

Mark Adas  
City of Flint  
City Engineer  
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Subject:  
RACER Trust Buick City Site – Outfall 003 Storm Sewer Remedial Options  
Hydraulic Evaluation

ENVIRONMENT

Dear Mr. Adas:

Date:  
March 28, 2018

On behalf of the Revitalizing Auto Communities Environmental Response Trust (RACER), Arcadis of Michigan, LLC (Arcadis) is submitting information pertaining to the proposed relocation of portions of the City of Flint's (the City's) storm sewers located on RACER'S Buick City Site (the Site). The proposed relocation is part of the proposed environmental remediation for this site and should result in improved infrastructure for the City. The proposed relocation is designed to address infiltration issues and increase system integrity. Two alternate routes are being considered to address infiltration, both of which would require making significant changes to the existing Outfall 003 (and potentially Outfall 002) storm sewer system. Therefore, Arcadis has conducted a hydraulic evaluation to assess the viability of both remedial options. This hydraulic evaluation, which demonstrates that both options maintain historic system capacity, is being submitted for your review and approval as discussed below.

Contact:  
Tony Maffeo  
  
Phone:  
248-994-2272  
Email:  
tony.maffeo@arcadis.com

Our ref:  
B0064410.2018.01903

### Background

Historical releases of various oils used in Site-related manufacturing operations over many decades have resulted in areas containing oily substances Light Non-aqueous Phase Liquids (LNAPL) within the Outfall 003 drainage area. In some locations LNAPL is infiltrating into the on-Site portion of the Outfall 003 storm sewer, which subsequently discharges to the Flint River. Various interim measures have been completed to address the infiltration and discharge to the river including engineered oil interceptors/accumulators, skimmers, vacuum pumps, containment booms, and absorbent booms and pads. In addition, bulkheads have been installed at strategic locations along select Outfall 003 storm sewer laterals to permanently eliminate the pathway to the storm sewer.

### Evaluations

RACER is currently evaluating two remedial options (referred to as Remedial Options 1 and 2), to address infiltration into the storm sewer and manhole structures along onsite portions of the Outfall 003 main. The two remedial options are depicted on the attached figures. Remedial Option 1 includes redirecting some of the Outfall 003 system into the Outfall 002 system and rerouting portions of the Outfall 003 system around the perimeter of the Site, while Remedial Option 2 replaces a portion of the on-Site Outfall 003 main through the middle of the site and rehabilitates other portions of the main with cured-in-place pipe (CIPP) technology.

Arcadis has completed a hydraulic evaluation of both remedial options in order to confirm performance objectives can be maintained with respect to historic capacities. The hydraulic evaluation is documented in a memorandum attached to this letter. The memorandum compares the performance of the Outfall 003 main under historical conditions (reflective of the watersheds and storm sewer connectivity that presumably existed when the Site was still active) with both of the remedial options being considered and current conditions. Additionally, because Remedial Option 1 involves redirection of some of the Outfall 003 storm sewer system to the Outfall 002 storm sewer, the hydraulic evaluation also includes an assessment of the Outfall 002 main performance.

Please review this material and let us know if you have any questions or if any aspect of this analysis requires clarification. We are hoping this evaluation meets your expectations and that we can reach agreement on the conditions that would make either option acceptable to the City. As we discussed, implementation of each option may exceed \$5 million dollars and once we commit to either we will not be able to redo the design. Also, it is our intent to dedicate these new sewer lines to the City in an appropriate utility easement once the work is completed. Arcadis and RACER welcome any other input on the remedial options that the City may wish to offer. Following the City's review and approval of this submittal, RACER intends to proceed with a construction-ready design for one of the two remedial options with the objective of commencing construction in 2018. The remedial option selection will be based on constructability, schedule, cost, integration with redevelopment objectives and performance considerations, as well as input that the City may provide. RACER will submit the construction-ready design to the City upon its completion.

We look forward to your response to this submittal and working with the City to implement this remedy.

Sincerely,

Arcadis of Michigan, LLC



Tony Maffeo  
Associate Project Manager

Copies:

Phil Batten, Arcadis

Brian M. Stone, PE, Arcadis

Brad Saunders, PE, Arcadis

Enclosures:

**Figures**

- 1 Figure set entitled "Storm Sewer Hydraulic Evaluation" (8 sheets)

**Attachments**

- 1 Memorandum entitled "RACER Trust Buick City Site – Outfall 003 Storm Sewer Remedial Options Hydraulic Evaluation"

## To:

Mark Ada, City of Flint Engineer

## Copies:

Grant Trigger, RACER  
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Tony Maffeo, Arcadis of MI, LLCArcadis of Michigan, LLC  
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## From:

Brian M. Stone, PE  
Phil Batten

## Date:

March 28, 2018

## Arcadis Project No.:

B0064410.2018.01903

## Subject:

RACER Trust Buick City Site – Outfall 003 Storm Sewer-Remedial Options  
Hydraulic Evaluation

This memorandum documents a hydraulic evaluation completed by Arcadis for portions of the storm sewer systems that cross the Revitalizing Auto Communities Environmental Response Trust's (RACER's) Buick City Site (the Site) in the City of Flint, Michigan (the City). These storm sewer systems collect stormwater runoff from areas within the City and from the Site and convey the runoff to Outfalls 002 and 003 located on the Flint River. RACER directed Arcadis to evaluate remedial options to reduce the potential for entry of Light Non-Aqueous Phase Liquid (LNAPL) into portions of the Outfall 003 storm sewer that crosses the Site. Several remedial options were initially considered, with two preferred options selected for further evaluation based on feasibility and effectiveness. Included in this memorandum is a description of the model development used in the hydraulic evaluation, an overview of the two remedial options which were further evaluated, a discussion of the results from the modeling effort, and a suggested approach for drainage design integrated with future Site redevelopment options.

***Evaluation Objective***

The objective of the hydraulic evaluation was to compare the performance of the Outfall 002 and 003 storm sewer systems under *historical conditions* to those associated with the two remedial options remaining under consideration to understand the change, if any, to the storm sewers capacities. Also included, for reference, is the *current condition* of the storm sewers after bulkheads have been installed along select mains and laterals to eliminate pathways for impacts entering the sewers. The evaluation is focused on the performance of the drainage system mains that pass through the Site and extend downstream to the outfalls. Upstream portions of the mains as well as smaller drain lines that feed into

mains were not evaluated although their flows were accounted for in the models. Consequently, the models used for this evaluation do not simulate upstream hydraulics that likely occur in the storm sewer systems that reduce the flowrates to the mains (e.g., inlet flow reductions due to grate capacities, ponding at individual inlets, bypass of ponded inlets, and pipe flow capacity restrictions). Thus, the inflows to the mains predicted by the models for this evaluation likely overpredict actual realized conditions. The models prepared for this evaluation are used only to assess the change in capacity of the Outfall 002 and 003 mains due to the remedial options and are not considered a predictor for the overall systems' performance.

### ***Model Development***

The storm sewer systems and their contributing watersheds were modeled using the United States Environmental Protection Agency's (USEPA's) Stormwater Management Model (SWMM), a public-domain software that has been in use for decades to model hydrologic processes within watersheds and the hydraulics of conveyance features such as open channels and storm sewers. SWMM had been used previously to evaluate modifications to other storm sewer systems in and around the Site and was selected for use in the present evaluation to build upon that prior work. Additionally, SWMM can perform both single rain event and continuous simulations, the latter being important in the present evaluation to calibrate the model with rainfall and flow measurement data collected at the Site.

Model development consisted of reviewing available data (primarily sewer mapping prepared previously by General Motors) regarding on-Site portions of the existing storm sewer systems and estimating the size and characteristics of the watersheds draining into the Outfall 002 and 003 storm sewer systems. The sizes of the on-Site portions of the storm sewer watersheds were estimated from the storm sewer mapping. The sizes of the off-Site portions of the storm sewer watersheds were estimated using available ground surface topography. The initial estimates for the off-Site portions of the storm sewer watersheds were subsequently refined using rainfall and flow monitoring data collected from May 23, 2015 to July 16, 2015 at the following manholes:

- MH 3-28-4 representing inflow to the Site in the Outfall 003 system from one location along Stewart Ave.
- MH 3-31 representing inflow to the Site in the Outfall 003 system from a second location along Stewart Ave.
- MH 3-25-1 representing inflow to the Site in the Outfall 003 system from one location along Industrial Ave.
- MH 2-5 representing flow in the Outfall 002 system at a location near the outfall.

It is noted that inflow to the 003 system at a second location along Industrial Ave farther to the south of MH-3-25-1 was previously calibrated by Arcadis using flow monitoring and rainfall data collected. The present evaluation utilized the calibrated watershed contributing to that portion of the Outfall 003 system.

Following calibration, Arcadis prepared four SWMM models to represent the Outfall 002 and 003 storm sewer systems under various conditions. The models included the following:

- **Historical Conditions:** This model represents conditions as they once existed when the Site was active. This condition was evaluated recognizing that eventual Site redevelopment will likely result in the entire Site contributing runoff to the storm sewer systems, unlike the current conditions model that omits certain areas due to bulkheading work previously completed (below). Therefore,

the historical conditions model has the same off-Site drainage area as the current conditions model but different on-Site drainage areas.

- Remedial Option 1: This model represents proposed conditions if Remedial Option 1 (discussed in greater detail below) was implemented.
- Remedial Option 2: This model represents proposed conditions if Remedial Option 2 (discussed in greater detail below) was implemented.
- Current Conditions: This model represents conditions as they exist today, and reflective of disconnection (via bulkheading at various on-Site structures) of portions of the on-Site drainage system completed as part of Interim measures for site remediation.

To develop these models, the capacities of the storm sewers were determined in terms of maximum rainfall depths that could be managed either without overtopping any of the manholes or with limited overtopping (refer to discussion below regarding model results for further details). The modeled rainfalls have a 24-hour-duration synthetic rainfall distribution. This is the same rainfall distribution published by the National Oceanic and Atmospheric Administration (NOAA) for typical 24-hour-duration design storm events. Thus, the maximum rainfall depths determined for the storm sewers can be compared to published design storms (e.g., 10-year, 24-hour storm) to understand the system capacity relative to recognized events.

It is noted the manhole at the intersection of Stewart Ave. and Industrial Avenue (**Figure 3**) receives inflow from a large drainage area in the model. In reality, this inflow occurs through numerous upstream structures, each with their own throttling characteristics. However, because the models do not account for these flow reductions, this manhole experienced overtopping before others in the Outfall 003 system. Recognizing that this condition is attributable to model limitations, Arcadis elected to include two additional manholes to the west along Stewart Ave. to allow the large peak inflows to dissipate before reaching this manhole. For this reason, predicted flooding at the first two manholes upstream of this manhole was disregarded.

### ***Remedial Options Overview***

RACER initially considered several remedial options for the Outfall 002 and 003 storm sewer systems. One objective for all identified options is to lessen the potential for infiltration into the storm sewers that remain or will be installed in those areas. Another equally important objective is to not negatively impact the capacity of the storm sewer systems compared to historical conditions. Although RACER will be selecting only one option for implementation, two options are still under consideration as of the date of this memorandum. Both remaining options are therefore included in this evaluation. The remedial options included in the modelling are as follows:

- Remedial Option 1 includes redirecting some of the Outfall 003 system into the Outfall 002 system, rerouting portions of the Outfall 003 system around the perimeter of the Site, and the use of water tight materials through areas of known impacts to address infiltration (**Figures 2 through 5**).
- Remedial Option 2 replaces a portion of the on-Site Outfall 003 system northern main with new sewer pipe and proposes to rehabilitate other portions of the same main with cured-in-place pipe (CIPP) technology. These measures will reduce the potential for infiltration into the main (**Figures 6 through 8**).

## Model Results

The attached **Table 1** and **Table 2** provide a summary of the model results for the four SWMM models. **Table 1** compares the capacities of Remedial Options 1 and 2 against historical conditions. **Table 2** compares the capacities of Remedial Options 1 and 2 against both historical and current conditions. The modeling reports from SWMM are also attached.

The capacities have been determined in terms of maximum rainfall depths for a 24-hour-duration synthetic rainfall distribution. Each model was iteratively executed with rainfall changing by 0.1 inch each time to determine the maximum rainfall depth that could be managed. System capacity is defined according to allowance for overtopping at the modeled structures (i.e., manholes). One capacity was calculated based on allowing no ponding at any structure. A second capacity was calculated based on allowing limited ponding at one or more structures. Limited ponding was defined as a ponding depth no greater than 6" for a duration of no greater than 30 minutes. The rationale for allowing some ponding is that most storm sewer systems experience ponding at structure locations during heavy rainfall due to inlet grate limitations. Limited ponding increases the systems' capacities because the additional head created by the ponding increases the flowrates through the mains. Additionally, the storage in the ponded area at each structure attenuates the peak flows carried through the systems. Hence, the limited ponding system capacity is generally greater than the no ponding capacity.

### Remedial Option 1

The model for Remedial Option 1 indicates that the capacity of both the Outfall 002 and 003 systems increase for both scenarios (no ponding and limited ponding) when compared to historical conditions (**Table 1**).

### Remedial Option 2

The model for Remedial Option 2 indicates that the capacity of both the Outfall 002 and 003 systems increases for both scenarios (no ponding and limited ponding) when compared to historical conditions (**Table 1**).

Either of the two remedial options preserves or increases the system capacity when compared to historical conditions. It should be noted that the modeling includes some on-Site area in Outfall 003 that will be eliminated as part of both options.

It should be noted that the objective of the hydraulic evaluation was to compare the performance of the Outfall 002 and 003 storm sewer systems under *historical conditions* to those associated with the two remedial options remaining under consideration. Also included, for reference, is the *current condition* of the storm sewers after bulkheads have been installed along select mains and laterals to eliminate pathways for impacts entering the sewers. These measures resulted in the decrease of drainage area from each sewer system increasing the capacity of the sewer systems. Neither RACER nor Arcadis are aware of any historical flooding issues associated with these sewer systems prior to bulkheading. A comparison of the historical and current conditions is provided in Table 2 for reference.

### **Site Redevelopment Drainage Considerations**

The future redevelopment of the Site will require not only a drainage design for managing stormwater runoff within the Site itself, but also a re-evaluation of the storm sewer system(s) into which the runoff eventually drains to ensure that redevelopment does not negatively impact the performance of the storm sewer system(s). As discussed earlier, under current conditions, only portions of the Site are connected to the storm sewer systems. Presumably, Site redevelopment will result in the entire Site being connected to the storm sewer systems, similar to conditions that once existed when the Site was an active manufacturing plant (i.e., historical conditions). Arcadis believes the historical conditions model presented

herein is therefore a reasonable benchmark against which drainage for Site redevelopment could be compared. Specifically, the maximum rainfall depths that have been computed for the historical condition should continue to be able to be managed by the storm sewer systems following Site redevelopment.

Depending on the degree of imperviousness of the redeveloped Site and the acreages draining to various inlets to the storm sewer systems, it may be necessary to incorporate some form of stormwater detention to reduce the peak inflow to the storm sewer systems. Alternatively, the amount of impervious area could be reduced to lessen the peak runoff rates.

In the event the Site is developed on a parcel-by-parcel basis, it will be important for the developer(s) and City to consider the state of redevelopment of the other parcels and to preserve capacity in the storm sewer systems to allow for redevelopment of the entire Site. This may best be accomplished by preparing a master drainage plan for the entire Site. The drainage design for a given parcel would then be based on and be governed by the conditions established in the master drainage plan.

### ***Conclusions***

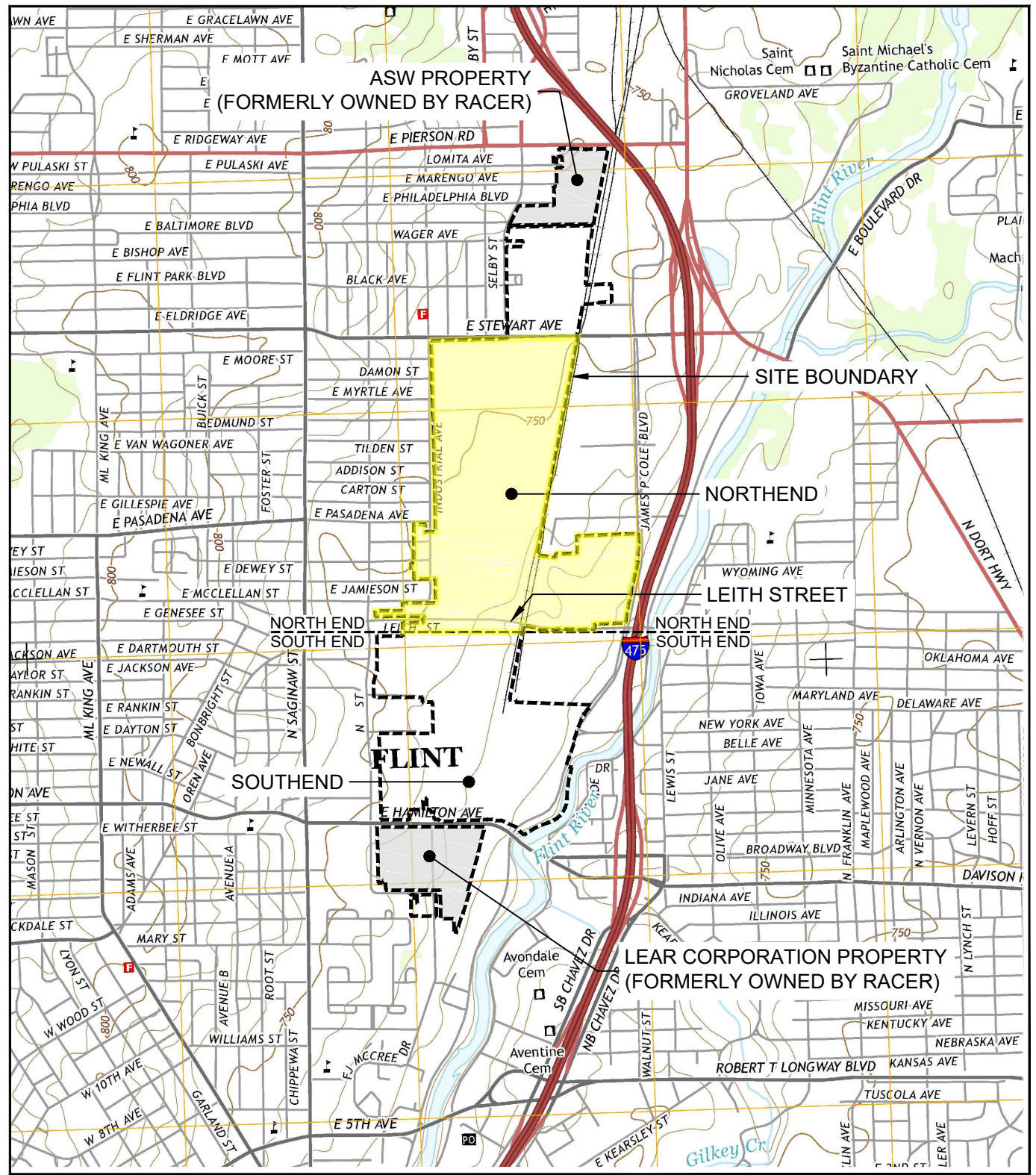
Both modeled remedial options increase the main capacities of the Outfall 002 and 003 systems compared to historical conditions. While future development will probably increase the drainage area to one or both systems, both remedial options allow for additional capacity when compared to historical conditions. Future evaluations should consider the maximum rainfall depths for historical conditions and city requirements when completing redevelopment drainage designs. The modeling information attached can be provided for future use by request.

**Outfall 003 Storm Sewer Remedial Options Hydraulic Evaluation**  
**RACER Trust Buick City Site – Flint, Michigan**

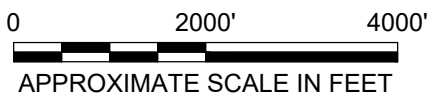
**FIGURES**



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SOURCE: USGS 7.5 MIN., FLINT NORTH QUADRANGLE, FLINT NORTH 2014

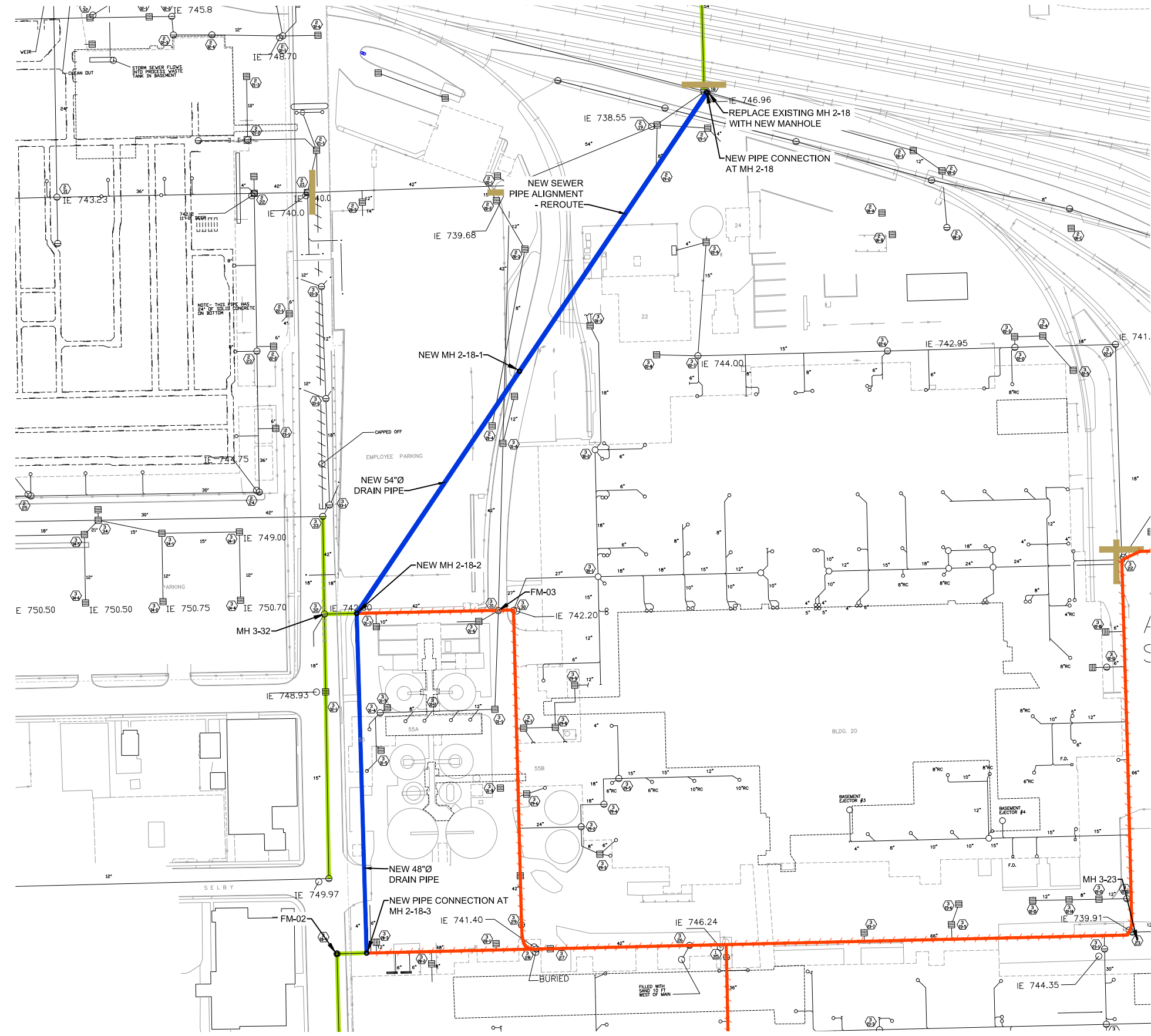


<p>RACER TRUST BUICK CITY FLINT, MICHIGAN <b>STORM SEWER HYDRAULIC EVALUATION</b></p>	
<p><b>SITE LOCATION MAP</b></p>	
	<p>Design &amp; Consultancy for natural and built assets</p>
<p>FIGURE <b>1</b></p>	



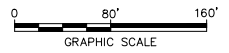
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IMAGES:  
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 01903-XLD  
 X-AREAS DRAINAGE  
 X-SITE BASE



- LEGEND:
- RACER PROPERTY BOUNDARY
  - STORM SEWER BULKHEAD LOCATION
  - EXISTING STORM SEWER PIPE/.I.D.
  - NEW MANHOLE
  - NEW SEWER MAIN TO BE INSTALLED
  - EXISTING SEWER TO BE ABANDONED IN PLACE
  - EXISTING SEWER MAIN TO REMAIN
  - EXISTING ROADS
  - EXISTING BUILDINGS
  - EXISTING BUILDINGS FORMER
  - EXISTING FENCE
  - EXISTING RAILROAD
  - GRAVEL DRIVE
  - GRAVEL TRAIL
  - SILO TANK
  - FM-03 FLOW MONITORING LOCATION

- NOTE:
1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED APRIL 2001, AT A SCALE OF 1:100. AERIAL IMAGE FROM ARCGIS 10 ONLINE MAPPING, ACCESSED 6/12/2013.
  2. MANHOLE AND PIPE LOCATIONS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS TO BE DETERMINED AS PART OF THE CONSTRUCTION DESIGN.



RACER TRUST - BUICK CITY  
 FLINT, MICHIGAN  
**STORM SEWER HYDRAULIC EVALUATION**

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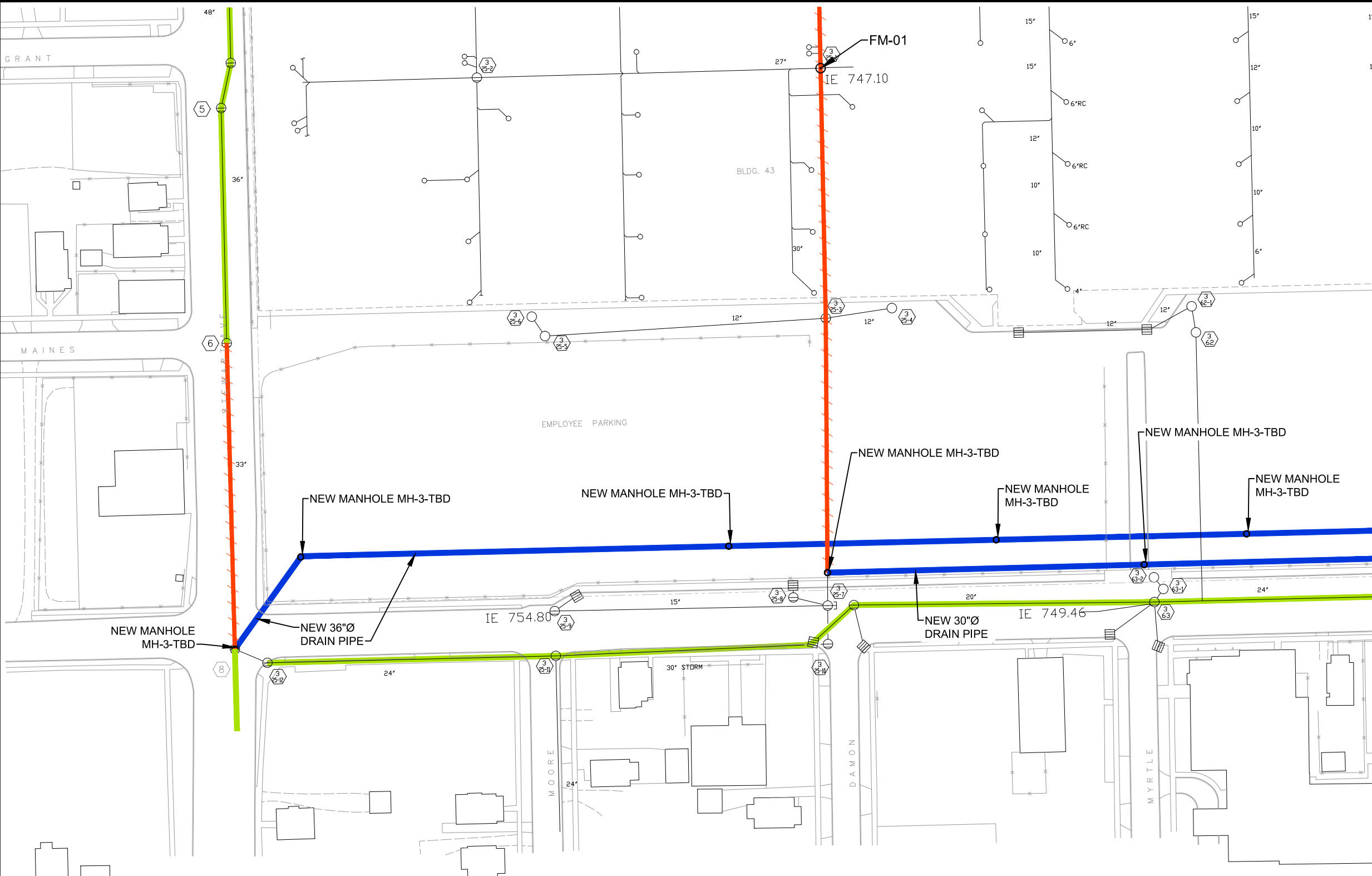
**REMEDIAL OPTION 1 -  
 PARTIAL SITE PLAN 1**

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**ARCADIS** Design & Consultancy  
 for natural and built assets

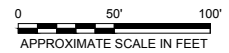
FIGURE  
**3**

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- LEGEND:
- RACER PROPERTY BOUNDARY
  - STORM SEWER BULKHEAD LOCATION
  - EXISTING STORM SEWER PIPE/I.D.
  - NEW MANHOLE
  - NEW SEWER MAIN TO BE INSTALLED
  - EXISTING SEWER TO BE ABANDONED IN PLACE
  - EXISTING SEWER MAIN TO REMAIN
  - EXISTING ROADS
  - ▭ EXISTING BUILDINGS
  - ▭ EXISTING BUILDINGS FORMER
  - EXISTING FENCE
  - EXISTING RAILROAD
  - GRAVEL DRIVE
  - GRAVEL TRAIL
  - SILO TANK
  - FM-01 ○ FLOW MONITORING LOCATION

- NOTE:
1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED APRIL 2001, AT A SCALE OF 1:100. AERIAL IMAGE FROM ARCGIS 10 ONLINE MAPPING, ACCESSED 6/12/2013.
  2. MANHOLE AND PIPE LOCATIONS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS TO BE DETERMINED AS PART OF THE CONSTRUCTION DESIGN.



RACER TRUST - BUICK CITY  
 FLINT, MICHIGAN  
**STORM SEWER HYDRAULIC EVALUATION**

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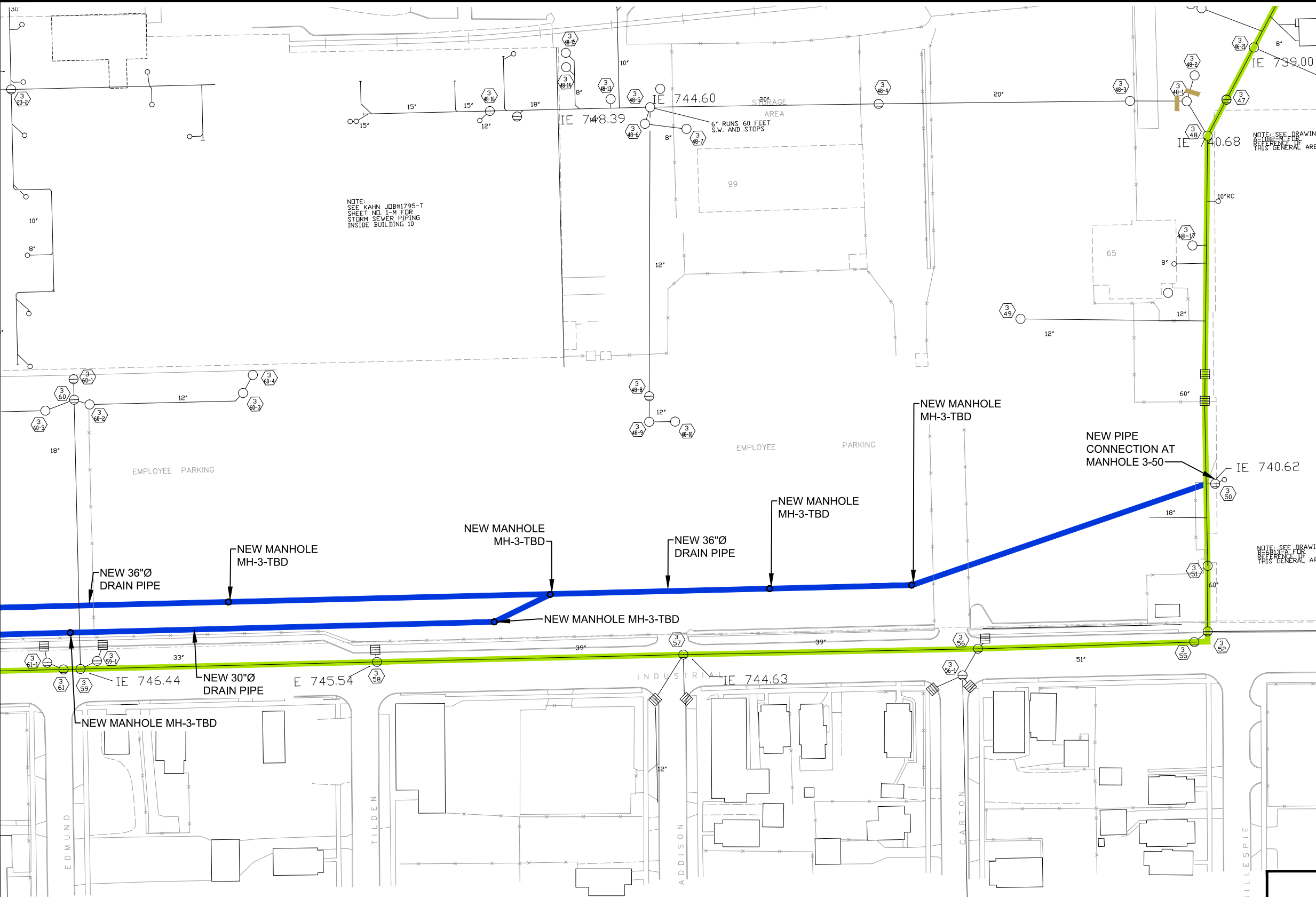
**REMEDIAL OPTION 1 -  
 PARTIAL SITE PLAN 2**

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 for natural and  
 built assets

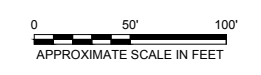
FIGURE  
**4**

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- LEGEND:
- RACER PROPERTY BOUNDARY
  - STORM SEWER BULKHEAD LOCATION
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  - EXISTING SEWER MAIN TO REMAIN
  - EXISTING ROADS
  - EXISTING BUILDINGS
  - EXISTING BUILDINGS FORMER
  - EXISTING FENCE
  - EXISTING RAILROAD
  - GRAVEL DRIVE
  - GRAVEL TRAIL
  - SILO TANK
  - FM-01 FLOW MONITORING LOCATION

- NOTE:
1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED APRIL 2001, AT A SCALE OF 1:100. AERIAL IMAGE FROM ARCGIS 10 ONLINE MAPPING, ACCESSED 6/12/2013.
  2. MANHOLE AND PIPE LOCATIONS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS TO BE DETERMINED AS PART OF THE CONSTRUCTION DESIGN.



RACER TRUST - BUICK CITY  
 FLINT, MICHIGAN  
**STORM SEWER HYDRAULIC EVALUATION**

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**REMEDIAL OPTION 1 -  
 PARTIAL SITE PLAN 3**

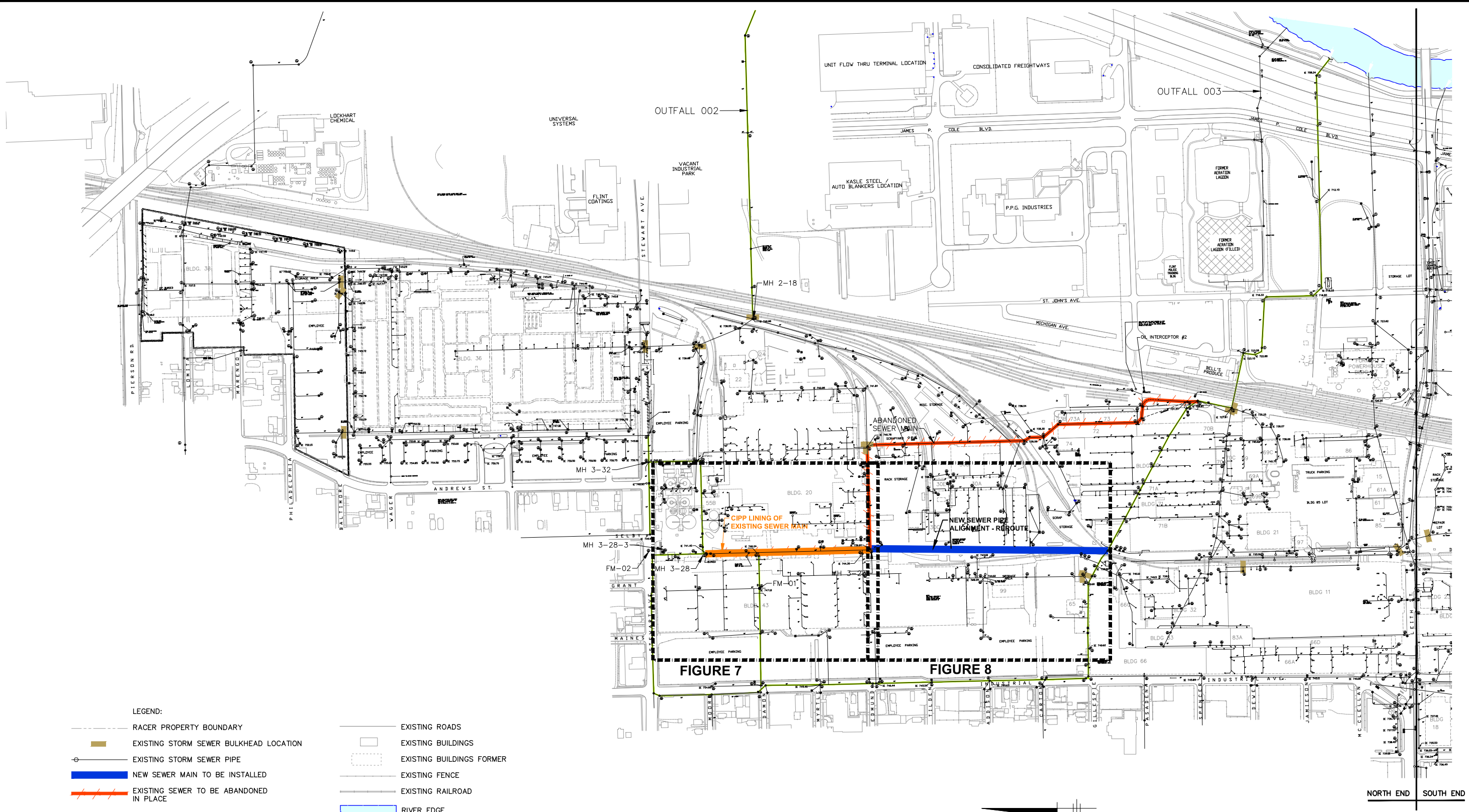
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**ARCADIS** Design & Consulting  
for natural and built assets

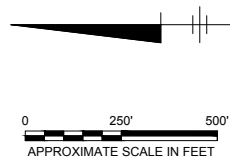
FIGURE  
**5**

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 XREFS:  
 01903-XLD  
 X-AREAS DRAINAGE  
 X-SITE BASE



- LEGEND:
- RACER PROPERTY BOUNDARY
  - EXISTING STORM SEWER BULKHEAD LOCATION
  - EXISTING STORM SEWER PIPE
  - NEW SEWER MAIN TO BE INSTALLED
  - EXISTING SEWER TO BE ABANDONED IN PLACE
  - EXISTING SEWER MAIN TO BE CIPP LINED
  - EXISTING SEWER MAIN TO REMAIN
  - FLOW MONITORING LOCATION
  - EXISTING ROADS
  - EXISTING BUILDINGS
  - EXISTING BUILDINGS FORMER
  - EXISTING FENCE
  - EXISTING RAILROAD
  - RIVER EDGE



NORTH END SOUTH END

FIGURE 7

FIGURE 8

RACER TRUST - BUICK CITY  
 FLINT, MICHIGAN  
**STORM SEWER HYDRAULIC EVALUATION**

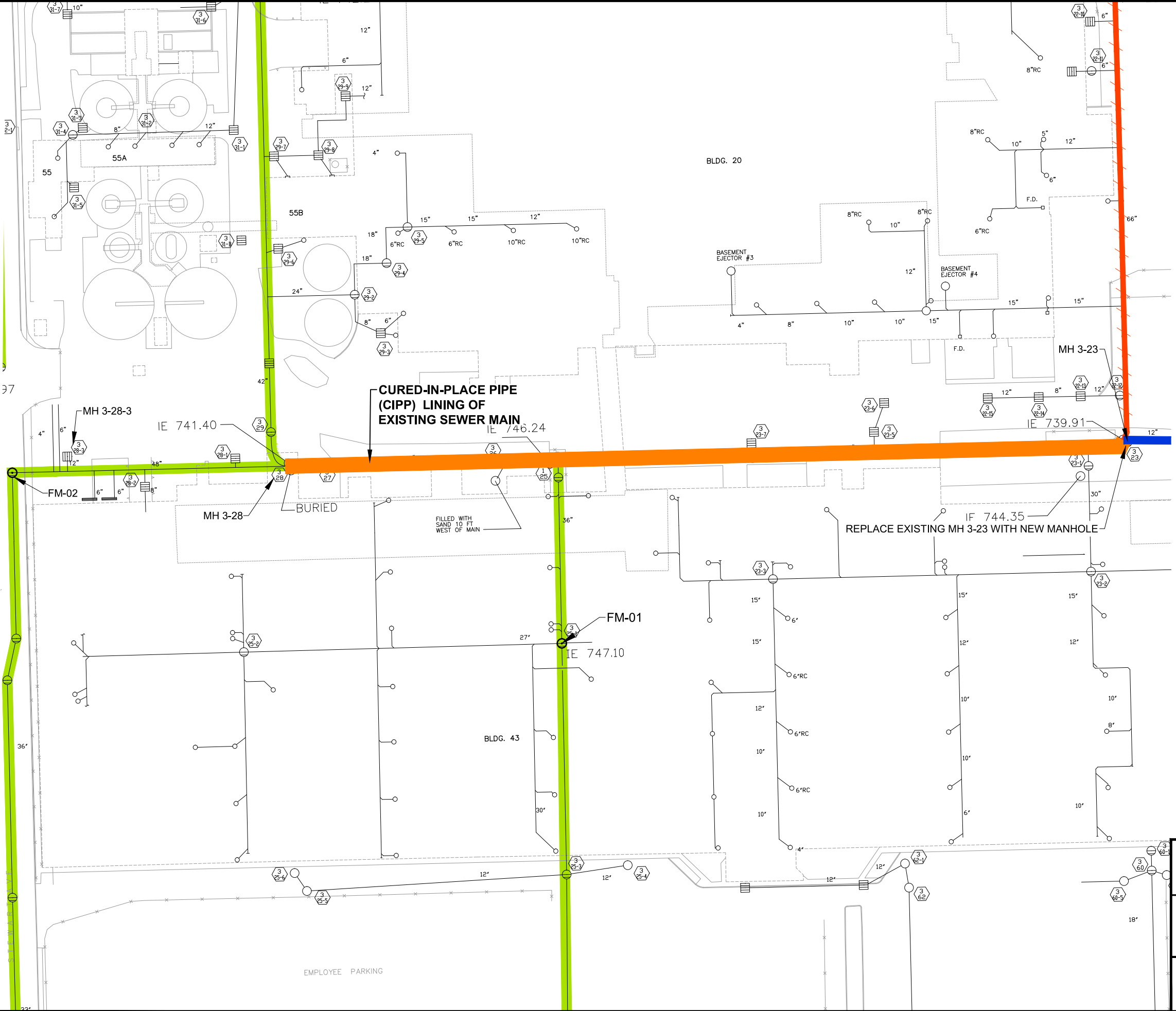
**REMEDIAL OPTION 2 -  
 OVERALL SITE PLAN**

- NOTE:
1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED APRIL 2001, AT A SCALE OF 1:100. AERIAL IMAGE FROM ARCGIS 10 ONLINE MAPPING, ACCESSED 6/12/2013.
  2. BASED ON INFORMATION AVAILABLE AS OF 3/19/2014.



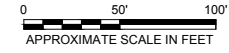
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 C:\Users\Ksartori\OneDrive - ARCADIS\BIM 360 Docs\ANA-RACER TRUST\2017 Buick City RCRA\2018\B0064410\201701-DWG\0190301903-fig7-8-0p2 OSPin.dwg LAYOUT: 7 SAVED: 2/22/2018 3:54 PM ACADVER: 20.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 2/22/2018 3:55 PM BY: SARTORI, KATHERINE

IMAGES:  
 XREFS:  
 01903-XLD  
 X-AREAS DRAINAGE  
 X-SITE BASE



- LEGEND:
- RACER PROPERTY BOUNDARY
  - STORM SEWER BULKHEAD LOCATION
  - EXISTING STORM SEWER PIPE/I.D.
  - NEW HDPE MANHOLE
  - NEW SEWER MAIN TO BE INSTALLED
  - EXISTING SEWER MAIN TO BE CIPP LINED
  - EXISTING SEWER TO BE ABANDONED IN PLACE
  - EXISTING SEWER MAIN TO REMAIN
  - EXISTING ROADS
  - EXISTING BUILDINGS
  - EXISTING BUILDINGS FORMER
  - EXISTING FENCE
  - EXISTING RAILROAD
  - GRAVEL DRIVE
  - GRAVEL TRAIL
  - SILO TANK
  - FM-01 FLOW MONITORING LOCATION

- NOTE:
1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED APRIL 2001, AT A SCALE OF 1:100. AERIAL IMAGE FROM ARCGIS 10 ONLINE MAPPING, ACCESSED 6/12/2013.
  2. MANHOLE AND PIPE LOCATIONS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS TO BE DETERMINED AS PART OF THE CONSTRUCTION DESIGN.



RACER TRUST - BUICK CITY  
 FLINT, MICHIGAN  
**STORM SEWER HYDRAULIC EVALUATION**

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**REMEDIAL OPTION 2 -  
 PARTIAL SITE PLAN 1**

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**ARCADIS** Design & Consultancy  
 for natural and built assets

FIGURE  
**7**



**Outfall 003 Storm Sewer Remedial Options Hydraulic Evaluation**  
**RACER Trust Buick City Site – Flint, Michigan**

**TABLES**



## Buick City

Outfall 002 and 003 Hydraulic Analysis Summary**Table 1 - Outfall Drainage Areas and Maximum Rainfall Depths for Remedial Options Compared to Historical Conditions**

Parameter	Outfall			
		Historical Conditions <sup>1</sup>	Remedial Option 1 <sup>2</sup>	Remedial Option 2 <sup>3</sup>
Drainage Area (Off-Site)	002	58.43	120.63	58.43
Drainage Area (On-Site)		44.79	0.00	0.00
<i>Drainage Area (Total)</i>		<i>103.22</i>	<i>120.63</i>	<i>58.43</i>
Drainage Area (Off-Site)	003	442.18	379.98	442.18
Drainage Area (On-Site)		109.33	31.34	64.54
<i>Drainage Area (Total)</i>		<i>551.51</i>	<i>411.32</i>	<i>506.72</i>
Maximum Rainfall Depth (No Ponding at Structures) <sup>5</sup>	002	0.8" (<1-yr, 24-hr)	1.7" (<1-yr, 24-hr)	4.6" (>10-yr, 24-hr)
	003	0.8" (<1-yr, 24-hr)	1.2" (<1-yr, 24-hr)	1.2" (<1-yr, 24-hr)
Maximum Rainfall Depth (Limited Ponding at Structures) <sup>6</sup>	002	1.5" (<1-yr, 24-hr)	2.4" (>2-yr, 24-hr)	5.5" (>10-yr, 24-hr)
	003	1.2" (<1-yr, 24-hr)	2.0" (<1-yr, 24-hr)	1.5" (<1-yr, 24-hr)

Notes:

1. Historical scenario represents drainage areas and flow conditions presumed to have existed when the GM property was still active. Under this scenario, all of the on-site drainage is presumed to connect to the existing storm sewer systems, including outfalls 002 and 003. Drainage areas tributary to the 002 and 003 systems are based on available on-site storm sewer mapping provided by GM. Due to the possibility of inaccuracies in the sewer mapping or changes to the sewer systems over time, the drainage areas and flow conditions for this scenario may not be entirely accurate. However, they are deemed to reasonably capture conditions that once existed. Because this scenario includes on-site drainage contributions, it is considered a benchmark against which the drainage design for future site redevelopment could be compared.

2. Remedial Option 1 includes the redirection of drainage in the Stewart Avenue portion of the 003 system to the 002 system via a connection at the existing MH 2-18 location (immediately west of the railroad tracks). The drainage area to the 003 system is reduced compared with current conditions under this scenario, and the 002 system drainage area is correspondingly increased. Remedial Option 1 also includes revisions to the flow paths of drainage from the Industrial Avenue portion of the 003 system via new piping installed on-site. The on-site drainage area for this option is reduced from current conditions due to the abandonment of drainage structures that currently admit inflow to the 003 system.

3. Remedial Option 2 preserves the current drainage areas to the 002 and 003 systems but modifies the piping of the 003 system to reduce the potential for infiltration in certain on-site areas.

4. All scenarios modeled using EPA software SWMM 5.1. All storm events used in the simulations (other than those used for model calibration) are 24-hour synthetic design storms having an SCS Type II distribution. Because the SWMM models include the trunklines of the 002 and 003 systems only, they do not simulate the restrictions that likely exist in the feeder lines upstream of the trunklines. Therefore, actual flows in the systems under extreme rainfalls are likely to be less than those predicted in the models. Modeling assumes a tailwater condition equivalent to half the outlet pipe diameter consistent with observed water levels at each outfall location.

5. Maximum rainfall depth that can be managed under each scenario for the "no ponding" condition is determined to the nearest tenth of an inch by trial and error until the predicted hydraulic grade line (HGL) equals the top of one or more structures (i.e., just below flood level). No ponding condition refers to ponding caused by the HGL within the pipes. Ponding may still occur due to inflow of stormwater at individual structures (i.e., inlet capacity restrictions).

6. Maximum rainfall depth that can be managed under each scenario for the "limited ponding" condition is determined to the nearest tenth of an inch by trial and error until flooding occurs at one or more structures due to the HGL rising above the top of the structure(s). Minor ponding (<6" ponding depth on the ground surface for <30 minutes) at limited structures is allowed and does not constitute an exceedance of the system's capacity.

7. The models allow for ponding at the structures, meaning that water that cannot be conveyed downstream is detained on the ground surface at the respective structure(s) until capacity in the system becomes available to drain the ponded water. The ground surface area for ponding is assumed to be 2,500 ft<sup>2</sup> at each structure (i.e., a 50-ft square area). In actuality, there is likely more area available for ponding, which would decrease the predicted ponding depth at the structures. Thus the predicted flood severity is deemed to be conservatively high.

8. The maximum rainfall depth that can be managed under each scenario is reported to the nearest tenth of an inch and may not necessarily equal a specific design rainfall. This is done to distinguish less significant changes in the systems' capacities. For comparison purposes, the National Oceanic and Atmospheric Administration (NOAA) rainfall frequency tables (Atlas 14) available online at the Hydrometeorological Design Center website indicate the following design rainfall at the site:

- 1-yr, 24-hr = 2.08 inches
- 2-yr, 24-hr = 2.32 inches
- 5-yr, 24-hr = 2.80 inches
- 10-yr, 24-hr = 3.29 inches

## Outfall 002 and 003 Hydraulic Analysis Summary

**Table 2 - Outfall Drainage Areas and Maximum Rainfall Depths  
for Historical and Current Conditions**

Parameter	Outfall	Scenario	
		Historical Conditions <sup>1</sup>	Current Conditions <sup>2</sup>
Drainage Area (Off-Site)	002	58.43	58.43
Drainage Area (On-Site)		44.79	0.00
<i>Drainage Area (Total)</i>		<i>103.22</i>	<i>58.43</i>
Drainage Area (Off-Site)	003	442.18	442.18
Drainage Area (On-Site)		109.33	64.54
<i>Drainage Area (Total)</i>		<i>551.51</i>	<i>506.72</i>
Maximum Rainfall Depth (No Ponding at Structures) <sup>4</sup>	002	0.8" (<1-yr, 24-hr)	4.6" (>10-yr, 24-hr)
	003	0.8" (<1-yr, 24-hr)	1.2" (<1-yr, 24-hr)
Maximum Rainfall Depth (Limited Ponding at Structures) <sup>5</sup>	002	1.5" (<1-yr, 24-hr)	5.5" (>10-yr, 24-hr)
	003	1.2" (<1-yr, 24-hr)	1.6" (<1-yr, 24-hr)

**Notes:**

1. Historical scenario represents drainage areas and flow conditions presumed to have existed when the GM property was still active. Under this scenario, all of the on-site drainage is presumed to connect to the existing storm sewer systems, including outfalls 002 and 003. Drainage areas tributary to the 002 and 003 systems are based on available on-site storm sewer mapping provided by GM. Due to the possibility of inaccuracies in the sewer mapping or changes to the sewer systems over time, the drainage areas and flow conditions for this scenario may not be entirely accurate. However, they are deemed to reasonably capture conditions that once existed. Because this scenario includes on-site drainage contributions, it is considered a benchmark against which the drainage design for future site redevelopment could be compared.
2. Current scenario represents flow conditions at the time of the 2015 field study. Some of the on-site drainage areas were disconnected from both the 002 and 003 systems as part of past site remediation work.
3. All scenarios modeled using EPA software SWMM 5.1. All storm events used in the simulations (other than those used for model calibration) are 24-hour synthetic design storms having an SCS Type II distribution. Because the SWMM models include the trunklines of the 002 and 003 systems only, they do not simulate the restrictions that likely exist in the feeder lines upstream of the trunklines. Therefore, actual flows in the systems under extreme rainfalls are likely to be less than those predicted in the models. Modeling assumes a tailwater condition equivalent to half the outlet pipe diameter consistent with observed water levels at each outfall location.
4. Maximum rainfall depth that can be managed under each scenario for the "no ponding" condition is determined to the nearest tenth of an inch by trial and error until the predicted hydraulic grade line (HGL) equals the top of one or more structures (i.e., just below flood level). No ponding condition refers to ponding caused by the HGL within the pipes. Ponding may still occur due to inflow of stormwater at individual structures (i.e., inlet capacity restrictions).
5. Maximum rainfall depth that can be managed under each scenario for the "limited ponding" condition is determined to the nearest tenth of an inch by trial and error until flooding occurs at one or more structures due to the HGL rising above the top of the structure(s). Minor ponding (<6" ponding depth on the ground surface for <30 minutes) at limited structures is allowed and does not constitute an exceedance of the system's capacity.
6. The models allow for ponding at the structures, meaning that water that cannot be conveyed downstream is detained on the ground surface at the respective structure(s) until capacity in the system becomes available to drain the ponded water. The ground surface area for ponding is assumed to be 2,500 ft<sup>2</sup> at each structure (i.e., a 50-ft square area). In actuality, there is likely more area available for ponding, which would decrease the predicted ponding depth at the structures. Thus the predicted flood severity is deemed to be conservatively high.
7. The maximum rainfall depth that can be managed under each scenario is reported to the nearest tenth of an inch and may not necessarily equal a specific design rainfall. This is done to distinguish less significant changes in the systems' capacities. For comparison purposes, the National Oceanic and Atmospheric Administration (NOAA) rainfall frequency tables (Atlas 14) available online at the Hydrometeorological Design Center website indicate the following design rainfall at the site:
  - 1-yr, 24-hr = 2.08 inches
  - 2-yr, 24-hr = 2.32 inches
  - 5-yr, 24-hr = 2.80 inches
  - 10-yr, 24-hr = 3.29 inches

Outfall 003 Storm Sewer Remedial Options Hydraulic Evaluation  
RACER Trust Buick City Site – Flint, Michigan

ATTACHMENT 1  
SWMM Model Output



*“Current Conditions” SWMM Model Output*



003 Existing Conditions

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 60

\*\*\*\*\*

Element Count

\*\*\*\*\*

Number of rain gages ..... 3  
 Number of subcatchments ... 23  
 Number of nodes ..... 73  
 Number of links ..... 67  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

\*\*\*\*\*

Raingage Summary

\*\*\*\*\*

Name	Data Source	Data Type	Recording Interval
SCS~Type~II	1.2-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

\*\*\*\*\*

Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
1	105.00	750.00	25.00	2.0000	SCS~Type~II	39
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16
17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-26#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-26
3-23#1	13.15	50000.00	100.00	0.5000	SCS~Type~II	3-23
3-30#1	9.17	50000.00	100.00	0.5000	SCS~Type~II	3-30
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

\*\*\*\*\*  
Node Summary  
\*\*\*\*\*

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	

2-17	JUNCTION	735.85	15.20	2500.0
2-18	JUNCTION	737.67	14.56	2500.0
2-18-3	JUNCTION	743.25	8.77	2500.0
2-19	JUNCTION	738.55	12.71	2500.0
2-2	JUNCTION	706.68	7.80	2500.0
2-20	JUNCTION	739.68	12.19	0.0
2-21	JUNCTION	740.00	10.58	0.0
2-3	JUNCTION	707.67	7.15	2500.0
2-4	JUNCTION	707.77	7.05	2500.0
2-5	JUNCTION	707.85	8.05	2500.0
2-6	JUNCTION	708.71	7.00	2500.0
2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-21	JUNCTION	734.90	12.10	2500.0
3-22	JUNCTION	735.61	12.39	2500.0
3-23	JUNCTION	737.57	11.70	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-26	JUNCTION	739.33	12.67	2500.0
3-28	JUNCTION	739.94	13.46	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-29	JUNCTION	741.05	11.95	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-30	JUNCTION	742.20	11.80	2500.0
3-31	JUNCTION	742.26	11.74	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0

3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0
3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
38	JUNCTION	755.54	4.80	2500.0
39	JUNCTION	759.88	4.80	2500.0
x-43	JUNCTION	730.59	0.00	0.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

\*\*\*\*\*  
Link Summary  
\*\*\*\*\*

Name	From Node	To Node	Type	Length	%Slope	Roughness
1	8	7	CONDUIT	60.0	2.1005	0.0150
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150

16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150
23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150
24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
link20	3-29	3-28	CONDUIT	39.0	0.1538	0.0150
LINK21	3-28	3-26	CONDUIT	268.0	0.2201	0.0150
Link22	3-26	3-23	CONDUIT	577.0	0.3050	0.0150
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150

55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
56	3-30	3-29	CONDUIT	443.0	0.1670	0.0150
57	2-18-3	3-28	CONDUIT	227.0	1.3261	0.0150
59	3-32	3-31	CONDUIT	248.0	0.2581	0.0150
60	3-31	3-30	CONDUIT	27.0	0.2222	0.0150
61	3-25-7	3-26	CONDUIT	690.0	1.1595	0.0150
62	3-23	3-22	CONDUIT	530.0	0.3698	0.0150
63	3-22	3-21	CONDUIT	195.0	0.3641	0.0150
64	3-21	3-20	CONDUIT	622.0	0.3666	0.0150
68	3-51	3-48	CONDUIT	216.6	2.7944	0.0150
69	38	8	CONDUIT	270.0	1.6669	0.0150
70	39	38	CONDUIT	274.0	1.5841	0.0150

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
1	CIRCULAR	2.50	4.91	0.63	2.50	1	51.52
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95

29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86
33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
link20	CIRCULAR	3.50	9.62	0.88	3.50	1	34.20
LINK21	CIRCULAR	3.50	9.62	0.88	3.50	1	40.91
Link22	CIRCULAR	5.50	23.76	1.38	5.50	1	160.74
Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
56	CIRCULAR	3.50	9.62	0.88	3.50	1	35.64
57	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
59	CIRCULAR	3.00	7.07	0.75	3.00	1	29.37
60	CIRCULAR	3.50	9.62	0.88	3.50	1	41.10
61	CIRCULAR	3.00	7.07	0.75	3.00	1	62.24
62	CIRCULAR	5.50	23.76	1.38	5.50	1	176.98
63	CIRCULAR	5.50	23.76	1.38	5.50	1	175.61
64	CIRCULAR	5.50	23.76	1.38	5.50	1	176.21

68	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
69	CIRCULAR	2.50	4.91	0.63	2.50	1	45.90
70	CIRCULAR	2.50	4.91	0.63	2.50	1	44.74

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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.  
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Analysis Options

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Flow Units ..... CFS  
Process Models:  
  Rainfall/Runoff ..... YES  
  RDII ..... NO  
  Snowmelt ..... NO  
  Groundwater ..... NO  
  Flow Routing ..... YES  
  Ponding Allowed ..... YES  
  Water Quality ..... NO  
Infiltration Method ..... CURVE\_NUMBER  
Flow Routing Method ..... DYNWAVE  
Starting Date ..... MAY-30-2015 00:00:00  
Ending Date ..... JUN-01-2015 00:00:00  
Antecedent Dry Days ..... 0.0  
Report Time Step ..... 00:02:00  
Wet Time Step ..... 00:01:00  
Dry Time Step ..... 00:05:00  
Routing Time Step ..... 5.00 sec  
Variable Time Step ..... YES  
Maximum Trials ..... 10  
Number of Threads ..... 1  
Head Tolerance ..... 0.005000 ft

*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----

Total Precipitation .....	56.515	1.200
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	24.944	0.530
Surface Runoff .....	26.921	0.572
Final Storage .....	4.653	0.099
Continuity Error (%) .....	-0.006	

*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	26.916	8.771
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	26.810	8.736
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.201	0.065
Continuity Error (%) .....	-0.156	

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Highest Continuity Errors  
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Node 2-2 (2.38%)

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Time-Step Critical Elements  
\*\*\*\*\*  
Link link37 (14.67%)  
Link 50 (1.76%)  
Link Link29 (1.53%)

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Highest Flow Instability Indexes  
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Link 44 (32)  
 Link Link32 (30)  
 Link 46 (26)  
 Link 68 (24)  
 Link 51 (23)

\*\*\*\*\*  
 Routing Time Step Summary  
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Minimum Time Step : 0.50 sec  
 Average Time Step : 4.49 sec  
 Maximum Time Step : 5.00 sec  
 Percent in Steady State : 0.00  
 Average Iterations per Step : 2.30  
 Percent Not Converging : 1.16

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 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
1	1.20	0.00	0.00	0.62	0.24	0.68	31.13	0.198
16	1.20	0.00	0.00	0.97	0.15	0.04	1.56	0.125
17	1.20	0.00	0.00	0.23	0.84	0.15	5.24	0.699
18	1.20	0.00	0.00	0.00	1.20	0.05	1.72	1.000
19	1.20	0.00	0.00	0.64	0.50	0.04	1.80	0.418
20	1.20	0.00	0.00	0.41	0.73	0.71	24.48	0.611
22	1.20	0.00	0.00	0.00	1.20	0.03	1.25	1.000
23	1.20	0.00	0.00	0.53	0.59	0.40	11.63	0.489
24	1.20	0.00	0.00	0.54	0.46	0.01	0.56	0.387
25	1.20	0.00	0.00	0.71	0.18	0.01	0.80	0.147
26	1.20	0.00	0.00	0.64	0.47	0.27	7.24	0.394
27	1.20	0.00	0.00	0.66	0.44	0.19	4.65	0.365
3-51#1	1.20	0.00	0.00	0.66	0.50	2.90	40.38	0.414
28	1.20	0.00	0.00	0.16	1.04	0.06	3.10	0.865
29	1.20	0.00	0.00	0.61	0.59	0.24	7.40	0.491

30	1.20	0.00	0.00	0.28	0.91	0.50	17.68	0.762
31	1.20	0.00	0.00	0.45	0.75	0.37	12.38	0.626
3-26#1	1.20	0.00	0.00	0.00	1.20	0.35	20.19	1.000
3-23#1	1.20	0.00	0.00	0.00	1.20	0.43	24.38	1.000
3-30#1	1.20	0.00	0.00	0.00	1.20	0.30	17.02	1.000
3-20#1	1.20	0.00	0.00	0.00	1.20	0.45	25.52	1.000
3-41#1	1.20	0.00	0.00	0.00	1.20	0.22	12.43	1.000
3-17#1	1.20	0.00	0.00	0.00	1.20	0.35	20.19	1.000

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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	Reported Max Depth Feet
2	JUNCTION	0.19	1.56	749.30	0 12:00	1.56
2-1	JUNCTION	2.01	2.38	708.47	0 00:01	2.08
2-10	JUNCTION	0.15	1.00	717.65	0 12:01	1.00
2-11	JUNCTION	0.15	0.90	718.26	0 12:04	0.90
2-13	JUNCTION	0.15	0.90	722.04	0 12:03	0.90
2-14	JUNCTION	0.13	0.90	722.69	0 12:05	0.87
2-15A	JUNCTION	0.12	0.86	724.15	0 12:08	0.86
2-15B	JUNCTION	0.12	1.05	732.34	0 12:04	1.05
2-16	JUNCTION	0.05	0.48	733.51	0 12:07	0.48
2-17	JUNCTION	0.00	0.00	735.85	0 00:00	0.00
2-18	JUNCTION	0.00	0.00	737.67	0 00:00	0.00
2-18-3	JUNCTION	1.42	3.80	747.05	0 12:00	3.77
2-19	JUNCTION	0.00	0.00	738.55	0 00:00	0.00
2-2	JUNCTION	1.42	1.66	708.34	0 00:02	1.54
2-20	JUNCTION	0.00	0.00	739.68	0 00:00	0.00
2-21	JUNCTION	0.00	0.00	740.00	0 00:00	0.00
2-3	JUNCTION	0.46	1.20	708.87	0 12:09	1.20
2-4	JUNCTION	0.38	1.22	708.99	0 12:03	1.21
2-5	JUNCTION	0.32	1.22	709.07	0 12:03	1.21
2-6	JUNCTION	0.17	1.22	709.93	0 12:04	1.22
2-7	JUNCTION	0.15	1.00	710.78	0 12:11	0.99
2-9	JUNCTION	0.15	0.92	713.58	0 12:04	0.91
3-1	JUNCTION	1.56	6.54	714.78	0 12:02	5.94

3-10	JUNCTION	0.75	5.11	732.72	0	12:04	5.08
3-12	JUNCTION	1.32	4.89	734.00	0	12:03	4.88
3-16	JUNCTION	0.55	4.12	734.38	0	12:03	4.11
3-17	JUNCTION	0.56	4.12	734.50	0	12:03	4.11
3-18	JUNCTION	0.25	3.29	735.17	0	12:03	3.28
3-19	JUNCTION	0.53	3.94	736.20	0	12:03	3.92
3-20	JUNCTION	0.52	3.95	736.57	0	12:03	3.92
3-21	JUNCTION	0.48	3.73	738.63	0	12:02	3.70
3-22	JUNCTION	0.48	3.76	739.37	0	12:01	3.76
3-23	JUNCTION	0.48	3.80	741.37	0	12:00	3.75
3-25-10	JUNCTION	0.04	0.53	748.39	0	11:57	0.53
3-25-11	JUNCTION	0.04	0.43	750.50	0	11:59	0.43
3-25-12	JUNCTION	0.00	0.00	750.81	0	00:00	0.00
3-25-7	JUNCTION	0.04	0.49	747.82	0	12:01	0.49
3-26	JUNCTION	0.44	3.43	742.76	0	12:00	3.39
3-28	JUNCTION	0.47	4.21	744.15	0	12:01	4.14
3-28-4	JUNCTION	0.29	2.64	747.66	0	11:59	2.64
3-29	JUNCTION	0.69	3.13	744.18	0	12:01	3.06
3-3	JUNCTION	0.84	5.69	717.79	0	12:03	5.65
3-30	JUNCTION	0.33	2.45	744.65	0	12:00	2.45
3-31	JUNCTION	0.30	2.40	744.66	0	12:00	2.40
3-32	JUNCTION	0.28	1.96	744.86	0	12:00	1.94
3-32-1	JUNCTION	0.18	1.22	747.69	0	12:00	1.22
3-33	JUNCTION	0.25	1.88	744.91	0	12:00	1.88
3-38	JUNCTION	0.57	3.62	732.75	0	12:04	3.56
3-39	JUNCTION	0.57	2.95	732.80	0	12:04	2.93
3-4	JUNCTION	0.84	5.67	722.20	0	12:03	5.63
3-40	JUNCTION	0.56	2.73	732.85	0	12:05	2.69
3-41	JUNCTION	0.57	2.63	733.04	0	12:00	2.55
3-42	JUNCTION	0.54	2.55	733.07	0	12:00	2.48
3-43	JUNCTION	0.55	2.50	733.09	0	12:00	2.45
3-44	JUNCTION	0.53	2.46	733.64	0	12:03	2.43
3-45	JUNCTION	0.53	2.34	734.02	0	12:03	2.32
3-46	JUNCTION	0.53	2.33	735.43	0	12:02	2.32
3-47	JUNCTION	0.53	2.33	736.18	0	12:02	2.32
3-48	JUNCTION	0.53	2.32	736.89	0	12:01	2.32
3-5	JUNCTION	0.82	5.56	722.36	0	12:01	5.50
3-51	JUNCTION	0.50	2.26	742.88	0	12:01	2.25
3-6	JUNCTION	1.39	7.34	723.67	0	12:01	6.73
3-7	JUNCTION	0.78	5.22	728.10	0	12:03	5.18
3-9	JUNCTION	0.80	5.21	728.31	0	12:03	5.19
5	JUNCTION	0.32	3.23	750.82	0	12:00	3.17

6	JUNCTION	0.33	3.98	752.20	0	11:58	3.24
7	JUNCTION	0.25	2.81	752.99	0	12:00	2.71
8	JUNCTION	0.62	5.25	756.29	0	11:58	3.84
38	JUNCTION	0.26	4.80	760.34	0	11:59	3.97
39	JUNCTION	0.26	4.80	764.68	0	12:01	2.82
x-43	JUNCTION	0.00	0.00	730.59	0	00:00	0.00
002	OUTFALL	2.51	2.51	708.10	0	00:00	2.51
003	OUTFALL	2.52	3.85	710.95	0	12:02	3.68

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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	Flow Balance Error Percent
2	JUNCTION	4.65	4.65	0 12:00	0.191	0.191	0.256
2-1	JUNCTION	24.48	34.53	0 00:00	0.71	1.11	0.973
2-10	JUNCTION	0.00	6.98	0 12:04	0	0.244	-0.103
2-11	JUNCTION	0.00	7.01	0 12:03	0	0.244	-0.007
2-13	JUNCTION	1.72	8.38	0 12:01	0.0456	0.245	0.101
2-14	JUNCTION	0.00	6.56	0 12:05	0	0.199	-0.138
2-15A	JUNCTION	0.00	5.68	0 12:04	0	0.199	0.007
2-15B	JUNCTION	5.24	6.40	0 12:00	0.154	0.199	-0.043
2-16	JUNCTION	1.56	1.56	0 12:00	0.0442	0.0442	0.067
2-17	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-18	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-18-3	JUNCTION	0.00	38.41	0 11:59	0	0.95	-0.157
2-19	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-2	JUNCTION	1.80	20.21	0 00:01	0.0378	0.355	2.435
2-20	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-21	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-3	JUNCTION	0.00	8.26	0 12:04	0	0.282	0.738
2-4	JUNCTION	0.00	8.26	0 12:03	0	0.278	0.201
2-5	JUNCTION	0.00	8.44	0 12:03	0	0.276	-0.191
2-6	JUNCTION	1.25	9.44	0 11:59	0.0296	0.275	0.065
2-7	JUNCTION	0.00	7.12	0 12:04	0	0.245	-0.118
2-9	JUNCTION	0.00	9.12	0 12:09	0	0.245	-0.348

3-1	JUNCTION	7.40	187.63	0	12:02	0.245	7.79	0.128
3-10	JUNCTION	0.00	145.56	0	12:03	0	6.57	-0.134
3-12	JUNCTION	0.00	104.10	0	12:03	0	3.45	0.017
3-16	JUNCTION	0.00	104.19	0	12:03	0	3.45	0.001
3-17	JUNCTION	20.19	104.42	0	12:03	0.355	3.45	0.053
3-18	JUNCTION	0.00	97.26	0	12:03	0	3.1	-0.030
3-19	JUNCTION	0.00	97.32	0	12:03	0	3.1	-0.010
3-20	JUNCTION	25.52	98.21	0	12:00	0.449	3.1	-0.011
3-21	JUNCTION	0.00	88.86	0	12:01	0	2.65	0.007
3-22	JUNCTION	0.00	90.44	0	12:00	0	2.65	0.016
3-23	JUNCTION	24.38	95.69	0	12:00	0.429	2.65	0.004
3-25-10	JUNCTION	0.56	1.22	0	11:57	0.0109	0.0252	-0.007
3-25-11	JUNCTION	0.80	0.80	0	11:57	0.0144	0.0144	-0.005
3-25-12	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
3-25-7	JUNCTION	0.00	1.21	0	11:57	0	0.0252	-0.248
3-26	JUNCTION	20.19	80.21	0	12:00	0.355	2.22	0.053
3-28	JUNCTION	0.00	65.53	0	12:00	0	1.84	0.015
3-28-4	JUNCTION	0.00	39.02	0	12:00	0	0.95	0.001
3-29	JUNCTION	0.00	29.62	0	12:00	0	0.888	-0.120
3-3	JUNCTION	0.00	179.01	0	12:02	0	7.5	0.036
3-30	JUNCTION	17.02	30.12	0	12:00	0.299	0.888	0.030
3-31	JUNCTION	0.00	16.75	0	12:01	0	0.589	-0.017
3-32	JUNCTION	0.00	16.07	0	12:00	0	0.59	0.029
3-32-1	JUNCTION	0.00	4.65	0	12:00	0	0.19	-0.454
3-33	JUNCTION	11.63	11.63	0	12:00	0.399	0.399	-0.006
3-38	JUNCTION	0.00	42.94	0	12:04	0	3.12	-0.052
3-39	JUNCTION	0.00	45.11	0	12:00	0	3.11	-0.019
3-4	JUNCTION	17.68	176.38	0	12:02	0.502	7.5	-0.036
3-40	JUNCTION	0.00	45.32	0	12:00	0	3.11	0.007
3-41	JUNCTION	12.43	46.37	0	12:00	0.218	3.12	0.058
3-42	JUNCTION	0.00	40.09	0	12:03	0	2.9	-0.010
3-43	JUNCTION	0.00	40.90	0	12:02	0	2.9	0.015
3-44	JUNCTION	0.00	44.06	0	12:03	0	2.9	-0.020
3-45	JUNCTION	0.00	43.88	0	12:02	0	2.9	0.007
3-46	JUNCTION	0.00	43.85	0	12:02	0	2.9	0.047
3-47	JUNCTION	0.00	43.67	0	12:01	0	2.9	-0.025
3-48	JUNCTION	0.00	42.53	0	12:02	0	2.91	0.212
3-5	JUNCTION	0.00	155.91	0	12:02	0	7	0.053
3-51	JUNCTION	40.38	40.38	0	12:03	2.9	2.9	-0.181
3-6	JUNCTION	3.10	155.77	0	12:02	0.0648	7.01	0.104
3-7	JUNCTION	12.38	154.07	0	12:03	0.371	6.94	-0.115
3-9	JUNCTION	0.00	144.79	0	12:03	0	6.57	0.164

5	JUNCTION	0.00	38.78	0	11:59	0	0.95	-0.027
6	JUNCTION	7.24	38.91	0	11:59	0.272	0.95	-0.004
7	JUNCTION	0.00	36.74	0	11:59	0	0.678	0.010
8	JUNCTION	0.00	36.91	0	11:59	0	0.678	0.038
38	JUNCTION	0.00	35.15	0	12:00	0	0.677	-0.149
39	JUNCTION	31.13	31.13	0	12:00	0.677	0.677	-0.102
x-43	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
002	OUTFALL	0.00	34.53	0	00:00	0	1.12	0.000
003	OUTFALL	0.00	189.56	0	12:02	0	7.83	0.000

\*\*\*\*\*  
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
2	JUNCTION	0.09	0.310	4.240
2-19	JUNCTION	48.00	0.000	12.710
2-20	JUNCTION	48.00	0.000	12.190
2-21	JUNCTION	48.00	0.000	10.580
3-1	JUNCTION	0.10	1.040	10.840
3-3	JUNCTION	0.05	0.188	4.312
3-4	JUNCTION	0.06	0.171	3.419
3-5	JUNCTION	0.01	0.063	3.647
3-6	JUNCTION	0.23	1.839	2.661
5	JUNCTION	0.05	0.225	3.275
6	JUNCTION	0.07	0.979	1.221
8	JUNCTION	0.14	2.300	0.000
38	JUNCTION	0.14	2.303	0.000
39	JUNCTION	0.15	2.301	0.000
x-43	JUNCTION	48.00	0.000	0.000

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

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Node	Hours Flooded	Maximum Rate CFS	Time of Max Occurrence days hr:min	Total Flood Volume 10^6 gal	Maximum Ponded Depth Feet
8	0.01	5.50	0 11:58	0.000	0.000
38	0.01	5.85	0 11:59	0.001	0.003
39	0.01	5.17	0 12:01	0.000	0.001

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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
002	92.33	1.75	34.53	1.120
003	99.43	11.26	189.56	7.831
System	95.88	13.02	217.73	8.951

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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
1	CONDUIT	36.74	0 11:59	7.48	0.71	1.00
2	CONDUIT	31.73	0 11:59	4.54	0.59	0.97
3	CONDUIT	38.78	0 11:59	5.49	1.24	1.00
6	CONDUIT	0.00	0 00:00	0.00	0.00	0.05
7	CONDUIT	1.19	0 12:07	0.95	0.01	0.17
8	CONDUIT	5.68	0 12:04	2.47	0.02	0.21

9	CONDUIT	6.56	0	12:05	4.32	0.04	0.22
10	CONDUIT	7.01	0	12:03	3.58	0.06	0.26
11	CONDUIT	6.98	0	12:04	4.12	0.06	0.27
12	CONDUIT	7.02	0	12:05	3.80	0.05	0.25
13	CONDUIT	9.12	0	12:09	4.91	0.06	0.21
14	CONDUIT	8.80	0	12:12	4.34	0.08	0.22
15	CONDUIT	8.44	0	12:03	2.97	0.08	0.22
16	CONDUIT	8.26	0	12:03	2.27	0.12	0.24
17	CONDUIT	8.26	0	12:04	2.62	0.20	0.24
18	CONDUIT	7.57	0	12:03	2.10	0.06	0.26
19	CONDUIT	20.21	0	00:01	3.95	0.21	0.36
20	CONDUIT	34.53	0	00:00	4.90	0.28	0.49
21	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
23	CONDUIT	4.65	0	12:00	3.83	1.21	0.97
24	CONDUIT	4.59	0	12:00	3.92	0.41	0.63
28	CONDUIT	0.70	0	11:59	1.71	0.02	0.14
29	CONDUIT	0.00	0	00:00	0.00	0.00	0.02
30	CONDUIT	11.48	0	12:00	2.21	0.43	0.55
32	CONDUIT	39.02	0	12:00	5.66	0.59	0.94
33	CONDUIT	38.41	0	11:59	4.59	0.27	0.66
38	CONDUIT	1.21	0	11:57	1.76	0.02	0.17
41	CONDUIT	7.12	0	12:04	3.70	0.08	0.27
link20	CONDUIT	28.94	0	11:59	5.77	0.85	0.78
LINK21	CONDUIT	65.04	0	12:01	6.79	1.59	0.99
Link22	CONDUIT	76.35	0	12:00	4.61	0.48	0.66
Link32	CONDUIT	43.67	0	12:01	5.11	0.22	0.47
Link33	CONDUIT	43.85	0	12:02	5.11	0.22	0.47
Link34	CONDUIT	43.88	0	12:02	5.10	0.22	0.47
Link35	CONDUIT	44.06	0	12:03	4.91	0.23	0.48
link36	CONDUIT	40.90	0	12:02	4.58	0.21	0.49
link37	CONDUIT	40.09	0	12:03	4.19	0.33	0.51
Link38	CONDUIT	40.24	0	12:03	4.52	0.32	0.52
Link39	CONDUIT	45.32	0	12:00	4.87	0.38	0.53
Link40	CONDUIT	45.11	0	12:00	4.75	0.37	0.57
Link41	CONDUIT	42.94	0	12:04	4.78	0.36	0.65
43	CONDUIT	45.72	0	12:07	3.81	0.21	0.86
44	CONDUIT	144.79	0	12:03	6.31	0.30	0.94
45	CONDUIT	144.64	0	12:03	6.21	1.04	0.95
46	CONDUIT	153.81	0	12:03	6.52	0.34	0.97
48	CONDUIT	189.56	0	12:02	8.80	1.22	0.85
49	CONDUIT	155.91	0	12:02	6.58	1.24	1.00
50	CONDUIT	160.51	0	12:02	6.76	0.77	1.00

51	CONDUIT	179.01	0	12:02	7.53	0.62	1.00
52	CONDUIT	182.10	0	12:02	7.66	0.68	1.00
LINK26	CONDUIT	97.32	0	12:03	5.34	0.55	0.72
53	CONDUIT	97.26	0	12:03	6.87	0.55	0.66
54	CONDUIT	96.99	0	12:03	4.78	0.36	0.67
Link29	CONDUIT	104.19	0	12:03	5.48	0.60	0.75
Link30	CONDUIT	104.10	0	12:03	5.01	0.59	0.82
55	CONDUIT	104.00	0	12:03	4.96	0.36	0.83
56	CONDUIT	29.62	0	12:00	4.67	0.83	0.73
57	CONDUIT	38.25	0	12:00	5.82	0.27	0.67
59	CONDUIT	16.75	0	12:01	3.23	0.57	0.73
60	CONDUIT	17.53	0	12:01	2.71	0.43	0.69
61	CONDUIT	1.03	0	12:01	0.24	0.02	0.58
62	CONDUIT	90.44	0	12:00	5.25	0.51	0.69
63	CONDUIT	88.86	0	12:01	5.23	0.51	0.68
64	CONDUIT	87.59	0	12:02	4.95	0.50	0.70
68	CONDUIT	42.53	0	12:02	5.09	0.11	0.46
69	CONDUIT	36.91	0	11:59	7.52	0.80	1.00
70	CONDUIT	35.15	0	12:00	7.16	0.79	1.00

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Up Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
1	1.00	0.21	0.00	0.00	0.41	0.00	0.00	0.38	0.00	0.41
2	1.00	0.00	0.20	0.00	0.79	0.00	0.00	0.00	0.00	0.77
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.47
6	1.00	0.73	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.00	0.00	0.18	0.00	0.82	0.00	0.00	0.00	0.00	0.79
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61
9	1.00	0.00	0.00	0.00	0.10	0.00	0.00	0.89	0.00	0.66
10	1.00	0.00	0.00	0.00	0.84	0.16	0.00	0.00	0.00	0.58
11	1.00	0.00	0.00	0.00	0.81	0.18	0.00	0.00	0.00	0.64
12	1.00	0.00	0.00	0.00	0.37	0.11	0.00	0.52	0.00	0.54
13	1.00	0.00	0.00	0.00	0.03	0.00	0.00	0.96	0.00	0.44
14	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.31

15	1.00	0.00	0.00	0.00	0.07	0.00	0.00	0.93	0.00	0.35
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.03
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
21	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	1.00	0.00	0.00	0.00	0.44	0.00	0.00	0.56	0.00	0.66
24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.68
28	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.06
29	1.00	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.32
32	1.00	0.00	0.00	0.00	0.82	0.18	0.00	0.00	0.00	0.58
33	1.00	0.00	0.00	0.00	0.96	0.01	0.00	0.03	0.00	0.68
38	1.00	0.00	0.00	0.00	0.92	0.08	0.00	0.00	0.00	0.56
41	1.00	0.00	0.00	0.00	0.37	0.00	0.00	0.62	0.00	0.36
link20	1.00	0.01	0.00	0.00	0.02	0.00	0.00	0.97	0.00	0.00
LINK21	1.00	0.00	0.00	0.00	0.77	0.00	0.00	0.23	0.00	0.48
Link22	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.77
Link32	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.68
Link33	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.68
Link34	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.69
Link35	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.69
link36	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.95
link37	1.00	0.01	0.02	0.00	0.97	0.00	0.00	0.00	0.00	0.58
Link38	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.60
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.59
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.60
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61
43	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.75
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.58
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.04
49	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.69
51	1.00	0.00	0.00	0.00	0.98	0.01	0.00	0.00	0.00	0.74
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.97
LINK26	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.84
53	1.00	0.00	0.00	0.00	0.58	0.42	0.00	0.00	0.00	0.67
54	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Link29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.70

Link30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.93
55	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.98
56	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00	0.80
57	1.00	0.03	0.00	0.00	0.02	0.00	0.00	0.94	0.00	0.46
59	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.82
60	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.44
61	1.00	0.00	0.36	0.00	0.64	0.00	0.00	0.00	0.00	1.00
62	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.72
63	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.77
64	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.74
68	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.96
69	1.00	0.20	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.77
70	1.00	0.20	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.46

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 Conduit Surcharge Summary  
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Conduit	Hours Full			Hours	Hours
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
1	0.07	0.13	0.10	0.01	0.03
2	0.01	0.01	0.07	0.01	0.01
3	0.05	0.07	0.05	0.12	0.05
23	0.01	0.09	0.01	0.11	0.01
32	0.01	0.05	0.01	0.01	0.01
LINK21	0.01	0.13	0.01	0.21	0.01
43	0.01	0.01	0.06	0.01	0.01
45	0.01	0.01	0.01	0.09	0.01
46	0.01	0.01	0.23	0.01	0.01
48	0.01	0.10	0.01	0.14	0.01
49	0.01	0.01	0.23	0.21	0.01
50	0.01	0.01	0.06	0.01	0.01
51	0.04	0.06	0.05	0.01	0.01
52	0.05	0.05	0.10	0.01	0.01
61	0.01	0.01	0.14	0.01	0.01
69	0.12	0.12	0.28	0.01	0.02
70	0.11	0.15	0.12	0.01	0.05

Analysis begun on: Thu Feb 01 20:32:43 2018  
Analysis ended on: Thu Feb 01 20:32:50 2018  
Total elapsed time: 00:00:07

003 Existing Conditions

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 60

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 23  
 Number of nodes ..... 73  
 Number of links ..... 67  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

\*\*\*\*\*

Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	1.6-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
1	105.00	750.00	25.00	2.0000	SCS~Type~II	39
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16
17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-26#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-26
3-23#1	13.15	50000.00	100.00	0.5000	SCS~Type~II	3-23
3-30#1	9.17	50000.00	100.00	0.5000	SCS~Type~II	3-30
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

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Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	

2-17	JUNCTION	735.85	15.20	2500.0
2-18	JUNCTION	737.67	14.56	2500.0
2-18-3	JUNCTION	743.25	8.77	2500.0
2-19	JUNCTION	738.55	12.71	2500.0
2-2	JUNCTION	706.68	7.80	2500.0
2-20	JUNCTION	739.68	12.19	0.0
2-21	JUNCTION	740.00	10.58	0.0
2-3	JUNCTION	707.67	7.15	2500.0
2-4	JUNCTION	707.77	7.05	2500.0
2-5	JUNCTION	707.85	8.05	2500.0
2-6	JUNCTION	708.71	7.00	2500.0
2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-21	JUNCTION	734.90	12.10	2500.0
3-22	JUNCTION	735.61	12.39	2500.0
3-23	JUNCTION	737.57	11.70	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-26	JUNCTION	739.33	12.67	2500.0
3-28	JUNCTION	739.94	13.46	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-29	JUNCTION	741.05	11.95	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-30	JUNCTION	742.20	11.80	2500.0
3-31	JUNCTION	742.26	11.74	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0

3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0
3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
38	JUNCTION	755.54	4.80	2500.0
39	JUNCTION	759.88	4.80	2500.0
x-43	JUNCTION	730.59	0.00	0.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
1	8	7	CONDUIT	60.0	2.1005	0.0150
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150

16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150
23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150
24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
link20	3-29	3-28	CONDUIT	39.0	0.1538	0.0150
LINK21	3-28	3-26	CONDUIT	268.0	0.2201	0.0150
Link22	3-26	3-23	CONDUIT	577.0	0.3050	0.0150
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150

55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
56	3-30	3-29	CONDUIT	443.0	0.1670	0.0150
57	2-18-3	3-28	CONDUIT	227.0	1.3261	0.0150
59	3-32	3-31	CONDUIT	248.0	0.2581	0.0150
60	3-31	3-30	CONDUIT	27.0	0.2222	0.0150
61	3-25-7	3-26	CONDUIT	690.0	1.1595	0.0150
62	3-23	3-22	CONDUIT	530.0	0.3698	0.0150
63	3-22	3-21	CONDUIT	195.0	0.3641	0.0150
64	3-21	3-20	CONDUIT	622.0	0.3666	0.0150
68	3-51	3-48	CONDUIT	216.6	2.7944	0.0150
69	38	8	CONDUIT	270.0	1.6669	0.0150
70	39	38	CONDUIT	274.0	1.5841	0.0150

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
1	CIRCULAR	2.50	4.91	0.63	2.50	1	51.52
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95

29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86
33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
link20	CIRCULAR	3.50	9.62	0.88	3.50	1	34.20
LINK21	CIRCULAR	3.50	9.62	0.88	3.50	1	40.91
Link22	CIRCULAR	5.50	23.76	1.38	5.50	1	160.74
Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
56	CIRCULAR	3.50	9.62	0.88	3.50	1	35.64
57	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
59	CIRCULAR	3.00	7.07	0.75	3.00	1	29.37
60	CIRCULAR	3.50	9.62	0.88	3.50	1	41.10
61	CIRCULAR	3.00	7.07	0.75	3.00	1	62.24
62	CIRCULAR	5.50	23.76	1.38	5.50	1	176.98
63	CIRCULAR	5.50	23.76	1.38	5.50	1	175.61
64	CIRCULAR	5.50	23.76	1.38	5.50	1	176.21



Total Precipitation .....	75.353	1.600
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	29.497	0.626
Surface Runoff .....	40.447	0.859
Final Storage .....	5.415	0.115
Continuity Error (%) .....	-0.007	

*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	40.442	13.178
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	40.329	13.142
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.201	0.065
Continuity Error (%) .....	-0.088	

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Highest Continuity Errors  
\*\*\*\*\*  
Node 2-2 (1.75%)

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Time-Step Critical Elements  
\*\*\*\*\*  
Link link37 (29.37%)  
Link Link29 (2.82%)  
Link 50 (1.56%)

\*\*\*\*\*  
Highest Flow Instability Indexes  
\*\*\*\*\*

Link 44 (40)  
 Link 46 (38)  
 Link 51 (31)  
 Link 49 (31)  
 Link 45 (31)

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 Routing Time Step Summary  
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Minimum Time Step : 0.50 sec  
 Average Time Step : 4.04 sec  
 Maximum Time Step : 5.00 sec  
 Percent in Steady State : 0.00  
 Average Iterations per Step : 2.47  
 Percent Not Converging : 2.60

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 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
1	1.60	0.00	0.00	0.72	0.47	1.33	44.45	0.292
16	1.60	0.00	0.00	1.20	0.21	0.06	2.28	0.134
17	1.60	0.00	0.00	0.28	1.17	0.22	7.61	0.730
18	1.60	0.00	0.00	0.00	1.60	0.06	2.43	1.000
19	1.60	0.00	0.00	0.78	0.76	0.06	2.46	0.474
20	1.60	0.00	0.00	0.48	1.07	1.04	35.59	0.668
22	1.60	0.00	0.00	0.00	1.60	0.04	1.74	1.000
23	1.60	0.00	0.00	0.61	0.90	0.61	16.98	0.565
24	1.60	0.00	0.00	0.62	0.78	0.02	0.74	0.490
25	1.60	0.00	0.00	0.82	0.47	0.04	1.07	0.292
26	1.60	0.00	0.00	0.74	0.77	0.44	10.55	0.482
27	1.60	0.00	0.00	0.77	0.73	0.32	6.77	0.457
3-51#1	1.60	0.00	0.00	0.79	0.77	4.48	61.79	0.479
28	1.60	0.00	0.00	0.20	1.41	0.09	4.28	0.878
29	1.60	0.00	0.00	0.73	0.87	0.36	10.82	0.541

30	1.60	0.00	0.00	0.34	1.26	0.69	25.35	0.786
31	1.60	0.00	0.00	0.54	1.06	0.52	17.68	0.661
3-26#1	1.60	0.00	0.00	0.00	1.60	0.47	26.93	1.000
3-23#1	1.60	0.00	0.00	0.00	1.60	0.57	32.54	1.000
3-30#1	1.60	0.00	0.00	0.00	1.60	0.40	22.71	1.000
3-20#1	1.60	0.00	0.00	0.00	1.60	0.60	34.07	1.000
3-41#1	1.60	0.00	0.00	0.00	1.60	0.29	16.57	1.000
3-17#1	1.60	0.00	0.00	0.00	1.60	0.47	26.93	1.000

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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	Reported Max Depth Feet
2	JUNCTION	0.28	5.81	753.55	0 11:58	5.58
2-1	JUNCTION	2.02	2.59	708.68	0 12:02	2.55
2-10	JUNCTION	0.19	1.11	717.76	0 12:03	1.10
2-11	JUNCTION	0.19	1.28	718.64	0 12:02	1.28
2-13	JUNCTION	0.19	1.28	722.42	0 12:01	1.28
2-14	JUNCTION	0.17	1.04	722.83	0 12:02	1.04
2-15A	JUNCTION	0.15	1.03	724.32	0 12:01	1.03
2-15B	JUNCTION	0.16	1.12	732.41	0 11:58	1.12
2-16	JUNCTION	0.07	0.53	733.56	0 12:03	0.53
2-17	JUNCTION	0.00	0.00	735.85	0 00:00	0.00
2-18	JUNCTION	0.00	0.00	737.67	0 00:00	0.00
2-18-3	JUNCTION	1.62	4.45	747.70	0 12:00	4.44
2-19	JUNCTION	0.00	0.00	738.55	0 00:00	0.00
2-2	JUNCTION	1.43	2.06	708.74	0 12:01	2.06
2-20	JUNCTION	0.00	0.00	739.68	0 00:00	0.00
2-21	JUNCTION	0.00	0.00	740.00	0 00:00	0.00
2-3	JUNCTION	0.47	1.24	708.91	0 12:02	1.24
2-4	JUNCTION	0.41	1.40	709.17	0 12:04	1.37
2-5	JUNCTION	0.34	1.41	709.26	0 12:05	1.37
2-6	JUNCTION	0.21	1.24	709.95	0 12:01	1.23
2-7	JUNCTION	0.19	1.10	710.88	0 12:04	1.09
2-9	JUNCTION	0.20	1.29	713.95	0 12:04	1.29
3-1	JUNCTION	1.72	17.38	725.62	0 11:58	8.86

3-10	JUNCTION	1.01	9.41	737.02	0	12:03	5.76
3-12	JUNCTION	1.55	6.28	735.39	0	12:01	6.28
3-16	JUNCTION	0.78	6.16	736.42	0	12:01	6.11
3-17	JUNCTION	0.78	6.15	736.53	0	12:01	6.10
3-18	JUNCTION	0.37	5.04	736.92	0	12:01	5.01
3-19	JUNCTION	0.74	5.25	737.51	0	12:00	5.19
3-20	JUNCTION	0.74	5.25	737.87	0	12:00	5.20
3-21	JUNCTION	0.69	4.92	739.82	0	12:01	4.91
3-22	JUNCTION	0.69	4.99	740.60	0	12:00	4.81
3-23	JUNCTION	0.69	5.02	742.59	0	12:00	4.98
3-25-10	JUNCTION	0.08	0.62	748.48	0	11:57	0.62
3-25-11	JUNCTION	0.08	0.50	750.57	0	11:59	0.50
3-25-12	JUNCTION	0.00	0.00	750.81	0	00:00	0.00
3-25-7	JUNCTION	0.08	0.58	747.91	0	12:00	0.58
3-26	JUNCTION	0.64	4.49	743.82	0	12:00	4.47
3-28	JUNCTION	0.68	10.05	749.99	0	11:58	7.31
3-28-4	JUNCTION	0.48	3.33	748.35	0	12:00	3.30
3-29	JUNCTION	0.80	9.25	750.30	0	11:58	6.31
3-3	JUNCTION	1.14	10.01	722.11	0	12:05	8.73
3-30	JUNCTION	0.47	11.80	754.00	0	11:58	6.23
3-31	JUNCTION	0.44	11.74	754.00	0	11:58	6.19
3-32	JUNCTION	0.40	10.75	753.65	0	11:58	5.96
3-32-1	JUNCTION	0.25	5.96	752.43	0	11:58	3.02
3-33	JUNCTION	0.36	11.80	754.83	0	11:58	5.89
3-38	JUNCTION	0.78	4.34	733.47	0	12:03	4.33
3-39	JUNCTION	0.77	3.71	733.56	0	12:02	3.67
3-4	JUNCTION	1.12	9.11	725.64	0	11:59	8.06
3-40	JUNCTION	0.76	3.57	733.69	0	12:02	3.47
3-41	JUNCTION	0.77	3.36	733.77	0	12:02	3.32
3-42	JUNCTION	0.75	3.29	733.81	0	12:03	3.25
3-43	JUNCTION	0.75	3.25	733.84	0	12:03	3.19
3-44	JUNCTION	0.72	3.15	734.33	0	12:04	3.15
3-45	JUNCTION	0.72	3.15	734.83	0	12:03	3.15
3-46	JUNCTION	0.72	3.15	736.25	0	12:03	3.15
3-47	JUNCTION	0.72	3.15	737.00	0	12:03	3.14
3-48	JUNCTION	0.72	3.15	737.72	0	12:03	3.14
3-5	JUNCTION	1.10	9.22	726.02	0	11:59	8.12
3-51	JUNCTION	0.70	3.10	743.72	0	12:03	3.10
3-6	JUNCTION	1.73	10.44	726.77	0	12:03	10.32
3-7	JUNCTION	1.05	7.02	729.90	0	12:01	6.96
3-9	JUNCTION	1.08	8.29	731.39	0	12:03	8.29
5	JUNCTION	0.51	6.50	754.09	0	11:59	3.47

6	JUNCTION	0.53	5.21	753.43	0	11:57	4.46
7	JUNCTION	0.45	5.45	755.63	0	11:57	4.38
8	JUNCTION	0.82	5.25	756.29	0	11:57	4.27
38	JUNCTION	0.45	4.80	760.34	0	12:01	4.70
39	JUNCTION	0.45	4.81	764.69	0	11:58	4.81
x-43	JUNCTION	0.00	0.00	730.59	0	00:00	0.00
002	OUTFALL	2.51	2.51	708.10	0	00:00	2.51
003	OUTFALL	2.55	4.57	711.67	0	12:01	4.57

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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	Flow Balance Error Percent
2	JUNCTION	6.77	6.77	0 12:00	0.318	0.318	0.171
2-1	JUNCTION	35.59	47.06	0 12:00	1.04	1.56	0.691
2-10	JUNCTION	0.00	11.68	0 12:02	0	0.339	-0.061
2-11	JUNCTION	0.00	11.71	0 12:01	0	0.339	0.010
2-13	JUNCTION	2.43	11.47	0 12:01	0.0608	0.34	0.086
2-14	JUNCTION	0.00	9.30	0 12:01	0	0.278	-0.169
2-15A	JUNCTION	0.00	11.01	0 11:59	0	0.279	0.057
2-15B	JUNCTION	7.61	9.57	0 12:00	0.215	0.278	-0.054
2-16	JUNCTION	2.28	2.28	0 12:00	0.0634	0.0634	0.051
2-17	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-18	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-18-3	JUNCTION	0.00	55.73	0 12:00	0	1.78	-0.058
2-19	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-2	JUNCTION	2.46	20.21	0 00:01	0.0573	0.479	1.777
2-20	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-21	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-3	JUNCTION	0.00	12.37	0 12:05	0	0.389	0.579
2-4	JUNCTION	0.00	12.42	0 12:04	0	0.385	0.145
2-5	JUNCTION	0.00	13.14	0 12:04	0	0.381	-0.718
2-6	JUNCTION	1.74	12.00	0 12:04	0.0395	0.38	0.064
2-7	JUNCTION	0.00	11.77	0 12:04	0	0.34	-0.179
2-9	JUNCTION	0.00	11.25	0 12:03	0	0.339	-0.156

3-1	JUNCTION	10.82	271.71	0	12:01	0.36	11.7	0.048
3-10	JUNCTION	0.00	233.98	0	12:02	0	10	-0.155
3-12	JUNCTION	0.00	162.64	0	12:01	0	5.28	0.017
3-16	JUNCTION	0.00	162.47	0	12:01	0	5.28	-0.047
3-17	JUNCTION	26.93	162.63	0	12:01	0.473	5.28	0.098
3-18	JUNCTION	0.00	152.36	0	12:00	0	4.81	-0.038
3-19	JUNCTION	0.00	152.53	0	12:00	0	4.81	-0.026
3-20	JUNCTION	34.07	153.68	0	12:00	0.598	4.81	0.001
3-21	JUNCTION	0.00	140.21	0	12:00	0	4.21	-0.008
3-22	JUNCTION	0.00	141.41	0	12:00	0	4.21	0.012
3-23	JUNCTION	32.54	144.96	0	12:00	0.571	4.21	0.029
3-25-10	JUNCTION	0.74	1.63	0	11:57	0.0183	0.0564	0.000
3-25-11	JUNCTION	1.07	1.07	0	11:57	0.0381	0.0381	-0.017
3-25-12	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
3-25-7	JUNCTION	0.00	1.63	0	11:57	0	0.0564	0.003
3-26	JUNCTION	26.93	122.64	0	11:59	0.473	3.64	0.024
3-28	JUNCTION	0.00	97.92	0	12:00	0	3.11	0.060
3-28-4	JUNCTION	0.00	57.66	0	11:57	0	1.78	-0.015
3-29	JUNCTION	0.00	44.77	0	11:58	0	1.33	-0.153
3-3	JUNCTION	0.00	264.11	0	12:03	0	11.3	0.060
3-30	JUNCTION	22.71	43.62	0	11:58	0.398	1.33	0.025
3-31	JUNCTION	0.00	25.18	0	11:58	0	0.931	-0.037
3-32	JUNCTION	0.00	25.47	0	11:58	0	0.932	0.046
3-32-1	JUNCTION	0.00	7.25	0	11:59	0	0.317	-0.224
3-33	JUNCTION	16.98	16.98	0	12:00	0.613	0.613	-0.014
3-38	JUNCTION	0.00	71.48	0	12:03	0	4.76	-0.028
3-39	JUNCTION	0.00	69.10	0	12:02	0	4.76	-0.009
3-4	JUNCTION	25.35	264.18	0	12:03	0.69	11.3	-0.027
3-40	JUNCTION	0.00	67.85	0	12:03	0	4.76	0.020
3-41	JUNCTION	16.57	68.16	0	12:03	0.291	4.77	0.038
3-42	JUNCTION	0.00	62.42	0	12:03	0	4.48	-0.008
3-43	JUNCTION	0.00	61.57	0	12:04	0	4.48	0.008
3-44	JUNCTION	0.00	61.58	0	12:03	0	4.47	-0.041
3-45	JUNCTION	0.00	61.62	0	12:03	0	4.47	0.002
3-46	JUNCTION	0.00	61.66	0	12:03	0	4.47	0.022
3-47	JUNCTION	0.00	61.68	0	12:03	0	4.47	-0.014
3-48	JUNCTION	0.00	61.74	0	12:03	0	4.48	0.185
3-5	JUNCTION	0.00	244.41	0	12:04	0	10.7	0.090
3-51	JUNCTION	61.79	61.79	0	12:03	4.48	4.48	-0.110
3-6	JUNCTION	4.28	272.26	0	12:02	0.0877	10.7	0.117
3-7	JUNCTION	17.68	266.71	0	12:01	0.523	10.6	-0.135
3-9	JUNCTION	0.00	250.07	0	12:02	0	10.1	0.150

5	JUNCTION	0.00	58.18	0	11:57	0	1.78	-0.157
6	JUNCTION	10.55	55.53	0	11:58	0.444	1.78	0.051
7	JUNCTION	0.00	45.42	0	11:58	0	1.34	0.255
8	JUNCTION	0.00	45.36	0	11:58	0	1.34	0.046
38	JUNCTION	0.00	45.70	0	11:58	0	1.34	0.152
39	JUNCTION	44.45	44.45	0	12:00	1.33	1.33	-0.478
x-43	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
002	OUTFALL	0.00	44.41	0	11:59	0	1.57	0.000
003	OUTFALL	0.00	271.71	0	12:01	0	11.8	0.000

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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
2	JUNCTION	0.20	4.558	0.000
2-19	JUNCTION	48.00	0.000	12.710
2-20	JUNCTION	48.00	0.000	12.190
2-21	JUNCTION	48.00	0.000	10.580
3-1	JUNCTION	0.30	11.882	0.000
3-10	JUNCTION	0.17	3.910	5.230
3-16	JUNCTION	0.08	0.658	3.582
3-17	JUNCTION	0.08	0.649	3.471
3-28	JUNCTION	0.08	4.589	3.411
3-29	JUNCTION	0.12	5.343	2.697
3-3	JUNCTION	0.26	4.512	0.000
3-30	JUNCTION	0.10	8.300	0.000
3-31	JUNCTION	0.10	8.241	0.000
3-32	JUNCTION	0.07	7.250	0.000
3-32-1	JUNCTION	0.04	4.457	0.000
3-33	JUNCTION	0.06	8.302	0.000
3-4	JUNCTION	0.27	3.612	0.000
3-5	JUNCTION	0.25	3.716	0.000
3-6	JUNCTION	0.41	4.943	0.000
3-7	JUNCTION	0.21	1.522	0.000
3-9	JUNCTION	0.24	2.794	0.000

5	JUNCTION	0.19	3.500	0.000
6	JUNCTION	0.20	2.208	0.000
7	JUNCTION	0.12	2.451	0.000
8	JUNCTION	0.27	2.303	0.000
38	JUNCTION	0.26	2.304	0.000
39	JUNCTION	0.27	2.312	0.000
x-43	JUNCTION	48.00	0.000	0.000

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Node Flooding Summary  
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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 Poned Depth Feet
2	0.02	2.01	0 11:58	0.000	0.008
3-1	0.01	12.09	0 11:58	0.000	0.002
3-3	0.02	21.48	0 12:05	0.002	0.012
3-31	0.01	1.45	0 11:58	0.000	0.001
3-32	0.01	0.92	0 11:58	0.000	0.000
3-32-1	0.01	2.85	0 11:58	0.000	0.007
3-33	0.01	7.49	0 11:58	0.000	0.002
3-4	0.01	29.83	0 11:59	0.001	0.022
3-5	0.01	11.65	0 11:59	0.000	0.006
3-6	0.12	35.01	0 11:59	0.022	0.443
3-7	0.04	42.92	0 12:01	0.009	0.072
3-9	0.02	27.76	0 12:00	0.003	0.014
5	0.01	3.19	0 11:59	0.000	0.000
6	0.03	3.13	0 12:03	0.000	0.008
7	0.01	2.64	0 12:03	0.000	0.001
8	0.02	7.39	0 12:04	0.001	0.003
38	0.05	6.80	0 12:02	0.001	0.004
39	0.06	11.36	0 11:57	0.002	0.012

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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
002	92.73	2.72	44.41	1.567
003	99.88	18.18	271.71	11.788
System	96.30	20.90	315.56	13.356

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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
1	CONDUIT	45.42	0 11:58	9.25	0.88	1.00
2	CONDUIT	45.49	0 11:58	6.43	0.85	1.00
3	CONDUIT	58.18	0 11:57	8.23	1.86	1.00
6	CONDUIT	0.00	0 00:00	0.00	0.00	0.05
7	CONDUIT	2.08	0 12:03	1.05	0.02	0.18
8	CONDUIT	11.01	0 11:59	4.09	0.05	0.24
9	CONDUIT	9.30	0 12:01	4.49	0.05	0.27
10	CONDUIT	11.71	0 12:01	4.12	0.10	0.37
11	CONDUIT	11.68	0 12:02	4.24	0.10	0.34
12	CONDUIT	9.28	0 12:02	3.79	0.07	0.32
13	CONDUIT	11.25	0 12:03	5.16	0.07	0.25
14	CONDUIT	10.84	0 12:04	4.62	0.10	0.24
15	CONDUIT	13.14	0 12:04	3.68	0.12	0.24
16	CONDUIT	12.42	0 12:04	2.79	0.18	0.28
17	CONDUIT	12.37	0 12:05	3.10	0.29	0.26
18	CONDUIT	13.82	0 12:05	2.80	0.11	0.32
19	CONDUIT	20.21	0 00:01	3.95	0.21	0.44
20	CONDUIT	44.41	0 11:59	4.90	0.36	0.51
21	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
23	CONDUIT	7.25	0 11:59	5.91	1.89	1.00

24	CONDUIT	9.79	0	11:58	5.54	0.87	1.00
28	CONDUIT	0.93	0	11:59	1.85	0.03	0.16
29	CONDUIT	0.00	0	00:00	0.00	0.00	0.04
30	CONDUIT	19.99	0	11:58	2.18	0.75	1.00
32	CONDUIT	57.66	0	11:57	8.16	0.88	1.00
33	CONDUIT	55.73	0	12:00	5.01	0.39	0.83
38	CONDUIT	1.63	0	11:57	1.77	0.02	0.20
41	CONDUIT	11.77	0	12:04	4.35	0.13	0.33
link20	CONDUIT	45.17	0	11:58	5.72	1.32	1.00
LINK21	CONDUIT	97.94	0	12:00	10.18	2.39	1.00
Link22	CONDUIT	117.83	0	12:00	5.42	0.73	0.86
Link32	CONDUIT	61.68	0	12:03	5.11	0.32	0.63
Link33	CONDUIT	61.66	0	12:03	5.15	0.32	0.63
Link34	CONDUIT	61.62	0	12:03	5.13	0.31	0.63
Link35	CONDUIT	61.58	0	12:03	5.09	0.32	0.63
link36	CONDUIT	61.57	0	12:04	4.72	0.32	0.64
link37	CONDUIT	62.42	0	12:03	4.69	0.51	0.65
Link38	CONDUIT	62.64	0	12:03	4.63	0.50	0.66
Link39	CONDUIT	67.85	0	12:03	4.79	0.57	0.69
Link40	CONDUIT	69.10	0	12:02	4.84	0.57	0.72
Link41	CONDUIT	71.48	0	12:03	4.71	0.60	0.80
43	CONDUIT	72.43	0	12:02	3.84	0.34	0.93
44	CONDUIT	250.07	0	12:02	10.53	0.52	1.00
45	CONDUIT	250.92	0	12:01	10.56	1.81	1.00
46	CONDUIT	269.06	0	12:02	11.33	0.59	1.00
48	CONDUIT	271.71	0	12:01	11.92	1.75	0.92
49	CONDUIT	244.41	0	12:04	10.29	1.94	1.00
50	CONDUIT	244.47	0	12:04	10.29	1.17	1.00
51	CONDUIT	264.11	0	12:03	11.12	0.92	1.00
52	CONDUIT	264.10	0	12:03	11.12	0.99	1.00
LINK26	CONDUIT	152.53	0	12:00	6.53	0.87	0.95
53	CONDUIT	152.36	0	12:00	6.78	0.87	0.93
54	CONDUIT	151.22	0	12:01	5.27	0.56	0.96
Link29	CONDUIT	162.47	0	12:01	6.84	0.94	1.00
Link30	CONDUIT	162.64	0	12:01	6.85	0.92	1.00
55	CONDUIT	161.88	0	12:01	6.82	0.56	1.00
56	CONDUIT	44.77	0	11:58	4.67	1.26	1.00
57	CONDUIT	54.98	0	12:00	5.73	0.38	0.91
59	CONDUIT	25.18	0	11:58	3.56	0.86	1.00
60	CONDUIT	23.98	0	12:00	2.69	0.58	1.00
61	CONDUIT	1.44	0	12:00	0.33	0.02	0.60
62	CONDUIT	141.41	0	12:00	6.28	0.80	0.91

63	CONDUIT	140.21	0	12:00	6.28	0.80	0.90
64	CONDUIT	134.60	0	12:00	5.91	0.76	0.92
68	CONDUIT	61.74	0	12:03	5.24	0.16	0.63
69	CONDUIT	45.36	0	11:58	9.24	0.99	1.00
70	CONDUIT	45.70	0	11:58	9.31	1.02	1.00

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
1	1.00	0.16	0.00	0.00	0.67	0.00	0.00	0.17	0.00	0.63
2	1.00	0.00	0.16	0.00	0.84	0.00	0.00	0.00	0.00	0.78
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.55
6	1.00	0.55	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.00	0.00	0.14	0.00	0.86	0.00	0.00	0.00	0.00	0.78
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
9	1.00	0.00	0.00	0.00	0.12	0.02	0.00	0.86	0.00	0.67
10	1.00	0.00	0.00	0.00	0.88	0.12	0.00	0.00	0.00	0.60
11	1.00	0.00	0.00	0.00	0.84	0.15	0.00	0.00	0.00	0.65
12	1.00	0.00	0.00	0.00	0.47	0.11	0.00	0.42	0.00	0.57
13	1.00	0.00	0.00	0.00	0.05	0.00	0.00	0.95	0.00	0.49
14	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.33
15	1.00	0.00	0.00	0.00	0.08	0.00	0.00	0.92	0.00	0.32
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.04
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
21	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	1.00	0.00	0.00	0.00	0.43	0.00	0.00	0.57	0.00	0.70
24	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.00	0.72
28	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.29
29	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.32
32	1.00	0.00	0.00	0.00	0.88	0.12	0.00	0.00	0.00	0.76
33	1.00	0.00	0.00	0.00	0.97	0.01	0.00	0.02	0.00	0.82

38	1.00	0.00	0.00	0.00	0.96	0.04	0.00	0.00	0.00	0.63
41	1.00	0.00	0.00	0.00	0.47	0.00	0.00	0.53	0.00	0.42
link20	1.00	0.00	0.00	0.00	0.03	0.00	0.00	0.96	0.00	0.00
LINK21	1.00	0.00	0.00	0.00	0.88	0.00	0.00	0.12	0.00	0.49
Link22	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.79
Link32	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.71
Link33	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.70
Link34	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.71
Link35	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.71
link36	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.94
link37	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.62
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.63
43	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.83
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.98
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.52
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.07
49	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.69
51	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.77
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.94
LINK26	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.84
53	1.00	0.00	0.00	0.00	0.55	0.45	0.00	0.00	0.00	0.77
54	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
Link29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.75
Link30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.91
55	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.97
56	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81
57	1.00	0.02	0.00	0.00	0.04	0.00	0.00	0.94	0.00	0.65
59	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.79
60	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.42
61	1.00	0.00	0.32	0.00	0.68	0.00	0.00	0.00	0.00	1.00
62	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.77
63	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.80
64	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.79
68	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.97
69	1.00	0.16	0.00	0.00	0.84	0.00	0.00	0.00	0.00	0.80
70	1.00	0.16	0.00	0.00	0.84	0.00	0.00	0.00	0.00	0.62

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 Conduit Surcharge Summary  
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Conduit	----- Both Ends	Hours Full Upstream	----- Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
1	0.20	0.26	0.22	0.01	0.03
2	0.12	0.12	0.20	0.01	0.02
3	0.18	0.20	0.18	0.24	0.17
23	0.14	0.20	0.14	0.22	0.13
24	0.04	0.04	0.09	0.01	0.01
30	0.06	0.06	0.07	0.01	0.01
32	0.09	0.18	0.09	0.01	0.02
link20	0.12	0.12	0.13	0.04	0.04
LINK21	0.16	0.26	0.16	0.35	0.16
43	0.01	0.01	0.28	0.01	0.01
44	0.13	0.13	0.24	0.01	0.01
45	0.18	0.24	0.18	0.30	0.16
46	0.18	0.19	0.40	0.01	0.01
48	0.01	0.30	0.01	0.32	0.01
49	0.25	0.25	0.40	0.39	0.01
50	0.24	0.25	0.27	0.12	0.18
51	0.25	0.27	0.26	0.01	0.04
52	0.26	0.26	0.30	0.01	0.04
54	0.01	0.01	0.08	0.01	0.01
Link29	0.08	0.08	0.08	0.01	0.01
Link30	0.08	0.08	0.15	0.01	0.01
55	0.01	0.01	0.13	0.01	0.01
56	0.10	0.10	0.12	0.04	0.03
57	0.01	0.01	0.08	0.01	0.01
59	0.11	0.11	0.13	0.01	0.01
60	0.10	0.10	0.10	0.01	0.01
61	0.01	0.01	0.27	0.01	0.01
69	0.24	0.24	0.41	0.01	0.05
70	0.23	0.26	0.24	0.01	0.10

Analysis begun on: Thu Feb 01 20:35:08 2018

Analysis ended on: Thu Feb 01 20:35:17 2018

Total elapsed time: 00:00:09

003 Existing Conditions

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 60

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 23  
 Number of nodes ..... 73  
 Number of links ..... 67  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	4.6-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
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1	105.00	750.00	25.00	2.0000	SCS~Type~II	39
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16
17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-26#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-26
3-23#1	13.15	50000.00	100.00	0.5000	SCS~Type~II	3-23
3-30#1	9.17	50000.00	100.00	0.5000	SCS~Type~II	3-30
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

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Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	
2-17	JUNCTION	735.85	15.20	2500.0	
2-18	JUNCTION	737.67	14.56	2500.0	

2-18-3	JUNCTION	743.25	8.77	2500.0
2-19	JUNCTION	738.55	12.71	2500.0
2-2	JUNCTION	706.68	7.80	2500.0
2-20	JUNCTION	739.68	12.19	0.0
2-21	JUNCTION	740.00	10.58	0.0
2-3	JUNCTION	707.67	7.15	2500.0
2-4	JUNCTION	707.77	7.05	2500.0
2-5	JUNCTION	707.85	8.05	2500.0
2-6	JUNCTION	708.71	7.00	2500.0
2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-21	JUNCTION	734.90	12.10	2500.0
3-22	JUNCTION	735.61	12.39	2500.0
3-23	JUNCTION	737.57	11.70	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-26	JUNCTION	739.33	12.67	2500.0
3-28	JUNCTION	739.94	13.46	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-29	JUNCTION	741.05	11.95	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-30	JUNCTION	742.20	11.80	2500.0
3-31	JUNCTION	742.26	11.74	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0

3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0
3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
38	JUNCTION	755.54	4.80	2500.0
39	JUNCTION	759.88	4.80	2500.0
x-43	JUNCTION	730.59	0.00	0.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
1	8	7	CONDUIT	60.0	2.1005	0.0150
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150
16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150

20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150
23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150
24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
link20	3-29	3-28	CONDUIT	39.0	0.1538	0.0150
LINK21	3-28	3-26	CONDUIT	268.0	0.2201	0.0150
Link22	3-26	3-23	CONDUIT	577.0	0.3050	0.0150
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
56	3-30	3-29	CONDUIT	443.0	0.1670	0.0150
57	2-18-3	3-28	CONDUIT	227.0	1.3261	0.0150
59	3-32	3-31	CONDUIT	248.0	0.2581	0.0150
60	3-31	3-30	CONDUIT	27.0	0.2222	0.0150

61	3-25-7	3-26	CONDUIT	690.0	1.1595	0.0150
62	3-23	3-22	CONDUIT	530.0	0.3698	0.0150
63	3-22	3-21	CONDUIT	195.0	0.3641	0.0150
64	3-21	3-20	CONDUIT	622.0	0.3666	0.0150
68	3-51	3-48	CONDUIT	216.6	2.7944	0.0150
69	38	8	CONDUIT	270.0	1.6669	0.0150
70	39	38	CONDUIT	274.0	1.5841	0.0150

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
1	CIRCULAR	2.50	4.91	0.63	2.50	1	51.52
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86
33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59

link20	CIRCULAR	3.50	9.62	0.88	3.50	1	34.20
LINK21	CIRCULAR	3.50	9.62	0.88	3.50	1	40.91
Link22	CIRCULAR	5.50	23.76	1.38	5.50	1	160.74
Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
56	CIRCULAR	3.50	9.62	0.88	3.50	1	35.64
57	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
59	CIRCULAR	3.00	7.07	0.75	3.00	1	29.37
60	CIRCULAR	3.50	9.62	0.88	3.50	1	41.10
61	CIRCULAR	3.00	7.07	0.75	3.00	1	62.24
62	CIRCULAR	5.50	23.76	1.38	5.50	1	176.98
63	CIRCULAR	5.50	23.76	1.38	5.50	1	175.61
64	CIRCULAR	5.50	23.76	1.38	5.50	1	176.21
68	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
69	CIRCULAR	2.50	4.91	0.63	2.50	1	45.90
70	CIRCULAR	2.50	4.91	0.63	2.50	1	44.74

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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.

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Analysis Options

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Flow Units ..... CFS  
 Process Models:  
   Rainfall/Runoff ..... YES  
   RDII ..... NO  
   Snowmelt ..... NO  
   Groundwater ..... NO  
   Flow Routing ..... YES  
   Ponding Allowed ..... YES  
   Water Quality ..... NO  
 Infiltration Method ..... CURVE\_NUMBER  
 Flow Routing Method ..... DYNWAVE  
 Starting Date ..... MAY-30-2015 00:00:00  
 Ending Date ..... JUN-01-2015 00:00:00  
 Antecedent Dry Days ..... 0.0  
 Report Time Step ..... 00:02:00  
 Wet Time Step ..... 00:01:00  
 Dry Time Step ..... 00:05:00  
 Routing Time Step ..... 5.00 sec  
 Variable Time Step ..... YES  
 Maximum Trials ..... 10  
 Number of Threads ..... 1  
 Head Tolerance ..... 0.005000 ft

*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	216.641	4.600
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	45.913	0.975
Surface Runoff .....	164.699	3.497
Final Storage .....	6.047	0.128
Continuity Error (%) .....	-0.008	

	Volume acre-feet	Volume 10 <sup>6</sup> gal
*****		
Flow Routing Continuity		
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	164.700	53.670
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	164.823	53.710
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.211	0.069
Continuity Error (%) .....	-0.171	

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Time-Step Critical Elements

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- Link link37 (50.89%)
- Link Link29 (3.56%)
- Link 12 (2.38%)
- Link 50 (2.29%)

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Highest Flow Instability Indexes

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- Link 44 (37)
- Link 46 (32)
- Link 33 (31)
- Link 51 (30)
- Link Link32 (30)

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Routing Time Step Summary

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- Minimum Time Step : 0.50 sec
- Average Time Step : 3.00 sec
- Maximum Time Step : 5.00 sec
- Percent in Steady State : 0.00

Average Iterations per Step : 3.03  
 Percent Not Converging : 7.58

\*\*\*\*\*  
 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
1	4.60	0.00	0.00	1.03	3.13	8.91	187.56	0.679
16	4.60	0.00	0.00	2.18	2.03	0.60	8.96	0.442
17	4.60	0.00	0.00	0.51	3.95	0.73	29.45	0.858
18	4.60	0.00	0.00	0.00	4.60	0.17	8.11	1.000
19	4.60	0.00	0.00	1.45	3.09	0.23	10.12	0.672
20	4.60	0.00	0.00	0.68	3.85	3.73	144.09	0.836
22	4.60	0.00	0.00	0.00	4.60	0.11	5.52	1.000
23	4.60	0.00	0.00	0.87	3.62	2.46	71.90	0.787
24	4.60	0.00	0.00	0.89	3.50	0.08	4.90	0.761
25	4.60	0.00	0.00	1.17	3.09	0.25	12.79	0.672
26	4.60	0.00	0.00	1.05	3.43	1.97	48.09	0.746
27	4.60	0.00	0.00	1.10	3.37	1.47	31.00	0.734
3-51#1	4.60	0.00	0.00	1.27	3.28	19.18	319.13	0.714
28	4.60	0.00	0.00	0.32	4.28	0.27	14.25	0.930
29	4.60	0.00	0.00	1.22	3.38	1.40	50.00	0.734
30	4.60	0.00	0.00	0.57	4.03	2.21	93.93	0.876
31	4.60	0.00	0.00	0.90	3.70	1.83	67.98	0.804
3-26#1	4.60	0.00	0.00	0.00	4.60	1.36	77.47	1.000
3-23#1	4.60	0.00	0.00	0.00	4.60	1.64	93.63	1.000
3-30#1	4.60	0.00	0.00	0.00	4.60	1.15	65.30	1.000
3-20#1	4.60	0.00	0.00	0.00	4.60	1.72	98.05	1.000
3-41#1	4.60	0.00	0.00	0.00	4.60	0.84	47.64	1.000
3-17#1	4.60	0.00	0.00	0.00	4.60	1.36	77.47	1.000

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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	Reported Max Depth Feet
2	JUNCTION	2.02	18.25	765.99	0 12:53	18.25
2-1	JUNCTION	2.09	6.84	712.93	0 12:00	6.75
2-10	JUNCTION	0.46	2.83	719.48	0 12:02	2.83
2-11	JUNCTION	0.48	3.05	720.41	0 12:01	3.05
2-13	JUNCTION	0.49	3.10	724.24	0 12:01	3.04
2-14	JUNCTION	0.45	2.72	724.51	0 12:01	2.68
2-15A	JUNCTION	0.43	2.70	725.99	0 12:01	2.65
2-15B	JUNCTION	0.41	2.22	733.51	0 12:00	2.21
2-16	JUNCTION	0.30	1.11	734.14	0 11:58	1.11
2-17	JUNCTION	0.00	0.00	735.85	0 00:00	0.00
2-18	JUNCTION	0.00	0.00	737.67	0 00:00	0.00
2-18-3	JUNCTION	2.74	12.51	755.76	0 12:42	12.51
2-19	JUNCTION	0.00	0.00	738.55	0 00:00	0.00
2-2	JUNCTION	1.51	6.55	713.23	0 12:00	6.27
2-20	JUNCTION	0.00	0.00	739.68	0 00:00	0.00
2-21	JUNCTION	0.00	0.00	740.00	0 00:00	0.00
2-3	JUNCTION	0.60	5.92	713.59	0 12:00	5.38
2-4	JUNCTION	0.60	5.95	713.72	0 12:00	5.36
2-5	JUNCTION	0.55	5.90	713.75	0 12:00	5.32
2-6	JUNCTION	0.47	5.24	713.95	0 12:00	4.58
2-7	JUNCTION	0.47	4.16	713.94	0 12:00	3.54
2-9	JUNCTION	0.49	3.04	715.70	0 12:02	3.02
3-1	JUNCTION	2.98	17.39	725.63	0 14:10	13.45
3-10	JUNCTION	2.63	17.66	745.27	0 12:31	17.66
3-12	JUNCTION	2.84	16.65	745.76	0 12:32	16.65
3-16	JUNCTION	2.10	16.18	746.44	0 12:33	16.17
3-17	JUNCTION	2.10	16.13	746.51	0 12:33	16.13
3-18	JUNCTION	1.52	14.97	746.85	0 12:33	14.97
3-19	JUNCTION	2.00	14.80	747.06	0 12:33	14.80
3-20	JUNCTION	2.00	14.64	747.26	0 12:33	14.64
3-21	JUNCTION	1.91	14.12	749.02	0 12:02	14.10
3-22	JUNCTION	1.90	14.06	749.67	0 12:02	14.06
3-23	JUNCTION	1.86	14.25	751.82	0 12:00	14.20
3-25-10	JUNCTION	0.30	6.32	754.18	0 11:52	5.75
3-25-11	JUNCTION	0.20	5.15	755.22	0 11:56	3.88
3-25-12	JUNCTION	0.18	5.10	755.91	0 11:56	3.14
3-25-7	JUNCTION	0.32	7.30	754.63	0 11:52	6.25
3-26	JUNCTION	1.77	13.66	752.99	0 12:00	13.62
3-28	JUNCTION	2.20	15.04	754.98	0 12:33	15.04

3-28-4	JUNCTION	1.56	10.90	755.92	0	12:43	10.90
3-29	JUNCTION	1.88	14.01	755.06	0	12:31	14.01
3-3	JUNCTION	2.80	16.17	728.27	0	12:12	16.17
3-30	JUNCTION	1.55	14.38	756.58	0	12:03	14.38
3-31	JUNCTION	1.52	14.39	756.65	0	12:03	14.38
3-32	JUNCTION	1.46	15.02	757.92	0	12:08	15.02
3-32-1	JUNCTION	1.13	11.97	758.44	0	12:19	11.97
3-33	JUNCTION	1.41	15.29	758.32	0	12:04	15.27
3-38	JUNCTION	2.09	17.24	746.37	0	12:31	17.24
3-39	JUNCTION	2.10	18.20	748.05	0	12:30	18.20
3-4	JUNCTION	2.89	18.34	734.87	0	12:13	18.34
3-40	JUNCTION	2.10	18.56	748.68	0	12:29	18.56
3-41	JUNCTION	2.12	18.96	749.37	0	12:28	18.95
3-42	JUNCTION	2.11	19.08	749.60	0	12:28	19.08
3-43	JUNCTION	2.11	19.16	749.75	0	12:28	19.16
3-44	JUNCTION	2.06	19.09	750.27	0	12:27	19.08
3-45	JUNCTION	2.05	19.03	750.71	0	12:26	19.03
3-46	JUNCTION	2.02	18.92	752.02	0	12:22	18.92
3-47	JUNCTION	2.02	18.92	752.77	0	12:20	18.92
3-48	JUNCTION	2.01	18.99	753.56	0	12:17	18.98
3-5	JUNCTION	2.88	18.71	735.51	0	12:15	18.71
3-51	JUNCTION	1.75	15.15	755.77	0	12:09	15.14
3-6	JUNCTION	3.80	22.38	738.71	0	12:23	22.38
3-7	JUNCTION	2.81	19.25	742.13	0	12:28	19.25
3-9	JUNCTION	2.88	20.18	743.28	0	12:29	20.18
5	JUNCTION	1.68	11.70	759.29	0	12:51	11.70
6	JUNCTION	1.96	14.75	762.97	0	12:52	14.75
7	JUNCTION	1.88	15.46	765.64	0	12:52	15.46
8	JUNCTION	2.36	16.45	767.49	0	12:50	16.45
38	JUNCTION	2.19	21.05	776.59	0	12:34	21.05
39	JUNCTION	2.50	30.44	790.32	0	12:11	30.42
x-43	JUNCTION	0.00	0.00	730.59	0	00:00	0.00
002	OUTFALL	2.52	3.88	709.47	0	12:00	3.86
003	OUTFALL	2.76	5.10	712.20	0	12:08	5.10

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Node Inflow Summary  
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Maximum Lateral	Maximum Total	Time of Max	Lateral Inflow	Total Inflow	Flow Balance
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Node	Type	Inflow CFS	Inflow CFS	Occurrence days hr:min	Volume 10^6 gal	Volume 10^6 gal	Error Percent
2	JUNCTION	31.00	31.00	0 12:00	1.47	1.47	0.012
2-1	JUNCTION	144.09	184.04	0 12:00	3.73	5.65	0.180
2-10	JUNCTION	0.00	43.12	0 12:01	0	1.5	-0.093
2-11	JUNCTION	0.00	43.47	0 12:01	0	1.5	0.041
2-13	JUNCTION	8.11	43.68	0 12:01	0.175	1.5	-0.037
2-14	JUNCTION	0.00	36.53	0 12:01	0	1.33	-0.029
2-15A	JUNCTION	0.00	37.78	0 12:00	0	1.33	0.109
2-15B	JUNCTION	29.45	39.74	0 11:59	0.726	1.33	-0.110
2-16	JUNCTION	8.96	8.96	0 12:00	0.599	0.599	0.060
2-17	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-18	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-18-3	JUNCTION	0.00	88.27	0 13:54	0	10.9	-0.038
2-19	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-2	JUNCTION	10.12	61.87	0 12:05	0.233	1.89	0.394
2-20	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-21	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-3	JUNCTION	0.00	54.20	0 12:04	0	1.63	0.415
2-4	JUNCTION	0.00	52.65	0 12:04	0	1.63	0.022
2-5	JUNCTION	0.00	50.24	0 12:02	0	1.62	-0.368
2-6	JUNCTION	5.52	48.42	0 12:02	0.114	1.62	-0.074
2-7	JUNCTION	0.00	42.62	0 12:02	0	1.5	-0.026
2-9	JUNCTION	0.00	42.96	0 12:02	0	1.5	-0.123
3-1	JUNCTION	50.00	372.37	0 12:08	1.4	48.2	0.021
3-10	JUNCTION	0.00	384.72	0 11:50	0	42.4	-0.057
3-12	JUNCTION	0.00	264.55	0 11:48	0	22.4	0.044
3-16	JUNCTION	0.00	264.81	0 11:48	0	22.4	-0.020
3-17	JUNCTION	77.47	270.43	0 11:56	1.36	22.4	0.049
3-18	JUNCTION	0.00	230.84	0 11:47	0	21	-0.050
3-19	JUNCTION	0.00	254.77	0 11:55	0	21	-0.009
3-20	JUNCTION	98.05	288.60	0 11:55	1.72	21	0.017
3-21	JUNCTION	0.00	199.37	0 11:52	0	19.3	-0.009
3-22	JUNCTION	0.00	213.79	0 11:56	0	19.3	-0.009
3-23	JUNCTION	93.63	243.56	0 11:55	1.64	19.3	0.009
3-25-10	JUNCTION	4.90	18.59	0 11:52	0.0817	0.335	-0.332
3-25-11	JUNCTION	12.79	19.39	0 11:52	0.252	0.257	0.691
3-25-12	JUNCTION	0.00	5.27	0 11:56	0	0.00341	-14.459
3-25-7	JUNCTION	0.00	20.15	0 11:57	0	0.341	-0.060
3-26	JUNCTION	77.47	159.83	0 11:57	1.36	17.7	0.035
3-28	JUNCTION	0.00	120.90	0 13:35	0	16	-0.018
3-28-4	JUNCTION	0.00	88.22	0 13:54	0	10.9	0.005

3-29	JUNCTION	0.00	57.30	0	12:00	0	5.08	-0.071
3-3	JUNCTION	0.00	351.40	0	12:27	0	46.8	0.011
3-30	JUNCTION	65.30	70.59	0	12:00	1.15	5.07	-0.016
3-31	JUNCTION	0.00	42.55	0	12:09	0	3.93	-0.061
3-32	JUNCTION	0.00	54.62	0	12:00	0	3.99	0.041
3-32-1	JUNCTION	0.00	14.97	0	12:01	0	1.53	-0.044
3-33	JUNCTION	71.90	71.90	0	12:00	2.46	2.46	-0.028
3-38	JUNCTION	0.00	183.74	0	12:28	0	20	-0.006
3-39	JUNCTION	0.00	185.12	0	11:57	0	20	-0.009
3-4	JUNCTION	93.93	371.29	0	12:00	2.21	46.7	-0.016
3-40	JUNCTION	0.00	193.44	0	11:57	0	20	0.005
3-41	JUNCTION	47.64	205.54	0	12:00	0.836	20	-0.004
3-42	JUNCTION	0.00	193.86	0	12:11	0	19.2	-0.050
3-43	JUNCTION	0.00	203.82	0	12:09	0	19.2	-0.029
3-44	JUNCTION	0.00	215.50	0	12:08	0	19.2	-0.036
3-45	JUNCTION	0.00	228.54	0	12:07	0	19.2	-0.018
3-46	JUNCTION	0.00	243.10	0	12:05	0	19.2	0.005
3-47	JUNCTION	0.00	260.81	0	12:04	0	19.2	-0.000
3-48	JUNCTION	0.00	285.18	0	12:03	0	19.2	0.013
3-5	JUNCTION	0.00	336.17	0	12:43	0	44.5	0.017
3-51	JUNCTION	319.13	319.13	0	12:00	19.2	19.2	-0.001
3-6	JUNCTION	14.25	347.92	0	11:55	0.267	44.6	0.018
3-7	JUNCTION	67.98	370.81	0	11:52	1.83	44.3	-0.039
3-9	JUNCTION	0.00	384.80	0	11:50	0	42.4	0.006
5	JUNCTION	0.00	84.40	0	13:57	0	10.9	-0.024
6	JUNCTION	48.09	76.84	0	12:37	1.97	10.9	0.006
7	JUNCTION	0.00	63.72	0	12:34	0	8.92	0.008
8	JUNCTION	0.00	70.51	0	12:19	0	8.92	-0.022
38	JUNCTION	0.00	96.33	0	12:05	0	8.91	-0.053
39	JUNCTION	187.56	187.56	0	12:00	8.91	8.91	-0.052
x-43	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
002	OUTFALL	0.00	184.05	0	12:00	0	5.66	0.000
003	OUTFALL	0.00	372.37	0	12:08	0	48.2	0.000

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Node Surcharge Summary

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

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Hours	Max. Height Above Crown	Min. Depth Below Rim
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Node	Type	Surcharged	Feet	Feet
2	JUNCTION	3.47	17.004	0.000
2-1	JUNCTION	0.17	1.641	1.859
2-18-3	JUNCTION	2.42	7.345	0.000
2-19	JUNCTION	48.00	0.000	12.710
2-2	JUNCTION	0.13	1.449	1.251
2-20	JUNCTION	48.00	0.000	12.190
2-21	JUNCTION	48.00	0.000	10.580
2-3	JUNCTION	0.06	0.871	1.229
2-4	JUNCTION	0.06	0.946	1.104
2-5	JUNCTION	0.04	0.649	2.151
2-6	JUNCTION	0.01	0.236	1.764
2-7	JUNCTION	0.01	0.162	1.988
3-1	JUNCTION	2.95	11.894	0.000
3-10	JUNCTION	2.57	12.156	0.000
3-12	JUNCTION	2.21	10.360	0.000
3-16	JUNCTION	2.24	10.675	0.000
3-17	JUNCTION	2.24	10.628	0.000
3-18	JUNCTION	2.17	9.472	0.000
3-19	JUNCTION	2.17	9.300	0.000
3-20	JUNCTION	2.16	9.137	0.000
3-21	JUNCTION	2.13	8.616	0.000
3-22	JUNCTION	2.12	8.562	0.000
3-23	JUNCTION	2.11	8.751	0.000
3-25-10	JUNCTION	0.33	3.320	0.000
3-25-11	JUNCTION	0.14	2.650	0.000
3-25-12	JUNCTION	0.09	2.903	0.000
3-25-7	JUNCTION	1.05	4.303	0.000
3-26	JUNCTION	2.06	8.161	0.000
3-28	JUNCTION	2.83	9.578	0.000
3-28-4	JUNCTION	2.40	6.900	0.000
3-29	JUNCTION	2.88	10.102	0.000
3-3	JUNCTION	2.79	10.673	0.000
3-30	JUNCTION	2.78	10.881	0.000
3-31	JUNCTION	2.76	10.888	0.000
3-32	JUNCTION	2.64	11.525	0.000
3-32-1	JUNCTION	3.40	10.470	0.000
3-33	JUNCTION	2.59	11.790	0.000
3-38	JUNCTION	2.25	12.238	0.000
3-39	JUNCTION	2.23	13.201	0.000
3-4	JUNCTION	2.83	12.844	0.000
3-40	JUNCTION	2.22	13.558	0.000

3-41	JUNCTION	2.20	13.958	0.000
3-42	JUNCTION	2.20	14.079	0.000
3-43	JUNCTION	2.19	14.163	0.000
3-44	JUNCTION	2.16	14.085	0.000
3-45	JUNCTION	2.14	14.034	0.000
3-46	JUNCTION	2.09	13.918	0.000
3-47	JUNCTION	2.07	13.918	0.000
3-48	JUNCTION	2.04	13.985	0.000
3-5	JUNCTION	2.80	13.214	0.000
3-51	JUNCTION	1.66	10.146	0.000
3-6	JUNCTION	3.18	16.876	0.000
3-7	JUNCTION	2.67	13.751	0.000
3-9	JUNCTION	2.80	14.679	0.000
5	JUNCTION	2.90	8.700	0.000
6	JUNCTION	2.92	11.752	0.000
7	JUNCTION	2.88	12.459	0.000
8	JUNCTION	3.69	13.497	0.000
38	JUNCTION	3.51	18.552	0.000
39	JUNCTION	3.64	27.939	0.000
x-43	JUNCTION	48.00	0.000	0.000

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Node Flooding Summary  
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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
2	3.37	25.31	0 12:00	0.239	12.454
2-18-3	1.97	20.45	0 11:52	0.076	3.735
3-1	0.01	42.41	0 14:10	0.001	0.014
3-10	1.46	24.29	0 12:01	0.070	3.016
3-12	1.91	32.27	0 11:55	0.134	5.760
3-16	2.04	27.18	0 11:56	0.139	6.435
3-17	2.07	34.73	0 11:56	0.180	6.508
3-18	2.04	56.21	0 11:47	0.167	5.852
3-19	2.08	43.28	0 11:47	0.125	6.060
3-20	2.01	37.06	0 11:55	0.130	5.257

3-21	1.37	22.52	0	11:57	0.054	2.016
3-22	1.18	20.22	0	11:56	0.043	1.672
3-23	1.13	50.09	0	11:55	0.071	2.551
3-25-10	0.01	12.92	0	11:52	0.001	0.020
3-25-11	0.01	0.74	0	11:56	0.000	0.000
3-25-12	0.01	2.07	0	11:56	0.000	0.003
3-25-7	0.01	4.39	0	11:52	0.000	0.003
3-26	0.16	28.98	0	11:57	0.028	0.991
3-28	1.60	12.04	0	11:56	0.034	1.578
3-28-4	1.72	10.94	0	11:58	0.044	2.200
3-29	1.71	16.06	0	11:55	0.044	2.062
3-3	2.35	31.63	0	11:57	0.164	6.173
3-30	1.70	17.01	0	11:55	0.055	2.581
3-31	1.70	16.62	0	11:55	0.053	2.648
3-32	1.85	19.13	0	11:57	0.089	4.275
3-32-1	2.28	14.97	0	12:01	0.117	6.020
3-33	1.61	20.57	0	11:57	0.068	3.490
3-38	1.80	24.73	0	11:57	0.128	5.868
3-39	1.73	25.29	0	11:57	0.129	6.051
3-4	2.38	36.77	0	11:56	0.212	9.254
3-40	1.64	21.84	0	11:57	0.114	5.678
3-41	1.55	20.41	0	11:59	0.106	5.368
3-42	1.21	13.77	0	12:04	0.067	3.479
3-43	1.21	14.77	0	12:03	0.069	3.563
3-44	1.30	18.82	0	12:01	0.084	4.265
3-45	1.50	23.89	0	11:59	0.118	5.714
3-46	1.69	35.72	0	11:57	0.167	8.018
3-47	1.81	40.79	0	11:57	0.196	9.718
3-48	1.85	49.48	0	11:57	0.225	10.705
3-5	2.37	33.90	0	11:56	0.201	9.504
3-51	1.00	47.49	0	12:00	0.104	5.146
3-6	2.46	60.42	0	11:47	0.288	12.376
3-7	2.37	53.04	0	11:49	0.268	12.301
3-9	2.34	59.66	0	11:49	0.251	11.899
5	2.08	11.75	0	12:00	0.107	5.200
6	2.84	21.65	0	11:49	0.198	9.552
7	2.75	14.94	0	12:00	0.200	10.009
8	2.80	17.01	0	12:01	0.223	11.197
38	2.84	36.88	0	12:02	0.337	16.252
39	2.79	100.22	0	12:00	0.506	25.639

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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
002	99.97	7.63	184.05	5.659
003	99.98	60.53	372.37	48.226
System	99.98	68.16	549.00	53.884

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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
1	CONDUIT	63.72	0 12:34	12.98	1.24	1.00
2	CONDUIT	65.89	0 14:01	9.32	1.23	1.00
3	CONDUIT	84.40	0 13:57	11.94	2.69	1.00
6	CONDUIT	0.00	0 00:00	0.00	0.00	0.12
7	CONDUIT	10.71	0 11:58	2.11	0.11	0.37
8	CONDUIT	37.78	0 12:00	4.58	0.16	0.54
9	CONDUIT	36.53	0 12:01	5.07	0.21	0.75
10	CONDUIT	43.47	0 12:01	4.88	0.38	0.88
11	CONDUIT	43.12	0 12:01	5.03	0.36	0.84
12	CONDUIT	36.49	0 12:01	4.32	0.26	0.82
13	CONDUIT	42.96	0 12:02	5.20	0.27	0.68
14	CONDUIT	44.30	0 12:02	5.66	0.39	1.00
15	CONDUIT	50.24	0 12:02	3.94	0.46	1.00
16	CONDUIT	52.65	0 12:04	3.03	0.74	1.00
17	CONDUIT	54.20	0 12:04	3.27	1.28	1.00
18	CONDUIT	56.88	0 12:05	2.96	0.45	1.00
19	CONDUIT	62.12	0 12:05	3.95	0.65	1.00
20	CONDUIT	184.05	0 12:00	9.99	1.49	0.89
21	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
23	CONDUIT	12.49	0 14:04	10.18	3.26	1.00

24	CONDUIT	18.04	0	13:57	10.21	1.61	1.00
28	CONDUIT	13.67	0	11:56	3.76	0.46	1.00
29	CONDUIT	5.27	0	11:56	1.78	0.58	1.00
30	CONDUIT	54.62	0	12:00	5.68	2.06	1.00
32	CONDUIT	88.22	0	13:54	12.48	1.34	1.00
33	CONDUIT	88.27	0	13:54	7.02	0.62	1.00
38	CONDUIT	20.15	0	11:57	3.45	0.29	1.00
41	CONDUIT	42.62	0	12:02	4.83	0.46	0.93
link20	CONDUIT	54.89	0	11:47	5.71	1.61	1.00
LINK21	CONDUIT	120.74	0	13:35	12.55	2.95	1.00
Link22	CONDUIT	151.32	0	11:55	6.37	0.94	1.00
Link32	CONDUIT	260.81	0	12:04	13.28	1.34	1.00
Link33	CONDUIT	243.10	0	12:05	12.38	1.25	1.00
Link34	CONDUIT	228.54	0	12:07	11.64	1.16	1.00
Link35	CONDUIT	215.50	0	12:08	10.98	1.11	1.00
link36	CONDUIT	203.82	0	12:09	10.38	1.04	1.00
link37	CONDUIT	193.86	0	12:11	9.87	1.59	1.00
Link38	CONDUIT	186.98	0	12:16	9.52	1.50	1.00
Link39	CONDUIT	193.44	0	11:57	9.85	1.62	1.00
Link40	CONDUIT	185.12	0	11:57	9.43	1.54	1.00
Link41	CONDUIT	183.74	0	12:28	9.36	1.53	1.00
43	CONDUIT	183.35	0	12:30	9.34	0.85	1.00
44	CONDUIT	384.80	0	11:50	16.20	0.80	1.00
45	CONDUIT	336.64	0	11:50	14.17	2.43	1.00
46	CONDUIT	336.02	0	11:54	14.14	0.73	1.00
48	CONDUIT	372.37	0	12:08	15.86	2.40	0.96
49	CONDUIT	336.17	0	12:43	14.15	2.67	1.00
50	CONDUIT	337.59	0	12:45	14.21	1.61	1.00
51	CONDUIT	351.40	0	12:27	14.79	1.22	1.00
52	CONDUIT	352.44	0	12:31	14.83	1.32	1.00
LINK26	CONDUIT	254.77	0	11:55	10.72	1.45	1.00
53	CONDUIT	230.84	0	11:47	9.72	1.31	1.00
54	CONDUIT	226.35	0	11:48	7.48	0.83	1.00
Link29	CONDUIT	264.81	0	11:48	11.15	1.53	1.00
Link30	CONDUIT	264.55	0	11:48	11.14	1.50	1.00
55	CONDUIT	264.52	0	11:48	11.13	0.91	1.00
56	CONDUIT	57.30	0	12:00	5.96	1.61	1.00
57	CONDUIT	93.79	0	13:39	7.46	0.65	1.00
59	CONDUIT	42.55	0	12:09	6.02	1.45	1.00
60	CONDUIT	42.76	0	12:10	4.44	1.04	1.00
61	CONDUIT	20.16	0	11:57	2.85	0.32	1.00
62	CONDUIT	213.79	0	11:56	9.00	1.21	1.00
63	CONDUIT	199.37	0	11:52	8.39	1.14	1.00

64	CONDUIT	199.37	0	11:52	8.39	1.13	1.00
68	CONDUIT	285.18	0	12:03	14.52	0.76	1.00
69	CONDUIT	70.51	0	12:19	14.36	1.54	1.00
70	CONDUIT	96.33	0	12:05	19.62	2.15	1.00

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
1	1.00	0.06	0.00	0.00	0.92	0.00	0.00	0.02	0.00	0.84
2	1.00	0.00	0.06	0.00	0.94	0.00	0.00	0.00	0.00	0.79
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.75
6	1.00	0.06	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.00	0.00	0.05	0.00	0.95	0.00	0.00	0.00	0.00	0.66
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
9	1.00	0.00	0.00	0.00	0.57	0.03	0.00	0.40	0.00	0.99
10	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.99
11	1.00	0.00	0.00	0.00	0.92	0.08	0.00	0.00	0.00	0.99
12	1.00	0.00	0.00	0.00	0.83	0.08	0.00	0.09	0.00	0.99
13	1.00	0.00	0.00	0.00	0.16	0.00	0.00	0.84	0.00	0.86
14	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.00	0.76
15	1.00	0.00	0.00	0.00	0.24	0.00	0.00	0.76	0.00	0.44
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.03
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.21
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.02
21	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	1.00	0.00	0.00	0.00	0.63	0.00	0.00	0.37	0.00	0.75
24	1.00	0.00	0.00	0.00	0.11	0.00	0.00	0.89	0.00	0.79
28	1.00	0.00	0.00	0.00	0.05	0.00	0.00	0.95	0.00	0.40
29	1.00	0.88	0.05	0.00	0.07	0.00	0.00	0.00	0.00	0.75
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.27
32	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.92
33	1.00	0.00	0.00	0.00	0.98	0.01	0.00	0.01	0.00	0.90
38	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.74
41	1.00	0.00	0.00	0.00	0.85	0.00	0.00	0.15	0.00	0.83

link20	1.00	0.00	0.00	0.00	0.22	0.00	0.00	0.78	0.00	0.00
LINK21	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.59
Link22	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
Link32	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.76
Link33	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.76
Link34	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.77
Link35	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.76
link36	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.89
link37	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.64
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.65
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.74
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.65
43	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.89
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.94
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.57
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.94
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.29
49	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.76
51	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.87
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.89
LINK26	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.70
53	1.00	0.00	0.00	0.00	0.57	0.43	0.00	0.00	0.00	0.77
54	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.95
Link29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.69
Link30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.79
55	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.87
56	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.66
57	1.00	0.01	0.00	0.00	0.18	0.00	0.00	0.81	0.00	0.82
59	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.63
60	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.35
61	1.00	0.00	0.22	0.00	0.78	0.00	0.00	0.00	0.00	0.96
62	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.70
63	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.71
64	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
68	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.95
69	1.00	0.06	0.00	0.00	0.94	0.00	0.00	0.00	0.00	0.83
70	1.00	0.06	0.00	0.00	0.94	0.00	0.00	0.00	0.00	0.84

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Conduit Surcharge Summary

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Conduit	Hours Full			Hours	Hours
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
1	3.01	3.67	3.07	2.34	2.39
2	2.88	2.88	2.92	2.24	2.25
3	2.90	2.92	2.90	3.24	2.90
14	0.01	0.01	0.02	0.01	0.01
15	0.01	0.01	0.04	0.01	0.01
16	0.06	0.06	0.06	0.01	0.01
17	0.06	0.06	0.06	0.13	0.06
18	0.07	0.07	0.13	0.01	0.01
19	0.14	0.14	0.17	0.01	0.01
20	0.01	0.20	0.01	0.21	0.01
23	3.43	3.47	3.44	3.44	3.38
24	2.70	3.40	2.70	1.29	1.30
28	0.13	0.13	0.42	0.01	0.01
29	0.09	0.09	0.15	0.01	0.01
30	2.59	2.59	2.64	0.58	0.59
32	2.87	2.90	2.87	2.12	2.12
33	2.35	2.38	2.41	0.01	0.01
38	0.33	0.33	1.05	0.01	0.01
41	0.01	0.01	0.03	0.01	0.01
link20	2.88	2.88	2.88	1.64	1.76
LINK21	2.90	3.04	2.90	3.53	2.90
Link22	2.06	2.06	2.11	0.01	0.01
Link32	2.03	2.03	2.07	0.43	0.43
Link33	2.07	2.07	2.09	0.39	0.39
Link34	2.09	2.09	2.14	0.33	0.33
Link35	2.14	2.14	2.16	0.30	0.31
link36	2.16	2.16	2.19	0.23	0.23
link37	2.19	2.19	2.20	1.49	1.51
Link38	2.20	2.20	2.20	1.42	1.43
Link39	2.20	2.20	2.22	1.69	1.69
Link40	2.22	2.22	2.23	1.73	1.73
Link41	2.23	2.23	2.25	1.79	1.79
43	2.25	2.25	3.03	0.01	0.01
44	2.49	2.49	2.80	0.01	0.01
45	2.60	2.80	2.60	3.04	2.57
46	2.59	2.60	3.18	0.01	0.01

48	0.01	2.95	0.01	3.01	0.01
49	2.78	2.79	3.18	3.17	0.02
50	2.74	2.79	2.81	2.43	2.59
51	2.73	2.82	2.78	2.23	2.36
52	2.78	2.78	2.95	2.38	2.45
LINK26	2.16	2.16	2.17	0.32	0.31
53	2.16	2.17	2.17	0.32	0.30
54	2.17	2.17	2.24	0.01	0.01
Link29	2.24	2.24	2.24	0.37	0.35
Link30	2.24	2.24	2.30	0.45	0.45
55	2.21	2.21	2.49	0.01	0.01
56	2.78	2.78	2.88	1.02	1.02
57	2.41	2.41	2.83	0.01	0.01
59	2.79	2.79	2.89	0.83	0.85
60	2.76	2.76	2.78	0.22	0.31
61	1.05	1.05	3.01	0.01	0.01
62	2.10	2.11	2.12	0.23	0.23
63	2.12	2.12	2.13	0.23	0.24
64	2.13	2.13	2.16	0.14	0.14
68	1.65	1.65	2.03	0.01	0.01
69	3.42	3.42	5.06	2.58	2.62
70	3.32	3.59	3.42	1.95	2.14

Analysis begun on: Thu Feb 01 20:31:27 2018  
 Analysis ended on: Thu Feb 01 20:31:39 2018  
 Total elapsed time: 00:00:12

003 Existing Conditions

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 60

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 23  
 Number of nodes ..... 73  
 Number of links ..... 67  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	5.5inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
------	------	-------	---------	--------	-----------	--------

1	105.00	750.00	25.00	2.0000	SCS~Type~II	39
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16
17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-26#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-26
3-23#1	13.15	50000.00	100.00	0.5000	SCS~Type~II	3-23
3-30#1	9.17	50000.00	100.00	0.5000	SCS~Type~II	3-30
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

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Node Summary  
\*\*\*\*\*

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	
2-17	JUNCTION	735.85	15.20	2500.0	
2-18	JUNCTION	737.67	14.56	2500.0	

2-18-3	JUNCTION	743.25	8.77	2500.0
2-19	JUNCTION	738.55	12.71	2500.0
2-2	JUNCTION	706.68	7.80	2500.0
2-20	JUNCTION	739.68	12.19	0.0
2-21	JUNCTION	740.00	10.58	0.0
2-3	JUNCTION	707.67	7.15	2500.0
2-4	JUNCTION	707.77	7.05	2500.0
2-5	JUNCTION	707.85	8.05	2500.0
2-6	JUNCTION	708.71	7.00	2500.0
2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-21	JUNCTION	734.90	12.10	2500.0
3-22	JUNCTION	735.61	12.39	2500.0
3-23	JUNCTION	737.57	11.70	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-26	JUNCTION	739.33	12.67	2500.0
3-28	JUNCTION	739.94	13.46	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-29	JUNCTION	741.05	11.95	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-30	JUNCTION	742.20	11.80	2500.0
3-31	JUNCTION	742.26	11.74	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0

3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0
3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
38	JUNCTION	755.54	4.80	2500.0
39	JUNCTION	759.88	4.80	2500.0
x-43	JUNCTION	730.59	0.00	0.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
1	8	7	CONDUIT	60.0	2.1005	0.0150
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150
16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150

20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150
23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150
24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
link20	3-29	3-28	CONDUIT	39.0	0.1538	0.0150
LINK21	3-28	3-26	CONDUIT	268.0	0.2201	0.0150
Link22	3-26	3-23	CONDUIT	577.0	0.3050	0.0150
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
56	3-30	3-29	CONDUIT	443.0	0.1670	0.0150
57	2-18-3	3-28	CONDUIT	227.0	1.3261	0.0150
59	3-32	3-31	CONDUIT	248.0	0.2581	0.0150
60	3-31	3-30	CONDUIT	27.0	0.2222	0.0150

61	3-25-7	3-26	CONDUIT	690.0	1.1595	0.0150
62	3-23	3-22	CONDUIT	530.0	0.3698	0.0150
63	3-22	3-21	CONDUIT	195.0	0.3641	0.0150
64	3-21	3-20	CONDUIT	622.0	0.3666	0.0150
68	3-51	3-48	CONDUIT	216.6	2.7944	0.0150
69	38	8	CONDUIT	270.0	1.6669	0.0150
70	39	38	CONDUIT	274.0	1.5841	0.0150

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
1	CIRCULAR	2.50	4.91	0.63	2.50	1	51.52
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86
33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59

link20	CIRCULAR	3.50	9.62	0.88	3.50	1	34.20
LINK21	CIRCULAR	3.50	9.62	0.88	3.50	1	40.91
Link22	CIRCULAR	5.50	23.76	1.38	5.50	1	160.74
Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
56	CIRCULAR	3.50	9.62	0.88	3.50	1	35.64
57	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
59	CIRCULAR	3.00	7.07	0.75	3.00	1	29.37
60	CIRCULAR	3.50	9.62	0.88	3.50	1	41.10
61	CIRCULAR	3.00	7.07	0.75	3.00	1	62.24
62	CIRCULAR	5.50	23.76	1.38	5.50	1	176.98
63	CIRCULAR	5.50	23.76	1.38	5.50	1	175.61
64	CIRCULAR	5.50	23.76	1.38	5.50	1	176.21
68	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
69	CIRCULAR	2.50	4.91	0.63	2.50	1	45.90
70	CIRCULAR	2.50	4.91	0.63	2.50	1	44.74

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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.

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Analysis Options

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Flow Units ..... CFS  
 Process Models:  
   Rainfall/Runoff ..... YES  
   RDII ..... NO  
   Snowmelt ..... NO  
   Groundwater ..... NO  
   Flow Routing ..... YES  
   Ponding Allowed ..... YES  
   Water Quality ..... NO  
 Infiltration Method ..... CURVE\_NUMBER  
 Flow Routing Method ..... DYNWAVE  
 Starting Date ..... MAY-30-2015 00:00:00  
 Ending Date ..... JUN-01-2015 00:00:00  
 Antecedent Dry Days ..... 0.0  
 Report Time Step ..... 00:02:00  
 Wet Time Step ..... 00:01:00  
 Dry Time Step ..... 00:05:00  
 Routing Time Step ..... 5.00 sec  
 Variable Time Step ..... YES  
 Maximum Trials ..... 10  
 Number of Threads ..... 1  
 Head Tolerance ..... 0.005000 ft

*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	259.027	5.500
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	48.160	1.023
Surface Runoff .....	204.639	4.345
Final Storage .....	6.250	0.133
Continuity Error (%) .....	-0.008	

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*****
Flow Routing Continuity      Volume      Volume
                             acre-feet   10^6 gal
*****                     -----
Dry Weather Inflow .....    0.000      0.000
Wet Weather Inflow .....   204.641    66.685
Groundwater Inflow .....    0.000      0.000
RDII Inflow .....          0.000      0.000
External Inflow .....       0.000      0.000
External Outflow .....      204.755    66.722
Flooding Loss .....         0.000      0.000
Evaporation Loss .....      0.000      0.000
Exfiltration Loss .....     0.000      0.000
Initial Stored Volume ....   0.052      0.017
Final Stored Volume .....   0.216      0.070
Continuity Error (%) .....  -0.136

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*****
Time-Step Critical Elements
*****
Link link37 (52.38%)
Link 12 (3.92%)
Link Link29 (3.78%)
Link 50 (2.16%)

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*****
Highest Flow Instability Indexes
*****
Link 44 (37)
Link 46 (32)
Link 51 (29)
Link Link32 (29)
Link 33 (29)

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*****
Routing Time Step Summary
*****
Minimum Time Step      :    0.50 sec
Average Time Step      :    2.95 sec
Maximum Time Step      :    5.00 sec
Percent in Steady State :    0.00

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Average Iterations per Step : 2.87  
 Percent Not Converging : 5.97

\*\*\*\*\*  
 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
1	5.50	0.00	0.00	1.07	3.98	11.35	244.51	0.724
16	5.50	0.00	0.00	2.35	2.75	0.81	11.45	0.499
17	5.50	0.00	0.00	0.55	4.80	0.88	37.04	0.874
18	5.50	0.00	0.00	0.00	5.50	0.21	9.86	1.000
19	5.50	0.00	0.00	1.57	3.87	0.29	12.93	0.704
20	5.50	0.00	0.00	0.71	4.72	4.57	180.42	0.858
22	5.50	0.00	0.00	0.00	5.50	0.14	6.66	1.000
23	5.50	0.00	0.00	0.91	4.48	3.04	91.31	0.815
24	5.50	0.00	0.00	0.92	4.36	0.10	6.09	0.793
25	5.50	0.00	0.00	1.22	3.94	0.32	16.59	0.716
26	5.50	0.00	0.00	1.09	4.28	2.46	62.06	0.779
27	5.50	0.00	0.00	1.14	4.23	1.84	40.18	0.769
3-51#1	5.50	0.00	0.00	1.34	4.11	24.02	421.94	0.748
28	5.50	0.00	0.00	0.34	5.16	0.32	17.40	0.938
29	5.50	0.00	0.00	1.30	4.20	1.75	64.80	0.764
30	5.50	0.00	0.00	0.60	4.89	2.68	116.65	0.890
31	5.50	0.00	0.00	0.95	4.54	2.24	85.50	0.826
3-26#1	5.50	0.00	0.00	0.00	5.50	1.63	92.63	1.000
3-23#1	5.50	0.00	0.00	0.00	5.50	1.96	111.95	1.000
3-30#1	5.50	0.00	0.00	0.00	5.50	1.37	78.07	1.000
3-20#1	5.50	0.00	0.00	0.00	5.50	2.06	117.23	1.000
3-41#1	5.50	0.00	0.00	0.00	5.50	1.00	56.96	1.000
3-17#1	5.50	0.00	0.00	0.00	5.50	1.63	92.63	1.000

\*\*\*\*\*  
 Node Depth Summary  
 \*\*\*\*\*

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min	Reported Max Depth Feet
2	JUNCTION	2.66	24.50	772.24	0 13:02	24.50
2-1	JUNCTION	2.13	8.70	714.79	0 12:00	8.70
2-10	JUNCTION	0.51	3.27	719.92	0 12:01	3.26
2-11	JUNCTION	0.54	3.84	721.20	0 12:00	3.55
2-13	JUNCTION	0.54	3.54	724.68	0 12:00	3.50
2-14	JUNCTION	0.50	3.16	724.95	0 12:01	3.15
2-15A	JUNCTION	0.48	3.14	726.43	0 12:01	3.12
2-15B	JUNCTION	0.46	2.78	734.07	0 12:00	2.73
2-16	JUNCTION	0.34	1.13	734.16	0 11:59	1.12
2-17	JUNCTION	0.00	0.00	735.85	0 00:00	0.00
2-18	JUNCTION	0.00	0.00	737.67	0 00:00	0.00
2-18-3	JUNCTION	3.14	15.97	759.22	0 13:16	15.97
2-19	JUNCTION	0.00	0.00	738.55	0 00:00	0.00
2-2	JUNCTION	1.54	8.22	714.90	0 12:00	8.22
2-20	JUNCTION	0.00	0.00	739.68	0 00:00	0.00
2-21	JUNCTION	0.00	0.00	740.00	0 00:00	0.00
2-3	JUNCTION	0.66	7.44	715.11	0 12:01	7.42
2-4	JUNCTION	0.67	7.47	715.24	0 12:01	7.47
2-5	JUNCTION	0.63	7.51	715.36	0 11:56	7.45
2-6	JUNCTION	0.54	7.02	715.73	0 11:57	6.77
2-7	JUNCTION	0.54	6.15	715.93	0 11:57	5.77
2-9	JUNCTION	0.55	3.91	716.57	0 12:02	3.91
3-1	JUNCTION	3.23	16.72	724.96	0 11:42	14.52
3-10	JUNCTION	3.05	20.63	748.24	0 12:44	20.63
3-12	JUNCTION	3.24	19.58	748.69	0 12:46	19.58
3-16	JUNCTION	2.52	19.06	749.32	0 12:49	19.06
3-17	JUNCTION	2.52	19.00	749.38	0 12:50	19.00
3-18	JUNCTION	1.92	17.83	749.71	0 12:51	17.83
3-19	JUNCTION	2.40	17.65	749.91	0 12:52	17.65
3-20	JUNCTION	2.39	17.48	750.10	0 12:53	17.48
3-21	JUNCTION	2.28	16.31	751.21	0 12:56	16.31
3-22	JUNCTION	2.27	15.96	751.57	0 12:57	15.95
3-23	JUNCTION	2.22	15.69	753.26	0 12:00	15.62
3-25-10	JUNCTION	0.48	6.87	754.73	0 12:02	6.86
3-25-11	JUNCTION	0.34	5.15	755.22	0 12:07	5.05
3-25-12	JUNCTION	0.29	5.10	755.91	0 11:54	5.10
3-25-7	JUNCTION	0.52	7.37	754.70	0 12:01	7.37
3-26	JUNCTION	2.12	14.98	754.31	0 12:00	14.91
3-28	JUNCTION	2.67	18.20	758.14	0 13:13	18.20

3-28-4	JUNCTION	1.94	14.42	759.44	0	13:16	14.42
3-29	JUNCTION	2.32	17.14	758.19	0	13:13	17.14
3-3	JUNCTION	3.14	17.60	729.70	0	12:09	17.60
3-30	JUNCTION	2.00	16.52	758.72	0	13:09	16.52
3-31	JUNCTION	1.97	16.48	758.74	0	13:09	16.48
3-32	JUNCTION	1.91	17.09	759.99	0	12:12	17.08
3-32-1	JUNCTION	1.58	14.69	761.16	0	13:03	14.69
3-33	JUNCTION	1.87	17.44	760.47	0	12:05	17.43
3-38	JUNCTION	2.51	20.57	749.70	0	12:41	20.57
3-39	JUNCTION	2.53	22.10	751.95	0	12:38	22.10
3-4	JUNCTION	3.29	20.15	736.68	0	12:10	20.15
3-40	JUNCTION	2.55	22.68	752.80	0	12:37	22.68
3-41	JUNCTION	2.57	23.33	753.74	0	12:36	23.33
3-42	JUNCTION	2.56	23.53	754.05	0	12:35	23.53
3-43	JUNCTION	2.56	23.67	754.26	0	12:35	23.67
3-44	JUNCTION	2.52	23.79	754.97	0	12:34	23.79
3-45	JUNCTION	2.51	23.91	755.59	0	12:32	23.91
3-46	JUNCTION	2.50	24.31	757.41	0	12:27	24.31
3-47	JUNCTION	2.50	24.62	758.47	0	12:25	24.61
3-48	JUNCTION	2.51	25.02	759.59	0	12:21	25.01
3-5	JUNCTION	3.30	20.52	737.32	0	12:13	20.52
3-51	JUNCTION	2.20	22.22	762.84	0	12:11	22.21
3-6	JUNCTION	4.28	24.57	740.90	0	12:36	24.57
3-7	JUNCTION	3.25	21.83	744.71	0	12:40	21.83
3-9	JUNCTION	3.35	22.91	746.01	0	12:42	22.91
5	JUNCTION	2.13	16.25	763.84	0	13:17	16.25
6	JUNCTION	2.52	20.38	768.60	0	13:14	20.38
7	JUNCTION	2.49	22.10	772.28	0	13:13	22.10
8	JUNCTION	3.02	23.78	774.82	0	13:10	23.78
38	JUNCTION	3.08	31.83	787.37	0	12:49	31.83
39	JUNCTION	3.76	45.48	805.36	0	12:16	45.47
x-43	JUNCTION	0.00	0.00	730.59	0	00:00	0.00
002	OUTFALL	2.53	4.27	709.86	0	12:00	4.26
003	OUTFALL	2.80	5.15	712.25	0	12:05	5.15

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Node Inflow Summary  
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Maximum Lateral    Maximum Total    Time of Max    Lateral Inflow    Total Inflow    Flow Balance

Node	Type	Inflow CFS	Inflow CFS	Occurrence days hr:min	Volume 10 <sup>6</sup> gal	Volume 10 <sup>6</sup> gal	Error Percent
2	JUNCTION	40.18	40.18	0 12:00	1.84	1.84	0.014
2-1	JUNCTION	180.42	228.90	0 12:00	4.57	6.98	0.152
2-10	JUNCTION	0.00	58.79	0 12:00	0	1.9	-0.077
2-11	JUNCTION	0.00	59.10	0 12:00	0	1.9	0.064
2-13	JUNCTION	9.86	54.30	0 12:01	0.209	1.9	-0.096
2-14	JUNCTION	0.00	45.84	0 12:01	0	1.69	-0.049
2-15A	JUNCTION	0.00	46.47	0 12:00	0	1.7	0.237
2-15B	JUNCTION	37.04	49.07	0 12:00	0.885	1.69	-0.167
2-16	JUNCTION	11.45	11.45	0 12:00	0.809	0.81	0.057
2-17	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-18	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-18-3	JUNCTION	0.00	97.46	0 14:56	0	13.8	0.002
2-19	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-2	JUNCTION	12.93	91.57	0 12:04	0.292	2.37	0.311
2-20	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-21	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
2-3	JUNCTION	0.00	82.02	0 12:04	0	2.06	0.386
2-4	JUNCTION	0.00	77.86	0 12:04	0	2.05	0.017
2-5	JUNCTION	0.00	73.19	0 12:04	0	2.04	-0.314
2-6	JUNCTION	6.66	62.58	0 12:04	0.136	2.04	-0.066
2-7	JUNCTION	0.00	54.89	0 12:02	0	1.91	0.064
2-9	JUNCTION	0.00	54.46	0 12:01	0	1.9	-0.188
3-1	JUNCTION	64.80	392.31	0 12:05	1.75	59.9	0.018
3-10	JUNCTION	0.00	384.44	0 11:47	0	52.8	-0.027
3-12	JUNCTION	0.00	267.33	0 11:45	0	27.8	0.015
3-16	JUNCTION	0.00	267.50	0 11:46	0	27.8	-0.014
3-17	JUNCTION	92.63	280.84	0 11:55	1.63	27.8	0.033
3-18	JUNCTION	0.00	234.08	0 11:45	0	26.1	-0.032
3-19	JUNCTION	0.00	252.93	0 11:55	0	26.1	-0.006
3-20	JUNCTION	117.23	285.95	0 11:55	2.06	26.1	0.009
3-21	JUNCTION	0.00	199.13	0 11:53	0	24.1	-0.012
3-22	JUNCTION	0.00	216.84	0 11:57	0	24.1	-0.004
3-23	JUNCTION	111.95	247.88	0 11:56	1.96	24.1	0.004
3-25-10	JUNCTION	6.09	22.39	0 12:00	0.102	0.423	-0.416
3-25-11	JUNCTION	16.59	16.59	0 12:00	0.321	0.327	0.521
3-25-12	JUNCTION	0.00	5.16	0 11:54	0	0.00465	-7.133
3-25-7	JUNCTION	0.00	21.68	0 11:54	0	0.429	0.020
3-26	JUNCTION	92.63	174.90	0 11:55	1.63	22.1	0.036
3-28	JUNCTION	0.00	147.40	0 14:51	0	20.1	-0.011
3-28-4	JUNCTION	0.00	98.20	0 14:56	0	13.8	-0.032

3-29	JUNCTION	0.00	62.89	0	12:00	0	6.25	-0.039
3-3	JUNCTION	0.00	365.87	0	12:42	0	58.1	0.010
3-30	JUNCTION	78.07	81.25	0	12:00	1.37	6.26	-0.006
3-31	JUNCTION	0.00	48.16	0	12:06	0	4.88	-0.034
3-32	JUNCTION	0.00	67.34	0	12:00	0	4.97	0.029
3-32-1	JUNCTION	0.00	18.35	0	12:01	0	1.93	-0.037
3-33	JUNCTION	91.31	91.31	0	12:00	3.04	3.04	-0.011
3-38	JUNCTION	0.00	214.43	0	12:32	0	25	-0.014
3-39	JUNCTION	0.00	216.69	0	12:28	0	25	-0.005
3-4	JUNCTION	116.65	385.48	0	12:00	2.68	58.1	-0.012
3-40	JUNCTION	0.00	220.39	0	12:24	0	25	0.000
3-41	JUNCTION	56.96	226.36	0	12:20	0.999	25	-0.008
3-42	JUNCTION	0.00	229.90	0	12:16	0	24	-0.047
3-43	JUNCTION	0.00	242.79	0	12:11	0	24	-0.030
3-44	JUNCTION	0.00	259.25	0	12:09	0	24	-0.028
3-45	JUNCTION	0.00	279.18	0	12:07	0	24	-0.013
3-46	JUNCTION	0.00	302.79	0	12:06	0	24	0.002
3-47	JUNCTION	0.00	331.36	0	12:04	0	24	-0.007
3-48	JUNCTION	0.00	367.90	0	12:03	0	24	0.044
3-5	JUNCTION	0.00	352.80	0	12:54	0	55.4	0.015
3-51	JUNCTION	421.94	421.94	0	12:00	24	24	-0.035
3-6	JUNCTION	17.40	351.89	0	12:51	0.322	55.4	-0.003
3-7	JUNCTION	85.50	369.22	0	11:49	2.24	55.1	-0.022
3-9	JUNCTION	0.00	384.36	0	11:47	0	52.8	0.002
5	JUNCTION	0.00	86.57	0	13:05	0	13.8	-0.007
6	JUNCTION	62.06	88.93	0	12:47	2.46	13.8	0.006
7	JUNCTION	0.00	75.28	0	12:47	0	11.4	0.010
8	JUNCTION	0.00	83.43	0	12:26	0	11.4	-0.006
38	JUNCTION	0.00	115.76	0	12:05	0	11.4	-0.030
39	JUNCTION	244.51	244.51	0	12:00	11.4	11.4	-0.018
x-43	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
002	OUTFALL	0.00	227.88	0	12:00	0	6.98	0.000
003	OUTFALL	0.00	392.31	0	12:05	0	59.9	0.000

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Node Surcharge Summary

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

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Hours                    Max. Height    Min. Depth  
                          Above Crown    Below Rim

Node	Type	Surcharged	Feet	Feet
2	JUNCTION	4.58	23.249	0.000
2-1	JUNCTION	0.26	3.503	0.000
2-11	JUNCTION	0.02	0.336	1.064
2-18-3	JUNCTION	3.65	10.812	0.000
2-19	JUNCTION	48.00	0.000	12.710
2-2	JUNCTION	0.22	3.124	0.000
2-20	JUNCTION	48.00	0.000	12.190
2-21	JUNCTION	48.00	0.000	10.580
2-3	JUNCTION	0.14	2.386	0.000
2-4	JUNCTION	0.14	2.470	0.000
2-5	JUNCTION	0.13	2.261	0.539
2-6	JUNCTION	0.13	2.022	0.000
2-7	JUNCTION	0.13	2.151	0.000
3-1	JUNCTION	3.96	11.217	0.663
3-10	JUNCTION	3.66	15.132	0.000
3-12	JUNCTION	3.22	13.289	0.000
3-16	JUNCTION	3.27	13.556	0.000
3-17	JUNCTION	3.26	13.505	0.000
3-18	JUNCTION	3.19	12.335	0.000
3-19	JUNCTION	3.19	12.154	0.000
3-20	JUNCTION	3.18	11.984	0.000
3-21	JUNCTION	3.17	10.814	0.000
3-22	JUNCTION	3.16	10.455	0.000
3-23	JUNCTION	3.15	10.194	0.000
3-25-10	JUNCTION	2.35	3.872	0.000
3-25-11	JUNCTION	1.81	2.651	0.000
3-25-12	JUNCTION	1.22	2.904	0.000
3-25-7	JUNCTION	2.48	4.368	0.000
3-26	JUNCTION	3.11	9.476	0.000
3-28	JUNCTION	3.97	12.740	0.000
3-28-4	JUNCTION	3.62	10.422	0.000
3-29	JUNCTION	4.05	13.226	0.000
3-3	JUNCTION	3.83	12.099	0.000
3-30	JUNCTION	3.93	13.016	0.000
3-31	JUNCTION	3.91	12.983	0.000
3-32	JUNCTION	3.78	13.589	0.000
3-32-1	JUNCTION	4.49	13.186	0.000
3-33	JUNCTION	3.73	13.937	0.000
3-38	JUNCTION	3.26	15.568	0.000
3-39	JUNCTION	3.23	17.104	0.000
3-4	JUNCTION	3.86	14.654	0.000

3-40	JUNCTION	3.21	17.681	0.000
3-41	JUNCTION	3.20	18.326	0.000
3-42	JUNCTION	3.19	18.532	0.000
3-43	JUNCTION	3.19	18.673	0.000
3-44	JUNCTION	3.16	18.789	0.000
3-45	JUNCTION	3.13	18.910	0.000
3-46	JUNCTION	3.09	19.312	0.000
3-47	JUNCTION	3.05	19.619	0.000
3-48	JUNCTION	2.99	20.016	0.000
3-5	JUNCTION	3.84	15.021	0.000
3-51	JUNCTION	2.54	17.219	0.000
3-6	JUNCTION	4.32	19.066	0.000
3-7	JUNCTION	3.72	16.332	0.000
3-9	JUNCTION	3.84	17.406	0.000
5	JUNCTION	4.08	13.249	0.000
6	JUNCTION	4.08	17.383	0.000
7	JUNCTION	4.05	19.095	0.000
8	JUNCTION	4.59	20.833	0.000
38	JUNCTION	4.40	29.326	0.000
39	JUNCTION	4.52	42.979	0.000
x-43	JUNCTION	48.00	0.000	0.000

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Node Flooding Summary  
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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
2	4.47	33.32	0 12:00	0.359	18.699
2-1	0.01	0.99	0 12:00	0.000	0.003
2-18-3	3.17	15.98	0 11:50	0.147	7.202
2-2	0.11	14.35	0 11:58	0.010	0.424
2-3	0.10	8.16	0 11:59	0.006	0.286
2-4	0.13	14.26	0 11:57	0.009	0.420
2-6	0.01	15.32	0 11:57	0.000	0.022
2-7	0.01	13.34	0 11:57	0.000	0.001
3-10	2.45	32.14	0 11:58	0.139	5.992

3-12	2.88	31.26	0	11:52	0.201	8.689
3-16	3.05	30.06	0	11:54	0.200	9.316
3-17	3.07	39.29	0	11:55	0.257	9.385
3-18	3.04	59.44	0	11:44	0.247	8.715
3-19	3.10	44.52	0	11:44	0.184	8.914
3-20	3.02	35.89	0	11:52	0.199	8.104
3-21	2.52	30.00	0	11:57	0.117	4.214
3-22	2.44	28.27	0	11:57	0.103	3.565
3-23	2.47	45.50	0	11:52	0.135	3.994
3-25-10	0.20	10.51	0	11:50	0.012	0.572
3-25-11	0.01	1.48	0	12:07	0.000	0.001
3-25-12	0.01	2.43	0	11:54	0.000	0.004
3-25-7	0.06	4.62	0	12:01	0.002	0.068
3-26	2.03	43.26	0	11:55	0.088	2.306
3-28	2.91	15.20	0	12:00	0.102	4.740
3-28-4	2.99	15.21	0	11:58	0.114	5.722
3-29	3.00	15.83	0	11:53	0.110	5.186
3-3	3.36	34.62	0	11:57	0.200	7.599
3-30	3.05	21.59	0	11:55	0.100	4.716
3-31	3.04	21.11	0	11:55	0.095	4.743
3-32	3.14	25.35	0	11:57	0.132	6.339
3-32-1	3.52	18.35	0	12:01	0.170	8.736
3-33	3.01	27.86	0	11:57	0.110	5.637
3-38	2.73	27.00	0	11:57	0.200	9.198
3-39	2.66	27.14	0	11:54	0.212	9.954
3-4	3.39	39.68	0	11:57	0.252	11.064
3-40	2.57	23.81	0	11:55	0.198	9.801
3-41	2.47	22.90	0	11:58	0.192	9.736
3-42	2.14	19.25	0	12:05	0.152	7.932
3-43	2.14	20.34	0	12:03	0.157	8.073
3-44	2.21	25.36	0	11:58	0.177	8.969
3-45	2.40	28.82	0	11:59	0.218	10.590
3-46	2.60	38.37	0	11:55	0.279	13.412
3-47	2.72	44.52	0	11:55	0.311	15.419
3-48	2.76	54.59	0	11:54	0.352	16.736
3-5	3.38	36.44	0	11:57	0.240	11.311
3-51	1.85	77.49	0	12:00	0.248	12.219
3-6	3.46	64.44	0	11:45	0.338	14.566
3-7	3.39	48.89	0	11:47	0.324	14.882
3-9	3.35	55.94	0	11:47	0.306	14.626
5	3.31	16.13	0	12:00	0.200	9.749
6	4.02	20.73	0	11:46	0.314	15.183
7	3.93	19.51	0	12:00	0.332	16.645

8	3.97	22.00	0	12:01	0.369	18.533
38	3.99	48.93	0	12:02	0.560	27.026
39	3.95	141.08	0	12:00	0.802	40.679

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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
002	99.97	9.30	227.88	6.982
003	99.99	68.25	392.31	59.908
System	99.98	77.54	613.35	66.890

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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
1	CONDUIT	75.28	0 12:47	15.34	1.46	1.00
2	CONDUIT	73.06	0 13:11	10.34	1.37	1.00
3	CONDUIT	86.57	0 13:05	12.25	2.76	1.00
6	CONDUIT	0.00	0 00:00	0.00	0.00	0.12
7	CONDUIT	12.16	0 11:59	2.21	0.12	0.43
8	CONDUIT	46.47	0 12:00	4.65	0.20	0.66
9	CONDUIT	45.84	0 12:01	5.15	0.26	0.87
10	CONDUIT	59.10	0 12:00	6.14	0.52	1.00
11	CONDUIT	58.79	0 12:00	6.20	0.49	0.97
12	CONDUIT	45.83	0 12:01	4.88	0.33	0.95
13	CONDUIT	54.46	0 12:01	5.20	0.34	0.85
14	CONDUIT	59.46	0 12:04	5.48	0.53	1.00
15	CONDUIT	73.19	0 12:04	3.93	0.67	1.00
16	CONDUIT	77.86	0 12:04	3.97	1.10	1.00

17	CONDUIT	82.02	0	12:04	4.18	1.94	1.00
18	CONDUIT	84.53	0	12:04	4.31	0.67	1.00
19	CONDUIT	94.28	0	12:04	4.80	0.99	1.00
20	CONDUIT	227.88	0	12:00	12.00	1.84	0.93
21	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
23	CONDUIT	12.42	0	15:16	10.12	3.24	1.00
24	CONDUIT	20.58	0	14:54	11.64	1.83	1.00
28	CONDUIT	16.58	0	12:00	3.89	0.55	1.00
29	CONDUIT	5.16	0	11:54	1.71	0.57	1.00
30	CONDUIT	67.34	0	12:00	7.00	2.53	1.00
32	CONDUIT	98.20	0	14:56	13.89	1.49	1.00
33	CONDUIT	97.46	0	14:56	7.76	0.68	1.00
38	CONDUIT	21.68	0	11:54	3.47	0.31	1.00
41	CONDUIT	54.89	0	12:02	5.71	0.59	1.00
link20	CONDUIT	57.61	0	11:45	5.99	1.68	1.00
LINK21	CONDUIT	147.51	0	14:51	15.33	3.61	1.00
Link22	CONDUIT	157.06	0	14:51	6.62	0.98	1.00
Link32	CONDUIT	331.36	0	12:04	16.88	1.70	1.00
Link33	CONDUIT	302.79	0	12:06	15.42	1.55	1.00
Link34	CONDUIT	279.18	0	12:07	14.22	1.42	1.00
Link35	CONDUIT	259.25	0	12:09	13.20	1.34	1.00
link36	CONDUIT	242.79	0	12:11	12.37	1.24	1.00
link37	CONDUIT	229.90	0	12:16	11.71	1.89	1.00
Link38	CONDUIT	221.21	0	12:20	11.27	1.77	1.00
Link39	CONDUIT	220.39	0	12:24	11.22	1.85	1.00
Link40	CONDUIT	216.69	0	12:28	11.04	1.80	1.00
Link41	CONDUIT	214.43	0	12:32	10.92	1.79	1.00
43	CONDUIT	213.04	0	12:35	10.85	0.99	1.00
44	CONDUIT	384.36	0	11:47	16.18	0.80	1.00
45	CONDUIT	339.04	0	12:58	14.27	2.45	1.00
46	CONDUIT	350.94	0	12:51	14.77	0.77	1.00
48	CONDUIT	392.31	0	12:05	16.68	2.53	0.97
49	CONDUIT	352.80	0	12:54	14.85	2.80	1.00
50	CONDUIT	353.77	0	12:57	14.89	1.69	1.00
51	CONDUIT	365.87	0	12:42	15.40	1.28	1.00
52	CONDUIT	366.61	0	12:43	15.43	1.37	1.00
LINK26	CONDUIT	252.93	0	11:55	10.65	1.44	1.00
53	CONDUIT	234.08	0	11:45	9.85	1.33	1.00
54	CONDUIT	229.75	0	11:45	7.60	0.85	1.00
Link29	CONDUIT	267.50	0	11:46	11.26	1.55	1.00
Link30	CONDUIT	267.33	0	11:45	11.25	1.52	1.00
55	CONDUIT	267.47	0	11:45	11.26	0.92	1.00
56	CONDUIT	62.89	0	12:00	6.54	1.76	1.00

57	CONDUIT	112.09	0	14:54	8.92	0.78	1.00
59	CONDUIT	48.16	0	12:06	6.81	1.64	1.00
60	CONDUIT	46.91	0	12:05	4.88	1.14	1.00
61	CONDUIT	21.70	0	11:54	3.07	0.35	1.00
62	CONDUIT	216.84	0	11:57	9.13	1.23	1.00
63	CONDUIT	199.13	0	11:53	8.38	1.13	1.00
64	CONDUIT	194.52	0	11:50	8.19	1.10	1.00
68	CONDUIT	367.90	0	12:03	18.74	0.98	1.00
69	CONDUIT	83.43	0	12:26	17.00	1.82	1.00
70	CONDUIT	115.76	0	12:05	23.58	2.59	1.00

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Down Dry	Sub Dry	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl	
1	1.00	0.05	0.00	0.00	0.94	0.00	0.00	0.01	0.00	0.83
2	1.00	0.00	0.05	0.00	0.95	0.00	0.00	0.00	0.00	0.77
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
6	1.00	0.05	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.00	0.00	0.04	0.00	0.96	0.00	0.00	0.00	0.00	0.69
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
9	1.00	0.00	0.00	0.00	0.59	0.04	0.00	0.37	0.00	0.99
10	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.99
11	1.00	0.00	0.00	0.00	0.92	0.08	0.00	0.00	0.00	0.99
12	1.00	0.00	0.00	0.00	0.85	0.07	0.00	0.07	0.00	0.99
13	1.00	0.00	0.00	0.00	0.22	0.00	0.00	0.77	0.00	0.89
14	1.00	0.00	0.00	0.00	0.02	0.00	0.00	0.98	0.00	0.80
15	1.00	0.00	0.00	0.00	0.31	0.00	0.00	0.69	0.00	0.45
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.06
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.22
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.03
21	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	1.00	0.00	0.00	0.00	0.67	0.00	0.00	0.33	0.00	0.74
24	1.00	0.00	0.00	0.00	0.13	0.00	0.00	0.87	0.00	0.80
28	1.00	0.00	0.00	0.00	0.07	0.00	0.00	0.93	0.00	0.39

29	1.00	0.21	0.03	0.00	0.10	0.00	0.00	0.66	0.00	0.02
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.25
32	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.89
33	1.00	0.00	0.00	0.00	0.98	0.01	0.00	0.01	0.00	0.88
38	1.00	0.00	0.00	0.00	0.96	0.03	0.00	0.00	0.00	0.76
41	1.00	0.00	0.00	0.00	0.88	0.00	0.00	0.12	0.00	0.86
link20	1.00	0.00	0.00	0.00	0.24	0.00	0.00	0.76	0.00	0.00
LINK21	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.58
Link22	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
Link32	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.77
Link33	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.77
Link34	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.77
Link35	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.77
link36	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.88
link37	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.66
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.65
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.66
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.66
43	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.87
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.92
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.54
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.92
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.32
49	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.76
51	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.86
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.87
LINK26	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
53	1.00	0.00	0.00	0.00	0.58	0.42	0.00	0.00	0.00	0.78
54	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.93
Link29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.71
Link30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.78
55	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.88
56	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.59
57	1.00	0.01	0.00	0.00	0.19	0.00	0.00	0.80	0.00	0.84
59	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.59
60	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.36
61	1.00	0.00	0.21	0.00	0.79	0.00	0.00	0.00	0.00	0.94
62	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.69
63	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.70
64	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
68	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.93

69	1.00	0.05	0.00	0.00	0.95	0.00	0.00	0.00	0.00	0.83
70	1.00	0.05	0.00	0.00	0.95	0.00	0.00	0.00	0.00	0.83

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 Conduit Surcharge Summary  
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Conduit	Hours Full			Hours	
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
1	4.08	4.59	4.09	3.51	3.52
2	4.05	4.05	4.08	3.43	3.43
3	4.08	4.08	4.08	4.12	4.08
10	0.01	0.01	0.02	0.01	0.01
11	0.01	0.02	0.01	0.01	0.01
14	0.13	0.13	0.13	0.01	0.01
15	0.13	0.13	0.13	0.01	0.01
16	0.14	0.14	0.14	0.01	0.01
17	0.14	0.14	0.14	0.22	0.12
18	0.15	0.15	0.22	0.01	0.01
19	0.23	0.23	0.26	0.01	0.02
20	0.01	0.28	0.01	0.29	0.01
23	4.53	4.58	4.53	4.59	4.52
24	3.84	4.49	3.84	2.77	2.78
28	1.81	1.81	2.38	0.01	0.01
29	1.22	1.22	1.87	0.01	0.01
30	3.73	3.73	3.78	0.79	0.80
32	4.05	4.08	4.05	3.34	3.34
33	3.59	3.61	3.64	0.01	0.02
38	2.35	2.35	2.48	0.01	0.01
41	0.05	0.05	0.13	0.01	0.01
link20	4.05	4.05	4.05	1.90	1.94
LINK21	4.08	4.18	4.08	4.59	4.08
Link22	3.10	3.11	3.15	0.01	0.01
Link32	2.99	2.99	3.05	0.77	0.77
Link33	3.05	3.05	3.09	0.76	0.76
Link34	3.09	3.09	3.13	0.74	0.74
Link35	3.13	3.13	3.16	0.77	0.77
link36	3.16	3.16	3.19	0.76	0.76
link37	3.19	3.19	3.19	2.17	2.18

Link38	3.19	3.19	3.20	2.19	2.20
Link39	3.20	3.20	3.21	2.41	2.42
Link40	3.21	3.21	3.23	2.48	2.48
Link41	3.23	3.23	3.26	2.57	2.57
43	3.25	3.25	4.16	0.01	0.01
44	3.52	3.52	3.84	0.01	0.01
45	3.65	3.84	3.65	4.18	3.63
46	3.64	3.65	4.32	0.01	0.01
48	0.01	3.96	0.01	4.07	0.01
49	3.82	3.83	4.32	4.31	0.02
50	3.79	3.83	3.84	3.45	3.64
51	3.77	3.85	3.82	3.24	3.37
52	3.82	3.82	3.96	3.39	3.46
LINK26	3.18	3.18	3.19	0.36	0.36
53	3.18	3.19	3.19	0.36	0.34
54	3.19	3.19	3.26	0.01	0.01
Link29	3.26	3.26	3.27	0.64	0.64
Link30	3.27	3.27	3.44	0.69	0.70
55	3.22	3.22	3.54	0.01	0.01
56	3.93	3.93	4.05	1.41	1.42
57	3.64	3.64	3.97	0.01	0.01
59	3.93	3.93	4.06	1.03	1.05
60	3.91	3.91	3.93	0.37	0.45
61	2.48	2.48	4.17	0.01	0.01
62	3.14	3.15	3.16	0.27	0.27
63	3.16	3.16	3.17	0.27	0.27
64	3.17	3.17	3.18	0.15	0.15
68	2.54	2.54	2.99	0.01	0.01
69	4.35	4.35	6.12	3.72	3.73
70	4.27	4.49	4.34	2.89	2.97

Analysis begun on: Thu Feb 01 20:36:19 2018  
 Analysis ended on: Thu Feb 01 20:36:31 2018  
 Total elapsed time: 00:00:12

*“Historical Conditions” SWMM Model Output*

# Historical Conditions



Historical Conditions

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link 60  
 WARNING 03: negative offset ignored for Link 71  
 WARNING 03: negative offset ignored for Link 71

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 29  
 Number of nodes ..... 71  
 Number of links ..... 68  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	0.8-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
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1	105.00	750.00	25.00	2.0000	SCS~Type~II	8
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16
17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-26#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-26
3-23#1	13.15	50000.00	100.00	0.5000	SCS~Type~II	3-23
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
3-41#	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-30#1	9.17	50000.00	100.00	0.5000	SCS~Type~II	3-30
3-10#1	17.30	50000.00	100.00	0.5000	SCS~Type~II	3-10
3-48#2	16.13	50000.00	100.00	0.5000	SCS~Type~II	3-48
3-22#1	11.36	50000.00	100.00	0.5000	SCS~Type~II	3-22
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17
2-21#1	29.18	50000.00	100.00	0.5000	SCS~Type~II	2-21
2-20#1	4.81	50000.00	100.00	0.5000	SCS~Type~II	2-20
2-18#1	10.80	50000.00	100.00	0.5000	SCS~Type~II	2-18

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Node Summary

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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
3-32	JUNCTION	742.90	10.75	2500.0	
3-32-1	JUNCTION	746.47	5.95	2500.0	
2	JUNCTION	747.74	5.80	2500.0	
5	JUNCTION	747.59	6.50	2500.0	
8	JUNCTION	751.04	5.25	2500.0	

7	JUNCTION	750.18	5.45	2500.0
6	JUNCTION	748.22	5.20	2500.0
2-17	JUNCTION	735.85	15.20	2500.0
2-16	JUNCTION	733.03	16.60	2500.0
2-15B	JUNCTION	731.29	11.00	2500.0
2-15A	JUNCTION	723.29	10.00	2500.0
2-14	JUNCTION	721.79	5.90	2500.0
2-13	JUNCTION	721.14	6.35	2500.0
2-11	JUNCTION	717.36	4.90	2500.0
2-10	JUNCTION	716.65	4.90	2500.0
2-7	JUNCTION	709.78	6.15	2500.0
2-6	JUNCTION	708.71	7.00	2500.0
2-5	JUNCTION	707.85	8.05	2500.0
2-4	JUNCTION	707.77	7.05	2500.0
2-3	JUNCTION	707.67	7.15	2500.0
2-2	JUNCTION	706.68	7.80	2500.0
2-1	JUNCTION	706.09	8.70	2500.0
2-18	JUNCTION	737.67	14.56	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
2-18-3	JUNCTION	743.25	8.77	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-29	JUNCTION	741.05	11.95	2500.0
3-28	JUNCTION	739.94	13.46	2500.0
3-26	JUNCTION	739.33	12.67	2500.0
3-23	JUNCTION	737.57	11.70	2500.0
3-46	JUNCTION	733.10	10.90	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-45	JUNCTION	731.68	13.32	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
x-43	JUNCTION	730.59	0.00	0.0
3-42	JUNCTION	730.52	15.60	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-10	JUNCTION	727.61	14.64	2500.0

3-9	JUNCTION	723.10	8.28	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-30	JUNCTION	742.20	11.80	2500.0
3-31	JUNCTION	742.26	11.74	2500.0
3-22	JUNCTION	735.61	12.39	2500.0
3-21	JUNCTION	734.90	12.10	2500.0
2-19	JUNCTION	738.55	12.71	2500.0
2-20	JUNCTION	739.68	12.19	2500.0
2-21	JUNCTION	740.00	10.58	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
002	OUTFALL	705.59	5.00	0.0
OF-3	OUTFALL	707.10	5.50	0.0

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Link Summary  
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Name	From Node	To Node	Type	Length	%Slope	Roughness
1	8	7	CONDUIT	60.0	2.1005	0.0150
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150

16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150
23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150
24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
link20	3-29	3-28	CONDUIT	39.0	0.1538	0.0150
LINK21	3-28	3-26	CONDUIT	268.0	0.2201	0.0150
Link22	3-26	3-23	CONDUIT	577.0	0.3050	0.0150
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	OF-3	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150

56	3-30	3-29	CONDUIT	443.0	0.1670	0.0150
57	2-18-3	3-28	CONDUIT	227.0	1.3261	0.0150
60	3-31	3-30	CONDUIT	27.0	0.2222	0.0150
61	3-25-7	3-26	CONDUIT	690.0	1.1595	0.0150
62	3-23	3-22	CONDUIT	530.0	0.3698	0.0150
63	3-22	3-21	CONDUIT	195.0	0.3641	0.0150
64	3-21	3-20	CONDUIT	622.0	0.3666	0.0150
66	2-19	2-18	CONDUIT	91.0	0.9671	0.0150
67	2-20	2-19	CONDUIT	222.0	0.5090	0.0150
68	2-21	2-20	CONDUIT	288.0	0.1111	0.0150
70	3-51	3-48	CONDUIT	216.6	2.7944	0.0150
71	3-32	3-31	CONDUIT	248.0	0.2581	0.0150

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
1	CIRCULAR	2.50	4.91	0.63	2.50	1	51.52
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11

30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86
33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
link20	CIRCULAR	3.50	9.62	0.88	3.50	1	34.20
LINK21	CIRCULAR	3.50	9.62	0.88	3.50	1	40.91
Link22	CIRCULAR	5.50	23.76	1.38	5.50	1	160.74
Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
56	CIRCULAR	3.50	9.62	0.88	3.50	1	35.64
57	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
60	CIRCULAR	3.50	9.62	0.88	3.50	1	41.10
61	CIRCULAR	3.00	7.07	0.75	3.00	1	62.24
62	CIRCULAR	5.50	23.76	1.38	5.50	1	176.98
63	CIRCULAR	5.50	23.76	1.38	5.50	1	175.61
64	CIRCULAR	5.50	23.76	1.38	5.50	1	176.21
66	CIRCULAR	4.50	15.90	1.13	4.50	1	167.60
67	CIRCULAR	4.50	15.90	1.13	4.50	1	121.59
68	CIRCULAR	3.50	9.62	0.88	3.50	1	29.07

70	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
71	CIRCULAR	3.00	7.07	0.75	3.00	1	29.37

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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.  
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Analysis Options  
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Flow Units ..... CFS  
Process Models:  
  Rainfall/Runoff ..... YES  
  RDII ..... NO  
  Snowmelt ..... NO  
  Groundwater ..... NO  
  Flow Routing ..... YES  
  Ponding Allowed ..... YES  
  Water Quality ..... NO  
Infiltration Method ..... CURVE\_NUMBER  
Flow Routing Method ..... DYNWAVE  
Starting Date ..... MAY-30-2015 00:00:00  
Ending Date ..... JUN-01-2015 00:00:00  
Antecedent Dry Days ..... 0.0  
Report Time Step ..... 00:02:00  
Wet Time Step ..... 00:01:00  
Dry Time Step ..... 00:05:00  
Routing Time Step ..... 5.00 sec  
Variable Time Step ..... YES  
Maximum Trials ..... 10  
Number of Threads ..... 1  
Head Tolerance ..... 0.005000 ft

*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	43.649	0.800
Evaporation Loss .....	0.000	0.000

Infiltration Loss .....	18.927	0.347
Surface Runoff .....	21.605	0.396
Final Storage .....	3.121	0.057
Continuity Error (%) .....	-0.010	

*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	21.600	7.039
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	21.523	7.014
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.198	0.065
Continuity Error (%) .....	-0.321	

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Time-Step Critical Elements  
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Link link37 (6.89%)  
Link 12 (3.90%)

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Highest Flow Instability Indexes  
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Link 44 (30)  
Link 45 (27)  
Link 51 (26)  
Link Link32 (25)  
Link 46 (25)

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Routing Time Step Summary  
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Minimum Time Step : 0.63 sec  
 Average Time Step : 4.66 sec  
 Maximum Time Step : 5.00 sec  
 Percent in Steady State : 0.00  
 Average Iterations per Step : 2.19  
 Percent Not Converging : 0.11

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 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
1	0.80	0.00	0.00	0.49	0.14	0.39	15.92	0.172
16	0.80	0.00	0.00	0.64	0.09	0.03	0.83	0.112
17	0.80	0.00	0.00	0.15	0.52	0.10	2.86	0.649
18	0.80	0.00	0.00	0.00	0.80	0.03	1.04	1.000
19	0.80	0.00	0.00	0.45	0.29	0.02	1.17	0.363
20	0.80	0.00	0.00	0.33	0.42	0.41	14.88	0.523
22	0.80	0.00	0.00	0.00	0.80	0.02	0.77	1.000
23	0.80	0.00	0.00	0.41	0.30	0.20	6.99	0.376
24	0.80	0.00	0.00	0.42	0.24	0.01	0.37	0.301
25	0.80	0.00	0.00	0.56	0.10	0.01	0.53	0.124
26	0.80	0.00	0.00	0.50	0.21	0.12	4.46	0.265
27	0.80	0.00	0.00	0.52	0.19	0.08	2.86	0.232
3-26#1	0.80	0.00	0.00	0.00	0.80	0.24	13.44	1.000
3-23#1	0.80	0.00	0.00	0.00	0.80	0.29	16.22	1.000
3-20#1	0.80	0.00	0.00	0.00	0.80	0.30	16.98	1.000
3-51#1	0.80	0.00	0.00	0.49	0.26	1.54	22.49	0.330
3-41#	0.80	0.00	0.00	0.00	0.80	0.15	8.28	1.000
28	0.80	0.00	0.00	0.12	0.68	0.04	1.97	0.848
29	0.80	0.00	0.00	0.45	0.34	0.14	4.49	0.429
30	0.80	0.00	0.00	0.21	0.59	0.32	10.60	0.733
31	0.80	0.00	0.00	0.33	0.46	0.23	7.52	0.580
3-30#1	0.80	0.00	0.00	0.00	0.80	0.20	11.34	1.000
3-10#1	0.80	0.00	0.00	0.00	0.80	0.38	21.26	1.000
3-48#2	0.80	0.00	0.00	0.00	0.80	0.35	19.85	1.000
3-22#1	0.80	0.00	0.00	0.00	0.80	0.25	14.03	1.000
3-17#1	0.80	0.00	0.00	0.00	0.80	0.24	13.44	1.000

2-21#1	0.80	0.00	0.00	0.00	0.80	0.63	35.38	1.000
2-20#1	0.80	0.00	0.00	0.00	0.80	0.10	5.96	1.000
2-18#1	0.80	0.00	0.00	0.00	0.80	0.23	13.34	1.000

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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	Reported Max Depth Feet
3-32	JUNCTION	0.18	1.32	744.22	0 12:00	1.31
3-32-1	JUNCTION	0.11	0.88	747.35	0 12:01	0.87
2	JUNCTION	0.12	1.00	748.74	0 12:00	1.00
5	JUNCTION	0.22	2.03	749.62	0 12:02	2.03
8	JUNCTION	0.53	2.41	753.45	0 12:00	2.40
7	JUNCTION	0.18	1.79	751.97	0 12:00	1.77
6	JUNCTION	0.23	2.06	750.28	0 12:01	2.05
2-17	JUNCTION	0.28	2.94	738.79	0 11:59	2.94
2-16	JUNCTION	0.29	2.89	735.92	0 12:01	2.88
2-15B	JUNCTION	0.29	2.91	734.20	0 12:02	2.90
2-15A	JUNCTION	0.31	3.31	726.60	0 12:03	3.29
2-14	JUNCTION	0.32	3.33	725.12	0 12:03	3.31
2-13	JUNCTION	0.33	3.40	724.54	0 12:03	3.38
2-11	JUNCTION	0.33	3.39	720.75	0 12:03	3.38
2-10	JUNCTION	0.31	3.12	719.77	0 12:03	3.12
2-7	JUNCTION	0.32	3.12	712.90	0 12:04	3.12
2-6	JUNCTION	0.31	2.82	711.53	0 12:04	2.79
2-5	JUNCTION	0.44	2.89	710.74	0 12:05	2.89
2-4	JUNCTION	0.50	2.88	710.65	0 12:06	2.88
2-3	JUNCTION	0.53	2.75	710.42	0 12:06	2.75
2-2	JUNCTION	1.45	2.75	709.43	0 12:07	2.74
2-1	JUNCTION	2.03	3.04	709.13	0 12:07	3.03
2-18	JUNCTION	0.27	2.99	740.66	0 11:57	2.99
3-25-11	JUNCTION	0.03	0.35	750.42	0 12:00	0.35
3-25-10	JUNCTION	0.03	0.43	748.29	0 11:57	0.43
3-33	JUNCTION	0.17	1.28	744.31	0 12:00	1.28
3-28-4	JUNCTION	0.19	1.61	746.63	0 12:02	1.60
2-18-3	JUNCTION	1.32	2.77	746.02	0 12:03	2.76
3-25-12	JUNCTION	0.00	0.00	750.81	0 00:00	0.00

3-25-7	JUNCTION	0.03	0.38	747.71	0	12:01	0.38
2-9	JUNCTION	0.34	3.39	716.05	0	12:04	3.39
3-29	JUNCTION	0.61	1.82	742.87	0	12:00	1.82
3-28	JUNCTION	0.34	2.74	742.68	0	12:01	2.73
3-26	JUNCTION	0.31	2.24	741.57	0	12:00	2.23
3-23	JUNCTION	0.35	2.72	740.29	0	12:01	2.71
3-46	JUNCTION	0.41	2.17	735.27	0	11:57	2.16
3-48	JUNCTION	0.41	2.17	736.74	0	12:00	2.16
3-47	JUNCTION	0.41	2.17	736.02	0	11:57	2.16
3-45	JUNCTION	0.41	2.17	733.85	0	12:00	2.15
3-44	JUNCTION	0.41	2.32	733.50	0	11:59	2.32
3-43	JUNCTION	0.43	2.48	733.07	0	12:00	2.46
3-41	JUNCTION	0.44	2.63	733.04	0	11:59	2.62
3-40	JUNCTION	0.43	2.62	732.74	0	12:00	2.61
x-43	JUNCTION	0.00	0.00	730.59	0	00:00	0.00
3-42	JUNCTION	0.42	2.55	733.07	0	12:00	2.54
3-39	JUNCTION	0.44	2.59	732.44	0	12:00	2.50
3-38	JUNCTION	0.43	3.14	732.27	0	12:01	3.06
3-10	JUNCTION	0.60	4.68	732.29	0	12:01	4.63
3-9	JUNCTION	0.65	4.74	727.84	0	12:01	4.73
3-7	JUNCTION	0.62	4.78	727.66	0	12:02	4.78
3-6	JUNCTION	1.21	5.99	722.32	0	12:00	5.87
3-1	JUNCTION	1.51	5.18	713.42	0	12:03	5.18
3-5	JUNCTION	0.66	4.90	721.70	0	12:02	4.85
3-4	JUNCTION	0.67	5.05	721.58	0	12:02	5.05
3-3	JUNCTION	0.67	5.04	717.14	0	12:02	5.00
3-20	JUNCTION	0.41	3.25	735.87	0	12:00	3.20
3-19	JUNCTION	0.41	3.24	735.50	0	12:01	3.21
3-18	JUNCTION	0.19	2.59	734.47	0	12:01	2.59
3-17	JUNCTION	0.43	3.39	733.77	0	12:01	3.39
3-16	JUNCTION	0.43	3.39	733.65	0	12:02	3.39
3-12	JUNCTION	1.20	4.15	733.26	0	12:02	4.14
3-30	JUNCTION	0.23	1.83	744.03	0	12:00	1.83
3-31	JUNCTION	0.21	1.79	744.05	0	12:00	1.78
3-22	JUNCTION	0.37	2.96	738.57	0	12:00	2.93
3-21	JUNCTION	0.37	2.75	737.65	0	12:00	2.74
2-19	JUNCTION	0.15	1.98	740.53	0	11:58	1.98
2-20	JUNCTION	0.23	2.57	742.25	0	11:57	2.56
2-21	JUNCTION	0.26	2.82	742.82	0	11:57	2.76
3-51	JUNCTION	0.34	1.48	742.10	0	12:03	1.47
002	OUTFALL	2.51	2.51	708.10	0	00:00	2.51
OF-3	OUTFALL	2.51	3.35	710.45	0	12:03	3.34

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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	Flow Balance Error Percent
3-32	JUNCTION	0.00	9.60	0 12:00	0	0.285	0.044
3-32-1	JUNCTION	0.00	2.80	0 12:00	0	0.0806	-0.390
2	JUNCTION	2.86	2.86	0 12:00	0.0809	0.0809	0.350
5	JUNCTION	0.00	19.61	0 12:01	0	0.513	-0.015
8	JUNCTION	15.92	15.92	0 12:00	0.392	0.392	-0.040
7	JUNCTION	0.00	15.87	0 12:00	0	0.392	0.072
6	JUNCTION	4.46	19.91	0 12:00	0.122	0.513	-0.022
2-17	JUNCTION	0.00	51.86	0 11:57	0	0.973	-0.019
2-16	JUNCTION	0.83	50.91	0 11:59	0.0265	1	-0.715
2-15B	JUNCTION	2.86	51.55	0 12:01	0.0956	1.1	-0.056
2-15A	JUNCTION	0.00	50.20	0 12:02	0	1.1	0.087
2-14	JUNCTION	0.00	49.88	0 12:03	0	1.1	-0.062
2-13	JUNCTION	1.04	50.80	0 12:03	0.0304	1.13	0.106
2-11	JUNCTION	0.00	50.78	0 12:03	0	1.13	-0.095
2-10	JUNCTION	0.00	50.75	0 12:03	0	1.13	-0.031
2-7	JUNCTION	0.00	50.47	0 12:04	0	1.14	-0.062
2-6	JUNCTION	0.77	51.01	0 12:04	0.0198	1.16	-0.033
2-5	JUNCTION	0.00	50.87	0 12:04	0	1.16	-0.554
2-4	JUNCTION	0.00	49.68	0 12:05	0	1.17	0.048
2-3	JUNCTION	0.00	49.32	0 12:05	0	1.17	0.292
2-2	JUNCTION	1.17	49.42	0 12:06	0.0219	1.21	0.656
2-1	JUNCTION	14.88	58.18	0 12:06	0.405	1.66	0.652
2-18	JUNCTION	13.34	52.35	0 11:57	0.235	0.973	-0.014
3-25-11	JUNCTION	0.53	0.53	0 11:57	0.00807	0.00806	-0.004
3-25-10	JUNCTION	0.37	0.80	0 11:57	0.00562	0.0137	-0.038
3-33	JUNCTION	6.99	6.99	0 12:00	0.204	0.204	-0.005
3-28-4	JUNCTION	0.00	19.43	0 12:02	0	0.514	-0.008
2-18-3	JUNCTION	0.00	19.40	0 12:02	0	0.514	-0.206
3-25-12	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
3-25-7	JUNCTION	0.00	0.80	0 11:57	0	0.0137	-0.417
2-9	JUNCTION	0.00	50.69	0 12:03	0	1.13	-0.203
3-29	JUNCTION	0.00	18.37	0 12:00	0	0.484	0.195

3-28	JUNCTION	0.00	37.17	0	12:01	0	0.998	-0.019
3-26	JUNCTION	13.44	44.52	0	12:00	0.236	1.25	0.053
3-23	JUNCTION	16.22	57.22	0	11:59	0.286	1.53	0.026
3-46	JUNCTION	0.00	38.70	0	11:57	0	1.89	-0.009
3-48	JUNCTION	19.85	38.78	0	12:00	0.35	1.89	-0.021
3-47	JUNCTION	0.00	38.41	0	12:00	0	1.89	0.077
3-45	JUNCTION	0.00	38.45	0	11:57	0	1.89	0.047
3-44	JUNCTION	0.00	38.38	0	11:57	0	1.89	-0.023
3-43	JUNCTION	0.00	39.43	0	11:59	0	1.89	0.038
3-41	JUNCTION	8.28	46.49	0	11:59	0.145	2.04	0.024
3-40	JUNCTION	0.00	45.06	0	11:59	0	2.04	0.019
x-43	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
3-42	JUNCTION	0.00	39.29	0	12:00	0	1.89	-0.012
3-39	JUNCTION	0.00	45.42	0	11:58	0	2.04	-0.011
3-38	JUNCTION	0.00	45.10	0	11:59	0	2.04	-0.061
3-10	JUNCTION	21.26	131.57	0	12:01	0.376	4.73	-0.076
3-9	JUNCTION	0.00	127.88	0	12:01	0	4.73	0.144
3-7	JUNCTION	7.52	133.97	0	12:01	0.229	4.95	-0.123
3-6	JUNCTION	1.97	135.05	0	12:02	0.0424	5	0.096
3-1	JUNCTION	4.49	146.04	0	12:02	0.143	5.52	0.262
3-5	JUNCTION	0.00	135.23	0	12:02	0	5	0.003
3-4	JUNCTION	10.60	144.39	0	12:02	0.322	5.32	-0.002
3-3	JUNCTION	0.00	143.80	0	12:02	0	5.32	0.028
3-20	JUNCTION	16.98	76.54	0	12:00	0.299	2.08	0.003
3-19	JUNCTION	0.00	70.10	0	12:00	0	2.08	-0.030
3-18	JUNCTION	0.00	69.83	0	12:01	0	2.08	-0.018
3-17	JUNCTION	13.44	75.52	0	12:00	0.236	2.32	0.014
3-16	JUNCTION	0.00	75.03	0	12:01	0	2.32	0.017
3-12	JUNCTION	0.00	74.92	0	12:02	0	2.32	0.063
3-30	JUNCTION	11.34	18.77	0	11:59	0.199	0.485	0.023
3-31	JUNCTION	0.00	9.96	0	12:01	0	0.285	-0.041
3-22	JUNCTION	14.03	68.55	0	11:59	0.247	1.78	0.007
3-21	JUNCTION	0.00	60.45	0	11:59	0	1.78	0.005
2-19	JUNCTION	0.00	40.11	0	11:57	0	0.738	-0.024
2-20	JUNCTION	5.96	40.75	0	11:57	0.105	0.738	0.023
2-21	JUNCTION	35.38	35.38	0	11:57	0.634	0.634	-0.003
3-51	JUNCTION	22.49	22.49	0	12:03	1.54	1.54	-0.049
002	OUTFALL	0.00	57.89	0	12:07	0	1.67	0.000
OF-3	OUTFALL	0.00	144.86	0	12:03	0	5.57	0.000

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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
x-43	JUNCTION	48.00	0.000	0.000
3-6	JUNCTION	0.10	0.487	4.013

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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
002	92.66	2.84	57.89	1.670
OF-3	99.86	8.17	144.86	5.566
System	96.26	11.01	196.30	7.236

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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
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1	CONDUIT	15.87	0	12:00	4.18	0.31	0.74
2	CONDUIT	15.68	0	12:00	3.55	0.29	0.64
3	CONDUIT	19.61	0	12:01	4.02	0.63	0.68
6	CONDUIT	50.09	0	11:59	5.07	0.50	0.64
7	CONDUIT	48.72	0	12:01	4.75	0.49	0.64
8	CONDUIT	50.20	0	12:02	4.79	0.22	0.69
9	CONDUIT	49.88	0	12:03	5.39	0.28	0.92
10	CONDUIT	50.78	0	12:03	5.33	0.45	0.97
11	CONDUIT	50.75	0	12:03	5.44	0.43	0.93
12	CONDUIT	49.87	0	12:03	5.27	0.35	0.95
13	CONDUIT	50.69	0	12:03	5.21	0.32	0.76
14	CONDUIT	50.43	0	12:04	5.97	0.45	0.64
15	CONDUIT	50.87	0	12:04	4.86	0.46	0.54
16	CONDUIT	49.68	0	12:05	4.43	0.70	0.58
17	CONDUIT	49.32	0	12:05	4.64	1.17	0.56
18	CONDUIT	48.95	0	12:06	4.85	0.39	0.54
19	CONDUIT	48.85	0	12:07	4.32	0.51	0.56
20	CONDUIT	57.89	0	12:07	5.17	0.47	0.56
21	CONDUIT	51.86	0	11:57	5.03	0.30	0.64
23	CONDUIT	2.80	0	12:00	2.97	0.73	0.73
24	CONDUIT	2.73	0	12:01	3.62	0.24	0.46
28	CONDUIT	0.46	0	12:00	1.53	0.02	0.11
29	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
30	CONDUIT	6.91	0	12:00	2.14	0.26	0.37
32	CONDUIT	19.43	0	12:02	4.68	0.29	0.61
33	CONDUIT	19.40	0	12:02	4.41	0.14	0.40
38	CONDUIT	0.80	0	11:57	1.76	0.01	0.13
41	CONDUIT	50.47	0	12:04	5.44	0.55	0.92
link20	CONDUIT	18.28	0	12:00	5.29	0.53	0.39
LINK21	CONDUIT	36.13	0	12:01	4.96	0.88	0.71
Link22	CONDUIT	43.39	0	12:00	4.35	0.27	0.45
Link32	CONDUIT	38.41	0	12:00	4.87	0.20	0.43
Link33	CONDUIT	38.70	0	11:57	4.92	0.20	0.43
Link34	CONDUIT	38.45	0	11:57	4.92	0.20	0.43
Link35	CONDUIT	38.38	0	11:57	4.87	0.20	0.45
link36	CONDUIT	39.43	0	11:59	4.51	0.20	0.48
link37	CONDUIT	39.29	0	12:00	4.30	0.32	0.50
Link38	CONDUIT	39.31	0	11:59	4.39	0.32	0.52
Link39	CONDUIT	45.06	0	11:59	4.79	0.38	0.52
Link40	CONDUIT	45.42	0	11:58	5.03	0.38	0.52
Link41	CONDUIT	45.10	0	11:59	4.63	0.38	0.57
43	CONDUIT	47.23	0	12:01	3.72	0.22	0.77
44	CONDUIT	127.88	0	12:01	5.92	0.27	0.86

45	CONDUIT	127.25	0	12:01	5.83	0.92	0.86
46	CONDUIT	133.49	0	12:02	5.78	0.29	0.93
48	CONDUIT	144.86	0	12:03	7.40	0.93	0.77
49	CONDUIT	135.23	0	12:02	5.83	1.07	0.95
50	CONDUIT	134.67	0	12:02	5.98	0.64	0.90
51	CONDUIT	143.80	0	12:02	6.32	0.50	0.92
52	CONDUIT	142.89	0	12:02	6.25	0.53	0.93
LINK26	CONDUIT	70.10	0	12:00	5.32	0.40	0.59
53	CONDUIT	69.83	0	12:01	7.07	0.40	0.53
54	CONDUIT	69.01	0	12:01	4.20	0.25	0.54
Link29	CONDUIT	75.03	0	12:01	5.11	0.43	0.62
Link30	CONDUIT	74.92	0	12:02	4.34	0.43	0.68
55	CONDUIT	74.63	0	12:02	4.26	0.26	0.73
56	CONDUIT	18.37	0	12:00	4.21	0.52	0.46
57	CONDUIT	19.37	0	12:03	5.44	0.14	0.36
60	CONDUIT	10.70	0	12:01	2.55	0.26	0.52
61	CONDUIT	0.70	0	11:59	0.25	0.01	0.44
62	CONDUIT	56.33	0	11:59	4.86	0.32	0.52
63	CONDUIT	60.45	0	11:59	5.35	0.34	0.52
64	CONDUIT	62.80	0	12:00	4.78	0.36	0.54
66	CONDUIT	39.90	0	11:57	4.62	0.24	0.55
67	CONDUIT	40.11	0	11:57	5.83	0.33	0.50
68	CONDUIT	34.95	0	11:57	4.50	1.20	0.77
70	CONDUIT	22.45	0	12:03	4.25	0.06	0.36
71	CONDUIT	9.96	0	12:01	3.09	0.34	0.52

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry		Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
1	1.00	0.23	0.00	0.00	0.36	0.00	0.00	0.41	0.00	0.39
2	1.00	0.00	0.23	0.00	0.77	0.00	0.00	0.00	0.00	0.75
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.40
6	1.00	0.00	0.00	0.00	0.54	0.00	0.00	0.45	0.00	0.69
7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.90
8	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.62
9	1.00	0.00	0.00	0.00	0.29	0.04	0.00	0.67	0.00	0.66

10	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.59
11	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.00	0.64
12	1.00	0.00	0.00	0.00	0.54	0.01	0.00	0.45	0.00	0.58
13	1.00	0.00	0.00	0.00	0.10	0.00	0.00	0.90	0.00	0.52
14	1.00	0.01	0.00	0.00	0.01	0.00	0.00	0.98	0.00	0.51
15	1.00	0.00	0.00	0.00	0.13	0.00	0.00	0.86	0.00	0.48
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.10
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
21	1.00	0.00	0.00	0.00	0.39	0.00	0.00	0.61	0.00	0.72
23	1.00	0.00	0.00	0.00	0.33	0.00	0.00	0.67	0.00	0.65
24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.55
28	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.04
29	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.34
32	1.00	0.00	0.00	0.00	0.77	0.22	0.00	0.00	0.00	0.46
33	1.00	0.00	0.00	0.00	0.95	0.01	0.00	0.04	0.00	0.62
38	1.00	0.00	0.00	0.00	0.97	0.02	0.00	0.00	0.00	0.42
41	1.00	0.00	0.00	0.00	0.55	0.00	0.00	0.45	0.00	0.51
link20	1.00	0.01	0.00	0.00	0.01	0.00	0.00	0.99	0.00	0.00
LINK21	1.00	0.00	0.01	0.00	0.71	0.00	0.00	0.28	0.00	0.43
Link22	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.75
Link32	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
Link33	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
Link34	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
Link35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
link36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
link37	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.55
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.57
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.59
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.58
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.60
43	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.70
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.52
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.03
49	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.65
51	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.71
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99

LINK26	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.87
53	1.00	0.00	0.00	0.00	0.53	0.47	0.00	0.00	0.00	0.64
54	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Link29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.70
Link30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.96
55	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.98
56	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00	0.79
57	1.00	0.04	0.00	0.00	0.01	0.00	0.00	0.94	0.00	0.38
60	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.35
61	1.00	0.00	0.39	0.00	0.61	0.00	0.00	0.00	0.00	1.00
62	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.71
63	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.76
64	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.72
66	1.00	0.00	0.04	0.00	0.96	0.00	0.00	0.00	0.99	0.00
67	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.46
68	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.40
70	1.00	0.00	0.04	0.00	0.95	0.00	0.00	0.00	0.00	0.95
71	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81

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 Conduit Surcharge Summary  
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Conduit	Hours Full			Hours	
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
17	0.01	0.01	0.01	0.11	0.01
46	0.01	0.01	0.10	0.01	0.01
49	0.01	0.01	0.10	0.08	0.01
68	0.01	0.01	0.01	0.10	0.01

Analysis begun on: Thu Feb 01 20:39:17 2018  
 Analysis ended on: Thu Feb 01 20:39:24 2018  
 Total elapsed time: 00:00:07

Historical Conditions

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link 60  
 WARNING 03: negative offset ignored for Link 71  
 WARNING 03: negative offset ignored for Link 71

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 29  
 Number of nodes ..... 71  
 Number of links ..... 68  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	1.2-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
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1	105.00	750.00	25.00	2.0000	SCS~Type~II	8
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16
17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-26#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-26
3-23#1	13.15	50000.00	100.00	0.5000	SCS~Type~II	3-23
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
3-41#	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-30#1	9.17	50000.00	100.00	0.5000	SCS~Type~II	3-30
3-10#1	17.30	50000.00	100.00	0.5000	SCS~Type~II	3-10
3-48#2	16.13	50000.00	100.00	0.5000	SCS~Type~II	3-48
3-22#1	11.36	50000.00	100.00	0.5000	SCS~Type~II	3-22
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17
2-21#1	29.18	50000.00	100.00	0.5000	SCS~Type~II	2-21
2-20#1	4.81	50000.00	100.00	0.5000	SCS~Type~II	2-20
2-18#1	10.80	50000.00	100.00	0.5000	SCS~Type~II	2-18

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Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
3-32	JUNCTION	742.90	10.75	2500.0	
3-32-1	JUNCTION	746.47	5.95	2500.0	
2	JUNCTION	747.74	5.80	2500.0	
5	JUNCTION	747.59	6.50	2500.0	
8	JUNCTION	751.04	5.25	2500.0	

7	JUNCTION	750.18	5.45	2500.0
6	JUNCTION	748.22	5.20	2500.0
2-17	JUNCTION	735.85	15.20	2500.0
2-16	JUNCTION	733.03	16.60	2500.0
2-15B	JUNCTION	731.29	11.00	2500.0
2-15A	JUNCTION	723.29	10.00	2500.0
2-14	JUNCTION	721.79	5.90	2500.0
2-13	JUNCTION	721.14	6.35	2500.0
2-11	JUNCTION	717.36	4.90	2500.0
2-10	JUNCTION	716.65	4.90	2500.0
2-7	JUNCTION	709.78	6.15	2500.0
2-6	JUNCTION	708.71	7.00	2500.0
2-5	JUNCTION	707.85	8.05	2500.0
2-4	JUNCTION	707.77	7.05	2500.0
2-3	JUNCTION	707.67	7.15	2500.0
2-2	JUNCTION	706.68	7.80	2500.0
2-1	JUNCTION	706.09	8.70	2500.0
2-18	JUNCTION	737.67	14.56	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
2-18-3	JUNCTION	743.25	8.77	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-29	JUNCTION	741.05	11.95	2500.0
3-28	JUNCTION	739.94	13.46	2500.0
3-26	JUNCTION	739.33	12.67	2500.0
3-23	JUNCTION	737.57	11.70	2500.0
3-46	JUNCTION	733.10	10.90	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-45	JUNCTION	731.68	13.32	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
x-43	JUNCTION	730.59	0.00	0.0
3-42	JUNCTION	730.52	15.60	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-10	JUNCTION	727.61	14.64	2500.0

3-9	JUNCTION	723.10	8.28	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-30	JUNCTION	742.20	11.80	2500.0
3-31	JUNCTION	742.26	11.74	2500.0
3-22	JUNCTION	735.61	12.39	2500.0
3-21	JUNCTION	734.90	12.10	2500.0
2-19	JUNCTION	738.55	12.71	2500.0
2-20	JUNCTION	739.68	12.19	2500.0
2-21	JUNCTION	740.00	10.58	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
002	OUTFALL	705.59	5.00	0.0
OF-3	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
1	8	7	CONDUIT	60.0	2.1005	0.0150
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150

16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150
23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150
24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
link20	3-29	3-28	CONDUIT	39.0	0.1538	0.0150
LINK21	3-28	3-26	CONDUIT	268.0	0.2201	0.0150
Link22	3-26	3-23	CONDUIT	577.0	0.3050	0.0150
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	OF-3	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150

56	3-30	3-29	CONDUIT	443.0	0.1670	0.0150
57	2-18-3	3-28	CONDUIT	227.0	1.3261	0.0150
60	3-31	3-30	CONDUIT	27.0	0.2222	0.0150
61	3-25-7	3-26	CONDUIT	690.0	1.1595	0.0150
62	3-23	3-22	CONDUIT	530.0	0.3698	0.0150
63	3-22	3-21	CONDUIT	195.0	0.3641	0.0150
64	3-21	3-20	CONDUIT	622.0	0.3666	0.0150
66	2-19	2-18	CONDUIT	91.0	0.9671	0.0150
67	2-20	2-19	CONDUIT	222.0	0.5090	0.0150
68	2-21	2-20	CONDUIT	288.0	0.1111	0.0150
70	3-51	3-48	CONDUIT	216.6	2.7944	0.0150
71	3-32	3-31	CONDUIT	248.0	0.2581	0.0150

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
1	CIRCULAR	2.50	4.91	0.63	2.50	1	51.52
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11

30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86
33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
link20	CIRCULAR	3.50	9.62	0.88	3.50	1	34.20
LINK21	CIRCULAR	3.50	9.62	0.88	3.50	1	40.91
Link22	CIRCULAR	5.50	23.76	1.38	5.50	1	160.74
Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
56	CIRCULAR	3.50	9.62	0.88	3.50	1	35.64
57	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
60	CIRCULAR	3.50	9.62	0.88	3.50	1	41.10
61	CIRCULAR	3.00	7.07	0.75	3.00	1	62.24
62	CIRCULAR	5.50	23.76	1.38	5.50	1	176.98
63	CIRCULAR	5.50	23.76	1.38	5.50	1	175.61
64	CIRCULAR	5.50	23.76	1.38	5.50	1	176.21
66	CIRCULAR	4.50	15.90	1.13	4.50	1	167.60
67	CIRCULAR	4.50	15.90	1.13	4.50	1	121.59
68	CIRCULAR	3.50	9.62	0.88	3.50	1	29.07

70	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
71	CIRCULAR	3.00	7.07	0.75	3.00	1	29.37

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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.  
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Analysis Options  
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Flow Units ..... CFS  
Process Models:  
  Rainfall/Runoff ..... YES  
  RDII ..... NO  
  Snowmelt ..... NO  
  Groundwater ..... NO  
  Flow Routing ..... YES  
  Ponding Allowed ..... YES  
  Water Quality ..... NO  
Infiltration Method ..... CURVE\_NUMBER  
Flow Routing Method ..... DYNWAVE  
Starting Date ..... MAY-30-2015 00:00:00  
Ending Date ..... JUN-01-2015 00:00:00  
Antecedent Dry Days ..... 0.0  
Report Time Step ..... 00:02:00  
Wet Time Step ..... 00:01:00  
Dry Time Step ..... 00:05:00  
Routing Time Step ..... 5.00 sec  
Variable Time Step ..... YES  
Maximum Trials ..... 10  
Number of Threads ..... 1  
Head Tolerance ..... 0.005000 ft

*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	65.473	1.200
Evaporation Loss .....	0.000	0.000

Infiltration Loss .....	24.944	0.457
Surface Runoff .....	35.882	0.658
Final Storage .....	4.654	0.085
Continuity Error (%) .....	-0.010	

*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	35.877	11.691
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	35.835	11.677
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.199	0.065
Continuity Error (%) .....	-0.291	

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Time-Step Critical Elements  
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Link link37 (15.86%)  
Link 12 (3.83%)  
Link 50 (1.80%)

\*\*\*\*\*  
Highest Flow Instability Indexes  
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Link 44 (35)  
Link Link32 (32)  
Link 46 (29)  
Link 45 (26)  
Link 51 (26)

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Routing Time Step Summary

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Minimum Time Step : 0.49 sec  
 Average Time Step : 4.34 sec  
 Maximum Time Step : 5.00 sec  
 Percent in Steady State : 0.00  
 Average Iterations per Step : 2.56  
 Percent Not Converging : 2.90

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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
1	1.20	0.00	0.00	0.62	0.24	0.68	31.13	0.198
16	1.20	0.00	0.00	0.97	0.15	0.04	1.56	0.125
17	1.20	0.00	0.00	0.23	0.84	0.15	5.24	0.699
18	1.20	0.00	0.00	0.00	1.20	0.05	1.72	1.000
19	1.20	0.00	0.00	0.64	0.50	0.04	1.80	0.418
20	1.20	0.00	0.00	0.41	0.73	0.71	24.48	0.611
22	1.20	0.00	0.00	0.00	1.20	0.03	1.25	1.000
23	1.20	0.00	0.00	0.53	0.59	0.40	11.63	0.489
24	1.20	0.00	0.00	0.54	0.46	0.01	0.56	0.387
25	1.20	0.00	0.00	0.71	0.18	0.01	0.80	0.147
26	1.20	0.00	0.00	0.64	0.47	0.27	7.24	0.394
27	1.20	0.00	0.00	0.66	0.44	0.19	4.65	0.365
3-26#1	1.20	0.00	0.00	0.00	1.20	0.35	20.19	1.000
3-23#1	1.20	0.00	0.00	0.00	1.20	0.43	24.38	1.000
3-20#1	1.20	0.00	0.00	0.00	1.20	0.45	25.52	1.000
3-51#1	1.20	0.00	0.00	0.66	0.50	2.90	40.38	0.414
3-41#	1.20	0.00	0.00	0.00	1.20	0.22	12.43	1.000
28	1.20	0.00	0.00	0.16	1.04	0.06	3.10	0.865
29	1.20	0.00	0.00	0.61	0.59	0.24	7.40	0.491
30	1.20	0.00	0.00	0.28	0.91	0.50	17.68	0.762
31	1.20	0.00	0.00	0.45	0.75	0.37	12.38	0.626
3-30#1	1.20	0.00	0.00	0.00	1.20	0.30	17.02	1.000
3-10#1	1.20	0.00	0.00	0.00	1.20	0.56	32.01	1.000
3-48#2	1.20	0.00	0.00	0.00	1.20	0.53	29.86	1.000
3-22#1	1.20	0.00	0.00	0.00	1.20	0.37	21.08	1.000

3-17#1	1.20	0.00	0.00	0.00	1.20	0.35	20.19	1.000
2-21#1	1.20	0.00	0.00	0.00	1.20	0.95	53.51	1.000
2-20#1	1.20	0.00	0.00	0.00	1.20	0.16	8.93	1.000
2-18#1	1.20	0.00	0.00	0.00	1.20	0.35	20.04	1.000

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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	Reported Max Depth Feet
3-32	JUNCTION	0.30	1.96	744.86	0 12:00	1.94
3-32-1	JUNCTION	0.20	1.22	747.69	0 12:00	1.22
2	JUNCTION	0.20	1.55	749.29	0 12:00	1.55
5	JUNCTION	0.36	3.19	750.78	0 12:00	3.17
8	JUNCTION	0.66	3.58	754.62	0 11:58	3.18
7	JUNCTION	0.28	2.75	752.93	0 12:00	2.73
6	JUNCTION	0.37	4.11	752.33	0 11:59	3.46
2-17	JUNCTION	0.39	3.89	739.74	0 11:58	3.88
2-16	JUNCTION	0.40	3.84	736.87	0 12:00	3.83
2-15B	JUNCTION	0.41	3.92	735.21	0 12:01	3.90
2-15A	JUNCTION	0.44	4.12	727.41	0 12:01	4.10
2-14	JUNCTION	0.46	5.90	727.69	0 12:01	4.94
2-13	JUNCTION	0.47	6.35	727.49	0 11:59	5.10
2-11	JUNCTION	0.46	4.90	722.26	0 12:01	4.85
2-10	JUNCTION	0.45	4.99	721.64	0 12:00	4.92
2-7	JUNCTION	0.46	4.79	714.57	0 12:03	4.51
2-6	JUNCTION	0.43	3.89	712.60	0 12:01	3.88
2-5	JUNCTION	0.56	4.03	711.88	0 12:03	4.01
2-4	JUNCTION	0.61	3.99	711.76	0 12:04	3.93
2-3	JUNCTION	0.62	3.81	711.48	0 12:03	3.76
2-2	JUNCTION	1.49	4.09	710.77	0 12:03	4.07
2-1	JUNCTION	2.07	4.38	710.47	0 12:03	4.37
2-18	JUNCTION	0.38	3.96	741.63	0 11:57	3.89
3-25-11	JUNCTION	0.04	0.43	750.50	0 11:59	0.43
3-25-10	JUNCTION	0.05	0.53	748.39	0 11:57	0.53
3-33	JUNCTION	0.27	1.88	744.91	0 12:00	1.88
3-28-4	JUNCTION	0.32	2.64	747.66	0 12:00	2.62
2-18-3	JUNCTION	1.46	3.78	747.03	0 12:00	3.73

3-25-12	JUNCTION	0.00	0.00	750.81	0	00:00	0.00
3-25-7	JUNCTION	0.05	0.49	747.82	0	12:01	0.49
2-9	JUNCTION	0.47	5.81	718.47	0	12:03	3.82
3-29	JUNCTION	0.72	3.14	744.19	0	12:01	3.05
3-28	JUNCTION	0.52	4.22	744.16	0	12:01	4.12
3-26	JUNCTION	0.48	3.44	742.77	0	12:00	3.41
3-23	JUNCTION	0.53	3.86	741.43	0	12:00	3.81
3-46	JUNCTION	0.62	3.19	736.29	0	12:00	3.19
3-48	JUNCTION	0.62	3.22	737.79	0	11:59	3.21
3-47	JUNCTION	0.62	3.21	737.06	0	11:59	3.21
3-45	JUNCTION	0.62	3.19	734.87	0	12:00	3.17
3-44	JUNCTION	0.62	3.19	734.37	0	12:00	3.15
3-43	JUNCTION	0.64	3.35	733.94	0	12:00	3.34
3-41	JUNCTION	0.66	3.48	733.89	0	12:00	3.48
3-40	JUNCTION	0.66	3.62	733.74	0	11:58	3.56
x-43	JUNCTION	0.00	0.00	730.59	0	00:00	0.00
3-42	JUNCTION	0.64	3.40	733.92	0	12:00	3.39
3-39	JUNCTION	0.67	3.76	733.61	0	11:58	3.76
3-38	JUNCTION	0.68	4.31	733.44	0	12:01	4.25
3-10	JUNCTION	0.91	8.73	736.34	0	12:01	5.55
3-9	JUNCTION	0.97	8.29	731.39	0	12:01	6.14
3-7	JUNCTION	0.94	6.99	729.87	0	11:59	5.58
3-6	JUNCTION	1.61	10.25	726.58	0	12:00	10.23
3-1	JUNCTION	1.70	17.39	725.63	0	11:59	8.64
3-5	JUNCTION	1.00	9.22	726.02	0	11:57	8.75
3-4	JUNCTION	1.01	9.11	725.64	0	12:01	8.85
3-3	JUNCTION	1.03	10.03	722.13	0	12:03	10.00
3-20	JUNCTION	0.61	4.55	737.17	0	12:00	4.52
3-19	JUNCTION	0.61	4.54	736.80	0	12:00	4.48
3-18	JUNCTION	0.31	3.83	735.71	0	12:01	3.80
3-17	JUNCTION	0.64	4.78	735.16	0	12:00	4.77
3-16	JUNCTION	0.64	4.85	735.11	0	12:01	4.84
3-12	JUNCTION	1.41	5.56	734.67	0	12:01	5.53
3-30	JUNCTION	0.36	2.45	744.65	0	12:00	2.45
3-31	JUNCTION	0.33	2.40	744.66	0	12:00	2.40
3-22	JUNCTION	0.57	4.18	739.79	0	12:00	4.15
3-21	JUNCTION	0.57	4.14	739.04	0	12:01	4.10
2-19	JUNCTION	0.22	3.03	741.58	0	11:57	2.97
2-20	JUNCTION	0.33	3.34	743.02	0	11:57	3.27
2-21	JUNCTION	0.36	4.06	744.06	0	11:56	3.86
3-51	JUNCTION	0.53	2.25	742.87	0	12:04	2.25
002	OUTFALL	2.51	2.92	708.51	0	12:03	2.91
OF-3	OUTFALL	2.56	4.54	711.64	0	12:00	4.47

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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	Flow Balance Error Percent
3-32	JUNCTION	0.00	16.07	0 12:00	0	0.59	0.025
3-32-1	JUNCTION	0.00	4.65	0 12:00	0	0.19	-0.445
2	JUNCTION	4.65	4.65	0 12:00	0.191	0.191	0.245
5	JUNCTION	0.00	38.50	0 12:00	0	0.949	-0.024
8	JUNCTION	31.13	31.13	0 12:00	0.677	0.677	-0.097
7	JUNCTION	0.00	33.50	0 11:59	0	0.677	0.049
6	JUNCTION	7.24	38.51	0 12:00	0.272	0.949	0.007
2-17	JUNCTION	0.00	81.32	0 11:57	0	1.46	0.010
2-16	JUNCTION	1.56	78.93	0 11:58	0.0442	1.5	-0.338
2-15B	JUNCTION	5.24	81.41	0 12:00	0.155	1.66	-0.134
2-15A	JUNCTION	0.00	80.79	0 12:01	0	1.67	0.152
2-14	JUNCTION	0.00	108.24	0 12:00	0	1.66	-0.139
2-13	JUNCTION	1.72	109.98	0 12:00	0.0456	1.71	-0.178
2-11	JUNCTION	0.00	110.05	0 12:00	0	1.71	-0.134
2-10	JUNCTION	0.00	110.06	0 12:00	0	1.72	-0.102
2-7	JUNCTION	0.00	90.22	0 12:03	0	1.72	-0.028
2-6	JUNCTION	1.25	91.17	0 12:03	0.0296	1.75	-0.041
2-5	JUNCTION	0.00	86.31	0 12:01	0	1.75	-0.650
2-4	JUNCTION	0.00	86.08	0 12:02	0	1.77	0.034
2-3	JUNCTION	0.00	85.10	0 12:02	0	1.77	0.207
2-2	JUNCTION	1.80	85.48	0 12:02	0.0378	1.83	0.422
2-1	JUNCTION	24.48	105.11	0 12:03	0.71	2.57	0.416
2-18	JUNCTION	20.04	82.03	0 11:57	0.352	1.46	0.029
3-25-11	JUNCTION	0.80	0.80	0 11:57	0.0144	0.0144	-0.002
3-25-10	JUNCTION	0.56	1.22	0 11:57	0.0109	0.0252	-0.019
3-33	JUNCTION	11.63	11.63	0 12:00	0.399	0.399	-0.003
3-28-4	JUNCTION	0.00	38.52	0 12:00	0	0.949	-0.005
2-18-3	JUNCTION	0.00	38.28	0 12:00	0	0.949	-0.126
3-25-12	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
3-25-7	JUNCTION	0.00	1.21	0 11:57	0	0.0252	-0.198
2-9	JUNCTION	0.00	103.64	0 12:03	0	1.72	-0.283

3-29	JUNCTION	0.00	29.57	0	12:00	0	0.888	-0.129
3-28	JUNCTION	0.00	64.85	0	12:00	0	1.84	0.018
3-26	JUNCTION	20.19	79.58	0	12:00	0.355	2.22	0.017
3-23	JUNCTION	24.38	96.94	0	12:00	0.429	2.65	0.012
3-46	JUNCTION	0.00	63.54	0	12:00	0	3.43	0.013
3-48	JUNCTION	29.86	66.47	0	12:00	0.526	3.43	0.163
3-47	JUNCTION	0.00	63.96	0	11:59	0	3.43	0.004
3-45	JUNCTION	0.00	63.09	0	12:00	0	3.42	0.018
3-44	JUNCTION	0.00	62.90	0	12:00	0	3.42	-0.002
3-43	JUNCTION	0.00	62.85	0	12:00	0	3.42	-0.002
3-41	JUNCTION	12.43	72.10	0	11:59	0.218	3.64	0.043
3-40	JUNCTION	0.00	71.94	0	12:00	0	3.64	0.005
x-43	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
3-42	JUNCTION	0.00	63.47	0	12:01	0	3.42	-0.007
3-39	JUNCTION	0.00	72.80	0	11:59	0	3.64	-0.016
3-38	JUNCTION	0.00	75.29	0	11:59	0	3.64	-0.037
3-10	JUNCTION	32.01	226.37	0	11:59	0.564	8.03	-0.083
3-9	JUNCTION	0.00	241.48	0	12:00	0	8.03	0.075
3-7	JUNCTION	12.38	253.37	0	12:01	0.371	8.4	-0.027
3-6	JUNCTION	3.10	265.37	0	11:59	0.0648	8.46	0.027
3-1	JUNCTION	7.40	267.65	0	12:00	0.245	9.25	0.163
3-5	JUNCTION	0.00	244.45	0	12:01	0	8.46	0.038
3-4	JUNCTION	17.68	261.19	0	12:01	0.502	8.96	-0.039
3-3	JUNCTION	0.00	261.15	0	12:00	0	8.96	0.092
3-20	JUNCTION	25.52	123.20	0	12:00	0.449	3.47	0.009
3-19	JUNCTION	0.00	121.59	0	12:00	0	3.47	-0.022
3-18	JUNCTION	0.00	121.48	0	12:00	0	3.47	-0.024
3-17	JUNCTION	20.19	131.58	0	12:00	0.355	3.82	0.032
3-16	JUNCTION	0.00	131.33	0	12:00	0	3.82	0.024
3-12	JUNCTION	0.00	130.55	0	12:00	0	3.82	-0.010
3-30	JUNCTION	17.02	30.08	0	11:59	0.299	0.888	0.031
3-31	JUNCTION	0.00	16.75	0	12:01	0	0.59	-0.011
3-22	JUNCTION	21.08	109.19	0	12:00	0.37	3.02	0.013
3-21	JUNCTION	0.00	106.86	0	12:00	0	3.02	-0.002
2-19	JUNCTION	0.00	62.23	0	11:57	0	1.11	-0.028
2-20	JUNCTION	8.93	62.43	0	11:57	0.157	1.11	0.015
2-21	JUNCTION	53.51	53.51	0	11:57	0.951	0.951	0.004
3-51	JUNCTION	40.38	40.38	0	12:03	2.9	2.9	-0.171
002	OUTFALL	0.00	104.81	0	12:03	0	2.58	0.000
OF-3	OUTFALL	0.00	267.65	0	12:00	0	9.28	0.000

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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
2	JUNCTION	0.09	0.303	4.247
5	JUNCTION	0.05	0.190	3.310
8	JUNCTION	0.15	0.628	1.672
6	JUNCTION	0.06	1.111	1.089
2-14	JUNCTION	0.07	2.203	0.000
2-13	JUNCTION	0.09	2.801	0.000
2-11	JUNCTION	0.14	1.404	0.000
2-10	JUNCTION	0.06	0.988	0.000
2-7	JUNCTION	0.09	0.789	1.361
2-9	JUNCTION	0.01	1.407	0.000
x-43	JUNCTION	48.00	0.000	0.000
3-10	JUNCTION	0.14	3.232	5.908
3-9	JUNCTION	0.19	2.790	0.000
3-7	JUNCTION	0.17	1.490	0.000
3-6	JUNCTION	0.33	4.749	0.000
3-1	JUNCTION	0.24	11.887	0.000
3-5	JUNCTION	0.20	3.721	0.000
3-4	JUNCTION	0.22	3.605	0.000
3-3	JUNCTION	0.21	4.531	0.000
2-21	JUNCTION	0.09	0.561	6.519

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Node Flooding Summary

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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 Poned Depth Feet
2-14	0.01	6.05	0 12:01	0.000	0.003

2-13	0.01	10.82	0	12:01	0.000	0.001
2-11	0.02	8.93	0	12:01	0.000	0.004
2-10	0.06	20.30	0	12:04	0.012	0.088
2-9	0.01	15.82	0	12:03	0.000	0.007
3-9	0.02	22.93	0	11:59	0.003	0.010
3-7	0.03	40.04	0	11:59	0.006	0.040
3-6	0.12	51.86	0	11:59	0.021	0.249
3-1	0.01	50.32	0	11:59	0.001	0.007
3-5	0.01	19.11	0	11:57	0.001	0.011
3-4	0.01	27.96	0	12:05	0.002	0.015
3-3	0.04	25.50	0	11:58	0.006	0.031

\*\*\*\*\*  
 Outfall Loading Summary  
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Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
002	93.45	5.43	104.81	2.583
OF-3	100.00	16.11	267.65	9.277
System	96.73	21.54	368.14	11.861

\*\*\*\*\*  
 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
1	CONDUIT	33.50	0 11:59	6.82	0.65	1.00
2	CONDUIT	31.37	0 12:00	4.50	0.59	0.96
3	CONDUIT	38.50	0 12:00	5.45	1.23	1.00
6	CONDUIT	77.50	0 11:58	5.55	0.77	0.84
7	CONDUIT	76.24	0 12:00	5.32	0.77	0.86
8	CONDUIT	80.79	0 12:01	5.76	0.35	0.89

9	CONDUIT	108.24	0	12:00	11.25	0.62	1.00
10	CONDUIT	110.05	0	12:00	11.44	0.97	1.00
11	CONDUIT	110.06	0	12:00	11.44	0.92	1.00
12	CONDUIT	108.33	0	12:00	11.26	0.77	1.00
13	CONDUIT	103.64	0	12:03	8.25	0.65	1.00
14	CONDUIT	90.24	0	12:03	7.86	0.80	0.89
15	CONDUIT	86.31	0	12:01	5.55	0.79	0.76
16	CONDUIT	86.08	0	12:02	5.15	1.22	0.80
17	CONDUIT	85.10	0	12:02	5.27	2.01	0.77
18	CONDUIT	84.36	0	12:03	5.19	0.67	0.78
19	CONDUIT	85.45	0	12:03	4.92	0.90	0.83
20	CONDUIT	104.81	0	12:03	6.83	0.85	0.73
21	CONDUIT	81.32	0	11:57	5.65	0.48	0.85
23	CONDUIT	4.65	0	12:00	3.83	1.21	0.97
24	CONDUIT	4.59	0	12:00	3.92	0.41	0.63
28	CONDUIT	0.70	0	11:59	1.71	0.02	0.14
29	CONDUIT	0.00	0	00:00	0.00	0.00	0.02
30	CONDUIT	11.48	0	12:00	2.21	0.43	0.55
32	CONDUIT	38.52	0	12:00	5.60	0.58	0.94
33	CONDUIT	38.28	0	12:00	4.75	0.27	0.66
38	CONDUIT	1.21	0	11:57	1.79	0.02	0.17
41	CONDUIT	90.22	0	12:03	9.38	0.97	1.00
link20	CONDUIT	28.63	0	11:59	5.50	0.84	0.78
LINK21	CONDUIT	64.90	0	12:01	6.77	1.59	0.99
Link22	CONDUIT	76.68	0	12:00	4.59	0.48	0.66
Link32	CONDUIT	63.96	0	11:59	5.09	0.33	0.64
Link33	CONDUIT	63.54	0	12:00	5.14	0.33	0.64
Link34	CONDUIT	63.09	0	12:00	5.13	0.32	0.64
Link35	CONDUIT	62.90	0	12:00	5.06	0.32	0.64
link36	CONDUIT	62.85	0	12:00	4.68	0.32	0.65
link37	CONDUIT	63.47	0	12:01	4.61	0.52	0.68
Link38	CONDUIT	63.79	0	12:01	4.54	0.51	0.69
Link39	CONDUIT	71.94	0	12:00	4.94	0.60	0.71
Link40	CONDUIT	72.80	0	11:59	5.02	0.61	0.74
Link41	CONDUIT	75.29	0	11:59	4.60	0.63	0.80
43	CONDUIT	76.90	0	11:59	4.09	0.36	0.93
44	CONDUIT	241.48	0	12:00	10.16	0.50	1.00
45	CONDUIT	242.17	0	12:01	10.19	1.75	1.00
46	CONDUIT	262.27	0	11:59	11.04	0.57	1.00
48	CONDUIT	267.65	0	12:00	11.77	1.72	0.91
49	CONDUIT	244.45	0	12:01	10.29	1.94	1.00
50	CONDUIT	244.48	0	12:01	10.29	1.17	1.00
51	CONDUIT	261.15	0	12:00	10.99	0.91	1.00

52	CONDUIT	261.15	0	12:00	10.99	0.98	1.00
LINK26	CONDUIT	121.59	0	12:00	5.79	0.69	0.83
53	CONDUIT	121.48	0	12:00	6.70	0.69	0.76
54	CONDUIT	120.03	0	12:01	5.07	0.44	0.78
Link29	CONDUIT	131.33	0	12:00	6.01	0.76	0.88
Link30	CONDUIT	130.55	0	12:00	5.64	0.74	0.94
55	CONDUIT	131.22	0	12:01	5.69	0.45	0.93
56	CONDUIT	29.57	0	12:00	4.56	0.83	0.73
57	CONDUIT	37.90	0	12:00	5.70	0.26	0.67
60	CONDUIT	17.56	0	12:01	2.71	0.43	0.69
61	CONDUIT	1.03	0	12:01	0.24	0.02	0.58
62	CONDUIT	92.44	0	12:00	4.97	0.52	0.73
63	CONDUIT	106.86	0	12:00	5.57	0.61	0.76
64	CONDUIT	105.17	0	12:01	5.24	0.60	0.79
66	CONDUIT	62.55	0	11:57	4.77	0.37	0.77
67	CONDUIT	62.23	0	11:57	5.80	0.51	0.71
68	CONDUIT	53.54	0	11:57	5.60	1.84	0.98
70	CONDUIT	42.50	0	12:04	4.56	0.11	0.54
71	CONDUIT	16.75	0	12:01	3.24	0.57	0.73

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Up Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
1	1.00	0.19	0.00	0.00	0.43	0.00	0.00	0.38	0.00	0.41
2	1.00	0.00	0.19	0.00	0.81	0.00	0.00	0.00	0.00	0.77
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.47
6	1.00	0.00	0.00	0.00	0.58	0.00	0.00	0.42	0.00	0.70
7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.90
8	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.63
9	1.00	0.00	0.00	0.00	0.47	0.06	0.00	0.47	0.00	0.67
10	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.59
11	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.00	0.65
12	1.00	0.00	0.00	0.00	0.58	0.01	0.00	0.41	0.00	0.59
13	1.00	0.00	0.00	0.00	0.15	0.00	0.00	0.84	0.00	0.53
14	1.00	0.00	0.00	0.00	0.03	0.00	0.00	0.97	0.00	0.52
15	1.00	0.00	0.00	0.00	0.21	0.00	0.00	0.79	0.00	0.54

16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.04
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.17
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
21	1.00	0.00	0.00	0.00	0.56	0.00	0.00	0.44	0.00	0.71
23	1.00	0.00	0.00	0.00	0.45	0.00	0.00	0.55	0.00	0.65
24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.68
28	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.06
29	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.32
32	1.00	0.00	0.00	0.00	0.83	0.17	0.00	0.00	0.00	0.58
33	1.00	0.00	0.00	0.00	0.96	0.01	0.00	0.03	0.00	0.67
38	1.00	0.00	0.00	0.00	0.92	0.08	0.00	0.00	0.00	0.59
41	1.00	0.00	0.00	0.00	0.58	0.00	0.00	0.41	0.00	0.51
link20	1.00	0.01	0.00	0.00	0.03	0.00	0.00	0.96	0.00	0.00
LINK21	1.00	0.00	0.00	0.00	0.77	0.00	0.00	0.22	0.00	0.47
Link22	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.77
Link32	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
Link33	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
Link34	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
Link35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
link36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.98
link37	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.63
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.64
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.64
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.64
43	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.75
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.55
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.05
49	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.68
51	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.74
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.96
LINK26	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.84
53	1.00	0.00	0.00	0.00	0.58	0.42	0.00	0.00	0.00	0.67
54	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Link29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.70
Link30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.92
55	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.98

56	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.80
57	1.00	0.03	0.00	0.00	0.04	0.00	0.00	0.93	0.00	0.46
60	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.44
61	1.00	0.00	0.35	0.00	0.65	0.00	0.00	0.00	0.00	1.00
62	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
63	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.76
64	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.74
66	1.00	0.00	0.04	0.00	0.96	0.00	0.00	0.00	0.99	0.00
67	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.49
68	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.52
70	1.00	0.00	0.03	0.00	0.97	0.00	0.00	0.00	0.00	0.96
71	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.82

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 Conduit Surcharge Summary  
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Conduit	Hours Full			Hours	
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
1	0.08	0.15	0.09	0.01	0.01
2	0.01	0.01	0.06	0.01	0.01
3	0.05	0.06	0.05	0.12	0.05
9	0.07	0.17	0.07	0.01	0.01
10	0.11	0.13	0.13	0.01	0.06
11	0.10	0.13	0.13	0.01	0.03
12	0.08	0.14	0.08	0.01	0.01
13	0.01	0.06	0.01	0.01	0.01
14	0.01	0.09	0.01	0.01	0.01
16	0.01	0.01	0.01	0.11	0.01
17	0.01	0.01	0.01	0.24	0.01
23	0.01	0.09	0.01	0.11	0.01
32	0.01	0.05	0.01	0.01	0.01
41	0.12	0.17	0.13	0.01	0.01
LINK21	0.01	0.14	0.01	0.22	0.01
43	0.01	0.01	0.24	0.01	0.01
44	0.11	0.12	0.19	0.01	0.01
45	0.16	0.19	0.16	0.25	0.13
46	0.15	0.16	0.33	0.01	0.01
48	0.01	0.24	0.01	0.26	0.01

49	0.19	0.20	0.33	0.32	0.01
50	0.20	0.20	0.22	0.09	0.12
51	0.20	0.22	0.21	0.01	0.04
52	0.21	0.21	0.24	0.01	0.06
Link30	0.01	0.01	0.04	0.01	0.01
55	0.01	0.01	0.12	0.01	0.01
61	0.01	0.01	0.15	0.01	0.01
68	0.01	0.09	0.01	0.19	0.01

Analysis begun on: Thu Feb 01 20:42:52 2018  
Analysis ended on: Thu Feb 01 20:43:00 2018  
Total elapsed time: 00:00:08

Historical Conditions

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link 60  
 WARNING 03: negative offset ignored for Link 71  
 WARNING 03: negative offset ignored for Link 71

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 29  
 Number of nodes ..... 71  
 Number of links ..... 68  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	1.5-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
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1	105.00	750.00	25.00	2.0000	SCS~Type~II	8
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16
17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-26#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-26
3-23#1	13.15	50000.00	100.00	0.5000	SCS~Type~II	3-23
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
3-41#	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-30#1	9.17	50000.00	100.00	0.5000	SCS~Type~II	3-30
3-10#1	17.30	50000.00	100.00	0.5000	SCS~Type~II	3-10
3-48#2	16.13	50000.00	100.00	0.5000	SCS~Type~II	3-48
3-22#1	11.36	50000.00	100.00	0.5000	SCS~Type~II	3-22
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17
2-21#1	29.18	50000.00	100.00	0.5000	SCS~Type~II	2-21
2-20#1	4.81	50000.00	100.00	0.5000	SCS~Type~II	2-20
2-18#1	10.80	50000.00	100.00	0.5000	SCS~Type~II	2-18

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Node Summary

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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
3-32	JUNCTION	742.90	10.75	2500.0	
3-32-1	JUNCTION	746.47	5.95	2500.0	
2	JUNCTION	747.74	5.80	2500.0	
5	JUNCTION	747.59	6.50	2500.0	
8	JUNCTION	751.04	5.25	2500.0	

7	JUNCTION	750.18	5.45	2500.0
6	JUNCTION	748.22	5.20	2500.0
2-17	JUNCTION	735.85	15.20	2500.0
2-16	JUNCTION	733.03	16.60	2500.0
2-15B	JUNCTION	731.29	11.00	2500.0
2-15A	JUNCTION	723.29	10.00	2500.0
2-14	JUNCTION	721.79	5.90	2500.0
2-13	JUNCTION	721.14	6.35	2500.0
2-11	JUNCTION	717.36	4.90	2500.0
2-10	JUNCTION	716.65	4.90	2500.0
2-7	JUNCTION	709.78	6.15	2500.0
2-6	JUNCTION	708.71	7.00	2500.0
2-5	JUNCTION	707.85	8.05	2500.0
2-4	JUNCTION	707.77	7.05	2500.0
2-3	JUNCTION	707.67	7.15	2500.0
2-2	JUNCTION	706.68	7.80	2500.0
2-1	JUNCTION	706.09	8.70	2500.0
2-18	JUNCTION	737.67	14.56	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
2-18-3	JUNCTION	743.25	8.77	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-29	JUNCTION	741.05	11.95	2500.0
3-28	JUNCTION	739.94	13.46	2500.0
3-26	JUNCTION	739.33	12.67	2500.0
3-23	JUNCTION	737.57	11.70	2500.0
3-46	JUNCTION	733.10	10.90	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-45	JUNCTION	731.68	13.32	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
x-43	JUNCTION	730.59	0.00	0.0
3-42	JUNCTION	730.52	15.60	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-10	JUNCTION	727.61	14.64	2500.0

3-9	JUNCTION	723.10	8.28	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-30	JUNCTION	742.20	11.80	2500.0
3-31	JUNCTION	742.26	11.74	2500.0
3-22	JUNCTION	735.61	12.39	2500.0
3-21	JUNCTION	734.90	12.10	2500.0
2-19	JUNCTION	738.55	12.71	2500.0
2-20	JUNCTION	739.68	12.19	2500.0
2-21	JUNCTION	740.00	10.58	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
002	OUTFALL	705.59	5.00	0.0
OF-3	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
1	8	7	CONDUIT	60.0	2.1005	0.0150
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150

16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150
23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150
24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
link20	3-29	3-28	CONDUIT	39.0	0.1538	0.0150
LINK21	3-28	3-26	CONDUIT	268.0	0.2201	0.0150
Link22	3-26	3-23	CONDUIT	577.0	0.3050	0.0150
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	OF-3	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150

56	3-30	3-29	CONDUIT	443.0	0.1670	0.0150
57	2-18-3	3-28	CONDUIT	227.0	1.3261	0.0150
60	3-31	3-30	CONDUIT	27.0	0.2222	0.0150
61	3-25-7	3-26	CONDUIT	690.0	1.1595	0.0150
62	3-23	3-22	CONDUIT	530.0	0.3698	0.0150
63	3-22	3-21	CONDUIT	195.0	0.3641	0.0150
64	3-21	3-20	CONDUIT	622.0	0.3666	0.0150
66	2-19	2-18	CONDUIT	91.0	0.9671	0.0150
67	2-20	2-19	CONDUIT	222.0	0.5090	0.0150
68	2-21	2-20	CONDUIT	288.0	0.1111	0.0150
70	3-51	3-48	CONDUIT	216.6	2.7944	0.0150
71	3-32	3-31	CONDUIT	248.0	0.2581	0.0150

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
1	CIRCULAR	2.50	4.91	0.63	2.50	1	51.52
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11

30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86
33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
link20	CIRCULAR	3.50	9.62	0.88	3.50	1	34.20
LINK21	CIRCULAR	3.50	9.62	0.88	3.50	1	40.91
Link22	CIRCULAR	5.50	23.76	1.38	5.50	1	160.74
Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
56	CIRCULAR	3.50	9.62	0.88	3.50	1	35.64
57	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
60	CIRCULAR	3.50	9.62	0.88	3.50	1	41.10
61	CIRCULAR	3.00	7.07	0.75	3.00	1	62.24
62	CIRCULAR	5.50	23.76	1.38	5.50	1	176.98
63	CIRCULAR	5.50	23.76	1.38	5.50	1	175.61
64	CIRCULAR	5.50	23.76	1.38	5.50	1	176.21
66	CIRCULAR	4.50	15.90	1.13	4.50	1	167.60
67	CIRCULAR	4.50	15.90	1.13	4.50	1	121.59
68	CIRCULAR	3.50	9.62	0.88	3.50	1	29.07

70	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
71	CIRCULAR	3.00	7.07	0.75	3.00	1	29.37

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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.  
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Analysis Options  
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Flow Units ..... CFS  
Process Models:  
  Rainfall/Runoff ..... YES  
  RDII ..... NO  
  Snowmelt ..... NO  
  Groundwater ..... NO  
  Flow Routing ..... YES  
  Ponding Allowed ..... YES  
  Water Quality ..... NO  
Infiltration Method ..... CURVE\_NUMBER  
Flow Routing Method ..... DYNWAVE  
Starting Date ..... MAY-30-2015 00:00:00  
Ending Date ..... JUN-01-2015 00:00:00  
Antecedent Dry Days ..... 0.0  
Report Time Step ..... 00:02:00  
Wet Time Step ..... 00:01:00  
Dry Time Step ..... 00:05:00  
Routing Time Step ..... 5.00 sec  
Variable Time Step ..... YES  
Maximum Trials ..... 10  
Number of Threads ..... 1  
Head Tolerance ..... 0.005000 ft

*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	81.841	1.500
Evaporation Loss .....	0.000	0.000

Infiltration Loss .....	28.459	0.522
Surface Runoff .....	48.049	0.881
Final Storage .....	5.342	0.098
Continuity Error (%) .....	-0.011	

*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	48.044	15.656
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	48.038	15.654
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.199	0.065
Continuity Error (%) .....	-0.292	

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Time-Step Critical Elements  
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Link link37 (27.07%)  
Link 12 (3.79%)  
Link 50 (1.94%)

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Highest Flow Instability Indexes  
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Link 44 (40)  
Link 46 (37)  
Link Link32 (32)  
Link 51 (31)  
Link 49 (31)

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Routing Time Step Summary

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Minimum Time Step : 0.50 sec  
 Average Time Step : 3.99 sec  
 Maximum Time Step : 5.00 sec  
 Percent in Steady State : 0.00  
 Average Iterations per Step : 2.64  
 Percent Not Converging : 2.96

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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 <sup>6</sup> gal	Peak Runoff CFS	Runoff Coeff
1	1.50	0.00	0.00	0.69	0.39	1.12	41.11	0.263
16	1.50	0.00	0.00	1.15	0.20	0.06	2.10	0.130
17	1.50	0.00	0.00	0.27	1.08	0.20	7.01	0.720
18	1.50	0.00	0.00	0.00	1.50	0.06	2.25	1.000
19	1.50	0.00	0.00	0.75	0.69	0.05	2.30	0.462
20	1.50	0.00	0.00	0.46	0.98	0.95	32.69	0.655
22	1.50	0.00	0.00	0.00	1.50	0.04	1.62	1.000
23	1.50	0.00	0.00	0.59	0.82	0.56	15.58	0.548
24	1.50	0.00	0.00	0.60	0.70	0.02	0.70	0.468
25	1.50	0.00	0.00	0.79	0.39	0.03	1.00	0.261
26	1.50	0.00	0.00	0.71	0.69	0.40	9.67	0.463
27	1.50	0.00	0.00	0.74	0.65	0.29	6.21	0.437
3-26#1	1.50	0.00	0.00	0.00	1.50	0.44	25.25	1.000
3-23#1	1.50	0.00	0.00	0.00	1.50	0.54	30.50	1.000
3-20#1	1.50	0.00	0.00	0.00	1.50	0.56	31.93	1.000
3-51#1	1.50	0.00	0.00	0.76	0.70	4.07	56.12	0.464
3-41#	1.50	0.00	0.00	0.00	1.50	0.27	15.53	1.000
28	1.50	0.00	0.00	0.19	1.31	0.08	3.98	0.875
29	1.50	0.00	0.00	0.70	0.79	0.33	9.91	0.530
30	1.50	0.00	0.00	0.33	1.17	0.64	23.39	0.780
31	1.50	0.00	0.00	0.52	0.98	0.48	16.32	0.653
3-30#1	1.50	0.00	0.00	0.00	1.50	0.37	21.29	1.000
3-10#1	1.50	0.00	0.00	0.00	1.50	0.70	40.06	1.000
3-48#2	1.50	0.00	0.00	0.00	1.50	0.66	37.37	1.000
3-22#1	1.50	0.00	0.00	0.00	1.50	0.46	26.36	1.000

3-17#1	1.50	0.00	0.00	0.00	1.50	0.44	25.25	1.000
2-21#1	1.50	0.00	0.00	0.00	1.50	1.19	67.11	1.000
2-20#1	1.50	0.00	0.00	0.00	1.50	0.20	11.17	1.000
2-18#1	1.50	0.00	0.00	0.00	1.50	0.44	25.06	1.000

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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	Reported Max Depth Feet
3-32	JUNCTION	0.40	9.20	752.10	0 11:59	5.37
3-32-1	JUNCTION	0.25	5.95	752.42	0 11:59	1.91
2	JUNCTION	0.27	5.80	753.54	0 11:59	3.22
5	JUNCTION	0.51	6.50	754.09	0 11:58	3.76
8	JUNCTION	0.81	5.25	756.29	0 12:00	3.48
7	JUNCTION	0.43	5.37	755.55	0 11:58	3.65
6	JUNCTION	0.53	5.21	753.43	0 11:58	4.58
2-17	JUNCTION	0.46	6.84	742.69	0 11:57	4.76
2-16	JUNCTION	0.48	6.43	739.46	0 11:57	4.87
2-15B	JUNCTION	0.49	4.98	736.27	0 11:57	4.94
2-15A	JUNCTION	0.51	8.16	731.45	0 11:58	4.00
2-14	JUNCTION	0.54	5.93	727.72	0 11:58	4.86
2-13	JUNCTION	0.55	6.35	727.49	0 12:03	5.11
2-11	JUNCTION	0.54	4.96	722.32	0 11:59	4.91
2-10	JUNCTION	0.53	5.04	721.69	0 12:03	4.91
2-7	JUNCTION	0.55	5.49	715.27	0 12:01	5.42
2-6	JUNCTION	0.51	4.58	713.29	0 12:02	4.54
2-5	JUNCTION	0.64	4.96	712.81	0 12:02	4.96
2-4	JUNCTION	0.68	4.87	712.64	0 12:02	4.86
2-3	JUNCTION	0.68	4.70	712.37	0 12:01	4.66
2-2	JUNCTION	1.53	5.20	711.88	0 12:01	5.13
2-1	JUNCTION	2.10	5.25	711.34	0 12:01	5.24
2-18	JUNCTION	0.45	4.64	742.31	0 11:57	4.50
3-25-11	JUNCTION	0.07	0.48	750.55	0 11:59	0.48
3-25-10	JUNCTION	0.08	0.60	748.46	0 11:57	0.60
3-33	JUNCTION	0.36	9.14	752.17	0 11:59	5.30
3-28-4	JUNCTION	0.46	3.16	748.18	0 11:59	3.14
2-18-3	JUNCTION	1.60	4.30	747.55	0 12:00	4.29

3-25-12	JUNCTION	0.00	0.00	750.81	0	00:00	0.00
3-25-7	JUNCTION	0.08	0.56	747.89	0	12:00	0.56
2-9	JUNCTION	0.57	6.24	718.90	0	12:01	6.17
3-29	JUNCTION	0.81	7.02	748.07	0	11:59	6.18
3-28	JUNCTION	0.69	7.88	747.82	0	11:59	7.25
3-26	JUNCTION	0.63	4.15	743.48	0	12:00	4.07
3-23	JUNCTION	0.68	4.62	742.19	0	12:00	4.55
3-46	JUNCTION	0.78	3.81	736.91	0	12:00	3.77
3-48	JUNCTION	0.78	3.85	738.42	0	12:00	3.84
3-47	JUNCTION	0.78	3.82	737.67	0	12:00	3.80
3-45	JUNCTION	0.78	3.80	735.48	0	12:00	3.74
3-44	JUNCTION	0.78	3.80	734.98	0	12:00	3.73
3-43	JUNCTION	0.80	4.01	734.60	0	12:01	4.00
3-41	JUNCTION	0.82	4.12	734.53	0	12:01	4.12
3-40	JUNCTION	0.82	4.33	734.45	0	12:01	4.18
x-43	JUNCTION	0.00	0.00	730.59	0	00:00	0.00
3-42	JUNCTION	0.80	4.05	734.57	0	12:00	4.05
3-39	JUNCTION	0.83	4.43	734.28	0	12:00	4.39
3-38	JUNCTION	0.84	4.90	734.03	0	12:00	4.73
3-10	JUNCTION	1.11	10.19	737.80	0	11:56	6.11
3-9	JUNCTION	1.21	9.10	732.20	0	12:02	9.10
3-7	JUNCTION	1.18	8.51	731.39	0	12:02	8.46
3-6	JUNCTION	1.94	12.73	729.06	0	12:04	12.72
3-1	JUNCTION	1.85	17.38	725.62	0	11:55	9.54
3-5	JUNCTION	1.27	10.11	726.91	0	12:05	10.09
3-4	JUNCTION	1.28	9.94	726.47	0	12:05	9.93
3-3	JUNCTION	1.30	10.03	722.13	0	12:06	10.03
3-20	JUNCTION	0.78	6.50	739.12	0	12:00	5.60
3-19	JUNCTION	0.78	6.46	738.72	0	12:00	5.77
3-18	JUNCTION	0.42	6.50	738.38	0	12:00	5.76
3-17	JUNCTION	0.82	7.06	737.44	0	12:00	6.62
3-16	JUNCTION	0.82	7.00	737.26	0	12:00	6.59
3-12	JUNCTION	1.58	6.52	735.63	0	12:00	6.29
3-30	JUNCTION	0.47	8.41	750.61	0	11:59	5.83
3-31	JUNCTION	0.44	8.45	750.71	0	11:59	5.78
3-22	JUNCTION	0.73	5.05	740.66	0	12:00	5.02
3-21	JUNCTION	0.73	5.06	739.96	0	12:00	4.99
2-19	JUNCTION	0.26	3.86	742.41	0	11:57	3.61
2-20	JUNCTION	0.39	3.90	743.58	0	11:57	3.78
2-21	JUNCTION	0.43	5.33	745.33	0	11:57	5.16
3-51	JUNCTION	0.69	2.92	743.54	0	12:03	2.91
002	OUTFALL	2.52	3.33	708.92	0	12:01	3.32
OF-3	OUTFALL	2.59	4.69	711.79	0	12:04	4.69

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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	Flow Balance Error Percent
3-32	JUNCTION	0.00	22.91	0 12:00	0	0.844	0.024
3-32-1	JUNCTION	0.00	7.42	0 11:59	0	0.285	-0.236
2	JUNCTION	6.21	6.21	0 12:00	0.285	0.285	0.168
5	JUNCTION	0.00	54.58	0 11:58	0	1.52	-0.046
8	JUNCTION	41.11	41.11	0 12:00	1.12	1.12	-0.105
7	JUNCTION	0.00	41.22	0 12:00	0	1.13	0.079
6	JUNCTION	9.67	50.90	0 12:00	0.399	1.52	0.019
2-17	JUNCTION	0.00	106.61	0 11:57	0	1.82	0.104
2-16	JUNCTION	2.10	105.34	0 11:57	0.0576	1.88	-0.347
2-15B	JUNCTION	7.01	111.65	0 11:57	0.199	2.09	-0.101
2-15A	JUNCTION	0.00	113.33	0 12:00	0	2.09	0.060
2-14	JUNCTION	0.00	120.19	0 11:58	0	2.09	-0.131
2-13	JUNCTION	2.25	122.23	0 11:58	0.057	2.15	-0.118
2-11	JUNCTION	0.00	122.22	0 11:58	0	2.15	-0.108
2-10	JUNCTION	0.00	133.13	0 11:59	0	2.15	-0.070
2-7	JUNCTION	0.00	105.13	0 12:01	0	2.16	0.033
2-6	JUNCTION	1.62	106.76	0 11:59	0.0371	2.2	-0.087
2-5	JUNCTION	0.00	106.11	0 12:01	0	2.2	-0.569
2-4	JUNCTION	0.00	105.65	0 12:02	0	2.21	0.026
2-3	JUNCTION	0.00	105.69	0 12:02	0	2.22	0.195
2-2	JUNCTION	2.30	107.16	0 12:02	0.0523	2.29	0.308
2-1	JUNCTION	32.69	135.19	0 12:01	0.953	3.27	0.332
2-18	JUNCTION	25.06	104.20	0 11:57	0.44	1.82	-0.004
3-25-11	JUNCTION	1.00	1.00	0 11:57	0.0319	0.0319	-0.010
3-25-10	JUNCTION	0.70	1.53	0 11:57	0.0164	0.0483	-0.015
3-33	JUNCTION	15.58	15.58	0 12:00	0.558	0.558	-0.004
3-28-4	JUNCTION	0.00	55.43	0 11:58	0	1.52	-0.081
2-18-3	JUNCTION	0.00	51.54	0 11:59	0	1.53	-0.029
3-25-12	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
3-25-7	JUNCTION	0.00	1.52	0 11:57	0	0.0483	-0.020
2-9	JUNCTION	0.00	133.22	0 11:59	0	2.15	-0.285

3-29	JUNCTION	0.00	42.06	0	11:59	0	1.22	-0.189
3-28	JUNCTION	0.00	92.67	0	11:59	0	2.75	0.048
3-26	JUNCTION	25.25	116.46	0	11:59	0.443	3.24	0.075
3-23	JUNCTION	30.50	128.94	0	12:00	0.536	3.77	-0.054
3-46	JUNCTION	0.00	85.03	0	12:00	0	4.72	0.025
3-48	JUNCTION	37.37	86.85	0	12:00	0.657	4.73	0.195
3-47	JUNCTION	0.00	85.32	0	12:00	0	4.72	0.008
3-45	JUNCTION	0.00	84.65	0	12:00	0	4.72	0.001
3-44	JUNCTION	0.00	84.36	0	12:00	0	4.72	-0.041
3-43	JUNCTION	0.00	84.24	0	12:00	0	4.72	0.017
3-41	JUNCTION	15.53	95.33	0	12:00	0.273	4.99	0.038
3-40	JUNCTION	0.00	95.21	0	12:00	0	4.99	0.004
x-43	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
3-42	JUNCTION	0.00	84.77	0	12:01	0	4.72	-0.009
3-39	JUNCTION	0.00	97.27	0	12:00	0	4.99	-0.010
3-38	JUNCTION	0.00	98.45	0	11:59	0	4.99	-0.005
3-10	JUNCTION	40.06	310.06	0	12:00	0.705	10.9	-0.210
3-9	JUNCTION	0.00	307.75	0	12:00	0	11	0.203
3-7	JUNCTION	16.32	316.60	0	11:58	0.484	11.4	-0.118
3-6	JUNCTION	3.98	289.50	0	12:01	0.082	11.5	0.089
3-1	JUNCTION	9.91	288.42	0	12:04	0.33	12.5	0.037
3-5	JUNCTION	0.00	277.59	0	12:02	0	11.5	0.090
3-4	JUNCTION	23.39	289.03	0	12:02	0.642	12.1	-0.039
3-3	JUNCTION	0.00	284.33	0	12:05	0	12.1	0.044
3-20	JUNCTION	31.93	166.34	0	12:00	0.561	4.79	0.015
3-19	JUNCTION	0.00	168.22	0	12:00	0	4.79	-0.025
3-18	JUNCTION	0.00	168.61	0	12:00	0	4.79	-0.021
3-17	JUNCTION	25.25	188.70	0	12:00	0.443	5.24	0.062
3-16	JUNCTION	0.00	189.02	0	12:00	0	5.24	-0.015
3-12	JUNCTION	0.00	188.94	0	12:00	0	5.24	0.016
3-30	JUNCTION	21.29	41.62	0	11:59	0.374	1.22	0.020
3-31	JUNCTION	0.00	22.92	0	12:00	0	0.843	-0.022
3-22	JUNCTION	26.36	144.54	0	12:00	0.463	4.23	0.014
3-21	JUNCTION	0.00	142.87	0	12:00	0	4.23	-0.009
2-19	JUNCTION	0.00	77.82	0	11:57	0	1.38	-0.036
2-20	JUNCTION	11.17	78.28	0	11:57	0.196	1.38	0.024
2-21	JUNCTION	67.11	67.11	0	11:57	1.19	1.19	0.011
3-51	JUNCTION	56.12	56.12	0	12:03	4.07	4.07	-0.175
002	OUTFALL	0.00	135.18	0	12:01	0	3.28	0.000
OF-3	OUTFALL	0.00	288.42	0	12:04	0	12.6	0.000

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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
3-32	JUNCTION	0.02	5.699	1.551
3-32-1	JUNCTION	0.01	4.452	0.000
2	JUNCTION	0.18	4.554	0.000
5	JUNCTION	0.16	3.501	0.000
8	JUNCTION	0.26	2.300	0.000
7	JUNCTION	0.10	2.371	0.079
6	JUNCTION	0.18	2.207	0.000
2-17	JUNCTION	0.01	2.240	8.360
2-16	JUNCTION	0.02	1.884	10.166
2-15B	JUNCTION	0.06	0.477	6.023
2-15A	JUNCTION	0.01	3.664	1.836
2-14	JUNCTION	0.13	2.230	0.000
2-13	JUNCTION	0.15	2.802	0.000
2-11	JUNCTION	0.20	1.455	0.000
2-10	JUNCTION	0.12	1.044	0.000
2-7	JUNCTION	0.15	1.488	0.662
2-2	JUNCTION	0.03	0.099	2.601
2-1	JUNCTION	0.04	0.051	3.449
2-18	JUNCTION	0.03	0.135	9.925
3-33	JUNCTION	0.02	5.644	2.656
2-9	JUNCTION	0.10	1.845	0.000
3-29	JUNCTION	0.10	3.106	4.934
3-28	JUNCTION	0.03	2.418	5.582
x-43	JUNCTION	48.00	0.000	0.000
3-10	JUNCTION	0.25	4.688	4.452
3-9	JUNCTION	0.31	3.599	0.000
3-7	JUNCTION	0.29	3.008	0.000
3-6	JUNCTION	0.48	7.227	0.000
3-1	JUNCTION	0.36	11.880	0.000
3-5	JUNCTION	0.31	4.611	0.000
3-4	JUNCTION	0.33	4.440	0.000
3-3	JUNCTION	0.33	4.526	0.000
3-20	JUNCTION	0.01	1.000	2.880
3-19	JUNCTION	0.01	0.964	2.276

3-18	JUNCTION	0.01	1.002	2.618
3-17	JUNCTION	0.11	1.559	2.561
3-16	JUNCTION	0.11	1.498	2.742
3-12	JUNCTION	0.05	0.231	4.369
3-30	JUNCTION	0.07	4.908	3.392
3-31	JUNCTION	0.06	4.951	3.289
2-21	JUNCTION	0.14	1.825	5.255

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Node Flooding Summary  
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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
3-32-1	0.01	2.78	0 11:59	0.000	0.002
2	0.01	1.39	0 11:59	0.000	0.004
5	0.01	6.92	0 11:58	0.000	0.001
8	0.01	5.99	0 12:03	0.000	0.000
6	0.02	5.59	0 11:58	0.000	0.007
2-14	0.01	21.64	0 11:58	0.001	0.030
2-13	0.01	13.16	0 12:03	0.001	0.002
2-11	0.07	11.72	0 12:03	0.004	0.055
2-10	0.09	22.31	0 11:58	0.015	0.144
2-9	0.09	29.33	0 11:59	0.026	0.445
3-9	0.17	28.36	0 12:00	0.022	0.819
3-7	0.21	34.54	0 11:58	0.040	1.558
3-6	0.26	44.98	0 11:57	0.065	2.727
3-1	0.01	16.10	0 11:55	0.000	0.000
3-5	0.18	14.36	0 12:09	0.019	0.901
3-4	0.18	10.22	0 12:01	0.019	0.850
3-3	0.07	19.95	0 12:09	0.002	0.026

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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
002	92.31	7.26	135.18	3.281
OF-3	99.94	22.68	288.42	12.569
System	96.12	29.94	421.88	15.850

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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
1	CONDUIT	41.22	0 12:00	8.40	0.80	1.00
2	CONDUIT	41.29	0 12:00	5.84	0.77	1.00
3	CONDUIT	54.58	0 11:58	7.72	1.74	1.00
6	CONDUIT	103.48	0 11:57	6.51	1.03	1.00
7	CONDUIT	105.40	0 11:57	6.63	1.06	1.00
8	CONDUIT	113.33	0 12:00	7.18	0.49	1.00
9	CONDUIT	120.19	0 11:58	12.49	0.68	1.00
10	CONDUIT	122.22	0 11:58	12.70	1.08	1.00
11	CONDUIT	133.13	0 11:59	13.84	1.12	1.00
12	CONDUIT	120.12	0 11:58	12.49	0.85	1.00
13	CONDUIT	133.22	0 11:59	10.60	0.83	1.00
14	CONDUIT	105.20	0 12:01	8.51	0.93	0.97
15	CONDUIT	106.11	0 12:01	5.96	0.97	0.93
16	CONDUIT	105.65	0 12:02	5.63	1.49	0.98
17	CONDUIT	105.69	0 12:02	5.70	2.50	0.95
18	CONDUIT	105.79	0 12:03	5.50	0.84	0.97
19	CONDUIT	107.46	0 12:03	5.48	1.13	1.00
20	CONDUIT	135.18	0 12:01	7.74	1.09	0.83
21	CONDUIT	106.61	0 11:57	6.70	0.62	1.00
23	CONDUIT	7.42	0 11:59	6.05	1.94	1.00
24	CONDUIT	7.41	0 11:59	4.25	0.66	1.00
28	CONDUIT	0.87	0 11:59	1.81	0.03	0.15
29	CONDUIT	0.00	0 00:00	0.00	0.00	0.03

30	CONDUIT	15.75	0	11:59	2.16	0.59	1.00
32	CONDUIT	55.43	0	11:58	7.84	0.84	1.00
33	CONDUIT	51.54	0	11:59	4.89	0.36	0.79
38	CONDUIT	1.52	0	11:57	1.77	0.02	0.19
41	CONDUIT	105.13	0	12:01	10.93	1.14	1.00
link20	CONDUIT	42.17	0	11:59	5.48	1.23	1.00
LINK21	CONDUIT	93.30	0	11:59	9.70	2.28	1.00
Link22	CONDUIT	105.29	0	12:00	5.19	0.66	0.80
Link32	CONDUIT	85.32	0	12:00	5.31	0.44	0.77
Link33	CONDUIT	85.03	0	12:00	5.30	0.44	0.76
Link34	CONDUIT	84.65	0	12:00	5.29	0.43	0.76
Link35	CONDUIT	84.36	0	12:00	5.28	0.44	0.76
link36	CONDUIT	84.24	0	12:00	5.15	0.43	0.78
link37	CONDUIT	84.77	0	12:01	5.06	0.70	0.81
Link38	CONDUIT	85.09	0	12:01	5.00	0.68	0.82
Link39	CONDUIT	95.21	0	12:00	5.49	0.80	0.84
Link40	CONDUIT	97.27	0	12:00	5.53	0.81	0.87
Link41	CONDUIT	98.45	0	11:59	5.52	0.82	0.92
43	CONDUIT	104.03	0	11:58	5.45	0.48	0.99
44	CONDUIT	307.75	0	12:00	12.95	0.64	1.00
45	CONDUIT	301.06	0	11:58	12.67	2.17	1.00
46	CONDUIT	286.24	0	12:01	12.05	0.63	1.00
48	CONDUIT	288.42	0	12:04	12.56	1.86	0.93
49	CONDUIT	277.59	0	12:02	11.68	2.20	1.00
50	CONDUIT	269.17	0	12:03	11.33	1.28	1.00
51	CONDUIT	284.33	0	12:05	11.97	0.99	1.00
52	CONDUIT	283.80	0	12:06	11.95	1.06	1.00
LINK26	CONDUIT	168.22	0	12:00	7.08	0.96	1.00
53	CONDUIT	168.61	0	12:00	7.10	0.96	1.00
54	CONDUIT	170.41	0	12:00	5.65	0.63	1.00
Link29	CONDUIT	189.02	0	12:00	7.96	1.09	1.00
Link30	CONDUIT	188.94	0	12:00	7.95	1.07	1.00
55	CONDUIT	191.54	0	12:00	8.06	0.66	1.00
56	CONDUIT	42.06	0	11:59	4.55	1.18	1.00
57	CONDUIT	51.00	0	12:00	5.68	0.36	0.89
60	CONDUIT	23.20	0	11:59	2.70	0.56	1.00
61	CONDUIT	1.33	0	12:00	0.30	0.02	0.59
62	CONDUIT	124.45	0	12:00	5.63	0.70	0.88
63	CONDUIT	142.87	0	12:00	6.25	0.81	0.92
64	CONDUIT	143.44	0	12:00	6.12	0.81	0.96
66	CONDUIT	81.28	0	11:57	5.33	0.48	0.93
67	CONDUIT	77.82	0	11:57	5.80	0.64	0.86
68	CONDUIT	67.11	0	11:57	6.98	2.31	1.00

70	CONDUIT	56.06	0	12:03	4.86	0.15	0.67
71	CONDUIT	22.92	0	12:00	3.26	0.78	1.00

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
1	1.00	0.16	0.00	0.00	0.64	0.00	0.00	0.19	0.00	0.60
2	1.00	0.00	0.16	0.00	0.84	0.00	0.00	0.00	0.00	0.78
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.57
6	1.00	0.00	0.00	0.00	0.61	0.00	0.00	0.39	0.00	0.68
7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.89
8	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.64
9	1.00	0.00	0.00	0.00	0.52	0.07	0.00	0.41	0.00	0.68
10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.60
11	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.00	0.65
12	1.00	0.00	0.00	0.00	0.61	0.01	0.00	0.37	0.00	0.59
13	1.00	0.00	0.00	0.00	0.19	0.00	0.00	0.80	0.00	0.53
14	1.00	0.00	0.00	0.00	0.03	0.00	0.00	0.96	0.00	0.52
15	1.00	0.00	0.00	0.00	0.27	0.00	0.00	0.73	0.00	0.51
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.05
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.02
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.20
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
21	1.00	0.00	0.00	0.00	0.60	0.00	0.00	0.40	0.00	0.71
23	1.00	0.00	0.00	0.00	0.44	0.00	0.00	0.56	0.00	0.69
24	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.00	0.71
28	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.29
29	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.32
32	1.00	0.00	0.00	0.00	0.88	0.12	0.00	0.00	0.00	0.73
33	1.00	0.00	0.00	0.00	0.97	0.01	0.00	0.02	0.00	0.78
38	1.00	0.00	0.00	0.00	0.96	0.04	0.00	0.00	0.00	0.62
41	1.00	0.00	0.00	0.00	0.62	0.00	0.00	0.38	0.00	0.51
link20	1.00	0.00	0.00	0.00	0.04	0.00	0.00	0.95	0.00	0.00
LINK21	1.00	0.00	0.00	0.00	0.85	0.00	0.00	0.14	0.00	0.51

Link22	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81
Link32	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.74
Link33	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.74
Link34	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.74
Link35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.74
link36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.97
link37	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.64
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.65
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.63
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.65
43	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.80
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.98
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.49
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.08
49	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.68
51	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.75
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.94
LINK26	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.84
53	1.00	0.00	0.00	0.00	0.58	0.42	0.00	0.00	0.00	0.75
54	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
Link29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.76
Link30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.90
55	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.97
56	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81
57	1.00	0.02	0.00	0.00	0.05	0.00	0.00	0.93	0.00	0.61
60	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.41
61	1.00	0.00	0.32	0.00	0.68	0.00	0.00	0.00	0.00	1.00
62	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.78
63	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81
64	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.80
66	1.00	0.00	0.03	0.00	0.97	0.00	0.00	0.00	0.99	0.00
67	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.48
68	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
70	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.97
71	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.80

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 Conduit Surcharge Summary  
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Conduit	----- Both Ends	Hours Full Upstream	----- Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
1	0.19	0.26	0.19	0.01	0.01
2	0.10	0.10	0.18	0.01	0.01
3	0.16	0.18	0.16	0.21	0.15
6	0.01	0.03	0.02	0.01	0.01
7	0.04	0.04	0.05	0.02	0.01
8	0.01	0.05	0.01	0.01	0.01
9	0.13	0.23	0.13	0.01	0.01
10	0.18	0.20	0.19	0.05	0.12
11	0.16	0.19	0.19	0.02	0.06
12	0.14	0.20	0.15	0.01	0.01
13	0.07	0.12	0.10	0.01	0.01
14	0.01	0.15	0.01	0.01	0.01
16	0.01	0.01	0.01	0.17	0.01
17	0.01	0.01	0.01	0.30	0.01
18	0.01	0.01	0.03	0.01	0.01
19	0.04	0.06	0.04	0.10	0.04
20	0.01	0.08	0.01	0.09	0.01
21	0.01	0.03	0.01	0.01	0.01
23	0.11	0.18	0.11	0.19	0.11
24	0.01	0.01	0.04	0.01	0.01
30	0.02	0.02	0.02	0.01	0.01
32	0.04	0.16	0.04	0.01	0.01
41	0.18	0.23	0.19	0.10	0.10
link20	0.10	0.10	0.10	0.02	0.02
LINK21	0.14	0.24	0.14	0.32	0.14
43	0.01	0.01	0.36	0.01	0.01
44	0.23	0.23	0.31	0.01	0.01
45	0.27	0.31	0.27	0.38	0.24
46	0.27	0.28	0.48	0.01	0.01
48	0.01	0.36	0.01	0.39	0.01
49	0.31	0.31	0.48	0.46	0.01
50	0.31	0.31	0.33	0.25	0.27
51	0.31	0.33	0.32	0.01	0.02
52	0.32	0.32	0.36	0.19	0.22
LINK26	0.01	0.01	0.01	0.01	0.01
53	0.01	0.01	0.01	0.01	0.01
54	0.01	0.01	0.11	0.01	0.01

Link29	0.11	0.11	0.11	0.03	0.03
Link30	0.11	0.11	0.17	0.03	0.03
55	0.05	0.05	0.23	0.01	0.01
56	0.07	0.07	0.10	0.01	0.01
57	0.01	0.01	0.03	0.01	0.01
60	0.06	0.06	0.07	0.01	0.01
61	0.01	0.01	0.25	0.01	0.01
64	0.01	0.01	0.01	0.01	0.01
66	0.01	0.01	0.03	0.01	0.01
68	0.09	0.14	0.09	0.24	0.09
71	0.07	0.07	0.11	0.01	0.01

Analysis begun on: Thu Feb 01 20:41:15 2018  
Analysis ended on: Thu Feb 01 20:41:24 2018  
Total elapsed time: 00:00:09

*“Remedial Option 1” SWMM Model Output*

# Remedial Option 1



Remedial Option 1

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 20  
 Number of nodes ..... 77  
 Number of links ..... 73  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	1.2-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
1	105.00	750.00	25.00	2.0000	SCS~Type~II	39
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16

17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

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Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	
2-17	JUNCTION	735.85	15.20	2500.0	
2-18	JUNCTION	737.67	14.56	2500.0	
2-18-3	JUNCTION	743.25	8.77	2500.0	
2-2	JUNCTION	706.68	7.80	2500.0	
2-3	JUNCTION	707.67	7.15	2500.0	
2-4	JUNCTION	707.77	7.05	2500.0	
2-5	JUNCTION	707.85	8.05	2500.0	
2-6	JUNCTION	708.71	7.00	2500.0	

2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0
3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
38	JUNCTION	755.54	4.80	2500.0
39	JUNCTION	759.88	4.80	2500.0
NMH-1	JUNCTION	751.00	4.80	2500.0

NMH-10	JUNCTION	746.38	6.72	2500.0
NMH-11	JUNCTION	745.48	5.53	2500.0
NMH-12	JUNCTION	744.48	7.61	2500.0
NMH-2	JUNCTION	749.62	5.30	2500.0
NMH2-18-1	JUNCTION	738.29	13.44	2500.0
NMH2-18-2	JUNCTION	739.38	14.27	2500.0
NMH2-18-3	JUNCTION	743.25	8.77	2500.0
NMH-3	JUNCTION	748.22	6.00	2500.0
NMH-4	JUNCTION	746.83	5.80	2500.0
NMH-5	JUNCTION	745.44	5.90	2500.0
NMH-6	JUNCTION	744.05	8.60	2500.0
NMH-7	JUNCTION	742.66	10.60	2500.0
NMH-8	JUNCTION	741.27	7.20	2500.0
NMH-9	JUNCTION	747.28	7.52	2500.0
x-43	JUNCTION	730.59	0.00	0.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150
16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150
23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150

24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
68	8	NMH-1	CONDUIT	185.1	0.0216	0.0120
69	NMH-1	NMH-2	CONDUIT	294.3	0.4689	0.0120
70	NMH-2	NMH-3	CONDUIT	316.5	0.4423	0.0120
71	NMH-3	NMH-4	CONDUIT	253.6	0.5481	0.0120
72	NMH-4	NMH-5	CONDUIT	258.2	0.5384	0.0120
73	NMH-5	NMH-6	CONDUIT	332.4	0.4181	0.0120
74	NMH-6	NMH-7	CONDUIT	232.7	0.5973	0.0120
75	NMH-9	NMH-10	CONDUIT	290.0	0.3103	0.0120
76	NMH-10	NMH-11	CONDUIT	291.3	0.3089	0.0120
77	NMH-11	NMH-12	CONDUIT	345.0	0.2898	0.0120

78	NMH-12	NMH-6	CONDUIT	123.3	0.3486	0.0120
79	NMH-7	NMH-8	CONDUIT	278.4	0.4993	0.0120
80	3-25-7	NMH-9	CONDUIT	58.1	0.0860	0.0150
81	3-32	NMH2-18-2	CONDUIT	51.0	6.9253	0.0120
82	NMH2-18-2	NMH2-18-1	CONDUIT	460.8	0.2366	0.0120
83	NMH2-18-1	2-18	CONDUIT	425.5	0.1457	0.0120
84	2-18-3	NMH2-18-2	CONDUIT	482.2	0.8027	0.0120
85	3-51	3-48	CONDUIT	216.6	2.7944	0.0150
86	NMH-8	3-51	CONDUIT	219.0	0.2968	0.0120
87	38	8	CONDUIT	270.0	1.6669	0.0150
88	39	38	CONDUIT	274.0	1.5841	0.0150

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86

33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
68	CIRCULAR	3.00	7.07	0.75	3.00	1	10.62
69	CIRCULAR	3.00	7.07	0.75	3.00	1	49.48
70	CIRCULAR	3.00	7.07	0.75	3.00	1	48.06
71	CIRCULAR	3.00	7.07	0.75	3.00	1	53.49
72	CIRCULAR	3.00	7.07	0.75	3.00	1	53.02
73	CIRCULAR	3.00	7.07	0.75	3.00	1	46.72
74	CIRCULAR	3.00	7.07	0.75	3.00	1	55.84
75	CIRCULAR	2.50	4.91	0.63	2.50	1	24.75
76	CIRCULAR	2.50	4.91	0.63	2.50	1	24.70
77	CIRCULAR	2.50	4.91	0.63	2.50	1	23.92
78	CIRCULAR	2.50	4.91	0.63	2.50	1	26.24
79	CIRCULAR	3.00	7.07	0.75	3.00	1	51.05
80	CIRCULAR	3.00	7.07	0.75	3.00	1	16.96
81	CIRCULAR	4.00	12.57	1.00	4.00	1	409.51
82	CIRCULAR	4.50	15.90	1.13	4.50	1	103.62

83	CIRCULAR	4.50	15.90	1.13	4.50	1	81.32
84	CIRCULAR	4.00	12.57	1.00	4.00	1	139.42
85	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
86	CIRCULAR	3.00	7.07	0.75	3.00	1	39.36
87	CIRCULAR	2.50	4.91	0.63	2.50	1	45.90
88	CIRCULAR	2.50	4.91	0.63	2.50	1	44.74

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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.  
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Analysis Options

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Flow Units ..... CFS  
Process Models:  
  Rainfall/Runoff ..... YES  
  RDII ..... NO  
  Snowmelt ..... NO  
  Groundwater ..... NO  
  Flow Routing ..... YES  
  Ponding Allowed ..... YES  
  Water Quality ..... NO  
Infiltration Method ..... CURVE\_NUMBER  
Flow Routing Method ..... DYNWAVE  
Starting Date ..... MAY-30-2015 00:00:00  
Ending Date ..... JUN-01-2015 00:00:00  
Antecedent Dry Days ..... 0.0  
Report Time Step ..... 00:02:00  
Wet Time Step ..... 00:01:00  
Dry Time Step ..... 00:05:00  
Routing Time Step ..... 5.00 sec  
Variable Time Step ..... YES  
Maximum Trials ..... 10  
Number of Threads ..... 1  
Head Tolerance ..... 0.005000 ft

\*\*\*\*\* Volume Depth

Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	53.195	1.200
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	24.944	0.563
Surface Runoff .....	23.600	0.532
Final Storage .....	4.653	0.105
Continuity Error (%) .....	-0.005	

Flow Routing Continuity	Volume acre-feet	Volume 10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	23.595	7.689
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	23.522	7.665
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.197	0.064
Continuity Error (%) .....	-0.302	

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Time-Step Critical Elements  
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Link link37 (21.05%)

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Highest Flow Instability Indexes  
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Link 51 (27)  
Link Link32 (27)  
Link 44 (25)  
Link 46 (25)  
Link 45 (24)

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Routing Time Step Summary

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Minimum Time Step : 0.64 sec  
 Average Time Step : 4.38 sec  
 Maximum Time Step : 5.00 sec  
 Percent in Steady State : 0.00  
 Average Iterations per Step : 2.28  
 Percent Not Converging : 0.62

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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
1	1.20	0.00	0.00	0.62	0.24	0.68	31.13	0.198
16	1.20	0.00	0.00	0.97	0.15	0.04	1.56	0.125
17	1.20	0.00	0.00	0.23	0.84	0.15	5.24	0.699
18	1.20	0.00	0.00	0.00	1.20	0.05	1.72	1.000
19	1.20	0.00	0.00	0.64	0.50	0.04	1.80	0.418
20	1.20	0.00	0.00	0.41	0.73	0.71	24.48	0.611
22	1.20	0.00	0.00	0.00	1.20	0.03	1.25	1.000
23	1.20	0.00	0.00	0.53	0.59	0.40	11.63	0.489
24	1.20	0.00	0.00	0.54	0.46	0.01	0.56	0.387
25	1.20	0.00	0.00	0.71	0.18	0.01	0.80	0.147
26	1.20	0.00	0.00	0.64	0.47	0.27	7.24	0.394
27	1.20	0.00	0.00	0.66	0.44	0.19	4.65	0.365
3-51#1	1.20	0.00	0.00	0.66	0.50	2.90	40.38	0.414
28	1.20	0.00	0.00	0.16	1.04	0.06	3.10	0.865
29	1.20	0.00	0.00	0.61	0.59	0.24	7.40	0.491
30	1.20	0.00	0.00	0.28	0.91	0.50	17.68	0.762
31	1.20	0.00	0.00	0.45	0.75	0.37	12.38	0.626
3-20#1	1.20	0.00	0.00	0.00	1.20	0.45	25.52	1.000
3-41#1	1.20	0.00	0.00	0.00	1.20	0.22	12.43	1.000
3-17#1	1.20	0.00	0.00	0.00	1.20	0.35	20.19	1.000

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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	Reported Max Depth Feet
2	JUNCTION	0.19	1.56	749.30	0 12:00	1.56
2-1	JUNCTION	2.01	2.38	708.47	0 00:01	2.17
2-10	JUNCTION	0.34	1.83	718.48	0 12:12	1.83
2-11	JUNCTION	0.36	2.05	719.41	0 12:11	2.04
2-13	JUNCTION	0.36	2.06	723.20	0 12:11	2.03
2-14	JUNCTION	0.34	2.00	723.79	0 12:08	2.00
2-15A	JUNCTION	0.33	1.97	725.26	0 12:10	1.96
2-15B	JUNCTION	0.32	1.67	732.96	0 12:09	1.66
2-16	JUNCTION	0.31	1.57	734.60	0 12:08	1.57
2-17	JUNCTION	0.31	1.56	737.41	0 12:10	1.56
2-18	JUNCTION	0.29	1.66	739.33	0 12:03	1.66
2-18-3	JUNCTION	0.17	1.00	744.25	0 11:59	0.99
2-2	JUNCTION	1.43	1.79	708.47	0 12:13	1.78
2-3	JUNCTION	0.54	1.73	709.40	0 12:14	1.72
2-4	JUNCTION	0.51	1.85	709.62	0 12:15	1.85
2-5	JUNCTION	0.46	1.85	709.70	0 12:15	1.85
2-6	JUNCTION	0.35	1.74	710.45	0 12:08	1.74
2-7	JUNCTION	0.35	1.74	711.52	0 12:12	1.73
2-9	JUNCTION	0.37	2.04	714.70	0 12:12	2.03
3-1	JUNCTION	1.50	4.39	712.63	0 12:04	4.39
3-10	JUNCTION	0.64	3.65	731.26	0 12:01	3.64
3-12	JUNCTION	1.01	3.14	732.25	0 11:58	3.14
3-16	JUNCTION	0.23	2.40	732.66	0 11:57	2.37
3-17	JUNCTION	0.23	2.38	732.76	0 11:57	2.37
3-18	JUNCTION	0.06	1.04	732.92	0 11:57	1.03
3-19	JUNCTION	0.17	1.56	733.82	0 11:57	1.54
3-20	JUNCTION	0.17	1.56	734.18	0 11:57	1.55
3-25-10	JUNCTION	0.04	0.53	748.39	0 11:57	0.53
3-25-11	JUNCTION	0.04	0.43	750.50	0 11:59	0.43
3-25-12	JUNCTION	0.00	0.00	750.81	0 00:00	0.00
3-25-7	JUNCTION	0.06	0.55	747.88	0 12:00	0.55
3-28-4	JUNCTION	0.16	1.00	746.02	0 11:59	1.00
3-3	JUNCTION	0.74	4.30	716.40	0 12:03	4.29
3-32	JUNCTION	0.20	1.38	744.28	0 12:00	1.37
3-32-1	JUNCTION	0.19	1.22	747.69	0 12:00	1.22

3-33	JUNCTION	0.24	1.47	744.50	0	12:00	1.47
3-38	JUNCTION	0.62	3.30	732.43	0	12:10	3.30
3-39	JUNCTION	0.64	3.32	733.17	0	12:09	3.32
3-4	JUNCTION	0.74	4.32	720.85	0	12:03	4.28
3-40	JUNCTION	0.63	3.33	733.45	0	12:09	3.32
3-41	JUNCTION	0.64	3.33	733.74	0	12:09	3.31
3-42	JUNCTION	0.62	3.28	733.80	0	12:09	3.26
3-43	JUNCTION	0.62	3.28	733.87	0	12:08	3.27
3-44	JUNCTION	0.60	3.27	734.45	0	12:08	3.26
3-45	JUNCTION	0.60	3.27	734.95	0	12:08	3.26
3-46	JUNCTION	0.60	3.28	736.38	0	12:08	3.27
3-47	JUNCTION	0.60	3.28	737.13	0	12:08	3.28
3-48	JUNCTION	0.60	3.28	737.85	0	12:07	3.28
3-5	JUNCTION	0.71	4.07	720.87	0	12:02	4.03
3-51	JUNCTION	0.58	3.23	743.85	0	12:07	3.22
3-6	JUNCTION	1.27	4.94	721.27	0	12:02	4.91
3-7	JUNCTION	0.68	3.91	726.79	0	12:02	3.90
3-9	JUNCTION	0.69	3.78	726.88	0	12:02	3.78
5	JUNCTION	0.18	0.94	748.53	0	11:59	0.92
6	JUNCTION	0.19	1.05	749.27	0	12:00	1.04
7	JUNCTION	0.00	0.00	750.18	0	00:00	0.00
8	JUNCTION	0.31	4.26	755.30	0	12:01	3.00
38	JUNCTION	0.27	4.80	760.34	0	11:58	2.60
39	JUNCTION	0.27	4.80	764.68	0	12:01	2.76
NMH-1	JUNCTION	0.26	2.77	753.77	0	12:00	2.72
NMH-10	JUNCTION	0.05	0.53	746.91	0	12:02	0.53
NMH-11	JUNCTION	0.06	1.27	746.75	0	12:05	1.24
NMH-12	JUNCTION	0.12	2.23	746.71	0	12:06	2.22
NMH-2	JUNCTION	0.26	2.73	752.35	0	12:01	2.73
NMH2-18-1	JUNCTION	0.31	1.70	739.99	0	12:01	1.70
NMH2-18-2	JUNCTION	0.30	1.69	741.07	0	12:00	1.68
NMH2-18-3	JUNCTION	0.00	0.00	743.25	0	00:00	0.00
NMH-3	JUNCTION	0.26	2.72	750.94	0	12:02	2.72
NMH-4	JUNCTION	0.26	2.72	749.55	0	12:02	2.69
NMH-5	JUNCTION	0.26	2.70	748.14	0	12:03	2.70
NMH-6	JUNCTION	0.27	2.65	746.70	0	12:06	2.62
NMH-7	JUNCTION	0.27	2.64	745.30	0	12:07	2.59
NMH-8	JUNCTION	0.29	2.93	744.20	0	12:07	2.85
NMH-9	JUNCTION	0.05	0.56	747.84	0	12:00	0.56
x-43	JUNCTION	0.00	0.00	730.59	0	00:00	0.00
002	OUTFALL	2.51	2.51	708.10	0	00:00	2.51
003	OUTFALL	2.51	2.97	710.07	0	12:04	2.97

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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	Flow Balance Error Percent
2	JUNCTION	4.65	4.65	0 12:00	0.191	0.191	0.224
2-1	JUNCTION	24.48	37.89	0 12:01	0.71	1.98	0.543
2-10	JUNCTION	0.00	22.77	0 12:11	0	1.11	-0.127
2-11	JUNCTION	0.00	22.87	0 12:11	0	1.11	-0.036
2-13	JUNCTION	1.72	23.12	0 12:08	0.0456	1.11	0.045
2-14	JUNCTION	0.00	22.15	0 12:08	0	1.06	-0.086
2-15A	JUNCTION	0.00	22.66	0 12:09	0	1.07	0.217
2-15B	JUNCTION	5.24	23.38	0 12:07	0.154	1.06	-0.180
2-16	JUNCTION	1.56	20.75	0 12:05	0.0442	0.906	-0.433
2-17	JUNCTION	0.00	21.84	0 12:03	0	0.862	-0.066
2-18	JUNCTION	0.00	22.79	0 12:01	0	0.861	-0.052
2-18-3	JUNCTION	0.00	8.64	0 11:59	0	0.273	0.279
2-2	JUNCTION	1.80	22.70	0 12:13	0.0378	1.23	0.646
2-3	JUNCTION	0.00	22.64	0 12:09	0	1.16	0.248
2-4	JUNCTION	0.00	22.65	0 12:09	0	1.15	0.049
2-5	JUNCTION	0.00	23.25	0 12:13	0	1.15	-0.554
2-6	JUNCTION	1.25	22.61	0 12:12	0.0296	1.15	-0.012
2-7	JUNCTION	0.00	22.26	0 12:12	0	1.11	-0.142
2-9	JUNCTION	0.00	22.69	0 12:11	0	1.11	-0.180
3-1	JUNCTION	7.40	116.59	0 12:03	0.245	5.85	0.250
3-10	JUNCTION	0.00	92.02	0 12:01	0	4.62	-0.131
3-12	JUNCTION	0.00	48.48	0 11:57	0	0.803	0.265
3-16	JUNCTION	0.00	48.25	0 11:57	0	0.803	-0.073
3-17	JUNCTION	20.19	45.09	0 11:57	0.355	0.803	0.055
3-18	JUNCTION	0.00	25.44	0 11:57	0	0.448	-0.038
3-19	JUNCTION	0.00	25.50	0 11:57	0	0.449	0.013
3-20	JUNCTION	25.52	25.52	0 11:57	0.449	0.449	0.022
3-25-10	JUNCTION	0.56	1.22	0 11:57	0.0109	0.0252	-0.003
3-25-11	JUNCTION	0.80	0.80	0 11:57	0.0144	0.0144	-0.000
3-25-12	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
3-25-7	JUNCTION	0.00	1.21	0 11:57	0	0.0252	-0.011
3-28-4	JUNCTION	0.00	6.87	0 11:59	0	0.272	-0.213

3-3	JUNCTION	0.00	113.05	0	12:03	0	5.56	0.003
3-32	JUNCTION	0.00	16.19	0	12:00	0	0.59	-0.036
3-32-1	JUNCTION	0.00	4.65	0	12:00	0	0.19	-0.424
3-33	JUNCTION	11.63	11.63	0	12:00	0.399	0.399	-0.004
3-38	JUNCTION	0.00	66.89	0	12:09	0	3.82	-0.026
3-39	JUNCTION	0.00	67.00	0	12:09	0	3.82	-0.016
3-4	JUNCTION	17.68	113.45	0	12:02	0.502	5.56	0.008
3-40	JUNCTION	0.00	67.05	0	12:09	0	3.82	0.012
3-41	JUNCTION	12.43	67.07	0	12:09	0.218	3.82	0.038
3-42	JUNCTION	0.00	65.58	0	12:08	0	3.6	0.001
3-43	JUNCTION	0.00	65.59	0	12:08	0	3.6	-0.003
3-44	JUNCTION	0.00	65.62	0	12:08	0	3.6	-0.013
3-45	JUNCTION	0.00	65.70	0	12:08	0	3.6	0.004
3-46	JUNCTION	0.00	65.79	0	12:08	0	3.6	0.038
3-47	JUNCTION	0.00	65.85	0	12:07	0	3.6	-0.044
3-48	JUNCTION	0.00	65.97	0	12:07	0	3.61	0.211
3-5	JUNCTION	0.00	98.40	0	12:02	0	5.06	0.017
3-51	JUNCTION	40.38	66.07	0	12:07	2.9	3.6	-0.154
3-6	JUNCTION	3.10	99.05	0	12:02	0.0648	5.06	0.172
3-7	JUNCTION	12.38	97.14	0	12:02	0.371	4.99	-0.203
3-9	JUNCTION	0.00	87.11	0	12:01	0	4.63	0.195
5	JUNCTION	0.00	7.16	0	12:00	0	0.272	-0.010
6	JUNCTION	7.24	7.24	0	12:00	0.272	0.272	0.008
7	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
8	JUNCTION	0.00	34.98	0	12:01	0	0.679	-0.011
38	JUNCTION	0.00	34.71	0	12:01	0	0.678	-0.123
39	JUNCTION	31.13	31.13	0	12:00	0.677	0.677	-0.219
NMH-1	JUNCTION	0.00	32.87	0	12:01	0	0.679	0.002
NMH-10	JUNCTION	0.00	1.16	0	12:00	0	0.0252	-0.211
NMH-11	JUNCTION	0.00	4.27	0	12:03	0	0.0282	0.034
NMH-12	JUNCTION	0.00	4.07	0	12:02	0	0.0374	0.175
NMH-2	JUNCTION	0.00	31.71	0	12:00	0	0.679	0.023
NMH2-18-1	JUNCTION	0.00	22.50	0	12:00	0	0.861	0.007
NMH2-18-2	JUNCTION	0.00	24.69	0	12:00	0	0.862	0.034
NMH2-18-3	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
NMH-3	JUNCTION	0.00	31.02	0	12:01	0	0.679	-0.012
NMH-4	JUNCTION	0.00	30.91	0	12:02	0	0.679	0.006
NMH-5	JUNCTION	0.00	30.82	0	12:02	0	0.679	0.010
NMH-6	JUNCTION	0.00	30.03	0	12:05	0	0.713	-0.029
NMH-7	JUNCTION	0.00	29.56	0	12:06	0	0.704	0.005
NMH-8	JUNCTION	0.00	29.36	0	12:07	0	0.704	0.013
NMH-9	JUNCTION	0.00	1.20	0	11:58	0	0.0252	-0.096
x-43	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal

002	OUTFALL	0.00	37.97	0	12:05	0	1.99	0.000
003	OUTFALL	0.00	115.19	0	12:04	0	5.89	0.000

\*\*\*\*\*  
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
2	JUNCTION	0.09	0.310	4.240
8	JUNCTION	0.01	1.256	0.994
38	JUNCTION	0.13	2.301	0.000
39	JUNCTION	0.15	2.300	0.000
NMH2-18-3	JUNCTION	48.00	0.000	8.770
x-43	JUNCTION	48.00	0.000	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 Poned Depth Feet
38	0.01	5.42	0 11:58	0.000	0.001
39	0.01	4.06	0 12:01	0.000	0.000

\*\*\*\*\*  
Outfall Loading Summary  
\*\*\*\*\*

Flow	Avg	Max	Total
------	-----	-----	-------

Outfall Node	Freq Pcnt	Flow CFS	Flow CFS	Volume 10^6 gal
002	95.76	2.95	37.97	1.995
003	99.02	8.57	115.19	5.886
System	97.39	11.52	152.97	7.881

\*\*\*\*\*  
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
2	CONDUIT	0.00	0 00:00	0.00	0.00	0.18
3	CONDUIT	7.16	0 12:00	3.63	0.23	0.33
6	CONDUIT	19.48	0 12:10	4.43	0.19	0.34
7	CONDUIT	19.50	0 12:08	3.93	0.20	0.36
8	CONDUIT	22.66	0 12:09	4.71	0.10	0.40
9	CONDUIT	22.15	0 12:08	4.88	0.13	0.54
10	CONDUIT	22.87	0 12:11	4.44	0.20	0.59
11	CONDUIT	22.77	0 12:11	4.78	0.19	0.55
12	CONDUIT	22.13	0 12:08	4.31	0.16	0.57
13	CONDUIT	22.69	0 12:11	5.29	0.14	0.43
14	CONDUIT	22.17	0 12:12	5.29	0.20	0.37
15	CONDUIT	23.25	0 12:13	4.33	0.21	0.33
16	CONDUIT	22.65	0 12:09	3.65	0.32	0.37
17	CONDUIT	22.64	0 12:09	4.21	0.54	0.35
18	CONDUIT	22.37	0 12:13	4.10	0.18	0.34
19	CONDUIT	22.50	0 12:13	3.95	0.24	0.37
20	CONDUIT	37.97	0 12:05	4.90	0.31	0.49
21	CONDUIT	21.84	0 12:03	4.85	0.13	0.35
23	CONDUIT	4.65	0 12:00	3.83	1.21	0.97
24	CONDUIT	4.59	0 12:00	3.92	0.41	0.63
28	CONDUIT	0.70	0 11:59	1.71	0.02	0.14
29	CONDUIT	0.00	0 00:00	0.00	0.00	0.02
30	CONDUIT	11.60	0 12:00	3.24	0.44	0.41
32	CONDUIT	6.87	0 11:59	3.49	0.10	0.32
33	CONDUIT	8.64	0 11:59	4.60	0.06	0.21

38	CONDUIT	1.21	0	11:57	1.43	0.02	0.18
41	CONDUIT	22.26	0	12:12	4.70	0.24	0.53
Link32	CONDUIT	65.85	0	12:07	5.12	0.34	0.66
Link33	CONDUIT	65.79	0	12:08	5.12	0.34	0.66
Link34	CONDUIT	65.70	0	12:08	5.14	0.33	0.65
Link35	CONDUIT	65.62	0	12:08	4.89	0.34	0.65
link36	CONDUIT	65.59	0	12:08	4.84	0.34	0.66
link37	CONDUIT	65.58	0	12:08	4.80	0.54	0.66
Link38	CONDUIT	65.58	0	12:09	4.76	0.53	0.66
Link39	CONDUIT	67.05	0	12:09	4.83	0.56	0.67
Link40	CONDUIT	67.00	0	12:09	4.83	0.56	0.67
Link41	CONDUIT	66.89	0	12:09	4.88	0.56	0.66
43	CONDUIT	66.75	0	12:10	4.93	0.31	0.66
44	CONDUIT	87.11	0	12:01	5.46	0.18	0.68
45	CONDUIT	86.50	0	12:02	4.88	0.62	0.70
46	CONDUIT	96.73	0	12:02	4.73	0.21	0.80
48	CONDUIT	115.19	0	12:04	6.81	0.74	0.67
49	CONDUIT	98.40	0	12:02	4.73	0.78	0.82
50	CONDUIT	98.13	0	12:02	5.05	0.47	0.76
51	CONDUIT	113.05	0	12:03	5.70	0.39	0.78
52	CONDUIT	111.94	0	12:03	5.58	0.42	0.79
LINK26	CONDUIT	25.50	0	11:57	4.60	0.15	0.28
53	CONDUIT	25.44	0	11:57	6.26	0.14	0.24
54	CONDUIT	25.14	0	11:57	2.71	0.09	0.31
Link29	CONDUIT	48.25	0	11:57	4.97	0.28	0.43
Link30	CONDUIT	48.48	0	11:57	4.17	0.28	0.50
55	CONDUIT	43.81	0	11:57	4.09	0.15	0.54
68	CONDUIT	32.87	0	12:01	4.73	3.09	0.96
69	CONDUIT	31.71	0	12:00	4.69	0.64	0.91
70	CONDUIT	31.02	0	12:01	4.64	0.65	0.91
71	CONDUIT	30.91	0	12:02	4.63	0.58	0.91
72	CONDUIT	30.82	0	12:02	4.64	0.58	0.90
73	CONDUIT	29.81	0	12:03	4.73	0.64	0.87
74	CONDUIT	29.56	0	12:06	4.49	0.53	0.88
75	CONDUIT	1.16	0	12:00	1.54	0.05	0.22
76	CONDUIT	1.06	0	12:02	1.52	0.04	0.35
77	CONDUIT	3.22	0	12:03	1.14	0.13	0.69
78	CONDUIT	4.07	0	12:02	1.01	0.15	0.95
79	CONDUIT	29.36	0	12:07	4.30	0.58	0.93
80	CONDUIT	1.20	0	11:58	1.40	0.07	0.18
81	CONDUIT	16.11	0	12:00	4.07	0.04	0.38
82	CONDUIT	22.50	0	12:00	4.46	0.22	0.38
83	CONDUIT	22.79	0	12:01	4.63	0.28	0.37

84	CONDUIT	8.93	0	11:59	2.61	0.06	0.34
85	CONDUIT	65.97	0	12:07	5.24	0.17	0.65
86	CONDUIT	29.48	0	12:07	4.18	0.75	0.99
87	CONDUIT	34.98	0	12:01	7.13	0.76	1.00
88	CONDUIT	34.71	0	12:01	7.07	0.78	1.00

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Up Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
2	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.71
6	1.00	0.01	0.00	0.00	0.73	0.00	0.00	0.26	0.00	0.63
7	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.66
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.76
9	1.00	0.00	0.00	0.00	0.38	0.02	0.00	0.59	0.00	0.79
10	1.00	0.00	0.00	0.00	0.96	0.04	0.00	0.00	0.00	0.74
11	1.00	0.00	0.00	0.00	0.90	0.10	0.00	0.00	0.00	0.78
12	1.00	0.00	0.00	0.00	0.61	0.06	0.00	0.33	0.00	0.73
13	1.00	0.00	0.00	0.00	0.12	0.00	0.00	0.87	0.00	0.66
14	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.59
15	1.00	0.00	0.00	0.00	0.19	0.00	0.00	0.81	0.00	0.46
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.02
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.18
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
21	1.00	0.01	0.00	0.00	0.47	0.00	0.00	0.53	0.00	0.51
23	1.00	0.00	0.00	0.00	0.45	0.00	0.00	0.55	0.00	0.65
24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.68
28	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.06
29	1.00	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.23
32	1.00	0.00	0.00	0.00	0.87	0.13	0.00	0.00	0.00	0.63
33	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.45
38	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.64
41	1.00	0.00	0.00	0.00	0.59	0.00	0.00	0.41	0.00	0.64

Link32	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.68
Link33	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.68
Link34	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.69
Link35	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.69
link36	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.95
link37	1.00	0.01	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.60
Link38	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.61
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.60
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
43	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.74
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.53
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.03
49	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.70
51	1.00	0.00	0.00	0.00	0.98	0.01	0.00	0.00	0.00	0.74
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.98
LINK26	1.00	0.00	0.10	0.00	0.90	0.00	0.00	0.00	0.00	0.54
53	1.00	0.00	0.00	0.00	0.48	0.52	0.00	0.00	0.00	0.51
54	1.00	0.00	0.23	0.00	0.77	0.00	0.00	0.00	0.00	0.79
Link29	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.64
Link30	1.00	0.00	0.22	0.00	0.77	0.00	0.00	0.00	0.00	0.98
55	1.00	0.00	0.23	0.00	0.77	0.00	0.00	0.00	0.00	0.98
68	1.00	0.19	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
69	1.00	0.20	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.41
70	1.00	0.20	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.43
71	1.00	0.20	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.38
72	1.00	0.20	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.42
73	1.00	0.01	0.19	0.00	0.80	0.00	0.00	0.00	0.00	0.39
74	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.44
75	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.30
76	1.00	0.01	0.10	0.00	0.88	0.00	0.00	0.00	0.00	0.67
77	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.00	0.26
78	1.00	0.01	0.33	0.00	0.67	0.00	0.00	0.00	0.00	0.70
79	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.46
80	1.00	0.00	0.33	0.00	0.67	0.00	0.00	0.00	0.00	0.03
81	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
82	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.92
83	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.65
84	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
85	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.98

86	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.93
87	1.00	0.19	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.77
88	1.00	0.19	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.46

\*\*\*\*\*  
 Conduit Surcharge Summary  
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-----
Conduit      ----- Hours Full -----      Hours      Hours
              Both Ends  Upstream  Dnstream  Above Full  Capacity
              -----
23            0.01      0.09      0.01      0.11        0.01
68            0.01      0.01      0.01      0.50        0.01
78            0.01      0.01      0.06      0.01        0.01
86            0.01      0.01      0.16      0.01        0.01
87            0.11      0.12      0.15      0.01        0.02
88            0.10      0.14      0.12      0.01        0.04
  
```

Analysis begun on: Thu Feb 01 20:52:01 2018  
 Analysis ended on: Thu Feb 01 20:52:09 2018  
 Total elapsed time: 00:00:08

Remedial Option 1

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 20  
 Number of nodes ..... 77  
 Number of links ..... 73  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

\*\*\*\*\*

Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	1.7-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
1	105.00	750.00	25.00	2.0000	SCS~Type~II	39
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16

17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

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Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	
2-17	JUNCTION	735.85	15.20	2500.0	
2-18	JUNCTION	737.67	14.56	2500.0	
2-18-3	JUNCTION	743.25	8.77	2500.0	
2-2	JUNCTION	706.68	7.80	2500.0	
2-3	JUNCTION	707.67	7.15	2500.0	
2-4	JUNCTION	707.77	7.05	2500.0	
2-5	JUNCTION	707.85	8.05	2500.0	
2-6	JUNCTION	708.71	7.00	2500.0	

2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0
3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
38	JUNCTION	755.54	4.80	2500.0
39	JUNCTION	759.88	4.80	2500.0
NMH-1	JUNCTION	751.00	4.80	2500.0

NMH-10	JUNCTION	746.38	6.72	2500.0
NMH-11	JUNCTION	745.48	5.53	2500.0
NMH-12	JUNCTION	744.48	7.61	2500.0
NMH-2	JUNCTION	749.62	5.30	2500.0
NMH2-18-1	JUNCTION	738.29	13.44	2500.0
NMH2-18-2	JUNCTION	739.38	14.27	2500.0
NMH2-18-3	JUNCTION	743.25	8.77	2500.0
NMH-3	JUNCTION	748.22	6.00	2500.0
NMH-4	JUNCTION	746.83	5.80	2500.0
NMH-5	JUNCTION	745.44	5.90	2500.0
NMH-6	JUNCTION	744.05	8.60	2500.0
NMH-7	JUNCTION	742.66	10.60	2500.0
NMH-8	JUNCTION	741.27	7.20	2500.0
NMH-9	JUNCTION	747.28	7.52	2500.0
x-43	JUNCTION	730.59	0.00	0.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150
16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150
23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150

24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
68	8	NMH-1	CONDUIT	185.1	0.0216	0.0120
69	NMH-1	NMH-2	CONDUIT	294.3	0.4689	0.0120
70	NMH-2	NMH-3	CONDUIT	316.5	0.4423	0.0120
71	NMH-3	NMH-4	CONDUIT	253.6	0.5481	0.0120
72	NMH-4	NMH-5	CONDUIT	258.2	0.5384	0.0120
73	NMH-5	NMH-6	CONDUIT	332.4	0.4181	0.0120
74	NMH-6	NMH-7	CONDUIT	232.7	0.5973	0.0120
75	NMH-9	NMH-10	CONDUIT	290.0	0.3103	0.0120
76	NMH-10	NMH-11	CONDUIT	291.3	0.3089	0.0120
77	NMH-11	NMH-12	CONDUIT	345.0	0.2898	0.0120

78	NMH-12	NMH-6	CONDUIT	123.3	0.3486	0.0120
79	NMH-7	NMH-8	CONDUIT	278.4	0.4993	0.0120
80	3-25-7	NMH-9	CONDUIT	58.1	0.0860	0.0150
81	3-32	NMH2-18-2	CONDUIT	51.0	6.9253	0.0120
82	NMH2-18-2	NMH2-18-1	CONDUIT	460.8	0.2366	0.0120
83	NMH2-18-1	2-18	CONDUIT	425.5	0.1457	0.0120
84	2-18-3	NMH2-18-2	CONDUIT	482.2	0.8027	0.0120
85	3-51	3-48	CONDUIT	216.6	2.7944	0.0150
86	NMH-8	3-51	CONDUIT	219.0	0.2968	0.0120
87	38	8	CONDUIT	270.0	1.6669	0.0150
88	39	38	CONDUIT	274.0	1.5841	0.0150

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Cross Section Summary

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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86

33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
68	CIRCULAR	3.00	7.07	0.75	3.00	1	10.62
69	CIRCULAR	3.00	7.07	0.75	3.00	1	49.48
70	CIRCULAR	3.00	7.07	0.75	3.00	1	48.06
71	CIRCULAR	3.00	7.07	0.75	3.00	1	53.49
72	CIRCULAR	3.00	7.07	0.75	3.00	1	53.02
73	CIRCULAR	3.00	7.07	0.75	3.00	1	46.72
74	CIRCULAR	3.00	7.07	0.75	3.00	1	55.84
75	CIRCULAR	2.50	4.91	0.63	2.50	1	24.75
76	CIRCULAR	2.50	4.91	0.63	2.50	1	24.70
77	CIRCULAR	2.50	4.91	0.63	2.50	1	23.92
78	CIRCULAR	2.50	4.91	0.63	2.50	1	26.24
79	CIRCULAR	3.00	7.07	0.75	3.00	1	51.05
80	CIRCULAR	3.00	7.07	0.75	3.00	1	16.96
81	CIRCULAR	4.00	12.57	1.00	4.00	1	409.51
82	CIRCULAR	4.50	15.90	1.13	4.50	1	103.62

83	CIRCULAR	4.50	15.90	1.13	4.50	1	81.32
84	CIRCULAR	4.00	12.57	1.00	4.00	1	139.42
85	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
86	CIRCULAR	3.00	7.07	0.75	3.00	1	39.36
87	CIRCULAR	2.50	4.91	0.63	2.50	1	45.90
88	CIRCULAR	2.50	4.91	0.63	2.50	1	44.74

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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.  
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Analysis Options

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Flow Units ..... CFS  
Process Models:  
  Rainfall/Runoff ..... YES  
  RDII ..... NO  
  Snowmelt ..... NO  
  Groundwater ..... NO  
  Flow Routing ..... YES  
  Ponding Allowed ..... YES  
  Water Quality ..... NO  
Infiltration Method ..... CURVE\_NUMBER  
Flow Routing Method ..... DYNWAVE  
Starting Date ..... MAY-30-2015 00:00:00  
Ending Date ..... JUN-01-2015 00:00:00  
Antecedent Dry Days ..... 0.0  
Report Time Step ..... 00:02:00  
Wet Time Step ..... 00:01:00  
Dry Time Step ..... 00:05:00  
Routing Time Step ..... 5.00 sec  
Variable Time Step ..... YES  
Maximum Trials ..... 10  
Number of Threads ..... 1  
Head Tolerance ..... 0.005000 ft

\*\*\*\*\* Volume Depth

Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	75.360	1.700
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	30.476	0.688
Surface Runoff .....	39.416	0.889
Final Storage .....	5.471	0.123
Continuity Error (%) .....	-0.005	

Flow Routing Continuity	Volume acre-feet	Volume 10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	39.411	12.843
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	39.357	12.825
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.197	0.064
Continuity Error (%) .....	-0.229	

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Time-Step Critical Elements  
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Link link37 (47.38%)

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Highest Flow Instability Indexes  
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Link 88 (35)  
Link 68 (34)  
Link 87 (33)  
Link Link32 (31)  
Link 85 (31)

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Routing Time Step Summary

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Minimum Time Step : 0.50 sec  
 Average Time Step : 3.61 sec  
 Maximum Time Step : 5.00 sec  
 Percent in Steady State : 0.00  
 Average Iterations per Step : 2.61  
 Percent Not Converging : 1.91

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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
1	1.70	0.00	0.00	0.74	0.54	1.55	47.81	0.320
16	1.70	0.00	0.00	1.25	0.24	0.07	2.46	0.142
17	1.70	0.00	0.00	0.29	1.26	0.23	8.23	0.739
18	1.70	0.00	0.00	0.00	1.70	0.06	2.61	1.000
19	1.70	0.00	0.00	0.81	0.83	0.06	2.64	0.486
20	1.70	0.00	0.00	0.49	1.15	1.12	38.57	0.679
22	1.70	0.00	0.00	0.00	1.70	0.04	1.86	1.000
23	1.70	0.00	0.00	0.63	0.99	0.67	18.42	0.580
24	1.70	0.00	0.00	0.64	0.87	0.02	0.79	0.509
25	1.70	0.00	0.00	0.84	0.54	0.04	1.13	0.320
26	1.70	0.00	0.00	0.76	0.85	0.49	11.46	0.500
27	1.70	0.00	0.00	0.79	0.81	0.35	7.35	0.475
3-51#1	1.70	0.00	0.00	0.82	0.84	4.90	67.66	0.493
28	1.70	0.00	0.00	0.20	1.50	0.09	4.58	0.881
29	1.70	0.00	0.00	0.76	0.94	0.39	11.76	0.552
30	1.70	0.00	0.00	0.35	1.34	0.74	27.35	0.791
31	1.70	0.00	0.00	0.56	1.14	0.56	19.08	0.669
3-20#1	1.70	0.00	0.00	0.00	1.70	0.64	36.20	1.000
3-41#1	1.70	0.00	0.00	0.00	1.70	0.31	17.60	1.000
3-17#1	1.70	0.00	0.00	0.00	1.70	0.50	28.62	1.000

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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	Reported Max Depth Feet
2	JUNCTION	0.31	5.00	752.74	0 12:00	5.00
2-1	JUNCTION	2.04	3.03	709.12	0 12:01	3.03
2-10	JUNCTION	0.51	2.58	719.23	0 12:09	2.58
2-11	JUNCTION	0.52	2.77	720.13	0 12:09	2.76
2-13	JUNCTION	0.53	2.77	723.91	0 12:09	2.75
2-14	JUNCTION	0.51	2.69	724.48	0 12:08	2.69
2-15A	JUNCTION	0.49	2.67	725.96	0 12:08	2.66
2-15B	JUNCTION	0.48	2.38	733.67	0 12:08	2.38
2-16	JUNCTION	0.47	2.21	735.24	0 12:06	2.20
2-17	JUNCTION	0.46	2.11	737.96	0 12:03	2.10
2-18	JUNCTION	0.45	2.08	739.75	0 12:01	2.08
2-18-3	JUNCTION	0.26	1.07	744.32	0 12:00	1.07
2-2	JUNCTION	1.46	2.53	709.21	0 12:03	2.48
2-3	JUNCTION	0.65	2.18	709.85	0 12:10	2.17
2-4	JUNCTION	0.64	2.38	710.15	0 12:11	2.37
2-5	JUNCTION	0.60	2.42	710.27	0 12:11	2.40
2-6	JUNCTION	0.51	2.20	710.91	0 12:12	2.18
2-7	JUNCTION	0.52	2.59	712.37	0 12:10	2.58
2-9	JUNCTION	0.53	2.77	715.43	0 12:10	2.76
3-1	JUNCTION	1.63	14.55	722.79	0 12:03	7.92
3-10	JUNCTION	0.97	5.20	732.81	0 12:02	5.20
3-12	JUNCTION	1.10	3.67	732.78	0 12:02	3.61
3-16	JUNCTION	0.32	2.98	733.24	0 11:58	2.98
3-17	JUNCTION	0.32	3.01	733.39	0 11:57	3.00
3-18	JUNCTION	0.08	1.61	733.49	0 11:57	1.58
3-19	JUNCTION	0.23	2.06	734.32	0 11:57	2.05
3-20	JUNCTION	0.22	2.07	734.69	0 11:55	2.06
3-25-10	JUNCTION	0.09	0.65	748.51	0 12:00	0.65
3-25-11	JUNCTION	0.09	0.51	750.58	0 11:59	0.51
3-25-12	JUNCTION	0.00	0.00	750.81	0 00:00	0.00
3-25-7	JUNCTION	0.12	1.07	748.40	0 12:04	1.07
3-28-4	JUNCTION	0.26	1.09	746.11	0 11:59	1.07
3-3	JUNCTION	1.08	10.01	722.11	0 12:01	5.97
3-32	JUNCTION	0.32	1.84	744.74	0 12:00	1.84
3-32-1	JUNCTION	0.28	1.70	748.17	0 12:00	1.70

3-33	JUNCTION	0.35	1.95	744.98	0	11:59	1.95
3-38	JUNCTION	0.94	4.58	733.71	0	12:03	4.58
3-39	JUNCTION	0.95	4.60	734.45	0	12:03	4.58
3-4	JUNCTION	1.07	9.09	725.62	0	12:01	7.21
3-40	JUNCTION	0.95	4.61	734.73	0	12:03	4.57
3-41	JUNCTION	0.96	4.61	735.02	0	12:03	4.57
3-42	JUNCTION	0.94	4.57	735.09	0	12:03	4.53
3-43	JUNCTION	0.94	4.54	735.13	0	12:03	4.51
3-44	JUNCTION	0.92	4.51	735.69	0	12:03	4.50
3-45	JUNCTION	0.92	4.52	736.20	0	12:02	4.49
3-46	JUNCTION	0.92	4.53	737.63	0	12:02	4.48
3-47	JUNCTION	0.92	4.54	738.39	0	12:02	4.47
3-48	JUNCTION	0.92	4.55	739.12	0	12:02	4.46
3-5	JUNCTION	1.04	9.15	725.95	0	12:02	7.49
3-51	JUNCTION	0.88	4.51	745.13	0	12:02	4.46
3-6	JUNCTION	1.65	10.00	726.33	0	12:01	10.00
3-7	JUNCTION	1.00	5.55	728.43	0	12:02	5.51
3-9	JUNCTION	1.01	5.70	728.80	0	12:01	5.54
5	JUNCTION	0.29	1.38	748.97	0	12:00	1.38
6	JUNCTION	0.30	1.41	749.63	0	11:59	1.40
7	JUNCTION	0.00	0.00	750.18	0	00:00	0.00
8	JUNCTION	0.58	5.26	756.30	0	12:00	4.21
38	JUNCTION	0.49	4.82	760.36	0	12:01	4.81
39	JUNCTION	0.50	4.87	764.75	0	12:01	4.85
NMH-1	JUNCTION	0.51	4.81	755.81	0	12:00	3.32
NMH-10	JUNCTION	0.12	1.86	748.24	0	12:02	1.75
NMH-11	JUNCTION	0.14	5.53	751.01	0	12:01	2.58
NMH-12	JUNCTION	0.25	7.61	752.09	0	12:01	3.29
NMH-2	JUNCTION	0.52	5.30	754.92	0	12:00	3.42
NMH2-18-1	JUNCTION	0.46	2.30	740.59	0	12:03	2.30
NMH2-18-2	JUNCTION	0.46	2.34	741.72	0	12:01	2.33
NMH2-18-3	JUNCTION	0.00	0.00	743.25	0	00:00	0.00
NMH-3	JUNCTION	0.52	6.00	754.22	0	11:59	3.36
NMH-4	JUNCTION	0.52	5.81	752.64	0	12:01	3.58
NMH-5	JUNCTION	0.52	5.90	751.34	0	12:03	3.76
NMH-6	JUNCTION	0.53	8.60	752.65	0	12:01	3.68
NMH-7	JUNCTION	0.54	10.60	753.26	0	12:00	4.13
NMH-8	JUNCTION	0.59	7.20	748.47	0	12:03	4.54
NMH-9	JUNCTION	0.11	1.11	748.39	0	12:03	1.10
x-43	JUNCTION	0.00	0.00	730.59	0	00:00	0.00
002	OUTFALL	2.51	2.51	708.10	0	00:00	2.51
003	OUTFALL	2.53	4.17	711.27	0	12:02	4.14

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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	Flow Balance Error Percent
2	JUNCTION	7.35	7.35	0 12:00	0.352	0.352	0.161
2-1	JUNCTION	38.57	58.36	0 12:01	1.12	3.21	0.335
2-10	JUNCTION	0.00	37.18	0 12:09	0	1.88	-0.107
2-11	JUNCTION	0.00	37.21	0 12:09	0	1.88	-0.046
2-13	JUNCTION	2.61	37.31	0 12:08	0.0646	1.88	0.028
2-14	JUNCTION	0.00	35.93	0 12:08	0	1.82	-0.092
2-15A	JUNCTION	0.00	37.79	0 12:04	0	1.82	0.175
2-15B	JUNCTION	8.23	40.85	0 12:04	0.231	1.82	-0.158
2-16	JUNCTION	2.46	36.10	0 12:03	0.071	1.58	-0.247
2-17	JUNCTION	0.00	33.34	0 12:01	0	1.51	-0.019
2-18	JUNCTION	0.00	33.03	0 12:01	0	1.51	-0.051
2-18-3	JUNCTION	0.00	10.72	0 11:59	0	0.489	0.162
2-2	JUNCTION	2.64	39.04	0 12:11	0.0624	2.04	0.347
2-3	JUNCTION	0.00	37.63	0 12:11	0	1.95	0.194
2-4	JUNCTION	0.00	37.84	0 12:11	0	1.95	0.029
2-5	JUNCTION	0.00	38.76	0 12:13	0	1.94	-0.483
2-6	JUNCTION	1.86	37.56	0 12:10	0.042	1.93	-0.147
2-7	JUNCTION	0.00	36.95	0 12:10	0	1.89	0.047
2-9	JUNCTION	0.00	37.12	0 12:09	0	1.89	-0.377
3-1	JUNCTION	11.76	221.92	0 12:01	0.39	9.78	0.106
3-10	JUNCTION	0.00	154.48	0 12:01	0	7.95	-0.140
3-12	JUNCTION	0.00	60.85	0 11:56	0	1.14	0.158
3-16	JUNCTION	0.00	61.41	0 11:57	0	1.14	-0.042
3-17	JUNCTION	28.62	62.58	0 11:57	0.502	1.14	0.039
3-18	JUNCTION	0.00	36.89	0 11:56	0	0.635	-0.043
3-19	JUNCTION	0.00	37.18	0 11:56	0	0.635	0.002
3-20	JUNCTION	36.20	36.20	0 11:57	0.636	0.636	0.040
3-25-10	JUNCTION	0.79	1.77	0 12:00	0.0202	0.0645	-0.038
3-25-11	JUNCTION	1.13	1.13	0 11:57	0.0443	0.0443	-0.009
3-25-12	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
3-25-7	JUNCTION	0.00	1.76	0 12:00	0	0.0646	0.044
3-28-4	JUNCTION	0.00	11.02	0 12:00	0	0.489	-0.150

3-3	JUNCTION	0.00	216.03	0	12:02	0	9.34	0.051
3-32	JUNCTION	0.00	25.91	0	12:00	0	1.02	-0.056
3-32-1	JUNCTION	0.00	7.35	0	12:00	0	0.351	-0.218
3-33	JUNCTION	18.42	18.42	0	12:00	0.669	0.669	-0.003
3-38	JUNCTION	0.00	113.02	0	12:03	0	6.81	0.011
3-39	JUNCTION	0.00	113.23	0	12:03	0	6.81	-0.013
3-4	JUNCTION	27.35	207.64	0	12:02	0.737	9.34	-0.032
3-40	JUNCTION	0.00	113.48	0	12:03	0	6.81	0.018
3-41	JUNCTION	17.60	113.65	0	12:03	0.309	6.82	0.044
3-42	JUNCTION	0.00	107.73	0	12:03	0	6.51	-0.011
3-43	JUNCTION	0.00	107.51	0	12:03	0	6.51	0.019
3-44	JUNCTION	0.00	107.83	0	12:02	0	6.51	-0.055
3-45	JUNCTION	0.00	110.73	0	12:02	0	6.51	-0.007
3-46	JUNCTION	0.00	111.06	0	12:02	0	6.51	0.033
3-47	JUNCTION	0.00	111.26	0	12:02	0	6.51	-0.022
3-48	JUNCTION	0.00	111.57	0	12:02	0	6.52	0.284
3-5	JUNCTION	0.00	181.62	0	12:02	0	8.61	0.057
3-51	JUNCTION	67.66	111.81	0	12:02	4.9	6.51	-0.197
3-6	JUNCTION	4.58	178.69	0	12:01	0.0935	8.62	0.129
3-7	JUNCTION	19.08	170.08	0	12:01	0.562	8.51	-0.182
3-9	JUNCTION	0.00	153.05	0	12:02	0	7.96	0.150
5	JUNCTION	0.00	12.21	0	12:00	0	0.489	-0.007
6	JUNCTION	11.46	11.46	0	12:00	0.489	0.489	0.023
7	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
8	JUNCTION	0.00	48.21	0	12:02	0	1.55	0.005
38	JUNCTION	0.00	47.46	0	12:02	0	1.55	0.031
39	JUNCTION	47.81	47.81	0	12:00	1.55	1.55	-0.061
NMH-1	JUNCTION	0.00	48.66	0	11:59	0	1.55	0.034
NMH-10	JUNCTION	0.00	8.82	0	12:00	0	0.0712	-0.039
NMH-11	JUNCTION	0.00	12.10	0	11:58	0	0.0846	0.174
NMH-12	JUNCTION	0.00	12.44	0	11:58	0	0.1	0.133
NMH-2	JUNCTION	0.00	48.17	0	12:02	0	1.55	0.032
NMH2-18-1	JUNCTION	0.00	33.95	0	12:01	0	1.51	-0.022
NMH2-18-2	JUNCTION	0.00	36.93	0	12:00	0	1.51	0.081
NMH2-18-3	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
NMH-3	JUNCTION	0.00	47.67	0	12:00	0	1.55	-0.029
NMH-4	JUNCTION	0.00	47.91	0	12:01	0	1.55	0.038
NMH-5	JUNCTION	0.00	49.26	0	12:01	0	1.55	0.030
NMH-6	JUNCTION	0.00	49.25	0	12:01	0	1.64	-0.044
NMH-7	JUNCTION	0.00	44.23	0	12:02	0	1.61	0.028
NMH-8	JUNCTION	0.00	44.23	0	12:02	0	1.61	-0.036
NMH-9	JUNCTION	0.00	2.48	0	12:03	0	0.0657	-0.063
x-43	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal

002	OUTFALL	0.00	57.55	0	12:01	0	3.22	0.000
003	OUTFALL	0.00	222.58	0	12:02	0	9.82	0.000

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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
2	JUNCTION	0.23	3.753	0.797
3-1	JUNCTION	0.14	9.052	2.828
3-3	JUNCTION	0.10	4.509	0.000
3-32-1	JUNCTION	0.08	0.197	4.253
3-4	JUNCTION	0.10	3.590	0.000
3-5	JUNCTION	0.06	3.652	0.058
3-6	JUNCTION	0.26	4.504	0.000
3-7	JUNCTION	0.02	0.045	1.405
3-9	JUNCTION	0.03	0.201	2.579
8	JUNCTION	0.18	2.259	0.000
38	JUNCTION	0.28	2.319	0.000
39	JUNCTION	0.30	2.370	0.000
NMH-1	JUNCTION	0.14	1.811	0.000
NMH-11	JUNCTION	0.01	3.031	0.000
NMH-12	JUNCTION	0.16	5.110	0.000
NMH-2	JUNCTION	0.14	2.305	0.000
NMH2-18-3	JUNCTION	48.00	0.000	8.770
NMH-3	JUNCTION	0.13	3.002	0.000
NMH-4	JUNCTION	0.12	2.806	0.000
NMH-5	JUNCTION	0.13	2.904	0.000
NMH-6	JUNCTION	0.14	5.601	0.000
NMH-7	JUNCTION	0.15	7.600	0.000
NMH-8	JUNCTION	0.33	4.201	0.000
x-43	JUNCTION	48.00	0.000	0.000

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Node Flooding Summary  
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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
3-3	0.01	17.28	0 12:02	0.001	0.009
3-4	0.01	1.93	0 12:01	0.000	0.000
3-6	0.01	4.38	0 12:01	0.000	0.004
8	0.05	5.25	0 12:03	0.001	0.009
38	0.09	7.52	0 11:54	0.002	0.019
39	0.09	7.90	0 12:04	0.003	0.070
NMH-1	0.03	5.58	0 12:03	0.001	0.011
NMH-11	0.01	4.12	0 12:01	0.000	0.001
NMH-12	0.01	0.27	0 12:01	0.000	0.000
NMH-2	0.02	6.48	0 12:00	0.000	0.005
NMH-3	0.01	6.65	0 11:58	0.000	0.002
NMH-4	0.02	7.64	0 12:01	0.001	0.006
NMH-5	0.02	8.84	0 11:57	0.001	0.004
NMH-6	0.01	6.32	0 12:01	0.000	0.001
NMH-7	0.01	3.46	0 12:00	0.000	0.000
NMH-8	0.01	3.72	0 12:03	0.000	0.001

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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
002	96.82	5.19	57.55	3.216
003	99.93	15.16	222.58	9.821
System	98.37	20.36	280.01	13.037

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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
2	CONDUIT	0.00	0 00:00	0.00	0.00	0.23
3	CONDUIT	12.21	0 12:00	3.96	0.39	0.46
6	CONDUIT	33.86	0 12:03	5.02	0.34	0.47
7	CONDUIT	34.11	0 12:05	4.63	0.34	0.51
8	CONDUIT	37.79	0 12:04	4.57	0.16	0.56
9	CONDUIT	35.93	0 12:08	5.08	0.20	0.74
10	CONDUIT	37.21	0 12:09	4.56	0.33	0.79
11	CONDUIT	37.18	0 12:09	4.72	0.31	0.76
12	CONDUIT	35.93	0 12:08	4.52	0.26	0.77
13	CONDUIT	37.12	0 12:09	5.34	0.23	0.62
14	CONDUIT	36.90	0 12:10	5.66	0.33	0.52
15	CONDUIT	38.76	0 12:13	4.87	0.35	0.43
16	CONDUIT	37.84	0 12:11	4.13	0.53	0.48
17	CONDUIT	37.63	0 12:11	4.45	0.89	0.45
18	CONDUIT	38.45	0 12:11	4.50	0.31	0.45
19	CONDUIT	38.38	0 12:11	3.95	0.40	0.53
20	CONDUIT	57.55	0 12:01	5.15	0.47	0.55
21	CONDUIT	33.34	0 12:01	5.13	0.20	0.45
23	CONDUIT	7.35	0 12:00	5.99	1.92	1.00
24	CONDUIT	7.35	0 12:00	4.88	0.66	0.80
28	CONDUIT	0.99	0 11:59	1.88	0.03	0.16
29	CONDUIT	0.00	0 00:00	0.00	0.00	0.04
30	CONDUIT	18.65	0 12:00	3.53	0.70	0.54
32	CONDUIT	11.02	0 12:00	4.29	0.17	0.41
33	CONDUIT	10.72	0 11:59	4.96	0.07	0.23
38	CONDUIT	1.76	0 12:00	1.56	0.03	0.27
41	CONDUIT	36.95	0 12:10	4.74	0.40	0.76
Link32	CONDUIT	111.26	0 12:02	5.95	0.57	0.91
Link33	CONDUIT	111.06	0 12:02	5.96	0.57	0.91
Link34	CONDUIT	110.73	0 12:02	5.96	0.56	0.90
Link35	CONDUIT	107.83	0 12:02	5.82	0.56	0.90
link36	CONDUIT	107.51	0 12:03	5.76	0.55	0.91
link37	CONDUIT	107.73	0 12:03	5.75	0.88	0.91
Link38	CONDUIT	107.77	0 12:03	5.74	0.86	0.92
Link39	CONDUIT	113.48	0 12:03	6.00	0.95	0.92
Link40	CONDUIT	113.23	0 12:03	5.99	0.94	0.92

Link41	CONDUIT	113.02	0	12:03	5.99	0.94	0.92
43	CONDUIT	112.83	0	12:03	5.83	0.52	0.96
44	CONDUIT	153.05	0	12:02	6.49	0.32	0.97
45	CONDUIT	153.44	0	12:01	6.46	1.11	1.00
46	CONDUIT	175.08	0	12:01	7.37	0.38	1.00
48	CONDUIT	222.58	0	12:02	10.05	1.43	0.88
49	CONDUIT	181.62	0	12:02	7.64	1.44	1.00
50	CONDUIT	183.64	0	12:02	7.73	0.88	1.00
51	CONDUIT	216.03	0	12:02	9.09	0.75	1.00
52	CONDUIT	212.96	0	12:01	8.96	0.80	1.00
LINK26	CONDUIT	37.18	0	11:56	4.76	0.21	0.37
53	CONDUIT	36.89	0	11:56	6.42	0.21	0.33
54	CONDUIT	34.86	0	11:57	2.90	0.13	0.42
Link29	CONDUIT	61.41	0	11:57	5.10	0.36	0.54
Link30	CONDUIT	60.85	0	11:56	4.41	0.35	0.59
55	CONDUIT	62.39	0	11:58	3.95	0.22	0.73
68	CONDUIT	48.66	0	11:59	6.88	4.58	1.00
69	CONDUIT	48.17	0	12:02	6.81	0.97	1.00
70	CONDUIT	47.67	0	12:00	6.74	0.99	1.00
71	CONDUIT	47.91	0	12:01	6.78	0.90	1.00
72	CONDUIT	49.26	0	12:01	6.97	0.93	1.00
73	CONDUIT	49.25	0	12:01	7.29	1.05	1.00
74	CONDUIT	44.23	0	12:02	6.26	0.79	1.00
75	CONDUIT	4.27	0	12:04	2.12	0.17	0.56
76	CONDUIT	8.05	0	12:05	2.01	0.33	0.87
77	CONDUIT	10.31	0	11:58	2.50	0.43	1.00
78	CONDUIT	12.44	0	11:58	2.54	0.47	1.00
79	CONDUIT	44.23	0	12:02	6.26	0.87	1.00
80	CONDUIT	2.18	0	12:04	1.61	0.13	0.36
81	CONDUIT	26.56	0	12:00	4.26	0.06	0.52
82	CONDUIT	33.95	0	12:01	4.80	0.33	0.51
83	CONDUIT	33.03	0	12:01	4.62	0.41	0.49
84	CONDUIT	10.37	0	12:00	2.45	0.07	0.43
85	CONDUIT	111.57	0	12:02	5.97	0.30	0.91
86	CONDUIT	44.23	0	12:02	6.26	1.12	1.00
87	CONDUIT	48.21	0	12:02	9.82	1.05	1.00
88	CONDUIT	47.46	0	12:02	9.67	1.06	1.00

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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	Norm Ltd	Inlet Ctrl
2	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.72
6	1.00	0.00	0.00	0.00	0.80	0.00	0.00	0.19	0.00	0.65
7	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.68
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.79
9	1.00	0.00	0.00	0.00	0.51	0.05	0.00	0.45	0.00	0.82
10	1.00	0.00	0.00	0.00	0.97	0.02	0.00	0.00	0.00	0.77
11	1.00	0.00	0.00	0.00	0.94	0.06	0.00	0.00	0.00	0.80
12	1.00	0.00	0.00	0.00	0.73	0.04	0.00	0.23	0.00	0.76
13	1.00	0.00	0.00	0.00	0.25	0.00	0.00	0.75	0.00	0.68
14	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.64
15	1.00	0.00	0.00	0.00	0.34	0.00	0.00	0.65	0.00	0.48
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.07
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.23
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
21	1.00	0.00	0.00	0.00	0.61	0.00	0.00	0.39	0.00	0.55
23	1.00	0.00	0.00	0.00	0.48	0.00	0.00	0.52	0.00	0.70
24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.72
28	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.30
29	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.21
32	1.00	0.00	0.00	0.00	0.90	0.09	0.00	0.00	0.00	0.67
33	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.51
38	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.66
41	1.00	0.00	0.00	0.00	0.72	0.00	0.00	0.28	0.00	0.66
Link32	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.72
Link33	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.72
Link34	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.73
Link35	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.72
link36	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.91
link37	1.00	0.00	0.01	0.00	0.98	0.00	0.00	0.00	0.00	0.61
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.63
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.64
43	1.00	0.00	0.00	0.00	0.96	0.04	0.00	0.00	0.00	0.78

44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.56
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.06
49	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.70
51	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.78
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.95
LINK26	1.00	0.00	0.08	0.00	0.92	0.00	0.00	0.00	0.00	0.58
53	1.00	0.00	0.00	0.00	0.44	0.56	0.00	0.00	0.00	0.56
54	1.00	0.00	0.19	0.00	0.81	0.00	0.00	0.00	0.00	0.79
Link29	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.61
Link30	1.00	0.00	0.18	0.00	0.81	0.00	0.00	0.00	0.00	0.96
55	1.00	0.00	0.18	0.00	0.81	0.00	0.00	0.00	0.00	0.98
68	1.00	0.14	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.00
69	1.00	0.14	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.64
70	1.00	0.14	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.66
71	1.00	0.14	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.62
72	1.00	0.14	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.65
73	1.00	0.01	0.13	0.00	0.86	0.00	0.00	0.00	0.00	0.63
74	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.66
75	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.46
76	1.00	0.01	0.14	0.00	0.84	0.00	0.00	0.00	0.00	0.76
77	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.00	0.42
78	1.00	0.01	0.26	0.00	0.73	0.00	0.00	0.00	0.00	0.46
79	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.69
80	1.00	0.00	0.26	0.00	0.74	0.00	0.00	0.00	0.00	0.03
81	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
82	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.89
83	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.67
84	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
85	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.97
86	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.80
87	1.00	0.14	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.77
88	1.00	0.14	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.66

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 Conduit Surcharge Summary  
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 Hours Hours

Conduit	----- Hours Full -----			Above Full Normal Flow	Capacity Limited
	Both Ends	Upstream	Dnstream		
23	0.16	0.23	0.16	0.25	0.16
24	0.01	0.08	0.01	0.01	0.01
43	0.01	0.01	0.05	0.01	0.01
44	0.01	0.01	0.04	0.01	0.01
45	0.01	0.04	0.01	0.06	0.01
46	0.01	0.01	0.26	0.01	0.01
48	0.01	0.14	0.01	0.16	0.01
49	0.05	0.05	0.26	0.21	0.01
50	0.05	0.06	0.10	0.01	0.02
51	0.09	0.10	0.09	0.01	0.02
52	0.09	0.09	0.14	0.01	0.01
68	0.14	0.17	0.14	0.69	0.13
69	0.13	0.14	0.14	0.01	0.04
70	0.12	0.14	0.13	0.01	0.06
71	0.12	0.13	0.12	0.01	0.03
72	0.11	0.12	0.13	0.01	0.02
73	0.08	0.13	0.14	0.02	0.04
74	0.13	0.14	0.15	0.01	0.01
76	0.01	0.01	0.01	0.01	0.01
77	0.01	0.01	0.16	0.01	0.01
78	0.16	0.16	0.28	0.01	0.01
79	0.15	0.15	0.33	0.01	0.02
86	0.33	0.33	0.48	0.10	0.11
87	0.26	0.27	0.30	0.02	0.05
88	0.25	0.29	0.27	0.07	0.15

Analysis begun on: Thu Feb 01 20:51:11 2018  
 Analysis ended on: Thu Feb 01 20:51:21 2018  
 Total elapsed time: 00:00:10

Remedial Option 1

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 20  
 Number of nodes ..... 77  
 Number of links ..... 73  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	2.0-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
1	105.00	750.00	25.00	2.0000	SCS~Type~II	39
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16

17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

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Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	
2-17	JUNCTION	735.85	15.20	2500.0	
2-18	JUNCTION	737.67	14.56	2500.0	
2-18-3	JUNCTION	743.25	8.77	2500.0	
2-2	JUNCTION	706.68	7.80	2500.0	
2-3	JUNCTION	707.67	7.15	2500.0	
2-4	JUNCTION	707.77	7.05	2500.0	
2-5	JUNCTION	707.85	8.05	2500.0	
2-6	JUNCTION	708.71	7.00	2500.0	

2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0
3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
38	JUNCTION	755.54	4.80	2500.0
39	JUNCTION	759.88	4.80	2500.0
NMH-1	JUNCTION	751.00	4.80	2500.0

NMH-10	JUNCTION	746.38	6.72	2500.0
NMH-11	JUNCTION	745.48	5.53	2500.0
NMH-12	JUNCTION	744.48	7.61	2500.0
NMH-2	JUNCTION	749.62	5.30	2500.0
NMH2-18-1	JUNCTION	738.29	13.44	2500.0
NMH2-18-2	JUNCTION	739.38	14.27	2500.0
NMH2-18-3	JUNCTION	743.25	8.77	2500.0
NMH-3	JUNCTION	748.22	6.00	2500.0
NMH-4	JUNCTION	746.83	5.80	2500.0
NMH-5	JUNCTION	745.44	5.90	2500.0
NMH-6	JUNCTION	744.05	8.60	2500.0
NMH-7	JUNCTION	742.66	10.60	2500.0
NMH-8	JUNCTION	741.27	7.20	2500.0
NMH-9	JUNCTION	747.28	7.52	2500.0
x-43	JUNCTION	730.59	0.00	0.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150
16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150
23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150

24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
68	8	NMH-1	CONDUIT	185.1	0.0216	0.0120
69	NMH-1	NMH-2	CONDUIT	294.3	0.4689	0.0120
70	NMH-2	NMH-3	CONDUIT	316.5	0.4423	0.0120
71	NMH-3	NMH-4	CONDUIT	253.6	0.5481	0.0120
72	NMH-4	NMH-5	CONDUIT	258.2	0.5384	0.0120
73	NMH-5	NMH-6	CONDUIT	332.4	0.4181	0.0120
74	NMH-6	NMH-7	CONDUIT	232.7	0.5973	0.0120
75	NMH-9	NMH-10	CONDUIT	290.0	0.3103	0.0120
76	NMH-10	NMH-11	CONDUIT	291.3	0.3089	0.0120
77	NMH-11	NMH-12	CONDUIT	345.0	0.2898	0.0120

78	NMH-12	NMH-6	CONDUIT	123.3	0.3486	0.0120
79	NMH-7	NMH-8	CONDUIT	278.4	0.4993	0.0120
80	3-25-7	NMH-9	CONDUIT	58.1	0.0860	0.0150
81	3-32	NMH2-18-2	CONDUIT	51.0	6.9253	0.0120
82	NMH2-18-2	NMH2-18-1	CONDUIT	460.8	0.2366	0.0120
83	NMH2-18-1	2-18	CONDUIT	425.5	0.1457	0.0120
84	2-18-3	NMH2-18-2	CONDUIT	482.2	0.8027	0.0120
85	3-51	3-48	CONDUIT	216.6	2.7944	0.0150
86	NMH-8	3-51	CONDUIT	219.0	0.2968	0.0120
87	38	8	CONDUIT	270.0	1.6669	0.0150
88	39	38	CONDUIT	274.0	1.5841	0.0150

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Cross Section Summary

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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86

33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
68	CIRCULAR	3.00	7.07	0.75	3.00	1	10.62
69	CIRCULAR	3.00	7.07	0.75	3.00	1	49.48
70	CIRCULAR	3.00	7.07	0.75	3.00	1	48.06
71	CIRCULAR	3.00	7.07	0.75	3.00	1	53.49
72	CIRCULAR	3.00	7.07	0.75	3.00	1	53.02
73	CIRCULAR	3.00	7.07	0.75	3.00	1	46.72
74	CIRCULAR	3.00	7.07	0.75	3.00	1	55.84
75	CIRCULAR	2.50	4.91	0.63	2.50	1	24.75
76	CIRCULAR	2.50	4.91	0.63	2.50	1	24.70
77	CIRCULAR	2.50	4.91	0.63	2.50	1	23.92
78	CIRCULAR	2.50	4.91	0.63	2.50	1	26.24
79	CIRCULAR	3.00	7.07	0.75	3.00	1	51.05
80	CIRCULAR	3.00	7.07	0.75	3.00	1	16.96
81	CIRCULAR	4.00	12.57	1.00	4.00	1	409.51
82	CIRCULAR	4.50	15.90	1.13	4.50	1	103.62

83	CIRCULAR	4.50	15.90	1.13	4.50	1	81.32
84	CIRCULAR	4.00	12.57	1.00	4.00	1	139.42
85	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
86	CIRCULAR	3.00	7.07	0.75	3.00	1	39.36
87	CIRCULAR	2.50	4.91	0.63	2.50	1	45.90
88	CIRCULAR	2.50	4.91	0.63	2.50	1	44.74

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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.  
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Analysis Options

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Flow Units ..... CFS  
Process Models:  
  Rainfall/Runoff ..... YES  
  RDII ..... NO  
  Snowmelt ..... NO  
  Groundwater ..... NO  
  Flow Routing ..... YES  
  Ponding Allowed ..... YES  
  Water Quality ..... NO  
Infiltration Method ..... CURVE\_NUMBER  
Flow Routing Method ..... DYNWAVE  
Starting Date ..... MAY-30-2015 00:00:00  
Ending Date ..... JUN-01-2015 00:00:00  
Antecedent Dry Days ..... 0.0  
Report Time Step ..... 00:02:00  
Wet Time Step ..... 00:01:00  
Dry Time Step ..... 00:05:00  
Routing Time Step ..... 5.00 sec  
Variable Time Step ..... YES  
Maximum Trials ..... 10  
Number of Threads ..... 1  
Head Tolerance ..... 0.005000 ft

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Volume                    Depth

Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	88.658	2.000
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	33.119	0.747
Surface Runoff .....	49.957	1.127
Final Storage .....	5.587	0.126
Continuity Error (%) .....	-0.005	

Flow Routing Continuity	Volume acre-feet	Volume 10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	49.951	16.277
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	49.930	16.270
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.197	0.064
Continuity Error (%) .....	-0.248	

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Time-Step Critical Elements  
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Link link37 (50.90%)

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Highest Flow Instability Indexes  
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Link 44 (35)  
Link Link32 (35)  
Link 85 (35)  
Link 46 (34)  
Link 51 (34)

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Routing Time Step Summary

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Minimum Time Step : 0.50 sec  
 Average Time Step : 3.39 sec  
 Maximum Time Step : 5.00 sec  
 Percent in Steady State : 0.00  
 Average Iterations per Step : 2.76  
 Percent Not Converging : 2.70

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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
1	2.00	0.00	0.00	0.79	0.78	2.24	58.07	0.392
16	2.00	0.00	0.00	1.39	0.35	0.10	3.02	0.175
17	2.00	0.00	0.00	0.33	1.53	0.28	10.10	0.763
18	2.00	0.00	0.00	0.00	2.00	0.08	3.16	1.000
19	2.00	0.00	0.00	0.91	1.03	0.08	3.21	0.517
20	2.00	0.00	0.00	0.53	1.42	1.37	47.95	0.709
22	2.00	0.00	0.00	0.00	2.00	0.05	2.23	1.000
23	2.00	0.00	0.00	0.67	1.24	0.84	22.95	0.619
24	2.00	0.00	0.00	0.68	1.12	0.03	1.27	0.560
25	2.00	0.00	0.00	0.90	0.78	0.06	1.38	0.391
26	2.00	0.00	0.00	0.81	1.09	0.63	14.36	0.547
27	2.00	0.00	0.00	0.84	1.05	0.46	9.20	0.524
3-51#1	2.00	0.00	0.00	0.90	1.06	6.20	86.47	0.531
28	2.00	0.00	0.00	0.22	1.78	0.11	5.49	0.889
29	2.00	0.00	0.00	0.83	1.16	0.48	14.75	0.582
30	2.00	0.00	0.00	0.39	1.61	0.88	33.51	0.805
31	2.00	0.00	0.00	0.61	1.38	0.68	23.39	0.691
3-20#1	2.00	0.00	0.00	0.00	2.00	0.75	42.60	1.000
3-41#1	2.00	0.00	0.00	0.00	2.00	0.36	20.71	1.000
3-17#1	2.00	0.00	0.00	0.00	2.00	0.59	33.68	1.000

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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	Reported Max Depth Feet
2	JUNCTION	0.41	5.88	753.62	0 12:01	5.88
2-1	JUNCTION	2.06	3.44	709.53	0 12:03	3.38
2-10	JUNCTION	0.60	3.01	719.66	0 12:09	3.01
2-11	JUNCTION	0.62	3.28	720.64	0 12:09	3.28
2-13	JUNCTION	0.62	3.28	724.42	0 12:09	3.28
2-14	JUNCTION	0.60	3.20	724.99	0 12:09	3.19
2-15A	JUNCTION	0.58	3.17	726.46	0 12:09	3.17
2-15B	JUNCTION	0.57	2.79	734.08	0 12:08	2.78
2-16	JUNCTION	0.55	2.60	735.63	0 12:07	2.60
2-17	JUNCTION	0.54	2.57	738.42	0 12:05	2.57
2-18	JUNCTION	0.53	2.59	740.26	0 12:04	2.59
2-18-3	JUNCTION	0.31	1.22	744.47	0 12:02	1.22
2-2	JUNCTION	1.49	2.93	709.61	0 12:02	2.91
2-3	JUNCTION	0.72	2.71	710.38	0 12:12	2.71
2-4	JUNCTION	0.72	2.84	710.61	0 12:12	2.84
2-5	JUNCTION	0.68	2.85	710.70	0 12:12	2.85
2-6	JUNCTION	0.59	2.74	711.45	0 12:10	2.74
2-7	JUNCTION	0.60	3.02	712.80	0 12:10	3.02
2-9	JUNCTION	0.62	3.29	715.95	0 12:09	3.29
3-1	JUNCTION	1.76	17.38	725.62	0 12:04	9.00
3-10	JUNCTION	1.13	6.07	733.68	0 12:01	5.66
3-12	JUNCTION	1.16	4.06	733.17	0 11:58	4.03
3-16	JUNCTION	0.37	3.33	733.59	0 11:57	3.33
3-17	JUNCTION	0.37	3.36	733.74	0 11:57	3.31
3-18	JUNCTION	0.10	1.92	733.80	0 11:57	1.89
3-19	JUNCTION	0.25	2.24	734.50	0 11:55	2.22
3-20	JUNCTION	0.25	2.26	734.88	0 11:54	2.22
3-25-10	JUNCTION	0.12	1.17	749.03	0 12:04	1.14
3-25-11	JUNCTION	0.11	0.58	750.65	0 12:00	0.58
3-25-12	JUNCTION	0.00	0.00	750.81	0 00:00	0.00
3-25-7	JUNCTION	0.15	1.66	748.99	0 12:03	1.65
3-28-4	JUNCTION	0.31	1.23	746.25	0 11:59	1.22
3-3	JUNCTION	1.27	10.02	722.12	0 12:04	9.08
3-32	JUNCTION	0.39	2.14	745.04	0 12:01	2.11
3-32-1	JUNCTION	0.33	1.86	748.33	0 12:01	1.84

3-33	JUNCTION	0.41	2.21	745.24	0	12:00	2.15
3-38	JUNCTION	1.10	6.38	735.51	0	12:02	6.30
3-39	JUNCTION	1.12	8.04	737.89	0	12:02	5.52
3-4	JUNCTION	1.26	9.10	725.63	0	12:03	8.08
3-40	JUNCTION	1.12	8.08	738.20	0	12:02	5.49
3-41	JUNCTION	1.13	7.51	737.92	0	12:02	5.52
3-42	JUNCTION	1.12	7.49	738.01	0	12:02	5.50
3-43	JUNCTION	1.12	7.55	738.14	0	12:02	5.52
3-44	JUNCTION	1.09	7.38	738.56	0	12:02	5.21
3-45	JUNCTION	1.08	7.13	738.81	0	12:02	5.08
3-46	JUNCTION	1.08	6.31	739.41	0	12:03	5.79
3-47	JUNCTION	1.08	6.12	739.97	0	12:01	5.32
3-48	JUNCTION	1.08	6.27	740.84	0	12:03	5.08
3-5	JUNCTION	1.22	9.21	726.01	0	12:03	8.17
3-51	JUNCTION	1.04	5.11	745.73	0	12:02	5.00
3-6	JUNCTION	1.87	10.30	726.63	0	12:01	10.20
3-7	JUNCTION	1.17	6.99	729.87	0	12:01	6.95
3-9	JUNCTION	1.19	8.29	731.39	0	12:02	8.28
5	JUNCTION	0.33	1.62	749.21	0	12:01	1.61
6	JUNCTION	0.34	1.68	749.90	0	12:00	1.68
7	JUNCTION	0.00	0.00	750.18	0	00:00	0.00
8	JUNCTION	0.72	5.26	756.30	0	11:57	5.26
38	JUNCTION	0.64	4.97	760.51	0	12:05	4.97
39	JUNCTION	0.65	5.72	765.60	0	12:03	5.69
NMH-1	JUNCTION	0.61	4.80	755.80	0	11:57	4.05
NMH-10	JUNCTION	0.17	5.23	751.61	0	12:04	2.61
NMH-11	JUNCTION	0.20	5.53	751.01	0	11:59	3.47
NMH-12	JUNCTION	0.34	7.32	751.80	0	11:58	5.44
NMH-2	JUNCTION	0.61	5.31	754.93	0	11:59	4.20
NMH2-18-1	JUNCTION	0.54	2.62	740.91	0	12:03	2.62
NMH2-18-2	JUNCTION	0.53	2.64	742.02	0	12:02	2.64
NMH2-18-3	JUNCTION	0.00	0.00	743.25	0	00:00	0.00
NMH-3	JUNCTION	0.61	6.00	754.22	0	11:58	4.27
NMH-4	JUNCTION	0.62	5.80	752.63	0	11:59	4.58
NMH-5	JUNCTION	0.63	5.90	751.34	0	11:57	4.91
NMH-6	JUNCTION	0.64	8.60	752.65	0	11:59	6.62
NMH-7	JUNCTION	0.66	10.60	753.26	0	11:56	6.93
NMH-8	JUNCTION	0.73	7.20	748.47	0	12:08	5.74
NMH-9	JUNCTION	0.15	1.76	749.04	0	12:04	1.75
x-43	JUNCTION	0.00	0.00	730.59	0	00:00	0.00
002	OUTFALL	2.51	2.51	708.10	0	00:00	2.51
003	OUTFALL	2.55	4.60	711.70	0	12:00	4.60

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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	Flow Balance Error Percent
2	JUNCTION	9.20	9.20	0 12:00	0.456	0.456	0.092
2-1	JUNCTION	47.95	71.30	0 12:02	1.37	4	0.268
2-10	JUNCTION	0.00	48.36	0 12:09	0	2.39	-0.084
2-11	JUNCTION	0.00	48.30	0 12:09	0	2.39	-0.031
2-13	JUNCTION	3.16	48.07	0 12:09	0.076	2.39	0.035
2-14	JUNCTION	0.00	46.61	0 12:09	0	2.31	-0.075
2-15A	JUNCTION	0.00	46.80	0 12:08	0	2.32	0.066
2-15B	JUNCTION	10.10	47.51	0 12:07	0.281	2.31	-0.087
2-16	JUNCTION	3.02	42.29	0 12:05	0.103	2.03	-0.193
2-17	JUNCTION	0.00	40.97	0 12:04	0	1.92	-0.039
2-18	JUNCTION	0.00	41.32	0 12:03	0	1.92	0.018
2-18-3	JUNCTION	0.00	13.64	0 11:59	0	0.629	0.145
2-2	JUNCTION	3.21	48.30	0 12:12	0.0781	2.58	0.252
2-3	JUNCTION	0.00	47.71	0 12:11	0	2.47	0.172
2-4	JUNCTION	0.00	48.07	0 12:10	0	2.47	0.023
2-5	JUNCTION	0.00	48.59	0 12:10	0	2.46	-0.538
2-6	JUNCTION	2.23	48.76	0 12:10	0.0494	2.45	-0.170
2-7	JUNCTION	0.00	48.29	0 12:09	0	2.4	0.082
2-9	JUNCTION	0.00	48.04	0 12:09	0	2.39	-0.415
3-1	JUNCTION	14.75	275.14	0 12:00	0.483	12.4	0.079
3-10	JUNCTION	0.00	218.50	0 12:00	0	10.2	-0.102
3-12	JUNCTION	0.00	72.96	0 11:57	0	1.34	0.154
3-16	JUNCTION	0.00	73.82	0 11:57	0	1.34	-0.069
3-17	JUNCTION	33.68	75.54	0 11:57	0.591	1.34	0.068
3-18	JUNCTION	0.00	42.99	0 11:55	0	0.748	-0.037
3-19	JUNCTION	0.00	43.47	0 11:55	0	0.748	0.013
3-20	JUNCTION	42.60	42.60	0 11:57	0.748	0.748	0.024
3-25-10	JUNCTION	1.27	3.76	0 12:03	0.0261	0.0901	-0.167
3-25-11	JUNCTION	1.38	1.38	0 12:00	0.0637	0.0637	0.359
3-25-12	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
3-25-7	JUNCTION	0.00	4.42	0 12:03	0	0.0909	0.037
3-28-4	JUNCTION	0.00	13.76	0 11:59	0	0.628	-0.158

3-3	JUNCTION	0.00	262.56	0	12:01	0	11.9	0.053
3-32	JUNCTION	0.00	30.96	0	12:00	0	1.3	-0.142
3-32-1	JUNCTION	0.00	8.00	0	12:01	0	0.456	-0.137
3-33	JUNCTION	22.95	22.95	0	12:00	0.841	0.841	-0.003
3-38	JUNCTION	0.00	149.38	0	12:03	0	8.89	0.009
3-39	JUNCTION	0.00	148.63	0	12:03	0	8.89	-0.010
3-4	JUNCTION	33.51	262.60	0	12:01	0.883	11.9	-0.018
3-40	JUNCTION	0.00	148.21	0	12:03	0	8.89	0.019
3-41	JUNCTION	20.71	147.66	0	12:03	0.363	8.89	0.043
3-42	JUNCTION	0.00	140.36	0	12:03	0	8.53	-0.014
3-43	JUNCTION	0.00	140.44	0	12:03	0	8.53	0.019
3-44	JUNCTION	0.00	141.78	0	12:03	0	8.53	-0.054
3-45	JUNCTION	0.00	140.50	0	12:03	0	8.52	-0.032
3-46	JUNCTION	0.00	142.19	0	12:01	0	8.52	0.018
3-47	JUNCTION	0.00	142.26	0	12:01	0	8.52	-0.011
3-48	JUNCTION	0.00	144.74	0	12:03	0	8.54	0.155
3-5	JUNCTION	0.00	233.16	0	12:02	0	11	0.057
3-51	JUNCTION	86.47	133.58	0	12:03	6.2	8.53	-0.121
3-6	JUNCTION	5.49	254.04	0	12:01	0.111	11	0.082
3-7	JUNCTION	23.39	240.99	0	12:00	0.683	10.9	-0.136
3-9	JUNCTION	0.00	228.34	0	12:00	0	10.2	0.094
5	JUNCTION	0.00	14.07	0	12:00	0	0.628	0.005
6	JUNCTION	14.36	14.36	0	12:00	0.628	0.628	0.051
7	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
8	JUNCTION	0.00	48.35	0	11:58	0	2.24	-0.017
38	JUNCTION	0.00	49.48	0	11:58	0	2.23	-0.025
39	JUNCTION	58.07	58.07	0	12:00	2.24	2.24	0.025
NMH-1	JUNCTION	0.00	48.38	0	11:58	0	2.24	0.146
NMH-10	JUNCTION	0.00	10.46	0	11:58	0	0.0999	-0.010
NMH-11	JUNCTION	0.00	15.30	0	11:56	0	0.116	-0.008
NMH-12	JUNCTION	0.00	13.68	0	11:56	0	0.131	-0.051
NMH-2	JUNCTION	0.00	48.24	0	11:58	0	2.23	-0.029
NMH2-18-1	JUNCTION	0.00	41.95	0	12:02	0	1.92	-0.047
NMH2-18-2	JUNCTION	0.00	43.47	0	11:59	0	1.93	0.162
NMH2-18-3	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
NMH-3	JUNCTION	0.00	48.17	0	11:59	0	2.23	0.021
NMH-4	JUNCTION	0.00	48.75	0	11:56	0	2.23	0.008
NMH-5	JUNCTION	0.00	49.02	0	11:56	0	2.23	-0.012
NMH-6	JUNCTION	0.00	52.42	0	11:57	0	2.35	-0.013
NMH-7	JUNCTION	0.00	49.05	0	12:07	0	2.32	-0.012
NMH-8	JUNCTION	0.00	49.05	0	12:07	0	2.32	-0.052
NMH-9	JUNCTION	0.00	4.38	0	12:01	0	0.0922	-0.043
x-43	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal

002	OUTFALL	0.00	70.74	0	12:03	0	4.01	0.000
003	OUTFALL	0.00	275.15	0	12:00	0	12.5	0.000

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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
2	JUNCTION	0.32	4.633	0.000
3-1	JUNCTION	0.27	11.884	0.000
3-10	JUNCTION	0.08	0.569	8.571
3-3	JUNCTION	0.21	4.516	0.000
3-32-1	JUNCTION	0.17	0.356	4.094
3-38	JUNCTION	0.13	1.380	4.990
3-39	JUNCTION	0.16	3.042	4.108
3-4	JUNCTION	0.21	3.603	0.000
3-40	JUNCTION	0.16	3.085	4.795
3-41	JUNCTION	0.17	2.511	6.079
3-42	JUNCTION	0.16	2.486	8.114
3-43	JUNCTION	0.16	2.550	8.050
3-44	JUNCTION	0.11	2.379	7.441
3-45	JUNCTION	0.09	2.128	6.192
3-46	JUNCTION	0.08	1.307	4.593
3-47	JUNCTION	0.08	1.124	3.076
3-48	JUNCTION	0.08	1.274	2.006
3-5	JUNCTION	0.15	3.713	0.000
3-51	JUNCTION	0.03	0.106	4.894
3-6	JUNCTION	0.39	4.802	0.000
3-7	JUNCTION	0.11	1.493	0.000
3-9	JUNCTION	0.12	2.785	0.000
8	JUNCTION	0.26	2.259	0.000
38	JUNCTION	0.35	2.467	0.000
39	JUNCTION	0.37	3.216	0.000
NMH-1	JUNCTION	0.24	1.805	0.000
NMH-10	JUNCTION	0.03	2.732	1.488
NMH-11	JUNCTION	0.17	3.031	0.000
NMH-12	JUNCTION	0.28	4.818	0.292

NMH-2	JUNCTION	0.23	2.311	0.000
NMH2-18-3	JUNCTION	48.00	0.000	8.770
NMH-3	JUNCTION	0.23	3.002	0.000
NMH-4	JUNCTION	0.23	2.804	0.000
NMH-5	JUNCTION	0.23	2.904	0.000
NMH-6	JUNCTION	0.26	5.600	0.000
NMH-7	JUNCTION	0.29	7.600	0.000
NMH-8	JUNCTION	0.47	4.201	0.000
x-43	JUNCTION	48.00	0.000	0.000

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Node Flooding Summary  
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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
2	0.15	1.21	0 12:00	0.002	0.083
3-1	0.01	25.39	0 12:04	0.000	0.004
3-3	0.02	25.42	0 12:04	0.003	0.016
3-4	0.01	21.72	0 12:03	0.001	0.013
3-5	0.01	14.94	0 12:03	0.000	0.003
3-6	0.08	21.55	0 12:00	0.011	0.302
3-7	0.02	33.75	0 12:01	0.003	0.043
3-9	0.01	16.93	0 12:00	0.001	0.005
8	0.02	2.08	0 11:57	0.000	0.009
38	0.21	6.11	0 11:51	0.005	0.167
39	0.22	10.66	0 12:00	0.019	0.916
NMH-1	0.01	3.35	0 11:57	0.000	0.005
NMH-11	0.01	1.40	0 11:59	0.000	0.001
NMH-2	0.01	4.89	0 11:58	0.000	0.011
NMH-3	0.01	6.77	0 11:58	0.000	0.002
NMH-4	0.01	7.20	0 11:54	0.000	0.004
NMH-5	0.01	8.13	0 11:57	0.000	0.004
NMH-6	0.01	4.40	0 11:59	0.000	0.000
NMH-7	0.01	5.35	0 11:56	0.000	0.000
NMH-8	0.01	3.85	0 12:08	0.000	0.001

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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
002	97.09	6.90	70.74	4.007
003	99.98	20.30	275.15	12.479
System	98.53	27.20	342.81	16.486

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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
2	CONDUIT	0.00	0 00:00	0.00	0.00	0.28
3	CONDUIT	14.07	0 12:00	3.87	0.45	0.55
6	CONDUIT	40.04	0 12:05	4.89	0.40	0.57
7	CONDUIT	40.73	0 12:07	4.31	0.41	0.60
8	CONDUIT	46.80	0 12:08	4.58	0.20	0.66
9	CONDUIT	46.61	0 12:09	5.19	0.27	0.88
10	CONDUIT	48.30	0 12:09	5.16	0.43	0.94
11	CONDUIT	48.36	0 12:09	5.34	0.41	0.90
12	CONDUIT	46.61	0 12:09	5.04	0.33	0.92
13	CONDUIT	48.04	0 12:09	5.39	0.30	0.74
14	CONDUIT	47.96	0 12:10	5.88	0.43	0.62
15	CONDUIT	48.59	0 12:10	4.80	0.44	0.53
16	CONDUIT	48.07	0 12:10	4.30	0.68	0.57
17	CONDUIT	47.71	0 12:11	4.55	1.13	0.55
18	CONDUIT	47.55	0 12:12	4.50	0.38	0.55
19	CONDUIT	48.45	0 12:13	3.95	0.51	0.62
20	CONDUIT	70.74	0 12:03	5.81	0.57	0.60
21	CONDUIT	40.97	0 12:04	5.35	0.24	0.56

23	CONDUIT	8.00	0	12:01	6.52	2.09	1.00
24	CONDUIT	8.09	0	12:02	5.25	0.72	0.82
28	CONDUIT	1.26	0	12:00	2.01	0.04	0.26
29	CONDUIT	0.00	0	00:00	0.00	0.00	0.06
30	CONDUIT	22.94	0	12:00	3.86	0.86	0.62
32	CONDUIT	13.76	0	11:59	4.65	0.21	0.47
33	CONDUIT	13.64	0	11:59	5.30	0.10	0.26
38	CONDUIT	4.42	0	12:03	2.03	0.06	0.47
41	CONDUIT	48.29	0	12:09	5.36	0.52	0.89
Link32	CONDUIT	142.26	0	12:01	7.25	0.73	1.00
Link33	CONDUIT	142.19	0	12:01	7.24	0.73	1.00
Link34	CONDUIT	140.50	0	12:03	7.16	0.72	1.00
Link35	CONDUIT	141.78	0	12:03	7.22	0.73	1.00
link36	CONDUIT	140.44	0	12:03	7.15	0.72	1.00
link37	CONDUIT	140.36	0	12:03	7.15	1.15	1.00
Link38	CONDUIT	140.41	0	12:03	7.15	1.13	1.00
Link39	CONDUIT	148.21	0	12:03	7.55	1.24	1.00
Link40	CONDUIT	148.63	0	12:03	7.57	1.24	1.00
Link41	CONDUIT	149.38	0	12:03	7.61	1.25	1.00
43	CONDUIT	151.49	0	12:00	7.72	0.70	1.00
44	CONDUIT	228.34	0	12:00	9.61	0.48	1.00
45	CONDUIT	219.74	0	12:01	9.25	1.59	1.00
46	CONDUIT	249.78	0	12:01	10.51	0.55	1.00
48	CONDUIT	275.15	0	12:00	12.05	1.77	0.92
49	CONDUIT	233.16	0	12:02	9.81	1.85	1.00
50	CONDUIT	233.17	0	12:02	9.81	1.11	1.00
51	CONDUIT	262.56	0	12:01	11.05	0.92	1.00
52	CONDUIT	262.55	0	12:01	11.05	0.98	1.00
LINK26	CONDUIT	43.47	0	11:55	4.99	0.25	0.41
53	CONDUIT	42.99	0	11:55	6.45	0.24	0.38
54	CONDUIT	41.87	0	11:57	2.93	0.15	0.48
Link29	CONDUIT	73.82	0	11:57	5.12	0.43	0.61
Link30	CONDUIT	72.96	0	11:57	4.46	0.41	0.67
55	CONDUIT	71.34	0	11:58	4.02	0.25	0.80
68	CONDUIT	48.38	0	11:58	6.84	4.55	1.00
69	CONDUIT	48.24	0	11:58	6.82	0.97	1.00
70	CONDUIT	48.17	0	11:59	6.81	1.00	1.00
71	CONDUIT	48.75	0	11:56	6.90	0.91	1.00
72	CONDUIT	49.02	0	11:56	6.93	0.92	1.00
73	CONDUIT	52.42	0	11:57	7.43	1.12	1.00
74	CONDUIT	49.05	0	12:07	6.94	0.88	1.00
75	CONDUIT	6.90	0	12:09	2.64	0.28	0.85
76	CONDUIT	10.28	0	12:10	2.32	0.42	1.00

77	CONDUIT	12.63	0	11:56	3.19	0.53	1.00
78	CONDUIT	13.68	0	11:56	2.79	0.52	1.00
79	CONDUIT	49.05	0	12:07	6.94	0.96	1.00
80	CONDUIT	3.76	0	12:03	2.14	0.22	0.57
81	CONDUIT	30.45	0	11:59	4.43	0.07	0.60
82	CONDUIT	41.95	0	12:02	4.76	0.40	0.58
83	CONDUIT	41.32	0	12:03	4.54	0.51	0.58
84	CONDUIT	13.24	0	12:02	2.56	0.09	0.48
85	CONDUIT	144.74	0	12:03	7.37	0.38	1.00
86	CONDUIT	49.06	0	12:07	6.94	1.25	1.00
87	CONDUIT	48.35	0	11:58	9.85	1.05	1.00
88	CONDUIT	49.48	0	11:58	10.08	1.11	1.00

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Up Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
2	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
6	1.00	0.00	0.00	0.00	0.83	0.00	0.00	0.16	0.00	0.66
7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81
9	1.00	0.00	0.00	0.00	0.54	0.06	0.00	0.39	0.00	0.84
10	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.79
11	1.00	0.00	0.00	0.00	0.95	0.05	0.00	0.00	0.00	0.82
12	1.00	0.00	0.00	0.00	0.77	0.03	0.00	0.20	0.00	0.78
13	1.00	0.00	0.00	0.00	0.31	0.00	0.00	0.69	0.00	0.70
14	1.00	0.00	0.00	0.00	0.02	0.00	0.00	0.98	0.00	0.65
15	1.00	0.00	0.00	0.00	0.42	0.00	0.00	0.57	0.00	0.49
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.09
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.24
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.02
21	1.00	0.00	0.00	0.00	0.66	0.00	0.00	0.34	0.00	0.58
23	1.00	0.00	0.00	0.00	0.53	0.00	0.00	0.47	0.00	0.73
24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.74

28	1.00	0.00	0.00	0.00	0.02	0.00	0.00	0.98	0.00	0.31
29	1.00	0.94	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.25
32	1.00	0.00	0.00	0.00	0.92	0.08	0.00	0.00	0.00	0.68
33	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.54
38	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.67
41	1.00	0.00	0.00	0.00	0.75	0.00	0.00	0.25	0.00	0.68
Link32	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.74
Link33	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.73
Link34	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.74
Link35	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.74
link36	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.90
link37	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.61
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.63
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.64
43	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.80
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.55
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.10
49	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.70
51	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.79
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.93
LINK26	1.00	0.00	0.08	0.00	0.92	0.00	0.00	0.00	0.00	0.57
53	1.00	0.00	0.00	0.00	0.45	0.55	0.00	0.00	0.00	0.54
54	1.00	0.00	0.18	0.00	0.82	0.00	0.00	0.00	0.00	0.79
Link29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.59
Link30	1.00	0.00	0.17	0.00	0.83	0.00	0.00	0.00	0.00	0.95
55	1.00	0.00	0.17	0.00	0.83	0.00	0.00	0.00	0.00	0.97
68	1.00	0.12	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.00
69	1.00	0.12	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.62
70	1.00	0.12	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.63
71	1.00	0.12	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.61
72	1.00	0.12	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.64
73	1.00	0.01	0.11	0.00	0.88	0.00	0.00	0.00	0.00	0.63
74	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.69
75	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.48
76	1.00	0.01	0.09	0.00	0.90	0.00	0.00	0.00	0.00	0.77
77	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.00	0.45
78	1.00	0.01	0.24	0.00	0.75	0.00	0.00	0.00	0.00	0.42

79	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.72
80	1.00	0.00	0.24	0.00	0.75	0.00	0.00	0.00	0.00	0.03
81	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
82	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.88
83	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.69
84	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
85	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.97
86	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.72
87	1.00	0.12	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.82
88	1.00	0.12	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.73

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 Conduit Surcharge Summary  
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Conduit	Hours Full			Hours	
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
17	0.01	0.01	0.01	0.14	0.01
23	0.24	0.32	0.24	0.35	0.23
24	0.01	0.17	0.01	0.01	0.01
Link32	0.06	0.08	0.07	0.01	0.02
Link33	0.06	0.08	0.08	0.01	0.02
Link34	0.07	0.08	0.09	0.01	0.02
Link35	0.08	0.09	0.11	0.01	0.01
link36	0.11	0.11	0.16	0.01	0.01
link37	0.16	0.16	0.16	0.15	0.11
Link38	0.16	0.16	0.17	0.14	0.10
Link39	0.16	0.17	0.16	0.18	0.14
Link40	0.16	0.16	0.16	0.18	0.13
Link41	0.12	0.16	0.12	0.18	0.12
43	0.12	0.12	0.19	0.01	0.01
44	0.06	0.06	0.11	0.01	0.01
45	0.10	0.11	0.10	0.20	0.09
46	0.10	0.11	0.39	0.01	0.01
48	0.01	0.27	0.01	0.29	0.01
49	0.14	0.15	0.39	0.35	0.01
50	0.15	0.15	0.21	0.07	0.10
51	0.20	0.22	0.21	0.01	0.04
52	0.21	0.21	0.27	0.01	0.03

55	0.01	0.01	0.06	0.01	0.01
68	0.24	0.26	0.24	0.83	0.23
69	0.23	0.24	0.23	0.01	0.03
70	0.23	0.23	0.23	0.01	0.05
71	0.22	0.23	0.23	0.01	0.02
72	0.22	0.23	0.23	0.01	0.01
73	0.20	0.23	0.26	0.18	0.14
74	0.26	0.26	0.29	0.01	0.01
75	0.01	0.01	0.03	0.01	0.01
76	0.03	0.03	0.17	0.01	0.01
77	0.17	0.17	0.28	0.01	0.01
78	0.28	0.28	0.35	0.01	0.01
79	0.29	0.29	0.47	0.01	0.01
85	0.01	0.02	0.08	0.01	0.01
86	0.47	0.47	0.67	0.23	0.24
87	0.33	0.34	0.37	0.19	0.21
88	0.33	0.36	0.34	0.20	0.25

Analysis begun on: Thu Feb 01 20:55:24 2018  
Analysis ended on: Thu Feb 01 20:55:34 2018  
Total elapsed time: 00:00:10

Remedial Option 1

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 20  
 Number of nodes ..... 77  
 Number of links ..... 73  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	2.4-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
1	105.00	750.00	25.00	2.0000	SCS~Type~II	39
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16

17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

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Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	
2-17	JUNCTION	735.85	15.20	2500.0	
2-18	JUNCTION	737.67	14.56	2500.0	
2-18-3	JUNCTION	743.25	8.77	2500.0	
2-2	JUNCTION	706.68	7.80	2500.0	
2-3	JUNCTION	707.67	7.15	2500.0	
2-4	JUNCTION	707.77	7.05	2500.0	
2-5	JUNCTION	707.85	8.05	2500.0	
2-6	JUNCTION	708.71	7.00	2500.0	

2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0
3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
38	JUNCTION	755.54	4.80	2500.0
39	JUNCTION	759.88	4.80	2500.0
NMH-1	JUNCTION	751.00	4.80	2500.0

NMH-10	JUNCTION	746.38	6.72	2500.0
NMH-11	JUNCTION	745.48	5.53	2500.0
NMH-12	JUNCTION	744.48	7.61	2500.0
NMH-2	JUNCTION	749.62	5.30	2500.0
NMH2-18-1	JUNCTION	738.29	13.44	2500.0
NMH2-18-2	JUNCTION	739.38	14.27	2500.0
NMH2-18-3	JUNCTION	743.25	8.77	2500.0
NMH-3	JUNCTION	748.22	6.00	2500.0
NMH-4	JUNCTION	746.83	5.80	2500.0
NMH-5	JUNCTION	745.44	5.90	2500.0
NMH-6	JUNCTION	744.05	8.60	2500.0
NMH-7	JUNCTION	742.66	10.60	2500.0
NMH-8	JUNCTION	741.27	7.20	2500.0
NMH-9	JUNCTION	747.28	7.52	2500.0
x-43	JUNCTION	730.59	0.00	0.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150
16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150
23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150

24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
68	8	NMH-1	CONDUIT	185.1	0.0216	0.0120
69	NMH-1	NMH-2	CONDUIT	294.3	0.4689	0.0120
70	NMH-2	NMH-3	CONDUIT	316.5	0.4423	0.0120
71	NMH-3	NMH-4	CONDUIT	253.6	0.5481	0.0120
72	NMH-4	NMH-5	CONDUIT	258.2	0.5384	0.0120
73	NMH-5	NMH-6	CONDUIT	332.4	0.4181	0.0120
74	NMH-6	NMH-7	CONDUIT	232.7	0.5973	0.0120
75	NMH-9	NMH-10	CONDUIT	290.0	0.3103	0.0120
76	NMH-10	NMH-11	CONDUIT	291.3	0.3089	0.0120
77	NMH-11	NMH-12	CONDUIT	345.0	0.2898	0.0120

78	NMH-12	NMH-6	CONDUIT	123.3	0.3486	0.0120
79	NMH-7	NMH-8	CONDUIT	278.4	0.4993	0.0120
80	3-25-7	NMH-9	CONDUIT	58.1	0.0860	0.0150
81	3-32	NMH2-18-2	CONDUIT	51.0	6.9253	0.0120
82	NMH2-18-2	NMH2-18-1	CONDUIT	460.8	0.2366	0.0120
83	NMH2-18-1	2-18	CONDUIT	425.5	0.1457	0.0120
84	2-18-3	NMH2-18-2	CONDUIT	482.2	0.8027	0.0120
85	3-51	3-48	CONDUIT	216.6	2.7944	0.0150
86	NMH-8	3-51	CONDUIT	219.0	0.2968	0.0120
87	38	8	CONDUIT	270.0	1.6669	0.0150
88	39	38	CONDUIT	274.0	1.5841	0.0150

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Cross Section Summary

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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86

33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
68	CIRCULAR	3.00	7.07	0.75	3.00	1	10.62
69	CIRCULAR	3.00	7.07	0.75	3.00	1	49.48
70	CIRCULAR	3.00	7.07	0.75	3.00	1	48.06
71	CIRCULAR	3.00	7.07	0.75	3.00	1	53.49
72	CIRCULAR	3.00	7.07	0.75	3.00	1	53.02
73	CIRCULAR	3.00	7.07	0.75	3.00	1	46.72
74	CIRCULAR	3.00	7.07	0.75	3.00	1	55.84
75	CIRCULAR	2.50	4.91	0.63	2.50	1	24.75
76	CIRCULAR	2.50	4.91	0.63	2.50	1	24.70
77	CIRCULAR	2.50	4.91	0.63	2.50	1	23.92
78	CIRCULAR	2.50	4.91	0.63	2.50	1	26.24
79	CIRCULAR	3.00	7.07	0.75	3.00	1	51.05
80	CIRCULAR	3.00	7.07	0.75	3.00	1	16.96
81	CIRCULAR	4.00	12.57	1.00	4.00	1	409.51
82	CIRCULAR	4.50	15.90	1.13	4.50	1	103.62

83	CIRCULAR	4.50	15.90	1.13	4.50	1	81.32
84	CIRCULAR	4.00	12.57	1.00	4.00	1	139.42
85	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
86	CIRCULAR	3.00	7.07	0.75	3.00	1	39.36
87	CIRCULAR	2.50	4.91	0.63	2.50	1	45.90
88	CIRCULAR	2.50	4.91	0.63	2.50	1	44.74

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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.  
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Analysis Options

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Flow Units ..... CFS  
Process Models:  
  Rainfall/Runoff ..... YES  
  RDII ..... NO  
  Snowmelt ..... NO  
  Groundwater ..... NO  
  Flow Routing ..... YES  
  Ponding Allowed ..... YES  
  Water Quality ..... NO  
Infiltration Method ..... CURVE\_NUMBER  
Flow Routing Method ..... DYNWAVE  
Starting Date ..... MAY-30-2015 00:00:00  
Ending Date ..... JUN-01-2015 00:00:00  
Antecedent Dry Days ..... 0.0  
Report Time Step ..... 00:02:00  
Wet Time Step ..... 00:01:00  
Dry Time Step ..... 00:05:00  
Routing Time Step ..... 5.00 sec  
Variable Time Step ..... YES  
Maximum Trials ..... 10  
Number of Threads ..... 1  
Head Tolerance ..... 0.005000 ft

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Volume                    Depth

Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	106.390	2.400
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	36.077	0.814
Surface Runoff .....	64.625	1.458
Final Storage .....	5.694	0.128
Continuity Error (%) .....	-0.006	

Flow Routing Continuity	Volume acre-feet	Volume 10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	64.619	21.057
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	64.623	21.058
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.197	0.064
Continuity Error (%) .....	-0.230	

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Time-Step Critical Elements  
\*\*\*\*\*  
Link link37 (54.22%)  
Link 12 (2.02%)

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Highest Flow Instability Indexes  
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Link 44 (37)  
Link 46 (36)  
Link 51 (35)  
Link 85 (35)  
Link Link32 (33)

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Routing Time Step Summary

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Minimum Time Step : 0.50 sec  
Average Time Step : 3.16 sec  
Maximum Time Step : 5.00 sec  
Percent in Steady State : 0.00  
Average Iterations per Step : 2.88  
Percent Not Converging : 4.07

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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 <sup>6</sup> gal	Peak Runoff CFS	Runoff Coeff
1	2.40	0.00	0.00	0.85	1.12	3.20	73.60	0.467
16	2.40	0.00	0.00	1.56	0.54	0.16	3.80	0.226
17	2.40	0.00	0.00	0.37	1.89	0.35	12.69	0.787
18	2.40	0.00	0.00	0.00	2.40	0.09	3.90	1.000
19	2.40	0.00	0.00	1.02	1.32	0.10	4.07	0.552
20	2.40	0.00	0.00	0.57	1.78	1.72	61.31	0.741
22	2.40	0.00	0.00	0.00	2.40	0.06	2.74	1.000
23	2.40	0.00	0.00	0.72	1.59	1.08	29.46	0.661
24	2.40	0.00	0.00	0.73	1.47	0.03	1.92	0.611
25	2.40	0.00	0.00	0.97	1.11	0.09	2.70	0.464
26	2.40	0.00	0.00	0.87	1.43	0.82	18.63	0.596
27	2.40	0.00	0.00	0.91	1.38	0.60	11.93	0.576
3-51#1	2.40	0.00	0.00	0.98	1.38	8.03	114.59	0.573
28	2.40	0.00	0.00	0.24	2.16	0.13	6.78	0.898
29	2.40	0.00	0.00	0.92	1.48	0.61	19.17	0.615
30	2.40	0.00	0.00	0.43	1.97	1.08	42.06	0.820
31	2.40	0.00	0.00	0.68	1.72	0.85	29.47	0.716
3-20#1	2.40	0.00	0.00	0.00	2.40	0.90	51.14	1.000
3-41#1	2.40	0.00	0.00	0.00	2.40	0.44	24.85	1.000
3-17#1	2.40	0.00	0.00	0.00	2.40	0.71	40.41	1.000

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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	Reported Max Depth Feet
2	JUNCTION	0.56	6.32	754.06	0 12:04	6.31
2-1	JUNCTION	2.10	4.06	710.15	0 12:10	4.06
2-10	JUNCTION	0.72	4.90	721.55	0 12:07	3.44
2-11	JUNCTION	0.74	4.85	722.21	0 12:08	3.84
2-13	JUNCTION	0.74	6.35	727.49	0 12:07	3.50
2-14	JUNCTION	0.72	5.90	727.69	0 12:07	3.67
2-15A	JUNCTION	0.70	3.75	727.04	0 12:08	3.72
2-15B	JUNCTION	0.68	3.24	734.53	0 12:07	3.24
2-16	JUNCTION	0.65	2.99	736.02	0 12:07	2.97
2-17	JUNCTION	0.63	2.94	738.79	0 12:05	2.93
2-18	JUNCTION	0.62	2.96	740.63	0 12:03	2.96
2-18-3	JUNCTION	0.37	1.60	744.85	0 12:02	1.60
2-2	JUNCTION	1.54	3.67	710.35	0 12:09	3.67
2-3	JUNCTION	0.81	3.24	710.91	0 12:09	3.21
2-4	JUNCTION	0.83	3.41	711.18	0 12:09	3.29
2-5	JUNCTION	0.79	3.42	711.27	0 12:10	3.32
2-6	JUNCTION	0.70	3.40	712.11	0 12:06	3.38
2-7	JUNCTION	0.72	4.44	714.22	0 12:06	3.92
2-9	JUNCTION	0.75	4.19	716.85	0 12:06	3.81
3-1	JUNCTION	1.98	17.38	725.62	0 12:08	9.80
3-10	JUNCTION	1.33	9.52	737.13	0 12:01	7.92
3-12	JUNCTION	1.24	4.51	733.62	0 11:58	4.51
3-16	JUNCTION	0.44	3.74	734.00	0 11:57	3.73
3-17	JUNCTION	0.43	3.76	734.14	0 11:57	3.71
3-18	JUNCTION	0.13	2.34	734.22	0 11:57	2.28
3-19	JUNCTION	0.29	2.57	734.83	0 11:55	2.56
3-20	JUNCTION	0.29	2.58	735.20	0 11:56	2.57
3-25-10	JUNCTION	0.16	1.60	749.46	0 12:02	1.54
3-25-11	JUNCTION	0.14	0.62	750.69	0 11:59	0.62
3-25-12	JUNCTION	0.00	0.00	750.81	0 00:00	0.00
3-25-7	JUNCTION	0.20	2.06	749.39	0 12:02	2.02
3-28-4	JUNCTION	0.36	1.59	746.61	0 12:00	1.59
3-3	JUNCTION	1.54	10.29	722.39	0 12:05	10.27
3-32	JUNCTION	0.46	2.35	745.25	0 11:59	2.34

3-32-1	JUNCTION	0.40	1.91	748.38	0	12:04	1.88
3-33	JUNCTION	0.48	2.49	745.52	0	11:59	2.48
3-38	JUNCTION	1.32	11.37	740.50	0	12:05	8.41
3-39	JUNCTION	1.37	12.15	742.00	0	12:05	10.95
3-4	JUNCTION	1.52	10.21	726.74	0	12:04	10.21
3-40	JUNCTION	1.38	12.88	743.00	0	12:05	11.71
3-41	JUNCTION	1.39	13.01	743.42	0	12:05	12.42
3-42	JUNCTION	1.38	13.09	743.61	0	12:05	12.53
3-43	JUNCTION	1.38	13.07	743.66	0	12:05	12.50
3-44	JUNCTION	1.35	12.50	743.68	0	12:05	11.92
3-45	JUNCTION	1.34	11.94	743.62	0	12:05	11.41
3-46	JUNCTION	1.33	10.90	744.00	0	12:10	9.89
3-47	JUNCTION	1.33	9.20	743.05	0	12:06	9.07
3-48	JUNCTION	1.33	8.31	742.88	0	12:06	8.29
3-5	JUNCTION	1.49	10.34	727.14	0	12:04	10.34
3-51	JUNCTION	1.25	8.45	749.07	0	12:00	5.03
3-6	JUNCTION	2.18	12.75	729.08	0	12:03	12.74
3-7	JUNCTION	1.40	8.26	731.14	0	12:02	8.26
3-9	JUNCTION	1.42	8.71	731.81	0	12:01	8.69
5	JUNCTION	0.39	1.94	749.53	0	12:00	1.92
6	JUNCTION	0.40	1.97	750.19	0	12:00	1.97
7	JUNCTION	0.00	0.01	750.19	0	12:00	0.01
8	JUNCTION	0.93	5.40	756.44	0	12:12	5.40
38	JUNCTION	0.87	5.98	761.52	0	12:09	5.97
39	JUNCTION	0.89	7.68	767.56	0	12:04	7.68
NMH-1	JUNCTION	0.80	4.80	755.80	0	11:52	4.65
NMH-10	JUNCTION	0.23	6.72	753.10	0	11:59	2.89
NMH-11	JUNCTION	0.28	5.53	751.01	0	11:57	3.75
NMH-12	JUNCTION	0.52	5.89	750.37	0	11:59	4.71
NMH-2	JUNCTION	0.80	5.30	754.92	0	11:54	4.69
NMH2-18-1	JUNCTION	0.63	2.99	741.28	0	12:02	2.97
NMH2-18-2	JUNCTION	0.62	3.02	742.40	0	12:01	3.02
NMH2-18-3	JUNCTION	0.00	0.00	743.25	0	00:00	0.00
NMH-3	JUNCTION	0.80	6.00	754.22	0	11:54	4.69
NMH-4	JUNCTION	0.81	5.80	752.63	0	11:54	4.96
NMH-5	JUNCTION	0.83	5.90	751.34	0	11:55	5.23
NMH-6	JUNCTION	0.84	6.66	750.71	0	11:54	5.18
NMH-7	JUNCTION	0.86	8.81	751.47	0	12:17	5.42
NMH-8	JUNCTION	0.94	7.20	748.47	0	12:17	5.45
NMH-9	JUNCTION	0.20	2.21	749.49	0	12:02	2.01
x-43	JUNCTION	0.00	0.00	730.59	0	00:00	0.00
002	OUTFALL	2.51	2.72	708.31	0	12:10	2.72
003	OUTFALL	2.59	4.73	711.83	0	12:04	4.73

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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	Flow Balance Error Percent
2	JUNCTION	11.93	11.93	0 12:00	0.602	0.602	0.050
2-1	JUNCTION	61.31	92.74	0 12:08	1.72	5.1	0.210
2-10	JUNCTION	0.00	96.43	0 12:07	0	3.11	-0.093
2-11	JUNCTION	0.00	96.13	0 12:07	0	3.11	-0.047
2-13	JUNCTION	3.90	96.20	0 12:07	0.0912	3.1	-0.025
2-14	JUNCTION	0.00	94.37	0 12:08	0	3.01	-0.086
2-15A	JUNCTION	0.00	59.32	0 12:07	0	3.01	0.059
2-15B	JUNCTION	12.69	59.98	0 12:06	0.348	3.01	-0.053
2-16	JUNCTION	3.80	52.85	0 12:05	0.16	2.66	-0.091
2-17	JUNCTION	0.00	50.91	0 12:03	0	2.5	-0.058
2-18	JUNCTION	0.00	51.28	0 12:02	0	2.5	0.044
2-18-3	JUNCTION	0.00	19.01	0 12:00	0	0.822	0.097
2-2	JUNCTION	4.07	65.28	0 12:09	0.0999	3.33	0.193
2-3	JUNCTION	0.00	65.61	0 12:09	0	3.2	0.114
2-4	JUNCTION	0.00	66.33	0 12:09	0	3.2	0.018
2-5	JUNCTION	0.00	69.25	0 12:06	0	3.18	-0.471
2-6	JUNCTION	2.74	84.19	0 12:06	0.0593	3.18	-0.131
2-7	JUNCTION	0.00	82.67	0 12:06	0	3.12	0.094
2-9	JUNCTION	0.00	94.00	0 12:07	0	3.11	-0.438
3-1	JUNCTION	19.17	294.71	0 12:04	0.613	16.1	0.070
3-10	JUNCTION	0.00	273.16	0 11:59	0	13.4	-0.087
3-12	JUNCTION	0.00	88.00	0 11:57	0	1.61	0.124
3-16	JUNCTION	0.00	88.88	0 11:57	0	1.61	-0.044
3-17	JUNCTION	40.41	91.06	0 11:57	0.709	1.61	0.052
3-18	JUNCTION	0.00	54.64	0 11:56	0	0.899	-0.030
3-19	JUNCTION	0.00	53.27	0 11:56	0	0.897	-0.043
3-20	JUNCTION	51.14	51.14	0 11:57	0.898	0.898	0.073
3-25-10	JUNCTION	1.92	5.50	0 12:00	0.0343	0.128	-0.175
3-25-11	JUNCTION	2.70	2.70	0 12:00	0.0907	0.0907	-0.031
3-25-12	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 gal
3-25-7	JUNCTION	0.00	8.05	0 12:02	0	0.131	0.028

3-28-4	JUNCTION	0.00	18.06	0	12:00	0	0.821	-0.127
3-3	JUNCTION	0.00	285.59	0	12:03	0	15.5	0.053
3-32	JUNCTION	0.00	37.69	0	12:00	0	1.68	-0.128
3-32-1	JUNCTION	0.00	8.28	0	12:04	0	0.601	-0.059
3-33	JUNCTION	29.46	29.46	0	12:00	1.08	1.08	-0.003
3-38	JUNCTION	0.00	188.17	0	12:00	0	11.8	-0.008
3-39	JUNCTION	0.00	188.04	0	12:00	0	11.8	-0.007
3-4	JUNCTION	42.06	291.40	0	12:02	1.08	15.5	-0.033
3-40	JUNCTION	0.00	187.79	0	12:00	0	11.8	0.021
3-41	JUNCTION	24.85	187.47	0	12:00	0.436	11.8	0.021
3-42	JUNCTION	0.00	171.95	0	12:05	0	11.4	-0.006
3-43	JUNCTION	0.00	171.25	0	12:05	0	11.4	0.003
3-44	JUNCTION	0.00	171.29	0	12:05	0	11.4	-0.042
3-45	JUNCTION	0.00	171.34	0	12:05	0	11.4	-0.031
3-46	JUNCTION	0.00	171.36	0	12:05	0	11.4	0.017
3-47	JUNCTION	0.00	175.64	0	12:01	0	11.4	-0.008
3-48	JUNCTION	0.00	181.06	0	12:00	0	11.4	0.096
3-5	JUNCTION	0.00	262.11	0	12:01	0	14.4	0.070
3-51	JUNCTION	114.59	164.91	0	12:02	8.03	11.4	-0.079
3-6	JUNCTION	6.78	290.59	0	11:57	0.135	14.4	0.068
3-7	JUNCTION	29.47	302.80	0	11:58	0.849	14.2	-0.103
3-9	JUNCTION	0.00	280.21	0	11:58	0	13.4	0.079
5	JUNCTION	0.00	18.29	0	12:00	0	0.822	0.035
6	JUNCTION	18.63	18.63	0	12:00	0.822	0.822	0.058
7	JUNCTION	0.00	0.06	0	12:00	0	1.45e-005	10.844
8	JUNCTION	0.00	49.00	0	12:08	0	3.2	0.018
38	JUNCTION	0.00	54.68	0	12:02	0	3.2	0.015
39	JUNCTION	73.60	73.60	0	12:00	3.2	3.19	-0.053
NMH-1	JUNCTION	0.00	48.40	0	11:54	0	3.2	0.068
NMH-10	JUNCTION	0.00	12.40	0	11:56	0	0.135	0.007
NMH-11	JUNCTION	0.00	14.74	0	11:55	0	0.149	-0.100
NMH-12	JUNCTION	0.00	14.31	0	11:54	0	0.165	0.006
NMH-2	JUNCTION	0.00	48.37	0	11:55	0	3.19	-0.013
NMH2-18-1	JUNCTION	0.00	52.22	0	12:01	0	2.5	-0.036
NMH2-18-2	JUNCTION	0.00	57.23	0	12:00	0	2.5	0.121
NMH2-18-3	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
NMH-3	JUNCTION	0.00	48.29	0	11:57	0	3.19	-0.010
NMH-4	JUNCTION	0.00	48.27	0	12:12	0	3.19	0.006
NMH-5	JUNCTION	0.00	48.55	0	11:55	0	3.19	0.008
NMH-6	JUNCTION	0.00	51.05	0	12:03	0	3.34	-0.019
NMH-7	JUNCTION	0.00	51.05	0	12:03	0	3.32	-0.003
NMH-8	JUNCTION	0.00	51.05	0	12:03	0	3.32	-0.021
NMH-9	JUNCTION	0.00	8.26	0	12:03	0	0.13	-0.064

x-43	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
002	OUTFALL	0.00	92.10	0	12:10	0	5.11	0.000
003	OUTFALL	0.00	294.71	0	12:04	0	16.1	0.000

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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
2	JUNCTION	0.60	5.065	0.000
2-10	JUNCTION	0.01	0.905	0.000
2-11	JUNCTION	0.14	1.355	0.045
2-13	JUNCTION	0.02	2.801	0.000
2-14	JUNCTION	0.01	2.200	0.000
2-7	JUNCTION	0.01	0.435	1.715
3-1	JUNCTION	0.45	11.884	0.000
3-10	JUNCTION	0.16	4.022	5.118
3-3	JUNCTION	0.38	4.791	0.000
3-32-1	JUNCTION	0.36	0.413	4.037
3-38	JUNCTION	0.32	6.371	0.000
3-39	JUNCTION	0.35	7.152	0.000
3-4	JUNCTION	0.39	4.710	0.000
3-40	JUNCTION	0.35	7.881	0.000
3-41	JUNCTION	0.36	8.009	0.581
3-42	JUNCTION	0.35	8.088	2.512
3-43	JUNCTION	0.35	8.075	2.525
3-44	JUNCTION	0.34	7.503	2.317
3-45	JUNCTION	0.33	6.937	1.383
3-46	JUNCTION	0.32	5.900	0.000
3-47	JUNCTION	0.33	4.202	0.000
3-48	JUNCTION	0.33	3.314	0.000
3-5	JUNCTION	0.34	4.840	0.000
3-51	JUNCTION	0.27	3.454	1.546
3-6	JUNCTION	0.57	7.249	0.000
3-7	JUNCTION	0.28	2.765	0.000
3-9	JUNCTION	0.26	3.212	0.000
8	JUNCTION	0.43	2.401	0.000

38	JUNCTION	0.48	3.484	0.000
39	JUNCTION	0.50	5.177	0.000
NMH-1	JUNCTION	0.41	1.802	0.000
NMH-10	JUNCTION	0.29	4.220	0.000
NMH-11	JUNCTION	0.36	3.033	0.000
NMH-12	JUNCTION	0.46	3.387	1.723
NMH-2	JUNCTION	0.41	2.302	0.000
NMH2-18-3	JUNCTION	48.00	0.000	8.770
NMH-3	JUNCTION	0.41	3.001	0.000
NMH-4	JUNCTION	0.40	2.803	0.000
NMH-5	JUNCTION	0.41	2.903	0.000
NMH-6	JUNCTION	0.44	3.663	1.937
NMH-7	JUNCTION	0.47	5.805	1.795
NMH-8	JUNCTION	0.71	4.202	0.000
x-43	JUNCTION	48.00	0.000	0.000

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Node Flooding Summary  
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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 <sup>6</sup> gal	Maximum Poned Depth Feet
2	0.34	3.77	0 12:00	0.010	0.515
2-10	0.01	13.10	0 12:07	0.000	0.005
2-13	0.01	7.95	0 12:07	0.000	0.001
2-14	0.01	1.59	0 12:07	0.000	0.000
3-1	0.01	33.98	0 12:08	0.001	0.004
3-3	0.17	43.84	0 12:08	0.015	0.291
3-38	0.01	16.30	0 12:05	0.000	0.001
3-39	0.01	17.98	0 12:05	0.000	0.002
3-4	0.19	20.44	0 11:56	0.027	1.120
3-40	0.01	5.93	0 12:05	0.000	0.001
3-46	0.01	12.13	0 12:09	0.000	0.000
3-47	0.01	9.95	0 12:06	0.000	0.002
3-48	0.07	16.18	0 12:06	0.006	0.034
3-5	0.18	18.96	0 11:56	0.024	1.130
3-6	0.23	63.93	0 11:57	0.065	2.749

3-7	0.16	44.06	0	11:58	0.031	1.315
3-9	0.12	22.23	0	11:59	0.016	0.432
8	0.24	3.99	0	11:51	0.003	0.151
38	0.37	7.74	0	12:02	0.026	1.184
39	0.38	20.85	0	12:00	0.057	2.877
NMH-1	0.01	2.29	0	11:52	0.000	0.002
NMH-10	0.01	2.50	0	11:59	0.000	0.000
NMH-11	0.01	5.78	0	11:57	0.000	0.003
NMH-2	0.01	2.35	0	11:54	0.000	0.002
NMH-3	0.01	4.21	0	11:54	0.000	0.001
NMH-4	0.01	6.98	0	11:52	0.000	0.003
NMH-5	0.01	9.20	0	11:53	0.000	0.003
NMH-8	0.01	5.64	0	12:17	0.000	0.002

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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
002	98.78	9.35	92.10	5.106
003	99.92	27.68	294.71	16.148
System	99.35	37.02	384.51	21.254

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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
2	CONDUIT	0.06	0 12:00	0.03	0.00	0.33
3	CONDUIT	18.29	0 12:00	3.89	0.58	0.65
6	CONDUIT	49.97	0 12:05	4.88	0.50	0.65
7	CONDUIT	51.32	0 12:07	4.38	0.52	0.69

8	CONDUIT	59.32	0	12:07	4.65	0.26	0.78
9	CONDUIT	94.37	0	12:08	9.81	0.54	1.00
10	CONDUIT	96.13	0	12:07	9.99	0.85	1.00
11	CONDUIT	96.43	0	12:07	10.02	0.81	1.00
12	CONDUIT	94.20	0	12:07	9.79	0.67	1.00
13	CONDUIT	94.00	0	12:07	7.71	0.59	0.97
14	CONDUIT	82.93	0	12:06	7.53	0.74	0.82
15	CONDUIT	69.25	0	12:06	5.27	0.63	0.65
16	CONDUIT	66.33	0	12:09	4.83	0.94	0.68
17	CONDUIT	65.61	0	12:09	4.99	1.55	0.66
18	CONDUIT	64.08	0	12:09	4.52	0.51	0.68
19	CONDUIT	65.67	0	12:11	4.22	0.69	0.75
20	CONDUIT	92.10	0	12:10	6.52	0.75	0.68
21	CONDUIT	50.91	0	12:03	5.36	0.30	0.64
23	CONDUIT	8.28	0	12:04	6.75	2.16	1.00
24	CONDUIT	8.34	0	12:05	5.36	0.74	0.82
28	CONDUIT	2.76	0	11:59	3.30	0.09	0.36
29	CONDUIT	0.00	0	00:00	0.00	0.00	0.07
30	CONDUIT	29.51	0	12:00	4.17	1.11	0.69
32	CONDUIT	18.06	0	12:00	4.67	0.27	0.59
33	CONDUIT	19.01	0	12:00	5.44	0.13	0.32
38	CONDUIT	8.05	0	12:02	3.22	0.12	0.60
41	CONDUIT	82.67	0	12:06	8.59	0.89	1.00
Link32	CONDUIT	175.64	0	12:01	8.95	0.90	1.00
Link33	CONDUIT	171.36	0	12:05	8.73	0.88	1.00
Link34	CONDUIT	171.34	0	12:05	8.73	0.87	1.00
Link35	CONDUIT	171.29	0	12:05	8.72	0.88	1.00
link36	CONDUIT	171.25	0	12:05	8.72	0.88	1.00
link37	CONDUIT	171.95	0	12:05	8.76	1.41	1.00
Link38	CONDUIT	172.35	0	12:05	8.78	1.38	1.00
Link39	CONDUIT	187.79	0	12:00	9.56	1.58	1.00
Link40	CONDUIT	188.04	0	12:00	9.58	1.56	1.00
Link41	CONDUIT	188.17	0	12:00	9.58	1.57	1.00
43	CONDUIT	189.21	0	11:59	9.64	0.88	1.00
44	CONDUIT	280.21	0	11:58	11.79	0.59	1.00
45	CONDUIT	274.65	0	11:58	11.56	1.98	1.00
46	CONDUIT	283.83	0	11:57	11.95	0.62	1.00
48	CONDUIT	294.71	0	12:04	12.80	1.90	0.93
49	CONDUIT	262.11	0	12:01	11.03	2.08	1.00
50	CONDUIT	255.98	0	12:02	10.77	1.22	1.00
51	CONDUIT	285.59	0	12:03	12.02	1.00	1.00
52	CONDUIT	284.07	0	12:05	11.96	1.06	1.00
LINK26	CONDUIT	53.27	0	11:56	4.99	0.30	0.47

53	CONDUIT	54.64	0	11:56	6.44	0.31	0.45
54	CONDUIT	50.73	0	11:57	3.12	0.19	0.55
Link29	CONDUIT	88.88	0	11:57	5.18	0.51	0.68
Link30	CONDUIT	88.00	0	11:57	4.64	0.50	0.75
55	CONDUIT	88.03	0	11:58	4.14	0.30	0.84
68	CONDUIT	48.40	0	11:54	6.85	4.56	1.00
69	CONDUIT	48.37	0	11:55	6.84	0.98	1.00
70	CONDUIT	48.29	0	11:57	6.83	1.00	1.00
71	CONDUIT	48.27	0	12:12	6.83	0.90	1.00
72	CONDUIT	48.55	0	11:55	6.87	0.92	1.00
73	CONDUIT	49.14	0	11:55	6.96	1.05	1.00
74	CONDUIT	51.05	0	12:03	7.22	0.91	1.00
75	CONDUIT	9.10	0	12:18	2.89	0.37	0.94
76	CONDUIT	11.75	0	12:19	2.59	0.48	1.00
77	CONDUIT	12.67	0	12:20	2.89	0.53	1.00
78	CONDUIT	14.31	0	11:54	2.92	0.55	1.00
79	CONDUIT	51.05	0	12:03	7.22	1.00	1.00
80	CONDUIT	8.26	0	12:03	2.84	0.49	0.70
81	CONDUIT	40.16	0	12:00	4.60	0.10	0.67
82	CONDUIT	52.22	0	12:01	4.81	0.50	0.67
83	CONDUIT	51.28	0	12:02	4.63	0.63	0.66
84	CONDUIT	19.06	0	12:01	2.54	0.14	0.58
85	CONDUIT	181.06	0	12:00	9.22	0.48	1.00
86	CONDUIT	51.07	0	12:03	7.22	1.30	1.00
87	CONDUIT	49.00	0	12:08	9.98	1.07	1.00
88	CONDUIT	54.68	0	12:02	11.14	1.22	1.00

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Up Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
2	1.00	0.00	0.93	0.00	0.06	0.00	0.00	0.00	0.00	0.75
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.76
6	1.00	0.00	0.00	0.00	0.87	0.00	0.00	0.12	0.00	0.69
7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.66
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.85
9	1.00	0.00	0.00	0.00	0.59	0.06	0.00	0.34	0.00	0.89

10	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.82
11	1.00	0.00	0.00	0.00	0.95	0.05	0.00	0.00	0.00	0.86
12	1.00	0.00	0.00	0.00	0.80	0.03	0.00	0.16	0.00	0.83
13	1.00	0.00	0.00	0.00	0.39	0.00	0.00	0.61	0.00	0.73
14	1.00	0.00	0.00	0.00	0.04	0.00	0.00	0.96	0.00	0.69
15	1.00	0.00	0.00	0.00	0.52	0.00	0.00	0.48	0.00	0.50
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.10
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.27
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.02
21	1.00	0.00	0.00	0.00	0.70	0.00	0.00	0.30	0.00	0.62
23	1.00	0.00	0.00	0.00	0.57	0.00	0.00	0.43	0.00	0.76
24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.76
28	1.00	0.00	0.00	0.00	0.04	0.00	0.00	0.96	0.00	0.32
29	1.00	0.90	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.25
32	1.00	0.00	0.00	0.00	0.93	0.07	0.00	0.00	0.00	0.70
33	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.56
38	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.67
41	1.00	0.00	0.00	0.00	0.79	0.00	0.00	0.21	0.00	0.71
Link32	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.76
Link33	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.76
Link34	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.77
Link35	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.77
link36	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.91
link37	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.62
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.64
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.65
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.66
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
43	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.82
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.98
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.55
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.13
49	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.72
51	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.80
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.92
LINK26	1.00	0.00	0.08	0.00	0.92	0.00	0.00	0.00	0.00	0.56
53	1.00	0.00	0.00	0.00	0.46	0.53	0.00	0.00	0.00	0.52
54	1.00	0.00	0.17	0.00	0.83	0.00	0.00	0.00	0.00	0.78

Link29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61
Link30	1.00	0.00	0.16	0.00	0.84	0.00	0.00	0.00	0.00	0.96
55	1.00	0.00	0.16	0.00	0.84	0.00	0.00	0.00	0.00	0.97
68	1.00	0.10	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.00
69	1.00	0.10	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.68
70	1.00	0.10	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.69
71	1.00	0.10	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.70
72	1.00	0.10	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.72
73	1.00	0.01	0.09	0.00	0.90	0.00	0.00	0.00	0.00	0.71
74	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.76
75	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.51
76	1.00	0.02	0.11	0.00	0.87	0.00	0.00	0.00	0.00	0.78
77	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.00	0.48
78	1.00	0.01	0.22	0.00	0.77	0.00	0.00	0.00	0.00	0.40
79	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.79
80	1.00	0.00	0.21	0.00	0.79	0.00	0.00	0.00	0.00	0.04
81	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
82	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.87
83	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
84	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
85	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.97
86	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.76
87	1.00	0.10	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.83
88	1.00	0.10	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.77

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Conduit Surcharge Summary  
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Conduit	Hours Full			Hours Above Full		Hours Capacity
	Both Ends	Upstream	Dnstream	Normal	Flow	Limited
9	0.01	0.15	0.01	0.01		0.01
10	0.11	0.13	0.14	0.01		0.01
11	0.01	0.14	0.03	0.01		0.01
12	0.01	0.12	0.02	0.01		0.01
13	0.01	0.01	0.01	0.01		0.01
14	0.01	0.01	0.01	0.01		0.01
17	0.01	0.01	0.01	0.30		0.01
23	0.40	0.60	0.40	0.67		0.40

24	0.01	0.36	0.01	0.01	0.01
30	0.01	0.01	0.01	0.07	0.01
41	0.03	0.16	0.04	0.01	0.01
Link32	0.31	0.32	0.32	0.01	0.09
Link33	0.31	0.32	0.32	0.01	0.07
Link34	0.31	0.32	0.33	0.01	0.07
Link35	0.32	0.33	0.33	0.01	0.07
link36	0.33	0.33	0.35	0.01	0.06
link37	0.35	0.35	0.35	0.35	0.28
Link38	0.35	0.35	0.36	0.35	0.28
Link39	0.34	0.35	0.35	0.40	0.29
Link40	0.34	0.35	0.35	0.39	0.29
Link41	0.31	0.35	0.31	0.39	0.30
43	0.32	0.32	0.37	0.01	0.05
44	0.15	0.15	0.26	0.01	0.01
45	0.24	0.26	0.27	0.40	0.21
46	0.25	0.26	0.57	0.01	0.01
48	0.01	0.45	0.01	0.48	0.01
49	0.33	0.34	0.57	0.54	0.01
50	0.33	0.34	0.39	0.20	0.25
51	0.36	0.39	0.37	0.01	0.05
52	0.38	0.38	0.45	0.17	0.23
55	0.01	0.01	0.15	0.01	0.01
68	0.41	0.43	0.41	1.39	0.41
69	0.41	0.41	0.41	0.01	0.02
70	0.40	0.41	0.41	0.12	0.15
71	0.40	0.41	0.40	0.01	0.01
72	0.40	0.40	0.41	0.01	0.01
73	0.38	0.41	0.44	0.37	0.34
74	0.44	0.44	0.47	0.01	0.01
75	0.01	0.01	0.29	0.01	0.01
76	0.29	0.29	0.36	0.01	0.01
77	0.36	0.36	0.46	0.01	0.01
78	0.46	0.46	0.52	0.01	0.01
79	0.47	0.47	0.71	0.01	0.03
85	0.23	0.23	0.32	0.01	0.01
86	0.71	0.71	1.01	0.41	0.41
87	0.47	0.48	0.49	0.36	0.37
88	0.46	0.49	0.48	0.30	0.34

Analysis begun on: Thu Feb 01 20:54:15 2018  
Analysis ended on: Thu Feb 01 20:54:26 2018

Total elapsed time: 00:00:11

*“Remedial Option 2” SWMM Model Output*

# Remedial Option 2



Remedial Option 2

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 60

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 23  
 Number of nodes ..... 71  
 Number of links ..... 66  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	1.2-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
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1	105.00	750.00	25.00	2.0000	SCS~Type~II	8
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16
17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-26#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-26
3-30#1	9.17	50000.00	100.00	0.5000	SCS~Type~II	3-30
3-23#1	13.15	50000.00	100.00	0.5000	SCS~Type~II	3-23
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

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Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	
2-17	JUNCTION	735.85	15.20	2500.0	
2-18	JUNCTION	737.67	14.56	2500.0	

2-18-3	JUNCTION	743.25	8.77	2500.0
2-19	JUNCTION	738.55	12.71	2500.0
2-2	JUNCTION	706.68	7.80	2500.0
2-20	JUNCTION	739.68	12.19	2500.0
2-21	JUNCTION	740.00	10.58	2500.0
2-3	JUNCTION	707.67	7.15	2500.0
2-4	JUNCTION	707.77	7.05	2500.0
2-5	JUNCTION	707.85	8.05	2500.0
2-6	JUNCTION	708.71	7.00	2500.0
2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-23	JUNCTION	737.57	11.70	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-26	JUNCTION	739.33	12.67	2500.0
3-28	JUNCTION	739.94	13.46	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-29	JUNCTION	741.05	11.95	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-30	JUNCTION	742.20	11.80	2500.0
3-31	JUNCTION	742.26	11.74	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0

3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
NMH-1	JUNCTION	736.48	11.22	2500.0
NMH-2	JUNCTION	735.39	12.73	2500.0
NMH-3	JUNCTION	734.30	10.88	2500.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
1	8	7	CONDUIT	60.0	2.1005	0.0150
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150
16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150

23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150
24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
link20	3-29	3-28	CONDUIT	39.0	0.1538	0.0150
LINK21	3-28	3-26	CONDUIT	268.0	0.2201	0.0120
Link22	3-26	3-23	CONDUIT	577.0	0.3050	0.0120
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
56	3-30	3-29	CONDUIT	443.0	0.1670	0.0150
57	2-18-3	3-28	CONDUIT	227.0	1.3261	0.0150
59	3-32	3-31	CONDUIT	248.0	0.2581	0.0150
60	3-31	3-30	CONDUIT	27.0	0.2222	0.0150
61	3-25-7	3-26	CONDUIT	690.0	1.1595	0.0150
68	3-51	3-48	CONDUIT	216.6	2.7944	0.0150

69	3-23	NMH-1	CONDUIT	304.0	0.3586	0.0120
70	NMH-1	NMH-2	CONDUIT	300.0	0.3633	0.0120
71	NMH-2	NMH-3	CONDUIT	300.0	0.3633	0.0120
72	NMH-3	3-46	CONDUIT	330.7	0.3629	0.0120

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
1	CIRCULAR	2.50	4.91	0.63	2.50	1	51.52
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86
33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
link20	CIRCULAR	3.50	9.62	0.88	3.50	1	34.20
LINK21	CIRCULAR	3.25	8.30	0.81	3.25	1	41.97
Link22	CIRCULAR	5.25	21.65	1.31	5.25	1	177.48

Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
56	CIRCULAR	3.50	9.62	0.88	3.50	1	35.64
57	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
59	CIRCULAR	3.00	7.07	0.75	3.00	1	29.37
60	CIRCULAR	3.50	9.62	0.88	3.50	1	41.10
61	CIRCULAR	3.00	7.07	0.75	3.00	1	62.24
68	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
69	CIRCULAR	3.00	7.07	0.75	3.00	2	43.27
70	CIRCULAR	3.00	7.07	0.75	3.00	2	43.55
71	CIRCULAR	3.00	7.07	0.75	3.00	2	43.55
72	CIRCULAR	3.00	7.07	0.75	3.00	2	43.53

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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.  
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 Analysis Options  
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Flow Units ..... CFS  
 Process Models:  
   Rainfall/Runoff ..... YES  
   RDII ..... NO  
   Snowmelt ..... NO  
   Groundwater ..... NO  
   Flow Routing ..... YES  
   Ponding Allowed ..... YES  
   Water Quality ..... NO  
 Infiltration Method ..... CURVE\_NUMBER  
 Flow Routing Method ..... DYNWAVE  
 Starting Date ..... MAY-30-2015 00:00:00  
 Ending Date ..... JUN-01-2015 00:00:00  
 Antecedent Dry Days ..... 0.0  
 Report Time Step ..... 00:02:00  
 Wet Time Step ..... 00:01:00  
 Dry Time Step ..... 00:05:00  
 Routing Time Step ..... 5.00 sec  
 Variable Time Step ..... YES  
 Maximum Trials ..... 10  
 Number of Threads ..... 1  
 Head Tolerance ..... 0.005000 ft

*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	56.515	1.200
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	24.944	0.530
Surface Runoff .....	26.921	0.572
Final Storage .....	4.653	0.099
Continuity Error (%) .....	-0.006	

*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000

Wet Weather Inflow .....	26.917	8.771
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	26.828	8.742
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.199	0.065
Continuity Error (%) .....	-0.218	

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Highest Continuity Errors  
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Node 2-2 (2.38%)

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Time-Step Critical Elements  
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Link link37 (34.30%)

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Highest Flow Instability Indexes  
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Link Link32 (29)  
Link Link34 (26)  
Link 44 (25)  
Link 68 (23)  
Link 51 (23)

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Routing Time Step Summary  
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Minimum Time Step : 0.50 sec  
Average Time Step : 3.96 sec  
Maximum Time Step : 5.00 sec  
Percent in Steady State : 0.00  
Average Iterations per Step : 2.29

Percent Not Converging : 0.96

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 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
1	1.20	0.00	0.00	0.62	0.24	0.68	31.13	0.198
16	1.20	0.00	0.00	0.97	0.15	0.04	1.56	0.125
17	1.20	0.00	0.00	0.23	0.84	0.15	5.24	0.699
18	1.20	0.00	0.00	0.00	1.20	0.05	1.72	1.000
19	1.20	0.00	0.00	0.64	0.50	0.04	1.80	0.418
20	1.20	0.00	0.00	0.41	0.73	0.71	24.48	0.611
22	1.20	0.00	0.00	0.00	1.20	0.03	1.25	1.000
23	1.20	0.00	0.00	0.53	0.59	0.40	11.63	0.489
24	1.20	0.00	0.00	0.54	0.46	0.01	0.56	0.387
25	1.20	0.00	0.00	0.71	0.18	0.01	0.80	0.147
26	1.20	0.00	0.00	0.64	0.47	0.27	7.24	0.394
27	1.20	0.00	0.00	0.66	0.44	0.19	4.65	0.365
3-51#1	1.20	0.00	0.00	0.66	0.50	2.90	40.38	0.414
28	1.20	0.00	0.00	0.16	1.04	0.06	3.10	0.865
29	1.20	0.00	0.00	0.61	0.59	0.24	7.40	0.491
30	1.20	0.00	0.00	0.28	0.91	0.50	17.68	0.762
31	1.20	0.00	0.00	0.45	0.75	0.37	12.38	0.626
3-26#1	1.20	0.00	0.00	0.00	1.20	0.35	20.19	1.000
3-30#1	1.20	0.00	0.00	0.00	1.20	0.30	17.02	1.000
3-23#1	1.20	0.00	0.00	0.00	1.20	0.43	24.38	1.000
3-20#1	1.20	0.00	0.00	0.00	1.20	0.45	25.52	1.000
3-41#1	1.20	0.00	0.00	0.00	1.20	0.22	12.43	1.000
3-17#1	1.20	0.00	0.00	0.00	1.20	0.35	20.19	1.000

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 Node Depth Summary  
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 Average Maximum Maximum Time of Max Reported

Node	Type	Depth Feet	Depth Feet	HGL Feet	Occurrence days hr:min	Max Depth Feet
2	JUNCTION	0.21	1.55	749.29	0 12:00	1.55
2-1	JUNCTION	2.01	2.38	708.47	0 00:01	2.08
2-10	JUNCTION	0.17	1.00	717.65	0 12:04	0.99
2-11	JUNCTION	0.17	0.90	718.26	0 12:04	0.90
2-13	JUNCTION	0.17	0.90	722.04	0 12:03	0.90
2-14	JUNCTION	0.15	0.91	722.70	0 12:08	0.88
2-15A	JUNCTION	0.14	0.86	724.15	0 12:10	0.86
2-15B	JUNCTION	0.14	1.05	732.34	0 12:04	1.05
2-16	JUNCTION	0.06	0.48	733.51	0 12:07	0.48
2-17	JUNCTION	0.00	0.00	735.85	0 00:00	0.00
2-18	JUNCTION	0.00	0.00	737.67	0 00:00	0.00
2-18-3	JUNCTION	1.48	3.78	747.03	0 12:00	3.74
2-19	JUNCTION	0.00	0.00	738.55	0 00:00	0.00
2-2	JUNCTION	1.42	1.66	708.34	0 00:02	1.54
2-20	JUNCTION	0.00	0.00	739.68	0 00:00	0.00
2-21	JUNCTION	0.00	0.00	740.00	0 00:00	0.00
2-3	JUNCTION	0.47	1.20	708.87	0 12:09	1.19
2-4	JUNCTION	0.39	1.22	708.99	0 12:04	1.21
2-5	JUNCTION	0.33	1.22	709.07	0 12:03	1.21
2-6	JUNCTION	0.19	1.22	709.93	0 12:04	1.22
2-7	JUNCTION	0.18	1.00	710.78	0 12:09	0.99
2-9	JUNCTION	0.18	0.92	713.58	0 12:04	0.91
3-1	JUNCTION	1.61	17.38	725.62	0 12:00	6.26
3-10	JUNCTION	0.87	5.27	732.88	0 12:01	5.16
3-12	JUNCTION	1.07	3.73	732.84	0 12:00	3.60
3-16	JUNCTION	0.28	2.45	732.71	0 12:00	2.41
3-17	JUNCTION	0.28	2.38	732.76	0 11:57	2.37
3-18	JUNCTION	0.07	1.04	732.92	0 11:57	1.03
3-19	JUNCTION	0.20	1.56	733.82	0 11:57	1.54
3-20	JUNCTION	0.19	1.56	734.18	0 11:57	1.55
3-23	JUNCTION	0.49	4.70	742.27	0 12:01	4.69
3-25-10	JUNCTION	0.05	0.53	748.39	0 11:57	0.53
3-25-11	JUNCTION	0.04	0.43	750.50	0 11:59	0.43
3-25-12	JUNCTION	0.00	0.00	750.81	0 00:00	0.00
3-25-7	JUNCTION	0.05	0.49	747.82	0 12:01	0.49
3-26	JUNCTION	0.64	3.64	742.97	0 12:00	3.61
3-28	JUNCTION	0.68	4.40	744.34	0 12:00	4.29
3-28-4	JUNCTION	0.34	2.63	747.65	0 12:00	2.63
3-29	JUNCTION	0.74	3.32	744.37	0 12:01	3.22
3-3	JUNCTION	0.96	10.00	722.10	0 12:01	5.58

3-30	JUNCTION	0.38	2.51	744.71	0	12:00	2.50
3-31	JUNCTION	0.35	2.46	744.72	0	12:00	2.44
3-32	JUNCTION	0.32	1.99	744.89	0	12:00	1.95
3-32-1	JUNCTION	0.21	1.22	747.69	0	12:00	1.22
3-33	JUNCTION	0.28	1.92	744.95	0	12:01	1.88
3-38	JUNCTION	0.86	5.01	734.14	0	12:02	4.99
3-39	JUNCTION	0.88	5.17	735.02	0	12:02	5.09
3-4	JUNCTION	0.96	7.60	724.13	0	12:01	5.83
3-40	JUNCTION	0.87	5.22	735.34	0	12:02	5.12
3-41	JUNCTION	0.88	5.31	735.72	0	12:02	5.17
3-42	JUNCTION	0.87	5.30	735.82	0	12:02	5.15
3-43	JUNCTION	0.87	5.30	735.89	0	12:02	5.17
3-44	JUNCTION	0.85	4.91	736.09	0	12:03	4.90
3-45	JUNCTION	0.85	4.92	736.60	0	12:02	4.89
3-46	JUNCTION	0.84	4.93	738.03	0	12:02	4.89
3-47	JUNCTION	0.65	4.25	738.10	0	12:02	4.22
3-48	JUNCTION	0.62	3.48	738.05	0	12:03	3.45
3-5	JUNCTION	0.93	7.49	724.29	0	12:01	5.69
3-51	JUNCTION	0.57	2.26	742.88	0	12:02	2.25
3-6	JUNCTION	1.52	9.13	725.46	0	12:01	6.96
3-7	JUNCTION	0.90	5.52	728.40	0	12:00	5.47
3-9	JUNCTION	0.91	5.72	728.82	0	12:01	5.49
5	JUNCTION	0.38	3.18	750.77	0	12:00	3.18
6	JUNCTION	0.39	3.98	752.20	0	11:59	3.49
7	JUNCTION	0.30	2.73	752.91	0	11:59	2.73
8	JUNCTION	0.68	4.47	755.51	0	12:03	3.18
NMH-1	JUNCTION	0.49	4.77	741.25	0	12:01	4.72
NMH-2	JUNCTION	0.50	5.99	741.38	0	11:56	4.81
NMH-3	JUNCTION	0.51	6.96	741.26	0	11:56	4.81
002	OUTFALL	2.51	2.51	708.10	0	00:00	2.51
003	OUTFALL	2.53	4.00	711.10	0	12:01	3.85

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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	Flow Balance Error Percent
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2	JUNCTION	4.65	4.65	0	12:00	0.191	0.191	0.296
2-1	JUNCTION	24.48	34.53	0	00:00	0.71	1.11	0.972
2-10	JUNCTION	0.00	6.98	0	12:04	0	0.244	-0.162
2-11	JUNCTION	0.00	7.02	0	12:03	0	0.244	-0.026
2-13	JUNCTION	1.72	8.40	0	12:01	0.0456	0.245	0.095
2-14	JUNCTION	0.00	6.56	0	12:10	0	0.199	-0.120
2-15A	JUNCTION	0.00	5.68	0	12:04	0	0.199	0.023
2-15B	JUNCTION	5.24	6.40	0	12:00	0.155	0.199	-0.046
2-16	JUNCTION	1.56	1.56	0	12:00	0.0442	0.0442	0.063
2-17	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
2-18	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
2-18-3	JUNCTION	0.00	38.18	0	12:00	0	0.949	-0.081
2-19	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
2-2	JUNCTION	1.80	20.21	0	00:01	0.0378	0.355	2.435
2-20	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
2-21	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
2-3	JUNCTION	0.00	8.35	0	12:04	0	0.282	0.736
2-4	JUNCTION	0.00	8.17	0	12:04	0	0.278	0.200
2-5	JUNCTION	0.00	8.45	0	12:04	0	0.276	-0.181
2-6	JUNCTION	1.25	9.58	0	12:04	0.0296	0.276	0.051
2-7	JUNCTION	0.00	7.12	0	12:04	0	0.246	-0.109
2-9	JUNCTION	0.00	8.69	0	12:07	0	0.245	-0.368
3-1	JUNCTION	7.40	204.26	0	12:01	0.245	7.81	0.157
3-10	JUNCTION	0.00	157.13	0	12:00	0	6.57	-0.102
3-12	JUNCTION	0.00	48.54	0	11:57	0	0.803	0.255
3-16	JUNCTION	0.00	48.24	0	11:57	0	0.803	-0.068
3-17	JUNCTION	20.19	45.09	0	11:57	0.355	0.803	0.055
3-18	JUNCTION	0.00	25.44	0	11:57	0	0.449	-0.040
3-19	JUNCTION	0.00	25.50	0	11:57	0	0.448	-0.028
3-20	JUNCTION	25.52	25.52	0	11:57	0.449	0.449	0.063
3-23	JUNCTION	24.38	96.30	0	12:00	0.429	2.65	-0.122
3-25-10	JUNCTION	0.56	1.22	0	11:57	0.0109	0.0252	-0.021
3-25-11	JUNCTION	0.80	0.80	0	11:57	0.0144	0.0144	-0.004
3-25-12	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
3-25-7	JUNCTION	0.00	1.21	0	11:57	0	0.0252	-0.162
3-26	JUNCTION	20.19	79.22	0	12:00	0.355	2.22	-0.105
3-28	JUNCTION	0.00	64.16	0	12:00	0	1.84	0.023
3-28-4	JUNCTION	0.00	38.40	0	12:00	0	0.949	-0.030
3-29	JUNCTION	0.00	28.53	0	11:58	0	0.888	-0.194
3-3	JUNCTION	0.00	199.86	0	12:01	0	7.51	0.040
3-30	JUNCTION	17.02	29.47	0	11:59	0.299	0.888	0.028
3-31	JUNCTION	0.00	16.34	0	12:01	0	0.589	-0.015
3-32	JUNCTION	0.00	15.96	0	12:00	0	0.589	0.016

3-32-1	JUNCTION	0.00	4.65	0	12:00	0	0.19	-0.438
3-33	JUNCTION	11.63	11.63	0	12:00	0.399	0.399	-0.005
3-38	JUNCTION	0.00	129.77	0	12:02	0	5.77	-0.006
3-39	JUNCTION	0.00	129.71	0	12:02	0	5.77	-0.006
3-4	JUNCTION	17.68	197.13	0	12:01	0.502	7.51	-0.027
3-40	JUNCTION	0.00	129.62	0	12:02	0	5.77	0.015
3-41	JUNCTION	12.43	129.60	0	12:02	0.218	5.77	0.029
3-42	JUNCTION	0.00	125.05	0	12:02	0	5.55	-0.012
3-43	JUNCTION	0.00	124.90	0	12:03	0	5.55	0.009
3-44	JUNCTION	0.00	125.03	0	12:02	0	5.55	-0.030
3-45	JUNCTION	0.00	125.46	0	12:02	0	5.55	0.012
3-46	JUNCTION	0.00	128.38	0	12:02	0	5.55	0.013
3-47	JUNCTION	0.00	43.62	0	12:01	0	2.9	-0.038
3-48	JUNCTION	0.00	42.53	0	12:03	0	2.9	0.210
3-5	JUNCTION	0.00	173.86	0	12:01	0	7.01	0.021
3-51	JUNCTION	40.38	40.38	0	12:03	2.9	2.9	-0.147
3-6	JUNCTION	3.10	173.99	0	12:01	0.0648	7.02	0.127
3-7	JUNCTION	12.38	169.06	0	12:01	0.371	6.94	-0.147
3-9	JUNCTION	0.00	155.94	0	12:01	0	6.58	0.106
5	JUNCTION	0.00	38.41	0	12:00	0	0.949	-0.010
6	JUNCTION	7.24	38.40	0	11:59	0.272	0.949	-0.002
7	JUNCTION	0.00	32.74	0	12:00	0	0.677	0.074
8	JUNCTION	31.13	31.13	0	12:00	0.677	0.677	-0.052
NMH-1	JUNCTION	0.00	85.25	0	12:01	0	2.65	-0.002
NMH-2	JUNCTION	0.00	85.25	0	12:01	0	2.65	0.012
NMH-3	JUNCTION	0.00	85.25	0	12:01	0	2.65	-0.025
002	OUTFALL	0.00	34.53	0	00:00	0	1.12	0.000
003	OUTFALL	0.00	204.30	0	12:01	0	7.86	0.000

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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
2	JUNCTION	0.09	0.304	4.246
2-19	JUNCTION	48.00	0.000	12.710
2-20	JUNCTION	48.00	0.000	12.190

2-21	JUNCTION	48.00	0.000	10.580
3-1	JUNCTION	0.12	11.880	0.000
3-3	JUNCTION	0.08	4.501	0.000
3-38	JUNCTION	0.01	0.013	6.357
3-39	JUNCTION	0.05	0.168	6.982
3-4	JUNCTION	0.08	2.097	1.493
3-40	JUNCTION	0.06	0.223	7.657
3-41	JUNCTION	0.06	0.310	8.280
3-42	JUNCTION	0.06	0.295	10.305
3-43	JUNCTION	0.06	0.296	10.304
3-5	JUNCTION	0.04	1.987	1.723
3-6	JUNCTION	0.23	3.631	0.869
3-7	JUNCTION	0.01	0.022	1.428
3-9	JUNCTION	0.01	0.215	2.565
5	JUNCTION	0.04	0.182	3.318
6	JUNCTION	0.07	0.976	1.224
8	JUNCTION	0.16	1.521	0.779
NMH-1	JUNCTION	0.18	1.765	6.455
NMH-2	JUNCTION	0.21	2.993	6.737
NMH-3	JUNCTION	0.28	3.960	3.920

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Node Flooding Summary  
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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 Poned Depth Feet
3-1	0.01	16.48	0 12:00	0.000	0.000
3-3	0.01	11.04	0 12:01	0.000	0.001

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Outfall Loading Summary  
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Flow            Avg            Max            Total

Outfall Node	Freq Pcnt	Flow CFS	Flow CFS	Volume 10^6 gal
002	93.03	2.09	34.53	1.121
003	99.91	13.51	204.30	7.860
System	96.47	15.60	232.87	8.981

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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
1	CONDUIT	32.74	0 12:00	6.67	0.64	1.00
2	CONDUIT	31.18	0 11:59	4.48	0.58	0.96
3	CONDUIT	38.41	0 12:00	5.43	1.22	1.00
6	CONDUIT	0.00	0 00:00	0.00	0.00	0.05
7	CONDUIT	1.19	0 12:07	0.95	0.01	0.17
8	CONDUIT	5.68	0 12:04	2.47	0.02	0.21
9	CONDUIT	6.56	0 12:10	4.30	0.04	0.22
10	CONDUIT	7.02	0 12:03	3.58	0.06	0.26
11	CONDUIT	6.98	0 12:04	4.21	0.06	0.27
12	CONDUIT	6.98	0 12:06	3.81	0.05	0.25
13	CONDUIT	8.69	0 12:07	4.74	0.05	0.20
14	CONDUIT	8.71	0 12:04	4.31	0.08	0.22
15	CONDUIT	8.45	0 12:04	2.99	0.08	0.22
16	CONDUIT	8.17	0 12:04	2.23	0.12	0.24
17	CONDUIT	8.35	0 12:04	2.65	0.20	0.24
18	CONDUIT	7.57	0 12:04	2.09	0.06	0.26
19	CONDUIT	20.21	0 00:01	3.95	0.21	0.36
20	CONDUIT	34.53	0 00:00	4.90	0.28	0.49
21	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
23	CONDUIT	4.65	0 12:00	3.83	1.21	0.97
24	CONDUIT	4.59	0 12:00	3.92	0.41	0.63
28	CONDUIT	0.70	0 11:59	1.71	0.02	0.14
29	CONDUIT	0.00	0 00:00	0.00	0.00	0.02
30	CONDUIT	11.37	0 12:00	2.18	0.43	0.56
32	CONDUIT	38.40	0 12:00	5.58	0.58	0.94

33	CONDUIT	38.18	0	12:00	4.73	0.27	0.66
38	CONDUIT	1.21	0	11:57	1.78	0.02	0.17
41	CONDUIT	7.12	0	12:04	3.70	0.08	0.27
link20	CONDUIT	27.42	0	11:59	5.28	0.80	0.84
LINK21	CONDUIT	63.92	0	12:01	7.71	1.52	1.00
Link22	CONDUIT	76.14	0	12:00	5.17	0.43	0.77
Link32	CONDUIT	43.62	0	12:01	4.31	0.22	0.77
Link33	CONDUIT	43.63	0	12:03	3.49	0.22	0.91
Link34	CONDUIT	125.46	0	12:02	6.41	0.64	0.98
Link35	CONDUIT	125.03	0	12:02	6.39	0.65	0.98
link36	CONDUIT	124.90	0	12:03	6.37	0.64	0.99
link37	CONDUIT	125.05	0	12:02	6.37	1.03	1.00
Link38	CONDUIT	124.87	0	12:02	6.36	1.00	1.00
Link39	CONDUIT	129.62	0	12:02	6.60	1.09	1.00
Link40	CONDUIT	129.71	0	12:02	6.61	1.08	1.00
Link41	CONDUIT	129.77	0	12:02	6.61	1.08	1.00
43	CONDUIT	133.03	0	12:02	6.78	0.62	1.00
44	CONDUIT	155.94	0	12:01	6.60	0.33	0.98
45	CONDUIT	157.76	0	12:01	6.64	1.14	1.00
46	CONDUIT	171.37	0	12:01	7.21	0.37	1.00
48	CONDUIT	204.30	0	12:01	9.37	1.31	0.86
49	CONDUIT	173.86	0	12:01	7.32	1.38	1.00
50	CONDUIT	180.58	0	12:01	7.60	0.86	1.00
51	CONDUIT	199.86	0	12:01	8.41	0.70	1.00
52	CONDUIT	198.54	0	12:01	8.36	0.74	1.00
LINK26	CONDUIT	25.50	0	11:57	4.60	0.15	0.28
53	CONDUIT	25.44	0	11:57	6.54	0.14	0.24
54	CONDUIT	25.13	0	11:57	2.71	0.09	0.31
Link29	CONDUIT	48.24	0	11:57	4.97	0.28	0.43
Link30	CONDUIT	48.54	0	11:57	4.17	0.28	0.56
55	CONDUIT	45.61	0	11:58	3.61	0.16	0.74
56	CONDUIT	28.53	0	11:58	4.32	0.80	0.77
57	CONDUIT	37.80	0	12:00	5.33	0.26	0.69
59	CONDUIT	16.34	0	12:01	3.17	0.56	0.74
60	CONDUIT	16.68	0	12:01	2.66	0.41	0.71
61	CONDUIT	1.03	0	12:01	0.24	0.02	0.58
68	CONDUIT	42.53	0	12:03	4.65	0.11	0.57
69	CONDUIT	85.25	0	12:01	6.03	0.99	1.00
70	CONDUIT	85.25	0	12:01	6.03	0.98	1.00
71	CONDUIT	85.25	0	12:01	6.03	0.98	1.00
72	CONDUIT	85.25	0	12:01	6.03	0.98	1.00

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Flow Classification Summary  
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Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Up Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
1	1.00	0.18	0.00	0.00	0.48	0.00	0.00	0.34	0.00	0.41
2	1.00	0.00	0.18	0.00	0.82	0.00	0.00	0.00	0.00	0.77
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.47
6	1.00	0.64	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.00	0.00	0.16	0.00	0.84	0.00	0.00	0.00	0.00	0.79
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61
9	1.00	0.00	0.00	0.00	0.11	0.01	0.00	0.88	0.00	0.66
10	1.00	0.00	0.00	0.00	0.86	0.14	0.00	0.00	0.00	0.58
11	1.00	0.00	0.00	0.00	0.84	0.16	0.00	0.00	0.00	0.64
12	1.00	0.00	0.00	0.00	0.45	0.09	0.00	0.46	0.00	0.54
13	1.00	0.00	0.00	0.00	0.04	0.00	0.00	0.96	0.00	0.44
14	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.30
15	1.00	0.00	0.00	0.00	0.08	0.00	0.00	0.92	0.00	0.35
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.03
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
21	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	1.00	0.00	0.00	0.00	0.50	0.00	0.00	0.50	0.00	0.64
24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.68
28	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.06
29	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.32
32	1.00	0.00	0.00	0.00	0.84	0.16	0.00	0.00	0.00	0.57
33	1.00	0.00	0.00	0.00	0.97	0.01	0.00	0.02	0.00	0.67
38	1.00	0.00	0.00	0.00	0.93	0.07	0.00	0.00	0.00	0.64
41	1.00	0.00	0.00	0.00	0.45	0.00	0.00	0.55	0.00	0.36
link20	1.00	0.01	0.00	0.00	0.04	0.00	0.00	0.96	0.00	0.00
LINK21	1.00	0.00	0.00	0.00	0.86	0.00	0.00	0.13	0.00	0.60
Link22	1.00	0.00	0.00	0.00	0.46	0.00	0.00	0.53	0.00	0.64
Link32	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.68
Link33	1.00	0.00	0.02	0.00	0.97	0.00	0.00	0.00	0.00	0.70
Link34	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.71

Link35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.71
link36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.95
link37	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.63
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.63
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.64
43	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.74
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.58
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.04
49	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.69
51	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.74
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.97
LINK26	1.00	0.00	0.09	0.00	0.91	0.00	0.00	0.00	0.00	0.54
53	1.00	0.00	0.00	0.00	0.45	0.55	0.00	0.00	0.00	0.51
54	1.00	0.00	0.21	0.00	0.79	0.00	0.00	0.00	0.00	0.79
Link29	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.62
Link30	1.00	0.00	0.20	0.00	0.80	0.00	0.00	0.00	0.00	0.97
55	1.00	0.00	0.20	0.00	0.79	0.00	0.00	0.00	0.00	0.97
56	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.80
57	1.00	0.03	0.00	0.00	0.04	0.00	0.00	0.93	0.00	0.46
59	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.82
60	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.44
61	1.00	0.00	0.32	0.00	0.68	0.00	0.00	0.00	0.00	1.00
68	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.96
69	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.70
70	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.72
71	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.71
72	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.95

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 Conduit Surcharge Summary  
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Conduit	Hours Full			Hours Above Full		Hours Capacity
	Both Ends	Upstream	Dnstream	Normal Flow	Limited	Limited
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1	0.08	0.15	0.09	0.01	0.01
2	0.01	0.01	0.07	0.01	0.01
3	0.04	0.07	0.04	0.12	0.04
23	0.01	0.09	0.01	0.11	0.01
32	0.01	0.04	0.01	0.01	0.01
LINK21	0.10	0.21	0.10	0.22	0.10
link36	0.01	0.01	0.06	0.01	0.01
link37	0.06	0.06	0.06	0.07	0.04
Link38	0.06	0.06	0.06	0.01	0.03
Link39	0.06	0.06	0.06	0.11	0.05
Link40	0.05	0.06	0.05	0.11	0.05
Link41	0.01	0.05	0.01	0.11	0.01
43	0.01	0.01	0.08	0.01	0.01
44	0.01	0.01	0.01	0.01	0.01
45	0.01	0.01	0.01	0.11	0.01
46	0.01	0.01	0.23	0.01	0.01
48	0.01	0.12	0.01	0.14	0.01
49	0.04	0.04	0.23	0.21	0.01
50	0.03	0.04	0.08	0.01	0.02
51	0.07	0.08	0.07	0.01	0.02
52	0.07	0.07	0.12	0.01	0.01
61	0.01	0.01	0.18	0.01	0.01
69	0.18	0.18	0.18	0.36	0.01
70	0.18	0.18	0.21	0.36	0.01
71	0.21	0.21	0.28	0.36	0.01
72	0.28	0.28	0.51	0.36	0.01

Analysis begun on: Tue Feb 13 12:48:58 2018  
 Analysis ended on: Tue Feb 13 12:49:05 2018  
 Total elapsed time: 00:00:07

Remedial Option 2

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 60

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 23  
 Number of nodes ..... 71  
 Number of links ..... 66  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	1.5-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
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1	105.00	750.00	25.00	2.0000	SCS~Type~II	8
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16
17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-26#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-26
3-30#1	9.17	50000.00	100.00	0.5000	SCS~Type~II	3-30
3-23#1	13.15	50000.00	100.00	0.5000	SCS~Type~II	3-23
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

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Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	
2-17	JUNCTION	735.85	15.20	2500.0	
2-18	JUNCTION	737.67	14.56	2500.0	

2-18-3	JUNCTION	743.25	8.77	2500.0
2-19	JUNCTION	738.55	12.71	2500.0
2-2	JUNCTION	706.68	7.80	2500.0
2-20	JUNCTION	739.68	12.19	2500.0
2-21	JUNCTION	740.00	10.58	2500.0
2-3	JUNCTION	707.67	7.15	2500.0
2-4	JUNCTION	707.77	7.05	2500.0
2-5	JUNCTION	707.85	8.05	2500.0
2-6	JUNCTION	708.71	7.00	2500.0
2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-23	JUNCTION	737.57	11.70	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-26	JUNCTION	739.33	12.67	2500.0
3-28	JUNCTION	739.94	13.46	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-29	JUNCTION	741.05	11.95	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-30	JUNCTION	742.20	11.80	2500.0
3-31	JUNCTION	742.26	11.74	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0

3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
NMH-1	JUNCTION	736.48	11.22	2500.0
NMH-2	JUNCTION	735.39	12.73	2500.0
NMH-3	JUNCTION	734.30	10.88	2500.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

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Link Summary  
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Name	From Node	To Node	Type	Length	%Slope	Roughness
1	8	7	CONDUIT	60.0	2.1005	0.0150
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150
16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150

23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150
24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
link20	3-29	3-28	CONDUIT	39.0	0.1538	0.0150
LINK21	3-28	3-26	CONDUIT	268.0	0.2201	0.0120
Link22	3-26	3-23	CONDUIT	577.0	0.3050	0.0120
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
56	3-30	3-29	CONDUIT	443.0	0.1670	0.0150
57	2-18-3	3-28	CONDUIT	227.0	1.3261	0.0150
59	3-32	3-31	CONDUIT	248.0	0.2581	0.0150
60	3-31	3-30	CONDUIT	27.0	0.2222	0.0150
61	3-25-7	3-26	CONDUIT	690.0	1.1595	0.0150
68	3-51	3-48	CONDUIT	216.6	2.7944	0.0150

69	3-23	NMH-1	CONDUIT	304.0	0.3586	0.0120
70	NMH-1	NMH-2	CONDUIT	300.0	0.3633	0.0120
71	NMH-2	NMH-3	CONDUIT	300.0	0.3633	0.0120
72	NMH-3	3-46	CONDUIT	330.7	0.3629	0.0120

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
1	CIRCULAR	2.50	4.91	0.63	2.50	1	51.52
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86
33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
link20	CIRCULAR	3.50	9.62	0.88	3.50	1	34.20
LINK21	CIRCULAR	3.25	8.30	0.81	3.25	1	41.97
Link22	CIRCULAR	5.25	21.65	1.31	5.25	1	177.48

Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
56	CIRCULAR	3.50	9.62	0.88	3.50	1	35.64
57	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
59	CIRCULAR	3.00	7.07	0.75	3.00	1	29.37
60	CIRCULAR	3.50	9.62	0.88	3.50	1	41.10
61	CIRCULAR	3.00	7.07	0.75	3.00	1	62.24
68	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
69	CIRCULAR	3.00	7.07	0.75	3.00	2	43.27
70	CIRCULAR	3.00	7.07	0.75	3.00	2	43.55
71	CIRCULAR	3.00	7.07	0.75	3.00	2	43.55
72	CIRCULAR	3.00	7.07	0.75	3.00	2	43.53

\*\*\*\*\*  
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.  
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Analysis Options

\*\*\*\*\*

Flow Units ..... CFS

Process Models:

  Rainfall/Runoff ..... YES

  RDII ..... NO

  Snowmelt ..... NO

  Groundwater ..... NO

  Flow Routing ..... YES

  Ponding Allowed ..... YES

  Water Quality ..... NO

Infiltration Method ..... CURVE\_NUMBER

Flow Routing Method ..... DYNWAVE

Starting Date ..... MAY-30-2015 00:00:00

Ending Date ..... JUN-01-2015 00:00:00

Antecedent Dry Days ..... 0.0

Report Time Step ..... 00:02:00

Wet Time Step ..... 00:01:00

Dry Time Step ..... 00:05:00

Routing Time Step ..... 5.00 sec

Variable Time Step ..... YES

Maximum Trials ..... 10

Number of Threads ..... 1

Head Tolerance ..... 0.005000 ft

*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	70.644	1.500
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	28.459	0.604
Surface Runoff .....	36.848	0.782
Final Storage .....	5.342	0.113
Continuity Error (%) .....	-0.007	

*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000

Wet Weather Inflow .....	36.847	12.007
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	36.793	11.990
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.199	0.065
Continuity Error (%) .....	-0.251	

\*\*\*\*\*  
Highest Continuity Errors  
\*\*\*\*\*  
Node 2-2 (1.88%)

\*\*\*\*\*  
Time-Step Critical Elements  
\*\*\*\*\*  
Link link37 (48.67%)

\*\*\*\*\*  
Highest Flow Instability Indexes  
\*\*\*\*\*  
Link Link34 (30)  
Link 46 (29)  
Link 51 (28)  
Link 44 (28)  
Link Link32 (27)

\*\*\*\*\*  
Routing Time Step Summary  
\*\*\*\*\*  
Minimum Time Step : 0.50 sec  
Average Time Step : 3.51 sec  
Maximum Time Step : 5.00 sec  
Percent in Steady State : 0.00  
Average Iterations per Step : 2.45

Percent Not Converging : 1.80

\*\*\*\*\*  
 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
1	1.50	0.00	0.00	0.69	0.39	1.12	41.11	0.263
16	1.50	0.00	0.00	1.15	0.20	0.06	2.10	0.130
17	1.50	0.00	0.00	0.27	1.08	0.20	7.01	0.720
18	1.50	0.00	0.00	0.00	1.50	0.06	2.25	1.000
19	1.50	0.00	0.00	0.75	0.69	0.05	2.30	0.462
20	1.50	0.00	0.00	0.46	0.98	0.95	32.69	0.655
22	1.50	0.00	0.00	0.00	1.50	0.04	1.62	1.000
23	1.50	0.00	0.00	0.59	0.82	0.56	15.58	0.548
24	1.50	0.00	0.00	0.60	0.70	0.02	0.70	0.468
25	1.50	0.00	0.00	0.79	0.39	0.03	1.00	0.261
26	1.50	0.00	0.00	0.71	0.69	0.40	9.67	0.463
27	1.50	0.00	0.00	0.74	0.65	0.29	6.21	0.437
3-51#1	1.50	0.00	0.00	0.76	0.70	4.07	56.12	0.464
28	1.50	0.00	0.00	0.19	1.31	0.08	3.98	0.875
29	1.50	0.00	0.00	0.70	0.79	0.33	9.91	0.530
30	1.50	0.00	0.00	0.33	1.17	0.64	23.39	0.780
31	1.50	0.00	0.00	0.52	0.98	0.48	16.32	0.653
3-26#1	1.50	0.00	0.00	0.00	1.50	0.44	25.25	1.000
3-30#1	1.50	0.00	0.00	0.00	1.50	0.37	21.29	1.000
3-23#1	1.50	0.00	0.00	0.00	1.50	0.54	30.50	1.000
3-20#1	1.50	0.00	0.00	0.00	1.50	0.56	31.93	1.000
3-41#1	1.50	0.00	0.00	0.00	1.50	0.27	15.53	1.000
3-17#1	1.50	0.00	0.00	0.00	1.50	0.44	25.25	1.000

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 Node Depth Summary  
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 Average Maximum Maximum Time of Max Reported

Node	Type	Depth Feet	Depth Feet	HGL Feet	Occurrence days hr:min	Max Depth Feet
2	JUNCTION	0.28	5.87	753.61	0 12:00	5.86
2-1	JUNCTION	2.01	2.38	708.47	0 00:01	2.33
2-10	JUNCTION	0.19	1.05	717.70	0 12:04	1.04
2-11	JUNCTION	0.20	1.19	718.55	0 12:04	1.19
2-13	JUNCTION	0.20	1.20	722.34	0 12:03	1.19
2-14	JUNCTION	0.17	1.00	722.79	0 12:02	0.99
2-15A	JUNCTION	0.16	0.99	724.28	0 12:02	0.98
2-15B	JUNCTION	0.17	1.12	732.41	0 12:01	1.12
2-16	JUNCTION	0.07	0.51	733.54	0 12:02	0.51
2-17	JUNCTION	0.00	0.00	735.85	0 00:00	0.00
2-18	JUNCTION	0.00	0.00	737.67	0 00:00	0.00
2-18-3	JUNCTION	1.61	8.82	752.07	0 11:59	8.80
2-19	JUNCTION	0.00	0.00	738.55	0 00:00	0.00
2-2	JUNCTION	1.43	1.85	708.53	0 12:02	1.82
2-20	JUNCTION	0.00	0.00	739.68	0 00:00	0.00
2-21	JUNCTION	0.00	0.00	740.00	0 00:00	0.00
2-3	JUNCTION	0.47	1.24	708.91	0 12:04	1.23
2-4	JUNCTION	0.40	1.36	709.13	0 12:05	1.36
2-5	JUNCTION	0.34	1.37	709.22	0 12:03	1.35
2-6	JUNCTION	0.21	1.25	709.96	0 12:01	1.23
2-7	JUNCTION	0.20	1.04	710.82	0 12:05	1.04
2-9	JUNCTION	0.20	1.09	713.75	0 12:04	1.07
3-1	JUNCTION	1.68	17.38	725.62	0 11:57	8.84
3-10	JUNCTION	1.04	6.41	734.02	0 12:01	5.51
3-12	JUNCTION	1.12	4.24	733.35	0 11:58	4.24
3-16	JUNCTION	0.33	3.08	733.34	0 11:58	2.91
3-17	JUNCTION	0.32	2.94	733.32	0 11:58	2.75
3-18	JUNCTION	0.08	1.55	733.43	0 12:00	1.54
3-19	JUNCTION	0.22	1.92	734.18	0 11:55	1.91
3-20	JUNCTION	0.21	1.92	734.54	0 11:56	1.91
3-23	JUNCTION	0.61	11.71	749.28	0 11:59	10.99
3-25-10	JUNCTION	0.08	0.65	748.51	0 12:01	0.60
3-25-11	JUNCTION	0.07	0.48	750.55	0 11:59	0.48
3-25-12	JUNCTION	0.00	0.00	750.81	0 00:00	0.00
3-25-7	JUNCTION	0.09	1.15	748.48	0 12:00	0.90
3-26	JUNCTION	0.79	12.67	752.00	0 11:59	9.81
3-28	JUNCTION	0.82	12.17	752.11	0 11:59	11.69
3-28-4	JUNCTION	0.47	8.70	753.72	0 11:59	7.06
3-29	JUNCTION	0.81	11.10	752.15	0 11:59	10.64
3-3	JUNCTION	1.14	10.01	722.11	0 11:57	8.70

3-30	JUNCTION	0.47	10.66	752.86	0	11:59	10.27
3-31	JUNCTION	0.44	10.62	752.88	0	11:59	10.21
3-32	JUNCTION	0.41	9.99	752.89	0	11:59	9.72
3-32-1	JUNCTION	0.26	5.97	752.44	0	12:00	5.96
3-33	JUNCTION	0.37	9.93	752.96	0	11:59	9.64
3-38	JUNCTION	1.03	8.18	737.31	0	11:58	5.20
3-39	JUNCTION	1.05	9.14	738.99	0	12:02	6.16
3-4	JUNCTION	1.14	9.09	725.62	0	11:57	7.94
3-40	JUNCTION	1.05	8.40	738.52	0	12:02	6.51
3-41	JUNCTION	1.06	8.39	738.80	0	12:00	6.90
3-42	JUNCTION	1.05	8.53	739.05	0	12:00	6.99
3-43	JUNCTION	1.05	8.61	739.20	0	12:00	7.06
3-44	JUNCTION	1.02	8.43	739.61	0	12:00	6.91
3-45	JUNCTION	1.02	8.31	739.99	0	12:00	6.78
3-46	JUNCTION	1.01	8.53	741.63	0	12:00	6.42
3-47	JUNCTION	0.79	8.22	742.07	0	12:00	5.76
3-48	JUNCTION	0.76	7.77	742.34	0	12:00	5.25
3-5	JUNCTION	1.11	9.21	726.01	0	11:58	8.08
3-51	JUNCTION	0.71	2.92	743.54	0	12:03	2.91
3-6	JUNCTION	1.73	10.45	726.78	0	12:01	10.29
3-7	JUNCTION	1.07	6.97	729.85	0	11:57	5.93
3-9	JUNCTION	1.09	8.29	731.39	0	12:02	6.24
5	JUNCTION	0.51	6.50	754.09	0	11:59	5.15
6	JUNCTION	0.53	5.41	753.63	0	12:00	5.31
7	JUNCTION	0.43	4.74	754.92	0	11:59	4.57
8	JUNCTION	0.83	5.25	756.29	0	12:03	4.50
NMH-1	JUNCTION	0.61	11.22	747.70	0	11:57	9.85
NMH-2	JUNCTION	0.62	10.30	745.69	0	11:57	8.75
NMH-3	JUNCTION	0.63	9.44	743.74	0	12:00	7.64
002	OUTFALL	2.51	2.51	708.10	0	00:00	2.51
003	OUTFALL	2.54	4.58	711.68	0	12:01	4.56

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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	Flow Balance Error Percent
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2	JUNCTION	6.21	6.21	0	12:00	0.285	0.285	0.199	
2-1	JUNCTION	32.69	40.76	0	12:03	0.953	1.44	0.746	
2-10	JUNCTION	0.00	10.27	0	12:03	0	0.314	-0.180	
2-11	JUNCTION	0.00	10.41	0	12:03	0	0.314	0.023	
2-13	JUNCTION	2.25	10.51	0	12:02	0.057	0.314	0.060	
2-14	JUNCTION	0.00	8.56	0	12:02	0	0.257	-0.078	
2-15A	JUNCTION	0.00	11.06	0	12:03	0	0.257	0.026	
2-15B	JUNCTION	7.01	8.83	0	12:00	0.199	0.257	-0.050	
2-16	JUNCTION	2.10	2.10	0	12:00	0.0576	0.0576	0.047	
2-17	JUNCTION	0.00	0.00	0	00:00	0	0	0.000	gal
2-18	JUNCTION	0.00	0.00	0	00:00	0	0	0.000	gal
2-18-3	JUNCTION	0.00	54.81	0	12:02	0	1.53	-0.013	
2-19	JUNCTION	0.00	0.00	0	00:00	0	0	0.000	gal
2-2	JUNCTION	2.30	20.21	0	00:01	0.0523	0.446	1.919	
2-20	JUNCTION	0.00	0.00	0	00:00	0	0	0.000	gal
2-21	JUNCTION	0.00	0.00	0	00:00	0	0	0.000	gal
2-3	JUNCTION	0.00	11.36	0	12:04	0	0.361	0.611	
2-4	JUNCTION	0.00	11.67	0	12:05	0	0.357	0.156	
2-5	JUNCTION	0.00	12.48	0	12:05	0	0.353	-0.638	
2-6	JUNCTION	1.62	10.86	0	12:05	0.0371	0.352	0.029	
2-7	JUNCTION	0.00	9.93	0	12:04	0	0.315	-0.089	
2-9	JUNCTION	0.00	10.12	0	12:04	0	0.314	-0.274	
3-1	JUNCTION	9.91	271.98	0	12:01	0.33	10.7	0.084	
3-10	JUNCTION	0.00	245.44	0	12:00	0	9.12	-0.072	
3-12	JUNCTION	0.00	55.24	0	11:56	0	1	0.207	
3-16	JUNCTION	0.00	59.15	0	11:57	0	1	-0.076	
3-17	JUNCTION	25.25	57.36	0	11:57	0.443	1	0.068	
3-18	JUNCTION	0.00	32.26	0	11:55	0	0.561	-0.068	
3-19	JUNCTION	0.00	32.55	0	11:56	0	0.561	-0.028	
3-20	JUNCTION	31.93	31.93	0	11:57	0.561	0.561	0.094	
3-23	JUNCTION	30.50	122.42	0	12:00	0.536	3.77	-0.098	
3-25-10	JUNCTION	0.70	1.53	0	11:57	0.0164	0.0483	-0.022	
3-25-11	JUNCTION	1.00	1.00	0	11:57	0.0319	0.0319	-0.008	
3-25-12	JUNCTION	0.00	0.00	0	00:00	0	0	0.000	gal
3-25-7	JUNCTION	0.00	10.49	0	12:00	0	0.0519	-0.015	
3-26	JUNCTION	25.25	106.60	0	11:59	0.443	3.24	-0.074	
3-28	JUNCTION	0.00	83.59	0	12:00	0	2.75	0.055	
3-28-4	JUNCTION	0.00	54.70	0	12:02	0	1.52	-0.100	
3-29	JUNCTION	0.00	44.05	0	11:59	0	1.22	-0.237	
3-3	JUNCTION	0.00	263.87	0	12:01	0	10.3	0.058	
3-30	JUNCTION	21.29	42.24	0	11:59	0.374	1.22	0.021	
3-31	JUNCTION	0.00	22.42	0	12:00	0	0.843	-0.023	
3-32	JUNCTION	0.00	22.36	0	12:00	0	0.843	-0.024	

3-32-1	JUNCTION	0.00	7.71	0	12:03	0	0.284	-0.094
3-33	JUNCTION	15.58	15.58	0	12:00	0.558	0.558	0.006
3-38	JUNCTION	0.00	191.94	0	12:00	0	8.12	0.011
3-39	JUNCTION	0.00	191.55	0	12:00	0	8.11	-0.016
3-4	JUNCTION	23.39	263.90	0	12:01	0.642	10.3	-0.053
3-40	JUNCTION	0.00	190.88	0	12:00	0	8.12	0.015
3-41	JUNCTION	15.53	189.41	0	12:00	0.273	8.12	0.042
3-42	JUNCTION	0.00	175.75	0	12:00	0	7.84	-0.018
3-43	JUNCTION	0.00	175.64	0	12:00	0	7.85	0.014
3-44	JUNCTION	0.00	176.30	0	12:00	0	7.84	-0.056
3-45	JUNCTION	0.00	176.55	0	12:00	0	7.84	-0.007
3-46	JUNCTION	0.00	176.14	0	12:00	0	7.84	0.013
3-47	JUNCTION	0.00	61.29	0	12:03	0	4.06	-0.045
3-48	JUNCTION	0.00	56.07	0	12:03	0	4.07	0.232
3-5	JUNCTION	0.00	242.50	0	12:01	0	9.7	0.082
3-51	JUNCTION	56.12	56.12	0	12:03	4.07	4.07	-0.111
3-6	JUNCTION	3.98	267.87	0	12:00	0.082	9.7	0.045
3-7	JUNCTION	16.32	267.97	0	12:00	0.484	9.61	-0.125
3-9	JUNCTION	0.00	260.73	0	12:00	0	9.12	0.015
5	JUNCTION	0.00	54.70	0	12:02	0	1.52	-0.018
6	JUNCTION	9.67	50.82	0	12:00	0.399	1.52	0.003
7	JUNCTION	0.00	41.13	0	12:00	0	1.13	0.079
8	JUNCTION	41.11	41.11	0	12:00	1.12	1.12	-0.046
NMH-1	JUNCTION	0.00	122.40	0	12:00	0	3.78	-0.004
NMH-2	JUNCTION	0.00	122.38	0	12:00	0	3.78	-0.005
NMH-3	JUNCTION	0.00	122.35	0	12:00	0	3.78	-0.012
002	OUTFALL	0.00	41.36	0	12:03	0	1.45	0.000
003	OUTFALL	0.00	271.98	0	12:01	0	10.8	0.000

\*\*\*\*\*  
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
2	JUNCTION	0.18	4.616	0.000
2-18-3	JUNCTION	0.05	3.663	0.000
2-19	JUNCTION	48.00	0.000	12.710

2-20	JUNCTION	48.00	0.000	12.190
2-21	JUNCTION	48.00	0.000	10.580
3-1	JUNCTION	0.26	11.880	0.000
3-10	JUNCTION	0.10	0.913	8.227
3-23	JUNCTION	0.14	6.331	0.000
3-26	JUNCTION	0.07	7.294	0.000
3-28	JUNCTION	0.11	6.710	1.290
3-28-4	JUNCTION	0.05	4.700	0.000
3-29	JUNCTION	0.14	7.189	0.851
3-3	JUNCTION	0.22	4.510	0.000
3-30	JUNCTION	0.11	7.164	1.136
3-31	JUNCTION	0.10	7.116	1.124
3-32	JUNCTION	0.08	6.492	0.758
3-32-1	JUNCTION	0.07	4.472	0.000
3-33	JUNCTION	0.08	6.432	1.868
3-38	JUNCTION	0.21	3.180	3.190
3-39	JUNCTION	0.24	4.136	3.014
3-4	JUNCTION	0.23	3.593	0.000
3-40	JUNCTION	0.25	3.398	4.482
3-41	JUNCTION	0.25	3.388	5.202
3-42	JUNCTION	0.25	3.533	7.067
3-43	JUNCTION	0.25	3.607	6.993
3-44	JUNCTION	0.20	3.432	6.388
3-45	JUNCTION	0.20	3.314	5.006
3-46	JUNCTION	0.19	3.534	2.366
3-47	JUNCTION	0.06	3.223	0.977
3-48	JUNCTION	0.01	2.767	0.513
3-5	JUNCTION	0.21	3.714	0.000
3-6	JUNCTION	0.38	4.950	0.000
3-7	JUNCTION	0.15	1.468	0.000
3-9	JUNCTION	0.19	2.787	0.000
5	JUNCTION	0.16	3.500	0.000
6	JUNCTION	0.17	2.413	0.000
7	JUNCTION	0.10	1.741	0.709
8	JUNCTION	0.25	2.301	0.000
NMH-1	JUNCTION	0.31	8.220	0.000
NMH-2	JUNCTION	0.34	7.298	2.432
NMH-3	JUNCTION	0.42	6.444	1.436

\*\*\*\*\*  
Node Flooding Summary  
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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 Poned Depth Feet
2	0.07	2.40	0 12:00	0.001	0.066
2-18-3	0.01	17.43	0 11:59	0.001	0.053
3-1	0.01	32.63	0 11:57	0.000	0.000
3-23	0.01	22.44	0 11:57	0.001	0.011
3-26	0.01	23.63	0 11:59	0.000	0.004
3-3	0.01	22.06	0 11:57	0.001	0.010
3-32-1	0.02	2.12	0 12:00	0.000	0.022
3-4	0.01	9.34	0 11:57	0.000	0.003
3-5	0.01	16.41	0 11:58	0.000	0.004
3-6	0.09	28.34	0 12:00	0.016	0.450
3-7	0.02	21.94	0 11:57	0.003	0.018
3-9	0.01	26.59	0 12:02	0.001	0.007
5	0.01	2.76	0 11:59	0.000	0.000
6	0.05	14.45	0 12:00	0.004	0.213
8	0.01	4.80	0 12:03	0.000	0.001
NMH-1	0.01	3.01	0 11:58	0.000	0.000

\*\*\*\*\*  
 Outfall Loading Summary  
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Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
002	94.78	2.48	41.36	1.452
003	99.91	16.94	271.98	10.753
System	97.35	19.42	311.81	12.205

\*\*\*\*\*  
 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
1	CONDUIT	41.13	0 12:00	8.38	0.80	1.00
2	CONDUIT	41.16	0 12:00	5.82	0.77	1.00
3	CONDUIT	54.70	0 12:02	7.74	1.74	1.00
6	CONDUIT	0.00	0 00:00	0.00	0.00	0.05
7	CONDUIT	1.96	0 12:02	1.00	0.02	0.18
8	CONDUIT	11.06	0 12:03	3.96	0.05	0.23
9	CONDUIT	8.56	0 12:02	4.43	0.05	0.25
10	CONDUIT	10.41	0 12:03	3.98	0.09	0.34
11	CONDUIT	10.27	0 12:03	4.23	0.09	0.32
12	CONDUIT	8.54	0 12:02	3.83	0.06	0.31
13	CONDUIT	10.12	0 12:04	5.04	0.06	0.22
14	CONDUIT	9.87	0 12:05	4.50	0.09	0.23
15	CONDUIT	12.48	0 12:05	3.60	0.11	0.23
16	CONDUIT	11.67	0 12:05	2.71	0.16	0.27
17	CONDUIT	11.36	0 12:04	3.00	0.27	0.25
18	CONDUIT	13.11	0 12:04	2.81	0.10	0.30
19	CONDUIT	20.21	0 00:01	3.95	0.21	0.40
20	CONDUIT	41.36	0 12:03	4.90	0.33	0.49
21	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
23	CONDUIT	7.71	0 12:03	6.29	2.02	1.00
24	CONDUIT	7.72	0 12:03	4.37	0.69	1.00
28	CONDUIT	0.87	0 11:59	1.81	0.03	0.15
29	CONDUIT	0.00	0 00:00	0.00	0.00	0.03
30	CONDUIT	15.84	0 11:59	2.16	0.60	1.00
32	CONDUIT	54.70	0 12:02	7.74	0.83	1.00
33	CONDUIT	54.81	0 12:02	4.79	0.38	1.00
38	CONDUIT	1.70	0 12:01	1.77	0.02	0.30
41	CONDUIT	9.93	0 12:04	4.14	0.11	0.30
link20	CONDUIT	43.98	0 11:59	5.17	1.29	1.00
LINK21	CONDUIT	83.81	0 12:00	10.10	2.00	1.00
Link22	CONDUIT	100.19	0 12:01	5.16	0.56	1.00
Link32	CONDUIT	61.29	0 12:03	4.34	0.32	1.00
Link33	CONDUIT	62.93	0 12:04	3.50	0.32	1.00
Link34	CONDUIT	176.55	0 12:00	8.99	0.90	1.00
Link35	CONDUIT	176.30	0 12:00	8.98	0.91	1.00
link36	CONDUIT	175.64	0 12:00	8.95	0.90	1.00

link37	CONDUIT	175.75	0	12:00	8.95	1.44	1.00
Link38	CONDUIT	178.24	0	12:00	9.08	1.43	1.00
Link39	CONDUIT	190.88	0	12:00	9.72	1.60	1.00
Link40	CONDUIT	191.55	0	12:00	9.76	1.59	1.00
Link41	CONDUIT	191.94	0	12:00	9.78	1.60	1.00
43	CONDUIT	192.77	0	12:00	9.82	0.90	1.00
44	CONDUIT	260.73	0	12:00	10.97	0.55	1.00
45	CONDUIT	251.94	0	12:00	10.60	1.82	1.00
46	CONDUIT	264.19	0	12:00	11.12	0.58	1.00
48	CONDUIT	271.98	0	12:01	11.93	1.75	0.92
49	CONDUIT	242.50	0	12:01	10.21	1.93	1.00
50	CONDUIT	242.51	0	12:01	10.21	1.16	1.00
51	CONDUIT	263.87	0	12:01	11.11	0.92	1.00
52	CONDUIT	263.87	0	12:01	11.11	0.99	1.00
LINK26	CONDUIT	32.55	0	11:56	4.92	0.19	0.35
53	CONDUIT	32.26	0	11:55	6.37	0.18	0.31
54	CONDUIT	32.50	0	11:57	2.94	0.12	0.39
Link29	CONDUIT	59.15	0	11:57	5.05	0.34	0.55
Link30	CONDUIT	55.24	0	11:56	4.33	0.31	0.65
55	CONDUIT	54.44	0	11:58	3.64	0.19	0.81
56	CONDUIT	44.05	0	11:59	4.58	1.24	1.00
57	CONDUIT	54.87	0	12:02	5.33	0.38	1.00
59	CONDUIT	22.42	0	12:00	3.21	0.76	1.00
60	CONDUIT	23.79	0	11:59	2.66	0.58	1.00
61	CONDUIT	9.02	0	12:00	1.87	0.14	0.69
68	CONDUIT	56.07	0	12:03	4.87	0.15	0.79
69	CONDUIT	122.40	0	12:00	8.66	1.41	1.00
70	CONDUIT	122.38	0	12:00	8.66	1.40	1.00
71	CONDUIT	122.35	0	12:00	8.65	1.40	1.00
72	CONDUIT	122.31	0	12:00	8.65	1.40	1.00

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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	Norm Ltd	Inlet Ctrl
1	1.00	0.14	0.00	0.00	0.69	0.00	0.00	0.17	0.00	0.60
2	1.00	0.00	0.14	0.00	0.86	0.00	0.00	0.00	0.00	0.78

3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.57
6	1.00	0.57	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.00	0.00	0.12	0.00	0.87	0.00	0.00	0.00	0.00	0.81
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
9	1.00	0.00	0.00	0.00	0.11	0.02	0.00	0.87	0.00	0.67
10	1.00	0.00	0.00	0.00	0.89	0.11	0.00	0.00	0.00	0.59
11	1.00	0.00	0.00	0.00	0.86	0.13	0.00	0.00	0.00	0.65
12	1.00	0.00	0.00	0.00	0.53	0.10	0.00	0.37	0.00	0.56
13	1.00	0.00	0.00	0.00	0.03	0.01	0.00	0.96	0.00	0.47
14	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.32
15	1.00	0.00	0.00	0.00	0.08	0.00	0.00	0.92	0.00	0.31
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.04
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
21	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	1.00	0.00	0.00	0.00	0.49	0.00	0.00	0.51	0.00	0.67
24	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.00	0.70
28	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.29
29	1.00	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.32
32	1.00	0.00	0.00	0.00	0.89	0.10	0.00	0.00	0.00	0.73
33	1.00	0.00	0.00	0.00	0.97	0.01	0.00	0.02	0.00	0.78
38	1.00	0.00	0.00	0.00	0.96	0.04	0.00	0.00	0.00	0.68
41	1.00	0.00	0.00	0.00	0.53	0.00	0.00	0.47	0.00	0.40
link20	1.00	0.00	0.00	0.00	0.04	0.00	0.00	0.96	0.00	0.00
LINK21	1.00	0.00	0.00	0.00	0.90	0.00	0.00	0.09	0.00	0.62
Link22	1.00	0.00	0.00	0.00	0.48	0.00	0.00	0.51	0.00	0.70
Link32	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.69
Link33	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.75
Link34	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.72
Link35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.71
link36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.92
link37	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.57
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.60
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.60
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.63
43	1.00	0.00	0.00	0.00	0.98	0.01	0.00	0.00	0.00	0.75
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.56
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.99

48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.07
49	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.69
51	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.75
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.94
LINK26	1.00	0.00	0.08	0.00	0.92	0.00	0.00	0.00	0.00	0.58
53	1.00	0.00	0.00	0.00	0.43	0.57	0.00	0.00	0.00	0.54
54	1.00	0.00	0.18	0.00	0.82	0.00	0.00	0.00	0.00	0.78
Link29	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.62
Link30	1.00	0.00	0.18	0.00	0.82	0.00	0.00	0.00	0.00	0.96
55	1.00	0.00	0.18	0.00	0.82	0.00	0.00	0.00	0.00	0.97
56	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81
57	1.00	0.02	0.00	0.00	0.04	0.00	0.00	0.93	0.00	0.61
59	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.80
60	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.41
61	1.00	0.00	0.28	0.00	0.72	0.00	0.00	0.00	0.00	1.00
68	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.96
69	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.73
70	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.75
71	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.75
72	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.92

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 Conduit Surcharge Summary  
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Conduit	Hours Full			Hours	
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
1	0.17	0.25	0.19	0.01	0.01
2	0.10	0.10	0.17	0.01	0.01
3	0.15	0.17	0.15	0.21	0.15
23	0.12	0.18	0.12	0.18	0.10
24	0.07	0.07	0.09	0.01	0.01
30	0.08	0.08	0.08	0.01	0.01
32	0.07	0.16	0.07	0.01	0.01
33	0.05	0.05	0.05	0.01	0.01
link20	0.14	0.14	0.14	0.03	0.03
LINK21	0.23	0.31	0.23	0.32	0.23
Link22	0.07	0.07	0.14	0.01	0.01

Link32	0.01	0.01	0.06	0.01	0.01
Link33	0.06	0.06	0.19	0.01	0.01
Link34	0.19	0.19	0.20	0.01	0.01
Link35	0.19	0.20	0.20	0.01	0.01
link36	0.20	0.20	0.25	0.01	0.01
link37	0.25	0.25	0.25	0.24	0.21
Link38	0.25	0.25	0.25	0.23	0.21
Link39	0.25	0.25	0.25	0.27	0.23
Link40	0.24	0.25	0.24	0.27	0.22
Link41	0.20	0.24	0.20	0.27	0.20
43	0.20	0.21	0.24	0.01	0.01
44	0.08	0.08	0.19	0.01	0.01
45	0.12	0.19	0.12	0.26	0.10
46	0.12	0.12	0.38	0.01	0.01
48	0.01	0.26	0.01	0.29	0.01
49	0.20	0.20	0.38	0.36	0.01
50	0.20	0.20	0.22	0.09	0.13
51	0.21	0.22	0.21	0.01	0.04
52	0.21	0.21	0.26	0.01	0.03
55	0.01	0.01	0.08	0.01	0.01
56	0.11	0.11	0.14	0.03	0.02
57	0.05	0.05	0.11	0.01	0.01
59	0.11	0.11	0.14	0.01	0.01
60	0.10	0.10	0.11	0.01	0.01
61	0.01	0.01	0.29	0.01	0.01
68	0.01	0.01	0.01	0.01	0.01
69	0.30	0.31	0.31	0.47	0.18
70	0.31	0.31	0.34	0.47	0.18
71	0.34	0.34	0.42	0.47	0.18
72	0.42	0.42	0.71	0.48	0.18

Analysis begun on: Tue Feb 13 12:52:27 2018  
 Analysis ended on: Tue Feb 13 12:52:36 2018  
 Total elapsed time: 00:00:09

Remedial Option 2

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 60

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 23  
 Number of nodes ..... 71  
 Number of links ..... 66  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	4.6-inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
------	------	-------	---------	--------	-----------	--------

1	105.00	750.00	25.00	2.0000	SCS~Type~II	8
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16
17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-26#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-26
3-30#1	9.17	50000.00	100.00	0.5000	SCS~Type~II	3-30
3-23#1	13.15	50000.00	100.00	0.5000	SCS~Type~II	3-23
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

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Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	
2-17	JUNCTION	735.85	15.20	2500.0	
2-18	JUNCTION	737.67	14.56	2500.0	

2-18-3	JUNCTION	743.25	8.77	2500.0
2-19	JUNCTION	738.55	12.71	2500.0
2-2	JUNCTION	706.68	7.80	2500.0
2-20	JUNCTION	739.68	12.19	2500.0
2-21	JUNCTION	740.00	10.58	2500.0
2-3	JUNCTION	707.67	7.15	2500.0
2-4	JUNCTION	707.77	7.05	2500.0
2-5	JUNCTION	707.85	8.05	2500.0
2-6	JUNCTION	708.71	7.00	2500.0
2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-23	JUNCTION	737.57	11.70	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-26	JUNCTION	739.33	12.67	2500.0
3-28	JUNCTION	739.94	13.46	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-29	JUNCTION	741.05	11.95	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-30	JUNCTION	742.20	11.80	2500.0
3-31	JUNCTION	742.26	11.74	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0

3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
NMH-1	JUNCTION	736.48	11.22	2500.0
NMH-2	JUNCTION	735.39	12.73	2500.0
NMH-3	JUNCTION	734.30	10.88	2500.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
1	8	7	CONDUIT	60.0	2.1005	0.0150
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150
16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150

23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150
24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
link20	3-29	3-28	CONDUIT	39.0	0.1538	0.0150
LINK21	3-28	3-26	CONDUIT	268.0	0.2201	0.0120
Link22	3-26	3-23	CONDUIT	577.0	0.3050	0.0120
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
56	3-30	3-29	CONDUIT	443.0	0.1670	0.0150
57	2-18-3	3-28	CONDUIT	227.0	1.3261	0.0150
59	3-32	3-31	CONDUIT	248.0	0.2581	0.0150
60	3-31	3-30	CONDUIT	27.0	0.2222	0.0150
61	3-25-7	3-26	CONDUIT	690.0	1.1595	0.0150
68	3-51	3-48	CONDUIT	216.6	2.7944	0.0150

69	3-23	NMH-1	CONDUIT	304.0	0.3586	0.0120
70	NMH-1	NMH-2	CONDUIT	300.0	0.3633	0.0120
71	NMH-2	NMH-3	CONDUIT	300.0	0.3633	0.0120
72	NMH-3	3-46	CONDUIT	330.7	0.3629	0.0120

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
1	CIRCULAR	2.50	4.91	0.63	2.50	1	51.52
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86
33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
link20	CIRCULAR	3.50	9.62	0.88	3.50	1	34.20
LINK21	CIRCULAR	3.25	8.30	0.81	3.25	1	41.97
Link22	CIRCULAR	5.25	21.65	1.31	5.25	1	177.48

Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
56	CIRCULAR	3.50	9.62	0.88	3.50	1	35.64
57	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
59	CIRCULAR	3.00	7.07	0.75	3.00	1	29.37
60	CIRCULAR	3.50	9.62	0.88	3.50	1	41.10
61	CIRCULAR	3.00	7.07	0.75	3.00	1	62.24
68	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
69	CIRCULAR	3.00	7.07	0.75	3.00	2	43.27
70	CIRCULAR	3.00	7.07	0.75	3.00	2	43.55
71	CIRCULAR	3.00	7.07	0.75	3.00	2	43.55
72	CIRCULAR	3.00	7.07	0.75	3.00	2	43.53

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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.  
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Analysis Options

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Flow Units ..... CFS

Process Models:

  Rainfall/Runoff ..... YES

  RDII ..... NO

  Snowmelt ..... NO

  Groundwater ..... NO

  Flow Routing ..... YES

  Ponding Allowed ..... YES

  Water Quality ..... NO

Infiltration Method ..... CURVE\_NUMBER

Flow Routing Method ..... DYNWAVE

Starting Date ..... MAY-30-2015 00:00:00

Ending Date ..... JUN-01-2015 00:00:00

Antecedent Dry Days ..... 0.0

Report Time Step ..... 00:02:00

Wet Time Step ..... 00:01:00

Dry Time Step ..... 00:05:00

Routing Time Step ..... 5.00 sec

Variable Time Step ..... YES

Maximum Trials ..... 10

Number of Threads ..... 1

Head Tolerance ..... 0.005000 ft

*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	216.641	4.600
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	45.913	0.975
Surface Runoff .....	164.699	3.497
Final Storage .....	6.047	0.128
Continuity Error (%) .....	-0.008	

*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000

Wet Weather Inflow .....	164.704	53.671
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	165.947	54.076
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.207	0.067
Continuity Error (%) .....	-0.849	

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Time-Step Critical Elements  
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Link link37 (65.67%)  
Link 12 (2.35%)  
Link Link29 (1.91%)

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Highest Flow Instability Indexes  
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Link 44 (34)  
Link Link32 (32)  
Link 33 (32)  
Link 68 (30)  
Link 46 (29)

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Routing Time Step Summary  
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Minimum Time Step	:	0.50 sec
Average Time Step	:	2.58 sec
Maximum Time Step	:	5.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	2.61
Percent Not Converging	:	4.34

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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
1	4.60	0.00	0.00	1.03	3.13	8.91	187.56	0.679
16	4.60	0.00	0.00	2.18	2.03	0.60	8.96	0.442
17	4.60	0.00	0.00	0.51	3.95	0.73	29.45	0.858
18	4.60	0.00	0.00	0.00	4.60	0.17	8.11	1.000
19	4.60	0.00	0.00	1.45	3.09	0.23	10.12	0.672
20	4.60	0.00	0.00	0.68	3.85	3.73	144.09	0.836
22	4.60	0.00	0.00	0.00	4.60	0.11	5.52	1.000
23	4.60	0.00	0.00	0.87	3.62	2.46	71.90	0.787
24	4.60	0.00	0.00	0.89	3.50	0.08	4.90	0.761
25	4.60	0.00	0.00	1.17	3.09	0.25	12.79	0.672
26	4.60	0.00	0.00	1.05	3.43	1.97	48.09	0.746
27	4.60	0.00	0.00	1.10	3.37	1.47	31.00	0.734
3-51#1	4.60	0.00	0.00	1.27	3.28	19.18	319.13	0.714
28	4.60	0.00	0.00	0.32	4.28	0.27	14.25	0.930
29	4.60	0.00	0.00	1.22	3.38	1.40	50.00	0.734
30	4.60	0.00	0.00	0.57	4.03	2.21	93.93	0.876
31	4.60	0.00	0.00	0.90	3.70	1.83	67.98	0.804
3-26#1	4.60	0.00	0.00	0.00	4.60	1.36	77.47	1.000
3-30#1	4.60	0.00	0.00	0.00	4.60	1.15	65.30	1.000
3-23#1	4.60	0.00	0.00	0.00	4.60	1.64	93.63	1.000
3-20#1	4.60	0.00	0.00	0.00	4.60	1.72	98.05	1.000
3-41#1	4.60	0.00	0.00	0.00	4.60	0.84	47.64	1.000
3-17#1	4.60	0.00	0.00	0.00	4.60	1.36	77.47	1.000

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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	Reported Max Depth Feet
2	JUNCTION	2.16	20.25	767.99	0 13:16	20.25

2-1	JUNCTION	2.08	6.83	712.92	0	12:00	6.72
2-10	JUNCTION	0.44	2.83	719.48	0	12:02	2.83
2-11	JUNCTION	0.47	3.05	720.41	0	12:01	3.05
2-13	JUNCTION	0.47	3.10	724.24	0	12:01	3.05
2-14	JUNCTION	0.43	2.72	724.51	0	12:01	2.68
2-15A	JUNCTION	0.41	2.70	725.99	0	12:01	2.65
2-15B	JUNCTION	0.39	2.22	733.51	0	12:00	2.21
2-16	JUNCTION	0.29	1.11	734.14	0	11:59	1.10
2-17	JUNCTION	0.00	0.00	735.85	0	00:00	0.00
2-18	JUNCTION	0.00	0.00	737.67	0	00:00	0.00
2-18-3	JUNCTION	3.05	18.63	761.88	0	13:03	18.63
2-19	JUNCTION	0.00	0.00	738.55	0	00:00	0.00
2-2	JUNCTION	1.49	6.51	713.19	0	12:00	6.24
2-20	JUNCTION	0.00	0.00	739.68	0	00:00	0.00
2-21	JUNCTION	0.00	0.00	740.00	0	00:00	0.00
2-3	JUNCTION	0.57	5.85	713.52	0	12:00	5.40
2-4	JUNCTION	0.57	5.86	713.63	0	12:00	5.38
2-5	JUNCTION	0.53	5.84	713.69	0	12:00	5.34
2-6	JUNCTION	0.46	5.17	713.88	0	12:00	4.59
2-7	JUNCTION	0.45	4.13	713.91	0	12:00	3.54
2-9	JUNCTION	0.47	3.04	715.70	0	12:02	3.02
3-1	JUNCTION	2.72	14.22	722.46	0	11:42	13.01
3-10	JUNCTION	2.25	14.64	742.25	0	14:02	13.24
3-12	JUNCTION	1.75	11.80	740.91	0	12:02	11.80
3-16	JUNCTION	0.91	10.84	741.10	0	12:00	10.78
3-17	JUNCTION	0.90	10.75	741.13	0	12:00	10.71
3-18	JUNCTION	0.47	9.33	741.21	0	12:00	9.28
3-19	JUNCTION	0.61	8.97	741.23	0	12:00	8.95
3-20	JUNCTION	0.58	9.39	742.01	0	11:53	8.68
3-23	JUNCTION	2.22	20.21	757.78	0	12:57	20.21
3-25-10	JUNCTION	0.66	10.46	758.32	0	12:59	10.46
3-25-11	JUNCTION	0.51	8.25	758.32	0	12:59	8.25
3-25-12	JUNCTION	0.47	7.52	758.33	0	12:59	7.52
3-25-7	JUNCTION	0.70	10.99	758.32	0	12:59	10.99
3-26	JUNCTION	2.34	18.97	758.30	0	12:59	18.97
3-28	JUNCTION	2.66	21.20	761.14	0	13:05	21.20
3-28-4	JUNCTION	1.86	17.01	762.03	0	13:02	17.01
3-29	JUNCTION	2.23	20.12	761.17	0	13:05	20.12
3-3	JUNCTION	2.51	15.25	727.35	0	12:07	15.24
3-30	JUNCTION	1.89	19.26	761.46	0	13:08	19.26
3-31	JUNCTION	1.86	19.21	761.47	0	13:08	19.21
3-32	JUNCTION	1.79	18.87	761.77	0	13:09	18.87
3-32-1	JUNCTION	1.52	16.13	762.60	0	13:18	16.13

3-33	JUNCTION	1.74	18.77	761.80	0	13:09	18.77
3-38	JUNCTION	2.28	13.48	742.61	0	12:21	13.48
3-39	JUNCTION	2.45	16.07	745.92	0	12:26	16.07
3-4	JUNCTION	2.54	16.93	733.46	0	12:06	16.93
3-40	JUNCTION	2.51	17.05	747.17	0	12:27	17.05
3-41	JUNCTION	2.59	18.13	748.54	0	12:27	18.13
3-42	JUNCTION	2.59	18.48	749.00	0	12:27	18.48
3-43	JUNCTION	2.60	18.72	749.31	0	12:27	18.72
3-44	JUNCTION	2.59	19.15	750.33	0	12:26	19.14
3-45	JUNCTION	2.59	19.52	751.20	0	12:26	19.52
3-46	JUNCTION	2.62	20.56	753.66	0	12:22	20.56
3-47	JUNCTION	2.18	20.57	754.42	0	12:19	20.57
3-48	JUNCTION	2.08	20.66	755.23	0	12:16	20.66
3-5	JUNCTION	2.52	17.17	733.97	0	12:06	17.17
3-51	JUNCTION	1.69	16.87	757.49	0	12:09	16.87
3-6	JUNCTION	3.38	20.10	736.43	0	12:05	20.10
3-7	JUNCTION	2.42	16.09	738.97	0	12:04	16.06
3-9	JUNCTION	2.48	16.56	739.66	0	12:04	16.55
5	JUNCTION	1.95	17.73	765.32	0	12:45	17.73
6	JUNCTION	2.15	21.30	769.52	0	12:31	21.30
7	JUNCTION	2.06	22.54	772.72	0	12:23	22.54
8	JUNCTION	2.56	24.55	775.59	0	12:10	24.55
NMH-1	JUNCTION	2.16	19.99	756.47	0	12:44	19.99
NMH-2	JUNCTION	2.11	20.01	755.40	0	12:34	20.01
NMH-3	JUNCTION	2.12	20.20	754.50	0	12:28	20.20
002	OUTFALL	2.52	3.88	709.47	0	12:00	3.85
003	OUTFALL	2.71	5.07	712.17	0	12:05	5.07

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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	Flow Balance Error Percent
2	JUNCTION	31.00	31.00	0 12:00	1.47	1.47	0.017
2-1	JUNCTION	144.09	183.73	0 12:00	3.73	5.65	0.185
2-10	JUNCTION	0.00	43.13	0 12:01	0	1.5	-0.096
2-11	JUNCTION	0.00	43.48	0 12:01	0	1.5	0.047

2-13	JUNCTION	8.11	43.68	0	12:00	0.175	1.5	-0.059	
2-14	JUNCTION	0.00	36.52	0	12:01	0	1.33	-0.017	
2-15A	JUNCTION	0.00	37.76	0	12:00	0	1.33	0.091	
2-15B	JUNCTION	29.45	39.77	0	11:59	0.726	1.32	-0.102	
2-16	JUNCTION	8.96	8.96	0	12:00	0.599	0.599	0.078	
2-17	JUNCTION	0.00	0.00	0	00:00	0	0	0.000	gal
2-18	JUNCTION	0.00	0.00	0	00:00	0	0	0.000	gal
2-18-3	JUNCTION	0.00	78.85	0	15:03	0	10.9	-0.039	
2-19	JUNCTION	0.00	0.00	0	00:00	0	0	0.000	gal
2-2	JUNCTION	10.12	61.60	0	12:04	0.233	1.89	0.402	
2-20	JUNCTION	0.00	0.00	0	00:00	0	0	0.000	gal
2-21	JUNCTION	0.00	0.00	0	00:00	0	0	0.000	gal
2-3	JUNCTION	0.00	54.33	0	12:04	0	1.63	0.412	
2-4	JUNCTION	0.00	52.81	0	12:04	0	1.63	0.023	
2-5	JUNCTION	0.00	51.26	0	12:01	0	1.62	-0.391	
2-6	JUNCTION	5.52	48.68	0	12:02	0.114	1.62	-0.091	
2-7	JUNCTION	0.00	42.65	0	12:02	0	1.5	-0.038	
2-9	JUNCTION	0.00	42.98	0	12:02	0	1.5	-0.111	
3-1	JUNCTION	50.00	363.82	0	12:05	1.4	48.6	0.052	
3-10	JUNCTION	0.00	369.57	0	11:54	0	42.5	0.029	
3-12	JUNCTION	0.00	161.38	0	11:54	0	3.13	-0.021	
3-16	JUNCTION	0.00	166.35	0	11:55	0	3.11	-0.077	
3-17	JUNCTION	77.47	175.46	0	11:57	1.36	3.11	-0.005	
3-18	JUNCTION	0.00	100.54	0	11:54	0	1.74	-0.036	
3-19	JUNCTION	0.00	98.04	0	11:57	0	1.72	-0.058	
3-20	JUNCTION	98.05	98.05	0	11:57	1.72	1.72	0.034	
3-23	JUNCTION	93.63	181.08	0	11:55	1.64	19.3	-0.259	
3-25-10	JUNCTION	4.90	21.47	0	11:47	0.0817	0.49	-0.260	
3-25-11	JUNCTION	12.79	19.82	0	11:47	0.252	0.361	0.354	
3-25-12	JUNCTION	0.00	5.06	0	11:52	0	0.0512	-0.536	
3-25-7	JUNCTION	0.00	21.39	0	11:46	0	0.615	-0.019	
3-26	JUNCTION	77.47	126.88	0	11:52	1.36	17.8	-0.092	
3-28	JUNCTION	0.00	115.19	0	14:57	0	16	-0.011	
3-28-4	JUNCTION	0.00	82.60	0	12:23	0	10.9	0.041	
3-29	JUNCTION	0.00	45.62	0	11:44	0	5.07	-0.049	
3-3	JUNCTION	0.00	338.92	0	12:03	0	47.1	-0.019	
3-30	JUNCTION	65.30	65.30	0	11:57	1.15	5.08	0.014	
3-31	JUNCTION	0.00	47.60	0	15:00	0	3.93	-0.015	
3-32	JUNCTION	0.00	52.72	0	12:00	0	4	0.032	
3-32-1	JUNCTION	0.00	15.56	0	12:01	0	1.55	-0.040	
3-33	JUNCTION	71.90	71.90	0	12:00	2.46	2.46	0.002	
3-38	JUNCTION	0.00	269.30	0	13:00	0	39.4	-0.007	
3-39	JUNCTION	0.00	264.67	0	13:02	0	39.4	-0.009	

3-4	JUNCTION	93.93	363.73	0	12:00	2.21	47.1	-0.071
3-40	JUNCTION	0.00	261.42	0	12:43	0	39.4	0.002
3-41	JUNCTION	47.64	259.38	0	12:24	0.836	39.4	0.002
3-42	JUNCTION	0.00	256.99	0	12:19	0	38.5	-0.019
3-43	JUNCTION	0.00	261.29	0	12:14	0	38.5	-0.008
3-44	JUNCTION	0.00	267.98	0	12:11	0	38.5	-0.017
3-45	JUNCTION	0.00	277.03	0	12:08	0	38.5	-0.007
3-46	JUNCTION	0.00	292.18	0	12:05	0	38.5	-0.001
3-47	JUNCTION	0.00	258.40	0	12:04	0	19.2	-0.016
3-48	JUNCTION	0.00	283.22	0	12:03	0	19.2	-0.007
3-5	JUNCTION	0.00	304.71	0	12:35	0	44.8	-0.106
3-51	JUNCTION	319.13	319.13	0	12:00	19.2	19.2	0.037
3-6	JUNCTION	14.25	342.33	0	11:56	0.267	44.7	-0.214
3-7	JUNCTION	67.98	372.12	0	11:55	1.83	44.4	-0.043
3-9	JUNCTION	0.00	369.48	0	11:54	0	42.5	-0.358
5	JUNCTION	0.00	90.25	0	12:13	0	10.9	-0.008
6	JUNCTION	48.09	113.39	0	12:03	1.97	10.9	-0.000
7	JUNCTION	0.00	118.92	0	12:01	0	8.91	0.010
8	JUNCTION	187.56	187.56	0	12:00	8.91	8.91	0.009
NMH-1	JUNCTION	0.00	148.92	0	11:56	0	19.4	-0.007
NMH-2	JUNCTION	0.00	141.76	0	14:19	0	19.4	-0.003
NMH-3	JUNCTION	0.00	141.76	0	14:19	0	19.4	-0.003
002	OUTFALL	0.00	183.74	0	12:00	0	5.66	0.000
003	OUTFALL	0.00	363.81	0	12:05	0	48.6	0.000

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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
2	JUNCTION	4.37	18.997	0.000
2-1	JUNCTION	0.17	1.627	1.873
2-18-3	JUNCTION	3.38	13.474	0.000
2-19	JUNCTION	48.00	0.000	12.710
2-2	JUNCTION	0.13	1.407	1.293
2-20	JUNCTION	48.00	0.000	12.190
2-21	JUNCTION	48.00	0.000	10.580

2-3	JUNCTION	0.06	0.797	1.303
2-4	JUNCTION	0.06	0.859	1.191
2-5	JUNCTION	0.04	0.592	2.208
2-6	JUNCTION	0.01	0.170	1.830
2-7	JUNCTION	0.01	0.131	2.019
3-1	JUNCTION	3.51	8.724	3.156
3-10	JUNCTION	3.18	9.140	0.000
3-12	JUNCTION	1.64	5.513	0.000
3-16	JUNCTION	1.58	5.340	0.000
3-17	JUNCTION	1.57	5.252	0.000
3-18	JUNCTION	1.25	3.833	0.000
3-19	JUNCTION	1.16	3.472	0.000
3-20	JUNCTION	1.09	3.888	0.000
3-23	JUNCTION	3.48	14.829	0.000
3-25-10	JUNCTION	2.89	7.457	0.000
3-25-11	JUNCTION	2.59	5.754	0.000
3-25-12	JUNCTION	2.51	5.317	0.000
3-25-7	JUNCTION	2.96	7.987	0.000
3-26	JUNCTION	3.38	13.589	0.000
3-28	JUNCTION	3.46	15.745	0.000
3-28-4	JUNCTION	3.36	13.015	0.000
3-29	JUNCTION	3.48	16.210	0.000
3-3	JUNCTION	3.42	9.750	0.000
3-30	JUNCTION	3.47	15.758	0.000
3-31	JUNCTION	3.47	15.712	0.000
3-32	JUNCTION	3.47	15.368	0.000
3-32-1	JUNCTION	4.30	14.630	0.000
3-33	JUNCTION	3.45	15.266	0.000
3-38	JUNCTION	3.55	8.476	0.000
3-39	JUNCTION	3.60	11.067	0.000
3-4	JUNCTION	3.46	11.428	0.000
3-40	JUNCTION	3.60	12.050	0.000
3-41	JUNCTION	3.61	13.132	0.000
3-42	JUNCTION	3.61	13.485	0.000
3-43	JUNCTION	3.61	13.723	0.000
3-44	JUNCTION	3.56	14.148	0.000
3-45	JUNCTION	3.55	14.524	0.000
3-46	JUNCTION	3.54	15.563	0.000
3-47	JUNCTION	3.33	15.567	0.000
3-48	JUNCTION	3.13	15.659	0.000
3-5	JUNCTION	3.43	11.670	0.000
3-51	JUNCTION	1.97	11.874	0.000
3-6	JUNCTION	3.70	14.599	0.000

3-7	JUNCTION	3.28	10.587	0.000
3-9	JUNCTION	3.42	11.063	0.000
5	JUNCTION	3.48	14.731	0.000
6	JUNCTION	3.49	18.304	0.000
7	JUNCTION	3.45	19.536	0.000
8	JUNCTION	3.74	21.601	0.000
NMH-1	JUNCTION	3.66	16.986	0.000
NMH-2	JUNCTION	3.72	17.007	0.000
NMH-3	JUNCTION	4.12	17.196	0.000

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Node Flooding Summary  
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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
2	4.28	25.48	0 12:00	0.277	14.447
2-18-3	3.31	26.67	0 11:45	0.200	9.864
3-10	0.01	25.12	0 14:02	0.000	0.000
3-12	0.63	17.44	0 11:58	0.022	0.913
3-16	0.67	18.67	0 11:56	0.028	1.100
3-17	0.70	24.48	0 11:57	0.035	1.132
3-18	0.08	11.39	0 11:59	0.007	0.213
3-19	0.10	20.23	0 11:53	0.007	0.232
3-20	0.01	23.88	0 11:53	0.000	0.008
3-23	3.05	38.67	0 11:55	0.228	8.509
3-25-10	2.40	16.56	0 11:59	0.084	4.157
3-25-11	2.18	8.66	0 12:02	0.066	3.104
3-25-12	1.86	4.17	0 11:52	0.047	2.417
3-25-7	2.28	17.70	0 11:58	0.082	3.687
3-26	2.71	39.69	0 11:52	0.179	6.299
3-28	3.07	18.94	0 11:57	0.167	7.745
3-28-4	3.11	25.44	0 11:44	0.165	8.315
3-29	3.18	18.72	0 11:57	0.173	8.170
3-3	2.08	29.92	0 11:57	0.139	5.250
3-30	3.19	18.09	0 11:57	0.158	7.458
3-31	3.19	17.36	0 11:59	0.150	7.472

3-32	3.26	20.69	0	11:57	0.169	8.118
3-32-1	3.53	15.56	0	12:01	0.198	10.180
3-33	3.12	21.99	0	11:57	0.136	6.966
3-38	1.05	39.48	0	14:58	0.047	2.106
3-39	1.46	16.75	0	11:59	0.083	3.917
3-4	2.23	38.12	0	11:57	0.180	7.838
3-40	1.47	15.98	0	11:59	0.084	4.170
3-41	1.49	16.83	0	11:59	0.090	4.542
3-42	1.16	13.32	0	12:03	0.055	2.885
3-43	1.20	14.98	0	12:02	0.061	3.123
3-44	1.41	18.66	0	11:59	0.086	4.328
3-45	1.66	22.81	0	11:56	0.128	6.204
3-46	2.10	43.67	0	11:55	0.229	9.663
3-47	2.31	42.15	0	11:55	0.229	11.367
3-48	2.38	53.50	0	11:56	0.261	12.379
3-5	2.22	35.34	0	11:57	0.168	7.960
3-51	1.35	52.64	0	12:00	0.139	6.874
3-6	2.45	51.14	0	11:45	0.257	10.099
3-7	2.27	59.29	0	11:54	0.205	9.137
3-9	2.18	63.35	0	11:54	0.183	8.283
5	3.25	24.51	0	12:00	0.230	11.231
6	3.43	38.50	0	12:00	0.333	16.104
7	3.38	51.35	0	12:00	0.341	17.086
8	3.41	72.98	0	12:00	0.365	19.301
NMH-1	2.94	24.03	0	11:50	0.210	8.766
NMH-2	2.40	28.39	0	11:58	0.174	7.277
NMH-3	2.47	32.95	0	11:57	0.226	9.316

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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
002	99.98	6.70	183.74	5.658
003	100.00	53.12	363.81	48.592
System	99.99	59.82	542.38	54.250

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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
1	CONDUIT	118.92	0 12:01	24.23	2.31	1.00
2	CONDUIT	81.53	0 12:08	11.53	1.53	1.00
3	CONDUIT	90.25	0 12:13	12.77	2.88	1.00
6	CONDUIT	0.00	0 00:00	0.00	0.00	0.12
7	CONDUIT	11.01	0 11:59	2.11	0.11	0.37
8	CONDUIT	37.76	0 12:00	4.58	0.16	0.54
9	CONDUIT	36.52	0 12:01	4.97	0.21	0.74
10	CONDUIT	43.48	0 12:01	4.88	0.38	0.88
11	CONDUIT	43.13	0 12:01	5.03	0.36	0.84
12	CONDUIT	36.48	0 12:01	4.32	0.26	0.82
13	CONDUIT	42.98	0 12:02	5.20	0.27	0.68
14	CONDUIT	44.54	0 12:02	5.48	0.40	1.00
15	CONDUIT	51.26	0 12:01	3.99	0.47	1.00
16	CONDUIT	52.81	0 12:04	3.11	0.75	1.00
17	CONDUIT	54.33	0 12:04	3.36	1.28	1.00
18	CONDUIT	56.43	0 12:05	2.94	0.45	1.00
19	CONDUIT	62.16	0 12:04	3.95	0.65	1.00
20	CONDUIT	183.74	0 12:00	9.97	1.49	0.89
21	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
23	CONDUIT	11.53	0 15:17	9.39	3.01	1.00
24	CONDUIT	24.40	0 15:02	13.81	2.18	1.00
28	CONDUIT	16.27	0 11:47	4.49	0.54	1.00
29	CONDUIT	5.06	0 11:52	1.65	0.56	1.00
30	CONDUIT	52.72	0 12:00	5.48	1.98	1.00
32	CONDUIT	82.60	0 12:23	11.69	1.25	1.00
33	CONDUIT	78.85	0 15:03	6.27	0.55	1.00
38	CONDUIT	16.52	0 11:47	3.50	0.24	1.00
41	CONDUIT	42.65	0 12:02	4.83	0.46	0.93
link20	CONDUIT	49.32	0 14:56	5.13	1.44	1.00
LINK21	CONDUIT	117.49	0 14:51	14.16	2.80	1.00
Link22	CONDUIT	123.73	0 14:48	5.72	0.70	1.00
Link32	CONDUIT	258.40	0 12:04	13.16	1.33	1.00
Link33	CONDUIT	241.08	0 12:06	12.28	1.24	1.00

Link34	CONDUIT	277.03	0	12:08	14.11	1.41	1.00
Link35	CONDUIT	267.98	0	12:11	13.65	1.38	1.00
link36	CONDUIT	261.29	0	12:14	13.31	1.34	1.00
link37	CONDUIT	256.99	0	12:19	13.09	2.11	1.00
Link38	CONDUIT	256.27	0	12:40	13.05	2.05	1.00
Link39	CONDUIT	261.42	0	12:43	13.31	2.19	1.00
Link40	CONDUIT	264.67	0	13:02	13.48	2.20	1.00
Link41	CONDUIT	269.30	0	13:00	13.72	2.25	1.00
43	CONDUIT	271.57	0	12:50	13.83	1.26	1.00
44	CONDUIT	369.48	0	11:54	15.55	0.77	1.00
45	CONDUIT	319.03	0	11:54	13.43	2.30	1.00
46	CONDUIT	328.44	0	11:56	13.82	0.72	1.00
48	CONDUIT	363.81	0	12:05	15.51	2.34	0.96
49	CONDUIT	304.71	0	12:35	12.83	2.42	1.00
50	CONDUIT	307.37	0	12:35	12.94	1.47	1.00
51	CONDUIT	338.92	0	12:03	14.27	1.18	1.00
52	CONDUIT	337.37	0	12:09	14.20	1.26	1.00
LINK26	CONDUIT	98.04	0	11:57	5.17	0.56	1.00
53	CONDUIT	100.54	0	11:54	6.64	0.57	1.00
54	CONDUIT	100.61	0	11:54	3.33	0.37	1.00
Link29	CONDUIT	166.35	0	11:55	7.00	0.96	1.00
Link30	CONDUIT	161.38	0	11:54	6.79	0.92	1.00
55	CONDUIT	161.34	0	11:54	6.79	0.56	1.00
56	CONDUIT	45.62	0	11:44	4.74	1.28	1.00
57	CONDUIT	88.06	0	15:02	7.01	0.61	1.00
59	CONDUIT	47.60	0	15:00	6.73	1.62	1.00
60	CONDUIT	41.99	0	14:59	4.36	1.02	1.00
61	CONDUIT	20.16	0	11:46	3.20	0.32	1.00
68	CONDUIT	283.22	0	12:03	14.42	0.75	1.00
69	CONDUIT	148.92	0	11:56	10.53	1.72	1.00
70	CONDUIT	141.76	0	14:19	10.03	1.63	1.00
71	CONDUIT	141.76	0	14:19	10.03	1.63	1.00
72	CONDUIT	148.24	0	14:11	10.49	1.70	1.00

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Flow Classification Summary

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Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----							
		Up Dry Dry		Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd

1	1.00	0.06	0.00	0.00	0.92	0.00	0.00	0.02	0.00	0.83
2	1.00	0.00	0.06	0.00	0.94	0.00	0.00	0.00	0.00	0.77
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.72
6	1.00	0.06	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.00	0.00	0.04	0.00	0.96	0.00	0.00	0.00	0.00	0.65
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.98
9	1.00	0.00	0.00	0.00	0.54	0.03	0.00	0.43	0.00	0.99
10	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.99
11	1.00	0.00	0.00	0.00	0.93	0.07	0.00	0.00	0.00	0.99
12	1.00	0.00	0.00	0.00	0.85	0.07	0.00	0.08	0.00	0.99
13	1.00	0.00	0.00	0.00	0.12	0.00	0.00	0.88	0.00	0.85
14	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.00	0.75
15	1.00	0.00	0.00	0.00	0.20	0.00	0.00	0.80	0.00	0.44
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.03
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.21
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.02
21	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	1.00	0.00	0.00	0.00	0.65	0.00	0.00	0.35	0.00	0.73
24	1.00	0.00	0.00	0.00	0.09	0.00	0.00	0.91	0.00	0.77
28	1.00	0.00	0.00	0.00	0.07	0.00	0.00	0.93	0.00	0.35
29	1.00	0.25	0.01	0.00	0.06	0.00	0.00	0.67	0.00	0.01
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.27
32	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.88
33	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00	0.87
38	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.72
41	1.00	0.00	0.00	0.00	0.87	0.00	0.00	0.13	0.00	0.83
link20	1.00	0.00	0.00	0.00	0.24	0.00	0.00	0.76	0.00	0.00
LINK21	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.77
Link22	1.00	0.00	0.00	0.00	0.60	0.00	0.00	0.40	0.00	0.63
Link32	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.71
Link33	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.73
Link34	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81
Link35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81
link36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.85
link37	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.66
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.67
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.69
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.70
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.70
43	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.85

44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.93
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.59
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.93
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.30
49	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.75
51	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.85
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.87
LINK26	1.00	0.00	0.06	0.00	0.94	0.00	0.00	0.00	0.00	0.53
53	1.00	0.00	0.00	0.00	0.48	0.52	0.00	0.00	0.00	0.51
54	1.00	0.00	0.13	0.00	0.87	0.00	0.00	0.00	0.00	0.72
Link29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.49
Link30	1.00	0.00	0.13	0.00	0.87	0.00	0.00	0.00	0.00	0.83
55	1.00	0.00	0.13	0.00	0.87	0.00	0.00	0.00	0.00	0.86
56	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.65
57	1.00	0.01	0.00	0.00	0.19	0.00	0.00	0.79	0.00	0.79
59	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.61
60	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.35
61	1.00	0.00	0.19	0.00	0.81	0.00	0.00	0.00	0.00	0.93
68	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.93
69	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.79
70	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81
71	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81
72	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.77

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 Conduit Surcharge Summary  
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Conduit	Hours Full			Hours	
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
1	3.48	3.74	3.49	1.20	1.20
2	3.45	3.45	3.49	1.19	1.19
3	3.48	3.49	3.48	3.51	3.47
14	0.01	0.01	0.02	0.01	0.01
15	0.01	0.01	0.04	0.01	0.01
16	0.06	0.06	0.06	0.01	0.01
17	0.06	0.06	0.06	0.13	0.06
18	0.07	0.07	0.13	0.01	0.01

19	0.14	0.14	0.17	0.01	0.01
20	0.01	0.20	0.01	0.21	0.01
23	4.34	4.37	4.34	4.23	4.18
24	3.54	4.30	3.54	0.88	0.82
28	2.59	2.59	2.91	0.01	0.01
29	2.50	2.50	2.62	0.01	0.01
30	3.45	3.45	3.47	0.44	0.45
32	3.45	3.48	3.45	1.36	1.36
33	3.36	3.36	3.38	0.01	0.01
38	2.88	2.88	2.96	0.01	0.01
41	0.01	0.01	0.03	0.01	0.01
link20	3.48	3.48	3.48	1.17	1.14
LINK21	3.58	3.85	3.58	3.82	3.45
Link22	3.38	3.38	3.48	0.01	0.01
Link32	3.13	3.13	3.33	0.42	0.42
Link33	3.33	3.33	3.54	0.36	0.36
Link34	3.54	3.54	3.55	2.59	2.61
Link35	3.55	3.55	3.55	2.67	2.67
link36	3.55	3.55	3.61	2.61	2.62
link37	3.60	3.61	3.61	3.61	3.57
Link38	3.60	3.61	3.61	3.59	3.55
Link39	3.60	3.61	3.60	3.64	3.58
Link40	3.59	3.60	3.60	3.64	3.57
Link41	3.54	3.60	3.54	3.64	3.53
43	3.53	3.54	3.56	2.23	2.25
44	2.65	2.67	3.39	0.01	0.01
45	3.04	3.38	3.05	3.58	2.97
46	3.01	3.05	3.68	0.01	0.02
48	0.01	3.51	0.01	3.55	0.01
49	3.35	3.40	3.68	3.72	0.05
50	3.34	3.40	3.40	2.95	3.02
51	3.32	3.41	3.39	1.90	2.06
52	3.39	3.39	3.51	2.26	2.52
LINK26	1.10	1.10	1.16	0.01	0.01
53	1.16	1.16	1.25	0.01	0.01
54	1.25	1.25	1.57	0.01	0.01
Link29	1.57	1.57	1.58	0.01	0.02
Link30	1.58	1.58	1.80	0.01	0.01
55	1.64	1.64	2.66	0.01	0.01
56	3.47	3.47	3.48	0.96	0.95
57	3.38	3.38	3.46	0.01	0.01
59	3.50	3.50	3.51	0.26	0.26
60	3.47	3.47	3.47	0.01	0.03

61	2.96	2.96	3.67	0.01	0.01
68	1.96	1.96	3.13	0.01	0.01
69	3.65	3.65	3.66	4.21	2.99
70	3.66	3.66	3.72	4.20	2.92
71	3.72	3.72	4.12	4.20	2.86
72	4.12	4.12	5.99	4.20	2.78

Analysis begun on: Tue Feb 13 12:53:26 2018

Analysis ended on: Tue Feb 13 12:53:38 2018

Total elapsed time: 00:00:12

Remedial Option 2

WARNING 03: negative offset ignored for Link 8  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 30  
 WARNING 03: negative offset ignored for Link 45  
 WARNING 03: negative offset ignored for Link 46  
 WARNING 03: negative offset ignored for Link 48  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link Link30  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 59  
 WARNING 03: negative offset ignored for Link 60

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Element Count

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Number of rain gages ..... 3  
 Number of subcatchments ... 23  
 Number of nodes ..... 71  
 Number of links ..... 66  
 Number of pollutants ..... 0  
 Number of land uses ..... 0

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Raingage Summary

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Name	Data Source	Data Type	Recording Interval
SCS~Type~II	5.5inch	CUMULATIVE	3 min.
0622-0623Rain	0622-0623	VOLUME	5 min.
053015-053115_Rain	0530-0531	VOLUME	5 min.

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Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
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1	105.00	750.00	25.00	2.0000	SCS~Type~II	8
16	10.86	50.00	15.00	0.6000	SCS~Type~II	2-16
17	6.78	75.00	80.00	3.0000	SCS~Type~II	2-15B
18	1.40	50.00	100.00	1.5000	SCS~Type~II	2-13
19	2.78	277.00	40.00	0.7000	SCS~Type~II	2-2
20	35.70	834.00	50.00	1.7000	SCS~Type~II	2-1
22	0.91	50.00	100.00	1.4000	SCS~Type~II	2-6
23	25.00	400.00	36.30	1.2000	SCS~Type~II	3-33
24	0.86	1000.00	35.00	0.2400	SCS~Type~II	3-25-10
25	3.00	500.00	14.40	1.6000	SCS~Type~II	3-25-11
26	21.17	500.00	23.00	0.7000	SCS~Type~II	6
27	16.03	400.00	19.80	0.4000	SCS~Type~II	2
3-51#1	215.12	1695.00	28.00	1.3000	SCS~Type~II	3-51
28	2.30	220.00	80.00	2.1000	SCS~Type~II	3-6
29	15.30	775.00	25.00	2.0000	SCS~Type~II	3-1
30	20.20	620.00	65.00	1.2000	SCS~Type~II	3-4
31	18.20	550.00	45.00	1.3000	SCS~Type~II	3-7
3-26#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-26
3-30#1	9.17	50000.00	100.00	0.5000	SCS~Type~II	3-30
3-23#1	13.15	50000.00	100.00	0.5000	SCS~Type~II	3-23
3-20#1	13.77	50000.00	100.00	0.5000	SCS~Type~II	3-20
3-41#1	6.69	50000.00	100.00	0.5000	SCS~Type~II	3-41
3-17#1	10.88	50000.00	100.00	0.5000	SCS~Type~II	3-17

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Node Summary  
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
2	JUNCTION	747.74	5.80	2500.0	
2-1	JUNCTION	706.09	8.70	2500.0	
2-10	JUNCTION	716.65	4.90	2500.0	
2-11	JUNCTION	717.36	4.90	2500.0	
2-13	JUNCTION	721.14	6.35	2500.0	
2-14	JUNCTION	721.79	5.90	2500.0	
2-15A	JUNCTION	723.29	10.00	2500.0	
2-15B	JUNCTION	731.29	11.00	2500.0	
2-16	JUNCTION	733.03	16.60	2500.0	
2-17	JUNCTION	735.85	15.20	2500.0	
2-18	JUNCTION	737.67	14.56	2500.0	

2-18-3	JUNCTION	743.25	8.77	2500.0
2-19	JUNCTION	738.55	12.71	2500.0
2-2	JUNCTION	706.68	7.80	2500.0
2-20	JUNCTION	739.68	12.19	2500.0
2-21	JUNCTION	740.00	10.58	2500.0
2-3	JUNCTION	707.67	7.15	2500.0
2-4	JUNCTION	707.77	7.05	2500.0
2-5	JUNCTION	707.85	8.05	2500.0
2-6	JUNCTION	708.71	7.00	2500.0
2-7	JUNCTION	709.78	6.15	2500.0
2-9	JUNCTION	712.66	5.80	2500.0
3-1	JUNCTION	708.24	17.38	2500.0
3-10	JUNCTION	727.61	14.64	2500.0
3-12	JUNCTION	729.11	10.89	2500.0
3-16	JUNCTION	730.26	9.74	2500.0
3-17	JUNCTION	730.38	9.62	2500.0
3-18	JUNCTION	731.88	9.12	2500.0
3-19	JUNCTION	732.26	8.74	2500.0
3-20	JUNCTION	732.62	9.38	2500.0
3-23	JUNCTION	737.57	11.70	2500.0
3-25-10	JUNCTION	747.86	6.30	2500.0
3-25-11	JUNCTION	750.07	5.15	2500.0
3-25-12	JUNCTION	750.81	5.10	2500.0
3-25-7	JUNCTION	747.33	7.30	2500.0
3-26	JUNCTION	739.33	12.67	2500.0
3-28	JUNCTION	739.94	13.46	2500.0
3-28-4	JUNCTION	745.02	8.70	2500.0
3-29	JUNCTION	741.05	11.95	2500.0
3-3	JUNCTION	712.10	10.00	2500.0
3-30	JUNCTION	742.20	11.80	2500.0
3-31	JUNCTION	742.26	11.74	2500.0
3-32	JUNCTION	742.90	10.75	2500.0
3-32-1	JUNCTION	746.47	5.95	2500.0
3-33	JUNCTION	743.03	11.80	2500.0
3-38	JUNCTION	729.13	11.37	2500.0
3-39	JUNCTION	729.85	12.15	2500.0
3-4	JUNCTION	716.53	9.09	2500.0
3-40	JUNCTION	730.12	12.88	2500.0
3-41	JUNCTION	730.41	13.59	2500.0
3-42	JUNCTION	730.52	15.60	2500.0
3-43	JUNCTION	730.59	15.60	2500.0
3-44	JUNCTION	731.18	14.82	2500.0
3-45	JUNCTION	731.68	13.32	2500.0

3-46	JUNCTION	733.10	10.90	2500.0
3-47	JUNCTION	733.85	9.20	2500.0
3-48	JUNCTION	734.57	8.28	2500.0
3-5	JUNCTION	716.80	9.21	2500.0
3-51	JUNCTION	740.62	10.00	2500.0
3-6	JUNCTION	716.33	10.00	2500.0
3-7	JUNCTION	722.88	6.95	2500.0
3-9	JUNCTION	723.10	8.28	2500.0
5	JUNCTION	747.59	6.50	2500.0
6	JUNCTION	748.22	5.20	2500.0
7	JUNCTION	750.18	5.45	2500.0
8	JUNCTION	751.04	5.25	2500.0
NMH-1	JUNCTION	736.48	11.22	2500.0
NMH-2	JUNCTION	735.39	12.73	2500.0
NMH-3	JUNCTION	734.30	10.88	2500.0
002	OUTFALL	705.59	5.00	0.0
003	OUTFALL	707.10	5.50	0.0

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Link Summary

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Name	From Node	To Node	Type	Length	%Slope	Roughness
1	8	7	CONDUIT	60.0	2.1005	0.0150
2	7	6	CONDUIT	230.0	0.8522	0.0150
3	6	5	CONDUIT	214.0	0.2944	0.0150
6	2-17	2-16	CONDUIT	799.0	0.3467	0.0150
7	2-16	2-15B	CONDUIT	511.0	0.3405	0.0150
8	2-15B	2-15A	CONDUIT	441.0	1.8144	0.0150
9	2-15A	2-14	CONDUIT	32.0	4.0659	0.0150
10	2-13	2-11	CONDUIT	225.0	1.6802	0.0150
11	2-11	2-10	CONDUIT	38.0	1.8687	0.0150
12	2-14	2-13	CONDUIT	23.0	2.6096	0.0150
13	2-10	2-9	CONDUIT	217.0	1.6546	0.0150
14	2-7	2-6	CONDUIT	33.0	0.8182	0.0150
15	2-6	2-5	CONDUIT	257.2	0.2372	0.0150
16	2-5	2-4	CONDUIT	81.4	0.0982	0.0150
17	2-4	2-3	CONDUIT	142.3	0.0351	0.0150
18	2-3	2-2	CONDUIT	285.4	0.3118	0.0150
19	2-2	2-1	CONDUIT	218.3	0.1787	0.0150
20	2-1	002	CONDUIT	166.9	0.2995	0.0150
21	2-18	2-17	CONDUIT	171.3	1.0042	0.0150

23	2	3-32-1	CONDUIT	261.0	0.4674	0.0150
24	3-32-1	3-32	CONDUIT	114.0	1.5177	0.0150
28	3-25-11	3-25-10	CONDUIT	255.0	0.7098	0.0150
29	3-25-12	3-25-11	CONDUIT	273.0	0.2161	0.0150
30	3-33	3-32	CONDUIT	140.0	0.0929	0.0150
32	5	3-28-4	CONDUIT	198.0	1.2981	0.0150
33	3-28-4	2-18-3	CONDUIT	46.0	1.3262	0.0150
38	3-25-10	3-25-7	CONDUIT	37.0	1.4326	0.0150
41	2-9	2-7	CONDUIT	251.0	1.1276	0.0150
link20	3-29	3-28	CONDUIT	39.0	0.1538	0.0150
LINK21	3-28	3-26	CONDUIT	268.0	0.2201	0.0120
Link22	3-26	3-23	CONDUIT	577.0	0.3050	0.0120
Link32	3-48	3-47	CONDUIT	97.0	0.7423	0.0150
Link33	3-47	3-46	CONDUIT	100.3	0.7477	0.0150
Link34	3-46	3-45	CONDUIT	188.0	0.7553	0.0150
Link35	3-45	3-44	CONDUIT	68.0	0.7353	0.0150
link36	3-44	3-43	CONDUIT	79.0	0.7469	0.0150
link37	3-43	3-42	CONDUIT	24.0	0.2917	0.0150
Link38	3-42	3-41	CONDUIT	36.0	0.3056	0.0150
Link39	3-41	3-40	CONDUIT	104.0	0.2788	0.0150
Link40	3-40	3-39	CONDUIT	95.0	0.2842	0.0150
Link41	3-39	3-38	CONDUIT	255.0	0.2824	0.0150
43	3-38	3-10	CONDUIT	167.0	0.9102	0.0150
44	3-10	3-9	CONDUIT	167.0	2.7016	0.0150
45	3-9	3-7	CONDUIT	97.0	0.2268	0.0150
46	3-7	3-6	CONDUIT	265.0	2.4725	0.0150
48	3-1	003	CONDUIT	400.0	0.2850	0.0150
49	3-6	3-5	CONDUIT	251.0	-0.1873	0.0150
50	3-5	3-4	CONDUIT	52.0	0.5192	0.0150
51	3-4	3-3	CONDUIT	456.0	0.9715	0.0150
52	3-3	3-1	CONDUIT	457.0	0.8447	0.0150
LINK26	3-20	3-19	CONDUIT	99.0	0.3636	0.0150
53	3-19	3-18	CONDUIT	104.0	0.3654	0.0150
54	3-18	3-17	CONDUIT	410.0	0.3659	0.0150
Link29	3-17	3-16	CONDUIT	34.0	0.3529	0.0150
Link30	3-16	3-12	CONDUIT	315.0	0.3651	0.0150
55	3-12	3-10	CONDUIT	231.0	0.9914	0.0150
56	3-30	3-29	CONDUIT	443.0	0.1670	0.0150
57	2-18-3	3-28	CONDUIT	227.0	1.3261	0.0150
59	3-32	3-31	CONDUIT	248.0	0.2581	0.0150
60	3-31	3-30	CONDUIT	27.0	0.2222	0.0150
61	3-25-7	3-26	CONDUIT	690.0	1.1595	0.0150
68	3-51	3-48	CONDUIT	216.6	2.7944	0.0150

69	3-23	NMH-1	CONDUIT	304.0	0.3586	0.0120
70		NMH-2	CONDUIT	300.0	0.3633	0.0120
71		NMH-3	CONDUIT	300.0	0.3633	0.0120
72		3-46	CONDUIT	330.7	0.3629	0.0120

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Cross Section Summary  
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
1	CIRCULAR	2.50	4.91	0.63	2.50	1	51.52
2	CIRCULAR	3.00	7.07	0.75	3.00	1	53.36
3	CIRCULAR	3.00	7.07	0.75	3.00	1	31.36
6	CIRCULAR	4.50	15.90	1.13	4.50	1	100.35
7	CIRCULAR	4.50	15.90	1.13	4.50	1	99.45
8	CIRCULAR	4.50	15.90	1.13	4.50	1	229.56
9	CIRCULAR	3.50	9.62	0.88	3.50	1	175.82
10	CIRCULAR	3.50	9.62	0.88	3.50	1	113.03
11	CIRCULAR	3.50	9.62	0.88	3.50	1	119.20
12	CIRCULAR	3.50	9.62	0.88	3.50	1	140.86
13	CIRCULAR	4.00	12.57	1.00	4.00	1	160.13
14	CIRCULAR	4.00	12.57	1.00	4.00	1	112.61
15	CIRCULAR	5.00	19.63	1.25	5.00	1	109.92
16	CIRCULAR	5.00	19.63	1.25	5.00	1	70.75
17	CIRCULAR	5.00	19.63	1.25	5.00	1	42.31
18	CIRCULAR	5.00	19.63	1.25	5.00	1	126.04
19	CIRCULAR	5.00	19.63	1.25	5.00	1	95.41
20	CIRCULAR	5.00	19.63	1.25	5.00	1	123.53
21	CIRCULAR	4.50	15.90	1.13	4.50	1	170.79
23	CIRCULAR	1.25	1.23	0.31	1.25	1	3.83
24	CIRCULAR	1.50	1.77	0.38	1.50	1	11.22
28	CIRCULAR	2.50	4.91	0.63	2.50	1	29.95
29	CIRCULAR	2.00	3.14	0.50	2.00	1	9.11
30	CIRCULAR	3.50	9.62	0.88	3.50	1	26.57
32	CIRCULAR	3.00	7.07	0.75	3.00	1	65.86
33	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
38	CIRCULAR	3.00	7.07	0.75	3.00	1	69.19
41	CIRCULAR	3.50	9.62	0.88	3.50	1	92.59
link20	CIRCULAR	3.50	9.62	0.88	3.50	1	34.20
LINK21	CIRCULAR	3.25	8.30	0.81	3.25	1	41.97
Link22	CIRCULAR	5.25	21.65	1.31	5.25	1	177.48

Link32	CIRCULAR	5.00	19.63	1.25	5.00	1	194.47
Link33	CIRCULAR	5.00	19.63	1.25	5.00	1	195.18
Link34	CIRCULAR	5.00	19.63	1.25	5.00	1	196.17
Link35	CIRCULAR	5.00	19.63	1.25	5.00	1	193.55
link36	CIRCULAR	5.00	19.63	1.25	5.00	1	195.07
link37	CIRCULAR	5.00	19.63	1.25	5.00	1	121.90
Link38	CIRCULAR	5.00	19.63	1.25	5.00	1	124.77
Link39	CIRCULAR	5.00	19.63	1.25	5.00	1	119.19
Link40	CIRCULAR	5.00	19.63	1.25	5.00	1	120.33
Link41	CIRCULAR	5.00	19.63	1.25	5.00	1	119.94
43	CIRCULAR	5.00	19.63	1.25	5.00	1	215.35
44	CIRCULAR	5.50	23.76	1.38	5.50	1	478.36
45	CIRCULAR	5.50	23.76	1.38	5.50	1	138.60
46	CIRCULAR	5.50	23.76	1.38	5.50	1	457.62
48	CIRCULAR	5.50	23.76	1.38	5.50	1	155.37
49	CIRCULAR	5.50	23.76	1.38	5.50	1	125.94
50	CIRCULAR	5.50	23.76	1.38	5.50	1	209.71
51	CIRCULAR	5.50	23.76	1.38	5.50	1	286.86
52	CIRCULAR	5.50	23.76	1.38	5.50	1	267.48
LINK26	CIRCULAR	5.50	23.76	1.38	5.50	1	175.50
53	CIRCULAR	5.50	23.76	1.38	5.50	1	175.92
54	RECT_OPEN	5.50	30.25	1.83	5.50	1	271.52
Link29	CIRCULAR	5.50	23.76	1.38	5.50	1	172.90
Link30	CIRCULAR	5.50	23.76	1.38	5.50	1	175.85
55	CIRCULAR	5.50	23.76	1.38	5.50	1	289.78
56	CIRCULAR	3.50	9.62	0.88	3.50	1	35.64
57	CIRCULAR	4.00	12.57	1.00	4.00	1	143.36
59	CIRCULAR	3.00	7.07	0.75	3.00	1	29.37
60	CIRCULAR	3.50	9.62	0.88	3.50	1	41.10
61	CIRCULAR	3.00	7.07	0.75	3.00	1	62.24
68	CIRCULAR	5.00	19.63	1.25	5.00	1	377.32
69	CIRCULAR	3.00	7.07	0.75	3.00	2	43.27
70	CIRCULAR	3.00	7.07	0.75	3.00	2	43.55
71	CIRCULAR	3.00	7.07	0.75	3.00	2	43.55
72	CIRCULAR	3.00	7.07	0.75	3.00	2	43.53

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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.  
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Analysis Options

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Flow Units ..... CFS  
 Process Models:  
   Rainfall/Runoff ..... YES  
   RDII ..... NO  
   Snowmelt ..... NO  
   Groundwater ..... NO  
   Flow Routing ..... YES  
   Ponding Allowed ..... YES  
   Water Quality ..... NO  
 Infiltration Method ..... CURVE\_NUMBER  
 Flow Routing Method ..... DYNWAVE  
 Starting Date ..... MAY-30-2015 00:00:00  
 Ending Date ..... JUN-01-2015 00:00:00  
 Antecedent Dry Days ..... 0.0  
 Report Time Step ..... 00:02:00  
 Wet Time Step ..... 00:01:00  
 Dry Time Step ..... 00:05:00  
 Routing Time Step ..... 5.00 sec  
 Variable Time Step ..... YES  
 Maximum Trials ..... 10  
 Number of Threads ..... 1  
 Head Tolerance ..... 0.005000 ft

*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	259.027	5.500
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	48.160	1.023
Surface Runoff .....	204.639	4.345
Final Storage .....	6.250	0.133
Continuity Error (%) .....	-0.008	

*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000

Wet Weather Inflow .....	204.643	66.686
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000
External Outflow .....	206.129	67.170
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.052	0.017
Final Stored Volume .....	0.211	0.069
Continuity Error (%) .....	-0.803	

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Time-Step Critical Elements  
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Link link37 (65.41%)  
Link 12 (3.19%)  
Link Link29 (1.96%)

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Highest Flow Instability Indexes  
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Link 44 (34)  
Link Link32 (31)  
Link 33 (30)  
Link 46 (29)  
Link 51 (27)

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Routing Time Step Summary  
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Minimum Time Step	:	0.50 sec
Average Time Step	:	2.54 sec
Maximum Time Step	:	5.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	2.66
Percent Not Converging	:	4.83

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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
1	5.50	0.00	0.00	1.07	3.98	11.35	244.51	0.724
16	5.50	0.00	0.00	2.35	2.75	0.81	11.45	0.499
17	5.50	0.00	0.00	0.55	4.80	0.88	37.04	0.874
18	5.50	0.00	0.00	0.00	5.50	0.21	9.86	1.000
19	5.50	0.00	0.00	1.57	3.87	0.29	12.93	0.704
20	5.50	0.00	0.00	0.71	4.72	4.57	180.42	0.858
22	5.50	0.00	0.00	0.00	5.50	0.14	6.66	1.000
23	5.50	0.00	0.00	0.91	4.48	3.04	91.31	0.815
24	5.50	0.00	0.00	0.92	4.36	0.10	6.09	0.793
25	5.50	0.00	0.00	1.22	3.94	0.32	16.59	0.716
26	5.50	0.00	0.00	1.09	4.28	2.46	62.06	0.779
27	5.50	0.00	0.00	1.14	4.23	1.84	40.18	0.769
3-51#1	5.50	0.00	0.00	1.34	4.11	24.02	421.94	0.748
28	5.50	0.00	0.00	0.34	5.16	0.32	17.40	0.938
29	5.50	0.00	0.00	1.30	4.20	1.75	64.80	0.764
30	5.50	0.00	0.00	0.60	4.89	2.68	116.65	0.890
31	5.50	0.00	0.00	0.95	4.54	2.24	85.50	0.826
3-26#1	5.50	0.00	0.00	0.00	5.50	1.63	92.63	1.000
3-30#1	5.50	0.00	0.00	0.00	5.50	1.37	78.07	1.000
3-23#1	5.50	0.00	0.00	0.00	5.50	1.96	111.95	1.000
3-20#1	5.50	0.00	0.00	0.00	5.50	2.06	117.23	1.000
3-41#1	5.50	0.00	0.00	0.00	5.50	1.00	56.96	1.000
3-17#1	5.50	0.00	0.00	0.00	5.50	1.63	92.63	1.000

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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	Reported Max Depth Feet
2	JUNCTION	2.94	27.16	774.90	0 13:28	27.16

2-1	JUNCTION	2.11	8.70	714.79	0	12:00	8.70
2-10	JUNCTION	0.49	3.26	719.91	0	12:01	3.25
2-11	JUNCTION	0.52	3.74	721.10	0	12:00	3.52
2-13	JUNCTION	0.52	3.52	724.66	0	12:00	3.50
2-14	JUNCTION	0.48	3.14	724.93	0	12:01	3.14
2-15A	JUNCTION	0.46	3.12	726.41	0	12:01	3.11
2-15B	JUNCTION	0.44	2.75	734.04	0	12:00	2.74
2-16	JUNCTION	0.32	1.13	734.16	0	12:01	1.11
2-17	JUNCTION	0.00	0.00	735.85	0	00:00	0.00
2-18	JUNCTION	0.00	0.00	737.67	0	00:00	0.00
2-18-3	JUNCTION	3.67	24.25	767.50	0	13:26	24.25
2-19	JUNCTION	0.00	0.00	738.55	0	00:00	0.00
2-2	JUNCTION	1.53	8.22	714.90	0	12:00	8.22
2-20	JUNCTION	0.00	0.00	739.68	0	00:00	0.00
2-21	JUNCTION	0.00	0.00	740.00	0	00:00	0.00
2-3	JUNCTION	0.63	7.44	715.11	0	12:01	7.42
2-4	JUNCTION	0.64	7.47	715.24	0	12:01	7.47
2-5	JUNCTION	0.60	7.57	715.42	0	11:57	7.45
2-6	JUNCTION	0.52	7.02	715.73	0	11:57	6.78
2-7	JUNCTION	0.52	6.16	715.94	0	11:57	5.78
2-9	JUNCTION	0.53	3.89	716.55	0	12:02	3.89
3-1	JUNCTION	2.96	14.10	722.34	0	12:03	14.08
3-10	JUNCTION	2.55	14.99	742.60	0	12:26	14.99
3-12	JUNCTION	2.02	13.50	742.61	0	12:27	13.49
3-16	JUNCTION	1.18	12.36	742.62	0	12:27	12.35
3-17	JUNCTION	1.16	12.24	742.62	0	12:27	12.23
3-18	JUNCTION	0.69	10.74	742.62	0	12:26	10.74
3-19	JUNCTION	0.83	10.36	742.62	0	12:27	10.36
3-20	JUNCTION	0.79	10.00	742.62	0	12:25	10.00
3-23	JUNCTION	2.86	24.78	762.35	0	13:21	24.78
3-25-10	JUNCTION	1.08	15.14	763.00	0	13:24	15.14
3-25-11	JUNCTION	0.87	12.94	763.01	0	13:24	12.94
3-25-12	JUNCTION	0.80	12.20	763.01	0	13:24	12.20
3-25-7	JUNCTION	1.14	15.67	763.00	0	13:24	15.67
3-26	JUNCTION	2.94	23.66	762.99	0	13:24	23.66
3-28	JUNCTION	3.35	26.59	766.53	0	13:29	26.59
3-28-4	JUNCTION	2.47	22.68	767.70	0	13:25	22.68
3-29	JUNCTION	2.90	25.50	766.55	0	13:29	25.50
3-3	JUNCTION	2.81	16.69	728.79	0	12:06	16.69
3-30	JUNCTION	2.57	24.65	766.85	0	13:33	24.65
3-31	JUNCTION	2.54	24.60	766.86	0	13:33	24.60
3-32	JUNCTION	2.46	24.27	767.17	0	13:34	24.27
3-32-1	JUNCTION	2.15	21.74	768.21	0	13:42	21.74

3-33	JUNCTION	2.42	24.16	767.19	0	13:34	24.16
3-38	JUNCTION	2.61	15.95	745.08	0	12:32	15.95
3-39	JUNCTION	2.84	19.10	748.95	0	12:36	19.10
3-4	JUNCTION	2.87	18.76	735.29	0	12:05	18.76
3-40	JUNCTION	2.93	20.28	750.40	0	12:36	20.28
3-41	JUNCTION	3.02	21.58	751.99	0	12:36	21.58
3-42	JUNCTION	3.04	22.00	752.52	0	12:36	22.00
3-43	JUNCTION	3.05	22.29	752.88	0	12:35	22.29
3-44	JUNCTION	3.06	22.88	754.06	0	12:34	22.88
3-45	JUNCTION	3.07	23.40	755.08	0	12:33	23.40
3-46	JUNCTION	3.14	24.84	757.94	0	12:29	24.84
3-47	JUNCTION	2.71	25.13	758.98	0	12:24	25.13
3-48	JUNCTION	2.61	25.61	760.18	0	12:18	25.61
3-5	JUNCTION	2.86	18.99	735.79	0	12:05	18.99
3-51	JUNCTION	2.15	23.47	764.09	0	12:08	23.45
3-6	JUNCTION	3.78	21.89	738.22	0	12:06	21.89
3-7	JUNCTION	2.76	17.81	740.69	0	12:05	17.80
3-9	JUNCTION	2.84	18.21	741.31	0	12:05	18.21
5	JUNCTION	2.60	24.52	772.11	0	13:03	24.52
6	JUNCTION	2.92	29.68	777.90	0	12:44	29.68
7	JUNCTION	2.90	32.37	782.55	0	12:35	32.37
8	JUNCTION	3.48	35.20	786.24	0	12:24	35.20
NMH-1	JUNCTION	2.77	24.26	760.74	0	13:06	24.26
NMH-2	JUNCTION	2.69	24.11	759.50	0	12:49	24.11
NMH-3	JUNCTION	2.66	24.32	758.62	0	12:37	24.32
002	OUTFALL	2.53	4.26	709.85	0	12:00	4.26
003	OUTFALL	2.76	5.13	712.23	0	12:03	5.13

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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	Flow Balance Error Percent
2	JUNCTION	40.18	40.18	0 12:00	1.84	1.84	0.019
2-1	JUNCTION	180.42	228.83	0 12:00	4.57	6.98	0.147
2-10	JUNCTION	0.00	56.91	0 12:00	0	1.9	-0.066
2-11	JUNCTION	0.00	57.48	0 12:00	0	1.9	0.067

2-13	JUNCTION	9.86	54.27	0	12:00	0.209	1.9	-0.084
2-14	JUNCTION	0.00	45.39	0	12:01	0	1.69	-0.034
2-15A	JUNCTION	0.00	45.84	0	12:00	0	1.7	0.173
2-15B	JUNCTION	37.04	48.68	0	12:00	0.885	1.69	-0.166
2-16	JUNCTION	11.45	11.45	0	12:00	0.809	0.81	0.085
2-17	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
2-18	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
2-18-3	JUNCTION	0.00	93.03	0	12:37	0	13.8	0.005
2-19	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
2-2	JUNCTION	12.93	91.52	0	12:04	0.292	2.37	0.303
2-20	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
2-21	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
2-3	JUNCTION	0.00	81.97	0	12:04	0	2.06	0.372
2-4	JUNCTION	0.00	77.81	0	12:04	0	2.05	0.013
2-5	JUNCTION	0.00	73.06	0	12:04	0	2.04	-0.322
2-6	JUNCTION	6.66	61.90	0	12:04	0.136	2.04	-0.084
2-7	JUNCTION	0.00	54.65	0	12:02	0	1.91	0.041
2-9	JUNCTION	0.00	54.05	0	12:01	0	1.9	-0.157
3-1	JUNCTION	64.80	384.51	0	12:03	1.75	60.3	0.039
3-10	JUNCTION	0.00	369.00	0	11:52	0	52.9	0.081
3-12	JUNCTION	0.00	159.10	0	11:52	0	3.74	-0.017
3-16	JUNCTION	0.00	181.84	0	11:52	0	3.71	-0.079
3-17	JUNCTION	92.63	197.60	0	11:55	1.63	3.71	-0.044
3-18	JUNCTION	0.00	122.97	0	11:52	0	2.08	-0.056
3-19	JUNCTION	0.00	117.29	0	11:56	0	2.06	-0.047
3-20	JUNCTION	117.23	117.23	0	11:57	2.06	2.06	0.021
3-23	JUNCTION	111.95	187.88	0	11:55	1.96	24.1	-0.154
3-25-10	JUNCTION	6.09	22.90	0	11:44	0.102	0.88	-0.214
3-25-11	JUNCTION	16.59	21.35	0	11:44	0.321	0.635	0.220
3-25-12	JUNCTION	0.00	6.98	0	12:03	0	0.142	-0.311
3-25-7	JUNCTION	0.00	22.26	0	11:56	0	1.19	-0.033
3-26	JUNCTION	92.63	128.07	0	11:52	1.63	22.6	-0.050
3-28	JUNCTION	0.00	117.42	0	16:16	0	20.1	-0.014
3-28-4	JUNCTION	0.00	98.68	0	12:30	0	13.8	-0.010
3-29	JUNCTION	0.00	49.05	0	12:00	0	6.25	0.004
3-3	JUNCTION	0.00	349.13	0	12:03	0	58.5	-0.005
3-30	JUNCTION	78.07	78.07	0	11:57	1.37	6.27	0.004
3-31	JUNCTION	0.00	42.48	0	16:20	0	4.9	-0.019
3-32	JUNCTION	0.00	65.15	0	12:00	0	4.99	0.023
3-32-1	JUNCTION	0.00	19.18	0	12:01	0	1.94	-0.043
3-33	JUNCTION	91.31	91.31	0	12:00	3.04	3.04	-0.000
3-38	JUNCTION	0.00	279.84	0	12:48	0	49.2	-0.009
3-39	JUNCTION	0.00	278.89	0	12:40	0	49.2	-0.006

3-4	JUNCTION	116.65	376.52	0	12:00	2.68	58.5	-0.052
3-40	JUNCTION	0.00	278.61	0	12:35	0	49.2	-0.002
3-41	JUNCTION	56.96	279.88	0	12:27	0.999	49.2	0.004
3-42	JUNCTION	0.00	278.58	0	12:20	0	48.2	-0.012
3-43	JUNCTION	0.00	285.49	0	12:14	0	48.2	-0.004
3-44	JUNCTION	0.00	295.98	0	12:11	0	48.2	-0.010
3-45	JUNCTION	0.00	310.78	0	12:07	0	48.2	-0.006
3-46	JUNCTION	0.00	334.16	0	12:05	0	48.1	-0.001
3-47	JUNCTION	0.00	334.07	0	12:04	0	24	-0.011
3-48	JUNCTION	0.00	368.34	0	12:03	0	24	0.027
3-5	JUNCTION	0.00	319.93	0	12:48	0	55.8	-0.116
3-51	JUNCTION	421.94	421.94	0	12:00	24	24	-0.007
3-6	JUNCTION	17.40	342.92	0	11:55	0.322	55.6	-0.336
3-7	JUNCTION	85.50	371.75	0	11:53	2.24	55.2	-0.038
3-9	JUNCTION	0.00	368.93	0	11:52	0	52.8	-0.335
5	JUNCTION	0.00	108.89	0	12:17	0	13.8	0.004
6	JUNCTION	62.06	137.58	0	12:03	2.46	13.8	-0.003
7	JUNCTION	0.00	148.27	0	12:02	0	11.3	0.005
8	JUNCTION	244.51	244.51	0	12:00	11.4	11.4	0.012
NMH-1	JUNCTION	0.00	151.44	0	11:56	0	24.1	-0.005
NMH-2	JUNCTION	0.00	148.03	0	15:33	0	24.1	-0.002
NMH-3	JUNCTION	0.00	150.58	0	15:16	0	24.1	-0.001
002	OUTFALL	0.00	227.87	0	12:00	0	6.98	0.000
003	OUTFALL	0.00	384.51	0	12:03	0	60.4	0.000

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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
2	JUNCTION	5.72	25.913	0.000
2-1	JUNCTION	0.26	3.503	0.000
2-11	JUNCTION	0.03	0.242	1.158
2-18-3	JUNCTION	4.73	19.089	0.000
2-19	JUNCTION	48.00	0.000	12.710
2-2	JUNCTION	0.22	3.123	0.000
2-20	JUNCTION	48.00	0.000	12.190

2-21	JUNCTION	48.00	0.000	10.580
2-3	JUNCTION	0.15	2.387	0.000
2-4	JUNCTION	0.14	2.471	0.000
2-5	JUNCTION	0.13	2.321	0.479
2-6	JUNCTION	0.13	2.024	0.000
2-7	JUNCTION	0.13	2.156	0.000
3-1	JUNCTION	4.82	8.604	3.276
3-10	JUNCTION	4.42	9.488	0.000
3-12	JUNCTION	2.62	7.206	0.000
3-16	JUNCTION	2.56	6.855	0.000
3-17	JUNCTION	2.54	6.736	0.000
3-18	JUNCTION	2.17	5.238	0.000
3-19	JUNCTION	2.09	4.859	0.000
3-20	JUNCTION	2.02	4.499	0.000
3-23	JUNCTION	4.81	19.401	0.000
3-25-10	JUNCTION	4.28	12.143	0.000
3-25-11	JUNCTION	3.99	10.437	0.000
3-25-12	JUNCTION	3.91	10.000	0.000
3-25-7	JUNCTION	4.34	12.672	0.000
3-26	JUNCTION	4.72	18.278	0.000
3-28	JUNCTION	4.80	21.129	0.000
3-28-4	JUNCTION	4.70	18.678	0.000
3-29	JUNCTION	4.82	21.594	0.000
3-3	JUNCTION	4.73	11.192	0.000
3-30	JUNCTION	4.81	21.149	0.000
3-31	JUNCTION	4.81	21.104	0.000
3-32	JUNCTION	4.80	20.770	0.000
3-32-1	JUNCTION	5.64	20.237	0.000
3-33	JUNCTION	4.79	20.665	0.000
3-38	JUNCTION	4.87	10.955	0.000
3-39	JUNCTION	4.90	14.104	0.000
3-4	JUNCTION	4.75	13.258	0.000
3-40	JUNCTION	4.92	15.282	0.000
3-41	JUNCTION	4.92	16.576	0.000
3-42	JUNCTION	4.92	17.002	0.000
3-43	JUNCTION	4.92	17.289	0.000
3-44	JUNCTION	4.87	17.878	0.000
3-45	JUNCTION	4.87	18.397	0.000
3-46	JUNCTION	4.86	19.843	0.000
3-47	JUNCTION	4.68	20.126	0.000
3-48	JUNCTION	4.39	20.614	0.000
3-5	JUNCTION	4.74	13.493	0.000
3-51	JUNCTION	3.00	18.473	0.000

3-6	JUNCTION	5.02	16.388	0.000
3-7	JUNCTION	4.58	12.306	0.000
3-9	JUNCTION	4.73	12.713	0.000
5	JUNCTION	4.82	21.516	0.000
6	JUNCTION	4.82	26.675	0.000
7	JUNCTION	4.79	29.371	0.000
8	JUNCTION	4.85	32.250	0.000
NMH-1	JUNCTION	4.99	21.259	0.000
NMH-2	JUNCTION	5.05	21.108	0.000
NMH-3	JUNCTION	5.28	21.325	0.000

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Node Flooding Summary  
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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
2	5.61	33.50	0 12:00	0.410	21.363
2-1	0.01	0.92	0 12:00	0.000	0.003
2-18-3	4.69	28.04	0 11:42	0.314	15.479
2-2	0.11	14.23	0 11:58	0.009	0.423
2-3	0.10	8.22	0 11:59	0.006	0.287
2-4	0.13	14.79	0 11:57	0.009	0.421
2-6	0.01	12.05	0 11:57	0.001	0.024
2-7	0.01	8.66	0 11:57	0.000	0.006
3-10	0.75	6.97	0 12:03	0.009	0.348
3-12	1.61	26.32	0 11:56	0.061	2.606
3-16	1.65	31.04	0 11:54	0.060	2.615
3-17	1.67	39.60	0 11:55	0.077	2.616
3-18	1.36	26.56	0 11:56	0.053	1.618
3-19	1.41	45.87	0 11:51	0.043	1.619
3-20	0.96	22.62	0 11:51	0.017	0.619
3-23	4.42	40.95	0 11:52	0.346	13.081
3-25-10	3.84	21.09	0 11:56	0.176	8.843
3-25-11	3.68	16.22	0 11:59	0.159	7.787
3-25-12	3.53	6.98	0 12:03	0.139	7.100
3-25-7	3.73	22.26	0 11:56	0.183	8.372

3-26	4.11	38.62	0	11:42	0.309	10.988
3-28	4.46	22.84	0	11:56	0.282	13.129
3-28-4	4.48	23.36	0	11:58	0.278	13.978
3-29	4.55	22.90	0	11:56	0.287	13.554
3-3	3.06	35.38	0	11:57	0.177	6.692
3-30	4.56	24.66	0	11:55	0.271	12.849
3-31	4.56	23.57	0	11:55	0.257	12.864
3-32	4.64	27.68	0	11:57	0.281	13.520
3-32-1	4.91	19.18	0	12:01	0.307	15.787
3-33	4.51	29.56	0	11:57	0.240	12.365
3-38	2.01	22.36	0	11:57	0.100	4.585
3-39	2.46	20.14	0	11:57	0.148	6.954
3-4	3.23	40.91	0	11:56	0.222	9.668
3-40	2.48	18.58	0	11:56	0.149	7.402
3-41	2.51	22.16	0	11:55	0.158	7.986
3-42	2.20	18.54	0	11:59	0.123	6.402
3-43	2.24	19.72	0	11:59	0.130	6.689
3-44	2.44	21.58	0	11:58	0.159	8.058
3-45	2.69	25.08	0	11:55	0.207	10.077
3-46	3.18	43.57	0	11:52	0.331	13.943
3-47	3.42	41.83	0	11:53	0.321	15.926
3-48	3.49	53.30	0	12:00	0.364	17.334
3-5	3.22	37.38	0	11:56	0.208	9.783
3-51	2.35	79.03	0	12:00	0.273	13.473
3-6	3.52	62.92	0	11:42	0.307	11.888
3-7	3.29	59.14	0	11:52	0.244	10.856
3-9	3.20	63.87	0	11:52	0.219	9.933
5	4.62	30.83	0	12:00	0.370	18.016
6	4.77	50.67	0	12:00	0.505	24.475
7	4.72	68.65	0	12:00	0.537	26.921
8	4.75	102.76	0	12:00	0.567	29.950
NMH-1	4.31	28.84	0	11:56	0.313	13.039
NMH-2	3.70	30.01	0	11:56	0.273	11.378
NMH-3	3.73	36.39	0	12:01	0.326	13.445

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 Outfall Loading Summary  
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 Flow            Avg            Max            Total  
 Freq            Flow            Flow            Volume

Outfall Node	Pcnt	CFS	CFS	10^6 gal
002	99.97	8.40	227.87	6.982
003	99.99	60.82	384.51	60.354
System	99.98	69.23	606.03	67.336

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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
1	CONDUIT	148.27	0 12:02	30.20	2.88	1.00
2	CONDUIT	98.56	0 12:09	13.94	1.85	1.00
3	CONDUIT	108.89	0 12:17	15.40	3.47	1.00
6	CONDUIT	0.00	0 00:00	0.00	0.00	0.12
7	CONDUIT	11.94	0 12:01	2.21	0.12	0.43
8	CONDUIT	45.84	0 12:00	4.66	0.20	0.65
9	CONDUIT	45.39	0 12:01	5.13	0.26	0.87
10	CONDUIT	57.48	0 12:00	5.97	0.51	1.00
11	CONDUIT	56.91	0 12:00	6.01	0.48	0.97
12	CONDUIT	45.39	0 12:01	4.83	0.32	0.94
13	CONDUIT	54.05	0 12:01	5.20	0.34	0.84
14	CONDUIT	58.77	0 12:04	5.48	0.52	1.00
15	CONDUIT	73.06	0 12:04	3.93	0.66	1.00
16	CONDUIT	77.81	0 12:04	3.96	1.10	1.00
17	CONDUIT	81.97	0 12:04	4.17	1.94	1.00
18	CONDUIT	84.47	0 12:04	4.30	0.67	1.00
19	CONDUIT	94.23	0 12:04	4.80	0.99	1.00
20	CONDUIT	227.87	0 12:00	12.00	1.84	0.93
21	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
23	CONDUIT	11.56	0 16:37	9.42	3.02	1.00
24	CONDUIT	26.54	0 16:23	15.02	2.37	1.00
28	CONDUIT	17.46	0 11:44	4.73	0.58	1.00
29	CONDUIT	6.98	0 12:03	2.22	0.77	1.00
30	CONDUIT	65.15	0 12:00	6.77	2.45	1.00
32	CONDUIT	98.68	0 12:30	13.96	1.50	1.00
33	CONDUIT	93.03	0 12:37	7.40	0.65	1.00

38	CONDUIT	17.65	0	11:44	3.29	0.26	1.00
41	CONDUIT	54.65	0	12:02	5.68	0.59	1.00
link20	CONDUIT	53.06	0	16:16	5.52	1.55	1.00
LINK21	CONDUIT	120.47	0	16:07	14.52	2.87	1.00
Link22	CONDUIT	132.95	0	15:11	6.14	0.75	1.00
Link32	CONDUIT	334.07	0	12:04	17.01	1.72	1.00
Link33	CONDUIT	310.70	0	12:06	15.82	1.59	1.00
Link34	CONDUIT	310.78	0	12:07	15.83	1.58	1.00
Link35	CONDUIT	295.98	0	12:11	15.07	1.53	1.00
link36	CONDUIT	285.49	0	12:14	14.54	1.46	1.00
link37	CONDUIT	278.58	0	12:20	14.19	2.29	1.00
Link38	CONDUIT	275.95	0	12:31	14.05	2.21	1.00
Link39	CONDUIT	278.61	0	12:35	14.19	2.34	1.00
Link40	CONDUIT	278.89	0	12:40	14.20	2.32	1.00
Link41	CONDUIT	279.84	0	12:48	14.25	2.33	1.00
43	CONDUIT	284.68	0	13:32	14.50	1.32	1.00
44	CONDUIT	368.93	0	11:52	15.53	0.77	1.00
45	CONDUIT	318.15	0	11:52	13.39	2.30	1.00
46	CONDUIT	328.23	0	11:54	13.82	0.72	1.00
48	CONDUIT	384.51	0	12:03	16.36	2.47	0.97
49	CONDUIT	319.93	0	12:48	13.47	2.54	1.00
50	CONDUIT	321.60	0	12:48	13.54	1.53	1.00
51	CONDUIT	349.13	0	12:03	14.69	1.22	1.00
52	CONDUIT	348.83	0	12:09	14.68	1.30	1.00
LINK26	CONDUIT	117.29	0	11:56	5.06	0.67	1.00
53	CONDUIT	122.97	0	11:52	6.44	0.70	1.00
54	CONDUIT	123.05	0	11:52	4.07	0.45	1.00
Link29	CONDUIT	181.84	0	11:52	7.65	1.05	1.00
Link30	CONDUIT	159.10	0	11:52	6.70	0.90	1.00
55	CONDUIT	159.06	0	11:52	6.70	0.55	1.00
56	CONDUIT	49.05	0	12:00	5.10	1.38	1.00
57	CONDUIT	89.63	0	16:23	7.13	0.63	1.00
59	CONDUIT	42.48	0	16:20	6.01	1.45	1.00
60	CONDUIT	48.04	0	16:20	4.99	1.17	1.00
61	CONDUIT	20.54	0	12:23	3.25	0.33	1.00
68	CONDUIT	368.34	0	12:03	18.76	0.98	1.00
69	CONDUIT	151.44	0	11:56	10.71	1.75	1.00
70	CONDUIT	148.03	0	15:33	10.47	1.70	1.00
71	CONDUIT	150.58	0	15:16	10.65	1.73	1.00
72	CONDUIT	157.48	0	15:15	11.14	1.81	1.00

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Flow Classification Summary

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Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Up Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
1	1.00	0.05	0.00	0.00	0.94	0.00	0.00	0.01	0.00	0.81
2	1.00	0.00	0.05	0.00	0.95	0.00	0.00	0.00	0.00	0.75
3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.71
6	1.00	0.05	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1.00	0.00	0.04	0.00	0.96	0.00	0.00	0.00	0.00	0.68
8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.98
9	1.00	0.00	0.00	0.00	0.58	0.04	0.00	0.38	0.00	0.99
10	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.99
11	1.00	0.00	0.00	0.00	0.93	0.07	0.00	0.00	0.00	0.99
12	1.00	0.00	0.00	0.00	0.87	0.06	0.00	0.06	0.00	0.99
13	1.00	0.00	0.00	0.00	0.18	0.00	0.00	0.82	0.00	0.89
14	1.00	0.00	0.00	0.00	0.02	0.00	0.00	0.98	0.00	0.79
15	1.00	0.00	0.00	0.00	0.27	0.00	0.00	0.73	0.00	0.45
16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.06
17	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
18	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.22
19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.03
21	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	1.00	0.00	0.00	0.00	0.69	0.00	0.00	0.31	0.00	0.71
24	1.00	0.00	0.00	0.00	0.11	0.00	0.00	0.89	0.00	0.77
28	1.00	0.00	0.00	0.00	0.10	0.00	0.00	0.90	0.00	0.35
29	1.00	0.26	0.03	0.00	0.09	0.00	0.00	0.63	0.00	0.01
30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.25
32	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.85
33	1.00	0.00	0.00	0.00	0.98	0.01	0.00	0.01	0.00	0.85
38	1.00	0.00	0.00	0.00	0.96	0.03	0.00	0.00	0.00	0.72
41	1.00	0.00	0.00	0.00	0.88	0.00	0.00	0.11	0.00	0.85
link20	1.00	0.00	0.00	0.00	0.26	0.00	0.00	0.74	0.00	0.00
LINK21	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.78
Link22	1.00	0.00	0.00	0.00	0.61	0.00	0.00	0.39	0.00	0.64
Link32	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.71
Link33	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.71
Link34	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.82
Link35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.82

link36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.83
link37	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.66
Link38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.66
Link39	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.68
Link40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.70
Link41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.71
43	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.85
44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.91
45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.58
46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.91
48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.33
49	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
50	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.75
51	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.84
52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.85
LINK26	1.00	0.00	0.06	0.00	0.94	0.00	0.00	0.00	0.00	0.50
53	1.00	0.00	0.00	0.00	0.51	0.49	0.00	0.00	0.00	0.47
54	1.00	0.00	0.13	0.00	0.87	0.00	0.00	0.00	0.00	0.70
Link29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.48
Link30	1.00	0.00	0.13	0.00	0.87	0.00	0.00	0.00	0.00	0.80
55	1.00	0.00	0.13	0.00	0.87	0.00	0.00	0.00	0.00	0.83
56	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.58
57	1.00	0.01	0.00	0.00	0.21	0.00	0.00	0.78	0.00	0.80
59	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.57
60	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.36
61	1.00	0.00	0.18	0.00	0.82	0.00	0.00	0.00	0.00	0.90
68	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.91
69	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.80
70	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.81
71	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.82
72	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.75

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 Conduit Surcharge Summary  
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Conduit	Hours Full			Hours	
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
1	4.81	4.84	4.83	2.07	2.07

2	4.79	4.79	4.82	2.15	2.15
3	4.81	4.82	4.81	4.85	4.81
10	0.01	0.01	0.03	0.01	0.01
11	0.01	0.03	0.01	0.01	0.01
14	0.13	0.13	0.13	0.01	0.01
15	0.13	0.13	0.13	0.01	0.01
16	0.14	0.14	0.14	0.01	0.01
17	0.14	0.14	0.15	0.22	0.12
18	0.15	0.15	0.22	0.01	0.01
19	0.23	0.23	0.26	0.01	0.02
20	0.01	0.28	0.01	0.30	0.01
23	5.67	5.72	5.68	5.58	5.51
24	4.91	5.64	4.91	1.91	1.76
28	3.99	3.99	4.29	0.01	0.01
29	3.91	3.91	4.03	0.01	0.01
30	4.79	4.79	4.80	0.60	0.61
32	4.79	4.82	4.79	2.31	2.31
33	4.69	4.70	4.73	0.01	0.01
38	4.28	4.28	4.34	0.01	0.01
41	0.06	0.06	0.13	0.01	0.01
link20	4.82	4.82	4.82	2.02	2.00
LINK21	4.90	5.09	4.90	4.96	4.74
Link22	4.72	4.72	4.81	0.01	0.01
Link32	4.39	4.39	4.68	0.75	0.74
Link33	4.68	4.68	4.86	0.71	0.71
Link34	4.86	4.86	4.87	3.88	3.90
Link35	4.87	4.87	4.87	3.92	3.92
link36	4.87	4.87	4.92	3.84	3.86
link37	4.92	4.92	4.92	4.92	4.88
Link38	4.92	4.92	4.92	4.90	4.87
Link39	4.91	4.92	4.91	4.95	4.89
Link40	4.90	4.91	4.90	4.95	4.87
Link41	4.85	4.90	4.85	4.95	4.85
43	4.84	4.86	4.87	3.32	3.35
44	3.77	3.81	4.69	0.01	0.01
45	4.20	4.69	4.21	4.90	4.10
46	4.16	4.21	5.00	0.01	0.01
48	0.01	4.82	0.01	4.87	0.01
49	4.65	4.71	4.99	5.04	0.08
50	4.64	4.71	4.70	4.17	4.29
51	4.60	4.70	4.68	2.88	3.07
52	4.69	4.69	4.82	3.27	3.57
LINK26	2.02	2.02	2.09	0.01	0.01

53	2.09	2.09	2.17	0.01	0.01
54	2.17	2.17	2.54	0.01	0.01
Link29	2.54	2.54	2.56	0.01	0.03
Link30	2.56	2.56	2.78	0.01	0.01
55	2.62	2.62	3.80	0.01	0.01
56	4.81	4.81	4.82	1.55	1.54
57	4.73	4.73	4.80	0.01	0.01
59	4.83	4.83	4.84	0.37	0.37
60	4.81	4.81	4.81	0.01	0.04
61	4.34	4.34	5.02	0.01	0.01
68	3.00	3.00	4.39	0.01	0.01
69	4.97	4.97	4.99	5.45	4.11
70	4.99	4.99	5.05	5.44	4.05
71	5.05	5.05	5.28	5.25	3.98
72	5.28	5.28	7.27	5.10	3.88

Analysis begun on: Tue Feb 13 12:54:07 2018  
Analysis ended on: Tue Feb 13 12:54:19 2018  
Total elapsed time: 00:00:12