

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	3.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Adoptable Manhole Type

Max Width (mm)	Diameter (mm)	Max Width (mm)	Diameter (mm)
374	1200	749	1500
499	1350	900	1800

>900 Link+900 mm

Max Depth (m)	Diameter (mm)	Max Depth (m)	Diameter (mm)
1.500	1050	99.999	1200

Circular Default Sewer Type Link Type

Template	Freeform Carrier	Auto Increment (mm)	75
Shape	Circular	Follow Ground	x
Barrels	1		

Available Diameters (mm)

100 | 150

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Node Type	Manhole Type	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)
✓ S1	0.024	3.00	24.500	Manhole	Adoptable	1200	530678.346	190083.448	1.000	23.500
✓ S2	0.024	3.00	24.500	Manhole	Adoptable	1200	530687.155	190080.599	1.100	23.400
✓ S3			24.500	Manhole	Adoptable	1200	530693.375	190067.047	1.500	23.000
✓ S5	0.007	3.00	24.500	Manhole	Adoptable	1200	530698.569	190055.509	1.100	23.400
✓ S4	0.007	3.00	24.900	Manhole	Adoptable	1200	530668.393	190041.821	1.000	23.900
✓ Ex			23.850	Manhole	Adoptable	1200	530702.575	190071.270	1.140	22.710

Links

	US Node	DS Node	Length (m)	ks (mm) / n	Velocity Equation	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	Link Type	T of C (mins)
0	S1	S2	9.258	0.600	Colebrook-White	23.500	23.400	0.100	92.6	150	Circular_Default Sewer Type	3.15
1	S2	S3	14.911	0.600	Colebrook-White	23.400	23.000	0.400	37.3	150	Circular_Default Sewer Type	3.30
2	S3	Ex	10.123	0.600	Colebrook-White	23.000	22.710	0.290	34.9	150	Circular_Default Sewer Type	3.66
0	S4	S5	33.135	0.600	Colebrook-White	23.900	23.400	0.500	66.3	150	Circular_Default Sewer Type	3.45
1	S5	S3	12.653	0.600	Colebrook-White	23.400	23.000	0.400	31.6	150	Circular_Default Sewer Type	3.56

DS Depth (m)	Minimum Depth (m)	Maximum Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)	Notes
0.950	0.850	0.950	0.024	0.0	50	0.856	TC is outside FEH-22 range Upstream Depth is less than the specified mini
1.350	0.950	1.350	0.048	0.0	56	1.444	TC is outside FEH-22 range Upstream Depth is less than the specified mini
0.990	0.990	1.350	0.062	0.0	63	1.581	TC is outside FEH-22 range Downstream Depth is less than the specified m
0.950	0.850	0.950	0.007	0.0	24	0.671	TC is outside FEH-22 range Upstream Depth is less than the specified mini
1.350	0.950	1.350	0.014	0.0	28	1.074	TC is outside FEH-22 range Upstream Depth is less than the specified mini

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	9.258	92.6	150	Circular_Default Sewer Type	24.500	23.500	0.850	24.500	23.400	0.950
1.001	14.911	37.3	150	Circular_Default Sewer Type	24.500	23.400	0.950	24.500	23.000	1.350
1.002	10.123	34.9	150	Circular_Default Sewer Type	24.500	23.000	1.350	23.850	22.710	0.990
2.000	33.135	66.3	150	Circular_Default Sewer Type	24.900	23.900	0.850	24.500	23.400	0.950
2.001	12.653	31.6	150	Circular_Default Sewer Type	24.500	23.400	0.950	24.500	23.000	1.350

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S1	1200	Manhole	Adoptable	S2	1200	Manhole	Adoptable
1.001	S2	1200	Manhole	Adoptable	S3	1200	Manhole	Adoptable
1.002	S3	1200	Manhole	Adoptable	Ex	1200	Manhole	Adoptable
2.000	S4	1200	Manhole	Adoptable	S5	1200	Manhole	Adoptable
2.001	S5	1200	Manhole	Adoptable	S3	1200	Manhole	Adoptable

Manhole Schedule

Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Node Type	MH Type	Connections	Link	IL (m)	Dia (mm)	Link Type	
530678.346	190083.448	24.500	1.000	1200	Manhole	Adoptable		0	1.000	23.500	150	Circular_Default Sewer Type
530687.155	190080.599	24.500	1.100	1200	Manhole	Adoptable		1	1.000	23.400	150	Circular_Default Sewer Type
530693.375	190067.047	24.500	1.500	1200	Manhole	Adoptable		0	1.001	23.400	150	Circular_Default Sewer Type
								1	2.001	23.000	150	Circular_Default Sewer Type
								2	1.001	23.000	150	Circular_Default Sewer Type
								0	1.002	23.000	150	Circular_Default Sewer Type
530698.569	190055.509	24.500	1.100	1200	Manhole	Adoptable		1	2.000	23.400	150	Circular_Default Sewer Type
								0	2.001	23.400	150	Circular_Default Sewer Type

Manhole Schedule

Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Node Type	MH Type	Connections	Link	IL (m)	Dia (mm)	Link Type	
530668.393	190041.821	24.900	1.000	1200	Manhole	Adoptable		0	2.000	23.900	150	Circular_Default Sew
530702.575	190071.270	23.850	1.140	1200	Manhole	Adoptable		1	1.002	22.710	150	Circular_Default Sew

Simulation Settings

Rainfall Methodology	FEH-22	Skip Steady State	✓	Check Discharge Rate(s)	x
Rainfall Events	Singular	Drain Down Time (mins)	5000	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m³/ha)	20.0		
Analysis Speed	Detailed	Starting Level (m)			

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	40	0	0

Node S3 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	23.000	Product Number	CTL-SHE-0042-1000-1500-1000
Design Depth (m)	1.500	Min Outlet Diameter (m)	0.075
Design Flow (l/s)	1.0	Min Node Diameter (mm)	1200

Node S3 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	23.830	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	344	Depth (m)	0.375
Safety Factor	2.0	Width (m)	5.500	Inf Depth (m)	
Porosity	0.30	Length (m)	28.500		

Node S2 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	23.830	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	344	Depth (m)	0.375
Safety Factor	2.0	Width (m)	5.500	Inf Depth (m)	
Porosity	0.30	Length (m)	28.500		

Node S3 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	23.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	280

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	20.0	20.0	0.800	20.0	20.0	0.801	0.0	20.0

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Approval Settings

Node Size	✓	Maximum Full Bore Velocity (m/s)	3.000
Node Losses	✓	Proportional Velocity	✓
Link Size	✓	Return Period (years)	
Minimum Diameter (mm)	150	Minimum Proportional Velocity (m/s)	0.750
Link Length	✓	Maximum Proportional Velocity (m/s)	3.000
Maximum Length (m)	100.000	Surcharged Depth	✓
Coordinates	✓	Return Period (years)	
Accuracy (m)	1.000	Maximum Surcharged Depth (m)	0.100
Crossings	✓	Flooding	✓
Cover Depth	✓	Return Period (years)	30
Minimum Cover Depth (m)		Time to Half Empty	x
Maximum Cover Depth (m)	3.000	Discharge Rates	✓
Backdrops	✓	Discharge Volume	✓
Minimum Backdrop Height (m)		100 year 360 minute (m ³)	
Maximum Backdrop Height (m)	1.500	First Flush	✓
Full Bore Velocity	✓	Return Period (years)	30
Minimum Full Bore Velocity (m/s)		First Flush Depth (mm)	5

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute winter	42.872	17.287	30 year 360 minute winter	25.468	10.082
1 year 30 minute winter	27.388	11.044	30 year 480 minute winter	20.017	7.962
1 year 60 minute winter	16.899	6.722	30 year 600 minute winter	16.494	6.603
1 year 120 minute winter	13.973	5.558	30 year 720 minute winter	14.178	5.654
1 year 180 minute winter	11.658	4.615	30 year 960 minute winter	11.098	4.412
1 year 240 minute winter	9.908	3.941	30 year 1440 minute winter	7.789	3.106
1 year 360 minute winter	7.705	3.050	100 year +40% CC 15 minute winter	422.468	170.350
1 year 480 minute winter	6.268	2.493	100 year +40% CC 30 minute winter	270.971	109.263
1 year 600 minute winter	5.288	2.117	100 year +40% CC 60 minute winter	167.336	66.562
1 year 720 minute winter	4.628	1.845	100 year +40% CC 120 minute winter	105.681	42.037
1 year 960 minute winter	3.721	1.479	100 year +40% CC 180 minute winter	80.008	31.674
1 year 1440 minute winter	2.725	1.087	100 year +40% CC 240 minute winter	64.610	25.700
30 year 15 minute winter	230.769	93.052	100 year +40% CC 360 minute winter	47.684	18.877
30 year 30 minute winter	146.950	59.254	100 year +40% CC 480 minute winter	37.765	15.022
30 year 60 minute winter	90.634	36.052	100 year +40% CC 600 minute winter	31.260	12.514
30 year 120 minute winter	57.628	22.923	100 year +40% CC 720 minute winter	26.942	10.744
30 year 180 minute winter	43.422	17.190	100 year +40% CC 960 minute winter	21.115	8.393
30 year 240 minute winter	34.860	13.867	100 year +40% CC 1440 minute winter	14.778	5.893

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.21%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	9	23.538	0.038	2.6	0.0617	0.0000	OK
15 minute winter	S2	9	23.443	0.043	5.1	0.0671	0.0000	OK
240 minute winter	S3	172	23.214	0.214	1.8	4.3127	0.0000	SURCHARGED
15 minute winter	S5	10	23.422	0.022	1.5	0.0277	0.0000	OK
15 minute winter	S4	10	23.919	0.019	0.8	0.0240	0.0000	OK
120 minute winter	Ex	86	22.725	0.015	0.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S1	1.000	S2	2.5	0.654	0.135	0.0356	
15 minute winter	S2	1.001	S3	5.1	1.336	0.173	0.1072	
240 minute winter	S3	1.002	Ex	0.7	0.689	0.022	0.0097	9.4
15 minute winter	S5	2.001	S3	1.5	0.691	0.046	0.0871	
15 minute winter	S4	2.000	S5	0.7	0.515	0.034	0.0477	

Results for 30 year Critical Storm Duration. Lowest mass balance: 98.73%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	S1	228	23.915	0.415	2.3	0.6688	0.0000	SURCHARGED
240 minute winter	S2	228	23.915	0.515	4.6	3.4741	0.0000	SURCHARGED
240 minute winter	S3	228	23.915	0.915	4.9	18.9027	0.0000	SURCHARGED
240 minute winter	S5	228	23.915	0.515	1.4	0.6479	0.0000	SURCHARGED
15 minute winter	S4	9	23.943	0.043	4.1	0.0549	0.0000	OK
240 minute winter	Ex	228	22.727	0.017	0.8	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)
240 minute winter	S1	1.000	S2	2.3	0.622	0.124	0.1630	
240 minute winter	S2	1.001	S3	4.0	0.903	0.138	0.2625	
240 minute winter	S3	1.002	Ex	0.8	0.730	0.026	0.0111	34.2
240 minute winter	S5	2.001	S3	1.2	0.557	0.036	0.2228	
15 minute winter	S4	2.000	S5	4.0	0.839	0.181	0.3194	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.07%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S1	352	24.253	0.753	3.2	1.2130	0.0000	FLOOD RISK
360 minute winter	S2	352	24.253	0.853	6.3	17.6573	0.0000	FLOOD RISK
360 minute winter	S3	352	24.253	1.253	5.6	32.9467	0.0000	FLOOD RISK
360 minute winter	S5	352	24.253	0.853	1.8	1.0725	0.0000	FLOOD RISK
360 minute winter	S4	352	24.252	0.352	0.9	0.4479	0.0000	SURCHARGED
360 minute winter	Ex	352	22.728	0.018	0.9	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)
360 minute winter	S1	1.000	S2	3.1	0.564	0.167	0.1630	
360 minute winter	S2	1.001	S3	4.6	0.893	0.158	0.2625	
360 minute winter	S3	1.002	Ex	0.9	0.762	0.030	0.0122	70.7
360 minute winter	S5	2.001	S3	1.6	0.471	0.051	0.2228	
360 minute winter	S4	2.000	S5	0.9	0.423	0.041	0.5833	

Results for 1 year 15 minute winter. 5015 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	9	23.538	0.038	2.6	0.0617	0.0000	OK
15 minute winter	S2	9	23.443	0.043	5.1	0.0671	0.0000	OK
15 minute winter	S3	17	23.106	0.106	6.5	2.1419	0.0000	OK
15 minute winter	S5	10	23.422	0.022	1.5	0.0277	0.0000	OK
15 minute winter	S4	10	23.919	0.019	0.8	0.0240	0.0000	OK
15 minute winter	Ex	18	22.725	0.015	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S1	1.000	S2	2.5	0.654	0.135	0.0356	2.7
15 minute winter	S2	1.001	S3	5.1	1.336	0.173	0.1072	
15 minute winter	S3	1.002	Ex	0.6	0.673	0.020	0.0091	
15 minute winter	S5	2.001	S3	1.5	0.691	0.046	0.0871	
15 minute winter	S4	2.000	S5	0.7	0.515	0.034	0.0477	

Results for 1 year 30 minute winter. 5030 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S1	17	23.532	0.032	1.8	0.0518	0.0000	OK
30 minute winter	S2	17	23.436	0.036	3.6	0.0557	0.0000	OK
30 minute winter	S3	31	23.125	0.125	4.6	2.5073	0.0000	OK
30 minute winter	S5	18	23.418	0.018	1.0	0.0230	0.0000	OK
30 minute winter	S4	18	23.916	0.016	0.5	0.0200	0.0000	OK
30 minute winter	Ex	31	22.725	0.015	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	S1	1.000	S2	1.8	0.605	0.097	0.0275	3.4
30 minute winter	S2	1.001	S3	3.6	1.056	0.123	0.1230	
30 minute winter	S3	1.002	Ex	0.6	0.680	0.021	0.0094	
30 minute winter	S5	2.001	S3	1.0	0.630	0.031	0.1014	
30 minute winter	S4	2.000	S5	0.5	0.456	0.023	0.0364	

Results for 1 year 60 minute winter. 5060 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S1	32	23.525	0.025	1.1	0.0403	0.0000	OK
60 minute winter	S2	33	23.428	0.028	2.2	0.0437	0.0000	OK
60 minute winter	S3	50	23.131	0.131	2.8	2.6342	0.0000	OK
60 minute winter	S5	36	23.414	0.014	0.6	0.0181	0.0000	OK
60 minute winter	S4	36	23.912	0.012	0.3	0.0157	0.0000	OK
60 minute winter	Ex	50	22.725	0.015	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	S1	1.000	S2	1.1	0.527	0.060	0.0194	4.1
60 minute winter	S2	1.001	S3	2.2	0.945	0.075	0.1280	
60 minute winter	S3	1.002	Ex	0.6	0.682	0.021	0.0094	
60 minute winter	S5	2.001	S3	0.6	0.579	0.019	0.1057	
60 minute winter	S4	2.000	S5	0.3	0.391	0.014	0.0255	

Results for 1 year 120 minute winter. 5120 minute analysis at 2 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	S1	60	23.523	0.023	0.9	0.0365	0.0000	OK
120 minute winter	S2	62	23.425	0.025	1.8	0.0396	0.0000	OK
120 minute winter	S3	92	23.190	0.190	2.4	3.8344	0.0000	SURCHARGED
120 minute winter	S5	66	23.414	0.014	0.6	0.0181	0.0000	OK
120 minute winter	S4	66	23.912	0.012	0.3	0.0157	0.0000	OK
120 minute winter	Ex	86	22.725	0.015	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute winter	S1	1.000	S2	0.9	0.498	0.049	0.0168	
120 minute winter	S2	1.001	S3	1.8	0.822	0.062	0.1446	
120 minute winter	S3	1.002	Ex	0.7	0.689	0.022	0.0097	6.8
120 minute winter	S5	2.001	S3	0.6	0.184	0.019	0.1155	
120 minute winter	S4	2.000	S5	0.3	0.391	0.014	0.0255	

Results for 1 year 180 minute winter. 5180 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	S1	92	23.521	0.021	0.8	0.0344	0.0000	OK
180 minute winter	S2	92	23.424	0.024	1.6	0.0374	0.0000	OK
180 minute winter	S3	132	23.213	0.213	2.0	4.2891	0.0000	SURCHARGED
180 minute winter	S5	88	23.412	0.012	0.4	0.0150	0.0000	OK
180 minute winter	S4	88	23.910	0.010	0.2	0.0131	0.0000	OK
180 minute winter	Ex	112	22.725	0.015	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute winter	S1	1.000	S2	0.8	0.481	0.043	0.0154	
180 minute winter	S2	1.001	S3	1.6	0.795	0.055	0.1437	
180 minute winter	S3	1.002	Ex	0.7	0.689	0.022	0.0097	8.2
180 minute winter	S5	2.001	S3	0.4	0.174	0.013	0.1155	
180 minute winter	S4	2.000	S5	0.2	0.344	0.009	0.0193	

Results for 1 year 240 minute winter. 5240 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	S1	124	23.520	0.020	0.7	0.0322	0.0000	OK
240 minute winter	S2	124	23.422	0.022	1.4	0.0351	0.0000	OK
240 minute winter	S3	172	23.214	0.214	1.8	4.3127	0.0000	SURCHARGED
240 minute winter	S5	120	23.412	0.012	0.4	0.0150	0.0000	OK
240 minute winter	S4	120	23.910	0.010	0.2	0.0131	0.0000	OK
240 minute winter	Ex	144	22.725	0.015	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute winter	S1	1.000	S2	0.7	0.463	0.038	0.0140	
240 minute winter	S2	1.001	S3	1.4	0.795	0.048	0.1424	
240 minute winter	S3	1.002	Ex	0.7	0.689	0.022	0.0097	9.4
240 minute winter	S5	2.001	S3	0.4	0.137	0.013	0.1155	
240 minute winter	S4	2.000	S5	0.2	0.344	0.009	0.0193	

Results for 1 year 360 minute winter. 5360 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S1	176	23.517	0.017	0.5	0.0275	0.0000	OK
360 minute winter	S2	176	23.419	0.019	1.0	0.0299	0.0000	OK
360 minute winter	S3	248	23.180	0.180	1.2	3.6262	0.0000	SURCHARGED
360 minute winter	S5	136	23.409	0.009	0.2	0.0109	0.0000	OK
360 minute winter	S4	136	23.907	0.007	0.1	0.0094	0.0000	OK
360 minute winter	Ex	248	22.725	0.015	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute winter	S1	1.000	S2	0.5	0.418	0.027	0.0111	
360 minute winter	S2	1.001	S3	1.0	0.741	0.034	0.1405	
360 minute winter	S3	1.002	Ex	0.7	0.689	0.022	0.0097	10.7
360 minute winter	S5	2.001	S3	0.2	0.095	0.006	0.1139	
360 minute winter	S4	2.000	S5	0.1	0.278	0.005	0.0119	

Results for 1 year 480 minute winter. 5480 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S1	224	23.515	0.015	0.4	0.0247	0.0000	OK
480 minute winter	S2	232	23.417	0.017	0.8	0.0269	0.0000	OK
480 minute winter	S3	312	23.163	0.163	1.0	3.2719	0.0000	SURCHARGED
480 minute winter	S5	184	23.409	0.009	0.2	0.0109	0.0000	OK
480 minute winter	S4	184	23.907	0.007	0.1	0.0094	0.0000	OK
480 minute winter	Ex	312	22.725	0.015	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	S1	1.000	S2	0.4	0.392	0.022	0.0095	
480 minute winter	S2	1.001	S3	0.8	0.741	0.027	0.1381	
480 minute winter	S3	1.002	Ex	0.7	0.688	0.022	0.0096	11.9
480 minute winter	S5	2.001	S3	0.2	0.091	0.006	0.1139	
480 minute winter	S4	2.000	S5	0.1	0.278	0.005	0.0119	

Results for 1 year 600 minute winter. 5610 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	S1	315	23.515	0.015	0.4	0.0247	0.0000	OK
600 minute winter	S2	315	23.417	0.017	0.8	0.0269	0.0000	OK
600 minute winter	S3	375	23.146	0.146	1.0	2.9386	0.0000	OK
600 minute winter	S5	240	23.409	0.009	0.2	0.0109	0.0000	OK
600 minute winter	S4	240	23.907	0.007	0.1	0.0094	0.0000	OK
600 minute winter	Ex	375	22.725	0.015	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	S1	1.000	S2	0.4	0.392	0.022	0.0095	13.3
600 minute winter	S2	1.001	S3	0.8	0.721	0.027	0.1359	
600 minute winter	S3	1.002	Ex	0.6	0.685	0.021	0.0095	
600 minute winter	S5	2.001	S3	0.2	0.097	0.006	0.1131	
600 minute winter	S4	2.000	S5	0.1	0.278	0.005	0.0119	

Results for 1 year 720 minute winter. 5730 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	S1	330	23.513	0.013	0.3	0.0216	0.0000	OK
720 minute winter	S2	330	23.415	0.015	0.6	0.0234	0.0000	OK
720 minute winter	S3	435	23.133	0.133	0.8	2.6811	0.0000	OK
720 minute winter	S5	300	23.409	0.009	0.2	0.0109	0.0000	OK
720 minute winter	S4	300	23.907	0.007	0.1	0.0094	0.0000	OK
720 minute winter	Ex	435	22.725	0.015	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	S1	1.000	S2	0.3	0.358	0.016	0.0078	14.0
720 minute winter	S2	1.001	S3	0.6	0.721	0.021	0.1288	
720 minute winter	S3	1.002	Ex	0.6	0.683	0.021	0.0094	
720 minute winter	S5	2.001	S3	0.2	0.081	0.006	0.1071	
720 minute winter	S4	2.000	S5	0.1	0.278	0.005	0.0119	

Results for 1 year 960 minute winter. 5970 minute analysis at 15 minute timestep. Mass balance: 99.21%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	S1	390	23.511	0.011	0.2	0.0179	0.0000	OK
960 minute winter	S2	390	23.412	0.012	0.4	0.0194	0.0000	OK
960 minute winter	S3	540	23.085	0.085	0.6	1.7117	0.0000	OK
960 minute winter	S5	420	23.409	0.009	0.2	0.0109	0.0000	OK
960 minute winter	S4	420	23.907	0.007	0.1	0.0094	0.0000	OK
960 minute winter	Ex	540	22.724	0.014	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute winter	S1	1.000	S2	0.2	0.316	0.011	0.0059	11.8
960 minute winter	S2	1.001	S3	0.4	0.721	0.014	0.0819	
960 minute winter	S3	1.002	Ex	0.6	0.661	0.019	0.0087	
960 minute winter	S5	2.001	S3	0.2	0.082	0.006	0.0677	
960 minute winter	S4	2.000	S5	0.1	0.278	0.005	0.0119	

Results for 1 year 1440 minute winter. 6450 minute analysis at 30 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	S1	660	23.511	0.011	0.2	0.0179	0.0000	OK
1440 minute winter	S2	660	23.412	0.012	0.4	0.0194	0.0000	OK
1440 minute winter	S3	780	23.082	0.082	0.6	1.6449	0.0000	OK
1440 minute winter	S5	720	23.409	0.009	0.2	0.0109	0.0000	OK
1440 minute winter	S4	720	23.907	0.007	0.1	0.0094	0.0000	OK
1440 minute winter	Ex	780	22.724	0.014	0.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute winter	S1	1.000	S2	0.2	0.316	0.011	0.0059	12.2
1440 minute winter	S2	1.001	S3	0.4	0.536	0.014	0.0782	
1440 minute winter	S3	1.002	Ex	0.6	0.656	0.018	0.0086	
1440 minute winter	S5	2.001	S3	0.2	0.064	0.006	0.0646	
1440 minute winter	S4	2.000	S5	0.1	0.278	0.005	0.0119	

Results for 30 year 15 minute winter. 5015 minute analysis at 1 minute timestep. Mass balance: 98.73%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	11	23.710	0.210	14.0	0.3377	0.0000	SURCHARGED
15 minute winter	S2	11	23.671	0.271	26.7	0.4242	0.0000	SURCHARGED
15 minute winter	S3	17	23.596	0.596	30.2	12.0007	0.0000	SURCHARGED
15 minute winter	S5	18	23.598	0.198	8.0	0.2491	0.0000	SURCHARGED
15 minute winter	S4	9	23.943	0.043	4.1	0.0549	0.0000	OK
15 minute winter	Ex	18	22.725	0.015	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S1	1.000	S2	12.8	0.912	0.692	0.1630	
15 minute winter	S2	1.001	S3	22.6	1.690	0.775	0.2625	
15 minute winter	S3	1.002	Ex	0.7	0.690	0.022	0.0097	14.5
15 minute winter	S5	2.001	S3	7.8	0.941	0.246	0.2228	
15 minute winter	S4	2.000	S5	4.0	0.839	0.181	0.3194	

Results for 30 year 30 minute winter. 5030 minute analysis at 1 minute timestep. Mass balance: 99.36%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S1	32	23.727	0.227	9.5	0.3657	0.0000	SURCHARGED
30 minute winter	S2	32	23.727	0.327	19.3	0.5125	0.0000	SURCHARGED
30 minute winter	S3	32	23.727	0.727	23.1	14.6447	0.0000	SURCHARGED
30 minute winter	S5	32	23.727	0.327	5.6	0.4119	0.0000	SURCHARGED
30 minute winter	S4	17	23.936	0.036	2.8	0.0460	0.0000	OK
30 minute winter	Ex	32	22.726	0.016	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	S1	1.000	S2	9.8	0.870	0.532	0.1630	
30 minute winter	S2	1.001	S3	17.7	1.569	0.607	0.2625	
30 minute winter	S3	1.002	Ex	0.7	0.709	0.024	0.0103	18.5
30 minute winter	S5	2.001	S3	5.6	0.842	0.176	0.2228	
30 minute winter	S4	2.000	S5	2.8	0.758	0.128	0.3354	

Results for 30 year 60 minute winter. 5060 minute analysis at 1 minute timestep. Mass balance: 99.75%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S1	60	23.856	0.356	6.0	0.5735	0.0000	SURCHARGED
60 minute winter	S2	61	23.856	0.456	12.1	1.0028	0.0000	SURCHARGED
60 minute winter	S3	61	23.856	0.856	14.2	16.4663	0.0000	SURCHARGED
60 minute winter	S5	61	23.857	0.457	4.0	0.5747	0.0000	SURCHARGED
60 minute winter	S4	33	23.928	0.028	1.7	0.0360	0.0000	OK
60 minute winter	Ex	61	22.727	0.017	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	S1	1.000	S2	6.1	0.811	0.331	0.1630	
60 minute winter	S2	1.001	S3	11.0	1.355	0.377	0.2625	
60 minute winter	S3	1.002	Ex	0.8	0.724	0.026	0.0108	22.4
60 minute winter	S5	2.001	S3	3.3	0.729	0.103	0.2228	
60 minute winter	S4	2.000	S5	1.7	0.653	0.078	0.3274	

Results for 30 year 120 minute winter. 5120 minute analysis at 2 minute timestep. Mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	S1	120	23.903	0.403	3.8	0.6485	0.0000	SURCHARGED
120 minute winter	S2	118	23.902	0.502	7.6	2.8586	0.0000	SURCHARGED
120 minute winter	S3	120	23.902	0.902	8.9	18.2970	0.0000	SURCHARGED
120 minute winter	S5	120	23.902	0.502	2.2	0.6319	0.0000	SURCHARGED
120 minute winter	S4	66	23.923	0.023	1.1	0.0291	0.0000	OK
120 minute winter	Ex	120	22.727	0.017	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute winter	S1	1.000	S2	3.8	0.721	0.205	0.1630	
120 minute winter	S2	1.001	S3	6.9	1.085	0.237	0.2625	
120 minute winter	S3	1.002	Ex	0.8	0.729	0.026	0.0110	28.5
120 minute winter	S5	2.001	S3	2.0	0.642	0.063	0.2228	
120 minute winter	S4	2.000	S5	1.1	0.561	0.050	0.3197	

Results for 30 year 180 minute winter. 5180 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	S1	176	23.914	0.414	2.9	0.6668	0.0000	SURCHARGED
180 minute winter	S2	176	23.914	0.514	5.6	3.4117	0.0000	SURCHARGED
180 minute winter	S3	176	23.914	0.914	6.3	18.8397	0.0000	SURCHARGED
180 minute winter	S5	176	23.914	0.514	1.6	0.6462	0.0000	SURCHARGED
180 minute winter	S4	96	23.920	0.020	0.8	0.0250	0.0000	OK
180 minute winter	Ex	176	22.727	0.017	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute winter	S1	1.000	S2	2.8	0.660	0.151	0.1630	
180 minute winter	S2	1.001	S3	4.9	1.010	0.169	0.2625	
180 minute winter	S3	1.002	Ex	0.8	0.730	0.026	0.0111	31.8
180 minute winter	S5	2.001	S3	1.4	0.521	0.043	0.2228	
180 minute winter	S4	2.000	S5	0.8	0.503	0.037	0.3141	

Results for 30 year 240 minute winter. 5240 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	S1	228	23.915	0.415	2.3	0.6688	0.0000	SURCHARGED
240 minute winter	S2	228	23.915	0.515	4.6	3.4741	0.0000	SURCHARGED
240 minute winter	S3	228	23.915	0.915	4.9	18.9027	0.0000	SURCHARGED
240 minute winter	S5	228	23.915	0.515	1.4	0.6479	0.0000	SURCHARGED
240 minute winter	S4	128	23.918	0.018	0.7	0.0234	0.0000	OK
240 minute winter	Ex	228	22.727	0.017	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute winter	S1	1.000	S2	2.3	0.622	0.124	0.1630	
240 minute winter	S2	1.001	S3	4.0	0.903	0.138	0.2625	
240 minute winter	S3	1.002	Ex	0.8	0.730	0.026	0.0111	34.2
240 minute winter	S5	2.001	S3	1.2	0.557	0.036	0.2228	
240 minute winter	S4	2.000	S5	0.7	0.478	0.032	0.3121	

Results for 30 year 360 minute winter. 5360 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S1	288	23.910	0.410	1.7	0.6599	0.0000	SURCHARGED
360 minute winter	S2	288	23.910	0.510	3.4	3.2042	0.0000	SURCHARGED
360 minute winter	S3	288	23.909	0.909	3.6	18.6340	0.0000	SURCHARGED
360 minute winter	S5	288	23.909	0.509	1.0	0.6408	0.0000	SURCHARGED
360 minute winter	S4	184	23.916	0.016	0.5	0.0200	0.0000	OK
360 minute winter	Ex	288	22.727	0.017	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute winter	S1	1.000	S2	1.7	0.564	0.092	0.1630	
360 minute winter	S2	1.001	S3	3.0	0.824	0.102	0.2625	
360 minute winter	S3	1.002	Ex	0.8	0.730	0.026	0.0111	37.9
360 minute winter	S5	2.001	S3	0.8	0.540	0.025	0.2228	
360 minute winter	S4	2.000	S5	0.5	0.425	0.023	0.3079	

Results for 30 year 480 minute winter. 5480 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S1	368	23.896	0.396	1.3	0.6380	0.0000	SURCHARGED
480 minute winter	S2	368	23.896	0.496	2.6	2.5433	0.0000	SURCHARGED
480 minute winter	S3	368	23.896	0.896	3.0	17.9790	0.0000	SURCHARGED
480 minute winter	S5	368	23.896	0.496	0.8	0.6237	0.0000	SURCHARGED
480 minute winter	S4	240	23.914	0.014	0.4	0.0180	0.0000	OK
480 minute winter	Ex	368	22.727	0.017	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	S1	1.000	S2	1.3	0.539	0.070	0.1630	
480 minute winter	S2	1.001	S3	2.4	0.760	0.082	0.2625	
480 minute winter	S3	1.002	Ex	0.8	0.728	0.026	0.0110	39.5
480 minute winter	S5	2.001	S3	0.6	0.222	0.019	0.2228	
480 minute winter	S4	2.000	S5	0.4	0.391	0.018	0.3055	

Results for 30 year 600 minute winter. 5610 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	S1	450	23.881	0.381	1.1	0.6136	0.0000	SURCHARGED
600 minute winter	S2	450	23.881	0.481	2.2	1.8239	0.0000	SURCHARGED
600 minute winter	S3	450	23.881	0.881	2.6	17.2672	0.0000	SURCHARGED
600 minute winter	S5	450	23.881	0.481	0.6	0.6047	0.0000	SURCHARGED
600 minute winter	S4	270	23.912	0.012	0.3	0.0157	0.0000	OK
600 minute winter	Ex	450	22.727	0.017	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	S1	1.000	S2	1.1	0.512	0.059	0.1630	
600 minute winter	S2	1.001	S3	2.0	0.721	0.068	0.2625	
600 minute winter	S3	1.002	Ex	0.8	0.727	0.026	0.0109	41.4
600 minute winter	S5	2.001	S3	0.6	0.136	0.019	0.2228	
600 minute winter	S4	2.000	S5	0.3	0.391	0.014	0.3030	

Results for 30 year 720 minute winter. 5730 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	S1	525	23.866	0.366	0.9	0.5901	0.0000	SURCHARGED
720 minute winter	S2	525	23.866	0.466	1.8	1.2751	0.0000	SURCHARGED
720 minute winter	S3	525	23.866	0.866	2.2	16.7274	0.0000	SURCHARGED
720 minute winter	S5	525	23.866	0.466	0.6	0.5863	0.0000	SURCHARGED
720 minute winter	S4	360	23.912	0.012	0.3	0.0157	0.0000	OK
720 minute winter	Ex	525	22.727	0.017	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	S1	1.000	S2	0.9	0.497	0.049	0.1630	
720 minute winter	S2	1.001	S3	1.8	0.721	0.061	0.2625	
720 minute winter	S3	1.002	Ex	0.8	0.725	0.026	0.0109	42.1
720 minute winter	S5	2.001	S3	0.4	0.065	0.014	0.2228	
720 minute winter	S4	2.000	S5	0.3	0.344	0.014	0.3030	

Results for 30 year 960 minute winter. 5970 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	S1	675	23.751	0.251	0.7	0.4045	0.0000	SURCHARGED
960 minute winter	S2	675	23.751	0.351	1.4	0.5501	0.0000	SURCHARGED
960 minute winter	S3	675	23.751	0.751	1.8	15.1155	0.0000	SURCHARGED
960 minute winter	S5	675	23.751	0.351	0.4	0.4414	0.0000	SURCHARGED
960 minute winter	S4	405	23.910	0.010	0.2	0.0131	0.0000	OK
960 minute winter	Ex	675	22.726	0.016	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute winter	S1	1.000	S2	0.7	0.463	0.038	0.1630	
960 minute winter	S2	1.001	S3	1.4	0.721	0.048	0.2625	
960 minute winter	S3	1.002	Ex	0.7	0.712	0.024	0.0104	41.3
960 minute winter	S5	2.001	S3	0.4	0.081	0.013	0.2228	
960 minute winter	S4	2.000	S5	0.2	0.344	0.009	0.3002	

Results for 30 year 1440 minute winter. 6450 minute analysis at 30 minute timestep. Mass balance: 99.73%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	S1	990	23.567	0.067	0.5	0.1086	0.0000	OK
1440 minute winter	S2	990	23.567	0.167	1.0	0.2624	0.0000	SURCHARGED
1440 minute winter	S3	990	23.567	0.567	1.4	11.4228	0.0000	SURCHARGED
1440 minute winter	S5	990	23.567	0.167	0.4	0.2107	0.0000	SURCHARGED
1440 minute winter	S4	750	23.910	0.010	0.2	0.0131	0.0000	OK
1440 minute winter	Ex	660	22.725	0.015	0.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute winter	S1	1.000	S2	0.5	0.418	0.027	0.1170	
1440 minute winter	S2	1.001	S3	1.0	0.536	0.034	0.2625	
1440 minute winter	S3	1.002	Ex	0.7	0.689	0.022	0.0097	43.8
1440 minute winter	S5	2.001	S3	0.4	0.070	0.013	0.2228	
1440 minute winter	S4	2.000	S5	0.2	0.344	0.009	0.2970	

Results for 100 year +40% CC 15 minute winter. 5015 minute analysis at 1 minute timestep. Mass balance: 99.07%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	10	24.119	0.619	25.6	0.9967	0.0000	SURCHARGED
15 minute winter	S2	13	23.942	0.542	48.5	4.7944	0.0000	SURCHARGED
15 minute winter	S3	21	23.919	0.919	40.8	19.1124	0.0000	SURCHARGED
15 minute winter	S5	21	23.920	0.520	14.8	0.6537	0.0000	SURCHARGED
15 minute winter	S4	9	23.960	0.060	7.5	0.0757	0.0000	OK
15 minute winter	Ex	21	22.727	0.017	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S1	1.000	S2	23.3	1.324	1.262	0.1630	
15 minute winter	S2	1.001	S3	28.7	1.938	0.982	0.2625	
15 minute winter	S3	1.002	Ex	0.8	0.731	0.027	0.0111	26.6
15 minute winter	S5	2.001	S3	12.2	1.030	0.383	0.2228	
15 minute winter	S4	2.000	S5	7.3	0.955	0.333	0.3962	

Results for 100 year +40% CC 30 minute winter. 5030 minute analysis at 1 minute timestep. Mass balance: 99.54%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S1	18	24.008	0.508	17.6	0.8181	0.0000	SURCHARGED
30 minute winter	S2	31	23.986	0.586	34.6	6.9221	0.0000	SURCHARGED
30 minute winter	S3	33	23.986	0.986	29.6	22.3127	0.0000	SURCHARGED
30 minute winter	S5	33	23.986	0.586	10.2	0.7373	0.0000	SURCHARGED
30 minute winter	S4	33	23.987	0.087	5.1	0.1111	0.0000	OK
30 minute winter	Ex	33	22.727	0.017	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	S1	1.000	S2	17.0	0.967	0.923	0.1630	
30 minute winter	S2	1.001	S3	23.4	1.687	0.802	0.2625	
30 minute winter	S3	1.002	Ex	0.8	0.738	0.027	0.0113	34.0
30 minute winter	S5	2.001	S3	7.8	0.892	0.245	0.2228	
30 minute winter	S4	2.000	S5	5.1	0.841	0.233	0.4681	

Results for 100 year +40% CC 60 minute winter. 5060 minute analysis at 1 minute timestep. Mass balance: 99.80%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S1	60	24.046	0.546	11.1	0.8790	0.0000	SURCHARGED
60 minute winter	S2	61	24.046	0.646	21.8	9.8186	0.0000	SURCHARGED
60 minute winter	S3	62	24.046	1.046	20.1	25.2006	0.0000	SURCHARGED
60 minute winter	S5	61	24.046	0.646	6.4	0.8122	0.0000	SURCHARGED
60 minute winter	S4	63	24.047	0.147	3.2	0.1863	0.0000	OK
60 minute winter	Ex	62	22.727	0.017	0.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	S1	1.000	S2	10.7	0.828	0.580	0.1630	
60 minute winter	S2	1.001	S3	16.6	1.482	0.567	0.2625	
60 minute winter	S3	1.002	Ex	0.8	0.743	0.028	0.0116	41.4
60 minute winter	S5	2.001	S3	6.7	0.774	0.211	0.2228	
60 minute winter	S4	2.000	S5	3.2	0.700	0.146	0.5816	

Results for 100 year +40% CC 120 minute winter. 5120 minute analysis at 2 minute timestep. Mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	S1	120	24.129	0.629	7.0	1.0135	0.0000	SURCHARGED
120 minute winter	S2	120	24.129	0.729	13.7	13.8746	0.0000	SURCHARGED
120 minute winter	S3	120	24.129	1.129	12.9	29.2090	0.0000	SURCHARGED
120 minute winter	S5	120	24.129	0.729	6.1	0.9170	0.0000	SURCHARGED
120 minute winter	S4	120	24.129	0.229	2.1	0.2910	0.0000	SURCHARGED
120 minute winter	Ex	120	22.728	0.018	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute winter	S1	1.000	S2	6.7	0.735	0.364	0.1630	
120 minute winter	S2	1.001	S3	10.6	1.273	0.364	0.2625	
120 minute winter	S3	1.002	Ex	0.9	0.751	0.029	0.0118	52.4
120 minute winter	S5	2.001	S3	3.8	0.634	0.121	0.2228	
120 minute winter	S4	2.000	S5	2.1	0.574	0.095	0.5833	

Results for 100 year +40% CC 180 minute winter. 5180 minute analysis at 4 minute timestep. Mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	S1	176	24.169	0.669	5.3	1.0770	0.0000	SURCHARGED
180 minute winter	S2	180	24.169	0.769	10.4	15.7959	0.0000	SURCHARGED
180 minute winter	S3	180	24.169	1.169	9.1	31.1177	0.0000	SURCHARGED
180 minute winter	S5	180	24.169	0.769	3.2	0.9669	0.0000	SURCHARGED
180 minute winter	S4	180	24.169	0.269	1.6	0.3415	0.0000	SURCHARGED
180 minute winter	Ex	180	22.728	0.018	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute winter	S1	1.000	S2	5.1	0.673	0.276	0.1630	
180 minute winter	S2	1.001	S3	7.6	1.149	0.259	0.2625	
180 minute winter	S3	1.002	Ex	0.9	0.754	0.030	0.0120	59.0
180 minute winter	S5	2.001	S3	2.9	0.762	0.090	0.2228	
180 minute winter	S4	2.000	S5	1.6	0.520	0.072	0.5833	

Results for 100 year +40% CC 240 minute winter. 5240 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	S1	236	24.189	0.689	4.3	1.1093	0.0000	SURCHARGED
240 minute winter	S2	236	24.189	0.789	8.4	16.7578	0.0000	SURCHARGED
240 minute winter	S3	236	24.188	1.188	7.8	32.0615	0.0000	SURCHARGED
240 minute winter	S5	236	24.188	0.788	2.5	0.9916	0.0000	SURCHARGED
240 minute winter	S4	236	24.188	0.288	1.3	0.3663	0.0000	SURCHARGED
240 minute winter	Ex	236	22.728	0.018	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute winter	S1	1.000	S2	4.1	0.630	0.224	0.1630	
240 minute winter	S2	1.001	S3	6.4	1.099	0.220	0.2625	
240 minute winter	S3	1.002	Ex	0.9	0.756	0.030	0.0120	63.5
240 minute winter	S5	2.001	S3	2.3	0.486	0.073	0.2228	
240 minute winter	S4	2.000	S5	1.2	0.478	0.055	0.5833	

Results for 100 year +40% CC 360 minute winter. 5360 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S1	352	24.253	0.753	3.2	1.2130	0.0000	FLOOD RISK
360 minute winter	S2	352	24.253	0.853	6.3	17.6573	0.0000	FLOOD RISK
360 minute winter	S3	352	24.253	1.253	5.6	32.9467	0.0000	FLOOD RISK
360 minute winter	S5	352	24.253	0.853	1.8	1.0725	0.0000	FLOOD RISK
360 minute winter	S4	352	24.252	0.352	0.9	0.4479	0.0000	SURCHARGED
360 minute winter	Ex	352	22.728	0.018	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute winter	S1	1.000	S2	3.1	0.564	0.167	0.1630	
360 minute winter	S2	1.001	S3	4.6	0.893	0.158	0.2625	
360 minute winter	S3	1.002	Ex	0.9	0.762	0.030	0.0122	70.7
360 minute winter	S5	2.001	S3	1.6	0.471	0.051	0.2228	
360 minute winter	S4	2.000	S5	0.9	0.423	0.041	0.5833	

Results for 100 year +40% CC 480 minute winter. 5480 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S1	456	24.194	0.694	2.5	1.1187	0.0000	SURCHARGED
480 minute winter	S2	456	24.194	0.794	4.9	17.0402	0.0000	SURCHARGED
480 minute winter	S3	464	24.194	1.194	4.4	32.3427	0.0000	SURCHARGED
480 minute winter	S5	464	24.194	0.794	1.4	0.9990	0.0000	SURCHARGED
480 minute winter	S4	464	24.194	0.294	0.7	0.3738	0.0000	SURCHARGED
480 minute winter	Ex	464	22.728	0.018	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	S1	1.000	S2	2.4	0.551	0.131	0.1630	
480 minute winter	S2	1.001	S3	3.6	0.824	0.124	0.2625	
480 minute winter	S3	1.002	Ex	0.9	0.757	0.030	0.0120	74.2
480 minute winter	S5	2.001	S3	1.3	0.540	0.040	0.2228	
480 minute winter	S4	2.000	S5	0.7	0.423	0.032	0.5833	

Results for 100 year +40% CC 600 minute winter. 5610 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	S1	555	24.178	0.678	2.1	1.0930	0.0000	SURCHARGED
600 minute winter	S2	570	24.178	0.778	4.1	16.2676	0.0000	SURCHARGED
600 minute winter	S3	570	24.178	1.178	3.8	31.5771	0.0000	SURCHARGED
600 minute winter	S5	570	24.178	0.778	1.2	0.9790	0.0000	SURCHARGED
600 minute winter	S4	570	24.178	0.278	0.6	0.3536	0.0000	SURCHARGED
600 minute winter	Ex	570	22.728	0.018	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	S1	1.000	S2	2.0	0.512	0.110	0.1630	
600 minute winter	S2	1.001	S3	3.1	0.560	0.107	0.2625	
600 minute winter	S3	1.002	Ex	0.9	0.755	0.030	0.0120	77.3
600 minute winter	S5	2.001	S3	1.1	0.327	0.034	0.2228	
600 minute winter	S4	2.000	S5	0.6	0.390	0.027	0.5833	

Results for 100 year +40% CC 720 minute winter. 5730 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	S1	585	24.164	0.664	1.8	1.0704	0.0000	SURCHARGED
720 minute winter	S2	585	24.164	0.764	3.5	15.5778	0.0000	SURCHARGED
720 minute winter	S3	585	24.164	1.164	3.1	30.8941	0.0000	SURCHARGED
720 minute winter	S5	585	24.164	0.764	1.0	0.9611	0.0000	SURCHARGED
720 minute winter	S4	585	24.164	0.264	0.5	0.3356	0.0000	SURCHARGED
720 minute winter	Ex	585	22.728	0.018	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	S1	1.000	S2	1.7	0.497	0.094	0.1630	
720 minute winter	S2	1.001	S3	2.6	0.560	0.090	0.2625	
720 minute winter	S3	1.002	Ex	0.9	0.754	0.029	0.0119	80.5
720 minute winter	S5	2.001	S3	0.9	0.327	0.029	0.2228	
720 minute winter	S4	2.000	S5	0.5	0.390	0.023	0.5833	

Results for 100 year +40% CC 960 minute winter. 5970 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	S1	735	24.126	0.626	1.4	1.0092	0.0000	SURCHARGED
960 minute winter	S2	735	24.126	0.726	2.8	13.7330	0.0000	SURCHARGED
960 minute winter	S3	735	24.126	1.126	2.8	29.0678	0.0000	SURCHARGED
960 minute winter	S5	735	24.126	0.726	0.8	0.9134	0.0000	SURCHARGED
960 minute winter	S4	735	24.126	0.226	0.4	0.2874	0.0000	SURCHARGED
960 minute winter	Ex	735	22.728	0.018	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute winter	S1	1.000	S2	1.4	0.481	0.074	0.1630	
960 minute winter	S2	1.001	S3	2.3	0.721	0.078	0.2625	
960 minute winter	S3	1.002	Ex	0.9	0.751	0.029	0.0118	83.5
960 minute winter	S5	2.001	S3	0.7	0.136	0.023	0.2228	
960 minute winter	S4	2.000	S5	0.4	0.344	0.018	0.5833	

Results for 100 year +40% CC 1440 minute winter. 6450 minute analysis at 30 minute timestep. Mass balance: 99.86%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	S1	1050	24.055	0.555	1.0	0.8933	0.0000	SURCHARGED
1440 minute winter	S2	1050	24.054	0.654	2.0	10.2367	0.0000	SURCHARGED
1440 minute winter	S3	1050	24.054	1.054	2.0	25.6052	0.0000	SURCHARGED
1440 minute winter	S5	1050	24.054	0.654	0.6	0.8230	0.0000	SURCHARGED
1440 minute winter	S4	1050	24.054	0.154	0.3	0.1960	0.0000	SURCHARGED
1440 minute winter	Ex	1050	22.727	0.017	0.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute winter	S1	1.000	S2	1.0	0.463	0.053	0.1630	
1440 minute winter	S2	1.001	S3	1.6	0.536	0.055	0.2625	
1440 minute winter	S3	1.002	Ex	0.9	0.744	0.028	0.0116	89.9
1440 minute winter	S5	2.001	S3	0.6	0.076	0.018	0.2228	
1440 minute winter	S4	2.000	S5	0.3	0.344	0.014	0.5833	