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Victoria Court 22 St Pancras West Sussex PO19 7GD	Twinham 34 Hurst Road Hass... Surface Water Drainage Attenuation Tank Design Rev02	
Date November 25	Designed by JS	
File ATTENUATION TANK REV0...	Checked by	
Elstree Computing Ltd	Source Control w.12.6	

Summary of Results for 100 year Return Period (+45%)

Half Drain Time : 264 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m ³)	Status
15 min Summer	63.430	0.180	0.0	0.3	0.3	5.1	OK
30 min Summer	63.488	0.238	0.0	0.3	0.3	6.8	OK
60 min Summer	63.544	0.294	0.0	0.3	0.3	8.4	OK
120 min Summer	63.588	0.338	0.0	0.4	0.4	9.6	OK
180 min Summer	63.601	0.351	0.0	0.4	0.4	10.0	OK
240 min Summer	63.602	0.352	0.0	0.4	0.4	10.0	OK
360 min Summer	63.600	0.350	0.0	0.4	0.4	10.0	OK
480 min Summer	63.594	0.344	0.0	0.4	0.4	9.8	OK
600 min Summer	63.586	0.336	0.0	0.4	0.4	9.6	OK
720 min Summer	63.577	0.327	0.0	0.4	0.4	9.3	OK
960 min Summer	63.558	0.308	0.0	0.4	0.4	8.8	OK
1440 min Summer	63.524	0.274	0.0	0.3	0.3	7.8	OK
2160 min Summer	63.481	0.231	0.0	0.3	0.3	6.6	OK
2880 min Summer	63.446	0.196	0.0	0.3	0.3	5.6	OK
4320 min Summer	63.393	0.143	0.0	0.3	0.3	4.1	OK
5760 min Summer	63.356	0.106	0.0	0.2	0.2	3.0	OK
7200 min Summer	63.330	0.080	0.0	0.2	0.2	2.3	OK
8640 min Summer	63.310	0.060	0.0	0.2	0.2	1.7	OK
10080 min Summer	63.295	0.045	0.0	0.2	0.2	1.3	OK
15 min Winter	63.430	0.180	0.0	0.3	0.3	5.1	OK
30 min Winter	63.488	0.238	0.0	0.3	0.3	6.8	OK
60 min Winter	63.545	0.295	0.0	0.4	0.4	8.4	OK
120 min Winter	63.590	0.340	0.0	0.4	0.4	9.7	OK

Storm Event	Rain (mm/hr)	Time-Peak (mins)
15 min Summer	136.149	25
30 min Summer	91.587	39
60 min Summer	58.739	68
120 min Summer	36.305	124
180 min Summer	26.955	180
240 min Summer	21.679	214
360 min Summer	15.967	276
480 min Summer	12.831	342
600 min Summer	10.820	412
720 min Summer	9.407	482
960 min Summer	7.537	618
1440 min Summer	5.504	888
2160 min Summer	4.010	1280
2880 min Summer	3.199	1668
4320 min Summer	2.322	2388
5760 min Summer	1.848	3120
7200 min Summer	1.549	3824
8640 min Summer	1.341	4576
10080 min Summer	1.188	5248
15 min Winter	136.149	25
30 min Winter	91.587	39
60 min Winter	58.739	66
120 min Winter	36.305	122

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Summary of Results for 100 year Return Period (+45%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
180 min Winter	63.604	0.354	0.0	0.4	0.4	10.1	0 K
240 min Winter	63.604	0.354	0.0	0.4	0.4	10.1	0 K
360 min Winter	63.600	0.350	0.0	0.4	0.4	10.0	0 K
480 min Winter	63.591	0.341	0.0	0.4	0.4	9.7	0 K
600 min Winter	63.580	0.330	0.0	0.4	0.4	9.4	0 K
720 min Winter	63.567	0.317	0.0	0.4	0.4	9.0	0 K
960 min Winter	63.541	0.291	0.0	0.3	0.3	8.3	0 K
1440 min Winter	63.494	0.244	0.0	0.3	0.3	7.0	0 K
2160 min Winter	63.439	0.189	0.0	0.3	0.3	5.4	0 K
2880 min Winter	63.397	0.147	0.0	0.3	0.3	4.2	0 K
4320 min Winter	63.340	0.090	0.0	0.2	0.2	2.6	0 K
5760 min Winter	63.304	0.054	0.0	0.2	0.2	1.5	0 K
7200 min Winter	63.281	0.031	0.0	0.2	0.2	0.9	0 K
8640 min Winter	63.266	0.016	0.0	0.1	0.1	0.5	0 K
10080 min Winter	63.255	0.005	0.0	0.1	0.1	0.1	0 K

Storm Event	Rain (mm/hr)	Time-Peak (mins)
180 min Winter	26.955	178
240 min Winter	21.679	230
360 min Winter	15.967	286
480 min Winter	12.831	364
600 min Winter	10.820	440
720 min Winter	9.407	516
960 min Winter	7.537	662
1440 min Winter	5.504	944
2160 min Winter	4.010	1344
2880 min Winter	3.199	1732
4320 min Winter	2.322	2468
5760 min Winter	1.848	3176
7200 min Winter	1.549	3896
8640 min Winter	1.341	4584
10080 min Winter	1.188	5248

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	1.000
Region	England and Wales	Cv (Winter)	1.000
M5-60 (mm)	20.000	Shortest Storm (mins)	15
Ratio R	0.347	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+45

Time / Area Diagram

Total Area (ha) 0.016

Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.005	4-8	0.005	8-12	0.005

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Model Details

Storage is Online Cover Level (m) 64.100

Cellular Storage Structure

Invert Level (m) 63.250 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

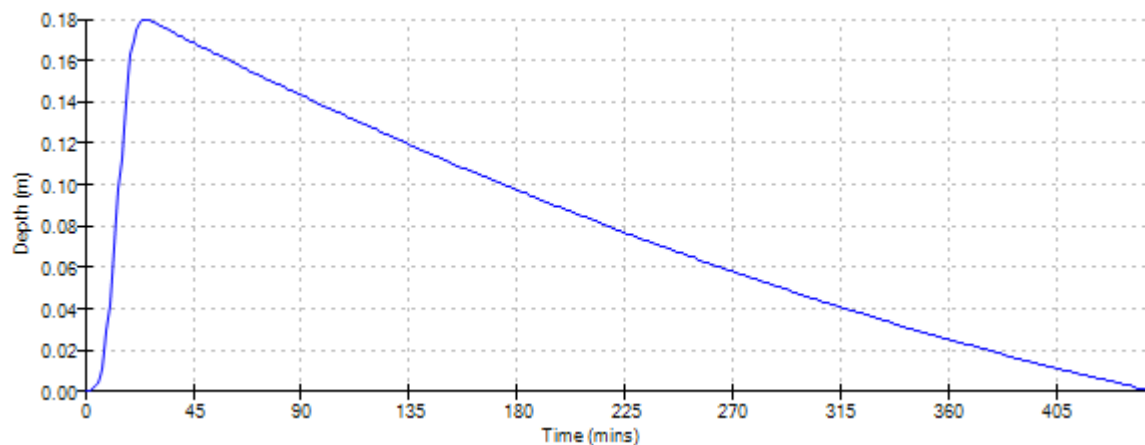
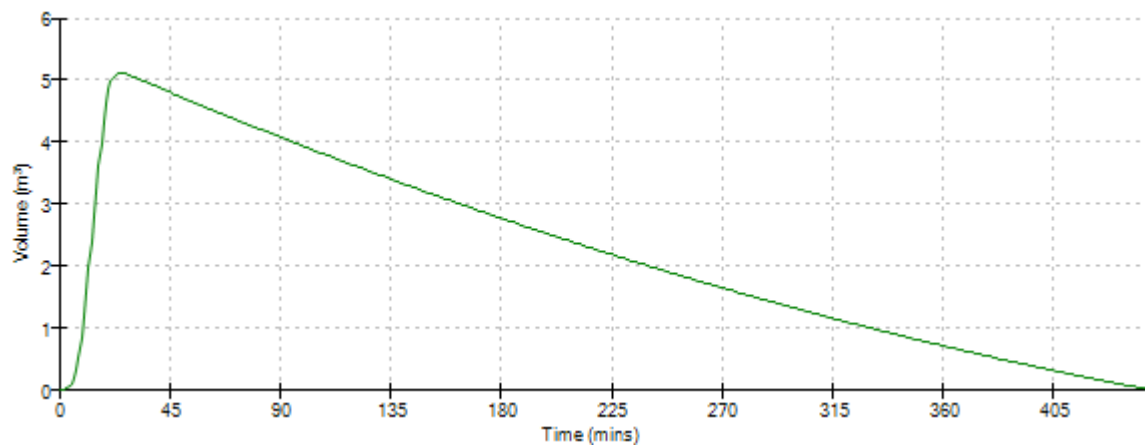
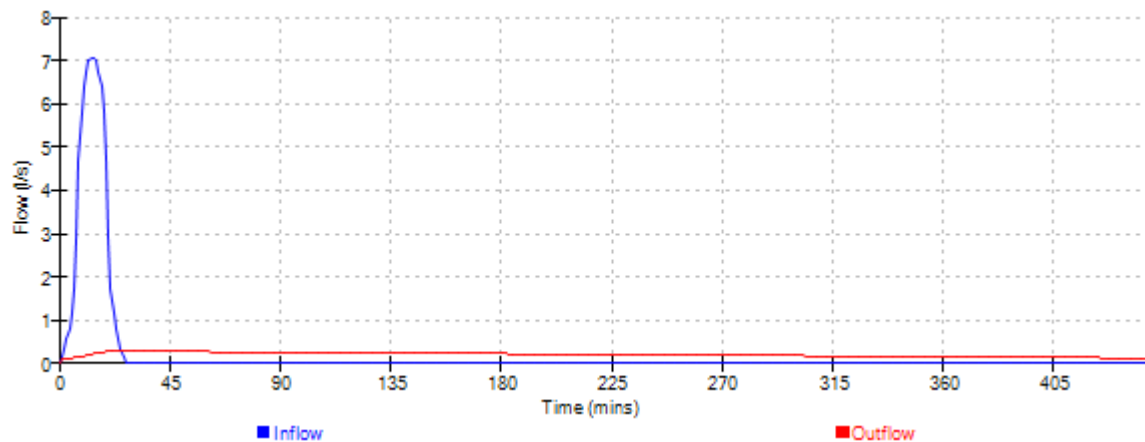
Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	30.0	30.0	0.500	0.0	43.6
0.400	30.0	43.6			

Orifice Outflow Control

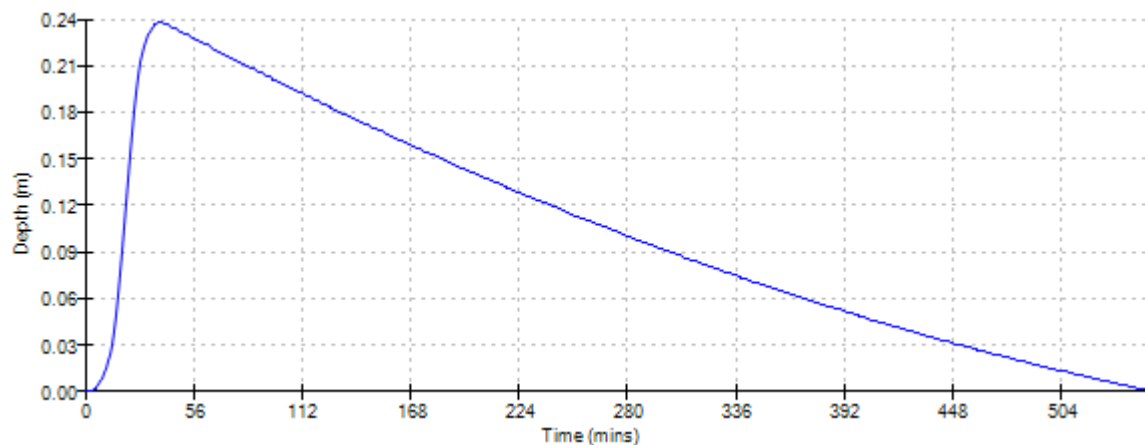
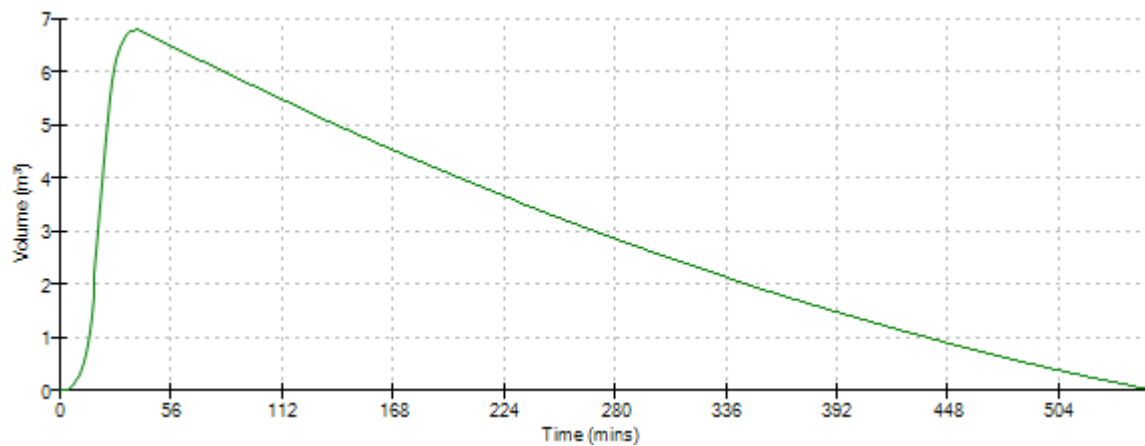
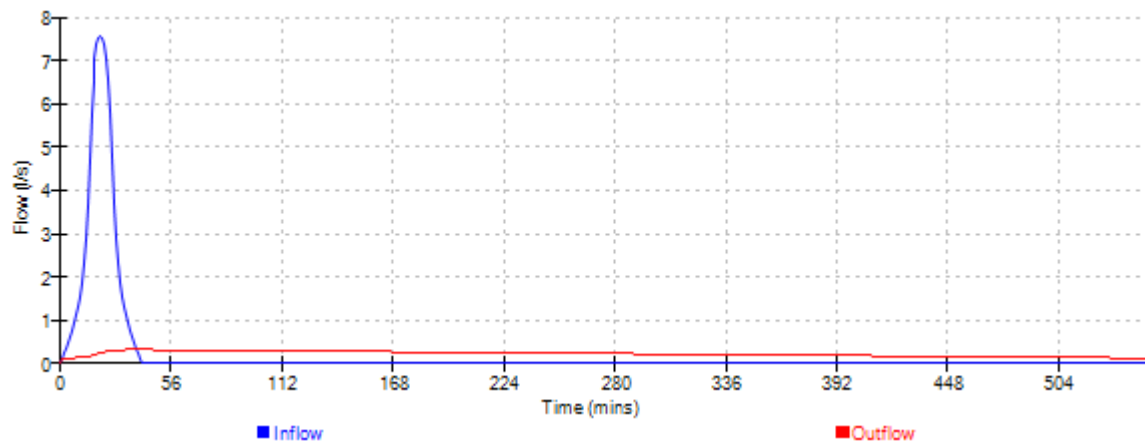
Diameter (m) 0.017 Discharge Coefficient 0.600 Invert Level (m) 63.200

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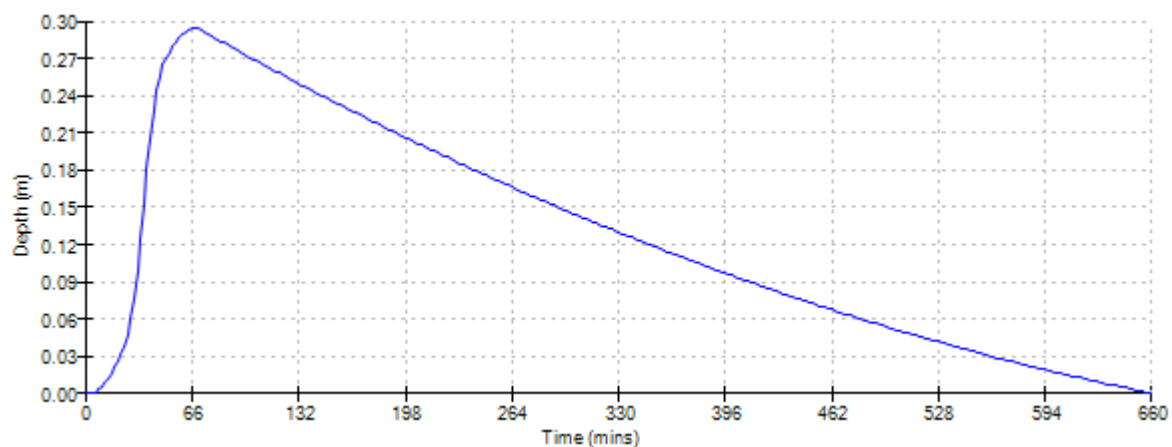
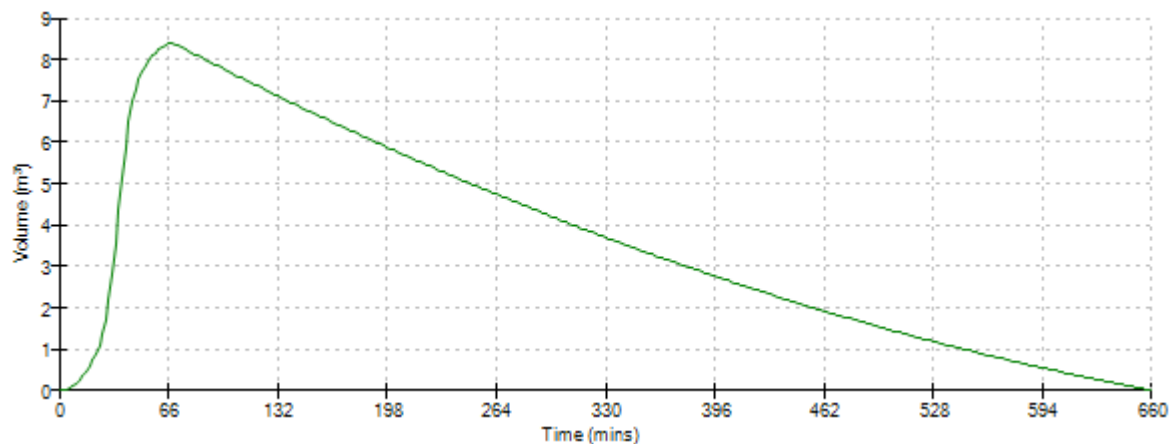
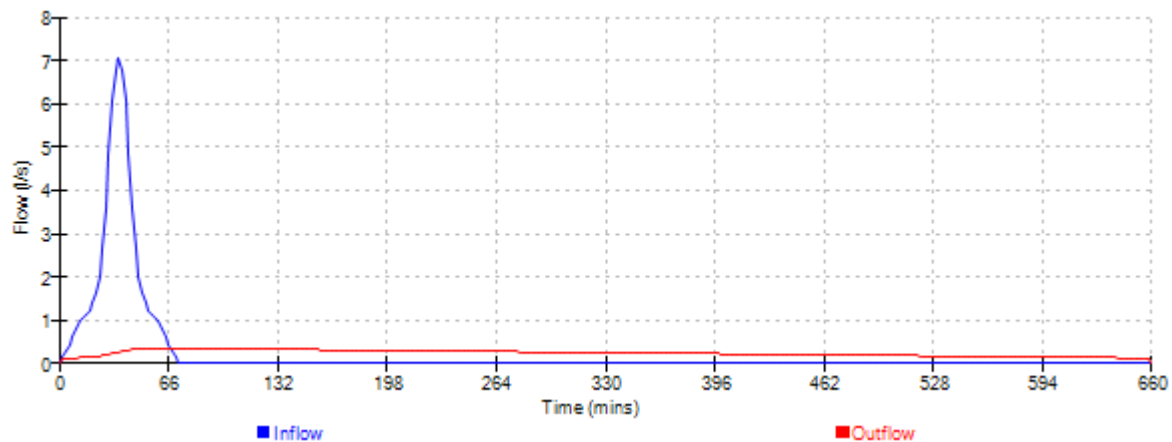
Event: 15 min Summer



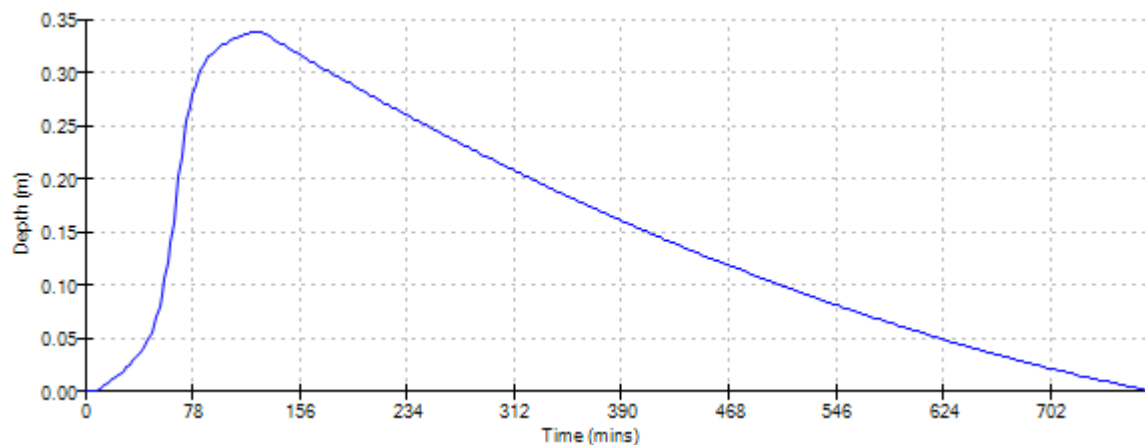
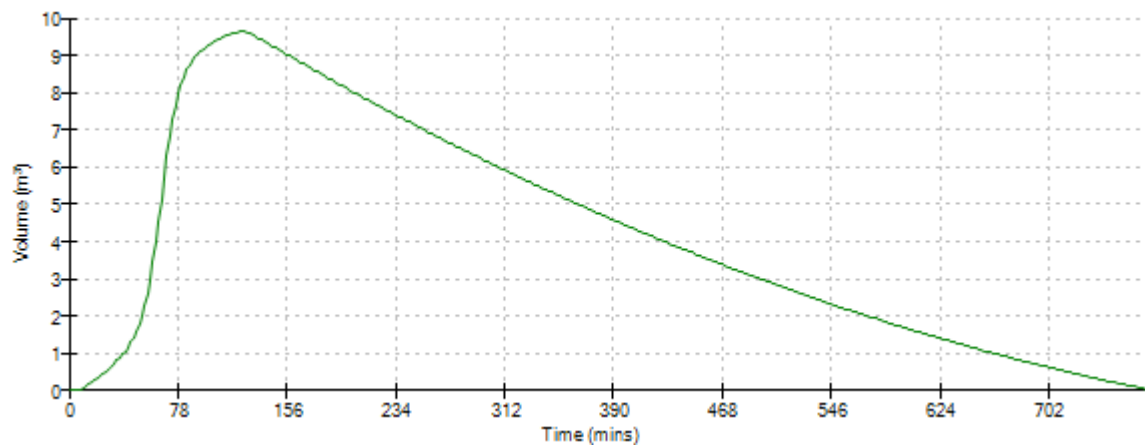
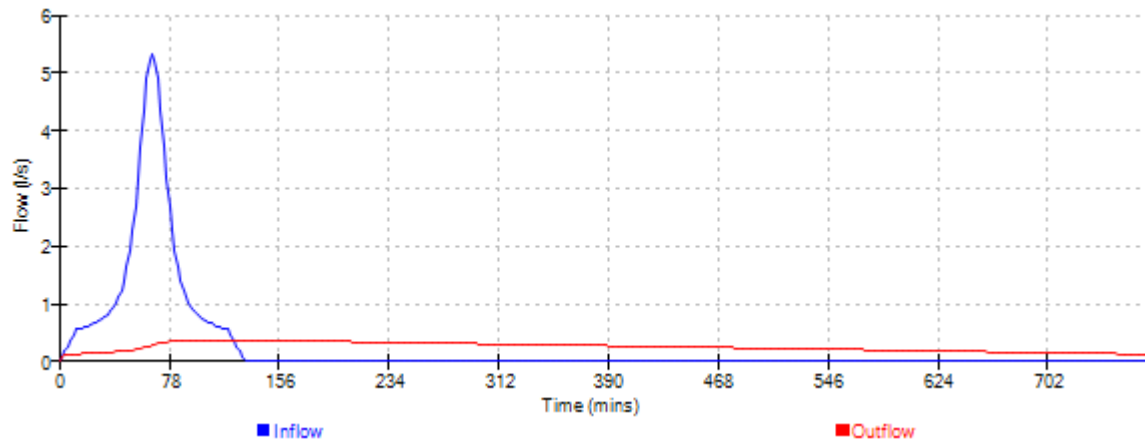
Event: 30 min Summer



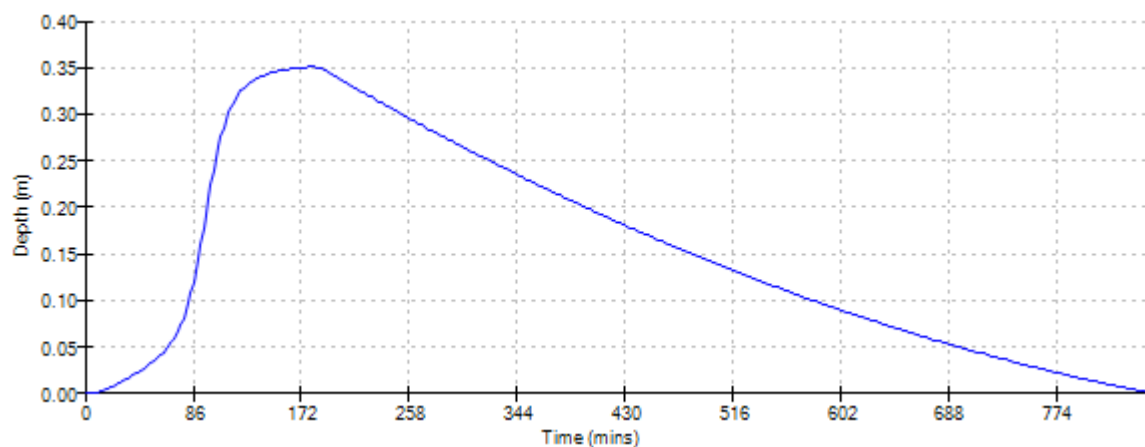
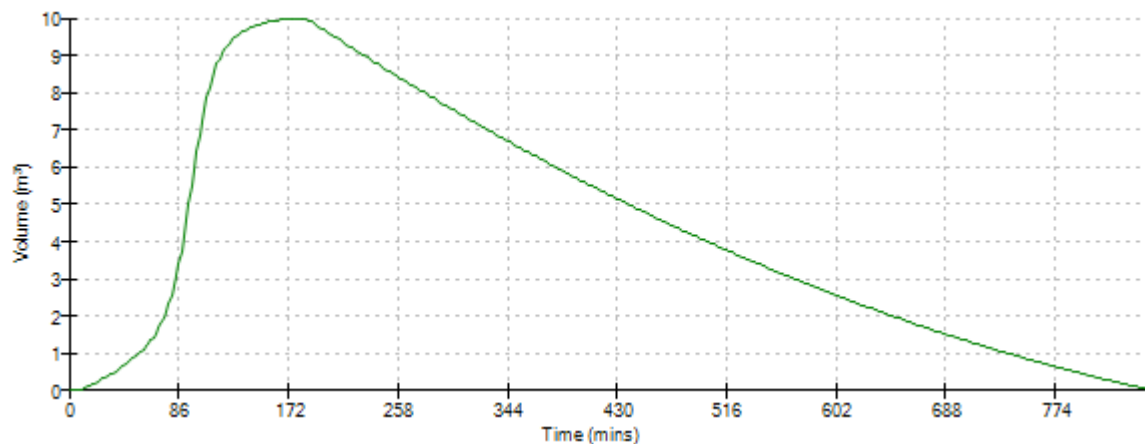
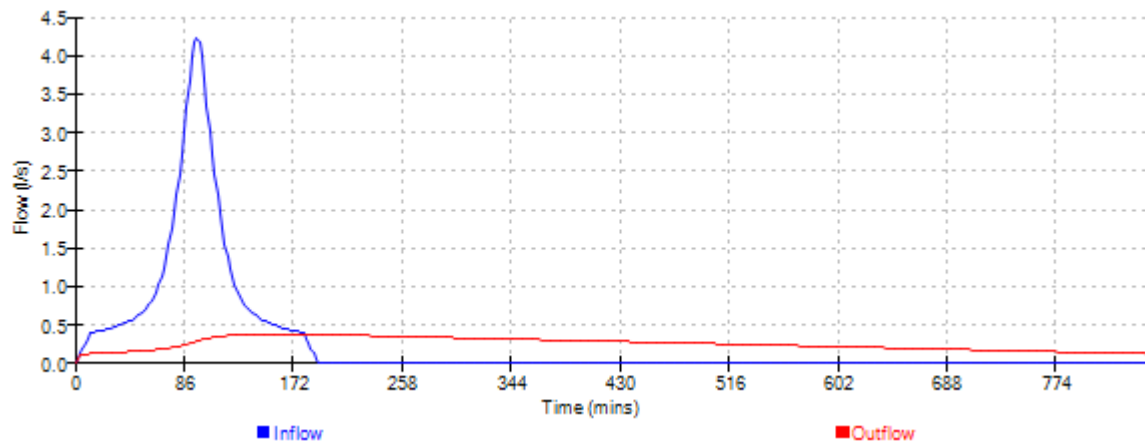
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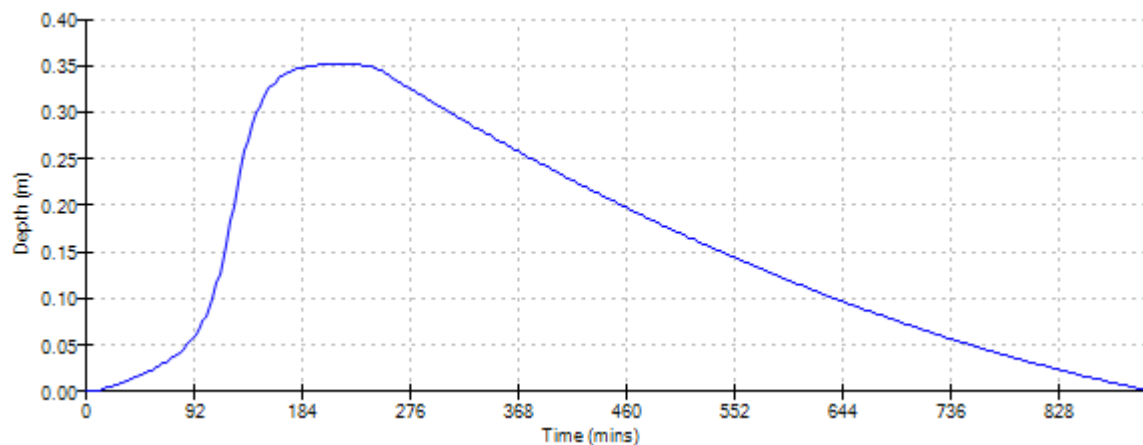
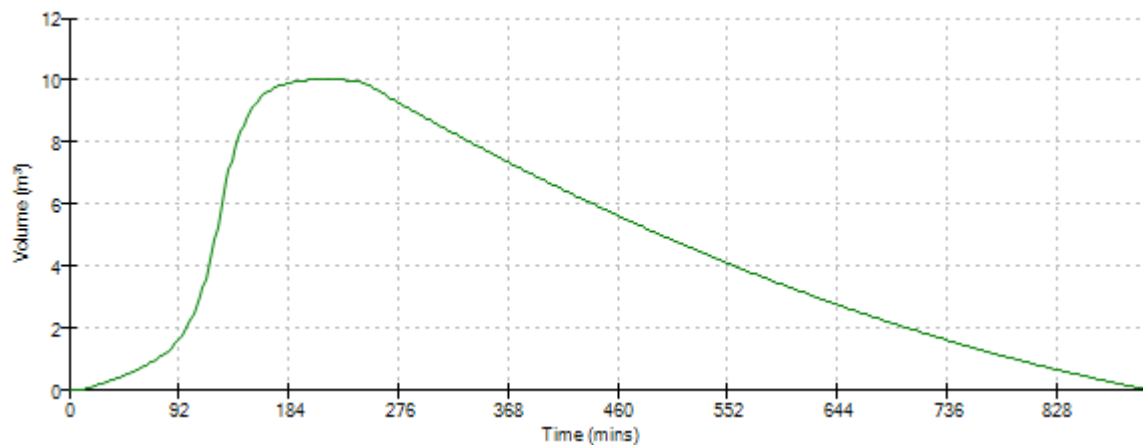
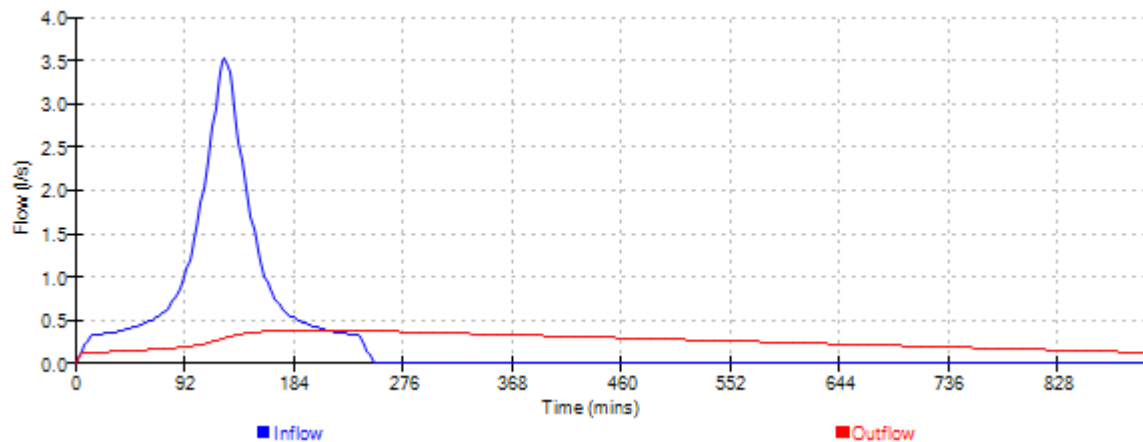
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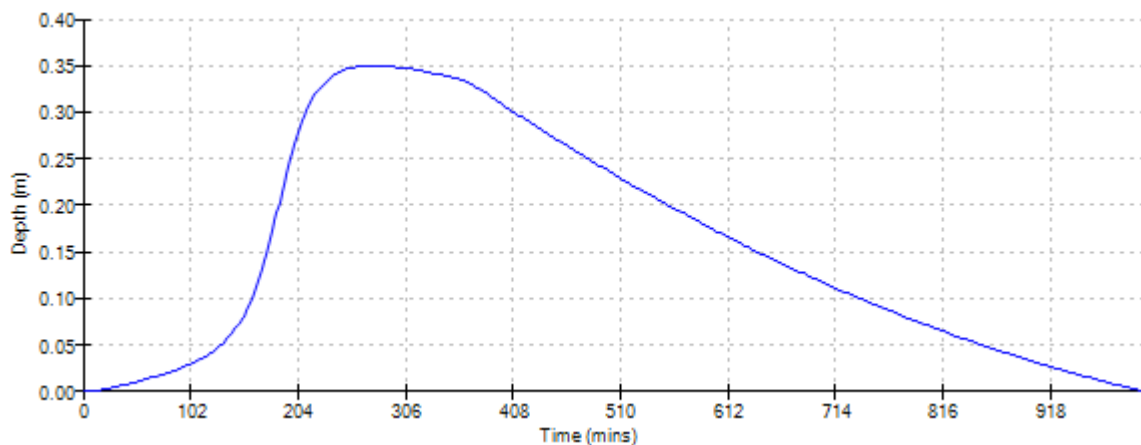
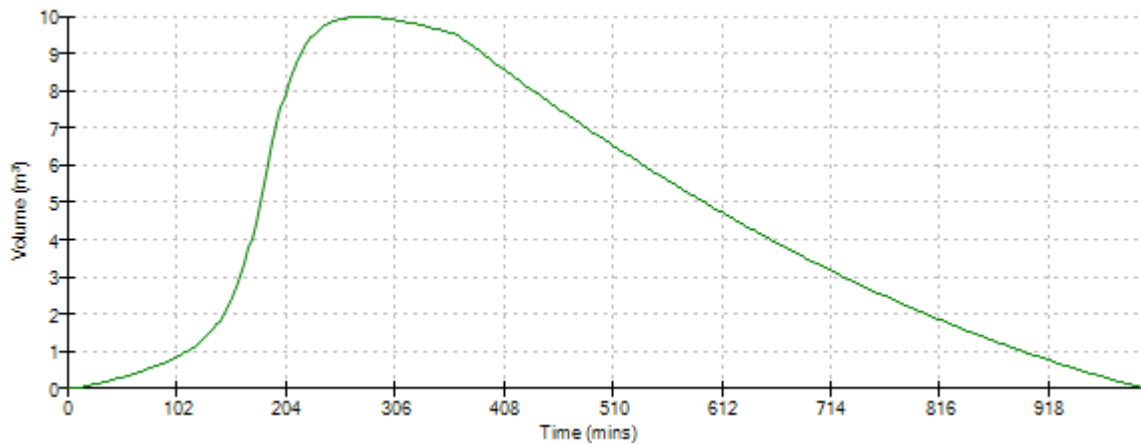
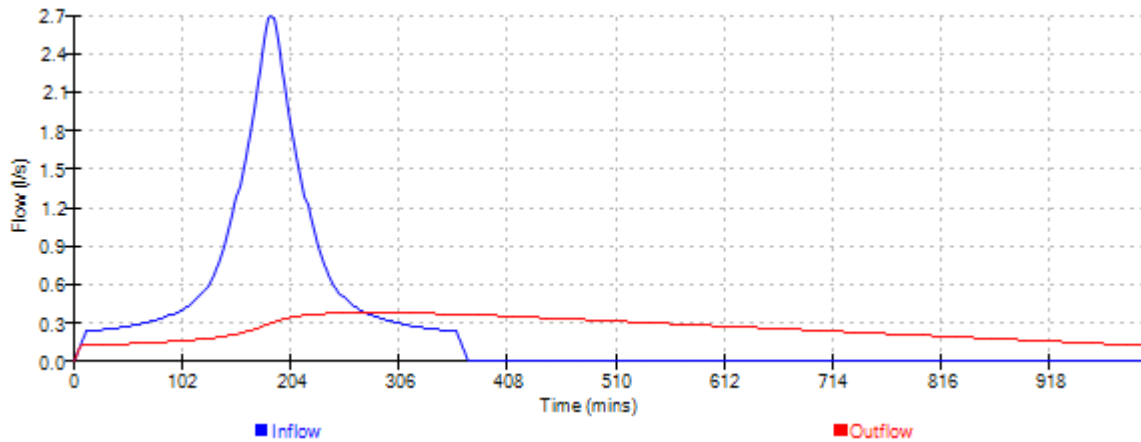
Event: 180 min Summer



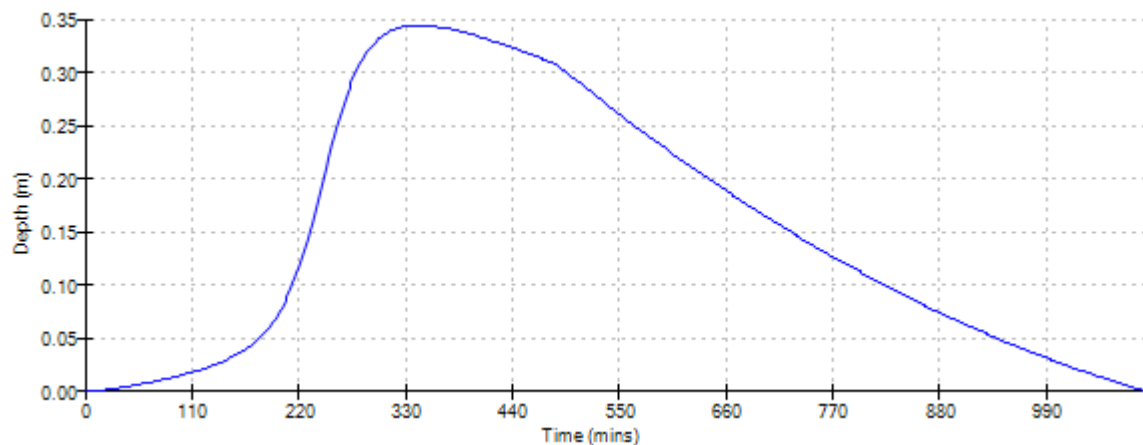
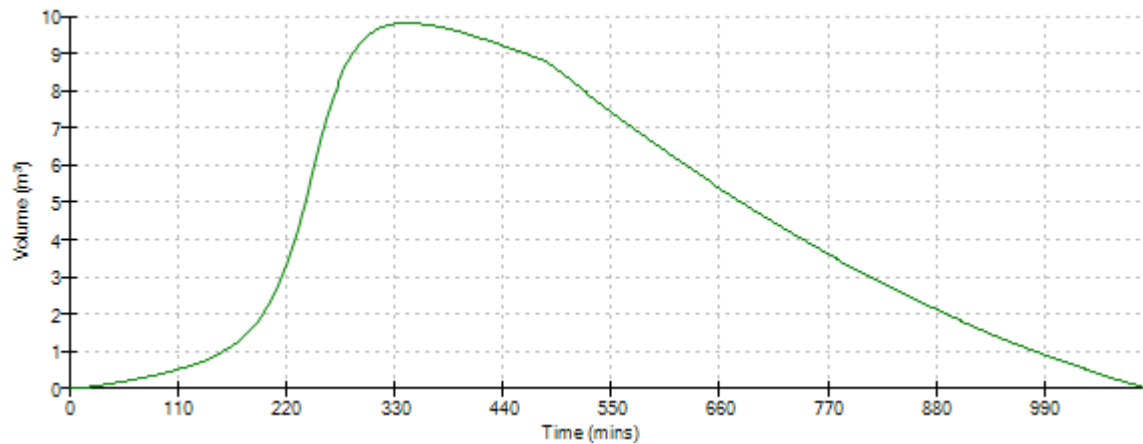
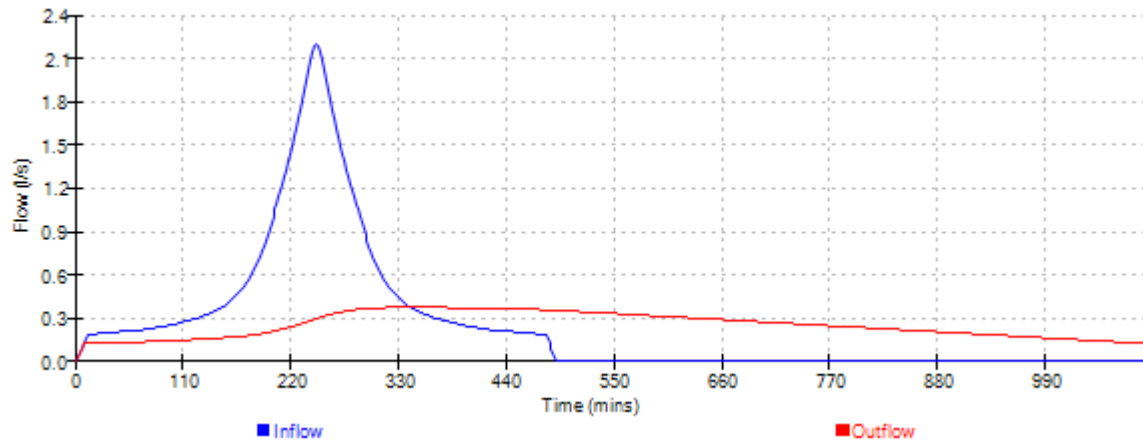
Event: 240 min Summer



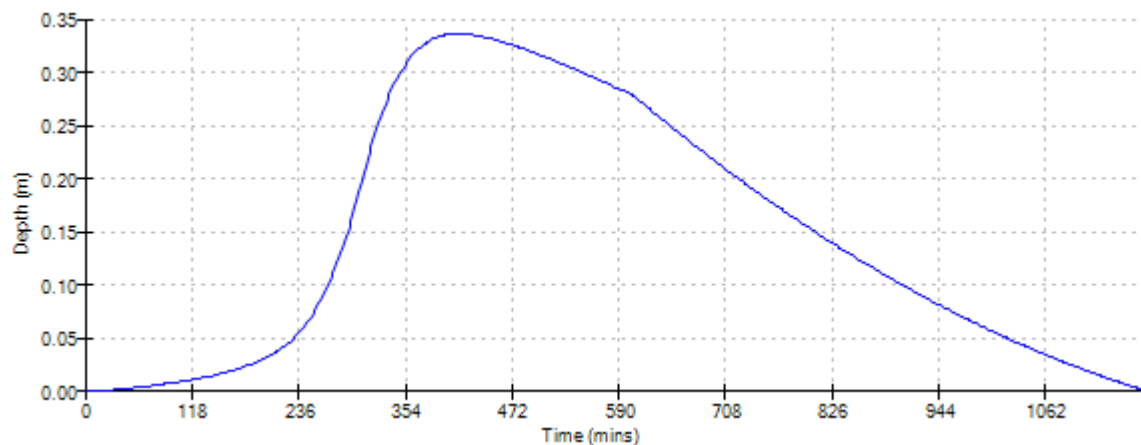
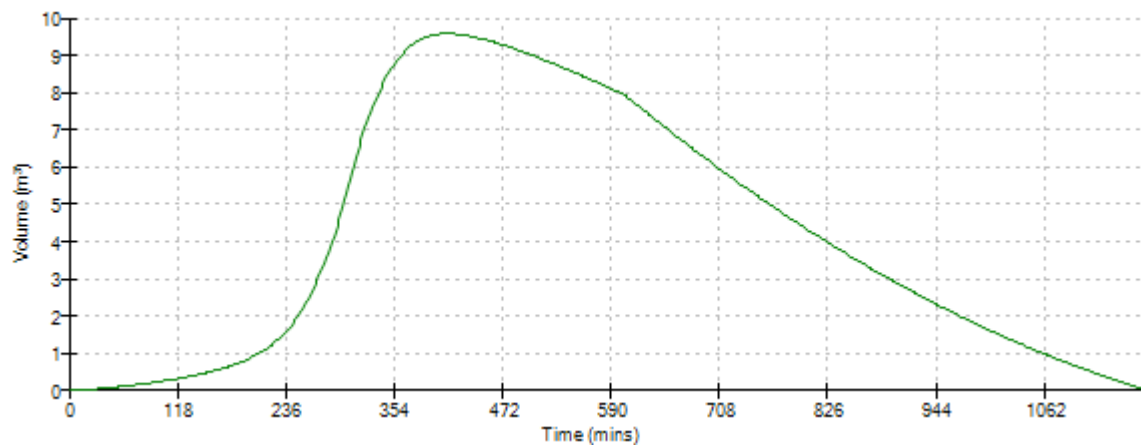
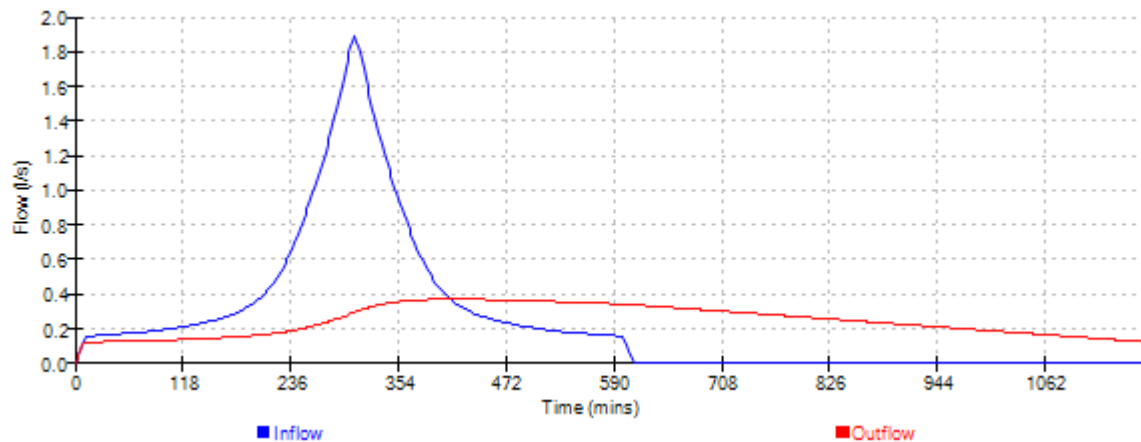
Event: 360 min Summer



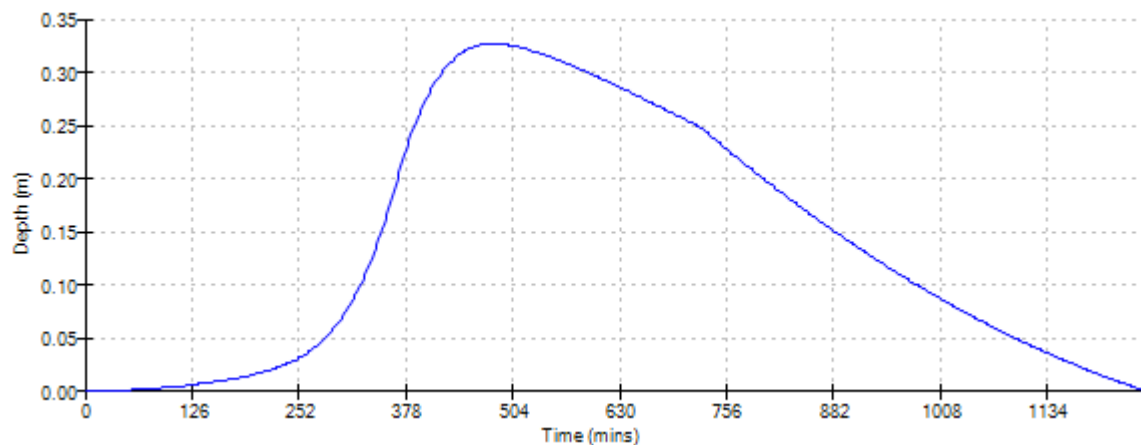
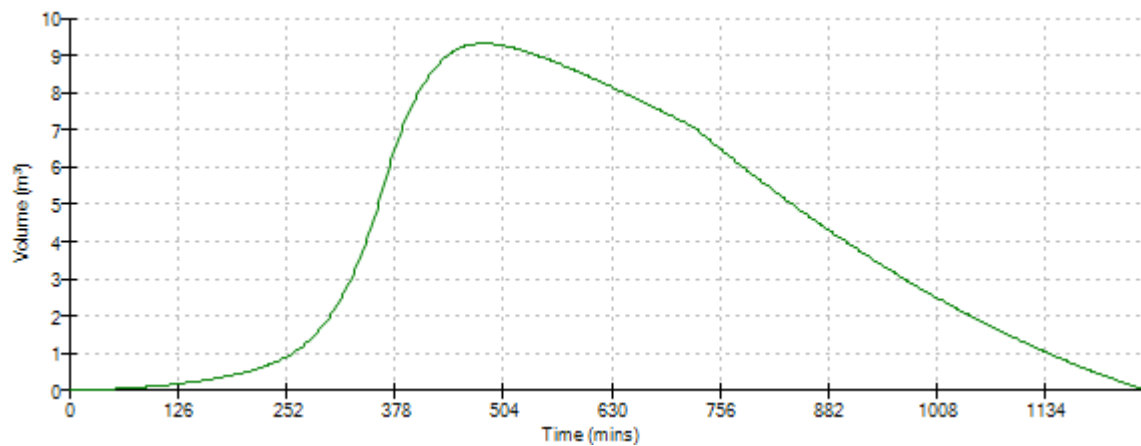
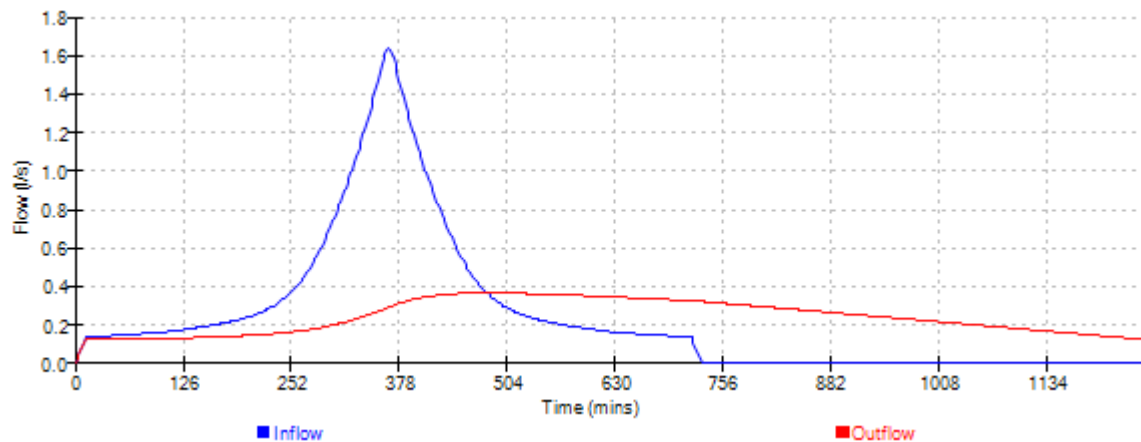
Event: 480 min Summer



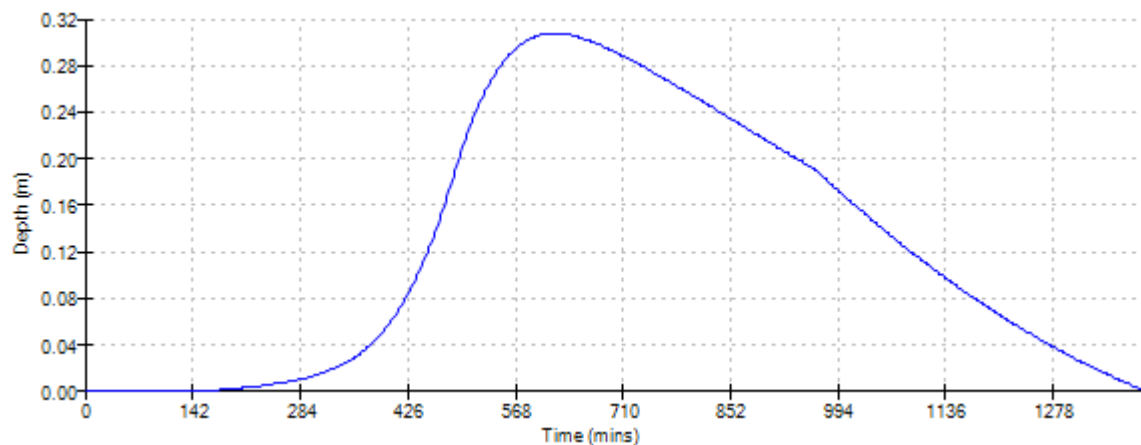
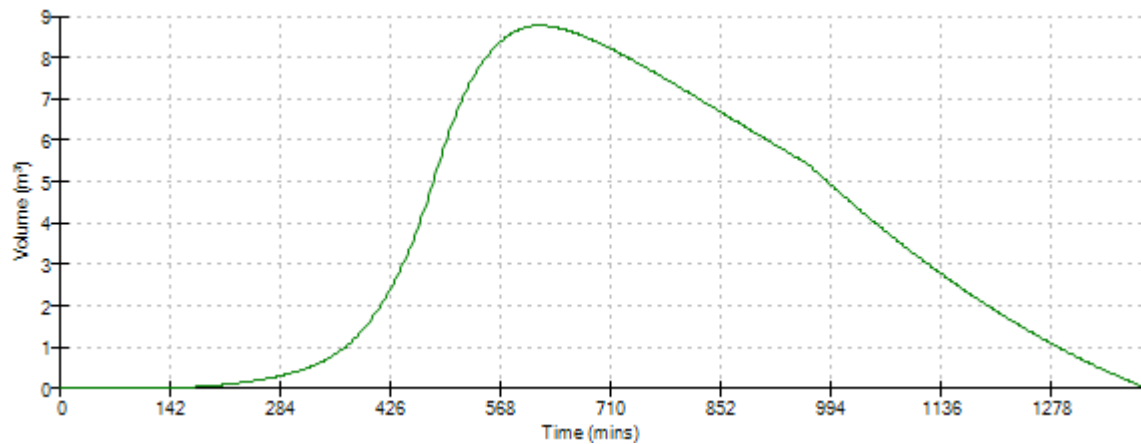
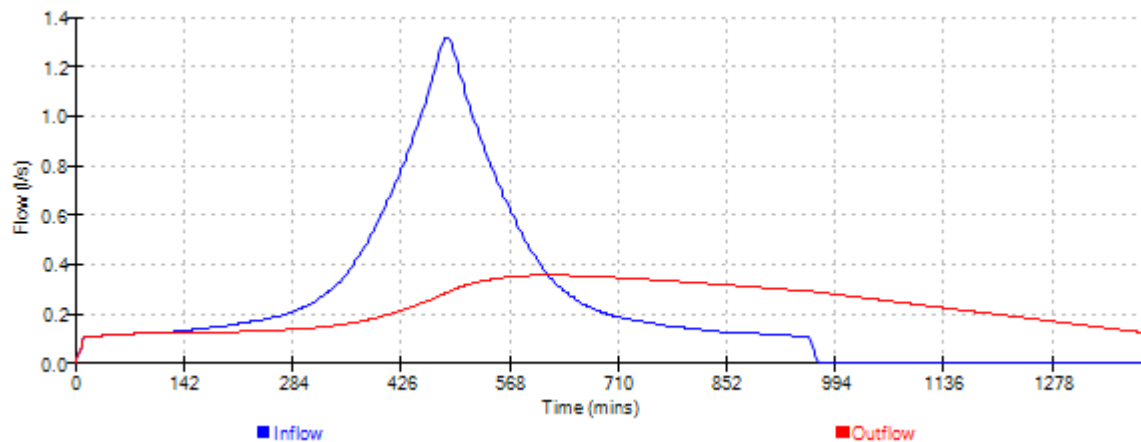
Event: 600 min Summer



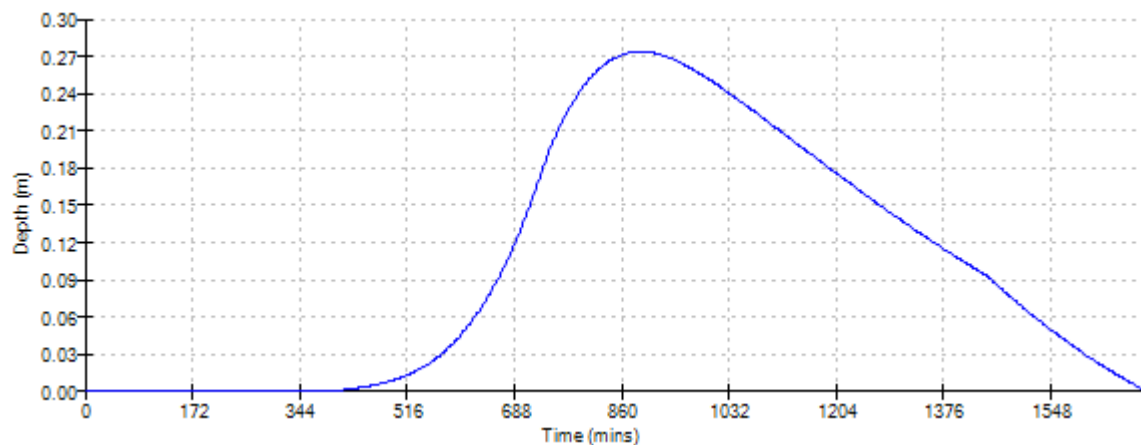
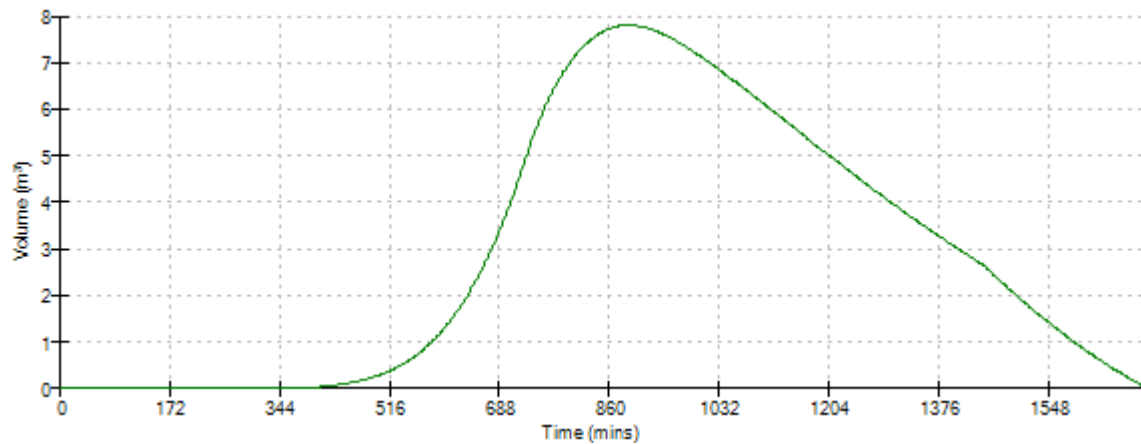
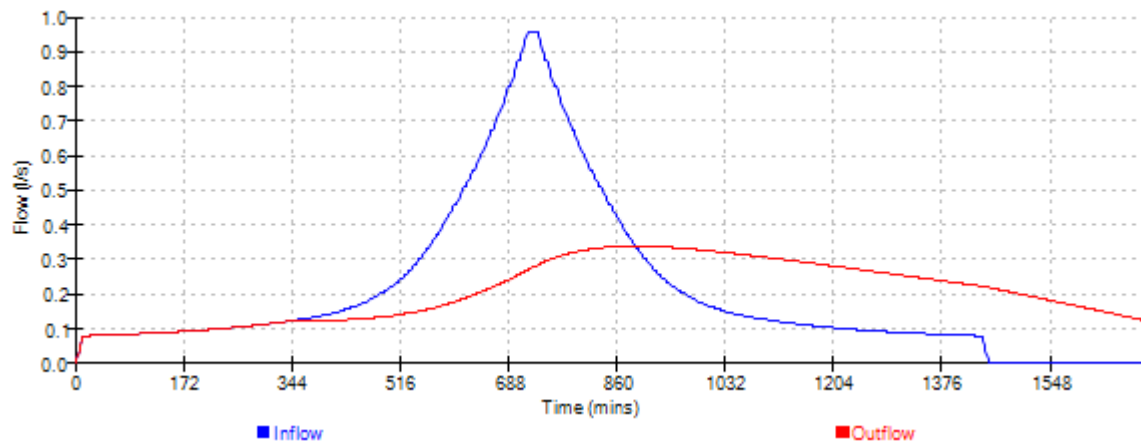
Event: 720 min Summer



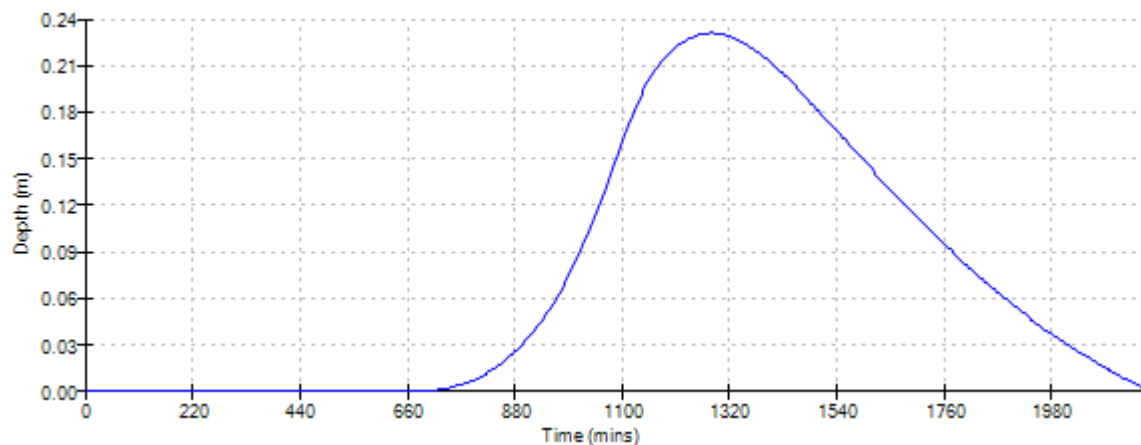
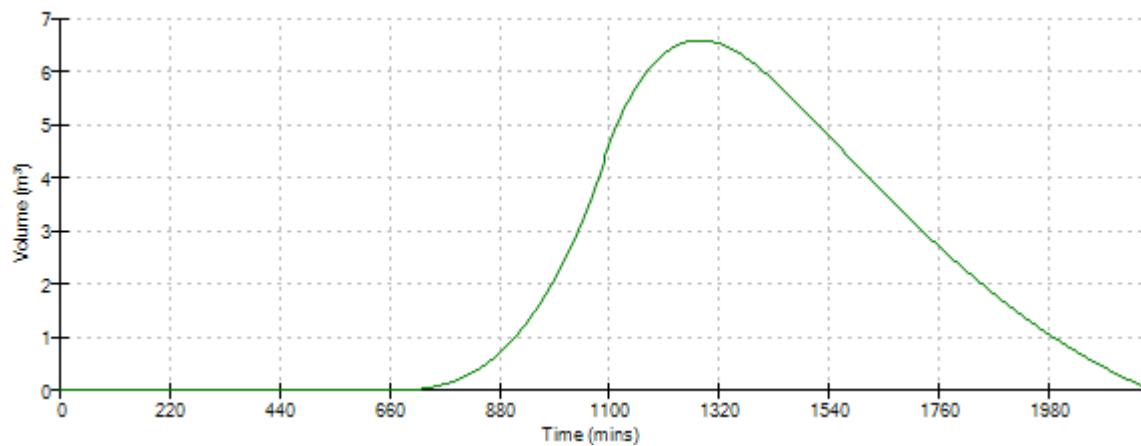
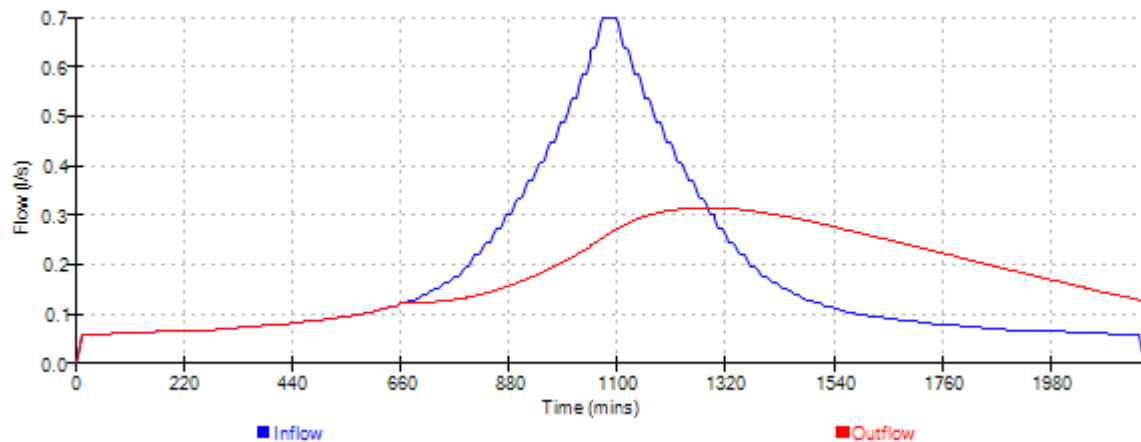
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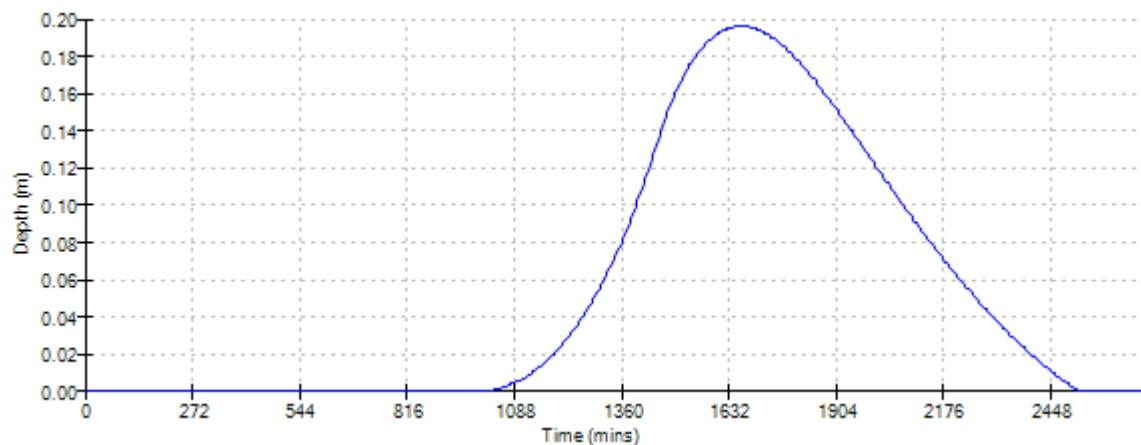
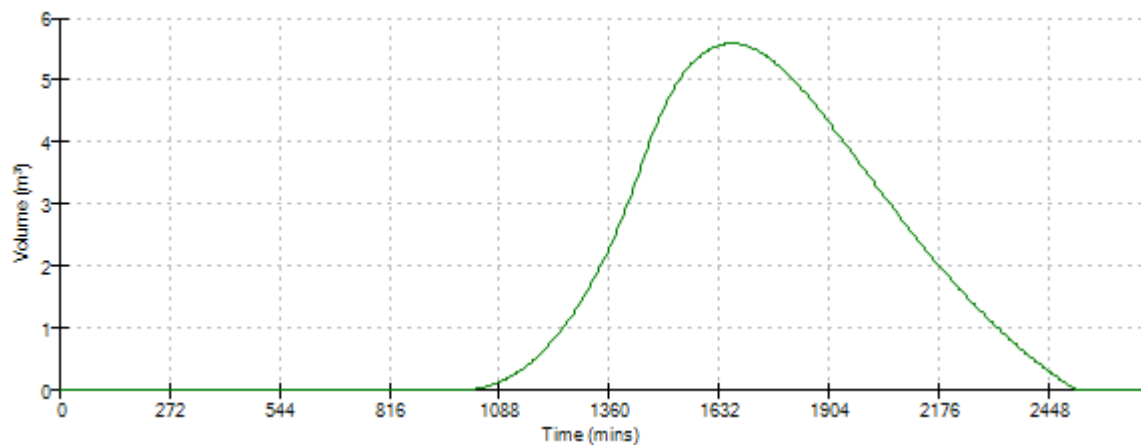
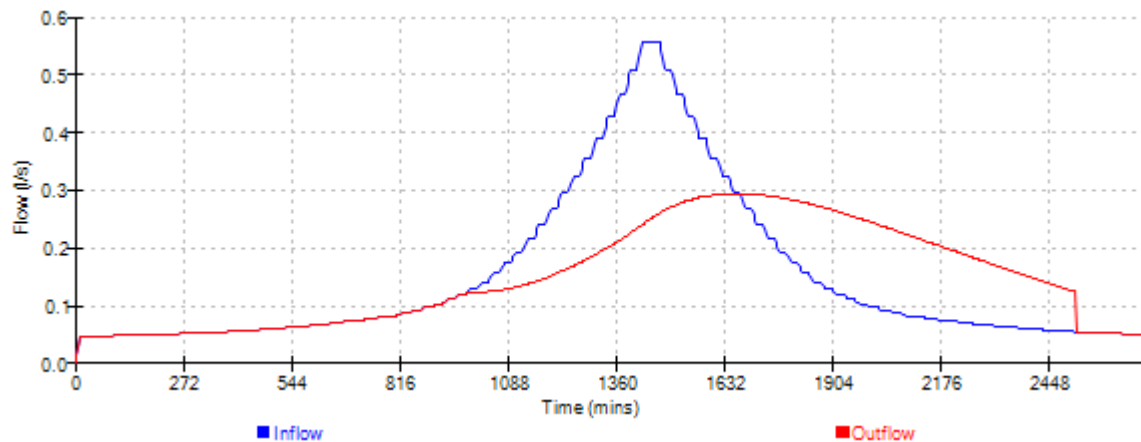
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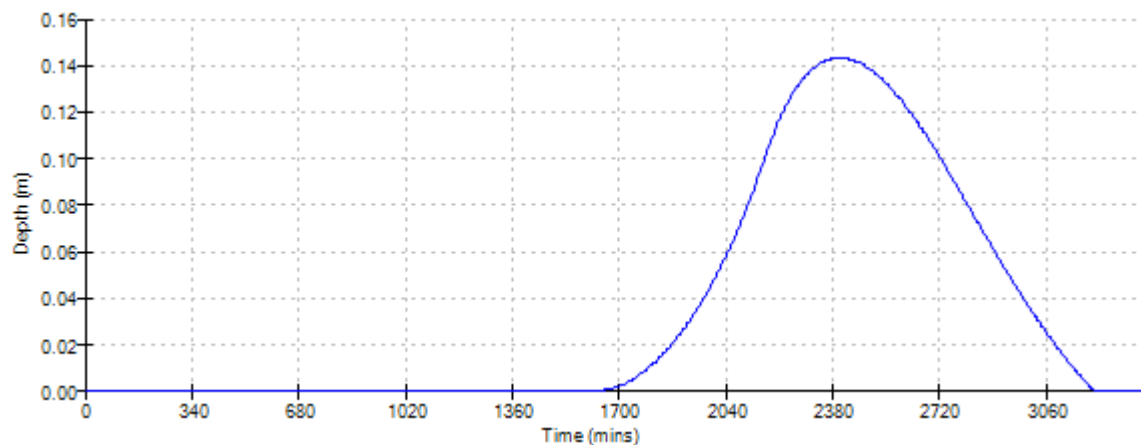
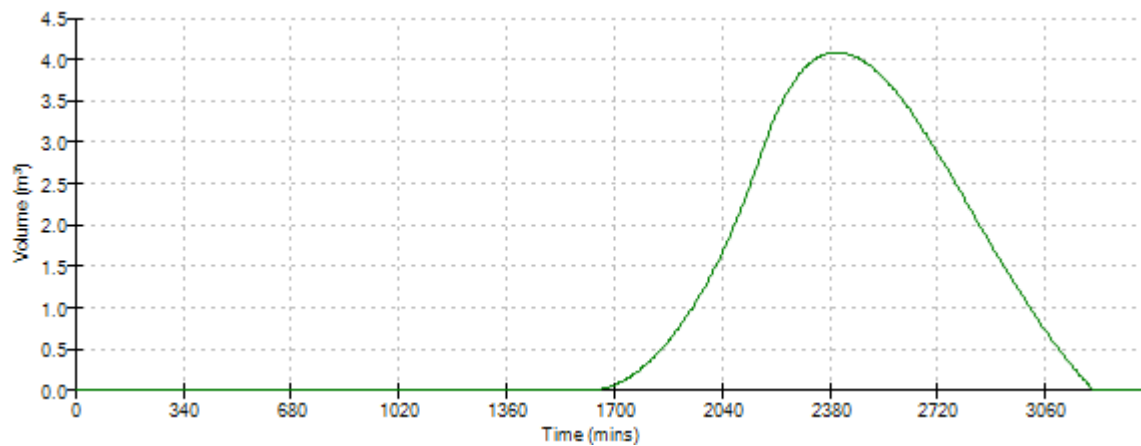
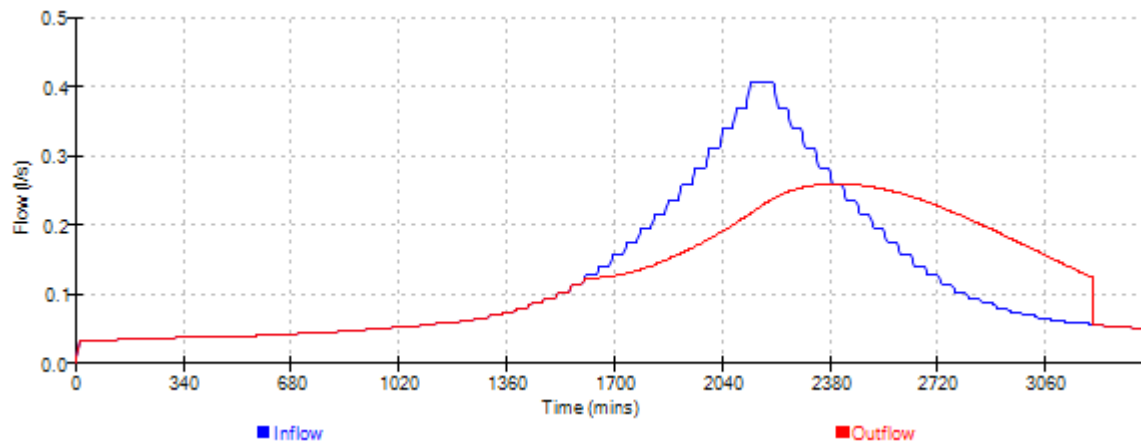
Event: 2160 min Summer



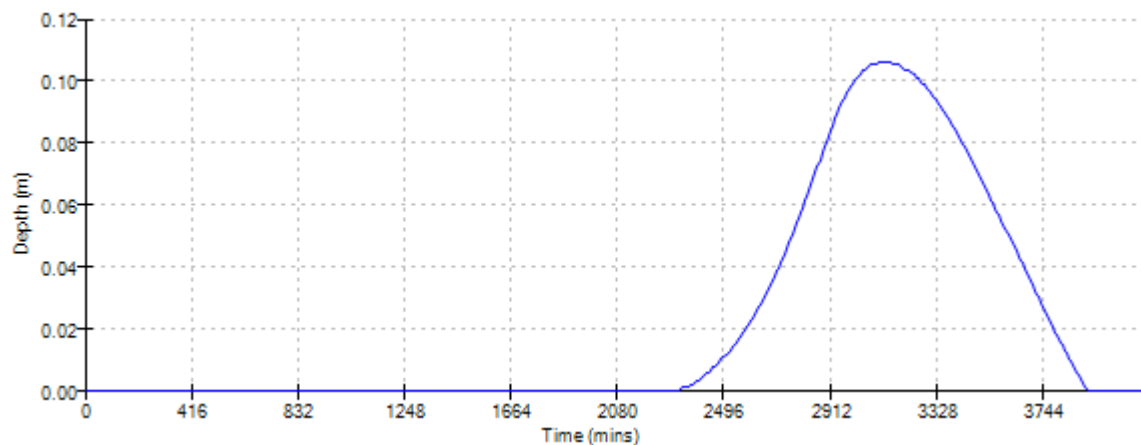
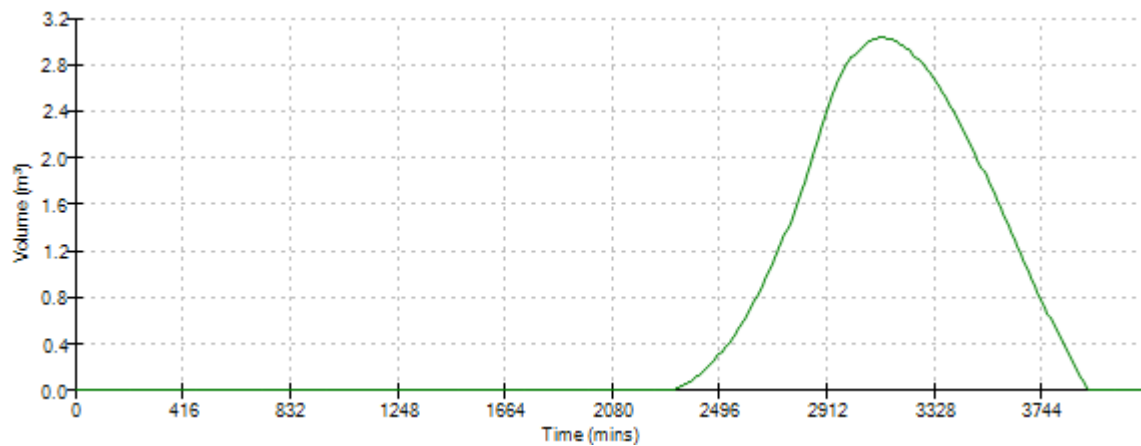
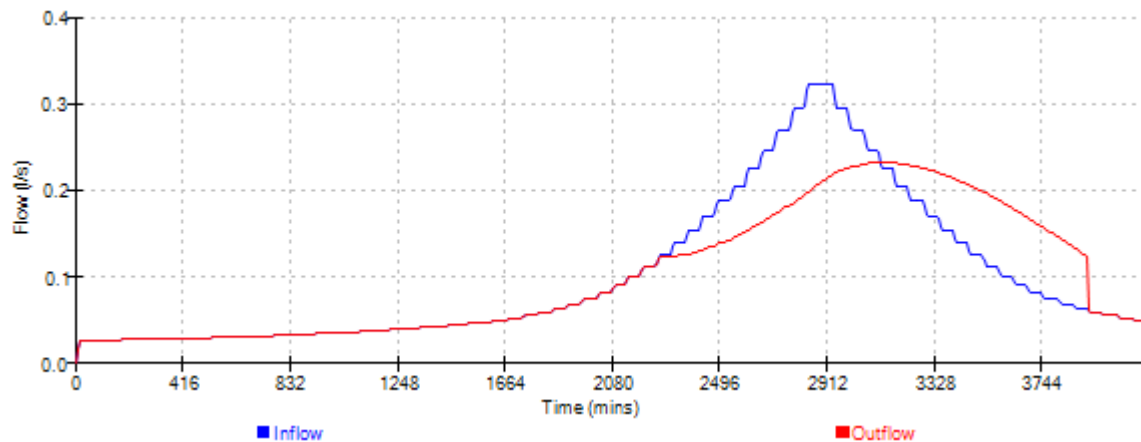
Event: 2880 min Summer



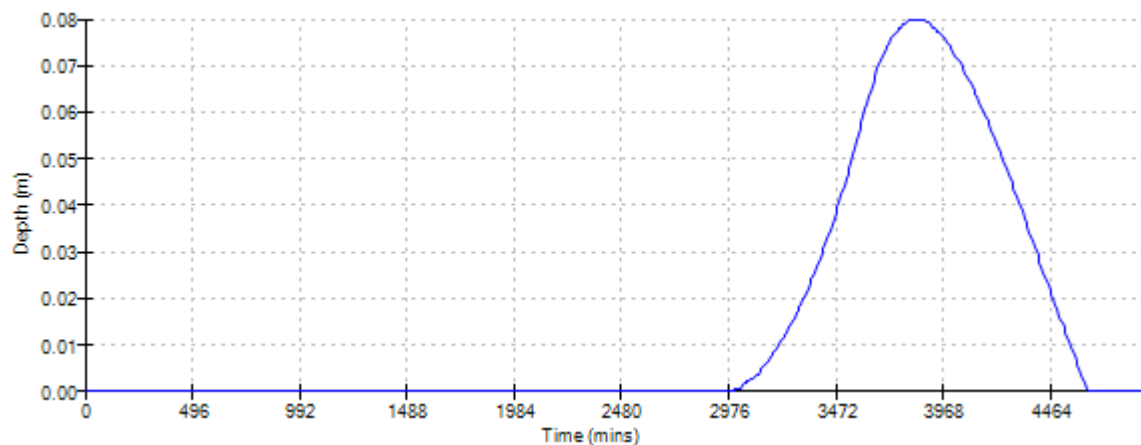
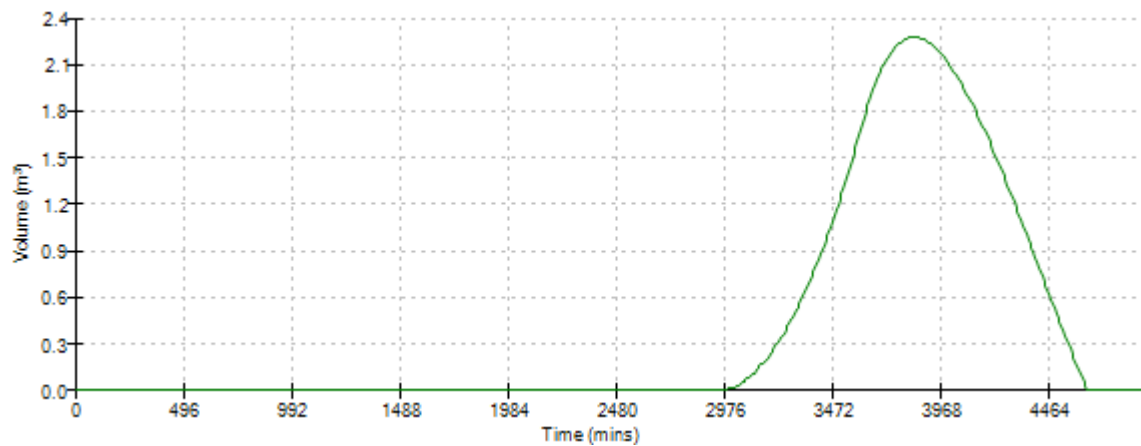
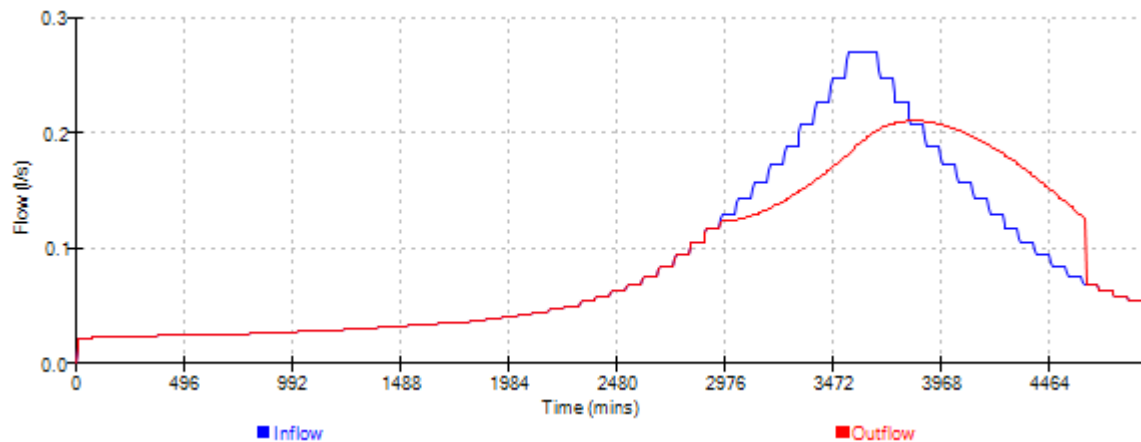
Event: 4320 min Summer



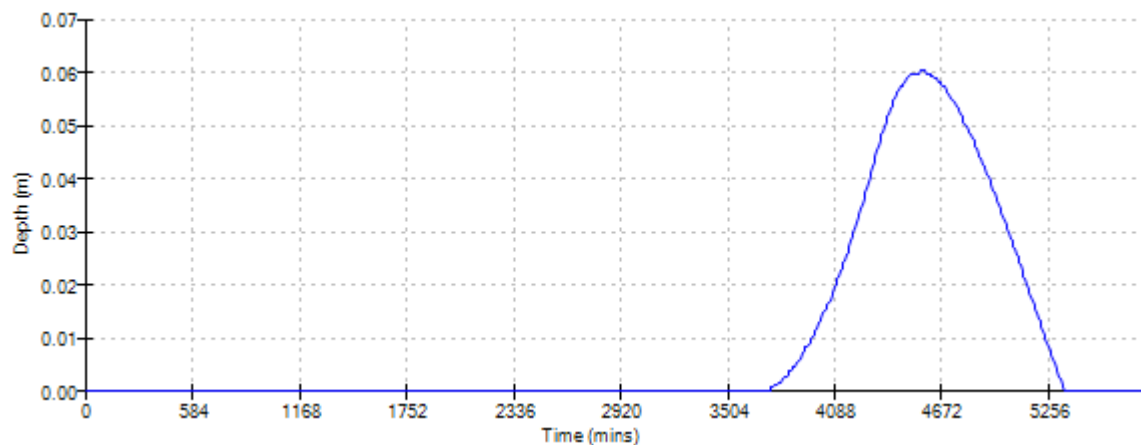
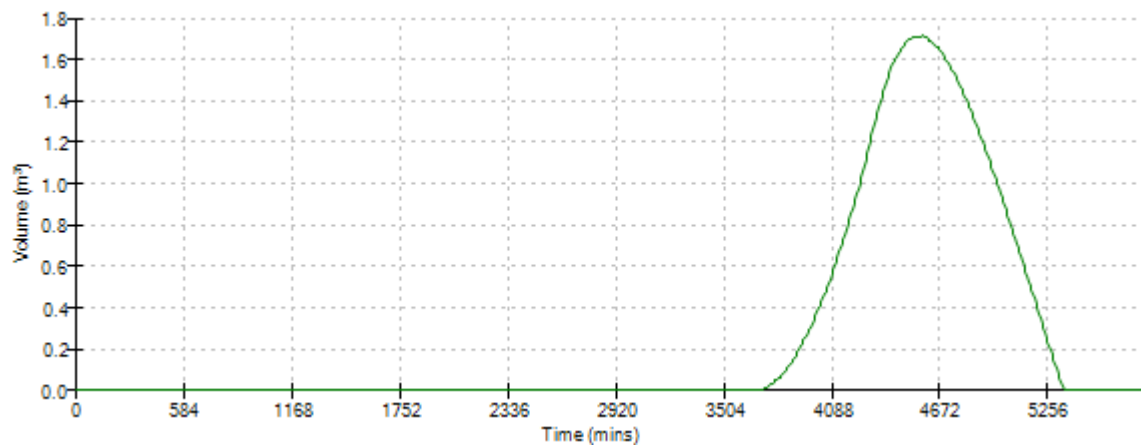
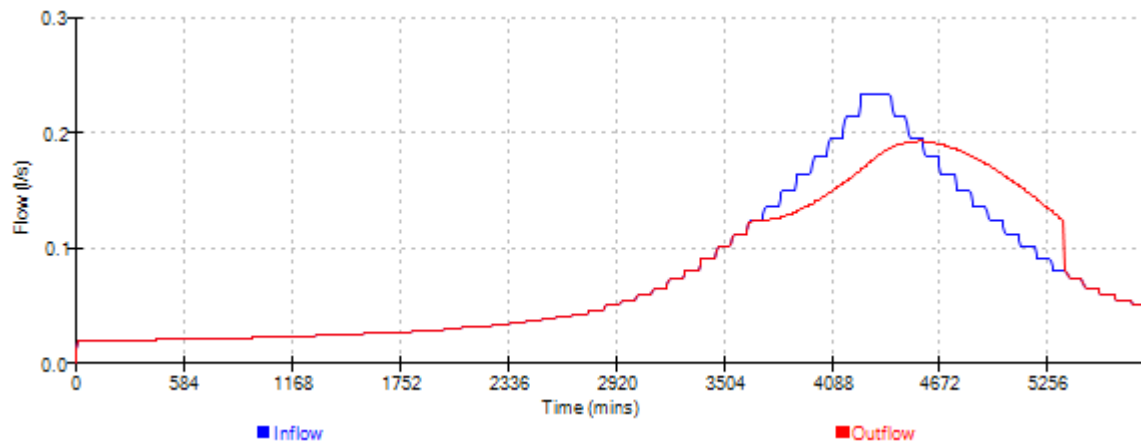
Event: 5760 min Summer



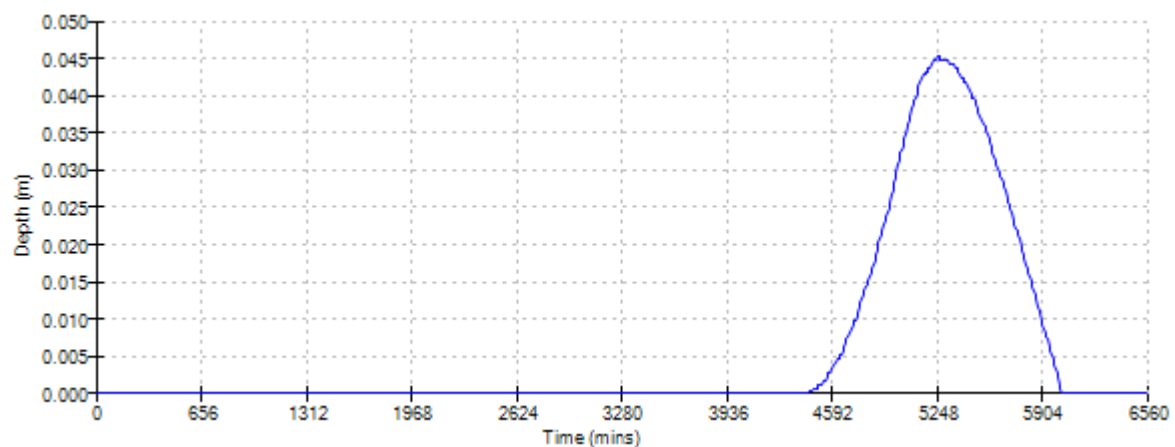
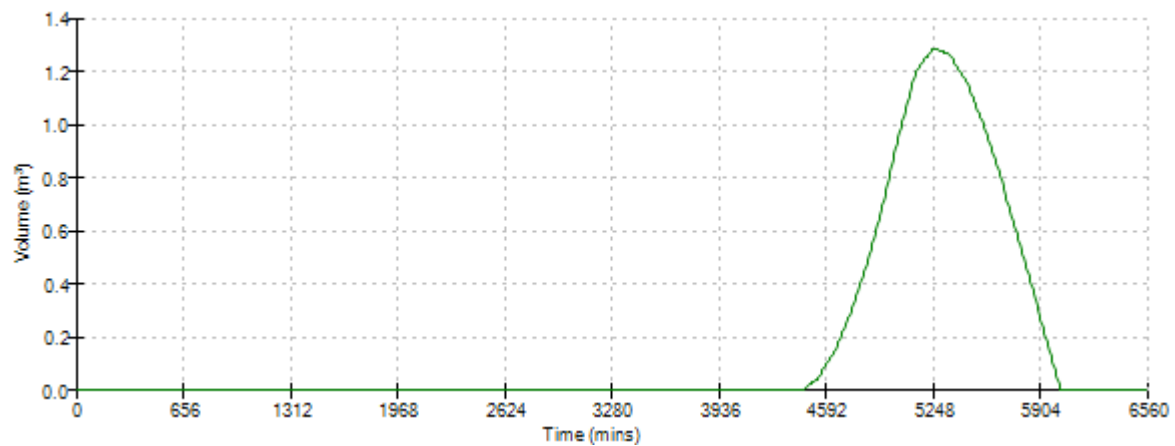
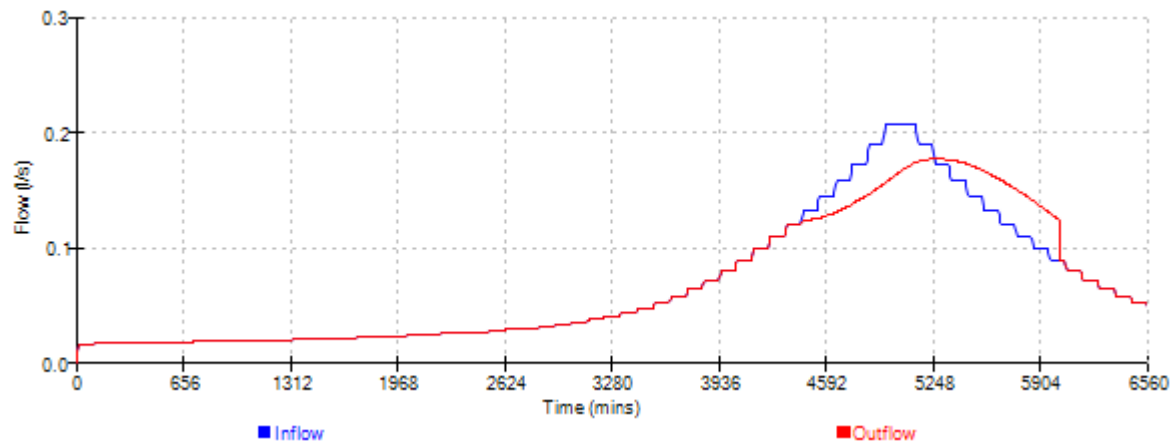
Event: 7200 min Summer



Event: 8640 min Summer

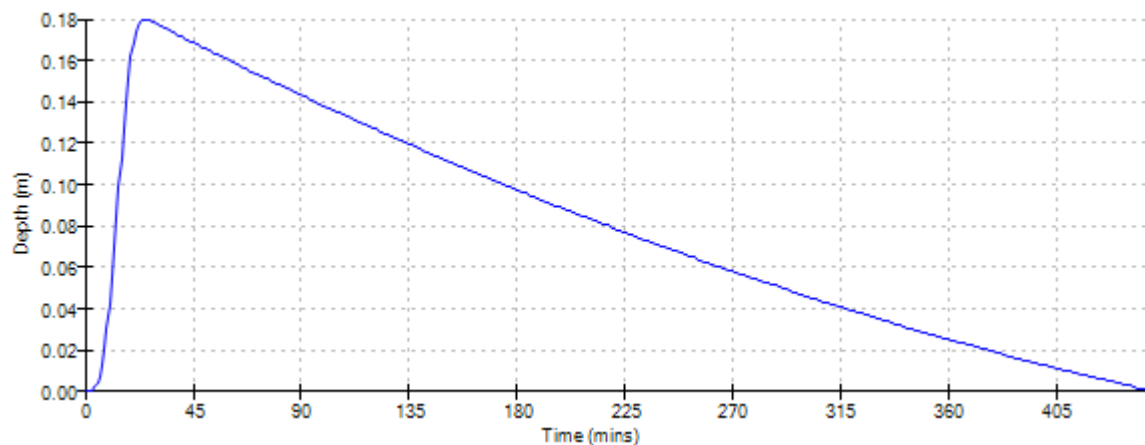
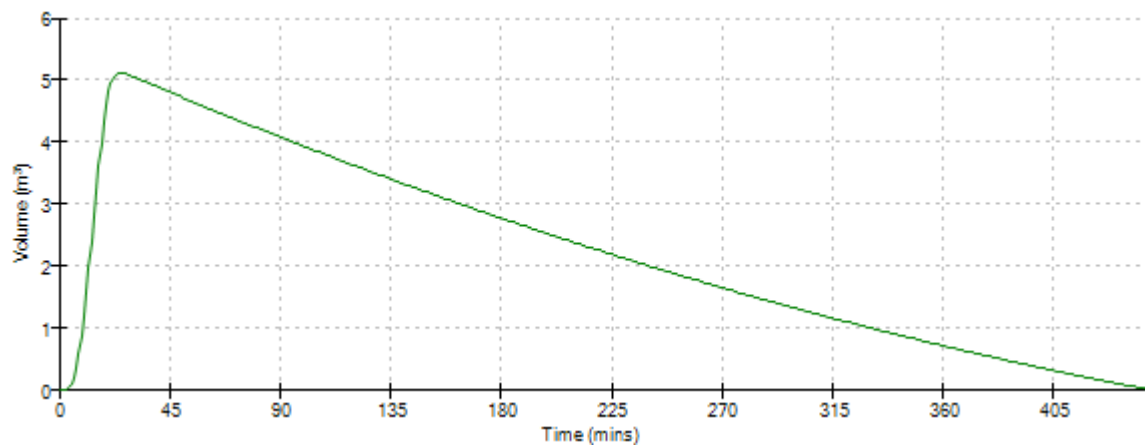
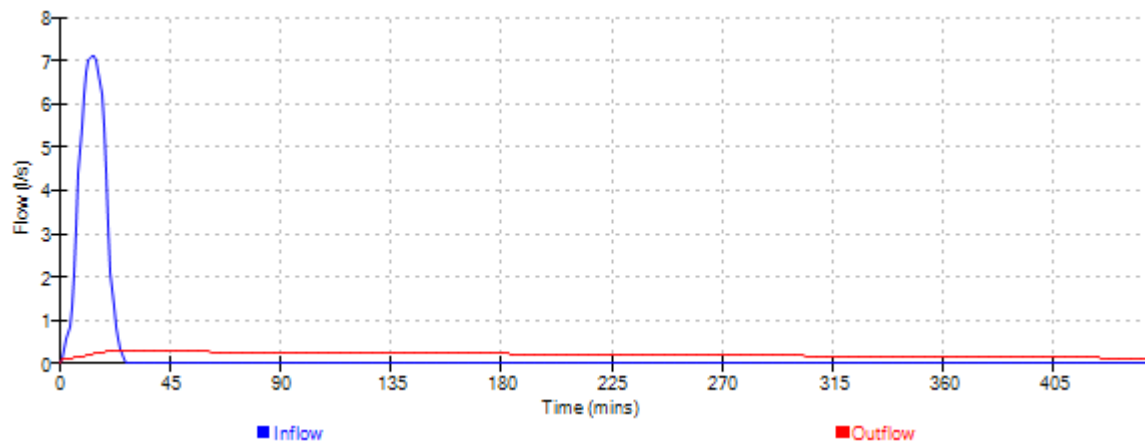


Event: 10080 min Summer

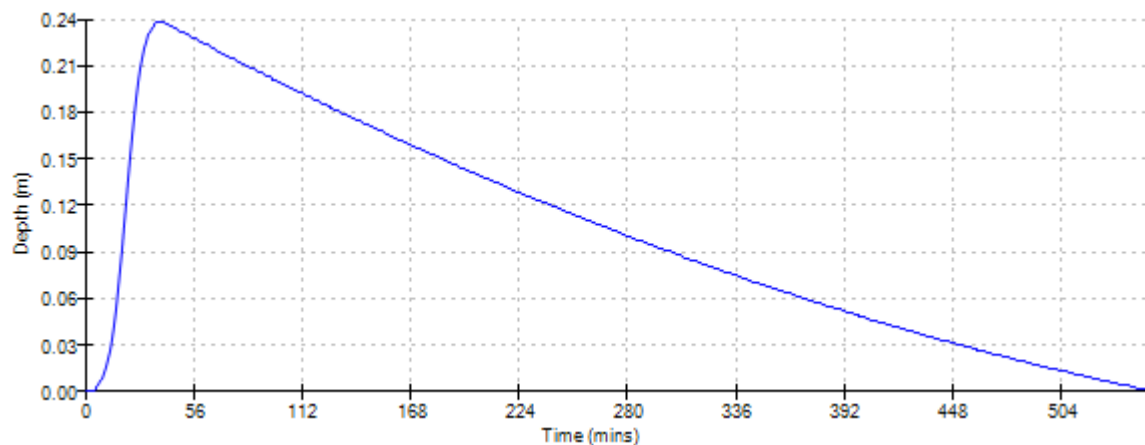
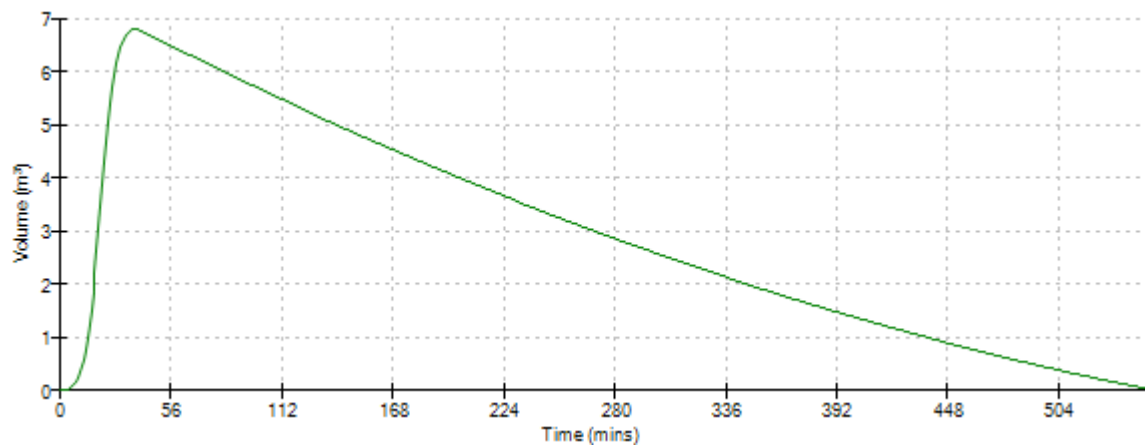
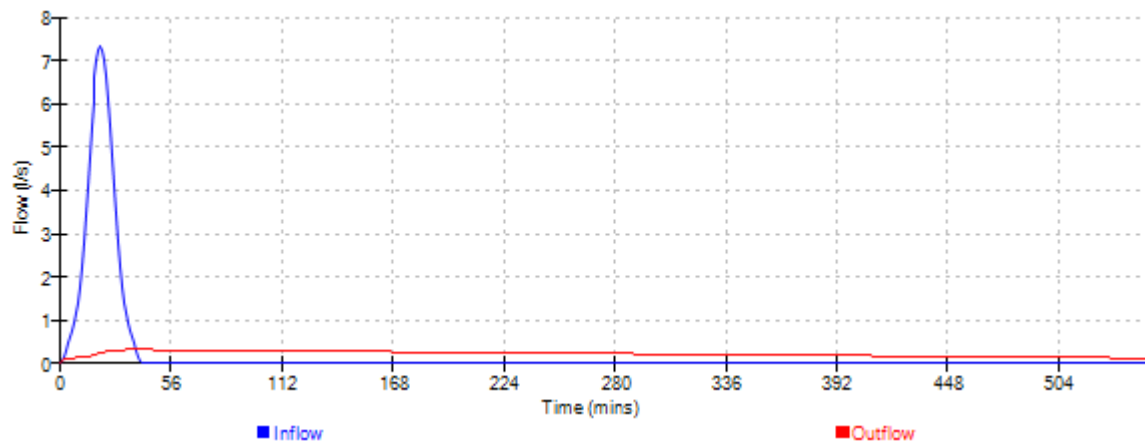


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	Checked by	
	Source Control w.12.6	

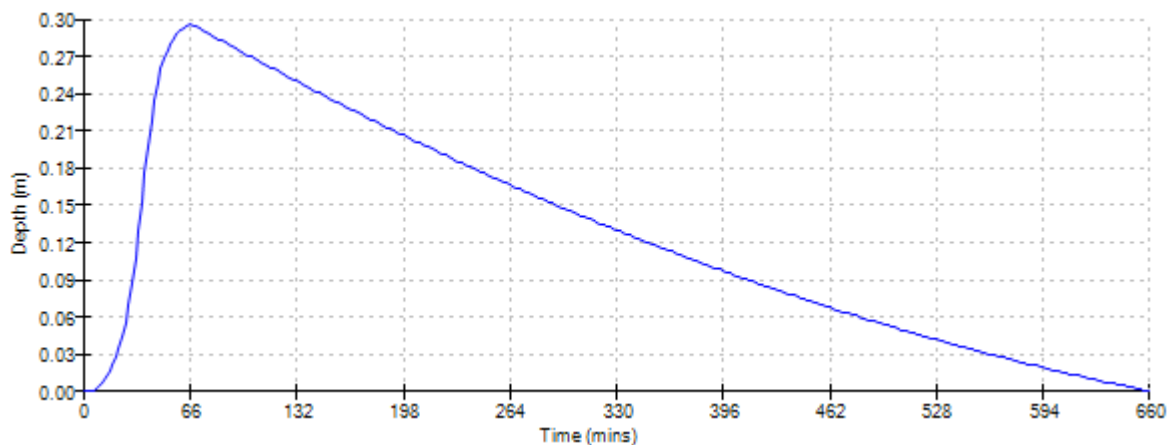
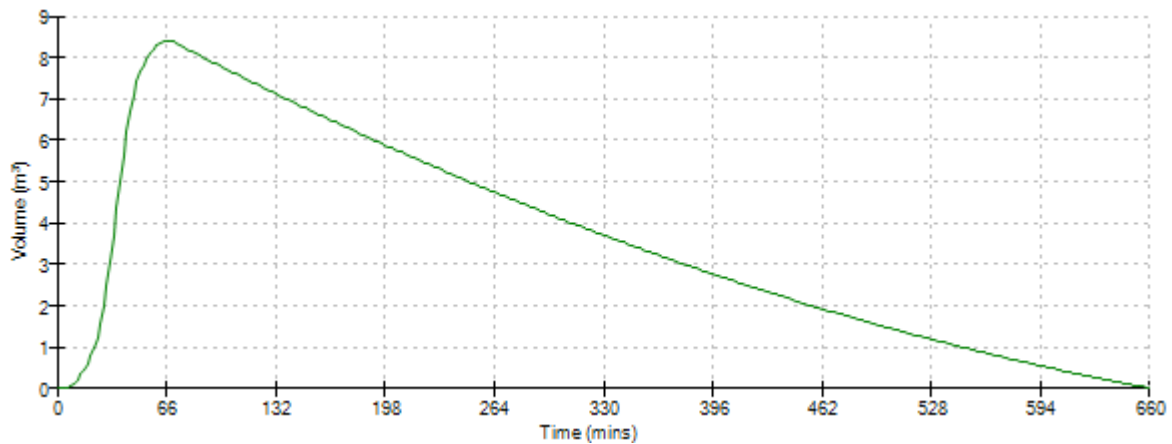
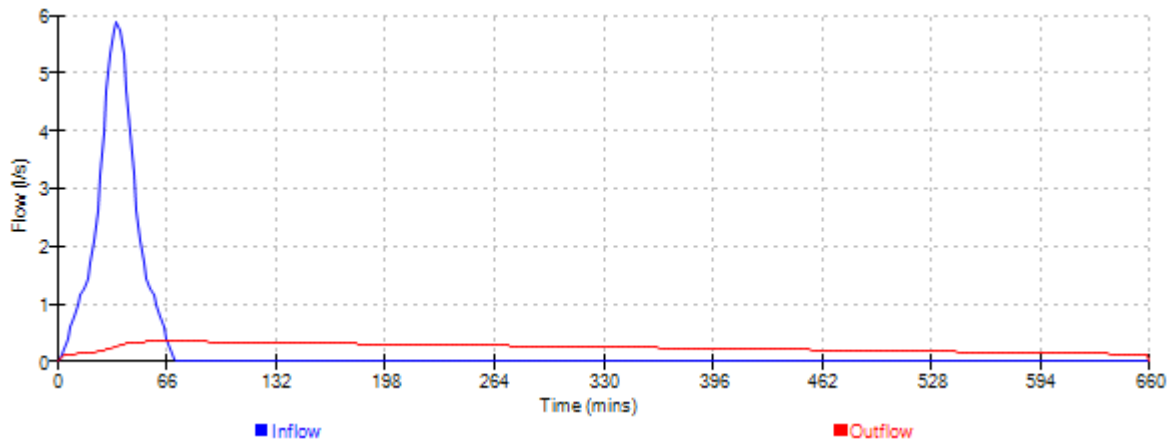
Event: 15 min Winter



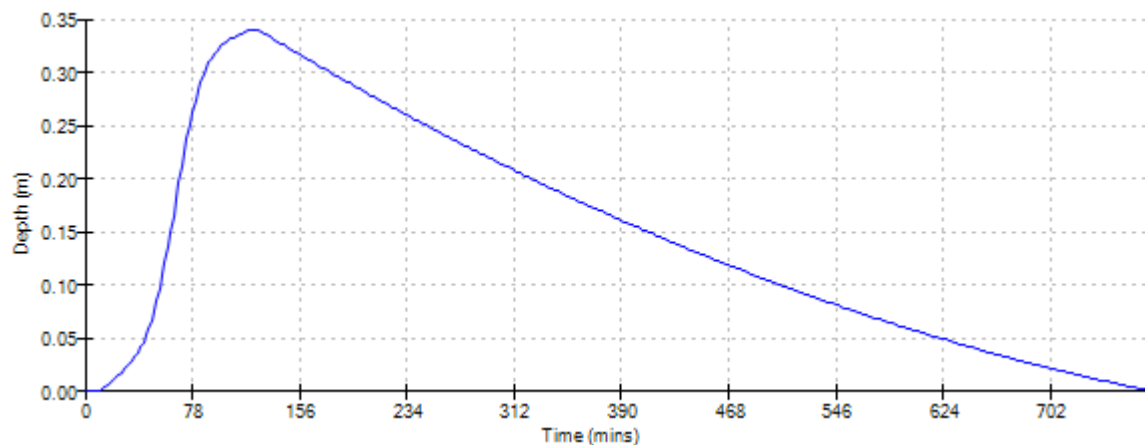
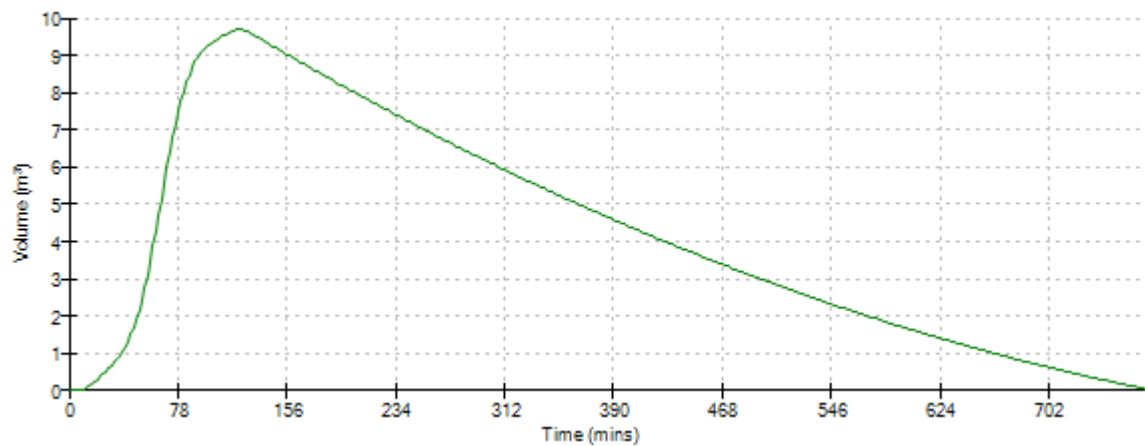
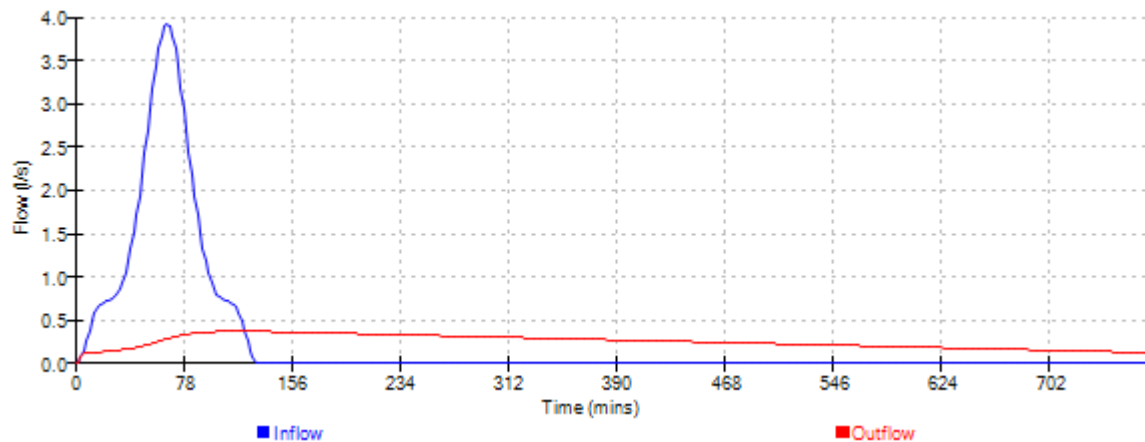
Event: 30 min Winter



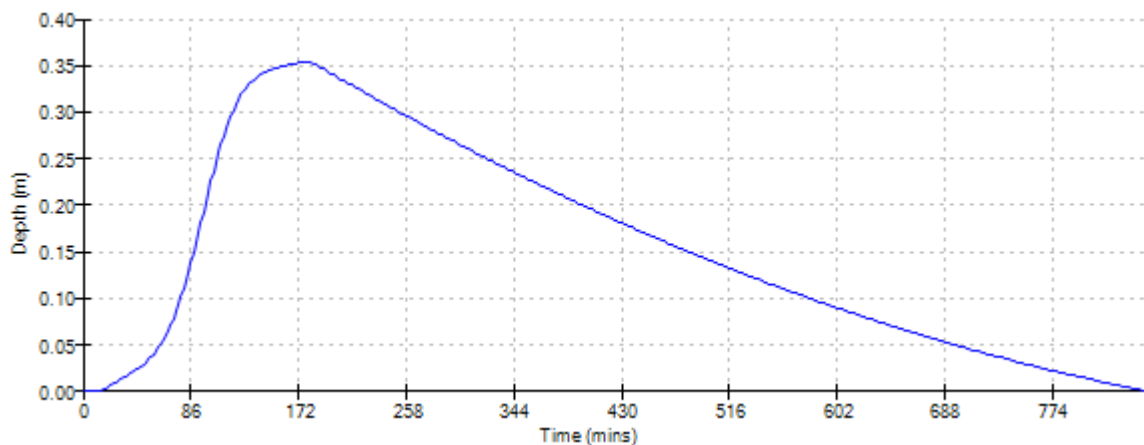
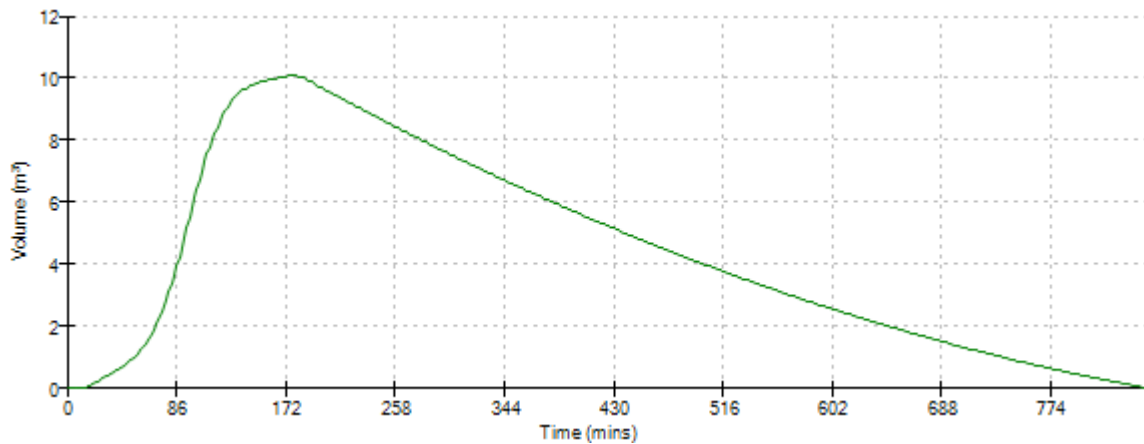
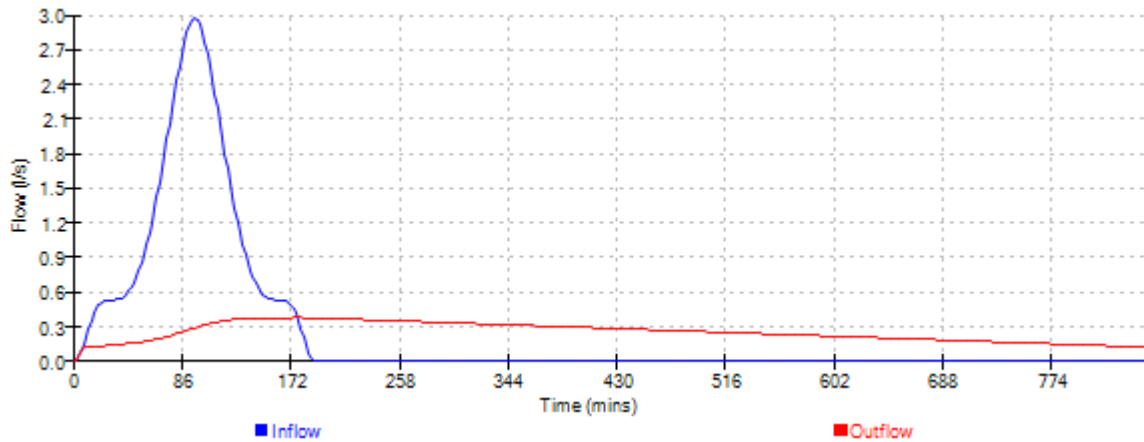
Event: 60 min Winter



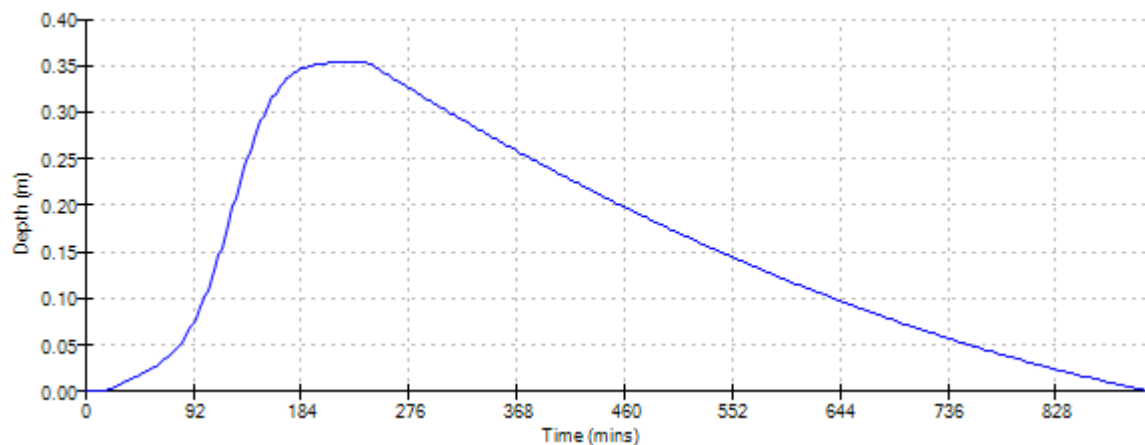
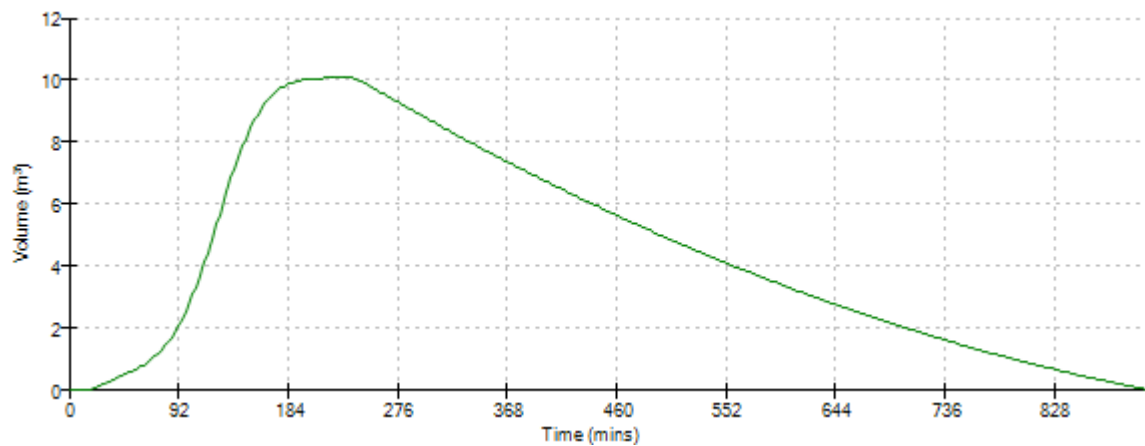
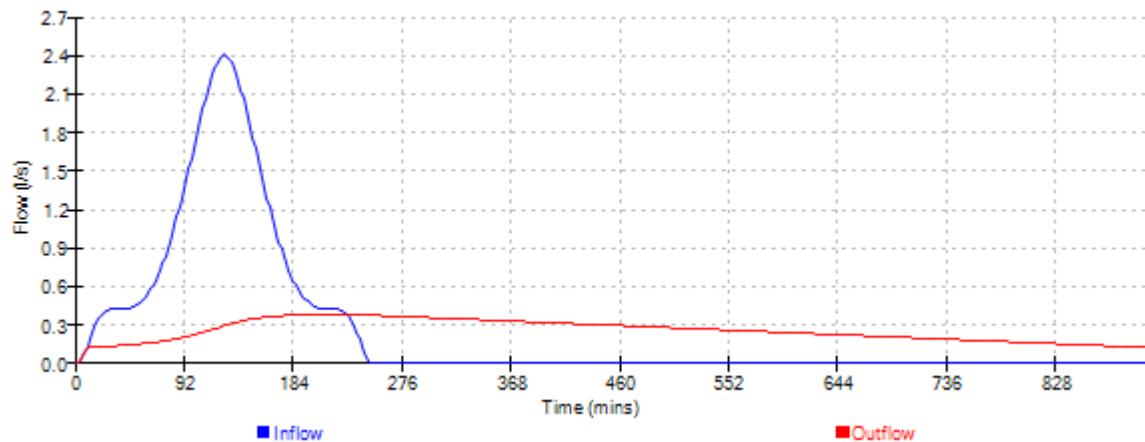
Event: 120 min Winter



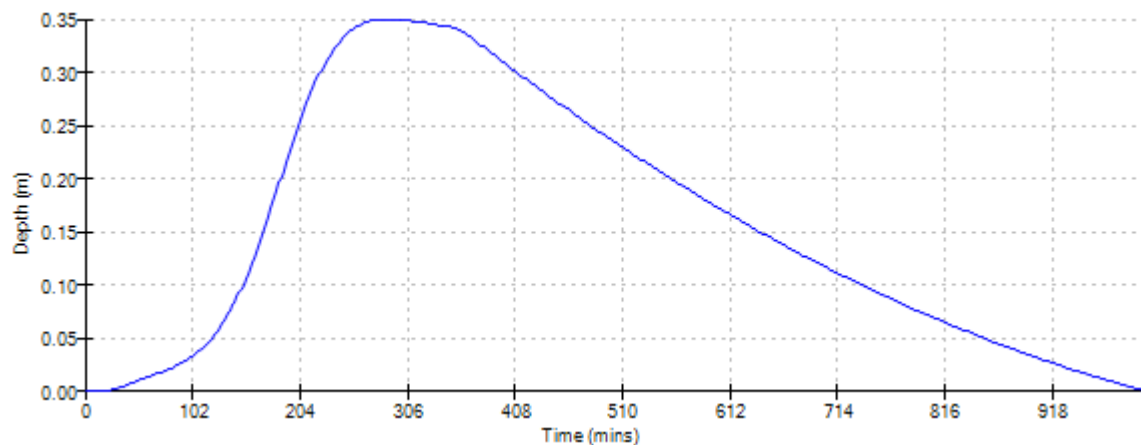
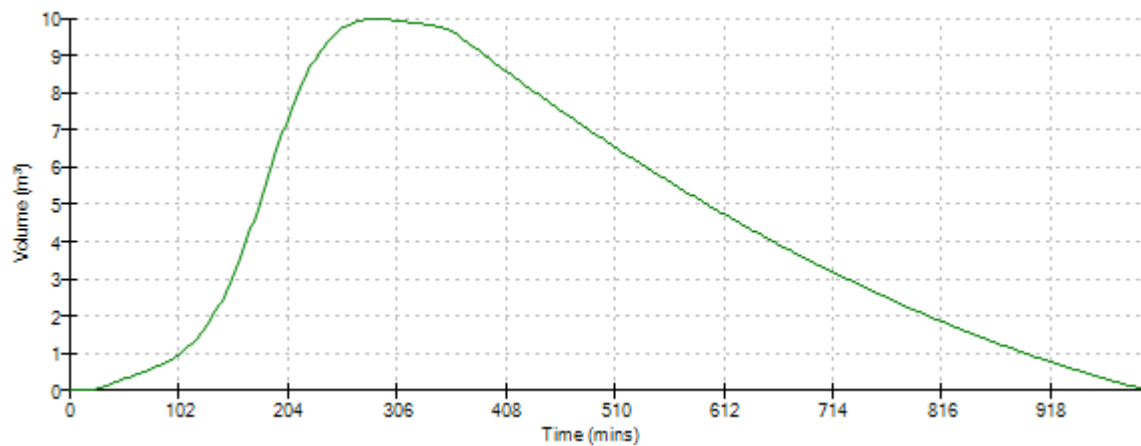
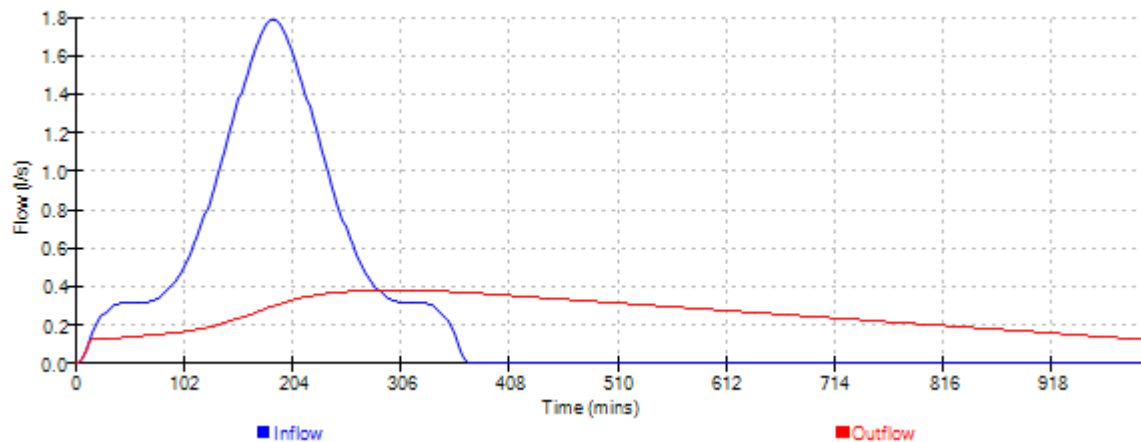
Event: 180 min Winter



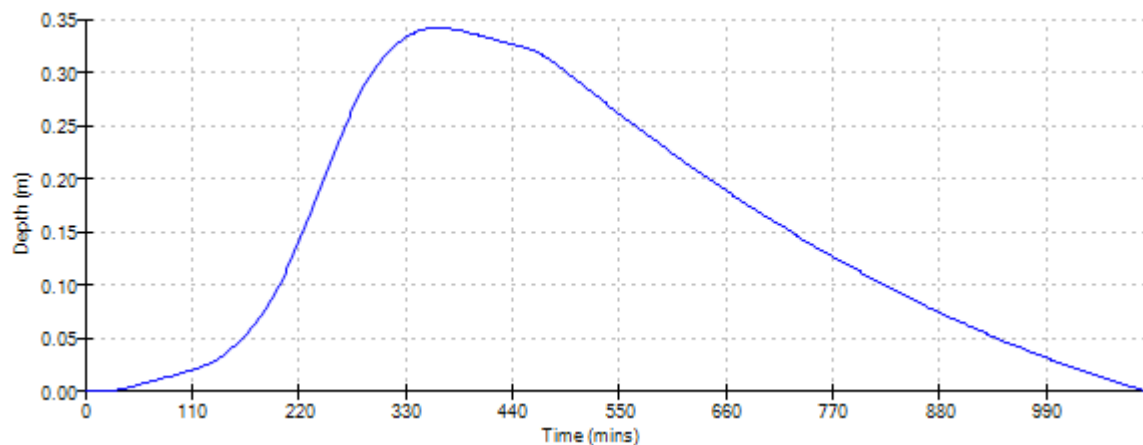
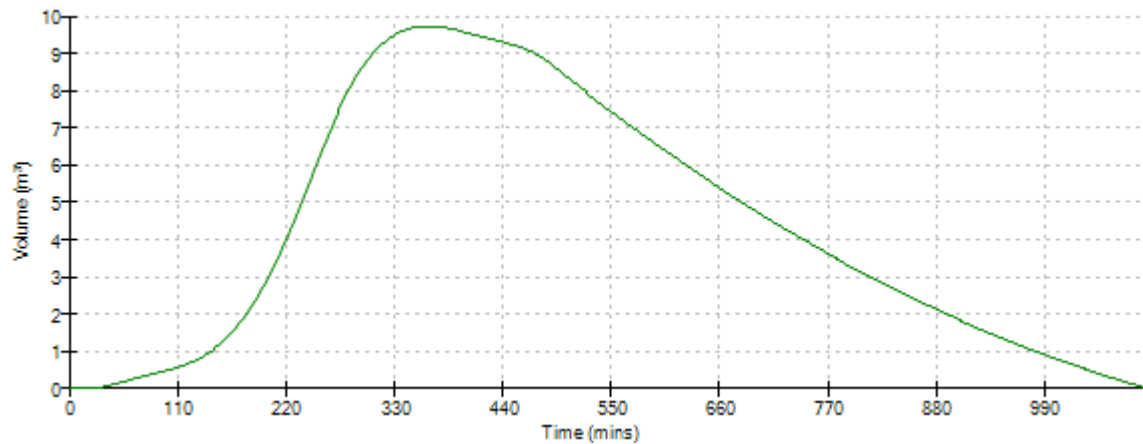
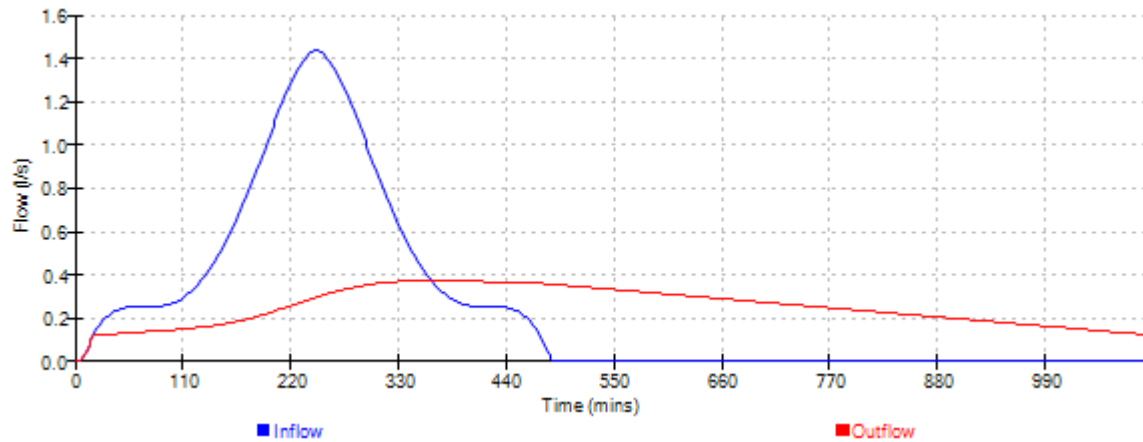
Event: 240 min Winter



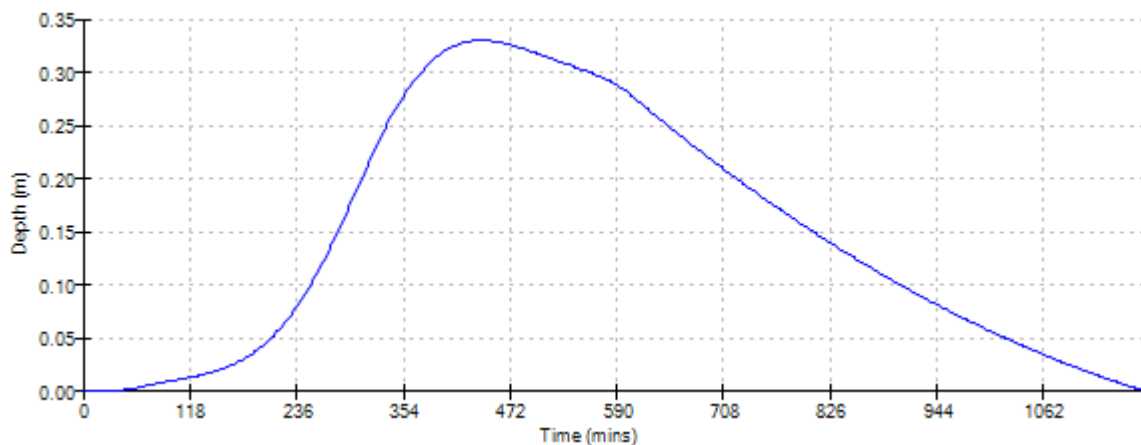
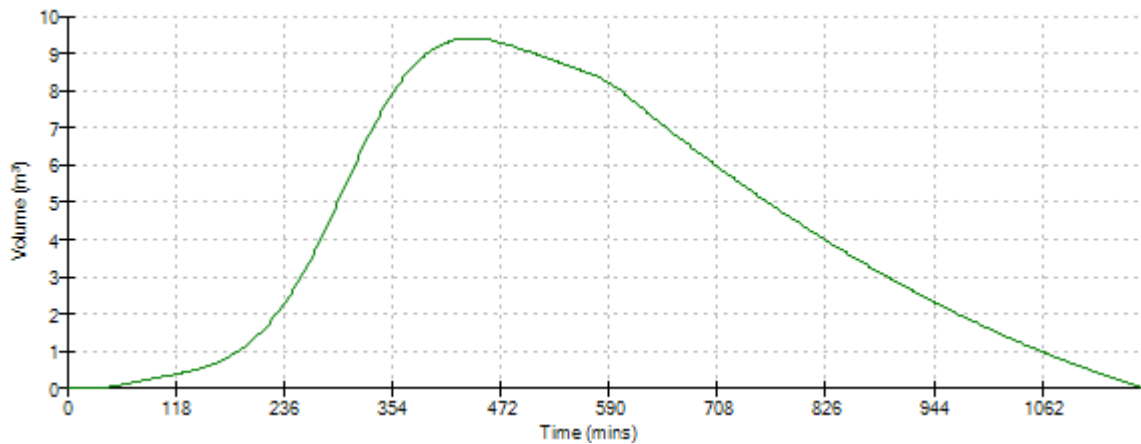
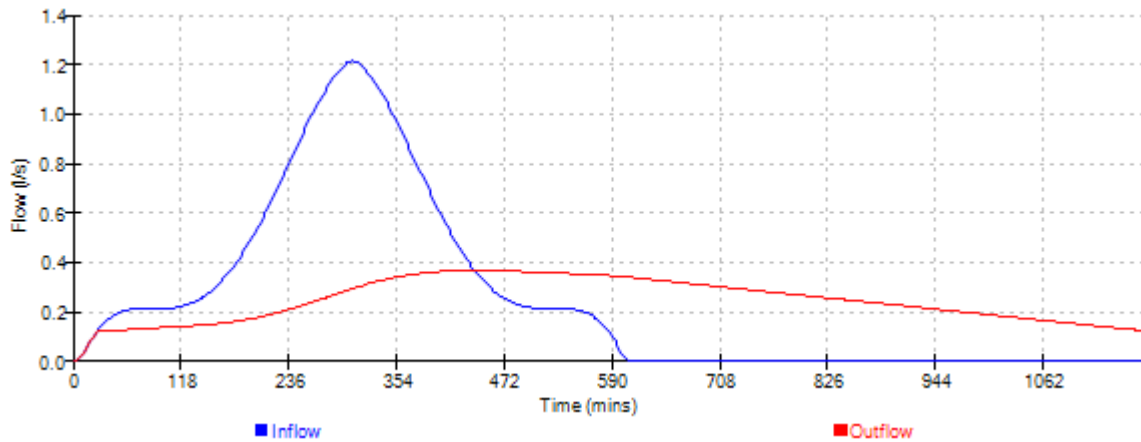
Event: 360 min Winter



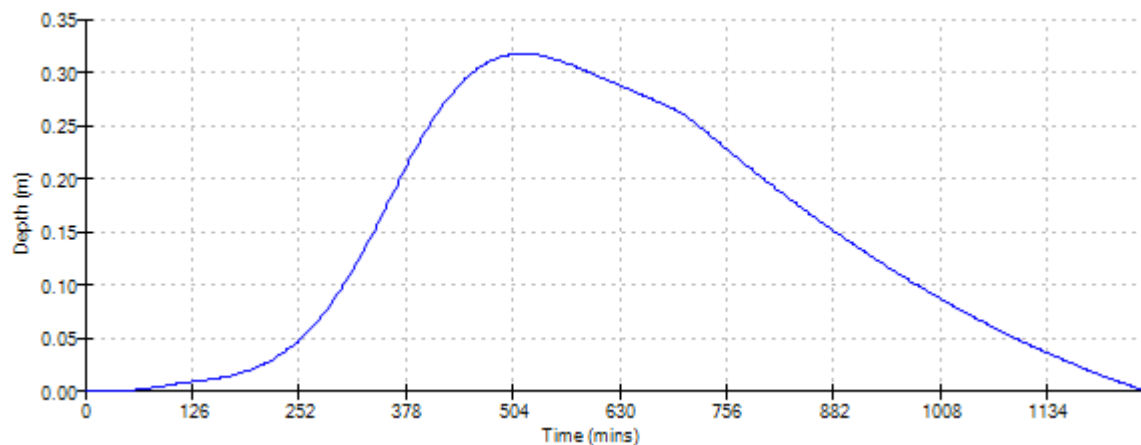
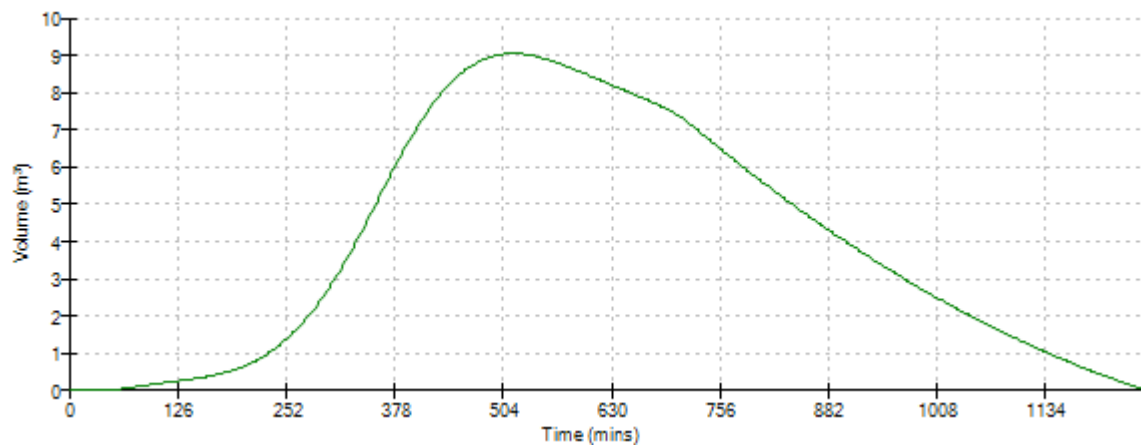
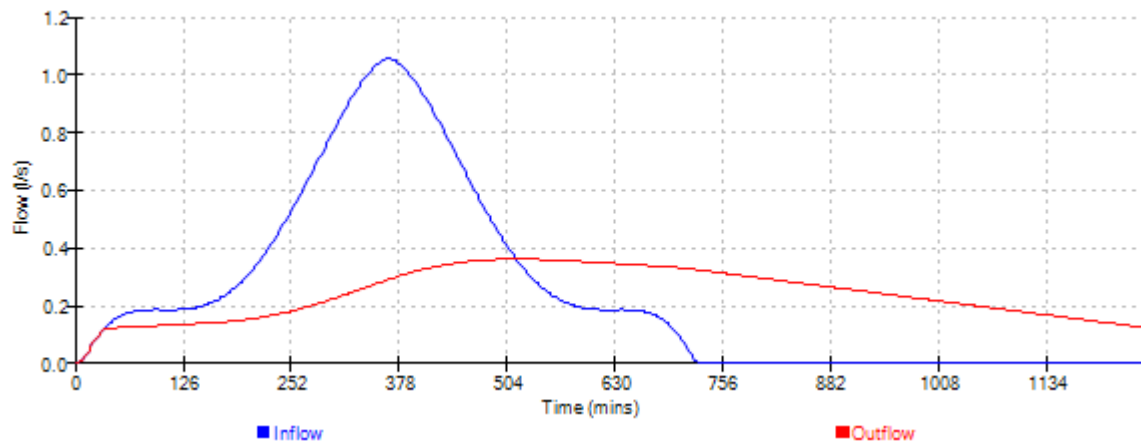
Event: 480 min Winter



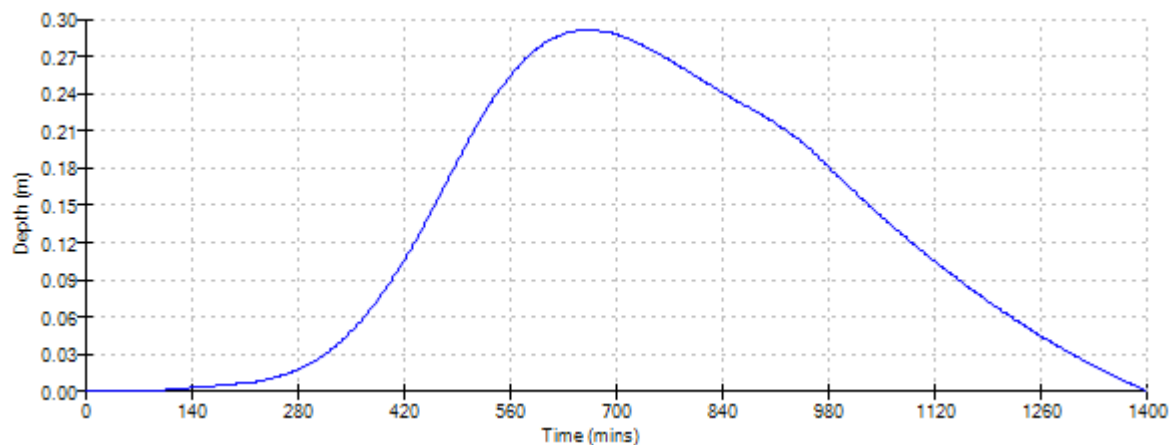
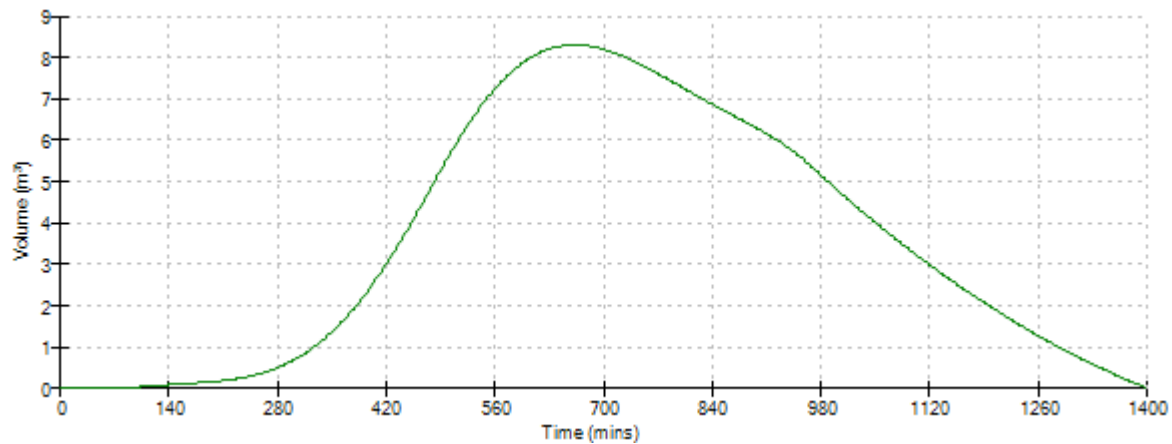
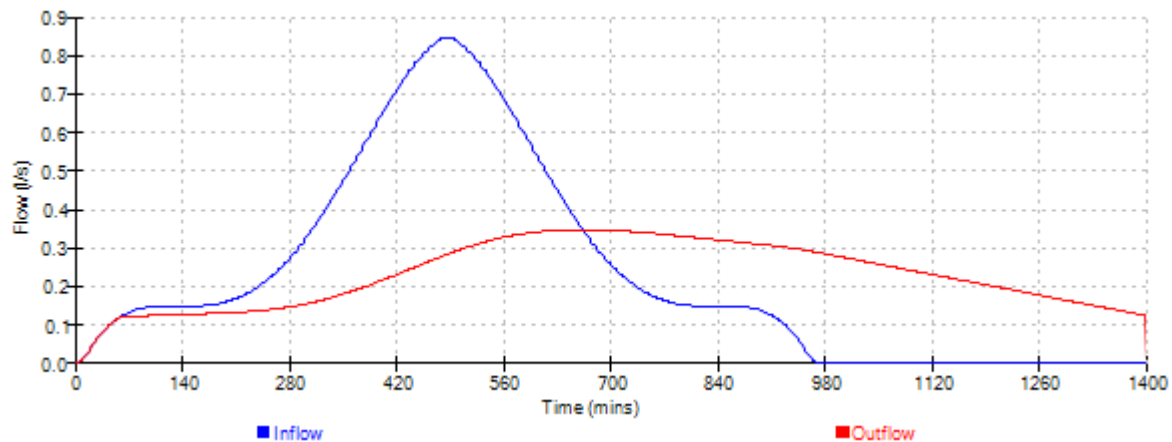
Event: 600 min Winter



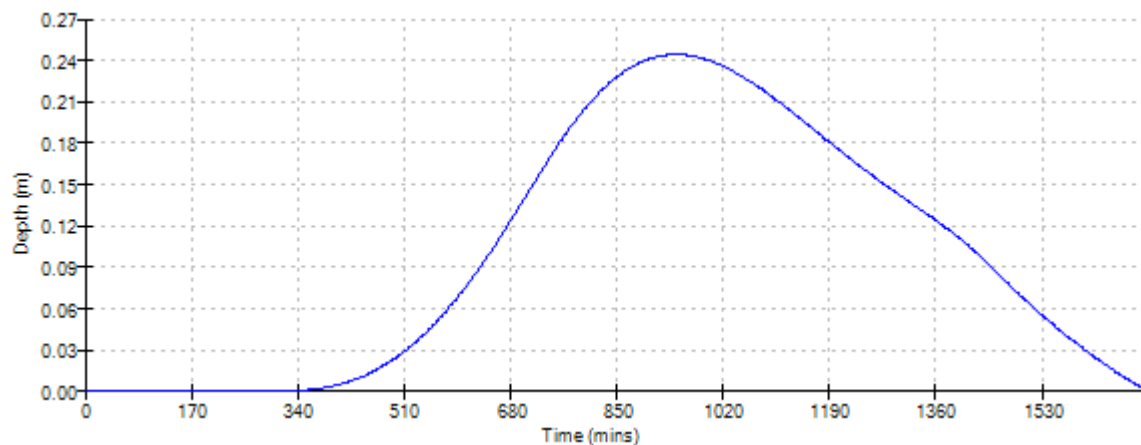
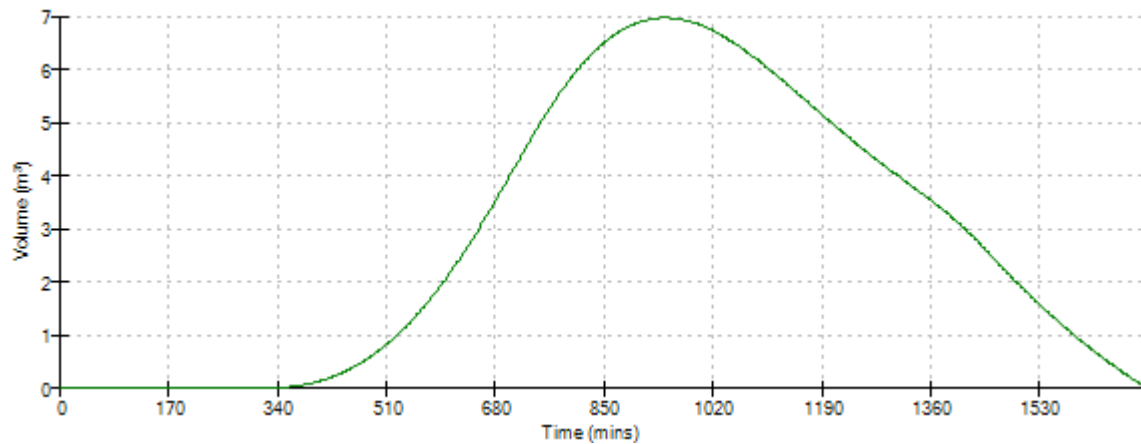
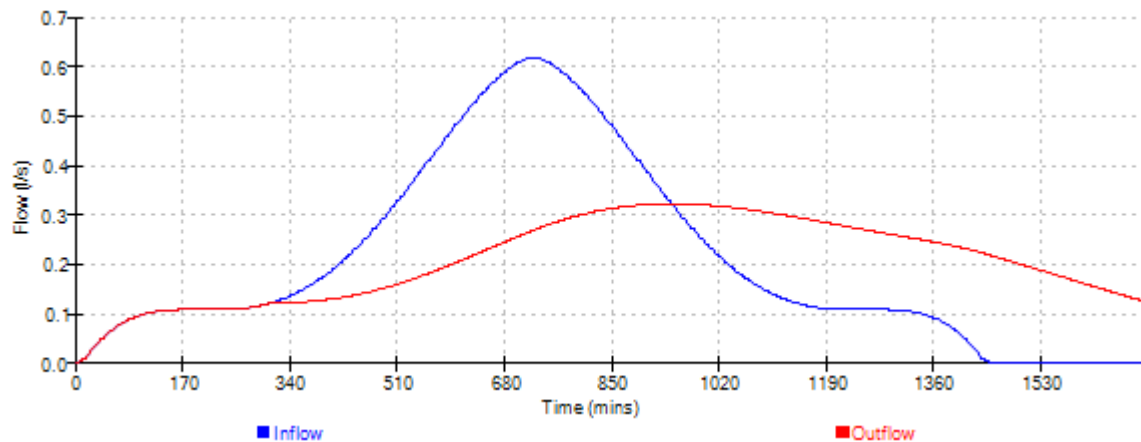
Event: 720 min Winter



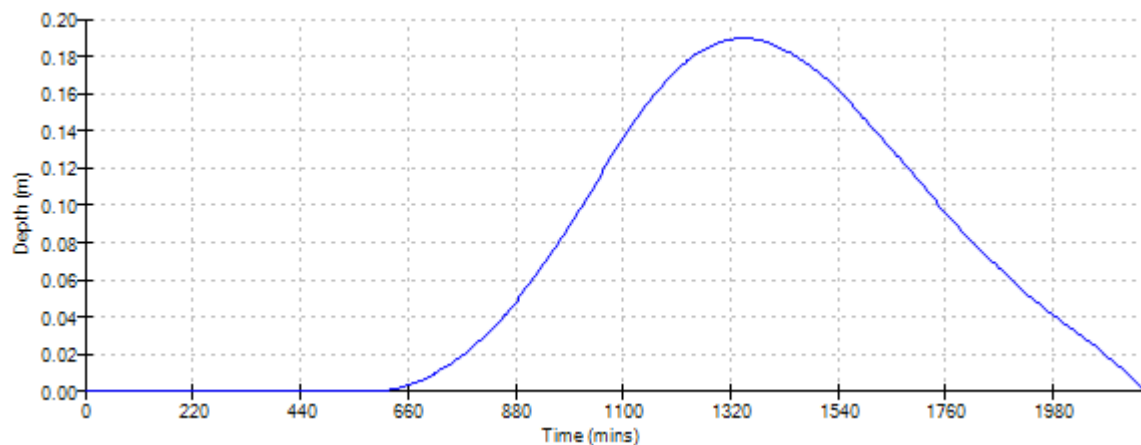
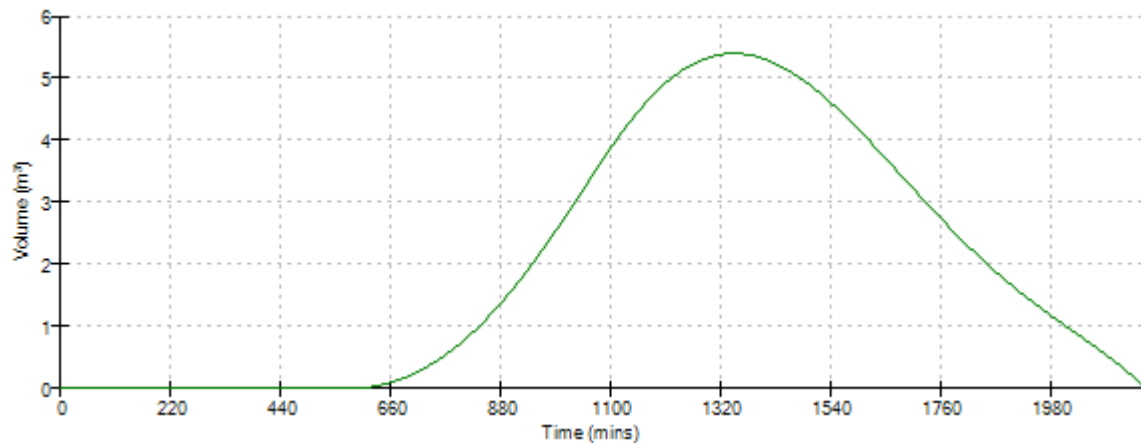
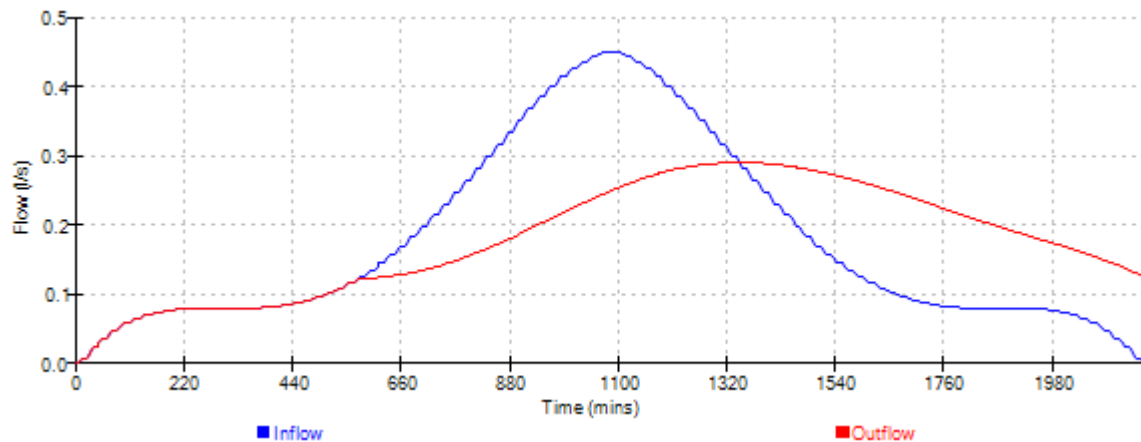
Event: 960 min Winter



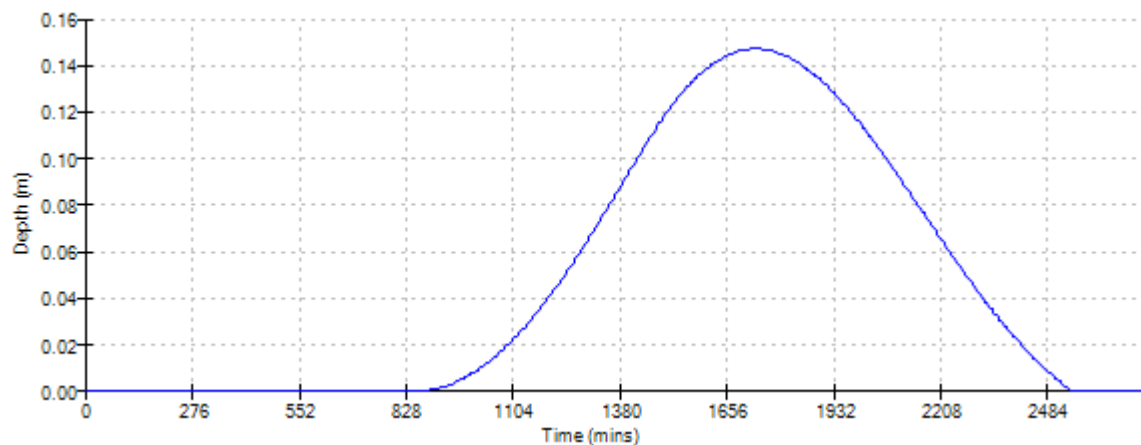
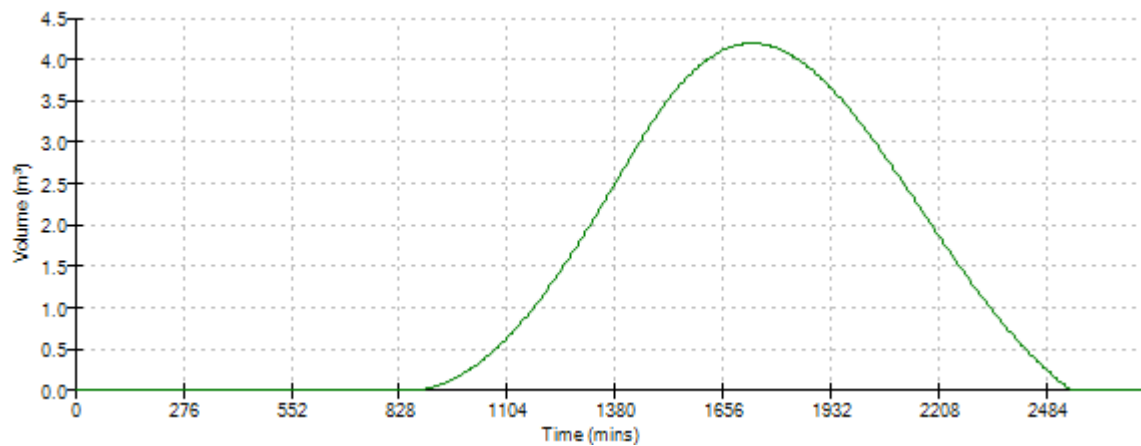
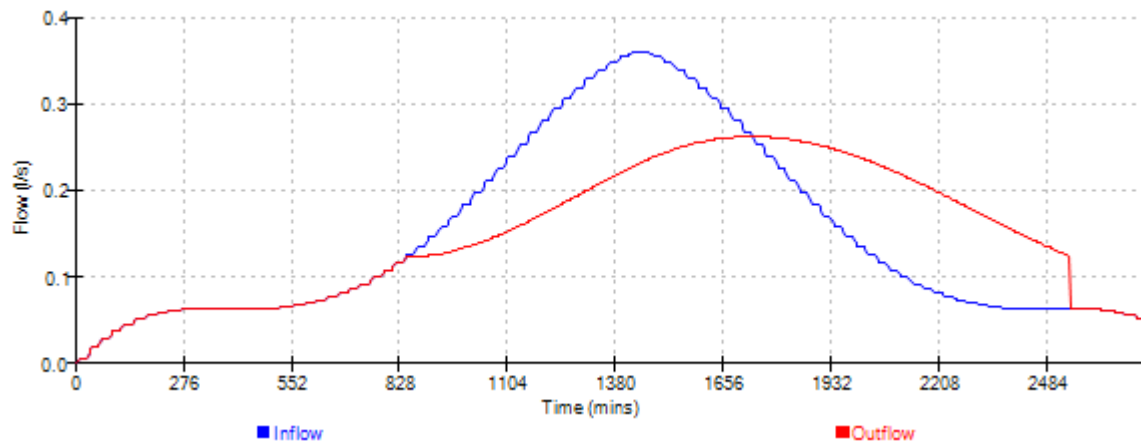
Event: 1440 min Winter



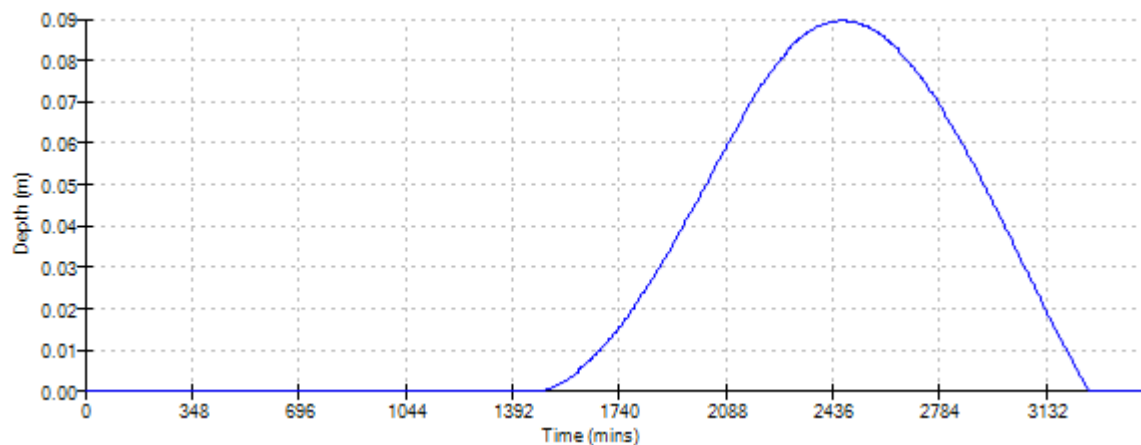
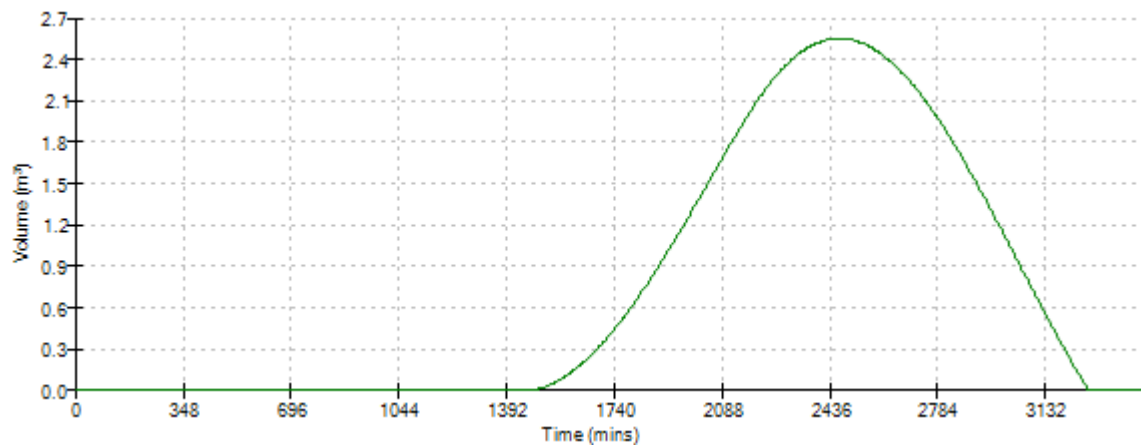
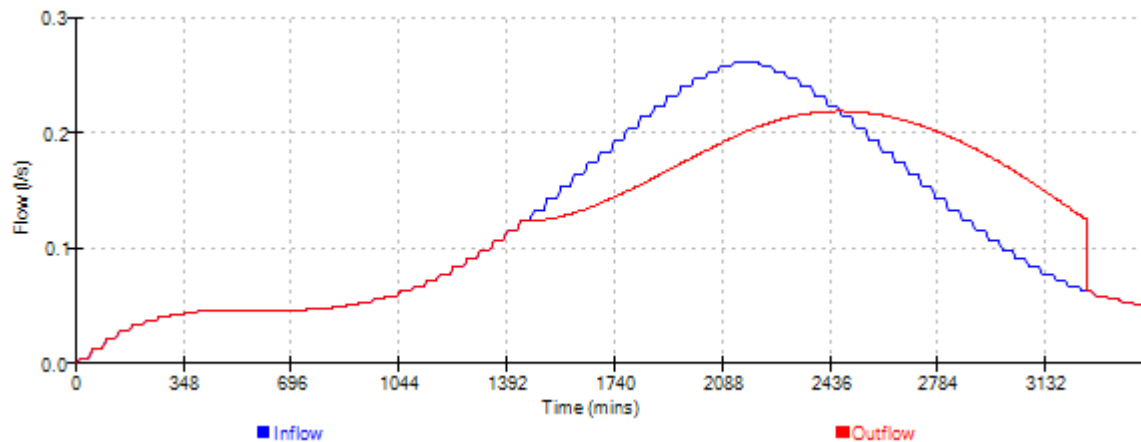
Event: 2160 min winter



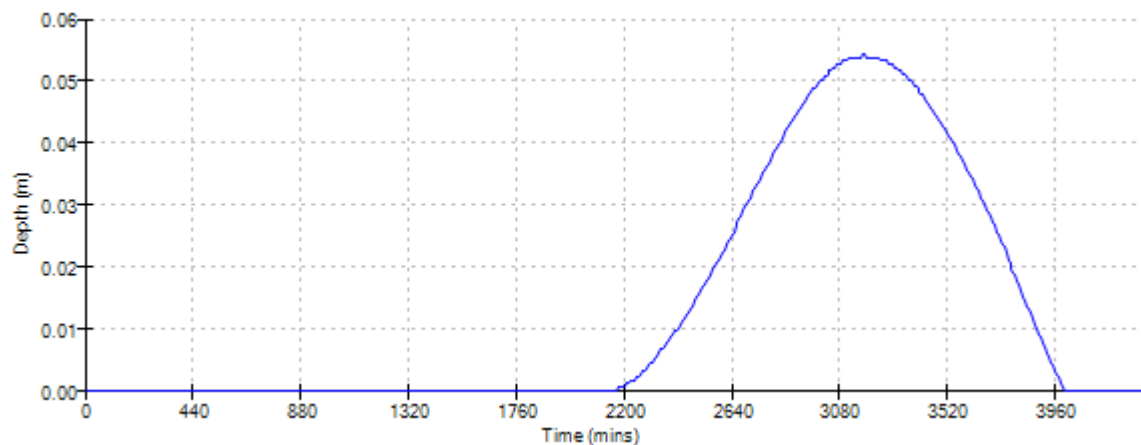
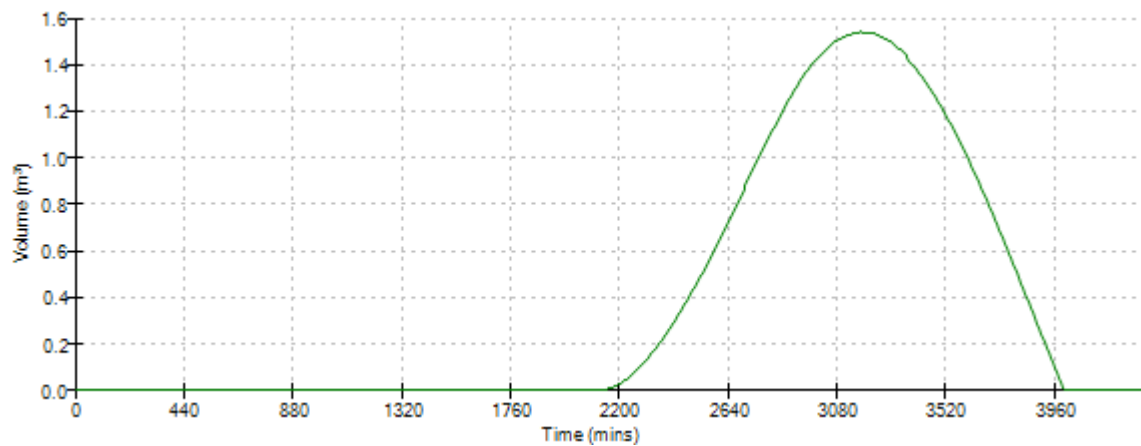
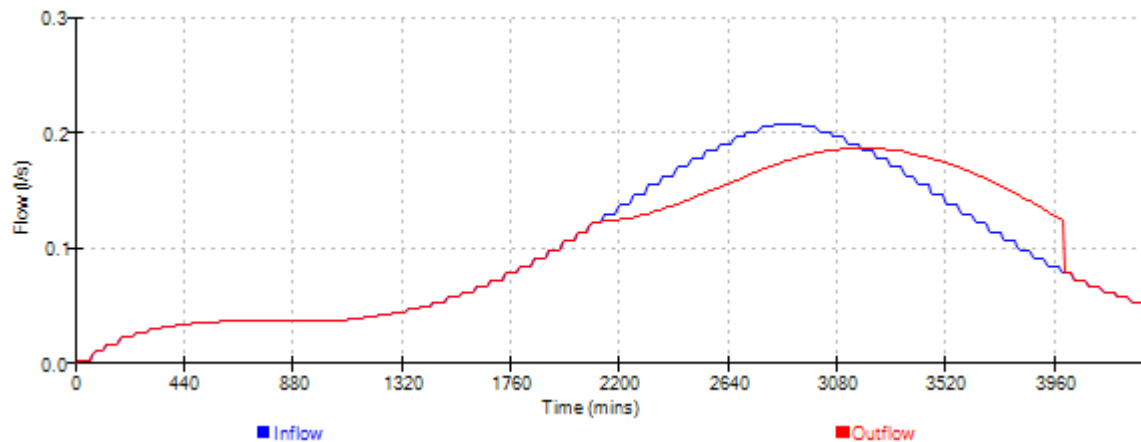
Event: 2880 min winter



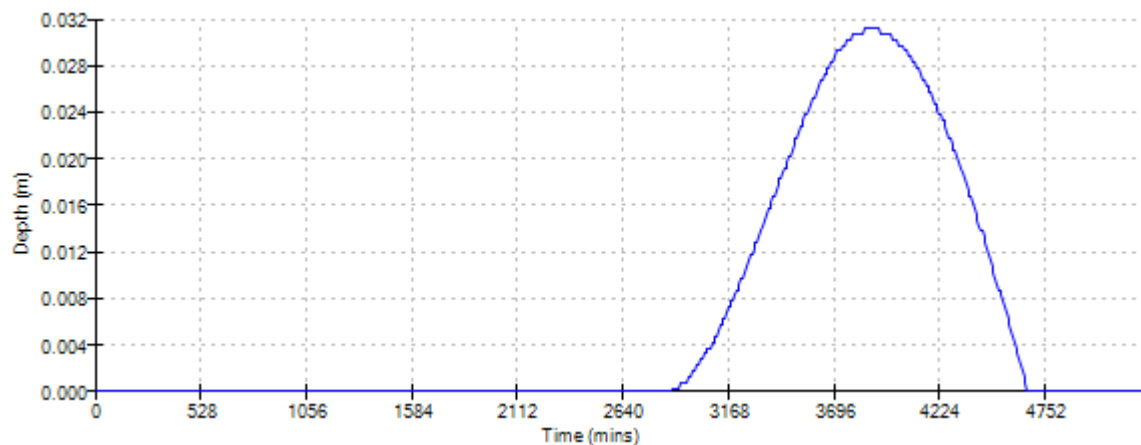
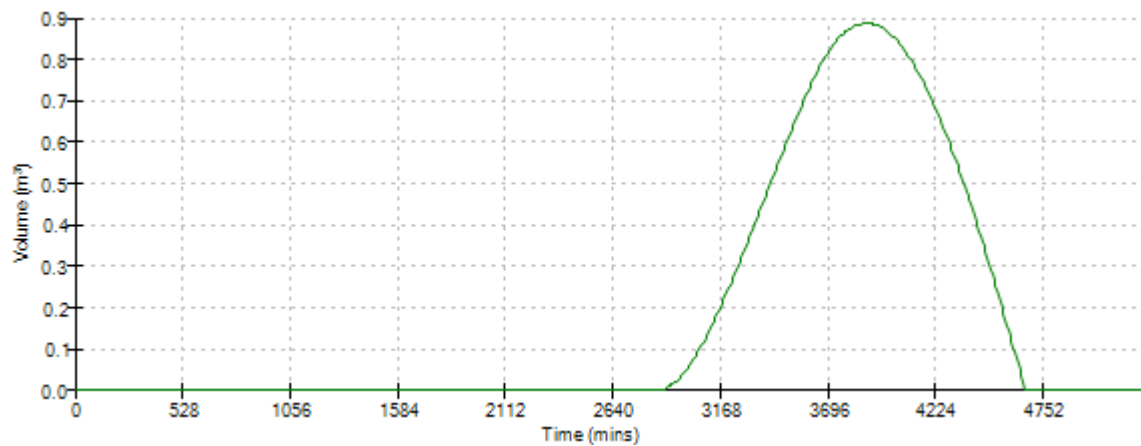
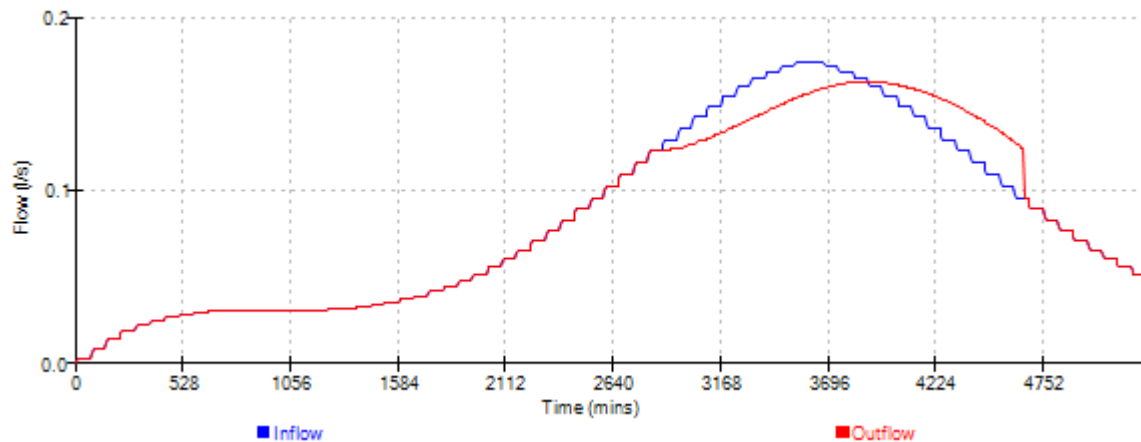
Event: 4320 min Winter



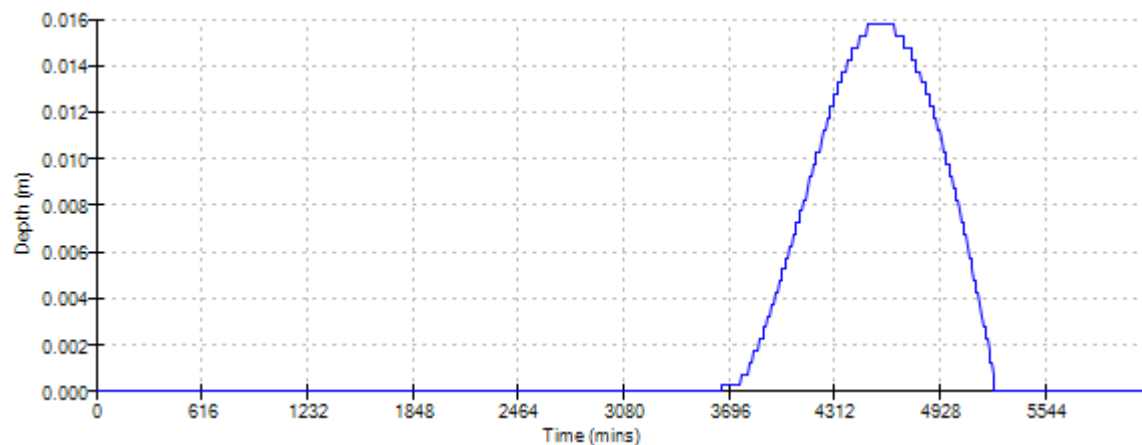
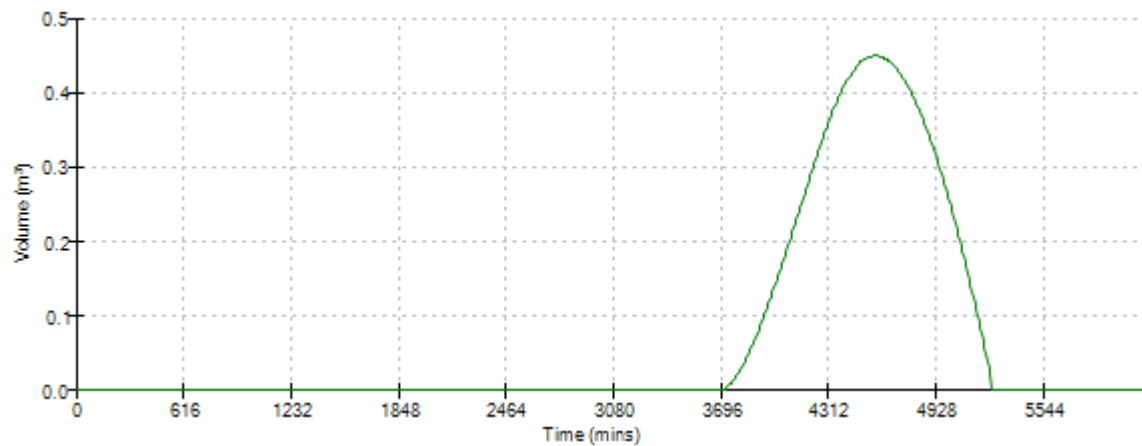
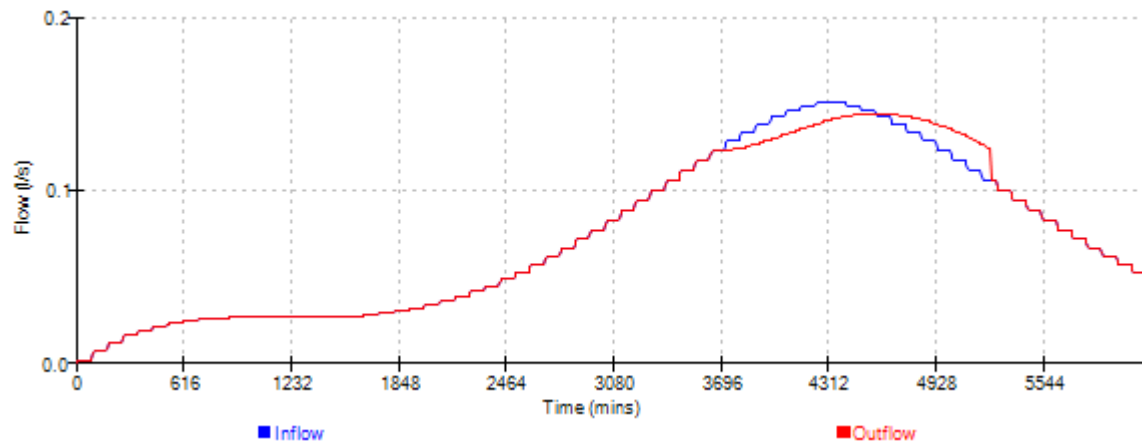
Event: 5760 min Winter



Event: 7200 min winter



Event: 8640 min Winter



Event: 10080 min Winter

