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TECHNICAL NOTE

Hammerstone Road Depot, Manchester

Discharge of Planning Condition 11

Curtins Ref: HRD-CUR-00-XX-T-RE-007

Revision: P01

Issue Date: 18 December 2025

Client Name: Morgan Sindall

Client Address: 10th Floor, Evershot St, London, NW1 2DN

Site Address: Hammerstone Road Depot, Gorton, Manchester, M18 8EQ

Rev	Description	Issued by	Checked	Date
P01	First Issue	ATL	MW	18 December 2025

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1.0 Project Details

1.1.1. Curtins was appointed by Morgan Sindall to assist in the discharge of planning conditions for Hammerstone Road Depot, Manchester, M18 8EQ, National Grid Reference 388216E, 396834N.

1.1.2. Planning Consent was granted 3rd December 2021 – the Planning Reference is 130127/VO/2021.

1.1.3. This Technical Note is provided to provide clarification on comments received from the LLFA, with regards to Report reference HRD-CUR-00-XX-T-RE-007-CUR-00-XX-T-RE-006.

2.0 Response to LLFA Comments

2.1 Culvert Survey

2.1.1. Culvert feasibility study and survey findings to be provided.

Latest LLFA Comment; *A CCTV survey of the culvert before construction has been provided. As per the below land drainage consent clause, please provide CCTV of the culverted watercourse post-installation.*

Response: A survey of the culvert will be undertaken and will be provided once completed.

2.1.2. *Where surface water is connected to ordinary watercourse, any works within or adjacent to the watercourse that would affect it would require consent from Manchester City Council as Lead Local Flood Authority.*

Latest LLFA Comment; *The applicant has quoted Land Drainage Consent reference EF1/593183. However, LLFA records indicate that this land drainage consent was refused.*

Land Drainage Consent cannot be issued retrospectively for works undertaken without consent. Please provide a post-construction CCTV survey including the full extent of the culverted watercourse on site and the newly installed manholes, to ensure that the works to the culverted watercourse have not caused any damage or blockage.

Response: A survey of the culvert will be undertaken and will be provided once completed.

2.1.3. Hydraulic calculation of the proposed drainage system. (Hydraulic calcs should coincide with finalised drainage plans.

Latest LLFA Comment; *For the ' MAIN AREA DRAINAGE (FLOW CONTROL @ MHS28)' calculations, the modelled configuration of the attenuation tank (Tank 1) is unclear. The tank appears to have been modelled as a node (reference 'TANK') rather than a storage structure, and no design parameters have been provided. Results have also not been included for the MAIN AREA DRAINAGE (FLOW CONTROL @ MHS28) network.*

Response: The node (Ref 'TANK') has been located at the outlet point of the storage tank within the model. The cellular storage is then applied set on this node. Updated Drainage details are enclosed in Appendix A which include the storage details and modelling results.

Appendices

Appendix A: Drainage Model Details and Results

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	40	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	17.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.400	Preferred Cover Depth (m)	1.200
CV	1.000	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	x

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Width (mm)	Easting (m)	Northing (m)	Depth (m)
RE PP1	0.054	5.00	64.228	1050		388217.969	396792.564	0.728
BEND PP2	0.015	5.00	64.190			388222.636	396809.328	0.806
BEND PP3	0.017	5.00	64.173			388227.222	396811.236	0.822
BEND PP4	0.010	5.00	64.201			388228.707	396816.433	0.886
BEND PP5	0.036	5.00	64.226			388227.505	396819.384	0.932
BEND PP6	0.012	5.00	64.224			388230.577	396830.686	1.008
S13b			64.240	1500		388233.850	396833.005	1.051
S13a			64.950	600		388235.913	396840.504	2.150
OU-11	0.080	5.00	64.306	350	350	388236.173	396848.221	0.846
S13			64.740	1500		388215.386	396857.536	2.200
OU-12	0.140	5.00	64.076	350	350	388166.406	396933.001	1.000
OU-13	0.126	5.00	64.031	350	350	388160.291	396909.984	1.000
S14			64.109	1500		388161.619	396906.443	1.449
OU-14	0.061	5.00	64.083	350	350	388154.700	396888.867	1.000
JUN-02			64.198			388157.755	396886.834	1.595
OU-15	0.087	5.00	64.232	350	350	388134.099	396812.930	1.000
S15	0.020	5.00	64.337	1500		388139.128	396813.380	1.155
OU-16	0.054	5.00	64.189	350	350	388143.485	396846.718	0.891
JUN-03			64.298			388148.482	396847.344	1.468
OU-17	0.067	5.00	64.136	350	350	388149.095	396867.801	1.000
S16			64.268	1500		388153.752	396866.521	1.788
OU-18	0.020	5.00	64.610	350	350	388162.166	396859.305	1.000
JUN-04			64.663			388169.376	396866.553	2.309
OU-08	0.017	5.00	64.159	350	350	388224.815	396784.079	1.000
S07	0.011	5.00	64.477	600		388214.211	396778.207	1.047
OU-01	0.003	5.00	64.420	350	350	388204.601	396773.900	1.000
S08			64.403	600		388202.250	396781.488	1.350
S09			64.460	1500		388202.428	396789.026	1.605
OU-02	0.068	5.00	64.063	350	350	388193.388	396777.976	1.000
S01			64.107	600		388191.358	396781.014	1.129
OU-07	0.040	5.00	64.345	350	350	388197.166	396791.687	1.350
S10			64.430	600		388195.512	396791.365	1.694
OU-04	0.130	5.00	64.093	350	350	388149.305	396788.915	1.000
OU-03	0.055	5.00	64.252	350	350	388164.599	396784.686	1.000
S03			64.291	1500		388166.728	396786.723	1.343
S04			64.433	1500		388171.539	396798.394	2.061
OU-05	0.060	5.00	64.417	350	350	388157.495	396819.066	1.000
OU-06	0.030	5.00	64.592	350	350	388173.489	396817.213	1.000
S05			64.659	1500		388177.568	396820.189	2.512
S11	0.013	5.00	64.531	450		388196.518	396814.994	0.731

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Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Width (mm)	Easting (m)	Northing (m)	Depth (m)
S12	0.013	5.00	64.676	450		388200.834	396830.772	0.700
S17A			64.822	1500		388181.897	396835.980	2.722
S17			64.680	1500		388188.257	396867.644	2.930
OU-19	0.081	5.00	64.800	350	350	388256.281	396929.299	1.000
S18			64.560	1500		388236.014	396932.498	1.245
OU-20	0.073	5.00	64.507	350	350	388223.207	396917.885	1.000
OU-21	0.060	5.00	64.564	350	350	388239.483	396908.335	1.000
S19			64.480	1500		388230.077	396910.923	1.255
KO-01	0.033	5.00	64.202	350	350	388262.984	396869.222	0.790
OU-22	0.047	5.00	64.496	350	350	388265.455	396876.733	0.881
S20			64.730	1500		388261.407	396877.847	1.569
OU-23	0.060	5.00	64.573	350	350	388229.757	396871.909	1.000
OU-24	0.060	5.00	64.528	350	350	388234.487	396890.122	1.000
JUN S22A			64.576			388229.800	396886.545	1.634
OU-26	0.073	5.00	64.279	350	350	388215.721	396889.840	0.817
OU-25	0.073	5.00	64.312	350	350	388211.947	396875.699	0.805
S22			64.330	1500		388213.557	396891.015	1.580
OU-27	0.090	5.00	64.473	350	350	388192.039	396926.186	1.350
S23			64.499	600		388189.987	396910.486	1.843
OU-28	0.118	5.00	64.457	350	350	388185.887	396903.148	1.000
JUN-05			64.483			388187.729	396902.281	1.861
OU-29	0.061	5.00	64.500	350	350	388181.023	396884.928	1.000
S24			64.597	1500		388182.786	396884.320	2.050
OU-30	0.052	5.00	64.198	350	350	388203.533	396881.236	1.350
S25			64.637	1500		388191.349	396882.020	2.730
S26			64.660	1500		388188.359	396874.610	2.994
PI			64.577	600		388181.875	396876.751	3.007
S27			64.754	1800		388170.636	396879.830	3.499
TANK			64.540			388177.005	396903.633	3.370
JUN S17A			64.652			388200.818	396862.879	2.215
S28			64.536	1500		388179.853	396906.968	3.384
S29			64.553	1800		388191.433	396939.763	4.003
JUN S13C			64.475			388222.564	396851.580	1.848

Links (Input)

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)
12.000	RE PP1	BEND PP2	17.402	0.600	63.500	63.384	0.116	150.0	225	5.27	50.0
12.001	BEND PP2	BEND PP3	4.967	0.600	63.384	63.351	0.033	150.0	225	5.35	50.0
12.002	BEND PP3	BEND PP4	5.405	0.600	63.351	63.315	0.036	150.0	225	5.43	50.0
12.003	BEND PP4	BEND PP5	3.186	0.600	63.315	63.294	0.021	150.0	225	5.48	50.0
12.004	BEND PP5	BEND PP6	11.712	0.600	63.294	63.216	0.078	150.0	225	5.67	50.0
12.005	BEND PP6	S13b	4.011	0.600	63.216	63.189	0.027	150.0	225	5.73	50.0
12.006	S13b	S13a	7.777	0.600	63.189	62.800	0.389	20.0	225	5.77	50.0
13.000	OU-11	JUN S13C	14.017	0.600	63.460	62.702	0.758	18.5	150	5.10	50.0
12.009	S13	JUN S17A	15.517	0.600	62.540	62.437	0.103	150.0	300	6.30	50.0
16.000	OU-12	S14	26.986	0.600	63.076	62.960	0.116	232.6	225	5.53	50.0
17.000	OU-13	S14	3.782	0.600	63.031	62.960	0.071	53.3	225	5.04	50.0
16.001	S14	JUN-02	19.986	0.600	62.660	62.603	0.057	350.0	450	5.84	50.0
18.000	OU-14	JUN-02	3.670	0.600	63.083	62.903	0.180	20.4	225	5.02	50.0

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Links (Input)

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)
16.002	JUN-02	S16	20.704	0.600	62.603	62.480	0.123	168.3	450	6.06	50.0
19.000	OU-15	S15	5.049	0.600	63.232	63.182	0.050	100.0	300	5.05	50.0
19.001	S15	JUN-03	35.229	0.600	63.182	62.830	0.352	100.0	300	5.43	50.0
20.000	OU-16	JUN-03	5.036	0.600	63.298	62.980	0.318	15.8	150	5.03	50.0
19.002	JUN-03	S16	19.888	0.600	62.830	62.631	0.199	100.0	300	5.64	50.0
21.000	OU-17	S16	4.830	0.600	63.136	63.104	0.032	150.0	225	5.08	50.0
16.003	S16	JUN-04	15.624	0.600	62.480	62.369	0.111	140.7	450	6.21	50.0
22.000	OU-18	JUN-04	10.223	0.600	63.610	62.676	0.934	10.9	150	5.06	50.0
16.004	JUN-04	S17	18.912	0.600	62.354	62.160	0.194	97.5	450	6.36	50.0
1.000	OU-08	S09	22.927	0.600	63.159	62.930	0.229	100.0	150	5.38	50.0
2.000	S07	S08	12.403	0.600	63.430	63.128	0.302	41.1	150	5.13	50.0
3.000	OU-01	S08	7.944	0.600	63.420	63.053	0.367	21.6	225	5.05	50.0
2.001	S08	S09	7.540	0.600	63.053	62.978	0.075	100.0	225	5.23	50.0
1.001	S09	S10	7.301	0.600	62.855	62.811	0.044	167.0	225	5.50	50.0
4.000	OU-02	S01	3.654	0.600	63.063	62.978	0.085	43.0	300	5.03	50.0
4.001	S01	S10	11.153	0.600	62.978	62.736	0.242	46.1	300	5.11	50.0
5.000	OU-07	S10	1.685	0.600	62.995	62.886	0.109	15.5	150	5.01	50.0
1.002	S10	S04	24.982	0.600	62.736	62.522	0.214	116.7	300	5.79	50.0
6.000	OU-04	S04	24.170	0.600	63.093	62.597	0.496	48.7	225	5.21	50.0
7.000	OU-03	S03	2.947	0.600	63.252	62.948	0.304	9.7	150	5.02	50.0
7.001	S03	S04	12.624	0.600	62.948	62.672	0.276	45.7	150	5.16	50.0
1.003	S04	S05	22.614	0.600	62.372	62.297	0.075	300.0	450	6.11	50.0
8.000	OU-05	S05	20.104	0.600	63.417	63.000	0.417	48.2	225	5.18	50.0
10.000	OU-06	S05	5.049	0.600	63.592	63.000	0.592	8.5	150	5.02	50.0
1.004_1	S05	S17A	16.374	0.600	62.147	62.100	0.047	350.0	600	6.32	50.0
1.004	S11	S05	9.581	0.600	63.800	63.000	0.800	12.0	150	5.05	50.0
11.000	S12	S17A	19.640	0.600	63.976	62.450	1.526	12.9	150	5.12	50.0
1.005	S17A	S17	32.296	0.600	62.100	62.000	0.100	323.0	600	6.72	50.0
1.006	S17	S26	6.967	0.600	61.750	61.735	0.015	450.0	600	6.82	50.0
23.000	OU-19	S18	20.518	0.600	63.800	63.390	0.410	50.0	225	5.18	50.0
23.001	S18	S19	22.377	0.600	63.315	63.225	0.090	250.0	300	5.56	50.0
24.000	OU-20	S19	9.781	0.600	63.507	63.300	0.207	47.3	150	5.11	50.0
25.000	OU-21	S19	9.756	0.600	63.564	63.300	0.264	37.0	225	5.08	50.0
23.002	S19	S22	25.870	0.600	63.230	63.127	0.103	250.0	300	6.00	50.0
26.000	KO-01	S20	8.768	0.600	63.412	63.237	0.175	50.0	225	5.08	50.0
27.000	OU-22	S20	4.198	0.600	63.615	63.236	0.379	11.1	150	5.02	50.0
26.001	S20	JUN S22A	32.782	0.600	63.161	62.942	0.219	150.0	225	5.59	50.0
14.000	OU-23	S13	20.325	0.600	63.573	63.370	0.203	100.0	225	5.26	50.0
28.000	OU-24	JUN S22A	5.896	0.600	63.528	62.942	0.586	10.1	225	5.02	50.0
26.002	JUN S22A	S22	16.847	0.600	62.942	62.830	0.112	150.0	225	5.86	50.0
29.000	OU-26	S22	2.462	0.600	63.462	63.273	0.189	13.0	225	5.01	50.0
15.000	OU-25	JUN S17A	16.977	0.600	63.507	62.587	0.920	18.5	150	5.12	50.0
23.003	S22	S25	23.960	0.600	62.750	62.205	0.545	44.0	450	6.13	50.0
30.000	OU-27	S23	15.834	0.600	63.123	62.731	0.392	40.4	225	5.13	50.0
30.001	S23	JUN-05	8.510	0.600	62.656	62.622	0.034	250.0	300	5.27	50.0
31.000	OU-28	JUN-05	2.036	0.600	63.457	62.697	0.760	2.7	225	5.00	50.0
30.002	JUN-05	S24	18.629	0.600	62.622	62.547	0.075	250.0	300	5.58	50.0
32.000	OU-29	S24	1.865	0.600	63.500	63.481	0.019	100.0	150	5.03	50.0
30.003	S24	S25	8.867	0.600	62.547	62.207	0.340	26.1	300	5.63	50.0
33.000	OU-30	S25	12.209	0.600	62.848	62.780	0.068	179.5	150	5.27	50.0
23.004	S25	S26	7.991	0.600	61.907	61.666	0.241	33.2	600	6.16	50.0
1.007	S26	PI	6.828	0.600	61.666	61.651	0.015	450.0	600	6.92	50.0

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Links (Input)

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)
1.009	PI	S27	5.432	0.600	61.570	61.554	0.016	339.5	600	6.99	50.0
1.010	S27	TANK	21.145	0.600	61.255	61.170	0.085	248.8	375	7.30	50.0
1.011	TANK	S28	2.452	0.600	61.170	61.161	0.009	272.4	375	7.34	50.0
12.010	JUN S17A	S17	13.434	0.600	62.437	62.160	0.277	48.5	300	6.40	50.0
1.012	S28	S29	37.587	0.600	61.152	60.550	0.602	62.4	300	7.65	50.0
12.007	S13a	JUN S13C	17.346	0.600	62.800	62.627	0.173	100.0	225	6.00	50.0
12.008	JUN S13C	S13	9.327	0.600	62.627	62.540	0.087	107.2	300	6.10	50.0

Simulation Settings

Rainfall Methodology	FSR	Skip Steady State	x
Rainfall Events	Singular	Drain Down Time (mins)	240
FSR Region	England and Wales	Additional Storage (m³/ha)	20.0
M5-60 (mm)	17.000	Starting Level (m)	
Ratio-R	0.400	Check Discharge Rate(s)	x
Summer CV	1.000	Check Discharge Volume	✓
Winter CV	1.000	100 year 360 minute (m³)	
Analysis Speed	Detailed		

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	0	0	0
100	40	0	0

Pre-development Discharge Volume

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

Node S28 Online Hydro-Brake® Control

Flap Valve	✓	Objective	(HE) Minimise upstream storage
Downstream Link	1.012	Sump Available	✓
Replaces Downstream Link	x	Product Number	CTL-SHE-0252-3300-0600-3300
Invert Level (m)	61.152	Min Outlet Diameter (m)	0.300
Design Depth (m)	0.600	Min Node Diameter (mm)	1500
Design Flow (l/s)	33.0		

Node S28 Online Orifice Control

Flap Valve	x	Invert Level (m)	62.170	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.190		

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Node TANK Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	61.170
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	124

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	323.0	0.0	2.400	323.0	0.0	2.401	0.0	0.0

Node S13b Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	12.005
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	63.189	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)	10	Diameter (mm)	600

Node BEND PP6 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	12.004
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	63.216	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)	10	Diameter (mm)	600

Node BEND PP5 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	12.003
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	63.294	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)	8	Diameter (mm)	600

Node BEND PP4 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	12.002
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	63.315	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)	7	Diameter (mm)	600

Node BEND PP3 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Link	12.001
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	63.351	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)	7	Diameter (mm)	600

Node BEND PP2 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Link	12.000
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	63.384	Surround Shape	(Trench)
Safety Factor	2.0	Time to half empty (mins)	7	Diameter (mm)	600

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	92.521	26.180	1 year 120 minute winter	16.596	6.602
1 year 15 minute winter	64.927	26.180	1 year 180 minute summer	19.271	4.959
1 year 30 minute summer	60.022	16.984	1 year 180 minute winter	12.527	4.959
1 year 30 minute winter	42.121	16.984	1 year 240 minute summer	15.301	4.043
1 year 60 minute summer	40.398	10.676	1 year 240 minute winter	10.165	4.043
1 year 60 minute winter	26.839	10.676	1 year 360 minute summer	11.775	3.030
1 year 120 minute summer	24.980	6.602	1 year 360 minute winter	7.654	3.030

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Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 480 minute summer	9.342	2.469
1 year 480 minute winter	6.207	2.469
1 year 600 minute summer	7.682	2.101
1 year 600 minute winter	5.249	2.101
1 year 720 minute summer	6.859	1.838
1 year 720 minute winter	4.609	1.838
1 year 960 minute summer	5.653	1.489
1 year 960 minute winter	3.745	1.489
1 year 1440 minute summer	4.127	1.106
1 year 1440 minute winter	2.773	1.106
30 year 15 minute summer	226.195	64.005
30 year 15 minute winter	158.733	64.005
30 year 30 minute summer	147.452	41.724
30 year 30 minute winter	103.475	41.724
30 year 60 minute summer	98.615	26.061
30 year 60 minute winter	65.517	26.061
30 year 120 minute summer	59.946	15.842
30 year 120 minute winter	39.827	15.842
30 year 180 minute summer	45.598	11.734
30 year 180 minute winter	29.640	11.734
30 year 240 minute summer	35.759	9.450
30 year 240 minute winter	23.758	9.450
30 year 360 minute summer	26.939	6.932
30 year 360 minute winter	17.511	6.932
30 year 480 minute summer	20.981	5.545
30 year 480 minute winter	13.940	5.545
30 year 600 minute summer	17.039	4.661
30 year 600 minute winter	11.642	4.661
30 year 720 minute summer	15.093	4.045
30 year 720 minute winter	10.143	4.045
30 year 960 minute summer	12.278	3.233
30 year 960 minute winter	8.133	3.233
30 year 1440 minute summer	8.788	2.355
30 year 1440 minute winter	5.906	2.355
100 year 15 minute summer	291.766	82.560
100 year 15 minute winter	204.748	82.560
100 year 30 minute summer	191.982	54.324
100 year 30 minute winter	134.724	54.324
100 year 60 minute summer	129.253	34.158
100 year 60 minute winter	85.873	34.158
100 year 120 minute summer	78.836	20.834
100 year 120 minute winter	52.377	20.834
100 year 180 minute summer	59.966	15.431
100 year 180 minute winter	38.980	15.431
100 year 240 minute summer	46.975	12.414
100 year 240 minute winter	31.209	12.414
100 year 360 minute summer	35.264	9.075
100 year 360 minute winter	22.923	9.075
100 year 480 minute summer	27.350	7.228
100 year 480 minute winter	18.171	7.228
100 year 600 minute summer	22.137	6.055
100 year 600 minute winter	15.126	6.055
100 year 720 minute summer	19.562	5.243
100 year 720 minute winter	13.147	5.243
100 year 960 minute summer	15.851	4.174
100 year 960 minute winter	10.500	4.174
100 year 1440 minute summer	11.278	3.023
100 year 1440 minute winter	7.579	3.023
100 year +40% CC 15 minute summer	408.473	115.584
100 year +40% CC 15 minute winter	286.647	115.584
100 year +40% CC 30 minute summer	268.775	76.054
100 year +40% CC 30 minute winter	188.614	76.054
100 year +40% CC 60 minute summer	180.954	47.821
100 year +40% CC 60 minute winter	120.222	47.821
100 year +40% CC 120 minute summer	110.370	29.168
100 year +40% CC 120 minute winter	73.327	29.168
100 year +40% CC 180 minute summer	83.953	21.604
100 year +40% CC 180 minute winter	54.572	21.604
100 year +40% CC 240 minute summer	65.765	17.380
100 year +40% CC 240 minute winter	43.693	17.380
100 year +40% CC 360 minute summer	49.370	12.705
100 year +40% CC 360 minute winter	32.092	12.705
100 year +40% CC 480 minute summer	38.291	10.119
100 year +40% CC 480 minute winter	25.439	10.119
100 year +40% CC 600 minute summer	30.992	8.477
100 year +40% CC 600 minute winter	21.176	8.477
100 year +40% CC 720 minute summer	27.387	7.340
100 year +40% CC 720 minute winter	18.406	7.340
100 year +40% CC 960 minute summer	22.191	5.844
100 year +40% CC 960 minute winter	14.700	5.844
100 year +40% CC 1440 minute summer	15.789	4.232
100 year +40% CC 1440 minute winter	10.611	4.232

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Results for 1 year Critical Storm Duration. Lowest mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RE PP1	10	63.568	0.068	8.2	0.1587	0.0000	OK
15 minute summer	BEND PP2	11	63.463	0.079	10.4	0.0923	0.0000	OK
15 minute summer	BEND PP3	11	63.440	0.089	12.8	0.1982	0.0000	OK
15 minute summer	BEND PP4	11	63.414	0.099	14.3	0.0798	0.0000	OK
15 minute summer	BEND PP5	11	63.401	0.107	19.5	0.1227	0.0000	OK
15 minute summer	BEND PP6	11	63.328	0.112	21.3	0.1385	0.0000	OK
15 minute summer	S13b	11	63.255	0.066	21.3	0.1460	0.0000	OK
15 minute summer	S13a	11	62.904	0.104	21.3	0.0293	0.0000	OK
15 minute summer	OU-11	10	63.517	0.056	12.1	0.1138	0.0000	OK
15 minute summer	S13	11	62.685	0.145	41.8	0.2564	0.0000	OK
15 minute summer	OU-12	10	63.208	0.132	21.2	0.3845	0.0000	OK
15 minute summer	OU-13	10	63.124	0.093	19.0	0.2455	0.0000	OK
15 minute summer	S14	10	62.807	0.147	39.2	0.2604	0.0000	OK
15 minute summer	OU-14	10	63.128	0.045	9.2	0.0607	0.0000	OK
15 minute summer	JUN-02	11	62.743	0.140	48.1	0.0000	0.0000	OK
15 minute summer	OU-15	10	63.310	0.078	13.1	0.1454	0.0000	OK
15 minute summer	S15	10	63.258	0.076	16.0	0.1600	0.0000	OK
15 minute summer	OU-16	10	63.343	0.045	8.2	0.0605	0.0000	OK
15 minute summer	JUN-03	11	62.926	0.096	23.9	0.0000	0.0000	OK
15 minute summer	OU-17	10	63.218	0.082	10.1	0.1198	0.0000	OK
15 minute summer	S16	11	62.656	0.176	82.2	0.3112	0.0000	OK
15 minute summer	OU-18	10	63.634	0.024	3.0	0.0127	0.0000	OK
15 minute summer	JUN-04	11	62.517	0.163	85.4	0.0000	0.0000	OK
15 minute summer	OU-08	11	63.198	0.039	2.6	0.0180	0.0000	OK
15 minute summer	S07	10	63.455	0.025	1.7	0.0125	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	RE PP1	12.000	BEND PP2	8.1	0.719	0.191	0.1958	
15 minute summer	BEND PP2	12.001	BEND PP3	10.3	0.756	0.242	0.0675	
15 minute summer	BEND PP3	12.002	BEND PP4	12.9	0.819	0.304	0.0849	
15 minute summer	BEND PP4	12.003	BEND PP5	14.3	0.808	0.338	0.0564	
15 minute summer	BEND PP5	12.004	BEND PP6	19.6	1.023	0.463	0.2243	
15 minute summer	BEND PP6	12.005	S13b	21.3	1.465	0.504	0.0588	
15 minute summer	S13b	12.006	S13a	21.3	1.559	0.183	0.1072	
15 minute summer	S13a	12.007	JUN S13C	21.3	1.061	0.411	0.3530	
15 minute summer	OU-11	13.000	JUN S13C	12.0	2.009	0.288	0.0837	
15 minute summer	S13	12.009	JUN S17A	41.9	1.367	0.462	0.4751	
15 minute summer	OU-12	16.000	S14	20.7	0.909	0.610	0.6133	
15 minute summer	OU-13	17.000	S14	18.9	1.360	0.264	0.0525	
15 minute summer	S14	16.001	JUN-02	39.3	0.905	0.229	0.8677	
15 minute summer	OU-14	18.000	JUN-02	9.2	1.683	0.079	0.0200	
15 minute summer	JUN-02	16.002	S16	48.6	0.980	0.195	1.0279	
15 minute summer	OU-15	19.000	S15	13.0	0.914	0.117	0.0719	
15 minute summer	S15	19.001	JUN-03	15.8	0.954	0.142	0.5860	
15 minute summer	OU-16	20.000	JUN-03	8.2	1.879	0.182	0.0219	
15 minute summer	JUN-03	19.002	S16	23.8	1.251	0.214	0.3788	
15 minute summer	OU-17	21.000	S16	10.0	0.822	0.237	0.0589	
15 minute summer	S16	16.003	JUN-04	82.5	1.488	0.303	0.8665	
15 minute summer	OU-18	22.000	JUN-04	3.0	1.634	0.055	0.0187	
15 minute summer	JUN-04	16.004	S17	85.5	1.716	0.261	0.9423	
15 minute summer	OU-08	1.000	S09	2.5	0.710	0.143	0.0820	
15 minute summer	S07	2.000	S08	1.7	0.857	0.060	0.0241	

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Results for 1 year Critical Storm Duration. Lowest mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	OU-01	10	63.431	0.011	0.5	0.0020	0.0000	OK
15 minute summer	S08	11	63.085	0.032	2.1	0.0090	0.0000	OK
15 minute summer	S09	11	62.909	0.054	4.6	0.0962	0.0000	OK
15 minute summer	OU-02	10	63.119	0.056	10.3	0.0833	0.0000	OK
15 minute summer	S01	10	63.028	0.050	10.3	0.0143	0.0000	OK
15 minute summer	OU-07	10	63.039	0.044	6.0	0.0316	0.0000	OK
15 minute summer	S10	11	62.830	0.094	20.6	0.0266	0.0000	OK
15 minute summer	OU-04	10	63.174	0.081	19.6	0.2203	0.0000	OK
15 minute summer	OU-03	10	63.292	0.040	8.3	0.0492	0.0000	OK
15 minute summer	S03	10	63.008	0.060	8.3	0.1064	0.0000	OK
15 minute summer	S04	11	62.535	0.163	47.6	0.2886	0.0000	OK
15 minute summer	OU-05	10	63.471	0.054	9.1	0.0713	0.0000	OK
15 minute summer	OU-06	10	63.621	0.029	4.5	0.0210	0.0000	OK
15 minute summer	S05	11	62.329	0.182	63.1	0.3215	0.0000	OK
15 minute summer	S11	10	63.821	0.021	2.0	0.0106	0.0000	OK
15 minute summer	S12	10	63.997	0.021	2.0	0.0109	0.0000	OK
15 minute summer	S17A	11	62.273	0.173	65.1	0.3056	0.0000	OK
15 minute summer	S17	11	62.155	0.405	202.1	0.7151	0.0000	OK
15 minute summer	OU-19	10	63.864	0.064	12.2	0.1107	0.0000	OK
15 minute summer	S18	11	63.398	0.083	12.1	0.1463	0.0000	OK
15 minute summer	OU-20	10	63.580	0.073	11.0	0.1148	0.0000	OK
15 minute summer	OU-21	10	63.613	0.049	9.1	0.0650	0.0000	OK
15 minute summer	S19	11	63.378	0.153	31.9	0.2695	0.0000	OK
15 minute summer	KO-01	10	63.453	0.041	5.0	0.0396	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	OU-01	3.000	S08	0.5	0.255	0.004	0.0162	
15 minute summer	S08	2.001	S09	2.1	0.630	0.040	0.0252	
15 minute summer	S09	1.001	S10	4.7	0.658	0.117	0.0519	
15 minute summer	OU-02	4.000	S01	10.3	1.216	0.060	0.0309	
15 minute summer	S01	4.001	S10	10.2	0.802	0.062	0.1477	
15 minute summer	OU-07	5.000	S10	6.0	1.563	0.131	0.0065	
15 minute summer	S10	1.002	S04	20.6	1.124	0.201	0.4582	
15 minute summer	OU-04	6.000	S04	19.3	1.548	0.259	0.3016	
15 minute summer	OU-03	7.000	S03	8.3	1.601	0.144	0.0153	
15 minute summer	S03	7.001	S04	8.2	1.277	0.310	0.0807	
15 minute summer	S04	1.003	S05	48.1	0.980	0.259	1.1103	
15 minute summer	OU-05	8.000	S05	9.0	1.257	0.119	0.1434	
15 minute summer	OU-06	10.000	S05	4.5	1.954	0.073	0.0116	
15 minute summer	S05	1.004_1	S17A	63.2	0.917	0.172	1.1395	
15 minute summer	S11	1.004	S05	2.0	1.393	0.038	0.0136	
15 minute summer	S12	11.000	S17A	2.0	1.365	0.040	0.0284	
15 minute summer	S17A	1.005	S17	64.2	1.013	0.168	2.0615	
15 minute summer	S17	1.006	S26	201.7	1.043	0.625	1.3476	
15 minute summer	OU-19	23.000	S18	12.1	1.347	0.164	0.1838	
15 minute summer	S18	23.001	S19	11.9	0.471	0.171	0.5793	
15 minute summer	OU-20	24.000	S19	11.0	1.314	0.422	0.0846	
15 minute summer	OU-21	25.000	S19	9.0	1.241	0.105	0.0892	
15 minute summer	S19	23.002	S22	31.6	0.963	0.451	0.8485	
15 minute summer	KO-01	26.000	S20	5.0	1.030	0.067	0.0423	

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Results for 1 year Critical Storm Duration. Lowest mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	OU-22	10	63.655	0.040	7.1	0.0477	0.0000	OK
15 minute summer	S20	10	63.242	0.081	12.0	0.1425	0.0000	OK
15 minute summer	OU-23	10	63.638	0.065	9.1	0.0861	0.0000	OK
15 minute summer	OU-24	10	63.564	0.036	9.1	0.0473	0.0000	OK
15 minute summer	JUN S22A	11	63.056	0.114	20.9	0.0000	0.0000	OK
15 minute summer	OU-26	10	63.511	0.049	11.0	0.0935	0.0000	OK
15 minute summer	OU-25	10	63.560	0.053	11.0	0.1034	0.0000	OK
15 minute summer	S22	11	62.864	0.114	62.8	0.2020	0.0000	OK
15 minute summer	OU-27	10	63.187	0.064	13.6	0.0936	0.0000	OK
15 minute summer	S23	10	62.765	0.109	13.5	0.0308	0.0000	OK
15 minute summer	OU-28	10	63.493	0.036	17.8	0.0892	0.0000	OK
15 minute summer	JUN-05	10	62.759	0.137	31.1	0.0000	0.0000	OK
15 minute summer	OU-29	10	63.589	0.089	9.2	0.1195	0.0000	OK
15 minute summer	S24	10	62.644	0.097	40.0	0.1707	0.0000	OK
15 minute summer	OU-30	10	62.936	0.088	7.9	0.0782	0.0000	OK
15 minute summer	S25	11	62.070	0.163	110.4	0.2885	0.0000	OK
15 minute summer	S26	11	62.109	0.443	311.5	0.7826	0.0000	OK
15 minute summer	PI	11	62.007	0.437	310.3	0.1237	0.0000	OK
120 minute summer	S27	86	61.693	0.438	139.6	1.1152	0.0000	SURCHARGED
120 minute summer	TANK	86	61.693	0.523	135.4	160.3775	0.0000	SURCHARGED
15 minute summer	JUN S17A	11	62.561	0.124	52.4	0.0000	0.0000	OK
120 minute summer	S28	86	61.691	0.539	33.4	0.9523	0.0000	SURCHARGED
30 minute summer	S29	33	60.648	0.098	32.9	0.0000	0.0000	OK
15 minute summer	JUN S13C	11	62.753	0.126	32.9	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	OU-22	27.000	S20	7.1	1.986	0.131	0.0150	
15 minute summer	S20	26.001	JUN S22A	11.8	0.728	0.279	0.5387	
15 minute summer	OU-23	14.000	S13	8.9	0.964	0.172	0.1881	
15 minute summer	OU-24	28.000	JUN S22A	9.1	1.233	0.055	0.0708	
15 minute summer	JUN S22A	26.002	S22	20.7	1.051	0.489	0.3321	
15 minute summer	OU-26	29.000	S22	10.9	1.922	0.076	0.0141	
15 minute summer	OU-25	15.000	JUN S17A	10.9	1.965	0.262	0.0942	
15 minute summer	S22	23.003	S25	63.0	2.078	0.129	0.7266	
15 minute summer	OU-27	30.000	S23	13.5	1.490	0.164	0.1433	
15 minute summer	S23	30.001	JUN-05	13.4	0.496	0.191	0.2313	
15 minute summer	OU-28	31.000	JUN-05	17.8	3.415	0.055	0.0131	
15 minute summer	JUN-05	30.002	S24	30.9	1.221	0.442	0.4735	
15 minute summer	OU-29	32.000	S24	9.1	0.923	0.515	0.0184	
15 minute summer	S24	30.003	S25	39.7	2.200	0.182	0.1606	
15 minute summer	OU-30	33.000	S25	7.8	0.762	0.588	0.1244	
15 minute summer	S25	23.004	S26	109.8	0.973	0.092	1.1387	
15 minute summer	S26	1.007	PI	310.3	1.540	0.962	1.3721	
15 minute summer	PI	1.009	S27	309.7	1.551	0.833	1.0825	
120 minute summer	S27	1.010	TANK	135.4	1.064	0.357	6.9967	
120 minute summer	TANK	1.011	S28	33.4	0.319	0.277	0.2704	
15 minute summer	JUN S17A	12.010	S17	52.5	1.983	0.328	0.3557	
120 minute summer	S28	1.012	S29	32.9	1.614	0.234	0.7673	267.4
15 minute summer	JUN S13C	12.008	S13	33.0	1.069	0.308	0.2882	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RE PP1	10	63.611	0.111	19.9	0.2612	0.0000	OK
15 minute summer	BEND PP2	11	63.528	0.144	25.2	0.2462	0.0000	OK
15 minute summer	BEND PP3	11	63.518	0.167	30.8	0.3791	0.0000	OK
15 minute summer	BEND PP4	11	63.505	0.190	34.5	0.1577	0.0000	OK
15 minute summer	BEND PP5	11	63.496	0.202	47.2	0.2315	0.0000	OK
15 minute summer	BEND PP6	11	63.408	0.192	51.7	0.2698	0.0000	OK
15 minute summer	S13b	12	63.336	0.147	50.4	0.3264	0.0000	OK
15 minute summer	S13a	12	63.222	0.422	49.9	0.1194	0.0000	SURCHARGED
15 minute summer	OU-11	10	63.553	0.093	29.6	0.1879	0.0000	OK
15 minute summer	S13	12	62.981	0.441	98.5	0.7787	0.0000	SURCHARGED
15 minute summer	OU-12	11	63.424	0.348	51.7	1.0165	0.0000	SURCHARGED
15 minute summer	OU-13	10	63.196	0.165	46.5	0.4370	0.0000	OK
15 minute summer	S14	11	62.909	0.249	94.7	0.4392	0.0000	OK
15 minute summer	OU-14	10	63.156	0.073	22.5	0.0984	0.0000	OK
15 minute summer	JUN-02	11	62.845	0.242	116.7	0.0000	0.0000	OK
15 minute summer	OU-15	10	63.363	0.131	32.1	0.2439	0.0000	OK
15 minute summer	S15	10	63.304	0.122	39.4	0.2583	0.0000	OK
15 minute summer	OU-16	10	63.373	0.075	19.9	0.1004	0.0000	OK
15 minute summer	JUN-03	10	62.990	0.160	58.8	0.0000	0.0000	OK
15 minute summer	OU-17	10	63.275	0.139	24.8	0.2032	0.0000	OK
15 minute summer	S16	12	62.794	0.314	199.4	0.5552	0.0000	OK
15 minute summer	OU-18	10	63.648	0.038	7.4	0.0200	0.0000	OK
15 minute summer	JUN-04	12	62.708	0.354	203.6	0.0000	0.0000	OK
15 minute summer	OU-08	10	63.222	0.063	6.3	0.0290	0.0000	OK
15 minute summer	S07	10	63.470	0.040	4.1	0.0197	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	RE PP1	12.000	BEND PP2	19.7	0.864	0.466	0.3991	
15 minute summer	BEND PP2	12.001	BEND PP3	24.8	0.864	0.586	0.1455	
15 minute summer	BEND PP3	12.002	BEND PP4	31.0	0.934	0.731	0.1823	
15 minute summer	BEND PP4	12.003	BEND PP5	34.5	0.951	0.815	0.1169	
15 minute summer	BEND PP5	12.004	BEND PP6	47.5	1.287	1.121	0.4319	
15 minute summer	BEND PP6	12.005	S13b	50.4	1.722	1.191	0.1254	
15 minute summer	S13b	12.006	S13a	49.9	1.749	0.427	0.2614	
15 minute summer	S13a	12.007	JUN S13C	49.3	1.239	0.948	0.6899	
15 minute summer	OU-11	13.000	JUN S13C	29.5	2.283	0.708	0.2040	
15 minute summer	S13	12.009	JUN S17A	95.9	1.540	1.059	1.0927	
15 minute summer	OU-12	16.000	S14	50.0	1.272	1.475	1.0104	
15 minute summer	OU-13	17.000	S14	46.2	1.668	0.647	0.1044	
15 minute summer	S14	16.001	JUN-02	95.2	1.078	0.554	1.7635	
15 minute summer	OU-14	18.000	JUN-02	22.4	2.130	0.194	0.0387	
15 minute summer	JUN-02	16.002	S16	117.5	1.157	0.472	2.1029	
15 minute summer	OU-15	19.000	S15	32.0	1.132	0.288	0.1426	
15 minute summer	S15	19.001	JUN-03	39.0	1.198	0.351	1.1469	
15 minute summer	OU-16	20.000	JUN-03	19.8	2.353	0.441	0.0424	
15 minute summer	JUN-03	19.002	S16	58.2	1.565	0.523	0.7541	
15 minute summer	OU-17	21.000	S16	24.6	1.031	0.581	0.1152	
15 minute summer	S16	16.003	JUN-04	196.6	1.801	0.722	1.9253	
15 minute summer	OU-18	22.000	JUN-04	7.4	2.117	0.136	0.0355	
15 minute summer	JUN-04	16.004	S17	199.9	1.914	0.610	2.7645	
15 minute summer	OU-08	1.000	S09	6.2	0.902	0.347	0.1567	
15 minute summer	S07	2.000	S08	4.1	1.103	0.146	0.0456	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	OU-01	11	63.436	0.016	1.1	0.0029	0.0000	OK
15 minute summer	S08	10	63.103	0.050	5.2	0.0142	0.0000	OK
15 minute summer	S09	11	62.943	0.088	11.3	0.1552	0.0000	OK
15 minute summer	OU-02	10	63.156	0.093	25.1	0.1378	0.0000	OK
15 minute summer	S01	10	63.060	0.082	25.0	0.0233	0.0000	OK
15 minute summer	OU-07	10	63.073	0.078	14.8	0.0556	0.0000	OK
15 minute summer	S10	10	62.893	0.157	50.8	0.0444	0.0000	OK
15 minute summer	OU-04	10	63.232	0.139	48.0	0.3788	0.0000	OK
15 minute summer	OU-03	10	63.323	0.071	20.3	0.0863	0.0000	OK
15 minute summer	S03	10	63.055	0.107	20.2	0.1896	0.0000	OK
15 minute summer	S04	12	62.723	0.351	117.2	0.6209	0.0000	OK
15 minute summer	OU-05	10	63.504	0.087	22.2	0.1155	0.0000	OK
15 minute summer	OU-06	10	63.639	0.047	11.1	0.0342	0.0000	OK
15 minute summer	S05	12	62.693	0.546	152.7	0.9654	0.0000	OK
15 minute summer	S11	10	63.832	0.032	4.8	0.0164	0.0000	OK
15 minute summer	S12	10	64.007	0.031	4.8	0.0167	0.0000	OK
15 minute summer	S17A	12	62.681	0.580	142.8	1.0257	0.0000	OK
15 minute summer	S17	12	62.659	0.909	451.7	1.6064	0.0000	SURCHARGED
15 minute summer	OU-19	10	63.904	0.104	29.9	0.1811	0.0000	OK
15 minute summer	S18	11	63.517	0.202	29.9	0.3572	0.0000	OK
15 minute summer	OU-20	11	63.780	0.273	27.0	0.4320	0.0000	SURCHARGED
15 minute summer	OU-21	9	63.643	0.079	22.2	0.1039	0.0000	OK
15 minute summer	S19	11	63.504	0.279	75.4	0.4934	0.0000	OK
15 minute summer	KO-01	10	63.478	0.066	12.2	0.0635	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	OU-01	3.000	S08	1.1	0.315	0.010	0.0310	
15 minute summer	S08	2.001	S09	5.1	0.807	0.098	0.0477	
15 minute summer	S09	1.001	S10	11.3	0.831	0.282	0.0997	
15 minute summer	OU-02	4.000	S01	25.0	1.465	0.147	0.0625	
15 minute summer	S01	4.001	S10	24.9	0.963	0.152	0.2949	
15 minute summer	OU-07	5.000	S10	14.7	1.891	0.324	0.0132	
15 minute summer	S10	1.002	S04	50.1	1.400	0.488	1.0398	
15 minute summer	OU-04	6.000	S04	47.4	1.922	0.635	0.5963	
15 minute summer	OU-03	7.000	S03	20.2	1.876	0.352	0.0319	
15 minute summer	S03	7.001	S04	20.0	1.561	0.759	0.1617	
15 minute summer	S04	1.003	S05	114.9	1.175	0.619	3.1735	
15 minute summer	OU-05	8.000	S05	22.0	1.599	0.293	0.2763	
15 minute summer	OU-06	10.000	S05	11.1	2.478	0.180	0.0226	
15 minute summer	S05	1.004_1	S17A	138.9	1.047	0.379	4.4897	
15 minute summer	S11	1.004	S05	4.8	1.792	0.092	0.0255	
15 minute summer	S12	11.000	S17A	4.8	1.728	0.096	0.1985	
15 minute summer	S17A	1.005	S17	149.7	0.981	0.392	9.0545	
15 minute summer	S17	1.006	S26	452.3	1.606	1.402	1.9624	
15 minute summer	OU-19	23.000	S18	29.9	1.660	0.406	0.4097	
15 minute summer	S18	23.001	S19	28.4	0.511	0.406	1.3294	
15 minute summer	OU-20	24.000	S19	25.8	1.464	0.994	0.1722	
15 minute summer	OU-21	25.000	S19	22.1	1.231	0.258	0.2421	
15 minute summer	S19	23.002	S22	74.7	1.218	1.067	1.5663	
15 minute summer	KO-01	26.000	S20	12.1	1.310	0.164	0.0811	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	OU-22	10	63.683	0.068	17.4	0.0804	0.0000	OK
15 minute summer	S20	10	63.296	0.135	29.5	0.2391	0.0000	OK
15 minute summer	OU-23	10	63.680	0.107	22.2	0.1421	0.0000	OK
15 minute summer	OU-24	10	63.584	0.056	22.2	0.0734	0.0000	OK
15 minute summer	JUN S22A	11	63.195	0.253	51.2	0.0000	0.0000	SURCHARGED
15 minute summer	OU-26	10	63.546	0.084	27.0	0.1605	0.0000	OK
15 minute summer	OU-25	10	63.598	0.091	27.0	0.1754	0.0000	OK
15 minute summer	S22	11	62.930	0.180	151.0	0.3181	0.0000	OK
15 minute summer	OU-27	10	63.226	0.103	33.2	0.1500	0.0000	OK
15 minute summer	S23	10	62.865	0.209	33.1	0.0591	0.0000	OK
15 minute summer	OU-28	10	63.515	0.058	43.6	0.1435	0.0000	OK
15 minute summer	JUN-05	10	62.855	0.233	76.2	0.0000	0.0000	OK
15 minute summer	OU-29	10	63.695	0.195	22.5	0.2613	0.0000	SURCHARGED
15 minute summer	S24	11	62.725	0.178	97.8	0.3145	0.0000	OK
15 minute summer	OU-30	10	63.071	0.223	19.2	0.1994	0.0000	SURCHARGED
15 minute summer	S25	12	62.592	0.685	267.1	1.2104	0.0000	SURCHARGED
15 minute summer	S26	12	62.563	0.897	699.4	1.5853	0.0000	SURCHARGED
120 minute summer	PI	84	62.469	0.899	325.9	0.2545	0.0000	SURCHARGED
120 minute summer	S27	84	62.467	1.212	323.9	3.0833	0.0000	SURCHARGED
120 minute summer	TANK	84	62.462	1.292	320.5	396.4867	0.0000	SURCHARGED
15 minute summer	JUN S17A	12	62.844	0.407	122.7	0.0000	0.0000	SURCHARGED
120 minute summer	S28	84	62.452	1.300	77.4	2.2973	0.0000	SURCHARGED
120 minute summer	S29	84	60.707	0.157	77.4	0.0000	0.0000	OK
15 minute summer	JUN S13C	12	63.038	0.411	77.6	0.0000	0.0000	SURCHARGED

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	OU-22	27.000	S20	17.4	2.427	0.323	0.0301	
15 minute summer	S20	26.001	JUN S22A	29.1	0.868	0.687	1.0606	
15 minute summer	OU-23	14.000	S13	21.9	1.218	0.421	0.3655	
15 minute summer	OU-24	28.000	JUN S22A	22.2	1.394	0.134	0.1396	
15 minute summer	JUN S22A	26.002	S22	50.5	1.284	1.192	0.6320	
15 minute summer	OU-26	29.000	S22	26.9	2.338	0.186	0.0284	
15 minute summer	OU-25	15.000	JUN S17A	26.8	2.457	0.643	0.2375	
15 minute summer	S22	23.003	S25	153.0	2.437	0.313	2.4047	
15 minute summer	OU-27	30.000	S23	33.1	1.705	0.403	0.3349	
15 minute summer	S23	30.001	JUN-05	32.7	0.587	0.467	0.4728	
15 minute summer	OU-28	31.000	JUN-05	43.5	3.488	0.136	0.0386	
15 minute summer	JUN-05	30.002	S24	75.4	1.496	1.078	0.9487	
15 minute summer	OU-29	32.000	S24	22.3	1.269	1.258	0.0319	
15 minute summer	S24	30.003	S25	96.1	2.471	0.440	0.5053	
15 minute summer	OU-30	33.000	S25	18.8	1.076	1.423	0.2038	
15 minute summer	S25	23.004	S26	260.2	0.999	0.217	2.2509	
15 minute summer	S26	1.007	PI	699.9	2.485	2.169	1.9233	
120 minute summer	PI	1.009	S27	323.9	1.492	0.871	1.5301	
120 minute summer	S27	1.010	TANK	320.5	1.350	0.846	6.9967	
120 minute summer	TANK	1.011	S28	77.4	0.702	0.641	0.2704	
15 minute summer	JUN S17A	12.010	S17	117.4	2.076	0.734	0.9460	
120 minute summer	S28	1.012	S29	77.4	1.998	0.549	1.4554	644.8
15 minute summer	JUN S13C	12.008	S13	76.7	1.223	0.715	0.6568	

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Results for 100 year Critical Storm Duration. Lowest mass balance: 99.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RE PP1	12	63.757	0.257	25.7	0.6047	0.0000	SURCHARGED
15 minute summer	BEND PP2	13	63.736	0.352	32.2	0.8431	0.0000	SURCHARGED
15 minute summer	BEND PP3	13	63.728	0.377	35.0	1.0330	0.0000	SURCHARGED
15 minute summer	BEND PP4	13	63.714	0.399	36.7	0.3958	0.0000	SURCHARGED
15 minute summer	BEND PP5	13	63.703	0.409	52.7	0.5061	0.0000	SURCHARGED
15 minute summer	BEND PP6	13	63.636	0.420	56.7	0.7633	0.0000	SURCHARGED
15 minute summer	S13b	13	63.593	0.404	56.6	0.9469	0.0000	SURCHARGED
15 minute summer	S13a	12	63.503	0.703	55.5	0.1988	0.0000	SURCHARGED
15 minute summer	OU-11	12	63.875	0.415	38.1	0.8362	0.0000	SURCHARGED
15 minute summer	S13	12	63.327	0.787	105.5	1.3913	0.0000	SURCHARGED
15 minute summer	OU-12	11	63.643	0.567	66.7	1.6568	0.0000	SURCHARGED
15 minute summer	OU-13	12	63.325	0.294	60.0	0.7763	0.0000	SURCHARGED
15 minute summer	S14	12	63.256	0.596	121.4	1.0526	0.0000	SURCHARGED
15 minute summer	OU-14	12	63.228	0.145	29.1	0.1941	0.0000	OK
15 minute summer	JUN-02	12	63.229	0.626	148.4	0.0000	0.0000	SURCHARGED
15 minute summer	OU-15	10	63.386	0.154	41.5	0.2862	0.0000	OK
15 minute summer	S15	10	63.325	0.143	50.8	0.3014	0.0000	OK
15 minute summer	OU-16	12	63.392	0.094	25.7	0.1257	0.0000	OK
15 minute summer	JUN-03	12	63.262	0.432	75.9	0.0000	0.0000	SURCHARGED
15 minute summer	OU-17	10	63.303	0.167	31.9	0.2437	0.0000	OK
15 minute summer	S16	12	63.187	0.707	251.7	1.2499	0.0000	SURCHARGED
15 minute summer	OU-18	10	63.653	0.043	9.5	0.0222	0.0000	OK
15 minute summer	JUN-04	12	63.096	0.742	223.6	0.0000	0.0000	SURCHARGED
15 minute summer	OU-08	10	63.232	0.073	8.1	0.0336	0.0000	OK
15 minute summer	S07	10	63.475	0.045	5.2	0.0224	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	RE PP1	12.000	BEND PP2	25.1	0.891	0.593	0.6921	
15 minute summer	BEND PP2	12.001	BEND PP3	27.3	0.856	0.645	0.1975	
15 minute summer	BEND PP3	12.002	BEND PP4	35.1	0.937	0.828	0.2150	
15 minute summer	BEND PP4	12.003	BEND PP5	38.9	1.001	0.919	0.1267	
15 minute summer	BEND PP5	12.004	BEND PP6	51.0	1.294	1.205	0.4658	
15 minute summer	BEND PP6	12.005	S13b	56.6	1.874	1.337	0.1595	
15 minute summer	S13b	12.006	S13a	55.5	1.731	0.475	0.3093	
15 minute summer	S13a	12.007	JUN S13C	60.0	1.508	1.154	0.6899	
15 minute summer	OU-11	13.000	JUN S13C	35.4	2.224	0.852	0.2468	
15 minute summer	S13	12.009	JUN S17A	100.3	1.488	1.108	1.0927	
15 minute summer	OU-12	16.000	S14	61.9	1.557	1.825	1.0733	
15 minute summer	OU-13	17.000	S14	59.5	1.751	0.833	0.1504	
15 minute summer	S14	16.001	JUN-02	119.4	1.091	0.695	3.1667	
15 minute summer	OU-14	18.000	JUN-02	29.0	2.271	0.251	0.1224	
15 minute summer	JUN-02	16.002	S16	144.4	1.167	0.581	3.2804	
15 minute summer	OU-15	19.000	S15	41.3	1.192	0.372	0.1750	
15 minute summer	S15	19.001	JUN-03	50.3	1.239	0.453	1.7958	
15 minute summer	OU-16	20.000	JUN-03	25.6	2.491	0.570	0.0736	
15 minute summer	JUN-03	19.002	S16	75.6	1.567	0.681	1.4005	
15 minute summer	OU-17	21.000	S16	31.7	1.085	0.748	0.1407	
15 minute summer	S16	16.003	JUN-04	216.0	1.824	0.794	2.4755	
15 minute summer	OU-18	22.000	JUN-04	9.5	2.233	0.175	0.1110	
15 minute summer	JUN-04	16.004	S17	223.5	1.882	0.683	2.9965	
15 minute summer	OU-08	1.000	S09	7.9	0.960	0.447	0.2826	
15 minute summer	S07	2.000	S08	5.2	1.178	0.185	0.0543	

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Results for 100 year Critical Storm Duration. Lowest mass balance: 99.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	OU-01	11	63.438	0.018	1.4	0.0032	0.0000	OK
15 minute summer	S08	11	63.110	0.057	6.6	0.0162	0.0000	OK
15 minute summer	S09	12	63.120	0.265	14.4	0.4682	0.0000	SURCHARGED
15 minute summer	OU-02	10	63.171	0.108	32.4	0.1602	0.0000	OK
15 minute summer	S01	12	63.121	0.143	32.3	0.0404	0.0000	OK
15 minute summer	OU-07	12	63.148	0.153	19.1	0.1093	0.0000	SURCHARGED
15 minute summer	S10	12	63.119	0.383	65.2	0.1085	0.0000	SURCHARGED
15 minute summer	OU-04	11	63.277	0.184	61.9	0.5003	0.0000	OK
15 minute summer	OU-03	11	63.360	0.108	26.2	0.1326	0.0000	OK
15 minute summer	S03	12	63.280	0.332	26.1	0.5871	0.0000	SURCHARGED
15 minute summer	S04	12	63.062	0.690	146.9	1.2191	0.0000	SURCHARGED
15 minute summer	OU-05	10	63.518	0.101	28.6	0.1338	0.0000	OK
15 minute summer	OU-06	10	63.647	0.055	14.3	0.0395	0.0000	OK
15 minute summer	S05	12	63.019	0.872	173.5	1.5402	0.0000	SURCHARGED
15 minute summer	S11	10	63.836	0.036	6.2	0.0188	0.0000	OK
15 minute summer	S12	10	64.012	0.036	6.2	0.0189	0.0000	OK
15 minute summer	S17A	12	63.007	0.907	179.7	1.6026	0.0000	SURCHARGED
15 minute summer	S17	12	62.982	1.232	516.5	2.1775	0.0000	SURCHARGED
15 minute summer	OU-19	10	63.918	0.118	38.6	0.2057	0.0000	OK
15 minute summer	S18	11	63.648	0.333	38.4	0.5888	0.0000	SURCHARGED
15 minute summer	OU-20	11	64.059	0.552	34.8	0.8738	0.0000	SURCHARGED
15 minute summer	OU-21	10	63.653	0.089	28.6	0.1175	0.0000	OK
15 minute summer	S19	11	63.614	0.389	97.1	0.6875	0.0000	SURCHARGED
15 minute summer	KO-01	9	63.486	0.074	15.7	0.0706	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	OU-01	3.000	S08	1.4	0.333	0.012	0.0372	
15 minute summer	S08	2.001	S09	6.5	0.860	0.126	0.1248	
15 minute summer	S09	1.001	S10	17.5	0.821	0.437	0.2904	
15 minute summer	OU-02	4.000	S01	32.3	1.589	0.190	0.1007	
15 minute summer	S01	4.001	S10	31.9	1.002	0.194	0.5770	
15 minute summer	OU-07	5.000	S10	19.0	1.986	0.418	0.0297	
15 minute summer	S10	1.002	S04	64.3	1.426	0.626	1.7592	
15 minute summer	OU-04	6.000	S04	60.9	1.973	0.815	0.9002	
15 minute summer	OU-03	7.000	S03	26.1	1.922	0.453	0.0460	
15 minute summer	S03	7.001	S04	23.4	1.585	0.887	0.2222	
15 minute summer	S04	1.003	S05	128.0	1.271	0.689	3.5830	
15 minute summer	OU-05	8.000	S05	28.3	1.704	0.377	0.3343	
15 minute summer	OU-06	10.000	S05	14.3	2.636	0.232	0.0273	
15 minute summer	S05	1.004_1	S17A	173.8	1.058	0.474	4.6122	
15 minute summer	S11	1.004	S05	6.2	1.923	0.119	0.0307	
15 minute summer	S12	11.000	S17A	6.2	1.733	0.124	0.2043	
15 minute summer	S17A	1.005	S17	169.9	0.946	0.445	9.0970	
15 minute summer	S17	1.006	S26	510.1	1.811	1.581	1.9624	
15 minute summer	OU-19	23.000	S18	38.4	1.650	0.521	0.6158	
15 minute summer	S18	23.001	S19	37.0	0.525	0.529	1.5758	
15 minute summer	OU-20	24.000	S19	32.7	1.858	1.262	0.1722	
15 minute summer	OU-21	25.000	S19	28.5	1.209	0.332	0.2650	
15 minute summer	S19	23.002	S22	96.5	1.395	1.380	1.6964	
15 minute summer	KO-01	26.000	S20	15.8	1.285	0.214	0.2192	

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Results for 100 year Critical Storm Duration. Lowest mass balance: 99.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	OU-22	11	63.696	0.081	22.4	0.0963	0.0000	OK
15 minute summer	S20	11	63.483	0.322	37.8	0.5694	0.0000	SURCHARGED
15 minute summer	OU-23	10	63.699	0.126	28.6	0.1663	0.0000	OK
15 minute summer	OU-24	10	63.591	0.063	28.6	0.0834	0.0000	OK
15 minute summer	JUN S22A	11	63.309	0.367	63.1	0.0000	0.0000	SURCHARGED
15 minute summer	OU-26	10	63.561	0.099	34.8	0.1890	0.0000	OK
15 minute summer	OU-25	11	63.639	0.132	34.8	0.2547	0.0000	OK
15 minute summer	S22	12	62.982	0.232	192.7	0.4099	0.0000	OK
15 minute summer	OU-27	11	63.262	0.139	42.9	0.2023	0.0000	OK
15 minute summer	S23	12	63.172	0.516	44.3	0.1460	0.0000	SURCHARGED
15 minute summer	OU-28	11	63.533	0.076	56.2	0.1888	0.0000	OK
15 minute summer	JUN-05	12	63.159	0.537	94.9	0.0000	0.0000	SURCHARGED
15 minute summer	OU-29	10	63.747	0.247	29.1	0.3322	0.0000	SURCHARGED
15 minute summer	S24	12	63.044	0.497	118.7	0.8776	0.0000	SURCHARGED
15 minute summer	OU-30	10	63.197	0.349	24.8	0.3116	0.0000	SURCHARGED
30 minute summer	S25	20	62.922	1.015	293.5	1.7930	0.0000	SURCHARGED
30 minute summer	S26	20	62.889	1.223	750.1	2.1619	0.0000	SURCHARGED
120 minute summer	PI	82	62.808	1.238	387.9	0.3504	0.0000	SURCHARGED
120 minute summer	S27	84	62.803	1.548	387.0	3.9392	0.0000	SURCHARGED
120 minute summer	TANK	84	62.796	1.626	384.5	498.8807	0.0000	SURCHARGED
15 minute summer	JUN S17A	12	63.189	0.752	132.5	0.0000	0.0000	SURCHARGED
120 minute summer	S28	84	62.778	1.626	103.9	2.8727	0.0000	SURCHARGED
120 minute summer	S29	84	60.739	0.189	103.9	0.0000	0.0000	OK
15 minute summer	JUN S13C	12	63.380	0.753	81.1	0.0000	0.0000	SURCHARGED

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	OU-22	27.000	S20	22.0	2.439	0.409	0.0573	
15 minute summer	S20	26.001	JUN S22A	35.7	0.899	0.844	1.3038	
15 minute summer	OU-23	14.000	S13	28.2	1.293	0.543	0.4441	
15 minute summer	OU-24	28.000	JUN S22A	28.6	1.419	0.173	0.1441	
15 minute summer	JUN S22A	26.002	S22	62.8	1.581	1.484	0.6527	
15 minute summer	OU-26	29.000	S22	34.7	2.458	0.239	0.0348	
15 minute summer	OU-25	15.000	JUN S17A	33.3	2.523	0.800	0.2884	
15 minute summer	S22	23.003	S25	190.3	2.353	0.390	2.8850	
15 minute summer	OU-27	30.000	S23	44.3	1.628	0.540	0.5186	
15 minute summer	S23	30.001	JUN-05	39.3	0.592	0.561	0.5993	
15 minute summer	OU-28	31.000	JUN-05	55.6	3.496	0.174	0.0525	
15 minute summer	JUN-05	30.002	S24	90.4	1.515	1.292	1.3118	
15 minute summer	OU-29	32.000	S24	28.8	1.638	1.624	0.0325	
15 minute summer	S24	30.003	S25	116.8	2.558	0.535	0.6244	
15 minute summer	OU-30	33.000	S25	24.1	1.369	1.826	0.2107	
30 minute summer	S25	23.004	S26	280.6	1.006	0.234	2.2509	
30 minute summer	S26	1.007	PI	741.8	2.634	2.299	1.9233	
120 minute summer	PI	1.009	S27	387.0	1.476	1.040	1.5301	
120 minute summer	S27	1.010	TANK	384.5	1.499	1.015	6.9967	
120 minute summer	TANK	1.011	S28	103.9	0.942	0.861	0.2704	
15 minute summer	JUN S17A	12.010	S17	125.5	2.209	0.785	0.9460	
120 minute summer	S28	1.012	S29	103.9	2.123	0.738	1.8392	850.1
15 minute summer	JUN S13C	12.008	S13	79.6	1.196	0.742	0.6568	

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.85%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RE PP1	12	64.228	0.728	36.0	1.7101	0.3126	FLOOD
15 minute summer	BEND PP2	12	64.190	0.806	37.8	2.4346	0.1526	FLOOD
30 minute summer	BEND PP3	20	64.173	0.822	36.4	2.5435	2.3258	FLOOD
15 minute summer	BEND PP4	12	64.174	0.859	38.0	0.9475	0.0000	FLOOD RISK
15 minute summer	BEND PP5	12	64.171	0.877	58.1	1.1364	0.0000	FLOOD RISK
30 minute summer	BEND PP6	20	64.126	0.910	59.4	1.9143	0.0000	FLOOD RISK
30 minute summer	S13b	21	64.099	0.910	56.3	2.2082	0.0000	FLOOD RISK
30 minute summer	S13a	21	64.046	1.246	49.7	0.3527	0.0000	SURCHARGED
15 minute summer	OU-11	10	64.306	0.846	53.4	1.7038	2.8271	FLOOD
30 minute summer	S13	21	63.919	1.379	101.9	2.4370	0.0000	SURCHARGED
15 minute summer	OU-12	10	64.076	1.000	93.4	2.9230	5.9362	FLOOD
15 minute summer	OU-13	12	64.023	0.992	84.1	2.6201	0.0000	FLOOD RISK
30 minute summer	S14	20	63.904	1.244	128.5	2.1983	0.0000	FLOOD RISK
30 minute summer	OU-14	20	63.900	0.817	36.7	1.0974	0.0000	FLOOD RISK
30 minute summer	JUN-02	20	63.885	1.282	157.4	0.0000	0.0000	SURCHARGED
15 minute summer	OU-15	12	64.060	0.828	58.0	1.5420	0.0000	FLOOD RISK
15 minute summer	S15	12	64.042	0.860	67.2	1.8165	0.0000	FLOOD RISK
15 minute summer	OU-16	12	64.113	0.815	36.0	1.0876	0.0000	FLOOD RISK
30 minute summer	JUN-03	20	63.951	1.121	84.0	0.0000	0.0000	SURCHARGED
30 minute summer	OU-17	20	63.881	0.745	40.3	1.0897	0.0000	FLOOD RISK
30 minute summer	S16	20	63.852	1.372	260.7	2.4249	0.0000	SURCHARGED
30 minute summer	OU-18	20	63.789	0.179	12.0	0.0936	0.0000	SURCHARGED
30 minute summer	JUN-04	20	63.757	1.403	248.4	0.0000	0.0000	SURCHARGED
30 minute summer	OU-08	21	63.857	0.698	11.9	0.3224	0.0000	SURCHARGED
30 minute summer	S07	21	63.836	0.406	6.6	0.2001	0.0000	SURCHARGED

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	RE PP1	12.000	BEND PP2	27.8	0.926	0.658	0.6921	
15 minute summer	BEND PP2	12.001	BEND PP3	28.2	0.860	0.667	0.1975	
30 minute summer	BEND PP3	12.002	BEND PP4	30.7	0.891	0.725	0.2150	
15 minute summer	BEND PP4	12.003	BEND PP5	36.4	1.060	0.860	0.1267	
15 minute summer	BEND PP5	12.004	BEND PP6	54.8	1.379	1.295	0.4658	
30 minute summer	BEND PP6	12.005	S13b	56.3	1.673	1.329	0.1595	
30 minute summer	S13b	12.006	S13a	49.7	1.762	0.425	0.3093	
30 minute summer	S13a	12.007	JUN S13C	49.0	1.233	0.944	0.6899	
15 minute summer	OU-11	13.000	JUN S13C	39.2	2.261	0.944	0.2468	
30 minute summer	S13	12.009	JUN S17A	93.9	1.506	1.037	1.0927	
15 minute summer	OU-12	16.000	S14	73.4	1.845	2.164	1.0733	
15 minute summer	OU-13	17.000	S14	75.3	1.895	1.055	0.1504	
30 minute summer	S14	16.001	JUN-02	124.3	1.102	0.723	3.1667	
30 minute summer	OU-14	18.000	JUN-02	33.0	2.339	0.285	0.1460	
30 minute summer	JUN-02	16.002	S16	147.5	1.156	0.593	3.2804	
15 minute summer	OU-15	19.000	S15	54.5	1.255	0.490	0.3555	
15 minute summer	S15	19.001	JUN-03	65.2	1.260	0.587	2.4808	
15 minute summer	OU-16	20.000	JUN-03	33.9	2.620	0.753	0.0887	
30 minute summer	JUN-03	19.002	S16	77.8	1.553	0.700	1.4005	
30 minute summer	OU-17	21.000	S16	39.6	1.102	0.936	0.1921	
30 minute summer	S16	16.003	JUN-04	237.5	1.795	0.872	2.4755	
30 minute summer	OU-18	22.000	JUN-04	11.9	2.204	0.221	0.1800	
30 minute summer	JUN-04	16.004	S17	241.7	1.905	0.738	2.9965	
30 minute summer	OU-08	1.000	S09	9.7	0.973	0.547	0.4036	
30 minute summer	S07	2.000	S08	6.6	1.250	0.237	0.2184	

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.85%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	OU-01	21	63.826	0.406	5.3	0.0743	0.0000	SURCHARGED
30 minute summer	S08	21	63.824	0.771	16.3	0.2182	0.0000	SURCHARGED
30 minute summer	S09	21	63.823	0.968	17.8	1.7096	0.0000	SURCHARGED
30 minute summer	OU-02	21	63.823	0.760	40.9	1.1276	0.0000	FLOOD RISK
30 minute summer	S01	21	63.819	0.841	38.2	0.2381	0.0000	FLOOD RISK
30 minute summer	OU-07	20	63.845	0.850	24.1	0.6077	0.0000	SURCHARGED
30 minute summer	S10	21	63.812	1.075	72.7	0.3044	0.0000	SURCHARGED
15 minute summer	OU-04	12	64.093	1.000	86.7	2.7230	0.3086	FLOOD
15 minute summer	OU-03	12	64.096	0.844	36.7	1.0327	0.0000	FLOOD RISK
30 minute summer	S03	20	63.979	1.031	29.4	1.8217	0.0000	SURCHARGED
30 minute summer	S04	21	63.737	1.365	160.3	2.4125	0.0000	SURCHARGED
30 minute summer	OU-05	20	63.743	0.326	36.1	0.4307	0.0000	SURCHARGED
30 minute summer	OU-06	21	63.710	0.118	18.1	0.0851	0.0000	OK
30 minute summer	S05	21	63.688	1.541	171.8	2.7236	0.0000	SURCHARGED
15 minute summer	S11	9	63.842	0.042	8.7	0.0217	0.0000	OK
15 minute summer	S12	10	64.018	0.042	8.7	0.0225	0.0000	OK
30 minute summer	S17A	21	63.672	1.572	175.8	2.7771	0.0000	SURCHARGED
30 minute summer	S17	21	63.645	1.895	515.0	3.3476	0.0000	SURCHARGED
15 minute summer	OU-19	12	64.157	0.357	54.0	0.6222	0.0000	SURCHARGED
15 minute summer	S18	12	63.983	0.668	49.7	1.1810	0.0000	SURCHARGED
15 minute summer	OU-20	10	64.507	1.000	48.7	1.5820	0.8995	FLOOD
15 minute summer	OU-21	12	63.991	0.427	40.0	0.5656	0.0000	SURCHARGED
30 minute summer	S19	20	63.942	0.717	118.6	1.2666	0.0000	SURCHARGED
15 minute summer	KO-01	12	64.161	0.749	22.0	0.7171	0.0000	FLOOD RISK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	OU-01	3.000	S08	4.2	0.338	0.038	0.3159	
30 minute summer	S08	2.001	S09	13.2	0.870	0.254	0.2999	
30 minute summer	S09	1.001	S10	21.4	0.761	0.534	0.2904	
30 minute summer	OU-02	4.000	S01	38.2	1.577	0.225	0.2573	
30 minute summer	S01	4.001	S10	36.5	1.029	0.222	0.7854	
30 minute summer	OU-07	5.000	S10	21.6	2.029	0.475	0.0297	
30 minute summer	S10	1.002	S04	68.7	1.391	0.669	1.7592	
15 minute summer	OU-04	6.000	S04	71.7	1.978	0.961	0.9613	
15 minute summer	OU-03	7.000	S03	30.8	1.968	0.536	0.0519	
30 minute summer	S03	7.001	S04	24.8	1.571	0.942	0.2222	
30 minute summer	S04	1.003	S05	127.7	1.225	0.687	3.5830	
30 minute summer	OU-05	8.000	S05	35.7	1.795	0.475	0.7996	
30 minute summer	OU-06	10.000	S05	18.8	2.714	0.306	0.0819	
30 minute summer	S05	1.004_1	S17A	169.9	1.028	0.464	4.6122	
15 minute summer	S11	1.004	S05	8.7	2.071	0.168	0.1034	
15 minute summer	S12	11.000	S17A	8.7	1.906	0.174	0.2129	
30 minute summer	S17A	1.005	S17	173.9	0.969	0.456	9.0970	
30 minute summer	S17	1.006	S26	510.8	1.813	1.583	1.9624	
15 minute summer	OU-19	23.000	S18	49.7	1.740	0.674	0.8160	
15 minute summer	S18	23.001	S19	46.0	0.653	0.658	1.5758	
15 minute summer	OU-20	24.000	S19	41.9	2.379	1.615	0.1722	
15 minute summer	OU-21	25.000	S19	37.9	1.231	0.441	0.3880	
30 minute summer	S19	23.002	S22	115.3	1.637	1.648	1.8217	
15 minute summer	KO-01	26.000	S20	18.6	1.289	0.252	0.3487	

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.85%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	OU-22	12	64.274	0.659	31.4	0.7838	0.0000	FLOOD RISK
15 minute summer	S20	12	64.148	0.987	45.6	1.7441	0.0000	SURCHARGED
30 minute summer	OU-23	20	63.969	0.396	36.1	0.5244	0.0000	SURCHARGED
15 minute summer	OU-24	12	63.978	0.450	40.0	0.5955	0.0000	SURCHARGED
15 minute summer	JUN S22A	12	63.951	1.009	77.2	0.0000	0.0000	SURCHARGED
30 minute summer	OU-26	20	63.710	0.248	44.0	0.4728	0.0000	SURCHARGED
15 minute summer	OU-25	11	64.312	0.805	48.7	1.5585	1.2057	FLOOD
30 minute summer	S22	20	63.685	0.935	221.1	1.6527	0.0000	SURCHARGED
15 minute summer	OU-27	12	64.129	1.006	60.0	1.4642	0.0000	SURCHARGED
15 minute summer	S23	12	63.954	1.298	52.1	0.3675	0.0000	SURCHARGED
15 minute summer	OU-28	12	63.993	0.536	78.7	1.3310	0.0000	SURCHARGED
15 minute summer	JUN-05	12	63.933	1.311	118.0	0.0000	0.0000	SURCHARGED
15 minute summer	OU-29	10	63.864	0.364	40.7	0.4895	0.0000	SURCHARGED
30 minute summer	S24	20	63.754	1.207	136.3	2.1331	0.0000	SURCHARGED
15 minute summer	OU-30	12	63.847	0.999	34.7	0.8923	0.0000	SURCHARGED
180 minute summer	S25	120	63.586	1.679	148.6	2.9661	0.0000	SURCHARGED
180 minute summer	S26	120	63.586	1.920	387.1	3.3922	0.0000	SURCHARGED
180 minute summer	PI	120	63.576	2.006	385.7	0.5678	0.0000	SURCHARGED
180 minute summer	S27	120	63.568	2.313	384.9	5.8858	0.0000	SURCHARGED
180 minute summer	TANK	120	63.557	2.387	382.6	732.4310	0.0000	SURCHARGED
30 minute summer	JUN S17A	21	63.813	1.376	128.4	0.0000	0.0000	SURCHARGED
180 minute summer	S28	120	63.531	2.379	124.0	4.2040	0.0000	SURCHARGED
15 minute summer	S29	1	61.850	1.300	86.8	0.0000	0.0000	OK
30 minute summer	JUN S13C	21	63.958	1.331	80.0	0.0000	0.0000	SURCHARGED

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	OU-22	27.000	S20	28.9	2.399	0.536	0.0739	
15 minute summer	S20	26.001	JUN S22A	39.0	0.980	0.920	1.3038	
30 minute summer	OU-23	14.000	S13	36.7	1.353	0.705	0.8083	
15 minute summer	OU-24	28.000	JUN S22A	38.3	1.446	0.232	0.2345	
15 minute summer	JUN S22A	26.002	S22	69.6	1.749	1.643	0.6700	
30 minute summer	OU-26	29.000	S22	43.7	2.567	0.302	0.0979	
15 minute summer	OU-25	15.000	JUN S17A	35.8	2.567	0.861	0.2989	
30 minute summer	S22	23.003	S25	211.2	2.351	0.432	3.7963	
15 minute summer	OU-27	30.000	S23	52.1	1.688	0.635	0.6297	
15 minute summer	S23	30.001	JUN-05	48.5	0.689	0.693	0.5993	
15 minute summer	OU-28	31.000	JUN-05	72.8	3.537	0.227	0.0810	
15 minute summer	JUN-05	30.002	S24	111.9	1.590	1.600	1.3118	
15 minute summer	OU-29	32.000	S24	40.2	2.282	2.263	0.0328	
30 minute summer	S24	30.003	S25	130.0	2.523	0.595	0.6244	
15 minute summer	OU-30	33.000	S25	30.4	1.728	2.305	0.2149	
180 minute summer	S25	23.004	S26	147.3	0.661	0.123	2.2509	
180 minute summer	S26	1.007	PI	385.7	1.370	1.195	1.9233	
180 minute summer	PI	1.009	S27	384.9	1.367	1.035	1.5301	
180 minute summer	S27	1.010	TANK	382.6	1.372	1.009	6.9967	
180 minute summer	TANK	1.011	S28	124.0	1.124	1.028	0.2704	
30 minute summer	JUN S17A	12.010	S17	121.1	2.217	0.757	0.9460	
180 minute summer	S28	1.012	S29	124.0	1.760	0.880	2.6469	1135.5
30 minute summer	JUN S13C	12.008	S13	77.1	1.227	0.718	0.6568	

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