

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Detailed
Rainfall Events	Singular	Skip Steady State	x
FSR Region	England and Wales	Drain Down Time (mins)	240
M5-60 (mm)	19.000	Additional Storage (m³/ha)	20.0
Ratio-R	0.252	Starting Level (m)	
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
30	120	240	480	720	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

Design Settings

Rainfall Methodology	FSR
Return Period (years)	5
Additional Flow (%)	0
FSR Region	England and Wales
M5-60 (mm)	19.000
Ratio-R	0.252
CV	0.750
Time of Entry (mins)	5.00
Maximum Time of Concentration (mins)	30.00
Maximum Rainfall (mm/hr)	75.0
Minimum Velocity (m/s)	1.00
Connection Type	Level Soffits
Minimum Backdrop Height (m)	0.200
Preferred Cover Depth (m)	1.200
Include Intermediate Ground	✓
Enforce best practice design rules	x

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)
Pond Inlet			137.200		392556.969	415668.743	2.200	135.000
Demarc SW10a	0.074	5.00	137.450	600	392560.729	415684.087	1.650	135.800
MH SW10			137.300	1800	392561.023	415679.080	1.975	135.325
Pond Outlet		5.00	137.200		392568.113	415668.552	2.200	135.000
Demarc SW06a	0.116	5.00	141.000	600	392580.345	415803.605	2.800	138.200
MH SW07	0.047	5.00	140.050	1800	392580.415	415782.402	4.355	135.695
Demarc SW08a	0.161	5.00	138.200	600	392580.688	415732.247	1.600	136.600
MH SW11	0.009	5.00	137.200	2000	392585.327	415670.513	2.235	134.965
MH SW06	0.025	5.00	140.850	1800	392585.490	415801.873	4.980	135.870
MH SW08	0.038	5.00	138.000	1800	392587.648	415731.975	2.445	135.555
River Outlet			135.440		392589.497	415610.300	1.475	133.965
MH SW09	0.020	5.00	137.250	1800	392590.587	415680.693	1.845	135.405
Demarc SW01a	0.028	5.00	139.850	600	392592.682	415875.558	1.800	138.050
Demarc SW08b	0.055	5.00	138.200	600	392593.620	415733.542	1.650	136.550
Demarc SW09a	0.047	5.00	137.550	600	392596.618	415680.999	1.700	135.850
Demarc SW05b	0.049	5.00	140.250	600	392600.026	415789.987	1.900	138.350
MH SW05	0.008	5.00	140.250	1500	392600.505	415796.808	4.255	135.995
Demarc SW05a	0.048	5.00	140.400	600	392603.226	415805.023	2.050	138.350
MH SW01	0.084	5.00	139.250	1200	392608.652	415870.408	2.650	136.600
MH SW04	0.024	5.00	139.200	1500	392625.429	415788.134	3.120	136.080
Demarc SW01b	0.053	5.00	138.900	600	392627.866	415864.336	1.700	137.200
Demarc SW03a	0.054	5.00	138.150	600	392655.543	415790.695	1.600	136.550
Demarc SW03b	0.109	5.00	138.150	600	392655.549	415774.946	1.700	136.450
MH SW03	0.024	5.00	137.950	1500	392655.549	415782.742	1.710	136.240
MH SW02	0.062	5.00	137.950	1800	392690.272	415787.921	1.610	136.340
Demarc SW02a	0.133	5.00	138.150	600	392692.432	415796.895	1.600	136.550
MH SW13			138.650	1500	392723.415	415793.534	2.010	136.640
MH SW12	0.054	5.00	138.250	1200	392760.285	415807.818	1.435	136.815

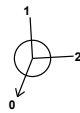
Links (Input)

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)
3.000	MH SW12	MH SW13	39.540	0.600	136.815	136.640	0.175	225.9	225	5.76	67.8
3.001	MH SW13	MH SW02	33.609	0.600	136.640	136.490	0.150	224.1	225	6.41	65.5
2.000	MH SW02	MH SW03	35.116	0.600	136.340	136.240	0.100	351.2	375	7.01	63.6
2.001	MH SW03	MH SW04	30.563	0.600	136.240	136.155	0.085	359.6	375	7.55	61.8
2.002	MH SW04	MH SW05	26.429	0.600	136.080	135.995	0.085	310.9	450	7.94	60.3

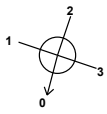
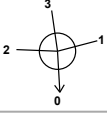
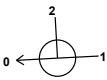
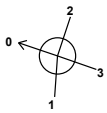
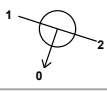
Links (Input)

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)
.003	MH SW05	MH SW06	15.846	0.600	135.995	135.945	0.050	316.9	450	8.17	59.0
.001	MH SW06	MH SW07	20.122	0.600	135.870	135.695	0.175	115.0	525	8.33	59.0
.002	MH SW07	MH SW08	50.943	0.600	135.695	135.555	0.140	363.9	525	9.06	57.0
.003	MH SW08	MH SW09	51.366	0.600	135.555	135.405	0.150	342.4	525	9.77	55.0
.004	MH SW09	MH SW10	29.608	0.600	135.405	135.325	0.080	370.1	525	10.19	53.0
.005	MH SW10	Pond Inlet	11.104	0.600	135.325	135.275	0.050	222.1	525	10.32	53.0
.006	Pond Outlet	MH SW11	17.357	0.600	135.000	134.965	0.035	495.9	300	5.41	69.0
.007	MH SW11	River Outlet	60.384	0.600	134.965	133.965	1.000	60.4	300	5.91	67.0
at SW09a	Demarc SW09a	MH SW09	6.039	0.600	135.850	135.780	0.070	86.3	150	5.09	71.0
at SW10a	Demarc SW10a	MH SW10	5.016	0.600	135.800	135.700	0.100	50.2	150	5.06	71.0
at SW08a	Demarc SW08a	MH SW08	6.965	0.600	136.600	136.500	0.100	69.7	225	5.07	71.0
at SW08b	Demarc SW08b	MH SW08	6.174	0.600	136.550	136.500	0.050	123.5	150	5.11	71.0
at SW05b	Demarc SW05b	MH SW05	6.802	0.600	138.350	137.795	0.555	12.3	150	5.04	71.0
at SW05a	Demarc SW05a	MH SW05	8.668	0.600	138.350	137.795	0.555	15.6	150	5.06	71.0
at SW06a	Demarc SW06a	MH SW06	5.429	0.600	138.200	137.945	0.255	21.3	225	5.03	71.0
.000	MH SW01	MH SW06	72.343	0.600	136.600	136.170	0.430	168.2	225	6.45	66.0
at SW01b	Demarc SW01b	MH SW01	20.151	0.600	137.200	136.675	0.525	38.4	150	5.21	70.0
at SW01a	Demarc SW01a	MH SW01	16.766	0.600	138.050	137.850	0.200	83.8	150	5.25	71.0
at SW03a	Demarc SW03a	MH SW03	7.977	0.600	136.550	136.465	0.085	93.8	150	5.13	71.0
at SW03b	Demarc SW03b	MH SW03	7.772	0.600	136.450	136.390	0.060	129.5	225	5.11	71.0
at SW02a	Demarc SW02a	MH SW02	9.194	0.600	136.550	136.490	0.060	153.2	225	5.15	71.0

Manhole Schedule

	Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
	Pond Inlet	392556.969	415668.743	137.200	2.200			1	1.005	135.275	525
	Demarc SW10a	392560.729	415684.087	137.450	1.650	600		0			
	MH SW10	392561.023	415679.080	137.300	1.975	1800		1	Lat SW10a	135.800	150
								2	1.004	135.700	150
								0	1.004	135.325	525
	Pond Outlet	392568.113	415668.552	137.200	2.200			0	1.005	135.325	525
	Demarc SW06a	392580.345	415803.605	141.000	2.800	600		0	1.006	135.000	300
	MH SW07	392580.415	415782.402	140.050	4.355	1800		1	Lat SW06a	138.200	225
								0	1.001	135.695	525
	Demarc SW08a	392580.688	415732.247	138.200	1.600	600		0	1.002	135.695	525
	MH SW11	392585.327	415670.513	137.200	2.235	2000		1	Lat SW08a	136.600	225
								0	1.006	134.965	300
								0	1.007	134.965	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
MH SW06	392585.490	415801.873	140.850	4.980	1800		1 Lat SW06a 2 1.000 3 2.003 0 1.001	137.945 136.170 135.945 135.870	225 225 450 525
MH SW08	392587.648	415731.975	138.000	2.445	1800		1 Lat SW08b 2 Lat SW08a 3 1.002 0 1.003	136.500 136.500 135.555 135.555	150 225 525 525
River Outlet	392589.497	415610.300	135.440	1.475			1 1.007	133.965	300
MH SW09	392590.587	415680.693	137.250	1.845	1800		1 Lat SW09a 2 1.003 0 1.004	135.780 135.405 135.405	150 525 525
Demarc SW01a	392592.682	415875.558	139.850	1.800	600		0 Lat SW01a	138.050	150
Demarc SW08b	392593.620	415733.542	138.200	1.650	600		0 Lat SW08b	136.550	150
Demarc SW09a	392596.618	415680.999	137.550	1.700	600		0 Lat SW09a	135.850	150
Demarc SW05b	392600.026	415789.987	140.250	1.900	600		0 Lat SW05b	138.350	150
MH SW05	392600.505	415796.808	140.250	4.255	1500		1 Lat SW05b 2 Lat SW05a 3 2.002 0 2.003	137.795 137.795 135.995 135.995	150 150 450 450
Demarc SW05a	392603.226	415805.023	140.400	2.050	600		0 Lat SW05a	138.350	150
MH SW01	392608.652	415870.408	139.250	2.650	1200		1 Lat SW01a 2 Lat SW01b 0 1.000	137.850 136.675 136.600	150 150 225
MH SW04	392625.429	415788.134	139.200	3.120	1500		1 2.001 0 2.002	136.155 136.080	375 450
Demarc SW01b	392627.866	415864.336	138.900	1.700	600		0 Lat SW01b	137.200	150
Demarc SW03a	392655.543	415790.695	138.150	1.600	600		0 Lat SW03a	136.550	150

Manhole Schedule

	Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
	Demarc SW03b	392655.549	415774.946	138.150	1.700	600		0	Lat SW03b	136.450	225
MH	SW03	392655.549	415782.742	137.950	1.710	1500		1	Lat SW03b	136.390	225
								2	Lat SW03a	136.465	150
								3	2.000	136.240	375
								0	2.001	136.240	375
MH	SW02	392690.272	415787.921	137.950	1.610	1800		1	Lat SW02a	136.490	225
								2	3.001	136.490	225
								0	2.000	136.340	375
	Demarc SW02a	392692.432	415796.895	138.150	1.600	600		0	Lat SW02a	136.550	225
MH	SW13	392723.415	415793.534	138.650	2.010	1500		1	3.000	136.640	225
								0	3.001	136.640	225
MH	SW12	392760.285	415807.818	138.250	1.435	1200		0	3.000	136.815	225

Node MH SW11 Online Hydro-Brake® Control

Flap Valve	x
Replaces Downstream Link	x
Invert Level (m)	134.965
Design Depth (m)	1.000
Design Flow (l/s)	25.0
Objective	(HE) Minimise upstream storage
Sump Available	✓
Product Number	CTL-SHE-0219-2500-1000-2500
Min Outlet Diameter (m)	0.300
Min Node Diameter (mm)	1800

Node MH SW11 Online Orifice Control

Flap Valve	x	Design Flow (l/s)	35.0
Replaces Downstream Link	x	Diameter (m)	0.131
Invert Level (m)	135.965	Discharge Coefficient	0.600
Design Depth (m)	1.000		

Node Pond Outlet Pond Storage Structure

Invert Level (m)	135.000	Analyse flow through structure	x
Time to half empty (mins)	96		

Inlets Pond Inlet

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	137.8	0.500	261.6	1.000	409.4	1.500	572.5	2.000	749.6	2.200	824.5

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	89.128	25.220
1 year 15 minute winter	62.546	25.220
1 year 30 minute summer	62.225	17.607
1 year 30 minute winter	43.667	17.607
1 year 60 minute summer	45.726	12.084
1 year 60 minute winter	30.379	12.084
1 year 120 minute summer	31.069	8.211
1 year 120 minute winter	20.642	8.211
1 year 180 minute summer	25.411	6.539
1 year 180 minute winter	16.518	6.539
1 year 240 minute summer	20.920	5.528
1 year 240 minute winter	13.899	5.528
1 year 360 minute summer	16.890	4.346
1 year 360 minute winter	10.979	4.346
1 year 480 minute summer	13.872	3.666
1 year 480 minute winter	9.216	3.666
1 year 600 minute summer	11.750	3.214
1 year 600 minute winter	8.029	3.214
1 year 720 minute summer	10.774	2.887
1 year 720 minute winter	7.241	2.887
1 year 960 minute summer	9.248	2.435
1 year 960 minute winter	6.126	2.435
1 year 1440 minute summer	7.150	1.916
1 year 1440 minute winter	4.805	1.916
2 year 15 minute summer	115.400	32.654
2 year 15 minute winter	80.982	32.654
2 year 30 minute summer	80.335	22.732
2 year 30 minute winter	56.375	22.732
2 year 60 minute summer	58.092	15.352
2 year 60 minute winter	38.595	15.352
2 year 120 minute summer	38.616	10.205
2 year 120 minute winter	25.656	10.205
2 year 180 minute summer	31.123	8.009
2 year 180 minute winter	20.231	8.009
2 year 240 minute summer	25.433	6.721
2 year 240 minute winter	16.897	6.721
2 year 360 minute summer	20.352	5.237
2 year 360 minute winter	13.229	5.237
2 year 480 minute summer	16.600	4.387
2 year 480 minute winter	11.028	4.387
2 year 600 minute summer	13.979	3.824
2 year 600 minute winter	9.551	3.824
2 year 720 minute summer	12.753	3.418
2 year 720 minute winter	8.571	3.418
2 year 960 minute summer	10.867	2.862
2 year 960 minute winter	7.199	2.862
2 year 1440 minute summer	8.312	2.228
2 year 1440 minute winter	5.586	2.228
30 year 15 minute summer	217.696	61.601
30 year 15 minute winter	152.769	61.601
30 year 30 minute summer	152.915	43.270
30 year 30 minute winter	107.309	43.270
30 year 60 minute summer	110.635	29.238
30 year 60 minute winter	73.503	29.238
30 year 120 minute summer	72.433	19.142
30 year 120 minute winter	48.123	19.142
30 year 180 minute summer	57.163	14.710

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year 180 minute winter	37.157	14.710
30 year 240 minute summer	46.016	12.161
30 year 240 minute winter	30.572	12.161
30 year 360 minute summer	36.088	9.287
30 year 360 minute winter	23.458	9.287
30 year 480 minute summer	28.972	7.656
30 year 480 minute winter	19.248	7.656
30 year 600 minute summer	24.076	6.585
30 year 600 minute winter	16.450	6.585
30 year 720 minute summer	21.713	5.819
30 year 720 minute winter	14.592	5.819
30 year 960 minute summer	18.162	4.782
30 year 960 minute winter	12.031	4.782
30 year 1440 minute summer	13.504	3.619
30 year 1440 minute winter	9.076	3.619
100 year +45% CC 15 minute summer	406.606	115.056
100 year +45% CC 15 minute winter	285.338	115.056
100 year +45% CC 30 minute summer	289.036	81.787
100 year +45% CC 30 minute winter	202.832	81.787
100 year +45% CC 60 minute summer	210.766	55.699
100 year +45% CC 60 minute winter	140.028	55.699
100 year +45% CC 120 minute summer	137.926	36.450
100 year +45% CC 120 minute winter	91.635	36.450
100 year +45% CC 180 minute summer	108.090	27.815
100 year +45% CC 180 minute winter	70.261	27.815
100 year +45% CC 240 minute summer	86.470	22.852
100 year +45% CC 240 minute winter	57.449	22.852
100 year +45% CC 360 minute summer	67.220	17.298
100 year +45% CC 360 minute winter	43.695	17.298
100 year +45% CC 480 minute summer	53.594	14.163
100 year +45% CC 480 minute winter	35.606	14.163
100 year +45% CC 600 minute summer	44.283	12.112
100 year +45% CC 600 minute winter	30.257	12.112
100 year +45% CC 720 minute summer	39.737	10.650
100 year +45% CC 720 minute winter	26.706	10.650
100 year +45% CC 960 minute summer	32.962	8.680
100 year +45% CC 960 minute winter	21.835	8.680
100 year +45% CC 1440 minute summer	24.196	6.485
100 year +45% CC 1440 minute winter	16.262	6.485

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	Pond Inlet	90	135.453	0.453	61.9	0.0000	0.0000	OK
15 minute winter	Demarc SW10a	10	135.867	0.067	8.5	0.0786	0.0000	OK
15 minute winter	MH SW10	13	135.566	0.241	129.5	0.6128	0.0000	OK
120 minute winter	Pond Outlet	90	135.438	0.438	42.9	85.9475	0.0000	SURCHARGED
15 minute winter	Demarc SW06a	10	138.257	0.057	13.3	0.0636	0.0000	OK
15 minute winter	MH SW07	12	135.928	0.233	95.8	0.6440	0.0000	OK
15 minute winter	Demarc SW08a	10	136.693	0.093	18.5	0.2133	0.0000	OK
120 minute winter	MH SW11	90	135.428	0.463	25.3	1.4903	0.0000	SURCHARGED
15 minute winter	MH SW06	11	136.049	0.179	91.3	0.4736	0.0000	OK
15 minute winter	MH SW08	12	135.817	0.262	119.9	0.7478	0.0000	OK
120 minute winter	River Outlet	102	134.049	0.084	25.0	0.0000	0.0000	OK
15 minute winter	MH SW09	13	135.677	0.272	125.6	0.7499	0.0000	OK
15 minute winter	Demarc SW01a	10	138.092	0.042	3.2	0.0248	0.0000	OK
15 minute winter	Demarc SW08b	10	136.620	0.070	6.3	0.0668	0.0000	OK
15 minute winter	Demarc SW09a	10	135.909	0.059	5.4	0.0489	0.0000	OK
15 minute winter	Demarc SW05b	10	138.385	0.035	5.6	0.0281	0.0000	OK
15 minute winter	MH SW05	12	136.183	0.188	60.1	0.3395	0.0000	OK
15 minute winter	Demarc SW05a	10	138.387	0.037	5.5	0.0276	0.0000	OK
15 minute winter	MH SW01	11	136.707	0.106	18.7	0.1879	0.0000	OK
15 minute winter	MH SW04	11	136.250	0.170	49.3	0.3267	0.0000	OK
15 minute winter	Demarc SW01b	10	137.248	0.048	6.1	0.0432	0.0000	OK
15 minute winter	Demarc SW03a	10	136.614	0.064	6.2	0.0611	0.0000	OK
15 minute winter	Demarc SW03b	10	136.537	0.087	12.5	0.1355	0.0000	OK
15 minute winter	MH SW03	11	136.421	0.181	47.4	0.3711	0.0000	OK
15 minute winter	MH SW02	11	136.468	0.128	26.9	0.4235	0.0000	OK
15 minute winter	Demarc SW02a	10	136.651	0.101	15.3	0.1957	0.0000	OK
15 minute winter	MH SW13	12	136.702	0.062	6.0	0.1102	0.0000	OK

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
Demarc SW10a	Lat SW10a	MH SW10	8.4	1.195	0.335	0.0353	180.3
MH SW10	1.005	Pond Inlet	130.6	1.407	0.402	1.0302	
Pond Outlet	1.006	MH SW11	25.1	0.357	0.509	1.2223	
Demarc SW06a	Lat SW06a	MH SW06	13.2	1.788	0.117	0.0402	
MH SW07	1.002	MH SW08	96.3	0.962	0.381	5.0988	
Demarc SW08a	Lat SW08a	MH SW08	18.3	1.273	0.293	0.1000	
MH SW11	1.007	River Outlet	25.0	1.538	0.174	0.9814	
MH SW06	1.001	MH SW07	90.8	1.171	0.201	1.5764	
MH SW08	1.003	MH SW09	119.4	1.085	0.458	5.6552	
MH SW09	1.004	MH SW10	124.3	1.188	0.496	3.0975	180.3
Demarc SW01a	Lat SW01a	MH SW01	3.1	0.797	0.161	0.0658	
Demarc SW08b	Lat SW08b	MH SW08	6.2	0.808	0.389	0.0475	
Demarc SW09a	Lat SW09a	MH SW09	5.3	0.885	0.279	0.0365	
Demarc SW05b	Lat SW05b	MH SW05	5.6	1.836	0.109	0.0206	
MH SW05	2.003	MH SW06	59.8	1.025	0.331	0.9249	
Demarc SW05a	Lat SW05a	MH SW05	5.5	1.684	0.121	0.0281	
MH SW01	1.000	MH SW06	17.8	0.978	0.446	1.3193	
MH SW04	2.002	MH SW05	49.1	0.837	0.269	1.5505	
Demarc SW01b	Lat SW01b	MH SW01	6.0	1.268	0.208	0.0952	
Demarc SW03a	Lat SW03a	MH SW03	6.1	0.896	0.333	0.0544	
Demarc SW03b	Lat SW03b	MH SW03	12.3	0.929	0.271	0.1032	
MH SW03	2.001	MH SW04	46.7	0.977	0.445	1.4679	
MH SW02	2.000	MH SW03	27.0	0.631	0.254	1.5063	
Demarc SW02a	Lat SW02a	MH SW02	15.1	0.926	0.359	0.1495	
MH SW13	3.001	MH SW02	5.7	0.646	0.165	0.2967	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	MH SW12	10	136.880	0.065	6.2	0.1225	0.0000	OK
US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)	
MH SW12	3.000	MH SW13	6.0	0.686	0.175	0.3597		

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	Pond Inlet	92	135.565	0.565	77.5	0.0000	0.0000	OK
15 minute winter	Demarc SW10a	10	135.878	0.078	11.0	0.0922	0.0000	OK
15 minute winter	MH SW10	13	135.606	0.281	169.5	0.7143	0.0000	OK
120 minute winter	Pond Outlet	94	135.550	0.550	50.9	115.4708	0.0000	SURCHARGED
15 minute winter	Demarc SW06a	10	138.266	0.066	17.2	0.0735	0.0000	OK
15 minute winter	MH SW07	12	135.972	0.277	125.4	0.7636	0.0000	OK
15 minute winter	Demarc SW08a	10	136.708	0.108	23.9	0.2488	0.0000	OK
120 minute winter	MH SW11	94	135.540	0.575	25.7	1.8526	0.0000	SURCHARGED
15 minute winter	MH SW06	11	136.081	0.211	119.5	0.5571	0.0000	OK
15 minute winter	MH SW08	12	135.866	0.311	155.9	0.8890	0.0000	OK
240 minute winter	River Outlet	212	134.049	0.084	25.0	0.0000	0.0000	OK
15 minute winter	MH SW09	12	135.727	0.322	163.9	0.8877	0.0000	OK
15 minute winter	Demarc SW01a	10	138.098	0.048	4.2	0.0286	0.0000	OK
15 minute winter	Demarc SW08b	10	136.633	0.083	8.2	0.0784	0.0000	OK
15 minute winter	Demarc SW09a	10	135.918	0.068	7.0	0.0569	0.0000	OK
15 minute winter	Demarc SW05b	10	138.391	0.041	7.3	0.0324	0.0000	OK
15 minute winter	MH SW05	12	136.213	0.218	78.3	0.3932	0.0000	OK
15 minute winter	Demarc SW05a	10	138.392	0.042	7.1	0.0316	0.0000	OK
15 minute winter	MH SW01	11	136.725	0.125	24.4	0.2206	0.0000	OK
15 minute winter	MH SW04	11	136.280	0.200	64.2	0.3847	0.0000	OK
15 minute winter	Demarc SW01b	10	137.255	0.055	7.9	0.0497	0.0000	OK
15 minute winter	Demarc SW03a	10	136.624	0.074	8.0	0.0712	0.0000	OK
15 minute winter	Demarc SW03b	10	136.551	0.101	16.2	0.1574	0.0000	OK
15 minute winter	MH SW03	11	136.452	0.212	61.5	0.4334	0.0000	OK
15 minute winter	MH SW02	11	136.493	0.153	35.0	0.5081	0.0000	OK
15 minute winter	Demarc SW02a	10	136.667	0.117	19.8	0.2283	0.0000	OK
15 minute winter	MH SW13	12	136.712	0.072	7.8	0.1271	0.0000	OK

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
Demarc SW10a	Lat SW10a	MH SW10	10.9	1.269	0.433	0.0430	296.9
MH SW10	1.005	Pond Inlet	169.9	1.506	0.524	1.2526	
Pond Outlet	1.006	MH SW11	25.7	0.365	0.521	1.2223	
Demarc SW06a	Lat SW06a	MH SW06	17.1	1.905	0.151	0.0488	
MH SW07	1.002	MH SW08	125.3	1.008	0.495	6.3325	
Demarc SW08a	Lat SW08a	MH SW08	23.6	1.354	0.379	0.1216	
MH SW11	1.007	River Outlet	25.0	1.538	0.174	0.9814	
MH SW06	1.001	MH SW07	118.8	1.228	0.263	1.9575	
MH SW08	1.003	MH SW09	155.9	1.147	0.598	6.9832	
MH SW09	1.004	MH SW10	161.3	1.265	0.643	3.7791	
Demarc SW01a	Lat SW01a	MH SW01	4.1	0.858	0.211	0.0801	
Demarc SW08b	Lat SW08b	MH SW08	8.1	0.861	0.507	0.0580	
Demarc SW09a	Lat SW09a	MH SW09	6.9	0.944	0.362	0.0443	
Demarc SW05b	Lat SW05b	MH SW05	7.3	1.971	0.142	0.0251	
MH SW05	2.003	MH SW06	77.6	1.103	0.430	1.1155	
Demarc SW05a	Lat SW05a	MH SW05	7.1	1.805	0.156	0.0339	
MH SW01	1.000	MH SW06	23.3	1.044	0.583	1.6137	
MH SW04	2.002	MH SW05	63.5	0.886	0.348	1.9044	
Demarc SW01b	Lat SW01b	MH SW01	7.8	1.360	0.270	0.1151	
Demarc SW03a	Lat SW03a	MH SW03	7.9	0.955	0.432	0.0661	
Demarc SW03b	Lat SW03b	MH SW03	16.0	0.992	0.350	0.1252	
MH SW03	2.001	MH SW04	60.8	1.051	0.580	1.7741	
MH SW02	2.000	MH SW03	35.0	0.658	0.330	1.8684	
Demarc SW02a	Lat SW02a	MH SW02	19.5	0.987	0.465	0.1816	
MH SW13	3.001	MH SW02	7.5	0.696	0.216	0.3613	

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	MH SW12	10	136.890	0.075	8.0	0.1404	0.0000	OK
US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)	
MH SW12	3.000	MH SW13	7.8	0.733	0.227	0.4383		

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	Pond Inlet	144	135.997	0.997	103.9	0.0000	0.0000	OK
180 minute winter	Demarc SW10a	144	135.998	0.198	6.3	0.2336	0.0000	SURCHARGED
180 minute winter	MH SW10	144	135.998	0.672	106.9	1.7114	0.0000	SURCHARGED
180 minute winter	Pond Outlet	148	135.980	0.980	62.9	262.9310	0.0000	SURCHARGED
15 minute winter	Demarc SW06a	10	138.297	0.096	32.5	0.1072	0.0000	OK
15 minute winter	MH SW07	12	136.215	0.520	232.6	1.4364	0.0000	OK
15 minute winter	Demarc SW08a	10	136.766	0.166	45.1	0.3804	0.0000	OK
180 minute winter	MH SW11	148	135.970	1.005	25.8	3.2393	0.0000	SURCHARGED
15 minute winter	MH SW06	12	136.245	0.375	224.0	0.9930	0.0000	OK
15 minute winter	MH SW08	12	136.093	0.538	284.7	1.5364	0.0000	SURCHARGED
600 minute summer	River Outlet	570	134.049	0.084	25.0	0.0000	0.0000	OK
180 minute winter	MH SW09	144	135.999	0.594	105.5	1.6387	0.0000	SURCHARGED
15 minute winter	Demarc SW01a	10	138.118	0.068	7.8	0.0406	0.0000	OK
15 minute winter	Demarc SW08b	10	136.685	0.135	15.4	0.1280	0.0000	OK
180 minute winter	Demarc SW09a	144	135.999	0.149	4.0	0.1244	0.0000	OK
15 minute winter	Demarc SW05b	10	138.408	0.058	13.7	0.0460	0.0000	OK
15 minute winter	MH SW05	12	136.322	0.327	146.4	0.5897	0.0000	OK
15 minute winter	Demarc SW05a	10	138.410	0.060	13.5	0.0452	0.0000	OK
15 minute winter	MH SW01	11	136.812	0.212	45.9	0.3749	0.0000	OK
15 minute winter	MH SW04	11	136.386	0.306	119.5	0.5875	0.0000	OK
15 minute winter	Demarc SW01b	10	137.276	0.076	14.9	0.0690	0.0000	OK
15 minute winter	Demarc SW03a	10	136.665	0.115	15.1	0.1098	0.0000	OK
15 minute winter	Demarc SW03b	11	136.610	0.160	30.6	0.2509	0.0000	OK
15 minute winter	MH SW03	11	136.564	0.324	114.9	0.6628	0.0000	OK
15 minute winter	MH SW02	11	136.606	0.266	66.9	0.8811	0.0000	OK
15 minute winter	Demarc SW02a	10	136.735	0.185	37.3	0.3593	0.0000	OK
15 minute winter	MH SW13	11	136.744	0.104	14.7	0.1833	0.0000	OK

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
Demarc SW10a	Lat SW10a	MH SW10	20.5	1.438	0.814	0.0711	648.5
MH SW10	1.005	Pond Inlet	308.7	1.764	0.952	1.9409	
Pond Outlet	1.006	MH SW11	27.6	0.406	0.558	1.2223	
Demarc SW06a	Lat SW06a	MH SW06	32.3	2.210	0.286	0.0795	
MH SW07	1.002	MH SW08	223.2	1.071	0.883	10.9976	
Demarc SW08a	Lat SW08a	MH SW08	44.6	1.556	0.715	0.1991	
MH SW11	1.007	River Outlet	25.0	1.538	0.174	0.9814	
MH SW06	1.001	MH SW07	220.2	1.321	0.487	3.8329	
MH SW08	1.003	MH SW09	274.8	1.276	1.054	11.0170	
MH SW09	1.004	MH SW10	291.1	1.452	1.161	5.8701	648.5
Demarc SW01a	Lat SW01a	MH SW01	7.7	1.012	0.396	0.1274	
Demarc SW08b	Lat SW08b	MH SW08	15.2	0.970	0.950	0.0959	
Demarc SW09a	Lat SW09a	MH SW09	13.1	1.090	0.683	0.0833	
Demarc SW05b	Lat SW05b	MH SW05	13.6	2.315	0.267	0.0401	
MH SW05	2.003	MH SW06	144.6	1.325	0.800	1.8675	
Demarc SW05a	Lat SW05a	MH SW05	13.4	2.130	0.296	0.0546	
MH SW01	1.000	MH SW06	42.0	1.181	1.052	2.5820	
MH SW04	2.002	MH SW05	118.5	1.010	0.650	3.1380	
Demarc SW01b	Lat SW01b	MH SW01	14.8	1.475	0.513	0.2576	
Demarc SW03a	Lat SW03a	MH SW03	14.9	1.093	0.812	0.1086	
Demarc SW03b	Lat SW03b	MH SW03	30.0	1.129	0.658	0.2454	
MH SW03	2.001	MH SW04	113.2	1.258	1.079	2.7281	
MH SW02	2.000	MH SW03	65.3	0.706	0.615	3.2425	
Demarc SW02a	Lat SW02a	MH SW02	36.6	1.121	0.874	0.2996	
MH SW13	3.001	MH SW02	14.7	0.802	0.427	0.6461	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	MH SW12	10	136.921	0.106	15.1	0.1988	0.0000	OK
US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)	
MH SW12	3.000	MH SW13	14.7	0.845	0.427	0.7069		

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.21%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	Pond Inlet	180	136.551	1.551	162.3	0.0000	0.0000	OK
240 minute winter	Demarc SW10a	176	136.556	0.756	9.9	0.8917	0.0000	SURCHARGED
240 minute winter	MH SW10	176	136.553	1.228	163.0	3.1256	0.0000	SURCHARGED
240 minute winter	Pond Outlet	180	136.524	1.524	98.7	534.7366	0.0000	SURCHARGED
15 minute winter	Demarc SW06a	10	138.347	0.147	60.6	0.1630	0.0000	OK
15 minute winter	MH SW07	12	137.248	1.553	344.6	4.2874	0.0000	SURCHARGED
15 minute winter	Demarc SW08a	12	137.117	0.517	84.2	1.1858	0.0000	SURCHARGED
240 minute winter	MH SW11	180	136.476	1.511	53.1	4.8670	0.0000	SURCHARGED
15 minute winter	MH SW06	12	137.398	1.528	326.6	4.0410	0.0000	SURCHARGED
15 minute winter	MH SW08	12	136.922	1.367	449.7	3.9046	0.0000	SURCHARGED
240 minute winter	River Outlet	180	134.090	0.125	53.1	0.0000	0.0000	OK
240 minute winter	MH SW09	176	136.558	1.153	154.2	3.1838	0.0000	SURCHARGED
15 minute winter	Demarc SW01a	12	138.620	0.570	14.7	0.3386	0.0000	SURCHARGED
15 minute winter	Demarc SW08b	12	137.075	0.525	28.8	0.4984	0.0000	SURCHARGED
240 minute winter	Demarc SW09a	176	136.559	0.709	6.3	0.5929	0.0000	SURCHARGED
15 minute winter	Demarc SW05b	10	138.435	0.085	25.7	0.0682	0.0000	OK
15 minute winter	MH SW05	12	137.508	1.513	207.3	2.7317	0.0000	SURCHARGED
15 minute winter	Demarc SW05a	10	138.439	0.089	25.1	0.0667	0.0000	OK
15 minute winter	MH SW01	12	138.555	1.955	74.4	3.4506	0.0000	SURCHARGED
15 minute winter	MH SW04	12	137.609	1.529	169.7	2.9369	0.0000	SURCHARGED
15 minute winter	Demarc SW01b	12	138.879	1.679	27.7	1.5207	0.0000	FLOOD RISK
15 minute winter	Demarc SW03a	12	138.007	1.457	28.3	1.3955	0.0000	FLOOD RISK
15 minute winter	Demarc SW03b	12	137.937	1.487	57.0	2.3268	0.0000	FLOOD RISK
15 minute winter	MH SW03	12	137.853	1.613	163.9	3.3041	0.0000	FLOOD RISK
15 minute winter	MH SW02	12	137.938	1.597	96.4	5.2957	0.0000	FLOOD RISK
15 minute winter	Demarc SW02a	12	138.076	1.526	69.5	2.9684	0.0000	FLOOD RISK
15 minute winter	MH SW13	13	137.995	1.355	24.9	2.3947	0.0000	SURCHARGED

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
Demarc SW10a	Lat SW10a	MH SW10	36.6	2.077	1.453	0.0883	897.3
MH SW10	1.005	Pond Inlet	509.7	2.362	1.571	2.3988	
Pond Outlet	1.006	MH SW11	52.8	0.750	1.068	1.2223	
Demarc SW06a	Lat SW06a	MH SW06	60.4	2.509	0.533	0.1305	
MH SW07	1.002	MH SW08	347.3	1.608	1.373	11.0054	
Demarc SW08a	Lat SW08a	MH SW08	82.9	2.084	1.328	0.2770	
MH SW11	1.007	River Outlet	53.1	1.889	0.371	1.6974	
MH SW06	1.001	MH SW07	325.8	1.508	0.721	4.3470	
MH SW08	1.003	MH SW09	449.4	2.081	1.724	11.0967	
MH SW09	1.004	MH SW10	477.4	2.210	1.904	6.3963	897.3
Demarc SW01a	Lat SW01a	MH SW01	14.5	1.139	0.745	0.2952	
Demarc SW08b	Lat SW08b	MH SW08	27.0	1.536	1.694	0.1087	
Demarc SW09a	Lat SW09a	MH SW09	22.2	1.261	1.161	0.1063	
Demarc SW05b	Lat SW05b	MH SW05	25.6	2.669	0.500	0.0651	
MH SW05	2.003	MH SW06	212.2	1.340	1.174	2.5107	
Demarc SW05a	Lat SW05a	MH SW05	25.0	2.455	0.551	0.0881	
MH SW01	1.000	MH SW06	62.8	1.579	1.572	2.8772	
MH SW04	2.002	MH SW05	176.9	1.116	0.969	4.1875	
Demarc SW01b	Lat SW01b	MH SW01	22.4	1.495	0.778	0.3548	
Demarc SW03a	Lat SW03a	MH SW03	21.9	1.245	1.196	0.1404	
Demarc SW03b	Lat SW03b	MH SW03	46.4	1.193	1.018	0.3091	
MH SW03	2.001	MH SW04	162.4	1.473	1.549	3.3710	
MH SW02	2.000	MH SW03	97.8	0.887	0.921	3.8732	
Demarc SW02a	Lat SW02a	MH SW02	56.4	1.418	1.346	0.3657	
MH SW13	3.001	MH SW02	33.1	1.026	0.957	1.3367	

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.21%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	MH SW12	13	138.057	1.242	37.4	2.3404	0.0000	FLOOD RISK
US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)	
MH SW12	3.000	MH SW13	25.4	0.941	0.737	1.5725		