

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	5	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	0.600
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
SK2.1	0.093	5.00	88.050	1200	250899.254	58940.267	0.600
SK2.4	0.044	5.00	88.050	1200	250894.701	58883.654	0.600
SK2.2	0.054	5.00	88.050	1200	250879.092	58890.057	0.840
SK2.3	0.099	5.00	88.050	1200	250847.418	58902.874	0.752
SMH60	0.037	5.00	88.050	1200	250882.896	59009.245	0.450
SMH60A	0.068	5.00	88.050	1200	250875.493	58989.605	0.500
SK2.7	0.050	5.00	88.050	1200	250901.559	58979.162	0.600
SK2.6	0.034	5.00	88.050	1200	250890.182	58950.035	0.739
SK2.5	0.092	5.00	88.050	1200	250870.684	58957.756	0.693
11	0.000		88.050		250860.222	58933.085	0.746
12 false			88.050		250850.712	58936.780	0.645

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	SK2.1	SK2.2	54.107	0.600	87.450	87.210	0.240	225.0	225	6.04	50.0
2.000	SK2.4	SK2.2	16.871	0.600	87.450	87.375	0.075	225.0	225	5.32	50.0
1.001	SK2.2	SK2.3	34.169	0.600	87.450	87.298	0.152	225.0	225	6.70	50.0
1.002	SK2.3	11	32.812	0.600	87.450	87.304	0.146	225.0	225	7.33	50.0
3.000	SMH60	SMH60A	20.989	0.600	87.600	87.550	0.050	419.8	225	5.55	50.0
3.001	SMH60A	SK2.7	28.080	0.600	87.550	87.500	0.050	561.6	225	6.41	50.0
3.002	SK2.7	SK2.6	31.270	0.600	87.450	87.311	0.139	225.0	225	7.01	50.0
3.003	SK2.6	SK2.5	20.971	0.600	87.450	87.357	0.093	225.0	225	7.42	50.0
3.004	SK2.5	11	26.798	0.600	87.450	87.331	0.119	225.0	225	7.93	50.0
1.003 false	11	12 false	10.203	0.600	87.450	87.405	0.045	225.0	225	8.13	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.000	0.867	34.5	12.6	0.375	0.615	0.093	0.0
2.000	0.867	34.5	6.0	0.375	0.450	0.044	0.0
1.001	0.867	34.5	25.9	0.375	0.527	0.191	0.0
1.002	0.867	34.5	39.3	0.375	0.521	0.290	0.0
3.000	0.632	25.1	5.0	0.225	0.275	0.037	0.0
3.001	0.545	21.7	14.2	0.275	0.325	0.105	0.0
3.002	0.867	34.5	21.0	0.375	0.514	0.155	0.0
3.003	0.867	34.5	25.6	0.375	0.468	0.189	0.0
3.004	0.867	34.5	38.1	0.375	0.494	0.281	0.0
1.003 false	0.867	34.5	77.4	0.375	0.420	0.571	0.0

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Additional Storage (m ³ /ha)	20.0
Summer CV	0.750	Skip Steady State	✓	Check Discharge Rate(s)	x
Winter CV	0.840	Drain Down Time (mins)	240	Check Discharge Volume	x

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	0	0	0
100	0	0	0
100	40	0	0

Node 11 Online Head/Flow Control

Flap Valve	x	Replaces Downstream Link	✓	Invert Level (m)	87.450
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Head (m)	Flow (l/s)	Head (m)	Flow (l/s)
0.001	0.001	3.000	0.001

Node SK2.1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Safety Factor	2.0	Invert Level (m)	86.150
Side Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Time to half empty (mins)	20

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	1.6	1.6	1.600	1.6	13.6	1.601	0.0	13.6

Node SK2.4 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Safety Factor	2.0	Invert Level (m)	86.150
Side Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Time to half empty (mins)	19

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	1.6	1.6	1.600	1.6	13.6	1.601	0.0	13.6

Node SK2.2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Safety Factor	2.0	Invert Level (m)	86.150
Side Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Time to half empty (mins)	11

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	1.6	1.6	1.600	1.6	13.6	1.601	0.0	13.6

Node SK2.2 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Link	1.000
Side Inf Coefficient (m/hr)	0.95800	Invert Level (m)	85.650	Surround Shape	Trench
Safety Factor	2.0	Time to half empty (mins)	14	Diameter (mm)	600

Node SK2.2 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Link	2.000
Side Inf Coefficient (m/hr)	0.95800	Invert Level (m)	85.650	Surround Shape	Trench
Safety Factor	2.0	Time to half empty (mins)	15	Diameter (mm)	600

Node SK2.3 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Safety Factor	2.0	Invert Level (m)	86.150
Side Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Time to half empty (mins)	13

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	1.6	1.6	1.600	1.6	13.6	1.601	0.0	13.6

Node SK2.3 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Link	1.001
Side Inf Coefficient (m/hr)	0.95800	Invert Level (m)	85.650	Surround Shape	Trench
Safety Factor	2.0	Time to half empty (mins)	16	Diameter (mm)	600

Node SK2.7 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Safety Factor	2.0	Invert Level (m)	86.150
Side Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Time to half empty (mins)	32

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	1.6	1.6	1.600	1.6	13.6	1.601	0.0	13.6

Node SK2.6 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Safety Factor	2.0	Invert Level (m)	86.150
Side Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Time to half empty (mins)	20

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	1.6	1.6	1.600	1.6	13.6	1.601	0.0	13.6

Node SK2.6 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Link	3.002
Side Inf Coefficient (m/hr)	0.95800	Invert Level (m)	85.650	Surround Shape	Trench
Safety Factor	2.0	Time to half empty (mins)	22	Diameter (mm)	600

Node SK2.5 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Safety Factor	2.0	Invert Level (m)	86.150
Side Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Time to half empty (mins)	18

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	1.6	1.6	1.600	1.6	13.6	1.601	0.0	13.6

Node SK2.5 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Link	3.003
Side Inf Coefficient (m/hr)	0.95800	Invert Level (m)	85.650	Surround Shape	Trench
Safety Factor	2.0	Time to half empty (mins)	21	Diameter (mm)	600

Node 11 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Link	3.004
Side Inf Coefficient (m/hr)	0.95800	Invert Level (m)	85.650	Surround Shape	Trench
Safety Factor	2.0	Time to half empty (mins)	12	Diameter (mm)	600

Node 11 Link Surround Storage Structure

Base Inf Coefficient (m/hr)	0.95800	Porosity	0.49	Link	1.002
Side Inf Coefficient (m/hr)	0.95800	Invert Level (m)	85.650	Surround Shape	Trench
Safety Factor	2.0	Time to half empty (mins)	12	Diameter (mm)	600

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.15%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	SK2.1	12	87.532	0.082	13.0	1.4311	0.0000	OK
15 minute winter	SK2.4	12	87.494	0.044	6.2	1.1682	0.0000	OK
30 minute winter	SK2.2	23	85.920	-1.290	16.5	3.5313	0.0000	OK
30 minute winter	SK2.3	23	86.049	-1.249	11.0	3.2483	0.0000	OK
15 minute winter	SMH60	11	87.684	0.084	5.2	0.2336	0.0000	OK
15 minute winter	SMH60A	11	87.678	0.128	13.8	0.4928	0.0000	OK
15 minute winter	SK2.7	12	87.567	0.117	19.7	1.4395	0.0000	OK
30 minute winter	SK2.6	25	86.338	-0.973	18.2	5.8381	0.0000	OK
30 minute winter	SK2.5	23	86.240	-1.117	10.2	3.4214	0.0000	OK
15 minute summer	11	1	85.650	-1.654	0.0	0.0000	0.0000	OK
15 minute summer	12 false	1	87.405	0.000	0.0	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	SK2.1	1.000	SK2.2	9.6	0.751	0.280	0.6951	
15 minute winter	SK2.1	Infiltration		1.6				
30 minute winter	SK2.4	2.000	SK2.2	2.7	0.524	0.080	0.0883	
15 minute winter	SK2.4	Infiltration		1.5				
15 minute summer	SK2.2	1.001	SK2.3	0.0	0.000	0.000	0.0000	
15 minute summer	SK2.2	Infiltration		0.0				
30 minute winter	SK2.2	Infiltration		6.5				
30 minute winter	SK2.2	Infiltration		2.4				
15 minute summer	SK2.3	1.002	11	0.0	0.000	0.000	0.0000	
15 minute summer	SK2.3	Infiltration		0.0				
30 minute winter	SK2.3	Infiltration		5.7				
15 minute winter	SMH60	3.000	SMH60A	4.7	0.297	0.188	0.3866	
15 minute winter	SMH60A	3.001	SK2.7	13.1	0.675	0.604	0.5469	
15 minute winter	SK2.7	3.002	SK2.6	17.6	0.878	0.510	0.6261	
15 minute winter	SK2.7	Infiltration		1.6				
15 minute summer	SK2.6	3.003	SK2.5	0.0	0.000	0.000	0.0000	
30 minute winter	SK2.6	Infiltration		0.4				
30 minute winter	SK2.6	Infiltration		7.6				
15 minute summer	SK2.5	3.004	11	0.0	0.000	0.000	0.0000	
30 minute winter	SK2.5	Infiltration		0.3				
30 minute winter	SK2.5	Infiltration		4.7				
15 minute summer	11	Head/Flow	12 false	0.0				0.0
15 minute summer	11	Infiltration		0.0				
15 minute summer	11	Infiltration		0.0				

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.15%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	SK2.1	11	87.609	0.159	31.6	1.8210	0.0000	OK
15 minute winter	SK2.4	10	87.550	0.100	15.0	1.3582	0.0000	OK
30 minute winter	SK2.2	24	86.531	-0.679	48.6	16.5816	0.0000	OK
30 minute winter	SK2.3	23	86.704	-0.594	27.2	10.2637	0.0000	OK
15 minute winter	SMH60	12	87.835	0.235	12.6	0.6531	0.0000	FLOOD RISK
15 minute winter	SMH60A	12	87.824	0.274	33.2	1.0571	0.0000	FLOOD RISK
15 minute winter	SK2.7	12	87.717	0.267	46.9	1.9773	0.0000	SURCHARGED
30 minute winter	SK2.6	24	87.531	0.220	46.7	17.7903	0.0000	OK
30 minute winter	SK2.5	26	87.313	-0.044	25.3	10.8806	0.0000	OK
15 minute summer	11	1	85.650	-1.654	0.0	0.0000	0.0000	OK
15 minute summer	12 false	1	87.405	0.000	0.0	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	SK2.1	1.000	SK2.2	28.0	0.998	0.811	1.5146	
15 minute winter	SK2.1	Infiltration		1.7				
15 minute winter	SK2.4	2.000	SK2.2	12.9	0.798	0.374	0.2734	
15 minute winter	SK2.4	Infiltration		1.6				
15 minute summer	SK2.2	1.001	SK2.3	0.0	0.000	0.000	0.0000	
30 minute winter	SK2.2	Infiltration		0.6				
30 minute winter	SK2.2	Infiltration		15.3				
30 minute winter	SK2.2	Infiltration		5.1				
15 minute summer	SK2.3	1.002	11	0.0	0.000	0.000	0.0000	
30 minute winter	SK2.3	Infiltration		0.7				
30 minute winter	SK2.3	Infiltration		11.6				
15 minute winter	SMH60	3.000	SMH60A	11.1	0.316	0.441	0.8348	
15 minute winter	SMH60A	3.001	SK2.7	30.1	0.794	1.391	1.1102	
15 minute winter	SK2.7	3.002	SK2.6	42.5	1.101	1.233	1.1333	
15 minute winter	SK2.7	Infiltration		1.8				
30 minute winter	SK2.6	3.003	SK2.5	9.1	0.723	0.263	0.2630	
30 minute winter	SK2.6	Infiltration		1.6				
30 minute winter	SK2.6	Infiltration		17.6				
15 minute summer	SK2.5	3.004	11	0.0	0.000	0.000	0.0000	
30 minute winter	SK2.5	Infiltration		1.4				
30 minute winter	SK2.5	Infiltration		10.7				
15 minute summer	11	Head/Flow	12 false	0.0				0.0
15 minute summer	11	Infiltration		0.0				
15 minute summer	11	Infiltration		0.0				

Results for 100 year Critical Storm Duration. Lowest mass balance: 99.15%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	SK2.1	11	87.646	0.196	39.2	2.0035	0.0000	OK
15 minute winter	SK2.4	10	87.565	0.115	18.6	1.4104	0.0000	OK
30 minute winter	SK2.2	24	86.801	-0.409	61.7	22.4237	0.0000	OK
30 minute winter	SK2.3	23	86.990	-0.308	34.2	13.3528	0.0000	OK
15 minute winter	SMH60	12	88.014	0.414	15.6	1.1475	0.0000	FLOOD RISK
15 minute winter	SMH60A	12	87.997	0.447	38.8	1.7209	0.0000	FLOOD RISK
15 minute winter	SK2.7	12	87.833	0.383	55.0	2.3267	0.0000	FLOOD RISK
30 minute winter	SK2.6	23	87.614	0.303	57.3	18.6457	0.0000	OK
30 minute winter	SK2.5	22	87.588	0.231	46.9	13.3323	0.0000	OK
30 minute winter	11	27	85.930	-1.374	22.5	3.7344	0.0000	OK
15 minute summer	12 false	1	87.405	0.000	0.0	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	SK2.1	1.000	SK2.2	34.6	1.044	1.004	1.7870	
15 minute winter	SK2.1	Infiltration		1.7				
15 minute winter	SK2.4	2.000	SK2.2	16.4	0.851	0.475	0.3267	
15 minute winter	SK2.4	Infiltration		1.6				
15 minute summer	SK2.2	1.001	SK2.3	0.0	0.000	0.000	0.0000	
30 minute winter	SK2.2	Infiltration		0.8				
30 minute winter	SK2.2	Infiltration		19.2				
30 minute winter	SK2.2	Infiltration		6.3				
15 minute summer	SK2.3	1.002	11	0.0	0.000	0.000	0.0000	
30 minute winter	SK2.3	Infiltration		1.0				
30 minute winter	SK2.3	Infiltration		14.2				
15 minute winter	SMH60	3.000	SMH60A	13.0	0.327	0.518	0.8348	
15 minute winter	SMH60A	3.001	SK2.7	36.2	0.912	1.674	1.1168	
15 minute winter	SK2.7	3.002	SK2.6	51.7	1.312	1.500	1.2436	
15 minute summer	SK2.7	Infiltration		1.8				
30 minute winter	SK2.6	3.003	SK2.5	23.9	0.776	0.694	0.7429	
30 minute winter	SK2.6	Infiltration		1.7				
30 minute winter	SK2.6	Infiltration		18.3				
30 minute winter	SK2.5	3.004	11	22.5	0.939	0.653	0.6426	
30 minute winter	SK2.5	Infiltration		1.6				
30 minute winter	SK2.5	Infiltration		12.2				
15 minute summer	11	Head/Flow	12 false	0.0				0.0
30 minute winter	11	Infiltration		3.7				
30 minute winter	11	Infiltration		4.4				

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.15%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	SK2.1	11	87.819	0.369	54.9	2.8161	0.0000	FLOOD RISK
15 minute winter	SK2.4	10	87.595	0.145	25.9	1.5114	0.0000	OK
30 minute winter	SK2.2	25	87.332	0.122	85.7	34.0710	0.0000	OK
30 minute winter	SK2.3	24	87.469	0.171	47.8	18.9056	0.0000	OK
30 minute winter	SMH60	17	88.050	0.450	17.9	1.2488	4.1317	FLOOD
30 minute winter	SMH60A	17	88.050	0.500	42.3	1.9255	2.0354	FLOOD
30 minute winter	SK2.7	20	87.993	0.543	60.5	2.7752	0.0000	FLOOD RISK
30 minute winter	SK2.6	21	87.798	0.487	71.8	20.7463	0.0000	FLOOD RISK
30 minute winter	SK2.5	21	87.726	0.369	70.5	14.7449	0.0000	SURCHARGED
60 minute winter	11	45	86.630	-0.674	39.9	16.0063	0.0000	OK
15 minute summer	12 false	1	87.405	0.000	0.0	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	SK2.1	1.000	SK2.2	46.1	1.181	1.336	1.9943	
15 minute summer	SK2.1	Infiltration		1.8				
15 minute winter	SK2.4	2.000	SK2.2	23.6	0.942	0.684	0.4246	
15 minute winter	SK2.4	Infiltration		1.7				
30 minute winter	SK2.2	1.001	SK2.3	-0.5	-0.035	-0.016	0.5795	
30 minute winter	SK2.2	Infiltration		1.4				
30 minute winter	SK2.2	Infiltration		26.8				
30 minute winter	SK2.2	Infiltration		8.7				
30 minute winter	SK2.3	1.002	11	0.5	0.329	0.014	0.0490	
30 minute winter	SK2.3	Infiltration		1.5				
30 minute winter	SK2.3	Infiltration		18.6				
15 minute summer	SMH60	3.000	SMH60A	12.7	0.318	0.504	0.8348	
30 minute summer	SMH60A	3.001	SK2.7	36.8	0.925	1.698	1.1168	
15 minute winter	SK2.7	3.002	SK2.6	58.2	1.467	1.689	1.2436	
15 minute summer	SK2.7	Infiltration		1.8				
60 minute summer	SK2.6	3.003	SK2.5	28.8	0.752	0.836	0.8340	
30 minute summer	SK2.6	Infiltration		1.8				
30 minute winter	SK2.6	Infiltration		19.8				
30 minute winter	SK2.5	3.004	11	43.9	1.132	1.273	0.9777	
30 minute winter	SK2.5	Infiltration		1.8				
30 minute winter	SK2.5	Infiltration		13.0				
15 minute summer	11	Head/Flow	12 false	0.0				0.0
60 minute winter	11	Infiltration		8.7				
60 minute winter	11	Infiltration		10.5				