BMC

BELL MUNRO CONSULTING LTD.

Burnage Cricket Club
Stockport

Hydraulic Calculations Package
April 2026

	Initials	Signature	Date
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STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Surface Network 1

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	2	PIMP (%)	100
M5-60 (mm)	18.000	Add Flow / Climate Change (%)	0
Ratio R	0.370	Minimum Backdrop Height (m)	0.200
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	1.500
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	1.200
Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	1.00
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

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Area Summary for Surface Network 1

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	User	-	100	0.010	0.010	0.010
1.001	-	-	100	0.000	0.000	0.000
1.002	User	-	100	0.006	0.006	0.006
1.003	-	-	100	0.000	0.000	0.000
2.000	User	-	100	0.020	0.020	0.020
1.004	User	-	100	0.016	0.016	0.016
3.000	User	-	100	0.008	0.008	0.008
3.001	-	-	100	0.000	0.000	0.000
1.005	-	-	100	0.000	0.000	0.000
1.006	User	-	100	0.013	0.013	0.013
	User	-	100	0.003	0.003	0.016
4.000	User	-	100	0.012	0.012	0.012
4.001	-	-	100	0.000	0.000	0.000
5.000	User	-	100	0.006	0.006	0.006
5.001	User	-	100	0.002	0.002	0.002
6.000	User	-	100	0.025	0.025	0.025
4.002	-	-	100	0.000	0.000	0.000
4.003	User	-	100	0.020	0.020	0.020
7.000	User	-	100	0.008	0.008	0.008
7.001	-	-	100	0.000	0.000	0.000
7.002	-	-	100	0.000	0.000	0.000
7.003	-	-	100	0.000	0.000	0.000
8.000	User	-	100	0.006	0.006	0.006
8.001	-	-	100	0.000	0.000	0.000
1.007	User	-	100	0.008	0.008	0.008
9.000	User	-	100	0.009	0.009	0.009
9.001	-	-	100	0.000	0.000	0.000
10.000	User	-	100	0.011	0.011	0.011
9.002	-	-	100	0.000	0.000	0.000
9.003	-	-	100	0.000	0.000	0.000
1.008	User	-	100	0.058	0.058	0.058
11.000	User	-	100	0.017	0.017	0.017
11.001	-	-	100	0.000	0.000	0.000
11.002	-	-	100	0.000	0.000	0.000
11.003	-	-	100	0.000	0.000	0.000
12.000	User	-	100	0.011	0.011	0.011
13.000	User	-	100	0.010	0.010	0.010
12.001	-	-	100	0.000	0.000	0.000
14.000	User	-	100	0.008	0.008	0.008
15.000	User	-	100	0.010	0.010	0.010
12.002	-	-	100	0.000	0.000	0.000
12.003	-	-	100	0.000	0.000	0.000
11.004	User	-	100	0.088	0.088	0.088
16.000	User	-	100	0.010	0.010	0.010
17.000	User	-	100	0.011	0.011	0.011
16.001	-	-	100	0.000	0.000	0.000

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Area Summary for Surface Network 1

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
18.000	User	-	100	0.009	0.009	0.009
	User	-	100	0.002	0.002	0.011
19.000	User	-	100	0.009	0.009	0.009
16.002	-	-	100	0.000	0.000	0.000
16.003	-	-	100	0.000	0.000	0.000
1.009	User	-	100	0.019	0.019	0.019
20.000	User	-	100	0.006	0.006	0.006
	User	-	100	0.002	0.002	0.008
	User	-	100	0.002	0.002	0.010
20.001	User	-	100	0.005	0.005	0.005
20.002	User	-	100	0.009	0.009	0.009
20.003	-	-	100	0.000	0.000	0.000
21.000	-	-	100	0.000	0.000	0.000
21.001	User	-	100	0.019	0.019	0.019
21.002	-	-	100	0.000	0.000	0.000
1.010	User	-	100	0.026	0.026	0.026
22.000	User	-	100	0.005	0.005	0.005
22.001	-	-	100	0.000	0.000	0.000
22.002	User	-	100	0.014	0.014	0.014
22.003	-	-	100	0.000	0.000	0.000
23.000	User	-	100	0.005	0.005	0.005
23.001	-	-	100	0.000	0.000	0.000
23.002	User	-	100	0.013	0.013	0.013
23.003	-	-	100	0.000	0.000	0.000
1.011	User	-	100	0.064	0.064	0.064
24.000	User	-	100	0.004	0.004	0.004
24.001	-	-	100	0.000	0.000	0.000
24.002	User	-	100	0.013	0.013	0.013
25.000	-	-	100	0.000	0.000	0.000
25.001	-	-	100	0.000	0.000	0.000
24.003	-	-	100	0.000	0.000	0.000
26.000	User	-	100	0.005	0.005	0.005
	User	-	100	0.004	0.004	0.008
26.001	-	-	100	0.000	0.000	0.000
26.002	User	-	100	0.013	0.013	0.013
27.000	-	-	100	0.000	0.000	0.000
27.001	-	-	100	0.000	0.000	0.000
26.003	-	-	100	0.000	0.000	0.000
1.012	-	-	100	0.000	0.000	0.000
1.013	User	-	100	0.010	0.010	0.010
1.014	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.665	0.665	0.665

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Free Flowing Outfall Details for Surface Network 1

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
1.014	Outfall	45.562	41.671	0.000	1200	0

Simulation Criteria for Surface Network 1

Volumetric Runoff Coeff	0.840	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	0.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 1 Number of Storage Structures 3 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Winter
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Storm Duration (mins)	30
Ratio R	0.370		

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Online Controls for Surface Network 1

Hydro-Brake® Optimum Manhole: SW11, DS/PN: 1.013, Volume (m³): 35.3

Unit Reference	MD-SHE-0100-5000-1400-5000
Design Head (m)	1.400
Design Flow (l/s)	5.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	100
Invert Level (m)	41.780
Minimum Outlet Pipe Diameter (mm)	150
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.400	5.0	Kick-Flo®	0.855	4.0
Flush-Flo™	0.416	5.0	Mean Flow over Head Range	-	4.4

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	3.3	1.200	4.7	3.000	7.1	7.000	10.7
0.200	4.6	1.400	5.0	3.500	7.7	7.500	11.0
0.300	4.9	1.600	5.3	4.000	8.2	8.000	11.4
0.400	5.0	1.800	5.6	4.500	8.6	8.500	11.7
0.500	5.0	2.000	5.9	5.000	9.1	9.000	12.0
0.600	4.9	2.200	6.2	5.500	9.5	9.500	12.3
0.800	4.3	2.400	6.4	6.000	9.9		
1.000	4.3	2.600	6.7	6.500	10.3		

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Storage Structures for Surface Network 1

Cellular Storage Manhole: Attenuation Tank 3a, DS/PN: 6.000

Invert Level (m) 44.244 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	70.0	70.0	0.500	0.0	83.6
0.400	70.0	83.6			

Cellular Storage Manhole: AttenuationTank 2a, DS/PN: 25.000

Invert Level (m) 43.880 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	126.0	126.0	0.900	0.0	169.2
0.800	126.0	169.2			

Cellular Storage Manhole: Attenuation Tank 1a, DS/PN: 27.000

Invert Level (m) 43.778 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	126.0	126.0	0.900	0.0	169.2
0.800	126.0	169.2			

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Summary of Critical Results by Maximum Flood Volume (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	0.000
Hot Start Level (mm)	0	Inlet Coeffiecient	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 Time/Area Diagrams 0
Number of Online Controls 1 Number of Storage Structures 3 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.370
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	18.000	Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	300.0
Analysis Timestep	2.5 Second Increment (Extended)
DTS Status	ON
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)	1, 2, 30, 100
Climate Change (%)	0, 0, 0, 45

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	PSW04 (RE)	15 Summer	1	+0%	100/15 Summer			
1.001	PSW05	15 Summer	1	+0%	100/15 Summer			
1.002	PSW06	15 Summer	1	+0%	100/15 Summer			
1.003	PS1	15 Summer	1	+0%	100/15 Summer			
2.000	Car Park01	15 Summer	1	+0%	100/15 Winter			
1.004	Car Park 01a	15 Summer	1	+0%	30/15 Summer			
3.000	PSW12 (RE)	15 Summer	1	+0%	100/15 Summer			
3.001	PSW13	15 Summer	1	+0%	100/15 Summer			
1.005	PSW14	15 Summer	1	+0%	30/15 Summer			
1.006	SW02	15 Summer	1	+0%	30/15 Summer			
4.000	PSW08 (RE)	15 Summer	1	+0%	100/15 Winter			
4.001	PSW11	15 Summer	1	+0%				
5.000	PSW01 (RE)	15 Summer	1	+0%				
5.001	PSW02	15 Summer	1	+0%				

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

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
1.000	PSW04 (RE)	44.970	-0.071	0.000	0.19			1.2	OK
1.001	PSW05	44.808	-0.070	0.000	0.19			1.2	OK
1.002	PSW06	44.712	-0.064	0.000	0.28			1.8	OK
1.003	PS1	44.538	-0.063	0.000	0.29			1.8	OK
2.000	Car Park01	44.882	-0.114	0.000	0.13			2.4	OK
1.004	Car Park 01a	44.410	-0.090	0.000	0.33			5.6	OK
3.000	PSW12 (RE)	44.649	-0.075	0.000	0.15			0.9	OK
3.001	PSW13	44.437	-0.127	0.000	0.06			0.9	OK
1.005	PSW14	44.332	-0.073	0.000	0.52			6.6	OK
1.006	SW02	43.673	-0.075	0.000	0.49			8.1	OK
4.000	PSW08 (RE)	44.907	-0.068	0.000	0.22			1.4	OK
4.001	PSW11	44.638	-0.121	0.000	0.08			1.4	OK
5.000	PSW01 (RE)	44.870	-0.078	0.000	0.10			0.7	OK
5.001	PSW02	44.683	-0.074	0.000	0.15			0.9	OK

PN	US/MH Name	Level Exceeded
1.000	PSW04 (RE)	
1.001	PSW05	
1.002	PSW06	
1.003	PS1	
2.000	Car Park01	
1.004	Car Park 01a	
3.000	PSW12 (RE)	
3.001	PSW13	
1.005	PSW14	
1.006	SW02	
4.000	PSW08 (RE)	
4.001	PSW11	
5.000	PSW01 (RE)	
5.001	PSW02	

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow
6.000	Attenuation Tank 3a	15 Summer	1	+0%			
4.002	Attenuation Tank 3b	15 Summer	1	+0%	100/15 Winter		
4.003	SW01	15 Summer	1	+0%	100/15 Summer		
7.000	PSW15 (RE)	15 Summer	1	+0%			
7.001	PS2	15 Summer	1	+0%			
7.002	PSW16	15 Summer	1	+0%			
7.003	SWD03	15 Summer	1	+0%			
8.000	PS7 (RE)	15 Summer	1	+0%			
8.001	SWD02	15 Summer	1	+0%			
1.007	SW03	15 Summer	1	+0%	100/15 Summer		
9.000	PSW29 (RE)	15 Summer	1	+0%			
9.001	PS3	15 Summer	1	+0%			
10.000	PSW28 (RE)	15 Summer	1	+0%			
9.002	PSW30	15 Summer	1	+0%			
9.003	SWD04	15 Summer	1	+0%			
1.008	SW04	15 Summer	1	+0%	100/60 Winter		
11.000	PSW40 (RE)	15 Summer	1	+0%	100/15 Summer		
11.001	PSW42	15 Summer	1	+0%	100/15 Summer		
11.002	PSW41	15 Summer	1	+0%			
11.003	SW05	15 Summer	1	+0%	100/60 Winter		
12.000	PSW32 (RE)	15 Summer	1	+0%			
13.000	PSW31 (RE)	15 Summer	1	+0%			
12.001	PSW33	15 Summer	1	+0%			
14.000	PSW35 (RE)	15 Summer	1	+0%			
15.000	PSW34 (RE)	15 Summer	1	+0%			
12.002	PSW36	15 Summer	1	+0%	100/15 Summer		
12.003	SWD06	15 Summer	1	+0%	100/15 Summer		
11.004	SW06	15 Summer	1	+0%	100/60 Winter		
16.000	PSW19 (RE)	15 Summer	1	+0%	100/15 Summer		
17.000	PSW17 (RE)	15 Summer	1	+0%			
16.001	PSW20	15 Summer	1	+0%	100/15 Summer		
18.000	PSW22 (RE)	15 Summer	1	+0%	100/15 Summer		
19.000	PSW21 (RE)	15 Summer	1	+0%			
16.002	PSW23	15 Summer	1	+0%	100/15 Summer		
16.003	SWD05	15 Summer	1	+0%	100/15 Summer		
1.009	SW07	15 Summer	1	+0%	100/60 Winter		
20.000	PSW24 (RE)	15 Summer	1	+0%			
20.001	PSW25	15 Summer	1	+0%			
20.002	PSW27	15 Summer	1	+0%			
20.003	PS5	15 Summer	1	+0%			
21.000	PSW38 (RE)	15 Summer	1	+0%	100/15 Summer		
21.001	PSW39	15 Summer	1	+0%	30/15 Summer		
21.002	PS6	15 Summer	1	+0%			

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

PN	US/MH Name	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)
6.000	Attenuation Tank 3a		44.260	-0.134	0.000	0.03		35
4.002	Attenuation Tank 3b		44.151	-0.107	0.000	0.18		
4.003	SW01		43.673	-0.097	0.000	0.27		
7.000	PSW15 (RE)		44.930	-0.073	0.000	0.16		
7.001	PS2		44.780	-0.126	0.000	0.06		
7.002	PSW16		44.697	-0.126	0.000	0.06		
7.003	SWD03		44.641	-0.126	0.000	0.06		
8.000	PS7 (RE)		45.239	-0.078	0.000	0.10		
8.001	SWD02		45.017	-0.131	0.000	0.04		
1.007	SW03		43.465	-0.134	0.000	0.34		
9.000	PSW29 (RE)		45.288	-0.074	0.000	0.15		
9.001	PS3		45.015	-0.124	0.000	0.07		
10.000	PSW28 (RE)		45.123	-0.069	0.000	0.21		
9.002	PSW30		44.978	-0.110	0.000	0.16		
9.003	SWD04		44.924	-0.114	0.000	0.13		
1.008	SW04		42.193	-1.293	0.000	0.01		
11.000	PSW40 (RE)		45.572	-0.062	0.000	0.31		
11.001	PSW42		45.353	-0.062	0.000	0.31		
11.002	PSW41		45.081	-0.116	0.000	0.11		
11.003	SW05		42.193	-1.329	0.000	0.00		
12.000	PSW32 (RE)		45.326	-0.070	0.000	0.19		
13.000	PSW31 (RE)		45.321	-0.071	0.000	0.18		
12.001	PSW33		45.055	-0.114	0.000	0.13		
14.000	PSW35 (RE)		45.507	-0.075	0.000	0.14		
15.000	PSW34 (RE)		45.395	-0.072	0.000	0.17		
12.002	PSW36		44.929	-0.095	0.000	0.28		
12.003	SWD06		44.865	-0.097	0.000	0.27		
11.004	SW06		42.193	-1.287	0.000	0.00		
16.000	PSW19 (RE)		44.766	-0.069	0.000	0.21		
17.000	PSW17 (RE)		44.725	-0.123	0.000	0.07		
16.001	PSW20		44.544	-0.111	0.000	0.15		
18.000	PSW22 (RE)		44.854	-0.068	0.000	0.22		
19.000	PSW21 (RE)		44.863	-0.125	0.000	0.07		
16.002	PSW23		44.447	-0.089	0.000	0.34		
16.003	SWD05		44.392	-0.093	0.000	0.30		
1.009	SW07		42.193	-1.228	0.000	0.01		
20.000	PSW24 (RE)		45.176	-0.072	0.000	0.17		
20.001	PSW25		44.922	-0.118	0.000	0.10		
20.002	PSW27		44.838	-0.112	0.000	0.15		
20.003	PS5		44.657	-0.110	0.000	0.16		
21.000	PSW38 (RE)		45.433	-0.100	0.000	0.00		
21.001	PSW39		45.291	-0.060	0.000	0.33		

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

PN	US/MH Name	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)
21.002	PS6		45.054	-0.114	0.000	0.13		

PN	US/MH Name	Pipe Flow (l/s)	Status	Level Exceeded
6.000	Attenuation Tank 3a	0.4	OK	
4.002	Attenuation Tank 3b	2.6	OK	
4.003	SW01	4.5	OK	
7.000	PSW15 (RE)	0.9	OK	
7.001	PS2	0.9	OK	
7.002	PSW16	0.9	OK	
7.003	SWD03	0.9	OK	
8.000	PS7 (RE)	0.7	OK	
8.001	SWD02	0.7	OK	
1.007	SW03	15.0	OK	
9.000	PSW29 (RE)	1.0	OK	
9.001	PS3	1.0	OK	
10.000	PSW28 (RE)	1.2	OK	
9.002	PSW30	2.2	OK	
9.003	SWD04	2.2	OK	
1.008	SW04	20.2	OK	
11.000	PSW40 (RE)	2.0	OK	
11.001	PSW42	2.0	OK	
11.002	PSW41	2.0	OK	
11.003	SW05	0.6	OK	
12.000	PSW32 (RE)	1.2	OK	
13.000	PSW31 (RE)	1.2	OK	
12.001	PSW33	2.4	OK	
14.000	PSW35 (RE)	0.9	OK	
15.000	PSW34 (RE)	1.1	OK	
12.002	PSW36	4.4	OK	
12.003	SWD06	4.4	OK	
11.004	SW06	9.3	OK	
16.000	PSW19 (RE)	1.2	OK	
17.000	PSW17 (RE)	1.2	OK	
16.001	PSW20	2.4	OK	
18.000	PSW22 (RE)	1.3	OK	
19.000	PSW21 (RE)	1.1	OK	
16.002	PSW23	4.8	OK	
16.003	SWD05	4.9	OK	
1.009	SW07	23.9	OK	

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

PN	US/MH Name	Pipe Flow (l/s)	Status	Level Exceeded
20.000	PSW24 (RE)	1.1	OK	
20.001	PSW25	1.5	OK	
20.002	PSW27	2.4	OK	
20.003	PS5	2.4	OK	
21.000	PSW38 (RE)	0.0	OK	
21.001	PSW39	1.9	OK	
21.002	PS6	1.9	OK	

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow
1.010	SW08	15 Summer	1	+0%	100/60 Winter		
22.000	PSW46 (RE)	15 Summer	1	+0%			
22.001	PSW47	15 Summer	1	+0%			
22.002	PSW48	15 Summer	1	+0%			
22.003	SWD09	15 Summer	1	+0%			
23.000	PSW43 (RE)	15 Summer	1	+0%			
23.001	PSW44	15 Summer	1	+0%			
23.002	PSW45	15 Summer	1	+0%			
23.003	SWD08	15 Summer	1	+0%			
1.011	SW09	15 Summer	1	+0%	100/60 Winter		
24.000	PSW49 (RE)	15 Summer	1	+0%			
24.001	PSW50	15 Summer	1	+0%			
24.002	PSW51	15 Summer	1	+0%			
25.000	AttenuationTank 2a	15 Summer	1	+0%	100/240 Winter		
25.001	Attenuation Tank 2b	15 Summer	1	+0%	100/120 Winter		
24.003	SWD10	15 Summer	1	+0%	100/120 Winter		
26.000	PSW52 (RE)	15 Summer	1	+0%			
26.001	PSW53	15 Summer	1	+0%			
26.002	PSW54	15 Summer	1	+0%			
27.000	Attenuation Tank 1a	15 Summer	1	+0%	100/180 Winter		
27.001	Attenuation Tank 1b	15 Summer	1	+0%	100/120 Winter		
26.003	SWD11	15 Summer	1	+0%	100/120 Winter		
1.012	SW10	15 Summer	1	+0%	100/60 Summer		
1.013	SW11	15 Summer	1	+0%	1/15 Summer		
1.014	C01	15 Summer	1	+0%			

PN	US/MH Name	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)
1.010	SW08		42.193	-1.173	0.000	0.01		
22.000	PSW46 (RE)		45.200	-0.080	0.000	0.09		
22.001	PSW47		45.077	-0.080	0.000	0.09		
22.002	PSW48		44.945	-0.113	0.000	0.14		
22.003	SWD09		44.767	-0.111	0.000	0.15		
23.000	PSW43 (RE)		45.500	-0.080	0.000	0.09		
23.001	PSW44		45.379	-0.079	0.000	0.09		
23.002	PSW45		45.245	-0.113	0.000	0.13		
23.003	SWD08		45.068	-0.110	0.000	0.16		
1.011	SW09		42.193	-1.137	0.000	0.01		
24.000	PSW49 (RE)		45.057	-0.081	0.000	0.08		
24.001	PSW50		44.913	-0.081	0.000	0.08		

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

PN	US/MH Name	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)
24.002	PSW51		44.776	-0.127	0.000	0.06		
25.000	AttenuationTank 2a		43.880	-0.150	0.000	0.00		
25.001	Attenuation Tank 2b		43.664	-0.207	0.000	0.00		
24.003	SWD10		43.741	-0.112	0.000	0.14		
26.000	PSW52 (RE)		45.705	-0.074	0.000	0.15		
26.001	PSW53		45.566	-0.073	0.000	0.16		
26.002	PSW54		45.454	-0.109	0.000	0.16		
27.000	Attenuation Tank 1a		43.778	-0.150	0.000	0.00		
27.001	Attenuation Tank 1b		43.650	-0.126	0.000	0.01		
26.003	SWD11		43.657	-0.107	0.000	0.18		
1.012	SW10		42.193	-1.103	0.000	0.01		
1.013	SW11		42.193	0.263	0.000	0.39		
1.014	C01		41.808	-0.086	0.000	0.38		

PN	US/MH Name	Pipe Flow (l/s)	Status	Level Exceeded
1.010	SW08	21.0	OK	
22.000	PSW46 (RE)	0.6	OK	
22.001	PSW47	0.6	OK	
22.002	PSW48	1.9	OK	
22.003	SWD09	1.9	OK	
23.000	PSW43 (RE)	0.6	OK	
23.001	PSW44	0.6	OK	
23.002	PSW45	1.9	OK	
23.003	SWD08	1.9	OK	
1.011	SW09	20.2	OK	
24.000	PSW49 (RE)	0.5	OK	
24.001	PSW50	0.5	OK	
24.002	PSW51	1.8	OK	
25.000	AttenuationTank 2a	0.0	OK	
25.001	Attenuation Tank 2b	0.0	OK	
24.003	SWD10	1.7	OK	
26.000	PSW52 (RE)	1.0	OK	
26.001	PSW53	1.0	OK	
26.002	PSW54	2.3	OK	
27.000	Attenuation Tank 1a	0.0	OK	
27.001	Attenuation Tank 1b	0.1	OK	
26.003	SWD11	2.2	OK	
1.012	SW10	12.0	OK	
1.013	SW11	5.0	SURCHARGED	

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

PN	US/MH Name		Pipe Flow (l/s)	Status	Level Exceeded
1.014		C01	5.0	OK	

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