

Summary of Critical Results by Maximum Level (Rank 1) for Surface Network 1

Simulation Criteria			
Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coefficient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		
Number of Input Hydrographs	0	Number of Offline Controls	0
Number of Online Controls	1	Number of Time/Area Diagrams	0
		Number of Storage Structures	1
		Number of Real Time Controls	0
Synthetic Rainfall Details			
Rainfall Model	FEH	Data Type	Catchment
FEH Rainfall Version	2013	Cv (Summer)	0.750
Site Location	GB 347450 257350 SO 47450 57350	Cv (Winter)	0.840
Margin for Flood Risk Warning (mm)			300.0
Analysis Timestep	2.5	Second Increment (Extended)	
DTS Status			OFF
DVD Status			ON
Inertia Status			ON
Profile(s)			Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440		
Return Period(s) (years)			100
Climate Change (%)			45

WARNING: Half Drain Time has not been calculated as the structure is too full.

									Water	Surcharged	Flooded	
US/MH			Return	Climate	First (X)		First (Y)	First (Z)	Overflow	Level	Depth	Volume
PN	Name	Storm	Period	Change	Surcharge		Flood	Overflow	Act.	(m)	(m)	(m³)
1.000	S1	15 Winter	100	+45%	100/15	Summer				93.720	0.995	0.000
1.001	S2	15 Winter	100	+45%	100/15	Summer				93.612	1.397	0.000
2.000	S82	15 Winter	100	+45%	100/15	Summer				93.484	2.159	0.000
1.002	S3	15 Winter	100	+45%	100/15	Summer				93.507	2.382	0.000
3.000	S4	15 Winter	100	+45%	100/15	Summer				93.649	1.549	0.000
3.001	S5	15 Winter	100	+45%	100/15	Summer				93.623	1.968	0.000
3.002	S6	15 Winter	100	+45%	100/15	Summer				93.420	2.120	0.000
1.003	S7	15 Winter	100	+45%	100/15	Summer				93.180	2.440	0.000
1.004	S8	15 Winter	100	+45%	100/15	Summer				92.971	2.458	0.000
1.005	S9	15 Winter	100	+45%	100/15	Summer				92.729	2.419	0.000
1.006	S10	15 Winter	100	+45%	100/15	Summer				92.496	2.280	0.000
1.007	S11	15 Winter	100	+45%	100/15	Summer				92.233	2.126	0.000
1.008	S12	15 Winter	100	+45%	100/15	Summer				91.951	1.909	0.000
4.000	HD8	15 Winter	100	+45%	100/15	Summer				91.833	0.833	0.000
4.001	HD9	15 Winter	100	+45%	100/15	Summer				91.791	1.631	0.000
1.009	S13	15 Winter	100	+45%	100/15	Summer				91.729	2.129	0.000
1.010	S14	15 Winter	100	+45%	100/15	Summer				91.581	2.166	0.000
1.011	S15	15 Winter	100	+45%	100/15	Summer	100/15 Winter			91.448	2.111	2.728
5.000	S16	15 Winter	100	+45%	100/15	Winter				91.829	0.404	0.000
6.000	S17	15 Winter	100	+45%	100/15	Winter				91.832	0.407	0.000
5.001	S18	15 Winter	100	+45%	100/15	Summer				91.783	0.673	0.000
5.002	S19	15 Winter	100	+45%	100/15	Summer				91.584	1.484	0.000
1.012	S20	15 Winter	100	+45%	100/15	Summer				91.295	2.179	0.000
7.000	S21	15 Winter	100	+45%	100/15	Summer				94.176	1.576	0.000
7.001	S22	15 Winter	100	+45%	100/15	Summer				93.833	1.693	0.000
7.002	S23	15 Winter	100	+45%	100/15	Summer				93.325	1.610	0.000
7.003	S24	15 Winter	100	+45%	100/15	Summer				92.894	1.809	0.000
7.004	S25	15 Winter	100	+45%	100/15	Summer				92.548	1.723	0.000
7.005	S26	15 Winter	100	+45%	100/15	Summer				91.787	1.502	0.000

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PN	US/MH Name	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
1.000	S1	0.51			51.2	SURCHARGED	
1.001	S2	0.25			56.0	SURCHARGED	
2.000	S82	0.19			9.3	SURCHARGED	
1.002	S3	1.17			177.6	SURCHARGED	
3.000	S4	0.20			23.0	FLOOD RISK	
3.001	S5	0.70			103.1	FLOOD RISK	
3.002	S6	0.36			105.9	SURCHARGED	
1.003	S7	1.27			292.8	SURCHARGED	
1.004	S8	1.38			314.2	SURCHARGED	
1.005	S9	1.91			330.1	SURCHARGED	
1.006	S10	1.86			346.9	SURCHARGED	
1.007	S11	2.09			352.7	SURCHARGED	
1.008	S12	0.66			338.6	SURCHARGED	
4.000	HD8	0.20			43.2	SURCHARGED	
4.001	HD9	0.22			41.2	FLOOD RISK	
1.009	S13	0.81			347.7	FLOOD RISK	
1.010	S14	1.02			355.4	FLOOD RISK	
1.011	S15	0.85			397.1	FLOOD	1
5.000	S16	0.55			30.5	SURCHARGED	
6.000	S17	0.55			32.0	SURCHARGED	
5.001	S18	0.66			103.6	SURCHARGED	
5.002	S19	0.99			175.8	SURCHARGED	
1.012	S20	1.04			519.9	FLOOD RISK	
7.000	S21	0.89			97.1	FLOOD RISK	
7.001	S22	1.11			128.2	FLOOD RISK	
7.002	S23	0.95			211.5	FLOOD RISK	
7.003	S24	1.40			265.4	FLOOD RISK	
7.004	S25	1.47			300.7	SURCHARGED	
7.005	S26	0.89			351.2	SURCHARGED	

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PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)
1.013	S27	15 Winter	100	+45%	100/15 Summer				90.971	2.249
1.014	S28	15 Winter	100	+45%	100/15 Summer				90.873	2.295
1.015	S29	15 Winter	100	+45%	100/15 Summer				90.702	2.203
1.016	S30	15 Winter	100	+45%	100/15 Summer				90.522	2.105
1.017	S31	15 Winter	100	+45%	100/15 Summer				90.341	2.006
8.000	HD1	15 Winter	100	+45%					92.179	-0.066
8.001	HD2	15 Winter	100	+45%	100/15 Winter				92.142	0.232
8.002	HD3	15 Winter	100	+45%	100/15 Summer				92.096	0.521
8.003	HD4	15 Winter	100	+45%	100/15 Summer				91.887	0.887
8.004	HD5	15 Winter	100	+45%	100/15 Summer				91.760	1.010
9.000	HD7	15 Winter	100	+45%	100/15 Summer				91.697	0.932
8.005	HD6	15 Winter	100	+45%	100/15 Summer				91.646	1.096
8.006	S32	15 Winter	100	+45%	100/15 Summer				91.517	1.317
8.007	S33	15 Winter	100	+45%	100/15 Summer				90.948	1.673
8.008	S34	15 Winter	100	+45%	100/15 Summer	100/15 Winter			90.742	1.792
10.000	S35	15 Winter	100	+45%	100/15 Summer				90.736	1.336
8.009	S36	15 Winter	100	+45%	100/15 Summer	100/15 Winter			90.508	2.163
8.010	S37	15 Winter	100	+45%	100/15 Summer				90.351	2.384
8.011	S38	15 Winter	100	+45%	100/15 Summer				90.146	2.593
11.000	S39	15 Winter	100	+45%	100/15 Summer	100/15 Winter			89.857	1.757
1.018	S40	15 Winter	100	+45%	100/15 Summer				89.923	3.037
1.019	S41	15 Winter	100	+45%	100/15 Summer				89.628	2.966
1.020	S42	15 Winter	100	+45%	100/15 Summer				89.312	2.756
12.000	S43	15 Winter	100	+45%	100/15 Summer				94.264	1.364
12.001	S44	15 Winter	100	+45%	100/15 Summer				94.015	1.615
12.002	S45	15 Winter	100	+45%	100/15 Summer				93.480	1.705
13.000	S46	15 Winter	100	+45%	100/15 Summer	100/15 Winter			93.225	1.775
12.003	S47	15 Winter	100	+45%	100/15 Summer				93.223	2.183
14.000	S57	15 Winter	100	+45%	100/15 Summer				93.819	1.194
14.001	S48	15 Winter	100	+45%	100/15 Summer				92.772	0.672
12.004	S49	15 Winter	100	+45%	100/15 Summer				92.461	2.266
12.005	S50	15 Winter	100	+45%	100/15 Summer				91.423	1.753
12.006	S51	15 Winter	100	+45%	100/15 Summer				90.890	1.720
12.007	S52	15 Winter	100	+45%	100/15 Summer				90.122	1.667
12.008	S53	15 Winter	100	+45%	100/15 Summer				89.560	1.315
1.021	S54	15 Winter	100	+45%	100/15 Summer				88.974	2.621
1.022	S55	15 Winter	100	+45%	100/15 Summer				88.248	1.999
1.023	S56	15 Winter	100	+45%	100/15 Summer				87.514	1.341
15.000	S59	15 Winter	100	+45%					90.313	-0.112
15.001	S60	15 Winter	100	+45%					88.756	-0.119
1.024	S61	15 Winter	100	+45%	100/15 Summer				86.759	0.729
1.025	S62	15 Winter	100	+45%	100/15 Summer				86.330	0.476
1.026	S63	15 Winter	100	+45%	100/15 Summer				85.893	0.163
1.027	S64	30 Winter	100	+45%					85.176	-0.338
1.028	S65	30 Winter	100	+45%	100/15 Summer				84.629	0.249
1.029	S66	30 Winter	100	+45%	100/15 Summer				84.173	0.153
1.030	S67	30 Winter	100	+45%	100/15 Winter				83.639	0.049
1.031	S68	30 Winter	100	+45%					82.620	-0.585
1.032	S69	30 Winter	100	+45%					79.710	-0.465
1.033	S70	240 Winter	100	+45%	100/180 Winter				79.050	0.125
16.000	Basin	360 Winter	100	+45%	100/15 Summer				78.654	1.504
1.034	S71 HB	360 Winter	100	+45%	100/15 Summer				78.654	2.354
1.035	S72	360 Winter	100	+45%					75.795	-0.165
1.036	S73	360 Winter	100	+45%					75.395	-0.165
1.037	S74	360 Winter	100	+45%					75.065	-0.165
1.038	S75	360 Winter	100	+45%					74.699	-0.161
1.039	S76	360 Winter	100	+45%					74.582	-0.163
1.040	S77	360 Winter	100	+45%					74.384	-0.161
1.041	S78	360 Winter	100	+45%					74.200	-0.225
1.042	S79	360 Winter	100	+45%					71.100	-0.200

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PN	US/MH Name	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
1.013	S27	0.000	1.06			815.8	SURCHARGED	
1.014	S28	0.000	1.06			802.3	SURCHARGED	
1.015	S29	0.000	1.05			800.6	SURCHARGED	
1.016	S30	0.000	1.05			806.8	SURCHARGED	
1.017	S31	0.000	0.36			824.2	SURCHARGED	
8.000	HD1	0.000	0.38			18.5	OK	
8.001	HD2	0.000	0.48			29.8	SURCHARGED	
8.002	HD3	0.000	1.03			64.9	SURCHARGED	
8.003	HD4	0.000	0.59			71.3	SURCHARGED	
8.004	HD5	0.000	0.82			91.7	SURCHARGED	
9.000	HD7	0.000	0.54			24.4	SURCHARGED	
8.005	HD6	0.000	0.76			94.1	SURCHARGED	
8.006	S32	0.000	1.08			190.2	SURCHARGED	
8.007	S33	0.000	0.85			189.5	FLOOD RISK	
8.008	S34	2.944	1.12			318.2	FLOOD	1
10.000	S35	0.000	0.50			82.8	SURCHARGED	
8.009	S36	1.358	0.75			434.9	FLOOD	1
8.010	S37	0.000	0.77			454.1	FLOOD RISK	
8.011	S38	0.000	0.70			454.2	SURCHARGED	
11.000	S39	4.460	0.31			71.4	FLOOD	1
1.018	S40	0.000	1.18			1254.7	FLOOD RISK	
1.019	S41	0.000	1.34			1280.8	SURCHARGED	
1.020	S42	0.000	1.28			1303.5	SURCHARGED	
12.000	S43	0.000	0.72			95.9	SURCHARGED	
12.001	S44	0.000	1.00			142.5	SURCHARGED	
12.002	S45	0.000	0.63			179.6	SURCHARGED	
13.000	S46	1.941	0.54			70.4	FLOOD	1
12.003	S47	0.000	1.09			366.9	FLOOD RISK	
14.000	S57	0.000	1.61			90.3	SURCHARGED	
14.001	S48	0.000	0.35			120.6	SURCHARGED	
12.004	S49	0.000	1.52			491.2	SURCHARGED	
12.005	S50	0.000	1.11			522.8	SURCHARGED	
12.006	S51	0.000	1.10			605.9	SURCHARGED	
12.007	S52	0.000	1.75			615.8	SURCHARGED	
12.008	S53	0.000	0.59			623.7	SURCHARGED	
1.021	S54	0.000	2.04			1924.0	SURCHARGED	
1.022	S55	0.000	2.22			1924.2	SURCHARGED	
1.023	S56	0.000	2.04			1949.2	SURCHARGED	
15.000	S59	0.000	0.50			46.9	OK	
15.001	S60	0.000	0.44			84.5	OK	
1.024	S61	0.000	1.42			1998.3	SURCHARGED	
1.025	S62	0.000	1.43			2015.0	SURCHARGED	
1.026	S63	0.000	1.41			2008.3	SURCHARGED	
1.027	S64	0.000	0.74			1996.7	OK	
1.028	S65	0.000	1.17			1910.1	SURCHARGED	
1.029	S66	0.000	1.12			1863.6	SURCHARGED	
1.030	S67	0.000	1.12			1843.6	SURCHARGED	
1.031	S68	0.000	0.41			1843.8	OK	
1.032	S69	0.000	0.60			1841.9	OK	
1.033	S70	0.000	0.18			748.8	SURCHARGED	
16.000	Basin	0.000	0.00			0.0	FLOOD RISK	
1.034	S71 HB	0.000	0.42			28.3	FLOOD RISK	
1.035	S72	0.000	0.42			28.3	OK	
1.036	S73	0.000	0.42			28.3	OK	
1.037	S74	0.000	0.42			28.3	OK	
1.038	S75	0.000	0.44			28.3	OK	
1.039	S76	0.000	0.43			28.3	OK	
1.040	S77	0.000	0.44			28.3	OK	
1.041	S78	0.000	0.14			28.3	OK	

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PN	US/MH Name	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status	Level Exceeded
		Volume (m³)			Time (mins)	Flow (l/s)		
1.042	S79	0.000	0.24			28.3	OK	

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									Water	Surcharged	Flooded	
PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.
1.043	S80	360 Winter	100	+45%					70.192	-0.208	0.000	0.21