Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	2	Maximum Rainfall (mm/hr)	200.0
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	0.360	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	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)
B2 STORAGE	0.104	5.00	46.025	600	385127.653	397962.084	0.959
B2 FCD	0.000		46.025	600	385129.991	397963.963	1.009
SW1	0.027	5.00	45.641	600	385132.330	397965.842	0.750
SW2	0.000		45.774	600	385154.269	397973.388	1.024
SW3	0.024	5.00	45.999	600	385181.755	397994.633	1.453
B1 STORAGE	0.071	5.00	45.961	600	385218.728	397967.688	1.528
B1 FCD	0.000		45.961	600	385216.626	397965.548	1.578
B3 STORAGE	0.052	5.00	45.995	600	385190.652	397943.231	1.404
B3 FCD	0.000		45.995	600	385192.872	397945.249	1.454
SW4	0.000		45.995	600	385195.092	397947.266	2.008
SW5	0.013	5.00	45.902	600	385201.658	397947.800	1.954
SW6	0.043	5.00	45.961	1800	385214.522	397963.407	2.561
CW1	0.000		46.034	1200	385216.640	397961.282	2.934
CW2	0.000		45.756		385222.123	397955.806	3.268
SW8	0.000	5.00	45.889	450	385145.603	397937.610	0.750
SW9	0.026	5.00	45.357	450	385174.329	397921.619	0.799
SW10	0.000		45.520	450	385187.689	397938.977	1.347

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)
B2 STORAGE	B2 STORAGE	B2 FCD	2.999	0.600	45.066	45.016	0.050	60.0	150	5.04	59.7
B2 FCD	B2 FCD	SW1	3.000	0.600	45.016	44.966	0.050	60.0	150	5.08	59.5
1.000	SW1	SW2	23.200	0.600	44.891	44.750	0.141	164.5	225	5.46	57.8
1.001	SW2	SW3	34.739	0.600	44.750	44.546	0.204	170.0	225	6.04	55.3
1.002	SW3	SW6	45.263	0.600	44.564	44.258	0.306	147.9	225	6.74	52.6
B3 STORAGE	B3 STORAGE	B3 FCD	3.000	0.600	44.591	44.541	0.050	60.0	150	5.04	59.7
B3 FCD	B3 FCD	SW4	2.999	0.600	44.541	44.491	0.050	60.0	150	5.08	59.5

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)
B2 STORAGE	1.301	23.0	16.8	0.809	0.859	0.104	0.0	95	1.417
B2 FCD	1.301	23.0	16.8	0.859	0.525	0.104	0.0	95	1.417
1.000	1.016	40.4	20.5	0.525	0.799	0.131	0.0	114	1.021
1.001	1.000	39.7	19.6	0.799	1.228	0.131	0.0	112	0.998
1.002	1.073	42.6	22.1	1.210	1.478	0.155	0.0	115	1.081
B3 STORAGE	1.301	23.0	8.4	1.254	1.304	0.052	0.0	63	1.203
B3 FCD	1.301	23.0	8.4	1.304	1.354	0.052	0.0	62	1.198

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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
2.003	SW4	SW5	6.588	0.600	43.987	43.948	0.039	168.9	225	5.98	55.5
2.004	SW5	SW6	20.225	0.600	43.948	43.400	0.548	36.9	225	6.13	54.9
B1 STORAGE	B1 STORAGE	B1 FCD	3.000	0.600	44.433	44.383	0.050	60.0	150	5.04	59.7
B1 FCD	B1 FCD	SW6	3.002	0.600	44.383	44.333	0.050	60.0	150	5.08	59.5
1.003	SW6	CW1	3.000	0.600	43.400	43.100	0.300	10.0	225	6.75	52.6
1.004	CW1	CW2	7.749	0.600	43.100	42.488	0.612	12.7	225	6.79	52.4
2.000	SW8	SW9	32.877	0.600	45.139	44.558	0.581	56.6	150	5.41	58.0
2.001	SW9	SW10	21.904	0.600	44.558	44.173	0.385	56.9	150	5.68	56.8
2.002	SW10	SW4	11.114	0.600	44.173	44.062	0.111	100.1	150	5.87	56.0

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)
2.003	1.003	39.9	11.7	1.783	1.729	0.078	0.0	83	0.872
2.004	2.160	85.9	13.5	1.729	2.336	0.091	0.0	60	1.587
B1 STORAGE	1.301	23.0	11.5	1.378	1.428	0.071	0.0	75	1.299
B1 FCD	1.300	23.0	11.5	1.428	1.478	0.071	0.0	75	1.298
1.003	4.161	165.5	51.3	2.336	2.709	0.360	0.0	86	3.681
1.004	3.697	147.0	51.2	2.709	3.043	0.360	0.0	92	3.380
2.000	1.340	23.7	0.0	0.600	0.649	0.000	0.0	0	0.000
2.001	1.336	23.6	4.0	0.649	1.197	0.026	0.0	42	1.000
2.002	1.004	17.7	3.9	1.197	1.783	0.026	0.0	48	0.807

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)
B2 STORAGE	2.999	60.0	150	Circular	46.025	45.066	0.809	46.025	45.016	0.859
B2 FCD	3.000	60.0	150	Circular	46.025	45.016	0.859	45.641	44.966	0.525
1.000	23.200	164.5	225	Circular	45.641	44.891	0.525	45.774	44.750	0.799
1.001	34.739	170.0	225	Circular	45.774	44.750	0.799	45.999	44.546	1.228
1.002	45.263	147.9	225	Circular	45.999	44.564	1.210	45.961	44.258	1.478
B3 STORAGE	3.000	60.0	150	Circular	45.995	44.591	1.254	45.995	44.541	1.304
B3 FCD	2.999	60.0	150	Circular	45.995	44.541	1.304	45.995	44.491	1.354
2.003	6.588	168.9	225	Circular	45.995	43.987	1.783	45.902	43.948	1.729
2.004	20.225	36.9	225	Circular	45.902	43.948	1.729	45.961	43.400	2.336
B1 STORAGE	3.000	60.0	150	Circular	45.961	44.433	1.378	45.961	44.383	1.428
B1 FCD	3.002	60.0	150	Circular	45.961	44.383	1.428	45.961	44.333	1.478

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
B2 STORAGE	B2 STORAGE	600	Manhole	Adoptable	B2 FCD	600	Manhole	Adoptable
B2 FCD	B2 FCD	600	Manhole	Adoptable	SW1	600	Manhole	Adoptable
1.000	SW1	600	Manhole	Adoptable	SW2	600	Manhole	Adoptable
1.001	SW2	600	Manhole	Adoptable	SW3	600	Manhole	Adoptable
1.002	SW3	600	Manhole	Adoptable	SW6	1800	Manhole	Adoptable
B3 STORAGE	B3 STORAGE	600	Manhole	Adoptable	B3 FCD	600	Manhole	Adoptable
B3 FCD	B3 FCD	600	Manhole	Adoptable	SW4	600	Manhole	Adoptable
2.003	SW4	600	Manhole	Adoptable	SW5	600	Manhole	Adoptable
2.004	SW5	600	Manhole	Adoptable	SW6	1800	Manhole	Adoptable
B1 STORAGE	B1 STORAGE	600	Manhole	Adoptable	B1 FCD	600	Manhole	Adoptable
B1 FCD	B1 FCD	600	Manhole	Adoptable	SW6	1800	Manhole	Adoptable

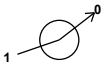
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Pipeline Schedule

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)
1.003	3.000	10.0	225	Circular	45.961	43.400	2.336	46.034	43.100	2.709
1.004	7.749	12.7	225	Circular	46.034	43.100	2.709	45.756	42.488	3.043
2.000	32.877	56.6	150	Circular	45.889	45.139	0.600	45.357	44.558	0.649
2.001	21.904	56.9	150	Circular	45.357	44.558	0.649	45.520	44.173	1.197
2.002	11.114	100.1	150	Circular	45.520	44.173	1.197	45.995	44.062	1.783

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.003	SW6	1800	Manhole	Adoptable	CW1	1200	Manhole	Adoptable
1.004	CW1	1200	Manhole	Adoptable	CW2		Junction	
2.000	SW8	450	Manhole	Adoptable	SW9	450	Manhole	Adoptable
2.001	SW9	450	Manhole	Adoptable	SW10	450	Manhole	Adoptable
2.002	SW10	450	Manhole	Adoptable	SW4	600	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
B2 STORAGE	385127.653	397962.084	46.025	0.959	600	 0	B2 STORAGE	45.066	150
B2 FCD	385129.991	397963.963	46.025	1.009	600	1  0	B2 STORAGE B2 FCD	45.016 45.016	150 150
SW1	385132.330	397965.842	45.641	0.750	600	1  0	B2 FCD 1.000	44.966 44.891	150 225
SW2	385154.269	397973.388	45.774	1.024	600	1  0	1.000 1.001	44.750 44.750	225 225
SW3	385181.755	397994.633	45.999	1.453	600	1  0	1.001 1.002	44.546 44.564	225 225
B1 STORAGE	385218.728	397967.688	45.961	1.528	600	 0	B1 STORAGE	44.433	150
B1 FCD	385216.626	397965.548	45.961	1.578	600	1  0	B1 STORAGE B1 FCD	44.383 44.383	150 150
B3 STORAGE	385190.652	397943.231	45.995	1.404	600	 0	B3 STORAGE	44.591	150

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Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
B3 FCD	385192.872	397945.249	45.995	1.454	600	1	B3 STORAGE	44.541	150
						0	B3 FCD	44.541	150
SW4	385195.092	397947.266	45.995	2.008	600	1	B3 FCD	44.491	150
						2	2.002	44.062	150
						0	2.003	43.987	225
SW5	385201.658	397947.800	45.902	1.954	600	1	2.003	43.948	225
						0	2.004	43.948	225
SW6	385214.522	397963.407	45.961	2.561	1800	1	B1 FCD	44.333	150
						2	2.004	43.400	225
						3	1.002	44.258	225
						0	1.003	43.400	225
CW1	385216.640	397961.282	46.034	2.934	1200	1	1.003	43.100	225
						0	1.004	43.100	225
CW2	385222.123	397955.806	45.756	3.268		1	1.004	42.488	225
SW8	385145.603	397937.610	45.889	0.750	450	0	2.000	45.139	150
SW9	385174.329	397921.619	45.357	0.799	450	1	2.000	44.558	150
						0	2.001	44.558	150
SW10	385187.689	397938.977	45.520	1.347	450	1	2.001	44.173	150
						0	2.002	44.173	150

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)	18.000	Additional Storage (m³/ha)	0.0
Ratio-R	0.360	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	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

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

Node B2 FCD Online Depth/Flow Control

Flap Valve x | Replaces Downstream Link ✓ | Invert Level (m) 45.016

Depth (m)	Flow (l/s)
0.001	0.700

Node B3 FCD Online Depth/Flow Control

Flap Valve x | Replaces Downstream Link ✓ | Invert Level (m) 44.541

Depth (m)	Flow (l/s)
0.001	1.800

Node B1 FCD Online Depth/Flow Control

Flap Valve x | Replaces Downstream Link ✓ | Invert Level (m) 44.383

Depth (m)	Flow (l/s)
0.001	0.900

Node SW6 Online ACO Q-Brake Control

Flap Valve	x	Design Depth (m)	1.850	Min Node Diameter (mm)	1200
Replaces Downstream Link	✓	Design Flow (l/s)	23.0	Orifice Diameter (m)	0.181
Invert Level (m)	43.400	Min Outlet Diameter (m)	0.220		

Node B2 STORAGE Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	45.066
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	768.0	0.0	0.150	768.0	0.0	0.151	0.0	0.0

Node B3 STORAGE Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	44.591
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	160

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	412.0	0.0	0.085	412.0	0.0	0.086	0.0	0.0

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Node B1 STORAGE Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	44.433
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	168

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	408.0	0.0	0.150	408.0	0.0	0.151	0.0	0.0

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	94.806	26.827
1 year 15 minute winter	66.530	26.827
1 year 30 minute summer	62.563	17.703
1 year 30 minute winter	43.904	17.703
1 year 60 minute summer	43.047	11.376
1 year 60 minute winter	28.599	11.376
1 year 120 minute summer	27.209	7.190
1 year 120 minute winter	18.077	7.190
1 year 180 minute summer	21.275	5.475
1 year 180 minute winter	13.830	5.475
1 year 240 minute summer	17.060	4.508
1 year 240 minute winter	11.334	4.508
1 year 360 minute summer	13.310	3.425
1 year 360 minute winter	8.652	3.425
1 year 480 minute summer	10.595	2.800
1 year 480 minute winter	7.039	2.800
1 year 600 minute summer	8.754	2.395
1 year 600 minute winter	5.981	2.395
1 year 720 minute summer	7.863	2.107
1 year 720 minute winter	5.284	2.107
1 year 960 minute summer	6.543	1.723
1 year 960 minute winter	4.334	1.723
1 year 1440 minute summer	4.843	1.298
1 year 1440 minute winter	3.255	1.298
1 year 2160 minute summer	3.541	0.979
1 year 2160 minute winter	2.440	0.979
1 year 2880 minute summer	2.986	0.800
1 year 2880 minute winter	2.007	0.800
1 year 4320 minute summer	2.305	0.603
1 year 4320 minute winter	1.518	0.603
1 year 5760 minute summer	1.927	0.493
1 year 5760 minute winter	1.247	0.493
1 year 7200 minute summer	1.656	0.422
1 year 7200 minute winter	1.069	0.422
1 year 8640 minute summer	1.459	0.372
1 year 8640 minute winter	0.942	0.372
1 year 10080 minute summer	1.312	0.335
1 year 10080 minute winter	0.847	0.335
30 year 15 minute summer	231.915	65.624
30 year 15 minute winter	162.747	65.624
30 year 30 minute summer	153.752	43.507
30 year 30 minute winter	107.896	43.507
30 year 60 minute summer	104.640	27.653

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Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year 60 minute winter	69.521	27.653
30 year 120 minute summer	64.663	17.088
30 year 120 minute winter	42.960	17.088
30 year 180 minute summer	49.598	12.763
30 year 180 minute winter	32.240	12.763
30 year 240 minute summer	39.093	10.331
30 year 240 minute winter	25.973	10.331
30 year 360 minute summer	29.626	7.624
30 year 360 minute winter	19.258	7.624
30 year 480 minute summer	23.255	6.146
30 year 480 minute winter	15.450	6.146
30 year 600 minute summer	18.997	5.196
30 year 600 minute winter	12.980	5.196
30 year 720 minute summer	16.897	4.528
30 year 720 minute winter	11.356	4.528
30 year 960 minute summer	13.834	3.643
30 year 960 minute winter	9.164	3.643
30 year 1440 minute summer	9.990	2.677
30 year 1440 minute winter	6.714	2.677
30 year 2160 minute summer	7.110	1.965
30 year 2160 minute winter	4.899	1.965
30 year 2880 minute summer	5.883	1.577
30 year 2880 minute winter	3.953	1.577
30 year 4320 minute summer	4.416	1.155
30 year 4320 minute winter	2.908	1.155
30 year 5760 minute summer	3.613	0.925
30 year 5760 minute winter	2.339	0.925
30 year 7200 minute summer	3.051	0.778
30 year 7200 minute winter	1.969	0.778
30 year 8640 minute summer	2.650	0.676
30 year 8640 minute winter	1.710	0.676
30 year 10080 minute summer	2.351	0.600
30 year 10080 minute winter	1.517	0.600
100 year +40% CC 15 minute summer	419.179	118.613
100 year +40% CC 15 minute winter	294.160	118.613
100 year +40% CC 30 minute summer	280.646	79.413
100 year +40% CC 30 minute winter	196.945	79.413
100 year +40% CC 60 minute summer	192.272	50.812
100 year +40% CC 60 minute winter	127.741	50.812
100 year +40% CC 120 minute summer	119.076	31.468
100 year +40% CC 120 minute winter	79.111	31.468
100 year +40% CC 180 minute summer	91.187	23.466
100 year +40% CC 180 minute winter	59.274	23.466
100 year +40% CC 240 minute summer	71.667	18.940
100 year +40% CC 240 minute winter	47.614	18.940
100 year +40% CC 360 minute summer	53.946	13.882
100 year +40% CC 360 minute winter	35.066	13.882
100 year +40% CC 480 minute summer	42.165	11.143
100 year +40% CC 480 minute winter	28.013	11.143
100 year +40% CC 600 minute summer	34.324	9.389
100 year +40% CC 600 minute winter	23.453	9.389
100 year +40% CC 720 minute summer	30.440	8.158

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Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
100 year +40% CC 720 minute winter	20.457	8.158
100 year +40% CC 960 minute summer	24.800	6.531
100 year +40% CC 960 minute winter	16.428	6.531
100 year +40% CC 1440 minute summer	17.775	4.764
100 year +40% CC 1440 minute winter	11.946	4.764
100 year +40% CC 2160 minute summer	12.550	3.468
100 year +40% CC 2160 minute winter	8.647	3.468
100 year +40% CC 2880 minute summer	10.319	2.766
100 year +40% CC 2880 minute winter	6.935	2.766
100 year +40% CC 4320 minute summer	7.675	2.007
100 year +40% CC 4320 minute winter	5.054	2.007
100 year +40% CC 5760 minute summer	6.236	1.596
100 year +40% CC 5760 minute winter	4.036	1.596
100 year +40% CC 7200 minute summer	5.236	1.336
100 year +40% CC 7200 minute winter	3.379	1.336
100 year +40% CC 8640 minute summer	4.525	1.154
100 year +40% CC 8640 minute winter	2.920	1.154
100 year +40% CC 10080 minute summer	3.998	1.020
100 year +40% CC 10080 minute winter	2.580	1.020

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Results for 1 year Critical Storm Duration. Lowest mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	B2 STORAGE	525	45.087	0.021	1.3	15.0723	0.0000	OK
720 minute winter	B2 FCD	525	45.017	0.001	0.4	0.0002	0.0000	OK
15 minute winter	SW1	10	44.935	0.044	3.3	0.0125	0.0000	OK
15 minute winter	SW2	11	44.793	0.043	3.3	0.0121	0.0000	OK
15 minute winter	SW3	12	44.620	0.074	6.0	0.0208	0.0000	OK
480 minute winter	B1 STORAGE	328	44.454	0.021	1.2	7.9961	0.0000	OK
600 minute winter	B1 FCD	480	44.384	0.001	0.5	0.0002	0.0000	OK
480 minute winter	B3 STORAGE	328	44.607	0.016	0.9	6.3380	0.0000	OK
480 minute winter	B3 FCD	328	44.541	0.000	0.4	0.0001	0.0000	OK
15 minute winter	SW4	11	44.031	0.044	3.1	0.0125	0.0000	OK
15 minute winter	SW5	11	43.983	0.035	4.6	0.0100	0.0000	OK
15 minute winter	SW6	12	43.548	0.148	15.0	0.3766	0.0000	OK
15 minute winter	CW1	12	43.148	0.048	13.8	0.0543	0.0000	OK
15 minute winter	CW2	12	42.534	0.046	13.8	0.0000	0.0000	OK
15 minute summer	SW8	1	45.139	0.000	0.0	0.0000	0.0000	OK
15 minute winter	SW9	10	44.595	0.037	3.2	0.0058	0.0000	OK
15 minute winter	SW10	11	44.217	0.044	3.1	0.0070	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)
720 minute winter	B2 STORAGE	B2 STORAGE	B2 FCD	0.4	1.013	0.018	0.0022	
720 minute winter	B2 FCD	Depth/Flow	SW1	0.4				
15 minute winter	SW1	1.000	SW2	3.3	0.622	0.081	0.1226	
15 minute winter	SW2	1.001	SW3	3.2	0.395	0.080	0.2855	
15 minute winter	SW3	1.002	SW6	5.6	0.748	0.132	0.3410	
480 minute winter	B1 STORAGE	B1 STORAGE	B1 FCD	0.5	1.121	0.023	0.0022	
600 minute winter	B1 FCD	Depth/Flow	SW6	0.5				
480 minute winter	B3 STORAGE	B3 STORAGE	B3 FCD	0.4	1.026	0.017	0.0015	
480 minute winter	B3 FCD	Depth/Flow	SW4	0.4				
15 minute winter	SW4	2.003	SW5	3.1	0.662	0.078	0.0311	
15 minute winter	SW5	2.004	SW6	4.6	0.930	0.054	0.3182	
15 minute winter	SW6	ACO Q-Brake	CW1	13.8				
15 minute winter	CW1	1.004	CW2	13.8	2.287	0.094	0.0468	10.3
15 minute summer	SW8	2.000	SW9	0.0	0.000	0.000	0.0528	
15 minute winter	SW9	2.001	SW10	3.1	0.831	0.131	0.0831	
15 minute winter	SW10	2.002	SW4	3.1	0.741	0.174	0.0464	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	B2 STORAGE	540	45.111	0.045	3.2	32.9407	0.0000	OK
720 minute winter	B2 FCD	600	45.129	0.113	3.0	0.0320	0.0000	OK
15 minute winter	SW1	10	44.961	0.070	8.2	0.0199	0.0000	OK
15 minute winter	SW2	11	44.818	0.068	8.1	0.0192	0.0000	OK
15 minute winter	SW3	11	44.656	0.110	14.9	0.0310	0.0000	OK
480 minute winter	B1 STORAGE	368	44.484	0.051	2.6	19.6140	0.0000	OK
180 minute winter	B1 FCD	204	44.384	0.001	0.9	0.0003	0.0000	OK
240 minute winter	B3 STORAGE	180	44.623	0.031	3.2	12.3375	0.0000	OK
240 minute winter	B3 FCD	188	44.542	0.001	1.0	0.0002	0.0000	OK
15 minute winter	SW4	15	44.359	0.372	8.4	0.1052	0.0000	SURCHARGED
15 minute winter	SW5	15	44.360	0.412	11.3	0.1166	0.0000	SURCHARGED
15 minute winter	SW6	14	44.361	0.961	37.1	2.4455	0.0000	SURCHARGED
60 minute summer	CW1	36	43.163	0.063	23.0	0.0709	0.0000	OK
60 minute summer	CW2	36	42.548	0.060	23.0	0.0000	0.0000	OK
15 minute summer	SW8	1	45.139	0.000	0.0	0.0000	0.0000	OK
15 minute winter	SW9	10	44.617	0.059	7.8	0.0093	0.0000	OK
15 minute winter	SW10	15	44.365	0.192	7.6	0.0305	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	B2 STORAGE	B2 STORAGE	B2 FCD	3.0	0.952	0.131	0.0279	
720 minute winter	B2 FCD	Depth/Flow	SW1	0.7				
15 minute winter	SW1	1.000	SW2	8.1	0.795	0.200	0.2361	
15 minute winter	SW2	1.001	SW3	8.0	0.550	0.201	0.5087	
15 minute winter	SW3	1.002	SW6	14.4	0.965	0.337	0.6750	
480 minute winter	B1 STORAGE	B1 STORAGE	B1 FCD	1.0	1.074	0.045	0.0078	
180 minute winter	B1 FCD	Depth/Flow	SW6	0.9				
240 minute winter	B3 STORAGE	B3 STORAGE	B3 FCD	1.0	1.412	0.045	0.0040	
240 minute winter	B3 FCD	Depth/Flow	SW4	1.0				
15 minute winter	SW4	2.003	SW5	9.3	0.838	0.234	0.2620	
15 minute winter	SW5	2.004	SW6	12.0	0.902	0.139	0.8044	
15 minute winter	SW6	ACO Q-Brake	CW1	23.0				
60 minute summer	CW1	1.004	CW2	23.0	2.632	0.156	0.0677	49.2
15 minute summer	SW8	2.000	SW9	0.0	0.000	0.000	0.1010	
15 minute winter	SW9	2.001	SW10	7.6	1.042	0.323	0.2441	
15 minute winter	SW10	2.002	SW4	7.6	0.936	0.427	0.1957	

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	B2 STORAGE	585	45.156	0.090	5.7	65.6534	0.0000	OK
600 minute winter	B2 FCD	525	45.159	0.143	2.7	0.0404	0.0000	OK
30 minute winter	SW1	23	45.285	0.394	14.4	0.1115	0.0000	SURCHARGED
30 minute winter	SW2	23	45.290	0.540	14.7	0.1529	0.0000	SURCHARGED
30 minute winter	SW3	23	45.281	0.735	22.1	0.2081	0.0000	SURCHARGED
360 minute winter	B1 STORAGE	336	44.529	0.096	6.2	37.1381	0.0000	OK
360 minute winter	B1 FCD	272	44.529	0.146	3.4	0.0414	0.0000	OK
240 minute winter	B3 STORAGE	204	44.653	0.062	5.8	24.2158	0.0000	OK
480 minute summer	B3 FCD	312	44.542	0.001	1.4	0.0003	0.0000	OK
30 minute winter	SW4	24	45.280	1.293	8.6	0.3658	0.0000	SURCHARGED
30 minute winter	SW5	24	45.278	1.330	16.3	0.3763	0.0000	SURCHARGED
30 minute winter	SW6	24	45.268	1.868	46.6	4.7544	0.0000	SURCHARGED
30 minute winter	CW1	24	43.163	0.063	23.1	0.0711	0.0000	OK
30 minute winter	CW2	24	42.548	0.060	23.1	0.0000	0.0000	OK
30 minute winter	SW8	24	45.312	0.173	4.2	0.0275	0.0000	SURCHARGED
30 minute winter	SW9	24	45.312	0.754	14.9	0.1199	0.0000	FLOOD RISK
30 minute winter	SW10	24	45.292	1.119	12.0	0.1779	0.0000	FLOOD RISK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	B2 STORAGE	B2 STORAGE	B2 FCD	2.7	0.993	0.116	0.0422	
600 minute winter	B2 FCD	Depth/Flow	SW1	0.7				
30 minute winter	SW1	1.000	SW2	12.0	0.873	0.297	0.9227	
30 minute winter	SW2	1.001	SW3	11.9	0.628	0.298	1.3816	
30 minute winter	SW3	1.002	SW6	21.0	0.967	0.492	1.8002	
360 minute winter	B1 STORAGE	B1 STORAGE	B1 FCD	3.4	1.107	0.148	0.0440	
360 minute winter	B1 FCD	Depth/Flow	SW6	0.9				
240 minute winter	B3 STORAGE	B3 STORAGE	B3 FCD	1.3	1.346	0.058	0.0103	
480 minute summer	B3 FCD	Depth/Flow	SW4	1.5				
30 minute winter	SW4	2.003	SW5	12.4	0.815	0.311	0.2620	
30 minute winter	SW5	2.004	SW6	14.5	1.067	0.169	0.8044	
30 minute winter	SW6	ACO Q-Brake	CW1	23.1				
30 minute winter	CW1	1.004	CW2	23.1	2.635	0.157	0.0680	78.2
30 minute winter	SW8	2.000	SW9	-4.2	-0.337	-0.176	0.5788	
30 minute winter	SW9	2.001	SW10	10.2	1.090	0.433	0.3856	
30 minute winter	SW10	2.002	SW4	8.4	0.952	0.471	0.1957	

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