

0.5YR

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.010)

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 LPS

Process Models:

Rainfall/Runoff YES

RDII NO

Snowmelt NO

Groundwater NO

Flow Routing YES

Ponding Allowed NO

Water Quality NO

Infiltration Method CURVE_NUMBER

Flow Routing Method KINWAVE

Starting Date JAN-01-2015 00:00:00

Ending Date JAN-03-2015 23:50:00

Antecedent Dry Days 0.0

Report Time Step 00:15:00

Wet Time Step 00:05:00

Dry Time Step 01:00:00

Routing Time Step 30.00 sec

Runoff Quantity Continuity

Volume
hectare-m

Depth
mm

Total Precipitation

14.473

30.750

Evaporation Loss	0.000	0.000
Infiltration Loss	12.980	27.578
Surface Runoff	0.852	1.811
Final Storage	0.641	1.362
Continuity Error (%)	-0.003	

	Volume hectare-m	Volume 10 ⁶ ltr
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***** Flow Routing Continuity *****		
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.852	8.524
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.743	7.433
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.003	0.031
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.103	1.032
Continuity Error (%)	0.321	

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	29.00 sec
Average Time Step	:	30.00 sec
Maximum Time Step	:	30.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	1.00
Percent Not Converging	:	0.00

Subcatchment Runoff Summary

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S2	30.75	0.00	0.00	20.32	8.15	0.12	2.98	0.265
S3	30.75	0.00	0.00	20.32	8.40	0.98	26.57	0.273
S4	30.75	0.00	0.00	15.36	11.79	0.80	23.54	0.384
S5	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S6	30.75	0.00	0.00	20.32	9.06	0.38	23.61	0.295
S7	30.75	0.00	0.00	28.98	0.51	0.03	1.29	0.017
S8	30.75	0.00	0.00	28.68	0.81	0.07	2.99	0.026
S9	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S10C	30.75	0.00	0.00	22.39	7.09	0.09	4.10	0.231
S11	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S12	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S13	30.75	0.00	0.00	19.20	9.28	0.28	8.77	0.302
S14	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S15	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S16	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S17	30.75	0.00	0.00	20.32	8.22	0.30	7.57	0.267
S18	30.75	0.00	0.00	20.32	8.64	0.20	6.62	0.281
S19	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S20	30.75	0.00	0.00	22.14	7.34	0.52	15.65	0.239
S21	30.75	0.00	0.00	21.85	7.64	0.73	33.72	0.249
S22	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S23	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S24	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S26	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S25	30.75	0.00	0.00	20.32	9.02	1.15	66.26	0.293
S28	30.75	0.00	0.00	20.32	8.60	0.26	8.18	0.280
S27	30.75	0.00	0.00	20.32	9.06	0.45	27.57	0.294
S29	30.75	0.00	0.00	28.93	0.56	0.01	0.38	0.018
S32	30.75	0.00	0.00	28.92	0.56	0.01	0.33	0.018
S30	30.75	0.00	0.00	26.18	3.31	0.07	1.98	0.108
S31	30.75	0.00	0.00	28.98	0.50	0.02	0.84	0.016

S4A	30.75	0.00	0.00	15.36	11.90	0.16	5.33	0.387
4B	30.75	0.00	0.00	25.10	4.38	0.04	1.33	0.143
S21-RE	30.75	0.00	0.00	21.85	7.64	0.39	17.96	0.249
S27-RE	30.75	0.00	0.00	20.32	9.05	0.36	22.25	0.294
S17-RE	30.75	0.00	0.00	20.32	8.68	0.11	3.78	0.282
S4C	30.75	0.00	0.00	15.36	11.92	0.35	11.73	0.388
S10B	30.75	0.00	0.00	23.23	6.26	0.33	8.37	0.204
S10A	30.75	0.00	0.00	22.74	6.75	0.12	3.74	0.219
EXTERNAL1	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
EXTERNAL2	30.75	0.00	0.00	29.50	0.00	0.00	0.00	0.000
S10D	30.75	0.00	0.00	22.70	6.79	0.21	6.35	0.221

Node Depth Summary

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J19	JUNCTION	0.00	0.01	81.06	0 13:00	0.00
J13	JUNCTION	0.00	0.00	65.96	0 22:00	0.00
J14	JUNCTION	0.00	0.01	64.97	0 20:04	0.00
J15	JUNCTION	0.01	0.02	63.02	0 20:08	0.01
J16	JUNCTION	0.01	0.02	62.85	0 20:19	0.01
J17	JUNCTION	0.00	0.01	59.34	0 20:30	0.00
J18	JUNCTION	0.00	0.01	57.32	0 20:32	0.00
J12	JUNCTION	0.00	0.01	72.60	0 22:00	0.00
J1	JUNCTION	0.00	0.00	70.32	0 00:00	0.00
J10	JUNCTION	0.00	0.01	61.81	0 21:28	0.00
J11	JUNCTION	0.02	0.03	55.03	1 00:19	0.01
J6	JUNCTION	0.02	0.04	52.04	1 00:10	0.01
J87	JUNCTION	0.00	0.00	49.00	0 22:49	0.00
J20	JUNCTION	0.00	0.00	77.97	0 00:00	0.00
J21	JUNCTION	0.00	0.01	64.01	0 21:33	0.00
B2	JUNCTION	0.01	0.04	68.58	0 15:00	0.01
B1.EX	JUNCTION	0.01	0.04	68.46	0 15:01	0.01
J5	JUNCTION	0.00	0.00	62.00	0 00:00	0.00
G3	JUNCTION	0.01	0.04	68.05	0 15:05	0.01

J7	JUNCTION	0.01	0.05	67.93	0	15:00	0.01
J22	JUNCTION	0.02	0.04	59.84	1	00:06	0.01
J24	JUNCTION	0.01	0.02	66.82	0	23:42	0.01
J23	JUNCTION	0.02	0.04	59.74	1	00:06	0.01
J25	JUNCTION	0.00	0.00	65.60	1	00:04	0.00
G2	JUNCTION	0.01	0.04	67.54	0	15:08	0.01
G1	JUNCTION	0.01	0.03	66.86	0	15:08	0.01
G1a	JUNCTION	0.01	0.05	66.76	0	13:04	0.02
G1.1	JUNCTION	0.01	0.05	64.37	0	13:06	0.01
G1.2	JUNCTION	0.01	0.06	63.33	0	13:06	0.02
G1.3	JUNCTION	0.01	0.07	63.19	0	13:06	0.02
J45	JUNCTION	0.01	0.07	62.80	0	13:07	0.02
A4CP	JUNCTION	0.01	0.07	67.97	0	13:00	0.02
A3	JUNCTION	0.01	0.07	67.88	0	13:01	0.02
A2	JUNCTION	0.01	0.07	67.62	0	13:02	0.02
A1	JUNCTION	0.01	0.07	67.32	0	13:03	0.02
J2	JUNCTION	0.02	0.03	60.73	1	00:18	0.01
OUT1	OUTFALL	0.00	0.00	40.00	0	22:56	0.00
P1	STORAGE	0.02	0.09	63.09	0	21:28	0.03
P2	STORAGE	0.07	0.13	59.43	1	00:49	0.04
P3C	STORAGE	0.02	0.11	63.41	0	20:25	0.03
P4	STORAGE	0.03	0.10	66.80	0	21:33	0.03
P6	STORAGE	0.08	0.19	66.69	1	00:14	0.06
P8	STORAGE	0.07	0.18	58.18	0	22:22	0.06
P10	STORAGE	0.13	0.23	58.43	1	03:09	0.07
P9	STORAGE	0.09	0.21	61.01	1	00:06	0.06
P11	STORAGE	0.05	0.16	69.46	0	23:42	0.05
P5	STORAGE	0.06	0.16	67.66	1	00:04	0.05
P12	STORAGE	0.00	0.00	81.60	1	00:33	0.00
P3A	STORAGE	0.05	0.16	64.61	1	00:14	0.05
P3B	STORAGE	0.07	0.18	63.68	1	01:27	0.06
P3D	STORAGE	0.07	0.19	60.19	1	00:32	0.06
P7NEW	STORAGE	0.08	0.19	60.99	1	00:18	0.06

Node Inflow Summary

Maximum Maximum Lateral Total Flow

Node	Type	Lateral Inflow LPS	Total Inflow LPS	Time of Max Occurrence days hr:min	Inflow Volume 10^6 ltr	Inflow Volume 10^6 ltr	Balance Error Percent
J19	JUNCTION	8.77	8.80	0 13:00	0.283	0.368	0.000
J13	JUNCTION	3.74	3.74	0 22:00	0.0834	0.0834	0.000
J14	JUNCTION	0.00	9.28	0 20:04	0	0.45	0.000
J15	JUNCTION	0.00	15.76	0 20:08	0	0.9	0.000
J16	JUNCTION	0.00	15.73	0 20:19	0	0.902	0.000
J17	JUNCTION	0.00	23.14	0 20:30	0	1.71	0.000
J18	JUNCTION	0.00	27.94	0 20:37	0	2.2	0.000
J12	JUNCTION	3.18	3.18	0 22:00	0.116	0.116	0.000
J1	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J10	JUNCTION	0.00	18.14	0 21:28	0	1.08	0.000
J11	JUNCTION	0.00	55.70	0 21:43	0	4.55	0.000
J6	JUNCTION	0.00	79.86	0 22:42	0	7.46	0.000
J87	JUNCTION	0.00	79.86	0 22:49	0	7.45	0.000
J20	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J21	JUNCTION	0.00	4.80	0 21:33	0	0.294	0.000
B2	JUNCTION	2.98	2.98	0 15:00	0.122	0.122	0.000
B1.EX	JUNCTION	0.00	2.98	0 15:01	0	0.122	0.000
J5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
G3	JUNCTION	0.00	2.98	0 15:05	0	0.122	0.000
J7	JUNCTION	26.57	26.57	0 15:00	0.977	0.977	0.000
J22	JUNCTION	0.00	8.43	1 00:06	0	1	0.000
J24	JUNCTION	0.00	2.70	0 23:42	0	0.247	0.000
J23	JUNCTION	0.00	11.12	1 00:05	0	1.25	-0.000
J25	JUNCTION	0.00	1.93	1 00:04	0	0.191	0.000
G2	JUNCTION	0.00	2.98	0 15:08	0	0.122	0.000
G1	JUNCTION	0.00	2.98	0 15:08	0	0.122	0.000
G1a	JUNCTION	0.00	14.13	0 13:05	0	0.472	0.000
G1.1	JUNCTION	0.00	14.13	0 13:06	0	0.472	0.000
G1.2	JUNCTION	0.00	14.13	0 13:06	0	0.472	0.000
G1.3	JUNCTION	0.00	14.13	0 13:06	0	0.472	0.000
J45	JUNCTION	0.00	14.12	0 13:07	0	0.472	0.000
A4CP	JUNCTION	11.73	11.73	0 13:00	0.349	0.349	0.000
A3	JUNCTION	0.00	11.73	0 13:01	0	0.349	-0.000
A2	JUNCTION	0.00	11.72	0 13:02	0	0.349	0.000
A1	JUNCTION	0.00	11.71	0 13:03	0	0.349	0.000

J2	JUNCTION	0.00	5.14	1	00:18	0	0.629	0.000
OUT1	OUTFALL	0.00	79.86	0	22:56	0	7.43	0.000
P1	STORAGE	0.00	28.41	0	15:00	0	1.09	-0.000
P2	STORAGE	28.81	28.81	0	12:40	0.586	0.586	-0.002
P3C	STORAGE	4.10	4.10	0	13:00	0.0873	0.0873	-0.006
P4	STORAGE	7.57	7.57	0	15:00	0.301	0.301	-0.000
P6	STORAGE	33.28	33.28	0	13:00	0.903	0.903	-0.001
P8	STORAGE	49.82	49.82	0	12:40	0.81	0.81	-0.001
P10	STORAGE	23.54	37.45	0	13:09	0.801	1.27	-0.003
P9	STORAGE	66.26	66.26	0	12:40	1.15	1.15	-0.001
P11	STORAGE	8.18	8.18	0	13:00	0.257	0.257	-0.001
P5	STORAGE	6.62	6.62	0	13:00	0.199	0.199	-0.001
P12	STORAGE	3.78	3.78	0	13:00	0.108	0.108	-0.002
P3A	STORAGE	3.74	3.74	0	15:00	0.125	0.125	-0.001
P3B	STORAGE	8.37	8.37	0	17:00	0.329	0.329	-0.001
P3D	STORAGE	6.35	6.35	0	15:00	0.208	0.208	-0.001
P7NEW	STORAGE	33.72	33.72	0	13:00	0.726	0.726	-0.002

Node Surcharge Summary

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

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	71.83	0.009	1.991
J13	JUNCTION	71.83	0.004	3.996
J14	JUNCTION	71.83	0.015	3.985
J15	JUNCTION	71.83	0.019	3.981
J16	JUNCTION	71.83	0.019	3.981
J17	JUNCTION	71.83	0.010	3.990
J18	JUNCTION	71.83	0.010	3.990
J12	JUNCTION	71.83	0.005	3.995
J1	JUNCTION	71.83	0.000	1.000
J10	JUNCTION	71.83	0.007	3.993
J11	JUNCTION	71.83	0.028	1.972

J6	JUNCTION	71.83	0.039	3.461
J87	JUNCTION	71.83	0.003	1.997
J20	JUNCTION	71.83	0.000	2.000
J21	JUNCTION	71.83	0.015	0.985
B2	JUNCTION	71.83	0.037	0.963
B1.EX	JUNCTION	71.83	0.039	1.531
J5	JUNCTION	71.83	0.000	2.000
G3	JUNCTION	71.83	0.039	2.061
J7	JUNCTION	71.83	0.046	1.954
J22	JUNCTION	71.83	0.040	3.960
J24	JUNCTION	71.83	0.018	2.982
J23	JUNCTION	71.83	0.040	1.960
J25	JUNCTION	71.83	0.003	2.997
G2	JUNCTION	71.83	0.037	1.813
G1	JUNCTION	71.83	0.030	1.450
G1a	JUNCTION	71.83	0.051	1.599
G1.1	JUNCTION	71.83	0.049	1.631
G1.2	JUNCTION	71.83	0.061	1.889
G1.3	JUNCTION	71.83	0.068	1.772
J45	JUNCTION	71.83	0.068	1.632
A4CP	JUNCTION	71.83	0.072	0.928
A3	JUNCTION	71.83	0.072	1.178
A2	JUNCTION	71.83	0.070	2.280
A1	JUNCTION	71.83	0.070	1.980
J2	JUNCTION	71.83	0.028	1.372
P1	STORAGE	71.83	0.087	2.913
P2	STORAGE	71.83	0.131	3.869
P3C	STORAGE	71.83	0.113	2.887
P4	STORAGE	71.83	0.103	1.897
P6	STORAGE	71.83	0.190	2.810
P8	STORAGE	71.83	0.182	2.818
P10	STORAGE	71.83	0.230	2.770
P9	STORAGE	71.83	0.213	2.787
P11	STORAGE	71.83	0.159	1.841
P5	STORAGE	71.83	0.161	1.839
P12	STORAGE	71.83	0.005	1.995
P3A	STORAGE	71.83	0.158	1.842
P3B	STORAGE	71.83	0.181	1.819
P3D	STORAGE	71.83	0.190	1.810

P7NEW STORAGE 71.83 0.188 1.212

 Node Flooding Summary

No nodes were flooded.

 Storage Volume Summary

Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow LPS
P1	0.099	1	0	0	0.399	2	0 21:28	18.14
P2	0.237	1	0	0	0.457	2	1 00:48	3.17
P3C	0.008	0	0	36	0.039	2	0 20:24	1.36
P4	0.038	1	0	0	0.125	4	0 21:32	4.80
P6	0.245	1	0	0	0.614	4	1 00:14	7.81
P8	0.206	2	0	0	0.532	4	0 22:22	7.58
P10	0.532	3	0	0	0.957	5	1 03:09	5.82
P9	0.364	2	0	0	0.833	6	1 00:06	8.43
P11	0.050	2	0	0	0.149	6	0 23:41	2.70
P5	0.041	2	0	0	0.121	5	1 00:04	1.93
P12	0.039	0	0	0	0.079	0	1 00:33	0.83
P3A	0.025	1	0	0	0.077	5	1 00:14	1.24
P3B	0.075	2	0	0	0.205	5	1 01:27	2.92
P3D	0.052	2	0	0	0.142	7	1 00:32	1.73
P7NEW	0.235	5	0	0	0.537	11	1 00:18	5.14

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
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OUT1	80.57	35.68	79.86	7.433
System	80.57	35.68	79.86	7.433

Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	8.77	0 13:07	0.91	0.00	0.01
C2	CONDUIT	3.74	0 22:03	0.23	0.00	0.00
C3	CONDUIT	9.28	0 20:07	0.60	0.00	0.00
C4	CONDUIT	15.73	0 20:19	0.20	0.00	0.02
C5	CONDUIT	15.72	0 20:26	0.46	0.00	0.00
C6	CONDUIT	23.14	0 20:32	0.57	0.00	0.01
C7	CONDUIT	27.93	0 20:47	0.35	0.00	0.00
C8	CONDUIT	3.18	0 22:03	0.62	0.00	0.00
C11	CONDUIT	55.69	0 22:12	0.00	0.00	0.00
C12	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C13	CONDUIT	4.80	0 21:44	0.31	0.00	0.01
C16	CONDUIT	79.86	0 22:49	0.00	0.00	0.00
C17	CONDUIT	79.86	0 22:56	0.00	0.00	0.00
C50	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
L1	CONDUIT	2.98	0 15:01	0.53	0.02	0.10
C53	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
L3	CONDUIT	2.98	0 15:08	0.53	0.02	0.10
C59	CONDUIT	8.43	1 00:06	0.80	0.00	0.04
C61	CONDUIT	2.70	0 23:45	0.82	0.00	0.02
C62	CONDUIT	11.12	1 00:10	1.08	0.00	0.04
C63	CONDUIT	1.93	1 00:22	0.00	0.00	0.00
C64	CONDUIT	26.57	0 15:00	2.86	0.02	0.09
L2	CONDUIT	2.98	0 15:05	0.48	0.02	0.11
C67	CONDUIT	18.14	0 21:34	0.54	0.00	0.01
L4	CONDUIT	2.98	0 15:08	0.74	0.01	0.08
L5	CONDUIT	2.98	0 15:08	0.75	0.01	0.08

L6	CONDUIT	14.13	0	13:06	1.34	0.01	0.08
L7	CONDUIT	14.13	0	13:06	1.30	0.01	0.08
L9	CONDUIT	14.12	0	13:07	0.81	0.03	0.12
L10	CONDUIT	14.11	0	13:11	1.12	0.02	0.09
L8	CONDUIT	14.13	0	13:06	0.94	0.02	0.10
M1	CONDUIT	11.73	0	13:01	0.62	0.03	0.12
M2	CONDUIT	11.72	0	13:02	0.66	0.03	0.12
M3	CONDUIT	11.71	0	13:03	0.64	0.03	0.12
M4	CONDUIT	11.71	0	13:04	1.01	0.02	0.09
C9	CONDUIT	5.14	1	00:19	1.51	0.02	0.09
O3a	ORIFICE	1.02	0	20:25			0.00
O6a	ORIFICE	7.81	1	00:14			0.00
O10a	ORIFICE	5.82	1	03:09			0.00
O10b	ORIFICE	0.00	0	00:00			0.00
O10c	ORIFICE	0.00	0	00:00			0.00
O3b	ORIFICE	0.00	0	00:00			0.00
O6b	ORIFICE	0.00	0	00:00			0.00
O8a	ORIFICE	7.58	0	22:22			0.00
O11a	ORIFICE	2.70	0	23:42			0.00
O11b	ORIFICE	0.00	0	00:00			0.00
O11c	ORIFICE	0.00	0	00:00			0.00
O9a	ORIFICE	8.43	1	00:06			0.00
O9b	ORIFICE	0.00	0	00:00			0.00
O9c	ORIFICE	0.00	0	00:00			0.00
O5a	ORIFICE	1.93	1	00:04			0.00
O1a	ORIFICE	18.14	0	21:28			0.00
O1b	ORIFICE	0.00	0	00:00			0.00
O1c	ORIFICE	0.00	0	00:00			0.00
O10d	ORIFICE	0.00	0	00:00			0.00
O5b	ORIFICE	0.00	0	00:00			0.00
O5c	ORIFICE	0.00	0	00:00			0.00
O6c	ORIFICE	0.00	0	00:00			0.00
O6d	ORIFICE	0.00	0	00:00			0.00
O4a	ORIFICE	4.80	0	21:33			0.00
O4b	ORIFICE	0.00	0	00:00			0.00
O4c	ORIFICE	0.00	0	00:00			0.00
O2a	ORIFICE	3.17	1	00:49			0.00
O2b	ORIFICE	0.00	0	00:00			0.00
P3Aa	ORIFICE	1.24	1	00:14			0.00

OP3Ab	ORIFICE	0.00	0	00:00	0.00
OP3Ac	ORIFICE	0.00	0	00:00	0.00
OP3Ba	ORIFICE	2.92	1	01:27	0.00
OP3Bb	ORIFICE	0.00	0	00:00	0.00
O3Bc	ORIFICE	0.00	0	00:00	0.00
OP3Bd	ORIFICE	0.00	0	00:00	0.00
O7a	ORIFICE	5.14	1	00:18	0.00
O7b	ORIFICE	0.00	0	00:00	0.00
O7c	ORIFICE	0.00	0	00:00	0.00
O8b	ORIFICE	0.00	0	00:00	0.00
O8c	ORIFICE	0.00	0	00:00	0.00
O3Da	ORIFICE	1.73	1	00:32	0.00
O3Db	ORIFICE	0.00	0	00:00	0.00
O3Dc	ORIFICE	0.00	0	00:00	0.00
O3Dd	ORIFICE	0.00	0	00:00	0.00
O3De	ORIFICE	0.00	0	00:00	0.00
O2c	ORIFICE	0.00	0	00:00	0.00
W1a	WEIR	0.00	0	00:00	0.00
W6	WEIR	0.00	0	00:00	0.00
W10	WEIR	0.00	0	00:00	0.00
W11	WEIR	0.00	0	00:00	0.00
W9	WEIR	0.00	0	00:00	0.00
W5	WEIR	0.00	0	00:00	0.00
W12	WEIR	0.83	1	00:33	0.00
W4	WEIR	0.00	0	00:00	0.00
P3AW	WEIR	0.00	0	00:00	0.00
W3B	WEIR	0.00	0	00:00	0.00
W3C	WEIR	0.00	0	00:00	0.00
W2	WEIR	0.00	0	00:00	0.00
W7	WEIR	0.00	0	00:00	0.00
W8	WEIR	0.00	0	00:00	0.00
W3D	WEIR	0.00	0	00:00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Thu May 18 08:49:50 2017

Analysis ended on: Thu May 18 08:49:50 2017

Total elapsed time: < 1 sec

1YR

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.010)

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 LPS
Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES
 Ponding Allowed NO
 Water Quality NO
Infiltration Method CURVE_NUMBER
Flow Routing Method KINWAVE
Starting Date JAN-01-2015 00:00:00
Ending Date JAN-03-2015 23:50:00
Antecedent Dry Days 0.0
Report Time Step 00:15:00
Wet Time Step 00:05:00
Dry Time Step 01:00:00
Routing Time Step 30.00 sec

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	18.545	39.400

Evaporation Loss	0.000	0.000
Infiltration Loss	16.128	34.266
Surface Runoff	1.809	3.844
Final Storage	0.608	1.292
Continuity Error (%)	-0.005	

	Volume hectare-m	Volume 10 ⁶ ltr
*****	-----	-----
Flow Routing Continuity		

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	1.809	18.094
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	1.615	16.148
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.004	0.042
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.191	1.910
Continuity Error (%)	-0.031	

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	29.00 sec
Average Time Step	:	30.00 sec
Maximum Time Step	:	30.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	1.00
Percent Not Converging	:	0.00

 Subcatchment Runoff Summary

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	39.40	0.00	0.00	36.70	1.46	0.01	0.49	0.037
S2	39.40	0.00	0.00	23.87	14.26	0.21	7.29	0.362
S3	39.40	0.00	0.00	23.57	14.58	1.70	70.59	0.370
S4	39.40	0.00	0.00	17.86	18.85	1.28	53.14	0.478
S5	39.40	0.00	0.00	36.34	1.80	0.20	6.54	0.046
S6	39.40	0.00	0.00	22.74	15.42	0.65	61.32	0.391
S7	39.40	0.00	0.00	34.81	3.33	0.18	5.02	0.085
S8	39.40	0.00	0.00	34.13	4.02	0.33	10.71	0.102
S9	39.40	0.00	0.00	36.40	1.73	0.09	2.91	0.044
S10C	39.40	0.00	0.00	25.29	12.86	0.16	12.36	0.326
S11	39.40	0.00	0.00	36.21	1.95	0.13	4.55	0.049
S12	39.40	0.00	0.00	36.47	1.69	0.17	5.69	0.043
S13	39.40	0.00	0.00	22.43	15.71	0.48	22.71	0.399
S14	39.40	0.00	0.00	36.57	1.57	0.02	0.77	0.040
S15	39.40	0.00	0.00	36.31	1.85	0.05	1.69	0.047
S16	39.40	0.00	0.00	36.50	1.63	0.11	3.89	0.041
S17	39.40	0.00	0.00	23.79	14.35	0.53	18.91	0.364
S18	39.40	0.00	0.00	23.25	14.89	0.34	17.74	0.378
S19	39.40	0.00	0.00	36.70	1.46	0.09	3.29	0.037
S20	39.40	0.00	0.00	24.95	13.19	0.93	47.59	0.335
S21	39.40	0.00	0.00	24.57	13.58	1.29	96.01	0.345
S22	39.40	0.00	0.00	36.05	2.11	0.24	8.63	0.054
S23	39.40	0.00	0.00	36.92	1.23	0.08	2.88	0.031
S24	39.40	0.00	0.00	36.66	1.47	0.02	0.66	0.037
S26	39.40	0.00	0.00	36.70	1.46	0.05	1.89	0.037
S25	39.40	0.00	0.00	22.78	15.38	1.96	170.93	0.390
S28	39.40	0.00	0.00	23.31	14.84	0.44	22.18	0.377
S27	39.40	0.00	0.00	22.74	15.42	0.76	71.56	0.391
S29	39.40	0.00	0.00	34.67	3.48	0.05	1.45	0.088
S32	39.40	0.00	0.00	34.67	3.48	0.04	1.25	0.088
S30	39.40	0.00	0.00	31.75	6.40	0.14	4.71	0.163

S31	39.40	0.00	0.00	34.84	3.30	0.12	3.26	0.084
S4A	39.40	0.00	0.00	17.86	18.98	0.26	11.81	0.482
4B	39.40	0.00	0.00	28.96	9.19	0.09	3.98	0.233
S21-RE	39.40	0.00	0.00	24.57	13.58	0.69	51.15	0.345
S27-RE	39.40	0.00	0.00	22.74	15.42	0.62	57.74	0.391
S17-RE	39.40	0.00	0.00	23.21	14.94	0.19	9.99	0.379
S4C	39.40	0.00	0.00	17.86	19.01	0.56	25.88	0.483
S10B	39.40	0.00	0.00	26.37	11.77	0.62	19.76	0.299
S10A	39.40	0.00	0.00	25.74	12.40	0.23	11.46	0.315
EXTERNAL1	39.40	0.00	0.00	37.63	0.50	0.97	39.06	0.013
EXTERNAL2	39.40	0.00	0.00	37.38	0.78	0.64	25.33	0.020
S10D	39.40	0.00	0.00	25.69	12.45	0.38	19.89	0.316

Node Depth Summary

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J19	JUNCTION	0.00	0.02	81.07	0 13:00	0.01
J13	JUNCTION	0.00	0.01	65.97	0 18:00	0.00
J14	JUNCTION	0.01	0.03	64.98	0 17:03	0.01
J15	JUNCTION	0.01	0.04	63.04	0 18:03	0.01
J16	JUNCTION	0.01	0.04	62.87	0 18:08	0.01
J17	JUNCTION	0.01	0.02	59.35	0 18:12	0.01
J18	JUNCTION	0.01	0.02	57.32	0 18:14	0.01
J12	JUNCTION	0.00	0.01	72.61	0 17:00	0.00
J1	JUNCTION	0.00	0.01	70.33	1 00:00	0.00
J10	JUNCTION	0.00	0.01	61.81	0 22:00	0.00
J11	JUNCTION	0.02	0.03	55.03	1 00:35	0.01
J6	JUNCTION	0.03	0.05	52.05	1 00:29	0.01
J87	JUNCTION	0.00	0.00	49.00	1 00:10	0.00
J20	JUNCTION	0.00	0.01	77.98	1 00:00	0.00
J21	JUNCTION	0.01	0.02	64.02	0 20:51	0.01
B2	JUNCTION	0.01	0.06	68.60	0 13:00	0.02
B1.EX	JUNCTION	0.01	0.06	68.48	0 13:01	0.02
J5	JUNCTION	0.00	0.00	62.00	0 00:00	0.00

G3	JUNCTION	0.01	0.06	68.07	0	13:03	0.02
J7	JUNCTION	0.01	0.07	67.95	0	13:00	0.02
J22	JUNCTION	0.03	0.05	59.85	1	00:25	0.01
J24	JUNCTION	0.01	0.02	66.82	1	00:14	0.01
J23	JUNCTION	0.03	0.05	59.75	1	00:26	0.01
J25	JUNCTION	0.00	0.00	65.60	1	00:23	0.00
G2	JUNCTION	0.01	0.06	67.56	0	13:05	0.02
G1	JUNCTION	0.01	0.04	66.87	0	13:05	0.01
G1a	JUNCTION	0.01	0.08	66.79	0	13:02	0.02
G1.1	JUNCTION	0.01	0.07	64.39	0	13:04	0.02
G1.2	JUNCTION	0.01	0.09	63.36	0	13:04	0.03
G1.3	JUNCTION	0.02	0.10	63.22	0	13:04	0.03
J45	JUNCTION	0.02	0.10	62.83	0	13:05	0.03
A4CP	JUNCTION	0.02	0.11	68.01	0	13:00	0.03
A3	JUNCTION	0.02	0.11	67.92	0	13:00	0.03
A2	JUNCTION	0.02	0.10	67.65	0	13:01	0.03
A1	JUNCTION	0.02	0.10	67.35	0	13:02	0.03
J2	JUNCTION	0.02	0.03	60.73	1	00:34	0.01
OUT1	OUTFALL	0.00	0.00	40.00	1	00:15	0.00
P1	STORAGE	0.05	0.19	63.19	0	21:02	0.06
P2	STORAGE	0.13	0.23	59.53	1	00:59	0.07
P3C	STORAGE	0.06	0.23	63.53	0	19:06	0.07
P4	STORAGE	0.05	0.19	66.89	0	20:51	0.06
P6	STORAGE	0.15	0.34	66.84	1	00:29	0.10
P8	STORAGE	0.13	0.31	58.31	1	00:07	0.10
P10	STORAGE	0.23	0.38	58.58	1	03:06	0.12
P9	STORAGE	0.18	0.37	61.17	1	00:25	0.11
P11	STORAGE	0.11	0.29	69.59	1	00:14	0.09
P5	STORAGE	0.11	0.29	67.79	1	00:23	0.09
P12	STORAGE	0.00	0.01	81.61	1	00:07	0.00
P3A	STORAGE	0.12	0.30	64.75	1	00:30	0.09
P3B	STORAGE	0.15	0.35	63.85	1	01:30	0.11
P3D	STORAGE	0.16	0.36	60.36	1	00:46	0.11
P7NEW	STORAGE	0.17	0.34	61.14	1	00:34	0.10

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J19	JUNCTION	22.71	22.89	0 13:00	0.479	0.637	0.000
J13	JUNCTION	17.37	17.37	0 18:00	0.576	0.576	0.000
J14	JUNCTION	5.69	32.65	0 17:03	0.169	1.38	0.000
J15	JUNCTION	8.45	49.92	0 18:03	0.253	2.48	0.000
J16	JUNCTION	3.29	52.30	0 18:08	0.0912	2.57	0.000
J17	JUNCTION	0.00	62.65	0 18:12	0	4.04	0.000
J18	JUNCTION	0.00	69.44	0 18:15	0	4.96	0.000
J12	JUNCTION	11.02	11.02	0 17:00	0.415	0.415	0.000
J1	JUNCTION	0.49	0.49	1 00:00	0.0137	0.0137	0.000
J10	JUNCTION	8.43	37.99	0 22:00	0.255	2.35	0.000
J11	JUNCTION	8.63	127.22	0 18:21	0.238	9.73	0.000
J6	JUNCTION	3.54	161.81	1 00:05	0.0943	14.6	0.000
J87	JUNCTION	0.00	161.80	1 00:10	0	14.6	-0.000
J20	JUNCTION	0.77	0.77	1 00:00	0.022	0.022	0.000
J21	JUNCTION	0.00	7.72	0 20:51	0	0.539	0.000
B2	JUNCTION	7.29	7.29	0 13:00	0.214	0.228	0.000
B1.EX	JUNCTION	0.00	7.29	0 13:01	0	0.228	0.000
J5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
G3	JUNCTION	0.00	7.28	0 13:03	0	0.228	0.000
J7	JUNCTION	70.59	70.59	0 13:00	1.7	1.7	-0.000
J22	JUNCTION	0.00	11.82	1 00:25	0	1.7	0.000
J24	JUNCTION	0.00	3.82	1 00:14	0	0.429	0.000
J23	JUNCTION	0.00	15.63	1 00:24	0	2.13	0.000
J25	JUNCTION	0.00	2.69	1 00:23	0	0.329	0.000
G2	JUNCTION	0.00	7.27	0 13:05	0	0.228	0.000
G1	JUNCTION	0.00	7.27	0 13:05	0	0.228	0.000
G1a	JUNCTION	0.00	33.06	0 13:03	0	0.785	0.000
G1.1	JUNCTION	0.00	33.05	0 13:04	0	0.784	0.000
G1.2	JUNCTION	0.00	33.05	0 13:04	0	0.784	0.000
G1.3	JUNCTION	0.00	33.04	0 13:04	0	0.784	0.000
J45	JUNCTION	0.00	33.04	0 13:05	0	0.784	0.000
A4CP	JUNCTION	25.88	25.88	0 13:00	0.557	0.557	0.000
A3	JUNCTION	0.00	25.86	0 13:00	0	0.557	0.000

A2	JUNCTION	0.00	25.86	0	13:01	0	0.557	0.000
A1	JUNCTION	0.00	25.84	0	13:02	0	0.557	0.000
J2	JUNCTION	0.00	7.30	1	00:34	0	1.1	0.000
OUT1	OUTFALL	64.38	225.99	1	00:00	1.61	16.1	0.000
P1	STORAGE	0.00	75.90	0	13:01	0	2.11	-0.000
P2	STORAGE	73.48	73.48	0	12:20	0.997	0.997	-0.003
P3C	STORAGE	12.36	12.36	0	12:30	0.158	0.158	-0.003
P4	STORAGE	18.91	18.91	0	13:00	0.525	0.547	-0.000
P6	STORAGE	93.91	93.91	0	13:00	1.61	1.61	-0.001
P8	STORAGE	129.30	129.30	0	12:20	1.38	1.38	-0.001
P10	STORAGE	53.14	85.60	0	13:00	1.28	2.06	-0.003
P9	STORAGE	170.93	170.93	0	12:20	1.96	1.96	-0.002
P11	STORAGE	22.18	22.18	0	13:00	0.444	0.444	-0.001
P5	STORAGE	17.74	17.74	0	13:00	0.342	0.342	-0.001
P12	STORAGE	9.99	9.99	0	13:00	0.187	0.187	-0.001
P3A	STORAGE	11.46	11.46	0	13:00	0.229	0.229	-0.001
P3B	STORAGE	19.76	19.76	0	13:00	0.618	0.618	-0.001
P3D	STORAGE	19.89	19.89	0	13:00	0.382	0.382	-0.002
P7NEW	STORAGE	96.01	96.01	0	12:30	1.29	1.29	-0.002

Node Surcharge Summary

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

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	71.83	0.017	1.983
J13	JUNCTION	71.83	0.010	3.990
J14	JUNCTION	71.83	0.031	3.969
J15	JUNCTION	71.83	0.038	3.962
J16	JUNCTION	71.83	0.038	3.962
J17	JUNCTION	71.83	0.018	3.982
J18	JUNCTION	71.83	0.018	3.982
J12	JUNCTION	71.83	0.011	3.989
J1	JUNCTION	71.83	0.012	0.988
J10	JUNCTION	71.83	0.011	3.989

J11	JUNCTION	71.83	0.034	1.966
J6	JUNCTION	71.83	0.046	3.454
J87	JUNCTION	71.83	0.004	1.996
J20	JUNCTION	71.83	0.009	1.991
J21	JUNCTION	71.83	0.019	0.981
B2	JUNCTION	71.83	0.058	0.942
B1.EX	JUNCTION	71.83	0.061	1.509
J5	JUNCTION	71.83	0.000	2.000
G3	JUNCTION	71.83	0.061	2.039
J7	JUNCTION	71.83	0.074	1.926
J22	JUNCTION	71.83	0.047	3.953
J24	JUNCTION	71.83	0.022	2.978
J23	JUNCTION	71.83	0.047	1.953
J25	JUNCTION	71.83	0.004	2.996
G2	JUNCTION	71.83	0.058	1.792
G1	JUNCTION	71.83	0.045	1.435
G1a	JUNCTION	71.83	0.075	1.575
G1.1	JUNCTION	71.83	0.074	1.606
G1.2	JUNCTION	71.83	0.093	1.857
G1.3	JUNCTION	71.83	0.103	1.737
J45	JUNCTION	71.83	0.103	1.597
A4CP	JUNCTION	71.83	0.106	0.894
A3	JUNCTION	71.83	0.105	1.145
A2	JUNCTION	71.83	0.103	2.247
A1	JUNCTION	71.83	0.103	1.947
J2	JUNCTION	71.83	0.034	1.366
P1	STORAGE	71.83	0.190	2.810
P2	STORAGE	71.83	0.227	3.773
P3C	STORAGE	71.83	0.234	2.766
P4	STORAGE	71.83	0.187	1.813
P6	STORAGE	71.83	0.341	2.659
P8	STORAGE	71.83	0.314	2.686
P10	STORAGE	71.83	0.384	2.616
P9	STORAGE	71.83	0.370	2.630
P11	STORAGE	71.83	0.288	1.712
P5	STORAGE	71.83	0.290	1.710
P12	STORAGE	71.83	0.007	1.993
P3A	STORAGE	71.83	0.301	1.699
P3B	STORAGE	71.83	0.347	1.653

OUT1 81.82 76.32 225.99 16.148

 System 81.82 76.32 225.99 16.148

Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	22.82	0 13:02	1.32	0.00	0.02
C2	CONDUIT	17.37	0 18:01	0.43	0.00	0.00
C3	CONDUIT	32.64	0 17:05	0.96	0.00	0.01
C4	CONDUIT	49.88	0 18:08	0.32	0.00	0.04
C5	CONDUIT	52.28	0 18:12	0.73	0.00	0.01
C6	CONDUIT	62.65	0 18:14	0.85	0.00	0.01
C7	CONDUIT	69.41	0 18:20	0.51	0.00	0.01
C8	CONDUIT	11.02	0 17:02	1.01	0.00	0.01
C11	CONDUIT	127.00	0 18:39	0.24	0.00	0.00
C12	CONDUIT	0.77	1 00:01	0.62	0.00	0.01
C13	CONDUIT	7.72	0 21:01	0.38	0.00	0.02
C16	CONDUIT	161.80	1 00:10	0.33	0.00	0.00
C17	CONDUIT	161.79	1 00:15	0.43	0.00	0.00
C50	CONDUIT	0.50	1 00:01	0.45	0.00	0.03
L1	CONDUIT	7.29	0 13:01	0.68	0.05	0.16
C53	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
L3	CONDUIT	7.27	0 13:05	0.68	0.05	0.16
C59	CONDUIT	11.82	1 00:26	0.88	0.00	0.05
C61	CONDUIT	3.82	1 00:17	0.91	0.00	0.02
C62	CONDUIT	15.63	1 00:29	1.19	0.00	0.05
C63	CONDUIT	2.69	1 00:40	0.19	0.00	0.00
C64	CONDUIT	70.57	0 13:00	3.82	0.05	0.14
L2	CONDUIT	7.28	0 13:03	0.63	0.06	0.16
C67	CONDUIT	37.99	0 22:02	0.72	0.00	0.02
L4	CONDUIT	7.27	0 13:05	0.98	0.03	0.12
L5	CONDUIT	7.27	0 13:05	0.99	0.03	0.12
L6	CONDUIT	33.05	0 13:04	1.74	0.03	0.12
L7	CONDUIT	33.05	0 13:04	1.68	0.03	0.13

L9	CONDUIT	33.04	0	13:05	1.04	0.07	0.18
L10	CONDUIT	33.01	0	13:07	1.44	0.04	0.14
L8	CONDUIT	33.04	0	13:04	1.21	0.05	0.16
M1	CONDUIT	25.86	0	13:00	0.78	0.07	0.18
M2	CONDUIT	25.86	0	13:01	0.84	0.07	0.17
M3	CONDUIT	25.84	0	13:02	0.81	0.07	0.18
M4	CONDUIT	25.84	0	13:02	1.28	0.04	0.13
C9	CONDUIT	7.30	1	00:35	1.66	0.03	0.11
O3a	ORIFICE	1.54	0	19:06			0.00
O6a	ORIFICE	11.26	1	00:29			0.00
O10a	ORIFICE	7.84	1	03:06			0.00
O10b	ORIFICE	0.00	0	00:00			0.00
O10c	ORIFICE	0.00	0	00:00			0.00
O3b	ORIFICE	0.00	0	00:00			0.00
O6b	ORIFICE	0.00	0	00:00			0.00
O8a	ORIFICE	10.72	1	00:07			0.00
O11a	ORIFICE	3.82	1	00:14			0.00
O11b	ORIFICE	0.00	0	00:00			0.00
O11c	ORIFICE	0.00	0	00:00			0.00
O9a	ORIFICE	11.82	1	00:25			0.00
O9b	ORIFICE	0.00	0	00:00			0.00
O9c	ORIFICE	0.00	0	00:00			0.00
O5a	ORIFICE	2.69	1	00:23			0.00
O1a	ORIFICE	29.74	0	21:02			0.00
O1b	ORIFICE	0.00	0	00:00			0.00
O1c	ORIFICE	0.00	0	00:00			0.00
O10d	ORIFICE	0.00	0	00:00			0.00
O5b	ORIFICE	0.00	0	00:00			0.00
O5c	ORIFICE	0.00	0	00:00			0.00
O6c	ORIFICE	0.00	0	00:00			0.00
O6d	ORIFICE	0.00	0	00:00			0.00
O4a	ORIFICE	7.72	0	20:51			0.00
O4b	ORIFICE	0.00	0	00:00			0.00
O4c	ORIFICE	0.00	0	00:00			0.00
O2a	ORIFICE	4.48	1	00:59			0.00
O2b	ORIFICE	0.00	0	00:00			0.00
P3Aa	ORIFICE	1.77	1	00:30			0.00
OP3Ab	ORIFICE	0.00	0	00:00			0.00
OP3Ac	ORIFICE	0.00	0	00:00			0.00

OP3Ba	ORIFICE	4.23	1	01:30	0.00
OP3Bb	ORIFICE	0.00	0	00:00	0.00
O3Bc	ORIFICE	0.00	0	00:00	0.00
OP3Bd	ORIFICE	0.00	0	00:00	0.00
O7a	ORIFICE	7.30	1	00:34	0.00
O7b	ORIFICE	0.00	0	00:00	0.00
O7c	ORIFICE	0.00	0	00:00	0.00
O8b	ORIFICE	0.00	0	00:00	0.00
O8c	ORIFICE	0.00	0	00:00	0.00
O3Da	ORIFICE	2.46	1	00:46	0.00
O3Db	ORIFICE	0.00	0	00:00	0.00
O3Dc	ORIFICE	0.00	0	00:00	0.00
O3Dd	ORIFICE	0.00	0	00:00	0.00
O3De	ORIFICE	0.00	0	00:00	0.00
O2c	ORIFICE	0.00	0	00:00	0.00
W1a	WEIR	0.00	0	00:00	0.00
W6	WEIR	0.00	0	00:00	0.00
W10	WEIR	0.00	0	00:00	0.00
W11	WEIR	0.00	0	00:00	0.00
W9	WEIR	0.00	0	00:00	0.00
W5	WEIR	0.00	0	00:00	0.00
W12	WEIR	1.64	1	00:07	0.00
W4	WEIR	0.00	0	00:00	0.00
P3AW	WEIR	0.00	0	00:00	0.00
W3B	WEIR	0.00	0	00:00	0.00
W3C	WEIR	0.00	0	00:00	0.00
W2	WEIR	0.00	0	00:00	0.00
W7	WEIR	0.00	0	00:00	0.00
W8	WEIR	0.00	0	00:00	0.00
W3D	WEIR	0.00	0	00:00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Thu May 18 08:52:42 2017

Analysis ended on: Thu May 18 08:52:42 2017

Total elapsed time: < 1 sec

2YR

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.010)

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 LPS

Process Models:

Rainfall/Runoff YES

RDII NO

Snowmelt NO

Groundwater NO

Flow Routing YES

Ponding Allowed NO

Water Quality NO

Infiltration Method CURVE_NUMBER

Flow Routing Method KINWAVE

Starting Date JAN-01-2015 00:00:00

Ending Date JAN-03-2015 23:50:00

Antecedent Dry Days 0.0

Report Time Step 00:15:00

Wet Time Step 00:05:00

Dry Time Step 01:00:00

Routing Time Step 30.00 sec

Runoff Quantity Continuity

Total Precipitation

Evaporation Loss

Infiltration Loss

Volume

hectare-m

23.302

0.000

19.093

Depth

mm

49.508

0.000

40.564

Surface Runoff	3.599	7.646
Final Storage	0.612	1.301
Continuity Error (%)	-0.006	

	Volume hectare-m	Volume 10 ⁶ ltr
*****	-----	-----
Flow Routing Continuity		

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	3.599	35.987
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	3.216	32.164
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.005	0.053
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.380	3.799
Continuity Error (%)	-0.083	

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	29.00 sec
Average Time Step	:	30.00 sec
Maximum Time Step	:	30.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	1.00
Percent Not Converging	:	0.00

Subcatchment Runoff Summary

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	49.51	0.00	0.00	43.28	4.97	0.05	1.25	0.100
S2	49.51	0.00	0.00	25.84	22.41	0.34	14.86	0.453
S3	49.51	0.00	0.00	25.52	22.73	2.64	139.52	0.459
S4	49.51	0.00	0.00	18.42	27.89	1.89	95.25	0.563
S5	49.51	0.00	0.00	42.77	5.48	0.62	18.92	0.111
S6	49.51	0.00	0.00	24.68	23.58	0.99	124.19	0.476
S7	49.51	0.00	0.00	40.44	7.81	0.42	12.10	0.158
S8	49.51	0.00	0.00	39.61	8.65	0.70	32.02	0.175
S9	49.51	0.00	0.00	42.87	5.39	0.27	8.09	0.109
S10C	49.51	0.00	0.00	27.88	20.39	0.25	28.86	0.412
S11	49.51	0.00	0.00	42.57	5.68	0.39	12.90	0.115
S12	49.51	0.00	0.00	42.91	5.33	0.53	15.54	0.108
S13	49.51	0.00	0.00	24.17	24.08	0.73	43.69	0.486
S14	49.51	0.00	0.00	43.11	5.15	0.07	2.02	0.104
S15	49.51	0.00	0.00	42.70	5.56	0.16	4.95	0.112
S16	49.51	0.00	0.00	43.01	5.24	0.36	10.40	0.106
S17	49.51	0.00	0.00	25.75	22.50	0.82	38.15	0.455
S18	49.51	0.00	0.00	25.20	23.04	0.53	35.52	0.465
S19	49.51	0.00	0.00	43.28	4.96	0.31	8.30	0.100
S20	49.51	0.00	0.00	27.33	20.92	1.47	99.34	0.422
S21	49.51	0.00	0.00	26.94	21.32	2.03	216.56	0.431
S22	49.51	0.00	0.00	42.37	5.88	0.66	25.26	0.119
S23	49.51	0.00	0.00	43.72	4.55	0.28	7.09	0.092
S24	49.51	0.00	0.00	43.28	4.99	0.06	1.66	0.101
S26	49.51	0.00	0.00	43.31	4.96	0.18	4.75	0.100
S25	49.51	0.00	0.00	24.73	23.54	3.00	354.30	0.475
S28	49.51	0.00	0.00	25.25	22.99	0.69	44.06	0.464
S27	49.51	0.00	0.00	24.69	23.58	1.17	145.24	0.476
S29	49.51	0.00	0.00	40.27	7.99	0.12	3.61	0.161
S32	49.51	0.00	0.00	40.24	8.00	0.10	3.10	0.162

S30	49.51	0.00	0.00	37.31	10.94	0.25	10.67	0.221
S31	49.51	0.00	0.00	40.47	7.77	0.27	7.85	0.157
S4A	49.51	0.00	0.00	18.42	28.02	0.38	21.18	0.566
4B	49.51	0.00	0.00	32.52	15.73	0.15	9.57	0.318
S21-RE	49.51	0.00	0.00	26.94	21.32	1.08	115.36	0.431
S27-RE	49.51	0.00	0.00	24.69	23.58	0.94	117.25	0.476
S17-RE	49.51	0.00	0.00	25.17	23.09	0.29	20.15	0.466
S4C	49.51	0.00	0.00	18.42	28.05	0.82	46.57	0.567
S10B	49.51	0.00	0.00	28.99	19.26	1.01	44.34	0.389
S10A	49.51	0.00	0.00	28.33	19.92	0.37	24.33	0.402
EXTERNAL1	49.51	0.00	0.00	45.64	2.61	5.11	125.43	0.053
EXTERNAL2	49.51	0.00	0.00	44.76	3.51	2.86	68.70	0.071
S10D	49.51	0.00	0.00	28.28	19.97	0.61	42.59	0.403

Node Depth Summary

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J19	JUNCTION	0.00	0.02	81.08	0 12:30	0.01
J13	JUNCTION	0.00	0.02	65.97	0 14:00	0.01
J14	JUNCTION	0.01	0.06	65.01	0 13:02	0.02
J15	JUNCTION	0.02	0.07	63.07	0 14:02	0.02
J16	JUNCTION	0.02	0.06	62.89	0 14:06	0.02
J17	JUNCTION	0.01	0.03	59.36	0 14:10	0.01
J18	JUNCTION	0.01	0.03	57.33	0 14:11	0.01
J12	JUNCTION	0.00	0.02	72.62	0 14:00	0.01
J1	JUNCTION	0.00	0.02	70.34	0 16:00	0.01
J10	JUNCTION	0.00	0.01	61.81	0 17:00	0.00
J11	JUNCTION	0.03	0.04	55.04	1 00:34	0.01
J6	JUNCTION	0.04	0.05	52.05	1 00:20	0.02
J87	JUNCTION	0.00	0.01	49.01	0 15:29	0.00
J20	JUNCTION	0.00	0.01	77.99	0 16:00	0.00
J21	JUNCTION	0.01	0.02	64.02	0 20:42	0.01

B2	JUNCTION	0.01	0.08	68.62	0	13:00	0.03
B1.EX	JUNCTION	0.01	0.09	68.51	0	13:01	0.03
J5	JUNCTION	0.00	0.00	62.00	0	00:00	0.00
G3	JUNCTION	0.01	0.09	68.10	0	13:01	0.03
J7	JUNCTION	0.01	0.10	67.98	0	12:50	0.03
J22	JUNCTION	0.04	0.05	59.85	1	00:23	0.02
J24	JUNCTION	0.02	0.02	66.82	1	00:09	0.01
J23	JUNCTION	0.04	0.05	59.75	1	00:24	0.02
J25	JUNCTION	0.00	0.00	65.60	1	00:22	0.00
G2	JUNCTION	0.01	0.08	67.58	0	13:03	0.03
G1	JUNCTION	0.01	0.06	66.89	0	13:03	0.02
G1a	JUNCTION	0.01	0.10	66.81	0	12:33	0.03
G1.1	JUNCTION	0.01	0.10	64.42	0	12:53	0.03
G1.2	JUNCTION	0.02	0.13	63.40	0	12:53	0.04
G1.3	JUNCTION	0.02	0.14	63.26	0	12:53	0.04
J45	JUNCTION	0.02	0.14	62.87	0	12:54	0.04
A4CP	JUNCTION	0.02	0.14	68.04	0	12:30	0.04
A3	JUNCTION	0.02	0.14	67.95	0	12:31	0.04
A2	JUNCTION	0.02	0.14	67.69	0	12:32	0.04
A1	JUNCTION	0.02	0.14	67.39	0	12:33	0.04
J2	JUNCTION	0.03	0.04	60.74	1	00:33	0.01
OUT1	OUTFALL	0.00	0.00	40.00	0	15:33	0.00
P1	STORAGE	0.10	0.36	63.36	0	21:05	0.11
P2	STORAGE	0.21	0.35	59.65	1	00:56	0.11
P3C	STORAGE	0.12	0.40	63.70	0	20:30	0.12
P4	STORAGE	0.10	0.33	67.03	0	20:42	0.10
P6	STORAGE	0.27	0.54	67.04	1	00:28	0.16
P8	STORAGE	0.22	0.50	58.50	1	00:04	0.15
P10	STORAGE	0.37	0.58	58.78	1	03:02	0.18
P9	STORAGE	0.31	0.58	61.38	1	00:23	0.18
P11	STORAGE	0.19	0.46	69.76	1	00:09	0.14
P5	STORAGE	0.21	0.46	67.96	1	00:22	0.14
P12	STORAGE	0.00	0.01	81.61	0	20:52	0.00
P3A	STORAGE	0.23	0.49	64.94	1	00:30	0.15
P3B	STORAGE	0.29	0.56	64.06	1	01:32	0.17
P3D	STORAGE	0.30	0.58	60.58	1	00:45	0.18
P7NEW	STORAGE	0.29	0.54	61.34	1	00:33	0.16

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J19	JUNCTION	43.69	43.89	0 12:30	0.734	0.99	0.000
J13	JUNCTION	49.13	49.13	0 14:00	1.37	1.37	0.000
J14	JUNCTION	15.54	97.41	0 13:02	0.533	2.89	0.000
J15	JUNCTION	23.19	123.85	0 14:02	0.794	5.05	0.000
J16	JUNCTION	8.30	130.20	0 14:07	0.311	5.36	0.000
J17	JUNCTION	0.00	141.13	0 14:10	0	7.61	0.000
J18	JUNCTION	0.00	148.09	0 14:12	0	9.03	0.000
J12	JUNCTION	27.90	27.90	0 14:00	0.878	0.878	0.000
J1	JUNCTION	1.25	1.25	0 16:00	0.0467	0.0467	0.000
J10	JUNCTION	23.34	61.85	0 17:00	0.795	4.3	0.000
J11	JUNCTION	25.26	241.06	0 15:09	0.663	17.1	0.000
J6	JUNCTION	8.69	285.91	0 15:24	0.343	24.3	0.000
J87	JUNCTION	0.00	285.88	0 15:29	0	24.2	0.000
J20	JUNCTION	2.02	2.02	0 16:00	0.072	0.072	0.000
J21	JUNCTION	0.00	11.33	0 20:42	0	0.886	0.000
B2	JUNCTION	14.86	15.34	0 13:00	0.336	0.383	0.000
B1.EX	JUNCTION	0.00	15.34	0 13:01	0	0.383	0.000
J5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
G3	JUNCTION	0.00	15.33	0 13:01	0	0.383	0.000
J7	JUNCTION	139.52	139.52	0 12:50	2.64	2.64	0.000
J22	JUNCTION	0.00	15.19	1 00:23	0	2.46	0.000
J24	JUNCTION	0.00	5.05	1 00:09	0	0.66	0.000
J23	JUNCTION	0.00	20.24	1 00:16	0	3.12	0.000
J25	JUNCTION	0.00	3.44	1 00:22	0	0.5	0.000
G2	JUNCTION	0.00	15.32	0 13:03	0	0.383	0.000
G1	JUNCTION	0.00	15.32	0 13:03	0	0.383	0.000
G1a	JUNCTION	0.00	60.84	0 12:52	0	1.2	0.000
G1.1	JUNCTION	0.00	60.83	0 12:53	0	1.2	0.000
G1.2	JUNCTION	0.00	60.83	0 12:53	0	1.2	0.000

G1.3	JUNCTION	0.00	60.83	0	12:53	0	1.2	0.000
J45	JUNCTION	0.00	60.83	0	12:54	0	1.2	0.000
A4CP	JUNCTION	46.57	46.57	0	12:30	0.822	0.822	0.000
A3	JUNCTION	0.00	46.56	0	12:31	0	0.822	0.000
A2	JUNCTION	0.00	46.54	0	12:32	0	0.822	0.000
A1	JUNCTION	0.00	46.52	0	12:33	0	0.821	0.000
J2	JUNCTION	0.00	9.43	1	00:33	0	1.58	0.000
OUT1	OUTFALL	193.03	432.88	0	20:30	7.97	32.2	0.000
P1	STORAGE	0.00	163.54	0	13:00	0	3.52	-0.000
P2	STORAGE	153.39	153.39	0	12:20	1.53	1.53	-0.003
P3C	STORAGE	28.86	28.86	0	12:20	0.251	0.251	0.002
P4	STORAGE	38.15	38.99	0	13:00	0.824	0.896	-0.000
P6	STORAGE	211.77	211.77	0	12:20	2.55	2.55	-0.001
P8	STORAGE	262.49	262.49	0	12:20	2.11	2.11	0.002
P10	STORAGE	95.25	155.90	0	12:50	1.89	3.1	-0.003
P9	STORAGE	354.30	354.30	0	12:20	3	3	-0.000
P11	STORAGE	44.06	44.06	0	12:30	0.688	0.688	-0.001
P5	STORAGE	35.52	35.52	0	12:30	0.53	0.53	-0.002
P12	STORAGE	20.15	20.15	0	12:30	0.289	0.289	-0.001
P3A	STORAGE	24.33	24.33	0	12:30	0.368	0.368	-0.002
P3B	STORAGE	44.34	44.34	0	13:00	1.01	1.01	-0.003
P3D	STORAGE	42.59	42.59	0	12:30	0.613	0.613	-0.003
P7NEW	STORAGE	216.56	216.56	0	12:20	2.03	2.03	-0.002

Node Surcharge Summary

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

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	71.83	0.024	1.976
J13	JUNCTION	71.83	0.019	3.981
J14	JUNCTION	71.83	0.059	3.941
J15	JUNCTION	71.83	0.065	3.935

J16	JUNCTION	71.83	0.065	3.935
J17	JUNCTION	71.83	0.030	3.970
J18	JUNCTION	71.83	0.030	3.970
J12	JUNCTION	71.83	0.018	3.982
J1	JUNCTION	71.83	0.019	0.981
J10	JUNCTION	71.83	0.014	3.986
J11	JUNCTION	71.83	0.038	1.962
J6	JUNCTION	71.83	0.052	3.448
J87	JUNCTION	71.83	0.006	1.994
J20	JUNCTION	71.83	0.014	1.986
J21	JUNCTION	71.83	0.024	0.976
B2	JUNCTION	71.83	0.083	0.917
B1.EX	JUNCTION	71.83	0.088	1.482
J5	JUNCTION	71.83	0.000	2.000
G3	JUNCTION	71.83	0.088	2.012
J7	JUNCTION	71.83	0.104	1.896
J22	JUNCTION	71.83	0.053	3.947
J24	JUNCTION	71.83	0.025	2.975
J23	JUNCTION	71.83	0.053	1.947
J25	JUNCTION	71.83	0.004	2.996
G2	JUNCTION	71.83	0.083	1.767
G1	JUNCTION	71.83	0.065	1.415
G1a	JUNCTION	71.83	0.100	1.550
G1.1	JUNCTION	71.83	0.099	1.581
G1.2	JUNCTION	71.83	0.125	1.825
G1.3	JUNCTION	71.83	0.140	1.700
J45	JUNCTION	71.83	0.140	1.560
A4CP	JUNCTION	71.83	0.141	0.859
A3	JUNCTION	71.83	0.141	1.109
A2	JUNCTION	71.83	0.138	2.212
A1	JUNCTION	71.83	0.138	1.912
J2	JUNCTION	71.83	0.038	1.362
P1	STORAGE	71.83	0.363	2.637
P2	STORAGE	71.83	0.352	3.648
P3C	STORAGE	71.83	0.395	2.605
P4	STORAGE	71.83	0.334	1.666
P6	STORAGE	71.83	0.539	2.461
P8	STORAGE	71.83	0.495	2.505
P10	STORAGE	71.83	0.581	2.419

P9	STORAGE	71.83	0.579	2.421
P11	STORAGE	71.83	0.464	1.536
P5	STORAGE	71.83	0.460	1.540
P12	STORAGE	71.83	0.010	1.990
P3A	STORAGE	71.83	0.486	1.514
P3B	STORAGE	71.83	0.557	1.443
P3D	STORAGE	71.83	0.582	1.418
P7NEW	STORAGE	71.83	0.538	0.862

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow LPS
P1	0.465	3	0	0	1.721	9	0 21:05	42.79
P2	0.745	3	0	0	1.260	5	1 00:56	5.79
P3C	0.046	2	0	21	0.151	6	0 20:30	2.39
P4	0.119	4	0	0	0.422	13	0 20:41	11.33
P6	0.915	5	0	0	1.908	11	1 00:27	14.61
P8	0.674	5	0	0	1.513	12	1 00:04	13.93
P10	1.589	9	0	0	2.526	14	1 03:01	9.84
P9	1.218	8	0	0	2.345	16	1 00:23	15.19
P11	0.190	7	0	0	0.463	18	1 00:09	5.05
P5	0.164	7	0	0	0.373	16	1 00:21	3.44
P12	0.078	0	0	0	0.179	1	0 20:51	2.84
P3A	0.119	7	0	0	0.267	16	1 00:29	2.28
P3B	0.364	9	0	0	0.744	17	1 01:32	5.45

P3D	0.238	11	0	0	0.472	22	1	00:45	3.19
P7NEW	0.870	18	0	0	1.619	34	1	00:33	9.43

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OUT1	82.94	149.97	432.88	32.164
System	82.94	149.97	432.88	32.164

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	43.81	0 12:34	1.68	0.00	0.02
C2	CONDUIT	49.10	0 14:01	0.65	0.00	0.01
C3	CONDUIT	97.34	0 13:04	1.41	0.00	0.02
C4	CONDUIT	123.70	0 14:06	0.45	0.01	0.06
C5	CONDUIT	130.13	0 14:10	1.05	0.00	0.02
C6	CONDUIT	141.12	0 14:11	1.17	0.00	0.01
C7	CONDUIT	147.99	0 14:16	0.69	0.00	0.01
C8	CONDUIT	27.88	0 14:01	1.44	0.00	0.01
C11	CONDUIT	241.05	0 15:19	0.31	0.00	0.00
C12	CONDUIT	2.01	0 16:02	0.91	0.00	0.01
C13	CONDUIT	11.33	0 20:50	0.43	0.00	0.02
C16	CONDUIT	285.88	0 15:29	0.42	0.00	0.00

C17	CONDUIT	285.86	0	15:33	0.54	0.00	0.00
C50	CONDUIT	1.25	0	16:04	0.59	0.00	0.05
L1	CONDUIT	15.34	0	13:01	0.85	0.11	0.22
C53	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
L3	CONDUIT	15.32	0	13:03	0.85	0.11	0.23
C59	CONDUIT	15.19	1	00:24	0.95	0.01	0.05
C61	CONDUIT	5.05	1	00:12	0.98	0.00	0.02
C62	CONDUIT	20.23	1	00:20	1.28	0.01	0.05
C63	CONDUIT	3.44	1	00:38	0.21	0.00	0.00
C64	CONDUIT	139.51	0	12:50	4.66	0.09	0.20
L2	CONDUIT	15.33	0	13:01	0.78	0.12	0.24
C67	CONDUIT	61.84	0	17:03	0.87	0.00	0.03
L4	CONDUIT	15.32	0	13:03	1.21	0.07	0.18
L5	CONDUIT	15.32	0	13:03	1.23	0.07	0.17
L6	CONDUIT	60.83	0	12:53	2.08	0.06	0.17
L7	CONDUIT	60.83	0	12:53	2.02	0.06	0.17
L9	CONDUIT	60.83	0	12:54	1.24	0.12	0.24
L10	CONDUIT	60.82	0	12:55	1.72	0.08	0.19
L8	CONDUIT	60.83	0	12:53	1.44	0.10	0.21
M1	CONDUIT	46.56	0	12:31	0.93	0.13	0.24
M2	CONDUIT	46.54	0	12:32	0.99	0.12	0.23
M3	CONDUIT	46.52	0	12:33	0.96	0.12	0.24
M4	CONDUIT	46.52	0	12:33	1.53	0.06	0.17
C9	CONDUIT	9.43	1	00:34	1.80	0.03	0.13
O3a	ORIFICE	2.05	0	20:30			0.00
O6a	ORIFICE	14.61	1	00:28			0.00
O10a	ORIFICE	9.83	1	03:02			0.00
O10b	ORIFICE	0.01	1	03:02			0.00
O10c	ORIFICE	0.00	0	00:00			0.00
O3b	ORIFICE	0.00	0	00:00			0.00
O6b	ORIFICE	0.00	0	00:00			0.00
O8a	ORIFICE	13.93	1	00:04			0.00
O11a	ORIFICE	4.95	1	00:09			0.00
O11b	ORIFICE	0.10	1	00:09			0.00
O11c	ORIFICE	0.00	0	00:00			0.00
O9a	ORIFICE	15.19	1	00:23			0.00
O9b	ORIFICE	0.00	0	00:00			0.00
O9c	ORIFICE	0.00	0	00:00			0.00
O5a	ORIFICE	3.44	1	00:22			0.00

O1a	ORIFICE	42.51	0	21:05	0.00
O1b	ORIFICE	0.28	0	21:05	0.00
O1c	ORIFICE	0.00	0	00:00	0.00
O10d	ORIFICE	0.00	0	00:00	0.00
O5b	ORIFICE	0.00	0	00:00	0.00
O5c	ORIFICE	0.00	0	00:00	0.00
O6c	ORIFICE	0.00	0	00:00	0.00
O6d	ORIFICE	0.00	0	00:00	0.00
O4a	ORIFICE	11.12	0	20:42	0.00
O4b	ORIFICE	0.21	0	20:42	0.00
O4c	ORIFICE	0.00	0	00:00	0.00
O2a	ORIFICE	5.76	1	00:56	0.00
O2b	ORIFICE	0.03	1	00:56	0.00
P3Aa	ORIFICE	2.28	1	00:30	0.00
OP3Ab	ORIFICE	0.00	0	00:00	0.00
OP3Ac	ORIFICE	0.00	0	00:00	0.00
OP3Ba	ORIFICE	5.45	1	01:32	0.00
OP3Bb	ORIFICE	0.00	0	00:00	0.00
O3Bc	ORIFICE	0.00	0	00:00	0.00
OP3Bd	ORIFICE	0.00	0	00:00	0.00
O7a	ORIFICE	9.43	1	00:33	0.00
O7b	ORIFICE	0.00	0	00:00	0.00
O7c	ORIFICE	0.00	0	00:00	0.00
O8b	ORIFICE	0.00	0	00:00	0.00
O8c	ORIFICE	0.00	0	00:00	0.00
O3Da	ORIFICE	3.16	1	00:45	0.00
O3Db	ORIFICE	0.02	1	00:45	0.00
O3Dc	ORIFICE	0.00	0	00:00	0.00
O3Dd	ORIFICE	0.00	0	00:00	0.00
O3De	ORIFICE	0.00	0	00:00	0.00
O2c	ORIFICE	0.00	0	00:00	0.00
W1a	WEIR	0.00	0	00:00	0.00
W6	WEIR	0.00	0	00:00	0.00
W10	WEIR	0.00	0	00:00	0.00
W11	WEIR	0.00	0	00:00	0.00
W9	WEIR	0.00	0	00:00	0.00
W5	WEIR	0.00	0	00:00	0.00
W12	WEIR	2.84	0	20:52	0.00
W4	WEIR	0.00	0	00:00	0.00

P3AW	WEIR	0.00	0	00:00	0.00
W3B	WEIR	0.00	0	00:00	0.00
W3C	WEIR	0.00	0	00:00	0.00
W2	WEIR	0.00	0	00:00	0.00
W7	WEIR	0.00	0	00:00	0.00
W8	WEIR	0.00	0	00:00	0.00
W3D	WEIR	0.00	0	00:00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Thu May 18 08:54:17 2017
Analysis ended on: Thu May 18 08:54:18 2017
Total elapsed time: 00:00:01

5YR

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.010)

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 LPS
Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES
 Ponding Allowed NO
 Water Quality NO
Infiltration Method CURVE_NUMBER
Flow Routing Method KINWAVE
Starting Date JAN-01-2015 00:00:00
Ending Date JAN-03-2015 23:50:00
Antecedent Dry Days 0.0
Report Time Step 00:15:00
Wet Time Step 00:05:00
Dry Time Step 01:00:00
Routing Time Step 30.00 sec

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	31.258	66.411
Evaporation Loss	0.000	0.000
Infiltration Loss	23.226	49.346
Surface Runoff	7.415	15.753
Final Storage	0.620	1.317
Continuity Error (%)	-0.009	

*****	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
*****	-----	-----
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	7.415	74.148
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	6.928	69.276
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.007	0.071
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.484	4.843
Continuity Error (%)	-0.058	

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step : 29.00 sec
Average Time Step : 30.00 sec
Maximum Time Step : 30.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 1.01
Percent Not Converging : 0.00

Subcatchment Runoff Summary

	Total	Total	Total	Total	Total	Total	Peak
Runoff	Precip	Runon	Evap	Infil	Runoff	Runoff	Runoff
Coeff							
Subcatchment	mm	mm	mm	mm	mm	10 ⁶ ltr	LPS

-							
S1	66.41	0.00	0.00	52.90	12.28	0.12	4.07
0.185							
S2	66.41	0.00	0.00	28.02	36.88	0.55	31.13
0.555							
S3	66.41	0.00	0.00	27.95	37.20	4.33	296.78
0.560							
S4	66.41	0.00	0.00	19.36	43.52	2.96	184.81
0.655							
S5	66.41	0.00	0.00	52.23	12.94	1.46	72.25
0.195							
S6	66.41	0.00	0.00	27.09	38.09	1.60	252.26
0.573							
S7	66.41	0.00	0.00	48.48	16.69	0.89	38.87
0.251							

S8	66.41	0.00	0.00	47.45	17.71	1.43	107.38
0.267							
S9	66.41	0.00	0.00	52.35	12.82	0.65	30.27
0.193							
S10C	66.41	0.00	0.00	31.15	34.02	0.42	63.39
0.512							
S11	66.41	0.00	0.00	52.00	13.18	0.91	51.90
0.199							
S12	66.41	0.00	0.00	52.43	12.75	1.28	57.06
0.192							
S13	66.41	0.00	0.00	25.92	38.85	1.19	92.22
0.585							
S14	66.41	0.00	0.00	52.67	12.51	0.18	6.92
0.188							
S15	66.41	0.00	0.00	52.16	13.03	0.37	19.24
0.196							
S16	66.41	0.00	0.00	52.55	12.64	0.88	36.88
0.190							
S17	66.41	0.00	0.00	28.02	36.97	1.35	80.37
0.557							
S18	66.41	0.00	0.00	27.63	37.53	0.86	76.46
0.565							
S19	66.41	0.00	0.00	52.90	12.28	0.77	27.04
0.185							
S20	66.41	0.00	0.00	30.36	34.81	2.45	225.22
0.524							
S21	66.41	0.00	0.00	29.94	35.23	3.35	460.03
0.531							
S22	66.41	0.00	0.00	51.72	13.44	1.52	101.77
0.202							
S23	66.41	0.00	0.00	53.45	11.71	0.72	22.03
0.176							
S24	66.41	0.00	0.00	52.86	12.31	0.15	5.45
0.185							
S26	66.41	0.00	0.00	52.90	12.27	0.44	15.48
0.185							

S25	66.41	0.00	0.00	27.14	38.04	4.85	714.98
0.573							
S28	66.41	0.00	0.00	27.69	37.48	1.12	95.11
0.564							
S27	66.41	0.00	0.00	27.09	38.08	1.89	294.80
0.573							
S29	66.41	0.00	0.00	48.26	16.92	0.25	11.76
0.255							
S32	66.41	0.00	0.00	48.23	16.93	0.21	10.09
0.255							
S30	66.41	0.00	0.00	45.30	19.87	0.45	24.63
0.299							
S31	66.41	0.00	0.00	48.52	16.65	0.59	25.00
0.251							
S4A	66.41	0.00	0.00	19.36	43.65	0.60	41.37
0.657							
4B	66.41	0.00	0.00	37.30	27.87	0.27	25.57
0.420							
S21-RE	66.41	0.00	0.00	29.94	35.23	1.78	245.06
0.531							
S27-RE	66.41	0.00	0.00	27.09	38.08	1.52	237.96
0.573							
S17-RE	66.41	0.00	0.00	27.59	37.57	0.47	43.28
0.566							
S4C	66.41	0.00	0.00	19.36	43.68	1.28	90.85
0.658							
S10B	66.41	0.00	0.00	32.34	32.82	1.72	98.32
0.494							
S10A	66.41	0.00	0.00	31.66	33.51	0.62	56.73
0.505							
EXTERNAL1	66.41	0.00	0.00	56.74	8.40	16.47	325.20
0.127							
EXTERNAL2	66.41	0.00	0.00	55.06	10.09	8.23	188.36
0.152							
S10D	66.41	0.00	0.00	31.59	33.57	1.03	98.94
0.505							

Node Depth Summary

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J19	JUNCTION	0.01	0.04	81.09	0 12:20	0.01
J13	JUNCTION	0.00	0.04	66.00	0 12:50	0.01
J14	JUNCTION	0.01	0.11	65.07	0 12:51	0.03
J15	JUNCTION	0.02	0.13	63.13	0 12:53	0.04
J16	JUNCTION	0.02	0.13	62.96	0 12:57	0.04
J17	JUNCTION	0.01	0.06	59.39	0 13:03	0.02
J18	JUNCTION	0.01	0.06	57.36	0 13:04	0.02
J12	JUNCTION	0.00	0.04	72.63	0 13:00	0.01
J1	JUNCTION	0.00	0.03	70.35	0 14:00	0.01
J10	JUNCTION	0.01	0.03	61.83	0 15:07	0.01
J11	JUNCTION	0.04	0.07	55.07	0 18:20	0.02
J6	JUNCTION	0.04	0.10	52.10	0 16:30	0.03
J87	JUNCTION	0.00	0.01	49.01	0 15:09	0.00
J20	JUNCTION	0.00	0.02	78.00	0 13:00	0.01
J21	JUNCTION	0.01	0.05	64.05	0 16:09	0.01
B2	JUNCTION	0.02	0.13	68.67	0 12:50	0.04
B1.EX	JUNCTION	0.02	0.13	68.55	0 12:50	0.04
J5	JUNCTION	0.00	0.00	62.00	0 00:00	0.00
G3	JUNCTION	0.02	0.13	68.14	0 12:51	0.04
J7	JUNCTION	0.02	0.15	68.03	0 12:20	0.05
J22	JUNCTION	0.05	0.10	59.90	0 17:04	0.03
J24	JUNCTION	0.02	0.05	66.85	0 15:58	0.01
J23	JUNCTION	0.05	0.10	59.80	0 17:04	0.03
J25	JUNCTION	0.00	0.01	65.61	0 16:17	0.00
G2	JUNCTION	0.02	0.13	67.63	0 12:52	0.04

G1	JUNCTION	0.01	0.10	66.93	0	12:52	0.03
G1a	JUNCTION	0.02	0.14	66.85	0	12:23	0.04
G1.1	JUNCTION	0.02	0.14	64.46	0	12:32	0.04
G1.2	JUNCTION	0.02	0.18	63.45	0	12:32	0.05
G1.3	JUNCTION	0.03	0.20	63.32	0	12:32	0.06
J45	JUNCTION	0.03	0.20	62.93	0	12:32	0.06
A4CP	JUNCTION	0.02	0.20	68.10	0	12:20	0.06
A3	JUNCTION	0.02	0.20	68.01	0	12:21	0.06
A2	JUNCTION	0.02	0.19	67.74	0	12:22	0.06
A1	JUNCTION	0.02	0.19	67.44	0	12:23	0.06
J2	JUNCTION	0.04	0.07	60.77	0	18:19	0.02
OUT1	OUTFALL	0.00	0.01	40.01	0	15:13	0.00
P1	STORAGE	0.13	0.52	63.52	0	16:12	0.16
P2	STORAGE	0.28	0.48	59.78	0	20:51	0.15
P3C	STORAGE	0.27	0.67	63.97	0	22:15	0.20
P4	STORAGE	0.12	0.46	67.16	0	16:09	0.14
P6	STORAGE	0.36	0.72	67.22	0	18:29	0.22
P8	STORAGE	0.26	0.62	58.62	0	15:04	0.19
P10	STORAGE	0.49	0.82	59.02	1	00:29	0.25
P9	STORAGE	0.37	0.74	61.54	0	17:04	0.23
P11	STORAGE	0.23	0.57	69.87	0	15:58	0.17
P5	STORAGE	0.24	0.56	68.06	0	16:17	0.17
P12	STORAGE	0.01	0.02	81.62	0	18:09	0.00
P3A	STORAGE	0.28	0.62	65.07	0	17:20	0.19
P3B	STORAGE	0.38	0.74	64.24	0	21:03	0.23
P3D	STORAGE	0.38	0.76	60.76	0	18:43	0.23
P7NEW	STORAGE	0.37	0.71	61.51	0	18:19	0.22

Node Inflow Summary

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

Node	Type	Inflow LPS	Inflow LPS	Occurrence days hr:min	Volume 10^6 ltr	Volume 10^6 ltr	Error Percent
J19	JUNCTION	92.22	92.72	0 12:20	1.19	1.62	0.000
J13	JUNCTION	176.91	176.91	0 12:50	2.93	2.93	0.000
J14	JUNCTION	57.06	314.01	0 12:51	1.28	5.82	0.000
J15	JUNCTION	86.39	406.37	0 12:53	1.89	10	0.000
J16	JUNCTION	27.04	432.76	0 13:01	0.768	10.8	0.000
J17	JUNCTION	0.00	445.70	0 13:03	0	14.6	0.000
J18	JUNCTION	0.00	453.67	0 13:04	0	17.1	0.000
J12	JUNCTION	84.90	84.90	0 13:00	1.79	1.79	0.000
J1	JUNCTION	4.07	4.07	0 14:00	0.115	0.115	0.000
J10	JUNCTION	87.69	178.47	0 15:07	1.9	8	0.000
J11	JUNCTION	101.77	687.56	0 13:01	1.52	32.1	0.000
J6	JUNCTION	27.45	785.19	0 15:06	0.877	44.7	0.000
J87	JUNCTION	0.00	785.15	0 15:09	0	44.6	0.000
J20	JUNCTION	6.92	6.92	0 13:00	0.175	0.175	0.000
J21	JUNCTION	0.00	32.59	0 16:09	0	1.52	0.000
B2	JUNCTION	31.13	34.35	0 12:50	0.553	0.669	0.000
B1.EX	JUNCTION	0.00	34.35	0 12:50	0	0.669	0.000
J5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
G3	JUNCTION	0.00	34.34	0 12:51	0	0.668	0.000
J7	JUNCTION	296.78	296.78	0 12:20	4.33	4.33	0.000
J22	JUNCTION	0.00	57.22	0 17:04	0	4.2	0.000
J24	JUNCTION	0.00	20.91	0 15:58	0	1.09	0.000
J23	JUNCTION	0.00	77.60	0 16:27	0	5.29	0.000
J25	JUNCTION	0.00	14.50	0 16:17	0	0.829	0.000
G2	JUNCTION	0.00	34.34	0 12:52	0	0.668	0.000
G1	JUNCTION	0.00	34.34	0 12:52	0	0.668	0.000
G1a	JUNCTION	0.00	123.22	0 12:31	0	1.95	0.000
G1.1	JUNCTION	0.00	123.22	0 12:32	0	1.95	0.000
G1.2	JUNCTION	0.00	123.22	0 12:32	0	1.95	-0.000
G1.3	JUNCTION	0.00	123.22	0 12:32	0	1.95	0.000
J45	JUNCTION	0.00	123.22	0 12:32	0	1.95	0.000
A4CP	JUNCTION	90.85	90.85	0 12:20	1.28	1.28	0.000
A3	JUNCTION	0.00	90.84	0 12:21	0	1.28	0.000

A2	JUNCTION	0.00	90.73	0	12:22	0	1.28	0.000
A1	JUNCTION	0.00	90.62	0	12:23	0	1.28	0.000
J2	JUNCTION	0.00	33.79	0	18:19	0	2.78	-0.000
OUT1	OUTFALL	506.34	1260.66	0	15:28	24.7	69.3	0.000
P1	STORAGE	0.00	371.34	0	12:30	0	6.12	0.004
P2	STORAGE	311.75	311.75	0	12:10	2.47	2.47	-0.001
P3C	STORAGE	63.39	63.39	0	12:10	0.418	0.418	0.002
P4	STORAGE	80.37	85.36	0	12:30	1.35	1.53	0.003
P6	STORAGE	458.57	458.57	0	12:20	4.23	4.23	0.001
P8	STORAGE	532.77	532.77	0	12:10	3.41	3.41	0.002
P10	STORAGE	184.81	307.97	0	12:30	2.96	4.9	-0.002
P9	STORAGE	714.98	714.98	0	12:10	4.85	4.85	0.000
P11	STORAGE	95.11	95.11	0	12:20	1.12	1.12	0.002
P5	STORAGE	76.46	76.46	0	12:20	0.863	0.863	0.001
P12	STORAGE	43.28	43.28	0	12:20	0.47	0.47	-0.001
P3A	STORAGE	56.73	56.73	0	12:20	0.619	0.619	0.001
P3B	STORAGE	98.32	98.32	0	12:30	1.72	1.72	-0.000
P3D	STORAGE	98.94	98.94	0	12:20	1.03	1.03	-0.000
P7NEW	STORAGE	460.03	460.03	0	12:10	3.35	3.35	-0.000

Node Surcharge Summary

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

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	71.83	0.038	1.962
J13	JUNCTION	71.83	0.040	3.960
J14	JUNCTION	71.83	0.114	3.886
J15	JUNCTION	71.83	0.131	3.869
J16	JUNCTION	71.83	0.131	3.869

J17	JUNCTION	71.83	0.062	3.938
J18	JUNCTION	71.83	0.059	3.941
J12	JUNCTION	71.83	0.036	3.964
J1	JUNCTION	71.83	0.033	0.967
J10	JUNCTION	71.83	0.027	3.973
J11	JUNCTION	71.83	0.071	1.929
J6	JUNCTION	71.83	0.097	3.403
J87	JUNCTION	71.83	0.011	1.989
J20	JUNCTION	71.83	0.024	1.976
J21	JUNCTION	71.83	0.045	0.955
B2	JUNCTION	71.83	0.125	0.875
B1.EX	JUNCTION	71.83	0.133	1.437
J5	JUNCTION	71.83	0.000	2.000
G3	JUNCTION	71.83	0.133	1.967
J7	JUNCTION	71.83	0.152	1.848
J22	JUNCTION	71.83	0.098	3.902
J24	JUNCTION	71.83	0.048	2.952
J23	JUNCTION	71.83	0.098	1.902
J25	JUNCTION	71.83	0.010	2.990
G2	JUNCTION	71.83	0.126	1.724
G1	JUNCTION	71.83	0.097	1.383
G1a	JUNCTION	71.83	0.139	1.511
G1.1	JUNCTION	71.83	0.141	1.539
G1.2	JUNCTION	71.83	0.179	1.771
G1.3	JUNCTION	71.83	0.201	1.639
J45	JUNCTION	71.83	0.201	1.499
A4CP	JUNCTION	71.83	0.199	0.801
A3	JUNCTION	71.83	0.199	1.051
A2	JUNCTION	71.83	0.195	2.155
A1	JUNCTION	71.83	0.195	1.855
J2	JUNCTION	71.83	0.071	1.329
P1	STORAGE	71.83	0.520	2.480
P2	STORAGE	71.83	0.479	3.521
P3C	STORAGE	71.83	0.671	2.329
P4	STORAGE	71.83	0.459	1.541
P6	STORAGE	71.83	0.723	2.277

P8	STORAGE	71.83	0.618	2.382
P10	STORAGE	71.83	0.817	2.183
P9	STORAGE	71.83	0.741	2.259
P11	STORAGE	71.83	0.568	1.432
P5	STORAGE	71.83	0.557	1.443
P12	STORAGE	71.83	0.016	1.984
P3A	STORAGE	71.83	0.616	1.384
P3B	STORAGE	71.83	0.738	1.262
P3D	STORAGE	71.83	0.763	1.237
P7NEW	STORAGE	71.83	0.708	0.692

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow LPS
P1	0.628	3	0	0	2.505	14	0 16:12	126.41
P2	0.986	4	0	0	1.742	7	0 20:51	19.54
P3C	0.109	5	0	17	0.284	12	0 22:14	3.04
P4	0.152	5	0	0	0.591	18	0 16:09	32.59
P6	1.250	7	0	0	2.674	16	0 18:28	44.86
P8	0.798	6	0	0	1.920	15	0 15:04	61.49
P10	2.158	12	0	0	3.650	20	1 00:29	29.00
P9	1.486	10	0	0	3.046	20	0 17:04	57.22

P11	0.225	9	0	0	0.578	22	0	15:57	20.91
P5	0.192	8	0	0	0.463	20	0	16:16	14.50
P12	0.108	0	0	0	0.276	1	0	18:08	5.43
P3A	0.148	9	0	0	0.353	21	0	17:19	8.49
P3B	0.497	12	0	0	1.060	25	0	21:03	17.25
P3D	0.304	14	0	0	0.642	30	0	18:42	11.06
P7NEW	1.118	23	0	0	2.187	46	0	18:19	33.79

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OUT1	83.28	321.66	1260.66	69.276
System	83.28	321.66	1260.66	69.276

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	92.33	0 12:23	2.20	0.00	0.04
C2	CONDUIT	176.85	0 12:51	1.07	0.00	0.01
C3	CONDUIT	313.92	0 12:52	2.06	0.00	0.04
C4	CONDUIT	406.02	0 12:57	0.71	0.03	0.13

C5	CONDUIT	432.79	0	13:03	1.66	0.00	0.03
C6	CONDUIT	445.68	0	13:04	1.81	0.00	0.03
C7	CONDUIT	453.64	0	13:07	1.07	0.00	0.02
C8	CONDUIT	84.86	0	13:01	2.16	0.00	0.02
C11	CONDUIT	684.57	0	13:11	0.47	0.00	0.01
C12	CONDUIT	6.90	0	13:02	1.37	0.00	0.02
C13	CONDUIT	32.59	0	16:15	0.63	0.00	0.05
C16	CONDUIT	785.15	0	15:09	0.63	0.00	0.01
C17	CONDUIT	785.13	0	15:13	0.82	0.00	0.00
C50	CONDUIT	4.07	0	14:01	0.85	0.02	0.09
L1	CONDUIT	34.35	0	12:50	1.07	0.25	0.34
C53	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
L3	CONDUIT	34.34	0	12:52	1.07	0.25	0.34
C59	CONDUIT	57.22	0	17:04	1.45	0.02	0.10
C61	CONDUIT	20.91	0	16:00	1.50	0.00	0.05
C62	CONDUIT	77.59	0	16:30	1.97	0.02	0.10
C63	CONDUIT	14.49	0	16:26	0.37	0.00	0.00
C64	CONDUIT	296.90	0	12:21	5.78	0.19	0.30
L2	CONDUIT	34.34	0	12:51	0.99	0.28	0.36
C67	CONDUIT	178.47	0	15:09	1.32	0.01	0.05
L4	CONDUIT	34.34	0	12:52	1.54	0.15	0.26
L5	CONDUIT	34.34	0	12:53	1.55	0.15	0.26
L6	CONDUIT	123.22	0	12:32	2.55	0.12	0.24
L7	CONDUIT	123.22	0	12:32	2.48	0.13	0.24
L9	CONDUIT	123.22	0	12:32	1.51	0.25	0.34
L10	CONDUIT	123.22	0	12:34	2.11	0.16	0.27
L8	CONDUIT	123.22	0	12:32	1.77	0.20	0.31
M1	CONDUIT	90.84	0	12:21	1.13	0.25	0.34
M2	CONDUIT	90.73	0	12:22	1.20	0.23	0.32
M3	CONDUIT	90.62	0	12:23	1.16	0.24	0.33
M4	CONDUIT	90.62	0	12:23	1.85	0.12	0.24
C9	CONDUIT	33.79	0	18:20	2.62	0.12	0.24
O3a	ORIFICE	2.69	0	22:15			0.00
O6a	ORIFICE	17.13	0	18:29			0.00
O10a	ORIFICE	11.78	1	00:29			0.00
O10b	ORIFICE	17.23	1	00:29			0.00

010c	ORIFICE	0.00	0	00:00	0.00
03b	ORIFICE	0.00	0	00:00	0.00
06b	ORIFICE	27.73	0	18:29	0.00
08a	ORIFICE	15.74	0	15:04	0.00
011a	ORIFICE	5.51	0	15:58	0.00
011b	ORIFICE	15.40	0	15:58	0.00
011c	ORIFICE	0.00	0	00:00	0.00
09a	ORIFICE	17.35	0	17:04	0.00
09b	ORIFICE	39.84	0	17:04	0.00
09c	ORIFICE	0.03	0	17:04	0.00
05a	ORIFICE	3.81	0	16:17	0.00
01a	ORIFICE	51.44	0	16:12	0.00
01b	ORIFICE	74.97	0	16:12	0.00
01c	ORIFICE	0.00	0	16:12	0.00
010d	ORIFICE	0.00	0	00:00	0.00
05b	ORIFICE	10.69	0	16:17	0.00
05c	ORIFICE	0.00	0	00:00	0.00
06c	ORIFICE	0.00	0	00:00	0.00
06d	ORIFICE	0.00	0	00:00	0.00
04a	ORIFICE	13.34	0	16:09	0.00
04b	ORIFICE	19.25	0	16:09	0.00
04c	ORIFICE	0.00	0	00:00	0.00
02a	ORIFICE	6.82	0	20:51	0.00
02b	ORIFICE	12.72	0	20:51	0.00
P3Aa	ORIFICE	2.58	0	17:20	0.00
OP3Ab	ORIFICE	5.91	0	17:20	0.00
OP3Ac	ORIFICE	0.00	0	00:00	0.00
OP3Ba	ORIFICE	6.33	0	21:03	0.00
OP3Bb	ORIFICE	10.93	0	21:03	0.00
03Bc	ORIFICE	0.00	0	00:00	0.00
OP3Bd	ORIFICE	0.00	0	00:00	0.00
07a	ORIFICE	10.92	0	18:19	0.00
07b	ORIFICE	22.87	0	18:19	0.00
07c	ORIFICE	0.00	0	00:00	0.00
08b	ORIFICE	45.75	0	15:04	0.00
08c	ORIFICE	0.00	0	00:00	0.00

O3Da	ORIFICE	3.64	0	18:43	0.00
O3Db	ORIFICE	7.39	0	18:43	0.00
O3Dc	ORIFICE	0.04	0	18:43	0.00
O3Dd	ORIFICE	0.00	0	00:00	0.00
O3De	ORIFICE	0.00	0	00:00	0.00
O2c	ORIFICE	0.00	0	00:00	0.00
W1a	WEIR	0.00	0	00:00	0.00
W6	WEIR	0.00	0	00:00	0.00
W10	WEIR	0.00	0	00:00	0.00
W11	WEIR	0.00	0	00:00	0.00
W9	WEIR	0.00	0	00:00	0.00
W5	WEIR	0.00	0	00:00	0.00
W12	WEIR	5.43	0	18:09	0.00
W4	WEIR	0.00	0	00:00	0.00
P3AW	WEIR	0.00	0	00:00	0.00
W3B	WEIR	0.00	0	00:00	0.00
W3C	WEIR	0.00	0	00:00	0.00
W2	WEIR	0.00	0	00:00	0.00
W7	WEIR	0.00	0	00:00	0.00
W8	WEIR	0.00	0	00:00	0.00
W3D	WEIR	0.00	0	00:00	0.00

 Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Thu May 18 08:55:24 2017
 Analysis ended on: Thu May 18 08:55:25 2017
 Total elapsed time: 00:00:01

10YR

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.010)

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 LPS
Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES
 Ponding Allowed NO
 Water Quality NO
Infiltration Method CURVE_NUMBER
Flow Routing Method KINWAVE
Starting Date JAN-01-2015 00:00:00
Ending Date JAN-03-2015 23:50:00
Antecedent Dry Days 0.0
Report Time Step 00:15:00
Wet Time Step 00:05:00
Dry Time Step 01:00:00
Routing Time Step 30.00 sec

```

*****
Runoff Quantity Continuity      Volume      Depth
                                hectare-m    mm
*****
Total Precipitation .....      37.051      78.718
Evaporation Loss .....          0.000        0.000
Infiltration Loss .....         25.778       54.768
Surface Runoff .....            10.656       22.639
Final Storage .....              0.621        1.319
Continuity Error (%) .....      -0.011

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*****
Flow Routing Continuity      Volume      Volume
                                hectare-m    10^6 ltr
*****
Dry Weather Inflow .....       0.000        0.000
Wet Weather Inflow .....       10.656       106.560
Groundwater Inflow .....        0.000        0.000
RDII Inflow .....              0.000        0.000
External Inflow .....           0.000        0.000
External Outflow .....          10.140       101.406
Flooding Loss .....             0.000        0.000
Evaporation Loss .....           0.000        0.000
Exfiltration Loss .....          0.007        0.074
Initial Stored Volume .....      0.000        0.000
Final Stored Volume .....         0.510        5.096
Continuity Error (%) .....      -0.016

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

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*****
Routing Time Step Summary

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Minimum Time Step : 29.00 sec
 Average Time Step : 30.00 sec
 Maximum Time Step : 30.00 sec
 Percent in Steady State : 0.00
 Average Iterations per Step : 1.01
 Percent Not Converging : 0.00

Subcatchment Runoff Summary

	Total	Total	Total	Total	Total	Total	Peak
Runoff	Precip	Runon	Evap	Infil	Runoff	Runoff	Runoff
Coeff							
Subcatchment	mm	mm	mm	mm	mm	10 ⁶ ltr	LPS
S1	78.72	0.00	0.00	59.00	18.48	0.17	7.97
0.235							
S2	78.72	0.00	0.00	29.00	47.90	0.72	45.80
0.609							
S3	78.72	0.00	0.00	29.00	48.22	5.61	437.52
0.613							
S4	78.72	0.00	0.00	19.79	55.20	3.75	260.66
0.701							
S5	78.72	0.00	0.00	58.25	19.21	2.16	133.29
0.244							
S6	78.72	0.00	0.00	28.38	49.11	2.07	347.21
0.624							
S7	78.72	0.00	0.00	53.43	24.05	1.29	67.56
0.306							

S8	78.72	0.00	0.00	52.33	25.15	2.04	199.21
0.319							
S9	78.72	0.00	0.00	58.38	19.08	0.97	56.36
0.242							
S10C	78.72	0.00	0.00	32.97	44.52	0.55	90.59
0.566							
S11	78.72	0.00	0.00	58.00	19.48	1.34	98.31
0.248							
S12	78.72	0.00	0.00	58.46	19.00	1.90	106.78
0.241							
S13	78.72	0.00	0.00	26.75	50.04	1.53	132.30
0.636							
S14	78.72	0.00	0.00	58.75	18.74	0.26	13.25
0.238							
S15	78.72	0.00	0.00	58.17	19.31	0.54	35.39
0.245							
S16	78.72	0.00	0.00	58.59	18.88	1.31	69.57
0.240							
S17	78.72	0.00	0.00	29.00	47.99	1.76	117.98
0.610							
S18	78.72	0.00	0.00	28.92	48.55	1.12	109.07
0.617							
S19	78.72	0.00	0.00	59.00	18.48	1.16	52.97
0.235							
S20	78.72	0.00	0.00	31.99	45.48	3.20	326.80
0.578							
S21	78.72	0.00	0.00	31.58	45.91	4.36	658.83
0.583							
S22	78.72	0.00	0.00	57.71	19.76	2.23	207.32
0.251							
S23	78.72	0.00	0.00	59.63	17.85	1.10	40.66
0.227							
S24	78.72	0.00	0.00	58.96	18.52	0.23	10.66
0.235							
S26	78.72	0.00	0.00	59.00	18.47	0.66	30.30
0.235							

S25	78.72	0.00	0.00	28.43	49.06	6.26	991.96
0.623							
S28	78.72	0.00	0.00	28.97	48.49	1.45	136.50
0.616							
S27	78.72	0.00	0.00	28.39	49.11	2.43	406.07
0.624							
S29	78.72	0.00	0.00	53.17	24.29	0.35	20.27
0.309							
S32	78.72	0.00	0.00	53.17	24.30	0.30	17.39
0.309							
S30	78.72	0.00	0.00	50.21	27.24	0.61	38.81
0.346							
S31	78.72	0.00	0.00	53.47	24.00	0.84	43.52
0.305							
S4A	78.72	0.00	0.00	19.79	55.31	0.76	57.91
0.703							
4B	78.72	0.00	0.00	40.02	37.45	0.36	39.42
0.476							
S21-RE	78.72	0.00	0.00	31.58	45.91	2.32	350.95
0.583							
S27-RE	78.72	0.00	0.00	28.39	49.11	1.96	327.82
0.624							
S17-RE	78.72	0.00	0.00	28.88	48.59	0.61	61.37
0.617							
S4C	78.72	0.00	0.00	19.79	55.34	1.62	126.84
0.703							
S10B	78.72	0.00	0.00	34.16	43.30	2.27	149.33
0.550							
S10A	78.72	0.00	0.00	33.47	44.00	0.81	83.32
0.559							
EXTERNAL1	78.72	0.00	0.00	63.61	13.87	27.19	549.20
0.176							
EXTERNAL2	78.72	0.00	0.00	61.52	15.97	13.02	327.94
0.203							
S10D	78.72	0.00	0.00	33.42	44.06	1.35	144.18
0.560							

Node Depth Summary

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J19	JUNCTION	0.01	0.05	81.10	0 12:20	0.01
J13	JUNCTION	0.00	0.06	66.01	0 12:20	0.02
J14	JUNCTION	0.02	0.16	65.11	0 12:22	0.05
J15	JUNCTION	0.03	0.18	63.18	0 12:31	0.06
J16	JUNCTION	0.03	0.18	63.01	0 12:33	0.06
J17	JUNCTION	0.02	0.09	59.42	0 12:35	0.03
J18	JUNCTION	0.02	0.08	57.39	0 12:36	0.02
J12	JUNCTION	0.01	0.05	72.65	0 12:50	0.01
J1	JUNCTION	0.01	0.05	70.36	0 13:00	0.01
J10	JUNCTION	0.01	0.04	61.84	0 14:34	0.01
J11	JUNCTION	0.04	0.10	55.10	0 15:35	0.03
J6	JUNCTION	0.05	0.13	52.13	0 14:54	0.04
J87	JUNCTION	0.00	0.02	49.02	0 14:18	0.00
J20	JUNCTION	0.00	0.03	78.01	0 13:00	0.01
J21	JUNCTION	0.01	0.06	64.06	0 14:45	0.02
B2	JUNCTION	0.02	0.16	68.70	0 12:30	0.05
B1.EX	JUNCTION	0.02	0.17	68.59	0 12:31	0.05
J5	JUNCTION	0.00	0.00	62.00	0 00:00	0.00
G3	JUNCTION	0.02	0.17	68.18	0 12:31	0.05
J7	JUNCTION	0.02	0.19	68.07	0 12:20	0.06
J22	JUNCTION	0.05	0.14	59.94	0 14:58	0.04
J24	JUNCTION	0.02	0.06	66.86	0 14:41	0.02
J23	JUNCTION	0.05	0.14	59.84	0 14:58	0.04
J25	JUNCTION	0.00	0.01	65.61	0 14:49	0.00
G2	JUNCTION	0.02	0.16	67.66	0 12:32	0.05

G1	JUNCTION	0.02	0.12	66.95	0	12:33	0.04
G1a	JUNCTION	0.02	0.17	66.88	0	12:24	0.05
G1.1	JUNCTION	0.02	0.17	64.49	0	12:24	0.05
G1.2	JUNCTION	0.03	0.22	63.49	0	12:24	0.07
G1.3	JUNCTION	0.03	0.24	63.36	0	12:24	0.07
J45	JUNCTION	0.03	0.24	62.97	0	12:25	0.07
A4CP	JUNCTION	0.03	0.24	68.14	0	12:20	0.07
A3	JUNCTION	0.03	0.24	68.05	0	12:21	0.07
A2	JUNCTION	0.03	0.23	67.78	0	12:21	0.07
A1	JUNCTION	0.03	0.23	67.48	0	12:22	0.07
J2	JUNCTION	0.04	0.10	60.80	0	15:34	0.03
OUT1	OUTFALL	0.00	0.01	40.01	0	14:20	0.00
P1	STORAGE	0.15	0.63	63.63	0	14:59	0.19
P2	STORAGE	0.30	0.56	59.86	0	17:35	0.17
P3C	STORAGE	0.31	0.76	64.06	0	16:02	0.23
P4	STORAGE	0.13	0.53	67.23	0	14:45	0.16
P6	STORAGE	0.39	0.84	67.34	0	16:06	0.25
P8	STORAGE	0.28	0.71	58.71	0	14:01	0.22
P10	STORAGE	0.55	0.94	59.14	0	21:08	0.29
P9	STORAGE	0.39	0.85	61.65	0	14:58	0.26
P11	STORAGE	0.24	0.64	69.94	0	14:41	0.20
P5	STORAGE	0.25	0.63	68.13	0	14:49	0.19
P12	STORAGE	0.01	0.02	81.62	0	17:07	0.01
P3A	STORAGE	0.30	0.71	65.16	0	15:25	0.22
P3B	STORAGE	0.40	0.83	64.33	0	17:41	0.25
P3D	STORAGE	0.41	0.88	60.88	0	16:22	0.27
P7NEW	STORAGE	0.40	0.82	61.62	0	15:34	0.25

Node Inflow Summary

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

Node	Type	Inflow LPS	Inflow LPS	Occurrence days hr:min	Volume 10^6 ltr	Volume 10^6 ltr	Error Percent
J19	JUNCTION	132.30	133.40	0 12:20	1.53	2.09	0.000
J13	JUNCTION	332.33	332.33	0 12:20	4.23	4.23	0.000
J14	JUNCTION	106.78	557.59	0 12:22	1.9	8.22	0.000
J15	JUNCTION	161.07	717.70	0 12:31	2.82	14.1	0.000
J16	JUNCTION	52.97	763.73	0 12:33	1.16	15.3	0.000
J17	JUNCTION	0.00	776.43	0 12:35	0	20.3	0.000
J18	JUNCTION	0.00	784.29	0 12:36	0	23.7	0.000
J12	JUNCTION	142.50	142.50	0 12:50	2.55	2.55	0.000
J1	JUNCTION	7.97	7.97	0 13:00	0.174	0.174	0.000
J10	JUNCTION	162.92	308.27	0 14:34	2.83	11	0.000
J11	JUNCTION	207.32	1180.49	0 12:37	2.23	44.3	0.000
J6	JUNCTION	51.32	1399.62	0 14:15	1.33	61.3	0.000
J87	JUNCTION	0.00	1399.46	0 14:18	0	61.2	0.000
J20	JUNCTION	13.25	13.25	0 13:00	0.262	0.262	0.000
J21	JUNCTION	0.00	59.16	0 14:45	0	2.01	0.000
B2	JUNCTION	45.80	52.59	0 12:30	0.719	0.892	0.000
B1.EX	JUNCTION	0.00	52.58	0 12:31	0	0.892	0.000
J5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
G3	JUNCTION	0.00	52.56	0 12:31	0	0.892	0.000
J7	JUNCTION	437.52	437.52	0 12:20	5.61	5.61	0.000
J22	JUNCTION	0.00	111.21	0 14:58	0	5.58	0.000
J24	JUNCTION	0.00	37.42	0 14:41	0	1.42	0.000
J23	JUNCTION	0.00	148.41	0 14:51	0	7	0.000
J25	JUNCTION	0.00	26.86	0 14:49	0	1.08	0.000
G2	JUNCTION	0.00	52.54	0 12:32	0	0.892	0.000
G1	JUNCTION	0.00	52.54	0 12:33	0	0.892	0.000
G1a	JUNCTION	0.00	177.17	0 12:24	0	2.51	0.000
G1.1	JUNCTION	0.00	177.15	0 12:24	0	2.51	0.000
G1.2	JUNCTION	0.00	177.14	0 12:24	0	2.51	0.000
G1.3	JUNCTION	0.00	177.15	0 12:24	0	2.51	0.000
J45	JUNCTION	0.00	177.13	0 12:25	0	2.51	0.000
A4CP	JUNCTION	126.84	126.84	0 12:20	1.62	1.62	0.000
A3	JUNCTION	0.00	126.76	0 12:21	0	1.62	0.000

A2	JUNCTION	0.00	126.54	0	12:21	0	1.62	0.000
A1	JUNCTION	0.00	126.27	0	12:22	0	1.62	0.000
J2	JUNCTION	0.00	66.49	0	15:34	0	3.76	0.000
OUT1	OUTFALL	862.96	2232.33	0	14:27	40.2	101	0.000
P1	STORAGE	0.00	567.86	0	12:21	0	8.16	0.012
P2	STORAGE	437.99	437.99	0	12:10	3.18	3.18	-0.001
P3C	STORAGE	90.59	90.59	0	12:10	0.548	0.548	0.002
P4	STORAGE	117.98	129.23	0	12:30	1.76	2.02	0.011
P6	STORAGE	663.40	663.40	0	12:10	5.52	5.52	0.003
P8	STORAGE	733.89	733.89	0	12:10	4.4	4.4	0.015
P10	STORAGE	260.66	434.82	0	12:26	3.75	6.26	-0.001
P9	STORAGE	991.96	991.96	0	12:10	6.26	6.26	0.007
P11	STORAGE	136.50	136.50	0	12:20	1.45	1.45	0.008
P5	STORAGE	109.07	109.07	0	12:20	1.12	1.12	0.006
P12	STORAGE	61.37	61.37	0	12:20	0.607	0.607	-0.001
P3A	STORAGE	83.32	83.32	0	12:20	0.813	0.813	0.005
P3B	STORAGE	149.33	149.33	0	12:30	2.27	2.27	0.001
P3D	STORAGE	144.18	144.18	0	12:20	1.35	1.35	0.004
P7NEW	STORAGE	658.83	658.83	0	12:10	4.36	4.36	0.004

Node Surcharge Summary

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

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	71.83	0.047	1.953
J13	JUNCTION	71.83	0.058	3.942
J14	JUNCTION	71.83	0.155	3.845
J15	JUNCTION	71.83	0.183	3.817
J16	JUNCTION	71.83	0.183	3.817

J17	JUNCTION	71.83	0.087	3.913
J18	JUNCTION	71.83	0.081	3.919
J12	JUNCTION	71.83	0.048	3.952
J1	JUNCTION	71.83	0.045	0.955
J10	JUNCTION	71.83	0.037	3.963
J11	JUNCTION	71.83	0.101	1.899
J6	JUNCTION	71.83	0.134	3.366
J87	JUNCTION	71.83	0.016	1.984
J20	JUNCTION	71.83	0.033	1.967
J21	JUNCTION	71.83	0.064	0.936
B2	JUNCTION	71.83	0.158	0.842
B1.EX	JUNCTION	71.83	0.169	1.401
J5	JUNCTION	71.83	0.000	2.000
G3	JUNCTION	71.83	0.169	1.931
J7	JUNCTION	71.83	0.186	1.814
J22	JUNCTION	71.83	0.135	3.865
J24	JUNCTION	71.83	0.063	2.937
J23	JUNCTION	71.83	0.135	1.865
J25	JUNCTION	71.83	0.014	2.986
G2	JUNCTION	71.83	0.159	1.691
G1	JUNCTION	71.83	0.120	1.360
G1a	JUNCTION	71.83	0.166	1.484
G1.1	JUNCTION	71.83	0.169	1.511
G1.2	JUNCTION	71.83	0.217	1.733
G1.3	JUNCTION	71.83	0.244	1.596
J45	JUNCTION	71.83	0.244	1.456
A4CP	JUNCTION	71.83	0.238	0.762
A3	JUNCTION	71.83	0.238	1.012
A2	JUNCTION	71.83	0.233	2.117
A1	JUNCTION	71.83	0.233	1.817
J2	JUNCTION	71.83	0.101	1.299
P1	STORAGE	71.83	0.625	2.375
P2	STORAGE	71.83	0.557	3.443
P3C	STORAGE	71.83	0.756	2.244
P4	STORAGE	71.83	0.535	1.465
P6	STORAGE	71.83	0.837	2.163

P8	STORAGE	71.83	0.708	2.292
P10	STORAGE	71.83	0.941	2.059
P9	STORAGE	71.83	0.855	2.145
P11	STORAGE	71.83	0.642	1.358
P5	STORAGE	71.83	0.630	1.370
P12	STORAGE	71.83	0.020	1.980
P3A	STORAGE	71.83	0.707	1.293
P3B	STORAGE	71.83	0.832	1.168
P3D	STORAGE	71.83	0.884	1.116
P7NEW	STORAGE	71.83	0.817	0.583

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow LPS
P1	0.708	4	0	0	3.044	17	0 14:59	219.22
P2	1.078	4	0	0	2.047	8	0 17:34	34.61
P3C	0.125	5	0	14	0.331	14	0 16:01	7.54
P4	0.169	5	0	0	0.699	21	0 14:44	59.16
P6	1.377	8	0	0	3.176	18	0 16:06	83.10
P8	0.837	7	0	0	2.226	18	0 14:01	115.27
P10	2.413	13	0	0	4.266	24	0 21:08	51.19
P9	1.585	11	0	0	3.551	24	0 14:58	111.21

P11	0.238	9	0	0	0.663	25	0	14:40	37.42
P5	0.203	9	0	0	0.533	23	0	14:48	26.86
P12	0.128	0	0	0	0.349	1	0	17:07	7.72
P3A	0.161	9	0	0	0.418	25	0	15:24	15.79
P3B	0.545	13	0	0	1.238	29	0	17:41	32.68
P3D	0.332	16	0	0	0.763	36	0	16:21	20.08
P7NEW	1.206	25	0	0	2.562	54	0	15:34	66.49

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OUT1	83.52	469.54	2232.33	101.406
System	83.52	469.54	2232.33	101.406

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	132.87	0 12:22	2.50	0.00	0.05
C2	CONDUIT	331.54	0 12:22	1.36	0.00	0.02
C3	CONDUIT	557.45	0 12:24	2.45	0.00	0.05
C4	CONDUIT	717.07	0 12:33	0.86	0.05	0.18

C5	CONDUIT	763.43	0	12:35	2.06	0.00	0.04
C6	CONDUIT	776.37	0	12:36	2.23	0.00	0.04
C7	CONDUIT	783.78	0	12:38	1.33	0.00	0.03
C8	CONDUIT	142.46	0	12:51	2.59	0.00	0.02
C11	CONDUIT	1169.51	0	12:47	0.58	0.00	0.01
C12	CONDUIT	13.25	0	13:01	1.67	0.00	0.03
C13	CONDUIT	59.14	0	14:50	0.78	0.00	0.06
C16	CONDUIT	1399.46	0	14:18	0.79	0.00	0.01
C17	CONDUIT	1399.32	0	14:20	1.03	0.00	0.01
C50	CONDUIT	7.96	0	13:01	1.05	0.03	0.12
L1	CONDUIT	52.58	0	12:31	1.20	0.38	0.43
C53	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
L3	CONDUIT	52.54	0	12:32	1.20	0.38	0.43
C59	CONDUIT	111.21	0	14:58	1.75	0.04	0.14
C61	CONDUIT	37.41	0	14:42	1.81	0.01	0.06
C62	CONDUIT	148.40	0	14:54	2.37	0.04	0.13
C63	CONDUIT	26.84	0	14:56	0.47	0.00	0.00
C64	CONDUIT	437.19	0	12:21	6.45	0.28	0.36
L2	CONDUIT	52.56	0	12:31	1.10	0.43	0.46
C67	CONDUIT	308.26	0	14:35	1.64	0.01	0.07
L4	CONDUIT	52.54	0	12:33	1.73	0.23	0.33
L5	CONDUIT	52.54	0	12:33	1.75	0.23	0.32
L6	CONDUIT	177.15	0	12:24	2.83	0.17	0.28
L7	CONDUIT	177.14	0	12:24	2.74	0.18	0.29
L9	CONDUIT	177.13	0	12:25	1.67	0.36	0.42
L10	CONDUIT	176.90	0	12:26	2.34	0.23	0.32
L8	CONDUIT	177.15	0	12:24	1.96	0.29	0.37
M1	CONDUIT	126.76	0	12:21	1.23	0.35	0.41
M2	CONDUIT	126.54	0	12:21	1.31	0.32	0.39
M3	CONDUIT	126.27	0	12:22	1.27	0.33	0.40
M4	CONDUIT	126.29	0	12:23	2.04	0.17	0.28
C9	CONDUIT	66.49	0	15:35	3.18	0.24	0.34
O3a	ORIFICE	2.87	0	16:02			0.00
O6a	ORIFICE	18.52	0	16:06			0.00
O10a	ORIFICE	12.68	0	21:08			0.00
O10b	ORIFICE	22.23	0	21:08			0.00

010c	ORIFICE	16.27	0	21:08	0.00
03b	ORIFICE	4.33	0	16:02	0.00
06b	ORIFICE	39.22	0	16:06	0.00
08a	ORIFICE	16.94	0	14:01	0.00
011a	ORIFICE	5.88	0	14:41	0.00
011b	ORIFICE	23.18	0	14:41	0.00
011c	ORIFICE	8.36	0	14:41	0.00
09a	ORIFICE	18.73	0	14:58	0.00
09b	ORIFICE	56.70	0	14:58	0.00
09c	ORIFICE	35.77	0	14:58	0.00
05a	ORIFICE	4.06	0	14:49	0.00
01a	ORIFICE	56.64	0	14:59	0.00
01b	ORIFICE	104.83	0	14:59	0.00
01c	ORIFICE	57.75	0	14:59	0.00
010d	ORIFICE	0.02	0	21:08	0.00
05b	ORIFICE	15.17	0	14:49	0.00
05c	ORIFICE	7.63	0	14:49	0.00
06c	ORIFICE	25.37	0	16:06	0.00
06d	ORIFICE	0.00	0	00:00	0.00
04a	ORIFICE	14.54	0	14:45	0.00
04b	ORIFICE	25.37	0	14:45	0.00
04c	ORIFICE	19.26	0	14:45	0.00
02a	ORIFICE	7.39	0	17:35	0.00
02b	ORIFICE	17.92	0	17:35	0.00
P3Aa	ORIFICE	2.77	0	15:25	0.00
OP3Ab	ORIFICE	8.16	0	15:25	0.00
OP3Ac	ORIFICE	4.86	0	15:25	0.00
OP3Ba	ORIFICE	6.73	0	17:41	0.00
OP3Bb	ORIFICE	13.88	0	17:41	0.00
03Bc	ORIFICE	12.07	0	17:41	0.00
OP3Bd	ORIFICE	0.00	0	00:00	0.00
07a	ORIFICE	11.78	0	15:34	0.00
07b	ORIFICE	31.67	0	15:34	0.00
07c	ORIFICE	23.05	0	15:34	0.00
08b	ORIFICE	73.69	0	14:01	0.00
08c	ORIFICE	24.64	0	14:01	0.00

O3Da	ORIFICE	3.92	0	16:22	0.00
O3Db	ORIFICE	9.83	0	16:22	0.00
O3Dc	ORIFICE	6.23	0	16:22	0.00
O3Dd	ORIFICE	0.09	0	16:22	0.00
O3De	ORIFICE	0.00	0	00:00	0.00
O2c	ORIFICE	9.29	0	17:35	0.00
W1a	WEIR	0.00	0	00:00	0.00
W6	WEIR	0.00	0	00:00	0.00
W10	WEIR	0.00	0	00:00	0.00
W11	WEIR	0.00	0	00:00	0.00
W9	WEIR	0.00	0	00:00	0.00
W5	WEIR	0.00	0	00:00	0.00
W12	WEIR	7.72	0	17:07	0.00
W4	WEIR	0.00	0	00:00	0.00
P3AW	WEIR	0.00	0	00:00	0.00
W3B	WEIR	0.00	0	00:00	0.00
W3C	WEIR	0.00	0	00:00	0.00
W2	WEIR	0.00	0	00:00	0.00
W7	WEIR	0.00	0	00:00	0.00
W8	WEIR	0.00	0	00:00	0.00
W3D	WEIR	0.00	0	00:00	0.00

 Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Thu May 18 08:55:58 2017
 Analysis ended on: Thu May 18 08:55:58 2017
 Total elapsed time: < 1 sec

20YR

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.010)

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 LPS
Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES
 Ponding Allowed NO
 Water Quality NO
Infiltration Method CURVE_NUMBER
Flow Routing Method KINWAVE
Starting Date JAN-01-2015 00:00:00
Ending Date JAN-03-2015 23:50:00
Antecedent Dry Days 0.0
Report Time Step 00:15:00
Wet Time Step 00:05:00
Dry Time Step 01:00:00
Routing Time Step 30.00 sec

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	43.086	91.541

Evaporation Loss	0.000	0.000
Infiltration Loss	28.116	59.735
Surface Runoff	14.341	30.469
Final Storage	0.634	1.348
Continuity Error (%)	-0.012	

	Volume hectare-m	Volume 10 ⁶ ltr
*****	-----	-----
Flow Routing Continuity		

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	14.341	143.412
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	13.806	138.058
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.008	0.076
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.527	5.268
Continuity Error (%)	0.007	

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	29.00 sec
Average Time Step	:	30.00 sec
Maximum Time Step	:	30.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	1.01
Percent Not Converging	:	0.00

 Subcatchment Runoff Summary

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	91.54	0.00	0.00	64.72	25.58	0.24	12.91	0.279
S2	91.54	0.00	0.00	29.80	59.66	0.89	63.09	0.652
S3	91.54	0.00	0.00	29.80	59.98	6.98	593.15	0.655
S4	91.54	0.00	0.00	20.13	67.51	4.58	344.44	0.737
S5	91.54	0.00	0.00	63.92	26.37	2.97	223.91	0.288
S6	91.54	0.00	0.00	29.46	60.87	2.56	449.69	0.665
S7	91.54	0.00	0.00	57.96	32.34	1.73	105.19	0.353
S8	91.54	0.00	0.00	56.79	33.51	2.71	308.97	0.366
S9	91.54	0.00	0.00	64.06	26.23	1.33	93.55	0.287
S10C	91.54	0.00	0.00	34.51	55.82	0.69	119.78	0.610
S11	91.54	0.00	0.00	63.66	26.67	1.84	168.98	0.291
S12	91.54	0.00	0.00	64.14	26.15	2.61	176.04	0.286
S13	91.54	0.00	0.00	27.42	61.95	1.89	175.77	0.677
S14	91.54	0.00	0.00	64.45	25.86	0.36	21.33	0.283
S15	91.54	0.00	0.00	63.84	26.48	0.75	60.30	0.289
S16	91.54	0.00	0.00	64.28	26.01	1.81	113.52	0.284
S17	91.54	0.00	0.00	29.80	59.75	2.19	162.35	0.653
S18	91.54	0.00	0.00	29.80	60.30	1.39	144.01	0.659
S19	91.54	0.00	0.00	64.72	25.58	1.60	85.83	0.279
S20	91.54	0.00	0.00	33.38	56.92	4.00	435.58	0.622
S21	91.54	0.00	0.00	32.95	57.36	5.45	872.74	0.627
S22	91.54	0.00	0.00	63.35	26.97	3.04	349.74	0.295
S23	91.54	0.00	0.00	65.42	24.89	1.54	67.96	0.272
S24	91.54	0.00	0.00	64.67	25.62	0.32	17.25	0.280
S26	91.54	0.00	0.00	64.72	25.57	0.92	49.11	0.279
S25	91.54	0.00	0.00	29.50	60.82	7.76	1290.61	0.664
S28	91.54	0.00	0.00	29.80	60.25	1.80	181.08	0.658
S27	91.54	0.00	0.00	29.46	60.87	3.01	526.13	0.665

S29	91.54	0.00	0.00	57.69	32.60	0.47	32.06	0.356
S32	91.54	0.00	0.00	57.69	32.61	0.40	27.54	0.356
S30	91.54	0.00	0.00	54.75	35.54	0.80	56.60	0.388
S31	91.54	0.00	0.00	58.00	32.29	1.14	67.56	0.353
S4A	91.54	0.00	0.00	20.13	67.63	0.93	75.88	0.739
4B	91.54	0.00	0.00	42.42	47.89	0.46	54.83	0.523
S21-RE	91.54	0.00	0.00	32.95	57.36	2.90	464.89	0.627
S27-RE	91.54	0.00	0.00	29.46	60.87	2.43	424.77	0.665
S17-RE	91.54	0.00	0.00	29.80	60.35	0.75	80.67	0.659
S4C	91.54	0.00	0.00	20.13	67.65	1.98	165.83	0.739
S10B	91.54	0.00	0.00	35.71	54.58	2.87	210.51	0.596
S10A	91.54	0.00	0.00	35.02	55.29	1.02	111.87	0.604
EXTERNAL1	91.54	0.00	0.00	69.88	20.40	39.98	857.92	0.223
EXTERNAL2	91.54	0.00	0.00	67.50	22.82	18.61	528.77	0.249
S10D	91.54	0.00	0.00	34.96	55.34	1.70	193.33	0.605

Node Depth Summary

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J19	JUNCTION	0.01	0.06	81.11	0 12:20	0.02
J13	JUNCTION	0.01	0.08	66.03	0 12:20	0.02
J14	JUNCTION	0.02	0.20	65.15	0 12:21	0.06
J15	JUNCTION	0.03	0.24	63.24	0 12:22	0.07
J16	JUNCTION	0.03	0.24	63.07	0 12:25	0.07
J17	JUNCTION	0.02	0.12	59.45	0 12:26	0.04
J18	JUNCTION	0.02	0.11	57.41	0 12:27	0.03
J12	JUNCTION	0.01	0.06	72.66	0 12:30	0.02
J1	JUNCTION	0.01	0.06	70.37	0 12:50	0.02
J10	JUNCTION	0.01	0.05	61.85	0 14:00	0.01
J11	JUNCTION	0.04	0.13	55.13	0 14:26	0.04
J6	JUNCTION	0.05	0.17	52.17	0 14:07	0.05
J87	JUNCTION	0.00	0.02	49.02	0 13:15	0.01

J20	JUNCTION	0.00	0.04	78.01	0	12:50	0.01
J21	JUNCTION	0.02	0.08	64.08	0	14:04	0.03
B2	JUNCTION	0.02	0.19	68.73	0	12:30	0.06
B1.EX	JUNCTION	0.02	0.21	68.63	0	12:30	0.06
J5	JUNCTION	0.00	0.00	62.00	0	00:00	0.00
G3	JUNCTION	0.02	0.21	68.22	0	12:31	0.06
J7	JUNCTION	0.02	0.22	68.10	0	12:20	0.07
J22	JUNCTION	0.06	0.17	59.97	0	14:06	0.05
J24	JUNCTION	0.02	0.08	66.88	0	14:02	0.02
J23	JUNCTION	0.06	0.17	59.87	0	14:06	0.05
J25	JUNCTION	0.00	0.02	65.62	0	14:05	0.01
G2	JUNCTION	0.02	0.19	67.69	0	12:31	0.06
G1	JUNCTION	0.02	0.15	66.98	0	12:32	0.04
G1a	JUNCTION	0.02	0.19	66.90	0	12:23	0.06
G1.1	JUNCTION	0.02	0.20	64.52	0	12:23	0.06
G1.2	JUNCTION	0.03	0.26	63.53	0	12:24	0.08
G1.3	JUNCTION	0.03	0.29	63.41	0	12:24	0.09
J45	JUNCTION	0.03	0.29	63.02	0	12:24	0.09
A4CP	JUNCTION	0.03	0.28	68.18	0	12:20	0.08
A3	JUNCTION	0.03	0.28	68.09	0	12:21	0.08
A2	JUNCTION	0.03	0.27	67.82	0	12:21	0.08
A1	JUNCTION	0.03	0.27	67.52	0	12:22	0.08
J2	JUNCTION	0.04	0.13	60.83	0	14:26	0.04
OUT1	OUTFALL	0.00	0.02	40.02	0	13:18	0.01
P1	STORAGE	0.16	0.72	63.72	0	14:16	0.22
P2	STORAGE	0.27	0.59	59.89	0	15:51	0.18
P3C	STORAGE	0.32	0.84	64.14	0	14:45	0.26
P4	STORAGE	0.14	0.60	67.30	0	14:04	0.18
P6	STORAGE	0.41	0.94	67.44	0	14:52	0.29
P8	STORAGE	0.29	0.81	58.81	0	13:23	0.25
P10	STORAGE	0.58	1.04	59.24	0	18:08	0.32
P9	STORAGE	0.41	0.97	61.77	0	14:06	0.30
P11	STORAGE	0.25	0.72	70.02	0	14:02	0.22
P5	STORAGE	0.26	0.70	68.20	0	14:05	0.21
P12	STORAGE	0.01	0.02	81.62	0	16:21	0.01
P3A	STORAGE	0.31	0.79	65.24	0	14:28	0.24
P3B	STORAGE	0.42	0.92	64.42	0	16:01	0.28
P3D	STORAGE	0.43	1.00	61.00	0	15:07	0.30
P7NEW	STORAGE	0.42	0.92	61.72	0	14:26	0.28

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J19	JUNCTION	175.77	177.79	0 12:20	1.89	2.6	0.000
J13	JUNCTION	542.51	542.51	0 12:20	5.69	5.69	0.000
J14	JUNCTION	176.04	888.74	0 12:21	2.61	10.9	0.000
J15	JUNCTION	266.85	1157.22	0 12:22	3.88	18.7	0.000
J16	JUNCTION	85.83	1232.32	0 12:25	1.6	20.3	0.000
J17	JUNCTION	0.00	1245.65	0 12:26	0	26.7	0.000
J18	JUNCTION	0.00	1254.14	0 12:27	0	30.9	0.000
J12	JUNCTION	221.10	221.10	0 12:30	3.4	3.4	0.000
J1	JUNCTION	12.91	12.91	0 12:50	0.24	0.24	0.000
J10	JUNCTION	271.16	490.54	0 14:00	3.89	14.2	0.000
J11	JUNCTION	349.74	1906.92	0 12:29	3.04	57.8	0.000
J6	JUNCTION	85.08	2342.66	0 13:14	1.86	79.5	0.000
J87	JUNCTION	0.00	2342.36	0 13:15	0	79.5	0.000
J20	JUNCTION	21.33	21.33	0 12:50	0.362	0.362	0.000
J21	JUNCTION	0.00	93.71	0 14:04	0	2.54	0.000
B2	JUNCTION	63.09	74.52	0 12:30	0.895	1.14	0.000
B1.EX	JUNCTION	0.00	74.51	0 12:30	0	1.14	0.000
J5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
G3	JUNCTION	0.00	74.51	0 12:31	0	1.13	0.000
J7	JUNCTION	593.15	593.15	0 12:20	6.98	6.98	0.000
J22	JUNCTION	0.00	184.13	0 14:06	0	7.07	0.000
J24	JUNCTION	0.00	59.36	0 14:02	0	1.77	0.000
J23	JUNCTION	0.00	243.47	0 14:05	0	8.84	0.000
J25	JUNCTION	0.00	43.88	0 14:05	0	1.35	0.000
G2	JUNCTION	0.00	74.51	0 12:31	0	1.13	0.000
G1	JUNCTION	0.00	74.51	0 12:32	0	1.13	0.000
G1a	JUNCTION	0.00	238.70	0 12:23	0	3.11	0.000

G1.1	JUNCTION	0.00	238.70	0	12:23	0	3.11	0.000
G1.2	JUNCTION	0.00	238.67	0	12:24	0	3.11	0.000
G1.3	JUNCTION	0.00	238.66	0	12:24	0	3.11	0.000
J45	JUNCTION	0.00	238.62	0	12:24	0	3.11	0.000
A4CP	JUNCTION	165.83	165.83	0	12:20	1.98	1.98	0.000
A3	JUNCTION	0.00	165.69	0	12:21	0	1.98	0.000
A2	JUNCTION	0.00	165.45	0	12:21	0	1.98	0.000
A1	JUNCTION	0.00	165.27	0	12:22	0	1.98	0.000
J2	JUNCTION	0.00	112.22	0	14:26	0	4.84	0.000
OUT1	OUTFALL	1360.19	3635.30	0	14:00	58.6	138	0.000
P1	STORAGE	0.00	806.69	0	12:21	0	10.4	0.021
P2	STORAGE	575.46	575.46	0	12:10	3.95	3.95	0.008
P3C	STORAGE	119.78	119.78	0	12:10	0.687	0.687	0.007
P4	STORAGE	162.35	181.83	0	12:21	2.19	2.55	0.020
P6	STORAGE	896.73	896.73	0	12:10	6.9	6.9	0.009
P8	STORAGE	950.90	950.90	0	12:10	5.45	5.45	0.028
P10	STORAGE	344.44	576.97	0	12:23	4.58	7.69	0.001
P9	STORAGE	1290.61	1290.61	0	12:10	7.76	7.76	0.017
P11	STORAGE	181.08	181.08	0	12:20	1.8	1.8	0.020
P5	STORAGE	144.01	144.01	0	12:20	1.39	1.39	0.017
P12	STORAGE	80.67	80.67	0	12:20	0.754	0.754	-0.001
P3A	STORAGE	111.87	111.87	0	12:20	1.02	1.02	0.012
P3B	STORAGE	210.51	210.51	0	12:20	2.87	2.87	0.004
P3D	STORAGE	193.33	193.33	0	12:10	1.7	1.7	0.010
P7NEW	STORAGE	872.74	872.74	0	12:10	5.45	5.45	0.012

Node Surcharge Summary

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

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	71.83	0.055	1.945
J13	JUNCTION	71.83	0.078	3.922

J14	JUNCTION	71.83	0.199	3.801
J15	JUNCTION	71.83	0.242	3.758
J16	JUNCTION	71.83	0.241	3.759
J17	JUNCTION	71.83	0.116	3.884
J18	JUNCTION	71.83	0.108	3.892
J12	JUNCTION	71.83	0.062	3.938
J1	JUNCTION	71.83	0.057	0.943
J10	JUNCTION	71.83	0.049	3.951
J11	JUNCTION	71.83	0.134	1.866
J6	JUNCTION	71.83	0.170	3.330
J87	JUNCTION	71.83	0.022	1.978
J20	JUNCTION	71.83	0.041	1.959
J21	JUNCTION	71.83	0.083	0.917
B2	JUNCTION	71.83	0.193	0.807
B1.EX	JUNCTION	71.83	0.207	1.363
J5	JUNCTION	71.83	0.000	2.000
G3	JUNCTION	71.83	0.207	1.893
J7	JUNCTION	71.83	0.220	1.780
J22	JUNCTION	71.83	0.172	3.828
J24	JUNCTION	71.83	0.078	2.922
J23	JUNCTION	71.83	0.172	1.828
J25	JUNCTION	71.83	0.019	2.981
G2	JUNCTION	71.83	0.194	1.656
G1	JUNCTION	71.83	0.145	1.335
G1a	JUNCTION	71.83	0.193	1.457
G1.1	JUNCTION	71.83	0.198	1.482
G1.2	JUNCTION	71.83	0.255	1.695
G1.3	JUNCTION	71.83	0.289	1.551
J45	JUNCTION	71.83	0.289	1.411
A4CP	JUNCTION	71.83	0.277	0.723
A3	JUNCTION	71.83	0.277	0.973
A2	JUNCTION	71.83	0.271	2.079
A1	JUNCTION	71.83	0.270	1.780
J2	JUNCTION	71.83	0.134	1.266
P1	STORAGE	71.83	0.723	2.277
P2	STORAGE	71.83	0.590	3.410
P3C	STORAGE	71.83	0.841	2.159
P4	STORAGE	71.83	0.599	1.401
P6	STORAGE	71.83	0.940	2.060

P8	STORAGE	71.83	0.807	2.193
P10	STORAGE	71.83	1.041	1.959
P9	STORAGE	71.83	0.971	2.029
P11	STORAGE	71.83	0.716	1.284
P5	STORAGE	71.83	0.698	1.302
P12	STORAGE	71.83	0.024	1.976
P3A	STORAGE	71.83	0.791	1.209
P3B	STORAGE	71.83	0.919	1.081
P3D	STORAGE	71.83	1.000	1.000
P7NEW	STORAGE	71.83	0.925	0.475

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow LPS
P1	0.773	4	0	0	3.554	19	0 14:15	342.15
P2	0.986	4	0	0	2.258	9	0 15:51	56.76
P3C	0.132	6	0	11	0.379	16	0 14:44	12.32
P4	0.182	6	0	0	0.792	24	0 14:03	93.71
P6	1.459	8	0	0	3.654	21	0 14:51	139.13
P8	0.872	7	0	0	2.571	21	0 13:23	189.47
P10	2.562	14	0	0	4.775	27	0 18:08	88.24
P9	1.659	11	0	0	4.078	27	0 14:06	184.13
P11	0.249	10	0	0	0.749	29	0 14:02	59.36
P5	0.212	9	0	0	0.601	26	0 14:04	43.88
P12	0.148	0	0	0	0.427	1	0 16:21	10.44

P3A	0.171	10	0	0	0.481	28	0	14:27	26.06
P3B	0.579	14	0	0	1.412	33	0	16:01	54.91
P3D	0.352	17	0	0	0.885	42	0	15:07	33.28
P7NEW	1.264	27	0	0	2.945	62	0	14:26	112.22

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OUT1	84.12	634.66	3635.30	138.057
System	84.12	634.66	3635.30	138.057

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	177.32	0 12:21	2.77	0.00	0.06
C2	CONDUIT	541.35	0 12:21	1.64	0.00	0.03
C3	CONDUIT	887.87	0 12:22	2.80	0.00	0.07
C4	CONDUIT	1153.20	0 12:25	1.01	0.07	0.24
C5	CONDUIT	1231.53	0 12:26	2.45	0.00	0.06
C6	CONDUIT	1245.53	0 12:27	2.65	0.00	0.05
C7	CONDUIT	1252.65	0 12:29	1.59	0.00	0.04
C8	CONDUIT	220.96	0 12:31	3.01	0.00	0.03
C11	CONDUIT	1887.90	0 12:39	0.71	0.00	0.01
C12	CONDUIT	21.33	0 12:51	1.93	0.00	0.04

C13	CONDUIT	93.68	0	14:08	0.90	0.01	0.08
C16	CONDUIT	2342.36	0	13:15	0.97	0.00	0.01
C17	CONDUIT	2342.09	0	13:18	1.26	0.00	0.01
C50	CONDUIT	12.91	0	12:51	1.20	0.05	0.15
L1	CONDUIT	74.51	0	12:30	1.32	0.54	0.52
C53	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
L3	CONDUIT	74.51	0	12:31	1.31	0.54	0.53
C59	CONDUIT	184.13	0	14:06	2.04	0.06	0.17
C61	CONDUIT	59.35	0	14:04	2.09	0.01	0.08
C62	CONDUIT	243.45	0	14:07	2.75	0.06	0.17
C63	CONDUIT	43.85	0	14:10	0.57	0.00	0.01
C64	CONDUIT	592.96	0	12:20	7.00	0.38	0.43
L2	CONDUIT	74.51	0	12:31	1.20	0.61	0.56
C67	CONDUIT	490.50	0	14:01	1.96	0.02	0.10
L4	CONDUIT	74.51	0	12:32	1.91	0.33	0.39
L5	CONDUIT	74.51	0	12:32	1.93	0.32	0.39
L6	CONDUIT	238.70	0	12:23	3.08	0.24	0.33
L7	CONDUIT	238.67	0	12:24	2.99	0.25	0.34
L9	CONDUIT	238.62	0	12:24	1.80	0.49	0.49
L10	CONDUIT	238.18	0	12:26	2.54	0.31	0.38
L8	CONDUIT	238.66	0	12:24	2.12	0.39	0.44
M1	CONDUIT	165.69	0	12:21	1.32	0.46	0.47
M2	CONDUIT	165.45	0	12:21	1.41	0.42	0.45
M3	CONDUIT	165.27	0	12:22	1.36	0.44	0.46
M4	CONDUIT	165.13	0	12:22	2.20	0.23	0.32
C9	CONDUIT	112.22	0	14:26	3.66	0.41	0.45
O3a	ORIFICE	3.03	0	14:45			0.00
O6a	ORIFICE	19.69	0	14:52			0.00
O10a	ORIFICE	13.37	0	18:08			0.00
O10b	ORIFICE	25.56	0	18:08			0.00
O10c	ORIFICE	25.27	0	18:08			0.00
O3b	ORIFICE	8.94	0	14:45			0.00
O6b	ORIFICE	47.33	0	14:52			0.00
O8a	ORIFICE	18.17	0	13:23			0.00
O11a	ORIFICE	6.23	0	14:02			0.00
O11b	ORIFICE	28.97	0	14:02			0.00
O11c	ORIFICE	24.16	0	14:02			0.00
O9a	ORIFICE	20.04	0	14:06			0.00
O9b	ORIFICE	69.84	0	14:06			0.00

09c	ORIFICE	94.25	0	14:06	0.00
05a	ORIFICE	4.28	0	14:05	0.00
01a	ORIFICE	61.07	0	14:16	0.00
01b	ORIFICE	126.40	0	14:16	0.00
01c	ORIFICE	154.68	0	14:16	0.00
010d	ORIFICE	24.05	0	18:08	0.00
05b	ORIFICE	18.40	0	14:05	0.00
05c	ORIFICE	21.20	0	14:05	0.00
06c	ORIFICE	46.30	0	14:52	0.00
06d	ORIFICE	25.81	0	14:52	0.00
04a	ORIFICE	15.47	0	14:04	0.00
04b	ORIFICE	29.54	0	14:04	0.00
04c	ORIFICE	48.70	0	14:04	0.00
02b	ORIFICE	26.34	0	15:51	0.00
P3Aa	ORIFICE	2.93	0	14:28	0.00
OP3Ab	ORIFICE	9.78	0	14:28	0.00
OP3Ac	ORIFICE	13.34	0	14:28	0.00
OP3Ba	ORIFICE	7.09	0	16:01	0.00
OP3Bb	ORIFICE	16.14	0	16:01	0.00
03Bc	ORIFICE	18.27	0	16:01	0.00
OP3Bd	ORIFICE	13.41	0	16:01	0.00
07a	ORIFICE	12.57	0	14:26	0.00
07b	ORIFICE	38.46	0	14:26	0.00
07c	ORIFICE	61.20	0	14:26	0.00
08b	ORIFICE	95.17	0	13:23	0.00
08c	ORIFICE	76.14	0	13:23	0.00
03Da	ORIFICE	4.18	0	15:07	0.00
03Db	ORIFICE	11.70	0	15:07	0.00
03Dc	ORIFICE	9.19	0	15:07	0.00
03Dd	ORIFICE	8.21	0	15:07	0.00
03De	ORIFICE	0.00	0	15:07	0.00
02c	ORIFICE	30.42	0	15:51	0.00
W1a	WEIR	0.00	0	00:00	0.00
W6	WEIR	0.00	0	00:00	0.00
W10	WEIR	0.00	0	00:00	0.00
W11	WEIR	0.00	0	00:00	0.00
W9	WEIR	0.00	0	00:00	0.00
W5	WEIR	0.00	0	00:00	0.00
W12	WEIR	10.44	0	16:21	0.00

W4	WEIR	0.00	0	00:00	0.00
P3AW	WEIR	0.00	0	00:00	0.00
W3B	WEIR	0.00	0	00:00	0.00
W3C	WEIR	0.00	0	00:00	0.00
W2	WEIR	0.00	0	00:00	0.00
W7	WEIR	0.00	0	00:00	0.00
W8	WEIR	0.00	0	00:00	0.00
W3D	WEIR	0.00	0	00:00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Thu May 18 09:01:47 2017
Analysis ended on: Thu May 18 09:01:48 2017
Total elapsed time: 00:00:01

50YR

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.010)

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 LPS
Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES
 Ponding Allowed NO
 Water Quality NO
Infiltration Method CURVE_NUMBER
Flow Routing Method KINWAVE
Starting Date JAN-01-2015 00:00:00
Ending Date JAN-03-2015 23:50:00
Antecedent Dry Days 0.0
Report Time Step 00:15:00
Wet Time Step 00:05:00
Dry Time Step 01:00:00
Routing Time Step 30.00 sec

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	51.557	109.538

Evaporation Loss	0.000	0.000
Infiltration Loss	30.971	65.801
Surface Runoff	19.951	42.389
Final Storage	0.642	1.363
Continuity Error (%)	-0.014	

	Volume hectare-m	Volume 10 ⁶ ltr

Flow Routing Continuity	-----	-----

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	19.951	199.516
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	19.429	194.289
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.008	0.078
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.512	5.119
Continuity Error (%)	0.015	

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	29.00 sec
Average Time Step	:	30.00 sec
Maximum Time Step	:	30.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	1.02
Percent Not Converging	:	0.00

 Subcatchment Runoff Summary

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	109.54	0.00	0.00	71.82	36.49	0.34	21.99	0.333
S2	109.54	0.00	0.00	30.57	76.52	1.15	89.07	0.699
S3	109.54	0.00	0.00	30.57	76.83	8.94	819.92	0.701
S4	109.54	0.00	0.00	20.45	84.98	5.77	466.02	0.776
S5	109.54	0.00	0.00	70.99	37.34	4.20	390.40	0.341
S6	109.54	0.00	0.00	30.57	77.71	3.27	599.69	0.709
S7	109.54	0.00	0.00	63.44	44.86	2.40	171.90	0.410
S8	109.54	0.00	0.00	62.22	46.11	3.73	485.56	0.421
S9	109.54	0.00	0.00	71.13	37.19	1.89	162.51	0.340
S10C	109.54	0.00	0.00	36.22	72.12	0.89	162.67	0.658
S11	109.54	0.00	0.00	70.67	37.67	2.60	285.93	0.344
S12	109.54	0.00	0.00	71.22	37.10	3.71	305.19	0.339
S13	109.54	0.00	0.00	28.05	78.96	2.41	238.36	0.721
S14	109.54	0.00	0.00	71.50	36.79	0.52	36.86	0.336
S15	109.54	0.00	0.00	70.86	37.46	1.06	104.64	0.342
S16	109.54	0.00	0.00	71.36	36.95	2.56	196.26	0.337
S17	109.54	0.00	0.00	30.57	76.61	2.80	227.93	0.699
S18	109.54	0.00	0.00	30.57	77.14	1.77	196.39	0.704
S19	109.54	0.00	0.00	71.82	36.48	2.28	146.12	0.333
S20	109.54	0.00	0.00	34.90	73.41	5.16	607.24	0.670
S21	109.54	0.00	0.00	34.49	73.85	7.02	1186.16	0.674
S22	109.54	0.00	0.00	70.31	38.00	4.29	584.29	0.347
S23	109.54	0.00	0.00	72.55	35.74	2.21	114.32	0.326
S24	109.54	0.00	0.00	71.77	36.53	0.45	29.43	0.333
S26	109.54	0.00	0.00	71.82	36.48	1.31	83.58	0.333
S25	109.54	0.00	0.00	30.57	77.66	9.91	1727.53	0.709
S28	109.54	0.00	0.00	30.57	77.09	2.31	245.16	0.704
S27	109.54	0.00	0.00	30.57	77.71	3.85	701.86	0.709

S29	109.54	0.00	0.00	63.16	45.13	0.65	52.62	0.412
S32	109.54	0.00	0.00	63.16	45.14	0.56	45.21	0.412
S30	109.54	0.00	0.00	60.23	48.07	1.08	86.71	0.439
S31	109.54	0.00	0.00	63.51	44.80	1.58	110.53	0.409
S4A	109.54	0.00	0.00	20.45	85.09	1.17	101.78	0.777
4B	109.54	0.00	0.00	45.15	63.17	0.61	79.98	0.577
S21-RE	109.54	0.00	0.00	34.49	73.85	3.74	631.84	0.674
S27-RE	109.54	0.00	0.00	30.57	77.71	3.11	566.69	0.709
S17-RE	109.54	0.00	0.00	30.57	77.19	0.96	110.83	0.705
S4C	109.54	0.00	0.00	20.45	85.12	2.49	221.94	0.777
S10B	109.54	0.00	0.00	37.42	70.87	3.72	303.50	0.647
S10A	109.54	0.00	0.00	36.73	71.58	1.32	156.99	0.653
EXTERNAL1	109.54	0.00	0.00	77.58	30.73	60.24	1426.96	0.281
EXTERNAL2	109.54	0.00	0.00	74.83	33.47	27.30	905.57	0.306
S10D	109.54	0.00	0.00	36.67	71.64	2.20	272.67	0.654

Node Depth Summary

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J19	JUNCTION	0.01	0.07	81.12	0 12:20	0.02
J13	JUNCTION	0.01	0.10	66.06	0 12:20	0.03
J14	JUNCTION	0.02	0.25	65.20	0 12:21	0.08
J15	JUNCTION	0.03	0.32	63.32	0 12:21	0.10
J16	JUNCTION	0.03	0.32	63.15	0 12:23	0.09
J17	JUNCTION	0.02	0.15	59.48	0 12:24	0.05
J18	JUNCTION	0.02	0.14	57.45	0 12:24	0.04
J12	JUNCTION	0.01	0.08	72.68	0 12:20	0.02
J1	JUNCTION	0.01	0.07	70.39	0 12:30	0.02
J10	JUNCTION	0.01	0.06	61.86	0 13:13	0.02
J11	JUNCTION	0.05	0.17	55.17	0 14:07	0.05
J6	JUNCTION	0.06	0.21	52.21	0 13:40	0.06
J87	JUNCTION	0.01	0.03	49.03	0 13:07	0.01

J20	JUNCTION	0.01	0.05	78.03	0	12:30	0.02
J21	JUNCTION	0.02	0.11	64.11	0	13:33	0.03
B2	JUNCTION	0.03	0.25	68.79	0	12:21	0.07
B1.EX	JUNCTION	0.03	0.27	68.69	0	12:21	0.08
J5	JUNCTION	0.00	0.00	62.00	0	00:00	0.00
G3	JUNCTION	0.03	0.27	68.28	0	12:22	0.08
J7	JUNCTION	0.03	0.26	68.14	0	12:20	0.08
J22	JUNCTION	0.06	0.21	60.01	0	13:41	0.06
J24	JUNCTION	0.02	0.10	66.90	0	13:32	0.03
J23	JUNCTION	0.06	0.21	59.91	0	13:41	0.06
J25	JUNCTION	0.00	0.02	65.62	0	13:36	0.01
G2	JUNCTION	0.03	0.25	67.75	0	12:23	0.08
G1	JUNCTION	0.02	0.18	67.01	0	12:23	0.05
G1a	JUNCTION	0.03	0.23	66.94	0	12:22	0.07
G1.1	JUNCTION	0.03	0.24	64.56	0	12:22	0.07
G1.2	JUNCTION	0.03	0.31	63.58	0	12:23	0.09
G1.3	JUNCTION	0.04	0.35	63.47	0	12:23	0.10
J45	JUNCTION	0.04	0.35	63.08	0	12:23	0.11
A4CP	JUNCTION	0.03	0.33	68.23	0	12:20	0.10
A3	JUNCTION	0.03	0.33	68.14	0	12:20	0.10
A2	JUNCTION	0.03	0.32	67.87	0	12:21	0.10
A1	JUNCTION	0.03	0.32	67.57	0	12:21	0.10
J2	JUNCTION	0.05	0.17	60.87	0	14:07	0.05
OUT1	OUTFALL	0.00	0.02	40.02	0	13:09	0.01
P1	STORAGE	0.18	0.86	63.86	0	13:46	0.26
P2	STORAGE	0.25	0.72	60.02	0	15:24	0.22
P3C	STORAGE	0.35	1.00	64.30	0	14:19	0.30
P4	STORAGE	0.15	0.69	67.39	0	13:33	0.21
P6	STORAGE	0.43	1.08	67.58	0	14:04	0.33
P8	STORAGE	0.30	0.96	58.96	0	13:09	0.29
P10	STORAGE	0.61	1.17	59.37	0	16:23	0.36
P9	STORAGE	0.43	1.17	61.97	0	13:41	0.36
P11	STORAGE	0.26	0.83	70.13	0	13:32	0.25
P5	STORAGE	0.28	0.80	68.30	0	13:36	0.24
P12	STORAGE	0.01	0.03	81.63	0	15:40	0.01
P3A	STORAGE	0.33	0.91	65.36	0	13:55	0.28
P3B	STORAGE	0.45	1.04	64.54	0	15:08	0.32
P3D	STORAGE	0.45	1.16	61.16	0	14:15	0.35
P7NEW	STORAGE	0.44	1.12	61.92	0	14:07	0.34

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J19	JUNCTION	238.36	242.14	0 12:20	2.41	3.33	0.000
J13	JUNCTION	866.08	866.08	0 12:20	7.91	7.91	0.000
J14	JUNCTION	305.19	1412.01	0 12:21	3.71	14.9	0.000
J15	JUNCTION	463.40	1883.11	0 12:21	5.51	25.5	0.000
J16	JUNCTION	146.12	2022.51	0 12:23	2.28	27.8	0.000
J17	JUNCTION	0.00	2059.30	0 12:24	0	36.2	0.000
J18	JUNCTION	0.00	2074.00	0 12:24	0	41.8	0.000
J12	JUNCTION	356.44	356.44	0 12:20	4.69	4.69	0.000
J1	JUNCTION	21.99	21.99	0 12:30	0.343	0.343	0.000
J10	JUNCTION	471.60	798.74	0 13:13	5.51	19.1	0.000
J11	JUNCTION	584.29	3234.68	0 12:27	4.29	78.1	0.000
J6	JUNCTION	142.65	3976.27	0 13:06	2.67	107	0.000
J87	JUNCTION	0.00	3975.78	0 13:07	0	107	0.000
J20	JUNCTION	36.86	36.86	0 12:30	0.515	0.515	0.000
J21	JUNCTION	0.00	146.85	0 13:33	0	3.31	0.000
B2	JUNCTION	89.07	110.13	0 12:21	1.15	1.49	0.000
B1.EX	JUNCTION	0.00	110.16	0 12:21	0	1.49	0.000
J5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
G3	JUNCTION	0.00	109.99	0 12:22	0	1.49	0.000
J7	JUNCTION	819.92	819.92	0 12:20	8.94	8.94	0.000
J22	JUNCTION	0.00	268.93	0 13:41	0	9.2	0.000
J24	JUNCTION	0.00	93.40	0 13:32	0	2.27	0.000
J23	JUNCTION	0.00	361.72	0 13:38	0	11.5	-0.000
J25	JUNCTION	0.00	67.81	0 13:36	0	1.74	0.000
G2	JUNCTION	0.00	109.93	0 12:23	0	1.49	0.000
G1	JUNCTION	0.00	109.92	0 12:23	0	1.49	0.000
G1a	JUNCTION	0.00	330.60	0 12:22	0	3.98	0.000

G1.1	JUNCTION	0.00	330.46	0	12:22	0	3.98	0.000
G1.2	JUNCTION	0.00	330.42	0	12:23	0	3.98	0.000
G1.3	JUNCTION	0.00	330.58	0	12:23	0	3.98	0.000
J45	JUNCTION	0.00	330.37	0	12:23	0	3.97	0.000
A4CP	JUNCTION	221.94	221.94	0	12:20	2.49	2.49	0.000
A3	JUNCTION	0.00	221.74	0	12:20	0	2.49	0.000
A2	JUNCTION	0.00	221.63	0	12:21	0	2.49	0.000
A1	JUNCTION	0.00	221.46	0	12:21	0	2.49	0.000
J2	JUNCTION	0.00	160.58	0	14:07	0	6.39	0.000
OUT1	OUTFALL	2293.76	6210.67	0	13:09	87.5	194	0.000
P1	STORAGE	0.00	1173.26	0	12:20	0	13.6	0.036
P2	STORAGE	776.91	776.91	0	12:10	5.04	5.04	0.012
P3C	STORAGE	162.67	162.67	0	12:10	0.887	0.887	0.015
P4	STORAGE	227.93	263.99	0	12:20	2.8	3.32	0.036
P6	STORAGE	1239.08	1239.08	0	12:10	8.9	8.9	0.021
P8	STORAGE	1268.55	1268.55	0	12:10	6.95	6.95	0.045
P10	STORAGE	466.02	788.59	0	12:20	5.77	9.74	0.005
P9	STORAGE	1727.53	1727.53	0	12:10	9.91	9.91	0.027
P11	STORAGE	245.16	245.16	0	12:10	2.31	2.31	0.035
P5	STORAGE	196.39	196.39	0	12:10	1.77	1.77	0.032
P12	STORAGE	110.83	110.83	0	12:10	0.965	0.965	-0.001
P3A	STORAGE	156.99	156.99	0	12:10	1.32	1.32	0.026
P3B	STORAGE	303.50	303.50	0	12:20	3.72	3.72	0.013
P3D	STORAGE	272.67	272.67	0	12:10	2.2	2.2	0.022
P7NEW	STORAGE	1186.16	1186.16	0	12:10	7.02	7.02	0.022

Node Surcharge Summary

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

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	71.83	0.066	1.934
J13	JUNCTION	71.83	0.103	3.897

J14	JUNCTION	71.83	0.252	3.748
J15	JUNCTION	71.83	0.319	3.681
J16	JUNCTION	71.83	0.319	3.681
J17	JUNCTION	71.83	0.155	3.845
J18	JUNCTION	71.83	0.144	3.856
J12	JUNCTION	71.83	0.081	3.919
J1	JUNCTION	71.83	0.075	0.925
J10	JUNCTION	71.83	0.065	3.935
J11	JUNCTION	71.83	0.166	1.834
J6	JUNCTION	71.83	0.206	3.294
J87	JUNCTION	71.83	0.030	1.970
J20	JUNCTION	71.83	0.053	1.947
J21	JUNCTION	71.83	0.107	0.893
B2	JUNCTION	71.83	0.249	0.751
B1.EX	JUNCTION	71.83	0.273	1.297
J5	JUNCTION	71.83	0.000	2.000
G3	JUNCTION	71.83	0.273	1.827
J7	JUNCTION	71.83	0.265	1.735
J22	JUNCTION	71.83	0.208	3.792
J24	JUNCTION	71.83	0.096	2.904
J23	JUNCTION	71.83	0.208	1.792
J25	JUNCTION	71.83	0.025	2.975
G2	JUNCTION	71.83	0.250	1.600
G1	JUNCTION	71.83	0.181	1.299
G1a	JUNCTION	71.83	0.230	1.420
G1.1	JUNCTION	71.83	0.235	1.445
G1.2	JUNCTION	71.83	0.308	1.642
G1.3	JUNCTION	71.83	0.353	1.487
J45	JUNCTION	71.83	0.353	1.347
A4CP	JUNCTION	71.83	0.330	0.670
A3	JUNCTION	71.83	0.330	0.920
A2	JUNCTION	71.83	0.322	2.028
A1	JUNCTION	71.83	0.322	1.728
J2	JUNCTION	71.83	0.166	1.234
P1	STORAGE	71.83	0.860	2.140
P2	STORAGE	71.83	0.715	3.285
P3C	STORAGE	71.83	0.996	2.004
P4	STORAGE	71.83	0.689	1.311
P6	STORAGE	71.83	1.079	1.921

P8	STORAGE	71.83	0.957	2.043
P10	STORAGE	71.83	1.173	1.827
P9	STORAGE	71.83	1.171	1.829
P11	STORAGE	71.83	0.826	1.174
P5	STORAGE	71.83	0.800	1.200
P12	STORAGE	71.83	0.031	1.969
P3A	STORAGE	71.83	0.914	1.086
P3B	STORAGE	71.83	1.043	0.957
P3D	STORAGE	71.83	1.160	0.840
P7NEW	STORAGE	71.83	1.116	0.284

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow LPS
P1	0.855	5	0	0	4.289	24	0 13:45	539.39
P2	0.953	4	0	0	2.832	11	0 15:23	75.61
P3C	0.146	6	0	9	0.474	20	0 14:18	17.34
P4	0.198	6	0	0	0.925	28	0 13:33	146.85
P6	1.549	9	0	0	4.325	25	0 14:03	239.10
P8	0.919	7	0	0	3.107	25	0 13:09	293.29
P10	2.705	15	0	0	5.462	30	0 16:23	148.03
P9	1.767	12	0	0	5.012	33	0 13:40	268.93
P11	0.263	10	0	0	0.882	34	0 13:32	93.40
P5	0.223	10	0	0	0.706	31	0 13:35	67.81
P12	0.173	0	0	0	0.537	2	0 15:40	14.72

P3A	0.182	11	0	0	0.578	34	0	13:54	41.82
P3B	0.620	15	0	0	1.674	39	0	15:07	85.64
P3D	0.376	18	0	0	1.059	50	0	14:15	55.94
P7NEW	1.352	28	0	0	3.648	77	0	14:06	160.58

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OUT1	85.28	881.01	6210.67	194.288
System	85.28	881.01	6210.67	194.288

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	241.92	0 12:21	3.07	0.00	0.07
C2	CONDUIT	865.32	0 12:21	1.96	0.00	0.03
C3	CONDUIT	1411.26	0 12:21	3.19	0.00	0.08
C4	CONDUIT	1879.48	0 12:23	1.19	0.12	0.32
C5	CONDUIT	2020.94	0 12:24	2.93	0.01	0.08
C6	CONDUIT	2058.96	0 12:24	3.17	0.01	0.07
C7	CONDUIT	2071.35	0 12:26	1.93	0.01	0.05
C8	CONDUIT	355.93	0 12:21	3.52	0.00	0.04
C11	CONDUIT	3208.77	0 12:32	0.87	0.00	0.02
C12	CONDUIT	36.86	0 12:31	2.26	0.01	0.05

C13	CONDUIT	146.81	0	13:37	1.04	0.01	0.11
C16	CONDUIT	3975.78	0	13:07	1.20	0.00	0.02
C17	CONDUIT	3975.32	0	13:09	1.56	0.00	0.01
C50	CONDUIT	21.97	0	12:31	1.41	0.09	0.20
L1	CONDUIT	110.16	0	12:21	1.44	0.80	0.67
C53	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
L3	CONDUIT	109.93	0	12:23	1.42	0.80	0.68
C59	CONDUIT	268.93	0	13:41	2.27	0.09	0.21
C61	CONDUIT	93.40	0	13:33	2.42	0.02	0.10
C62	CONDUIT	361.68	0	13:40	3.09	0.09	0.21
C63	CONDUIT	67.78	0	13:40	0.68	0.00	0.01
C64	CONDUIT	819.80	0	12:20	7.61	0.53	0.52
L2	CONDUIT	109.99	0	12:22	1.30	0.89	0.74
C67	CONDUIT	798.47	0	13:14	2.37	0.03	0.13
L4	CONDUIT	109.92	0	12:23	2.11	0.48	0.49
L5	CONDUIT	109.91	0	12:24	2.13	0.48	0.49
L6	CONDUIT	330.46	0	12:22	3.37	0.33	0.39
L7	CONDUIT	330.42	0	12:23	3.26	0.34	0.40
L9	CONDUIT	330.37	0	12:23	1.95	0.68	0.60
L10	CONDUIT	329.97	0	12:24	2.78	0.42	0.45
L8	CONDUIT	330.58	0	12:23	2.30	0.55	0.53
M1	CONDUIT	221.74	0	12:20	1.42	0.61	0.56
M2	CONDUIT	221.63	0	12:21	1.52	0.56	0.53
M3	CONDUIT	221.46	0	12:21	1.47	0.58	0.55
M4	CONDUIT	221.46	0	12:22	2.38	0.30	0.38
C9	CONDUIT	160.58	0	14:07	4.00	0.59	0.55
O3a	ORIFICE	3.30	0	14:19			0.00
O6a	ORIFICE	21.17	0	14:04			0.00
O10a	ORIFICE	14.22	0	16:23			0.00
O10b	ORIFICE	29.38	0	16:23			0.00
O10c	ORIFICE	33.64	0	16:23			0.00
O3b	ORIFICE	13.69	0	14:19			0.00
O6b	ORIFICE	56.41	0	14:04			0.00
O8a	ORIFICE	19.88	0	13:09			0.00
O11a	ORIFICE	6.71	0	13:32			0.00
O11b	ORIFICE	35.86	0	13:32			0.00
O11c	ORIFICE	48.29	0	13:32			0.00
O9a	ORIFICE	22.11	0	13:41			0.00
O9b	ORIFICE	88.01	0	13:41			0.00

09c	ORIFICE	149.95	0	13:41	0.00
05a	ORIFICE	4.60	0	13:36	0.00
01a	ORIFICE	66.82	0	13:46	0.00
01b	ORIFICE	151.64	0	13:46	0.00
01c	ORIFICE	313.16	0	13:46	0.00
010d	ORIFICE	69.48	0	16:23	0.00
05b	ORIFICE	22.39	0	13:36	0.00
05c	ORIFICE	40.81	0	13:36	0.00
06c	ORIFICE	64.27	0	14:04	0.00
06d	ORIFICE	97.24	0	14:04	0.00
04a	ORIFICE	16.69	0	13:33	0.00
04b	ORIFICE	34.58	0	13:33	0.00
04c	ORIFICE	95.58	0	13:33	0.00
02b	ORIFICE	33.06	0	15:24	0.00
P3Aa	ORIFICE	3.16	0	13:55	0.00
OP3Ab	ORIFICE	11.75	0	13:55	0.00
OP3Ac	ORIFICE	25.84	0	13:55	0.00
OP3Ba	ORIFICE	7.56	0	15:08	0.00
OP3Bb	ORIFICE	18.89	0	15:08	0.00
03Bc	ORIFICE	24.53	0	15:08	0.00
OP3Bd	ORIFICE	33.27	0	15:08	0.00
07a	ORIFICE	13.86	0	14:07	0.00
07b	ORIFICE	48.19	0	14:07	0.00
07c	ORIFICE	98.54	0	14:07	0.00
08b	ORIFICE	120.54	0	13:09	0.00
08c	ORIFICE	152.87	0	13:09	0.00
03Da	ORIFICE	4.51	0	14:15	0.00
03Db	ORIFICE	13.87	0	14:15	0.00
03Dc	ORIFICE	12.13	0	14:15	0.00
03Dd	ORIFICE	13.43	0	14:15	0.00
03De	ORIFICE	11.95	0	14:15	0.00
02c	ORIFICE	42.55	0	15:24	0.00
W1a	WEIR	7.78	0	13:46	0.00
W6	WEIR	0.00	0	00:00	0.00
W10	WEIR	1.32	0	16:23	0.00
W11	WEIR	2.54	0	13:32	0.00
W9	WEIR	8.86	0	13:41	0.00
W5	WEIR	0.02	0	13:36	0.00
W12	WEIR	14.72	0	15:40	0.00

W4	WEIR	0.00	0	00:00	0.00
P3AW	WEIR	1.08	0	13:55	0.00
W3B	WEIR	1.39	0	15:08	0.00
W3C	WEIR	0.00	0	00:00	0.00
W2	WEIR	0.00	0	00:00	0.00
W7	WEIR	0.00	0	00:00	0.00
W8	WEIR	0.00	0	00:00	0.00
W3D	WEIR	0.05	0	14:15	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Thu May 18 09:03:45 2017
Analysis ended on: Thu May 18 09:03:45 2017
Total elapsed time: < 1 sec

Total Precipitation	58.487	124.262
Evaporation Loss	0.000	0.000
Infiltration Loss	33.004	70.119
Surface Runoff	24.833	52.761
Final Storage	0.659	1.401
Continuity Error (%)	-0.015	

	Volume hectare-m	Volume 10 ⁶ ltr

Flow Routing Continuity	-----	-----

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	24.833	248.335
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	24.338	243.381
Flooding Loss	0.013	0.129
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.008	0.079
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.471	4.712
Continuity Error (%)	0.014	

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	29.00 sec
Average Time Step	:	30.00 sec
Maximum Time Step	:	30.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	1.03

Percent Not Converging : 0.00

 Subcatchment Runoff Summary

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	124.26	0.00	0.00	76.97	46.07	0.43	31.03	0.371
S2	124.26	0.00	0.00	31.08	90.51	1.36	111.15	0.728
S3	124.26	0.00	0.00	31.08	90.81	10.56	1009.99	0.731
S4	124.26	0.00	0.00	20.67	99.38	6.75	567.84	0.800
S5	124.26	0.00	0.00	76.07	46.97	5.29	542.93	0.378
S6	124.26	0.00	0.00	31.08	91.69	3.86	727.25	0.738
S7	124.26	0.00	0.00	67.32	55.71	2.98	237.72	0.448
S8	124.26	0.00	0.00	66.02	57.01	4.62	651.62	0.459
S9	124.26	0.00	0.00	76.22	46.82	2.37	228.19	0.377
S10C	124.26	0.00	0.00	37.36	85.73	1.05	199.44	0.690
S11	124.26	0.00	0.00	75.75	47.32	3.26	387.49	0.381
S12	124.26	0.00	0.00	76.31	46.72	4.67	430.95	0.376
S13	124.26	0.00	0.00	28.48	93.05	2.84	290.39	0.749
S14	124.26	0.00	0.00	76.64	46.39	0.65	52.58	0.373
S15	124.26	0.00	0.00	75.93	47.10	1.33	144.19	0.379
S16	124.26	0.00	0.00	76.50	46.56	3.23	279.38	0.375
S17	124.26	0.00	0.00	31.08	90.59	3.32	283.47	0.729
S18	124.26	0.00	0.00	31.08	91.12	2.10	243.70	0.733
S19	124.26	0.00	0.00	76.97	46.07	2.88	206.27	0.371
S20	124.26	0.00	0.00	35.90	87.14	6.13	758.25	0.701
S21	124.26	0.00	0.00	35.48	87.59	8.32	1454.79	0.705
S22	124.26	0.00	0.00	75.37	47.67	5.38	809.16	0.384
S23	124.26	0.00	0.00	77.72	45.29	2.80	160.08	0.364
S24	124.26	0.00	0.00	76.92	46.11	0.57	41.58	0.371
S26	124.26	0.00	0.00	76.97	46.06	1.65	118.02	0.371
S25	124.26	0.00	0.00	31.08	91.64	11.69	2099.86	0.737
S28	124.26	0.00	0.00	31.08	91.07	2.72	304.82	0.733

S27	124.26	0.00	0.00	31.08	91.69	4.54	851.34	0.738
S29	124.26	0.00	0.00	67.04	55.99	0.81	71.95	0.451
S32	124.26	0.00	0.00	67.04	56.00	0.69	61.78	0.451
S30	124.26	0.00	0.00	64.09	58.93	1.32	114.33	0.474
S31	124.26	0.00	0.00	67.39	55.65	1.96	152.90	0.448
S4A	124.26	0.00	0.00	20.67	99.48	1.36	123.36	0.801
4B	124.26	0.00	0.00	46.99	76.06	0.73	101.81	0.612
S21-RE	124.26	0.00	0.00	35.48	87.59	4.43	774.93	0.705
S27-RE	124.26	0.00	0.00	31.08	91.69	3.67	687.41	0.738
S17-RE	124.26	0.00	0.00	31.08	91.17	1.14	137.28	0.734
S4C	124.26	0.00	0.00	20.67	99.51	2.92	268.65	0.801
S10B	124.26	0.00	0.00	38.54	84.48	4.44	383.03	0.680
S10A	124.26	0.00	0.00	37.86	85.18	1.57	196.83	0.686
EXTERNAL1	124.26	0.00	0.00	83.07	39.96	78.33	2015.52	0.322
EXTERNAL2	124.26	0.00	0.00	80.11	42.90	34.99	1300.27	0.345
S10D	124.26	0.00	0.00	37.80	85.24	2.62	341.05	0.686

Node Depth Summary

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J19	JUNCTION	0.01	0.07	81.13	0 12:20	0.02
J13	JUNCTION	0.01	0.12	66.08	0 12:10	0.04
J14	JUNCTION	0.03	0.29	65.24	0 12:20	0.09
J15	JUNCTION	0.04	0.38	63.38	0 12:20	0.11
J16	JUNCTION	0.04	0.38	63.21	0 12:22	0.11
J17	JUNCTION	0.02	0.19	59.52	0 12:23	0.05
J18	JUNCTION	0.02	0.17	57.48	0 12:24	0.05
J12	JUNCTION	0.01	0.10	72.70	0 12:20	0.03
J1	JUNCTION	0.01	0.09	70.41	0 12:20	0.03
J10	JUNCTION	0.01	0.08	61.88	0 13:09	0.03
J11	JUNCTION	0.05	0.30	55.30	0 13:01	0.09
J6	JUNCTION	0.06	0.29	52.29	0 13:06	0.09

J87	JUNCTION	0.01	0.04	49.04	0	13:08	0.01
J20	JUNCTION	0.01	0.06	78.03	0	12:20	0.02
J21	JUNCTION	0.02	0.14	64.14	0	13:07	0.04
B2	JUNCTION	0.03	1.00	69.54	0	12:18	0.09
B1.EX	JUNCTION	0.04	1.57	69.99	0	12:10	0.48
J5	JUNCTION	0.00	0.00	62.00	0	00:00	0.00
G3	JUNCTION	0.03	0.34	68.35	0	12:23	0.10
J7	JUNCTION	0.03	0.30	68.18	0	12:20	0.09
J22	JUNCTION	0.06	0.30	60.10	0	13:04	0.09
J24	JUNCTION	0.03	0.13	66.93	0	13:02	0.04
J23	JUNCTION	0.06	0.30	60.00	0	13:04	0.09
J25	JUNCTION	0.01	0.04	65.64	0	13:02	0.01
G2	JUNCTION	0.03	0.29	67.79	0	12:26	0.09
G1	JUNCTION	0.02	0.20	67.03	0	12:26	0.06
G1a	JUNCTION	0.03	0.26	66.97	0	12:22	0.08
G1.1	JUNCTION	0.03	0.26	64.58	0	12:22	0.08
G1.2	JUNCTION	0.04	0.35	63.62	0	12:22	0.10
G1.3	JUNCTION	0.04	0.40	63.52	0	12:22	0.12
J45	JUNCTION	0.04	0.40	63.13	0	12:22	0.12
A4CP	JUNCTION	0.04	0.37	68.27	0	12:20	0.11
A3	JUNCTION	0.04	0.37	68.18	0	12:20	0.11
A2	JUNCTION	0.04	0.36	67.91	0	12:21	0.11
A1	JUNCTION	0.04	0.36	67.61	0	12:21	0.11
J2	JUNCTION	0.06	1.40	62.10	0	12:57	0.43
OUT1	OUTFALL	0.00	0.03	40.03	0	13:10	0.01
P1	STORAGE	0.19	0.95	63.95	0	13:18	0.29
P2	STORAGE	0.16	0.64	59.94	0	13:09	0.19
P3C	STORAGE	0.36	1.03	64.33	0	13:02	0.32
P4	STORAGE	0.16	0.74	67.44	0	13:07	0.22
P6	STORAGE	0.44	1.14	67.64	0	13:09	0.35
P8	STORAGE	0.31	1.04	59.04	0	12:50	0.32
P10	STORAGE	0.62	1.23	59.43	0	14:40	0.37
P9	STORAGE	0.45	1.27	62.07	0	13:04	0.39
P11	STORAGE	0.27	0.87	70.17	0	13:02	0.27
P5	STORAGE	0.28	0.84	68.34	0	13:02	0.26
P12	STORAGE	0.01	0.04	81.64	0	15:16	0.01
P3A	STORAGE	0.34	0.95	65.40	0	13:05	0.29
P3B	STORAGE	0.46	1.08	64.58	0	13:52	0.33
P3D	STORAGE	0.47	1.20	61.20	0	13:09	0.37

P7NEW STORAGE 0.46 1.21 62.01 0 13:13 0.37

 Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J19	JUNCTION	290.39	295.98	0 12:20	2.84	3.93	0.000
J13	JUNCTION	1174.46	1174.46	0 12:10	9.84	9.84	0.000
J14	JUNCTION	430.95	1871.63	0 12:20	4.67	18.4	0.000
J15	JUNCTION	651.77	2548.03	0 12:20	6.93	31.4	0.000
J16	JUNCTION	206.27	2751.45	0 12:22	2.88	34.3	0.000
J17	JUNCTION	0.00	2830.52	0 12:23	0	44.3	0.000
J18	JUNCTION	0.00	2865.76	0 12:24	0	51	0.000
J12	JUNCTION	485.79	485.79	0 12:20	5.81	5.81	0.000
J1	JUNCTION	31.03	31.03	0 12:20	0.433	0.433	0.000
J10	JUNCTION	660.85	1213.10	0 13:09	6.94	23.3	0.000
J11	JUNCTION	809.16	5011.39	0 13:04	5.38	95.6	0.000
J6	JUNCTION	201.55	6392.75	0 13:07	3.38	130	0.000
J87	JUNCTION	0.00	6391.18	0 13:08	0	130	0.000
J20	JUNCTION	52.58	52.58	0 12:20	0.649	0.649	0.000
J21	JUNCTION	0.00	229.01	0 13:07	0	3.95	0.000
B2	JUNCTION	111.15	141.81	0 12:20	1.36	1.79	0.000
B1.EX	JUNCTION	0.00	142.36	0 12:27	0	1.79	0.000
J5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
G3	JUNCTION	0.00	133.02	0 12:27	0	1.78	0.000
J7	JUNCTION	1009.99	1009.99	0 12:20	10.6	10.6	0.000
J22	JUNCTION	0.00	548.62	0 13:04	0	11	0.000
J24	JUNCTION	0.00	165.50	0 13:02	0	2.69	0.000
J23	JUNCTION	0.00	713.90	0 13:04	0	13.7	0.000
J25	JUNCTION	0.00	125.84	0 13:02	0	2.06	0.000
G2	JUNCTION	0.00	132.94	0 12:26	0	1.78	0.000
G1	JUNCTION	0.00	132.93	0 12:26	0	1.78	0.000

G1a	JUNCTION	0.00	401.01	0	12:22	0	4.69	0.000
G1.1	JUNCTION	0.00	401.00	0	12:22	0	4.69	0.000
G1.2	JUNCTION	0.00	400.93	0	12:22	0	4.69	0.000
G1.3	JUNCTION	0.00	400.87	0	12:22	0	4.69	0.000
J45	JUNCTION	0.00	400.82	0	12:22	0	4.68	0.000
A4CP	JUNCTION	268.65	268.65	0	12:20	2.92	2.92	0.000
A3	JUNCTION	0.00	268.50	0	12:20	0	2.91	0.000
A2	JUNCTION	0.00	268.38	0	12:21	0	2.91	0.000
A1	JUNCTION	0.00	268.27	0	12:21	0	2.91	0.000
J2	JUNCTION	0.00	330.30	0	13:13	0	7.69	0.000
OUT1	OUTFALL	3245.55	9622.04	0	13:09	113	243	0.000
P1	STORAGE	0.00	1492.83	0	12:20	0	16.4	0.049
P2	STORAGE	948.80	948.80	0	12:10	5.95	5.95	0.022
P3C	STORAGE	199.44	199.44	0	12:10	1.05	1.05	0.028
P4	STORAGE	283.47	335.46	0	12:20	3.32	3.97	0.048
P6	STORAGE	1533.18	1533.18	0	12:10	10.6	10.6	0.037
P8	STORAGE	1538.75	1538.75	0	12:10	8.21	8.21	0.062
P10	STORAGE	567.84	964.23	0	12:20	6.75	11.4	0.010
P9	STORAGE	2099.86	2099.86	0	12:10	11.7	11.7	0.044
P11	STORAGE	304.82	304.82	0	12:10	2.72	2.72	0.051
P5	STORAGE	243.70	243.70	0	12:10	2.1	2.1	0.046
P12	STORAGE	137.28	137.28	0	12:10	1.14	1.14	-0.000
P3A	STORAGE	196.83	196.83	0	12:10	1.57	1.57	0.040
P3B	STORAGE	383.03	383.03	0	12:20	4.44	4.44	0.020
P3D	STORAGE	341.05	341.05	0	12:10	2.62	2.62	0.040
P7NEW	STORAGE	1454.79	1454.79	0	12:10	8.32	8.32	0.035

Node Surcharge Summary

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

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	71.83	0.074	1.926

J13	JUNCTION	71.83	0.123	3.877
J14	JUNCTION	71.83	0.291	3.709
J15	JUNCTION	71.83	0.378	3.622
J16	JUNCTION	71.83	0.378	3.622
J17	JUNCTION	71.83	0.185	3.815
J18	JUNCTION	71.83	0.174	3.826
J12	JUNCTION	71.83	0.097	3.903
J1	JUNCTION	71.83	0.089	0.911
J10	JUNCTION	71.83	0.083	3.917
J11	JUNCTION	71.83	0.300	1.700
J6	JUNCTION	71.83	0.291	3.209
J87	JUNCTION	71.83	0.040	1.960
J20	JUNCTION	71.83	0.063	1.937
J21	JUNCTION	71.83	0.137	0.863
B2	JUNCTION	71.83	1.000	0.000
B1.EX	JUNCTION	71.83	1.570	0.000
J5	JUNCTION	71.83	0.000	2.000
G3	JUNCTION	71.83	0.342	1.758
J7	JUNCTION	71.83	0.301	1.699
J22	JUNCTION	71.83	0.298	3.702
J24	JUNCTION	71.83	0.127	2.873
J23	JUNCTION	71.83	0.298	1.702
J25	JUNCTION	71.83	0.036	2.964
G2	JUNCTION	71.83	0.293	1.557
G1	JUNCTION	71.83	0.202	1.278
G1a	JUNCTION	71.83	0.256	1.394
G1.1	JUNCTION	71.83	0.262	1.418
G1.2	JUNCTION	71.83	0.348	1.602
G1.3	JUNCTION	71.83	0.404	1.436
J45	JUNCTION	71.83	0.404	1.296
A4CP	JUNCTION	71.83	0.374	0.626
A3	JUNCTION	71.83	0.374	0.876
A2	JUNCTION	71.83	0.364	1.986
A1	JUNCTION	71.83	0.364	1.686
J2	JUNCTION	71.83	1.400	0.000
P1	STORAGE	71.83	0.945	2.055
P2	STORAGE	71.83	0.636	3.364
P3C	STORAGE	71.83	1.034	1.966
P4	STORAGE	71.83	0.740	1.260

P6	STORAGE	71.83	1.136	1.864
P8	STORAGE	71.83	1.040	1.960
P10	STORAGE	71.83	1.226	1.774
P9	STORAGE	71.83	1.268	1.732
P11	STORAGE	71.83	0.872	1.128
P5	STORAGE	71.83	0.844	1.156
P12	STORAGE	71.83	0.036	1.964
P3A	STORAGE	71.83	0.953	1.047
P3B	STORAGE	71.83	1.082	0.918
P3D	STORAGE	71.83	1.201	0.799
P7NEW	STORAGE	71.83	1.211	0.189

Node Flooding Summary

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

Node	Hours Flooded	Maximum Rate LPS	Time of Max Occurrence days hr:min	Total Flood Volume 10^6 ltr	Maximum Ponded Volume 1000 m3
B2	0.16	3.44	0 12:21	0.001	0.000
B1.EX	0.60	17.49	0 12:21	0.023	0.000
J2	0.82	58.70	0 13:13	0.105	0.000

Storage Volume Summary

Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow LPS
P1	0.911	5	0	0	4.752	26	0 13:17	828.94

P2	0.655	3	0	0	2.606	14	0	13:08	267.06
P3C	0.151	6	0	7	0.499	21	0	13:01	52.93
P4	0.209	6	0	0	1.002	30	0	13:07	229.01
P6	1.599	9	0	0	4.612	27	0	13:09	510.77
P8	0.951	8	0	0	3.416	27	0	12:50	501.31
P10	2.777	15	0	0	5.744	32	0	14:40	284.01
P9	1.824	12	0	0	5.473	36	0	13:04	548.62
P11	0.272	10	0	0	0.939	36	0	13:02	165.50
P5	0.231	10	0	0	0.753	33	0	13:02	125.84
P12	0.193	1	0	0	0.628	2	0	15:16	18.61
P3A	0.189	11	0	0	0.611	36	0	13:05	88.98
P3B	0.641	15	0	0	1.762	41	0	13:51	165.25
P3D	0.388	18	0	0	1.105	52	0	13:08	136.58
P7NEW	1.400	29	0	0	4.011	84	0	13:13	330.30

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OUT1	86.18	1092.03	9622.04	243.380
System	86.18	1092.03	9622.04	243.380

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
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C1	CONDUIT	296.11	0	12:21	3.29	0.01	0.07
C2	CONDUIT	1170.29	0	12:11	2.18	0.00	0.04
C3	CONDUIT	1871.06	0	12:21	3.45	0.00	0.10
C4	CONDUIT	2545.28	0	12:22	1.32	0.16	0.38
C5	CONDUIT	2750.09	0	12:23	3.26	0.01	0.09
C6	CONDUIT	2830.26	0	12:24	3.54	0.01	0.09
C7	CONDUIT	2862.47	0	12:25	2.19	0.01	0.06
C8	CONDUIT	484.98	0	12:21	3.89	0.00	0.05
C11	CONDUIT	4999.96	0	13:08	1.05	0.00	0.02
C12	CONDUIT	52.45	0	12:22	2.54	0.01	0.06
C13	CONDUIT	228.55	0	13:11	1.19	0.02	0.14
C16	CONDUIT	6391.18	0	13:08	1.45	0.00	0.02
C17	CONDUIT	6389.43	0	13:10	1.89	0.00	0.02
C50	CONDUIT	31.03	0	12:31	1.56	0.12	0.24
L1	CONDUIT	142.36	0	12:27	1.49	1.03	0.92
C53	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
L3	CONDUIT	132.94	0	12:26	1.47	0.97	0.79
C59	CONDUIT	548.62	0	13:04	2.79	0.19	0.30
C61	CONDUIT	165.45	0	13:03	2.85	0.03	0.13
C62	CONDUIT	713.53	0	13:06	3.76	0.18	0.29
C63	CONDUIT	125.24	0	13:06	0.87	0.00	0.01
C64	CONDUIT	1009.90	0	12:20	7.99	0.65	0.59
L2	CONDUIT	133.02	0	12:27	1.34	1.08	0.96
C67	CONDUIT	1212.92	0	13:10	2.78	0.05	0.17
L4	CONDUIT	132.93	0	12:26	2.21	0.58	0.55
L5	CONDUIT	132.93	0	12:26	2.24	0.58	0.54
L6	CONDUIT	401.00	0	12:22	3.55	0.40	0.44
L7	CONDUIT	400.93	0	12:22	3.44	0.41	0.45
L9	CONDUIT	400.82	0	12:22	2.03	0.82	0.69
L10	CONDUIT	400.59	0	12:23	2.92	0.52	0.51
L8	CONDUIT	400.87	0	12:22	2.41	0.66	0.59
M1	CONDUIT	268.50	0	12:20	1.48	0.74	0.64
M2	CONDUIT	268.38	0	12:21	1.59	0.67	0.60
M3	CONDUIT	268.27	0	12:21	1.53	0.71	0.62
M4	CONDUIT	268.19	0	12:21	2.51	0.37	0.42
C9	CONDUIT	290.55	0	13:38	4.45	1.07	1.00
O3a	ORIFICE	3.36	0	13:02			0.00
O6a	ORIFICE	21.75	0	13:09			0.00
O10a	ORIFICE	14.55	0	14:40			0.00

010b	ORIFICE	30.78	0	14:40	0.00
010c	ORIFICE	36.47	0	14:40	0.00
03b	ORIFICE	14.63	0	13:02	0.00
06b	ORIFICE	59.75	0	13:09	0.00
08a	ORIFICE	20.78	0	12:50	0.00
011a	ORIFICE	6.90	0	13:02	0.00
011b	ORIFICE	38.38	0	13:02	0.00
011c	ORIFICE	54.95	0	13:02	0.00
09a	ORIFICE	23.04	0	13:04	0.00
09b	ORIFICE	95.52	0	13:04	0.00
09c	ORIFICE	170.35	0	13:04	0.00
05a	ORIFICE	4.72	0	13:02	0.00
01a	ORIFICE	70.13	0	13:18	0.00
01b	ORIFICE	165.33	0	13:18	0.00
01c	ORIFICE	376.65	0	13:18	0.00
010d	ORIFICE	81.00	0	14:40	0.00
05b	ORIFICE	23.89	0	13:02	0.00
05c	ORIFICE	46.36	0	13:02	0.00
06c	ORIFICE	70.34	0	13:09	0.00
06d	ORIFICE	116.85	0	13:09	0.00
04a	ORIFICE	17.34	0	13:07	0.00
04b	ORIFICE	37.11	0	13:07	0.00
04c	ORIFICE	112.79	0	13:07	0.00
02b	ORIFICE	17.66	0	13:09	0.00
P3Aa	ORIFICE	3.23	0	13:05	0.00
OP3Ab	ORIFICE	12.31	0	13:05	0.00
OP3Ac	ORIFICE	28.52	0	13:05	0.00
OP3Ba	ORIFICE	7.71	0	13:52	0.00
OP3Bb	ORIFICE	19.69	0	13:52	0.00
03Bc	ORIFICE	26.21	0	13:52	0.00
OP3Bd	ORIFICE	37.32	0	13:52	0.00
07a	ORIFICE	14.46	0	13:13	0.00
07b	ORIFICE	52.36	0	13:13	0.00
07c	ORIFICE	112.60	0	13:13	0.00
08b	ORIFICE	132.64	0	12:50	0.00
08c	ORIFICE	180.56	0	12:50	0.00
03Da	ORIFICE	4.59	0	13:09	0.00
03Db	ORIFICE	14.37	0	13:09	0.00
03Dc	ORIFICE	12.78	0	13:09	0.00

O3Dd	ORIFICE	14.47	0	13:09	0.00
O3De	ORIFICE	13.58	0	13:09	0.00
O2c	ORIFICE	47.60	0	13:09	0.00
W1a	WEIR	216.83	0	13:18	0.00
W6	WEIR	242.08	0	13:09	0.00
W10	WEIR	121.22	0	14:40	0.00
W11	WEIR	65.28	0	13:02	0.00
W9	WEIR	259.72	0	13:04	0.00
W5	WEIR	50.87	0	13:02	0.00
W12	WEIR	18.61	0	15:16	0.00
W4	WEIR	61.77	0	13:07	0.00
P3AW	WEIR	44.92	0	13:05	0.00
W3B	WEIR	74.33	0	13:52	0.00
W3C	WEIR	34.59	0	13:02	0.00
W2	WEIR	201.80	0	13:09	0.00
W7	WEIR	150.88	0	13:13	0.00
W8	WEIR	167.34	0	12:50	0.00
W3D	WEIR	76.81	0	13:09	0.00

 Conduit Surcharge Summary

Conduit	Hours Full			Hours	Hours
	Both Ends	Upstream	Dnstream	Above Full Normal Flow	Capacity Limited
L1	0.15	0.15	0.15	0.15	0.15
L2	0.59	0.59	0.59	0.61	0.59
C9	0.81	0.81	0.81	0.81	0.81

Analysis begun on: Thu May 18 09:07:15 2017
 Analysis ended on: Thu May 18 09:07:16 2017
 Total elapsed time: 00:00:01