

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)	0.200
CV	1.000	Preferred Cover Depth (m)	0.900
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)	Invert Level (m)
101	0.015	5.00	77.284	450	394461.133	180853.327	1.084	76.200
102	0.015	5.00	77.218	450	394462.816	180837.315	1.178	76.040
103	0.015	5.00	76.950	450	394470.776	180838.151	1.090	75.860
112	0.022	5.00	76.950	450	394489.323	180855.321	1.160	75.790
104	0.022	5.00	76.922	1200	394490.716	180842.062	1.352	75.570
105	0.022	5.00	76.784	1200	394499.834	180843.020	1.374	75.410
113	0.022	5.00	76.330	1200	394519.484	180837.165	1.280	75.050
106	0.022	5.00	76.700	1200	394501.621	180826.018	1.860	74.840
107	0.022	5.00	76.764	1200	394479.861	180823.732	2.224	74.540
114	0.022	5.00	76.600	450	394503.149	180808.141	0.650	75.950
115	0.022	5.00	76.655	1200	394506.777	180773.618	1.445	75.210
116	0.022	5.00	76.560	1200	394490.218	180771.878	1.515	75.045
108	0.022	5.00	76.453	1200	394484.708	180773.565	2.213	74.240
117	0.021	5.00	75.840	1500	394470.466	180783.663	1.750	74.090
109	0.020	5.00	76.030	1200	394473.675	180770.810	1.860	74.170
HW1			75.500		394464.287	180783.703	1.450	74.050
HW2			75.500		394459.824	180773.308	1.500	74.000
110			75.500	1500	394458.675	180767.791	1.600	73.900
111			75.500	1200	394445.638	180766.265	1.680	73.820

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	✓	Check Discharge Rate(s)	x
Summer CV	1.000	Drain Down Time (mins)	240	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m³/ha)	0.0		

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 %)
1	0	0	0
30	0	0	0
100	45	0	0

Node 110 Online Orifice Control

Flap Valve	x	Invert Level (m)	73.900	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.031		

Node HW2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	74.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	66.5	66.5	1.500	291.5	301.3

Node 117 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	74.400
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	136.0	136.0	0.800	136.0	169.1	0.801	0.0	169.1

Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	101	10	76.230	0.030	1.6	0.0048	0.0000	OK
15 minute summer	102	10	76.075	0.035	3.2	0.0055	0.0000	OK
15 minute summer	103	10	75.913	0.053	4.7	0.0085	0.0000	OK
15 minute summer	112	10	75.827	0.037	2.4	0.0059	0.0000	OK
15 minute summer	104	10	75.630	0.060	9.3	0.0674	0.0000	OK
15 minute summer	105	10	75.463	0.053	11.7	0.0596	0.0000	OK
15 minute summer	113	10	75.082	0.032	2.4	0.0365	0.0000	OK
15 minute summer	106	11	74.929	0.089	16.2	0.1005	0.0000	OK
15 minute summer	107	11	74.633	0.093	18.4	0.1054	0.0000	OK
15 minute summer	114	10	75.980	0.030	2.4	0.0048	0.0000	OK
15 minute summer	115	11	75.262	0.052	4.7	0.0591	0.0000	OK
15 minute summer	116	11	75.113	0.068	6.9	0.0774	0.0000	OK
720 minute summer	108	555	74.379	0.139	5.9	0.1567	0.0000	OK
720 minute summer	117	525	74.378	0.288	6.5	0.5085	0.0000	OK
720 minute summer	109	570	74.378	0.208	6.3	0.2351	0.0000	OK
720 minute summer	HW1	525	74.378	0.328	6.2	0.0000	0.0000	SURCHARGED
720 minute summer	HW2	525	74.378	0.378	6.6	35.8269	0.0000	SURCHARGED
720 minute summer	110	525	74.378	0.478	5.3	0.8442	0.0000	SURCHARGED
720 minute summer	111	525	73.846	0.026	1.3	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	101	1.000	102	1.6	0.563	0.089	0.0452	
15 minute summer	102	1.001	103	3.1	0.732	0.118	0.0347	
15 minute summer	103	1.002	104	4.7	0.849	0.258	0.1115	
15 minute summer	112	2.000	104	2.3	0.708	0.126	0.0441	
15 minute summer	104	1.003	105	9.3	1.202	0.135	0.0708	
15 minute summer	105	1.004	106	11.5	1.105	0.121	0.1845	
15 minute summer	113	3.000	106	2.3	0.281	0.045	0.1893	
15 minute summer	106	1.005	107	16.2	1.147	0.307	0.3093	
15 minute summer	107	1.006	108	18.3	0.780	0.214	1.1844	
15 minute summer	114	4.000	115	2.3	0.597	0.090	0.1383	
15 minute summer	115	4.001	116	4.6	0.695	0.261	0.1105	
15 minute summer	116	4.002	108	6.9	0.934	0.366	0.0426	
720 minute summer	108	1.007	109	5.9	0.671	0.068	0.4760	
720 minute summer	117	1.009	HW1	6.2	0.513	0.070	0.4323	
720 minute summer	109	1.008	117	6.1	0.594	0.071	0.8049	
720 minute summer	HW1	1.010	HW2	6.6	0.679	0.089	0.7967	
720 minute summer	HW2	1.011	110	5.3	0.231	0.036	0.3968	
720 minute summer	110	1.012	111	1.3	0.452	0.016	0.0391	54.5

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.66%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	101	10	76.262	0.062	6.1	0.0098	0.0000	OK
15 minute summer	102	10	76.116	0.076	12.1	0.0121	0.0000	OK
15 minute summer	103	11	75.993	0.133	18.3	0.0212	0.0000	OK
15 minute summer	112	10	75.867	0.077	8.9	0.0122	0.0000	OK
15 minute summer	104	10	75.699	0.129	35.4	0.1461	0.0000	OK
15 minute summer	105	11	75.517	0.107	44.1	0.1210	0.0000	OK
15 minute summer	113	12	75.185	0.135	8.9	0.1527	0.0000	OK
15 minute summer	106	12	75.171	0.331	61.6	0.3740	0.0000	SURCHARGED
15 minute summer	107	12	74.868	0.328	65.0	0.3706	0.0000	SURCHARGED
15 minute summer	114	10	76.010	0.060	8.9	0.0096	0.0000	OK
15 minute summer	115	11	75.452	0.242	17.7	0.2742	0.0000	SURCHARGED
15 minute summer	116	11	75.283	0.238	24.6	0.2693	0.0000	SURCHARGED
15 minute summer	108	12	74.687	0.447	92.3	0.5055	0.0000	SURCHARGED
1440 minute summer	117	990	74.682	0.592	9.5	37.4872	0.0000	SURCHARGED
1440 minute summer	109	990	74.682	0.512	8.9	0.5786	0.0000	SURCHARGED
1440 minute summer	HW1	990	74.682	0.632	6.0	0.0000	0.0000	SURCHARGED
1440 minute summer	HW2	990	74.682	0.682	6.0	80.1536	0.0000	SURCHARGED
1440 minute summer	110	990	74.681	0.781	4.6	1.3809	0.0000	SURCHARGED
1440 minute summer	111	990	73.849	0.029	1.7	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	101	1.000	102	6.1	0.775	0.342	0.1273	
15 minute summer	102	1.001	103	12.2	0.942	0.455	0.1017	
15 minute summer	103	1.002	104	17.9	1.132	0.992	0.3252	
15 minute summer	112	2.000	104	8.8	1.005	0.476	0.1170	
15 minute summer	104	1.003	105	35.3	1.674	0.512	0.1930	
15 minute summer	105	1.004	106	43.9	1.437	0.461	0.4989	
15 minute summer	113	3.000	106	10.1	0.374	0.194	0.6805	
15 minute summer	106	1.005	107	56.1	1.434	1.064	0.8702	
15 minute summer	107	1.006	108	61.6	0.982	0.720	3.5492	
15 minute summer	114	4.000	115	8.8	0.789	0.339	0.4202	
15 minute summer	115	4.001	116	16.1	0.917	0.913	0.2931	
15 minute summer	116	4.002	108	24.4	1.384	1.291	0.0996	
15 minute summer	108	1.007	109	92.7	1.317	1.066	0.8008	
1440 minute summer	117	1.009	HW1	6.0	0.417	0.067	0.4351	
1440 minute summer	109	1.008	117	8.9	0.451	0.103	0.9329	
1440 minute summer	HW1	1.010	HW2	6.0	0.522	0.081	0.7967	
1440 minute summer	HW2	1.011	110	4.6	0.208	0.031	0.3968	
1440 minute summer	110	1.012	111	1.7	0.487	0.020	0.0469	136.5

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.51%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	101	12	77.067	0.867	11.3	0.1378	0.0000	FLOOD RISK
15 minute summer	102	12	77.034	0.994	17.9	0.1580	0.0000	FLOOD RISK
15 minute summer	103	12	76.950	1.090	26.4	0.1733	0.2521	FLOOD
15 minute summer	112	12	76.737	0.947	16.5	0.1506	0.0000	FLOOD RISK
15 minute summer	104	12	76.659	1.089	55.5	1.2316	0.0000	FLOOD RISK
15 minute summer	105	12	76.560	1.150	60.5	1.3008	0.0000	FLOOD RISK
15 minute summer	113	12	76.317	1.267	16.5	1.4330	0.0000	FLOOD RISK
15 minute summer	106	12	76.302	1.462	81.3	1.6536	0.0000	SURCHARGED
15 minute summer	107	12	75.646	1.106	93.7	1.2505	0.0000	SURCHARGED
15 minute summer	114	12	76.404	0.454	16.5	0.0723	0.0000	FLOOD RISK
15 minute summer	115	12	76.170	0.960	30.3	1.0856	0.0000	SURCHARGED
15 minute summer	116	12	75.688	0.643	42.6	0.7277	0.0000	SURCHARGED
15 minute summer	108	12	75.227	0.987	147.4	1.1166	0.0000	SURCHARGED
1440 minute summer	117	1170	75.124	1.034	17.8	95.4233	0.0000	SURCHARGED
1440 minute summer	109	1170	75.124	0.954	16.6	1.0790	0.0000	SURCHARGED
1440 minute summer	HW1	1170	75.124	1.074	11.3	0.0000	0.0000	SURCHARGED
1440 minute summer	HW2	1170	75.124	1.124	11.3	169.4600	0.0000	SURCHARGED
1440 minute summer	110	1170	75.124	1.224	4.4	2.1625	0.0000	SURCHARGED
1440 minute summer	111	1170	73.853	0.033	2.2	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	101	1.000	102	8.4	0.798	0.473	0.2834	
15 minute summer	102	1.001	103	15.9	0.953	0.595	0.1409	
15 minute summer	103	1.002	104	24.3	1.380	1.345	0.3577	
15 minute summer	112	2.000	104	15.4	1.063	0.833	0.2347	
15 minute summer	104	1.003	105	44.8	1.664	0.650	0.3646	
15 minute summer	105	1.004	106	56.5	1.458	0.592	0.6799	
15 minute summer	113	3.000	106	18.2	0.510	0.351	0.8374	
15 minute summer	106	1.005	107	80.6	2.027	1.529	0.8702	
15 minute summer	107	1.006	108	93.4	1.327	1.092	3.5492	
15 minute summer	114	4.000	115	14.5	0.923	0.558	0.6111	
15 minute summer	115	4.001	116	27.2	1.547	1.541	0.2931	
15 minute summer	116	4.002	108	40.7	2.313	2.158	0.1014	
15 minute summer	108	1.007	109	147.2	2.091	1.692	0.8008	
1440 minute summer	117	1.009	HW1	11.3	0.445	0.127	0.4351	
1440 minute summer	109	1.008	117	16.6	0.451	0.192	0.9329	
1440 minute summer	HW1	1.010	HW2	11.3	0.536	0.153	0.7967	
1440 minute summer	HW2	1.011	110	4.4	0.250	0.030	0.3968	
1440 minute summer	110	1.012	111	2.2	0.521	0.025	0.0552	168.3