

**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	527251.163	202443.136	1.000
SWMH02	0.029	4.00	120.300	1200	527283.918	202436.104	1.778
SWMH03	0.042	4.00	119.800	1350	527291.553	202471.672	2.484
SWMH04	0.029	4.00	120.000	1350	527344.498	202468.975	2.850
SWMH05	0.030	4.00	119.600	1350	527383.253	202465.493	2.702
SWMH06	0.008	4.00	118.500	1350	527410.281	202485.523	1.755
SWMH07			119.000	1350	527424.261	202470.023	2.350
SWMH08			115.100	1500	527454.311	202459.706	2.300
SWMH09			115.200	1500	527508.695	202464.408	2.673
SWMH10			115.200	1500	527539.335	202446.984	3.300
Pond			112.300	1200	527556.059	202462.421	1.300
SWMH17	0.062	4.00	120.700	1200	527318.563	202428.667	1.000
SWMH18	0.042	4.00	119.000	1200	527240.503	202506.042	1.100
SWMH19	0.025	4.00	119.400	1200	527250.594	202477.615	1.683
SWMH20	0.034	4.00	120.300	1200	527340.637	202451.938	1.300
SWMH21	0.032	4.00	120.500	1200	527367.431	202400.091	1.000
SWMH22	0.026	4.00	120.200	1200	527371.325	202416.186	1.084
SWMH23	0.047	4.00	120.200	1200	527375.924	202435.198	2.370
SWMH24	0.067	4.00	120.700	1200	527341.286	202423.453	1.200
SWMH25	0.035	4.00	119.500	1200	527430.745	202440.469	1.000
SWMH26	0.041	4.00	119.700	1200	527424.642	202420.259	1.486
SWMH27	0.043	4.00	119.500	1200	527423.216	202455.327	1.100
SWMH28	0.048	4.00	118.900	1200	527434.636	202461.703	1.175
SWMH29	0.039	4.00	115.100	1200	527452.850	202455.450	1.900
SWMH30	0.021	4.00	119.700	450	527414.288	202409.808	1.200
SWMH31	0.012	4.00	120.600	450	527435.565	202403.537	2.322
SWMH32			120.250	450	527475.466	202400.417	2.372
SWMH33	0.037	4.00	119.350	1200	527482.711	202416.622	1.725
SWMH33a			118.900	1200	527487.798	202426.691	1.395
SWMH34			118.600	1200	527491.967	202434.945	2.520
SWMH35	0.046	4.00	119.750	1200	527436.588	202432.457	1.350
SWMH36	0.028	4.00	119.000	450	527498.156	202421.467	1.300
SWMH37	0.110	4.00	118.100	1200	527621.763	202377.188	1.175
SWMH38	0.097	4.00	118.800	1200	527562.397	202395.582	2.243

**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	33.501	0.600	118.800	118.597	0.203	165.0	225	10.50	73.3
1.001	SWMH02	SWMH03	36.378	0.600	118.522	117.391	1.131	32.2	300	11.19	70.9
1.002	SWMH03	SWMH04	53.014	0.600	117.316	117.150	0.166	319.4	375	12.09	67.9
1.003	SWMH04	SWMH05	38.911	0.600	117.150	116.973	0.177	219.8	375	12.45	66.8

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.000	1.015	40.3	26.5	0.775	1.478	0.100	0.0
1.001	2.782	196.6	48.9	1.478	2.109	0.191	0.0
1.002	1.008	111.4	73.6	2.109	2.475	0.300	0.0
1.003	1.218	134.5	87.6	2.475	2.252	0.363	0.0

**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)
1.004	SWMH05	SWMH06	33.641	0.600	116.898	116.745	0.153	219.9	450	13.01	65.1
1.005	SWMH06	SWMH07	20.873	0.600	116.745	116.650	0.095	219.7	450	13.35	64.1
1.006	SWMH07	SWMH08	31.772	0.600	116.650	112.875	3.775	8.4	450	13.42	63.9
1.007	SWMH08	SWMH09	54.587	0.600	112.800	112.527	0.273	200.0	525	14.10	62.2
1.008	SWMH09	SWMH10	35.248	0.600	112.527	111.900	0.627	56.2	525	14.57	61.0
1.009	SWMH10	Pond	15.978	0.600	111.900	111.000	0.900	17.8	525	14.84	60.3
2.000	SWMH17	SWMH02	35.434	0.600	119.700	118.672	1.028	34.5	150	10.59	73.0
3.000	SWMH18	SWMH19	30.165	0.600	117.900	117.717	0.183	164.8	225	10.65	72.8
3.001	SWMH19	SWMH03	41.388	0.600	117.717	117.466	0.251	164.9	225	11.34	70.3
4.000	SWMH20	SWMH04	17.469	0.600	119.000	117.375	1.625	10.8	150	10.29	74.1
5.000	SWMH21	SWMH22	16.559	0.600	119.500	119.191	0.309	53.6	150	10.28	74.2
5.001	SWMH22	SWMH23	19.560	0.600	119.116	117.905	1.211	16.2	225	10.72	72.5
5.002	SWMH23	SWMH05	31.169	0.600	117.830	117.048	0.782	39.9	300	12.09	67.9
6.000	SWMH24	SWMH22	30.906	0.600	119.500	119.116	0.384	80.5	225	10.39	73.7
7.000	SWMH25	SWMH26	21.111	0.600	118.500	118.289	0.211	100.1	150	10.55	73.2
7.001	SWMH26	SWMH23	50.957	0.600	118.214	117.905	0.309	164.9	225	11.57	69.6
8.000	SWMH27	SWMH28	13.079	0.600	118.400	117.800	0.600	21.8	150	10.17	74.6
8.001	SWMH28	SWMH29	19.257	0.600	117.725	113.275	4.450	4.3	225	10.36	73.9
8.002	SWMH29	SWMH08	4.500	0.600	113.200	113.025	0.175	25.7	300	10.40	73.7
9.000	SWMH30	SWMH31	22.182	0.600	118.500	118.278	0.222	99.9	150	10.37	73.8
9.001	SWMH31	SWMH32	40.023	0.600	118.278	117.878	0.400	100.1	150	11.04	71.4
9.002	SWMH32	SWMH33	17.751	0.600	117.878	117.700	0.178	99.7	150	11.33	70.4
9.003	SWMH33	SWMH34	20.528	0.600	117.625	116.155	1.470	14.0	225	11.67	69.2
9.004	SWMH34	SWMH09	33.881	0.600	116.080	112.752	3.328	10.2	300	12.14	67.7


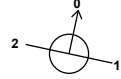
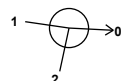






Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.004	1.367	217.4	150.8	2.252	1.305	0.641	0.0
1.005	1.367	217.4	150.3	1.305	1.900	0.649	0.0
1.006	7.039	1119.5	149.9	1.900	1.775	0.649	0.0
1.007	1.580	342.0	175.1	1.775	2.148	0.779	0.0
1.008	2.991	647.5	242.9	2.148	2.775	1.102	0.0
1.009	5.333	1154.5	240.2	2.775	0.775	1.102	0.0
2.000	1.720	30.4	16.4	0.850	1.478	0.062	0.0
3.000	1.015	40.4	11.1	0.875	1.458	0.042	0.0
3.001	1.015	40.4	17.0	1.458	2.109	0.067	0.0
4.000	3.090	54.6	9.1	1.150	2.475	0.034	0.0
5.000	1.377	24.3	8.6	0.850	0.859	0.032	0.0
5.001	3.272	130.1	32.8	0.859	2.070	0.125	0.0
5.002	2.497	176.5	60.9	2.070	2.252	0.248	0.0
6.000	1.458	58.0	17.8	0.975	0.859	0.067	0.0
7.000	1.004	17.7	9.3	0.850	1.261	0.035	0.0
7.001	1.015	40.4	19.1	1.261	2.070	0.076	0.0
8.000	2.166	38.3	11.6	0.950	0.950	0.043	0.0
8.001	6.333	251.8	24.3	0.950	1.600	0.091	0.0
8.002	3.112	220.0	34.6	1.600	1.775	0.130	0.0
9.000	1.005	17.8	5.6	1.050	2.172	0.021	0.0
9.001	1.004	17.7	8.5	2.172	2.222	0.033	0.0
9.002	1.006	17.8	8.4	2.222	1.500	0.033	0.0
9.003	3.519	139.9	29.0	1.500	2.220	0.116	0.0
9.004	4.954	350.2	79.0	2.220	2.148	0.323	0.0

**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)
10.000	SWMH35	SWMH33	48.766	0.600	118.400	117.700	0.700	69.7	150	10.81	72.2
11.000	SWMH36	SWMH33a	11.601	0.600	117.700	117.505	0.195	59.5	150	10.19	74.5
12.000	SWMH37	SWMH38	62.150	0.600	116.925	116.557	0.368	168.9	300	10.61	72.9
12.001	SWMH38	SWMH34	80.684	0.600	116.557	116.080	0.477	169.1	300	11.40	70.1

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
10.000	1.206	21.3	12.0	1.200	1.500	0.046	0.0
11.000	1.306	23.1	7.5	1.150	1.245	0.028	0.0
12.000	1.207	85.3	29.0	0.875	1.943	0.110	0.0
12.001	1.206	85.2	52.4	1.943	2.220	0.207	0.0






**Manhole Schedule**

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
SWMH01	527251.163	202443.136	119.800	1.000	1200		0	1.000	118.800	225
SWMH02	527283.918	202436.104	120.300	1.778	1200		1 2	2.000 1.000	118.672 118.597	150 225
SWMH03	527291.553	202471.672	119.800	2.484	1350		1 2	3.001 1.001	117.466 117.391	225 300
SWMH04	527344.498	202468.975	120.000	2.850	1350		1 2	4.000 1.002	117.375 117.150	150 375
SWMH05	527383.253	202465.493	119.600	2.702	1350		1 2	5.002 1.003	117.048 116.973	300 375
SWMH06	527410.281	202485.523	118.500	1.755	1350		1	1.004	116.745	450
SWMH07	527424.261	202470.023	119.000	2.350	1350		1	1.005	116.650	450
SWMH08	527454.311	202459.706	115.100	2.300	1500		1 2	8.002 1.006	113.025 112.875	300 450
SWMH09	527508.695	202464.408	115.200	2.673	1500		1 2	9.004 1.007	112.752 112.527	300 525
							0	1.008	112.527	525

**Manhole Schedule**

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
SWMH10	527539.335	202446.984	115.200	3.300	1500		1	1.008	111.900	525
							0	1.009	111.900	525
Pond	527556.059	202462.421	112.300	1.300	1200		1	1.009	111.000	525
SWMH17	527318.563	202428.667	120.700	1.000	1200					
							0	2.000	119.700	150
SWMH18	527240.503	202506.042	119.000	1.100	1200					
							0	3.000	117.900	225
SWMH19	527250.594	202477.615	119.400	1.683	1200		1	3.000	117.717	225
							0	3.001	117.717	225
SWMH20	527340.637	202451.938	120.300	1.300	1200					
							0	4.000	119.000	150
SWMH21	527367.431	202400.091	120.500	1.000	1200					
							0	5.000	119.500	150
SWMH22	527371.325	202416.186	120.200	1.084	1200		1	6.000	119.116	225
							2	5.000	119.191	150
							0	5.001	119.116	225
SWMH23	527375.924	202435.198	120.200	2.370	1200		1	7.001	117.905	225
							2	5.001	117.905	225
							0	5.002	117.830	300
SWMH24	527341.286	202423.453	120.700	1.200	1200					
							0	6.000	119.500	225
SWMH25	527430.745	202440.469	119.500	1.000	1200					
							0	7.000	118.500	150
SWMH26	527424.642	202420.259	119.700	1.486	1200		1	7.000	118.289	150
							0	7.001	118.214	225
SWMH27	527423.216	202455.327	119.500	1.100	1200					
							0	8.000	118.400	150

**Manhole Schedule**

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
SWMH28	527434.636	202461.703	118.900	1.175	1200	 1	8.000	117.800	150
SWMH29	527452.850	202455.450	115.100	1.900	1200	0	8.001	117.725	225
						1	8.001	113.275	225
SWMH30	527414.288	202409.808	119.700	1.200	450	 0	8.002	113.200	300
						0	9.000	118.500	150
SWMH31	527435.565	202403.537	120.600	2.322	450	1	9.000	118.278	150
						0	9.001	118.278	150
SWMH32	527475.466	202400.417	120.250	2.372	450	1	9.001	117.878	150
						0	9.002	117.878	150
SWMH33	527482.711	202416.622	119.350	1.725	1200	1	10.000	117.700	150
						2	9.002	117.700	150
						0	9.003	117.625	225
SWMH33a	527487.798	202426.691	118.900	1.395	1200	 1	11.000	117.505	150
SWMH34	527491.967	202434.945	118.600	2.520	1200	1	12.001	116.080	300
						2	9.003	116.155	225
						0	9.004	116.080	300
SWMH35	527436.588	202432.457	119.750	1.350	1200	 0	10.000	118.400	150
						0	11.000	117.700	150
SWMH37	527621.763	202377.188	118.100	1.175	1200	 0	12.000	116.925	300
						1	12.000	116.557	300
SWMH38	527562.397	202395.582	118.800	2.243	1200	0	12.001	116.557	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	30	60	120	180	240	360	480	600	720	960	1440	2160
----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	------	------

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
30	0	0	0
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)	111.000	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)	111.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m <sup>2</sup> )	Inf Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Inf Area (m <sup>2</sup> )
0.000	851.0	0.0	1.200	1327.0	0.0

**Rainfall**

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year 15 minute summer	268.706	76.035	30 year 720 minute summer	17.490	4.687
30 year 15 minute winter	188.566	76.035	30 year 720 minute winter	11.754	4.687
30 year 30 minute summer	174.929	49.499	30 year 960 minute summer	14.215	3.743
30 year 30 minute winter	122.757	49.499	30 year 960 minute winter	9.416	3.743
30 year 60 minute summer	116.589	30.811	30 year 1440 minute summer	10.161	2.723
30 year 60 minute winter	77.459	30.811	30 year 1440 minute winter	6.829	2.723
30 year 120 minute summer	70.438	18.615	30 year 2160 minute summer	7.160	1.979
30 year 120 minute winter	46.797	18.615	30 year 2160 minute winter	4.933	1.979
30 year 180 minute summer	53.298	13.715	100 year +40% CC 15 minute summer	488.233	138.153
30 year 180 minute winter	34.645	13.715	100 year +40% CC 15 minute winter	342.620	138.153
30 year 240 minute summer	41.604	10.995	100 year +40% CC 30 minute summer	320.551	90.705
30 year 240 minute winter	27.641	10.995	100 year +40% CC 30 minute winter	224.948	90.705
30 year 360 minute summer	31.221	8.034	100 year +40% CC 60 minute summer	214.603	56.713
30 year 360 minute winter	20.295	8.034	100 year +40% CC 60 minute winter	142.577	56.713
30 year 480 minute summer	24.324	6.428	100 year +40% CC 120 minute summer	129.587	34.246
30 year 480 minute winter	16.160	6.428	100 year +40% CC 120 minute winter	86.094	34.246
30 year 600 minute summer	19.756	5.404	100 year +40% CC 180 minute summer	97.729	25.149
30 year 600 minute winter	13.498	5.404	100 year +40% CC 180 minute winter	63.526	25.149

**Rainfall**

<b>Event</b>	<b>Peak Intensity (mm/hr)</b>	<b>Average Intensity (mm/hr)</b>	<b>Event</b>	<b>Peak Intensity (mm/hr)</b>	<b>Average Intensity (mm/hr)</b>
100 year +40% CC 240 minute summer	75.977	20.078	100 year +40% CC 720 minute summer	31.433	8.424
100 year +40% CC 240 minute winter	50.477	20.078	100 year +40% CC 720 minute winter	21.125	8.424
100 year +40% CC 360 minute summer	56.677	14.585	100 year +40% CC 960 minute summer	25.432	6.697
100 year +40% CC 360 minute winter	36.841	14.585	100 year +40% CC 960 minute winter	16.847	6.697
100 year +40% CC 480 minute summer	43.979	11.622	100 year +40% CC 1440 minute summer	18.055	4.839
100 year +40% CC 480 minute winter	29.219	11.622	100 year +40% CC 1440 minute winter	12.134	4.839
100 year +40% CC 600 minute summer	35.604	9.738	100 year +40% CC 2160 minute summer	12.630	3.490
100 year +40% CC 600 minute winter	24.327	9.738	100 year +40% CC 2160 minute winter	8.702	3.490

**Results for 30 year Critical Storm Duration. Lowest mass balance: 99.42%**

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	10	118.975	0.175	36.6	0.5484	0.0000	OK
15 minute winter	SWMH02	10	118.644	0.122	69.3	0.1774	0.0000	OK
15 minute winter	SWMH03	11	117.624	0.308	109.2	0.5451	0.0000	OK
15 minute winter	SWMH04	11	117.469	0.319	124.9	0.5214	0.0000	OK
15 minute winter	SWMH05	11	117.304	0.406	217.2	0.6715	0.0000	OK
15 minute winter	SWMH06	11	117.094	0.349	220.8	0.5317	0.0000	OK
15 minute winter	SWMH07	11	116.783	0.133	220.5	0.1906	0.0000	OK
15 minute winter	SWMH08	10	113.164	0.364	262.1	0.6423	0.0000	OK
15 minute winter	SWMH09	9	112.937	0.410	382.4	0.7240	0.0000	OK
15 minute winter	SWMH10	9	112.831	0.931	390.1	1.6446	0.0000	SURCHARGED
600 minute winter	Pond	585	111.413	0.413	34.8	385.3518	0.0000	OK
15 minute winter	SWMH17	10	119.800	0.100	22.7	0.2372	0.0000	OK
15 minute summer	SWMH18	10	117.996	0.096	15.4	0.1811	0.0000	OK
15 minute summer	SWMH19	10	117.846	0.128	24.5	0.1834	0.0000	OK
15 minute winter	SWMH20	9	119.050	0.050	12.4	0.0823	0.0000	OK
15 minute winter	SWMH21	10	119.577	0.077	11.7	0.1363	0.0000	OK
15 minute summer	SWMH22	10	119.213	0.097	45.7	0.1570	0.0000	OK
15 minute summer	SWMH23	10	117.981	0.151	89.5	0.2306	0.0000	OK
15 minute summer	SWMH24	10	119.606	0.106	24.5	0.2385	0.0000	OK
15 minute winter	SWMH25	10	118.599	0.099	12.8	0.1807	0.0000	OK
15 minute winter	SWMH26	10	118.352	0.138	27.8	0.2321	0.0000	OK
15 minute winter	SWMH27	10	118.471	0.071	15.7	0.1358	0.0000	OK
15 minute winter	SWMH28	10	117.782	0.057	33.3	0.1113	0.0000	OK
15 minute winter	SWMH29	10	113.316	0.116	47.6	0.1781	0.0000	OK
15 minute winter	SWMH30	10	118.569	0.069	7.7	0.0352	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	36.0	1.139	0.893	1.0587	
15 minute winter	SWMH02	1.001	SWMH03	69.1	1.899	0.352	1.5330	
15 minute winter	SWMH03	1.002	SWMH04	104.4	1.078	0.938	5.2159	
15 minute winter	SWMH04	1.003	SWMH05	123.7	1.297	0.920	3.9487	
15 minute winter	SWMH05	1.004	SWMH06	218.3	1.537	1.004	4.7530	
15 minute winter	SWMH06	1.005	SWMH07	220.5	2.550	1.014	1.7863	
15 minute winter	SWMH07	1.006	SWMH08	220.2	3.310	0.197	2.3150	
15 minute winter	SWMH08	1.007	SWMH09	269.4	1.813	0.787	8.9591	
15 minute winter	SWMH09	1.008	SWMH10	390.1	2.961	0.602	6.9943	
15 minute winter	SWMH10	1.009	Pond	426.1	5.222	0.369	1.7912	
600 minute winter	Pond	Hydro-Brake®		4.5				174.3
15 minute winter	SWMH17	2.000	SWMH02	22.6	1.853	0.745	0.4331	
15 minute summer	SWMH18	3.000	SWMH19	15.4	0.803	0.382	0.5951	
15 minute summer	SWMH19	3.001	SWMH03	24.5	0.961	0.608	1.0564	
15 minute winter	SWMH20	4.000	SWMH04	12.4	2.434	0.227	0.1404	
15 minute winter	SWMH21	5.000	SWMH22	11.7	1.327	0.481	0.1459	
15 minute summer	SWMH22	5.001	SWMH23	45.7	2.891	0.351	0.3094	
15 minute summer	SWMH23	5.002	SWMH05	89.6	2.203	0.508	1.4991	
15 minute summer	SWMH24	6.000	SWMH22	24.5	1.407	0.423	0.5387	
15 minute winter	SWMH25	7.000	SWMH26	12.8	1.069	0.719	0.2520	
15 minute winter	SWMH26	7.001	SWMH23	26.8	1.084	0.664	1.2684	
15 minute winter	SWMH27	8.000	SWMH28	15.7	1.987	0.410	0.1034	
15 minute winter	SWMH28	8.001	SWMH29	33.3	4.334	0.132	0.1480	
15 minute winter	SWMH29	8.002	SWMH08	47.5	2.147	0.216	0.1278	
15 minute winter	SWMH30	9.000	SWMH31	7.7	0.797	0.434	0.2150	



**Results for 30 year Critical Storm Duration. Lowest mass balance: 99.42%**

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 summer	SWMH31	10	118.371	0.093	12.1	0.0244	0.0000	OK
15 minute winter	SWMH32	11	117.972	0.094	12.1	0.0149	0.0000	OK
15 minute winter	SWMH33	10	117.713	0.088	41.5	0.1371	0.0000	OK
15 minute winter	SWMH33a	10	117.575	0.070	10.2	0.0000	0.0000	OK
15 minute winter	SWMH34	11	116.202	0.122	112.7	0.1382	0.0000	OK
15 minute winter	SWMH35	10	118.502	0.102	16.8	0.1846	0.0000	OK
15 minute winter	SWMH36	10	117.774	0.074	10.2	0.0438	0.0000	OK
15 minute winter	SWMH37	10	117.068	0.143	40.3	0.4288	0.0000	OK
15 minute winter	SWMH38	10	116.786	0.229	75.5	0.4570	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 summer	SWMH31	9.001	SWMH32	12.1	1.062	0.681	0.4556	
15 minute winter	SWMH32	9.002	SWMH33	11.8	1.052	0.665	0.1994	
15 minute winter	SWMH33	9.003	SWMH34	41.2	2.978	0.295	0.2843	
15 minute winter	SWMH34	9.004	SWMH09	113.1	4.340	0.323	1.1472	
15 minute winter	SWMH35	10.000	SWMH33	16.5	1.319	0.775	0.6110	
15 minute winter	SWMH36	11.000	SWMH33a	10.2	1.221	0.442	0.0969	4.5
15 minute winter	SWMH37	12.000	SWMH38	40.1	0.894	0.470	2.8201	
15 minute winter	SWMH38	12.001	SWMH34	72.5	1.711	0.850	3.3821	

**Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.42%**

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	119.398	0.598	66.5	1.8734	0.0000	SURCHARGED
15 minute winter	SWMH02	11	118.998	0.476	115.2	0.6935	0.0000	SURCHARGED
15 minute winter	SWMH03	11	118.643	1.327	157.6	2.3491	0.0000	SURCHARGED
15 minute winter	SWMH04	11	118.285	1.135	187.1	1.8551	0.0000	SURCHARGED
15 minute winter	SWMH05	11	117.868	0.970	342.9	1.6030	0.0000	SURCHARGED
15 minute winter	SWMH06	11	117.364	0.619	346.3	0.9420	0.0000	SURCHARGED
15 minute winter	SWMH07	11	116.819	0.169	345.2	0.2412	0.0000	OK
15 minute winter	SWMH08	10	113.954	1.154	431.3	2.0393	0.0000	SURCHARGED
15 minute winter	SWMH09	9	113.540	1.013	627.0	1.7906	0.0000	SURCHARGED
15 minute winter	SWMH10	8	113.058	1.158	637.2	2.0468	0.0000	SURCHARGED
960 minute winter	Pond	945	111.792	0.792	43.2	799.1369	0.0000	OK
15 minute winter	SWMH17	11	120.353	0.653	41.2	1.5471	0.0000	SURCHARGED
15 minute winter	SWMH18	12	118.878	0.978	27.9	1.8526	0.0000	FLOOD RISK
15 minute winter	SWMH19	12	118.818	1.101	36.8	1.5721	0.0000	SURCHARGED
15 minute winter	SWMH20	10	119.068	0.068	22.6	0.1127	0.0000	OK
15 minute winter	SWMH21	10	119.618	0.118	21.3	0.2096	0.0000	OK
15 minute winter	SWMH22	10	119.256	0.140	83.2	0.2261	0.0000	OK
15 minute winter	SWMH23	11	118.495	0.665	152.3	1.0163	0.0000	SURCHARGED
15 minute summer	SWMH24	10	119.657	0.157	44.5	0.3534	0.0000	OK
15 minute winter	SWMH25	11	119.053	0.553	23.3	1.0132	0.0000	SURCHARGED
15 minute winter	SWMH26	11	118.824	0.610	47.0	1.0265	0.0000	SURCHARGED
15 minute winter	SWMH27	10	118.506	0.106	28.6	0.2036	0.0000	OK
15 minute winter	SWMH28	10	117.799	0.074	60.5	0.1449	0.0000	OK
15 minute winter	SWMH29	10	114.029	0.829	86.4	1.2778	0.0000	SURCHARGED
15 minute winter	SWMH30	11	118.664	0.164	14.0	0.0833	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	SWMH01	1.000	SWMH02	62.0	1.561	1.537	1.3324	
15 minute winter	SWMH02	1.001	SWMH03	106.9	1.928	0.544	2.5617	
15 minute winter	SWMH03	1.002	SWMH04	154.8	1.404	1.390	5.8473	
15 minute winter	SWMH04	1.003	SWMH05	186.6	1.692	1.388	4.2918	
15 minute winter	SWMH05	1.004	SWMH06	341.8	2.158	1.573	5.3302	
15 minute winter	SWMH06	1.005	SWMH07	345.2	2.756	1.587	2.2188	
15 minute winter	SWMH07	1.006	SWMH08	344.8	3.280	0.308	3.3774	
15 minute winter	SWMH08	1.007	SWMH09	451.0	2.088	1.319	11.7926	
15 minute winter	SWMH09	1.008	SWMH10	637.2	3.342	0.984	7.6147	
15 minute winter	SWMH10	1.009	Pond	656.2	5.397	0.568	1.9100	
960 minute winter	Pond	Hydro-Brake®		4.5				246.1
15 minute winter	SWMH17	2.000	SWMH02	33.9	1.925	1.115	0.6238	
15 minute winter	SWMH18	3.000	SWMH19	22.0	0.866	0.544	1.1997	
15 minute winter	SWMH19	3.001	SWMH03	40.9	1.124	1.014	1.6460	
15 minute winter	SWMH20	4.000	SWMH04	22.3	2.496	0.409	0.2217	
15 minute winter	SWMH21	5.000	SWMH22	21.3	1.490	0.875	0.2363	
15 minute winter	SWMH22	5.001	SWMH23	81.6	3.080	0.627	0.6436	
15 minute winter	SWMH23	5.002	SWMH05	141.6	2.210	0.802	2.1949	
15 minute summer	SWMH24	6.000	SWMH22	44.6	1.623	0.770	0.8492	
15 minute winter	SWMH25	7.000	SWMH26	20.5	1.163	1.153	0.3717	
15 minute winter	SWMH26	7.001	SWMH23	43.3	1.179	1.073	2.0266	
15 minute winter	SWMH27	8.000	SWMH28	28.6	2.253	0.747	0.1659	
15 minute winter	SWMH28	8.001	SWMH29	60.5	4.404	0.240	0.4930	
15 minute winter	SWMH29	8.002	SWMH08	91.0	2.180	0.414	0.3169	
15 minute winter	SWMH30	9.000	SWMH31	13.6	0.878	0.766	0.3905	

**Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.42%**

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	SWMH31	11	118.544	0.266	21.6	0.0697	0.0000	SURCHARGED
15 minute winter	SWMH32	11	118.042	0.164	19.0	0.0260	0.0000	SURCHARGED
15 minute winter	SWMH33	10	117.743	0.118	67.6	0.1838	0.0000	OK
15 minute winter	SWMH33a	10	117.607	0.102	18.6	0.0000	0.0000	OK
15 minute winter	SWMH34	11	116.229	0.149	176.3	0.1685	0.0000	OK
15 minute winter	SWMH35	11	118.958	0.558	30.6	1.0111	0.0000	SURCHARGED
15 minute winter	SWMH36	10	117.813	0.112	18.6	0.0664	0.0000	OK
15 minute winter	SWMH37	11	117.508	0.583	73.1	1.7502	0.0000	SURCHARGED
15 minute winter	SWMH38	11	117.301	0.744	124.8	1.4843	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	SWMH31	9.001	SWMH32	19.0	1.131	1.072	0.7046	
15 minute winter	SWMH32	9.002	SWMH33	18.6	1.099	1.046	0.2959	
15 minute winter	SWMH33	9.003	SWMH34	67.3	3.353	0.481	0.4122	
15 minute winter	SWMH34	9.004	SWMH09	176.0	4.268	0.503	1.7844	
15 minute winter	SWMH35	10.000	SWMH33	26.1	1.481	1.223	0.8463	
15 minute winter	SWMH36	11.000	SWMH33a	18.6	1.382	0.806	0.1560	8.1
15 minute winter	SWMH37	12.000	SWMH38	61.2	0.985	0.718	4.3766	
15 minute winter	SWMH38	12.001	SWMH34	110.3	1.839	1.294	4.2493	