

**Nodes**

Name	Area (ha)	T of E (mins)	Diameter (mm)	Width (mm)
S110	0.026	5.00	450	
OB5	0.002	5.00	500	500
OB2	0.058	5.00	500	500
S111	0.190	5.00	1200	
S102	0.190	5.00	1200	
S101	0.028	5.00	450	
S109	0.028	5.00	450	
S112			1200	
S104			1200	
S106			1200	
S103			1200	
S105	0.051	5.00	1200	
OB1	0.080	5.00	500	500
OB4	0.041	5.00	500	500
PI				
S108			1350	
TANK				
PUMP				
S113			450	

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	22.650	70.1	150	Circular	10.709	9.709	0.850	10.693	9.386	1.157
1.001	12.130	137.8	300	Circular	10.693	9.311	1.082	10.477	9.223	0.954
1.002	7.267	11.7	300	Circular	10.477	9.223	0.954	10.500	8.600	1.600
2.000	22.370	40.6	225	Circular	9.506	8.951	0.330	10.494	8.400	1.869
3.000	3.260	2.3	225	Circular	10.419	9.819	0.375	10.494	8.400	1.869
2.001	9.798	49.0	300	Circular	10.494	8.325	1.869	10.482	8.125	2.057
4.000	6.806	13.6	225	Circular	10.468	8.700	1.543	10.482	8.200	2.057
5.000	5.640	3.5	225	Circular	10.753	9.819	0.709	10.482	8.200	2.057
2.002	1.620	64.8	300	Circular	10.482	8.125	2.057	10.500	8.100	2.100
7.000	13.348	42.5	150	Circular	10.796	9.793	0.853	10.729	9.479	1.100
7.001	16.680	150.3	300	Circular	10.729	9.329	1.100	10.535	9.218	1.017
7.002	3.410	148.3	300	Circular	10.535	9.218	1.017	10.500	9.195	1.005
6.000	5.380	30.1	150	Circular	10.761	9.731	0.880	10.677	9.552	0.975

Link	US Node	Dia (mm)	Width (mm)	Node Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S101	450		Manhole	S102	1200	Manhole	Adoptable
1.001	S102	1200		Manhole	S103	1200	Manhole	Adoptable
1.002	S103	1200		Manhole	TANK		Manhole	Adoptable
2.000	OB4	500	500	Manhole	S104	1200	Manhole	Adoptable
3.000	OB1	500	500	Manhole	S104	1200	Manhole	Adoptable
2.001	S104	1200		Manhole	S106	1200	Manhole	Adoptable
4.000	S105	1200		Manhole	S106	1200	Manhole	Adoptable
5.000	OB2	500	500	Manhole	S106	1200	Manhole	Adoptable
2.002	S106	1200		Manhole	PI		Junction	
7.000	S110	450		Manhole	S111	1200	Manhole	Adoptable
7.001	S111	1200		Manhole	S112	1200	Manhole	Adoptable
7.002	S112	1200		Manhole	TANK		Manhole	Adoptable
6.000	OB5	500	500	Manhole	S109	450	Manhole	Adoptable

Pipeline Schedule

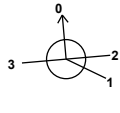
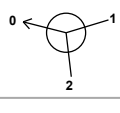
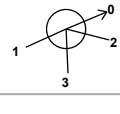
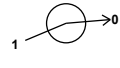
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
6.001	21.410	15.1	225	Circular	10.677	9.477	0.975	10.609	8.058	2.326
2.003	1.700	100.0	300	Circular	10.500	8.000	2.200	10.609	7.983	2.326
2.004	1.500	187.5	300	Circular	10.609	7.908	2.401	10.500	7.900	2.300
1.003	10.980	199.6	375	Circular	10.500	7.900	2.225	10.541	7.845	2.321
1.004	37.996	-23.7	80	Circular	10.541	7.845	2.616	10.456	9.450	0.926

Link	US Node	Dia (mm)	Width (mm)	Node Type	DS Node	Dia (mm)	Node Type	MH Type
6.001	S109	450		Manhole	S108	1350	Manhole	Adoptable
2.003	PI			Junction	S108	1350	Manhole	Adoptable
2.004	S108	1350		Manhole	TANK		Manhole	Adoptable
1.003	TANK			Manhole	PUMP		Manhole	Adoptable
1.004	PUMP			Manhole	S113	450	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Width (mm)	Connections	Link	IL (m)	Dia (mm)
S110	534572.241	191588.391	10.796	1.003	450					
							0	7.000	9.793	150
OB5	534636.898	191628.818	10.761	1.030	500	500				
							0	6.000	9.731	150
OB2	534620.042	191613.438	10.753	0.934	500	500				
							0	5.000	9.819	225
S111	534584.752	191593.043	10.729	1.400	1200			1	7.000	9.479
							0	7.001	9.329	300
S102	534614.747	191596.840	10.693	1.382	1200			1	1.000	9.386
							0	1.001	9.311	300
S101	534637.292	191598.751	10.709	1.000	450					
							0	1.000	9.709	150
S109	534636.260	191627.137	10.677	1.200	450			1	6.000	9.552
							0	6.001	9.477	225
S112	534583.538	191607.590	10.535	1.317	1200			1	7.001	9.218
							0	7.002	9.218	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Width (mm)	Connections	Link	IL (m)	Dia (mm)
S104	534605.312	191614.980	10.494	2.169	1200			1 3.000 8.400 2 2.000 8.400	225	225
S106	534615.073	191615.829	10.482	2.357	1200			0 2.001 8.325 1 5.000 8.200 2 4.000 8.200 3 2.001 8.125 0 2.002 8.125	300	225 225 300 300
S103	534613.605	191609.912	10.477	1.254	1200			1 1.001 9.223 0 1.002 9.223	300	300
S105	534621.854	191616.419	10.468	1.768	1200			0 4.000 8.700	225	
OB1	534604.320	191612.018	10.419	0.600	500	500		0 3.000 9.819	225	
OB4	534603.453	191592.687	9.506	0.555	500	500		0 2.000 8.951	225	
PI	534614.750	191619.549	10.500	2.500				1 2.002 8.100 0 2.003 8.000	300	300
S108	534614.627	191620.590	10.609	2.701	1350			1 6.001 8.058 2 2.003 7.983 0 2.004 7.908	225	300
TANK	534613.132	191620.969	10.500	2.600				1 7.002 9.195 2 2.004 7.900 3 1.002 8.600 0 1.003 7.900	300	300 300 300 375
PUMP	534623.330	191625.251	10.541	2.696				1 1.003 7.845 0 1.004 7.845	375	80
S113	534656.031	191627.993	10.456	1.006	450			1 1.004 9.450	80	

Simulation Settings

Rainfall Methodology FEH-22
Rainfall Events Singular
Summer CV 0.750
Winter CV 0.840

Analysis Speed Detailed
Skip Steady State x
Drain Down Time (mins) 1440
Additional Storage (m³/ha) 0.0

Starting Level (m)
Check Discharge Rate(s) x
Check Discharge Volume x

Storm Durations

15	60	180	360	600	960	2160	4320
30	120	240	480	720	1440	2880	

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 PUMP Online Pump Control

Flap Valve	x	Design Depth (m)	1.655	Switch off depth (m)	0.000
Replaces Downstream Link	✓	Design Flow (l/s)	4.2		
Invert Level (m)	7.845	Switch on depth (m)	0.001		

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	4.200	0.600	4.200	1.000	4.200	1.400	4.200	1.655	4.200
0.400	4.200	0.800	4.200	1.200	4.200	1.600	4.200		

Node TANK Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	7.900
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	896

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	280.0	0.0	1.600	280.0	0.0	1.601	0.0	0.0

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	61.078	17.283	1 year 1440 minute summer	3.975	1.065
1 year 15 minute winter	42.862	17.283	1 year 1440 minute winter	2.672	1.065
1 year 30 minute summer	39.021	11.042	1 year 2160 minute summer	2.821	0.780
1 year 30 minute winter	27.383	11.042	1 year 2160 minute winter	1.944	0.780
1 year 60 minute summer	25.431	6.721	1 year 2880 minute summer	2.351	0.630
1 year 60 minute winter	16.896	6.721	1 year 2880 minute winter	1.580	0.630
1 year 120 minute summer	21.098	5.576	1 year 4320 minute summer	1.821	0.476
1 year 120 minute winter	14.017	5.576	1 year 4320 minute winter	1.199	0.476
1 year 180 minute summer	17.994	4.630	30 year 15 minute summer	313.940	88.834
1 year 180 minute winter	11.697	4.630	30 year 15 minute winter	220.308	88.834
1 year 240 minute summer	14.947	3.950	30 year 30 minute summer	200.398	56.706
1 year 240 minute winter	9.930	3.950	30 year 30 minute winter	140.630	56.706
1 year 360 minute summer	11.840	3.047	30 year 60 minute summer	130.425	34.467
1 year 360 minute winter	7.696	3.047	30 year 60 minute winter	86.651	34.467
1 year 480 minute summer	9.398	2.483	30 year 120 minute summer	83.288	22.011
1 year 480 minute winter	6.244	2.483	30 year 120 minute winter	55.335	22.011
1 year 600 minute summer	7.694	2.104	30 year 180 minute summer	64.194	16.519
1 year 600 minute winter	5.257	2.104	30 year 180 minute winter	41.728	16.519
1 year 720 minute summer	6.834	1.832	30 year 240 minute summer	50.412	13.322
1 year 720 minute winter	4.593	1.832	30 year 240 minute winter	33.493	13.322
1 year 960 minute summer	5.565	1.465	30 year 360 minute summer	37.589	9.673
1 year 960 minute winter	3.686	1.465	30 year 360 minute winter	24.434	9.673

**Rainfall**

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year 480 minute summer	28.848	7.624	100 year +40% CC 120 minute winter	101.048	40.194
30 year 480 minute winter	19.166	7.624	100 year +40% CC 180 minute summer	117.712	30.291
30 year 600 minute summer	23.070	6.310	100 year +40% CC 180 minute winter	76.516	30.291
30 year 600 minute winter	15.763	6.310	100 year +40% CC 240 minute summer	92.900	24.551
30 year 720 minute summer	20.128	5.395	100 year +40% CC 240 minute winter	61.720	24.551
30 year 720 minute winter	13.527	5.395	100 year +40% CC 360 minute summer	69.814	17.965
30 year 960 minute summer	15.942	4.198	100 year +40% CC 360 minute winter	45.381	17.965
30 year 960 minute winter	10.560	4.198	100 year +40% CC 480 minute summer	53.902	14.245
30 year 1440 minute summer	10.968	2.939	100 year +40% CC 480 minute winter	35.811	14.245
30 year 1440 minute winter	7.371	2.939	100 year +40% CC 600 minute summer	43.260	11.833
30 year 2160 minute summer	7.466	2.063	100 year +40% CC 600 minute winter	29.558	11.833
30 year 2160 minute winter	5.144	2.063	100 year +40% CC 720 minute summer	37.819	10.136
30 year 2880 minute summer	6.017	1.613	100 year +40% CC 720 minute winter	25.417	10.136
30 year 2880 minute winter	4.044	1.613	100 year +40% CC 960 minute summer	29.983	7.895
30 year 4320 minute summer	4.411	1.153	100 year +40% CC 960 minute winter	19.861	7.895
30 year 4320 minute winter	2.905	1.153	100 year +40% CC 1440 minute summer	20.531	5.503
100 year +40% CC 15 minute summer	569.341	161.104	100 year +40% CC 1440 minute winter	13.798	5.503
100 year +40% CC 15 minute winter	399.538	161.104	100 year +40% CC 2160 minute summer	13.792	3.812
100 year +40% CC 30 minute summer	366.566	103.725	100 year +40% CC 2160 minute winter	9.503	3.812
100 year +40% CC 30 minute winter	257.239	103.725	100 year +40% CC 2880 minute summer	10.968	2.940
100 year +40% CC 60 minute summer	240.056	63.440	100 year +40% CC 2880 minute winter	7.371	2.940
100 year +40% CC 60 minute winter	159.488	63.440	100 year +40% CC 4320 minute summer	7.843	2.051
100 year +40% CC 120 minute summer	152.094	40.194	100 year +40% CC 4320 minute winter	5.165	2.051

Results for 1 year Critical Storm Duration. Lowest 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	S110	10	9.821	0.028	2.0	0.0044	0.0000	OK
15 minute winter	OB5	10	9.739	0.008	0.2	0.0020	0.0000	OK
15 minute winter	OB2	10	9.840	0.021	4.6	0.0052	0.0000	OK
15 minute winter	S111	10	9.421	0.092	16.9	0.1040	0.0000	OK
15 minute winter	S102	10	9.403	0.092	17.0	0.1045	0.0000	OK
15 minute winter	S101	10	9.742	0.033	2.2	0.0052	0.0000	OK
15 minute winter	S109	10	9.498	0.021	2.4	0.0033	0.0000	OK
15 minute winter	S112	10	9.315	0.097	16.7	0.1102	0.0000	OK
15 minute winter	S104	10	8.374	0.049	9.4	0.0555	0.0000	OK
15 minute winter	S106	10	8.206	0.081	17.9	0.0919	0.0000	OK
15 minute winter	S103	10	9.272	0.049	16.9	0.0558	0.0000	OK
15 minute winter	S105	10	8.727	0.027	4.0	0.0304	0.0000	OK
15 minute winter	OB1	10	9.841	0.022	6.3	0.0056	0.0000	OK
15 minute winter	OB4	10	8.981	0.030	3.2	0.0076	0.0000	OK
240 minute winter	PI	184	8.106	0.106	5.3	0.0000	0.0000	OK
240 minute winter	S108	184	8.106	0.198	5.9	0.2838	0.0000	OK
240 minute winter	TANK	184	8.106	0.206	15.8	54.8747	0.0000	OK
240 minute winter	PUMP	216	8.133	0.288	16.1	0.0000	0.0000	SURCHARGED
15 minute summer	S113	1	9.450	0.000	2.8	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)
15 minute winter	S110	7.000	S111	2.0	0.891	0.072	0.0297
15 minute winter	OB5	6.000	S109	0.2	0.472	0.005	0.0019
15 minute winter	OB2	5.000	S106	4.6	2.599	0.016	0.0100
15 minute winter	S111	7.001	S112	16.7	0.877	0.185	0.3178
15 minute winter	S102	1.001	S103	16.9	1.335	0.179	0.1574
15 minute winter	S101	1.000	S102	2.2	0.769	0.101	0.0635
15 minute winter	S109	6.001	S108	2.3	1.282	0.017	0.0388
15 minute winter	S112	7.002	TANK	16.5	0.909	0.181	0.0620
15 minute winter	S104	2.001	S106	9.4	0.832	0.059	0.1121
15 minute winter	S106	2.002	PI	17.8	1.254	0.129	0.0230
15 minute winter	S103	1.002	TANK	16.8	2.344	0.051	0.0522
15 minute winter	S105	4.000	S106	4.0	1.531	0.028	0.0177
15 minute winter	OB1	3.000	S104	6.3	3.264	0.018	0.0063
15 minute winter	OB4	2.000	S104	3.1	0.990	0.038	0.0709
240 minute winter	PI	2.003	S108	5.3	0.771	0.047	0.0422
240 minute winter	S108	2.004	TANK	5.8	0.704	0.072	0.0758
240 minute winter	TANK	1.003	PUMP	16.1	0.267	0.114	0.8232
240 minute winter	PUMP	Pump	S113	4.2			

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S110	10	9.857	0.064	10.5	0.0102	0.0000	OK
15 minute winter	OB5	11	9.748	0.017	0.8	0.0042	0.0000	OK
15 minute winter	OB2	10	9.862	0.043	23.4	0.0108	0.0000	OK
15 minute winter	S111	10	9.622	0.293	87.2	0.3309	0.0000	OK
15 minute winter	S102	10	9.545	0.234	88.0	0.2641	0.0000	OK
15 minute winter	S101	10	9.786	0.077	11.3	0.0123	0.0000	OK
15 minute winter	S109	10	9.522	0.045	12.1	0.0072	0.0000	OK
15 minute winter	S112	10	9.495	0.277	85.6	0.3133	0.0000	OK
360 minute winter	S104	352	8.855	0.530	6.9	0.5998	0.0000	SURCHARGED
360 minute winter	S106	352	8.855	0.730	12.7	0.8260	0.0000	SURCHARGED
15 minute winter	S103	10	9.349	0.126	87.4	0.1420	0.0000	OK
360 minute winter	S105	352	8.855	0.155	2.9	0.1757	0.0000	OK
15 minute winter	OB1	10	9.870	0.051	32.3	0.0127	0.0000	OK
15 minute winter	OB4	10	9.022	0.071	16.6	0.0177	0.0000	OK
360 minute winter	PI	352	8.855	0.855	12.3	0.0000	0.0000	SURCHARGED
360 minute winter	S108	352	8.855	0.947	13.8	1.3557	0.0000	SURCHARGED
360 minute winter	TANK	352	8.855	0.955	38.2	254.1196	0.0000	SURCHARGED
360 minute winter	PUMP	352	8.855	1.010	7.9	0.0000	0.0000	SURCHARGED
15 minute summer	S113	1	9.450	0.000	4.2	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)
15 minute winter	S110	7.000	S111	10.5	1.240	0.382	0.1635
15 minute winter	OB5	6.000	S109	0.8	0.765	0.025	0.0056
15 minute winter	OB2	5.000	S106	23.4	2.827	0.083	0.0850
15 minute winter	S111	7.001	S112	85.6	1.239	0.947	1.1504
15 minute winter	S102	1.001	S103	87.4	1.988	0.925	0.5263
15 minute winter	S101	1.000	S102	11.2	0.872	0.528	0.3031
15 minute winter	S109	6.001	S108	12.1	1.742	0.090	0.4683
15 minute winter	S112	7.002	TANK	84.7	1.348	0.930	0.2123
360 minute winter	S104	2.001	S106	6.7	0.693	0.042	0.6900
360 minute winter	S106	2.002	PI	12.3	1.039	0.089	0.1141
15 minute winter	S103	1.002	TANK	87.0	3.498	0.266	0.1810
360 minute winter	S105	4.000	S106	2.9	1.294	0.020	0.2348
15 minute winter	OB1	3.000	S104	32.3	4.709	0.093	0.0246
15 minute winter	OB4	2.000	S104	16.4	1.582	0.200	0.2320
360 minute winter	PI	2.003	S108	12.1	0.726	0.109	0.1197
360 minute winter	S108	2.004	TANK	13.5	0.844	0.167	0.1056
360 minute winter	TANK	1.003	PUMP	7.9	0.280	0.056	1.2111
360 minute winter	PUMP	Pump	S113	4.2			

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.91%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S110	11	10.305	0.512	19.1	0.0814	0.0000	SURCHARGED
15 minute winter	OB5	10	9.754	0.023	1.5	0.0057	0.0000	OK
15 minute winter	OB2	10	9.877	0.058	42.5	0.0146	0.0000	OK
15 minute winter	S111	10	10.143	0.814	156.4	0.9205	0.0000	SURCHARGED
15 minute winter	S102	10	9.844	0.533	157.8	0.6031	0.0000	SURCHARGED
15 minute winter	S101	11	10.164	0.455	20.5	0.0723	0.0000	SURCHARGED
360 minute winter	S109	240	9.625	0.148	3.2	0.0235	0.0000	OK
15 minute winter	S112	10	9.678	0.460	154.8	0.5200	0.0000	SURCHARGED
360 minute winter	S104	240	9.610	1.285	31.7	1.4529	0.0000	SURCHARGED
360 minute winter	S106	240	9.620	1.495	27.4	1.6903	0.0000	SURCHARGED
360 minute winter	S103	240	9.627	0.404	23.1	0.4570	0.0000	SURCHARGED
360 minute winter	S105	240	9.620	0.920	5.4	1.0407	0.0000	SURCHARGED
15 minute summer	OB1	9	9.881	0.062	55.8	0.0155	0.0000	OK
600 minute winter	OB4	390	9.506	0.555	24.4	0.1388	106.4526	FLOOD
360 minute winter	PI	240	9.621	1.621	23.0	0.0000	0.0000	SURCHARGED
360 minute winter	S108	240	9.623	1.715	25.9	2.4544	0.0000	SURCHARGED
360 minute winter	TANK	240	9.626	1.726	71.2	425.7330	0.0000	SURCHARGED
360 minute winter	PUMP	240	9.626	1.781	4.5	0.0000	0.0000	SURCHARGED
15 minute summer	S113	1	9.450	0.000	4.2	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)
15 minute winter	S110	7.000	S111	19.1	1.240	0.699	0.2350
15 minute winter	OB5	6.000	S109	1.5	0.914	0.046	0.0087
15 minute winter	OB2	5.000	S106	42.4	2.840	0.151	0.1352
15 minute winter	S111	7.001	S112	154.8	2.198	1.711	1.1746
15 minute winter	S102	1.001	S103	156.2	2.423	1.653	0.7057
15 minute winter	S101	1.000	S102	20.1	1.142	0.946	0.3987
360 minute winter	S109	6.001	S108	3.2	0.887	0.024	0.7222
15 minute winter	S112	7.002	TANK	154.3	2.191	1.694	0.2373
360 minute winter	S104	2.001	S106	-27.4	0.690	-0.172	0.6900
360 minute winter	S106	2.002	PI	23.0	1.006	0.166	0.1141
360 minute winter	S103	1.002	TANK	23.8	2.439	0.073	0.5117
360 minute winter	S105	4.000	S106	5.1	1.309	0.036	0.2707
15 minute summer	OB1	3.000	S104	55.8	4.754	0.161	0.0784
600 minute winter	OB4	2.000	S104	-22.7	0.852	-0.277	0.8897
360 minute winter	PI	2.003	S108	22.7	0.736	0.204	0.1197
360 minute winter	S108	2.004	TANK	25.3	0.919	0.312	0.1056
360 minute winter	TANK	1.003	PUMP	4.5	0.241	0.032	1.2111
360 minute winter	PUMP	Pump	S113	4.2			