

## **APPENDIX 1.2**

### **OPTION 9 – SWMM MODEL OUTPUT**

#### **Option Description**

The Broadway-Lomas detention pond was deleted from the model. The existing manhole number COA 32878.A was connected directly to an existing manhole COA32878.B with a 4.5 ft diameter RCP pipe in Broadway. The Warehouse Detention Pond was simulated. The pond was placed in between manholes COA 7963.11A and COA7716 with appropriate inlet, outlet nodes and pipes as simulated in SWMM. The BR21 pond was simulated to detain runoff from Sub-catchment BR21. The pond outfall was simulated as a 24-inch conduit that joined manhole COA7860 in Lomas Blvd. at Edith. A detention pond in Santa Barbara Park was added along with the inlet and outlet. The storm drain from Commercial to Baca was re-routed to Broadway to drain into the Santa Barbara Park Pond. Upsized 36-in. to 48-in. storm drain from the Commercial-Indian School intersection south on Commercial to McKnight, then east on McKnight, then new 48-in. storm drain from the Commercial-McKnight intersection east to the Broadway-McKnight intersection, then south on Broadway to join into the Santa Barbara Park Pond. The pipes connecting manholes COA 29163 and COA7635, along Commercial and COA29132 and COA7628 along Broadway were deleted.

The Broadway Pump Station Capacity was modeled at 130 cfs existing capacity. The North Wells Park Pond was included located near Summer and 5<sup>th</sup> St. The storm drains from Cutler to McKnight on 4<sup>th</sup> St. were upsized from 36" to 48". A 48" RCP storm drain was included west from 3<sup>rd</sup> and Constitution and south along 5<sup>th</sup> St. to drain into North Wells Park Pond. The pond outfall is a 36-in. RCP south on 5<sup>th</sup> St. to Mountain, then west to 3<sup>rd</sup> St where it joins the existing storm drain. The existing pipe between Constitution and Mountain along 3<sup>rd</sup> St was deleted to direct water to the North Wells Park Pond. The storm drains from Carson and Rio Grande to San Pasquale and Laguna were upsized from 36 in.-48 in. The storm drain from Barelás and Pacific to Lewis and the West Riverside storm drain were upsized from 27 in. and 30 in. to 48 in. The significant option components are summarized in **Table 6-1 (Summary of Model Filenames and Components)**.





| <u>DESCRIPTION</u> | <u>DATE</u> |
|--------------------|-------------|
|                    |             |

All components of Option 3 - Turn down limit curve  
To Original (Existing) Curve : Max 30 CFS





**TABLE 6-16**  
**SUMMARY OF OPTION 9 STREET PONDING AND MAN-HOLE FLOODING**

**Note-** negative numbers imply that the HGL did not reach the manhole rim

Represents flooding depth over 1 ft

Represents flooding between 0.5ft - 0.99 ft

Represents flooding depth between 0 - 0.5 ft

| MH Name   | Manhole<br>Invert Elev. | Max.<br>Depth of<br>Manhole | Manhole<br>Rim Elev. | Maximum<br>HGL | Node Flood<br>Depth Above<br>Manhole Rim | Flood<br>Volume       | Flood<br>Volume | Hours<br>Flooded |
|-----------|-------------------------|-----------------------------|----------------------|----------------|------------------------------------------|-----------------------|-----------------|------------------|
|           | (ft)                    | (ft)                        | (ft)                 | (ft)           | (ft)                                     | (10 <sup>6</sup> gal) | (acre-ft)       |                  |
|           | (a)                     | (a)                         | (b)                  | (c)            | (d)                                      | (e)                   | (f)             |                  |
| COA6045   | 4957.51                 | 7.82                        | 4965.33              | 4965.34        | 0.01                                     | 0.26                  | 0.798           | 2.4              |
| COA15184  | 4954.19                 | 10.04                       | 4964.23              | 4964.43        | 0.2                                      | 0.755                 | 2.317           | 3.68             |
| COA6218   | 4953.66                 | 9.34                        | 4963                 | 4963.43        | 0.43                                     | 0.874                 | 2.682           | 4.16             |
| COA6195   | 4962.97                 | 6.74                        | 4969.71              | 4970.01        | 0.3                                      | 0.18                  | 0.552           | 0.78             |
| COA6246   | 4962.06                 | 7.85                        | 4969.91              | 4969.92        | 0.01                                     | 0.019                 | 0.058           | 0.12             |
| COA7656   | 4953.17                 | 9.45                        | 4962.62              | 4962.63        | 0.01                                     | 0.017                 | 0.052           | 0.1              |
| COA19719  | 4952.3                  | 9.98                        | 4962.28              | 4963.06        | 0.78                                     | 1.19                  | 3.652           | 4.42             |
| COA7654   | 4951.67                 | 8.59                        | 4960.26              | 4960.27        | 0.01                                     | 0.282                 | 0.865           | 1.6              |
| COA25349  | 4945.26                 | 11.07                       | 4956.33              | 4956.34        | 0.01                                     | 0.065                 | 0.199           | 0.14             |
| COA25656  | 4948.86                 | 10.32                       | 4959.18              | 4959.33        | 0.15                                     | 0.246                 | 0.755           | 1.94             |
| COA25622  | 4948.24                 | 9.58                        | 4957.82              | 4957.84        | 0.02                                     | 0.067                 | 0.206           | 0.9              |
| COA7476   | 4950.32                 | 7.85                        | 4958.17              | 4958.32        | 0.15                                     | 0.231                 | 0.709           | 1.49             |
| COA7518   | 4947.94                 | 8.89                        | 4956.83              | 4957           | 0.17                                     | 0.232                 | 0.712           | 1.68             |
| COA24834  | 4944.52                 | 7.06                        | 4951.58              | 4951.93        | 0.35                                     | 1.59                  | 4.880           | 4.01             |
| COA25105  | 4946.31                 | 10.2                        | 4956.51              | 4956.52        | 0.01                                     | 0.04                  | 0.123           | 0.37             |
| COA7908   | 4946.15                 | 10                          | 4956.15              | 4956.16        | 0.01                                     | 0.011                 | 0.034           | 0.03             |
| COA22517  | 4943.59                 | 11                          | 4954.59              | 4954.6         | 0.01                                     | 0.064                 | 0.196           | 0.28             |
| COA7769JB | 4944.52                 | 11.81                       | 4956.33              | 4958.37        | 2.04                                     |                       | 0.000           |                  |
| COA32878  | 4946.6                  | 9.16                        | 4955.76              | 4955.88        | 0.12                                     | 0.044                 | 0.135           | 0.4              |
| COA9344   | 4935.83                 | 15.71                       | 4951.54              | 4951.55        | 0.01                                     | 0.024                 | 0.074           | 0.07             |
| COA9229   | 4913.15                 | 27                          | 4940.15              | 4940.49        | 0.34                                     | 0.028                 | 0.086           | 0.58             |
| 1F.H.MH1  | 4951.5                  | 8                           | 4959.5               | 4959.54        | 0.04                                     | 0.138                 | 0.424           | 0.31             |

(a) Manhole invert elevation from SWMM Input under Node Summary Table

(b) Rim elevation = MH invert elevation + Max depth of manhole

(c) Max HGL from SWMM output table under Node Depth Summary

(d) Node Flood Depth above Manhole Rim = HGL Elev-Rim Elev

(e) Flood volume from SWMM output table under Node Flooding Summary

(f) 1 gallon = 3.06888 E-6 acre-ft

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

COA Mid Valley Existing Conditions SWMM 5.0.022 Model  
Results Printed on August 24, 2011

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

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

Flow Units ..... CFS  
Process Models:  
  Rainfall/Runoff ..... YES  
  Snowmelt ..... NO  
  Groundwater ..... NO  
  Flow Routing ..... YES  
  Ponding Allowed ..... YES  
  Water Quality ..... NO  
Infiltration Method ..... CURVE\_NUMBER  
Flow Routing Method ..... DYNWAVE  
Starting Date ..... JUL-01-2011 00:00:00  
Ending Date ..... JUL-06-2011 23:00:00  
Antecedent Dry Days ..... 0.0  
Report Time Step ..... 00:00:15  
Wet Time Step ..... 00:00:15  
Dry Time Step ..... 00:00:15  
Routing Time Step ..... 1.00 sec

\*\*\*\*\*  
Element Count  
\*\*\*\*\*

Number of rain gages ..... 1  
Number of subcatchments ... 70  
Number of nodes ..... 135  
Number of links ..... 139  
Number of pollutants ..... 0  
Number of land uses ..... 0

\*\*\*\*\*  
Raingage Summary  
\*\*\*\*\*

| Name  | Data Source   | Data Type  | Recording Interval |
|-------|---------------|------------|--------------------|
| Gage1 | Rain100hr24hr | CUMULATIVE | 3 min.             |

\*\*\*\*\*  
Subcatchment Summary  
\*\*\*\*\*

| Name | Area   | Width  | %Imperv | %Slope | Rain Gage | Outlet   |
|------|--------|--------|---------|--------|-----------|----------|
| A1   | 32.38  | 400.00 | 60.00   | 0.0800 | Gage1     | COA24916 |
| A10  | 50.08  | 400.00 | 56.00   | 0.1351 | Gage1     | COA25048 |
| A11  | 36.32  | 400.00 | 67.00   | 0.2105 | Gage1     | COA7518  |
| A12  | 107.39 | 400.00 | 53.00   | 0.0702 | Gage1     | COA25656 |
| A13  | 123.40 | 400.00 | 70.00   | 0.1177 | Gage1     | COA24834 |
| A15  | 46.43  | 400.00 | 70.00   | 0.1835 | Gage1     | COA7444  |
| A18  | 42.12  | 400.00 | 54.00   | 0.1802 | Gage1     | COA7476  |
| A2   | 11.08  | 400.00 | 55.00   | 0.0000 | Gage1     | COA9083  |
| A3   | 88.49  | 400.00 | 40.00   | 0.2000 | Gage1     | COA9069  |
| A4   | 12.42  | 400.00 | 50.00   | 0.1071 | Gage1     | COA24859 |
| A5   | 78.59  | 400.00 | 55.00   | 0.1563 | Gage1     | COA9045  |
| A6   | 47.22  | 400.00 | 42.00   | 0.1277 | Gage1     | COA8985  |

|       |        |        |       |        |       |                      |
|-------|--------|--------|-------|--------|-------|----------------------|
| A7    | 38.26  | 400.00 | 52.00 | 0.1667 | Gage1 | COA25034             |
| A8    | 22.07  | 400.00 | 57.00 | 0.2778 | Gage1 | COA25105             |
| A9    | 29.10  | 400.00 | 58.00 | 0.2128 | Gage1 | COA25622             |
| B1    | 40.10  | 400.00 | 67.00 | 0.2778 | Gage1 | COA22127             |
| B10   | 13.89  | 400.00 | 64.00 | 0.1905 | Gage1 | COA22155             |
| B11   | 12.41  | 400.00 | 19.00 | 0.9091 | Gage1 | TINGLEYPARKSURGEFOND |
| B12   | 9.50   | 400.00 | 70.00 | 0.1852 | Gage1 | COA9407              |
| B13   | 20.03  | 400.00 | 61.00 | 0.1942 | Gage1 | COA13866             |
| B14   | 28.24  | 400.00 | 85.00 | 0.3889 | Gage1 | COA22429             |
| B15   | 41.75  | 400.00 | 90.00 | 0.1523 | Gage1 | COA9344              |
| B16   | 29.92  | 400.00 | 86.00 | 0.2308 | Gage1 | COA9348              |
| B17   | 17.56  | 400.00 | 90.00 | 0.0000 | Gage1 | COA9310              |
| B18   | 13.98  | 400.00 | 98.00 | 0.0000 | Gage1 | COA9310              |
| B20   | 16.96  | 400.00 | 85.00 | 0.2500 | Gage1 | COA22517             |
| B21   | 30.91  | 400.00 | 70.00 | 0.3571 | Gage1 | COA24930             |
| B22   | 33.42  | 400.00 | 70.00 | 0.1482 | Gage1 | COA9260              |
| B23   | 9.35   | 400.00 | 99.00 | 0.1111 | Gage1 | COA9260              |
| B24   | 18.44  | 400.00 | 90.00 | 0.0000 | Gage1 | COA22584             |
| B25   | 39.65  | 400.00 | 96.00 | 0.1290 | Gage1 | COA7865              |
| B26   | 59.34  | 400.00 | 75.00 | 0.0000 | Gage1 | COA25253             |
| B27   | 51.52  | 400.00 | 88.00 | 0.1299 | Gage1 | COA7740              |
| B28   | 64.91  | 400.00 | 70.00 | 0.1072 | Gage1 | COA7816              |
| B29   | 105.31 | 400.00 | 65.00 | 0.1127 | Gage1 | COA25349             |
| B3    | 5.08   | 400.00 | 64.00 | 0.1754 | Gage1 | COA9141              |
| B30   | 51.79  | 400.00 | 82.00 | 0.1379 | Gage1 | NORTHWELLSFARK       |
| B31   | 43.60  | 400.00 | 85.00 | 0.1149 | Gage1 | COA7654              |
| B32   | 39.96  | 400.00 | 72.00 | 0.1709 | Gage1 | COA7638              |
| B33   | 51.09  | 400.00 | 68.00 | 0.1010 | Gage1 | COA6231              |
| B34   | 53.33  | 400.00 | 76.00 | 0.2010 | Gage1 | COA15184             |
| B35   | 32.09  | 400.00 | 82.00 | 0.4008 | Gage1 | COA19719             |
| B36   | 25.33  | 400.00 | 77.00 | 0.3150 | Gage1 | COA6045              |
| B4    | 5.98   | 400.00 | 47.00 | 0.1205 | Gage1 | COA22174             |
| B40   | 36.44  | 400.00 | 84.00 | 0.8037 | Gage1 | COA19719             |
| B41   | 24.82  | 400.00 | 94.00 | 0.5333 | Gage1 | COA6149              |
| B5    | 65.56  | 400.00 | 68.00 | 0.1553 | Gage1 | COA22169             |
| B6    | 7.04   | 400.00 | 65.00 | 0.0917 | Gage1 | COA9431              |
| B7    | 11.54  | 400.00 | 56.00 | 0.3529 | Gage1 | COA9426              |
| B8    | 23.57  | 400.00 | 64.00 | 0.1478 | Gage1 | MHB22410             |
| BR1   | 28.93  | 400.00 | 75.00 | 3.8667 | Gage1 | COA29178             |
| BR10  | 36.43  | 400.00 | 31.00 | 5.1034 | Gage1 | COA7963.05M          |
| BR11  | 9.74   | 400.00 | 65.00 | 4.5106 | Gage1 | COA33027             |
| BR12  | 22.29  | 400.00 | 10.00 | 4.7826 | Gage1 | SANTABARBARAPOND     |
| BR13  | 29.14  | 400.00 | 70.00 | 1.6667 | Gage1 | COA7656              |
| BR14  | 19.80  | 400.00 | 89.00 | 0.4000 | Gage1 | COA7635              |
| BR16  | 25.89  | 400.00 | 13.00 | 3.1858 | Gage1 | SANTABARBARAPOND     |
| BR17  | 49.17  | 400.00 | 59.00 | 1.4286 | Gage1 | COA29132             |
| BR18  | 33.13  | 400.00 | 75.00 | 1.4000 | Gage1 | COA6195              |
| BR19  | 26.21  | 400.00 | 75.00 | 1.0370 | Gage1 | COA32878             |
| BR2   | 5.67   | 400.00 | 50.00 | 0.5405 | Gage1 | COA32878.A           |
| BR20  | 24.15  | 400.00 | 90.00 | 0.2222 | Gage1 | COA7848              |
| BR21  | 23.81  | 400.00 | 80.00 | 3.2594 | Gage1 | BR21POND             |
| BR3   | 37.23  | 400.00 | 66.00 | 2.3529 | Gage1 | COA32865             |
| BR4   | 39.56  | 400.00 | 75.00 | 3.0586 | Gage1 | COA7870              |
| BR5   | 10.73  | 400.00 | 59.00 | 4.1071 | Gage1 | COA7963.05A          |
| BR6   | 28.63  | 400.00 | 82.00 | 0.6154 | Gage1 | COA7766JB            |
| BR9   | 55.23  | 400.00 | 86.00 | 0.2353 | Gage1 | COA7717              |
| B19.1 | 15.30  | 400.00 | 85.00 | 2.6286 | Gage1 | COA9152              |
| B19.2 | 12.03  | 400.00 | 85.00 | 2.7942 | Gage1 | COA9248              |

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

| Name     | Type     | Invert Elev. | Max. Depth | Ponded Area | External Inflow |
|----------|----------|--------------|------------|-------------|-----------------|
| COA6149  | JUNCTION | 4956.51      | 6.87       | 130067.0    |                 |
| COA6231  | JUNCTION | 4955.06      | 7.45       | 130067.0    |                 |
| COA6045  | JUNCTION | 4957.51      | 7.82       | 309545.0    |                 |
| COA15184 | JUNCTION | 4954.19      | 10.04      | 224607.0    |                 |
| COA6218  | JUNCTION | 4953.66      | 9.34       | 224607.0    |                 |
| COA6195  | JUNCTION | 4962.97      | 6.74       | 79450.0     |                 |



|           |          |         |       |          |     |
|-----------|----------|---------|-------|----------|-----|
| COA6246   | JUNCTION | 4962.06 | 7.85  | 79450.0  |     |
| COA29163  | JUNCTION | 4962.01 | 8.38  | 79450.0  |     |
| COA7635   | JUNCTION | 4957.34 | 7.29  | 27461.0  |     |
| COA7650   | JUNCTION | 4954.93 | 8.35  | 27461.0  |     |
| COA7656   | JUNCTION | 4953.17 | 9.45  | 13559.0  |     |
| COA7628   | JUNCTION | 4960.44 | 11.03 | 13559.0  |     |
| COA29132  | JUNCTION | 4961.85 | 14.23 | 18581.0  |     |
| COA33027  | JUNCTION | 4957.15 | 8.20  | 0.0      |     |
| COA33007  | JUNCTION | 4994.87 | 10.60 | 0.0      | Yes |
| COA7717   | JUNCTION | 4949.54 | 9.19  | 21893.0  |     |
| COA19719  | JUNCTION | 4952.30 | 9.98  | 188061.0 |     |
| COA7654   | JUNCTION | 4951.67 | 8.59  | 228852.0 |     |
| COA7714   | JUNCTION | 4950.14 | 7.86  | 98694.3  |     |
| COA6259   | JUNCTION | 4953.72 | 10.36 | 64850.0  |     |
| COA7638   | JUNCTION | 4952.62 | 8.10  | 64850.0  |     |
| COA25807  | JUNCTION | 4953.18 | 7.28  | 64850.0  |     |
| COA25349  | JUNCTION | 4945.26 | 11.07 | 166821.0 |     |
| COA25656  | JUNCTION | 4948.86 | 10.32 | 197750.0 |     |
| COA25677  | JUNCTION | 4948.59 | 10.97 | 197750.0 |     |
| COA25622  | JUNCTION | 4948.24 | 9.58  | 159436.0 |     |
| COA7444   | JUNCTION | 4952.87 | 7.72  | 292160.0 | Yes |
| COA7476   | JUNCTION | 4950.32 | 7.85  | 181489.0 |     |
| COA7518   | JUNCTION | 4947.94 | 8.89  | 167547.7 |     |
| COA24834  | JUNCTION | 4944.52 | 7.06  | 612333.2 |     |
| COA8985   | JUNCTION | 4940.76 | 11.38 | 241168.0 |     |
| COA24859  | JUNCTION | 4938.64 | 12.00 | 25798.0  |     |
| COA9015   | JUNCTION | 4942.91 | 8.45  | 25798.0  |     |
| COA25105  | JUNCTION | 4946.31 | 10.20 | 50544.0  |     |
| COA25117  | JUNCTION | 4945.26 | 11.29 | 50544.0  |     |
| COA25048  | JUNCTION | 4944.92 | 11.36 | 401053.0 |     |
| COA25034  | JUNCTION | 4943.82 | 10.70 | 171143.0 |     |
| COA9045   | JUNCTION | 4941.61 | 8.65  | 171143.0 |     |
| COA25352  | JUNCTION | 4945.06 | 11.31 | 166821.0 |     |
| COA7815   | JUNCTION | 4943.48 | 13.40 | 166821.0 |     |
| COA25253  | JUNCTION | 4941.66 | 12.95 | 84189.0  |     |
| COA7977   | JUNCTION | 4941.94 | 13.08 | 84189.0  |     |
| COA25238  | JUNCTION | 4941.20 | 13.47 | 84189.0  |     |
| COA25240  | JUNCTION | 4941.15 | 13.87 | 84189.0  |     |
| COA22584  | JUNCTION | 4940.18 | 14.49 | 117610.0 |     |
| COA9260   | JUNCTION | 4938.02 | 14.78 | 208149.0 |     |
| COA7740   | JUNCTION | 4949.69 | 8.25  | 166203.0 |     |
| COA7830   | JUNCTION | 4944.87 | 12.00 | 166203.0 |     |
| COA7865   | JUNCTION | 4946.34 | 10.46 | 45527.0  |     |
| COA7908   | JUNCTION | 4946.15 | 10.00 | 45527.0  |     |
| COA7912   | JUNCTION | 4945.61 | 10.68 | 45527.0  |     |
| COA7955   | JUNCTION | 4943.49 | 12.00 | 45527.0  |     |
| COA22517  | JUNCTION | 4943.59 | 11.00 | 97896.0  |     |
| COA7716   | JUNCTION | 4948.88 | 9.23  | 21893.0  |     |
| COA7766JB | JUNCTION | 4943.95 | 12.33 | 40457.3  |     |
| COA7769JB | JUNCTION | 4944.52 | 11.81 | 0.0      |     |
| COA32865  | JUNCTION | 4945.49 | 11.62 | 21867.0  |     |
| COA32878  | JUNCTION | 4946.60 | 9.16  | 26441.0  |     |
| COA7848   | JUNCTION | 4947.67 | 8.71  | 75622.0  |     |
| COA7861   | JUNCTION | 4947.76 | 10.18 | 0.0      |     |
| COA7870   | JUNCTION | 4957.75 | 12.84 | 0.0      | Yes |
| COA29178  | JUNCTION | 4956.78 | 9.45  | 0.0      |     |
| COA7816   | JUNCTION | 4944.19 | 13.17 | 362909.0 |     |
| COA25109  | JUNCTION | 4945.87 | 10.67 | 50544.0  |     |
| BPSINLET  | JUNCTION | 4938.89 | 21.00 | 0.0      |     |
| COA9310   | JUNCTION | 4942.40 | 11.55 | 187810.0 |     |
| COA9348   | JUNCTION | 4939.63 | 11.79 | 195274.4 |     |
| COA9344   | JUNCTION | 4935.83 | 15.71 | 94192.0  |     |
| COA9340   | JUNCTION | 4935.64 | 16.65 | 94192.0  |     |
| COA22250  | JUNCTION | 4937.56 | 13.58 | 94192.0  |     |
| COA22429  | JUNCTION | 4937.26 | 13.07 | 183374.0 |     |
| COA13866  | JUNCTION | 4935.36 | 12.08 | 73420.0  |     |
| COA24930  | JUNCTION | 4937.17 | 11.05 | 174484.0 |     |
| COA24916  | JUNCTION | 4938.25 | 10.36 | 85713.0  |     |
| COA9248   | JUNCTION | 4947.65 | 10.07 | 11689.0  |     |
| COA32981  | JUNCTION | 4931.39 | 17.86 | 18760.0  |     |
| COA9121   | JUNCTION | 4931.16 | 17.50 | 33447.0  |     |
| COA24902  | JUNCTION | 4939.07 | 10.00 | 85713.0  |     |

|                      |          |         |       |          |
|----------------------|----------|---------|-------|----------|
| COA24902A            | JUNCTION | 4939.73 | 8.82  | 140992.0 |
| COA9069              | JUNCTION | 4940.85 | 8.80  | 140992.0 |
| COA24997             | JUNCTION | 4936.14 | 13.35 | 140992.0 |
| COA9083              | JUNCTION | 4935.33 | 12.62 | 0.0      |
| UPSINLET             | JUNCTION | 4931.47 | 18.57 | 0.0      |
| COA9407              | JUNCTION | 4944.40 | 6.42  | 79526.0  |
| COA9426              | JUNCTION | 4943.03 | 6.39  | 22812.0  |
| COA22194             | JUNCTION | 4942.00 | 7.04  | 22812.0  |
| COA22191             | JUNCTION | 4940.79 | 8.13  | 22812.0  |
| COA9431              | JUNCTION | 4939.27 | 9.59  | 22229.0  |
| COA22176             | JUNCTION | 4938.45 | 10.72 | 22229.0  |
| COA22168             | JUNCTION | 4936.56 | 9.92  | 117391.0 |
| COA22174             | JUNCTION | 4928.49 | 16.58 | 35030.0  |
| COA22155             | JUNCTION | 4928.35 | 16.89 | 33447.0  |
| COA9141              | JUNCTION | 4928.21 | 17.88 | 20203.1  |
| COA22410             | JUNCTION | 4928.36 | 18.75 | 45178.0  |
| COA9129              | JUNCTION | 4930.24 | 16.01 | 45178.0  |
| COA9143              | JUNCTION | 4927.28 | 20.70 | 0.0      |
| COA22144             | JUNCTION | 4924.79 | 22.45 | 0.0      |
| COA22145             | JUNCTION | 4925.85 | 24.38 | 0.0      |
| COA22143             | JUNCTION | 4923.99 | 22.50 | 0.0      |
| COA10456             | JUNCTION | 4922.76 | 20.45 | 0.0      |
| COA10457             | JUNCTION | 4907.13 | 14.88 | 0.0      |
| COA7963.05A          | JUNCTION | 4971.98 | 7.11  | 0.0      |
| COA7963.05M          | JUNCTION | 4952.69 | 10.31 | 0.0      |
| COA7963.11A          | JUNCTION | 4951.67 | 9.48  | 21893.0  |
| COA7963.T            | JUNCTION | 4932.21 | 9.25  | 0.0      |
| COA32878.A           | JUNCTION | 4947.19 | 8.39  | 21867.0  |
| COA32878.B           | JUNCTION | 4946.27 | 9.58  | 21867.0  |
| APSINLET             | JUNCTION | 4929.66 | 14.10 | 0.0      |
| IRON14TH             | JUNCTION | 4939.07 | 10.00 | 0.0      |
| BLDWEIR              | JUNCTION | 4946.60 | 9.16  | 0.0      |
| BLUWEIR              | JUNCTION | 4946.60 | 9.16  | 0.0      |
| COA22169             | JUNCTION | 4939.35 | 6.75  | 117391.0 |
| COA22127             | JUNCTION | 4937.86 | 7.66  | 226362.0 |
| COA32823             | JUNCTION | 4933.09 | 27.00 | 0.0      |
| COA9453              | JUNCTION | 4939.07 | 7.51  | 117391.0 |
| MHB22410             | JUNCTION | 4928.42 | 18.75 | 90355.0  |
| COA9152              | JUNCTION | 4929.67 | 27.00 | 0.0      |
| COA9229              | JUNCTION | 4913.15 | 27.00 | 8870.0   |
| MHB19A               | JUNCTION | 4933.00 | 27.00 | 0.0      |
| 1F.C.INLET           | JUNCTION | 4951.00 | 9.42  | 21893.0  |
| 1F.C.OUT             | JUNCTION | 4949.00 | 9.40  | 21893.0  |
| 1F.D.MH1             | JUNCTION | 5062.00 | 14.00 | 0.0      |
| 1F.E.MHA             | JUNCTION | 4961.50 | 14.21 | 13559.0  |
| 1F.E.MHB             | JUNCTION | 4960.85 | 11.04 | 13559.0  |
| 1F.H.MH1             | JUNCTION | 4951.50 | 8.00  | 98694.3  |
| 1F.H.MH2             | JUNCTION | 4950.50 | 8.00  | 98694.3  |
| APSOUTLET            | OUTFALL  | 4960.84 | 0.00  | 0.0      |
| BPSOUTLET            | OUTFALL  | 5106.00 | 0.00  | 0.0      |
| BaPSOUTLET           | OUTFALL  | 4941.69 | 0.00  | 0.0      |
| AIRQUALITYPOND       | STORAGE  | 4952.26 | 12.40 | 0.0      |
| TINGLEYPARKSURGEPOND | STORAGE  | 4932.21 | 16.45 | 0.0      |
| WAREHOUSEPOND        | STORAGE  | 4950.00 | 10.00 | 0.0      |
| BR21POND             | STORAGE  | 5062.00 | 14.00 | 0.0      |
| SANTABARBARAPOND     | STORAGE  | 4961.00 | 11.00 | 0.0      |
| NORTHWELLS PARK      | STORAGE  | 4951.00 | 9.00  | 0.0      |

Yes

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

| Name       | From Node | To Node  | Type    | Length | %Slope | Roughness |
|------------|-----------|----------|---------|--------|--------|-----------|
| ESWMM57    | COA6149   | COA6231  | CONDUIT | 733.0  | 0.1378 | 0.0140    |
| 1F.H.SWMM8 | COA6045   | COA15184 | CONDUIT | 802.0  | 0.3915 | 0.0140    |
| 1F.H.SWMM9 | COA15184  | COA6218  | CONDUIT | 622.0  | 0.0096 | 0.0140    |
| 1F.DSWMM1  | COA6195   | COA6246  | CONDUIT | 636.0  | 0.1431 | 0.0140    |
| 1F.D.SWMM2 | COA6246   | COA29163 | CONDUIT | 120.0  | 0.2917 | 0.0140    |
| 1F.D.SWMM4 | COA7635   | COA7650  | CONDUIT | 613.0  | 0.3932 | 0.0140    |
| 1F.D.SWMM5 | COA7650   | COA7656  | CONDUIT | 386.0  | 0.4041 | 0.0140    |
| ESWMM41    | COA33027  | COA7656  | CONDUIT | 416.0  | 0.7428 | 0.0140    |

|             |           |             |         |        |        |        |
|-------------|-----------|-------------|---------|--------|--------|--------|
| 1F.D.SWMM7  | COA7628   | COA7656     | CONDUIT | 831.0  | 0.7618 | 0.0140 |
| ESWMM42     | COA33007  | COA33027    | CONDUIT | 1096.0 | 3.4235 | 0.0140 |
| ESWMM45     | COA7656   | COA7963.11A | CONDUIT | 319.0  | 0.4702 | 0.0140 |
| 1F.H.SWMM10 | COA6218   | COA19719    | CONDUIT | 369.0  | 0.1463 | 0.0140 |
| ESWMM32     | COA19719  | COA7654     | CONDUIT | 1795.0 | 0.0713 | 0.0140 |
| ESWMM58     | COA6231   | COA6259     | CONDUIT | 298.0  | 0.2349 | 0.0140 |
| ESWMM59     | COA6259   | COA7638     | CONDUIT | 930.0  | 0.1183 | 0.0140 |
| ESWMM60     | COA25807  | COA7638     | CONDUIT | 310.0  | 0.1806 | 0.0140 |
| ESWMM91     | COA25656  | COA25677    | CONDUIT | 670.0  | 0.0403 | 0.0140 |
| ESWMM92     | COA25677  | COA25622    | CONDUIT | 914.0  | 0.0306 | 0.0140 |
| 1F.H.SWMM1  | COA7444   | COA7476     | CONDUIT | 1361.0 | 0.1925 | 0.0140 |
| 1F.H.SWMM2  | COA7476   | COA7518     | CONDUIT | 895.0  | 0.2547 | 0.0140 |
| 1F.H.SWMM3  | COA7518   | COA24834    | CONDUIT | 1804.0 | 0.0815 | 0.0140 |
| 1F.H.SWMM4  | COA24834  | COA8985     | CONDUIT | 1437.0 | 0.1621 | 0.0140 |
| ESWMM5      | COA8985   | COA24859    | CONDUIT | 442.0  | 0.4344 | 0.0140 |
| ESWMM6      | COA24859  | COA9015     | CONDUIT | 670.0  | 0.0343 | 0.0140 |
| ESWMM93     | COA25622  | COA25105    | CONDUIT | 752.0  | 0.2354 | 0.0140 |
| ESWMM94     | COA25105  | COA25109    | CONDUIT | 280.0  | 0.1571 | 0.0140 |
| ESWMM96     | COA25117  | COA25048    | CONDUIT | 342.0  | 0.0848 | 0.0140 |
| ESWMM97     | COA25048  | COA25034    | CONDUIT | 747.0  | 0.1473 | 0.0140 |
| ESWMM98     | COA25034  | COA9045     | CONDUIT | 1976.0 | 0.1088 | 0.0140 |
| ESWMM61     | COA25807  | COA25349    | CONDUIT | 2789.0 | 0.2840 | 0.0140 |
| ESWMM62     | COA25349  | COA25352    | CONDUIT | 60.0   | 0.3333 | 0.0140 |
| ESWMM63     | COA25352  | COA7815     | CONDUIT | 305.0  | 0.3639 | 0.0140 |
| ESWMM64     | COA7815   | COA25253    | CONDUIT | 1481.0 | 0.1229 | 0.0140 |
| ESWMM65     | COA7977   | COA25253    | CONDUIT | 20.0   | 1.4001 | 0.0140 |
| ESWMM66     | COA7977   | COA25238    | CONDUIT | 137.0  | 0.3723 | 0.0140 |
| ESWMM67     | COA25238  | COA25240    | CONDUIT | 23.0   | 0.2174 | 0.0140 |
| ESWMM68     | COA25240  | COA22584    | CONDUIT | 490.0  | 0.2612 | 0.0140 |
| ESWMM69     | COA22584  | COA9260     | CONDUIT | 560.0  | 0.2268 | 0.0140 |
| ESWMM30     | COA7714   | COA7740     | CONDUIT | 405.0  | 0.1111 | 0.0140 |
| ESWMM29     | COA7740   | COA7830     | CONDUIT | 1028.0 | 0.1566 | 0.0140 |
| ESWMM28     | COA7830   | COA7865     | CONDUIT | 391.0  | 0.1611 | 0.0140 |
| ESWMM27     | COA7865   | COA7908     | CONDUIT | 355.0  | 0.0535 | 0.0140 |
| ESWMM26     | COA7912   | COA7908     | CONDUIT | 13.0   | 5.2379 | 0.0140 |
| ESWMM25     | COA7912   | COA7955     | CONDUIT | 360.0  | 0.1083 | 0.0140 |
| ESWMM24     | COA7955   | COA22517    | CONDUIT | 968.0  | 0.1333 | 0.0140 |
| ESWMM50     | COA7870   | COA29178    | CONDUIT | 441.0  | 0.1020 | 0.0140 |
| ESWMM51     | COA7870   | COA7861     | CONDUIT | 517.0  | 1.8901 | 0.0140 |
| ESWMM52     | COA7861   | COA32878    | CONDUIT | 350.0  | 0.2743 | 0.0140 |
| BLUPIPE     | COA32878  | BLUWEIR     | CONDUIT | 300.0  | 0.0067 | 0.0140 |
| ESWMM46     | COA7717   | COA7716     | CONDUIT | 11.0   | 4.3678 | 0.0140 |
| ESWMM47     | COA7716   | COA7766JB   | CONDUIT | 725.0  | 0.5821 | 0.0140 |
| ESWMM48     | COA7769JB | COA7766JB   | CONDUIT | 78.0   | 0.6026 | 0.0140 |
| ESWMM49     | COA32865  | COA7769JB   | CONDUIT | 307.0  | 0.3225 | 0.0140 |
| ESWMM54     | COA7848   | COA7830     | CONDUIT | 1435.0 | 0.1951 | 0.0140 |
| ESWMM55     | COA7830   | COA7816     | CONDUIT | 1092.0 | 0.0778 | 0.0140 |
| ESWMM56     | COA7816   | COA7815     | CONDUIT | 739.0  | 0.0825 | 0.0140 |
| ESWMM95     | COA25109  | COA25117    | CONDUIT | 389.0  | 0.1517 | 0.0140 |
| 48SDTOBPS   | COA7766JB | BPSINLET    | CONDUIT | 60.0   | 0.1000 | 0.0140 |
| ESWMM23     | COA9248   | COA22517    | CONDUIT | 821.0  | 0.4592 | 0.0140 |
| ESWMM22     | COA22517  | COA9310     | CONDUIT | 1089.0 | 0.1093 | 0.0140 |
| ESWMM21     | COA9310   | COA9348     | CONDUIT | 1101.0 | 0.2516 | 0.0140 |
| ESWMM20     | COA9348   | COA9344     | CONDUIT | 373.0  | 0.1287 | 0.0140 |
| ESWMM19     | COA9344   | COA9340     | CONDUIT | 375.0  | 0.1493 | 0.0140 |
| ESWMM18     | COA9340   | COA22250    | CONDUIT | 346.0  | 0.1532 | 0.0140 |
| ESWMM17     | COA22250  | COA22429    | CONDUIT | 366.0  | 0.0820 | 0.0140 |
| ESWMM16     | COA22429  | COA13866    | CONDUIT | 361.0  | 0.4017 | 0.0140 |
| ESWMM70     | COA9260   | COA13866    | CONDUIT | 1622.0 | 0.1178 | 0.0140 |
| ESWMM15     | COA24930  | COA13866    | CONDUIT | 713.0  | 0.0898 | 0.0140 |
| ESWMM71     | COA13866  | COA7963.T   | CONDUIT | 1026.0 | 0.3070 | 0.0140 |
| ESWMM72     | COA32981  | COA9121     | CONDUIT | 80.0   | 0.2875 | 0.0140 |
| ESWMM7      | COA9015   | COA9069     | CONDUIT | 1428.0 | 0.1366 | 0.0140 |
| ESWMM12     | COA24902  | COA24902A   | CONDUIT | 479.0  | 0.0271 | 0.0140 |
| ESWMM9      | COA9069   | COA24902A   | CONDUIT | 514.0  | 0.2218 | 0.0140 |
| ESWMM99     | COA9045   | COA24902    | CONDUIT | 740.0  | 0.1649 | 0.0140 |
| ESWMM8      | COA9069   | COA24997    | CONDUIT | 19.0   | 4.5838 | 0.0140 |
| ESWMM10     | COA24997  | COA9083     | CONDUIT | 384.0  | 0.2109 | 0.0140 |
| ESWMM11     | COA24902A | COA9083     | CONDUIT | 376.0  | 1.2474 | 0.0140 |
| ESWMM90     | COA9407   | COA9426     | CONDUIT | 393.0  | 0.3384 | 0.0140 |
| ESWMM89     | COA9426   | COA22194    | CONDUIT | 356.0  | 0.2865 | 0.0140 |
| ESWMM88     | COA22194  | COA22191    | CONDUIT | 296.0  | 0.4088 | 0.0140 |



|                     |                  |                |            |        |        |        |
|---------------------|------------------|----------------|------------|--------|--------|--------|
| ESWMM87             | COA22191         | COA9431        | CONDUIT    | 328.0  | 0.4634 | 0.0140 |
| ESWMM86             | COA9431          | COA22176       | CONDUIT    | 172.0  | 0.5523 | 0.0140 |
| ESWMM85             | COA22176         | COA22168       | CONDUIT    | 612.0  | 0.3088 | 0.0140 |
| ESWMM84             | COA22168         | COA22174       | CONDUIT    | 337.0  | 2.3953 | 0.0140 |
| ESWMM83             | COA22174         | COA22155       | CONDUIT    | 386.0  | 0.0363 | 0.0140 |
| ESWMM82             | COA22155         | COA9141        | CONDUIT    | 510.0  | 0.0275 | 0.0240 |
| ESWMM73             | COA9121          | COA9129        | CONDUIT    | 327.0  | 0.2813 | 0.0240 |
| ESWMM76             | COA9141          | COA9143        | CONDUIT    | 210.0  | 0.4429 | 0.0240 |
| ESWMM77             | COA9143          | COA22145       | CONDUIT    | 377.0  | 0.3793 | 0.0240 |
| ESWMM78             | COA22145         | COA22144       | CONDUIT    | 370.0  | 0.2865 | 0.0240 |
| ESWMM79             | COA22144         | COA22143       | CONDUIT    | 202.0  | 0.3960 | 0.0240 |
| ESWMM80             | COA22143         | COA10456       | CONDUIT    | 301.0  | 0.4086 | 0.0240 |
| ESWMM81             | COA10456         | COA10457       | CONDUIT    | 243.0  | 6.4454 | 0.0240 |
| ESWMM14             | COA24916         | COA24930       | CONDUIT    | 717.0  | 0.1325 | 0.0140 |
| ESWMM13             | IRON14TH         | COA24916       | CONDUIT    | 659.0  | 0.1199 | 0.0140 |
| ESWMM125            | COA7963.05A      | COA7963.05M    | CONDUIT    | 1793.0 | 1.0759 | 0.0140 |
| ESWMM71A            | COA7963.T        | COA32981       | CONDUIT    | 149.0  | 0.5503 | 0.0140 |
| ESWMM126            | TINGLEYPARKSURGE | POND           | CONDUIT    | 50.0   | 0.0040 | 0.0140 |
| ESWMM127            | AIRQUALITYPOND   | COA7963.11A    | CONDUIT    | 240.0  | 0.2458 | 0.0140 |
| ESWMM128            | COA33027         | AIRQUALITYPOND | CONDUIT    | 149.0  | 3.2836 | 0.0140 |
| ESWMM129            | COA7963.05M      | AIRQUALITYPOND | CONDUIT    | 69.0   | 0.6232 | 0.0140 |
| ESWMM132            | COA32878.A       | COA32878       | CONDUIT    | 60.0   | 0.9834 | 0.0140 |
| 60SDTOBPS           | COA7769JB        | BPSINLET       | CONDUIT    | 60.0   | 0.8834 | 0.0140 |
| ESWMM134            | COA32878.B       | COA7769JB      | CONDUIT    | 595.0  | 0.2941 | 0.0140 |
| ESWMM135            | COA9083          | APSINLET       | CONDUIT    | 150.7  | 0.0730 | 0.0140 |
| ESWMM53             | COA7848          | BLDWEIR        | CONDUIT    | 308.0  | 0.3474 | 0.0140 |
| ESWMM75             | COA22410         | COA9141        | CONDUIT    | 100.0  | 0.1500 | 0.0240 |
| 1F.H.SWMM5          | COA22169         | COA9453        | CONDUIT    | 194.0  | 0.1443 | 0.0140 |
| 1F.H.SWMM6          | COA9453          | COA22127       | CONDUIT    | 870.0  | 0.1486 | 0.0140 |
| 1F.H.SWMM7          | COA22127         | COA10456       | CONDUIT    | 1157.0 | 0.5272 | 0.0140 |
| ESWMM201            | COA9229          | COA32823       | CONDUIT    | 230.0  | 0.0261 | 0.0140 |
| ESWMM203            | COA32823         | UPSINLET       | CONDUIT    | 103.0  | 1.5730 | 0.0140 |
| ESWMM200            | COA9152          | COA9229        | CONDUIT    | 1665.0 | 0.0913 | 0.0140 |
| ESWMM202            | COA32823         | MHB19A         | CONDUIT    | 426.0  | 0.0211 | 0.0140 |
| ESWMM500            | COA24859         | COA24997       | CONDUIT    | 2116.0 | 0.1181 | 0.0140 |
| ESWMM74             | COA9129          | MHB22410       | CONDUIT    | 501.0  | 0.3633 | 0.0240 |
| ESWMM74A            | MHB22410         | COA22410       | CONDUIT    | 24.0   | 0.2500 | 0.0240 |
| 1F.C.SWMM1          | COA32878.A       | COA32878.B     | CONDUIT    | 100.0  | 0.9200 | 0.0140 |
| 1F.CSWMM2           | COA7963.11A      | 1F.C.INLET     | CONDUIT    | 400.0  | 0.1675 | 0.0100 |
| 1F.C3               | 1F.C.INLET       | WAREHOUSEPOND  | CONDUIT    | 400.0  | 0.2500 | 0.0100 |
| 1F.C.4              | WAREHOUSEPOND    | 1F.C.OUT       | CONDUIT    | 400.0  | 0.2500 | 0.0100 |
| 1F.CSWMM5           | 1F.C.OUT         | COA7716        | CONDUIT    | 400.0  | 0.0300 | 0.0100 |
| 1F.D.SWMM8          | 1F.D.MH1         | COA7870        | CONDUIT    | 2300.0 | 4.5373 | 0.0140 |
| 1F.E.SWMM1          | COA29163         | COA29132       | CONDUIT    | 400.0  | 0.0400 | 0.0140 |
| 1F.E.SWMM2          | COA29132         | 1F.E.MHA       | CONDUIT    | 300.0  | 0.1167 | 0.0140 |
| 1F.E.SWMM4          | SANTABARBARAPOND | 1F.E.MHB       | CONDUIT    | 100.0  | 0.1500 | 0.0140 |
| 1F.E.SWMM5          | 1F.E.MHB         | COA7628        | CONDUIT    | 224.0  | 0.1830 | 0.0140 |
| 1F.H.SWMM11         | COA7654          | 1F.H.MH1       | CONDUIT    | 500.0  | 0.0340 | 0.0140 |
| 1F.H.SWMM12         | 1F.H.MH1         | NORTHWELLSPARK | CONDUIT    | 100.0  | 0.5000 | 0.0100 |
| 1F.H.SWMM13         | NORTHWELLSPARK   | 1F.H.MH2       | CONDUIT    | 100.0  | 0.5000 | 0.0140 |
| 1F.H.SWMM14         | 1F.H.MH2         | COA7714        | CONDUIT    | 757.0  | 0.0476 | 0.0140 |
| 1F.J.SWMM3          | 1F.E.MHA         | 1F.E.MHB       | CONDUIT    | 100.0  | 0.6500 | 0.0140 |
| BROADWAYPUMPSTATION | BPSINLET         | BPSOUTLET      | TYPE4 PUMP |        |        |        |
| ALCALDEPUMPSTATION  | APSINLET         | APSOUTLET      | TYPE4 PUMP |        |        |        |
| URBANPUMPSTATION    | UPSINLET         | COA9248        | TYPE4 PUMP |        |        |        |
| BARELASPUMPSTATION  | COA10457         | BaPSOUTLET     | TYPE4 PUMP |        |        |        |
| WEIRIRON14TH        | IRON14TH         | COA24902       | WEIR       |        |        |        |
| WEIRBROADWAY        | BLUWEIR          | BLDWEIR        | WEIR       |        |        |        |
| BR21OUTLET          | BR21POND         | 1F.D.MH1       | OUTLET     |        |        |        |

\*\*\*\*\*  
Cross Section Summary  
\*\*\*\*\*

| Conduit    | Shape    | Full Depth | Full Area | Hyd. Rad. | Max. Width | No. of Barrels | Full Flow |
|------------|----------|------------|-----------|-----------|------------|----------------|-----------|
| ESWMM57    | CIRCULAR | 3.50       | 9.62      | 0.88      | 3.50       | 1              | 34.68     |
| 1F.H.SWMM8 | CIRCULAR | 4.00       | 12.57     | 1.00      | 4.00       | 1              | 83.46     |
| 1F.H.SWMM9 | CIRCULAR | 4.00       | 12.57     | 1.00      | 4.00       | 1              | 13.10     |
| 1F.DSWMM1  | CIRCULAR | 4.00       | 12.57     | 1.00      | 4.00       | 1              | 50.45     |
| 1F.D.SWMM2 | CIRCULAR | 4.00       | 12.57     | 1.00      | 4.00       | 1              | 72.04     |



|             |          |      |       |      |      |   |        |
|-------------|----------|------|-------|------|------|---|--------|
| 1F.D.SWMM4  | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 83.63  |
| 1F.D.SWMM5  | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 84.80  |
| ESWMM41     | CIRCULAR | 2.00 | 3.14  | 0.50 | 2.00 | 1 | 18.10  |
| 1F.D.SWMM7  | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 116.41 |
| ESWMM42     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 246.80 |
| ESWMM45     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 91.46  |
| 1F.H.SWMM10 | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 51.03  |
| ESWMM32     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 35.62  |
| ESWMM58     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 64.65  |
| ESWMM59     | CIRCULAR | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 62.80  |
| ESWMM60     | CIRCULAR | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 77.61  |
| ESWMM91     | CIRCULAR | 3.00 | 7.07  | 0.75 | 3.00 | 1 | 12.43  |
| ESWMM92     | CIRCULAR | 3.00 | 7.07  | 0.75 | 3.00 | 1 | 10.84  |
| 1F.H.SWMM1  | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 58.52  |
| 1F.H.SWMM2  | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 67.32  |
| 1F.H.SWMM3  | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 38.08  |
| 1F.H.SWMM4  | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 53.71  |
| ESWMM5      | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 87.91  |
| ESWMM6      | CIRCULAR | 3.00 | 7.07  | 0.75 | 3.00 | 1 | 11.48  |
| ESWMM93     | CIRCULAR | 3.00 | 7.07  | 0.75 | 3.00 | 1 | 30.05  |
| ESWMM94     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 52.87  |
| ESWMM96     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 38.84  |
| ESWMM97     | CIRCULAR | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 92.80  |
| ESWMM98     | CIRCULAR | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 79.77  |
| ESWMM61     | CIRCULAR | 5.50 | 23.76 | 1.38 | 5.50 | 1 | 166.17 |
| ESWMM62     | CIRCULAR | 5.50 | 23.76 | 1.38 | 5.50 | 1 | 180.03 |
| ESWMM63     | CIRCULAR | 5.50 | 23.76 | 1.38 | 5.50 | 1 | 188.11 |
| ESWMM64     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 137.86 |
| ESWMM65     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 465.33 |
| ESWMM66     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 239.94 |
| ESWMM67     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 183.36 |
| ESWMM68     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 200.99 |
| ESWMM69     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 187.28 |
| ESWMM30     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 44.46  |
| ESWMM29     | CIRCULAR | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 72.26  |
| ESWMM28     | CIRCULAR | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 73.30  |
| ESWMM27     | CIRCULAR | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 55.95  |
| ESWMM26     | CIRCULAR | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 553.49 |
| ESWMM25     | CIRCULAR | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 79.60  |
| ESWMM24     | CIRCULAR | 5.50 | 23.76 | 1.38 | 5.50 | 1 | 113.83 |
| ESWMM50     | CIRCULAR | 3.00 | 7.07  | 0.75 | 3.00 | 1 | 19.78  |
| ESWMM51     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 183.38 |
| ESWMM52     | CIRCULAR | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 95.63  |
| BLUPIPE     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 32.11  |
| ESWMM46     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 2 | 278.76 |
| ESWMM47     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 2 | 101.76 |
| ESWMM48     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 103.54 |
| ESWMM49     | CIRCULAR | 3.50 | 9.62  | 0.88 | 3.50 | 1 | 53.05  |
| ESWMM54     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 173.71 |
| ESWMM55     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 109.72 |
| ESWMM56     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 112.98 |
| ESWMM95     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 51.95  |
| 48SDTOBPS   | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 42.18  |
| ESWMM23     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 90.39  |
| ESWMM22     | CIRCULAR | 5.50 | 23.76 | 1.38 | 5.50 | 1 | 103.08 |
| ESWMM21     | CIRCULAR | 5.50 | 23.76 | 1.38 | 5.50 | 1 | 156.41 |
| ESWMM20     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 141.07 |
| ESWMM19     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 151.97 |
| ESWMM18     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 153.91 |
| ESWMM17     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 112.59 |
| ESWMM16     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 249.24 |
| ESWMM70     | CIRCULAR | 7.00 | 38.48 | 1.75 | 7.00 | 1 | 203.56 |
| ESWMM15     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 117.82 |
| ESWMM71     | CIRCULAR | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 469.28 |
| ESWMM72     | CIRCULAR | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 454.12 |
| ESWMM7      | CIRCULAR | 3.00 | 7.07  | 0.75 | 3.00 | 1 | 22.89  |
| ESWMM12     | CIRCULAR | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 64.79  |
| ESWMM9      | CIRCULAR | 3.00 | 7.07  | 0.75 | 3.00 | 1 | 29.17  |
| ESWMM99     | CIRCULAR | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 98.20  |
| ESWMM8      | CIRCULAR | 3.00 | 7.07  | 0.75 | 3.00 | 1 | 132.60 |
| ESWMM10     | CIRCULAR | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 61.26  |
| ESWMM11     | CIRCULAR | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 270.11 |



|             |             |      |       |      |      |   |         |
|-------------|-------------|------|-------|------|------|---|---------|
| ESWMM90     | CIRCULAR    | 3.50 | 9.62  | 0.88 | 3.50 | 1 | 54.35   |
| ESWMM89     | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 71.40   |
| ESWMM88     | CIRCULAR    | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 116.75  |
| ESWMM87     | CIRCULAR    | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 124.31  |
| ESWMM86     | CIRCULAR    | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 135.71  |
| ESWMM85     | CIRCULAR    | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 101.48  |
| ESWMM84     | CIRCULAR    | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 374.29  |
| ESWMM83     | CIRCULAR    | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 46.06   |
| ESWMM82     | CIRCULAR    | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 23.37   |
| ESWMM73     | CIRCULAR    | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 262.05  |
| ESWMM76     | CIRCULAR    | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 328.77  |
| ESWMM77     | CIRCULAR    | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 304.27  |
| ESWMM78     | CIRCULAR    | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 264.43  |
| ESWMM79     | CIRCULAR    | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 310.91  |
| ESWMM80     | CIRCULAR    | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 315.82  |
| ESWMM81     | CIRCULAR    | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 1254.27 |
| ESWMM14     | CIRCULAR    | 5.50 | 23.76 | 1.38 | 5.50 | 1 | 113.50  |
| ESWMM13     | CIRCULAR    | 5.50 | 23.76 | 1.38 | 5.50 | 1 | 107.96  |
| ESWMM125    | CIRCULAR    | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 250.85  |
| ESWMM71A    | CIRCULAR    | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 628.30  |
| ESWMM126    | CIRCULAR    | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 53.56   |
| ESWMM127    | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 66.13   |
| ESWMM128    | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 241.70  |
| ESWMM129    | CIRCULAR    | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 190.92  |
| ESWMM132    | CIRCULAR    | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 181.08  |
| 6OSDFOBPS   | CIRCULAR    | 5.00 | 19.63 | 1.25 | 5.00 | 1 | 227.30  |
| ESWMM134    | CIRCULAR    | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 99.03   |
| ESWMM135    | CIRCULAR    | 5.50 | 23.76 | 1.38 | 5.50 | 1 | 84.26   |
| ESWMM53     | CIRCULAR    | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 231.79  |
| ESWMM75     | CIRCULAR    | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 191.34  |
| 1F.H.SWMM5  | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 50.67   |
| 1F.H.SWMM6  | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 51.42   |
| 1F.H.SWMM7  | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 96.85   |
| ESWMM201    | CIRCULAR    | 1.50 | 1.77  | 0.38 | 1.50 | 1 | 1.58    |
| ESWMM203    | CIRCULAR    | 3.50 | 9.62  | 0.88 | 3.50 | 1 | 117.17  |
| ESWMM200    | CIRCULAR    | 6.00 | 28.27 | 1.50 | 6.00 | 1 | 118.82  |
| ESWMM202    | CIRCULAR    | 6.50 | 33.18 | 1.63 | 6.50 | 1 | 70.76   |
| ESWMM500    | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 45.85   |
| ESWMM74     | CIRCULAR    | 8.00 | 50.27 | 2.00 | 8.00 | 1 | 297.77  |
| ESWMM74A    | RECT CLOSED | 8.00 | 53.36 | 1.82 | 6.67 | 1 | 246.13  |
| 1F.C.SWMM1  | CIRCULAR    | 4.50 | 15.90 | 1.13 | 4.50 | 1 | 175.15  |
| 1F.CSWMM2   | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 76.43   |
| 1F.C3       | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 93.37   |
| 1F.C.4      | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 93.37   |
| 1F.CSWMM5   | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 32.34   |
| 1F.D.SWMM8  | CIRCULAR    | 2.00 | 3.14  | 0.50 | 2.00 | 1 | 44.75   |
| 1F.E.SWMM1  | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 26.68   |
| 1F.E.SWMM2  | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 45.56   |
| 1F.E.SWMM4  | CIRCULAR    | 2.00 | 3.14  | 0.50 | 2.00 | 1 | 8.14    |
| 1F.E.SWMM5  | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 57.06   |
| 1F.H.SWMM11 | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 24.59   |
| 1F.H.SWMM12 | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 132.04  |
| 1F.H.SWMM13 | CIRCULAR    | 3.00 | 7.07  | 0.75 | 3.00 | 1 | 43.79   |
| 1F.H.SWMM14 | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 29.09   |
| 1F.J.SWMM3  | CIRCULAR    | 4.00 | 12.57 | 1.00 | 4.00 | 1 | 107.54  |

\*\*\*\*\*  
Control Actions Taken  
\*\*\*\*\*

| *****                      | Volume    | Depth  |
|----------------------------|-----------|--------|
| Runoff Quantity Continuity | acre-feet | inches |
| *****                      |           |        |
| Total Precipitation .....  | 527.113   | 2.600  |
| Evaporation Loss .....     | 0.000     | 0.000  |
| Infiltration Loss .....    | 127.079   | 0.627  |
| Surface Runoff .....       | 360.760   | 1.779  |
| Final Surface Storage .... | 39.276    | 0.194  |
| Continuity Error (%) ..... | -0.000    |        |

```

*****
Flow Routing Continuity
*****
               Volume      Volume
               acre-feet   10^6 gal
-----
Dry Weather Inflow ..... 0.000      0.000
Wet Weather Inflow ..... 360.760    117.559
Groundwater Inflow ..... 0.000      0.000
RDII Inflow ..... 0.000      0.000
External Inflow ..... 6.751      2.200
External Outflow ..... 357.313    116.436
Internal Outflow ..... 0.000      0.000
Storage Losses ..... 0.000      0.000
Initial Stored Volume .... 0.000      0.000
Final Stored Volume ..... 0.402      0.131
Continuity Error (%) ..... 2.666

```

```

*****
Highest Continuity Errors
*****

```

```

Node COA29163 (5.19%)
Node COA6218 (3.73%)
Node COA6246 (3.67%)
Node COA24834 (-3.57%)
Node COA9348 (3.52%)

```

```

*****
Time-Step Critical Elements
*****

```

```

Link ESWMM74A (2.00%)

```

```

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

```

```

Link ESWMM81 (2)
Link 60SDTOBPS (2)
Link 48SDTOBPS (2)
Link URBANPUMPSTATION (1)
Link ESWMM48 (1)

```

```

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

```

```

Minimum Time Step      : 0.50 sec
Average Time Step      : 0.99 sec
Maximum Time Step      : 1.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.16

```

```

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

```

| Subcatchment | Total<br>Precip<br>in | Total<br>Runon<br>in | Total<br>Evap<br>in | Total<br>Infil<br>in | Total<br>Runoff<br>in | Total<br>Runoff<br>10^6 gal | Peak<br>Runoff<br>CFS | Runoff<br>Coeff |
|--------------|-----------------------|----------------------|---------------------|----------------------|-----------------------|-----------------------------|-----------------------|-----------------|
| A1           | 2.60                  | 0.00                 | 0.00                | 0.87                 | 1.66                  | 1.46                        | 18.12                 | 0.640           |
| A10          | 2.60                  | 0.00                 | 0.00                | 0.87                 | 1.65                  | 2.25                        | 24.64                 | 0.635           |
| A11          | 2.60                  | 0.00                 | 0.00                | 0.68                 | 1.85                  | 1.83                        | 31.47                 | 0.712           |
| A12          | 2.60                  | 0.00                 | 0.00                | 1.01                 | 1.51                  | 4.41                        | 31.40                 | 0.581           |
| A13          | 2.60                  | 0.00                 | 0.00                | 0.66                 | 1.85                  | 6.20                        | 42.35                 | 0.712           |
| A15          | 2.60                  | 0.00                 | 0.00                | 0.62                 | 1.90                  | 2.39                        | 34.15                 | 0.731           |
| A18          | 2.60                  | 0.00                 | 0.00                | 0.99                 | 1.54                  | 1.77                        | 24.46                 | 0.594           |
| A2           | 2.60                  | 0.00                 | 0.00                | 1.15                 | 0.00                  | 0.00                        | 0.00                  | 0.000           |
| A3           | 2.60                  | 0.00                 | 0.00                | 1.34                 | 1.19                  | 2.86                        | 30.31                 | 0.458           |



# 09

|       |      |      |      |      |      |      |       |       |
|-------|------|------|------|------|------|------|-------|-------|
| A4    | 2.60 | 0.00 | 0.00 | 1.03 | 1.52 | 0.51 | 13.38 | 0.584 |
| A5    | 2.60 | 0.00 | 0.00 | 1.02 | 1.51 | 3.22 | 30.62 | 0.581 |
| A6    | 2.60 | 0.00 | 0.00 | 1.24 | 1.30 | 1.67 | 20.90 | 0.500 |
| A7    | 2.60 | 0.00 | 0.00 | 0.93 | 1.60 | 1.66 | 24.08 | 0.614 |
| A8    | 2.60 | 0.00 | 0.00 | 0.79 | 1.73 | 1.04 | 23.40 | 0.665 |
| A9    | 2.60 | 0.00 | 0.00 | 0.79 | 1.73 | 1.37 | 22.71 | 0.665 |
| B1    | 2.60 | 0.00 | 0.00 | 0.62 | 1.90 | 2.06 | 29.88 | 0.729 |
| B10   | 2.60 | 0.00 | 0.00 | 0.64 | 1.88 | 0.71 | 17.34 | 0.722 |
| B11   | 2.60 | 0.00 | 0.00 | 1.43 | 1.15 | 0.39 | 11.10 | 0.443 |
| B12   | 2.60 | 0.00 | 0.00 | 0.54 | 1.97 | 0.51 | 15.14 | 0.759 |
| B13   | 2.60 | 0.00 | 0.00 | 0.71 | 1.81 | 0.98 | 19.53 | 0.694 |
| B14   | 2.60 | 0.00 | 0.00 | 0.28 | 2.24 | 1.71 | 39.76 | 0.860 |
| B15   | 2.60 | 0.00 | 0.00 | 0.18 | 2.32 | 2.63 | 36.32 | 0.892 |
| B16   | 2.60 | 0.00 | 0.00 | 0.26 | 2.25 | 1.83 | 33.26 | 0.865 |
| B17   | 2.60 | 0.00 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00  | 0.000 |
| B18   | 2.60 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00  | 0.000 |
| B20   | 2.60 | 0.00 | 0.00 | 0.26 | 2.24 | 1.03 | 29.73 | 0.863 |
| B21   | 2.60 | 0.00 | 0.00 | 0.59 | 1.93 | 1.62 | 29.60 | 0.744 |
| B22   | 2.60 | 0.00 | 0.00 | 0.56 | 1.97 | 1.79 | 29.56 | 0.757 |
| B23   | 2.60 | 0.00 | 0.00 | 0.02 | 2.48 | 0.63 | 19.50 | 0.954 |
| B24   | 2.60 | 0.00 | 0.00 | 0.24 | 0.00 | 0.00 | 0.00  | 0.000 |
| B25   | 2.60 | 0.00 | 0.00 | 0.07 | 2.43 | 2.62 | 36.35 | 0.934 |
| B26   | 2.60 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00  | 0.000 |
| B27   | 2.60 | 0.00 | 0.00 | 0.22 | 2.28 | 3.20 | 39.07 | 0.879 |
| B28   | 2.60 | 0.00 | 0.00 | 0.59 | 1.92 | 3.38 | 31.67 | 0.738 |
| B29   | 2.60 | 0.00 | 0.00 | 0.73 | 1.78 | 5.09 | 34.99 | 0.684 |
| B3    | 2.60 | 0.00 | 0.00 | 0.64 | 1.90 | 0.26 | 10.25 | 0.731 |
| B30   | 2.60 | 0.00 | 0.00 | 0.33 | 2.18 | 3.06 | 38.80 | 0.837 |
| B31   | 2.60 | 0.00 | 0.00 | 0.27 | 2.23 | 2.64 | 34.75 | 0.858 |
| B32   | 2.60 | 0.00 | 0.00 | 0.52 | 1.99 | 2.16 | 33.49 | 0.765 |
| B33   | 2.60 | 0.00 | 0.00 | 0.62 | 1.90 | 2.63 | 29.54 | 0.730 |
| B34   | 2.60 | 0.00 | 0.00 | 0.45 | 2.06 | 2.99 | 40.56 | 0.793 |
| B35   | 2.60 | 0.00 | 0.00 | 0.33 | 2.18 | 1.90 | 41.36 | 0.839 |
| B36   | 2.60 | 0.00 | 0.00 | 0.41 | 2.10 | 1.45 | 34.23 | 0.8   |
| B4    | 2.60 | 0.00 | 0.00 | 0.95 | 1.58 | 0.26 | 8.48  | 0.6   |
| B40   | 2.60 | 0.00 | 0.00 | 0.29 | 2.22 | 2.20 | 54.14 | 0.854 |
| B41   | 2.60 | 0.00 | 0.00 | 0.10 | 1.15 | 0.77 | 11.31 | 0.442 |
| B5    | 2.60 | 0.00 | 0.00 | 0.64 | 1.88 | 3.34 | 31.12 | 0.722 |
| B6    | 2.60 | 0.00 | 0.00 | 0.62 | 1.90 | 0.36 | 10.61 | 0.729 |
| B7    | 2.60 | 0.00 | 0.00 | 0.78 | 1.74 | 0.54 | 18.58 | 0.669 |
| B8    | 2.60 | 0.00 | 0.00 | 0.65 | 1.87 | 1.20 | 22.18 | 0.720 |
| BR1   | 2.60 | 0.00 | 0.00 | 0.38 | 2.15 | 1.69 | 70.88 | 0.827 |
| BR10  | 2.60 | 0.00 | 0.00 | 1.08 | 1.49 | 1.47 | 42.40 | 0.572 |
| BR11  | 2.60 | 0.00 | 0.00 | 0.53 | 2.00 | 0.53 | 31.84 | 0.769 |
| BR12  | 2.60 | 0.00 | 0.00 | 1.40 | 1.19 | 0.72 | 5.47  | 0.457 |
| BR13  | 2.60 | 0.00 | 0.00 | 0.46 | 2.06 | 1.63 | 55.48 | 0.794 |
| BR14  | 2.60 | 0.00 | 0.00 | 0.19 | 2.31 | 1.24 | 37.01 | 0.889 |
| BR16  | 2.60 | 0.00 | 0.00 | 1.45 | 1.14 | 0.80 | 4.82  | 0.437 |
| BR17  | 2.60 | 0.00 | 0.00 | 0.65 | 1.89 | 2.52 | 60.64 | 0.726 |
| BR18  | 2.60 | 0.00 | 0.00 | 0.39 | 2.14 | 1.92 | 57.19 | 0.822 |
| BR19  | 2.60 | 0.00 | 0.00 | 0.40 | 2.12 | 1.51 | 42.71 | 0.815 |
| BR2   | 2.60 | 0.00 | 0.00 | 0.89 | 1.64 | 0.25 | 13.33 | 0.630 |
| BR20  | 2.60 | 0.00 | 0.00 | 0.18 | 2.33 | 1.53 | 33.72 | 0.895 |
| BR21  | 2.60 | 0.00 | 0.00 | 0.26 | 2.26 | 1.46 | 64.21 | 0.868 |
| BR3   | 2.60 | 0.00 | 0.00 | 0.53 | 2.00 | 2.02 | 55.96 | 0.770 |
| BR4   | 2.60 | 0.00 | 0.00 | 0.35 | 2.17 | 2.33 | 78.00 | 0.836 |
| BR5   | 2.60 | 0.00 | 0.00 | 0.47 | 2.07 | 0.60 | 32.53 | 0.797 |
| BR6   | 2.60 | 0.00 | 0.00 | 0.32 | 2.19 | 1.70 | 42.89 | 0.841 |
| BR9   | 2.60 | 0.00 | 0.00 | 0.26 | 2.25 | 3.37 | 45.33 | 0.864 |
| B19.1 | 2.60 | 0.00 | 0.00 | 0.24 | 2.27 | 0.94 | 52.47 | 0.874 |
| B19.2 | 2.60 | 0.00 | 0.00 | 0.24 | 2.27 | 0.74 | 44.71 | 0.874 |

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

| Node | Type | Average<br>Depth<br>Feet | Maximum<br>Depth<br>Feet | Maximum<br>HGL<br>Feet | Time of Max<br>Occurrence<br>days hr:min |
|------|------|--------------------------|--------------------------|------------------------|------------------------------------------|
|------|------|--------------------------|--------------------------|------------------------|------------------------------------------|

|           |          |      |        |         |   |       |
|-----------|----------|------|--------|---------|---|-------|
| COA6149   | JUNCTION | 0.11 | 2.05   | 4958.56 | 0 | 02:03 |
| COA6231   | JUNCTION | 0.19 | 3.19   | 4958.25 | 0 | 02:04 |
| COA6045   | JUNCTION | 0.27 | 7.83   | 4965.34 | 0 | 01:31 |
| COA15184  | JUNCTION | 0.61 | 10.24  | 4964.43 | 0 | 02:15 |
| COA6218   | JUNCTION | 0.55 | 9.78   | 4963.44 | 0 | 03:13 |
| COA6195   | JUNCTION | 0.14 | 6.95   | 4969.92 | 0 | 01:48 |
| COA6246   | JUNCTION | 0.43 | 7.86   | 4969.92 | 0 | 01:32 |
| COA29163  | JUNCTION | 0.18 | 8.38   | 4970.39 | 0 | 01:41 |
| COA7635   | JUNCTION | 0.08 | 7.29   | 4964.63 | 0 | 01:31 |
| COA7650   | JUNCTION | 0.14 | 8.36   | 4963.29 | 0 | 01:40 |
| COA7656   | JUNCTION | 0.35 | 9.46   | 4962.63 | 0 | 01:38 |
| COA7628   | JUNCTION | 0.21 | 11.03  | 4971.47 | 0 | 01:31 |
| COA29132  | JUNCTION | 0.23 | 14.23  | 4976.08 | 0 | 01:48 |
| COA33027  | JUNCTION | 0.04 | 1.71   | 4958.86 | 0 | 02:22 |
| COA33007  | JUNCTION | 0.01 | 1.21   | 4996.08 | 0 | 00:16 |
| COA7717   | JUNCTION | 0.20 | 9.19   | 4958.73 | 0 | 01:28 |
| COA19719  | JUNCTION | 1.26 | 10.78  | 4963.08 | 0 | 03:09 |
| COA7654   | JUNCTION | 0.67 | 8.60   | 4960.27 | 0 | 02:40 |
| COA7714   | JUNCTION | 0.61 | 7.86   | 4958.00 | 0 | 02:23 |
| COA6259   | JUNCTION | 0.21 | 4.07   | 4957.79 | 0 | 02:04 |
| COA7638   | JUNCTION | 0.78 | 4.61   | 4957.23 | 0 | 01:57 |
| COA25807  | JUNCTION | 0.18 | 3.14   | 4956.32 | 0 | 01:57 |
| COA25349  | JUNCTION | 0.42 | 11.08  | 4956.34 | 0 | 02:01 |
| COA25656  | JUNCTION | 0.55 | 10.44  | 4959.30 | 0 | 02:26 |
| COA25677  | JUNCTION | 0.65 | 10.97  | 4959.56 | 0 | 02:05 |
| COA25622  | JUNCTION | 0.39 | 9.59   | 4957.83 | 0 | 01:45 |
| COA7444   | JUNCTION | 0.29 | 7.72   | 4960.59 | 0 | 01:38 |
| COA7476   | JUNCTION | 0.30 | 8.00   | 4958.32 | 0 | 02:13 |
| COA7518   | JUNCTION | 0.52 | 9.06   | 4957.00 | 0 | 02:26 |
| COA24834  | JUNCTION | 0.62 | 7.37   | 4951.89 | 0 | 03:15 |
| COA8985   | JUNCTION | 0.52 | 11.38  | 4952.14 | 0 | 02:00 |
| COA24859  | JUNCTION | 0.60 | 12.00  | 4950.64 | 0 | 02:01 |
| COA9015   | JUNCTION | 0.07 | 2.76   | 4945.67 | 0 | 01:57 |
| COA25105  | JUNCTION | 0.37 | 10.21  | 4956.52 | 0 | 01:49 |
| COA25117  | JUNCTION | 0.44 | 11.29  | 4956.55 | 0 | 01:50 |
| COA25048  | JUNCTION | 0.37 | 11.36  | 4956.28 | 0 | 01:55 |
| COA25034  | JUNCTION | 0.43 | 10.70  | 4954.52 | 0 | 01:49 |
| COA9045   | JUNCTION | 0.49 | 8.65   | 4950.26 | 0 | 01:49 |
| COA25352  | JUNCTION | 0.43 | 11.32  | 4956.38 | 0 | 02:01 |
| COA7815   | JUNCTION | 0.69 | 13.40  | 4956.88 | 0 | 02:01 |
| COA25253  | JUNCTION | 0.89 | 12.95  | 4954.61 | 0 | 01:52 |
| COA7977   | JUNCTION | 0.57 | 13.01  | 4954.95 | 0 | 01:53 |
| COA25238  | JUNCTION | 0.86 | 13.47  | 4954.67 | 0 | 01:52 |
| COA25240  | JUNCTION | 0.87 | 13.57  | 4954.72 | 0 | 01:52 |
| COA22584  | JUNCTION | 0.63 | 14.49  | 4954.67 | 0 | 01:56 |
| COA9260   | JUNCTION | 0.79 | 14.78  | 4952.80 | 0 | 01:50 |
| COA7740   | JUNCTION | 0.62 | 8.25   | 4957.94 | 0 | 02:23 |
| COA7830   | JUNCTION | 0.77 | 12.00  | 4956.87 | 0 | 01:51 |
| COA7865   | JUNCTION | 0.67 | 10.47  | 4956.81 | 0 | 01:51 |
| COA7908   | JUNCTION | 0.83 | 10.01  | 4956.16 | 0 | 01:54 |
| COA7912   | JUNCTION | 0.29 | 10.68  | 4956.29 | 0 | 01:50 |
| COA7955   | JUNCTION | 1.63 | 12.01  | 4955.50 | 0 | 01:53 |
| COA22517  | JUNCTION | 0.33 | 11.00  | 4954.59 | 0 | 01:57 |
| COA7716   | JUNCTION | 0.35 | 9.23   | 4958.11 | 0 | 01:28 |
| COA7766JB | JUNCTION | 0.66 | 12.33  | 4956.28 | 0 | 01:29 |
| COA7769JB | JUNCTION | 0.43 | 12.87  | 4957.39 | 0 | 01:25 |
| COA32865  | JUNCTION | 0.37 | 11.64  | 4957.13 | 0 | 01:30 |
| COA32878  | JUNCTION | 0.90 | 9.88   | 4956.48 | 0 | 01:57 |
| COA7848   | JUNCTION | 0.20 | 8.72   | 4956.39 | 0 | 01:55 |
| COA7861   | JUNCTION | 0.31 | 43.92  | 4991.68 | 0 | 01:30 |
| COA7870   | JUNCTION | 0.13 | 102.42 | 5060.17 | 0 | 01:30 |
| COA29178  | JUNCTION | 4.82 | 108.57 | 5065.35 | 0 | 01:30 |
| COA7816   | JUNCTION | 0.69 | 13.17  | 4957.36 | 0 | 02:06 |
| COA25109  | JUNCTION | 0.37 | 10.67  | 4956.54 | 0 | 01:47 |
| BPSINLET  | JUNCTION | 0.71 | 17.23  | 4956.12 | 0 | 01:28 |
| COA9310   | JUNCTION | 0.26 | 11.55  | 4953.95 | 0 | 02:03 |
| COA9348   | JUNCTION | 0.40 | 11.79  | 4951.42 | 0 | 01:53 |
| COA9344   | JUNCTION | 3.42 | 15.71  | 4951.54 | 0 | 02:01 |
| COA9340   | JUNCTION | 2.80 | 16.65  | 4952.29 | 0 | 01:52 |
| COA22250  | JUNCTION | 0.41 | 13.58  | 4951.14 | 0 | 01:54 |
| COA22429  | JUNCTION | 0.36 | 13.07  | 4950.33 | 0 | 01:54 |
| COA13866  | JUNCTION | 0.67 | 12.08  | 4947.44 | 0 | 01:54 |



|                       |          |       |       |         |   |       |
|-----------------------|----------|-------|-------|---------|---|-------|
| COA24930              | JUNCTION | 0.38  | 11.05 | 4948.22 | 0 | 02:16 |
| COA24916              | JUNCTION | 0.27  | 10.36 | 4948.61 | 0 | 01:53 |
| COA9248               | JUNCTION | 0.10  | 10.08 | 4957.73 | 0 | 01:54 |
| COA32981              | JUNCTION | 0.73  | 9.45  | 4940.84 | 0 | 02:15 |
| COA9121               | JUNCTION | 0.78  | 9.38  | 4940.54 | 0 | 02:15 |
| COA24902              | JUNCTION | 1.35  | 5.37  | 4944.44 | 0 | 01:51 |
| COA24902A             | JUNCTION | 0.53  | 3.22  | 4942.95 | 0 | 01:51 |
| COA9069               | JUNCTION | 0.13  | 2.77  | 4943.62 | 0 | 01:57 |
| COA24997              | JUNCTION | 0.54  | 7.22  | 4943.36 | 0 | 01:57 |
| COA9083               | JUNCTION | 0.65  | 5.54  | 4940.87 | 0 | 01:52 |
| UPSINLET              | JUNCTION | 0.23  | 5.19  | 4936.66 | 0 | 02:26 |
| COA9407               | JUNCTION | 0.05  | 1.30  | 4945.70 | 0 | 01:30 |
| COA9426               | JUNCTION | 0.07  | 2.03  | 4945.06 | 0 | 01:31 |
| COA22194              | JUNCTION | 0.06  | 1.77  | 4943.77 | 0 | 01:31 |
| COA22191              | JUNCTION | 0.06  | 1.81  | 4942.60 | 0 | 01:32 |
| COA9431               | JUNCTION | 0.19  | 2.24  | 4941.51 | 0 | 01:33 |
| COA22176              | JUNCTION | 0.08  | 2.29  | 4940.74 | 0 | 01:34 |
| COA22168              | JUNCTION | 0.04  | 1.13  | 4937.69 | 0 | 01:35 |
| COA22174              | JUNCTION | 0.52  | 8.04  | 4936.53 | 0 | 01:52 |
| COA22155              | JUNCTION | 0.58  | 8.07  | 4936.42 | 0 | 01:53 |
| COA9141               | JUNCTION | 0.69  | 7.70  | 4935.91 | 0 | 01:55 |
| COA22410              | JUNCTION | 0.81  | 8.26  | 4936.62 | 0 | 01:55 |
| COA9129               | JUNCTION | 0.75  | 9.15  | 4939.39 | 0 | 02:03 |
| COA9143               | JUNCTION | 0.69  | 7.38  | 4934.66 | 0 | 01:53 |
| COA22144              | JUNCTION | 0.66  | 6.20  | 4930.99 | 0 | 01:56 |
| COA22145              | JUNCTION | 0.73  | 7.02  | 4932.87 | 0 | 01:55 |
| COA22143              | JUNCTION | 0.68  | 5.46  | 4929.45 | 0 | 01:54 |
| COA10456              | JUNCTION | 0.40  | 3.06  | 4925.82 | 0 | 01:55 |
| COA10457              | JUNCTION | 0.25  | 4.77  | 4911.90 | 0 | 01:55 |
| COA7963.05A           | JUNCTION | 0.04  | 1.63  | 4973.61 | 0 | 00:13 |
| COA7963.05M           | JUNCTION | 0.24  | 6.12  | 4958.81 | 0 | 02:24 |
| COA7963.11A           | JUNCTION | 0.45  | 9.48  | 4961.15 | 0 | 01:37 |
| COA7963.T             | JUNCTION | 0.64  | 9.06  | 4941.26 | 0 | 02:15 |
| COA32878.A            | JUNCTION | 0.29  | 9.09  | 4956.28 | 0 | 02:02 |
| COA32878.B            | JUNCTION | 0.35  | 9.80  | 4956.07 | 0 | 02:06 |
| APSINLET              | JUNCTION | 0.23  | 7.75  | 4937.41 | 0 | 01:52 |
| IRON14TH              | JUNCTION | 0.13  | 6.88  | 4945.95 | 0 | 01:50 |
| BLDWEIR               | JUNCTION | 1.27  | 9.80  | 4956.40 | 0 | 01:56 |
| BLUWEIR               | JUNCTION | 0.89  | 10.93 | 4957.53 | 0 | 01:45 |
| COA22169              | JUNCTION | 0.24  | 3.24  | 4942.59 | 0 | 01:58 |
| COA22127              | JUNCTION | 0.18  | 2.32  | 4940.18 | 0 | 01:52 |
| COA32823              | JUNCTION | 0.08  | 3.56  | 4936.65 | 0 | 02:26 |
| COA9453               | JUNCTION | 0.31  | 2.91  | 4941.98 | 0 | 01:58 |
| MHB22410              | JUNCTION | 0.81  | 9.09  | 4937.51 | 0 | 01:55 |
| COA9152               | JUNCTION | 5.09  | 10.88 | 4940.55 | 0 | 02:02 |
| COA9229               | JUNCTION | 20.04 | 27.34 | 4940.49 | 0 | 02:05 |
| MHB19A                | JUNCTION | 0.17  | 3.65  | 4936.65 | 0 | 02:25 |
| 1F.C.INLET            | JUNCTION | 0.42  | 9.42  | 4960.42 | 0 | 01:54 |
| 1F.C.OUT              | JUNCTION | 0.56  | 9.41  | 4958.41 | 0 | 01:28 |
| 1F.D.MH1              | JUNCTION | 0.05  | 0.61  | 5062.61 | 0 | 02:29 |
| 1F.E.MHA              | JUNCTION | 0.15  | 11.44 | 4972.94 | 0 | 01:30 |
| 1F.E.MHB              | JUNCTION | 0.30  | 11.04 | 4971.89 | 0 | 01:30 |
| 1F.H.MH1              | JUNCTION | 0.50  | 8.02  | 4959.52 | 0 | 03:04 |
| 1F.H.MH2              | JUNCTION | 0.70  | 7.38  | 4957.88 | 0 | 03:05 |
| APSOUTLET             | OUTFALL  | 0.00  | 0.00  | 4960.84 | 0 | 00:00 |
| BPSOUTLET             | OUTFALL  | 0.00  | 0.00  | 5106.00 | 0 | 00:00 |
| BaPSOUTLET            | OUTFALL  | 0.00  | 0.00  | 4941.69 | 0 | 00:00 |
| AIRQUALITYPOND        | STORAGE  | 0.29  | 6.55  | 4958.81 | 0 | 02:24 |
| TINGLEYPARKSURGE POND | STORAGE  | 0.63  | 9.00  | 4941.21 | 0 | 02:44 |
| WAREHOUSEPOND         | STORAGE  | 0.43  | 6.73  | 4956.73 | 0 | 02:41 |
| BR21POND              | STORAGE  | 0.27  | 6.60  | 5068.60 | 0 | 02:28 |
| SANTABARBARAPOND      | STORAGE  | 0.28  | 1.15  | 4962.15 | 0 | 05:49 |
| NORTHWELLS PARK       | STORAGE  | 0.61  | 8.13  | 4959.13 | 0 | 05:16 |

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

| Maximum<br>Lateral | Maximum<br>Total | Time of Max | Lateral<br>Inflow | Total<br>Inflow |
|--------------------|------------------|-------------|-------------------|-----------------|
|--------------------|------------------|-------------|-------------------|-----------------|

| Node      | Type     | Inflow<br>CFS | Inflow<br>CFS | Occurrence<br>days hr:min | Volume<br>10 <sup>6</sup> gal | Volume<br>10 <sup>6</sup> gal |
|-----------|----------|---------------|---------------|---------------------------|-------------------------------|-------------------------------|
| COA6149   | JUNCTION | 11.31         | 11.31         | 0 02:03                   | 0.774                         | 0.777                         |
| COA6231   | JUNCTION | 29.54         | 40.32         | 0 02:03                   | 2.632                         | 3.410                         |
| COA6045   | JUNCTION | 34.23         | 75.06         | 0 01:28                   | 1.448                         | 1.732                         |
| COA15184  | JUNCTION | 40.56         | 88.78         | 0 05:26                   | 2.986                         | 4.791                         |
| COA6218   | JUNCTION | 0.00          | 149.85        | 0 05:08                   | 0.000                         | 4.807                         |
| COA6195   | JUNCTION | 57.19         | 57.19         | 0 01:30                   | 1.922                         | 1.922                         |
| COA6246   | JUNCTION | 0.00          | 79.73         | 0 01:32                   | 0.000                         | 1.922                         |
| COA29163  | JUNCTION | 0.00          | 131.72        | 0 01:33                   | 0.000                         | 1.853                         |
| COA7635   | JUNCTION | 37.01         | 39.24         | 0 01:30                   | 1.242                         | 1.242                         |
| COA7650   | JUNCTION | 0.00          | 54.42         | 0 01:35                   | 0.000                         | 1.249                         |
| COA7656   | JUNCTION | 55.48         | 187.02        | 0 01:35                   | 1.634                         | 8.799                         |
| COA7628   | JUNCTION | 0.00          | 94.27         | 0 01:29                   | 0.000                         | 5.714                         |
| COA29132  | JUNCTION | 60.64         | 101.12        | 0 01:28                   | 2.519                         | 4.275                         |
| COA33027  | JUNCTION | 31.84         | 45.60         | 0 01:32                   | 0.529                         | 1.690                         |
| COA33007  | JUNCTION | 43.49         | 43.49         | 0 00:15                   | 0.809                         | 0.809                         |
| COA7717   | JUNCTION | 45.33         | 45.33         | 0 01:53                   | 3.367                         | 3.368                         |
| COA19719  | JUNCTION | 95.40         | 139.57        | 0 01:33                   | 4.099                         | 8.606                         |
| COA7654   | JUNCTION | 34.75         | 101.66        | 0 02:09                   | 2.641                         | 11.023                        |
| COA7714   | JUNCTION | 0.00          | 55.71         | 0 05:28                   | 0.000                         | 14.191                        |
| COA6259   | JUNCTION | 0.00          | 40.27         | 0 02:02                   | 0.000                         | 3.405                         |
| COA7638   | JUNCTION | 33.49         | 71.22         | 0 02:01                   | 2.159                         | 5.565                         |
| COA25807  | JUNCTION | 0.00          | 71.72         | 0 02:01                   | 0.000                         | 5.560                         |
| COA25349  | JUNCTION | 34.99         | 169.14        | 0 02:17                   | 5.088                         | 10.653                        |
| COA25656  | JUNCTION | 31.40         | 31.40         | 0 02:02                   | 4.407                         | 4.407                         |
| COA25677  | JUNCTION | 0.00          | 53.72         | 0 02:08                   | 0.000                         | 4.405                         |
| COA25622  | JUNCTION | 22.71         | 58.15         | 0 01:37                   | 1.367                         | 5.638                         |
| COA7444   | JUNCTION | 36.85         | 44.96         | 0 01:37                   | 2.893                         | 2.894                         |
| COA7476   | JUNCTION | 24.46         | 68.47         | 0 01:39                   | 1.767                         | 4.629                         |
| COA7518   | JUNCTION | 31.47         | 75.60         | 0 01:37                   | 1.826                         | 6.448                         |
| COA24834  | JUNCTION | 42.35         | 101.47        | 0 02:02                   | 6.199                         | 12.674                        |
| COA8985   | JUNCTION | 20.90         | 89.45         | 0 01:43                   | 1.667                         | 14.793                        |
| COA24859  | JUNCTION | 13.38         | 103.64        | 0 01:39                   | 0.512                         | 15.059                        |
| COA9015   | JUNCTION | 0.00          | 27.83         | 0 02:01                   | 0.000                         | 1.559                         |
| COA25105  | JUNCTION | 23.40         | 70.28         | 0 01:33                   | 1.036                         | 6.616                         |
| COA25117  | JUNCTION | 0.00          | 72.15         | 0 01:49                   | 0.000                         | 6.417                         |
| COA25048  | JUNCTION | 24.64         | 105.00        | 0 01:46                   | 2.246                         | 8.576                         |
| COA25034  | JUNCTION | 24.08         | 127.44        | 0 01:48                   | 1.659                         | 10.333                        |
| COA9045   | JUNCTION | 30.62         | 127.65        | 0 01:44                   | 3.221                         | 13.523                        |
| COA25352  | JUNCTION | 0.00          | 370.28        | 0 01:58                   | 0.000                         | 10.538                        |
| COA7815   | JUNCTION | 0.00          | 265.08        | 0 02:09                   | 0.000                         | 30.890                        |
| COA25253  | JUNCTION | 0.00          | 176.37        | 0 01:45                   | 0.000                         | 30.531                        |
| COA7977   | JUNCTION | 0.00          | 183.05        | 0 02:06                   | 0.000                         | 30.607                        |
| COA25238  | JUNCTION | 0.00          | 185.66        | 0 02:06                   | 0.000                         | 30.604                        |
| COA25240  | JUNCTION | 0.00          | 173.00        | 0 02:11                   | 0.000                         | 30.674                        |
| COA22584  | JUNCTION | 0.00          | 174.05        | 0 02:11                   | 0.000                         | 30.675                        |
| COA9260   | JUNCTION | 47.72         | 209.18        | 0 01:56                   | 2.416                         | 33.006                        |
| COA7740   | JUNCTION | 39.07         | 78.41         | 0 02:23                   | 3.196                         | 17.193                        |
| COA7830   | JUNCTION | 0.00          | 147.23        | 0 01:37                   | 0.000                         | 21.707                        |
| COA7865   | JUNCTION | 36.35         | 130.71        | 0 02:11                   | 2.616                         | 6.435                         |
| COA7908   | JUNCTION | 0.00          | 156.27        | 0 01:51                   | 0.000                         | 6.317                         |
| COA7912   | JUNCTION | 0.00          | 136.51        | 0 02:14                   | 0.000                         | 6.267                         |
| COA7955   | JUNCTION | 0.00          | 107.66        | 0 02:08                   | 0.000                         | 6.286                         |
| COA22517  | JUNCTION | 29.73         | 146.79        | 0 01:57                   | 1.033                         | 8.953                         |
| COA7716   | JUNCTION | 0.00          | 92.56         | 0 03:03                   | 0.000                         | 16.757                        |
| COA7766JB | JUNCTION | 42.89         | 101.28        | 0 02:35                   | 1.700                         | 17.996                        |
| COA7769JB | JUNCTION | 0.00          | 121.20        | 0 01:31                   | 0.000                         | 11.162                        |
| COA32865  | JUNCTION | 55.96         | 55.96         | 0 01:30                   | 2.024                         | 2.025                         |
| COA32878  | JUNCTION | 42.70         | 200.68        | 0 01:30                   | 1.509                         | 7.293                         |
| COA7848   | JUNCTION | 33.72         | 136.60        | 0 01:29                   | 1.525                         | 4.748                         |
| COA7861   | JUNCTION | 0.00          | 155.58        | 0 01:30                   | 0.000                         | 5.751                         |
| COA7870   | JUNCTION | 78.00         | 153.53        | 0 01:30                   | 2.604                         | 5.748                         |
| COA29178  | JUNCTION | 70.87         | 70.87         | 0 01:30                   | 1.688                         | 1.688                         |
| COA7816   | JUNCTION | 31.67         | 176.63        | 0 02:05                   | 3.382                         | 21.107                        |
| COA25109  | JUNCTION | 0.00          | 91.42         | 0 01:46                   | 0.000                         | 6.541                         |
| BPSINLET  | JUNCTION | 0.00          | 132.35        | 0 01:25                   | 0.000                         | 24.019                        |
| COA9310   | JUNCTION | 0.00          | 123.26        | 0 01:46                   | 0.000                         | 8.849                         |
| COA9348   | JUNCTION | 33.26         | 149.20        | 0 01:57                   | 1.828                         | 10.685                        |
| COA9344   | JUNCTION | 36.32         | 204.15        | 0 02:01                   | 2.630                         | 12.938                        |
| COA9340   | JUNCTION | 0.00          | 192.74        | 0 01:50                   | 0.000                         | 12.861                        |



|                       |          |       |        |   |       |       |        |
|-----------------------|----------|-------|--------|---|-------|-------|--------|
| COA22250              | JUNCTION | 0.00  | 175.40 | 0 | 01:53 | 0.000 | 12.914 |
| COA22429              | JUNCTION | 39.76 | 223.53 | 0 | 01:54 | 1.715 | 14.534 |
| COA13866              | JUNCTION | 19.53 | 436.28 | 0 | 01:54 | 0.982 | 51.569 |
| COA24930              | JUNCTION | 29.60 | 106.88 | 0 | 02:16 | 1.623 | 3.226  |
| COA24916              | JUNCTION | 18.12 | 78.35  | 0 | 01:49 | 1.463 | 1.744  |
| COA9248               | JUNCTION | 44.71 | 48.71  | 0 | 01:30 | 0.742 | 1.697  |
| COA32981              | JUNCTION | 0.00  | 279.36 | 0 | 03:16 | 0.000 | 51.856 |
| COA9121               | JUNCTION | 0.00  | 279.38 | 0 | 03:05 | 0.000 | 51.856 |
| COA24902              | JUNCTION | 0.00  | 129.91 | 0 | 01:42 | 0.000 | 13.551 |
| COA24902A             | JUNCTION | 0.00  | 132.64 | 0 | 01:51 | 0.000 | 14.692 |
| COA9069               | JUNCTION | 30.31 | 52.58  | 0 | 01:56 | 2.864 | 4.443  |
| COA24997              | JUNCTION | 0.00  | 85.97  | 0 | 01:57 | 0.000 | 16.774 |
| COA9083               | JUNCTION | 0.00  | 207.34 | 0 | 01:52 | 0.000 | 31.465 |
| UPSINLET              | JUNCTION | 0.00  | 10.76  | 0 | 02:26 | 0.000 | 0.956  |
| COA9407               | JUNCTION | 15.14 | 15.14  | 0 | 01:30 | 0.509 | 0.509  |
| COA9426               | JUNCTION | 18.58 | 32.99  | 0 | 01:30 | 0.545 | 1.054  |
| COA22194              | JUNCTION | 0.00  | 32.74  | 0 | 01:31 | 0.000 | 1.048  |
| COA22191              | JUNCTION | 0.00  | 32.66  | 0 | 01:32 | 0.000 | 1.052  |
| COA9431               | JUNCTION | 10.61 | 42.42  | 0 | 01:32 | 0.363 | 1.414  |
| COA22176              | JUNCTION | 0.00  | 42.16  | 0 | 01:33 | 0.000 | 1.414  |
| COA22168              | JUNCTION | 0.00  | 41.97  | 0 | 01:34 | 0.000 | 1.414  |
| COA22174              | JUNCTION | 8.48  | 48.27  | 0 | 01:34 | 0.256 | 1.671  |
| COA22155              | JUNCTION | 17.34 | 66.30  | 0 | 01:35 | 0.708 | 2.379  |
| COA9141               | JUNCTION | 10.25 | 320.94 | 0 | 01:48 | 0.262 | 55.696 |
| COA22410              | JUNCTION | 0.00  | 284.41 | 0 | 02:46 | 0.000 | 53.056 |
| COA9129               | JUNCTION | 0.00  | 279.36 | 0 | 03:16 | 0.000 | 51.857 |
| COA9143               | JUNCTION | 0.00  | 315.89 | 0 | 01:53 | 0.000 | 55.696 |
| COA22144              | JUNCTION | 0.00  | 315.02 | 0 | 01:54 | 0.000 | 55.697 |
| COA22145              | JUNCTION | 0.00  | 315.32 | 0 | 01:53 | 0.000 | 55.697 |
| COA22143              | JUNCTION | 0.00  | 314.92 | 0 | 01:56 | 0.000 | 55.696 |
| COA10456              | JUNCTION | 0.00  | 373.85 | 0 | 01:54 | 0.000 | 61.099 |
| COA10457              | JUNCTION | 0.00  | 373.86 | 0 | 01:55 | 0.000 | 61.127 |
| COA7963.05A           | JUNCTION | 48.69 | 48.69  | 0 | 00:12 | 1.226 | 1.226  |
| COA7963.05M           | JUNCTION | 42.40 | 74.23  | 0 | 01:30 | 1.472 | 2.708  |
| COA7963.11A           | JUNCTION | 0.00  | 152.96 | 0 | 01:32 | 0.000 | 13.143 |
| COA7963.T             | JUNCTION | 0.00  | 380.99 | 0 | 01:53 | 0.000 | 52.617 |
| COA32878.A            | JUNCTION | 13.33 | 88.40  | 0 | 02:25 | 0.252 | 4.300  |
| COA32878.B            | JUNCTION | 0.00  | 76.09  | 0 | 01:26 | 0.000 | 4.303  |
| APSINLET              | JUNCTION | 0.00  | 207.05 | 0 | 01:52 | 0.000 | 31.464 |
| IRON14TH              | JUNCTION | 0.00  | 59.96  | 0 | 01:49 | 0.000 | 0.200  |
| BLDWEIR               | JUNCTION | 0.00  | 110.37 | 0 | 01:26 | 0.000 | 3.229  |
| BLUWEIR               | JUNCTION | 0.00  | 114.58 | 0 | 01:26 | 0.000 | 3.244  |
| COA22169              | JUNCTION | 31.12 | 31.12  | 0 | 01:57 | 3.340 | 3.340  |
| COA22127              | JUNCTION | 29.88 | 59.17  | 0 | 01:49 | 2.064 | 5.403  |
| COA32823              | JUNCTION | 0.00  | 13.06  | 0 | 01:49 | 0.000 | 0.987  |
| COA9453               | JUNCTION | 0.00  | 31.12  | 0 | 01:57 | 0.000 | 3.340  |
| MHB22410              | JUNCTION | 22.18 | 284.41 | 0 | 02:46 | 1.198 | 53.055 |
| COA9152               | JUNCTION | 52.47 | 52.47  | 0 | 01:30 | 0.944 | 0.944  |
| COA9229               | JUNCTION | 0.00  | 47.30  | 0 | 01:30 | 0.000 | 0.938  |
| MHB19A                | JUNCTION | 0.00  | 2.23   | 0 | 01:35 | 0.000 | 0.032  |
| 1F.C.INLET            | JUNCTION | 0.00  | 95.37  | 0 | 01:48 | 0.000 | 12.550 |
| 1F.C.OUT              | JUNCTION | 0.00  | 76.65  | 0 | 03:59 | 0.000 | 13.925 |
| 1F.D.MH1              | JUNCTION | 0.00  | 8.99   | 0 | 02:28 | 0.000 | 1.459  |
| 1F.E.MHA              | JUNCTION | 0.00  | 100.83 | 0 | 01:28 | 0.000 | 4.268  |
| 1F.E.MHB              | JUNCTION | 0.00  | 100.89 | 0 | 01:28 | 0.000 | 6.172  |
| 1F.H.MH1              | JUNCTION | 0.00  | 166.93 | 0 | 03:04 | 0.000 | 10.987 |
| 1F.H.MH2              | JUNCTION | 0.00  | 55.71  | 0 | 05:28 | 0.000 | 14.115 |
| APSOUTLET             | OUTFALL  | 0.00  | 207.03 | 0 | 01:52 | 0.000 | 31.464 |
| BPSOUTLET             | OUTFALL  | 0.00  | 130.00 | 0 | 01:25 | 0.000 | 24.019 |
| BaPSOUTLET            | OUTFALL  | 0.00  | 373.84 | 0 | 01:55 | 0.000 | 60.944 |
| AIRQUALITYPOND        | STORAGE  | 0.00  | 164.24 | 0 | 01:32 | 0.000 | 4.747  |
| TINGLEYPARKSURGE POND | STORAGE  | 11.10 | 131.43 | 0 | 01:53 | 0.388 | 1.151  |
| WAREHOUSEPOND         | STORAGE  | 0.00  | 150.11 | 0 | 01:33 | 0.000 | 13.230 |
| BR21POND              | STORAGE  | 64.21 | 64.21  | 0 | 01:30 | 1.459 | 1.459  |
| SANTABARBARAPOND      | STORAGE  | 10.29 | 25.51  | 0 | 02:00 | 1.518 | 1.977  |
| NORTHWELLS PARK       | STORAGE  | 38.80 | 195.44 | 0 | 03:04 | 3.059 | 14.052 |

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

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

| Node      | Type     | Hours<br>Surcharged | Max. Height<br>Above Crown<br>Feet | Min. Depth<br>Below Rim<br>Feet |
|-----------|----------|---------------------|------------------------------------|---------------------------------|
| COA6045   | JUNCTION | 2.66                | 3.827                              | 0.000                           |
| COA15184  | JUNCTION | 4.79                | 6.061                              | 0.000                           |
| COA6218   | JUNCTION | 5.29                | 5.306                              | 0.000                           |
| COA6195   | JUNCTION | 0.64                | 2.952                              | 0.000                           |
| COA6246   | JUNCTION | 0.59                | 3.559                              | 0.000                           |
| COA29163  | JUNCTION | 0.70                | 4.383                              | 0.000                           |
| COA7635   | JUNCTION | 0.46                | 3.292                              | 0.000                           |
| COA7650   | JUNCTION | 0.86                | 4.357                              | 0.000                           |
| COA7656   | JUNCTION | 1.62                | 4.521                              | 0.000                           |
| COA7628   | JUNCTION | 0.18                | 7.030                              | 0.000                           |
| COA29132  | JUNCTION | 0.67                | 10.231                             | 0.000                           |
| COA7717   | JUNCTION | 2.40                | 5.190                              | 0.000                           |
| COA19719  | JUNCTION | 5.71                | 5.956                              | 0.000                           |
| COA7654   | JUNCTION | 6.83                | 4.598                              | 0.000                           |
| COA7714   | JUNCTION | 6.48                | 3.862                              | 0.000                           |
| COA7638   | JUNCTION | 0.02                | 0.108                              | 3.492                           |
| COA25349  | JUNCTION | 2.02                | 5.579                              | 0.000                           |
| COA25656  | JUNCTION | 2.32                | 7.444                              | 0.000                           |
| COA25677  | JUNCTION | 1.81                | 7.902                              | 0.000                           |
| COA25622  | JUNCTION | 1.42                | 6.454                              | 0.000                           |
| COA7444   | JUNCTION | 1.00                | 3.641                              | 0.000                           |
| COA7476   | JUNCTION | 1.53                | 3.986                              | 0.000                           |
| COA7518   | JUNCTION | 3.62                | 4.960                              | 0.000                           |
| COA24834  | JUNCTION | 4.41                | 1.423                              | 0.000                           |
| COA8985   | JUNCTION | 4.33                | 5.950                              | 0.000                           |
| COA24859  | JUNCTION | 0.17                | 4.500                              | 0.000                           |
| COA25105  | JUNCTION | 1.28                | 6.206                              | 0.000                           |
| COA25117  | JUNCTION | 1.39                | 7.274                              | 0.000                           |
| COA25048  | JUNCTION | 0.68                | 6.360                              | 0.000                           |
| COA25034  | JUNCTION | 1.00                | 5.701                              | 0.000                           |
| COA9045   | JUNCTION | 0.45                | 3.590                              | 0.000                           |
| COA25352  | JUNCTION | 2.20                | 5.816                              | 0.000                           |
| COA7815   | JUNCTION | 2.19                | 7.304                              | 0.000                           |
| COA25253  | JUNCTION | 2.41                | 6.952                              | 0.000                           |
| COA7977   | JUNCTION | 1.92                | 7.012                              | 0.068                           |
| COA25238  | JUNCTION | 2.24                | 7.240                              | 0.000                           |
| COA25240  | JUNCTION | 1.68                | 7.256                              | 0.304                           |
| COA22584  | JUNCTION | 2.32                | 8.491                              | 0.000                           |
| COA9260   | JUNCTION | 2.39                | 7.781                              | 0.000                           |
| COA7740   | JUNCTION | 4.24                | 3.751                              | 0.000                           |
| COA7830   | JUNCTION | 0.65                | 4.293                              | 0.000                           |
| COA7865   | JUNCTION | 0.95                | 4.992                              | 0.000                           |
| COA7908   | JUNCTION | 1.24                | 5.007                              | 0.000                           |
| COA7912   | JUNCTION | 0.75                | 4.461                              | 0.000                           |
| COA7955   | JUNCTION | 1.17                | 5.117                              | 0.000                           |
| COA22517  | JUNCTION | 1.61                | 5.503                              | 0.000                           |
| COA7716   | JUNCTION | 2.80                | 5.055                              | 0.000                           |
| COA7766JB | JUNCTION | 5.13                | 7.622                              | 0.000                           |
| COA7769JB | JUNCTION | 4.79                | 7.873                              | 0.000                           |
| COA32865  | JUNCTION | 5.03                | 8.117                              | 0.000                           |
| COA32878  | JUNCTION | 1.56                | 3.856                              | 0.000                           |
| COA7848   | JUNCTION | 0.73                | 2.720                              | 0.000                           |
| COA7861   | JUNCTION | 1.91                | 39.420                             | 0.000                           |
| COA7870   | JUNCTION | 0.26                | 95.669                             | 0.000                           |
| COA29178  | JUNCTION | 0.76                | 101.299                            | 0.000                           |
| COA7816   | JUNCTION | 1.88                | 7.172                              | 0.000                           |
| COA25109  | JUNCTION | 1.35                | 6.672                              | 0.000                           |
| BPSINLET  | JUNCTION | 4.98                | 7.125                              | 3.775                           |
| COA9310   | JUNCTION | 1.66                | 6.051                              | 0.000                           |
| COA9348   | JUNCTION | 2.08                | 5.752                              | 0.000                           |
| COA9344   | JUNCTION | 2.36                | 6.353                              | 0.000                           |
| COA9340   | JUNCTION | 2.59                | 7.981                              | 0.000                           |
| COA22250  | JUNCTION | 2.64                | 7.583                              | 0.000                           |
| COA22429  | JUNCTION | 2.62                | 7.071                              | 0.000                           |
| COA13866  | JUNCTION | 2.40                | 4.084                              | 0.000                           |
| COA24930  | JUNCTION | 2.22                | 5.053                              | 0.000                           |



|                      |          |        |       |        |
|----------------------|----------|--------|-------|--------|
| COA24916             | JUNCTION | 1.52   | 4.832 | 0.000  |
| COA9248              | JUNCTION | 0.08   | 6.076 | 0.000  |
| COA32981             | JUNCTION | 2.82   | 1.455 | 8.405  |
| COA9121              | JUNCTION | 2.82   | 1.384 | 8.116  |
| COA24997             | JUNCTION | 0.22   | 0.383 | 6.127  |
| COA9083              | JUNCTION | 0.01   | 0.036 | 7.084  |
| UPSINLET             | JUNCTION | 1.88   | 1.688 | 13.382 |
| COA22174             | JUNCTION | 3.47   | 3.038 | 8.542  |
| COA22155             | JUNCTION | 3.52   | 3.069 | 8.821  |
| COA22410             | JUNCTION | 0.42   | 0.261 | 10.489 |
| COA9129              | JUNCTION | 2.82   | 1.151 | 6.859  |
| COA7963.05M          | JUNCTION | 1.61   | 1.123 | 4.187  |
| COA7963.11A          | JUNCTION | 3.34   | 5.481 | 0.000  |
| COA7963.T            | JUNCTION | 2.80   | 1.053 | 0.197  |
| COA32878.A           | JUNCTION | 2.41   | 4.588 | 0.000  |
| COA32878.B           | JUNCTION | 3.97   | 5.299 | 0.000  |
| BLDWEIR              | JUNCTION | 1.28   | 3.800 | 0.000  |
| BLUWEIR              | JUNCTION | 1.56   | 4.933 | 0.000  |
| MHB22410             | JUNCTION | 2.85   | 1.091 | 9.659  |
| COA9229              | JUNCTION | 0.87   | 1.343 | 0.000  |
| 1F.C.INLET           | JUNCTION | 3.38   | 5.422 | 0.000  |
| 1F.C.OUT             | JUNCTION | 4.02   | 5.410 | 0.000  |
| 1F.E.MHA             | JUNCTION | 0.52   | 7.441 | 2.769  |
| 1F.E.MHB             | JUNCTION | 0.46   | 7.040 | 0.000  |
| 1F.H.MH1             | JUNCTION | 6.48   | 4.018 | 0.000  |
| 1F.H.MH2             | JUNCTION | 7.20   | 3.379 | 0.621  |
| AIRQUALITYPOND       | STORAGE  | 2.04   | 1.547 | 5.853  |
| TINGLEYPARKSURGEPOND | STORAGE  | 2.81   | 0.997 | 7.453  |
| WAREHOUSEPOND        | STORAGE  | 3.81   | 2.732 | 3.268  |
| BR21POND             | STORAGE  | 143.00 | 6.599 | 7.401  |
| NORTHWELLSPARK       | STORAGE  | 7.15   | 4.130 | 0.870  |

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

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

| Node     | Hours<br>Flooded | Maximum<br>Rate<br>CFS | Time of Max<br>Occurrence<br>days hr:min | Total<br>Flood<br>Volume<br>10^6 gal | Maximum<br>Ponded<br>Depth<br>Feet |
|----------|------------------|------------------------|------------------------------------------|--------------------------------------|------------------------------------|
| COA6045  | 2.37             | 47.87                  | 0 01:29                                  | 0.255                                | 7.83                               |
| COA15184 | 3.53             | 71.03                  | 0 01:28                                  | 0.714                                | 10.24                              |
| COA6218  | 3.91             | 134.49                 | 0 05:09                                  | 0.848                                | 9.78                               |
| COA6195  | 0.64             | 43.32                  | 0 01:35                                  | 0.144                                | 6.95                               |
| COA6246  | 0.38             | 79.64                  | 0 01:32                                  | 0.062                                | 7.86                               |
| COA29163 | 0.13             | 92.45                  | 0 01:41                                  | 0.021                                | 8.38                               |
| COA7635  | 0.03             | 15.71                  | 0 01:36                                  | 0.002                                | 7.29                               |
| COA7650  | 0.33             | 34.21                  | 0 02:04                                  | 0.045                                | 8.36                               |
| COA7656  | 0.23             | 52.57                  | 0 01:37                                  | 0.044                                | 9.46                               |
| COA7628  | 0.01             | 8.08                   | 0 01:31                                  | 0.000                                | 11.03                              |
| COA29132 | 0.01             | 19.47                  | 0 01:48                                  | 0.000                                | 14.23                              |
| COA7717  | 0.01             | 9.77                   | 0 01:28                                  | 0.000                                | 9.19                               |
| COA19719 | 4.24             | 79.80                  | 0 01:32                                  | 1.190                                | 10.78                              |
| COA7654  | 1.42             | 96.44                  | 0 02:39                                  | 0.214                                | 8.60                               |
| COA7714  | 0.40             | 44.30                  | 0 02:23                                  | 0.038                                | 7.86                               |
| COA25349 | 0.26             | 168.83                 | 0 02:17                                  | 0.114                                | 11.08                              |
| COA25656 | 1.73             | 22.97                  | 0 02:00                                  | 0.228                                | 10.44                              |
| COA25677 | 0.67             | 47.94                  | 0 02:04                                  | 0.055                                | 10.97                              |
| COA25622 | 0.81             | 21.93                  | 0 01:37                                  | 0.058                                | 9.59                               |
| COA7444  | 0.78             | 16.29                  | 0 01:37                                  | 0.045                                | 7.72                               |
| COA7476  | 1.49             | 30.29                  | 0 01:36                                  | 0.231                                | 8.00                               |
| COA7518  | 1.65             | 30.81                  | 0 01:34                                  | 0.228                                | 9.06                               |
| COA24834 | 3.89             | 54.32                  | 0 01:55                                  | 1.443                                | 7.37                               |
| COA8985  | 0.13             | 26.81                  | 0 02:00                                  | 0.015                                | 11.38                              |
| COA24859 | 0.01             | 10.45                  | 0 01:57                                  | 0.000                                | 12.00                              |
| COA25105 | 0.35             | 28.54                  | 0 01:49                                  | 0.035                                | 10.21                              |
| COA25117 | 0.11             | 58.39                  | 0 01:49                                  | 0.014                                | 11.29                              |
| COA25048 | 0.13             | 44.27                  | 0 01:55                                  | 0.024                                | 11.36                              |

|             |      |        |   |       |       |       |
|-------------|------|--------|---|-------|-------|-------|
| COA25034    | 0.15 | 42.45  | 0 | 01:57 | 0.025 | 10.70 |
| COA9045     | 0.02 | 15.88  | 0 | 01:49 | 0.002 | 8.65  |
| COA25352    | 0.16 | 183.06 | 0 | 02:01 | 0.057 | 11.32 |
| COA7815     | 0.25 | 106.99 | 0 | 02:07 | 0.132 | 13.40 |
| COA25253    | 0.03 | 26.93  | 0 | 01:52 | 0.005 | 12.95 |
| COA25238    | 0.01 | 14.06  | 0 | 01:52 | 0.001 | 13.47 |
| COA22584    | 0.02 | 53.49  | 0 | 01:56 | 0.005 | 14.49 |
| COA9260     | 0.04 | 53.48  | 0 | 02:07 | 0.009 | 14.78 |
| COA7740     | 0.09 | 32.95  | 0 | 02:23 | 0.011 | 8.25  |
| COA7830     | 0.12 | 85.60  | 0 | 02:02 | 0.045 | 12.00 |
| COA7865     | 0.12 | 77.00  | 0 | 02:11 | 0.037 | 10.47 |
| COA7908     | 0.04 | 128.04 | 0 | 02:14 | 0.012 | 10.01 |
| COA7912     | 0.01 | 42.39  | 0 | 02:03 | 0.002 | 10.68 |
| COA7955     | 0.17 | 43.48  | 0 | 02:08 | 0.040 | 12.01 |
| COA22517    | 0.35 | 63.22  | 0 | 01:57 | 0.082 | 11.00 |
| COA7716     | 0.01 | 31.55  | 0 | 01:28 | 0.001 | 9.23  |
| COA7766JB   | 0.01 | 9.68   | 0 | 01:28 | 0.001 | 12.33 |
| COA32865    | 0.07 | 38.49  | 0 | 01:30 | 0.006 | 11.64 |
| COA32878    | 0.93 | 51.49  | 0 | 01:30 | 0.174 | 9.88  |
| COA7848     | 0.10 | 68.87  | 0 | 01:54 | 0.015 | 8.72  |
| COA7816     | 0.40 | 135.05 | 0 | 02:06 | 0.128 | 13.17 |
| COA25109    | 0.20 | 35.10  | 0 | 01:55 | 0.018 | 10.67 |
| COA9310     | 0.10 | 38.62  | 0 | 02:03 | 0.019 | 11.55 |
| COA9348     | 0.15 | 53.07  | 0 | 02:03 | 0.040 | 11.79 |
| COA9344     | 0.06 | 63.52  | 0 | 01:54 | 0.018 | 15.71 |
| COA9340     | 0.02 | 47.73  | 0 | 02:01 | 0.006 | 16.65 |
| COA22250    | 0.03 | 86.68  | 0 | 01:51 | 0.012 | 13.58 |
| COA22429    | 0.03 | 84.30  | 0 | 01:59 | 0.012 | 13.07 |
| COA13866    | 0.05 | 119.42 | 0 | 01:54 | 0.026 | 12.08 |
| COA24930    | 0.18 | 95.31  | 0 | 02:16 | 0.051 | 11.05 |
| COA24916    | 0.09 | 58.60  | 0 | 01:53 | 0.022 | 10.36 |
| COA9248     | 0.05 | 19.96  | 0 | 01:53 | 0.005 | 10.08 |
| COA7963.11A | 0.01 | 28.26  | 0 | 01:37 | 0.001 | 9.48  |
| COA32878.A  | 0.96 | 32.23  | 0 | 02:25 | 0.120 | 9.09  |
| COA32878.B  | 0.53 | 26.90  | 0 | 01:26 | 0.037 | 9.80  |
| COA9229     | 0.58 | 10.46  | 0 | 01:51 | 0.028 | 27.34 |
| 1F.C.INLET  | 0.02 | 27.48  | 0 | 01:54 | 0.003 | 9.42  |
| 1F.C.OUT    | 0.01 | 70.48  | 0 | 01:28 | 0.002 | 9.41  |
| 1F.E.MHB    | 0.01 | 12.07  | 0 | 01:30 | 0.000 | 11.04 |
| 1F.H.MH1    | 0.23 | 162.11 | 0 | 03:04 | 0.088 | 8.02  |

\*\*\*\*\*  
Storage Volume Summary  
\*\*\*\*\*

| Storage Unit          | Average<br>Volume<br>1000 ft3 | Avg<br>Pcnt<br>Full | E&I<br>Pcnt<br>Loss | Maximum<br>Volume<br>1000 ft3 | Max<br>Pcnt<br>Full | Time of Max<br>Occurrence<br>days hr:min | Maximum<br>Outflow<br>CFS |
|-----------------------|-------------------------------|---------------------|---------------------|-------------------------------|---------------------|------------------------------------------|---------------------------|
| AIRQUALITYPOND        | 7.022                         | 1                   | 0                   | 280.885                       | 41                  | 0 02:24                                  | 39.31                     |
| TINGLEYPARKSURGE POND | 1.828                         | 0                   | 0                   | 106.594                       | 4                   | 0 02:44                                  | 49.29                     |
| WAREHOUSEPOND         | 11.005                        | 2                   | 0                   | 380.211                       | 54                  | 0 02:41                                  | 76.65                     |
| BR21POND              | 3.543                         | 1                   | 0                   | 96.137                        | 36                  | 0 02:28                                  | 8.99                      |
| SANTABARBARAPOND      | 35.420                        | 2                   | 0                   | 147.428                       | 9                   | 0 05:49                                  | 4.27                      |
| NORTHWELLS PARK       | 45.894                        | 6                   | 0                   | 642.018                       | 89                  | 0 05:16                                  | 188.39                    |

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

| Outfall Node | Flow<br>Freq.<br>Pcnt. | Avg.<br>Flow<br>CFS | Max.<br>Flow<br>CFS | Total<br>Volume<br>10^6 gal |
|--------------|------------------------|---------------------|---------------------|-----------------------------|
| APSOUTLET    | 99.27                  | 9.03                | 207.03              | 31.464                      |
| BPSOUTLET    | 99.84                  | 6.87                | 130.00              | 24.019                      |
| BaPSOUTLET   | 97.71                  | 18.00               | 373.84              | 60.944                      |



System 98.94 33.90 709.57 116.427

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

| Link        | Type    | Maximum<br> Flow <br>CFS | Time of Max<br>Occurrence<br>days hr:min | Maximum<br> Veloc <br>ft/sec | Max/<br>Full<br>Flow | Max/<br>Full<br>Depth |
|-------------|---------|--------------------------|------------------------------------------|------------------------------|----------------------|-----------------------|
| ESWMM57     | CONDUIT | 11.30                    | 0 02:03                                  | 1.97                         | 0.33                 | 0.68                  |
| 1F.H.SWMM8  | CONDUIT | 53.53                    | 0 05:10                                  | 5.50                         | 0.64                 | 1.00                  |
| 1F.H.SWMM9  | CONDUIT | 79.28                    | 0 05:26                                  | 6.31                         | 6.05                 | 1.00                  |
| 1F.DSWMM1   | CONDUIT | 69.90                    | 0 01:58                                  | 5.56                         | 1.39                 | 1.00                  |
| 1F.D.SWMM2  | CONDUIT | 131.72                   | 0 01:33                                  | 10.48                        | 1.83                 | 1.00                  |
| 1F.D.SWMM4  | CONDUIT | 54.42                    | 0 01:35                                  | 5.05                         | 0.65                 | 1.00                  |
| 1F.D.SWMM5  | CONDUIT | 56.06                    | 0 01:35                                  | 4.46                         | 0.66                 | 1.00                  |
| ESWMM41     | CONDUIT | 18.29                    | 0 01:32                                  | 6.93                         | 1.01                 | 0.93                  |
| 1F.D.SWMM7  | CONDUIT | 85.47                    | 0 01:37                                  | 6.80                         | 0.73                 | 1.00                  |
| ESWMM42     | CONDUIT | 42.12                    | 0 00:16                                  | 13.85                        | 0.17                 | 0.29                  |
| ESWMM45     | CONDUIT | 152.96                   | 0 01:32                                  | 12.17                        | 1.67                 | 1.00                  |
| 1F.H.SWMM10 | CONDUIT | 111.08                   | 0 05:08                                  | 8.84                         | 2.18                 | 1.00                  |
| ESWMM32     | CONDUIT | 73.21                    | 0 01:29                                  | 5.88                         | 2.06                 | 1.00                  |
| ESWMM58     | CONDUIT | 40.27                    | 0 02:02                                  | 4.44                         | 0.62                 | 0.83                  |
| ESWMM59     | CONDUIT | 41.42                    | 0 02:06                                  | 2.70                         | 0.66                 | 0.95                  |
| ESWMM60     | CONDUIT | 71.72                    | 0 02:01                                  | 5.36                         | 0.92                 | 0.85                  |
| ESWMM91     | CONDUIT | 53.72                    | 0 02:08                                  | 7.60                         | 4.32                 | 1.00                  |
| ESWMM92     | CONDUIT | 44.10                    | 0 03:01                                  | 6.24                         | 4.07                 | 1.00                  |
| 1F.H.SWMM1  | CONDUIT | 44.05                    | 0 01:39                                  | 3.74                         | 0.75                 | 1.00                  |
| 1F.H.SWMM2  | CONDUIT | 50.69                    | 0 03:10                                  | 4.06                         | 0.75                 | 1.00                  |
| 1F.H.SWMM3  | CONDUIT | 68.86                    | 0 01:37                                  | 5.85                         | 1.81                 | 1.00                  |
| 1F.H.SWMM4  | CONDUIT | 69.94                    | 0 02:14                                  | 5.57                         | 1.30                 | 1.00                  |
| ESWMM5      | CONDUIT | 92.98                    | 0 02:00                                  | 7.40                         | 1.06                 | 1.00                  |
| ESWMM6      | CONDUIT | 27.83                    | 0 02:01                                  | 4.99                         | 2.43                 | 0.96                  |
| ESWMM93     | CONDUIT | 50.28                    | 0 01:47                                  | 7.11                         | 1.67                 | 1.00                  |
| ESWMM94     | CONDUIT | 91.42                    | 0 01:46                                  | 7.28                         | 1.73                 | 1.00                  |
| ESWMM96     | CONDUIT | 80.40                    | 0 01:46                                  | 6.40                         | 2.07                 | 1.00                  |
| ESWMM97     | CONDUIT | 104.24                   | 0 01:48                                  | 5.31                         | 1.12                 | 1.00                  |
| ESWMM98     | CONDUIT | 98.22                    | 0 01:44                                  | 5.00                         | 1.23                 | 1.00                  |
| ESWMM61     | CONDUIT | 91.18                    | 0 02:04                                  | 4.68                         | 0.55                 | 0.79                  |
| ESWMM62     | CONDUIT | 370.28                   | 0 01:58                                  | 15.59                        | 2.06                 | 1.00                  |
| ESWMM63     | CONDUIT | 174.25                   | 0 02:07                                  | 7.33                         | 0.93                 | 1.00                  |
| ESWMM64     | CONDUIT | 176.37                   | 0 01:45                                  | 6.28                         | 1.28                 | 1.00                  |
| ESWMM65     | CONDUIT | 183.05                   | 0 02:06                                  | 6.47                         | 0.39                 | 1.00                  |
| ESWMM66     | CONDUIT | 185.66                   | 0 02:06                                  | 6.57                         | 0.77                 | 1.00                  |
| ESWMM67     | CONDUIT | 173.00                   | 0 02:11                                  | 6.12                         | 0.94                 | 1.00                  |
| ESWMM68     | CONDUIT | 174.05                   | 0 02:11                                  | 6.16                         | 0.87                 | 1.00                  |
| ESWMM69     | CONDUIT | 168.23                   | 0 01:56                                  | 5.95                         | 0.90                 | 1.00                  |
| ESWMM30     | CONDUIT | 55.71                    | 0 05:28                                  | 4.43                         | 1.25                 | 1.00                  |
| ESWMM29     | CONDUIT | 65.31                    | 0 03:49                                  | 4.97                         | 0.90                 | 1.00                  |
| ESWMM28     | CONDUIT | 99.26                    | 0 02:11                                  | 6.24                         | 1.35                 | 1.00                  |
| ESWMM27     | CONDUIT | 112.00                   | 0 01:53                                  | 5.70                         | 2.00                 | 1.00                  |
| ESWMM26     | CONDUIT | 136.51                   | 0 02:14                                  | 6.95                         | 0.25                 | 1.00                  |
| ESWMM25     | CONDUIT | 107.66                   | 0 02:08                                  | 5.48                         | 1.35                 | 1.00                  |
| ESWMM24     | CONDUIT | 91.74                    | 0 02:08                                  | 3.86                         | 0.81                 | 1.00                  |
| ESWMM50     | CONDUIT | 71.69                    | 0 01:30                                  | 10.21                        | 3.62                 | 1.00                  |
| ESWMM51     | CONDUIT | 155.58                   | 0 01:30                                  | 12.38                        | 0.85                 | 1.00                  |
| ESWMM52     | CONDUIT | 158.10                   | 0 01:30                                  | 9.94                         | 1.65                 | 1.00                  |
| BLUPIPE     | CONDUIT | 114.58                   | 0 01:26                                  | 4.06                         | 3.57                 | 1.00                  |
| ESWMM46     | CONDUIT | 61.77                    | 0 01:29                                  | 3.77                         | 0.11                 | 1.00                  |
| ESWMM47     | CONDUIT | 92.49                    | 0 03:03                                  | 5.08                         | 0.45                 | 1.00                  |
| ESWMM48     | CONDUIT | 43.63                    | 0 02:54                                  | 3.47                         | 0.42                 | 1.00                  |
| ESWMM49     | CONDUIT | 63.12                    | 0 01:30                                  | 6.56                         | 1.19                 | 1.00                  |
| ESWMM54     | CONDUIT | 126.76                   | 0 01:33                                  | 5.89                         | 0.73                 | 1.00                  |
| ESWMM55     | CONDUIT | 145.86                   | 0 02:05                                  | 5.16                         | 1.33                 | 1.00                  |
| ESWMM56     | CONDUIT | 144.85                   | 0 02:03                                  | 5.13                         | 1.28                 | 1.00                  |
| ESWMM95     | CONDUIT | 72.15                    | 0 01:49                                  | 5.74                         | 1.39                 | 1.00                  |
| 48SDTOBPS   | CONDUIT | 58.86                    | 0 02:26                                  | 5.32                         | 1.40                 | 1.00                  |
| ESWMM23     | CONDUIT | 48.69                    | 0 01:30                                  | 5.31                         | 0.54                 | 1.00                  |
| ESWMM22     | CONDUIT | 123.26                   | 0 01:46                                  | 5.19                         | 1.20                 | 1.00                  |

|             |         |        |   |       |       |      |      |
|-------------|---------|--------|---|-------|-------|------|------|
| ESWMM21     | CONDUIT | 118.67 | 0 | 01:57 | 5.00  | 0.76 | 1.00 |
| ESWMM20     | CONDUIT | 168.51 | 0 | 02:01 | 5.96  | 1.19 | 1.00 |
| ESWMM19     | CONDUIT | 192.74 | 0 | 01:50 | 6.82  | 1.27 | 1.00 |
| ESWMM18     | CONDUIT | 175.40 | 0 | 01:53 | 6.20  | 1.14 | 1.00 |
| ESWMM17     | CONDUIT | 190.27 | 0 | 01:54 | 6.73  | 1.69 | 1.00 |
| ESWMM16     | CONDUIT | 208.31 | 0 | 01:54 | 7.37  | 0.84 | 1.00 |
| ESWMM70     | CONDUIT | 197.34 | 0 | 01:52 | 5.13  | 0.97 | 1.00 |
| ESWMM15     | CONDUIT | 66.54  | 0 | 02:03 | 3.28  | 0.56 | 1.00 |
| ESWMM71     | CONDUIT | 380.99 | 0 | 01:53 | 7.58  | 0.81 | 1.00 |
| ESWMM72     | CONDUIT | 279.38 | 0 | 03:05 | 5.56  | 0.62 | 1.00 |
| ESWMM7      | CONDUIT | 22.92  | 0 | 01:57 | 3.85  | 1.00 | 0.90 |
| ESWMM12     | CONDUIT | 117.27 | 0 | 01:51 | 6.65  | 1.81 | 0.64 |
| ESWMM9      | CONDUIT | 20.27  | 0 | 01:54 | 2.92  | 0.69 | 0.96 |
| ESWMM99     | CONDUIT | 129.91 | 0 | 01:42 | 7.14  | 1.32 | 0.90 |
| ESWMM8      | CONDUIT | 35.52  | 0 | 01:59 | 10.28 | 0.27 | 0.96 |
| ESWMM10     | CONDUIT | 84.56  | 0 | 01:54 | 6.73  | 1.38 | 1.00 |
| ESWMM11     | CONDUIT | 126.19 | 0 | 01:51 | 7.57  | 0.47 | 0.79 |
| ESWMM90     | CONDUIT | 15.00  | 0 | 01:31 | 3.38  | 0.28 | 0.47 |
| ESWMM89     | CONDUIT | 32.74  | 0 | 01:31 | 5.60  | 0.46 | 0.47 |
| ESWMM88     | CONDUIT | 32.66  | 0 | 01:32 | 5.58  | 0.28 | 0.40 |
| ESWMM87     | CONDUIT | 32.48  | 0 | 01:33 | 4.69  | 0.26 | 0.45 |
| ESWMM86     | CONDUIT | 42.16  | 0 | 01:33 | 5.49  | 0.31 | 0.49 |
| ESWMM85     | CONDUIT | 41.97  | 0 | 01:34 | 7.59  | 0.41 | 0.38 |
| ESWMM84     | CONDUIT | 41.85  | 0 | 01:35 | 3.56  | 0.11 | 0.61 |
| ESWMM83     | CONDUIT | 49.98  | 0 | 01:35 | 2.55  | 1.09 | 1.00 |
| ESWMM82     | CONDUIT | 65.10  | 0 | 01:35 | 3.38  | 2.79 | 1.00 |
| ESWMM73     | CONDUIT | 279.36 | 0 | 03:16 | 5.56  | 1.07 | 1.00 |
| ESWMM76     | CONDUIT | 315.89 | 0 | 01:53 | 6.49  | 0.96 | 0.94 |
| ESWMM77     | CONDUIT | 315.32 | 0 | 01:53 | 6.63  | 1.04 | 0.90 |
| ESWMM78     | CONDUIT | 315.02 | 0 | 01:54 | 7.10  | 1.19 | 0.83 |
| ESWMM79     | CONDUIT | 314.92 | 0 | 01:56 | 8.03  | 1.01 | 0.73 |
| ESWMM80     | CONDUIT | 314.89 | 0 | 01:56 | 11.71 | 1.00 | 0.53 |
| ESWMM81     | CONDUIT | 373.86 | 0 | 01:55 | 23.97 | 0.30 | 0.49 |
| ESWMM14     | CONDUIT | 60.32  | 0 | 01:49 | 2.55  | 0.53 | 1.00 |
| ESWMM13     | CONDUIT | 59.96  | 0 | 01:49 | 2.62  | 0.56 | 1.00 |
| ESWMM125    | CONDUIT | 47.64  | 0 | 00:14 | 7.68  | 0.19 | 0.57 |
| ESWMM71A    | CONDUIT | 279.36 | 0 | 03:16 | 5.56  | 0.44 | 1.00 |
| ESWMM126    | CONDUIT | 127.94 | 0 | 01:53 | 2.55  | 2.39 | 1.00 |
| ESWMM127    | CONDUIT | 62.27  | 0 | 01:32 | 5.32  | 0.94 | 1.00 |
| ESWMM128    | CONDUIT | 43.06  | 0 | 01:32 | 8.70  | 0.18 | 0.71 |
| ESWMM129    | CONDUIT | 65.86  | 0 | 01:30 | 6.85  | 0.34 | 1.00 |
| ESWMM132    | CONDUIT | 87.29  | 0 | 02:25 | 5.49  | 0.48 | 1.00 |
| 60SDTOBPS   | CONDUIT | 88.40  | 0 | 01:31 | 6.14  | 0.39 | 1.00 |
| ESWMM134    | CONDUIT | 72.15  | 0 | 01:30 | 4.91  | 0.73 | 1.00 |
| ESWMM135    | CONDUIT | 207.05 | 0 | 01:52 | 9.47  | 2.46 | 0.87 |
| ESWMM53     | CONDUIT | 106.71 | 0 | 01:29 | 5.70  | 0.46 | 1.00 |
| ESWMM75     | CONDUIT | 284.42 | 0 | 02:46 | 5.85  | 1.49 | 0.98 |
| 1F.H.SWMM5  | CONDUIT | 31.12  | 0 | 01:57 | 3.05  | 0.61 | 0.77 |
| 1F.H.SWMM6  | CONDUIT | 31.10  | 0 | 01:59 | 3.68  | 0.60 | 0.64 |
| 1F.H.SWMM7  | CONDUIT | 59.07  | 0 | 01:52 | 7.95  | 0.61 | 0.57 |
| ESWMM201    | CONDUIT | 13.06  | 0 | 01:49 | 7.39  | 8.29 | 1.00 |
| ESWMM203    | CONDUIT | 10.76  | 0 | 02:26 | 8.34  | 0.09 | 1.00 |
| ESWMM200    | CONDUIT | 47.30  | 0 | 01:30 | 3.40  | 0.40 | 0.99 |
| ESWMM202    | CONDUIT | 2.23   | 0 | 01:35 | 1.19  | 0.03 | 0.55 |
| ESWMM500    | CONDUIT | 59.40  | 0 | 05:32 | 4.73  | 1.30 | 1.00 |
| ESWMM74     | CONDUIT | 279.37 | 0 | 03:16 | 5.56  | 0.94 | 1.00 |
| ESWMM74A    | CONDUIT | 284.41 | 0 | 02:46 | 5.42  | 1.16 | 1.00 |
| 1F.C.SWMM1  | CONDUIT | 76.09  | 0 | 01:26 | 6.03  | 0.43 | 1.00 |
| 1F.CSWMM2   | CONDUIT | 95.37  | 0 | 01:48 | 7.62  | 1.25 | 1.00 |
| 1F.C3       | CONDUIT | 94.47  | 0 | 01:54 | 8.10  | 1.01 | 1.00 |
| 1F.C.4      | CONDUIT | 76.65  | 0 | 03:59 | 6.10  | 0.82 | 1.00 |
| 1F.CSWMM5   | CONDUIT | 76.65  | 0 | 03:59 | 7.62  | 2.37 | 1.00 |
| 1F.D.SWMM8  | CONDUIT | 8.99   | 0 | 02:29 | 8.25  | 0.20 | 0.65 |
| 1F.E.SWMM1  | CONDUIT | 57.18  | 0 | 02:04 | 4.55  | 2.14 | 1.00 |
| 1F.E.SWMM2  | CONDUIT | 100.83 | 0 | 01:28 | 8.03  | 2.21 | 1.00 |
| 1F.E.SWMM4  | CONDUIT | 15.47  | 0 | 02:00 | 8.42  | 1.90 | 0.62 |
| 1F.E.SWMM5  | CONDUIT | 94.27  | 0 | 01:29 | 8.80  | 1.65 | 1.00 |
| 1F.H.SWMM11 | CONDUIT | 108.96 | 0 | 02:12 | 10.34 | 4.43 | 1.00 |
| 1F.H.SWMM12 | CONDUIT | 177.34 | 0 | 03:04 | 23.72 | 1.34 | 1.00 |
| 1F.H.SWMM13 | CONDUIT | 55.71  | 0 | 05:28 | 7.88  | 1.27 | 1.00 |
| 1F.H.SWMM14 | CONDUIT | 55.71  | 0 | 05:28 | 4.43  | 1.92 | 1.00 |
| 1F.J.SWMM3  | CONDUIT | 100.89 | 0 | 01:28 | 8.40  | 0.94 | 1.00 |



|                     |       |        |   |       |      |      |
|---------------------|-------|--------|---|-------|------|------|
| BROADWAYPUMPSTATION | PUMP  | 130.00 | 0 | 01:25 | 1.00 |      |
| ALCALDEPUMPSTATION  | PUMP  | 207.03 | 0 | 01:52 | 0.77 |      |
| URBANPUMPSTATION    | PUMP  | 10.75  | 0 | 02:26 | 0.90 |      |
| BARELASPUMPSTATION  | PUMP  | 373.84 | 0 | 01:55 | 0.92 |      |
| WEIRIRON14TH        | WEIR  | 25.42  | 0 | 01:50 |      | 0.22 |
| WEIRBROADWAY        | WEIR  | 110.37 | 0 | 01:26 |      | 1.00 |
| BR21OUTLET          | DUMMY | 8.99   | 0 | 02:28 |      |      |

\*\*\*\*\*  
Flow Classification Summary  
\*\*\*\*\*

| Conduit     | Adjusted<br>/Actual<br>Length | --- Fraction of Time in Flow Class --- |        |          |          | Avg. Froude Number |         | Avg. Flow Change |           |        |
|-------------|-------------------------------|----------------------------------------|--------|----------|----------|--------------------|---------|------------------|-----------|--------|
|             |                               | Dry                                    | Up Dry | Down Dry | Sub Crit | Sup Crit           | Up Crit |                  | Down Crit |        |
| ESWMM57     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.05     | 0.00               | 0.00    | 0.94             | 0.32      | 0.0000 |
| 1F.H.SWMM8  | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.37     | 0.00               | 0.00    | 0.62             | 0.31      | 0.0003 |
| 1F.H.SWMM9  | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.07     | 0.00               | 0.00    | 0.93             | 0.19      | 0.0015 |
| 1F.DSWMM1   | 1.00                          | 0.00                                   | 0.00   | 0.00     | 1.00     | 0.00               | 0.00    | 0.00             | 0.06      | 0.0001 |
| 1F.D.SWMM2  | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.27      | 0.0001 |
| 1F.D.SWMM4  | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.37      | 0.0001 |
| 1F.D.SWMM5  | 1.00                          | 0.00                                   | 0.00   | 0.00     | 0.28     | 0.00               | 0.00    | 0.71             | 0.38      | 0.0001 |
| ESWMM41     | 1.00                          | 0.09                                   | 0.00   | 0.00     | 0.04     | 0.00               | 0.00    | 0.86             | 0.29      | 0.0001 |
| 1F.D.SWMM7  | 1.00                          | 0.00                                   | 0.00   | 0.00     | 0.03     | 0.00               | 0.00    | 0.96             | 1.27      | 0.0000 |
| ESWMM42     | 1.00                          | 0.00                                   | 0.00   | 0.00     | 0.01     | 0.01               | 0.00    | 0.98             | 0.06      | 0.0000 |
| ESWMM45     | 1.00                          | 0.00                                   | 0.00   | 0.00     | 1.00     | 0.00               | 0.00    | 0.00             | 0.66      | 0.0001 |
| 1F.H.SWMM10 | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.21     | 0.00               | 0.00    | 0.78             | 0.36      | 0.0004 |
| ESWMM32     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.14      | 0.0002 |
| ESWMM58     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.02     | 0.00               | 0.00    | 0.97             | 0.58      | 0.0000 |
| ESWMM59     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.05      | 0.0000 |
| ESWMM60     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.09      | 0.0000 |
| ESWMM91     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.13      | 0.0005 |
| ESWMM92     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.21     | 0.00               | 0.00    | 0.78             | 0.29      | 0.0006 |
| 1F.H.SWMM1  | 1.00                          | 0.00                                   | 0.00   | 0.00     | 1.00     | 0.00               | 0.00    | 0.00             | 0.33      | 0.0001 |
| 1F.H.SWMM2  | 1.00                          | 0.00                                   | 0.00   | 0.00     | 0.78     | 0.00               | 0.00    | 0.22             | 0.44      | 0.0001 |
| 1F.H.SWMM3  | 1.00                          | 0.00                                   | 0.00   | 0.00     | 0.04     | 0.00               | 0.00    | 0.96             | 0.34      | 0.0000 |
| 1F.H.SWMM4  | 1.00                          | 0.00                                   | 0.00   | 0.00     | 0.04     | 0.00               | 0.00    | 0.96             | 0.52      | 0.0000 |
| ESWMM5      | 1.00                          | 0.00                                   | 0.00   | 0.00     | 0.21     | 0.00               | 0.00    | 0.79             | 1.00      | 0.0001 |
| ESWMM6      | 1.00                          | 0.87                                   | 0.09   | 0.00     | 0.04     | 0.00               | 0.00    | 0.00             | 0.01      | 0.0000 |
| ESWMM93     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.17     | 0.00               | 0.00    | 0.82             | 0.66      | 0.0002 |
| ESWMM94     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.46      | 0.0002 |
| ESWMM96     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.73     | 0.00               | 0.00    | 0.26             | 0.40      | 0.0002 |
| ESWMM97     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.40      | 0.0001 |
| ESWMM98     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.38      | 0.0000 |
| ESWMM61     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.26      | 0.0000 |
| ESWMM62     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.53      | 0.0003 |
| ESWMM63     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.19     | 0.00               | 0.00    | 0.80             | 0.77      | 0.0002 |
| ESWMM64     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.20      | 0.0001 |
| ESWMM65     | 1.52                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.24      | 0.0000 |
| ESWMM66     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.52      | 0.0000 |
| ESWMM67     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.15      | 0.0000 |
| ESWMM68     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.49      | 0.0000 |
| ESWMM69     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.08     | 0.00               | 0.00    | 0.91             | 0.73      | 0.0000 |
| ESWMM30     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.25      | 0.0003 |
| ESWMM29     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.02     | 0.00               | 0.00    | 0.97             | 0.48      | 0.0000 |
| ESWMM28     | 1.00                          | 0.94                                   | 0.00   | 0.00     | 0.03     | 0.00               | 0.00    | 0.03             | 0.03      | 0.0001 |
| ESWMM27     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.03      | 0.0002 |
| ESWMM26     | 3.14                          | 0.01                                   | 0.00   | 0.00     | 0.03     | 0.00               | 0.96    | 0.00             | 0.07      | 0.0000 |
| ESWMM25     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.04     | 0.00               | 0.00    | 0.96             | 0.35      | 0.0002 |
| ESWMM24     | 1.00                          | 0.00                                   | 0.01   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.25      | 0.0001 |
| ESWMM50     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.00     | 0.00               | 0.99    | 0.00             | 0.05      | 0.0000 |
| ESWMM51     | 1.00                          | 0.00                                   | 0.00   | 0.00     | 0.04     | 0.02               | 0.00    | 0.94             | 1.41      | 0.0000 |
| ESWMM52     | 1.00                          | 0.00                                   | 0.00   | 0.00     | 1.00     | 0.00               | 0.00    | 0.00             | 0.07      | 0.0000 |
| BLUPIPE     | 1.00                          | 0.00                                   | 0.00   | 0.00     | 1.00     | 0.00               | 0.00    | 0.00             | 0.00      | 0.0001 |
| ESWMM46     | 3.05                          | 0.00                                   | 0.00   | 0.00     | 0.16     | 0.06               | 0.00    | 0.77             | 1.61      | 0.0000 |
| ESWMM47     | 1.00                          | 0.00                                   | 0.00   | 0.00     | 0.06     | 0.01               | 0.00    | 0.94             | 1.13      | 0.0000 |
| ESWMM48     | 1.00                          | 0.80                                   | 0.09   | 0.00     | 0.06     | 0.00               | 0.05    | 0.00             | 0.02      | 0.0000 |
| ESWMM49     | 1.00                          | 0.00                                   | 0.00   | 0.00     | 1.00     | 0.00               | 0.00    | 0.00             | 0.35      | 0.0000 |
| ESWMM54     | 1.00                          | 0.01                                   | 0.00   | 0.00     | 0.99     | 0.00               | 0.00    | 0.00             | 0.02      | 0.0000 |

|            |      |      |      |      |      |      |      |      |      |        |
|------------|------|------|------|------|------|------|------|------|------|--------|
| ESWMM55    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.23 | 0.0002 |
| ESWMM56    | 1.00 | 0.01 | 0.00 | 0.00 | 0.65 | 0.00 | 0.00 | 0.35 | 0.35 | 0.0003 |
| ESWMM95    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.35 | 0.0002 |
| 48SDTOBPS  | 1.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.95 | 0.72 | 0.0000 |
| ESWMM23    | 1.00 | 0.00 | 0.00 | 0.00 | 0.18 | 0.00 | 0.00 | 0.82 | 0.41 | 0.0001 |
| ESWMM22    | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.32 | 0.0001 |
| ESWMM21    | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.17 | 0.0000 |
| ESWMM20    | 1.00 | 0.01 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.92 | 0.39 | 0.0001 |
| ESWMM19    | 1.00 | 0.01 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.93 | 0.44 | 0.0001 |
| ESWMM18    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.32 | 0.0001 |
| ESWMM17    | 1.00 | 0.00 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.31 | 0.0001 |
| ESWMM16    | 1.00 | 0.00 | 0.00 | 0.00 | 0.23 | 0.01 | 0.00 | 0.76 | 0.67 | 0.0000 |
| ESWMM70    | 1.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.94 | 0.45 | 0.0000 |
| ESWMM15    | 1.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.90 | 0.30 | 0.0001 |
| ESWMM71    | 1.00 | 0.00 | 0.00 | 0.00 | 0.91 | 0.00 | 0.00 | 0.08 | 0.67 | 0.0000 |
| ESWMM72    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.46 | 0.0000 |
| ESWMM7     | 1.00 | 0.70 | 0.17 | 0.00 | 0.10 | 0.00 | 0.00 | 0.03 | 0.03 | 0.0000 |
| ESWMM12    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.18 | 0.0000 |
| ESWMM9     | 1.00 | 0.01 | 0.14 | 0.00 | 0.85 | 0.00 | 0.00 | 0.00 | 0.04 | 0.0000 |
| ESWMM99    | 1.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.91 | 0.57 | 0.0000 |
| ESWMM8     | 1.50 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.00 | 0.97 | 2.29 | 0.0000 |
| ESWMM10    | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.32 | 0.0000 |
| ESWMM11    | 1.00 | 0.00 | 0.01 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.36 | 0.0000 |
| ESWMM90    | 1.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0.74 | 0.36 | 0.0000 |
| ESWMM89    | 1.00 | 0.01 | 0.00 | 0.00 | 0.27 | 0.00 | 0.00 | 0.73 | 0.41 | 0.0000 |
| ESWMM88    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.46 | 0.0000 |
| ESWMM87    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.11 | 0.0000 |
| ESWMM86    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.38 | 0.0000 |
| ESWMM85    | 1.00 | 0.01 | 0.00 | 0.00 | 0.83 | 0.17 | 0.00 | 0.00 | 0.49 | 0.0000 |
| ESWMM84    | 1.00 | 0.01 | 0.07 | 0.00 | 0.92 | 0.00 | 0.00 | 0.00 | 0.13 | 0.0000 |
| ESWMM83    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.03 | 0.0000 |
| ESWMM82    | 1.00 | 0.00 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.01 | 0.0000 |
| ESWMM73    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.39 | 0.0000 |
| ESWMM76    | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.48 | 0.0000 |
| ESWMM77    | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.42 | 0.0000 |
| ESWMM78    | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.43 | 0.0000 |
| ESWMM79    | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.39 | 0.0000 |
| ESWMM80    | 1.00 | 0.00 | 0.00 | 0.00 | 0.95 | 0.04 | 0.00 | 0.00 | 0.58 | 0.0000 |
| ESWMM81    | 1.00 | 0.01 | 0.00 | 0.00 | 0.37 | 0.62 | 0.00 | 0.00 | 1.97 | 0.0003 |
| ESWMM14    | 1.00 | 0.00 | 0.00 | 0.00 | 0.37 | 0.00 | 0.00 | 0.63 | 0.32 | 0.0001 |
| ESWMM13    | 1.00 | 0.10 | 0.82 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0001 |
| ESWMM125   | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.0000 |
| ESWMM71A   | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.69 | 0.0000 |
| ESWMM126   | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.0003 |
| ESWMM127   | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.0001 |
| ESWMM128   | 1.00 | 0.00 | 0.09 | 0.00 | 0.90 | 0.00 | 0.00 | 0.00 | 0.06 | 0.0000 |
| ESWMM129   | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.46 | 0.0000 |
| ESWMM132   | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.0000 |
| 60SDTOBPS  | 1.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.95 | 1.05 | 0.0000 |
| ESWMM134   | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.47 | 0.0000 |
| ESWMM135   | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.62 | 0.0000 |
| ESWMM53    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 |
| ESWMM75    | 1.00 | 0.00 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.37 | 0.0000 |
| 1F.H.SWMM5 | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.18 | 0.0000 |
| 1F.H.SWMM6 | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.39 | 0.0000 |
| 1F.H.SWMM7 | 1.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.99 | 0.89 | 0.0000 |
| ESWMM201   | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.20 | 0.0000 |
| ESWMM203   | 1.00 | 0.01 | 0.00 | 0.00 | 0.86 | 0.13 | 0.00 | 0.00 | 0.27 | 0.0000 |
| ESWMM200   | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.05 | 0.0000 |
| ESWMM202   | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 |
| ESWMM500   | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.43 | 0.0000 |
| ESWMM74    | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.41 | 0.0000 |
| ESWMM74A   | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.12 | 0.0000 |
| 1F.C.SWMM1 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.61 | 0.0000 |
| 1F.CSWMM2  | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.70 | 0.0000 |
| 1F.C3      | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.80 | 0.0000 |
| 1F.C.4     | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.41 | 0.0000 |
| 1F.CSWMM5  | 1.00 | 0.00 | 0.00 | 0.00 | 0.99 | 0.01 | 0.00 | 0.00 | 0.49 | 0.0000 |
| 1F.D.SWMM8 | 1.00 | 0.00 | 0.01 | 0.00 | 0.77 | 0.22 | 0.00 | 0.00 | 0.86 | 0.0000 |
| 1F.E.SWMM1 | 1.00 | 0.00 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.10 | 0.0001 |
| 1F.E.SWMM2 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.40 | 0.0001 |
| 1F.E.SWMM4 | 1.00 | 0.00 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.47 | 0.0000 |



|             |      |      |      |      |      |      |      |      |      |        |
|-------------|------|------|------|------|------|------|------|------|------|--------|
| 1F.E.SWMM5  | 1.00 | 0.00 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.61 | 0.0000 |
| 1F.H.SWMM11 | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.27 | 0.0010 |
| 1F.H.SWMM12 | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.01 | 0.00 | 0.00 | 0.41 | 0.0003 |
| 1F.H.SWMM13 | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.39 | 0.0001 |
| 1F.H.SWMM14 | 1.00 | 0.01 | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.00 | 0.27 | 0.0002 |
| 1F.J.SWMM3  | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.20 | 0.0000 |

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

| Conduit     | Hours Full |          |          | Hours                  |                  |
|-------------|------------|----------|----------|------------------------|------------------|
|             | Both Ends  | Upstream | Dnstream | Above Full Normal Flow | Capacity Limited |
| 1F.H.SWMM8  | 2.45       | 2.45     | 2.53     | 0.01                   | 0.08             |
| 1F.H.SWMM9  | 5.22       | 5.22     | 5.23     | 2.99                   | 4.16             |
| 1F.DSWMM1   | 0.64       | 0.64     | 0.64     | 0.21                   | 0.25             |
| 1F.D.SWMM2  | 0.58       | 0.58     | 0.59     | 0.02                   | 0.18             |
| 1F.D.SWMM4  | 0.32       | 0.32     | 0.35     | 0.01                   | 0.05             |
| 1F.D.SWMM5  | 0.86       | 0.86     | 0.90     | 0.01                   | 0.18             |
| ESWMM41     | 0.01       | 0.01     | 0.01     | 0.01                   | 0.01             |
| 1F.D.SWMM7  | 0.16       | 0.16     | 0.17     | 0.01                   | 0.03             |
| ESWMM45     | 2.30       | 2.30     | 2.30     | 0.61                   | 0.62             |
| 1F.H.SWMM10 | 4.98       | 4.98     | 5.02     | 0.08                   | 0.43             |
| ESWMM32     | 5.81       | 5.81     | 5.86     | 4.01                   | 4.06             |
| ESWMM91     | 1.94       | 1.94     | 1.95     | 2.88                   | 1.15             |
| ESWMM92     | 1.40       | 1.40     | 1.44     | 3.37                   | 1.27             |
| 1F.H.SWMM1  | 0.97       | 0.97     | 0.99     | 0.01                   | 0.01             |
| 1F.H.SWMM2  | 1.52       | 1.52     | 1.53     | 0.01                   | 0.01             |
| 1F.H.SWMM3  | 3.82       | 3.82     | 3.82     | 1.63                   | 1.63             |
| 1F.H.SWMM4  | 4.33       | 4.33     | 4.35     | 4.37                   | 4.17             |
| ESWMM5      | 4.63       | 4.63     | 4.63     | 0.01                   | 3.96             |
| ESWMM6      | 0.01       | 0.01     | 0.01     | 2.42                   | 0.01             |
| ESWMM93     | 1.72       | 1.72     | 1.72     | 1.26                   | 0.83             |
| ESWMM94     | 1.22       | 1.22     | 1.24     | 0.16                   | 0.60             |
| ESWMM96     | 1.30       | 1.30     | 1.31     | 0.84                   | 0.59             |
| ESWMM97     | 0.61       | 0.61     | 0.63     | 0.01                   | 0.15             |
| ESWMM98     | 0.36       | 0.36     | 0.37     | 0.15                   | 0.32             |
| ESWMM62     | 2.01       | 2.01     | 2.02     | 0.01                   | 0.44             |
| ESWMM63     | 2.20       | 2.20     | 2.20     | 0.01                   | 0.50             |
| ESWMM64     | 2.40       | 2.40     | 2.40     | 0.28                   | 1.84             |
| ESWMM65     | 1.92       | 1.92     | 1.92     | 0.01                   | 0.01             |
| ESWMM66     | 1.92       | 1.92     | 1.92     | 0.01                   | 0.15             |
| ESWMM67     | 2.23       | 2.23     | 2.23     | 0.01                   | 2.22             |
| ESWMM68     | 1.66       | 1.66     | 1.66     | 0.01                   | 0.15             |
| ESWMM69     | 2.32       | 2.32     | 2.32     | 0.01                   | 0.25             |
| ESWMM30     | 4.98       | 4.98     | 5.03     | 4.77                   | 4.47             |
| ESWMM29     | 0.45       | 0.45     | 0.47     | 0.01                   | 0.19             |
| ESWMM28     | 0.80       | 0.80     | 0.81     | 0.01                   | 0.20             |
| ESWMM27     | 1.24       | 1.24     | 1.25     | 1.74                   | 0.97             |
| ESWMM26     | 0.74       | 0.74     | 0.74     | 0.01                   | 0.02             |
| ESWMM25     | 1.51       | 1.51     | 1.51     | 0.10                   | 1.29             |
| ESWMM24     | 0.77       | 0.77     | 0.81     | 0.01                   | 0.16             |
| ESWMM50     | 0.26       | 0.26     | 0.26     | 0.80                   | 0.01             |
| ESWMM51     | 0.55       | 0.55     | 0.55     | 0.01                   | 0.04             |
| ESWMM52     | 1.90       | 1.90     | 1.90     | 0.42                   | 0.79             |
| BLUPIPE     | 1.56       | 1.56     | 1.56     | 1.18                   | 0.98             |
| ESWMM46     | 2.40       | 2.40     | 2.40     | 0.01                   | 0.01             |
| ESWMM47     | 2.95       | 2.95     | 2.95     | 0.01                   | 0.01             |
| ESWMM48     | 5.02       | 5.02     | 5.02     | 0.01                   | 0.01             |
| ESWMM49     | 5.03       | 5.03     | 5.03     | 0.04                   | 0.32             |
| ESWMM54     | 0.73       | 0.73     | 0.73     | 0.01                   | 0.05             |
| ESWMM55     | 1.65       | 1.65     | 1.70     | 0.03                   | 0.45             |
| ESWMM56     | 1.64       | 1.64     | 1.70     | 0.07                   | 0.39             |
| ESWMM95     | 1.32       | 1.32     | 1.33     | 0.11                   | 0.57             |
| 48SDTOBPS   | 5.25       | 5.25     | 5.25     | 4.53                   | 5.24             |
| ESWMM23     | 0.08       | 0.08     | 0.09     | 0.01                   | 0.03             |
| ESWMM22     | 1.26       | 1.26     | 1.30     | 0.08                   | 0.98             |
| ESWMM21     | 1.66       | 1.66     | 1.67     | 0.01                   | 0.23             |

|             |      |      |      |      |      |
|-------------|------|------|------|------|------|
| ESWMM20     | 2.05 | 2.05 | 2.07 | 0.01 | 0.27 |
| ESWMM19     | 2.47 | 2.47 | 2.47 | 0.04 | 1.53 |
| ESWMM18     | 2.57 | 2.57 | 2.57 | 0.02 | 0.40 |
| ESWMM17     | 2.59 | 2.59 | 2.60 | 0.55 | 2.41 |
| ESWMM16     | 2.62 | 2.62 | 2.63 | 0.01 | 0.07 |
| ESWMM70     | 2.39 | 2.39 | 2.39 | 0.01 | 0.27 |
| ESWMM15     | 2.22 | 2.22 | 2.25 | 0.01 | 0.22 |
| ESWMM71     | 2.40 | 2.40 | 2.41 | 0.01 | 0.62 |
| ESWMM72     | 2.82 | 2.82 | 2.82 | 0.01 | 2.80 |
| ESWMM7      | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 |
| ESWMM12     | 0.01 | 0.01 | 0.01 | 1.78 | 0.01 |
| ESWMM99     | 0.01 | 0.01 | 0.01 | 0.55 | 0.01 |
| ESWMM10     | 2.21 | 2.21 | 2.21 | 4.68 | 2.21 |
| ESWMM83     | 3.47 | 3.47 | 3.47 | 0.04 | 0.21 |
| ESWMM82     | 3.48 | 3.48 | 3.48 | 0.77 | 0.68 |
| ESWMM73     | 2.82 | 2.82 | 2.82 | 2.50 | 2.79 |
| ESWMM77     | 0.01 | 0.01 | 0.01 | 0.52 | 0.01 |
| ESWMM78     | 0.01 | 0.01 | 0.01 | 2.92 | 0.01 |
| ESWMM79     | 0.01 | 0.01 | 0.01 | 0.30 | 0.01 |
| ESWMM14     | 1.61 | 1.61 | 1.62 | 0.01 | 0.28 |
| ESWMM13     | 0.21 | 0.21 | 0.22 | 0.01 | 0.02 |
| ESWMM71A    | 2.80 | 2.80 | 2.80 | 0.01 | 0.01 |
| ESWMM126    | 2.80 | 2.80 | 2.80 | 0.13 | 1.03 |
| ESWMM127    | 2.93 | 2.93 | 2.93 | 0.01 | 0.05 |
| ESWMM129    | 1.61 | 1.61 | 1.61 | 0.01 | 0.01 |
| ESWMM132    | 2.41 | 2.41 | 2.41 | 0.01 | 0.01 |
| 60SDTOBPS   | 4.79 | 4.79 | 4.79 | 0.01 | 0.01 |
| ESWMM134    | 3.97 | 3.97 | 3.97 | 0.01 | 0.01 |
| ESWMM135    | 0.01 | 0.01 | 0.01 | 4.73 | 0.01 |
| ESWMM53     | 0.73 | 0.73 | 0.73 | 0.01 | 0.01 |
| ESWMM75     | 0.01 | 0.01 | 0.01 | 3.36 | 0.01 |
| ESWMM201    | 2.24 | 2.24 | 2.24 | 3.49 | 2.24 |
| ESWMM203    | 0.23 | 0.23 | 0.23 | 0.01 | 0.01 |
| ESWMM500    | 4.52 | 4.52 | 4.52 | 4.72 | 4.49 |
| ESWMM74     | 2.82 | 2.82 | 2.82 | 0.01 | 2.51 |
| ESWMM74A    | 0.41 | 0.41 | 0.42 | 2.95 | 0.41 |
| 1F.C.SWMM1  | 2.41 | 2.41 | 2.41 | 0.01 | 0.01 |
| 1F.CSWMM2   | 3.17 | 3.17 | 3.18 | 0.67 | 1.49 |
| 1F.C3       | 3.32 | 3.32 | 3.33 | 0.01 | 0.62 |
| 1F.C.4      | 3.80 | 3.80 | 3.80 | 0.01 | 2.67 |
| 1F.CSWMM5   | 2.93 | 2.93 | 2.93 | 5.45 | 2.11 |
| 1F.E.SWMM1  | 0.66 | 0.66 | 0.66 | 0.61 | 0.38 |
| 1F.E.SWMM2  | 0.52 | 0.52 | 0.52 | 0.86 | 0.50 |
| 1F.E.SWMM4  | 0.01 | 0.01 | 0.01 | 0.94 | 0.01 |
| 1F.E.SWMM5  | 0.18 | 0.18 | 0.18 | 0.65 | 0.18 |
| 1F.H.SWMM11 | 6.27 | 6.27 | 6.31 | 4.16 | 3.75 |
| 1F.H.SWMM12 | 6.48 | 6.48 | 6.50 | 0.01 | 0.28 |
| 1F.H.SWMM13 | 8.36 | 8.36 | 8.36 | 4.89 | 6.77 |
| 1F.H.SWMM14 | 6.42 | 6.42 | 6.47 | 7.78 | 5.84 |
| 1F.J.SWMM3  | 0.45 | 0.45 | 0.46 | 0.01 | 0.38 |

\*\*\*\*\*  
Pumping Summary  
\*\*\*\*\*

| Pump                | Percent Utilized | Number of Start-Ups | Min Flow CFS | Avg Flow CFS | Max Flow CFS | Total Volume 10^6 gal | Power Usage Kw-hr | % Time Pump Curve Low | Off High |
|---------------------|------------------|---------------------|--------------|--------------|--------------|-----------------------|-------------------|-----------------------|----------|
| BROADWAYPUMPSTATION | 99.84            | 129                 | 0.00         | 6.87         | 130.00       | 24.019                | 11950.30          | 95.5                  | 0.7      |
| ALCALDEPUMPSTATION  | 99.28            | 120                 | 0.00         | 9.03         | 207.03       | 31.464                | 2869.09           | 98.5                  | 0.0      |
| URBANPUMPSTATION    | 3.60             | 1610                | 0.00         | 7.09         | 10.75        | 0.954                 | 45.14             | 39.4                  | 0.0      |
| BARELAPUMPSTATION   | 97.70            | 3064                | 0.00         | 18.00        | 373.84       | 60.944                | 6173.89           | 96.4                  | 0.0      |

Analysis begun on: Tue Jan 24 11:20:56 2012  
Analysis ended on: Tue Jan 24 11:23:49 2012  
Total elapsed time: 00:02:53