

**7 SANFORD STREET RESIDENTIAL ADDITION
MEDWAY, MA
PROJECT 0321**

**STORMWATER MANAGEMENT ANALYSIS
- DESIGN CRITERIA -**

- Methodology: SCS Modified Soil Cover Complex Method
- Design Storm Return Period (Frequency):
100 year – 24-hour storm
- Precipitation Rate (per 24-hour period):

RETURN PERIOD	PRECIPITATION RATE (inches/per 24 hours)
100 year	8.80

- Minimum Time of Concentration (T_c) = 0.10 hours (=6.0 min)
- Site Soil Classifications:

SOIL TYPE	HYDROLOGIC SOIL GROUP (HSG)
Merrimac-Urban Land Complex; 626B	A

- Runoff Curve Numbers (CN):

LAND USE	HSG	CN
Pavement/Roofs	-	98
Open Space, Lawn; grass cover > 75%	A	39*
*(In New England region, do not use CN < 59, therefore use CN for HSG B		61)

- Sheet Flow Criteria:

= 2 year-24-hour storm (P_2) = 3.22 inches / 24 hours
= Manning's Roughness Coefficient (n):

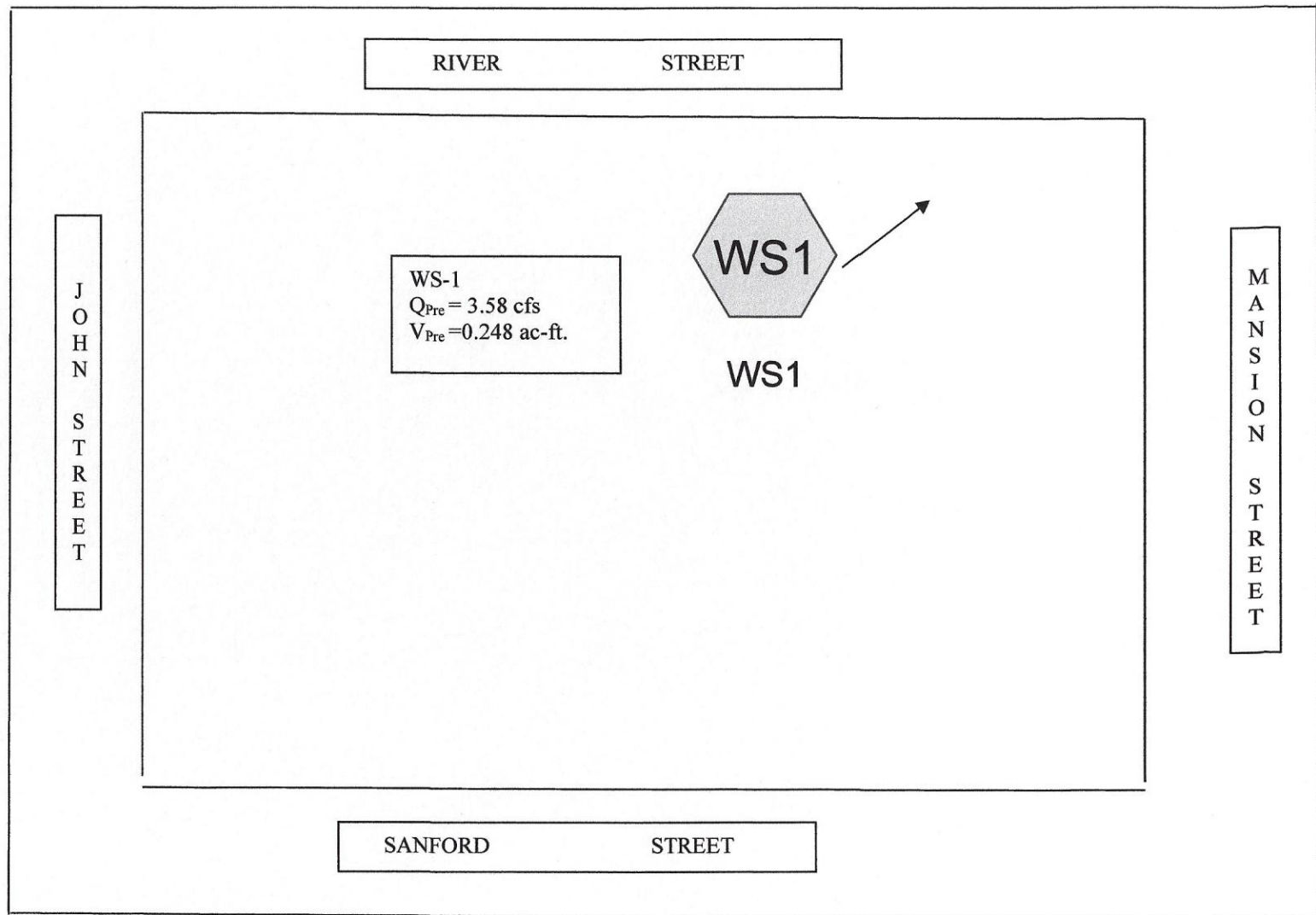
LAND USE	n
Pavement/Roofs	0.011
Short Grasses	0.150
Woods, light underbrush	0.400

- Soil Conductivity (Rawls) Rate:

= From Soil Evaluation; Sand and Loamy Sand – Use $C=2.41$ in./hr.
(Based on Soil Evaluation conducted on 03/19/2023)

7 Sanford Street Residential Addition
Medway, MA
Project No. 0321

PREDEVELOPMENT RUNOFF
100 Year – 24 Hour Storm



PREDEVELOPMENT
100 Year – 24 Hour Storm

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Predevelopment
100 Year - 24 Hour Storm

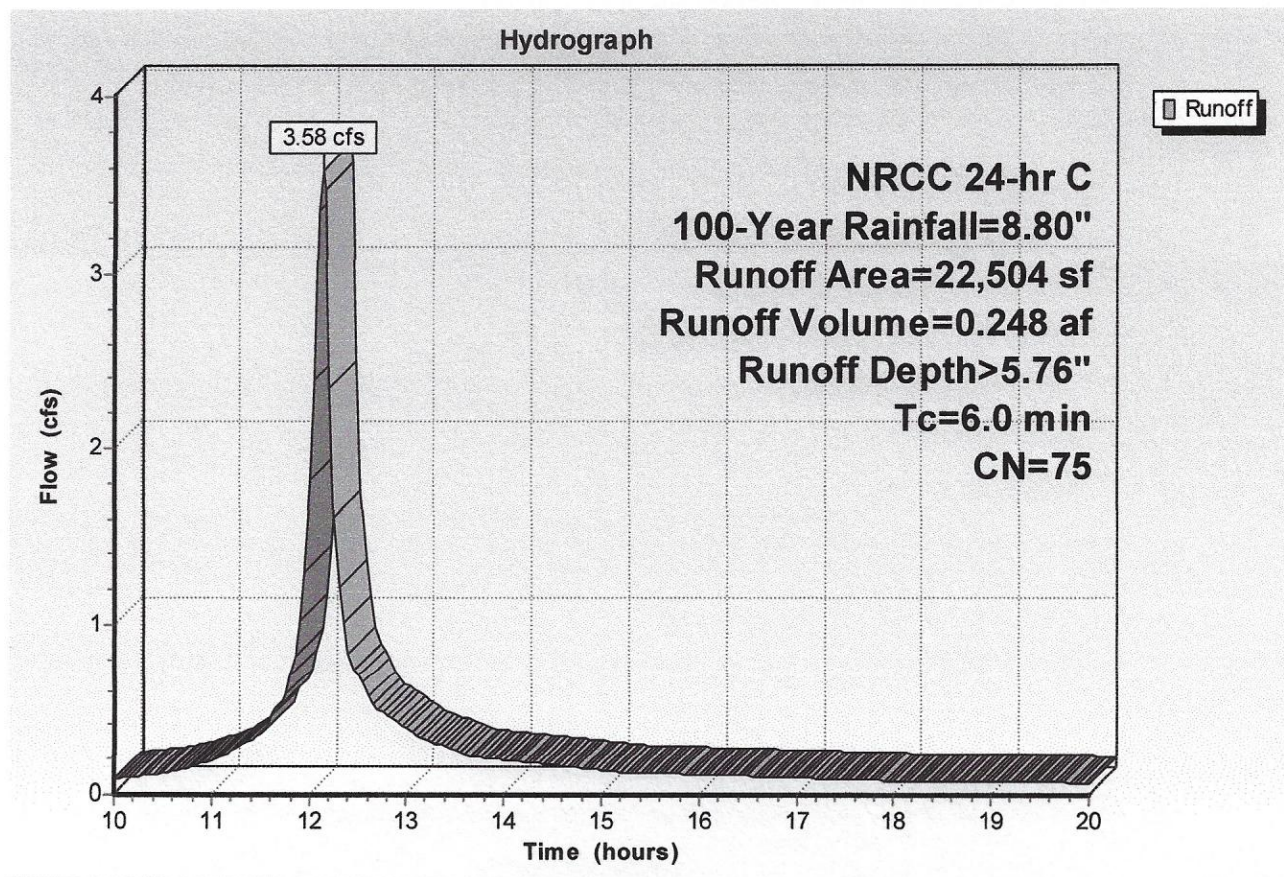
Summary for Subcatchment WS1: WS1

Runoff = 3.58 cfs @ 12.13 hrs, Volume= 0.248 af, Depth> 5.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr C 100-Year Rainfall=8.80"

Area (sf)	CN	Description
4,660	98	Paved parking, HSG A
3,701	98	Roofs, HSG A
14,143	61	>75% Grass cover, Good, HSG B
22,504	75	Weighted Average
14,143		62.85% Pervious Area
8,361		37.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, By Inspection



0321-PRE

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NRCC 24-hr C 100-Year Rainfall=8.80"

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Hydrograph for Subcatchment WS1: WS1

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)	Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
10.00	0.09	0.011	12.60	0.57	0.144
10.05	0.09	0.011	12.65	0.52	0.146
10.10	0.09	0.011	12.70	0.49	0.148
10.15	0.09	0.012	12.75	0.47	0.150
10.20	0.10	0.012	12.80	0.45	0.152
10.25	0.10	0.013	12.85	0.43	0.154
10.30	0.10	0.013	12.90	0.41	0.156
10.35	0.11	0.014	12.95	0.40	0.157
10.40	0.11	0.014	13.00	0.38	0.159
10.45	0.11	0.014	13.05	0.36	0.160
10.50	0.11	0.015	13.10	0.34	0.162
10.55	0.12	0.015	13.15	0.33	0.163
10.60	0.13	0.016	13.20	0.31	0.164
10.65	0.13	0.016	13.25	0.30	0.166
10.70	0.14	0.017	13.30	0.29	0.167
10.75	0.15	0.018	13.35	0.28	0.168
10.80	0.16	0.018	13.40	0.27	0.169
10.85	0.17	0.019	13.45	0.26	0.170
10.90	0.17	0.020	13.50	0.25	0.171
10.95	0.18	0.020	13.55	0.24	0.172
11.00	0.19	0.021	13.60	0.22	0.173
11.05	0.20	0.022	13.65	0.22	0.174
11.10	0.22	0.023	13.70	0.21	0.175
11.15	0.23	0.024	13.75	0.21	0.176
11.20	0.25	0.025	13.80	0.21	0.177
11.25	0.26	0.026	13.85	0.20	0.177
11.30	0.28	0.027	13.90	0.20	0.178
11.35	0.30	0.028	13.95	0.20	0.179
11.40	0.31	0.030	14.00	0.19	0.180
11.45	0.33	0.031	14.05	0.19	0.181
11.50	0.35	0.033	14.10	0.19	0.181
11.55	0.38	0.034	14.15	0.19	0.182
11.60	0.45	0.036	14.20	0.18	0.183
11.65	0.50	0.038	14.25	0.18	0.184
11.70	0.53	0.040	14.30	0.18	0.184
11.75	0.58	0.043	14.35	0.17	0.185
11.80	0.70	0.046	14.40	0.17	0.186
11.85	0.83	0.049	14.45	0.17	0.187
11.90	1.03	0.053	14.50	0.16	0.187
11.95	1.30	0.059	14.55	0.16	0.188
12.00	1.82	0.066	14.60	0.16	0.189
12.05	2.40	0.076	14.65	0.16	0.189
12.10	3.36	0.090	14.70	0.15	0.190
12.15	3.48	0.104	14.75	0.15	0.190
12.20	2.34	0.114	14.80	0.15	0.191
12.25	1.61	0.121	14.85	0.14	0.192
12.30	1.21	0.126	14.90	0.14	0.192
12.35	1.01	0.130	14.95	0.14	0.193
12.40	0.83	0.133	15.00	0.13	0.193
12.45	0.74	0.136	15.05	0.13	0.194
12.50	0.70	0.139	15.10	0.13	0.194
12.55	0.66	0.142	15.15	0.13	0.195

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NRCC 24-hr C 100-Year Rainfall=8.80"

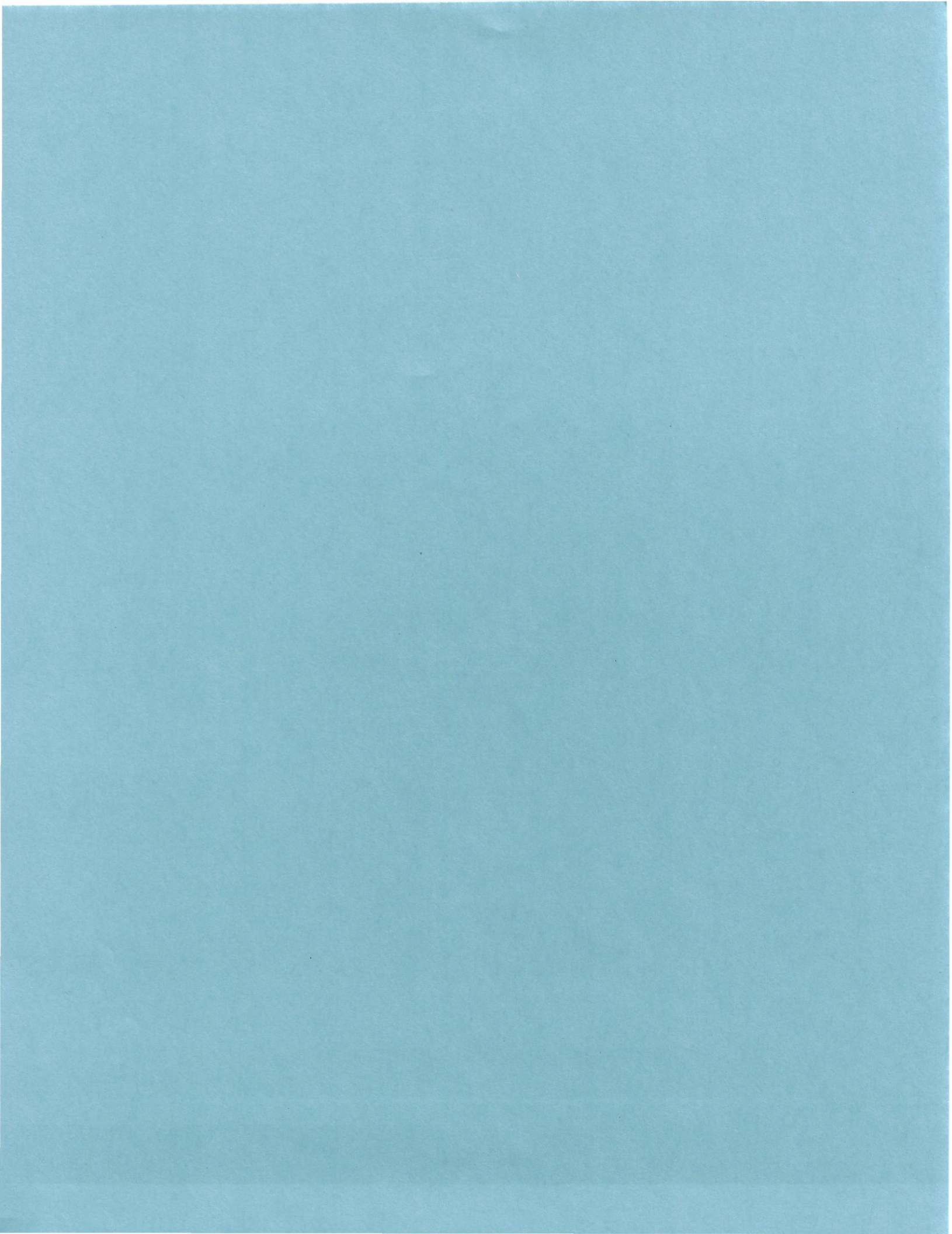
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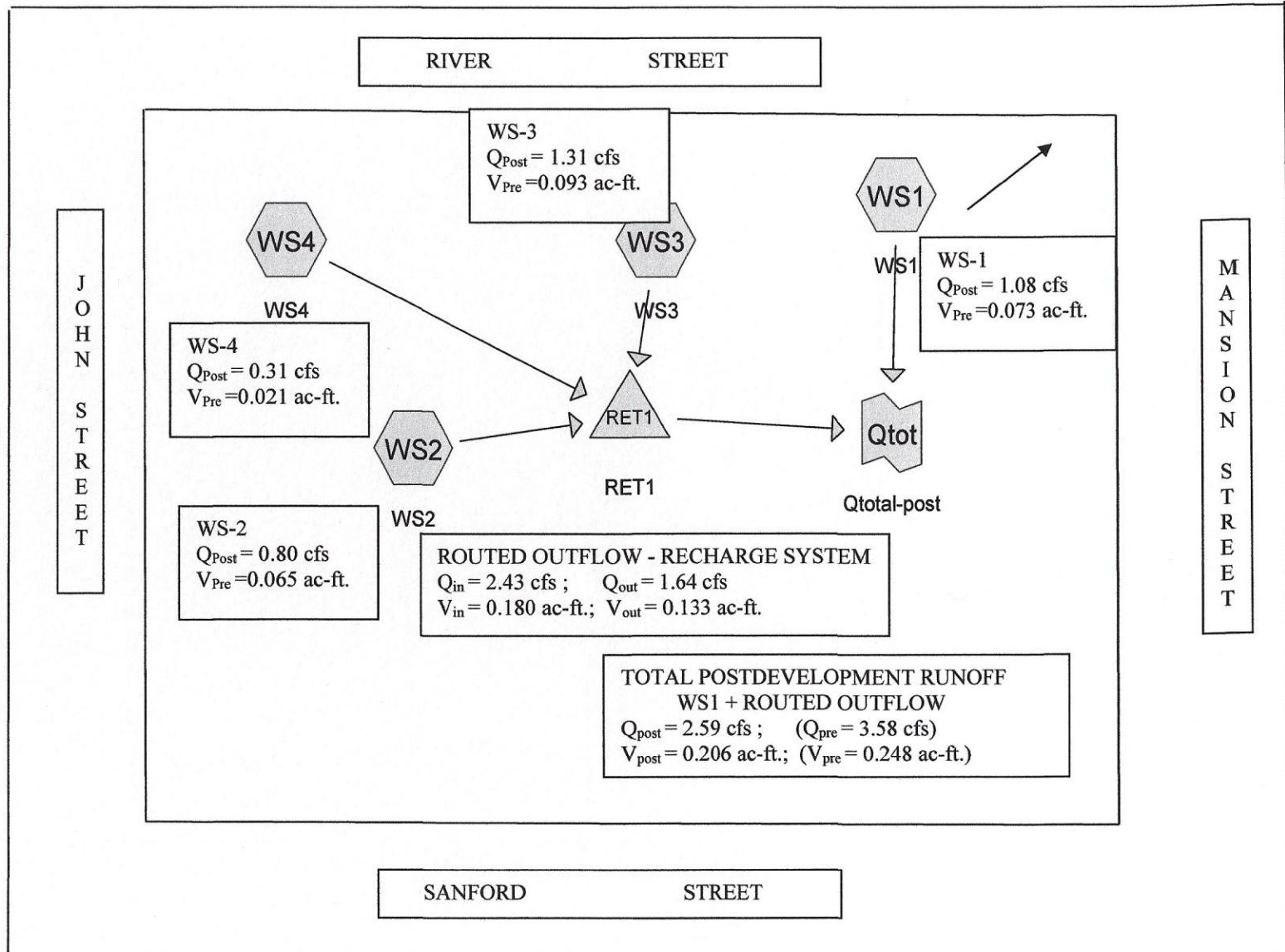
Hydrograph for Subcatchment WS1: WS1 (continued)

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)	Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
15.20	0.12	0.195	17.80	0.08	0.217
15.25	0.12	0.196	17.85	0.08	0.217
15.30	0.12	0.196	17.90	0.08	0.218
15.35	0.12	0.197	17.95	0.08	0.218
15.40	0.12	0.197	18.00	0.08	0.218
15.45	0.12	0.198	18.05	0.07	0.219
15.50	0.12	0.198	18.10	0.07	0.219
15.55	0.12	0.199	18.15	0.07	0.219
15.60	0.12	0.199	18.20	0.07	0.220
15.65	0.12	0.200	18.25	0.07	0.220
15.70	0.12	0.200	18.30	0.07	0.220
15.75	0.11	0.201	18.35	0.07	0.220
15.80	0.11	0.201	18.40	0.07	0.221
15.85	0.11	0.202	18.45	0.07	0.221
15.90	0.11	0.202	18.50	0.07	0.221
15.95	0.11	0.203	18.55	0.07	0.222
16.00	0.11	0.203	18.60	0.07	0.222
16.05	0.11	0.204	18.65	0.07	0.222
16.10	0.11	0.204	18.70	0.07	0.223
16.15	0.11	0.204	18.75	0.07	0.223
16.20	0.11	0.205	18.80	0.07	0.223
16.25	0.11	0.205	18.85	0.07	0.223
16.30	0.10	0.206	18.90	0.07	0.224
16.35	0.10	0.206	18.95	0.07	0.224
16.40	0.10	0.207	19.00	0.07	0.224
16.45	0.10	0.207	19.05	0.07	0.225
16.50	0.10	0.207	19.10	0.07	0.225
16.55	0.10	0.208	19.15	0.07	0.225
16.60	0.10	0.208	19.20	0.07	0.225
16.65	0.10	0.209	19.25	0.07	0.226
16.70	0.10	0.209	19.30	0.07	0.226
16.75	0.10	0.210	19.35	0.07	0.226
16.80	0.10	0.210	19.40	0.07	0.226
16.85	0.10	0.210	19.45	0.07	0.227
16.90	0.09	0.211	19.50	0.07	0.227
16.95	0.09	0.211	19.55	0.07	0.227
17.00	0.09	0.211	19.60	0.07	0.228
17.05	0.09	0.212	19.65	0.07	0.228
17.10	0.09	0.212	19.70	0.07	0.228
17.15	0.09	0.213	19.75	0.07	0.228
17.20	0.09	0.213	19.80	0.07	0.229
17.25	0.09	0.213	19.85	0.07	0.229
17.30	0.09	0.214	19.90	0.06	0.229
17.35	0.09	0.214	19.95	0.06	0.229
17.40	0.09	0.214	20.00	0.06	0.230
17.45	0.08	0.215			
17.50	0.08	0.215			
17.55	0.08	0.215			
17.60	0.08	0.216			
17.65	0.08	0.216			
17.70	0.08	0.216			
17.75	0.08	0.217			



7 Sanford Street Residential Addition
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POSTDEVELOPMENT RUNOFF
100 Year - 24 Hour Storm



POSTDEVELOPMENT
100 Year – 24 Hour Storm

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Postdevelopment
100 Year - 24 Hour Storm

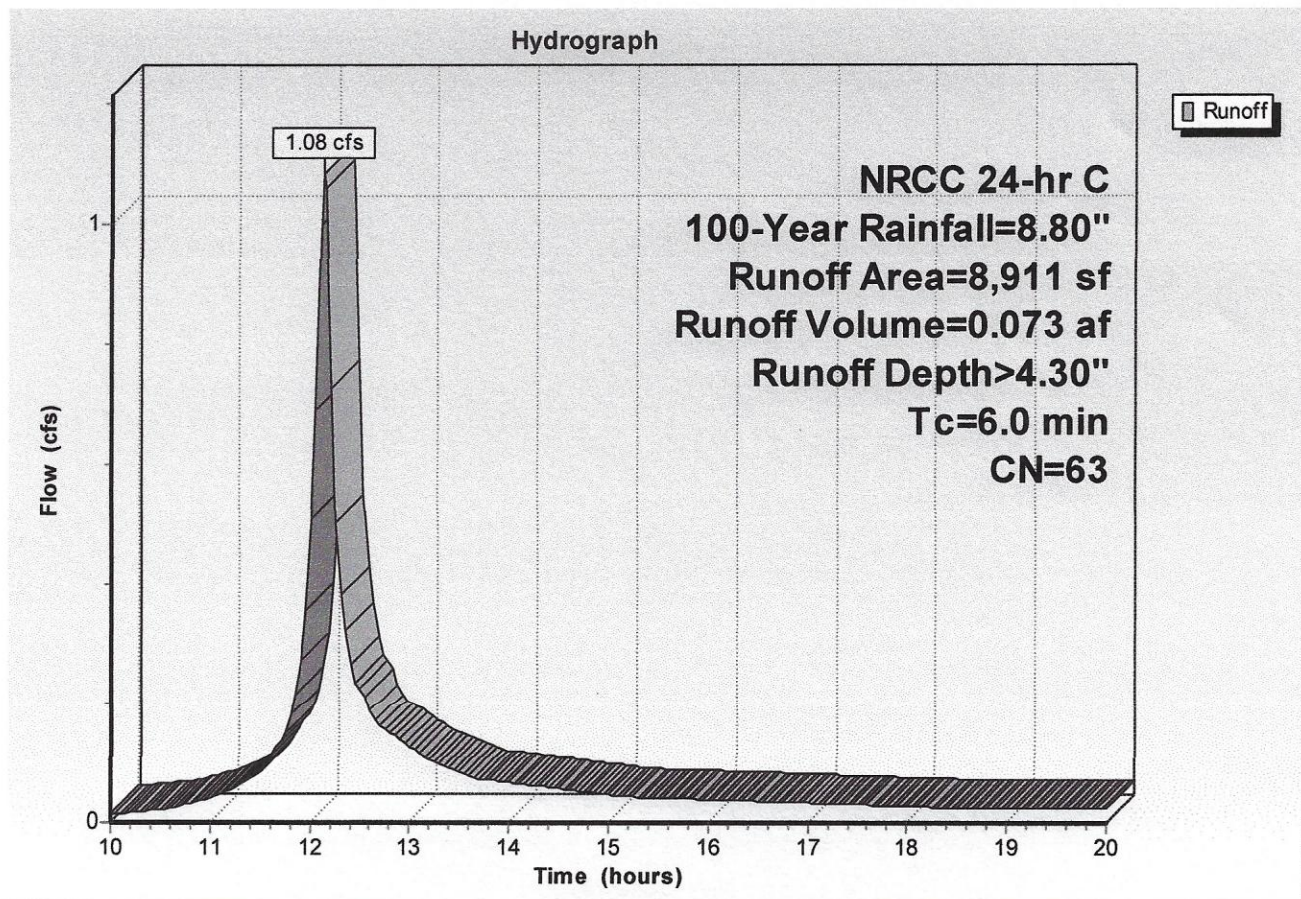
Summary for Subcatchment WS1: WS1

Runoff = 1.08 cfs @ 12.13 hrs, Volume= 0.073 af, Depth> 4.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr C 100-Year Rainfall=8.80"

Area (sf)	CN	Description
405	98	Paved parking, HSG A
8,506	61	>75% Grass cover, Good, HSG B
8,911	63	Weighted Average
8,506		95.46% Pervious Area
405		4.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, By Inspection



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NRCC 24-hr C 100-Year Rainfall=8.80"

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Hydrograph for Subcatchment WS1: WS1

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)	Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
10.00	0.01	0.001	12.60	0.19	0.038
10.05	0.01	0.001	12.65	0.17	0.039
10.10	0.01	0.001	12.70	0.16	0.039
10.15	0.01	0.001	12.75	0.15	0.040
10.20	0.02	0.001	12.80	0.15	0.041
10.25	0.02	0.001	12.85	0.14	0.041
10.30	0.02	0.001	12.90	0.14	0.042
10.35	0.02	0.001	12.95	0.13	0.042
10.40	0.02	0.001	13.00	0.12	0.043
10.45	0.02	0.001	13.05	0.12	0.043
10.50	0.02	0.001	13.10	0.11	0.044
10.55	0.02	0.002	13.15	0.11	0.044
10.60	0.02	0.002	13.20	0.10	0.045
10.65	0.02	0.002	13.25	0.10	0.045
10.70	0.03	0.002	13.30	0.10	0.046
10.75	0.03	0.002	13.35	0.09	0.046
10.80	0.03	0.002	13.40	0.09	0.046
10.85	0.03	0.002	13.45	0.09	0.047
10.90	0.03	0.002	13.50	0.08	0.047
10.95	0.04	0.003	13.55	0.08	0.047
11.00	0.04	0.003	13.60	0.07	0.048
11.05	0.04	0.003	13.65	0.07	0.048
11.10	0.05	0.003	13.70	0.07	0.048
11.15	0.05	0.003	13.75	0.07	0.048
11.20	0.05	0.003	13.80	0.07	0.049
11.25	0.06	0.004	13.85	0.07	0.049
11.30	0.06	0.004	13.90	0.07	0.049
11.35	0.07	0.004	13.95	0.07	0.050
11.40	0.07	0.005	14.00	0.07	0.050
11.45	0.08	0.005	14.05	0.06	0.050
11.50	0.08	0.005	14.10	0.06	0.050
11.55	0.09	0.006	14.15	0.06	0.051
11.60	0.11	0.006	14.20	0.06	0.051
11.65	0.12	0.007	14.25	0.06	0.051
11.70	0.13	0.007	14.30	0.06	0.051
11.75	0.15	0.008	14.35	0.06	0.052
11.80	0.18	0.008	14.40	0.06	0.052
11.85	0.22	0.009	14.45	0.06	0.052
11.90	0.27	0.010	14.50	0.06	0.052
11.95	0.35	0.012	14.55	0.05	0.053
12.00	0.51	0.014	14.60	0.05	0.053
12.05	0.69	0.017	14.65	0.05	0.053
12.10	1.00	0.021	14.70	0.05	0.053
12.15	1.06	0.025	14.75	0.05	0.053
12.20	0.72	0.028	14.80	0.05	0.054
12.25	0.50	0.030	14.85	0.05	0.054
12.30	0.38	0.032	14.90	0.05	0.054
12.35	0.32	0.033	14.95	0.05	0.054
12.40	0.27	0.034	15.00	0.05	0.054
12.45	0.24	0.035	15.05	0.04	0.055
12.50	0.23	0.036	15.10	0.04	0.055
12.55	0.21	0.037	15.15	0.04	0.055

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NRCC 24-hr C 100-Year Rainfall=8.80"

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Hydrograph for Subcatchment WS1: WS1 (continued)

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)	Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
15.20	0.04	0.055	17.80	0.03	0.063
15.25	0.04	0.055	17.85	0.03	0.063
15.30	0.04	0.055	17.90	0.03	0.063
15.35	0.04	0.056	17.95	0.03	0.063
15.40	0.04	0.056	18.00	0.03	0.063
15.45	0.04	0.056	18.05	0.03	0.063
15.50	0.04	0.056	18.10	0.03	0.063
15.55	0.04	0.056	18.15	0.03	0.063
15.60	0.04	0.056	18.20	0.02	0.063
15.65	0.04	0.057	18.25	0.02	0.064
15.70	0.04	0.057	18.30	0.02	0.064
15.75	0.04	0.057	18.35	0.02	0.064
15.80	0.04	0.057	18.40	0.02	0.064
15.85	0.04	0.057	18.45	0.02	0.064
15.90	0.04	0.057	18.50	0.02	0.064
15.95	0.04	0.058	18.55	0.02	0.064
16.00	0.04	0.058	18.60	0.02	0.064
16.05	0.04	0.058	18.65	0.02	0.064
16.10	0.04	0.058	18.70	0.02	0.064
16.15	0.04	0.058	18.75	0.02	0.065
16.20	0.04	0.058	18.80	0.02	0.065
16.25	0.04	0.059	18.85	0.02	0.065
16.30	0.04	0.059	18.90	0.02	0.065
16.35	0.04	0.059	18.95	0.02	0.065
16.40	0.04	0.059	19.00	0.02	0.065
16.45	0.04	0.059	19.05	0.02	0.065
16.50	0.03	0.059	19.10	0.02	0.065
16.55	0.03	0.059	19.15	0.02	0.065
16.60	0.03	0.060	19.20	0.02	0.065
16.65	0.03	0.060	19.25	0.02	0.066
16.70	0.03	0.060	19.30	0.02	0.066
16.75	0.03	0.060	19.35	0.02	0.066
16.80	0.03	0.060	19.40	0.02	0.066
16.85	0.03	0.060	19.45	0.02	0.066
16.90	0.03	0.060	19.50	0.02	0.066
16.95	0.03	0.060	19.55	0.02	0.066
17.00	0.03	0.061	19.60	0.02	0.066
17.05	0.03	0.061	19.65	0.02	0.066
17.10	0.03	0.061	19.70	0.02	0.066
17.15	0.03	0.061	19.75	0.02	0.066
17.20	0.03	0.061	19.80	0.02	0.067
17.25	0.03	0.061	19.85	0.02	0.067
17.30	0.03	0.061	19.90	0.02	0.067
17.35	0.03	0.062	19.95	0.02	0.067
17.40	0.03	0.062	20.00	0.02	0.067
17.45	0.03	0.062			
17.50	0.03	0.062			
17.55	0.03	0.062			
17.60	0.03	0.062			
17.65	0.03	0.062			
17.70	0.03	0.062			
17.75	0.03	0.062			

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Postdevelopment
100 Year – 24 Hour Storm

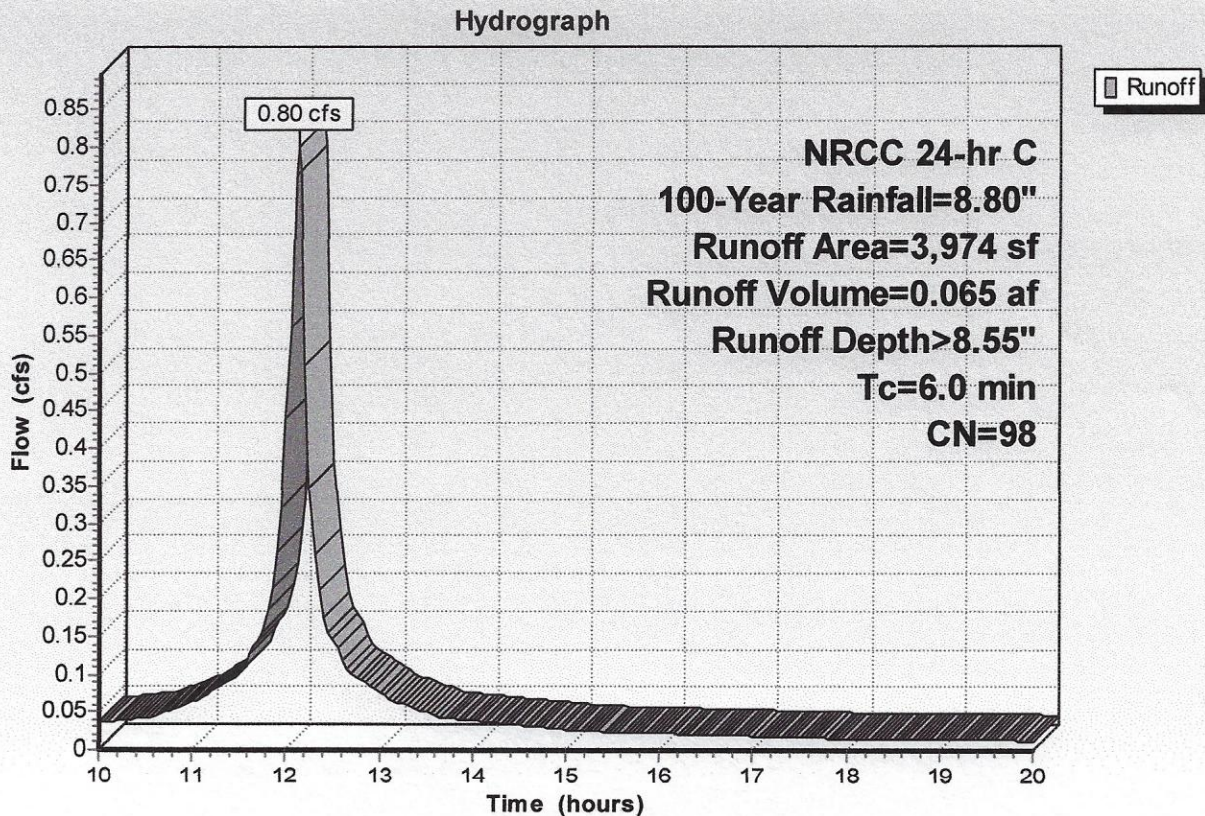
Summary for Subcatchment WS2: WS2

Runoff = 0.80 cfs @ 12.13 hrs, Volume= 0.065 af, Depth> 8.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr C 100-Year Rainfall=8.80"

Area (sf)	CN	Description
3,974	98	Roofs, HSG A
3,974		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, By Inspection



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NRCC 24-hr C 100-Year Rainfall=8.80"

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Hydrograph for Subcatchment WS2: WS2

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)	Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
10.00	0.04	0.011	12.60	0.12	0.044
10.05	0.04	0.011	12.65	0.11	0.045
10.10	0.04	0.012	12.70	0.10	0.045
10.15	0.04	0.012	12.75	0.10	0.046
10.20	0.04	0.012	12.80	0.09	0.046
10.25	0.04	0.012	12.85	0.09	0.046
10.30	0.04	0.012	12.90	0.08	0.047
10.35	0.04	0.012	12.95	0.08	0.047
10.40	0.04	0.013	13.00	0.08	0.047
10.45	0.04	0.013	13.05	0.07	0.048
10.50	0.04	0.013	13.10	0.07	0.048
10.55	0.04	0.013	13.15	0.07	0.048
10.60	0.05	0.013	13.20	0.06	0.049
10.65	0.05	0.014	13.25	0.06	0.049
10.70	0.05	0.014	13.30	0.06	0.049
10.75	0.05	0.014	13.35	0.06	0.049
10.80	0.05	0.014	13.40	0.05	0.049
10.85	0.06	0.014	13.45	0.05	0.050
10.90	0.06	0.015	13.50	0.05	0.050
10.95	0.06	0.015	13.55	0.05	0.050
11.00	0.06	0.015	13.60	0.05	0.050
11.05	0.07	0.015	13.65	0.04	0.050
11.10	0.07	0.016	13.70	0.04	0.051
11.15	0.07	0.016	13.75	0.04	0.051
11.20	0.08	0.016	13.80	0.04	0.051
11.25	0.08	0.017	13.85	0.04	0.051
11.30	0.09	0.017	13.90	0.04	0.051
11.35	0.09	0.017	13.95	0.04	0.051
11.40	0.09	0.018	14.00	0.04	0.052
11.45	0.10	0.018	14.05	0.04	0.052
11.50	0.10	0.019	14.10	0.04	0.052
11.55	0.11	0.019	14.15	0.04	0.052
11.60	0.13	0.020	14.20	0.04	0.052
11.65	0.14	0.020	14.25	0.04	0.052
11.70	0.14	0.021	14.30	0.04	0.053
11.75	0.16	0.021	14.35	0.03	0.053
11.80	0.18	0.022	14.40	0.03	0.053
11.85	0.21	0.023	14.45	0.03	0.053
11.90	0.26	0.024	14.50	0.03	0.053
11.95	0.32	0.025	14.55	0.03	0.053
12.00	0.44	0.027	14.60	0.03	0.053
12.05	0.56	0.030	14.65	0.03	0.054
12.10	0.76	0.033	14.70	0.03	0.054
12.15	0.77	0.036	14.75	0.03	0.054
12.20	0.51	0.038	14.80	0.03	0.054
12.25	0.35	0.039	14.85	0.03	0.054
12.30	0.26	0.041	14.90	0.03	0.054
12.35	0.21	0.041	14.95	0.03	0.054
12.40	0.17	0.042	15.00	0.03	0.054
12.45	0.15	0.043	15.05	0.03	0.054
12.50	0.15	0.043	15.10	0.03	0.055
12.55	0.14	0.044	15.15	0.02	0.055

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NRCC 24-hr C 100-Year Rainfall=8.80"

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Hydrograph for Subcatchment WS2: WS2 (continued)

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)	Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
15.20	0.02	0.055	17.80	0.02	0.059
15.25	0.02	0.055	17.85	0.02	0.059
15.30	0.02	0.055	17.90	0.01	0.059
15.35	0.02	0.055	17.95	0.01	0.059
15.40	0.02	0.055	18.00	0.01	0.059
15.45	0.02	0.055	18.05	0.01	0.059
15.50	0.02	0.055	18.10	0.01	0.059
15.55	0.02	0.055	18.15	0.01	0.059
15.60	0.02	0.056	18.20	0.01	0.059
15.65	0.02	0.056	18.25	0.01	0.060
15.70	0.02	0.056	18.30	0.01	0.060
15.75	0.02	0.056	18.35	0.01	0.060
15.80	0.02	0.056	18.40	0.01	0.060
15.85	0.02	0.056	18.45	0.01	0.060
15.90	0.02	0.056	18.50	0.01	0.060
15.95	0.02	0.056	18.55	0.01	0.060
16.00	0.02	0.056	18.60	0.01	0.060
16.05	0.02	0.056	18.65	0.01	0.060
16.10	0.02	0.056	18.70	0.01	0.060
16.15	0.02	0.057	18.75	0.01	0.060
16.20	0.02	0.057	18.80	0.01	0.060
16.25	0.02	0.057	18.85	0.01	0.060
16.30	0.02	0.057	18.90	0.01	0.060
16.35	0.02	0.057	18.95	0.01	0.060
16.40	0.02	0.057	19.00	0.01	0.060
16.45	0.02	0.057	19.05	0.01	0.060
16.50	0.02	0.057	19.10	0.01	0.061
16.55	0.02	0.057	19.15	0.01	0.061
16.60	0.02	0.057	19.20	0.01	0.061
16.65	0.02	0.057	19.25	0.01	0.061
16.70	0.02	0.057	19.30	0.01	0.061
16.75	0.02	0.058	19.35	0.01	0.061
16.80	0.02	0.058	19.40	0.01	0.061
16.85	0.02	0.058	19.45	0.01	0.061
16.90	0.02	0.058	19.50	0.01	0.061
16.95	0.02	0.058	19.55	0.01	0.061
17.00	0.02	0.058	19.60	0.01	0.061
17.05	0.02	0.058	19.65	0.01	0.061
17.10	0.02	0.058	19.70	0.01	0.061
17.15	0.02	0.058	19.75	0.01	0.061
17.20	0.02	0.058	19.80	0.01	0.061
17.25	0.02	0.058	19.85	0.01	0.061
17.30	0.02	0.058	19.90	0.01	0.061
17.35	0.02	0.058	19.95	0.01	0.061
17.40	0.02	0.058	20.00	0.01	0.061
17.45	0.02	0.059			
17.50	0.02	0.059			
17.55	0.02	0.059			
17.60	0.02	0.059			
17.65	0.02	0.059			
17.70	0.02	0.059			
17.75	0.02	0.059			

7 Sanford Street Residential Addition
Medway, MA
Project No. 0321

Postdevelopment
100 Year – 24 Hour Storm

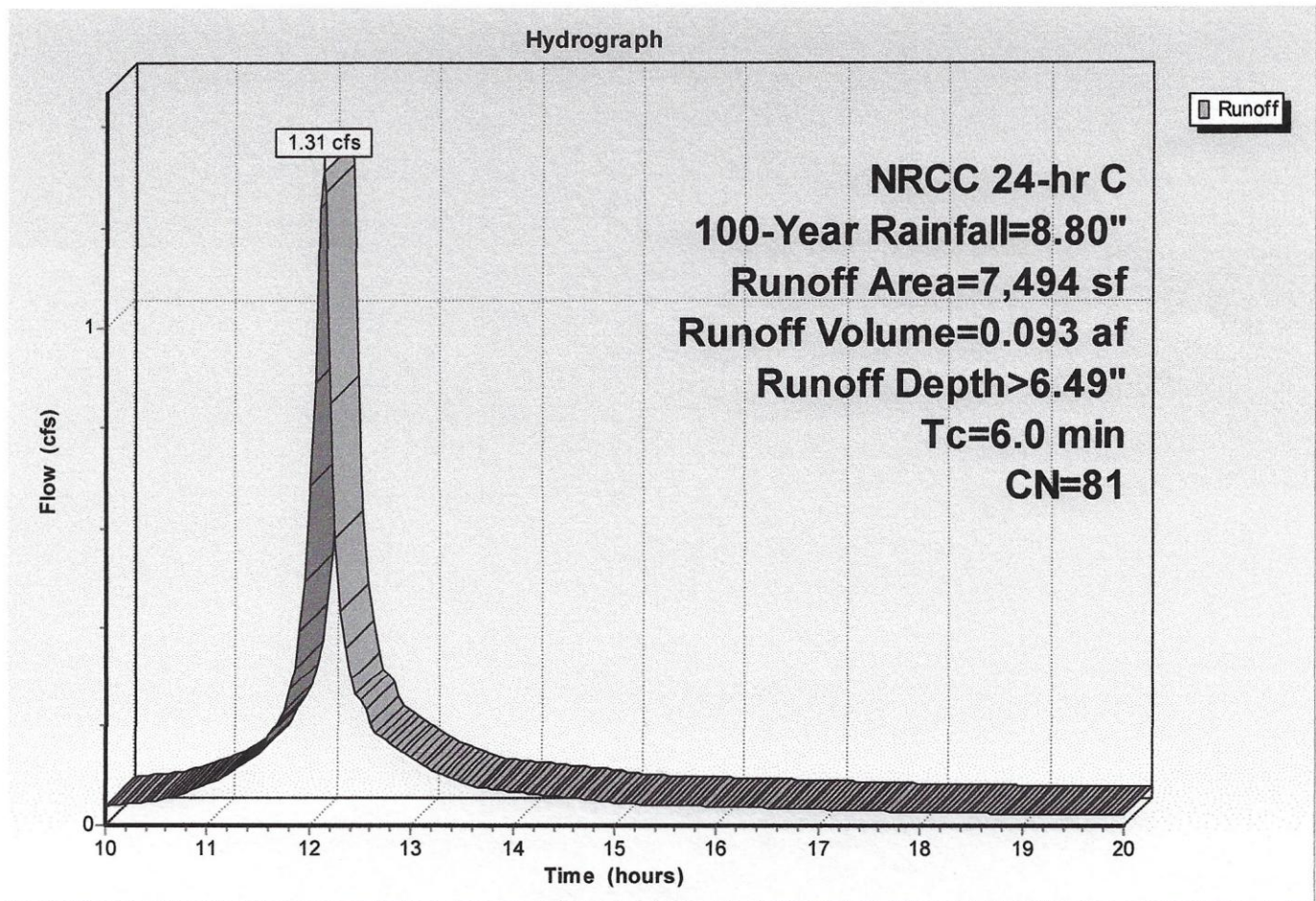
Summary for Subcatchment WS3: WS3

Runoff = 1.31 cfs @ 12.13 hrs, Volume= 0.093 af, Depth> 6.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr C 100-Year Rainfall=8.80"

Area (sf)	CN	Description
3,983	98	Paved parking, HSG A
3,511	61	>75% Grass cover, Good, HSG B
7,494	81	Weighted Average
3,511		46.85% Pervious Area
3,983		53.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, By Inspection



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NRCC 24-hr C 100-Year Rainfall=8.80"

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Hydrograph for Subcatchment WS3: WS3

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)	Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
10.00	0.04	0.006	12.60	0.20	0.057
10.05	0.04	0.006	12.65	0.19	0.057
10.10	0.04	0.006	12.70	0.17	0.058
10.15	0.04	0.007	12.75	0.17	0.059
10.20	0.04	0.007	12.80	0.16	0.060
10.25	0.04	0.007	12.85	0.15	0.060
10.30	0.05	0.007	12.90	0.15	0.061
10.35	0.05	0.007	12.95	0.14	0.061
10.40	0.05	0.008	13.00	0.13	0.062
10.45	0.05	0.008	13.05	0.13	0.062
10.50	0.05	0.008	13.10	0.12	0.063
10.55	0.05	0.008	13.15	0.11	0.063
10.60	0.05	0.008	13.20	0.11	0.064
10.65	0.06	0.009	13.25	0.11	0.064
10.70	0.06	0.009	13.30	0.10	0.065
10.75	0.06	0.009	13.35	0.10	0.065
10.80	0.07	0.009	13.40	0.09	0.066
10.85	0.07	0.010	13.45	0.09	0.066
10.90	0.07	0.010	13.50	0.09	0.066
10.95	0.08	0.010	13.55	0.08	0.067
11.00	0.08	0.011	13.60	0.08	0.067
11.05	0.08	0.011	13.65	0.08	0.067
11.10	0.09	0.011	13.70	0.07	0.068
11.15	0.10	0.012	13.75	0.07	0.068
11.20	0.10	0.012	13.80	0.07	0.068
11.25	0.11	0.013	13.85	0.07	0.068
11.30	0.11	0.013	13.90	0.07	0.069
11.35	0.12	0.014	13.95	0.07	0.069
11.40	0.13	0.014	14.00	0.07	0.069
11.45	0.13	0.015	14.05	0.07	0.070
11.50	0.14	0.015	14.10	0.07	0.070
11.55	0.15	0.016	14.15	0.07	0.070
11.60	0.18	0.017	14.20	0.06	0.070
11.65	0.20	0.018	14.25	0.06	0.071
11.70	0.21	0.018	14.30	0.06	0.071
11.75	0.23	0.019	14.35	0.06	0.071
11.80	0.27	0.020	14.40	0.06	0.071
11.85	0.32	0.022	14.45	0.06	0.072
11.90	0.39	0.023	14.50	0.06	0.072
11.95	0.49	0.025	14.55	0.06	0.072
12.00	0.69	0.028	14.60	0.06	0.072
12.05	0.89	0.032	14.65	0.05	0.073
12.10	1.24	0.037	14.70	0.05	0.073
12.15	1.27	0.042	14.75	0.05	0.073
12.20	0.85	0.046	14.80	0.05	0.073
12.25	0.58	0.048	14.85	0.05	0.073
12.30	0.44	0.050	14.90	0.05	0.074
12.35	0.36	0.052	14.95	0.05	0.074
12.40	0.30	0.053	15.00	0.05	0.074
12.45	0.26	0.054	15.05	0.05	0.074
12.50	0.25	0.055	15.10	0.04	0.074
12.55	0.23	0.056	15.15	0.04	0.075

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NRCC 24-hr C 100-Year Rainfall=8.80"

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Hydrograph for Subcatchment WS3: WS3 (continued)

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)	Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
15.20	0.04	0.075	17.80	0.03	0.082
15.25	0.04	0.075	17.85	0.03	0.082
15.30	0.04	0.075	17.90	0.03	0.083
15.35	0.04	0.075	17.95	0.03	0.083
15.40	0.04	0.075	18.00	0.03	0.083
15.45	0.04	0.076	18.05	0.03	0.083
15.50	0.04	0.076	18.10	0.03	0.083
15.55	0.04	0.076	18.15	0.03	0.083
15.60	0.04	0.076	18.20	0.03	0.083
15.65	0.04	0.076	18.25	0.03	0.083
15.70	0.04	0.077	18.30	0.02	0.083
15.75	0.04	0.077	18.35	0.02	0.084
15.80	0.04	0.077	18.40	0.02	0.084
15.85	0.04	0.077	18.45	0.02	0.084
15.90	0.04	0.077	18.50	0.02	0.084
15.95	0.04	0.077	18.55	0.02	0.084
16.00	0.04	0.077	18.60	0.02	0.084
16.05	0.04	0.078	18.65	0.02	0.084
16.10	0.04	0.078	18.70	0.02	0.084
16.15	0.04	0.078	18.75	0.02	0.084
16.20	0.04	0.078	18.80	0.02	0.084
16.25	0.04	0.078	18.85	0.02	0.085
16.30	0.04	0.078	18.90	0.02	0.085
16.35	0.04	0.079	18.95	0.02	0.085
16.40	0.04	0.079	19.00	0.02	0.085
16.45	0.04	0.079	19.05	0.02	0.085
16.50	0.04	0.079	19.10	0.02	0.085
16.55	0.04	0.079	19.15	0.02	0.085
16.60	0.03	0.079	19.20	0.02	0.085
16.65	0.03	0.079	19.25	0.02	0.085
16.70	0.03	0.080	19.30	0.02	0.085
16.75	0.03	0.080	19.35	0.02	0.086
16.80	0.03	0.080	19.40	0.02	0.086
16.85	0.03	0.080	19.45	0.02	0.086
16.90	0.03	0.080	19.50	0.02	0.086
16.95	0.03	0.080	19.55	0.02	0.086
17.00	0.03	0.080	19.60	0.02	0.086
17.05	0.03	0.081	19.65	0.02	0.086
17.10	0.03	0.081	19.70	0.02	0.086
17.15	0.03	0.081	19.75	0.02	0.086
17.20	0.03	0.081	19.80	0.02	0.086
17.25	0.03	0.081	19.85	0.02	0.086
17.30	0.03	0.081	19.90	0.02	0.087
17.35	0.03	0.081	19.95	0.02	0.087
17.40	0.03	0.081	20.00	0.02	0.087
17.45	0.03	0.082			
17.50	0.03	0.082			
17.55	0.03	0.082			
17.60	0.03	0.082			
17.65	0.03	0.082			
17.70	0.03	0.082			
17.75	0.03	0.082			

7 Sanford Street Residential Addition
Medway, MA
Project No. 0321

Postdevelopment
100 Year - 24 Hour Storm

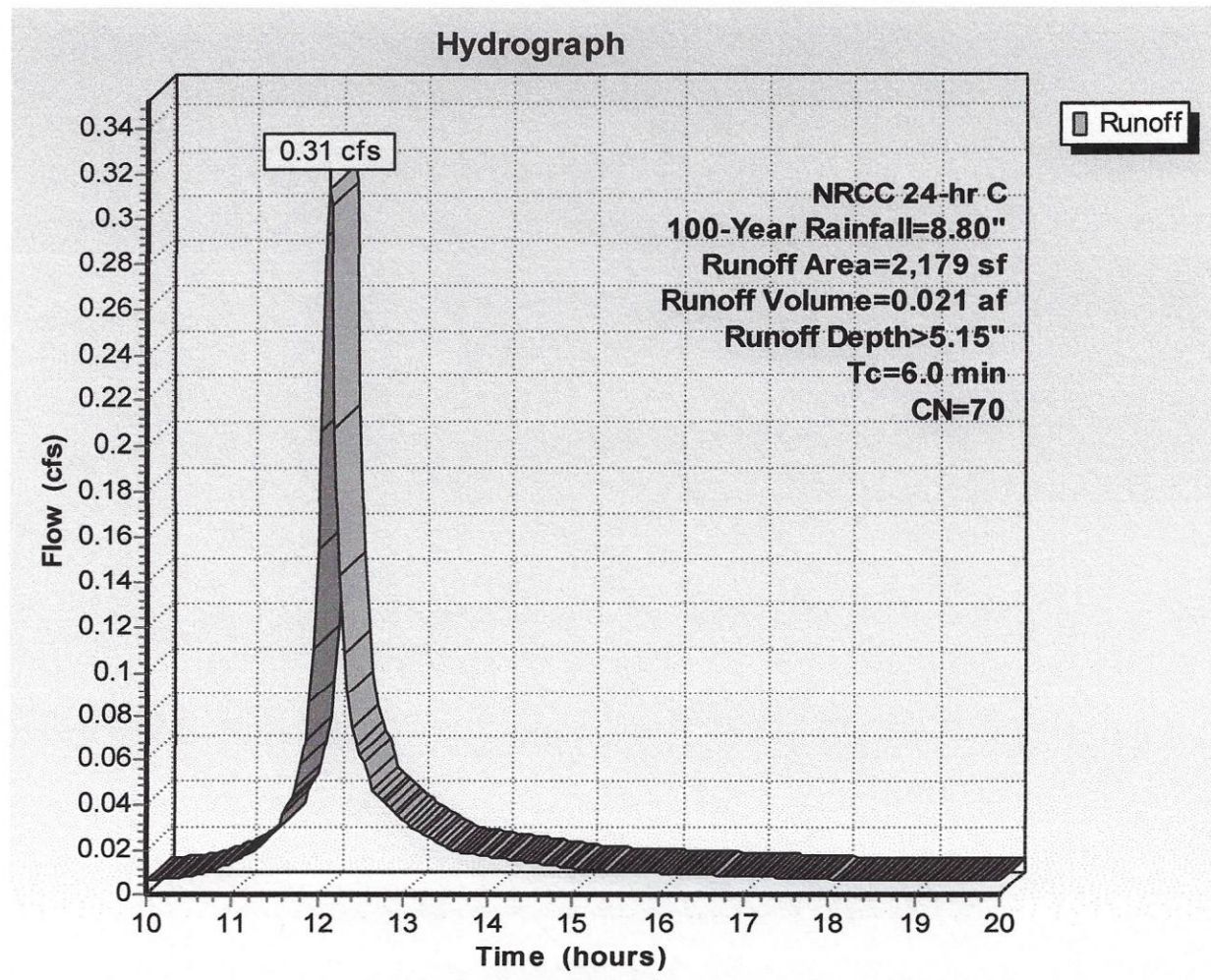
Summary for Subcatchment WS4: WS4

Runoff = 0.31 cfs @ 12.13 hrs, Volume= 0.021 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr C 100-Year Rainfall=8.80"

Area (sf)	CN	Description
539	98	Paved parking, HSG A
1,640	61	>75% Grass cover, Good, HSG B
2,179	70	Weighted Average
1,640		75.26% Pervious Area
539		24.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, By Inspection



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NRCC 24-hr C 100-Year Rainfall=8.80"

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Hydrograph for Subcatchment WS4: WS4

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)	Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
10.00	0.01	0.001	12.60	0.05	0.012
10.05	0.01	0.001	12.65	0.05	0.012
10.10	0.01	0.001	12.70	0.04	0.012
10.15	0.01	0.001	12.75	0.04	0.013
10.20	0.01	0.001	12.80	0.04	0.013
10.25	0.01	0.001	12.85	0.04	0.013
10.30	0.01	0.001	12.90	0.04	0.013
10.35	0.01	0.001	12.95	0.04	0.013
10.40	0.01	0.001	13.00	0.03	0.013
10.45	0.01	0.001	13.05	0.03	0.013
10.50	0.01	0.001	13.10	0.03	0.014
10.55	0.01	0.001	13.15	0.03	0.014
10.60	0.01	0.001	13.20	0.03	0.014
10.65	0.01	0.001	13.25	0.03	0.014
10.70	0.01	0.001	13.30	0.03	0.014
10.75	0.01	0.001	13.35	0.03	0.014
10.80	0.01	0.001	13.40	0.02	0.014
10.85	0.01	0.001	13.45	0.02	0.014
10.90	0.01	0.001	13.50	0.02	0.014
10.95	0.01	0.001	13.55	0.02	0.014
11.00	0.01	0.001	13.60	0.02	0.015
11.05	0.02	0.001	13.65	0.02	0.015
11.10	0.02	0.002	13.70	0.02	0.015
11.15	0.02	0.002	13.75	0.02	0.015
11.20	0.02	0.002	13.80	0.02	0.015
11.25	0.02	0.002	13.85	0.02	0.015
11.30	0.02	0.002	13.90	0.02	0.015
11.35	0.02	0.002	13.95	0.02	0.015
11.40	0.03	0.002	14.00	0.02	0.015
11.45	0.03	0.002	14.05	0.02	0.015
11.50	0.03	0.002	14.10	0.02	0.015
11.55	0.03	0.002	14.15	0.02	0.015
11.60	0.04	0.003	14.20	0.02	0.015
11.65	0.04	0.003	14.25	0.02	0.016
11.70	0.04	0.003	14.30	0.02	0.016
11.75	0.05	0.003	14.35	0.02	0.016
11.80	0.06	0.003	14.40	0.02	0.016
11.85	0.07	0.004	14.45	0.02	0.016
11.90	0.09	0.004	14.50	0.01	0.016
11.95	0.11	0.004	14.55	0.01	0.016
12.00	0.16	0.005	14.60	0.01	0.016
12.05	0.21	0.006	14.65	0.01	0.016
12.10	0.29	0.007	14.70	0.01	0.016
12.15	0.31	0.008	14.75	0.01	0.016
12.20	0.21	0.009	14.80	0.01	0.016
12.25	0.14	0.010	14.85	0.01	0.016
12.30	0.11	0.010	14.90	0.01	0.016
12.35	0.09	0.011	14.95	0.01	0.016
12.40	0.07	0.011	15.00	0.01	0.016
12.45	0.07	0.011	15.05	0.01	0.016
12.50	0.06	0.011	15.10	0.01	0.017
12.55	0.06	0.012	15.15	0.01	0.017

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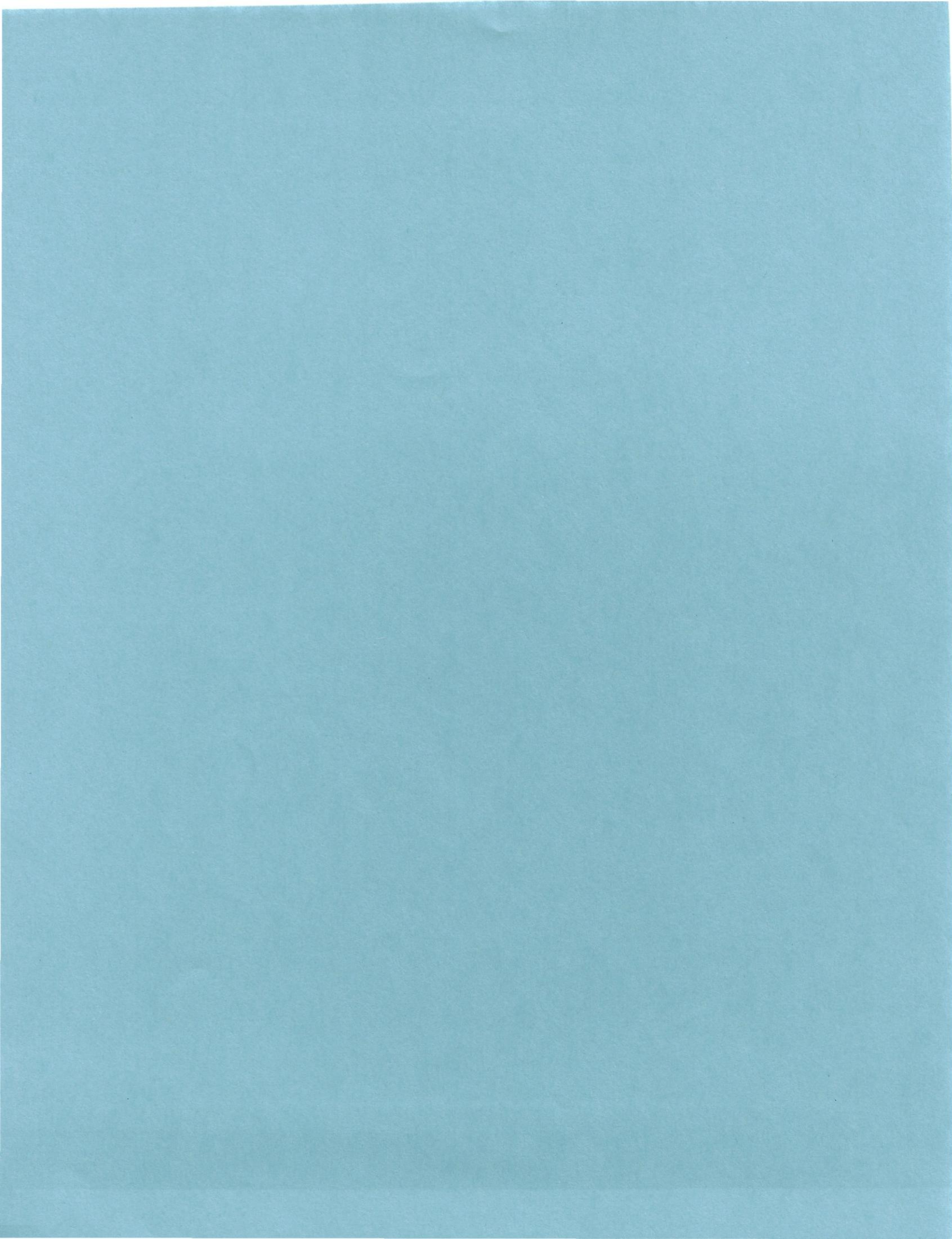
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NRCC 24-hr C 100-Year Rainfall=8.80"

Printed 4/18/2023

Hydrograph for Subcatchment WS4: WS4 (continued)

Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)	Time (hours)	Runoff (cfs)	Runoff-Volume (acre-feet)
15.20	0.01	0.017	17.80	0.01	0.019
15.25	0.01	0.017	17.85	0.01	0.019
15.30	0.01	0.017	17.90	0.01	0.019
15.35	0.01	0.017	17.95	0.01	0.019
15.40	0.01	0.017	18.00	0.01	0.019
15.45	0.01	0.017	18.05	0.01	0.019
15.50	0.01	0.017	18.10	0.01	0.019
15.55	0.01	0.017	18.15	0.01	0.019
15.60	0.01	0.017	18.20	0.01	0.019
15.65	0.01	0.017	18.25	0.01	0.019
15.70	0.01	0.017	18.30	0.01	0.019
15.75	0.01	0.017	18.35	0.01	0.019
15.80	0.01	0.017	18.40	0.01	0.019
15.85	0.01	0.017	18.45	0.01	0.019
15.90	0.01	0.017	18.50	0.01	0.019
15.95	0.01	0.017	18.55	0.01	0.019
16.00	0.01	0.017	18.60	0.01	0.019
16.05	0.01	0.017	18.65	0.01	0.019
16.10	0.01	0.017	18.70	0.01	0.019
16.15	0.01	0.017	18.75	0.01	0.019
16.20	0.01	0.017	18.80	0.01	0.019
16.25	0.01	0.018	18.85	0.01	0.019
16.30	0.01	0.018	18.90	0.01	0.019
16.35	0.01	0.018	18.95	0.01	0.019
16.40	0.01	0.018	19.00	0.01	0.019
16.45	0.01	0.018	19.05	0.01	0.019
16.50	0.01	0.018	19.10	0.01	0.019
16.55	0.01	0.018	19.15	0.01	0.019
16.60	0.01	0.018	19.20	0.01	0.019
16.65	0.01	0.018	19.25	0.01	0.019
16.70	0.01	0.018	19.30	0.01	0.019
16.75	0.01	0.018	19.35	0.01	0.019
16.80	0.01	0.018	19.40	0.01	0.019
16.85	0.01	0.018	19.45	0.01	0.020
16.90	0.01	0.018	19.50	0.01	0.020
16.95	0.01	0.018	19.55	0.01	0.020
17.00	0.01	0.018	19.60	0.01	0.020
17.05	0.01	0.018	19.65	0.01	0.020
17.10	0.01	0.018	19.70	0.01	0.020
17.15	0.01	0.018	19.75	0.01	0.020
17.20	0.01	0.018	19.80	0.01	0.020
17.25	0.01	0.018	19.85	0.01	0.020
17.30	0.01	0.018	19.90	0.01	0.020
17.35	0.01	0.018	19.95	0.01	0.020
17.40	0.01	0.018	20.00	0.01	0.020
17.45	0.01	0.018			
17.50	0.01	0.018			
17.55	0.01	0.018			
17.60	0.01	0.018			
17.65	0.01	0.019			
17.70	0.01	0.019			
17.75	0.01	0.019			



RETENTION SYSTEMS ANALYSIS
RETENTION/RECHARGE SYSTEM



Site Engineering Consultants, Inc.

55 Grape Shot Road
Sharon, Massachusetts 02067

TEL: (781) 784-0326

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CONSULTING CIVIL ENGINEERS

PROJECT NAME: 7 SANFORD ST., MEDWAY, MA

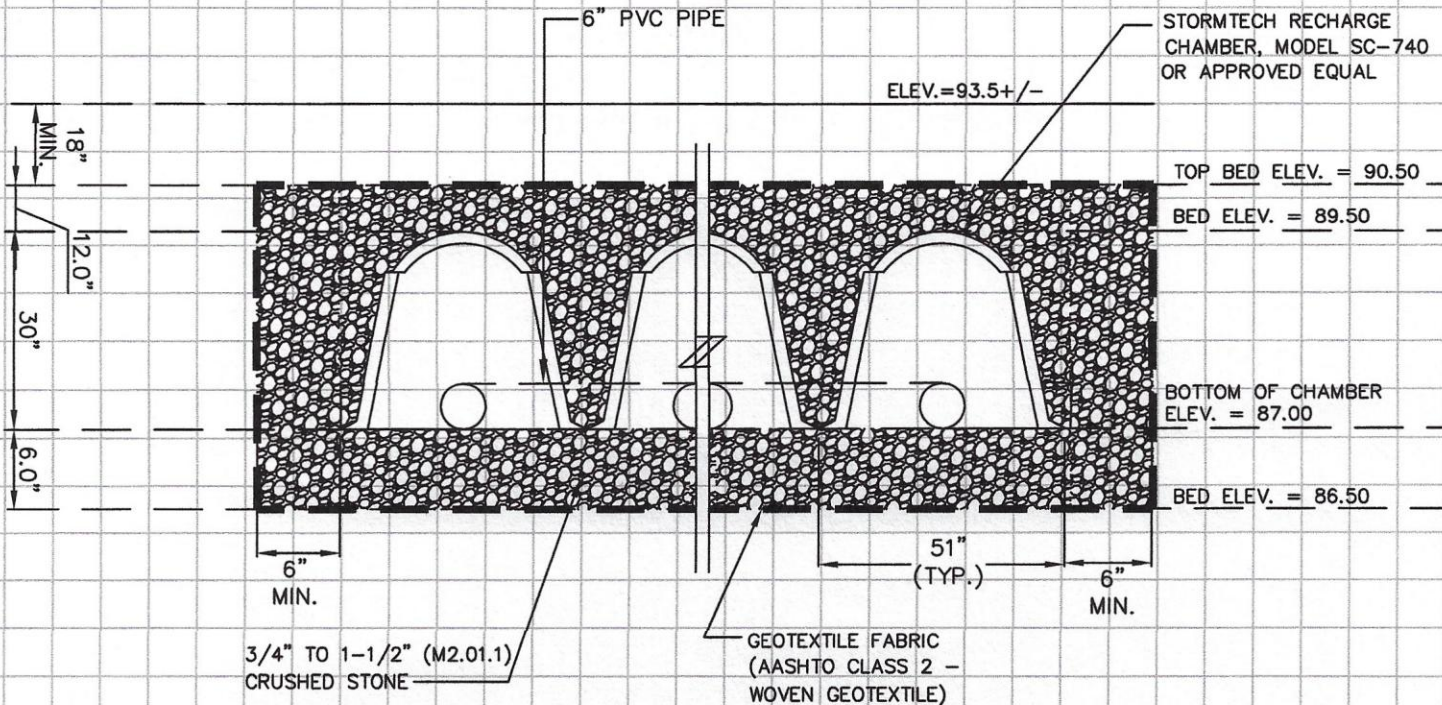
PROJECT NO: 0321

PREPARED BY: A.S.

CHECKED BY:

DATE: 04/18/2023

SCALE: N.T.S



OBSERVED/ASSUMED GROUNDWATER ELEV. = 84.50
(BOTTOM OF TEST PIT- NO WATER OR MOTTILING ENCOUNTERED)

SIZING OF RECHARGE SYSTEM

FROM SOILS TESTING CONDUCTED ON 3/19/2023, THE SOILS ENCOUNTERED CONSIST OF SANDS AND LOAMY SANDS AT 32" BELOW GRADE. GIVEN THESE CONDITIONS, THEREFORE, A RAWLS RATE (HYDRAULIC CONDUCTIVITY) OF 2.41 in./hr. WAS USED FOR THE DESIGN OF THE SYSTEM.

USING STORMTECH SC-740 RECHARGE CHAMBERS:

$L_c = 7.12'$, $W_c = 4.25'$ (51.0"), $D_c = 2.5'$ (30.0")

USE A 15.0' WIDE x 25.0' LONG x 4.0' HIGH RECHARGE FIELD:

$L = 25.0'$

$W = 15'$

$D = 4.0'$

NO. OF CHAMBERS, $N = 9$ ch

7 Sanford Street Residential Addition
Medway, MA
Project No. 0321

ROUTED OUTFLOW ANALYSIS THROUGH STORMWATER RECHARGE SYSTEM
STORMTECH RECHARGE CHAMBERS, MODEL SC-740
100 Year - 24 Hour Storm

Summary for Pond RET1: RET1

Inflow Area = 0.313 ac, 62.26% Impervious, Inflow Depth > 6.88" for 100-Year event
 Inflow = 2.43 cfs @ 12.13 hrs, Volume= 0.180 af
 Outflow = 1.70 cfs @ 12.20 hrs, Volume= 0.178 af, Atten= 30%, Lag= 4.3 min
 Discarded = 0.06 cfs @ 12.20 hrs, Volume= 0.045 af
 Primary = 1.64 cfs @ 12.20 hrs, Volume= 0.133 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 90.25' @ 12.20 hrs Surf.Area= 375 sf Storage= 810 cf

Plug-Flow detention time= 15.6 min calculated for 0.177 af (99% of inflow)
 Center-of-Mass det. time= 8.8 min (792.1 - 783.3)

Volume	Invert	Avail.Storage	Storage Description
#1	86.50'	435 cf	15.00'W x 25.00'L x 4.00'H Prismaoid 1,500 cf Overall - 413 cf Embedded = 1,087 cf x40.0% Voids
#2	87.00'	413 cf	ADS StormTech SC-740 +Cap x9 Inside #1 Effective Size= 44.6"Wx30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"Wx30.0"H x 7.56'L with 0.44' Overlap
		848 cf	Total Available Storage

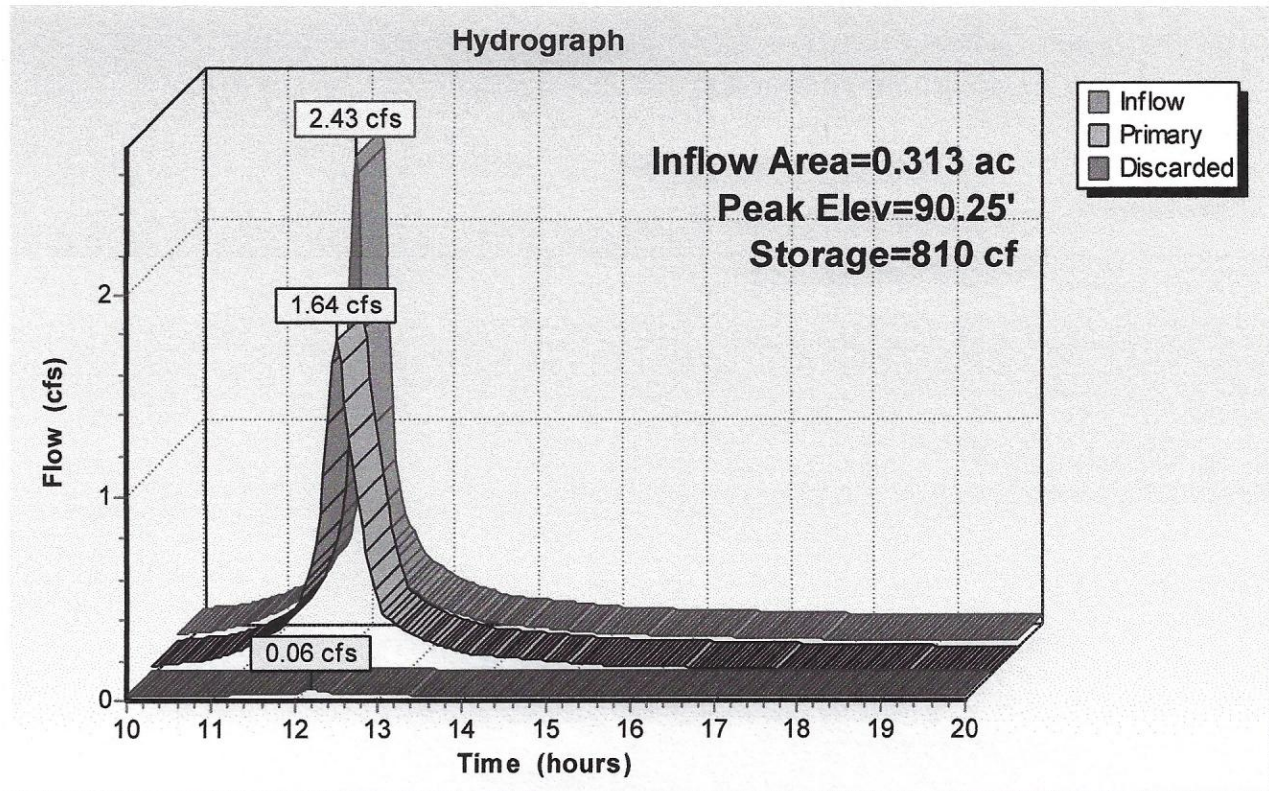
Device	Routing	Invert	Outlet Devices
#1	Primary	87.00'	6.0" Vert. Orifice/Grate C= 0.600
#2	Discarded	86.50'	2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 84.50'

Discarded OutFlow Max=0.06 cfs @ 12.20 hrs HW=90.25' (Free Discharge)
 ↑ **2=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=1.64 cfs @ 12.20 hrs HW=90.25' (Free Discharge)
 ↑ **1=Orifice/Grate** (Orifice Controls 1.64 cfs @ 8.34 fps)

7 Sanford Street Residential Addition
Medway, MA
Project No. 0321

ROUTED OUTFLOW ANALYSIS THROUGH STORMWATER RECHARGE SYSTEM
STORMTECH RECHARGE CHAMBERS, MODEL SC-740
100 Year – 24 Hour Storm



Events for Pond RET1: RET1

Event	Inflow (cfs)	Discarded (cfs)	Primary (cfs)	Volume (acre-feet)	Elevation (feet)	Storage (cubic-feet)
100-Year	2.43	0.06	1.64	0.133	90.25	810

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NRCC 24-hr C 100-Year Rainfall=8.80"

Prepared by Site Engineering Consultants, Inc.

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Hydrograph for Pond RET1: RET1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)	Primary (cfs)	Outflow-Volume (acre-feet)
10.00	0.08	113	87.13	0.03	0.05	0.015
10.05	0.08	114	87.13	0.03	0.05	0.016
10.10	0.09	114	87.13	0.03	0.05	0.016
10.15	0.09	115	87.14	0.03	0.06	0.016
10.20	0.09	116	87.14	0.03	0.06	0.017
10.25	0.09	117	87.14	0.03	0.06	0.017
10.30	0.09	117	87.14	0.03	0.06	0.018
10.35	0.09	118	87.15	0.03	0.06	0.018
10.40	0.10	119	87.15	0.03	0.07	0.018
10.45	0.10	119	87.15	0.03	0.07	0.019
10.50	0.10	120	87.15	0.03	0.07	0.019
10.55	0.10	121	87.16	0.03	0.07	0.020
10.60	0.11	122	87.16	0.03	0.07	0.020
10.65	0.11	123	87.17	0.03	0.08	0.020
10.70	0.12	125	87.17	0.03	0.08	0.021
10.75	0.13	127	87.18	0.03	0.09	0.021
10.80	0.13	129	87.18	0.03	0.10	0.022
10.85	0.14	130	87.19	0.03	0.10	0.022
10.90	0.15	132	87.20	0.03	0.11	0.023
10.95	0.15	134	87.20	0.03	0.11	0.024
11.00	0.16	136	87.21	0.03	0.12	0.024
11.05	0.17	138	87.21	0.03	0.13	0.025
11.10	0.18	140	87.22	0.03	0.14	0.025
11.15	0.19	142	87.23	0.03	0.15	0.026
11.20	0.20	145	87.24	0.03	0.16	0.027
11.25	0.21	148	87.25	0.03	0.17	0.028
11.30	0.22	151	87.26	0.03	0.18	0.029
11.35	0.23	153	87.27	0.03	0.19	0.029
11.40	0.25	156	87.28	0.03	0.20	0.030
11.45	0.26	159	87.29	0.03	0.21	0.031
11.50	0.27	162	87.30	0.03	0.22	0.032
11.55	0.29	165	87.31	0.03	0.24	0.034
11.60	0.34	171	87.33	0.03	0.27	0.035
11.65	0.37	179	87.36	0.03	0.30	0.036
11.70	0.39	185	87.38	0.03	0.33	0.038
11.75	0.43	191	87.40	0.03	0.36	0.039
11.80	0.52	202	87.44	0.03	0.41	0.041
11.85	0.60	218	87.49	0.03	0.47	0.043
11.90	0.74	243	87.58	0.03	0.54	0.046
11.95	0.93	280	87.71	0.03	0.64	0.048
12.00	1.28	344	87.94	0.04	0.79	0.052
12.05	1.66	443	88.31	0.04	0.98	0.056
12.10	2.30	593	88.93	0.05	1.23	0.061
12.15	2.35	754	89.87	0.06	1.53	0.068
12.20	1.57	810	90.25	0.06	1.64	0.075
12.25	1.07	752	89.86	0.06	1.53	0.081
12.30	0.80	654	89.23	0.05	1.33	0.087
12.35	0.66	553	88.76	0.04	1.16	0.092
12.40	0.54	459	88.38	0.04	1.00	0.096
12.45	0.48	378	88.07	0.04	0.85	0.100
12.50	0.46	314	87.83	0.03	0.72	0.103
12.55	0.43	268	87.67	0.03	0.61	0.106

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NRCC 24-hr C 100-Year Rainfall=8.80"

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Hydrograph for Pond RET1: RET1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)	Primary (cfs)	Outflow-Volume (acre-feet)
12.60	0.37	233	87.55	0.03	0.51	0.108
12.65	0.34	207	87.45	0.03	0.43	0.110
12.70	0.32	190	87.40	0.03	0.36	0.112
12.75	0.31	181	87.36	0.03	0.31	0.113
12.80	0.29	175	87.34	0.03	0.29	0.114
12.85	0.28	172	87.33	0.03	0.27	0.116
12.90	0.27	168	87.32	0.03	0.26	0.117
12.95	0.26	166	87.31	0.03	0.24	0.118
13.00	0.24	163	87.30	0.03	0.23	0.119
13.05	0.23	160	87.29	0.03	0.22	0.120
13.10	0.22	157	87.28	0.03	0.21	0.121
13.15	0.21	155	87.27	0.03	0.20	0.122
13.20	0.20	152	87.26	0.03	0.18	0.123
13.25	0.20	150	87.26	0.03	0.18	0.124
13.30	0.19	148	87.25	0.03	0.17	0.124
13.35	0.18	147	87.25	0.03	0.16	0.125
13.40	0.17	145	87.24	0.03	0.15	0.126
13.45	0.17	143	87.23	0.03	0.15	0.127
13.50	0.16	141	87.23	0.03	0.14	0.127
13.55	0.15	139	87.22	0.03	0.13	0.128
13.60	0.14	138	87.21	0.03	0.13	0.129
13.65	0.14	136	87.21	0.03	0.12	0.129
13.70	0.14	134	87.20	0.03	0.12	0.130
13.75	0.13	133	87.20	0.03	0.11	0.130
13.80	0.13	132	87.20	0.03	0.11	0.131
13.85	0.13	132	87.19	0.03	0.11	0.132
13.90	0.13	131	87.19	0.03	0.10	0.132
13.95	0.13	130	87.19	0.03	0.10	0.133
14.00	0.12	130	87.19	0.03	0.10	0.133
14.05	0.12	129	87.19	0.03	0.10	0.134
14.10	0.12	129	87.18	0.03	0.10	0.134
14.15	0.12	128	87.18	0.03	0.09	0.135
14.20	0.12	128	87.18	0.03	0.09	0.135
14.25	0.12	127	87.18	0.03	0.09	0.136
14.30	0.11	127	87.18	0.03	0.09	0.136
14.35	0.11	126	87.17	0.03	0.09	0.137
14.40	0.11	125	87.17	0.03	0.08	0.137
14.45	0.11	125	87.17	0.03	0.08	0.138
14.50	0.11	124	87.17	0.03	0.08	0.138
14.55	0.10	123	87.17	0.03	0.08	0.139
14.60	0.10	123	87.16	0.03	0.08	0.139
14.65	0.10	122	87.16	0.03	0.08	0.139
14.70	0.10	122	87.16	0.03	0.07	0.140
14.75	0.10	121	87.16	0.03	0.07	0.140
14.80	0.09	120	87.15	0.03	0.07	0.141
14.85	0.09	120	87.15	0.03	0.07	0.141
14.90	0.09	119	87.15	0.03	0.07	0.141
14.95	0.09	118	87.15	0.03	0.06	0.142
15.00	0.09	117	87.15	0.03	0.06	0.142
15.05	0.08	117	87.14	0.03	0.06	0.142
15.10	0.08	116	87.14	0.03	0.06	0.143
15.15	0.08	115	87.14	0.03	0.06	0.143

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NRCC 24-hr C 100-Year Rainfall=8.80"

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Hydrograph for Pond RET1: RET1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)	Primary (cfs)	Outflow-Volume (acre-feet)
15.20	0.08	115	87.14	0.03	0.05	0.144
15.25	0.08	114	87.13	0.03	0.05	0.144
15.30	0.08	114	87.13	0.03	0.05	0.144
15.35	0.08	114	87.13	0.03	0.05	0.145
15.40	0.08	113	87.13	0.03	0.05	0.145
15.45	0.08	113	87.13	0.03	0.05	0.145
15.50	0.08	113	87.13	0.03	0.05	0.145
15.55	0.08	113	87.13	0.03	0.05	0.146
15.60	0.07	112	87.13	0.03	0.05	0.146
15.65	0.07	112	87.13	0.03	0.05	0.146
15.70	0.07	112	87.13	0.03	0.05	0.147
15.75	0.07	112	87.12	0.03	0.05	0.147
15.80	0.07	111	87.12	0.03	0.05	0.147
15.85	0.07	111	87.12	0.03	0.05	0.148
15.90	0.07	111	87.12	0.03	0.05	0.148
15.95	0.07	111	87.12	0.03	0.04	0.148
16.00	0.07	110	87.12	0.03	0.04	0.149
16.05	0.07	110	87.12	0.03	0.04	0.149
16.10	0.07	110	87.12	0.03	0.04	0.149
16.15	0.07	110	87.12	0.03	0.04	0.149
16.20	0.07	109	87.12	0.03	0.04	0.150
16.25	0.07	109	87.12	0.03	0.04	0.150
16.30	0.07	109	87.12	0.03	0.04	0.150
16.35	0.07	109	87.11	0.03	0.04	0.151
16.40	0.07	108	87.11	0.03	0.04	0.151
16.45	0.07	108	87.11	0.03	0.04	0.151
16.50	0.06	108	87.11	0.03	0.04	0.151
16.55	0.06	108	87.11	0.03	0.04	0.152
16.60	0.06	107	87.11	0.03	0.04	0.152
16.65	0.06	107	87.11	0.03	0.04	0.152
16.70	0.06	107	87.11	0.03	0.04	0.152
16.75	0.06	107	87.11	0.03	0.04	0.153
16.80	0.06	107	87.11	0.03	0.04	0.153
16.85	0.06	106	87.11	0.03	0.03	0.153
16.90	0.06	106	87.11	0.03	0.03	0.153
16.95	0.06	106	87.11	0.03	0.03	0.154
17.00	0.06	106	87.10	0.03	0.03	0.154
17.05	0.06	105	87.10	0.03	0.03	0.154
17.10	0.06	105	87.10	0.03	0.03	0.154
17.15	0.06	105	87.10	0.03	0.03	0.155
17.20	0.06	105	87.10	0.03	0.03	0.155
17.25	0.06	104	87.10	0.03	0.03	0.155
17.30	0.06	104	87.10	0.03	0.03	0.155
17.35	0.06	104	87.10	0.03	0.03	0.156
17.40	0.05	104	87.10	0.03	0.03	0.156
17.45	0.05	103	87.10	0.03	0.03	0.156
17.50	0.05	103	87.10	0.03	0.03	0.156
17.55	0.05	103	87.09	0.03	0.03	0.157
17.60	0.05	102	87.09	0.03	0.03	0.157
17.65	0.05	102	87.09	0.03	0.03	0.157
17.70	0.05	102	87.09	0.03	0.03	0.157
17.75	0.05	102	87.09	0.03	0.03	0.157

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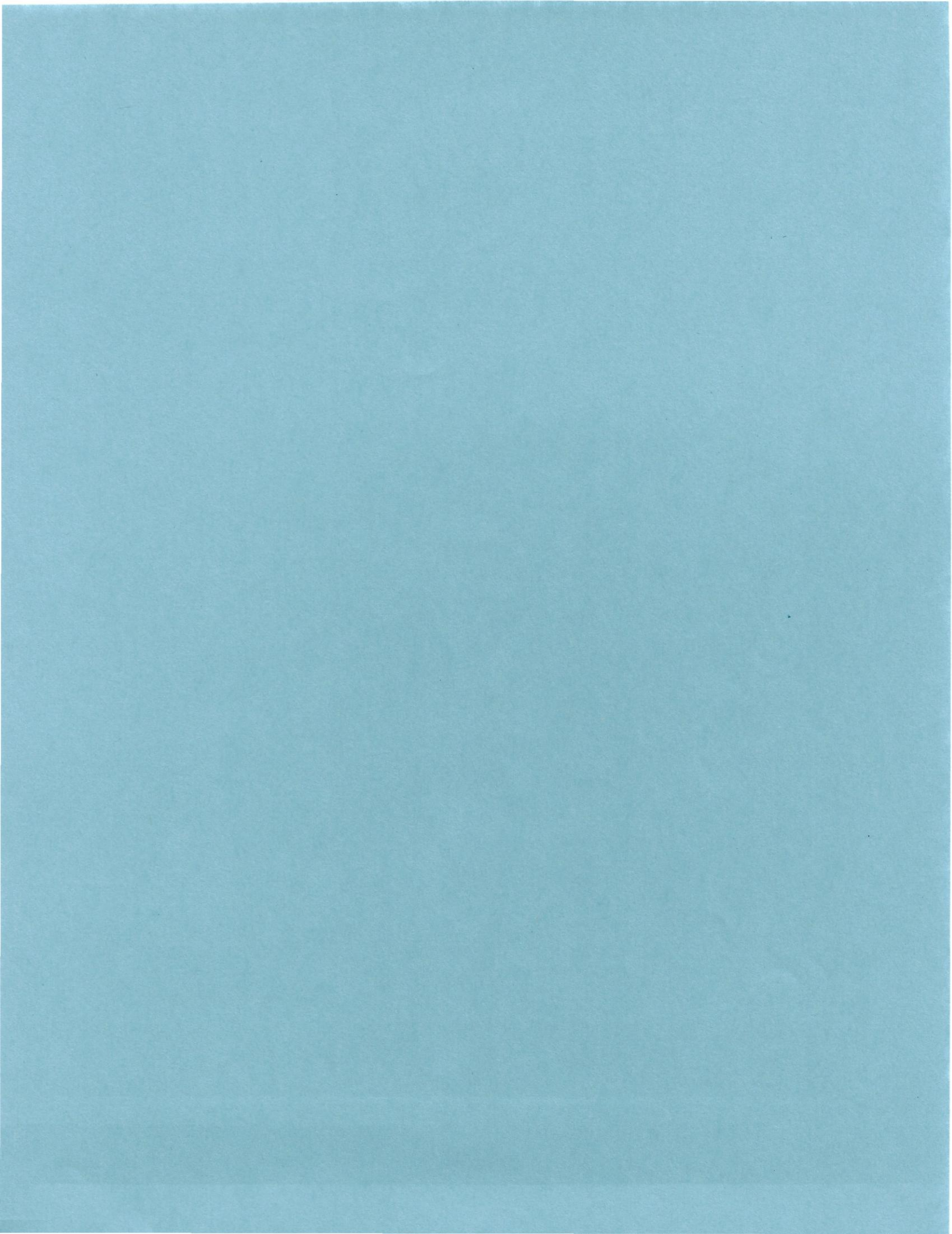
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Hydrograph for Pond RET1: RET1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)	Primary (cfs)	Outflow-Volume (acre-feet)
17.80	0.05	101	87.09	0.03	0.02	0.158
17.85	0.05	101	87.09	0.03	0.02	0.158
17.90	0.05	101	87.09	0.03	0.02	0.158
17.95	0.05	100	87.09	0.03	0.02	0.158
18.00	0.05	100	87.09	0.03	0.02	0.158
18.05	0.05	100	87.08	0.03	0.02	0.159
18.10	0.05	99	87.08	0.03	0.02	0.159
18.15	0.05	99	87.08	0.03	0.02	0.159
18.20	0.05	99	87.08	0.03	0.02	0.159
18.25	0.05	99	87.08	0.03	0.02	0.159
18.30	0.05	98	87.08	0.03	0.02	0.160
18.35	0.05	98	87.08	0.03	0.02	0.160
18.40	0.05	98	87.08	0.03	0.02	0.160
18.45	0.05	98	87.08	0.03	0.02	0.160
18.50	0.05	98	87.08	0.03	0.02	0.160
18.55	0.05	98	87.08	0.03	0.02	0.161
18.60	0.04	98	87.08	0.03	0.02	0.161
18.65	0.04	97	87.08	0.03	0.02	0.161
18.70	0.04	97	87.08	0.03	0.02	0.161
18.75	0.04	97	87.08	0.03	0.02	0.161
18.80	0.04	97	87.08	0.03	0.02	0.162
18.85	0.04	97	87.08	0.03	0.02	0.162
18.90	0.04	97	87.08	0.03	0.02	0.162
18.95	0.04	97	87.07	0.03	0.02	0.162
19.00	0.04	97	87.07	0.03	0.02	0.162
19.05	0.04	97	87.07	0.03	0.02	0.162
19.10	0.04	97	87.07	0.03	0.02	0.163
19.15	0.04	96	87.07	0.03	0.02	0.163
19.20	0.04	96	87.07	0.03	0.02	0.163
19.25	0.04	96	87.07	0.03	0.02	0.163
19.30	0.04	96	87.07	0.03	0.02	0.163
19.35	0.04	96	87.07	0.03	0.02	0.164
19.40	0.04	96	87.07	0.03	0.02	0.164
19.45	0.04	96	87.07	0.03	0.02	0.164
19.50	0.04	96	87.07	0.03	0.02	0.164
19.55	0.04	96	87.07	0.03	0.02	0.164
19.60	0.04	96	87.07	0.03	0.02	0.164
19.65	0.04	96	87.07	0.03	0.02	0.165
19.70	0.04	95	87.07	0.03	0.02	0.165
19.75	0.04	95	87.07	0.03	0.02	0.165
19.80	0.04	95	87.07	0.03	0.02	0.165
19.85	0.04	95	87.07	0.03	0.01	0.165
19.90	0.04	95	87.07	0.03	0.01	0.165
19.95	0.04	95	87.07	0.03	0.01	0.166
20.00	0.04	95	87.07	0.03	0.01	0.166

Table 2.3.3. 1982 Rawls Rates¹⁸

Texture Class	NRCS Hydrologic Soil Group (HSG)	Infiltration Rate Inches/Hour
Sand	A	8.27
Loamy Sand	A	2.41
Sandy Loam	B	1.02
Loam	B	0.52
Silt Loam	C	0.27
Sandy Clay Loam	C	0.17
Clay Loam	D	0.09
Silty Clay Loam	D	0.06
Sandy Clay	D	0.05
Silty Clay	D	0.04
Clay	D	0.02



TOTAL SITE POSTDEVELOPMENT OUTFLOW
100 Year – 24 Hour Storm

7 Sanford Street Residential Addition
Medway, MA
Project No. 0321

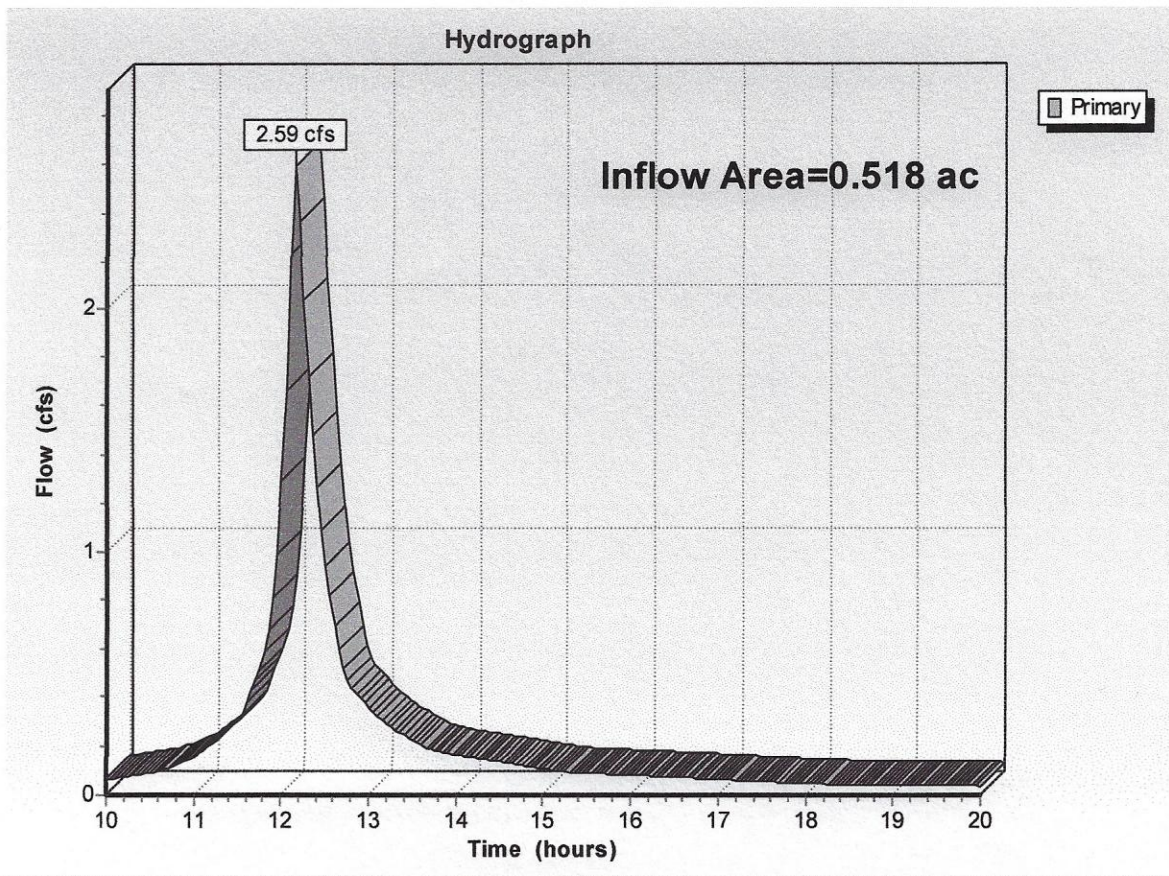
Postdevelopment
100 Year – 24 Hour Storm

TOTAL POSTDEVELOPMENT RUNOFF
(Watershed 1 + Routed Outflow From Recharge System 1)

Summary for Link Qtot: Qtotal-post

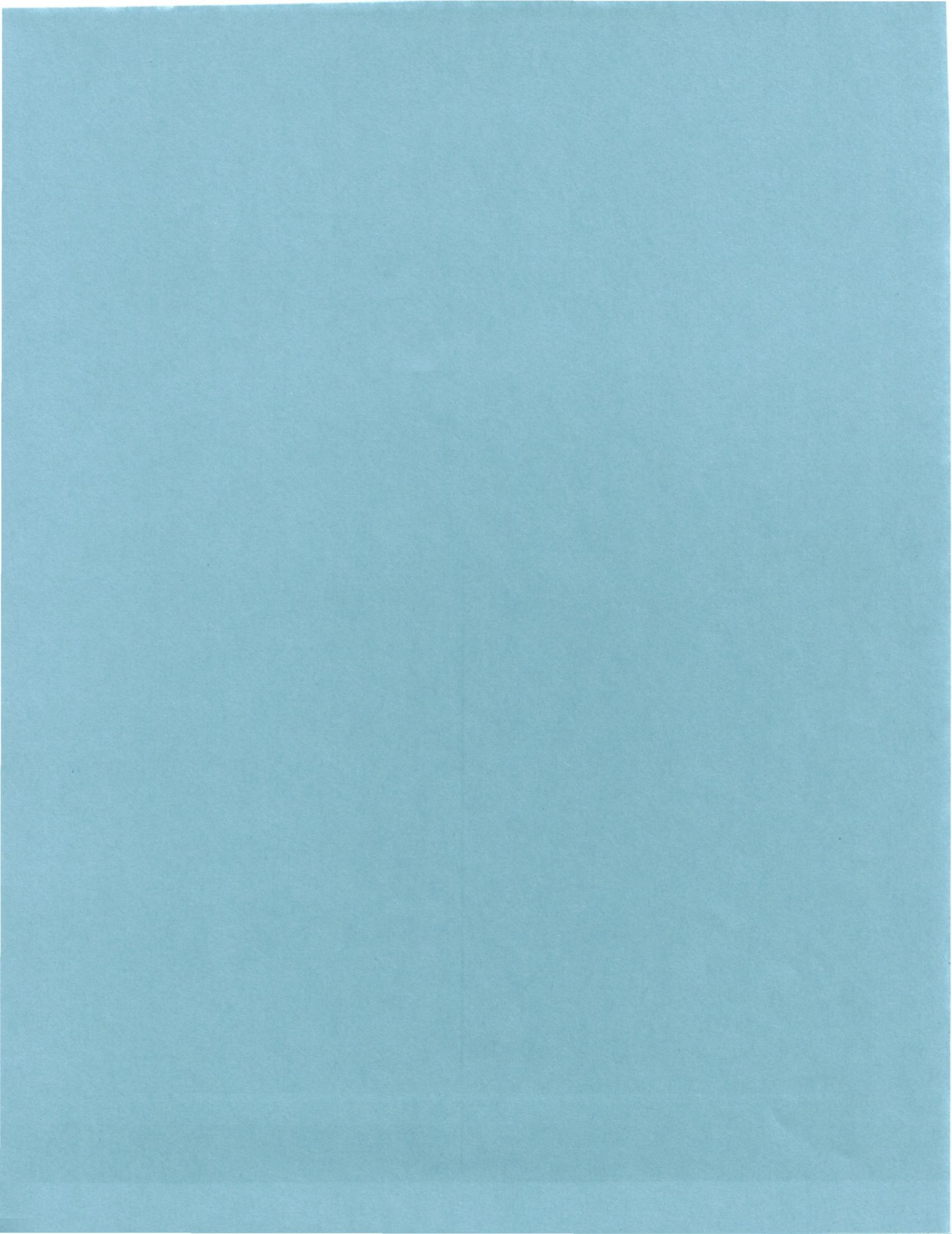
Inflow Area = 0.518 ac, 39.46% Impervious, Inflow Depth > 4.77" for 100-Year event
Inflow = 2.59 cfs @ 12.16 hrs, Volume= 0.206 af
Primary = 2.59 cfs @ 12.16 hrs, Volume= 0.206 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs



Events for Link Qtot: Qtotal-post

Event	Inflow (cfs)	Primary (cfs)	Volume (acre-feet)	Elevation (feet)
100-Year	2.59	2.59	0.206	0.00



POSTDEVELOPMENT

0.8 in. OF RUNOFF OVER IMPERVIOUS AREAS

7 Sanford Street Residential Addition
Medway, MA
Project No. 0321

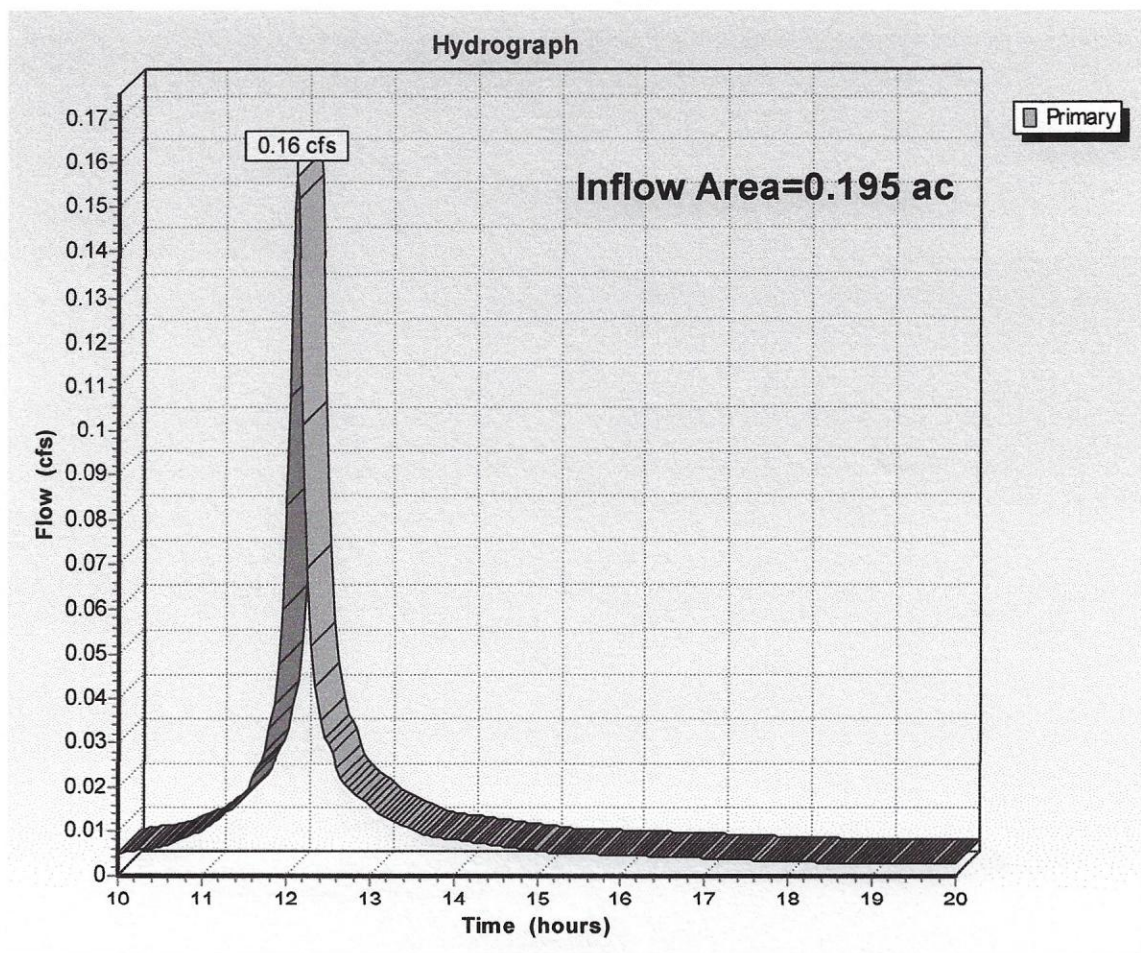
Postdevelopment
0.8-inch RUNOFF FROM IMPERVIOUS AREAS

Summary for Link 0.8in-Q: 0.8in-RUNOFF

THIS CALCULATES THE RUNOFF RATE AND VOLUME FOR 0.8 in. OF RUNOFF OVER
POSTDEVELOPMENT IMPERVIOUS AREAS (WS2+WS3+WS4).
- SUM OF HYDROGRAPHS INTO RECHARGE SYSTEM-

Inflow Area =	0.195 ac, 100.00% Impervious, Inflow Depth > 0.69" for Custom event
Inflow =	0.16 cfs @ 12.13 hrs, Volume= 0.011 af
Primary =	0.16 cfs @ 12.13 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs



Hydrograph for Link 0.8in-Q: 0.8in-RUNOFF

Time (hours)	WS2-Inflow (cfs)	WS3-Inflow (cfs)	WS4-Inflow (cfs)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Primary-Volume (acre-feet)
10.00	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.05	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.10	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.15	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.20	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.25	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.30	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.35	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.40	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.45	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.50	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.55	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.60	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.65	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.70	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.75	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.80	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.85	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.90	0.00	0.00	0.00	0.01	0.00	0.01	0.001
10.95	0.00	0.00	0.00	0.01	0.00	0.01	0.001
11.00	0.00	0.00	0.00	0.01	0.00	0.01	0.001
11.05	0.00	0.00	0.00	0.01	0.00	0.01	0.001
11.10	0.01	0.01	0.00	0.01	0.00	0.01	0.002
11.15	0.01	0.01	0.00	0.01	0.00	0.01	0.002
11.20	0.01	0.01	0.00	0.01	0.00	0.01	0.002
11.25	0.01	0.01	0.00	0.01	0.00	0.01	0.002
11.30	0.01	0.01	0.00	0.01	0.00	0.01	0.002
11.35	0.01	0.01	0.00	0.01	0.00	0.01	0.002
11.40	0.01	0.01	0.00	0.02	0.00	0.02	0.002
11.45	0.01	0.01	0.00	0.02	0.00	0.02	0.002
11.50	0.01	0.01	0.00	0.02	0.00	0.02	0.002
11.55	0.01	0.01	0.00	0.02	0.00	0.02	0.002
11.60	0.01	0.01	0.00	0.02	0.00	0.02	0.002
11.65	0.01	0.01	0.00	0.02	0.00	0.02	0.002
11.70	0.01	0.01	0.00	0.03	0.00	0.03	0.002
11.75	0.01	0.01	0.00	0.03	0.00	0.03	0.003
11.80	0.02	0.02	0.00	0.03	0.00	0.03	0.003
11.85	0.02	0.02	0.00	0.04	0.00	0.04	0.003
11.90	0.02	0.02	0.00	0.05	0.00	0.05	0.003
11.95	0.03	0.03	0.00	0.06	0.00	0.06	0.003
12.00	0.04	0.04	0.01	0.08	0.00	0.08	0.004
12.05	0.05	0.05	0.01	0.11	0.00	0.11	0.004
12.10	0.07	0.07	0.01	0.15	0.00	0.15	0.005
12.15	0.07	0.07	0.01	0.15	0.00	0.15	0.005
12.20	0.05	0.05	0.01	0.10	0.00	0.10	0.006
12.25	0.03	0.03	0.00	0.07	0.00	0.07	0.006
12.30	0.02	0.02	0.00	0.05	0.00	0.05	0.006
12.35	0.02	0.02	0.00	0.04	0.00	0.04	0.006
12.40	0.02	0.02	0.00	0.04	0.00	0.04	0.007
12.45	0.01	0.01	0.00	0.03	0.00	0.03	0.007
12.50	0.01	0.01	0.00	0.03	0.00	0.03	0.007
12.55	0.01	0.01	0.00	0.03	0.00	0.03	0.007

Hydrograph for Link 0.8in-Q: 0.8in-RUNOFF (continued)

Time (hours)	WS2-Inflow (cfs)	WS3-Inflow (cfs)	WS4-Inflow (cfs)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Primary-Volume (acre-feet)
12.60	0.01	0.01	0.00	0.02	0.00	0.02	0.007
12.65	0.01	0.01	0.00	0.02	0.00	0.02	0.007
12.70	0.01	0.01	0.00	0.02	0.00	0.02	0.007
12.75	0.01	0.01	0.00	0.02	0.00	0.02	0.007
12.80	0.01	0.01	0.00	0.02	0.00	0.02	0.007
12.85	0.01	0.01	0.00	0.02	0.00	0.02	0.007
12.90	0.01	0.01	0.00	0.02	0.00	0.02	0.007
12.95	0.01	0.01	0.00	0.02	0.00	0.02	0.008
13.00	0.01	0.01	0.00	0.02	0.00	0.02	0.008
13.05	0.01	0.01	0.00	0.02	0.00	0.02	0.008
13.10	0.01	0.01	0.00	0.01	0.00	0.01	0.008
13.15	0.01	0.01	0.00	0.01	0.00	0.01	0.008
13.20	0.01	0.01	0.00	0.01	0.00	0.01	0.008
13.25	0.01	0.01	0.00	0.01	0.00	0.01	0.008
13.30	0.01	0.01	0.00	0.01	0.00	0.01	0.008
13.35	0.01	0.01	0.00	0.01	0.00	0.01	0.008
13.40	0.01	0.01	0.00	0.01	0.00	0.01	0.008
13.45	0.01	0.01	0.00	0.01	0.00	0.01	0.008
13.50	0.00	0.00	0.00	0.01	0.00	0.01	0.008
13.55	0.00	0.00	0.00	0.01	0.00	0.01	0.008
13.60	0.00	0.00	0.00	0.01	0.00	0.01	0.008
13.65	0.00	0.00	0.00	0.01	0.00	0.01	0.008
13.70	0.00	0.00	0.00	0.01	0.00	0.01	0.008
13.75	0.00	0.00	0.00	0.01	0.00	0.01	0.008
13.80	0.00	0.00	0.00	0.01	0.00	0.01	0.008
13.85	0.00	0.00	0.00	0.01	0.00	0.01	0.008
13.90	0.00	0.00	0.00	0.01	0.00	0.01	0.008
13.95	0.00	0.00	0.00	0.01	0.00	0.01	0.008
14.00	0.00	0.00	0.00	0.01	0.00	0.01	0.008
14.05	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.10	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.15	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.20	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.25	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.30	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.35	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.40	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.45	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.50	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.55	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.60	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.65	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.70	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.75	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.80	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.85	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.90	0.00	0.00	0.00	0.01	0.00	0.01	0.009
14.95	0.00	0.00	0.00	0.01	0.00	0.01	0.009
15.00	0.00	0.00	0.00	0.01	0.00	0.01	0.009
15.05	0.00	0.00	0.00	0.01	0.00	0.01	0.009
15.10	0.00	0.00	0.00	0.01	0.00	0.01	0.009
15.15	0.00	0.00	0.00	0.01	0.00	0.01	0.009

NRCC 24-hr C Custom Rainfall=0.90"

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Hydrograph for Link 0.8in-Q: 0.8in-RUNOFF (continued)

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POSTDEVELOPMENT

**STORAGE VOLUME PROVIDED FOR
0.8 in. OF RUNOFF OVER IMPERVIOUS AREAS**

7 Sanford Street Residential Addition
Medway, MA
Project No. 0321

ROUTED OUTFLOW ANALYSIS THROUGH STORMWATER RECHARGE SYSTEM
STORMTECH MODEL SC-740 RECHARGER SYSTEM

0.8-INCHES OF RUNOFF FROM POSTDEVELOPMENT IMPERVIOUS AREAS

Summary for Pond RET1: RET1

Inflow Area = 0.195 ac, 100.00% Impervious, Inflow Depth > 0.69" for Custom event
Inflow = 0.16 cfs @ 12.13 hrs, Volume= 0.011 af
Outflow = 0.06 cfs @ 12.28 hrs, Volume= 0.011 af, Atten= 62%, Lag= 9.1 min
Discarded = 0.03 cfs @ 12.28 hrs, Volume= 0.010 af
Primary = 0.03 cfs @ 12.28 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 87.10' @ 12.28 hrs Surf.Area= 0.009 ac Storage= 0.002 af

Plug-Flow detention time= 20.2 min calculated for 0.011 af (100% of inflow)
Center-of-Mass det. time= 19.4 min (815.9 - 796.5)

Volume	Invert	Avail.Storage	Storage Description
#1	86.50'	0.010 af	15.00'W x 25.00'L x 4.00'H Prismaoid 0.034 af Overall - 0.009 af Embedded = 0.025 af x 40.0% Voids
#2	87.00'	0.009 af	ADS_StormTech SC-740 +Cap x9 Inside #1 Effective Size= 44.6"Wx30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"Wx30.0"H x 7.56'L with 0.44' Overlap
		0.019 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	87.00'	6.0" Vert. Orifice/Grate C= 0.600
#2	Discarded	86.50'	2.410 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 84.50'

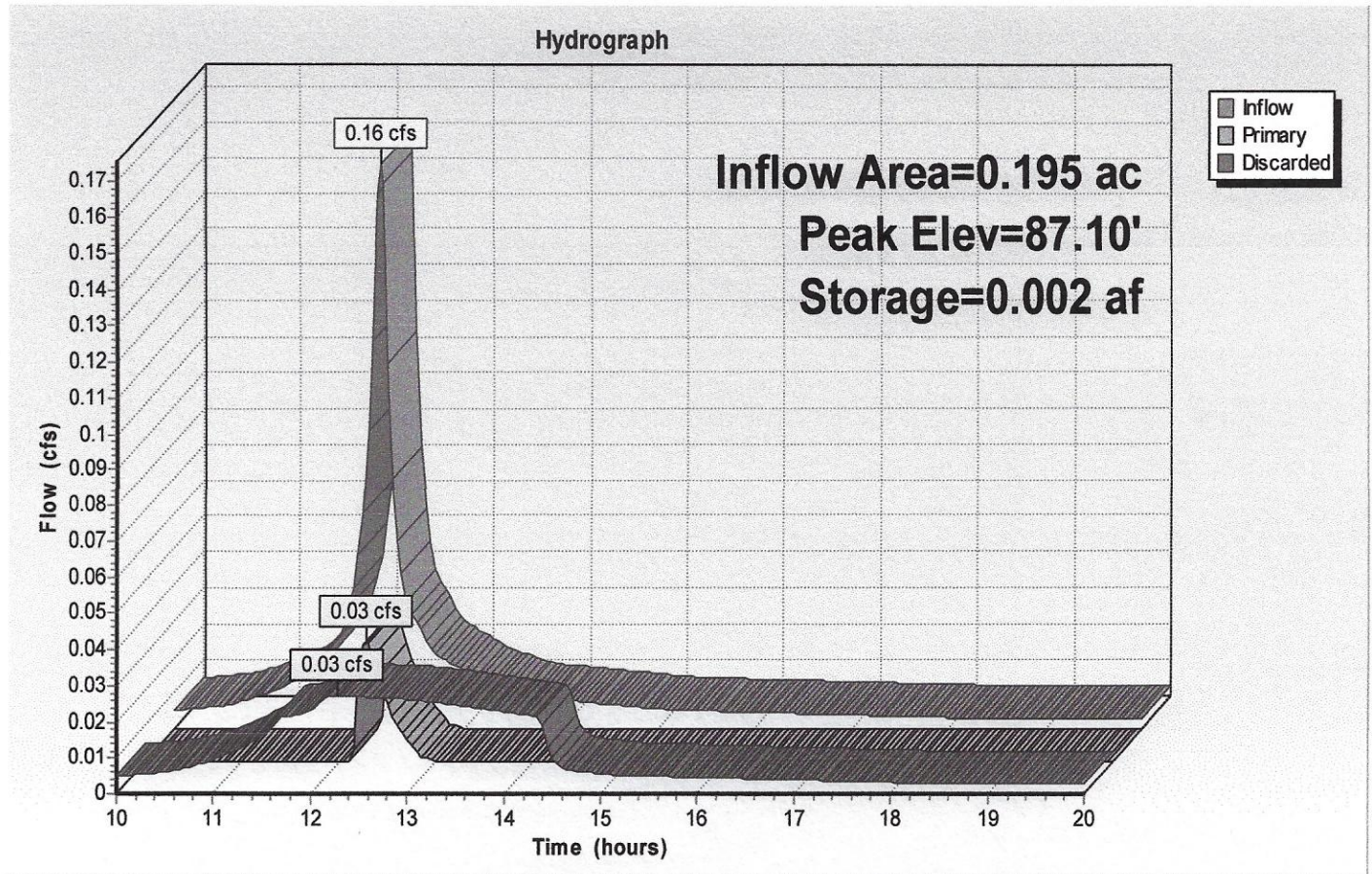
Discarded OutFlow Max=0.03 cfs @ 12.28 hrs HW=87.10' (Free Discharge)
↑ **2=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=0.03 cfs @ 12.28 hrs HW=87.10' (Free Discharge)
↑ **1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 1.09 fps)

7 Sanford Street Residential Addition
Medway, MA
Project No. 0321

ROUTED OUTFLOW ANALYSIS THROUGH STORMWATER RECHARGE SYSTEM
STORMTECH MODEL SC-740 RECHARGER SYSTEM

0.8-INCHES OF RUNOFF FROM POSTDEVELOPMENT IMPERVIOUS AREAS



VOLUME OF STORAGE GENERATED BY 0.8-in. OF RUNOFF OVER POSTDEVELOPMENT IMPERVIOUS SURFACES
= 0.011 ac.-ft.

VOLUME OF STORAGE PROVIDED BY STORMWATER RECHARGE SYSTEM, = 0.019 ac.-ft.

Hydrograph for Pond RET1: RET1

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Discarded (cfs)	Primary (cfs)	Outflow-Volume (acre-feet)
10.00	0.01	0.000	86.51	0.00	0.00	0.001
10.05	0.01	0.000	86.51	0.01	0.00	0.001
10.10	0.01	0.000	86.51	0.01	0.00	0.001
10.15	0.01	0.000	86.51	0.01	0.00	0.001
10.20	0.01	0.000	86.51	0.01	0.00	0.001
10.25	0.01	0.000	86.51	0.01	0.00	0.001
10.30	0.01	0.000	86.51	0.01	0.00	0.001
10.35	0.01	0.000	86.51	0.01	0.00	0.001
10.40	0.01	0.000	86.51	0.01	0.00	0.001
10.45	0.01	0.000	86.51	0.01	0.00	0.001
10.50	0.01	0.000	86.51	0.01	0.00	0.001
10.55	0.01	0.000	86.51	0.01	0.00	0.001
10.60	0.01	0.000	86.51	0.01	0.00	0.001
10.65	0.01	0.000	86.51	0.01	0.00	0.001
10.70	0.01	0.000	86.51	0.01	0.00	0.001
10.75	0.01	0.000	86.51	0.01	0.00	0.001
10.80	0.01	0.000	86.51	0.01	0.00	0.001
10.85	0.01	0.000	86.52	0.01	0.00	0.001
10.90	0.01	0.000	86.52	0.01	0.00	0.001
10.95	0.01	0.000	86.52	0.01	0.00	0.001
11.00	0.01	0.000	86.52	0.01	0.00	0.001
11.05	0.01	0.000	86.52	0.01	0.00	0.001
11.10	0.01	0.000	86.52	0.01	0.00	0.001
11.15	0.01	0.000	86.52	0.01	0.00	0.002
11.20	0.01	0.000	86.52	0.01	0.00	0.002
11.25	0.01	0.000	86.52	0.01	0.00	0.002
11.30	0.01	0.000	86.52	0.01	0.00	0.002
11.35	0.01	0.000	86.53	0.01	0.00	0.002
11.40	0.02	0.000	86.53	0.01	0.00	0.002
11.45	0.02	0.000	86.53	0.02	0.00	0.002
11.50	0.02	0.000	86.53	0.02	0.00	0.002
11.55	0.02	0.000	86.53	0.02	0.00	0.002
11.60	0.02	0.000	86.54	0.02	0.00	0.002
11.65	0.02	0.000	86.54	0.02	0.00	0.002
11.70	0.03	0.000	86.54	0.02	0.00	0.002
11.75	0.03	0.000	86.55	0.02	0.00	0.002
11.80	0.03	0.000	86.56	0.02	0.00	0.002
11.85	0.04	0.000	86.58	0.02	0.00	0.003
11.90	0.05	0.000	86.60	0.02	0.00	0.003
11.95	0.06	0.000	86.64	0.02	0.00	0.003
12.00	0.08	0.001	86.70	0.02	0.00	0.003
12.05	0.11	0.001	86.79	0.02	0.00	0.003
12.10	0.15	0.001	86.91	0.03	0.00	0.003
12.15	0.15	0.002	87.03	0.03	0.00	0.003
12.20	0.10	0.002	87.08	0.03	0.02	0.003
12.25	0.07	0.002	87.10	0.03	0.03	0.004
12.30	0.05	0.002	87.10	0.03	0.03	0.004
12.35	0.04	0.002	87.10	0.03	0.03	0.004
12.40	0.04	0.002	87.09	0.03	0.02	0.004
12.45	0.03	0.002	87.08	0.03	0.02	0.004
12.50	0.03	0.002	87.07	0.03	0.02	0.005
12.55	0.03	0.002	87.06	0.03	0.01	0.005

Hydrograph for Pond RET1: RET1 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Discarded (cfs)	Primary (cfs)	Outflow-Volume (acre-feet)
12.60	0.02	0.002	87.06	0.03	0.01	0.005
12.65	0.02	0.002	87.05	0.03	0.01	0.005
12.70	0.02	0.002	87.04	0.03	0.01	0.005
12.75	0.02	0.002	87.03	0.03	0.00	0.005
12.80	0.02	0.002	87.03	0.03	0.00	0.005
12.85	0.02	0.002	87.02	0.03	0.00	0.006
12.90	0.02	0.002	87.01	0.03	0.00	0.006
12.95	0.02	0.002	87.01	0.03	0.00	0.006
13.00	0.02	0.002	87.00	0.03	0.00	0.006
13.05	0.02	0.002	86.99	0.03	0.00	0.006
13.10	0.01	0.002	86.98	0.03	0.00	0.006
13.15	0.01	0.002	86.96	0.03	0.00	0.006
13.20	0.01	0.002	86.95	0.03	0.00	0.006
13.25	0.01	0.001	86.93	0.03	0.00	0.006
13.30	0.01	0.001	86.92	0.03	0.00	0.007
13.35	0.01	0.001	86.90	0.03	0.00	0.007
13.40	0.01	0.001	86.88	0.02	0.00	0.007
13.45	0.01	0.001	86.87	0.02	0.00	0.007
13.50	0.01	0.001	86.85	0.02	0.00	0.007
13.55	0.01	0.001	86.83	0.02	0.00	0.007
13.60	0.01	0.001	86.82	0.02	0.00	0.007
13.65	0.01	0.001	86.80	0.02	0.00	0.007
13.70	0.01	0.001	86.78	0.02	0.00	0.007
13.75	0.01	0.001	86.76	0.02	0.00	0.007
13.80	0.01	0.001	86.74	0.02	0.00	0.008
13.85	0.01	0.001	86.73	0.02	0.00	0.008
13.90	0.01	0.001	86.71	0.02	0.00	0.008
13.95	0.01	0.001	86.69	0.02	0.00	0.008
14.00	0.01	0.001	86.67	0.02	0.00	0.008
14.05	0.01	0.001	86.66	0.02	0.00	0.008
14.10	0.01	0.000	86.64	0.02	0.00	0.008
14.15	0.01	0.000	86.62	0.02	0.00	0.008
14.20	0.01	0.000	86.60	0.02	0.00	0.008
14.25	0.01	0.000	86.59	0.02	0.00	0.008
14.30	0.01	0.000	86.57	0.02	0.00	0.008
14.35	0.01	0.000	86.55	0.02	0.00	0.009
14.40	0.01	0.000	86.54	0.02	0.00	0.009
14.45	0.01	0.000	86.52	0.01	0.00	0.009
14.50	0.01	0.000	86.52	0.01	0.00	0.009
14.55	0.01	0.000	86.52	0.01	0.00	0.009
14.60	0.01	0.000	86.51	0.01	0.00	0.009
14.65	0.01	0.000	86.51	0.01	0.00	0.009
14.70	0.01	0.000	86.51	0.01	0.00	0.009
14.75	0.01	0.000	86.51	0.01	0.00	0.009
14.80	0.01	0.000	86.51	0.01	0.00	0.009
14.85	0.01	0.000	86.51	0.01	0.00	0.009
14.90	0.01	0.000	86.51	0.01	0.00	0.009
14.95	0.01	0.000	86.51	0.01	0.00	0.009
15.00	0.01	0.000	86.51	0.01	0.00	0.009
15.05	0.01	0.000	86.51	0.01	0.00	0.009
15.10	0.01	0.000	86.51	0.01	0.00	0.009
15.15	0.01	0.000	86.51	0.01	0.00	0.009

Hydrograph for Pond RET1: RET1 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Discarded (cfs)	Primary (cfs)	Outflow-Volume (acre-feet)
15.20	0.01	0.000	86.51	0.01	0.00	0.009
15.25	0.01	0.000	86.51	0.01	0.00	0.009
15.30	0.01	0.000	86.51	0.01	0.00	0.009
15.35	0.00	0.000	86.51	0.01	0.00	0.009
15.40	0.00	0.000	86.51	0.01	0.00	0.009
15.45	0.00	0.000	86.51	0.00	0.00	0.009
15.50	0.00	0.000	86.51	0.00	0.00	0.009
15.55	0.00	0.000	86.51	0.00	0.00	0.009
15.60	0.00	0.000	86.51	0.00	0.00	0.009
15.65	0.00	0.000	86.51	0.00	0.00	0.009
15.70	0.00	0.000	86.51	0.00	0.00	0.009
15.75	0.00	0.000	86.51	0.00	0.00	0.009
15.80	0.00	0.000	86.51	0.00	0.00	0.009
15.85	0.00	0.000	86.51	0.00	0.00	0.009
15.90	0.00	0.000	86.51	0.00	0.00	0.009
15.95	0.00	0.000	86.51	0.00	0.00	0.009
16.00	0.00	0.000	86.51	0.00	0.00	0.009
16.05	0.00	0.000	86.51	0.00	0.00	0.009
16.10	0.00	0.000	86.51	0.00	0.00	0.009
16.15	0.00	0.000	86.51	0.00	0.00	0.009
16.20	0.00	0.000	86.51	0.00	0.00	0.009
16.25	0.00	0.000	86.51	0.00	0.00	0.010
16.30	0.00	0.000	86.51	0.00	0.00	0.010
16.35	0.00	0.000	86.51	0.00	0.00	0.010
16.40	0.00	0.000	86.51	0.00	0.00	0.010
16.45	0.00	0.000	86.51	0.00	0.00	0.010
16.50	0.00	0.000	86.51	0.00	0.00	0.010
16.55	0.00	0.000	86.51	0.00	0.00	0.010
16.60	0.00	0.000	86.51	0.00	0.00	0.010
16.65	0.00	0.000	86.51	0.00	0.00	0.010
16.70	0.00	0.000	86.51	0.00	0.00	0.010
16.75	0.00	0.000	86.51	0.00	0.00	0.010
16.80	0.00	0.000	86.51	0.00	0.00	0.010
16.85	0.00	0.000	86.51	0.00	0.00	0.010
16.90	0.00	0.000	86.51	0.00	0.00	0.010
16.95	0.00	0.000	86.51	0.00	0.00	0.010
17.00	0.00	0.000	86.51	0.00	0.00	0.010
17.05	0.00	0.000	86.51	0.00	0.00	0.010
17.10	0.00	0.000	86.51	0.00	0.00	0.010
17.15	0.00	0.000	86.51	0.00	0.00	0.010
17.20	0.00	0.000	86.51	0.00	0.00	0.010
17.25	0.00	0.000	86.51	0.00	0.00	0.010
17.30	0.00	0.000	86.51	0.00	0.00	0.010
17.35	0.00	0.000	86.51	0.00	0.00	0.010
17.40	0.00	0.000	86.51	0.00	0.00	0.010
17.45	0.00	0.000	86.51	0.00	0.00	0.010
17.50	0.00	0.000	86.51	0.00	0.00	0.010
17.55	0.00	0.000	86.51	0.00	0.00	0.010
17.60	0.00	0.000	86.51	0.00	0.00	0.010
17.65	0.00	0.000	86.51	0.00	0.00	0.010
17.70	0.00	0.000	86.51	0.00	0.00	0.010
17.75	0.00	0.000	86.51	0.00	0.00	0.010

Hydrograph for Pond RET1: RET1 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Discarded (cfs)	Primary (cfs)	Outflow-Volume (acre-feet)
17.80	0.00	0.000	86.51	0.00	0.00	0.010
17.85	0.00	0.000	86.51	0.00	0.00	0.010
17.90	0.00	0.000	86.51	0.00	0.00	0.010
17.95	0.00	0.000	86.51	0.00	0.00	0.010
18.00	0.00	0.000	86.51	0.00	0.00	0.010
18.05	0.00	0.000	86.51	0.00	0.00	0.010
18.10	0.00	0.000	86.51	0.00	0.00	0.010
18.15	0.00	0.000	86.51	0.00	0.00	0.010
18.20	0.00	0.000	86.51	0.00	0.00	0.010
18.25	0.00	0.000	86.51	0.00	0.00	0.010
18.30	0.00	0.000	86.51	0.00	0.00	0.010
18.35	0.00	0.000	86.51	0.00	0.00	0.010
18.40	0.00	0.000	86.51	0.00	0.00	0.010
18.45	0.00	0.000	86.51	0.00	0.00	0.010
18.50	0.00	0.000	86.51	0.00	0.00	0.010
18.55	0.00	0.000	86.51	0.00	0.00	0.010
18.60	0.00	0.000	86.51	0.00	0.00	0.010
18.65	0.00	0.000	86.51	0.00	0.00	0.010
18.70	0.00	0.000	86.51	0.00	0.00	0.010
18.75	0.00	0.000	86.51	0.00	0.00	0.010
18.80	0.00	0.000	86.51	0.00	0.00	0.010
18.85	0.00	0.000	86.51	0.00	0.00	0.010
18.90	0.00	0.000	86.51	0.00	0.00	0.010
18.95	0.00	0.000	86.51	0.00	0.00	0.010
19.00	0.00	0.000	86.51	0.00	0.00	0.010
19.05	0.00	0.000	86.51	0.00	0.00	0.010
19.10	0.00	0.000	86.51	0.00	0.00	0.010
19.15	0.00	0.000	86.51	0.00	0.00	0.010
19.20	0.00	0.000	86.51	0.00	0.00	0.010
19.25	0.00	0.000	86.51	0.00	0.00	0.010
19.30	0.00	0.000	86.51	0.00	0.00	0.010
19.35	0.00	0.000	86.51	0.00	0.00	0.010
19.40	0.00	0.000	86.51	0.00	0.00	0.010
19.45	0.00	0.000	86.51	0.00	0.00	0.010
19.50	0.00	0.000	86.51	0.00	0.00	0.010
19.55	0.00	0.000	86.51	0.00	0.00	0.010
19.60	0.00	0.000	86.51	0.00	0.00	0.010
19.65	0.00	0.000	86.51	0.00	0.00	0.010
19.70	0.00	0.000	86.51	0.00	0.00	0.010
19.75	0.00	0.000	86.51	0.00	0.00	0.010
19.80	0.00	0.000	86.51	0.00	0.00	0.010
19.85	0.00	0.000	86.51	0.00	0.00	0.010
19.90	0.00	0.000	86.50	0.00	0.00	0.010
19.95	0.00	0.000	86.50	0.00	0.00	0.010
20.00	0.00	0.000	86.50	0.00	0.00	0.011

SITE SOILS DATA



Commonwealth of Massachusetts
City/Town of Medway, MA (Stormwater Management)

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

A. Facility Information

7 Sanford Street LLC

Owner Name

7 Sanford Street

Street Address

Medway

City

MA

State

60-088

Map/Lot #

02053

Zip Code

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☒ Yes ☐ No If yes:

NRCS-Websoil
Survey

626B
Soil Map Unit

Merrimac-Urban Land Complex

Soil Name

Soil Limitations

Loamy Glaciofluvial Deposits over sandy and
gravelly deposits.

Outwash Plains, Outwash Terraces, Moraines, Eskers
Landform

3. Surficial Geological Report Available? ☐ Yes ☐ No

If yes:

Year Published/Source

Map Unit

Description of Geologic Map Unit:

4. Flood Rate Insurance Map Within a regulatory floodway? ☐ Yes ☒ No

5. Within a velocity zone? ☐ Yes ☒ No

6. Within a Mapped Wetland Area? ☐ Yes ☐ No

If yes, MassGIS Wetland Data Layer:

Wetland Type

7. Current Water Resource Conditions (USGS):

Month/Day/ Year

Range: ☐ Above Normal

☐ Normal

☐ Below Normal

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of Medway, MA (Stormwater Management)

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: TP1 3/19/2023 8:10 am Sunny, T=38d - F 42.139-N 71.397-W
 Hole # Date Time Weather Latitude Longitude:
 1. Land Use Residential Lawn None 7.5%+/-
 (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: Loamy Glaciofluvial Deposits over sandy and gravelly deposits. Outwash Plain BS
 Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body N/A feet Drainage Way N/A feet Wetlands N/A feet
 Property Line 21.0 feet Drinking Water Well N/A feet Other - feet

4. Unsuitable Materials Present: ☐ Yes ☒ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-20"	A	Loam	7.5YR3/2	-	-	-	-	-	-	-	-
20"-32"	B	Sandy Loam	7.5YR4/4	-	-	-	-	-	-	-	-
32"-46"	C1	Loamy Sand	10YR4/6	-	-	-	10%	-	-	-	-
46"-96"	C2	Sand	7.5YR5/4	-	-	-	10%	10%	-	-	-

Additional Notes:

Bottom of Test Pit at 96.0" (Elev.=84.50)



Commonwealth of Massachusetts
City/Town of Medway, MA (Stormwater Management)

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number:

Hole # _____ Date _____ Time _____ Weather _____ Latitude _____ Longitude: _____

1. Land Use: _____ (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation _____ Surface Stones (e.g., cobbles, stones, boulders, etc.) _____ Slope (%) _____

Description of Location: _____

2. Soil Parent Material: _____ Landform _____ Position on Landscape (SU, SH, BS, FS, TS) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable

Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☐ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			

Additional Notes: _____



Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method Used:

☒ Depth observed standing water in observation hole

Obs. Hole # TP1

Obs. Hole # _____

96.0 (Bot. of TP) inches

_____ inches

☐ Depth weeping from side of observation hole

_____ inches

_____ inches

☐ Depth to soil redoximorphic features (mottles)

_____ inches

_____ inches

☐ Depth to adjusted seasonal high groundwater (S_h)
(USGS methodology)

_____ inches

_____ inches

Index Well Number _____

Reading Date _____

$$S_h = S_c - [S_r \times (OW_c - OW_{max}) / OW_r]$$

Obs. Hole/Well# _____ S_c _____ S_r _____ OW_c _____ OW_{max} _____ OW_r _____ S_h _____

2. Estimated Depth to High Groundwater: _____ inches

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?

☒ Yes ☐ No

b. If yes, at what depth was it observed (exclude A and O Horizons)?

Upper boundary: 20.0"
inches

Lower boundary: 96.0"
inches

c. If no, at what depth was impervious material observed?

Upper boundary: _____
inches

Lower boundary: _____
inches



Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Anthony Stella

Signature of Soil Evaluator

April 19, 2023

Date

Anthony Stella, P.E. / S.E. #2342

Typed or Printed Name of Soil Evaluator / License #

June 30, 2025

Expiration Date of License

Name of Approving Authority Witness

Approving Authority

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.

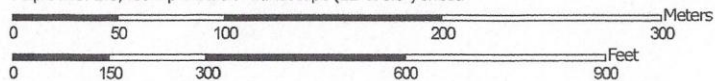
Field Diagrams: Use this area for field diagrams:

Soil Map—Norfolk and Suffolk Counties, Massachusetts
(7 Sanford St. Site Plan, Medway, MA - #0321)



Soil Map may not be valid at this scale.

Map Scale: 1:3,480 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

1/25/2023
Page 1 of 3

Soil Map—Norfolk and Suffolk Counties, Massachusetts
(7 Sanford St. Site Plan, Medway, MA - #0321)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Norfolk and Suffolk Counties, Massachusetts

Survey Area Data: Version 18, Sep 9, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
30	Raynham silt loam, 0 to 3 percent slopes	0.0	0.0%
223B	Scio very fine sandy loam, 2 to 5 percent slopes	10.3	17.3%
245B	Hinckley loamy sand, 3 to 8 percent slopes	0.8	1.3%
245C	Hinckley loamy sand, 8 to 15 percent slopes	5.6	9.4%
253D	Hinckley loamy sand, 15 to 35 percent slopes	4.4	7.4%
305D	Paxton fine sandy loam, 15 to 25 percent slopes	1.1	1.9%
626B	Merrimac-Urban land complex, 0 to 8 percent slopes	36.3	61.1%
653	Udorthents, sandy	0.9	1.5%
Totals for Area of Interest		59.4	100.0%

Norfolk and Suffolk Counties, Massachusetts

626B—Merrimac-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyr9

Elevation: 0 to 820 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 250 days

Farmland classification: Not prime farmland

Map Unit Composition

Merrimac and similar soils: 45 percent

Urban land: 40 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Outwash plains, outwash terraces, moraines, eskers, kames

Landform position (two-dimensional): Summit, shoulder, backslope, footslope

Landform position (three-dimensional): Side slope, crest, riser, tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam

Bw1 - 10 to 22 inches: fine sandy loam

Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand

2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to very high (1.42 to 99.90 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 2 percent

Maximum salinity: Nonsaline (0.0 to 1.4 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: A

Ecological site: F144AY022MA - Dry Outwash

Hydric soil rating: No

Description of Urban Land

Typical profile

M - 0 to 10 inches: cemented material

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: 0 inches to manufactured layer

Runoff class: Very high

*Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)*

Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

Hydric soil rating: Unranked

Minor Components

Windsor

Percent of map unit: 5 percent

Landform: Outwash terraces, dunes, outwash plains, deltas

Landform position (three-dimensional): Tread, riser

Down-slope shape: Linear, convex

Across-slope shape: Linear, convex

Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent

Landform: Deltas, terraces, outwash plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread, dip

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent

Landform: Deltas, kames, eskers, outwash plains

Landform position (two-dimensional): Summit, shoulder, backslope

*Landform position (three-dimensional): Head slope, nose slope,
side slope, crest, rise*

Down-slope shape: Convex

Across-slope shape: Convex, linear
Hydric soil rating: No

Data Source Information

Soil Survey Area: Norfolk and Suffolk Counties, Massachusetts
Survey Area Data: Version 18, Sep 9, 2022

RIVER STREET

PREDEVELOPMENT STORMWATER MANAGEMENT ANALYSIS

NRCS SOILS CLASSIFICATIONS:
626B - MERRIMAC-URBAN LAND COMPLEX; HSG-A

WATERSHED
BOUNDARY

WATERSHED
BOUNDARY

W.S. 1
Area = 22,504.3 sf
CN = 75
Tc = 6.0 min.

#7
2.5 STORY
WOOD FRAME
DWELLING

RETAINING WALL
(TYPICAL)

SANFORD STREET

MANSION STREET

SITE PLAN
FOR
PROPOSED BUILDING
AND SITE IMPROVEMENTS
AT
7 SANFORD STREET
MEDWAY, MA 02053

PREPARED FOR: 7 SANFORD STREET LLC
7 SANFORD STREET
MEDWAY, MA 02053

Site Engineering Consultants, Inc.
55 Grape Shot Road
Sharon, Massachusetts 02067
TEL: (781) 784-0320
FAX: (781) 784-0492
CONSULTING CIVIL ENGINEERS

EXISTING CONDITIONS

SCALE: AS NOTED DATE: 03/23/2023

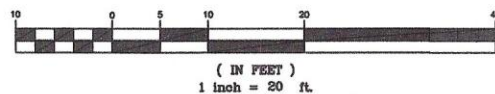
DRAWN BY: A.S.

CHECKED BY:

PROJECT NO: 0321

SHEET 1 OF 1

GRAPHIC SCALE



RIVER STREET

POST-DEVELOPMENT STORMWATER MANAGEMENT ANALYSIS

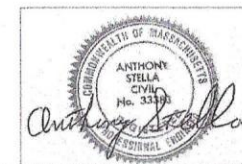
NRCS SOILS CLASSIFICATIONS:
626B - MERRIMAC-URBAN LAND COMPLEX; HSG-A

W.S. 1
Area = 8911.1 sf
CN = 63
Tc = 6.0 min.

W.S. 3
Area = 7493.6 sf
CN = 81
Tc = 6.0 min.

W.S. 4
Area = 2179.2 sf
CN = 70
Tc = 6.0 min.

W.S. 2
Area = 3974.4 sf
CN = 98
Tc = 6.0 min.



SITE PLAN
FOR
PROPOSED BUILDING
AND SITE IMPROVEMENTS
AT
7 SANFORD STREET
MEDWAY, MA 02053

PREPARED FOR: 7 SANFORD STREET LLC
7 SANFORD STREET
MEDWAY, MA 02053

Site Engineering Consultants, Inc.
55 Grape Shot Road
Sharon, Massachusetts 02067
TEL: (781) 784-0328
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PROPOSED SITE PLAN

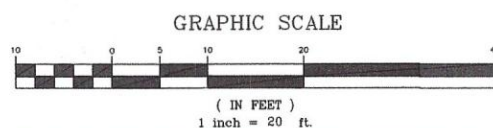
SCALE: AS NOTED DATE: 03/23/2023

DRAWN BY: A.S.

CHECKED BY:

PROJECT NO: 0321

SHEET 1 OF 1



SANFORD STREET

MANSION STREET

JOHN STREET

