

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	250.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.123	5.00	167.608	1500	401452.543	344621.147	1.500
2	0.010	5.00	167.713	1500	401436.142	344606.836	1.714
3	0.080	5.00	167.847	1350	401430.167	344591.466	1.930
4	0.176	5.00	165.676	1800	401474.639	344518.597	1.982
5	0.021	5.00	165.964	1500	401462.805	344508.418	2.336
6			166.195	1350	401442.194	344502.849	2.657
7	0.261	5.00	166.379	1800	401425.631	344503.705	3.060
8	0.074	5.00	165.829	1500	401424.037	344472.857	2.590
9			165.266	1350	401428.117	344441.386	2.110
10	0.145	5.00	165.137	1500	401436.789	344435.971	2.008
11	0.436	5.00	163.374	2400	401558.740	344515.847	3.981
12	0.019	5.00	164.034	2700	401512.609	344465.118	4.812
13	0.097	5.00	164.375	2700	401484.619	344445.695	5.239
14	0.018	5.00	163.362	2700	401505.836	344415.164	4.319
15	0.035	5.00	162.810	2700	401521.542	344399.458	3.823
16	0.162	5.00	162.685	2700	401603.845	344475.811	3.426
17	0.036	5.00	162.230	3000	401572.106	344441.311	3.088
18	0.020	5.00	162.588	3000	401540.367	344406.811	3.563
19	0.051	5.00	162.782	3000	401524.215	344395.010	3.807
20	0.177	5.00	163.386	3000	401465.910	344381.121	4.339
21	0.027	5.00	162.945	3000	401509.915	344388.333	4.010
22	0.079	5.00	162.380	3000	401517.193	344361.815	3.514
23	0.166	5.00	161.930	3000	401525.059	344330.326	3.145
24			158.600		401542.035	344322.926	0.578

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	1	2	21.767	0.600	166.108	165.999	0.109	199.7	300	5.33	51.5
1.001	2	3	16.491	0.600	165.999	165.917	0.082	201.1	300	5.58	50.5
1.002	3	7	87.879	0.600	165.917	163.469	2.448	35.9	300	6.13	48.4
2.000	4	5	15.609	0.600	163.694	163.628	0.066	236.5	300	5.26	51.8

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.000	1.109	78.4	22.9	1.200	1.414	0.123	0.0
1.001	1.105	78.1	24.3	1.414	1.630	0.133	0.0
1.002	2.632	186.1	37.3	1.630	2.610	0.213	0.0
2.000	1.018	71.9	32.9	1.682	2.036	0.176	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)
2.001	5	6	21.351	0.600	163.628	163.538	0.090	237.2	300	5.61	50.4
2.002	6	7	16.585	0.600	163.539	163.469	0.070	236.9	300	5.88	49.3
1.003	7	8	30.889	0.600	163.319	163.239	0.080	386.1	450	6.63	46.7
1.004	8	9	31.735	0.600	163.239	163.157	0.082	387.0	450	7.15	45.0
1.005	9	10	10.225	0.600	163.156	163.129	0.027	378.7	450	7.31	44.5
1.006	10	13	48.808	0.600	163.130	160.187	2.943	16.6	450	7.47	44.0
3.000	11	12	68.568	0.600	159.393	159.222	0.171	401.0	1500	5.54	50.7
3.001	12	13	34.069	0.600	159.222	159.137	0.085	400.8	1500	5.80	49.6
1.007	13	14	37.179	0.600	159.136	159.043	0.093	399.8	1500	7.76	43.2
1.008	14	15	22.212	0.600	159.043	158.987	0.056	396.6	1500	7.94	42.7
1.009	15	19	5.227	0.600	158.988	158.975	0.013	402.1	1500	7.98	42.6
4.000	16	17	46.879	0.600	159.259	159.142	0.117	400.7	1500	5.37	51.4
4.001	17	18	46.879	0.600	159.142	159.025	0.117	400.7	1500	5.73	49.9
4.002	18	19	20.003	0.600	159.025	158.975	0.050	400.1	1500	5.89	49.3
1.010	19	21	15.711	0.600	158.975	158.936	0.039	402.8	1500	8.10	42.2
5.000	20	21	44.549	0.600	159.047	158.936	0.111	401.3	1500	5.35	51.4
1.011	21	22	27.499	0.600	158.935	158.866	0.069	398.5	1500	8.31	41.7
1.012	22	23	32.457	0.600	158.867	158.786	0.081	400.7	1500	8.57	41.1
1.013	23	24	18.519	0.600	158.785	158.022	0.763	24.3	225	8.68	40.8

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
2.001	1.016	71.8	35.9	2.036	2.357	0.197	0.0
2.002	1.017	71.9	35.1	2.356	2.610	0.197	0.0
1.003	1.028	163.5	113.2	2.610	2.140	0.671	0.0
1.004	1.027	163.4	121.1	2.140	1.659	0.745	0.0
1.005	1.038	165.2	119.8	1.660	1.558	0.745	0.0
1.006	5.010	796.9	141.6	1.557	3.738	0.890	0.0
3.000	2.135	3773.7	79.9	2.481	3.312	0.436	0.0
3.001	2.136	3774.5	81.6	3.312	3.738	0.455	0.0
1.007	2.139	3779.4	225.1	3.739	2.819	1.442	0.0
1.008	2.147	3794.4	225.2	2.819	2.323	1.460	0.0
1.009	2.133	3768.5	230.0	2.322	2.307	1.495	0.0
4.000	2.136	3775.2	30.1	1.926	1.588	0.162	0.0
4.001	2.136	3775.2	35.7	1.588	2.063	0.198	0.0
4.002	2.138	3778.1	38.8	2.063	2.307	0.218	0.0
1.010	2.131	3764.9	269.3	2.307	2.509	1.764	0.0
5.000	2.135	3772.0	32.9	2.839	2.509	0.177	0.0
1.011	2.142	3785.3	296.6	2.510	2.014	1.968	0.0
1.012	2.136	3775.0	303.8	2.013	1.644	2.047	0.0
1.013	2.666	106.0	326.1	2.920	0.353	2.213	0.0

Pipeline Schedule

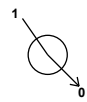
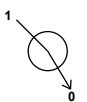
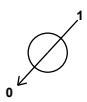
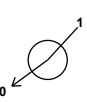
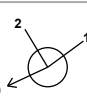
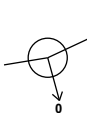
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	21.767	199.7	300	1 SN1 SEP 24	167.608	166.108	1.200	167.713	165.999	1.414
1.001	16.491	201.1	300	1 SN1 SEP 24	167.713	165.999	1.414	167.847	165.917	1.630
1.002	87.879	35.9	300	1 SN1 SEP 24	167.847	165.917	1.630	166.379	163.469	2.610
2.000	15.609	236.5	300	1 SN1 SEP 24	165.676	163.694	1.682	165.964	163.628	2.036
2.001	21.351	237.2	300	1 SN1 SEP 24	165.964	163.628	2.036	166.195	163.538	2.357
2.002	16.585	236.9	300	1 SN1 SEP 24	166.195	163.539	2.356	166.379	163.469	2.610
1.003	30.889	386.1	450	1 SN1 SEP 24	166.379	163.319	2.610	165.829	163.239	2.140
1.004	31.735	387.0	450	1 SN1 SEP 24	165.829	163.239	2.140	165.266	163.157	1.659
1.005	10.225	378.7	450	1 SN1 SEP 24	165.266	163.156	1.660	165.137	163.129	1.558
1.006	48.808	16.6	450	1 SN1 SEP 24	165.137	163.130	1.557	164.375	160.187	3.738
3.000	68.568	401.0	1500	1 SN1 SEP 24	163.374	159.393	2.481	164.034	159.222	3.312
3.001	34.069	400.8	1500	1 SN1 SEP 24	164.034	159.222	3.312	164.375	159.137	3.738
1.007	37.179	399.8	1500	1 SN1 SEP 24	164.375	159.136	3.739	163.362	159.043	2.819
1.008	22.212	396.6	1500	1 SN1 SEP 24	163.362	159.043	2.819	162.810	158.987	2.323
1.009	5.227	402.1	1500	1 SN1 SEP 24	162.810	158.988	2.322	162.782	158.975	2.307
4.000	46.879	400.7	1500	1 SN1 SEP 24	162.685	159.259	1.926	162.230	159.142	1.588
4.001	46.879	400.7	1500	1 SN1 SEP 24	162.230	159.142	1.588	162.588	159.025	2.063
4.002	20.003	400.1	1500	1 SN1 SEP 24	162.588	159.025	2.063	162.782	158.975	2.307
1.010	15.711	402.8	1500	1 SN1 SEP 24	162.782	158.975	2.307	162.945	158.936	2.509
5.000	44.549	401.3	1500	1 SN1 SEP 24	163.386	159.047	2.839	162.945	158.936	2.509
1.011	27.499	398.5	1500	1 SN1 SEP 24	162.945	158.935	2.510	162.380	158.866	2.014
1.012	32.457	400.7	1500	1 SN1 SEP 24	162.380	158.867	2.013	161.930	158.786	1.644
1.013	18.519	24.3	225	1 SN1 SEP 24	161.930	158.785	2.920	158.600	158.022	0.353

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	1500	Manhole	1 SN1 SEP 24	2	1500	Manhole	1 SN1 SEP 24
1.001	2	1500	Manhole	1 SN1 SEP 24	3	1350	Manhole	1 SN1 SEP 24
1.002	3	1350	Manhole	1 SN1 SEP 24	7	1800	Manhole	1 SN1 SEP 24
2.000	4	1800	Manhole	1 SN1 SEP 24	5	1500	Manhole	1 SN1 SEP 24
2.001	5	1500	Manhole	1 SN1 SEP 24	6	1350	Manhole	1 SN1 SEP 24
2.002	6	1350	Manhole	1 SN1 SEP 24	7	1800	Manhole	1 SN1 SEP 24
1.003	7	1800	Manhole	1 SN1 SEP 24	8	1500	Manhole	1 SN1 SEP 24
1.004	8	1500	Manhole	1 SN1 SEP 24	9	1350	Manhole	1 SN1 SEP 24
1.005	9	1350	Manhole	1 SN1 SEP 24	10	1500	Manhole	1 SN1 SEP 24
1.006	10	1500	Manhole	1 SN1 SEP 24	13	2700	Manhole	1 SN1 SEP 24
3.000	11	2400	Manhole	1 SN1 SEP 24	12	2700	Manhole	1 SN1 SEP 24
3.001	12	2700	Manhole	1 SN1 SEP 24	13	2700	Manhole	1 SN1 SEP 24
1.007	13	2700	Manhole	1 SN1 SEP 24	14	2700	Manhole	1 SN1 SEP 24
1.008	14	2700	Manhole	1 SN1 SEP 24	15	2700	Manhole	1 SN1 SEP 24
1.009	15	2700	Manhole	1 SN1 SEP 24	19	3000	Manhole	1 SN1 SEP 24
4.000	16	2700	Manhole	1 SN1 SEP 24	17	3000	Manhole	1 SN1 SEP 24
4.001	17	3000	Manhole	1 SN1 SEP 24	18	3000	Manhole	1 SN1 SEP 24
4.002	18	3000	Manhole	1 SN1 SEP 24	19	3000	Manhole	1 SN1 SEP 24
1.010	19	3000	Manhole	1 SN1 SEP 24	21	3000	Manhole	1 SN1 SEP 24
5.000	20	3000	Manhole	1 SN1 SEP 24	21	3000	Manhole	1 SN1 SEP 24
1.011	21	3000	Manhole	1 SN1 SEP 24	22	3000	Manhole	1 SN1 SEP 24
1.012	22	3000	Manhole	1 SN1 SEP 24	23	3000	Manhole	1 SN1 SEP 24
1.013	23	3000	Manhole	1 SN1 SEP 24	24		Manhole	1 SN1 SEP 24

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
1	401452.543	344621.147	167.608	1.500	1500		0	1.000	166.108	300
2	401436.142	344606.836	167.713	1.714	1500		1	1.000	165.999	300
3	401430.167	344591.466	167.847	1.930	1350		0	1.001	165.999	300
4	401474.639	344518.597	165.676	1.982	1800		1	1.001	165.917	300
5	401462.805	344508.418	165.964	2.336	1500		0	1.002	165.917	300
6	401442.194	344502.849	166.195	2.657	1350		0	2.000	163.694	300
7	401425.631	344503.705	166.379	3.060	1800		1	2.000	163.628	300
8	401424.037	344472.857	165.829	2.590	1500		0	2.001	163.628	300
9	401428.117	344441.386	165.266	2.110	1350		1	2.001	163.538	300
10	401436.789	344435.971	165.137	2.008	1500		0	2.002	163.539	300
11	401558.740	344515.847	163.374	3.981	2400		1	2.002	163.469	300
12	401512.609	344465.118	164.034	4.812	2700		2	1.002	163.469	300
13	401484.619	344445.695	164.375	5.239	2700		0	1.003	163.319	450
14	401474.639	344518.597	165.676	1.982	1800		1	1.003	163.239	450
15	401462.805	344508.418	165.964	2.336	1500		0	1.004	163.239	450
16	401442.194	344502.849	166.195	2.657	1350		1	1.004	163.157	450
17	401436.789	344435.971	165.137	2.008	1500		0	1.005	163.156	450
18	401425.631	344503.705	166.379	3.060	1800		1	1.005	163.129	450
19	401424.037	344472.857	165.829	2.590	1500		0	1.006	163.130	450
20	401430.167	344591.466	167.847	1.930	1350		0	3.000	159.393	1500
21	401436.142	344606.836	167.713	1.714	1500		1	3.000	159.222	1500
22	401452.543	344621.147	167.608	1.500	1500		0	3.001	159.222	1500
23	401484.619	344445.695	164.375	5.239	2700		1	3.001	159.137	1500
24	401474.639	344518.597	165.676	1.982	1800		2	1.006	160.187	450
25	401462.805	344508.418	165.964	2.336	1500		0	1.007	159.136	1500

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
14	401505.836	344415.164	163.362	4.319	2700		1	1.007	159.043	1500
						0	1.008	159.043	1500	
15	401521.542	344399.458	162.810	3.823	2700		1	1.008	158.987	1500
						0	1.009	158.988	1500	
16	401603.845	344475.811	162.685	3.426	2700		0	4.000	159.259	1500
17	401572.106	344441.311	162.230	3.088	3000		1	4.000	159.142	1500
						0	4.001	159.142	1500	
18	401540.367	344406.811	162.588	3.563	3000		1	4.001	159.025	1500
						0	4.002	159.025	1500	
19	401524.215	344395.010	162.782	3.807	3000		1	4.002	158.975	1500
							2	1.009	158.975	1500
							0	1.010	158.975	1500
20	401465.910	344381.121	163.386	4.339	3000		0	5.000	159.047	1500
21	401509.915	344388.333	162.945	4.010	3000		1	5.000	158.936	1500
							2	1.010	158.936	1500
							0	1.011	158.935	1500
22	401517.193	344361.815	162.380	3.514	3000		1	1.011	158.866	1500
						0	1.012	158.867	1500	
23	401525.059	344330.326	161.930	3.145	3000		1	1.012	158.786	1500
						0	1.013	158.785	225	
24	401542.035	344322.926	158.600	0.578			1	1.013	158.022	225

Simulation Settings

Rainfall Methodology FSR
Rainfall Events Singular
FSR Region England and Wales
M5-60 (mm) 18.000
Ratio-R 0.356
Summer CV 1.000

Winter CV 1.000
Analysis Speed Normal
Skip Steady State x
Drain Down Time (mins) 240
Additional Storage (m³/ha) 20.0
Starting Level (m)

Simulation Settings

Check Discharge Rate(s) x | 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 %)
2	0	0	0
30	0	0	0
100	40	0	0

Node 23 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	158.785	Product Number	CTL-SHE-0167-1740-2350-1740
Design Depth (m)	2.350	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	17.4	Min Node Diameter (mm)	2100

Node 4 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	164.700
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	0

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	105.0	0.0	0.400	105.0	0.0	0.401	0.0	0.0

Node 23 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	160.100
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	0

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	750.0	0.0	1.349	1250.0	0.0	1.350	0.0	0.0

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.71%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	166.229	0.121	24.6	0.4112	0.0000	OK
15 minute summer	2	11	166.122	0.123	26.2	0.2320	0.0000	OK
15 minute summer	3	11	166.013	0.096	41.7	0.2163	0.0000	OK
15 minute summer	4	10	163.856	0.162	35.1	0.7019	0.0000	OK
15 minute summer	5	11	163.797	0.168	38.6	0.3280	0.0000	OK
15 minute summer	6	11	163.712	0.174	38.5	0.2487	0.0000	OK
15 minute summer	7	11	163.647	0.328	129.7	1.3931	0.0000	OK
15 minute summer	8	12	163.559	0.320	139.9	0.7479	0.0000	OK
15 minute summer	9	12	163.418	0.262	138.9	0.3747	0.0000	OK
15 minute summer	10	12	163.272	0.143	163.7	0.4593	0.0000	OK
180 minute winter	11	168	159.654	0.261	20.6	1.7553	0.0000	OK
180 minute winter	12	168	159.654	0.432	21.5	2.5063	0.0000	OK
180 minute winter	13	168	159.654	0.518	60.4	3.1547	0.0000	OK
180 minute winter	14	172	159.653	0.610	53.1	3.5456	0.0000	OK
180 minute winter	15	172	159.653	0.666	46.9	3.9377	0.0000	OK
180 minute winter	16	168	159.654	0.395	7.7	2.6343	0.0000	OK
180 minute winter	17	172	159.654	0.512	12.3	3.7378	0.0000	OK
180 minute winter	18	172	159.654	0.629	14.3	4.5149	0.0000	OK
180 minute winter	19	172	159.653	0.678	45.5	4.9773	0.0000	OK
180 minute winter	20	172	159.653	0.606	8.4	4.7785	0.0000	OK
180 minute winter	21	172	159.653	0.718	34.4	5.1721	0.0000	OK
180 minute winter	22	164	159.653	0.787	25.8	5.9182	0.0000	OK
180 minute winter	23	164	159.654	0.869	23.4	7.0564	0.0000	SURCHARGED
30 minute summer	24	28	158.083	0.061	17.4	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 summer	1	1.000	2	24.2	0.902	0.309	0.5841	
15 minute summer	2	1.001	3	26.1	1.125	0.335	0.3838	
15 minute summer	3	1.002	7	41.6	1.668	0.224	2.7587	
15 minute summer	4	2.000	5	34.4	0.869	0.478	0.6182	
15 minute summer	5	2.001	6	38.5	0.941	0.536	0.8863	
15 minute summer	6	2.002	7	38.3	0.947	0.533	0.7086	
15 minute summer	7	1.003	8	125.8	1.036	0.769	3.7664	
15 minute summer	8	1.004	9	138.9	1.284	0.850	3.4262	
15 minute summer	9	1.005	10	139.2	2.014	0.843	0.7105	
15 minute summer	10	1.006	13	163.3	3.923	0.205	2.0323	
180 minute winter	11	3.000	12	20.6	0.560	0.005	21.3878	
180 minute winter	12	3.001	13	16.6	0.343	0.004	16.2786	
180 minute winter	13	1.007	14	52.2	0.612	0.014	22.5034	
180 minute winter	14	1.008	15	45.2	0.473	0.012	15.8627	
180 minute winter	15	1.009	19	43.2	0.447	0.011	3.9921	
180 minute winter	16	4.000	17	6.1	0.356	0.002	21.0541	
180 minute winter	17	4.001	18	-5.6	0.281	-0.001	28.8314	
180 minute winter	18	4.002	19	-13.4	0.118	-0.004	14.7340	
180 minute winter	19	1.010	21	31.6	0.518	0.008	12.6038	
180 minute winter	20	5.000	21	3.8	0.238	0.001	33.3558	
180 minute winter	21	1.011	22	22.7	0.519	0.006	24.3044	
180 minute winter	22	1.012	23	18.2	0.216	0.005	32.2945	
180 minute winter	23	1.013	24	17.4	1.931	0.164	0.1666	399.5

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.68%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	166.287	0.179	46.3	0.6089	0.0000	OK
15 minute summer	2	10	166.176	0.177	49.5	0.3336	0.0000	OK
15 minute summer	3	11	166.052	0.135	79.1	0.3048	0.0000	OK
15 minute summer	4	12	164.226	0.532	66.3	2.3000	0.0000	SURCHARGED
15 minute summer	5	12	164.167	0.539	66.0	1.0501	0.0000	SURCHARGED
15 minute summer	6	12	164.068	0.530	65.3	0.7589	0.0000	SURCHARGED
15 minute summer	7	11	163.993	0.674	233.0	2.8636	0.0000	SURCHARGED
15 minute summer	8	11	163.785	0.546	251.1	1.2774	0.0000	SURCHARGED
15 minute summer	9	12	163.529	0.373	250.4	0.5331	0.0000	OK
15 minute summer	10	11	163.330	0.201	299.7	0.6446	0.0000	OK
360 minute winter	11	352	160.182	0.789	23.4	5.2961	0.0000	OK
240 minute winter	12	228	160.180	0.958	23.9	5.5631	0.0000	OK
240 minute winter	13	244	160.182	1.046	78.6	6.3762	0.0000	OK
240 minute winter	14	236	160.181	1.138	68.5	6.6114	0.0000	OK
240 minute winter	15	236	160.183	1.196	61.1	7.0653	0.0000	OK
240 minute winter	16	240	160.180	0.920	11.7	6.1406	0.0000	OK
240 minute winter	17	232	160.180	1.038	18.6	7.5765	0.0000	OK
360 minute winter	18	352	160.179	1.154	17.2	8.2897	0.0000	OK
360 minute winter	19	336	160.180	1.205	51.8	8.8388	0.0000	OK
240 minute winter	20	236	160.181	1.134	12.8	8.9374	0.0000	OK
240 minute winter	21	232	160.180	1.245	62.5	8.9655	0.0000	OK
240 minute winter	22	240	160.180	1.314	60.6	9.8763	0.0000	OK
240 minute winter	23	240	160.180	1.395	62.9	73.0747	0.0000	SURCHARGED
15 minute winter	24	12	158.083	0.061	17.4	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 summer	1	1.000	2	45.7	1.052	0.584	0.9471	
15 minute summer	2	1.001	3	49.2	1.333	0.630	0.6087	
15 minute summer	3	1.002	7	78.7	1.740	0.423	4.4429	
15 minute summer	4	2.000	5	58.4	0.960	0.812	1.0992	
15 minute summer	5	2.001	6	65.3	1.002	0.909	1.5035	
15 minute summer	6	2.002	7	66.7	0.976	0.928	1.1679	
15 minute summer	7	1.003	8	226.2	1.428	1.383	4.8942	
15 minute summer	8	1.004	9	250.4	1.600	1.533	4.7351	
15 minute summer	9	1.005	10	251.7	2.365	1.524	1.0659	
15 minute summer	10	1.006	13	297.9	4.577	0.374	3.1772	
360 minute winter	11	3.000	12	17.7	0.484	0.005	72.8235	
240 minute winter	12	3.001	13	20.4	0.307	0.005	42.5441	
240 minute winter	13	1.007	14	67.2	0.575	0.018	51.0023	
240 minute winter	14	1.008	15	58.6	0.509	0.015	32.6350	
240 minute winter	15	1.009	19	58.8	0.479	0.016	7.8875	
240 minute winter	16	4.000	17	8.1	0.304	0.002	56.9947	
240 minute winter	17	4.001	18	-14.7	0.309	-0.004	64.5613	
360 minute winter	18	4.002	19	-16.1	0.115	-0.004	29.7266	
360 minute winter	19	1.010	21	37.9	0.517	0.010	24.1850	
240 minute winter	20	5.000	21	8.9	0.245	0.002	66.5794	
240 minute winter	21	1.011	22	58.2	0.528	0.015	43.9616	
240 minute winter	22	1.012	23	57.9	0.249	0.015	54.2160	
240 minute winter	23	1.013	24	17.4	1.931	0.164	0.1666	427.5

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 72.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	11	166.446	0.338	83.8	1.1518	0.0000	SURCHARGED
15 minute summer	2	11	166.301	0.301	87.5	0.5680	0.0000	SURCHARGED
15 minute summer	3	11	166.146	0.229	138.8	0.5181	0.0000	OK
15 minute summer	4	13	164.860	1.166	119.9	21.0579	0.0000	SURCHARGED
15 minute summer	5	12	164.814	1.186	120.4	2.3085	0.0000	SURCHARGED
15 minute summer	6	11	164.775	1.237	122.8	1.7702	0.0000	SURCHARGED
15 minute summer	7	11	164.766	1.447	346.8	6.1501	0.0000	SURCHARGED
15 minute summer	8	11	164.329	1.090	377.7	2.5499	0.0000	SURCHARGED
15 minute summer	9	11	163.744	0.588	377.9	0.8408	0.0000	SURCHARGED
15 minute summer	10	11	163.398	0.269	472.4	0.8626	0.0000	OK
240 minute winter	11	176	160.735	1.342	123.3	9.0096	0.0000	OK
240 minute winter	12	176	160.736	1.514	329.0	8.7911	0.0000	SURCHARGED
240 minute winter	13	176	160.735	1.599	309.2	9.7499	0.0000	SURCHARGED
240 minute winter	14	176	160.738	1.695	533.1	9.8470	0.0000	SURCHARGED
240 minute winter	15	200	160.973	1.986	4037.0	11.7325	0.0000	SURCHARGED
180 minute winter	16	148	160.661	1.401	178.3	9.3494	0.0000	OK
240 minute winter	17	184	160.715	1.573	161.7	11.4887	0.0000	SURCHARGED
240 minute winter	18	200	160.773	1.748	1000.9	12.5545	0.0000	SURCHARGED
180 minute winter	19	176	160.872	1.896	2291.1	13.9145	0.0000	SURCHARGED
360 minute winter	20	264	160.713	1.666	70.7	13.1372	0.0000	SURCHARGED
240 minute winter	21	200	160.782	1.847	1276.3	13.3071	0.0000	SURCHARGED
360 minute winter	22	264	160.689	1.823	251.7	13.7060	0.0000	SURCHARGED
360 minute winter	23	264	160.656	1.871	163.7	489.7864	0.0000	SURCHARGED
360 minute summer	24	136	158.083	0.061	17.4	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 summer	1	1.000	2	80.7	1.171	1.030	1.5325	
15 minute summer	2	1.001	3	86.4	1.468	1.107	1.0567	
15 minute summer	3	1.002	7	138.0	2.019	0.742	5.6326	
15 minute summer	4	2.000	5	118.1	1.678	1.642	1.0992	
15 minute summer	5	2.001	6	122.8	1.744	1.710	1.5035	
15 minute summer	6	2.002	7	126.2	1.792	1.755	1.1679	
15 minute summer	7	1.003	8	329.6	2.080	2.015	4.8942	
15 minute summer	8	1.004	9	377.9	2.386	2.314	5.0282	
15 minute summer	9	1.005	10	378.0	2.636	2.288	1.3146	
15 minute summer	10	1.006	13	472.9	5.074	0.593	4.5491	
240 minute winter	11	3.000	12	188.6	0.489	0.050	117.3343	
240 minute winter	12	3.001	13	220.7	0.314	0.058	59.9736	
240 minute winter	13	1.007	14	-286.1	0.664	-0.076	65.4530	
240 minute winter	14	1.008	15	-532.7	0.579	-0.140	39.1038	
240 minute winter	15	1.009	19	-2910.8	1.674	-0.772	9.2020	
180 minute winter	16	4.000	17	-176.3	0.364	-0.047	81.3613	
240 minute winter	17	4.001	18	245.9	0.347	0.065	82.5297	
240 minute winter	18	4.002	19	790.2	0.468	0.209	35.2149	
180 minute winter	19	1.010	21	619.8	0.628	0.165	27.6589	
360 minute winter	20	5.000	21	93.8	0.281	0.025	78.4277	
240 minute winter	21	1.011	22	218.2	0.522	0.058	48.4115	
360 minute winter	22	1.012	23	-250.2	-0.142	-0.066	57.1400	
360 minute winter	23	1.013	24	17.4	1.931	0.164	0.1665	517.0