter_2	CONDUIT	2.92	0	12:45	2.07	0.55	1.00
Over_18_RCP_Walter_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_8	CONDUIT	1.11	0	12:42	0.33	0.00	0.53
CHANNEL_9	CONDUIT	2.67	0	12:45	0.62	0.07	0.90
CHANNEL_10	CONDUIT	26.65	0	13:02	1.51	0.37	0.67
CHANNEL_11	CONDUIT	18.31	0	13:11	0.88	0.20	0.62
30_RCP_Walter_1	CONDUIT	18.44	0	13:11	3.88	0.47	0.94
Over_30_RCP_Walter_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
24_RCP_Park#1	CONDUIT	27.70	0	13:38	8.97	1.62	0.97
Park#1-OVER	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_12	CONDUIT	30.07	0	13:01	1.76	0.12	0.85
CHANNEL_13	CONDUIT	34.59	0	13:00	2.55	0.20	0.47
24_RCP_Park#2	CONDUIT	27.87	0	13:04	8.87	3.48	1.00
CHANNEL_14	CONDUIT	27.72	0	13:33	1.05	0.58	0.93
Park#2-OVER	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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Flow Classification Summary
****

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
15_RCP_Daniels_1	1.00	0.01	0.00	0.00	0.97	0.03	0.00	0.00	0.70	0.0000
Over_15_RCP_Daniels_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_1	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.12	0.0000
15_CMP_Daniels_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.64	0.0000
Over_15_CMP_Daniels_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
CHANNEL_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.13	0.0000
CHANNEL_4	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.07	0.0000
12_RCP_Viverette_1	1.00	0.01	0.00	0.00	0.43	0.56	0.00	0.00	0.80	0.0001
Over_12_RCP_Viverette_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_5	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.10	0.0000
24_RCP_Daniels_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.34	0.0004
Over_24_RCP_Daniels_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_6	1.00	0.01	0.01	0.00	0.99	0.00	0.00	0.00	0.13	0.0000
15_RCP_Viverette_2	1.00	0.01	0.00	0.00	0.46	0.54	0.00	0.00	1.02	0.0001
Over_15_RCP_Viverette_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_7	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
15_RCP_Pearce	1.00	0.01	0.00	0.00	0.44	0.55	0.00	0.00	0.72	0.0000
Over_15_RCP_Pearce	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
18_RCP_Walter_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.31	0.0000
Over_18_RCP_Walter_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_8	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.03	0.0000
CHANNEL_9	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.05	0.0000
CHANNEL_10	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.17	0.0000

CHANNEL_11	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
30_RCP_Walter_1	1.00	0.01	0.00	0.00	0.80	0.19	0.00	0.00	0.70	0.0000
Over_30_RCP_Walter_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
24_RCP_Park#1	1.00	0.01	0.01	0.00	0.88	0.09	0.00	0.00	0.79	0.0001
Park#1-OVER	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_12	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.18	0.0000
CHANNEL_13	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.34	0.0000
24_RCP_Park#2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.38	0.0002
CHANNEL_14	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.13	0.0000
Park#2-OVER	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
12_RCP_Viverette_1	2.06	2.06	2.06	0.49	1.78
24_RCP_Daniels_3	1.30	1.30	1.30	5.38	1.30
15_RCP_Viverette_2	1.55	1.55	1.55	0.01	0.31
15_RCP_Pearce	1.40	1.40	1.40	0.01	0.01
18_RCP_Walter_2	2.43	2.43	2.43	0.01	0.01
24_RCP_Park#1	0.01	0.01	0.01	3.07	0.01
24_RCP_Park#2	3.40	3.40	3.40	4.84	3.40

Analysis begun on: Mon Dec 07 15:31:19 2015
Analysis ended on: Mon Dec 07 15:31:20 2015
Total elapsed time: 00:00:01

Existing Conditions - Project Area 1 (10-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
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Existing Conditions - Project Area 1 (10-Year)

***********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
***********************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-29-2015 00:00:00
Ending Date .............. MAY-01-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 02: maximum depth increased for Node 126-128_Daniels

WARNING 02: maximum depth increased for Node 138-140_Daniels

WARNING 02: maximum depth increased for Node D/S_Viverette_2

WARNING 02: maximum depth increased for Node U/S_Park#2

WARNING 02: maximum depth increased for Node D/S_Park#2

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......        47.838         5.284
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........        19.228         2.124
Surface Runoff ...........        28.206         3.116
Final Surface Storage ....         0.425         0.047
Continuity Error (%) .....        -0.044


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......        28.206         9.191
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........        28.203         9.190
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.003         0.001
Continuity Error (%) .....        -0.001


**************************
Time-Step Critical Elements
**************************
Link 24_RCP_Park#2 (52.25%)
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Link 24_RCP_Park#1 (18.07%)
Link 15_RCP_Daniels_1 (3.22%)
Link CHANNEL_13 (3.13%)
Link 15_CMP_Daniels_2 (2.45%)

****
Highest Flow Instability Indexes
****
All links are stable.

****
Routing Time Step Summary
****
Minimum Time Step : 0.50 sec
Average Time Step : 5.75 sec
Maximum Time Step : 15.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.00

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Area#1-10	5.28	0.00	0.00	1.31	3.93	0.26	4.58	0.744
Area#1-20	5.28	0.00	0.00	1.52	3.72	0.73	11.03	0.704
Area#1-30	5.28	0.00	0.00	1.57	3.67	0.17	3.09	0.695
Area#1-40	5.28	0.00	0.00	1.77	3.47	0.70	10.43	0.656
Area#1-50	5.28	0.00	0.00	1.54	3.70	0.59	9.01	0.700
Area#1-60	5.28	0.00	0.00	1.59	3.65	0.62	11.02	0.691
Area#1-70	5.28	0.00	0.00	1.50	3.74	0.38	7.02	0.708
Area#1-80	5.28	0.00	0.00	1.11	4.14	0.30	6.17	0.783
Area#1-90	5.28	0.00	0.00	1.97	3.27	1.03	12.02	0.618
Area#1-100	5.28	0.00	0.00	2.04	3.20	0.49	7.00	0.605
Area#1-110	5.28	0.00	0.00	2.70	2.54	0.13	2.19	0.481
Area#1-120	5.28	0.00	0.00	1.53	3.71	0.26	4.68	0.703
Area#1-130	5.28	0.00	0.00	1.04	4.21	0.69	13.82	0.796
Area#1-140	5.28	0.00	0.00	2.88	2.36	2.74	19.85	0.447
Area#1-150	5.28	0.00	0.00	0.50	4.75	0.10	2.10	0.899

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
U/S_Daniels_1	JUNCTION	0.28	1.65	127.18	0 13:00
D/S_Daniels_1	JUNCTION	0.25	1.73	127.11	0 13:48
126-128_Daniels	JUNCTION	0.53	3.13	127.11	0 13:49
U/S_Daniels_2	JUNCTION	0.30	2.14	127.11	0 13:49
D/S_Daniels_2	JUNCTION	0.30	2.49	127.11	0 13:49
138-140_Daniels	JUNCTION	0.79	3.97	127.10	0 13:49
U/S_Viverette_1	JUNCTION	0.67	4.17	128.12	0 13:00
D/S_Viverette_1	JUNCTION	0.59	3.50	127.11	0 13:49
U/S_Daniels_3	JUNCTION	1.18	4.60	127.09	0 13:49
D/S_Daniels_3	JUNCTION	0.97	3.50	125.98	0 13:51
U/S_Walter_1	JUNCTION	0.91	3.74	125.93	0 13:51
D/S_Walter_1	JUNCTION	1.04	3.54	125.33	0 13:46
U/S_Viverette_2	JUNCTION	0.62	3.10	125.98	0 13:00
D/S_Viverette_2	JUNCTION	0.75	3.14	125.31	0 13:46
108-110_Walter	JUNCTION	1.24	3.80	125.30	0 13:46
U/S_Pearce	JUNCTION	0.52	2.94	125.19	0 13:46
D/S_Pearce	JUNCTION	0.48	3.04	125.19	0 13:47
U/S_Walter_2	JUNCTION	0.85	3.94	125.19	0 13:46

D/S_Walter_2	JUNCTION	0.90	4.04	125.19	0	13:46
120-122_Walter	JUNCTION	1.01	4.19	125.19	0	13:46
U/S_Park#1	JUNCTION	1.52	5.63	125.01	0	13:48
D/S_Park#1	JUNCTION	0.94	2.27	121.40	0	13:52
U/S_Park#2	JUNCTION	1.70	5.65	125.15	0	13:47
D/S_Park#2	JUNCTION	1.58	5.61	125.06	0	13:48
Outfall	OUTFALL	0.94	2.27	121.02	0	13:52

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Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
U/S_Daniels_1	JUNCTION	4.57	4.57	0 12:59	0.261	0.261
D/S_Daniels_1	JUNCTION	0.00	4.55	0 13:00	0.000	0.261
126-128_Daniels	JUNCTION	11.02	16.56	0 12:59	0.727	1.164
U/S_Daniels_2	JUNCTION	3.09	3.09	0 12:59	0.174	0.174
D/S_Daniels_2	JUNCTION	0.00	3.12	0 12:59	0.000	0.174
138-140_Daniels	JUNCTION	8.99	23.13	0 12:57	0.589	2.453
U/S_Viverette_1	JUNCTION	10.41	10.41	0 12:59	0.700	0.700
D/S_Viverette_1	JUNCTION	0.00	10.37	0 13:00	0.000	0.700
U/S_Daniels_3	JUNCTION	11.00	23.56	0 12:58	0.619	3.072
D/S_Daniels_3	JUNCTION	0.00	21.54	0 13:00	0.000	3.072
U/S_Walter_1	JUNCTION	7.01	24.69	0 12:59	0.383	3.455
D/S_Walter_1	JUNCTION	0.00	22.24	0 13:55	0.000	3.455
U/S_Viverette_2	JUNCTION	12.00	12.00	0 12:59	1.028	1.029
D/S_Viverette_2	JUNCTION	6.16	18.05	0 13:00	0.301	1.329
108-110_Walter	JUNCTION	6.99	41.81	0 13:00	0.487	5.272
U/S_Pearce	JUNCTION	2.09	2.09	0 12:59	0.101	0.101
D/S_Pearce	JUNCTION	0.00	2.86	0 12:56	0.000	0.102
U/S_Walter_2	JUNCTION	4.68	6.50	0 12:58	0.258	0.362
D/S_Walter_2	JUNCTION	0.00	5.38	0 12:59	0.000	0.364
120-122_Walter	JUNCTION	16.00	50.67	0 12:54	0.816	6.452
U/S_Park#1	JUNCTION	0.00	39.48	0 13:47	0.000	6.446
D/S_Park#1	JUNCTION	19.83	51.29	0 13:52	2.744	9.190
U/S_Park#2	JUNCTION	0.00	39.50	0 13:45	0.000	6.446
D/S_Park#2	JUNCTION	0.00	39.49	0 13:46	0.000	6.445
Outfall	OUTFALL	0.00	51.29	0 13:52	0.000	9.190

****
Node Surcharge Summary
****

Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
120-122_Walter	JUNCTION	2.24	0.188	0.812

****
Node Flooding Summary
****

No nodes were flooded.

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal

Outfall	99.03	13.84	51.29	9.190
System	99.03	13.84	51.29	9.190

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
15_RCP_Daniels_1	CONDUIT	4.55	0 13:00	3.71	1.09	1.00
Over_15_RCP_Daniels_1	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
CHANNEL_1	CHANNEL	3.99	0 12:53	0.88	0.01	0.54
15_CMP_Daniels_2	CONDUIT	3.05	0 12:59	2.81	0.83	1.00
Over_15_CMP_Daniels_2	CONDUIT	1.13	0 13:29	0.33	0.00	0.05
CHANNEL_2	CONDUIT	2.38	0 12:59	0.73	0.06	0.92
CHANNEL_3	CHANNEL	10.05	0 12:54	0.91	0.02	0.53
CHANNEL_4	CONDUIT	7.94	0 13:02	0.38	0.11	0.93
12_RCP_Viverette_1	CONDUIT	6.76	0 12:41	8.61	1.88	1.00
Over_12_RCP_Viverette_1	CONDUIT	5.58	0 13:00	1.35	0.00	0.03
CHANNEL_5	CONDUIT	16.28	0 14:13	0.71	0.12	1.00
24_RCP_Daniels_3	CONDUIT	21.54	0 13:00	6.86	6.56	1.00
Over_24_RCP_Daniels_3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
CHANNEL_6	CONDUIT	19.95	0 14:06	0.88	0.25	0.80
15_RCP_Viverette_2	CONDUIT	8.84	0 12:43	7.21	1.03	1.00
Over_15_RCP_Viverette_2	CONDUIT	4.90	0 13:00	1.23	0.00	0.03
CHANNEL_7	CONDUIT	16.64	0 13:00	1.08	0.12	0.87
15_RCP_Pearce	CONDUIT	2.08	0 12:58	3.74	0.68	1.00
Over_15_RCP_Pearce	CONDUIT	0.60	0 13:17	0.10	0.00	0.08
18_RCP_Walter_2	CONDUIT	3.03	0 12:39	1.96	0.57	1.00
Over_18_RCP_Walter_2	CONDUIT	4.71	0 12:58	0.53	0.00	0.41
CHANNEL_8	CONDUIT	1.92	0 12:58	0.31	0.01	0.87
CHANNEL_9	CONDUIT	3.22	0 12:54	0.51	0.08	1.00
CHANNEL_10	CONDUIT	33.30	0 13:46	1.57	0.46	0.98
CHANNEL_11	CONDUIT	22.26	0 14:04	0.77	0.25	0.92
30_RCP_Walter_1	CONDUIT	22.24	0 13:55	4.53	0.57	1.00
Over_30_RCP_Walter_1	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
24_RCP_Park#1	CONDUIT	36.43	0 13:36	11.60	2.13	1.00
Park#1-OVER	CONDUIT	3.15	0 13:48	1.01	0.00	0.02
CHANNEL_12	CONDUIT	39.50	0 13:45	1.55	0.15	1.00
CHANNEL_13	CONDUIT	51.29	0 13:52	2.83	0.30	0.57
24_RCP_Park#2	CONDUIT	33.64	0 13:03	10.71	4.21	1.00
CHANNEL_14	CONDUIT	39.48	0 13:47	0.99	0.82	1.00
Park#2-OVER	CONDUIT	28.64	0 13:47	2.45	0.01	0.09

****
Flow Classification Summary
****

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
15_RCP_Daniels_1	1.00	0.01	0.00	0.00	0.97	0.02	0.00	0.00	0.67	0.0001
Over_15_RCP_Daniels_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_1	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.11	0.0000
15_CMP_Daniels_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.59	0.0001
Over_15_CMP_Daniels_2	1.00	0.97	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.0000
CHANNEL_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
CHANNEL_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.13	0.0000
CHANNEL_4	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.07	0.0000
12_RCP_Viverette_1	1.00	0.01	0.00	0.00	0.46	0.53	0.00	0.00	0.79	0.0001
Over_12_RCP_Viverette_1	1.00	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.0000
CHANNEL_5	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.10	0.0000
24_RCP_Daniels_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.33	0.0004
Over_24_RCP_Daniels_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_6	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.12	0.0000
15_RCP_Viverette_2	1.00	0.01	0.00	0.00	0.50	0.49	0.00	0.00	0.96	0.0001
Over_15_RCP_Viverette_2	1.00	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.0000

CHANNEL_7	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.07	0.0000
15_RCP_Pearce	1.00	0.01	0.00	0.00	0.45	0.54	0.00	0.00	0.71	0.0002
Over_15_RCP_Pearce	1.00	0.94	0.01	0.00	0.05	0.00	0.00	0.00	0.00	0.0000
18_RCP_Walter_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.29	0.0001
Over_18_RCP_Walter_2	1.00	0.85	0.01	0.00	0.14	0.00	0.00	0.00	0.00	0.0000
CHANNEL_8	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.03	0.0000
CHANNEL_9	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.05	0.0000
CHANNEL_10	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.17	0.0000
CHANNEL_11	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
30_RCP_Walter_1	1.00	0.01	0.00	0.00	0.82	0.18	0.00	0.00	0.63	0.0000
Over_30_RCP_Walter_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
24_RCP_Park#1	1.00	0.01	0.01	0.00	0.91	0.07	0.00	0.00	0.65	0.0001
Park#1-OVER	1.00	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.0000
CHANNEL_12	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.18	0.0000
CHANNEL_13	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.34	0.0000
24_RCP_Park#2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.37	0.0005
CHANNEL_14	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.12	0.0001
Park#2-OVER	1.00	0.95	0.00	0.00	0.02	0.00	0.00	0.03	0.05	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
15_RCP_Daniels_1	2.02	2.02	2.02	0.14	0.18
15_CMP_Daniels_2	2.80	2.80	2.80	0.01	0.13
12_RCP_Viverette_1	4.11	4.11	4.11	2.07	3.09
24_RCP_Daniels_3	3.99	3.99	3.99	7.97	3.99
15_RCP_Viverette_2	4.24	4.24	4.24	0.08	0.82
15_RCP_Pearce	4.21	4.21	4.21	0.01	0.01
18_RCP_Walter_2	4.70	4.70	4.70	0.01	0.01
CHANNEL_9	3.61	3.61	3.61	0.01	0.01
30_RCP_Walter_1	3.58	3.58	3.58	0.01	2.81
24_RCP_Park#1	3.48	3.48	3.48	5.07	3.48
CHANNEL_12	2.24	2.24	2.24	0.01	0.01
24_RCP_Park#2	5.57	5.57	5.57	7.39	5.57
CHANNEL_14	3.63	3.63	3.63	0.01	0.01

Analysis begun on: Mon Dec 07 15:32:40 2015
Analysis ended on: Mon Dec 07 15:32:41 2015
Total elapsed time: 00:00:01

Existing Conditions - Project Area 1 (25-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Existing Conditions - Project Area 1 (25-Year)

***********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
***********************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-29-2015 00:00:00
Ending Date .............. MAY-01-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 02: maximum depth increased for Node 126-128_Daniels

WARNING 02: maximum depth increased for Node 138-140_Daniels

WARNING 02: maximum depth increased for Node D/S_Viverette_2

WARNING 02: maximum depth increased for Node U/S_Park#2

WARNING 02: maximum depth increased for Node D/S_Park#2

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......        58.684         6.482
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........        21.182         2.340
Surface Runoff ...........        37.104         4.098
Final Surface Storage ....         0.425         0.047
Continuity Error (%) .....        -0.047


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......        37.104        12.091
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........        37.118        12.095
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.004         0.001
Continuity Error (%) .....        -0.048


**************************
Time-Step Critical Elements
**************************
Link 24_RCP_Park#2 (51.79%)
```

Link 24_RCP_Park#1 (18.14%)
Link CHANNEL_13 (5.81%)
Link 15_RCP_Daniels_1 (2.01%)
Link 15_CMP_Daniels_2 (1.92%)

****
Highest Flow Instability Indexes
****
Link Over_18_RCP_Walter_2 (2)
Link CHANNEL_8 (1)
Link Park#2-OVER (1)

****
Routing Time Step Summary
****
Minimum Time Step : 0.50 sec
Average Time Step : 5.76 sec
Maximum Time Step : 15.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.01

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Area#1-10	6.48	0.00	0.00	1.41	5.03	0.33	6.05	0.777
Area#1-20	6.48	0.00	0.00	1.64	4.80	0.94	14.78	0.741
Area#1-30	6.48	0.00	0.00	1.69	4.75	0.23	4.15	0.733
Area#1-40	6.48	0.00	0.00	1.91	4.53	0.91	14.38	0.698
Area#1-50	6.48	0.00	0.00	1.66	4.78	0.76	12.10	0.737
Area#1-60	6.48	0.00	0.00	1.71	4.73	0.80	14.80	0.729
Area#1-70	6.48	0.00	0.00	1.62	4.82	0.49	9.35	0.744
Area#1-80	6.48	0.00	0.00	1.20	5.25	0.38	7.94	0.810
Area#1-90	6.48	0.00	0.00	2.14	4.29	1.35	16.57	0.663
Area#1-100	6.48	0.00	0.00	2.24	4.20	0.64	9.66	0.648
Area#1-110	6.48	0.00	0.00	3.08	3.36	0.17	2.99	0.518
Area#1-120	6.48	0.00	0.00	1.66	4.79	0.33	6.23	0.738
Area#1-130	6.48	0.00	0.00	1.19	5.26	0.86	17.40	0.812
Area#1-140	6.48	0.00	0.00	3.20	3.23	3.76	28.03	0.499
Area#1-150	6.48	0.00	0.00	0.53	5.92	0.13	2.62	0.914

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
U/S_Daniels_1	JUNCTION	0.35	2.42	127.95	0 14:04
D/S_Daniels_1	JUNCTION	0.32	2.52	127.90	0 14:11
126-128_Daniels	JUNCTION	0.58	3.92	127.90	0 14:11
U/S_Daniels_2	JUNCTION	0.36	2.93	127.90	0 14:11
D/S_Daniels_2	JUNCTION	0.36	3.28	127.90	0 14:11
138-140_Daniels	JUNCTION	0.86	4.77	127.90	0 14:09
U/S_Viverette_1	JUNCTION	0.69	4.21	128.16	0 13:00
D/S_Viverette_1	JUNCTION	0.65	4.29	127.90	0 14:09
U/S_Daniels_3	JUNCTION	1.25	5.39	127.88	0 14:09
D/S_Daniels_3	JUNCTION	1.02	4.10	126.58	0 13:48
U/S_Walter_1	JUNCTION	0.96	4.36	126.55	0 13:47
D/S_Walter_1	JUNCTION	1.08	4.07	125.86	0 13:34
U/S_Viverette_2	JUNCTION	0.62	3.15	126.03	0 13:00
D/S_Viverette_2	JUNCTION	0.79	3.67	125.84	0 13:34
108-110_Walter	JUNCTION	1.28	4.34	125.84	0 13:33
U/S_Pearce	JUNCTION	0.53	3.44	125.69	0 13:34

D/S_Pearce	JUNCTION	0.48	3.54	125.69	0	13:34
U/S_Walter_2	JUNCTION	0.87	4.44	125.69	0	13:35
D/S_Walter_2	JUNCTION	0.92	4.54	125.69	0	13:35
120-122_Walter	JUNCTION	1.03	4.70	125.70	0	13:33
U/S_Park#1	JUNCTION	1.58	5.72	125.10	0	13:03
D/S_Park#1	JUNCTION	0.98	2.65	121.78	0	13:03
U/S_Park#2	JUNCTION	1.75	6.14	125.64	0	13:32
D/S_Park#2	JUNCTION	1.64	6.20	125.65	0	13:32
Outfall	OUTFALL	0.98	2.65	121.40	0	13:03

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
U/S_Daniels_1	JUNCTION	6.04	6.04	0 12:59	0.335	0.335
D/S_Daniels_1	JUNCTION	0.00	8.81	0 13:04	0.000	0.348
126-128_Daniels	JUNCTION	14.76	24.14	0 12:54	0.939	1.529
U/S_Daniels_2	JUNCTION	4.14	4.14	0 12:59	0.226	0.227
D/S_Daniels_2	JUNCTION	0.00	3.99	0 12:56	0.000	0.226
138-140_Daniels	JUNCTION	12.08	25.78	0 12:49	0.760	3.192
U/S_Viverette_1	JUNCTION	14.37	14.37	0 13:00	0.914	0.914
D/S_Viverette_1	JUNCTION	0.00	14.32	0 13:00	0.000	0.914
U/S_Daniels_3	JUNCTION	14.78	24.56	0 12:49	0.802	3.976
D/S_Daniels_3	JUNCTION	0.00	22.99	0 14:57	0.000	3.976
U/S_Walter_1	JUNCTION	9.34	25.52	0 14:50	0.493	4.470
D/S_Walter_1	JUNCTION	0.00	26.20	0 14:49	0.000	4.469
U/S_Viverette_2	JUNCTION	16.55	16.55	0 13:00	1.351	1.352
D/S_Viverette_2	JUNCTION	7.94	24.37	0 13:00	0.382	1.733
108-110_Walter	JUNCTION	9.64	48.29	0 13:00	0.640	6.843
U/S_Pearce	JUNCTION	2.62	4.16	0 12:58	0.125	0.126
D/S_Pearce	JUNCTION	0.00	6.22	0 12:58	0.000	0.136
U/S_Walter_2	JUNCTION	6.22	9.28	0 13:01	0.333	0.471
D/S_Walter_2	JUNCTION	0.00	8.55	0 12:57	0.000	0.475
120-122_Walter	JUNCTION	20.38	62.32	0 13:01	1.029	8.346
U/S_Park#1	JUNCTION	0.00	48.04	0 13:01	0.000	8.335
D/S_Park#1	JUNCTION	28.00	70.67	0 13:03	3.759	12.095
U/S_Park#2	JUNCTION	0.00	61.28	0 13:01	0.000	8.484
D/S_Park#2	JUNCTION	0.00	66.86	0 13:12	0.000	8.482
Outfall	OUTFALL	0.00	70.58	0 13:03	0.000	12.095

****
Node Surcharge Summary
****

Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
108-110_Walter	JUNCTION	1.56	0.336	0.664
120-122_Walter	JUNCTION	3.51	0.698	0.302

****
Node Flooding Summary
****

No nodes were flooded.

****
Outfall Loading Summary
****

Flow	Avg.	Max.	Total

Existing Conditions - Project Area 1 (25-Year)

Outfall Node	Freq. Pcnt.	Flow CFS	Flow CFS	Volume 10^6 gal
Outfall	99.05	15.15	70.58	12.095
System	99.05	15.15	70.58	12.095

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
15_RCP_Daniels_1	CONDUIT	5.87	0	12:58	4.78	1.41	1.00
Over_15_RCP_Daniels_1	CONDUIT	0.38	0	14:04	0.45	0.00	0.02
CHANNEL_1	CHANNEL	4.62	0	12:46	0.86	0.02	0.72
15_CMP_Daniels_2	CONDUIT	3.45	0	12:49	2.96	0.94	1.00
Over_15_CMP_Daniels_2	CONDUIT	3.41	0	12:59	0.92	0.00	0.31
CHANNEL_2	CONDUIT	2.71	0	12:56	0.65	0.06	1.00
CHANNEL_3	CHANNEL	12.27	0	15:43	0.81	0.02	0.64
CHANNEL_4	CONDUIT	10.98	0	13:01	0.38	0.15	1.00
12_RCP_Viverette_1	CONDUIT	6.93	0	12:35	8.82	1.93	1.00
Over_12_RCP_Viverette_1	CONDUIT	10.53	0	13:00	1.72	0.00	0.04
CHANNEL_5	CONDUIT	19.81	0	15:10	0.71	0.15	1.00
24_RCP_Daniels_3	CONDUIT	22.99	0	14:57	7.32	7.00	1.00
Over_24_RCP_Daniels_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_6	CONDUIT	23.55	0	14:51	0.91	0.29	0.94
15_RCP_Viverette_2	CONDUIT	8.99	0	12:36	7.32	1.05	1.00
Over_15_RCP_Viverette_2	CONDUIT	11.46	0	13:00	1.72	0.00	0.04
CHANNEL_7	CONDUIT	22.25	0	13:00	1.15	0.15	0.96
15_RCP_Pearce	CONDUIT	2.56	0	12:54	2.84	0.83	1.00
Over_15_RCP_Pearce	CONDUIT	3.31	0	13:01	0.26	0.00	0.25
18_RCP_Walter_2	CONDUIT	3.22	0	12:45	1.82	0.61	1.00
Over_18_RCP_Walter_2	CONDUIT	6.65	0	13:01	0.69	0.00	0.58
CHANNEL_8	CONDUIT	5.98	0	12:58	0.18	0.02	0.94
CHANNEL_9	CONDUIT	8.55	0	12:57	0.44	0.22	1.00
CHANNEL_10	CONDUIT	42.98	0	13:03	1.49	0.59	1.00
CHANNEL_11	CONDUIT	26.52	0	14:48	0.81	0.30	1.00
30_RCP_Walter_1	CONDUIT	26.20	0	14:49	5.34	0.67	1.00
Over_30_RCP_Walter_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
24_RCP_Park#1	CONDUIT	36.08	0	15:42	11.48	2.10	1.00
Park#1-OVER	CONDUIT	13.25	0	13:04	1.79	0.01	0.05
CHANNEL_12	CONDUIT	61.28	0	13:01	1.45	0.24	1.00
CHANNEL_13	CONDUIT	70.58	0	13:03	3.08	0.42	0.66
24_RCP_Park#2	CONDUIT	34.96	0	12:56	11.13	4.37	1.00
CHANNEL_14	CONDUIT	48.04	0	13:01	1.09	1.00	1.00
Park#2-OVER	CONDUIT	66.86	0	13:12	3.01	0.02	0.26

****
Flow Classification Summary
****

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
15_RCP_Daniels_1	1.00	0.01	0.00	0.00	0.97	0.02	0.00	0.00	0.66	0.0001
Over_15_RCP_Daniels_1	1.00	0.98	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.0000
CHANNEL_1	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.11	0.0000
15_CMP_Daniels_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.60	0.0001
Over_15_CMP_Daniels_2	1.00	0.94	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.0000
CHANNEL_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
CHANNEL_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.13	0.0000
CHANNEL_4	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.07	0.0000
12_RCP_Viverette_1	1.00	0.01	0.00	0.00	0.48	0.51	0.00	0.00	0.78	0.0002
Over_12_RCP_Viverette_1	1.00	0.93	0.00	0.00	0.00	0.00	0.00	0.07	0.05	0.0000
CHANNEL_5	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.10	0.0000
24_RCP_Daniels_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.33	0.0005
Over_24_RCP_Daniels_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

CHANNEL_6	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.12	0.0000
15_RCP_Viverette_2	1.00	0.01	0.00	0.00	0.51	0.48	0.00	0.00	0.95	0.0001
Over_15_RCP_Viverette_2	1.00	0.94	0.00	0.00	0.00	0.00	0.00	0.06	0.05	0.0000
CHANNEL_7	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.07	0.0000
15_RCP_Pearce	1.00	0.01	0.00	0.00	0.45	0.54	0.00	0.00	0.71	0.0002
Over_15_RCP_Pearce	1.00	0.93	0.01	0.00	0.06	0.00	0.00	0.00	0.00	0.0000
18_RCP_Walter_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.29	0.0001
Over_18_RCP_Walter_2	1.00	0.86	0.01	0.00	0.13	0.00	0.00	0.00	0.00	0.0000
CHANNEL_8	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.03	0.0000
CHANNEL_9	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.05	0.0001
CHANNEL_10	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.17	0.0001
CHANNEL_11	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
30_RCP_Walter_1	1.00	0.01	0.00	0.00	0.82	0.17	0.00	0.00	0.62	0.0000
Over_30_RCP_Walter_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
24_RCP_Park#1	1.00	0.01	0.01	0.00	0.92	0.06	0.00	0.00	0.64	0.0001
Park#1-OVER	1.00	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.0000
CHANNEL_12	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.18	0.0000
CHANNEL_13	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.35	0.0000
24_RCP_Park#2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.36	0.0011
CHANNEL_14	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.13	0.0001
Park#2-OVER	1.00	0.94	0.00	0.00	0.05	0.00	0.00	0.02	0.04	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
15_RCP_Daniels_1	3.58	3.58	3.58	0.41	0.63
15_CMP_Daniels_2	4.06	4.06	4.06	0.01	0.15
CHANNEL_2	2.02	2.02	2.02	0.01	0.01
CHANNEL_4	2.03	2.03	2.03	0.01	0.01
12_RCP_Viverette_1	5.25	5.25	5.25	0.52	2.30
CHANNEL_5	3.11	3.11	3.11	0.01	0.01
24_RCP_Daniels_3	4.98	4.98	4.98	9.79	4.98
15_RCP_Viverette_2	5.19	5.19	5.19	0.08	0.45
15_RCP_Pearce	5.24	5.24	5.24	0.01	0.26
18_RCP_Walter_2	5.72	5.72	5.72	0.01	0.16
CHANNEL_9	4.67	4.67	4.67	0.01	0.01
CHANNEL_10	1.56	1.56	1.56	0.01	0.01
CHANNEL_11	0.73	0.73	0.73	0.01	0.01
30_RCP_Walter_1	4.63	4.63	4.63	0.01	4.16
24_RCP_Park#1	4.70	4.70	4.70	6.47	4.70
CHANNEL_12	3.51	3.51	3.51	0.01	0.01
24_RCP_Park#2	7.09	7.09	7.09	7.12	5.30
CHANNEL_14	4.70	4.70	4.70	1.76	1.77

Analysis begun on: Mon Dec 07 15:33:23 2015
Analysis ended on: Mon Dec 07 15:33:25 2015
Total elapsed time: 00:00:02

Existing Conditions - Project Area 1 (50-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
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Existing Conditions - Project Area 1 (50-Year)

***********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
***********************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-29-2015 00:00:00
Ending Date .............. MAY-01-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 02: maximum depth increased for Node 126-128_Daniels

WARNING 02: maximum depth increased for Node 138-140_Daniels

WARNING 02: maximum depth increased for Node D/S_Viverette_2

WARNING 02: maximum depth increased for Node U/S_Park#2

WARNING 02: maximum depth increased for Node D/S_Park#2

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......        65.130         7.194
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........        22.173         2.449
Surface Runoff ...........        42.562         4.701
Final Surface Storage ....         0.426         0.047
Continuity Error (%) .....        -0.049


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......        42.562        13.869
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........        41.650        13.572
Internal Outflow .........         0.931         0.303
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.004         0.001
Continuity Error (%) .....        -0.054


************************
Highest Continuity Errors
************************
Node D/S_Daniels_2 (-1.09%)
```

****
Time-Step Critical Elements
****
Link 24_RCP_Park#2 (50.14%)
Link 24_RCP_Park#1 (19.05%)
Link CHANNEL_13 (6.70%)
Link 15_CMP_Daniels_2 (1.86%)
Link 15_RCP_Daniels_1 (1.79%)

****
Highest Flow Instability Indexes
****
Link Over_15_CMP_Daniels_2 (6)
Link CHANNEL_2 (6)
Link 15_CMP_Daniels_2 (6)
Link Over_18_RCP_Walter_2 (5)
Link 18_RCP_Walter_2 (5)

****
Routing Time Step Summary
****
Minimum Time Step : 0.50 sec
Average Time Step : 5.69 sec
Maximum Time Step : 15.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.04

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Area#1-10	7.19	0.00	0.00	1.45	5.70	0.38	6.95	0.792
Area#1-20	7.19	0.00	0.00	1.70	5.46	1.07	17.14	0.759
Area#1-30	7.19	0.00	0.00	1.75	5.40	0.26	4.80	0.751
Area#1-40	7.19	0.00	0.00	1.98	5.17	1.04	16.89	0.719
Area#1-50	7.19	0.00	0.00	1.72	5.43	0.86	14.04	0.755
Area#1-60	7.19	0.00	0.00	1.78	5.38	0.91	17.16	0.747
Area#1-70	7.19	0.00	0.00	1.68	5.48	0.56	10.79	0.761
Area#1-80	7.19	0.00	0.00	1.24	5.92	0.43	9.02	0.823
Area#1-90	7.19	0.00	0.00	2.23	4.92	1.55	19.52	0.684
Area#1-100	7.19	0.00	0.00	2.34	4.82	0.73	11.36	0.669
Area#1-110	7.19	0.00	0.00	3.28	3.87	0.19	3.52	0.538
Area#1-120	7.19	0.00	0.00	1.72	5.44	0.38	7.19	0.756
Area#1-130	7.19	0.00	0.00	1.27	5.90	0.97	19.60	0.820
Area#1-140	7.19	0.00	0.00	3.37	3.78	4.39	33.62	0.525
Area#1-150	7.19	0.00	0.00	0.54	6.62	0.14	2.94	0.920

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
U/S_Daniels_1	JUNCTION	0.38	2.60	128.13	0 13:52
D/S_Daniels_1	JUNCTION	0.35	2.75	128.13	0 13:52
126-128_Daniels	JUNCTION	0.63	4.15	128.13	0 13:51
U/S_Daniels_2	JUNCTION	0.39	3.17	128.14	0 13:50
D/S_Daniels_2	JUNCTION	0.39	3.51	128.13	0 13:50
138-140_Daniels	JUNCTION	0.92	5.00	128.13	0 13:52
U/S_Viverette_1	JUNCTION	0.73	4.23	128.18	0 13:00
D/S_Viverette_1	JUNCTION	0.70	4.52	128.13	0 13:52

U/S_Daniels_3	JUNCTION	1.32	5.62	128.11	0	13:51
D/S_Daniels_3	JUNCTION	1.08	4.34	126.82	0	13:51
U/S_Walter_1	JUNCTION	1.02	4.59	126.78	0	13:51
D/S_Walter_1	JUNCTION	1.14	4.48	126.27	0	13:48
U/S_Viverette_2	JUNCTION	0.64	3.35	126.23	0	13:47
D/S_Viverette_2	JUNCTION	0.84	4.06	126.23	0	13:47
108-110_Walter	JUNCTION	1.34	4.73	126.23	0	13:47
U/S_Pearce	JUNCTION	0.57	3.79	126.04	0	13:05
D/S_Pearce	JUNCTION	0.53	3.89	126.04	0	13:05
U/S_Walter_2	JUNCTION	0.93	4.79	126.04	0	13:06
D/S_Walter_2	JUNCTION	0.98	4.89	126.04	0	13:06
120-122_Walter	JUNCTION	1.10	5.00	126.00	0	13:04
U/S_Park#1	JUNCTION	1.65	5.73	125.11	0	13:00
D/S_Park#1	JUNCTION	1.02	2.84	121.97	0	13:00
U/S_Park#2	JUNCTION	1.84	6.47	125.97	0	13:05
D/S_Park#2	JUNCTION	1.73	6.52	125.97	0	13:05
Outfall	OUTFALL	1.02	2.84	121.59	0	13:00

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
U/S_Daniels_1	JUNCTION	6.95	6.95	0 12:59	0.379	0.380
D/S_Daniels_1	JUNCTION	0.00	14.52	0 13:00	0.000	0.424
126-128_Daniels	JUNCTION	17.13	33.16	0 13:00	1.067	1.815
U/S_Daniels_2	JUNCTION	4.80	4.85	0 12:59	0.257	0.259
D/S_Daniels_2	JUNCTION	0.00	4.36	0 12:52	0.000	0.256
138-140_Daniels	JUNCTION	14.03	27.11	0 12:45	0.864	3.683
U/S_Viverette_1	JUNCTION	16.88	16.88	0 12:59	1.044	1.045
D/S_Viverette_1	JUNCTION	0.00	16.82	0 13:00	0.000	1.044
U/S_Daniels_3	JUNCTION	17.15	28.58	0 13:51	0.912	4.524
D/S_Daniels_3	JUNCTION	0.00	28.58	0 13:52	0.000	4.524
U/S_Walter_1	JUNCTION	10.78	31.89	0 13:51	0.560	5.085
D/S_Walter_1	JUNCTION	0.00	31.90	0 13:52	0.000	5.084
U/S_Viverette_2	JUNCTION	19.51	19.51	0 12:59	1.549	1.549
D/S_Viverette_2	JUNCTION	9.02	28.33	0 12:59	0.431	1.979
108-110_Walter	JUNCTION	11.35	52.12	0 12:56	0.733	7.798
U/S_Pearce	JUNCTION	2.94	4.64	0 12:53	0.140	0.141
D/S_Pearce	JUNCTION	0.00	9.58	0 12:59	0.000	0.160
U/S_Walter_2	JUNCTION	7.19	15.40	0 12:59	0.378	0.554
D/S_Walter_2	JUNCTION	0.00	14.42	0 13:08	0.000	0.561
120-122_Walter	JUNCTION	23.11	72.03	0 12:59	1.158	9.510
U/S_Park#1	JUNCTION	0.00	48.04	0 12:56	0.000	9.178
D/S_Park#1	JUNCTION	33.60	81.62	0 12:59	4.393	13.571
U/S_Park#2	JUNCTION	0.00	68.38	0 12:57	0.000	9.313
D/S_Park#2	JUNCTION	0.00	69.21	0 13:01	0.000	9.311
Outfall	OUTFALL	0.00	81.52	0 13:00	0.000	13.571

****
Node Surcharge Summary
****

Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
108-110_Walter	JUNCTION	2.51	0.728	0.272
120-122_Walter	JUNCTION	3.97	1.000	0.000

****
Node Flooding Summary
****

Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CFS	Time of Max Occurrence days hr:min	Total Flood Volume 10^6 gal	Maximum Ponded Depth Feet
120-122_Walter	1.47	20.16	0 13:07	0.303	5.00

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Outfall	99.07	16.24	81.52	13.571
System	99.07	16.24	81.52	13.571

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
15_RCP_Daniels_1	CONDUIT	6.23	0 12:52	5.08	1.49	1.00
Over_15_RCP_Daniels_1	CONDUIT	2.68	0 13:26	0.97	0.00	0.09
CHANNEL_1	CHANNEL	8.03	0 13:01	0.84	0.03	0.77
15_CMP_Daniels_2	CONDUIT	3.66	0 12:45	2.98	1.00	1.00
Over_15_CMP_Daniels_2	CONDUIT	4.08	0 13:00	0.97	0.00	0.39
CHANNEL_2	CONDUIT	2.86	0 12:48	0.55	0.07	1.00
CHANNEL_3	CHANNEL	14.76	0 13:01	0.75	0.03	0.68
CHANNEL_4	CONDUIT	13.57	0 13:01	0.38	0.19	1.00
12_RCP_Viverette_1	CONDUIT	6.80	0 12:33	8.66	1.89	1.00
Over_12_RCP_Viverette_1	CONDUIT	13.61	0 13:00	1.89	0.01	0.05
CHANNEL_5	CONDUIT	23.09	0 13:55	0.71	0.17	1.00
24_RCP_Daniels_3	CONDUIT	23.10	0 15:45	7.35	7.03	1.00
Over_24_RCP_Daniels_3	CONDUIT	7.17	0 13:52	1.38	0.00	0.03
CHANNEL_6	CONDUIT	28.60	0 13:53	0.91	0.35	0.98
15_RCP_Viverette_2	CONDUIT	8.92	0 12:34	7.27	1.04	1.00
Over_15_RCP_Viverette_2	CONDUIT	16.66	0 13:00	1.98	0.01	0.13
CHANNEL_7	CONDUIT	26.10	0 12:58	1.16	0.18	1.00
15_RCP_Pearce	CONDUIT	2.81	0 12:50	2.82	0.91	1.00
Over_15_RCP_Pearce	CONDUIT	4.58	0 12:56	0.30	0.00	0.36
18_RCP_Walter_2	CONDUIT	3.46	0 12:41	1.96	0.65	1.00
Over_18_RCP_Walter_2	CONDUIT	14.24	0 13:08	0.81	0.01	0.70
CHANNEL_8	CONDUIT	9.56	0 12:59	0.25	0.04	0.99
CHANNEL_9	CONDUIT	13.67	0 13:00	0.70	0.36	1.00
CHANNEL_10	CONDUIT	49.11	0 13:48	1.48	0.68	1.00
CHANNEL_11	CONDUIT	31.92	0 13:52	0.85	0.36	1.00
30_RCP_Walter_1	CONDUIT	26.66	0 15:27	5.43	0.68	1.00
Over_30_RCP_Walter_1	CONDUIT	11.46	0 13:51	1.69	0.01	0.04
24_RCP_Park#1	CONDUIT	35.98	0 16:06	11.45	2.10	1.00
Park#1-OVER	CONDUIT	14.20	0 13:00	1.84	0.01	0.05
CHANNEL_12	CONDUIT	68.38	0 12:57	1.55	0.27	1.00
CHANNEL_13	CONDUIT	81.52	0 13:00	3.20	0.48	0.71
24_RCP_Park#2	CONDUIT	35.31	0 12:52	11.24	4.41	1.00
CHANNEL_14	CONDUIT	48.04	0 12:56	1.09	1.00	1.00
Park#2-OVER	CONDUIT	69.21	0 13:01	3.09	0.02	0.37

****
Flow Classification Summary
****

	Adjusted /Actual	--- Fraction of Time in Flow Class ---- Up	Down	Sub	Sup	Up	Down	Avg. Froude	Avg. Flow

Existing Conditions - Project Area 1 (50-Year)

Conduit	Length	Dry	Dry	Dry	Crit	Crit	Crit	Crit	Number	Change
15_RCP_Daniels_1	1.00	0.01	0.00	0.00	0.97	0.02	0.00	0.00	0.65	0.0001
Over_15_RCP_Daniels_1	1.00	0.95	0.00	0.00	0.04	0.00	0.00	0.01	0.01	0.0000
CHANNEL_1	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.11	0.0000
15_CMP_Daniels_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.60	0.0006
Over_15_CMP_Daniels_2	1.00	0.93	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.0000
CHANNEL_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0001
CHANNEL_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.13	0.0000
CHANNEL_4	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.07	0.0000
12_RCP_Viverette_1	1.00	0.01	0.00	0.00	0.51	0.48	0.00	0.00	0.76	0.0002
Over_12_RCP_Viverette_1	1.00	0.93	0.00	0.00	0.03	0.00	0.00	0.04	0.04	0.0000
CHANNEL_5	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.10	0.0000
24_RCP_Daniels_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.33	0.0005
Over_24_RCP_Daniels_3	1.00	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.0000
CHANNEL_6	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.12	0.0000
15_RCP_Viverette_2	1.00	0.01	0.00	0.00	0.54	0.46	0.00	0.00	0.93	0.0001
Over_15_RCP_Viverette_2	1.00	0.93	0.00	0.00	0.03	0.00	0.00	0.03	0.03	0.0000
CHANNEL_7	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.07	0.0000
15_RCP_Pearce	1.00	0.01	0.00	0.00	0.47	0.52	0.00	0.00	0.69	0.0001
Over_15_RCP_Pearce	1.00	0.93	0.01	0.00	0.06	0.00	0.00	0.00	0.00	0.0000
18_RCP_Walter_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.28	0.0005
Over_18_RCP_Walter_2	1.00	0.86	0.01	0.00	0.14	0.00	0.00	0.00	0.00	0.0001
CHANNEL_8	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.03	0.0001
CHANNEL_9	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.05	0.0002
CHANNEL_10	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.17	0.0001
CHANNEL_11	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
30_RCP_Walter_1	1.00	0.01	0.00	0.00	0.83	0.16	0.00	0.00	0.62	0.0000
Over_30_RCP_Walter_1	1.00	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.0000
24_RCP_Park#1	1.00	0.01	0.01	0.00	0.93	0.06	0.00	0.00	0.63	0.0001
Park#1-OVER	1.00	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.0000
CHANNEL_12	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.18	0.0000
CHANNEL_13	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.35	0.0000
24_RCP_Park#2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.35	0.0007
CHANNEL_14	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.13	0.0001
Park#2-OVER	1.00	0.93	0.00	0.00	0.05	0.00	0.00	0.01	0.03	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
15_RCP_Daniels_1	4.13	4.13	4.13	0.43	0.40
15_CMP_Daniels_2	4.56	4.56	4.56	0.01	0.14
CHANNEL_2	2.95	2.95	2.96	0.01	0.01
CHANNEL_4	2.96	2.96	2.96	0.01	0.01
12_RCP_Viverette_1	6.00	6.00	6.00	0.44	1.56
CHANNEL_5	3.70	3.70	3.70	0.01	0.01
24_RCP_Daniels_3	5.47	5.47	5.47	10.63	5.47
15_RCP_Viverette_2	5.64	5.64	5.64	0.06	0.38
CHANNEL_7	1.38	1.38	1.39	0.01	0.01
15_RCP_Pearce	5.73	5.73	5.74	0.01	0.25
18_RCP_Walter_2	6.35	6.35	6.35	0.01	0.12
CHANNEL_9	5.17	5.17	5.17	0.01	0.01
CHANNEL_10	2.51	2.51	2.51	0.01	0.01
CHANNEL_11	2.19	2.19	2.19	0.01	0.01
30_RCP_Walter_1	5.12	5.12	5.12	0.01	4.51
24_RCP_Park#1	5.26	5.26	5.26	7.23	5.26
CHANNEL_12	3.97	3.97	3.97	0.01	0.01
24_RCP_Park#2	7.87	7.87	7.87	7.17	5.20
CHANNEL_14	5.20	5.20	5.20	2.64	2.67

Analysis begun on: Mon Dec 07 15:34:23 2015
Analysis ended on: Mon Dec 07 15:34:24 2015
Total elapsed time: 00:00:01

Existing Conditions - Project Area 1 (100-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Existing Conditions - Project Area 1 (100-Year)

***********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
***********************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-29-2015 00:00:00
Ending Date .............. MAY-01-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 02: maximum depth increased for Node 126-128_Daniels

WARNING 02: maximum depth increased for Node 138-140_Daniels

WARNING 02: maximum depth increased for Node D/S_Viverette_2

WARNING 02: maximum depth increased for Node U/S_Park#2

WARNING 02: maximum depth increased for Node D/S_Park#2

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......        72.390         7.996
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........        23.151         2.557
Surface Runoff ...........        48.839         5.395
Final Surface Storage ....         0.436         0.048
Continuity Error (%) .....        -0.051


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......        48.839        15.915
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........        45.895        14.955
Internal Outflow .........         2.980         0.971
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.004         0.001
Continuity Error (%) .....        -0.081


************************
Highest Continuity Errors
************************
Node D/S_Daniels_2 (-3.72%)
```

Node U/S_Walter_2 (1.23%)
Node D/S_Walter_2 (-1.21%)

****
Time-Step Critical Elements
****
Link 24_RCP_Park#2 (48.98%)
Link 24_RCP_Park#1 (18.69%)
Link CHANNEL_13 (7.09%)
Link 24_RCP_Daniels_3 (2.16%)
Link 15_CMP_Daniels_2 (1.83%)

****
Highest Flow Instability Indexes
****
Link CHANNEL_2 (6)
Link 15_CMP_Daniels_2 (6)
Link Over_15_CMP_Daniels_2 (6)
Link Over_18_RCP_Walter_2 (4)
Link 18_RCP_Walter_2 (3)

****
Routing Time Step Summary
****
Minimum Time Step : 0.50 sec
Average Time Step : 5.55 sec
Maximum Time Step : 15.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.04

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Area#1-10	8.00	0.00	0.00	1.50	6.46	0.43	7.99	0.808
Area#1-20	8.00	0.00	0.00	1.75	6.20	1.21	19.85	0.776
Area#1-30	8.00	0.00	0.00	1.81	6.15	0.29	5.55	0.769
Area#1-40	8.00	0.00	0.00	2.04	5.91	1.19	19.77	0.739
Area#1-50	8.00	0.00	0.00	1.77	6.18	0.98	16.27	0.773
Area#1-60	8.00	0.00	0.00	1.83	6.12	1.04	19.84	0.765
Area#1-70	8.00	0.00	0.00	1.73	6.22	0.64	12.43	0.778
Area#1-80	8.00	0.00	0.00	1.28	6.68	0.49	10.23	0.835
Area#1-90	8.00	0.00	0.00	2.31	5.64	1.78	22.98	0.705
Area#1-100	8.00	0.00	0.00	2.43	5.52	0.84	13.35	0.690
Area#1-110	8.00	0.00	0.00	3.49	4.46	0.22	4.14	0.558
Area#1-120	8.00	0.00	0.00	1.78	6.18	0.43	8.28	0.773
Area#1-130	8.00	0.00	0.00	1.35	6.62	1.08	22.07	0.828
Area#1-140	8.00	0.00	0.00	3.53	4.41	5.13	40.45	0.552
Area#1-150	8.00	0.00	0.00	0.56	7.41	0.16	3.29	0.927

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
U/S_Daniels_1	JUNCTION	0.40	2.70	128.23	0 13:31
D/S_Daniels_1	JUNCTION	0.37	2.85	128.23	0 13:31
126-128_Daniels	JUNCTION	0.67	4.24	128.22	0 13:32
U/S_Daniels_2	JUNCTION	0.41	3.27	128.24	0 13:32
D/S_Daniels_2	JUNCTION	0.42	3.61	128.23	0 13:32
138-140_Daniels	JUNCTION	0.97	5.09	128.22	0 13:31

U/S_Viverette_1	JUNCTION	0.77	4.28	128.23	0	13:30
D/S_Viverette_1	JUNCTION	0.75	4.61	128.22	0	13:30
U/S_Daniels_3	JUNCTION	1.38	5.69	128.18	0	13:31
D/S_Daniels_3	JUNCTION	1.12	4.45	126.93	0	13:30
U/S_Walter_1	JUNCTION	1.07	4.67	126.86	0	13:30
D/S_Walter_1	JUNCTION	1.19	4.69	126.48	0	13:29
U/S_Viverette_2	JUNCTION	0.68	3.54	126.42	0	13:03
D/S_Viverette_2	JUNCTION	0.89	4.25	126.42	0	13:03
108-110_Walter	JUNCTION	1.39	4.91	126.41	0	13:29
U/S_Pearce	JUNCTION	0.60	3.87	126.12	0	12:59
D/S_Pearce	JUNCTION	0.56	3.97	126.12	0	12:59
U/S_Walter_2	JUNCTION	0.98	4.83	126.08	0	12:59
D/S_Walter_2	JUNCTION	1.03	4.93	126.08	0	12:59
120-122_Walter	JUNCTION	1.15	5.00	126.00	0	12:57
U/S_Park#1	JUNCTION	1.72	5.73	125.11	0	13:00
D/S_Park#1	JUNCTION	1.07	2.95	122.08	0	13:00
U/S_Park#2	JUNCTION	1.92	6.51	126.01	0	12:58
D/S_Park#2	JUNCTION	1.80	6.57	126.02	0	12:59
Outfall	OUTFALL	1.07	2.95	121.70	0	13:00

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
U/S_Daniels_1	JUNCTION	7.98	7.98	0 12:59	0.430	0.432
D/S_Daniels_1	JUNCTION	0.00	18.06	0 13:00	0.000	0.495
126-128_Daniels	JUNCTION	19.83	43.20	0 13:00	1.213	2.114
U/S_Daniels_2	JUNCTION	5.54	5.60	0 12:59	0.292	0.295
D/S_Daniels_2	JUNCTION	0.00	7.26	0 13:12	0.000	0.284
138-140_Daniels	JUNCTION	16.25	31.42	0 13:00	0.983	4.229
U/S_Viverette_1	JUNCTION	19.74	19.74	0 13:00	1.193	1.193
D/S_Viverette_1	JUNCTION	0.00	19.70	0 13:00	0.000	1.193
U/S_Daniels_3	JUNCTION	19.81	38.70	0 13:31	1.038	5.150
D/S_Daniels_3	JUNCTION	0.00	38.70	0 13:31	0.000	5.150
U/S_Walter_1	JUNCTION	12.41	43.29	0 13:30	0.637	5.787
D/S_Walter_1	JUNCTION	0.00	43.30	0 13:31	0.000	5.786
U/S_Viverette_2	JUNCTION	22.95	22.95	0 13:00	1.775	1.775
D/S_Viverette_2	JUNCTION	10.22	32.48	0 13:00	0.486	2.261
108-110_Walter	JUNCTION	13.33	65.98	0 13:30	0.841	8.889
U/S_Pearce	JUNCTION	3.29	5.78	0 12:49	0.157	0.158
D/S_Pearce	JUNCTION	0.00	11.41	0 12:55	0.000	0.181
U/S_Walter_2	JUNCTION	8.27	18.14	0 12:59	0.429	0.625
D/S_Walter_2	JUNCTION	0.00	18.56	0 12:59	0.000	0.630
120-122_Walter	JUNCTION	26.20	106.61	0 13:00	1.306	10.826
U/S_Park#1	JUNCTION	0.00	48.04	0 12:51	0.000	9.823
D/S_Park#1	JUNCTION	40.40	88.41	0 13:00	5.131	14.955
U/S_Park#2	JUNCTION	0.00	72.87	0 12:53	0.000	9.970
D/S_Park#2	JUNCTION	0.00	68.81	0 12:56	0.000	9.968
Outfall	OUTFALL	0.00	88.33	0 13:00	0.000	14.954

****
Node Surcharge Summary
****

Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
108-110_Walter	JUNCTION	2.89	0.912	0.088
120-122_Walter	JUNCTION	4.28	1.000	0.000

****
Node Flooding Summary
****

Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CFS	Time of Max Occurrence days hr:min	Total Flood Volume 10^6 gal	Maximum Ponded Depth Feet
120-122_Walter	1.93	66.31	0 13:00	0.971	5.00

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Outfall	99.10	17.41	88.33	14.954
System	99.10	17.41	88.33	14.954

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
15_RCP_Daniels_1	CONDUIT	6.57	0 12:47	5.35	1.58	1.00
Over_15_RCP_Daniels_1	CONDUIT	4.35	0 13:07	1.30	0.00	0.12
CHANNEL_1	CHANNEL	10.21	0 13:00	0.81	0.04	0.79
15_CMP_Daniels_2	CONDUIT	3.86	0 12:41	3.14	1.05	1.00
Over_15_CMP_Daniels_2	CONDUIT	7.14	0 13:12	1.01	0.00	0.42
CHANNEL_2	CONDUIT	3.21	0 12:44	0.49	0.07	1.00
CHANNEL_3	CHANNEL	21.10	0 13:00	0.73	0.04	0.69
CHANNEL_4	CONDUIT	15.57	0 13:01	0.39	0.21	1.00
12_RCP_Viverette_1	CONDUIT	6.60	0 12:32	8.41	1.84	1.00
Over_12_RCP_Viverette_1	CONDUIT	17.17	0 13:00	2.06	0.01	0.08
CHANNEL_5	CONDUIT	31.21	0 13:34	0.78	0.23	1.00
24_RCP_Daniels_3	CONDUIT	23.02	0 16:02	7.33	7.01	1.00
Over_24_RCP_Daniels_3	CONDUIT	17.61	0 13:31	1.97	0.01	0.06
CHANNEL_6	CONDUIT	38.75	0 13:32	0.91	0.48	0.99
15_RCP_Viverette_2	CONDUIT	8.70	0 12:33	7.09	1.01	1.00
Over_15_RCP_Viverette_2	CONDUIT	22.19	0 13:00	2.05	0.01	0.19
CHANNEL_7	CONDUIT	31.49	0 13:00	1.15	0.22	1.00
15_RCP_Pearce	CONDUIT	3.05	0 12:45	2.83	0.99	1.00
Over_15_RCP_Pearce	CONDUIT	5.39	0 12:59	0.46	0.00	0.39
18_RCP_Walter_2	CONDUIT	3.54	0 12:37	2.00	0.67	1.00
Over_18_RCP_Walter_2	CONDUIT	18.38	0 12:59	0.85	0.01	0.71
CHANNEL_8	CONDUIT	11.40	0 12:54	0.29	0.04	1.00
CHANNEL_9	CONDUIT	22.00	0 13:00	1.13	0.58	1.00
CHANNEL_10	CONDUIT	65.98	0 13:30	1.50	0.91	1.00
CHANNEL_11	CONDUIT	43.40	0 13:32	0.99	0.49	1.00
30_RCP_Walter_1	CONDUIT	26.62	0 15:45	5.42	0.68	1.00
Over_30_RCP_Walter_1	CONDUIT	25.69	0 13:30	2.29	0.01	0.07
24_RCP_Park#1	CONDUIT	35.84	0 16:19	11.41	2.09	1.00
Park#1-OVER	CONDUIT	14.78	0 13:00	1.87	0.01	0.05
CHANNEL_12	CONDUIT	72.87	0 12:53	1.66	0.28	1.00
CHANNEL_13	CONDUIT	88.33	0 13:00	3.27	0.52	0.74
24_RCP_Park#2	CONDUIT	35.43	0 12:47	11.28	4.43	1.00
CHANNEL_14	CONDUIT	48.04	0 12:51	1.09	1.00	1.00
Park#2-OVER	CONDUIT	68.81	0 12:56	3.12	0.02	0.39

****
Flow Classification Summary
****

Existing Conditions - Project Area 1 (100-Year)

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
15_RCP_Daniels_1	1.00	0.01	0.00	0.00	0.97	0.02	0.00	0.00	0.65	0.0001
Over_15_RCP_Daniels_1	1.00	0.95	0.00	0.00	0.04	0.00	0.00	0.00	0.01	0.0000
CHANNEL_1	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.11	0.0000
15_CMP_Daniels_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.60	0.0007
Over_15_CMP_Daniels_2	1.00	0.93	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.0000
CHANNEL_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0001
CHANNEL_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.13	0.0000
CHANNEL_4	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.07	0.0000
12_RCP_Viverette_1	1.00	0.01	0.00	0.00	0.52	0.47	0.00	0.00	0.74	0.0002
Over_12_RCP_Viverette_1	1.00	0.93	0.00	0.00	0.04	0.00	0.00	0.03	0.04	0.0000
CHANNEL_5	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.10	0.0000
24_RCP_Daniels_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.33	0.0005
Over_24_RCP_Daniels_3	1.00	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.0000
CHANNEL_6	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.12	0.0000
15_RCP_Viverette_2	1.00	0.01	0.00	0.00	0.58	0.41	0.00	0.00	0.90	0.0001
Over_15_RCP_Viverette_2	1.00	0.93	0.00	0.00	0.04	0.00	0.00	0.03	0.03	0.0000
CHANNEL_7	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.07	0.0000
15_RCP_Pearce	1.00	0.01	0.00	0.00	0.49	0.50	0.00	0.00	0.68	0.0001
Over_15_RCP_Pearce	1.00	0.92	0.01	0.00	0.07	0.00	0.00	0.00	0.00	0.0000
18_RCP_Walter_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.27	0.0003
Over_18_RCP_Walter_2	1.00	0.86	0.01	0.00	0.14	0.00	0.00	0.00	0.00	0.0000
CHANNEL_8	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.03	0.0001
CHANNEL_9	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.05	0.0002
CHANNEL_10	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.17	0.0001
CHANNEL_11	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
30_RCP_Walter_1	1.00	0.01	0.00	0.00	0.84	0.16	0.00	0.00	0.61	0.0001
Over_30_RCP_Walter_1	1.00	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.0000
24_RCP_Park#1	1.00	0.01	0.01	0.00	0.93	0.05	0.00	0.00	0.62	0.0001
Park#1-OVER	1.00	0.94	0.00	0.00	0.00	0.00	0.00	0.06	0.05	0.0000
CHANNEL_12	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.18	0.0000
CHANNEL_13	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.35	0.0000
24_RCP_Park#2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.34	0.0007
CHANNEL_14	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.13	0.0001
Park#2-OVER	1.00	0.93	0.00	0.00	0.06	0.00	0.00	0.01	0.03	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
15_RCP_Daniels_1	4.41	4.41	4.42	0.39	0.32
15_CMP_Daniels_2	4.84	4.84	4.84	0.04	0.13
CHANNEL_2	3.29	3.29	3.29	0.01	0.01
CHANNEL_4	3.30	3.30	3.31	0.01	0.01
12_RCP_Viverette_1	6.59	6.59	6.59	0.52	1.70
CHANNEL_5	3.99	3.99	4.00	0.01	0.01
24_RCP_Daniels_3	5.85	5.85	5.85	11.31	5.85
15_RCP_Viverette_2	6.15	6.15	6.15	0.03	0.32
CHANNEL_7	1.85	1.85	1.85	0.01	0.01
15_RCP_Pearce	6.07	6.07	6.07	0.01	0.21
18_RCP_Walter_2	6.95	6.95	6.95	0.01	0.07
CHANNEL_9	5.50	5.50	5.50	0.01	0.01
CHANNEL_10	2.89	2.89	2.89	0.01	0.01
CHANNEL_11	2.60	2.60	2.60	0.01	0.01
30_RCP_Walter_1	5.44	5.44	5.44	0.01	4.36
24_RCP_Park#1	5.65	5.65	5.65	7.86	5.65
CHANNEL_12	4.28	4.28	4.28	0.01	0.01
24_RCP_Park#2	8.51	8.51	8.52	7.63	5.47
CHANNEL_14	5.54	5.54	5.54	3.01	3.03

Analysis begun on: Mon Dec 07 15:35:00 2015
Analysis ended on: Mon Dec 07 15:35:01 2015
Total elapsed time: 00:00:01

Existing Conditions - Project Areas 2,4,5, & 6 (2-Year)

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Existing Conditions - Project Areas 2,4,5, & 6 (2-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-06-2015 00:00:00
Ending Date .............. APR-07-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Gainor

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905
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WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224

WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node PE_972240

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       387.008         3.596
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       176.306         1.638
Surface Runoff ...........       163.542         1.520
Final Surface Storage ....        47.424         0.441
Continuity Error (%) .....        -0.068


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       162.993        53.114
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       154.420        50.320
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......         8.182         2.666
Continuity Error (%) .....         0.240


************************
Highest Continuity Errors
************************
Node 8** (1.68%)
Node U/S_NC-4 (1.36%)
Node Drew_Hill_Junction (1.01%)
Node PE_972258 (1.01%)
```

Existing Conditions - Project Areas 2,4,5, & 6 (2-Year)

****
Time-Step Critical Elements
****
Link Farm-Culvert (37.94%)
Link 18_RCP_Gainor_5 (17.81%)
Link 24_RCP_Etheridge_2 (13.55%)
Link Hathaway_St_Culvert (7.49%)
Link 24_RCP_Etheridge_1 (4.33%)

****
Highest Flow Instability Indexes
****
Link 24_RCP_Marriott_9 (1)
Link 24_RCP_Etheridge_2 (1)

****
Routing Time Step Summary
****
Minimum Time Step   :   0.50 sec
Average Time Step   :   7.70 sec
Maximum Time Step   :   15.00 sec
Percent in Steady State   :   0.00
Average Iterations per Step :   2.00

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	3.60	0.00	0.00	1.74	1.20	15.77	140.23	0.333
Basin_A-2	3.60	0.00	0.00	1.51	1.61	5.77	57.91	0.448
Basin_A-3	3.60	0.00	0.00	1.56	1.70	4.80	41.76	0.473
Basin_A-4	3.60	0.00	0.00	1.64	1.59	7.19	69.77	0.442
Basin_A-5	3.60	0.00	0.00	1.58	1.66	5.53	64.74	0.463
Basin_B-2	3.60	0.00	0.00	1.80	1.54	3.56	39.40	0.428
Area#5-10	3.60	0.00	0.00	1.54	1.98	0.02	0.41	0.551
Area#5-30	3.60	0.00	0.00	0.78	2.75	0.06	1.23	0.766
Area#5-50	3.60	0.00	0.00	1.38	2.15	0.03	0.54	0.599
Area#5-70	3.60	0.00	0.00	1.73	1.78	0.07	1.13	0.496
Area#5-80	3.60	0.00	0.00	1.20	2.33	0.10	1.97	0.648
Area#5-20	3.60	0.00	0.00	0.78	2.76	0.03	0.60	0.767
Area#5-40	3.60	0.00	0.00	0.78	2.75	0.03	0.58	0.766
Area#5-90	3.60	0.00	0.00	0.69	2.86	0.07	1.46	0.795
Area#5-100	3.60	0.00	0.00	0.78	2.77	0.04	0.74	0.769
Area#6-10	3.60	0.00	0.00	2.05	1.49	0.04	0.79	0.413
Area#6-20	3.60	0.00	0.00	1.61	1.89	0.19	3.20	0.527
Area#6-30	3.60	0.00	0.00	1.58	1.90	0.52	7.99	0.528
Area#6-40	3.60	0.00	0.00	1.90	1.55	0.31	3.52	0.431
Area#6-50	3.60	0.00	0.00	2.12	1.37	0.61	8.42	0.380
Area#6-60	3.60	0.00	0.00	1.54	1.91	2.79	42.21	0.531
Area#6-70	3.60	0.00	0.00	0.27	3.29	0.05	1.07	0.914
Area#6-80	3.60	0.00	0.00	2.10	1.43	0.03	0.59	0.399
Area#6-90	3.60	0.00	0.00	1.79	1.72	0.30	5.13	0.478
Area#4-140	3.60	0.00	0.00	0.82	2.73	0.07	1.53	0.759
Area#4-150	3.60	0.00	0.00	0.31	3.25	0.04	0.76	0.904
Area#4-160	3.60	0.00	0.00	1.22	2.32	0.01	0.21	0.645
Area#4-170	3.60	0.00	0.00	0.69	2.85	0.04	0.83	0.792
Area#4-180	3.60	0.00	0.00	1.02	2.52	0.07	1.44	0.700
Area#4-190	3.60	0.00	0.00	0.69	2.85	0.02	0.45	0.793
Area#4-200	3.60	0.00	0.00	1.93	1.59	0.09	1.52	0.443
Area#4-130	3.60	0.00	0.00	1.61	1.93	0.07	1.30	0.536
Area#4-120	3.60	0.00	0.00	1.46	2.08	0.05	1.05	0.578

Area#4-100	3.60	0.00	0.00	2.19	1.34	0.06	1.17	0.372
Area#4-90	3.60	0.00	0.00	0.41	3.14	0.06	1.17	0.874
Area#4-80	3.60	0.00	0.00	0.29	3.26	0.10	1.99	0.907
Area#4-10	3.60	0.00	0.00	0.31	3.24	0.08	1.65	0.901
Area#4-20	3.60	0.00	0.00	0.61	2.93	0.13	2.77	0.815
Area#4-70	3.60	0.00	0.00	0.53	3.01	0.11	2.19	0.837
Area#4-60	3.60	0.00	0.00	0.31	3.24	0.08	1.64	0.902
Area#4-50	3.60	0.00	0.00	0.51	3.03	0.16	3.33	0.842
Area#4-30	3.60	0.00	0.00	1.79	1.73	0.03	0.67	0.481
Area#2-10	3.60	0.00	0.00	1.48	1.98	0.15	2.07	0.551
Area#2-20	3.60	0.00	0.00	1.10	2.41	0.05	0.95	0.669
Area#2-30	3.60	0.00	0.00	1.60	1.87	0.15	2.17	0.520
Area#2-40	3.60	0.00	0.00	1.19	2.32	0.30	5.67	0.647
Area#2-50	3.60	0.00	0.00	1.35	2.08	0.32	4.24	0.578
Area#2-60	3.60	0.00	0.00	1.35	2.17	0.21	4.08	0.603
Area#2-70	3.60	0.00	0.00	1.60	1.89	0.20	3.29	0.525
Area#2-100	3.60	0.00	0.00	1.26	2.25	0.14	2.65	0.626
Area#2-80	3.60	0.00	0.00	1.10	2.43	0.09	1.73	0.674
Area#2-110	3.60	0.00	0.00	1.26	2.25	0.09	1.75	0.626
Area#5-60	3.60	0.00	0.00	0.78	2.77	0.03	0.57	0.769
Area#2-90	3.60	0.00	0.00	1.03	2.46	0.18	3.07	0.683
Area#2-120	3.60	0.00	0.00	1.30	2.12	1.31	16.06	0.590
Area#2-150	3.60	0.00	0.00	1.59	1.87	0.35	4.83	0.521
Area#4-40	3.60	0.00	0.00	1.02	2.52	0.08	1.63	0.700
Area#4-110	3.60	0.00	0.00	1.18	2.33	0.19	3.81	0.649
Area#5-110	3.60	0.00	0.00	0.50	3.04	0.08	1.76	0.846
Area#2-130	3.60	0.00	0.00	1.31	2.22	0.06	1.30	0.616
Area#2-140	3.60	0.00	0.00	1.59	1.89	0.17	2.55	0.524

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	2.35	4.07	124.07	0 13:14
3**	JUNCTION	0.31	0.89	101.89	0 13:00
D/S_NC-4	JUNCTION	1.59	2.83	104.01	0 14:09
5**	JUNCTION	1.87	3.52	97.52	0 14:32
D/S_W_Battleboro_Ave**	JUNCTION	0.80	1.99	116.16	0 13:02
7**	JUNCTION	1.49	3.34	105.34	0 13:04
8**	JUNCTION	3.68	5.86	95.86	0 14:53
Hathaway_St-D/S	JUNCTION	2.98	4.84	94.82	0 14:59
DI_983628	JUNCTION	0.06	0.20	127.10	0 13:00
DI_983629	JUNCTION	0.22	0.60	126.80	0 13:00
DI_983630	JUNCTION	0.42	0.84	126.30	0 13:00
DI_983631	JUNCTION	0.09	0.32	126.77	0 13:00
DI_983633	JUNCTION	0.42	0.82	121.92	0 13:00
DI_983632	JUNCTION	0.47	0.86	121.91	0 13:00
DI_983634	JUNCTION	0.18	0.54	114.19	0 13:00
DI_984002*	JUNCTION	0.43	2.56	110.06	0 13:00
UNK_952741*	JUNCTION	0.31	2.54	110.44	0 13:00
DI_983635	JUNCTION	0.08	0.24	111.39	0 13:00
PE_972255	JUNCTION	0.08	0.28	113.78	0 13:00
PE_972263	JUNCTION	0.14	1.58	110.48	0 13:00
PE_972261*	JUNCTION	0.14	0.58	107.98	0 13:01
PE_972258	JUNCTION	3.01	4.94	93.94	0 15:08
Railroad_Junction_1	JUNCTION	1.58	3.54	108.07	0 13:05
Junction_1	JUNCTION	3.42	5.47	92.97	0 14:31
DI_983955	JUNCTION	0.08	0.28	100.88	0 13:00
PE_272260	JUNCTION	0.08	0.28	101.88	0 12:59
DI_983954	JUNCTION	0.12	0.45	98.47	0 13:00
DI_983953	JUNCTION	0.08	0.27	96.17	0 13:00
Drew_Hill_Junction	JUNCTION	3.78	5.87	93.87	0 15:08
DI_983952	JUNCTION	0.20	0.76	106.09	0 13:00
DI_983951	JUNCTION	0.16	0.57	104.62	0 13:00
DI_983950	JUNCTION	0.63	1.75	102.75	0 13:00

DI_283949	JUNCTION	0.26	0.80	102.05	0	13:00
DI_983948	JUNCTION	0.21	0.81	97.46	0	13:00
DI_983947	JUNCTION	0.37	0.94	96.02	0	13:01
DI_983946	JUNCTION	0.18	0.55	94.82	0	14:58
PE_972230	JUNCTION	0.43	1.11	128.26	0	12:59
UNK_952735*	JUNCTION	0.47	1.09	128.19	0	13:00
DI_983907	JUNCTION	0.51	1.11	128.16	0	13:00
DI_983906	JUNCTION	0.14	0.55	127.66	0	13:00
UNK_952736*	JUNCTION	0.14	0.55	126.31	0	13:00
DI_983903	JUNCTION	0.22	0.78	123.39	0	13:00
DI_983902	JUNCTION	0.52	1.59	122.67	0	13:00
DI_983904	JUNCTION	0.82	3.84	121.25	0	13:00
DI_983905	JUNCTION	1.62	4.00	120.48	0	13:01
DI_983721	JUNCTION	2.06	4.08	120.05	0	13:04
DI_983722	JUNCTION	2.04	4.10	120.06	0	13:06
MH_974299	JUNCTION	2.47	4.53	119.98	0	13:08
PE_972229	JUNCTION	0.25	0.89	116.11	0	13:09
PE_972224	JUNCTION	0.14	0.57	121.42	0	13:01
PE_972239	JUNCTION	0.41	1.25	113.37	0	13:02
PE_972246	JUNCTION	0.23	0.83	127.39	0	13:00
PE_972240	JUNCTION	0.29	1.55	127.27	0	13:10
DI_983935	JUNCTION	0.32	2.85	126.80	0	13:02
DI_983934	JUNCTION	0.39	2.93	126.61	0	13:00
MH_974300	JUNCTION	0.40	3.10	125.86	0	13:00
DI_983624	JUNCTION	0.94	4.93	122.05	0	13:00
DI_983623	JUNCTION	0.53	2.20	119.25	0	13:00
DI_983619	JUNCTION	0.35	1.27	115.58	0	13:00
DI_983622	JUNCTION	0.20	0.80	118.25	0	13:00
DI_983621	JUNCTION	0.36	1.33	115.65	0	13:00
DI_983620	JUNCTION	0.07	0.25	116.70	0	13:00
DI_983618	JUNCTION	0.52	1.93	114.65	0	13:00
DI_983898	JUNCTION	0.38	3.70	127.70	0	13:01
DI_983604	JUNCTION	0.43	3.43	126.93	0	13:00
DI_983901	JUNCTION	0.31	1.93	124.28	0	13:00
DI_983607	JUNCTION	0.13	1.76	128.56	0	13:00
DI_983606	JUNCTION	0.24	2.35	128.50	0	13:00
DI_9836054	JUNCTION	0.54	3.73	127.78	0	13:03
MH_974298	JUNCTION	1.46	3.80	127.85	0	12:58
DI_983899	JUNCTION	0.17	1.26	128.23	0	13:00
DI_983900	JUNCTION	0.17	1.26	128.25	0	13:00
DI_983897	JUNCTION	0.22	1.91	128.11	0	13:00
DI_983896	JUNCTION	0.34	1.96	128.01	0	13:01
DI_983895	JUNCTION	0.45	1.92	127.77	0	13:00
DI_983894	JUNCTION	0.40	0.95	126.75	0	13:00
DI_953893*	JUNCTION	0.15	0.52	126.22	0	13:00
PE_972225	JUNCTION	0.08	0.30	126.85	0	13:00
UNK_952734*	JUNCTION	0.41	0.92	123.45	0	13:00
DI_983892	JUNCTION	0.19	0.74	122.97	0	13:00
UNK_952733*	JUNCTION	0.19	0.74	122.59	0	13:00
UNK_952732*	JUNCTION	0.18	0.77	122.12	0	13:00
U/S_NC-4	JUNCTION	0.99	2.19	104.80	0	14:02
U/S_W_Battleboro_Ave	JUNCTION	1.10	3.09	117.51	0	13:00
Hathaway_St-U/S	JUNCTION	3.06	5.09	95.08	0	14:58
9**	JUNCTION	1.24	2.71	118.13	0	13:00
Farm-Culv-Up	JUNCTION	2.27	3.82	99.82	0	13:05
Farm-Culv-Dn	JUNCTION	1.42	3.28	98.78	0	13:12
Railroad-Up	JUNCTION	0.87	3.33	108.91	0	13:14
DI_983957	JUNCTION	0.10	0.34	121.34	0	13:00
DI_983956*	JUNCTION	0.17	0.63	121.13	0	13:00
PE_972262	JUNCTION	0.21	0.77	116.16	0	13:00
DI_983936	JUNCTION	0.47	1.14	127.50	0	13:00
U/S_Gainor_Swale	JUNCTION	0.33	1.30	127.30	0	13:10
DI_983625	JUNCTION	0.21	0.74	117.74	0	13:00
952731	JUNCTION	0.34	0.93	121.88	0	13:01
972222	JUNCTION	0.14	0.46	121.25	0	13:04
983943	JUNCTION	0.12	0.45	126.10	0	13:00
952740	JUNCTION	0.09	0.34	125.79	0	13:00
Primary_Outfall*	OUTFALL	3.42	5.47	92.47	0	14:31

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Existing Conditions - Project Areas 2,4,5, & 6 (2-Year)

Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	Time of Max Occurrence hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	140.14	140.14	0	13:00	15.687	15.686
3**	JUNCTION	57.87	57.87	0	13:00	5.750	5.750
D/S_NC-4	JUNCTION	0.00	80.67	0	14:02	0.000	15.233
5**	JUNCTION	0.00	105.10	0	14:04	0.000	20.897
D/S_W_Battleboro_Ave**	JUNCTION	0.00	40.71	0	13:00	0.000	4.780
7**	JUNCTION	69.72	108.20	0	13:00	7.163	11.929
8**	JUNCTION	64.69	225.31	0	13:00	5.512	38.204
Hathaway_St-D/S	JUNCTION	0.00	182.35	0	14:57	0.000	38.197
DI_983628	JUNCTION	0.41	0.41	0	12:59	0.021	0.021
DI_983629	JUNCTION	0.60	1.01	0	12:59	0.029	0.051
DI_983630	JUNCTION	0.58	2.80	0	13:00	0.028	0.139
DI_983631	JUNCTION	1.22	1.22	0	12:59	0.061	0.061
DI_983633	JUNCTION	0.53	0.53	0	12:59	0.026	0.026
DI_983632	JUNCTION	0.57	3.88	0	13:00	0.027	0.192
DI_983634	JUNCTION	0.00	3.87	0	13:00	0.000	0.192
DI_984002*	JUNCTION	0.00	8.33	0	13:00	0.000	0.427
UNK_952741*	JUNCTION	1.46	4.53	0	13:00	0.070	0.235
DI_983635	JUNCTION	0.00	1.13	0	13:00	0.000	0.066
PE_972255	JUNCTION	1.13	1.13	0	12:59	0.066	0.066
PE_972263	JUNCTION	1.97	1.97	0	12:59	0.100	0.100
PE_972261*	JUNCTION	0.74	9.00	0	13:00	0.035	0.463
PE_972258	JUNCTION	0.00	182.61	0	14:59	0.000	38.204
Railroad_Junction_1	JUNCTION	42.88	102.38	0	13:00	3.856	9.862
Junction_1	JUNCTION	42.19	252.20	0	14:07	2.782	50.675
DI_983955	JUNCTION	0.59	0.59	0	12:59	0.029	0.029
PE_272260	JUNCTION	1.07	1.07	0	12:59	0.052	0.052
DI_983954	JUNCTION	0.00	1.66	0	13:00	0.000	0.081
DI_983953	JUNCTION	0.00	1.65	0	13:00	0.000	0.080
Drew_Hill_Junction	JUNCTION	0.00	182.27	0	15:04	0.000	37.819
DI_983952	JUNCTION	5.13	5.13	0	12:59	0.297	0.297
DI_983951	JUNCTION	0.00	5.13	0	13:00	0.000	0.297
DI_983950	JUNCTION	0.00	5.12	0	13:00	0.000	0.297
DI_283949	JUNCTION	0.00	5.12	0	13:00	0.000	0.297
DI_983948	JUNCTION	0.00	5.11	0	13:00	0.000	0.297
DI_983947	JUNCTION	0.00	5.11	0	13:01	0.000	0.297
DI_983946	JUNCTION	0.00	5.12	0	13:01	0.000	0.296
PE_972230	JUNCTION	1.99	1.99	0	12:59	0.096	0.096
UNK_952735*	JUNCTION	0.00	1.99	0	13:00	0.000	0.095
DI_983907	JUNCTION	1.17	3.15	0	12:59	0.056	0.152
DI_983906	JUNCTION	0.00	3.15	0	13:00	0.000	0.151
UNK_952736*	JUNCTION	0.00	3.15	0	13:00	0.000	0.151
DI_983903	JUNCTION	1.17	4.32	0	12:59	0.063	0.215
DI_983902	JUNCTION	0.00	16.20	0	13:00	0.000	0.885
DI_983904	JUNCTION	0.00	16.19	0	13:00	0.000	0.884
DI_983905	JUNCTION	3.81	19.97	0	13:00	0.189	1.074
DI_983721	JUNCTION	1.05	22.77	0	13:02	0.052	1.163
DI_983722	JUNCTION	1.30	23.67	0	13:05	0.066	1.227
MH_974299	JUNCTION	0.00	19.26	0	13:06	0.000	1.187
PE_972229	JUNCTION	1.52	22.82	0	13:08	0.085	1.515
PE_972224	JUNCTION	0.00	4.94	0	13:00	0.000	0.250
PE_972239	JUNCTION	0.00	26.86	0	13:01	0.000	1.866
PE_972246	JUNCTION	0.95	3.01	0	13:00	0.052	0.202
PE_972240	JUNCTION	0.00	4.96	0	13:00	0.000	0.354
DI_983935	JUNCTION	5.66	5.66	0	12:59	0.296	0.296
DI_983934	JUNCTION	4.23	8.83	0	12:52	0.315	0.612
MH_974300	JUNCTION	0.00	11.40	0	12:52	0.000	0.965
DI_983624	JUNCTION	7.36	18.02	0	12:59	0.405	1.370
DI_983623	JUNCTION	0.00	17.92	0	13:00	0.000	1.370
DI_983619	JUNCTION	0.00	22.15	0	13:00	0.000	1.601
DI_983622	JUNCTION	4.80	4.80	0	12:59	0.265	0.265
DI_983621	JUNCTION	2.64	2.64	0	12:59	0.140	0.140
DI_983620	JUNCTION	1.75	1.75	0	12:59	0.092	0.092

DI_983618	JUNCTION	0.00	26.92	0	13:00	0.000	1.866
DI_983898	JUNCTION	3.33	10.24	0	13:00	0.163	0.564
DI_983604	JUNCTION	2.19	12.05	0	12:57	0.106	0.670
DI_983901	JUNCTION	0.00	11.94	0	12:57	0.000	0.670
DI_983607	JUNCTION	1.65	1.65	0	12:59	0.079	0.079
DI_983606	JUNCTION	2.77	4.41	0	12:59	0.134	0.213
DI_9836054	JUNCTION	1.64	4.01	0	12:59	0.078	0.189
MH_974298	JUNCTION	0.00	2.28	0	13:00	0.000	0.111
DI_983899	JUNCTION	1.63	2.29	0	12:59	0.079	0.111
DI_983900	JUNCTION	0.67	0.67	0	13:00	0.032	0.032
DI_983897	JUNCTION	1.53	1.53	0	12:59	0.073	0.073
DI_983896	JUNCTION	0.76	2.24	0	13:00	0.036	0.109
DI_983895	JUNCTION	0.21	2.27	0	12:45	0.009	0.118
DI_983894	JUNCTION	0.00	2.25	0	13:00	0.000	0.118
DI_953893*	JUNCTION	0.00	3.08	0	13:00	0.000	0.158
PE_972225	JUNCTION	0.83	0.83	0	12:59	0.040	0.040
UNK_952734*	JUNCTION	1.43	4.51	0	12:59	0.070	0.228
DI_983892	JUNCTION	0.00	4.51	0	13:00	0.000	0.228
UNK_952733*	JUNCTION	0.00	4.51	0	13:00	0.000	0.228
UNK_952732*	JUNCTION	0.45	4.95	0	13:00	0.022	0.250
U/S_NC-4	JUNCTION	0.00	87.30	0	13:35	0.000	15.443
U/S_W_Battleboro_Ave	JUNCTION	0.00	41.29	0	13:00	0.000	4.783
Hathaway_St-U/S	JUNCTION	1.76	181.38	0	14:49	0.083	38.108
9**	JUNCTION	41.73	41.73	0	13:00	4.786	4.786
Farm-Culv-Up	JUNCTION	8.42	99.06	0	13:04	0.606	10.410
Farm-Culv-Dn	JUNCTION	0.00	98.99	0	13:06	0.000	10.388
Railroad-Up	JUNCTION	20.88	49.81	0	13:00	1.657	3.761
DI_983957	JUNCTION	0.79	0.79	0	12:59	0.042	0.042
DI_983956*	JUNCTION	3.19	3.98	0	12:59	0.187	0.229
PE_972262	JUNCTION	7.99	11.95	0	13:00	0.519	0.749
DI_983936	JUNCTION	2.07	2.07	0	13:00	0.150	0.150
U/S_Gainor_Swale	JUNCTION	2.17	5.12	0	13:00	0.152	0.354
DI_983625	JUNCTION	0.00	4.80	0	13:00	0.000	0.265
952731	JUNCTION	2.55	3.79	0	13:00	0.174	0.238
972222	JUNCTION	0.00	3.52	0	13:01	0.000	0.237
983943	JUNCTION	1.30	1.30	0	12:59	0.064	0.064
952740	JUNCTION	0.00	1.29	0	13:00	0.000	0.064
Primary_Outfall*	OUTFALL	0.00	251.98	0	14:31	0.000	50.316

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Node Surcharge Summary
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No nodes were surcharged.

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Node Flooding Summary
****

No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	96.27	106.60	251.98	50.316
System	96.27	106.60	251.98	50.316

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Link Flow Summary
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Existing Conditions - Project Areas 2,4,5, & 6 (2-Year)

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
BeechTrib8	CHANNEL	87.30	0	13:35	2.30	0.01	0.21
NC-4	CONDUIT	80.67	0	14:02	5.48	0.47	0.72
BeechTrib7	CHANNEL	80.25	0	14:09	2.13	0.01	0.23
Channel_4**	CONDUIT	57.57	0	13:00	1.62	0.03	0.34
BeechTrib6	CHANNEL	101.25	0	14:32	1.63	0.03	0.47
W_Battleboro_Ave_Culvert**	CONDUIT	40.71	0	13:00	6.49	0.86	0.83
Channel_3A**	CHANNEL	39.60	0	13:02	2.23	0.00	0.18
Channel_3B	CHANNEL	91.91	0	13:04	1.77	0.01	0.29
BeechTrib5	CHANNEL	179.35	0	14:51	1.80	0.80	0.55
Hathaway_St_Culvert	CONDUIT	181.13	0	14:57	3.04	1.59	0.83
15_RCP_Hathaway_1	CONDUIT	0.41	0	13:00	1.19	0.06	0.32
15_RCP_Hathaway_2	CONDUIT	1.00	0	13:00	1.82	0.38	0.46
15_RCP_Hathaway_3	CONDUIT	1.22	0	13:00	2.20	0.14	0.46
15_RCP_Hathaway_4	CONDUIT	2.78	0	13:00	5.32	0.38	0.44
15_RCP_Hathaway_5	CONDUIT	0.53	0	13:00	0.61	0.28	0.67
15_RCP_Hathaway_6	CONDUIT	3.87	0	13:00	7.92	0.34	0.42
15_RCP_Hathaway_7	CONDUIT	3.87	0	13:00	4.23	0.33	0.70
15_RCP_Hathaway_8	CONDUIT	1.13	0	13:00	6.10	0.10	0.21
15_RCP_Hathaway_9	CONDUIT	1.13	0	13:00	1.61	0.08	0.60
18_RCP_Hathaway_10	CONDUIT	1.94	0	13:00	2.22	0.13	1.00
18_RCP_Hathaway_11*	CONDUIT	4.46	0	13:00	2.53	0.73	1.00
15_RCP_Hathaway_12*	CONDUIT	8.30	0	13:00	8.63	1.62	0.73
Hathaway_Swale*	CONDUIT	8.90	0	13:01	0.43	0.00	0.27
BeechTrib4	CHANNEL	182.34	0	14:59	1.54	0.02	0.43
12_RCP_Battleboro_Apt_1	CONDUIT	0.58	0	13:00	2.26	0.17	0.36
12_RCP_Battleboro_Apt_2	CONDUIT	1.07	0	12:59	4.32	0.17	0.36
12_RCP_Battleboro_Apt_3	CONDUIT	1.65	0	13:00	6.53	0.33	0.36
15_RCP_Battleboro_Apt_4	CONDUIT	1.65	0	13:00	3.27	0.10	0.61
BeechTrib3	CHANNEL	182.27	0	15:04	1.06	0.01	0.47
BeechTrib2	CHANNEL	182.21	0	15:12	0.96	0.05	0.46
Channel-6B	CHANNEL	92.23	0	13:05	2.70	0.04	0.41
15_RCP_Burrows_1	CONDUIT	5.13	0	13:00	7.87	0.49	0.53
15_RCP_Burrows_2	CONDUIT	5.12	0	13:00	5.37	0.37	0.73
15_RCP_Burrows_3	CONDUIT	5.12	0	13:00	4.75	1.19	0.82
15_RCP_Burrows_4	CONDUIT	5.11	0	13:00	6.36	0.65	0.62
15_RCP_Burrows_5	CONDUIT	5.11	0	13:01	5.58	0.66	0.70
15_RCP_Burrows_6	CONDUIT	5.12	0	13:01	9.02	0.48	0.48
18_RCP_Burrows_7	CONDUIT	5.08	0	13:01	4.18	0.16	0.68
BeechTrib1	CHANNEL	251.98	0	14:31	1.48	0.03	0.44
18_RCP_Marriott_1	CONDUIT	1.99	0	13:00	1.43	0.55	0.73
12_RCP_Marriott_2	CONDUIT	2.00	0	13:00	2.54	0.79	1.00
15_RCP_Marriott_3	CONDUIT	3.15	0	13:00	4.81	0.51	0.53
15_VCP_Marriott_4	CONDUIT	3.15	0	13:00	6.04	0.35	0.44
15_RCP_Mattiott_5	CONDUIT	3.15	0	13:00	5.06	0.40	0.53
15_RCP_Mattiott_6	CONDUIT	4.30	0	13:00	4.23	0.55	0.79
24_RCP_Marriott_7	CONDUIT	16.19	0	13:00	5.77	0.47	0.84
24_RCP_Marriott_8	CONDUIT	16.19	0	13:00	5.15	0.72	1.00
24_RCP_Marriott_9	CONDUIT	14.96	0	12:48	4.76	0.71	1.00
24_RCP_Etheridge_1	CONDUIT	14.20	0	12:39	4.52	0.86	1.00
24_RCP_Etheridge_2	CONDUIT	9.68	0	12:54	3.08	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.13	0	13:08	6.30	0.25	0.67
Railroad_Swale_2	CONDUIT	22.16	0	13:09	0.88	0.01	0.22
Railroad_Swale_1	CONDUIT	4.92	0	13:01	1.55	0.01	0.14
Cemetery_Dr_Swale	CONDUIT	26.36	0	13:02	1.78	0.04	0.45
Gainor_Swale	CONDUIT	4.96	0	13:00	1.51	0.03	0.28
12_RCP_Gainor_1	CONDUIT	4.49	0	13:21	5.79	1.03	1.00
18_RCP_Gainor_2	CONDUIT	5.64	0	13:08	3.19	0.66	1.00
18_RCP_Gainor_3	CONDUIT	8.57	0	12:52	5.60	0.50	1.00
18_RCP_Gainor_4	CONDUIT	11.49	0	13:09	6.50	0.82	1.00
18_RCP_Gainor_5	CONDUIT	17.92	0	13:00	10.14	7.24	1.00
24_RCP_Gainor_6	CONDUIT	17.82	0	13:01	6.09	1.04	0.88
15_RCP_Gainor_7A	CONDUIT	4.80	0	13:00	5.26	0.33	0.51
15_RCP_Gainor_7B	CONDUIT	2.64	0	13:00	1.63	1.51	0.86
15_RCP_Gainor_7C	CONDUIT	1.75	0	13:00	2.48	0.08	0.60
36_RCP_Gainor_8	CONDUIT	22.14	0	13:00	5.78	0.19	0.53

36_RCP_Gainor_9	CONDUIT	26.86	0	13:01	7.06	0.28	0.53
15_RCP_W_Battleboro_1	CONDUIT	1.64	0	13:00	2.79	0.20	1.00
18_RCP_W_Battleboro_2	CONDUIT	4.39	0	13:00	2.79	0.56	1.00
18_RCP_W_Battleboro_3	CONDUIT	5.77	0	13:06	3.26	0.77	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.40	0	13:06	5.89	0.77	1.00
18_RCP_W_Battleboro_5	CONDUIT	11.94	0	12:57	6.75	1.33	1.00
18_RCP_W_Battleboro_6	CONDUIT	11.94	0	13:04	6.78	0.86	1.00
15_RCP_Pollard_3	CONDUIT	3.21	0	13:07	3.26	0.13	1.00
15_RCP_Pollard_2	CONDUIT	2.28	0	13:00	3.68	0.44	1.00
12_RCP_Pollard_1	CONDUIT	0.66	0	13:00	1.30	0.75	1.00
12_RCP_W_Bridges_1	CONDUIT	1.38	0	12:45	1.75	0.59	1.00
12_RCP_W_Bridges_2	CONDUIT	2.12	0	13:04	2.70	0.43	1.00
12_RCP_Railroad_1	CONDUIT	2.25	0	13:00	2.89	4.25	0.97
15_RCP_Railroad_2	CONDUIT	2.26	0	13:01	3.97	0.39	0.48
15_RCP_Railroad_3	CONDUIT	0.83	0	13:00	2.44	0.13	0.33
18_RCP_Railroad_4	CONDUIT	3.08	0	13:00	3.68	0.26	0.48
24_RCP_Railroad_5	CONDUIT	4.51	0	13:00	4.54	0.18	0.35
24_RCP_Railroad_6*	CONDUIT	4.51	0	13:00	4.25	0.22	0.37
24_RCP_Railroad_7*	CONDUIT	4.51	0	13:01	4.16	0.24	0.38
24_VCP_Railroad_8	CONDUIT	4.94	0	13:00	5.34	0.16	0.34
CONNECT**	CONDUIT	41.29	0	13:00	2.05	0.14	0.48
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	97.74	0	13:12	1.92	0.02	0.47
Farm-Culvert	CONDUIT	16.68	0	12:16	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	88.20	0	13:06	5.23	0.02	0.11
Railroad_Culvert	CONDUIT	38.05	0	13:19	5.38	0.57	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Marriott_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Marriott_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.02
Over_24_RCP_Marriott_9	CONDUIT	5.75	0	13:01	0.81	0.00	0.05
Over_24_RCP_Etheridge_1	CONDUIT	23.09	0	13:05	0.83	0.00	0.17
Over_24_RCP_Etheridge_2	CONDUIT	14.57	0	13:06	0.57	0.00	0.16
Over_15_RCP_W_Battleboro_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_W_Battleboro_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_W_Battleboro_4	CONDUIT	0.00	0	13:01	0.00	0.00	0.00
Over_18_RCP_W_Battleboro_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_W_Battleboro_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_12_RCP_Pollard_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Pollard_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_24_RCP_Etheridge_3	CONDUIT	4.17	0	13:08	2.87	0.00	0.01
Over_12_RCP_W_Bridges_1	CONDUIT	0.18	0	13:00	0.32	0.00	0.00
Over_12_RCP_W_Bridges_2	CONDUIT	0.01	0	13:01	0.00	0.00	0.00
Over_12_RCP_Railroad_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_6*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_7*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_VCP_Railroad_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_12_RCP_Gainor_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.04

Existing Conditions - Project Areas 2,4,5, & 6 (2-Year)

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OVer_18_RCP_Gainor_2 CONDUIT      0.00     0  00:00      0.00    0.00    0.02
Over_18_RCP_Gainor_3 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_18_RCP_Gainor_4 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_18_RCP_Gainor_5 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_24_RCP_Gainor_6 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_8 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
12_RCP_Crepe_Myrtle_1 CONDUIT      0.79     0  13:00      2.41    0.23    0.44
12_RCP_Crepe_Myrtle_2 CONDUIT      3.97     0  13:00      6.76    0.66    0.70
Crepe_Myrtle_Swale   CONDUIT     11.72     0  13:00      1.00    0.02    0.43
Over_15_RCP_Hathaway_10 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_12_RCP_Crepe_Myrtle_1 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Hathaway_12* CONDUIT      0.00     0  00:00      0.00    0.00    0.00
15_RCP_Gainor        CONDUIT      2.05     0  13:00      2.02    0.39    0.79
Gainor_Bridges       CONDUIT      2.96     0  13:00      3.14    0.63    0.83
Over_15_RCP_Gainor   CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_Gainor_Bridges  CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Gainor_7A CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Gainor_7C CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_Hathaway_3      CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Hathaway_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Battle-Gainor-Over   CONDUIT      0.00     0  00:00      0.00    0.00    0.00
15_RCP_Gainor_7D     CONDUIT      4.77     0  13:00      3.37    0.49    0.75
84                   CONDUIT      0.02     0  12:58      0.02    0.00    0.01
E-Battleboro-Culv    CONDUIT      3.52     0  13:01      3.67    0.46    0.35
RR-Open-Ditch2       CONDUIT      3.24     0  13:05      0.34    0.01    0.47
Pearsall             CONDUIT      1.29     0  13:00      3.47    0.15    0.27
RR-Open-Ditch1       CONDUIT      1.25     0  13:00      0.72    0.01    0.21
Battleboro-Ovr       CONDUIT      0.00     0  00:00      0.00    0.00    0.00


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Flow Classification Summary
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                    Adjusted    --- Fraction of Time in Flow Class ----   Avg.     Avg.
                     /Actual         Up    Down  Sub   Sup   Up    Down   Froude   Flow
Conduit               Length    Dry  Dry   Dry   Crit  Crit  Crit  Crit   Number   Change
-------------------------------------------------------------------------------------------
BeechTrib8              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.32   0.0000
NC-4                    1.00   0.04  0.00  0.00  0.92  0.04  0.00  0.00     0.70   0.0001
BeechTrib7              1.00   0.02  0.04  0.00  0.94  0.00  0.00  0.00     0.28   0.0000
Channel_4**             1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.12   0.0000
BeechTrib6              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.15   0.0000
W_Battleboro_Ave_Culvert**    3.30   0.02  0.00  0.00  0.63  0.35  0.00  0.00     0.94   0.0001
Channel_3A**            1.00   0.02  0.01  0.00  0.97  0.00  0.00  0.00     0.22   0.0000
Channel_3B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.15   0.0000
BeechTrib5              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.17   0.0001
Hathaway_St_Culvert     1.18   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.16   0.0002
15_RCP_Hathaway_1       2.23   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.23   0.0000
15_RCP_Hathaway_2       1.00   0.04  0.00  0.00  0.94  0.00  0.00  0.02     0.33   0.0001
15_RCP_Hathaway_3       2.38   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.19   0.0000
15_RCP_Hathaway_4       1.00   0.06  0.00  0.00  0.39  0.53  0.00  0.02     1.02   0.0001
15_RCP_Hathaway_5       1.34   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.03   0.0001
15_RCP_Hathaway_6       1.00   0.08  0.00  0.00  0.01  0.91  0.00  0.00     1.46   0.0001
15_RCP_Hathaway_7       1.00   0.02  0.06  0.00  0.91  0.00  0.00  0.00     0.57   0.0001
15_RCP_Hathaway_8       2.28   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.18   0.0000
15_RCP_Hathaway_9       2.53   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.53   0.0000
18_RCP_Hathaway_10      2.92   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.59   0.0000
18_RCP_Hathaway_11*     1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.45   0.0001
15_RCP_Hathaway_12*     6.57   0.02  0.00  0.00  0.01  0.97  0.00  0.00     1.39   0.0003
Hathaway_Swale*         1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.04   0.0000
BeechTrib4              1.00   0.03  0.03  0.00  0.95  0.00  0.00  0.00     0.15   0.0000
12_RCP_Battleboro_Apt_1    1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.73   0.0000
12_RCP_Battleboro_Apt_2    1.29   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.30   0.0000
12_RCP_Battleboro_Apt_3    1.10   0.02  0.00  0.00  0.00  0.97  0.00  0.00     2.03   0.0001
15_RCP_Battleboro_Apt_4    1.78   0.02  0.00  0.00  0.90  0.08  0.00  0.00     0.33   0.0000
BeechTrib3              2.88   0.03  0.00  0.00  0.97  0.00  0.00  0.00     0.12   0.0000
BeechTrib2              1.00   0.02  0.03  0.00  0.94  0.00  0.00  0.00     0.09   0.0000
Channel-6B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.29   0.0000
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Existing Conditions - Project Areas 2,4,5, & 6 (2-Year)

15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.14	0.0001
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.96	0.01	0.00	0.00	0.44	0.0001
15_RCP_Burrows_3	1.76	0.02	0.03	0.00	0.95	0.00	0.00	0.00	0.33	0.0002
15_RCP_Burrows_4	1.00	0.06	0.00	0.00	0.00	0.94	0.00	0.00	1.48	0.0001
15_RCP_Burrows_5	1.15	0.06	0.00	0.00	0.72	0.23	0.00	0.00	0.72	0.0001
15_RCP_Burrows_6	4.20	0.07	0.00	0.00	0.06	0.87	0.00	0.00	2.10	0.0001
18_RCP_Burrows_7	5.31	0.05	0.01	0.00	0.89	0.04	0.00	0.00	0.27	0.0000
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.14	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.09	0.0001
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.09	0.0001
15_RCP_Marriott_3	3.55	0.08	0.00	0.00	0.00	0.92	0.00	0.00	1.21	0.0001
15_VCP_Marriott_4	1.95	0.08	0.00	0.00	0.00	0.92	0.00	0.00	1.51	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.06	0.00	0.53	0.39	0.00	0.00	0.86	0.0001
15_RCP_Mattiott_6	1.30	0.03	0.00	0.00	0.96	0.00	0.00	0.01	0.59	0.0001
24_RCP_Marriott_7	1.14	0.04	0.00	0.00	0.81	0.15	0.00	0.00	0.79	0.0001
24_RCP_Marriott_8	1.47	0.02	0.03	0.00	0.91	0.04	0.00	0.00	0.16	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.03	0.00	0.95	0.00	0.00	0.00	0.05	0.0003
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0003
24_RCP_Etheridge_3	7.59	0.02	0.09	0.00	0.00	0.00	0.88	0.00	0.23	0.0001
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.05	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.28	0.0000
Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.27	0.0000
12_RCP_Gainor_1	1.00	0.03	0.00	0.00	0.37	0.60	0.00	0.00	0.96	0.0002
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.62	0.0002
18_RCP_Gainor_3	4.48	0.03	0.00	0.00	0.07	0.90	0.00	0.00	1.30	0.0001
18_RCP_Gainor_4	1.00	0.03	0.00	0.00	0.18	0.21	0.00	0.59	1.45	0.0002
18_RCP_Gainor_5	2.32	0.02	0.00	0.00	0.06	0.00	0.00	0.92	0.61	0.0013
24_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	1.03	0.0002
15_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.34	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0003
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.54	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.05	0.93	0.00	0.00	1.41	0.0000
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.44	0.0000
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.67	0.0000
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.67	0.0001
18_RCP_W_Battleboro_3	2.87	0.02	0.05	0.00	0.09	0.00	0.84	0.00	0.28	0.0002
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.19	0.79	0.00	0.00	1.01	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.05	0.92	0.00	0.00	1.24	0.0002
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.70	0.28	0.00	0.00	0.74	0.0002
15_RCP_Pollard_3	26.14	0.02	0.06	0.00	0.92	0.00	0.00	0.00	0.27	0.0000
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.81	0.05	0.00	0.12	0.63	0.0001
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0002
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0001
12_RCP_W_Bridges_2	6.67	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.29	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.16	0.0008
15_RCP_Railroad_2	2.51	0.02	0.06	0.00	0.03	0.89	0.00	0.00	0.98	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.66	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.37	0.0000
24_RCP_Railroad_5	3.55	0.07	0.00	0.00	0.01	0.92	0.00	0.00	1.17	0.0000
24_RCP_Railroad_6*	3.25	0.07	0.00	0.00	0.01	0.92	0.00	0.00	1.02	0.0000
24_RCP_Railroad_7*	2.02	0.02	0.05	0.00	0.05	0.88	0.00	0.00	1.05	0.0000
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.67	0.0000
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0000
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.24	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_2	3.53	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_3	7.01	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_4	2.14	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_5	1.88	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_6	5.36	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_7	7.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
W_Battleboro_Ave-Over	3.80	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.18	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.78	0.20	0.00	0.00	0.62	0.0003

Over_Farm-Culvert	7.77	0.63	0.00	0.00	0.00	0.00	0.00	0.37	0.53	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.40	0.0001
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_2	27.58	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_3	4.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_7	1.03	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_8	1.80	0.96	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_9	2.78	0.90	0.06	0.00	0.04	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Etheridge_1	5.90	0.85	0.05	0.00	0.10	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Etheridge_2	1.42	0.85	0.10	0.00	0.00	0.00	0.05	0.00	0.00	0.0000
Over_15_RCP_W_Battleboro_1	2.34	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.0000
Over_18_RCP_W_Battleboro_5	1.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_6	6.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Pollard_1	1.11	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.98	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.0000
Over_12_RCP_Railroad_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Gainor_1	1.00	0.95	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
OVer_18_RCP_Gainor_2	5.06	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_3	20.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_4	1.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_5	16.05	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Gainor_6	18.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
12_RCP_Crepe_Myrtle_1	2.12	0.02	0.00	0.00	0.22	0.08	0.00	0.68	1.03	0.0000
12_RCP_Crepe_Myrtle_2	1.00	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.75	0.0001
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.07	0.0000
Over_15_RCP_Hathaway_10	1.15	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Crepe_Myrtle_1	5.17	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_12*	25.27	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
15_RCP_Gainor	3.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0001
Gainor_Bridges	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.70	0.0001
Over_15_RCP_Gainor	3.16	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Gainor_Bridges	1.33	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7A	13.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
15_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.48	0.0001
84	30.58	0.99	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.96	0.02	0.00	0.00	0.67	0.0001
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.96	0.00	0.00	0.00	0.07	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.04	0.94	0.00	0.00	1.14	0.0000
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.11	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

****
Conduit Surcharge Summary
****

	Hours	Hours

Existing Conditions - Project Areas 2,4,5, & 6 (2-Year)

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Above Full Normal Flow	Capacity Limited
Hathaway_St_Culvert	0.01	0.01	0.01	4.91	0.01
18_RCP_Hathaway_10	0.07	0.07	0.07	0.01	0.01
18_RCP_Hathaway_11*	0.44	0.44	0.45	0.01	0.01
15_RCP_Hathaway_12*	0.01	0.01	0.01	0.51	0.01
15_RCP_Burrows_3	0.01	0.01	0.01	0.35	0.01
12_RCP_Marriott_2	0.38	0.38	0.38	0.01	0.01
24_RCP_Marriott_8	1.93	1.93	1.93	0.01	0.01
24_RCP_Marriott_9	3.13	3.13	3.13	0.01	0.28
24_RCP_Etheridge_1	4.32	4.32	4.32	0.01	0.17
24_RCP_Etheridge_2	6.16	6.16	6.16	0.01	0.01
12_RCP_Gainor_1	0.46	0.46	0.46	0.23	0.06
18_RCP_Gainor_2	0.40	0.40	0.40	0.01	0.08
18_RCP_Gainor_3	0.40	0.40	0.40	0.01	0.01
18_RCP_Gainor_4	0.47	0.47	0.47	0.01	0.01
18_RCP_Gainor_5	0.56	0.56	0.57	5.23	0.56
24_RCP_Gainor_6	0.01	0.01	0.01	0.15	0.01
15_RCP_Gainor_7B	0.01	0.01	0.01	0.43	0.01
15_RCP_W_Battleboro_1	0.17	0.17	0.17	0.01	0.01
18_RCP_W_Battleboro_2	0.24	0.24	0.24	0.01	0.01
18_RCP_W_Battleboro_3	0.52	0.52	0.53	0.01	0.01
18_RCP_W_Battleboro_4	0.56	0.56	0.56	0.01	0.54
18_RCP_W_Battleboro_5	0.31	0.31	0.31	0.55	0.31
18_RCP_W_Battleboro_6	0.19	0.19	0.19	0.01	0.19
15_RCP_Pollard_3	0.38	0.38	0.38	0.01	0.01
15_RCP_Pollard_2	0.02	0.02	0.02	0.01	0.01
12_RCP_Pollard_1	0.11	0.11	0.12	0.01	0.07
12_RCP_W_Bridges_1	0.52	0.52	0.52	0.01	0.01
12_RCP_W_Bridges_2	0.51	0.51	0.51	0.01	0.01
12_RCP_Railroad_1	0.01	0.01	0.01	1.57	0.01
Farm-Culvert	5.98	5.98	5.98	7.31	5.98
Railroad_Culvert	0.66	0.66	0.66	0.01	0.01

Analysis begun on: Mon Dec 07 15:36:49 2015
Analysis ended on: Mon Dec 07 15:36:52 2015
Total elapsed time: 00:00:03

Existing Conditions - Project Areas 2,4,5, & 6 (10-Year)

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Existing Conditions - Project Areas 2,4,5, & 6 (10-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-06-2015 00:00:00
Ending Date .............. APR-07-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Gainor

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905
```

Existing Conditions - Project Areas 2,4,5, & 6 (10-Year)

```
WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224

WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node PE_972240

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       568.673         5.284
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       214.465         1.993
Surface Runoff ...........       292.608         2.719
Final Surface Storage ....        62.031         0.576
Continuity Error (%) .....        -0.076


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       291.733        95.065
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       277.489        90.424
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        14.945         4.870
Continuity Error (%) .....        -0.240


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (2.26%)
Node 8** (1.67%)
```

Existing Conditions - Project Areas 2,4,5, & 6 (10-Year)

```
**************************
Time-Step Critical Elements
**************************
Link Farm-Culvert (26.29%)
Link 24_RCP_Etheridge_2 (17.28%)
Link Hathaway_St_Culvert (11.59%)
Link NC-4 (11.30%)
Link 18_RCP_Gainor_5 (9.58%)


******************************
Highest Flow Instability Indexes
******************************
All links are stable.


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     6.68 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.01


**************************
Subcatchment Runoff Summary
**************************
```

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	5.28	0.00	0.00	2.11	2.27	29.94	239.45	0.430
Basin_A-2	5.28	0.00	0.00	1.81	2.87	10.29	99.28	0.543
Basin_A-3	5.28	0.00	0.00	1.86	3.02	8.54	79.86	0.572
Basin_A-4	5.28	0.00	0.00	1.99	2.85	12.86	124.54	0.538
Basin_A-5	5.28	0.00	0.00	1.94	2.90	9.65	108.78	0.549
Basin_B-2	5.28	0.00	0.00	2.23	2.73	6.31	70.14	0.518
Area#5-10	5.28	0.00	0.00	1.94	3.26	0.04	0.71	0.618
Area#5-30	5.28	0.00	0.00	0.98	4.24	0.09	1.91	0.802
Area#5-50	5.28	0.00	0.00	1.74	3.48	0.04	0.89	0.659
Area#5-70	5.28	0.00	0.00	2.17	3.01	0.11	2.05	0.570
Area#5-80	5.28	0.00	0.00	1.53	3.69	0.16	3.19	0.698
Area#5-20	5.28	0.00	0.00	0.98	4.24	0.04	0.93	0.803
Area#5-40	5.28	0.00	0.00	0.98	4.24	0.04	0.90	0.802
Area#5-90	5.28	0.00	0.00	0.87	4.37	0.11	2.25	0.827
Area#5-100	5.28	0.00	0.00	0.98	4.25	0.05	1.15	0.805
Area#6-10	5.28	0.00	0.00	2.77	2.45	0.07	1.35	0.463
Area#6-20	5.28	0.00	0.00	2.03	3.15	0.31	5.62	0.597
Area#6-30	5.28	0.00	0.00	1.96	3.18	0.87	14.12	0.602
Area#6-40	5.28	0.00	0.00	2.32	2.79	0.56	7.49	0.528
Area#6-50	5.28	0.00	0.00	2.64	2.51	1.12	18.23	0.475
Area#6-60	5.28	0.00	0.00	1.94	3.17	4.63	71.03	0.601
Area#6-70	5.28	0.00	0.00	0.35	4.90	0.08	1.59	0.926
Area#6-80	5.28	0.00	0.00	2.80	2.42	0.05	1.03	0.458
Area#6-90	5.28	0.00	0.00	2.35	2.84	0.49	8.71	0.537
Area#4-140	5.28	0.00	0.00	1.00	4.23	0.11	2.41	0.801
Area#4-150	5.28	0.00	0.00	0.37	4.87	0.05	1.13	0.922
Area#4-160	5.28	0.00	0.00	1.49	3.74	0.02	0.34	0.707
Area#4-170	5.28	0.00	0.00	0.85	4.38	0.06	1.30	0.829
Area#4-180	5.28	0.00	0.00	1.24	3.97	0.11	2.32	0.752
Area#4-190	5.28	0.00	0.00	0.85	4.39	0.03	0.70	0.830
Area#4-200	5.28	0.00	0.00	2.55	2.65	0.14	2.62	0.501
Area#4-130	5.28	0.00	0.00	2.17	3.05	0.11	2.08	0.577
Area#4-120	5.28	0.00	0.00	1.98	3.25	0.08	1.67	0.615
Area#4-100	5.28	0.00	0.00	2.96	2.25	0.11	2.06	0.425
Area#4-90	5.28	0.00	0.00	0.55	4.69	0.08	1.73	0.887
Area#4-80	5.28	0.00	0.00	0.35	4.89	0.14	2.98	0.925

Area#4-10	5.28	0.00	0.00	0.37	4.86	0.12	2.47	0.920
Area#4-20	5.28	0.00	0.00	0.75	4.48	0.20	4.27	0.848
Area#4-70	5.28	0.00	0.00	0.65	4.58	0.16	3.36	0.867
Area#4-60	5.28	0.00	0.00	0.37	4.87	0.12	2.45	0.921
Area#4-50	5.28	0.00	0.00	0.62	4.60	0.25	5.10	0.870
Area#4-30	5.28	0.00	0.00	2.19	3.01	0.06	1.23	0.570
Area#2-10	5.28	0.00	0.00	1.75	3.37	0.26	3.91	0.637
Area#2-20	5.28	0.00	0.00	1.31	3.88	0.08	1.61	0.733
Area#2-30	5.28	0.00	0.00	1.90	3.23	0.26	4.28	0.612
Area#2-40	5.28	0.00	0.00	1.41	3.78	0.48	9.69	0.715
Area#2-50	5.28	0.00	0.00	1.60	3.48	0.53	7.60	0.659
Area#2-60	5.28	0.00	0.00	1.60	3.59	0.34	7.13	0.680
Area#2-70	5.28	0.00	0.00	1.90	3.26	0.35	6.33	0.617
Area#2-100	5.28	0.00	0.00	1.50	3.69	0.23	4.59	0.699
Area#2-80	5.28	0.00	0.00	1.31	3.90	0.14	2.89	0.738
Area#2-110	5.28	0.00	0.00	1.50	3.69	0.15	3.03	0.699
Area#5-60	5.28	0.00	0.00	0.98	4.25	0.04	0.88	0.805
Area#2-90	5.28	0.00	0.00	1.22	3.93	0.29	5.12	0.745
Area#2-120	5.28	0.00	0.00	1.49	3.58	2.21	30.76	0.678
Area#2-150	5.28	0.00	0.00	1.90	3.22	0.60	9.30	0.609
Area#4-40	5.28	0.00	0.00	1.24	3.98	0.13	2.63	0.753
Area#4-110	5.28	0.00	0.00	1.36	3.83	0.31	6.57	0.726
Area#5-110	5.28	0.00	0.00	0.58	4.65	0.13	2.70	0.881
Area#2-130	5.28	0.00	0.00	1.57	3.64	0.11	2.22	0.688
Area#2-140	5.28	0.00	0.00	1.90	3.24	0.30	4.89	0.612

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	2.70	4.84	124.84	0 13:12
3**	JUNCTION	0.44	1.22	102.22	0 13:00
D/S_NC-4	JUNCTION	2.09	3.46	104.64	0 14:50
5**	JUNCTION	2.66	4.68	98.68	0 15:13
D/S_W_Battleboro_Ave**	JUNCTION	1.11	2.74	116.91	0 13:04
7**	JUNCTION	1.99	4.07	106.07	0 13:07
8**	JUNCTION	4.51	6.83	96.83	0 15:18
Hathaway_St-D/S	JUNCTION	3.63	5.45	95.43	0 15:24
DI_983628	JUNCTION	0.08	0.26	127.16	0 13:00
DI_983629	JUNCTION	0.25	0.81	127.01	0 13:00
DI_983630	JUNCTION	0.46	1.02	126.48	0 13:00
DI_983631	JUNCTION	0.11	0.40	126.85	0 13:00
DI_983633	JUNCTION	0.46	0.98	122.08	0 13:00
DI_983632	JUNCTION	0.50	1.00	122.05	0 13:00
DI_983634	JUNCTION	0.22	0.78	114.43	0 13:00
DI_984002*	JUNCTION	0.58	3.52	111.02	0 13:01
UNK_952741*	JUNCTION	0.44	3.84	111.74	0 13:00
DI_983635	JUNCTION	0.11	0.68	111.83	0 13:00
PE_972255	JUNCTION	0.11	0.35	113.85	0 13:00
PE_972263	JUNCTION	0.22	2.88	111.78	0 13:00
PE_972261*	JUNCTION	0.18	0.72	108.12	0 13:01
PE_972258	JUNCTION	3.68	5.66	94.66	0 15:29
Railroad_Junction_1	JUNCTION	1.99	4.27	108.80	0 13:07
Junction_1	JUNCTION	4.12	6.18	93.68	0 14:56
DI_983955	JUNCTION	0.10	0.38	100.98	0 13:00
PE_272260	JUNCTION	0.09	0.34	101.94	0 12:59
DI_983954	JUNCTION	0.14	0.59	98.61	0 13:00
DI_983953	JUNCTION	0.09	0.34	96.24	0 13:00
Drew_Hill_Junction	JUNCTION	4.49	6.61	94.61	0 15:29
DI_983952	JUNCTION	0.29	3.66	108.99	0 13:00
DI_983951	JUNCTION	0.23	2.95	107.00	0 13:00
DI_983950	JUNCTION	0.78	4.01	105.01	0 13:02
DI_283949	JUNCTION	0.34	2.32	103.57	0 13:04
DI_983948	JUNCTION	0.29	2.03	98.68	0 13:05
DI_983947	JUNCTION	0.43	1.33	96.41	0 13:05

DI_983946	JUNCTION	0.47	1.18	95.45	0	15:18
PE_972230	JUNCTION	0.48	1.42	128.57	0	12:59
UNK_952735*	JUNCTION	0.51	1.37	128.47	0	13:00
DI_983907	JUNCTION	0.56	1.35	128.40	0	12:59
DI_983906	JUNCTION	0.17	0.71	127.82	0	12:57
UNK_952736*	JUNCTION	0.18	0.81	126.57	0	13:00
DI_983903	JUNCTION	0.30	2.64	125.25	0	13:00
DI_983902	JUNCTION	0.62	2.72	123.80	0	13:04
DI_983904	JUNCTION	1.09	4.36	121.77	0	13:03
DI_983905	JUNCTION	1.87	4.06	120.54	0	13:01
DI_983721	JUNCTION	2.30	4.15	120.12	0	13:01
DI_983722	JUNCTION	2.29	4.18	120.14	0	13:03
MH_974299	JUNCTION	2.71	4.56	120.01	0	13:04
PE_972229	JUNCTION	0.32	1.18	116.40	0	13:05
PE_972224	JUNCTION	0.18	0.70	121.55	0	13:02
PE_972239	JUNCTION	0.52	1.63	113.75	0	13:03
PE_972246	JUNCTION	0.38	1.50	128.06	0	13:02
PE_972240	JUNCTION	0.51	2.03	127.75	0	13:05
DI_983935	JUNCTION	0.53	3.01	126.96	0	13:00
DI_983934	JUNCTION	0.63	3.20	126.88	0	13:02
MH_974300	JUNCTION	0.68	3.96	126.72	0	13:05
DI_983624	JUNCTION	1.34	5.16	122.28	0	13:02
DI_983623	JUNCTION	0.71	2.32	119.37	0	13:02
DI_983619	JUNCTION	0.47	2.16	116.47	0	13:01
DI_983622	JUNCTION	0.26	1.26	118.71	0	13:00
DI_983621	JUNCTION	0.55	5.24	119.56	0	13:01
DI_983620	JUNCTION	0.09	0.36	116.81	0	13:00
DI_983618	JUNCTION	0.70	3.10	115.82	0	13:02
DI_983898	JUNCTION	0.56	3.88	127.88	0	13:02
DI_983604	JUNCTION	0.62	4.28	127.78	0	13:02
DI_983901	JUNCTION	0.45	4.16	126.51	0	13:04
DI_983607	JUNCTION	0.22	2.76	129.56	0	13:01
DI_983606	JUNCTION	0.36	3.35	129.50	0	13:00
DI_9836054	JUNCTION	0.72	3.94	127.99	0	13:07
MH_974298	JUNCTION	1.58	3.95	128.00	0	13:05
DI_983899	JUNCTION	0.25	1.76	128.73	0	13:00
DI_983900	JUNCTION	0.26	1.79	128.78	0	13:00
DI_983897	JUNCTION	0.30	1.94	128.14	0	13:00
DI_983896	JUNCTION	0.42	2.04	128.09	0	13:00
DI_983895	JUNCTION	0.54	2.21	128.06	0	13:03
DI_983894	JUNCTION	0.45	1.15	126.95	0	13:02
DI_953893*	JUNCTION	0.18	0.62	126.32	0	13:00
PE_972225	JUNCTION	0.10	0.38	126.93	0	12:59
UNK_952734*	JUNCTION	0.45	1.12	123.65	0	13:00
DI_983892	JUNCTION	0.24	0.95	123.18	0	13:00
UNK_952733*	JUNCTION	0.24	0.95	122.80	0	13:01
UNK_952732*	JUNCTION	0.23	0.98	122.33	0	13:01
U/S_NC-4	JUNCTION	1.74	3.96	106.57	0	14:44
U/S_W_Battleboro_Ave	JUNCTION	1.64	5.28	119.70	0	13:01
Hathaway_St-U/S	JUNCTION	3.86	6.12	96.11	0	15:23
9**	JUNCTION	1.64	4.45	119.87	0	13:01
Farm-Culv-Up	JUNCTION	2.73	3.94	99.94	0	13:04
Farm-Culv-Dn	JUNCTION	1.80	3.82	99.32	0	13:12
Railroad-Up	JUNCTION	1.38	4.80	110.38	0	13:31
DI_983957	JUNCTION	0.16	2.25	123.25	0	13:00
DI_983956*	JUNCTION	0.25	2.65	123.15	0	13:01
PE_972262	JUNCTION	0.28	1.03	116.42	0	13:00
DI_983936	JUNCTION	0.62	1.73	128.09	0	13:00
U/S_Gainor_Swale	JUNCTION	0.51	1.80	127.80	0	13:04
DI_983625	JUNCTION	0.27	1.27	118.27	0	13:00
952731	JUNCTION	0.42	1.30	122.25	0	13:02
972222	JUNCTION	0.19	0.63	121.42	0	13:05
983943	JUNCTION	0.15	0.61	126.26	0	13:00
952740	JUNCTION	0.12	0.45	125.90	0	13:00
Primary_Outfall*	OUTFALL	4.12	6.19	93.19	0	14:56

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Node Inflow Summary
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Existing Conditions - Project Areas 2,4,5, & 6 (10-Year)

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	239.34	239.34	0	12:59	29.807	29.806
3**	JUNCTION	99.23	99.23	0	12:59	10.256	10.256
D/S_NC-4	JUNCTION	0.00	140.69	0	14:40	0.000	29.014
5**	JUNCTION	0.00	187.81	0	14:38	0.000	39.133
D/S_W_Battleboro_Ave**	JUNCTION	0.00	74.33	0	13:01	0.000	8.510
7**	JUNCTION	124.48	192.75	0	13:00	12.828	21.328
8**	JUNCTION	108.74	357.47	0	13:00	9.624	69.865
Hathaway_St-D/S	JUNCTION	0.00	333.80	0	15:22	0.000	69.741
DI_983628	JUNCTION	0.71	0.71	0	12:59	0.035	0.035
DI_983629	JUNCTION	0.93	1.64	0	12:59	0.045	0.080
DI_983630	JUNCTION	0.90	4.42	0	12:59	0.044	0.217
DI_983631	JUNCTION	1.91	1.91	0	12:59	0.093	0.093
DI_983633	JUNCTION	0.89	0.89	0	12:59	0.043	0.043
DI_983632	JUNCTION	0.88	6.17	0	13:00	0.042	0.301
DI_983634	JUNCTION	0.00	6.16	0	13:00	0.000	0.300
DI_984002*	JUNCTION	0.00	12.29	0	13:00	0.000	0.671
UNK_952741*	JUNCTION	2.25	6.18	0	12:44	0.107	0.370
DI_983635	JUNCTION	0.00	2.05	0	13:00	0.000	0.111
PE_972255	JUNCTION	2.05	2.05	0	12:59	0.111	0.111
PE_972263	JUNCTION	3.19	3.19	0	12:59	0.158	0.158
PE_972261*	JUNCTION	1.15	13.32	0	13:00	0.054	0.725
PE_972258	JUNCTION	0.00	334.12	0	15:24	0.000	69.763
Railroad_Junction_1	JUNCTION	77.59	171.84	0	13:00	6.855	16.776
Junction_1	JUNCTION	71.01	450.56	0	14:51	4.623	91.064
DI_983955	JUNCTION	1.03	1.03	0	12:59	0.049	0.049
PE_272260	JUNCTION	1.59	1.59	0	12:59	0.077	0.077
DI_983954	JUNCTION	0.00	2.62	0	13:00	0.000	0.126
DI_983953	JUNCTION	0.00	2.61	0	13:00	0.000	0.126
Drew_Hill_Junction	JUNCTION	0.00	333.95	0	15:28	0.000	69.166
DI_983952	JUNCTION	8.71	9.85	0	12:59	0.490	0.496
DI_983951	JUNCTION	0.00	9.83	0	13:00	0.000	0.496
DI_983950	JUNCTION	0.00	9.58	0	13:00	0.000	0.496
DI_283949	JUNCTION	0.00	9.17	0	13:02	0.000	0.496
DI_983948	JUNCTION	0.00	8.39	0	13:04	0.000	0.496
DI_983947	JUNCTION	0.00	8.36	0	13:05	0.000	0.496
DI_983946	JUNCTION	0.00	8.35	0	13:05	0.000	0.496
PE_972230	JUNCTION	2.98	2.98	0	12:59	0.143	0.143
UNK_952735*	JUNCTION	0.00	2.98	0	12:59	0.000	0.143
DI_983907	JUNCTION	1.73	4.71	0	12:59	0.084	0.227
DI_983906	JUNCTION	0.00	4.71	0	13:00	0.000	0.227
UNK_952736*	JUNCTION	0.00	4.71	0	13:00	0.000	0.227
DI_983903	JUNCTION	2.06	6.65	0	12:59	0.107	0.333
DI_983902	JUNCTION	0.00	22.06	0	13:01	0.000	1.363
DI_983904	JUNCTION	0.00	20.44	0	13:05	0.000	1.363
DI_983905	JUNCTION	6.56	26.85	0	13:00	0.311	1.674
DI_983721	JUNCTION	1.67	31.89	0	13:00	0.082	1.847
DI_983722	JUNCTION	2.08	35.62	0	13:02	0.105	1.953
MH_974299	JUNCTION	0.00	29.78	0	13:04	0.000	1.857
PE_972229	JUNCTION	2.62	37.26	0	13:04	0.142	2.381
PE_972224	JUNCTION	0.00	7.25	0	13:01	0.000	0.389
PE_972239	JUNCTION	0.00	47.50	0	13:02	0.000	3.103
PE_972246	JUNCTION	1.61	5.41	0	13:00	0.084	0.339
PE_972240	JUNCTION	0.00	8.20	0	13:02	0.000	0.602
DI_983935	JUNCTION	9.68	9.68	0	12:59	0.482	0.482
DI_983934	JUNCTION	7.60	17.03	0	13:00	0.529	1.012
MH_974300	JUNCTION	0.00	12.69	0	12:35	0.000	1.491
DI_983624	JUNCTION	13.46	33.85	0	13:00	0.686	2.301
DI_983623	JUNCTION	0.00	18.38	0	12:40	0.000	2.145
DI_983619	JUNCTION	0.00	40.09	0	13:01	0.000	2.678
DI_983622	JUNCTION	8.00	8.00	0	12:59	0.426	0.426
DI_983621	JUNCTION	4.59	19.08	0	13:01	0.230	0.384
DI_983620	JUNCTION	3.03	3.03	0	12:59	0.150	0.150
DI_983618	JUNCTION	0.00	47.51	0	13:01	0.000	3.103
DI_983898	JUNCTION	5.10	14.42	0	13:00	0.247	0.867
DI_983604	JUNCTION	3.36	16.82	0	13:00	0.162	1.030

DI_983901	JUNCTION	0.00	16.12	0	13:02	0.000	1.030
DI_983607	JUNCTION	2.47	2.47	0	12:59	0.119	0.119
DI_983606	JUNCTION	4.27	6.40	0	12:59	0.204	0.323
DI_9836054	JUNCTION	2.45	5.89	0	13:00	0.118	0.297
MH_974298	JUNCTION	0.00	3.41	0	12:50	0.000	0.179
DI_983899	JUNCTION	2.63	3.59	0	12:59	0.125	0.180
DI_983900	JUNCTION	1.23	1.23	0	12:59	0.056	0.056
DI_983897	JUNCTION	2.41	2.41	0	12:59	0.114	0.114
DI_983896	JUNCTION	1.13	3.52	0	12:59	0.054	0.168
DI_983895	JUNCTION	0.34	3.76	0	13:00	0.015	0.183
DI_983894	JUNCTION	0.00	3.25	0	13:03	0.000	0.183
DI_953893*	JUNCTION	0.00	4.38	0	13:00	0.000	0.245
PE_972225	JUNCTION	1.30	1.30	0	12:59	0.062	0.062
UNK_952734*	JUNCTION	2.32	6.66	0	13:00	0.111	0.356
DI_983892	JUNCTION	0.00	6.64	0	13:00	0.000	0.355
UNK_952733*	JUNCTION	0.00	6.63	0	13:00	0.000	0.355
UNK_952732*	JUNCTION	0.70	7.25	0	13:00	0.033	0.389
U/S_NC-4	JUNCTION	0.00	179.94	0	13:53	0.000	29.686
U/S_W_Battleboro_Ave	JUNCTION	0.00	77.10	0	13:00	0.000	8.514
Hathaway_St-U/S	JUNCTION	2.70	332.86	0	15:12	0.128	69.555
9**	JUNCTION	79.81	79.81	0	12:59	8.518	8.518
Farm-Culv-Up	JUNCTION	18.22	161.91	0	13:04	1.114	17.812
Farm-Culv-Dn	JUNCTION	0.00	161.96	0	13:05	0.000	17.768
Railroad-Up	JUNCTION	40.03	89.64	0	13:00	2.808	6.319
DI_983957	JUNCTION	1.35	1.35	0	12:59	0.069	0.069
DI_983956*	JUNCTION	5.61	6.95	0	12:59	0.312	0.381
PE_972262	JUNCTION	14.11	20.22	0	12:59	0.871	1.252
DI_983936	JUNCTION	3.91	3.91	0	12:59	0.256	0.256
U/S_Gainor_Swale	JUNCTION	4.28	8.98	0	13:00	0.263	0.602
DI_983625	JUNCTION	0.00	7.96	0	13:00	0.000	0.426
952731	JUNCTION	4.89	7.04	0	13:00	0.298	0.404
972222	JUNCTION	0.00	6.45	0	13:01	0.000	0.402
983943	JUNCTION	2.22	2.22	0	12:59	0.106	0.106
952740	JUNCTION	0.00	2.22	0	13:00	0.000	0.106
Primary_Outfall*	OUTFALL	0.00	450.12	0	14:56	0.000	90.417

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Node Surcharge Summary
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No nodes were surcharged.

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Node Flooding Summary
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No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	97.06	193.51	450.12	90.417
System	97.06	193.51	450.12	90.417

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Link Flow Summary
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	Maximum	Time of Max	Maximum	Max/	Max/

Existing Conditions - Project Areas 2,4,5, & 6 (10-Year)

Link	Type	|Flow| CFS	Occurrence days	Occurrence hr:min	|Veloc| ft/sec	Full Flow	Full Depth	
BeechTrib8	CHANNEL	179.94	0	13:53	2.29	0.02	0.28	
NC-4	CONDUIT	140.69	0	14:40	7.32	0.82	0.99	
BeechTrib7	CHANNEL	140.46	0	14:50	2.07	0.01	0.29	
Channel_4**	CONDUIT	98.74	0	13:00	2.09	0.05	0.45	
BeechTrib6	CHANNEL	183.85	0	15:13	1.65	0.06	0.58	
W_Battleboro_Ave_Culvert**	CONDUIT	74.33	0	13:01	10.71	1.58	0.96	
Channel_3A**	CHANNEL	71.48	0	13:04	2.70	0.00	0.23	
Channel_3B	CHANNEL	155.64	0	13:07	1.45	0.02	0.35	
BeechTrib5	CHANNEL	330.22	0	15:14	1.70	1.48	0.65	
Hathaway_St_Culvert	CONDUIT	332.17	0	15:23	4.83	2.91	0.95	
15_RCP_Hathaway_1	CONDUIT	0.70	0	13:00	1.41	0.10	0.43	
15_RCP_Hathaway_2	CONDUIT	1.62	0	13:00	2.06	0.62	0.61	
15_RCP_Hathaway_3	CONDUIT	1.91	0	13:00	2.64	0.22	0.57	
15_RCP_Hathaway_4	CONDUIT	4.40	0	13:00	6.04	0.60	0.57	
15_RCP_Hathaway_5	CONDUIT	0.89	0	13:00	0.85	0.47	0.79	
15_RCP_Hathaway_6	CONDUIT	6.16	0	13:00	8.47	0.54	0.57	
15_RCP_Hathaway_7	CONDUIT	6.15	0	13:00	5.90	0.52	0.79	
15_RCP_Hathaway_8	CONDUIT	2.05	0	13:00	6.53	0.17	0.41	
15_RCP_Hathaway_9	CONDUIT	2.21	0	13:06	2.68	0.16	0.77	
18_RCP_Hathaway_10	CONDUIT	3.44	0	13:05	2.24	0.24	1.00	
18_RCP_Hathaway_11*	CONDUIT	6.15	0	13:00	3.48	1.01	1.00	
15_RCP_Hathaway_12*	CONDUIT	10.90	0	13:01	10.51	2.13	0.79	
Hathaway_Swale*	CONDUIT	13.22	0	13:01	0.46	0.00	0.32	
BeechTrib4	CHANNEL	333.79	0	15:24	1.59	0.04	0.48	
12_RCP_Battleboro_Apt_1	CONDUIT	1.02	0	13:00	2.72	0.30	0.48	
12_RCP_Battleboro_Apt_2	CONDUIT	1.59	0	12:59	4.72	0.25	0.46	
12_RCP_Battleboro_Apt_3	CONDUIT	2.61	0	13:00	7.28	0.52	0.47	
15_RCP_Battleboro_Apt_4	CONDUIT	2.61	0	13:00	3.30	0.16	0.64	
BeechTrib3	CHANNEL	333.95	0	15:28	1.05	0.02	0.53	
BeechTrib2	CHANNEL	334.13	0	15:34	1.16	0.09	0.52	
Channel-6B	CHANNEL	147.62	0	13:07	2.87	0.07	0.46	
15_RCP_Burrows_1	CONDUIT	9.83	0	13:00	8.01	0.94	1.00	
15_RCP_Burrows_2	CONDUIT	9.57	0	13:00	7.80	0.68	1.00	
15_RCP_Burrows_3	CONDUIT	8.60	0	13:00	7.01	1.99	1.00	
15_RCP_Burrows_4	CONDUIT	8.03	0	12:56	6.60	1.03	1.00	
15_RCP_Burrows_5	CONDUIT	8.36	0	13:05	6.81	1.08	1.00	
15_RCP_Burrows_6	CONDUIT	8.35	0	13:05	9.00	0.78	0.91	
18_RCP_Burrows_7	CONDUIT	8.28	0	13:06	5.20	0.26	0.89	
BeechTrib1	CHANNEL	450.12	0	14:56	1.72	0.05	0.50	
18_RCP_Marriott_1	CONDUIT	2.98	0	12:59	1.74	0.82	0.93	
12_RCP_Marriott_2	CONDUIT	2.98	0	13:00	3.80	1.18	1.00	
15_RCP_Marriott_3	CONDUIT	4.71	0	13:00	5.24	0.77	0.69	
15_VCP_Marriott_4	CONDUIT	4.71	0	13:00	6.59	0.53	0.60	
15_RCP_Mattiott_5	CONDUIT	4.68	0	12:55	4.88	0.59	0.82	
15_RCP_Mattiott_6	CONDUIT	6.54	0	13:00	5.33	0.84	1.00	
24_RCP_Marriott_7	CONDUIT	20.34	0	13:08	6.47	0.59	1.00	
24_RCP_Marriott_8	CONDUIT	20.45	0	13:05	6.51	0.91	1.00	
24_RCP_Marriott_9	CONDUIT	15.43	0	12:43	4.91	0.73	1.00	
24_RCP_Etheridge_1	CONDUIT	14.43	0	12:35	4.59	0.88	1.00	
24_RCP_Etheridge_2	CONDUIT	9.72	0	12:46	3.09	0.73	1.00	
24_RCP_Etheridge_3	CONDUIT	14.32	0	13:05	6.37	0.26	0.67	
Railroad_Swale_2	CONDUIT	36.62	0	13:06	1.08	0.01	0.27	
Railroad_Swale_1	CONDUIT	7.18	0	13:02	1.73	0.01	0.19	
Cemetery_Dr_Swale	CONDUIT	46.31	0	13:04	1.59	0.07	0.61	
Gainor_Swale	CONDUIT	8.20	0	13:02	1.63	0.05	0.38	
12_RCP_Gainor_1	CONDUIT	4.65	0	14:41	5.93	1.06	1.00	
18_RCP_Gainor_2	CONDUIT	5.71	0	12:37	3.23	0.67	1.00	
18_RCP_Gainor_3	CONDUIT	9.30	0	12:37	5.73	0.55	1.00	
18_RCP_Gainor_4	CONDUIT	12.05	0	13:48	6.82	0.86	1.00	
18_RCP_Gainor_5	CONDUIT	18.38	0	12:40	10.40	7.43	1.00	
24_RCP_Gainor_6	CONDUIT	18.26	0	13:02	6.21	1.07	0.88	
15_RCP_Gainor_7A	CONDUIT	7.96	0	13:00	5.68	0.54	0.84	
15_RCP_Gainor_7B	CONDUIT	19.07	0	13:01	10.79	10.89	1.00	
15_RCP_Gainor_7C	CONDUIT	2.99	0	13:00	3.60	0.14	0.64	
36_RCP_Gainor_8	CONDUIT	40.04	0	13:02	6.33	0.34	0.86	
36_RCP_Gainor_9	CONDUIT	47.50	0	13:02	8.17	0.50	0.77	
15_RCP_W_Battleboro_1	CONDUIT	3.38	0	13:04	2.88	0.41	1.00	
18_RCP_W_Battleboro_2	CONDUIT	6.30	0	12:59	3.57	0.80	1.00	

Existing Conditions - Project Areas 2,4,5, & 6 (10-Year)

18_RCP_W_Battleboro_3	CONDUIT	7.30	0	13:33	4.13	0.97	1.00
18_RCP_W_Battleboro_4	CONDUIT	11.00	0	13:26	6.22	0.81	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.95	0	13:13	7.33	1.44	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.47	0	13:02	8.75	1.12	1.00
15_RCP_Pollard_3	CONDUIT	4.12	0	13:34	3.36	0.17	1.00
15_RCP_Pollard_2	CONDUIT	3.41	0	12:50	3.95	0.66	1.00
12_RCP_Pollard_1	CONDUIT	1.65	0	13:04	2.10	1.85	1.00
12_RCP_W_Bridges_1	CONDUIT	1.59	0	12:35	2.03	0.68	1.00
12_RCP_W_Bridges_2	CONDUIT	2.32	0	12:35	2.95	0.47	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:17	3.10	4.58	1.00
15_RCP_Railroad_2	CONDUIT	3.26	0	13:03	4.33	0.57	0.61
15_RCP_Railroad_3	CONDUIT	1.30	0	13:00	2.96	0.20	0.40
18_RCP_Railroad_4	CONDUIT	4.36	0	13:00	4.20	0.36	0.58
24_RCP_Railroad_5	CONDUIT	6.64	0	13:00	4.81	0.27	0.45
24_RCP_Railroad_6*	CONDUIT	6.63	0	13:00	4.54	0.32	0.47
24_RCP_Railroad_7*	CONDUIT	6.63	0	13:01	4.44	0.35	0.48
24_VCP_Railroad_8	CONDUIT	7.25	0	13:01	5.80	0.24	0.42
CONNECT**	CONDUIT	77.10	0	13:00	2.17	0.26	0.81
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_2	CONDUIT	0.01	0	12:59	0.00	0.00	0.00
Overland_Burrows_3	CONDUIT	0.57	0	13:02	0.93	0.00	0.00
Overland_Burrows_4	CONDUIT	0.68	0	13:04	0.80	0.00	0.01
Overland_Burrows_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	160.03	0	13:12	1.70	0.04	0.54
Farm-Culvert	CONDUIT	16.67	0	11:03	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	153.50	0	13:06	6.41	0.03	0.15
Railroad_Culvert	CONDUIT	54.56	0	13:45	7.72	0.82	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.08
Over_15_RCP_Marriott_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Marriott_7	CONDUIT	0.13	0	13:04	0.25	0.00	0.00
Over_24_RCP_Marriott_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.03
Over_24_RCP_Marriott_9	CONDUIT	12.88	0	13:01	1.22	0.01	0.08
Over_24_RCP_Etheridge_1	CONDUIT	34.20	0	13:02	1.06	0.01	0.19
Over_24_RCP_Etheridge_2	CONDUIT	24.11	0	13:04	0.81	0.01	0.18
Over_15_RCP_W_Battleboro_1	CONDUIT	0.70	0	13:01	0.37	0.00	0.01
Over_15_RCP_W_Battleboro_2	CONDUIT	0.00	0	13:00	0.00	0.00	0.03
Over_18_RCP_W_Battleboro_4	CONDUIT	10.24	0	13:02	1.39	0.04	0.05
Over_18_RCP_W_Battleboro_5	CONDUIT	7.86	0	13:03	1.87	0.00	0.03
Over_18_RCP_W_Battleboro_6	CONDUIT	0.31	0	13:04	0.53	0.00	0.00
Over_12_RCP_Pollard_1	CONDUIT	0.20	0	13:00	0.04	0.00	0.03
Over_15_RCP_Pollard_2	CONDUIT	0.23	0	13:00	0.04	0.00	0.04
Over_24_RCP_Etheridge_3	CONDUIT	14.87	0	13:05	4.75	0.00	0.02
Over_12_RCP_W_Bridges_1	CONDUIT	1.47	0	13:00	0.55	0.00	0.02
Over_12_RCP_W_Bridges_2	CONDUIT	2.66	0	13:00	0.77	0.01	0.02
Over_12_RCP_Railroad_1	CONDUIT	1.01	0	13:03	0.48	0.00	0.01
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_6*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_7*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_VCP_Railroad_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_12_RCP_Gainor_1	CONDUIT	5.40	0	13:06	0.24	0.00	0.14
OVer_18_RCP_Gainor_2	CONDUIT	6.79	0	13:00	0.71	0.00	0.06
Over_18_RCP_Gainor_3	CONDUIT	10.41	0	13:02	3.88	0.00	0.02
Over_18_RCP_Gainor_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

Existing Conditions - Project Areas 2,4,5, & 6 (10-Year)

Over_18_RCP_Gainor_5	CONDUIT	15.15	0	13:02	4.67	0.00	0.02
Over_24_RCP_Gainor_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_36_RCP_Gainor_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_36_RCP_Gainor_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
12_RCP_Crepe_Myrtle_1	CONDUIT	1.61	0	13:05	2.45	0.48	1.00
12_RCP_Crepe_Myrtle_2	CONDUIT	6.23	0	13:03	7.95	1.03	1.00
Crepe_Myrtle_Swale	CONDUIT	19.92	0	13:00	1.17	0.04	0.52
Over_15_RCP_Hathaway_10	CONDUIT	1.16	0	13:00	0.84	0.00	0.01
Over_12_RCP_Crepe_Myrtle_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_15_RCP_Hathaway_12*	CONDUIT	1.31	0	13:01	1.36	0.00	0.01
15_RCP_Gainor	CONDUIT	2.88	0	12:47	2.35	0.55	1.00
Gainor_Bridges	CONDUIT	4.20	0	12:47	3.43	0.89	1.00
Over_15_RCP_Gainor	CONDUIT	2.27	0	13:00	0.62	0.01	0.02
Over_Gainor_Bridges	CONDUIT	1.61	0	13:02	0.18	0.00	0.06
Over_15_RCP_Gainor_7A	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Gainor_7C	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_Hathaway_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Hathaway_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Battle-Gainor-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
15_RCP_Gainor_7D	CONDUIT	7.64	0	12:59	4.60	0.79	0.92
84	CONDUIT	3.13	0	13:06	0.59	0.00	0.06
E-Battleboro-Culv	CONDUIT	6.45	0	13:01	4.35	0.84	0.48
RR-Open-Ditch2	CONDUIT	6.04	0	13:05	0.34	0.02	0.58
Pearsall	CONDUIT	2.22	0	13:00	4.00	0.26	0.35
RR-Open-Ditch1	CONDUIT	2.16	0	13:00	0.77	0.01	0.29
Battleboro-Ovr	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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Flow Classification Summary
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Conduit	Adjusted /Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
		--- Fraction of Time in Flow Class ----								
BeechTrib8	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.0000
NC-4	1.00	0.02	0.00	0.00	0.95	0.03	0.00	0.00	0.61	0.0002
BeechTrib7	1.00	0.02	0.02	0.00	0.95	0.00	0.00	0.00	0.24	0.0000
Channel_4**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0000
BeechTrib6	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.15	0.0000
W_Battleboro_Ave_Culvert**	3.30	0.02	0.00	0.00	0.71	0.27	0.00	0.00	0.89	0.0002
Channel_3A**	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.24	0.0000
Channel_3B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.14	0.0000
BeechTrib5	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.16	0.0002
Hathaway_St_Culvert	1.18	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.21	0.0004
15_RCP_Hathaway_1	2.23	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0000
15_RCP_Hathaway_2	1.00	0.03	0.00	0.00	0.96	0.00	0.00	0.01	0.36	0.0001
15_RCP_Hathaway_3	2.38	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0000
15_RCP_Hathaway_4	1.00	0.05	0.00	0.00	0.26	0.67	0.00	0.02	1.10	0.0001
15_RCP_Hathaway_5	1.34	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0001
15_RCP_Hathaway_6	1.00	0.06	0.00	0.00	0.01	0.93	0.00	0.00	1.60	0.0001
15_RCP_Hathaway_7	1.00	0.02	0.04	0.00	0.92	0.01	0.00	0.00	0.59	0.0001
15_RCP_Hathaway_8	2.28	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.21	0.0000
15_RCP_Hathaway_9	2.53	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.54	0.0000
18_RCP_Hathaway_10	2.92	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.57	0.0001
18_RCP_Hathaway_11*	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.44	0.0002
15_RCP_Hathaway_12*	6.57	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.38	0.0003
Hathaway_Swale*	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.03	0.0000
BeechTrib4	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.17	0.0000
12_RCP_Battleboro_Apt_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.77	0.0000
12_RCP_Battleboro_Apt_2	1.29	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.30	0.0000
12_RCP_Battleboro_Apt_3	1.10	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.09	0.0001
15_RCP_Battleboro_Apt_4	1.78	0.02	0.00	0.00	0.92	0.06	0.00	0.00	0.30	0.0000
BeechTrib3	2.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib2	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.10	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.02	0.96	0.00	0.00	2.12	0.0001
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.96	0.02	0.00	0.00	0.49	0.0001
15_RCP_Burrows_3	1.76	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.37	0.0004

Existing Conditions - Project Areas 2,4,5, & 6 (10-Year)

15_RCP_Burrows_4	1.00	0.04	0.00	0.00	0.03	0.93	0.00	0.00	1.47	0.0002
15_RCP_Burrows_5	1.15	0.04	0.00	0.00	0.68	0.28	0.00	0.00	0.82	0.0002
15_RCP_Burrows_6	4.20	0.05	0.00	0.00	0.38	0.57	0.00	0.00	1.53	0.0001
18_RCP_Burrows_7	5.31	0.04	0.01	0.00	0.92	0.03	0.00	0.00	0.26	0.0000
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.17	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.11	0.0001
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.11	0.0002
15_RCP_Marriott_3	3.55	0.06	0.00	0.00	0.00	0.94	0.00	0.00	1.24	0.0001
15_VCP_Marriott_4	1.95	0.06	0.00	0.00	0.00	0.94	0.00	0.00	1.56	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.04	0.00	0.53	0.41	0.00	0.00	0.90	0.0001
15_RCP_Mattiott_6	1.30	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.62	0.0002
24_RCP_Marriott_7	1.14	0.03	0.00	0.00	0.82	0.15	0.00	0.00	0.76	0.0001
24_RCP_Marriott_8	1.47	0.02	0.02	0.00	0.93	0.04	0.00	0.00	0.15	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.04	0.0004
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0003
24_RCP_Etheridge_3	7.59	0.02	0.06	0.00	0.00	0.00	0.92	0.00	0.30	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0000
Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
12_RCP_Gainor_1	1.00	0.02	0.00	0.00	0.42	0.55	0.00	0.00	0.87	0.0002
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.59	0.0002
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.18	0.80	0.00	0.00	1.19	0.0001
18_RCP_Gainor_4	1.00	0.02	0.00	0.00	0.26	0.27	0.00	0.44	1.31	0.0001
18_RCP_Gainor_5	2.32	0.02	0.00	0.00	0.14	0.00	0.00	0.84	0.58	0.0011
24_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	1.01	0.0002
15_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.02	0.97	0.00	0.00	1.34	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0017
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.52	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.10	0.88	0.00	0.00	1.35	0.0001
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.01	0.97	0.00	0.00	1.38	0.0001
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.66	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.63	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.03	0.00	0.18	0.00	0.77	0.00	0.30	0.0003
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.28	0.70	0.00	0.00	0.97	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.08	0.90	0.00	0.00	1.20	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.65	0.33	0.00	0.00	0.80	0.0002
15_RCP_Pollard_3	26.14	0.02	0.04	0.00	0.94	0.00	0.00	0.00	0.30	0.0001
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.76	0.06	0.00	0.16	0.67	0.0002
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0005
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0003
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.18	0.0008
15_RCP_Railroad_2	2.51	0.02	0.04	0.00	0.04	0.90	0.00	0.00	1.01	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.94	0.04	0.00	0.00	0.67	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.44	0.0001
24_RCP_Railroad_5	3.55	0.05	0.00	0.00	0.01	0.94	0.00	0.00	1.19	0.0000
24_RCP_Railroad_6*	3.25	0.05	0.00	0.00	0.05	0.90	0.00	0.00	1.05	0.0000
24_RCP_Railroad_7*	2.02	0.02	0.03	0.00	0.06	0.89	0.00	0.00	1.07	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.64	0.0000
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.27	0.0000
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.18	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_2	3.53	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_3	7.01	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.0000
Overland_Burrows_4	2.14	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000
Overland_Burrows_5	1.88	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_6	5.36	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_7	7.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
W_Battleboro_Ave-Over	3.80	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.17	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.82	0.16	0.00	0.00	0.46	0.0002
Over_Farm-Culvert	7.77	0.47	0.00	0.00	0.00	0.00	0.00	0.53	0.80	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.34	0.0001
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

Existing Conditions - Project Areas 2,4,5, & 6 (10-Year)

Cemetery_Dr_Floodplain	1.00	0.88	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_2	27.58	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_3	4.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_7	1.03	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.0000
Over_24_RCP_Marriott_8	1.80	0.93	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_9	2.78	0.85	0.07	0.00	0.07	0.00	0.00	0.00	0.03	0.0000
Over_24_RCP_Etheridge_1	5.90	0.78	0.07	0.00	0.15	0.00	0.00	0.00	0.02	0.0000
Over_24_RCP_Etheridge_2	1.42	0.78	0.13	0.00	0.00	0.00	0.09	0.00	0.01	0.0000
Over_15_RCP_W_Battleboro_1	2.34	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.95	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.0000
Over_18_RCP_W_Battleboro_5	1.60	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.0000
Over_18_RCP_W_Battleboro_6	6.23	0.99	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Pollard_1	1.11	0.95	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.94	0.04	0.00	0.02	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.94	0.00	0.00	0.00	0.00	0.00	0.06	0.19	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.94	0.01	0.00	0.05	0.00	0.00	0.00	0.01	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.94	0.00	0.00	0.02	0.00	0.00	0.03	0.02	0.0000
Over_12_RCP_Railroad_1	1.00	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Gainor_1	1.00	0.83	0.10	0.00	0.00	0.00	0.08	0.00	0.00	0.0000
OVer_18_RCP_Gainor_2	5.06	0.91	0.01	0.00	0.00	0.00	0.08	0.00	0.01	0.0000
Over_18_RCP_Gainor_3	20.67	0.93	0.00	0.00	0.00	0.06	0.00	0.02	0.22	0.0000
Over_18_RCP_Gainor_4	1.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_5	16.05	0.93	0.00	0.00	0.00	0.00	0.00	0.07	0.19	0.0000
Over_24_RCP_Gainor_6	18.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
12_RCP_Crepe_Myrtle_1	2.12	0.02	0.00	0.00	0.31	0.10	0.00	0.57	0.99	0.0001
12_RCP_Crepe_Myrtle_2	1.00	0.02	0.00	0.00	0.03	0.95	0.00	0.00	1.68	0.0002
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.07	0.0000
Over_15_RCP_Hathaway_10	1.15	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.0000
Over_12_RCP_Crepe_Myrtle_1	5.17	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_12*	25.27	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.0000
15_RCP_Gainor	3.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0001
Gainor_Bridges	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.61	0.0002
Over_15_RCP_Gainor	3.16	0.94	0.00	0.00	0.02	0.00	0.00	0.04	0.02	0.0000
Over_Gainor_Bridges	1.33	0.88	0.09	0.00	0.04	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7A	13.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
15_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.47	0.0001
84	30.58	0.94	0.00	0.00	0.06	0.00	0.00	0.00	0.01	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.70	0.0001
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.07	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.14	0.0000
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited

Existing Conditions - Project Areas 2,4,5, & 6 (10-Year)

NC-4	0.01	0.01	0.01	4.76	0.01
W_Battleboro_Ave_Culvert**	0.01	0.01	0.01	2.00	0.01
BeechTrib5	0.01	0.01	0.01	4.95	0.01
Hathaway_St_Culvert	0.01	0.01	0.01	9.26	0.01
18_RCP_Hathaway_10	0.52	0.52	0.53	0.01	0.01
18_RCP_Hathaway_11*	0.64	0.64	0.64	0.09	0.50
15_RCP_Hathaway_12*	0.01	0.01	0.01	0.72	0.01
15_RCP_Burrows_1	0.20	0.20	0.21	0.01	0.17
15_RCP_Burrows_2	0.22	0.22	0.23	0.01	0.01
15_RCP_Burrows_3	0.31	0.31	0.31	0.60	0.01
15_RCP_Burrows_4	0.30	0.30	0.30	0.14	0.28
15_RCP_Burrows_5	0.13	0.13	0.13	0.26	0.13
12_RCP_Marriott_2	0.51	0.51	0.51	0.37	0.38
15_RCP_Mattiott_6	0.44	0.44	0.44	0.01	0.08
24_RCP_Marriott_7	0.22	0.22	0.22	0.01	0.01
24_RCP_Marriott_8	3.11	3.11	3.11	0.01	0.34
24_RCP_Marriott_9	5.06	5.06	5.06	0.01	0.25
24_RCP_Etheridge_1	6.14	6.14	6.15	0.01	0.14
24_RCP_Etheridge_2	8.06	8.06	8.06	0.01	0.01
12_RCP_Gainor_1	1.96	1.96	1.96	0.89	0.44
18_RCP_Gainor_2	1.53	1.53	1.53	0.01	0.03
18_RCP_Gainor_3	1.54	1.54	1.54	0.01	0.02
18_RCP_Gainor_4	1.61	1.61	1.61	0.01	0.01
18_RCP_Gainor_5	1.66	1.66	1.67	7.82	1.66
24_RCP_Gainor_6	0.01	0.01	0.01	1.09	0.01
15_RCP_Gainor_7B	0.44	0.44	0.44	1.06	0.44
15_RCP_W_Battleboro_1	0.54	0.54	0.54	0.01	0.01
18_RCP_W_Battleboro_2	0.80	0.80	0.80	0.01	0.01
18_RCP_W_Battleboro_3	1.04	1.04	1.04	0.01	0.01
18_RCP_W_Battleboro_4	1.07	1.07	1.07	0.01	0.58
18_RCP_W_Battleboro_5	0.93	0.93	0.93	0.93	0.93
18_RCP_W_Battleboro_6	0.59	0.59	0.60	0.22	0.59
15_RCP_Pollard_3	0.96	0.96	0.96	0.01	0.01
15_RCP_Pollard_2	0.44	0.44	0.44	0.01	0.01
12_RCP_Pollard_1	0.77	0.77	0.78	0.34	0.44
12_RCP_W_Bridges_1	0.87	0.87	0.88	0.01	0.02
12_RCP_W_Bridges_2	0.87	0.87	0.87	0.01	0.01
12_RCP_Railroad_1	0.36	0.36	0.37	3.51	0.36
Farm-Culvert	9.45	9.45	9.46	9.37	9.45
Railroad_Culvert	2.57	2.57	2.57	0.01	1.99
12_RCP_Crepe_Myrtle_1	0.29	0.29	0.29	0.01	0.01
12_RCP_Crepe_Myrtle_2	0.12	0.12	0.12	0.21	0.12
15_RCP_Gainor	1.33	1.33	1.33	0.01	0.01
Gainor_Bridges	1.33	1.33	1.33	0.01	0.01

Analysis begun on: Mon Dec 07 15:38:41 2015
Analysis ended on: Mon Dec 07 15:38:44 2015
Total elapsed time: 00:00:03

Existing Conditions - Project Areas 2,4,5, & 6 (25-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Existing Conditions - Project Areas 2,4,5, & 6 (25-Year)

***********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
***********************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-06-2015 00:00:00
Ending Date .............. APR-07-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Gainor

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905
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WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224

WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node PE_972240

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       697.604         6.482
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       234.508         2.179
Surface Runoff ...........       393.438         3.656
Final Surface Storage ....        70.206         0.652
Continuity Error (%) .....        -0.079


**************************        Volume        Volume
Flow Routing Continuity        acre-feet     10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       392.343       127.851
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       374.456       122.022
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        19.190         6.253
Continuity Error (%) .....        -0.332


************************
Highest Continuity Errors
************************
Node DI_983621 (-3.80%)
Node U/S_NC-4 (2.76%)
Node 8** (1.61%)
```

Existing Conditions - Project Areas 2,4,5, & 6 (25-Year)

```
**************************
Time-Step Critical Elements
**************************
Link Farm-Culvert (21.74%)
Link 18_RCP_Gainor_5 (17.92%)
Link Hathaway_St_Culvert (15.09%)
Link 24_RCP_Etheridge_2 (10.33%)
Link NC-4 (7.75%)


*******************************
Highest Flow Instability Indexes
*******************************
All links are stable.


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     6.17 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.03


**************************
Subcatchment Runoff Summary
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Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	6.48	0.00	0.00	2.31	3.14	41.39	323.50	0.485
Basin_A-2	6.48	0.00	0.00	1.97	3.85	13.78	133.83	0.593
Basin_A-3	6.48	0.00	0.00	2.01	4.03	11.39	113.04	0.622
Basin_A-4	6.48	0.00	0.00	2.17	3.82	17.25	171.80	0.589
Basin_A-5	6.48	0.00	0.00	2.13	3.86	12.83	145.20	0.596
Basin_B-2	6.48	0.00	0.00	2.47	3.66	8.46	96.83	0.565
Area#5-10	6.48	0.00	0.00	2.16	4.24	0.05	0.94	0.654
Area#5-30	6.48	0.00	0.00	1.09	5.32	0.12	2.42	0.821
Area#5-50	6.48	0.00	0.00	1.93	4.48	0.05	1.17	0.691
Area#5-70	6.48	0.00	0.00	2.41	3.96	0.15	2.80	0.611
Area#5-80	6.48	0.00	0.00	1.71	4.70	0.20	4.14	0.725
Area#5-20	6.48	0.00	0.00	1.09	5.33	0.06	1.18	0.822
Area#5-40	6.48	0.00	0.00	1.09	5.32	0.05	1.14	0.821
Area#5-90	6.48	0.00	0.00	0.97	5.47	0.13	2.82	0.844
Area#5-100	6.48	0.00	0.00	1.09	5.34	0.07	1.45	0.824
Area#6-10	6.48	0.00	0.00	3.21	3.20	0.09	1.80	0.493
Area#6-20	6.48	0.00	0.00	2.25	4.11	0.41	7.58	0.635
Area#6-30	6.48	0.00	0.00	2.17	4.16	1.14	19.16	0.642
Area#6-40	6.48	0.00	0.00	2.54	3.75	0.75	10.94	0.578
Area#6-50	6.48	0.00	0.00	2.93	3.41	1.52	26.65	0.526
Area#6-60	6.48	0.00	0.00	2.16	4.14	6.03	94.66	0.638
Area#6-70	6.48	0.00	0.00	0.40	6.05	0.10	1.97	0.933
Area#6-80	6.48	0.00	0.00	3.22	3.19	0.06	1.39	0.493
Area#6-90	6.48	0.00	0.00	2.68	3.70	0.64	11.65	0.571
Area#4-140	6.48	0.00	0.00	1.09	5.34	0.14	3.06	0.823
Area#4-150	6.48	0.00	0.00	0.41	6.04	0.07	1.40	0.931
Area#4-160	6.48	0.00	0.00	1.64	4.79	0.02	0.44	0.739
Area#4-170	6.48	0.00	0.00	0.93	5.50	0.08	1.64	0.848
Area#4-180	6.48	0.00	0.00	1.36	5.05	0.14	2.99	0.779
Area#4-190	6.48	0.00	0.00	0.93	5.50	0.04	0.89	0.849
Area#4-200	6.48	0.00	0.00	2.92	3.47	0.19	3.53	0.535
Area#4-130	6.48	0.00	0.00	2.52	3.89	0.13	2.70	0.601
Area#4-120	6.48	0.00	0.00	2.29	4.13	0.10	2.14	0.637
Area#4-100	6.48	0.00	0.00	3.44	2.97	0.14	2.80	0.458
Area#4-90	6.48	0.00	0.00	0.64	5.80	0.10	2.15	0.895

Area#4-80	6.48	0.00	0.00	0.38	6.05	0.18	3.69	0.933
Area#4-10	6.48	0.00	0.00	0.41	6.02	0.15	3.07	0.929
Area#4-20	6.48	0.00	0.00	0.82	5.61	0.26	5.37	0.865
Area#4-70	6.48	0.00	0.00	0.71	5.71	0.20	4.22	0.882
Area#4-60	6.48	0.00	0.00	0.41	6.03	0.15	3.04	0.930
Area#4-50	6.48	0.00	0.00	0.68	5.74	0.31	6.41	0.885
Area#4-30	6.48	0.00	0.00	2.40	4.00	0.07	1.67	0.617
Area#2-10	6.48	0.00	0.00	1.89	4.41	0.34	5.41	0.680
Area#2-20	6.48	0.00	0.00	1.41	4.96	0.11	2.11	0.766
Area#2-30	6.48	0.00	0.00	2.05	4.27	0.35	5.99	0.658
Area#2-40	6.48	0.00	0.00	1.53	4.86	0.62	12.75	0.750
Area#2-50	6.48	0.00	0.00	1.73	4.53	0.69	10.34	0.699
Area#2-60	6.48	0.00	0.00	1.73	4.66	0.44	9.46	0.719
Area#2-70	6.48	0.00	0.00	2.05	4.30	0.45	8.75	0.663
Area#2-100	6.48	0.00	0.00	1.62	4.76	0.30	6.09	0.735
Area#2-80	6.48	0.00	0.00	1.41	4.99	0.18	3.76	0.770
Area#2-110	6.48	0.00	0.00	1.62	4.77	0.19	4.01	0.735
Area#5-60	6.48	0.00	0.00	1.09	5.34	0.05	1.11	0.824
Area#2-90	6.48	0.00	0.00	1.32	5.02	0.37	6.70	0.775
Area#2-120	6.48	0.00	0.00	1.59	4.67	2.88	42.58	0.720
Area#2-150	6.48	0.00	0.00	2.07	4.24	0.79	12.97	0.654
Area#4-40	6.48	0.00	0.00	1.36	5.05	0.16	3.39	0.780
Area#4-110	6.48	0.00	0.00	1.44	4.94	0.40	8.61	0.762
Area#5-110	6.48	0.00	0.00	0.61	5.81	0.16	3.38	0.897
Area#2-130	6.48	0.00	0.00	1.70	4.70	0.14	2.93	0.725
Area#2-140	6.48	0.00	0.00	2.07	4.26	0.39	6.80	0.657

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Node Depth Summary
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Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	2.94	5.28	125.28	0 13:11
3**	JUNCTION	0.53	1.45	102.45	0 13:00
D/S_NC-4	JUNCTION	2.38	3.72	104.90	0 15:48
5**	JUNCTION	3.10	5.08	99.08	0 15:20
D/S_W_Battleboro_Ave**	JUNCTION	1.30	3.15	117.32	0 13:06
7**	JUNCTION	2.27	4.49	106.49	0 13:11
8**	JUNCTION	4.98	7.40	97.40	0 15:14
Hathaway_St-D/S	JUNCTION	3.97	5.74	95.72	0 15:20
DI_983628	JUNCTION	0.09	0.30	127.20	0 12:59
DI_983629	JUNCTION	0.28	0.97	127.17	0 13:00
DI_983630	JUNCTION	0.49	1.16	126.62	0 13:00
DI_983631	JUNCTION	0.12	0.45	126.90	0 12:59
DI_983633	JUNCTION	0.48	1.10	122.20	0 12:59
DI_983632	JUNCTION	0.53	1.11	122.16	0 13:00
DI_983634	JUNCTION	0.24	0.96	114.61	0 13:00
DI_984002*	JUNCTION	0.65	3.53	111.03	0 13:00
UNK_952741*	JUNCTION	0.51	3.90	111.80	0 12:59
DI_983635	JUNCTION	0.12	0.82	111.97	0 13:00
PE_972255	JUNCTION	0.12	0.42	113.92	0 12:59
PE_972263	JUNCTION	0.25	2.90	111.80	0 13:00
PE_972261*	JUNCTION	0.20	0.78	108.18	0 13:00
PE_972258	JUNCTION	4.05	6.02	95.02	0 15:24
Railroad_Junction_1	JUNCTION	2.25	4.76	109.29	0 13:08
Junction_1	JUNCTION	4.50	6.53	94.03	0 14:51
DI_983955	JUNCTION	0.12	0.44	101.04	0 13:00
PE_272260	JUNCTION	0.10	0.38	101.98	0 12:59
DI_983954	JUNCTION	0.16	0.70	98.72	0 13:00
DI_983953	JUNCTION	0.10	0.39	96.29	0 13:00
Drew_Hill_Junction	JUNCTION	4.89	6.97	94.97	0 15:24
DI_983952	JUNCTION	0.38	3.71	109.04	0 13:00
DI_983951	JUNCTION	0.31	3.02	107.07	0 13:01
DI_983950	JUNCTION	0.89	4.05	105.05	0 13:01
DI_283949	JUNCTION	0.41	2.37	103.62	0 13:03
DI_983948	JUNCTION	0.37	2.42	99.07	0 13:04

DI_983947	JUNCTION	0.53	3.47	98.55	0	13:08
DI_983946	JUNCTION	0.69	2.43	96.70	0	13:09
PE_972230	JUNCTION	0.52	2.11	129.26	0	13:00
UNK_952735*	JUNCTION	0.55	2.02	129.12	0	13:00
DI_983907	JUNCTION	0.60	1.96	129.01	0	13:00
DI_983906	JUNCTION	0.19	1.29	128.40	0	13:00
UNK_952736*	JUNCTION	0.22	1.89	127.65	0	13:00
DI_983903	JUNCTION	0.37	3.17	125.78	0	13:01
DI_983902	JUNCTION	0.68	2.85	123.93	0	13:04
DI_983904	JUNCTION	1.27	4.60	122.01	0	13:05
DI_983905	JUNCTION	2.02	4.12	120.60	0	13:03
DI_983721	JUNCTION	2.44	4.20	120.17	0	13:02
DI_983722	JUNCTION	2.43	4.23	120.19	0	13:04
MH_974299	JUNCTION	2.84	4.58	120.03	0	13:05
PE_972229	JUNCTION	0.37	1.36	116.58	0	13:06
PE_972224	JUNCTION	0.20	0.81	121.66	0	13:02
PE_972239	JUNCTION	0.60	1.90	114.02	0	13:04
PE_972246	JUNCTION	0.45	1.55	128.11	0	13:00
PE_972240	JUNCTION	0.60	2.08	127.80	0	13:03
DI_983935	JUNCTION	0.68	3.04	126.99	0	13:00
DI_983934	JUNCTION	0.78	3.23	126.91	0	13:00
MH_974300	JUNCTION	0.88	4.17	126.93	0	13:00
DI_983624	JUNCTION	1.59	5.20	122.32	0	13:00
DI_983623	JUNCTION	0.82	2.34	119.39	0	13:01
DI_983619	JUNCTION	0.57	2.53	116.84	0	13:01
DI_983622	JUNCTION	0.33	2.96	120.41	0	13:00
DI_983621	JUNCTION	0.76	5.97	120.29	0	13:02
DI_983620	JUNCTION	0.11	0.69	117.14	0	13:00
DI_983618	JUNCTION	0.84	3.43	116.15	0	13:03
DI_983898	JUNCTION	0.68	3.92	127.92	0	13:00
DI_983604	JUNCTION	0.74	4.32	127.82	0	13:00
DI_983901	JUNCTION	0.55	4.20	126.55	0	13:01
DI_983607	JUNCTION	0.26	2.78	129.58	0	12:59
DI_983606	JUNCTION	0.43	3.39	129.54	0	13:00
DI_9836054	JUNCTION	0.84	4.04	128.09	0	13:07
MH_974298	JUNCTION	1.66	4.04	128.09	0	13:04
DI_983899	JUNCTION	0.29	1.78	128.75	0	13:00
DI_983900	JUNCTION	0.31	1.80	128.79	0	13:00
DI_983897	JUNCTION	0.35	1.95	128.15	0	13:00
DI_983896	JUNCTION	0.47	2.06	128.11	0	13:00
DI_983895	JUNCTION	0.60	2.25	128.10	0	13:02
DI_983894	JUNCTION	0.49	1.45	127.25	0	13:02
DI_953893*	JUNCTION	0.20	0.74	126.44	0	13:00
PE_972225	JUNCTION	0.11	0.43	126.98	0	12:45
UNK_952734*	JUNCTION	0.48	1.30	123.83	0	13:00
DI_983892	JUNCTION	0.27	1.15	123.38	0	13:00
UNK_952733*	JUNCTION	0.27	1.14	122.99	0	13:00
UNK_952732*	JUNCTION	0.27	1.18	122.53	0	13:00
U/S_NC-4	JUNCTION	2.43	5.28	107.89	0	15:42
U/S_W_Battleboro_Ave	JUNCTION	2.09	7.57	121.99	0	13:01
Hathaway_St-U/S	JUNCTION	4.34	6.81	96.80	0	15:19
9**	JUNCTION	2.01	6.70	122.12	0	13:01
Farm-Culv-Up	JUNCTION	2.97	4.02	100.02	0	13:09
Farm-Culv-Dn	JUNCTION	2.01	4.08	99.58	0	13:13
Railroad-Up	JUNCTION	1.79	5.91	111.49	0	13:40
DI_983957	JUNCTION	0.26	2.65	123.65	0	13:02
DI_983956*	JUNCTION	0.38	3.15	123.65	0	13:04
PE_972262	JUNCTION	0.33	1.16	116.55	0	13:00
DI_983936	JUNCTION	0.70	1.77	128.13	0	13:00
U/S_Gainor_Swale	JUNCTION	0.60	1.91	127.91	0	13:01
DI_983625	JUNCTION	0.34	2.93	119.93	0	12:59
952731	JUNCTION	0.48	1.59	122.54	0	13:02
972222	JUNCTION	0.22	0.74	121.53	0	13:05
983943	JUNCTION	0.18	0.72	126.37	0	12:59
952740	JUNCTION	0.13	0.51	125.96	0	13:00
Primary_Outfall*	OUTFALL	4.50	6.53	93.53	0	14:51

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Node Inflow Summary
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Existing Conditions - Project Areas 2,4,5, & 6 (25-Year)

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	323.46	323.46	0 12:59	41.220	41.219
3**	JUNCTION	133.82	133.82	0 12:59	13.744	13.743
D/S_NC-4	JUNCTION	0.00	174.05	0 15:41	0.000	40.227
5**	JUNCTION	0.00	237.02	0 15:00	0.000	53.788
D/S_W_Battleboro_Ave**	JUNCTION	0.00	103.68	0 13:02	0.000	11.357
7**	JUNCTION	171.77	260.37	0 12:59	17.207	28.565
8**	JUNCTION	145.18	461.25	0 13:00	12.804	94.810
Hathaway_St-D/S	JUNCTION	0.00	442.18	0 15:19	0.000	94.624
DI_983628	JUNCTION	0.94	0.94	0 12:59	0.046	0.046
DI_983629	JUNCTION	1.18	2.12	0 12:59	0.056	0.102
DI_983630	JUNCTION	1.14	5.65	0 12:59	0.055	0.274
DI_983631	JUNCTION	2.42	2.42	0 12:59	0.117	0.117
DI_983633	JUNCTION	1.17	1.17	0 12:59	0.055	0.055
DI_983632	JUNCTION	1.11	7.89	0 12:59	0.052	0.381
DI_983634	JUNCTION	0.00	7.88	0 13:00	0.000	0.380
DI_984002*	JUNCTION	0.00	14.20	0 13:00	0.000	0.836
UNK_952741*	JUNCTION	2.82	6.77	0 12:37	0.134	0.456
DI_983635	JUNCTION	0.00	2.80	0 13:00	0.000	0.146
PE_972255	JUNCTION	2.80	2.80	0 12:59	0.146	0.146
PE_972263	JUNCTION	4.14	4.14	0 12:59	0.201	0.201
PE_972261*	JUNCTION	1.45	15.54	0 12:59	0.068	0.904
PE_972258	JUNCTION	0.00	442.58	0 15:20	0.000	94.661
Railroad_Junction_1	JUNCTION	107.75	219.28	0 12:59	9.187	22.054
Junction_1	JUNCTION	94.65	599.85	0 14:43	6.025	122.815
DI_983955	JUNCTION	1.39	1.39	0 12:59	0.064	0.064
PE_272260	JUNCTION	1.97	1.97	0 12:59	0.095	0.095
DI_983954	JUNCTION	0.00	3.35	0 12:59	0.000	0.159
DI_983953	JUNCTION	0.00	3.34	0 13:00	0.000	0.159
Drew_Hill_Junction	JUNCTION	0.00	442.44	0 15:23	0.000	93.974
DI_983952	JUNCTION	11.65	14.90	0 12:59	0.639	0.665
DI_983951	JUNCTION	0.00	14.73	0 13:00	0.000	0.665
DI_983950	JUNCTION	0.00	14.43	0 13:01	0.000	0.668
DI_283949	JUNCTION	0.00	14.37	0 13:01	0.000	0.669
DI_983948	JUNCTION	0.00	14.15	0 13:03	0.000	0.671
DI_983947	JUNCTION	0.00	13.96	0 13:04	0.000	0.671
DI_983946	JUNCTION	0.00	12.90	0 13:08	0.000	0.672
PE_972230	JUNCTION	3.69	3.69	0 12:59	0.177	0.177
UNK_952735*	JUNCTION	0.00	3.68	0 12:59	0.000	0.177
DI_983907	JUNCTION	2.15	5.80	0 12:59	0.104	0.281
DI_983906	JUNCTION	0.00	5.78	0 13:00	0.000	0.281
UNK_952736*	JUNCTION	0.00	5.78	0 12:47	0.000	0.281
DI_983903	JUNCTION	2.80	8.52	0 12:59	0.141	0.421
DI_983902	JUNCTION	0.00	30.82	0 13:01	0.000	1.715
DI_983904	JUNCTION	0.00	29.00	0 13:04	0.000	1.714
DI_983905	JUNCTION	8.61	34.62	0 13:03	0.401	2.117
DI_983721	JUNCTION	2.14	39.60	0 13:04	0.104	2.357
DI_983722	JUNCTION	2.70	44.34	0 13:03	0.134	2.491
MH_974299	JUNCTION	0.00	38.06	0 13:04	0.000	2.351
PE_972229	JUNCTION	3.53	47.98	0 13:05	0.185	3.020
PE_972224	JUNCTION	0.00	9.61	0 13:00	0.000	0.490
PE_972239	JUNCTION	0.00	67.30	0 13:02	0.000	4.050
PE_972246	JUNCTION	2.11	7.41	0 12:59	0.108	0.442
PE_972240	JUNCTION	0.00	12.68	0 13:01	0.000	0.789
DI_983935	JUNCTION	12.75	12.75	0 12:59	0.620	0.620
DI_983934	JUNCTION	10.34	22.78	0 12:59	0.688	1.309
MH_974300	JUNCTION	0.00	13.07	0 12:33	0.000	1.779
DI_983624	JUNCTION	18.20	51.79	0 12:59	0.897	2.995
DI_983623	JUNCTION	0.00	18.77	0 12:36	0.000	2.581
DI_983619	JUNCTION	0.00	42.45	0 13:00	0.000	3.430
DI_983622	JUNCTION	10.46	10.46	0 12:59	0.544	0.544
DI_983621	JUNCTION	6.08	40.11	0 13:00	0.297	0.712
DI_983620	JUNCTION	4.01	4.01	0 12:59	0.194	0.194
DI_983618	JUNCTION	0.00	51.08	0 12:58	0.000	3.968
DI_983898	JUNCTION	6.41	19.15	0 12:59	0.308	1.090

DI_983604	JUNCTION	4.22	22.82	0	12:59	0.202	1.294
DI_983901	JUNCTION	0.00	22.67	0	13:00	0.000	1.294
DI_983607	JUNCTION	3.07	3.07	0	12:59	0.147	0.147
DI_983606	JUNCTION	5.37	8.44	0	12:59	0.256	0.402
DI_9836054	JUNCTION	3.04	7.81	0	12:59	0.146	0.374
MH_974298	JUNCTION	0.00	4.14	0	12:36	0.000	0.221
DI_983899	JUNCTION	3.39	4.28	0	12:59	0.159	0.228
DI_983900	JUNCTION	1.67	1.67	0	12:59	0.074	0.074
DI_983897	JUNCTION	3.06	3.06	0	12:59	0.143	0.143
DI_983896	JUNCTION	1.40	4.44	0	12:59	0.067	0.211
DI_983895	JUNCTION	0.44	4.72	0	12:59	0.020	0.230
DI_983894	JUNCTION	0.00	4.37	0	13:02	0.000	0.230
DI_953893*	JUNCTION	0.00	5.89	0	13:00	0.000	0.308
PE_972225	JUNCTION	1.64	1.64	0	12:59	0.078	0.078
UNK_952734*	JUNCTION	2.99	8.85	0	12:59	0.141	0.449
DI_983892	JUNCTION	0.00	8.82	0	13:00	0.000	0.449
UNK_952733*	JUNCTION	0.00	8.81	0	13:00	0.000	0.449
UNK_952732*	JUNCTION	0.89	9.60	0	13:00	0.042	0.490
U/S_NC-4	JUNCTION	0.00	277.46	0	13:56	0.000	41.367
U/S_W_Battleboro_Ave	JUNCTION	0.00	113.15	0	13:00	0.000	11.361
Hathaway_St-U/S	JUNCTION	3.38	441.76	0	15:05	0.159	94.347
9**	JUNCTION	113.02	113.02	0	12:59	11.365	11.365
Farm-Culv-Up	JUNCTION	26.65	207.59	0	13:04	1.514	23.476
Farm-Culv-Dn	JUNCTION	0.00	206.92	0	13:04	0.000	23.405
Railroad-Up	JUNCTION	55.54	121.34	0	13:00	3.667	8.253
DI_983957	JUNCTION	1.80	2.19	0	12:57	0.090	0.091
DI_983956*	JUNCTION	7.58	8.74	0	12:59	0.407	0.498
PE_972262	JUNCTION	19.16	25.41	0	12:59	1.139	1.636
DI_983936	JUNCTION	5.41	5.41	0	12:59	0.335	0.335
U/S_Gainor_Swale	JUNCTION	5.99	13.11	0	12:59	0.347	0.789
DI_983625	JUNCTION	0.00	8.95	0	12:49	0.000	0.539
952731	JUNCTION	6.79	9.64	0	12:59	0.393	0.529
972222	JUNCTION	0.00	8.67	0	13:02	0.000	0.527
983943	JUNCTION	2.93	2.93	0	12:59	0.136	0.136
952740	JUNCTION	0.00	2.93	0	13:00	0.000	0.136
Primary_Outfall*	OUTFALL	0.00	599.65	0	14:51	0.000	122.013

****
Node Surcharge Summary
****

Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
9**	JUNCTION	0.20	0.698	1.302
DI_983625	JUNCTION	0.30	1.426	3.174

****
Node Flooding Summary
****

No nodes were flooded.

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	97.42	260.32	599.65	122.013
System	97.42	260.32	599.65	122.013

Existing Conditions - Project Areas 2,4,5, & 6 (25-Year)

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
BeechTrib8	CHANNEL	277.46	0	13:56	2.29	0.03	0.33
NC-4	CONDUIT	174.05	0	15:41	9.05	1.01	1.00
BeechTrib7	CHANNEL	174.00	0	15:48	1.99	0.02	0.31
Channel_4**	CONDUIT	133.15	0	13:00	2.39	0.07	0.50
BeechTrib6	CHANNEL	233.77	0	15:20	1.64	0.07	0.62
W_Battleboro_Ave_Culvert**	CONDUIT	98.83	0	13:00	13.98	2.10	1.00
Channel_3A**	CHANNEL	96.32	0	13:06	2.84	0.00	0.25
Channel_3B	CHANNEL	206.84	0	13:11	1.36	0.02	0.38
BeechTrib5	CHANNEL	438.13	0	15:07	1.70	1.96	0.71
Hathaway_St_Culvert	CONDUIT	440.05	0	15:19	6.25	3.86	0.98
15_RCP_Hathaway_1	CONDUIT	0.94	0	13:00	1.50	0.13	0.51
15_RCP_Hathaway_2	CONDUIT	2.10	0	13:00	2.18	0.80	0.73
15_RCP_Hathaway_3	CONDUIT	2.42	0	12:59	2.88	0.28	0.65
15_RCP_Hathaway_4	CONDUIT	5.62	0	13:00	6.34	0.77	0.68
15_RCP_Hathaway_5	CONDUIT	1.17	0	13:00	1.02	0.62	0.88
15_RCP_Hathaway_6	CONDUIT	7.88	0	13:00	8.73	0.69	0.69
15_RCP_Hathaway_7	CONDUIT	7.87	0	13:00	6.97	0.67	0.87
15_RCP_Hathaway_8	CONDUIT	2.80	0	13:00	6.83	0.24	0.50
15_RCP_Hathaway_9	CONDUIT	2.82	0	13:00	2.71	0.20	0.83
18_RCP_Hathaway_10	CONDUIT	3.18	0	13:08	2.23	0.22	1.00
18_RCP_Hathaway_11*	CONDUIT	6.34	0	13:00	3.59	1.04	1.00
15_RCP_Hathaway_12*	CONDUIT	11.22	0	13:00	10.51	2.20	0.81
Hathaway_Swale*	CONDUIT	15.43	0	13:00	0.45	0.00	0.36
BeechTrib4	CHANNEL	442.16	0	15:20	1.63	0.05	0.51
12_RCP_Battleboro_Apt_1	CONDUIT	1.38	0	13:00	2.97	0.40	0.57
12_RCP_Battleboro_Apt_2	CONDUIT	1.97	0	12:59	4.95	0.30	0.54
12_RCP_Battleboro_Apt_3	CONDUIT	3.34	0	13:00	7.64	0.67	0.54
15_RCP_Battleboro_Apt_4	CONDUIT	3.34	0	13:00	3.93	0.21	0.65
BeechTrib3	CHANNEL	442.44	0	15:23	1.15	0.03	0.57
BeechTrib2	CHANNEL	442.61	0	15:29	1.27	0.11	0.55
Channel-6B	CHANNEL	187.41	0	13:08	2.87	0.09	0.49
15_RCP_Burrows_1	CONDUIT	10.04	0	12:43	8.18	0.96	1.00
15_RCP_Burrows_2	CONDUIT	9.63	0	13:00	7.85	0.69	1.00
15_RCP_Burrows_3	CONDUIT	8.61	0	12:43	7.01	1.99	1.00
15_RCP_Burrows_4	CONDUIT	8.04	0	12:43	6.65	1.03	1.00
15_RCP_Burrows_5	CONDUIT	8.76	0	12:50	7.14	1.14	1.00
15_RCP_Burrows_6	CONDUIT	12.06	0	13:02	9.83	1.12	1.00
18_RCP_Burrows_7	CONDUIT	12.86	0	13:08	7.28	0.40	1.00
BeechTrib1	CHANNEL	599.65	0	14:51	1.89	0.07	0.53
18_RCP_Marriott_1	CONDUIT	3.68	0	12:59	2.08	1.01	1.00
12_RCP_Marriott_2	CONDUIT	3.67	0	13:00	4.67	1.46	1.00
15_RCP_Marriott_3	CONDUIT	5.78	0	13:00	5.30	0.94	1.00
15_VCP_Marriott_4	CONDUIT	5.78	0	12:47	6.71	0.64	1.00
15_RCP_Mattiott_5	CONDUIT	5.74	0	13:00	4.84	0.73	1.00
15_RCP_Mattiott_6	CONDUIT	7.58	0	12:50	6.17	0.97	1.00
24_RCP_Marriott_7	CONDUIT	20.33	0	13:17	6.47	0.59	1.00
24_RCP_Marriott_8	CONDUIT	21.89	0	13:06	6.97	0.98	1.00
24_RCP_Marriott_9	CONDUIT	15.42	0	12:41	4.91	0.73	1.00
24_RCP_Etheridge_1	CONDUIT	12.21	0	12:33	3.89	0.74	1.00
24_RCP_Etheridge_2	CONDUIT	9.74	0	12:42	3.10	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.42	0	13:05	6.41	0.26	0.67
Railroad_Swale_2	CONDUIT	47.28	0	13:06	1.18	0.02	0.31
Railroad_Swale_1	CONDUIT	9.53	0	13:02	1.81	0.02	0.21
Cemetery_Dr_Swale	CONDUIT	65.22	0	13:04	1.52	0.10	0.69
Gainor_Swale	CONDUIT	12.68	0	13:01	1.66	0.07	0.40
12_RCP_Gainor_1	CONDUIT	4.66	0	15:18	5.95	1.07	1.00
18_RCP_Gainor_2	CONDUIT	6.21	0	12:34	3.51	0.73	1.00
18_RCP_Gainor_3	CONDUIT	9.80	0	12:35	5.67	0.58	1.00
18_RCP_Gainor_4	CONDUIT	12.07	0	14:23	6.83	0.86	1.00
18_RCP_Gainor_5	CONDUIT	18.77	0	12:36	10.62	7.58	1.00

Existing Conditions - Project Areas 2,4,5, & 6 (25-Year)

24_RCP_Gainor_6	CONDUIT	18.33	0	13:01	6.23	1.07	0.89
15_RCP_Gainor_7A	CONDUIT	8.95	0	12:49	5.79	0.61	1.00
15_RCP_Gainor_7B	CONDUIT	20.89	0	13:16	11.82	11.93	1.00
15_RCP_Gainor_7C	CONDUIT	3.97	0	13:00	3.88	0.19	0.78
36_RCP_Gainor_8	CONDUIT	42.31	0	13:00	6.46	0.36	0.92
36_RCP_Gainor_9	CONDUIT	50.90	0	12:56	8.60	0.53	0.82
15_RCP_W_Battleboro_1	CONDUIT	3.49	0	13:07	2.94	0.42	1.00
18_RCP_W_Battleboro_2	CONDUIT	6.50	0	12:40	3.68	0.83	1.00
18_RCP_W_Battleboro_3	CONDUIT	7.01	0	13:43	3.96	0.93	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.93	0	13:37	6.19	0.81	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.78	0	13:21	7.23	1.42	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.47	0	12:52	8.76	1.12	1.00
15_RCP_Pollard_3	CONDUIT	3.80	0	13:47	3.19	0.16	1.00
15_RCP_Pollard_2	CONDUIT	3.44	0	12:40	4.04	0.67	1.00
12_RCP_Pollard_1	CONDUIT	1.52	0	13:07	1.94	1.71	1.00
12_RCP_W_Bridges_1	CONDUIT	1.67	0	12:34	2.13	0.72	1.00
12_RCP_W_Bridges_2	CONDUIT	2.40	0	12:34	3.05	0.48	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:23	3.10	4.58	1.00
15_RCP_Railroad_2	CONDUIT	4.37	0	13:02	4.46	0.76	0.77
15_RCP_Railroad_3	CONDUIT	1.64	0	12:59	3.21	0.25	0.47
18_RCP_Railroad_4	CONDUIT	5.87	0	13:00	4.66	0.49	0.68
24_RCP_Railroad_5	CONDUIT	8.82	0	13:00	5.00	0.35	0.55
24_RCP_Railroad_6*	CONDUIT	8.81	0	13:00	4.74	0.42	0.57
24_RCP_Railroad_7*	CONDUIT	8.81	0	13:01	4.67	0.46	0.58
24_VCP_Railroad_8	CONDUIT	9.61	0	13:00	6.19	0.32	0.50
CONNECT**	CONDUIT	113.15	0	13:00	2.14	0.38	1.00
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	4.93	0	13:00	1.87	0.00	0.02
Overland_Burrows_2	CONDUIT	4.80	0	13:01	1.43	0.00	0.02
Overland_Burrows_3	CONDUIT	5.83	0	13:01	2.03	0.00	0.02
Overland_Burrows_4	CONDUIT	6.71	0	13:03	1.98	0.00	0.02
Overland_Burrows_5	CONDUIT	9.89	0	13:05	1.75	0.00	0.04
Overland_Burrows_6	CONDUIT	1.70	0	13:08	0.84	0.00	0.01
Overland_Burrows_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	5.09	0	13:02	1.12	0.00	0.02
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	204.44	0	13:13	1.69	0.04	0.58
Farm-Culvert	CONDUIT	16.67	0	10:23	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	199.64	0	13:04	7.02	0.04	0.18
Railroad_Culvert	CONDUIT	63.93	0	13:52	9.04	0.96	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.19
Over_15_RCP_Marriott_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_6	CONDUIT	0.87	0	13:01	0.22	0.00	0.03
Over_24_RCP_Marriott_7	CONDUIT	9.25	0	13:05	1.43	0.00	0.04
Over_24_RCP_Marriott_8	CONDUIT	6.95	0	13:05	0.82	0.00	0.06
Over_24_RCP_Marriott_9	CONDUIT	20.97	0	13:03	1.44	0.01	0.10
Over_24_RCP_Etheridge_1	CONDUIT	42.65	0	13:03	1.21	0.01	0.21
Over_24_RCP_Etheridge_2	CONDUIT	31.70	0	13:04	0.98	0.01	0.19
Over_15_RCP_W_Battleboro_1	CONDUIT	1.74	0	13:00	0.54	0.01	0.02
Over_15_RCP_W_Battleboro_2	CONDUIT	2.05	0	13:00	0.31	0.00	0.04
Over_18_RCP_W_Battleboro_4	CONDUIT	15.33	0	13:01	1.66	0.06	0.06
Over_18_RCP_W_Battleboro_5	CONDUIT	14.43	0	13:00	2.38	0.00	0.04
Over_18_RCP_W_Battleboro_6	CONDUIT	7.35	0	13:01	1.74	0.00	0.03
Over_12_RCP_Pollard_1	CONDUIT	0.73	0	13:00	0.12	0.00	0.04
Over_15_RCP_Pollard_2	CONDUIT	1.14	0	13:00	0.13	0.00	0.06
Over_24_RCP_Etheridge_3	CONDUIT	23.20	0	13:05	5.66	0.00	0.03
Over_12_RCP_W_Bridges_1	CONDUIT	2.23	0	13:00	0.61	0.00	0.03
Over_12_RCP_W_Bridges_2	CONDUIT	3.73	0	13:00	0.86	0.01	0.03
Over_12_RCP_Railroad_1	CONDUIT	2.41	0	13:02	0.69	0.00	0.02
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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Over_24_RCP_Railroad_6* CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_24_RCP_Railroad_7* CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_24_VCP_Railroad_8 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Railroad_3 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_12_RCP_Gainor_1 CONDUIT     10.23     0  13:03      0.42    0.00    0.15
OVer_18_RCP_Gainor_2 CONDUIT      9.68     0  13:00      0.88    0.00    0.07
Over_18_RCP_Gainor_3 CONDUIT     22.31     0  13:01      5.21    0.00    0.03
Over_18_RCP_Gainor_4 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_18_RCP_Gainor_5 CONDUIT     32.86     0  13:00      4.71    0.00    0.09
Over_24_RCP_Gainor_6 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_8 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
12_RCP_Crepe_Myrtle_1 CONDUIT      1.67     0  13:28      2.57    0.50    1.00
12_RCP_Crepe_Myrtle_2 CONDUIT      6.44     0  13:09      8.22    1.07    1.00
Crepe_Myrtle_Swale   CONDUIT     25.00     0  13:00      1.28    0.05    0.58
Over_15_RCP_Hathaway_10 CONDUIT      3.27     0  13:00      1.24    0.00    0.02
Over_12_RCP_Crepe_Myrtle_1 CONDUIT      2.21     0  13:10      0.31    0.00    0.13
Over_15_RCP_Hathaway_12* CONDUIT      2.91     0  13:00      1.87    0.00    0.01
15_RCP_Gainor        CONDUIT      3.12     0  12:39      2.54    0.59    1.00
Gainor_Bridges       CONDUIT      4.55     0  12:40      3.71    0.97    1.00
Over_15_RCP_Gainor   CONDUIT      4.16     0  13:00      0.68    0.02    0.04
Over_Gainor_Bridges  CONDUIT      4.36     0  13:00      0.32    0.00    0.09
Over_15_RCP_Gainor_7A CONDUIT      1.53     0  13:00      0.51    0.00    0.02
Over_15_RCP_Gainor_7C CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_Hathaway_3      CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Hathaway_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Battle-Gainor-Over   CONDUIT     16.79     0  13:02      2.74    0.00    0.04
15_RCP_Gainor_7D     CONDUIT      8.95     0  12:49      5.06    0.92    1.00
84                   CONDUIT      4.44     0  13:05      0.62    0.00    0.09
E-Battleboro-Culv    CONDUIT      8.67     0  13:02      4.65    1.13    0.58
RR-Open-Ditch2       CONDUIT      8.27     0  13:05      0.38    0.02    0.59
Pearsall             CONDUIT      2.93     0  13:00      4.33    0.34    0.41
RR-Open-Ditch1       CONDUIT      2.86     0  13:00      0.80    0.01    0.35
Battleboro-Ovr       CONDUIT      0.00     0  00:00      0.00    0.00    0.00


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Flow Classification Summary
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                    Adjusted    --- Fraction of Time in Flow Class ----   Avg.     Avg.
                     /Actual          Up    Down  Sub   Sup   Up    Down   Froude   Flow
Conduit               Length    Dry  Dry   Dry   Crit  Crit  Crit  Crit   Number   Change
-------------------------------------------------------------------------------------------
BeechTrib8              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.27   0.0000
NC-4                    1.00   0.02  0.00  0.00  0.95  0.03  0.00  0.00     0.47   0.0002
BeechTrib7              1.00   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.22   0.0000
Channel_4**             1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.12   0.0000
BeechTrib6              1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.14   0.0000
W_Battleboro_Ave_Culvert**    3.30   0.02  0.00  0.00  0.75  0.23  0.00  0.00     0.84   0.0003
Channel_3A**            1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.26   0.0000
Channel_3B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.13   0.0000
BeechTrib5              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.14   0.0002
Hathaway_St_Culvert     1.18   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.25   0.0005
15_RCP_Hathaway_1       2.23   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.28   0.0000
15_RCP_Hathaway_2       1.00   0.03  0.00  0.00  0.96  0.00  0.00  0.01     0.38   0.0001
15_RCP_Hathaway_3       2.38   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.26   0.0000
15_RCP_Hathaway_4       1.00   0.04  0.00  0.00  0.23  0.70  0.00  0.03     1.14   0.0001
15_RCP_Hathaway_5       1.34   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.05   0.0001
15_RCP_Hathaway_6       1.00   0.05  0.00  0.00  0.01  0.94  0.00  0.00     1.66   0.0001
15_RCP_Hathaway_7       1.00   0.02  0.03  0.00  0.92  0.03  0.00  0.00     0.59   0.0001
15_RCP_Hathaway_8       2.28   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.24   0.0000
15_RCP_Hathaway_9       2.53   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.54   0.0001
18_RCP_Hathaway_10      2.92   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.56   0.0001
18_RCP_Hathaway_11*     1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.43   0.0002
15_RCP_Hathaway_12*     6.57   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.37   0.0003
Hathaway_Swale*         1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.03   0.0000
BeechTrib4              1.00   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.18   0.0000
12_RCP_Battleboro_Apt_1    1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.80   0.0001
12_RCP_Battleboro_Apt_2    1.29   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.29   0.0000
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Existing Conditions - Project Areas 2,4,5, & 6 (25-Year)

12_RCP_Battleboro_Apt_3	1.10	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.11	0.0001
15_RCP_Battleboro_Apt_4	1.78	0.02	0.00	0.00	0.93	0.05	0.00	0.00	0.29	0.0000
BeechTrib3	2.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib2	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.11	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.04	0.94	0.00	0.00	2.09	0.0002
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.51	0.0001
15_RCP_Burrows_3	1.76	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.39	0.0003
15_RCP_Burrows_4	1.00	0.03	0.00	0.00	0.05	0.92	0.00	0.00	1.46	0.0002
15_RCP_Burrows_5	1.15	0.04	0.00	0.00	0.71	0.25	0.00	0.00	0.81	0.0002
15_RCP_Burrows_6	4.20	0.04	0.00	0.00	0.53	0.43	0.00	0.00	1.27	0.0002
18_RCP_Burrows_7	5.31	0.04	0.01	0.00	0.93	0.03	0.00	0.00	0.23	0.0001
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.18	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.11	0.0001
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0002
15_RCP_Marriott_3	3.55	0.05	0.00	0.00	0.03	0.92	0.00	0.00	1.24	0.0001
15_VCP_Marriott_4	1.95	0.05	0.00	0.00	0.02	0.93	0.00	0.00	1.56	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.03	0.00	0.53	0.42	0.00	0.00	0.90	0.0001
15_RCP_Mattiott_6	1.30	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.63	0.0002
24_RCP_Marriott_7	1.14	0.03	0.00	0.00	0.85	0.12	0.00	0.00	0.74	0.0001
24_RCP_Marriott_8	1.47	0.02	0.01	0.00	0.94	0.03	0.00	0.00	0.14	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.04	0.0004
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0002
24_RCP_Etheridge_3	7.59	0.02	0.05	0.00	0.00	0.00	0.93	0.00	0.35	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
12_RCP_Gainor_1	1.00	0.02	0.00	0.00	0.43	0.55	0.00	0.00	0.84	0.0002
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.56	0.0002
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.22	0.76	0.00	0.00	1.12	0.0002
18_RCP_Gainor_4	1.00	0.02	0.00	0.00	0.31	0.30	0.00	0.37	1.22	0.0001
18_RCP_Gainor_5	2.32	0.02	0.00	0.00	0.19	0.00	0.00	0.79	0.55	0.0011
24_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	0.99	0.0001
15_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.03	0.95	0.00	0.00	1.31	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0018
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.52	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.15	0.83	0.00	0.00	1.30	0.0001
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.05	0.94	0.00	0.00	1.34	0.0001
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.64	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.61	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.03	0.00	0.25	0.00	0.71	0.00	0.30	0.0002
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.32	0.66	0.00	0.00	0.94	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.11	0.87	0.00	0.00	1.17	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.65	0.33	0.00	0.00	0.82	0.0002
15_RCP_Pollard_3	26.14	0.02	0.03	0.00	0.95	0.00	0.00	0.00	0.31	0.0001
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.74	0.06	0.00	0.18	0.68	0.0002
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0004
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0002
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.19	0.0008
15_RCP_Railroad_2	2.51	0.02	0.03	0.00	0.05	0.90	0.00	0.00	1.02	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.95	0.03	0.00	0.00	0.67	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.47	0.0001
24_RCP_Railroad_5	3.55	0.04	0.00	0.00	0.02	0.94	0.00	0.00	1.20	0.0001
24_RCP_Railroad_6*	3.25	0.04	0.00	0.00	0.05	0.91	0.00	0.00	1.06	0.0001
24_RCP_Railroad_7*	2.02	0.02	0.02	0.00	0.06	0.90	0.00	0.00	1.08	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.63	0.0000
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0001
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.16	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	0.97	0.00	0.00	0.00	0.02	0.00	0.00	0.04	0.0000
Overland_Burrows_2	3.53	0.97	0.00	0.00	0.01	0.00	0.00	0.02	0.03	0.0000
Overland_Burrows_3	7.01	0.96	0.00	0.00	0.00	0.03	0.00	0.00	0.05	0.0000
Overland_Burrows_4	2.14	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.0000
Overland_Burrows_5	1.88	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.0000
Overland_Burrows_6	5.36	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000

Existing Conditions - Project Areas 2,4,5, & 6 (25-Year)

Overland_Burrows_7	7.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
W_Battleboro_Ave-Over	3.80	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.16	0.00	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.85	0.13	0.00	0.00	0.37	0.00	0.0002
Over_Farm-Culvert	7.77	0.37	0.00	0.00	0.00	0.04	0.00	0.58	0.95	0.00	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.00	0.0002
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	0.80	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_2	27.58	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_3	4.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	0.97	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_7	1.03	0.97	0.00	0.00	0.01	0.00	0.00	0.02	0.02	0.00	0.0000
Over_24_RCP_Marriott_8	1.80	0.89	0.08	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_9	2.78	0.81	0.09	0.00	0.11	0.00	0.00	0.00	0.04	0.00	0.0000
Over_24_RCP_Etheridge_1	5.90	0.72	0.08	0.00	0.19	0.00	0.00	0.00	0.03	0.00	0.0000
Over_24_RCP_Etheridge_2	1.42	0.72	0.14	0.00	0.00	0.00	0.14	0.00	0.02	0.00	0.0000
Over_15_RCP_W_Battleboro_1	2.34	0.97	0.00	0.00	0.02	0.00	0.00	0.02	0.01	0.00	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.93	0.05	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.93	0.00	0.00	0.00	0.00	0.00	0.07	0.04	0.00	0.0000
Over_18_RCP_W_Battleboro_5	1.60	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.0000
Over_18_RCP_W_Battleboro_6	6.23	0.97	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.02	0.0000
Over_12_RCP_Pollard_1	1.11	0.93	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.91	0.05	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.90	0.00	0.00	0.00	0.00	0.00	0.10	0.31	0.00	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.93	0.01	0.00	0.05	0.00	0.00	0.00	0.01	0.00	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.93	0.00	0.00	0.03	0.00	0.00	0.03	0.03	0.00	0.0000
Over_12_RCP_Railroad_1	1.00	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.00	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Gainor_1	1.00	0.78	0.08	0.00	0.00	0.00	0.13	0.00	0.01	0.00	0.0000
OVer_18_RCP_Gainor_2	5.06	0.86	0.01	0.00	0.00	0.00	0.13	0.00	0.03	0.00	0.0000
Over_18_RCP_Gainor_3	20.67	0.88	0.00	0.00	0.00	0.09	0.00	0.03	0.39	0.00	0.0000
Over_18_RCP_Gainor_4	1.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_5	16.05	0.89	0.00	0.00	0.03	0.01	0.00	0.07	0.24	0.00	0.0000
Over_24_RCP_Gainor_6	18.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
12_RCP_Crepe_Myrtle_1	2.12	0.02	0.00	0.00	0.35	0.10	0.00	0.53	0.94	0.0003	
12_RCP_Crepe_Myrtle_2	1.00	0.02	0.00	0.00	0.04	0.94	0.00	0.00	1.62	0.0002	
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.08	0.0000	
Over_15_RCP_Hathaway_10	1.15	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.00	0.0000
Over_12_RCP_Crepe_Myrtle_1	5.17	0.94	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_12*	25.27	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.07	0.00	0.0000
15_RCP_Gainor	3.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0001	
Gainor_Bridges	1.00	0.02	0.00	0.00	0.98	0.01	0.00	0.00	0.57	0.0002	
Over_15_RCP_Gainor	3.16	0.89	0.00	0.00	0.06	0.00	0.00	0.05	0.04	0.0000	
Over_Gainor_Bridges	1.33	0.82	0.09	0.00	0.08	0.00	0.00	0.00	0.00	0.0000	
Over_15_RCP_Gainor_7A	13.13	0.97	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.0000	
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Battle-Gainor-Over	3.68	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.0000	
15_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.45	0.0001	
84	30.58	0.91	0.00	0.00	0.09	0.00	0.00	0.00	0.01	0.0000	
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.72	0.0002	
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.06	0.0000	
Pearsall	3.93	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.15	0.0000	
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0000	
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	

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Existing Conditions - Project Areas 2,4,5, & 6 (25-Year)

Conduit Surcharge Summary
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Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
NC-4	4.74	4.74	4.74	7.63	4.74
W_Battleboro_Ave_Culvert**	0.40	0.40	0.40	3.21	0.40
BeechTrib5	0.01	0.01	0.01	7.26	0.01
Hathaway_St_Culvert	0.01	0.01	0.01	11.36	0.01
18_RCP_Hathaway_10	0.62	0.62	0.62	0.01	0.01
18_RCP_Hathaway_11*	0.79	0.79	0.79	0.38	0.62
15_RCP_Hathaway_12*	0.01	0.01	0.01	1.02	0.01
15_RCP_Burrows_1	0.50	0.50	0.50	0.01	0.43
15_RCP_Burrows_2	0.54	0.54	0.54	0.01	0.01
15_RCP_Burrows_3	0.67	0.67	0.67	1.00	0.01
15_RCP_Burrows_4	0.66	0.66	0.66	0.08	0.17
15_RCP_Burrows_5	0.59	0.59	0.60	0.28	0.26
15_RCP_Burrows_6	0.45	0.45	0.45	0.27	0.42
18_RCP_Burrows_7	0.41	0.41	0.41	0.01	0.01
18_RCP_Marriott_1	0.38	0.38	0.38	0.15	0.38
12_RCP_Marriott_2	0.54	0.54	0.54	0.48	0.48
15_RCP_Marriott_3	0.05	0.05	0.05	0.01	0.05
15_VCP_Marriott_4	0.05	0.05	0.05	0.01	0.01
15_RCP_Mattiott_5	0.28	0.28	0.28	0.01	0.01
15_RCP_Mattiott_6	0.69	0.69	0.69	0.01	0.46
24_RCP_Marriott_7	0.57	0.57	0.57	0.01	0.01
24_RCP_Marriott_8	4.16	4.16	4.16	0.01	0.64
24_RCP_Marriott_9	6.08	6.08	6.08	0.01	0.21
24_RCP_Etheridge_1	6.97	6.97	6.98	0.01	0.09
24_RCP_Etheridge_2	9.97	9.97	9.97	0.01	0.01
12_RCP_Gainor_1	2.59	2.59	2.59	0.82	0.42
18_RCP_Gainor_2	2.17	2.17	2.17	0.01	0.02
18_RCP_Gainor_3	2.18	2.18	2.18	0.01	0.02
18_RCP_Gainor_4	2.26	2.26	2.26	0.01	0.01
18_RCP_Gainor_5	2.33	2.33	2.33	9.76	2.33
24_RCP_Gainor_6	0.01	0.01	0.01	1.68	0.01
15_RCP_Gainor_7A	0.30	0.30	0.30	0.01	0.27
15_RCP_Gainor_7B	0.83	0.83	0.83	1.58	0.83
15_RCP_W_Battleboro_1	0.75	0.75	0.75	0.01	0.01
18_RCP_W_Battleboro_2	1.04	1.04	1.04	0.01	0.01
18_RCP_W_Battleboro_3	1.31	1.31	1.31	0.01	0.01
18_RCP_W_Battleboro_4	1.34	1.34	1.34	0.01	0.60
18_RCP_W_Battleboro_5	1.20	1.20	1.20	0.94	1.20
18_RCP_W_Battleboro_6	0.77	0.77	0.77	0.41	0.77
15_RCP_Pollard_3	1.22	1.22	1.22	0.01	0.01
15_RCP_Pollard_2	0.69	0.69	0.69	0.01	0.01
12_RCP_Pollard_1	1.07	1.07	1.07	0.50	0.67
12_RCP_W_Bridges_1	1.03	1.03	1.03	0.01	0.02
12_RCP_W_Bridges_2	1.02	1.02	1.02	0.01	0.01
12_RCP_Railroad_1	0.58	0.58	0.59	4.51	0.58
CONNECT**	0.20	0.20	0.20	0.01	0.01
Farm-Culvert	11.14	11.14	11.14	10.41	10.55
Railroad_Culvert	3.44	3.44	3.44	0.01	2.97
12_RCP_Crepe_Myrtle_1	0.86	0.86	0.86	0.01	0.01
12_RCP_Crepe_Myrtle_2	0.44	0.44	0.44	0.81	0.44
15_RCP_Gainor	2.06	2.06	2.06	0.01	0.01
Gainor_Bridges	2.06	2.06	2.06	0.01	0.01
15_RCP_Gainor_7D	0.30	0.30	0.30	0.01	0.01
E-Battleboro-Culv	0.01	0.01	0.01	0.22	0.01

Analysis begun on: Mon Dec 07 15:39:59 2015
Analysis ended on: Mon Dec 07 15:40:03 2015
Total elapsed time: 00:00:04

Existing Conditions - Project Areas 2,4,5, & 6 (50-Year)

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Existing Conditions - Project Areas 2,4,5, & 6 (50-Year)

***********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
***********************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-06-2015 00:00:00
Ending Date .............. APR-07-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Gainor

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905
```

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WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224

WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node PE_972240

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       774.230         7.194
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       244.501         2.272
Surface Runoff ...........       456.014         4.237
Final Surface Storage ....        74.332         0.691
Continuity Error (%) .....        -0.080


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       454.806       148.205
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       434.865       141.707
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        21.408         6.976
Continuity Error (%) .....        -0.322


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (3.02%)
Node 8** (1.54%)
Node DI_983621 (-1.17%)
```

Existing Conditions - Project Areas 2,4,5, & 6 (50-Year)

```
**************************
Time-Step Critical Elements
**************************
Link 24_RCP_Etheridge_2 (19.53%)
Link 18_RCP_Gainor_5 (17.34%)
Link Farm-Culvert (15.78%)
Link Hathaway_St_Culvert (13.78%)
Link W_Battleboro_Ave_Culvert** (6.36%)


*******************************
Highest Flow Instability Indexes
*******************************
All links are stable.


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     5.78 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.03


**************************
Subcatchment Runoff Summary
**************************
```

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	7.19	0.00	0.00	2.41	3.69	48.60	378.81	0.513
Basin_A-2	7.19	0.00	0.00	2.04	4.45	15.94	156.30	0.618
Basin_A-3	7.19	0.00	0.00	2.08	4.65	13.14	134.84	0.647
Basin_A-4	7.19	0.00	0.00	2.26	4.41	19.96	202.91	0.614
Basin_A-5	7.19	0.00	0.00	2.22	4.45	14.80	168.78	0.619
Basin_B-2	7.19	0.00	0.00	2.59	4.24	9.79	114.47	0.589
Area#5-10	7.19	0.00	0.00	2.27	4.84	0.05	1.09	0.672
Area#5-30	7.19	0.00	0.00	1.15	5.98	0.13	2.73	0.831
Area#5-50	7.19	0.00	0.00	2.03	5.09	0.06	1.34	0.708
Area#5-70	7.19	0.00	0.00	2.54	4.54	0.17	3.28	0.631
Area#5-80	7.19	0.00	0.00	1.80	5.32	0.23	4.72	0.739
Area#5-20	7.19	0.00	0.00	1.15	5.99	0.06	1.33	0.832
Area#5-40	7.19	0.00	0.00	1.15	5.98	0.06	1.28	0.831
Area#5-90	7.19	0.00	0.00	1.02	6.13	0.15	3.17	0.853
Area#5-100	7.19	0.00	0.00	1.15	6.00	0.08	1.63	0.833
Area#6-10	7.19	0.00	0.00	3.45	3.67	0.10	2.09	0.510
Area#6-20	7.19	0.00	0.00	2.37	4.71	0.47	8.83	0.654
Area#6-30	7.19	0.00	0.00	2.27	4.76	1.30	22.38	0.662
Area#6-40	7.19	0.00	0.00	2.65	4.34	0.87	13.18	0.603
Area#6-50	7.19	0.00	0.00	3.07	3.97	1.77	32.11	0.552
Area#6-60	7.19	0.00	0.00	2.27	4.73	6.90	109.81	0.657
Area#6-70	7.19	0.00	0.00	0.43	6.73	0.11	2.19	0.936
Area#6-80	7.19	0.00	0.00	3.45	3.68	0.07	1.62	0.511
Area#6-90	7.19	0.00	0.00	2.85	4.23	0.73	13.53	0.588
Area#4-140	7.19	0.00	0.00	1.14	6.00	0.16	3.45	0.834
Area#4-150	7.19	0.00	0.00	0.43	6.73	0.07	1.56	0.936
Area#4-160	7.19	0.00	0.00	1.71	5.43	0.02	0.49	0.755
Area#4-170	7.19	0.00	0.00	0.97	6.17	0.09	1.84	0.858
Area#4-180	7.19	0.00	0.00	1.42	5.70	0.16	3.40	0.793
Area#4-190	7.19	0.00	0.00	0.97	6.17	0.05	1.00	0.858
Area#4-200	7.19	0.00	0.00	3.12	3.98	0.21	4.12	0.553
Area#4-130	7.19	0.00	0.00	2.71	4.42	0.15	3.09	0.614
Area#4-120	7.19	0.00	0.00	2.46	4.67	0.12	2.44	0.649
Area#4-100	7.19	0.00	0.00	3.70	3.42	0.16	3.28	0.475
Area#4-90	7.19	0.00	0.00	0.69	6.46	0.12	2.39	0.898

Area#4-80	7.19	0.00	0.00	0.40	6.75	0.20	4.12	0.938
Area#4-10	7.19	0.00	0.00	0.43	6.72	0.16	3.42	0.934
Area#4-20	7.19	0.00	0.00	0.85	6.28	0.29	6.04	0.874
Area#4-70	7.19	0.00	0.00	0.74	6.40	0.23	4.73	0.889
Area#4-60	7.19	0.00	0.00	0.43	6.72	0.16	3.39	0.935
Area#4-50	7.19	0.00	0.00	0.71	6.42	0.35	7.19	0.892
Area#4-30	7.19	0.00	0.00	2.50	4.60	0.08	1.94	0.640
Area#2-10	7.19	0.00	0.00	1.96	5.04	0.38	6.36	0.701
Area#2-20	7.19	0.00	0.00	1.46	5.62	0.12	2.42	0.781
Area#2-30	7.19	0.00	0.00	2.12	4.90	0.40	7.07	0.681
Area#2-40	7.19	0.00	0.00	1.58	5.51	0.70	14.63	0.767
Area#2-50	7.19	0.00	0.00	1.79	5.17	0.79	12.08	0.719
Area#2-60	7.19	0.00	0.00	1.79	5.31	0.50	10.88	0.737
Area#2-70	7.19	0.00	0.00	2.12	4.93	0.52	10.25	0.685
Area#2-100	7.19	0.00	0.00	1.68	5.41	0.34	7.00	0.753
Area#2-80	7.19	0.00	0.00	1.46	5.65	0.20	4.28	0.785
Area#2-110	7.19	0.00	0.00	1.68	5.42	0.22	4.61	0.753
Area#5-60	7.19	0.00	0.00	1.15	6.00	0.06	1.25	0.833
Area#2-90	7.19	0.00	0.00	1.37	5.68	0.42	7.68	0.790
Area#2-120	7.19	0.00	0.00	1.63	5.33	3.28	50.01	0.740
Area#2-150	7.19	0.00	0.00	2.15	4.87	0.91	15.31	0.676
Area#4-40	7.19	0.00	0.00	1.42	5.71	0.18	3.85	0.793
Area#4-110	7.19	0.00	0.00	1.48	5.61	0.46	9.85	0.780
Area#5-110	7.19	0.00	0.00	0.63	6.51	0.18	3.79	0.905
Area#2-130	7.19	0.00	0.00	1.77	5.34	0.16	3.36	0.743
Area#2-140	7.19	0.00	0.00	2.15	4.88	0.45	8.00	0.679

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	3.03	5.51	125.51	0 13:11
3**	JUNCTION	0.57	1.58	102.58	0 13:00
D/S_NC-4	JUNCTION	2.53	3.87	105.05	0 16:16
5**	JUNCTION	3.32	5.26	99.26	0 15:21
D/S_W_Battleboro_Ave**	JUNCTION	1.38	3.41	117.58	0 13:03
7**	JUNCTION	2.38	4.74	106.74	0 13:10
8**	JUNCTION	5.23	7.74	97.74	0 15:14
Hathaway_St-D/S	JUNCTION	4.13	5.89	95.87	0 15:19
DI_983628	JUNCTION	0.09	0.41	127.31	0 13:00
DI_983629	JUNCTION	0.29	1.08	127.28	0 13:00
DI_983630	JUNCTION	0.49	1.26	126.72	0 13:00
DI_983631	JUNCTION	0.13	0.49	126.94	0 13:00
DI_983633	JUNCTION	0.49	1.18	122.28	0 12:59
DI_983632	JUNCTION	0.54	1.18	122.23	0 13:00
DI_983634	JUNCTION	0.25	1.11	114.76	0 13:00
DI_984002*	JUNCTION	0.68	3.54	111.04	0 13:00
UNK_952741*	JUNCTION	0.53	3.92	111.82	0 12:59
DI_983635	JUNCTION	0.13	0.92	112.07	0 13:00
PE_972255	JUNCTION	0.13	0.46	113.96	0 13:00
PE_972263	JUNCTION	0.25	2.92	111.82	0 13:00
PE_972261*	JUNCTION	0.21	0.82	108.22	0 13:00
PE_972258	JUNCTION	4.24	6.20	95.20	0 15:21
Railroad_Junction_1	JUNCTION	2.35	5.03	109.56	0 13:08
Junction_1	JUNCTION	4.68	6.71	94.21	0 14:46
DI_983955	JUNCTION	0.12	0.48	101.08	0 13:00
PE_272260	JUNCTION	0.10	0.40	102.00	0 12:59
DI_983954	JUNCTION	0.17	0.78	98.80	0 13:00
DI_983953	JUNCTION	0.11	0.42	96.32	0 13:00
Drew_Hill_Junction	JUNCTION	5.08	7.16	95.16	0 15:21
DI_983952	JUNCTION	0.40	3.72	109.05	0 13:00
DI_983951	JUNCTION	0.32	3.04	107.09	0 13:00
DI_983950	JUNCTION	0.92	4.06	105.06	0 13:01
DI_283949	JUNCTION	0.43	2.39	103.64	0 13:02
DI_983948	JUNCTION	0.39	2.44	99.09	0 13:03

DI_983947	JUNCTION	0.60	3.54	98.62	0	13:05
DI_983946	JUNCTION	0.81	3.27	97.54	0	13:08
PE_972230	JUNCTION	0.53	2.38	129.53	0	13:00
UNK_952735*	JUNCTION	0.57	2.31	129.41	0	13:02
DI_983907	JUNCTION	0.61	2.25	129.30	0	13:00
DI_983906	JUNCTION	0.21	1.53	128.64	0	13:00
UNK_952736*	JUNCTION	0.23	2.06	127.82	0	13:01
DI_983903	JUNCTION	0.38	3.18	125.79	0	13:00
DI_983902	JUNCTION	0.70	2.89	123.97	0	13:03
DI_983904	JUNCTION	1.32	4.64	122.05	0	13:04
DI_983905	JUNCTION	2.08	4.16	120.64	0	13:03
DI_983721	JUNCTION	2.49	4.23	120.20	0	13:04
DI_983722	JUNCTION	2.48	4.27	120.23	0	13:06
MH_974299	JUNCTION	2.89	4.59	120.04	0	13:03
PE_972229	JUNCTION	0.38	1.49	116.71	0	13:04
PE_972224	JUNCTION	0.21	0.86	121.71	0	13:01
PE_972239	JUNCTION	0.62	2.07	114.19	0	13:03
PE_972246	JUNCTION	0.47	1.57	128.13	0	13:00
PE_972240	JUNCTION	0.63	2.10	127.82	0	13:02
DI_983935	JUNCTION	0.73	3.06	127.01	0	13:00
DI_983934	JUNCTION	0.84	3.24	126.92	0	13:00
MH_974300	JUNCTION	0.94	4.26	127.02	0	13:02
DI_983624	JUNCTION	1.67	5.22	122.34	0	13:00
DI_983623	JUNCTION	0.86	2.34	119.39	0	12:57
DI_983619	JUNCTION	0.59	2.69	117.00	0	13:01
DI_983622	JUNCTION	0.34	2.97	120.42	0	13:00
DI_983621	JUNCTION	0.79	6.02	120.34	0	13:01
DI_983620	JUNCTION	0.11	0.89	117.34	0	13:00
DI_983618	JUNCTION	0.87	3.55	116.27	0	13:01
DI_983898	JUNCTION	0.69	3.93	127.93	0	13:00
DI_983604	JUNCTION	0.75	4.33	127.83	0	13:00
DI_983901	JUNCTION	0.57	4.21	126.56	0	13:01
DI_983607	JUNCTION	0.27	2.79	129.59	0	12:59
DI_983606	JUNCTION	0.43	3.40	129.55	0	13:00
DI_9836054	JUNCTION	0.85	4.09	128.14	0	13:04
MH_974298	JUNCTION	1.67	4.09	128.14	0	13:07
DI_983899	JUNCTION	0.30	1.79	128.76	0	13:00
DI_983900	JUNCTION	0.31	1.81	128.80	0	13:00
DI_983897	JUNCTION	0.36	1.96	128.16	0	13:00
DI_983896	JUNCTION	0.47	2.08	128.13	0	13:00
DI_983895	JUNCTION	0.61	2.27	128.12	0	13:01
DI_983894	JUNCTION	0.50	1.67	127.47	0	13:01
DI_953893*	JUNCTION	0.21	0.80	126.50	0	13:00
PE_972225	JUNCTION	0.12	0.46	127.01	0	12:45
UNK_952734*	JUNCTION	0.49	1.41	123.94	0	13:00
DI_983892	JUNCTION	0.28	1.27	123.50	0	13:00
UNK_952733*	JUNCTION	0.28	1.26	123.11	0	13:00
UNK_952732*	JUNCTION	0.28	1.29	122.64	0	13:00
U/S_NC-4	JUNCTION	2.91	6.19	108.80	0	16:09
U/S_W_Battleboro_Ave	JUNCTION	2.31	7.68	122.10	0	13:00
Hathaway_St-U/S	JUNCTION	4.60	7.24	97.23	0	15:18
9**	JUNCTION	2.21	6.89	122.31	0	12:59
Farm-Culv-Up	JUNCTION	3.05	4.09	100.09	0	13:10
Farm-Culv-Dn	JUNCTION	2.10	4.23	99.73	0	13:13
Railroad-Up	JUNCTION	1.98	6.53	112.11	0	13:44
DI_983957	JUNCTION	0.31	2.90	123.90	0	13:05
DI_983956*	JUNCTION	0.44	3.39	123.89	0	13:06
PE_972262	JUNCTION	0.35	1.24	116.63	0	13:00
DI_983936	JUNCTION	0.72	1.79	128.15	0	13:00
U/S_Gainor_Swale	JUNCTION	0.63	1.97	127.97	0	13:01
DI_983625	JUNCTION	0.35	2.95	119.95	0	13:00
952731	JUNCTION	0.50	1.78	122.73	0	13:02
972222	JUNCTION	0.23	0.79	121.58	0	13:05
983943	JUNCTION	0.18	0.77	126.42	0	12:59
952740	JUNCTION	0.14	0.54	125.99	0	13:00
Primary_Outfall*	OUTFALL	4.68	6.71	93.71	0	14:46

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Node Inflow Summary
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Existing Conditions - Project Areas 2,4,5, & 6 (50-Year)

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	378.67	378.67	0	12:59	48.411	48.410
3**	JUNCTION	156.24	156.24	0	12:59	15.898	15.897
D/S_NC-4	JUNCTION	0.00	194.89	0	16:08	0.000	47.292
5**	JUNCTION	0.00	265.16	0	15:00	0.000	62.988
D/S_W_Battleboro_Ave**	JUNCTION	0.00	133.06	0	13:00	0.000	13.105
7**	JUNCTION	202.83	313.50	0	12:59	19.911	33.028
8**	JUNCTION	168.73	533.27	0	13:00	14.769	110.393
Hathaway_St-D/S	JUNCTION	0.00	505.81	0	15:17	0.000	110.227
DI_983628	JUNCTION	1.09	1.09	0	12:59	0.052	0.052
DI_983629	JUNCTION	1.33	2.41	0	12:59	0.063	0.116
DI_983630	JUNCTION	1.28	6.39	0	12:59	0.062	0.309
DI_983631	JUNCTION	2.73	2.73	0	12:59	0.131	0.131
DI_983633	JUNCTION	1.34	1.34	0	12:59	0.062	0.062
DI_983632	JUNCTION	1.25	8.93	0	12:59	0.059	0.429
DI_983634	JUNCTION	0.00	8.93	0	13:00	0.000	0.429
DI_984002*	JUNCTION	0.00	15.29	0	13:00	0.000	0.933
UNK_952741*	JUNCTION	3.17	7.24	0	12:36	0.150	0.505
DI_983635	JUNCTION	0.00	3.27	0	13:00	0.000	0.168
PE_972255	JUNCTION	3.28	3.28	0	12:59	0.168	0.168
PE_972263	JUNCTION	4.72	4.75	0	12:59	0.228	0.228
PE_972261*	JUNCTION	1.63	16.83	0	12:59	0.076	1.010
PE_972258	JUNCTION	0.00	506.27	0	15:18	0.000	110.274
Railroad_Junction_1	JUNCTION	127.59	251.11	0	12:59	10.632	25.261
Junction_1	JUNCTION	109.78	685.57	0	14:37	6.887	142.603
DI_983955	JUNCTION	1.62	1.62	0	12:59	0.074	0.074
PE_272260	JUNCTION	2.19	2.19	0	12:59	0.106	0.106
DI_983954	JUNCTION	0.00	3.80	0	12:59	0.000	0.180
DI_983953	JUNCTION	0.00	3.80	0	13:00	0.000	0.180
Drew_Hill_Junction	JUNCTION	0.00	506.19	0	15:21	0.000	109.536
DI_983952	JUNCTION	13.53	18.14	0	12:59	0.731	0.772
DI_983951	JUNCTION	0.00	17.98	0	13:00	0.000	0.774
DI_983950	JUNCTION	0.00	17.75	0	13:00	0.000	0.779
DI_283949	JUNCTION	0.00	17.69	0	13:01	0.000	0.781
DI_983948	JUNCTION	0.00	17.50	0	13:02	0.000	0.784
DI_983947	JUNCTION	0.00	17.41	0	13:03	0.000	0.784
DI_983946	JUNCTION	0.00	17.10	0	13:05	0.000	0.784
PE_972230	JUNCTION	4.12	4.12	0	12:59	0.198	0.198
UNK_952735*	JUNCTION	0.00	4.77	0	13:04	0.000	0.198
DI_983907	JUNCTION	2.39	6.21	0	12:46	0.116	0.313
DI_983906	JUNCTION	0.00	6.13	0	12:42	0.000	0.313
UNK_952736*	JUNCTION	0.00	6.14	0	12:42	0.000	0.313
DI_983903	JUNCTION	3.28	9.25	0	12:59	0.162	0.475
DI_983902	JUNCTION	0.00	34.86	0	13:01	0.000	1.926
DI_983904	JUNCTION	0.00	33.98	0	13:03	0.000	1.925
DI_983905	JUNCTION	9.85	41.06	0	13:02	0.455	2.382
DI_983721	JUNCTION	2.44	47.30	0	13:02	0.118	2.663
DI_983722	JUNCTION	3.09	52.25	0	13:01	0.152	2.814
MH_974299	JUNCTION	0.00	44.69	0	13:06	0.000	2.647
PE_972229	JUNCTION	4.12	57.85	0	13:03	0.213	3.406
PE_972224	JUNCTION	0.00	11.00	0	13:00	0.000	0.552
PE_972239	JUNCTION	0.00	81.09	0	13:01	0.000	4.596
PE_972246	JUNCTION	2.42	8.67	0	12:59	0.122	0.505
PE_972240	JUNCTION	0.00	15.05	0	13:01	0.000	0.903
DI_983935	JUNCTION	14.62	14.62	0	12:59	0.703	0.703
DI_983934	JUNCTION	12.07	28.57	0	13:00	0.786	1.501
MH_974300	JUNCTION	0.00	14.78	0	13:03	0.000	1.943
DI_983624	JUNCTION	21.12	61.06	0	12:59	1.025	3.419
DI_983623	JUNCTION	0.00	18.90	0	12:34	0.000	2.816
DI_983619	JUNCTION	0.00	42.84	0	12:58	0.000	3.815
DI_983622	JUNCTION	11.96	11.96	0	12:59	0.616	0.616
DI_983621	JUNCTION	7.00	52.07	0	13:00	0.338	0.953
DI_983620	JUNCTION	4.61	4.61	0	12:59	0.220	0.220
DI_983618	JUNCTION	0.00	51.41	0	12:53	0.000	4.413
DI_983898	JUNCTION	7.19	21.82	0	12:59	0.345	1.223

DI_983604	JUNCTION	4.73	26.03	0	12:59	0.226	1.451
DI_983901	JUNCTION	0.00	25.87	0	13:00	0.000	1.451
DI_983607	JUNCTION	3.42	3.42	0	12:59	0.164	0.164
DI_983606	JUNCTION	6.04	9.46	0	12:59	0.286	0.450
DI_9836054	JUNCTION	3.39	8.74	0	12:57	0.162	0.420
MH_974298	JUNCTION	0.00	4.67	0	12:35	0.000	0.245
DI_983899	JUNCTION	3.85	4.72	0	12:59	0.180	0.256
DI_983900	JUNCTION	1.93	1.93	0	12:59	0.085	0.085
DI_983897	JUNCTION	3.45	3.45	0	12:59	0.161	0.161
DI_983896	JUNCTION	1.56	4.99	0	12:59	0.075	0.237
DI_983895	JUNCTION	0.49	5.33	0	12:59	0.022	0.260
DI_983894	JUNCTION	0.00	5.02	0	13:01	0.000	0.260
DI_953893*	JUNCTION	0.00	6.76	0	13:00	0.000	0.347
PE_972225	JUNCTION	1.84	1.84	0	12:59	0.087	0.087
UNK_952734*	JUNCTION	3.40	10.13	0	12:59	0.159	0.506
DI_983892	JUNCTION	0.00	10.11	0	13:00	0.000	0.506
UNK_952733*	JUNCTION	0.00	10.09	0	13:00	0.000	0.505
UNK_952732*	JUNCTION	1.00	11.00	0	13:00	0.047	0.552
U/S_NC-4	JUNCTION	0.00	341.14	0	13:48	0.000	48.765
U/S_W_Battleboro_Ave	JUNCTION	0.00	134.79	0	13:00	0.000	13.111
Hathaway_St-U/S	JUNCTION	3.79	505.85	0	15:02	0.178	109.884
9**	JUNCTION	134.77	134.77	0	12:59	13.113	13.113
Farm-Culv-Up	JUNCTION	32.10	239.28	0	13:06	1.764	26.925
Farm-Culv-Dn	JUNCTION	0.00	237.57	0	13:08	0.000	26.831
Railroad-Up	JUNCTION	65.29	145.63	0	13:00	4.189	9.398
DI_983957	JUNCTION	2.09	3.38	0	12:58	0.103	0.106
DI_983956*	JUNCTION	8.83	10.03	0	13:00	0.466	0.572
PE_972262	JUNCTION	22.37	28.69	0	12:59	1.303	1.872
DI_983936	JUNCTION	6.35	6.35	0	12:59	0.383	0.383
U/S_Gainor_Swale	JUNCTION	7.06	15.47	0	12:59	0.398	0.903
DI_983625	JUNCTION	0.00	9.22	0	12:42	0.000	0.599
952731	JUNCTION	8.00	11.27	0	12:59	0.450	0.606
972222	JUNCTION	0.00	9.97	0	13:02	0.000	0.604
983943	JUNCTION	3.36	3.36	0	12:59	0.155	0.155
952740	JUNCTION	0.00	3.36	0	13:00	0.000	0.155
Primary_Outfall*	OUTFALL	0.00	685.28	0	14:46	0.000	141.697

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
9**	JUNCTION	0.84	0.895	1.105
DI_983625	JUNCTION	0.41	1.453	3.147

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Node Flooding Summary
****

No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	97.65	298.44	685.28	141.697
System	97.65	298.44	685.28	141.697

Existing Conditions - Project Areas 2,4,5, & 6 (50-Year)

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Link Flow Summary
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-------------------------------------------------------------------------------
                              Maximum  Time of Max   Maximum    Max/    Max/
                              |Flow|   Occurrence   |Veloc|    Full    Full
Link                 Type          CFS  days hr:min    ft/sec    Flow   Depth
-------------------------------------------------------------------------------
BeechTrib8           CHANNEL    341.14     0  13:48      2.29    0.04    0.37
NC-4                 CONDUIT    194.89     0  16:08     10.13    1.13    1.00
BeechTrib7           CHANNEL    194.82     0  16:16      1.99    0.02    0.33
Channel_4**          CONDUIT    155.52     0  13:00      2.56    0.09    0.53
BeechTrib6           CHANNEL    262.08     0  15:21      1.62    0.08    0.65
W_Battleboro_Ave_Culvert** CONDUIT     99.05     0  12:54     14.01    2.10    1.00
Channel_3A**         CHANNEL    119.06     0  13:03      2.85    0.01    0.27
Channel_3B           CHANNEL    245.35     0  13:11      1.34    0.02    0.40
BeechTrib5           CHANNEL    501.63     0  15:04      1.70    2.25    0.75
Hathaway_St_Culvert  CONDUIT    503.37     0  15:18      7.06    4.41    0.99
15_RCP_Hathaway_1    CONDUIT      1.08     0  13:00      1.55    0.15    0.60
15_RCP_Hathaway_2    CONDUIT      2.38     0  13:00      2.22    0.91    0.82
15_RCP_Hathaway_3    CONDUIT      2.73     0  13:00      3.00    0.32    0.69
15_RCP_Hathaway_4    CONDUIT      6.36     0  13:00      6.46    0.87    0.75
15_RCP_Hathaway_5    CONDUIT      1.34     0  13:00      1.12    0.71    0.94
15_RCP_Hathaway_6    CONDUIT      8.93     0  13:00      8.77    0.78    0.78
15_RCP_Hathaway_7    CONDUIT      8.91     0  13:00      7.52    0.76    0.92
15_RCP_Hathaway_8    CONDUIT      3.27     0  13:00      7.02    0.28    0.55
15_RCP_Hathaway_9    CONDUIT      3.30     0  13:00      2.94    0.24    0.87
18_RCP_Hathaway_10   CONDUIT      3.08     0  13:10      2.22    0.21    1.00
18_RCP_Hathaway_11*  CONDUIT      6.44     0  12:39      3.65    1.05    1.00
15_RCP_Hathaway_12*  CONDUIT     11.38     0  13:00     10.51    2.23    0.83
Hathaway_Swale*      CONDUIT     16.71     0  13:00      0.50    0.00    0.38
BeechTrib4           CHANNEL    505.79     0  15:18      1.68    0.06    0.53
12_RCP_Battleboro_Apt_1 CONDUIT      1.61     0  13:00      3.09    0.47    0.63
12_RCP_Battleboro_Apt_2 CONDUIT      2.19     0  12:59      5.06    0.34    0.59
12_RCP_Battleboro_Apt_3 CONDUIT      3.80     0  13:00      7.77    0.76    0.60
15_RCP_Battleboro_Apt_4 CONDUIT      3.79     0  13:00      4.35    0.23    0.67
BeechTrib3           CHANNEL    506.19     0  15:21      1.20    0.03    0.58
BeechTrib2           CHANNEL    506.41     0  15:26      1.33    0.13    0.56
Channel-6B           CHANNEL    215.41     0  13:08      2.87    0.10    0.51
15_RCP_Burrows_1     CONDUIT     10.24     0  12:40      8.34    0.98    1.00
15_RCP_Burrows_2     CONDUIT      9.66     0  13:00      7.87    0.69    1.00
15_RCP_Burrows_3     CONDUIT      8.60     0  12:40      7.01    1.99    1.00
15_RCP_Burrows_4     CONDUIT      8.04     0  12:40      6.67    1.03    1.00
15_RCP_Burrows_5     CONDUIT      8.76     0  12:44      7.14    1.14    1.00
15_RCP_Burrows_6     CONDUIT     12.16     0  12:54      9.91    1.13    1.00
18_RCP_Burrows_7     CONDUIT     15.97     0  13:03      9.03    0.50    1.00
BeechTrib1           CHANNEL    685.28     0  14:46      1.98    0.08    0.54
18_RCP_Marriott_1    CONDUIT      4.73     0  13:04      2.68    1.31    1.00
12_RCP_Marriott_2    CONDUIT      4.83     0  13:05      6.15    1.92    1.00
15_RCP_Marriott_3    CONDUIT      6.13     0  12:42      5.51    1.00    1.00
15_VCP_Marriott_4    CONDUIT      6.14     0  12:42      6.73    0.68    1.00
15_RCP_Mattiott_5    CONDUIT      5.98     0  13:02      4.89    0.76    1.00
15_RCP_Mattiott_6    CONDUIT      7.97     0  12:44      6.49    1.02    1.00
24_RCP_Marriott_7    CONDUIT     20.33     0  13:21      6.47    0.59    1.00
24_RCP_Marriott_8    CONDUIT     21.89     0  13:06      6.97    0.98    1.00
24_RCP_Marriott_9    CONDUIT     15.31     0  12:40      4.87    0.73    1.00
24_RCP_Etheridge_1   CONDUIT      9.87     0  12:31      3.14    0.60    1.00
24_RCP_Etheridge_2   CONDUIT      9.73     0  12:39      3.10    0.73    1.00
24_RCP_Etheridge_3   CONDUIT     14.49     0  13:03      6.44    0.26    0.67
Railroad_Swale_2     CONDUIT     56.02     0  13:04      1.27    0.02    0.33
Railroad_Swale_1     CONDUIT     10.92     0  13:01      1.83    0.02    0.23
Cemetery_Dr_Swale    CONDUIT     78.53     0  13:04      1.63    0.12    0.71
Gainor_Swale         CONDUIT     15.05     0  13:01      1.66    0.08    0.41
12_RCP_Gainor_1      CONDUIT      4.68     0  15:35      5.98    1.07    1.00
18_RCP_Gainor_2      CONDUIT      6.19     0  12:34      3.50    0.73    1.00
18_RCP_Gainor_3      CONDUIT      9.93     0  12:34      5.62    0.58    1.00
18_RCP_Gainor_4      CONDUIT     12.08     0  14:42      6.84    0.86    1.00
18_RCP_Gainor_5      CONDUIT     18.90     0  12:34     10.70    7.63    1.00
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Existing Conditions - Project Areas 2,4,5, & 6 (50-Year)

24_RCP_Gainor_6	CONDUIT	18.39	0	13:00	6.23	1.07	0.91
15_RCP_Gainor_7A	CONDUIT	9.22	0	12:42	5.81	0.63	1.00
15_RCP_Gainor_7B	CONDUIT	20.89	0	13:21	11.82	11.93	1.00
15_RCP_Gainor_7C	CONDUIT	4.55	0	13:00	4.10	0.22	0.85
36_RCP_Gainor_8	CONDUIT	42.61	0	12:56	6.41	0.36	0.95
36_RCP_Gainor_9	CONDUIT	51.21	0	12:52	8.66	0.53	0.84
15_RCP_W_Battleboro_1	CONDUIT	3.41	0	13:08	2.95	0.41	1.00
18_RCP_W_Battleboro_2	CONDUIT	6.55	0	12:39	3.70	0.83	1.00
18_RCP_W_Battleboro_3	CONDUIT	6.71	0	13:49	3.80	0.89	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.87	0	13:45	6.15	0.80	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.88	0	13:25	7.29	1.43	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.47	0	12:49	8.75	1.12	1.00
15_RCP_Pollard_3	CONDUIT	3.60	0	13:56	3.07	0.15	1.00
15_RCP_Pollard_2	CONDUIT	3.56	0	12:35	4.07	0.69	1.00
12_RCP_Pollard_1	CONDUIT	1.45	0	13:10	1.85	1.63	1.00
12_RCP_W_Bridges_1	CONDUIT	1.71	0	12:33	2.17	0.73	1.00
12_RCP_W_Bridges_2	CONDUIT	2.42	0	12:34	3.08	0.49	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:27	3.10	4.58	1.00
15_RCP_Railroad_2	CONDUIT	5.02	0	13:02	4.70	0.87	0.82
15_RCP_Railroad_3	CONDUIT	1.84	0	12:59	3.33	0.28	0.50
18_RCP_Railroad_4	CONDUIT	6.75	0	13:00	4.89	0.56	0.74
24_RCP_Railroad_5	CONDUIT	10.11	0	13:00	5.08	0.40	0.61
24_RCP_Railroad_6*	CONDUIT	10.09	0	13:00	4.83	0.49	0.63
24_RCP_Railroad_7*	CONDUIT	10.09	0	13:01	4.79	0.53	0.64
24_VCP_Railroad_8	CONDUIT	11.00	0	13:00	6.39	0.36	0.54
CONNECT**	CONDUIT	134.79	0	13:00	2.11	0.45	1.00
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	8.21	0	13:00	2.28	0.00	0.02
Overland_Burrows_2	CONDUIT	8.09	0	13:00	1.74	0.00	0.03
Overland_Burrows_3	CONDUIT	9.16	0	13:01	2.45	0.00	0.02
Overland_Burrows_4	CONDUIT	10.06	0	13:02	2.32	0.00	0.03
Overland_Burrows_5	CONDUIT	13.58	0	13:03	1.97	0.00	0.04
Overland_Burrows_6	CONDUIT	8.55	0	13:05	1.58	0.00	0.04
Overland_Burrows_7	CONDUIT	0.45	0	13:08	0.73	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	35.99	0	13:00	2.31	0.01	0.08
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	235.22	0	13:13	1.69	0.05	0.59
Farm-Culvert	CONDUIT	16.68	0	10:04	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	231.19	0	13:09	7.10	0.05	0.22
Railroad_Culvert	CONDUIT	68.88	0	13:58	9.74	1.04	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.25
Over_15_RCP_Marriott_1	CONDUIT	0.63	0	13:00	0.52	0.00	0.01
Over_15_RCP_Marriott_2	CONDUIT	0.19	0	13:02	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	13:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_15_RCP_Mattiott_6	CONDUIT	1.79	0	13:00	0.48	0.00	0.04
Over_24_RCP_Marriott_7	CONDUIT	14.24	0	13:03	1.68	0.01	0.05
Over_24_RCP_Marriott_8	CONDUIT	11.94	0	13:04	1.12	0.00	0.07
Over_24_RCP_Marriott_9	CONDUIT	27.16	0	13:03	1.65	0.01	0.11
Over_24_RCP_Etheridge_1	CONDUIT	49.50	0	13:01	1.32	0.01	0.22
Over_24_RCP_Etheridge_2	CONDUIT	37.85	0	13:06	1.11	0.01	0.20
Over_15_RCP_W_Battleboro_1	CONDUIT	2.15	0	13:00	0.57	0.01	0.02
Over_15_RCP_W_Battleboro_2	CONDUIT	3.11	0	13:00	0.42	0.00	0.05
Over_18_RCP_W_Battleboro_4	CONDUIT	17.96	0	13:00	1.78	0.07	0.06
Over_18_RCP_W_Battleboro_5	CONDUIT	17.63	0	13:00	2.57	0.00	0.04
Over_18_RCP_W_Battleboro_6	CONDUIT	10.66	0	13:01	2.00	0.00	0.04
Over_12_RCP_Pollard_1	CONDUIT	1.03	0	13:00	0.29	0.00	0.04
Over_15_RCP_Pollard_2	CONDUIT	1.63	0	13:00	0.21	0.00	0.07
Over_24_RCP_Etheridge_3	CONDUIT	29.82	0	13:07	6.25	0.00	0.03
Over_12_RCP_W_Bridges_1	CONDUIT	2.71	0	13:00	0.58	0.00	0.03
Over_12_RCP_W_Bridges_2	CONDUIT	4.34	0	13:00	0.90	0.01	0.04
Over_12_RCP_Railroad_1	CONDUIT	3.31	0	13:01	0.78	0.00	0.03
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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Over_24_RCP_Railroad_6* CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_24_RCP_Railroad_7* CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_24_VCP_Railroad_8 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Railroad_3 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_12_RCP_Gainor_1 CONDUIT     12.70     0  13:03      0.49    0.00    0.16
OVer_18_RCP_Gainor_2 CONDUIT     11.45     0  13:00      0.96    0.00    0.08
Over_18_RCP_Gainor_3 CONDUIT     28.41     0  13:00      5.72    0.00    0.03
Over_18_RCP_Gainor_4 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_18_RCP_Gainor_5 CONDUIT     42.13     0  13:00      4.60    0.00    0.10
Over_24_RCP_Gainor_6 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_8 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
12_RCP_Crepe_Myrtle_1 CONDUIT      1.73     0  13:47      2.65    0.51    1.00
12_RCP_Crepe_Myrtle_2 CONDUIT      6.54     0  13:16      8.34    1.09    1.00
Crepe_Myrtle_Swale   CONDUIT     28.22     0  13:00      1.31    0.05    0.62
Over_15_RCP_Hathaway_10 CONDUIT      4.63     0  13:00      1.41    0.00    0.02
Over_12_RCP_Crepe_Myrtle_1 CONDUIT      2.73     0  13:15      0.30    0.00    0.21
Over_15_RCP_Hathaway_12* CONDUIT      3.85     0  13:00      2.09    0.00    0.01
15_RCP_Gainor        CONDUIT      3.23     0  12:36      2.64    0.61    1.00
Gainor_Bridges       CONDUIT      4.66     0  12:37      3.80    0.99    1.00
Over_15_RCP_Gainor   CONDUIT      5.18     0  13:00      0.71    0.02    0.05
Over_Gainor_Bridges  CONDUIT      5.92     0  13:00      0.37    0.00    0.10
Over_15_RCP_Gainor_7A CONDUIT      3.19     0  13:00      1.07    0.00    0.04
Over_15_RCP_Gainor_7C CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_Hathaway_3      CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Hathaway_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Battle-Gainor-Over   CONDUIT     30.09     0  13:02      3.43    0.01    0.06
15_RCP_Gainor_7D     CONDUIT      9.13     0  12:44      5.17    0.94    1.00
84                   CONDUIT      4.81     0  13:08      0.68    0.00    0.11
E-Battleboro-Culv    CONDUIT      9.97     0  13:02      4.83    1.30    0.64
RR-Open-Ditch2       CONDUIT      9.60     0  13:05      0.44    0.02    0.60
Pearsall             CONDUIT      3.36     0  13:00      4.52    0.39    0.44
RR-Open-Ditch1       CONDUIT      3.29     0  13:00      0.81    0.02    0.39
Battleboro-Ovr       CONDUIT      0.00     0  00:00      0.00    0.00    0.00


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Flow Classification Summary
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                    Adjusted    --- Fraction of Time in Flow Class ----   Avg.     Avg.
                     /Actual         Up    Down  Sub   Sup   Up    Down   Froude   Flow
Conduit               Length    Dry  Dry   Dry   Crit  Crit  Crit  Crit   Number   Change
-------------------------------------------------------------------------------------------
BeechTrib8              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.25   0.0000
NC-4                    1.00   0.03  0.00  0.00  0.95  0.03  0.00  0.00     0.41   0.0003
BeechTrib7              1.00   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.21   0.0000
Channel_4**             1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.12   0.0000
BeechTrib6              1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.14   0.0000
W_Battleboro_Ave_Culvert**    3.30   0.02  0.00  0.00  0.77  0.22  0.00  0.00     0.79   0.0003
Channel_3A**            1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.26   0.0000
Channel_3B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.13   0.0000
BeechTrib5              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.14   0.0003
Hathaway_St_Culvert     1.18   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.28   0.0005
15_RCP_Hathaway_1       2.23   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.29   0.0000
15_RCP_Hathaway_2       1.00   0.02  0.00  0.00  0.97  0.00  0.00  0.01     0.39   0.0001
15_RCP_Hathaway_3       2.38   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.26   0.0000
15_RCP_Hathaway_4       1.00   0.04  0.00  0.00  0.08  0.85  0.00  0.03     1.15   0.0001
15_RCP_Hathaway_5       1.34   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.05   0.0001
15_RCP_Hathaway_6       1.00   0.04  0.00  0.00  0.01  0.95  0.00  0.00     1.69   0.0001
15_RCP_Hathaway_7       1.00   0.02  0.03  0.00  0.93  0.03  0.00  0.00     0.60   0.0001
15_RCP_Hathaway_8       2.28   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.26   0.0000
15_RCP_Hathaway_9       2.53   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.54   0.0001
18_RCP_Hathaway_10      2.92   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.55   0.0001
18_RCP_Hathaway_11*     1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.42   0.0002
15_RCP_Hathaway_12*     6.57   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.36   0.0003
Hathaway_Swale*         1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.03   0.0000
BeechTrib4              1.00   0.02  0.01  0.00  0.97  0.00  0.00  0.00     0.19   0.0000
12_RCP_Battleboro_Apt_1    1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.81   0.0001
12_RCP_Battleboro_Apt_2    1.29   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.28   0.0000
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Existing Conditions - Project Areas 2,4,5, & 6 (50-Year)

12_RCP_Battleboro_Apt_3	1.10	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.12	0.0001
15_RCP_Battleboro_Apt_4	1.78	0.02	0.00	0.00	0.94	0.04	0.00	0.00	0.27	0.0000
BeechTrib3	2.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib2	1.00	0.02	0.02	0.00	0.97	0.00	0.00	0.00	0.12	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.04	0.94	0.00	0.00	2.09	0.0002
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.97	0.02	0.00	0.00	0.52	0.0001
15_RCP_Burrows_3	1.76	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.40	0.0003
15_RCP_Burrows_4	1.00	0.03	0.00	0.00	0.05	0.92	0.00	0.00	1.46	0.0001
15_RCP_Burrows_5	1.15	0.03	0.00	0.00	0.87	0.10	0.00	0.00	0.77	0.0002
15_RCP_Burrows_6	4.20	0.04	0.00	0.00	0.58	0.38	0.00	0.00	1.14	0.0002
18_RCP_Burrows_7	5.31	0.03	0.00	0.00	0.94	0.03	0.00	0.00	0.19	0.0001
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.18	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0002
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0003
15_RCP_Marriott_3	3.55	0.04	0.00	0.00	0.03	0.93	0.00	0.00	1.24	0.0001
15_VCP_Marriott_4	1.95	0.04	0.00	0.00	0.03	0.93	0.00	0.00	1.56	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.03	0.00	0.53	0.42	0.00	0.00	0.91	0.0001
15_RCP_Mattiott_6	1.30	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.65	0.0002
24_RCP_Marriott_7	1.14	0.03	0.00	0.00	0.85	0.12	0.00	0.00	0.73	0.0001
24_RCP_Marriott_8	1.47	0.02	0.01	0.00	0.95	0.02	0.00	0.00	0.13	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.04	0.0004
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0002
24_RCP_Etheridge_3	7.59	0.02	0.05	0.00	0.00	0.00	0.94	0.00	0.37	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
12_RCP_Gainor_1	1.00	0.02	0.00	0.00	0.42	0.56	0.00	0.00	0.84	0.0002
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.55	0.0002
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.23	0.75	0.00	0.00	1.11	0.0002
18_RCP_Gainor_4	1.00	0.02	0.00	0.00	0.32	0.32	0.00	0.34	1.19	0.0001
18_RCP_Gainor_5	2.32	0.02	0.00	0.00	0.20	0.00	0.00	0.79	0.54	0.0010
24_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.97	0.99	0.0001
15_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.03	0.95	0.00	0.00	1.31	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0017
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.98	0.01	0.00	0.00	0.51	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.16	0.82	0.00	0.00	1.29	0.0000
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.04	0.94	0.00	0.00	1.33	0.0001
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.64	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.60	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.02	0.00	0.27	0.00	0.69	0.00	0.31	0.0002
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.32	0.66	0.00	0.00	0.94	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.10	0.88	0.00	0.00	1.17	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.65	0.34	0.00	0.00	0.84	0.0002
15_RCP_Pollard_3	26.14	0.02	0.03	0.00	0.96	0.00	0.00	0.00	0.32	0.0001
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.73	0.05	0.00	0.20	0.70	0.0002
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0004
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.0002
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.19	0.0008
15_RCP_Railroad_2	2.51	0.02	0.03	0.00	0.04	0.91	0.00	0.00	1.03	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.96	0.03	0.00	0.00	0.67	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.48	0.0001
24_RCP_Railroad_5	3.55	0.04	0.00	0.00	0.02	0.94	0.00	0.00	1.21	0.0001
24_RCP_Railroad_6*	3.25	0.04	0.00	0.00	0.05	0.92	0.00	0.00	1.06	0.0001
24_RCP_Railroad_7*	2.02	0.02	0.02	0.00	0.05	0.91	0.00	0.00	1.08	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.63	0.0000
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0001
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.14	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	0.97	0.00	0.00	0.00	0.02	0.00	0.00	0.04	0.0000
Overland_Burrows_2	3.53	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.0000
Overland_Burrows_3	7.01	0.96	0.01	0.00	0.00	0.03	0.00	0.00	0.05	0.0000
Overland_Burrows_4	2.14	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.0000
Overland_Burrows_5	1.88	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.0000
Overland_Burrows_6	5.36	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.0000

Existing Conditions - Project Areas 2,4,5, & 6 (50-Year)

Overland_Burrows_7	7.81	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000
W_Battleboro_Ave-Over	3.80	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.16	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.86	0.12	0.00	0.00	0.32	0.0002
Over_Farm-Culvert	7.77	0.31	0.00	0.00	0.00	0.07	0.00	0.61	1.02	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0002
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	0.78	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.0000
Over_15_RCP_Marriott_2	27.58	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_Marriott_3	4.67	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	0.97	0.01	0.00	0.02	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Marriott_7	1.03	0.97	0.00	0.00	0.02	0.00	0.00	0.02	0.02	0.0000
Over_24_RCP_Marriott_8	1.80	0.90	0.08	0.00	0.03	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Marriott_9	2.78	0.80	0.10	0.00	0.10	0.00	0.00	0.00	0.03	0.0000
Over_24_RCP_Etheridge_1	5.90	0.72	0.08	0.00	0.20	0.00	0.00	0.00	0.03	0.0000
Over_24_RCP_Etheridge_2	1.42	0.72	0.13	0.00	0.00	0.00	0.16	0.00	0.02	0.0000
Over_15_RCP_W_Battleboro_1	2.34	0.97	0.00	0.00	0.02	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.93	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.93	0.00	0.00	0.00	0.00	0.00	0.07	0.04	0.0000
Over_18_RCP_W_Battleboro_5	1.60	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.0000
Over_18_RCP_W_Battleboro_6	6.23	0.97	0.01	0.00	0.02	0.01	0.00	0.00	0.02	0.0000
Over_12_RCP_Pollard_1	1.11	0.93	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.91	0.05	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.90	0.00	0.00	0.00	0.00	0.00	0.10	0.31	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.94	0.01	0.00	0.05	0.00	0.00	0.00	0.01	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.94	0.00	0.00	0.03	0.00	0.00	0.02	0.02	0.0000
Over_12_RCP_Railroad_1	1.00	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Gainor_1	1.00	0.78	0.07	0.00	0.00	0.00	0.15	0.00	0.01	0.0000
OVer_18_RCP_Gainor_2	5.06	0.85	0.01	0.00	0.00	0.00	0.14	0.00	0.03	0.0000
Over_18_RCP_Gainor_3	20.67	0.86	0.00	0.00	0.00	0.09	0.00	0.04	0.45	0.0000
Over_18_RCP_Gainor_4	1.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_5	16.05	0.87	0.00	0.00	0.03	0.01	0.00	0.08	0.26	0.0000
Over_24_RCP_Gainor_6	18.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
12_RCP_Crepe_Myrtle_1	2.12	0.02	0.00	0.00	0.37	0.09	0.00	0.52	0.93	0.0004
12_RCP_Crepe_Myrtle_2	1.00	0.02	0.00	0.00	0.05	0.93	0.00	0.00	1.60	0.0002
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.08	0.0000
Over_15_RCP_Hathaway_10	1.15	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.0000
Over_12_RCP_Crepe_Myrtle_1	5.17	0.93	0.02	0.00	0.06	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_12*	25.27	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.06	0.0000
15_RCP_Gainor	3.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0001
Gainor_Bridges	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.56	0.0002
Over_15_RCP_Gainor	3.16	0.87	0.00	0.00	0.07	0.00	0.00	0.06	0.04	0.0000
Over_Gainor_Bridges	1.33	0.81	0.10	0.00	0.09	0.00	0.00	0.00	0.01	0.0000
Over_15_RCP_Gainor_7A	13.13	0.97	0.01	0.00	0.01	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.0000
15_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.45	0.0001
84	30.58	0.91	0.00	0.00	0.09	0.00	0.00	0.00	0.01	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.73	0.0002
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.15	0.0001
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

****

Existing Conditions - Project Areas 2,4,5, & 6 (50-Year)

Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
NC-4	6.50	6.50	6.50	8.95	6.50
W_Battleboro_Ave_Culvert**	1.36	1.36	1.36	3.58	1.36
BeechTrib5	0.01	0.01	0.01	8.41	0.01
Hathaway_St_Culvert	0.01	0.01	0.01	11.75	0.01
18_RCP_Hathaway_10	0.67	0.67	0.68	0.01	0.01
18_RCP_Hathaway_11*	0.99	0.99	0.99	0.43	0.69
15_RCP_Hathaway_12*	0.01	0.01	0.01	1.25	0.01
15_RCP_Burrows_1	0.61	0.61	0.61	0.01	0.51
15_RCP_Burrows_2	0.65	0.65	0.65	0.01	0.01
15_RCP_Burrows_3	0.79	0.79	0.79	1.32	0.01
15_RCP_Burrows_4	0.78	0.78	0.78	0.06	0.12
15_RCP_Burrows_5	0.76	0.76	0.77	0.20	0.24
15_RCP_Burrows_6	0.64	0.64	0.64	0.17	0.58
18_RCP_Burrows_7	3.81	3.81	3.81	0.01	0.01
18_RCP_Marriott_1	0.47	0.47	0.47	0.15	0.46
12_RCP_Marriott_2	0.59	0.59	0.59	0.52	0.54
15_RCP_Marriott_3	0.34	0.34	0.34	0.01	0.34
15_VCP_Marriott_4	0.34	0.34	0.34	0.01	0.01
15_RCP_Mattiott_5	0.42	0.42	0.42	0.01	0.01
15_RCP_Mattiott_6	0.76	0.76	0.76	0.04	0.54
24_RCP_Marriott_7	0.67	0.67	0.67	0.01	0.01
24_RCP_Marriott_8	4.56	4.56	4.56	0.01	0.73
24_RCP_Marriott_9	6.62	6.62	6.62	0.01	0.17
24_RCP_Etheridge_1	7.54	7.54	7.54	0.01	0.01
24_RCP_Etheridge_2	10.54	10.54	10.54	0.01	0.01
12_RCP_Gainor_1	2.94	2.94	2.94	0.76	0.42
18_RCP_Gainor_2	2.51	2.51	2.51	0.01	0.02
18_RCP_Gainor_3	2.52	2.52	2.53	0.01	0.03
18_RCP_Gainor_4	2.60	2.60	2.60	0.01	0.01
18_RCP_Gainor_5	2.64	2.64	2.65	10.60	2.64
24_RCP_Gainor_6	0.01	0.01	0.01	2.03	0.01
15_RCP_Gainor_7A	0.40	0.40	0.40	0.01	0.37
15_RCP_Gainor_7B	1.04	1.04	1.04	1.86	1.04
15_RCP_W_Battleboro_1	0.91	0.91	0.91	0.01	0.01
18_RCP_W_Battleboro_2	1.19	1.19	1.19	0.01	0.01
18_RCP_W_Battleboro_3	1.47	1.47	1.47	0.01	0.01
18_RCP_W_Battleboro_4	1.50	1.50	1.50	0.01	0.64
18_RCP_W_Battleboro_5	1.35	1.35	1.35	1.03	1.35
18_RCP_W_Battleboro_6	0.89	0.89	0.89	0.50	0.89
15_RCP_Pollard_3	1.38	1.38	1.38	0.01	0.01
15_RCP_Pollard_2	0.86	0.86	0.86	0.01	0.01
12_RCP_Pollard_1	1.29	1.29	1.29	0.40	0.82
12_RCP_W_Bridges_1	1.12	1.12	1.12	0.01	0.02
12_RCP_W_Bridges_2	1.11	1.11	1.11	0.01	0.01
12_RCP_Railroad_1	0.68	0.68	0.68	5.00	0.68
CONNECT**	0.84	0.84	0.84	0.01	0.01
Farm-Culvert	12.23	12.23	12.23	10.32	11.07
Railroad_Culvert	3.84	3.84	3.85	1.13	3.40
12_RCP_Crepe_Myrtle_1	1.20	1.20	1.20	0.01	0.01
12_RCP_Crepe_Myrtle_2	0.57	0.57	0.57	1.17	0.57
15_RCP_Gainor	2.44	2.44	2.44	0.01	0.01
Gainor_Bridges	2.44	2.44	2.44	0.01	0.01
15_RCP_Gainor_7D	0.41	0.41	0.41	0.01	0.01
E-Battleboro-Culv	0.01	0.01	0.01	0.40	0.01

Analysis begun on: Mon Dec 07 15:40:37 2015
Analysis ended on: Mon Dec 07 15:40:41 2015
Total elapsed time: 00:00:04

Existing Conditions - Project Areas 2,4,5, & 6 (100-Year)

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Existing Conditions - Project Areas 2,4,5, & 6 (100-Year)

***********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
***********************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-06-2015 00:00:00
Ending Date .............. APR-07-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Gainor

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905
```

Existing Conditions - Project Areas 2,4,5, & 6 (100-Year)

```
WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224

WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node PE_972240

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       860.543         7.996
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       254.412         2.364
Surface Runoff ...........       528.069         4.907
Final Surface Storage ....        78.756         0.732
Continuity Error (%) .....        -0.081


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       526.733       171.644
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       502.829       163.854
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        25.835         8.419
Continuity Error (%) .....        -0.366


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (3.12%)
Node 8** (1.75%)
```

Existing Conditions - Project Areas 2,4,5, & 6 (100-Year)

```
**************************
Time-Step Critical Elements
**************************
Link Hathaway_St_Culvert (25.94%)
Link 18_RCP_Gainor_5 (19.55%)
Link 24_RCP_Etheridge_2 (12.11%)
Link Farm-Culvert (8.60%)
Link NC-4 (5.38%)


*******************************
Highest Flow Instability Indexes
*******************************
Link 24_RCP_Etheridge_1 (1)


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     6.08 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.05


**************************
Subcatchment Runoff Summary
**************************
```

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	8.00	0.00	0.00	2.50	4.33	56.96	444.65	0.541
Basin_A-2	8.00	0.00	0.00	2.12	5.14	18.42	182.75	0.643
Basin_A-3	8.00	0.00	0.00	2.15	5.36	15.14	160.61	0.671
Basin_A-4	8.00	0.00	0.00	2.34	5.10	23.07	239.83	0.638
Basin_A-5	8.00	0.00	0.00	2.32	5.13	17.06	196.50	0.642
Basin_B-2	8.00	0.00	0.00	2.71	4.90	11.32	135.44	0.613
Area#5-10	8.00	0.00	0.00	2.38	5.52	0.06	1.26	0.691
Area#5-30	8.00	0.00	0.00	1.21	6.72	0.15	3.08	0.841
Area#5-50	8.00	0.00	0.00	2.13	5.79	0.07	1.53	0.724
Area#5-70	8.00	0.00	0.00	2.67	5.21	0.19	3.83	0.652
Area#5-80	8.00	0.00	0.00	1.90	6.02	0.26	5.39	0.753
Area#5-20	8.00	0.00	0.00	1.21	6.73	0.07	1.50	0.842
Area#5-40	8.00	0.00	0.00	1.21	6.72	0.07	1.45	0.841
Area#5-90	8.00	0.00	0.00	1.07	6.89	0.17	3.57	0.861
Area#5-100	8.00	0.00	0.00	1.21	6.74	0.09	1.83	0.843
Area#6-10	8.00	0.00	0.00	3.70	4.21	0.12	2.44	0.527
Area#6-20	8.00	0.00	0.00	2.49	5.39	0.53	10.28	0.674
Area#6-30	8.00	0.00	0.00	2.38	5.45	1.49	26.12	0.682
Area#6-40	8.00	0.00	0.00	2.76	5.02	1.00	15.80	0.628
Area#6-50	8.00	0.00	0.00	3.22	4.62	2.05	38.50	0.578
Area#6-60	8.00	0.00	0.00	2.38	5.41	7.89	127.47	0.676
Area#6-70	8.00	0.00	0.00	0.45	7.51	0.12	2.44	0.939
Area#6-80	8.00	0.00	0.00	3.68	4.24	0.09	1.88	0.531
Area#6-90	8.00	0.00	0.00	3.03	4.85	0.84	15.74	0.607
Area#4-140	8.00	0.00	0.00	1.19	6.76	0.18	3.89	0.845
Area#4-150	8.00	0.00	0.00	0.44	7.53	0.08	1.74	0.941
Area#4-160	8.00	0.00	0.00	1.78	6.16	0.03	0.56	0.771
Area#4-170	8.00	0.00	0.00	1.01	6.93	0.10	2.07	0.867
Area#4-180	8.00	0.00	0.00	1.48	6.45	0.18	3.86	0.806
Area#4-190	8.00	0.00	0.00	1.01	6.94	0.05	1.12	0.867
Area#4-200	8.00	0.00	0.00	3.33	4.57	0.24	4.80	0.571
Area#4-130	8.00	0.00	0.00	2.91	5.02	0.17	3.54	0.627
Area#4-120	8.00	0.00	0.00	2.65	5.29	0.13	2.78	0.661
Area#4-100	8.00	0.00	0.00	3.97	3.94	0.19	3.84	0.493
Area#4-90	8.00	0.00	0.00	0.74	7.22	0.13	2.67	0.902
Area#4-80	8.00	0.00	0.00	0.41	7.53	0.22	4.60	0.942

Area#4-10	8.00	0.00	0.00	0.44	7.50	0.18	3.82	0.938
Area#4-20	8.00	0.00	0.00	0.89	7.05	0.32	6.79	0.882
Area#4-70	8.00	0.00	0.00	0.77	7.17	0.25	5.31	0.896
Area#4-60	8.00	0.00	0.00	0.44	7.51	0.18	3.78	0.939
Area#4-50	8.00	0.00	0.00	0.74	7.19	0.39	8.07	0.899
Area#4-30	8.00	0.00	0.00	2.61	5.30	0.10	2.24	0.663
Area#2-10	8.00	0.00	0.00	2.03	5.77	0.44	7.44	0.722
Area#2-20	8.00	0.00	0.00	1.51	6.37	0.14	2.78	0.796
Area#2-30	8.00	0.00	0.00	2.20	5.62	0.46	8.30	0.703
Area#2-40	8.00	0.00	0.00	1.64	6.26	0.80	16.74	0.783
Area#2-50	8.00	0.00	0.00	1.86	5.90	0.90	14.08	0.738
Area#2-60	8.00	0.00	0.00	1.86	6.04	0.57	12.48	0.756
Area#2-70	8.00	0.00	0.00	2.20	5.65	0.60	11.97	0.707
Area#2-100	8.00	0.00	0.00	1.73	6.16	0.38	8.04	0.770
Area#2-80	8.00	0.00	0.00	1.51	6.40	0.23	4.87	0.801
Area#2-110	8.00	0.00	0.00	1.73	6.16	0.25	5.29	0.770
Area#5-60	8.00	0.00	0.00	1.21	6.74	0.07	1.40	0.843
Area#2-90	8.00	0.00	0.00	1.42	6.43	0.47	8.80	0.805
Area#2-120	8.00	0.00	0.00	1.68	6.07	3.74	58.53	0.760
Area#2-150	8.00	0.00	0.00	2.22	5.58	1.05	18.00	0.698
Area#4-40	8.00	0.00	0.00	1.48	6.45	0.20	4.36	0.806
Area#4-110	8.00	0.00	0.00	1.52	6.37	0.52	11.24	0.797
Area#5-110	8.00	0.00	0.00	0.65	7.29	0.20	4.25	0.912
Area#2-130	8.00	0.00	0.00	1.83	6.08	0.18	3.85	0.760
Area#2-140	8.00	0.00	0.00	2.22	5.60	0.52	9.38	0.700

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Node Depth Summary
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Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	3.10	5.74	125.74	0 13:10
3**	JUNCTION	0.61	1.73	102.73	0 13:00
D/S_NC-4	JUNCTION	2.63	4.01	105.19	0 16:37
5**	JUNCTION	3.47	5.44	99.44	0 15:21
D/S_W_Battleboro_Ave**	JUNCTION	1.47	3.64	117.81	0 13:03
7**	JUNCTION	2.51	5.01	107.01	0 13:12
8**	JUNCTION	5.39	8.13	98.13	0 15:17
Hathaway_St-D/S	JUNCTION	4.20	6.04	96.02	0 15:20
DI_983628	JUNCTION	0.10	0.61	127.51	0 13:00
DI_983629	JUNCTION	0.31	1.28	127.48	0 13:00
DI_983630	JUNCTION	0.51	1.41	126.87	0 13:00
DI_983631	JUNCTION	0.14	0.65	127.10	0 13:00
DI_983633	JUNCTION	0.51	1.40	122.50	0 13:00
DI_983632	JUNCTION	0.55	1.38	122.43	0 13:00
DI_983634	JUNCTION	0.28	2.59	116.24	0 13:00
DI_984002*	JUNCTION	0.74	3.54	111.04	0 13:00
UNK_952741*	JUNCTION	0.59	3.96	111.86	0 12:37
DI_983635	JUNCTION	0.14	1.05	112.20	0 13:00
PE_972255	JUNCTION	0.14	0.51	114.01	0 12:59
PE_972263	JUNCTION	0.29	2.93	111.83	0 13:00
PE_972261*	JUNCTION	0.23	0.86	108.26	0 13:00
PE_972258	JUNCTION	4.32	6.38	95.38	0 15:19
Railroad_Junction_1	JUNCTION	2.50	5.33	109.86	0 13:07
Junction_1	JUNCTION	4.77	6.89	94.39	0 14:37
DI_983955	JUNCTION	0.13	0.53	101.13	0 13:00
PE_272260	JUNCTION	0.11	0.43	102.03	0 12:59
DI_983954	JUNCTION	0.19	0.86	98.88	0 13:00
DI_983953	JUNCTION	0.12	0.51	96.41	0 13:00
Drew_Hill_Junction	JUNCTION	5.16	7.34	95.34	0 15:19
DI_983952	JUNCTION	0.44	3.73	109.06	0 13:00
DI_983951	JUNCTION	0.36	3.06	107.11	0 13:00
DI_983950	JUNCTION	0.99	4.08	105.08	0 13:01
DI_283949	JUNCTION	0.47	2.40	103.65	0 13:02
DI_983948	JUNCTION	0.43	2.46	99.11	0 13:03
DI_983947	JUNCTION	0.71	3.56	98.64	0 13:04

DI_983946	JUNCTION	0.92	3.31	97.58	0	13:06
PE_972230	JUNCTION	0.57	2.39	129.54	0	13:00
UNK_952735*	JUNCTION	0.60	2.33	129.43	0	13:01
DI_983907	JUNCTION	0.64	2.30	129.35	0	13:02
DI_983906	JUNCTION	0.23	1.73	128.84	0	13:02
UNK_952736*	JUNCTION	0.26	2.20	127.96	0	13:02
DI_983903	JUNCTION	0.42	3.19	125.80	0	13:00
DI_983902	JUNCTION	0.74	2.92	124.00	0	13:02
DI_983904	JUNCTION	1.45	4.67	122.08	0	13:03
DI_983905	JUNCTION	2.19	4.20	120.68	0	13:01
DI_983721	JUNCTION	2.59	4.26	120.23	0	13:01
DI_983722	JUNCTION	2.57	4.31	120.27	0	13:03
MH_974299	JUNCTION	2.98	4.61	120.06	0	13:03
PE_972229	JUNCTION	0.42	1.63	116.85	0	13:04
PE_972224	JUNCTION	0.23	0.92	121.77	0	13:01
PE_972239	JUNCTION	0.67	2.23	114.35	0	13:03
PE_972246	JUNCTION	0.50	1.60	128.16	0	13:00
PE_972240	JUNCTION	0.67	2.12	127.84	0	13:02
DI_983935	JUNCTION	0.80	3.08	127.03	0	13:00
DI_983934	JUNCTION	0.91	3.25	126.93	0	13:00
MH_974300	JUNCTION	1.03	4.49	127.25	0	13:02
DI_983624	JUNCTION	1.79	5.23	122.35	0	13:00
DI_983623	JUNCTION	0.91	2.35	119.40	0	13:01
DI_983619	JUNCTION	0.65	2.84	117.15	0	13:00
DI_983622	JUNCTION	0.38	2.99	120.44	0	13:00
DI_983621	JUNCTION	0.91	6.06	120.38	0	13:01
DI_983620	JUNCTION	0.13	1.18	117.63	0	13:00
DI_983618	JUNCTION	0.95	3.65	116.37	0	13:01
DI_983898	JUNCTION	0.77	3.95	127.95	0	13:00
DI_983604	JUNCTION	0.83	4.35	127.85	0	13:00
DI_983901	JUNCTION	0.63	4.22	126.57	0	13:01
DI_983607	JUNCTION	0.30	2.80	129.60	0	12:59
DI_983606	JUNCTION	0.48	3.42	129.57	0	13:00
DI_9836054	JUNCTION	0.93	4.14	128.19	0	13:06
MH_974298	JUNCTION	1.71	4.16	128.21	0	13:04
DI_983899	JUNCTION	0.33	1.80	128.77	0	13:00
DI_983900	JUNCTION	0.35	1.81	128.80	0	13:00
DI_983897	JUNCTION	0.40	1.97	128.17	0	13:00
DI_983896	JUNCTION	0.51	2.09	128.14	0	13:00
DI_983895	JUNCTION	0.65	2.28	128.13	0	13:01
DI_983894	JUNCTION	0.52	1.90	127.70	0	13:01
DI_953893*	JUNCTION	0.22	0.87	126.57	0	13:00
PE_972225	JUNCTION	0.13	0.49	127.04	0	12:43
UNK_952734*	JUNCTION	0.51	1.52	124.05	0	13:00
DI_983892	JUNCTION	0.30	1.40	123.63	0	13:00
UNK_952733*	JUNCTION	0.31	1.39	123.24	0	13:00
UNK_952732*	JUNCTION	0.30	1.41	122.76	0	13:00
U/S_NC-4	JUNCTION	3.42	7.21	109.82	0	16:30
U/S_W_Battleboro_Ave	JUNCTION	2.56	7.74	122.16	0	13:00
Hathaway_St-U/S	JUNCTION	4.80	7.74	97.73	0	15:20
9**	JUNCTION	2.43	7.05	122.47	0	12:59
Farm-Culv-Up	JUNCTION	3.07	4.18	100.18	0	13:10
Farm-Culv-Dn	JUNCTION	2.22	4.39	99.89	0	13:12
Railroad-Up	JUNCTION	2.28	7.23	112.81	0	13:49
DI_983957	JUNCTION	0.42	3.18	124.18	0	13:08
DI_983956*	JUNCTION	0.55	3.68	124.18	0	13:09
PE_972262	JUNCTION	0.38	1.32	116.71	0	13:00
DI_983936	JUNCTION	0.75	1.81	128.17	0	13:00
U/S_Gainor_Swale	JUNCTION	0.67	2.04	128.04	0	13:01
DI_983625	JUNCTION	0.39	2.98	119.98	0	13:00
952731	JUNCTION	0.54	2.03	122.98	0	13:03
972222	JUNCTION	0.25	0.84	121.63	0	13:06
983943	JUNCTION	0.20	0.84	126.49	0	12:59
952740	JUNCTION	0.15	0.58	126.03	0	13:00
Primary_Outfall*	OUTFALL	4.77	6.89	93.89	0	14:37

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Node Inflow Summary
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Existing Conditions - Project Areas 2,4,5, & 6 (100-Year)

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	444.56	444.56	0	12:59	56.751	56.750
3**	JUNCTION	182.71	182.71	0	12:59	18.368	18.368
D/S_NC-4	JUNCTION	0.00	216.75	0	16:30	0.000	55.721
5**	JUNCTION	0.00	295.33	0	15:00	0.000	73.894
D/S_W_Battleboro_Ave**	JUNCTION	0.00	159.22	0	13:00	0.000	15.105
7**	JUNCTION	239.77	373.26	0	12:59	23.015	38.142
8**	JUNCTION	196.46	621.70	0	13:01	17.026	128.535
Hathaway_St-D/S	JUNCTION	0.00	573.14	0	15:19	0.000	127.941
DI_983628	JUNCTION	1.26	1.26	0	12:59	0.060	0.060
DI_983629	JUNCTION	1.50	2.73	0	12:59	0.071	0.131
DI_983630	JUNCTION	1.45	7.21	0	12:59	0.069	0.348
DI_983631	JUNCTION	3.08	3.08	0	12:59	0.148	0.148
DI_983633	JUNCTION	1.53	1.53	0	12:59	0.071	0.071
DI_983632	JUNCTION	1.40	10.11	0	12:59	0.066	0.484
DI_983634	JUNCTION	0.00	10.07	0	13:00	0.000	0.484
DI_984002*	JUNCTION	0.00	16.51	0	13:00	0.000	1.043
UNK_952741*	JUNCTION	3.57	7.94	0	12:35	0.168	0.563
DI_983635	JUNCTION	0.00	3.82	0	13:00	0.000	0.192
PE_972255	JUNCTION	3.83	3.83	0	12:59	0.192	0.192
PE_972263	JUNCTION	5.39	6.28	0	12:59	0.258	0.262
PE_972261*	JUNCTION	1.83	18.26	0	12:59	0.086	1.133
PE_972258	JUNCTION	0.00	573.67	0	15:20	0.000	127.980
Railroad_Junction_1	JUNCTION	151.21	290.82	0	12:59	12.298	28.960
Junction_1	JUNCTION	127.45	781.42	0	14:30	7.877	164.961
DI_983955	JUNCTION	1.88	1.88	0	12:59	0.085	0.085
PE_272260	JUNCTION	2.44	2.44	0	12:59	0.118	0.118
DI_983954	JUNCTION	0.00	4.32	0	12:59	0.000	0.203
DI_983953	JUNCTION	0.00	4.31	0	13:00	0.000	0.203
Drew_Hill_Junction	JUNCTION	0.00	573.78	0	15:23	0.000	127.114
DI_983952	JUNCTION	15.73	21.88	0	12:59	0.838	0.898
DI_983951	JUNCTION	0.00	21.73	0	13:00	0.000	0.896
DI_983950	JUNCTION	0.00	21.49	0	13:00	0.000	0.902
DI_283949	JUNCTION	0.00	21.42	0	13:01	0.000	0.901
DI_983948	JUNCTION	0.00	21.21	0	13:02	0.000	0.904
DI_983947	JUNCTION	0.00	21.15	0	13:03	0.000	0.904
DI_983946	JUNCTION	0.00	21.04	0	13:04	0.000	0.905
PE_972230	JUNCTION	4.60	4.60	0	12:59	0.221	0.221
UNK_952735*	JUNCTION	0.00	4.56	0	13:00	0.000	0.219
DI_983907	JUNCTION	2.67	7.14	0	12:59	0.129	0.350
DI_983906	JUNCTION	0.00	6.55	0	12:40	0.000	0.350
UNK_952736*	JUNCTION	0.00	6.36	0	12:39	0.000	0.350
DI_983903	JUNCTION	3.84	9.96	0	12:59	0.187	0.537
DI_983902	JUNCTION	0.00	39.03	0	13:00	0.000	2.168
DI_983904	JUNCTION	0.00	38.49	0	13:02	0.000	2.169
DI_983905	JUNCTION	11.24	48.06	0	13:00	0.517	2.687
DI_983721	JUNCTION	2.78	54.24	0	13:00	0.133	3.010
DI_983722	JUNCTION	3.54	58.88	0	13:02	0.173	3.180
MH_974299	JUNCTION	0.00	52.42	0	13:03	0.000	2.985
PE_972229	JUNCTION	4.80	66.99	0	13:03	0.244	3.844
PE_972224	JUNCTION	0.00	12.49	0	13:00	0.000	0.621
PE_972239	JUNCTION	0.00	95.46	0	13:01	0.000	5.247
PE_972246	JUNCTION	2.77	10.11	0	12:59	0.138	0.576
PE_972240	JUNCTION	0.00	17.66	0	13:01	0.000	1.033
DI_983935	JUNCTION	16.74	16.74	0	12:59	0.798	0.798
DI_983934	JUNCTION	14.08	35.02	0	12:59	0.897	1.728
MH_974300	JUNCTION	0.00	17.35	0	13:02	0.000	2.127
DI_983624	JUNCTION	24.44	71.09	0	12:59	1.172	3.902
DI_983623	JUNCTION	0.00	18.97	0	12:34	0.000	3.066
DI_983619	JUNCTION	0.00	43.18	0	13:00	0.000	4.238
DI_983622	JUNCTION	13.67	13.67	0	12:59	0.697	0.697
DI_983621	JUNCTION	8.04	64.96	0	13:00	0.384	1.259
DI_983620	JUNCTION	5.29	5.29	0	12:59	0.251	0.251
DI_983618	JUNCTION	0.00	51.64	0	13:00	0.000	4.899
DI_983898	JUNCTION	8.07	24.45	0	12:59	0.386	1.375
DI_983604	JUNCTION	5.31	29.42	0	12:59	0.253	1.631

DI_983901	JUNCTION	0.00	29.29	0	13:00	0.000	1.631
DI_983607	JUNCTION	3.82	3.82	0	12:59	0.183	0.183
DI_983606	JUNCTION	6.79	10.60	0	12:59	0.321	0.505
DI_9836054	JUNCTION	3.78	10.01	0	13:00	0.181	0.474
MH_974298	JUNCTION	0.00	5.03	0	12:34	0.000	0.272
DI_983899	JUNCTION	4.36	5.21	0	12:59	0.203	0.288
DI_983900	JUNCTION	2.24	2.24	0	12:59	0.098	0.098
DI_983897	JUNCTION	3.89	3.89	0	12:59	0.182	0.182
DI_983896	JUNCTION	1.74	5.61	0	12:59	0.084	0.266
DI_983895	JUNCTION	0.56	6.00	0	12:59	0.025	0.291
DI_983894	JUNCTION	0.00	5.69	0	13:01	0.000	0.291
DI_953893*	JUNCTION	0.00	7.67	0	13:00	0.000	0.389
PE_972225	JUNCTION	2.07	2.07	0	12:59	0.098	0.098
UNK_952734*	JUNCTION	3.86	11.50	0	12:59	0.180	0.569
DI_983892	JUNCTION	0.00	11.47	0	13:00	0.000	0.569
UNK_952733*	JUNCTION	0.00	11.45	0	13:00	0.000	0.569
UNK_952732*	JUNCTION	1.12	12.49	0	13:00	0.053	0.621
U/S_NC-4	JUNCTION	0.00	414.01	0	13:41	0.000	57.514
U/S_W_Battleboro_Ave	JUNCTION	0.00	160.59	0	13:00	0.000	15.111
Hathaway_St-U/S	JUNCTION	4.25	573.91	0	15:01	0.200	127.620
9**	JUNCTION	160.57	160.57	0	12:59	15.112	15.112
Farm-Culv-Up	JUNCTION	38.48	278.57	0	13:06	2.052	30.905
Farm-Culv-Dn	JUNCTION	0.00	275.77	0	13:09	0.000	30.787
Railroad-Up	JUNCTION	76.51	175.21	0	13:00	4.783	10.730
DI_983957	JUNCTION	2.44	5.04	0	12:59	0.119	0.127
DI_983956*	JUNCTION	10.28	11.54	0	12:58	0.533	0.660
PE_972262	JUNCTION	26.11	32.49	0	12:59	1.492	2.144
DI_983936	JUNCTION	7.44	7.44	0	12:59	0.438	0.438
U/S_Gainor_Swale	JUNCTION	8.30	18.15	0	12:59	0.457	1.033
DI_983625	JUNCTION	0.00	9.49	0	12:39	0.000	0.662
952731	JUNCTION	9.38	13.14	0	12:59	0.516	0.693
972222	JUNCTION	0.00	11.26	0	13:03	0.000	0.691
983943	JUNCTION	3.85	3.85	0	12:59	0.176	0.176
952740	JUNCTION	0.00	3.84	0	13:00	0.000	0.176
Primary_Outfall*	OUTFALL	0.00	780.63	0	14:37	0.000	163.842

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
DI_983634	JUNCTION	0.22	1.289	1.461
9**	JUNCTION	1.78	1.051	0.949
DI_983625	JUNCTION	0.52	1.478	3.122

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Node Flooding Summary
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No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	97.58	340.02	780.63	163.842
System	97.58	340.02	780.63	163.842

Existing Conditions - Project Areas 2,4,5, & 6 (100-Year)

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Link Flow Summary
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Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
BeechTrib8	CHANNEL	414.01	0	13:41	2.29	0.05	0.41
NC-4	CONDUIT	216.75	0	16:30	11.26	1.26	1.00
BeechTrib7	CHANNEL	216.69	0	16:37	1.99	0.02	0.34
Channel_4**	CONDUIT	181.88	0	13:00	2.75	0.10	0.55
BeechTrib6	CHANNEL	292.19	0	15:21	1.54	0.09	0.68
W_Battleboro_Ave_Culvert**	CONDUIT	99.44	0	12:48	14.07	2.11	1.00
Channel_3A**	CHANNEL	141.75	0	13:03	2.80	0.01	0.29
Channel_3B	CHANNEL	291.60	0	13:12	1.35	0.03	0.42
BeechTrib5	CHANNEL	569.10	0	15:02	1.70	2.55	0.79
Hathaway_St_Culvert	CONDUIT	570.40	0	15:20	7.92	5.00	1.00
15_RCP_Hathaway_1	CONDUIT	1.23	0	13:00	1.60	0.17	0.74
15_RCP_Hathaway_2	CONDUIT	2.69	0	13:00	2.30	1.03	0.96
15_RCP_Hathaway_3	CONDUIT	3.07	0	13:00	3.08	0.36	0.76
15_RCP_Hathaway_4	CONDUIT	7.18	0	13:00	6.50	0.98	0.88
15_RCP_Hathaway_5	CONDUIT	1.53	0	12:59	1.25	0.81	1.00
15_RCP_Hathaway_6	CONDUIT	10.07	0	13:00	8.82	0.88	0.91
15_RCP_Hathaway_7	CONDUIT	10.07	0	13:00	8.21	0.86	1.00
15_RCP_Hathaway_8	CONDUIT	3.82	0	13:00	7.23	0.32	0.62
15_RCP_Hathaway_9	CONDUIT	3.84	0	13:00	3.27	0.28	0.92
18_RCP_Hathaway_10	CONDUIT	2.94	0	13:12	2.19	0.20	1.00
18_RCP_Hathaway_11*	CONDUIT	6.56	0	12:38	3.71	1.07	1.00
15_RCP_Hathaway_12*	CONDUIT	11.52	0	13:00	10.52	2.26	0.84
Hathaway_Swale*	CONDUIT	18.12	0	13:00	0.53	0.01	0.40
BeechTrib4	CHANNEL	573.14	0	15:20	1.73	0.06	0.54
12_RCP_Battleboro_Apt_1	CONDUIT	1.88	0	13:00	3.22	0.55	0.70
12_RCP_Battleboro_Apt_2	CONDUIT	2.44	0	12:59	5.18	0.38	0.64
12_RCP_Battleboro_Apt_3	CONDUIT	4.31	0	13:00	7.79	0.87	0.69
15_RCP_Battleboro_Apt_4	CONDUIT	4.30	0	13:00	4.65	0.27	0.70
BeechTrib3	CHANNEL	573.78	0	15:23	1.26	0.03	0.60
BeechTrib2	CHANNEL	574.17	0	15:27	1.39	0.15	0.58
Channel-6B	CHANNEL	250.09	0	13:08	2.87	0.11	0.53
15_RCP_Burrows_1	CONDUIT	10.54	0	12:37	8.59	1.01	1.00
15_RCP_Burrows_2	CONDUIT	9.68	0	13:00	7.88	0.69	1.00
15_RCP_Burrows_3	CONDUIT	8.63	0	12:37	7.03	2.00	1.00
15_RCP_Burrows_4	CONDUIT	8.05	0	12:38	6.68	1.03	1.00
15_RCP_Burrows_5	CONDUIT	8.71	0	12:43	7.10	1.13	1.00
15_RCP_Burrows_6	CONDUIT	12.06	0	12:51	9.83	1.12	1.00
18_RCP_Burrows_7	CONDUIT	16.07	0	12:57	9.09	0.51	1.00
BeechTrib1	CHANNEL	780.63	0	14:37	2.07	0.09	0.56
18_RCP_Marriott_1	CONDUIT	4.19	0	12:41	2.37	1.16	1.00
12_RCP_Marriott_2	CONDUIT	5.61	0	13:10	7.15	2.23	1.00
15_RCP_Marriott_3	CONDUIT	6.55	0	12:40	5.71	1.07	1.00
15_VCP_Marriott_4	CONDUIT	6.36	0	12:39	6.80	0.71	1.00
15_RCP_Mattiott_5	CONDUIT	6.18	0	13:03	5.03	0.78	1.00
15_RCP_Mattiott_6	CONDUIT	8.03	0	12:40	6.54	1.03	1.00
24_RCP_Marriott_7	CONDUIT	20.33	0	13:24	6.47	0.59	1.00
24_RCP_Marriott_8	CONDUIT	21.87	0	13:05	6.96	0.98	1.00
24_RCP_Marriott_9	CONDUIT	15.11	0	12:38	4.81	0.72	1.00
24_RCP_Etheridge_1	CONDUIT	9.98	0	12:11	3.18	0.61	1.00
24_RCP_Etheridge_2	CONDUIT	9.69	0	12:36	3.08	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.57	0	13:04	6.47	0.26	0.67
Railroad_Swale_2	CONDUIT	65.94	0	13:04	1.36	0.02	0.35
Railroad_Swale_1	CONDUIT	12.40	0	13:01	1.81	0.02	0.25
Cemetery_Dr_Swale	CONDUIT	93.29	0	13:03	1.86	0.15	0.72
Gainor_Swale	CONDUIT	17.66	0	13:01	1.66	0.10	0.42
12_RCP_Gainor_1	CONDUIT	4.70	0	15:44	6.02	1.08	1.00
18_RCP_Gainor_2	CONDUIT	6.05	0	12:33	3.42	0.71	1.00
18_RCP_Gainor_3	CONDUIT	9.95	0	12:33	5.63	0.58	1.00
18_RCP_Gainor_4	CONDUIT	12.10	0	13:03	6.85	0.87	1.00
18_RCP_Gainor_5	CONDUIT	18.97	0	12:34	10.74	7.66	1.00

Existing Conditions - Project Areas 2,4,5, & 6 (100-Year)

24_RCP_Gainor_6	CONDUIT	18.41	0	12:55	6.23	1.07	0.95
15_RCP_Gainor_7A	CONDUIT	9.49	0	12:39	5.94	0.65	1.00
15_RCP_Gainor_7B	CONDUIT	20.88	0	13:28	11.82	11.93	1.00
15_RCP_Gainor_7C	CONDUIT	5.25	0	13:00	4.31	0.25	0.97
36_RCP_Gainor_8	CONDUIT	43.10	0	13:00	6.36	0.36	0.97
36_RCP_Gainor_9	CONDUIT	51.56	0	13:00	8.71	0.54	0.87
15_RCP_W_Battleboro_1	CONDUIT	3.33	0	13:09	2.97	0.40	1.00
18_RCP_W_Battleboro_2	CONDUIT	6.54	0	12:38	3.70	0.83	1.00
18_RCP_W_Battleboro_3	CONDUIT	6.55	0	14:05	3.71	0.87	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.79	0	13:54	6.10	0.80	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.92	0	13:30	7.31	1.44	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.47	0	12:45	8.76	1.12	1.00
15_RCP_Pollard_3	CONDUIT	3.58	0	14:06	3.11	0.15	1.00
15_RCP_Pollard_2	CONDUIT	3.80	0	12:34	4.09	0.74	1.00
12_RCP_Pollard_1	CONDUIT	1.31	0	13:13	1.67	1.48	1.00
12_RCP_W_Bridges_1	CONDUIT	1.71	0	12:33	2.18	0.73	1.00
12_RCP_W_Bridges_2	CONDUIT	2.45	0	12:33	3.11	0.49	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:30	3.10	4.58	1.00
15_RCP_Railroad_2	CONDUIT	5.69	0	13:02	5.18	0.99	0.85
15_RCP_Railroad_3	CONDUIT	2.07	0	12:59	3.50	0.32	0.54
18_RCP_Railroad_4	CONDUIT	7.66	0	13:00	5.12	0.64	0.79
24_RCP_Railroad_5	CONDUIT	11.47	0	13:00	5.15	0.46	0.67
24_RCP_Railroad_6*	CONDUIT	11.45	0	13:00	4.91	0.55	0.70
24_RCP_Railroad_7*	CONDUIT	11.45	0	13:00	4.90	0.60	0.70
24_VCP_Railroad_8	CONDUIT	12.49	0	13:00	6.60	0.41	0.58
CONNECT**	CONDUIT	160.59	0	13:00	2.07	0.54	1.00
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	11.98	0	13:00	2.66	0.00	0.03
Overland_Burrows_2	CONDUIT	11.81	0	13:00	2.02	0.00	0.04
Overland_Burrows_3	CONDUIT	12.90	0	13:01	2.83	0.00	0.03
Overland_Burrows_4	CONDUIT	13.77	0	13:02	2.62	0.00	0.03
Overland_Burrows_5	CONDUIT	17.36	0	13:03	2.15	0.01	0.05
Overland_Burrows_6	CONDUIT	12.56	0	13:04	1.82	0.00	0.04
Overland_Burrows_7	CONDUIT	5.11	0	13:06	1.93	0.00	0.01
W_Battleboro_Ave-Over	CONDUIT	63.99	0	13:00	2.89	0.02	0.11
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	273.07	0	13:12	1.69	0.06	0.61
Farm-Culvert	CONDUIT	16.68	0	09:46	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	270.06	0	13:09	7.16	0.06	0.26
Railroad_Culvert	CONDUIT	74.45	0	14:02	10.53	1.12	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.32
Over_15_RCP_Marriott_1	CONDUIT	1.24	0	13:00	0.69	0.00	0.01
Over_15_RCP_Marriott_2	CONDUIT	1.33	0	13:01	0.75	0.00	0.01
Over_15_RCP_Marriott_3	CONDUIT	0.89	0	13:02	0.47	0.00	0.01
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_15_RCP_Mattiott_6	CONDUIT	2.55	0	13:00	0.56	0.00	0.04
Over_24_RCP_Marriott_7	CONDUIT	18.76	0	13:02	1.85	0.01	0.07
Over_24_RCP_Marriott_8	CONDUIT	16.57	0	13:03	1.33	0.01	0.08
Over_24_RCP_Marriott_9	CONDUIT	34.12	0	13:01	1.79	0.02	0.12
Over_24_RCP_Etheridge_1	CONDUIT	56.18	0	13:02	1.39	0.01	0.24
Over_24_RCP_Etheridge_2	CONDUIT	45.06	0	13:03	1.24	0.01	0.22
Over_15_RCP_W_Battleboro_1	CONDUIT	2.59	0	12:59	0.61	0.01	0.03
Over_15_RCP_W_Battleboro_2	CONDUIT	4.27	0	13:00	0.53	0.00	0.05
Over_18_RCP_W_Battleboro_4	CONDUIT	20.68	0	13:00	1.89	0.08	0.07
Over_18_RCP_W_Battleboro_5	CONDUIT	21.03	0	13:00	2.75	0.01	0.05
Over_18_RCP_W_Battleboro_6	CONDUIT	14.16	0	13:01	2.15	0.00	0.05
Over_12_RCP_Pollard_1	CONDUIT	1.37	0	13:00	0.31	0.00	0.05
Over_15_RCP_Pollard_2	CONDUIT	2.27	0	13:00	0.28	0.00	0.08
Over_24_RCP_Etheridge_3	CONDUIT	37.70	0	13:04	6.85	0.00	0.04
Over_12_RCP_W_Bridges_1	CONDUIT	3.25	0	13:00	0.71	0.00	0.03
Over_12_RCP_W_Bridges_2	CONDUIT	4.99	0	13:00	0.95	0.01	0.05
Over_12_RCP_Railroad_1	CONDUIT	4.29	0	13:01	0.87	0.00	0.03
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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Over_24_RCP_Railroad_6* CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_24_RCP_Railroad_7* CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_24_VCP_Railroad_8 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Railroad_3 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_12_RCP_Gainor_1 CONDUIT     15.55     0  13:02      0.57    0.01    0.16
OVer_18_RCP_Gainor_2 CONDUIT     13.42     0  13:00      1.05    0.00    0.08
Over_18_RCP_Gainor_3 CONDUIT     34.85     0  13:00      6.17    0.00    0.04
Over_18_RCP_Gainor_4 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_18_RCP_Gainor_5 CONDUIT     52.14     0  13:00      4.45    0.00    0.11
Over_24_RCP_Gainor_6 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_8 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
12_RCP_Crepe_Myrtle_1 CONDUIT      1.87     0  12:36      2.68    0.56    1.00
12_RCP_Crepe_Myrtle_2 CONDUIT      6.62     0  13:28      8.45    1.10    1.00
Crepe_Myrtle_Swale   CONDUIT     31.96     0  13:00      1.35    0.06    0.63
Over_15_RCP_Hathaway_10 CONDUIT      6.16     0  13:00      1.57    0.00    0.03
Over_12_RCP_Crepe_Myrtle_1 CONDUIT      3.37     0  13:27      0.33    0.00    0.30
Over_15_RCP_Hathaway_12* CONDUIT      4.93     0  13:00      2.30    0.00    0.01
15_RCP_Gainor        CONDUIT      3.37     0  12:35      2.77    0.64    1.00
Gainor_Bridges       CONDUIT      4.75     0  12:35      3.87    1.01    1.00
Over_15_RCP_Gainor   CONDUIT      6.31     0  13:00      0.75    0.02    0.05
Over_Gainor_Bridges  CONDUIT      7.71     0  13:00      0.42    0.01    0.12
Over_15_RCP_Gainor_7A CONDUIT      5.02     0  13:00      1.22    0.00    0.04
Over_15_RCP_Gainor_7C CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_Hathaway_3      CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Hathaway_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Battle-Gainor-Over   CONDUIT     43.98     0  13:01      3.97    0.01    0.07
15_RCP_Gainor_7D     CONDUIT      9.32     0  12:40      5.27    0.96    1.00
84                   CONDUIT      5.42     0  13:10      0.74    0.00    0.13
E-Battleboro-Culv    CONDUIT     11.26     0  13:03      4.99    1.47    0.71
RR-Open-Ditch2       CONDUIT     10.94     0  13:06      0.49    0.03    0.61
Pearsall             CONDUIT      3.84     0  13:00      4.71    0.45    0.47
RR-Open-Ditch1       CONDUIT      3.77     0  13:00      0.82    0.02    0.43
Battleboro-Ovr       CONDUIT      0.00     0  00:00      0.00    0.00    0.00


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Flow Classification Summary
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                    Adjusted    --- Fraction of Time in Flow Class ----   Avg.     Avg.
                     /Actual         Up    Down  Sub   Sup   Up    Down   Froude   Flow
Conduit               Length    Dry  Dry   Dry   Crit  Crit  Crit  Crit   Number   Change
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BeechTrib8              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.22   0.0000
NC-4                    1.00   0.03  0.00  0.00  0.94  0.03  0.00  0.00     0.38   0.0003
BeechTrib7              1.00   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.21   0.0000
Channel_4**             1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.12   0.0000
BeechTrib6              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.13   0.0000
W_Battleboro_Ave_Culvert**    3.30   0.02  0.00  0.00  0.75  0.23  0.00  0.00     0.75   0.0003
Channel_3A**            1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.25   0.0000
Channel_3B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.13   0.0000
BeechTrib5              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.13   0.0003
Hathaway_St_Culvert     1.18   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.24   0.0006
15_RCP_Hathaway_1       2.23   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.29   0.0000
15_RCP_Hathaway_2       1.00   0.03  0.00  0.00  0.97  0.00  0.00  0.01     0.39   0.0001
15_RCP_Hathaway_3       2.38   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.28   0.0000
15_RCP_Hathaway_4       1.00   0.04  0.00  0.00  0.10  0.84  0.00  0.03     1.17   0.0001
15_RCP_Hathaway_5       1.34   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.05   0.0001
15_RCP_Hathaway_6       1.00   0.04  0.00  0.00  0.00  0.95  0.00  0.00     1.71   0.0001
15_RCP_Hathaway_7       1.00   0.02  0.03  0.00  0.94  0.01  0.00  0.00     0.58   0.0001
15_RCP_Hathaway_8       2.28   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.26   0.0000
15_RCP_Hathaway_9       2.53   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.53   0.0001
18_RCP_Hathaway_10      2.92   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.54   0.0001
18_RCP_Hathaway_11*     1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.41   0.0002
15_RCP_Hathaway_12*     6.57   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.36   0.0003
Hathaway_Swale*         1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.03   0.0000
BeechTrib4              1.00   0.02  0.01  0.00  0.97  0.00  0.00  0.00     0.19   0.0000
12_RCP_Battleboro_Apt_1    1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.81   0.0001
12_RCP_Battleboro_Apt_2    1.29   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.28   0.0001
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Existing Conditions - Project Areas 2,4,5, & 6 (100-Year)

12_RCP_Battleboro_Apt_3	1.10	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.12	0.0001
15_RCP_Battleboro_Apt_4	1.78	0.02	0.00	0.00	0.94	0.04	0.00	0.00	0.29	0.0000
BeechTrib3	2.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib2	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.12	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.33	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.05	0.93	0.00	0.00	2.06	0.0002
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.95	0.03	0.00	0.00	0.53	0.0001
15_RCP_Burrows_3	1.76	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.40	0.0003
15_RCP_Burrows_4	1.00	0.03	0.00	0.00	0.06	0.90	0.00	0.00	1.44	0.0002
15_RCP_Burrows_5	1.15	0.03	0.00	0.00	0.84	0.13	0.00	0.00	0.72	0.0002
15_RCP_Burrows_6	4.20	0.04	0.00	0.00	0.59	0.37	0.00	0.00	1.12	0.0002
18_RCP_Burrows_7	5.31	0.03	0.00	0.00	0.94	0.03	0.00	0.00	0.19	0.0001
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.19	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0004
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0005
15_RCP_Marriott_3	3.55	0.04	0.00	0.00	0.04	0.92	0.00	0.00	1.23	0.0002
15_VCP_Marriott_4	1.95	0.04	0.00	0.00	0.04	0.92	0.00	0.00	1.55	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.02	0.00	0.51	0.44	0.00	0.00	0.92	0.0001
15_RCP_Mattiott_6	1.30	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.66	0.0002
24_RCP_Marriott_7	1.14	0.03	0.00	0.00	0.85	0.12	0.00	0.00	0.71	0.0001
24_RCP_Marriott_8	1.47	0.02	0.01	0.00	0.95	0.02	0.00	0.00	0.13	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.04	0.0003
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0002
24_RCP_Etheridge_3	7.59	0.02	0.05	0.00	0.00	0.00	0.94	0.00	0.40	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0000
Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
12_RCP_Gainor_1	1.00	0.02	0.00	0.00	0.46	0.52	0.00	0.00	0.82	0.0002
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.54	0.0002
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.25	0.73	0.00	0.00	1.07	0.0002
18_RCP_Gainor_4	1.00	0.02	0.00	0.00	0.36	0.35	0.00	0.26	1.12	0.0001
18_RCP_Gainor_5	2.32	0.02	0.00	0.00	0.22	0.00	0.00	0.76	0.53	0.0011
24_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.02	0.00	0.00	0.97	0.98	0.0001
15_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.04	0.94	0.00	0.00	1.29	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0018
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.98	0.01	0.00	0.00	0.51	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.18	0.80	0.00	0.00	1.26	0.0001
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.06	0.92	0.00	0.00	1.31	0.0001
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.64	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.59	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.02	0.00	0.31	0.00	0.66	0.00	0.31	0.0002
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.37	0.61	0.00	0.00	0.91	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.12	0.86	0.00	0.00	1.14	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.61	0.37	0.00	0.00	0.84	0.0002
15_RCP_Pollard_3	26.14	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.32	0.0001
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.71	0.04	0.00	0.23	0.71	0.0002
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0004
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0002
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.20	0.0009
15_RCP_Railroad_2	2.51	0.02	0.02	0.00	0.05	0.91	0.00	0.00	1.02	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.96	0.02	0.00	0.00	0.68	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.51	0.0001
24_RCP_Railroad_5	3.55	0.04	0.00	0.00	0.03	0.93	0.00	0.00	1.20	0.0001
24_RCP_Railroad_6*	3.25	0.04	0.00	0.00	0.05	0.92	0.00	0.00	1.06	0.0001
24_RCP_Railroad_7*	2.02	0.02	0.02	0.00	0.06	0.90	0.00	0.00	1.08	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.61	0.0001
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0001
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.15	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	0.96	0.00	0.00	0.00	0.02	0.00	0.00	0.05	0.0000
Overland_Burrows_2	3.53	0.96	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.0000
Overland_Burrows_3	7.01	0.95	0.01	0.00	0.00	0.03	0.00	0.00	0.06	0.0000
Overland_Burrows_4	2.14	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.0000
Overland_Burrows_5	1.88	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.0000
Overland_Burrows_6	5.36	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.0000

Existing Conditions - Project Areas 2,4,5, & 6 (100-Year)

Overland_Burrows_7	7.81	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.0000
W_Battleboro_Ave-Over	3.80	0.90	0.00	0.00	0.00	0.00	0.00	0.10	0.09	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.16	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.86	0.12	0.00	0.00	0.27	0.0002
Over_Farm-Culvert	7.77	0.26	0.00	0.00	0.00	0.11	0.00	0.63	1.09	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0002
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	0.75	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	0.97	0.00	0.00	0.01	0.00	0.00	0.02	0.01	0.0000
Over_15_RCP_Marriott_2	27.58	0.97	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.0000
Over_15_RCP_Marriott_3	4.67	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	0.97	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	0.96	0.01	0.00	0.03	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Marriott_7	1.03	0.96	0.00	0.00	0.02	0.00	0.00	0.02	0.03	0.0000
Over_24_RCP_Marriott_8	1.80	0.88	0.09	0.00	0.03	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Marriott_9	2.78	0.76	0.12	0.00	0.12	0.00	0.00	0.00	0.04	0.0000
Over_24_RCP_Etheridge_1	5.90	0.67	0.09	0.00	0.24	0.00	0.00	0.00	0.04	0.0000
Over_24_RCP_Etheridge_2	1.42	0.67	0.16	0.00	0.00	0.00	0.17	0.00	0.02	0.0000
Over_15_RCP_W_Battleboro_1	2.34	0.97	0.00	0.00	0.03	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.92	0.05	0.00	0.03	0.00	0.00	0.00	0.01	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.92	0.00	0.00	0.00	0.00	0.00	0.08	0.05	0.0000
Over_18_RCP_W_Battleboro_5	1.60	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.0000
Over_18_RCP_W_Battleboro_6	6.23	0.96	0.01	0.00	0.02	0.01	0.00	0.00	0.03	0.0000
Over_12_RCP_Pollard_1	1.11	0.92	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.90	0.06	0.00	0.04	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.88	0.00	0.00	0.00	0.00	0.00	0.12	0.37	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.93	0.01	0.00	0.06	0.00	0.00	0.00	0.02	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.93	0.00	0.00	0.04	0.00	0.00	0.03	0.03	0.0000
Over_12_RCP_Railroad_1	1.00	0.94	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Gainor_1	1.00	0.76	0.07	0.00	0.00	0.00	0.17	0.00	0.01	0.0000
OVer_18_RCP_Gainor_2	5.06	0.83	0.01	0.00	0.00	0.00	0.16	0.00	0.03	0.0000
Over_18_RCP_Gainor_3	20.67	0.84	0.00	0.00	0.00	0.11	0.00	0.04	0.50	0.0000
Over_18_RCP_Gainor_4	1.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_5	16.05	0.87	0.00	0.00	0.05	0.01	0.00	0.07	0.26	0.0000
Over_24_RCP_Gainor_6	18.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
12_RCP_Crepe_Myrtle_1	2.12	0.02	0.00	0.00	0.42	0.16	0.00	0.41	0.89	0.0006
12_RCP_Crepe_Myrtle_2	1.00	0.02	0.00	0.00	0.08	0.91	0.00	0.00	1.57	0.0002
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.08	0.0000
Over_15_RCP_Hathaway_10	1.15	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.0000
Over_12_RCP_Crepe_Myrtle_1	5.17	0.89	0.01	0.00	0.09	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_12*	25.27	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.07	0.0000
15_RCP_Gainor	3.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0001
Gainor_Bridges	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.55	0.0002
Over_15_RCP_Gainor	3.16	0.87	0.00	0.00	0.09	0.00	0.00	0.04	0.05	0.0000
Over_Gainor_Bridges	1.33	0.79	0.09	0.00	0.11	0.00	0.00	0.00	0.01	0.0000
Over_15_RCP_Gainor_7A	13.13	0.95	0.02	0.00	0.02	0.00	0.00	0.01	0.02	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.06	0.0000
15_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.44	0.0001
84	30.58	0.90	0.00	0.00	0.10	0.00	0.00	0.00	0.01	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.73	0.0002
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.14	0.0001
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

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Existing Conditions - Project Areas 2,4,5, & 6 (100-Year)

Conduit Surcharge Summary
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Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
NC-4	8.10	8.10	8.10	10.28	8.10
W_Battleboro_Ave_Culvert**	2.13	2.13	2.14	3.89	2.13
BeechTrib5	0.01	0.01	0.01	9.62	0.01
Hathaway_St_Culvert	1.61	1.61	1.61	12.08	1.61
15_RCP_Hathaway_2	0.01	0.01	0.01	0.11	0.01
15_RCP_Hathaway_5	0.19	0.19	0.19	0.01	0.17
15_RCP_Hathaway_7	0.22	0.22	0.22	0.01	0.01
18_RCP_Hathaway_10	0.75	0.75	0.75	0.01	0.01
18_RCP_Hathaway_11*	1.17	1.17	1.18	0.46	0.77
15_RCP_Hathaway_12*	0.01	0.01	0.01	1.59	0.01
15_RCP_Burrows_1	0.73	0.73	0.73	0.01	0.58
15_RCP_Burrows_2	0.78	0.78	0.78	0.01	0.01
15_RCP_Burrows_3	0.92	0.92	0.92	1.61	0.01
15_RCP_Burrows_4	0.92	0.92	0.92	0.08	0.13
15_RCP_Burrows_5	0.91	0.91	0.92	0.18	0.26
15_RCP_Burrows_6	0.83	0.83	0.83	0.11	0.70
18_RCP_Burrows_7	4.78	4.78	4.78	0.01	0.01
18_RCP_Marriott_1	0.59	0.59	0.59	0.08	0.54
12_RCP_Marriott_2	0.67	0.67	0.67	0.59	0.62
15_RCP_Marriott_3	0.49	0.49	0.49	0.07	0.48
15_VCP_Marriott_4	0.49	0.49	0.49	0.01	0.01
15_RCP_Mattiott_5	0.54	0.54	0.55	0.01	0.01
15_RCP_Mattiott_6	0.84	0.84	0.84	0.07	0.64
24_RCP_Marriott_7	0.77	0.77	0.77	0.01	0.01
24_RCP_Marriott_8	5.11	5.11	5.11	0.01	0.82
24_RCP_Marriott_9	6.98	6.98	6.98	0.01	0.09
24_RCP_Etheridge_1	8.15	8.15	8.16	0.01	0.01
24_RCP_Etheridge_2	12.38	12.38	12.38	0.01	0.01
12_RCP_Gainor_1	3.08	3.08	3.08	0.69	0.28
18_RCP_Gainor_2	2.80	2.80	2.80	0.01	0.02
18_RCP_Gainor_3	2.81	2.81	2.81	0.01	0.02
18_RCP_Gainor_4	2.88	2.88	2.88	0.01	0.01
18_RCP_Gainor_5	2.94	2.94	2.94	11.30	2.94
24_RCP_Gainor_6	0.01	0.01	0.01	2.35	0.01
15_RCP_Gainor_7A	0.50	0.50	0.50	0.01	0.47
15_RCP_Gainor_7B	1.37	1.37	1.37	2.18	1.37
15_RCP_W_Battleboro_1	1.05	1.05	1.05	0.01	0.01
18_RCP_W_Battleboro_2	1.44	1.44	1.44	0.01	0.01
18_RCP_W_Battleboro_3	1.65	1.65	1.65	0.01	0.01
18_RCP_W_Battleboro_4	1.69	1.69	1.69	0.01	0.68
18_RCP_W_Battleboro_5	1.54	1.54	1.54	1.13	1.54
18_RCP_W_Battleboro_6	1.03	1.03	1.03	0.59	1.03
15_RCP_Pollard_3	1.57	1.57	1.57	0.01	0.01
15_RCP_Pollard_2	1.05	1.05	1.05	0.01	0.01
12_RCP_Pollard_1	1.49	1.49	1.49	0.29	0.96
12_RCP_W_Bridges_1	1.24	1.24	1.24	0.01	0.02
12_RCP_W_Bridges_2	1.22	1.22	1.22	0.01	0.01
12_RCP_Railroad_1	0.75	0.75	0.75	5.42	0.75
CONNECT**	1.78	1.78	1.79	0.01	0.01
Farm-Culvert	13.90	13.90	13.91	10.00	12.11
Railroad_Culvert	4.26	4.26	4.26	2.11	3.82
12_RCP_Crepe_Myrtle_1	1.62	1.62	1.62	0.01	0.01
12_RCP_Crepe_Myrtle_2	0.78	0.78	0.78	1.59	0.78
15_RCP_Gainor	2.70	2.70	2.70	0.01	0.01
Gainor_Bridges	2.70	2.70	2.70	0.01	0.01
15_RCP_Gainor_7D	0.52	0.52	0.52	0.01	0.01
E-Battleboro-Culv	0.01	0.01	0.01	0.60	0.01

Analysis begun on: Mon Dec 07 15:41:21 2015
Analysis ended on: Mon Dec 07 15:41:25 2015
Total elapsed time: 00:00:04

Future Conditions - Project Areas 2,4,5,& 6 (2-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
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Future Conditions - Project Areas 2,4,5,& 6 (2-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-06-2015 00:00:00
Ending Date .............. APR-07-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Gainor

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905
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WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224

WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node PE_972240

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       387.008         3.596
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       167.810         1.559
Surface Runoff ...........       176.288         1.638
Final Surface Storage ....        43.174         0.401
Continuity Error (%) .....        -0.068


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       175.756        57.273
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       167.318        54.523
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......         8.012         2.611
Continuity Error (%) .....         0.243


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (2.47%)
Node 8** (1.59%)
```

Future Conditions - Project Areas 2,4,5,& 6 (2-Year)

```
**************************
Time-Step Critical Elements
**************************
Link Farm-Culvert (37.89%)
Link 18_RCP_Gainor_5 (16.75%)
Link 24_RCP_Etheridge_2 (13.40%)
Link Hathaway_St_Culvert (8.92%)
Link 24_RCP_Etheridge_1 (4.29%)


*******************************
Highest Flow Instability Indexes
*******************************
Link 24_RCP_Marriott_9 (1)
Link 24_RCP_Etheridge_2 (1)


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     7.69 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.00


**************************
Subcatchment Runoff Summary
**************************
```

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	3.60	0.00	0.00	1.56	1.47	19.34	207.72	0.409
Basin_A-2	3.60	0.00	0.00	1.40	1.77	6.35	70.97	0.493
Basin_A-3	3.60	0.00	0.00	1.56	1.70	4.80	41.76	0.473
Basin_A-4	3.60	0.00	0.00	1.64	1.59	7.19	69.77	0.442
Basin_A-5	3.60	0.00	0.00	1.58	1.66	5.53	64.74	0.463
Basin_B-2	3.60	0.00	0.00	1.80	1.54	3.56	39.40	0.428
Area#5-10	3.60	0.00	0.00	1.54	1.98	0.02	0.41	0.551
Area#5-30	3.60	0.00	0.00	0.78	2.75	0.06	1.23	0.766
Area#5-50	3.60	0.00	0.00	1.38	2.15	0.03	0.54	0.599
Area#5-70	3.60	0.00	0.00	1.73	1.78	0.07	1.13	0.496
Area#5-80	3.60	0.00	0.00	1.20	2.33	0.10	1.97	0.648
Area#5-20	3.60	0.00	0.00	0.78	2.76	0.03	0.60	0.767
Area#5-40	3.60	0.00	0.00	0.78	2.75	0.03	0.58	0.766
Area#5-90	3.60	0.00	0.00	0.69	2.86	0.07	1.46	0.795
Area#5-100	3.60	0.00	0.00	0.78	2.77	0.04	0.74	0.769
Area#6-10	3.60	0.00	0.00	2.05	1.49	0.04	0.79	0.413
Area#6-20	3.60	0.00	0.00	1.61	1.89	0.19	3.20	0.527
Area#6-30	3.60	0.00	0.00	1.58	1.90	0.52	7.99	0.528
Area#6-40	3.60	0.00	0.00	1.90	1.55	0.31	3.52	0.431
Area#6-50	3.60	0.00	0.00	2.12	1.37	0.61	8.42	0.380
Area#6-60	3.60	0.00	0.00	1.54	1.91	2.79	42.21	0.531
Area#6-70	3.60	0.00	0.00	0.27	3.29	0.05	1.07	0.914
Area#6-80	3.60	0.00	0.00	2.10	1.43	0.03	0.59	0.399
Area#6-90	3.60	0.00	0.00	1.79	1.72	0.30	5.13	0.478
Area#4-140	3.60	0.00	0.00	0.82	2.73	0.07	1.53	0.759
Area#4-150	3.60	0.00	0.00	0.31	3.25	0.04	0.76	0.904
Area#4-160	3.60	0.00	0.00	1.22	2.32	0.01	0.21	0.645
Area#4-170	3.60	0.00	0.00	0.69	2.85	0.04	0.83	0.792
Area#4-180	3.60	0.00	0.00	1.02	2.52	0.07	1.44	0.700
Area#4-190	3.60	0.00	0.00	0.69	2.85	0.02	0.45	0.793
Area#4-200	3.60	0.00	0.00	1.93	1.59	0.09	1.52	0.443
Area#4-130	3.60	0.00	0.00	1.61	1.93	0.07	1.30	0.536
Area#4-120	3.60	0.00	0.00	1.46	2.08	0.05	1.05	0.578
Area#4-100	3.60	0.00	0.00	2.19	1.34	0.06	1.17	0.372
Area#4-90	3.60	0.00	0.00	0.41	3.14	0.06	1.17	0.874

Area#4-80	3.60	0.00	0.00	0.29	3.26	0.10	1.99	0.907
Area#4-10	3.60	0.00	0.00	0.31	3.24	0.08	1.65	0.901
Area#4-20	3.60	0.00	0.00	0.61	2.93	0.13	2.77	0.815
Area#4-70	3.60	0.00	0.00	0.53	3.01	0.11	2.19	0.837
Area#4-60	3.60	0.00	0.00	0.31	3.24	0.08	1.64	0.902
Area#4-50	3.60	0.00	0.00	0.51	3.03	0.16	3.33	0.842
Area#4-30	3.60	0.00	0.00	1.79	1.73	0.03	0.67	0.481
Area#2-10	3.60	0.00	0.00	1.48	1.98	0.15	2.07	0.551
Area#2-20	3.60	0.00	0.00	1.10	2.41	0.05	0.95	0.669
Area#2-30	3.60	0.00	0.00	1.60	1.87	0.15	2.17	0.520
Area#2-40	3.60	0.00	0.00	1.19	2.32	0.30	5.67	0.647
Area#2-50	3.60	0.00	0.00	1.35	2.08	0.32	4.24	0.578
Area#2-60	3.60	0.00	0.00	1.35	2.17	0.21	4.08	0.603
Area#2-70	3.60	0.00	0.00	1.60	1.89	0.20	3.29	0.525
Area#2-100	3.60	0.00	0.00	1.26	2.25	0.14	2.65	0.626
Area#2-80	3.60	0.00	0.00	1.10	2.43	0.09	1.73	0.674
Area#2-110	3.60	0.00	0.00	1.26	2.25	0.09	1.75	0.626
Area#5-60	3.60	0.00	0.00	0.78	2.77	0.03	0.57	0.769
Area#2-90	3.60	0.00	0.00	1.03	2.46	0.18	3.07	0.683
Area#2-120	3.60	0.00	0.00	1.30	2.12	1.31	16.06	0.590
Area#2-150	3.60	0.00	0.00	1.59	1.87	0.35	4.83	0.521
Area#4-40	3.60	0.00	0.00	1.02	2.52	0.08	1.63	0.700
Area#4-110	3.60	0.00	0.00	1.18	2.33	0.19	3.81	0.649
Area#5-110	3.60	0.00	0.00	0.50	3.04	0.08	1.76	0.846
Area#2-130	3.60	0.00	0.00	1.31	2.22	0.06	1.30	0.616
Area#2-140	3.60	0.00	0.00	1.59	1.89	0.17	2.55	0.524

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	2.51	4.64	124.64	0 13:14
3**	JUNCTION	0.33	1.00	102.00	0 13:00
D/S_NC-4	JUNCTION	1.76	3.26	104.44	0 14:26
5**	JUNCTION	2.09	4.20	98.20	0 14:50
D/S_W_Battleboro_Ave**	JUNCTION	0.80	1.99	116.16	0 13:02
7**	JUNCTION	1.49	3.33	105.33	0 13:04
8**	JUNCTION	3.83	6.13	96.13	0 15:12
Hathaway_St-D/S	JUNCTION	3.09	5.02	95.00	0 15:17
DI_983628	JUNCTION	0.06	0.20	127.10	0 13:00
DI_983629	JUNCTION	0.22	0.60	126.80	0 13:00
DI_983630	JUNCTION	0.42	0.84	126.30	0 13:00
DI_983631	JUNCTION	0.09	0.32	126.77	0 12:59
DI_983633	JUNCTION	0.42	0.82	121.92	0 13:00
DI_983632	JUNCTION	0.47	0.86	121.91	0 13:00
DI_983634	JUNCTION	0.18	0.54	114.19	0 13:00
DI_984002*	JUNCTION	0.43	2.57	110.07	0 13:00
UNK_952741*	JUNCTION	0.31	2.54	110.44	0 13:00
DI_983635	JUNCTION	0.08	0.24	111.39	0 13:00
PE_972255	JUNCTION	0.08	0.28	113.78	0 13:00
PE_972263	JUNCTION	0.14	1.58	110.48	0 13:00
PE_972261*	JUNCTION	0.14	0.58	107.98	0 13:01
PE_972258	JUNCTION	3.14	5.13	94.13	0 15:28
Railroad_Junction_1	JUNCTION	1.58	3.54	108.07	0 13:05
Junction_1	JUNCTION	3.51	5.59	93.09	0 15:05
DI_983955	JUNCTION	0.08	0.28	100.88	0 13:00
PE_272260	JUNCTION	0.08	0.28	101.88	0 12:59
DI_983954	JUNCTION	0.12	0.45	98.47	0 13:00
DI_983953	JUNCTION	0.08	0.27	96.17	0 13:00
Drew_Hill_Junction	JUNCTION	3.91	6.07	94.07	0 15:29
DI_983952	JUNCTION	0.20	0.76	106.09	0 12:59
DI_983951	JUNCTION	0.16	0.57	104.62	0 13:00
DI_983950	JUNCTION	0.63	1.75	102.75	0 13:00
DI_283949	JUNCTION	0.26	0.80	102.05	0 13:00
DI_983948	JUNCTION	0.21	0.81	97.46	0 13:00

DI_983947	JUNCTION	0.37	0.94	96.02	0	13:01
DI_983946	JUNCTION	0.22	0.74	95.01	0	15:18
PE_972230	JUNCTION	0.42	1.11	128.26	0	12:59
UNK_952735*	JUNCTION	0.47	1.09	128.19	0	13:00
DI_983907	JUNCTION	0.51	1.11	128.16	0	12:59
DI_983906	JUNCTION	0.14	0.55	127.66	0	13:00
UNK_952736*	JUNCTION	0.14	0.55	126.31	0	13:00
DI_983903	JUNCTION	0.22	0.78	123.39	0	13:00
DI_983902	JUNCTION	0.52	1.59	122.67	0	13:00
DI_983904	JUNCTION	0.82	3.84	121.25	0	13:00
DI_983905	JUNCTION	1.61	4.00	120.48	0	13:01
DI_983721	JUNCTION	2.05	4.08	120.05	0	13:04
DI_983722	JUNCTION	2.04	4.10	120.06	0	13:06
MH_974299	JUNCTION	2.47	4.53	119.98	0	13:08
PE_972229	JUNCTION	0.25	0.89	116.11	0	13:09
PE_972224	JUNCTION	0.14	0.57	121.42	0	13:01
PE_972239	JUNCTION	0.41	1.25	113.37	0	13:02
PE_972246	JUNCTION	0.23	0.83	127.39	0	13:00
PE_972240	JUNCTION	0.29	1.55	127.27	0	13:10
DI_983935	JUNCTION	0.32	2.85	126.80	0	13:02
DI_983934	JUNCTION	0.39	2.93	126.61	0	13:00
MH_974300	JUNCTION	0.40	3.10	125.86	0	13:00
DI_983624	JUNCTION	0.94	4.93	122.05	0	13:00
DI_983623	JUNCTION	0.53	2.20	119.25	0	13:00
DI_983619	JUNCTION	0.35	1.27	115.58	0	13:00
DI_983622	JUNCTION	0.20	0.80	118.25	0	13:00
DI_983621	JUNCTION	0.36	1.33	115.65	0	13:00
DI_983620	JUNCTION	0.07	0.25	116.70	0	12:59
DI_983618	JUNCTION	0.52	1.93	114.65	0	13:00
DI_983898	JUNCTION	0.38	3.71	127.71	0	13:01
DI_983604	JUNCTION	0.43	3.43	126.93	0	13:00
DI_983901	JUNCTION	0.31	1.93	124.28	0	13:00
DI_983607	JUNCTION	0.13	1.76	128.56	0	13:00
DI_983606	JUNCTION	0.24	2.35	128.50	0	13:00
DI_9836054	JUNCTION	0.54	3.73	127.78	0	13:03
MH_974298	JUNCTION	1.45	3.80	127.85	0	12:58
DI_983899	JUNCTION	0.17	1.26	128.23	0	13:00
DI_983900	JUNCTION	0.17	1.26	128.25	0	13:00
DI_983897	JUNCTION	0.22	1.91	128.11	0	13:00
DI_983896	JUNCTION	0.34	1.96	128.01	0	13:01
DI_983895	JUNCTION	0.44	1.92	127.77	0	13:00
DI_983894	JUNCTION	0.40	0.95	126.75	0	13:00
DI_953893*	JUNCTION	0.15	0.52	126.22	0	13:00
PE_972225	JUNCTION	0.08	0.30	126.85	0	12:59
UNK_952734*	JUNCTION	0.41	0.92	123.45	0	13:00
DI_983892	JUNCTION	0.19	0.74	122.97	0	13:00
UNK_952733*	JUNCTION	0.19	0.74	122.59	0	13:00
UNK_952732*	JUNCTION	0.18	0.77	122.12	0	13:00
U/S_NC-4	JUNCTION	1.19	3.17	105.78	0	14:19
U/S_W_Battleboro_Ave	JUNCTION	1.10	3.09	117.51	0	13:00
Hathaway_St-U/S	JUNCTION	3.20	5.35	95.34	0	15:17
9**	JUNCTION	1.24	2.71	118.13	0	13:00
Farm-Culv-Up	JUNCTION	2.28	3.82	99.82	0	13:05
Farm-Culv-Dn	JUNCTION	1.42	3.27	98.77	0	13:12
Railroad-Up	JUNCTION	0.87	3.33	108.91	0	13:14
DI_983957	JUNCTION	0.10	0.34	121.34	0	12:59
DI_983956*	JUNCTION	0.17	0.63	121.13	0	13:00
PE_972262	JUNCTION	0.21	0.77	116.16	0	13:00
DI_983936	JUNCTION	0.47	1.14	127.50	0	13:00
U/S_Gainor_Swale	JUNCTION	0.33	1.30	127.30	0	13:10
DI_983625	JUNCTION	0.21	0.74	117.74	0	13:00
952731	JUNCTION	0.34	0.93	121.88	0	13:01
972222	JUNCTION	0.14	0.46	121.25	0	13:04
983943	JUNCTION	0.12	0.45	126.10	0	13:00
952740	JUNCTION	0.09	0.34	125.79	0	13:00
Primary_Outfall*	OUTFALL	3.52	5.60	92.60	0	15:05

****
Node Inflow Summary
****

Future Conditions - Project Areas 2,4,5,& 6 (2-Year)

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	207.65	207.65	0	12:59	19.264	19.264
3**	JUNCTION	70.95	70.95	0	12:59	6.331	6.330
D/S_NC-4	JUNCTION	0.00	119.17	0	14:18	0.000	18.825
5**	JUNCTION	0.00	146.04	0	14:24	0.000	25.085
D/S_W_Battleboro_Ave**	JUNCTION	0.00	40.71	0	13:00	0.000	4.780
7**	JUNCTION	69.75	108.21	0	12:59	7.163	11.929
8**	JUNCTION	64.72	238.74	0	13:00	5.512	42.422
Hathaway_St-D/S	JUNCTION	0.00	217.18	0	15:16	0.000	42.386
DI_983628	JUNCTION	0.41	0.41	0	12:59	0.021	0.021
DI_983629	JUNCTION	0.60	1.01	0	12:59	0.029	0.051
DI_983630	JUNCTION	0.58	2.80	0	12:59	0.028	0.139
DI_983631	JUNCTION	1.23	1.23	0	12:59	0.061	0.061
DI_983633	JUNCTION	0.53	0.53	0	12:59	0.026	0.026
DI_983632	JUNCTION	0.57	3.88	0	12:59	0.027	0.192
DI_983634	JUNCTION	0.00	3.87	0	13:00	0.000	0.192
DI_984002*	JUNCTION	0.00	8.33	0	13:00	0.000	0.427
UNK_952741*	JUNCTION	1.46	4.53	0	12:59	0.070	0.235
DI_983635	JUNCTION	0.00	1.13	0	13:00	0.000	0.066
PE_972255	JUNCTION	1.13	1.13	0	12:59	0.066	0.066
PE_972263	JUNCTION	1.97	1.97	0	12:59	0.100	0.100
PE_972261*	JUNCTION	0.74	9.00	0	12:59	0.035	0.463
PE_972258	JUNCTION	0.00	217.38	0	15:17	0.000	42.395
Railroad_Junction_1	JUNCTION	42.90	102.32	0	12:59	3.857	9.861
Junction_1	JUNCTION	42.20	277.67	0	14:59	2.782	54.882
DI_983955	JUNCTION	0.59	0.59	0	12:59	0.029	0.029
PE_272260	JUNCTION	1.07	1.07	0	12:59	0.052	0.052
DI_983954	JUNCTION	0.00	1.66	0	12:59	0.000	0.081
DI_983953	JUNCTION	0.00	1.65	0	13:00	0.000	0.080
Drew_Hill_Junction	JUNCTION	0.00	216.82	0	15:23	0.000	42.015
DI_983952	JUNCTION	5.13	5.13	0	12:59	0.297	0.297
DI_983951	JUNCTION	0.00	5.13	0	13:00	0.000	0.297
DI_983950	JUNCTION	0.00	5.12	0	13:00	0.000	0.297
DI_283949	JUNCTION	0.00	5.12	0	13:00	0.000	0.297
DI_983948	JUNCTION	0.00	5.11	0	13:00	0.000	0.297
DI_983947	JUNCTION	0.00	5.11	0	13:01	0.000	0.297
DI_983946	JUNCTION	0.00	5.12	0	13:01	0.000	0.296
PE_972230	JUNCTION	1.99	1.99	0	12:59	0.096	0.096
UNK_952735*	JUNCTION	0.00	1.99	0	12:59	0.000	0.095
DI_983907	JUNCTION	1.17	3.15	0	12:59	0.056	0.152
DI_983906	JUNCTION	0.00	3.15	0	13:00	0.000	0.151
UNK_952736*	JUNCTION	0.00	3.15	0	13:00	0.000	0.151
DI_983903	JUNCTION	1.17	4.32	0	12:59	0.063	0.215
DI_983902	JUNCTION	0.00	16.20	0	13:00	0.000	0.885
DI_983904	JUNCTION	0.00	16.19	0	13:00	0.000	0.884
DI_983905	JUNCTION	3.81	19.98	0	12:59	0.189	1.074
DI_983721	JUNCTION	1.05	22.73	0	13:02	0.052	1.162
DI_983722	JUNCTION	1.30	23.60	0	13:05	0.066	1.227
MH_974299	JUNCTION	0.00	19.19	0	13:07	0.000	1.186
PE_972229	JUNCTION	1.52	22.71	0	13:08	0.085	1.514
PE_972224	JUNCTION	0.00	4.94	0	13:00	0.000	0.250
PE_972239	JUNCTION	0.00	26.86	0	13:01	0.000	1.866
PE_972246	JUNCTION	0.95	3.00	0	12:59	0.052	0.202
PE_972240	JUNCTION	0.00	4.96	0	13:00	0.000	0.354
DI_983935	JUNCTION	5.67	5.67	0	12:59	0.296	0.296
DI_983934	JUNCTION	4.24	8.83	0	12:52	0.316	0.612
MH_974300	JUNCTION	0.00	11.40	0	12:52	0.000	0.966
DI_983624	JUNCTION	7.37	18.02	0	12:59	0.405	1.370
DI_983623	JUNCTION	0.00	17.92	0	13:00	0.000	1.370
DI_983619	JUNCTION	0.00	22.15	0	13:00	0.000	1.602
DI_983622	JUNCTION	4.80	4.80	0	12:59	0.265	0.265
DI_983621	JUNCTION	2.65	2.65	0	12:59	0.140	0.140
DI_983620	JUNCTION	1.75	1.75	0	12:59	0.092	0.092
DI_983618	JUNCTION	0.00	26.92	0	13:00	0.000	1.866
DI_983898	JUNCTION	3.33	10.23	0	12:59	0.163	0.564

DI_983604	JUNCTION	2.19	12.05	0	12:56	0.106	0.670
DI_983901	JUNCTION	0.00	11.94	0	12:57	0.000	0.670
DI_983607	JUNCTION	1.65	1.65	0	12:59	0.079	0.079
DI_983606	JUNCTION	2.77	4.41	0	12:59	0.134	0.213
DI_9836054	JUNCTION	1.64	3.99	0	12:59	0.078	0.189
MH_974298	JUNCTION	0.00	2.28	0	13:00	0.000	0.111
DI_983899	JUNCTION	1.63	2.29	0	12:59	0.079	0.111
DI_983900	JUNCTION	0.67	0.67	0	12:59	0.032	0.032
DI_983897	JUNCTION	1.53	1.53	0	12:59	0.073	0.073
DI_983896	JUNCTION	0.76	2.24	0	12:59	0.036	0.109
DI_983895	JUNCTION	0.21	2.27	0	12:45	0.009	0.118
DI_983894	JUNCTION	0.00	2.25	0	13:00	0.000	0.118
DI_953893*	JUNCTION	0.00	3.08	0	13:00	0.000	0.158
PE_972225	JUNCTION	0.83	0.83	0	12:59	0.040	0.040
UNK_952734*	JUNCTION	1.44	4.51	0	12:59	0.070	0.228
DI_983892	JUNCTION	0.00	4.51	0	13:00	0.000	0.228
UNK_952733*	JUNCTION	0.00	4.51	0	13:00	0.000	0.228
UNK_952732*	JUNCTION	0.45	4.95	0	12:59	0.022	0.250
U/S_NC-4	JUNCTION	0.00	144.40	0	13:38	0.000	19.302
U/S_W_Battleboro_Ave	JUNCTION	0.00	41.29	0	13:00	0.000	4.783
Hathaway_St-U/S	JUNCTION	1.76	216.63	0	15:08	0.083	42.297
9**	JUNCTION	41.75	41.75	0	12:59	4.786	4.786
Farm-Culv-Up	JUNCTION	8.42	99.00	0	13:04	0.606	10.409
Farm-Culv-Dn	JUNCTION	0.00	98.93	0	13:05	0.000	10.387
Railroad-Up	JUNCTION	20.88	49.80	0	12:59	1.657	3.761
DI_983957	JUNCTION	0.79	0.79	0	12:59	0.042	0.042
DI_983956*	JUNCTION	3.19	3.98	0	12:59	0.187	0.229
PE_972262	JUNCTION	7.99	11.96	0	12:59	0.519	0.749
DI_983936	JUNCTION	2.07	2.07	0	12:59	0.150	0.150
U/S_Gainor_Swale	JUNCTION	2.17	5.12	0	12:59	0.152	0.354
DI_983625	JUNCTION	0.00	4.80	0	13:00	0.000	0.265
952731	JUNCTION	2.55	3.79	0	12:59	0.174	0.238
972222	JUNCTION	0.00	3.52	0	13:01	0.000	0.237
983943	JUNCTION	1.30	1.30	0	12:59	0.064	0.064
952740	JUNCTION	0.00	1.29	0	13:00	0.000	0.064
Primary_Outfall*	OUTFALL	0.00	277.23	0	15:05	0.000	54.519

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Node Surcharge Summary
****

No nodes were surcharged.

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Node Flooding Summary
****

No nodes were flooded.

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	96.27	115.66	277.23	54.519
System	96.27	115.66	277.23	54.519

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Link Flow Summary
****

Future Conditions - Project Areas 2,4,5,& 6 (2-Year)

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
BeechTrib8	CHANNEL	144.40	0	13:38	2.29	0.02	0.26
NC-4	CONDUIT	119.17	0	14:18	6.44	0.69	0.92
BeechTrib7	CHANNEL	118.67	0	14:26	2.14	0.01	0.27
Channel_4**	CONDUIT	70.54	0	13:00	1.74	0.04	0.40
BeechTrib6	CHANNEL	140.85	0	14:50	1.74	0.04	0.52
W_Battleboro_Ave_Culvert**	CONDUIT	40.71	0	13:00	6.49	0.86	0.83
Channel_3A**	CHANNEL	39.60	0	13:02	2.24	0.00	0.18
Channel_3B	CHANNEL	91.01	0	13:04	1.58	0.01	0.29
BeechTrib5	CHANNEL	214.82	0	15:10	1.77	0.96	0.57
Hathaway_St_Culvert	CONDUIT	216.15	0	15:17	3.47	1.89	0.86
15_RCP_Hathaway_1	CONDUIT	0.41	0	13:00	1.19	0.06	0.32
15_RCP_Hathaway_2	CONDUIT	1.00	0	13:00	1.82	0.38	0.46
15_RCP_Hathaway_3	CONDUIT	1.22	0	12:59	2.20	0.14	0.46
15_RCP_Hathaway_4	CONDUIT	2.78	0	13:00	5.32	0.38	0.44
15_RCP_Hathaway_5	CONDUIT	0.53	0	13:00	0.61	0.28	0.67
15_RCP_Hathaway_6	CONDUIT	3.87	0	13:00	7.92	0.34	0.42
15_RCP_Hathaway_7	CONDUIT	3.87	0	13:00	4.23	0.33	0.70
15_RCP_Hathaway_8	CONDUIT	1.13	0	13:00	6.10	0.10	0.21
15_RCP_Hathaway_9	CONDUIT	1.13	0	13:00	1.61	0.08	0.60
18_RCP_Hathaway_10	CONDUIT	1.94	0	13:00	2.22	0.13	1.00
15_RCP_Hathaway_11*	CONDUIT	4.46	0	13:00	2.53	0.73	1.00
15_RCP_Hathaway_12*	CONDUIT	8.30	0	13:00	8.63	1.62	0.73
Hathaway_Swale*	CONDUIT	8.89	0	13:01	0.42	0.00	0.28
BeechTrib4	CHANNEL	217.16	0	15:17	1.54	0.02	0.44
12_RCP_Battleboro_Apt_1	CONDUIT	0.58	0	13:00	2.26	0.17	0.36
12_RCP_Battleboro_Apt_2	CONDUIT	1.07	0	12:59	4.32	0.17	0.36
12_RCP_Battleboro_Apt_3	CONDUIT	1.65	0	13:00	6.53	0.33	0.36
15_RCP_Battleboro_Apt_4	CONDUIT	1.65	0	13:00	3.27	0.10	0.61
BeechTrib3	CHANNEL	216.82	0	15:23	1.05	0.01	0.49
BeechTrib2	CHANNEL	216.59	0	15:30	1.03	0.06	0.47
Channel-6B	CHANNEL	92.15	0	13:05	2.70	0.04	0.41
15_RCP_Burrows_1	CONDUIT	5.13	0	13:00	7.87	0.49	0.53
15_RCP_Burrows_2	CONDUIT	5.12	0	13:00	5.37	0.37	0.73
15_RCP_Burrows_3	CONDUIT	5.12	0	13:00	4.75	1.19	0.82
15_RCP_Burrows_4	CONDUIT	5.11	0	13:00	6.36	0.65	0.62
15_RCP_Burrows_5	CONDUIT	5.11	0	13:01	5.60	0.66	0.70
15_RCP_Burrows_6	CONDUIT	5.12	0	13:01	8.99	0.48	0.49
18_RCP_Burrows_7	CONDUIT	5.08	0	13:01	4.11	0.16	0.75
BeechTrib1	CHANNEL	277.23	0	15:05	1.51	0.03	0.45
18_RCP_Marriott_1	CONDUIT	1.99	0	12:59	1.43	0.55	0.73
12_RCP_Marriott_2	CONDUIT	2.00	0	13:00	2.54	0.79	1.00
15_RCP_Marriott_3	CONDUIT	3.15	0	13:00	4.81	0.51	0.53
15_VCP_Marriott_4	CONDUIT	3.15	0	13:00	6.04	0.35	0.44
15_RCP_Mattiott_5	CONDUIT	3.15	0	13:00	5.06	0.40	0.53
15_RCP_Mattiott_6	CONDUIT	4.30	0	13:00	4.23	0.55	0.79
24_RCP_Marriott_7	CONDUIT	16.19	0	13:00	5.77	0.47	0.84
24_RCP_Marriott_8	CONDUIT	16.19	0	13:00	5.15	0.72	1.00
24_RCP_Marriott_9	CONDUIT	14.96	0	12:48	4.76	0.71	1.00
24_RCP_Etheridge_1	CONDUIT	14.26	0	12:39	4.54	0.87	1.00
24_RCP_Etheridge_2	CONDUIT	9.68	0	12:54	3.08	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.13	0	13:08	6.30	0.25	0.67
Railroad_Swale_2	CONDUIT	22.05	0	13:09	0.87	0.01	0.22
Railroad_Swale_1	CONDUIT	4.92	0	13:01	1.55	0.01	0.14
Cemetery_Dr_Swale	CONDUIT	26.36	0	13:02	1.78	0.04	0.45
Gainor_Swale	CONDUIT	4.96	0	13:00	1.51	0.03	0.28
12_RCP_Gainor_1	CONDUIT	4.49	0	13:21	5.79	1.03	1.00
18_RCP_Gainor_2	CONDUIT	5.65	0	13:09	3.20	0.66	1.00
18_RCP_Gainor_3	CONDUIT	8.57	0	12:52	5.60	0.50	1.00
18_RCP_Gainor_4	CONDUIT	11.49	0	13:09	6.50	0.82	1.00
18_RCP_Gainor_5	CONDUIT	17.92	0	13:00	10.14	7.24	1.00
24_RCP_Gainor_6	CONDUIT	17.82	0	13:00	6.09	1.04	0.88
15_RCP_Gainor_7A	CONDUIT	4.80	0	13:00	5.26	0.33	0.51
15_RCP_Gainor_7B	CONDUIT	2.64	0	13:00	1.63	1.51	0.86
15_RCP_Gainor_7C	CONDUIT	1.75	0	13:00	2.48	0.08	0.60
36_RCP_Gainor_8	CONDUIT	22.14	0	13:00	5.78	0.19	0.53
36_RCP_Gainor_9	CONDUIT	26.86	0	13:01	7.06	0.28	0.53
15_RCP_W_Battleboro_1	CONDUIT	1.64	0	13:00	2.79	0.20	1.00

Future Conditions - Project Areas 2,4,5,& 6 (2-Year)

18_RCP_W_Battleboro_2	CONDUIT	4.39	0	13:00	2.79	0.56	1.00
18_RCP_W_Battleboro_3	CONDUIT	5.77	0	13:06	3.27	0.77	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.40	0	13:06	5.89	0.77	1.00
18_RCP_W_Battleboro_5	CONDUIT	11.94	0	12:57	6.75	1.33	1.00
18_RCP_W_Battleboro_6	CONDUIT	11.93	0	13:04	6.78	0.86	1.00
15_RCP_Pollard_3	CONDUIT	3.21	0	13:07	3.26	0.13	1.00
15_RCP_Pollard_2	CONDUIT	2.28	0	13:00	3.68	0.44	1.00
12_RCP_Pollard_1	CONDUIT	0.66	0	13:00	1.30	0.75	1.00
12_RCP_W_Bridges_1	CONDUIT	1.38	0	12:45	1.75	0.59	1.00
12_RCP_W_Bridges_2	CONDUIT	2.12	0	13:04	2.70	0.43	1.00
12_RCP_Railroad_1	CONDUIT	2.25	0	13:00	2.89	4.25	0.97
15_RCP_Railroad_2	CONDUIT	2.26	0	13:01	3.97	0.39	0.48
15_RCP_Railroad_3	CONDUIT	0.83	0	12:59	2.44	0.13	0.33
18_RCP_Railroad_4	CONDUIT	3.08	0	13:00	3.68	0.26	0.48
24_RCP_Railroad_5	CONDUIT	4.51	0	13:00	4.54	0.18	0.35
24_RCP_Railroad_6*	CONDUIT	4.51	0	13:00	4.25	0.22	0.37
24_RCP_Railroad_7*	CONDUIT	4.51	0	13:01	4.16	0.24	0.38
24_VCP_Railroad_8	CONDUIT	4.94	0	13:00	5.34	0.16	0.34
CONNECT**	CONDUIT	41.29	0	13:00	2.05	0.14	0.48
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	97.58	0	13:12	1.74	0.02	0.48
Farm-Culvert	CONDUIT	16.68	0	12:16	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	88.11	0	13:06	5.22	0.02	0.11
Railroad_Culvert	CONDUIT	38.05	0	13:19	5.38	0.57	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Marriott_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Marriott_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.02
Over_24_RCP_Marriott_9	CONDUIT	5.74	0	13:01	0.81	0.00	0.05
Over_24_RCP_Etheridge_1	CONDUIT	23.02	0	13:05	0.83	0.00	0.17
Over_24_RCP_Etheridge_2	CONDUIT	14.51	0	13:07	0.56	0.00	0.16
Over_15_RCP_W_Battleboro_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_W_Battleboro_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_W_Battleboro_4	CONDUIT	0.00	0	13:01	0.00	0.00	0.00
Over_18_RCP_W_Battleboro_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_W_Battleboro_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_12_RCP_Pollard_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Pollard_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_24_RCP_Etheridge_3	CONDUIT	4.09	0	13:08	2.85	0.00	0.01
Over_12_RCP_W_Bridges_1	CONDUIT	0.18	0	13:00	0.32	0.00	0.00
Over_12_RCP_W_Bridges_2	CONDUIT	0.01	0	13:01	0.00	0.00	0.00
Over_12_RCP_Railroad_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_6*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_7*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_VCP_Railroad_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_12_RCP_Gainor_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.04
OVer_18_RCP_Gainor_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.02
Over_18_RCP_Gainor_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

Over_18_RCP_Gainor_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Gainor_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Gainor_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_36_RCP_Gainor_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_36_RCP_Gainor_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
12_RCP_Crepe_Myrtle_1	CONDUIT	0.79	0	13:00	2.41	0.23	0.44
12_RCP_Crepe_Myrtle_2	CONDUIT	3.97	0	13:00	6.76	0.66	0.70
Crepe_Myrtle_Swale	CONDUIT	11.72	0	13:00	1.00	0.02	0.43
Over_18_RCP_Hathaway_10	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_12_RCP_Crepe_Myrtle_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Hathaway_12*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
15_RCP_Gainor	CONDUIT	2.05	0	13:00	2.02	0.39	0.79
Gainor_Bridges	CONDUIT	2.96	0	13:00	3.14	0.63	0.83
Over_15_RCP_Gainor	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_Gainor_Bridges	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Gainor_7A	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Gainor_7C	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_Hathaway_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Hathaway_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Battle-Gainor-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
15_RCP_Gainor_7D	CONDUIT	4.77	0	13:00	3.37	0.49	0.75
84	CONDUIT	0.01	0	12:58	0.00	0.00	0.01
E-Battleboro-Culv	CONDUIT	3.52	0	13:01	3.67	0.46	0.35
RR-Open-Ditch2	CONDUIT	3.24	0	13:05	0.34	0.01	0.47
Pearsall	CONDUIT	1.29	0	13:00	3.47	0.15	0.27
RR-Open-Ditch1	CONDUIT	1.25	0	13:00	0.72	0.01	0.21
Battleboro-Ovr	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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Flow Classification Summary
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Conduit	Adjusted /Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
		--- Fraction of Time in Flow Class ----								
BeechTrib8	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.32	0.0000
NC-4	1.00	0.04	0.00	0.00	0.92	0.04	0.00	0.00	0.68	0.0002
BeechTrib7	1.00	0.02	0.04	0.00	0.94	0.00	0.00	0.00	0.27	0.0000
Channel_4**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.11	0.0000
BeechTrib6	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.15	0.0000
W_Battleboro_Ave_Culvert**	3.30	0.02	0.00	0.00	0.63	0.35	0.00	0.00	0.94	0.0001
Channel_3A**	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.22	0.0000
Channel_3B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.14	0.0000
BeechTrib5	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.16	0.0002
Hathaway_St_Culvert	1.18	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.17	0.0003
15_RCP_Hathaway_1	2.23	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0000
15_RCP_Hathaway_2	1.00	0.04	0.00	0.00	0.94	0.00	0.00	0.02	0.33	0.0001
15_RCP_Hathaway_3	2.38	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.19	0.0000
15_RCP_Hathaway_4	1.00	0.06	0.00	0.00	0.39	0.53	0.00	0.02	1.02	0.0001
15_RCP_Hathaway_5	1.34	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.03	0.0001
15_RCP_Hathaway_6	1.00	0.08	0.00	0.00	0.01	0.91	0.00	0.00	1.46	0.0001
15_RCP_Hathaway_7	1.00	0.02	0.06	0.00	0.91	0.00	0.00	0.00	0.57	0.0001
15_RCP_Hathaway_8	2.28	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.18	0.0000
15_RCP_Hathaway_9	2.53	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.53	0.0000
18_RCP_Hathaway_10	2.92	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.59	0.0000
15_RCP_Hathaway_11*	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.45	0.0001
15_RCP_Hathaway_12*	6.57	0.02	0.00	0.00	0.01	0.97	0.00	0.00	1.39	0.0003
Hathaway_Swale*	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.03	0.0000
BeechTrib4	1.00	0.03	0.03	0.00	0.95	0.00	0.00	0.00	0.15	0.0000
12_RCP_Battleboro_Apt_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.73	0.0000
12_RCP_Battleboro_Apt_2	1.29	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.30	0.0000
12_RCP_Battleboro_Apt_3	1.10	0.02	0.00	0.00	0.00	0.97	0.00	0.00	2.03	0.0001
15_RCP_Battleboro_Apt_4	1.78	0.02	0.00	0.00	0.90	0.08	0.00	0.00	0.33	0.0000
BeechTrib3	2.88	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.12	0.0000
BeechTrib2	1.00	0.02	0.03	0.00	0.94	0.00	0.00	0.00	0.09	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.14	0.0001
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.96	0.01	0.00	0.00	0.44	0.0001

Future Conditions - Project Areas 2,4,5,& 6 (2-Year)

15_RCP_Burrows_3	1.76	0.02	0.03	0.00	0.95	0.00	0.00	0.00	0.33	0.0002
15_RCP_Burrows_4	1.00	0.06	0.00	0.00	0.00	0.94	0.00	0.00	1.48	0.0001
15_RCP_Burrows_5	1.15	0.06	0.00	0.00	0.72	0.23	0.00	0.00	0.72	0.0001
15_RCP_Burrows_6	4.20	0.07	0.00	0.00	0.16	0.77	0.00	0.00	1.99	0.0001
18_RCP_Burrows_7	5.31	0.05	0.01	0.00	0.89	0.04	0.00	0.00	0.27	0.0000
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.14	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.09	0.0001
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.09	0.0001
15_RCP_Marriott_3	3.55	0.08	0.00	0.00	0.00	0.92	0.00	0.00	1.21	0.0001
15_VCP_Marriott_4	1.95	0.08	0.00	0.00	0.00	0.92	0.00	0.00	1.51	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.06	0.00	0.53	0.39	0.00	0.00	0.86	0.0001
15_RCP_Mattiott_6	1.30	0.03	0.00	0.00	0.96	0.00	0.00	0.01	0.59	0.0001
24_RCP_Marriott_7	1.14	0.04	0.00	0.00	0.81	0.15	0.00	0.00	0.79	0.0001
24_RCP_Marriott_8	1.47	0.02	0.03	0.00	0.91	0.04	0.00	0.00	0.16	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.03	0.00	0.95	0.00	0.00	0.00	0.05	0.0003
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0003
24_RCP_Etheridge_3	7.59	0.02	0.09	0.00	0.00	0.00	0.88	0.00	0.23	0.0001
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.05	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.28	0.0000
Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.27	0.0000
12_RCP_Gainor_1	1.00	0.03	0.00	0.00	0.37	0.60	0.00	0.00	0.96	0.0002
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.62	0.0002
18_RCP_Gainor_3	4.48	0.03	0.00	0.00	0.07	0.90	0.00	0.00	1.30	0.0001
18_RCP_Gainor_4	1.00	0.03	0.00	0.00	0.18	0.21	0.00	0.59	1.45	0.0002
18_RCP_Gainor_5	2.32	0.02	0.00	0.00	0.06	0.00	0.00	0.92	0.61	0.0013
24_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	1.03	0.0002
15_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.34	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0003
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.54	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.05	0.93	0.00	0.00	1.41	0.0000
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.44	0.0000
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.67	0.0000
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.67	0.0001
18_RCP_W_Battleboro_3	2.87	0.02	0.05	0.00	0.09	0.00	0.84	0.00	0.28	0.0002
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.19	0.79	0.00	0.00	1.01	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.05	0.92	0.00	0.00	1.24	0.0002
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.70	0.28	0.00	0.00	0.74	0.0002
15_RCP_Pollard_3	26.14	0.02	0.06	0.00	0.92	0.00	0.00	0.00	0.27	0.0000
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.81	0.05	0.00	0.12	0.63	0.0001
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0002
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0001
12_RCP_W_Bridges_2	6.67	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.29	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.16	0.0008
15_RCP_Railroad_2	2.51	0.02	0.06	0.00	0.03	0.89	0.00	0.00	0.98	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.66	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.37	0.0000
24_RCP_Railroad_5	3.55	0.07	0.00	0.00	0.01	0.92	0.00	0.00	1.17	0.0000
24_RCP_Railroad_6*	3.25	0.07	0.00	0.00	0.01	0.92	0.00	0.00	1.02	0.0000
24_RCP_Railroad_7*	2.02	0.02	0.05	0.00	0.05	0.88	0.00	0.00	1.05	0.0000
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.67	0.0000
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0000
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.21	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_2	3.53	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_3	7.01	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_4	2.14	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_5	1.88	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_6	5.36	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_7	7.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
W_Battleboro_Ave-Over	3.80	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.17	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.78	0.20	0.00	0.00	0.62	0.0003
Over_Farm-Culvert	7.77	0.63	0.00	0.00	0.00	0.00	0.00	0.37	0.54	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.40	0.0001

Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_2	27.58	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_3	4.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_7	1.03	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_8	1.80	0.96	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_9	2.78	0.90	0.06	0.00	0.04	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Etheridge_1	5.90	0.85	0.05	0.00	0.10	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Etheridge_2	1.42	0.85	0.10	0.00	0.00	0.00	0.05	0.00	0.00	0.0000
Over_15_RCP_W_Battleboro_1	2.34	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.0000
Over_18_RCP_W_Battleboro_5	1.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_6	6.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Pollard_1	1.11	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.98	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.0000
Over_12_RCP_Railroad_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Gainor_1	1.00	0.95	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
OVer_18_RCP_Gainor_2	5.06	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_3	20.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_4	1.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_5	16.05	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Gainor_6	18.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
12_RCP_Crepe_Myrtle_1	2.12	0.02	0.00	0.00	0.22	0.08	0.00	0.68	1.03	0.0000
12_RCP_Crepe_Myrtle_2	1.00	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.75	0.0001
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.07	0.0000
Over_18_RCP_Hathaway_10	1.15	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Crepe_Myrtle_1	5.17	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_12*	15.31	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
15_RCP_Gainor	3.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0001
Gainor_Bridges	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.70	0.0001
Over_15_RCP_Gainor	3.16	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Gainor_Bridges	1.33	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7A	13.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
15_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.48	0.0001
84	30.58	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.96	0.02	0.00	0.00	0.67	0.0001
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.96	0.00	0.00	0.00	0.07	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.04	0.94	0.00	0.00	1.14	0.0000
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.11	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited

Future Conditions - Project Areas 2,4,5,& 6 (2-Year)

NC-4	0.01	0.01	0.01	2.13	0.01
Hathaway_St_Culvert	0.01	0.01	0.01	5.21	0.01
18_RCP_Hathaway_10	0.07	0.07	0.07	0.01	0.01
15_RCP_Hathaway_11*	0.45	0.45	0.45	0.01	0.01
15_RCP_Hathaway_12*	0.01	0.01	0.01	0.51	0.01
15_RCP_Burrows_3	0.01	0.01	0.01	0.35	0.01
12_RCP_Marriott_2	0.38	0.38	0.38	0.01	0.01
24_RCP_Marriott_8	1.93	1.93	1.93	0.01	0.01
24_RCP_Marriott_9	3.13	3.13	3.13	0.01	0.28
24_RCP_Etheridge_1	4.32	4.32	4.32	0.01	0.17
24_RCP_Etheridge_2	6.16	6.16	6.16	0.01	0.01
12_RCP_Gainor_1	0.46	0.46	0.46	0.23	0.06
18_RCP_Gainor_2	0.40	0.40	0.40	0.01	0.08
18_RCP_Gainor_3	0.40	0.40	0.40	0.01	0.01
18_RCP_Gainor_4	0.47	0.47	0.47	0.01	0.01
18_RCP_Gainor_5	0.57	0.57	0.57	5.23	0.57
24_RCP_Gainor_6	0.01	0.01	0.01	0.15	0.01
15_RCP_Gainor_7B	0.01	0.01	0.01	0.43	0.01
15_RCP_W_Battleboro_1	0.17	0.17	0.17	0.01	0.01
18_RCP_W_Battleboro_2	0.24	0.24	0.24	0.01	0.01
18_RCP_W_Battleboro_3	0.52	0.52	0.53	0.01	0.01
18_RCP_W_Battleboro_4	0.56	0.56	0.56	0.01	0.54
18_RCP_W_Battleboro_5	0.31	0.31	0.31	0.55	0.31
18_RCP_W_Battleboro_6	0.19	0.19	0.19	0.01	0.19
15_RCP_Pollard_3	0.38	0.38	0.38	0.01	0.01
15_RCP_Pollard_2	0.02	0.02	0.02	0.01	0.01
12_RCP_Pollard_1	0.12	0.12	0.12	0.01	0.07
12_RCP_W_Bridges_1	0.52	0.52	0.52	0.01	0.01
12_RCP_W_Bridges_2	0.51	0.51	0.51	0.01	0.01
12_RCP_Railroad_1	0.01	0.01	0.01	1.56	0.01
Farm-Culvert	5.99	5.99	5.99	7.32	5.99
Railroad_Culvert	0.66	0.66	0.66	0.01	0.01

Analysis begun on: Mon Dec 07 15:46:26 2015
Analysis ended on: Mon Dec 07 15:46:29 2015
Total elapsed time: 00:00:03

Future Conditions - Project Areas 2,4,5,& 6 (10-Year)

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Future Conditions - Project Areas 2,4,5,& 6 (10-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-06-2015 00:00:00
Ending Date .............. APR-07-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Gainor

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905
```

Future Conditions - Project Areas 2,4,5,& 6 (10-Year)

```
WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224

WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node PE_972240

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       568.673         5.284
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       204.157         1.897
Surface Runoff ...........       309.177         2.873
Final Surface Storage ....        55.767         0.518
Continuity Error (%) .....        -0.075


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       308.325       100.472
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       294.598        95.999
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        14.346         4.675
Continuity Error (%) .....        -0.200


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (2.97%)
Node 8** (1.53%)
```

Future Conditions - Project Areas 2,4,5,& 6 (10-Year)

```
**************************
Time-Step Critical Elements
**************************
Link Farm-Culvert (25.53%)
Link 18_RCP_Gainor_5 (17.22%)
Link 24_RCP_Etheridge_2 (16.73%)
Link Hathaway_St_Culvert (12.35%)
Link NC-4 (5.91%)


******************************
Highest Flow Instability Indexes
******************************
All links are stable.


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     6.50 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.01


**************************
Subcatchment Runoff Summary
**************************
```

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	5.28	0.00	0.00	1.89	2.63	34.62	346.18	0.498
Basin_A-2	5.28	0.00	0.00	1.68	3.07	11.01	119.51	0.581
Basin_A-3	5.28	0.00	0.00	1.86	3.02	8.54	79.86	0.572
Basin_A-4	5.28	0.00	0.00	1.99	2.85	12.86	124.54	0.538
Basin_A-5	5.28	0.00	0.00	1.94	2.90	9.65	108.78	0.549
Basin_B-2	5.28	0.00	0.00	2.23	2.73	6.31	70.14	0.518
Area#5-10	5.28	0.00	0.00	1.94	3.26	0.04	0.71	0.618
Area#5-30	5.28	0.00	0.00	0.98	4.24	0.09	1.91	0.802
Area#5-50	5.28	0.00	0.00	1.74	3.48	0.04	0.89	0.659
Area#5-70	5.28	0.00	0.00	2.17	3.01	0.11	2.05	0.570
Area#5-80	5.28	0.00	0.00	1.53	3.69	0.16	3.19	0.698
Area#5-20	5.28	0.00	0.00	0.98	4.24	0.04	0.93	0.803
Area#5-40	5.28	0.00	0.00	0.98	4.24	0.04	0.90	0.802
Area#5-90	5.28	0.00	0.00	0.87	4.37	0.11	2.25	0.827
Area#5-100	5.28	0.00	0.00	0.98	4.25	0.05	1.15	0.805
Area#6-10	5.28	0.00	0.00	2.77	2.45	0.07	1.35	0.463
Area#6-20	5.28	0.00	0.00	2.03	3.15	0.31	5.62	0.597
Area#6-30	5.28	0.00	0.00	1.96	3.18	0.87	14.12	0.602
Area#6-40	5.28	0.00	0.00	2.32	2.79	0.56	7.49	0.528
Area#6-50	5.28	0.00	0.00	2.64	2.51	1.12	18.23	0.475
Area#6-60	5.28	0.00	0.00	1.94	3.17	4.63	71.03	0.601
Area#6-70	5.28	0.00	0.00	0.35	4.90	0.08	1.59	0.926
Area#6-80	5.28	0.00	0.00	2.80	2.42	0.05	1.03	0.458
Area#6-90	5.28	0.00	0.00	2.35	2.84	0.49	8.71	0.537
Area#4-140	5.28	0.00	0.00	1.00	4.23	0.11	2.41	0.801
Area#4-150	5.28	0.00	0.00	0.37	4.87	0.05	1.13	0.922
Area#4-160	5.28	0.00	0.00	1.49	3.74	0.02	0.34	0.707
Area#4-170	5.28	0.00	0.00	0.85	4.38	0.06	1.30	0.829
Area#4-180	5.28	0.00	0.00	1.24	3.97	0.11	2.32	0.752
Area#4-190	5.28	0.00	0.00	0.85	4.39	0.03	0.70	0.830
Area#4-200	5.28	0.00	0.00	2.55	2.65	0.14	2.62	0.501
Area#4-130	5.28	0.00	0.00	2.17	3.05	0.11	2.08	0.577
Area#4-120	5.28	0.00	0.00	1.98	3.25	0.08	1.67	0.615
Area#4-100	5.28	0.00	0.00	2.96	2.25	0.11	2.06	0.425
Area#4-90	5.28	0.00	0.00	0.55	4.69	0.08	1.73	0.887
Area#4-80	5.28	0.00	0.00	0.35	4.89	0.14	2.98	0.925

Area#4-10	5.28	0.00	0.00	0.37	4.86	0.12	2.47	0.920
Area#4-20	5.28	0.00	0.00	0.75	4.48	0.20	4.27	0.848
Area#4-70	5.28	0.00	0.00	0.65	4.58	0.16	3.36	0.867
Area#4-60	5.28	0.00	0.00	0.37	4.87	0.12	2.45	0.921
Area#4-50	5.28	0.00	0.00	0.62	4.60	0.25	5.10	0.870
Area#4-30	5.28	0.00	0.00	2.19	3.01	0.06	1.23	0.570
Area#2-10	5.28	0.00	0.00	1.75	3.37	0.26	3.91	0.637
Area#2-20	5.28	0.00	0.00	1.31	3.88	0.08	1.61	0.733
Area#2-30	5.28	0.00	0.00	1.90	3.23	0.26	4.28	0.612
Area#2-40	5.28	0.00	0.00	1.41	3.78	0.48	9.69	0.715
Area#2-50	5.28	0.00	0.00	1.60	3.48	0.53	7.60	0.659
Area#2-60	5.28	0.00	0.00	1.60	3.59	0.34	7.13	0.680
Area#2-70	5.28	0.00	0.00	1.90	3.26	0.35	6.33	0.617
Area#2-100	5.28	0.00	0.00	1.50	3.69	0.23	4.59	0.699
Area#2-80	5.28	0.00	0.00	1.31	3.90	0.14	2.89	0.738
Area#2-110	5.28	0.00	0.00	1.50	3.69	0.15	3.03	0.699
Area#5-60	5.28	0.00	0.00	0.98	4.25	0.04	0.88	0.805
Area#2-90	5.28	0.00	0.00	1.22	3.93	0.29	5.12	0.745
Area#2-120	5.28	0.00	0.00	1.49	3.58	2.21	30.76	0.678
Area#2-150	5.28	0.00	0.00	1.90	3.22	0.60	9.30	0.609
Area#4-40	5.28	0.00	0.00	1.24	3.98	0.13	2.63	0.753
Area#4-110	5.28	0.00	0.00	1.36	3.83	0.31	6.57	0.726
Area#5-110	5.28	0.00	0.00	0.58	4.65	0.13	2.70	0.881
Area#2-130	5.28	0.00	0.00	1.57	3.64	0.11	2.22	0.688
Area#2-140	5.28	0.00	0.00	1.90	3.24	0.30	4.89	0.612

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	2.89	5.35	125.35	0 13:11
3**	JUNCTION	0.47	1.35	102.35	0 13:00
D/S_NC-4	JUNCTION	2.29	3.67	104.85	0 14:43
5**	JUNCTION	2.90	4.92	98.92	0 15:04
D/S_W_Battleboro_Ave**	JUNCTION	1.12	2.74	116.91	0 13:04
7**	JUNCTION	2.01	4.06	106.06	0 13:07
8**	JUNCTION	4.70	6.99	96.99	0 15:14
Hathaway_St-D/S	JUNCTION	3.77	5.54	95.52	0 15:19
DI_983628	JUNCTION	0.08	0.26	127.16	0 13:00
DI_983629	JUNCTION	0.25	0.81	127.01	0 13:00
DI_983630	JUNCTION	0.46	1.02	126.48	0 13:00
DI_983631	JUNCTION	0.11	0.40	126.85	0 12:59
DI_983633	JUNCTION	0.46	0.98	122.08	0 12:59
DI_983632	JUNCTION	0.50	1.00	122.05	0 13:00
DI_983634	JUNCTION	0.22	0.78	114.43	0 13:00
DI_984002*	JUNCTION	0.58	3.53	111.03	0 13:00
UNK_952741*	JUNCTION	0.44	3.85	111.75	0 12:59
DI_983635	JUNCTION	0.11	0.68	111.83	0 13:00
PE_972255	JUNCTION	0.11	0.35	113.85	0 12:59
PE_972263	JUNCTION	0.22	2.88	111.78	0 13:00
PE_972261*	JUNCTION	0.18	0.72	108.12	0 13:01
PE_972258	JUNCTION	3.84	5.77	94.77	0 15:25
Railroad_Junction_1	JUNCTION	2.01	4.27	108.80	0 13:07
Junction_1	JUNCTION	4.25	6.25	93.75	0 14:57
DI_983955	JUNCTION	0.10	0.38	100.98	0 13:00
PE_272260	JUNCTION	0.09	0.34	101.94	0 12:59
DI_983954	JUNCTION	0.14	0.59	98.61	0 13:00
DI_983953	JUNCTION	0.09	0.34	96.24	0 13:00
Drew_Hill_Junction	JUNCTION	4.66	6.72	94.72	0 15:26
DI_983952	JUNCTION	0.29	3.67	109.00	0 13:00
DI_983951	JUNCTION	0.23	2.95	107.00	0 13:00
DI_983950	JUNCTION	0.78	4.01	105.01	0 13:02
DI_283949	JUNCTION	0.35	2.32	103.57	0 13:05
DI_983948	JUNCTION	0.30	2.08	98.73	0 13:05
DI_983947	JUNCTION	0.43	1.37	96.45	0 13:05

DI_983946	JUNCTION	0.52	1.27	95.54	0	15:01
PE_972230	JUNCTION	0.48	1.42	128.57	0	12:59
UNK_952735*	JUNCTION	0.51	1.37	128.47	0	13:00
DI_983907	JUNCTION	0.56	1.35	128.40	0	12:59
DI_983906	JUNCTION	0.17	0.71	127.82	0	12:57
UNK_952736*	JUNCTION	0.18	0.80	126.56	0	13:00
DI_983903	JUNCTION	0.30	2.64	125.25	0	13:00
DI_983902	JUNCTION	0.62	2.71	123.79	0	13:04
DI_983904	JUNCTION	1.09	4.36	121.77	0	13:03
DI_983905	JUNCTION	1.88	4.06	120.54	0	13:01
DI_983721	JUNCTION	2.30	4.15	120.12	0	13:01
DI_983722	JUNCTION	2.29	4.18	120.14	0	13:03
MH_974299	JUNCTION	2.71	4.56	120.01	0	13:04
PE_972229	JUNCTION	0.32	1.18	116.40	0	13:05
PE_972224	JUNCTION	0.18	0.70	121.55	0	13:02
PE_972239	JUNCTION	0.53	1.63	113.75	0	13:03
PE_972246	JUNCTION	0.38	1.50	128.06	0	13:02
PE_972240	JUNCTION	0.52	2.03	127.75	0	13:05
DI_983935	JUNCTION	0.55	3.01	126.96	0	13:00
DI_983934	JUNCTION	0.65	3.20	126.88	0	13:02
MH_974300	JUNCTION	0.70	3.96	126.72	0	13:05
DI_983624	JUNCTION	1.36	5.16	122.28	0	13:01
DI_983623	JUNCTION	0.72	2.32	119.37	0	13:02
DI_983619	JUNCTION	0.48	2.16	116.47	0	13:01
DI_983622	JUNCTION	0.26	1.26	118.71	0	13:00
DI_983621	JUNCTION	0.55	5.23	119.55	0	13:01
DI_983620	JUNCTION	0.09	0.36	116.81	0	13:00
DI_983618	JUNCTION	0.71	3.10	115.82	0	13:01
DI_983898	JUNCTION	0.56	3.88	127.88	0	13:01
DI_983604	JUNCTION	0.62	4.28	127.78	0	13:02
DI_983901	JUNCTION	0.45	4.16	126.51	0	13:04
DI_983607	JUNCTION	0.22	2.76	129.56	0	13:01
DI_983606	JUNCTION	0.36	3.35	129.50	0	13:00
DI_9836054	JUNCTION	0.72	3.94	127.99	0	13:07
MH_974298	JUNCTION	1.58	3.95	128.00	0	13:05
DI_983899	JUNCTION	0.25	1.76	128.73	0	13:00
DI_983900	JUNCTION	0.26	1.79	128.78	0	13:00
DI_983897	JUNCTION	0.30	1.94	128.14	0	13:00
DI_983896	JUNCTION	0.42	2.04	128.09	0	13:00
DI_983895	JUNCTION	0.54	2.21	128.06	0	13:03
DI_983894	JUNCTION	0.45	1.16	126.96	0	13:02
DI_953893*	JUNCTION	0.18	0.63	126.33	0	13:00
PE_972225	JUNCTION	0.10	0.38	126.93	0	12:59
UNK_952734*	JUNCTION	0.45	1.12	123.65	0	13:00
DI_983892	JUNCTION	0.24	0.95	123.18	0	13:00
UNK_952733*	JUNCTION	0.24	0.95	122.80	0	13:01
UNK_952732*	JUNCTION	0.23	0.98	122.33	0	13:00
U/S_NC-4	JUNCTION	2.12	4.94	107.55	0	14:36
U/S_W_Battleboro_Ave	JUNCTION	1.66	5.29	119.71	0	13:01
Hathaway_St-U/S	JUNCTION	4.04	6.31	96.30	0	15:19
9**	JUNCTION	1.66	4.45	119.87	0	13:01
Farm-Culv-Up	JUNCTION	2.76	3.94	99.94	0	13:04
Farm-Culv-Dn	JUNCTION	1.82	3.81	99.31	0	13:12
Railroad-Up	JUNCTION	1.40	4.80	110.38	0	13:31
DI_983957	JUNCTION	0.16	2.25	123.25	0	13:00
DI_983956*	JUNCTION	0.25	2.65	123.15	0	13:01
PE_972262	JUNCTION	0.28	1.03	116.42	0	13:00
DI_983936	JUNCTION	0.63	1.73	128.09	0	13:00
U/S_Gainor_Swale	JUNCTION	0.52	1.80	127.80	0	13:04
DI_983625	JUNCTION	0.27	1.27	118.27	0	13:00
952731	JUNCTION	0.42	1.30	122.25	0	13:02
972222	JUNCTION	0.19	0.63	121.42	0	13:05
983943	JUNCTION	0.15	0.61	126.26	0	12:59
952740	JUNCTION	0.12	0.45	125.90	0	13:00
Primary_Outfall*	OUTFALL	4.25	6.25	93.25	0	14:57

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Node Inflow Summary
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Future Conditions - Project Areas 2,4,5,& 6 (10-Year)

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	346.09	346.09	0	12:59	34.490	34.489
3**	JUNCTION	119.48	119.48	0	12:59	10.981	10.980
D/S_NC-4	JUNCTION	0.00	165.68	0	14:35	0.000	33.734
5**	JUNCTION	0.00	216.98	0	14:30	0.000	44.597
D/S_W_Battleboro_Ave**	JUNCTION	0.00	74.33	0	13:01	0.000	8.509
7**	JUNCTION	124.51	192.83	0	12:59	12.827	21.328
8**	JUNCTION	108.76	377.55	0	13:00	9.624	75.375
Hathaway_St-D/S	JUNCTION	0.00	363.99	0	15:18	0.000	75.270
DI_983628	JUNCTION	0.71	0.71	0	12:59	0.035	0.035
DI_983629	JUNCTION	0.93	1.64	0	12:59	0.045	0.080
DI_983630	JUNCTION	0.90	4.42	0	12:59	0.044	0.217
DI_983631	JUNCTION	1.91	1.91	0	12:59	0.093	0.093
DI_983633	JUNCTION	0.89	0.89	0	12:59	0.043	0.043
DI_983632	JUNCTION	0.88	6.17	0	12:59	0.042	0.301
DI_983634	JUNCTION	0.00	6.16	0	13:00	0.000	0.300
DI_984002*	JUNCTION	0.00	12.26	0	13:00	0.000	0.670
UNK_952741*	JUNCTION	2.25	6.16	0	12:44	0.107	0.370
DI_983635	JUNCTION	0.00	2.05	0	13:00	0.000	0.111
PE_972255	JUNCTION	2.05	2.05	0	12:59	0.111	0.111
PE_972263	JUNCTION	3.19	3.19	0	12:59	0.158	0.158
PE_972261*	JUNCTION	1.15	13.30	0	12:59	0.054	0.725
PE_972258	JUNCTION	0.00	364.32	0	15:19	0.000	75.295
Railroad_Junction_1	JUNCTION	77.61	171.86	0	12:59	6.854	16.776
Junction_1	JUNCTION	71.02	482.14	0	14:51	4.623	96.629
DI_983955	JUNCTION	1.03	1.03	0	12:59	0.049	0.049
PE_272260	JUNCTION	1.59	1.59	0	12:59	0.077	0.077
DI_983954	JUNCTION	0.00	2.61	0	12:59	0.000	0.126
DI_983953	JUNCTION	0.00	2.61	0	13:00	0.000	0.126
Drew_Hill_Junction	JUNCTION	0.00	364.09	0	15:24	0.000	74.710
DI_983952	JUNCTION	8.71	9.89	0	12:59	0.490	0.496
DI_983951	JUNCTION	0.00	9.86	0	13:00	0.000	0.496
DI_983950	JUNCTION	0.00	9.58	0	13:00	0.000	0.496
DI_283949	JUNCTION	0.00	9.22	0	13:02	0.000	0.496
DI_983948	JUNCTION	0.00	8.42	0	13:04	0.000	0.496
DI_983947	JUNCTION	0.00	8.39	0	13:05	0.000	0.496
DI_983946	JUNCTION	0.00	8.37	0	13:05	0.000	0.496
PE_972230	JUNCTION	2.98	2.98	0	12:59	0.143	0.143
UNK_952735*	JUNCTION	0.00	2.98	0	12:59	0.000	0.143
DI_983907	JUNCTION	1.73	4.71	0	12:59	0.084	0.227
DI_983906	JUNCTION	0.00	4.71	0	13:00	0.000	0.227
UNK_952736*	JUNCTION	0.00	4.71	0	13:00	0.000	0.227
DI_983903	JUNCTION	2.06	6.65	0	12:59	0.107	0.333
DI_983902	JUNCTION	0.00	22.11	0	13:01	0.000	1.363
DI_983904	JUNCTION	0.00	20.42	0	13:05	0.000	1.362
DI_983905	JUNCTION	6.56	26.81	0	12:59	0.311	1.673
DI_983721	JUNCTION	1.67	31.82	0	13:00	0.082	1.847
DI_983722	JUNCTION	2.08	35.66	0	13:02	0.105	1.952
MH_974299	JUNCTION	0.00	29.78	0	13:04	0.000	1.856
PE_972229	JUNCTION	2.62	37.29	0	13:04	0.142	2.380
PE_972224	JUNCTION	0.00	7.28	0	13:01	0.000	0.389
PE_972239	JUNCTION	0.00	47.49	0	13:02	0.000	3.102
PE_972246	JUNCTION	1.61	5.41	0	12:59	0.084	0.339
PE_972240	JUNCTION	0.00	8.20	0	13:02	0.000	0.602
DI_983935	JUNCTION	9.68	9.68	0	12:59	0.482	0.482
DI_983934	JUNCTION	7.60	17.03	0	12:59	0.529	1.011
MH_974300	JUNCTION	0.00	12.69	0	12:35	0.000	1.491
DI_983624	JUNCTION	13.46	33.82	0	13:00	0.686	2.300
DI_983623	JUNCTION	0.00	18.38	0	12:40	0.000	2.144
DI_983619	JUNCTION	0.00	40.07	0	13:01	0.000	2.678
DI_983622	JUNCTION	8.01	8.01	0	12:59	0.426	0.426
DI_983621	JUNCTION	4.59	19.06	0	13:01	0.230	0.384
DI_983620	JUNCTION	3.03	3.03	0	12:59	0.150	0.150
DI_983618	JUNCTION	0.00	47.49	0	13:01	0.000	3.103
DI_983898	JUNCTION	5.10	14.41	0	12:59	0.247	0.867
DI_983604	JUNCTION	3.36	16.81	0	12:59	0.162	1.029

DI_983901	JUNCTION	0.00	16.07	0	13:03	0.000	1.029
DI_983607	JUNCTION	2.47	2.47	0	12:59	0.119	0.119
DI_983606	JUNCTION	4.27	6.40	0	12:59	0.204	0.323
DI_9836054	JUNCTION	2.45	5.88	0	12:59	0.118	0.298
MH_974298	JUNCTION	0.00	3.41	0	12:50	0.000	0.179
DI_983899	JUNCTION	2.63	3.59	0	12:59	0.125	0.180
DI_983900	JUNCTION	1.23	1.23	0	12:59	0.056	0.056
DI_983897	JUNCTION	2.41	2.41	0	12:59	0.114	0.114
DI_983896	JUNCTION	1.13	3.52	0	12:59	0.054	0.168
DI_983895	JUNCTION	0.34	3.77	0	12:59	0.015	0.183
DI_983894	JUNCTION	0.00	3.27	0	13:03	0.000	0.183
DI_953893*	JUNCTION	0.00	4.40	0	13:00	0.000	0.245
PE_972225	JUNCTION	1.30	1.30	0	12:59	0.062	0.062
UNK_952734*	JUNCTION	2.32	6.69	0	12:59	0.111	0.356
DI_983892	JUNCTION	0.00	6.67	0	13:00	0.000	0.356
UNK_952733*	JUNCTION	0.00	6.66	0	13:00	0.000	0.355
UNK_952732*	JUNCTION	0.70	7.28	0	13:00	0.033	0.389
U/S_NC-4	JUNCTION	0.00	276.45	0	13:44	0.000	34.765
U/S_W_Battleboro_Ave	JUNCTION	0.00	77.12	0	13:00	0.000	8.514
Hathaway_St-U/S	JUNCTION	2.70	363.17	0	15:08	0.128	75.076
9**	JUNCTION	79.84	79.84	0	12:59	8.518	8.518
Farm-Culv-Up	JUNCTION	18.22	161.94	0	13:04	1.114	17.811
Farm-Culv-Dn	JUNCTION	0.00	161.98	0	13:05	0.000	17.767
Railroad-Up	JUNCTION	40.05	89.62	0	12:59	2.808	6.319
DI_983957	JUNCTION	1.35	1.35	0	12:59	0.069	0.069
DI_983956*	JUNCTION	5.62	6.95	0	12:59	0.312	0.381
PE_972262	JUNCTION	14.12	20.23	0	12:59	0.871	1.252
DI_983936	JUNCTION	3.91	3.91	0	12:59	0.256	0.256
U/S_Gainor_Swale	JUNCTION	4.28	8.98	0	13:00	0.263	0.602
DI_983625	JUNCTION	0.00	7.96	0	13:00	0.000	0.426
952731	JUNCTION	4.89	7.04	0	12:59	0.298	0.404
972222	JUNCTION	0.00	6.45	0	13:01	0.000	0.402
983943	JUNCTION	2.22	2.22	0	12:59	0.106	0.106
952740	JUNCTION	0.00	2.22	0	13:00	0.000	0.106
Primary_Outfall*	OUTFALL	0.00	481.63	0	14:57	0.000	95.992

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Node Surcharge Summary
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No nodes were surcharged.

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Node Flooding Summary
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No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	97.14	210.05	481.63	95.992
System	97.14	210.05	481.63	95.992

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Link Flow Summary
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	Maximum	Time of Max	Maximum	Max/	Max/

Future Conditions - Project Areas 2,4,5,& 6 (10-Year)

Link	Type	|Flow| CFS	Occurrence days	Occurrence hr:min	|Veloc| ft/sec	Full Flow	Full Depth
BeechTrib8	CHANNEL	276.45	0	13:44	2.29	0.03	0.32
NC-4	CONDUIT	165.68	0	14:35	8.61	0.96	1.00
BeechTrib7	CHANNEL	165.52	0	14:43	2.13	0.02	0.31
Channel_4**	CONDUIT	118.88	0	13:00	2.20	0.07	0.48
BeechTrib6	CHANNEL	212.58	0	15:04	1.73	0.07	0.60
W_Battleboro_Ave_Culvert**	CONDUIT	74.33	0	13:01	10.71	1.58	0.96
Channel_3A**	CHANNEL	71.51	0	13:04	2.72	0.00	0.23
Channel_3B	CHANNEL	154.90	0	13:07	1.34	0.01	0.35
BeechTrib5	CHANNEL	360.38	0	15:10	1.71	1.62	0.66
Hathaway_St_Culvert	CONDUIT	362.33	0	15:19	5.23	3.17	0.96
15_RCP_Hathaway_1	CONDUIT	0.70	0	13:00	1.41	0.10	0.43
15_RCP_Hathaway_2	CONDUIT	1.62	0	13:00	2.06	0.62	0.61
15_RCP_Hathaway_3	CONDUIT	1.91	0	12:59	2.64	0.22	0.57
15_RCP_Hathaway_4	CONDUIT	4.40	0	13:00	6.04	0.60	0.57
15_RCP_Hathaway_5	CONDUIT	0.89	0	13:00	0.85	0.47	0.79
15_RCP_Hathaway_6	CONDUIT	6.16	0	13:00	8.47	0.54	0.57
15_RCP_Hathaway_7	CONDUIT	6.15	0	13:00	5.90	0.52	0.79
15_RCP_Hathaway_8	CONDUIT	2.05	0	13:00	6.53	0.17	0.41
15_RCP_Hathaway_9	CONDUIT	2.21	0	13:06	2.68	0.16	0.77
18_RCP_Hathaway_10	CONDUIT	3.43	0	13:05	2.24	0.24	1.00
15_RCP_Hathaway_11*	CONDUIT	6.12	0	13:00	3.46	1.00	1.00
15_RCP_Hathaway_12*	CONDUIT	10.91	0	13:01	10.53	2.14	0.79
Hathaway_Swale*	CONDUIT	13.20	0	13:01	0.46	0.00	0.33
BeechTrib4	CHANNEL	363.98	0	15:19	1.59	0.04	0.49
12_RCP_Battleboro_Apt_1	CONDUIT	1.02	0	13:00	2.72	0.30	0.48
12_RCP_Battleboro_Apt_2	CONDUIT	1.59	0	12:59	4.72	0.25	0.46
12_RCP_Battleboro_Apt_3	CONDUIT	2.61	0	13:00	7.28	0.52	0.47
15_RCP_Battleboro_Apt_4	CONDUIT	2.61	0	13:00	3.30	0.16	0.64
BeechTrib3	CHANNEL	364.09	0	15:24	1.08	0.02	0.54
BeechTrib2	CHANNEL	364.14	0	15:29	1.20	0.09	0.52
Channel-6B	CHANNEL	147.64	0	13:07	2.87	0.07	0.46
15_RCP_Burrows_1	CONDUIT	9.86	0	13:00	8.04	0.94	1.00
15_RCP_Burrows_2	CONDUIT	9.57	0	12:59	7.80	0.68	1.00
15_RCP_Burrows_3	CONDUIT	8.61	0	12:57	7.01	1.99	1.00
15_RCP_Burrows_4	CONDUIT	8.02	0	12:56	6.60	1.03	1.00
15_RCP_Burrows_5	CONDUIT	8.39	0	13:05	6.83	1.09	1.00
15_RCP_Burrows_6	CONDUIT	8.37	0	13:05	8.87	0.78	0.96
18_RCP_Burrows_7	CONDUIT	8.31	0	13:06	5.09	0.26	0.92
BeechTrib1	CHANNEL	481.63	0	14:57	1.77	0.06	0.51
18_RCP_Marriott_1	CONDUIT	2.98	0	12:59	1.74	0.82	0.93
12_RCP_Marriott_2	CONDUIT	2.98	0	13:00	3.80	1.18	1.00
15_RCP_Marriott_3	CONDUIT	4.71	0	13:00	5.24	0.77	0.69
15_VCP_Marriott_4	CONDUIT	4.71	0	13:00	6.59	0.53	0.60
15_RCP_Mattiott_5	CONDUIT	4.68	0	12:55	4.88	0.59	0.82
15_RCP_Mattiott_6	CONDUIT	6.53	0	13:00	5.32	0.84	1.00
24_RCP_Marriott_7	CONDUIT	20.33	0	13:08	6.47	0.59	1.00
24_RCP_Marriott_8	CONDUIT	20.42	0	13:05	6.50	0.91	1.00
24_RCP_Marriott_9	CONDUIT	15.43	0	12:43	4.91	0.73	1.00
24_RCP_Etheridge_1	CONDUIT	14.43	0	12:35	4.59	0.88	1.00
24_RCP_Etheridge_2	CONDUIT	9.72	0	12:46	3.10	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.32	0	13:05	6.37	0.26	0.67
Railroad_Swale_2	CONDUIT	36.63	0	13:06	1.08	0.01	0.27
Railroad_Swale_1	CONDUIT	7.21	0	13:02	1.73	0.01	0.19
Cemetery_Dr_Swale	CONDUIT	46.30	0	13:04	1.59	0.07	0.61
Gainor_Swale	CONDUIT	8.20	0	13:02	1.63	0.05	0.38
12_RCP_Gainor_1	CONDUIT	4.65	0	14:41	5.93	1.06	1.00
18_RCP_Gainor_2	CONDUIT	5.71	0	12:37	3.23	0.67	1.00
18_RCP_Gainor_3	CONDUIT	9.30	0	12:37	5.73	0.55	1.00
18_RCP_Gainor_4	CONDUIT	12.05	0	13:48	6.82	0.86	1.00
18_RCP_Gainor_5	CONDUIT	18.38	0	12:40	10.40	7.43	1.00
24_RCP_Gainor_6	CONDUIT	18.26	0	13:02	6.21	1.07	0.88
15_RCP_Gainor_7A	CONDUIT	7.96	0	13:00	5.68	0.54	0.84
15_RCP_Gainor_7B	CONDUIT	19.05	0	13:01	10.78	10.88	1.00
15_RCP_Gainor_7C	CONDUIT	2.99	0	13:00	3.60	0.14	0.64
36_RCP_Gainor_8	CONDUIT	40.03	0	13:01	6.33	0.34	0.86
36_RCP_Gainor_9	CONDUIT	47.49	0	13:02	8.17	0.49	0.77
15_RCP_W_Battleboro_1	CONDUIT	3.38	0	13:04	2.88	0.41	1.00
18_RCP_W_Battleboro_2	CONDUIT	6.30	0	12:59	3.57	0.80	1.00

Future Conditions - Project Areas 2,4,5,& 6 (10-Year)

18_RCP_W_Battleboro_3	CONDUIT	7.29	0	13:33	4.13	0.97	1.00
18_RCP_W_Battleboro_4	CONDUIT	11.00	0	13:26	6.22	0.81	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.95	0	13:13	7.33	1.44	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.48	0	13:02	8.76	1.12	1.00
15_RCP_Pollard_3	CONDUIT	4.11	0	13:34	3.35	0.17	1.00
15_RCP_Pollard_2	CONDUIT	3.41	0	12:50	3.95	0.66	1.00
12_RCP_Pollard_1	CONDUIT	1.65	0	13:04	2.10	1.85	1.00
12_RCP_W_Bridges_1	CONDUIT	1.59	0	12:35	2.03	0.68	1.00
12_RCP_W_Bridges_2	CONDUIT	2.32	0	12:35	2.95	0.47	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:17	3.10	4.58	1.00
15_RCP_Railroad_2	CONDUIT	3.28	0	13:03	4.33	0.57	0.61
15_RCP_Railroad_3	CONDUIT	1.30	0	12:59	2.95	0.20	0.40
18_RCP_Railroad_4	CONDUIT	4.39	0	13:00	4.21	0.36	0.58
24_RCP_Railroad_5	CONDUIT	6.67	0	13:00	4.81	0.27	0.45
24_RCP_Railroad_6*	CONDUIT	6.66	0	13:00	4.54	0.32	0.47
24_RCP_Railroad_7*	CONDUIT	6.66	0	13:01	4.44	0.35	0.48
24_VCP_Railroad_8	CONDUIT	7.28	0	13:01	5.81	0.24	0.42
CONNECT**	CONDUIT	77.12	0	13:00	2.17	0.26	0.81
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	0.00	0	13:00	0.00	0.00	0.00
Overland_Burrows_2	CONDUIT	0.01	0	13:00	0.00	0.00	0.00
Overland_Burrows_3	CONDUIT	0.62	0	13:02	0.95	0.00	0.00
Overland_Burrows_4	CONDUIT	0.74	0	13:05	0.83	0.00	0.01
Overland_Burrows_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	160.00	0	13:12	1.56	0.04	0.54
Farm-Culvert	CONDUIT	16.67	0	11:03	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	153.52	0	13:06	6.41	0.03	0.15
Railroad_Culvert	CONDUIT	54.58	0	13:45	7.72	0.82	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.08
Over_15_RCP_Marriott_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Marriott_7	CONDUIT	0.10	0	13:04	0.00	0.00	0.00
Over_24_RCP_Marriott_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.03
Over_24_RCP_Marriott_9	CONDUIT	12.86	0	13:01	1.22	0.01	0.08
Over_24_RCP_Etheridge_1	CONDUIT	34.23	0	13:02	1.06	0.01	0.19
Over_24_RCP_Etheridge_2	CONDUIT	24.11	0	13:04	0.81	0.01	0.18
Over_15_RCP_W_Battleboro_1	CONDUIT	0.70	0	13:01	0.37	0.00	0.01
Over_15_RCP_W_Battleboro_2	CONDUIT	0.00	0	13:00	0.00	0.00	0.03
Over_18_RCP_W_Battleboro_4	CONDUIT	10.22	0	13:02	1.38	0.04	0.05
Over_18_RCP_W_Battleboro_5	CONDUIT	7.81	0	13:03	1.87	0.00	0.03
Over_18_RCP_W_Battleboro_6	CONDUIT	0.33	0	13:04	0.61	0.00	0.00
Over_12_RCP_Pollard_1	CONDUIT	0.20	0	13:00	0.04	0.00	0.03
Over_15_RCP_Pollard_2	CONDUIT	0.23	0	13:00	0.04	0.00	0.04
Over_24_RCP_Etheridge_3	CONDUIT	14.86	0	13:05	4.75	0.00	0.02
Over_12_RCP_W_Bridges_1	CONDUIT	1.47	0	13:00	0.49	0.00	0.02
Over_12_RCP_W_Bridges_2	CONDUIT	2.68	0	13:00	0.77	0.01	0.02
Over_12_RCP_Railroad_1	CONDUIT	1.04	0	13:03	0.49	0.00	0.01
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_6*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_7*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_VCP_Railroad_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_12_RCP_Gainor_1	CONDUIT	5.39	0	13:06	0.24	0.00	0.14
OVer_18_RCP_Gainor_2	CONDUIT	6.79	0	13:00	0.71	0.00	0.06
Over_18_RCP_Gainor_3	CONDUIT	10.39	0	13:02	3.88	0.00	0.02
Over_18_RCP_Gainor_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

Future Conditions - Project Areas 2,4,5,& 6 (10-Year)

Over_18_RCP_Gainor_5	CONDUIT	15.13	0	13:02	4.67	0.00	0.02
Over_24_RCP_Gainor_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_36_RCP_Gainor_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_36_RCP_Gainor_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
12_RCP_Crepe_Myrtle_1	CONDUIT	1.61	0	13:05	2.46	0.48	1.00
12_RCP_Crepe_Myrtle_2	CONDUIT	6.23	0	13:03	7.95	1.03	1.00
Crepe_Myrtle_Swale	CONDUIT	19.92	0	13:00	1.18	0.04	0.52
Over_18_RCP_Hathaway_10	CONDUIT	1.20	0	13:00	0.85	0.00	0.01
Over_12_RCP_Crepe_Myrtle_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_15_RCP_Hathaway_12*	CONDUIT	1.28	0	13:01	0.91	0.00	0.01
15_RCP_Gainor	CONDUIT	2.88	0	12:47	2.35	0.55	1.00
Gainor_Bridges	CONDUIT	4.20	0	12:47	3.43	0.89	1.00
Over_15_RCP_Gainor	CONDUIT	2.27	0	13:00	0.62	0.01	0.02
Over_Gainor_Bridges	CONDUIT	1.61	0	13:02	0.18	0.00	0.06
Over_15_RCP_Gainor_7A	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Gainor_7C	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_Hathaway_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Hathaway_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Battle-Gainor-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
15_RCP_Gainor_7D	CONDUIT	7.64	0	12:59	4.60	0.79	0.92
84	CONDUIT	3.10	0	13:06	0.59	0.00	0.06
E-Battleboro-Culv	CONDUIT	6.45	0	13:01	4.35	0.84	0.48
RR-Open-Ditch2	CONDUIT	6.04	0	13:05	0.34	0.02	0.58
Pearsall	CONDUIT	2.22	0	13:00	4.00	0.26	0.35
RR-Open-Ditch1	CONDUIT	2.16	0	13:00	0.77	0.01	0.29
Battleboro-Ovr	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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Flow Classification Summary
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Conduit	Adjusted /Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
		--- Fraction of Time in Flow Class ----								
BeechTrib8	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0000
NC-4	1.00	0.02	0.00	0.00	0.95	0.03	0.00	0.00	0.51	0.0003
BeechTrib7	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.24	0.0000
Channel_4**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.11	0.0000
BeechTrib6	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.15	0.0000
W_Battleboro_Ave_Culvert**	3.30	0.02	0.00	0.00	0.72	0.26	0.00	0.00	0.89	0.0002
Channel_3A**	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.24	0.0000
Channel_3B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib5	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.16	0.0002
Hathaway_St_Culvert	1.18	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.22	0.0004
15_RCP_Hathaway_1	2.23	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0000
15_RCP_Hathaway_2	1.00	0.03	0.00	0.00	0.96	0.00	0.00	0.01	0.36	0.0001
15_RCP_Hathaway_3	2.38	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0000
15_RCP_Hathaway_4	1.00	0.05	0.00	0.00	0.26	0.68	0.00	0.02	1.10	0.0001
15_RCP_Hathaway_5	1.34	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0001
15_RCP_Hathaway_6	1.00	0.06	0.00	0.00	0.01	0.94	0.00	0.00	1.60	0.0001
15_RCP_Hathaway_7	1.00	0.02	0.04	0.00	0.93	0.01	0.00	0.00	0.59	0.0001
15_RCP_Hathaway_8	2.28	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.22	0.0000
15_RCP_Hathaway_9	2.53	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.54	0.0000
18_RCP_Hathaway_10	2.92	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.57	0.0001
15_RCP_Hathaway_11*	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.44	0.0002
15_RCP_Hathaway_12*	6.57	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.38	0.0003
Hathaway_Swale*	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.03	0.0000
BeechTrib4	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.18	0.0000
12_RCP_Battleboro_Apt_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.78	0.0000
12_RCP_Battleboro_Apt_2	1.29	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.30	0.0000
12_RCP_Battleboro_Apt_3	1.10	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.09	0.0001
15_RCP_Battleboro_Apt_4	1.78	0.02	0.00	0.00	0.92	0.06	0.00	0.00	0.29	0.0000
BeechTrib3	2.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib2	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.11	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.02	0.96	0.00	0.00	2.12	0.0001
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.96	0.02	0.00	0.00	0.49	0.0001
15_RCP_Burrows_3	1.76	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.37	0.0004

15_RCP_Burrows_4	1.00	0.04	0.00	0.00	0.03	0.93	0.00	0.00	1.48	0.0002
15_RCP_Burrows_5	1.15	0.04	0.00	0.00	0.68	0.28	0.00	0.00	0.82	0.0002
15_RCP_Burrows_6	4.20	0.05	0.00	0.00	0.41	0.54	0.00	0.00	1.49	0.0001
18_RCP_Burrows_7	5.31	0.04	0.01	0.00	0.92	0.03	0.00	0.00	0.25	0.0000
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.17	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.11	0.0001
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.11	0.0002
15_RCP_Marriott_3	3.55	0.06	0.00	0.00	0.00	0.94	0.00	0.00	1.25	0.0001
15_VCP_Marriott_4	1.95	0.06	0.00	0.00	0.00	0.94	0.00	0.00	1.56	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.04	0.00	0.54	0.40	0.00	0.00	0.90	0.0001
15_RCP_Mattiott_6	1.30	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.62	0.0001
24_RCP_Marriott_7	1.14	0.03	0.00	0.00	0.82	0.15	0.00	0.00	0.76	0.0001
24_RCP_Marriott_8	1.47	0.02	0.02	0.00	0.93	0.03	0.00	0.00	0.15	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.04	0.0004
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0003
24_RCP_Etheridge_3	7.59	0.02	0.06	0.00	0.00	0.00	0.92	0.00	0.31	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
12_RCP_Gainor_1	1.00	0.02	0.00	0.00	0.42	0.56	0.00	0.00	0.87	0.0002
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.59	0.0002
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.18	0.80	0.00	0.00	1.19	0.0001
18_RCP_Gainor_4	1.00	0.02	0.00	0.00	0.26	0.29	0.00	0.43	1.30	0.0001
18_RCP_Gainor_5	2.32	0.02	0.00	0.00	0.15	0.00	0.00	0.83	0.57	0.0011
24_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	1.01	0.0002
15_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.02	0.97	0.00	0.00	1.34	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0016
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.52	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.11	0.87	0.00	0.00	1.34	0.0001
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.01	0.97	0.00	0.00	1.37	0.0001
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.66	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.63	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.03	0.00	0.19	0.00	0.76	0.00	0.30	0.0002
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.28	0.71	0.00	0.00	0.97	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.08	0.90	0.00	0.00	1.20	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.66	0.32	0.00	0.00	0.80	0.0002
15_RCP_Pollard_3	26.14	0.02	0.04	0.00	0.94	0.00	0.00	0.00	0.31	0.0001
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.76	0.05	0.00	0.16	0.67	0.0002
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0005
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0002
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.18	0.0008
15_RCP_Railroad_2	2.51	0.02	0.04	0.00	0.04	0.90	0.00	0.00	1.01	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.94	0.04	0.00	0.00	0.67	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.44	0.0001
24_RCP_Railroad_5	3.55	0.05	0.00	0.00	0.01	0.94	0.00	0.00	1.20	0.0000
24_RCP_Railroad_6*	3.25	0.05	0.00	0.00	0.05	0.90	0.00	0.00	1.05	0.0000
24_RCP_Railroad_7*	2.02	0.02	0.03	0.00	0.06	0.89	0.00	0.00	1.07	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.64	0.0000
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.27	0.0000
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.16	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_2	3.53	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_3	7.01	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.0000
Overland_Burrows_4	2.14	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000
Overland_Burrows_5	1.88	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_6	5.36	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_7	7.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
W_Battleboro_Ave-Over	3.80	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.16	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.83	0.15	0.00	0.00	0.44	0.0002
Over_Farm-Culvert	7.77	0.46	0.00	0.00	0.00	0.00	0.00	0.54	0.82	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.33	0.0001
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

```
Cemetery_Dr_Floodplain    1.00   0.88  0.12  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Marriott_1    4.23   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Marriott_2   27.58   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Marriott_3    4.67   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_VCP_Mattiott_4    2.30   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Mattiott_5    1.00   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Mattiott_6    2.06   0.99  0.01  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_24_RCP_Marriott_7    1.03   0.99  0.00  0.00  0.00  0.00  0.00  0.01     0.00   0.0000
Over_24_RCP_Marriott_8    1.80   0.93  0.07  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_24_RCP_Marriott_9    2.78   0.85  0.08  0.00  0.07  0.00  0.00  0.00     0.03   0.0000
Over_24_RCP_Etheridge_1    5.90   0.78  0.06  0.00  0.15  0.00  0.00  0.00     0.02   0.0000
Over_24_RCP_Etheridge_2    1.42   0.78  0.12  0.00  0.00  0.00  0.10  0.00     0.01   0.0000
Over_15_RCP_W_Battleboro_1    2.34   0.98  0.00  0.00  0.00  0.00  0.00  0.02     0.00   0.0000
Over_15_RCP_W_Battleboro_2    1.00   0.95  0.05  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_18_RCP_W_Battleboro_4    3.16   0.95  0.00  0.00  0.00  0.00  0.00  0.05     0.03   0.0000
Over_18_RCP_W_Battleboro_5    1.60   0.98  0.00  0.00  0.00  0.00  0.00  0.02     0.03   0.0000
Over_18_RCP_W_Battleboro_6    6.23   0.99  0.00  0.00  0.00  0.00  0.00  0.00     0.01   0.0000
Over_12_RCP_Pollard_1    1.11   0.95  0.03  0.00  0.02  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Pollard_2    1.07   0.94  0.04  0.00  0.02  0.00  0.00  0.00     0.00   0.0000
Over_24_RCP_Etheridge_3   17.58   0.93  0.00  0.00  0.00  0.00  0.00  0.07     0.21   0.0000
Over_12_RCP_W_Bridges_1    5.33   0.95  0.01  0.00  0.04  0.00  0.00  0.00     0.01   0.0000
Over_12_RCP_W_Bridges_2    5.45   0.95  0.00  0.00  0.02  0.00  0.00  0.03     0.02   0.0000
Over_12_RCP_Railroad_1    1.00   0.96  0.00  0.00  0.00  0.00  0.00  0.04     0.01   0.0000
Over_15_RCP_Railroad_2    2.11   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_18_RCP_Railroad_4    1.10   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_24_RCP_Railroad_5    5.35   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_24_RCP_Railroad_6*    3.87   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_24_RCP_Railroad_7*    1.00   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_24_VCP_Railroad_8    7.09   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Railroad_3    3.23   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_12_RCP_Gainor_1    1.00   0.82  0.09  0.00  0.00  0.00  0.08  0.00     0.00   0.0000
OVer_18_RCP_Gainor_2    5.06   0.91  0.01  0.00  0.00  0.00  0.08  0.00     0.02   0.0000
Over_18_RCP_Gainor_3   20.67   0.92  0.00  0.00  0.00  0.05  0.00  0.02     0.24   0.0000
Over_18_RCP_Gainor_4    1.11   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_18_RCP_Gainor_5   16.05   0.93  0.00  0.00  0.00  0.00  0.00  0.07     0.19   0.0000
Over_24_RCP_Gainor_6   18.60   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_36_RCP_Gainor_8    5.32   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_36_RCP_Gainor_9   13.46   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
12_RCP_Crepe_Myrtle_1    2.12   0.02  0.00  0.00  0.30  0.12  0.00  0.56     0.99   0.0001
12_RCP_Crepe_Myrtle_2    1.00   0.02  0.00  0.00  0.03  0.95  0.00  0.00     1.68   0.0002
Crepe_Myrtle_Swale      1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.07   0.0000
Over_18_RCP_Hathaway_10    1.15   0.97  0.00  0.00  0.00  0.00  0.00  0.03     0.02   0.0000
Over_12_RCP_Crepe_Myrtle_1    5.17   0.99  0.01  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Hathaway_12*   15.31   0.97  0.00  0.00  0.00  0.00  0.00  0.03     0.03   0.0000
15_RCP_Gainor           3.55   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.24   0.0001
Gainor_Bridges          1.00   0.02  0.00  0.00  0.97  0.01  0.00  0.00     0.61   0.0001
Over_15_RCP_Gainor      3.16   0.94  0.00  0.00  0.02  0.00  0.00  0.04     0.02   0.0000
Over_Gainor_Bridges     1.33   0.87  0.09  0.00  0.04  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Gainor_7A   13.13   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Gainor_7C   15.62   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_Hathaway_3         1.00   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Hathaway_9    5.47   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Battle-Gainor-Over      3.68   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
15_RCP_Gainor_7D        1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.47   0.0001
84                     30.58   0.94  0.00  0.00  0.06  0.00  0.00  0.00     0.01   0.0000
E-Battleboro-Culv       1.00   0.02  0.00  0.00  0.97  0.01  0.00  0.00     0.70   0.0001
RR-Open-Ditch2          1.00   0.02  0.01  0.00  0.97  0.00  0.00  0.00     0.06   0.0000
Pearsall                3.93   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.14   0.0000
RR-Open-Ditch1          1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.12   0.0000
Battleboro-Ovr          1.38   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000


*************************
Conduit Surcharge Summary
*************************

---------------------------------------------------------------------------
                                                    Hours        Hours
                         --------- Hours Full --------   Above Full   Capacity
Conduit                Both Ends  Upstream  Dnstream   Normal Flow   Limited
---------------------------------------------------------------------------
```

Future Conditions - Project Areas 2,4,5,& 6 (10-Year)

NC-4	2.96	2.96	2.96	5.56	2.96
W_Battleboro_Ave_Culvert**	0.01	0.01	0.01	2.00	0.01
BeechTrib5	0.01	0.01	0.01	5.50	0.01
Hathaway_St_Culvert	0.01	0.01	0.01	9.11	0.01
18_RCP_Hathaway_10	0.52	0.52	0.53	0.01	0.01
15_RCP_Hathaway_11*	0.64	0.64	0.64	0.01	0.50
15_RCP_Hathaway_12*	0.01	0.01	0.01	0.72	0.01
15_RCP_Burrows_1	0.20	0.20	0.21	0.01	0.17
15_RCP_Burrows_2	0.22	0.22	0.23	0.01	0.01
15_RCP_Burrows_3	0.31	0.31	0.31	0.60	0.01
15_RCP_Burrows_4	0.30	0.30	0.30	0.13	0.28
15_RCP_Burrows_5	0.15	0.15	0.16	0.27	0.15
12_RCP_Marriott_2	0.51	0.51	0.51	0.37	0.38
15_RCP_Mattiott_6	0.44	0.44	0.44	0.01	0.09
24_RCP_Marriott_7	0.21	0.21	0.22	0.01	0.01
24_RCP_Marriott_8	3.11	3.11	3.11	0.01	0.33
24_RCP_Marriott_9	5.06	5.06	5.06	0.01	0.25
24_RCP_Etheridge_1	6.14	6.14	6.15	0.01	0.14
24_RCP_Etheridge_2	8.06	8.06	8.06	0.01	0.01
12_RCP_Gainor_1	1.96	1.96	1.96	0.89	0.44
18_RCP_Gainor_2	1.53	1.53	1.53	0.01	0.03
18_RCP_Gainor_3	1.54	1.54	1.54	0.01	0.02
18_RCP_Gainor_4	1.61	1.61	1.61	0.01	0.01
18_RCP_Gainor_5	1.66	1.66	1.66	7.82	1.66
24_RCP_Gainor_6	0.01	0.01	0.01	1.09	0.01
15_RCP_Gainor_7B	0.44	0.44	0.44	1.06	0.44
15_RCP_W_Battleboro_1	0.54	0.54	0.54	0.01	0.01
18_RCP_W_Battleboro_2	0.80	0.80	0.80	0.01	0.01
18_RCP_W_Battleboro_3	1.04	1.04	1.04	0.01	0.01
18_RCP_W_Battleboro_4	1.07	1.07	1.07	0.01	0.58
18_RCP_W_Battleboro_5	0.93	0.93	0.93	0.93	0.93
18_RCP_W_Battleboro_6	0.59	0.59	0.59	0.21	0.59
15_RCP_Pollard_3	0.96	0.96	0.96	0.01	0.01
15_RCP_Pollard_2	0.44	0.44	0.44	0.01	0.01
12_RCP_Pollard_1	0.77	0.77	0.78	0.34	0.44
12_RCP_W_Bridges_1	0.87	0.87	0.87	0.01	0.02
12_RCP_W_Bridges_2	0.86	0.86	0.86	0.01	0.01
12_RCP_Railroad_1	0.37	0.37	0.37	3.51	0.37
Farm-Culvert	9.45	9.45	9.46	9.37	9.45
Railroad_Culvert	2.57	2.57	2.57	0.01	1.99
12_RCP_Crepe_Myrtle_1	0.29	0.29	0.29	0.01	0.01
12_RCP_Crepe_Myrtle_2	0.12	0.12	0.12	0.21	0.12
15_RCP_Gainor	1.33	1.33	1.33	0.01	0.01
Gainor_Bridges	1.33	1.33	1.33	0.01	0.01

Analysis begun on: Mon Dec 07 15:47:09 2015
Analysis ended on: Mon Dec 07 15:47:12 2015
Total elapsed time: 00:00:03

Future Conditions - Project Areas 2,4,5,& 6 (25-Year)

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Future Conditions - Project Areas 2,4,5,& 6 (25-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-06-2015 00:00:00
Ending Date .............. APR-07-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Gainor

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905
```

Future Conditions - Project Areas 2,4,5,& 6 (25-Year)

```
WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224

WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node PE_972240

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       697.604         6.482
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       223.255         2.074
Surface Runoff ...........       412.106         3.829
Final Surface Storage ....        62.786         0.583
Continuity Error (%) .....        -0.078


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       411.068       133.953
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       393.901       128.358
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        18.295         5.962
Continuity Error (%) .....        -0.274


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (3.26%)
Node 8** (1.49%)
```

Future Conditions - Project Areas 2,4,5,& 6 (25-Year)

```
**************************
Time-Step Critical Elements
**************************
Link Farm-Culvert (21.89%)
Link 18_RCP_Gainor_5 (18.08%)
Link Hathaway_St_Culvert (15.26%)
Link 24_RCP_Etheridge_2 (12.09%)
Link W_Battleboro_Ave_Culvert** (6.69%)


*******************************
Highest Flow Instability Indexes
*******************************
Link 24_RCP_Marriott_9 (1)


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     6.21 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.03


**************************
Subcatchment Runoff Summary
**************************
```

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	6.48	0.00	0.00	2.07	3.55	46.68	458.66	0.547
Basin_A-2	6.48	0.00	0.00	1.82	4.07	14.58	159.13	0.628
Basin_A-3	6.48	0.00	0.00	2.01	4.03	11.39	113.04	0.622
Basin_A-4	6.48	0.00	0.00	2.17	3.82	17.25	171.80	0.589
Basin_A-5	6.48	0.00	0.00	2.13	3.86	12.83	145.20	0.596
Basin_B-2	6.48	0.00	0.00	2.47	3.66	8.46	96.83	0.565
Area#5-10	6.48	0.00	0.00	2.16	4.24	0.05	0.94	0.654
Area#5-30	6.48	0.00	0.00	1.09	5.32	0.12	2.42	0.821
Area#5-50	6.48	0.00	0.00	1.93	4.48	0.05	1.17	0.691
Area#5-70	6.48	0.00	0.00	2.41	3.96	0.15	2.80	0.611
Area#5-80	6.48	0.00	0.00	1.71	4.70	0.20	4.14	0.725
Area#5-20	6.48	0.00	0.00	1.09	5.33	0.06	1.18	0.822
Area#5-40	6.48	0.00	0.00	1.09	5.32	0.05	1.14	0.821
Area#5-90	6.48	0.00	0.00	0.97	5.47	0.13	2.82	0.844
Area#5-100	6.48	0.00	0.00	1.09	5.34	0.07	1.45	0.824
Area#6-10	6.48	0.00	0.00	3.21	3.20	0.09	1.80	0.493
Area#6-20	6.48	0.00	0.00	2.25	4.11	0.41	7.58	0.635
Area#6-30	6.48	0.00	0.00	2.17	4.16	1.14	19.16	0.642
Area#6-40	6.48	0.00	0.00	2.54	3.75	0.75	10.94	0.578
Area#6-50	6.48	0.00	0.00	2.93	3.41	1.52	26.65	0.526
Area#6-60	6.48	0.00	0.00	2.16	4.14	6.03	94.66	0.638
Area#6-70	6.48	0.00	0.00	0.40	6.05	0.10	1.97	0.933
Area#6-80	6.48	0.00	0.00	3.22	3.19	0.06	1.39	0.493
Area#6-90	6.48	0.00	0.00	2.68	3.70	0.64	11.65	0.571
Area#4-140	6.48	0.00	0.00	1.09	5.34	0.14	3.06	0.823
Area#4-150	6.48	0.00	0.00	0.41	6.04	0.07	1.40	0.931
Area#4-160	6.48	0.00	0.00	1.64	4.79	0.02	0.44	0.739
Area#4-170	6.48	0.00	0.00	0.93	5.50	0.08	1.64	0.848
Area#4-180	6.48	0.00	0.00	1.36	5.05	0.14	2.99	0.779
Area#4-190	6.48	0.00	0.00	0.93	5.50	0.04	0.89	0.849
Area#4-200	6.48	0.00	0.00	2.92	3.47	0.19	3.53	0.535
Area#4-130	6.48	0.00	0.00	2.52	3.89	0.13	2.70	0.601
Area#4-120	6.48	0.00	0.00	2.29	4.13	0.10	2.14	0.637
Area#4-100	6.48	0.00	0.00	3.44	2.97	0.14	2.80	0.458
Area#4-90	6.48	0.00	0.00	0.64	5.80	0.10	2.15	0.895
Area#4-80	6.48	0.00	0.00	0.38	6.05	0.18	3.69	0.933

Area#4-10	6.48	0.00	0.00	0.41	6.02	0.15	3.07	0.929
Area#4-20	6.48	0.00	0.00	0.82	5.61	0.26	5.37	0.865
Area#4-70	6.48	0.00	0.00	0.71	5.71	0.20	4.22	0.882
Area#4-60	6.48	0.00	0.00	0.41	6.03	0.15	3.04	0.930
Area#4-50	6.48	0.00	0.00	0.68	5.74	0.31	6.41	0.885
Area#4-30	6.48	0.00	0.00	2.40	4.00	0.07	1.67	0.617
Area#2-10	6.48	0.00	0.00	1.89	4.41	0.34	5.41	0.680
Area#2-20	6.48	0.00	0.00	1.41	4.96	0.11	2.11	0.766
Area#2-30	6.48	0.00	0.00	2.05	4.27	0.35	5.99	0.658
Area#2-40	6.48	0.00	0.00	1.53	4.86	0.62	12.75	0.750
Area#2-50	6.48	0.00	0.00	1.73	4.53	0.69	10.34	0.699
Area#2-60	6.48	0.00	0.00	1.73	4.66	0.44	9.46	0.719
Area#2-70	6.48	0.00	0.00	2.05	4.30	0.45	8.75	0.663
Area#2-100	6.48	0.00	0.00	1.62	4.76	0.30	6.09	0.735
Area#2-80	6.48	0.00	0.00	1.41	4.99	0.18	3.76	0.770
Area#2-110	6.48	0.00	0.00	1.62	4.77	0.19	4.01	0.735
Area#5-60	6.48	0.00	0.00	1.09	5.34	0.05	1.11	0.824
Area#2-90	6.48	0.00	0.00	1.32	5.02	0.37	6.70	0.775
Area#2-120	6.48	0.00	0.00	1.59	4.67	2.88	42.58	0.720
Area#2-150	6.48	0.00	0.00	2.07	4.24	0.79	12.97	0.654
Area#4-40	6.48	0.00	0.00	1.36	5.05	0.16	3.39	0.780
Area#4-110	6.48	0.00	0.00	1.44	4.94	0.40	8.61	0.762
Area#5-110	6.48	0.00	0.00	0.61	5.81	0.16	3.38	0.897
Area#2-130	6.48	0.00	0.00	1.70	4.70	0.14	2.93	0.725
Area#2-140	6.48	0.00	0.00	2.07	4.26	0.39	6.80	0.657

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Node Depth Summary
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Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	3.10	5.75	125.75	0 13:10
3**	JUNCTION	0.54	1.60	102.60	0 13:00
D/S_NC-4	JUNCTION	2.53	3.88	105.06	0 15:36
5**	JUNCTION	3.26	5.25	99.25	0 15:06
D/S_W_Battleboro_Ave**	JUNCTION	1.30	3.15	117.32	0 13:06
7**	JUNCTION	2.26	4.49	106.49	0 13:11
8**	JUNCTION	5.10	7.55	97.55	0 15:12
Hathaway_St-D/S	JUNCTION	4.05	5.81	95.79	0 15:17
DI_983628	JUNCTION	0.09	0.30	127.20	0 13:00
DI_983629	JUNCTION	0.28	0.97	127.17	0 13:00
DI_983630	JUNCTION	0.49	1.16	126.62	0 13:00
DI_983631	JUNCTION	0.12	0.45	126.90	0 12:59
DI_983633	JUNCTION	0.48	1.10	122.20	0 13:00
DI_983632	JUNCTION	0.53	1.11	122.16	0 13:00
DI_983634	JUNCTION	0.24	0.97	114.62	0 13:00
DI_984002*	JUNCTION	0.65	3.55	111.05	0 13:00
UNK_952741*	JUNCTION	0.51	3.90	111.80	0 13:00
DI_983635	JUNCTION	0.12	0.83	111.98	0 13:00
PE_972255	JUNCTION	0.12	0.42	113.92	0 13:00
PE_972263	JUNCTION	0.25	2.90	111.80	0 13:00
PE_972261*	JUNCTION	0.20	0.78	108.18	0 13:00
PE_972258	JUNCTION	4.15	6.10	95.10	0 15:20
Railroad_Junction_1	JUNCTION	2.24	4.76	109.29	0 13:08
Junction_1	JUNCTION	4.57	6.59	94.09	0 14:49
DI_983955	JUNCTION	0.12	0.44	101.04	0 13:00
PE_272260	JUNCTION	0.10	0.38	101.98	0 12:59
DI_983954	JUNCTION	0.16	0.70	98.72	0 13:00
DI_983953	JUNCTION	0.10	0.39	96.29	0 13:00
Drew_Hill_Junction	JUNCTION	4.98	7.06	95.06	0 15:20
DI_983952	JUNCTION	0.38	3.71	109.04	0 13:00
DI_983951	JUNCTION	0.31	3.02	107.07	0 13:01
DI_983950	JUNCTION	0.89	4.05	105.05	0 13:01
DI_283949	JUNCTION	0.41	2.37	103.62	0 13:03
DI_983948	JUNCTION	0.37	2.42	99.07	0 13:04
DI_983947	JUNCTION	0.55	3.47	98.55	0 13:08

DI_983946	JUNCTION	0.71	2.51	96.78	0	13:09
PE_972230	JUNCTION	0.52	2.11	129.26	0	13:00
UNK_952735*	JUNCTION	0.55	2.02	129.12	0	13:00
DI_983907	JUNCTION	0.60	1.96	129.01	0	13:00
DI_983906	JUNCTION	0.19	1.29	128.40	0	13:00
UNK_952736*	JUNCTION	0.22	1.89	127.65	0	13:00
DI_983903	JUNCTION	0.37	3.17	125.78	0	13:01
DI_983902	JUNCTION	0.68	2.85	123.93	0	13:04
DI_983904	JUNCTION	1.27	4.60	122.01	0	13:05
DI_983905	JUNCTION	2.02	4.12	120.60	0	13:03
DI_983721	JUNCTION	2.44	4.20	120.17	0	13:02
DI_983722	JUNCTION	2.42	4.23	120.19	0	13:04
MH_974299	JUNCTION	2.84	4.58	120.03	0	13:05
PE_972229	JUNCTION	0.37	1.36	116.58	0	13:06
PE_972224	JUNCTION	0.20	0.80	121.65	0	13:01
PE_972239	JUNCTION	0.60	1.87	113.99	0	13:05
PE_972246	JUNCTION	0.45	1.55	128.11	0	13:00
PE_972240	JUNCTION	0.60	2.08	127.80	0	13:03
DI_983935	JUNCTION	0.68	3.04	126.99	0	13:00
DI_983934	JUNCTION	0.78	3.23	126.91	0	13:01
MH_974300	JUNCTION	0.87	4.17	126.93	0	13:00
DI_983624	JUNCTION	1.58	5.20	122.32	0	13:00
DI_983623	JUNCTION	0.82	2.34	119.39	0	13:01
DI_983619	JUNCTION	0.56	2.49	116.80	0	13:02
DI_983622	JUNCTION	0.33	2.96	120.41	0	13:00
DI_983621	JUNCTION	0.75	5.96	120.28	0	13:03
DI_983620	JUNCTION	0.11	0.66	117.11	0	13:00
DI_983618	JUNCTION	0.83	3.40	116.12	0	13:04
DI_983898	JUNCTION	0.68	3.92	127.92	0	13:00
DI_983604	JUNCTION	0.74	4.32	127.82	0	13:00
DI_983901	JUNCTION	0.55	4.20	126.55	0	13:01
DI_983607	JUNCTION	0.27	2.78	129.58	0	13:00
DI_983606	JUNCTION	0.43	3.39	129.54	0	13:00
DI_9836054	JUNCTION	0.84	4.04	128.09	0	13:07
MH_974298	JUNCTION	1.66	4.04	128.09	0	13:04
DI_983899	JUNCTION	0.29	1.78	128.75	0	13:00
DI_983900	JUNCTION	0.31	1.80	128.79	0	13:00
DI_983897	JUNCTION	0.35	1.95	128.15	0	13:00
DI_983896	JUNCTION	0.47	2.06	128.11	0	13:00
DI_983895	JUNCTION	0.60	2.25	128.10	0	13:02
DI_983894	JUNCTION	0.49	1.45	127.25	0	13:02
DI_953893*	JUNCTION	0.20	0.74	126.44	0	13:00
PE_972225	JUNCTION	0.11	0.43	126.98	0	12:45
UNK_952734*	JUNCTION	0.48	1.30	123.83	0	13:00
DI_983892	JUNCTION	0.27	1.15	123.38	0	13:00
UNK_952733*	JUNCTION	0.27	1.14	122.99	0	13:00
UNK_952732*	JUNCTION	0.27	1.18	122.53	0	13:00
U/S_NC-4	JUNCTION	2.80	6.23	108.84	0	15:29
U/S_W_Battleboro_Ave	JUNCTION	2.08	7.57	121.99	0	13:01
Hathaway_St-U/S	JUNCTION	4.46	7.00	96.99	0	15:16
9**	JUNCTION	2.01	6.70	122.12	0	13:01
Farm-Culv-Up	JUNCTION	2.96	4.02	100.02	0	13:09
Farm-Culv-Dn	JUNCTION	2.01	4.08	99.58	0	13:13
Railroad-Up	JUNCTION	1.78	5.88	111.46	0	13:40
DI_983957	JUNCTION	0.26	2.65	123.65	0	13:02
DI_983956*	JUNCTION	0.38	3.15	123.65	0	13:04
PE_972262	JUNCTION	0.33	1.16	116.55	0	13:00
DI_983936	JUNCTION	0.70	1.77	128.13	0	13:00
U/S_Gainor_Swale	JUNCTION	0.60	1.91	127.91	0	13:01
DI_983625	JUNCTION	0.34	2.92	119.92	0	13:00
952731	JUNCTION	0.48	1.59	122.54	0	13:02
972222	JUNCTION	0.22	0.74	121.53	0	13:05
983943	JUNCTION	0.18	0.72	126.37	0	13:00
952740	JUNCTION	0.13	0.51	125.96	0	13:00
Primary_Outfall*	OUTFALL	4.57	6.59	93.59	0	14:49

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Node Inflow Summary
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Future Conditions - Project Areas 2,4,5,& 6 (25-Year)

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	458.38	458.38	0	13:00	46.519	46.519
3**	JUNCTION	159.02	159.02	0	13:00	14.544	14.544
D/S_NC-4	JUNCTION	0.00	195.86	0	15:28	0.000	45.576
5**	JUNCTION	0.00	262.67	0	14:30	0.000	59.964
D/S_W_Battleboro_Ave**	JUNCTION	0.00	103.35	0	13:02	0.000	11.357
7**	JUNCTION	171.67	260.41	0	13:00	17.207	28.566
8**	JUNCTION	145.09	492.90	0	13:00	12.804	101.055
Hathaway_St-D/S	JUNCTION	0.00	470.68	0	15:15	0.000	100.911
DI_983628	JUNCTION	0.94	0.94	0	12:59	0.046	0.046
DI_983629	JUNCTION	1.18	2.12	0	12:59	0.056	0.102
DI_983630	JUNCTION	1.14	5.65	0	13:00	0.055	0.274
DI_983631	JUNCTION	2.42	2.42	0	12:59	0.117	0.117
DI_983633	JUNCTION	1.17	1.17	0	12:59	0.055	0.055
DI_983632	JUNCTION	1.11	7.88	0	13:00	0.052	0.381
DI_983634	JUNCTION	0.00	7.88	0	13:00	0.000	0.380
DI_984002*	JUNCTION	0.00	14.14	0	13:00	0.000	0.835
UNK_952741*	JUNCTION	2.82	6.76	0	12:37	0.134	0.455
DI_983635	JUNCTION	0.00	2.80	0	13:00	0.000	0.146
PE_972255	JUNCTION	2.80	2.80	0	12:59	0.146	0.146
PE_972263	JUNCTION	4.14	4.14	0	12:59	0.201	0.201
PE_972261*	JUNCTION	1.45	15.50	0	13:00	0.068	0.904
PE_972258	JUNCTION	0.00	471.08	0	15:16	0.000	100.952
Railroad_Junction_1	JUNCTION	107.68	219.08	0	13:00	9.187	22.033
Junction_1	JUNCTION	94.59	630.00	0	14:42	6.025	129.131
DI_983955	JUNCTION	1.39	1.39	0	12:59	0.064	0.064
PE_272260	JUNCTION	1.97	1.97	0	12:59	0.095	0.095
DI_983954	JUNCTION	0.00	3.35	0	13:00	0.000	0.159
DI_983953	JUNCTION	0.00	3.34	0	13:00	0.000	0.159
Drew_Hill_Junction	JUNCTION	0.00	470.95	0	15:20	0.000	100.283
DI_983952	JUNCTION	11.64	14.95	0	12:59	0.639	0.665
DI_983951	JUNCTION	0.00	14.79	0	13:00	0.000	0.665
DI_983950	JUNCTION	0.00	14.49	0	13:01	0.000	0.667
DI_283949	JUNCTION	0.00	14.43	0	13:01	0.000	0.669
DI_983948	JUNCTION	0.00	14.20	0	13:03	0.000	0.672
DI_983947	JUNCTION	0.00	14.02	0	13:04	0.000	0.672
DI_983946	JUNCTION	0.00	12.92	0	13:08	0.000	0.672
PE_972230	JUNCTION	3.69	3.69	0	12:59	0.177	0.177
UNK_952735*	JUNCTION	0.00	3.68	0	12:59	0.000	0.177
DI_983907	JUNCTION	2.15	5.80	0	12:59	0.104	0.281
DI_983906	JUNCTION	0.00	5.78	0	13:00	0.000	0.281
UNK_952736*	JUNCTION	0.00	5.78	0	12:47	0.000	0.281
DI_983903	JUNCTION	2.80	8.51	0	12:59	0.141	0.421
DI_983902	JUNCTION	0.00	30.81	0	13:01	0.000	1.716
DI_983904	JUNCTION	0.00	29.03	0	13:04	0.000	1.715
DI_983905	JUNCTION	8.61	34.68	0	13:02	0.401	2.117
DI_983721	JUNCTION	2.14	39.65	0	13:04	0.104	2.357
DI_983722	JUNCTION	2.70	44.39	0	13:03	0.134	2.491
MH_974299	JUNCTION	0.00	38.13	0	13:04	0.000	2.351
PE_972229	JUNCTION	3.53	48.04	0	13:05	0.185	3.020
PE_972224	JUNCTION	0.00	9.60	0	13:01	0.000	0.490
PE_972239	JUNCTION	0.00	65.10	0	13:03	0.000	4.027
PE_972246	JUNCTION	2.11	7.41	0	13:00	0.108	0.442
PE_972240	JUNCTION	0.00	12.68	0	13:01	0.000	0.789
DI_983935	JUNCTION	12.74	12.74	0	12:59	0.620	0.620
DI_983934	JUNCTION	10.33	22.78	0	13:00	0.688	1.309
MH_974300	JUNCTION	0.00	13.07	0	12:33	0.000	1.779
DI_983624	JUNCTION	18.19	51.80	0	13:00	0.897	2.996
DI_983623	JUNCTION	0.00	18.77	0	12:36	0.000	2.581
DI_983619	JUNCTION	0.00	42.52	0	13:00	0.000	3.427
DI_983622	JUNCTION	10.45	10.45	0	12:59	0.544	0.544
DI_983621	JUNCTION	6.08	40.04	0	13:00	0.297	0.712
DI_983620	JUNCTION	4.01	4.01	0	12:59	0.194	0.194
DI_983618	JUNCTION	0.00	51.20	0	12:59	0.000	3.965
DI_983898	JUNCTION	6.40	19.15	0	13:00	0.308	1.090
DI_983604	JUNCTION	4.21	22.82	0	13:00	0.202	1.294

DI_983901	JUNCTION	0.00	22.67	0	13:00	0.000	1.293
DI_983607	JUNCTION	3.07	3.07	0	12:59	0.147	0.147
DI_983606	JUNCTION	5.37	8.43	0	12:59	0.256	0.402
DI_9836054	JUNCTION	3.04	7.80	0	13:00	0.146	0.374
MH_974298	JUNCTION	0.00	4.14	0	12:36	0.000	0.221
DI_983899	JUNCTION	3.39	4.28	0	12:59	0.159	0.228
DI_983900	JUNCTION	1.66	1.66	0	12:59	0.074	0.074
DI_983897	JUNCTION	3.06	3.06	0	12:59	0.143	0.143
DI_983896	JUNCTION	1.40	4.44	0	12:59	0.067	0.211
DI_983895	JUNCTION	0.44	4.71	0	13:00	0.020	0.230
DI_983894	JUNCTION	0.00	4.36	0	13:02	0.000	0.230
DI_953893*	JUNCTION	0.00	5.88	0	13:00	0.000	0.308
PE_972225	JUNCTION	1.64	1.64	0	12:59	0.078	0.078
UNK_952734*	JUNCTION	2.99	8.83	0	13:00	0.141	0.449
DI_983892	JUNCTION	0.00	8.81	0	13:00	0.000	0.448
UNK_952733*	JUNCTION	0.00	8.80	0	13:00	0.000	0.448
UNK_952732*	JUNCTION	0.89	9.59	0	13:00	0.042	0.490
U/S_NC-4	JUNCTION	0.00	394.98	0	13:39	0.000	47.111
U/S_W_Battleboro_Ave	JUNCTION	0.00	113.12	0	13:00	0.000	11.362
Hathaway_St-U/S	JUNCTION	3.38	470.47	0	15:02	0.159	100.617
9**	JUNCTION	112.96	112.96	0	13:00	11.366	11.366
Farm-Culv-Up	JUNCTION	26.64	207.49	0	13:04	1.514	23.455
Farm-Culv-Dn	JUNCTION	0.00	206.87	0	13:04	0.000	23.384
Railroad-Up	JUNCTION	55.51	116.59	0	13:00	3.667	8.230
DI_983957	JUNCTION	1.80	2.19	0	12:57	0.090	0.091
DI_983956*	JUNCTION	7.58	8.74	0	12:59	0.407	0.498
PE_972262	JUNCTION	19.14	25.40	0	12:59	1.139	1.636
DI_983936	JUNCTION	5.40	5.40	0	13:00	0.335	0.335
U/S_Gainor_Swale	JUNCTION	5.98	13.11	0	13:00	0.347	0.789
DI_983625	JUNCTION	0.00	8.95	0	12:49	0.000	0.539
952731	JUNCTION	6.79	9.64	0	13:00	0.393	0.529
972222	JUNCTION	0.00	8.67	0	13:02	0.000	0.527
983943	JUNCTION	2.93	2.93	0	12:59	0.136	0.136
952740	JUNCTION	0.00	2.93	0	13:00	0.000	0.136
Primary_Outfall*	OUTFALL	0.00	629.74	0	14:49	0.000	128.349

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
9**	JUNCTION	0.20	0.695	1.305
DI_983625	JUNCTION	0.30	1.419	3.181

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Node Flooding Summary
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No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	97.40	271.72	629.74	128.349
System	97.40	271.72	629.74	128.349

Future Conditions - Project Areas 2,4,5,& 6 (25-Year)

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Link Flow Summary
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Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
BeechTrib8	CHANNEL	394.98	0	13:39	2.29	0.04	0.37
NC-4	CONDUIT	195.86	0	15:28	10.18	1.14	1.00
BeechTrib7	CHANNEL	195.79	0	15:36	2.08	0.02	0.33
Channel_4**	CONDUIT	158.37	0	13:00	2.50	0.09	0.52
BeechTrib6	CHANNEL	259.92	0	15:06	1.67	0.08	0.64
W_Battleboro_Ave_Culvert**	CONDUIT	98.79	0	13:00	13.98	2.09	1.00
Channel_3A**	CHANNEL	96.26	0	13:06	2.86	0.00	0.25
Channel_3B	CHANNEL	206.22	0	13:11	1.28	0.02	0.39
BeechTrib5	CHANNEL	466.71	0	15:04	1.71	2.09	0.73
Hathaway_St_Culvert	CONDUIT	468.51	0	15:16	6.61	4.10	0.98
15_RCP_Hathaway_1	CONDUIT	0.94	0	13:00	1.50	0.13	0.51
15_RCP_Hathaway_2	CONDUIT	2.10	0	13:00	2.18	0.80	0.73
15_RCP_Hathaway_3	CONDUIT	2.42	0	13:00	2.88	0.28	0.65
15_RCP_Hathaway_4	CONDUIT	5.62	0	13:00	6.34	0.77	0.68
15_RCP_Hathaway_5	CONDUIT	1.17	0	13:00	1.02	0.62	0.88
15_RCP_Hathaway_6	CONDUIT	7.88	0	13:00	8.72	0.69	0.69
15_RCP_Hathaway_7	CONDUIT	7.87	0	13:00	6.97	0.67	0.87
15_RCP_Hathaway_8	CONDUIT	2.80	0	13:00	6.83	0.24	0.50
15_RCP_Hathaway_9	CONDUIT	2.82	0	13:00	2.73	0.20	0.83
18_RCP_Hathaway_10	CONDUIT	3.18	0	13:08	2.24	0.22	1.00
15_RCP_Hathaway_11*	CONDUIT	6.30	0	12:40	3.56	1.03	1.00
15_RCP_Hathaway_12*	CONDUIT	11.25	0	13:00	10.53	2.20	0.81
Hathaway_Swale*	CONDUIT	15.39	0	13:00	0.45	0.00	0.37
BeechTrib4	CHANNEL	470.66	0	15:16	1.65	0.05	0.52
12_RCP_Battleboro_Apt_1	CONDUIT	1.38	0	13:00	2.97	0.40	0.57
12_RCP_Battleboro_Apt_2	CONDUIT	1.97	0	12:59	4.95	0.30	0.54
12_RCP_Battleboro_Apt_3	CONDUIT	3.34	0	13:00	7.64	0.67	0.54
15_RCP_Battleboro_Apt_4	CONDUIT	3.34	0	13:00	3.93	0.21	0.65
BeechTrib3	CHANNEL	470.95	0	15:20	1.18	0.03	0.57
BeechTrib2	CHANNEL	471.12	0	15:25	1.30	0.12	0.55
Channel-6B	CHANNEL	187.21	0	13:08	2.87	0.09	0.49
15_RCP_Burrows_1	CONDUIT	10.04	0	12:43	8.18	0.96	1.00
15_RCP_Burrows_2	CONDUIT	9.63	0	13:00	7.85	0.69	1.00
15_RCP_Burrows_3	CONDUIT	8.60	0	12:44	7.01	1.99	1.00
15_RCP_Burrows_4	CONDUIT	8.04	0	12:43	6.65	1.03	1.00
15_RCP_Burrows_5	CONDUIT	8.72	0	12:50	7.10	1.13	1.00
15_RCP_Burrows_6	CONDUIT	11.92	0	13:01	9.71	1.11	1.00
18_RCP_Burrows_7	CONDUIT	12.88	0	13:08	7.29	0.41	1.00
BeechTrib1	CHANNEL	629.74	0	14:49	1.93	0.07	0.53
18_RCP_Marriott_1	CONDUIT	3.68	0	12:59	2.08	1.01	1.00
12_RCP_Marriott_2	CONDUIT	3.67	0	13:00	4.67	1.46	1.00
15_RCP_Marriott_3	CONDUIT	5.78	0	13:00	5.30	0.94	1.00
15_VCP_Marriott_4	CONDUIT	5.78	0	12:47	6.71	0.64	1.00
15_RCP_Mattiott_5	CONDUIT	5.74	0	13:00	4.84	0.73	1.00
15_RCP_Mattiott_6	CONDUIT	7.59	0	12:47	6.18	0.97	1.00
24_RCP_Marriott_7	CONDUIT	20.33	0	13:17	6.47	0.59	1.00
24_RCP_Marriott_8	CONDUIT	21.89	0	13:06	6.97	0.98	1.00
24_RCP_Marriott_9	CONDUIT	15.42	0	12:41	4.91	0.73	1.00
24_RCP_Etheridge_1	CONDUIT	12.21	0	12:33	3.89	0.74	1.00
24_RCP_Etheridge_2	CONDUIT	9.74	0	12:42	3.10	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.42	0	13:05	6.41	0.26	0.67
Railroad_Swale_2	CONDUIT	47.35	0	13:06	1.18	0.02	0.31
Railroad_Swale_1	CONDUIT	9.52	0	13:01	1.81	0.02	0.21
Cemetery_Dr_Swale	CONDUIT	62.66	0	13:05	1.52	0.10	0.69
Gainor_Swale	CONDUIT	12.68	0	13:01	1.66	0.07	0.40
12_RCP_Gainor_1	CONDUIT	4.66	0	15:18	5.95	1.07	1.00
18_RCP_Gainor_2	CONDUIT	6.21	0	12:34	3.51	0.73	1.00
18_RCP_Gainor_3	CONDUIT	9.80	0	12:35	5.67	0.58	1.00
18_RCP_Gainor_4	CONDUIT	12.07	0	14:23	6.83	0.86	1.00
18_RCP_Gainor_5	CONDUIT	18.77	0	12:36	10.62	7.58	1.00
24_RCP_Gainor_6	CONDUIT	18.33	0	13:01	6.23	1.07	0.89

Future Conditions - Project Areas 2,4,5,& 6 (25-Year)

15_RCP_Gainor_7A	CONDUIT	8.95	0	12:49	5.79	0.61	1.00
15_RCP_Gainor_7B	CONDUIT	20.89	0	13:16	11.82	11.93	1.00
15_RCP_Gainor_7C	CONDUIT	3.97	0	13:00	3.94	0.19	0.77
36_RCP_Gainor_8	CONDUIT	42.38	0	13:00	6.44	0.36	0.91
36_RCP_Gainor_9	CONDUIT	51.06	0	12:58	8.60	0.53	0.81
15_RCP_W_Battleboro_1	CONDUIT	3.48	0	13:07	2.94	0.42	1.00
18_RCP_W_Battleboro_2	CONDUIT	6.50	0	12:40	3.68	0.83	1.00
18_RCP_W_Battleboro_3	CONDUIT	7.01	0	13:43	3.96	0.93	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.93	0	13:37	6.19	0.81	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.77	0	13:21	7.22	1.42	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.48	0	12:51	8.76	1.12	1.00
15_RCP_Pollard_3	CONDUIT	3.80	0	13:47	3.20	0.16	1.00
15_RCP_Pollard_2	CONDUIT	3.44	0	12:40	4.04	0.67	1.00
12_RCP_Pollard_1	CONDUIT	1.52	0	13:07	1.94	1.71	1.00
12_RCP_W_Bridges_1	CONDUIT	1.67	0	12:34	2.13	0.72	1.00
12_RCP_W_Bridges_2	CONDUIT	2.40	0	12:34	3.05	0.48	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:23	3.10	4.58	1.00
15_RCP_Railroad_2	CONDUIT	4.36	0	13:02	4.46	0.76	0.77
15_RCP_Railroad_3	CONDUIT	1.64	0	13:00	3.22	0.25	0.47
18_RCP_Railroad_4	CONDUIT	5.87	0	13:00	4.65	0.49	0.68
24_RCP_Railroad_5	CONDUIT	8.81	0	13:00	5.00	0.35	0.55
24_RCP_Railroad_6*	CONDUIT	8.80	0	13:00	4.74	0.42	0.57
24_RCP_Railroad_7*	CONDUIT	8.80	0	13:01	4.67	0.46	0.58
24_VCP_Railroad_8	CONDUIT	9.60	0	13:01	6.19	0.32	0.50
CONNECT**	CONDUIT	113.12	0	13:00	2.14	0.38	1.00
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	4.99	0	13:00	1.88	0.00	0.02
Overland_Burrows_2	CONDUIT	4.86	0	13:01	1.44	0.00	0.02
Overland_Burrows_3	CONDUIT	5.89	0	13:01	2.05	0.00	0.02
Overland_Burrows_4	CONDUIT	6.75	0	13:03	1.98	0.00	0.02
Overland_Burrows_5	CONDUIT	9.95	0	13:04	1.75	0.00	0.04
Overland_Burrows_6	CONDUIT	1.94	0	13:08	0.89	0.00	0.01
Overland_Burrows_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	4.79	0	13:02	1.09	0.00	0.02
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	204.23	0	13:13	1.57	0.04	0.58
Farm-Culvert	CONDUIT	16.67	0	10:23	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	199.58	0	13:04	7.02	0.04	0.18
Railroad_Culvert	CONDUIT	63.67	0	13:53	9.01	0.96	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.19
Over_15_RCP_Marriott_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_6	CONDUIT	0.87	0	13:01	0.22	0.00	0.03
Over_24_RCP_Marriott_7	CONDUIT	9.28	0	13:04	1.44	0.00	0.04
Over_24_RCP_Marriott_8	CONDUIT	6.99	0	13:05	0.82	0.00	0.06
Over_24_RCP_Marriott_9	CONDUIT	21.02	0	13:03	1.44	0.01	0.10
Over_24_RCP_Etheridge_1	CONDUIT	42.70	0	13:03	1.21	0.01	0.21
Over_24_RCP_Etheridge_2	CONDUIT	31.76	0	13:04	0.98	0.01	0.19
Over_15_RCP_W_Battleboro_1	CONDUIT	1.74	0	13:00	0.54	0.01	0.02
Over_15_RCP_W_Battleboro_2	CONDUIT	2.05	0	13:00	0.31	0.00	0.04
Over_18_RCP_W_Battleboro_4	CONDUIT	15.33	0	13:01	1.66	0.06	0.06
Over_18_RCP_W_Battleboro_5	CONDUIT	14.43	0	13:00	2.38	0.00	0.04
Over_18_RCP_W_Battleboro_6	CONDUIT	7.35	0	13:01	1.72	0.00	0.03
Over_12_RCP_Pollard_1	CONDUIT	0.73	0	13:00	0.12	0.00	0.04
Over_15_RCP_Pollard_2	CONDUIT	1.14	0	13:00	0.13	0.00	0.06
Over_24_RCP_Etheridge_3	CONDUIT	23.28	0	13:05	5.67	0.00	0.03
Over_12_RCP_W_Bridges_1	CONDUIT	2.23	0	13:00	0.61	0.00	0.03
Over_12_RCP_W_Bridges_2	CONDUIT	3.72	0	13:00	0.86	0.01	0.03
Over_12_RCP_Railroad_1	CONDUIT	2.40	0	13:02	0.69	0.00	0.02
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_6*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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Over_24_RCP_Railroad_7* CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_24_VCP_Railroad_8 CONDUIT       0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Railroad_3 CONDUIT       0.00     0  00:00      0.00    0.00    0.00
Over_12_RCP_Gainor_1 CONDUIT        10.23     0  13:03      0.42    0.00    0.15
OVer_18_RCP_Gainor_2 CONDUIT         9.68     0  13:00      0.88    0.00    0.07
Over_18_RCP_Gainor_3 CONDUIT        22.31     0  13:01      5.21    0.00    0.03
Over_18_RCP_Gainor_4 CONDUIT         0.00     0  00:00      0.00    0.00    0.00
Over_18_RCP_Gainor_5 CONDUIT        32.85     0  13:00      4.70    0.00    0.09
Over_24_RCP_Gainor_6 CONDUIT         0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_8 CONDUIT         0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_9 CONDUIT         0.00     0  00:00      0.00    0.00    0.00
12_RCP_Crepe_Myrtle_1 CONDUIT        1.69     0  13:28      2.57    0.50    1.00
12_RCP_Crepe_Myrtle_2 CONDUIT        6.44     0  13:09      8.22    1.07    1.00
Crepe_Myrtle_Swale   CONDUIT        25.00    0  13:00      1.28    0.05    0.58
Over_18_RCP_Hathaway_10 CONDUIT       3.33     0  13:00      1.25    0.00    0.02
Over_12_RCP_Crepe_Myrtle_1 CONDUIT      2.20     0  13:10      0.31    0.00    0.13
Over_15_RCP_Hathaway_12* CONDUIT      2.83     0  13:00      1.22    0.00    0.02
15_RCP_Gainor        CONDUIT         3.12     0  12:39      2.54    0.59    1.00
Gainor_Bridges       CONDUIT         4.55     0  12:40      3.71    0.97    1.00
Over_15_RCP_Gainor   CONDUIT         4.16     0  13:00      0.68    0.02    0.04
Over_Gainor_Bridges  CONDUIT         4.36     0  13:01      0.32    0.00    0.09
Over_15_RCP_Gainor_7A CONDUIT        1.46     0  13:00      0.86    0.00    0.02
Over_15_RCP_Gainor_7C CONDUIT        0.00     0  00:00      0.00    0.00    0.00
Over_Hathaway_3      CONDUIT         0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Hathaway_9 CONDUIT       0.00     0  00:00      0.00    0.00    0.00
Battle-Gainor-Over   CONDUIT        14.76     0  13:03      2.60    0.00    0.04
15_RCP_Gainor_7D     CONDUIT         8.95     0  12:49      5.07    0.92    1.00
84                   CONDUIT         4.43     0  13:05      0.62    0.00    0.09
E-Battleboro-Culv    CONDUIT         8.67     0  13:02      4.65    1.13    0.58
RR-Open-Ditch2       CONDUIT         8.27     0  13:05      0.38    0.02    0.59
Pearsall             CONDUIT         2.93     0  13:00      4.33    0.34    0.41
RR-Open-Ditch1       CONDUIT         2.86     0  13:00      0.80    0.01    0.35
Battleboro-Ovr       CONDUIT         0.00     0  00:00      0.00    0.00    0.00


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Flow Classification Summary
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                    Adjusted    --- Fraction of Time in Flow Class ----    Avg.     Avg.
                     /Actual         Up    Down  Sub   Sup   Up    Down   Froude   Flow
Conduit               Length    Dry  Dry   Dry   Crit  Crit  Crit  Crit   Number   Change
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BeechTrib8              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.26   0.0000
NC-4                    1.00   0.02  0.00  0.00  0.95  0.03  0.00  0.00     0.44   0.0003
BeechTrib7              1.00   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.23   0.0000
Channel_4**             1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.11   0.0000
BeechTrib6              1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.14   0.0000
W_Battleboro_Ave_Culvert**    3.30   0.02  0.00  0.00  0.75  0.23  0.00  0.00     0.84   0.0003
Channel_3A**            1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.26   0.0000
Channel_3B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.13   0.0000
BeechTrib5              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.14   0.0003
Hathaway_St_Culvert     1.18   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.26   0.0005
15_RCP_Hathaway_1       2.23   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.28   0.0000
15_RCP_Hathaway_2       1.00   0.03  0.00  0.00  0.96  0.00  0.00  0.01     0.38   0.0001
15_RCP_Hathaway_3       2.38   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.26   0.0000
15_RCP_Hathaway_4       1.00   0.04  0.00  0.00  0.23  0.70  0.00  0.04     1.14   0.0001
15_RCP_Hathaway_5       1.34   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.05   0.0001
15_RCP_Hathaway_6       1.00   0.05  0.00  0.00  0.01  0.94  0.00  0.00     1.66   0.0001
15_RCP_Hathaway_7       1.00   0.02  0.03  0.00  0.92  0.03  0.00  0.00     0.59   0.0001
15_RCP_Hathaway_8       2.28   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.24   0.0000
15_RCP_Hathaway_9       2.53   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.54   0.0001
18_RCP_Hathaway_10      2.92   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.56   0.0001
15_RCP_Hathaway_11*     1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.43   0.0002
15_RCP_Hathaway_12*     6.57   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.37   0.0003
Hathaway_Swale*         1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.03   0.0000
BeechTrib4              1.00   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.18   0.0000
12_RCP_Battleboro_Apt_1    1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.80   0.0001
12_RCP_Battleboro_Apt_2    1.29   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.29   0.0000
12_RCP_Battleboro_Apt_3    1.10   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.11   0.0001
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Future Conditions - Project Areas 2,4,5,& 6 (25-Year)

15_RCP_Battleboro_Apt_4	1.78	0.02	0.00	0.00	0.93	0.05	0.00	0.00	0.29	0.0000
BeechTrib3	2.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib2	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.11	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.04	0.94	0.00	0.00	2.08	0.0002
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.51	0.0001
15_RCP_Burrows_3	1.76	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.39	0.0003
15_RCP_Burrows_4	1.00	0.04	0.00	0.00	0.05	0.91	0.00	0.00	1.46	0.0002
15_RCP_Burrows_5	1.15	0.04	0.00	0.00	0.76	0.21	0.00	0.00	0.78	0.0002
15_RCP_Burrows_6	4.20	0.04	0.00	0.00	0.52	0.44	0.00	0.00	1.27	0.0002
18_RCP_Burrows_7	5.31	0.04	0.01	0.00	0.93	0.03	0.00	0.00	0.21	0.0001
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.18	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.11	0.0001
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0002
15_RCP_Marriott_3	3.55	0.05	0.00	0.00	0.03	0.92	0.00	0.00	1.24	0.0001
15_VCP_Marriott_4	1.95	0.05	0.00	0.00	0.02	0.93	0.00	0.00	1.56	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.03	0.00	0.53	0.42	0.00	0.00	0.90	0.0001
15_RCP_Mattiott_6	1.30	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.63	0.0002
24_RCP_Marriott_7	1.14	0.03	0.00	0.00	0.85	0.12	0.00	0.00	0.74	0.0001
24_RCP_Marriott_8	1.47	0.02	0.01	0.00	0.94	0.03	0.00	0.00	0.14	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.04	0.0004
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0002
24_RCP_Etheridge_3	7.59	0.02	0.05	0.00	0.00	0.00	0.93	0.00	0.35	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
12_RCP_Gainor_1	1.00	0.02	0.00	0.00	0.43	0.55	0.00	0.00	0.84	0.0002
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.56	0.0002
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.22	0.76	0.00	0.00	1.13	0.0002
18_RCP_Gainor_4	1.00	0.02	0.00	0.00	0.31	0.30	0.00	0.38	1.22	0.0001
18_RCP_Gainor_5	2.32	0.02	0.00	0.00	0.19	0.00	0.00	0.79	0.55	0.0011
24_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	0.99	0.0001
15_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.03	0.95	0.00	0.00	1.31	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0018
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.52	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.15	0.83	0.00	0.00	1.30	0.0001
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.05	0.94	0.00	0.00	1.34	0.0001
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.64	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.61	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.03	0.00	0.25	0.00	0.71	0.00	0.30	0.0002
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.32	0.66	0.00	0.00	0.94	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.11	0.88	0.00	0.00	1.17	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.65	0.33	0.00	0.00	0.82	0.0002
15_RCP_Pollard_3	26.14	0.02	0.03	0.00	0.95	0.00	0.00	0.00	0.31	0.0001
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.74	0.06	0.00	0.19	0.68	0.0002
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0004
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0002
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.19	0.0008
15_RCP_Railroad_2	2.51	0.02	0.03	0.00	0.05	0.90	0.00	0.00	1.02	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.95	0.03	0.00	0.00	0.67	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.47	0.0001
24_RCP_Railroad_5	3.55	0.04	0.00	0.00	0.02	0.94	0.00	0.00	1.20	0.0001
24_RCP_Railroad_6*	3.25	0.04	0.00	0.00	0.05	0.91	0.00	0.00	1.06	0.0001
24_RCP_Railroad_7*	2.02	0.02	0.02	0.00	0.06	0.90	0.00	0.00	1.08	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.63	0.0000
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0001
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.14	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	0.97	0.00	0.00	0.00	0.02	0.00	0.00	0.04	0.0000
Overland_Burrows_2	3.53	0.97	0.00	0.00	0.01	0.00	0.00	0.02	0.02	0.0000
Overland_Burrows_3	7.01	0.96	0.00	0.00	0.00	0.03	0.00	0.00	0.04	0.0000
Overland_Burrows_4	2.14	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.0000
Overland_Burrows_5	1.88	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.0000
Overland_Burrows_6	5.36	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000
Overland_Burrows_7	7.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

Future Conditions - Project Areas 2,4,5,& 6 (25-Year)

W_Battleboro_Ave-Over	3.80	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.15	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.85	0.13	0.00	0.00	0.37	0.0002
Over_Farm-Culvert	7.77	0.38	0.00	0.00	0.00	0.05	0.00	0.58	0.94	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.0002
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	0.80	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_2	27.58	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_3	4.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	0.97	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_7	1.03	0.97	0.00	0.00	0.01	0.00	0.00	0.02	0.02	0.0000
Over_24_RCP_Marriott_8	1.80	0.90	0.08	0.00	0.02	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_9	2.78	0.81	0.09	0.00	0.10	0.00	0.00	0.00	0.03	0.0000
Over_24_RCP_Etheridge_1	5.90	0.72	0.09	0.00	0.19	0.00	0.00	0.00	0.03	0.0000
Over_24_RCP_Etheridge_2	1.42	0.72	0.14	0.00	0.00	0.00	0.14	0.00	0.02	0.0000
Over_15_RCP_W_Battleboro_1	2.34	0.97	0.00	0.00	0.02	0.00	0.00	0.02	0.01	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.92	0.05	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.92	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.0000
Over_18_RCP_W_Battleboro_5	1.60	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.0000
Over_18_RCP_W_Battleboro_6	6.23	0.97	0.01	0.00	0.01	0.01	0.00	0.00	0.02	0.0000
Over_12_RCP_Pollard_1	1.11	0.92	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.91	0.05	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.90	0.00	0.00	0.00	0.00	0.00	0.10	0.30	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.93	0.02	0.00	0.05	0.00	0.00	0.00	0.01	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.93	0.00	0.00	0.03	0.00	0.00	0.04	0.03	0.0000
Over_12_RCP_Railroad_1	1.00	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Gainor_1	1.00	0.79	0.08	0.00	0.00	0.00	0.13	0.00	0.01	0.0000
OVer_18_RCP_Gainor_2	5.06	0.86	0.01	0.00	0.00	0.00	0.13	0.00	0.03	0.0000
Over_18_RCP_Gainor_3	20.67	0.88	0.00	0.00	0.00	0.09	0.00	0.03	0.39	0.0000
Over_18_RCP_Gainor_4	1.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_5	16.05	0.89	0.00	0.00	0.03	0.01	0.00	0.07	0.24	0.0000
Over_24_RCP_Gainor_6	18.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
12_RCP_Crepe_Myrtle_1	2.12	0.02	0.00	0.00	0.35	0.10	0.00	0.53	0.94	0.0003
12_RCP_Crepe_Myrtle_2	1.00	0.02	0.00	0.00	0.05	0.94	0.00	0.00	1.62	0.0002
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.08	0.0000
Over_18_RCP_Hathaway_10	1.15	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.0000
Over_12_RCP_Crepe_Myrtle_1	5.17	0.94	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_12*	15.31	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.0000
15_RCP_Gainor	3.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0001
Gainor_Bridges	1.00	0.02	0.00	0.00	0.98	0.01	0.00	0.00	0.57	0.0002
Over_15_RCP_Gainor	3.16	0.89	0.00	0.00	0.06	0.00	0.00	0.05	0.04	0.0000
Over_Gainor_Bridges	1.33	0.83	0.09	0.00	0.08	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7A	13.13	0.97	0.01	0.00	0.01	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.0000
15_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.45	0.0001
84	30.58	0.91	0.00	0.00	0.09	0.00	0.00	0.00	0.01	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.72	0.0002
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.06	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.15	0.0000
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

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Conduit Surcharge Summary

Future Conditions - Project Areas 2,4,5,& 6 (25-Year)

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Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
NC-4	5.74	5.74	5.74	7.98	5.74
W_Battleboro_Ave_Culvert**	0.40	0.40	0.40	3.21	0.40
BeechTrib5	0.01	0.01	0.01	7.57	0.01
Hathaway_St_Culvert	0.01	0.01	0.01	11.22	0.01
18_RCP_Hathaway_10	0.62	0.62	0.62	0.01	0.01
15_RCP_Hathaway_11*	0.79	0.79	0.79	0.36	0.62
15_RCP_Hathaway_12*	0.01	0.01	0.01	1.02	0.01
15_RCP_Burrows_1	0.50	0.50	0.50	0.01	0.43
15_RCP_Burrows_2	0.54	0.54	0.54	0.01	0.01
15_RCP_Burrows_3	0.67	0.67	0.67	1.00	0.01
15_RCP_Burrows_4	0.66	0.66	0.66	0.07	0.17
15_RCP_Burrows_5	0.62	0.62	0.62	0.27	0.27
15_RCP_Burrows_6	0.48	0.48	0.48	0.28	0.44
18_RCP_Burrows_7	2.56	2.56	2.57	0.01	0.01
18_RCP_Marriott_1	0.38	0.38	0.38	0.15	0.38
12_RCP_Marriott_2	0.54	0.54	0.54	0.48	0.48
15_RCP_Marriott_3	0.05	0.05	0.05	0.01	0.05
15_VCP_Marriott_4	0.05	0.05	0.05	0.01	0.01
15_RCP_Mattiott_5	0.28	0.28	0.28	0.01	0.01
15_RCP_Mattiott_6	0.69	0.69	0.69	0.01	0.46
24_RCP_Marriott_7	0.57	0.57	0.57	0.01	0.01
24_RCP_Marriott_8	4.16	4.16	4.16	0.01	0.64
24_RCP_Marriott_9	6.08	6.08	6.08	0.01	0.21
24_RCP_Etheridge_1	6.98	6.98	6.98	0.01	0.09
24_RCP_Etheridge_2	9.97	9.97	9.97	0.01	0.01
12_RCP_Gainor_1	2.59	2.59	2.59	0.82	0.42
18_RCP_Gainor_2	2.17	2.17	2.17	0.01	0.02
18_RCP_Gainor_3	2.18	2.18	2.18	0.01	0.02
18_RCP_Gainor_4	2.26	2.26	2.26	0.01	0.01
18_RCP_Gainor_5	2.33	2.33	2.33	9.76	2.33
24_RCP_Gainor_6	0.01	0.01	0.01	1.68	0.01
15_RCP_Gainor_7A	0.30	0.30	0.30	0.01	0.27
15_RCP_Gainor_7B	0.83	0.83	0.83	1.58	0.83
15_RCP_W_Battleboro_1	0.75	0.75	0.75	0.01	0.01
18_RCP_W_Battleboro_2	1.04	1.04	1.04	0.01	0.01
18_RCP_W_Battleboro_3	1.30	1.30	1.31	0.01	0.01
18_RCP_W_Battleboro_4	1.34	1.34	1.34	0.01	0.59
18_RCP_W_Battleboro_5	1.20	1.20	1.20	0.95	1.20
18_RCP_W_Battleboro_6	0.77	0.77	0.77	0.41	0.77
15_RCP_Pollard_3	1.22	1.22	1.22	0.01	0.01
15_RCP_Pollard_2	0.69	0.69	0.69	0.01	0.01
12_RCP_Pollard_1	1.07	1.07	1.07	0.50	0.67
12_RCP_W_Bridges_1	1.03	1.03	1.03	0.01	0.02
12_RCP_W_Bridges_2	1.02	1.02	1.02	0.01	0.01
12_RCP_Railroad_1	0.58	0.58	0.58	4.51	0.58
CONNECT**	0.20	0.20	0.20	0.01	0.01
Farm-Culvert	11.15	11.15	11.15	10.41	10.56
Railroad_Culvert	3.44	3.44	3.44	0.01	2.97
12_RCP_Crepe_Myrtle_1	0.86	0.86	0.86	0.01	0.01
12_RCP_Crepe_Myrtle_2	0.44	0.44	0.44	0.81	0.44
15_RCP_Gainor	2.06	2.06	2.06	0.01	0.01
Gainor_Bridges	2.06	2.06	2.06	0.01	0.01
15_RCP_Gainor_7D	0.30	0.30	0.30	0.01	0.01
E-Battleboro-Culv	0.01	0.01	0.01	0.22	0.01

Analysis begun on: Mon Dec 07 15:48:14 2015
Analysis ended on: Mon Dec 07 15:48:18 2015
Total elapsed time: 00:00:04

Future Conditions - Project Areas 2,4,5,& 6 (50-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
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Future Conditions - Project Areas 2,4,5,& 6 (50-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-06-2015 00:00:00
Ending Date .............. APR-07-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Gainor

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905
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WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224

WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node PE_972240

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       774.230         7.194
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       232.778         2.163
Surface Runoff ...........       475.744         4.421
Final Surface Storage ....        66.316         0.616
Continuity Error (%) .....        -0.079


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       474.588       154.652
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       455.537       148.444
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        20.449         6.664
Continuity Error (%) .....        -0.294


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (3.43%)
Node 8** (1.43%)
```

Future Conditions - Project Areas 2,4,5,& 6 (50-Year)

```
**************************
Time-Step Critical Elements
**************************
Link 24_RCP_Etheridge_2 (19.73%)
Link 18_RCP_Gainor_5 (17.14%)
Link Farm-Culvert (15.85%)
Link Hathaway_St_Culvert (15.46%)
Link W_Battleboro_Ave_Culvert** (6.37%)


*******************************
Highest Flow Instability Indexes
*******************************
All links are stable.


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     5.80 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.03


**************************
Subcatchment Runoff Summary
**************************
```

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	7.19	0.00	0.00	2.16	4.12	54.20	531.00	0.572
Basin_A-2	7.19	0.00	0.00	1.89	4.68	16.78	184.57	0.651
Basin_A-3	7.19	0.00	0.00	2.08	4.65	13.14	134.84	0.647
Basin_A-4	7.19	0.00	0.00	2.26	4.41	19.96	202.91	0.614
Basin_A-5	7.19	0.00	0.00	2.22	4.45	14.80	168.78	0.619
Basin_B-2	7.19	0.00	0.00	2.59	4.24	9.79	114.47	0.589
Area#5-10	7.19	0.00	0.00	2.27	4.84	0.05	1.09	0.672
Area#5-30	7.19	0.00	0.00	1.15	5.98	0.13	2.73	0.831
Area#5-50	7.19	0.00	0.00	2.03	5.09	0.06	1.34	0.708
Area#5-70	7.19	0.00	0.00	2.54	4.54	0.17	3.28	0.631
Area#5-80	7.19	0.00	0.00	1.80	5.32	0.23	4.72	0.739
Area#5-20	7.19	0.00	0.00	1.15	5.99	0.06	1.33	0.832
Area#5-40	7.19	0.00	0.00	1.15	5.98	0.06	1.28	0.831
Area#5-90	7.19	0.00	0.00	1.02	6.13	0.15	3.17	0.853
Area#5-100	7.19	0.00	0.00	1.15	6.00	0.08	1.63	0.833
Area#6-10	7.19	0.00	0.00	3.45	3.67	0.10	2.09	0.510
Area#6-20	7.19	0.00	0.00	2.37	4.71	0.47	8.83	0.654
Area#6-30	7.19	0.00	0.00	2.27	4.76	1.30	22.38	0.662
Area#6-40	7.19	0.00	0.00	2.65	4.34	0.87	13.18	0.603
Area#6-50	7.19	0.00	0.00	3.07	3.97	1.77	32.11	0.552
Area#6-60	7.19	0.00	0.00	2.27	4.73	6.90	109.81	0.657
Area#6-70	7.19	0.00	0.00	0.43	6.73	0.11	2.19	0.936
Area#6-80	7.19	0.00	0.00	3.45	3.68	0.07	1.62	0.511
Area#6-90	7.19	0.00	0.00	2.85	4.23	0.73	13.53	0.588
Area#4-140	7.19	0.00	0.00	1.14	6.00	0.16	3.45	0.834
Area#4-150	7.19	0.00	0.00	0.43	6.73	0.07	1.56	0.936
Area#4-160	7.19	0.00	0.00	1.71	5.43	0.02	0.49	0.755
Area#4-170	7.19	0.00	0.00	0.97	6.17	0.09	1.84	0.858
Area#4-180	7.19	0.00	0.00	1.42	5.70	0.16	3.40	0.793
Area#4-190	7.19	0.00	0.00	0.97	6.17	0.05	1.00	0.858
Area#4-200	7.19	0.00	0.00	3.12	3.98	0.21	4.12	0.553
Area#4-130	7.19	0.00	0.00	2.71	4.42	0.15	3.09	0.614
Area#4-120	7.19	0.00	0.00	2.46	4.67	0.12	2.44	0.649
Area#4-100	7.19	0.00	0.00	3.70	3.42	0.16	3.28	0.475
Area#4-90	7.19	0.00	0.00	0.69	6.46	0.12	2.39	0.898
Area#4-80	7.19	0.00	0.00	0.40	6.75	0.20	4.12	0.938

Area#4-10	7.19	0.00	0.00	0.43	6.72	0.16	3.42	0.934
Area#4-20	7.19	0.00	0.00	0.85	6.28	0.29	6.04	0.874
Area#4-70	7.19	0.00	0.00	0.74	6.40	0.23	4.73	0.889
Area#4-60	7.19	0.00	0.00	0.43	6.72	0.16	3.39	0.935
Area#4-50	7.19	0.00	0.00	0.71	6.42	0.35	7.19	0.892
Area#4-30	7.19	0.00	0.00	2.50	4.60	0.08	1.94	0.640
Area#2-10	7.19	0.00	0.00	1.96	5.04	0.38	6.36	0.701
Area#2-20	7.19	0.00	0.00	1.46	5.62	0.12	2.42	0.781
Area#2-30	7.19	0.00	0.00	2.12	4.90	0.40	7.07	0.681
Area#2-40	7.19	0.00	0.00	1.58	5.51	0.70	14.63	0.767
Area#2-50	7.19	0.00	0.00	1.79	5.17	0.79	12.08	0.719
Area#2-60	7.19	0.00	0.00	1.79	5.31	0.50	10.88	0.737
Area#2-70	7.19	0.00	0.00	2.12	4.93	0.52	10.25	0.685
Area#2-100	7.19	0.00	0.00	1.68	5.41	0.34	7.00	0.753
Area#2-80	7.19	0.00	0.00	1.46	5.65	0.20	4.28	0.785
Area#2-110	7.19	0.00	0.00	1.68	5.42	0.22	4.61	0.753
Area#5-60	7.19	0.00	0.00	1.15	6.00	0.06	1.25	0.833
Area#2-90	7.19	0.00	0.00	1.37	5.68	0.42	7.68	0.790
Area#2-120	7.19	0.00	0.00	1.63	5.33	3.28	50.01	0.740
Area#2-150	7.19	0.00	0.00	2.15	4.87	0.91	15.31	0.676
Area#4-40	7.19	0.00	0.00	1.42	5.71	0.18	3.85	0.793
Area#4-110	7.19	0.00	0.00	1.48	5.61	0.46	9.85	0.780
Area#5-110	7.19	0.00	0.00	0.63	6.51	0.18	3.79	0.905
Area#2-130	7.19	0.00	0.00	1.77	5.34	0.16	3.36	0.743
Area#2-140	7.19	0.00	0.00	2.15	4.88	0.45	8.00	0.679

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	3.18	5.95	125.95	0 13:09
3**	JUNCTION	0.58	1.74	102.74	0 13:00
D/S_NC-4	JUNCTION	2.68	3.99	105.17	0 16:01
5**	JUNCTION	3.49	5.41	99.41	0 15:08
D/S_W_Battleboro_Ave**	JUNCTION	1.38	3.41	117.58	0 13:03
7**	JUNCTION	2.38	4.74	106.74	0 13:11
8**	JUNCTION	5.36	7.89	97.89	0 15:11
Hathaway_St-D/S	JUNCTION	4.22	5.95	95.93	0 15:15
DI_983628	JUNCTION	0.09	0.41	127.31	0 13:00
DI_983629	JUNCTION	0.29	1.08	127.28	0 13:00
DI_983630	JUNCTION	0.49	1.26	126.72	0 13:00
DI_983631	JUNCTION	0.13	0.49	126.94	0 12:59
DI_983633	JUNCTION	0.49	1.18	122.28	0 12:59
DI_983632	JUNCTION	0.54	1.18	122.23	0 13:00
DI_983634	JUNCTION	0.25	1.12	114.77	0 13:00
DI_984002*	JUNCTION	0.68	3.55	111.05	0 13:00
UNK_952741*	JUNCTION	0.54	3.92	111.82	0 12:59
DI_983635	JUNCTION	0.13	0.92	112.07	0 13:00
PE_972255	JUNCTION	0.13	0.46	113.96	0 12:59
PE_972263	JUNCTION	0.26	2.92	111.82	0 13:00
PE_972261*	JUNCTION	0.21	0.82	108.22	0 13:00
PE_972258	JUNCTION	4.34	6.28	95.28	0 15:18
Railroad_Junction_1	JUNCTION	2.35	5.04	109.57	0 13:08
Junction_1	JUNCTION	4.75	6.76	94.26	0 14:42
DI_983955	JUNCTION	0.12	0.48	101.08	0 13:00
PE_272260	JUNCTION	0.10	0.40	102.00	0 12:59
DI_983954	JUNCTION	0.17	0.78	98.80	0 13:00
DI_983953	JUNCTION	0.11	0.42	96.32	0 13:00
Drew_Hill_Junction	JUNCTION	5.18	7.23	95.23	0 15:17
DI_983952	JUNCTION	0.40	3.72	109.05	0 13:00
DI_983951	JUNCTION	0.32	3.04	107.09	0 13:00
DI_983950	JUNCTION	0.93	4.06	105.06	0 13:01
DI_283949	JUNCTION	0.43	2.39	103.64	0 13:02
DI_983948	JUNCTION	0.39	2.44	99.09	0 13:03
DI_983947	JUNCTION	0.62	3.54	98.62	0 13:05

DI_983946	JUNCTION	0.83	3.28	97.55	0	13:08
PE_972230	JUNCTION	0.54	2.38	129.53	0	13:00
UNK_952735*	JUNCTION	0.57	2.31	129.41	0	13:02
DI_983907	JUNCTION	0.62	2.25	129.30	0	13:00
DI_983906	JUNCTION	0.21	1.53	128.64	0	13:00
UNK_952736*	JUNCTION	0.23	2.06	127.82	0	13:01
DI_983903	JUNCTION	0.38	3.18	125.79	0	13:00
DI_983902	JUNCTION	0.70	2.89	123.97	0	13:03
DI_983904	JUNCTION	1.32	4.64	122.05	0	13:04
DI_983905	JUNCTION	2.08	4.16	120.64	0	13:03
DI_983721	JUNCTION	2.49	4.24	120.21	0	13:04
DI_983722	JUNCTION	2.48	4.27	120.23	0	13:02
MH_974299	JUNCTION	2.89	4.59	120.04	0	13:03
PE_972229	JUNCTION	0.38	1.50	116.72	0	13:04
PE_972224	JUNCTION	0.21	0.86	121.71	0	13:01
PE_972239	JUNCTION	0.62	2.06	114.18	0	13:04
PE_972246	JUNCTION	0.47	1.57	128.13	0	13:00
PE_972240	JUNCTION	0.62	2.10	127.82	0	13:02
DI_983935	JUNCTION	0.73	3.06	127.01	0	13:00
DI_983934	JUNCTION	0.83	3.24	126.92	0	13:00
MH_974300	JUNCTION	0.94	4.26	127.02	0	13:02
DI_983624	JUNCTION	1.66	5.22	122.34	0	13:00
DI_983623	JUNCTION	0.86	2.34	119.39	0	12:57
DI_983619	JUNCTION	0.60	2.68	116.99	0	13:01
DI_983622	JUNCTION	0.35	2.97	120.42	0	13:00
DI_983621	JUNCTION	0.81	6.02	120.34	0	13:01
DI_983620	JUNCTION	0.11	0.88	117.33	0	13:00
DI_983618	JUNCTION	0.87	3.54	116.26	0	13:01
DI_983898	JUNCTION	0.69	3.93	127.93	0	13:00
DI_983604	JUNCTION	0.75	4.33	127.83	0	13:00
DI_983901	JUNCTION	0.57	4.21	126.56	0	13:01
DI_983607	JUNCTION	0.27	2.79	129.59	0	12:59
DI_983606	JUNCTION	0.43	3.40	129.55	0	13:00
DI_9836054	JUNCTION	0.85	4.09	128.14	0	13:04
MH_974298	JUNCTION	1.67	4.09	128.14	0	13:07
DI_983899	JUNCTION	0.30	1.79	128.76	0	13:00
DI_983900	JUNCTION	0.31	1.81	128.80	0	13:00
DI_983897	JUNCTION	0.36	1.96	128.16	0	13:00
DI_983896	JUNCTION	0.48	2.08	128.13	0	13:00
DI_983895	JUNCTION	0.61	2.27	128.12	0	13:01
DI_983894	JUNCTION	0.50	1.67	127.47	0	13:01
DI_953893*	JUNCTION	0.21	0.80	126.50	0	13:00
PE_972225	JUNCTION	0.12	0.46	127.01	0	12:45
UNK_952734*	JUNCTION	0.49	1.40	123.93	0	13:00
DI_983892	JUNCTION	0.28	1.27	123.50	0	13:00
UNK_952733*	JUNCTION	0.28	1.26	123.11	0	13:00
UNK_952732*	JUNCTION	0.28	1.29	122.64	0	13:00
U/S_NC-4	JUNCTION	3.31	7.11	109.72	0	15:55
U/S_W_Battleboro_Ave	JUNCTION	2.31	7.68	122.10	0	13:00
Hathaway_St-U/S	JUNCTION	4.73	7.44	97.43	0	15:15
9**	JUNCTION	2.21	6.89	122.31	0	12:59
Farm-Culv-Up	JUNCTION	3.04	4.09	100.09	0	13:10
Farm-Culv-Dn	JUNCTION	2.09	4.23	99.73	0	13:13
Railroad-Up	JUNCTION	1.97	6.53	112.11	0	13:44
DI_983957	JUNCTION	0.31	2.90	123.90	0	13:05
DI_983956*	JUNCTION	0.44	3.40	123.90	0	13:06
PE_972262	JUNCTION	0.35	1.24	116.63	0	13:00
DI_983936	JUNCTION	0.72	1.79	128.15	0	13:00
U/S_Gainor_Swale	JUNCTION	0.63	1.97	127.97	0	13:01
DI_983625	JUNCTION	0.36	2.95	119.95	0	13:00
952731	JUNCTION	0.50	1.78	122.73	0	13:02
972222	JUNCTION	0.23	0.79	121.58	0	13:05
983943	JUNCTION	0.18	0.77	126.42	0	12:59
952740	JUNCTION	0.14	0.54	125.99	0	13:00
Primary_Outfall*	OUTFALL	4.75	6.77	93.77	0	14:42

****
Node Inflow Summary
****

Future Conditions - Project Areas 2,4,5,& 6 (50-Year)

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	530.84	530.84	0	12:59	54.020	54.019
3**	JUNCTION	184.52	184.52	0	12:59	16.735	16.735
D/S_NC-4	JUNCTION	0.00	214.53	0	15:54	0.000	52.960
5**	JUNCTION	0.00	289.16	0	14:30	0.000	69.527
D/S_W_Battleboro_Ave**	JUNCTION	0.00	133.06	0	13:00	0.000	13.105
7**	JUNCTION	202.84	313.71	0	12:59	19.911	33.029
8**	JUNCTION	168.74	571.10	0	13:01	14.769	117.032
Hathaway_St-D/S	JUNCTION	0.00	533.28	0	15:14	0.000	116.901
DI_983628	JUNCTION	1.09	1.09	0	12:59	0.052	0.052
DI_983629	JUNCTION	1.33	2.41	0	12:59	0.063	0.116
DI_983630	JUNCTION	1.28	6.39	0	12:59	0.062	0.309
DI_983631	JUNCTION	2.73	2.73	0	12:59	0.131	0.131
DI_983633	JUNCTION	1.34	1.34	0	12:59	0.062	0.062
DI_983632	JUNCTION	1.25	8.93	0	12:59	0.059	0.429
DI_983634	JUNCTION	0.00	8.93	0	13:00	0.000	0.429
DI_984002*	JUNCTION	0.00	15.22	0	13:00	0.000	0.933
UNK_952741*	JUNCTION	3.17	7.23	0	12:36	0.150	0.504
DI_983635	JUNCTION	0.00	3.27	0	13:00	0.000	0.168
PE_972255	JUNCTION	3.28	3.28	0	12:59	0.168	0.168
PE_972263	JUNCTION	4.72	4.82	0	12:59	0.228	0.228
PE_972261*	JUNCTION	1.63	16.76	0	12:59	0.076	1.009
PE_972258	JUNCTION	0.00	533.75	0	15:15	0.000	116.952
Railroad_Junction_1	JUNCTION	127.60	251.38	0	12:59	10.632	25.266
Junction_1	JUNCTION	109.79	716.09	0	14:32	6.887	149.326
DI_983955	JUNCTION	1.62	1.62	0	12:59	0.074	0.074
PE_272260	JUNCTION	2.19	2.19	0	12:59	0.106	0.106
DI_983954	JUNCTION	0.00	3.80	0	12:59	0.000	0.180
DI_983953	JUNCTION	0.00	3.80	0	13:00	0.000	0.180
Drew_Hill_Junction	JUNCTION	0.00	533.68	0	15:18	0.000	116.229
DI_983952	JUNCTION	13.53	18.21	0	12:59	0.731	0.773
DI_983951	JUNCTION	0.00	18.05	0	13:00	0.000	0.772
DI_983950	JUNCTION	0.00	17.82	0	13:00	0.000	0.776
DI_283949	JUNCTION	0.00	17.76	0	13:01	0.000	0.776
DI_983948	JUNCTION	0.00	17.56	0	13:02	0.000	0.779
DI_983947	JUNCTION	0.00	17.46	0	13:03	0.000	0.779
DI_983946	JUNCTION	0.00	17.14	0	13:05	0.000	0.779
PE_972230	JUNCTION	4.12	4.12	0	12:59	0.198	0.198
UNK_952735*	JUNCTION	0.00	4.77	0	13:04	0.000	0.198
DI_983907	JUNCTION	2.39	6.21	0	12:46	0.116	0.313
DI_983906	JUNCTION	0.00	6.13	0	12:42	0.000	0.313
UNK_952736*	JUNCTION	0.00	6.15	0	12:42	0.000	0.313
DI_983903	JUNCTION	3.28	9.25	0	12:59	0.162	0.475
DI_983902	JUNCTION	0.00	34.88	0	13:01	0.000	1.928
DI_983904	JUNCTION	0.00	34.02	0	13:03	0.000	1.927
DI_983905	JUNCTION	9.85	41.15	0	13:02	0.455	2.383
DI_983721	JUNCTION	2.44	47.41	0	13:02	0.118	2.664
DI_983722	JUNCTION	3.09	52.46	0	13:01	0.152	2.816
MH_974299	JUNCTION	0.00	44.80	0	13:02	0.000	2.648
PE_972229	JUNCTION	4.12	58.03	0	13:03	0.213	3.406
PE_972224	JUNCTION	0.00	11.00	0	13:00	0.000	0.552
PE_972239	JUNCTION	0.00	80.94	0	13:02	0.000	4.601
PE_972246	JUNCTION	2.42	8.67	0	12:59	0.122	0.505
PE_972240	JUNCTION	0.00	15.05	0	13:01	0.000	0.903
DI_983935	JUNCTION	14.63	14.63	0	12:59	0.703	0.703
DI_983934	JUNCTION	12.07	28.57	0	13:00	0.786	1.501
MH_974300	JUNCTION	0.00	14.78	0	13:03	0.000	1.943
DI_983624	JUNCTION	21.12	61.07	0	12:59	1.025	3.419
DI_983623	JUNCTION	0.00	18.91	0	12:34	0.000	2.816
DI_983619	JUNCTION	0.00	42.87	0	12:58	0.000	3.825
DI_983622	JUNCTION	11.96	11.96	0	12:59	0.616	0.616
DI_983621	JUNCTION	7.00	52.06	0	13:00	0.338	0.962
DI_983620	JUNCTION	4.61	4.61	0	12:59	0.220	0.220
DI_983618	JUNCTION	0.00	51.44	0	12:54	0.000	4.423
DI_983898	JUNCTION	7.19	21.82	0	12:59	0.345	1.224
DI_983604	JUNCTION	4.73	26.04	0	12:59	0.226	1.452

DI_983901	JUNCTION	0.00	25.89	0	13:00	0.000	1.452
DI_983607	JUNCTION	3.42	3.42	0	12:59	0.164	0.164
DI_983606	JUNCTION	6.04	9.46	0	12:59	0.286	0.450
DI_9836054	JUNCTION	3.39	8.73	0	12:57	0.162	0.420
MH_974298	JUNCTION	0.00	4.69	0	12:35	0.000	0.245
DI_983899	JUNCTION	3.85	4.72	0	12:59	0.180	0.256
DI_983900	JUNCTION	1.93	1.93	0	12:59	0.085	0.085
DI_983897	JUNCTION	3.45	3.45	0	12:59	0.161	0.161
DI_983896	JUNCTION	1.56	4.99	0	12:59	0.075	0.237
DI_983895	JUNCTION	0.49	5.33	0	12:59	0.022	0.260
DI_983894	JUNCTION	0.00	5.02	0	13:01	0.000	0.260
DI_953893*	JUNCTION	0.00	6.76	0	13:00	0.000	0.347
PE_972225	JUNCTION	1.84	1.84	0	12:59	0.087	0.087
UNK_952734*	JUNCTION	3.40	10.13	0	12:59	0.159	0.506
DI_983892	JUNCTION	0.00	10.11	0	13:00	0.000	0.506
UNK_952733*	JUNCTION	0.00	10.09	0	13:00	0.000	0.505
UNK_952732*	JUNCTION	1.00	11.00	0	13:00	0.047	0.552
U/S_NC-4	JUNCTION	0.00	469.38	0	13:34	0.000	54.840
U/S_W_Battleboro_Ave	JUNCTION	0.00	134.80	0	13:00	0.000	13.111
Hathaway_St-U/S	JUNCTION	3.79	533.39	0	15:00	0.178	116.546
9**	JUNCTION	134.79	134.79	0	12:59	13.113	13.113
Farm-Culv-Up	JUNCTION	32.10	239.51	0	13:06	1.764	26.931
Farm-Culv-Dn	JUNCTION	0.00	237.77	0	13:08	0.000	26.836
Railroad-Up	JUNCTION	65.29	144.96	0	13:01	4.189	9.403
DI_983957	JUNCTION	2.09	3.38	0	12:58	0.103	0.106
DI_983956*	JUNCTION	8.83	10.05	0	13:00	0.466	0.572
PE_972262	JUNCTION	22.37	28.69	0	12:59	1.303	1.872
DI_983936	JUNCTION	6.35	6.35	0	12:59	0.383	0.383
U/S_Gainor_Swale	JUNCTION	7.06	15.47	0	12:59	0.398	0.903
DI_983625	JUNCTION	0.00	9.13	0	12:42	0.000	0.598
952731	JUNCTION	8.00	11.27	0	12:59	0.450	0.606
972222	JUNCTION	0.00	9.97	0	13:02	0.000	0.604
983943	JUNCTION	3.36	3.36	0	12:59	0.155	0.155
952740	JUNCTION	0.00	3.36	0	13:00	0.000	0.155
Primary_Outfall*	OUTFALL	0.00	715.67	0	14:42	0.000	148.433

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
9**	JUNCTION	0.84	0.895	1.105
DI_983625	JUNCTION	0.42	1.453	3.147

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Node Flooding Summary
****

No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	97.64	311.25	715.67	148.433
System	97.64	311.25	715.67	148.433

Future Conditions - Project Areas 2,4,5,& 6 (50-Year)

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Link Flow Summary
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Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
BeechTrib8	CHANNEL	469.38	0	13:34	2.29	0.05	0.40
NC-4	CONDUIT	214.53	0	15:54	11.15	1.25	1.00
BeechTrib7	CHANNEL	214.47	0	16:02	2.08	0.02	0.34
Channel_4**	CONDUIT	183.73	0	13:00	2.68	0.10	0.54
BeechTrib6	CHANNEL	286.50	0	15:08	1.67	0.09	0.67
W_Battleboro_Ave_Culvert**	CONDUIT	99.05	0	12:54	14.01	2.10	1.00
Channel_3A**	CHANNEL	119.15	0	13:03	2.87	0.01	0.27
Channel_3B	CHANNEL	244.75	0	13:11	1.28	0.02	0.41
BeechTrib5	CHANNEL	529.12	0	15:01	1.71	2.37	0.77
Hathaway_St_Culvert	CONDUIT	530.80	0	15:15	7.40	4.65	1.00
15_RCP_Hathaway_1	CONDUIT	1.08	0	13:00	1.55	0.15	0.60
15_RCP_Hathaway_2	CONDUIT	2.38	0	13:00	2.22	0.91	0.82
15_RCP_Hathaway_3	CONDUIT	2.73	0	13:00	3.00	0.32	0.69
15_RCP_Hathaway_4	CONDUIT	6.36	0	13:00	6.46	0.87	0.75
15_RCP_Hathaway_5	CONDUIT	1.34	0	13:00	1.12	0.71	0.94
15_RCP_Hathaway_6	CONDUIT	8.93	0	13:00	8.76	0.78	0.78
15_RCP_Hathaway_7	CONDUIT	8.91	0	13:00	7.51	0.76	0.93
15_RCP_Hathaway_8	CONDUIT	3.27	0	13:00	7.02	0.28	0.55
15_RCP_Hathaway_9	CONDUIT	3.30	0	13:00	2.93	0.24	0.87
18_RCP_Hathaway_10	CONDUIT	3.08	0	13:10	2.22	0.21	1.00
15_RCP_Hathaway_11*	CONDUIT	6.42	0	12:39	3.63	1.05	1.00
15_RCP_Hathaway_12*	CONDUIT	11.41	0	13:00	10.54	2.23	0.83
Hathaway_Swale*	CONDUIT	16.65	0	13:00	0.50	0.00	0.39
BeechTrib4	CHANNEL	533.26	0	15:15	1.70	0.06	0.53
12_RCP_Battleboro_Apt_1	CONDUIT	1.61	0	13:00	3.09	0.47	0.63
12_RCP_Battleboro_Apt_2	CONDUIT	2.19	0	12:59	5.06	0.34	0.59
12_RCP_Battleboro_Apt_3	CONDUIT	3.80	0	13:00	7.77	0.76	0.60
15_RCP_Battleboro_Apt_4	CONDUIT	3.79	0	13:00	4.34	0.23	0.67
BeechTrib3	CHANNEL	533.68	0	15:18	1.23	0.03	0.59
BeechTrib2	CHANNEL	533.93	0	15:23	1.36	0.14	0.57
Channel-6B	CHANNEL	215.62	0	13:08	2.87	0.10	0.51
15_RCP_Burrows_1	CONDUIT	10.25	0	12:40	8.35	0.98	1.00
15_RCP_Burrows_2	CONDUIT	9.66	0	13:00	7.87	0.69	1.00
15_RCP_Burrows_3	CONDUIT	8.61	0	12:41	7.01	1.99	1.00
15_RCP_Burrows_4	CONDUIT	8.04	0	12:40	6.67	1.03	1.00
15_RCP_Burrows_5	CONDUIT	8.68	0	12:46	7.08	1.13	1.00
15_RCP_Burrows_6	CONDUIT	11.94	0	12:55	9.73	1.11	1.00
18_RCP_Burrows_7	CONDUIT	15.71	0	13:03	8.89	0.49	1.00
BeechTrib1	CHANNEL	715.67	0	14:42	2.01	0.08	0.55
18_RCP_Marriott_1	CONDUIT	4.73	0	13:04	2.68	1.31	1.00
12_RCP_Marriott_2	CONDUIT	4.83	0	13:05	6.15	1.92	1.00
15_RCP_Marriott_3	CONDUIT	6.13	0	12:42	5.51	1.00	1.00
15_VCP_Marriott_4	CONDUIT	6.15	0	12:42	6.73	0.68	1.00
15_RCP_Mattiott_5	CONDUIT	5.98	0	13:02	4.89	0.76	1.00
15_RCP_Mattiott_6	CONDUIT	7.96	0	12:44	6.49	1.02	1.00
24_RCP_Marriott_7	CONDUIT	20.33	0	13:19	6.47	0.59	1.00
24_RCP_Marriott_8	CONDUIT	21.89	0	13:06	6.97	0.98	1.00
24_RCP_Marriott_9	CONDUIT	15.31	0	12:40	4.87	0.73	1.00
24_RCP_Etheridge_1	CONDUIT	9.87	0	12:31	3.14	0.60	1.00
24_RCP_Etheridge_2	CONDUIT	9.73	0	12:39	3.10	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.50	0	13:03	6.44	0.26	0.67
Railroad_Swale_2	CONDUIT	56.19	0	13:04	1.28	0.02	0.33
Railroad_Swale_1	CONDUIT	10.92	0	13:01	1.83	0.02	0.23
Cemetery_Dr_Swale	CONDUIT	78.27	0	13:04	1.63	0.12	0.71
Gainor_Swale	CONDUIT	15.05	0	13:01	1.66	0.08	0.41
12_RCP_Gainor_1	CONDUIT	4.68	0	15:35	5.98	1.07	1.00
18_RCP_Gainor_2	CONDUIT	6.19	0	12:34	3.50	0.73	1.00
18_RCP_Gainor_3	CONDUIT	9.93	0	12:34	5.62	0.58	1.00
18_RCP_Gainor_4	CONDUIT	12.08	0	14:42	6.84	0.86	1.00
18_RCP_Gainor_5	CONDUIT	18.91	0	12:34	10.70	7.64	1.00
24_RCP_Gainor_6	CONDUIT	18.39	0	13:00	6.23	1.07	0.91

15_RCP_Gainor_7A	CONDUIT	9.13	0	12:42	5.78	0.62	1.00
15_RCP_Gainor_7B	CONDUIT	20.89	0	13:21	11.82	11.93	1.00
15_RCP_Gainor_7C	CONDUIT	4.55	0	13:00	4.12	0.22	0.85
36_RCP_Gainor_8	CONDUIT	42.64	0	12:55	6.41	0.36	0.95
36_RCP_Gainor_9	CONDUIT	51.26	0	12:52	8.64	0.53	0.84
15_RCP_W_Battleboro_1	CONDUIT	3.41	0	13:08	2.95	0.41	1.00
18_RCP_W_Battleboro_2	CONDUIT	6.54	0	12:39	3.70	0.83	1.00
18_RCP_W_Battleboro_3	CONDUIT	6.71	0	13:49	3.80	0.89	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.87	0	13:45	6.15	0.80	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.89	0	13:25	7.30	1.43	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.48	0	12:48	8.76	1.12	1.00
15_RCP_Pollard_3	CONDUIT	3.60	0	13:56	3.07	0.15	1.00
15_RCP_Pollard_2	CONDUIT	3.56	0	12:35	4.07	0.69	1.00
12_RCP_Pollard_1	CONDUIT	1.45	0	13:10	1.85	1.63	1.00
12_RCP_W_Bridges_1	CONDUIT	1.71	0	12:33	2.17	0.73	1.00
12_RCP_W_Bridges_2	CONDUIT	2.42	0	12:34	3.08	0.49	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:27	3.10	4.58	1.00
15_RCP_Railroad_2	CONDUIT	5.02	0	13:02	4.70	0.87	0.82
15_RCP_Railroad_3	CONDUIT	1.84	0	12:59	3.34	0.28	0.50
18_RCP_Railroad_4	CONDUIT	6.75	0	13:00	4.89	0.56	0.74
24_RCP_Railroad_5	CONDUIT	10.11	0	13:00	5.08	0.40	0.61
24_RCP_Railroad_6*	CONDUIT	10.09	0	13:00	4.83	0.49	0.63
24_RCP_Railroad_7*	CONDUIT	10.09	0	13:01	4.79	0.53	0.64
24_VCP_Railroad_8	CONDUIT	11.00	0	13:00	6.39	0.36	0.54
CONNECT**	CONDUIT	134.80	0	13:00	2.11	0.45	1.00
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	8.28	0	13:00	2.29	0.00	0.02
Overland_Burrows_2	CONDUIT	8.16	0	13:00	1.75	0.00	0.03
Overland_Burrows_3	CONDUIT	9.22	0	13:01	2.46	0.00	0.02
Overland_Burrows_4	CONDUIT	10.12	0	13:02	2.32	0.00	0.03
Overland_Burrows_5	CONDUIT	13.63	0	13:03	1.97	0.00	0.04
Overland_Burrows_6	CONDUIT	8.60	0	13:05	1.58	0.00	0.04
Overland_Burrows_7	CONDUIT	0.66	0	13:08	0.85	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	36.01	0	13:00	2.31	0.01	0.08
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	235.38	0	13:13	1.60	0.05	0.60
Farm-Culvert	CONDUIT	16.68	0	10:04	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	231.39	0	13:09	7.11	0.05	0.22
Railroad_Culvert	CONDUIT	68.90	0	13:58	9.75	1.04	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.25
Over_15_RCP_Marriott_1	CONDUIT	0.62	0	13:00	0.52	0.00	0.01
Over_15_RCP_Marriott_2	CONDUIT	0.18	0	13:02	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	13:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_15_RCP_Mattiott_6	CONDUIT	1.79	0	13:00	0.46	0.00	0.04
Over_24_RCP_Marriott_7	CONDUIT	14.28	0	13:03	1.68	0.01	0.05
Over_24_RCP_Marriott_8	CONDUIT	11.99	0	13:04	1.12	0.00	0.07
Over_24_RCP_Marriott_9	CONDUIT	27.24	0	13:03	1.65	0.01	0.11
Over_24_RCP_Etheridge_1	CONDUIT	49.71	0	13:01	1.33	0.01	0.22
Over_24_RCP_Etheridge_2	CONDUIT	37.94	0	13:06	1.11	0.01	0.20
Over_15_RCP_W_Battleboro_1	CONDUIT	2.15	0	13:00	0.57	0.01	0.02
Over_15_RCP_W_Battleboro_2	CONDUIT	3.11	0	13:00	0.42	0.00	0.05
Over_18_RCP_W_Battleboro_4	CONDUIT	17.97	0	13:00	1.78	0.07	0.06
Over_18_RCP_W_Battleboro_5	CONDUIT	17.64	0	13:00	2.57	0.00	0.04
Over_18_RCP_W_Battleboro_6	CONDUIT	10.67	0	13:01	1.99	0.00	0.04
Over_12_RCP_Pollard_1	CONDUIT	1.03	0	13:00	0.36	0.00	0.04
Over_15_RCP_Pollard_2	CONDUIT	1.63	0	13:00	0.28	0.00	0.07
Over_24_RCP_Etheridge_3	CONDUIT	29.98	0	13:03	6.26	0.00	0.03
Over_12_RCP_W_Bridges_1	CONDUIT	2.71	0	13:00	0.58	0.00	0.03
Over_12_RCP_W_Bridges_2	CONDUIT	4.34	0	13:00	0.90	0.01	0.04
Over_12_RCP_Railroad_1	CONDUIT	3.31	0	13:01	0.78	0.00	0.03
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_6*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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Over_24_RCP_Railroad_7* CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_24_VCP_Railroad_8 CONDUIT       0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Railroad_3 CONDUIT       0.00     0  00:00      0.00    0.00    0.00
Over_12_RCP_Gainor_1 CONDUIT        12.70     0  13:03      0.49    0.00    0.16
OVer_18_RCP_Gainor_2 CONDUIT        11.45     0  13:00      0.96    0.00    0.08
Over_18_RCP_Gainor_3 CONDUIT        28.41     0  13:00      5.71    0.00    0.03
Over_18_RCP_Gainor_4 CONDUIT         0.00     0  00:00      0.00    0.00    0.00
Over_18_RCP_Gainor_5 CONDUIT        42.14     0  13:00      4.67    0.00    0.10
Over_24_RCP_Gainor_6 CONDUIT         0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_8 CONDUIT         0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_9 CONDUIT         0.00     0  00:00      0.00    0.00    0.00
12_RCP_Crepe_Myrtle_1 CONDUIT        1.73     0  13:47      2.65    0.51    1.00
12_RCP_Crepe_Myrtle_2 CONDUIT        6.54     0  13:16      8.34    1.09    1.00
Crepe_Myrtle_Swale   CONDUIT        28.22    0  13:00      1.31    0.05    0.62
Over_18_RCP_Hathaway_10 CONDUIT      4.70     0  13:00      1.42    0.00    0.02
Over_12_RCP_Crepe_Myrtle_1 CONDUIT      2.75     0  13:15      0.30    0.00    0.21
Over_15_RCP_Hathaway_12* CONDUIT     3.76     0  13:00      1.37    0.00    0.02
15_RCP_Gainor        CONDUIT         3.23     0  12:36      2.64    0.61    1.00
Gainor_Bridges       CONDUIT         4.66     0  12:37      3.80    0.99    1.00
Over_15_RCP_Gainor   CONDUIT         5.18     0  13:00      0.71    0.02    0.05
Over_Gainor_Bridges  CONDUIT         5.92     0  13:00      0.37    0.00    0.10
Over_15_RCP_Gainor_7A CONDUIT        3.18     0  13:00      1.06    0.00    0.04
Over_15_RCP_Gainor_7C CONDUIT        0.00     0  00:00      0.00    0.00    0.00
Over_Hathaway_3      CONDUIT         0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Hathaway_9 CONDUIT       0.00     0  00:00      0.00    0.00    0.00
Battle-Gainor-Over   CONDUIT        29.97     0  13:02      3.43    0.01    0.06
15_RCP_Gainor_7D     CONDUIT         9.10     0  12:44      5.15    0.94    1.00
84                   CONDUIT         4.80     0  13:08      0.67    0.00    0.11
E-Battleboro-Culv    CONDUIT         9.97     0  13:02      4.83    1.30    0.64
RR-Open-Ditch2       CONDUIT         9.60     0  13:05      0.44    0.02    0.60
Pearsall             CONDUIT         3.36     0  13:00      4.52    0.39    0.44
RR-Open-Ditch1       CONDUIT         3.29     0  13:00      0.81    0.02    0.39
Battleboro-Ovr       CONDUIT         0.00     0  00:00      0.00    0.00    0.00


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Flow Classification Summary
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                    Adjusted    --- Fraction of Time in Flow Class ----    Avg.     Avg.
                     /Actual         Up    Down  Sub   Sup   Up    Down   Froude   Flow
Conduit               Length    Dry  Dry   Dry   Crit  Crit  Crit  Crit   Number   Change
-------------------------------------------------------------------------------------
BeechTrib8              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.24   0.0000
NC-4                    1.00   0.03  0.00  0.00  0.95  0.03  0.00  0.00     0.39   0.0003
BeechTrib7              1.00   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.22   0.0000
Channel_4**             1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.11   0.0000
BeechTrib6              1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.14   0.0000
W_Battleboro_Ave_Culvert**    3.30   0.02  0.00  0.00  0.77  0.22  0.00  0.00     0.79   0.0003
Channel_3A**            1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.26   0.0000
Channel_3B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.12   0.0000
BeechTrib5              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.14   0.0003
Hathaway_St_Culvert     1.18   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.29   0.0006
15_RCP_Hathaway_1       2.23   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.29   0.0000
15_RCP_Hathaway_2       1.00   0.02  0.00  0.00  0.97  0.00  0.00  0.01     0.39   0.0001
15_RCP_Hathaway_3       2.38   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.26   0.0000
15_RCP_Hathaway_4       1.00   0.04  0.00  0.00  0.08  0.85  0.00  0.03     1.15   0.0001
15_RCP_Hathaway_5       1.34   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.05   0.0001
15_RCP_Hathaway_6       1.00   0.04  0.00  0.00  0.01  0.95  0.00  0.00     1.69   0.0001
15_RCP_Hathaway_7       1.00   0.02  0.03  0.00  0.93  0.03  0.00  0.00     0.60   0.0001
15_RCP_Hathaway_8       2.28   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.26   0.0000
15_RCP_Hathaway_9       2.53   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.54   0.0001
18_RCP_Hathaway_10      2.92   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.55   0.0001
15_RCP_Hathaway_11*     1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.42   0.0002
15_RCP_Hathaway_12*     6.57   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.36   0.0003
Hathaway_Swale*         1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.02   0.0000
BeechTrib4              1.00   0.02  0.01  0.00  0.97  0.00  0.00  0.00     0.19   0.0000
12_RCP_Battleboro_Apt_1    1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.81   0.0001
12_RCP_Battleboro_Apt_2    1.29   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.28   0.0000
12_RCP_Battleboro_Apt_3    1.10   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.12   0.0001
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Future Conditions - Project Areas 2,4,5,& 6 (50-Year)

15_RCP_Battleboro_Apt_4	1.78	0.02	0.00	0.00	0.94	0.04	0.00	0.00	0.27	0.0000
BeechTrib3	2.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib2	1.00	0.02	0.02	0.00	0.97	0.00	0.00	0.00	0.12	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.04	0.94	0.00	0.00	2.08	0.0002
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.97	0.02	0.00	0.00	0.52	0.0001
15_RCP_Burrows_3	1.76	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.40	0.0003
15_RCP_Burrows_4	1.00	0.03	0.00	0.00	0.05	0.91	0.00	0.00	1.46	0.0002
15_RCP_Burrows_5	1.15	0.03	0.00	0.00	0.87	0.10	0.00	0.00	0.74	0.0002
15_RCP_Burrows_6	4.20	0.04	0.00	0.00	0.58	0.39	0.00	0.00	1.14	0.0002
18_RCP_Burrows_7	5.31	0.03	0.00	0.00	0.94	0.03	0.00	0.00	0.19	0.0001
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.19	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0002
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0003
15_RCP_Marriott_3	3.55	0.04	0.00	0.00	0.03	0.93	0.00	0.00	1.24	0.0001
15_VCP_Marriott_4	1.95	0.04	0.00	0.00	0.03	0.93	0.00	0.00	1.56	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.03	0.00	0.54	0.42	0.00	0.00	0.91	0.0001
15_RCP_Mattiott_6	1.30	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.65	0.0002
24_RCP_Marriott_7	1.14	0.03	0.00	0.00	0.85	0.12	0.00	0.00	0.73	0.0001
24_RCP_Marriott_8	1.47	0.02	0.01	0.00	0.95	0.02	0.00	0.00	0.13	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.04	0.0004
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0002
24_RCP_Etheridge_3	7.59	0.02	0.05	0.00	0.00	0.00	0.94	0.00	0.37	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
12_RCP_Gainor_1	1.00	0.02	0.00	0.00	0.42	0.56	0.00	0.00	0.84	0.0002
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.55	0.0002
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.23	0.76	0.00	0.00	1.11	0.0002
18_RCP_Gainor_4	1.00	0.02	0.00	0.00	0.32	0.32	0.00	0.34	1.19	0.0001
18_RCP_Gainor_5	2.32	0.02	0.00	0.00	0.20	0.00	0.00	0.79	0.54	0.0010
24_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.98	0.99	0.0001
15_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.04	0.95	0.00	0.00	1.31	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0017
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.98	0.01	0.00	0.00	0.51	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.16	0.82	0.00	0.00	1.29	0.0000
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.05	0.93	0.00	0.00	1.33	0.0001
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.65	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.60	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.02	0.00	0.27	0.00	0.69	0.00	0.31	0.0002
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.32	0.66	0.00	0.00	0.94	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.10	0.88	0.00	0.00	1.17	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.64	0.34	0.00	0.00	0.83	0.0002
15_RCP_Pollard_3	26.14	0.02	0.03	0.00	0.96	0.00	0.00	0.00	0.32	0.0001
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.73	0.05	0.00	0.20	0.70	0.0002
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0004
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.0002
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.19	0.0008
15_RCP_Railroad_2	2.51	0.02	0.03	0.00	0.05	0.91	0.00	0.00	1.03	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.96	0.03	0.00	0.00	0.67	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.48	0.0001
24_RCP_Railroad_5	3.55	0.04	0.00	0.00	0.02	0.94	0.00	0.00	1.21	0.0001
24_RCP_Railroad_6*	3.25	0.04	0.00	0.00	0.05	0.92	0.00	0.00	1.06	0.0001
24_RCP_Railroad_7*	2.02	0.02	0.02	0.00	0.06	0.91	0.00	0.00	1.08	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.63	0.0000
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0001
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.13	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	0.97	0.00	0.00	0.00	0.02	0.00	0.00	0.04	0.0000
Overland_Burrows_2	3.53	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.0000
Overland_Burrows_3	7.01	0.96	0.01	0.00	0.00	0.02	0.00	0.01	0.05	0.0000
Overland_Burrows_4	2.14	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.0000
Overland_Burrows_5	1.88	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.0000
Overland_Burrows_6	5.36	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.0000
Overland_Burrows_7	7.81	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000

W_Battleboro_Ave-Over	3.80	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.15	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.86	0.12	0.00	0.00	0.32	0.0002
Over_Farm-Culvert	7.77	0.31	0.00	0.00	0.00	0.07	0.00	0.61	1.02	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0002
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	0.78	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.0000
Over_15_RCP_Marriott_2	27.58	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_Marriott_3	4.67	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	0.96	0.01	0.00	0.02	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Marriott_7	1.03	0.96	0.00	0.00	0.02	0.00	0.00	0.02	0.02	0.0000
Over_24_RCP_Marriott_8	1.80	0.90	0.07	0.00	0.03	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Marriott_9	2.78	0.80	0.10	0.00	0.10	0.00	0.00	0.00	0.03	0.0000
Over_24_RCP_Etheridge_1	5.90	0.72	0.09	0.00	0.20	0.00	0.00	0.00	0.03	0.0000
Over_24_RCP_Etheridge_2	1.42	0.72	0.13	0.00	0.00	0.00	0.16	0.00	0.02	0.0000
Over_15_RCP_W_Battleboro_1	2.34	0.97	0.00	0.00	0.02	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.93	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.93	0.00	0.00	0.00	0.00	0.00	0.07	0.04	0.0000
Over_18_RCP_W_Battleboro_5	1.60	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.0000
Over_18_RCP_W_Battleboro_6	6.23	0.96	0.01	0.00	0.02	0.01	0.00	0.00	0.02	0.0000
Over_12_RCP_Pollard_1	1.11	0.93	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.92	0.05	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.90	0.00	0.00	0.00	0.00	0.00	0.10	0.31	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.94	0.01	0.00	0.06	0.00	0.00	0.00	0.01	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.94	0.00	0.00	0.04	0.00	0.00	0.02	0.03	0.0000
Over_12_RCP_Railroad_1	1.00	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Gainor_1	1.00	0.78	0.07	0.00	0.00	0.00	0.15	0.00	0.01	0.0000
OVer_18_RCP_Gainor_2	5.06	0.85	0.01	0.00	0.00	0.00	0.14	0.00	0.03	0.0000
Over_18_RCP_Gainor_3	20.67	0.86	0.00	0.00	0.00	0.09	0.00	0.04	0.45	0.0000
Over_18_RCP_Gainor_4	1.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_5	16.05	0.87	0.00	0.00	0.04	0.01	0.00	0.08	0.26	0.0000
Over_24_RCP_Gainor_6	18.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
12_RCP_Crepe_Myrtle_1	2.12	0.02	0.00	0.00	0.37	0.10	0.00	0.52	0.93	0.0004
12_RCP_Crepe_Myrtle_2	1.00	0.02	0.00	0.00	0.06	0.93	0.00	0.00	1.60	0.0002
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.08	0.0000
Over_18_RCP_Hathaway_10	1.15	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.0000
Over_12_RCP_Crepe_Myrtle_1	5.17	0.93	0.02	0.00	0.06	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_12*	15.31	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.0000
15_RCP_Gainor	3.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0001
Gainor_Bridges	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.56	0.0002
Over_15_RCP_Gainor	3.16	0.87	0.00	0.00	0.07	0.00	0.00	0.06	0.04	0.0000
Over_Gainor_Bridges	1.33	0.81	0.10	0.00	0.09	0.00	0.00	0.00	0.01	0.0000
Over_15_RCP_Gainor_7A	13.13	0.96	0.02	0.00	0.01	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.0000
15_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.45	0.0001
84	30.58	0.92	0.00	0.00	0.08	0.00	0.00	0.00	0.01	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.73	0.0002
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.15	0.0001
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

****
Conduit Surcharge Summary

Future Conditions - Project Areas 2,4,5,& 6 (50-Year)

****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited	
NC-4	7.15	7.15	7.16	9.22	7.15	
W_Battleboro_Ave_Culvert**	1.36	1.36	1.36	3.58	1.36	
BeechTrib5	0.01	0.01	0.01	8.65	0.01	
Hathaway_St_Culvert	0.01	0.01	0.01	12.08	0.01	
18_RCP_Hathaway_10	0.67	0.67	0.67	0.01	0.01	
15_RCP_Hathaway_11*	0.99	0.99	0.99	0.41	0.69	
15_RCP_Hathaway_12*	0.01	0.01	0.01	1.25	0.01	
15_RCP_Burrows_1	0.61	0.61	0.61	0.01	0.51	
15_RCP_Burrows_2	0.65	0.65	0.65	0.01	0.01	
15_RCP_Burrows_3	0.79	0.79	0.79	1.32	0.01	
15_RCP_Burrows_4	0.78	0.78	0.78	0.09	0.16	
15_RCP_Burrows_5	0.75	0.75	0.75	0.22	0.24	
15_RCP_Burrows_6	0.65	0.65	0.65	0.14	0.58	
18_RCP_Burrows_7	4.17	4.17	4.17	0.01	0.01	
18_RCP_Marriott_1	0.47	0.47	0.47	0.15	0.46	
12_RCP_Marriott_2	0.59	0.59	0.59	0.52	0.54	
15_RCP_Marriott_3	0.34	0.34	0.34	0.01	0.34	
15_VCP_Marriott_4	0.34	0.34	0.34	0.01	0.01	
15_RCP_Mattiott_5	0.42	0.42	0.42	0.01	0.01	
15_RCP_Mattiott_6	0.76	0.76	0.76	0.04	0.54	
24_RCP_Marriott_7	0.67	0.67	0.67	0.01	0.01	
24_RCP_Marriott_8	4.56	4.56	4.56	0.01	0.73	
24_RCP_Marriott_9	6.62	6.62	6.62	0.01	0.17	
24_RCP_Etheridge_1	7.54	7.54	7.54	0.01	0.01	
24_RCP_Etheridge_2	10.54	10.54	10.54	0.01	0.01	
12_RCP_Gainor_1	2.94	2.94	2.94	0.76	0.42	
18_RCP_Gainor_2	2.51	2.51	2.51	0.01	0.02	
18_RCP_Gainor_3	2.53	2.53	2.53	0.01	0.03	
18_RCP_Gainor_4	2.60	2.60	2.60	0.01	0.01	
18_RCP_Gainor_5	2.64	2.64	2.65	10.60	2.64	
24_RCP_Gainor_6	0.01	0.01	0.01	2.03	0.01	
15_RCP_Gainor_7A	0.41	0.41	0.41	0.01	0.38	
15_RCP_Gainor_7B	1.10	1.10	1.10	1.86	1.10	
15_RCP_W_Battleboro_1	0.91	0.91	0.91	0.01	0.01	
18_RCP_W_Battleboro_2	1.19	1.19	1.19	0.01	0.01	
18_RCP_W_Battleboro_3	1.47	1.47	1.47	0.01	0.01	
18_RCP_W_Battleboro_4	1.50	1.50	1.50	0.01	0.64	
18_RCP_W_Battleboro_5	1.35	1.35	1.35	1.03	1.35	
18_RCP_W_Battleboro_6	0.89	0.89	0.89	0.50	0.89	
15_RCP_Pollard_3	1.38	1.38	1.38	0.01	0.01	
15_RCP_Pollard_2	0.86	0.86	0.86	0.01	0.01	
12_RCP_Pollard_1	1.29	1.29	1.29	0.40	0.82	
12_RCP_W_Bridges_1	1.12	1.12	1.12	0.01	0.02	
12_RCP_W_Bridges_2	1.11	1.11	1.11	0.01	0.01	
12_RCP_Railroad_1	0.68	0.68	0.68	5.00	0.68	
CONNECT**	0.84	0.84	0.84	0.01	0.01	
Farm-Culvert	12.23	12.23	12.23	10.33	11.07	
Railroad_Culvert	3.84	3.84	3.85	1.14	3.41	
12_RCP_Crepe_Myrtle_1	1.20	1.20	1.20	0.01	0.01	
12_RCP_Crepe_Myrtle_2	0.57	0.57	0.57	1.17	0.57	
15_RCP_Gainor	2.44	2.44	2.44	0.01	0.01	
Gainor_Bridges	2.44	2.44	2.44	0.01	0.01	
15_RCP_Gainor_7D	0.42	0.42	0.42	0.01	0.01	
E-Battleboro-Culv	0.01	0.01	0.01	0.40	0.01	

Analysis begun on: Mon Dec 07 15:48:57 2015
Analysis ended on: Mon Dec 07 15:49:01 2015
Total elapsed time: 00:00:04

Future Conditions - Project Areas 2,4,5,& 6 (100-Year)

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Future Conditions - Project Areas 2,4,5,& 6 (100-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-06-2015 00:00:00
Ending Date .............. APR-07-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Gainor

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905
```

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WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224

WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node PE_972240

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       860.543         7.996
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       242.225         2.251
Surface Runoff ...........       548.879         5.100
Final Surface Storage ....        70.124         0.652
Continuity Error (%) .....        -0.080


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       547.601       178.444
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       524.342       170.865
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        25.175         8.204
Continuity Error (%) .....        -0.350


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (3.48%)
Node 8** (1.68%)
```

Future Conditions - Project Areas 2,4,5,& 6 (100-Year)

```
**************************
Time-Step Critical Elements
**************************
Link Hathaway_St_Culvert (25.56%)
Link 18_RCP_Gainor_5 (19.99%)
Link 24_RCP_Etheridge_2 (12.14%)
Link Farm-Culvert (8.59%)
Link 24_RCP_Etheridge_1 (4.68%)


******************************
Highest Flow Instability Indexes
******************************
Link 24_RCP_Etheridge_1 (1)


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     6.09 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.04


**************************
Subcatchment Runoff Summary
**************************
```

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	8.00	0.00	0.00	2.24	4.78	62.87	615.70	0.597
Basin_A-2	8.00	0.00	0.00	1.96	5.38	19.29	214.28	0.673
Basin_A-3	8.00	0.00	0.00	2.15	5.36	15.14	160.61	0.671
Basin_A-4	8.00	0.00	0.00	2.34	5.10	23.07	239.83	0.638
Basin_A-5	8.00	0.00	0.00	2.32	5.13	17.06	196.50	0.642
Basin_B-2	8.00	0.00	0.00	2.71	4.90	11.32	135.44	0.613
Area#5-10	8.00	0.00	0.00	2.38	5.52	0.06	1.26	0.691
Area#5-30	8.00	0.00	0.00	1.21	6.72	0.15	3.08	0.841
Area#5-50	8.00	0.00	0.00	2.13	5.79	0.07	1.53	0.724
Area#5-70	8.00	0.00	0.00	2.67	5.21	0.19	3.83	0.652
Area#5-80	8.00	0.00	0.00	1.90	6.02	0.26	5.39	0.753
Area#5-20	8.00	0.00	0.00	1.21	6.73	0.07	1.50	0.842
Area#5-40	8.00	0.00	0.00	1.21	6.72	0.07	1.45	0.841
Area#5-90	8.00	0.00	0.00	1.07	6.89	0.17	3.57	0.861
Area#5-100	8.00	0.00	0.00	1.21	6.74	0.09	1.83	0.843
Area#6-10	8.00	0.00	0.00	3.70	4.21	0.12	2.44	0.527
Area#6-20	8.00	0.00	0.00	2.49	5.39	0.53	10.28	0.674
Area#6-30	8.00	0.00	0.00	2.38	5.45	1.49	26.12	0.682
Area#6-40	8.00	0.00	0.00	2.76	5.02	1.00	15.80	0.628
Area#6-50	8.00	0.00	0.00	3.22	4.62	2.05	38.50	0.578
Area#6-60	8.00	0.00	0.00	2.38	5.41	7.89	127.47	0.676
Area#6-70	8.00	0.00	0.00	0.45	7.51	0.12	2.44	0.939
Area#6-80	8.00	0.00	0.00	3.68	4.24	0.09	1.88	0.531
Area#6-90	8.00	0.00	0.00	3.03	4.85	0.84	15.74	0.607
Area#4-140	8.00	0.00	0.00	1.19	6.76	0.18	3.89	0.845
Area#4-150	8.00	0.00	0.00	0.44	7.53	0.08	1.74	0.941
Area#4-160	8.00	0.00	0.00	1.78	6.16	0.03	0.56	0.771
Area#4-170	8.00	0.00	0.00	1.01	6.93	0.10	2.07	0.867
Area#4-180	8.00	0.00	0.00	1.48	6.45	0.18	3.86	0.806
Area#4-190	8.00	0.00	0.00	1.01	6.94	0.05	1.12	0.867
Area#4-200	8.00	0.00	0.00	3.33	4.57	0.24	4.80	0.571
Area#4-130	8.00	0.00	0.00	2.91	5.02	0.17	3.54	0.627
Area#4-120	8.00	0.00	0.00	2.65	5.29	0.13	2.78	0.661
Area#4-100	8.00	0.00	0.00	3.97	3.94	0.19	3.84	0.493
Area#4-90	8.00	0.00	0.00	0.74	7.22	0.13	2.67	0.902
Area#4-80	8.00	0.00	0.00	0.41	7.53	0.22	4.60	0.942

Area#4-10	8.00	0.00	0.00	0.44	7.50	0.18	3.82	0.938
Area#4-20	8.00	0.00	0.00	0.89	7.05	0.32	6.79	0.882
Area#4-70	8.00	0.00	0.00	0.77	7.17	0.25	5.31	0.896
Area#4-60	8.00	0.00	0.00	0.44	7.51	0.18	3.78	0.939
Area#4-50	8.00	0.00	0.00	0.74	7.19	0.39	8.07	0.899
Area#4-30	8.00	0.00	0.00	2.61	5.30	0.10	2.24	0.663
Area#2-10	8.00	0.00	0.00	2.03	5.77	0.44	7.44	0.722
Area#2-20	8.00	0.00	0.00	1.51	6.37	0.14	2.78	0.796
Area#2-30	8.00	0.00	0.00	2.20	5.62	0.46	8.30	0.703
Area#2-40	8.00	0.00	0.00	1.64	6.26	0.80	16.74	0.783
Area#2-50	8.00	0.00	0.00	1.86	5.90	0.90	14.08	0.738
Area#2-60	8.00	0.00	0.00	1.86	6.04	0.57	12.48	0.756
Area#2-70	8.00	0.00	0.00	2.20	5.65	0.60	11.97	0.707
Area#2-100	8.00	0.00	0.00	1.73	6.16	0.38	8.04	0.770
Area#2-80	8.00	0.00	0.00	1.51	6.40	0.23	4.87	0.801
Area#2-110	8.00	0.00	0.00	1.73	6.16	0.25	5.29	0.770
Area#5-60	8.00	0.00	0.00	1.21	6.74	0.07	1.40	0.843
Area#2-90	8.00	0.00	0.00	1.42	6.43	0.47	8.80	0.805
Area#2-120	8.00	0.00	0.00	1.68	6.07	3.74	58.53	0.760
Area#2-150	8.00	0.00	0.00	2.22	5.58	1.05	18.00	0.698
Area#4-40	8.00	0.00	0.00	1.48	6.45	0.20	4.36	0.806
Area#4-110	8.00	0.00	0.00	1.52	6.37	0.52	11.24	0.797
Area#5-110	8.00	0.00	0.00	0.65	7.29	0.20	4.25	0.912
Area#2-130	8.00	0.00	0.00	1.83	6.08	0.18	3.85	0.760
Area#2-140	8.00	0.00	0.00	2.22	5.60	0.52	9.38	0.700

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	3.27	6.15	126.15	0 13:08
3**	JUNCTION	0.63	1.89	102.89	0 13:00
D/S_NC-4	JUNCTION	2.79	4.11	105.29	0 16:22
5**	JUNCTION	3.65	5.55	99.55	0 15:06
D/S_W_Battleboro_Ave**	JUNCTION	1.47	3.64	117.81	0 13:03
7**	JUNCTION	2.50	5.00	107.00	0 13:12
8**	JUNCTION	5.54	8.30	98.30	0 15:15
Hathaway_St-D/S	JUNCTION	4.30	6.09	96.07	0 15:18
DI_983628	JUNCTION	0.10	0.61	127.51	0 13:00
DI_983629	JUNCTION	0.31	1.28	127.48	0 13:00
DI_983630	JUNCTION	0.51	1.41	126.87	0 13:00
DI_983631	JUNCTION	0.14	0.65	127.10	0 13:00
DI_983633	JUNCTION	0.51	1.40	122.50	0 13:00
DI_983632	JUNCTION	0.55	1.38	122.43	0 13:00
DI_983634	JUNCTION	0.28	2.61	116.26	0 13:00
DI_984002*	JUNCTION	0.74	3.56	111.06	0 13:00
UNK_952741*	JUNCTION	0.60	3.95	111.85	0 12:37
DI_983635	JUNCTION	0.14	1.05	112.20	0 13:00
PE_972255	JUNCTION	0.14	0.51	114.01	0 13:00
PE_972263	JUNCTION	0.29	2.93	111.83	0 13:00
PE_972261*	JUNCTION	0.23	0.85	108.25	0 13:00
PE_972258	JUNCTION	4.43	6.44	95.44	0 15:18
Railroad_Junction_1	JUNCTION	2.50	5.33	109.86	0 13:07
Junction_1	JUNCTION	4.85	6.93	94.43	0 14:33
DI_983955	JUNCTION	0.13	0.53	101.13	0 13:00
PE_272260	JUNCTION	0.11	0.43	102.03	0 12:59
DI_983954	JUNCTION	0.18	0.86	98.88	0 13:00
DI_983953	JUNCTION	0.12	0.52	96.42	0 13:00
Drew_Hill_Junction	JUNCTION	5.27	7.40	95.40	0 15:17
DI_983952	JUNCTION	0.45	3.73	109.06	0 13:00
DI_983951	JUNCTION	0.36	3.06	107.11	0 13:00
DI_983950	JUNCTION	0.99	4.08	105.08	0 13:01
DI_283949	JUNCTION	0.47	2.40	103.65	0 13:02
DI_983948	JUNCTION	0.43	2.46	99.11	0 13:02
DI_983947	JUNCTION	0.73	3.57	98.65	0 13:04

DI_983946	JUNCTION	0.95	3.31	97.58	0	13:05
PE_972230	JUNCTION	0.57	2.39	129.54	0	13:00
UNK_952735*	JUNCTION	0.60	2.33	129.43	0	13:01
DI_983907	JUNCTION	0.64	2.31	129.36	0	13:02
DI_983906	JUNCTION	0.23	1.73	128.84	0	13:02
UNK_952736*	JUNCTION	0.26	2.21	127.97	0	13:02
DI_983903	JUNCTION	0.42	3.19	125.80	0	13:00
DI_983902	JUNCTION	0.74	2.92	124.00	0	13:02
DI_983904	JUNCTION	1.45	4.67	122.08	0	13:03
DI_983905	JUNCTION	2.18	4.20	120.68	0	13:01
DI_983721	JUNCTION	2.59	4.26	120.23	0	13:01
DI_983722	JUNCTION	2.57	4.31	120.27	0	13:03
MH_974299	JUNCTION	2.98	4.61	120.06	0	13:03
PE_972229	JUNCTION	0.42	1.63	116.85	0	13:05
PE_972224	JUNCTION	0.23	0.92	121.77	0	13:01
PE_972239	JUNCTION	0.67	2.23	114.35	0	13:03
PE_972246	JUNCTION	0.50	1.60	128.16	0	13:00
PE_972240	JUNCTION	0.67	2.12	127.84	0	13:02
DI_983935	JUNCTION	0.80	3.08	127.03	0	13:00
DI_983934	JUNCTION	0.91	3.25	126.93	0	13:00
MH_974300	JUNCTION	1.02	4.49	127.25	0	13:02
DI_983624	JUNCTION	1.79	5.23	122.35	0	13:00
DI_983623	JUNCTION	0.91	2.35	119.40	0	13:01
DI_983619	JUNCTION	0.65	2.83	117.14	0	13:00
DI_983622	JUNCTION	0.38	2.99	120.44	0	13:00
DI_983621	JUNCTION	0.91	6.06	120.38	0	13:01
DI_983620	JUNCTION	0.13	1.17	117.62	0	13:00
DI_983618	JUNCTION	0.95	3.65	116.37	0	13:01
DI_983898	JUNCTION	0.77	3.95	127.95	0	13:00
DI_983604	JUNCTION	0.83	4.35	127.85	0	13:00
DI_983901	JUNCTION	0.64	4.22	126.57	0	13:01
DI_983607	JUNCTION	0.30	2.80	129.60	0	12:59
DI_983606	JUNCTION	0.48	3.42	129.57	0	13:00
DI_9836054	JUNCTION	0.93	4.14	128.19	0	13:06
MH_974298	JUNCTION	1.71	4.15	128.20	0	13:04
DI_983899	JUNCTION	0.33	1.80	128.77	0	13:00
DI_983900	JUNCTION	0.35	1.81	128.80	0	13:00
DI_983897	JUNCTION	0.40	1.97	128.17	0	13:00
DI_983896	JUNCTION	0.51	2.09	128.14	0	13:00
DI_983895	JUNCTION	0.65	2.28	128.13	0	13:01
DI_983894	JUNCTION	0.52	1.90	127.70	0	13:01
DI_953893*	JUNCTION	0.22	0.87	126.57	0	13:00
PE_972225	JUNCTION	0.13	0.49	127.04	0	12:43
UNK_952734*	JUNCTION	0.52	1.52	124.05	0	13:00
DI_983892	JUNCTION	0.30	1.40	123.63	0	13:00
UNK_952733*	JUNCTION	0.31	1.39	123.24	0	13:00
UNK_952732*	JUNCTION	0.30	1.41	122.76	0	13:00
U/S_NC-4	JUNCTION	3.88	8.10	110.71	0	16:15
U/S_W_Battleboro_Ave	JUNCTION	2.56	7.74	122.16	0	13:00
Hathaway_St-U/S	JUNCTION	4.95	7.95	97.94	0	15:18
9**	JUNCTION	2.43	7.05	122.47	0	12:59
Farm-Culv-Up	JUNCTION	3.07	4.18	100.18	0	13:10
Farm-Culv-Dn	JUNCTION	2.21	4.39	99.89	0	13:12
Railroad-Up	JUNCTION	2.28	7.23	112.81	0	13:49
DI_983957	JUNCTION	0.42	3.18	124.18	0	13:08
DI_983956*	JUNCTION	0.55	3.68	124.18	0	13:09
PE_972262	JUNCTION	0.38	1.32	116.71	0	13:00
DI_983936	JUNCTION	0.75	1.81	128.17	0	13:00
U/S_Gainor_Swale	JUNCTION	0.67	2.04	128.04	0	13:01
DI_983625	JUNCTION	0.39	2.98	119.98	0	13:00
952731	JUNCTION	0.54	2.03	122.98	0	13:03
972222	JUNCTION	0.25	0.84	121.63	0	13:06
983943	JUNCTION	0.20	0.84	126.49	0	12:59
952740	JUNCTION	0.15	0.58	126.03	0	13:00
Primary_Outfall*	OUTFALL	4.85	6.93	93.93	0	14:33

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Node Inflow Summary
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Future Conditions - Project Areas 2,4,5,& 6 (100-Year)

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	615.48	615.48	0	12:59	62.677	62.676
3**	JUNCTION	214.21	214.21	0	12:59	19.243	19.243
D/S_NC-4	JUNCTION	0.00	234.39	0	16:15	0.000	61.727
5**	JUNCTION	0.00	328.86	0	13:00	0.000	80.811
D/S_W_Battleboro_Ave**	JUNCTION	0.00	159.22	0	13:00	0.000	15.105
7**	JUNCTION	239.73	373.25	0	12:59	23.014	38.143
8**	JUNCTION	196.43	666.17	0	13:01	17.026	135.580
Hathaway_St-D/S	JUNCTION	0.00	598.63	0	15:17	0.000	134.956
DI_983628	JUNCTION	1.26	1.26	0	12:59	0.060	0.060
DI_983629	JUNCTION	1.50	2.73	0	12:59	0.071	0.131
DI_983630	JUNCTION	1.45	7.21	0	12:59	0.069	0.348
DI_983631	JUNCTION	3.08	3.08	0	12:59	0.148	0.148
DI_983633	JUNCTION	1.53	1.53	0	12:59	0.071	0.071
DI_983632	JUNCTION	1.40	10.11	0	12:59	0.066	0.484
DI_983634	JUNCTION	0.00	10.07	0	13:00	0.000	0.484
DI_984002*	JUNCTION	0.00	16.43	0	13:00	0.000	1.043
UNK_952741*	JUNCTION	3.57	7.94	0	12:35	0.168	0.563
DI_983635	JUNCTION	0.00	3.82	0	13:00	0.000	0.192
PE_972255	JUNCTION	3.82	3.82	0	12:59	0.192	0.192
PE_972263	JUNCTION	5.39	6.36	0	12:59	0.258	0.262
PE_972261*	JUNCTION	1.83	18.19	0	12:59	0.086	1.128
PE_972258	JUNCTION	0.00	599.16	0	15:18	0.000	134.996
Railroad_Junction_1	JUNCTION	151.18	290.45	0	12:59	12.298	28.952
Junction_1	JUNCTION	127.43	809.51	0	14:30	7.877	171.976
DI_983955	JUNCTION	1.88	1.88	0	12:59	0.085	0.085
PE_272260	JUNCTION	2.44	2.44	0	12:59	0.118	0.118
DI_983954	JUNCTION	0.00	4.32	0	12:59	0.000	0.203
DI_983953	JUNCTION	0.00	4.31	0	13:00	0.000	0.203
Drew_Hill_Junction	JUNCTION	0.00	599.25	0	15:21	0.000	134.132
DI_983952	JUNCTION	15.73	21.95	0	12:59	0.838	0.898
DI_983951	JUNCTION	0.00	21.80	0	13:00	0.000	0.896
DI_983950	JUNCTION	0.00	21.56	0	13:00	0.000	0.901
DI_283949	JUNCTION	0.00	21.50	0	13:01	0.000	0.901
DI_983948	JUNCTION	0.00	21.28	0	13:02	0.000	0.904
DI_983947	JUNCTION	0.00	21.22	0	13:03	0.000	0.904
DI_983946	JUNCTION	0.00	21.12	0	13:04	0.000	0.905
PE_972230	JUNCTION	4.60	4.60	0	12:59	0.221	0.221
UNK_952735*	JUNCTION	0.00	4.56	0	13:00	0.000	0.220
DI_983907	JUNCTION	2.67	7.14	0	12:59	0.129	0.349
DI_983906	JUNCTION	0.00	6.55	0	12:40	0.000	0.349
UNK_952736*	JUNCTION	0.00	6.36	0	12:39	0.000	0.349
DI_983903	JUNCTION	3.84	9.97	0	12:59	0.187	0.536
DI_983902	JUNCTION	0.00	39.03	0	13:00	0.000	2.167
DI_983904	JUNCTION	0.00	38.49	0	13:02	0.000	2.167
DI_983905	JUNCTION	11.24	48.03	0	13:00	0.517	2.685
DI_983721	JUNCTION	2.78	54.17	0	13:00	0.133	3.008
DI_983722	JUNCTION	3.54	58.83	0	13:02	0.173	3.178
MH_974299	JUNCTION	0.00	52.36	0	13:03	0.000	2.984
PE_972229	JUNCTION	4.80	66.94	0	13:03	0.244	3.843
PE_972224	JUNCTION	0.00	12.48	0	13:00	0.000	0.621
PE_972239	JUNCTION	0.00	95.45	0	13:01	0.000	5.239
PE_972246	JUNCTION	2.77	10.11	0	12:59	0.138	0.576
PE_972240	JUNCTION	0.00	17.66	0	13:01	0.000	1.033
DI_983935	JUNCTION	16.74	16.74	0	12:59	0.798	0.798
DI_983934	JUNCTION	14.07	35.02	0	13:00	0.897	1.728
MH_974300	JUNCTION	0.00	17.35	0	13:02	0.000	2.127
DI_983624	JUNCTION	24.44	71.08	0	12:59	1.172	3.902
DI_983623	JUNCTION	0.00	18.97	0	12:34	0.000	3.066
DI_983619	JUNCTION	0.00	43.19	0	12:53	0.000	4.237
DI_983622	JUNCTION	13.67	13.67	0	12:59	0.697	0.697
DI_983621	JUNCTION	8.04	64.96	0	13:00	0.384	1.256
DI_983620	JUNCTION	5.29	5.29	0	12:59	0.251	0.251
DI_983618	JUNCTION	0.00	51.68	0	12:50	0.000	4.899
DI_983898	JUNCTION	8.07	24.44	0	12:59	0.386	1.374
DI_983604	JUNCTION	5.31	29.41	0	12:59	0.253	1.631

DI_983901	JUNCTION	0.00	29.29	0	13:00	0.000	1.631
DI_983607	JUNCTION	3.82	3.82	0	12:59	0.183	0.183
DI_983606	JUNCTION	6.79	10.60	0	12:59	0.321	0.505
DI_9836054	JUNCTION	3.78	9.99	0	13:00	0.181	0.474
MH_974298	JUNCTION	0.00	5.03	0	12:34	0.000	0.272
DI_983899	JUNCTION	4.36	5.21	0	12:59	0.203	0.288
DI_983900	JUNCTION	2.24	2.24	0	12:59	0.098	0.098
DI_983897	JUNCTION	3.89	3.89	0	12:59	0.182	0.182
DI_983896	JUNCTION	1.74	5.61	0	12:59	0.084	0.266
DI_983895	JUNCTION	0.56	6.00	0	12:59	0.025	0.291
DI_983894	JUNCTION	0.00	5.69	0	13:01	0.000	0.291
DI_953893*	JUNCTION	0.00	7.67	0	13:00	0.000	0.389
PE_972225	JUNCTION	2.07	2.07	0	12:59	0.098	0.098
UNK_952734*	JUNCTION	3.86	11.50	0	12:59	0.180	0.569
DI_983892	JUNCTION	0.00	11.47	0	13:00	0.000	0.569
UNK_952733*	JUNCTION	0.00	11.45	0	13:00	0.000	0.569
UNK_952732*	JUNCTION	1.12	12.48	0	13:00	0.053	0.621
U/S_NC-4	JUNCTION	0.00	554.02	0	13:29	0.000	63.949
U/S_W_Battleboro_Ave	JUNCTION	0.00	160.57	0	13:00	0.000	15.111
Hathaway_St-U/S	JUNCTION	4.25	599.71	0	14:59	0.200	134.631
9**	JUNCTION	160.53	160.53	0	12:59	15.112	15.112
Farm-Culv-Up	JUNCTION	38.47	278.35	0	13:06	2.052	30.897
Farm-Culv-Dn	JUNCTION	0.00	275.53	0	13:09	0.000	30.778
Railroad-Up	JUNCTION	76.50	174.98	0	13:00	4.783	10.722
DI_983957	JUNCTION	2.44	5.03	0	12:59	0.119	0.127
DI_983956*	JUNCTION	10.27	11.53	0	12:58	0.533	0.660
PE_972262	JUNCTION	26.11	32.49	0	12:59	1.492	2.144
DI_983936	JUNCTION	7.44	7.44	0	12:59	0.438	0.438
U/S_Gainor_Swale	JUNCTION	8.30	18.14	0	12:59	0.457	1.033
DI_983625	JUNCTION	0.00	9.49	0	12:39	0.000	0.662
952731	JUNCTION	9.38	13.13	0	12:59	0.516	0.693
972222	JUNCTION	0.00	11.26	0	13:03	0.000	0.691
983943	JUNCTION	3.85	3.85	0	12:59	0.176	0.176
952740	JUNCTION	0.00	3.84	0	13:00	0.000	0.176
Primary_Outfall*	OUTFALL	0.00	808.86	0	14:33	0.000	170.852

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
DI_983634	JUNCTION	0.22	1.307	1.443
9**	JUNCTION	1.79	1.051	0.949
DI_983625	JUNCTION	0.52	1.478	3.122

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Node Flooding Summary
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No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	97.57	353.74	808.86	170.852
System	97.57	353.74	808.86	170.852

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Link Flow Summary
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Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
BeechTrib8	CHANNEL	554.02	0	13:29	2.29	0.06	0.44
NC-4	CONDUIT	234.39	0	16:15	12.18	1.36	1.00
BeechTrib7	CHANNEL	234.32	0	16:22	2.09	0.02	0.34
Channel_4**	CONDUIT	213.34	0	13:00	2.87	0.12	0.57
BeechTrib6	CHANNEL	315.65	0	15:06	1.67	0.10	0.69
W_Battleboro_Ave_Culvert**	CONDUIT	99.43	0	12:48	14.07	2.11	1.00
Channel_3A**	CHANNEL	141.82	0	13:03	2.81	0.01	0.29
Channel_3B	CHANNEL	290.99	0	13:12	1.30	0.03	0.43
BeechTrib5	CHANNEL	594.86	0	15:00	1.71	2.67	0.81
Hathaway_St_Culvert	CONDUIT	595.86	0	15:18	8.28	5.22	1.00
15_RCP_Hathaway_1	CONDUIT	1.23	0	13:00	1.60	0.17	0.74
15_RCP_Hathaway_2	CONDUIT	2.69	0	13:00	2.30	1.03	0.95
15_RCP_Hathaway_3	CONDUIT	3.07	0	13:00	3.08	0.36	0.76
15_RCP_Hathaway_4	CONDUIT	7.18	0	13:00	6.50	0.98	0.88
15_RCP_Hathaway_5	CONDUIT	1.53	0	12:59	1.25	0.81	1.00
15_RCP_Hathaway_6	CONDUIT	10.07	0	13:00	8.82	0.88	0.91
15_RCP_Hathaway_7	CONDUIT	10.07	0	13:00	8.20	0.86	1.00
15_RCP_Hathaway_8	CONDUIT	3.82	0	13:00	7.23	0.32	0.62
15_RCP_Hathaway_9	CONDUIT	3.84	0	13:00	3.27	0.28	0.92
18_RCP_Hathaway_10	CONDUIT	2.94	0	13:13	2.19	0.20	1.00
15_RCP_Hathaway_11*	CONDUIT	6.54	0	12:38	3.70	1.07	1.00
15_RCP_Hathaway_12*	CONDUIT	11.56	0	13:00	10.54	2.26	0.84
Hathaway_Swale*	CONDUIT	18.06	0	13:00	0.53	0.01	0.42
BeechTrib4	CHANNEL	598.63	0	15:18	1.75	0.07	0.55
12_RCP_Battleboro_Apt_1	CONDUIT	1.88	0	13:00	3.22	0.55	0.69
12_RCP_Battleboro_Apt_2	CONDUIT	2.44	0	12:59	5.18	0.38	0.64
12_RCP_Battleboro_Apt_3	CONDUIT	4.31	0	13:00	7.78	0.87	0.69
15_RCP_Battleboro_Apt_4	CONDUIT	4.30	0	13:00	4.64	0.27	0.71
BeechTrib3	CHANNEL	599.25	0	15:21	1.28	0.03	0.60
BeechTrib2	CHANNEL	599.62	0	15:26	1.42	0.15	0.58
Channel-6B	CHANNEL	249.87	0	13:08	2.87	0.11	0.53
15_RCP_Burrows_1	CONDUIT	10.40	0	12:37	8.48	1.00	1.00
15_RCP_Burrows_2	CONDUIT	9.68	0	13:00	7.89	0.69	1.00
15_RCP_Burrows_3	CONDUIT	8.61	0	12:38	7.02	1.99	1.00
15_RCP_Burrows_4	CONDUIT	8.03	0	12:38	6.68	1.03	1.00
15_RCP_Burrows_5	CONDUIT	8.61	0	12:43	7.02	1.12	1.00
15_RCP_Burrows_6	CONDUIT	11.89	0	12:51	9.69	1.10	1.00
18_RCP_Burrows_7	CONDUIT	15.80	0	12:57	8.94	0.50	1.00
BeechTrib1	CHANNEL	808.86	0	14:33	2.10	0.10	0.56
18_RCP_Marriott_1	CONDUIT	4.19	0	12:41	2.37	1.15	1.00
12_RCP_Marriott_2	CONDUIT	4.74	0	13:10	6.04	1.88	1.00
15_RCP_Marriott_3	CONDUIT	6.55	0	12:40	5.70	1.07	1.00
15_VCP_Marriott_4	CONDUIT	6.36	0	12:39	6.80	0.71	1.00
15_RCP_Mattiott_5	CONDUIT	6.18	0	13:03	5.04	0.78	1.00
15_RCP_Mattiott_6	CONDUIT	8.03	0	12:40	6.54	1.03	1.00
24_RCP_Marriott_7	CONDUIT	20.33	0	13:24	6.47	0.59	1.00
24_RCP_Marriott_8	CONDUIT	21.87	0	13:05	6.96	0.98	1.00
24_RCP_Marriott_9	CONDUIT	15.11	0	12:38	4.81	0.72	1.00
24_RCP_Etheridge_1	CONDUIT	9.98	0	12:11	3.18	0.61	1.00
24_RCP_Etheridge_2	CONDUIT	9.69	0	12:36	3.08	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.57	0	13:04	6.47	0.26	0.67
Railroad_Swale_2	CONDUIT	65.87	0	13:05	1.36	0.02	0.35
Railroad_Swale_1	CONDUIT	12.40	0	13:01	1.81	0.02	0.25
Cemetery_Dr_Swale	CONDUIT	93.22	0	13:03	1.86	0.15	0.72
Gainor_Swale	CONDUIT	17.66	0	13:01	1.66	0.10	0.42
12_RCP_Gainor_1	CONDUIT	4.70	0	15:44	6.02	1.08	1.00
18_RCP_Gainor_2	CONDUIT	6.05	0	12:33	3.42	0.71	1.00
18_RCP_Gainor_3	CONDUIT	9.95	0	12:33	5.63	0.58	1.00
18_RCP_Gainor_4	CONDUIT	12.10	0	13:03	6.85	0.87	1.00
18_RCP_Gainor_5	CONDUIT	18.97	0	12:34	10.74	7.66	1.00

Future Conditions - Project Areas 2,4,5,& 6 (100-Year)

24_RCP_Gainor_6	CONDUIT	18.41	0	12:55	6.23	1.07	0.95
15_RCP_Gainor_7A	CONDUIT	9.49	0	12:39	5.94	0.65	1.00
15_RCP_Gainor_7B	CONDUIT	20.88	0	13:28	11.82	11.93	1.00
15_RCP_Gainor_7C	CONDUIT	5.25	0	13:00	4.31	0.25	0.97
36_RCP_Gainor_8	CONDUIT	43.10	0	13:00	6.36	0.36	0.97
36_RCP_Gainor_9	CONDUIT	51.56	0	13:00	8.70	0.54	0.87
15_RCP_W_Battleboro_1	CONDUIT	3.33	0	13:09	2.97	0.40	1.00
18_RCP_W_Battleboro_2	CONDUIT	6.53	0	12:38	3.70	0.83	1.00
18_RCP_W_Battleboro_3	CONDUIT	6.55	0	14:05	3.70	0.87	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.79	0	13:54	6.10	0.80	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.92	0	13:30	7.31	1.44	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.47	0	12:46	8.75	1.12	1.00
15_RCP_Pollard_3	CONDUIT	3.58	0	14:06	3.11	0.15	1.00
15_RCP_Pollard_2	CONDUIT	3.80	0	12:34	4.09	0.74	1.00
12_RCP_Pollard_1	CONDUIT	1.32	0	13:13	1.67	1.48	1.00
12_RCP_W_Bridges_1	CONDUIT	1.71	0	12:33	2.18	0.73	1.00
12_RCP_W_Bridges_2	CONDUIT	2.45	0	12:33	3.11	0.49	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:30	3.10	4.58	1.00
15_RCP_Railroad_2	CONDUIT	5.69	0	13:02	5.18	0.99	0.85
15_RCP_Railroad_3	CONDUIT	2.07	0	12:59	3.50	0.32	0.54
18_RCP_Railroad_4	CONDUIT	7.66	0	13:00	5.12	0.64	0.79
24_RCP_Railroad_5	CONDUIT	11.47	0	13:00	5.15	0.46	0.67
24_RCP_Railroad_6*	CONDUIT	11.45	0	13:00	4.91	0.55	0.70
24_RCP_Railroad_7*	CONDUIT	11.45	0	13:01	4.90	0.60	0.70
24_VCP_Railroad_8	CONDUIT	12.48	0	13:00	6.60	0.41	0.58
CONNECT**	CONDUIT	160.57	0	13:00	2.07	0.54	1.00
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	12.05	0	13:00	2.70	0.00	0.03
Overland_Burrows_2	CONDUIT	11.89	0	13:00	2.02	0.00	0.04
Overland_Burrows_3	CONDUIT	12.97	0	13:01	2.83	0.00	0.03
Overland_Burrows_4	CONDUIT	13.85	0	13:02	2.63	0.00	0.03
Overland_Burrows_5	CONDUIT	17.44	0	13:03	2.15	0.01	0.05
Overland_Burrows_6	CONDUIT	12.64	0	13:04	1.82	0.00	0.04
Overland_Burrows_7	CONDUIT	5.46	0	13:06	1.98	0.00	0.01
W_Battleboro_Ave-Over	CONDUIT	63.99	0	13:00	2.89	0.02	0.11
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	272.81	0	13:12	1.63	0.06	0.62
Farm-Culvert	CONDUIT	16.68	0	09:46	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	269.83	0	13:09	7.17	0.06	0.26
Railroad_Culvert	CONDUIT	74.39	0	14:02	10.52	1.12	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.32
Over_15_RCP_Marriott_1	CONDUIT	1.24	0	13:00	0.69	0.00	0.01
Over_15_RCP_Marriott_2	CONDUIT	1.35	0	13:01	0.75	0.00	0.01
Over_15_RCP_Marriott_3	CONDUIT	0.92	0	13:02	0.47	0.00	0.01
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_15_RCP_Mattiott_6	CONDUIT	2.56	0	13:00	0.61	0.00	0.04
Over_24_RCP_Marriott_7	CONDUIT	18.75	0	13:02	1.85	0.01	0.07
Over_24_RCP_Marriott_8	CONDUIT	16.56	0	13:03	1.33	0.01	0.08
Over_24_RCP_Marriott_9	CONDUIT	34.09	0	13:01	1.79	0.02	0.12
Over_24_RCP_Etheridge_1	CONDUIT	56.13	0	13:02	1.39	0.01	0.24
Over_24_RCP_Etheridge_2	CONDUIT	45.01	0	13:03	1.24	0.01	0.22
Over_15_RCP_W_Battleboro_1	CONDUIT	2.59	0	12:59	0.61	0.01	0.03
Over_15_RCP_W_Battleboro_2	CONDUIT	4.27	0	13:00	0.53	0.00	0.05
Over_18_RCP_W_Battleboro_4	CONDUIT	20.68	0	13:00	1.89	0.08	0.07
Over_18_RCP_W_Battleboro_5	CONDUIT	21.03	0	13:00	2.75	0.01	0.05
Over_18_RCP_W_Battleboro_6	CONDUIT	14.15	0	13:01	2.20	0.00	0.05
Over_12_RCP_Pollard_1	CONDUIT	1.37	0	13:00	0.31	0.00	0.05
Over_15_RCP_Pollard_2	CONDUIT	2.27	0	13:00	0.27	0.00	0.08
Over_24_RCP_Etheridge_3	CONDUIT	37.65	0	13:04	6.84	0.00	0.04
Over_12_RCP_W_Bridges_1	CONDUIT	3.25	0	13:00	0.71	0.00	0.03
Over_12_RCP_W_Bridges_2	CONDUIT	4.99	0	13:00	0.95	0.01	0.05
Over_12_RCP_Railroad_1	CONDUIT	4.29	0	13:01	0.87	0.00	0.03
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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Over_24_RCP_Railroad_6* CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_24_RCP_Railroad_7* CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_24_VCP_Railroad_8 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Railroad_3 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_12_RCP_Gainor_1 CONDUIT     15.55     0  13:02      0.57    0.01    0.16
OVer_18_RCP_Gainor_2 CONDUIT     13.42     0  13:00      1.05    0.00    0.08
Over_18_RCP_Gainor_3 CONDUIT     34.85     0  13:00      6.17    0.00    0.04
Over_18_RCP_Gainor_4 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_18_RCP_Gainor_5 CONDUIT     52.14     0  13:00      4.54    0.00    0.11
Over_24_RCP_Gainor_6 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_8 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_36_RCP_Gainor_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
12_RCP_Crepe_Myrtle_1 CONDUIT      1.87     0  12:36      2.69    0.56    1.00
12_RCP_Crepe_Myrtle_2 CONDUIT      6.62     0  13:28      8.45    1.10    1.00
Crepe_Myrtle_Swale   CONDUIT     31.96     0  13:00      1.35    0.06    0.63
Over_18_RCP_Hathaway_10 CONDUIT      6.24     0  13:00      1.58    0.00    0.03
Over_12_RCP_Crepe_Myrtle_1 CONDUIT      3.40     0  13:32      0.34    0.00    0.30
Over_15_RCP_Hathaway_12* CONDUIT      4.82     0  13:00      1.51    0.00    0.02
15_RCP_Gainor        CONDUIT      3.37     0  12:35      2.77    0.64    1.00
Gainor_Bridges       CONDUIT      4.75     0  12:35      3.87    1.01    1.00
Over_15_RCP_Gainor   CONDUIT      6.31     0  13:00      0.75    0.02    0.05
Over_Gainor_Bridges  CONDUIT      7.71     0  13:00      0.42    0.01    0.12
Over_15_RCP_Gainor_7A CONDUIT      5.02     0  13:00      1.21    0.00    0.04
Over_15_RCP_Gainor_7C CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_Hathaway_3      CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Hathaway_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Battle-Gainor-Over   CONDUIT     43.96     0  13:01      3.97    0.01    0.07
15_RCP_Gainor_7D     CONDUIT      9.30     0  12:40      5.26    0.96    1.00
84                   CONDUIT      5.42     0  13:10      0.75    0.00    0.13
E-Battleboro-Culv    CONDUIT     11.26     0  13:03      4.99    1.47    0.71
RR-Open-Ditch2       CONDUIT     10.94     0  13:06      0.49    0.03    0.61
Pearsall             CONDUIT      3.84     0  13:00      4.71    0.45    0.47
RR-Open-Ditch1       CONDUIT      3.77     0  13:00      0.82    0.02    0.43
Battleboro-Ovr       CONDUIT      0.00     0  00:00      0.00    0.00    0.00


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Flow Classification Summary
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                    Adjusted    --- Fraction of Time in Flow Class ----   Avg.     Avg.
                     /Actual          Up    Down  Sub   Sup   Up    Down   Froude   Flow
Conduit               Length    Dry  Dry   Dry   Crit  Crit  Crit  Crit   Number   Change
-------------------------------------------------------------------------------------------
BeechTrib8              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.21   0.0000
NC-4                    1.00   0.03  0.00  0.00  0.95  0.03  0.00  0.00     0.36   0.0003
BeechTrib7              1.00   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.21   0.0000
Channel_4**             1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.12   0.0000
BeechTrib6              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.14   0.0000
W_Battleboro_Ave_Culvert**    3.30   0.02  0.00  0.00  0.75  0.23  0.00  0.00     0.75   0.0003
Channel_3A**            1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.25   0.0000
Channel_3B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.12   0.0000
BeechTrib5              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.13   0.0003
Hathaway_St_Culvert     1.18   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.23   0.0006
15_RCP_Hathaway_1       2.23   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.29   0.0000
15_RCP_Hathaway_2       1.00   0.03  0.00  0.00  0.97  0.00  0.00  0.01     0.39   0.0001
15_RCP_Hathaway_3       2.38   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.28   0.0001
15_RCP_Hathaway_4       1.00   0.04  0.00  0.00  0.10  0.84  0.00  0.02     1.17   0.0001
15_RCP_Hathaway_5       1.34   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.05   0.0001
15_RCP_Hathaway_6       1.00   0.04  0.00  0.00  0.00  0.95  0.00  0.00     1.71   0.0001
15_RCP_Hathaway_7       1.00   0.02  0.03  0.00  0.94  0.01  0.00  0.00     0.58   0.0001
15_RCP_Hathaway_8       2.28   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.26   0.0000
15_RCP_Hathaway_9       2.53   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.53   0.0001
18_RCP_Hathaway_10      2.92   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.54   0.0001
15_RCP_Hathaway_11*     1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.41   0.0002
15_RCP_Hathaway_12*     6.57   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.36   0.0003
Hathaway_Swale*         1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.02   0.0000
BeechTrib4              1.00   0.02  0.01  0.00  0.97  0.00  0.00  0.00     0.19   0.0000
12_RCP_Battleboro_Apt_1    1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.81   0.0001
12_RCP_Battleboro_Apt_2    1.29   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.28   0.0001
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Future Conditions - Project Areas 2,4,5,& 6 (100-Year)

12_RCP_Battleboro_Apt_3	1.10	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.12	0.0001
15_RCP_Battleboro_Apt_4	1.78	0.02	0.00	0.00	0.94	0.04	0.00	0.00	0.29	0.0000
BeechTrib3	2.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib2	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.12	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.33	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.05	0.93	0.00	0.00	2.05	0.0002
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.95	0.03	0.00	0.00	0.53	0.0001
15_RCP_Burrows_3	1.76	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.41	0.0003
15_RCP_Burrows_4	1.00	0.03	0.00	0.00	0.06	0.91	0.00	0.00	1.44	0.0002
15_RCP_Burrows_5	1.15	0.03	0.00	0.00	0.84	0.13	0.00	0.00	0.70	0.0002
15_RCP_Burrows_6	4.20	0.04	0.00	0.00	0.59	0.37	0.00	0.00	1.09	0.0002
18_RCP_Burrows_7	5.31	0.03	0.00	0.00	0.94	0.02	0.00	0.00	0.19	0.0001
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.19	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0004
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0005
15_RCP_Marriott_3	3.55	0.04	0.00	0.00	0.04	0.92	0.00	0.00	1.23	0.0002
15_VCP_Marriott_4	1.95	0.04	0.00	0.00	0.03	0.92	0.00	0.00	1.55	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.02	0.00	0.52	0.44	0.00	0.00	0.91	0.0001
15_RCP_Mattiott_6	1.30	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.66	0.0002
24_RCP_Marriott_7	1.14	0.03	0.00	0.00	0.85	0.12	0.00	0.00	0.70	0.0001
24_RCP_Marriott_8	1.47	0.02	0.01	0.00	0.95	0.02	0.00	0.00	0.13	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.04	0.0003
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0002
24_RCP_Etheridge_3	7.59	0.02	0.05	0.00	0.00	0.00	0.94	0.00	0.40	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0000
Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
12_RCP_Gainor_1	1.00	0.02	0.00	0.00	0.46	0.52	0.00	0.00	0.82	0.0002
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.54	0.0002
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.25	0.73	0.00	0.00	1.07	0.0002
18_RCP_Gainor_4	1.00	0.02	0.00	0.00	0.36	0.35	0.00	0.27	1.12	0.0001
18_RCP_Gainor_5	2.32	0.02	0.00	0.00	0.22	0.00	0.00	0.76	0.53	0.0011
24_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.02	0.00	0.00	0.97	0.98	0.0001
15_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.05	0.94	0.00	0.00	1.29	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0018
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.98	0.01	0.00	0.00	0.51	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.18	0.80	0.00	0.00	1.26	0.0001
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.06	0.92	0.00	0.00	1.31	0.0001
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.64	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.59	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.02	0.00	0.30	0.00	0.66	0.00	0.31	0.0002
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.37	0.61	0.00	0.00	0.91	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.12	0.86	0.00	0.00	1.14	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.61	0.37	0.00	0.00	0.84	0.0002
15_RCP_Pollard_3	26.14	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.32	0.0001
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.71	0.04	0.00	0.23	0.71	0.0002
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0004
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0002
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.20	0.0009
15_RCP_Railroad_2	2.51	0.02	0.02	0.00	0.05	0.91	0.00	0.00	1.02	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.96	0.02	0.00	0.00	0.68	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.51	0.0001
24_RCP_Railroad_5	3.55	0.04	0.00	0.00	0.03	0.93	0.00	0.00	1.20	0.0001
24_RCP_Railroad_6*	3.25	0.04	0.00	0.00	0.05	0.91	0.00	0.00	1.06	0.0001
24_RCP_Railroad_7*	2.02	0.02	0.02	0.00	0.06	0.90	0.00	0.00	1.08	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.61	0.0001
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0001
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.13	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	0.96	0.01	0.00	0.00	0.02	0.00	0.00	0.05	0.0000
Overland_Burrows_2	3.53	0.96	0.01	0.00	0.01	0.00	0.00	0.03	0.03	0.0000
Overland_Burrows_3	7.01	0.95	0.01	0.00	0.01	0.03	0.00	0.00	0.06	0.0000
Overland_Burrows_4	2.14	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.07	0.0000
Overland_Burrows_5	1.88	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.0000
Overland_Burrows_6	5.36	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.0000

Future Conditions - Project Areas 2,4,5,& 6 (100-Year)

Overland_Burrows_7	7.81	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.0000
W_Battleboro_Ave-Over	3.80	0.90	0.00	0.00	0.00	0.00	0.00	0.10	0.09	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.15	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.86	0.12	0.00	0.00	0.27	0.0002
Over_Farm-Culvert	7.77	0.26	0.00	0.00	0.00	0.11	0.00	0.63	1.09	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0002
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	0.76	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	0.97	0.00	0.00	0.01	0.00	0.00	0.02	0.01	0.0000
Over_15_RCP_Marriott_2	27.58	0.97	0.00	0.00	0.03	0.00	0.00	0.00	0.02	0.0000
Over_15_RCP_Marriott_3	4.67	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	0.97	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	0.95	0.01	0.00	0.03	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Marriott_7	1.03	0.96	0.00	0.00	0.03	0.00	0.00	0.02	0.03	0.0000
Over_24_RCP_Marriott_8	1.80	0.88	0.08	0.00	0.03	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Marriott_9	2.78	0.77	0.12	0.00	0.12	0.00	0.00	0.00	0.04	0.0000
Over_24_RCP_Etheridge_1	5.90	0.67	0.09	0.00	0.23	0.00	0.00	0.00	0.04	0.0000
Over_24_RCP_Etheridge_2	1.42	0.67	0.16	0.00	0.00	0.00	0.17	0.00	0.02	0.0000
Over_15_RCP_W_Battleboro_1	2.34	0.97	0.00	0.00	0.03	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.92	0.05	0.00	0.03	0.00	0.00	0.00	0.01	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.92	0.00	0.00	0.00	0.00	0.00	0.08	0.05	0.0000
Over_18_RCP_W_Battleboro_5	1.60	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.0000
Over_18_RCP_W_Battleboro_6	6.23	0.96	0.01	0.00	0.02	0.01	0.00	0.00	0.03	0.0000
Over_12_RCP_Pollard_1	1.11	0.92	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.90	0.06	0.00	0.04	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.88	0.00	0.00	0.00	0.00	0.00	0.12	0.37	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.93	0.01	0.00	0.06	0.00	0.00	0.00	0.02	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.93	0.00	0.00	0.05	0.00	0.00	0.03	0.03	0.0000
Over_12_RCP_Railroad_1	1.00	0.94	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Gainor_1	1.00	0.76	0.07	0.00	0.00	0.00	0.17	0.00	0.01	0.0000
OVer_18_RCP_Gainor_2	5.06	0.83	0.01	0.00	0.00	0.00	0.16	0.00	0.03	0.0000
Over_18_RCP_Gainor_3	20.67	0.84	0.00	0.00	0.00	0.11	0.00	0.04	0.49	0.0000
Over_18_RCP_Gainor_4	1.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_5	16.05	0.87	0.00	0.00	0.05	0.01	0.00	0.08	0.26	0.0000
Over_24_RCP_Gainor_6	18.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
12_RCP_Crepe_Myrtle_1	2.12	0.02	0.00	0.00	0.42	0.16	0.00	0.41	0.89	0.0006
12_RCP_Crepe_Myrtle_2	1.00	0.02	0.00	0.00	0.07	0.91	0.00	0.00	1.57	0.0002
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.08	0.0000
Over_18_RCP_Hathaway_10	1.15	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.0000
Over_12_RCP_Crepe_Myrtle_1	5.17	0.89	0.01	0.00	0.10	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_12*	15.31	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.0000
15_RCP_Gainor	3.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0001
Gainor_Bridges	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.55	0.0002
Over_15_RCP_Gainor	3.16	0.87	0.00	0.00	0.09	0.00	0.00	0.04	0.05	0.0000
Over_Gainor_Bridges	1.33	0.79	0.09	0.00	0.11	0.00	0.00	0.00	0.01	0.0000
Over_15_RCP_Gainor_7A	13.13	0.95	0.02	0.00	0.02	0.00	0.00	0.01	0.02	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.06	0.0000
15_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.44	0.0001
84	30.58	0.90	0.00	0.00	0.10	0.00	0.00	0.00	0.01	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.73	0.0002
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.14	0.0001
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

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Future Conditions - Project Areas 2,4,5,& 6 (100-Year)

Conduit Surcharge Summary
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Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
NC-4	8.54	8.54	8.55	10.63	8.54
W_Battleboro_Ave_Culvert**	2.13	2.13	2.14	3.89	2.13
BeechTrib5	0.01	0.01	0.01	9.82	0.01
Hathaway_St_Culvert	2.51	2.51	2.51	12.41	2.51
15_RCP_Hathaway_2	0.01	0.01	0.01	0.11	0.01
15_RCP_Hathaway_5	0.19	0.19	0.19	0.01	0.17
15_RCP_Hathaway_7	0.22	0.22	0.22	0.01	0.01
18_RCP_Hathaway_10	0.75	0.75	0.75	0.01	0.01
15_RCP_Hathaway_11*	1.17	1.17	1.18	0.45	0.77
15_RCP_Hathaway_12*	0.01	0.01	0.01	1.59	0.01
15_RCP_Burrows_1	0.73	0.73	0.73	0.01	0.58
15_RCP_Burrows_2	0.78	0.78	0.78	0.01	0.01
15_RCP_Burrows_3	0.92	0.92	0.92	1.61	0.01
15_RCP_Burrows_4	0.92	0.92	0.92	0.07	0.13
15_RCP_Burrows_5	0.94	0.94	0.94	0.18	0.26
15_RCP_Burrows_6	0.99	0.99	0.99	0.08	0.73
18_RCP_Burrows_7	5.08	5.08	5.08	0.01	0.01
18_RCP_Marriott_1	0.59	0.59	0.59	0.08	0.54
12_RCP_Marriott_2	0.66	0.66	0.66	0.58	0.62
15_RCP_Marriott_3	0.48	0.48	0.48	0.06	0.48
15_VCP_Marriott_4	0.48	0.48	0.48	0.01	0.01
15_RCP_Mattiott_5	0.54	0.54	0.54	0.01	0.01
15_RCP_Mattiott_6	0.84	0.84	0.84	0.07	0.63
24_RCP_Marriott_7	0.77	0.77	0.77	0.01	0.01
24_RCP_Marriott_8	5.11	5.11	5.11	0.01	0.82
24_RCP_Marriott_9	6.98	6.98	6.98	0.01	0.09
24_RCP_Etheridge_1	8.15	8.15	8.16	0.01	0.01
24_RCP_Etheridge_2	12.38	12.38	12.38	0.01	0.01
12_RCP_Gainor_1	3.08	3.08	3.08	0.70	0.28
18_RCP_Gainor_2	2.80	2.80	2.80	0.01	0.02
18_RCP_Gainor_3	2.81	2.81	2.81	0.01	0.02
18_RCP_Gainor_4	2.88	2.88	2.88	0.01	0.01
18_RCP_Gainor_5	2.94	2.94	2.95	11.30	2.94
24_RCP_Gainor_6	0.01	0.01	0.01	2.35	0.01
15_RCP_Gainor_7A	0.50	0.50	0.50	0.01	0.46
15_RCP_Gainor_7B	1.37	1.37	1.37	2.18	1.37
15_RCP_W_Battleboro_1	1.05	1.05	1.05	0.01	0.01
18_RCP_W_Battleboro_2	1.44	1.44	1.44	0.01	0.01
18_RCP_W_Battleboro_3	1.65	1.65	1.65	0.01	0.01
18_RCP_W_Battleboro_4	1.68	1.68	1.69	0.01	0.68
18_RCP_W_Battleboro_5	1.54	1.54	1.54	1.13	1.54
18_RCP_W_Battleboro_6	1.03	1.03	1.03	0.58	1.03
15_RCP_Pollard_3	1.57	1.57	1.57	0.01	0.01
15_RCP_Pollard_2	1.05	1.05	1.05	0.01	0.01
12_RCP_Pollard_1	1.49	1.49	1.49	0.30	0.96
12_RCP_W_Bridges_1	1.24	1.24	1.24	0.01	0.02
12_RCP_W_Bridges_2	1.22	1.22	1.22	0.01	0.01
12_RCP_Railroad_1	0.75	0.75	0.75	5.42	0.75
CONNECT**	1.79	1.79	1.79	0.01	0.01
Farm-Culvert	13.90	13.90	13.91	10.00	12.11
Railroad_Culvert	4.25	4.25	4.26	2.10	3.81
12_RCP_Crepe_Myrtle_1	1.62	1.62	1.62	0.01	0.01
12_RCP_Crepe_Myrtle_2	0.78	0.78	0.78	1.59	0.78
15_RCP_Gainor	2.70	2.70	2.70	0.01	0.01
Gainor_Bridges	2.70	2.70	2.70	0.01	0.01
15_RCP_Gainor_7D	0.52	0.52	0.52	0.01	0.01
E-Battleboro-Culv	0.01	0.01	0.01	0.60	0.01

Analysis begun on: Mon Dec 07 15:49:33 2015
Analysis ended on: Mon Dec 07 15:49:37 2015
Total elapsed time: 00:00:04

Alternatives - Project Area 1 (2-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
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Alternatives - Project Area 1 (2-Year)

*******************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*******************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-29-2015 00:00:00
Ending Date .............. MAY-01-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 02: maximum depth increased for Node 126-128_Daniels

WARNING 02: maximum depth increased for Node 138-140_Daniels

WARNING 02: maximum depth increased for Node D/S_Viverette_2

*************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
*************************     ---------       -------
Total Precipitation ......        32.556         3.596
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........        15.602         1.723
Surface Runoff ...........        16.541         1.827
Final Surface Storage ....         0.426         0.047
Continuity Error (%) .....        -0.038


*************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
*************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......        16.541         5.390
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........        16.538         5.389
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.003         0.001
Continuity Error (%) .....         0.001


**************************
Time-Step Critical Elements
**************************
Link Twin36-_Park#2 (56.13%)
Link 24_RCP_Daniels_3 (15.04%)
Link 12_RCP_Viverette_1 (2.53%)
Link Viverette_2-PR-ELLIPTICAL (2.24%)
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Highest Flow Instability Indexes
****
All links are stable.

****
Routing Time Step Summary
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Minimum Time Step	:	0.50 sec
Average Time Step	:	6.85 sec
Maximum Time Step	:	15.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	2.00

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Area#1-10	3.60	0.00	0.00	1.12	2.43	0.16	2.68	0.677
Area#1-20	3.60	0.00	0.00	1.29	2.27	0.44	6.33	0.630
Area#1-30	3.60	0.00	0.00	1.32	2.23	0.11	1.75	0.619
Area#1-40	3.60	0.00	0.00	1.50	2.05	0.41	5.57	0.571
Area#1-50	3.60	0.00	0.00	1.30	2.25	0.36	5.14	0.626
Area#1-60	3.60	0.00	0.00	1.34	2.21	0.38	6.20	0.615
Area#1-70	3.60	0.00	0.00	1.27	2.28	0.23	4.03	0.635
Area#1-80	3.60	0.00	0.00	0.94	2.62	0.19	3.79	0.729
Area#1-90	3.60	0.00	0.00	1.64	1.91	0.60	6.64	0.532
Area#1-100	3.60	0.00	0.00	1.67	1.88	0.29	3.83	0.523
Area#1-110	3.60	0.00	0.00	2.05	1.50	0.07	1.23	0.417
Area#1-120	3.60	0.00	0.00	1.28	2.28	0.16	2.71	0.633
Area#1-130	3.60	0.00	0.00	0.79	2.77	0.45	9.01	0.770
Area#1-140	3.60	0.00	0.00	2.29	1.26	1.47	10.91	0.351
Area#1-150	3.60	0.00	0.00	0.43	3.13	0.07	1.37	0.869

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days	hr:min
U/S_Daniels_1	JUNCTION	0.22	0.98	126.51	0	13:00
D/S_Daniels_1	JUNCTION	0.19	0.79	126.17	0	13:00
126-128_Daniels	JUNCTION	0.38	1.63	125.61	0	13:08
U/S_Daniels_2	JUNCTION	0.19	0.77	125.74	0	13:00
D/S_Daniels_2	JUNCTION	0.18	1.00	125.62	0	13:08
138-140_Daniels	JUNCTION	0.61	2.43	125.56	0	13:08
U/S_Viverette_1	JUNCTION	0.51	3.43	127.38	0	13:00
D/S_Viverette_1	JUNCTION	0.44	1.97	125.58	0	13:08
U/S_Daniels_3	JUNCTION	0.97	3.05	125.54	0	13:08
D/S_Daniels_3	JUNCTION	0.78	2.25	124.73	0	13:11
U/S_Walter_1	JUNCTION	0.69	2.31	124.50	0	13:10
D/S_Walter_1	JUNCTION	0.81	2.25	124.04	0	13:04
U/S_Viverette_2	JUNCTION	0.47	1.70	124.07	0	13:00
D/S_Viverette_2	JUNCTION	0.53	1.79	123.96	0	13:03
108-110_Walter	JUNCTION	0.98	2.44	123.94	0	13:03
U/S_Pearce	JUNCTION	0.16	0.74	122.99	0	13:01
D/S_Pearce	JUNCTION	0.09	0.80	122.95	0	13:03
U/S_Walter_2	JUNCTION	0.41	1.70	122.95	0	13:03
D/S_Walter_2	JUNCTION	0.45	1.71	122.86	0	13:05
120-122_Walter	JUNCTION	0.55	1.86	122.86	0	13:05
U/S_Park#1	JUNCTION	0.68	2.14	121.52	0	13:04
D/S_Park#1	JUNCTION	0.80	2.12	121.25	0	13:02
U/S_Park#2	JUNCTION	1.09	3.22	122.72	0	13:05

D/S_Park#2	JUNCTION	0.99	2.55	121.95	0	13:05
Outfall	OUTFALL	0.80	2.12	120.87	0	13:02

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
U/S_Daniels_1	JUNCTION	2.68	2.68	0 13:00	0.162	0.162
D/S_Daniels_1	JUNCTION	0.00	2.68	0 13:00	0.000	0.162
126-128_Daniels	JUNCTION	6.33	10.30	0 13:00	0.443	0.711
U/S_Daniels_2	JUNCTION	1.75	1.75	0 13:00	0.106	0.106
D/S_Daniels_2	JUNCTION	0.00	1.74	0 13:00	0.000	0.106
138-140_Daniels	JUNCTION	5.14	16.36	0 13:00	0.358	1.484
U/S_Viverette_1	JUNCTION	5.57	5.57	0 13:00	0.414	0.414
D/S_Viverette_1	JUNCTION	0.00	5.53	0 13:00	0.000	0.414
U/S_Daniels_3	JUNCTION	6.20	17.73	0 13:01	0.375	1.858
D/S_Daniels_3	JUNCTION	0.00	16.99	0 13:04	0.000	1.858
U/S_Walter_1	JUNCTION	4.03	19.02	0 13:07	0.234	2.092
D/S_Walter_1	JUNCTION	0.00	19.06	0 13:13	0.000	2.092
U/S_Viverette_2	JUNCTION	6.64	6.64	0 13:00	0.602	0.602
D/S_Viverette_2	JUNCTION	3.79	10.42	0 13:00	0.191	0.793
108-110_Walter	JUNCTION	3.83	30.08	0 13:00	0.287	3.171
U/S_Pearce	JUNCTION	1.37	1.37	0 13:00	0.066	0.066
D/S_Pearce	JUNCTION	0.00	1.35	0 13:00	0.000	0.066
U/S_Walter_2	JUNCTION	2.71	3.65	0 13:00	0.158	0.224
D/S_Walter_2	JUNCTION	0.00	3.17	0 12:50	0.000	0.224
120-122_Walter	JUNCTION	10.24	40.07	0 13:00	0.528	3.923
U/S_Park#1	JUNCTION	0.00	36.99	0 13:05	0.000	3.923
D/S_Park#1	JUNCTION	10.90	44.82	0 13:02	1.466	5.389
U/S_Park#2	JUNCTION	0.00	37.25	0 13:03	0.000	3.923
D/S_Park#2	JUNCTION	0.00	36.96	0 13:05	0.000	3.923
Outfall	OUTFALL	0.00	44.81	0 13:02	0.000	5.389

****
Node Surcharge Summary
****

No nodes were surcharged.

****
Node Flooding Summary
****

No nodes were flooded.

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Outfall	98.78	10.73	44.81	5.389
System	98.78	10.73	44.81	5.389

****
Link Flow Summary
****

	Maximum	Time of Max	Maximum	Max/	Max/

Alternatives - Project Area 1 (2-Year)

Link	Type	|Flow| CFS	Occurrence days	Occurrence hr:min	|Veloc| ft/sec	Full Flow	Full Depth
15_RCP_Daniels_1	CONDUIT	2.68	0	13:00	2.95	0.64	0.70
Over_15_RCP_Daniels_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_1	CHANNEL	2.58	0	13:00	0.83	0.01	0.26
15_CMP_Daniels_2	CONDUIT	1.74	0	13:00	2.55	0.47	0.69
Over_15_CMP_Daniels_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_2	CONDUIT	1.40	0	13:00	0.64	0.03	0.44
CHANNEL_3	CHANNEL	7.85	0	13:00	1.02	0.02	0.30
CHANNEL_4	CONDUIT	3.66	0	13:17	0.44	0.05	0.55
12_RCP_Viverette_1	CONDUIT	5.53	0	13:00	7.05	1.54	1.00
Over_12_RCP_Viverette_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_5	CONDUIT	13.35	0	13:09	0.72	0.10	0.68
24_RCP_Daniels_3	CONDUIT	16.99	0	13:04	5.41	5.17	1.00
Over_24_RCP_Daniels_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_6	CONDUIT	16.87	0	13:12	0.93	0.21	0.51
Viverette_2-PR-ELLIPTICAL	CONDUIT	6.63	0	13:00	2.09	0.42	1.00
Viverette_2-OVR	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_7	CONDUIT	9.97	0	13:00	0.99	0.07	0.53
15_RCP_Pearce	CONDUIT	1.35	0	13:00	3.60	0.44	0.61
Over_15_RCP_Pearce	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
18_RCP_Walter_2	CONDUIT	3.17	0	12:50	2.07	0.60	1.00
Over_18_RCP_Walter_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_8	CONDUIT	1.11	0	12:42	0.33	0.00	0.31
CHANNEL_9	CONDUIT	2.94	0	12:49	0.62	0.08	0.59
CHANNEL_10	CONDUIT	28.32	0	13:04	1.74	0.39	0.54
CHANNEL_11	CONDUIT	19.18	0	13:14	0.99	0.21	0.59
30_RCP_Walter_1	CONDUIT	19.06	0	13:13	4.08	0.49	0.91
Over_30_RCP_Walter_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Twin36-_Park#1	CONDUIT	37.07	0	13:06	3.50	0.37	0.71
Park#1-OVER	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_12	CONDUIT	37.25	0	13:03	1.91	0.15	0.63
CHANNEL_13	CONDUIT	44.81	0	13:02	2.73	0.26	0.53
Twin36-_Park#2	CONDUIT	36.96	0	13:05	5.41	1.11	0.92
17	CONDUIT	36.99	0	13:05	1.96	1.44	0.59
Park#2-OVER	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

****
Flow Classification Summary
****

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
15_RCP_Daniels_1	1.00	0.01	0.00	0.00	0.96	0.03	0.00	0.00	0.69	0.0001
Over_15_RCP_Daniels_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_1	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.11	0.0000
15_CMP_Daniels_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.62	0.0000
Over_15_CMP_Daniels_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
CHANNEL_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.13	0.0000
CHANNEL_4	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.07	0.0000
12_RCP_Viverette_1	1.00	0.01	0.00	0.00	0.44	0.55	0.00	0.00	0.79	0.0001
Over_12_RCP_Viverette_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_5	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.10	0.0000
24_RCP_Daniels_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.34	0.0004
Over_24_RCP_Daniels_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_6	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
Viverette_2-PR-ELLIPTICAL	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.50	0.0000
Viverette_2-OVR	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_7	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
15_RCP_Pearce	1.00	0.01	0.00	0.00	0.37	0.62	0.00	0.00	0.85	0.0000
Over_15_RCP_Pearce	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
18_RCP_Walter_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.33	0.0000
Over_18_RCP_Walter_2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_8	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.03	0.0000
CHANNEL_9	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.06	0.0000
CHANNEL_10	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.19	0.0000
CHANNEL_11	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
30_RCP_Walter_1	1.00	0.01	0.00	0.00	0.80	0.19	0.00	0.00	0.71	0.0000
Over_30_RCP_Walter_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

Twin36-_Park#1	1.00	0.01	0.02	0.00	0.97	0.00	0.00	0.00	0.47	0.0001
Park#1-OVER	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_12	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.22	0.0000
CHANNEL_13	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.33	0.0000
Twin36-_Park#2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.44	0.0001
17	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.20	0.0001
Park#2-OVER	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
12_RCP_Viverette_1	1.97	1.97	1.97	0.49	1.78
24_RCP_Daniels_3	1.05	1.05	1.05	5.38	1.05
Viverette_2-PR-ELLIPTICAL	0.28	0.28	0.28	0.01	0.01
18_RCP_Walter_2	0.37	0.37	0.37	0.01	0.10
Twin36-_Park#2	0.01	0.01	0.01	0.39	0.01
17	0.01	0.01	0.01	1.34	0.01

Analysis begun on: Mon Dec 07 15:52:12 2015
Analysis ended on: Mon Dec 07 15:52:13 2015
Total elapsed time: 00:00:01

Alternatives - Project Area 1 (10-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
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Alternatives - Project Area 1 (10-Year)

*******************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*******************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-29-2015 00:00:00
Ending Date .............. MAY-01-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 02: maximum depth increased for Node 126-128_Daniels

WARNING 02: maximum depth increased for Node 138-140_Daniels

WARNING 02: maximum depth increased for Node D/S_Viverette_2

*************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
*************************     ---------       -------
Total Precipitation ......        47.838         5.284
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........        19.228         2.124
Surface Runoff ...........        28.206         3.116
Final Surface Storage ....         0.425         0.047
Continuity Error (%) .....        -0.044


*************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
*************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......        28.206         9.191
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........        28.203         9.190
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.003         0.001
Continuity Error (%) .....         0.000


**************************
Time-Step Critical Elements
**************************
Link Twin36-_Park#2 (60.42%)
Link 24_RCP_Daniels_3 (10.11%)
Link 30_RCP_Walter_1 (5.15%)
Link Twin36-_Park#1 (2.15%)
Link Viverette_2-PR-ELLIPTICAL (1.80%)
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*******************************
Highest Flow Instability Indexes
*******************************
All links are stable.


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     5.61 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.00


**************************
Subcatchment Runoff Summary
**************************
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Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Area#1-10	5.28	0.00	0.00	1.31	3.93	0.26	4.58	0.744
Area#1-20	5.28	0.00	0.00	1.52	3.72	0.73	11.03	0.704
Area#1-30	5.28	0.00	0.00	1.57	3.67	0.17	3.09	0.695
Area#1-40	5.28	0.00	0.00	1.77	3.47	0.70	10.43	0.656
Area#1-50	5.28	0.00	0.00	1.54	3.70	0.59	9.01	0.700
Area#1-60	5.28	0.00	0.00	1.59	3.65	0.62	11.02	0.691
Area#1-70	5.28	0.00	0.00	1.50	3.74	0.38	7.02	0.708
Area#1-80	5.28	0.00	0.00	1.11	4.14	0.30	6.17	0.783
Area#1-90	5.28	0.00	0.00	1.97	3.27	1.03	12.02	0.618
Area#1-100	5.28	0.00	0.00	2.04	3.20	0.49	7.00	0.605
Area#1-110	5.28	0.00	0.00	2.70	2.54	0.13	2.19	0.481
Area#1-120	5.28	0.00	0.00	1.53	3.71	0.26	4.68	0.703
Area#1-130	5.28	0.00	0.00	1.04	4.21	0.69	13.82	0.796
Area#1-140	5.28	0.00	0.00	2.88	2.36	2.74	19.85	0.447
Area#1-150	5.28	0.00	0.00	0.50	4.75	0.10	2.10	0.899

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*********************
Node Depth Summary
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Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
U/S_Daniels_1	JUNCTION	0.43	1.65	127.18	0 13:00
D/S_Daniels_1	JUNCTION	0.42	1.61	126.99	0 13:30
126-128_Daniels	JUNCTION	0.85	3.00	126.98	0 13:31
U/S_Daniels_2	JUNCTION	0.52	2.06	127.03	0 13:27
D/S_Daniels_2	JUNCTION	0.57	2.36	126.98	0 13:31
138-140_Daniels	JUNCTION	1.19	3.84	126.97	0 13:30
U/S_Viverette_1	JUNCTION	1.17	4.17	128.12	0 13:00
D/S_Viverette_1	JUNCTION	0.95	3.36	126.97	0 13:30
U/S_Daniels_3	JUNCTION	1.61	4.47	126.96	0 13:30
D/S_Daniels_3	JUNCTION	1.19	3.01	125.49	0 13:17
U/S_Walter_1	JUNCTION	1.14	3.18	125.37	0 13:15
D/S_Walter_1	JUNCTION	1.17	2.80	124.59	0 13:04
U/S_Viverette_2	JUNCTION	0.79	2.58	124.95	0 13:00
D/S_Viverette_2	JUNCTION	0.85	2.36	124.53	0 13:02
108-110_Walter	JUNCTION	1.35	3.01	124.51	0 13:04
U/S_Pearce	JUNCTION	0.36	1.85	124.10	0 13:02
D/S_Pearce	JUNCTION	0.32	1.89	124.04	0 13:03
U/S_Walter_2	JUNCTION	0.76	2.79	124.04	0 13:03
D/S_Walter_2	JUNCTION	0.80	2.77	123.92	0 13:06
120-122_Walter	JUNCTION	0.91	2.92	123.92	0 13:06
U/S_Park#1	JUNCTION	1.07	2.75	122.13	0 13:03
D/S_Park#1	JUNCTION	1.16	2.64	121.77	0 13:00

U/S_Park#2	JUNCTION	1.63	4.33	123.83	0	13:06
D/S_Park#2	JUNCTION	1.37	3.09	122.49	0	13:05
Outfall	OUTFALL	1.16	2.64	121.39	0	13:00

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
U/S_Daniels_1	JUNCTION	4.58	4.58	0	12:59	0.261	0.261
D/S_Daniels_1	JUNCTION	0.00	4.55	0	13:00	0.000	0.261
126-128_Daniels	JUNCTION	11.03	16.59	0	12:59	0.727	1.164
U/S_Daniels_2	JUNCTION	3.09	3.09	0	12:59	0.175	0.175
D/S_Daniels_2	JUNCTION	0.00	3.06	0	12:59	0.000	0.174
138-140_Daniels	JUNCTION	9.00	23.25	0	12:57	0.589	2.453
U/S_Viverette_1	JUNCTION	10.43	10.43	0	12:59	0.700	0.700
D/S_Viverette_1	JUNCTION	0.00	10.37	0	13:00	0.000	0.700
U/S_Daniels_3	JUNCTION	11.02	23.92	0	12:59	0.620	3.072
D/S_Daniels_3	JUNCTION	0.00	23.17	0	13:42	0.000	3.072
U/S_Walter_1	JUNCTION	7.02	26.11	0	13:30	0.383	3.455
D/S_Walter_1	JUNCTION	0.00	26.41	0	13:33	0.000	3.455
U/S_Viverette_2	JUNCTION	12.02	12.02	0	12:59	1.028	1.029
D/S_Viverette_2	JUNCTION	6.17	18.16	0	12:59	0.301	1.329
108-110_Walter	JUNCTION	7.00	46.10	0	13:00	0.487	5.271
U/S_Pearce	JUNCTION	2.10	2.10	0	12:59	0.101	0.101
D/S_Pearce	JUNCTION	0.00	2.07	0	13:00	0.000	0.101
U/S_Walter_2	JUNCTION	4.68	6.22	0	13:01	0.258	0.359
D/S_Walter_2	JUNCTION	0.00	5.03	0	13:02	0.000	0.359
120-122_Walter	JUNCTION	16.00	61.50	0	12:59	0.816	6.445
U/S_Park#1	JUNCTION	0.00	53.93	0	13:07	0.000	6.446
D/S_Park#1	JUNCTION	19.85	69.71	0	12:59	2.744	9.190
U/S_Park#2	JUNCTION	0.00	54.53	0	13:02	0.000	6.446
D/S_Park#2	JUNCTION	0.00	53.87	0	13:07	0.000	6.446
Outfall	OUTFALL	0.00	69.67	0	13:00	0.000	9.190

****
Node Surcharge Summary
****

No nodes were surcharged.

****
Node Flooding Summary
****

No nodes were flooded.

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Outfall	99.05	20.93	69.67	9.190
System	99.05	20.93	69.67	9.190

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
15_RCP_Daniels_1	CONDUIT	4.55	0	13:00	3.71	1.09	1.00
Over_15_RCP_Daniels_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_1	CHANNEL	3.99	0	12:53	0.88	0.01	0.51
15_CMP_Daniels_2	CONDUIT	3.05	0	12:59	2.81	0.83	1.00
Over_15_CMP_Daniels_2	CONDUIT	0.26	0	13:27	0.24	0.00	0.01
CHANNEL_2	CONDUIT	2.39	0	12:59	0.73	0.06	0.89
CHANNEL_3	CHANNEL	10.07	0	12:54	0.91	0.02	0.51
CHANNEL_4	CONDUIT	7.97	0	13:02	0.39	0.11	0.90
12_RCP_Viverette_1	CONDUIT	6.76	0	12:41	8.61	1.88	1.00
Over_12_RCP_Viverette_1	CONDUIT	5.58	0	13:00	1.35	0.00	0.03
CHANNEL_5	CONDUIT	19.09	0	14:05	0.73	0.14	0.98
24_RCP_Daniels_3	CONDUIT	23.17	0	13:42	7.38	7.06	1.00
Over_24_RCP_Daniels_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_6	CONDUIT	23.47	0	13:43	0.92	0.29	0.69
Viverette_2-PR-ELLIPTICAL	CONDUIT	12.00	0	13:00	3.79	0.76	1.00
Viverette_2-OVR	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_7	CONDUIT	17.50	0	13:00	1.07	0.12	0.67
15_RCP_Pearce	CONDUIT	2.07	0	13:00	3.74	0.67	1.00
Over_15_RCP_Pearce	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
18_RCP_Walter_2	CONDUIT	4.61	0	13:00	2.61	0.87	1.00
Over_18_RCP_Walter_2	CONDUIT	1.19	0	13:03	0.70	0.00	0.01
CHANNEL_8	CONDUIT	1.92	0	13:01	0.31	0.01	0.59
CHANNEL_9	CONDUIT	4.75	0	13:03	0.57	0.12	0.95
CHANNEL_10	CONDUIT	42.41	0	13:01	1.80	0.58	0.74
CHANNEL_11	CONDUIT	26.56	0	13:34	1.09	0.30	0.73
30_RCP_Walter_1	CONDUIT	26.41	0	13:33	5.38	0.68	1.00
Over_30_RCP_Walter_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Twin36-_Park#1	CONDUIT	54.05	0	13:08	4.09	0.53	0.90
Park#1-OVER	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_12	CONDUIT	54.53	0	13:02	2.00	0.21	0.86
CHANNEL_13	CONDUIT	69.67	0	13:00	3.07	0.41	0.66
Twin36-_Park#2	CONDUIT	53.87	0	13:07	7.62	1.62	1.00
17	CONDUIT	53.93	0	13:07	2.04	2.10	0.73
Park#2-OVER	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

****
Flow Classification Summary
****

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
15_RCP_Daniels_1	1.00	0.01	0.00	0.00	0.97	0.02	0.00	0.00	0.57	0.0001
Over_15_RCP_Daniels_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_1	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.10	0.0000
15_CMP_Daniels_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.49	0.0001
Over_15_CMP_Daniels_2	1.00	0.93	0.01	0.00	0.05	0.00	0.00	0.01	0.01	0.0000
CHANNEL_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.07	0.0000
CHANNEL_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.12	0.0000
CHANNEL_4	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.06	0.0000
12_RCP_Viverette_1	1.00	0.01	0.00	0.00	0.55	0.44	0.00	0.00	0.66	0.0001
Over_12_RCP_Viverette_1	1.00	0.87	0.00	0.00	0.00	0.00	0.00	0.13	0.09	0.0000
CHANNEL_5	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.09	0.0000
24_RCP_Daniels_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.28	0.0005
Over_24_RCP_Daniels_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_6	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.13	0.0000
Viverette_2-PR-ELLIPTICAL	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.40	0.0000
Viverette_2-OVR	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_7	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
15_RCP_Pearce	1.00	0.01	0.00	0.00	0.48	0.51	0.00	0.00	0.69	0.0000
Over_15_RCP_Pearce	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
18_RCP_Walter_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.26	0.0001
Over_18_RCP_Walter_2	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000
CHANNEL_8	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.03	0.0000
CHANNEL_9	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.05	0.0000
CHANNEL_10	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.20	0.0000
CHANNEL_11	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.09	0.0000
30_RCP_Walter_1	1.00	0.01	0.00	0.00	0.84	0.15	0.00	0.00	0.57	0.0000

Over_30_RCP_Walter_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Twin36-_Park#1	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.43	0.0001
Park#1-OVER	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_12	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.22	0.0000
CHANNEL_13	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.35	0.0000
Twin36-_Park#2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.42	0.0001
17	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.21	0.0001
Park#2-OVER	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
15_RCP_Daniels_1	1.27	1.27	1.27	0.14	0.18
15_CMP_Daniels_2	1.99	1.99	1.99	0.01	0.13
12_RCP_Viverette_1	3.48	3.48	3.48	2.07	3.09
24_RCP_Daniels_3	3.03	3.03	3.03	7.96	3.03
Viverette_2-PR-ELLIPTICAL	2.76	2.76	2.77	0.01	0.47
15_RCP_Pearce	0.87	0.87	0.87	0.01	0.01
18_RCP_Walter_2	2.48	2.48	2.48	0.01	0.77
30_RCP_Walter_1	1.55	1.55	1.55	0.01	1.55
Twin36-_Park#1	0.01	0.01	0.01	0.46	0.01
Twin36-_Park#2	0.43	0.43	0.43	2.53	0.43
17	0.01	0.01	0.01	3.21	0.01

Analysis begun on: Mon Dec 07 15:53:45 2015
Analysis ended on: Mon Dec 07 15:53:46 2015
Total elapsed time: 00:00:01

Alternatives - Project Area 1 (25-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
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Alternatives - Project Area 1 (25-Year)

*******************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*******************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-29-2015 00:00:00
Ending Date .............. MAY-01-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 02: maximum depth increased for Node 126-128_Daniels

WARNING 02: maximum depth increased for Node 138-140_Daniels

WARNING 02: maximum depth increased for Node D/S_Viverette_2

*************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
*************************     ---------       -------
Total Precipitation ......        58.684         6.482
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........        21.182         2.340
Surface Runoff ...........        37.104         4.098
Final Surface Storage ....         0.425         0.047
Continuity Error (%) .....        -0.047


*************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
*************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......        37.104        12.091
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........        37.100        12.090
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.003         0.001
Continuity Error (%) .....         0.001


**************************
Time-Step Critical Elements
**************************
Link Twin36-_Park#2 (56.80%)
Link Twin36-_Park#1 (10.29%)
Link 24_RCP_Daniels_3 (8.84%)
Link 30_RCP_Walter_1 (3.87%)
Link 12_RCP_Viverette_1 (1.56%)
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*******************************
Highest Flow Instability Indexes
*******************************
Link Over_15_CMP_Daniels_2 (1)


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     5.32 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.00


**************************
Subcatchment Runoff Summary
**************************
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Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Area#1-10	6.48	0.00	0.00	1.41	5.03	0.33	6.05	0.777
Area#1-20	6.48	0.00	0.00	1.64	4.80	0.94	14.78	0.741
Area#1-30	6.48	0.00	0.00	1.69	4.75	0.23	4.15	0.733
Area#1-40	6.48	0.00	0.00	1.91	4.53	0.91	14.38	0.698
Area#1-50	6.48	0.00	0.00	1.66	4.78	0.76	12.10	0.737
Area#1-60	6.48	0.00	0.00	1.71	4.73	0.80	14.80	0.729
Area#1-70	6.48	0.00	0.00	1.62	4.82	0.49	9.35	0.744
Area#1-80	6.48	0.00	0.00	1.20	5.25	0.38	7.94	0.810
Area#1-90	6.48	0.00	0.00	2.14	4.29	1.35	16.57	0.663
Area#1-100	6.48	0.00	0.00	2.24	4.20	0.64	9.66	0.648
Area#1-110	6.48	0.00	0.00	3.08	3.36	0.17	2.99	0.518
Area#1-120	6.48	0.00	0.00	1.66	4.79	0.33	6.23	0.738
Area#1-130	6.48	0.00	0.00	1.19	5.26	0.86	17.40	0.812
Area#1-140	6.48	0.00	0.00	3.20	3.23	3.76	28.03	0.499
Area#1-150	6.48	0.00	0.00	0.53	5.92	0.13	2.62	0.914

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******************
Node Depth Summary
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Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
U/S_Daniels_1	JUNCTION	0.64	2.41	127.94	0 13:00
D/S_Daniels_1	JUNCTION	0.62	2.33	127.71	0 13:51
126-128_Daniels	JUNCTION	1.11	3.73	127.71	0 13:52
U/S_Daniels_2	JUNCTION	0.74	2.74	127.71	0 13:52
D/S_Daniels_2	JUNCTION	0.81	3.09	127.71	0 13:52
138-140_Daniels	JUNCTION	1.49	4.58	127.71	0 13:52
U/S_Viverette_1	JUNCTION	1.35	4.21	128.16	0 13:00
D/S_Viverette_1	JUNCTION	1.23	4.10	127.71	0 13:52
U/S_Daniels_3	JUNCTION	1.92	5.20	127.69	0 13:51
D/S_Daniels_3	JUNCTION	1.37	3.52	126.00	0 13:20
U/S_Walter_1	JUNCTION	1.34	3.75	125.94	0 13:18
D/S_Walter_1	JUNCTION	1.31	3.25	125.04	0 13:07
U/S_Viverette_2	JUNCTION	0.94	3.32	125.69	0 13:01
D/S_Viverette_2	JUNCTION	0.98	2.84	125.01	0 13:06
108-110_Walter	JUNCTION	1.50	3.49	124.99	0 13:07
U/S_Pearce	JUNCTION	0.48	2.43	124.68	0 13:04
D/S_Pearce	JUNCTION	0.45	2.49	124.64	0 13:07
U/S_Walter_2	JUNCTION	0.92	3.39	124.64	0 13:08
D/S_Walter_2	JUNCTION	0.96	3.49	124.64	0 13:08
120-122_Walter	JUNCTION	1.08	3.63	124.63	0 13:07
U/S_Park#1	JUNCTION	1.21	3.08	122.46	0 13:03
D/S_Park#1	JUNCTION	1.29	2.91	122.04	0 13:00

U/S_Park#2	JUNCTION	1.85	5.03	124.53	0	13:07
D/S_Park#2	JUNCTION	1.51	3.38	122.78	0	13:07
Outfall	OUTFALL	1.29	2.91	121.66	0	13:00

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
U/S_Daniels_1	JUNCTION	6.04	6.04	0 13:00	0.335	0.335
D/S_Daniels_1	JUNCTION	0.00	8.25	0 13:04	0.000	0.343
126-128_Daniels	JUNCTION	14.78	23.73	0 12:54	0.939	1.517
U/S_Daniels_2	JUNCTION	4.15	4.15	0 13:00	0.226	0.226
D/S_Daniels_2	JUNCTION	0.00	4.00	0 12:56	0.000	0.226
138-140_Daniels	JUNCTION	12.09	25.83	0 12:49	0.761	3.185
U/S_Viverette_1	JUNCTION	14.38	14.38	0 13:00	0.914	0.914
D/S_Viverette_1	JUNCTION	0.00	14.33	0 13:00	0.000	0.914
U/S_Daniels_3	JUNCTION	14.80	25.62	0 14:20	0.802	3.976
D/S_Daniels_3	JUNCTION	0.00	25.77	0 14:24	0.000	3.976
U/S_Walter_1	JUNCTION	9.35	28.68	0 13:59	0.493	4.469
D/S_Walter_1	JUNCTION	0.00	29.11	0 14:07	0.000	4.469
U/S_Viverette_2	JUNCTION	16.57	16.57	0 13:00	1.352	1.352
D/S_Viverette_2	JUNCTION	7.94	23.36	0 13:00	0.382	1.733
108-110_Walter	JUNCTION	9.65	54.82	0 13:00	0.640	6.843
U/S_Pearce	JUNCTION	2.62	2.62	0 13:00	0.125	0.125
D/S_Pearce	JUNCTION	0.00	2.61	0 12:59	0.000	0.125
U/S_Walter_2	JUNCTION	6.23	8.47	0 12:54	0.333	0.458
D/S_Walter_2	JUNCTION	0.00	7.95	0 12:53	0.000	0.458
120-122_Walter	JUNCTION	20.39	72.06	0 12:58	1.029	8.329
U/S_Park#1	JUNCTION	0.00	62.90	0 13:07	0.000	8.329
D/S_Park#1	JUNCTION	28.03	85.57	0 13:00	3.759	12.089
U/S_Park#2	JUNCTION	0.00	63.25	0 13:06	0.000	8.330
D/S_Park#2	JUNCTION	0.00	62.95	0 13:07	0.000	8.329
Outfall	OUTFALL	0.00	85.45	0 13:00	0.000	12.089

****
Node Surcharge Summary
****

No nodes were surcharged.

****
Node Flooding Summary
****

No nodes were flooded.

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Outfall	99.12	25.74	85.45	12.089
System	99.12	25.74	85.45	12.089

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
15_RCP_Daniels_1	CONDUIT	5.88	0	12:58	4.79	1.41	1.00
Over_15_RCP_Daniels_1	CONDUIT	0.24	0	13:00	0.42	0.00	0.00
CHANNEL_1	CHANNEL	4.62	0	12:46	0.86	0.02	0.67
15_CMP_Daniels_2	CONDUIT	3.45	0	12:49	2.96	0.94	1.00
Over_15_CMP_Daniels_2	CONDUIT	3.43	0	12:59	0.93	0.00	0.25
CHANNEL_2	CONDUIT	2.75	0	12:56	0.65	0.06	1.00
CHANNEL_3	CHANNEL	12.85	0	15:06	0.81	0.03	0.62
CHANNEL_4	CONDUIT	11.09	0	13:01	0.39	0.15	1.00
12_RCP_Viverette_1	CONDUIT	6.93	0	12:35	8.82	1.93	1.00
Over_12_RCP_Viverette_1	CONDUIT	10.52	0	13:00	1.72	0.00	0.04
CHANNEL_5	CONDUIT	22.00	0	14:43	0.73	0.17	1.00
24_RCP_Daniels_3	CONDUIT	25.77	0	14:24	8.20	7.85	1.00
Over_24_RCP_Daniels_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_6	CONDUIT	26.16	0	14:20	0.94	0.32	0.81
Viverette_2-PR-ELLIPTICAL	CONDUIT	15.50	0	13:00	4.89	0.99	1.00
Viverette_2-OVR	CONDUIT	0.00	0	00:00	0.00	0.00	0.05
CHANNEL_7	CONDUIT	22.33	0	13:00	1.15	0.15	0.79
15_RCP_Pearce	CONDUIT	2.61	0	12:59	3.47	0.85	1.00
Over_15_RCP_Pearce	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
18_RCP_Walter_2	CONDUIT	4.82	0	12:50	2.73	0.91	1.00
Over_18_RCP_Walter_2	CONDUIT	6.38	0	13:01	1.10	0.00	0.23
CHANNEL_8	CONDUIT	2.79	0	12:52	0.18	0.01	0.73
CHANNEL_9	CONDUIT	5.76	0	12:53	0.50	0.15	1.00
CHANNEL_10	CONDUIT	48.92	0	13:02	1.83	0.67	0.89
CHANNEL_11	CONDUIT	29.31	0	14:06	1.14	0.33	0.84
30_RCP_Walter_1	CONDUIT	29.11	0	14:07	5.93	0.75	1.00
Over_30_RCP_Walter_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Twin36-_Park#1	CONDUIT	62.98	0	13:09	4.49	0.62	0.98
Park#1-OVER	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_12	CONDUIT	63.25	0	13:06	2.00	0.25	0.95
CHANNEL_13	CONDUIT	85.45	0	13:00	3.24	0.50	0.73
Twin36-_Park#2	CONDUIT	61.66	0	13:13	8.72	1.85	1.00
17	CONDUIT	62.90	0	13:07	2.03	2.45	0.81
Park#2-OVER	CONDUIT	1.35	0	13:07	0.87	0.00	0.01

****
Flow Classification Summary
****

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
15_RCP_Daniels_1	1.00	0.01	0.00	0.00	0.97	0.02	0.00	0.00	0.52	0.0001
Over_15_RCP_Daniels_1	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.0000
CHANNEL_1	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.09	0.0000
15_CMP_Daniels_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.47	0.0001
Over_15_CMP_Daniels_2	1.00	0.80	0.00	0.00	0.19	0.00	0.00	0.01	0.01	0.0000
CHANNEL_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.06	0.0000
CHANNEL_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.11	0.0000
CHANNEL_4	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.06	0.0000
12_RCP_Viverette_1	1.00	0.01	0.00	0.00	0.59	0.40	0.00	0.00	0.62	0.0001
Over_12_RCP_Viverette_1	1.00	0.80	0.00	0.00	0.00	0.00	0.00	0.20	0.15	0.0000
CHANNEL_5	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.09	0.0000
24_RCP_Daniels_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.27	0.0005
Over_24_RCP_Daniels_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_6	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.12	0.0000
Viverette_2-PR-ELLIPTICAL	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.37	0.0001
Viverette_2-OVR	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_7	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
15_RCP_Pearce	1.00	0.01	0.00	0.00	0.50	0.50	0.00	0.00	0.65	0.0001
Over_15_RCP_Pearce	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
18_RCP_Walter_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.24	0.0002
Over_18_RCP_Walter_2	1.00	0.92	0.00	0.00	0.08	0.00	0.00	0.00	0.01	0.0000
CHANNEL_8	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.02	0.0000
CHANNEL_9	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.05	0.0000
CHANNEL_10	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.20	0.0000
CHANNEL_11	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.09	0.0000
30_RCP_Walter_1	1.00	0.01	0.00	0.00	0.86	0.14	0.00	0.00	0.53	0.0000

Over_30_RCP_Walter_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Twin36-_Park#1	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.41	0.0001
Park#1-OVER	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_12	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.22	0.0000
CHANNEL_13	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.36	0.0000
Twin36-_Park#2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.38	0.0001
17	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.21	0.0002
Park#2-OVER	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
15_RCP_Daniels_1	2.88	2.88	2.88	0.41	0.63
15_CMP_Daniels_2	3.33	3.33	3.33	0.01	0.16
CHANNEL_2	1.04	1.04	1.04	0.01	0.01
CHANNEL_4	1.08	1.08	1.08	0.01	0.01
12_RCP_Viverette_1	4.45	4.45	4.45	0.54	3.76
CHANNEL_5	2.36	2.36	2.37	0.01	0.01
24_RCP_Daniels_3	4.00	4.00	4.00	9.79	4.00
Viverette_2-PR-ELLIPTICAL	3.76	3.76	3.76	0.01	1.54
15_RCP_Pearce	2.15	2.15	2.15	0.01	0.30
18_RCP_Walter_2	3.50	3.50	3.50	0.01	0.26
CHANNEL_9	0.91	0.91	0.91	0.01	0.01
30_RCP_Walter_1	2.93	2.93	2.93	0.01	2.93
Twin36-_Park#1	0.01	0.01	0.01	1.65	0.01
Twin36-_Park#2	1.80	1.80	1.80	3.55	1.80
17	0.01	0.01	0.01	4.09	0.01

Analysis begun on: Mon Dec 07 15:54:23 2015
Analysis ended on: Mon Dec 07 15:54:24 2015
Total elapsed time: 00:00:01

Alternatives - Project Area 1 (50-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Alternatives - Project Area 1 (50-Year)

*******************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*******************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-29-2015 00:00:00
Ending Date .............. MAY-01-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 02: maximum depth increased for Node 126-128_Daniels

WARNING 02: maximum depth increased for Node 138-140_Daniels

WARNING 02: maximum depth increased for Node D/S_Viverette_2

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......        65.130         7.194
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........        22.173         2.449
Surface Runoff ...........        42.562         4.701
Final Surface Storage ....         0.426         0.047
Continuity Error (%) .....        -0.049


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......        42.562        13.869
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........        42.558        13.868
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.003         0.001
Continuity Error (%) .....         0.001


**************************
Time-Step Critical Elements
**************************
Link Twin36-_Park#2 (53.60%)
Link Twin36-_Park#1 (14.05%)
Link 24_RCP_Daniels_3 (8.78%)
Link 30_RCP_Walter_1 (3.71%)
Link 12_RCP_Viverette_1 (1.55%)
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*******************************
Highest Flow Instability Indexes
*******************************
All links are stable.


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     5.17 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.00


**************************
Subcatchment Runoff Summary
**************************
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Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Area#1-10	7.19	0.00	0.00	1.45	5.70	0.38	6.95	0.792
Area#1-20	7.19	0.00	0.00	1.70	5.46	1.07	17.14	0.759
Area#1-30	7.19	0.00	0.00	1.75	5.40	0.26	4.80	0.751
Area#1-40	7.19	0.00	0.00	1.98	5.17	1.04	16.89	0.719
Area#1-50	7.19	0.00	0.00	1.72	5.43	0.86	14.04	0.755
Area#1-60	7.19	0.00	0.00	1.78	5.38	0.91	17.16	0.747
Area#1-70	7.19	0.00	0.00	1.68	5.48	0.56	10.79	0.761
Area#1-80	7.19	0.00	0.00	1.24	5.92	0.43	9.02	0.823
Area#1-90	7.19	0.00	0.00	2.23	4.92	1.55	19.52	0.684
Area#1-100	7.19	0.00	0.00	2.34	4.82	0.73	11.36	0.669
Area#1-110	7.19	0.00	0.00	3.28	3.87	0.19	3.52	0.538
Area#1-120	7.19	0.00	0.00	1.72	5.44	0.38	7.19	0.756
Area#1-130	7.19	0.00	0.00	1.27	5.90	0.97	19.60	0.820
Area#1-140	7.19	0.00	0.00	3.37	3.78	4.39	33.62	0.525
Area#1-150	7.19	0.00	0.00	0.54	6.62	0.14	2.94	0.920

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******************
Node Depth Summary
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Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
U/S_Daniels_1	JUNCTION	0.75	2.55	128.08	0 13:58
D/S_Daniels_1	JUNCTION	0.75	2.70	128.08	0 13:57
126-128_Daniels	JUNCTION	1.27	4.09	128.07	0 13:59
U/S_Daniels_2	JUNCTION	0.87	3.11	128.08	0 14:00
D/S_Daniels_2	JUNCTION	0.95	3.46	128.08	0 14:00
138-140_Daniels	JUNCTION	1.66	4.94	128.07	0 13:58
U/S_Viverette_1	JUNCTION	1.44	4.23	128.18	0 13:00
D/S_Viverette_1	JUNCTION	1.40	4.46	128.07	0 13:57
U/S_Daniels_3	JUNCTION	2.11	5.56	128.05	0 13:58
D/S_Daniels_3	JUNCTION	1.49	3.75	126.23	0 13:17
U/S_Walter_1	JUNCTION	1.47	3.99	126.18	0 13:15
D/S_Walter_1	JUNCTION	1.40	3.47	125.26	0 13:04
U/S_Viverette_2	JUNCTION	1.02	3.48	125.85	0 13:00
D/S_Viverette_2	JUNCTION	1.06	3.07	125.24	0 13:03
108-110_Walter	JUNCTION	1.58	3.73	125.23	0 13:03
U/S_Pearce	JUNCTION	0.55	2.73	124.98	0 13:00
D/S_Pearce	JUNCTION	0.51	2.70	124.85	0 13:03
U/S_Walter_2	JUNCTION	1.01	3.59	124.84	0 13:03
D/S_Walter_2	JUNCTION	1.06	3.69	124.84	0 13:03
120-122_Walter	JUNCTION	1.18	3.84	124.84	0 13:03
U/S_Park#1	JUNCTION	1.30	3.68	123.06	0 13:04
D/S_Park#1	JUNCTION	1.37	3.20	122.33	0 13:04

U/S_Park#2	JUNCTION	1.97	5.19	124.69	0	13:04
D/S_Park#2	JUNCTION	1.59	3.91	123.31	0	13:04
Outfall	OUTFALL	1.37	3.20	121.95	0	13:04

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
U/S_Daniels_1	JUNCTION	6.95	6.95	0 12:59	0.379	0.379
D/S_Daniels_1	JUNCTION	0.00	14.17	0 13:00	0.000	0.410
126-128_Daniels	JUNCTION	17.13	31.38	0 13:00	1.067	1.781
U/S_Daniels_2	JUNCTION	4.80	4.86	0 12:59	0.257	0.258
D/S_Daniels_2	JUNCTION	0.00	4.32	0 12:52	0.000	0.257
138-140_Daniels	JUNCTION	14.03	27.17	0 12:45	0.865	3.662
U/S_Viverette_1	JUNCTION	16.87	16.87	0 12:59	1.045	1.045
D/S_Viverette_1	JUNCTION	0.00	16.82	0 13:00	0.000	1.044
U/S_Daniels_3	JUNCTION	17.15	27.71	0 13:57	0.912	4.524
D/S_Daniels_3	JUNCTION	0.00	27.71	0 13:58	0.000	4.524
U/S_Walter_1	JUNCTION	10.78	31.00	0 13:59	0.560	5.085
D/S_Walter_1	JUNCTION	0.00	31.24	0 14:06	0.000	5.085
U/S_Viverette_2	JUNCTION	19.51	19.51	0 12:59	1.549	1.549
D/S_Viverette_2	JUNCTION	9.02	28.24	0 12:59	0.431	1.980
108-110_Walter	JUNCTION	11.35	61.12	0 13:00	0.733	7.798
U/S_Pearce	JUNCTION	2.94	2.94	0 12:59	0.140	0.140
D/S_Pearce	JUNCTION	0.00	2.92	0 12:59	0.000	0.140
U/S_Walter_2	JUNCTION	7.18	9.50	0 12:59	0.378	0.519
D/S_Walter_2	JUNCTION	0.00	8.76	0 12:49	0.000	0.518
120-122_Walter	JUNCTION	23.11	82.27	0 13:01	1.158	9.474
U/S_Park#1	JUNCTION	0.00	79.18	0 13:04	0.000	9.474
D/S_Park#1	JUNCTION	33.60	104.61	0 13:03	4.393	13.867
U/S_Park#2	JUNCTION	0.00	80.10	0 13:03	0.000	9.474
D/S_Park#2	JUNCTION	0.00	79.80	0 13:03	0.000	9.474
Outfall	OUTFALL	0.00	104.59	0 13:04	0.000	13.867

****
Node Surcharge Summary
****

No nodes were surcharged.

****
Node Flooding Summary
****

No nodes were flooded.

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Outfall	99.16	28.52	104.59	13.867
System	99.16	28.52	104.59	13.867

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
15_RCP_Daniels_1	CONDUIT	6.24	0	12:52	5.08	1.50	1.00
Over_15_RCP_Daniels_1	CONDUIT	2.53	0	13:30	0.96	0.00	0.07
CHANNEL_1	CHANNEL	7.55	0	13:01	0.84	0.03	0.75
15_CMP_Daniels_2	CONDUIT	3.66	0	12:45	2.98	1.00	1.00
Over_15_CMP_Daniels_2	CONDUIT	4.18	0	13:00	0.98	0.00	0.37
CHANNEL_2	CONDUIT	2.86	0	12:48	0.55	0.07	1.00
CHANNEL_3	CHANNEL	14.69	0	15:43	0.75	0.03	0.67
CHANNEL_4	CONDUIT	13.75	0	13:01	0.39	0.19	1.00
12_RCP_Viverette_1	CONDUIT	6.80	0	12:33	8.65	1.89	1.00
Over_12_RCP_Viverette_1	CONDUIT	13.57	0	13:00	1.89	0.01	0.05
CHANNEL_5	CONDUIT	23.23	0	15:13	0.73	0.17	1.00
24_RCP_Daniels_3	CONDUIT	26.83	0	14:50	8.54	8.17	1.00
Over_24_RCP_Daniels_3	CONDUIT	2.13	0	13:58	0.84	0.00	0.02
CHANNEL_6	CONDUIT	27.89	0	14:03	0.94	0.35	0.86
Viverette_2-PR-ELLIPTICAL	CONDUIT	16.53	0	12:55	5.22	1.05	1.00
Viverette_2-OVR	CONDUIT	4.71	0	13:00	0.34	0.00	0.09
CHANNEL_7	CONDUIT	27.02	0	13:00	1.21	0.19	0.85
15_RCP_Pearce	CONDUIT	2.92	0	12:59	3.12	0.95	1.00
Over_15_RCP_Pearce	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
18_RCP_Walter_2	CONDUIT	4.91	0	12:46	2.78	0.93	1.00
Over_18_RCP_Walter_2	CONDUIT	7.94	0	13:00	1.15	0.00	0.30
CHANNEL_8	CONDUIT	3.10	0	12:49	0.18	0.01	0.79
CHANNEL_9	CONDUIT	7.54	0	13:04	0.42	0.20	1.00
CHANNEL_10	CONDUIT	56.71	0	13:04	1.84	0.78	0.95
CHANNEL_11	CONDUIT	31.43	0	14:08	1.17	0.35	0.90
30_RCP_Walter_1	CONDUIT	31.24	0	14:06	6.36	0.80	1.00
Over_30_RCP_Walter_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Twin36-_Park#1	CONDUIT	79.27	0	13:05	5.61	0.78	1.00
Park#1-OVER	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_12	CONDUIT	80.10	0	13:03	1.94	0.31	0.98
CHANNEL_13	CONDUIT	104.59	0	13:04	3.41	0.62	0.80
Twin36-_Park#2	CONDUIT	61.28	0	13:34	8.67	1.84	1.00
17	CONDUIT	79.18	0	13:04	1.98	3.08	0.95
Park#2-OVER	CONDUIT	24.98	0	13:04	2.58	0.01	0.06

****
Flow Classification Summary
****

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
15_RCP_Daniels_1	1.00	0.01	0.00	0.00	0.98	0.02	0.00	0.00	0.50	0.0001
Over_15_RCP_Daniels_1	1.00	0.86	0.01	0.00	0.11	0.00	0.00	0.01	0.02	0.0000
CHANNEL_1	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.09	0.0000
15_CMP_Daniels_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.45	0.0001
Over_15_CMP_Daniels_2	1.00	0.76	0.01	0.00	0.23	0.00	0.00	0.01	0.01	0.0000
CHANNEL_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.06	0.0000
CHANNEL_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.11	0.0000
CHANNEL_4	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.06	0.0000
12_RCP_Viverette_1	1.00	0.01	0.00	0.00	0.62	0.37	0.00	0.00	0.59	0.0002
Over_12_RCP_Viverette_1	1.00	0.78	0.00	0.00	0.07	0.00	0.00	0.15	0.16	0.0000
CHANNEL_5	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.09	0.0000
24_RCP_Daniels_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.26	0.0005
Over_24_RCP_Daniels_3	1.00	0.94	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.0000
CHANNEL_6	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.12	0.0000
Viverette_2-PR-ELLIPTICAL	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.35	0.0001
Viverette_2-OVR	1.00	0.95	0.04	0.00	0.00	0.00	0.01	0.00	0.00	0.0000
CHANNEL_7	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
15_RCP_Pearce	1.00	0.01	0.00	0.00	0.51	0.48	0.00	0.00	0.64	0.0001
Over_15_RCP_Pearce	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
18_RCP_Walter_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.23	0.0001
Over_18_RCP_Walter_2	1.00	0.88	0.00	0.00	0.12	0.00	0.00	0.00	0.01	0.0000
CHANNEL_8	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.02	0.0000
CHANNEL_9	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.05	0.0000
CHANNEL_10	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.20	0.0000
CHANNEL_11	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.10	0.0000
30_RCP_Walter_1	1.00	0.01	0.00	0.00	0.86	0.13	0.00	0.00	0.51	0.0000

Over_30_RCP_Walter_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Twin36-_Park#1	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.39	0.0001
Park#1-OVER	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_12	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.22	0.0000
CHANNEL_13	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.36	0.0000
Twin36-_Park#2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.36	0.0001
17	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.21	0.0002
Park#2-OVER	1.00	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
15_RCP_Daniels_1	3.55	3.55	3.55	0.43	0.43
15_CMP_Daniels_2	3.93	3.93	3.93	0.01	0.14
CHANNEL_2	2.40	2.40	2.40	0.01	0.01
CHANNEL_4	2.39	2.39	2.39	0.01	0.01
12_RCP_Viverette_1	5.22	5.22	5.22	0.44	2.19
CHANNEL_5	3.14	3.14	3.14	0.01	0.01
24_RCP_Daniels_3	4.54	4.54	4.54	10.63	4.54
Viverette_2-PR-ELLIPTICAL	4.27	4.27	4.27	0.10	2.09
15_RCP_Pearce	2.74	2.74	2.74	0.01	0.36
18_RCP_Walter_2	3.96	3.96	3.96	0.01	0.22
CHANNEL_9	1.61	1.61	1.61	0.01	0.01
30_RCP_Walter_1	3.50	3.50	3.50	0.01	3.50
Twin36-_Park#1	0.31	0.31	0.31	2.30	0.31
Twin36-_Park#2	2.50	2.50	2.50	4.02	2.50
17	0.01	0.01	0.01	4.64	0.01

Analysis begun on: Mon Dec 07 15:55:37 2015
Analysis ended on: Mon Dec 07 15:55:39 2015
Total elapsed time: 00:00:02

Alternatives - Project Area 1 (100-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Alternatives - Project Area 1 (100-Year)

*******************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*******************************************************

***************
Analysis Options
***************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ YES
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Starting Date ............ APR-29-2015 00:00:00
Ending Date .............. MAY-01-2015 00:00:00
Antecedent Dry Days ...... 7.0
Report Time Step ......... 00:15:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 01:00:00
Routing Time Step ........ 15.00 sec


WARNING 02: maximum depth increased for Node 126-128_Daniels

WARNING 02: maximum depth increased for Node 138-140_Daniels

WARNING 02: maximum depth increased for Node D/S_Viverette_2

*************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
*************************     ---------       -------
Total Precipitation ......        72.390         7.996
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........        23.151         2.557
Surface Runoff ...........        48.839         5.395
Final Surface Storage ....         0.436         0.048
Continuity Error (%) .....        -0.051


*************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
*************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......        48.839        15.915
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........        48.832        15.913
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.004         0.001
Continuity Error (%) .....         0.008


**************************
Time-Step Critical Elements
**************************
Link Twin36-_Park#2 (52.43%)
Link Twin36-_Park#1 (11.95%)
Link 24_RCP_Daniels_3 (10.58%)
Link 30_RCP_Walter_1 (3.93%)
Link CHANNEL_13 (2.25%)
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*******************************
Highest Flow Instability Indexes
*******************************
Link Over_15_CMP_Daniels_2 (5)
Link 15_CMP_Daniels_2 (4)
Link CHANNEL_2 (4)


************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     5.20 sec
Maximum Time Step           :    15.00 sec
Percent in Steady State     :     0.00
Average Iterations per Step :     2.03


**************************
Subcatchment Runoff Summary
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Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Area#1-10	8.00	0.00	0.00	1.50	6.46	0.43	7.99	0.808
Area#1-20	8.00	0.00	0.00	1.75	6.20	1.21	19.85	0.776
Area#1-30	8.00	0.00	0.00	1.81	6.15	0.29	5.55	0.769
Area#1-40	8.00	0.00	0.00	2.04	5.91	1.19	19.77	0.739
Area#1-50	8.00	0.00	0.00	1.77	6.18	0.98	16.27	0.773
Area#1-60	8.00	0.00	0.00	1.83	6.12	1.04	19.84	0.765
Area#1-70	8.00	0.00	0.00	1.73	6.22	0.64	12.43	0.778
Area#1-80	8.00	0.00	0.00	1.28	6.68	0.49	10.23	0.835
Area#1-90	8.00	0.00	0.00	2.31	5.64	1.78	22.98	0.705
Area#1-100	8.00	0.00	0.00	2.43	5.52	0.84	13.35	0.690
Area#1-110	8.00	0.00	0.00	3.49	4.46	0.22	4.14	0.558
Area#1-120	8.00	0.00	0.00	1.78	6.18	0.43	8.28	0.773
Area#1-130	8.00	0.00	0.00	1.35	6.62	1.08	22.07	0.828
Area#1-140	8.00	0.00	0.00	3.53	4.41	5.13	40.45	0.552
Area#1-150	8.00	0.00	0.00	0.56	7.41	0.16	3.29	0.927

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******************
Node Depth Summary
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Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
U/S_Daniels_1	JUNCTION	0.73	2.68	128.21	0 13:34
D/S_Daniels_1	JUNCTION	0.73	2.83	128.21	0 13:34
126-128_Daniels	JUNCTION	1.23	4.23	128.21	0 13:33
U/S_Daniels_2	JUNCTION	0.84	3.25	128.22	0 13:33
D/S_Daniels_2	JUNCTION	0.91	3.59	128.21	0 13:33
138-140_Daniels	JUNCTION	1.63	5.07	128.20	0 13:33
U/S_Viverette_1	JUNCTION	1.40	4.26	128.21	0 13:31
D/S_Viverette_1	JUNCTION	1.36	4.60	128.21	0 13:32
U/S_Daniels_3	JUNCTION	2.08	5.68	128.17	0 13:33
D/S_Daniels_3	JUNCTION	1.50	4.34	126.82	0 13:33
U/S_Walter_1	JUNCTION	1.48	4.56	126.75	0 13:34
D/S_Walter_1	JUNCTION	1.41	3.67	125.46	0 13:03
U/S_Viverette_2	JUNCTION	1.02	3.54	125.91	0 13:00
D/S_Viverette_2	JUNCTION	1.06	3.28	125.45	0 13:02
108-110_Walter	JUNCTION	1.59	3.93	125.43	0 13:02
U/S_Pearce	JUNCTION	0.54	2.79	125.04	0 13:00
D/S_Pearce	JUNCTION	0.50	2.88	125.03	0 13:03
U/S_Walter_2	JUNCTION	1.00	3.77	125.02	0 13:04
D/S_Walter_2	JUNCTION	1.05	3.87	125.02	0 13:04
120-122_Walter	JUNCTION	1.17	4.02	125.02	0 13:02

U/S_Park#1	JUNCTION	1.31	4.02	123.40	0	13:03
D/S_Park#1	JUNCTION	1.38	3.44	122.57	0	12:59
U/S_Park#2	JUNCTION	1.97	5.35	124.85	0	13:05
D/S_Park#2	JUNCTION	1.60	5.32	124.72	0	13:05
Outfall	OUTFALL	1.38	3.44	122.19	0	12:59

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
U/S_Daniels_1	JUNCTION	7.98	7.98	0 12:59	0.430	0.432
D/S_Daniels_1	JUNCTION	0.00	17.27	0 13:00	0.000	0.489
126-128_Daniels	JUNCTION	19.84	40.73	0 13:00	1.213	2.091
U/S_Daniels_2	JUNCTION	5.55	5.61	0 12:59	0.292	0.294
D/S_Daniels_2	JUNCTION	0.00	4.79	0 13:25	0.000	0.295
138-140_Daniels	JUNCTION	16.26	31.71	0 12:59	0.983	4.212
U/S_Viverette_1	JUNCTION	19.75	19.75	0 12:59	1.193	1.193
D/S_Viverette_1	JUNCTION	0.00	19.70	0 13:00	0.000	1.193
U/S_Daniels_3	JUNCTION	19.82	37.65	0 13:32	1.039	5.150
D/S_Daniels_3	JUNCTION	0.00	37.65	0 13:33	0.000	5.150
U/S_Walter_1	JUNCTION	12.42	42.01	0 13:33	0.637	5.786
D/S_Walter_1	JUNCTION	0.00	41.98	0 13:34	0.000	5.787
U/S_Viverette_2	JUNCTION	22.96	22.96	0 12:59	1.775	1.775
D/S_Viverette_2	JUNCTION	10.23	32.93	0 12:59	0.486	2.261
108-110_Walter	JUNCTION	13.33	69.37	0 13:00	0.841	8.889
U/S_Pearce	JUNCTION	3.29	3.29	0 12:59	0.157	0.157
D/S_Pearce	JUNCTION	0.00	3.32	0 12:58	0.000	0.157
U/S_Walter_2	JUNCTION	8.28	10.55	0 12:59	0.429	0.588
D/S_Walter_2	JUNCTION	0.00	9.57	0 12:46	0.000	0.587
120-122_Walter	JUNCTION	26.20	97.48	0 13:00	1.306	10.781
U/S_Park#1	JUNCTION	0.00	125.39	0 13:05	0.000	10.781
D/S_Park#1	JUNCTION	40.40	122.61	0 12:59	5.131	15.912
U/S_Park#2	JUNCTION	0.00	94.22	0 13:01	0.000	10.781
D/S_Park#2	JUNCTION	0.00	92.80	0 13:02	0.000	10.781
Outfall	OUTFALL	0.00	122.32	0 12:59	0.000	15.911

****
Node Surcharge Summary
****

Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
120-122_Walter	JUNCTION	0.07	0.017	0.983

****
Node Flooding Summary
****

No nodes were flooded.

****
Outfall Loading Summary
****

Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Outfall	99.16	28.97	122.32	15.911

System 99.16 28.97 122.32 15.911

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
15_RCP_Daniels_1	CONDUIT	6.58	0	12:47	5.36	1.58	1.00
Over_15_RCP_Daniels_1	CONDUIT	4.19	0	13:00	1.29	0.00	0.12
CHANNEL_1	CHANNEL	9.43	0	12:59	0.81	0.03	0.78
15_CMP_Daniels_2	CONDUIT	3.86	0	12:41	3.14	1.05	1.00
Over_15_CMP_Daniels_2	CONDUIT	4.72	0	13:25	1.02	0.00	0.41
CHANNEL_2	CONDUIT	3.21	0	12:44	0.49	0.07	1.00
CHANNEL_3	CHANNEL	18.37	0	13:00	0.73	0.04	0.69
CHANNEL_4	CONDUIT	15.79	0	13:01	0.39	0.22	1.00
12_RCP_Viverette_1	CONDUIT	6.60	0	12:32	8.40	1.84	1.00
Over_12_RCP_Viverette_1	CONDUIT	17.08	0	13:00	2.06	0.01	0.08
CHANNEL_5	CONDUIT	30.39	0	13:36	0.76	0.23	1.00
24_RCP_Daniels_3	CONDUIT	26.66	0	15:24	8.49	8.12	1.00
Over_24_RCP_Daniels_3	CONDUIT	15.76	0	13:33	1.88	0.01	0.05
CHANNEL_6	CONDUIT	37.66	0	13:34	0.95	0.47	0.98
Viverette_2-PR-ELLIPTICAL	CONDUIT	17.17	0	12:49	5.42	1.09	1.00
Viverette_2-OVR	CONDUIT	10.45	0	13:00	0.64	0.00	0.10
CHANNEL_7	CONDUIT	32.04	0	13:00	1.27	0.22	0.90
15_RCP_Pearce	CONDUIT	3.23	0	12:54	2.92	1.05	1.00
Over_15_RCP_Pearce	CONDUIT	1.50	0	13:00	0.62	0.00	0.03
18_RCP_Walter_2	CONDUIT	5.02	0	12:43	2.84	0.95	1.00
Over_18_RCP_Walter_2	CONDUIT	9.21	0	13:00	1.21	0.00	0.36
CHANNEL_8	CONDUIT	3.38	0	12:46	0.18	0.01	0.83
CHANNEL_9	CONDUIT	8.72	0	13:01	0.45	0.23	1.00
CHANNEL_10	CONDUIT	65.55	0	13:01	1.85	0.90	0.99
CHANNEL_11	CONDUIT	42.02	0	13:35	1.18	0.47	0.95
30_RCP_Walter_1	CONDUIT	34.84	0	14:15	7.10	0.89	1.00
Over_30_RCP_Walter_1	CONDUIT	8.40	0	13:34	1.50	0.00	0.04
Twin36-_Park#1	CONDUIT	87.94	0	13:13	6.22	0.87	1.00
Park#1-OVER	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
CHANNEL_12	CONDUIT	94.22	0	13:01	2.15	0.37	1.00
CHANNEL_13	CONDUIT	122.32	0	12:59	3.55	0.72	0.86
Twin36-_Park#2	CONDUIT	60.79	0	14:26	8.60	1.82	1.00
17	CONDUIT	125.39	0	13:05	2.85	4.88	1.00
Park#2-OVER	CONDUIT	68.21	0	13:04	3.75	0.02	0.13

****
Flow Classification Summary
****

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
15_RCP_Daniels_1	1.00	0.01	0.00	0.00	0.98	0.02	0.00	0.00	0.51	0.0001
Over_15_RCP_Daniels_1	1.00	0.87	0.01	0.00	0.11	0.00	0.00	0.01	0.02	0.0000
CHANNEL_1	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.09	0.0000
15_CMP_Daniels_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.46	0.0006
Over_15_CMP_Daniels_2	1.00	0.77	0.01	0.00	0.21	0.00	0.00	0.01	0.01	0.0000
CHANNEL_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.06	0.0000
CHANNEL_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.11	0.0000
CHANNEL_4	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.06	0.0000
12_RCP_Viverette_1	1.00	0.01	0.00	0.00	0.62	0.37	0.00	0.00	0.59	0.0002
Over_12_RCP_Viverette_1	1.00	0.80	0.00	0.00	0.10	0.00	0.00	0.10	0.12	0.0000
CHANNEL_5	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.09	0.0000
24_RCP_Daniels_3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.27	0.0005
Over_24_RCP_Daniels_3	1.00	0.91	0.00	0.00	0.00	0.00	0.00	0.09	0.06	0.0000
CHANNEL_6	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.12	0.0000
Viverette_2-PR-ELLIPTICAL	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.35	0.0001
Viverette_2-OVR	1.00	0.95	0.03	0.00	0.00	0.00	0.02	0.00	0.00	0.0000
CHANNEL_7	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.08	0.0000
15_RCP_Pearce	1.00	0.01	0.00	0.00	0.51	0.48	0.00	0.00	0.65	0.0001

Over_15_RCP_Pearce	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
18_RCP_Walter_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.23	0.0001
Over_18_RCP_Walter_2	1.00	0.88	0.00	0.00	0.12	0.00	0.00	0.00	0.01	0.0000
CHANNEL_8	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.02	0.0000
CHANNEL_9	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.05	0.0000
CHANNEL_10	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.20	0.0001
CHANNEL_11	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.10	0.0000
30_RCP_Walter_1	1.00	0.01	0.00	0.00	0.86	0.13	0.00	0.00	0.52	0.0001
Over_30_RCP_Walter_1	1.00	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.0000
Twin36-_Park#1	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.38	0.0002
Park#1-OVER	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
CHANNEL_12	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.22	0.0000
CHANNEL_13	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.36	0.0001
Twin36-_Park#2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.37	0.0002
17	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.21	0.0043
Park#2-OVER	1.00	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
15_RCP_Daniels_1	3.92	3.92	3.92	0.40	0.32
15_CMP_Daniels_2	4.27	4.27	4.27	0.04	0.13
CHANNEL_2	2.87	2.87	2.87	0.01	0.01
CHANNEL_4	2.88	2.88	2.88	0.01	0.01
12_RCP_Viverette_1	5.85	5.85	5.85	0.53	2.15
CHANNEL_5	3.53	3.53	3.53	0.01	0.01
24_RCP_Daniels_3	4.95	4.95	4.95	11.31	4.95
Viverette_2-PR-ELLIPTICAL	4.59	4.59	4.59	0.18	2.53
15_RCP_Pearce	3.15	3.15	3.15	0.16	0.33
18_RCP_Walter_2	4.27	4.27	4.27	0.01	0.21
CHANNEL_9	2.32	2.32	2.32	0.01	0.01
30_RCP_Walter_1	3.83	3.83	3.83	0.01	3.83
Twin36-_Park#1	1.36	1.36	1.36	2.80	1.36
CHANNEL_12	0.07	0.07	0.08	0.01	0.01
Twin36-_Park#2	2.99	2.99	3.00	4.18	2.99
17	0.05	0.05	0.11	5.28	0.05

Analysis begun on: Mon Dec 07 15:56:13 2015
Analysis ended on: Mon Dec 07 15:56:14 2015
Total elapsed time: 00:00:01

Alternative - Project Area 2,4,5,& 6(2-Year)

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Alternative - Project Area 2,4,5,& 6(2-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ..............  CFS
Process Models:
  Rainfall/Runoff ........  YES
  Snowmelt ...............  NO
  Groundwater ............  NO
  Flow Routing ...........  YES
  Ponding Allowed ........  YES
  Water Quality ..........  NO
Infiltration Method ......  CURVE_NUMBER
Flow Routing Method ......  DYNWAVE
Starting Date ............  APR-06-2015 00:00:00
Ending Date ..............  APR-07-2015 00:00:00
Antecedent Dry Days ......  7.0
Report Time Step .........  00:15:00
Wet Time Step ............  00:05:00
Dry Time Step ............  01:00:00
Routing Time Step ........  15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905

WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224
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WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node DI_983936

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

WARNING 02: maximum depth increased for Node 4

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       387.607         3.596
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       168.167         1.560
Surface Runoff ...........       176.520         1.638
Final Surface Storage ....        43.185         0.401
Continuity Error (%) .....        -0.068


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       175.988        57.348
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       167.536        54.594
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......         8.032         2.617
Continuity Error (%) .....         0.239


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (2.47%)
Node PE_972240 (2.11%)
Node 8** (1.59%)


**************************
Time-Step Critical Elements
**************************
```

Link Farm-Culvert (40.38%)
Link Hathaway_St_Culvert (20.36%)
Link 24_RCP_Etheridge_2 (14.18%)
Link 24_RCP_Etheridge_1 (4.13%)
Link 24_RCP_Marriott_9 (1.62%)

****
Highest Flow Instability Indexes
****
Link 24_RCP_Marriott_9 (1)
Link 24_RCP_Etheridge_2 (1)

****
Routing Time Step Summary
****
Minimum Time Step : 0.50 sec
Average Time Step : 8.13 sec
Maximum Time Step : 15.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.00

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	3.60	0.00	0.00	1.56	1.47	19.34	207.72	0.409
Basin_A-2	3.60	0.00	0.00	1.40	1.77	6.35	70.97	0.493
Basin_A-3	3.60	0.00	0.00	1.56	1.70	4.80	41.76	0.473
Basin_A-4	3.60	0.00	0.00	1.64	1.59	7.19	69.77	0.442
Basin_A-5	3.60	0.00	0.00	1.58	1.66	5.53	64.74	0.463
Basin_B-2	3.60	0.00	0.00	1.80	1.54	3.56	39.40	0.428
Area#5-10	3.60	0.00	0.00	1.54	1.98	0.02	0.41	0.551
Area#5-30	3.60	0.00	0.00	0.78	2.75	0.06	1.23	0.766
Area#5-50	3.60	0.00	0.00	1.38	2.15	0.03	0.54	0.599
Area#5-70	3.60	0.00	0.00	1.73	1.78	0.07	1.13	0.496
Area#5-80	3.60	0.00	0.00	1.20	2.33	0.10	1.97	0.648
Area#5-20	3.60	0.00	0.00	0.78	2.76	0.03	0.60	0.767
Area#5-40	3.60	0.00	0.00	0.78	2.75	0.03	0.58	0.766
Area#5-90	3.60	0.00	0.00	0.69	2.86	0.07	1.46	0.795
Area#5-100	3.60	0.00	0.00	0.78	2.77	0.04	0.74	0.769
Area#6-10	3.60	0.00	0.00	2.05	1.49	0.04	0.79	0.413
Area#6-20	3.60	0.00	0.00	1.61	1.89	0.19	3.20	0.527
Area#6-30	3.60	0.00	0.00	1.58	1.90	0.52	7.99	0.528
Area#6-40	3.60	0.00	0.00	1.90	1.55	0.31	3.52	0.431
Area#6-50	3.60	0.00	0.00	2.12	1.37	0.61	8.42	0.380
Area#6-60	3.60	0.00	0.00	1.54	1.91	2.79	42.21	0.531
Area#6-70	3.60	0.00	0.00	0.27	3.29	0.05	1.07	0.914
Area#6-80	3.60	0.00	0.00	2.10	1.43	0.03	0.59	0.399
Area#6-90	3.60	0.00	0.00	1.79	1.72	0.30	5.13	0.478
Area#4-140	3.60	0.00	0.00	0.82	2.73	0.07	1.53	0.759
Area#4-150	3.60	0.00	0.00	0.31	3.25	0.04	0.76	0.904
Area#4-160	3.60	0.00	0.00	1.22	2.32	0.01	0.21	0.645
Area#4-170	3.60	0.00	0.00	0.69	2.85	0.04	0.83	0.792
Area#4-180	3.60	0.00	0.00	1.02	2.52	0.07	1.44	0.700
Area#4-190	3.60	0.00	0.00	0.69	2.85	0.02	0.45	0.793
Area#4-200	3.60	0.00	0.00	1.93	1.59	0.09	1.52	0.443
Area#4-130	3.60	0.00	0.00	1.61	1.93	0.07	1.30	0.536
Area#4-120	3.60	0.00	0.00	1.46	2.08	0.05	1.05	0.578
Area#4-100	3.60	0.00	0.00	2.19	1.34	0.06	1.17	0.372
Area#4-90	3.60	0.00	0.00	0.41	3.14	0.06	1.17	0.874
Area#4-80	3.60	0.00	0.00	0.29	3.26	0.10	1.99	0.907
Area#4-10	3.60	0.00	0.00	0.31	3.24	0.08	1.65	0.901
Area#4-20	3.60	0.00	0.00	0.61	2.93	0.13	2.77	0.815
Area#4-70	3.60	0.00	0.00	0.53	3.01	0.11	2.19	0.837
Area#4-60	3.60	0.00	0.00	0.31	3.24	0.08	1.64	0.902

Area#4-50	3.60	0.00	0.00	0.51	3.03	0.16	3.33	0.842
Area#4-30	3.60	0.00	0.00	1.79	1.73	0.03	0.67	0.481
Area#2-10	3.60	0.00	0.00	1.48	1.98	0.15	2.07	0.551
Area#2-20	3.60	0.00	0.00	1.10	2.41	0.05	0.95	0.669
Area#2-30	3.60	0.00	0.00	1.60	1.87	0.15	2.17	0.520
Area#2-40	3.60	0.00	0.00	1.19	2.32	0.30	5.67	0.647
Area#2-50	3.60	0.00	0.00	1.35	2.08	0.32	4.24	0.578
Area#2-60	3.60	0.00	0.00	1.35	2.17	0.21	4.08	0.603
Area#2-70	3.60	0.00	0.00	1.60	1.89	0.20	3.29	0.525
Area#2-100	3.60	0.00	0.00	1.26	2.25	0.14	2.65	0.626
Area#2-80	3.60	0.00	0.00	1.10	2.43	0.09	1.73	0.674
Area#2-110	3.60	0.00	0.00	1.26	2.25	0.09	1.75	0.626
Area#5-60	3.60	0.00	0.00	0.78	2.77	0.03	0.57	0.769
Area#2-90	3.60	0.00	0.00	1.03	2.46	0.18	3.07	0.683
Area#2-120	3.60	0.00	0.00	1.30	2.12	1.31	16.06	0.590
Area#2-150	3.60	0.00	0.00	1.59	1.87	0.35	4.83	0.521
Area#4-40	3.60	0.00	0.00	1.02	2.52	0.08	1.63	0.700
Area#4-110	3.60	0.00	0.00	1.18	2.33	0.19	3.81	0.649
Area#5-110	3.60	0.00	0.00	0.50	3.04	0.08	1.76	0.846
Area#2-130	3.60	0.00	0.00	1.31	2.22	0.06	1.30	0.616
Area#2-140	3.60	0.00	0.00	1.59	1.89	0.17	2.55	0.524
Area#2-85	3.60	0.00	0.00	2.14	1.39	0.08	1.51	0.387

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	2.43	4.64	124.64	0 13:14
3**	JUNCTION	0.32	1.00	102.00	0 13:00
D/S_NC-4	JUNCTION	1.69	3.26	104.44	0 14:26
5**	JUNCTION	2.01	4.20	98.20	0 14:50
D/S_W_Battleboro_Ave**	JUNCTION	0.76	1.99	116.16	0 13:02
7**	JUNCTION	1.42	3.33	105.33	0 13:04
8**	JUNCTION	3.72	6.13	96.13	0 15:12
Hathaway_St-D/S	JUNCTION	3.01	5.03	95.01	0 15:17
DI_983628	JUNCTION	0.06	0.20	127.10	0 13:00
DI_983629	JUNCTION	0.21	0.60	126.80	0 13:00
DI_983630	JUNCTION	0.41	0.84	126.30	0 13:00
DI_983631	JUNCTION	0.09	0.32	126.77	0 13:00
DI_983633	JUNCTION	0.41	0.82	121.92	0 13:00
DI_983632	JUNCTION	0.46	0.86	121.91	0 13:00
DI_983634	JUNCTION	0.17	0.54	114.19	0 13:00
DI_984002*	JUNCTION	0.31	1.28	108.78	0 13:00
UNK_952741*	JUNCTION	0.25	1.29	109.19	0 13:00
DI_983635	JUNCTION	0.07	0.24	111.39	0 13:00
PE_972255	JUNCTION	0.08	0.28	113.78	0 13:00
PE_972263	JUNCTION	0.10	0.37	109.27	0 13:00
PE_972261*	JUNCTION	0.13	0.58	107.98	0 13:01
PE_972258	JUNCTION	3.05	5.13	94.13	0 15:28
Railroad_Junction_1	JUNCTION	1.50	3.55	108.08	0 13:07
Junction_1	JUNCTION	3.42	5.59	93.09	0 15:05
DI_983955	JUNCTION	0.07	0.28	100.88	0 13:00
PE_272260	JUNCTION	0.07	0.28	101.88	0 12:59
DI_983954	JUNCTION	0.11	0.45	98.47	0 13:00
DI_983953	JUNCTION	0.07	0.27	96.17	0 13:00
Drew_Hill_Junction	JUNCTION	3.82	6.07	94.07	0 15:29
DI_983952	JUNCTION	0.19	0.76	106.09	0 13:00
DI_983951	JUNCTION	0.15	0.57	104.62	0 13:00
DI_983950	JUNCTION	0.60	1.75	102.75	0 13:00
DI_283949	JUNCTION	0.25	0.80	102.05	0 13:00
DI_983948	JUNCTION	0.20	0.81	97.46	0 13:00
DI_983947	JUNCTION	0.36	0.94	96.02	0 13:01
DI_983946	JUNCTION	0.21	0.74	95.01	0 15:18
PE_972230	JUNCTION	0.41	1.11	128.26	0 13:00
UNK_952735*	JUNCTION	0.45	1.09	128.19	0 13:00
DI_983907	JUNCTION	0.50	1.11	128.16	0 13:00
DI_983906	JUNCTION	0.13	0.55	127.66	0 13:00

UNK_952736*	JUNCTION	0.14	0.55	126.31	0	13:00
DI_983903	JUNCTION	0.21	0.78	123.39	0	13:00
DI_983902	JUNCTION	0.50	1.59	122.67	0	13:00
DI_983904	JUNCTION	0.73	3.84	121.25	0	13:00
DI_983905	JUNCTION	1.52	4.00	120.48	0	13:01
DI_983721	JUNCTION	1.97	4.08	120.05	0	13:04
DI_983722	JUNCTION	1.95	4.10	120.06	0	13:06
MH_974299	JUNCTION	2.39	4.53	119.98	0	13:08
PE_972229	JUNCTION	0.23	0.89	116.11	0	13:09
PE_972224	JUNCTION	0.13	0.57	121.42	0	13:01
PE_972239	JUNCTION	0.39	1.33	113.45	0	13:02
PE_972240	JUNCTION	0.19	0.58	126.30	0	13:07
DI_983935	JUNCTION	0.26	1.51	125.46	0	13:00
DI_983934	JUNCTION	0.33	1.44	125.12	0	13:00
MH_974300	JUNCTION	0.29	0.94	123.70	0	13:00
DI_983624	JUNCTION	0.54	2.21	119.33	0	13:00
DI_983623	JUNCTION	0.40	1.43	118.33	0	13:00
DI_983619	JUNCTION	0.32	1.37	115.68	0	13:00
DI_983622	JUNCTION	0.21	0.97	118.42	0	13:00
DI_983621	JUNCTION	0.33	1.41	115.73	0	13:00
DI_983620	JUNCTION	0.07	0.25	116.70	0	13:00
DI_983618	JUNCTION	0.49	2.12	114.84	0	13:01
DI_983898	JUNCTION	0.35	3.70	127.70	0	13:01
DI_983604	JUNCTION	0.40	3.43	126.93	0	13:00
DI_983901	JUNCTION	0.29	1.93	124.28	0	13:00
DI_983607	JUNCTION	0.12	1.76	128.56	0	13:00
DI_983606	JUNCTION	0.22	2.35	128.50	0	13:00
DI_9836054	JUNCTION	0.52	3.73	127.78	0	13:03
MH_974298	JUNCTION	1.44	3.80	127.85	0	12:58
DI_983899	JUNCTION	0.15	1.26	128.23	0	13:00
DI_983900	JUNCTION	0.16	1.26	128.25	0	13:00
DI_983897	JUNCTION	0.20	1.91	128.11	0	13:00
DI_983896	JUNCTION	0.32	1.96	128.01	0	13:01
DI_983895	JUNCTION	0.42	1.92	127.77	0	13:00
DI_983894	JUNCTION	0.39	0.95	126.75	0	13:00
DI_953893*	JUNCTION	0.14	0.52	126.22	0	13:00
PE_972225	JUNCTION	0.08	0.30	126.85	0	13:00
UNK_952734*	JUNCTION	0.40	0.92	123.45	0	13:00
DI_983892	JUNCTION	0.18	0.74	122.97	0	13:00
UNK_952733*	JUNCTION	0.18	0.74	122.59	0	13:00
UNK_952732*	JUNCTION	0.17	0.77	122.12	0	13:00
U/S_NC-4	JUNCTION	1.11	3.17	105.78	0	14:19
U/S_W_Battleboro_Ave	JUNCTION	1.04	3.09	117.51	0	13:00
Hathaway_St-U/S	JUNCTION	3.11	5.35	95.34	0	15:17
9**	JUNCTION	1.19	2.71	118.13	0	13:00
Farm-Culv-Up	JUNCTION	2.20	3.82	99.82	0	13:06
Farm-Culv-Dn	JUNCTION	1.34	3.29	98.79	0	13:13
Railroad-Up	JUNCTION	0.78	3.40	108.98	0	13:12
DI_983957	JUNCTION	0.09	0.34	121.34	0	13:00
DI_983956*	JUNCTION	0.16	0.63	121.13	0	13:00
PE_972262	JUNCTION	0.20	0.77	116.16	0	13:00
DI_983936	JUNCTION	0.24	0.97	127.33	0	13:00
U/S_Gainor_Swale	JUNCTION	0.44	1.22	127.22	0	13:00
DI_983625	JUNCTION	0.23	0.88	117.88	0	13:00
952731	JUNCTION	0.32	0.93	121.88	0	13:01
972222	JUNCTION	0.13	0.46	121.25	0	13:04
983943	JUNCTION	0.11	0.45	126.10	0	13:00
952740	JUNCTION	0.08	0.34	125.79	0	13:00
New_Inlet-Red-Roof	JUNCTION	0.09	0.32	125.22	0	12:59
4	JUNCTION	0.27	1.06	127.26	0	13:00
Primary_Outfall*	OUTFALL	3.42	5.60	92.60	0	15:05

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal

Alternative - Project Area 2,4,5,& 6(2-Year)

1**	JUNCTION	207.64	207.64	0	13:00	19.265	19.264
3**	JUNCTION	70.94	70.94	0	13:00	6.331	6.330
D/S_NC-4	JUNCTION	0.00	119.18	0	14:18	0.000	18.825
5**	JUNCTION	0.00	146.05	0	14:24	0.000	25.085
D/S_W_Battleboro_Ave**	JUNCTION	0.00	40.72	0	13:00	0.000	4.780
7**	JUNCTION	69.73	108.21	0	13:00	7.163	11.929
8**	JUNCTION	64.71	238.74	0	13:00	5.512	42.423
Hathaway_St-D/S	JUNCTION	0.00	217.19	0	15:16	0.000	42.387
DI_983628	JUNCTION	0.41	0.41	0	13:00	0.021	0.021
DI_983629	JUNCTION	0.60	1.01	0	12:59	0.029	0.051
DI_983630	JUNCTION	0.58	2.80	0	13:00	0.028	0.140
DI_983631	JUNCTION	1.22	1.22	0	12:59	0.061	0.061
DI_983633	JUNCTION	0.53	0.53	0	12:59	0.026	0.026
DI_983632	JUNCTION	0.57	3.88	0	13:00	0.027	0.192
DI_983634	JUNCTION	0.00	3.87	0	13:00	0.000	0.192
DI_984002*	JUNCTION	0.00	8.40	0	13:00	0.000	0.428
UNK_952741*	JUNCTION	1.46	4.55	0	13:00	0.070	0.235
DI_983635	JUNCTION	0.00	1.13	0	13:00	0.000	0.066
PE_972255	JUNCTION	1.13	1.13	0	13:00	0.066	0.066
PE_972263	JUNCTION	1.97	1.97	0	12:59	0.100	0.100
PE_972261*	JUNCTION	0.74	9.11	0	13:00	0.035	0.463
PE_972258	JUNCTION	0.00	217.39	0	15:17	0.000	42.396
Railroad_Junction_1	JUNCTION	42.89	103.20	0	13:00	3.857	9.932
Junction_1	JUNCTION	42.19	278.09	0	14:59	2.783	54.953
DI_983955	JUNCTION	0.59	0.59	0	12:59	0.029	0.029
PE_272260	JUNCTION	1.07	1.07	0	12:59	0.052	0.052
DI_983954	JUNCTION	0.00	1.65	0	13:00	0.000	0.081
DI_983953	JUNCTION	0.00	1.65	0	13:00	0.000	0.080
Drew_Hill_Junction	JUNCTION	0.00	216.84	0	15:23	0.000	42.016
DI_983952	JUNCTION	5.13	5.13	0	12:59	0.297	0.297
DI_983951	JUNCTION	0.00	5.13	0	13:00	0.000	0.297
DI_983950	JUNCTION	0.00	5.12	0	13:00	0.000	0.297
DI_283949	JUNCTION	0.00	5.12	0	13:00	0.000	0.297
DI_983948	JUNCTION	0.00	5.11	0	13:00	0.000	0.297
DI_983947	JUNCTION	0.00	5.11	0	13:01	0.000	0.297
DI_983946	JUNCTION	0.00	5.12	0	13:01	0.000	0.296
PE_972230	JUNCTION	1.99	1.99	0	12:59	0.096	0.096
UNK_952735*	JUNCTION	0.00	1.99	0	13:00	0.000	0.095
DI_983907	JUNCTION	1.17	3.15	0	12:59	0.056	0.152
DI_983906	JUNCTION	0.00	3.15	0	13:00	0.000	0.151
UNK_952736*	JUNCTION	0.00	3.15	0	13:00	0.000	0.151
DI_983903	JUNCTION	1.17	4.32	0	13:00	0.063	0.215
DI_983902	JUNCTION	0.00	16.20	0	13:00	0.000	0.885
DI_983904	JUNCTION	0.00	16.19	0	13:00	0.000	0.884
DI_983905	JUNCTION	3.81	19.97	0	13:00	0.189	1.074
DI_983721	JUNCTION	1.05	22.83	0	13:02	0.052	1.163
DI_983722	JUNCTION	1.30	23.80	0	13:05	0.066	1.227
MH_974299	JUNCTION	0.00	19.36	0	13:06	0.000	1.188
PE_972229	JUNCTION	1.52	22.98	0	13:07	0.085	1.517
PE_972224	JUNCTION	0.00	4.94	0	13:00	0.000	0.250
PE_972239	JUNCTION	0.00	30.95	0	13:01	0.000	1.934
PE_972240	JUNCTION	0.00	5.11	0	13:00	0.000	0.354
DI_983935	JUNCTION	5.66	5.66	0	13:00	0.296	0.296
DI_983934	JUNCTION	4.24	9.88	0	13:00	0.316	0.612
MH_974300	JUNCTION	0.00	13.47	0	13:00	0.000	0.958
DI_983624	JUNCTION	3.29	16.68	0	13:00	0.200	1.157
DI_983623	JUNCTION	4.08	20.51	0	13:00	0.206	1.363
DI_983619	JUNCTION	0.00	24.83	0	13:00	0.000	1.595
DI_983622	JUNCTION	4.80	6.31	0	13:00	0.265	0.341
DI_983621	JUNCTION	2.65	2.65	0	13:00	0.140	0.140
DI_983620	JUNCTION	1.75	1.75	0	13:00	0.092	0.092
DI_983618	JUNCTION	0.00	31.03	0	13:00	0.000	1.935
DI_983898	JUNCTION	3.33	10.26	0	13:00	0.163	0.564
DI_983604	JUNCTION	2.19	12.05	0	12:57	0.106	0.670
DI_983901	JUNCTION	0.00	11.94	0	12:57	0.000	0.670
DI_983607	JUNCTION	1.65	1.65	0	12:59	0.079	0.079
DI_983606	JUNCTION	2.77	4.41	0	12:59	0.134	0.213
DI_9836054	JUNCTION	1.64	4.01	0	13:00	0.078	0.189
MH_974298	JUNCTION	0.00	2.28	0	13:00	0.000	0.111
DI_983899	JUNCTION	1.63	2.29	0	13:00	0.079	0.111
DI_983900	JUNCTION	0.67	0.67	0	13:00	0.032	0.032
DI_983897	JUNCTION	1.53	1.53	0	12:59	0.073	0.073
DI_983896	JUNCTION	0.76	2.24	0	13:00	0.036	0.109

DI_983895	JUNCTION	0.21	2.27	0	12:45	0.009	0.118
DI_983894	JUNCTION	0.00	2.25	0	13:00	0.000	0.118
DI_953893*	JUNCTION	0.00	3.08	0	13:00	0.000	0.158
PE_972225	JUNCTION	0.83	0.83	0	12:59	0.040	0.040
UNK_952734*	JUNCTION	1.43	4.51	0	12:59	0.070	0.228
DI_983892	JUNCTION	0.00	4.51	0	13:00	0.000	0.228
UNK_952733*	JUNCTION	0.00	4.51	0	13:00	0.000	0.228
UNK_952732*	JUNCTION	0.45	4.95	0	13:00	0.022	0.250
U/S_NC-4	JUNCTION	0.00	144.42	0	13:38	0.000	19.303
U/S_W_Battleboro_Ave	JUNCTION	0.00	41.29	0	13:00	0.000	4.783
Hathaway_St-U/S	JUNCTION	1.76	216.64	0	15:08	0.083	42.297
9**	JUNCTION	41.74	41.74	0	13:00	4.786	4.786
Farm-Culv-Up	JUNCTION	8.42	99.90	0	13:06	0.606	10.480
Farm-Culv-Dn	JUNCTION	0.00	99.88	0	13:06	0.000	10.457
Railroad-Up	JUNCTION	20.88	52.71	0	13:00	1.657	3.830
DI_983957	JUNCTION	0.79	0.79	0	12:59	0.042	0.042
DI_983956*	JUNCTION	3.19	3.98	0	13:00	0.187	0.229
PE_972262	JUNCTION	7.99	11.95	0	13:00	0.519	0.749
DI_983936	JUNCTION	2.07	2.07	0	13:00	0.150	0.150
U/S_Gainor_Swale	JUNCTION	3.12	5.17	0	13:00	0.204	0.354
DI_983625	JUNCTION	0.00	6.30	0	13:00	0.000	0.341
952731	JUNCTION	2.55	3.80	0	13:00	0.174	0.238
972222	JUNCTION	0.00	3.52	0	13:01	0.000	0.237
983943	JUNCTION	1.30	1.30	0	13:00	0.064	0.064
952740	JUNCTION	0.00	1.29	0	13:00	0.000	0.064
New_Inlet-Red-Roof	JUNCTION	1.51	1.51	0	12:59	0.075	0.075
4	JUNCTION	0.00	2.06	0	13:00	0.000	0.150
Primary_Outfall*	OUTFALL	0.00	277.64	0	15:05	0.000	54.590

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Node Surcharge Summary
****

No nodes were surcharged.

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Node Flooding Summary
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No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	96.06	109.58	277.64	54.590
System	96.06	109.58	277.64	54.590

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Link Flow Summary
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Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
BeechTrib8	CHANNEL	144.42	0 13:38	2.29	0.02	0.26
NC-4	CONDUIT	119.18	0 14:18	6.44	0.69	0.92
BeechTrib7	CHANNEL	118.68	0 14:26	2.14	0.01	0.27
Channel_4**	CONDUIT	70.54	0 13:00	1.74	0.04	0.40
BeechTrib6	CHANNEL	140.87	0 14:50	1.74	0.04	0.52
W_Battleboro_Ave_Culvert**	CONDUIT	40.72	0 13:00	6.49	0.86	0.83

Channel_3A**	CHANNEL	39.61	0	13:02	2.24	0.00	0.18
Channel_3B	CHANNEL	91.03	0	13:04	1.58	0.01	0.29
BeechTrib5	CHANNEL	214.83	0	15:10	1.76	0.96	0.57
Hathaway_St_Culvert	CONDUIT	216.16	0	15:17	3.47	1.89	0.86
15_RCP_Hathaway_1	CONDUIT	0.41	0	13:00	1.19	0.06	0.32
15_RCP_Hathaway_2	CONDUIT	1.00	0	13:00	1.82	0.38	0.46
15_RCP_Hathaway_3	CONDUIT	1.22	0	13:00	2.20	0.14	0.46
15_RCP_Hathaway_4	CONDUIT	2.78	0	13:00	5.32	0.38	0.44
15_RCP_Hathaway_5	CONDUIT	0.53	0	13:00	0.61	0.28	0.67
15_RCP_Hathaway_6	CONDUIT	3.87	0	13:00	7.92	0.34	0.42
15_RCP_Hathaway_7	CONDUIT	3.87	0	13:00	4.23	0.33	0.70
15_RCP_Hathaway_8	CONDUIT	1.13	0	13:00	6.10	0.10	0.21
15_RCP_Hathaway_9	CONDUIT	1.13	0	13:00	1.67	0.08	0.60
18_RCP_Hathaway_10	CONDUIT	1.97	0	13:00	2.17	0.14	0.56
15_RCP_Hathaway_11*	CONDUIT	4.53	0	13:00	2.81	0.74	0.86
PR-24_RCP_Hathaway_12*	CONDUIT	8.39	0	13:00	5.86	0.47	0.47
Hathaway_Swale*	CONDUIT	9.00	0	13:01	0.42	0.00	0.28
BeechTrib4	CHANNEL	217.18	0	15:17	1.54	0.02	0.44
12_RCP_Battleboro_Apt_1	CONDUIT	0.58	0	13:00	2.26	0.17	0.36
12_RCP_Battleboro_Apt_2	CONDUIT	1.07	0	12:59	4.32	0.17	0.36
12_RCP_Battleboro_Apt_3	CONDUIT	1.65	0	13:00	6.53	0.33	0.36
15_RCP_Battleboro_Apt_4	CONDUIT	1.65	0	13:00	3.27	0.10	0.61
BeechTrib3	CHANNEL	216.84	0	15:23	1.05	0.01	0.49
BeechTrib2	CHANNEL	216.60	0	15:30	1.03	0.06	0.47
Channel-6B	CHANNEL	93.26	0	13:07	2.71	0.04	0.41
15_RCP_Burrows_1	CONDUIT	5.13	0	13:00	7.87	0.49	0.53
15_RCP_Burrows_2	CONDUIT	5.12	0	13:00	5.37	0.37	0.73
15_RCP_Burrows_3	CONDUIT	5.12	0	13:00	4.75	1.19	0.82
15_RCP_Burrows_4	CONDUIT	5.11	0	13:00	6.36	0.65	0.62
15_RCP_Burrows_5	CONDUIT	5.11	0	13:01	5.60	0.66	0.70
15_RCP_Burrows_6	CONDUIT	5.12	0	13:01	8.99	0.48	0.49
18_RCP_Burrows_7	CONDUIT	5.08	0	13:01	4.11	0.16	0.75
BeechTrib1	CHANNEL	277.64	0	15:05	1.51	0.03	0.45
18_RCP_Marriott_1	CONDUIT	1.99	0	13:00	1.43	0.55	0.73
12_RCP_Marriott_2	CONDUIT	2.00	0	13:00	2.54	0.79	1.00
15_RCP_Marriott_3	CONDUIT	3.15	0	13:00	4.81	0.51	0.53
15_VCP_Marriott_4	CONDUIT	3.15	0	13:00	6.04	0.35	0.44
15_RCP_Mattiott_5	CONDUIT	3.15	0	13:00	5.06	0.40	0.53
15_RCP_Mattiott_6	CONDUIT	4.30	0	13:00	4.23	0.55	0.79
24_RCP_Marriott_7	CONDUIT	16.19	0	13:00	5.77	0.47	0.84
24_RCP_Marriott_8	CONDUIT	16.19	0	13:00	5.15	0.72	1.00
24_RCP_Marriott_9	CONDUIT	14.95	0	12:48	4.76	0.71	1.00
24_RCP_Etheridge_1	CONDUIT	14.09	0	12:39	4.49	0.86	1.00
24_RCP_Etheridge_2	CONDUIT	9.68	0	12:53	3.08	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.13	0	13:08	6.30	0.25	0.67
Railroad_Swale_2	CONDUIT	22.31	0	13:09	0.88	0.01	0.22
Railroad_Swale_1	CONDUIT	4.92	0	13:01	1.54	0.01	0.14
Cemetery_Dr_Swale	CONDUIT	30.00	0	13:02	1.79	0.05	0.46
18_RCP_Gainor_2	CONDUIT	5.65	0	13:00	3.21	0.66	0.98
18_RCP_Gainor_3	CONDUIT	9.86	0	13:00	6.70	0.58	0.78
18_RCP_Gainor_7A	CONDUIT	6.30	0	13:00	5.54	0.43	0.61
15_RCP_Gainor_7B	CONDUIT	2.63	0	13:00	1.62	1.50	0.93
15_RCP_Gainor_7C	CONDUIT	1.75	0	13:00	2.48	0.08	0.60
15_RCP_W_Battleboro_1	CONDUIT	1.64	0	13:00	2.79	0.20	1.00
18_RCP_W_Battleboro_2	CONDUIT	4.39	0	13:00	2.79	0.56	1.00
18_RCP_W_Battleboro_3	CONDUIT	5.78	0	13:06	3.27	0.77	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.40	0	13:06	5.89	0.77	1.00
18_RCP_W_Battleboro_5	CONDUIT	11.94	0	12:57	6.75	1.33	1.00
18_RCP_W_Battleboro_6	CONDUIT	11.92	0	13:03	6.78	0.86	1.00
15_RCP_Pollard_3	CONDUIT	3.21	0	13:07	3.26	0.13	1.00
12_RCP_Pollard_1	CONDUIT	0.66	0	13:00	1.30	0.75	1.00
15_RCP_Pollard_2	CONDUIT	2.28	0	13:00	3.68	0.44	1.00
12_RCP_W_Bridges_1	CONDUIT	1.38	0	12:45	1.75	0.59	1.00
12_RCP_W_Bridges_2	CONDUIT	2.12	0	13:04	2.70	0.43	1.00
12_RCP_Railroad_1	CONDUIT	2.25	0	13:00	2.89	4.25	0.97
15_RCP_Railroad_2	CONDUIT	2.26	0	13:01	3.97	0.39	0.48
15_RCP_Railroad_3	CONDUIT	0.83	0	13:00	2.44	0.13	0.33
18_RCP_Railroad_4	CONDUIT	3.08	0	13:00	3.68	0.26	0.48
24_RCP_Railroad_5	CONDUIT	4.51	0	13:00	4.54	0.18	0.35
24_RCP_Railroad_6*	CONDUIT	4.51	0	13:00	4.25	0.22	0.37
24_RCP_Railroad_7*	CONDUIT	4.51	0	13:01	4.16	0.24	0.38
24_VCP_Railroad_8	CONDUIT	4.94	0	13:00	5.34	0.16	0.34
CONNECT**	CONDUIT	41.29	0	13:00	2.04	0.14	0.48

Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	98.78	0	13:13	1.74	0.02	0.48
Farm-Culvert	CONDUIT	16.68	0	12:15	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	89.16	0	13:07	5.25	0.02	0.11
Railroad_Culvert	CONDUIT	38.69	0	13:16	5.47	0.58	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Marriott_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Marriott_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.02
Over_24_RCP_Marriott_9	CONDUIT	5.77	0	13:01	0.80	0.00	0.06
Over_24_RCP_Etheridge_1	CONDUIT	23.21	0	13:05	0.83	0.00	0.17
Over_24_RCP_Etheridge_2	CONDUIT	14.67	0	13:06	0.57	0.00	0.16
Over_15_RCP_W_Battleboro_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_W_Battleboro_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_W_Battleboro_4	CONDUIT	0.00	0	13:01	0.00	0.00	0.00
Over_18_RCP_W_Battleboro_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_W_Battleboro_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_12_RCP_Pollard_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Pollard_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_24_RCP_Etheridge_3	CONDUIT	4.28	0	13:08	2.90	0.00	0.01
Over_12_RCP_W_Bridges_1	CONDUIT	0.18	0	13:00	0.32	0.00	0.00
Over_12_RCP_W_Bridges_2	CONDUIT	0.01	0	13:01	0.00	0.00	0.00
Over_12_RCP_Railroad_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_6*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_7*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_VCP_Railroad_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
OVer_18_RCP_Gainor_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Gainor_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Crepe_Myrtle_1-12	CONDUIT	0.79	0	13:00	2.41	0.23	0.44
Crepe_Myrtle_2_12	CONDUIT	3.97	0	13:00	6.76	0.66	0.70
Crepe_Myrtle_Swale	CONDUIT	11.72	0	13:00	1.00	0.02	0.43
Over_18_RCP_Hathaway_10	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Crepe_Myrtle_1-OVR	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Hathaway_12*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_18_RCP_Gainor	CONDUIT	2.06	0	13:00	1.62	0.39	0.68
Over_PROP_18_RCP_Gainor	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP-BRIDGES_18_RCP	CONDUIT	2.06	0	13:00	1.43	0.26	0.76
Over-Bridges	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_Gainor_Swale	CONDUIT	5.11	0	13:00	1.58	0.13	0.35
PROP_18_RCP_Gainor_1	CONDUIT	3.95	0	13:05	5.05	0.31	0.50
Over_18_RCP_Gainor_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.10
PROP_24_RCP_Gainor_4	CONDUIT	13.48	0	13:00	6.44	0.45	0.68
Over_24_RCP_Gainor_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_24_RCP_Gainor_5	CONDUIT	16.64	0	13:00	5.75	1.07	0.87
Over_24_RCP_Gainor_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_30_RCP_Gainor_6	CONDUIT	20.53	0	13:00	7.28	0.54	0.56
OVER_PROP_30_RCP_Gainor_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
36_RCP_Gainor_8	CONDUIT	24.77	0	13:00	5.81	0.21	0.58
Over_36_RCP_Gainor_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
36_RCP_Gainor_9	CONDUIT	30.95	0	13:01	7.37	0.32	0.57

Over_36_RCP_Gainor_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Gainor_7A	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Gainor_7C	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_Hathaway_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Hathaway_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Battle-Gainor-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
18_RCP_Gainor_7D	CONDUIT	6.28	0	13:00	4.18	0.65	0.79
84	CONDUIT	0.02	0	12:58	0.02	0.00	0.01
E-Battleboro-Culv	CONDUIT	3.52	0	13:01	3.67	0.46	0.35
RR-Open-Ditch2	CONDUIT	3.24	0	13:05	0.34	0.01	0.48
Battleboro-Ovr	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Pearsall	CONDUIT	1.29	0	13:00	3.46	0.15	0.27
RR-Open-Ditch1	CONDUIT	1.25	0	13:00	0.72	0.01	0.21
Crepe_Myrtle_2-OVR	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
New-Red-Roof-Pipe	CONDUIT	1.51	0	12:59	2.63	0.15	0.52
Red-Roof-Pipe-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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Flow Classification Summary
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Conduit	Adjusted /Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
BeechTrib8	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.32	0.0000
NC-4	1.00	0.04	0.00	0.00	0.91	0.04	0.00	0.00	0.68	0.0002
BeechTrib7	1.00	0.02	0.04	0.00	0.94	0.00	0.00	0.00	0.27	0.0000
Channel_4**	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.11	0.0000
BeechTrib6	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.15	0.0000
W_Battleboro_Ave_Culvert**	3.30	0.02	0.00	0.00	0.61	0.37	0.00	0.00	0.95	0.0002
Channel_3A**	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.22	0.0000
Channel_3B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.14	0.0000
BeechTrib5	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.16	0.0002
Hathaway_St_Culvert	1.18	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.16	0.0003
15_RCP_Hathaway_1	2.23	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.22	0.0000
15_RCP_Hathaway_2	1.00	0.04	0.00	0.00	0.94	0.00	0.00	0.02	0.32	0.0001
15_RCP_Hathaway_3	2.38	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.18	0.0000
15_RCP_Hathaway_4	1.00	0.07	0.00	0.00	0.41	0.50	0.00	0.02	1.00	0.0001
15_RCP_Hathaway_5	1.34	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.03	0.0001
15_RCP_Hathaway_6	1.00	0.09	0.00	0.00	0.01	0.90	0.00	0.00	1.42	0.0001
15_RCP_Hathaway_7	1.00	0.02	0.07	0.00	0.91	0.00	0.00	0.00	0.72	0.0001
15_RCP_Hathaway_8	2.28	0.02	0.00	0.00	0.00	0.97	0.00	0.00	2.16	0.0000
15_RCP_Hathaway_9	2.53	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.53	0.0000
18_RCP_Hathaway_10	2.92	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.60	0.0000
15_RCP_Hathaway_11*	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.57	0.0001
PR-24_RCP_Hathaway_12*	8.57	0.02	0.00	0.00	0.01	0.97	0.00	0.00	1.38	0.0001
Hathaway_Swale*	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.03	0.0000
BeechTrib4	1.00	0.03	0.03	0.00	0.95	0.00	0.00	0.00	0.14	0.0000
12_RCP_Battleboro_Apt_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.72	0.0000
12_RCP_Battleboro_Apt_2	1.29	0.02	0.00	0.00	0.00	0.97	0.00	0.00	1.29	0.0000
12_RCP_Battleboro_Apt_3	1.10	0.02	0.00	0.00	0.00	0.97	0.00	0.00	2.02	0.0001
15_RCP_Battleboro_Apt_4	1.78	0.03	0.00	0.00	0.89	0.08	0.00	0.00	0.34	0.0000
BeechTrib3	2.88	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.12	0.0000
BeechTrib2	1.00	0.02	0.04	0.00	0.94	0.00	0.00	0.00	0.09	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.14	0.0001
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.96	0.01	0.00	0.00	0.42	0.0001
15_RCP_Burrows_3	1.76	0.02	0.03	0.00	0.95	0.00	0.00	0.00	0.32	0.0002
15_RCP_Burrows_4	1.00	0.06	0.00	0.00	0.00	0.94	0.00	0.00	1.47	0.0001
15_RCP_Burrows_5	1.15	0.06	0.00	0.00	0.76	0.18	0.00	0.00	0.70	0.0001
15_RCP_Burrows_6	4.20	0.07	0.00	0.00	0.15	0.78	0.00	0.00	2.01	0.0001
18_RCP_Burrows_7	5.31	0.05	0.02	0.00	0.89	0.04	0.00	0.00	0.26	0.0000
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.14	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.09	0.0001
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.08	0.0002
15_RCP_Marriott_3	3.55	0.08	0.00	0.00	0.00	0.91	0.00	0.00	1.21	0.0001
15_VCP_Marriott_4	1.95	0.08	0.00	0.00	0.00	0.91	0.00	0.00	1.49	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.06	0.00	0.56	0.35	0.00	0.00	0.84	0.0001
15_RCP_Mattiott_6	1.30	0.03	0.00	0.00	0.96	0.00	0.00	0.01	0.58	0.0001
24_RCP_Marriott_7	1.14	0.05	0.00	0.00	0.79	0.16	0.00	0.00	0.81	0.0001

Alternative - Project Area 2,4,5,& 6(2-Year)

24_RCP_Marriott_8	1.47	0.02	0.03	0.00	0.91	0.04	0.00	0.00	0.17	0.0002	
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.05	0.0002	
24_RCP_Etheridge_1	2.71	0.02	0.03	0.00	0.95	0.00	0.00	0.00	0.05	0.0004	
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.03	0.0003	
24_RCP_Etheridge_3	7.59	0.02	0.10	0.00	0.00	0.00	0.88	0.00	0.20	0.0001	
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.05	0.0000	
Railroad_Swale_1	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.25	0.0000	
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.29	0.0000	
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.63	0.0001	
18_RCP_Gainor_3	4.48	0.03	0.00	0.00	0.00	0.97	0.00	0.00	1.47	0.0001	
18_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.00	0.97	0.00	0.00	1.34	0.0001	
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0003	
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.96	0.01	0.00	0.00	0.55	0.0000	
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.67	0.0001	
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.67	0.0001	
18_RCP_W_Battleboro_3	2.87	0.02	0.06	0.00	0.07	0.00	0.86	0.00	0.28	0.0002	
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.16	0.82	0.00	0.00	1.02	0.0002	
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.05	0.93	0.00	0.00	1.25	0.0003	
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.73	0.24	0.00	0.00	0.72	0.0002	
15_RCP_Pollard_3	26.14	0.02	0.06	0.00	0.91	0.00	0.00	0.00	0.26	0.0000	
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0002	
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.84	0.04	0.00	0.10	0.61	0.0001	
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0001	
12_RCP_W_Bridges_2	6.67	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.29	0.0001	
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.15	0.0008	
15_RCP_Railroad_2	2.51	0.03	0.06	0.00	0.02	0.89	0.00	0.00	0.98	0.0001	
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.66	0.0000	
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.35	0.0000	
24_RCP_Railroad_5	3.55	0.07	0.00	0.00	0.01	0.92	0.00	0.00	1.16	0.0000	
24_RCP_Railroad_6*	3.25	0.07	0.00	0.00	0.02	0.91	0.00	0.00	1.01	0.0000	
24_RCP_Railroad_7*	2.02	0.02	0.05	0.00	0.05	0.88	0.00	0.00	1.04	0.0000	
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.97	0.00	0.00	1.67	0.0000	
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0000	
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Overland_Battleboro_Apt_4	5.35	0.23	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Overland_Burrows_1	9.63	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Overland_Burrows_2	3.53	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Overland_Burrows_3	7.01	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Overland_Burrows_4	2.14	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Overland_Burrows_5	1.88	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Overland_Burrows_6	5.36	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Overland_Burrows_7	7.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
W_Battleboro_Ave-Over	3.80	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Channel-6A	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.17	0.0000	
Farm-Culvert	3.88	0.02	0.00	0.00	0.77	0.21	0.00	0.00	0.65	0.0003	
Over_Farm-Culvert	7.77	0.67	0.00	0.00	0.00	0.00	0.00	0.33	0.48	0.0000	
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.41	0.0001	
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Cemetery_Dr_Floodplain	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_15_RCP_Marriott_1	4.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_15_RCP_Marriott_2	27.58	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_15_RCP_Marriott_3	4.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_15_RCP_Mattiott_5	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_15_RCP_Mattiott_6	2.06	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_24_RCP_Marriott_7	1.03	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_24_RCP_Marriott_8	1.80	0.96	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_24_RCP_Marriott_9	2.78	0.93	0.04	0.00	0.04	0.00	0.00	0.00	0.01	0.0000	
Over_24_RCP_Etheridge_1	5.90	0.89	0.04	0.00	0.07	0.00	0.00	0.00	0.01	0.0000	
Over_24_RCP_Etheridge_2	1.42	0.89	0.07	0.00	0.00	0.00	0.04	0.00	0.00	0.0000	
Over_15_RCP_W_Battleboro_1	2.34	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_15_RCP_W_Battleboro_2	1.00	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_18_RCP_W_Battleboro_4	3.16	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.0000	
Over_18_RCP_W_Battleboro_5	1.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_18_RCP_W_Battleboro_6	6.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_12_RCP_Pollard_1	1.11	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_15_RCP_Pollard_2	1.07	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
Over_24_RCP_Etheridge_3	17.58	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.0000	
Over_12_RCP_W_Bridges_1	5.33	0.98	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.0000	

Over_12_RCP_W_Bridges_2	5.45	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.0000
Over_12_RCP_Railroad_1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
OVer_18_RCP_Gainor_2	5.06	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_3	10.04	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Crepe_Myrtle_1-12	2.12	0.02	0.00	0.00	0.18	0.08	0.00	0.72	1.03	0.0000
Crepe_Myrtle_2_12	1.00	0.02	0.00	0.00	0.00	0.97	0.00	0.00	1.76	0.0001
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.07	0.0000
Over_18_RCP_Hathaway_10	1.15	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Crepe_Myrtle_1-OVR	5.17	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Hathaway_12*	25.27	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_18_RCP_Gainor	1.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.52	0.0001
Over_PROP_18_RCP_Gainor	2.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP-BRIDGES_18_RCP	3.27	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0000
Over-Bridges	6.54	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0000
PROP_18_RCP_Gainor_1	1.00	0.03	0.00	0.00	0.42	0.55	0.00	0.00	0.90	0.0001
Over_18_RCP_Gainor_1	1.39	0.03	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_24_RCP_Gainor_4	1.00	0.03	0.00	0.00	0.01	0.15	0.00	0.81	1.69	0.0001
Over_24_RCP_Gainor_4	1.12	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_24_RCP_Gainor_5	3.60	0.02	0.00	0.00	0.00	0.00	0.00	0.98	0.85	0.0002
Over_24_RCP_Gainor_5	6.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_30_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.01	0.97	0.00	0.00	1.50	0.0001
OVER_PROP_30_RCP_Gainor_6	18.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.04	0.94	0.00	0.00	1.38	0.0000
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.45	0.0001
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7A	13.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
18_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.57	0.0001
84	30.58	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.66	0.0001
RR-Open-Ditch2	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.07	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.04	0.94	0.00	0.00	1.14	0.0000
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.11	0.0000
Crepe_Myrtle_2-OVR	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
New-Red-Roof-Pipe	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.71	0.0000
Red-Roof-Pipe-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
NC-4	0.01	0.01	0.01	2.13	0.01
Hathaway_St_Culvert	0.01	0.01	0.01	5.21	0.01
15_RCP_Burrows_3	0.01	0.01	0.01	0.35	0.01
12_RCP_Marriott_2	0.38	0.38	0.38	0.01	0.01
24_RCP_Marriott_8	1.93	1.93	1.93	0.01	0.01
24_RCP_Marriott_9	3.13	3.13	3.13	0.01	0.28
24_RCP_Etheridge_1	4.32	4.32	4.32	0.01	0.17
24_RCP_Etheridge_2	6.16	6.16	6.16	0.01	0.01
15_RCP_Gainor_7B	0.01	0.01	0.01	0.43	0.01
15_RCP_W_Battleboro_1	0.17	0.17	0.17	0.01	0.01
18_RCP_W_Battleboro_2	0.24	0.24	0.24	0.01	0.01
18_RCP_W_Battleboro_3	0.52	0.52	0.53	0.01	0.01
18_RCP_W_Battleboro_4	0.56	0.56	0.56	0.01	0.54

18_RCP_W_Battleboro_5	0.31	0.31	0.31	0.55	0.31
18_RCP_W_Battleboro_6	0.19	0.19	0.19	0.01	0.19
15_RCP_Pollard_3	0.37	0.37	0.38	0.01	0.01
12_RCP_Pollard_1	0.11	0.11	0.12	0.01	0.07
15_RCP_Pollard_2	0.02	0.02	0.02	0.01	0.01
12_RCP_W_Bridges_1	0.52	0.52	0.52	0.01	0.01
12_RCP_W_Bridges_2	0.51	0.51	0.51	0.01	0.01
12_RCP_Railroad_1	0.01	0.01	0.01	1.56	0.01
Farm-Culvert	6.02	6.02	6.03	7.36	6.02
Railroad_Culvert	0.66	0.66	0.66	0.01	0.01
PROP_24_RCP_Gainor_5	0.01	0.01	0.01	0.09	0.01

Analysis begun on: Mon Jan 18 15:38:27 2016
Analysis ended on: Mon Jan 18 15:38:30 2016
Total elapsed time: 00:00:03

Alternative - Project Area 2,4,5,& 6(10-Year)

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Alternative - Project Area 2,4,5,& 6(10-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ..............  CFS
Process Models:
  Rainfall/Runoff ........  YES
  Snowmelt ...............  NO
  Groundwater ............  NO
  Flow Routing ...........  YES
  Ponding Allowed ........  YES
  Water Quality ..........  NO
Infiltration Method ......  CURVE_NUMBER
Flow Routing Method ......  DYNWAVE
Starting Date ............  APR-06-2015 00:00:00
Ending Date ..............  APR-07-2015 00:00:00
Antecedent Dry Days ......  7.0
Report Time Step .........  00:15:00
Wet Time Step ............  00:05:00
Dry Time Step ............  01:00:00
Routing Time Step ........  15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905

WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224
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WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node DI_983936

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

WARNING 02: maximum depth increased for Node 4

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       569.554         5.284
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       204.672         1.899
Surface Runoff ...........       309.530         2.872
Final Surface Storage ....        55.779         0.517
Continuity Error (%) .....        -0.075


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       308.680       100.588
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       294.911        96.101
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        14.371         4.683
Continuity Error (%) .....        -0.194


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (2.97%)
Node PE_972240 (1.54%)
Node 8** (1.53%)


**************************
Time-Step Critical Elements
**************************
```

Link Farm-Culvert (27.16%)
Link Hathaway_St_Culvert (25.53%)
Link 24_RCP_Etheridge_2 (17.82%)
Link NC-4 (6.34%)
Link 24_RCP_Etheridge_1 (3.47%)

****
Highest Flow Instability Indexes
****
All links are stable.

****
Routing Time Step Summary
****
Minimum Time Step : 0.50 sec
Average Time Step : 6.92 sec
Maximum Time Step : 15.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.03

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	5.28	0.00	0.00	1.89	2.63	34.62	346.18	0.498
Basin_A-2	5.28	0.00	0.00	1.68	3.07	11.01	119.51	0.581
Basin_A-3	5.28	0.00	0.00	1.86	3.02	8.54	79.86	0.572
Basin_A-4	5.28	0.00	0.00	1.99	2.85	12.86	124.54	0.538
Basin_A-5	5.28	0.00	0.00	1.94	2.90	9.65	108.78	0.549
Basin_B-2	5.28	0.00	0.00	2.23	2.73	6.31	70.14	0.518
Area#5-10	5.28	0.00	0.00	1.94	3.26	0.04	0.71	0.618
Area#5-30	5.28	0.00	0.00	0.98	4.24	0.09	1.91	0.802
Area#5-50	5.28	0.00	0.00	1.74	3.48	0.04	0.89	0.659
Area#5-70	5.28	0.00	0.00	2.17	3.01	0.11	2.05	0.570
Area#5-80	5.28	0.00	0.00	1.53	3.69	0.16	3.19	0.698
Area#5-20	5.28	0.00	0.00	0.98	4.24	0.04	0.93	0.803
Area#5-40	5.28	0.00	0.00	0.98	4.24	0.04	0.90	0.802
Area#5-90	5.28	0.00	0.00	0.87	4.37	0.11	2.25	0.827
Area#5-100	5.28	0.00	0.00	0.98	4.25	0.05	1.15	0.805
Area#6-10	5.28	0.00	0.00	2.77	2.45	0.07	1.35	0.463
Area#6-20	5.28	0.00	0.00	2.03	3.15	0.31	5.62	0.597
Area#6-30	5.28	0.00	0.00	1.96	3.18	0.87	14.12	0.602
Area#6-40	5.28	0.00	0.00	2.32	2.79	0.56	7.49	0.528
Area#6-50	5.28	0.00	0.00	2.64	2.51	1.12	18.23	0.475
Area#6-60	5.28	0.00	0.00	1.94	3.17	4.63	71.03	0.601
Area#6-70	5.28	0.00	0.00	0.35	4.90	0.08	1.59	0.926
Area#6-80	5.28	0.00	0.00	2.80	2.42	0.05	1.03	0.458
Area#6-90	5.28	0.00	0.00	2.35	2.84	0.49	8.71	0.537
Area#4-140	5.28	0.00	0.00	1.00	4.23	0.11	2.41	0.801
Area#4-150	5.28	0.00	0.00	0.37	4.87	0.05	1.13	0.922
Area#4-160	5.28	0.00	0.00	1.49	3.74	0.02	0.34	0.707
Area#4-170	5.28	0.00	0.00	0.85	4.38	0.06	1.30	0.829
Area#4-180	5.28	0.00	0.00	1.24	3.97	0.11	2.32	0.752
Area#4-190	5.28	0.00	0.00	0.85	4.39	0.03	0.70	0.830
Area#4-200	5.28	0.00	0.00	2.55	2.65	0.14	2.62	0.501
Area#4-130	5.28	0.00	0.00	2.17	3.05	0.11	2.08	0.577
Area#4-120	5.28	0.00	0.00	1.98	3.25	0.08	1.67	0.615
Area#4-100	5.28	0.00	0.00	2.96	2.25	0.11	2.06	0.425
Area#4-90	5.28	0.00	0.00	0.55	4.69	0.08	1.73	0.887
Area#4-80	5.28	0.00	0.00	0.35	4.89	0.14	2.98	0.925
Area#4-10	5.28	0.00	0.00	0.37	4.86	0.12	2.47	0.920
Area#4-20	5.28	0.00	0.00	0.75	4.48	0.20	4.27	0.848
Area#4-70	5.28	0.00	0.00	0.65	4.58	0.16	3.36	0.867
Area#4-60	5.28	0.00	0.00	0.37	4.87	0.12	2.45	0.921
Area#4-50	5.28	0.00	0.00	0.62	4.60	0.25	5.10	0.870

Area#4-30	5.28	0.00	0.00	2.19	3.01	0.06	1.23	0.570
Area#2-10	5.28	0.00	0.00	1.75	3.37	0.26	3.91	0.637
Area#2-20	5.28	0.00	0.00	1.31	3.88	0.08	1.61	0.733
Area#2-30	5.28	0.00	0.00	1.90	3.23	0.26	4.28	0.612
Area#2-40	5.28	0.00	0.00	1.41	3.78	0.48	9.69	0.715
Area#2-50	5.28	0.00	0.00	1.60	3.48	0.53	7.60	0.659
Area#2-60	5.28	0.00	0.00	1.60	3.59	0.34	7.13	0.680
Area#2-70	5.28	0.00	0.00	1.90	3.26	0.35	6.33	0.617
Area#2-100	5.28	0.00	0.00	1.50	3.69	0.23	4.59	0.699
Area#2-80	5.28	0.00	0.00	1.31	3.90	0.14	2.89	0.738
Area#2-110	5.28	0.00	0.00	1.50	3.69	0.15	3.03	0.699
Area#5-60	5.28	0.00	0.00	0.98	4.25	0.04	0.88	0.805
Area#2-90	5.28	0.00	0.00	1.22	3.93	0.29	5.12	0.745
Area#2-120	5.28	0.00	0.00	1.49	3.58	2.21	30.76	0.678
Area#2-150	5.28	0.00	0.00	1.90	3.22	0.60	9.30	0.609
Area#4-40	5.28	0.00	0.00	1.24	3.98	0.13	2.63	0.753
Area#4-110	5.28	0.00	0.00	1.36	3.83	0.31	6.57	0.726
Area#5-110	5.28	0.00	0.00	0.58	4.65	0.13	2.70	0.881
Area#2-130	5.28	0.00	0.00	1.57	3.64	0.11	2.22	0.688
Area#2-140	5.28	0.00	0.00	1.90	3.24	0.30	4.89	0.612
Area#2-85	5.28	0.00	0.00	3.10	2.12	0.12	2.24	0.402

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days	hr:min
1**	JUNCTION	2.84	5.35	125.35	0	13:11
3**	JUNCTION	0.45	1.35	102.35	0	13:00
D/S_NC-4	JUNCTION	2.23	3.67	104.85	0	14:43
5**	JUNCTION	2.82	4.92	98.92	0	15:04
D/S_W_Battleboro_Ave**	JUNCTION	1.08	2.74	116.91	0	13:04
7**	JUNCTION	1.94	4.06	106.06	0	13:07
8**	JUNCTION	4.60	6.99	96.99	0	15:14
Hathaway_St-D/S	JUNCTION	3.69	5.54	95.52	0	15:19
DI_983628	JUNCTION	0.07	0.26	127.16	0	13:00
DI_983629	JUNCTION	0.25	0.81	127.01	0	13:00
DI_983630	JUNCTION	0.45	1.02	126.48	0	13:00
DI_983631	JUNCTION	0.11	0.40	126.85	0	12:59
DI_983633	JUNCTION	0.45	1.00	122.10	0	13:00
DI_983632	JUNCTION	0.50	1.02	122.07	0	13:00
DI_983634	JUNCTION	0.21	0.69	114.34	0	13:00
DI_984002*	JUNCTION	0.41	1.73	109.23	0	13:00
UNK_952741*	JUNCTION	0.35	2.37	110.27	0	13:00
DI_983635	JUNCTION	0.09	0.32	111.47	0	13:00
PE_972255	JUNCTION	0.10	0.39	113.89	0	13:00
PE_972263	JUNCTION	0.15	1.47	110.37	0	13:00
PE_972261*	JUNCTION	0.17	0.76	108.16	0	13:01
PE_972258	JUNCTION	3.76	5.77	94.77	0	15:25
Railroad_Junction_1	JUNCTION	1.93	4.29	108.82	0	13:07
Junction_1	JUNCTION	4.16	6.26	93.76	0	14:57
DI_983955	JUNCTION	0.10	0.38	100.98	0	13:00
PE_272260	JUNCTION	0.09	0.34	101.94	0	12:59
DI_983954	JUNCTION	0.14	0.59	98.61	0	13:00
DI_983953	JUNCTION	0.09	0.34	96.24	0	13:00
Drew_Hill_Junction	JUNCTION	4.57	6.72	94.72	0	15:25
DI_983952	JUNCTION	0.26	2.29	107.62	0	13:00
DI_983951	JUNCTION	0.21	2.14	106.19	0	13:00
DI_983950	JUNCTION	0.75	3.77	104.77	0	13:01
DI_283949	JUNCTION	0.33	2.27	103.52	0	13:01
DI_983948	JUNCTION	0.28	1.70	98.35	0	13:02
DI_983947	JUNCTION	0.42	1.25	96.33	0	13:03
DI_983946	JUNCTION	0.50	1.27	95.54	0	15:01
PE_972230	JUNCTION	0.47	1.42	128.57	0	12:59
UNK_952735*	JUNCTION	0.51	1.37	128.47	0	13:00
DI_983907	JUNCTION	0.55	1.35	128.40	0	12:59
DI_983906	JUNCTION	0.16	0.71	127.82	0	12:57
UNK_952736*	JUNCTION	0.17	0.80	126.56	0	13:00

DI_983903	JUNCTION	0.30	2.64	125.25	0	13:00
DI_983902	JUNCTION	0.61	2.72	123.80	0	13:04
DI_983904	JUNCTION	1.02	4.36	121.77	0	13:03
DI_983905	JUNCTION	1.79	4.06	120.54	0	13:01
DI_983721	JUNCTION	2.22	4.15	120.12	0	13:01
DI_983722	JUNCTION	2.21	4.18	120.14	0	13:03
MH_974299	JUNCTION	2.64	4.56	120.01	0	13:04
PE_972229	JUNCTION	0.31	1.18	116.40	0	13:05
PE_972224	JUNCTION	0.17	0.70	121.55	0	13:02
PE_972239	JUNCTION	0.51	1.68	113.80	0	13:03
PE_972240	JUNCTION	0.26	0.86	126.58	0	13:05
DI_983935	JUNCTION	0.42	2.98	126.93	0	13:02
DI_983934	JUNCTION	0.50	3.16	126.84	0	13:02
MH_974300	JUNCTION	0.40	1.70	124.46	0	13:02
DI_983624	JUNCTION	0.78	3.86	120.98	0	13:01
DI_983623	JUNCTION	0.55	2.23	119.13	0	13:00
DI_983619	JUNCTION	0.46	2.39	116.70	0	13:01
DI_983622	JUNCTION	0.32	2.95	120.40	0	13:00
DI_983621	JUNCTION	0.48	2.60	116.92	0	13:00
DI_983620	JUNCTION	0.09	0.44	116.89	0	13:00
DI_983618	JUNCTION	0.70	3.28	116.00	0	13:01
DI_983898	JUNCTION	0.55	3.88	127.88	0	13:01
DI_983604	JUNCTION	0.61	4.28	127.78	0	13:03
DI_983901	JUNCTION	0.45	4.16	126.51	0	13:04
DI_983607	JUNCTION	0.22	2.76	129.56	0	13:01
DI_983606	JUNCTION	0.36	3.35	129.50	0	13:00
DI_9836054	JUNCTION	0.71	3.94	127.99	0	13:07
MH_974298	JUNCTION	1.58	3.95	128.00	0	13:05
DI_983899	JUNCTION	0.24	1.76	128.73	0	13:00
DI_983900	JUNCTION	0.25	1.79	128.78	0	13:00
DI_983897	JUNCTION	0.29	1.94	128.14	0	13:00
DI_983896	JUNCTION	0.41	2.04	128.09	0	13:00
DI_983895	JUNCTION	0.53	2.21	128.06	0	13:03
DI_983894	JUNCTION	0.44	1.15	126.95	0	13:02
DI_953893*	JUNCTION	0.17	0.62	126.32	0	13:00
PE_972225	JUNCTION	0.10	0.38	126.93	0	12:59
UNK_952734*	JUNCTION	0.45	1.12	123.65	0	13:00
DI_983892	JUNCTION	0.23	0.95	123.18	0	13:00
UNK_952733*	JUNCTION	0.23	0.95	122.80	0	13:01
UNK_952732*	JUNCTION	0.23	0.98	122.33	0	13:01
U/S_NC-4	JUNCTION	2.01	4.94	107.55	0	14:36
U/S_W_Battleboro_Ave	JUNCTION	1.59	5.29	119.71	0	13:01
Hathaway_St-U/S	JUNCTION	3.95	6.31	96.30	0	15:19
9**	JUNCTION	1.61	4.45	119.87	0	13:01
Farm-Culv-Up	JUNCTION	2.70	3.94	99.94	0	13:04
Farm-Culv-Dn	JUNCTION	1.75	3.82	99.32	0	13:12
Railroad-Up	JUNCTION	1.31	4.90	110.48	0	13:29
DI_983957	JUNCTION	0.16	2.20	123.20	0	12:54
DI_983956*	JUNCTION	0.25	2.58	123.08	0	13:00
PE_972262	JUNCTION	0.27	1.04	116.43	0	13:00
DI_983936	JUNCTION	0.33	1.42	127.78	0	13:00
U/S_Gainor_Swale	JUNCTION	0.55	1.51	127.51	0	13:00
DI_983625	JUNCTION	0.34	2.90	119.90	0	13:00
952731	JUNCTION	0.41	1.30	122.25	0	13:02
972222	JUNCTION	0.18	0.63	121.42	0	13:05
983943	JUNCTION	0.15	0.61	126.26	0	13:00
952740	JUNCTION	0.11	0.45	125.90	0	13:00
New_Inlet-Red-Roof	JUNCTION	0.11	0.39	125.29	0	12:59
4	JUNCTION	0.38	1.42	127.62	0	13:00
Primary_Outfall*	OUTFALL	4.16	6.26	93.26	0	14:57

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	346.03	346.03	0 12:59	34.492	34.489

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3**	JUNCTION	119.46	119.46	0	12:59	10.981	10.981
D/S_NC-4	JUNCTION	0.00	165.69	0	14:35	0.000	33.734
5**	JUNCTION	0.00	216.98	0	14:30	0.000	44.598
D/S_W_Battleboro_Ave**	JUNCTION	0.00	74.34	0	13:01	0.000	8.509
7**	JUNCTION	124.49	192.79	0	12:59	12.828	21.328
8**	JUNCTION	108.75	377.54	0	13:00	9.624	75.375
Hathaway_St-D/S	JUNCTION	0.00	363.98	0	15:19	0.000	75.269
DI_983628	JUNCTION	0.71	0.71	0	12:59	0.035	0.035
DI_983629	JUNCTION	0.93	1.64	0	12:59	0.045	0.080
DI_983630	JUNCTION	0.90	4.42	0	12:59	0.044	0.217
DI_983631	JUNCTION	1.91	1.91	0	12:59	0.093	0.093
DI_983633	JUNCTION	0.89	0.89	0	12:59	0.043	0.043
DI_983632	JUNCTION	0.88	6.17	0	12:59	0.042	0.301
DI_983634	JUNCTION	0.00	6.16	0	13:00	0.000	0.300
DI_984002*	JUNCTION	0.00	13.55	0	13:00	0.000	0.676
UNK_952741*	JUNCTION	2.25	7.45	0	12:59	0.107	0.376
DI_983635	JUNCTION	0.00	2.05	0	13:00	0.000	0.111
PE_972255	JUNCTION	2.05	2.05	0	12:59	0.111	0.111
PE_972263	JUNCTION	3.19	3.19	0	12:59	0.158	0.158
PE_972261*	JUNCTION	1.15	14.64	0	13:00	0.054	0.730
PE_972258	JUNCTION	0.00	364.31	0	15:19	0.000	75.293
Railroad_Junction_1	JUNCTION	77.60	173.23	0	12:59	6.855	16.880
Junction_1	JUNCTION	71.01	482.56	0	14:52	4.623	96.731
DI_983955	JUNCTION	1.03	1.03	0	12:59	0.049	0.049
PE_272260	JUNCTION	1.59	1.59	0	12:59	0.077	0.077
DI_983954	JUNCTION	0.00	2.61	0	12:59	0.000	0.126
DI_983953	JUNCTION	0.00	2.61	0	13:00	0.000	0.126
Drew_Hill_Junction	JUNCTION	0.00	364.09	0	15:24	0.000	74.708
DI_983952	JUNCTION	8.71	8.71	0	12:59	0.490	0.490
DI_983951	JUNCTION	0.00	8.54	0	13:00	0.000	0.490
DI_983950	JUNCTION	0.00	8.28	0	13:00	0.000	0.490
DI_283949	JUNCTION	0.00	8.09	0	13:00	0.000	0.490
DI_983948	JUNCTION	0.00	7.96	0	13:01	0.000	0.490
DI_983947	JUNCTION	0.00	7.90	0	13:02	0.000	0.490
DI_983946	JUNCTION	0.00	7.88	0	13:02	0.000	0.489
PE_972230	JUNCTION	2.98	2.98	0	12:59	0.143	0.143
UNK_952735*	JUNCTION	0.00	2.98	0	12:59	0.000	0.143
DI_983907	JUNCTION	1.73	4.71	0	12:59	0.084	0.227
DI_983906	JUNCTION	0.00	4.71	0	13:00	0.000	0.227
UNK_952736*	JUNCTION	0.00	4.71	0	13:00	0.000	0.227
DI_983903	JUNCTION	2.06	6.65	0	12:59	0.107	0.333
DI_983902	JUNCTION	0.00	21.94	0	13:01	0.000	1.362
DI_983904	JUNCTION	0.00	20.43	0	13:05	0.000	1.362
DI_983905	JUNCTION	6.56	26.81	0	13:00	0.311	1.673
DI_983721	JUNCTION	1.67	31.81	0	13:00	0.082	1.847
DI_983722	JUNCTION	2.08	35.69	0	13:02	0.105	1.952
MH_974299	JUNCTION	0.00	29.79	0	13:04	0.000	1.856
PE_972229	JUNCTION	2.62	37.27	0	13:04	0.142	2.380
PE_972224	JUNCTION	0.00	7.25	0	13:01	0.000	0.388
PE_972239	JUNCTION	0.00	50.89	0	13:01	0.000	3.207
PE_972240	JUNCTION	0.00	9.69	0	13:00	0.000	0.602
DI_983935	JUNCTION	9.68	9.68	0	12:59	0.482	0.482
DI_983934	JUNCTION	7.60	14.49	0	12:59	0.529	1.011
MH_974300	JUNCTION	0.00	22.01	0	13:03	0.000	1.603
DI_983624	JUNCTION	6.33	27.55	0	13:00	0.345	1.947
DI_983623	JUNCTION	7.13	34.28	0	13:00	0.341	2.288
DI_983619	JUNCTION	0.00	42.31	0	13:00	0.000	2.670
DI_983622	JUNCTION	8.00	10.24	0	12:59	0.426	0.541
DI_983621	JUNCTION	4.59	5.28	0	12:59	0.230	0.232
DI_983620	JUNCTION	3.03	3.03	0	12:59	0.150	0.150
DI_983618	JUNCTION	0.00	50.89	0	13:01	0.000	3.208
DI_983898	JUNCTION	5.10	14.41	0	12:59	0.247	0.867
DI_983604	JUNCTION	3.36	16.81	0	13:00	0.162	1.029
DI_983901	JUNCTION	0.00	16.07	0	13:03	0.000	1.029
DI_983607	JUNCTION	2.47	2.47	0	12:59	0.119	0.119
DI_983606	JUNCTION	4.27	6.41	0	12:59	0.204	0.323
DI_9836054	JUNCTION	2.45	5.88	0	12:59	0.118	0.298
MH_974298	JUNCTION	0.00	3.41	0	12:50	0.000	0.179
DI_983899	JUNCTION	2.63	3.59	0	12:59	0.125	0.180
DI_983900	JUNCTION	1.23	1.23	0	12:59	0.056	0.056
DI_983897	JUNCTION	2.41	2.41	0	12:59	0.114	0.114
DI_983896	JUNCTION	1.13	3.52	0	12:59	0.054	0.168
DI_983895	JUNCTION	0.34	3.76	0	13:00	0.015	0.183

DI_983894	JUNCTION	0.00	3.25	0	13:03	0.000	0.183
DI_953893*	JUNCTION	0.00	4.37	0	13:00	0.000	0.245
PE_972225	JUNCTION	1.30	1.30	0	12:59	0.062	0.062
UNK_952734*	JUNCTION	2.32	6.66	0	12:59	0.111	0.356
DI_983892	JUNCTION	0.00	6.64	0	13:00	0.000	0.355
UNK_952733*	JUNCTION	0.00	6.63	0	13:00	0.000	0.355
UNK_952732*	JUNCTION	0.70	7.24	0	13:00	0.033	0.389
U/S_NC-4	JUNCTION	0.00	276.44	0	13:44	0.000	34.765
U/S_W_Battleboro_Ave	JUNCTION	0.00	77.10	0	13:00	0.000	8.514
Hathaway_St-U/S	JUNCTION	2.70	363.16	0	15:08	0.128	75.081
9**	JUNCTION	79.82	79.82	0	12:59	8.518	8.518
Farm-Culv-Up	JUNCTION	18.22	163.28	0	13:04	1.114	17.915
Farm-Culv-Dn	JUNCTION	0.00	163.33	0	13:05	0.000	17.871
Railroad-Up	JUNCTION	40.04	93.64	0	13:00	2.808	6.426
DI_983957	JUNCTION	1.35	1.35	0	12:59	0.069	0.069
DI_983956*	JUNCTION	5.62	6.96	0	12:59	0.312	0.381
PE_972262	JUNCTION	14.11	20.64	0	12:59	0.871	1.252
DI_983936	JUNCTION	3.91	3.91	0	12:59	0.256	0.256
U/S_Gainor_Swale	JUNCTION	5.88	9.76	0	12:59	0.347	0.602
DI_983625	JUNCTION	0.00	9.20	0	12:54	0.000	0.539
952731	JUNCTION	4.89	7.04	0	12:59	0.298	0.404
972222	JUNCTION	0.00	6.45	0	13:01	0.000	0.402
983943	JUNCTION	2.22	2.22	0	12:59	0.106	0.106
952740	JUNCTION	0.00	2.22	0	13:00	0.000	0.106
New_Inlet-Red-Roof	JUNCTION	2.24	2.24	0	12:59	0.115	0.115
4	JUNCTION	0.00	3.90	0	13:00	0.000	0.255
Primary_Outfall*	OUTFALL	0.00	482.06	0	14:57	0.000	96.094

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
DI_983625	JUNCTION	0.31	1.403	3.197

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Node Flooding Summary
****

No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	96.96	200.32	482.06	96.094
System	96.96	200.32	482.06	96.094

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Link Flow Summary
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Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
BeechTrib8	CHANNEL	276.44	0 13:44	2.29	0.03	0.32

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NC-4	CONDUIT	165.69	0	14:35	8.61	0.96	1.00
BeechTrib7	CHANNEL	165.52	0	14:43	2.13	0.02	0.31
Channel_4**	CONDUIT	118.90	0	13:00	2.20	0.07	0.48
BeechTrib6	CHANNEL	212.59	0	15:04	1.73	0.07	0.60
W_Battleboro_Ave_Culvert**	CONDUIT	74.34	0	13:01	10.71	1.58	0.96
Channel_3A**	CHANNEL	71.51	0	13:04	2.72	0.00	0.23
Channel_3B	CHANNEL	154.89	0	13:07	1.34	0.01	0.35
BeechTrib5	CHANNEL	360.38	0	15:10	1.71	1.62	0.66
Hathaway_St_Culvert	CONDUIT	362.33	0	15:19	5.23	3.17	0.96
15_RCP_Hathaway_1	CONDUIT	0.70	0	13:00	1.41	0.10	0.43
15_RCP_Hathaway_2	CONDUIT	1.62	0	13:00	2.06	0.62	0.61
15_RCP_Hathaway_3	CONDUIT	1.91	0	12:59	2.65	0.22	0.57
15_RCP_Hathaway_4	CONDUIT	4.40	0	13:00	5.98	0.60	0.58
15_RCP_Hathaway_5	CONDUIT	0.89	0	13:00	0.84	0.47	0.81
15_RCP_Hathaway_6	CONDUIT	6.16	0	13:00	9.01	0.54	0.54
15_RCP_Hathaway_7	CONDUIT	6.15	0	13:00	6.17	0.52	0.76
15_RCP_Hathaway_8	CONDUIT	2.05	0	13:00	7.13	0.17	0.28
15_RCP_Hathaway_9	CONDUIT	2.04	0	13:00	2.51	0.15	0.63
18_RCP_Hathaway_10	CONDUIT	3.17	0	13:00	2.31	0.22	0.99
15_RCP_Hathaway_11*	CONDUIT	7.39	0	13:00	4.18	1.21	1.00
PR-24_RCP_Hathaway_12*	CONDUIT	13.54	0	13:00	6.62	0.76	0.62
Hathaway_Swale*	CONDUIT	14.48	0	13:01	0.46	0.00	0.33
BeechTrib4	CHANNEL	363.98	0	15:19	1.59	0.04	0.49
12_RCP_Battleboro_Apt_1	CONDUIT	1.02	0	13:00	2.72	0.30	0.48
12_RCP_Battleboro_Apt_2	CONDUIT	1.59	0	12:59	4.72	0.25	0.46
12_RCP_Battleboro_Apt_3	CONDUIT	2.61	0	13:00	7.28	0.52	0.47
15_RCP_Battleboro_Apt_4	CONDUIT	2.61	0	13:00	3.29	0.16	0.64
BeechTrib3	CHANNEL	364.09	0	15:24	1.08	0.02	0.54
BeechTrib2	CHANNEL	364.15	0	15:29	1.20	0.09	0.52
Channel-6B	CHANNEL	148.94	0	13:07	2.87	0.07	0.46
15_RCP_Burrows_1	CONDUIT	8.54	0	13:00	7.88	0.82	1.00
15_RCP_Burrows_2	CONDUIT	8.28	0	13:00	6.88	0.59	1.00
15_RCP_Burrows_3	CONDUIT	8.09	0	13:00	6.59	1.87	1.00
15_RCP_Burrows_4	CONDUIT	7.96	0	13:01	6.60	1.02	1.00
15_RCP_Burrows_5	CONDUIT	7.90	0	13:02	6.44	1.02	1.00
15_RCP_Burrows_6	CONDUIT	7.88	0	13:02	8.87	0.73	0.87
18_RCP_Burrows_7	CONDUIT	7.81	0	13:03	5.04	0.25	0.92
BeechTrib1	CHANNEL	482.06	0	14:57	1.77	0.06	0.51
18_RCP_Marriott_1	CONDUIT	2.98	0	12:59	1.74	0.82	0.93
12_RCP_Marriott_2	CONDUIT	2.98	0	13:00	3.80	1.18	1.00
15_RCP_Marriott_3	CONDUIT	4.71	0	13:00	5.24	0.77	0.69
15_VCP_Marriott_4	CONDUIT	4.71	0	13:00	6.59	0.53	0.60
15_RCP_Mattiott_5	CONDUIT	4.68	0	12:55	4.88	0.59	0.82
15_RCP_Mattiott_6	CONDUIT	6.53	0	12:55	5.32	0.84	1.00
24_RCP_Marriott_7	CONDUIT	20.33	0	13:08	6.47	0.59	1.00
24_RCP_Marriott_8	CONDUIT	20.44	0	13:05	6.51	0.91	1.00
24_RCP_Marriott_9	CONDUIT	15.42	0	12:43	4.91	0.73	1.00
24_RCP_Etheridge_1	CONDUIT	14.48	0	12:35	4.61	0.88	1.00
24_RCP_Etheridge_2	CONDUIT	9.72	0	12:46	3.09	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.32	0	13:05	6.37	0.26	0.67
Railroad_Swale_2	CONDUIT	36.58	0	13:05	1.07	0.01	0.27
Railroad_Swale_1	CONDUIT	7.18	0	13:02	1.73	0.01	0.19
Cemetery_Dr_Swale	CONDUIT	49.81	0	13:03	1.73	0.08	0.63
18_RCP_Gainor_2	CONDUIT	8.11	0	13:10	4.59	0.95	1.00
18_RCP_Gainor_3	CONDUIT	14.35	0	13:00	8.12	0.84	1.00
18_RCP_Gainor_7A	CONDUIT	9.20	0	12:54	5.81	0.63	1.00
15_RCP_Gainor_7B	CONDUIT	5.26	0	13:00	2.98	3.00	1.00
15_RCP_Gainor_7C	CONDUIT	2.96	0	13:00	3.49	0.14	0.67
15_RCP_W_Battleboro_1	CONDUIT	3.39	0	13:04	2.87	0.41	1.00
18_RCP_W_Battleboro_2	CONDUIT	6.30	0	12:59	3.57	0.80	1.00
18_RCP_W_Battleboro_3	CONDUIT	7.30	0	13:33	4.13	0.97	1.00
18_RCP_W_Battleboro_4	CONDUIT	11.00	0	13:26	6.22	0.81	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.95	0	13:13	7.33	1.44	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.46	0	13:02	8.75	1.12	1.00
15_RCP_Pollard_3	CONDUIT	4.24	0	13:34	3.46	0.17	1.00
12_RCP_Pollard_1	CONDUIT	1.64	0	13:04	2.09	1.84	1.00
15_RCP_Pollard_2	CONDUIT	3.41	0	12:50	3.95	0.66	1.00
12_RCP_W_Bridges_1	CONDUIT	1.59	0	12:35	2.03	0.68	1.00
12_RCP_W_Bridges_2	CONDUIT	2.31	0	12:35	2.94	0.47	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:17	3.10	4.58	1.00
15_RCP_Railroad_2	CONDUIT	3.26	0	13:03	4.32	0.57	0.61
15_RCP_Railroad_3	CONDUIT	1.30	0	12:59	2.96	0.20	0.40
18_RCP_Railroad_4	CONDUIT	4.36	0	13:00	4.20	0.36	0.58

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24_RCP_Railroad_5	CONDUIT	6.64	0	13:00	4.81	0.27	0.45
24_RCP_Railroad_6*	CONDUIT	6.63	0	13:00	4.54	0.32	0.47
24_RCP_Railroad_7*	CONDUIT	6.63	0	13:01	4.44	0.35	0.48
24_VCP_Railroad_8	CONDUIT	7.25	0	13:01	5.80	0.24	0.42
CONNECT**	CONDUIT	77.10	0	13:00	2.16	0.26	0.81
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	161.33	0	13:12	1.56	0.04	0.55
Farm-Culvert	CONDUIT	16.67	0	11:02	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	154.91	0	13:06	6.43	0.03	0.15
Railroad_Culvert	CONDUIT	55.58	0	13:42	7.86	0.84	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.09
Over_15_RCP_Marriott_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Marriott_7	CONDUIT	0.12	0	13:04	0.00	0.00	0.00
Over_24_RCP_Marriott_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.03
Over_24_RCP_Marriott_9	CONDUIT	12.87	0	13:01	1.21	0.01	0.08
Over_24_RCP_Etheridge_1	CONDUIT	34.26	0	13:03	1.06	0.01	0.19
Over_24_RCP_Etheridge_2	CONDUIT	24.12	0	13:04	0.81	0.01	0.18
Over_15_RCP_W_Battleboro_1	CONDUIT	0.70	0	13:01	0.37	0.00	0.01
Over_15_RCP_W_Battleboro_2	CONDUIT	0.00	0	13:00	0.00	0.00	0.03
Over_18_RCP_W_Battleboro_4	CONDUIT	10.22	0	13:02	1.39	0.04	0.05
Over_18_RCP_W_Battleboro_5	CONDUIT	7.80	0	13:03	1.87	0.00	0.03
Over_18_RCP_W_Battleboro_6	CONDUIT	0.23	0	13:04	0.43	0.00	0.00
Over_12_RCP_Pollard_1	CONDUIT	0.20	0	13:00	0.04	0.00	0.03
Over_15_RCP_Pollard_2	CONDUIT	0.23	0	13:00	0.04	0.00	0.04
Over_24_RCP_Etheridge_3	CONDUIT	14.86	0	13:05	4.75	0.00	0.02
Over_12_RCP_W_Bridges_1	CONDUIT	1.47	0	13:00	0.55	0.00	0.02
Over_12_RCP_W_Bridges_2	CONDUIT	2.66	0	13:00	0.77	0.01	0.02
Over_12_RCP_Railroad_1	CONDUIT	1.01	0	13:03	0.48	0.00	0.01
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_6*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_7*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_VCP_Railroad_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
OVer_18_RCP_Gainor_2	CONDUIT	4.93	0	13:03	0.58	0.00	0.05
Over_18_RCP_Gainor_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Crepe_Myrtle_1-12	CONDUIT	1.56	0	13:04	2.43	0.46	1.00
Crepe_Myrtle_2_12	CONDUIT	6.21	0	13:04	7.93	1.03	1.00
Crepe_Myrtle_Swale	CONDUIT	20.21	0	13:00	1.17	0.04	0.53
Over_18_RCP_Hathaway_10	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Crepe_Myrtle_1-OVR	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Hathaway_12*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_18_RCP_Gainor	CONDUIT	3.90	0	13:00	2.25	0.74	0.95
Over_PROP_18_RCP_Gainor	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP-BRIDGES_18_RCP	CONDUIT	3.90	0	13:00	2.23	0.49	0.97
Over-Bridges	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_Gainor_Swale	CONDUIT	9.69	0	13:00	1.85	0.25	0.47
PROP_18_RCP_Gainor_1	CONDUIT	7.91	0	13:07	5.85	0.61	0.79
Over_18_RCP_Gainor_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.14
PROP_24_RCP_Gainor_4	CONDUIT	22.12	0	13:04	7.37	0.73	0.92
Over_24_RCP_Gainor_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_24_RCP_Gainor_5	CONDUIT	27.64	0	13:02	8.80	1.78	1.00
Over_24_RCP_Gainor_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

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PROP_30_RCP_Gainor_6 CONDUIT     34.15     0  13:00      7.77    0.89    0.92
OVER_PROP_30_RCP_Gainor_6 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
36_RCP_Gainor_8      CONDUIT     42.02     0  13:01      6.28    0.35    0.90
Over_36_RCP_Gainor_8 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
36_RCP_Gainor_9      CONDUIT     50.89     0  13:01      8.62    0.53    0.78
Over_36_RCP_Gainor_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Gainor_7A CONDUIT      0.80     0  13:01      0.83    0.00    0.01
Over_15_RCP_Gainor_7C CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_Hathaway_3      CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Hathaway_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Battle-Gainor-Over   CONDUIT      0.00     0  00:00      0.00    0.00    0.00
18_RCP_Gainor_7D     CONDUIT      9.19     0  12:54      5.20    0.95    1.00
84                   CONDUIT      3.12     0  13:06      0.59    0.00    0.06
E-Battleboro-Culv    CONDUIT      6.45     0  13:01      4.35    0.84    0.48
RR-Open-Ditch2       CONDUIT      6.04     0  13:05      0.34    0.02    0.58
Battleboro-Ovr       CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Pearsall             CONDUIT      2.22     0  13:00      4.00    0.26    0.35
RR-Open-Ditch1       CONDUIT      2.16     0  13:00      0.77    0.01    0.29
Crepe_Myrtle_2-OVR   CONDUIT      0.49     0  13:00      0.70    0.00    0.01
New-Red-Roof-Pipe    CONDUIT      2.24     0  12:59      2.69    0.22    0.66
Red-Roof-Pipe-Over   CONDUIT      0.00     0  00:00      0.00    0.00    0.01


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Flow Classification Summary
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                    Adjusted    --- Fraction of Time in Flow Class ----   Avg.     Avg.
                     /Actual         Up    Down  Sub   Sup   Up    Down   Froude   Flow
Conduit               Length    Dry  Dry   Dry   Crit  Crit  Crit  Crit   Number   Change
-------------------------------------------------------------------------------------
BeechTrib8              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.30   0.0000
NC-4                    1.00   0.02  0.00  0.00  0.95  0.03  0.00  0.00     0.53   0.0003
BeechTrib7              1.00   0.03  0.02  0.00  0.95  0.00  0.00  0.00     0.25   0.0000
Channel_4**             1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.11   0.0000
BeechTrib6              1.00   0.02  0.01  0.00  0.97  0.00  0.00  0.00     0.15   0.0000
W_Battleboro_Ave_Culvert**    3.30   0.02  0.00  0.00  0.70  0.28  0.00  0.00     0.89   0.0002
Channel_3A**            1.00   0.02  0.01  0.00  0.97  0.00  0.00  0.00     0.24   0.0000
Channel_3B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.13   0.0000
BeechTrib5              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.16   0.0002
Hathaway_St_Culvert     1.18   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.22   0.0004
15_RCP_Hathaway_1       2.23   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.26   0.0000
15_RCP_Hathaway_2       1.00   0.03  0.00  0.00  0.96  0.00  0.00  0.01     0.36   0.0001
15_RCP_Hathaway_3       2.38   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.22   0.0000
15_RCP_Hathaway_4       1.00   0.05  0.00  0.00  0.27  0.67  0.00  0.01     1.08   0.0001
15_RCP_Hathaway_5       1.34   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.04   0.0001
15_RCP_Hathaway_6       1.00   0.06  0.00  0.00  0.01  0.93  0.00  0.00     1.57   0.0001
15_RCP_Hathaway_7       1.00   0.02  0.04  0.00  0.91  0.03  0.00  0.00     0.76   0.0001
15_RCP_Hathaway_8       2.28   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.24   0.0000
15_RCP_Hathaway_9       2.53   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.55   0.0000
18_RCP_Hathaway_10      2.92   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.59   0.0000
15_RCP_Hathaway_11*     1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.55   0.0002
PR-24_RCP_Hathaway_12*    8.57   0.02  0.00  0.00  0.01  0.97  0.00  0.00     1.37   0.0001
Hathaway_Swale*         1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.03   0.0000
BeechTrib4              1.00   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.17   0.0000
12_RCP_Battleboro_Apt_1    1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.77   0.0000
12_RCP_Battleboro_Apt_2    1.29   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.29   0.0000
12_RCP_Battleboro_Apt_3    1.10   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.08   0.0001
15_RCP_Battleboro_Apt_4    1.78   0.02  0.00  0.00  0.92  0.06  0.00  0.00     0.30   0.0000
BeechTrib3              2.88   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.13   0.0000
BeechTrib2              1.00   0.02  0.03  0.00  0.95  0.00  0.00  0.00     0.11   0.0000
Channel-6B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.30   0.0000
15_RCP_Burrows_1        3.03   0.02  0.00  0.00  0.02  0.96  0.00  0.00     2.12   0.0001
15_RCP_Burrows_2        2.73   0.02  0.00  0.00  0.96  0.02  0.00  0.00     0.48   0.0001
15_RCP_Burrows_3        1.76   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.37   0.0003
15_RCP_Burrows_4        1.00   0.04  0.00  0.00  0.03  0.93  0.00  0.00     1.47   0.0002
15_RCP_Burrows_5        1.15   0.04  0.00  0.00  0.72  0.23  0.00  0.00     0.80   0.0002
15_RCP_Burrows_6        4.20   0.05  0.00  0.00  0.38  0.57  0.00  0.00     1.52   0.0001
18_RCP_Burrows_7        5.31   0.04  0.01  0.00  0.92  0.03  0.00  0.00     0.26   0.0000
BeechTrib1              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.17   0.0000
18_RCP_Marriott_1       2.14   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.11   0.0001
12_RCP_Marriott_2       8.88   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.10   0.0002
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Alternative - Project Area 2,4,5,& 6(10-Year)

15_RCP_Marriott_3	3.55	0.06	0.00	0.00	0.00	0.94	0.00	0.00	1.24	0.0001
15_VCP_Marriott_4	1.95	0.06	0.00	0.00	0.00	0.94	0.00	0.00	1.55	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.04	0.00	0.58	0.36	0.00	0.00	0.88	0.0001
15_RCP_Mattiott_6	1.30	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.61	0.0002
24_RCP_Marriott_7	1.14	0.04	0.00	0.00	0.81	0.15	0.00	0.00	0.78	0.0001
24_RCP_Marriott_8	1.47	0.02	0.02	0.00	0.93	0.04	0.00	0.00	0.15	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.05	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.05	0.0004
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0003
24_RCP_Etheridge_3	7.59	0.02	0.07	0.00	0.00	0.00	0.91	0.00	0.28	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0000
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.61	0.0002
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.03	0.94	0.00	0.00	1.41	0.0001
18_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.04	0.94	0.00	0.00	1.31	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0005
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.53	0.0000
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.65	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.63	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.04	0.00	0.16	0.00	0.79	0.00	0.29	0.0003
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.24	0.74	0.00	0.00	0.98	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.08	0.90	0.00	0.00	1.21	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.71	0.27	0.00	0.00	0.77	0.0002
15_RCP_Pollard_3	26.14	0.02	0.04	0.00	0.94	0.00	0.00	0.00	0.29	0.0001
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0006
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.81	0.05	0.00	0.13	0.65	0.0002
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0002
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.17	0.0008
15_RCP_Railroad_2	2.51	0.02	0.04	0.00	0.05	0.89	0.00	0.00	1.01	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.94	0.04	0.00	0.00	0.67	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.42	0.0001
24_RCP_Railroad_5	3.55	0.05	0.00	0.00	0.01	0.94	0.00	0.00	1.19	0.0000
24_RCP_Railroad_6*	3.25	0.05	0.00	0.00	0.05	0.90	0.00	0.00	1.05	0.0001
24_RCP_Railroad_7*	2.02	0.02	0.03	0.00	0.06	0.89	0.00	0.00	1.07	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.65	0.0000
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.27	0.0000
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.17	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_2	3.53	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_3	7.01	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_4	2.14	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_5	1.88	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_6	5.36	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_7	7.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
W_Battleboro_Ave-Over	3.80	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.16	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.82	0.16	0.00	0.00	0.47	0.0003
Over_Farm-Culvert	7.77	0.48	0.00	0.00	0.00	0.00	0.00	0.52	0.77	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.35	0.0001
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	0.89	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_2	27.58	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_3	4.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_7	1.03	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000
Over_24_RCP_Marriott_8	1.80	0.92	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_9	2.78	0.87	0.06	0.00	0.08	0.00	0.00	0.00	0.03	0.0000
Over_24_RCP_Etheridge_1	5.90	0.82	0.05	0.00	0.13	0.00	0.00	0.00	0.02	0.0000
Over_24_RCP_Etheridge_2	1.42	0.82	0.09	0.00	0.00	0.00	0.10	0.00	0.01	0.0000
Over_15_RCP_W_Battleboro_1	2.34	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.95	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.0000
Over_18_RCP_W_Battleboro_5	1.60	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.0000

Over_18_RCP_W_Battleboro_6	6.23	0.99	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.0000
Over_12_RCP_Pollard_1	1.11	0.95	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.94	0.04	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.93	0.00	0.00	0.00	0.00	0.00	0.07	0.22	0.00	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.94	0.01	0.00	0.05	0.00	0.00	0.00	0.01	0.00	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.94	0.00	0.00	0.02	0.00	0.00	0.03	0.02	0.00	0.0000
Over_12_RCP_Railroad_1	1.00	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.00	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
OVer_18_RCP_Gainor_2	5.06	0.96	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.0000
Over_18_RCP_Gainor_3	10.04	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Crepe_Myrtle_1-12	2.12	0.02	0.00	0.00	0.26	0.12	0.00	0.60	0.99	0.00	0.0001
Crepe_Myrtle_2_12	1.00	0.02	0.00	0.00	0.03	0.95	0.00	0.00	1.68	0.00	0.0002
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.07	0.00	0.0000
Over_18_RCP_Hathaway_10	1.15	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Crepe_Myrtle_1-OVR	5.17	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Hathaway_12*	25.27	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_18_RCP_Gainor	1.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.48	0.00	0.0001
Over_PROP_18_RCP_Gainor	2.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP-BRIDGES_18_RCP	3.27	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.00	0.0001
Over-Bridges	6.54	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.00	0.0000
PROP_18_RCP_Gainor_1	1.00	0.02	0.00	0.00	0.39	0.59	0.00	0.00	0.95	0.00	0.0001
Over_18_RCP_Gainor_1	1.39	0.02	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_24_RCP_Gainor_4	1.00	0.02	0.00	0.00	0.07	0.17	0.00	0.74	1.65	0.00	0.0001
Over_24_RCP_Gainor_4	1.12	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_24_RCP_Gainor_5	3.60	0.02	0.00	0.00	0.04	0.00	0.00	0.95	0.82	0.00	0.0003
Over_24_RCP_Gainor_5	6.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_30_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.03	0.95	0.00	0.00	1.48	0.00	0.0001
OVER_PROP_30_RCP_Gainor_6	18.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.11	0.87	0.00	0.00	1.31	0.00	0.0001
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.03	0.95	0.00	0.00	1.38	0.00	0.0001
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7A	13.13	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
18_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.53	0.00	0.0002
84	30.58	0.94	0.00	0.00	0.06	0.00	0.00	0.00	0.01	0.00	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.70	0.00	0.0001
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.07	0.00	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.01	0.97	0.00	0.00	1.14	0.00	0.0000
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.00	0.0000
Crepe_Myrtle_2-OVR	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.0000
New-Red-Roof-Pipe	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.70	0.00	0.0000
Red-Roof-Pipe-Over	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
NC-4	2.96	2.96	2.96	5.56	2.96
W_Battleboro_Ave_Culvert**	0.01	0.01	0.01	2.00	0.01
BeechTrib5	0.01	0.01	0.01	5.50	0.01
Hathaway_St_Culvert	0.01	0.01	0.01	9.12	0.01
15_RCP_Hathaway_11*	0.38	0.38	0.38	0.34	0.38
15_RCP_Burrows_1	0.13	0.13	0.13	0.01	0.09
15_RCP_Burrows_2	0.14	0.14	0.14	0.01	0.01
15_RCP_Burrows_3	0.21	0.21	0.21	0.58	0.01

15_RCP_Burrows_4	0.20	0.20	0.20	0.08	0.18
15_RCP_Burrows_5	0.01	0.01	0.02	0.16	0.01
12_RCP_Marriott_2	0.51	0.51	0.51	0.37	0.38
15_RCP_Mattiott_6	0.44	0.44	0.44	0.01	0.08
24_RCP_Marriott_7	0.22	0.22	0.22	0.01	0.01
24_RCP_Marriott_8	3.11	3.11	3.11	0.01	0.33
24_RCP_Marriott_9	5.06	5.06	5.07	0.01	0.25
24_RCP_Etheridge_1	6.15	6.15	6.15	0.01	0.14
24_RCP_Etheridge_2	8.06	8.06	8.06	0.01	0.01
18_RCP_Gainor_2	0.63	0.63	0.64	0.01	0.50
18_RCP_Gainor_3	0.18	0.18	0.18	0.01	0.18
18_RCP_Gainor_7A	0.30	0.30	0.30	0.01	0.26
15_RCP_Gainor_7B	0.58	0.58	0.58	0.91	0.58
15_RCP_W_Battleboro_1	0.54	0.54	0.54	0.01	0.01
18_RCP_W_Battleboro_2	0.80	0.80	0.80	0.01	0.01
18_RCP_W_Battleboro_3	1.04	1.04	1.04	0.01	0.01
18_RCP_W_Battleboro_4	1.07	1.07	1.07	0.01	0.58
18_RCP_W_Battleboro_5	0.93	0.93	0.93	0.93	0.93
18_RCP_W_Battleboro_6	0.59	0.59	0.60	0.21	0.59
15_RCP_Pollard_3	0.96	0.96	0.96	0.01	0.01
12_RCP_Pollard_1	0.77	0.77	0.78	0.34	0.44
15_RCP_Pollard_2	0.44	0.44	0.44	0.01	0.01
12_RCP_W_Bridges_1	0.87	0.87	0.87	0.01	0.02
12_RCP_W_Bridges_2	0.87	0.87	0.87	0.01	0.01
12_RCP_Railroad_1	0.36	0.36	0.36	3.51	0.36
Farm-Culvert	9.49	9.49	9.49	9.44	9.49
Railroad_Culvert	2.55	2.55	2.55	0.01	2.03
Crepe_Myrtle_1-12	0.27	0.27	0.28	0.01	0.01
Crepe_Myrtle_2_12	0.13	0.13	0.13	0.20	0.13
PROP_24_RCP_Gainor_5	0.13	0.13	0.13	0.94	0.13
18_RCP_Gainor_7D	0.31	0.31	0.31	0.01	0.01

Analysis begun on: Mon Jan 18 15:41:05 2016
Analysis ended on: Mon Jan 18 15:41:08 2016
Total elapsed time: 00:00:03

Alternative - Project Area 2,4,5,& 6(25-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Alternative - Project Area 2,4,5,& 6(25-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ..............  CFS
Process Models:
  Rainfall/Runoff ........  YES
  Snowmelt ...............  NO
  Groundwater ............  NO
  Flow Routing ...........  YES
  Ponding Allowed ........  YES
  Water Quality ..........  NO
Infiltration Method ......  CURVE_NUMBER
Flow Routing Method ......  DYNWAVE
Starting Date ............  APR-06-2015 00:00:00
Ending Date ..............  APR-07-2015 00:00:00
Antecedent Dry Days ......  7.0
Report Time Step .........  00:15:00
Wet Time Step ............  00:05:00
Dry Time Step ............  01:00:00
Routing Time Step ........  15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905

WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224
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WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node DI_983936

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

WARNING 02: maximum depth increased for Node 4

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       698.684         6.482
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       223.880         2.077
Surface Runoff ...........       412.549         3.827
Final Surface Storage ....        62.799         0.583
Continuity Error (%) .....        -0.078


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       411.501       134.094
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       394.268       128.478
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        18.329         5.973
Continuity Error (%) .....        -0.266


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (3.26%)
Node 8** (1.49%)
Node PE_972240 (1.33%)


**************************
Time-Step Critical Elements
**************************
```

Link Hathaway_St_Culvert (29.89%)
Link Farm-Culvert (23.51%)
Link 24_RCP_Etheridge_2 (12.95%)
Link W_Battleboro_Ave_Culvert** (8.69%)
Link NC-4 (5.61%)

****
Highest Flow Instability Indexes
****
Link 24_RCP_Marriott_9 (1)
Link 24_RCP_Etheridge_1 (1)
Link 24_RCP_Etheridge_2 (1)

****
Routing Time Step Summary
****
Minimum Time Step : 0.50 sec
Average Time Step : 6.65 sec
Maximum Time Step : 15.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.03

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	6.48	0.00	0.00	2.07	3.55	46.68	458.66	0.547
Basin_A-2	6.48	0.00	0.00	1.82	4.07	14.58	159.13	0.628
Basin_A-3	6.48	0.00	0.00	2.01	4.03	11.39	113.04	0.622
Basin_A-4	6.48	0.00	0.00	2.17	3.82	17.25	171.80	0.589
Basin_A-5	6.48	0.00	0.00	2.13	3.86	12.83	145.20	0.596
Basin_B-2	6.48	0.00	0.00	2.47	3.66	8.46	96.83	0.565
Area#5-10	6.48	0.00	0.00	2.16	4.24	0.05	0.94	0.654
Area#5-30	6.48	0.00	0.00	1.09	5.32	0.12	2.42	0.821
Area#5-50	6.48	0.00	0.00	1.93	4.48	0.05	1.17	0.691
Area#5-70	6.48	0.00	0.00	2.41	3.96	0.15	2.80	0.611
Area#5-80	6.48	0.00	0.00	1.71	4.70	0.20	4.14	0.725
Area#5-20	6.48	0.00	0.00	1.09	5.33	0.06	1.18	0.822
Area#5-40	6.48	0.00	0.00	1.09	5.32	0.05	1.14	0.821
Area#5-90	6.48	0.00	0.00	0.97	5.47	0.13	2.82	0.844
Area#5-100	6.48	0.00	0.00	1.09	5.34	0.07	1.45	0.824
Area#6-10	6.48	0.00	0.00	3.21	3.20	0.09	1.80	0.493
Area#6-20	6.48	0.00	0.00	2.25	4.11	0.41	7.58	0.635
Area#6-30	6.48	0.00	0.00	2.17	4.16	1.14	19.16	0.642
Area#6-40	6.48	0.00	0.00	2.54	3.75	0.75	10.94	0.578
Area#6-50	6.48	0.00	0.00	2.93	3.41	1.52	26.65	0.526
Area#6-60	6.48	0.00	0.00	2.16	4.14	6.03	94.66	0.638
Area#6-70	6.48	0.00	0.00	0.40	6.05	0.10	1.97	0.933
Area#6-80	6.48	0.00	0.00	3.22	3.19	0.06	1.39	0.493
Area#6-90	6.48	0.00	0.00	2.68	3.70	0.64	11.65	0.571
Area#4-140	6.48	0.00	0.00	1.09	5.34	0.14	3.06	0.823
Area#4-150	6.48	0.00	0.00	0.41	6.04	0.07	1.40	0.931
Area#4-160	6.48	0.00	0.00	1.64	4.79	0.02	0.44	0.739
Area#4-170	6.48	0.00	0.00	0.93	5.50	0.08	1.64	0.848
Area#4-180	6.48	0.00	0.00	1.36	5.05	0.14	2.99	0.779
Area#4-190	6.48	0.00	0.00	0.93	5.50	0.04	0.89	0.849
Area#4-200	6.48	0.00	0.00	2.92	3.47	0.19	3.53	0.535
Area#4-130	6.48	0.00	0.00	2.52	3.89	0.13	2.70	0.601
Area#4-120	6.48	0.00	0.00	2.29	4.13	0.10	2.14	0.637
Area#4-100	6.48	0.00	0.00	3.44	2.97	0.14	2.80	0.458
Area#4-90	6.48	0.00	0.00	0.64	5.80	0.10	2.15	0.895
Area#4-80	6.48	0.00	0.00	0.38	6.05	0.18	3.69	0.933
Area#4-10	6.48	0.00	0.00	0.41	6.02	0.15	3.07	0.929
Area#4-20	6.48	0.00	0.00	0.82	5.61	0.26	5.37	0.865
Area#4-70	6.48	0.00	0.00	0.71	5.71	0.20	4.22	0.882

Area#4-60	6.48	0.00	0.00	0.41	6.03	0.15	3.04	0.930
Area#4-50	6.48	0.00	0.00	0.68	5.74	0.31	6.41	0.885
Area#4-30	6.48	0.00	0.00	2.40	4.00	0.07	1.67	0.617
Area#2-10	6.48	0.00	0.00	1.89	4.41	0.34	5.41	0.680
Area#2-20	6.48	0.00	0.00	1.41	4.96	0.11	2.11	0.766
Area#2-30	6.48	0.00	0.00	2.05	4.27	0.35	5.99	0.658
Area#2-40	6.48	0.00	0.00	1.53	4.86	0.62	12.75	0.750
Area#2-50	6.48	0.00	0.00	1.73	4.53	0.69	10.34	0.699
Area#2-60	6.48	0.00	0.00	1.73	4.66	0.44	9.46	0.719
Area#2-70	6.48	0.00	0.00	2.05	4.30	0.45	8.75	0.663
Area#2-100	6.48	0.00	0.00	1.62	4.76	0.30	6.09	0.735
Area#2-80	6.48	0.00	0.00	1.41	4.99	0.18	3.76	0.770
Area#2-110	6.48	0.00	0.00	1.62	4.77	0.19	4.01	0.735
Area#5-60	6.48	0.00	0.00	1.09	5.34	0.05	1.11	0.824
Area#2-90	6.48	0.00	0.00	1.32	5.02	0.37	6.70	0.775
Area#2-120	6.48	0.00	0.00	1.59	4.67	2.88	42.58	0.720
Area#2-150	6.48	0.00	0.00	2.07	4.24	0.79	12.97	0.654
Area#4-40	6.48	0.00	0.00	1.36	5.05	0.16	3.39	0.780
Area#4-110	6.48	0.00	0.00	1.44	4.94	0.40	8.61	0.762
Area#5-110	6.48	0.00	0.00	0.61	5.81	0.16	3.38	0.897
Area#2-130	6.48	0.00	0.00	1.70	4.70	0.14	2.93	0.725
Area#2-140	6.48	0.00	0.00	2.07	4.26	0.39	6.80	0.657
Area#2-85	6.48	0.00	0.00	3.75	2.66	0.14	2.78	0.411

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Node Depth Summary
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Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	3.05	5.75	125.75	0 13:10
3**	JUNCTION	0.53	1.60	102.60	0 13:00
D/S_NC-4	JUNCTION	2.49	3.88	105.06	0 15:36
5**	JUNCTION	3.22	5.25	99.25	0 15:06
D/S_W_Battleboro_Ave**	JUNCTION	1.26	3.15	117.32	0 13:06
7**	JUNCTION	2.20	4.49	106.49	0 13:11
8**	JUNCTION	5.03	7.55	97.55	0 15:12
Hathaway_St-D/S	JUNCTION	4.00	5.81	95.79	0 15:17
DI_983628	JUNCTION	0.08	0.30	127.20	0 13:00
DI_983629	JUNCTION	0.27	0.97	127.17	0 13:00
DI_983630	JUNCTION	0.48	1.16	126.62	0 13:00
DI_983631	JUNCTION	0.12	0.45	126.90	0 12:59
DI_983633	JUNCTION	0.48	1.12	122.22	0 13:00
DI_983632	JUNCTION	0.52	1.13	122.18	0 13:00
DI_983634	JUNCTION	0.23	0.83	114.48	0 13:00
DI_984002*	JUNCTION	0.47	2.16	109.66	0 13:00
UNK_952741*	JUNCTION	0.43	3.49	111.39	0 13:00
DI_983635	JUNCTION	0.11	0.46	111.61	0 13:00
PE_972255	JUNCTION	0.12	0.45	113.95	0 12:59
PE_972263	JUNCTION	0.20	2.67	111.57	0 13:00
PE_972261*	JUNCTION	0.20	0.87	108.27	0 13:01
PE_972258	JUNCTION	4.09	6.10	95.10	0 15:20
Railroad_Junction_1	JUNCTION	2.17	4.79	109.32	0 13:07
Junction_1	JUNCTION	4.50	6.60	94.10	0 14:49
DI_983955	JUNCTION	0.11	0.44	101.04	0 13:00
PE_272260	JUNCTION	0.10	0.38	101.98	0 12:59
DI_983954	JUNCTION	0.16	0.70	98.72	0 13:00
DI_983953	JUNCTION	0.10	0.39	96.29	0 13:00
Drew_Hill_Junction	JUNCTION	4.92	7.06	95.06	0 15:20
DI_983952	JUNCTION	0.37	3.69	109.02	0 13:00
DI_983951	JUNCTION	0.30	2.98	107.03	0 13:01
DI_983950	JUNCTION	0.88	4.03	105.03	0 13:03
DI_283949	JUNCTION	0.40	2.34	103.59	0 13:05
DI_983948	JUNCTION	0.36	2.37	99.02	0 13:08
DI_983947	JUNCTION	0.51	2.61	97.69	0 13:09
DI_983946	JUNCTION	0.69	1.93	96.20	0 13:10
PE_972230	JUNCTION	0.51	2.12	129.27	0 13:00
UNK_952735*	JUNCTION	0.54	2.02	129.12	0 13:00
DI_983907	JUNCTION	0.59	1.97	129.02	0 13:00

DI_983906	JUNCTION	0.19	1.29	128.40	0	13:00
UNK_952736*	JUNCTION	0.21	1.89	127.65	0	13:00
DI_983903	JUNCTION	0.37	3.17	125.78	0	13:01
DI_983902	JUNCTION	0.68	2.85	123.93	0	13:04
DI_983904	JUNCTION	1.19	4.60	122.01	0	13:05
DI_983905	JUNCTION	1.94	4.12	120.60	0	13:03
DI_983721	JUNCTION	2.36	4.20	120.17	0	13:02
DI_983722	JUNCTION	2.35	4.23	120.19	0	13:04
MH_974299	JUNCTION	2.78	4.58	120.03	0	13:05
PE_972229	JUNCTION	0.35	1.36	116.58	0	13:06
PE_972224	JUNCTION	0.20	0.81	121.66	0	13:01
PE_972239	JUNCTION	0.59	1.80	113.92	0	13:02
PE_972240	JUNCTION	0.32	1.25	126.97	0	13:09
DI_983935	JUNCTION	0.59	3.32	127.27	0	13:09
DI_983934	JUNCTION	0.69	3.59	127.27	0	13:08
MH_974300	JUNCTION	0.52	2.77	125.53	0	13:05
DI_983624	JUNCTION	0.99	5.21	122.33	0	13:02
DI_983623	JUNCTION	0.67	3.73	120.63	0	13:00
DI_983619	JUNCTION	0.57	3.40	117.71	0	13:00
DI_983622	JUNCTION	0.38	2.99	120.44	0	13:00
DI_983621	JUNCTION	0.60	4.36	118.68	0	13:00
DI_983620	JUNCTION	0.12	1.54	117.99	0	13:00
DI_983618	JUNCTION	0.83	3.89	116.61	0	13:00
DI_983898	JUNCTION	0.67	3.92	127.92	0	13:00
DI_983604	JUNCTION	0.74	4.32	127.82	0	13:00
DI_983901	JUNCTION	0.55	4.20	126.55	0	13:01
DI_983607	JUNCTION	0.27	2.78	129.58	0	13:00
DI_983606	JUNCTION	0.43	3.39	129.54	0	13:00
DI_9836054	JUNCTION	0.84	4.04	128.09	0	13:07
MH_974298	JUNCTION	1.67	4.04	128.09	0	13:04
DI_983899	JUNCTION	0.29	1.78	128.75	0	13:00
DI_983900	JUNCTION	0.30	1.80	128.79	0	13:00
DI_983897	JUNCTION	0.35	1.95	128.15	0	13:00
DI_983896	JUNCTION	0.46	2.06	128.11	0	13:00
DI_983895	JUNCTION	0.59	2.25	128.10	0	13:02
DI_983894	JUNCTION	0.48	1.46	127.26	0	13:02
DI_953893*	JUNCTION	0.19	0.74	126.44	0	13:00
PE_972225	JUNCTION	0.11	0.43	126.98	0	12:59
UNK_952734*	JUNCTION	0.48	1.30	123.83	0	13:00
DI_983892	JUNCTION	0.26	1.15	123.38	0	13:00
UNK_952733*	JUNCTION	0.26	1.15	123.00	0	13:01
UNK_952732*	JUNCTION	0.26	1.18	122.53	0	13:00
U/S_NC-4	JUNCTION	2.73	6.23	108.84	0	15:29
U/S_W_Battleboro_Ave	JUNCTION	2.03	7.57	121.99	0	13:01
Hathaway_St-U/S	JUNCTION	4.39	7.00	96.99	0	15:16
9**	JUNCTION	1.96	6.70	122.12	0	13:00
Farm-Culv-Up	JUNCTION	2.91	4.03	100.03	0	13:09
Farm-Culv-Dn	JUNCTION	1.95	4.09	99.59	0	13:12
Railroad-Up	JUNCTION	1.70	5.95	111.53	0	13:50
DI_983957	JUNCTION	0.20	2.31	123.31	0	13:00
DI_983956*	JUNCTION	0.31	2.61	123.11	0	13:00
PE_972262	JUNCTION	0.32	1.23	116.62	0	13:00
DI_983936	JUNCTION	0.39	1.84	128.20	0	13:00
U/S_Gainor_Swale	JUNCTION	0.61	1.65	127.65	0	13:00
DI_983625	JUNCTION	0.39	3.02	120.02	0	12:59
952731	JUNCTION	0.46	1.59	122.54	0	13:02
972222	JUNCTION	0.21	0.74	121.53	0	13:05
983943	JUNCTION	0.17	0.72	126.37	0	13:00
952740	JUNCTION	0.13	0.51	125.96	0	13:00
New_Inlet-Red-Roof	JUNCTION	0.12	0.44	125.34	0	12:59
4	JUNCTION	0.44	1.67	127.87	0	13:00
Primary_Outfall*	OUTFALL	4.50	6.60	93.60	0	14:49

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal

Alternative - Project Area 2,4,5,& 6(25-Year)

1**	JUNCTION	458.16	458.16	0	13:00	46.518	46.517
3**	JUNCTION	158.94	158.94	0	13:00	14.544	14.544
D/S_NC-4	JUNCTION	0.00	195.86	0	15:28	0.000	45.574
5**	JUNCTION	0.00	262.67	0	14:30	0.000	59.961
D/S_W_Battleboro_Ave**	JUNCTION	0.00	103.61	0	13:02	0.000	11.356
7**	JUNCTION	171.57	260.29	0	13:00	17.207	28.565
8**	JUNCTION	145.04	492.98	0	13:00	12.804	101.051
Hathaway_St-D/S	JUNCTION	0.00	470.66	0	15:15	0.000	100.902
DI_983628	JUNCTION	0.94	0.94	0	12:59	0.046	0.046
DI_983629	JUNCTION	1.18	2.12	0	12:59	0.056	0.102
DI_983630	JUNCTION	1.14	5.65	0	12:59	0.055	0.274
DI_983631	JUNCTION	2.42	2.42	0	12:59	0.117	0.117
DI_983633	JUNCTION	1.17	1.17	0	12:59	0.055	0.055
DI_983632	JUNCTION	1.11	7.89	0	13:00	0.052	0.381
DI_983634	JUNCTION	0.00	7.89	0	13:00	0.000	0.380
DI_984002*	JUNCTION	0.00	17.41	0	13:00	0.000	0.861
UNK_952741*	JUNCTION	2.82	9.62	0	12:59	0.134	0.481
DI_983635	JUNCTION	0.00	2.80	0	13:00	0.000	0.146
PE_972255	JUNCTION	2.80	2.80	0	12:59	0.146	0.146
PE_972263	JUNCTION	4.13	4.13	0	12:59	0.201	0.201
PE_972261*	JUNCTION	1.45	18.78	0	13:00	0.068	0.929
PE_972258	JUNCTION	0.00	471.06	0	15:16	0.000	100.943
Railroad_Junction_1	JUNCTION	107.61	223.03	0	13:00	9.187	22.164
Junction_1	JUNCTION	94.56	631.20	0	14:42	6.025	129.250
DI_983955	JUNCTION	1.39	1.39	0	12:59	0.064	0.064
PE_272260	JUNCTION	1.97	1.97	0	12:59	0.095	0.095
DI_983954	JUNCTION	0.00	3.35	0	13:00	0.000	0.159
DI_983953	JUNCTION	0.00	3.34	0	13:00	0.000	0.159
Drew_Hill_Junction	JUNCTION	0.00	470.93	0	15:20	0.000	100.273
DI_983952	JUNCTION	11.64	11.64	0	12:59	0.639	0.639
DI_983951	JUNCTION	0.00	11.34	0	13:00	0.000	0.639
DI_983950	JUNCTION	0.00	10.90	0	13:01	0.000	0.640
DI_283949	JUNCTION	0.00	10.84	0	13:03	0.000	0.640
DI_983948	JUNCTION	0.00	10.58	0	13:05	0.000	0.641
DI_983947	JUNCTION	0.00	10.10	0	13:08	0.000	0.641
DI_983946	JUNCTION	0.00	10.07	0	13:08	0.000	0.641
PE_972230	JUNCTION	3.69	3.69	0	12:59	0.177	0.177
UNK_952735*	JUNCTION	0.00	3.68	0	12:59	0.000	0.177
DI_983907	JUNCTION	2.15	5.80	0	12:59	0.104	0.281
DI_983906	JUNCTION	0.00	5.78	0	13:00	0.000	0.281
UNK_952736*	JUNCTION	0.00	5.78	0	12:47	0.000	0.281
DI_983903	JUNCTION	2.80	8.51	0	12:59	0.141	0.421
DI_983902	JUNCTION	0.00	30.83	0	13:01	0.000	1.716
DI_983904	JUNCTION	0.00	29.03	0	13:04	0.000	1.714
DI_983905	JUNCTION	8.61	34.68	0	13:02	0.401	2.117
DI_983721	JUNCTION	2.14	39.66	0	13:04	0.104	2.357
DI_983722	JUNCTION	2.70	44.42	0	13:03	0.134	2.492
MH_974299	JUNCTION	0.00	38.11	0	13:04	0.000	2.351
PE_972229	JUNCTION	3.53	48.06	0	13:05	0.185	3.021
PE_972224	JUNCTION	0.00	9.64	0	13:01	0.000	0.491
PE_972239	JUNCTION	0.00	58.31	0	13:01	0.000	4.158
PE_972240	JUNCTION	0.00	13.48	0	13:00	0.000	0.789
DI_983935	JUNCTION	12.74	12.74	0	12:59	0.620	0.620
DI_983934	JUNCTION	10.32	20.07	0	13:00	0.688	1.306
MH_974300	JUNCTION	0.00	23.31	0	13:35	0.000	2.085
DI_983624	JUNCTION	8.73	28.54	0	13:00	0.454	2.539
DI_983623	JUNCTION	9.45	36.04	0	12:55	0.442	2.981
DI_983619	JUNCTION	0.00	50.24	0	13:00	0.000	3.501
DI_983622	JUNCTION	10.45	13.23	0	12:59	0.544	0.688
DI_983621	JUNCTION	6.08	10.76	0	13:00	0.297	0.327
DI_983620	JUNCTION	4.01	4.01	0	12:59	0.194	0.194
DI_983618	JUNCTION	0.00	58.39	0	13:00	0.000	4.159
DI_983898	JUNCTION	6.40	19.13	0	13:00	0.308	1.090
DI_983604	JUNCTION	4.21	22.82	0	13:00	0.202	1.294
DI_983901	JUNCTION	0.00	22.67	0	13:00	0.000	1.294
DI_983607	JUNCTION	3.07	3.07	0	12:59	0.147	0.147
DI_983606	JUNCTION	5.37	8.43	0	12:59	0.256	0.402
DI_9836054	JUNCTION	3.04	7.82	0	13:00	0.146	0.373
MH_974298	JUNCTION	0.00	4.14	0	12:36	0.000	0.221
DI_983899	JUNCTION	3.39	4.28	0	12:59	0.159	0.228
DI_983900	JUNCTION	1.66	1.66	0	12:59	0.074	0.074
DI_983897	JUNCTION	3.06	3.06	0	12:59	0.143	0.143

DI_983896	JUNCTION	1.40	4.44	0	12:59	0.067	0.211
DI_983895	JUNCTION	0.44	4.72	0	13:00	0.020	0.231
DI_983894	JUNCTION	0.00	4.39	0	13:02	0.000	0.231
DI_953893*	JUNCTION	0.00	5.91	0	13:00	0.000	0.308
PE_972225	JUNCTION	1.64	1.64	0	12:59	0.078	0.078
UNK_952734*	JUNCTION	2.99	8.87	0	13:00	0.141	0.449
DI_983892	JUNCTION	0.00	8.85	0	13:00	0.000	0.449
UNK_952733*	JUNCTION	0.00	8.84	0	13:00	0.000	0.449
UNK_952732*	JUNCTION	0.89	9.63	0	13:00	0.042	0.491
U/S_NC-4	JUNCTION	0.00	394.98	0	13:39	0.000	47.109
U/S_W_Battleboro_Ave	JUNCTION	0.00	112.63	0	13:00	0.000	11.361
Hathaway_St-U/S	JUNCTION	3.38	470.46	0	15:02	0.159	100.639
9**	JUNCTION	112.91	112.91	0	13:00	11.366	11.365
Farm-Culv-Up	JUNCTION	26.62	210.60	0	13:04	1.514	23.586
Farm-Culv-Dn	JUNCTION	0.00	209.65	0	13:04	0.000	23.514
Railroad-Up	JUNCTION	55.48	120.22	0	13:00	3.667	8.362
DI_983957	JUNCTION	1.80	1.80	0	12:59	0.090	0.090
DI_983956*	JUNCTION	7.58	9.37	0	12:59	0.407	0.498
PE_972262	JUNCTION	19.13	28.30	0	13:00	1.139	1.636
DI_983936	JUNCTION	5.40	5.40	0	13:00	0.335	0.335
U/S_Gainor_Swale	JUNCTION	8.09	13.47	0	13:00	0.455	0.789
DI_983625	JUNCTION	0.00	9.39	0	12:39	0.000	0.658
952731	JUNCTION	6.79	9.63	0	13:00	0.393	0.529
972222	JUNCTION	0.00	8.67	0	13:02	0.000	0.527
983943	JUNCTION	2.93	2.93	0	12:59	0.136	0.136
952740	JUNCTION	0.00	2.92	0	13:00	0.000	0.136
New_Inlet-Red-Roof	JUNCTION	2.78	2.78	0	12:59	0.144	0.144
4	JUNCTION	0.00	5.40	0	13:00	0.000	0.335
Primary_Outfall*	OUTFALL	0.00	630.91	0	14:49	0.000	128.469

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
9**	JUNCTION	0.20	0.697	1.303
DI_983625	JUNCTION	0.52	1.519	3.081

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Node Flooding Summary
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No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	97.22	264.47	630.91	128.469
System	97.22	264.47	630.91	128.469

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Link Flow Summary
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	Maximum |Flow|	Time of Max Occurrence	Maximum |Veloc|	Max/ Full	Max/ Full

Alternative - Project Area 2,4,5,& 6(25-Year)

Link	Type	CFS	days	hr:min	ft/sec	Flow	Depth
BeechTrib8	CHANNEL	394.98	0	13:39	2.29	0.04	0.37
NC-4	CONDUIT	195.86	0	15:28	10.18	1.14	1.00
BeechTrib7	CHANNEL	195.80	0	15:36	2.08	0.02	0.33
Channel_4**	CONDUIT	158.37	0	13:00	2.50	0.09	0.52
BeechTrib6	CHANNEL	259.92	0	15:06	1.67	0.08	0.64
W_Battleboro_Ave_Culvert**	CONDUIT	98.81	0	13:00	13.98	2.10	1.00
Channel_3A**	CHANNEL	96.36	0	13:06	2.86	0.00	0.25
Channel_3B	CHANNEL	206.25	0	13:11	1.28	0.02	0.39
BeechTrib5	CHANNEL	466.70	0	15:04	1.71	2.09	0.73
Hathaway_St_Culvert	CONDUIT	468.49	0	15:16	6.61	4.10	0.98
15_RCP_Hathaway_1	CONDUIT	0.94	0	13:00	1.50	0.13	0.51
15_RCP_Hathaway_2	CONDUIT	2.10	0	13:00	2.18	0.80	0.73
15_RCP_Hathaway_3	CONDUIT	2.42	0	13:00	2.88	0.28	0.65
15_RCP_Hathaway_4	CONDUIT	5.63	0	13:00	6.32	0.77	0.68
15_RCP_Hathaway_5	CONDUIT	1.17	0	13:00	1.00	0.62	0.90
15_RCP_Hathaway_6	CONDUIT	7.89	0	13:00	9.40	0.69	0.65
15_RCP_Hathaway_7	CONDUIT	7.88	0	13:00	7.37	0.67	0.81
15_RCP_Hathaway_8	CONDUIT	2.80	0	13:00	7.59	0.24	0.36
15_RCP_Hathaway_9	CONDUIT	2.78	0	13:01	3.25	0.20	0.68
18_RCP_Hathaway_10	CONDUIT	4.10	0	13:00	2.39	0.28	1.00
15_RCP_Hathaway_11*	CONDUIT	9.53	0	13:00	5.39	1.56	1.00
PR-24_RCP_Hathaway_12*	CONDUIT	17.39	0	13:00	7.22	0.97	0.72
Hathaway_Swale*	CONDUIT	18.61	0	13:01	0.46	0.01	0.37
BeechTrib4	CHANNEL	470.64	0	15:16	1.65	0.05	0.52
12_RCP_Battleboro_Apt_1	CONDUIT	1.38	0	13:00	2.97	0.40	0.57
12_RCP_Battleboro_Apt_2	CONDUIT	1.97	0	12:59	4.96	0.30	0.54
12_RCP_Battleboro_Apt_3	CONDUIT	3.34	0	13:00	7.64	0.67	0.54
15_RCP_Battleboro_Apt_4	CONDUIT	3.34	0	13:00	3.93	0.21	0.65
BeechTrib3	CHANNEL	470.93	0	15:20	1.18	0.03	0.57
BeechTrib2	CHANNEL	471.10	0	15:25	1.30	0.12	0.55
Channel-6B	CHANNEL	189.95	0	13:07	2.87	0.09	0.49
15_RCP_Burrows_1	CONDUIT	9.87	0	12:47	8.04	0.95	1.00
15_RCP_Burrows_2	CONDUIT	9.60	0	13:01	7.82	0.69	1.00
15_RCP_Burrows_3	CONDUIT	8.60	0	12:46	7.01	1.99	1.00
15_RCP_Burrows_4	CONDUIT	8.03	0	12:43	6.66	1.03	1.00
15_RCP_Burrows_5	CONDUIT	8.63	0	12:53	7.03	1.12	1.00
15_RCP_Burrows_6	CONDUIT	10.07	0	13:08	8.51	0.94	1.00
18_RCP_Burrows_7	CONDUIT	10.04	0	13:09	5.68	0.32	1.00
BeechTrib1	CHANNEL	630.91	0	14:49	1.93	0.07	0.53
18_RCP_Marriott_1	CONDUIT	3.68	0	12:59	2.08	1.01	1.00
12_RCP_Marriott_2	CONDUIT	3.67	0	13:00	4.67	1.46	1.00
15_RCP_Marriott_3	CONDUIT	5.78	0	13:00	5.30	0.94	1.00
15_VCP_Marriott_4	CONDUIT	5.78	0	12:47	6.71	0.64	1.00
15_RCP_Mattiott_5	CONDUIT	5.74	0	13:00	4.85	0.73	1.00
15_RCP_Mattiott_6	CONDUIT	7.58	0	12:50	6.17	0.97	1.00
24_RCP_Marriott_7	CONDUIT	20.34	0	13:17	6.48	0.59	1.00
24_RCP_Marriott_8	CONDUIT	21.89	0	13:06	6.97	0.98	1.00
24_RCP_Marriott_9	CONDUIT	15.42	0	12:41	4.91	0.73	1.00
24_RCP_Etheridge_1	CONDUIT	12.23	0	12:33	3.89	0.74	1.00
24_RCP_Etheridge_2	CONDUIT	9.73	0	12:42	3.10	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.42	0	13:05	6.41	0.26	0.67
Railroad_Swale_2	CONDUIT	47.37	0	13:06	1.17	0.02	0.31
Railroad_Swale_1	CONDUIT	9.56	0	13:01	1.81	0.02	0.21
Cemetery_Dr_Swale	CONDUIT	57.75	0	13:02	1.66	0.09	0.68
18_RCP_Gainor_2	CONDUIT	8.15	0	13:48	4.61	0.96	1.00
18_RCP_Gainor_3	CONDUIT	14.77	0	12:47	8.36	0.87	1.00
18_RCP_Gainor_7A	CONDUIT	9.39	0	12:39	5.95	0.64	1.00
15_RCP_Gainor_7B	CONDUIT	10.74	0	13:00	6.08	6.13	1.00
15_RCP_Gainor_7C	CONDUIT	3.97	0	13:00	3.67	0.19	1.00
15_RCP_W_Battleboro_1	CONDUIT	3.49	0	13:07	2.94	0.42	1.00
18_RCP_W_Battleboro_2	CONDUIT	6.50	0	12:40	3.68	0.83	1.00
18_RCP_W_Battleboro_3	CONDUIT	7.01	0	13:43	3.97	0.93	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.93	0	13:37	6.19	0.81	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.78	0	13:21	7.23	1.42	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.47	0	12:52	8.75	1.12	1.00
15_RCP_Pollard_3	CONDUIT	3.78	0	13:47	3.20	0.16	1.00
12_RCP_Pollard_1	CONDUIT	1.52	0	13:07	1.94	1.71	1.00
15_RCP_Pollard_2	CONDUIT	3.44	0	12:40	4.04	0.67	1.00
12_RCP_W_Bridges_1	CONDUIT	1.67	0	12:34	2.12	0.71	1.00
12_RCP_W_Bridges_2	CONDUIT	2.40	0	12:34	3.06	0.48	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:23	3.10	4.58	1.00

15_RCP_Railroad_2	CONDUIT	4.39	0	13:02	4.46	0.76	0.78
15_RCP_Railroad_3	CONDUIT	1.64	0	12:59	3.20	0.25	0.47
18_RCP_Railroad_4	CONDUIT	5.90	0	13:00	4.66	0.49	0.68
24_RCP_Railroad_5	CONDUIT	8.85	0	13:00	5.00	0.35	0.55
24_RCP_Railroad_6*	CONDUIT	8.84	0	13:00	4.74	0.43	0.57
24_RCP_Railroad_7*	CONDUIT	8.84	0	13:01	4.68	0.46	0.58
24_VCP_Railroad_8	CONDUIT	9.64	0	13:01	6.19	0.32	0.50
CONNECT**	CONDUIT	112.63	0	13:00	2.13	0.38	1.00
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	1.49	0	13:00	1.22	0.00	0.01
Overland_Burrows_2	CONDUIT	1.30	0	13:01	0.88	0.00	0.01
Overland_Burrows_3	CONDUIT	2.28	0	13:03	1.34	0.00	0.01
Overland_Burrows_4	CONDUIT	3.11	0	13:05	1.46	0.00	0.01
Overland_Burrows_5	CONDUIT	3.70	0	13:08	1.21	0.00	0.02
Overland_Burrows_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	5.04	0	13:02	1.11	0.00	0.02
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	206.70	0	13:12	1.57	0.05	0.58
Farm-Culvert	CONDUIT	16.68	0	10:22	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	202.42	0	13:04	7.04	0.04	0.19
Railroad_Culvert	CONDUIT	65.04	0	13:56	9.20	0.98	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.19
Over_15_RCP_Marriott_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_6	CONDUIT	0.88	0	13:01	0.22	0.00	0.03
Over_24_RCP_Marriott_7	CONDUIT	9.28	0	13:04	1.44	0.00	0.04
Over_24_RCP_Marriott_8	CONDUIT	6.99	0	13:05	0.82	0.00	0.06
Over_24_RCP_Marriott_9	CONDUIT	21.01	0	13:03	1.44	0.01	0.10
Over_24_RCP_Etheridge_1	CONDUIT	42.72	0	13:03	1.21	0.01	0.21
Over_24_RCP_Etheridge_2	CONDUIT	31.75	0	13:04	0.98	0.01	0.19
Over_15_RCP_W_Battleboro_1	CONDUIT	1.74	0	13:00	0.54	0.01	0.02
Over_15_RCP_W_Battleboro_2	CONDUIT	2.05	0	13:00	0.31	0.00	0.04
Over_18_RCP_W_Battleboro_4	CONDUIT	15.33	0	13:01	1.66	0.06	0.06
Over_18_RCP_W_Battleboro_5	CONDUIT	14.43	0	13:00	2.38	0.00	0.04
Over_18_RCP_W_Battleboro_6	CONDUIT	7.35	0	13:01	1.73	0.00	0.03
Over_12_RCP_Pollard_1	CONDUIT	0.73	0	13:00	0.12	0.00	0.04
Over_15_RCP_Pollard_2	CONDUIT	1.14	0	13:00	0.13	0.00	0.06
Over_24_RCP_Etheridge_3	CONDUIT	23.26	0	13:05	5.67	0.00	0.03
Over_12_RCP_W_Bridges_1	CONDUIT	2.23	0	13:00	0.69	0.00	0.03
Over_12_RCP_W_Bridges_2	CONDUIT	3.74	0	13:00	0.85	0.01	0.03
Over_12_RCP_Railroad_1	CONDUIT	2.44	0	13:02	0.69	0.00	0.02
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_6*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_7*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_VCP_Railroad_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
OVer_18_RCP_Gainor_2	CONDUIT	9.17	0	13:00	0.78	0.00	0.17
Over_18_RCP_Gainor_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.07
Crepe_Myrtle_1-12	CONDUIT	1.80	0	13:00	2.36	0.53	1.00
Crepe_Myrtle_2_12	CONDUIT	6.20	0	12:40	7.91	1.03	1.00
Crepe_Myrtle_Swale	CONDUIT	27.79	0	13:00	1.29	0.05	0.59
Over_18_RCP_Hathaway_10	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Crepe_Myrtle_1-OVR	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_24_RCP_Hathaway_12*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_18_RCP_Gainor	CONDUIT	5.40	0	13:00	3.05	1.03	1.00
Over_PROP_18_RCP_Gainor	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP-BRIDGES_18_RCP	CONDUIT	5.40	0	13:00	3.06	0.68	1.00
Over-Bridges	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_Gainor_Swale	CONDUIT	13.48	0	13:00	1.96	0.35	0.55
PROP_18_RCP_Gainor_1	CONDUIT	9.39	0	13:16	5.75	0.73	0.92
Over_18_RCP_Gainor_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.21
PROP_24_RCP_Gainor_4	CONDUIT	23.56	0	13:33	7.62	0.78	1.00

Over_24_RCP_Gainor_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_24_RCP_Gainor_5	CONDUIT	30.62	0	13:06	9.75	1.97	1.00
Over_24_RCP_Gainor_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.02
PROP_30_RCP_Gainor_6	CONDUIT	36.22	0	13:07	7.92	0.95	1.00
OVER_PROP_30_RCP_Gainor_6	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
36_RCP_Gainor_8	CONDUIT	50.10	0	13:00	7.09	0.42	1.00
Over_36_RCP_Gainor_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
36_RCP_Gainor_9	CONDUIT	58.31	0	13:01	9.63	0.61	0.80
Over_36_RCP_Gainor_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Gainor_7A	CONDUIT	4.74	0	13:00	1.67	0.00	0.02
Over_15_RCP_Gainor_7C	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_Hathaway_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Hathaway_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Battle-Gainor-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
18_RCP_Gainor_7D	CONDUIT	9.33	0	12:42	5.28	0.96	1.00
84	CONDUIT	4.46	0	13:05	0.63	0.00	0.09
E-Battleboro-Culv	CONDUIT	8.67	0	13:02	4.66	1.13	0.58
RR-Open-Ditch2	CONDUIT	8.27	0	13:05	0.38	0.02	0.59
Battleboro-Ovr	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Pearsall	CONDUIT	2.92	0	13:00	4.33	0.34	0.41
RR-Open-Ditch1	CONDUIT	2.86	0	13:00	0.80	0.01	0.35
Crepe_Myrtle_2-OVR	CONDUIT	3.19	0	13:00	1.47	0.01	0.04
New-Red-Roof-Pipe	CONDUIT	2.78	0	12:59	3.15	0.27	0.68
Red-Roof-Pipe-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.03

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Flow Classification Summary
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Conduit	Adjusted /Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
BeechTrib8	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0000
NC-4	1.00	0.02	0.00	0.00	0.95	0.03	0.00	0.00	0.44	0.0003
BeechTrib7	1.00	0.03	0.02	0.00	0.96	0.00	0.00	0.00	0.23	0.0000
Channel_4**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.11	0.0000
BeechTrib6	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.14	0.0000
W_Battleboro_Ave_Culvert**	3.30	0.02	0.00	0.00	0.73	0.25	0.00	0.00	0.85	0.0003
Channel_3A**	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.25	0.0000
Channel_3B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib5	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.14	0.0003
Hathaway_St_Culvert	1.18	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0006
15_RCP_Hathaway_1	2.23	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.27	0.0000
15_RCP_Hathaway_2	1.00	0.03	0.00	0.00	0.96	0.00	0.00	0.01	0.37	0.0001
15_RCP_Hathaway_3	2.38	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
15_RCP_Hathaway_4	1.00	0.04	0.00	0.00	0.24	0.70	0.00	0.01	1.12	0.0001
15_RCP_Hathaway_5	1.34	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.05	0.0001
15_RCP_Hathaway_6	1.00	0.05	0.00	0.00	0.01	0.94	0.00	0.00	1.64	0.0001
15_RCP_Hathaway_7	1.00	0.02	0.04	0.00	0.91	0.04	0.00	0.00	0.77	0.0001
15_RCP_Hathaway_8	2.28	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.27	0.0000
15_RCP_Hathaway_9	2.53	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.56	0.0000
18_RCP_Hathaway_10	2.92	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.58	0.0000
15_RCP_Hathaway_11*	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.55	0.0002
PR-24_RCP_Hathaway_12*	8.57	0.02	0.00	0.00	0.01	0.97	0.00	0.00	1.36	0.0001
Hathaway_Swale*	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.03	0.0000
BeechTrib4	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.18	0.0000
12_RCP_Battleboro_Apt_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.79	0.0001
12_RCP_Battleboro_Apt_2	1.29	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.28	0.0000
12_RCP_Battleboro_Apt_3	1.10	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.10	0.0001
15_RCP_Battleboro_Apt_4	1.78	0.02	0.00	0.00	0.93	0.05	0.00	0.00	0.30	0.0000
BeechTrib3	2.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib2	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.11	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.04	0.94	0.00	0.00	2.08	0.0002
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.50	0.0001
15_RCP_Burrows_3	1.76	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.38	0.0004
15_RCP_Burrows_4	1.00	0.04	0.00	0.00	0.05	0.91	0.00	0.00	1.45	0.0002
15_RCP_Burrows_5	1.15	0.04	0.00	0.00	0.79	0.18	0.00	0.00	0.76	0.0002
15_RCP_Burrows_6	4.20	0.04	0.00	0.00	0.52	0.43	0.00	0.00	1.26	0.0001
18_RCP_Burrows_7	5.31	0.04	0.01	0.00	0.92	0.03	0.00	0.00	0.22	0.0001

BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.18	0.0000
18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.11	0.0002
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.11	0.0002
15_RCP_Marriott_3	3.55	0.05	0.00	0.00	0.03	0.92	0.00	0.00	1.24	0.0001
15_VCP_Marriott_4	1.95	0.05	0.00	0.00	0.02	0.93	0.00	0.00	1.55	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.03	0.00	0.57	0.38	0.00	0.00	0.88	0.0001
15_RCP_Mattiott_6	1.30	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.62	0.0002
24_RCP_Marriott_7	1.14	0.03	0.00	0.00	0.84	0.13	0.00	0.00	0.75	0.0001
24_RCP_Marriott_8	1.47	0.02	0.02	0.00	0.94	0.03	0.00	0.00	0.14	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.02	0.00	0.97	0.00	0.00	0.00	0.04	0.0004
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0003
24_RCP_Etheridge_3	7.59	0.02	0.06	0.00	0.00	0.00	0.92	0.00	0.33	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.58	0.0003
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.09	0.89	0.00	0.00	1.32	0.0002
18_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.05	0.94	0.00	0.00	1.29	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0009
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.52	0.0000
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.63	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.61	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.03	0.00	0.22	0.00	0.74	0.00	0.29	0.0003
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.28	0.70	0.00	0.00	0.94	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.11	0.87	0.00	0.00	1.16	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.70	0.28	0.00	0.00	0.79	0.0002
15_RCP_Pollard_3	26.14	0.02	0.03	0.00	0.95	0.00	0.00	0.00	0.30	0.0001
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0004
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.79	0.05	0.00	0.15	0.66	0.0002
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0002
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.18	0.0009
15_RCP_Railroad_2	2.51	0.02	0.03	0.00	0.05	0.90	0.00	0.00	1.01	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.95	0.03	0.00	0.00	0.67	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.46	0.0001
24_RCP_Railroad_5	3.55	0.04	0.00	0.00	0.02	0.93	0.00	0.00	1.20	0.0001
24_RCP_Railroad_6*	3.25	0.04	0.00	0.00	0.05	0.90	0.00	0.00	1.05	0.0001
24_RCP_Railroad_7*	2.02	0.02	0.03	0.00	0.06	0.89	0.00	0.00	1.07	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.64	0.0000
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.26	0.0001
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.15	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	0.97	0.00	0.00	0.01	0.02	0.00	0.00	0.03	0.0000
Overland_Burrows_2	3.53	0.97	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.0000
Overland_Burrows_3	7.01	0.96	0.01	0.00	0.00	0.03	0.00	0.00	0.04	0.0000
Overland_Burrows_4	2.14	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.0000
Overland_Burrows_5	1.88	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.0000
Overland_Burrows_6	5.36	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_7	7.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
W_Battleboro_Ave-Over	3.80	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.15	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.84	0.14	0.00	0.00	0.39	0.0002
Over_Farm-Culvert	7.77	0.40	0.00	0.00	0.00	0.05	0.00	0.55	0.90	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.32	0.0002
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	0.82	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_2	27.58	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_3	4.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	0.97	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_7	1.03	0.97	0.00	0.00	0.01	0.00	0.00	0.02	0.02	0.0000
Over_24_RCP_Marriott_8	1.80	0.89	0.09	0.00	0.02	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Marriott_9	2.78	0.82	0.07	0.00	0.11	0.00	0.00	0.00	0.04	0.0000
Over_24_RCP_Etheridge_1	5.90	0.76	0.06	0.00	0.18	0.00	0.00	0.00	0.03	0.0000
Over_24_RCP_Etheridge_2	1.42	0.76	0.10	0.00	0.00	0.00	0.14	0.00	0.02	0.0000
Over_15_RCP_W_Battleboro_1	2.34	0.96	0.00	0.00	0.02	0.00	0.00	0.02	0.01	0.0000

Over_15_RCP_W_Battleboro_2	1.00	0.92	0.05	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.92	0.00	0.00	0.00	0.00	0.00	0.08	0.04	0.0000
Over_18_RCP_W_Battleboro_5	1.60	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.0000
Over_18_RCP_W_Battleboro_6	6.23	0.97	0.01	0.00	0.01	0.01	0.00	0.00	0.02	0.0000
Over_12_RCP_Pollard_1	1.11	0.92	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.91	0.06	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.90	0.00	0.00	0.00	0.00	0.00	0.10	0.32	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.92	0.02	0.00	0.06	0.00	0.00	0.00	0.02	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.92	0.00	0.00	0.04	0.00	0.00	0.04	0.03	0.0000
Over_12_RCP_Railroad_1	1.00	0.94	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
OVer_18_RCP_Gainor_2	5.06	0.90	0.01	0.00	0.07	0.00	0.02	0.00	0.01	0.0000
Over_18_RCP_Gainor_3	10.04	0.92	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Crepe_Myrtle_1-12	2.12	0.02	0.00	0.00	0.31	0.10	0.00	0.57	0.96	0.0001
Crepe_Myrtle_2_12	1.00	0.02	0.00	0.00	0.04	0.94	0.00	0.00	1.63	0.0002
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.08	0.0000
Over_18_RCP_Hathaway_10	1.15	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Crepe_Myrtle_1-OVR	5.17	0.97	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Hathaway_12*	25.27	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_18_RCP_Gainor	1.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.45	0.0002
Over_PROP_18_RCP_Gainor	2.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP-BRIDGES_18_RCP	3.27	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0001
Over-Bridges	6.54	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0001
PROP_18_RCP_Gainor_1	1.00	0.02	0.00	0.00	0.40	0.58	0.00	0.00	0.94	0.0001
Over_18_RCP_Gainor_1	1.39	0.02	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_24_RCP_Gainor_4	1.00	0.02	0.00	0.00	0.12	0.17	0.00	0.69	1.56	0.0001
Over_24_RCP_Gainor_4	1.12	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_24_RCP_Gainor_5	3.60	0.02	0.00	0.00	0.08	0.00	0.00	0.90	0.79	0.0003
Over_24_RCP_Gainor_5	6.30	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_30_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.05	0.93	0.00	0.00	1.44	0.0001
OVER_PROP_30_RCP_Gainor_6	18.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.16	0.82	0.00	0.00	1.26	0.0001
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.02	0.96	0.00	0.00	1.35	0.0001
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7A	13.13	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
18_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.52	0.0002
84	30.58	0.91	0.00	0.00	0.09	0.00	0.00	0.00	0.01	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.71	0.0002
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.06	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.15	0.0001
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0000
Crepe_Myrtle_2-OVR	1.00	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.0000
New-Red-Roof-Pipe	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.69	0.0000
Red-Roof-Pipe-Over	1.00	0.97	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

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Conduit Surcharge Summary
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Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
NC-4	5.74	5.74	5.74	7.98	5.74
W_Battleboro_Ave_Culvert**	0.39	0.39	0.40	3.21	0.39
BeechTrib5	0.01	0.01	0.01	7.57	0.01
Hathaway_St_Culvert	0.01	0.01	0.01	11.22	0.01
18_RCP_Hathaway_10	0.40	0.40	0.40	0.01	0.01

15_RCP_Hathaway_11*	0.50	0.50	0.50	0.48	0.50
15_RCP_Burrows_1	0.47	0.47	0.47	0.01	0.41
15_RCP_Burrows_2	0.51	0.51	0.51	0.01	0.01
15_RCP_Burrows_3	0.63	0.63	0.63	1.00	0.01
15_RCP_Burrows_4	0.62	0.62	0.63	0.12	0.23
15_RCP_Burrows_5	0.53	0.53	0.53	0.38	0.39
15_RCP_Burrows_6	0.41	0.41	0.41	0.01	0.36
18_RCP_Burrows_7	2.44	2.44	2.45	0.01	0.01
18_RCP_Marriott_1	0.38	0.38	0.38	0.15	0.38
12_RCP_Marriott_2	0.54	0.54	0.54	0.48	0.48
15_RCP_Marriott_3	0.05	0.05	0.05	0.01	0.05
15_VCP_Marriott_4	0.05	0.05	0.05	0.01	0.01
15_RCP_Mattiott_5	0.28	0.28	0.28	0.01	0.01
15_RCP_Mattiott_6	0.69	0.69	0.69	0.01	0.45
24_RCP_Marriott_7	0.57	0.57	0.57	0.01	0.01
24_RCP_Marriott_8	4.16	4.16	4.16	0.01	0.64
24_RCP_Marriott_9	6.08	6.08	6.08	0.01	0.21
24_RCP_Etheridge_1	6.97	6.97	6.98	0.01	0.09
24_RCP_Etheridge_2	9.97	9.97	9.97	0.01	0.01
18_RCP_Gainor_2	1.30	1.30	1.30	0.01	0.29
18_RCP_Gainor_3	0.99	0.99	0.99	0.01	0.99
18_RCP_Gainor_7A	0.52	0.52	0.52	0.01	0.34
15_RCP_Gainor_7B	1.27	1.27	1.27	1.29	1.27
15_RCP_Gainor_7C	0.13	0.13	0.13	0.01	0.01
15_RCP_W_Battleboro_1	0.75	0.75	0.75	0.01	0.01
18_RCP_W_Battleboro_2	1.04	1.04	1.04	0.01	0.01
18_RCP_W_Battleboro_3	1.31	1.31	1.31	0.01	0.01
18_RCP_W_Battleboro_4	1.34	1.34	1.34	0.01	0.59
18_RCP_W_Battleboro_5	1.20	1.20	1.20	0.95	1.20
18_RCP_W_Battleboro_6	0.77	0.77	0.77	0.41	0.77
15_RCP_Pollard_3	1.22	1.22	1.22	0.01	0.01
12_RCP_Pollard_1	1.07	1.07	1.07	0.50	0.68
15_RCP_Pollard_2	0.69	0.69	0.69	0.01	0.01
12_RCP_W_Bridges_1	1.03	1.03	1.03	0.01	0.02
12_RCP_W_Bridges_2	1.02	1.02	1.02	0.01	0.01
12_RCP_Railroad_1	0.60	0.60	0.60	4.51	0.60
CONNECT**	0.20	0.20	0.20	0.01	0.01
Farm-Culvert	11.20	11.20	11.20	10.42	10.62
Railroad_Culvert	3.45	3.45	3.45	0.01	3.04
Crepe_Myrtle_1-12	0.55	0.55	0.55	0.01	0.01
Crepe_Myrtle_2_12	0.45	0.45	0.45	0.40	0.45
PROP_18_RCP_Gainor	0.27	0.27	0.27	0.04	0.27
PROP-BRIDGES_18_RCP	0.27	0.27	0.27	0.01	0.05
PROP_24_RCP_Gainor_4	0.67	0.67	0.67	0.01	0.01
PROP_24_RCP_Gainor_5	0.47	0.47	0.47	1.53	0.47
PROP_30_RCP_Gainor_6	0.31	0.31	0.31	0.01	0.30
36_RCP_Gainor_8	0.18	0.18	0.18	0.01	0.01
18_RCP_Gainor_7D	0.52	0.52	0.52	0.01	0.02
E-Battleboro-Culv	0.01	0.01	0.01	0.22	0.01

Analysis begun on: Mon Jan 18 15:42:26 2016
Analysis ended on: Mon Jan 18 15:42:29 2016
Total elapsed time: 00:00:03

Alternative - Project Area 2,4,5,& 6(50-Year)

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Alternative - Project Area 2,4,5,& 6(50-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ..............  CFS
Process Models:
  Rainfall/Runoff ........  YES
  Snowmelt ...............  NO
  Groundwater ............  NO
  Flow Routing ...........  YES
  Ponding Allowed ........  YES
  Water Quality ..........  NO
Infiltration Method ......  CURVE_NUMBER
Flow Routing Method ......  DYNWAVE
Starting Date ............  APR-06-2015 00:00:00
Ending Date ..............  APR-07-2015 00:00:00
Antecedent Dry Days ......  7.0
Report Time Step .........  00:15:00
Wet Time Step ............  00:05:00
Dry Time Step ............  01:00:00
Routing Time Step ........  15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905

WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224
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WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node DI_983936

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

WARNING 02: maximum depth increased for Node 4

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       775.429         7.194
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       233.467         2.166
Surface Runoff ...........       476.243         4.418
Final Surface Storage ....        66.329         0.615
Continuity Error (%) .....        -0.079


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       475.089       154.815
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       455.954       148.579
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        20.482         6.675
Continuity Error (%) .....        -0.283


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (3.43%)
Node 8** (1.43%)
Node PE_972240 (1.25%)


**************************
Time-Step Critical Elements
**************************
```

Link Hathaway_St_Culvert (27.37%)
Link 24_RCP_Etheridge_2 (21.02%)
Link Farm-Culvert (17.22%)
Link W_Battleboro_Ave_Culvert** (7.49%)
Link NC-4 (5.24%)

****
Highest Flow Instability Indexes
****
All links are stable.

****
Routing Time Step Summary
****
Minimum Time Step : 0.50 sec
Average Time Step : 6.18 sec
Maximum Time Step : 15.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.03

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	7.19	0.00	0.00	2.16	4.12	54.20	531.00	0.572
Basin_A-2	7.19	0.00	0.00	1.89	4.68	16.78	184.57	0.651
Basin_A-3	7.19	0.00	0.00	2.08	4.65	13.14	134.84	0.647
Basin_A-4	7.19	0.00	0.00	2.26	4.41	19.96	202.91	0.614
Basin_A-5	7.19	0.00	0.00	2.22	4.45	14.80	168.78	0.619
Basin_B-2	7.19	0.00	0.00	2.59	4.24	9.79	114.47	0.589
Area#5-10	7.19	0.00	0.00	2.27	4.84	0.05	1.09	0.672
Area#5-30	7.19	0.00	0.00	1.15	5.98	0.13	2.73	0.831
Area#5-50	7.19	0.00	0.00	2.03	5.09	0.06	1.34	0.708
Area#5-70	7.19	0.00	0.00	2.54	4.54	0.17	3.28	0.631
Area#5-80	7.19	0.00	0.00	1.80	5.32	0.23	4.72	0.739
Area#5-20	7.19	0.00	0.00	1.15	5.99	0.06	1.33	0.832
Area#5-40	7.19	0.00	0.00	1.15	5.98	0.06	1.28	0.831
Area#5-90	7.19	0.00	0.00	1.02	6.13	0.15	3.17	0.853
Area#5-100	7.19	0.00	0.00	1.15	6.00	0.08	1.63	0.833
Area#6-10	7.19	0.00	0.00	3.45	3.67	0.10	2.09	0.510
Area#6-20	7.19	0.00	0.00	2.37	4.71	0.47	8.83	0.654
Area#6-30	7.19	0.00	0.00	2.27	4.76	1.30	22.38	0.662
Area#6-40	7.19	0.00	0.00	2.65	4.34	0.87	13.18	0.603
Area#6-50	7.19	0.00	0.00	3.07	3.97	1.77	32.11	0.552
Area#6-60	7.19	0.00	0.00	2.27	4.73	6.90	109.81	0.657
Area#6-70	7.19	0.00	0.00	0.43	6.73	0.11	2.19	0.936
Area#6-80	7.19	0.00	0.00	3.45	3.68	0.07	1.62	0.511
Area#6-90	7.19	0.00	0.00	2.85	4.23	0.73	13.53	0.588
Area#4-140	7.19	0.00	0.00	1.14	6.00	0.16	3.45	0.834
Area#4-150	7.19	0.00	0.00	0.43	6.73	0.07	1.56	0.936
Area#4-160	7.19	0.00	0.00	1.71	5.43	0.02	0.49	0.755
Area#4-170	7.19	0.00	0.00	0.97	6.17	0.09	1.84	0.858
Area#4-180	7.19	0.00	0.00	1.42	5.70	0.16	3.40	0.793
Area#4-190	7.19	0.00	0.00	0.97	6.17	0.05	1.00	0.858
Area#4-200	7.19	0.00	0.00	3.12	3.98	0.21	4.12	0.553
Area#4-130	7.19	0.00	0.00	2.71	4.42	0.15	3.09	0.614
Area#4-120	7.19	0.00	0.00	2.46	4.67	0.12	2.44	0.649
Area#4-100	7.19	0.00	0.00	3.70	3.42	0.16	3.28	0.475
Area#4-90	7.19	0.00	0.00	0.69	6.46	0.12	2.39	0.898
Area#4-80	7.19	0.00	0.00	0.40	6.75	0.20	4.12	0.938
Area#4-10	7.19	0.00	0.00	0.43	6.72	0.16	3.42	0.934
Area#4-20	7.19	0.00	0.00	0.85	6.28	0.29	6.04	0.874
Area#4-70	7.19	0.00	0.00	0.74	6.40	0.23	4.73	0.889
Area#4-60	7.19	0.00	0.00	0.43	6.72	0.16	3.39	0.935
Area#4-50	7.19	0.00	0.00	0.71	6.42	0.35	7.19	0.892

Area#4-30	7.19	0.00	0.00	2.50	4.60	0.08	1.94	0.640
Area#2-10	7.19	0.00	0.00	1.96	5.04	0.38	6.36	0.701
Area#2-20	7.19	0.00	0.00	1.46	5.62	0.12	2.42	0.781
Area#2-30	7.19	0.00	0.00	2.12	4.90	0.40	7.07	0.681
Area#2-40	7.19	0.00	0.00	1.58	5.51	0.70	14.63	0.767
Area#2-50	7.19	0.00	0.00	1.79	5.17	0.79	12.08	0.719
Area#2-60	7.19	0.00	0.00	1.79	5.31	0.50	10.88	0.737
Area#2-70	7.19	0.00	0.00	2.12	4.93	0.52	10.25	0.685
Area#2-100	7.19	0.00	0.00	1.68	5.41	0.34	7.00	0.753
Area#2-80	7.19	0.00	0.00	1.46	5.65	0.20	4.28	0.785
Area#2-110	7.19	0.00	0.00	1.68	5.42	0.22	4.61	0.753
Area#5-60	7.19	0.00	0.00	1.15	6.00	0.06	1.25	0.833
Area#2-90	7.19	0.00	0.00	1.37	5.68	0.42	7.68	0.790
Area#2-120	7.19	0.00	0.00	1.63	5.33	3.28	50.01	0.740
Area#2-150	7.19	0.00	0.00	2.15	4.87	0.91	15.31	0.676
Area#4-40	7.19	0.00	0.00	1.42	5.71	0.18	3.85	0.793
Area#4-110	7.19	0.00	0.00	1.48	5.61	0.46	9.85	0.780
Area#5-110	7.19	0.00	0.00	0.63	6.51	0.18	3.79	0.905
Area#2-130	7.19	0.00	0.00	1.77	5.34	0.16	3.36	0.743
Area#2-140	7.19	0.00	0.00	2.15	4.88	0.45	8.00	0.679
Area#2-85	7.19	0.00	0.00	4.13	2.99	0.16	3.12	0.416

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days	hr:min
1**	JUNCTION	3.14	5.95	125.95	0	13:09
3**	JUNCTION	0.57	1.74	102.74	0	13:00
D/S_NC-4	JUNCTION	2.66	3.99	105.17	0	16:01
5**	JUNCTION	3.47	5.41	99.41	0	15:08
D/S_W_Battleboro_Ave**	JUNCTION	1.35	3.41	117.58	0	13:03
7**	JUNCTION	2.34	4.74	106.74	0	13:11
8**	JUNCTION	5.31	7.89	97.89	0	15:11
Hathaway_St-D/S	JUNCTION	4.19	5.95	95.93	0	15:16
DI_983628	JUNCTION	0.09	0.41	127.31	0	13:00
DI_983629	JUNCTION	0.28	1.08	127.28	0	13:00
DI_983630	JUNCTION	0.49	1.26	126.72	0	13:00
DI_983631	JUNCTION	0.12	0.49	126.94	0	13:00
DI_983633	JUNCTION	0.48	1.20	122.30	0	13:00
DI_983632	JUNCTION	0.53	1.20	122.25	0	13:00
DI_983634	JUNCTION	0.24	0.95	114.60	0	13:00
DI_984002*	JUNCTION	0.48	2.33	109.83	0	13:00
UNK_952741*	JUNCTION	0.45	3.76	111.66	0	13:00
DI_983635	JUNCTION	0.11	0.75	111.90	0	13:00
PE_972255	JUNCTION	0.13	0.47	113.97	0	13:00
PE_972263	JUNCTION	0.21	2.88	111.78	0	13:00
PE_972261*	JUNCTION	0.21	0.91	108.31	0	13:00
PE_972258	JUNCTION	4.30	6.28	95.28	0	15:18
Railroad_Junction_1	JUNCTION	2.30	5.06	109.59	0	13:07
Junction_1	JUNCTION	4.70	6.77	94.27	0	14:44
DI_983955	JUNCTION	0.12	0.48	101.08	0	13:00
PE_272260	JUNCTION	0.10	0.40	102.00	0	12:59
DI_983954	JUNCTION	0.17	0.78	98.80	0	13:00
DI_983953	JUNCTION	0.11	0.42	96.32	0	13:00
Drew_Hill_Junction	JUNCTION	5.14	7.23	95.23	0	15:18
DI_983952	JUNCTION	0.39	3.71	109.04	0	13:00
DI_983951	JUNCTION	0.31	3.01	107.06	0	13:01
DI_983950	JUNCTION	0.91	4.05	105.05	0	13:02
DI_283949	JUNCTION	0.42	2.36	103.61	0	13:03
DI_983948	JUNCTION	0.38	2.41	99.06	0	13:04
DI_983947	JUNCTION	0.60	3.47	98.55	0	13:09
DI_983946	JUNCTION	0.82	2.57	96.84	0	13:09
PE_972230	JUNCTION	0.52	2.38	129.53	0	13:00
UNK_952735*	JUNCTION	0.56	2.31	129.41	0	13:02
DI_983907	JUNCTION	0.60	2.25	129.30	0	13:00
DI_983906	JUNCTION	0.20	1.53	128.64	0	13:00
UNK_952736*	JUNCTION	0.22	2.06	127.82	0	13:01

DI_983903	JUNCTION	0.38	3.18	125.79	0	13:00
DI_983902	JUNCTION	0.69	2.89	123.97	0	13:03
DI_983904	JUNCTION	1.25	4.64	122.05	0	13:04
DI_983905	JUNCTION	2.00	4.16	120.64	0	13:03
DI_983721	JUNCTION	2.42	4.23	120.20	0	13:04
DI_983722	JUNCTION	2.41	4.27	120.23	0	13:06
MH_974299	JUNCTION	2.83	4.59	120.04	0	13:07
PE_972229	JUNCTION	0.37	1.49	116.71	0	13:04
PE_972224	JUNCTION	0.20	0.86	121.71	0	13:01
PE_972239	JUNCTION	0.62	1.85	113.97	0	13:03
PE_972240	JUNCTION	0.36	1.58	127.30	0	13:16
DI_983935	JUNCTION	0.68	3.60	127.55	0	13:14
DI_983934	JUNCTION	0.78	3.87	127.55	0	13:15
MH_974300	JUNCTION	0.58	3.00	125.76	0	13:04
DI_983624	JUNCTION	1.07	5.41	122.53	0	13:03
DI_983623	JUNCTION	0.72	4.49	121.39	0	13:01
DI_983619	JUNCTION	0.61	3.95	118.26	0	13:00
DI_983622	JUNCTION	0.39	3.00	120.45	0	13:00
DI_983621	JUNCTION	0.65	5.52	119.84	0	13:00
DI_983620	JUNCTION	0.13	2.16	118.61	0	13:00
DI_983618	JUNCTION	0.89	4.25	116.97	0	13:01
DI_983898	JUNCTION	0.67	3.93	127.93	0	13:00
DI_983604	JUNCTION	0.74	4.33	127.83	0	13:00
DI_983901	JUNCTION	0.56	4.21	126.56	0	13:01
DI_983607	JUNCTION	0.26	2.79	129.59	0	13:00
DI_983606	JUNCTION	0.42	3.40	129.55	0	13:00
DI_9836054	JUNCTION	0.84	4.08	128.13	0	13:05
MH_974298	JUNCTION	1.66	4.09	128.14	0	13:07
DI_983899	JUNCTION	0.29	1.79	128.76	0	13:00
DI_983900	JUNCTION	0.31	1.81	128.80	0	13:00
DI_983897	JUNCTION	0.35	1.96	128.16	0	13:00
DI_983896	JUNCTION	0.47	2.08	128.13	0	13:00
DI_983895	JUNCTION	0.60	2.26	128.11	0	13:01
DI_983894	JUNCTION	0.49	1.66	127.46	0	13:02
DI_953893*	JUNCTION	0.20	0.80	126.50	0	13:00
PE_972225	JUNCTION	0.12	0.46	127.01	0	12:45
UNK_952734*	JUNCTION	0.49	1.40	123.93	0	13:00
DI_983892	JUNCTION	0.27	1.26	123.49	0	13:00
UNK_952733*	JUNCTION	0.27	1.25	123.10	0	13:00
UNK_952732*	JUNCTION	0.27	1.28	122.63	0	13:00
U/S_NC-4	JUNCTION	3.30	7.11	109.72	0	15:55
U/S_W_Battleboro_Ave	JUNCTION	2.27	7.68	122.10	0	13:00
Hathaway_St-U/S	JUNCTION	4.69	7.44	97.43	0	15:15
9**	JUNCTION	2.18	6.89	122.31	0	13:00
Farm-Culv-Up	JUNCTION	3.00	4.10	100.10	0	13:09
Farm-Culv-Dn	JUNCTION	2.05	4.24	99.74	0	13:12
Railroad-Up	JUNCTION	1.92	6.50	112.08	0	13:59
DI_983957	JUNCTION	0.21	2.39	123.39	0	13:00
DI_983956*	JUNCTION	0.32	2.62	123.12	0	13:00
PE_972262	JUNCTION	0.33	1.33	116.72	0	13:00
DI_983936	JUNCTION	0.42	2.12	128.48	0	13:00
U/S_Gainor_Swale	JUNCTION	0.64	1.73	127.73	0	13:00
DI_983625	JUNCTION	0.40	3.88	120.88	0	12:37
952731	JUNCTION	0.49	1.78	122.73	0	13:02
972222	JUNCTION	0.22	0.79	121.58	0	13:05
983943	JUNCTION	0.18	0.77	126.42	0	13:00
952740	JUNCTION	0.13	0.54	125.99	0	13:00
New_Inlet-Red-Roof	JUNCTION	0.13	0.47	125.37	0	12:59
4	JUNCTION	0.47	1.83	128.03	0	13:00
Primary_Outfall*	OUTFALL	4.71	6.77	93.77	0	14:44

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal
1**	JUNCTION	530.73	530.73	0 13:00	54.021	54.019

3**	JUNCTION	184.47	184.47	0	13:00	16.735	16.735
D/S_NC-4	JUNCTION	0.00	214.53	0	15:54	0.000	52.961
5**	JUNCTION	0.00	289.16	0	14:30	0.000	69.527
D/S_W_Battleboro_Ave**	JUNCTION	0.00	133.07	0	13:00	0.000	13.106
7**	JUNCTION	202.79	313.90	0	13:00	19.912	33.030
8**	JUNCTION	168.68	571.05	0	13:01	14.769	117.034
Hathaway_St-D/S	JUNCTION	0.00	533.27	0	15:14	0.000	116.904
DI_983628	JUNCTION	1.09	1.09	0	12:59	0.052	0.052
DI_983629	JUNCTION	1.33	2.41	0	12:59	0.063	0.116
DI_983630	JUNCTION	1.28	6.39	0	13:00	0.062	0.309
DI_983631	JUNCTION	2.73	2.73	0	12:59	0.131	0.131
DI_983633	JUNCTION	1.34	1.34	0	12:59	0.062	0.062
DI_983632	JUNCTION	1.25	8.94	0	13:00	0.059	0.430
DI_983634	JUNCTION	0.00	8.93	0	13:00	0.000	0.429
DI_984002*	JUNCTION	0.00	18.70	0	13:00	0.000	0.970
UNK_952741*	JUNCTION	3.17	9.91	0	12:49	0.150	0.541
DI_983635	JUNCTION	0.00	3.27	0	13:00	0.000	0.168
PE_972255	JUNCTION	3.27	3.27	0	13:00	0.168	0.168
PE_972263	JUNCTION	4.72	4.72	0	12:59	0.228	0.228
PE_972261*	JUNCTION	1.63	20.30	0	13:00	0.076	1.046
PE_972258	JUNCTION	0.00	533.73	0	15:15	0.000	116.955
Railroad_Junction_1	JUNCTION	127.56	255.57	0	13:00	10.633	25.401
Junction_1	JUNCTION	109.72	717.33	0	14:37	6.887	149.461
DI_983955	JUNCTION	1.62	1.62	0	12:59	0.074	0.074
PE_272260	JUNCTION	2.19	2.19	0	12:59	0.106	0.106
DI_983954	JUNCTION	0.00	3.80	0	13:00	0.000	0.180
DI_983953	JUNCTION	0.00	3.80	0	13:00	0.000	0.180
Drew_Hill_Junction	JUNCTION	0.00	533.67	0	15:18	0.000	116.232
DI_983952	JUNCTION	13.52	14.71	0	13:00	0.731	0.735
DI_983951	JUNCTION	0.00	14.38	0	13:00	0.000	0.735
DI_983950	JUNCTION	0.00	14.01	0	13:01	0.000	0.738
DI_283949	JUNCTION	0.00	13.95	0	13:02	0.000	0.739
DI_983948	JUNCTION	0.00	13.70	0	13:03	0.000	0.743
DI_983947	JUNCTION	0.00	13.54	0	13:05	0.000	0.743
DI_983946	JUNCTION	0.00	12.54	0	13:08	0.000	0.743
PE_972230	JUNCTION	4.12	4.12	0	12:59	0.198	0.198
UNK_952735*	JUNCTION	0.00	4.64	0	13:04	0.000	0.198
DI_983907	JUNCTION	2.39	6.22	0	12:46	0.116	0.313
DI_983906	JUNCTION	0.00	6.14	0	12:44	0.000	0.313
UNK_952736*	JUNCTION	0.00	6.15	0	12:42	0.000	0.313
DI_983903	JUNCTION	3.27	9.25	0	12:59	0.162	0.475
DI_983902	JUNCTION	0.00	34.77	0	13:01	0.000	1.923
DI_983904	JUNCTION	0.00	33.86	0	13:03	0.000	1.922
DI_983905	JUNCTION	9.85	40.83	0	13:02	0.455	2.379
DI_983721	JUNCTION	2.44	47.00	0	13:02	0.118	2.659
DI_983722	JUNCTION	3.09	51.81	0	13:01	0.152	2.811
MH_974299	JUNCTION	0.00	44.48	0	13:06	0.000	2.643
PE_972229	JUNCTION	4.11	57.43	0	13:03	0.213	3.401
PE_972224	JUNCTION	0.00	10.93	0	13:00	0.000	0.551
PE_972239	JUNCTION	0.00	62.23	0	13:01	0.000	4.739
PE_972240	JUNCTION	0.00	15.76	0	13:00	0.000	0.903
DI_983935	JUNCTION	14.62	14.62	0	12:59	0.703	0.703
DI_983934	JUNCTION	12.07	22.74	0	12:59	0.786	1.487
MH_974300	JUNCTION	0.00	23.65	0	13:36	0.000	2.380
DI_983624	JUNCTION	10.25	30.20	0	13:00	0.521	2.900
DI_983623	JUNCTION	10.87	37.23	0	13:06	0.504	3.404
DI_983619	JUNCTION	0.00	54.73	0	13:00	0.000	4.018
DI_983622	JUNCTION	11.96	15.07	0	12:59	0.616	0.778
DI_983621	JUNCTION	7.00	13.85	0	13:00	0.338	0.394
DI_983620	JUNCTION	4.61	4.61	0	12:59	0.220	0.220
DI_983618	JUNCTION	0.00	62.36	0	13:00	0.000	4.740
DI_983898	JUNCTION	7.19	21.78	0	13:00	0.345	1.222
DI_983604	JUNCTION	4.73	25.94	0	13:00	0.226	1.448
DI_983901	JUNCTION	0.00	25.78	0	13:00	0.000	1.447
DI_983607	JUNCTION	3.42	3.42	0	12:59	0.164	0.164
DI_983606	JUNCTION	6.04	9.46	0	12:59	0.286	0.450
DI_9836054	JUNCTION	3.39	8.75	0	12:58	0.162	0.420
MH_974298	JUNCTION	0.00	4.68	0	12:35	0.000	0.245
DI_983899	JUNCTION	3.85	4.72	0	12:59	0.180	0.256
DI_983900	JUNCTION	1.93	1.93	0	12:59	0.085	0.085
DI_983897	JUNCTION	3.45	3.45	0	12:59	0.161	0.161
DI_983896	JUNCTION	1.56	4.99	0	12:59	0.075	0.236
DI_983895	JUNCTION	0.49	5.31	0	13:00	0.022	0.258

DI_983894	JUNCTION	0.00	4.97	0	13:01	0.000	0.258
DI_953893*	JUNCTION	0.00	6.70	0	13:00	0.000	0.345
PE_972225	JUNCTION	1.84	1.84	0	12:59	0.087	0.087
UNK_952734*	JUNCTION	3.40	10.06	0	13:00	0.159	0.504
DI_983892	JUNCTION	0.00	10.04	0	13:00	0.000	0.504
UNK_952733*	JUNCTION	0.00	10.02	0	13:00	0.000	0.504
UNK_952732*	JUNCTION	1.00	10.92	0	13:00	0.047	0.551
U/S_NC-4	JUNCTION	0.00	469.40	0	13:34	0.000	54.841
U/S_W_Battleboro_Ave	JUNCTION	0.00	134.74	0	13:00	0.000	13.111
Hathaway_St-U/S	JUNCTION	3.79	533.38	0	15:00	0.178	116.584
9**	JUNCTION	134.77	134.77	0	13:00	13.114	13.113
Farm-Culv-Up	JUNCTION	32.10	242.81	0	13:04	1.764	27.066
Farm-Culv-Dn	JUNCTION	0.00	240.63	0	13:07	0.000	26.969
Railroad-Up	JUNCTION	65.28	134.71	0	13:00	4.189	9.542
DI_983957	JUNCTION	2.09	2.09	0	12:59	0.103	0.103
DI_983956*	JUNCTION	8.83	10.92	0	13:00	0.466	0.569
PE_972262	JUNCTION	22.36	33.09	0	13:00	1.303	1.873
DI_983936	JUNCTION	6.35	6.35	0	13:00	0.383	0.383
U/S_Gainor_Swale	JUNCTION	9.48	15.80	0	13:00	0.520	0.903
DI_983625	JUNCTION	0.00	9.62	0	12:37	0.000	0.723
952731	JUNCTION	7.99	11.27	0	13:00	0.450	0.606
972222	JUNCTION	0.00	9.97	0	13:02	0.000	0.604
983943	JUNCTION	3.36	3.36	0	12:59	0.155	0.155
952740	JUNCTION	0.00	3.36	0	13:00	0.000	0.155
New_Inlet-Red-Roof	JUNCTION	3.12	3.12	0	12:59	0.162	0.162
4	JUNCTION	0.00	6.34	0	13:00	0.000	0.383
Primary_Outfall*	OUTFALL	0.00	716.96	0	14:44	0.000	148.568

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
9**	JUNCTION	0.84	0.894	1.106
DI_983625	JUNCTION	0.61	2.381	2.219

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Node Flooding Summary
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No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	97.48	308.97	716.96	148.568
System	97.48	308.97	716.96	148.568

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Link Flow Summary
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Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth

BeechTrib8	CHANNEL	469.40	0	13:34	2.29	0.05	0.40
NC-4	CONDUIT	214.53	0	15:54	11.15	1.25	1.00
BeechTrib7	CHANNEL	214.47	0	16:02	2.08	0.02	0.34
Channel_4**	CONDUIT	183.73	0	13:00	2.68	0.10	0.54
BeechTrib6	CHANNEL	286.51	0	15:08	1.67	0.09	0.67
W_Battleboro_Ave_Culvert**	CONDUIT	99.06	0	12:54	14.01	2.10	1.00
Channel_3A**	CHANNEL	119.26	0	13:03	2.87	0.01	0.27
Channel_3B	CHANNEL	244.83	0	13:11	1.28	0.02	0.41
BeechTrib5	CHANNEL	529.11	0	15:01	1.71	2.37	0.77
Hathaway_St_Culvert	CONDUIT	530.78	0	15:15	7.40	4.65	1.00
15_RCP_Hathaway_1	CONDUIT	1.08	0	13:00	1.55	0.15	0.60
15_RCP_Hathaway_2	CONDUIT	2.38	0	13:00	2.22	0.91	0.82
15_RCP_Hathaway_3	CONDUIT	2.73	0	13:00	2.99	0.32	0.70
15_RCP_Hathaway_4	CONDUIT	6.36	0	13:00	6.46	0.87	0.75
15_RCP_Hathaway_5	CONDUIT	1.34	0	13:00	1.11	0.71	0.96
15_RCP_Hathaway_6	CONDUIT	8.93	0	13:00	9.46	0.78	0.72
15_RCP_Hathaway_7	CONDUIT	8.93	0	13:00	7.96	0.76	0.86
15_RCP_Hathaway_8	CONDUIT	3.27	0	13:00	7.49	0.28	0.49
15_RCP_Hathaway_9	CONDUIT	3.27	0	13:00	3.45	0.24	0.80
18_RCP_Hathaway_10	CONDUIT	4.86	0	13:03	2.75	0.33	1.00
15_RCP_Hathaway_11*	CONDUIT	9.79	0	12:54	5.54	1.60	1.00
PR-24_RCP_Hathaway_12*	CONDUIT	18.69	0	13:00	7.64	1.05	0.73
Hathaway_Swale*	CONDUIT	20.20	0	13:00	0.50	0.01	0.39
BeechTrib4	CHANNEL	533.25	0	15:15	1.70	0.06	0.53
12_RCP_Battleboro_Apt_1	CONDUIT	1.61	0	13:00	3.09	0.47	0.63
12_RCP_Battleboro_Apt_2	CONDUIT	2.19	0	12:59	5.08	0.34	0.59
12_RCP_Battleboro_Apt_3	CONDUIT	3.80	0	13:00	7.76	0.76	0.60
15_RCP_Battleboro_Apt_4	CONDUIT	3.79	0	13:00	4.34	0.23	0.67
BeechTrib3	CHANNEL	533.67	0	15:18	1.23	0.03	0.59
BeechTrib2	CHANNEL	533.91	0	15:23	1.36	0.14	0.57
Channel-6B	CHANNEL	218.27	0	13:07	2.87	0.10	0.51
15_RCP_Burrows_1	CONDUIT	9.92	0	12:40	8.08	0.95	1.00
15_RCP_Burrows_2	CONDUIT	9.63	0	13:00	7.85	0.69	1.00
15_RCP_Burrows_3	CONDUIT	8.60	0	12:42	7.00	1.99	1.00
15_RCP_Burrows_4	CONDUIT	8.03	0	12:40	6.67	1.03	1.00
15_RCP_Burrows_5	CONDUIT	8.66	0	12:47	7.05	1.12	1.00
15_RCP_Burrows_6	CONDUIT	11.66	0	13:01	9.50	1.08	1.00
18_RCP_Burrows_7	CONDUIT	12.51	0	13:09	7.08	0.39	1.00
BeechTrib1	CHANNEL	716.96	0	14:44	2.01	0.08	0.55
18_RCP_Marriott_1	CONDUIT	4.61	0	13:04	2.61	1.27	1.00
12_RCP_Marriott_2	CONDUIT	4.76	0	13:05	6.06	1.89	1.00
15_RCP_Marriott_3	CONDUIT	6.14	0	12:44	5.51	1.00	1.00
15_VCP_Marriott_4	CONDUIT	6.15	0	12:42	6.73	0.69	1.00
15_RCP_Mattiott_5	CONDUIT	5.98	0	12:55	4.89	0.76	1.00
15_RCP_Mattiott_6	CONDUIT	7.98	0	12:44	6.51	1.02	1.00
24_RCP_Marriott_7	CONDUIT	20.33	0	13:19	6.47	0.59	1.00
24_RCP_Marriott_8	CONDUIT	21.89	0	13:06	6.97	0.98	1.00
24_RCP_Marriott_9	CONDUIT	15.30	0	12:40	4.87	0.73	1.00
24_RCP_Etheridge_1	CONDUIT	9.87	0	12:31	3.14	0.60	1.00
24_RCP_Etheridge_2	CONDUIT	9.73	0	12:39	3.10	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.49	0	13:07	6.44	0.26	0.67
Railroad_Swale_2	CONDUIT	55.61	0	13:04	1.26	0.02	0.33
Railroad_Swale_1	CONDUIT	10.85	0	13:01	1.83	0.02	0.23
Cemetery_Dr_Swale	CONDUIT	61.59	0	13:03	1.59	0.10	0.69
18_RCP_Gainor_2	CONDUIT	8.32	0	14:18	4.71	0.98	1.00
18_RCP_Gainor_3	CONDUIT	14.96	0	12:43	8.49	0.88	1.00
18_RCP_Gainor_7A	CONDUIT	9.62	0	12:37	6.06	0.65	1.00
15_RCP_Gainor_7B	CONDUIT	13.79	0	13:00	7.80	7.88	1.00
15_RCP_Gainor_7C	CONDUIT	4.51	0	13:00	3.73	0.22	1.00
15_RCP_W_Battleboro_1	CONDUIT	3.42	0	13:08	2.95	0.41	1.00
18_RCP_W_Battleboro_2	CONDUIT	6.56	0	12:39	3.71	0.83	1.00
18_RCP_W_Battleboro_3	CONDUIT	6.71	0	13:50	3.80	0.89	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.87	0	13:44	6.15	0.80	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.89	0	13:24	7.29	1.43	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.47	0	12:49	8.75	1.12	1.00
15_RCP_Pollard_3	CONDUIT	3.59	0	13:55	3.07	0.15	1.00
12_RCP_Pollard_1	CONDUIT	1.44	0	13:10	1.83	1.62	1.00
15_RCP_Pollard_2	CONDUIT	3.57	0	12:35	4.06	0.69	1.00
12_RCP_W_Bridges_1	CONDUIT	1.71	0	12:33	2.18	0.73	1.00
12_RCP_W_Bridges_2	CONDUIT	2.42	0	12:33	3.08	0.49	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:27	3.10	4.58	1.00
15_RCP_Railroad_2	CONDUIT	4.97	0	13:02	4.66	0.86	0.82
15_RCP_Railroad_3	CONDUIT	1.84	0	13:00	3.36	0.28	0.50

18_RCP_Railroad_4	CONDUIT	6.69	0	13:00	4.87	0.56	0.73
24_RCP_Railroad_5	CONDUIT	10.04	0	13:00	5.08	0.40	0.60
24_RCP_Railroad_6*	CONDUIT	10.02	0	13:00	4.82	0.48	0.63
24_RCP_Railroad_7*	CONDUIT	10.02	0	13:01	4.78	0.52	0.63
24_VCP_Railroad_8	CONDUIT	10.93	0	13:00	6.38	0.36	0.54
CONNECT**	CONDUIT	134.74	0	13:00	2.11	0.45	1.00
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	4.57	0	13:00	1.84	0.00	0.02
Overland_Burrows_2	CONDUIT	4.38	0	13:01	1.38	0.00	0.02
Overland_Burrows_3	CONDUIT	5.40	0	13:02	1.97	0.00	0.02
Overland_Burrows_4	CONDUIT	6.26	0	13:03	1.92	0.00	0.02
Overland_Burrows_5	CONDUIT	9.48	0	13:05	1.72	0.00	0.04
Overland_Burrows_6	CONDUIT	1.76	0	13:09	0.86	0.00	0.01
Overland_Burrows_7	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
W_Battleboro_Ave-Over	CONDUIT	36.03	0	13:00	2.31	0.01	0.08
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	237.88	0	13:12	1.60	0.05	0.60
Farm-Culvert	CONDUIT	16.68	0	10:04	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	234.28	0	13:08	7.12	0.05	0.22
Railroad_Culvert	CONDUIT	69.87	0	14:19	9.88	1.05	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.25
Over_15_RCP_Marriott_1	CONDUIT	0.61	0	13:00	0.51	0.00	0.01
Over_15_RCP_Marriott_2	CONDUIT	0.16	0	13:02	0.00	0.00	0.00
Over_15_RCP_Marriott_3	CONDUIT	0.00	0	13:00	0.00	0.00	0.00
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_15_RCP_Mattiott_6	CONDUIT	1.78	0	13:00	0.51	0.00	0.04
Over_24_RCP_Marriott_7	CONDUIT	14.11	0	13:03	1.67	0.01	0.05
Over_24_RCP_Marriott_8	CONDUIT	11.82	0	13:04	1.11	0.00	0.07
Over_24_RCP_Marriott_9	CONDUIT	26.96	0	13:03	1.64	0.01	0.11
Over_24_RCP_Etheridge_1	CONDUIT	49.21	0	13:05	1.32	0.01	0.22
Over_24_RCP_Etheridge_2	CONDUIT	37.65	0	13:06	1.10	0.01	0.20
Over_15_RCP_W_Battleboro_1	CONDUIT	2.15	0	13:00	0.57	0.01	0.02
Over_15_RCP_W_Battleboro_2	CONDUIT	3.11	0	13:00	0.42	0.00	0.05
Over_18_RCP_W_Battleboro_4	CONDUIT	17.90	0	13:01	1.77	0.07	0.06
Over_18_RCP_W_Battleboro_5	CONDUIT	17.54	0	13:00	2.56	0.00	0.04
Over_18_RCP_W_Battleboro_6	CONDUIT	10.57	0	13:01	1.95	0.00	0.04
Over_12_RCP_Pollard_1	CONDUIT	1.03	0	13:00	0.15	0.00	0.04
Over_15_RCP_Pollard_2	CONDUIT	1.62	0	13:00	0.19	0.00	0.07
Over_24_RCP_Etheridge_3	CONDUIT	29.61	0	13:07	6.23	0.00	0.03
Over_12_RCP_W_Bridges_1	CONDUIT	2.70	0	13:00	0.66	0.00	0.03
Over_12_RCP_W_Bridges_2	CONDUIT	4.32	0	13:00	0.91	0.01	0.04
Over_12_RCP_Railroad_1	CONDUIT	3.24	0	13:02	0.78	0.00	0.03
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_6*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_7*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_VCP_Railroad_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
OVer_18_RCP_Gainor_2	CONDUIT	10.37	0	12:59	0.80	0.00	0.27
Over_18_RCP_Gainor_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.12
Crepe_Myrtle_1-12	CONDUIT	2.09	0	13:00	2.66	0.62	1.00
Crepe_Myrtle_2_12	CONDUIT	6.21	0	12:37	7.93	1.03	1.00
Crepe_Myrtle_Swale	CONDUIT	32.50	0	13:00	1.38	0.06	0.63
Over_18_RCP_Hathaway_10	CONDUIT	1.20	0	13:00	0.73	0.00	0.01
Crepe_Myrtle_1-OVR	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_24_RCP_Hathaway_12*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_18_RCP_Gainor	CONDUIT	6.34	0	13:00	3.59	1.21	1.00
Over_PROP_18_RCP_Gainor	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP-BRIDGES_18_RCP	CONDUIT	6.34	0	13:00	3.59	0.80	1.00
Over-Bridges	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_Gainor_Swale	CONDUIT	15.76	0	13:00	2.02	0.41	0.62
PROP_18_RCP_Gainor_1	CONDUIT	9.77	0	13:41	5.66	0.76	1.00
Over_18_RCP_Gainor_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.26
PROP_24_RCP_Gainor_4	CONDUIT	23.74	0	14:02	7.67	0.79	1.00
Over_24_RCP_Gainor_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_24_RCP_Gainor_5	CONDUIT	32.18	0	13:14	10.24	2.07	1.00

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Over_24_RCP_Gainor_5 CONDUIT      6.78     0  13:03      0.66    0.00    0.07
PROP_30_RCP_Gainor_6 CONDUIT     37.88     0  13:06      7.93    0.99    1.00
OVER_PROP_30_RCP_Gainor_6 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
36_RCP_Gainor_8      CONDUIT     54.44     0  13:00      7.70    0.46    1.00
Over_36_RCP_Gainor_8 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
36_RCP_Gainor_9      CONDUIT     62.23     0  13:01     10.17    0.65    0.81
Over_36_RCP_Gainor_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Gainor_7A CONDUIT      6.92     0  13:00      1.94    0.00    0.02
Over_15_RCP_Gainor_7C CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_Hathaway_3      CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Over_15_RCP_Hathaway_9 CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Battle-Gainor-Over   CONDUIT      0.00     0  00:00      0.00    0.00    0.00
18_RCP_Gainor_7D     CONDUIT      9.30     0  12:39      5.26    0.96    1.00
84                   CONDUIT      4.85     0  13:09      0.70    0.00    0.11
E-Battleboro-Culv    CONDUIT      9.97     0  13:02      4.84    1.30    0.64
RR-Open-Ditch2       CONDUIT      9.60     0  13:05      0.44    0.02    0.60
Battleboro-Ovr       CONDUIT      0.00     0  00:00      0.00    0.00    0.00
Pearsall             CONDUIT      3.36     0  13:00      4.52    0.39    0.44
RR-Open-Ditch1       CONDUIT      3.29     0  13:00      0.81    0.02    0.39
Crepe_Myrtle_2-OVR   CONDUIT      4.78     0  13:00      1.73    0.01    0.05
New-Red-Roof-Pipe    CONDUIT      3.12     0  13:00      3.46    0.30    0.69
Red-Roof-Pipe-Over   CONDUIT      0.00     0  00:00      0.00    0.00    0.04


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Flow Classification Summary
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                    Adjusted    --- Fraction of Time in Flow Class ----   Avg.     Avg.
                     /Actual         Up    Down  Sub   Sup   Up    Down   Froude   Flow
Conduit               Length    Dry  Dry   Dry   Crit  Crit  Crit  Crit   Number   Change
-------------------------------------------------------------------------------------------
BeechTrib8              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.23   0.0000
NC-4                    1.00   0.03  0.00  0.00  0.94  0.03  0.00  0.00     0.38   0.0003
BeechTrib7              1.00   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.22   0.0000
Channel_4**             1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.11   0.0000
BeechTrib6              1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.14   0.0000
W_Battleboro_Ave_Culvert**    3.30   0.02  0.00  0.00  0.75  0.23  0.00  0.00     0.79   0.0003
Channel_3A**            1.00   0.02  0.01  0.00  0.98  0.00  0.00  0.00     0.25   0.0000
Channel_3B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.12   0.0000
BeechTrib5              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.13   0.0003
Hathaway_St_Culvert     1.18   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.29   0.0006
15_RCP_Hathaway_1       2.23   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.28   0.0000
15_RCP_Hathaway_2       1.00   0.03  0.00  0.00  0.97  0.00  0.00  0.01     0.38   0.0001
15_RCP_Hathaway_3       2.38   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.25   0.0000
15_RCP_Hathaway_4       1.00   0.04  0.00  0.00  0.09  0.86  0.00  0.01     1.14   0.0001
15_RCP_Hathaway_5       1.34   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.05   0.0001
15_RCP_Hathaway_6       1.00   0.05  0.00  0.00  0.01  0.95  0.00  0.00     1.67   0.0001
15_RCP_Hathaway_7       1.00   0.02  0.03  0.00  0.92  0.03  0.00  0.00     0.77   0.0001
15_RCP_Hathaway_8       2.28   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.28   0.0000
15_RCP_Hathaway_9       2.53   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.56   0.0000
18_RCP_Hathaway_10      2.92   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.58   0.0001
15_RCP_Hathaway_11*     1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.55   0.0002
PR-24_RCP_Hathaway_12*    8.57   0.02  0.00  0.00  0.01  0.98  0.00  0.00     1.36   0.0001
Hathaway_Swale*         1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.02   0.0000
BeechTrib4              1.00   0.02  0.02  0.00  0.97  0.00  0.00  0.00     0.19   0.0000
12_RCP_Battleboro_Apt_1    1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.81   0.0001
12_RCP_Battleboro_Apt_2    1.29   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.28   0.0000
12_RCP_Battleboro_Apt_3    1.10   0.02  0.00  0.00  0.00  0.98  0.00  0.00     2.11   0.0001
15_RCP_Battleboro_Apt_4    1.78   0.02  0.00  0.00  0.93  0.05  0.00  0.00     0.28   0.0000
BeechTrib3              2.88   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.13   0.0000
BeechTrib2              1.00   0.02  0.02  0.00  0.96  0.00  0.00  0.00     0.12   0.0000
Channel-6B              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.31   0.0000
15_RCP_Burrows_1        3.03   0.02  0.00  0.00  0.04  0.94  0.00  0.00     2.08   0.0002
15_RCP_Burrows_2        2.73   0.02  0.00  0.00  0.96  0.02  0.00  0.00     0.51   0.0001
15_RCP_Burrows_3        1.76   0.02  0.01  0.00  0.97  0.00  0.00  0.00     0.39   0.0003
15_RCP_Burrows_4        1.00   0.03  0.00  0.00  0.06  0.91  0.00  0.00     1.45   0.0002
15_RCP_Burrows_5        1.15   0.03  0.00  0.00  0.90  0.07  0.00  0.00     0.73   0.0002
15_RCP_Burrows_6        4.20   0.04  0.00  0.00  0.59  0.37  0.00  0.00     1.10   0.0002
18_RCP_Burrows_7        5.31   0.03  0.00  0.00  0.93  0.03  0.00  0.00     0.19   0.0001
BeechTrib1              1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.18   0.0000
18_RCP_Marriott_1       2.14   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.11   0.0002
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Alternative - Project Area 2,4,5,& 6(50-Year)

12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0003
15_RCP_Marriott_3	3.55	0.04	0.00	0.00	0.03	0.93	0.00	0.00	1.24	0.0002
15_VCP_Marriott_4	1.95	0.04	0.00	0.00	0.03	0.93	0.00	0.00	1.55	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.03	0.00	0.57	0.38	0.00	0.00	0.89	0.0001
15_RCP_Mattiott_6	1.30	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.64	0.0002
24_RCP_Marriott_7	1.14	0.03	0.00	0.00	0.84	0.13	0.00	0.00	0.75	0.0001
24_RCP_Marriott_8	1.47	0.02	0.01	0.00	0.94	0.03	0.00	0.00	0.14	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.04	0.0004
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0003
24_RCP_Etheridge_3	7.59	0.02	0.05	0.00	0.00	0.00	0.93	0.00	0.35	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.57	0.0003
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.12	0.86	0.00	0.00	1.29	0.0002
18_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.04	0.94	0.00	0.00	1.29	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0011
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.51	0.0000
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.64	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.61	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.02	0.00	0.24	0.00	0.72	0.00	0.30	0.0002
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.29	0.70	0.00	0.00	0.94	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.10	0.88	0.00	0.00	1.17	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.68	0.30	0.00	0.00	0.81	0.0002
15_RCP_Pollard_3	26.14	0.02	0.03	0.00	0.96	0.00	0.00	0.00	0.31	0.0001
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0004
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.77	0.04	0.00	0.17	0.68	0.0002
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.0002
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.18	0.0009
15_RCP_Railroad_2	2.51	0.02	0.03	0.00	0.04	0.91	0.00	0.00	1.02	0.0001
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.96	0.03	0.00	0.00	0.67	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.47	0.0001
24_RCP_Railroad_5	3.55	0.04	0.00	0.00	0.02	0.94	0.00	0.00	1.20	0.0001
24_RCP_Railroad_6*	3.25	0.04	0.00	0.00	0.05	0.91	0.00	0.00	1.06	0.0001
24_RCP_Railroad_7*	2.02	0.02	0.02	0.00	0.06	0.90	0.00	0.00	1.08	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.63	0.0001
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.25	0.0001
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.14	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	0.97	0.00	0.00	0.00	0.02	0.00	0.00	0.04	0.0000
Overland_Burrows_2	3.53	0.97	0.00	0.00	0.01	0.00	0.00	0.02	0.02	0.0000
Overland_Burrows_3	7.01	0.96	0.01	0.00	0.01	0.03	0.00	0.00	0.04	0.0000
Overland_Burrows_4	2.14	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.0000
Overland_Burrows_5	1.88	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.0000
Overland_Burrows_6	5.36	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000
Overland_Burrows_7	7.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
W_Battleboro_Ave-Over	3.80	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.15	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.86	0.13	0.00	0.00	0.33	0.0002
Over_Farm-Culvert	7.77	0.33	0.00	0.00	0.00	0.07	0.00	0.60	0.99	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.31	0.0002
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	0.79	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	0.98	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.0000
Over_15_RCP_Marriott_2	27.58	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_Marriott_3	4.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	0.96	0.01	0.00	0.02	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Marriott_7	1.03	0.97	0.00	0.00	0.02	0.00	0.00	0.02	0.02	0.0000
Over_24_RCP_Marriott_8	1.80	0.90	0.08	0.00	0.02	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Marriott_9	2.78	0.81	0.09	0.00	0.10	0.00	0.00	0.00	0.03	0.0000
Over_24_RCP_Etheridge_1	5.90	0.75	0.06	0.00	0.19	0.00	0.00	0.00	0.03	0.0000
Over_24_RCP_Etheridge_2	1.42	0.75	0.09	0.00	0.00	0.00	0.16	0.00	0.02	0.0000
Over_15_RCP_W_Battleboro_1	2.34	0.97	0.00	0.00	0.02	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.93	0.05	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_W_Battleboro_4	3.16	0.93	0.00	0.00	0.00	0.00	0.00	0.07	0.04	0.0000

Over_18_RCP_W_Battleboro_5	1.60	0.96	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.0000
Over_18_RCP_W_Battleboro_6	6.23	0.97	0.01	0.00	0.02	0.01	0.00	0.00	0.02	0.0000
Over_12_RCP_Pollard_1	1.11	0.93	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Pollard_2	1.07	0.91	0.05	0.00	0.03	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Etheridge_3	17.58	0.90	0.00	0.00	0.00	0.00	0.00	0.10	0.32	0.0000
Over_12_RCP_W_Bridges_1	5.33	0.93	0.01	0.00	0.06	0.00	0.00	0.00	0.02	0.0000
Over_12_RCP_W_Bridges_2	5.45	0.93	0.00	0.00	0.04	0.00	0.00	0.03	0.03	0.0000
Over_12_RCP_Railroad_1	1.00	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.0000
Over_15_RCP_Railroad_2	2.11	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_18_RCP_Railroad_4	1.10	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_5	5.35	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_6*	3.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Railroad_7*	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_VCP_Railroad_8	7.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Railroad_3	3.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
OVer_18_RCP_Gainor_2	5.06	0.88	0.01	0.00	0.09	0.00	0.02	0.00	0.01	0.0000
Over_18_RCP_Gainor_3	10.04	0.90	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Crepe_Myrtle_1-12	2.12	0.02	0.00	0.00	0.33	0.10	0.00	0.56	0.96	0.0002
Crepe_Myrtle_2_12	1.00	0.02	0.00	0.00	0.04	0.94	0.00	0.00	1.62	0.0002
Crepe_Myrtle_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.07	0.0000
Over_18_RCP_Hathaway_10	1.15	0.98	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.0000
Crepe_Myrtle_1-OVR	5.17	0.97	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_24_RCP_Hathaway_12*	25.27	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_18_RCP_Gainor	1.55	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.44	0.0002
Over_PROP_18_RCP_Gainor	2.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP-BRIDGES_18_RCP	3.27	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0001
Over-Bridges	6.54	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_Gainor_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0001
PROP_18_RCP_Gainor_1	1.00	0.02	0.00	0.00	0.40	0.58	0.00	0.00	0.92	0.0001
Over_18_RCP_Gainor_1	1.39	0.02	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_24_RCP_Gainor_4	1.00	0.02	0.00	0.00	0.13	0.18	0.00	0.67	1.53	0.0001
Over_24_RCP_Gainor_4	1.12	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
PROP_24_RCP_Gainor_5	3.60	0.02	0.00	0.00	0.09	0.00	0.00	0.89	0.78	0.0003
Over_24_RCP_Gainor_5	6.30	0.98	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.0000
PROP_30_RCP_Gainor_6	1.00	0.02	0.00	0.00	0.05	0.93	0.00	0.00	1.43	0.0001
OVER_PROP_30_RCP_Gainor_6	18.23	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
36_RCP_Gainor_8	5.33	0.02	0.00	0.00	0.17	0.81	0.00	0.00	1.25	0.0001
Over_36_RCP_Gainor_8	5.32	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
36_RCP_Gainor_9	8.07	0.02	0.00	0.00	0.02	0.96	0.00	0.00	1.34	0.0001
Over_36_RCP_Gainor_9	13.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Gainor_7A	13.13	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.0000
Over_15_RCP_Gainor_7C	15.62	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_Hathaway_3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Hathaway_9	5.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Battle-Gainor-Over	3.68	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
18_RCP_Gainor_7D	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.52	0.0002
84	30.58	0.91	0.00	0.00	0.08	0.00	0.00	0.00	0.01	0.0000
E-Battleboro-Culv	1.00	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.72	0.0002
RR-Open-Ditch2	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.06	0.0000
Battleboro-Ovr	1.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Pearsall	3.93	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.15	0.0001
RR-Open-Ditch1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0000
Crepe_Myrtle_2-OVR	1.00	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.0000
New-Red-Roof-Pipe	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.69	0.0000
Red-Roof-Pipe-Over	1.00	0.97	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.0000

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
NC-4	7.16	7.16	7.16	9.23	7.16
W_Battleboro_Ave_Culvert**	1.36	1.36	1.36	3.58	1.36
BeechTrib5	0.01	0.01	0.01	8.65	0.01
Hathaway_St_Culvert	0.01	0.01	0.01	12.08	0.01
18_RCP_Hathaway_10	0.47	0.47	0.47	0.01	0.01
15_RCP_Hathaway_11*	0.54	0.54	0.54	0.53	0.54
PR-24_RCP_Hathaway_12*	0.01	0.01	0.01	0.23	0.01

15_RCP_Burrows_1	0.60	0.60	0.61	0.01	0.49
15_RCP_Burrows_2	0.63	0.63	0.63	0.01	0.01
15_RCP_Burrows_3	0.77	0.77	0.77	1.32	0.01
15_RCP_Burrows_4	0.76	0.76	0.76	0.09	0.17
15_RCP_Burrows_5	0.74	0.74	0.74	0.25	0.33
15_RCP_Burrows_6	0.63	0.63	0.63	0.27	0.55
18_RCP_Burrows_7	4.14	4.14	4.14	0.01	0.01
18_RCP_Marriott_1	0.47	0.47	0.47	0.16	0.46
12_RCP_Marriott_2	0.59	0.59	0.59	0.52	0.55
15_RCP_Marriott_3	0.34	0.34	0.34	0.01	0.34
15_VCP_Marriott_4	0.34	0.34	0.34	0.01	0.01
15_RCP_Mattiott_5	0.42	0.42	0.42	0.01	0.01
15_RCP_Mattiott_6	0.76	0.76	0.76	0.04	0.54
24_RCP_Marriott_7	0.67	0.67	0.67	0.01	0.01
24_RCP_Marriott_8	4.56	4.56	4.56	0.01	0.73
24_RCP_Marriott_9	6.62	6.62	6.62	0.01	0.17
24_RCP_Etheridge_1	7.54	7.54	7.54	0.01	0.01
24_RCP_Etheridge_2	10.54	10.54	10.54	0.01	0.01
18_RCP_Gainor_2	1.80	1.80	1.80	0.01	0.23
18_RCP_Gainor_3	1.54	1.54	1.54	0.01	1.54
18_RCP_Gainor_7A	0.60	0.60	0.60	0.01	0.25
15_RCP_Gainor_7B	1.73	1.73	1.73	1.54	1.73
15_RCP_Gainor_7C	0.30	0.30	0.30	0.01	0.01
15_RCP_W_Battleboro_1	0.90	0.90	0.91	0.01	0.01
18_RCP_W_Battleboro_2	1.19	1.19	1.19	0.01	0.01
18_RCP_W_Battleboro_3	1.47	1.47	1.47	0.01	0.01
18_RCP_W_Battleboro_4	1.50	1.50	1.50	0.01	0.65
18_RCP_W_Battleboro_5	1.35	1.35	1.35	1.04	1.35
18_RCP_W_Battleboro_6	0.89	0.89	0.89	0.49	0.88
15_RCP_Pollard_3	1.38	1.38	1.38	0.01	0.01
12_RCP_Pollard_1	1.29	1.29	1.29	0.41	0.82
15_RCP_Pollard_2	0.86	0.86	0.86	0.01	0.01
12_RCP_W_Bridges_1	1.12	1.12	1.12	0.01	0.02
12_RCP_W_Bridges_2	1.11	1.11	1.11	0.01	0.01
12_RCP_Railroad_1	0.66	0.66	0.66	5.00	0.66
CONNECT**	0.84	0.84	0.84	0.01	0.01
Farm-Culvert	12.30	12.30	12.30	10.31	11.16
Railroad_Culvert	3.87	3.87	3.87	1.29	3.47
Crepe_Myrtle_1-12	0.65	0.65	0.65	0.01	0.01
Crepe_Myrtle_2_12	0.56	0.56	0.57	0.30	0.56
PROP_18_RCP_Gainor	0.42	0.42	0.42	0.21	0.42
PROP-BRIDGES_18_RCP	0.42	0.42	0.42	0.01	0.22
PROP_18_RCP_Gainor_1	0.41	0.41	0.41	0.01	0.01
PROP_24_RCP_Gainor_4	1.22	1.22	1.22	0.01	0.01
PROP_24_RCP_Gainor_5	0.65	0.65	0.65	1.86	0.65
PROP_30_RCP_Gainor_6	0.45	0.45	0.45	0.01	0.45
36_RCP_Gainor_8	0.33	0.33	0.34	0.01	0.01
18_RCP_Gainor_7D	0.61	0.61	0.61	0.01	0.01
E-Battleboro-Culv	0.01	0.01	0.01	0.40	0.01

Analysis begun on: Mon Jan 18 15:43:13 2016
Analysis ended on: Mon Jan 18 15:43:17 2016
Total elapsed time: 00:00:04

Alternative - Project Area 2,4,5,& 6(100-Year)

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.0 (Build 5.0.022)
--------------------------------------------------------------

Alternative - Project Area 2,4,5,& 6(100-Year)

*****************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*****************************************************

***************
Analysis Options
***************
Flow Units ..............  CFS
Process Models:
  Rainfall/Runoff ........  YES
  Snowmelt ...............  NO
  Groundwater ............  NO
  Flow Routing ...........  YES
  Ponding Allowed ........  YES
  Water Quality ..........  NO
Infiltration Method ......  CURVE_NUMBER
Flow Routing Method ......  DYNWAVE
Starting Date ............  APR-06-2015 00:00:00
Ending Date ..............  APR-07-2015 00:00:00
Antecedent Dry Days ......  7.0
Report Time Step .........  00:15:00
Wet Time Step ............  00:05:00
Dry Time Step ............  01:00:00
Routing Time Step ........  15.00 sec


WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_W_Battleboro_1

WARNING 04: minimum elevation drop used for Conduit Over_18_RCP_W_Battleboro_4

WARNING 04: minimum elevation drop used for Conduit Over_12_RCP_W_Bridges_2

WARNING 04: minimum elevation drop used for Conduit Over_15_RCP_Railroad_2

WARNING 02: maximum depth increased for Node D/S_NC-4

WARNING 02: maximum depth increased for Node 5**

WARNING 02: maximum depth increased for Node D/S_W_Battleboro_Ave**

WARNING 02: maximum depth increased for Node 7**

WARNING 02: maximum depth increased for Node 8**

WARNING 02: maximum depth increased for Node Hathaway_St-D/S

WARNING 02: maximum depth increased for Node DI_984002*

WARNING 02: maximum depth increased for Node PE_972261*

WARNING 02: maximum depth increased for Node Railroad_Junction_1

WARNING 02: maximum depth increased for Node DI_983955

WARNING 02: maximum depth increased for Node DI_283949

WARNING 02: maximum depth increased for Node DI_983946

WARNING 02: maximum depth increased for Node DI_983903

WARNING 02: maximum depth increased for Node DI_983905

WARNING 02: maximum depth increased for Node PE_972229

WARNING 02: maximum depth increased for Node PE_972224
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WARNING 02: maximum depth increased for Node PE_972239

WARNING 02: maximum depth increased for Node DI_983935

WARNING 02: maximum depth increased for Node DI_983619

WARNING 02: maximum depth increased for Node DI_983622

WARNING 02: maximum depth increased for Node DI_983621

WARNING 02: maximum depth increased for Node DI_983620

WARNING 02: maximum depth increased for Node DI_983618

WARNING 02: maximum depth increased for Node DI_983900

WARNING 02: maximum depth increased for Node PE_972225

WARNING 02: maximum depth increased for Node U/S_NC-4

WARNING 02: maximum depth increased for Node Farm-Culv-Up

WARNING 02: maximum depth increased for Node Farm-Culv-Dn

WARNING 02: maximum depth increased for Node Railroad-Up

WARNING 02: maximum depth increased for Node DI_983956*

WARNING 02: maximum depth increased for Node DI_983936

WARNING 02: maximum depth increased for Node U/S_Gainor_Swale

WARNING 02: maximum depth increased for Node 4

**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Total Precipitation ......       861.876         7.996
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........       242.984         2.254
Surface Runoff ...........       549.440         5.097
Final Surface Storage ....        70.137         0.651
Continuity Error (%) .....        -0.080


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       548.164       178.627
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........       524.821       171.021
Internal Outflow .........         0.000         0.000
Storage Losses ...........         0.000         0.000
Initial Stored Volume ....         0.001         0.000
Final Stored Volume ......        25.206         8.214
Continuity Error (%) .....        -0.340


************************
Highest Continuity Errors
************************
Node U/S_NC-4 (3.48%)
Node 8** (1.68%)
Node PE_972240 (1.18%)


**************************
Time-Step Critical Elements
**************************
```

Link Hathaway_St_Culvert (35.83%)
Link 24_RCP_Etheridge_2 (13.16%)
Link W_Battleboro_Ave_Culvert** (10.11%)
Link Farm-Culvert (9.03%)
Link PROP_24_RCP_Gainor_5 (6.34%)

****
Highest Flow Instability Indexes
****
Link 24_RCP_Etheridge_1 (1)
Link 24_RCP_Marriott_9 (1)

****
Routing Time Step Summary
****
Minimum Time Step : 0.50 sec
Average Time Step : 6.61 sec
Maximum Time Step : 15.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.04

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_A-1	8.00	0.00	0.00	2.24	4.78	62.87	615.70	0.597
Basin_A-2	8.00	0.00	0.00	1.96	5.38	19.29	214.28	0.673
Basin_A-3	8.00	0.00	0.00	2.15	5.36	15.14	160.61	0.671
Basin_A-4	8.00	0.00	0.00	2.34	5.10	23.07	239.83	0.638
Basin_A-5	8.00	0.00	0.00	2.32	5.13	17.06	196.50	0.642
Basin_B-2	8.00	0.00	0.00	2.71	4.90	11.32	135.44	0.613
Area#5-10	8.00	0.00	0.00	2.38	5.52	0.06	1.26	0.691
Area#5-30	8.00	0.00	0.00	1.21	6.72	0.15	3.08	0.841
Area#5-50	8.00	0.00	0.00	2.13	5.79	0.07	1.53	0.724
Area#5-70	8.00	0.00	0.00	2.67	5.21	0.19	3.83	0.652
Area#5-80	8.00	0.00	0.00	1.90	6.02	0.26	5.39	0.753
Area#5-20	8.00	0.00	0.00	1.21	6.73	0.07	1.50	0.842
Area#5-40	8.00	0.00	0.00	1.21	6.72	0.07	1.45	0.841
Area#5-90	8.00	0.00	0.00	1.07	6.89	0.17	3.57	0.861
Area#5-100	8.00	0.00	0.00	1.21	6.74	0.09	1.83	0.843
Area#6-10	8.00	0.00	0.00	3.70	4.21	0.12	2.44	0.527
Area#6-20	8.00	0.00	0.00	2.49	5.39	0.53	10.28	0.674
Area#6-30	8.00	0.00	0.00	2.38	5.45	1.49	26.12	0.682
Area#6-40	8.00	0.00	0.00	2.76	5.02	1.00	15.80	0.628
Area#6-50	8.00	0.00	0.00	3.22	4.62	2.05	38.50	0.578
Area#6-60	8.00	0.00	0.00	2.38	5.41	7.89	127.47	0.676
Area#6-70	8.00	0.00	0.00	0.45	7.51	0.12	2.44	0.939
Area#6-80	8.00	0.00	0.00	3.68	4.24	0.09	1.88	0.531
Area#6-90	8.00	0.00	0.00	3.03	4.85	0.84	15.74	0.607
Area#4-140	8.00	0.00	0.00	1.19	6.76	0.18	3.89	0.845
Area#4-150	8.00	0.00	0.00	0.44	7.53	0.08	1.74	0.941
Area#4-160	8.00	0.00	0.00	1.78	6.16	0.03	0.56	0.771
Area#4-170	8.00	0.00	0.00	1.01	6.93	0.10	2.07	0.867
Area#4-180	8.00	0.00	0.00	1.48	6.45	0.18	3.86	0.806
Area#4-190	8.00	0.00	0.00	1.01	6.94	0.05	1.12	0.867
Area#4-200	8.00	0.00	0.00	3.33	4.57	0.24	4.80	0.571
Area#4-130	8.00	0.00	0.00	2.91	5.02	0.17	3.54	0.627
Area#4-120	8.00	0.00	0.00	2.65	5.29	0.13	2.78	0.661
Area#4-100	8.00	0.00	0.00	3.97	3.94	0.19	3.84	0.493
Area#4-90	8.00	0.00	0.00	0.74	7.22	0.13	2.67	0.902
Area#4-80	8.00	0.00	0.00	0.41	7.53	0.22	4.60	0.942
Area#4-10	8.00	0.00	0.00	0.44	7.50	0.18	3.82	0.938
Area#4-20	8.00	0.00	0.00	0.89	7.05	0.32	6.79	0.882
Area#4-70	8.00	0.00	0.00	0.77	7.17	0.25	5.31	0.896
Area#4-60	8.00	0.00	0.00	0.44	7.51	0.18	3.78	0.939

Area#4-50	8.00	0.00	0.00	0.74	7.19	0.39	8.07	0.899
Area#4-30	8.00	0.00	0.00	2.61	5.30	0.10	2.24	0.663
Area#2-10	8.00	0.00	0.00	2.03	5.77	0.44	7.44	0.722
Area#2-20	8.00	0.00	0.00	1.51	6.37	0.14	2.78	0.796
Area#2-30	8.00	0.00	0.00	2.20	5.62	0.46	8.30	0.703
Area#2-40	8.00	0.00	0.00	1.64	6.26	0.80	16.74	0.783
Area#2-50	8.00	0.00	0.00	1.86	5.90	0.90	14.08	0.738
Area#2-60	8.00	0.00	0.00	1.86	6.04	0.57	12.48	0.756
Area#2-70	8.00	0.00	0.00	2.20	5.65	0.60	11.97	0.707
Area#2-100	8.00	0.00	0.00	1.73	6.16	0.38	8.04	0.770
Area#2-80	8.00	0.00	0.00	1.51	6.40	0.23	4.87	0.801
Area#2-110	8.00	0.00	0.00	1.73	6.16	0.25	5.29	0.770
Area#5-60	8.00	0.00	0.00	1.21	6.74	0.07	1.40	0.843
Area#2-90	8.00	0.00	0.00	1.42	6.43	0.47	8.80	0.805
Area#2-120	8.00	0.00	0.00	1.68	6.07	3.74	58.53	0.760
Area#2-150	8.00	0.00	0.00	2.22	5.58	1.05	18.00	0.698
Area#4-40	8.00	0.00	0.00	1.48	6.45	0.20	4.36	0.806
Area#4-110	8.00	0.00	0.00	1.52	6.37	0.52	11.24	0.797
Area#5-110	8.00	0.00	0.00	0.65	7.29	0.20	4.25	0.912
Area#2-130	8.00	0.00	0.00	1.83	6.08	0.18	3.85	0.760
Area#2-140	8.00	0.00	0.00	2.22	5.60	0.52	9.38	0.700
Area#2-85	8.00	0.00	0.00	4.55	3.37	0.18	3.50	0.421

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Node Depth Summary
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Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
1**	JUNCTION	3.22	6.15	126.15	0 13:08
3**	JUNCTION	0.62	1.89	102.89	0 13:00
D/S_NC-4	JUNCTION	2.77	4.11	105.29	0 16:22
5**	JUNCTION	3.64	5.55	99.55	0 15:06
D/S_W_Battleboro_Ave**	JUNCTION	1.45	3.64	117.81	0 13:03
7**	JUNCTION	2.47	5.00	107.00	0 13:12
8**	JUNCTION	5.49	8.30	98.30	0 15:15
Hathaway_St-D/S	JUNCTION	4.26	6.09	96.07	0 15:18
DI_983628	JUNCTION	0.10	0.61	127.51	0 13:00
DI_983629	JUNCTION	0.30	1.28	127.48	0 13:00
DI_983630	JUNCTION	0.51	1.41	126.87	0 13:00
DI_983631	JUNCTION	0.13	0.65	127.10	0 13:00
DI_983633	JUNCTION	0.50	1.30	122.40	0 13:00
DI_983632	JUNCTION	0.55	1.28	122.33	0 13:00
DI_983634	JUNCTION	0.26	1.11	114.76	0 13:00
DI_984002*	JUNCTION	0.53	2.47	109.97	0 13:00
UNK_952741*	JUNCTION	0.51	3.85	111.75	0 13:00
DI_983635	JUNCTION	0.13	0.94	112.09	0 13:00
PE_972255	JUNCTION	0.14	0.51	114.01	0 13:00
PE_972263	JUNCTION	0.24	2.90	111.80	0 13:00
PE_972261*	JUNCTION	0.23	0.94	108.34	0 13:00
PE_972258	JUNCTION	4.38	6.45	95.45	0 15:18
Railroad_Junction_1	JUNCTION	2.45	5.35	109.88	0 13:06
Junction_1	JUNCTION	4.79	6.93	94.43	0 14:38
DI_983955	JUNCTION	0.13	0.53	101.13	0 13:00
PE_272260	JUNCTION	0.11	0.43	102.03	0 12:59
DI_983954	JUNCTION	0.18	0.86	98.88	0 13:00
DI_983953	JUNCTION	0.12	0.52	96.42	0 13:00
Drew_Hill_Junction	JUNCTION	5.22	7.40	95.40	0 15:18
DI_983952	JUNCTION	0.45	3.72	109.05	0 13:00
DI_983951	JUNCTION	0.36	3.04	107.09	0 13:00
DI_983950	JUNCTION	0.99	4.06	105.06	0 13:01
DI_283949	JUNCTION	0.47	2.39	103.64	0 13:02
DI_983948	JUNCTION	0.43	2.44	99.09	0 13:03
DI_983947	JUNCTION	0.72	3.54	98.62	0 13:05
DI_983946	JUNCTION	0.95	3.29	97.56	0 13:08
PE_972230	JUNCTION	0.56	2.39	129.54	0 13:00
UNK_952735*	JUNCTION	0.59	2.33	129.43	0 13:01
DI_983907	JUNCTION	0.64	2.30	129.35	0 13:02
DI_983906	JUNCTION	0.23	1.72	128.83	0 13:02

UNK_952736*	JUNCTION	0.26	2.20	127.96	0	13:02
DI_983903	JUNCTION	0.42	3.19	125.80	0	13:00
DI_983902	JUNCTION	0.74	2.92	124.00	0	13:02
DI_983904	JUNCTION	1.38	4.67	122.08	0	13:03
DI_983905	JUNCTION	2.11	4.20	120.68	0	13:01
DI_983721	JUNCTION	2.51	4.26	120.23	0	13:01
DI_983722	JUNCTION	2.50	4.31	120.27	0	13:03
MH_974299	JUNCTION	2.91	4.61	120.06	0	13:03
PE_972229	JUNCTION	0.41	1.63	116.85	0	13:05
PE_972224	JUNCTION	0.22	0.92	121.77	0	13:01
PE_972239	JUNCTION	0.67	1.93	114.05	0	13:03
PE_972240	JUNCTION	0.44	2.00	127.72	0	13:22
DI_983935	JUNCTION	0.80	3.79	127.74	0	13:10
DI_983934	JUNCTION	0.90	4.05	127.73	0	13:09
MH_974300	JUNCTION	0.71	4.10	126.86	0	13:20
DI_983624	JUNCTION	1.22	5.49	122.61	0	13:00
DI_983623	JUNCTION	0.83	5.03	121.93	0	13:01
DI_983619	JUNCTION	0.70	4.45	118.76	0	13:03
DI_983622	JUNCTION	0.45	3.02	120.47	0	13:00
DI_983621	JUNCTION	0.76	5.90	120.22	0	13:01
DI_983620	JUNCTION	0.17	2.77	119.22	0	13:00
DI_983618	JUNCTION	0.99	4.56	117.28	0	13:03
DI_983898	JUNCTION	0.77	3.95	127.95	0	13:00
DI_983604	JUNCTION	0.83	4.35	127.85	0	13:00
DI_983901	JUNCTION	0.63	4.22	126.57	0	13:01
DI_983607	JUNCTION	0.30	2.80	129.60	0	13:00
DI_983606	JUNCTION	0.48	3.42	129.57	0	13:00
DI_9836054	JUNCTION	0.93	4.14	128.19	0	13:07
MH_974298	JUNCTION	1.72	4.15	128.20	0	13:04
DI_983899	JUNCTION	0.33	1.80	128.77	0	13:00
DI_983900	JUNCTION	0.34	1.81	128.80	0	13:00
DI_983897	JUNCTION	0.39	1.97	128.17	0	13:00
DI_983896	JUNCTION	0.51	2.09	128.14	0	13:00
DI_983895	JUNCTION	0.64	2.28	128.13	0	13:01
DI_983894	JUNCTION	0.51	1.89	127.69	0	13:01
DI_953893*	JUNCTION	0.22	0.87	126.57	0	13:00
PE_972225	JUNCTION	0.12	0.50	127.05	0	12:44
UNK_952734*	JUNCTION	0.51	1.52	124.05	0	13:00
DI_983892	JUNCTION	0.29	1.39	123.62	0	13:00
UNK_952733*	JUNCTION	0.30	1.38	123.23	0	13:00
UNK_952732*	JUNCTION	0.29	1.40	122.75	0	13:00
U/S_NC-4	JUNCTION	3.90	8.10	110.71	0	16:15
U/S_W_Battleboro_Ave	JUNCTION	2.56	7.74	122.16	0	13:00
Hathaway_St-U/S	JUNCTION	4.91	7.95	97.94	0	15:18
9**	JUNCTION	2.43	7.05	122.47	0	13:00
Farm-Culv-Up	JUNCTION	3.01	4.19	100.19	0	13:09
Farm-Culv-Dn	JUNCTION	2.17	4.40	99.90	0	13:12
Railroad-Up	JUNCTION	2.24	7.12	112.70	0	14:03
DI_983957	JUNCTION	0.25	2.47	123.47	0	13:00
DI_983956*	JUNCTION	0.37	2.64	123.14	0	13:00
PE_972262	JUNCTION	0.37	1.44	116.83	0	13:00
DI_983936	JUNCTION	0.49	2.48	128.84	0	13:00
U/S_Gainor_Swale	JUNCTION	0.70	1.81	127.81	0	13:00
DI_983625	JUNCTION	0.46	3.10	120.10	0	13:00
952731	JUNCTION	0.53	2.03	122.98	0	13:03
972222	JUNCTION	0.24	0.84	121.63	0	13:06
983943	JUNCTION	0.19	0.84	126.49	0	13:00
952740	JUNCTION	0.15	0.58	126.03	0	13:00
New_Inlet-Red-Roof	JUNCTION	0.14	0.50	125.40	0	13:00
4	JUNCTION	0.54	2.02	128.22	0	13:00
Primary_Outfall*	OUTFALL	4.80	6.93	93.93	0	14:38

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal

1**	JUNCTION	615.52	615.52	0	13:00	62.677	62.676
3**	JUNCTION	214.21	214.21	0	13:00	19.243	19.243
D/S_NC-4	JUNCTION	0.00	234.39	0	16:15	0.000	61.727
5**	JUNCTION	0.00	328.90	0	13:00	0.000	80.811
D/S_W_Battleboro_Ave**	JUNCTION	0.00	159.23	0	13:00	0.000	15.105
7**	JUNCTION	239.75	373.31	0	13:00	23.015	38.144
8**	JUNCTION	196.43	666.40	0	13:01	17.026	135.581
Hathaway_St-D/S	JUNCTION	0.00	598.60	0	15:17	0.000	134.958
DI_983628	JUNCTION	1.26	1.26	0	13:00	0.060	0.060
DI_983629	JUNCTION	1.50	2.73	0	13:00	0.071	0.131
DI_983630	JUNCTION	1.45	7.21	0	13:00	0.069	0.348
DI_983631	JUNCTION	3.08	3.08	0	12:59	0.148	0.148
DI_983633	JUNCTION	1.53	1.53	0	12:59	0.071	0.071
DI_983632	JUNCTION	1.40	10.08	0	13:00	0.066	0.485
DI_983634	JUNCTION	0.00	10.08	0	13:00	0.000	0.484
DI_984002*	JUNCTION	0.00	19.69	0	13:00	0.000	1.085
UNK_952741*	JUNCTION	3.57	9.98	0	12:41	0.168	0.601
DI_983635	JUNCTION	0.00	3.82	0	13:00	0.000	0.192
PE_972255	JUNCTION	3.82	3.82	0	13:00	0.192	0.192
PE_972263	JUNCTION	5.38	5.38	0	12:59	0.258	0.258
PE_972261*	JUNCTION	1.83	21.50	0	13:00	0.086	1.170
PE_972258	JUNCTION	0.00	599.14	0	15:18	0.000	134.999
Railroad_Junction_1	JUNCTION	151.19	295.16	0	13:00	12.298	29.105
Junction_1	JUNCTION	127.41	808.26	0	14:30	7.877	172.131
DI_983955	JUNCTION	1.88	1.88	0	13:00	0.085	0.085
PE_272260	JUNCTION	2.44	2.44	0	12:59	0.118	0.118
DI_983954	JUNCTION	0.00	4.32	0	13:00	0.000	0.203
DI_983953	JUNCTION	0.00	4.31	0	13:00	0.000	0.203
Drew_Hill_Junction	JUNCTION	0.00	599.20	0	15:21	0.000	134.134
DI_983952	JUNCTION	15.73	18.70	0	13:00	0.838	0.856
DI_983951	JUNCTION	0.00	18.43	0	13:00	0.000	0.856
DI_983950	JUNCTION	0.00	18.16	0	13:01	0.000	0.860
DI_283949	JUNCTION	0.00	18.09	0	13:01	0.000	0.861
DI_983948	JUNCTION	0.00	17.85	0	13:02	0.000	0.863
DI_983947	JUNCTION	0.00	17.76	0	13:03	0.000	0.863
DI_983946	JUNCTION	0.00	17.51	0	13:05	0.000	0.863
PE_972230	JUNCTION	4.60	4.60	0	12:59	0.221	0.221
UNK_952735*	JUNCTION	0.00	4.56	0	13:00	0.000	0.219
DI_983907	JUNCTION	2.67	7.13	0	12:59	0.129	0.349
DI_983906	JUNCTION	0.00	6.56	0	12:40	0.000	0.349
UNK_952736*	JUNCTION	0.00	6.36	0	12:39	0.000	0.349
DI_983903	JUNCTION	3.83	9.96	0	13:00	0.187	0.537
DI_983902	JUNCTION	0.00	38.99	0	13:00	0.000	2.165
DI_983904	JUNCTION	0.00	38.44	0	13:02	0.000	2.165
DI_983905	JUNCTION	11.23	47.91	0	13:00	0.517	2.683
DI_983721	JUNCTION	2.78	54.01	0	13:00	0.133	3.006
DI_983722	JUNCTION	3.54	58.70	0	13:02	0.173	3.176
MH_974299	JUNCTION	0.00	52.22	0	13:03	0.000	2.981
PE_972229	JUNCTION	4.80	66.74	0	13:03	0.244	3.839
PE_972224	JUNCTION	0.00	12.43	0	13:00	0.000	0.620
PE_972239	JUNCTION	0.00	68.88	0	13:01	0.000	5.395
PE_972240	JUNCTION	0.00	18.24	0	13:00	0.000	1.033
DI_983935	JUNCTION	16.73	16.73	0	13:00	0.798	0.799
DI_983934	JUNCTION	14.07	25.63	0	12:58	0.897	1.693
MH_974300	JUNCTION	0.00	24.80	0	13:28	0.000	2.714
DI_983624	JUNCTION	11.96	32.02	0	13:00	0.598	3.311
DI_983623	JUNCTION	12.47	43.72	0	13:00	0.574	3.885
DI_983619	JUNCTION	0.00	60.15	0	13:01	0.000	4.593
DI_983622	JUNCTION	13.67	17.16	0	13:00	0.697	0.880
DI_983621	JUNCTION	8.03	17.35	0	13:00	0.384	0.469
DI_983620	JUNCTION	5.29	5.29	0	13:00	0.251	0.251
DI_983618	JUNCTION	0.00	65.67	0	13:03	0.000	5.387
DI_983898	JUNCTION	8.07	24.41	0	13:00	0.386	1.372
DI_983604	JUNCTION	5.31	29.40	0	13:00	0.253	1.629
DI_983901	JUNCTION	0.00	29.27	0	13:00	0.000	1.629
DI_983607	JUNCTION	3.82	3.82	0	12:59	0.183	0.183
DI_983606	JUNCTION	6.78	10.60	0	12:59	0.321	0.504
DI_9836054	JUNCTION	3.78	9.88	0	12:55	0.181	0.474
MH_974298	JUNCTION	0.00	5.04	0	12:34	0.000	0.272
DI_983899	JUNCTION	4.36	5.21	0	12:59	0.203	0.288
DI_983900	JUNCTION	2.24	2.24	0	13:00	0.098	0.098
DI_983897	JUNCTION	3.89	3.89	0	12:59	0.182	0.182
DI_983896	JUNCTION	1.74	5.61	0	12:59	0.084	0.265

DI_983895	JUNCTION	0.56	5.99	0	13:00	0.025	0.290
DI_983894	JUNCTION	0.00	5.66	0	13:01	0.000	0.290
DI_953893*	JUNCTION	0.00	7.63	0	13:00	0.000	0.387
PE_972225	JUNCTION	2.07	2.07	0	12:59	0.098	0.098
UNK_952734*	JUNCTION	3.86	11.45	0	13:00	0.180	0.567
DI_983892	JUNCTION	0.00	11.42	0	13:00	0.000	0.567
UNK_952733*	JUNCTION	0.00	11.40	0	13:00	0.000	0.567
UNK_952732*	JUNCTION	1.12	12.43	0	13:00	0.053	0.620
U/S_NC-4	JUNCTION	0.00	554.08	0	13:29	0.000	63.951
U/S_W_Battleboro_Ave	JUNCTION	0.00	160.49	0	13:00	0.000	15.111
Hathaway_St-U/S	JUNCTION	4.25	599.70	0	14:59	0.200	134.675
9**	JUNCTION	160.57	160.57	0	13:00	15.112	15.112
Farm-Culv-Up	JUNCTION	38.48	282.36	0	13:04	2.052	31.050
Farm-Culv-Dn	JUNCTION	0.00	278.88	0	13:08	0.000	30.931
Railroad-Up	JUNCTION	76.51	152.42	0	13:00	4.783	10.879
DI_983957	JUNCTION	2.43	2.43	0	13:00	0.119	0.119
DI_983956*	JUNCTION	10.27	12.64	0	13:00	0.533	0.652
PE_972262	JUNCTION	26.10	38.56	0	13:00	1.492	2.144
DI_983936	JUNCTION	7.44	7.44	0	13:00	0.438	0.438
U/S_Gainor_Swale	JUNCTION	11.07	18.46	0	13:00	0.595	1.033
DI_983625	JUNCTION	0.00	10.22	0	12:35	0.000	0.795
952731	JUNCTION	9.38	13.13	0	13:00	0.516	0.693
972222	JUNCTION	0.00	11.26	0	13:03	0.000	0.691
983943	JUNCTION	3.84	3.84	0	13:00	0.176	0.176
952740	JUNCTION	0.00	3.84	0	13:00	0.000	0.176
New_Inlet-Red-Roof	JUNCTION	3.50	3.50	0	12:59	0.183	0.183
4	JUNCTION	0.00	7.42	0	13:00	0.000	0.438
Primary_Outfall*	OUTFALL	0.00	807.63	0	14:38	0.000	171.008

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Feet	Min. Depth Below Rim Feet
9**	JUNCTION	1.78	1.051	0.949
DI_983625	JUNCTION	0.71	1.604	2.996

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Node Flooding Summary
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No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq. Pcnt.	Avg. Flow CFS	Max. Flow CFS	Total Volume 10^6 gal
Primary_Outfall*	97.37	354.56	807.63	171.008
System	97.37	354.56	807.63	171.008

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Link Flow Summary
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Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth

BeechTrib8	CHANNEL	554.08	0	13:29	2.29	0.06	0.44
NC-4	CONDUIT	234.39	0	16:15	12.18	1.36	1.00
BeechTrib7	CHANNEL	234.33	0	16:22	2.09	0.02	0.34
Channel_4**	CONDUIT	213.35	0	13:00	2.87	0.12	0.57
BeechTrib6	CHANNEL	315.65	0	15:06	1.67	0.10	0.69
W_Battleboro_Ave_Culvert**	CONDUIT	99.43	0	12:48	14.07	2.11	1.00
Channel_3A**	CHANNEL	141.90	0	13:03	2.82	0.01	0.29
Channel_3B	CHANNEL	291.05	0	13:12	1.30	0.03	0.43
BeechTrib5	CHANNEL	594.86	0	15:00	1.71	2.67	0.81
Hathaway_St_Culvert	CONDUIT	595.84	0	15:18	8.28	5.22	1.00
15_RCP_Hathaway_1	CONDUIT	1.23	0	13:00	1.60	0.17	0.75
15_RCP_Hathaway_2	CONDUIT	2.69	0	13:00	2.26	1.03	0.96
15_RCP_Hathaway_3	CONDUIT	3.07	0	13:00	3.08	0.36	0.76
15_RCP_Hathaway_4	CONDUIT	7.16	0	13:00	6.51	0.98	0.85
15_RCP_Hathaway_5	CONDUIT	1.53	0	13:00	1.25	0.81	1.00
15_RCP_Hathaway_6	CONDUIT	10.08	0	13:00	9.48	0.88	0.81
15_RCP_Hathaway_7	CONDUIT	10.06	0	13:00	8.51	0.86	0.92
15_RCP_Hathaway_8	CONDUIT	3.82	0	13:00	7.50	0.32	0.58
15_RCP_Hathaway_9	CONDUIT	3.83	0	13:00	3.53	0.27	0.88
18_RCP_Hathaway_10	CONDUIT	5.01	0	13:04	2.83	0.34	1.00
15_RCP_Hathaway_11*	CONDUIT	9.75	0	12:43	5.52	1.59	1.00
PR-24_RCP_Hathaway_12*	CONDUIT	19.68	0	13:00	7.97	1.10	0.73
Hathaway_Swale*	CONDUIT	21.40	0	13:00	0.53	0.01	0.42
BeechTrib4	CHANNEL	598.60	0	15:18	1.75	0.07	0.55
12_RCP_Battleboro_Apt_1	CONDUIT	1.88	0	13:00	3.22	0.55	0.69
12_RCP_Battleboro_Apt_2	CONDUIT	2.44	0	12:59	5.18	0.38	0.64
12_RCP_Battleboro_Apt_3	CONDUIT	4.31	0	13:00	7.78	0.87	0.69
15_RCP_Battleboro_Apt_4	CONDUIT	4.30	0	13:00	4.63	0.27	0.71
BeechTrib3	CHANNEL	599.20	0	15:21	1.28	0.03	0.60
BeechTrib2	CHANNEL	599.56	0	15:26	1.42	0.15	0.58
Channel-6B	CHANNEL	253.13	0	13:07	2.87	0.12	0.53
15_RCP_Burrows_1	CONDUIT	10.26	0	12:38	8.36	0.98	1.00
15_RCP_Burrows_2	CONDUIT	9.66	0	13:00	7.87	0.69	1.00
15_RCP_Burrows_3	CONDUIT	8.60	0	12:39	7.01	1.99	1.00
15_RCP_Burrows_4	CONDUIT	8.03	0	12:38	6.69	1.03	1.00
15_RCP_Burrows_5	CONDUIT	8.51	0	12:45	6.94	1.10	1.00
15_RCP_Burrows_6	CONDUIT	11.69	0	12:55	9.52	1.09	1.00
18_RCP_Burrows_7	CONDUIT	15.29	0	13:02	8.65	0.48	1.00
BeechTrib1	CHANNEL	807.63	0	14:38	2.10	0.09	0.56
18_RCP_Marriott_1	CONDUIT	4.19	0	12:41	2.37	1.16	1.00
12_RCP_Marriott_2	CONDUIT	5.44	0	13:10	6.93	2.16	1.00
15_RCP_Marriott_3	CONDUIT	6.56	0	12:40	5.70	1.07	1.00
15_VCP_Marriott_4	CONDUIT	6.36	0	12:39	6.81	0.71	1.00
15_RCP_Mattiott_5	CONDUIT	6.17	0	13:03	5.03	0.78	1.00
15_RCP_Mattiott_6	CONDUIT	8.04	0	12:40	6.55	1.03	1.00
24_RCP_Marriott_7	CONDUIT	20.33	0	13:24	6.47	0.59	1.00
24_RCP_Marriott_8	CONDUIT	21.87	0	13:05	6.96	0.98	1.00
24_RCP_Marriott_9	CONDUIT	15.11	0	12:38	4.81	0.72	1.00
24_RCP_Etheridge_1	CONDUIT	9.98	0	12:11	3.18	0.61	1.00
24_RCP_Etheridge_2	CONDUIT	9.69	0	12:36	3.08	0.73	1.00
24_RCP_Etheridge_3	CONDUIT	14.57	0	13:04	6.47	0.26	0.67
Railroad_Swale_2	CONDUIT	65.64	0	13:05	1.35	0.02	0.35
Railroad_Swale_1	CONDUIT	12.35	0	13:01	1.80	0.02	0.25
Cemetery_Dr_Swale	CONDUIT	67.84	0	13:03	1.53	0.11	0.69
18_RCP_Gainor_2	CONDUIT	8.43	0	14:45	4.77	0.99	1.00
18_RCP_Gainor_3	CONDUIT	14.97	0	12:40	8.50	0.88	1.00
18_RCP_Gainor_7A	CONDUIT	10.22	0	12:35	6.10	0.70	1.00
15_RCP_Gainor_7B	CONDUIT	14.98	0	12:51	8.47	8.55	1.00
15_RCP_Gainor_7C	CONDUIT	5.19	0	13:00	4.23	0.25	1.00
15_RCP_W_Battleboro_1	CONDUIT	3.32	0	13:09	2.97	0.40	1.00
18_RCP_W_Battleboro_2	CONDUIT	6.53	0	12:38	3.70	0.83	1.00
18_RCP_W_Battleboro_3	CONDUIT	6.54	0	14:05	3.70	0.87	1.00
18_RCP_W_Battleboro_4	CONDUIT	10.79	0	13:54	6.10	0.80	1.00
18_RCP_W_Battleboro_5	CONDUIT	12.92	0	13:30	7.31	1.44	1.00
18_RCP_W_Battleboro_6	CONDUIT	15.47	0	12:46	8.75	1.12	1.00
15_RCP_Pollard_3	CONDUIT	3.56	0	14:06	3.11	0.15	1.00
12_RCP_Pollard_1	CONDUIT	1.33	0	13:13	1.69	1.49	1.00
15_RCP_Pollard_2	CONDUIT	3.81	0	12:34	4.09	0.74	1.00
12_RCP_W_Bridges_1	CONDUIT	1.71	0	12:33	2.18	0.73	1.00
12_RCP_W_Bridges_2	CONDUIT	2.43	0	12:33	3.10	0.49	1.00
12_RCP_Railroad_1	CONDUIT	2.43	0	13:30	3.10	4.58	1.00
15_RCP_Railroad_2	CONDUIT	5.66	0	13:02	5.16	0.98	0.85

15_RCP_Railroad_3	CONDUIT	2.07	0	13:00	3.52	0.32	0.54
18_RCP_Railroad_4	CONDUIT	7.61	0	13:00	5.10	0.63	0.79
24_RCP_Railroad_5	CONDUIT	11.42	0	13:00	5.15	0.46	0.67
24_RCP_Railroad_6*	CONDUIT	11.40	0	13:00	4.90	0.55	0.69
24_RCP_Railroad_7*	CONDUIT	11.40	0	13:01	4.90	0.60	0.70
24_VCP_Railroad_8	CONDUIT	12.43	0	13:00	6.59	0.41	0.58
CONNECT**	CONDUIT	160.49	0	13:00	2.07	0.53	1.00
Overland_Battleboro_Apt_1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Battleboro_Apt_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
Hathaway_St-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Overland_Burrows_1	CONDUIT	8.65	0	13:00	2.33	0.00	0.02
Overland_Burrows_2	CONDUIT	8.50	0	13:01	1.77	0.00	0.03
Overland_Burrows_3	CONDUIT	9.55	0	13:01	2.50	0.00	0.03
Overland_Burrows_4	CONDUIT	10.42	0	13:02	2.35	0.00	0.03
Overland_Burrows_5	CONDUIT	13.94	0	13:04	1.98	0.00	0.05
Overland_Burrows_6	CONDUIT	9.00	0	13:05	1.61	0.00	0.04
Overland_Burrows_7	CONDUIT	1.49	0	13:08	1.18	0.00	0.01
W_Battleboro_Ave-Over	CONDUIT	64.02	0	13:00	2.89	0.02	0.11
NC-4-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Channel-6A	CHANNEL	275.91	0	13:12	1.62	0.06	0.62
Farm-Culvert	CONDUIT	16.68	0	09:46	9.46	1.35	1.00
Over_Farm-Culvert	CONDUIT	273.21	0	13:08	7.18	0.06	0.27
Railroad_Culvert	CONDUIT	74.54	0	14:23	10.54	1.12	1.00
Railroad-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Cemetery_Dr_Floodplain	CONDUIT	0.00	0	00:00	0.00	0.00	0.31
Over_15_RCP_Marriott_1	CONDUIT	1.23	0	13:00	0.69	0.00	0.01
Over_15_RCP_Marriott_2	CONDUIT	1.31	0	13:01	0.76	0.00	0.01
Over_15_RCP_Marriott_3	CONDUIT	0.85	0	13:02	0.46	0.00	0.01
Over_15_VCP_Mattiott_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Mattiott_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
Over_15_RCP_Mattiott_6	CONDUIT	2.54	0	13:00	0.62	0.00	0.04
Over_24_RCP_Marriott_7	CONDUIT	18.70	0	13:02	1.85	0.01	0.06
Over_24_RCP_Marriott_8	CONDUIT	16.52	0	13:03	1.33	0.01	0.08
Over_24_RCP_Marriott_9	CONDUIT	33.99	0	13:01	1.79	0.02	0.12
Over_24_RCP_Etheridge_1	CONDUIT	56.00	0	13:02	1.39	0.01	0.24
Over_24_RCP_Etheridge_2	CONDUIT	44.88	0	13:03	1.23	0.01	0.21
Over_15_RCP_W_Battleboro_1	CONDUIT	2.59	0	13:00	0.61	0.01	0.03
Over_15_RCP_W_Battleboro_2	CONDUIT	4.27	0	13:00	0.53	0.00	0.05
Over_18_RCP_W_Battleboro_4	CONDUIT	20.66	0	13:00	1.88	0.08	0.07
Over_18_RCP_W_Battleboro_5	CONDUIT	21.01	0	13:00	2.75	0.01	0.05
Over_18_RCP_W_Battleboro_6	CONDUIT	14.13	0	13:01	2.26	0.00	0.05
Over_12_RCP_Pollard_1	CONDUIT	1.37	0	13:00	0.30	0.00	0.05
Over_15_RCP_Pollard_2	CONDUIT	2.26	0	13:00	0.37	0.00	0.08
Over_24_RCP_Etheridge_3	CONDUIT	37.51	0	13:04	6.83	0.00	0.04
Over_12_RCP_W_Bridges_1	CONDUIT	3.24	0	13:00	0.73	0.00	0.03
Over_12_RCP_W_Bridges_2	CONDUIT	4.97	0	13:00	0.96	0.01	0.05
Over_12_RCP_Railroad_1	CONDUIT	4.23	0	13:01	0.87	0.00	0.03
Over_15_RCP_Railroad_2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_18_RCP_Railroad_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_5	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_6*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_RCP_Railroad_7*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_24_VCP_Railroad_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Railroad_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
OVer_18_RCP_Gainor_2	CONDUIT	11.59	0	12:58	0.83	0.00	0.33
Over_18_RCP_Gainor_3	CONDUIT	7.40	0	13:12	0.28	0.00	0.16
Crepe_Myrtle_1-12	CONDUIT	2.35	0	13:00	2.99	0.70	1.00
Crepe_Myrtle_2_12	CONDUIT	6.21	0	12:36	7.93	1.03	1.00
Crepe_Myrtle_Swale	CONDUIT	37.92	0	13:00	1.50	0.07	0.64
Over_18_RCP_Hathaway_10	CONDUIT	2.99	0	13:00	1.15	0.00	0.02
Crepe_Myrtle_1-OVR	CONDUIT	0.02	0	13:00	0.02	0.00	0.01
Over_24_RCP_Hathaway_12*	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_18_RCP_Gainor	CONDUIT	7.42	0	13:00	4.20	1.41	1.00
Over_PROP_18_RCP_Gainor	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP-BRIDGES_18_RCP	CONDUIT	7.42	0	13:00	4.20	0.93	1.00
Over-Bridges	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PROP_Gainor_Swale	CONDUIT	18.24	0	13:00	2.08	0.48	0.76
PROP_18_RCP_Gainor_1	CONDUIT	9.93	0	13:40	5.74	0.77	1.00
Over_18_RCP_Gainor_1	CONDUIT	3.39	0	13:22	0.06	0.00	0.34
PROP_24_RCP_Gainor_4	CONDUIT	25.16	0	13:28	8.01	0.84	1.00
Over_24_RCP_Gainor_4	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

Alternative - Project Area 2,4,5,& 6(100-Year)

PROP_24_RCP_Gainor_5	CONDUIT	32.88	0	13:21	10.47	2.12	1.00
Over_24_RCP_Gainor_5	CONDUIT	14.79	0	13:01	1.08	0.00	0.09
PROP_30_RCP_Gainor_6	CONDUIT	41.27	0	13:08	8.41	1.08	1.00
OVER_PROP_30_RCP_Gainor_6	CONDUIT	5.19	0	13:01	3.06	0.00	0.01
36_RCP_Gainor_8	CONDUIT	58.13	0	13:03	8.22	0.49	1.00
Over_36_RCP_Gainor_8	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
36_RCP_Gainor_9	CONDUIT	65.66	0	13:03	10.56	0.68	0.82
Over_36_RCP_Gainor_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Gainor_7A	CONDUIT	9.38	0	13:00	2.19	0.00	0.03
Over_15_RCP_Gainor_7C	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_Hathaway_3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Over_15_RCP_Hathaway_9	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Battle-Gainor-Over	CONDUIT	3.33	0	13:01	1.45	0.00	0.02
18_RCP_Gainor_7D	CONDUIT	9.22	0	12:37	5.22	0.95	1.00
84	CONDUIT	5.40	0	13:11	0.60	0.00	0.13
E-Battleboro-Culv	CONDUIT	11.26	0	13:03	5.00	1.47	0.71
RR-Open-Ditch2	CONDUIT	10.94	0	13:07	0.49	0.03	0.61
Battleboro-Ovr	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
Pearsall	CONDUIT	3.84	0	13:00	4.71	0.45	0.47
RR-Open-Ditch1	CONDUIT	3.77	0	13:00	0.82	0.02	0.43
Crepe_Myrtle_2-OVR	CONDUIT	6.56	0	13:00	1.96	0.01	0.07
New-Red-Roof-Pipe	CONDUIT	3.50	0	13:00	3.81	0.34	0.70
Red-Roof-Pipe-Over	CONDUIT	0.00	0	00:00	0.00	0.00	0.04

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Flow Classification Summary
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Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Avg. Froude Number	Avg. Flow Change
BeechTrib8	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.21	0.0000
NC-4	1.00	0.03	0.00	0.00	0.94	0.03	0.00	0.00	0.35	0.0004
BeechTrib7	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.20	0.0000
Channel_4**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0000
BeechTrib6	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
W_Battleboro_Ave_Culvert**	3.30	0.02	0.00	0.00	0.73	0.25	0.00	0.00	0.74	0.0003
Channel_3A**	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.25	0.0000
Channel_3B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0000
BeechTrib5	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0004
Hathaway_St_Culvert	1.18	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0007
15_RCP_Hathaway_1	2.23	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0000
15_RCP_Hathaway_2	1.00	0.03	0.00	0.00	0.96	0.00	0.00	0.01	0.39	0.0002
15_RCP_Hathaway_3	2.38	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.27	0.0001
15_RCP_Hathaway_4	1.00	0.04	0.00	0.00	0.10	0.83	0.00	0.03	1.15	0.0001
15_RCP_Hathaway_5	1.34	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.05	0.0001
15_RCP_Hathaway_6	1.00	0.05	0.00	0.00	0.00	0.95	0.00	0.00	1.70	0.0001
15_RCP_Hathaway_7	1.00	0.02	0.03	0.00	0.91	0.04	0.00	0.00	0.78	0.0001
15_RCP_Hathaway_8	2.28	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.27	0.0000
15_RCP_Hathaway_9	2.53	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.56	0.0000
18_RCP_Hathaway_10	2.92	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.57	0.0001
15_RCP_Hathaway_11*	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.54	0.0002
PR-24_RCP_Hathaway_12*	8.57	0.02	0.00	0.00	0.01	0.98	0.00	0.00	1.35	0.0002
Hathaway_Swale*	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.03	0.0000
BeechTrib4	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.19	0.0000
12_RCP_Battleboro_Apt_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.81	0.0001
12_RCP_Battleboro_Apt_2	1.29	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.28	0.0001
12_RCP_Battleboro_Apt_3	1.10	0.02	0.00	0.00	0.00	0.98	0.00	0.00	2.11	0.0001
15_RCP_Battleboro_Apt_4	1.78	0.02	0.00	0.00	0.93	0.05	0.00	0.00	0.30	0.0000
BeechTrib3	2.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.13	0.0000
BeechTrib2	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.12	0.0000
Channel-6B	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.32	0.0000
15_RCP_Burrows_1	3.03	0.02	0.00	0.00	0.06	0.92	0.00	0.00	2.04	0.0002
15_RCP_Burrows_2	2.73	0.02	0.00	0.00	0.94	0.04	0.00	0.00	0.52	0.0001
15_RCP_Burrows_3	1.76	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.40	0.0003
15_RCP_Burrows_4	1.00	0.03	0.00	0.00	0.07	0.90	0.00	0.00	1.43	0.0002
15_RCP_Burrows_5	1.15	0.03	0.00	0.00	0.88	0.08	0.00	0.00	0.68	0.0002
15_RCP_Burrows_6	4.20	0.04	0.00	0.00	0.61	0.35	0.00	0.00	1.03	0.0002
18_RCP_Burrows_7	5.31	0.04	0.00	0.00	0.93	0.03	0.00	0.00	0.19	0.0001
BeechTrib1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.19	0.0000

18_RCP_Marriott_1	2.14	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0004
12_RCP_Marriott_2	8.88	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.12	0.0006
15_RCP_Marriott_3	3.55	0.04	0.00	0.00	0.04	0.91	0.00	0.00	1.22	0.0002
15_VCP_Marriott_4	1.95	0.04	0.00	0.00	0.04	0.92	0.00	0.00	1.54	0.0001
15_RCP_Mattiott_5	1.00	0.02	0.03	0.00	0.55	0.40	0.00	0.00	0.90	0.0001
15_RCP_Mattiott_6	1.30	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.64	0.0002
24_RCP_Marriott_7	1.14	0.03	0.00	0.00	0.84	0.13	0.00	0.00	0.72	0.0001
24_RCP_Marriott_8	1.47	0.02	0.01	0.00	0.94	0.02	0.00	0.00	0.13	0.0002
24_RCP_Marriott_9	2.49	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.04	0.0002
24_RCP_Etheridge_1	2.71	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.04	0.0004
24_RCP_Etheridge_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.0003
24_RCP_Etheridge_3	7.59	0.02	0.05	0.00	0.00	0.00	0.93	0.00	0.38	0.0000
Railroad_Swale_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.06	0.0000
Railroad_Swale_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0000
Cemetery_Dr_Swale	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.23	0.0000
18_RCP_Gainor_2	2.87	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.55	0.0003
18_RCP_Gainor_3	4.48	0.02	0.00	0.00	0.14	0.83	0.00	0.00	1.24	0.0002
18_RCP_Gainor_7A	6.64	0.02	0.00	0.00	0.06	0.92	0.00	0.00	1.26	0.0001
15_RCP_Gainor_7B	2.21	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.22	0.0013
15_RCP_Gainor_7C	11.04	0.02	0.00	0.00	0.97	0.01	0.00	0.00	0.50	0.0000
15_RCP_W_Battleboro_1	3.26	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.63	0.0002
18_RCP_W_Battleboro_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.59	0.0002
18_RCP_W_Battleboro_3	2.87	0.02	0.02	0.00	0.27	0.00	0.68	0.00	0.30	0.0003
18_RCP_W_Battleboro_4	4.87	0.02	0.00	0.00	0.33	0.65	0.00	0.00	0.91	0.0002
18_RCP_W_Battleboro_5	1.00	0.02	0.00	0.00	0.13	0.86	0.00	0.00	1.14	0.0003
18_RCP_W_Battleboro_6	2.03	0.02	0.00	0.00	0.66	0.32	0.00	0.00	0.82	0.0002
15_RCP_Pollard_3	26.14	0.02	0.03	0.00	0.95	0.00	0.00	0.00	0.31	0.0001
12_RCP_Pollard_1	2.13	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.28	0.0004
15_RCP_Pollard_2	1.00	0.02	0.00	0.00	0.76	0.03	0.00	0.19	0.68	0.0002
12_RCP_W_Bridges_1	2.47	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.0002
12_RCP_W_Bridges_2	6.67	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.31	0.0001
12_RCP_Railroad_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.19	0.0010
15_RCP_Railroad_2	2.51	0.02	0.03	0.00	0.06	0.90	0.00	0.00	1.02	0.0002
15_RCP_Railroad_3	1.39	0.02	0.00	0.00	0.95	0.03	0.00	0.00	0.67	0.0000
18_RCP_Railroad_4	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.49	0.0001
24_RCP_Railroad_5	3.55	0.04	0.00	0.00	0.03	0.93	0.00	0.00	1.20	0.0001
24_RCP_Railroad_6*	3.25	0.04	0.00	0.00	0.06	0.90	0.00	0.00	1.06	0.0001
24_RCP_Railroad_7*	2.02	0.02	0.02	0.00	0.07	0.89	0.00	0.00	1.08	0.0001
24_VCP_Railroad_8	6.30	0.02	0.00	0.00	0.00	0.98	0.00	0.00	1.61	0.0001
CONNECT**	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.24	0.0001
Overland_Battleboro_Apt_1	1.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_2	3.13	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_3	3.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Battleboro_Apt_4	5.35	0.14	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Hathaway_St-Over	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Overland_Burrows_1	9.63	0.96	0.01	0.00	0.00	0.03	0.00	0.00	0.05	0.0000
Overland_Burrows_2	3.53	0.95	0.01	0.00	0.00	0.00	0.00	0.04	0.04	0.0000
Overland_Burrows_3	7.01	0.94	0.01	0.00	0.01	0.03	0.00	0.00	0.06	0.0000
Overland_Burrows_4	2.14	0.94	0.00	0.00	0.00	0.00	0.00	0.06	0.07	0.0000
Overland_Burrows_5	1.88	0.95	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.0000
Overland_Burrows_6	5.36	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.0000
Overland_Burrows_7	7.81	0.99	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.0000
W_Battleboro_Ave-Over	3.80	0.90	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.0000
NC-4-Over	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Channel-6A	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.15	0.0000
Farm-Culvert	3.88	0.02	0.00	0.00	0.85	0.13	0.00	0.00	0.29	0.0002
Over_Farm-Culvert	7.77	0.29	0.00	0.00	0.00	0.12	0.00	0.60	1.05	0.0000
Railroad_Culvert	1.81	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.0002
Railroad-Over	2.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Cemetery_Dr_Floodplain	1.00	0.76	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Marriott_1	4.23	0.97	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.0000
Over_15_RCP_Marriott_2	27.58	0.97	0.00	0.00	0.03	0.00	0.00	0.00	0.02	0.0000
Over_15_RCP_Marriott_3	4.67	0.97	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.0000
Over_15_VCP_Mattiott_4	2.30	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_5	1.00	0.96	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Over_15_RCP_Mattiott_6	2.06	0.95	0.01	0.00	0.03	0.00	0.00	0.01	0.01	0.0000
Over_24_RCP_Marriott_7	1.03	0.95	0.00	0.00	0.03	0.00	0.00	0.02	0.03	0.0000
Over_24_RCP_Marriott_8	1.80	0.88	0.09	0.00	0.04	0.00	0.00	0.00	0.01	0.0000
Over_24_RCP_Marriott_9	2.78	0.77	0.10	0.00	0.13	0.00	0.00	0.00	0.04	0.0000
Over_24_RCP_Etheridge_1	5.90	0.71	0.06	0.00	0.23	0.00	0.00	0.00	0.04	0.0000
Over_24_RCP_Etheridge_2	1.42	0.71	0.11	0.00	0.00	0.00	0.19	0.00	0.03	0.0000
Over_15_RCP_W_Battleboro_1	2.34	0.96	0.00	0.00	0.03	0.00	0.00	0.01	0.01	0.0000
Over_15_RCP_W_Battleboro_2	1.00	0.91	0.06	0.00	0.04	0.00	0.00	0.00	0.01	0.0000

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Over_18_RCP_W_Battleboro_4    3.16   0.91  0.00  0.00  0.00  0.00  0.00  0.09     0.05   0.0000
Over_18_RCP_W_Battleboro_5    1.60   0.95  0.00  0.00  0.00  0.00  0.00  0.05     0.06   0.0000
Over_18_RCP_W_Battleboro_6    6.23   0.95  0.01  0.00  0.02  0.01  0.00  0.00     0.03   0.0000
Over_12_RCP_Pollard_1    1.11   0.91  0.05  0.00  0.04  0.00  0.00  0.00      0.00   0.0000
Over_15_RCP_Pollard_2    1.07   0.89  0.06  0.00  0.04  0.00  0.00  0.00      0.00   0.0000
Over_24_RCP_Etheridge_3   17.58   0.88  0.00  0.00  0.00  0.00  0.00  0.12     0.39   0.0000
Over_12_RCP_W_Bridges_1    5.33   0.92  0.01  0.00  0.07  0.00  0.00  0.00     0.02   0.0000
Over_12_RCP_W_Bridges_2    5.45   0.92  0.00  0.00  0.05  0.00  0.00  0.03     0.03   0.0000
Over_12_RCP_Railroad_1    1.00   0.94  0.00  0.00  0.00  0.00  0.00  0.06     0.02   0.0000
Over_15_RCP_Railroad_2    2.11   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_18_RCP_Railroad_4    1.10   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_24_RCP_Railroad_5    5.35   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_24_RCP_Railroad_6*    3.87   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_24_RCP_Railroad_7*    1.00   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_24_VCP_Railroad_8    7.09   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Railroad_3    3.23   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
OVer_18_RCP_Gainor_2    5.06   0.85  0.01  0.00  0.13  0.00  0.01  0.00     0.01   0.0000
Over_18_RCP_Gainor_3   10.04   0.87  0.09  0.00  0.00  0.00  0.04  0.00     0.00   0.0000
Crepe_Myrtle_1-12       2.12   0.02  0.00  0.00  0.38  0.16  0.00  0.44     0.93   0.0002
Crepe_Myrtle_2_12       1.00   0.02  0.00  0.00  0.06  0.92  0.00  0.00     1.59   0.0002
Crepe_Myrtle_Swale      1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.08   0.0000
Over_18_RCP_Hathaway_10    1.15   0.97  0.01  0.00  0.03  0.00  0.00  0.00     0.02   0.0000
Crepe_Myrtle_1-OVR      5.17   0.95  0.05  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_24_RCP_Hathaway_12*   25.27   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
PROP_18_RCP_Gainor      1.55   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.41   0.0002
Over_PROP_18_RCP_Gainor    2.81   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
PROP-BRIDGES_18_RCP     3.27   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.21   0.0001
Over-Bridges            6.54   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
PROP_Gainor_Swale       1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.27   0.0001
PROP_18_RCP_Gainor_1    1.00   0.02  0.00  0.00  0.44  0.54  0.00  0.00     0.86   0.0001
Over_18_RCP_Gainor_1    1.39   0.02  0.95  0.00  0.00  0.00  0.03  0.00     0.00   0.0000
PROP_24_RCP_Gainor_4    1.00   0.02  0.00  0.00  0.15  0.20  0.00  0.63     1.46   0.0001
Over_24_RCP_Gainor_4    1.12   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
PROP_24_RCP_Gainor_5    3.60   0.02  0.00  0.00  0.13  0.00  0.00  0.86     0.76   0.0004
Over_24_RCP_Gainor_5    6.30   0.95  0.01  0.00  0.00  0.00  0.03  0.00     0.01   0.0000
PROP_30_RCP_Gainor_6    1.00   0.02  0.00  0.00  0.07  0.91  0.00  0.00     1.39   0.0002
OVER_PROP_30_RCP_Gainor_6   18.23   0.99  0.00  0.00  0.00  0.00  0.00  0.00     0.03   0.0000
36_RCP_Gainor_8         5.33   0.02  0.00  0.00  0.21  0.77  0.00  0.00     1.20   0.0001
Over_36_RCP_Gainor_8    5.32   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
36_RCP_Gainor_9         8.07   0.02  0.00  0.00  0.03  0.95  0.00  0.00     1.32   0.0001
Over_36_RCP_Gainor_9   13.46   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Gainor_7A   13.13   0.96  0.00  0.00  0.00  0.00  0.00  0.04     0.05   0.0000
Over_15_RCP_Gainor_7C   15.62   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_Hathaway_3         1.00   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Over_15_RCP_Hathaway_9    5.47   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Battle-Gainor-Over      3.68   0.99  0.00  0.00  0.00  0.00  0.00  0.01     0.01   0.0000
18_RCP_Gainor_7D        1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.51   0.0002
84                     30.58   0.89  0.00  0.00  0.11  0.00  0.00  0.00     0.01   0.0000
E-Battleboro-Culv       1.00   0.02  0.00  0.00  0.97  0.01  0.00  0.00     0.72   0.0002
RR-Open-Ditch2          1.00   0.02  0.01  0.00  0.97  0.00  0.00  0.00     0.06   0.0000
Battleboro-Ovr          1.38   1.00  0.00  0.00  0.00  0.00  0.00  0.00     0.00   0.0000
Pearsall                3.93   0.02  0.00  0.00  0.00  0.98  0.00  0.00     1.14   0.0001
RR-Open-Ditch1          1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.12   0.0000
Crepe_Myrtle_2-OVR      1.00   0.95  0.00  0.00  0.00  0.00  0.00  0.05     0.06   0.0000
New-Red-Roof-Pipe       1.00   0.02  0.00  0.00  0.98  0.00  0.00  0.00     0.69   0.0001
Red-Roof-Pipe-Over      1.00   0.96  0.04  0.00  0.00  0.00  0.00  0.00     0.00   0.0000


*************************
Conduit Surcharge Summary
*************************

-------------------------------------------------------------------------------
                                                          Hours        Hours
                          --------- Hours Full --------   Above Full   Capacity
Conduit                  Both Ends  Upstream  Dnstream   Normal Flow   Limited
-------------------------------------------------------------------------------
NC-4                          8.54      8.54      8.55     10.63         8.54
W_Battleboro_Ave_Culvert**        2.13      2.13      2.14      3.89         2.13
BeechTrib5                    0.01      0.01      0.01      9.81         0.01
Hathaway_St_Culvert           2.51      2.51      2.51     12.41         2.51
15_RCP_Hathaway_2             0.01      0.01      0.01      0.10         0.01
15_RCP_Hathaway_5             0.15      0.15      0.15      0.01         0.15
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18_RCP_Hathaway_10	0.51	0.51	0.52	0.01	0.01
15_RCP_Hathaway_11*	0.58	0.58	0.58	0.58	0.58
PR-24_RCP_Hathaway_12*	0.01	0.01	0.01	0.38	0.01
15_RCP_Burrows_1	0.71	0.71	0.72	0.01	0.56
15_RCP_Burrows_2	0.77	0.77	0.77	0.01	0.01
15_RCP_Burrows_3	0.91	0.91	0.91	1.61	0.01
15_RCP_Burrows_4	0.91	0.91	0.91	0.08	0.15
15_RCP_Burrows_5	0.93	0.93	0.93	0.22	0.32
15_RCP_Burrows_6	0.98	0.98	0.98	0.11	0.71
18_RCP_Burrows_7	5.05	5.05	5.05	0.01	0.01
18_RCP_Marriott_1	0.59	0.59	0.59	0.08	0.54
12_RCP_Marriott_2	0.66	0.66	0.66	0.59	0.62
15_RCP_Marriott_3	0.48	0.48	0.49	0.06	0.48
15_VCP_Marriott_4	0.48	0.48	0.49	0.01	0.01
15_RCP_Mattiott_5	0.54	0.54	0.54	0.01	0.01
15_RCP_Mattiott_6	0.83	0.83	0.84	0.07	0.63
24_RCP_Marriott_7	0.76	0.76	0.77	0.01	0.01
24_RCP_Marriott_8	5.11	5.11	5.11	0.01	0.82
24_RCP_Marriott_9	6.98	6.98	6.98	0.01	0.09
24_RCP_Etheridge_1	8.16	8.16	8.16	0.01	0.01
24_RCP_Etheridge_2	12.38	12.38	12.38	0.01	0.01
18_RCP_Gainor_2	2.26	2.26	2.26	0.01	0.19
18_RCP_Gainor_3	2.04	2.04	2.04	0.01	1.87
18_RCP_Gainor_7A	0.70	0.70	0.70	0.01	0.18
15_RCP_Gainor_7B	2.20	2.20	2.20	1.81	2.20
15_RCP_Gainor_7C	0.43	0.43	0.43	0.01	0.01
15_RCP_W_Battleboro_1	1.05	1.05	1.05	0.01	0.01
18_RCP_W_Battleboro_2	1.44	1.44	1.44	0.01	0.01
18_RCP_W_Battleboro_3	1.65	1.65	1.65	0.01	0.01
18_RCP_W_Battleboro_4	1.68	1.68	1.68	0.01	0.68
18_RCP_W_Battleboro_5	1.54	1.54	1.54	1.13	1.54
18_RCP_W_Battleboro_6	1.03	1.03	1.03	0.58	1.03
15_RCP_Pollard_3	1.56	1.56	1.57	0.01	0.01
12_RCP_Pollard_1	1.49	1.49	1.49	0.23	0.97
15_RCP_Pollard_2	1.05	1.05	1.05	0.01	0.01
12_RCP_W_Bridges_1	1.24	1.24	1.24	0.01	0.02
12_RCP_W_Bridges_2	1.22	1.22	1.22	0.01	0.01
12_RCP_Railroad_1	0.73	0.73	0.73	5.42	0.73
CONNECT**	1.78	1.78	1.79	0.01	0.01
Farm-Culvert	13.95	13.95	13.95	9.97	12.15
Railroad_Culvert	4.30	4.30	4.30	2.20	3.89
Crepe_Myrtle_1-12	0.78	0.78	0.78	0.01	0.01
Crepe_Myrtle_2_12	0.72	0.72	0.72	0.29	0.72
PROP_18_RCP_Gainor	1.11	1.11	1.11	0.37	0.83
PROP-BRIDGES_18_RCP	1.17	1.17	1.18	0.01	0.38
PROP_18_RCP_Gainor_1	1.20	1.20	1.20	0.01	0.01
PROP_24_RCP_Gainor_4	1.79	1.79	1.79	0.01	0.01
PROP_24_RCP_Gainor_5	0.94	0.94	0.94	2.30	0.94
PROP_30_RCP_Gainor_6	0.61	0.61	0.61	0.16	0.61
36_RCP_Gainor_8	0.48	0.48	0.48	0.01	0.01
18_RCP_Gainor_7D	0.71	0.71	0.72	0.01	0.01
E-Battleboro-Culv	0.01	0.01	0.01	0.60	0.01

Analysis begun on: Mon Jan 18 15:44:02 2016
Analysis ended on: Mon Jan 18 15:44:06 2016
Total elapsed time: 00:00:04

Appendix H:
Preliminary Opinion of Probable Construction Costs

List of Contents:

1. Summary Table
2. Alternative #1 – Three Sisters Park Culverts Replacement
3. Alternative #2A – East Bridges Street Drainage Improvements
4. Alternative #2B – Gainor Avenue Drainage Improvements
5. Alternative #3 –Viverette Avenue Culvert Replacement
6. Alternative #4 – Marriott/Hathaway Street Drainage Improvements
7. Alternative #5 – West Bridges Street and Railroad Street Drainage Improvements (Private)
8. Alternative #6 – Marriot Street and Crape Myrtle Street Drainage Improvements (Private)

Project: Battleboro Stormwater Study, Rocky Mount, NC
Project #: 20140160.00.RA
Date: 01/18/16

Design Alternative	Construction Cost	Additional Cost	Total Cost
Alternative #1: Three Sisters Park Culverts Replacements	$39,320	$7,860	**$47,200**
Alternative #2A East Bridges Street Drainage Improvements	$37,080	$7,420	**$44,500**
Alternative #2B: Gainor Avenue Drainage Improvements (NCDOT)	$277,670	$55,530	**$333,200**
Alternative #3: Viverette Avenue Culvert Replacement	$30,440	$6,090	**$36,600**
Alternative #4: Marriott/Hathaway Streets Drainage Improvement (NCDOT)	$7,420	$1,480	**$8,900**
Alternative #5 W.Bridges St. & Railroad St. Drainage Improvements (Private)	$16,560	$3,310	**$19,900**
Alternative #6 Marriott St & Crape Myrtle St Drainage Improvements (Private)	$4,020	$800	**$4,900**

Project: Battleboro Stormwater Study, Rocky Mount, NC
Location: Alternative #1 Three Sisters Park Culverts Replacements
Project #: 20140160.00.RA
Date: 12/08/2015

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization (5% of total cost)	1	LS	$ 1,600.00	$ 1,600.00
2	Comprehensive Grading[1]	1	LS	$ 1,500.00	$ 1,500.00
3	Remove and Dispose of Existing Asphalt Greenway	56	SY	$ 8.00	$ 444.44
4	Remove and Dispose of Existing 24" R.C. Pipe	84	LF	$ 8.00	$ 672.00
5	Aggregate Base Course (8")	19	TN	$ 90.00	$ 1,700.00
6	Bituminous Surface Course (2")	5	TN	$ 150.00	$ 750.00
7	Asphalt Binder For Plant Mix	1	TN	$ 1,000.00	$ 1,000.00
8	Drainage Structures, Endwall	4	EA	$ 2,500.00	$ 10,000.00
9	36" R.C. Pipe, Class IV	168	LF	$ 75.00	$ 12,600.00
10	Construction Staking	1	LS	$ 500.00	$ 500.00
11	Traffic Control	1	LS	$ 500.00	$ 500.00
12	Erosion Control	1	LS	$ 1,500.00	$ 1,500.00
				Subtotal	$ 32,770.00
20% Contingency					$ 6,550.00
Total Opinion of Probable Construction Cost[2]					$ 39,320.00
Additional Items					
Design, Permitting, and Administrative Costs[3]					$7,860.00
Total Opinion of Probable Project Cost					**$47,200.00**

[1] *Cost for comprehensive grading includes, but is not limited to, roadway excavation, saw cutting, compaction of select material, sheeting, shoring, dewatering, permanent and temporary seeding and mulching, and geotechnical recommendations.*

[2] *The Engineer's opinions of probable construction costs are made on the basis of the Engineer's experience and qualifications and represent the Engineer's best judgment as a professional generally familiar with the construction industry. Since the Engineer has no control over the cost of labor, materials, equipment, or services furnished by others; over the contractors methods of determining prices; or over competitive bidding or marketing conditions, the Engineer's cannot and does not guarantee that proposal, bids or actual construction costs will not vary from opinions of probable construction costs prepared by the Engineer.*

[3] *Design, Permitting, and Administrative Costs includes, consultant planning & design costs, permitting, administrative costs, and easement acquisition (20% of total opinion of probable construction cost)*

Project: Battleboro Stormwater Study, Rocky Mount, NC
Location: Alternative #2A East Bridges Street Drainage Improvements
Project #: 20140160.00.RA
Date: 01/18/16

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization (5% of total cost)	1	LS	$ 1,500.00	$ 1,500.00
2	Comprehensive Grading[1]	1	LS	$ 2,500.00	$ 2,500.00
3	Repair Concrete Driveway	1	LS	$ 1,000.00	$ 1,000.00
4	18" R.C. Pipe, Class IV	99	LF	$ 50.00	$ 4,950.00
5	18" R.C. Flared End Section	2	EA	$ 500.00	$ 1,000.00
6	Asphalt Removal and Replacement (Pipe Trench)	61	SY	$ 150.00	$ 9,150.00
7	Drainage Structures, Inlet	1	EA	$ 3,000.00	$ 3,000.00
8	Grout Fill and Cap Existing 15" Pipe	12	CY	$ 150.00	$ 1,800.00
9	Construction Staking	1	LS	$ 2,000.00	$ 2,000.00
10	Traffic Control	1	LS	$ 2,000.00	$ 2,000.00
11	Erosion Control	1	LS	$ 2,000.00	$ 2,000.00
				Subtotal	$ 30,900.00
20% Contingency					$ 6,180.00
Total Opinion of Probable Construction Cost[2]					$ 37,080.00
Additional Items					
Design, Permitting, and Administrative Costs[3]					$7,420.00
Total Opinion of Probable Project Cost					**$44,500.00**

[1] *Cost for comprehensive grading includes, but is not limited to, roadway excavation, saw cutting, compaction of select material, sheeting, shoring, dewatering, permanent and temporary seeding and mulching, and geotechnical recommendations.*

[2] *The Engineer's opinions of probable construction costs are made on the basis of the Engineer's experience and qualifications and represent the Engineer's best judgment as a professional generally familiar with the construction industry. Since the Engineer has no control over the cost of labor, materials, equipment, or services furnished by others; over the contractors methods of determining prices; or over competitive bidding or marketing conditions, the Engineer's cannot and does not guarantee that proposal, bids or actual construction costs will not vary from opinions of probable construction costs prepared by the Engineer.*

[3] *Design, Permitting, and Administrative Costs includes, consultant planning & design costs, permitting, administrative costs, and easement acquisition (20% of total opinion of probable construction cost)*

Project: Battleboro Stormwater Study, Rocky Mount, NC
Location: Alternative #2B Gainor Drainage Avenue Improvements (NCDOT)
Project #: 20140160.00.RA
Date: 01/18/16

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization (5% of total cost)	1	LS	$ 11,000.00	$ 11,000.00
2	Comprehensive Grading[1]	1	LS	$ 2,500.00	$ 2,500.00
3	Open Swale Grading	290	LF	$ 10.00	$ 2,900.00
4	Asphalt Removal and Replacement (Pipe Trench)	556	SY	$ 150.00	$ 83,400.00
5	Remove and Dispose of Existing RCP	825	LF	$ 8.00	$ 6,600.00
6	18" R.C. Pipe	198	LF	$ 55.00	$ 10,890.00
7	24" R.C. Pipe	329	LF	$ 70.00	$ 23,030.00
8	30" R.C. Pipe	298	LF	$ 90.00	$ 26,820.00
9	Concrete Curb and Gutter Replacement	650	LF	$ 35.00	$ 22,750.00
10	Drainage Structures, Inlet	3	EA	$ 3,000.00	$ 9,000.00
11	Drainage Structures, Manhole	1	EA	$ 3,500.00	$ 3,500.00
12	Utility Relocations (Minor)	1	LS	$ 15,000.00	$ 15,000.00
13	Construction Staking	1	LS	$ 4,000.00	$ 4,000.00
14	Traffic Control	1	LS	$ 5,000.00	$ 5,000.00
15	Erosion Control	1	LS	$ 5,000.00	$ 5,000.00
				Subtotal	$ 231,390.00
20% Contingency					$ 46,280.00
Total Opinion of Probable Construction Cost[2]					$ 277,670.00
Additional Items					
Design, Permitting, and Administrative Costs[3]					$55,530.00
Total Opinion of Probable Project Cost					**$333,200.00**

[1] *Cost for comprehensive grading includes, but is not limited to, roadway excavation, saw cutting, compaction of select material, sheeting, shoring, dewatering, permanent and temporary seeding and mulching, and geotechnical recommendations.*

[2] *The Engineer's opinions of probable construction costs are made on the basis of the Engineer's experience and qualifications and represent the Engineer's best judgment as a professional generally familiar with the construction industry. Since the Engineer has no control over the cost of labor, materials, equipment, or services furnished by others; over the contractors methods of determining prices; or over competitive bidding or marketing conditions, the Engineer's cannot and does not guarantee that proposal, bids or actual construction costs will not vary from opinions of probable construction costs prepared by the Engineer.*

[3] *Design, Permitting, and Administrative Costs includes, consultant planning & design costs, permitting, administrative costs, and easement acquisition (20% of total opinion of probable construction cost)*

Project: Battleboro Stormwater Study, Rocky Mount, NC
Location: Alternative #3 Viverette Avenue Culvert Replacement
Project #: 20140160.00.RA
Date: 12/08/2015

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization (5% of total cost)	1	LS	$ 1,200.00	$ 1,200.00
2	Comprehensive Grading[1]	1	LS	$ 2,500.00	$ 2,500.00
3	Remove and Dispose of Existing 15" R.C. Pipe	40	LF	$ 8.00	$ 320.00
4	30"x19" Elliptical R.C. Pipe, Class IV	40	LF	$ 100.00	$ 4,000.00
5	Asphalt Removal and Replacement (Pipe Trench)	29	SY	$ 150.00	$ 4,350.00
6	Drainage Structures, Headwall	2	EA	$ 4,000.00	$ 8,000.00
7	Construction Staking	1	LS	$ 1,500.00	$ 1,500.00
8	Traffic Control	1	LS	$ 2,000.00	$ 2,000.00
9	Erosion Control	1	LS	$ 1,500.00	$ 1,500.00
				Subtotal	$ 25,370.00
20% Contingency					$ 5,070.00
Total Opinion of Probable Construction Cost[2]					$ 30,440.00
Additional Items					
Design, Permitting, and Administrative Costs[3]					$6,090.00
Total Opinion of Probable Project Cost					**$36,600.00**

[1] *Cost for comprehensive grading includes, but is not limited to, roadway excavation, saw cutting, compaction of select material, sheeting, shoring, dewatering, permanent and temporary seeding and mulching, and geotechnical recommendations.*

[2] *The Engineer's opinions of probable construction costs are made on the basis of the Engineer's experience and qualifications and represent the Engineer's best judgment as a professional generally familiar with the construction industry. Since the Engineer has no control over the cost of labor, materials, equipment, or services furnished by others; over the contractors methods of determining prices; or over competitive bidding or marketing conditions, the Engineer's cannot and does not guarantee that proposal, bids or actual construction costs will not vary from opinions of probable construction costs prepared by the Engineer.*

[3] *Design, Permitting, and Administrative Costs includes, consultant planning & design costs, permitting, administrative costs, and easement acquisition (20% of total opinion of probable construction cost)*

Project: Battleboro Stormwater Study, Rocky Mount, NC
Location: Alternative #4 Marriott/Hathaway Streets Drainage Improvement (NCDOT)
Project #: 20140160.00.RA
Date: 12/08/2015

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization (5% of total cost)	1	LS	$ 300.00	$ 300.00
2	Comprehensive Grading[1]	1	LS	$ 1,000.00	$ 1,000.00
3	Remove and Dispose of Existing 15" R.C. Pipe	16	LF	$ 8.00	$ 128.00
4	24" R.C. Pipe, Class IV	20	LF	$ 75.00	$ 1,500.00
5	Construction Staking	1	LS	$ 750.00	$ 750.00
6	Traffic Control	1	LS	$ 1,000.00	$ 1,000.00
7	Erosion Control	1	LS	$ 1,500.00	$ 1,500.00
				Subtotal	$ 6,180.00
20% Contingency					$ 1,240.00
Total Opinion of Probable Construction Cost[2]					$ 7,420.00
Additional Items					
Design, Permitting, and Administrative Costs[3]					$1,480.00
Total Opinion of Probable Project Cost					**$8,900.00**

[1] *Cost for comprehensive grading includes, but is not limited to, roadway excavation, saw cutting, compaction of select material, sheeting, shoring, dewatering, permanent and temporary seeding and mulching, and geotechnical recommendations.*

[2] *The Engineer's opinions of probable construction costs are made on the basis of the Engineer's experience and qualifications and represent the Engineer's best judgment as a professional generally familiar with the construction industry. Since the Engineer has no control over the cost of labor, materials, equipment, or services furnished by others; over the contractors methods of determining prices; or over competitive bidding or marketing conditions, the Engineer's cannot and does not guarantee that proposal, bids or actual construction costs will not vary from opinions of probable construction costs prepared by the Engineer.*

[3] *Design, Permitting, and Administrative Costs includes, consultant planning & design costs, permitting, administrative costs, and easement acquisition (20% of total opinion of probable construction cost)*

Project: Battleboro Stormwater Study, Rocky Mount, NC
Location: Alternative #5 W.Bridges St. & Railroad St. Drainage Improvements (Private)
Project #: 20140160.00.RA
Date: 12/08/2015

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization (5% of total cost)	1	LS	$ 700.00	$ 700.00
2	Comprehensive Grading[1]	1	LS	$ 1,000.00	$ 1,000.00
3	Open Swale Grading	150	LF	$ 10.00	$ 1,500.00
4	Reshape & Regrade Existing Area Adjacent to Building	1	LS	$ 2,000.00	$ 2,000.00
5	Berm	200	LF	$ 10.00	$ 2,000.00
6	Gutters & Downspouts	200	LF	$ 15.00	$ 3,000.00
7	Grout Fill and Cap Existing 15" Pipe	4	CY	$ 150.00	$ 600.00
8	Construction Staking	1	LS	$ 1,000.00	$ 1,000.00
9	Traffic Control	1	LS	$ 1,000.00	$ 1,000.00
10	Erosion Control	1	LS	$ 1,000.00	$ 1,000.00
				Subtotal	$ 13,800.00
20% Contingency					$ 2,760.00
Total Opinion of Probable Construction Cost[2]					$ 16,560.00
Additional Items					
Design, Permitting, and Administrative Costs[3]					$3,310.00
Total Opinion of Probable Project Cost					**$19,900.00**

[1] *Cost for comprehensive grading includes, but is not limited to, roadway excavation, saw cutting, compaction of select material, sheeting, shoring, dewatering, permanent and temporary seeding and mulching, and geotechnical recommendations.*

[2] *The Engineer's opinions of probable construction costs are made on the basis of the Engineer's experience and qualifications and represent the Engineer's best judgment as a professional generally familiar with the construction industry. Since the Engineer has no control over the cost of labor, materials, equipment, or services furnished by others; over the contractors methods of determining prices; or over competitive bidding or marketing conditions, the Engineer's cannot and does not guarantee that proposal, bids or actual construction costs will not vary from opinions of probable construction costs prepared by the Engineer.*

[3] *Design, Permitting, and Administrative Costs includes, consultant planning & design costs, permitting, administrative costs, and easement acquisition (20% of total opinion of probable construction cost)*

Project: Battleboro Stormwater Study, Rocky Mount, NC
Location: Alternative #6 Marriott St & Crape Myrtle St Drainage Improvements (Private)
Project #: 20140160.00.RA
Date: 12/08/2015

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization (5% of total cost)	1	LS	$ 200.00	$ 200.00
2	Comprehensive Grading[1]	1	LS	$ 1,000.00	$ 1,000.00
3	Drainage Structure, Landscape Yard Inlet	1	EA	$ 250.00	$ 250.00
4	French Drain, 6" Perforated HDPE	100	LF	$ 10.00	$ 1,000.00
5	Construction Staking	1	LS	$ 250.00	$ 250.00
6	Traffic Control	1	LS	$ 250.00	$ 250.00
7	Erosion Control	1	LS	$ 400.00	$ 400.00
				Subtotal	$ 3,350.00
20% Contingency					$ 670.00
Total Opinion of Probable Construction Cost[2]					$ 4,020.00
Additional Items					
Design, Permitting, and Administrative Costs[3]					$800.00
Total Opinion of Probable Project Cost					**$4,900.00**

[1] *Cost for comprehensive grading includes, but is not limited to, roadway excavation, saw cutting, compaction of select material, sheeting, shoring, dewatering, permanent and temporary seeding and mulching, and geotechnical recommendations.*

[2] *The Engineer's opinions of probable construction costs are made on the basis of the Engineer's experience and qualifications and represent the Engineer's best judgment as a professional generally familiar with the construction industry. Since the Engineer has no control over the cost of labor, materials, equipment, or services furnished by others; over the contractors methods of determining prices; or over competitive bidding or marketing conditions, the Engineer's cannot and does not guarantee that proposal, bids or actual construction costs will not vary from opinions of probable construction costs prepared by the Engineer.*

[3] *Design, Permitting, and Administrative Costs includes, consultant planning & design costs, permitting, administrative costs, and easement acquisition (20% of total opinion of probable construction cost)*

Appendix I:
Digital Copy of SWMM Models

List of Contents:

1. EPA SWMM
    a. Existing Conditions – Project Area 1
    b. Existing Conditions – Project Areas 2, 4, 5, and 6
    c. Future Conditions – Project Areas 2, 4, 5, and 6
    d. Alternatives – Project Area 1 (Alternatives #1 and #3)
    e. Alternatives – Project Areas 2, 4, 5, and 6 (Alternatives #2, #4, and #5)

DIGITAL COPY OF SWMM MODELS

(To Be Included In Final Sealed Report)