

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	1	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	1.000
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	4.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	5.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	75.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S1	0.026	4.00	6.319	1350	488669.002	98288.275	1.305
S2	0.050	4.00	6.586	1350	488624.454	98291.265	1.758
S3	0.023	4.00	6.201	1350	488585.096	98290.845	1.612
S4	0.107	4.00	6.213	1350	488581.321	98269.583	1.711
S5	0.015	4.00	6.257	1350	488575.332	98234.247	1.867
S13	0.006	4.00	6.367	1350	488665.928	98275.450	1.367
S14	0.088	4.00	6.411	1350	488657.598	98242.288	1.553
S15	0.006	4.00	6.592	1200	488648.039	98215.067	1.855
S16	0.014	4.00	6.489	1200	488634.728	98208.707	1.813
S17	0.085	4.00	6.229	1350	488613.343	98208.844	1.717
S6	0.009	4.00	6.480	1350	488571.771	98222.814	2.202
S18	0.048	4.00	6.461	1350	488556.579	98291.126	1.719
S19	0.011	4.00	6.657	1200	488533.105	98291.339	2.013
S20			6.641	1200	488526.796	98288.730	2.025
S21	0.041	4.00	6.592	1200	488522.604	98283.221	2.005
S22	0.014	4.00	6.197	1350	488521.553	98248.232	1.756
S12	0.033	4.00	6.194	1200	488526.746	98238.215	1.800
S7	0.006	4.00	6.416	1350	488546.160	98230.075	2.205
S8			6.136		488544.006	98219.017	1.953
S9	0.082	4.00	6.136		488558.585	98207.292	2.000
S10			6.389	1350	488569.190	98203.032	2.282
S11			5.220		488588.797	98194.701	1.166

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	S1	S2	44.648	0.600	5.014	4.828	0.186	240.0	300	4.74	39.2
1.001	S2	S3	39.360	0.600	4.828	4.664	0.164	240.0	300	5.00	39.2
1.002	S3	S4	21.595	0.600	4.589	4.502	0.087	248.2	375	5.00	39.2
1.003	S4	S5	35.839	0.600	4.502	4.390	0.112	320.0	375	5.00	39.2
1.004	S5	S6	11.975	0.600	4.390	4.353	0.037	323.6	375	5.00	39.2

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)
1.000	1.010	71.4	3.7	1.005	1.458	0.026	0.0	46	0.536
1.001	1.010	71.4	10.8	1.458	1.237	0.076	0.0	78	0.732
1.002	1.145	126.5	14.0	1.237	1.336	0.099	0.0	84	0.764
1.003	1.007	111.2	29.2	1.336	1.492	0.206	0.0	131	0.853
1.004	1.001	110.6	31.3	1.492	1.752	0.221	0.0	136	0.865

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)
2.000	S13	S14	34.192	0.600	5.000	4.858	0.142	240.8	300	4.57	39.2
2.001	S14	S15	28.850	0.600	4.858	4.737	0.121	238.4	300	5.00	39.2
2.002	S15	S16	14.753	0.600	4.737	4.676	0.061	241.9	300	5.00	39.2
2.003	S16	S17	21.386	0.600	4.676	4.587	0.089	240.3	300	5.00	39.2
2.004	S17	S6	43.856	0.600	4.512	4.353	0.159	275.8	375	5.00	39.2
1.005	S6	S7	26.621	0.600	4.278	4.211	0.067	397.3	450	5.00	39.2
3.000	S18	S19	23.476	0.600	4.742	4.644	0.098	239.6	300	4.39	39.2
3.001	S19	S20	6.827	0.600	4.644	4.616	0.028	243.8	300	4.50	39.2
3.002	S20	S21	6.923	0.600	4.616	4.587	0.029	238.7	300	4.61	39.2
3.003	S21	S22	35.004	0.600	4.587	4.441	0.146	239.8	300	5.00	39.2
3.004	S22	S12	11.283	0.600	4.441	4.394	0.047	240.1	300	5.00	39.2
3.005	S12	S7	21.051	0.600	4.394	4.292	0.102	206.4	300	5.00	39.2
1.006	S7	S8	11.266	0.600	4.211	4.183	0.028	402.4	450	5.00	39.2
1.007	S8	S9	18.709	0.600	4.183	4.136	0.047	398.1	450	5.00	39.2
1.008	S9	S10	11.429	0.600	4.136	4.107	0.029	394.1	450	5.00	39.2
1.009	S10	S11	21.303	0.600	4.107	4.054	0.053	401.9	450	5.00	39.2

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)
2.000	1.009	71.3	0.8	1.067	1.253	0.006	0.0	23	0.345
2.001	1.014	71.6	13.3	1.253	1.555	0.094	0.0	87	0.779
2.002	1.006	71.1	14.2	1.555	1.513	0.100	0.0	91	0.790
2.003	1.010	71.4	16.1	1.513	1.342	0.114	0.0	96	0.819
2.004	1.086	119.9	28.2	1.342	1.752	0.199	0.0	123	0.893
1.005	1.014	161.2	60.7	1.752	1.755	0.429	0.0	191	0.945
3.000	1.011	71.5	6.8	1.419	1.713	0.048	0.0	62	0.641
3.001	1.002	70.8	8.3	1.713	1.725	0.059	0.0	69	0.679
3.002	1.013	71.6	8.3	1.725	1.705	0.059	0.0	69	0.683
3.003	1.011	71.4	14.2	1.705	1.456	0.100	0.0	90	0.791
3.004	1.010	71.4	16.1	1.456	1.500	0.114	0.0	96	0.820
3.005	1.090	77.1	20.8	1.500	1.824	0.147	0.0	106	0.931
1.006	1.007	160.2	82.4	1.755	1.503	0.582	0.0	229	1.014
1.007	1.013	161.0	82.4	1.503	1.550	0.582	0.0	228	1.018
1.008	1.018	161.9	94.0	1.550	1.832	0.664	0.0	247	1.054
1.009	1.008	160.3	94.0	1.832	0.716	0.664	0.0	248	1.046

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	44.648	240.0	300	Circular	6.319	5.014	1.005	6.586	4.828	1.458
1.001	39.360	240.0	300	Circular	6.586	4.828	1.458	6.201	4.664	1.237
1.002	21.595	248.2	375	Circular	6.201	4.589	1.237	6.213	4.502	1.336
1.003	35.839	320.0	375	Circular	6.213	4.502	1.336	6.257	4.390	1.492

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S1	1350	Manhole	Adoptable	S2	1350	Manhole	Adoptable
1.001	S2	1350	Manhole	Adoptable	S3	1350	Manhole	Adoptable
1.002	S3	1350	Manhole	Adoptable	S4	1350	Manhole	Adoptable
1.003	S4	1350	Manhole	Adoptable	S5	1350	Manhole	Adoptable

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)
1.004	11.975	323.6	375	Circular	6.257	4.390	1.492	6.480	4.353	1.752
2.000	34.192	240.8	300	Circular	6.367	5.000	1.067	6.411	4.858	1.253
2.001	28.850	238.4	300	Circular	6.411	4.858	1.253	6.592	4.737	1.555
2.002	14.753	241.9	300	Circular	6.592	4.737	1.555	6.489	4.676	1.513
2.003	21.386	240.3	300	Circular	6.489	4.676	1.513	6.229	4.587	1.342
2.004	43.856	275.8	375	Circular	6.229	4.512	1.342	6.480	4.353	1.752
1.005	26.621	397.3	450	Circular	6.480	4.278	1.752	6.416	4.211	1.755
3.000	23.476	239.6	300	Circular	6.461	4.742	1.419	6.657	4.644	1.713
3.001	6.827	243.8	300	Circular	6.657	4.644	1.713	6.641	4.616	1.725
3.002	6.923	238.7	300	Circular	6.641	4.616	1.725	6.592	4.587	1.705
3.003	35.004	239.8	300	Circular	6.592	4.587	1.705	6.197	4.441	1.456
3.004	11.283	240.1	300	Circular	6.197	4.441	1.456	6.194	4.394	1.500
3.005	21.051	206.4	300	Circular	6.194	4.394	1.500	6.416	4.292	1.824
1.006	11.266	402.4	450	Circular	6.416	4.211	1.755	6.136	4.183	1.503
1.007	18.709	398.1	450	Circular	6.136	4.183	1.503	6.136	4.136	1.550
1.008	11.429	394.1	450	Circular	6.136	4.136	1.550	6.389	4.107	1.832
1.009	21.303	401.9	450	Circular	6.389	4.107	1.832	5.220	4.054	0.716

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.004	S5	1350	Manhole	Adoptable	S6	1350	Manhole	Adoptable
2.000	S13	1350	Manhole	Adoptable	S14	1350	Manhole	Adoptable
2.001	S14	1350	Manhole	Adoptable	S15	1200	Manhole	Adoptable
2.002	S15	1200	Manhole	Adoptable	S16	1200	Manhole	Adoptable
2.003	S16	1200	Manhole	Adoptable	S17	1350	Manhole	Adoptable
2.004	S17	1350	Manhole	Adoptable	S6	1350	Manhole	Adoptable
1.005	S6	1350	Manhole	Adoptable	S7	1350	Manhole	Adoptable
3.000	S18	1350	Manhole	Adoptable	S19	1200	Manhole	Adoptable
3.001	S19	1200	Manhole	Adoptable	S20	1200	Manhole	Adoptable
3.002	S20	1200	Manhole	Adoptable	S21	1200	Manhole	Adoptable
3.003	S21	1200	Manhole	Adoptable	S22	1350	Manhole	Adoptable
3.004	S22	1350	Manhole	Adoptable	S12	1200	Manhole	Adoptable
3.005	S12	1200	Manhole	Adoptable	S7	1350	Manhole	Adoptable
1.006	S7	1350	Manhole	Adoptable	S8		Junction	
1.007	S8		Junction		S9		Junction	
1.008	S9		Junction		S10	1350	Manhole	Adoptable
1.009	S10	1350	Manhole	Adoptable	S11		Junction	

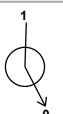
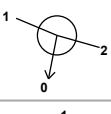
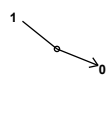
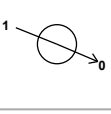
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1	488669.002	98288.275	6.319	1.305	1350				
							0	1.000	5.014 300
S2	488624.454	98291.265	6.586	1.758	1350				
							1	1.000	4.828 300
							0	1.001	4.828 300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S3	488585.096	98290.845	6.201	1.612	1350		1	1.001	4.664	300
S4	488581.321	98269.583	6.213	1.711	1350		1	1.002	4.589	375
							0	1.003	4.502	375
S5	488575.332	98234.247	6.257	1.867	1350		1	1.003	4.390	375
							0	1.004	4.390	375
S13	488665.928	98275.450	6.367	1.367	1350		0	2.000	5.000	300
S14	488657.598	98242.288	6.411	1.553	1350		1	2.000	4.858	300
							0	2.001	4.858	300
S15	488648.039	98215.067	6.592	1.855	1200		1	2.001	4.737	300
							0	2.002	4.737	300
S16	488634.728	98208.707	6.489	1.813	1200		1	2.002	4.676	300
							0	2.003	4.676	300
S17	488613.343	98208.844	6.229	1.717	1350		1	2.003	4.587	300
							0	2.004	4.512	375
S6	488571.771	98222.814	6.480	2.202	1350		1	2.004	4.353	375
							2	1.004	4.353	375
							0	1.005	4.278	450
S18	488556.579	98291.126	6.461	1.719	1350		0	3.000	4.742	300
							1	3.000	4.644	300
S19	488533.105	98291.339	6.657	2.013	1200		0	3.001	4.644	300
							1	3.001	4.616	300
S20	488526.796	98288.730	6.641	2.025	1200		0	3.002	4.616	300
							1	3.002	4.587	300
S21	488522.604	98283.221	6.592	2.005	1200		0	3.003	4.587	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S22	488521.553	98248.232	6.197	1.756	1350		1	3.003	4.441	300
S12	488526.746	98238.215	6.194	1.800	1200		0	3.004	4.441	300
							0	3.005	4.394	300
S7	488546.160	98230.075	6.416	2.205	1350		1	3.005	4.292	300
							2	1.005	4.211	450
							0	1.006	4.211	450
S8	488544.006	98219.017	6.136	1.953			1	1.006	4.183	450
							0	1.007	4.183	450
S9	488558.585	98207.292	6.136	2.000			1	1.007	4.136	450
							0	1.008	4.136	450
S10	488569.190	98203.032	6.389	2.282	1350		1	1.008	4.107	450
							0	1.009	4.107	450
S11	488588.797	98194.701	5.220	1.166			1	1.009	4.054	450

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	1.000	Drain Down Time (mins)	4320	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m³/ha)	0.0		

Storm Durations

30	120	240	480	720	1440	2880
60	180	360	600	960	2160	4320

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	45	0	0
10	45	0	0
30	45	0	0
100	45	10	0

Node S10 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	4.107	Product Number	CTL-SHE-0106-5000-1000-5000
Design Depth (m)	1.000	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Node S9 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	4.136
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	2460

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)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	177.7	0.0	0.600	345.8	0.0	1.200	535.6	0.0	1.800	746.6	0.0
0.100	203.8	0.0	0.700	376.0	0.0	1.300	569.3	0.0	1.900	783.8	0.0
0.200	231.0	0.0	0.800	406.8	0.0	1.400	603.6	0.0	2.000	821.6	0.0
0.300	258.9	0.0	0.900	438.1	0.0	1.500	638.5	0.0			
0.400	287.3	0.0	1.000	470.0	0.0	1.600	673.9	0.0			
0.500	316.3	0.0	1.100	502.5	0.0	1.700	710.0	0.0			

Results for 1 year +45% CC Critical Storm Duration. Lowest mass balance: 99.50%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
4320 minute winter	S1	4200	5.108	0.094	1.5	0.1348	0.0000	OK
4320 minute winter	S2	4200	5.108	0.280	2.7	0.4005	0.0000	OK
4320 minute winter	S3	4200	5.108	0.519	3.3	0.7426	0.0000	SURCHARGED
4320 minute winter	S4	4200	5.108	0.606	3.7	0.8669	0.0000	SURCHARGED
4320 minute winter	S5	4200	5.109	0.719	3.9	1.0285	0.0000	SURCHARGED
4320 minute winter	S13	4200	5.110	0.110	1.3	0.1570	0.0000	OK
4320 minute winter	S14	4200	5.109	0.251	2.8	0.3597	0.0000	OK
4320 minute winter	S15	4200	5.109	0.372	3.2	0.4205	0.0000	SURCHARGED
4320 minute winter	S16	4200	5.108	0.432	3.5	0.4890	0.0000	SURCHARGED
4320 minute winter	S17	4200	5.108	0.596	3.7	0.8532	0.0000	SURCHARGED
4320 minute winter	S6	4200	5.107	0.829	7.6	1.1863	0.0000	SURCHARGED
4320 minute winter	S18	4200	5.106	0.364	0.4	0.5205	0.0000	SURCHARGED
4320 minute winter	S19	4200	5.106	0.462	0.9	0.5230	0.0000	SURCHARGED
4320 minute winter	S20	4200	5.106	0.490	1.1	0.5536	0.0000	SURCHARGED
4320 minute winter	S21	4200	5.106	0.519	1.2	0.5875	0.0000	SURCHARGED
4320 minute winter	S22	4200	5.106	0.665	1.3	0.9516	0.0000	SURCHARGED
4320 minute winter	S12	4200	5.106	0.712	1.7	0.8048	0.0000	SURCHARGED
4320 minute winter	S7	4140	5.112	0.901	9.5	1.2897	0.0000	SURCHARGED
4320 minute winter	S8	8460	5.102	0.919	9.6	0.0000	0.0000	SURCHARGED
4320 minute winter	S9	7440	5.101	0.965	7.0	302.5631	0.0000	SURCHARGED
4320 minute winter	S10	4380	5.101	0.994	0.1	1.4226	0.0000	SURCHARGED
30 minute summer	S11	1	5.219	1.165	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)
4320 minute winter	S1	1.000	S2	-1.5	0.133	-0.021	1.9491	
4320 minute winter	S2	1.001	S3	-2.6	0.291	-0.037	2.7321	
4320 minute winter	S3	1.002	S4	-3.3	0.201	-0.026	2.3819	
4320 minute winter	S4	1.003	S5	-3.6	0.283	-0.032	3.9529	
4320 minute winter	S5	1.004	S6	-3.9	0.290	-0.035	1.3208	
4320 minute winter	S13	2.000	S14	-1.3	-0.049	-0.018	1.4764	
4320 minute winter	S14	2.001	S15	-2.7	0.294	-0.038	1.9252	
4320 minute winter	S15	2.002	S16	-3.2	0.276	-0.046	1.0389	
4320 minute winter	S16	2.003	S17	-3.5	0.331	-0.049	1.5060	
4320 minute winter	S17	2.004	S6	3.8	0.294	0.031	4.8372	
4320 minute winter	S6	1.005	S7	-7.6	0.218	-0.047	4.2179	
4320 minute winter	S18	3.000	S19	0.9	0.223	0.012	1.6532	
4320 minute winter	S19	3.001	S20	0.9	0.270	0.013	0.4808	
4320 minute winter	S20	3.002	S21	-1.1	0.236	-0.015	0.4875	
4320 minute winter	S21	3.003	S22	1.1	0.254	0.015	2.4650	
4320 minute winter	S22	3.004	S12	-1.3	0.231	-0.019	0.7945	
4320 minute winter	S12	3.005	S7	-1.7	0.277	-0.022	1.4824	
4320 minute winter	S7	1.006	S8	-9.5	0.218	-0.060	1.7850	
4320 minute winter	S8	1.007	S9	-9.6	0.382	-0.060	2.9643	
4320 minute winter	S9	1.008	S10	0.1	0.046	0.000	1.8109	
4320 minute winter	S10	1.009	S11	0.0	0.000	0.000	3.3753	0.0

Results for 10 year +45% CC Critical Storm Duration. Lowest mass balance: 99.44%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
4320 minute winter	S1	2940	5.334	0.320	2.3	0.4577	0.0000	SURCHARGED
4320 minute winter	S2	2940	5.328	0.500	4.1	0.7162	0.0000	SURCHARGED
4320 minute summer	S3	2940	5.319	0.730	3.2	1.0448	0.0000	SURCHARGED
4320 minute summer	S4	2940	5.319	0.817	3.8	1.1692	0.0000	SURCHARGED
4320 minute summer	S5	2940	5.321	0.931	3.9	1.3317	0.0000	SURCHARGED
4320 minute winter	S13	2940	5.329	0.329	1.0	0.4707	0.0000	SURCHARGED
4320 minute winter	S14	2940	5.329	0.471	2.6	0.6741	0.0000	SURCHARGED
4320 minute winter	S15	2940	5.328	0.591	3.2	0.6689	0.0000	SURCHARGED
4320 minute winter	S16	2940	5.327	0.651	3.9	0.7361	0.0000	SURCHARGED
4320 minute winter	S17	2940	5.323	0.811	4.2	1.1608	0.0000	SURCHARGED
4320 minute summer	S6	2700	5.319	1.041	7.8	1.4898	0.0000	SURCHARGED
4320 minute winter	S18	2940	5.324	0.582	0.5	0.8326	0.0000	SURCHARGED
4320 minute winter	S19	2940	5.324	0.680	0.9	0.7694	0.0000	SURCHARGED
4320 minute winter	S20	2940	5.324	0.708	1.9	0.8003	0.0000	SURCHARGED
4320 minute winter	S21	2940	5.323	0.736	2.1	0.8323	0.0000	SURCHARGED
4320 minute summer	S22	2700	5.320	0.879	3.3	1.2572	0.0000	SURCHARGED
4320 minute summer	S12	2700	5.320	0.926	3.6	1.0469	0.0000	SURCHARGED
4320 minute summer	S7	2940	5.329	1.118	11.1	1.5995	0.0000	SURCHARGED
4320 minute summer	S8	2640	5.320	1.137	12.9	0.0000	0.0000	SURCHARGED
4320 minute summer	S9	2700	5.318	1.182	11.4	409.6927	0.0000	SURCHARGED
4320 minute summer	S10	2700	5.318	1.211	3.5	1.7328	0.0000	SURCHARGED
30 minute summer	S11	1	5.219	1.165	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)
4320 minute winter	S1	1.000	S2	4.0	0.152	0.056	3.1441	
4320 minute winter	S2	1.001	S3	4.5	0.313	0.062	2.7717	
4320 minute summer	S3	1.002	S4	3.5	0.202	0.028	2.3819	
4320 minute summer	S4	1.003	S5	3.9	0.257	0.036	3.9529	
4320 minute summer	S5	1.004	S6	4.2	0.288	0.038	1.3208	
4320 minute winter	S13	2.000	S14	2.4	0.069	0.034	2.4078	
4320 minute winter	S14	2.001	S15	3.2	0.325	0.045	2.0316	
4320 minute winter	S15	2.002	S16	3.6	0.295	0.051	1.0389	
4320 minute winter	S16	2.003	S17	4.0	0.331	0.056	1.5060	
4320 minute winter	S17	2.004	S6	4.6	0.294	0.038	4.8372	
4320 minute summer	S6	1.005	S7	7.5	0.208	0.046	4.2179	
4320 minute winter	S18	3.000	S19	0.9	0.227	0.013	1.6532	
4320 minute winter	S19	3.001	S20	1.9	0.271	0.027	0.4808	
4320 minute winter	S20	3.002	S21	2.0	0.236	0.028	0.4875	
4320 minute winter	S21	3.003	S22	3.3	0.251	0.046	2.4650	
4320 minute summer	S22	3.004	S12	3.5	0.222	0.049	0.7945	
4320 minute summer	S12	3.005	S7	3.6	0.277	0.047	1.4824	
4320 minute summer	S7	1.006	S8	12.9	0.256	0.080	1.7850	
4320 minute summer	S8	1.007	S9	11.2	0.363	0.069	2.9643	
4320 minute summer	S9	1.008	S10	3.5	0.059	0.022	1.8109	
4320 minute summer	S10	1.009	S11	3.5	0.022	0.022	3.3753	225.0

Results for 30 year +45% CC Critical Storm Duration. Lowest mass balance: 99.44%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
4320 minute summer	S1	2640	5.405	0.391	1.0	0.5589	0.0000	SURCHARGED
4320 minute summer	S2	2640	5.403	0.575	2.3	0.8233	0.0000	SURCHARGED
4320 minute summer	S3	2640	5.403	0.814	3.2	1.1646	0.0000	SURCHARGED
4320 minute summer	S4	2640	5.403	0.901	3.8	1.2894	0.0000	SURCHARGED
4320 minute summer	S5	2640	5.403	1.013	4.2	1.4494	0.0000	SURCHARGED
4320 minute summer	S13	2640	5.403	0.403	0.5	0.5771	0.0000	SURCHARGED
4320 minute summer	S14	2640	5.403	0.545	1.6	0.7795	0.0000	SURCHARGED
4320 minute summer	S15	2640	5.402	0.665	1.6	0.7524	0.0000	SURCHARGED
4320 minute summer	S16	2640	5.402	0.726	1.9	0.8214	0.0000	SURCHARGED
4320 minute summer	S17	2640	5.402	0.890	3.4	1.2743	0.0000	SURCHARGED
4320 minute summer	S6	2640	5.404	1.126	7.8	1.6110	0.0000	SURCHARGED
4320 minute summer	S18	2700	5.406	0.664	0.9	0.9498	0.0000	SURCHARGED
4320 minute summer	S19	2700	5.407	0.763	1.1	0.8625	0.0000	SURCHARGED
4320 minute summer	S20	2640	5.405	0.789	1.9	0.8919	0.0000	SURCHARGED
4320 minute summer	S21	2700	5.407	0.820	2.3	0.9274	0.0000	SURCHARGED
4320 minute summer	S22	2640	5.405	0.964	1.9	1.3790	0.0000	SURCHARGED
4320 minute summer	S12	2640	5.405	1.011	2.6	1.1435	0.0000	SURCHARGED
4320 minute summer	S7	2640	5.401	1.190	9.6	1.7035	0.0000	SURCHARGED
4320 minute summer	S8	2640	5.406	1.223	10.7	0.0000	0.0000	SURCHARGED
4320 minute summer	S9	2640	5.403	1.267	11.2	456.0376	0.0000	SURCHARGED
4320 minute summer	S10	2640	5.403	1.296	4.8	1.8547	0.0000	SURCHARGED
30 minute summer	S11	1	5.219	1.165	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)
4320 minute summer	S1	1.000	S2	2.2	0.172	0.030	3.1441	
4320 minute summer	S2	1.001	S3	3.2	0.311	0.045	2.7717	
4320 minute summer	S3	1.002	S4	3.6	0.202	0.028	2.3819	
4320 minute summer	S4	1.003	S5	4.2	0.271	0.037	3.9529	
4320 minute summer	S5	1.004	S6	4.3	0.288	0.039	1.3208	
4320 minute summer	S13	2.000	S14	0.9	0.072	0.013	2.4078	
4320 minute summer	S14	2.001	S15	1.5	0.326	0.021	2.0316	
4320 minute summer	S15	2.002	S16	1.8	0.295	0.026	1.0389	
4320 minute summer	S16	2.003	S17	2.1	0.313	0.029	1.5060	
4320 minute summer	S17	2.004	S6	3.5	0.294	0.029	4.8372	
4320 minute summer	S6	1.005	S7	7.1	0.210	0.044	4.2179	
4320 minute summer	S18	3.000	S19	0.9	0.227	0.012	1.6532	
4320 minute summer	S19	3.001	S20	1.9	0.270	0.026	0.4808	
4320 minute summer	S20	3.002	S21	1.6	0.208	0.022	0.4875	
4320 minute summer	S21	3.003	S22	1.6	0.224	0.023	2.4650	
4320 minute summer	S22	3.004	S12	2.0	0.200	0.028	0.7945	
4320 minute summer	S12	3.005	S7	2.4	0.276	0.031	1.4824	
4320 minute summer	S7	1.006	S8	10.7	0.267	0.067	1.7850	
4320 minute summer	S8	1.007	S9	9.7	0.375	0.060	2.9643	
4320 minute summer	S9	1.008	S10	4.8	0.030	0.030	1.8109	
4320 minute summer	S10	1.009	S11	4.8	0.030	0.030	3.3753	370.6

Results for 100 year +45% CC +10% A Critical Storm Duration. Lowest mass balance: 99.33%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S1	19	6.244	1.230	23.5	1.7599	0.0000	FLOOD RISK
30 minute summer	S2	19	6.226	1.398	66.5	2.0000	0.0000	SURCHARGED
30 minute summer	S3	19	6.102	1.513	72.7	2.1645	0.0000	FLOOD RISK
30 minute summer	S4	19	6.059	1.557	157.5	2.2285	0.0000	FLOOD RISK
30 minute summer	S5	19	5.811	1.421	165.3	2.0328	0.0000	SURCHARGED
30 minute summer	S13	19	6.327	1.327	14.3	1.8995	0.0000	FLOOD RISK
30 minute summer	S14	19	6.321	1.463	79.6	2.0934	0.0000	FLOOD RISK
30 minute summer	S15	19	6.190	1.453	71.4	1.6439	0.0000	SURCHARGED
30 minute summer	S16	19	6.100	1.424	81.4	1.6109	0.0000	SURCHARGED
30 minute summer	S17	19	5.944	1.432	145.1	2.0494	0.0000	FLOOD RISK
30 minute summer	S6	19	5.678	1.400	310.0	2.0035	0.0000	SURCHARGED
30 minute summer	S18	19	5.896	1.154	43.4	1.6516	0.0000	SURCHARGED
30 minute summer	S19	19	5.869	1.225	48.2	1.3853	0.0000	SURCHARGED
30 minute summer	S20	19	5.851	1.235	41.5	1.3969	0.0000	SURCHARGED
30 minute summer	S21	19	5.831	1.244	71.3	1.4075	0.0000	SURCHARGED
2880 minute summer	S22	1920	5.669	1.228	3.7	1.7576	0.0000	SURCHARGED
2880 minute summer	S12	1920	5.670	1.276	4.8	1.4428	0.0000	SURCHARGED
2880 minute summer	S7	1920	5.667	1.456	18.4	2.0829	0.0000	SURCHARGED
2880 minute summer	S8	1980	5.670	1.487	19.1	0.0000	0.0000	SURCHARGED
2880 minute summer	S9	1920	5.667	1.531	21.1	615.4918	0.0000	SURCHARGED
2880 minute summer	S10	1920	5.667	1.560	5.0	2.2328	0.0000	SURCHARGED
30 minute summer	S11	1	5.219	1.165	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)
30 minute summer	S1	1.000	S2	20.7	0.519	0.290	3.1441	
30 minute summer	S2	1.001	S3	56.4	0.964	0.790	2.7717	
30 minute summer	S3	1.002	S4	73.8	0.669	0.584	2.3819	
30 minute summer	S4	1.003	S5	152.3	1.381	1.369	3.9529	
30 minute summer	S5	1.004	S6	161.5	1.465	1.460	1.3208	
30 minute summer	S13	2.000	S14	11.2	-0.162	0.157	2.4078	
30 minute summer	S14	2.001	S15	67.2	0.975	0.937	2.0316	
30 minute summer	S15	2.002	S16	71.5	1.016	1.006	1.0389	
30 minute summer	S16	2.003	S17	81.9	1.163	1.148	1.5060	
30 minute summer	S17	2.004	S6	142.0	1.288	1.184	4.8372	
30 minute summer	S6	1.005	S7	309.7	1.955	1.921	4.2179	
30 minute summer	S18	3.000	S19	38.2	0.751	0.535	1.6532	
30 minute summer	S19	3.001	S20	41.5	0.708	0.586	0.4808	
30 minute summer	S20	3.002	S21	41.4	0.621	0.578	0.4875	
30 minute summer	S21	3.003	S22	69.8	0.991	0.976	2.4650	
2880 minute summer	S22	3.004	S12	3.7	0.284	0.052	0.7945	
2880 minute summer	S12	3.005	S7	4.8	0.302	0.063	1.4824	
2880 minute summer	S7	1.006	S8	19.1	0.327	0.119	1.7850	
2880 minute summer	S8	1.007	S9	18.4	0.360	0.115	2.9643	
2880 minute summer	S9	1.008	S10	5.0	0.032	0.031	1.8109	
2880 minute summer	S10	1.009	S11	5.0	0.031	0.031	3.3753	561.8