

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)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Width (mm)	Easting (m)	Northing (m)	Depth (m)
RE1	0.007	5.00	116.000			529562.123	125966.750	0.400
RE2	0.007	5.00	114.920			529585.514	125960.851	0.320
S1			115.710	450		529563.858	125973.693	0.610
S2			115.000	450		529587.223	125967.815	0.500
S3			115.350	450		529578.326	125969.997	0.920
S4			115.150	450		529580.442	125978.720	0.800
HW1	0.020	5.00	114.800			529581.163	125980.347	0.499
HW2		5.00	114.800			529589.929	125983.754	0.500
S5			114.800	450		529591.086	125984.182	0.600
S6	0.000	5.00	114.800	1220	1100	529592.177	125984.616	1.150
S7			114.400	450		529594.501	125985.535	0.770

Links (Input)

Name	US Node	DS Node	Length (m)	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	Link Type	T of C (mins)
1.000	RE1	S1	7.156	115.600	115.100	0.500	14.3	150	Circular	5.04
2.000	RE2	S2	7.171	114.600	114.500	0.100	71.7	150	Circular	5.10
1.001	S1	S3	14.933	115.100	114.430	0.670	22.3	150	Circular	5.16
2.001	S2	S3	9.161	114.500	114.430	0.070	130.9	150	Circular	5.27
1.002	S3	S4	8.976	114.430	114.350	0.080	112.2	150	Circular	5.43
1.003	S4	HW1	1.780	114.350	114.330	0.020	89.0	150	Circular	5.46
1.004	HW2	S5	1.234	114.300	114.200	0.100	12.3	150	Circular	5.01
1.005	S5	S6	1.174	114.200	113.650	0.550	2.1	150	Circular	5.01
1.006	S6	S7	2.499	113.650	113.630	0.020	125.0	150	Circular	5.06

Simulation Settings

Rainfall Methodology	FEH-22	Skip Steady State	x	2 year (l/s)	0.1
Rainfall Events	Singular	Drain Down Time (mins)	240	30 year (l/s)	0.1
Summer CV	1.000	Additional Storage (m³/ha)	0.0	100 year (l/s)	0.2
Winter CV	1.000	Starting Level (m)		Check Discharge Volume	x
Analysis Speed	Normal	Check Discharge Rate(s)	✓		

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 %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0	100	25	0	0
30	20	0	0				

Pre-development Discharge Rate

Site Makeup	Greenfield	BFIHost	0.478	Growth Factor 100 year	2.48
Greenfield Method	FEH	Region	7	Betterment (%)	0
Positively Drained Area (ha)	0.014	QBar/QMed conversion factor	1.136	QMed	0.1
SAAR (mm)	832	Growth Factor 2 year	0.88	QBar	0.1
Host	1	Growth Factor 30 year	1.95	Q 2 year (l/s)	0.1

Pre-development Discharge Rate

Q 30 year (l/s) 0.1 | Q 100 year (l/s) 0.2 |

Node S5 Online Orifice Control

Flap Valve	x	Design Depth (m)	0.300	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	0.4		
Invert Level (m)	114.200	Diameter (m)	0.020		

Node HW2 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	8.770
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	114.300	Main Channel Slope (1:X)	9999.0
Safety Factor	2.0	Time to half empty (mins)		Main Channel n	0.040

Inlets

HW1

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	94.6	94.6	0.200	123.2	124.1	0.500	170.3	173.0

Results for 2 year Critical Storm Duration. Lowest mass balance: 98.84%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RE1	10	115.617	0.017	1.3	0.0000	0.0000	OK
15 minute summer	RE2	10	114.625	0.025	1.3	0.0000	0.0000	OK
15 minute summer	S1	10	115.119	0.019	1.3	0.0030	0.0000	OK
15 minute summer	S2	10	114.529	0.029	1.3	0.0046	0.0000	OK
15 minute summer	S3	11	114.471	0.041	2.5	0.0065	0.0000	OK
15 minute summer	S4	11	114.389	0.039	2.5	0.0063	0.0000	OK
240 minute winter	HW1	212	114.354	0.053	1.4	0.0000	0.0000	OK
240 minute winter	HW2	212	114.354	0.054	6.8	0.0000	0.0000	OK
480 minute winter	S5	416	114.381	0.181	6.3	0.0287	0.0000	SURCHARGED
240 minute winter	S6	212	113.665	0.015	0.3	0.0207	0.0000	OK
240 minute winter	S7	212	113.645	0.015	0.3	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	RE1	1.000	S1	1.3	1.079	0.027	0.0085	
15 minute summer	RE2	2.000	S2	1.3	0.596	0.061	0.0155	
15 minute summer	S1	1.001	S3	1.3	0.607	0.034	0.0381	
15 minute summer	S2	2.001	S3	1.3	0.410	0.081	0.0284	
15 minute summer	S3	1.002	S4	2.5	0.667	0.150	0.0338	
15 minute summer	S4	1.003	HW1	2.5	0.716	0.134	0.0063	
15 minute summer	HW1	Flow through Pond	HW2	4.9	0.036	0.008	2.3176	
360 minute winter	HW2	1.004	S5	7.3	0.579	0.143	0.0140	
240 minute winter	S5	1.005	S6	0.3	0.614	0.003	0.0007	
240 minute winter	S6	1.006	S7	0.3	0.349	0.020	0.0023	7.6

Results for 30 year +20% CC Critical Storm Duration. Lowest mass balance: 98.78%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RE1	10	115.629	0.029	3.9	0.0000	0.0000	OK
15 minute summer	RE2	10	114.644	0.044	3.9	0.0000	0.0000	OK
15 minute summer	S1	10	115.132	0.032	3.9	0.0052	0.0000	OK
15 minute summer	S2	10	114.551	0.051	3.9	0.0081	0.0000	OK
15 minute summer	S3	10	114.506	0.076	7.7	0.0121	0.0000	OK
360 minute winter	S4	344	114.450	0.100	1.4	0.0159	0.0000	OK
360 minute winter	HW1	344	114.450	0.149	3.1	0.0000	0.0000	OK
360 minute winter	HW2	344	114.450	0.150	5.6	0.0000	0.0000	SURCHARGED
360 minute winter	S5	344	114.450	0.250	4.1	0.0398	0.0000	SURCHARGED
360 minute winter	S6	344	113.667	0.017	0.4	0.0233	0.0000	OK
360 minute winter	S7	344	113.647	0.017	0.4	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	RE1	1.000	S1	3.9	1.498	0.082	0.0186	
15 minute summer	RE2	2.000	S2	3.9	0.809	0.185	0.0344	
15 minute summer	S1	1.001	S3	3.9	0.677	0.102	0.0877	
15 minute summer	S2	2.001	S3	3.8	0.544	0.248	0.0650	
15 minute summer	S3	1.002	S4	7.6	0.878	0.454	0.0777	
15 minute summer	S4	1.003	HW1	7.6	0.960	0.405	0.0141	
15 minute summer	HW1	Flow through Pond	HW2	11.1	0.046	0.018	7.7094	
60 minute summer	HW2	1.004	S5	7.4	0.572	0.146	0.0203	
360 minute winter	S5	1.005	S6	0.4	0.639	0.003	0.0008	
360 minute winter	S6	1.006	S7	0.4	0.374	0.026	0.0027	12.3

Results for 100 year +25% CC Critical Storm Duration. Lowest mass balance: 99.01%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RE1	10	115.633	0.033	5.1	0.0000	0.0000	OK
15 minute summer	RE2	10	114.651	0.051	5.1	0.0000	0.0000	OK
15 minute summer	S1	10	115.137	0.037	5.1	0.0059	0.0000	OK
15 minute summer	S2	10	114.559	0.059	5.1	0.0094	0.0000	OK
15 minute summer	S3	10	114.520	0.090	10.1	0.0143	0.0000	OK
600 minute winter	S4	510	114.499	0.149	1.0	0.0237	0.0000	OK
600 minute winter	HW1	510	114.499	0.198	3.3	0.0000	0.0000	OK
600 minute winter	HW2	510	114.499	0.199	7.7	0.0000	0.0000	SURCHARGED
600 minute winter	S5	510	114.499	0.299	1.9	0.0476	0.0000	SURCHARGED
600 minute winter	S6	510	113.668	0.018	0.4	0.0244	0.0000	OK
600 minute winter	S7	510	113.647	0.017	0.4	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	RE1	1.000	S1	5.1	1.618	0.107	0.0225	
15 minute summer	RE2	2.000	S2	5.1	0.861	0.241	0.0422	
15 minute summer	S1	1.001	S3	5.0	0.712	0.133	0.1077	
15 minute summer	S2	2.001	S3	5.0	0.574	0.324	0.0801	
15 minute summer	S3	1.002	S4	9.9	0.933	0.592	0.0954	
15 minute summer	S4	1.003	HW1	9.9	1.026	0.528	0.0173	
15 minute summer	HW1	Flow through Pond	HW2	13.1	0.045	0.021	10.1236	
15 minute winter	HW2	1.004	S5	8.0	0.829	0.156	0.0185	
600 minute winter	S5	1.005	S6	0.4	0.657	0.004	0.0009	
600 minute winter	S6	1.006	S7	0.4	0.384	0.028	0.0029	18.4