

Rainfall Methodology	FSR
Return Period (years)	2
Additional Flow (%)	0
FSR Region	England and Wales
M5-60 (mm)	20.000
Ratio-R	0.400
CV	0.750
Time of Entry (mins)	5.00
Maximum Time of Concentration (mins)	30.00
Maximum Rainfall (mm/hr)	50.0
Minimum Velocity (m/s)	1.00
Connection Type	Level Soffits
Minimum Backdrop Height (m)	0.200
Preferred Cover Depth (m)	0.600
Include Intermediate Ground	
Enforce best practice design rules	

	Name	Area (ha)	T of E (mins)	Add Inflow (l/s)	Cover Level (m)	Node Type	Manhole Type	Diameter (mm)	Width (mm)	Easting (m)	Northing (m)	Depth (m)	Notes
1		0.004	5.00		3.600	Manhole	Adoptable	100				0.700	
2		0.004	5.00		3.600	Manhole	Adoptable	100				0.700	
3		0.004	5.00		3.600	Manhole	Adoptable	450				0.811	
4		0.004	5.00		3.500	Manhole	Adoptable	100				0.700	
5		0.004	5.00		3.600	Manhole	Adoptable	450				1.063	
6		0.004	5.00		3.600	Manhole	Adoptable	450				1.114	
7		0.004	5.00		3.600	Manhole	Adoptable	100				0.700	
8		0.004	5.00		3.500	Manhole	Adoptable	450				0.865	
9		0.004	5.00		3.500	Manhole	Adoptable	450				0.915	
10		0.026	5.00		3.400	Manhole	Adoptable	1800				1.500	
11		0.004	5.00		3.400	Manhole	Adoptable	450				0.750	
12		0.004	5.00		3.400	Manhole	Adoptable	450				0.799	
13		0.026	5.00		3.400	Manhole	Adoptable	1800				1.522	
14		0.004	5.00		4.250	Manhole	Adoptable	100				0.700	
15		0.004	5.00		4.250	Manhole	Adoptable	450				0.769	
16		0.004	5.00		3.500	Manhole	Adoptable	450				0.700	
17		0.004	5.00		3.500	Manhole	Adoptable	450				0.803	
18		0.004	5.00		3.500	Manhole	Adoptable	450				0.859	
19		0.004	5.00		4.250	Manhole	Adoptable	100				0.700	
20		0.004	5.00		3.500	Manhole	Adoptable	450				0.700	
21		0.004	5.00		3.400	Manhole	Adoptable	100				0.654	
22		0.004	5.00		3.400	Manhole	Adoptable	450				0.877	
23		0.026	5.00		3.400	Manhole	Adoptable	1800				1.560	
24		0.026	5.00		3.400	Manhole	Adoptable	1800				1.465	
25		0.004	5.00		4.250	Manhole	Adoptable	100				0.700	
26		0.004	5.00		3.500	Manhole	Adoptable	450				0.700	
27		0.026	5.00		3.400	Manhole	Adoptable	1800				1.578	
28		0.008	5.00		3.400	Manhole	Adoptable	1800				1.597	
29		0.004	5.00		4.550	Manhole	Adoptable	100				0.700	

30	0.004	5.00	4.550	Manhole	Adoptable	450				0.822
31	0.004	5.00	4.000	Manhole	Adoptable	450				0.700
32	0.004	5.00	4.000	Manhole	Adoptable	450				0.801
33			3.500	Manhole	Adoptable	1800				1.720
34			3.500	Manhole	Adoptable	1800				1.883

	Name	US Node	DS Node	Length (m)	ks (mm) / n	Velocity Equation	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	Link Type	T of C (mins)	Rain (mm/hr)	Con Offset (m)	Min DS IL (m)	Lateral Area (ha)	Lateral Ins Point (%)	Lateral T of E (mins)
?	1.000	1	3	11.075	0.600	Colebrook-White	2.900	2.789	0.111	100.0	100	Circular	5.24	50.0					
?	2.000	2	3	10.848	0.600	Colebrook-White	2.900	2.789	0.111	97.7	100	Circular	5.23	50.0					
	1.001	3	10	7.775	0.600	Colebrook-White	2.789	2.400	0.389	20.0	100	Circular	5.31	50.0					
?	3.000	4	5	21.254	0.600	Colebrook-White	2.800	2.587	0.213	100.0	100	Circular	5.46	50.0					
	3.001	5	6	5.065	0.600	Colebrook-White	2.537	2.486	0.051	100.0	150	Circular	5.54	50.0					
	3.002	6	10	11.012	0.600	Colebrook-White	2.486	2.350	0.136	81.0	150	Circular	5.71	50.0					
?	4.000	7	8	21.455	0.600	Colebrook-White	2.900	2.685	0.215	100.0	100	Circular	5.47	50.0					
	4.001	8	9	4.990	0.600	Colebrook-White	2.635	2.585	0.050	100.0	150	Circular	5.55	50.0					
	4.002	9	10	11.004	0.600	Colebrook-White	2.585	2.350	0.235	46.8	150	Circular	5.67	50.0					
	1.002	10	13	10.970	0.600	Colebrook-White	1.900	1.878	0.022	500.0	600	Circular	5.88	50.0					
	5.000	11	12	4.865	0.600	Colebrook-White	2.650	2.601	0.049	100.0	150	Circular	5.08	50.0					
	5.001	12	13	3.112	0.600	Colebrook-White	2.601	2.328	0.273	11.4	150	Circular	5.10	50.0					
	1.003	13	23	19.224	0.600	Colebrook-White	1.878	1.840	0.038	500.0	600	Circular	6.17	50.0					
?	6.000	14	15	6.860	0.600	Colebrook-White	3.550	3.481	0.069	100.0	100	Circular	5.15	50.0					
	6.001	15	16	9.823	0.600	Colebrook-White	3.481	2.800	0.681	14.4	100	Circular	5.23	50.0					
?	6.002	16	17	5.261	0.600	Colebrook-White	2.800	2.747	0.053	100.0	100	Circular	5.34	50.0					
	6.003	17	18	5.595	0.600	Colebrook-White	2.697	2.641	0.056	100.0	150	Circular	5.44	50.0					
	6.004	18	23	6.004	0.600	Colebrook-White	2.641	2.290	0.351	17.1	150	Circular	5.48	50.0					
	7.000	19	20	13.351	0.600	Colebrook-White	3.550	2.800	0.750	17.8	100	Circular	5.12	50.0					
	7.001	20	23	4.975	0.600	Colebrook-White	2.800	2.340	0.460	10.8	100	Circular	5.16	50.0					
?	8.000	21	22	22.327	0.600	Colebrook-White	2.746	2.523	0.223	100.0	100	Circular	5.48	50.0					
?	8.001	22	23	18.345	0.600	Colebrook-White	2.523	2.340	0.183	100.0	100	Circular	5.88	50.0					
	1.004	23	28	18.655	0.600	Colebrook-White	1.840	1.803	0.037	500.0	600	Circular	6.46	50.0					
	9.000	24	27	56.543	0.600	Colebrook-White	1.935	1.822	0.113	500.0	600	Circular	5.87	50.0					
	10.000	25	26	5.965	0.600	Colebrook-White	3.550	2.800	0.750	8.0	100	Circular	5.04	50.0					
	10.001	26	27	9.799	0.600	Colebrook-White	2.800	2.322	0.478	20.5	100	Circular	5.13	50.0					
	9.001	27	28	9.461	0.600	Colebrook-White	1.822	1.803	0.019	500.0	600	Circular	6.02	50.0					
	1.005	28	33	11.600	0.600	Colebrook-White	1.803	1.780	0.023	500.0	600	Circular	6.64	50.0					
?	11.000	29	30	12.224	0.600	Colebrook-White	3.850	3.728	0.122	100.0	100	Circular	5.27	50.0					
	11.001	30	31	7.610	0.600	Colebrook-White	3.728	3.300	0.428	17.8	100	Circular	5.33	50.0					
?	11.002	31	32	5.099	0.600	Colebrook-White	3.300	3.249	0.051	100.0	100	Circular	5.44	50.0					
?	11.003	32	33	9.655	0.600	Colebrook-White	3.199	2.233	0.966	10.0	150	Circular	5.49	50.0					
?	1.006	33	34	10.607	0.600	Colebrook-White	1.780	1.617	0.163	65.1	600	Circular	6.70	50.0					

Link Name	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)	US Node Name	Dia (mm)	Width (mm)	Node Type	MH Type	DS Node Name	Dia (mm)	Width (mm)	Node Type	MH Type
1.000	11.075	100.0	100	Circular	3.600	2.900	0.600	3.600	2.789	0.711	1	100		Manhole	Adoptable	3	450		Manhole	Adoptable
2.000	10.848	97.7	100	Circular	3.600	2.900	0.600	3.600	2.789	0.711	2	100		Manhole	Adoptable	3	450		Manhole	Adoptable
1.001	7.775	20.0	100	Circular	3.600	2.789	0.711	3.400	2.400	0.900	3	450		Manhole	Adoptable	10	1800		Manhole	Adoptable
3.000	21.254	100.0	100	Circular	3.500	2.800	0.600	3.600	2.587	0.913	4	100		Manhole	Adoptable	5	450		Manhole	Adoptable
3.001	5.065	100.0	150	Circular	3.600	2.537	0.913	3.600	2.486	0.964	5	450		Manhole	Adoptable	6	450		Manhole	Adoptable
3.002	11.012	81.0	150	Circular	3.600	2.486	0.964	3.400	2.350	0.900	6	450		Manhole	Adoptable	10	1800		Manhole	Adoptable
4.000	21.455	100.0	100	Circular	3.600	2.900	0.600	3.500	2.685	0.715	7	100		Manhole	Adoptable	8	450		Manhole	Adoptable
4.001	4.990	100.0	150	Circular	3.500	2.635	0.715	3.500	2.585	0.765	8	450		Manhole	Adoptable	9	450		Manhole	Adoptable
4.002	11.004	46.8	150	Circular	3.500	2.585	0.765	3.400	2.350	0.900	9	450		Manhole	Adoptable	10	1800		Manhole	Adoptable
1.002	10.970	500.0	600	Circular	3.400	1.900	0.900	3.400	1.878	0.922	10	1800		Manhole	Adoptable	13	1800		Manhole	Adoptable
5.000	4.865	100.0	150	Circular	3.400	2.650	0.600	3.400	2.601	0.649	11	450		Manhole	Adoptable	12	450		Manhole	Adoptable
5.001	3.112	11.4	150	Circular	3.400	2.601	0.649	3.400	2.328	0.922	12	450		Manhole	Adoptable	13	1800		Manhole	Adoptable
1.003	19.224	500.0	600	Circular	3.400	1.878	0.922	3.400	1.840	0.960	13	1800		Manhole	Adoptable	23	1800		Manhole	Adoptable
6.000	6.860	100.0	100	Circular	4.250	3.550	0.600	4.250	3.481	0.669	14	100		Manhole	Adoptable	15	450		Manhole	Adoptable
6.001	9.823	14.4	100	Circular	4.250	3.481	0.669	3.500	2.800	0.600	15	450		Manhole	Adoptable	16	450		Manhole	Adoptable
6.002	5.261	100.0	100	Circular	3.500	2.800	0.600	3.500	2.747	0.653	16	450		Manhole	Adoptable	17	450		Manhole	Adoptable
6.003	5.595	100.0	150	Circular	3.500	2.697	0.653	3.500	2.641	0.709	17	450		Manhole	Adoptable	18	450		Manhole	Adoptable
6.004	6.004	17.1	150	Circular	3.500	2.641	0.709	3.400	2.290	0.960	18	450		Manhole	Adoptable	23	1800		Manhole	Adoptable
7.000	13.351	17.8	100	Circular	4.250	3.550	0.600	3.500	2.800	0.600	19	100		Manhole	Adoptable	20	450		Manhole	Adoptable
7.001	4.975	10.8	100	Circular	3.500	2.800	0.600	3.400	2.340	0.960	20	450		Manhole	Adoptable	23	1800		Manhole	Adoptable
8.000	22.327	100.0	100	Circular	3.400	2.746	0.554	3.400	2.523	0.777	21	100		Manhole	Adoptable	22	450		Manhole	Adoptable
8.001	18.345	100.0	100	Circular	3.400	2.523	0.777	3.400	2.340	0.960	22	450		Manhole	Adoptable	23	1800		Manhole	Adoptable
1.004	18.655	500.0	600	Circular	3.400	1.840	0.960	3.400	1.803	0.997	23	1800		Manhole	Adoptable	28	1800		Manhole	Adoptable
9.000	56.543	500.0	600	Circular	3.400	1.935	0.865	3.400	1.822	0.978	24	1800		Manhole	Adoptable	27	1800		Manhole	Adoptable
10.000	5.965	8.0	100	Circular	4.250	3.550	0.600	3.500	2.800	0.600	25	100		Manhole	Adoptable	26	450		Manhole	Adoptable
10.001	9.799	20.5	100	Circular	3.500	2.800	0.600	3.400	2.322	0.978	26	450		Manhole	Adoptable	27	1800		Manhole	Adoptable
9.001	9.461	500.0	600	Circular	3.400	1.822	0.978	3.400	1.803	0.997	27	1800		Manhole	Adoptable	28	1800		Manhole	Adoptable
1.005	11.600	500.0	600	Circular	3.400	1.803	0.997	3.500	1.780	1.120	28	1800		Manhole	Adoptable	33	1800		Manhole	Adoptable
11.000	12.224	100.0	100	Circular	4.550	3.850	0.600	4.550	3.728	0.722	29	100		Manhole	Adoptable	30	450		Manhole	Adoptable
11.001	7.610	17.8	100	Circular	4.550	3.728	0.722	4.000	3.300	0.600	30	450		Manhole	Adoptable	31	450		Manhole	Adoptable
11.002	5.099	100.0	100	Circular	4.000	3.300	0.600	4.000	3.249	0.651	31	450		Manhole	Adoptable	32	450		Manhole	Adoptable
11.003	9.655	10.0	150	Circular	4.000	3.199	0.651	3.500	2.233	1.117	32	450		Manhole	Adoptable	33	1800		Manhole	Adoptable
1.006	10.607	65.1	600	Circular	3.500	1.780	1.120	3.500	1.617	1.283	33	1800		Manhole	Adoptable	34	1800		Manhole	Adoptable

Node Name	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Width (mm)	Node Type	MH Type		Link ID	IL (m)	Dia (mm)	Link Type
1			3.600	0.700	100		Manhole	Adoptable					
									0	1.000	2.900	100	Circular
2			3.600	0.700	100		Manhole	Adoptable					
									0	2.000	2.900	100	Circular
3			3.600	0.811	450		Manhole	Adoptable	1	2.000	2.789	100	Circular
									2	1.000	2.789	100	Circular
									0	1.001	2.789	100	Circular
4			3.500	0.700	100		Manhole	Adoptable					
									0	3.000	2.800	100	Circular
5			3.600	1.063	450		Manhole	Adoptable	1	3.000	2.587	100	Circular
									0	3.001	2.537	150	Circular
6			3.600	1.114	450		Manhole	Adoptable	1	3.001	2.486	150	Circular
									0	3.002	2.486	150	Circular
7			3.600	0.700	100		Manhole	Adoptable					
									0	4.000	2.900	100	Circular
8			3.500	0.865	450		Manhole	Adoptable	1	4.000	2.685	100	Circular

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								0	6.002	2.800	100	Circular
17			3.500	0.803	450	Manhole	Adoptable	1	6.002	2.747	100	Circular
								0	6.003	2.697	150	Circular
18			3.500	0.859	450	Manhole	Adoptable	1	6.003	2.641	150	Circular
								0	6.004	2.641	150	Circular
19			4.250	0.700	100	Manhole	Adoptable					
								0	7.000	3.550	100	Circular
20			3.500	0.700	450	Manhole	Adoptable	1	7.000	2.800	100	Circular
								0	7.001	2.800	100	Circular
21			3.400	0.654	100	Manhole	Adoptable					
								0	8.000	2.746	100	Circular
22			3.400	0.877	450	Manhole	Adoptable	1	8.000	2.523	100	Circular
								0	8.001	2.523	100	Circular
23			3.400	1.560	1800	Manhole	Adoptable	1	8.001	2.340	100	Circular
								2	7.001	2.340	100	Circular
								3	6.004	2.290	150	Circular
								4	1.003	1.840	600	Circular
								0	1.004	1.840	600	Circular
24			3.400	1.465	1800	Manhole	Adoptable					

								0	9.000	1.935	600	Circular
25			4.250	0.700	100	Manhole	Adoptable					
								0	10.000	3.550	100	Circular
26			3.500	0.700	450	Manhole	Adoptable	1	10.000	2.800	100	Circular
								0	10.001	2.800	100	Circular
27			3.400	1.578	1800	Manhole	Adoptable	1	10.001	2.322	100	Circular
								2	9.000	1.822	600	Circular
								0	9.001	1.822	600	Circular
28			3.400	1.597	1800	Manhole	Adoptable	1	9.001	1.803	600	Circular
								2	1.004	1.803	600	Circular
								0	1.005	1.803	600	Circular
29			4.550	0.700	100	Manhole	Adoptable					
								0	11.000	3.850	100	Circular
30			4.550	0.822	450	Manhole	Adoptable	1	11.000	3.728	100	Circular
								0	11.001	3.728	100	Circular
31			4.000	0.700	450	Manhole	Adoptable	1	11.001	3.300	100	Circular
								0	11.002	3.300	100	Circular
32			4.000	0.801	450	Manhole	Adoptable	1	11.002	3.249	100	Circular
								0	11.003	3.199	150	Circular

33			3.500	1.720	1800	Manhole	Adoptable	1	11.003	2.233	150	Circular
								2	1.005	1.780	600	Circular
								0	1.006	1.780	600	Circular
34			3.500	1.883	1800	Manhole	Adoptable	1	1.006	1.617	600	Circular

Rainfall Methodology	FSR		Return Period (years)	Climate Change (%)
FSR Region	England and Wales		1	0
M5-60 (mm)	20.000		30	0
Ratio-R	0.400		100	40
Summer CV	0.750			
Winter CV	0.840			
Analysis Speed	Detailed			
Skip Steady State	x			
Drain Down Time (mins)	240			
Additional Storage (m³/ha)	20.0			
Storm Durations (mins)	15			
	30			
	60			
	120			
	180			
	240			
	360			
	480			
	600			
	720			
	960			
	1440			
	2160			
	2880			
	4320			
	5760			
	7200			
	8640			
	10080			
Check Discharge Rate(s)	x			
1 year (l/s)				
30 year (l/s)				

100 year (l/s)				
Check Discharge Volume	x			
100 year 360 minute (m³)				

Hydro-Brake®												
Node	Flap Valve	Online / Offline	Replaces Downstream Link	Loop to Node	Invert Level (m)	Design Depth (m)	Design Flow (l/s)	Objective	Sump Available	Product Number	Min Outlet Diameter (m)	Min Node Diameter (mm)
33	x	Online			1.780	1.200	2.5	(HE) Minimise upstream storage		CTL-SHE-0072-2500-1200-2500	0.100	1200

Carpark											
Node	Base Inf Coefficient (m/hr)	Side Inf Coefficient (m/hr)	Safety Factor	Porosity	Invert Level (m)	Time to half empty (mins)	Width (m)	Length (m)	Slope (1:X)	Depth (m)	Inf Depth (m)
33	0.00000	0.00000	2.0	0.30	2.569	96	60.500	7.300	500.0		
27	0.00000	0.00000	2.0	0.30	2.610	104	5.300	56.000	500.0		

Results for 1 year Critical Storm Duration. Lowest mass balance: 98.69%															
Event	US Node ID	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status	Link ID	DS Node ID	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	10	2.920	0.020	0.6	0.0025	0.0000	OK	1.000	3	0.6	0.429	0.092	0.0143	
15 minute winter	2	10	2.920	0.020	0.6	0.0025	0.0000	OK	2.000	3	0.6	0.431	0.091	0.0140	
15 minute winter	3	11	2.813	0.024	1.7	0.0062	0.0000	OK	1.001	10	1.6	1.148	0.120	0.0111	
15 minute winter	4	11	2.820	0.020	0.6	0.0025	0.0000	OK	3.000	5	0.5	0.475	0.088	0.0239	
15 minute winter	5	10	2.563	0.026	1.1	0.0060	0.0000	OK	3.001	6	1.1	0.482	0.060	0.0112	
15 minute winter	6	11	2.516	0.030	1.6	0.0068	0.0000	OK	3.002	10	1.6	0.668	0.082	0.0266	
15 minute winter	7	11	2.920	0.020	0.6	0.0025	0.0000	OK	4.000	8	0.5	0.475	0.088	0.0241	
15 minute winter	8	10	2.661	0.026	1.1	0.0065	0.0000	OK	4.001	9	1.1	0.529	0.060	0.0100	
15 minute winter	9	11	2.611	0.026	1.6	0.0064	0.0000	OK	4.002	10	1.6	0.810	0.062	0.0219	
60 minute winter	10	59	2.122	0.222	4.6	0.6411	0.0000	OK	1.002	13	3.9	0.282	0.013	1.1078	
15 minute winter	11	10	2.669	0.019	0.6	0.0051	0.0000	OK	5.000	12	0.6	0.493	0.032	0.0056	
15 minute winter	12	10	2.617	0.016	1.2	0.0041	0.0000	OK	5.001	13	1.1	1.176	0.021	0.0030	
60 minute winter	13	59	2.122	0.244	6.4	0.7034	0.0000	OK	1.003	23	5.1	0.264	0.017	2.2800	
15 minute winter	14	10	3.571	0.021	0.6	0.0026	0.0000	OK	6.000	15	0.6	0.514	0.092	0.0075	
15 minute winter	15	10	3.499	0.018	1.2	0.0047	0.0000	OK	6.001	16	1.1	0.640	0.069	0.0176	
15 minute winter	16	11	2.837	0.037	1.7	0.0102	0.0000	OK	6.002	17	1.6	0.637	0.272	0.0136	
15 minute winter	17	11	2.735	0.038	2.2	0.0098	0.0000	OK	6.003	18	2.2	0.789	0.123	0.0156	
15 minute winter	18	11	2.668	0.027	2.7	0.0067	0.0000	OK	6.004	23	2.7	1.332	0.063	0.0123	
15 minute winter	19	10	3.564	0.014	0.6	0.0017	0.0000	OK	7.000	20	0.6	0.746	0.040	0.0103	
15 minute winter	20	10	2.817	0.017	1.2	0.0047	0.0000	OK	7.001	23	1.1	1.274	0.060	0.0044	
15 minute winter	21	10	2.766	0.020	0.6	0.0026	0.0000	OK	8.000	22	0.5	0.379	0.089	0.0332	
15 minute winter	22	11	2.552	0.029	1.1	0.0072	0.0000	OK	8.001	23	1.1	0.575	0.174	0.0336	
60 minute winter	23	59	2.122	0.282	9.6	0.8103	0.0000	OK	1.004	28	7.7	0.313	0.025	2.6261	
60 minute winter	24	61	2.122	0.187	4.5	0.5428	0.0000	OK	9.000	27	-2.6	0.129	-0.008	6.0687	
15 minute winter	25	10	3.561	0.011	0.6	0.0014	0.0000	OK	10.000	26	0.6	0.744	0.027	0.0048	
15 minute winter	26	10	2.820	0.020	1.2	0.0055	0.0000	OK	10.001	27	1.1	1.024	0.083	0.0107	
60 minute winter	27	59	2.121	0.299	6.2	0.8594	0.0000	OK	9.001	28	-3.7	0.153	-0.012	1.3813	
60 minute winter	28	59	2.121	0.318	8.3	0.8416	0.0000	OK	1.005	33	2.5	0.306	0.008	1.8395	
15 minute winter	29	10	3.871	0.021	0.6	0.0026	0.0000	OK	11.000	30	0.6	0.499	0.091	0.0135	
15 minute winter	30	10	3.747	0.019	1.2	0.0048	0.0000	OK	11.001	31	1.1	0.619	0.076	0.0140	
15 minute winter	31	11	3.337	0.037	1.7	0.0102	0.0000	OK	11.002	32	1.6	0.635	0.272	0.0132	
15 minute winter	32	11	3.220	0.021	2.2	0.0053	0.0000	OK	11.003	33	2.2	1.527	0.038	0.0137	
60 minute winter	33	59	2.121	0.341	3.4	0.8684	0.0000	OK	Hydro-Brake®	34	2.3				27.0
15 minute summer	34	1	1.617	0.000	2.3	0.0000	0.0000	OK							

Results for 30 year Critical Storm Duration. Lowest mass balance: 98.69%															
Event	US Node ID	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status	Link ID	DS Node ID	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	10	2.933	0.033	1.4	0.0040	0.0000	OK	1.000	3	1.4	0.541	0.226	0.0280	
15 minute winter	2	10	2.932	0.032	1.4	0.0039	0.0000	OK	2.000	3	1.4	0.543	0.224	0.0274	
15 minute winter	3	10	2.828	0.039	4.1	0.0102	0.0000	OK	1.001	10	4.0	1.464	0.297	0.0215	
15 minute winter	4	11	2.832	0.032	1.4	0.0039	0.0000	OK	3.000	5	1.3	0.616	0.222	0.0462	
180 minute winter	5	172	2.662	0.125	0.6	0.0292	0.0000	OK	3.001	6	0.6	0.417	0.034	0.0842	
180 minute winter	6	172	2.662	0.176	1.4	0.0406	0.0000	SURCHARGED	3.002	10	0.9	0.563	0.046	0.1939	
15 minute winter	7	11	2.932	0.032	1.4	0.0039	0.0000	OK	4.000	8	1.3	0.616	0.222	0.0466	
15 minute winter	8	10	2.677	0.042	2.7	0.0106	0.0000	OK	4.001	9	2.7	0.673	0.151	0.0198	
180 minute winter	9	176	2.662	0.077	0.9	0.0189	0.0000	OK	4.002	10	0.9	0.683	0.035	0.1467	
180 minute winter	10	172	2.662	0.762	4.8	2.2028	0.0000	SURCHARGED	1.002	13	3.8	0.241	0.012	3.0900	
15 minute winter	11	10	2.680	0.030	1.4	0.0079	0.0000	OK	5.000	12	1.4	0.630	0.078	0.0107	
180 minute winter	12	176	2.662	0.061	0.6	0.0158	0.0000	OK	5.001	13	0.6	0.978	0.011	0.0378	
180 minute winter	13	172	2.662	0.784	6.5	2.2624	0.0000	SURCHARGED	1.003	23	4.5	0.252	0.015	5.4150	
15 minute winter	14	10	3.584	0.034	1.4	0.0042	0.0000	OK	6.000	15	1.4	0.663	0.227	0.0142	
15 minute winter	15	10	3.509	0.028	2.8	0.0074	0.0000	OK	6.001	16	2.7	0.770	0.171	0.0352	
15 minute winter	16	10	2.865	0.065	4.1	0.0177	0.0000	OK	6.002	17	4.0	0.790	0.670	0.0269	
15 minute winter	17	10	2.758	0.061	5.4	0.0158	0.0000	OK	6.003	18	5.4	0.999	0.303	0.0303	
15 minute winter	18	11	2.684	0.043	6.7	0.0108	0.0000	OK	6.004	23	6.7	1.702	0.156	0.0237	
15 minute winter	19	10	3.571	0.021	1.4	0.0026	0.0000	OK	7.000	20	1.4	0.948	0.096	0.0195	
15 minute winter	20	10	2.827	0.027	2.8	0.0075	0.0000	OK	7.001	23	2.7	1.634	0.148	0.0084	
15 minute winter	21	10	2.778	0.032	1.4	0.0042	0.0000	OK	8.000	22	1.4	0.472	0.224	0.0651	
180 minute winter	22	172	2.662	0.139	0.6	0.0347	0.0000	SURCHARGED	8.001	23	0.6	0.490	0.100	0.1435	
180 minute winter	23	172	2.662	0.822	9.3	2.3656	0.0000	SURCHARGED	1.004	28	7.0	0.258	0.023	5.2547	
180 minute winter	24	172	2.662	0.727	4.0	2.1081	0.0000	SURCHARGED	9.000	27	-2.3	0.142	-0.008	15.9269	
15 minute winter	25	10	3.567	0.017	1.4	0.0021	0.0000	OK	10.000	26	1.4	0.937	0.064	0.0090	
15 minute winter	26	10	2.832	0.032	2.8	0.0087	0.0000	OK	10.001	27	2.7	1.316	0.204	0.0204	
180 minute winter	27	172	2.662	0.840	5.8	3.4919	0.0000	SURCHARGED	9.001	28	-3.1	0.144	-0.010	2.6649	
180 minute winter	28	172	2.662	0.859	8.9	2.2720	0.0000	SURCHARGED	1.005	33	8.7	0.250	0.029	3.2675	
15 minute winter	29	10	3.884	0.034	1.4	0.0041	0.0000	OK	11.000	30	1.4	0.645	0.226	0.0259	
15 minute winter	30	10	3.758	0.030	2.8	0.0076	0.0000	OK	11.001	31	2.7	0.749	0.189	0.0278	
15 minute winter	31	11	3.365	0.065	4.1	0.0178	0.0000	OK	11.002	32	4.0	0.787	0.670	0.0262	
15 minute winter	32	11	3.231	0.032	5.4	0.0084	0.0000	OK	11.003	33	5.4	1.979	0.095	0.0371	
180 minute winter	33	172	2.662	0.882	9.5	13.5750	0.0000	SURCHARGED	Hydro-Brake®	34	2.3				50.8
15 minute summer	34	1	1.617	0.000	2.3	0.0000	0.0000	OK							

Results for 100 year +40% Critical Storm Duration. Lowest mass balance: 98.69%															
Event	US Node ID	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status	Link ID	DS Node ID	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	10	2.945	0.045	2.5	0.0055	0.0000	OK	1.000	3	2.5	0.618	0.410	0.0444	
15 minute winter	2	10	2.945	0.045	2.5	0.0055	0.0000	OK	2.000	3	2.5	0.619	0.405	0.0433	
360 minute winter	3	344	2.933	0.144	0.9	0.0372	0.0000	SURCHARGED	1.001	10	0.9	0.968	0.066	0.0608	
360 minute winter	4	344	2.933	0.133	0.3	0.0163	0.0000	SURCHARGED	3.000	5	0.3	0.401	0.050	0.1663	
360 minute winter	5	344	2.933	0.396	0.6	0.0927	0.0000	SURCHARGED	3.001	6	1.3	0.417	0.071	0.0892	
360 minute winter	6	344	2.933	0.447	1.6	0.1033	0.0000	SURCHARGED	3.002	10	2.4	0.555	0.122	0.1939	
15 minute winter	7	11	2.945	0.045	2.5	0.0055	0.0000	OK	4.000	8	2.4	0.724	0.404	0.0723	
360 minute winter	8	344	2.933	0.298	0.6	0.0752	0.0000	SURCHARGED	4.001	9	0.6	0.456	0.036	0.0878	
360 minute winter	9	344	2.933	0.348	0.9	0.0857	0.0000	SURCHARGED	4.002	10	0.9	0.674	0.035	0.1937	
360 minute winter	10	344	2.933	1.033	6.3	2.9875	0.0000	SURCHARGED	1.002	13	5.0	0.240	0.016	3.0900	
360 minute winter	11	344	2.933	0.283	0.3	0.0754	0.0000	SURCHARGED	5.000	12	0.4	0.420	0.021	0.0856	
360 minute winter	12	344	2.933	0.332	0.7	0.0861	0.0000	SURCHARGED	5.001	13	0.7	0.973	0.013	0.0548	
360 minute winter	13	344	2.933	1.055	7.7	3.0459	0.0000	SURCHARGED	1.003	23	7.3	0.234	0.024	5.4150	
15 minute winter	14	10	3.597	0.047	2.5	0.0058	0.0000	OK	6.000	15	2.5	0.776	0.410	0.0219	
15 minute winter	15	10	3.519	0.038	5.0	0.0101	0.0000	OK	6.001	16	5.0	0.833	0.308	0.0519	
15 minute winter	16	11	2.934	0.134	7.4	0.0365	0.0000	SURCHARGED	6.002	17	7.3	0.938	1.210	0.0395	
360 minute winter	17	344	2.933	0.236	1.2	0.0612	0.0000	SURCHARGED	6.003	18	1.2	0.676	0.068	0.0985	
360 minute winter	18	344	2.933	0.292	1.5	0.0737	0.0000	SURCHARGED	6.004	23	1.5	1.110	0.035	0.1057	
15 minute winter	19	10	3.578	0.028	2.5	0.0034	0.0000	OK	7.000	20	2.5	1.102	0.172	0.0302	
360 minute winter	20	344	2.933	0.133	0.6	0.0364	0.0000	SURCHARGED	7.001	23	0.6	1.057	0.032	0.0389	
360 minute winter	21	344	2.933	0.187	0.3	0.0244	0.0000	SURCHARGED	8.000	22	0.3	0.308	0.050	0.1747	
360 minute winter	22	344	2.933	0.410	0.8	0.1026	0.0000	SURCHARGED	8.001	23	0.6	0.481	0.100	0.1435	
360 minute winter	23	344	2.933	1.093	12.0	3.1469	0.0000	SURCHARGED	1.004	28	11.8	0.226	0.039	5.2547	
360 minute winter	24	344	2.933	0.998	4.0	2.8942	0.0000	SURCHARGED	9.000	27	2.4	0.134	0.008	15.9269	
15 minute winter	25	10	3.573	0.023	2.5	0.0028	0.0000	OK	10.000	26	2.5	1.084	0.115	0.0139	
360 minute winter	26	344	2.933	0.133	0.6	0.0364	0.0000	SURCHARGED	10.001	27	0.6	0.850	0.045	0.0767	
360 minute winter	27	344	2.933	1.111	6.0	27.0149	0.0000	SURCHARGED	9.001	28	4.7	0.133	0.015	2.6649	
360 minute winter	28	344	2.933	1.130	14.9	2.9900	0.0000	SURCHARGED	1.005	33	14.4	0.296	0.047	3.2675	
15 minute winter	29	10	3.897	0.047	2.5	0.0057	0.0000	OK	11.000	30	2.5	0.757	0.409	0.0399	
15 minute winter	30	10	3.768	0.040	5.0	0.0104	0.0000	OK	11.001	31	4.9	0.806	0.342	0.0411	
15 minute winter	31	11	3.434	0.134	7.4	0.0365	0.0000	SURCHARGED	11.002	32	7.3	0.939	1.212	0.0383	
15 minute winter	32	10	3.243	0.044	9.7	0.0113	0.0000	OK	11.003	33	9.7	2.313	0.172	0.1033	
360 minute winter	33	344	2.933	1.153	15.6	50.2311	0.0000	SURCHARGED	Hydro-Brake®	34	2.5				80.4
15 minute summer	34	1	1.617	0.000	2.3	0.0000	0.0000	OK							