

Stormwater Summary

The following analysis has been provided to review stormwater runoff associated with existing and proposed mining operations.

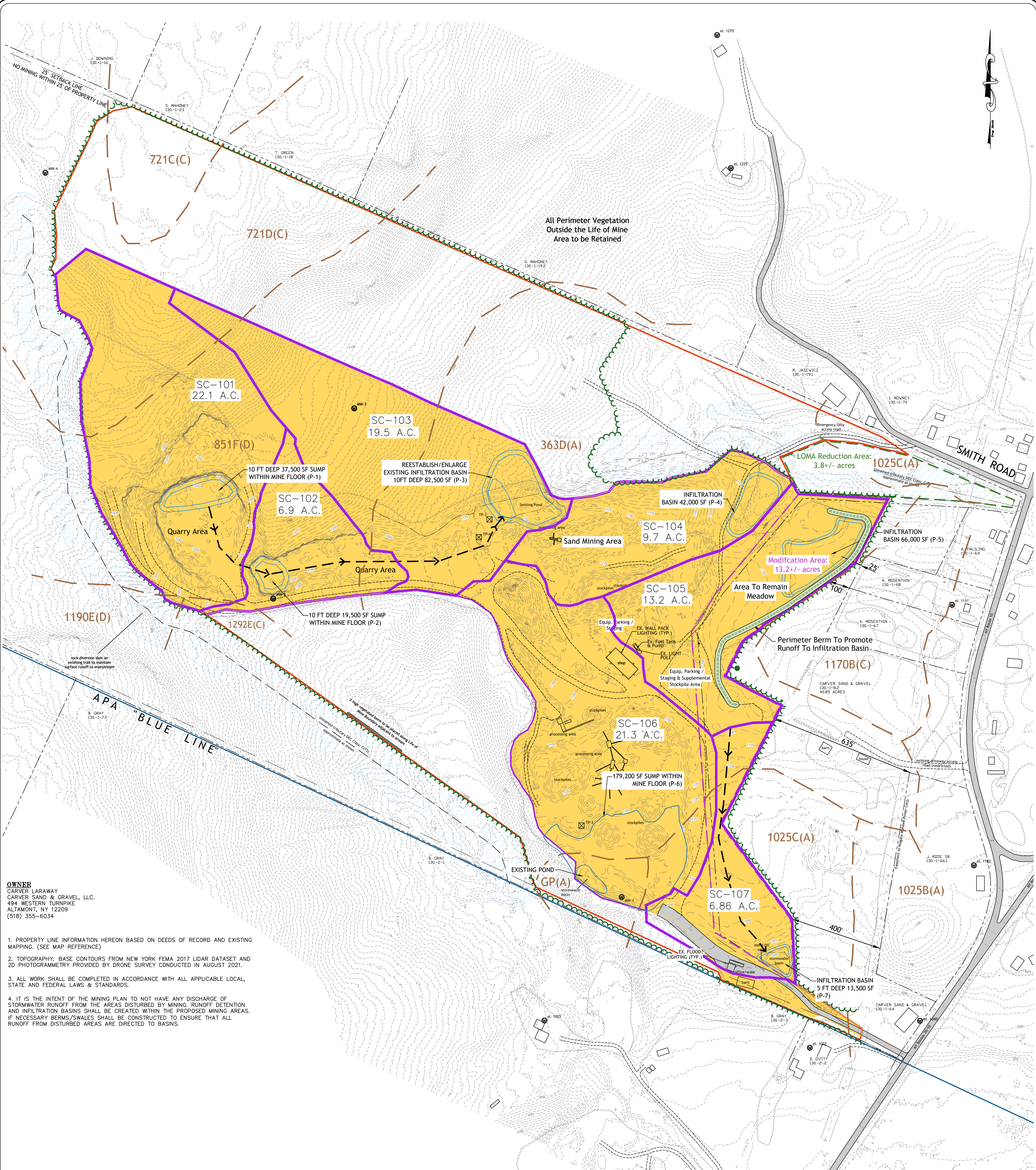
The current mine contains sumps within the rock and sand quarry floors, which attenuate stormwater runoff, prior to discharge to infiltration basins within the sand and gravel portions of the mine.

As demonstrated on the accompanying stormwater management plan and Hydrocad analysis, the combination of mine sumps within the quarry floors and infiltration basins within the sand and gravel portions of the mine provide adequate storage of stormwater runoff for the 100-year, 24-hour storm event without discharge from the proposed LOM. To account for frozen ground conditions infiltration basins have been modeled without infiltration.

As with existing operations, the majority of any surface runoff adjacent to the mine will continue to be intercepted by existing unnamed streams and diverted around the mine. These streams continue to flow southeast ultimately discharging into the Caroga Creek.



Stormwater Management Plan



OWNER
 CARVER LARAWAY
 CARVER SAND & GRAVEL, LLC.
 494 WESTERN TURNPIKE
 ALAMONT, NY 12209
 (518) 355-6034

1. PROPERTY LINE INFORMATION HEREON BASED ON DEEDS OF RECORD AND EXISTING MAPPING. (SEE MAP REFERENCE)
2. TOPOGRAPHY: BASE CONTOURS FROM NEW YORK FEMA 2017 LIDAR DATASET AND 2D PHOTOGRAMMETRY PROVIDED BY DRONE SURVEY CONDUCTED IN AUGUST 2021.
3. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL LAWS & STANDARDS.
4. IT IS THE INTENT OF THE MINING PLAN TO NOT HAVE ANY DISCHARGE OF STORMWATER RUNOFF FROM THE AREAS DISTURBED BY MINING. RUNOFF DETENTION AND INFILTRATION BASINS SHALL BE CREATED WITHIN THE PROPOSED MINING AREAS. IF NECESSARY BERMS/SWALES SHALL BE CONSTRUCTED TO ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS ARE DIRECTED TO BASINS.

LEGEND

- EXISTING TREELINE
 - EXISTING CONTOUR
 - ROAD- PAVED
 - ROAD- UNPAVED
 - BUILDING/STRUCTURE
 - OVERHEAD UTILITY POLE
 - WELL LOCATION
 - TEST PIT LOCATION
 - STONE WALL
 - PROPERTY LINE
 - DRAINAGE SUBCATCHMENTS
 - LIFE OF MINE
 - STREAM BUFFER
 - AREA TO BE AFFECTED DURING THE PERMIT TERM 2021-2026:
 - SOIL BOUNDARY
- FOR INFORMATION ONLY
NOT FOR CONSTRUCTION

NOTE: 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL CONTACT DIG SAFELY NEW YORK TO LOCATE ALL UNDERGROUND UTILITIES. 1-800-962-7962

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7209 SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY COPIES MADE FROM THE ORIGINAL OF THIS DRAWING BEARING AN ORIGINAL INKED OR EMBOSSED SEAL AND SIGNATURE SHALL BE CONSIDERED TO BE VALID TRUE COPIES.		© Copyright 2015 - Ingalls & Associates, LLP - All rights reserved	
NO.	DATE	REVISIONS	BY:
1	5-4-22	REVISED PER NYSDEC COMMENTS	PJY

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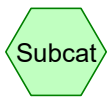
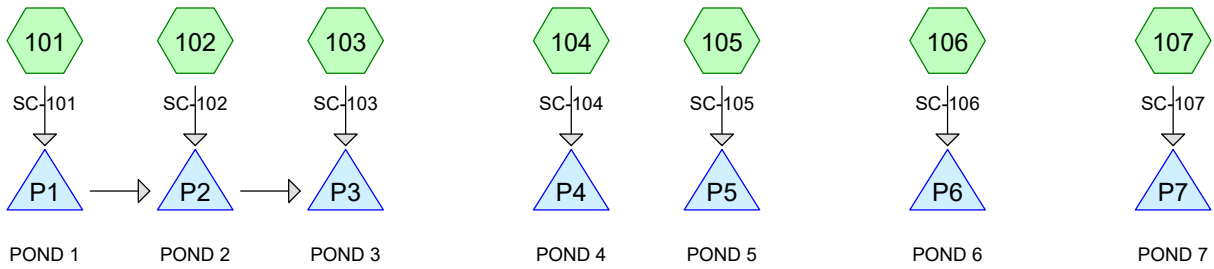
STORMWATER MANAGEMENT PLAN
 CARVER SAND & GRAVEL, LLC
 NYSDEC MLF #50766 & APA PERMIT #2008-0246C
 TOWN OF EPHRAATAH
 COUNTY OF FULTON STATE OF NEW YORK

DATE: SEPTEMBER 24, 2021
 CHECKED BY: JOB NO. 08-119
 DRAWN BY:
 CADD:

SCALE: 1" = 200'
 SHEET 1 OF 1

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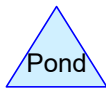
HydroCad Analysis



Subcat



Reach



Pond



Link

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

Prepared by Avatara

Printed 5/4/2022

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 101: SC-101	Runoff Area=22.100 ac 0.00% Impervious Runoff Depth=5.73" Tc=6.0 min CN=96 Runoff=188.10 cfs 10.546 af
Subcatchment 102: SC-102	Runoff Area=6.900 ac 0.00% Impervious Runoff Depth=5.73" Tc=6.0 min CN=96 Runoff=58.73 cfs 3.293 af
Subcatchment 103: SC-103	Runoff Area=19.500 ac 0.00% Impervious Runoff Depth=5.73" Tc=6.0 min CN=96 Runoff=165.97 cfs 9.306 af
Subcatchment 104: SC-104	Runoff Area=9.700 ac 0.00% Impervious Runoff Depth=5.73" Tc=6.0 min CN=96 Runoff=82.56 cfs 4.629 af
Subcatchment 105: SC-105	Runoff Area=13.200 ac 0.00% Impervious Runoff Depth=2.14" Tc=6.0 min CN=61 Runoff=48.92 cfs 2.355 af
Subcatchment 106: SC-106	Runoff Area=21.300 ac 0.00% Impervious Runoff Depth=5.73" Tc=6.0 min CN=96 Runoff=181.29 cfs 10.165 af
Subcatchment 107: SC-107	Runoff Area=6.860 ac 0.00% Impervious Runoff Depth=1.63" Flow Length=1,050' Tc=14.1 min CN=55 Runoff=13.64 cfs 0.934 af
Pond P1: POND 1	Peak Elev=1,244.79' Storage=289,075 cf Inflow=188.10 cfs 10.546 af Outflow=27.95 cfs 4.570 af
Pond P2: POND 2	Peak Elev=1,187.48' Storage=137,127 cf Inflow=58.73 cfs 7.863 af Outflow=22.41 cfs 4.919 af
Pond P3: POND 3	Peak Elev=1,158.78' Storage=619,633 cf Inflow=165.97 cfs 14.225 af Outflow=0.00 cfs 0.000 af
Pond P4: POND 4	Peak Elev=1,088.66' Storage=201,638 cf Inflow=82.56 cfs 4.629 af Outflow=0.00 cfs 0.000 af
Pond P5: POND 5	Peak Elev=1,108.90' Storage=102,565 cf Inflow=48.92 cfs 2.355 af Outflow=0.00 cfs 0.000 af
Pond P6: POND 6	Peak Elev=1,091.50' Storage=442,773 cf Inflow=181.29 cfs 10.165 af Outflow=0.00 cfs 0.000 af
Pond P7: POND 7	Peak Elev=1,078.71' Storage=40,691 cf Inflow=13.64 cfs 0.934 af Outflow=0.00 cfs 0.000 af

Total Runoff Area = 99.560 ac Runoff Volume = 41.227 af Average Runoff Depth = 4.97"
100.00% Pervious = 99.560 ac 0.00% Impervious = 0.000 ac

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

Prepared by Avatara

Printed 5/4/2022

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Summary for Subcatchment 101: SC-101

Runoff = 188.10 cfs @ 11.96 hrs, Volume= 10.546 af, Depth= 5.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.20"

Area (ac)	CN	Description
22.100	96	Gravel surface, HSG D
22.100		100.00% Pervious Area

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

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

Prepared by Avatara

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Hydrograph for Subcatchment 101: SC-101

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	6.20	5.73	0.00
0.50	0.03	0.00	0.00	26.50	6.20	5.73	0.00
1.00	0.07	0.00	0.00	27.00	6.20	5.73	0.00
1.50	0.10	0.00	0.07	27.50	6.20	5.73	0.00
2.00	0.14	0.01	0.31	28.00	6.20	5.73	0.00
2.50	0.17	0.02	0.53	28.50	6.20	5.73	0.00
3.00	0.21	0.03	0.72	29.00	6.20	5.73	0.00
3.50	0.25	0.05	0.90	29.50	6.20	5.73	0.00
4.00	0.30	0.07	1.06	30.00	6.20	5.73	0.00
4.50	0.34	0.10	1.25				
5.00	0.39	0.13	1.44				
5.50	0.44	0.17	1.63				
6.00	0.50	0.21	1.82				
6.50	0.55	0.25	2.01				
7.00	0.61	0.30	2.19				
7.50	0.68	0.35	2.38				
8.00	0.74	0.41	2.55				
8.50	0.82	0.47	3.12				
9.00	0.91	0.55	3.80				
9.50	1.01	0.64	3.98				
10.00	1.12	0.74	4.87				
10.50	1.26	0.87	6.39				
11.00	1.46	1.05	8.90				
11.50	1.75	1.34	14.70				
12.00	4.11	3.65	173.70				
12.50	4.56	4.09	14.83				
13.00	4.79	4.32	9.03				
13.50	4.95	4.49	6.81				
14.00	5.08	4.62	5.34				
14.50	5.19	4.72	4.69				
15.00	5.29	4.82	4.21				
15.50	5.38	4.91	3.73				
16.00	5.46	4.99	3.25				
16.50	5.53	5.05	3.02				
17.00	5.59	5.12	2.85				
17.50	5.65	5.18	2.68				
18.00	5.71	5.24	2.51				
18.50	5.76	5.29	2.34				
19.00	5.81	5.34	2.16				
19.50	5.86	5.39	1.99				
20.00	5.90	5.43	1.82				
20.50	5.94	5.47	1.76				
21.00	5.98	5.51	1.73				
21.50	6.02	5.55	1.69				
22.00	6.06	5.58	1.66				
22.50	6.09	5.62	1.62				
23.00	6.13	5.66	1.59				
23.50	6.17	5.69	1.55				
24.00	6.20	5.73	1.52				
24.50	6.20	5.73	0.00				
25.00	6.20	5.73	0.00				
25.50	6.20	5.73	0.00				

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Subcatchment 102: SC-102

Runoff = 58.73 cfs @ 11.96 hrs, Volume= 3.293 af, Depth= 5.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.20"

Area (ac)	CN	Description
6.900	96	Gravel surface, HSG D
6.900		100.00% Pervious Area

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

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Subcatchment 102: SC-102

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	6.20	5.73	0.00
0.50	0.03	0.00	0.00	26.50	6.20	5.73	0.00
1.00	0.07	0.00	0.00	27.00	6.20	5.73	0.00
1.50	0.10	0.00	0.02	27.50	6.20	5.73	0.00
2.00	0.14	0.01	0.10	28.00	6.20	5.73	0.00
2.50	0.17	0.02	0.16	28.50	6.20	5.73	0.00
3.00	0.21	0.03	0.23	29.00	6.20	5.73	0.00
3.50	0.25	0.05	0.28	29.50	6.20	5.73	0.00
4.00	0.30	0.07	0.33	30.00	6.20	5.73	0.00
4.50	0.34	0.10	0.39				
5.00	0.39	0.13	0.45				
5.50	0.44	0.17	0.51				
6.00	0.50	0.21	0.57				
6.50	0.55	0.25	0.63				
7.00	0.61	0.30	0.69				
7.50	0.68	0.35	0.74				
8.00	0.74	0.41	0.80				
8.50	0.82	0.47	0.97				
9.00	0.91	0.55	1.19				
9.50	1.01	0.64	1.24				
10.00	1.12	0.74	1.52				
10.50	1.26	0.87	2.00				
11.00	1.46	1.05	2.78				
11.50	1.75	1.34	4.59				
12.00	4.11	3.65	54.23				
12.50	4.56	4.09	4.63				
13.00	4.79	4.32	2.82				
13.50	4.95	4.49	2.13				
14.00	5.08	4.62	1.67				
14.50	5.19	4.72	1.46				
15.00	5.29	4.82	1.31				
15.50	5.38	4.91	1.16				
16.00	5.46	4.99	1.01				
16.50	5.53	5.05	0.94				
17.00	5.59	5.12	0.89				
17.50	5.65	5.18	0.84				
18.00	5.71	5.24	0.78				
18.50	5.76	5.29	0.73				
19.00	5.81	5.34	0.68				
19.50	5.86	5.39	0.62				
20.00	5.90	5.43	0.57				
20.50	5.94	5.47	0.55				
21.00	5.98	5.51	0.54				
21.50	6.02	5.55	0.53				
22.00	6.06	5.58	0.52				
22.50	6.09	5.62	0.51				
23.00	6.13	5.66	0.50				
23.50	6.17	5.69	0.49				
24.00	6.20	5.73	0.47				
24.50	6.20	5.73	0.00				
25.00	6.20	5.73	0.00				
25.50	6.20	5.73	0.00				

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Subcatchment 103: SC-103

Runoff = 165.97 cfs @ 11.96 hrs, Volume= 9.306 af, Depth= 5.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.20"

Area (ac)	CN	Description
19.500	96	Gravel surface, HSG D
19.500		100.00% Pervious Area

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

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Subcatchment 103: SC-103

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	6.20	5.73	0.00
0.50	0.03	0.00	0.00	26.50	6.20	5.73	0.00
1.00	0.07	0.00	0.00	27.00	6.20	5.73	0.00
1.50	0.10	0.00	0.06	27.50	6.20	5.73	0.00
2.00	0.14	0.01	0.28	28.00	6.20	5.73	0.00
2.50	0.17	0.02	0.46	28.50	6.20	5.73	0.00
3.00	0.21	0.03	0.64	29.00	6.20	5.73	0.00
3.50	0.25	0.05	0.79	29.50	6.20	5.73	0.00
4.00	0.30	0.07	0.94	30.00	6.20	5.73	0.00
4.50	0.34	0.10	1.10				
5.00	0.39	0.13	1.27				
5.50	0.44	0.17	1.44				
6.00	0.50	0.21	1.61				
6.50	0.55	0.25	1.77				
7.00	0.61	0.30	1.94				
7.50	0.68	0.35	2.10				
8.00	0.74	0.41	2.25				
8.50	0.82	0.47	2.75				
9.00	0.91	0.55	3.35				
9.50	1.01	0.64	3.52				
10.00	1.12	0.74	4.30				
10.50	1.26	0.87	5.64				
11.00	1.46	1.05	7.85				
11.50	1.75	1.34	12.97				
12.00	4.11	3.65	153.27				
12.50	4.56	4.09	13.08				
13.00	4.79	4.32	7.97				
13.50	4.95	4.49	6.01				
14.00	5.08	4.62	4.71				
14.50	5.19	4.72	4.14				
15.00	5.29	4.82	3.72				
15.50	5.38	4.91	3.29				
16.00	5.46	4.99	2.87				
16.50	5.53	5.05	2.67				
17.00	5.59	5.12	2.51				
17.50	5.65	5.18	2.36				
18.00	5.71	5.24	2.21				
18.50	5.76	5.29	2.06				
19.00	5.81	5.34	1.91				
19.50	5.86	5.39	1.76				
20.00	5.90	5.43	1.61				
20.50	5.94	5.47	1.55				
21.00	5.98	5.51	1.52				
21.50	6.02	5.55	1.49				
22.00	6.06	5.58	1.46				
22.50	6.09	5.62	1.43				
23.00	6.13	5.66	1.40				
23.50	6.17	5.69	1.37				
24.00	6.20	5.73	1.34				
24.50	6.20	5.73	0.00				
25.00	6.20	5.73	0.00				
25.50	6.20	5.73	0.00				

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Subcatchment 104: SC-104

Runoff = 82.56 cfs @ 11.96 hrs, Volume= 4.629 af, Depth= 5.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.20"

Area (ac)	CN	Description
9.700	96	Gravel surface, HSG D
9.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, 6 Min. Minimum

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Subcatchment 104: SC-104

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	6.20	5.73	0.00
0.50	0.03	0.00	0.00	26.50	6.20	5.73	0.00
1.00	0.07	0.00	0.00	27.00	6.20	5.73	0.00
1.50	0.10	0.00	0.03	27.50	6.20	5.73	0.00
2.00	0.14	0.01	0.14	28.00	6.20	5.73	0.00
2.50	0.17	0.02	0.23	28.50	6.20	5.73	0.00
3.00	0.21	0.03	0.32	29.00	6.20	5.73	0.00
3.50	0.25	0.05	0.39	29.50	6.20	5.73	0.00
4.00	0.30	0.07	0.47	30.00	6.20	5.73	0.00
4.50	0.34	0.10	0.55				
5.00	0.39	0.13	0.63				
5.50	0.44	0.17	0.72				
6.00	0.50	0.21	0.80				
6.50	0.55	0.25	0.88				
7.00	0.61	0.30	0.96				
7.50	0.68	0.35	1.04				
8.00	0.74	0.41	1.12				
8.50	0.82	0.47	1.37				
9.00	0.91	0.55	1.67				
9.50	1.01	0.64	1.75				
10.00	1.12	0.74	2.14				
10.50	1.26	0.87	2.81				
11.00	1.46	1.05	3.91				
11.50	1.75	1.34	6.45				
12.00	4.11	3.65	76.24				
12.50	4.56	4.09	6.51				
13.00	4.79	4.32	3.96				
13.50	4.95	4.49	2.99				
14.00	5.08	4.62	2.34				
14.50	5.19	4.72	2.06				
15.00	5.29	4.82	1.85				
15.50	5.38	4.91	1.64				
16.00	5.46	4.99	1.43				
16.50	5.53	5.05	1.33				
17.00	5.59	5.12	1.25				
17.50	5.65	5.18	1.18				
18.00	5.71	5.24	1.10				
18.50	5.76	5.29	1.02				
19.00	5.81	5.34	0.95				
19.50	5.86	5.39	0.87				
20.00	5.90	5.43	0.80				
20.50	5.94	5.47	0.77				
21.00	5.98	5.51	0.76				
21.50	6.02	5.55	0.74				
22.00	6.06	5.58	0.73				
22.50	6.09	5.62	0.71				
23.00	6.13	5.66	0.70				
23.50	6.17	5.69	0.68				
24.00	6.20	5.73	0.67				
24.50	6.20	5.73	0.00				
25.00	6.20	5.73	0.00				
25.50	6.20	5.73	0.00				

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Subcatchment 105: SC-105

Runoff = 48.92 cfs @ 11.98 hrs, Volume= 2.355 af, Depth= 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.20"

Area (ac)	CN	Description
5.000	96	Gravel surface, HSG D
8.200	39	>75% Grass cover, Good, HSG A
13.200	61	Weighted Average
13.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, 6 Min. Minimum

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Subcatchment 105: SC-105

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	6.20	2.14	0.00
0.50	0.03	0.00	0.00	26.50	6.20	2.14	0.00
1.00	0.07	0.00	0.00	27.00	6.20	2.14	0.00
1.50	0.10	0.00	0.00	27.50	6.20	2.14	0.00
2.00	0.14	0.00	0.00	28.00	6.20	2.14	0.00
2.50	0.17	0.00	0.00	28.50	6.20	2.14	0.00
3.00	0.21	0.00	0.00	29.00	6.20	2.14	0.00
3.50	0.25	0.00	0.00	29.50	6.20	2.14	0.00
4.00	0.30	0.00	0.00	30.00	6.20	2.14	0.00
4.50	0.34	0.00	0.00				
5.00	0.39	0.00	0.00				
5.50	0.44	0.00	0.00				
6.00	0.50	0.00	0.00				
6.50	0.55	0.00	0.00				
7.00	0.61	0.00	0.00				
7.50	0.68	0.00	0.00				
8.00	0.74	0.00	0.00				
8.50	0.82	0.00	0.00				
9.00	0.91	0.00	0.00				
9.50	1.01	0.00	0.00				
10.00	1.12	0.00	0.00				
10.50	1.26	0.00	0.00				
11.00	1.46	0.00	0.24				
11.50	1.75	0.03	1.07				
12.00	4.11	0.87	47.36				
12.50	4.56	1.11	4.97				
13.00	4.79	1.24	3.15				
13.50	4.95	1.34	2.43				
14.00	5.08	1.42	1.94				
14.50	5.19	1.49	1.73				
15.00	5.29	1.55	1.57				
15.50	5.38	1.60	1.41				
16.00	5.46	1.65	1.24				
16.50	5.53	1.69	1.16				
17.00	5.59	1.74	1.10				
17.50	5.65	1.78	1.04				
18.00	5.71	1.81	0.98				
18.50	5.76	1.85	0.92				
19.00	5.81	1.88	0.85				
19.50	5.86	1.91	0.79				
20.00	5.90	1.94	0.72				
20.50	5.94	1.97	0.70				
21.00	5.98	1.99	0.69				
21.50	6.02	2.02	0.68				
22.00	6.06	2.04	0.67				
22.50	6.09	2.07	0.66				
23.00	6.13	2.09	0.64				
23.50	6.17	2.12	0.63				
24.00	6.20	2.14	0.62				
24.50	6.20	2.14	0.00				
25.00	6.20	2.14	0.00				
25.50	6.20	2.14	0.00				

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Subcatchment 106: SC-106

Runoff = 181.29 cfs @ 11.96 hrs, Volume= 10.165 af, Depth= 5.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.20"

Area (ac)	CN	Description
* 21.300	96	Gravel surface, HSG A
21.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, 6 Min. Minimum

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Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Subcatchment 106: SC-106

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	6.20	5.73	0.00
0.50	0.03	0.00	0.00	26.50	6.20	5.73	0.00
1.00	0.07	0.00	0.00	27.00	6.20	5.73	0.00
1.50	0.10	0.00	0.07	27.50	6.20	5.73	0.00
2.00	0.14	0.01	0.30	28.00	6.20	5.73	0.00
2.50	0.17	0.02	0.51	28.50	6.20	5.73	0.00
3.00	0.21	0.03	0.69	29.00	6.20	5.73	0.00
3.50	0.25	0.05	0.87	29.50	6.20	5.73	0.00
4.00	0.30	0.07	1.02	30.00	6.20	5.73	0.00
4.50	0.34	0.10	1.20				
5.00	0.39	0.13	1.39				
5.50	0.44	0.17	1.58				
6.00	0.50	0.21	1.76				
6.50	0.55	0.25	1.94				
7.00	0.61	0.30	2.12				
7.50	0.68	0.35	2.29				
8.00	0.74	0.41	2.46				
8.50	0.82	0.47	3.01				
9.00	0.91	0.55	3.66				
9.50	1.01	0.64	3.84				
10.00	1.12	0.74	4.70				
10.50	1.26	0.87	6.16				
11.00	1.46	1.05	8.58				
11.50	1.75	1.34	14.17				
12.00	4.11	3.65	167.41				
12.50	4.56	4.09	14.29				
13.00	4.79	4.32	8.71				
13.50	4.95	4.49	6.56				
14.00	5.08	4.62	5.14				
14.50	5.19	4.72	4.52				
15.00	5.29	4.82	4.06				
15.50	5.38	4.91	3.60				
16.00	5.46	4.99	3.13				
16.50	5.53	5.05	2.91				
17.00	5.59	5.12	2.75				
17.50	5.65	5.18	2.58				
18.00	5.71	5.24	2.42				
18.50	5.76	5.29	2.25				
19.00	5.81	5.34	2.09				
19.50	5.86	5.39	1.92				
20.00	5.90	5.43	1.75				
20.50	5.94	5.47	1.70				
21.00	5.98	5.51	1.66				
21.50	6.02	5.55	1.63				
22.00	6.06	5.58	1.60				
22.50	6.09	5.62	1.56				
23.00	6.13	5.66	1.53				
23.50	6.17	5.69	1.50				
24.00	6.20	5.73	1.46				
24.50	6.20	5.73	0.00				
25.00	6.20	5.73	0.00				
25.50	6.20	5.73	0.00				

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Subcatchment 107: SC-107

Runoff = 13.64 cfs @ 12.08 hrs, Volume= 0.934 af, Depth= 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.20"

Area (ac)	CN	Description
0.850	96	Gravel surface, HSG A
6.010	49	50-75% Grass cover, Fair, HSG A
6.860	55	Weighted Average
6.860		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.2	100	0.0550	0.16		Sheet Flow, 1) Sheet Flow
					Grass: Dense n= 0.240 P2= 2.80"
3.9	950	0.0626	4.03		Shallow Concentrated Flow, 2) SCF
					Unpaved Kv= 16.1 fps
14.1	1,050	Total			

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Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Subcatchment 107: SC-107

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	6.20	1.63	0.00
0.50	0.03	0.00	0.00	26.50	6.20	1.63	0.00
1.00	0.07	0.00	0.00	27.00	6.20	1.63	0.00
1.50	0.10	0.00	0.00	27.50	6.20	1.63	0.00
2.00	0.14	0.00	0.00	28.00	6.20	1.63	0.00
2.50	0.17	0.00	0.00	28.50	6.20	1.63	0.00
3.00	0.21	0.00	0.00	29.00	6.20	1.63	0.00
3.50	0.25	0.00	0.00	29.50	6.20	1.63	0.00
4.00	0.30	0.00	0.00	30.00	6.20	1.63	0.00
4.50	0.34	0.00	0.00				
5.00	0.39	0.00	0.00				
5.50	0.44	0.00	0.00				
6.00	0.50	0.00	0.00				
6.50	0.55	0.00	0.00				
7.00	0.61	0.00	0.00				
7.50	0.68	0.00	0.00				
8.00	0.74	0.00	0.00				
8.50	0.82	0.00	0.00				
9.00	0.91	0.00	0.00				
9.50	1.01	0.00	0.00				
10.00	1.12	0.00	0.00				
10.50	1.26	0.00	0.00				
11.00	1.46	0.00	0.00				
11.50	1.75	0.00	0.01				
12.00	4.11	0.57	10.53				
12.50	4.56	0.77	2.79				
13.00	4.79	0.88	1.46				
13.50	4.95	0.96	1.11				
14.00	5.08	1.02	0.89				
14.50	5.19	1.08	0.77				
15.00	5.29	1.13	0.70				
15.50	5.38	1.17	0.63				
16.00	5.46	1.22	0.56				
16.50	5.53	1.25	0.51				
17.00	5.59	1.29	0.49				
17.50	5.65	1.32	0.47				
18.00	5.71	1.35	0.44				
18.50	5.76	1.38	0.41				
19.00	5.81	1.41	0.39				
19.50	5.86	1.44	0.36				
20.00	5.90	1.46	0.33				
20.50	5.94	1.48	0.31				
21.00	5.98	1.51	0.31				
21.50	6.02	1.53	0.30				
22.00	6.06	1.55	0.30				
22.50	6.09	1.57	0.29				
23.00	6.13	1.59	0.29				
23.50	6.17	1.61	0.28				
24.00	6.20	1.63	0.28				
24.50	6.20	1.63	0.01				
25.00	6.20	1.63	0.00				
25.50	6.20	1.63	0.00				

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Pond P1: POND 1

Inflow Area = 22.100 ac, 0.00% Impervious, Inflow Depth = 5.73" for 100-Year event
 Inflow = 188.10 cfs @ 11.96 hrs, Volume= 10.546 af
 Outflow = 27.95 cfs @ 12.20 hrs, Volume= 4.570 af, Atten= 85%, Lag= 14.1 min
 Primary = 27.95 cfs @ 12.20 hrs, Volume= 4.570 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,244.79' @ 12.20 hrs Surf.Area= 37,150 sf Storage= 289,075 cf
 Flood Elev= 1,245.00' Surf.Area= 37,500 sf Storage= 296,825 cf

Plug-Flow detention time= 312.6 min calculated for 4.563 af (43% of inflow)
 Center-of-Mass det. time= 176.8 min (930.5 - 753.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,235.00'	296,825 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,235.00	22,500	0	0	22,500
1,245.00	37,500	296,825	296,825	38,690

Device	Routing	Invert	Outlet Devices
#1	Primary	1,244.00'	15.0' long x 15.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=27.92 cfs @ 12.20 hrs HW=1,244.79' TW=1,185.83' (Dynamic Tailwater)
 ↑1=**Broad-Crested Rectangular Weir** (Weir Controls 27.92 cfs @ 2.35 fps)

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Pond P1: POND 1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	1,235.00	0.00
1.00	0.00	0	1,235.00	0.00
2.00	0.31	372	1,235.02	0.00
3.00	0.72	2,255	1,235.10	0.00
4.00	1.06	5,480	1,235.24	0.00
5.00	1.44	9,977	1,235.44	0.00
6.00	1.82	15,860	1,235.69	0.00
7.00	2.19	23,098	1,236.00	0.00
8.00	2.55	31,646	1,236.35	0.00
9.00	3.80	42,910	1,236.81	0.00
10.00	4.87	57,834	1,237.40	0.00
11.00	8.90	81,522	1,238.30	0.00
12.00	173.70	249,197	1,243.69	0.00
13.00	9.03	275,901	1,244.43	11.61
14.00	5.34	270,595	1,244.29	6.27
15.00	4.21	268,609	1,244.23	4.57
16.00	3.25	267,366	1,244.20	3.60
17.00	2.85	266,547	1,244.18	3.00
18.00	2.51	266,028	1,244.16	2.65
19.00	2.16	265,515	1,244.15	2.31
20.00	1.82	264,980	1,244.13	1.97
21.00	1.73	264,652	1,244.12	1.78
22.00	1.66	264,511	1,244.12	1.69
23.00	1.59	264,390	1,244.12	1.62
24.00	1.52	264,269	1,244.11	1.55
25.00	0.00	261,731	1,244.04	0.37
26.00	0.00	260,938	1,244.02	0.13
27.00	0.00	260,624	1,244.01	0.06
28.00	0.00	260,468	1,244.01	0.03
29.00	0.00	260,380	1,244.01	0.02
30.00	0.00	260,325	1,244.00	0.01

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Pond P2: POND 2

Inflow Area = 29.000 ac, 0.00% Impervious, Inflow Depth > 3.25" for 100-Year event
 Inflow = 58.73 cfs @ 11.96 hrs, Volume= 7.863 af
 Outflow = 22.41 cfs @ 12.60 hrs, Volume= 4.919 af, Atten= 62%, Lag= 38.1 min
 Primary = 22.41 cfs @ 12.60 hrs, Volume= 4.919 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,187.48' @ 12.60 hrs Surf.Area= 18,956 sf Storage= 137,127 cf
 Flood Elev= 1,188.00' Surf.Area= 19,500 sf Storage= 147,136 cf

Plug-Flow detention time= 258.0 min calculated for 4.911 af (62% of inflow)
 Center-of-Mass det. time= 119.9 min (976.3 - 856.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,178.00'	147,136 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,178.00	10,400	0	0	10,400
1,188.00	19,500	147,136	147,136	20,457

Device	Routing	Invert	Outlet Devices
#1	Primary	1,187.00'	25.0' long x 15.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=22.38 cfs @ 12.60 hrs HW=1,187.48' TW=1,154.56' (Dynamic Tailwater)
 ↑1=**Broad-Crested Rectangular Weir** (Weir Controls 22.38 cfs @ 1.87 fps)

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Pond P2: POND 2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	1,178.00	0.00
1.00	0.00	0	1,178.00	0.00
2.00	0.10	116	1,178.01	0.00
3.00	0.23	704	1,178.07	0.00
4.00	0.33	1,711	1,178.16	0.00
5.00	0.45	3,115	1,178.30	0.00
6.00	0.57	4,952	1,178.47	0.00
7.00	0.69	7,212	1,178.68	0.00
8.00	0.80	9,881	1,178.92	0.00
9.00	1.19	13,397	1,179.23	0.00
10.00	1.52	18,057	1,179.64	0.00
11.00	2.78	25,453	1,180.25	0.00
12.00	54.23	77,804	1,184.04	0.00
13.00	14.44	135,184	1,187.38	15.59
14.00	7.94	132,792	1,187.25	8.36
15.00	5.88	131,892	1,187.20	6.04
16.00	4.61	131,342	1,187.17	4.77
17.00	3.89	130,972	1,187.15	3.96
18.00	3.43	130,743	1,187.14	3.49
19.00	2.98	130,518	1,187.13	3.05
20.00	2.54	130,284	1,187.11	2.61
21.00	2.31	130,134	1,187.11	2.34
22.00	2.21	130,070	1,187.10	2.22
23.00	2.12	130,016	1,187.10	2.13
24.00	2.03	129,964	1,187.10	2.04
25.00	0.37	128,900	1,187.04	0.54
26.00	0.13	128,525	1,187.02	0.19
27.00	0.06	128,376	1,187.01	0.09
28.00	0.03	128,302	1,187.01	0.05
29.00	0.02	128,260	1,187.01	0.03
30.00	0.01	128,234	1,187.00	0.02

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Pond P3: POND 3

Inflow Area = 48.500 ac, 0.00% Impervious, Inflow Depth > 3.52" for 100-Year event
 Inflow = 165.97 cfs @ 11.96 hrs, Volume= 14.225 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,158.78' @ 30.00 hrs Surf.Area= 79,805 sf Storage= 619,633 cf
 Flood Elev= 1,160.00' Surf.Area= 82,500 sf Storage= 718,750 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	1,150.00'	718,750 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,150.00	61,750	0	0	61,750
1,160.00	82,500	718,750	718,750	84,569

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.00'	15.0' long x 15.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,150.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Pond P3: POND 3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	1,150.00	0.00
1.00	0.00	0	1,150.00	0.00
2.00	0.28	328	1,150.01	0.00
3.00	0.64	1,989	1,150.03	0.00
4.00	0.94	4,835	1,150.08	0.00
5.00	1.27	8,803	1,150.14	0.00
6.00	1.61	13,994	1,150.23	0.00
7.00	1.94	20,380	1,150.33	0.00
8.00	2.25	27,923	1,150.45	0.00
9.00	3.35	37,862	1,150.61	0.00
10.00	4.30	51,030	1,150.82	0.00
11.00	7.85	71,931	1,151.14	0.00
12.00	153.27	219,880	1,153.38	0.00
13.00	23.56	343,078	1,155.13	0.00
14.00	13.07	405,447	1,155.99	0.00
15.00	9.76	445,473	1,156.53	0.00
16.00	7.63	476,742	1,156.94	0.00
17.00	6.48	501,830	1,157.27	0.00
18.00	5.70	523,739	1,157.56	0.00
19.00	4.96	542,927	1,157.80	0.00
20.00	4.21	559,432	1,158.02	0.00
21.00	3.86	573,828	1,158.20	0.00
22.00	3.69	587,398	1,158.37	0.00
23.00	3.53	600,394	1,158.54	0.00
24.00	3.38	612,846	1,158.69	0.00
25.00	0.54	617,561	1,158.75	0.00
26.00	0.19	618,728	1,158.77	0.00
27.00	0.09	619,192	1,158.77	0.00
28.00	0.05	619,421	1,158.78	0.00
29.00	0.03	619,552	1,158.78	0.00
30.00	0.02	619,633	1,158.78	0.00

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Pond P4: POND 4

Inflow Area = 9.700 ac, 0.00% Impervious, Inflow Depth = 5.73" for 100-Year event
 Inflow = 82.56 cfs @ 11.96 hrs, Volume= 4.629 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,088.66' @ 24.40 hrs Surf.Area= 39,878 sf Storage= 201,638 cf
 Flood Elev= 1,090.00' Surf.Area= 42,000 sf Storage= 256,370 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	1,083.00'	256,370 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,083.00	31,500	0	0	31,500
1,090.00	42,000	256,370	256,370	43,022

Device	Routing	Invert	Outlet Devices
#1	Primary	1,089.00'	15.0' long x 15.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,083.00' (Free Discharge)
 ↑1=**Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Pond P4: POND 4

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	1,083.00	0.00
1.00	0.00	0	1,083.00	0.00
2.00	0.14	163	1,083.01	0.00
3.00	0.32	990	1,083.03	0.00
4.00	0.47	2,405	1,083.08	0.00
5.00	0.63	4,379	1,083.14	0.00
6.00	0.80	6,961	1,083.22	0.00
7.00	0.96	10,138	1,083.32	0.00
8.00	1.12	13,890	1,083.44	0.00
9.00	1.67	18,834	1,083.59	0.00
10.00	2.14	25,384	1,083.79	0.00
11.00	3.91	35,781	1,084.11	0.00
12.00	76.24	109,376	1,086.24	0.00
13.00	3.96	150,833	1,087.36	0.00
14.00	2.34	161,767	1,087.64	0.00
15.00	1.85	169,195	1,087.84	0.00
16.00	1.43	175,090	1,087.99	0.00
17.00	1.25	179,870	1,088.11	0.00
18.00	1.10	184,102	1,088.22	0.00
19.00	0.95	187,792	1,088.31	0.00
20.00	0.80	190,939	1,088.39	0.00
21.00	0.76	193,723	1,088.46	0.00
22.00	0.73	196,396	1,088.53	0.00
23.00	0.70	198,960	1,088.60	0.00
24.00	0.67	201,416	1,088.66	0.00
25.00	0.00	201,638	1,088.66	0.00
26.00	0.00	201,638	1,088.66	0.00
27.00	0.00	201,638	1,088.66	0.00
28.00	0.00	201,638	1,088.66	0.00
29.00	0.00	201,638	1,088.66	0.00
30.00	0.00	201,638	1,088.66	0.00

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Pond P5: POND 5

Inflow Area = 13.200 ac, 0.00% Impervious, Inflow Depth = 2.14" for 100-Year event
 Inflow = 48.92 cfs @ 11.98 hrs, Volume= 2.355 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,108.90' @ 24.40 hrs Surf.Area= 56,243 sf Storage= 102,565 cf
 Flood Elev= 1,113.00' Surf.Area= 66,000 sf Storage= 353,167 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	1,107.00'	353,167 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,107.00	52,000	0	0	52,000
1,113.00	66,000	353,167	353,167	66,920

Device	Routing	Invert	Outlet Devices
#1	Primary	1,112.00'	15.0' long x 15.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,107.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Pond P5: POND 5

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	1,107.00	0.00
1.00	0.00	0	1,107.00	0.00
2.00	0.00	0	1,107.00	0.00
3.00	0.00	0	1,107.00	0.00
4.00	0.00	0	1,107.00	0.00
5.00	0.00	0	1,107.00	0.00
6.00	0.00	0	1,107.00	0.00
7.00	0.00	0	1,107.00	0.00
8.00	0.00	0	1,107.00	0.00
9.00	0.00	0	1,107.00	0.00
10.00	0.00	0	1,107.00	0.00
11.00	0.24	144	1,107.00	0.00
12.00	47.36	29,294	1,107.56	0.00
13.00	3.15	58,518	1,108.10	0.00
14.00	1.94	67,394	1,108.26	0.00
15.00	1.57	73,630	1,108.38	0.00
16.00	1.24	78,690	1,108.47	0.00
17.00	1.10	82,860	1,108.54	0.00
18.00	0.98	86,602	1,108.61	0.00
19.00	0.85	89,901	1,108.67	0.00
20.00	0.72	92,740	1,108.72	0.00
21.00	0.69	95,271	1,108.77	0.00
22.00	0.67	97,718	1,108.81	0.00
23.00	0.64	100,081	1,108.85	0.00
24.00	0.62	102,358	1,108.89	0.00
25.00	0.00	102,565	1,108.90	0.00
26.00	0.00	102,565	1,108.90	0.00
27.00	0.00	102,565	1,108.90	0.00
28.00	0.00	102,565	1,108.90	0.00
29.00	0.00	102,565	1,108.90	0.00
30.00	0.00	102,565	1,108.90	0.00

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Pond P6: POND 6

Inflow Area = 21.300 ac, 0.00% Impervious, Inflow Depth = 5.73" for 100-Year event
 Inflow = 181.29 cfs @ 11.96 hrs, Volume= 10.165 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,091.50' @ 24.40 hrs Surf.Area= 138,724 sf Storage= 442,773 cf
 Flood Elev= 1,095.00' Surf.Area= 179,200 sf Storage= 998,053 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	1,082.00'	998,053 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,082.00	1,500	0	0	1,500
1,085.00	2,800	6,349	6,349	2,888
1,090.00	123,000	240,597	246,946	123,142
1,095.00	179,200	751,107	998,053	179,759

Device	Routing	Invert	Outlet Devices
#1	Primary	1,092.00'	15.0' long x 15.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,082.00' (Free Discharge)
 ↑1=**Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Pond P6: POND 6

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	1,082.00	0.00
1.00	0.00	0	1,082.00	0.00
2.00	0.30	358	1,082.23	0.00
3.00	0.69	2,173	1,083.25	0.00
4.00	1.02	5,281	1,084.60	0.00
5.00	1.39	9,616	1,085.62	0.00
6.00	1.76	15,286	1,086.13	0.00
7.00	2.12	22,262	1,086.53	0.00
8.00	2.46	30,501	1,086.88	0.00
9.00	3.66	41,357	1,087.23	0.00
10.00	4.70	55,740	1,087.60	0.00
11.00	8.58	78,571	1,088.06	0.00
12.00	167.41	240,177	1,089.94	0.00
13.00	8.71	331,210	1,090.67	0.00
14.00	5.14	355,220	1,090.85	0.00
15.00	4.06	371,531	1,090.97	0.00
16.00	3.13	384,476	1,091.07	0.00
17.00	2.75	394,972	1,091.15	0.00
18.00	2.42	404,266	1,091.22	0.00
19.00	2.09	412,368	1,091.28	0.00
20.00	1.75	419,279	1,091.33	0.00
21.00	1.66	425,391	1,091.37	0.00
22.00	1.60	431,261	1,091.41	0.00
23.00	1.53	436,892	1,091.45	0.00
24.00	1.46	442,284	1,091.49	0.00
25.00	0.00	442,773	1,091.50	0.00
26.00	0.00	442,773	1,091.50	0.00
27.00	0.00	442,773	1,091.50	0.00
28.00	0.00	442,773	1,091.50	0.00
29.00	0.00	442,773	1,091.50	0.00
30.00	0.00	442,773	1,091.50	0.00

Runoff Analysis 5-4-2022

Type II 24-hr 100-Year Rainfall=6.20"

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Summary for Pond P7: POND 7

Inflow Area = 6.860 ac, 0.00% Impervious, Inflow Depth = 1.63" for 100-Year event
 Inflow = 13.64 cfs @ 12.08 hrs, Volume= 0.934 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,078.71' @ 24.85 hrs Surf.Area= 12,424 sf Storage= 40,691 cf
 Flood Elev= 1,080.00' Surf.Area= 13,500 sf Storage= 57,434 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	1,075.00'	57,434 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,075.00	9,585	0	0	9,585
1,080.00	13,500	57,434	57,434	13,936

Device	Routing	Invert	Outlet Devices
#1	Primary	1,079.75'	15.0' long x 15.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,075.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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Type II 24-hr 100-Year Rainfall=6.20"

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Hydrograph for Pond P7: POND 7

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	1,075.00	0.00
1.00	0.00	0	1,075.00	0.00
2.00	0.00	0	1,075.00	0.00
3.00	0.00	0	1,075.00	0.00
4.00	0.00	0	1,075.00	0.00
5.00	0.00	0	1,075.00	0.00
6.00	0.00	0	1,075.00	0.00
7.00	0.00	0	1,075.00	0.00
8.00	0.00	0	1,075.00	0.00
9.00	0.00	0	1,075.00	0.00
10.00	0.00	0	1,075.00	0.00
11.00	0.00	0	1,075.00	0.00
12.00	10.53	3,787	1,075.39	0.00
13.00	1.46	20,721	1,077.01	0.00
14.00	0.89	24,781	1,077.37	0.00
15.00	0.70	27,567	1,077.61	0.00
16.00	0.56	29,842	1,077.81	0.00
17.00	0.49	31,705	1,077.97	0.00
18.00	0.44	33,380	1,078.11	0.00
19.00	0.39	34,865	1,078.23	0.00
20.00	0.33	36,152	1,078.34	0.00
21.00	0.31	37,288	1,078.43	0.00
22.00	0.30	38,385	1,078.52	0.00
23.00	0.29	39,447	1,078.61	0.00
24.00	0.28	40,472	1,078.69	0.00
25.00	0.00	40,691	1,078.71	0.00
26.00	0.00	40,691	1,078.71	0.00
27.00	0.00	40,691	1,078.71	0.00
28.00	0.00	40,691	1,078.71	0.00
29.00	0.00	40,691	1,078.71	0.00
30.00	0.00	40,691	1,078.71	0.00

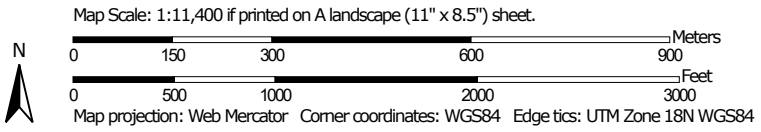
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Soils Mapping

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.



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 1:24,000.

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: Fulton County, New York
 Survey Area Data: Version 21, Sep 1, 2021

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

Date(s) aerial images were photographed: May 8, 2019—Aug 2, 2019

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
363D	Adams loamy sand, 15 to 35 percent slopes	86.6	34.1%
721C	Becket-Tunbridge-Skerry complex, 3 to 15 percent slopes, rocky, very bouldery	10.0	4.0%
721D	Becket-Tunbridge complex, 15 to 35 percent slopes, rocky, very bouldery	38.6	15.2%
725B	Skerry-Becket complex, 3 to 15 percent slopes, very bouldery	12.7	5.0%
727B	Skerry-Adirondack complex, 0 to 8 percent slopes, very bouldery	0.1	0.1%
851F	Lyman-Knob Lock complex, 35 to 60 percent slopes, very rocky, very bouldery	59.0	23.2%
1025B	Adams loamy sand, 3 to 8 percent slopes	2.3	0.9%
1025C	Adams loamy sand, 8 to 15 percent slopes	20.2	8.0%
1025E	Adams loamy sand, 15 to 35 percent slopes	5.1	2.0%
1170B	Henniker fine sandy loam, 3 to 8 percent slopes	11.9	4.7%
1190E	Tunbridge-Lyman complex, 15 to 35 percent slopes, very rocky, very bouldery	2.8	1.1%
1292E	Becket-Tunbridge complex, 15 to 35 percent slopes, rocky, very bouldery	1.5	0.6%
GP	Pits, sand and gravel	2.9	1.1%
Totals for Area of Interest		253.9	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the

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characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered

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practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Fulton County, New York

363D—Adams loamy sand, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 9sc5
Elevation: 1,000 to 2,820 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 37 to 43 degrees F
Frost-free period: 90 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Adams and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams

Setting

Landform: Terraces, moraines, kames, eskers, deltas
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy glaciofluvial deposits from predominantly crystalline rock and sandstone

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
E - 2 to 3 inches: loamy sand
Bh - 3 to 5 inches: loamy sand
Bhs - 5 to 9 inches: loamy sand
Bs1 - 9 to 14 inches: loamy sand
Bs2 - 14 to 17 inches: loamy sand
BC - 17 to 32 inches: sand
C1 - 32 to 58 inches: coarse sand
C2 - 58 to 72 inches: coarse sand

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A

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Ecological site: F143XY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Colton

Percent of map unit: 8 percent
Hydric soil rating: No

Monadnock

Percent of map unit: 6 percent
Hydric soil rating: No

Becket

Percent of map unit: 3 percent
Hydric soil rating: No

Allagash

Percent of map unit: 2 percent
Hydric soil rating: No

Croghan

Percent of map unit: 1 percent
Hydric soil rating: No

721C—Becket-Tunbridge-Skerry complex, 3 to 15 percent slopes, rocky, very bouldery

Map Unit Setting

National map unit symbol: 2w5hl
Elevation: 510 to 2,460 feet
Mean annual precipitation: 31 to 95 inches
Mean annual air temperature: 27 to 48 degrees F
Frost-free period: 100 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Becket, rocky, very bouldery, and similar soils: 40 percent
Tunbridge, rocky, very bouldery, and similar soils: 30 percent
Skerry, rocky, very bouldery, and similar soils: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Becket, Rocky, Very Bouldery

Setting

Landform: Hillsides or mountainsides
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Mountainbase, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy lodgement till derived from gneiss

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Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
E - 1 to 4 inches: fine sandy loam
Bhs1 - 4 to 6 inches: fine sandy loam
Bhs2 - 6 to 10 inches: fine sandy loam
Bs1 - 10 to 16 inches: fine sandy loam
Bs2 - 16 to 20 inches: gravelly fine sandy loam
BC - 20 to 33 inches: sandy loam
Cd - 33 to 79 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 2.4 percent
Depth to restrictive feature: 26 to 36 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: About 30 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F143XY505ME - Loamy Over Sandy
Hydric soil rating: No

Description of Tunbridge, Rocky, Very Bouldery

Setting

Landform: Hillsides or mountainsides
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived from gneiss

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
Oa - 1 to 3 inches: highly decomposed plant material
E - 3 to 4 inches: sandy loam
Bhs1 - 4 to 7 inches: fine sandy loam
Bhs2 - 7 to 13 inches: fine sandy loam
Bs - 13 to 18 inches: fine sandy loam
C - 18 to 27 inches: gravelly sandy loam
R - 27 to 79 inches: bedrock

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 2.4 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High

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Capacity of the most limiting layer to transmit water (Ksat): Very low to very high
(0.00 to 14.17 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B

Ecological site: F143XY501ME - Loamy Slope

Hydric soil rating: No

Description of Skerry, Rocky, Very Bouldery

Setting

Landform: Hillsides or mountainsides

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Mountainbase, side slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Loamy lodgement till derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

Oa - 1 to 3 inches: highly decomposed plant material

E - 3 to 4 inches: fine sandy loam

Bhs1 - 4 to 5 inches: fine sandy loam

Bhs2 - 5 to 9 inches: fine sandy loam

Bs - 9 to 20 inches: fine sandy loam

BC1 - 20 to 27 inches: gravelly sandy loam

BC2 - 27 to 34 inches: cobbly loamy sand

Cd - 34 to 79 inches: very cobbly loamy sand

Properties and qualities

Slope: 3 to 15 percent

Surface area covered with cobbles, stones or boulders: 2.4 percent

Depth to restrictive feature: 20 to 38 inches to densic material

Drainage class: Moderately well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: B/D

Ecological site: F143XY505ME - Loamy Over Sandy

Hydric soil rating: No

Minor Components

Adirondack, rocky, very bouldery

Percent of map unit: 3 percent

Landform: Low hills

Landform position (two-dimensional): Summit, footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Lyman, rocky, very bouldery

Percent of map unit: 2 percent

Landform: Hillsides or mountainsides

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Monadnock, rocky, very bouldery

Percent of map unit: 2 percent

Landform: Hillsides or mountainsides

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent

Hydric soil rating: Unranked

Adams

Percent of map unit: 1 percent

Landform: Kame moraines

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Riser, tread

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Tahawus, rocky, very bouldery

Percent of map unit: 1 percent

Landform: Hillsides or mountainsides

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

721D—Becket-Tunbridge complex, 15 to 35 percent slopes, rocky, very bouldery

Map Unit Setting

National map unit symbol: 2spn0
Elevation: 510 to 2,460 feet
Mean annual precipitation: 31 to 95 inches
Mean annual air temperature: 27 to 48 degrees F
Frost-free period: 100 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Becket, rocky, very bouldery, and similar soils: 45 percent
Tunbridge, rocky, very bouldery, and similar soils: 30 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Becket, Rocky, Very Bouldery

Setting

Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy lodgement till derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
E - 1 to 4 inches: fine sandy loam
Bhs1 - 4 to 6 inches: fine sandy loam
Bhs2 - 6 to 10 inches: fine sandy loam
Bs1 - 10 to 16 inches: fine sandy loam
Bs2 - 16 to 20 inches: gravelly fine sandy loam
BC - 20 to 33 inches: sandy loam
Cd - 33 to 79 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 2.4 percent
Depth to restrictive feature: 26 to 36 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: About 30 to 36 inches
Frequency of flooding: None

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Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: F143XY505ME - Loamy Over Sandy
Hydric soil rating: No

Description of Tunbridge, Rocky, Very Bouldery

Setting

Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived from gneiss

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
Oa - 1 to 3 inches: highly decomposed plant material
E - 3 to 4 inches: sandy loam
Bhs1 - 4 to 7 inches: fine sandy loam
Bhs2 - 7 to 13 inches: fine sandy loam
Bs - 13 to 18 inches: fine sandy loam
C - 18 to 27 inches: gravelly sandy loam
R - 27 to 79 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 2.4 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to very high
(0.00 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: F143XY501ME - Loamy Slope
Hydric soil rating: No

Minor Components

Lyman, rocky, very bouldery

Percent of map unit: 7 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope

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Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Monadnock, rocky, very bouldery

Percent of map unit: 6 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Hermon, rocky, very bouldery

Percent of map unit: 5 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Skerry, rocky, very bouldery

Percent of map unit: 3 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Adams

Percent of map unit: 2 percent
Landform: Kame moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: Unranked

Adirondack, rocky, very bouldery

Percent of map unit: 1 percent
Landform: Low hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

725B—Skerry-Becket complex, 3 to 15 percent slopes, very bouldery

Map Unit Setting

National map unit symbol: 2spmz

Elevation: 740 to 2,380 feet

Mean annual precipitation: 31 to 95 inches

Mean annual air temperature: 27 to 48 degrees F

Frost-free period: 100 to 130 days

Farmland classification: Not prime farmland

Map Unit Composition

Skerry, very bouldery, and similar soils: 50 percent

Becket, very bouldery, and similar soils: 25 percent

Minor components: 25 percent

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

Description of Skerry, Very Bouldery

Setting

Landform: Hillsides or mountainsides

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Mountainbase, side slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Loamy lodgement till derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

Oa - 1 to 3 inches: highly decomposed plant material

E - 3 to 4 inches: fine sandy loam

Bhs1 - 4 to 5 inches: fine sandy loam

Bhs2 - 5 to 9 inches: fine sandy loam

Bs - 9 to 20 inches: fine sandy loam

BC1 - 20 to 27 inches: gravelly sandy loam

BC2 - 27 to 34 inches: cobbly loamy sand

Cd - 34 to 79 inches: very cobbly loamy sand

Properties and qualities

Slope: 3 to 15 percent

Surface area covered with cobbles, stones or boulders: 2.4 percent

Depth to restrictive feature: 20 to 38 inches to densic material

Drainage class: Moderately well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

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Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: B/D

Ecological site: F143XY505ME - Loamy Over Sandy

Hydric soil rating: No

Description of Becket, Very Bouldery

Setting

Landform: Hillsides or mountainsides

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Mountainbase, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy lodgement till derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

E - 1 to 4 inches: fine sandy loam

Bhs1 - 4 to 6 inches: fine sandy loam

Bhs2 - 6 to 10 inches: fine sandy loam

Bs1 - 10 to 16 inches: fine sandy loam

Bs2 - 16 to 20 inches: gravelly fine sandy loam

BC - 20 to 33 inches: sandy loam

Cd - 33 to 79 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 15 percent

Surface area covered with cobbles, stones or boulders: 2.4 percent

Depth to restrictive feature: 26 to 36 inches to densic material

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)

Depth to water table: About 30 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Ecological site: F143XY505ME - Loamy Over Sandy

Hydric soil rating: No

Minor Components

Adirondack, very bouldery

Percent of map unit: 9 percent

Landform: Low hills

Landform position (two-dimensional): Summit, footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

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Across-slope shape: Linear
Hydric soil rating: No

Sunapee, very bouldery

Percent of map unit: 6 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Monadnock, very bouldery

Percent of map unit: 4 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Tunbridge, very bouldery

Percent of map unit: 3 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Adams

Percent of map unit: 2 percent
Landform: Kame moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Tahawus, very bouldery

Percent of map unit: 1 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

727B—Skerry-Adirondack complex, 0 to 8 percent slopes, very bouldery

Map Unit Setting

National map unit symbol: bqys
Elevation: 1,000 to 2,820 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 37 to 43 degrees F
Frost-free period: 90 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Skerry, very bouldery, and similar soils: 45 percent
Adirondack, very bouldery, and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Skerry, Very Bouldery

Setting

Landform: Till plains, mountain valleys
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Friable loamy till underlain by firm sandy lodgment till derived from igneous and metamorphic rock

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material
Oa - 3 to 5 inches: highly decomposed plant material
E - 5 to 7 inches: fine sandy loam
Bs1 - 7 to 11 inches: fine sandy loam
Bs2 - 11 to 17 inches: fine sandy loam
BC - 17 to 29 inches: fine sandy loam
Cd - 29 to 72 inches: gravelly loamy fine sand

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 38 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

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Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Ecological site: F143XY505ME - Loamy Over Sandy
Hydric soil rating: No

Description of Adirondack, Very Bouldery

Setting

Landform: Till plains, mountain valleys
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Friable loamy till underlain by firm sandy lodgment till derived from igneous and metamorphic rock

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
Oa - 2 to 4 inches: highly decomposed plant material
E - 4 to 6 inches: fine sandy loam
Bh - 6 to 8 inches: fine sandy loam
Bhs - 8 to 9 inches: fine sandy loam
Bs - 9 to 18 inches: fine sandy loam
BC - 18 to 26 inches: sandy loam
Cd1 - 26 to 34 inches: gravelly loamy sand
Cd2 - 34 to 43 inches: gravelly loamy sand
Cd3 - 43 to 72 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 15 to 38 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Ecological site: F143XY502ME - Loamy Till Toeslope
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 5 percent
Hydric soil rating: No

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Sabattis

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Becket

Percent of map unit: 4 percent
Hydric soil rating: No

Pleasant lake

Percent of map unit: 2 percent
Landform: Bogs, swamps, marshes
Hydric soil rating: Yes

Burnt vly

Percent of map unit: 2 percent
Landform: Bogs, marshes, swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Wonsqueak

Percent of map unit: 2 percent
Landform: Marshes, swamps
Hydric soil rating: Yes

851F—Lyman-Knob Lock complex, 35 to 60 percent slopes, very rocky, very bouldery

Map Unit Setting

National map unit symbol: 2xj29
Elevation: 390 to 2,430 feet
Mean annual precipitation: 31 to 95 inches
Mean annual air temperature: 27 to 48 degrees F
Frost-free period: 100 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Lyman, very rocky, very bouldery, and similar soils: 45 percent
Knob lock, very rocky, very bouldery, and similar soils: 30 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman, Very Rocky, Very Bouldery

Setting

Landform: Hillsides or mountainsides

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Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Lower third of mountainflank, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

Oa - 1 to 5 inches: highly decomposed plant material

E - 5 to 6 inches: fine sandy loam

Bhs - 6 to 11 inches: fine sandy loam

Bs - 11 to 19 inches: fine sandy loam

R - 19 to 79 inches: bedrock

Properties and qualities

Slope: 35 to 60 percent

Surface area covered with cobbles, stones or boulders: 2.4 percent

Depth to restrictive feature: 12 to 26 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to very high
(0.00 to 14.17 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Hydric soil rating: No

Description of Knob Lock, Very Rocky, Very Bouldery

Setting

Landform: Hillsides or mountainsides

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Lower third of mountainflank, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Non-saturated organic material over till derived from gneiss

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material

Oa - 3 to 7 inches: highly decomposed plant material

Bs - 7 to 9 inches: very fine sandy loam

R - 9 to 79 inches: bedrock

Properties and qualities

Slope: 35 to 60 percent

Surface area covered with cobbles, stones or boulders: 2.4 percent

Depth to restrictive feature: 4 to 20 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to very high
(0.00 to 14.17 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 10 percent
Hydric soil rating: Unranked

Tunbridge, very rocky, very bouldery

Percent of map unit: 7 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Monadnock, very rocky, very bouldery

Percent of map unit: 4 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Becket, very rocky, very bouldery

Percent of map unit: 2 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainbase, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Hogback, very rocky, very bouldery

Percent of map unit: 1 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Adirondack, very rocky, very bouldery

Percent of map unit: 1 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope

Custom Soil Resource Report

Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

1025B—Adams loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: bqm_q
Elevation: 1,000 to 2,820 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 37 to 43 degrees F
Frost-free period: 90 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Adams and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams

Setting

Landform: Outwash plains, kame terraces, deltas
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy glaciofluvial deposits from predominantly crystalline rock and sandstone

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
E - 2 to 3 inches: loamy sand
Bh - 3 to 5 inches: loamy sand
Bhs - 5 to 9 inches: loamy sand
Bs1 - 9 to 14 inches: loamy sand
Bs2 - 14 to 17 inches: loamy sand
BC - 17 to 32 inches: sand
C1 - 32 to 58 inches: coarse sand
C2 - 58 to 72 inches: coarse sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 5.95 in/hr)
Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F143XY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Colton

Percent of map unit: 5 percent
Hydric soil rating: No

Allagash

Percent of map unit: 5 percent
Hydric soil rating: No

Monadnock

Percent of map unit: 3 percent
Hydric soil rating: No

Croghan

Percent of map unit: 2 percent
Hydric soil rating: No

1025C—Adams loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: bqmt
Elevation: 1,000 to 2,820 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 37 to 43 degrees F
Frost-free period: 90 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Adams and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams

Setting

Landform: Eskers, outwash plains, kame terraces, deltas
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex

Custom Soil Resource Report

Parent material: Sandy glaciofluvial deposits from predominantly crystalline rock and sandstone

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
E - 2 to 3 inches: loamy sand
Bh - 3 to 5 inches: loamy sand
Bhs - 5 to 9 inches: loamy sand
Bs1 - 9 to 14 inches: loamy sand
Bs2 - 14 to 17 inches: loamy sand
BC - 17 to 32 inches: sand
C1 - 32 to 58 inches: coarse sand
C2 - 58 to 72 inches: coarse sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F143XY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Colton

Percent of map unit: 5 percent
Hydric soil rating: No

Monadnock

Percent of map unit: 5 percent
Hydric soil rating: No

Allagash

Percent of map unit: 2 percent
Hydric soil rating: No

Henniker

Percent of map unit: 2 percent
Hydric soil rating: No

Croghan

Percent of map unit: 1 percent
Hydric soil rating: No

1025E—Adams loamy sand, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: bqms
Elevation: 1,000 to 2,820 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 37 to 43 degrees F
Frost-free period: 90 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Adams and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams

Setting

Landform: Outwash plains, kame terraces, deltas, eskers
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy glaciofluvial deposits from predominantly crystalline rock and sandstone

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
E - 2 to 3 inches: loamy sand
Bh - 3 to 5 inches: loamy sand
Bhs - 5 to 9 inches: loamy sand
Bs1 - 9 to 14 inches: loamy sand
Bs2 - 14 to 17 inches: loamy sand
BC - 17 to 32 inches: sand
C1 - 32 to 58 inches: coarse sand
C2 - 58 to 72 inches: coarse sand

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Ecological site: F143XY601ME - Dry Sand

Hydric soil rating: No

Minor Components

Monadnock

Percent of map unit: 8 percent

Hydric soil rating: No

Colton

Percent of map unit: 5 percent

Hydric soil rating: No

Unnamed

Percent of map unit: 5 percent

Hydric soil rating: No

Allagash

Percent of map unit: 1 percent

Hydric soil rating: No

Croghan

Percent of map unit: 1 percent

Hydric soil rating: No

1170B—Henniker fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: bqnq

Elevation: 1,000 to 2,820 feet

Mean annual precipitation: 35 to 50 inches

Mean annual air temperature: 37 to 43 degrees F

Frost-free period: 90 to 130 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Henniker and similar soils: 75 percent

Minor components: 25 percent

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

Description of Henniker

Setting

Landform: Till plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Custom Soil Resource Report

Across-slope shape: Convex

Parent material: Friable loamy till underlain by firm sandy lodgment till derived from igneous and metamorphic rock

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material

Ap - 2 to 8 inches: fine sandy loam

Bw1 - 8 to 20 inches: gravelly fine sandy loam

Bw2 - 20 to 31 inches: gravelly fine sandy loam

Cd1 - 31 to 52 inches: gravelly loamy fine sand

Cd2 - 52 to 72 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent

Surface area covered with cobbles, stones or boulders: 0.0 percent

Depth to restrictive feature: 20 to 40 inches to densic material

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)

Depth to water table: About 28 to 40 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Ecological site: F143XY501ME - Loamy Slope

Hydric soil rating: No

Minor Components

Metacomet

Percent of map unit: 9 percent

Hydric soil rating: No

Skerry

Percent of map unit: 6 percent

Hydric soil rating: No

Becket

Percent of map unit: 5 percent

Hydric soil rating: No

Monadnock

Percent of map unit: 2 percent

Hydric soil rating: No

Pillsbury

Percent of map unit: 2 percent

Hydric soil rating: No

Unnamed, stony

Percent of map unit: 1 percent

Hydric soil rating: No

1190E—Tunbridge-Lyman complex, 15 to 35 percent slopes, very rocky, very bouldery

Map Unit Setting

National map unit symbol: 2wrc7
Elevation: 330 to 2,300 feet
Mean annual precipitation: 31 to 95 inches
Mean annual air temperature: 27 to 48 degrees F
Frost-free period: 100 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Tunbridge, very rocky, very bouldery, and similar soils: 45 percent
Lyman, very rocky, very bouldery, and similar soils: 30 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tunbridge, Very Rocky, Very Bouldery

Setting

Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived from gneiss

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
Oa - 1 to 3 inches: highly decomposed plant material
E - 3 to 4 inches: sandy loam
Bhs1 - 4 to 7 inches: fine sandy loam
Bhs2 - 7 to 13 inches: fine sandy loam
Bs - 13 to 18 inches: fine sandy loam
C - 18 to 27 inches: gravelly sandy loam
R - 27 to 79 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 2.4 percent
Depth to restrictive feature: 21 to 48 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to very high
(0.00 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F143XY702ME - Shallow And Moderately Deep Till
Hydric soil rating: No

Description of Lyman, Very Rocky, Very Bouldery

Setting

Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
Oa - 1 to 5 inches: highly decomposed plant material
E - 5 to 6 inches: fine sandy loam
Bhs - 6 to 11 inches: fine sandy loam
Bs - 11 to 19 inches: fine sandy loam
R - 19 to 79 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 2.4 percent
Depth to restrictive feature: 12 to 26 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to very high
(0.00 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F143XY702ME - Shallow And Moderately Deep Till
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 7 percent
Hydric soil rating: Unranked

Knob lock, very rocky, very bouldery

Percent of map unit: 5 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex

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Across-slope shape: Convex
Hydric soil rating: No

Monadnock, very rocky, very bouldery

Percent of map unit: 5 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Potsdam, very rocky, very bouldery

Percent of map unit: 3 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Becket, very rocky, very bouldery

Percent of map unit: 3 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Skerry, very rocky, very bouldery

Percent of map unit: 2 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

1292E—Becket-Tunbridge complex, 15 to 35 percent slopes, rocky, very bouldery

Map Unit Setting

National map unit symbol: 2w5jm
Elevation: 490 to 2,390 feet
Mean annual precipitation: 31 to 95 inches
Mean annual air temperature: 27 to 48 degrees F
Frost-free period: 100 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Becket, rocky, very bouldery, and similar soils: 45 percent
Tunbridge, rocky, very bouldery, and similar soils: 30 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Becket, Rocky, Very Bouldery

Setting

Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy lodgement till derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
E - 1 to 4 inches: fine sandy loam
Bhs1 - 4 to 6 inches: fine sandy loam
Bhs2 - 6 to 10 inches: fine sandy loam
Bs1 - 10 to 16 inches: fine sandy loam
Bs2 - 16 to 20 inches: gravelly fine sandy loam
BC - 20 to 33 inches: sandy loam
Cd - 33 to 79 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 2.4 percent
Depth to restrictive feature: 26 to 36 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: About 30 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F143XY505ME - Loamy Over Sandy
Hydric soil rating: No

Description of Tunbridge, Rocky, Very Bouldery

Setting

Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived from gneiss

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Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
Oa - 1 to 3 inches: highly decomposed plant material
E - 3 to 4 inches: sandy loam
Bhs1 - 4 to 7 inches: fine sandy loam
Bhs2 - 7 to 13 inches: fine sandy loam
Bs - 13 to 18 inches: fine sandy loam
C - 18 to 27 inches: gravelly sandy loam
R - 27 to 79 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 2.4 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to very high
(0.00 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: F143XY501ME - Loamy Slope
Hydric soil rating: No

Minor Components

Lyman, rocky, very bouldery

Percent of map unit: 8 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Monadnock, rocky, very bouldery

Percent of map unit: 8 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Skerry, rocky, very bouldery

Percent of map unit: 5 percent
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank, side slope
Down-slope shape: Linear

Custom Soil Resource Report

Across-slope shape: Convex
Hydric soil rating: No

Adirondack, rocky, very bouldery

Percent of map unit: 3 percent
Landform: Low hills
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: Unranked

GP—Pits, sand and gravel

Map Unit Setting

National map unit symbol: bqnr
Elevation: 590 to 1,000 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 120 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Pits, sand and gravel: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits, Sand And Gravel

Setting

Parent material: Sandy and gravelly outwash

Typical profile

H1 - 0 to 72 inches: very gravelly sand

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydric soil rating: Unranked

Minor Components

Hinckley

Percent of map unit: 5 percent
Hydric soil rating: No

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Merrimac

Percent of map unit: 5 percent
Hydric soil rating: No

Alton

Percent of map unit: 5 percent
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Hydric soil rating: No