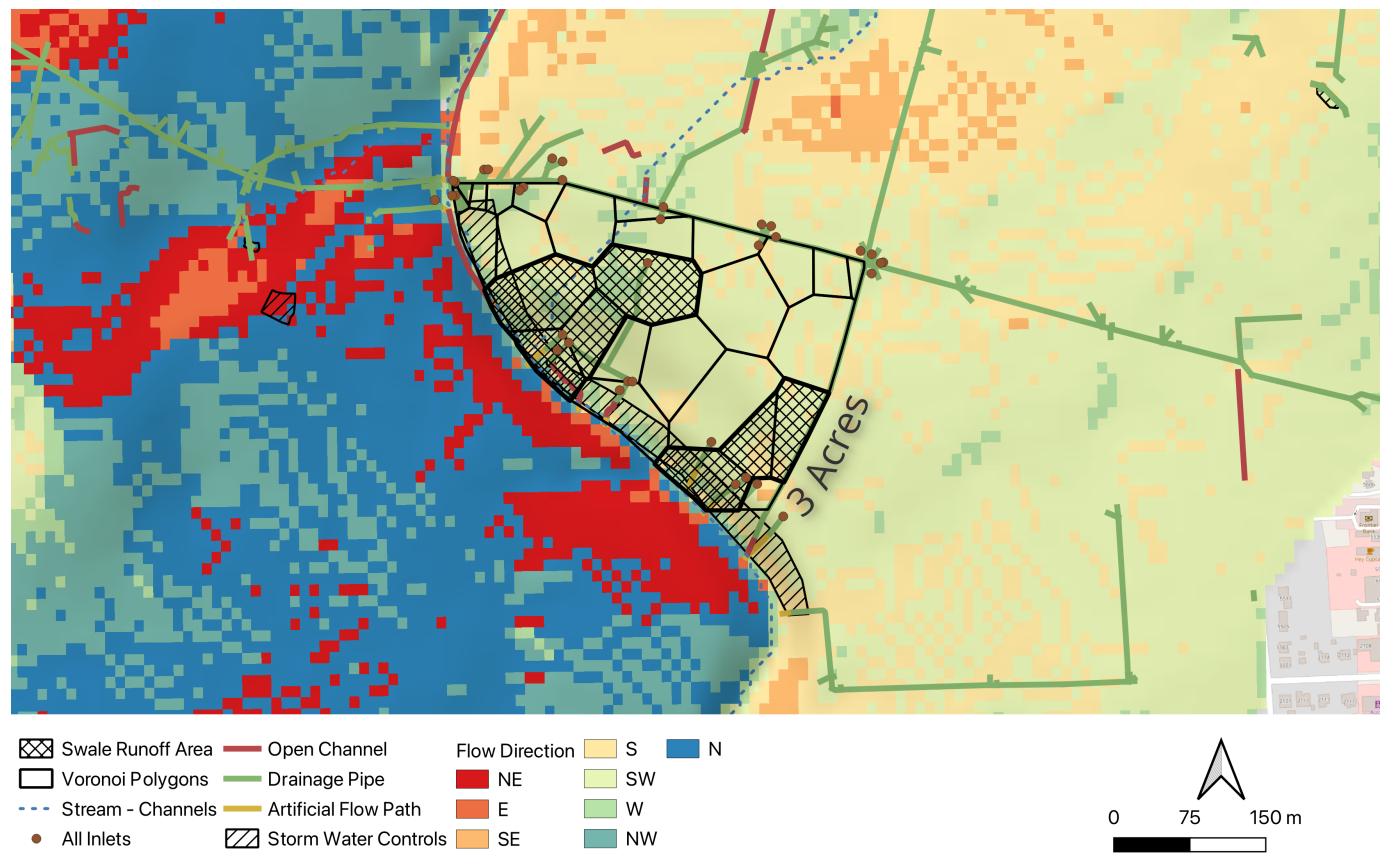


Analysis Map



Swale discharge, stormwater capacity

swale name	peak discharge capacity (ft ³ /s)	rainfall intensity to reach discharge capacity (in/hr)	volume capacity (ft ³)	rainfall depth to reach volume capacity (ft ³)	potential basin capacity (ft ³)	time to fill (s)
A	5.6	2.1	450.2	0.2	0.0	80.4
C	5.4	3.4	227.6	0.1	188.2	42.1

soil stormwater capacity

swale name	soil volume (ft ³)	soil dry capacity (ft ³)	soil wet capacity (ft ³)	ft ³ /hr infiltrated	infiltration time (hr)	total capacity w/soil dry (ft ³)	rainfall depth to reach volume capacity w/soil dry (in)	total capacity w/soil wet (ft ³)	rainfall depth to reach volume capacity w/soil wet (in)
A	3300.9	1914.5	462.1	12.5	36.0	2364.7	0.8	912.3	0.2
C	957.0	555.1	134.0	3.6	62.8	782.7	0.3	361.6	0.1

4/20, 5/1 Storm runoff total volume

datetime	storm length (min)	rainfall depth (in)	runoff volume (ft^3)	runoff volume reaching Swale A (ft^3)	runoff volume reaching Swale C (ft^3)
2024-04-20 17:51:00.000	60 min	0.070	1425.5	162.4	125.6
2024-04-20 18:51:00.000	60 min	0.000	0.0	0.0	0.0
2024-04-20 19:51:00.000	60 min	0.020	407.3	46.4	35.9
2024-04-20 20:51:00.000	60 min	0.380	7738.4	881.8	681.8
2024-04-20 21:51:00.000	60 min	0.220	4480.1	510.5	394.7
2024-05-01 16:51:00.000	60 min	0.001	20.4	2.3	1.8
2024-05-01 17:51:00.000	60 min	0.000	0.0	0.0	0.0
2024-05-01 18:51:00.000	60 min	0.000	0.0	0.0	0.0
2024-05-01 19:51:00.000	60 min	0.900	18327.9	2088.4	1614.7
2024-05-01 20:51:00.000	60 min	0.710	14458.7	1647.5	1273.8
2024-05-01 21:51:00.000	60 min	0.001	20.4	2.3	1.8

4/20, 5/1 Storm runoff peak discharge

datetime	storm length (min)	rainfall intensity (in/hr)	catchment peak discharge (ft^3/s)	peak discharge to Swale A (ft^3/s)	peak discharge to Swale C (ft^3/s)
2024-04-20 17:51:00.000	60 min	0.070	1.0	0.2	0.1
2024-04-20 18:51:00.000	60 min	0.000	0.0	0.0	0.0
2024-04-20 19:51:00.000	60 min	0.020	0.3	0.1	0.0
2024-04-20 20:51:00.000	60 min	0.380	5.4	1.0	0.6
2024-04-20 21:51:00.000	60 min	0.220	3.1	0.6	0.3

datetime	storm length (min)	rainfall intensity (in/hr)	catchment peak discharge (ft^3/s)	peak discharge to Swale A (ft^3/s)	peak discharge to Swale C (ft^3/s)
2024-05-01 16:51:00.000	60 min	0.001	0.0	0.0	0.0
2024-05-01 17:51:00.000	60 min	0.000	0.0	0.0	0.0
2024-05-01 18:51:00.000	60 min	0.000	0.0	0.0	0.0
2024-05-01 19:51:00.000	60 min	0.900	12.9	2.4	1.4
2024-05-01 20:51:00.000	60 min	0.710	10.1	1.9	1.1
2024-05-01 21:51:00.000	60 min	0.001	0.0	0.0	0.0

Recurrence Interval runoff for various storm lengths

recurrence interval (yr)	storm length (min)	rainfall depth (in)	runoff volume (ft^3)	runoff volume reaching Swale A (ft^3)	runoff volume reaching Swale C (ft^3)
1	5-min	0.431	8777.0	1000.1	773.3
2	5-min	0.524	10670.9	1215.9	940.1
5	5-min	0.668	13603.4	1550.1	1198.5
10	5-min	0.795	16189.6	1844.8	1426.3
25	5-min	0.977	19895.9	2267.1	1752.9
50	5-min	1.120	22808.0	2598.9	2009.4
100	5-min	1.280	26066.3	2970.2	2296.5
200	5-min	1.460	29731.9	3387.9	2619.4
500	5-min	1.700	34619.3	3944.8	3050.0
1	10-min	0.684	13929.2	1587.2	1227.2
2	10-min	0.833	16963.5	1933.0	1494.5
5	10-min	1.060	21586.2	2459.7	1901.8
10	10-min	1.270	25862.7	2947.0	2278.5
25	10-min	1.560	31768.3	3619.9	2798.8
50	10-min	1.800	36655.7	4176.9	3229.4
100	10-min	2.060	41950.5	4780.2	3695.9
200	10-min	2.320	47245.2	5383.5	4162.4
500	10-min	2.690	54780.0	6242.1	4826.2

recurrence interval (yr)	storm length (min)	rainfall depth (in)	runoff volume (ft^3)	runoff volume reaching Swale A (ft^3)	runoff volume reaching Swale C (ft^3)
1	15-min	0.868	17676.2	2014.2	1557.3
2	15-min	1.050	21382.5	2436.5	1883.8
5	15-min	1.340	27288.2	3109.4	2404.1
10	15-min	1.590	32379.2	3689.6	2852.7
25	15-min	1.950	39710.4	4524.9	3498.5
50	15-min	2.240	45616.0	5197.9	4018.8
100	15-min	2.550	51929.0	5917.2	4575.0
200	15-min	2.90	59056.5	6729.4	5203.0
500	15-min	3.38	68831.3	7843.2	6064.2
1	30-min	1.24	25251.7	2877.4	2224.7
2	30-min	1.49	30342.8	3457.5	2673.2
5	30-min	1.89	38488.5	4385.7	3390.9
10	30-min	2.24	45616.0	5197.9	4018.8
25	30-min	2.74	55798.2	6358.1	4915.9
50	30-min	3.13	63740.3	7263.1	5615.6
100	30-min	3.56	72496.9	8260.9	6387.1
200	30-min	4.05	82475.4	9397.9	7266.2
500	30-min	4.75	96730.4	11022.3	8522.1
1	60-min	1.61	32786.5	3736.0	2888.5
2	60-min	1.96	39914.0	4548.1	3516.5
5	60-min	2.49	50707.1	5778.0	4467.4
10	60-min	2.97	60482.0	6891.8	5328.6
25	60-min	3.65	74329.7	8469.7	6548.6
50	60-min	4.19	85326.4	9722.8	7517.4
100	60-min	4.79	97545.0	11115.1	8593.9
200	60-min	5.49	111800.0	12739.4	9849.8
500	60-min	6.52	132775.2	15129.5	11697.7

Recurrence Interval peak discharge for various storm lengths

recurrence interval (yr)	storm length (min)	rainfall intensity (in/hr)	catchment peak discharge (ft^3/s)	peak discharge to Swale A (ft^3/s)	peak discharge to Swale C (ft^3/s)
1	5-min	5.17	73.8	13.6	8.1

recurrence interval (yr)	storm length (min)	rainfall intensity (in/hr)	catchment peak discharge (ft^3/s)	peak discharge to Swale A (ft^3/s)	peak discharge to Swale C (ft^3/s)
2	5-min	6.29	89.8	16.5	9.9
5	5-min	8.02	114.5	21.1	12.6
10	5-min	9.54	136.2	25.0	15.0
25	5-min	11.70	167.1	30.7	18.4
50	5-min	13.50	192.8	35.4	21.3
100	5-min	15.40	219.9	40.4	24.3
200	5-min	17.50	249.9	45.9	27.6
500	5-min	20.40	291.3	53.5	32.1
1	10-min	4.10	58.5	10.8	6.5
2	10-min	5.00	71.4	13.1	7.9
5	10-min	6.38	91.1	16.7	10.0
10	10-min	7.60	108.5	19.9	12.0
25	10-min	9.36	133.7	24.6	14.7
50	10-min	10.80	154.2	28.4	17.0
100	10-min	12.30	175.6	32.3	19.4
200	10-min	13.90	198.5	36.5	21.9
500	10-min	16.20	231.3	42.5	25.5
1	15-min	3.47	49.6	9.1	5.5
2	15-min	4.21	60.1	11.1	6.6
5	15-min	5.36	76.5	14.1	8.4
10	15-min	6.36	90.8	16.7	10.0
25	15-min	7.80	111.4	20.5	12.3
50	15-min	8.97	128.1	23.5	14.1
100	15-min	10.20	145.7	26.8	16.1
200	15-min	11.60	165.6	30.4	18.3
500	15-min	13.50	192.8	35.4	21.3
1	30-min	2.47	35.3	6.5	3.9
2	30-min	2.98	42.6	7.8	4.7
5	30-min	3.78	54.0	9.9	6.0
10	30-min	4.48	64.0	11.8	7.1
25	30-min	5.47	78.1	14.4	8.6
50	30-min	6.26	89.4	16.4	9.9

recurrence interval (yr)	storm length (min)	rainfall intensity (in/hr)	catchment peak discharge (ft^3/s)	peak discharge to Swale A (ft^3/s)	peak discharge to Swale C (ft^3/s)
100	30-min	7.12	101.7	18.7	11.2
200	30-min	8.09	115.5	21.2	12.7
500	30-min	9.50	135.7	24.9	15.0
1	60-min	1.61	23.0	4.2	2.5
2	60-min	1.96	28.0	5.1	3.1
5	60-min	2.49	35.6	6.5	3.9
10	60-min	2.97	42.4	7.8	4.7
25	60-min	3.65	52.1	9.6	5.7
50	60-min	4.19	59.8	11.0	6.6
100	60-min	4.79	68.4	12.6	7.5
200	60-min	5.49	78.4	14.4	8.6
500	60-min	6.52	93.1	17.1	10.3