

Design Settings

Rainfall Methodology	FEH-13	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)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.051	5.00	44.188	1350	505613.481	119375.106	1.225
15	0.022	5.00	43.401	1350	505578.112	119372.401	1.401
2	0.007	5.00	43.616	1350	505596.926	119373.706	1.918
3	0.094	5.00	42.405	1350	505594.836	119340.731	2.091
4	0.037	5.00	40.885	1350	505592.616	119306.350	2.760
5	0.129	5.00	40.904	1350	505565.078	119308.985	2.851
16	0.021	5.00	40.798	1350	505523.824	119338.866	1.425
17	0.020	5.00	39.532	1350	505476.589	119340.994	1.432
18	0.090	5.00	39.418	1350	505475.423	119313.554	2.618
19	0.081	5.00	39.757	1350	505508.620	119311.914	2.157
6	0.085	5.00	40.410	1350	505522.821	119311.201	3.210
7	0.057	5.00	37.585	1500	505521.511	119263.766	3.085
20	0.021	5.00	37.442	1350	505474.320	119284.552	1.742
21	0.043	5.00	36.801	1200	505473.623	119265.847	1.601
22	0.000	5.00	36.114	1200	505475.559	119252.787	1.514
23	0.000	5.00	35.982	1200	505493.545	119251.394	1.782
24	0.000	5.00	35.417	1200	505499.124	119242.739	1.617
8	0.009	5.00	36.200	1500	505522.350	119243.609	3.150
9	0.000	5.00	33.000	1500	505517.881	119222.078	1.900
10	0.000	5.00	33.000	1500	505511.949	119208.210	2.000
11	0.000	5.00	32.500	1500	505501.127	119190.135	1.600
12	0.000	5.00	32.500	1500	505510.367	119174.044	1.630
13	0.000	5.00	32.500	1500	505518.057	119170.282	1.650
14	0.000	5.00	31.982	1500	505535.198	119155.009	1.182

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	16.614	0.600	42.963	41.773	1.190	14.0	225	5.08	50.0
2.000	15	2	18.859	0.600	42.000	41.773	0.227	83.1	225	5.22	50.0
1.001	2	3	33.041	0.600	41.698	40.314	1.384	23.9	300	5.39	50.0
1.002	3	4	34.453	0.600	40.314	38.200	2.114	16.3	300	5.54	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	3.520	140.0	9.2	1.000	1.618	0.051	0.0	39	2.018
2.000	1.435	57.1	4.0	1.176	1.618	0.022	0.0	40	0.831
1.001	3.231	228.4	14.5	1.618	1.791	0.080	0.0	51	1.830
1.002	3.913	276.6	31.4	1.791	2.385	0.174	0.0	68	2.625

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)
1.003	4	5	27.664	0.600	38.125	38.053	0.072	384.2	375	6.04	50.0
1.004	5	6	42.315	0.600	38.053	37.600	0.453	93.4	375	6.41	48.2
3.000	16	6	27.683	0.600	39.373	37.500	1.873	14.8	225	5.13	50.0
4.000	17	18	27.465	0.600	38.100	36.875	1.225	22.4	225	5.16	50.0
4.001	18	20	23.728	0.600	36.800	35.700	1.100	21.6	300	5.28	50.0
4.002	19	6	23.728	0.600	37.600	37.500	0.100	237.3	225	5.47	50.0
1.005	6	7	47.453	0.600	37.200	34.500	2.700	17.6	525	6.56	45.8
1.006	7	8	20.174	0.600	34.500	33.125	1.375	14.7	525	6.62	44.9
5.000	20	21	18.718	0.600	35.700	35.200	0.500	37.4	300	5.40	50.0
5.001	21	22	13.203	0.600	35.200	34.600	0.600	22.0	300	5.47	50.0
5.002	22	23	18.040	0.600	34.600	34.200	0.400	45.1	300	5.60	50.0
5.003	23	24	10.297	0.600	34.200	33.800	0.400	25.7	300	5.65	50.0
5.004	24	8	23.242	0.600	33.800	33.350	0.450	51.6	300	5.83	50.0
1.007	8	9	21.990	0.600	33.050	31.100	1.950	11.3	600	6.67	44.9
1.008	9	10	15.083	0.600	31.100	31.000	0.100	150.8	600	6.80	44.7
1.009	10	11	21.067	0.600	31.000	30.900	0.100	210.7	600	7.01	44.1
1.010	11	12	18.555	0.600	30.900	30.870	0.030	618.5	600	7.32	43.3
1.011	12	13	8.561	0.600	30.870	30.850	0.020	428.1	600	7.45	43.0
1.012	13	14	27.279	0.600	30.850	30.800	0.050	545.6	600	7.89	41.8

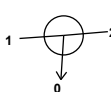
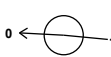
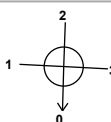
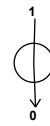
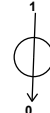
Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.003	0.918	101.4	38.1	2.385	2.476	0.211	0.0	159	0.855
1.004	1.875	207.1	59.2	2.476	2.435	0.340	0.0	137	1.625
3.000	3.421	136.0	3.8	1.200	2.685	0.021	0.0	26	1.522
4.000	2.775	110.3	3.6	1.207	2.318	0.020	0.0	28	1.285
4.001	3.399	240.3	19.9	2.318	1.442	0.110	0.0	58	2.080
4.002	0.844	33.6	14.6	1.932	2.685	0.081	0.0	104	0.817
1.005	5.360	1160.4	87.2	2.685	2.560	0.527	0.0	96	3.215
1.006	5.868	1270.3	94.8	2.560	2.550	0.584	0.0	96	3.509
5.000	2.577	182.2	23.7	1.442	1.301	0.131	0.0	72	1.794
5.001	3.366	237.9	31.4	1.301	1.214	0.174	0.0	73	2.354
5.002	2.347	165.9	31.4	1.214	1.482	0.174	0.0	88	1.820
5.003	3.111	219.9	31.4	1.482	1.317	0.174	0.0	76	2.224
5.004	2.192	155.0	31.4	1.317	2.550	0.174	0.0	91	1.730
1.007	7.277	2057.4	124.5	2.550	1.300	0.767	0.0	99	4.112
1.008	1.980	559.9	123.9	1.300	1.400	0.767	0.0	191	1.606
1.009	1.674	473.2	122.2	1.400	1.000	0.767	0.0	207	1.415
1.010	0.972	274.7	120.0	1.000	1.030	0.767	0.0	277	0.940
1.011	1.170	330.9	119.2	1.030	1.050	0.767	0.0	248	1.078
1.012	1.035	292.7	115.9	1.050	0.582	0.767	0.0	262	0.977

Pipeline Schedule

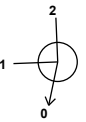
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	16.614	14.0	225	Circular_Default Sewer Type	44.188	42.963	1.000	43.616	41.773	1.618
2.000	18.859	83.1	225	Circular_Default Sewer Type	43.401	42.000	1.176	43.616	41.773	1.618
1.001	33.041	23.9	300	Circular_Default Sewer Type	43.616	41.698	1.618	42.405	40.314	1.791
1.002	34.453	16.3	300	Circular_Default Sewer Type	42.405	40.314	1.791	40.885	38.200	2.385
1.003	27.664	384.2	375	Circular_Default Sewer Type	40.885	38.125	2.385	40.904	38.053	2.476
1.004	42.315	93.4	375	Circular_Default Sewer Type	40.904	38.053	2.476	40.410	37.600	2.435
3.000	27.683	14.8	225	Circular_Default Sewer Type	40.798	39.373	1.200	40.410	37.500	2.685
4.000	27.465	22.4	225	Circular_Default Sewer Type	39.532	38.100	1.207	39.418	36.875	2.318
4.001	23.728	21.6	300	Circular_Default Sewer Type	39.418	36.800	2.318	37.442	35.700	1.442
4.002	23.728	237.3	225	Circular_Default Sewer Type	39.757	37.600	1.932	40.410	37.500	2.685
1.005	47.453	17.6	525	Circular_Default Sewer Type	40.410	37.200	2.685	37.585	34.500	2.560
1.006	20.174	14.7	525	Circular_Default Sewer Type	37.585	34.500	2.560	36.200	33.125	2.550
5.000	18.718	37.4	300	Circular_Default Sewer Type	37.442	35.700	1.442	36.801	35.200	1.301
5.001	13.203	22.0	300	Circular_Default Sewer Type	36.801	35.200	1.301	36.114	34.600	1.214
5.002	18.040	45.1	300	Circular_Default Sewer Type	36.114	34.600	1.214	35.982	34.200	1.482
5.003	10.297	25.7	300	Circular_Default Sewer Type	35.982	34.200	1.482	35.417	33.800	1.317
5.004	23.242	51.6	300	Circular_Default Sewer Type	35.417	33.800	1.317	36.200	33.350	2.550
1.007	21.990	11.3	600	Circular_Default Sewer Type	36.200	33.050	2.550	33.000	31.100	1.300
1.008	15.083	150.8	600	Circular_Default Sewer Type	33.000	31.100	1.300	33.000	31.000	1.400
1.009	21.067	210.7	600	Circular_Default Sewer Type	33.000	31.000	1.400	32.500	30.900	1.000
1.010	18.555	618.5	600	Circular_Default Sewer Type	32.500	30.900	1.000	32.500	30.870	1.030
1.011	8.561	428.1	600	Circular_Default Sewer Type	32.500	30.870	1.030	32.500	30.850	1.050
1.012	27.279	545.6	600	Circular_Default Sewer Type	32.500	30.850	1.050	31.982	30.800	0.582

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	1350	Manhole	Adoptable	2	1350	Manhole	Adoptable
2.000	15	1350	Manhole	Adoptable	2	1350	Manhole	Adoptable
1.001	2	1350	Manhole	Adoptable	3	1350	Manhole	Adoptable
1.002	3	1350	Manhole	Adoptable	4	1350	Manhole	Adoptable
1.003	4	1350	Manhole	Adoptable	5	1350	Manhole	Adoptable
1.004	5	1350	Manhole	Adoptable	6	1350	Manhole	Adoptable
3.000	16	1350	Manhole	Adoptable	6	1350	Manhole	Adoptable
4.000	17	1350	Manhole	Adoptable	18	1350	Manhole	Adoptable
4.001	18	1350	Manhole	Adoptable	20	1350	Manhole	Adoptable
4.002	19	1350	Manhole	Adoptable	6	1350	Manhole	Adoptable
1.005	6	1350	Manhole	Adoptable	7	1500	Manhole	Adoptable
1.006	7	1500	Manhole	Adoptable	8	1500	Manhole	Adoptable
5.000	20	1350	Manhole	Adoptable	21	1200	Manhole	Adoptable
5.001	21	1200	Manhole	Adoptable	22	1200	Manhole	Adoptable
5.002	22	1200	Manhole	Adoptable	23	1200	Manhole	Adoptable
5.003	23	1200	Manhole	Adoptable	24	1200	Manhole	Adoptable
5.004	24	1200	Manhole	Adoptable	8	1500	Manhole	Adoptable
1.007	8	1500	Manhole	Adoptable	9	1500	Manhole	Adoptable
1.008	9	1500	Manhole	Adoptable	10	1500	Manhole	Adoptable
1.009	10	1500	Manhole	Adoptable	11	1500	Manhole	Adoptable
1.010	11	1500	Manhole	Adoptable	12	1500	Manhole	Adoptable
1.011	12	1500	Manhole	Adoptable	13	1500	Manhole	Adoptable
1.012	13	1500	Manhole	Adoptable	14	1500	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
1	505613.481	119375.106	44.188	1.225	1350		0	1.000	42.963	225
15	505578.112	119372.401	43.401	1.401	1350		0	2.000	42.000	225
2	505596.926	119373.706	43.616	1.918	1350		1 2 0	2.000 1.000 1.001	41.773 41.773 41.698	225 225 300
3	505594.836	119340.731	42.405	2.091	1350		1 0	1.001 1.002	40.314 40.314	300 300
4	505592.616	119306.350	40.885	2.760	1350		1 0	1.002 1.003	38.200 38.125	300 375
5	505565.078	119308.985	40.904	2.851	1350		1 0	1.003 1.004	38.053 38.053	375 375
16	505523.824	119338.866	40.798	1.425	1350		0	3.000	39.373	225
17	505476.589	119340.994	39.532	1.432	1350		0	4.000	38.100	225
18	505475.423	119313.554	39.418	2.618	1350		1 0	4.000 4.001	36.875 36.800	225 300
19	505508.620	119311.914	39.757	2.157	1350		0	4.002	37.600	225
6	505522.821	119311.201	40.410	3.210	1350		1 2 2 3 0	4.002 3.000 1.004 1.005	37.500 37.500 37.600 37.200	225 225 375 525
7	505521.511	119263.766	37.585	3.085	1500		1 0	1.005 1.006	34.500 34.500	525 525
20	505474.320	119284.552	37.442	1.742	1350		1 0	4.001 5.000	35.700 35.700	300 300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
21	505473.623	119265.847	36.801	1.601	1200	 1	5.000	35.200	300
						0	5.001	35.200	300
22	505475.559	119252.787	36.114	1.514	1200	 1	5.001	34.600	300
						0	5.002	34.600	300
23	505493.545	119251.394	35.982	1.782	1200	 1	5.002	34.200	300
						0	5.003	34.200	300
24	505499.124	119242.739	35.417	1.617	1200	 1	5.003	33.800	300
						0	5.004	33.800	300
8	505522.350	119243.609	36.200	3.150	1500	 1	5.004	33.350	300
						2	1.006	33.125	525
						0	1.007	33.050	600
9	505517.881	119222.078	33.000	1.900	1500	 1	1.007	31.100	600
						0	1.008	31.100	600
10	505511.949	119208.210	33.000	2.000	1500	 1	1.008	31.000	600
						0	1.009	31.000	600
11	505501.127	119190.135	32.500	1.600	1500	 1	1.009	30.900	600
						0	1.010	30.900	600
12	505510.367	119174.044	32.500	1.630	1500	 1	1.010	30.870	600
						0	1.011	30.870	600
13	505518.057	119170.282	32.500	1.650	1500	 1	1.011	30.850	600
						0	1.012	30.850	600
14	505535.198	119155.009	31.982	1.182	1500	 1	1.012	30.800	600

Simulation Settings

Rainfall Methodology	FEH-13	Skip Steady State	✓	2 year (l/s)	6.1
Rainfall Events	Singular	Drain Down Time (mins)	240	30 year (l/s)	13.8
Summer CV	1.000	Additional Storage (m³/ha)	20.0	100 year (l/s)	19.4
Winter CV	1.000	Starting Level (m)		Check Discharge Volume	✓
Analysis Speed	Normal	Check Discharge Rate(s)	✓	100 year 360 minute (m³)	

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

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

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	1.95
Greenfield Method	IH124	Growth Factor 100 year	2.48
Positively Drained Area (ha)	8.000	Betterment (%)	0
SAAR (mm)	900	QBar	1.8
Soil Index	1	Q 2 year (l/s)	1.6
SPR	0.10	Q 30 year (l/s)	3.5
Region	1	Q 100 year (l/s)	4.5
Growth Factor 2 year	0.90		

Pre-development Discharge Volume

Site Makeup	Greenfield	Return Period (years)	100
Greenfield Method	FSR/FEH	Climate Change (%)	0
Positively Drained Area (ha)	8.000	Storm Duration (mins)	360
Soil Index	1	Betterment (%)	0
SPR	0.10	PR	
CWI		Runoff Volume (m³)	

Node 13 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	30.850	Product Number	CTL-SHE-0102-5200-1400-5200
Design Depth (m)	1.400	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.2	Min Node Diameter (mm)	1200

Node 11 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	30.900
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	177.0	0.0	1.100	734.0	0.0	1.201	0.1	0.0
0.100	415.0	0.0	1.200	995.0	0.0			

Node 5 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	38.053	Slope (1:X)	80.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	3	Depth (m)	0.400
Safety Factor	2.0	Width (m)	10.000	Inf Depth (m)	
Porosity	1.00	Length (m)	25.000		

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.07%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	43.004	0.041	9.7	0.0927	0.0000	OK
15 minute summer	15	10	42.042	0.042	4.2	0.0727	0.0000	OK
15 minute summer	2	10	41.750	0.052	15.0	0.0777	0.0000	OK
15 minute summer	3	10	40.383	0.069	32.7	0.1605	0.0000	OK
15 minute summer	4	11	38.283	0.158	39.4	0.2689	0.0000	OK
15 minute summer	5	12	38.181	0.128	63.1	6.8695	0.0000	OK
15 minute summer	16	10	39.400	0.027	4.0	0.0459	0.0000	OK
15 minute summer	17	10	38.129	0.029	3.8	0.0489	0.0000	OK
15 minute summer	18	10	36.859	0.059	20.8	0.1254	0.0000	OK
15 minute summer	19	10	37.710	0.110	15.4	0.2391	0.0000	OK
15 minute summer	6	12	37.292	0.092	78.9	0.1810	0.0000	OK
15 minute summer	7	11	34.598	0.098	88.6	0.2094	0.0000	OK
15 minute summer	20	10	35.777	0.077	24.7	0.1289	0.0000	OK
15 minute summer	21	10	35.276	0.076	32.7	0.1270	0.0000	OK
15 minute summer	22	10	34.696	0.096	32.4	0.1085	0.0000	OK
15 minute summer	23	11	34.282	0.082	32.3	0.0922	0.0000	OK
15 minute summer	24	11	33.898	0.098	32.5	0.1104	0.0000	OK
15 minute summer	8	11	33.147	0.097	121.9	0.1773	0.0000	OK
15 minute summer	9	11	31.319	0.219	121.7	0.3875	0.0000	OK
15 minute winter	10	8	31.273	0.273	114.8	0.4825	0.0000	OK
480 minute summer	11	352	31.220	0.320	31.3	129.0184	0.0000	OK
480 minute summer	12	352	31.219	0.349	5.8	0.6174	0.0000	OK
480 minute summer	13	352	31.219	0.369	5.3	0.6526	0.0000	OK
15 minute summer	14	1	30.800	0.000	4.8	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	9.6	1.993	0.069	0.0801	
15 minute summer	15	2.000	2	4.1	0.828	0.072	0.0935	
15 minute summer	2	1.001	3	14.9	1.479	0.065	0.3346	
15 minute summer	3	1.002	4	32.4	2.420	0.117	0.4818	
15 minute summer	4	1.003	5	39.0	1.092	0.385	1.0423	
15 minute summer	5	1.004	6	49.2	1.532	0.238	1.3655	
15 minute summer	16	3.000	6	3.9	1.513	0.029	0.0720	
15 minute summer	17	4.000	18	3.7	1.285	0.034	0.0795	
15 minute summer	18	4.001	20	20.7	1.726	0.086	0.2858	
15 minute summer	19	4.002	6	15.0	0.829	0.448	0.4314	
15 minute summer	6	1.005	7	78.8	2.964	0.068	1.2627	
15 minute summer	7	1.006	8	88.1	3.314	0.069	0.5364	
15 minute summer	20	5.000	21	24.5	1.727	0.134	0.2651	
15 minute summer	21	5.001	22	32.4	1.946	0.136	0.2208	
15 minute summer	22	5.002	23	32.3	1.861	0.195	0.3140	
15 minute summer	23	5.003	24	32.5	1.845	0.148	0.1819	
15 minute summer	24	5.004	8	32.8	1.706	0.211	0.4463	
15 minute summer	8	1.007	9	121.7	2.057	0.059	1.3492	
15 minute summer	9	1.008	10	122.2	1.324	0.218	1.4211	
15 minute winter	10	1.009	11	116.4	2.212	0.246	1.3306	
480 minute summer	11	1.010	12	5.8	0.247	0.021	2.9956	
480 minute summer	12	1.011	13	5.3	0.155	0.016	1.5078	
480 minute summer	13	Hydro-Brake®	14	5.2				183.8

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.07%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	43.030	0.067	24.8	0.1512	0.0000	OK
15 minute summer	15	10	42.068	0.068	10.7	0.1183	0.0000	OK
15 minute summer	2	10	41.781	0.083	38.6	0.1243	0.0000	OK
15 minute summer	3	10	40.426	0.112	84.2	0.2616	0.0000	OK
15 minute summer	4	11	38.400	0.275	101.6	0.4679	0.0000	OK
15 minute summer	5	12	38.271	0.218	162.8	19.4394	0.0000	OK
15 minute summer	16	10	39.415	0.042	10.2	0.0727	0.0000	OK
15 minute summer	17	10	38.146	0.046	9.7	0.0780	0.0000	OK
15 minute summer	18	10	36.895	0.095	53.4	0.2018	0.0000	OK
15 minute summer	19	11	37.827	0.227	39.4	0.4961	0.0000	SURCHARGED
15 minute summer	6	11	37.348	0.147	198.4	0.2892	0.0000	OK
15 minute summer	7	11	34.663	0.163	223.9	0.3484	0.0000	OK
15 minute summer	20	10	35.830	0.130	63.4	0.2173	0.0000	OK
15 minute summer	21	10	35.331	0.131	83.8	0.2191	0.0000	OK
15 minute summer	22	10	34.766	0.166	83.4	0.1882	0.0000	OK
15 minute summer	23	10	34.343	0.143	83.0	0.1621	0.0000	OK
15 minute summer	24	11	33.970	0.170	82.9	0.1922	0.0000	OK
15 minute summer	8	11	33.204	0.154	310.2	0.2813	0.0000	OK
480 minute winter	9	464	31.561	0.461	40.3	0.8151	0.0000	OK
480 minute winter	10	464	31.561	0.561	39.5	0.9918	0.0000	OK
480 minute winter	11	464	31.561	0.661	38.8	313.9718	0.0000	SURCHARGED
480 minute winter	12	472	31.562	0.692	6.5	1.2229	0.0000	SURCHARGED
480 minute winter	13	464	31.562	0.712	11.0	1.2581	0.0000	SURCHARGED
15 minute summer	14	1	30.800	0.000	5.2	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	24.6	2.587	0.176	0.1583	
15 minute summer	15	2.000	2	10.5	1.077	0.185	0.1845	
15 minute summer	2	1.001	3	38.4	1.938	0.168	0.6576	
15 minute summer	3	1.002	4	83.6	2.452	0.302	1.2682	
15 minute summer	4	1.003	5	100.1	1.449	0.987	2.0648	
15 minute summer	5	1.004	6	121.2	1.916	0.585	2.6839	
15 minute summer	16	3.000	6	10.1	1.996	0.074	0.1402	
15 minute summer	17	4.000	18	9.6	1.696	0.087	0.1554	
15 minute summer	18	4.001	20	53.2	2.203	0.221	0.5747	
15 minute summer	19	4.002	6	38.2	1.044	1.137	0.8392	
15 minute summer	6	1.005	7	197.5	3.728	0.170	2.5313	
15 minute summer	7	1.006	8	222.2	4.201	0.175	1.0687	
15 minute summer	20	5.000	21	62.9	2.138	0.345	0.5512	
15 minute summer	21	5.001	22	83.4	2.392	0.351	0.4605	
15 minute summer	22	5.002	23	83.0	2.267	0.500	0.6614	
15 minute summer	23	5.003	24	82.9	2.235	0.377	0.3824	
15 minute summer	24	5.004	8	83.8	2.149	0.541	0.9067	
15 minute summer	8	1.007	9	309.9	2.538	0.151	2.7165	
480 minute winter	9	1.008	10	39.5	0.927	0.071	3.8207	
480 minute winter	10	1.009	11	38.8	0.914	0.082	5.8542	
480 minute winter	11	1.010	12	6.5	0.272	0.024	5.2265	
480 minute winter	12	1.011	13	11.0	0.213	0.033	2.4114	
480 minute winter	13	Hydro-Brake®	14	5.2				193.6

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.07%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	43.057	0.094	45.5	0.2125	0.0000	OK
15 minute summer	15	10	42.095	0.095	19.6	0.1657	0.0000	OK
15 minute summer	2	10	41.812	0.114	70.9	0.1708	0.0000	OK
15 minute summer	3	10	40.472	0.158	154.5	0.3687	0.0000	OK
15 minute summer	4	10	38.658	0.533	186.6	0.9061	0.0000	SURCHARGED
15 minute summer	5	13	38.373	0.320	298.6	41.6920	0.0000	OK
15 minute summer	16	10	39.431	0.058	18.8	0.0993	0.0000	OK
15 minute summer	17	10	38.162	0.062	17.9	0.1068	0.0000	OK
15 minute summer	18	10	36.934	0.134	98.1	0.2830	0.0000	OK
15 minute summer	19	11	38.221	0.621	72.3	1.3549	0.0000	SURCHARGED
15 minute summer	6	11	37.398	0.198	341.6	0.3876	0.0000	OK
15 minute summer	7	11	34.727	0.227	389.2	0.4854	0.0000	OK
15 minute summer	20	10	35.893	0.193	116.5	0.3225	0.0000	OK
15 minute summer	21	10	35.402	0.202	154.0	0.3373	0.0000	OK
15 minute summer	22	10	34.874	0.274	153.2	0.3098	0.0000	OK
15 minute summer	23	11	34.445	0.245	152.2	0.2766	0.0000	OK
15 minute summer	24	11	34.154	0.354	151.4	0.4007	0.0000	SURCHARGED
15 minute summer	8	11	33.256	0.206	543.1	0.3753	0.0000	OK
960 minute winter	9	930	32.086	0.986	41.8	1.7430	0.0000	SURCHARGED
960 minute winter	10	915	32.086	1.086	41.2	1.9183	0.0000	SURCHARGED
960 minute winter	11	930	32.086	1.186	41.0	679.2137	0.0000	SURCHARGED
960 minute winter	12	945	32.086	1.216	5.9	2.1486	0.0000	SURCHARGED
960 minute winter	13	930	32.087	1.237	6.2	2.1852	0.0000	SURCHARGED
15 minute summer	14	1	30.800	0.000	5.2	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	45.2	3.023	0.323	0.2487	
15 minute summer	15	2.000	2	19.4	1.263	0.339	0.2890	
15 minute summer	2	1.001	3	70.6	2.277	0.309	1.0261	
15 minute summer	3	1.002	4	153.6	2.502	0.555	1.8622	
15 minute summer	4	1.003	5	183.4	1.748	1.809	2.8991	
15 minute summer	5	1.004	6	197.9	2.079	0.956	4.0279	
15 minute summer	16	3.000	6	18.6	2.375	0.137	0.2172	
15 minute summer	17	4.000	18	17.7	2.013	0.160	0.2415	
15 minute summer	18	4.001	20	97.7	2.496	0.407	0.9274	
15 minute summer	19	4.002	6	70.2	1.766	2.092	0.9289	
15 minute summer	6	1.005	7	340.6	4.178	0.294	3.8846	
15 minute summer	7	1.006	8	387.4	4.775	0.305	1.6379	
15 minute summer	20	5.000	21	115.6	2.356	0.635	0.9208	
15 minute summer	21	5.001	22	153.2	2.571	0.644	0.7789	
15 minute summer	22	5.002	23	152.2	2.408	0.918	1.1618	
15 minute summer	23	5.003	24	151.4	2.393	0.688	0.6792	
15 minute summer	24	5.004	8	148.0	2.319	0.955	1.4940	
15 minute summer	8	1.007	9	542.5	2.691	0.264	4.0363	
960 minute winter	9	1.008	10	41.2	0.759	0.074	4.2485	
960 minute winter	10	1.009	11	41.0	0.792	0.087	5.9341	
960 minute winter	11	1.010	12	5.9	0.266	0.021	5.2265	
960 minute winter	12	1.011	13	6.2	0.185	0.019	2.4114	
960 minute winter	13	Hydro-Brake®	14	5.2				322.3