

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	1	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	18.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.363	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

1 STANDARD Link Type

Shape	Circular	Auto Increment (mm)	75
Barrels	1	Follow Ground	x

Available Diameters (mm)

100 | 150

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Node Type	Manhole Type	Diameter (mm)	Width (mm)	Easting (m)	Northing (m)	Depth (m)
SW1	0.016	5.00	39.150	Manhole	1 STANDARD	450		384864.820	396994.275	1.150
SW2	0.018	5.00	39.150	Manhole	1 STANDARD	450		384868.787	396990.433	1.470
SW3	0.008	5.00	39.170	Manhole	1 STANDARD	450		384856.680	396970.870	1.470
SW4			39.160	Manhole	1 STANDARD	450		384860.105	396974.409	1.509
SW5	0.064	5.00	39.170	Manhole	1 STANDARD	450		384866.793	396970.481	1.674
SW6	0.005	5.00	39.150	Manhole	1 STANDARD	600		384877.730	396981.781	1.971
SW7	0.014	5.00	39.200	Manhole	1 STANDARD	1200		384881.064	396985.226	2.045
SW8	0.014	5.00	39.120	Manhole	1 STANDARD	1500		384884.805	396981.693	1.991
ATANK	0.014	5.00	39.050	Manhole	1 STANDARD	1200		384891.908	396974.899	1.970
OU	0.006	5.00	38.840	Manhole	1 STANDARD	350	350	384909.059	396961.282	1.000
SW9	0.004	5.00	38.980	Manhole	1 STANDARD	600		384898.752	396971.243	1.284
SW10	0.024	5.00	38.950	Manhole	1 STANDARD	1500		384897.376	396969.819	1.907
SW11			38.930	Manhole	1 STANDARD	1200		384899.005	396967.522	2.230
CW1			38.900	Manhole	1 STANDARD	1200		384900.324	396965.677	2.427
14_OUT			39.000	Manhole	1 STANDARD			384904.211	396959.009	2.740

Links

	US Node	DS Node	Length (m)	ks (mm) / n	Velocity Equation	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	Link Type	T of C (mins)	Rain (mm/hr)	M DS (n)
000	SW1	SW2	5.523	0.600	Colebrook-White	38.000	37.680	0.320	17.3	150	1 STANDARD	5.04	46.9	
001	SW2	SW6	12.443	0.600	Colebrook-White	37.680	37.556	0.124	100.0	150	1 STANDARD	5.24	46.1	
000	SW3	SW4	4.925	0.600	Colebrook-White	37.700	37.651	0.049	100.5	150	1 STANDARD	5.08	46.7	
001	SW4	SW5	7.756	0.600	Colebrook-White	37.651	37.496	0.155	50.0	150	1 STANDARD	5.17	46.3	

Name	US Node	DS Node	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Minimum Depth (m)	Maximum Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.000	SW1	SW2	2.436	43.0	2.0	1.000	1.320	1.000	1.320	0.016	0.0
1.001	SW2	SW6	1.005	17.8	4.2	1.320	1.444	1.320	1.444	0.034	0.0
2.000	SW3	SW4	1.002	17.7	1.0	1.320	1.359	1.320	1.359	0.008	0.0
2.001	SW4	SW5	1.426	25.2	1.0	1.359	1.524	1.359	1.524	0.008	0.0

Links

US Node	DS Node	Length (m)	ks (mm) / n	Velocity Equation	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	Link Type	T of C (mins)	Rain (mm/hr)
SW5	SW6	15.726	0.600	Colebrook-White	37.505	37.348	0.157	100.0	150	1 STANDARD	5.43	45.4
SW6	SW7	4.794	0.600	Colebrook-White	37.179	37.155	0.024	199.8	300	1 STANDARD	5.51	45.1
SW7	SW8	5.146	0.600	Colebrook-White	37.155	37.129	0.026	200.0	300	1 STANDARD	5.58	44.8
SW8	ATANK	9.829	0.600	Colebrook-White	37.129	37.080	0.049	200.0	300	1 STANDARD	5.73	44.3
ATANK	SW10	7.464	0.600	Colebrook-White	37.080	37.043	0.037	200.0	300	1 STANDARD	5.84	43.9
OU	SW9	14.334	0.600	Colebrook-White	37.840	37.696	0.144	99.5	150	1 STANDARD	5.24	45.1
SW9	SW10	1.980	0.600	Colebrook-White	37.696	37.676	0.020	100.0	150	1 STANDARD	5.27	45.0
SW10	SW11	2.816	0.600	Colebrook-White	37.043	36.761	0.282	10.0	150	1 STANDARD	5.86	43.9
SW11	CW1	2.268	0.600	Colebrook-White	36.700	36.473	0.227	10.0	150	1 STANDARD	5.87	43.8
CW1	14_OUT	7.718	0.600	Colebrook-White	36.473	36.260	0.213	36.2	150	1 STANDARD	5.95	43.6

Name	US Node	DS Node	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Minimum Depth (m)	Maximum Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
2.002	SW5	SW6	1.005	17.8	8.9	1.515	1.652	1.515	1.652	0.072	0.0
1.002	SW6	SW7	1.109	78.4	13.6	1.671	1.745	1.671	1.745	0.111	0.0
1.003	SW7	SW8	1.108	78.3	15.2	1.745	1.691	1.691	1.745	0.125	0.0
1.004	SW8	ATANK	1.108	78.3	16.7	1.691	1.670	1.670	1.691	0.139	0.0
1.005	ATANK	SW10	1.108	78.3	18.2	1.670	1.607	1.607	1.670	0.153	0.0
3.000	OU	SW9	1.007	17.8	0.7	0.850	1.134	0.850	1.134	0.006	0.0
3.001	SW9	SW10	1.005	17.8	1.2	1.134	1.124	1.124	1.134	0.010	0.0
1.006	SW10	SW11	3.204	56.6	22.2	1.757	2.019	1.757	2.019	0.187	0.0
1.007	SW11	CW1	3.204	56.6	22.2	2.080	2.277	2.080	2.277	0.187	0.0
1.008	CW1	14_OUT	1.677	29.6	22.1	2.277	2.590	2.277	2.590	0.187	0.0

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	5.523	17.3	150	1 STANDARD	39.150	38.000	1.000	39.150	37.680	1.320
1.001	12.443	100.0	150	1 STANDARD	39.150	37.680	1.320	39.150	37.556	1.444
2.000	4.925	100.5	150	1 STANDARD	39.170	37.700	1.320	39.160	37.651	1.359
2.001	7.756	50.0	150	1 STANDARD	39.160	37.651	1.359	39.170	37.496	1.524
2.002	15.726	100.0	150	1 STANDARD	39.170	37.505	1.515	39.150	37.348	1.652
1.002	4.794	199.8	300	1 STANDARD	39.150	37.179	1.671	39.200	37.155	1.745
1.003	5.146	200.0	300	1 STANDARD	39.200	37.155	1.745	39.120	37.129	1.691
1.004	9.829	200.0	300	1 STANDARD	39.120	37.129	1.691	39.050	37.080	1.670
1.005	7.464	200.0	300	1 STANDARD	39.050	37.080	1.670	38.950	37.043	1.607
3.000	14.334	99.5	150	1 STANDARD	38.840	37.840	0.850	38.980	37.696	1.134

Link	US Node	Dia (mm)	Width (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	SW1	450		Manhole	1 STANDARD	SW2	450	Manhole	1 STANDARD
1.001	SW2	450		Manhole	1 STANDARD	SW6	600	Manhole	1 STANDARD
2.000	SW3	450		Manhole	1 STANDARD	SW4	450	Manhole	1 STANDARD
2.001	SW4	450		Manhole	1 STANDARD	SW5	450	Manhole	1 STANDARD
2.002	SW5	450		Manhole	1 STANDARD	SW6	600	Manhole	1 STANDARD
1.002	SW6	600		Manhole	1 STANDARD	SW7	1200	Manhole	1 STANDARD
1.003	SW7	1200		Manhole	1 STANDARD	SW8	1500	Manhole	1 STANDARD
1.004	SW8	1500		Manhole	1 STANDARD	ATANK	1200	Manhole	1 STANDARD
1.005	ATANK	1200		Manhole	1 STANDARD	SW10	1500	Manhole	1 STANDARD
3.000	OU	350	350	Manhole	1 STANDARD	SW9	600	Manhole	1 STANDARD

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)
3.001	1.980	100.0	150	1 STANDARD	38.980	37.696	1.134	38.950	37.676	1.124
1.006	2.816	10.0	150	1 STANDARD	38.950	37.043	1.757	38.930	36.761	2.019
1.007	2.268	10.0	150	1 STANDARD	38.930	36.700	2.080	38.900	36.473	2.277
1.008	7.718	36.2	150	1 STANDARD	38.900	36.473	2.277	39.000	36.260	2.590

Link	US Node	Dia (mm)	Width (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
3.001	SW9	600		Manhole	1 STANDARD	SW10	1500	Manhole	1 STANDARD
1.006	SW10	1500		Manhole	1 STANDARD	SW11	1200	Manhole	1 STANDARD
1.007	SW11	1200		Manhole	1 STANDARD	CW1	1200	Manhole	1 STANDARD
1.008	CW1	1200		Manhole	1 STANDARD	14_OUT		Manhole	1 STANDARD

Manhole Schedule

	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Width (mm)	Node Type	MH Type	Connections	Link	IL (m)	Dia (mm)	Link Type	
	384864.820	396994.275	39.150	1.150	450		Manhole	1 STANDARD		0	1.000	38.000	150	1 STANDARD
	384868.787	396990.433	39.150	1.470	450		Manhole	1 STANDARD		1 0	1.000 1.001	37.680 37.680	150	1 STANDARD 1 STANDARD
	384856.680	396970.870	39.170	1.470	450		Manhole	1 STANDARD		0	2.000	37.700	150	1 STANDARD
	384860.105	396974.409	39.160	1.509	450		Manhole	1 STANDARD		1 0	2.000 2.001	37.651 37.651	150	1 STANDARD 1 STANDARD
	384866.793	396970.481	39.170	1.674	450		Manhole	1 STANDARD		1 0	2.001 2.002	37.496 37.505	150	1 STANDARD 1 STANDARD
	384877.730	396981.781	39.150	1.971	600		Manhole	1 STANDARD		1 2 0	2.002 1.001 1.002	37.348 37.556 37.179	150 150 300	1 STANDARD 1 STANDARD 1 STANDARD
	384881.064	396985.226	39.200	2.045	1200		Manhole	1 STANDARD		1 0	1.002 1.003	37.155 37.155	300	1 STANDARD 1 STANDARD
	384884.805	396981.693	39.120	1.991	1500		Manhole	1 STANDARD		1 0	1.003 1.004	37.129 37.129	300	1 STANDARD 1 STANDARD
X	384891.908	396974.899	39.050	1.970	1200		Manhole	1 STANDARD		1 0	1.004 1.005	37.080 37.080	300	1 STANDARD 1 STANDARD

Manhole Schedule

	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Width (mm)	Node Type	MH Type	Connections	Link	IL (m)	Dia (mm)	Link Type	
	384909.059	396961.282	38.840	1.000	350	350	Manhole	1 STANDARD		0	3.000	37.840	150	1 STANDARD
	384898.752	396971.243	38.980	1.284	600		Manhole	1 STANDARD		1	3.000	37.696	150	1 STANDARD
	384897.376	396969.819	38.950	1.907	1500		Manhole	1 STANDARD		0 1 2	3.001 1.005	37.696 37.043	150 300	1 STANDARD 1 STANDARD
	384899.005	396967.522	38.930	2.230	1200		Manhole	1 STANDARD		1 0	1.006 1.007	37.043 36.761	150 150	1 STANDARD 1 STANDARD
	384900.324	396965.677	38.900	2.427	1200		Manhole	1 STANDARD		1 0	1.007 1.008	36.473 36.473	150 150	1 STANDARD 1 STANDARD
T	384904.211	396959.009	39.000	2.740			Manhole	1 STANDARD		1	1.008	36.260	150	1 STANDARD

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	18.000	Drain Down Time (mins)	240
Ratio-R	0.363	Additional Storage (m³/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

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	0	0	0
100	20	0	0
100	40	0	0

Node 14_OUT Surcharged Outfall

Overrides Design Area	x	Depression Storage Area (m²)	0	Evapo-transpiration (mm/day)	0
Overrides Design Additional Inflow	x	Depression Storage Depth (mm)	0		
Applies to All storms					

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
0	1.375	255	1.375	510	0.000	765	0.000	1020	0.000	1275	0.000
15	1.375	270	1.375	525	0.000	780	0.000	1035	0.000	1290	0.000
30	1.375	285	1.375	540	0.000	795	0.000	1050	0.000	1305	0.000
45	1.375	300	1.375	555	0.000	810	0.000	1065	0.000	1320	0.000
60	1.375	315	1.375	570	0.000	825	0.000	1080	0.000	1335	0.000
75	1.375	330	1.375	585	0.000	840	0.000	1095	0.000	1350	0.000
90	1.375	345	1.375	600	0.000	855	0.000	1110	0.000	1365	0.000
105	1.375	360	1.375	615	0.000	870	0.000	1125	0.000	1380	0.000
120	1.375	375	0.000	630	0.000	885	0.000	1140	0.000	1395	0.000
135	1.375	390	0.000	645	0.000	900	0.000	1155	0.000	1410	0.000
150	1.375	405	0.000	660	0.000	915	0.000	1170	0.000	1425	0.000
165	1.375	420	0.000	675	0.000	930	0.000	1185	0.000	1440	0.000
180	1.375	435	0.000	690	0.000	945	0.000	1200	0.000		
195	1.375	450	0.000	705	0.000	960	0.000	1215	0.000		
210	1.375	465	0.000	720	0.000	975	0.000	1230	0.000		
225	1.375	480	0.000	735	0.000	990	0.000	1245	0.000		
240	1.375	495	0.000	750	0.000	1005	0.000	1260	0.000		

Node SW10 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	37.046	Product Number	CTL-SHE-0101-5000-1300-5000
Design Depth (m)	1.300	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Node ATANK Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	37.081
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	220

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	56.0	24.0	1.200	56.0	46.4	1.210	0.0	46.4

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Approval Settings

Node Size	✓	Minimum Backdrop Height (m)	0.200
Node Losses	✓	Maximum Backdrop Height (m)	1.500
Link Size	✓	Full Bore Velocity	✓
Minimum Diameter (mm)	150	Minimum Full Bore Velocity (m/s)	1.000
Link Length	✓	Maximum Full Bore Velocity (m/s)	3.000
Maximum Length (m)	100.000	Proportional Velocity	✓
Coordinates	✓	Return Period (years)	1
Accuracy (m)	1.000	Minimum Proportional Velocity (m/s)	0.750
Crossings	✓	Maximum Proportional Velocity (m/s)	3.000
Cover Depth	✓	Surcharged Depth	✓
Minimum Cover Depth (m)	1.200	Return Period (years)	1
Maximum Cover Depth (m)	3.000	Maximum Surcharged Depth (m)	0.100
Backdrops	✓	Flooding	✓

Approval Settings

Return Period (years)	30	Discharge Rates	✓
Time to Half Empty	x	Discharge Volume	x

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	95.066	26.900	30 year 1440 minute winter	6.673	2.661
1 year 15 minute winter	66.713	26.900	100 year +20% CC 15 minute summer	360.342	101.964
1 year 30 minute summer	62.653	17.729	100 year +20% CC 15 minute winter	252.871	101.964
1 year 30 minute winter	43.967	17.729	100 year +20% CC 30 minute summer	240.915	68.171
1 year 60 minute summer	43.047	11.376	100 year +20% CC 30 minute winter	169.063	68.171
1 year 60 minute winter	28.599	11.376	100 year +20% CC 60 minute summer	164.805	43.553
1 year 120 minute summer	27.164	7.179	100 year +20% CC 60 minute winter	109.492	43.553
1 year 120 minute winter	18.047	7.179	100 year +20% CC 120 minute summer	101.919	26.934
1 year 180 minute summer	21.219	5.460	100 year +20% CC 120 minute winter	67.713	26.934
1 year 180 minute winter	13.793	5.460	100 year +20% CC 180 minute summer	77.993	20.070
1 year 240 minute summer	17.002	4.493	100 year +20% CC 180 minute winter	50.697	20.070
1 year 240 minute winter	11.296	4.493	100 year +20% CC 240 minute summer	61.271	16.192
1 year 360 minute summer	13.256	3.411	100 year +20% CC 240 minute winter	40.707	16.192
1 year 360 minute winter	8.617	3.411	100 year +20% CC 360 minute summer	46.088	11.860
1 year 480 minute summer	10.544	2.786	100 year +20% CC 360 minute winter	29.958	11.860
1 year 480 minute winter	7.005	2.786	100 year +20% CC 480 minute summer	36.005	9.515
1 year 600 minute summer	8.707	2.382	100 year +20% CC 480 minute winter	23.921	9.515
1 year 600 minute winter	5.949	2.382	100 year +20% CC 600 minute summer	29.299	8.014
1 year 720 minute summer	7.817	2.095	100 year +20% CC 600 minute winter	20.019	8.014
1 year 720 minute winter	5.254	2.095	100 year +20% CC 720 minute summer	25.975	6.962
1 year 960 minute summer	6.500	1.712	100 year +20% CC 720 minute winter	17.457	6.962
1 year 960 minute winter	4.306	1.712	100 year +20% CC 960 minute summer	21.153	5.570
1 year 1440 minute summer	4.806	1.288	100 year +20% CC 960 minute winter	14.012	5.570
1 year 1440 minute winter	3.230	1.288	100 year +20% CC 1440 minute summer	15.152	4.061
30 year 15 minute summer	232.567	65.808	100 year +20% CC 1440 minute winter	10.183	4.061
30 year 15 minute winter	163.205	65.808	100 year +40% CC 15 minute summer	420.399	118.958
30 year 30 minute summer	153.976	43.570	100 year +40% CC 15 minute winter	295.017	118.958
30 year 30 minute winter	108.053	43.570	100 year +40% CC 30 minute summer	281.068	79.532
30 year 60 minute summer	104.640	27.653	100 year +40% CC 30 minute winter	197.240	79.532
30 year 60 minute winter	69.521	27.653	100 year +40% CC 60 minute summer	192.272	50.812
30 year 120 minute summer	64.570	17.064	100 year +40% CC 60 minute winter	127.741	50.812
30 year 120 minute winter	42.899	17.064	100 year +40% CC 120 minute summer	118.905	31.423
30 year 180 minute summer	49.489	12.735	100 year +40% CC 120 minute winter	78.998	31.423
30 year 180 minute winter	32.169	12.735	100 year +40% CC 180 minute summer	90.992	23.415
30 year 240 minute summer	38.987	10.303	100 year +40% CC 180 minute winter	59.147	23.415
30 year 240 minute winter	25.902	10.303	100 year +40% CC 240 minute summer	71.483	18.891
30 year 360 minute summer	29.523	7.597	100 year +40% CC 240 minute winter	47.492	18.891
30 year 360 minute winter	19.191	7.597	100 year +40% CC 360 minute summer	53.769	13.837
30 year 480 minute summer	23.161	6.121	100 year +40% CC 360 minute winter	34.951	13.837
30 year 480 minute winter	15.388	6.121	100 year +40% CC 480 minute summer	42.006	11.101
30 year 600 minute summer	18.912	5.173	100 year +40% CC 480 minute winter	27.908	11.101
30 year 600 minute winter	12.922	5.173	100 year +40% CC 600 minute summer	34.182	9.350
30 year 720 minute summer	16.816	4.507	100 year +40% CC 600 minute winter	23.355	9.350
30 year 720 minute winter	11.301	4.507	100 year +40% CC 720 minute summer	30.304	8.122
30 year 960 minute summer	13.761	3.624	100 year +40% CC 720 minute winter	20.366	8.122
30 year 960 minute winter	9.115	3.624	100 year +40% CC 960 minute summer	24.679	6.498
30 year 1440 minute summer	9.930	2.661	100 year +40% CC 960 minute winter	16.348	6.498

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
100 year +40% CC 1440 minute summer	17.677	4.738	100 year +40% CC 1440 minute winter	11.880	4.738

Results for 1 year Critical Storm Duration. Lowest mass balance: 97.39%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW1	10	38.022	0.022	2.0	0.0096	0.0000	OK
15 minute winter	SW2	10	37.731	0.051	4.2	0.0205	0.0000	OK
15 minute winter	SW3	10	37.725	0.025	1.0	0.0068	0.0000	OK
15 minute winter	SW4	11	37.671	0.020	1.0	0.0032	0.0000	OK
15 minute winter	SW5	10	37.582	0.086	8.7	0.0795	0.0000	OK
360 minute winter	SW6	344	37.530	0.351	2.3	0.1168	0.0000	SURCHARGED
360 minute winter	SW7	360	37.524	0.369	2.5	0.4683	0.0000	SURCHARGED
360 minute winter	SW8	352	37.525	0.396	2.7	0.7547	0.0000	SURCHARGED
360 minute winter	ATANK	360	37.524	0.444	3.1	24.1601	0.0000	SURCHARGED
15 minute winter	OU	11	37.860	0.020	0.7	0.0049	0.0000	OK
15 minute winter	SW9	11	37.725	0.029	1.2	0.0099	0.0000	OK
360 minute winter	SW10	360	37.524	0.481	4.8	0.9712	0.0000	SURCHARGED
360 minute winter	SW11	360	37.522	0.822	5.0	0.9302	0.0000	SURCHARGED
360 minute winter	CW1	360	37.522	1.049	6.9	1.1866	0.0000	SURCHARGED
15 minute summer	14_OUT	1	37.635	1.375	0.0	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 winter	SW1	1.000	SW2	2.0	0.601	0.046	0.0189	
15 minute winter	SW2	1.001	SW6	4.1	0.798	0.229	0.0635	
15 minute winter	SW3	2.000	SW4	1.0	0.588	0.055	0.0082	
15 minute winter	SW4	2.001	SW5	1.0	0.172	0.038	0.0459	
15 minute winter	SW5	2.002	SW6	8.6	0.972	0.482	0.1388	
360 minute winter	SW6	1.002	SW7	2.2	0.407	0.028	0.3376	
360 minute winter	SW7	1.003	SW8	2.6	0.417	0.034	0.3624	
360 minute winter	SW8	1.004	ATANK	2.6	0.500	0.033	0.6922	
360 minute winter	ATANK	1.005	SW10	4.8	0.164	0.062	0.5256	
15 minute winter	OU	3.000	SW9	0.7	0.379	0.039	0.0269	
15 minute winter	SW9	3.001	SW10	1.2	0.544	0.067	0.0044	
360 minute winter	SW10	1.006	SW11	5.0	1.845	0.088	0.0496	
360 minute winter	SW11	1.007	CW1	6.9	1.435	0.121	0.0399	
360 minute winter	CW1	1.008	14_OUT	8.6	1.207	0.290	0.1359	30.0

Results for 30 year Critical Storm Duration. Lowest mass balance: 97.39%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW1	10	38.034	0.034	4.8	0.0148	0.0000	OK
240 minute winter	SW2	172	37.783	0.103	2.1	0.0416	0.0000	OK
240 minute winter	SW3	172	37.784	0.084	0.5	0.0226	0.0000	OK
240 minute winter	SW4	172	37.784	0.133	0.5	0.0212	0.0000	OK
240 minute winter	SW5	172	37.784	0.288	4.4	0.2665	0.0000	SURCHARGED
240 minute winter	SW6	172	37.782	0.603	6.8	0.2009	0.0000	SURCHARGED
240 minute winter	SW7	172	37.784	0.629	7.1	0.7974	0.0000	SURCHARGED
240 minute winter	SW8	172	37.782	0.653	8.1	1.2464	0.0000	SURCHARGED
240 minute winter	ATANK	172	37.783	0.703	9.5	38.2572	0.0000	SURCHARGED
15 minute winter	OU	10	37.872	0.032	1.8	0.0078	0.0000	OK
240 minute winter	SW9	172	37.783	0.087	0.6	0.0299	0.0000	OK
240 minute winter	SW10	172	37.783	0.740	4.8	1.4934	0.0000	SURCHARGED
240 minute winter	SW11	172	37.644	0.944	6.5	1.0676	0.0000	SURCHARGED
240 minute winter	CW1	172	37.641	1.168	8.2	1.3212	0.0000	SURCHARGED
15 minute summer	14_OUT	1	37.635	1.375	0.0	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 winter	SW1	1.000	SW2	4.8	0.729	0.111	0.0370	
240 minute winter	SW2	1.001	SW6	2.1	0.666	0.118	0.1896	
240 minute winter	SW3	2.000	SW4	0.5	0.482	0.028	0.0658	
240 minute winter	SW4	2.001	SW5	0.5	0.149	0.020	0.1324	
240 minute winter	SW5	2.002	SW6	4.4	0.781	0.247	0.2769	
240 minute winter	SW6	1.002	SW7	6.3	0.432	0.081	0.3376	
240 minute winter	SW7	1.003	SW8	7.3	0.438	0.093	0.3624	
240 minute winter	SW8	1.004	ATANK	7.5	0.644	0.096	0.6922	
240 minute winter	ATANK	1.005	SW10	4.8	0.150	0.062	0.5256	
15 minute winter	OU	3.000	SW9	1.8	0.489	0.099	0.0522	
240 minute winter	SW9	3.001	SW10	0.6	0.450	0.034	0.0237	
240 minute winter	SW10	1.006	SW11	6.5	1.845	0.114	0.0496	
240 minute winter	SW11	1.007	CW1	8.2	1.435	0.144	0.0399	
240 minute winter	CW1	1.008	14_OUT	9.9	1.207	0.333	0.1359	60.7

Results for 100 year +20% CC Critical Storm Duration. Lowest mass balance: 97.39%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	SW1	180	38.123	0.123	1.5	0.0539	0.0000	OK
240 minute winter	SW2	180	38.124	0.444	3.2	0.1792	0.0000	SURCHARGED
240 minute winter	SW3	180	38.125	0.425	0.8	0.1140	0.0000	SURCHARGED
240 minute winter	SW4	180	38.125	0.474	0.7	0.0754	0.0000	SURCHARGED
240 minute winter	SW5	180	38.125	0.629	6.4	0.5815	0.0000	SURCHARGED
240 minute winter	SW6	180	38.123	0.944	9.6	0.3145	0.0000	SURCHARGED
240 minute winter	SW7	180	38.123	0.968	11.0	1.2279	0.0000	SURCHARGED
240 minute winter	SW8	180	38.123	0.994	11.5	1.8969	0.0000	SURCHARGED
240 minute winter	ATANK	180	38.123	1.043	13.4	56.7844	0.0000	SURCHARGED
240 minute winter	OU	180	38.123	0.283	0.6	0.0687	0.0000	SURCHARGED
240 minute winter	SW9	180	38.123	0.427	1.0	0.1472	0.0000	SURCHARGED
240 minute winter	SW10	180	38.123	1.080	5.2	2.1800	0.0000	SURCHARGED
120 minute winter	SW11	126	37.648	0.948	5.0	1.0718	0.0000	SURCHARGED
120 minute winter	CW1	126	37.644	1.171	5.0	1.3240	0.0000	SURCHARGED
15 minute summer	14_OUT	1	37.635	1.375	0.0	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)
240 minute winter	SW1	1.000	SW2	1.5	0.565	0.035	0.0914	
240 minute winter	SW2	1.001	SW6	3.0	0.720	0.169	0.2191	
240 minute winter	SW3	2.000	SW4	0.7	0.530	0.040	0.0867	
240 minute winter	SW4	2.001	SW5	1.2	0.158	0.047	0.1365	
240 minute winter	SW5	2.002	SW6	6.2	0.800	0.349	0.2769	
240 minute winter	SW6	1.002	SW7	9.7	0.435	0.124	0.3376	
240 minute winter	SW7	1.003	SW8	10.2	0.455	0.130	0.3624	
240 minute winter	SW8	1.004	ATANK	11.4	0.750	0.146	0.6922	
240 minute winter	ATANK	1.005	SW10	4.8	0.145	0.062	0.5256	
240 minute winter	OU	3.000	SW9	0.6	0.353	0.034	0.2523	
240 minute winter	SW9	3.001	SW10	1.0	0.502	0.057	0.0349	
240 minute winter	SW10	1.006	SW11	6.5	1.845	0.115	0.0496	
120 minute winter	SW11	1.007	CW1	5.0	0.898	0.088	0.0399	
120 minute winter	CW1	1.008	14_OUT	5.0	0.284	0.169	0.1359	44.9

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 97.39%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	SW1	192	38.507	0.507	1.8	0.2215	0.0000	SURCHARGED
240 minute winter	SW2	192	38.507	0.827	3.8	0.3341	0.0000	SURCHARGED
240 minute winter	SW3	192	38.509	0.809	0.9	0.2167	0.0000	SURCHARGED
240 minute winter	SW4	192	38.509	0.858	0.8	0.1364	0.0000	SURCHARGED
240 minute winter	SW5	192	38.509	1.013	7.5	0.9357	0.0000	SURCHARGED
240 minute winter	SW6	192	38.506	1.327	11.4	0.4420	0.0000	SURCHARGED
240 minute winter	SW7	192	38.508	1.353	12.9	1.7156	0.0000	SURCHARGED
240 minute winter	SW8	192	38.507	1.378	13.9	2.6288	0.0000	SURCHARGED
240 minute winter	ATANK	192	38.506	1.426	15.2	65.9482	0.0000	SURCHARGED
240 minute winter	OU	196	38.507	0.667	0.7	0.1621	0.0000	SURCHARGED
240 minute winter	SW9	192	38.508	0.812	1.1	0.2800	0.0000	SURCHARGED
240 minute winter	SW10	192	38.506	1.463	5.5	2.9547	0.0000	SURCHARGED
120 minute winter	SW11	74	37.648	0.948	5.0	1.0718	0.0000	SURCHARGED
15 minute winter	CW1	17	37.644	1.171	3.3	1.3243	0.0000	SURCHARGED
15 minute summer	14_OUT	1	37.635	1.375	0.9	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)
240 minute winter	SW1	1.000	SW2	1.8	0.580	0.042	0.0972	
240 minute winter	SW2	1.001	SW6	3.5	0.727	0.196	0.2191	
240 minute winter	SW3	2.000	SW4	0.8	0.530	0.046	0.0867	
240 minute winter	SW4	2.001	SW5	1.0	0.153	0.041	0.1365	
240 minute winter	SW5	2.002	SW6	7.3	0.807	0.410	0.2769	
240 minute winter	SW6	1.002	SW7	11.3	0.443	0.144	0.3376	
240 minute winter	SW7	1.003	SW8	12.3	0.481	0.157	0.3624	
240 minute winter	SW8	1.004	ATANK	13.6	0.757	0.174	0.6922	
240 minute winter	ATANK	1.005	SW10	5.0	0.113	0.064	0.5256	
240 minute winter	OU	3.000	SW9	0.7	0.363	0.039	0.2523	
240 minute winter	SW9	3.001	SW10	1.0	0.515	0.057	0.0349	
240 minute winter	SW10	1.006	SW11	6.5	1.845	0.115	0.0496	
120 minute winter	SW11	1.007	CW1	5.0	0.812	0.088	0.0399	
15 minute winter	CW1	1.008	14_OUT	3.3	0.189	0.112	0.1359	7.1