

Design Settings

Rainfall Methodology	FEH-22	Maximum Time of Concentration (mins)	30.00	Preferred Cover Depth (m)	1.200
Return Period (years)	1	Maximum Rainfall (mm/hr)	50.0	Include Intermediate Ground	✓
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00	Enforce best practice design rules	x
CV	1.000	Connection Type	Level Soffits		
Time of Entry (mins)	5.00	Minimum Backdrop Height (m)	0.200		

Nodes

Name	Area (ha)	T of E (mins)	Add Inflow (l/s)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S1	0.003	5.00		60.200	600	387721.460	397741.301	1.000
S2	0.013	5.00		60.200	600	387729.266	397740.605	1.060
S3	0.032	5.00		60.350	600	387726.457	397710.690	1.522
S4	0.035	5.00		60.546	600	387735.620	397688.506	1.931
S5	0.026	5.00		60.200	600	387750.330	397688.907	1.200
S6	0.008	5.00		60.642	600	387756.950	397667.538	1.842
S7	0.051	5.00		60.730	600	387744.560	397668.701	2.703
S8	0.019	5.00		59.985	600	387742.346	397645.129	2.254
S9	0.014	5.00		59.612	600	387731.641	397646.134	2.412
S10	0.033	5.00		59.236	1350	387717.952	397647.420	2.136
S11	0.032	5.00		59.207	1350	387719.283	397661.638	2.207
S12	0.369	5.00		60.333	1500	387702.838	397684.840	1.833
S13	0.032	5.00		59.124	1350	387700.708	397663.325	2.284
S14	0.273	5.00		60.331	1350	387652.212	397689.483	1.831
S15 TANK	0.244	5.00		59.452	1200	387650.083	397667.924	2.612
S16	0.087	5.00		61.137	1350	387691.391	397780.234	1.350
S18	0.090	5.00		60.376	1350	387660.121	397795.223	0.926
S19	0.000	5.00		60.284	1350	387652.119	397783.922	0.917
S20	0.047	5.00		60.186	1350	387643.495	397768.276	0.990
S22	0.073	5.00		59.760	1350	387636.870	397705.098	1.217
S23	0.040	5.00		59.717	1350	387637.804	397689.557	1.312
S24	0.040	5.00	0.0	59.558	1350	387633.470	397678.299	1.645
S25				59.428	1200	387631.987	397669.568	2.588
S26 FCMH				59.330	1800	387628.150	397669.917	2.640
S27				58.567	1200	387615.347	397682.361	2.122
SD4				58.444	2100	387612.419	397684.758	3.504
SD1		5.00		60.603	2100	387731.466	397751.432	2.703
SD2				60.539	2100	387734.607	397714.504	3.010
SD3				60.289	2100	387730.631	397673.331	3.789

Nodes

Name	Area (ha)	T of E (mins)	Add Inflow (l/s)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
OUTFALL				58.444	2100	387609.877	397684.901	3.523

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	5.465	0.600	59.200	59.140	0.060	91.1	150	5.09	33.6
1.001	S2	S3	31.195	0.600	59.140	58.828	0.312	100.0	225	5.48	32.5
1.002	S3	S4	21.259	0.600	58.828	58.615	0.213	100.0	225	5.76	31.8
1.003	S4	S9	43.651	0.600	58.615	57.275	1.340	32.6	225	6.07	31.0
2.000	S5	S7	21.014	0.600	59.000	58.027	0.973	21.6	225	5.12	33.5
3.000	S6	S7	12.445	0.600	58.800	58.102	0.698	17.8	150	5.09	33.6
2.001	S7	S8	23.676	0.600	58.027	57.731	0.296	80.0	225	5.39	32.7
2.002	S8	S9	12.000	0.600	57.731	57.275	0.456	26.3	225	5.47	32.5
1.004	S9	S10	12.502	0.600	57.200	57.100	0.100	125.0	300	6.22	30.6
1.005	S10	S11	14.281	0.600	57.100	57.000	0.100	142.8	300	6.40	30.2
1.006	S11	S13	18.651	0.600	57.000	56.840	0.160	116.6	300	6.61	29.8
4.000	S12	S13	21.620	0.600	58.500	57.840	0.660	32.8	450	5.10	33.5
1.007	S13	S15 TANK	50.834	0.600	56.840	56.840	0.000	0.0	450	7.46	27.6

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	1.053	18.6	0.4	0.850	0.910	0.003	0.0	14	0.405
1.001	1.307	52.0	1.9	0.835	1.297	0.016	0.0	29	0.626
1.002	1.307	52.0	5.5	1.297	1.706	0.048	0.0	50	0.860
1.003	2.300	91.4	9.3	1.706	2.112	0.083	0.0	48	1.485
2.000	2.827	112.4	3.1	0.975	2.478	0.026	0.0	26	1.257
3.000	2.397	42.3	1.0	1.692	2.478	0.008	0.0	16	0.980
2.001	1.463	58.2	10.1	2.478	2.029	0.085	0.0	63	1.100
2.002	2.560	101.8	12.2	2.029	2.112	0.104	0.0	52	1.739
1.004	1.405	99.3	22.2	2.112	1.836	0.201	0.0	96	1.140
1.005	1.313	92.8	25.6	1.836	1.907	0.234	0.0	108	1.128
1.006	1.455	102.8	28.6	1.907	1.984	0.266	0.0	108	1.253
4.000	3.561	566.4	44.7	1.383	0.834	0.369	0.0	85	2.166
1.007	1.000	159.0	66.5	1.834	2.162	0.667	0.0	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)
5.000	S14	S15 TANK	21.620	0.600	58.500	56.840	1.660	13.0	450	5.06	33.6
1.008	S15 TANK	S25	18.170	0.600	56.840	56.840	0.000	0.0	450	7.76	27.1
6.000	S16	S19	39.444	0.600	59.787	59.367	0.420	93.9	300	5.41	32.7
7.001	S18	S19	13.847	0.600	59.450	59.367	0.083	166.8	300	5.19	33.3
6.001	S19	S20	17.865	0.600	59.367	59.196	0.171	104.5	300	5.60	32.2
6.002	S20	S22	63.525	0.600	59.196	58.543	0.653	97.3	300	6.26	30.5
6.003	S22	S24	27.014	0.600	58.543	57.913	0.630	42.9	300	6.45	30.1
9.000	S23	S24	12.064	0.600	58.405	57.989	0.416	29.0	150	5.11	33.5
6.004	S24	S25	8.856	0.600	57.913	56.915	0.998	8.9	300	6.48	30.1
1.009	S25	S26 FCMH	3.795	0.600	56.840	56.690	0.150	25.3	450	7.78	27.3
1.010	S26 FCMH	S27	19.642	0.600	56.690	56.445	0.245	80.2	450	7.92	27.2
1.011	S27	SD4	3.783	0.600	56.445	55.889	0.556	6.8	450	7.93	27.2
10.000	SD1	SD2	37.099	0.600	57.900	57.529	0.371	100.0	1200	5.17	33.3
10.001	SD2	SD3	41.328	0.600	57.529	56.500	1.029	40.2	1200	5.28	32.9
10.002	SD3	SD4	118.763	0.600	56.500	54.940	1.560	76.1	1200	5.74	31.8
1.012	SD4	OUTFALL	2.546	0.600	54.940	54.921	0.019	134.0	1200	7.95	27.2

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)
5.000	5.656	899.5	33.2	1.381	2.162	0.273	0.0	58	2.761
1.008	1.000	159.0	116.0	2.162	2.138	1.184	0.0	0	∞
6.000	1.622	114.7	10.3	1.050	0.617	0.087	0.0	60	1.014
7.001	1.214	85.8	10.8	0.626	0.617	0.090	0.0	72	0.839
6.001	1.537	108.7	20.6	0.617	0.690	0.177	0.0	88	1.191
6.002	1.594	112.7	24.7	0.690	0.917	0.224	0.0	95	1.286
6.003	2.407	170.1	32.3	0.917	1.345	0.297	0.0	88	1.866
9.000	1.876	33.2	4.8	1.162	1.419	0.040	0.0	38	1.338
6.004	5.308	375.2	41.0	1.345	2.213	0.377	0.0	67	3.526
1.009	4.054	644.8	154.0	2.138	2.190	1.561	0.0	149	3.355
1.010	2.271	361.2	153.5	2.190	1.672	1.561	0.0	204	2.182
1.011	7.832	1245.7	153.4	1.672	2.105	1.561	0.0	106	5.408
10.000	3.741	4231.0	0.0	1.503	1.810	0.000	0.0	0	0.000
10.001	5.911	6684.6	0.0	1.810	2.589	0.000	0.0	0	0.000
10.002	4.289	4851.2	0.0	2.589	2.304	0.000	0.0	0	0.000
1.012	3.230	3652.9	153.3	2.304	2.323	1.561	0.0	164	1.650

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	5.465	91.1	150	Circular	60.200	59.200	0.850	60.200	59.140	0.910
1.001	31.195	100.0	225	Circular	60.200	59.140	0.835	60.350	58.828	1.297
1.002	21.259	100.0	225	Circular	60.350	58.828	1.297	60.546	58.615	1.706
1.003	43.651	32.6	225	Circular	60.546	58.615	1.706	59.612	57.275	2.112
2.000	21.014	21.6	225	Circular	60.200	59.000	0.975	60.730	58.027	2.478
3.000	12.445	17.8	150	Circular	60.642	58.800	1.692	60.730	58.102	2.478
2.001	23.676	80.0	225	Circular	60.730	58.027	2.478	59.985	57.731	2.029
2.002	12.000	26.3	225	Circular	59.985	57.731	2.029	59.612	57.275	2.112
1.004	12.502	125.0	300	Circular	59.612	57.200	2.112	59.236	57.100	1.836
1.005	14.281	142.8	300	Circular	59.236	57.100	1.836	59.207	57.000	1.907
1.006	18.651	116.6	300	Circular	59.207	57.000	1.907	59.124	56.840	1.984
4.000	21.620	32.8	450	Circular	60.333	58.500	1.383	59.124	57.840	0.834
1.007	50.834	0.0	450	Circular	59.124	56.840	1.834	59.452	56.840	2.162
5.000	21.620	13.0	450	Circular	60.331	58.500	1.381	59.452	56.840	2.162
1.008	18.170	0.0	450	Circular	59.452	56.840	2.162	59.428	56.840	2.138
6.000	39.444	93.9	300	Circular	61.137	59.787	1.050	60.284	59.367	0.617
7.001	13.847	166.8	300	Circular	60.376	59.450	0.626	60.284	59.367	0.617

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S1	600	Manhole	Adoptable	S2	600	Manhole	Adoptable
1.001	S2	600	Manhole	Adoptable	S3	600	Manhole	Adoptable
1.002	S3	600	Manhole	Adoptable	S4	600	Manhole	Adoptable
1.003	S4	600	Manhole	Adoptable	S9	600	Manhole	Adoptable
2.000	S5	600	Manhole	Adoptable	S7	600	Manhole	Adoptable
3.000	S6	600	Manhole	Adoptable	S7	600	Manhole	Adoptable
2.001	S7	600	Manhole	Adoptable	S8	600	Manhole	Adoptable
2.002	S8	600	Manhole	Adoptable	S9	600	Manhole	Adoptable
1.004	S9	600	Manhole	Adoptable	S10	1350	Manhole	Adoptable
1.005	S10	1350	Manhole	Adoptable	S11	1350	Manhole	Adoptable
1.006	S11	1350	Manhole	Adoptable	S13	1350	Manhole	Adoptable
4.000	S12	1500	Manhole	Adoptable	S13	1350	Manhole	Adoptable
1.007	S13	1350	Manhole	Adoptable	S15 TANK	1200	Manhole	Adoptable
5.000	S14	1350	Manhole	Adoptable	S15 TANK	1200	Manhole	Adoptable
1.008	S15 TANK	1200	Manhole	Adoptable	S25	1200	Manhole	Adoptable
6.000	S16	1350	Manhole	Adoptable	S19	1350	Manhole	Adoptable
7.001	S18	1350	Manhole	Adoptable	S19	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)
6.001	17.865	104.5	300	Circular	60.284	59.367	0.617	60.186	59.196	0.690
6.002	63.525	97.3	300	Circular	60.186	59.196	0.690	59.760	58.543	0.917
6.003	27.014	42.9	300	Circular	59.760	58.543	0.917	59.558	57.913	1.345
9.000	12.064	29.0	150	Circular	59.717	58.405	1.162	59.558	57.989	1.419
6.004	8.856	8.9	300	Circular	59.558	57.913	1.345	59.428	56.915	2.213
1.009	3.795	25.3	450	Circular	59.428	56.840	2.138	59.330	56.690	2.190
1.010	19.642	80.2	450	Circular	59.330	56.690	2.190	58.567	56.445	1.672
1.011	3.783	6.8	450	Circular	58.567	56.445	1.672	58.444	55.889	2.105
10.000	37.099	100.0	1200	Circular	60.603	57.900	1.503	60.539	57.529	1.810
10.001	41.328	40.2	1200	Circular	60.539	57.529	1.810	60.289	56.500	2.589
10.002	118.763	76.1	1200	Circular	60.289	56.500	2.589	58.444	54.940	2.304
1.012	2.546	134.0	1200	Circular	58.444	54.940	2.304	58.444	54.921	2.323

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
6.001	S19	1350	Manhole	Adoptable	S20	1350	Manhole	Adoptable
6.002	S20	1350	Manhole	Adoptable	S22	1350	Manhole	Adoptable
6.003	S22	1350	Manhole	Adoptable	S24	1350	Manhole	Adoptable
9.000	S23	1350	Manhole	Adoptable	S24	1350	Manhole	Adoptable
6.004	S24	1350	Manhole	Adoptable	S25	1200	Manhole	Adoptable
1.009	S25	1200	Manhole	Adoptable	S26 FCMH	1800	Manhole	Adoptable
1.010	S26 FCMH	1800	Manhole	Adoptable	S27	1200	Manhole	Adoptable
1.011	S27	1200	Manhole	Adoptable	SD4	2100	Manhole	Adoptable
10.000	SD1	2100	Manhole	Adoptable	SD2	2100	Manhole	Adoptable
10.001	SD2	2100	Manhole	Adoptable	SD3	2100	Manhole	Adoptable
10.002	SD3	2100	Manhole	Adoptable	SD4	2100	Manhole	Adoptable
1.012	SD4	2100	Manhole	Adoptable	OUTFALL	2100	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1	387721.460	397741.301	60.200	1.000	600				
						0	1.000	59.200	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S2	387729.266	397740.605	60.200	1.060	600		1	1.000	59.140	150
							0	1.001	59.140	225
S3	387726.457	397710.690	60.350	1.522	600		1	1.001	58.828	225
							0	1.002	58.828	225
S4	387735.620	397688.506	60.546	1.931	600		1	1.002	58.615	225
							0	1.003	58.615	225
S5	387750.330	397688.907	60.200	1.200	600		0	2.000	59.000	225
S6	387756.950	397667.538	60.642	1.842	600		0	3.000	58.800	150
S7	387744.560	397668.701	60.730	2.703	600		1	3.000	58.102	150
							2	2.000	58.027	225
							0	2.001	58.027	225
S8	387742.346	397645.129	59.985	2.254	600		1	2.001	57.731	225
							0	2.002	57.731	225
S9	387731.641	397646.134	59.612	2.412	600		1	2.002	57.275	225
							2	1.003	57.275	225
							0	1.004	57.200	300
S10	387717.952	397647.420	59.236	2.136	1350		1	1.004	57.100	300
							0	1.005	57.100	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S11	387719.283	397661.638	59.207	2.207	1350	 1	1.005	57.000	300
S12	387702.838	397684.840	60.333	1.833	1500	 0	1.006	57.000	300
S13	387700.708	397663.325	59.124	2.284	1350	 1 0 2	4.000 1.006	58.500 57.840	450 300
S14	387652.212	397689.483	60.331	1.831	1350	 0	1.007	56.840	450
S15 TANK	387650.083	397667.924	59.452	2.612	1200	 1 0 2	5.000 1.007	58.500 56.840	450 450
S16	387691.391	397780.234	61.137	1.350	1350	 0	1.008	56.840	450
S18	387660.121	397795.223	60.376	0.926	1350	 0	6.000	59.787	300
S19	387652.119	397783.922	60.284	0.917	1350	 1 0 2	7.001 6.001	59.450 59.367	300 300
S20	387643.495	397768.276	60.186	0.990	1350	 1 0	6.001	59.196	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S22	387636.870	397705.098	59.760	1.217	1350	 1 0	6.002	58.543	300
S23	387637.804	397689.557	59.717	1.312	1350	 1 0	6.003	58.543	300
S24	387633.470	397678.299	59.558	1.645	1350	 2 0	9.000	57.989	150
S25	387631.987	397669.568	59.428	2.588	1200	 1 0	6.004	57.913	300
S26 FCMH	387628.150	397669.917	59.330	2.640	1800	 1 0	6.004	56.915	300
S27	387615.347	397682.361	58.567	2.122	1200	 1 0	1.008	56.840	450
SD4	387612.419	397684.758	58.444	3.504	2100	 1 0	1.009	56.840	450
SD1	387731.466	397751.432	60.603	2.703	2100	 1 0	1.010	56.690	450
SD2	387734.607	397714.504	60.539	3.010	2100	 1 0	1.010	56.445	450
						 1 0	1.011	56.445	450
						 1 0	10.002	54.940	1200
						 1 0	1.011	55.889	450
						 1 0	1.012	54.940	1200
						 1 0	10.000	57.900	1200
						 1 0	10.000	57.529	1200
						1 0	10.001	57.529	1200

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
SD3	387730.631	397673.331	60.289	3.789	2100		1	10.001	56.500	1200
							0	10.002	56.500	1200
OUTFALL	387609.877	397684.901	58.444	3.523	2100		1	1.012	54.921	1200

Simulation Settings

Rainfall Methodology	FEH-22	Winter CV	1.000	Drain Down Time (mins)	240	Check Discharge Rate(s)	✓	100 year (l/s)	50.3
Rainfall Events	Singular	Analysis Speed	Normal	Additional Storage (m³/ha)	20.0	2 year (l/s)	18.3	Check Discharge Volume	✓
Summer CV	1.000	Skip Steady State	x	Starting Level (m)		30 year (l/s)	39.6	100 year 360 minute (m³)	

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 %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0	100	45	0	0
30	0	0	0				

Pre-development Discharge Rate

Site Makeup	Greenfield	BFIHost	0.312	Growth Factor 100 year	2.48	Q 30 year (l/s)	39.6
Greenfield Method	FEH	Region	1	Betterment (%)	0	Q 100 year (l/s)	50.3
Positively Drained Area (ha)	2.166	QBar/QMed conversion factor	1.111	QMed	18.3		
SAAR (mm)	896	Growth Factor 2 year	0.90	QBar	20.3		
Host	1	Growth Factor 30 year	1.95	Q 2 year (l/s)	18.3		

Pre-development Discharge Volume

Site Makeup	Greenfield	Soil Index	4	Return Period (years)	100	Betterment (%)	0
Greenfield Method	FSR/FEH	SPR	0.47	Climate Change (%)	0	PR	
Positively Drained Area (ha)	2.166	CWI		Storm Duration (mins)	360	Runoff Volume (m³)	

Node S26 FCMH Online Hydro-Brake® Control

Flap Valve	x	Design Flow (l/s)	14.0	Min Outlet Diameter (m)	0.225
Replaces Downstream Link	x	Objective	(HE) Minimise upstream storage	Min Node Diameter (mm)	1800
Invert Level (m)	56.690	Sump Available	✓		
Design Depth (m)	2.000	Product Number	CTL-SHE-0155-1400-2000-1400		

Node S15 TANK Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	56.840
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	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	800.0	800.0	1.600	800.0	960.4	1.601	0.0	960.4

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.06%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	11	59.217	0.017	0.5	0.0058	0.0000	OK
15 minute summer	S2	11	59.174	0.034	2.7	0.0181	0.0000	OK
15 minute summer	S3	11	58.888	0.060	7.9	0.0424	0.0000	OK
15 minute summer	S4	11	58.674	0.059	13.5	0.0380	0.0000	OK
15 minute summer	S5	10	59.030	0.030	4.3	0.0214	0.0000	OK
15 minute summer	S6	11	58.818	0.018	1.3	0.0068	0.0000	OK
15 minute summer	S7	10	58.106	0.079	14.1	0.0519	0.0000	OK
15 minute summer	S8	10	57.797	0.066	17.1	0.0296	0.0000	OK
15 minute summer	S9	11	57.334	0.134	32.6	0.0534	0.0000	OK
15 minute summer	S10	9	57.290	0.190	38.1	0.3304	0.0000	OK
15 minute summer	S11	9	57.278	0.278	43.9	0.4782	0.0000	OK
15 minute summer	S12	10	58.605	0.105	61.5	0.6065	0.0000	OK
15 minute summer	S13	9	57.222	0.382	115.1	0.6537	0.0000	OK
15 minute summer	S14	9	58.581	0.081	45.5	0.3571	0.0000	OK
480 minute summer	S15 TANK	320	57.112	0.272	40.7	207.7838	0.0000	OK
15 minute summer	S16	10	59.858	0.071	14.5	0.1926	0.0000	OK
15 minute summer	S18	10	59.539	0.089	15.0	0.3006	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	S1	1.000	S2	0.5	0.251	0.027	0.0112	
15 minute summer	S2	1.001	S3	2.6	0.435	0.051	0.1924	
15 minute summer	S3	1.002	S4	7.8	0.931	0.151	0.1786	
15 minute summer	S4	1.003	S9	13.5	1.634	0.148	0.3609	
15 minute summer	S5	2.000	S7	4.3	0.580	0.038	0.1625	
15 minute summer	S6	3.000	S7	1.3	1.071	0.031	0.0151	
15 minute summer	S7	2.001	S8	13.9	1.268	0.239	0.2600	
15 minute summer	S8	2.002	S9	16.9	1.836	0.166	0.1107	
15 minute summer	S9	1.004	S10	32.9	0.985	0.331	0.4506	
15 minute summer	S10	1.005	S11	38.7	1.101	0.416	0.8219	
15 minute summer	S11	1.006	S13	48.9	0.779	0.476	1.2918	
15 minute summer	S12	4.000	S13	60.9	2.280	0.107	0.5776	
15 minute summer	S13	1.007	S15 TANK	121.7	1.786	0.765	3.7442	
15 minute summer	S14	5.000	S15 TANK	46.0	4.013	0.051	0.4139	
480 minute summer	S15 TANK	1.008	S25	12.3	0.682	0.078	1.8200	
15 minute summer	S16	6.000	S19	14.2	0.795	0.124	0.7172	
15 minute summer	S18	7.001	S19	14.8	0.723	0.173	0.2844	

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.06%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S19	11	59.479	0.112	29.1	0.1597	0.0000	OK
15 minute summer	S20	11	59.315	0.119	36.5	0.2833	0.0000	OK
15 minute summer	S22	11	58.662	0.119	48.2	0.3137	0.0000	OK
15 minute summer	S23	10	58.452	0.047	6.7	0.0968	0.0000	OK
15 minute summer	S24	11	57.994	0.081	60.8	0.1559	0.0000	OK
480 minute summer	S25	320	57.112	0.272	13.5	0.3073	0.0000	OK
480 minute summer	S26 FCMH	320	57.112	0.422	28.1	1.0734	0.0000	OK
480 minute summer	S27	320	56.481	0.036	13.4	0.0403	0.0000	OK
480 minute summer	SD4	320	54.998	0.058	13.4	0.2024	0.0000	OK
15 minute summer	SD1	1	57.900	0.000	0.0	0.0000	0.0000	OK
15 minute summer	SD2	1	57.529	0.000	0.0	0.0000	0.0000	OK
15 minute summer	SD3	1	56.500	0.000	0.0	0.0000	0.0000	OK
480 minute summer	OUTFALL	320	54.973	0.052	13.4	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	S19	6.001	S20	29.0	1.162	0.267	0.4454	
15 minute summer	S20	6.002	S22	36.6	1.406	0.325	1.6540	
15 minute summer	S22	6.003	S24	47.9	2.325	0.282	0.5601	
15 minute summer	S23	9.000	S24	6.6	1.429	0.200	0.0560	
15 minute summer	S24	6.004	S25	61.3	3.112	0.163	0.2274	
480 minute summer	S25	1.009	S26 FCMH	28.1	0.563	0.044	0.4827	
480 minute summer	S26 FCMH	1.010	S27	13.4	1.397	0.037	0.1943	
480 minute summer	S27	1.011	SD4	13.4	2.460	0.011	0.0206	
480 minute summer	SD4	1.012	OUTFALL	13.4	0.738	0.004	0.0464	369.7
15 minute summer	SD1	10.000	SD2	0.0	0.000	0.000	0.0001	
15 minute summer	SD2	10.001	SD3	0.0	0.000	0.000	0.0001	
15 minute summer	SD3	10.002	SD4	0.0	0.000	0.000	1.1408	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.06%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	10	59.227	0.027	1.3	0.0091	0.0000	OK
15 minute summer	S2	10	59.194	0.054	6.8	0.0285	0.0000	OK
15 minute summer	S3	10	58.929	0.101	20.1	0.0709	0.0000	OK
15 minute summer	S4	10	58.710	0.095	34.6	0.0611	0.0000	OK
15 minute summer	S5	10	59.047	0.047	11.0	0.0339	0.0000	OK
15 minute summer	S6	10	58.829	0.029	3.4	0.0106	0.0000	OK
15 minute summer	S7	12	58.168	0.141	35.8	0.0933	0.0000	OK
15 minute summer	S8	11	58.091	0.360	43.9	0.1622	0.0000	SURCHARGED
15 minute summer	S9	11	58.003	0.803	77.1	0.3203	0.0000	SURCHARGED
15 minute summer	S10	11	57.914	0.814	89.2	1.4160	0.0000	SURCHARGED
15 minute summer	S11	11	57.781	0.781	102.2	1.3449	0.0000	SURCHARGED
15 minute summer	S12	10	58.676	0.176	155.5	1.0193	0.0000	OK
15 minute summer	S13	11	57.573	0.733	261.8	1.2541	0.0000	SURCHARGED
15 minute summer	S14	9	58.616	0.116	115.0	0.5131	0.0000	OK
360 minute winter	S15 TANK	336	57.500	0.660	72.0	503.4823	0.0000	SURCHARGED
15 minute summer	S16	10	59.902	0.115	36.7	0.3122	0.0000	OK
15 minute summer	S18	10	59.611	0.161	38.0	0.5437	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	S1	1.000	S2	1.3	0.335	0.069	0.0214	
15 minute summer	S2	1.001	S3	6.6	0.549	0.128	0.3829	
15 minute summer	S3	1.002	S4	19.8	1.200	0.380	0.3518	
15 minute summer	S4	1.003	S9	34.2	1.558	0.373	1.2143	
15 minute summer	S5	2.000	S7	10.9	0.734	0.097	0.3303	
15 minute summer	S6	3.000	S7	3.4	1.173	0.080	0.0592	
15 minute summer	S7	2.001	S8	35.9	1.581	0.617	0.7816	
15 minute summer	S8	2.002	S9	39.5	1.826	0.388	0.4773	
15 minute summer	S9	1.004	S10	78.3	1.112	0.789	0.8804	
15 minute summer	S10	1.005	S11	91.6	1.301	0.986	1.0057	
15 minute summer	S11	1.006	S13	104.7	1.487	1.018	1.3134	
15 minute summer	S12	4.000	S13	154.4	2.887	0.273	1.1567	
15 minute summer	S13	1.007	S15 TANK	261.8	2.099	1.646	6.7245	
15 minute summer	S14	5.000	S15 TANK	115.8	4.404	0.129	1.4007	
360 minute winter	S15 TANK	1.008	S25	14.2	0.332	0.089	2.8789	
15 minute summer	S16	6.000	S19	36.3	0.975	0.316	1.4847	
15 minute summer	S18	7.001	S19	37.3	0.849	0.435	0.6163	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.06%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S19	11	59.571	0.204	73.6	0.2917	0.0000	OK
15 minute summer	S20	11	59.410	0.214	91.9	0.5091	0.0000	OK
15 minute summer	S22	11	58.755	0.212	122.0	0.5589	0.0000	OK
15 minute summer	S23	10	58.486	0.081	16.9	0.1657	0.0000	OK
15 minute summer	S24	11	58.059	0.146	154.2	0.2801	0.0000	OK
480 minute summer	S25	368	57.501	0.661	26.0	0.7472	0.0000	SURCHARGED
360 minute winter	S26 FCMH	336	57.500	0.810	21.5	2.0602	0.0000	SURCHARGED
60 minute winter	S27	105	56.481	0.036	14.0	0.0412	0.0000	OK
120 minute winter	SD4	230	55.000	0.060	14.0	0.2066	0.0000	OK
15 minute summer	SD1	1	57.900	0.000	0.0	0.0000	0.0000	OK
15 minute summer	SD2	1	57.529	0.000	0.0	0.0000	0.0000	OK
15 minute summer	SD3	1	56.500	0.000	0.0	0.0000	0.0000	OK
120 minute winter	OUTFALL	230	54.974	0.053	14.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S19	6.001	S20	73.0	1.395	0.672	0.9351	
15 minute summer	S20	6.002	S22	92.6	1.730	0.822	3.4004	
15 minute summer	S22	6.003	S24	121.8	2.797	0.716	1.1801	
15 minute summer	S23	9.000	S24	16.7	1.801	0.505	0.1122	
15 minute summer	S24	6.004	S25	154.0	3.053	0.410	0.4360	
480 minute summer	S25	1.009	S26 FCMH	16.0	0.283	0.025	0.6013	
360 minute winter	S26 FCMH	1.010	S27	14.0	1.412	0.039	0.2001	
60 minute winter	S27	1.011	SD4	14.0	2.489	0.011	0.0213	
120 minute winter	SD4	1.012	OUTFALL	14.0	0.744	0.004	0.0479	279.9
15 minute summer	SD1	10.000	SD2	0.0	0.000	0.000	0.0001	
15 minute summer	SD2	10.001	SD3	0.0	0.000	0.000	0.0001	
15 minute summer	SD3	10.002	SD4	0.0	0.000	0.000	1.2017	

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.06%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	12	59.666	0.466	11.5	0.1597	0.0000	SURCHARGED
15 minute summer	S2	12	59.661	0.521	20.2	0.2748	0.0000	SURCHARGED
15 minute summer	S3	12	59.642	0.814	37.0	0.5723	0.0000	SURCHARGED
15 minute summer	S4	12	59.594	0.979	58.3	0.6312	0.0000	SURCHARGED
15 minute summer	S5	12	59.768	0.768	20.1	0.5500	0.0000	SURCHARGED
15 minute summer	S6	12	59.758	0.958	6.2	0.3546	0.0000	SURCHARGED
15 minute summer	S7	12	59.746	1.719	62.4	1.1345	0.0000	SURCHARGED
15 minute summer	S8	12	59.486	1.755	60.5	0.7915	0.0000	SURCHARGED
15 minute summer	S9	12	59.258	2.058	114.4	0.8210	0.0000	SURCHARGED
15 minute summer	S10	12	59.060	1.960	132.4	3.4100	0.0000	FLOOD RISK
15 minute summer	S11	11	58.756	1.756	155.1	3.0228	0.0000	SURCHARGED
15 minute summer	S12	10	58.754	0.254	285.7	1.4734	0.0000	OK
960 minute winter	S13	900	58.403	1.563	34.3	2.6765	0.0000	SURCHARGED
15 minute summer	S14	9	58.652	0.152	211.3	0.6723	0.0000	OK
960 minute winter	S15 TANK	900	58.403	1.563	67.4	1192.4330	0.0000	SURCHARGED
15 minute summer	S16	12	60.394	0.607	67.4	1.6503	0.0000	SURCHARGED
15 minute summer	S18	12	60.330	0.880	69.7	2.9687	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)
15 minute summer	S1	1.000	S2	-9.3	-0.527	-0.498	0.0962	
15 minute summer	S2	1.001	S3	19.7	0.614	0.380	1.2407	
15 minute summer	S3	1.002	S4	36.5	1.231	0.702	0.8455	
15 minute summer	S4	1.003	S9	49.6	1.535	0.542	1.7360	
15 minute summer	S5	2.000	S7	18.9	0.786	0.168	0.8357	
15 minute summer	S6	3.000	S7	10.2	1.175	0.240	0.2191	
15 minute summer	S7	2.001	S8	49.2	1.544	0.846	0.9416	
15 minute summer	S8	2.002	S9	62.1	1.774	0.610	0.4773	
15 minute summer	S9	1.004	S10	120.0	1.705	1.209	0.8804	
15 minute summer	S10	1.005	S11	143.1	2.032	1.541	1.0057	
15 minute summer	S11	1.006	S13	168.9	2.399	1.642	1.3134	
15 minute summer	S12	4.000	S13	282.2	3.241	0.498	2.6950	
960 minute winter	S13	1.007	S15 TANK	34.2	0.631	0.215	8.0543	
15 minute summer	S14	5.000	S15 TANK	212.1	4.431	0.236	2.0219	
960 minute winter	S15 TANK	1.008	S25	46.7	0.466	0.293	2.8789	
15 minute summer	S16	6.000	S19	62.0	1.082	0.540	2.7776	
15 minute summer	S18	7.001	S19	57.4	0.911	0.668	0.9751	

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.06%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S19	12	60.284	0.917	112.0	1.3122	0.6452	FLOOD
15 minute summer	S20	12	60.075	0.879	136.3	2.0921	0.0000	FLOOD RISK
15 minute summer	S22	12	59.071	0.528	181.3	1.3883	0.0000	SURCHARGED
15 minute summer	S23	10	58.536	0.131	31.0	0.2671	0.0000	OK
960 minute winter	S24	870	58.455	0.542	28.9	1.0403	0.0000	SURCHARGED
960 minute summer	S25	645	58.656	1.816	60.2	2.0544	0.0000	SURCHARGED
960 minute winter	S26 FCMH	930	58.471	1.781	136.7	4.5314	0.0000	SURCHARGED
15 minute summer	S27	143	56.481	0.036	14.0	0.0412	0.0000	OK
15 minute summer	SD4	144	55.000	0.060	14.0	0.2066	0.0000	OK
15 minute summer	SD1	1	57.900	0.000	0.0	0.0000	0.0000	OK
15 minute summer	SD2	1	57.529	0.000	0.0	0.0000	0.0000	OK
15 minute summer	SD3	1	56.500	0.000	0.0	0.0000	0.0000	OK
15 minute summer	OUTFALL	144	54.974	0.053	14.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S19	6.001	S20	102.3	1.453	0.942	1.2580	
15 minute summer	S20	6.002	S22	130.5	1.875	1.158	4.4734	
15 minute summer	S22	6.003	S24	178.2	2.810	1.048	1.6996	
15 minute summer	S23	9.000	S24	30.7	1.896	0.925	0.1992	
960 minute winter	S24	6.004	S25	-26.3	1.725	-0.070	0.6236	
960 minute summer	S25	1.009	S26 FCMH	-35.0	0.339	-0.054	0.6013	
960 minute winter	S26 FCMH	1.010	S27	14.0	1.412	0.039	0.2001	
15 minute summer	S27	1.011	SD4	14.0	2.489	0.011	0.0213	
15 minute summer	SD4	1.012	OUTFALL	14.0	0.744	0.004	0.0479	208.8
15 minute summer	SD1	10.000	SD2	0.0	0.000	0.000	0.0001	
15 minute summer	SD2	10.001	SD3	0.0	0.000	0.000	0.0001	
15 minute summer	SD3	10.002	SD4	0.0	0.000	0.000	1.2196	