

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	2	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)	20.000	Minimum Backdrop Height (m)	1.000
Ratio-R	0.300	Preferred Cover Depth (m)	1.200
CV	1.000	Include Intermediate Ground	x
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)	Invert Level (m)
HW1	0.159	5.00	78.700	1500	431067.479	410505.562	1.760	76.940
S1	0.083	5.00	78.393	1500	431071.573	410494.796	1.800	76.593
S2	0.156	5.00	78.715	1500	431080.823	410470.497	2.174	76.541
S3	0.061	5.00	79.263	1500	431105.987	410434.565	2.810	76.453
S4	0.146	5.00	79.422	1500	431116.718	410426.856	2.995	76.427
S5	0.079	5.00	79.715	1500	431138.472	410427.827	3.332	76.383
S6	0.050	5.00	80.169	1500	431172.515	410410.349	3.863	76.306
S7	0.075	5.00	80.087	1500	431181.710	410403.145	3.804	76.283
FC1			79.546	1500	431201.599	410392.661	3.358	76.188
C1			79.574	1200	431204.486	410391.280	4.692	74.882
C2			79.408	1200	431205.249	410384.839	4.569	74.839
C3			78.480	1200	431201.357	410366.840	3.764	74.716
C4			76.839	1200	431207.525	410347.077	2.261	74.578
C5			77.466	1200	431219.088	410348.757	2.970	74.496

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)
C2 S1.000	HW1	S1	11.519	0.600	76.940	76.593	0.347	33.2	600	5.05	50.0
C2 S1.001	S1	S2	25.999	0.600	76.593	76.541	0.052	500.0	600	5.45	50.0
C2 S1.002	S2	S3	43.867	0.600	76.541	76.453	0.088	498.5	600	6.12	50.0
C2 S1.003	S3	S4	13.214	0.600	76.453	76.427	0.026	508.2	600	6.33	50.0
C2 S1.004	S4	S5	21.775	0.600	76.427	76.383	0.044	494.9	600	6.66	50.0
C2 S1.005	S5	S6	38.269	0.600	76.383	76.306	0.077	497.0	600	7.25	50.0
C2 S1.006	S6	S7	11.680	0.600	76.307	76.284	0.023	507.8	600	7.43	50.0
C2 S1.007	S7	FC1	22.483	0.600	76.283	76.238	0.045	499.6	600	7.77	50.0
C2 S1.008	FC1	C1	3.200	0.600	76.188	74.882	1.306	2.5	225	7.78	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
C2 S1.000	4.235	1197.5	28.7	1.160	1.200	0.159	0.0
C2 S1.001	1.082	305.9	43.7	1.200	1.574	0.242	0.0
C2 S1.002	1.084	306.4	71.9	1.574	2.210	0.398	0.0
C2 S1.003	1.073	303.4	82.9	2.210	2.395	0.459	0.0
C2 S1.004	1.088	307.5	109.3	2.395	2.732	0.605	0.0
C2 S1.005	1.085	306.9	123.6	2.732	3.263	0.684	0.0
C2 S1.006	1.074	303.5	132.6	3.262	3.203	0.734	0.0
C2 S1.007	1.082	306.0	146.2	3.204	2.708	0.809	0.0
C2 S1.008	8.420	334.8	146.2	3.133	4.467	0.809	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)
C2 C1.000	C1	C2	6.486	0.600	74.882	74.839	0.043	150.8	225	7.88	50.0
C2 C1.001	C2	C3	18.415	0.600	74.839	74.716	0.123	149.7	225	8.17	49.3
C2 C1.002	C3	C4	20.703	0.600	74.716	74.578	0.138	150.0	225	8.49	48.4
C2 C1.003	C4	C5	11.684	0.600	74.578	74.496	0.082	142.5	225	8.67	47.9



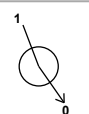
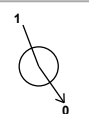
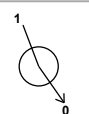
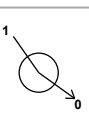
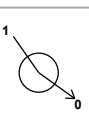
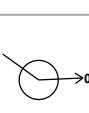
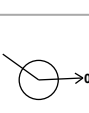








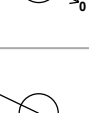
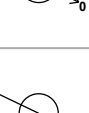
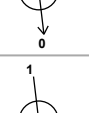
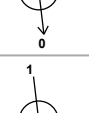
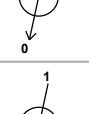
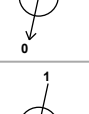
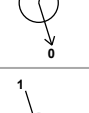
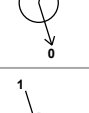
Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
C2 C1.000	1.062	42.2	146.2	4.467	4.344	0.809	0.0
C2 C1.001	1.066	42.4	144.0	4.344	3.539	0.809	0.0
C2 C1.002	1.065	42.3	141.5	3.539	2.036	0.809	0.0
C2 C1.003	1.093	43.5	140.1	2.036	2.745	0.809	0.0

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)
C2 S1.000	11.519	33.2	600	Circular_Default Sewer Type	78.700	76.940	1.160	78.393	76.593	1.200
C2 S1.001	25.999	500.0	600	Circular_Default Sewer Type	78.393	76.593	1.200	78.715	76.541	1.574
C2 S1.002	43.867	498.5	600	Circular_Default Sewer Type	78.715	76.541	1.574	79.263	76.453	2.210
C2 S1.003	13.214	508.2	600	Circular_Default Sewer Type	79.263	76.453	2.210	79.422	76.427	2.395
C2 S1.004	21.775	494.9	600	Circular_Default Sewer Type	79.422	76.427	2.395	79.715	76.383	2.732
C2 S1.005	38.269	497.0	600	Circular_Default Sewer Type	79.715	76.383	2.732	80.169	76.306	3.263
C2 S1.006	11.680	507.8	600	Circular_Default Sewer Type	80.169	76.307	3.262	80.087	76.284	3.203
C2 S1.007	22.483	499.6	600	Circular_Default Sewer Type	80.087	76.283	3.204	79.546	76.238	2.708
C2 S1.008	3.200	2.5	225	Circular_Default Sewer Type	79.546	76.188	3.133	79.574	74.882	4.467
C2 C1.000	6.486	150.8	225	Circular_Default Sewer Type	79.574	74.882	4.467	79.408	74.839	4.344
C2 C1.001	18.415	149.7	225	Circular_Default Sewer Type	79.408	74.839	4.344	78.480	74.716	3.539
C2 C1.002	20.703	150.0	225	Circular_Default Sewer Type	78.480	74.716	3.539	76.839	74.578	2.036
C2 C1.003	11.684	142.5	225	Circular_Default Sewer Type	76.839	74.578	2.036	77.466	74.496	2.745


Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
C2 S1.000	HW1	1500	Junction		S1	1500	Manhole	Adoptable
C2 S1.001	S1	1500	Manhole	Adoptable	S2	1500	Manhole	Adoptable
C2 S1.002	S2	1500	Manhole	Adoptable	S3	1500	Manhole	Adoptable
C2 S1.003	S3	1500	Manhole	Adoptable	S4	1500	Manhole	Adoptable
C2 S1.004	S4	1500	Manhole	Adoptable	S5	1500	Manhole	Adoptable
C2 S1.005	S5	1500	Manhole	Adoptable	S6	1500	Manhole	Adoptable
C2 S1.006	S6	1500	Manhole	Adoptable	S7	1500	Manhole	Adoptable
C2 S1.007	S7	1500	Manhole	Adoptable	FC1	1500	Manhole	Adoptable
C2 S1.008	FC1	1500	Manhole	Adoptable	C1	1200	Manhole	Adoptable
C2 C1.000	C1	1200	Manhole	Adoptable	C2	1200	Manhole	Adoptable
C2 C1.001	C2	1200	Manhole	Adoptable	C3	1200	Manhole	Adoptable
C2 C1.002	C3	1200	Manhole	Adoptable	C4	1200	Manhole	Adoptable
C2 C1.003	C4	1200	Manhole	Adoptable	C5	1200	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
HW1	431067.479	410505.562	78.700	1.760	1500					
S1	431071.573	410494.796	78.393	1.800	1500		0	C2 S1.000	76.940	600
S2	431080.823	410470.497	78.715	2.174	1500		1	C2 S1.000	76.593	600
S2	431080.823	410470.497	78.715	2.174	1500		0	C2 S1.001	76.593	600
S2	431080.823	410470.497	78.715	2.174	1500		1	C2 S1.001	76.541	600
S3	431105.987	410434.565	79.263	2.810	1500		0	C2 S1.002	76.541	600
S3	431105.987	410434.565	79.263	2.810	1500		1	C2 S1.002	76.453	600
S4	431116.718	410426.856	79.422	2.995	1500		0	C2 S1.003	76.453	600
S4	431116.718	410426.856	79.422	2.995	1500		1	C2 S1.003	76.427	600
S5	431138.472	410427.827	79.715	3.332	1500		0	C2 S1.004	76.427	600
S5	431138.472	410427.827	79.715	3.332	1500		1	C2 S1.004	76.383	600
S6	431172.515	410410.349	80.169	3.863	1500		0	C2 S1.005	76.383	600
S6	431172.515	410410.349	80.169	3.863	1500		1	C2 S1.005	76.306	600
S7	431181.710	410403.145	80.087	3.804	1500		0	C2 S1.006	76.307	600
S7	431181.710	410403.145	80.087	3.804	1500		1	C2 S1.006	76.284	600
FC1	431201.599	410392.661	79.546	3.358	1500		0	C2 S1.007	76.283	600
FC1	431201.599	410392.661	79.546	3.358	1500		1	C2 S1.007	76.238	600
C1	431204.486	410391.280	79.574	4.692	1200		0	C2 S1.008	76.188	225
C1	431204.486	410391.280	79.574	4.692	1200		1	C2 S1.008	74.882	225
C2	431205.249	410384.839	79.408	4.569	1200		0	C2 C1.000	74.882	225
C2	431205.249	410384.839	79.408	4.569	1200		1	C2 C1.000	74.839	225
C3	431201.357	410366.840	78.480	3.764	1200		0	C2 C1.001	74.839	225
C3	431201.357	410366.840	78.480	3.764	1200		1	C2 C1.001	74.716	225
C4	431207.525	410347.077	76.839	2.261	1200		0	C2 C1.002	74.716	225
C4	431207.525	410347.077	76.839	2.261	1200		1	C2 C1.002	74.578	225
							0	C2 C1.003	74.578	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
C5	431219.088	410348.757	77.466	2.970	1200	1	C2 C1.003	74.496	225



Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	✓	Check Discharge Rate(s)	✓
Summer CV	1.000	Drain Down Time (mins)	240	Check Discharge Volume	✓
Winter CV	1.000	Additional Storage (m ³ /ha)	20.0	100 year 360 minute (m ³)	

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 %)
2	0	0	0
30	0	0	0
100	0	0	0
100	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	1.95
Greenfield Method	IH124	Growth Factor 100 year	2.48
Positively Drained Area (ha)		Betterment (%)	0
SAAR (mm)		QBar	
Soil Index	1	Q 1 year (l/s)	
SPR	0.10	Q 30 year (l/s)	
Region	1	Q 100 year (l/s)	
Growth Factor 1 year	0.85		

Pre-development Discharge Volume

Site Makeup	Greenfield	Return Period (years)	100
Greenfield Method	FSR/FEH	Climate Change (%)	0
Positively Drained Area (ha)		Storm Duration (mins)	360
Soil Index	1	Betterment (%)	0
SPR	0.10	PR	
CWI		Runoff Volume (m ³)	

Node FC1 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	76.188	Product Number	CTL-SHE-0079-3500-1700-3500
Design Depth (m)	1.700	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	3.5	Min Node Diameter (mm)	1200

Node HW1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	76.940
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	735.0	0.0	1.000	735.0	0.0	1.001	0.0	0.0

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	✓	Maximum Full Bore Velocity (m/s)	3.000
Node Losses	✓	Proportional Velocity	✓
Link Size	✓	Return Period (years)	
Minimum Diameter (mm)	150	Minimum Proportional Velocity (m/s)	0.750
Link Length	✓	Maximum Proportional Velocity (m/s)	3.000
Maximum Length (m)	100.000	Surcharged Depth	✓
Coordinates	✓	Return Period (years)	
Accuracy (m)	1.000	Maximum Surcharged Depth (m)	0.100
Crossings	✓	Flooding	✓
Cover Depth	✓	Return Period (years)	30
Minimum Cover Depth (m)		Time to Half Empty	x
Maximum Cover Depth (m)	3.000	Discharge Rates	✓
Backdrops	✓	Discharge Volume	✓
Minimum Backdrop Height (m)		100 year 360 minute (m ³)	
Maximum Backdrop Height (m)	1.500	First Flush	✓
Full Bore Velocity	✓	Return Period (years)	30
Minimum Full Bore Velocity (m/s)		First Flush Depth (mm)	5

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
2 year 15 minute summer	104.606	29.600	2 year 720 minute summer	9.752	2.614
2 year 15 minute winter	73.408	29.600	2 year 720 minute winter	6.554	2.614
2 year 30 minute summer	67.853	19.200	2 year 960 minute summer	8.082	2.128
2 year 30 minute winter	47.616	19.200	2 year 960 minute winter	5.353	2.128
2 year 60 minute summer	45.408	12.000	2 year 1440 minute summer	5.908	1.583
2 year 60 minute winter	30.168	12.000	2 year 1440 minute winter	3.970	1.583
2 year 120 minute summer	31.407	8.300	30 year 15 minute summer	279.082	78.970
2 year 120 minute winter	20.866	8.300	30 year 15 minute winter	195.847	78.970
2 year 180 minute summer	25.346	6.522	30 year 30 minute summer	183.166	51.830
2 year 180 minute winter	16.475	6.522	30 year 30 minute winter	128.538	51.830
2 year 240 minute summer	20.634	5.453	30 year 60 minute summer	123.908	32.745
2 year 240 minute winter	13.709	5.453	30 year 60 minute winter	82.322	32.745
2 year 360 minute summer	16.317	4.199	30 year 120 minute summer	74.207	19.611
2 year 360 minute winter	10.606	4.199	30 year 120 minute winter	49.301	19.611
2 year 480 minute summer	13.101	3.462	30 year 180 minute summer	56.290	14.485
2 year 480 minute winter	8.704	3.462	30 year 180 minute winter	36.590	14.485
2 year 600 minute summer	10.857	2.970	30 year 240 minute summer	44.179	11.675
2 year 600 minute winter	7.418	2.970	30 year 240 minute winter	29.351	11.675

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year 360 minute summer	33.467	8.612	100 year 720 minute summer	24.486	6.563
30 year 360 minute winter	21.754	8.612	100 year 720 minute winter	16.456	6.563
30 year 480 minute summer	26.279	6.945	100 year 960 minute summer	20.204	5.320
30 year 480 minute winter	17.459	6.945	100 year 960 minute winter	13.384	5.320
30 year 600 minute summer	21.493	5.879	100 year 1440 minute summer	14.697	3.939
30 year 600 minute winter	14.686	5.879	100 year 1440 minute winter	9.878	3.939
30 year 720 minute summer	19.147	5.132	100 year +40% CC 15 minute summer	498.795	141.142
30 year 720 minute winter	12.868	5.132	100 year +40% CC 15 minute winter	350.032	141.142
30 year 960 minute summer	15.732	4.143	100 year +40% CC 30 minute summer	332.403	94.058
30 year 960 minute winter	10.421	4.143	100 year +40% CC 30 minute winter	233.265	94.058
30 year 1440 minute summer	11.402	3.056	100 year +40% CC 60 minute summer	226.620	59.889
30 year 1440 minute winter	7.663	3.056	100 year +40% CC 60 minute winter	150.561	59.889
100 year 15 minute summer	356.282	100.816	100 year +40% CC 120 minute summer	133.207	35.203
100 year 15 minute winter	250.023	100.816	100 year +40% CC 120 minute winter	88.499	35.203
100 year 30 minute summer	237.430	67.185	100 year +40% CC 180 minute summer	100.333	25.819
100 year 30 minute winter	166.618	67.185	100 year +40% CC 180 minute winter	65.219	25.819
100 year 60 minute summer	161.871	42.778	100 year +40% CC 240 minute summer	78.523	20.751
100 year 60 minute winter	107.544	42.778	100 year +40% CC 240 minute winter	52.169	20.751
100 year 120 minute summer	95.148	25.145	100 year +40% CC 360 minute summer	59.493	15.310
100 year 120 minute winter	63.214	25.145	100 year +40% CC 360 minute winter	38.672	15.310
100 year 180 minute summer	71.667	18.442	100 year +40% CC 480 minute summer	46.818	12.373
100 year 180 minute winter	46.585	18.442	100 year +40% CC 480 minute winter	31.105	12.373
100 year 240 minute summer	56.088	14.822	100 year +40% CC 600 minute summer	38.387	10.500
100 year 240 minute winter	37.263	14.822	100 year +40% CC 600 minute winter	26.228	10.500
100 year 360 minute summer	42.495	10.935	100 year +40% CC 720 minute summer	34.281	9.188
100 year 360 minute winter	27.623	10.935	100 year +40% CC 720 minute winter	23.039	9.188
100 year 480 minute summer	33.441	8.838	100 year +40% CC 960 minute summer	28.286	7.448
100 year 480 minute winter	22.218	8.838	100 year +40% CC 960 minute winter	18.737	7.448
100 year 600 minute summer	27.419	7.500	100 year +40% CC 1440 minute summer	20.576	5.515
100 year 600 minute winter	18.735	7.500	100 year +40% CC 1440 minute winter	13.829	5.515

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.74%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
600 minute winter	HW1	570	77.065	0.125	17.9	91.8154	0.0000	OK
600 minute winter	S1	570	77.065	0.472	20.8	1.2682	0.0000	OK
600 minute winter	S2	570	77.065	0.524	21.6	1.6766	0.0000	OK
600 minute winter	S3	570	77.065	0.612	17.9	1.3461	0.0000	SURCHARGED
600 minute winter	S4	570	77.065	0.638	12.1	1.7483	0.0000	SURCHARGED
600 minute winter	S5	570	77.065	0.682	10.2	1.5274	0.0000	SURCHARGED
600 minute winter	S6	570	77.065	0.759	8.4	1.5369	0.0000	SURCHARGED
600 minute winter	S7	570	77.065	0.782	6.5	1.6890	0.0000	SURCHARGED
1440 minute winter	FC1	1470	77.069	0.881	4.0	1.5570	0.0000	SURCHARGED
120 minute winter	C1	42	74.924	0.042	2.9	0.0473	0.0000	OK
30 minute winter	C2	14	74.879	0.040	2.9	0.0458	0.0000	OK
120 minute summer	C3	46	74.756	0.040	2.9	0.0457	0.0000	OK
180 minute summer	C4	68	74.618	0.040	2.9	0.0458	0.0000	OK
180 minute summer	C5	68	74.535	0.039	2.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
600 minute winter	HW1	C2 S1.000	S1	20.8	0.239	0.017	1.6119	
600 minute winter	S1	C2 S1.001	S2	21.6	0.222	0.071	6.4806	
600 minute winter	S2	C2 S1.002	S3	17.9	0.307	0.059	11.9007	
600 minute winter	S3	C2 S1.003	S4	12.1	0.305	0.040	3.7221	
600 minute winter	S4	C2 S1.004	S5	10.2	0.349	0.033	6.1335	
600 minute winter	S5	C2 S1.005	S6	8.4	0.307	0.027	10.7795	
600 minute winter	S6	C2 S1.006	S7	6.5	0.312	0.021	3.2900	
600 minute winter	S7	C2 S1.007	FC1	4.4	0.335	0.014	6.3329	
1440 minute winter	FC1	Hydro-Brake®	C1	2.9				
120 minute winter	C1	C2 C1.000	C2	2.9	0.587	0.069	0.0321	
30 minute winter	C2	C2 C1.001	C3	2.9	0.638	0.069	0.0889	
120 minute summer	C3	C2 C1.002	C4	2.9	0.602	0.069	0.1000	
180 minute summer	C4	C2 C1.003	C5	2.9	0.615	0.067	0.0553	62.6

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.87%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
960 minute winter	HW1	930	77.363	0.423	19.9	311.8016	0.0000	OK
960 minute winter	S1	930	77.363	0.770	15.6	2.0711	0.0000	SURCHARGED
960 minute winter	S2	930	77.363	0.822	13.4	2.6324	0.0000	SURCHARGED
960 minute winter	S3	915	77.363	0.910	9.0	2.0029	0.0000	SURCHARGED
960 minute winter	S4	915	77.363	0.936	7.2	2.5665	0.0000	SURCHARGED
960 minute winter	S5	915	77.363	0.980	4.3	2.1962	0.0000	SURCHARGED
15 minute summer	S6	11	77.372	1.066	88.9	2.1594	0.0000	SURCHARGED
15 minute summer	S7	11	77.381	1.098	60.1	2.3725	0.0000	SURCHARGED
15 minute summer	FC1	11	77.387	1.199	29.0	2.1191	0.0000	SURCHARGED
15 minute summer	C1	11	74.924	0.042	3.0	0.0480	0.0000	OK
960 minute winter	C2	930	74.880	0.041	3.0	0.0462	0.0000	OK
15 minute winter	C3	7	74.757	0.041	2.9	0.0461	0.0000	OK
960 minute winter	C4	930	74.619	0.041	3.0	0.0462	0.0000	OK
960 minute winter	C5	930	74.536	0.040	3.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
960 minute winter	HW1	C2 S1.000	S1	-15.3	0.264	-0.013	2.8460	
960 minute winter	S1	C2 S1.001	S2	-13.2	0.209	-0.043	7.3233	
960 minute winter	S2	C2 S1.002	S3	-8.9	0.278	-0.029	12.3563	
960 minute winter	S3	C2 S1.003	S4	-7.2	0.266	-0.024	3.7221	
960 minute winter	S4	C2 S1.004	S5	3.3	0.314	0.011	6.1335	
960 minute winter	S5	C2 S1.005	S6	3.2	0.318	0.011	10.7795	
15 minute summer	S6	C2 S1.006	S7	-67.2	0.517	-0.221	3.2900	
15 minute summer	S7	C2 S1.007	FC1	29.0	0.452	0.095	6.3329	
15 minute summer	FC1	Hydro-Brake®	C1	3.0				
15 minute summer	C1	C2 C1.000	C2	3.0	0.703	0.070	0.0321	
960 minute winter	C2	C2 C1.001	C3	3.0	0.605	0.070	0.0900	
15 minute winter	C3	C2 C1.002	C4	2.9	0.677	0.069	0.0997	
960 minute winter	C4	C2 C1.003	C5	3.0	0.618	0.068	0.0559	196.2

Results for 100 year Critical Storm Duration. Lowest mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
1440 minute winter	HW1	1380	77.556	0.616	19.1	454.1490	0.0000	SURCHARGED
1440 minute winter	S1	1380	77.556	0.963	14.8	2.5905	0.0000	SURCHARGED
1440 minute winter	S2	1380	77.556	1.015	12.6	3.2512	0.0000	SURCHARGED
1440 minute winter	S3	1380	77.556	1.103	8.4	2.4285	0.0000	SURCHARGED
1440 minute winter	S4	1380	77.556	1.129	6.7	3.0967	0.0000	SURCHARGED
1440 minute winter	S5	1380	77.556	1.173	3.7	2.6295	0.0000	SURCHARGED
1440 minute winter	S6	1380	77.556	1.250	3.4	2.5332	0.0000	SURCHARGED
1440 minute winter	S7	1380	77.556	1.273	3.5	2.7517	0.0000	SURCHARGED
1440 minute winter	FC1	1380	77.556	1.368	3.2	2.4179	0.0000	SURCHARGED
1440 minute winter	C1	1380	74.926	0.044	3.2	0.0495	0.0000	OK
1440 minute winter	C2	1380	74.881	0.042	3.2	0.0478	0.0000	OK
1440 minute winter	C3	1380	74.758	0.042	3.2	0.0477	0.0000	OK
1440 minute winter	C4	1380	74.620	0.042	3.2	0.0478	0.0000	OK
1440 minute winter	C5	1380	74.537	0.041	3.2	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
1440 minute winter	HW1	C2 S1.000	S1	-14.7	0.279	-0.012	3.2446	
1440 minute winter	S1	C2 S1.001	S2	-12.5	0.216	-0.041	7.3233	
1440 minute winter	S2	C2 S1.002	S3	-8.3	0.276	-0.027	12.3563	
1440 minute winter	S3	C2 S1.003	S4	-6.7	0.275	-0.022	3.7221	
1440 minute winter	S4	C2 S1.004	S5	3.1	0.316	0.010	6.1335	
1440 minute winter	S5	C2 S1.005	S6	3.1	0.317	0.010	10.7795	
1440 minute winter	S6	C2 S1.006	S7	3.1	0.305	0.010	3.2900	
1440 minute winter	S7	C2 S1.007	FC1	3.2	0.331	0.010	6.3329	
1440 minute winter	FC1	Hydro-Brake®	C1	3.2				
1440 minute winter	C1	C2 C1.000	C2	3.2	0.601	0.075	0.0342	
1440 minute winter	C2	C2 C1.001	C3	3.2	0.617	0.075	0.0946	
1440 minute winter	C3	C2 C1.002	C4	3.2	0.617	0.075	0.1064	
1440 minute winter	C4	C2 C1.003	C5	3.2	0.630	0.073	0.0588	285.1

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
1440 minute winter	HW1	1410	77.933	0.993	27.3	731.8198	0.0000	SURCHARGED
1440 minute winter	S1	1410	77.933	1.340	21.3	3.6039	0.0000	SURCHARGED
1440 minute winter	S2	1410	77.933	1.392	18.2	4.4579	0.0000	SURCHARGED
1440 minute winter	S3	1410	77.933	1.480	12.3	3.2582	0.0000	SURCHARGED
1440 minute winter	S4	1410	77.933	1.506	10.1	4.1304	0.0000	SURCHARGED
1440 minute winter	S5	1410	77.933	1.550	4.6	3.4744	0.0000	SURCHARGED
1440 minute winter	S6	1410	77.933	1.627	3.6	3.2973	0.0000	SURCHARGED
1440 minute winter	S7	1410	77.933	1.650	3.6	3.5667	0.0000	SURCHARGED
1440 minute winter	FC1	1410	77.934	1.746	3.5	3.0843	0.0000	SURCHARGED
1440 minute winter	C1	1410	74.928	0.046	3.5	0.0524	0.0000	OK
1440 minute winter	C2	1410	74.884	0.045	3.5	0.0506	0.0000	OK
1440 minute winter	C3	1410	74.761	0.045	3.5	0.0504	0.0000	OK
1440 minute winter	C4	1410	74.623	0.045	3.5	0.0506	0.0000	OK
1440 minute winter	C5	1410	74.539	0.043	3.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
1440 minute winter	HW1	C2 S1.000	S1	-21.2	0.254	-0.018	3.2446	
1440 minute winter	S1	C2 S1.001	S2	-18.1	0.206	-0.059	7.3233	
1440 minute winter	S2	C2 S1.002	S3	-12.2	0.284	-0.040	12.3563	
1440 minute winter	S3	C2 S1.003	S4	-10.0	0.274	-0.033	3.7221	
1440 minute winter	S4	C2 S1.004	S5	-4.5	0.333	-0.015	6.1335	
1440 minute winter	S5	C2 S1.005	S6	3.5	0.299	0.012	10.7795	
1440 minute winter	S6	C2 S1.006	S7	3.5	0.296	0.012	3.2900	
1440 minute winter	S7	C2 S1.007	FC1	3.5	0.304	0.012	6.3329	
1440 minute winter	FC1	Hydro-Brake®	C1	3.5				
1440 minute winter	C1	C2 C1.000	C2	3.5	0.620	0.084	0.0371	
1440 minute winter	C2	C2 C1.001	C3	3.5	0.637	0.084	0.1025	
1440 minute winter	C3	C2 C1.002	C4	3.5	0.637	0.084	0.1153	
1440 minute winter	C4	C2 C1.003	C5	3.5	0.651	0.082	0.0637	307.3