














Alan Wood & Partners (Hull)		Page 1
341 Beverley Road Hull Yorkshire, HU5 1LD	45822 - Keepmoat Homes Ltd. Lincs Lakes SW Calcs - Phase 1 - Rev P1	
Date 20/08/2025 File 45822 Modelling 09.08 -...	Designed by E Dalby Checked by J Padley	
Innovyze	Network 2020.1.3	

STORM SEWER DESIGN by the Modified Rational Method

Network Design Table for Storm

# - Indicates pipe length does not match coordinates  
 « - Indicates pipe capacity < flow

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section	Type	Auto Design
S1.000	50.196	0.122	410.0	0.179	5.00	0.0	0.600	o	450	Pipe/Conduit		
S1.001	13.996	0.034	410.0	0.034	0.00	0.0	0.600	o	450	Pipe/Conduit		
S1.002	30.948	0.075	410.0	0.074	0.00	0.0	0.600	o	450	Pipe/Conduit		
S2.000	10.349	0.042	246.4	0.175	5.00	0.0	0.600	o	375	Pipe/Conduit		
S2.001	15.488	0.066	235.7	0.015	0.00	0.0	0.600	o	375	Pipe/Conduit		
S1.003	53.223	0.108	495.0	0.072	0.00	0.0	0.600	o	525	Pipe/Conduit		
S1.004	8.016	0.016	495.0	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit		
S3.000	63.586	0.260	245.0	0.207	5.00	0.0	0.600	o	300	Pipe/Conduit		
S3.001	7.839	0.033	237.5	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit		
S1.005	37.526	0.064	585.0	0.124	0.00	0.0	0.600	o	600	Pipe/Conduit		
S1.006	7.537	0.012	625.0	0.000	0.00	0.0	0.600	o	675	Pipe/Conduit		
S4.000	90.000	0.277	325.0	0.341	5.00	0.0	0.600	o	375	Pipe/Conduit		

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	10.00	5.84	2.217	0.179	0.0	0.0	0.0	1.00	158.7	4.8
S1.001	10.00	6.07	2.095	0.213	0.0	0.0	0.0	1.00	158.7	5.8
S1.002	10.00	6.59	2.060	0.287	0.0	0.0	0.0	1.00	158.7	7.8
S2.000	10.00	5.15	2.168	0.175	0.0	0.0	0.0	1.15	127.0	4.7
S2.001	10.00	5.37	2.126	0.190	0.0	0.0	0.0	1.18	129.9	5.1
S1.003	10.00	7.48	1.910	0.549	0.0	0.0	0.0	1.00	216.5	14.9
S1.004	10.00	7.61	1.802	0.549	0.0	0.0	0.0	1.00	216.5	14.9
S3.000	10.00	6.06	2.305	0.207	0.0	0.0	0.0	1.00	70.7	5.6
S3.001	10.00	6.17	1.970	0.207	0.0	0.0	0.0	1.17	129.4	5.6
S1.005	10.00	8.24	1.711	0.880	0.0	0.0	0.0	1.00	282.6	23.8
S1.006	10.00	8.36	1.572	0.880	0.0	0.0	0.0	1.04	372.5	23.8
S4.000	10.00	6.50	2.137	0.341	0.0	0.0	0.0	1.00	110.4	9.2

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.007	5.374	0.009	625.0	0.052	0.00	0.0	0.600	o	675	Pipe/Conduit	
S1.008	26.073	0.042	620.8	0.100	0.00	0.0	0.600	o	675	Pipe/Conduit	
S1.009	22.678	0.036	625.0	0.029	0.00	0.0	0.600	o	675	Pipe/Conduit	
S5.000	57.484	0.235	245.0	0.068	5.00	0.0	0.600	o	300	Pipe/Conduit	
S5.001	32.380	0.267	121.3	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.010	59.041	0.110	536.7	0.000	0.00	0.0	0.600	o	675	Pipe/Conduit	
S6.000	48.558	0.149	325.0	0.180	5.00	0.0	0.600	o	375	Pipe/Conduit	
S6.001	26.046	0.064	407.0	0.068	0.00	0.0	0.600	o	450	Pipe/Conduit	
S7.000	44.600	0.395	112.9	0.088	5.00	0.0	0.600	o	225	Pipe/Conduit	
S6.002	36.836	0.074	495.0	0.035	0.00	0.0	0.600	o	525	Pipe/Conduit	
S6.003	27.452	0.055	495.0	0.127	0.00	0.0	0.600	o	525	Pipe/Conduit	
S6.004	15.000	0.030	495.0	0.023	0.00	0.0	0.600	o	525	Pipe/Conduit	
S6.005	11.902	0.024	495.0	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
S6.006	34.032	0.068	500.0	0.152	0.00	0.0	0.600	o	600	Pipe/Conduit	
S1.011	106.895	0.171	625.0	0.000	0.00	0.0	0.600	o	675	Pipe/Conduit	















Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.007	10.00	8.44	1.560	1.273	0.0	0.0	0.0	1.04	372.5	34.5
S1.008	10.00	8.86	1.551	1.373	0.0	0.0	0.0	1.04	373.8	37.2
S1.009	10.00	9.22	1.509	1.402	0.0	0.0	0.0	1.04	372.5	38.0
S5.000	10.00	5.96	2.350	0.068	0.0	0.0	0.0	1.00	70.7	1.8
S5.001	10.00	6.34	2.115	0.068	0.0	0.0	0.0	1.43	100.8	1.8
S1.010	10.00	10.10	1.473	1.470	0.0	0.0	0.0	1.12	402.3	39.8
S6.000	10.00	5.81	2.128	0.180	0.0	0.0	0.0	1.00	110.4	4.9
S6.001	10.00	6.24	1.904	0.248	0.0	0.0	0.0	1.00	159.3	6.7
S7.000	10.00	5.60	2.460	0.088	0.0	0.0	0.0	1.23	48.9	2.4
S6.002	10.00	6.86	1.765	0.371	0.0	0.0	0.0	1.00	216.5	10.0
S6.003	10.00	7.31	1.690	0.498	0.0	0.0	0.0	1.00	216.5	13.5
S6.004	10.00	7.56	1.635	0.521	0.0	0.0	0.0	1.00	216.5	14.1
S6.005	10.00	7.76	1.604	0.521	0.0	0.0	0.0	1.00	216.5	14.1
S6.006	10.00	8.29	1.505	0.673	0.0	0.0	0.0	1.08	306.0	18.2
S1.011	10.00	11.81	1.362	2.143	0.0	0.0	0.0	1.04	372.5	58.0

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S8.000	16.155	0.096	168.3	0.049	5.00	0.0	0.600	o	225	Pipe/Conduit	
S8.001	38.452	0.157	245.0	0.102	0.00	0.0	0.600	o	300	Pipe/Conduit	
S8.002	13.031	0.241	54.1	0.128	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.012	89.747	0.144	625.0	0.000	0.00	0.0	0.600	o	675	Pipe/Conduit	
S1.013	70.679	0.113	625.0	0.080	0.00	0.0	0.600	o	675	Pipe/Conduit	
S1.014	21.458#	0.035	613.1	0.000	0.00	0.0	0.600	o	675	Pipe/Conduit	
S9.000	60.606	0.247	245.0	0.205	5.00	0.0	0.600	o	300	Pipe/Conduit	
S10.000	14.054	0.083	170.0	0.037	5.00	0.0	0.600	o	225	Pipe/Conduit	
S10.001	20.183	0.082	245.0	0.094	0.00	0.0	0.600	o	300	Pipe/Conduit	
S10.002	21.705	0.221	98.2	0.073	0.00	0.0	0.600	o	300	Pipe/Conduit	
S9.001	15.000	0.137	109.5	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
S11.000	11.479	0.047	245.0	0.103	5.00	0.0	0.600	o	300	Pipe/Conduit	
S11.001	20.903	0.085	245.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S11.002	21.379	0.087	245.0	0.083	0.00	0.0	0.600	o	300	Pipe/Conduit	
















Network Results Table

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S8.000	10.00	5.27	2.136	0.049	0.0	0.0	0.0	1.00	40.0	1.3
S8.001	10.00	5.91	1.965	0.151	0.0	0.0	0.0	1.00	70.7	4.1
S8.002	10.00	6.01	1.808	0.279	0.0	0.0	0.0	2.14	151.4	7.6
S1.012	10.00	13.25	1.191	2.422	0.0	0.0	0.0	1.04	372.5	65.6
S1.013	10.00	14.38	1.048	2.502	0.0	0.0	0.0	1.04	372.5	67.8
S1.014	10.00	14.72	0.935	2.502	0.0	0.0	0.0	1.05	376.1	67.8
S9.000	10.00	6.01	2.406	0.205	0.0	0.0	0.0	1.00	70.7	5.6
S10.000	10.00	5.23	2.620	0.037	0.0	0.0	0.0	1.00	39.8	1.0
S10.001	10.00	5.57	2.462	0.131	0.0	0.0	0.0	1.00	70.7	3.5
S10.002	10.00	5.80	2.380	0.204	0.0	0.0	0.0	1.59	112.2	5.5
S9.001	10.00	6.14	2.009	0.409	0.0	0.0	0.0	1.94	308.9	11.1
S11.000	10.00	5.19	2.404	0.103	0.0	0.0	0.0	1.00	70.7	2.8
S11.001	10.00	5.54	2.357	0.103	0.0	0.0	0.0	1.00	70.7	2.8
S11.002	10.00	5.90	2.272	0.186	0.0	0.0	0.0	1.00	70.7	5.0

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S12.000	12.271	0.072	170.0	0.114	5.00	0.0	0.600	o	225	Pipe/Conduit	
S12.001	21.440	0.088	243.6	0.020	0.00	0.0	0.600	o	300	Pipe/Conduit	
S12.002	18.418	0.217	84.9	0.012	0.00	0.0	0.600	o	300	Pipe/Conduit	
S11.003	38.850	0.120	325.0	0.120	0.00	0.0	0.600	o	375	Pipe/Conduit	
S11.004	13.876	0.043	325.0	0.014	0.00	0.0	0.600	o	450	Pipe/Conduit	
S9.002	57.722	0.115	500.0	0.196	0.00	0.0	0.600	o	675	Pipe/Conduit	
S9.003	7.411	0.015	500.0	0.011	0.00	0.0	0.600	o	675	Pipe/Conduit	
S9.004	29.568	0.059	500.0	0.047	0.00	0.0	0.600	o	675	Pipe/Conduit	
S9.005	19.269	0.039	500.0	0.008	0.00	0.0	0.600	o	675	Pipe/Conduit	
S9.006	11.118	0.022	500.0	0.022	0.00	0.0	0.600	o	675	Pipe/Conduit	
S9.007	8.073	0.016	500.0	0.000	0.00	0.0	0.600	o	675	Pipe/Conduit	
S9.008	71.599	0.143	500.0	0.079	0.00	0.0	0.600	o	675	Pipe/Conduit	
S9.009	23.192#	0.337	68.8	0.084	0.00	0.0	0.600	o	675	Pipe/Conduit	
S1.015	7.627	0.031	246.0	3.352	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.016	24.635	0.529	46.6	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S12.000	10.00	5.20	2.643	0.114	0.0	0.0	0.0	1.00	39.8	3.1
S12.001	10.00	5.56	2.496	0.134	0.0	0.0	0.0	1.00	70.9	3.6
S12.002	10.00	5.74	2.408	0.146	0.0	0.0	0.0	1.71	120.7	4.0
S11.003	10.00	6.54	2.110	0.452	0.0	0.0	0.0	1.00	110.4	12.2
S11.004	10.00	6.75	1.915	0.466	0.0	0.0	0.0	1.12	178.5	12.6
S9.002	10.00	7.58	1.647	1.071	0.0	0.0	0.0	1.17	417.0	29.0
S9.003	10.00	7.68	1.531	1.082	0.0	0.0	0.0	1.17	417.0	29.3
S9.004	10.00	8.10	1.516	1.129	0.0	0.0	0.0	1.17	417.0	30.6
S9.005	10.00	8.38	1.457	1.137	0.0	0.0	0.0	1.17	417.0	30.8
S9.006	10.00	8.54	1.419	1.159	0.0	0.0	0.0	1.17	417.0	31.4
S9.007	10.00	8.65	1.396	1.159	0.0	0.0	0.0	1.17	417.0	31.4
S9.008	10.00	9.68	1.380	1.238	0.0	0.0	0.0	1.17	417.0	33.5
S9.009	10.00	9.80	1.237	1.322	0.0	0.0	0.0	3.16	1131.8	35.8
S1.015	10.00	14.84	0.900	7.176	0.0	0.0	0.0	1.00	70.5<	194.3
S1.016	10.00	15.02	0.869	7.176	0.0	0.0	0.0	2.31	163.2<	194.3

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Online Controls for Storm


Hydro-Brake® Optimum Manhole: S127, DS/PN: S1.016, Volume (m³): 3.9

Unit Reference	MD-SHE-0259-3700-1000-3700
Design Head (m)	1.000
Design Flow (l/s)	37.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	259
Invert Level (m)	0.869
Minimum Outlet Pipe Diameter (mm)	300
Suggested Manhole Diameter (mm)	1800

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	37.0
Flush-Flo™	0.403	37.0
Kick-Flo®	0.759	32.4
Mean Flow over Head Range	-	30.2

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	8.3	1.200	40.4	3.000	62.8	7.000	94.9
0.200	26.6	1.400	43.5	3.500	67.7	7.500	98.1
0.300	36.4	1.600	46.4	4.000	72.3	8.000	101.3
0.400	37.0	1.800	49.1	4.500	76.5	8.500	104.3
0.500	36.6	2.000	51.6	5.000	80.5	9.000	107.3
0.600	35.8	2.200	54.1	5.500	84.4	9.500	110.2
0.800	33.2	2.400	56.4	6.000	88.0		
1.000	37.0	2.600	58.6	6.500	91.5		


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Storage Structures for Storm

Tank or Pond Manhole: SLake Out, DS/PN: S1.015

Invert Level (m) 0.900

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	28597.0	1.800	33519.0

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000      Additional Flow - % of Total Flow 0.000  
Hot Start (mins)                      0                      MADD Factor \* 10m<sup>3</sup>/ha Storage 0.000  
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 Storage Structures 1  
Number of Online Controls 1      Number of Time/Area Diagrams 0  
Number of Offline Controls 0      Number of Real Time Controls 0


Synthetic Rainfall Details

Rainfall Model                      FSR                      Ratio R 0.400  
Region England and Wales Cv (Summer) 0.750  
M5-60 (mm)                      18.300 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm)                      300.0  
Analysis Timestep 2.5 Second Increment (Extended)  
DTS Status                      OFF  
DVD Status                      OFF  
Inertia Status                      OFF

Profile(s)                      Summer and Winter  
Duration(s) (mins)                      15, 30, 60, 120, 180, 240, 360, 480, 600,  
720, 960, 1440, 2160, 2880, 4320, 5760,  
7200, 8640, 10080  
Return Period(s) (years)                      100  
Climate Change (%)                      40

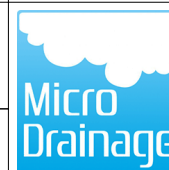
PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S1.000	S20 30	Winter	100	+40%	100/15	Summer			3.524
S1.001	S21 30	Winter	100	+40%	100/15	Summer			3.499
S1.002	S22 30	Winter	100	+40%	100/15	Summer			3.481
S2.000	S19A 30	Winter	100	+40%	100/15	Summer			3.491
S2.001	S19B 30	Winter	100	+40%	100/15	Summer			3.473
S1.003	S23 30	Winter	100	+40%	100/15	Summer			3.449
S1.004	S24 30	Winter	100	+40%	100/15	Summer			3.403
S3.000	S25 15	Winter	100	+40%	100/15	Summer			3.590
S3.001	S26 30	Winter	100	+40%	100/15	Summer			3.402
S1.005	S27 30	Winter	100	+40%	100/15	Summer			3.382
S1.006	S28 30	Winter	100	+40%	100/15	Summer			3.332
S4.000	S29 15	Winter	100	+40%	100/15	Summer			3.509
S1.007	S30 30	Winter	100	+40%	100/15	Summer			3.313
S1.008	S31 30	Winter	100	+40%	100/15	Summer			3.285
S1.009	S32 30	Winter	100	+40%	100/15	Summer			3.223
S5.000	S1 30	Winter	100	+40%	100/15	Summer			3.199
S5.001	S2 30	Winter	100	+40%	100/15	Summer			3.177

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Surcharged		Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)						
S1.000	S20	0.857	0.000	0.52			74.4	SURCHARGED	
S1.001	S21	0.955	0.000	0.76			78.3	FLOOD RISK	
S1.002	S22	0.970	0.000	0.73			99.9	SURCHARGED	
S2.000	S19A	0.948	0.000	0.78			73.3	FLOOD RISK	
S2.001	S19B	0.972	0.000	0.73			75.9	FLOOD RISK	
S1.003	S23	1.014	0.000	0.92			179.7	SURCHARGED	
S1.004	S24	1.076	0.000	1.34			172.5	SURCHARGED	
S3.000	S25	0.985	0.000	1.56			104.9	FLOOD RISK	
S3.001	S26	1.057	0.000	0.99			74.4	SURCHARGED	
S1.005	S27	1.071	0.000	1.19			283.9	SURCHARGED	
S1.006	S28	1.085	0.000	1.18			277.0	SURCHARGED	
S4.000	S29	0.997	0.000	1.60			169.0	FLOOD RISK	
S1.007	S30	1.078	0.000	1.51			415.6	SURCHARGED	
S1.008	S31	1.058	0.000	1.66			439.5	SURCHARGED	
S1.009	S32	1.038	0.000	1.84			437.5	SURCHARGED	
S5.000	S1	0.549	0.000	0.44			29.3	SURCHARGED	
S5.001	S2	0.761	0.000	0.32			29.6	SURCHARGED	


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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
S1.010	S33	30 Winter	100	+40%	100/15 Summer			
S6.000	S44	30 Winter	100	+40%	100/15 Summer			
S6.001	S46	30 Winter	100	+40%	100/15 Summer			
S7.000	S48	30 Winter	100	+40%	100/15 Summer			
S6.002	S50	30 Winter	100	+40%	100/15 Summer			
S6.003	S51	30 Winter	100	+40%	100/15 Summer			
S6.004	S52	30 Winter	100	+40%	100/15 Summer			
S6.005	S53	30 Winter	100	+40%	100/15 Summer			
S6.006	S54	30 Winter	100	+40%	100/15 Summer			
S1.011	S131	30 Winter	100	+40%	100/15 Summer			
S8.000	S71	30 Winter	100	+40%	100/15 Summer			
S8.001	S72	30 Winter	100	+40%	100/15 Summer			
S8.002	S73	30 Winter	100	+40%	100/15 Summer			
S1.012	S132	30 Winter	100	+40%	100/15 Summer			
S1.013	S133	30 Winter	100	+40%	100/15 Summer			
S1.014	S134	30 Winter	100	+40%	100/15 Summer			
S9.000	S66	15 Winter	100	+40%	100/15 Summer			
S10.000	S43A	15 Winter	100	+40%	100/15 Summer			
S10.001	S43B	15 Winter	100	+40%	100/15 Summer			
S10.002	S42	15 Winter	100	+40%	100/15 Summer			
S9.001	S67	15 Winter	100	+40%	100/15 Summer			
S11.000	S35	15 Winter	100	+40%	100/15 Summer			
S11.001	S36	15 Winter	100	+40%	100/15 Summer			
S11.002	S37	15 Winter	100	+40%	100/15 Summer			
S12.000	S41A	15 Winter	100	+40%	100/15 Summer			
S12.001	S41B	15 Winter	100	+40%	100/15 Summer			
S12.002	S40	15 Winter	100	+40%	100/15 Summer			
S11.003	S39	15 Winter	100	+40%	100/15 Summer			
S11.004	S38A	15 Winter	100	+40%	100/15 Summer			
S9.002	S38B	15 Winter	100	+40%	100/15 Summer			
S9.003	S68	15 Winter	100	+40%	100/15 Summer			
S9.004	S69	15 Winter	100	+40%	100/15 Summer			
S9.005	S70	15 Winter	100	+40%	100/15 Summer			
S9.006	S83	15 Winter	100	+40%	100/15 Summer			
S9.007	S84	15 Winter	100	+40%	100/15 Summer			
S9.008	S85	15 Winter	100	+40%	100/15 Summer			
S9.009	S82	15 Winter	100	+40%				
S1.015	SLake Out	2880 Winter	100	+40%				
S1.016	S127	2880 Winter	100	+40%				


PN	US/MH Name	Water Surcharged Flooded			Half Drain Pipe		Status
		Level (m)	Depth (m)	Volume (m <sup>3</sup> )	Flow / Overflow Cap. (l/s)	Time (mins)	
S1.010	S33	3.159	1.011	0.000	1.20	425.4	SURCHARGED
S6.000	S44	3.226	0.723	0.000	0.76	77.1	SURCHARGED
S6.001	S46	3.194	0.841	0.000	0.70	93.9	SURCHARGED

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap. (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
S7.000	S48	3.228	0.543	0.000	0.83		38.6	SURCHARGED
S6.002	S50	3.172	0.883	0.000	0.70		129.8	SURCHARGED
S6.003	S51	3.147	0.931	0.000	0.95		169.0	SURCHARGED
S6.004	S52	3.114	0.955	0.000	1.36		168.0	SURCHARGED
S6.005	S53	3.085	0.956	0.000	1.37		160.5	SURCHARGED
S6.006	S54	3.060	0.955	0.000	0.98		207.8	SURCHARGED
S1.011	S131	3.019	0.981	0.000	1.65		569.8	SURCHARGED
S8.000	S71	2.650	0.289	0.000	0.60		21.3	SURCHARGED
S8.001	S72	2.636	0.371	0.000	1.00		65.3	SURCHARGED
S8.002	S73	2.606	0.498	0.000	1.00		122.4	SURCHARGED
S1.012	S132	2.573	0.706	0.000	1.76		598.3	SURCHARGED
S1.013	S133	2.132	0.409	0.000	1.78		594.8	SURCHARGED
S1.014	S134	1.762	0.152	0.000	2.55		595.6	SURCHARGED
S9.000	S66	3.376	0.670	0.000	1.57		105.3	SURCHARGED
S10.000	S43A	3.102	0.257	0.000	0.52		18.2	SURCHARGED
S10.001	S43B	3.073	0.311	0.000	1.15		70.8	SURCHARGED
S10.002	S42	3.007	0.327	0.000	1.11		109.2	SURCHARGED
S9.001	S67	2.877	0.418	0.000	0.93		191.2	SURCHARGED
S11.000	S35	3.597	0.893	0.000	0.90		51.0	SURCHARGED
S11.001	S36	3.560	0.903	0.000	0.77		47.6	SURCHARGED
S11.002	S37	3.512	0.940	0.000	1.37		84.8	SURCHARGED
S12.000	S41A	3.725	0.857	0.000	1.65		56.2	FLOOD RISK
S12.001	S41B	3.536	0.741	0.000	1.08		61.7	SURCHARGED
S12.002	S40	3.448	0.740	0.000	0.63		65.6	SURCHARGED
S11.003	S39	3.369	0.884	0.000	2.13		199.6	SURCHARGED
S11.004	S38A	2.901	0.536	0.000	1.57		202.4	SURCHARGED
S9.002	S38B	2.782	0.461	0.000	1.27		464.6	SURCHARGED
S9.003	S68	2.628	0.422	0.000	2.45		463.2	SURCHARGED
S9.004	S69	2.545	0.354	0.000	1.42		467.4	SURCHARGED
S9.005	S70	2.436	0.304	0.000	1.75		464.3	SURCHARGED
S9.006	S83	2.347	0.253	0.000	2.31		464.6	SURCHARGED
S9.007	S84	2.211	0.139	0.000	2.08		465.9	SURCHARGED
S9.008	S85	2.120	0.064	0.000	1.24		462.5	SURCHARGED
S9.009	S82	1.631	-0.281	0.000	0.64		469.3	OK
S1.015	SLake Out	1.089	-0.111	0.000	0.61		27.1	OK*
S1.016	S127	1.071	-0.098	0.000	0.19		27.1	OK

PN	US/MH Name	Level Exceeded
S1.010	S33	
S6.000	S44	
S6.001	S46	
S7.000	S48	
S6.002	S50	
S6.003	S51	

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PN	US/MH Name	Level Exceeded
S6.004	S52	
S6.005	S53	
S6.006	S54	
S1.011	S131	
S8.000	S71	
S8.001	S72	
S8.002	S73	
S1.012	S132	
S1.013	S133	
S1.014	S134	
S9.000	S66	
S10.000	S43A	
S10.001	S43B	
S10.002	S42	
S9.001	S67	
S11.000	S35	
S11.001	S36	
S11.002	S37	
S12.000	S41A	
S12.001	S41B	
S12.002	S40	
S11.003	S39	
S11.004	S38A	
S9.002	S38B	
S9.003	S68	
S9.004	S69	
S9.005	S70	
S9.006	S83	
S9.007	S84	
S9.008	S85	
S9.009	S82	
S1.015	SLake Out	
S1.016	S127	