

THE RANCH PLAN PLANNED COMMUNITY
PLANNING AREAS 3 AND 4 RUNOFF MANAGEMENT PLAN

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INTERNATIONAL

TECHNICAL APPENDIX C.6

PCSWMM Results

PCSWMM Link Summary

Element Summary

Number of External Inflows	2
Number of Links	46

Outlet Structure Summary

Name	Type	Shape	Invert Offset (ft)	Outlet To	Diameter (ft)
C35	Conduit	Circular	5	Gobernadora	8.00
Outlet Structure 3A-5					
C23	Conduit	Circular	0.0	Gobernadora	0.50
C24	Conduit	Circular	2.95	Gobernadora	1.75
W-5	Weir	(N/A)	5.7	Gobernadora	(N/A)
Outlet Structure 3A-6					
C25	Conduit	Circular	0.0	Gobernadora	0.50
C26	Conduit	Circular	2.7	Gobernadora	2.00
W-6	Weir	(N/A)	5.7	Gobernadora	(N/A)
Outlet Structure 3A-7					
C27	Conduit	Circular	0.0	Gobernadora	0.50
C28	Conduit	Circular	2.7	Gobernadora	2.00
W-7	Weir	(N/A)	5.7	Gobernadora	(N/A)
Outlet Structure 3A-9					
C29	Conduit	Circular	0.0	Gobernadora	0.50
C38	Conduit	Circular	1.0	Gobernadora	1.50
W-9	Weir	(N/A)	4.0	Gobernadora	(N/A)
C20	Conduit	Circular	0.0	Basin 3A-10	4.00
Outlet Structure 3A-10					
C30	Conduit	Circular	0.0	Gobernadora	0.50
C37	Conduit	Circular	1.0	Gobernadora	2.00
W-10	Weir	(N/A)	4.5	Gobernadora	(N/A)
C21	Conduit	Circular	0.0	Basin 3A-11	2.50
Outlet Structure 3A-11					
C31	Conduit	Circular	0.0	Gobernadora	1.00
C36	Conduit	Circular	0.8	Gobernadora	2.00
W-11	Weir	(N/A)	4.5	Gobernadora	(N/A)

Notes

1. Weirs are emergency spillways for basins.
2. C35 is model equivalent to Outlet 9.
3. Only links out of basins are summarized, for data on all links refer to full scenario summaries in Appendix C.6.

PCSWMM Scenario Calculation Summary

Element Summary

ID	All Discrete Events
Output Increment	0.050 hours
Duration	24.00 hours




Outlet Discharge Summary

Name	100-yr	50-yr	25-yr	10-yr	5-yr	2-yr
	(cfs)					
C35	264.33	185.17	162.03	0.00	0.00	0.00
Outlet Structure 3A-5						
C23	2.94	2.95	2.94	2.94	2.94	2.39
C24	40.90	40.5	40.09	39.33	33.37	1.23
W-5	0.00	0.00	0.00	0.00	0.00	0.00
Outlet Structure 3A-6						
C25	3.15	3.15	3.15	3.15	3.15	2.92
C26	68.22	67.65	66.96	66.98	25.73	0.00
W-6	0.00	0.00	0.00	0.00	0.00	0.00
Outlet Structure 3A-7						
C27	2.27	2.27	2.27	2.27	2.22	1.99
C28	19.37	17.56	12.60	2.25	0.00	0.00
W-7	0.00	0.00	0.00	0.00	0.00	0.00
Outlet Structure 3A-9						
C29	2.51	2.51	2.51	2.52	2.52	1.17
C38	81.92	79.33	72.37	40.65	0.00	0.00
W-9	0.00	0.00	0.00	0.00	0.00	0.00
C20	304.17	298.48	283.18	211.52	30.98	4.42
Outlet Structure 3A-10						
C30	2.51	2.51	2.51	2.51	2.51	0.98
C37	100.92	93.56	77.84	42.55	0.00	0.00
W-10	0.00	0.00	0.00	0.00	0.00	0.00
C21	149.94	148.9	143.09	116.68	16.64	2.01
Outlet Structure 3A-11						
C31	18.71	18.59	18.58	18.69	10.43	1.27
C36	104.57	98.8	85.83	59.12	0.00	0.00
W-11	0.00	0.00	0.00	0.00	0.00	0.00
C33	579.71	465.32	350.81	233.52	77.78	13.8

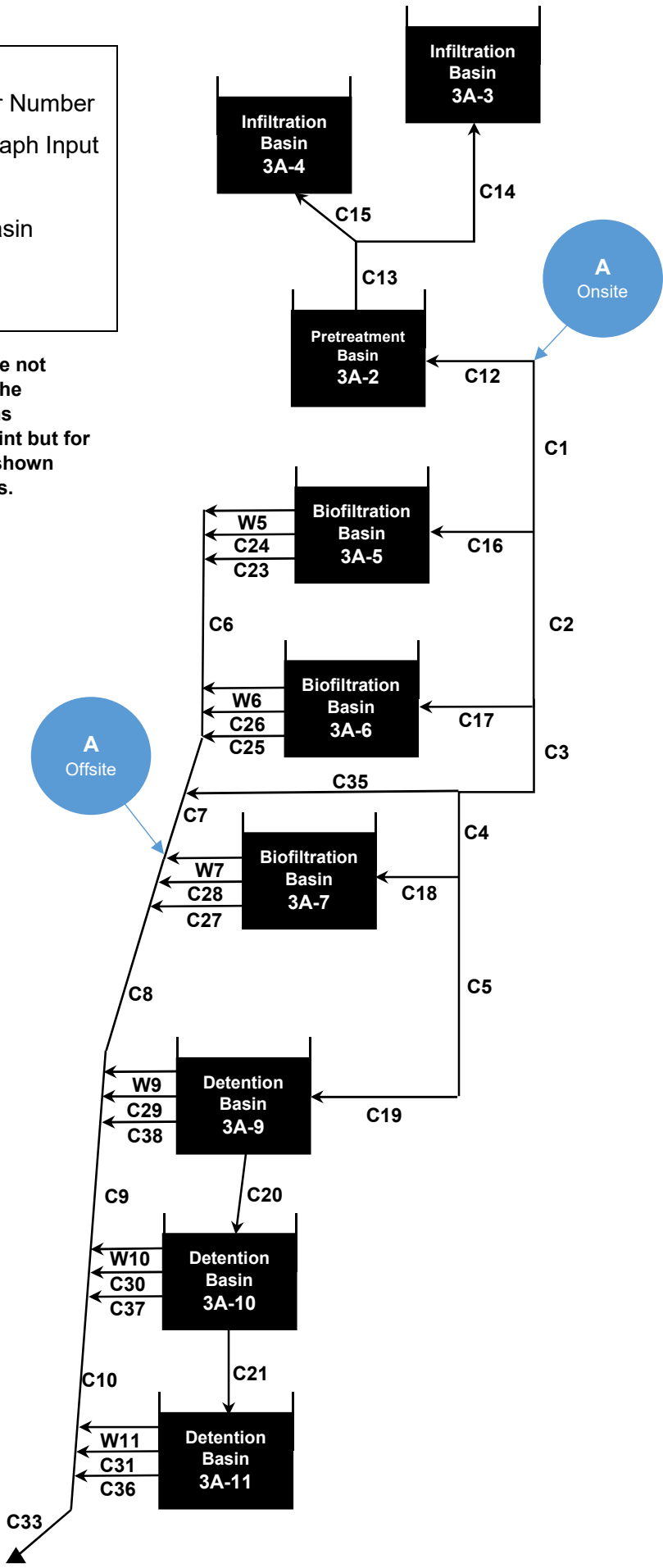
Notes

1. Weirs are emergency spillways for basins.
2. C35 is model equivalent to Outlet 9.
3. Only links out of basins are summarized, for data on all links refer to full scenario summaries in Appendix C.6.
4. C33 is the total peak outflow for the basin system.

LEGEND

- C15 Conduit/Weir Number
-  Unit Hydrograph Input Location
-  Proposed Basin
-  Conduits

NOTE: Some conduits are not included for simplicity. The conduits out of the basins converge at the same point but for labeling purposes were shown having different junctions.



 WARNING 02: maximum depth increased for Node J12

 Element Count

Number of rain gages 0
 Number of subcatchments ... 0
 Number of nodes 8
 Number of links 7
 Number of pollutants 0
 Number of land uses 0

 Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J10	JUNCTION	331.50	18.00	0.0	
J11	JUNCTION	300.00	18.00	0.0	
J12	JUNCTION	280.00	17.84	0.0	
J13	JUNCTION	275.00	18.00	0.0	
J7	JUNCTION	375.00	18.00	0.0	Yes
J8	JUNCTION	348.50	18.00	0.0	
J9	JUNCTION	340.00	18.00	0.0	
OUT1	OUTFALL	250.00	17.84	0.0	

 Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C10	J11	J12	CONDUIT	658.8	3.0373	0.0350
C11	J12	J13	CONDUIT	449.5	1.1123	0.0350
C33	J13	OUT1	CONDUIT	702.1	3.5628	0.0350
C6	J7	J8	CONDUIT	557.2	4.7616	0.0350
C7	J8	J9	CONDUIT	777.5	1.0933	0.0350
C8	J9	J10	CONDUIT	1081.8	0.7858	0.0350
C9	J10	J11	CONDUIT	925.5	3.4055	0.0350

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C10	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	20223.36
C11	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12238.65
C33	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	21903.39
C6	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	25321.59
C7	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12133.59
C8	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	10286.37
C9	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	21414.42

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

Analysis Options

Flow Units CFS

Process Models:

Rainfall/Runoff NO
RDII NO
Snowmelt NO
Groundwater NO
Flow Routing YES
Ponding Allowed YES
Water Quality NO

Flow Routing Method DYNWAVE

Starting Date 10/01/1958 00:30:00

Ending Date 09/30/2005 23:45:00

Antecedent Dry Days 0.0

Report Time Step 00:00:00

Routing Time Step 20.00 sec

Variable Time Step YES

Maximum Trials 8

Number of Threads 1

Head Tolerance 0.005000 ft

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*****
Flow Routing Continuity
*****
                Volume      Volume
                acre-feet   10^6 gal
                -----
Dry Weather Inflow .....      0.000      0.000
Wet Weather Inflow .....      0.000      0.000
Groundwater Inflow .....      0.000      0.000
RDII Inflow .....            0.000      0.000
External Inflow .....      11671.578    3803.358
External Outflow .....      11672.309    3803.596
Flooding Loss .....          0.000      0.000
Evaporation Loss .....       0.000      0.000
Exfiltration Loss .....       0.000      0.000
Initial Stored Volume ....      0.000      0.000
Final Stored Volume .....      0.000      0.000
Continuity Error (%) .....    -0.006

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*****
Time-Step Critical Elements
*****
None

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

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*****
Routing Time Step Summary
*****
Minimum Time Step      :      0.70 sec
Average Time Step      :      20.00 sec
Maximum Time Step      :      20.00 sec
Percent in Steady State :      0.00
Average Iterations per Step :      2.00
Percent Not Converging :      0.00

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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
J10	JUNCTION	0.00	3.52	335.02	7094 13:33	1.35
J11	JUNCTION	0.00	3.64	303.64	7094 13:33	1.41
J12	JUNCTION	0.01	4.85	284.85	7094 13:33	1.96
J13	JUNCTION	0.00	3.47	278.47	7094 13:34	1.35
J7	JUNCTION	0.00	3.22	378.22	7094 13:30	1.20
J8	JUNCTION	0.01	5.04	353.54	7094 13:30	1.89
J9	JUNCTION	0.01	5.57	345.57	7094 13:32	2.27
OUT1	OUTFALL	0.00	3.46	253.46	7094 13:34	1.35

Node Inflow Summary

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal	Flow Balance Error Percent
J10	JUNCTION	0.00	1524.88	7094 13:32	0	3.8e+003	-0.016
J11	JUNCTION	0.00	1518.00	7094 13:33	0	3.8e+003	0.012
J12	JUNCTION	0.00	1514.60	7094 13:33	0	3.8e+003	0.006
J13	JUNCTION	0.00	1514.48	7094 13:34	0	3.8e+003	-0.009
J7	JUNCTION	1556.65	1556.65	7094 13:30	3.8e+003	3.8e+003	-0.003
J8	JUNCTION	0.00	1552.22	7094 13:30	0	3.8e+003	0.000
J9	JUNCTION	0.00	1539.21	7094 13:31	0	3.8e+003	0.003
OUT1	OUTFALL	0.00	1514.76	7094 13:34	0	3.8e+003	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
OUT1	16.95	2.03	1514.76	3803.314
System	16.95	2.03	1514.76	3803.314

 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
C10	CONDUIT	1514.60	7094 13:33	12.93	0.07	0.24
C11	CONDUIT	1514.48	7094 13:34	13.21	0.12	0.23
C33	CONDUIT	1514.76	7094 13:34	16.06	0.07	0.19
C6	CONDUIT	1552.22	7094 13:30	13.72	0.06	0.23
C7	CONDUIT	1539.21	7094 13:31	10.36	0.13	0.30
C8	CONDUIT	1524.88	7094 13:32	12.11	0.15	0.25
C9	CONDUIT	1518.00	7094 13:33	15.57	0.07	0.20

 Flow Classification Summary

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	
C10	1.00	0.66	0.02	0.00	0.33	0.00	0.00	0.00	0.99	0.00
C11	1.00	0.66	0.00	0.00	0.34	0.00	0.00	0.00	0.16	0.00
C33	1.00	0.73	0.00	0.00	0.26	0.01	0.00	0.00	0.03	0.00

C6	1.00	0.68	0.06	0.00	0.26	0.00	0.00	0.00	0.41	0.00
C7	1.00	0.66	0.01	0.00	0.32	0.00	0.00	0.00	0.99	0.00
C8	1.00	0.66	0.00	0.00	0.34	0.00	0.00	0.00	0.01	0.00
C9	1.00	0.67	0.04	0.00	0.28	0.01	0.00	0.00	0.35	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Mon Jun 24 07:07:15 2019
Analysis ended on: Mon Jun 24 07:12:21 2019
Total elapsed time: 00:05:06

 WARNING 02: maximum depth increased for Node J12

Element Count

Number of rain gages 0
 Number of subcatchments ... 0
 Number of nodes 28
 Number of links 44
 Number of pollutants 0
 Number of land uses 0

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	445.00	10.00	0.0	Yes
J10	JUNCTION	300.00	18.00	0.0	
J11	JUNCTION	280.00	18.00	0.0	
J12	JUNCTION	272.00	17.84	0.0	
J13	JUNCTION	265.00	18.00	0.0	
J14	JUNCTION	340.00	1.00	0.0	
J15	JUNCTION	400.00	3.00	0.0	
J16	JUNCTION	445.00	10.00	0.0	
J2	JUNCTION	430.00	10.00	0.0	
J3	JUNCTION	415.00	10.00	0.0	
J4	JUNCTION	407.00	13.00	0.0	
J5	JUNCTION	392.00	10.00	0.0	
J6	JUNCTION	353.02	10.00	0.0	
J7	JUNCTION	338.00	18.00	0.0	
J8	JUNCTION	332.00	18.00	0.0	
J9	JUNCTION	327.00	18.00	0.0	
OUT1	OUTFALL	250.00	17.84	0.0	
3A-1	STORAGE	0.00	5.00	0.0	
3A-10	STORAGE	315.00	5.00	0.0	
3A-11	STORAGE	305.00	5.00	0.0	
3A-12	STORAGE	295.00	5.00	0.0	
3A-2	STORAGE	405.00	5.00	0.0	
3A-3	STORAGE	393.00	7.00	0.0	

3A-4	STORAGE	383.00	7.00	0.0
3A-5	STORAGE	393.80	6.20	0.0
3A-6	STORAGE	393.80	6.20	0.0
3A-7	STORAGE	358.80	6.20	0.0
3A-9	STORAGE	335.00	5.00	0.0

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J1	J2	CONDUIT	163.0	9.2417	0.0130
C10	J11	J12	CONDUIT	658.8	1.2144	0.0350
C11	J12	J13	CONDUIT	449.5	1.5574	0.0350
C12	J1	3A-2	CONDUIT	299.8	13.4641	0.0130
C13	3A-2	J15	CONDUIT	300.0	1.6669	0.0130
C14	J15	3A-3	CONDUIT	977.8	0.7159	0.0130
C15	J15	3A-4	CONDUIT	228.6	7.4579	0.0130
C16	J2	3A-5	CONDUIT	214.6	17.1164	0.0130
C17	J3	3A-6	CONDUIT	210.0	10.1483	0.0130
C18	J5	3A-7	CONDUIT	284.3	11.7594	0.0130
C19	J6	3A-9	CONDUIT	93.0	19.7484	0.0130
C2	J2	J3	CONDUIT	710.0	2.1131	0.0130
C20	3A-9	3A-10	CONDUIT	111.0	18.3178	0.0130
C21	3A-10	3A-11	CONDUIT	86.0	11.7073	0.0130
C22	J14	3A-12	CONDUIT	806.0	5.5918	0.0130
C23	3A-5	J7	CONDUIT	216.5	26.6711	0.0130
C24	3A-5	J7	CONDUIT	258.6	23.3272	0.0130
C25	3A-6	J8	CONDUIT	205.0	31.6227	0.0130
C26	3A-6	J8	CONDUIT	245.7	27.2055	0.0130
C27	3A-7	J9	CONDUIT	211.8	15.1889	0.0130
C28	3A-7	J9	CONDUIT	245.5	14.1940	0.0130
C29	3A-9	J10	CONDUIT	204.6	17.3669	0.0130
C3	J3	J4	CONDUIT	358.7	2.2310	0.0130
C30	3A-10	J11	CONDUIT	204.8	17.3418	0.0130
C31	3A-11	J12	CONDUIT	235.6	14.1440	0.0100
C32	3A-12	J13	CONDUIT	297.2	10.1459	0.0130
C33	J13	OUT1	CONDUIT	702.1	2.1368	0.0350
C34	J16	J9	CONDUIT	218.4	64.2006	0.0100
C35	J4	J9	CONDUIT	782.4	10.9281	0.0130
C36	3A-11	J12	CONDUIT	253.1	13.4557	0.0100
C37	3A-10	J11	CONDUIT	249.1	14.6069	0.0100
C38	3A-9	J10	CONDUIT	240.1	15.1652	0.0100
C4	J4	J5	CONDUIT	725.0	2.0695	0.0130
C5	J5	J6	CONDUIT	898.2	4.3439	0.0130

C6	J7	J8	CONDUIT	557.2	1.0769	0.0350
C7	J8	J9	CONDUIT	777.5	0.6431	0.0350
C8	J9	J10	CONDUIT	1081.8	2.4967	0.0350
C9	J10	J11	CONDUIT	925.5	2.1615	0.0350
W10	3A-10	J11	WEIR			
W11	3A-11	J12	WEIR			
W5	3A-5	J7	WEIR			
W6	3A-6	J8	WEIR			
W7	3A-7	J9	WEIR			
W9	3A-9	J10	WEIR			

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	8.00	50.27	2.00	8.00	1	2772.73
C10	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12787.90
C11	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	14481.40
C12	CIRCULAR	3.00	7.07	0.75	3.00	1	244.74
C13	RECT_CLOSED	3.00	12.00	0.86	4.00	1	159.80
C14	CIRCULAR	1.50	1.77	0.38	1.50	1	8.89
C15	CIRCULAR	3.00	7.07	0.75	3.00	1	182.15
C16	CIRCULAR	1.50	1.77	0.38	1.50	1	43.46
C17	CIRCULAR	2.00	3.14	0.50	2.00	1	72.07
C18	CIRCULAR	1.25	1.23	0.31	1.25	1	22.15
C19	CIRCULAR	5.00	19.63	1.25	5.00	1	1157.38
C2	CIRCULAR	8.00	50.27	2.00	8.00	1	1325.86
C20	CIRCULAR	4.00	12.57	1.00	4.00	1	614.78
C21	CIRCULAR	2.50	4.91	0.63	2.50	1	140.34
C22	CIRCULAR	1.00	0.79	0.25	1.00	1	8.42
C23	CIRCULAR	0.50	0.20	0.13	0.50	1	2.90
C24	CIRCULAR	1.75	2.41	0.44	1.75	1	76.53
C25	CIRCULAR	0.50	0.20	0.13	0.50	1	3.16
C26	CIRCULAR	2.00	3.14	0.50	2.00	1	118.00
C27	CIRCULAR	0.50	0.20	0.13	0.50	1	2.19
C28	CIRCULAR	2.00	3.14	0.50	2.00	1	85.23
C29	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C3	CIRCULAR	8.00	50.27	2.00	8.00	1	1362.34
C30	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C31	CIRCULAR	1.00	0.79	0.25	1.00	1	17.42
C32	CIRCULAR	1.00	0.79	0.25	1.00	1	11.35
C33	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	16962.85
C34	CIRCULAR	8.00	50.27	2.00	8.00	1	9500.47

C35	CIRCULAR	8.00	50.27	2.00	8.00	1	3015.12
C36	CIRCULAR	2.00	3.14	0.50	2.00	1	107.88
C37	CIRCULAR	2.00	3.14	0.50	2.00	1	112.40
C38	CIRCULAR	1.50	1.77	0.38	1.50	2	53.18
C4	CIRCULAR	5.25	21.65	1.31	5.25	1	426.72
C5	CIRCULAR	5.00	19.63	1.25	5.00	1	542.81
C6	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12042.33
C7	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	9305.86
C8	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	18335.61
C9	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	17060.47

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

Analysis Options

Flow Units CFS

Process Models:

Rainfall/Runoff NO

RDII NO

Snowmelt NO

Groundwater NO

Flow Routing YES

Ponding Allowed YES

Water Quality NO

Flow Routing Method DYNWAVE

Starting Date 10/01/1958 00:30:00

Ending Date 09/30/2005 23:45:00

Antecedent Dry Days 0.0

Report Time Step 00:00:00

Routing Time Step 20.00 sec

Variable Time Step YES

Maximum Trials 8

Number of Threads 2

Head Tolerance 0.005000 ft

Flow Routing Continuity

Volume

acre-feet

Volume

10⁶ gal

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	22171.279	7224.843
External Outflow	16821.108	5481.409
Flooding Loss	0.761	0.248
Evaporation Loss	0.000	0.000
Exfiltration Loss	5364.940	1748.246
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.042	0.014
Continuity Error (%)	-0.070	

Time-Step Critical Elements

Link C23 (11.84%)

Link C25 (4.22%)

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	0.50 sec
Average Time Step	:	17.69 sec
Maximum Time Step	:	20.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	2.00
Percent Not Converging	:	0.00

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
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J1	JUNCTION	0.04	4.65	449.65	7094	13:30	1.47
J10	JUNCTION	0.03	3.32	303.32	7094	13:34	0.94
J11	JUNCTION	0.03	4.20	284.20	7094	13:35	1.27
J12	JUNCTION	0.03	3.99	275.99	7094	13:36	1.58
J13	JUNCTION	0.03	3.62	268.62	7094	13:36	1.42
J14	JUNCTION	0.00	0.00	340.00	0	00:00	0.00
J15	JUNCTION	0.03	2.63	402.63	7791	10:44	1.74
J16	JUNCTION	0.00	0.00	445.00	0	00:00	0.00
J2	JUNCTION	0.05	10.00	440.00	7094	13:28	1.97
J3	JUNCTION	0.03	6.94	421.94	7094	13:29	1.47
J4	JUNCTION	0.04	7.99	414.99	7094	13:30	1.80
J5	JUNCTION	0.03	3.74	395.74	7094	13:34	1.39
J6	JUNCTION	0.02	2.13	355.15	7094	13:34	0.91
J7	JUNCTION	0.02	0.58	338.58	13310	04:51	0.56
J8	JUNCTION	0.04	1.38	333.38	13244	15:32	1.32
J9	JUNCTION	0.02	3.02	330.02	7094	13:34	0.87
OUT1	OUTFALL	0.02	3.62	253.62	7094	13:36	1.42
3A-1	STORAGE	0.00	0.00	0.00	0	00:00	0.00
3A-10	STORAGE	0.03	4.28	319.28	7791	17:32	1.64
3A-11	STORAGE	0.03	3.40	308.40	7791	18:12	2.09
3A-12	STORAGE	0.00	0.00	295.00	0	00:00	0.00
3A-2	STORAGE	0.02	3.66	408.66	7791	10:57	2.10
3A-3	STORAGE	0.27	3.45	396.45	6340	02:53	3.27
3A-4	STORAGE	0.27	6.79	389.79	12190	12:15	6.14
3A-5	STORAGE	0.27	3.97	397.77	13310	04:50	3.93
3A-6	STORAGE	0.13	3.83	397.63	7094	13:37	3.75
3A-7	STORAGE	0.10	3.36	362.16	13284	14:16	3.35
3A-9	STORAGE	0.02	2.09	337.09	7791	16:22	1.17

Node Inflow Summary

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal	Flow Balance Error Percent
J1	JUNCTION	1665.36	1665.36	7094 13:30	7.22e+003	7.22e+003	-0.050
J10	JUNCTION	0.00	1104.99	7094 13:34	0	4.5e+003	-0.000
J11	JUNCTION	0.00	1205.50	7094 13:34	0	4.73e+003	0.001
J12	JUNCTION	0.00	1259.24	7094 13:35	0	5.48e+003	-0.001
J13	JUNCTION	0.00	1258.42	7094 13:36	0	5.48e+003	0.000

J14	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
J15	JUNCTION	0.00	191.46	7791	10:44	0	1.75e+003	-0.035
J16	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
J2	JUNCTION	0.00	1668.08	7094	13:30	0	5.48e+003	-0.013
J3	JUNCTION	0.00	1434.09	7094	13:30	0	3.12e+003	-0.029
J4	JUNCTION	0.00	1358.94	7094	13:29	0	1.79e+003	0.003
J5	JUNCTION	0.00	461.47	7094	13:30	0	1.77e+003	0.004
J6	JUNCTION	0.00	438.89	7094	13:34	0	1.16e+003	-0.003
J7	JUNCTION	0.00	44.81	13310	04:51	0	2.36e+003	-0.000
J8	JUNCTION	0.00	118.85	7094	13:37	0	3.69e+003	-0.000
J9	JUNCTION	0.00	1014.82	7094	13:33	0	4.32e+003	0.000
OUT1	OUTFALL	0.00	1257.67	7094	13:36	0	5.48e+003	0.000
3A-1	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-10	STORAGE	0.00	329.98	7791	16:22	0	978	0.002
3A-11	STORAGE	0.00	150.53	13284	13:52	0	748	0.001
3A-12	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-2	STORAGE	0.00	261.76	7791	10:45	0	1.75e+003	0.020
3A-3	STORAGE	0.00	10.12	7791	10:45	0	278	0.038
3A-4	STORAGE	0.00	179.94	7791	10:44	0	1.47e+003	0.006
3A-5	STORAGE	0.00	46.74	9185	19:40	0	2.36e+003	-0.000
3A-6	STORAGE	0.00	77.54	13265	06:30	0	1.33e+003	0.008
3A-7	STORAGE	0.00	23.84	9998	21:13	0	610	0.000
3A-9	STORAGE	0.00	438.89	7094	13:34	0	1.16e+003	0.005

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
J2	JUNCTION	0.12	2.000	0.000

Node Flooding Summary

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

Maximum	Time of Max	Total Flood	Maximum Pondered
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Node	Hours Flooded	Rate CFS	Occurrence days hr:min	Volume 10^6 gal	Depth Feet
J2	0.09	187.55	7094 13:30	0.248	0.000

Storage Volume Summary

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
3A-1	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-10	2.363	0	0	0	426.229	84	7791 17:32	265.47
3A-11	2.866	1	0	0	318.900	65	7791 18:12	133.54
3A-12	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-2	1.045	0	0	0	198.985	70	7791 10:57	191.46
3A-3	5.107	3	0	100	68.392	42	6340 02:53	0.39
3A-4	28.483	3	0	100	796.052	97	12190 12:15	2.25
3A-5	18.961	4	0	0	287.470	60	13310 04:50	44.81
3A-6	5.591	2	0	0	174.350	57	7094 13:37	75.33
3A-7	4.740	1	0	0	166.032	50	13284 14:16	22.29
3A-9	4.043	0	0	0	395.327	40	7791 16:22	425.26

Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
OUT1	96.06	2.03	1257.67	5481.002
System	96.06	2.03	1257.67	5481.002

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
C1	CONDUIT	1668.08	7094	13:30	41.97	0.60	0.79
C10	CONDUIT	1203.62	7094	13:35	10.68	0.09	0.23
C11	CONDUIT	1258.42	7094	13:36	12.08	0.09	0.21
C12	CONDUIT	261.76	7791	10:45	>50.00	1.07	0.95
C13	CONDUIT	191.46	7791	10:44	17.96	1.20	0.92
C14	CONDUIT	10.12	7791	10:45	8.65	1.14	1.00
C15	CONDUIT	179.94	7791	10:44	36.13	0.99	0.90
C16	CONDUIT	46.74	9185	19:40	>50.00	1.08	1.00
C17	CONDUIT	77.54	13265	06:30	33.43	1.08	1.00
C18	CONDUIT	23.84	9998	21:13	29.25	1.08	1.00
C19	CONDUIT	438.89	7094	13:34	>50.00	0.38	0.42
C2	CONDUIT	1434.09	7094	13:30	30.78	1.08	0.93
C20	CONDUIT	329.98	7791	16:22	>50.00	0.54	0.75
C21	CONDUIT	150.53	13284	13:52	45.19	1.07	1.00
C22	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
C23	CONDUIT	2.94	7791	16:02	22.87	1.02	1.00
C24	CONDUIT	41.88	13310	04:51	39.01	0.55	0.46
C25	CONDUIT	3.18	11463	14:23	25.96	1.01	1.00
C26	CONDUIT	72.18	7094	13:37	38.60	0.61	0.62
C27	CONDUIT	2.27	12516	17:31	18.14	1.04	1.00
C28	CONDUIT	20.03	13284	14:16	19.28	0.24	0.53
C29	CONDUIT	2.52	12549	03:34	18.86	1.08	1.00
C3	CONDUIT	1358.94	7094	13:29	27.87	1.00	0.93
C30	CONDUIT	2.51	3446	06:38	15.73	1.08	1.00
C31	CONDUIT	18.74	16236	16:12	30.09	1.08	1.00
C32	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
C33	CONDUIT	1257.67	7094	13:36	12.74	0.07	0.20
C34	CONDUIT	0.00	0	00:00	0.00	0.00	0.19
C35	CONDUIT	897.30	7094	13:30	>50.00	0.30	0.38
C36	CONDUIT	116.07	7791	17:02	42.45	1.08	1.00
C37	CONDUIT	120.84	13284	13:31	41.34	1.08	1.00
C38	CONDUIT	92.97	7791	16:22	33.15	0.87	0.86
C4	CONDUIT	461.47	7094	13:30	24.67	1.08	0.86
C5	CONDUIT	438.89	7094	13:34	36.68	0.81	0.59
C6	CONDUIT	44.81	13310	04:51	2.33	0.00	0.05
C7	CONDUIT	127.72	7094	13:20	4.05	0.01	0.12
C8	CONDUIT	1014.23	7094	13:34	11.89	0.06	0.18
C9	CONDUIT	1103.19	7094	13:34	10.74	0.06	0.21
W10	WEIR	0.00	0	00:00			0.00
W11	WEIR	0.00	0	00:00			0.00
W5	WEIR	0.00	0	00:00			0.00

C4	1.00	0.00	0.00	0.00	0.08	0.91	0.00	0.00	0.02	0.00
C5	1.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00
C6	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	1.00	0.00
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00
C8	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.98	0.00
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.99	0.00

 Conduit Surcharge Summary

Conduit	Hours Full			Hours	
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
C1	0.01	0.01	0.12	0.01	0.01
C12	0.01	3.30	0.43	0.15	0.01
C13	0.01	0.43	0.01	0.91	0.01
C14	8.17	10.20	13325.82	10.81	1.51
C15	0.01	0.01	1712.14	0.01	0.01
C16	170.25	175.35	11077.31	105.69	1.84
C17	21.74	22.14	2966.58	19.23	1.45
C18	70.67	79.62	3084.15	48.49	7.30
C2	0.01	0.12	0.01	0.16	0.01
C20	0.01	0.01	0.65	0.01	0.01
C21	1.48	3.95	4.43	7.24	1.29
C23	302.13	17440.99	302.13	478.71	302.13
C25	1117.42	7374.94	1117.42	0.34	0.01
C27	402.51	5423.80	402.51	613.23	401.69
C28	0.01	0.01	0.03	0.01	0.01
C29	221.62	247.31	469.68	127.64	10.51
C30	326.16	354.02	705.43	137.89	11.46
C31	88.47	193.53	106.30	91.03	50.83
C36	0.52	1.39	3.72	5.29	0.08
C37	0.62	2.19	1.82	2.06	0.19
C38	0.01	0.01	1.56	0.01	0.01
C4	0.01	2.53	0.01	3.03	0.01

Analysis begun on: Fri Aug 23 19:27:42 2019
 Analysis ended on: Fri Aug 23 20:18:41 2019
 Total elapsed time: 00:50:59

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

 WARNING 02: maximum depth increased for Node J12

Element Count

Number of rain gages 0
 Number of subcatchments ... 0
 Number of nodes 28
 Number of links 44
 Number of pollutants 0
 Number of land uses 0

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	445.00	10.00	0.0	Yes
J10	JUNCTION	300.00	18.00	0.0	
J11	JUNCTION	280.00	18.00	0.0	
J12	JUNCTION	272.00	17.84	0.0	
J13	JUNCTION	265.00	18.00	0.0	
J14	JUNCTION	340.00	1.00	0.0	
J15	JUNCTION	400.00	3.00	0.0	
J16	JUNCTION	445.00	10.00	0.0	Yes
J2	JUNCTION	430.00	10.00	0.0	
J3	JUNCTION	415.00	10.00	0.0	
J4	JUNCTION	407.00	13.00	0.0	
J5	JUNCTION	392.00	10.00	0.0	
J6	JUNCTION	353.02	10.00	0.0	
J7	JUNCTION	338.00	18.00	0.0	
J8	JUNCTION	332.00	18.00	0.0	
J9	JUNCTION	327.00	18.00	0.0	
OUT1	OUTFALL	250.00	17.84	0.0	
3A-1	STORAGE	0.00	5.00	0.0	
3A-10	STORAGE	315.00	5.00	0.0	
3A-11	STORAGE	305.00	5.00	0.0	
3A-12	STORAGE	295.00	5.00	0.0	
3A-2	STORAGE	405.00	5.00	0.0	
3A-3	STORAGE	393.00	7.00	0.0	

3A-4	STORAGE	383.00	7.00	0.0
3A-5	STORAGE	393.80	6.20	0.0
3A-6	STORAGE	393.80	6.20	0.0
3A-7	STORAGE	358.80	6.20	0.0
3A-9	STORAGE	335.00	5.00	0.0

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J1	J2	CONDUIT	163.0	9.2417	0.0130
C10	J11	J12	CONDUIT	658.8	1.2144	0.0350
C11	J12	J13	CONDUIT	449.5	1.5574	0.0350
C12	J1	3A-2	CONDUIT	299.8	13.4641	0.0130
C13	3A-2	J15	CONDUIT	300.0	1.6669	0.0130
C14	J15	3A-3	CONDUIT	977.8	0.7159	0.0130
C15	J15	3A-4	CONDUIT	228.6	7.4579	0.0130
C16	J2	3A-5	CONDUIT	214.6	17.1164	0.0130
C17	J3	3A-6	CONDUIT	210.0	10.1483	0.0130
C18	J5	3A-7	CONDUIT	284.3	11.7594	0.0130
C19	J6	3A-9	CONDUIT	93.0	19.7484	0.0130
C2	J2	J3	CONDUIT	710.0	2.1131	0.0130
C20	3A-9	3A-10	CONDUIT	111.0	18.3178	0.0130
C21	3A-10	3A-11	CONDUIT	86.0	11.7073	0.0130
C22	J14	3A-12	CONDUIT	806.0	5.5918	0.0130
C23	3A-5	J7	CONDUIT	216.5	26.6711	0.0130
C24	3A-5	J7	CONDUIT	258.6	23.3272	0.0130
C25	3A-6	J8	CONDUIT	205.0	31.6227	0.0130
C26	3A-6	J8	CONDUIT	245.7	27.2055	0.0130
C27	3A-7	J9	CONDUIT	211.8	15.1889	0.0130
C28	3A-7	J9	CONDUIT	245.5	14.1940	0.0130
C29	3A-9	J10	CONDUIT	204.6	17.3669	0.0130
C3	J3	J4	CONDUIT	358.7	2.2310	0.0130
C30	3A-10	J11	CONDUIT	204.8	17.3418	0.0130
C31	3A-11	J12	CONDUIT	235.6	14.1440	0.0100
C32	3A-12	J13	CONDUIT	297.2	10.1459	0.0130
C33	J13	OUT1	CONDUIT	702.1	2.1368	0.0350
C34	J16	J9	CONDUIT	218.4	64.2006	0.0100
C35	J4	J9	CONDUIT	782.4	10.9281	0.0130
C36	3A-11	J12	CONDUIT	253.1	13.4557	0.0100
C37	3A-10	J11	CONDUIT	249.1	14.6069	0.0100
C38	3A-9	J10	CONDUIT	240.1	15.1652	0.0100
C4	J4	J5	CONDUIT	725.0	2.0695	0.0130
C5	J5	J6	CONDUIT	898.2	4.3439	0.0130

C6	J7	J8	CONDUIT	557.2	1.0769	0.0350
C7	J8	J9	CONDUIT	777.5	0.6431	0.0350
C8	J9	J10	CONDUIT	1081.8	2.4967	0.0350
C9	J10	J11	CONDUIT	925.5	2.1615	0.0350
W10	3A-10	J11	WEIR			
W11	3A-11	J12	WEIR			
W5	3A-5	J7	WEIR			
W6	3A-6	J8	WEIR			
W7	3A-7	J9	WEIR			
W9	3A-9	J10	WEIR			

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	8.00	50.27	2.00	8.00	1	2772.73
C10	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12787.90
C11	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	14481.40
C12	CIRCULAR	3.00	7.07	0.75	3.00	1	244.74
C13	RECT_CLOSED	3.00	12.00	0.86	4.00	1	159.80
C14	CIRCULAR	1.50	1.77	0.38	1.50	1	8.89
C15	CIRCULAR	3.00	7.07	0.75	3.00	1	182.15
C16	CIRCULAR	1.50	1.77	0.38	1.50	1	43.46
C17	CIRCULAR	2.00	3.14	0.50	2.00	1	72.07
C18	CIRCULAR	1.25	1.23	0.31	1.25	1	22.15
C19	CIRCULAR	5.00	19.63	1.25	5.00	1	1157.38
C2	CIRCULAR	8.00	50.27	2.00	8.00	1	1325.86
C20	CIRCULAR	4.00	12.57	1.00	4.00	1	614.78
C21	CIRCULAR	2.50	4.91	0.63	2.50	1	140.34
C22	CIRCULAR	1.00	0.79	0.25	1.00	1	8.42
C23	CIRCULAR	0.50	0.20	0.13	0.50	1	2.90
C24	CIRCULAR	1.75	2.41	0.44	1.75	1	76.53
C25	CIRCULAR	0.50	0.20	0.13	0.50	1	3.16
C26	CIRCULAR	2.00	3.14	0.50	2.00	1	118.00
C27	CIRCULAR	0.50	0.20	0.13	0.50	1	2.19
C28	CIRCULAR	2.00	3.14	0.50	2.00	1	85.23
C29	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C3	CIRCULAR	8.00	50.27	2.00	8.00	1	1362.34
C30	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C31	CIRCULAR	1.00	0.79	0.25	1.00	1	17.42
C32	CIRCULAR	1.00	0.79	0.25	1.00	1	11.35
C33	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	16962.85
C34	CIRCULAR	8.00	50.27	2.00	8.00	1	9500.47

C35	CIRCULAR	8.00	50.27	2.00	8.00	1	3015.12
C36	CIRCULAR	2.00	3.14	0.50	2.00	1	107.88
C37	CIRCULAR	2.00	3.14	0.50	2.00	1	112.40
C38	CIRCULAR	1.50	1.77	0.38	1.50	2	53.18
C4	CIRCULAR	5.25	21.65	1.31	5.25	1	426.72
C5	CIRCULAR	5.00	19.63	1.25	5.00	1	542.81
C6	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12042.33
C7	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	9305.86
C8	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	18335.61
C9	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	17060.47

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

Analysis Options

Flow Units CFS

Process Models:

Rainfall/Runoff NO

RDII NO

Snowmelt NO

Groundwater NO

Flow Routing YES

Ponding Allowed YES

Water Quality NO

Flow Routing Method DYNWAVE

Starting Date 01/01/2019 00:01:00

Ending Date 01/04/2019 00:00:00

Antecedent Dry Days 0.0

Report Time Step 00:01:00

Routing Time Step 20.00 sec

Variable Time Step YES

Maximum Trials 8

Number of Threads 2

Head Tolerance 0.005000 ft

Flow Routing Continuity Volume Volume

 acre-feet 10^6 gal

***** ----- -----

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	29.099	9.482
External Outflow	18.015	5.870
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	10.849	3.535
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.249	0.081
Continuity Error (%)	-0.045	

Time-Step Critical Elements

Link C23 (68.13%)
 Link C25 (20.29%)
 Link C16 (1.22%)

Highest Flow Instability Indexes

Link C34 (1)

Routing Time Step Summary

Minimum Time Step	:	1.65 sec
Average Time Step	:	8.60 sec
Maximum Time Step	:	20.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	2.01
Percent Not Converging	:	0.18

Node Depth Summary

	Average Depth	Maximum Depth	Maximum HGL	Time of Max Occurrence	Reported Max Depth
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Node	Type	Feet	Feet	Feet	days	hr:min	Feet
J1	JUNCTION	0.12	1.04	446.04	0	16:25	1.04
J10	JUNCTION	0.09	0.23	300.23	0	16:42	0.23
J11	JUNCTION	0.11	0.28	280.28	0	16:46	0.28
J12	JUNCTION	0.11	0.26	272.26	0	16:49	0.26
J13	JUNCTION	0.10	0.24	265.24	0	16:53	0.24
J14	JUNCTION	0.00	0.00	340.00	0	00:00	0.00
J15	JUNCTION	0.14	0.95	400.95	0	16:34	0.95
J16	JUNCTION	0.02	0.15	445.15	0	16:35	0.15
J2	JUNCTION	0.13	1.20	431.20	0	16:25	1.20
J3	JUNCTION	0.09	0.84	415.84	0	16:25	0.84
J4	JUNCTION	0.10	1.02	408.02	0	16:26	1.02
J5	JUNCTION	0.07	0.68	392.68	0	16:26	0.68
J6	JUNCTION	0.05	0.51	353.52	0	16:27	0.51
J7	JUNCTION	0.08	0.13	338.13	0	18:53	0.13
J8	JUNCTION	0.15	0.25	332.25	0	19:08	0.25
J9	JUNCTION	0.09	0.21	327.21	0	16:37	0.21
OUT1	OUTFALL	0.08	0.21	250.21	0	16:53	0.21
3A-1	STORAGE	0.00	0.00	0.00	0	00:00	0.00
3A-10	STORAGE	0.06	0.23	315.23	0	17:52	0.23
3A-11	STORAGE	0.06	0.18	305.18	0	20:07	0.18
3A-12	STORAGE	0.00	0.00	295.00	0	00:00	0.00
3A-2	STORAGE	0.10	1.02	406.02	0	16:33	1.02
3A-3	STORAGE	1.45	2.70	395.70	1	00:01	2.70
3A-4	STORAGE	1.05	2.24	385.24	0	23:33	2.24
3A-5	STORAGE	1.27	3.11	396.91	0	18:50	3.11
3A-6	STORAGE	0.28	1.55	395.35	0	17:33	1.55
3A-7	STORAGE	0.14	0.70	359.50	0	17:01	0.70
3A-9	STORAGE	0.06	0.26	335.26	0	16:46	0.26

Node Inflow Summary

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal	Flow Balance Error Percent
J1	JUNCTION	161.78	161.78	0 16:25	9.11	9.1	-0.004
J10	JUNCTION	0.00	13.54	0 16:37	0	5.33	0.022
J11	JUNCTION	0.00	13.84	0 16:42	0	5.52	0.024
J12	JUNCTION	0.00	13.87	0 16:47	0	5.87	0.018

J13	JUNCTION	0.00	13.85	0	16:50	0	5.87	0.025
J14	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
J15	JUNCTION	0.00	46.03	0	16:34	0	3.53	-0.025
J16	JUNCTION	5.90	5.90	0	16:35	0.377	0.377	-0.775
J2	JUNCTION	0.00	101.04	0	16:25	0	5.57	-0.002
J3	JUNCTION	0.00	58.13	0	16:25	0	2.63	-0.003
J4	JUNCTION	0.00	31.43	0	16:25	0	1.34	0.000
J5	JUNCTION	0.00	31.24	0	16:26	0	1.34	0.001
J6	JUNCTION	0.00	19.36	0	16:26	0	0.749	-0.006
J7	JUNCTION	0.00	3.61	0	18:51	0	2.92	0.002
J8	JUNCTION	0.00	6.39	0	18:54	0	4.2	0.033
J9	JUNCTION	0.00	12.76	0	16:35	0	5.17	0.025
OUT1	OUTFALL	0.00	13.80	0	16:53	0	5.87	0.000
3A-1	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-10	STORAGE	0.00	4.42	0	16:49	0	0.572	0.002
3A-11	STORAGE	0.00	2.01	0	18:06	0	0.373	0.009
3A-12	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-2	STORAGE	0.00	60.77	0	16:25	0	3.53	0.008
3A-3	STORAGE	0.00	6.47	0	16:34	0	0.604	0.005
3A-4	STORAGE	0.00	39.56	0	16:34	0	2.93	0.008
3A-5	STORAGE	0.00	42.61	0	16:25	0	2.94	-0.003
3A-6	STORAGE	0.00	26.44	0	16:25	0	1.29	0.012
3A-7	STORAGE	0.00	11.73	0	16:26	0	0.593	0.010
3A-9	STORAGE	0.00	19.35	0	16:27	0	0.749	-0.002

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Average Avg Evap Exfil Maximum Max Time of Max Maximum

Storage Unit	Volume 1000 ft3	Pcnt Full	Pcnt Loss	Pcnt Loss	Volume 1000 ft3	Pcnt Full	Occurrence days hr:min	Outflow CFS
3A-1	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-10	5.376	1	0	0	20.463	4	0 17:52	2.98
3A-11	5.229	1	0	0	15.876	3	0 20:07	1.27
3A-12	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-2	4.957	2	0	0	51.002	18	0 16:33	46.03
3A-3	26.859	17	0	100	51.698	32	1 00:01	0.36
3A-4	110.540	13	0	100	239.409	29	0 23:33	1.89
3A-5	88.311	19	0	0	220.389	46	0 18:50	3.61
3A-6	11.781	4	0	0	66.648	22	0 17:33	2.92
3A-7	6.495	2	0	0	32.960	10	0 17:01	1.99
3A-9	10.389	1	0	0	47.297	5	0 16:46	5.59

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
OUT1	98.51	3.87	13.80	5.870
System	98.51	3.87	13.80	5.870

 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
C1	CONDUIT	101.04	0 16:25	23.54	0.04	0.14
C10	CONDUIT	13.76	0 16:47	1.97	0.00	0.02
C11	CONDUIT	13.85	0 16:50	2.15	0.00	0.01
C12	CONDUIT	60.77	0 16:25	30.22	0.25	0.33
C13	CONDUIT	46.03	0 16:34	11.67	0.29	0.33
C14	CONDUIT	6.47	0 16:34	4.66	0.73	0.82
C15	CONDUIT	39.56	0 16:34	16.78	0.22	0.41

C16	CONDUIT	42.61	0	16:25	26.98	0.98	0.90
C17	CONDUIT	26.44	0	16:25	17.89	0.37	0.50
C18	CONDUIT	11.73	0	16:26	20.05	0.53	0.48
C19	CONDUIT	19.35	0	16:27	30.56	0.02	0.07
C2	CONDUIT	58.13	0	16:25	15.56	0.04	0.13
C20	CONDUIT	4.42	0	16:49	17.01	0.01	0.06
C21	CONDUIT	2.01	0	18:06	13.79	0.01	0.07
C22	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
C23	CONDUIT	2.39	0	10:07	21.99	0.82	0.63
C24	CONDUIT	1.23	0	18:50	13.03	0.02	0.08
C25	CONDUIT	2.92	1	01:03	20.82	0.93	0.75
C26	CONDUIT	0.00	0	00:00	0.00	0.00	0.06
C27	CONDUIT	1.99	0	16:22	15.46	0.91	0.71
C28	CONDUIT	0.00	0	00:00	0.00	0.00	0.05
C29	CONDUIT	1.17	0	16:46	12.51	0.50	0.48
C3	CONDUIT	31.43	0	16:25	9.65	0.02	0.12
C30	CONDUIT	0.98	0	17:52	11.44	0.42	0.46
C31	CONDUIT	1.27	0	20:07	11.06	0.07	0.20
C32	CONDUIT	0.00	0	00:00	0.00	0.00	0.12
C33	CONDUIT	13.80	0	16:53	2.41	0.00	0.01
C34	CONDUIT	5.90	0	16:35	20.54	0.00	0.02
C35	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
C36	CONDUIT	0.00	0	00:00	0.00	0.00	0.07
C37	CONDUIT	0.00	0	00:00	0.00	0.00	0.07
C38	CONDUIT	0.00	0	00:00	0.00	0.00	0.08
C4	CONDUIT	31.24	0	16:26	13.78	0.07	0.16
C5	CONDUIT	19.36	0	16:26	14.80	0.04	0.12
C6	CONDUIT	3.60	0	18:53	0.75	0.00	0.01
C7	CONDUIT	6.38	0	19:06	1.20	0.00	0.01
C8	CONDUIT	12.42	0	16:37	2.25	0.00	0.01
C9	CONDUIT	13.32	0	16:42	2.06	0.00	0.01
W10	WEIR	0.00	0	00:00			0.00
W11	WEIR	0.00	0	00:00			0.00
W5	WEIR	0.00	0	00:00			0.00
W6	WEIR	0.00	0	00:00			0.00
W7	WEIR	0.00	0	00:00			0.00
W9	WEIR	0.00	0	00:00			0.00

Flow Classification Summary

Adjusted ----- Fraction of Time in Flow Class -----
/Actual Up Down Sub Sup Up Down Norm Inlet

Conduit	Length	Dry	Dry	Dry	Crit	Crit	Crit	Crit	Ltd	Ctrl
C1	1.00	0.60	0.00	0.00	0.00	0.40	0.00	0.00	1.00	0.00
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.46	0.00
C11	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.35	0.00
C12	1.00	0.00	0.60	0.00	0.00	0.40	0.00	0.00	0.68	0.00
C13	1.00	0.00	0.00	0.00	0.60	0.40	0.00	0.00	0.99	0.00
C14	1.00	0.00	0.00	0.00	0.86	0.13	0.00	0.00	0.86	0.00
C15	1.00	0.00	0.00	0.00	0.66	0.34	0.00	0.00	0.67	0.00
C16	1.00	0.00	0.60	0.00	0.11	0.29	0.00	0.00	0.96	0.00
C17	1.00	0.00	0.60	0.00	0.13	0.27	0.00	0.00	0.96	0.00
C18	1.00	0.00	0.59	0.00	0.06	0.34	0.00	0.00	0.91	0.00
C19	1.00	0.00	0.59	0.00	0.00	0.40	0.00	0.00	0.77	0.00
C2	1.00	0.60	0.00	0.00	0.00	0.40	0.00	0.00	0.67	0.00
C20	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.76	0.00
C21	1.00	0.01	0.00	0.00	0.01	0.99	0.00	0.00	0.73	0.00
C22	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C23	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
C24	1.00	0.00	0.87	0.00	0.01	0.12	0.00	0.00	0.71	0.00
C25	1.00	0.00	0.00	0.00	0.24	0.76	0.00	0.00	0.61	0.00
C26	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C27	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.33	0.00
C28	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C29	1.00	0.00	0.00	0.00	0.15	0.85	0.00	0.00	0.82	0.00
C3	1.00	0.60	0.00	0.00	0.00	0.40	0.00	0.00	1.00	0.00
C30	1.00	0.00	0.01	0.00	0.15	0.84	0.00	0.00	0.73	0.00
C31	1.00	0.01	0.04	0.00	0.22	0.73	0.00	0.00	0.65	0.00
C32	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C33	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C34	1.00	0.00	0.60	0.00	0.00	0.39	0.00	0.00	0.98	0.00
C35	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C36	1.00	0.01	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C37	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C38	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	0.59	0.00	0.00	0.00	0.40	0.00	0.00	0.66	0.00
C5	1.00	0.59	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00
C6	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.98	0.00
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.00
C8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.96	0.00
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.97	0.00

 Conduit Surcharge Summary

Conduit	Hours Full			Hours	Hours
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
C14	0.01	0.01	28.87	0.01	0.01
C16	0.01	0.01	56.33	0.01	0.01
C23	0.01	35.11	0.01	0.01	0.01
C25	0.01	9.27	0.01	0.01	0.01
C27	0.01	3.49	0.01	0.01	0.01

Analysis begun on: Mon Aug 26 06:35:44 2019
 Analysis ended on: Mon Aug 26 06:35:45 2019
 Total elapsed time: 00:00:01

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

 WARNING 02: maximum depth increased for Node J12

Element Count

Number of rain gages 0
 Number of subcatchments ... 0
 Number of nodes 28
 Number of links 44
 Number of pollutants 0
 Number of land uses 0

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	445.00	10.00	0.0	Yes
J10	JUNCTION	300.00	18.00	0.0	
J11	JUNCTION	280.00	18.00	0.0	
J12	JUNCTION	272.00	17.84	0.0	
J13	JUNCTION	265.00	18.00	0.0	
J14	JUNCTION	340.00	1.00	0.0	
J15	JUNCTION	400.00	3.00	0.0	
J16	JUNCTION	445.00	10.00	0.0	Yes
J2	JUNCTION	430.00	10.00	0.0	
J3	JUNCTION	415.00	10.00	0.0	
J4	JUNCTION	407.00	13.00	0.0	
J5	JUNCTION	392.00	10.00	0.0	
J6	JUNCTION	353.02	10.00	0.0	
J7	JUNCTION	338.00	18.00	0.0	
J8	JUNCTION	332.00	18.00	0.0	
J9	JUNCTION	327.00	18.00	0.0	
OUT1	OUTFALL	250.00	17.84	0.0	
3A-1	STORAGE	0.00	5.00	0.0	
3A-10	STORAGE	315.00	5.00	0.0	
3A-11	STORAGE	305.00	5.00	0.0	
3A-12	STORAGE	295.00	5.00	0.0	
3A-2	STORAGE	405.00	5.00	0.0	
3A-3	STORAGE	393.00	7.00	0.0	

3A-4	STORAGE	383.00	7.00	0.0
3A-5	STORAGE	393.80	6.20	0.0
3A-6	STORAGE	393.80	6.20	0.0
3A-7	STORAGE	358.80	6.20	0.0
3A-9	STORAGE	335.00	5.00	0.0

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J1	J2	CONDUIT	163.0	9.2417	0.0130
C10	J11	J12	CONDUIT	658.8	1.2144	0.0350
C11	J12	J13	CONDUIT	449.5	1.5574	0.0350
C12	J1	3A-2	CONDUIT	299.8	13.4641	0.0130
C13	3A-2	J15	CONDUIT	300.0	1.6669	0.0130
C14	J15	3A-3	CONDUIT	977.8	0.7159	0.0130
C15	J15	3A-4	CONDUIT	228.6	7.4579	0.0130
C16	J2	3A-5	CONDUIT	214.6	17.1164	0.0130
C17	J3	3A-6	CONDUIT	210.0	10.1483	0.0130
C18	J5	3A-7	CONDUIT	284.3	11.7594	0.0130
C19	J6	3A-9	CONDUIT	93.0	19.7484	0.0130
C2	J2	J3	CONDUIT	710.0	2.1131	0.0130
C20	3A-9	3A-10	CONDUIT	111.0	18.3178	0.0130
C21	3A-10	3A-11	CONDUIT	86.0	11.7073	0.0130
C22	J14	3A-12	CONDUIT	806.0	5.5918	0.0130
C23	3A-5	J7	CONDUIT	216.5	26.6711	0.0130
C24	3A-5	J7	CONDUIT	258.6	23.3272	0.0130
C25	3A-6	J8	CONDUIT	205.0	31.6227	0.0130
C26	3A-6	J8	CONDUIT	245.7	27.2055	0.0130
C27	3A-7	J9	CONDUIT	211.8	15.1889	0.0130
C28	3A-7	J9	CONDUIT	245.5	14.1940	0.0130
C29	3A-9	J10	CONDUIT	204.6	17.3669	0.0130
C3	J3	J4	CONDUIT	358.7	2.2310	0.0130
C30	3A-10	J11	CONDUIT	204.8	17.3418	0.0130
C31	3A-11	J12	CONDUIT	235.6	14.1440	0.0100
C32	3A-12	J13	CONDUIT	297.2	10.1459	0.0130
C33	J13	OUT1	CONDUIT	702.1	2.1368	0.0350
C34	J16	J9	CONDUIT	218.4	64.2006	0.0100
C35	J4	J9	CONDUIT	782.4	10.9281	0.0130
C36	3A-11	J12	CONDUIT	253.1	13.4557	0.0100
C37	3A-10	J11	CONDUIT	249.1	14.6069	0.0100
C38	3A-9	J10	CONDUIT	240.1	15.1652	0.0100
C4	J4	J5	CONDUIT	725.0	2.0695	0.0130
C5	J5	J6	CONDUIT	898.2	4.3439	0.0130

C6	J7	J8	CONDUIT	557.2	1.0769	0.0350
C7	J8	J9	CONDUIT	777.5	0.6431	0.0350
C8	J9	J10	CONDUIT	1081.8	2.4967	0.0350
C9	J10	J11	CONDUIT	925.5	2.1615	0.0350
W10	3A-10	J11	WEIR			
W11	3A-11	J12	WEIR			
W5	3A-5	J7	WEIR			
W6	3A-6	J8	WEIR			
W7	3A-7	J9	WEIR			
W9	3A-9	J10	WEIR			

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	8.00	50.27	2.00	8.00	1	2772.73
C10	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12787.90
C11	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	14481.40
C12	CIRCULAR	3.00	7.07	0.75	3.00	1	244.74
C13	RECT_CLOSED	3.00	12.00	0.86	4.00	1	159.80
C14	CIRCULAR	1.50	1.77	0.38	1.50	1	8.89
C15	CIRCULAR	3.00	7.07	0.75	3.00	1	182.15
C16	CIRCULAR	1.50	1.77	0.38	1.50	1	43.46
C17	CIRCULAR	2.00	3.14	0.50	2.00	1	72.07
C18	CIRCULAR	1.25	1.23	0.31	1.25	1	22.15
C19	CIRCULAR	5.00	19.63	1.25	5.00	1	1157.38
C2	CIRCULAR	8.00	50.27	2.00	8.00	1	1325.86
C20	CIRCULAR	4.00	12.57	1.00	4.00	1	614.78
C21	CIRCULAR	2.50	4.91	0.63	2.50	1	140.34
C22	CIRCULAR	1.00	0.79	0.25	1.00	1	8.42
C23	CIRCULAR	0.50	0.20	0.13	0.50	1	2.90
C24	CIRCULAR	1.75	2.41	0.44	1.75	1	76.53
C25	CIRCULAR	0.50	0.20	0.13	0.50	1	3.16
C26	CIRCULAR	2.00	3.14	0.50	2.00	1	118.00
C27	CIRCULAR	0.50	0.20	0.13	0.50	1	2.19
C28	CIRCULAR	2.00	3.14	0.50	2.00	1	85.23
C29	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C3	CIRCULAR	8.00	50.27	2.00	8.00	1	1362.34
C30	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C31	CIRCULAR	1.00	0.79	0.25	1.00	1	17.42
C32	CIRCULAR	1.00	0.79	0.25	1.00	1	11.35
C33	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	16962.85
C34	CIRCULAR	8.00	50.27	2.00	8.00	1	9500.47

C35	CIRCULAR	8.00	50.27	2.00	8.00	1	3015.12
C36	CIRCULAR	2.00	3.14	0.50	2.00	1	107.88
C37	CIRCULAR	2.00	3.14	0.50	2.00	1	112.40
C38	CIRCULAR	1.50	1.77	0.38	1.50	2	53.18
C4	CIRCULAR	5.25	21.65	1.31	5.25	1	426.72
C5	CIRCULAR	5.00	19.63	1.25	5.00	1	542.81
C6	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12042.33
C7	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	9305.86
C8	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	18335.61
C9	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	17060.47

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

Analysis Options

Flow Units CFS

Process Models:

Rainfall/Runoff NO

RDII NO

Snowmelt NO

Groundwater NO

Flow Routing YES

Ponding Allowed YES

Water Quality NO

Flow Routing Method DYNWAVE

Starting Date 01/01/2019 00:01:00

Ending Date 01/04/2019 00:00:00

Antecedent Dry Days 0.0

Report Time Step 00:01:00

Routing Time Step 20.00 sec

Variable Time Step YES

Maximum Trials 8

Number of Threads 2

Head Tolerance 0.005000 ft

Flow Routing Continuity

Volume

acre-feet

Volume

10⁶ gal

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	49.224	16.040
External Outflow	36.864	12.013
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	12.090	3.940
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.280	0.091
Continuity Error (%)	-0.021	

Time-Step Critical Elements

Link C23 (46.03%)
 Link C25 (32.63%)
 Link C21 (6.56%)
 Link C16 (2.57%)
 Link C19 (1.75%)

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	1.14 sec
Average Time Step	:	7.89 sec
Maximum Time Step	:	20.00 sec
Percent in Steady State	:	-0.00
Average Iterations per Step	:	2.00
Percent Not Converging	:	0.01

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
J1	JUNCTION	0.20	1.92	446.92	0 16:26	1.67
J10	JUNCTION	0.15	0.64	300.64	0 16:50	0.64
J11	JUNCTION	0.18	0.79	280.79	0 16:51	0.79
J12	JUNCTION	0.18	0.74	272.74	0 16:53	0.74
J13	JUNCTION	0.16	0.66	265.66	0 16:55	0.66
J14	JUNCTION	0.00	0.00	340.00	0 00:00	0.00
J15	JUNCTION	0.15	1.31	401.31	0 16:26	1.30
J16	JUNCTION	0.03	0.27	445.27	0 16:28	0.27
J2	JUNCTION	0.22	2.50	432.50	0 16:26	2.44
J3	JUNCTION	0.15	1.92	416.92	0 16:27	1.81
J4	JUNCTION	0.19	2.40	409.40	0 16:27	2.38
J5	JUNCTION	0.12	1.80	393.80	0 16:28	1.74
J6	JUNCTION	0.09	1.25	354.27	0 16:28	1.24
J7	JUNCTION	0.12	0.51	338.51	0 16:45	0.51
J8	JUNCTION	0.22	0.97	332.97	0 16:46	0.97
J9	JUNCTION	0.14	0.61	327.61	0 16:47	0.61
OUT1	OUTFALL	0.14	0.66	250.66	0 16:55	0.66
3A-1	STORAGE	0.00	0.00	0.00	0 00:00	0.00
3A-10	STORAGE	0.11	0.63	315.63	0 17:11	0.63
3A-11	STORAGE	0.11	0.56	305.56	0 18:04	0.56
3A-12	STORAGE	0.00	0.00	295.00	0 00:00	0.00
3A-2	STORAGE	0.12	1.53	406.53	0 16:26	1.53
3A-3	STORAGE	1.74	3.20	396.20	0 17:38	3.20
3A-4	STORAGE	1.54	3.04	386.04	0 17:35	3.04
3A-5	STORAGE	1.59	3.84	397.64	0 16:44	3.84
3A-6	STORAGE	0.87	3.33	397.13	0 16:42	3.33
3A-7	STORAGE	0.47	1.68	360.48	0 18:36	1.68
3A-9	STORAGE	0.10	0.66	335.66	0 16:41	0.66

Node Inflow Summary

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal	Flow Balance Error Percent
J1	JUNCTION	303.96	303.96	0 16:23	15.1	15.1	-0.007
J10	JUNCTION	0.00	75.78	0 16:47	0	10.4	0.012

J11	JUNCTION	0.00	77.03	0	16:50	0	10.8	0.014
J12	JUNCTION	0.00	78.24	0	16:52	0	12	0.009
J13	JUNCTION	0.00	78.03	0	16:54	0	12	0.011
J14	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
J15	JUNCTION	0.00	80.28	0	16:26	0	3.94	-0.024
J16	JUNCTION	19.08	19.08	0	16:28	0.962	0.962	-0.013
J2	JUNCTION	0.00	306.63	0	16:26	0	11.1	-0.002
J3	JUNCTION	0.00	243.97	0	16:27	0	5.97	0.002
J4	JUNCTION	0.00	168.16	0	16:27	0	3.21	-0.004
J5	JUNCTION	0.00	161.75	0	16:28	0	3.21	0.010
J6	JUNCTION	0.00	133.68	0	16:28	0	1.98	-0.006
J7	JUNCTION	0.00	36.30	0	16:44	0	5.14	0.004
J8	JUNCTION	0.00	64.54	0	16:43	0	7.89	0.019
J9	JUNCTION	0.00	74.51	0	16:45	0	10.1	0.006
OUT1	OUTFALL	0.00	77.78	0	16:55	0	12	0.000
3A-1	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-10	STORAGE	0.00	30.98	0	16:43	0	1.64	0.002
3A-11	STORAGE	0.00	16.64	0	17:18	0	1.23	0.005
3A-12	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-2	STORAGE	0.00	111.67	0	16:23	0	3.94	0.011
3A-3	STORAGE	0.00	8.47	0	16:26	0	0.631	-0.033
3A-4	STORAGE	0.00	71.57	0	16:26	0	3.31	0.011
3A-5	STORAGE	0.00	45.51	0	16:11	0	5.16	0.000
3A-6	STORAGE	0.00	76.68	0	16:27	0	2.76	-0.007
3A-7	STORAGE	0.00	23.83	0	16:36	0	1.23	-0.012
3A-9	STORAGE	0.00	134.52	0	16:28	0	1.98	0.006

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
3A-1	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-10	9.554	2	0	0	56.633	11	0 17:11	18.96
3A-11	9.219	2	0	0	49.314	10	0 18:04	10.43
3A-12	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-2	5.844	2	0	0	77.447	27	0 16:26	80.28
3A-3	32.730	20	0	99	62.690	39	0 17:38	0.38
3A-4	164.446	20	0	100	329.933	40	0 17:35	1.95
3A-5	111.920	24	0	0	277.065	58	0 16:44	36.30
3A-6	38.116	13	0	0	149.527	49	0 16:42	28.87
3A-7	22.124	7	0	0	79.606	24	0 18:36	2.22
3A-9	18.095	2	0	0	121.259	12	0 16:41	33.30

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
OUT1	99.99	10.02	77.78	12.012
System	99.99	10.02	77.78	12.012

 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
C1	CONDUIT	306.63	0 16:26	32.12	0.11	0.26
C10	CONDUIT	76.60	0 16:52	3.87	0.01	0.04
C11	CONDUIT	78.03	0 16:54	4.31	0.01	0.04
C12	CONDUIT	111.67	0 16:23	33.66	0.46	0.57
C13	CONDUIT	80.28	0 16:26	14.21	0.50	0.47

C14	CONDUIT	8.47	0	16:26	4.99	0.95	0.94
C15	CONDUIT	71.57	0	16:26	17.09	0.39	0.65
C16	CONDUIT	45.51	0	16:11	26.17	1.05	1.00
C17	CONDUIT	76.68	0	16:27	24.84	1.06	0.98
C18	CONDUIT	23.83	0	16:36	21.68	1.08	0.99
C19	CONDUIT	134.52	0	16:28	>50.00	0.12	0.17
C2	CONDUIT	243.97	0	16:27	22.72	0.18	0.27
C20	CONDUIT	30.98	0	16:43	31.87	0.05	0.14
C21	CONDUIT	16.64	0	17:18	24.99	0.12	0.22
C22	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
C23	CONDUIT	2.94	0	16:41	22.00	1.02	1.00
C24	CONDUIT	33.37	0	16:44	37.11	0.44	0.40
C25	CONDUIT	3.15	0	18:37	20.97	1.00	1.00
C26	CONDUIT	25.73	0	16:42	22.61	0.22	0.40
C27	CONDUIT	2.22	0	17:06	15.74	1.02	1.00
C28	CONDUIT	0.00	0	00:00	0.00	0.00	0.15
C29	CONDUIT	2.52	0	17:13	13.21	1.08	1.00
C3	CONDUIT	168.16	0	16:27	16.10	0.12	0.26
C30	CONDUIT	2.51	0	16:45	13.11	1.07	1.00
C31	CONDUIT	10.43	0	18:00	23.54	0.60	0.56
C32	CONDUIT	0.00	0	00:00	0.00	0.00	0.33
C33	CONDUIT	77.78	0	16:55	4.57	0.00	0.04
C34	CONDUIT	19.07	0	16:28	23.97	0.00	0.05
C35	CONDUIT	0.00	0	00:00	0.00	0.00	0.04
C36	CONDUIT	0.00	0	00:00	0.00	0.00	0.19
C37	CONDUIT	0.00	0	00:00	0.00	0.00	0.20
C38	CONDUIT	0.00	0	00:00	0.00	0.00	0.21
C4	CONDUIT	161.75	0	16:28	20.94	0.38	0.39
C5	CONDUIT	133.68	0	16:28	26.58	0.25	0.30
C6	CONDUIT	36.22	0	16:45	2.21	0.00	0.04
C7	CONDUIT	63.35	0	16:46	3.10	0.01	0.04
C8	CONDUIT	73.46	0	16:47	4.59	0.00	0.03
C9	CONDUIT	74.72	0	16:50	4.06	0.00	0.04
W10	WEIR	0.00	0	00:00			0.00
W11	WEIR	0.00	0	00:00			0.00
W5	WEIR	0.00	0	00:00			0.00
W6	WEIR	0.00	0	00:00			0.00
W7	WEIR	0.00	0	00:00			0.00
W9	WEIR	0.00	0	00:00			0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.57	0.00	0.00	0.00	0.43	0.00	0.00	1.00	0.00
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.43	0.00
C11	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.34	0.00
C12	1.00	0.00	0.57	0.00	0.17	0.26	0.00	0.00	0.77	0.00
C13	1.00	0.00	0.00	0.00	0.67	0.33	0.00	0.00	0.90	0.00
C14	1.00	0.00	0.00	0.00	0.91	0.08	0.00	0.00	0.92	0.00
C15	1.00	0.00	0.00	0.00	0.73	0.27	0.00	0.00	0.84	0.00
C16	1.00	0.00	0.57	0.00	0.06	0.37	0.00	0.00	0.95	0.00
C17	1.00	0.00	0.56	0.00	0.15	0.28	0.00	0.00	0.96	0.00
C18	1.00	0.00	0.56	0.00	0.13	0.31	0.00	0.00	0.92	0.00
C19	1.00	0.00	0.56	0.00	0.01	0.43	0.00	0.00	0.77	0.00
C2	1.00	0.57	0.00	0.00	0.00	0.43	0.00	0.00	0.67	0.00
C20	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.76	0.00
C21	1.00	0.01	0.00	0.00	0.01	0.98	0.00	0.00	0.75	0.00
C22	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C23	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.00	0.00
C24	1.00	0.00	0.78	0.00	0.00	0.21	0.00	0.00	0.66	0.00
C25	1.00	0.00	0.00	0.00	0.16	0.84	0.00	0.00	0.42	0.00
C26	1.00	0.00	0.86	0.00	0.03	0.11	0.00	0.00	0.77	0.00
C27	1.00	0.00	0.00	0.00	0.03	0.97	0.00	0.00	0.19	0.00
C28	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C29	1.00	0.00	0.00	0.00	0.18	0.81	0.00	0.00	0.87	0.00
C3	1.00	0.56	0.00	0.00	0.00	0.43	0.00	0.00	1.00	0.00
C30	1.00	0.00	0.01	0.00	0.16	0.83	0.00	0.00	0.75	0.00
C31	1.00	0.00	0.05	0.00	0.17	0.78	0.00	0.00	0.64	0.00
C32	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C33	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C34	1.00	0.00	0.57	0.00	0.00	0.43	0.00	0.00	0.97	0.00
C35	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C36	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C37	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C38	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	0.56	0.01	0.00	0.00	0.43	0.00	0.00	0.66	0.00
C5	1.00	0.56	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00
C6	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.98	0.00
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.00
C8	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.96	0.00
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.98	0.00

Conduit Surcharge Summary

Conduit	----- Both Ends	Hours Full Upstream	----- Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
C14	0.01	0.01	33.24	0.01	0.01
C15	0.01	0.01	1.80	0.01	0.01
C16	0.43	0.43	59.23	0.13	0.01
C17	0.01	0.01	55.66	0.05	0.01
C18	0.01	0.14	55.38	0.15	0.01
C23	0.15	41.08	0.15	0.65	0.15
C25	2.24	19.75	2.24	0.01	0.01
C27	0.50	14.82	0.50	0.86	0.50
C29	0.59	0.63	0.75	0.39	0.01
C30	1.08	1.08	1.50	0.56	0.01

Analysis begun on: Mon Aug 26 06:29:21 2019
Analysis ended on: Mon Aug 26 06:29:23 2019
Total elapsed time: 00:00:02

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

 WARNING 02: maximum depth increased for Node J12

Element Count

Number of rain gages 0
 Number of subcatchments ... 0
 Number of nodes 28
 Number of links 44
 Number of pollutants 0
 Number of land uses 0

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	445.00	10.00	0.0	Yes
J10	JUNCTION	300.00	18.00	0.0	
J11	JUNCTION	280.00	18.00	0.0	
J12	JUNCTION	272.00	17.84	0.0	
J13	JUNCTION	265.00	18.00	0.0	
J14	JUNCTION	340.00	1.00	0.0	
J15	JUNCTION	400.00	3.00	0.0	
J16	JUNCTION	445.00	10.00	0.0	Yes
J2	JUNCTION	430.00	10.00	0.0	
J3	JUNCTION	415.00	10.00	0.0	
J4	JUNCTION	407.00	13.00	0.0	
J5	JUNCTION	392.00	10.00	0.0	
J6	JUNCTION	353.02	10.00	0.0	
J7	JUNCTION	338.00	18.00	0.0	
J8	JUNCTION	332.00	18.00	0.0	
J9	JUNCTION	327.00	18.00	0.0	
OUT1	OUTFALL	250.00	17.84	0.0	
3A-1	STORAGE	0.00	5.00	0.0	
3A-10	STORAGE	315.00	5.00	0.0	
3A-11	STORAGE	305.00	5.00	0.0	
3A-12	STORAGE	295.00	5.00	0.0	
3A-2	STORAGE	405.00	5.00	0.0	
3A-3	STORAGE	393.00	7.00	0.0	

3A-4	STORAGE	383.00	7.00	0.0
3A-5	STORAGE	393.80	6.20	0.0
3A-6	STORAGE	393.80	6.20	0.0
3A-7	STORAGE	358.80	6.20	0.0
3A-9	STORAGE	335.00	5.00	0.0

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J1	J2	CONDUIT	163.0	9.2417	0.0130
C10	J11	J12	CONDUIT	658.8	1.2144	0.0350
C11	J12	J13	CONDUIT	449.5	1.5574	0.0350
C12	J1	3A-2	CONDUIT	299.8	13.4641	0.0130
C13	3A-2	J15	CONDUIT	300.0	1.6669	0.0130
C14	J15	3A-3	CONDUIT	977.8	0.7159	0.0130
C15	J15	3A-4	CONDUIT	228.6	7.4579	0.0130
C16	J2	3A-5	CONDUIT	214.6	17.1164	0.0130
C17	J3	3A-6	CONDUIT	210.0	10.1483	0.0130
C18	J5	3A-7	CONDUIT	284.3	11.7594	0.0130
C19	J6	3A-9	CONDUIT	93.0	19.7484	0.0130
C2	J2	J3	CONDUIT	710.0	2.1131	0.0130
C20	3A-9	3A-10	CONDUIT	111.0	18.3178	0.0130
C21	3A-10	3A-11	CONDUIT	86.0	11.7073	0.0130
C22	J14	3A-12	CONDUIT	806.0	5.5918	0.0130
C23	3A-5	J7	CONDUIT	216.5	26.6711	0.0130
C24	3A-5	J7	CONDUIT	258.6	23.3272	0.0130
C25	3A-6	J8	CONDUIT	205.0	31.6227	0.0130
C26	3A-6	J8	CONDUIT	245.7	27.2055	0.0130
C27	3A-7	J9	CONDUIT	211.8	15.1889	0.0130
C28	3A-7	J9	CONDUIT	245.5	14.1940	0.0130
C29	3A-9	J10	CONDUIT	204.6	17.3669	0.0130
C3	J3	J4	CONDUIT	358.7	2.2310	0.0130
C30	3A-10	J11	CONDUIT	204.8	17.3418	0.0130
C31	3A-11	J12	CONDUIT	235.6	14.1440	0.0100
C32	3A-12	J13	CONDUIT	297.2	10.1459	0.0130
C33	J13	OUT1	CONDUIT	702.1	2.1368	0.0350
C34	J16	J9	CONDUIT	218.4	64.2006	0.0100
C35	J4	J9	CONDUIT	782.4	10.9281	0.0130
C36	3A-11	J12	CONDUIT	253.1	13.4557	0.0100
C37	3A-10	J11	CONDUIT	249.1	14.6069	0.0100
C38	3A-9	J10	CONDUIT	240.1	15.1652	0.0100
C4	J4	J5	CONDUIT	725.0	2.0695	0.0130
C5	J5	J6	CONDUIT	898.2	4.3439	0.0130

C6	J7	J8	CONDUIT	557.2	1.0769	0.0350
C7	J8	J9	CONDUIT	777.5	0.6431	0.0350
C8	J9	J10	CONDUIT	1081.8	2.4967	0.0350
C9	J10	J11	CONDUIT	925.5	2.1615	0.0350
W10	3A-10	J11	WEIR			
W11	3A-11	J12	WEIR			
W5	3A-5	J7	WEIR			
W6	3A-6	J8	WEIR			
W7	3A-7	J9	WEIR			
W9	3A-9	J10	WEIR			

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	8.00	50.27	2.00	8.00	1	2772.73
C10	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12787.90
C11	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	14481.40
C12	CIRCULAR	3.00	7.07	0.75	3.00	1	244.74
C13	RECT_CLOSED	3.00	12.00	0.86	4.00	1	159.80
C14	CIRCULAR	1.50	1.77	0.38	1.50	1	8.89
C15	CIRCULAR	3.00	7.07	0.75	3.00	1	182.15
C16	CIRCULAR	1.50	1.77	0.38	1.50	1	43.46
C17	CIRCULAR	2.00	3.14	0.50	2.00	1	72.07
C18	CIRCULAR	1.25	1.23	0.31	1.25	1	22.15
C19	CIRCULAR	5.00	19.63	1.25	5.00	1	1157.38
C2	CIRCULAR	8.00	50.27	2.00	8.00	1	1325.86
C20	CIRCULAR	4.00	12.57	1.00	4.00	1	614.78
C21	CIRCULAR	2.50	4.91	0.63	2.50	1	140.34
C22	CIRCULAR	1.00	0.79	0.25	1.00	1	8.42
C23	CIRCULAR	0.50	0.20	0.13	0.50	1	2.90
C24	CIRCULAR	1.75	2.41	0.44	1.75	1	76.53
C25	CIRCULAR	0.50	0.20	0.13	0.50	1	3.16
C26	CIRCULAR	2.00	3.14	0.50	2.00	1	118.00
C27	CIRCULAR	0.50	0.20	0.13	0.50	1	2.19
C28	CIRCULAR	2.00	3.14	0.50	2.00	1	85.23
C29	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C3	CIRCULAR	8.00	50.27	2.00	8.00	1	1362.34
C30	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C31	CIRCULAR	1.00	0.79	0.25	1.00	1	17.42
C32	CIRCULAR	1.00	0.79	0.25	1.00	1	11.35
C33	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	16962.85
C34	CIRCULAR	8.00	50.27	2.00	8.00	1	9500.47

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	79.281	25.835
External Outflow	67.291	21.928
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	11.714	3.817
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.286	0.093
Continuity Error (%)	-0.011	

Time-Step Critical Elements

Link C25 (36.29%)
 Link C23 (34.09%)
 Link C21 (8.61%)
 Link C19 (4.31%)
 Link C24 (3.51%)

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	0.96 sec
Average Time Step	:	7.39 sec
Maximum Time Step	:	20.00 sec
Percent in Steady State	:	-0.00
Average Iterations per Step	:	2.00
Percent Not Converging	:	0.01

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
J1	JUNCTION	0.32	2.35	447.35	0 16:21	2.34
J10	JUNCTION	0.22	1.11	301.11	0 16:30	1.11
J11	JUNCTION	0.27	1.45	281.45	0 16:36	1.45
J12	JUNCTION	0.28	1.43	273.43	0 16:38	1.43
J13	JUNCTION	0.26	1.29	266.29	0 16:40	1.29
J14	JUNCTION	0.00	0.00	340.00	0 00:00	0.00
J15	JUNCTION	0.14	0.65	400.65	0 14:25	0.65
J16	JUNCTION	0.06	0.35	445.35	0 16:25	0.35
J2	JUNCTION	0.38	3.39	433.39	0 16:21	3.37
J3	JUNCTION	0.28	2.99	417.99	0 16:21	2.99
J4	JUNCTION	0.36	4.20	411.20	0 16:22	4.20
J5	JUNCTION	0.26	3.37	395.37	0 16:22	3.35
J6	JUNCTION	0.17	1.98	354.99	0 16:22	1.98
J7	JUNCTION	0.16	0.56	338.56	0 16:43	0.56
J8	JUNCTION	0.30	1.33	333.33	0 16:38	1.33
J9	JUNCTION	0.21	0.91	327.91	0 16:26	0.91
OUT1	OUTFALL	0.24	1.29	251.29	0 16:40	1.29
3A-1	STORAGE	0.00	0.00	0.00	0 00:00	0.00
3A-10	STORAGE	0.21	1.85	316.85	0 16:40	1.85
3A-11	STORAGE	0.23	1.81	306.81	0 17:04	1.81
3A-12	STORAGE	0.00	0.00	295.00	0 00:00	0.00
3A-2	STORAGE	0.10	0.62	405.62	0 14:25	0.62
3A-3	STORAGE	1.86	2.93	395.93	0 15:20	2.93
3A-4	STORAGE	1.54	2.62	385.62	0 15:17	2.62
3A-5	STORAGE	1.88	3.93	397.73	0 16:43	3.93
3A-6	STORAGE	1.12	3.78	397.58	0 16:36	3.78
3A-7	STORAGE	1.06	2.92	361.72	0 18:14	2.92
3A-9	STORAGE	0.18	1.64	336.64	0 16:29	1.64

Node Inflow Summary

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal	Flow Balance Error Percent
J1	JUNCTION	519.87	519.87	0 16:21	24	24	-0.002
J10	JUNCTION	0.00	185.11	0 16:29	0	16.9	0.008

J11	JUNCTION	0.00	213.40	0	16:35	0	17.9	0.010
J12	JUNCTION	0.00	234.13	0	16:37	0	21.9	0.003
J13	JUNCTION	0.00	233.64	0	16:39	0	21.9	0.009
J14	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
J15	JUNCTION	0.00	22.01	0	14:25	0	3.82	-0.023
J16	JUNCTION	33.61	33.61	0	16:25	1.83	1.83	-0.008
J2	JUNCTION	0.00	519.57	0	16:21	0	20.2	-0.001
J3	JUNCTION	0.00	478.20	0	16:21	0	12.5	-0.000
J4	JUNCTION	0.00	405.56	0	16:21	0	7.82	0.001
J5	JUNCTION	0.00	404.95	0	16:22	0	7.82	0.002
J6	JUNCTION	0.00	381.89	0	16:22	0	5.82	-0.001
J7	JUNCTION	0.00	42.26	0	16:43	0	7.7	0.002
J8	JUNCTION	0.00	112.30	0	16:36	0	12.3	0.012
J9	JUNCTION	0.00	144.98	0	16:25	0	16.2	0.004
OUT1	OUTFALL	0.00	233.52	0	16:40	0	21.9	0.000
3A-1	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-10	STORAGE	0.00	211.52	0	16:31	0	5.03	0.002
3A-11	STORAGE	0.00	116.68	0	16:43	0	4.05	-0.001
3A-12	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-2	STORAGE	0.00	23.43	0	14:25	0	3.82	-0.001
3A-3	STORAGE	0.00	3.43	0	14:25	0	0.638	0.046
3A-4	STORAGE	0.00	18.55	0	14:25	0	3.18	0.007
3A-5	STORAGE	0.00	45.24	0	15:48	0	7.72	0.000
3A-6	STORAGE	0.00	74.85	0	16:07	0	4.64	-0.001
3A-7	STORAGE	0.00	23.80	0	16:02	0	2	-0.026
3A-9	STORAGE	0.00	381.70	0	16:22	0	5.82	0.004

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
3A-1	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-10	18.822	4	0	0	173.319	34	0 16:40	160.85
3A-11	19.933	4	0	0	163.225	33	0 17:04	76.62
3A-12	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-2	4.867	2	0	0	30.297	11	0 14:25	22.01
3A-3	34.917	22	0	99	56.659	35	0 15:20	0.37
3A-4	163.395	20	0	100	281.513	34	0 15:17	1.92
3A-5	133.058	28	0	0	284.366	60	0 16:43	42.26
3A-6	49.520	16	0	0	171.751	57	0 16:36	70.12
3A-7	50.752	15	0	0	142.743	43	0 18:14	4.47
3A-9	33.929	3	0	0	308.933	31	0 16:29	253.51

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
OUT1	98.71	26.25	233.52	21.926
System	98.71	26.25	233.52	21.926

 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
C1	CONDUIT	519.57	0 16:21	32.18	0.19	0.36
C10	CONDUIT	213.23	0 16:36	5.66	0.02	0.08
C11	CONDUIT	233.64	0 16:39	6.58	0.02	0.08
C12	CONDUIT	23.43	0 14:25	33.40	0.10	0.40
C13	CONDUIT	22.01	0 14:25	8.72	0.14	0.21

C14	CONDUIT	3.43	0	14:25	5.38	0.39	0.72
C15	CONDUIT	18.55	0	14:25	18.54	0.10	0.52
C16	CONDUIT	45.24	0	15:48	26.90	1.04	1.00
C17	CONDUIT	74.85	0	16:07	24.19	1.04	1.00
C18	CONDUIT	23.80	0	16:02	19.62	1.07	1.00
C19	CONDUIT	381.70	0	16:22	>50.00	0.33	0.34
C2	CONDUIT	478.20	0	16:21	25.72	0.36	0.40
C20	CONDUIT	211.52	0	16:31	48.59	0.34	0.42
C21	CONDUIT	116.68	0	16:43	40.38	0.83	0.66
C22	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
C23	CONDUIT	2.94	0	15:31	22.02	1.02	1.00
C24	CONDUIT	39.33	0	16:43	38.50	0.51	0.44
C25	CONDUIT	3.15	0	19:26	21.00	1.00	1.00
C26	CONDUIT	66.98	0	16:36	34.00	0.57	0.60
C27	CONDUIT	2.27	0	17:38	16.48	1.04	1.00
C28	CONDUIT	2.25	0	18:14	6.71	0.03	0.23
C29	CONDUIT	2.52	0	17:45	12.96	1.08	1.00
C3	CONDUIT	405.56	0	16:21	18.70	0.30	0.45
C30	CONDUIT	2.51	0	18:40	13.03	1.08	1.00
C31	CONDUIT	18.69	0	16:36	27.72	1.07	1.00
C32	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
C33	CONDUIT	233.52	0	16:40	6.95	0.01	0.07
C34	CONDUIT	33.59	0	16:25	19.61	0.00	0.08
C35	CONDUIT	0.00	0	00:00	0.00	0.00	0.06
C36	CONDUIT	59.12	0	17:04	33.03	0.55	0.57
C37	CONDUIT	42.55	0	16:40	23.20	0.38	0.57
C38	CONDUIT	40.65	0	16:29	19.03	0.38	0.58
C4	CONDUIT	404.95	0	16:22	24.38	0.95	0.72
C5	CONDUIT	381.89	0	16:22	35.85	0.70	0.53
C6	CONDUIT	42.23	0	16:43	2.28	0.00	0.05
C7	CONDUIT	111.46	0	16:38	3.89	0.01	0.06
C8	CONDUIT	143.45	0	16:26	5.77	0.01	0.06
C9	CONDUIT	183.57	0	16:30	5.71	0.01	0.07
W10	WEIR	0.00	0	00:00			0.00
W11	WEIR	0.00	0	00:00			0.00
W5	WEIR	0.00	0	00:00			0.00
W6	WEIR	0.00	0	00:00			0.00
W7	WEIR	0.00	0	00:00			0.00
W9	WEIR	0.00	0	00:00			0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.53	0.00	0.00	0.00	0.46	0.00	0.00	1.00	0.00
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.45	0.00
C11	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.32	0.00
C12	1.00	0.00	0.53	0.00	0.21	0.25	0.00	0.00	0.00	0.00
C13	1.00	0.00	0.00	0.00	0.64	0.36	0.00	0.00	1.00	0.00
C14	1.00	0.00	0.00	0.00	0.94	0.06	0.00	0.00	0.95	0.00
C15	1.00	0.00	0.00	0.00	0.79	0.21	0.00	0.00	0.84	0.00
C16	1.00	0.00	0.53	0.00	0.08	0.39	0.00	0.00	0.96	0.00
C17	1.00	0.00	0.53	0.00	0.16	0.31	0.00	0.00	0.97	0.00
C18	1.00	0.00	0.52	0.00	0.16	0.32	0.00	0.00	0.94	0.00
C19	1.00	0.00	0.53	0.00	0.00	0.47	0.00	0.00	0.77	0.00
C2	1.00	0.53	0.00	0.00	0.00	0.46	0.00	0.00	0.67	0.00
C20	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.77	0.00
C21	1.00	0.01	0.00	0.00	0.01	0.99	0.00	0.00	0.77	0.00
C22	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C23	1.00	0.00	0.00	0.00	0.10	0.90	0.00	0.00	0.00	0.00
C24	1.00	0.00	0.71	0.00	0.00	0.29	0.00	0.00	0.66	0.00
C25	1.00	0.00	0.00	0.00	0.22	0.78	0.00	0.00	0.38	0.00
C26	1.00	0.00	0.78	0.00	0.02	0.20	0.00	0.00	0.78	0.00
C27	1.00	0.00	0.00	0.00	0.11	0.89	0.00	0.00	0.01	0.00
C28	1.00	0.00	0.88	0.00	0.05	0.08	0.00	0.00	0.76	0.00
C29	1.00	0.00	0.00	0.00	0.36	0.64	0.00	0.00	0.88	0.00
C3	1.00	0.53	0.00	0.00	0.00	0.46	0.00	0.00	1.00	0.00
C30	1.00	0.00	0.01	0.00	0.19	0.80	0.00	0.00	0.75	0.00
C31	1.00	0.00	0.04	0.00	0.17	0.79	0.00	0.00	0.63	0.00
C32	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C33	1.00	0.00	0.00	0.00	0.89	0.11	0.00	0.00	0.02	0.00
C34	1.00	0.00	0.54	0.00	0.00	0.46	0.00	0.00	0.98	0.00
C35	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C36	1.00	0.00	0.91	0.00	0.01	0.08	0.00	0.00	0.77	0.00
C37	1.00	0.00	0.94	0.00	0.01	0.05	0.00	0.00	0.77	0.00
C38	1.00	0.00	0.95	0.00	0.01	0.03	0.00	0.00	0.77	0.00
C4	1.00	0.53	0.01	0.00	0.00	0.47	0.00	0.00	0.66	0.00
C5	1.00	0.53	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00
C6	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.98	0.00
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.00
C8	1.00	0.00	0.00	0.00	0.93	0.07	0.00	0.00	0.97	0.00
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.98	0.00

Conduit Surcharge Summary

Conduit	----- Both Ends	Hours Full Upstream	----- Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
C14	0.01	0.01	36.48	0.01	0.01
C16	0.80	0.80	63.35	0.22	0.01
C17	0.41	0.41	56.89	0.09	0.01
C18	0.61	0.61	56.22	0.40	0.34
C23	1.69	43.96	1.69	2.56	1.69
C25	4.79	22.90	4.79	0.01	0.01
C27	1.83	25.94	1.83	2.92	1.83
C29	1.56	1.56	2.29	0.62	0.11
C30	2.30	2.30	3.69	0.50	0.01
C31	0.81	2.07	1.12	0.76	0.57

Analysis begun on: Mon Aug 26 06:26:39 2019
Analysis ended on: Mon Aug 26 06:26:41 2019
Total elapsed time: 00:00:02

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

 WARNING 02: maximum depth increased for Node J12

Element Count

Number of rain gages 0
 Number of subcatchments ... 0
 Number of nodes 28
 Number of links 44
 Number of pollutants 0
 Number of land uses 0

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	445.00	10.00	0.0	Yes
J10	JUNCTION	300.00	18.00	0.0	
J11	JUNCTION	280.00	18.00	0.0	
J12	JUNCTION	272.00	17.84	0.0	
J13	JUNCTION	265.00	18.00	0.0	
J14	JUNCTION	340.00	1.00	0.0	
J15	JUNCTION	400.00	3.00	0.0	
J16	JUNCTION	445.00	10.00	0.0	Yes
J2	JUNCTION	430.00	10.00	0.0	
J3	JUNCTION	415.00	10.00	0.0	
J4	JUNCTION	407.00	13.00	0.0	
J5	JUNCTION	392.00	10.00	0.0	
J6	JUNCTION	353.02	10.00	0.0	
J7	JUNCTION	338.00	18.00	0.0	
J8	JUNCTION	332.00	18.00	0.0	
J9	JUNCTION	327.00	18.00	0.0	
OUT1	OUTFALL	250.00	17.84	0.0	
3A-1	STORAGE	0.00	5.00	0.0	
3A-10	STORAGE	315.00	5.00	0.0	
3A-11	STORAGE	305.00	5.00	0.0	
3A-12	STORAGE	295.00	5.00	0.0	
3A-2	STORAGE	405.00	5.00	0.0	
3A-3	STORAGE	393.00	7.00	0.0	

3A-4	STORAGE	383.00	7.00	0.0
3A-5	STORAGE	393.80	6.20	0.0
3A-6	STORAGE	393.80	6.20	0.0
3A-7	STORAGE	358.80	6.20	0.0
3A-9	STORAGE	335.00	5.00	0.0

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J1	J2	CONDUIT	163.0	9.2417	0.0130
C10	J11	J12	CONDUIT	658.8	1.2144	0.0350
C11	J12	J13	CONDUIT	449.5	1.5574	0.0350
C12	J1	3A-2	CONDUIT	299.8	13.4641	0.0130
C13	3A-2	J15	CONDUIT	300.0	1.6669	0.0130
C14	J15	3A-3	CONDUIT	977.8	0.7159	0.0130
C15	J15	3A-4	CONDUIT	228.6	7.4579	0.0130
C16	J2	3A-5	CONDUIT	214.6	17.1164	0.0130
C17	J3	3A-6	CONDUIT	210.0	10.1483	0.0130
C18	J5	3A-7	CONDUIT	284.3	11.7594	0.0130
C19	J6	3A-9	CONDUIT	93.0	19.7484	0.0130
C2	J2	J3	CONDUIT	710.0	2.1131	0.0130
C20	3A-9	3A-10	CONDUIT	111.0	18.3178	0.0130
C21	3A-10	3A-11	CONDUIT	86.0	11.7073	0.0130
C22	J14	3A-12	CONDUIT	806.0	5.5918	0.0130
C23	3A-5	J7	CONDUIT	216.5	26.6711	0.0130
C24	3A-5	J7	CONDUIT	258.6	23.3272	0.0130
C25	3A-6	J8	CONDUIT	205.0	31.6227	0.0130
C26	3A-6	J8	CONDUIT	245.7	27.2055	0.0130
C27	3A-7	J9	CONDUIT	211.8	15.1889	0.0130
C28	3A-7	J9	CONDUIT	245.5	14.1940	0.0130
C29	3A-9	J10	CONDUIT	204.6	17.3669	0.0130
C3	J3	J4	CONDUIT	358.7	2.2310	0.0130
C30	3A-10	J11	CONDUIT	204.8	17.3418	0.0130
C31	3A-11	J12	CONDUIT	235.6	14.1440	0.0100
C32	3A-12	J13	CONDUIT	297.2	10.1459	0.0130
C33	J13	OUT1	CONDUIT	702.1	2.1368	0.0350
C34	J16	J9	CONDUIT	218.4	64.2006	0.0100
C35	J4	J9	CONDUIT	782.4	10.9281	0.0130
C36	3A-11	J12	CONDUIT	253.1	13.4557	0.0100
C37	3A-10	J11	CONDUIT	249.1	14.6069	0.0100
C38	3A-9	J10	CONDUIT	240.1	15.1652	0.0100
C4	J4	J5	CONDUIT	725.0	2.0695	0.0130
C5	J5	J6	CONDUIT	898.2	4.3439	0.0130

C6	J7	J8	CONDUIT	557.2	1.0769	0.0350
C7	J8	J9	CONDUIT	777.5	0.6431	0.0350
C8	J9	J10	CONDUIT	1081.8	2.4967	0.0350
C9	J10	J11	CONDUIT	925.5	2.1615	0.0350
W10	3A-10	J11	WEIR			
W11	3A-11	J12	WEIR			
W5	3A-5	J7	WEIR			
W6	3A-6	J8	WEIR			
W7	3A-7	J9	WEIR			
W9	3A-9	J10	WEIR			

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	8.00	50.27	2.00	8.00	1	2772.73
C10	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12787.90
C11	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	14481.40
C12	CIRCULAR	3.00	7.07	0.75	3.00	1	244.74
C13	RECT_CLOSED	3.00	12.00	0.86	4.00	1	159.80
C14	CIRCULAR	1.50	1.77	0.38	1.50	1	8.89
C15	CIRCULAR	3.00	7.07	0.75	3.00	1	182.15
C16	CIRCULAR	1.50	1.77	0.38	1.50	1	43.46
C17	CIRCULAR	2.00	3.14	0.50	2.00	1	72.07
C18	CIRCULAR	1.25	1.23	0.31	1.25	1	22.15
C19	CIRCULAR	5.00	19.63	1.25	5.00	1	1157.38
C2	CIRCULAR	8.00	50.27	2.00	8.00	1	1325.86
C20	CIRCULAR	4.00	12.57	1.00	4.00	1	614.78
C21	CIRCULAR	2.50	4.91	0.63	2.50	1	140.34
C22	CIRCULAR	1.00	0.79	0.25	1.00	1	8.42
C23	CIRCULAR	0.50	0.20	0.13	0.50	1	2.90
C24	CIRCULAR	1.75	2.41	0.44	1.75	1	76.53
C25	CIRCULAR	0.50	0.20	0.13	0.50	1	3.16
C26	CIRCULAR	2.00	3.14	0.50	2.00	1	118.00
C27	CIRCULAR	0.50	0.20	0.13	0.50	1	2.19
C28	CIRCULAR	2.00	3.14	0.50	2.00	1	85.23
C29	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C3	CIRCULAR	8.00	50.27	2.00	8.00	1	1362.34
C30	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C31	CIRCULAR	1.00	0.79	0.25	1.00	1	17.42
C32	CIRCULAR	1.00	0.79	0.25	1.00	1	11.35
C33	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	16962.85
C34	CIRCULAR	8.00	50.27	2.00	8.00	1	9500.47

C35	CIRCULAR	8.00	50.27	2.00	8.00	1	3015.12
C36	CIRCULAR	2.00	3.14	0.50	2.00	1	107.88
C37	CIRCULAR	2.00	3.14	0.50	2.00	1	112.40
C38	CIRCULAR	1.50	1.77	0.38	1.50	2	53.18
C4	CIRCULAR	5.25	21.65	1.31	5.25	1	426.72
C5	CIRCULAR	5.00	19.63	1.25	5.00	1	542.81
C6	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12042.33
C7	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	9305.86
C8	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	18335.61
C9	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	17060.47

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

Analysis Options

Flow Units CFS

Process Models:

Rainfall/Runoff NO

RDII NO

Snowmelt NO

Groundwater NO

Flow Routing YES

Ponding Allowed YES

Water Quality NO

Flow Routing Method DYNWAVE

Starting Date 01/01/2019 00:01:00

Ending Date 01/04/2019 00:00:00

Antecedent Dry Days 0.0

Report Time Step 00:01:00

Routing Time Step 20.00 sec

Variable Time Step YES

Maximum Trials 8

Number of Threads 2

Head Tolerance 0.005000 ft

Flow Routing Continuity Volume Volume

acre-feet

10⁶ gal

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	101.076	32.937
External Outflow	89.072	29.025
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	11.733	3.823
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.281	0.092
Continuity Error (%)	-0.010	

Time-Step Critical Elements

Link C25 (34.48%)
 Link C23 (30.25%)
 Link C21 (10.40%)
 Link C24 (8.82%)
 Link C19 (5.21%)

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	0.92 sec
Average Time Step	:	7.20 sec
Maximum Time Step	:	20.00 sec
Percent in Steady State	:	-0.00
Average Iterations per Step	:	2.00
Percent Not Converging	:	0.01

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
J1	JUNCTION	0.38	2.67	447.67	0 16:21	2.67
J10	JUNCTION	0.26	1.50	301.50	0 16:24	1.50
J11	JUNCTION	0.33	1.89	281.89	0 16:26	1.89
J12	JUNCTION	0.34	1.83	273.83	0 16:37	1.83
J13	JUNCTION	0.31	1.65	266.65	0 16:38	1.65
J14	JUNCTION	0.00	0.00	340.00	0 00:00	0.00
J15	JUNCTION	0.14	0.62	400.62	0 12:55	0.62
J16	JUNCTION	0.07	0.43	445.43	0 16:23	0.43
J2	JUNCTION	0.46	3.91	433.91	0 16:21	3.90
J3	JUNCTION	0.35	3.55	418.55	0 16:21	3.53
J4	JUNCTION	0.46	6.06	413.06	0 16:21	6.04
J5	JUNCTION	0.32	3.67	395.67	0 16:18	3.67
J6	JUNCTION	0.20	2.11	355.12	0 16:18	2.10
J7	JUNCTION	0.18	0.57	338.57	0 16:52	0.57
J8	JUNCTION	0.34	1.30	333.30	0 16:36	1.30
J9	JUNCTION	0.24	1.32	328.32	0 16:22	1.31
OUT1	OUTFALL	0.29	1.65	251.65	0 16:38	1.65
3A-1	STORAGE	0.00	0.00	0.00	0 00:00	0.00
3A-10	STORAGE	0.25	2.22	317.22	0 16:37	2.22
3A-11	STORAGE	0.27	2.10	307.10	0 16:57	2.10
3A-12	STORAGE	0.00	0.00	295.00	0 00:00	0.00
3A-2	STORAGE	0.10	0.58	405.58	0 12:54	0.58
3A-3	STORAGE	1.92	2.92	395.92	0 13:48	2.92
3A-4	STORAGE	1.61	2.63	385.63	0 13:45	2.63
3A-5	STORAGE	2.03	3.94	397.74	0 16:51	3.94
3A-6	STORAGE	1.26	3.78	397.58	0 16:35	3.78
3A-7	STORAGE	1.21	3.22	362.02	0 16:46	3.22
3A-9	STORAGE	0.22	1.91	336.91	0 16:29	1.91

Node Inflow Summary

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal	Flow Balance Error Percent
J1	JUNCTION	666.19	666.19	0 16:21	30.3	30.3	-0.001
J10	JUNCTION	0.00	317.87	0 16:23	0	22.3	0.005

J11	JUNCTION	0.00	329.90	0	16:25	0	23.8	0.008
J12	JUNCTION	0.00	351.39	0	16:37	0	29	0.004
J13	JUNCTION	0.00	351.10	0	16:38	0	29	0.007
J14	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
J15	JUNCTION	0.00	20.32	0	12:54	0	3.82	-0.024
J16	JUNCTION	52.80	52.80	0	16:23	2.63	2.63	-0.005
J2	JUNCTION	0.00	665.93	0	16:21	0	26.5	-0.002
J3	JUNCTION	0.00	622.28	0	16:21	0	16.8	0.001
J4	JUNCTION	0.00	551.47	0	16:21	0	10.8	-0.003
J5	JUNCTION	0.00	451.94	0	16:17	0	10.6	-0.001
J6	JUNCTION	0.00	428.50	0	16:18	0	7.98	0.001
J7	JUNCTION	0.00	43.02	0	16:51	0	9.68	0.001
J8	JUNCTION	0.00	112.74	0	16:29	0	15.6	0.009
J9	JUNCTION	0.00	286.70	0	16:21	0	21.1	0.002
OUT1	OUTFALL	0.00	350.81	0	16:38	0	29	0.000
3A-1	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-10	STORAGE	0.00	283.18	0	16:29	0	6.77	0.001
3A-11	STORAGE	0.00	143.09	0	16:39	0	5.22	-0.002
3A-12	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-2	STORAGE	0.00	93.92	0	16:34	0	3.82	0.001
3A-3	STORAGE	0.00	3.19	0	12:55	0	0.638	0.053
3A-4	STORAGE	0.00	17.10	0	12:55	0	3.19	0.007
3A-5	STORAGE	0.00	45.21	0	15:35	0	9.7	0.001
3A-6	STORAGE	0.00	74.69	0	16:04	0	5.96	-0.001
3A-7	STORAGE	0.00	23.56	0	15:56	0	2.61	-0.019
3A-9	STORAGE	0.00	428.22	0	16:18	0	7.98	0.003

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
3A-1	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-10	22.880	5	0	0	210.131	41	0 16:37	222.67
3A-11	24.249	5	0	0	190.896	39	0 16:57	103.33
3A-12	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-2	5.034	2	0	0	28.705	10	0 12:54	20.32
3A-3	36.116	22	0	100	56.427	35	0 13:48	0.37
3A-4	171.388	21	0	100	282.526	34	0 13:45	1.92
3A-5	143.355	30	0	0	285.281	60	0 16:51	43.02
3A-6	55.901	18	0	0	171.738	57	0 16:35	70.10
3A-7	58.318	18	0	0	158.488	48	0 16:46	14.86
3A-9	40.351	4	0	0	360.352	36	0 16:29	357.77

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
OUT1	98.80	37.22	350.81	29.023
System	98.80	37.22	350.81	29.023

 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
C1	CONDUIT	665.93	0 16:21	34.20	0.24	0.41
C10	CONDUIT	326.12	0 16:26	6.69	0.03	0.10
C11	CONDUIT	351.10	0 16:38	7.65	0.02	0.10
C12	CONDUIT	93.92	0 16:34	>50.00	0.38	0.45
C13	CONDUIT	20.32	0 12:54	8.43	0.13	0.20

C14	CONDUIT	3.19	0	12:55	5.62	0.36	0.71
C15	CONDUIT	17.10	0	12:55	19.38	0.09	0.52
C16	CONDUIT	45.21	0	15:35	27.22	1.04	1.00
C17	CONDUIT	74.69	0	16:04	24.17	1.04	1.00
C18	CONDUIT	23.56	0	15:56	19.52	1.06	1.00
C19	CONDUIT	428.22	0	16:18	>50.00	0.37	0.40
C2	CONDUIT	622.28	0	16:21	33.19	0.47	0.47
C20	CONDUIT	283.18	0	16:29	48.78	0.46	0.50
C21	CONDUIT	143.09	0	16:39	39.16	1.02	0.79
C22	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
C23	CONDUIT	2.94	0	14:48	22.04	1.02	1.00
C24	CONDUIT	40.09	0	16:51	38.65	0.52	0.45
C25	CONDUIT	3.15	0	20:19	21.02	1.00	1.00
C26	CONDUIT	66.96	0	16:35	36.31	0.57	0.59
C27	CONDUIT	2.27	0	18:17	16.49	1.04	1.00
C28	CONDUIT	12.60	0	16:46	14.04	0.15	0.39
C29	CONDUIT	2.51	0	17:54	12.96	1.08	1.00
C3	CONDUIT	551.47	0	16:21	18.67	0.40	0.60
C30	CONDUIT	2.51	0	18:51	12.95	1.08	1.00
C31	CONDUIT	18.58	0	16:27	27.33	1.07	1.00
C32	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
C33	CONDUIT	350.81	0	16:38	8.08	0.02	0.09
C34	CONDUIT	52.79	0	16:23	22.26	0.01	0.11
C35	CONDUIT	112.55	0	16:21	24.84	0.04	0.15
C36	CONDUIT	85.83	0	16:57	36.71	0.80	0.73
C37	CONDUIT	77.84	0	16:37	30.98	0.69	0.75
C38	CONDUIT	72.37	0	16:29	25.44	0.68	0.78
C4	CONDUIT	451.94	0	16:17	24.63	1.06	0.85
C5	CONDUIT	428.50	0	16:18	36.66	0.79	0.58
C6	CONDUIT	43.01	0	16:52	2.14	0.00	0.05
C7	CONDUIT	121.23	0	16:21	3.81	0.01	0.07
C8	CONDUIT	262.26	0	16:22	7.36	0.01	0.08
C9	CONDUIT	303.79	0	16:24	7.03	0.02	0.09
W10	WEIR	0.00	0	00:00			0.00
W11	WEIR	0.00	0	00:00			0.00
W5	WEIR	0.00	0	00:00			0.00
W6	WEIR	0.00	0	00:00			0.00
W7	WEIR	0.00	0	00:00			0.00
W9	WEIR	0.00	0	00:00			0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.52	0.00	0.00	0.00	0.48	0.00	0.00	1.00	0.00
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.45	0.00
C11	1.00	0.00	0.00	0.00	0.95	0.05	0.00	0.00	0.33	0.00
C12	1.00	0.00	0.52	0.00	0.25	0.22	0.00	0.00	0.67	0.00
C13	1.00	0.00	0.00	0.00	0.63	0.37	0.00	0.00	1.00	0.00
C14	1.00	0.00	0.00	0.00	0.95	0.05	0.00	0.00	0.96	0.00
C15	1.00	0.00	0.00	0.00	0.82	0.18	0.00	0.00	0.85	0.00
C16	1.00	0.00	0.52	0.00	0.07	0.40	0.00	0.00	0.95	0.00
C17	1.00	0.00	0.52	0.00	0.15	0.33	0.00	0.00	0.97	0.00
C18	1.00	0.00	0.51	0.00	0.15	0.34	0.00	0.00	0.94	0.00
C19	1.00	0.00	0.52	0.00	0.00	0.48	0.00	0.00	0.77	0.00
C2	1.00	0.52	0.00	0.00	0.00	0.48	0.00	0.00	0.67	0.00
C20	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.80	0.00
C21	1.00	0.01	0.00	0.00	0.01	0.99	0.00	0.00	0.77	0.00
C22	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C23	1.00	0.00	0.00	0.00	0.14	0.86	0.00	0.00	0.00	0.00
C24	1.00	0.00	0.66	0.00	0.00	0.33	0.00	0.00	0.65	0.00
C25	1.00	0.00	0.00	0.00	0.27	0.73	0.00	0.00	0.38	0.00
C26	1.00	0.00	0.74	0.00	0.01	0.25	0.00	0.00	0.80	0.00
C27	1.00	0.00	0.00	0.00	0.16	0.84	0.00	0.00	0.01	0.00
C28	1.00	0.00	0.80	0.00	0.05	0.15	0.00	0.00	0.78	0.00
C29	1.00	0.00	0.00	0.00	0.37	0.63	0.00	0.00	0.88	0.00
C3	1.00	0.52	0.00	0.00	0.00	0.48	0.00	0.00	1.00	0.00
C30	1.00	0.00	0.01	0.00	0.21	0.78	0.00	0.00	0.74	0.00
C31	1.00	0.00	0.04	0.00	0.17	0.80	0.00	0.00	0.64	0.00
C32	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C33	1.00	0.00	0.00	0.00	0.85	0.15	0.00	0.00	0.03	0.00
C34	1.00	0.00	0.52	0.00	0.00	0.48	0.00	0.00	0.98	0.00
C35	1.00	0.00	0.98	0.00	0.00	0.01	0.00	0.00	0.77	0.00
C36	1.00	0.00	0.89	0.00	0.02	0.09	0.00	0.00	0.77	0.00
C37	1.00	0.00	0.93	0.00	0.02	0.06	0.00	0.00	0.77	0.00
C38	1.00	0.00	0.94	0.00	0.01	0.05	0.00	0.00	0.78	0.00
C4	1.00	0.51	0.01	0.00	0.00	0.48	0.00	0.00	0.67	0.00
C5	1.00	0.51	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
C6	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.98	0.00
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.00
C8	1.00	0.00	0.00	0.00	0.88	0.12	0.00	0.00	0.97	0.00
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.99	0.00

Conduit Surcharge Summary

Conduit	----- Both Ends	Hours Full Upstream	----- Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
C14	0.01	0.01	37.99	0.01	0.01
C16	1.01	1.01	65.19	0.46	0.01
C17	0.49	0.49	58.27	0.05	0.01
C18	0.65	0.65	57.25	0.49	0.28
C21	0.01	0.01	0.01	0.14	0.01
C23	2.73	44.84	2.73	4.15	2.73
C25	7.16	26.24	7.16	0.01	0.01
C27	3.48	27.77	3.48	4.43	3.48
C29	1.91	1.91	3.85	0.87	0.12
C30	2.74	2.74	5.55	0.81	0.01
C31	1.23	2.34	1.54	1.19	0.90
C38	0.01	0.01	0.02	0.01	0.01
C4	0.01	0.14	0.01	0.19	0.01

Analysis begun on: Mon Aug 26 06:22:44 2019
Analysis ended on: Mon Aug 26 06:22:46 2019
Total elapsed time: 00:00:02

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

 WARNING 02: maximum depth increased for Node J12

Element Count

Number of rain gages 0
 Number of subcatchments ... 0
 Number of nodes 28
 Number of links 44
 Number of pollutants 0
 Number of land uses 0

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	445.00	10.00	0.0	Yes
J10	JUNCTION	300.00	18.00	0.0	
J11	JUNCTION	280.00	18.00	0.0	
J12	JUNCTION	272.00	17.84	0.0	
J13	JUNCTION	265.00	18.00	0.0	
J14	JUNCTION	340.00	1.00	0.0	
J15	JUNCTION	400.00	3.00	0.0	
J16	JUNCTION	445.00	10.00	0.0	Yes
J2	JUNCTION	430.00	10.00	0.0	
J3	JUNCTION	415.00	10.00	0.0	
J4	JUNCTION	407.00	13.00	0.0	
J5	JUNCTION	392.00	10.00	0.0	
J6	JUNCTION	353.02	10.00	0.0	
J7	JUNCTION	338.00	18.00	0.0	
J8	JUNCTION	332.00	18.00	0.0	
J9	JUNCTION	327.00	18.00	0.0	
OUT1	OUTFALL	250.00	17.84	0.0	
3A-1	STORAGE	0.00	5.00	0.0	
3A-10	STORAGE	315.00	5.00	0.0	
3A-11	STORAGE	305.00	5.00	0.0	
3A-12	STORAGE	295.00	5.00	0.0	
3A-2	STORAGE	405.00	5.00	0.0	
3A-3	STORAGE	393.00	7.00	0.0	

3A-4	STORAGE	383.00	7.00	0.0
3A-5	STORAGE	393.80	6.20	0.0
3A-6	STORAGE	393.80	6.20	0.0
3A-7	STORAGE	358.80	6.20	0.0
3A-9	STORAGE	335.00	5.00	0.0

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J1	J2	CONDUIT	163.0	9.2417	0.0130
C10	J11	J12	CONDUIT	658.8	1.2144	0.0350
C11	J12	J13	CONDUIT	449.5	1.5574	0.0350
C12	J1	3A-2	CONDUIT	299.8	13.4641	0.0130
C13	3A-2	J15	CONDUIT	300.0	1.6669	0.0130
C14	J15	3A-3	CONDUIT	977.8	0.7159	0.0130
C15	J15	3A-4	CONDUIT	228.6	7.4579	0.0130
C16	J2	3A-5	CONDUIT	214.6	17.1164	0.0130
C17	J3	3A-6	CONDUIT	210.0	10.1483	0.0130
C18	J5	3A-7	CONDUIT	284.3	11.7594	0.0130
C19	J6	3A-9	CONDUIT	93.0	19.7484	0.0130
C2	J2	J3	CONDUIT	710.0	2.1131	0.0130
C20	3A-9	3A-10	CONDUIT	111.0	18.3178	0.0130
C21	3A-10	3A-11	CONDUIT	86.0	11.7073	0.0130
C22	J14	3A-12	CONDUIT	806.0	5.5918	0.0130
C23	3A-5	J7	CONDUIT	216.5	26.6711	0.0130
C24	3A-5	J7	CONDUIT	258.6	23.3272	0.0130
C25	3A-6	J8	CONDUIT	205.0	31.6227	0.0130
C26	3A-6	J8	CONDUIT	245.7	27.2055	0.0130
C27	3A-7	J9	CONDUIT	211.8	15.1889	0.0130
C28	3A-7	J9	CONDUIT	245.5	14.1940	0.0130
C29	3A-9	J10	CONDUIT	204.6	17.3669	0.0130
C3	J3	J4	CONDUIT	358.7	2.2310	0.0130
C30	3A-10	J11	CONDUIT	204.8	17.3418	0.0130
C31	3A-11	J12	CONDUIT	235.6	14.1440	0.0100
C32	3A-12	J13	CONDUIT	297.2	10.1459	0.0130
C33	J13	OUT1	CONDUIT	702.1	2.1368	0.0350
C34	J16	J9	CONDUIT	218.4	64.2006	0.0100
C35	J4	J9	CONDUIT	782.4	10.9281	0.0130
C36	3A-11	J12	CONDUIT	253.1	13.4557	0.0100
C37	3A-10	J11	CONDUIT	249.1	14.6069	0.0100
C38	3A-9	J10	CONDUIT	240.1	15.1652	0.0100
C4	J4	J5	CONDUIT	725.0	2.0695	0.0130
C5	J5	J6	CONDUIT	898.2	4.3439	0.0130

C6	J7	J8	CONDUIT	557.2	1.0769	0.0350
C7	J8	J9	CONDUIT	777.5	0.6431	0.0350
C8	J9	J10	CONDUIT	1081.8	2.4967	0.0350
C9	J10	J11	CONDUIT	925.5	2.1615	0.0350
W10	3A-10	J11	WEIR			
W11	3A-11	J12	WEIR			
W5	3A-5	J7	WEIR			
W6	3A-6	J8	WEIR			
W7	3A-7	J9	WEIR			
W9	3A-9	J10	WEIR			

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	8.00	50.27	2.00	8.00	1	2772.73
C10	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12787.90
C11	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	14481.40
C12	CIRCULAR	3.00	7.07	0.75	3.00	1	244.74
C13	RECT_CLOSED	3.00	12.00	0.86	4.00	1	159.80
C14	CIRCULAR	1.50	1.77	0.38	1.50	1	8.89
C15	CIRCULAR	3.00	7.07	0.75	3.00	1	182.15
C16	CIRCULAR	1.50	1.77	0.38	1.50	1	43.46
C17	CIRCULAR	2.00	3.14	0.50	2.00	1	72.07
C18	CIRCULAR	1.25	1.23	0.31	1.25	1	22.15
C19	CIRCULAR	5.00	19.63	1.25	5.00	1	1157.38
C2	CIRCULAR	8.00	50.27	2.00	8.00	1	1325.86
C20	CIRCULAR	4.00	12.57	1.00	4.00	1	614.78
C21	CIRCULAR	2.50	4.91	0.63	2.50	1	140.34
C22	CIRCULAR	1.00	0.79	0.25	1.00	1	8.42
C23	CIRCULAR	0.50	0.20	0.13	0.50	1	2.90
C24	CIRCULAR	1.75	2.41	0.44	1.75	1	76.53
C25	CIRCULAR	0.50	0.20	0.13	0.50	1	3.16
C26	CIRCULAR	2.00	3.14	0.50	2.00	1	118.00
C27	CIRCULAR	0.50	0.20	0.13	0.50	1	2.19
C28	CIRCULAR	2.00	3.14	0.50	2.00	1	85.23
C29	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C3	CIRCULAR	8.00	50.27	2.00	8.00	1	1362.34
C30	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C31	CIRCULAR	1.00	0.79	0.25	1.00	1	17.42
C32	CIRCULAR	1.00	0.79	0.25	1.00	1	11.35
C33	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	16962.85
C34	CIRCULAR	8.00	50.27	2.00	8.00	1	9500.47

C35	CIRCULAR	8.00	50.27	2.00	8.00	1	3015.12
C36	CIRCULAR	2.00	3.14	0.50	2.00	1	107.88
C37	CIRCULAR	2.00	3.14	0.50	2.00	1	112.40
C38	CIRCULAR	1.50	1.77	0.38	1.50	2	53.18
C4	CIRCULAR	5.25	21.65	1.31	5.25	1	426.72
C5	CIRCULAR	5.00	19.63	1.25	5.00	1	542.81
C6	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12042.33
C7	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	9305.86
C8	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	18335.61
C9	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	17060.47

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

Analysis Options

Flow Units CFS

Process Models:

Rainfall/Runoff NO
RDII NO
Snowmelt NO
Groundwater NO
Flow Routing YES
Ponding Allowed YES
Water Quality NO

Flow Routing Method DYNWAVE

Starting Date 01/01/2019 00:01:00

Ending Date 01/04/2019 00:00:00

Antecedent Dry Days 0.0

Report Time Step 00:01:00

Routing Time Step 20.00 sec

Variable Time Step YES

Maximum Trials 8

Number of Threads 2

Head Tolerance 0.005000 ft

Flow Routing Continuity

Volume

acre-feet

Volume

10⁶ gal

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	113.925	37.124
External Outflow	101.838	33.185
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	11.818	3.851
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.290	0.095
Continuity Error (%)	-0.019	

Time-Step Critical Elements

Link C25 (31.91%)
 Link C23 (29.10%)
 Link C21 (11.56%)
 Link C24 (10.79%)
 Link C19 (6.34%)

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	0.49 sec
Average Time Step	:	7.06 sec
Maximum Time Step	:	20.00 sec
Percent in Steady State	:	-0.00
Average Iterations per Step	:	2.00
Percent Not Converging	:	0.03

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
J1	JUNCTION	0.41	2.83	447.83	0 16:21	2.82
J10	JUNCTION	0.29	1.79	301.79	0 16:24	1.79
J11	JUNCTION	0.37	2.27	282.27	0 16:25	2.27
J12	JUNCTION	0.38	2.18	274.18	0 16:26	2.18
J13	JUNCTION	0.34	1.96	266.96	0 16:27	1.96
J14	JUNCTION	0.00	0.00	340.00	0 00:00	0.00
J15	JUNCTION	0.14	0.56	400.56	0 12:08	0.56
J16	JUNCTION	0.08	0.46	445.46	0 16:23	0.46
J2	JUNCTION	0.51	4.17	434.17	0 16:21	4.17
J3	JUNCTION	0.39	3.86	418.86	0 16:21	3.84
J4	JUNCTION	0.52	6.34	413.34	0 16:21	6.34
J5	JUNCTION	0.35	3.67	395.67	0 16:15	3.66
J6	JUNCTION	0.22	2.10	355.12	0 16:15	2.09
J7	JUNCTION	0.20	0.57	338.57	0 16:58	0.57
J8	JUNCTION	0.37	1.29	333.29	0 16:41	1.29
J9	JUNCTION	0.27	1.58	328.58	0 16:22	1.57
OUT1	OUTFALL	0.32	1.96	251.96	0 16:27	1.96
3A-1	STORAGE	0.00	0.00	0.00	0 00:00	0.00
3A-10	STORAGE	0.28	2.39	317.39	0 16:38	2.39
3A-11	STORAGE	0.31	2.26	307.26	0 16:57	2.26
3A-12	STORAGE	0.00	0.00	295.00	0 00:00	0.00
3A-2	STORAGE	0.11	0.51	405.51	0 12:08	0.51
3A-3	STORAGE	1.97	2.89	395.89	0 12:58	2.89
3A-4	STORAGE	1.66	2.61	385.61	0 12:55	2.61
3A-5	STORAGE	2.10	3.95	397.75	0 16:57	3.95
3A-6	STORAGE	1.35	3.79	397.59	0 16:27	3.79
3A-7	STORAGE	1.29	3.32	362.12	0 16:44	3.32
3A-9	STORAGE	0.24	1.97	336.97	0 16:30	1.97

Node Inflow Summary

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal	Flow Balance Error Percent
J1	JUNCTION	741.85	741.85	0 16:21	34.1	34.1	-0.000
J10	JUNCTION	0.00	417.89	0 16:22	0	25.3	0.004

J11	JUNCTION	0.00	445.10	0	16:24	0	27.2	0.007
J12	JUNCTION	0.00	467.74	0	16:26	0	33.2	0.003
J13	JUNCTION	0.00	466.62	0	16:27	0	33.2	0.007
J14	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
J15	JUNCTION	0.00	16.47	0	12:08	0	3.85	-0.024
J16	JUNCTION	62.80	62.80	0	16:23	2.98	2.98	-0.127
J2	JUNCTION	0.00	741.59	0	16:21	0	30.3	-0.002
J3	JUNCTION	0.00	697.77	0	16:21	0	19.6	0.002
J4	JUNCTION	0.00	626.66	0	16:21	0	12.9	-0.005
J5	JUNCTION	0.00	451.78	0	16:15	0	12.3	0.000
J6	JUNCTION	0.00	428.30	0	16:15	0	9.34	0.001
J7	JUNCTION	0.00	43.43	0	16:57	0	10.6	0.000
J8	JUNCTION	0.00	113.43	0	16:28	0	17.4	0.008
J9	JUNCTION	0.00	372.82	0	16:21	0	23.9	0.000
OUT1	OUTFALL	0.00	465.32	0	16:27	0	33.2	0.000
3A-1	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-10	STORAGE	0.00	298.48	0	16:30	0	7.89	0.001
3A-11	STORAGE	0.00	148.90	0	16:42	0	5.96	-0.004
3A-12	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-2	STORAGE	0.00	40.83	0	15:23	0	3.85	-0.001
3A-3	STORAGE	0.00	2.63	0	12:08	0	0.643	0.058
3A-4	STORAGE	0.00	13.82	0	12:08	0	3.21	0.007
3A-5	STORAGE	0.00	45.21	0	16:49	0	10.7	0.000
3A-6	STORAGE	0.00	74.59	0	16:02	0	6.75	-0.000
3A-7	STORAGE	0.00	23.45	0	15:48	0	2.93	-0.015
3A-9	STORAGE	0.00	427.99	0	16:15	0	9.34	0.002

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
3A-1	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-10	25.570	5	0	0	227.091	45	0 16:38	243.52
3A-11	27.127	6	0	0	206.098	42	0 16:57	116.29
3A-12	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-2	5.143	2	0	0	24.943	9	0 12:08	16.47
3A-3	37.074	23	0	99	55.898	35	0 12:58	0.37
3A-4	177.006	21	0	100	280.999	34	0 12:55	1.92
3A-5	148.642	31	0	0	285.786	60	0 16:57	43.43
3A-6	59.830	20	0	0	172.087	57	0 16:27	70.80
3A-7	62.184	19	0	0	163.669	49	0 16:44	19.82
3A-9	44.319	4	0	0	371.694	37	0 16:30	380.16

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
OUT1	98.95	44.87	465.32	33.183
System	98.95	44.87	465.32	33.183

 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
C1	CONDUIT	741.59	0 16:21	35.11	0.27	0.44
C10	CONDUIT	440.89	0 16:25	7.48	0.03	0.12
C11	CONDUIT	466.62	0 16:27	8.51	0.03	0.12
C12	CONDUIT	40.83	0 15:23	45.03	0.17	0.49
C13	CONDUIT	16.47	0 12:08	7.71	0.10	0.18

C14	CONDUIT	2.63	0	12:08	5.73	0.30	0.69
C15	CONDUIT	13.82	0	12:08	19.82	0.08	0.51
C16	CONDUIT	45.21	0	16:49	27.85	1.04	1.00
C17	CONDUIT	74.59	0	16:02	24.11	1.04	1.00
C18	CONDUIT	23.45	0	15:48	19.43	1.06	1.00
C19	CONDUIT	427.99	0	16:15	>50.00	0.37	0.40
C2	CONDUIT	697.77	0	16:21	27.79	0.53	0.50
C20	CONDUIT	298.48	0	16:30	48.10	0.49	0.53
C21	CONDUIT	148.90	0	16:42	38.00	1.06	0.87
C22	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
C23	CONDUIT	2.94	0	14:19	22.05	1.02	1.00
C24	CONDUIT	40.50	0	16:57	38.73	0.53	0.45
C25	CONDUIT	3.15	0	20:54	21.01	1.00	1.00
C26	CONDUIT	67.65	0	16:27	36.59	0.57	0.59
C27	CONDUIT	2.27	0	18:29	16.49	1.04	1.00
C28	CONDUIT	17.56	0	16:44	16.39	0.21	0.52
C29	CONDUIT	2.51	0	18:00	12.96	1.08	1.00
C3	CONDUIT	626.66	0	16:21	18.69	0.46	0.64
C30	CONDUIT	2.51	0	18:56	12.95	1.08	1.00
C31	CONDUIT	18.59	0	16:21	27.01	1.07	1.00
C32	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
C33	CONDUIT	465.32	0	16:27	8.97	0.03	0.11
C34	CONDUIT	62.78	0	16:23	>50.00	0.01	0.13
C35	CONDUIT	185.17	0	16:21	29.85	0.06	0.18
C36	CONDUIT	98.80	0	16:57	38.30	0.92	0.82
C37	CONDUIT	93.56	0	16:38	33.97	0.83	0.83
C38	CONDUIT	79.33	0	16:30	26.08	0.75	0.82
C4	CONDUIT	451.78	0	16:15	24.64	1.06	0.85
C5	CONDUIT	428.30	0	16:15	36.67	0.79	0.58
C6	CONDUIT	43.43	0	16:58	2.11	0.00	0.05
C7	CONDUIT	121.14	0	16:18	3.79	0.01	0.08
C8	CONDUIT	352.95	0	16:22	8.12	0.02	0.09
C9	CONDUIT	404.32	0	16:24	7.68	0.02	0.11
W10	WEIR	0.00	0	00:00			0.00
W11	WEIR	0.00	0	00:00			0.00
W5	WEIR	0.00	0	00:00			0.00
W6	WEIR	0.00	0	00:00			0.00
W7	WEIR	0.00	0	00:00			0.00
W9	WEIR	0.00	0	00:00			0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.51	0.00	0.00	0.00	0.49	0.00	0.00	1.00	0.00
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.45	0.00
C11	1.00	0.00	0.00	0.00	0.94	0.06	0.00	0.00	0.33	0.00
C12	1.00	0.00	0.51	0.00	0.27	0.21	0.00	0.00	0.00	0.00
C13	1.00	0.00	0.00	0.00	0.56	0.44	0.00	0.00	1.00	0.00
C14	1.00	0.00	0.00	0.00	0.95	0.05	0.00	0.00	0.96	0.00
C15	1.00	0.00	0.00	0.00	0.84	0.16	0.00	0.00	0.86	0.00
C16	1.00	0.00	0.51	0.00	0.09	0.40	0.00	0.00	0.95	0.00
C17	1.00	0.00	0.51	0.00	0.15	0.34	0.00	0.00	0.97	0.00
C18	1.00	0.00	0.50	0.00	0.16	0.34	0.00	0.00	0.94	0.00
C19	1.00	0.00	0.51	0.00	0.00	0.49	0.00	0.00	0.77	0.00
C2	1.00	0.51	0.00	0.00	0.00	0.49	0.00	0.00	0.67	0.00
C20	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.81	0.00
C21	1.00	0.01	0.00	0.00	0.01	0.99	0.00	0.00	0.77	0.00
C22	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C23	1.00	0.00	0.00	0.00	0.16	0.84	0.00	0.00	0.00	0.00
C24	1.00	0.00	0.64	0.00	0.00	0.36	0.00	0.00	0.65	0.00
C25	1.00	0.00	0.00	0.00	0.30	0.70	0.00	0.00	0.38	0.00
C26	1.00	0.00	0.71	0.00	0.01	0.28	0.00	0.00	0.81	0.00
C27	1.00	0.00	0.00	0.00	0.19	0.81	0.00	0.00	0.01	0.00
C28	1.00	0.00	0.77	0.00	0.02	0.21	0.00	0.00	0.78	0.00
C29	1.00	0.00	0.00	0.00	0.38	0.62	0.00	0.00	0.88	0.00
C3	1.00	0.51	0.00	0.00	0.00	0.49	0.00	0.00	1.00	0.00
C30	1.00	0.00	0.01	0.00	0.22	0.77	0.00	0.00	0.74	0.00
C31	1.00	0.00	0.03	0.00	0.17	0.79	0.00	0.00	0.64	0.00
C32	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C33	1.00	0.00	0.00	0.00	0.83	0.17	0.00	0.00	0.03	0.00
C34	1.00	0.00	0.51	0.00	0.00	0.49	0.00	0.00	0.98	0.00
C35	1.00	0.00	0.98	0.00	0.00	0.02	0.00	0.00	0.77	0.00
C36	1.00	0.00	0.88	0.00	0.02	0.10	0.00	0.00	0.77	0.00
C37	1.00	0.00	0.92	0.00	0.02	0.06	0.00	0.00	0.77	0.00
C38	1.00	0.00	0.93	0.00	0.01	0.05	0.00	0.00	0.78	0.00
C4	1.00	0.50	0.00	0.00	0.00	0.49	0.00	0.00	0.67	0.00
C5	1.00	0.50	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00
C6	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.99	0.00
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.00
C8	1.00	0.00	0.00	0.00	0.86	0.14	0.00	0.00	0.98	0.00
C9	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.99	0.00

Conduit Surcharge Summary

Conduit	----- Both Ends	Hours Full Upstream	----- Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
C14	0.01	0.01	39.13	0.01	0.01
C16	1.24	1.24	65.91	0.55	0.01
C17	0.56	0.56	59.02	0.06	0.01
C18	0.83	0.83	57.88	0.47	0.29
C21	0.01	0.01	0.01	0.31	0.01
C23	3.39	45.13	3.39	5.05	3.39
C25	8.39	27.89	8.39	0.01	0.01
C27	4.33	28.62	4.33	5.50	4.33
C29	2.15	2.15	4.66	1.04	0.08
C30	3.05	3.05	6.72	1.26	0.22
C31	1.42	2.51	1.75	1.30	1.00
C36	0.01	0.01	0.30	0.01	0.01
C37	0.01	0.01	0.18	0.01	0.01
C38	0.01	0.01	0.17	0.01	0.01
C4	0.01	0.22	0.01	0.27	0.01

Analysis begun on: Thu Oct 17 13:48:43 2019
Analysis ended on: Thu Oct 17 13:48:45 2019
Total elapsed time: 00:00:02

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

 WARNING 02: maximum depth increased for Node J12

Element Count

Number of rain gages 0
 Number of subcatchments ... 0
 Number of nodes 28
 Number of links 44
 Number of pollutants 0
 Number of land uses 0

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	445.00	10.00	0.0	Yes
J10	JUNCTION	300.00	18.00	0.0	
J11	JUNCTION	280.00	18.00	0.0	
J12	JUNCTION	272.00	17.84	0.0	
J13	JUNCTION	265.00	18.00	0.0	
J14	JUNCTION	340.00	1.00	0.0	
J15	JUNCTION	400.00	3.00	0.0	
J16	JUNCTION	445.00	10.00	0.0	Yes
J2	JUNCTION	430.00	10.00	0.0	
J3	JUNCTION	415.00	10.00	0.0	
J4	JUNCTION	407.00	13.00	0.0	
J5	JUNCTION	392.00	10.00	0.0	
J6	JUNCTION	353.02	10.00	0.0	
J7	JUNCTION	338.00	18.00	0.0	
J8	JUNCTION	332.00	18.00	0.0	
J9	JUNCTION	327.00	18.00	0.0	
OUT1	OUTFALL	250.00	17.84	0.0	
3A-1	STORAGE	0.00	5.00	0.0	
3A-10	STORAGE	315.00	5.00	0.0	
3A-11	STORAGE	305.00	5.00	0.0	
3A-12	STORAGE	295.00	5.00	0.0	
3A-2	STORAGE	405.00	5.00	0.0	
3A-3	STORAGE	393.00	7.00	0.0	

3A-4	STORAGE	383.00	7.00	0.0
3A-5	STORAGE	393.80	6.20	0.0
3A-6	STORAGE	393.80	6.20	0.0
3A-7	STORAGE	358.80	6.20	0.0
3A-9	STORAGE	335.00	5.00	0.0

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J1	J2	CONDUIT	163.0	9.2417	0.0130
C10	J11	J12	CONDUIT	658.8	1.2144	0.0350
C11	J12	J13	CONDUIT	449.5	1.5574	0.0350
C12	J1	3A-2	CONDUIT	299.8	13.4641	0.0130
C13	3A-2	J15	CONDUIT	300.0	1.6669	0.0130
C14	J15	3A-3	CONDUIT	977.8	0.7159	0.0130
C15	J15	3A-4	CONDUIT	228.6	7.4579	0.0130
C16	J2	3A-5	CONDUIT	214.6	17.1164	0.0130
C17	J3	3A-6	CONDUIT	210.0	10.1483	0.0130
C18	J5	3A-7	CONDUIT	284.3	11.7594	0.0130
C19	J6	3A-9	CONDUIT	93.0	19.7484	0.0130
C2	J2	J3	CONDUIT	710.0	2.1131	0.0130
C20	3A-9	3A-10	CONDUIT	111.0	18.3178	0.0130
C21	3A-10	3A-11	CONDUIT	86.0	11.7073	0.0130
C22	J14	3A-12	CONDUIT	806.0	5.5918	0.0130
C23	3A-5	J7	CONDUIT	216.5	26.6711	0.0130
C24	3A-5	J7	CONDUIT	258.6	23.3272	0.0130
C25	3A-6	J8	CONDUIT	205.0	31.6227	0.0130
C26	3A-6	J8	CONDUIT	245.7	27.2055	0.0130
C27	3A-7	J9	CONDUIT	211.8	15.1889	0.0130
C28	3A-7	J9	CONDUIT	245.5	14.1940	0.0130
C29	3A-9	J10	CONDUIT	204.6	17.3669	0.0130
C3	J3	J4	CONDUIT	358.7	2.2310	0.0130
C30	3A-10	J11	CONDUIT	204.8	17.3418	0.0130
C31	3A-11	J12	CONDUIT	235.6	14.1440	0.0100
C32	3A-12	J13	CONDUIT	297.2	10.1459	0.0130
C33	J13	OUT1	CONDUIT	702.1	2.1368	0.0350
C34	J16	J9	CONDUIT	218.4	64.2006	0.0100
C35	J4	J9	CONDUIT	782.4	10.9281	0.0130
C36	3A-11	J12	CONDUIT	253.1	13.4557	0.0100
C37	3A-10	J11	CONDUIT	249.1	14.6069	0.0100
C38	3A-9	J10	CONDUIT	240.1	15.1652	0.0100
C4	J4	J5	CONDUIT	725.0	2.0695	0.0130
C5	J5	J6	CONDUIT	898.2	4.3439	0.0130

C6	J7	J8	CONDUIT	557.2	1.0769	0.0350
C7	J8	J9	CONDUIT	777.5	0.6431	0.0350
C8	J9	J10	CONDUIT	1081.8	2.4967	0.0350
C9	J10	J11	CONDUIT	925.5	2.1615	0.0350
W10	3A-10	J11	WEIR			
W11	3A-11	J12	WEIR			
W5	3A-5	J7	WEIR			
W6	3A-6	J8	WEIR			
W7	3A-7	J9	WEIR			
W9	3A-9	J10	WEIR			

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	8.00	50.27	2.00	8.00	1	2772.73
C10	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12787.90
C11	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	14481.40
C12	CIRCULAR	3.00	7.07	0.75	3.00	1	244.74
C13	RECT_CLOSED	3.00	12.00	0.86	4.00	1	159.80
C14	CIRCULAR	1.50	1.77	0.38	1.50	1	8.89
C15	CIRCULAR	3.00	7.07	0.75	3.00	1	182.15
C16	CIRCULAR	1.50	1.77	0.38	1.50	1	43.46
C17	CIRCULAR	2.00	3.14	0.50	2.00	1	72.07
C18	CIRCULAR	1.25	1.23	0.31	1.25	1	22.15
C19	CIRCULAR	5.00	19.63	1.25	5.00	1	1157.38
C2	CIRCULAR	8.00	50.27	2.00	8.00	1	1325.86
C20	CIRCULAR	4.00	12.57	1.00	4.00	1	614.78
C21	CIRCULAR	2.50	4.91	0.63	2.50	1	140.34
C22	CIRCULAR	1.00	0.79	0.25	1.00	1	8.42
C23	CIRCULAR	0.50	0.20	0.13	0.50	1	2.90
C24	CIRCULAR	1.75	2.41	0.44	1.75	1	76.53
C25	CIRCULAR	0.50	0.20	0.13	0.50	1	3.16
C26	CIRCULAR	2.00	3.14	0.50	2.00	1	118.00
C27	CIRCULAR	0.50	0.20	0.13	0.50	1	2.19
C28	CIRCULAR	2.00	3.14	0.50	2.00	1	85.23
C29	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C3	CIRCULAR	8.00	50.27	2.00	8.00	1	1362.34
C30	CIRCULAR	0.50	0.20	0.13	0.50	1	2.34
C31	CIRCULAR	1.00	0.79	0.25	1.00	1	17.42
C32	CIRCULAR	1.00	0.79	0.25	1.00	1	11.35
C33	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	16962.85
C34	CIRCULAR	8.00	50.27	2.00	8.00	1	9500.47

C35	CIRCULAR	8.00	50.27	2.00	8.00	1	3015.12
C36	CIRCULAR	2.00	3.14	0.50	2.00	1	107.88
C37	CIRCULAR	2.00	3.14	0.50	2.00	1	112.40
C38	CIRCULAR	1.50	1.77	0.38	1.50	2	53.18
C4	CIRCULAR	5.25	21.65	1.31	5.25	1	426.72
C5	CIRCULAR	5.00	19.63	1.25	5.00	1	542.81
C6	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	12042.33
C7	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	9305.86
C8	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	18335.61
C9	TRAPEZOIDAL	17.84	614.05	9.39	43.34	1	17060.47

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

Analysis Options

Flow Units CFS

Process Models:

Rainfall/Runoff NO
RDII NO
Snowmelt NO
Groundwater NO
Flow Routing YES
Ponding Allowed YES
Water Quality NO

Flow Routing Method DYNWAVE

Starting Date 01/01/2019 00:01:00

Ending Date 01/04/2019 00:00:00

Antecedent Dry Days 0.0

Report Time Step 00:01:00

Routing Time Step 20.00 sec

Variable Time Step YES

Maximum Trials 8

Number of Threads 2

Head Tolerance 0.005000 ft

Flow Routing Continuity

Volume

acre-feet

Volume

10⁶ gal

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.000	0.000
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	128.630	41.916
External Outflow	116.551	37.980
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	11.805	3.847
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.282	0.092
Continuity Error (%)	-0.006	

Time-Step Critical Elements

Link C25 (30.56%)
 Link C23 (28.22%)
 Link C21 (13.82%)
 Link C24 (11.66%)
 Link C19 (6.79%)

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	0.85 sec
Average Time Step	:	6.93 sec
Maximum Time Step	:	20.00 sec
Percent in Steady State	:	-0.00
Average Iterations per Step	:	2.00
Percent Not Converging	:	0.01

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
J1	JUNCTION	0.45	2.99	447.99	0 16:20	2.99
J10	JUNCTION	0.32	2.04	302.04	0 16:23	2.04
J11	JUNCTION	0.40	2.57	282.57	0 16:24	2.57
J12	JUNCTION	0.42	2.49	274.49	0 16:25	2.49
J13	JUNCTION	0.38	2.24	267.24	0 16:26	2.24
J14	JUNCTION	0.00	0.00	340.00	0 00:00	0.00
J15	JUNCTION	0.15	0.56	400.56	0 11:14	0.56
J16	JUNCTION	0.09	0.50	445.50	0 16:23	0.50
J2	JUNCTION	0.55	4.46	434.46	0 16:20	4.45
J3	JUNCTION	0.42	4.19	419.19	0 16:20	4.14
J4	JUNCTION	0.57	6.60	413.60	0 16:20	6.60
J5	JUNCTION	0.38	3.67	395.67	0 16:12	3.62
J6	JUNCTION	0.24	2.10	355.12	0 16:12	2.10
J7	JUNCTION	0.21	0.57	338.57	0 15:19	0.57
J8	JUNCTION	0.39	1.29	333.29	0 16:04	1.29
J9	JUNCTION	0.30	1.82	328.82	0 16:21	1.82
OUT1	OUTFALL	0.36	2.24	252.24	0 16:26	2.24
3A-1	STORAGE	0.00	0.00	0.00	0 00:00	0.00
3A-10	STORAGE	0.30	2.48	317.48	0 16:38	2.48
3A-11	STORAGE	0.34	2.34	307.34	0 16:56	2.34
3A-12	STORAGE	0.00	0.00	295.00	0 00:00	0.00
3A-2	STORAGE	0.11	0.51	405.51	0 11:14	0.51
3A-3	STORAGE	2.00	2.89	395.89	0 12:05	2.89
3A-4	STORAGE	1.71	2.63	385.63	0 12:02	2.63
3A-5	STORAGE	2.17	3.96	397.76	0 15:18	3.96
3A-6	STORAGE	1.45	3.79	397.59	0 16:26	3.79
3A-7	STORAGE	1.37	3.35	362.15	0 16:45	3.35
3A-9	STORAGE	0.26	1.99	336.99	0 16:31	1.99

Node Inflow Summary

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal	Flow Balance Error Percent
J1	JUNCTION	822.99	822.99	0 16:20	38.3	38.3	-0.000
J10	JUNCTION	0.00	512.43	0 16:21	0	29.2	0.004

J11	JUNCTION	0.00	546.04	0	16:23	0	31.3	0.007
J12	JUNCTION	0.00	582.26	0	16:25	0	38	0.003
J13	JUNCTION	0.00	581.06	0	16:25	0	38	0.006
J14	JUNCTION	0.00	0.00	0	00:00	0	0	0.000 gal
J15	JUNCTION	0.00	16.48	0	11:14	0	3.85	-0.025
J16	JUNCTION	73.60	73.60	0	16:23	3.64	3.64	-0.003
J2	JUNCTION	0.00	822.69	0	16:20	0	34.4	-0.002
J3	JUNCTION	0.00	780.40	0	16:20	0	22.6	0.003
J4	JUNCTION	0.00	709.71	0	16:20	0	14.9	-0.002
J5	JUNCTION	0.00	451.39	0	16:12	0	13.8	-0.004
J6	JUNCTION	0.00	427.25	0	16:12	0	10.4	0.002
J7	JUNCTION	0.00	43.83	0	15:18	0	11.8	0.001
J8	JUNCTION	0.00	114.15	0	16:26	0	19.5	0.007
J9	JUNCTION	0.00	467.61	0	16:21	0	27.6	0.002
OUT1	OUTFALL	0.00	579.71	0	16:26	0	38	0.000
3A-1	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-10	STORAGE	0.00	304.17	0	16:31	0	8.83	-0.001
3A-11	STORAGE	0.00	149.94	0	16:44	0	6.66	-0.004
3A-12	STORAGE	0.00	0.00	0	00:00	0	0	0.000 gal
3A-2	STORAGE	0.00	137.94	0	16:07	0	3.85	0.001
3A-3	STORAGE	0.00	2.63	0	11:14	0	0.639	0.056
3A-4	STORAGE	0.00	13.84	0	11:14	0	3.21	0.008
3A-5	STORAGE	0.00	45.21	0	16:55	0	11.8	0.001
3A-6	STORAGE	0.00	74.51	0	16:01	0	7.73	0.000
3A-7	STORAGE	0.00	23.28	0	15:43	0	3.36	-0.010
3A-9	STORAGE	0.00	426.87	0	16:12	0	10.4	0.001

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
3A-1	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-10	27.830	5	0	0	235.882	47	0 16:38	247.81
3A-11	30.036	6	0	0	213.893	44	0 16:56	122.07
3A-12	0.000	0	0	0	0.000	0	0 00:00	0.00
3A-2	5.349	2	0	0	24.954	9	0 11:14	16.48
3A-3	37.690	23	0	100	55.894	35	0 12:05	0.37
3A-4	182.179	22	0	100	283.313	34	0 12:02	1.92
3A-5	154.147	32	0	0	286.273	60	0 15:18	43.83
3A-6	64.125	21	0	0	172.374	57	0 16:26	71.37
3A-7	66.356	20	0	0	165.405	50	0 16:45	21.62
3A-9	47.441	5	0	0	375.943	38	0 16:31	388.43

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
OUT1	98.90	52.73	579.71	37.977
System	98.90	52.73	579.71	37.977

 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
C1	CONDUIT	822.69	0 16:20	35.91	0.30	0.47
C10	CONDUIT	541.67	0 16:24	8.02	0.04	0.14
C11	CONDUIT	581.06	0 16:25	9.21	0.04	0.13
C12	CONDUIT	137.94	0 16:07	>50.00	0.56	0.55
C13	CONDUIT	16.48	0 11:14	7.71	0.10	0.18

C14	CONDUIT	2.63	0	11:14	5.86	0.30	0.69
C15	CONDUIT	13.84	0	11:14	20.38	0.08	0.52
C16	CONDUIT	45.21	0	16:55	29.28	1.04	1.00
C17	CONDUIT	74.51	0	16:01	24.12	1.03	1.00
C18	CONDUIT	23.28	0	15:43	19.28	1.05	1.00
C19	CONDUIT	426.87	0	16:12	>50.00	0.37	0.41
C2	CONDUIT	780.40	0	16:20	28.30	0.59	0.54
C20	CONDUIT	304.17	0	16:31	47.36	0.49	0.54
C21	CONDUIT	149.94	0	16:44	36.41	1.07	0.91
C22	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
C23	CONDUIT	2.94	0	13:36	22.07	1.02	1.00
C24	CONDUIT	40.90	0	15:18	38.81	0.53	0.45
C25	CONDUIT	3.15	0	21:23	21.08	1.00	1.00
C26	CONDUIT	68.22	0	16:26	36.71	0.58	0.59
C27	CONDUIT	2.27	0	18:40	16.49	1.04	1.00
C28	CONDUIT	19.37	0	16:45	17.45	0.23	0.61
C29	CONDUIT	2.51	0	18:09	12.96	1.07	1.00
C3	CONDUIT	709.71	0	16:20	19.76	0.52	0.67
C30	CONDUIT	2.51	0	19:04	12.95	1.08	1.00
C31	CONDUIT	18.71	0	16:15	26.84	1.07	1.00
C32	CONDUIT	0.00	0	00:00	0.00	0.00	0.50
C33	CONDUIT	579.71	0	16:26	9.71	0.03	0.13
C34	CONDUIT	73.59	0	16:23	22.39	0.01	0.14
C35	CONDUIT	264.33	0	16:20	34.04	0.09	0.21
C36	CONDUIT	104.57	0	16:56	38.76	0.97	0.86
C37	CONDUIT	100.92	0	16:38	35.31	0.90	0.87
C38	CONDUIT	81.92	0	16:31	26.15	0.77	0.83
C4	CONDUIT	451.39	0	16:12	24.66	1.06	0.85
C5	CONDUIT	427.25	0	16:12	36.68	0.79	0.58
C6	CONDUIT	43.82	0	15:19	2.11	0.00	0.05
C7	CONDUIT	120.77	0	16:14	3.78	0.01	0.08
C8	CONDUIT	445.44	0	16:21	8.87	0.02	0.11
C9	CONDUIT	498.41	0	16:23	8.25	0.03	0.13
W10	WEIR	0.00	0	00:00			0.00
W11	WEIR	0.00	0	00:00			0.00
W5	WEIR	0.00	0	00:00			0.00
W6	WEIR	0.00	0	00:00			0.00
W7	WEIR	0.00	0	00:00			0.00
W9	WEIR	0.00	0	00:00			0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	----- Fraction of Time in Flow Class -----								
		Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.50	0.00	0.00	0.00	0.49	0.00	0.00	1.00	0.00
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.45	0.00
C11	1.00	0.00	0.00	0.00	0.93	0.07	0.00	0.00	0.32	0.00
C12	1.00	0.00	0.50	0.00	0.31	0.19	0.00	0.00	0.67	0.00
C13	1.00	0.00	0.00	0.00	0.58	0.42	0.00	0.00	0.99	0.00
C14	1.00	0.00	0.00	0.00	0.96	0.04	0.00	0.00	0.96	0.00
C15	1.00	0.00	0.00	0.00	0.85	0.15	0.00	0.00	0.86	0.00
C16	1.00	0.00	0.50	0.00	0.10	0.40	0.00	0.00	0.94	0.00
C17	1.00	0.00	0.50	0.00	0.16	0.34	0.00	0.00	0.97	0.00
C18	1.00	0.00	0.50	0.00	0.15	0.35	0.00	0.00	0.94	0.00
C19	1.00	0.00	0.50	0.00	0.00	0.50	0.00	0.00	0.76	0.00
C2	1.00	0.50	0.00	0.00	0.00	0.49	0.00	0.00	0.67	0.00
C20	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.82	0.00
C21	1.00	0.01	0.00	0.00	0.01	0.99	0.00	0.00	0.77	0.00
C22	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C23	1.00	0.00	0.00	0.00	0.19	0.80	0.00	0.00	0.00	0.00
C24	1.00	0.00	0.61	0.00	0.00	0.38	0.00	0.00	0.65	0.00
C25	1.00	0.00	0.00	0.00	0.33	0.67	0.00	0.00	0.38	0.00
C26	1.00	0.00	0.69	0.00	0.01	0.30	0.00	0.00	0.82	0.00
C27	1.00	0.00	0.00	0.00	0.22	0.78	0.00	0.00	0.01	0.00
C28	1.00	0.00	0.75	0.00	0.01	0.24	0.00	0.00	0.79	0.00
C29	1.00	0.00	0.00	0.00	0.38	0.61	0.00	0.00	0.87	0.00
C3	1.00	0.50	0.00	0.00	0.00	0.49	0.00	0.00	0.99	0.00
C30	1.00	0.00	0.01	0.00	0.23	0.76	0.00	0.00	0.73	0.00
C31	1.00	0.00	0.03	0.00	0.18	0.79	0.00	0.00	0.64	0.00
C32	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C33	1.00	0.00	0.00	0.00	0.81	0.19	0.00	0.00	0.03	0.00
C34	1.00	0.00	0.51	0.00	0.00	0.49	0.00	0.00	0.98	0.00
C35	1.00	0.00	0.97	0.00	0.00	0.03	0.00	0.00	0.77	0.00
C36	1.00	0.00	0.86	0.00	0.03	0.11	0.00	0.00	0.77	0.00
C37	1.00	0.00	0.91	0.00	0.02	0.07	0.00	0.00	0.78	0.00
C38	1.00	0.00	0.93	0.00	0.02	0.05	0.00	0.00	0.78	0.00
C4	1.00	0.50	0.00	0.00	0.00	0.50	0.00	0.00	0.67	0.00
C5	1.00	0.50	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
C6	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.98	0.00
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.00
C8	1.00	0.00	0.00	0.00	0.82	0.18	0.00	0.00	0.98	0.00
C9	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.99	0.00

Conduit Surcharge Summary

Conduit	----- Both Ends	Hours Full Upstream	----- Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
C14	0.01	0.01	39.40	0.01	0.01
C16	1.52	1.52	66.49	0.82	0.01
C17	0.58	0.58	59.84	0.15	0.08
C18	0.92	0.92	58.59	0.49	0.28
C21	0.01	0.01	0.01	0.38	0.01
C23	4.51	45.34	4.51	5.84	4.51
C25	9.69	29.52	9.69	0.01	0.01
C27	5.33	29.78	5.33	6.88	5.33
C29	2.57	2.57	5.63	1.03	0.03
C30	3.56	3.56	7.77	1.50	0.25
C31	1.69	2.71	2.18	1.53	1.18
C36	0.01	0.01	0.42	0.01	0.01
C37	0.01	0.01	0.30	0.01	0.01
C38	0.01	0.01	0.25	0.01	0.01
C4	0.01	0.29	0.01	0.35	0.01

Analysis begun on: Sun Aug 25 16:34:21 2019
Analysis ended on: Sun Aug 25 16:34:23 2019
Total elapsed time: 00:00:02