

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	0	0	0
100	40	6	0

Node PS47 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	96.000	Product Number	CTL-SHE-0070-2000-0800-2000
Design Depth (m)	0.800	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	2.0	Min Node Diameter (mm)	1200

Node PS47 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	93.550
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	80.0	0.0	0.800	80.0	0.0	0.801	0.0	0.0

Results for 2 year Critical Storm Duration. Lowest mass balance: 96.32%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	PS49	10	94.783	0.033	1.7	0.0053	0.0000	OK
15 minute summer	PS48	11	94.583	0.033	2.6	0.0052	0.0000	OK
15 minute summer	PS44	10	94.733	0.033	2.8	0.0052	0.0000	OK
15 minute summer	PS45	10	94.000	0.050	6.6	0.0080	0.0000	OK
960 minute winter	PS46	870	93.762	0.087	0.8	0.0983	0.0000	OK
960 minute winter	PS47	870	93.762	0.212	0.8	16.3438	0.0000	SURCHARGED
15 minute summer	PS50	1	93.500	0.000	0.0	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	PS49	1.000	PS48	1.7	0.757	0.230	0.0302	
15 minute summer	PS48	1.001	PS45	2.6	1.189	0.220	0.0319	
15 minute summer	PS44	2.000	PS45	2.7	1.236	0.225	0.0387	
15 minute summer	PS45	1.002	PS46	6.6	1.331	0.213	0.0329	
960 minute winter	PS46	1.003	PS47	0.8	0.483	0.014	0.2855	
960 minute winter	PS47	Hydro-Brake®	PS50	0.0				0.0

**Results for 30 year Critical Storm Duration. Lowest mass balance: 96.32%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute summer	PS49	10	94.810	0.060	4.7	0.0096	0.0000	OK
15 minute summer	PS48	10	94.608	0.058	7.2	0.0093	0.0000	OK
15 minute summer	PS44	10	94.759	0.059	7.5	0.0093	0.0000	OK
15 minute summer	PS45	10	94.043	0.093	18.0	0.0148	0.0000	OK
1440 minute winter	PS46	1410	94.022	0.347	1.1	0.3922	0.0000	SURCHARGED
1440 minute winter	PS47	1410	94.022	0.472	1.1	36.3877	0.0000	SURCHARGED
15 minute summer	PS50	1	93.500	0.000	0.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute summer	PS49	1.000	PS48	4.7	0.964	0.629	0.0647	
15 minute summer	PS48	1.001	PS45	7.1	1.530	0.598	0.0673	
15 minute summer	PS44	2.000	PS45	7.4	1.590	0.607	0.0812	
15 minute summer	PS45	1.002	PS46	17.9	1.679	0.577	0.0706	
1440 minute winter	PS46	1.003	PS47	1.1	0.487	0.019	0.4290	
1440 minute winter	PS47	Hydro-Brake®	PS50	0.0				0.0

Results for 100 year +40% CC +6% A Critical Storm Duration. Lowest mass balance: 96.32%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	PS49	1470	95.058	0.308	0.5	0.0490	0.0000	SURCHARGED
1440 minute summer	PS48	1470	95.058	0.508	0.8	0.0808	0.0000	SURCHARGED
1440 minute summer	PS44	1470	95.058	0.358	0.8	0.0570	0.0000	SURCHARGED
1440 minute summer	PS45	1470	95.058	1.108	2.0	0.1762	0.0000	SURCHARGED
1440 minute summer	PS46	1470	95.058	1.383	3.0	1.5645	0.0000	SURCHARGED
1440 minute summer	PS47	1470	95.058	1.508	2.9	62.5439	0.0000	SURCHARGED
15 minute summer	PS50	1	93.500	0.000	0.0	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)
1440 minute summer	PS49	1.000	PS48	0.5	0.530	0.068	0.1049	
1440 minute summer	PS48	1.001	PS45	0.8	0.851	0.068	0.1141	
1440 minute summer	PS44	2.000	PS45	0.8	0.872	0.066	0.1364	
1440 minute summer	PS45	1.002	PS46	2.0	0.765	0.064	0.1168	
1440 minute summer	PS46	1.003	PS47	2.9	0.491	0.053	0.4290	
1440 minute summer	PS47	Hydro-Brake®	PS50	0.0				0.0