

**Nodes**

| Name   | Area (ha) | T of E (mins) | Cover Level (m) | Diameter (mm) | Easting (m) | Northing (m) | Depth (m) |
|--------|-----------|---------------|-----------------|---------------|-------------|--------------|-----------|
| SWMH01 | 0.100     | 4.00          | 119.800         | 1200          | 527243.173  | 202443.624   | 1.425     |
| SWMH02 | 0.029     | 4.00          | 120.200         | 1200          | 527283.666  | 202434.931   | 2.219     |
| SWMH03 | 0.000     | 4.00          | 119.800         | 1200          | 527291.553  | 202471.672   | 1.973     |
| SWMH04 | 0.000     | 4.00          | 119.700         | 1200          | 527346.721  | 202467.051   | 2.100     |
| SWMH05 | 0.030     | 4.00          | 119.600         | 1200          | 527384.293  | 202463.413   | 2.623     |
| SWMH06 | 0.008     | 4.00          | 118.500         | 1200          | 527413.413  | 202482.051   | 1.593     |
| SWMH07 | 0.000     | 4.00          | 119.000         | 1200          | 527424.261  | 202470.023   | 2.126     |
| SWMH08 | 0.000     | 4.00          | 115.100         | 1200          | 527454.311  | 202459.706   | 1.700     |
| SWMH09 | 0.062     | 4.00          | 120.700         | 1200          | 527323.778  | 202426.320   | 1.425     |
| Pond   | 0.100     | 4.00          | 114.400         | 1200          | 527468.269  | 202500.363   | 1.200     |
| SWMH10 | 0.034     | 4.00          | 120.300         | 1200          | 527343.246  | 202451.720   | 1.350     |
| SWMH11 | 0.033     | 4.00          | 118.900         | 1200          | 527243.740  | 202511.091   | 0.900     |
| SWMH12 | 0.129     | 4.00          | 119.400         | 1200          | 527254.955  | 202482.680   | 1.657     |
| SWMH13 | 0.000     | 4.00          | 119.700         | 1200          | 527376.064  | 202469.523   | 2.456     |
| SWMH14 | 0.006     | 4.00          | 119.500         | 1200          | 527246.816  | 202473.228   | 1.300     |
| SWMH15 | 0.032     | 4.00          | 120.500         | 1200          | 527368.889  | 202399.739   | 1.350     |
| SWMH16 | 0.026     | 4.00          | 120.200         | 1200          | 527372.712  | 202415.542   | 1.362     |
| SWMH17 | 0.047     | 4.00          | 120.200         | 1200          | 527377.382  | 202434.845   | 2.697     |
| SWMH18 | 0.067     | 4.00          | 120.700         | 1200          | 527341.216  | 202423.162   | 1.425     |
| SWMH19 | 0.035     | 4.00          | 119.500         | 1200          | 527430.458  | 202440.556   | 1.350     |
| SWMH20 | 0.041     | 4.00          | 119.700         | 1200          | 527424.441  | 202420.633   | 1.832     |
| SWMH21 | 0.043     | 4.00          | 119.500         | 1200          | 527423.216  | 202455.327   | 1.350     |
| SWMH22 | 0.061     | 4.00          | 118.900         | 1200          | 527434.636  | 202461.703   | 1.400     |
| SWMH23 | 0.044     | 4.00          | 115.100         | 1200          | 527452.850  | 202455.450   | 1.200     |
| SWMH24 | 0.000     | 4.00          | 118.700         | 1200          | 527474.238  | 202441.267   | 3.000     |
| SWMH25 | 0.168     | 4.00          | 117.800         | 1200          | 527639.506  | 202373.418   | 0.900     |

**Links**

| Name  | US Node | DS Node | Length (m) | ks (mm) / n | US IL (m) | DS IL (m) | Fall (m) | Slope (1:X) | Dia (mm) | T of C (mins) | Rain (mm/hr) |
|-------|---------|---------|------------|-------------|-----------|-----------|----------|-------------|----------|---------------|--------------|
| 1.000 | SWMH01  | SWMH02  | 41.416     | 0.600       | 118.375   | 118.131   | 0.244    | 169.7       | 225      | 4.69          | 100.0        |
| 1.001 | SWMH02  | SWMH03  | 37.578     | 0.600       | 117.981   | 117.827   | 0.154    | 244.0       | 300      | 5.32          | 100.0        |
| 1.002 | SWMH03  | SWMH04  | 55.361     | 0.600       | 117.827   | 117.600   | 0.227    | 243.9       | 300      | 6.24          | 82.8         |
| 1.003 | SWMH04  | SWMH05  | 37.748     | 0.600       | 117.600   | 117.202   | 0.398    | 94.8        | 300      | 6.86          | 79.2         |
| 1.004 | SWMH05  | SWMH06  | 34.574     | 0.600       | 116.977   | 116.907   | 0.070    | 493.9       | 525      | 7.44          | 76.2         |
| 1.005 | SWMH06  | SWMH07  | 16.197     | 0.600       | 116.907   | 116.874   | 0.033    | 490.8       | 525      | 7.71          | 74.9         |
| 1.006 | SWMH07  | SWMH08  | 44.021     | 0.600       | 116.874   | 113.475   | 3.399    | 13.0        | 525      | 8.44          | 71.6         |
| 1.007 | SWMH08  | Pond    | 34.626     | 0.600       | 113.400   | 113.200   | 0.200    | 173.1       | 600      | 9.02          | 69.2         |

| Name  | Vel (m/s) | Cap (l/s) | Flow (l/s) | US Depth (m) | DS Depth (m) | Σ Area (ha) | Σ Add Inflow (l/s) | Pro Depth (mm) | Pro Velocity (m/s) |
|-------|-----------|-----------|------------|--------------|--------------|-------------|--------------------|----------------|--------------------|
| 1.000 | 1.000     | 39.8      | 36.1       | 1.200        | 1.844        | 0.100       | 0.0                | 169            | 1.130              |
| 1.001 | 1.002     | 70.8      | 69.0       | 1.919        | 1.673        | 0.191       | 0.0                | 241            | 1.136              |
| 1.002 | 1.002     | 70.8      | 57.2       | 1.673        | 1.800        | 0.191       | 0.0                | 205            | 1.111              |
| 1.003 | 1.614     | 114.1     | 64.4       | 1.800        | 2.098        | 0.225       | 0.0                | 161            | 1.662              |
| 1.004 | 1.001     | 216.7     | 184.8      | 2.098        | 1.068        | 0.671       | 0.0                | 375            | 1.118              |
| 1.005 | 1.004     | 217.3     | 183.8      | 1.601        | 1.068        | 0.679       | 0.0                | 372            | 1.120              |
| 1.006 | 6.246     | 1352.2    | 175.7      | 1.601        | 1.100        | 0.679       | 0.0                | 126            | 4.373              |
| 1.007 | 1.847     | 522.4     | 248.8      | 1.100        | 0.600        | 0.995       | 0.0                | 292            | 1.826              |

### Links


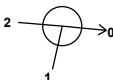
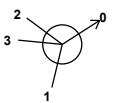


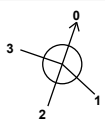

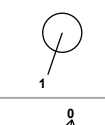


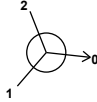
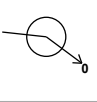


| Name   | US Node | DS Node | Length (m) | ks (mm) / n | US IL (m) | DS IL (m) | Fall (m) | Slope (1:X) | Dia (mm) | T of C (mins) | Rain (mm/hr) |
|--------|---------|---------|------------|-------------|-----------|-----------|----------|-------------|----------|---------------|--------------|
| 2.000  | SWMH09  | SWMH02  | 41.026     | 0.600       | 119.275   | 118.131   | 1.144    | 35.9        | 150      | 4.41          | 95.9         |
| 3.000  | SWMH10  | SWMH04  | 15.720     | 0.600       | 118.950   | 117.750   | 1.200    | 13.1        | 150      | 4.11          | 98.5         |
| 4.000  | SWMH11  | SWMH12  | 30.544     | 0.600       | 118.000   | 117.818   | 0.182    | 167.8       | 225      | 4.56          | 94.6         |
| 4.001  | SWMH12  | SWMH13  | 121.822    | 0.600       | 117.743   | 117.244   | 0.499    | 244.1       | 300      | 6.59          | 80.7         |
| 4.002  | SWMH13  | SWMH05  | 10.249     | 0.600       | 117.244   | 117.202   | 0.042    | 244.0       | 300      | 6.76          | 79.8         |
| 5.000  | SWMH14  | SWMH12  | 12.473     | 0.600       | 118.200   | 117.893   | 0.307    | 40.6        | 100      | 4.21          | 97.6         |
| 6.000  | SWMH15  | SWMH16  | 16.259     | 0.600       | 119.150   | 118.913   | 0.237    | 68.6        | 150      | 4.27          | 97.1         |
| 6.001  | SWMH16  | SWMH17  | 19.860     | 0.600       | 118.838   | 117.503   | 1.335    | 14.9        | 300      | 4.81          | 92.6         |
| 6.002  | SWMH17  | SWMH05  | 29.392     | 0.600       | 117.503   | 117.202   | 0.301    | 97.6        | 300      | 5.58          | 87.0         |
| 7.000  | SWMH18  | SWMH16  | 32.405     | 0.600       | 119.275   | 118.838   | 0.437    | 74.2        | 225      | 4.54          | 94.8         |
| 8.000  | SWMH19  | SWMH20  | 20.812     | 0.600       | 118.150   | 117.943   | 0.207    | 100.5       | 150      | 4.35          | 96.4         |
| 8.001  | SWMH20  | SWMH17  | 49.158     | 0.600       | 117.868   | 117.578   | 0.290    | 169.5       | 225      | 5.16          | 89.9         |
| 9.000  | SWMH21  | SWMH22  | 14.108     | 0.600       | 118.150   | 117.575   | 0.575    | 24.5        | 150      | 4.23          | 97.4         |
| 9.001  | SWMH22  | SWMH23  | 19.257     | 0.600       | 117.500   | 113.975   | 3.525    | 5.5         | 225      | 4.53          | 94.9         |
| 9.002  | SWMH23  | SWMH08  | 12.640     | 0.600       | 113.900   | 113.775   | 0.125    | 101.1       | 300      | 4.74          | 93.2         |
| 10.000 | SWMH25  | SWMH24  | 184.812    | 0.600       | 116.900   | 116.300   | 0.600    | 308.0       | 300      | 7.08          | 78.0         |
| 10.001 | SWMH24  | SWMH08  | 13.031     | 0.600       | 115.700   | 113.700   | 2.000    | 6.5         | 300      | 7.30          | 76.9         |

| Name   | Vel (m/s) | Cap (l/s) | Flow (l/s) | US Depth (m) | DS Depth (m) | Σ Area (ha) | Σ Add Inflow (l/s) | Pro Depth (mm) | Pro Velocity (m/s) |
|--------|-----------|-----------|------------|--------------|--------------|-------------|--------------------|----------------|--------------------|
| 2.000  | 1.686     | 29.8      | 21.5       | 1.275        | 1.919        | 0.062       | 0.0                | 95             | 1.833              |
| 3.000  | 2.798     | 49.4      | 12.1       | 1.200        | 1.800        | 0.034       | 0.0                | 51             | 2.324              |
| 4.000  | 1.006     | 40.0      | 11.3       | 0.675        | 1.357        | 0.033       | 0.0                | 81             | 0.866              |
| 4.001  | 1.002     | 70.8      | 49.0       | 1.357        | 2.156        | 0.168       | 0.0                | 184            | 1.078              |
| 4.002  | 1.002     | 70.8      | 48.5       | 2.156        | 2.098        | 0.168       | 0.0                | 183            | 1.076              |
| 5.000  | 1.213     | 9.5       | 2.1        | 1.200        | 1.407        | 0.006       | 0.0                | 32             | 0.982              |
| 6.000  | 1.215     | 21.5      | 11.2       | 1.200        | 1.137        | 0.032       | 0.0                | 77             | 1.229              |
| 6.001  | 4.096     | 289.5     | 41.8       | 1.062        | 2.397        | 0.125       | 0.0                | 76             | 2.942              |
| 6.002  | 1.591     | 112.5     | 78.0       | 2.397        | 2.098        | 0.248       | 0.0                | 184            | 1.713              |
| 7.000  | 1.520     | 60.4      | 23.0       | 1.200        | 1.137        | 0.067       | 0.0                | 96             | 1.420              |
| 8.000  | 1.002     | 17.7      | 12.2       | 1.200        | 1.607        | 0.035       | 0.0                | 92             | 1.079              |
| 8.001  | 1.001     | 39.8      | 24.7       | 1.607        | 2.397        | 0.076       | 0.0                | 129            | 1.054              |
| 9.000  | 2.041     | 36.1      | 15.1       | 1.200        | 1.175        | 0.043       | 0.0                | 68             | 1.952              |
| 9.001  | 5.635     | 224.0     | 35.7       | 1.175        | 0.900        | 0.104       | 0.0                | 60             | 4.147              |
| 9.002  | 1.563     | 110.5     | 49.9       | 0.900        | 1.025        | 0.148       | 0.0                | 141            | 1.523              |
| 10.000 | 0.890     | 62.9      | 47.4       | 0.600        | 2.100        | 0.168       | 0.0                | 195            | 0.975              |
| 10.001 | 6.196     | 438.0     | 46.7       | 2.700        | 1.100        | 0.168       | 0.0                | 65             | 4.076              |








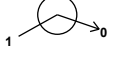






### Manhole Schedule

| Node   | Easting (m) | Northing (m) | CL (m)  | Depth (m) | Dia (mm) | Connections | Link | IL (m) | Dia (mm) |     |
|--------|-------------|--------------|---------|-----------|----------|-------------|------|--------|----------|-----|
| SWMH01 | 527243.173  | 202443.624   | 119.800 | 1.425     | 1200     |             | 0    | 1.000  | 118.375  | 225 |
| SWMH02 | 527283.666  | 202434.931   | 120.200 | 2.219     | 1200     |             | 1    | 2.000  | 118.131  | 150 |
|        |             |              |         |           |          |             | 2    | 1.000  | 118.131  | 225 |
|        |             |              |         |           |          |             | 0    | 1.001  | 117.981  | 300 |

**Manhole Schedule**

| Node   | Easting (m) | Northing (m) | CL (m)  | Depth (m) | Dia (mm) | Connections  | Link     | IL (m)  | Dia (mm) |
|--------|-------------|--------------|---------|-----------|----------|--|----------|---------|----------|
| SWMH03 | 527291.553  | 202471.672   | 119.800 | 1.973     | 1200     |    | 1 1.001  | 117.827 | 300      |
| SWMH04 | 527346.721  | 202467.051   | 119.700 | 2.100     | 1200     |    | 0 1.002  | 117.827 | 300      |
|        |             |              |         |           |          |  | 1 3.000  | 117.750 | 150      |
| SWMH05 | 527384.293  | 202463.413   | 119.600 | 2.623     | 1200     |    | 2 1.002  | 117.600 | 300      |
|        |             |              |         |           |          |  | 1 6.002  | 117.202 | 300      |
| SWMH06 | 527413.413  | 202482.051   | 118.500 | 1.593     | 1200     |    | 2 4.002  | 117.202 | 300      |
|        |             |              |         |           |          |  | 3 1.003  | 117.202 | 300      |
| SWMH07 | 527424.261  | 202470.023   | 119.000 | 2.126     | 1200     |    | 0 1.004  | 116.977 | 525      |
|        |             |              |         |           |          |  | 1 1.004  | 116.907 | 525      |
| SWMH08 | 527454.311  | 202459.706   | 115.100 | 1.700     | 1200     |  | 0 1.005  | 116.907 | 525      |
|        |             |              |         |           |          |  | 1 1.005  | 116.874 | 525      |
| SWMH09 | 527323.778  | 202426.320   | 120.700 | 1.425     | 1200     |  | 0 1.006  | 116.874 | 525      |
|        |             |              |         |           |          |  | 1 10.001 | 113.700 | 300      |
| Pond   | 527468.269  | 202500.363   | 114.400 | 1.200     | 1200     |  | 2 9.002  | 113.775 | 300      |
|        |             |              |         |           |          |  | 3 1.006  | 113.475 | 525      |
| SWMH10 | 527343.246  | 202451.720   | 120.300 | 1.350     | 1200     |  | 0 1.007  | 113.400 | 600      |
|        |             |              |         |           |          |  | 1 1.007  | 113.200 | 600      |
| SWMH11 | 527243.740  | 202511.091   | 118.900 | 0.900     | 1200     |  | 0 2.000  | 119.275 | 150      |
|        |             |              |         |           |          |  | 1 3.000  | 118.950 | 150      |
| SWMH12 | 527254.955  | 202482.680   | 119.400 | 1.657     | 1200     |  | 0 4.000  | 118.000 | 225      |
|        |             |              |         |           |          |  | 1 5.000  | 117.893 | 100      |
| SWMH13 | 527376.064  | 202469.523   | 119.700 | 2.456     | 1200     |  | 2 4.000  | 117.818 | 225      |
|        |             |              |         |           |          |  | 1 4.001  | 117.743 | 300      |
| SWMH14 | 527246.816  | 202473.228   | 119.500 | 1.300     | 1200     |  | 1 4.001  | 117.244 | 300      |
|        |             |              |         |           |          |  | 0 4.002  | 117.244 | 300      |
|        |             |              |         |           |          |  | 0 5.000  | 118.200 | 100      |

### Manhole Schedule

| Node   | Easting (m) | Northing (m) | CL (m)  | Depth (m) | Dia (mm) | Connections  | Link   | IL (m)         | Dia (mm)           |            |
|--------|-------------|--------------|---------|-----------|----------|--|--------|----------------|--------------------|------------|
| SWMH15 | 527368.889  | 202399.739   | 120.500 | 1.350     | 1200     |    | 0      | 6.000          | 119.150            | 150        |
| SWMH16 | 527372.712  | 202415.542   | 120.200 | 1.362     | 1200     |    | 1<br>2 | 7.000<br>6.000 | 118.838<br>118.913 | 225<br>150 |
| SWMH17 | 527377.382  | 202434.845   | 120.200 | 2.697     | 1200     |    | 1<br>2 | 8.001<br>6.001 | 117.578<br>117.503 | 225<br>300 |
| SWMH18 | 527341.216  | 202423.162   | 120.700 | 1.425     | 1200     |    | 0      | 6.001          | 118.838            | 300        |
| SWMH19 | 527430.458  | 202440.556   | 119.500 | 1.350     | 1200     |   | 0      | 7.000          | 119.275            | 225        |
| SWMH20 | 527424.441  | 202420.633   | 119.700 | 1.832     | 1200     |  | 1      | 8.000          | 118.150            | 150        |
| SWMH21 | 527423.216  | 202455.327   | 119.500 | 1.350     | 1200     |  | 0      | 8.001          | 117.943            | 225        |
| SWMH22 | 527434.636  | 202461.703   | 118.900 | 1.400     | 1200     |  | 1      | 9.000          | 118.150            | 150        |
| SWMH23 | 527452.850  | 202455.450   | 115.100 | 1.200     | 1200     |  | 1      | 9.001          | 117.500            | 225        |
| SWMH24 | 527474.238  | 202441.267   | 118.700 | 3.000     | 1200     |  | 1      | 9.001          | 113.975            | 225        |
| SWMH25 | 527639.506  | 202373.418   | 117.800 | 0.900     | 1200     |  | 1      | 9.002          | 113.900            | 300        |
|        |             |              |         |           |          |  | 0      | 10.000         | 116.300            | 300        |
|        |             |              |         |           |          |  | 0      | 10.001         | 115.700            | 300        |
|        |             |              |         |           |          |  | 0      | 10.000         | 116.900            | 300        |

### Simulation Settings

|                      |                   |   |        |
|----------------------|-------------------|---|--------|
| Rainfall Methodology | FSR               | Analysis Speed                          | Normal |
| FSR Region           | England and Wales | Skip Steady State                       | x      |
| M5-60 (mm)           | 20.000            | Drain Down Time (mins)                  | 240    |
| Ratio-R              | 0.400             | Additional Storage (m <sup>3</sup> /ha) | 20.0   |
| Summer CV            | 0.750             | Check Discharge Rate(s)                 | x      |
| Winter CV            | 0.840             | Check Discharge Volume                  | x      |

**Storm Durations**

|    |     |     |     |     |      |      |
|----|-----|-----|-----|-----|------|------|
| 15 | 60  | 180 | 360 | 600 | 960  | 2160 |
| 30 | 120 | 240 | 480 | 720 | 1440 | 2880 |

| Return Period<br>(years) | Climate Change<br>(CC %) | Additional Area<br>(A %) | Additional Flow<br>(Q %) |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 100                      | 40                       | 0                        | 0                        |

**Node Pond Online Hydro-Brake® Control**

|                          |         |                         |                                |
|--------------------------|---------|-------------------------|--------------------------------|
| Flap Valve               | x       | Objective               | (HE) Minimise upstream storage |
| Replaces Downstream Link | ✓       | Sump Available          | ✓                              |
| Invert Level (m)         | 113.200 | Product Number          | CTL-SHE-0100-4500-1000-4500    |
| Design Depth (m)         | 1.000   | Min Outlet Diameter (m) | 0.150                          |
| Design Flow (l/s)        | 4.5     | Min Node Diameter (mm)  | 1200                           |

**Node Pond Depth/Area Storage Structure**

|                             |         |               |      |                           |         |
|-----------------------------|---------|---------------|------|---------------------------|---------|
| Base Inf Coefficient (m/hr) | 0.00000 | Safety Factor | 2.0  | Invert Level (m)          | 113.200 |
| Side Inf Coefficient (m/hr) | 0.00000 | Porosity      | 1.00 | Time to half empty (mins) |         |

| Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Inf Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Inf Area<br>(m <sup>2</sup> ) |
|--------------|---------------------------|-------------------------------|--------------|---------------------------|-------------------------------|
| 0.000        | 700.0                     | 0.0                           | 1.200        | 1200.0                    | 0.0                           |

**Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.02%**

| Node Event        | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m <sup>3</sup> ) | Flood (m <sup>3</sup> ) | Status     |
|-------------------|---------|-------------|-----------|-----------|--------------|----------------------------|-------------------------|------------|
| 15 minute winter  | SWMH01  | 11          | 119.490   | 1.115     | 66.4         | 2.8265                     | 0.0000                  | SURCHARGED |
| 15 minute winter  | SWMH02  | 11          | 118.984   | 1.003     | 103.1        | 1.3967                     | 0.0000                  | SURCHARGED |
| 15 minute winter  | SWMH03  | 11          | 118.626   | 0.799     | 98.3         | 0.9032                     | 0.0000                  | SURCHARGED |
| 15 minute winter  | SWMH04  | 11          | 118.130   | 0.530     | 116.5        | 0.5997                     | 0.0000                  | SURCHARGED |
| 15 minute winter  | SWMH05  | 11          | 117.630   | 0.653     | 369.9        | 0.8880                     | 0.0000                  | SURCHARGED |
| 15 minute winter  | SWMH06  | 11          | 117.358   | 0.450     | 374.3        | 0.5545                     | 0.0000                  | OK         |
| 15 minute winter  | SWMH07  | 11          | 117.059   | 0.185     | 373.6        | 0.2091                     | 0.0000                  | OK         |
| 960 minute winter | SWMH08  | 945         | 114.069   | 0.669     | 38.9         | 0.7569                     | 0.0000                  | SURCHARGED |
| 15 minute winter  | SWMH09  | 11          | 120.340   | 1.065     | 41.1         | 2.1306                     | 0.0000                  | SURCHARGED |
| 960 minute winter | Pond    | 945         | 114.069   | 0.869     | 41.9         | 768.2967                   | 0.0000                  | OK         |
| 15 minute summer  | SWMH10  | 9           | 119.025   | 0.075     | 22.6         | 0.1221                     | 0.0000                  | OK         |
| 15 minute winter  | SWMH11  | 11          | 118.676   | 0.676     | 21.9         | 1.2607                     | 0.0000                  | FLOOD RISK |
| 15 minute winter  | SWMH12  | 11          | 118.643   | 0.900     | 102.4        | 2.4191                     | 0.0000                  | SURCHARGED |
| 15 minute winter  | SWMH13  | 11          | 117.744   | 0.500     | 90.6         | 0.5655                     | 0.0000                  | SURCHARGED |
| 15 minute winter  | SWMH14  | 11          | 118.666   | 0.466     | 8.3          | 0.5701                     | 0.0000                  | SURCHARGED |
| 15 minute winter  | SWMH15  | 10          | 119.287   | 0.137     | 21.3         | 0.2202                     | 0.0000                  | OK         |
| 15 minute winter  | SWMH16  | 10          | 118.949   | 0.111     | 83.0         | 0.1684                     | 0.0000                  | OK         |
| 15 minute winter  | SWMH17  | 11          | 118.273   | 0.770     | 150.5        | 1.1390                     | 0.0000                  | SURCHARGED |
| 15 minute summer  | SWMH18  | 10          | 119.431   | 0.156     | 44.5         | 0.3223                     | 0.0000                  | OK         |
| 15 minute winter  | SWMH19  | 11          | 118.899   | 0.748     | 23.3         | 1.2343                     | 0.0000                  | SURCHARGED |
| 15 minute winter  | SWMH20  | 11          | 118.633   | 0.765     | 42.7         | 1.2085                     | 0.0000                  | SURCHARGED |
| 15 minute summer  | SWMH21  | 10          | 118.261   | 0.111     | 28.6         | 0.1961                     | 0.0000                  | OK         |
| 15 minute summer  | SWMH22  | 10          | 117.585   | 0.085     | 69.2         | 0.1705                     | 0.0000                  | OK         |
| 15 minute winter  | SWMH23  | 10          | 114.155   | 0.255     | 98.4         | 0.4747                     | 0.0000                  | OK         |
| 15 minute winter  | SWMH24  | 12          | 115.784   | 0.084     | 76.8         | 0.0953                     | 0.0000                  | OK         |

| Link Event (Upstream Depth) | US Node | Link         | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m <sup>3</sup> ) | Discharge Vol (m <sup>3</sup> ) |
|-----------------------------|---------|--------------|---------|---------------|----------------|----------|----------------------------|---------------------------------|
| 15 minute winter            | SWMH01  | 1.000        | SWMH02  | 54.1          | 1.361          | 1.360    | 1.6472                     |                                 |
| 15 minute winter            | SWMH02  | 1.001        | SWMH03  | 98.3          | 1.396          | 1.388    | 2.6462                     |                                 |
| 15 minute winter            | SWMH03  | 1.002        | SWMH04  | 99.4          | 1.411          | 1.403    | 3.8985                     |                                 |
| 15 minute winter            | SWMH04  | 1.003        | SWMH05  | 116.7         | 1.732          | 1.022    | 2.6582                     |                                 |
| 15 minute winter            | SWMH05  | 1.004        | SWMH06  | 369.8         | 1.721          | 1.707    | 7.1442                     |                                 |
| 15 minute winter            | SWMH06  | 1.005        | SWMH07  | 373.6         | 2.735          | 1.719    | 2.1469                     |                                 |
| 15 minute winter            | SWMH07  | 1.006        | SWMH08  | 373.1         | 2.957          | 0.276    | 5.8737                     |                                 |
| 960 minute winter           | SWMH08  | 1.007        | Pond    | 38.0          | 1.000          | 0.073    | 9.7534                     |                                 |
| 15 minute winter            | SWMH09  | 2.000        | SWMH02  | 30.6          | 1.803          | 1.028    | 0.7223                     |                                 |
| 960 minute winter           | Pond    | Hydro-Brake® |         | 4.5           |                |          |                            | 256.3                           |
| 15 minute summer            | SWMH10  | 3.000        | SWMH04  | 22.6          | 2.568          | 0.457    | 0.2031                     |                                 |
| 15 minute winter            | SWMH11  | 4.000        | SWMH12  | 20.5          | 0.702          | 0.512    | 1.2148                     |                                 |
| 15 minute winter            | SWMH12  | 4.001        | SWMH13  | 90.6          | 1.286          | 1.279    | 8.5786                     |                                 |
| 15 minute winter            | SWMH13  | 4.002        | SWMH05  | 90.3          | 1.283          | 1.276    | 0.7217                     |                                 |
| 15 minute winter            | SWMH14  | 5.000        | SWMH12  | 7.0           | 0.895          | 0.735    | 0.0976                     |                                 |
| 15 minute winter            | SWMH15  | 6.000        | SWMH16  | 21.1          | 1.334          | 0.983    | 0.2708                     |                                 |
| 15 minute winter            | SWMH16  | 6.001        | SWMH17  | 82.0          | 1.477          | 0.283    | 0.9353                     |                                 |
| 15 minute winter            | SWMH17  | 6.002        | SWMH05  | 146.8         | 2.085          | 1.305    | 2.0698                     |                                 |
| 15 minute summer            | SWMH18  | 7.000        | SWMH16  | 44.5          | 1.829          | 0.737    | 0.7863                     |                                 |
| 15 minute winter            | SWMH19  | 8.000        | SWMH20  | 20.6          | 1.169          | 1.162    | 0.3664                     |                                 |
| 15 minute winter            | SWMH20  | 8.001        | SWMH17  | 43.8          | 1.169          | 1.101    | 1.9551                     |                                 |
| 15 minute summer            | SWMH21  | 9.000        | SWMH22  | 28.6          | 2.152          | 0.793    | 0.1873                     |                                 |
| 15 minute summer            | SWMH22  | 9.001        | SWMH23  | 69.2          | 3.519          | 0.309    | 0.4593                     |                                 |
| 15 minute winter            | SWMH23  | 9.002        | SWMH08  | 98.5          | 1.658          | 0.892    | 0.7481                     |                                 |
| 15 minute winter            | SWMH24  | 10.001       | SWMH08  | 76.8          | 4.222          | 0.175    | 0.4959                     |                                 |

**Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.02%**

| Node Event       | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m <sup>3</sup> ) | Flood (m <sup>3</sup> ) | Status     |
|------------------|---------|-------------|-----------|-----------|--------------|----------------------------|-------------------------|------------|
| 15 minute winter | SWMH25  | 12          | 117.346   | 0.445     | 111.5        | 2.1668                     | 0.0000                  | SURCHARGED |

| Link Event (Upstream Depth) | US Node | Link   | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m <sup>3</sup> ) | Discharge Vol (m <sup>3</sup> ) |
|-----------------------------|---------|--------|---------|---------------|----------------|----------|----------------------------|---------------------------------|
| 15 minute winter            | SWMH25  | 10.000 | SWMH24  | 76.8          | 1.140          | 1.220    | 11.5325                    |                                 |