## Design Settings

| | | | |
|---|---|---|---|
| Rainfall Methodology | FEH-22 | Minimum Velocity (m/s) | 1.00 |
| Return Period (years) | 100 | Connection Type | Level Soffits |
| Additional Flow (%) | 45 | Minimum Backdrop Height (m) | 0.200 |
| CV | 1.000 | Preferred Cover Depth (m) | 1.200 |
| Time of Entry (mins) | 5.00 | Include Intermediate Ground | ✓ |
| Maximum Time of Concentration (mins) | 30.00 | Enforce best practice design rules | x |
| Maximum Rainfall (mm/hr) | 50.0 | | |

## Nodes

| Name | Area (ha) | T of E (mins) | Cover Level (m) | Diameter (mm) | Easting (m) | Northing (m) | Depth (m) | Invert Level (m) |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.016 | 5.00 | 129.781 | 1200 | 420759.225 | 426741.119 | 1.026 | 128.755 |
| 2 | 0.024 | 5.00 | 130.166 | 450 | 420746.948 | 426777.702 | 1.351 | 128.815 |
| 3 | 0.057 | 5.00 | 129.852 | 1200 | 420751.108 | 426765.422 | 1.852 | 128.000 |
| 4 | 0.015 | 5.00 | 129.237 | 450 | 420763.225 | 426775.555 | 1.300 | 127.937 |
| J1 | | | 128.900 | | 420765.045 | 426769.943 | 1.883 | 127.017 |
| 5 | 0.013 | 5.00 | 128.336 | 450 | 420774.172 | 426779.104 | 1.300 | 127.036 |
| J2 | | | 128.111 | | 420775.990 | 426773.494 | 1.866 | 126.245 |
| 6 | 0.013 | 5.00 | 127.947 | 450 | 420776.505 | 426779.860 | 1.300 | 126.647 |
| J3 | | | 127.943 | | 420778.323 | 426774.251 | 1.863 | 126.080 |
| 7 | 0.032 | 5.00 | 127.151 | 1800 | 420789.297 | 426777.811 | 2.346 | 124.805 |
| 8 | 0.010 | 5.00 | 126.684 | 450 | 420797.806 | 426784.769 | 1.300 | 125.384 |
| J4 | | | 126.449 | | 420799.037 | 426780.971 | 1.881 | 124.568 |
| 9 | 0.015 | 5.00 | 126.029 | 450 | 420807.459 | 426789.659 | 1.300 | 124.729 |
| J5 | | | 125.715 | | 420809.206 | 426784.270 | 1.864 | 123.851 |
| 10 | | | 125.521 | 1200 | 420814.589 | 426786.017 | 2.351 | 123.170 |
| 11 | 0.054 | 5.00 | 125.400 | 450 | 420834.466 | 426798.418 | 0.600 | 124.800 |
| 12 | | 5.00 | 125.325 | 600 | 420843.602 | 426795.429 | 2.185 | 123.140 |
| Tank | | | 125.309 | 1200 | 420836.222 | 426793.035 | 2.219 | 123.090 |
| J6 | | | 125.470 | | 420831.235 | 426791.418 | 2.113 | 123.357 |
| 13 | 0.015 | 5.00 | 125.399 | 1500 | 420832.104 | 426788.744 | 2.554 | 122.845 |
| C1 | | | 124.414 | 600 | 420833.067 | 426787.184 | 1.434 | 122.980 |

## 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 | 1 | 3 | 25.623 | 0.600 | 128.755 | 128.000 | 0.755 | 33.9 | 300 | 5.16 | 50.0 |
| 2.000 | 2 | 3 | 12.965 | 0.600 | 128.815 | 128.150 | 0.665 | 19.5 | 150 | 5.09 | 50.0 |
| 1.001 | 3 | J1 | 14.652 | 0.600 | 128.000 | 127.017 | 0.983 | 14.9 | 300 | 5.22 | 50.0 |
| 8.000 | 12 | Tank | 7.759 | 0.600 | 123.440 | 123.390 | 0.050 | 155.2 | 300 | 5.10 | 50.0 |
| 1.010 | 13 | C1 | 1.833 | 0.600 | 123.295 | 123.280 | 0.015 | 122.2 | 150 | 5.74 | 50.0 |
| 3.000 | 4 | J1 | 5.900 | 0.600 | 127.937 | 127.367 | 0.570 | 10.4 | 100 | 5.04 | 50.0 |

| 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 | 2.708 | 191.4 | 4.2 | 0.726 | 1.552 | 0.016 | 0.0 | 30 | 1.113 |
| 2.000 | 2.291 | 40.5 | 6.3 | 1.201 | 1.552 | 0.024 | 0.0 | 40 | 1.677 |
| 1.001 | 4.092 | 289.3 | 25.4 | 1.552 | 1.583 | 0.097 | 0.0 | 59 | 2.549 |
| 8.000 | 1.259 | 89.0 | 0.0 | 1.585 | 1.619 | 0.000 | 0.0 | 0 | 0.000 |
| 1.010 | 0.908 | 16.0 | 69.2 | 1.954 | 0.984 | 0.264 | 0.0 | 150 | 0.925 |
| 3.000 | 2.416 | 19.0 | 3.9 | 1.200 | 1.433 | 0.015 | 0.0 | 31 | 1.906 |

## 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) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.002 | J1 | J2 | 11.507 | 0.600 | 127.017 | 126.245 | 0.772 | 14.9 | 300 | 5.26 | 50.0 |
| 1.003 | J2 | J3 | 2.453 | 0.600 | 126.245 | 126.080 | 0.165 | 14.9 | 300 | 5.27 | 50.0 |
| 1.004 | J3 | 7 | 11.537 | 0.600 | 126.080 | 125.305 | 0.775 | 14.9 | 300 | 5.32 | 50.0 |
| 1.006 | J4 | J5 | 10.691 | 0.600 | 124.568 | 123.851 | 0.717 | 14.9 | 300 | 5.41 | 50.0 |
| 1.007 | J5 | 10 | 5.659 | 0.600 | 123.851 | 123.470 | 0.381 | 14.9 | 300 | 5.43 | 50.0 |
| 4.000 | 5 | J2 | 5.897 | 0.600 | 127.036 | 126.595 | 0.441 | 13.4 | 100 | 5.05 | 50.0 |
| 5.000 | 6 | J3 | 5.896 | 0.600 | 126.647 | 126.547 | 0.100 | 59.0 | 100 | 5.10 | 50.0 |
| 6.000 | 8 | J4 | 3.993 | 0.600 | 125.384 | 124.969 | 0.415 | 9.6 | 100 | 5.03 | 50.0 |
| 7.000 | 9 | J5 | 5.665 | 0.600 | 124.729 | 124.252 | 0.477 | 11.9 | 100 | 5.04 | 50.0 |
| 9.000 | 11 | Tank | 5.662 | 0.600 | 124.800 | 123.390 | 1.410 | 4.0 | 150 | 5.02 | 50.0 |
| 8.001 | Tank | J6 | 5.243 | 0.600 | 123.390 | 123.357 | 0.033 | 158.9 | 300 | 5.17 | 50.0 |
| 1.005 | 7 | J4 | 10.240 | 0.600 | 125.255 | 124.568 | 0.687 | 14.9 | 300 | 5.36 | 50.0 |
| 1.008 | 10 | J6 | 17.500 | 0.600 | 123.470 | 123.357 | 0.113 | 154.9 | 300 | 5.66 | 50.0 |
| 1.009 | J6 | 13 | 2.812 | 0.600 | 123.357 | 123.345 | 0.012 | 234.3 | 300 | 5.71 | 50.0 |

| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 1.002 | 4.092 | 289.3 | 29.3 | 1.583 | 1.566 | 0.112 | 0.0 | 64 | 2.663 |
| 1.003 | 4.098 | 289.7 | 32.8 | 1.566 | 1.563 | 0.125 | 0.0 | 68 | 2.749 |
| 1.004 | 4.095 | 289.4 | 36.2 | 1.563 | 1.546 | 0.138 | 0.0 | 71 | 2.826 |
| 1.006 | 4.091 | 289.2 | 47.2 | 1.581 | 1.564 | 0.180 | 0.0 | 81 | 3.036 |
| 1.007 | 4.099 | 289.8 | 51.1 | 1.564 | 1.751 | 0.195 | 0.0 | 85 | 3.112 |
| 4.000 | 2.124 | 16.7 | 3.4 | 1.200 | 1.416 | 0.013 | 0.0 | 31 | 1.675 |
| 5.000 | 1.005 | 7.9 | 3.4 | 1.200 | 1.296 | 0.013 | 0.0 | 46 | 0.966 |
| 6.000 | 2.506 | 19.7 | 2.6 | 1.200 | 1.380 | 0.010 | 0.0 | 25 | 1.740 |
| 7.000 | 2.254 | 17.7 | 3.9 | 1.200 | 1.363 | 0.015 | 0.0 | 32 | 1.803 |
| 9.000 | 5.064 | 89.5 | 14.1 | 0.450 | 1.769 | 0.054 | 0.0 | 40 | 3.711 |
| 8.001 | 1.245 | 88.0 | 14.1 | 1.619 | 1.813 | 0.054 | 0.0 | 81 | 0.921 |
| 1.005 | 4.092 | 289.3 | 44.5 | 1.596 | 1.581 | 0.170 | 0.0 | 79 | 2.988 |
| 1.008 | 1.261 | 89.1 | 51.1 | 1.751 | 1.813 | 0.195 | 0.0 | 163 | 1.303 |
| 1.009 | 1.023 | 72.3 | 65.2 | 1.813 | 1.754 | 0.249 | 0.0 | 224 | 1.152 |

## Pipeline Schedule

| Link | Length (m) | Slope (1:X) | Dia (mm) | Link Type | US CL (m) | US IL (m) | US Depth (m) | DS CL (m) | DS IL (m) | DS Depth (m) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 25.623 | 33.9 | 300 | Circular | 129.781 | 128.755 | 0.726 | 129.852 | 128.000 | 1.552 |
| 2.000 | 12.965 | 19.5 | 150 | Circular | 130.166 | 128.815 | 1.201 | 129.852 | 128.150 | 1.552 |
| 1.001 | 14.652 | 14.9 | 300 | Circular | 129.852 | 128.000 | 1.552 | 128.900 | 127.017 | 1.583 |
| 8.000 | 7.759 | 155.2 | 300 | Circular | 125.325 | 123.440 | 1.585 | 125.309 | 123.390 | 1.619 |
| 1.010 | 1.833 | 122.2 | 150 | Circular | 125.399 | 123.295 | 1.954 | 124.414 | 123.280 | 0.984 |
| 3.000 | 5.900 | 10.4 | 100 | Circular | 129.237 | 127.937 | 1.200 | 128.900 | 127.367 | 1.433 |

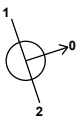
| Link | US Node | Dia (mm) | Node Type | MH Type | DS Node | Dia (mm) | Node Type | MH Type |
|---|---|---|---|---|---|---|---|---|
| 1.000 | 1 | 1200 | Manhole | Adoptable | 3 | 1200 | Manhole | Adoptable |
| 2.000 | 2 | 450 | Manhole | Adoptable | 3 | 1200 | Manhole | Adoptable |
| 1.001 | 3 | 1200 | Manhole | Adoptable | J1 | | Junction | |
| 8.000 | 12 | 600 | Manhole | Adoptable | Tank | 1200 | Manhole | Adoptable |
| 1.010 | 13 | 1500 | Manhole | Adoptable | C1 | 600 | Manhole | Adoptable |
| 3.000 | 4 | 450 | Manhole | Adoptable | J1 | | Junction | |

## Pipeline Schedule

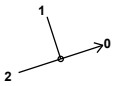
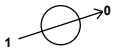
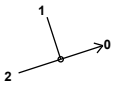
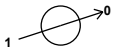
| Link | Length (m) | Slope (1:X) | Dia (mm) | Link Type | US CL (m) | US IL (m) | US Depth (m) | DS CL (m) | DS IL (m) | DS Depth (m) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.002 | 11.507 | 14.9 | 300 | Circular | 128.900 | 127.017 | 1.583 | 128.111 | 126.245 | 1.566 |
| 1.003 | 2.453 | 14.9 | 300 | Circular | 128.111 | 126.245 | 1.566 | 127.943 | 126.080 | 1.563 |
| 1.004 | 11.537 | 14.9 | 300 | Circular | 127.943 | 126.080 | 1.563 | 127.151 | 125.305 | 1.546 |
| 1.006 | 10.691 | 14.9 | 300 | Circular | 126.449 | 124.568 | 1.581 | 125.715 | 123.851 | 1.564 |
| 1.007 | 5.659 | 14.9 | 300 | Circular | 125.715 | 123.851 | 1.564 | 125.521 | 123.470 | 1.751 |
| 4.000 | 5.897 | 13.4 | 100 | Circular | 128.336 | 127.036 | 1.200 | 128.111 | 126.595 | 1.416 |
| 5.000 | 5.896 | 59.0 | 100 | Circular | 127.947 | 126.647 | 1.200 | 127.943 | 126.547 | 1.296 |
| 6.000 | 3.993 | 9.6 | 100 | Circular | 126.684 | 125.384 | 1.200 | 126.449 | 124.969 | 1.380 |
| 7.000 | 5.665 | 11.9 | 100 | Circular | 126.029 | 124.729 | 1.200 | 125.715 | 124.252 | 1.363 |
| 9.000 | 5.662 | 4.0 | 150 | Circular | 125.400 | 124.800 | 0.450 | 125.309 | 123.390 | 1.769 |
| 8.001 | 5.243 | 158.9 | 300 | Circular | 125.309 | 123.390 | 1.619 | 125.470 | 123.357 | 1.813 |
| 1.005 | 10.240 | 14.9 | 300 | Circular | 127.151 | 125.255 | 1.596 | 126.449 | 124.568 | 1.581 |
| 1.008 | 17.500 | 154.9 | 300 | Circular | 125.521 | 123.470 | 1.751 | 125.470 | 123.357 | 1.813 |
| 1.009 | 2.812 | 234.3 | 300 | Circular | 125.470 | 123.357 | 1.813 | 125.399 | 123.345 | 1.754 |

| Link | US Node | Dia (mm) | Node Type | MH Type | DS Node | Dia (mm) | Node Type | MH Type |
|---|---|---|---|---|---|---|---|---|
| 1.002 | J1 | | Junction | | J2 | | Junction | |
| 1.003 | J2 | | Junction | | J3 | | Junction | |
| 1.004 | J3 | | Junction | | 7 | 1800 | Manhole | Adoptable |
| 1.006 | J4 | | Junction | | J5 | | Junction | |
| 1.007 | J5 | | Junction | | 10 | 1200 | Manhole | Adoptable |
| 4.000 | 5 | 450 | Manhole | Adoptable | J2 | | Junction | |
| 5.000 | 6 | 450 | Manhole | Adoptable | J3 | | Junction | |
| 6.000 | 8 | 450 | Manhole | Adoptable | J4 | | Junction | |
| 7.000 | 9 | 450 | Manhole | Adoptable | J5 | | Junction | |
| 9.000 | 11 | 450 | Manhole | Adoptable | Tank | 1200 | Manhole | Adoptable |
| 8.001 | Tank | 1200 | Manhole | Adoptable | J6 | | Junction | |
| 1.005 | 7 | 1800 | Manhole | Adoptable | J4 | | Junction | |
| 1.008 | 10 | 1200 | Manhole | Adoptable | J6 | | Junction | |
| 1.009 | J6 | | Junction | | 13 | 1500 | Manhole | Adoptable |

## Manhole Schedule

| Node | Easting (m) | Northing (m) | CL (m) | Depth (m) | Dia (mm) | Connections | Link | IL (m) | Dia (mm) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 420759.225 | 426741.119 | 129.781 | 1.026 | 1200 |  0 | 1.000 | 128.755 | 300 |
| 2 | 420746.948 | 426777.702 | 130.166 | 1.351 | 450 |  0 | 2.000 | 128.815 | 150 |
| 3 | 420751.108 | 426765.422 | 129.852 | 1.852 | 1200 |  1<br>2<br>0 | 2.000<br>1.000<br>1.001 | 128.150<br>128.000<br>128.000 | 150<br>300<br>300 |
| 4 | 420763.225 | 426775.555 | 129.237 | 1.300 | 450 |  0 | 3.000 | 127.937 | 100 |

## Manhole Schedule

| Node | Easting (m) | Northing (m) | CL (m) | Depth (m) | Dia (mm) | Connections | Link | IL (m) | Dia (mm) |
|---|---|---|---|---|---|---|---|---|---|
| J1 | 420765.045 | 426769.943 | 128.900 | 1.883 | |  1 | 3.000 | 127.367 | 100 |
| | | | | | | 2 | 1.001 | 127.017 | 300 |
| | | | | | | 0 | 1.002 | 127.017 | 300 |
| 5 | 420774.172 | 426779.104 | 128.336 | 1.300 | 450 |  0 | 4.000 | 127.036 | 100 |
| J2 | 420775.990 | 426773.494 | 128.111 | 1.866 | |  1 | 4.000 | 126.595 | 100 |
| | | | | | | 2 | 1.002 | 126.245 | 300 |
| | | | | | | 0 | 1.003 | 126.245 | 300 |
| 6 | 420776.505 | 426779.860 | 127.947 | 1.300 | 450 |  0 | 5.000 | 126.647 | 100 |
| J3 | 420778.323 | 426774.251 | 127.943 | 1.863 | |  1 | 5.000 | 126.547 | 100 |
| | | | | | | 2 | 1.003 | 126.080 | 300 |
| | | | | | | 0 | 1.004 | 126.080 | 300 |
| 7 | 420789.297 | 426777.811 | 127.151 | 2.346 | 1800 |  1 | 1.004 | 125.305 | 300 |
| | | | | | | 0 | 1.005 | 125.255 | 300 |
| 8 | 420797.806 | 426784.769 | 126.684 | 1.300 | 450 |  0 | 6.000 | 125.384 | 100 |
| J4 | 420799.037 | 426780.971 | 126.449 | 1.881 | |  1 | 6.000 | 124.969 | 100 |
| | | | | | | 2 | 1.005 | 124.568 | 300 |
| | | | | | | 0 | 1.006 | 124.568 | 300 |
| 9 | 420807.459 | 426789.659 | 126.029 | 1.300 | 450 |  0 | 7.000 | 124.729 | 100 |
| J5 | 420809.206 | 426784.270 | 125.715 | 1.864 | |  1 | 7.000 | 124.252 | 100 |
| | | | | | | 2 | 1.006 | 123.851 | 300 |
| | | | | | | 0 | 1.007 | 123.851 | 300 |
| 10 | 420814.589 | 426786.017 | 125.521 | 2.351 | 1200 |  1 | 1.007 | 123.470 | 300 |
| | | | | | | 0 | 1.008 | 123.470 | 300 |
| 11 | 420834.466 | 426798.418 | 125.400 | 0.600 | 450 |  0 | 9.000 | 124.800 | 150 |
| 12 | 420843.602 | 426795.429 | 125.325 | 2.185 | 600 |  0 | 8.000 | 123.440 | 300 |

## Manhole Schedule

| Node | Easting (m) | Northing (m) | CL (m) | Depth (m) | Dia (mm) | Connections | Link | IL (m) | Dia (mm) |
|---|---|---|---|---|---|---|---|---|---|
| Tank | 420836.222 | 426793.035 | 125.309 | 2.219 | 1200 | 1 | 9.000 | 123.390 | 150 |
| | | | | | | 2 | 8.000 | 123.390 | 300 |
| | | | | | | 0 | 8.001 | 123.390 | 300 |
| J6 | 420831.235 | 426791.418 | 125.470 | 2.113 | | 1 | 8.001 | 123.357 | 300 |
| | | | | | | 2 | 1.008 | 123.357 | 300 |
| | | | | | | 0 | 1.009 | 123.357 | 300 |
| 13 | 420832.104 | 426788.744 | 125.399 | 2.554 | 1500 | 1 | 1.009 | 123.345 | 300 |
| | | | | | | 0 | 1.010 | 123.295 | 150 |
| C1 | 420833.067 | 426787.184 | 124.414 | 1.434 | 600 | 1 | 1.010 | 123.280 | 150 |

## Simulation Settings

| | | | | | |
|---|---|---|---|---|---|
| Rainfall Methodology | FEH-22 | Analysis Speed | Detailed | Starting Level (m) | |
| Rainfall Events | Singular | Skip Steady State | x | Check Discharge Rate(s) | x |
| Summer CV | 1.000 | Drain Down Time (mins) | 240 | Check Discharge Volume | x |
| Winter CV | 1.000 | Additional Storage (m³/ha) | 20.0 | | |

**Storm Durations**

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

| Return Period (years) | Climate Change (CC %) | Additional Area (A %) | Additional Flow (Q %) |
|---|---|---|---|
| 1 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 |
| 100 | 45 | 0 | 0 |

## Node 7 Online Hydro-Brake® Control

| | | | |
|---|---|---|---|
| Flap Valve | x | Objective | (HE) Minimise upstream storage |
| Replaces Downstream Link | x | Sump Available | ✓ |
| Invert Level (m) | 125.255 | Product Number | CTL-SHE-0199-2200-1600-2200 |
| Design Depth (m) | 1.600 | Min Outlet Diameter (m) | 0.225 |
| Design Flow (l/s) | 22.0 | Min Node Diameter (mm) | 1800 |

## Node 13 Online Hydro-Brake® Control

| | | | |
|---|---|---|---|
| Flap Valve | x | Objective | (HE) Minimise upstream storage |
| Replaces Downstream Link | x | Sump Available | ✓ |
| Invert Level (m) | 123.295 | Product Number | CTL-SHE-0086-3500-1200-3500 |
| Design Depth (m) | 1.200 | Min Outlet Diameter (m) | 0.100 |
| Design Flow (l/s) | 3.5 | Min Node Diameter (mm) | 1200 |

## Node Tank Depth/Area Storage Structure

| | | | | | |
|---|---|---|---|---|---|
| Base Inf Coefficient (m/hr) | 0.00000 | Safety Factor | 2.0 | Invert Level (m) | 123.390 |
| Side Inf Coefficient (m/hr) | 0.00000 | Porosity | 0.95 | Time to half empty (mins) | |

| Depth (m) | Area (m²) | Inf Area (m²) | Depth (m) | Area (m²) | Inf Area (m²) | Depth (m) | Area (m²) | Inf Area (m²) |
|---|---|---|---|---|---|---|---|---|
| 0.000 | 145.0 | 145.0 | 1.200 | 145.0 | 196.2 | 1.201 | 0.0 | 196.2 |

## Node 7 Depth/Area Storage Structure

| | | | | | |
|---|---|---|---|---|---|
| Base Inf Coefficient (m/hr) | 0.00000 | Safety Factor | 2.0 | Invert Level (m) | 125.255 |
| Side Inf Coefficient (m/hr) | 0.00000 | Porosity | 0.95 | Time to half empty (mins) | 24 |

| Depth (m) | Area (m²) | Inf Area (m²) | Depth (m) | Area (m²) | Inf Area (m²) | Depth (m) | Area (m²) | Inf Area (m²) |
|---|---|---|---|---|---|---|---|---|
| 0.000 | 63.0 | 63.0 | 0.800 | 63.0 | 85.5 | 0.801 | 0.0 | 85.5 |

**Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%**

| Node Event | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 10 | 128.775 | 0.020 | 1.7 | 0.0288 | 0.0000 | OK |
| 15 minute summer | 2 | 10 | 128.841 | 0.026 | 2.5 | 0.0132 | 0.0000 | OK |
| 15 minute summer | 3 | 10 | 128.038 | 0.038 | 10.2 | 0.0671 | 0.0000 | OK |
| 15 minute summer | 4 | 10 | 127.957 | 0.020 | 1.6 | 0.0078 | 0.0000 | OK |
| 15 minute summer | J1 | 10 | 127.058 | 0.041 | 11.7 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 5 | 10 | 127.056 | 0.020 | 1.4 | 0.0071 | 0.0000 | OK |
| 15 minute summer | J2 | 10 | 126.288 | 0.043 | 13.1 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 6 | 10 | 126.676 | 0.029 | 1.4 | 0.0104 | 0.0000 | OK |
| 15 minute summer | J3 | 10 | 126.126 | 0.046 | 14.4 | 0.0000 | 0.0000 | OK |
| 120 minute summer | 7 | 72 | 125.380 | 0.125 | 9.7 | 7.8585 | 0.0000 | OK |
| 15 minute summer | 8 | 10 | 125.400 | 0.016 | 1.1 | 0.0051 | 0.0000 | OK |
| 120 minute summer | J4 | 70 | 124.599 | 0.031 | 6.6 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 9 | 10 | 124.750 | 0.021 | 1.6 | 0.0081 | 0.0000 | OK |
| 120 minute summer | J5 | 70 | 123.884 | 0.033 | 7.2 | 0.0000 | 0.0000 | OK |
| 120 minute summer | 10 | 70 | 123.527 | 0.057 | 7.2 | 0.0649 | 0.0000 | OK |
| 15 minute summer | 11 | 9 | 124.835 | 0.035 | 5.7 | 0.0679 | 0.0000 | OK |
| 360 minute summer | 12 | 240 | 123.506 | 0.066 | 0.0 | 0.0187 | 0.0000 | OK |
| 360 minute summer | Tank | 240 | 123.506 | 0.116 | 4.8 | 16.1387 | 0.0000 | OK |
| 360 minute summer | J6 | 240 | 123.506 | 0.149 | 5.8 | 0.0000 | 0.0000 | OK |
| 360 minute summer | 13 | 240 | 123.506 | 0.211 | 3.1 | 0.4032 | 0.0000 | SURCHARGED |
| 360 minute summer | C1 | 240 | 123.325 | 0.045 | 3.1 | 0.0000 | 0.0000 | OK |

| Link Event (Upstream Depth) | US Node | Link | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 1.000 | 3 | 1.7 | 0.475 | 0.009 | 0.0924 | |
| 15 minute summer | 2 | 2.000 | 3 | 2.5 | 1.254 | 0.061 | 0.0257 | |
| 15 minute summer | 3 | 1.001 | J1 | 10.1 | 1.849 | 0.035 | 0.0805 | |
| 15 minute summer | 4 | 3.000 | J1 | 1.6 | 1.450 | 0.084 | 0.0065 | |
| 15 minute summer | J1 | 1.002 | J2 | 11.7 | 1.953 | 0.040 | 0.0689 | |
| 15 minute summer | 5 | 4.000 | J2 | 1.4 | 1.272 | 0.083 | 0.0064 | |
| 15 minute summer | J2 | 1.003 | J3 | 13.0 | 1.994 | 0.045 | 0.0161 | |
| 15 minute summer | 6 | 5.000 | J3 | 1.4 | 0.746 | 0.175 | 0.0109 | |
| 15 minute summer | J3 | 1.004 | 7 | 14.4 | 2.125 | 0.050 | 0.0780 | |
| 120 minute summer | 7 | 1.005 | J4 | 6.2 | 1.635 | 0.022 | 0.0391 | |
| 15 minute summer | 8 | 6.000 | J4 | 1.1 | 1.327 | 0.055 | 0.0033 | |
| 120 minute summer | J4 | 1.006 | J5 | 6.6 | 1.659 | 0.023 | 0.0428 | |
| 15 minute summer | 9 | 7.000 | J5 | 1.6 | 1.379 | 0.090 | 0.0065 | |
| 120 minute summer | J5 | 1.007 | 10 | 7.2 | 1.098 | 0.025 | 0.0382 | |
| 120 minute summer | 10 | 1.008 | J6 | 7.3 | 0.483 | 0.081 | 0.2786 | |
| 15 minute summer | 11 | 9.000 | Tank | 5.8 | 3.895 | 0.064 | 0.0093 | |
| 360 minute summer | 12 | 8.000 | Tank | 0.0 | -0.009 | 0.000 | 0.1424 | |
| 360 minute summer | Tank | 8.001 | J6 | -3.2 | 0.315 | -0.037 | 0.1577 | |
| 360 minute summer | J6 | 1.009 | 13 | 3.0 | 0.371 | 0.042 | 0.1033 | |
| 360 minute summer | 13 | 1.010 | C1 | 3.1 | 0.654 | 0.196 | 0.0088 | 49.9 |

**Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%**

| Node Event | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 10 | 128.779 | 0.024 | 2.5 | 0.0345 | 0.0000 | OK |
| 15 minute summer | 2 | 10 | 128.847 | 0.032 | 3.8 | 0.0163 | 0.0000 | OK |
| 15 minute summer | 3 | 10 | 128.047 | 0.047 | 15.3 | 0.0818 | 0.0000 | OK |
| 15 minute summer | 4 | 10 | 127.962 | 0.025 | 2.4 | 0.0096 | 0.0000 | OK |
| 15 minute summer | J1 | 10 | 127.067 | 0.050 | 17.6 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 5 | 10 | 127.061 | 0.024 | 2.1 | 0.0088 | 0.0000 | OK |
| 15 minute summer | J2 | 10 | 126.298 | 0.053 | 19.6 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 6 | 10 | 126.683 | 0.036 | 2.1 | 0.0129 | 0.0000 | OK |
| 15 minute summer | J3 | 10 | 126.137 | 0.057 | 21.7 | 0.0000 | 0.0000 | OK |
| 120 minute summer | 7 | 70 | 125.412 | 0.157 | 13.6 | 9.8769 | 0.0000 | OK |
| 15 minute summer | 8 | 10 | 125.404 | 0.020 | 1.6 | 0.0062 | 0.0000 | OK |
| 60 minute summer | J4 | 38 | 124.606 | 0.038 | 9.9 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 9 | 10 | 124.754 | 0.025 | 2.4 | 0.0099 | 0.0000 | OK |
| 60 minute summer | J5 | 37 | 123.890 | 0.039 | 10.8 | 0.0000 | 0.0000 | OK |
| 360 minute summer | 10 | 248 | 123.561 | 0.091 | 7.5 | 0.1033 | 0.0000 | OK |
| 15 minute summer | 11 | 9 | 124.841 | 0.041 | 8.6 | 0.0798 | 0.0000 | OK |
| 360 minute summer | 12 | 248 | 123.561 | 0.121 | 0.1 | 0.0344 | 0.0000 | OK |
| 360 minute summer | Tank | 248 | 123.561 | 0.171 | 6.8 | 23.8051 | 0.0000 | OK |
| 360 minute summer | J6 | 248 | 123.561 | 0.204 | 7.5 | 0.0000 | 0.0000 | OK |
| 360 minute summer | 13 | 248 | 123.561 | 0.266 | 3.3 | 0.5087 | 0.0000 | SURCHARGED |
| 360 minute summer | C1 | 248 | 123.326 | 0.046 | 3.3 | 0.0000 | 0.0000 | OK |

| Link Event (Upstream Depth) | US Node | Link | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 1.000 | 3 | 2.5 | 0.533 | 0.013 | 0.1228 | |
| 15 minute summer | 2 | 2.000 | 3 | 3.8 | 1.414 | 0.093 | 0.0345 | |
| 15 minute summer | 3 | 1.001 | J1 | 15.2 | 2.079 | 0.053 | 0.1073 | |
| 15 minute summer | 4 | 3.000 | J1 | 2.4 | 1.629 | 0.126 | 0.0087 | |
| 15 minute summer | J1 | 1.002 | J2 | 17.6 | 2.203 | 0.061 | 0.0917 | |
| 15 minute summer | 5 | 4.000 | J2 | 2.1 | 1.430 | 0.125 | 0.0086 | |
| 15 minute summer | J2 | 1.003 | J3 | 19.6 | 2.238 | 0.068 | 0.0215 | |
| 15 minute summer | 6 | 5.000 | J3 | 2.1 | 0.835 | 0.264 | 0.0147 | |
| 15 minute summer | J3 | 1.004 | 7 | 21.6 | 2.386 | 0.075 | 0.1247 | |
| 120 minute summer | 7 | 1.005 | J4 | 9.3 | 1.843 | 0.032 | 0.0520 | |
| 15 minute summer | 8 | 6.000 | J4 | 1.6 | 1.481 | 0.081 | 0.0043 | |
| 60 minute summer | J4 | 1.006 | J5 | 9.9 | 1.877 | 0.034 | 0.0564 | |
| 15 minute summer | 9 | 7.000 | J5 | 2.4 | 1.549 | 0.135 | 0.0087 | |
| 60 minute summer | J5 | 1.007 | 10 | 10.8 | 1.236 | 0.037 | 0.0506 | |
| 360 minute summer | 10 | 1.008 | J6 | 7.5 | 0.418 | 0.084 | 0.6058 | |
| 15 minute summer | 11 | 9.000 | Tank | 8.7 | 4.202 | 0.097 | 0.0185 | |
| 360 minute summer | 12 | 8.000 | Tank | -0.1 | -0.008 | -0.001 | 0.2650 | |
| 360 minute summer | Tank | 8.001 | J6 | -4.7 | 0.348 | -0.054 | 0.2431 | |
| 360 minute summer | J6 | 1.009 | 13 | 3.2 | 0.367 | 0.045 | 0.1484 | |
| 360 minute summer | 13 | 1.010 | C1 | 3.3 | 0.665 | 0.208 | 0.0092 | 65.3 |

**Results for 30 year Critical Storm Duration. Lowest mass balance: 99.90%**

| Node Event | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 10 | 128.793 | 0.038 | 6.7 | 0.0549 | 0.0000 | OK |
| 15 minute summer | 2 | 10 | 128.868 | 0.053 | 10.0 | 0.0272 | 0.0000 | OK |
| 15 minute summer | 3 | 10 | 128.077 | 0.077 | 40.4 | 0.1338 | 0.0000 | OK |
| 15 minute summer | 4 | 10 | 127.978 | 0.041 | 6.3 | 0.0161 | 0.0000 | OK |
| 15 minute summer | J1 | 10 | 127.098 | 0.081 | 46.4 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 5 | 10 | 127.077 | 0.041 | 5.4 | 0.0146 | 0.0000 | OK |
| 15 minute summer | J2 | 10 | 126.330 | 0.085 | 51.7 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 6 | 10 | 126.711 | 0.063 | 5.4 | 0.0228 | 0.0000 | OK |
| 15 minute summer | J3 | 10 | 126.170 | 0.090 | 57.0 | 0.0000 | 0.0000 | OK |
| 30 minute summer | 7 | 23 | 125.632 | 0.377 | 64.6 | 23.6219 | 0.0000 | SURCHARGED |
| 15 minute summer | 8 | 10 | 125.417 | 0.033 | 4.2 | 0.0102 | 0.0000 | OK |
| 30 minute summer | J4 | 19 | 124.626 | 0.058 | 24.1 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 9 | 10 | 124.772 | 0.043 | 6.3 | 0.0167 | 0.0000 | OK |
| 30 minute summer | J5 | 19 | 123.915 | 0.064 | 29.4 | 0.0000 | 0.0000 | OK |
| 180 minute winter | 10 | 180 | 123.912 | 0.442 | 17.0 | 0.5003 | 0.0000 | SURCHARGED |
| 15 minute summer | 11 | 9 | 124.861 | 0.061 | 22.5 | 0.1193 | 0.0000 | OK |
| 180 minute winter | 12 | 180 | 123.894 | 0.454 | 0.2 | 0.1284 | 0.0000 | SURCHARGED |
| 180 minute winter | Tank | 180 | 123.894 | 0.504 | 18.7 | 69.9858 | 0.0000 | SURCHARGED |
| 180 minute winter | J6 | 180 | 123.894 | 0.537 | 16.5 | 0.0000 | 0.0000 | SURCHARGED |
| 240 minute winter | 13 | 240 | 123.893 | 0.598 | 5.0 | 1.1426 | 0.0000 | SURCHARGED |
| 30 minute summer | C1 | 51 | 123.328 | 0.047 | 3.5 | 0.0000 | 0.0000 | OK |

| Link Event (Upstream Depth) | US Node | Link | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 1.000 | 3 | 6.6 | 0.708 | 0.035 | 0.2477 | |
| 15 minute summer | 2 | 2.000 | 3 | 9.9 | 1.844 | 0.245 | 0.0699 | |
| 15 minute summer | 3 | 1.001 | J1 | 40.2 | 2.734 | 0.139 | 0.2152 | |
| 15 minute summer | 4 | 3.000 | J1 | 6.3 | 2.117 | 0.331 | 0.0175 | |
| 15 minute summer | J1 | 1.002 | J2 | 46.3 | 2.928 | 0.160 | 0.1820 | |
| 15 minute summer | 5 | 4.000 | J2 | 5.4 | 1.850 | 0.323 | 0.0172 | |
| 15 minute summer | J2 | 1.003 | J3 | 51.6 | 3.034 | 0.178 | 0.0418 | |
| 15 minute summer | 6 | 5.000 | J3 | 5.4 | 1.054 | 0.681 | 0.0301 | |
| 15 minute summer | J3 | 1.004 | 7 | 56.9 | 2.861 | 0.197 | 0.4517 | |
| 30 minute summer | 7 | 1.005 | J4 | 21.4 | 2.351 | 0.074 | 0.0947 | |
| 15 minute summer | 8 | 6.000 | J4 | 4.2 | 1.938 | 0.213 | 0.0086 | |
| 30 minute summer | J4 | 1.006 | J5 | 24.1 | 2.411 | 0.083 | 0.1100 | |
| 15 minute summer | 9 | 7.000 | J5 | 6.3 | 2.010 | 0.355 | 0.0177 | |
| 30 minute summer | J5 | 1.007 | 10 | 29.4 | 1.597 | 0.101 | 0.1789 | |
| 180 minute winter | 10 | 1.008 | J6 | 16.5 | 0.487 | 0.185 | 1.2323 | |
| 15 minute summer | 11 | 9.000 | Tank | 22.6 | 4.774 | 0.253 | 0.0537 | |
| 180 minute winter | 12 | 8.000 | Tank | -0.2 | -0.014 | -0.002 | 0.5464 | |
| 180 minute winter | Tank | 8.001 | J6 | -13.9 | -0.319 | -0.158 | 0.3692 | |
| 180 minute winter | J6 | 1.009 | 13 | 4.5 | 0.331 | 0.062 | 0.1980 | |
| 240 minute winter | 13 | 1.010 | C1 | 3.5 | 0.673 | 0.218 | 0.0095 | 87.9 |

**Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.38%**

| Node Event | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 10 | 128.806 | 0.051 | 12.3 | 0.0737 | 0.0000 | OK |
| 15 minute summer | 2 | 10 | 128.891 | 0.076 | 18.5 | 0.0390 | 0.0000 | OK |
| 15 minute summer | 3 | 10 | 128.107 | 0.107 | 74.5 | 0.1862 | 0.0000 | OK |
| 15 minute summer | 4 | 10 | 127.997 | 0.060 | 11.6 | 0.0233 | 0.0000 | OK |
| 15 minute summer | J1 | 10 | 127.128 | 0.111 | 85.7 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 5 | 10 | 127.095 | 0.059 | 10.0 | 0.0211 | 0.0000 | OK |
| 60 minute summer | J2 | 44 | 126.744 | 0.499 | 67.7 | 0.0000 | 0.0000 | SURCHARGED |
| 15 minute summer | 6 | 11 | 126.819 | 0.172 | 10.0 | 0.0618 | 0.0000 | SURCHARGED |
| 60 minute summer | J3 | 44 | 126.743 | 0.663 | 74.7 | 0.0000 | 0.0000 | SURCHARGED |
| 60 minute summer | 7 | 44 | 126.740 | 1.485 | 92.0 | 52.1889 | 0.0000 | SURCHARGED |
| 15 minute summer | 8 | 10 | 125.430 | 0.046 | 7.7 | 0.0144 | 0.0000 | OK |
| 15 minute summer | J4 | 11 | 124.632 | 0.064 | 29.3 | 0.0000 | 0.0000 | OK |
| 15 minute summer | 9 | 10 | 124.792 | 0.063 | 11.6 | 0.0244 | 0.0000 | OK |
| 360 minute winter | J5 | 352 | 124.558 | 0.707 | 19.7 | 0.0000 | 0.0000 | SURCHARGED |
| 360 minute winter | 10 | 352 | 124.558 | 1.088 | 21.9 | 1.2308 | 0.0000 | SURCHARGED |
| 15 minute summer | 11 | 9 | 124.881 | 0.081 | 41.6 | 0.1581 | 0.0000 | OK |
| 360 minute winter | 12 | 352 | 124.558 | 1.118 | 0.2 | 0.3165 | 0.0000 | SURCHARGED |
| 360 minute winter | Tank | 352 | 124.558 | 1.168 | 22.6 | 162.2294 | 0.0000 | SURCHARGED |
| 360 minute winter | J6 | 352 | 124.558 | 1.201 | 20.8 | 0.0000 | 0.0000 | SURCHARGED |
| 360 minute winter | 13 | 352 | 124.558 | 1.263 | 5.2 | 2.4124 | 0.0000 | SURCHARGED |
| 360 minute winter | C1 | 352 | 123.328 | 0.048 | 3.5 | 0.0000 | 0.0000 | OK |

| Link Event (Upstream Depth) | US Node | Link | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|---|---|---|---|---|---|---|---|---|
| 15 minute summer | 1 | 1.000 | 3 | 12.2 | 0.829 | 0.064 | 0.3889 | |
| 15 minute summer | 2 | 2.000 | 3 | 18.4 | 2.150 | 0.455 | 0.1110 | |
| 15 minute summer | 3 | 1.001 | J1 | 74.2 | 3.221 | 0.256 | 0.3375 | |
| 15 minute summer | 4 | 3.000 | J1 | 11.6 | 2.450 | 0.609 | 0.0278 | |
| 15 minute summer | J1 | 1.002 | J2 | 85.6 | 3.471 | 0.296 | 0.2838 | |
| 15 minute summer | 5 | 4.000 | J2 | 10.0 | 2.147 | 0.598 | 0.0274 | |
| 60 minute summer | J2 | 1.003 | J3 | 67.7 | 3.272 | 0.234 | 0.1727 | |
| 15 minute summer | 6 | 5.000 | J3 | 9.7 | 1.244 | 1.233 | 0.0455 | |
| 60 minute summer | J3 | 1.004 | 7 | 74.7 | 1.873 | 0.258 | 0.8124 | |
| 60 minute summer | 7 | 1.005 | J4 | 22.0 | 2.395 | 0.076 | 0.1005 | |
| 15 minute summer | 8 | 6.000 | J4 | 7.7 | 2.266 | 0.390 | 0.0135 | |
| 15 minute summer | J4 | 1.006 | J5 | 29.3 | 2.450 | 0.101 | 0.1325 | |
| 15 minute summer | 9 | 7.000 | J5 | 11.6 | 2.317 | 0.653 | 0.0283 | |
| 360 minute winter | J5 | 1.007 | 10 | 21.9 | 1.157 | 0.075 | 0.3985 | |
| 360 minute winter | 10 | 1.008 | J6 | 20.8 | 0.386 | 0.233 | 1.2323 | |
| 15 minute summer | 11 | 9.000 | Tank | 41.7 | 4.921 | 0.466 | 0.0718 | |
| 360 minute winter | 12 | 8.000 | Tank | -0.2 | -0.007 | -0.002 | 0.5464 | |
| 360 minute winter | Tank | 8.001 | J6 | -17.2 | -0.244 | -0.195 | 0.3692 | |
| 360 minute winter | J6 | 1.009 | 13 | 3.7 | 0.332 | 0.052 | 0.1980 | |
| 360 minute winter | 13 | 1.010 | C1 | 3.5 | 0.674 | 0.219 | 0.0096 | 109.6 |