File Doolittle

United States Department of Agriculture
Soil Conservation Service

Northeast NTC
Chester, PA 19013

Subject: Ground-Penetrating Radar (GPR) Date: 28 September 1992
Field Assistance; 20-25 September 1992

To: Norman Kallock
State Soil Scientist
USDA-Soil Conservation Service
Orono, Maine

Purpose:
To provide transect data on the depth to bedrock in various map units in the "Big Woods" Soil Survey Area of Maine.

Principal Participants:
Jim Doolittle, Soil Specialist, SSQAS, SCS, Chester, PA
Buzz Williams, Soil Party Leader, SCS, Rangeley, ME
Wayne Hoar, Soil Scientist, SCS, Rangeley, ME

Activities:
The following is a summary of transects completed with GPR:

DATE	15 MIN TOPO MAP	TRANSECTS	MILES OF DATA
21 Sept.	Oquossoc & Errol, ME	12	6.06
22 Sept.	Chain Lake, ME	13	5.16
23 Sept.	Cupsuptic, ME	16	7.14
24 Sept.	Cuosuptic, ME	19	7.24
TOTALS:		60	25.60

Equipment:
The ground-penetrating radar unit used in this study is the Subsurface Interface Radar (SIR) System-8 manufactured by Geophysical Survey Systems, Inc.1. Components of the SIR System-8 used in this study were the model 4800 control unit, ADTEK SR 8004H graphic recorder, power distribution unit, transmission cable (30 m), and the model 3110 (120 MHz) antenna. The system was powered by a 12-volt battery.

U1. Use of trade names in this report is for identification purposes only and does not constitute endorsement by the author or SCS.

Calibration trials were completed to determine the velocity of signal propagation through tills, depth scale for radar profiles, and the depth of penetration. For these trials, a metallic 4reflector was buried at a depth of 15 inches. The velocity of propagation was 0.179 feet/nanoseconds (ns). Using a scanning time of 130 ns, a maximum profiling depth of 11.67 feet was used in this study.

All transects were conducted along access roads. A 250 foot interval was used between observation points. Though the GPR provides a continuous record of subsurface conditions, estimates of the depth to bedrock were restricted to these observation points. In addition, at each observation point, soil drainage class was inferred from vegetation and landscape position. The locations of transects were determined with a Voyager LORAN Navigator. On 24 September, the battery charge on the LORAN unit became low in the field, resulting in the loss of all recorded locations for that day.

Discussion:
This was a remarkably productive week. The intent was to use the GPR in a productive mode. To my knowledge, no one has every conducted more miles of GPR soil transects in a single week. Considering the difficult terrain and soil conditions of the Big Woods, and the ineffectiveness of conventional survey tools for determining the depth to bedrock, radar interpretations of the depth to bedrock are considered more reliable than ground-truth auger or shovel observations.

It was my pleasure to work in your state and with Buzz and Wayne.

With kind regards.

James A. Doolittle
Soil Specialist

cc:
J. Culver, National Leader, SSQA Staff, NSSC, SCS, Lincoln, NE
C. Holzhey, Assistant Director, NSSC, SCS, Lincoln, NE
B. Hudson, Supervisory Soil Scientist, SSQA Staff, NSSC, SCS, Lincoln, NE
B. Williams, Soil Party Leader, SCS, Main Steet, P.O. Box 114, Rangeley, ME 04970

Results:
The following tables summarize observations for each transect according to soil depth and drainage classes. Percentages found in the second table for each map unit (extreme right-hand column) are for soil depth class. Areas of very poorly drained soils were combined with areas ofpoorly drained soils in the second table.

21 September 1992
Oquossoc & Errol 15 Minute Topographic Quadrangles

Map unit: 302C Hermon-Tunbridge-Skerry association, rolling
Location: 44°55.18′ 70°57.88′ to 44°55.31′ 70°57.34′

Observation	Depth	Drainage
0	>140 inches	EX
250	>140 inches	EX
500	>140 inches	WD
750	>140 inches	EX
1000	>140 inches	PD
1250	>140 inches	PD
1500	>140 inches	EX
1750	>140 inches	EX
2000	>140 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	0	0	0	
>60 inches	5	1	1	0	2	----- 100%

Map unit: 312C Colton-Hermon association, rolling
Location: 44°55.21′ 70°57.11′ to 44°55.21′ 70°57.11′

Observation	Depth	Drainage
0	113 inches	SWPD
250	62 inches	PD
500	20 inches	MWD
750	66 inches	MWD
1000	90 inches	EX
1250	43 inches	MWD
1500	84 inches	EX
1750	93 inches	EX

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	1	0	0	----- 12%
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	1	0	0	----- 12%
>60 inches	3	0	1	1	1	----- 76%

Map unit: 302C Hermon-Tunbridge-Skerry association, rolling
Location: 44°55.13′ 70°57.10′ to 44°54.65′ 70°57.23′

Observation	Depth	Drainage
0	100 inches	EX
250	118 inches	EX
500	115 inches	EX
750	106 inches	EX
1000	77 inches	EX
1250	83 inches	EX
1500	80 inches	EX
1750	90 inches	EX
2000	85 inches	EX
2250	65 inches	EX
2500	46 inches	EX
2750	114 inches	EX

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 65 inches	1	0	0	0	0	----- 8%
>60 inches	11	0	0	0	0	----- 92%

Map unit: 302C Hermon-Tunbridge-Skerry association, rolling
Location: 44°54.65′ 70°57.23′ to 44°54.55′ 70°57.44′

Observation	Depth	Drainage
0	76 inches	EX
250	48 inches	EX
500	90 inches	EX
750	62 inches	EX
1000	>140 inches	EX
1250	95 inches	EX
1500	108 inches	EX
1750	>140 inches	EX

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	1	0	0	0	0	----- 12%
>60 inches	7	0	0	0	0	----- 88%

Map unit: 302C Hermon-Tunbridge-Skerry association, rolling
Location: 44°54.55′ 70°57.44′ to 44°54.41′ 70°57.79′

Observation	Depth	Drainage
0	52 inches	EX
250	>140 inches	EX
500	40 inches	EX
750	86 inches	MWD
1000	>140 inches	EX
1250	66 inches	EX
1500	>140 inches	PD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	2	0	0	0	0	----- 29%
>60 inches	3	0	1	0	1	----- 71%

Map unit: 40C Becket-Skerry-Lyman association, strongly sloping
Location: 44°47.03′ 70°55.61′ to 44°47.41′ 70°56.16′

Observation	Depth	Drainage
0	>140 inches	MWD
250	>140 inches	MWD
500	>140 inches	WD
750	>140 inches	MWD
1000	95 inches	WD
1250	38 inches	MWD
1500	38 inches	MWD
1750	53 inches	MWD
2000	42 inches	MWD
2250	52 inches	WD
2500	53 inches	WD
2750	15 inches	WD
3000	62 inches	SWPD
3250	46 inches	MWD
3500	53 inches	MWD
3750	44 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	1	0	0	0	----- 6%
20 - 40 inches	0	0	2	0	0	----- 12%
40 - 60 inches	0	2	5	0	0	----- 44%
>60 inches	0	2	3	1	0	----- 38%

Map unit: 301C Skerry-Hermon association, rolling
Location: 44°47.85′ 70°56.19′ to 44°48.04′ 70°55.19′

Observation	Depth	Drainage
0	48 inches	PD
250	78 inches	EX
500	84 inches	EX
750	78 inches	EX
1000	116 inches	EX
1250	77 inches	EX
1500	92 inches	SWPD
1750	69 inches	MWD
2000	>140 inches	EX
2250	87 inches	EX
2500	70 inches	EX
2750	43 inches	SWPD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	0	1	1	----- 17%
>60 inches	8	0	0	1	1	----- 83%

Map unit: 301C Skerry-Hermon association, rolling
Location: 44°47.85′ 70°56.19′ to 44°48.04′ 70°55.19′

Observation	Depth	Drainage
3000	46 inches	MWD
3250	81 inches	EX
3500	>140 inches	EX
3750	114 inches	EX
4000	45 inches	EX
4250	>140 inches	EX
4500	117 inches	EX
4750	>140 inches	EX
5000	>140 inches	EX
5250	>140 inches	EX
5500	44 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	1	0	2	0	0	----- 27%
>60 inches	8	0	0	0	0	----- 73%

Map unit: 301C Hermon-Tunbridge-Skerry association, rolling
Location: 44°48.04′ 70°55.19′ to 44°48.59′ 70°55.27′

Observation	Depth	Drainage
0	85 inches	MWD
250	>140 inches	EX
500	>140 inches	EX
750	>140 inches	MWD
1000	>140 inches	MWD
1250	122 inches	MWD
1500	>140 inches	WD
1750	121 inches	MWD
2000	87 inches	MWD
2250	42 inches	WD
2500	35 inches	WD
2750	120 inches	MWD
3000	88 inches	MWD
3250	35 inches	WD
3500	85 inches	MWD
3750	100 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	2	0	0	0	----- 12%
40 - 60 inches	0	1	0	0	0	----- 6%
>60 inches	2	2	9	0	0	----- 82%

Map unit: 40C Becket-Skerry-Lyman association, strongly sloping
Location: 44°48.59′ 70°55.27′ to 44°48.89′ 70°55.52′

Observation	Depth	Drainage
0	84 inches	WD
250	96 inches	MWD
500	65 inches	MWD
750	92 inches	MWD
1000	86 inches	MWD
1250	58 inches	MWD
1500	15 inches	MWD
1750	65 inches	WD
2000	>140 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	1	0	0	----- 11%
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	1	0	0	----- 11%
>60 inches	0	2	5	0	0	----- 78%

Map unit: 40C Becket-Skerry-Lyman association, strongly sloping
Location: 44°52.46′ 70°00.89′ to 44°52.55′ 70°02.28′

Observation	Depth	Drainage
0	32 inches	PD
250	36 inches	MWD
500	53 inches	SWPD
750	91 inches	SWPD
1000	95 inches	MWD
1250	49 inches	WD
1500	69 inches	WD
1750	57 inches	MWD
2000	27 inches	WD
2250	87 inches	WD
2500	45 inches	MWD
2750	46 inches	MWD
3000	37 inches	MWD
3250	79 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	1	2	0	1	----- 28%
40 - 60 inches	0	1	3	1	0	----- 36%
>60 inches	0	3	1	1	0	----- 36%

Map unit: 40C Becket-Skerry-Lyman association, strongly sloping
Location: 44°52.46′ 70°00.89′ to 44°52.55′ 70°02.28′

Observation	Depth	Drainage
3500	>140 inches	WD
3750	>140 inches	WD
4000	70 inches	MWD
4250	59 inches	MWD
4500	63 inches	MWD
4750	92 inches	SWPD
5000	>140 inches	MWD
5250	>140 inches	MWD
5500	>140 inches	SWPD
5750	>140 inches	MWD
6000	>140 inches	WD
6250	>140 inches	MWD
6500	>140 inches	SWPD
6750	>140 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	1	0	0	----- 7%
>60 inches	0	3	7	3	0	----- 93%

22 September 1992
Chain Lake 15 Minute Topographic Quadrangle

Map unit: 942C Lyman-Abram association, hilly
Location: 45°29.68′ 70°30.89′ to 45°29.85′ 70°31.64′

Observation	Depth	Drainage
0	34 inches	WD
250	20 inches	WD
500	16 inches	MWD
750	24 inches	MWD
1000	14 inches	WD
1250	52 inches	WD
1500	0 inches	WD
1750	20 inches	WD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	2	1	0	0 ----- 38%
20 - 40 inches	0	3	1	0	0 ----- 50%
40 - 60 inches	0	1	0	0	0 ----- 12%
>60 inches	0	0	0	0	0

Map unit: 302C Hermon-Tunbridge-Skerry association, rolling
Location: 45°29.85′ 70°31.33′ to 45°30.05′ 70°31.64′

Observation	Depth	Drainage
0	>140 inches	MWD
250	>140 inches	PD
500	>140 inches	SWPD
750	23 inches	MWD
1000	48 inches	MWD
1250	23 inches	MWD
1500	18 inches	MWD
1750	28 inches	WD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	1	0	0 -----12%
20 - 40 inches	0	1	2	0	0 -----38%
40 - 60 inches	0	0	1	0	0 -----12%
>60 inches	0	0	1	1	1 -----38%

Map unit: 48C Dixfield-Colonel-Marlow association, strongly sloping
Location: 45°30.05′ 70°31.64′ to 45°29.98′ 70°32.64′

Observation	Depth	Drainage
0	28 inches	MWD
250	58 inches	MWD
500	15 inches	MWD
750	65 inches	SWPD
1000	75 inches	MWD
1250	47 inches	MWD
1500	23 inches	MWD
1750	23 inches	MWD
2000	42 inches	WD
2250	50 inches	MWD
2500	35 inches	MWD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	1	0	0 ----- 10%
20 - 40 inches	0	0	4	0	0 ----- 36%
40 - 60 inches	0	1	3	0	0 ----- 36%
>60 inches	0	0	1	1	0 ----- 18%

Map unit: 48C Dixfield-Colonel-Marlow association, strongly sloping
Location: 45°29.98′ 70°32.18′ to 45°29.90′ 70°32.66′

Observation	Depth	Drainage
0	55 inches	WD
250	26 inches	MWD
500	37 inches	MWD
750	64 inches	WD
1000	36 inches	MWD
1250	28 inches	SWPD
1500	31 inches	MWD
1750	110 inches	MWD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	0	0	0
20 - 40 inches	0	0	4	1	0 ----- 62%
40 - 60 inches	0	1	0	0	0 ----- 13%
>60 inches	0	1	1	0	0 ----- 25%

Map unit: 302C Hermon-Tunbridge-Skerry association, rolling
Location: 44°29.90′ 70°32.66′ to 45°29.90′ 70°32.66′

Observation	Depth	Drainage
0	43 inches	WD
250	60 inches	MWD
500	39 inches	WD
750	35 inches	WD
1000	25 inches	WD
1250	28 inches	WD
1500	55 inches	MWD
1750	85 inches	WD
2000	35 inches	MWD
2250	52 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	4	0	0	0	----- 40%
40 - 60 inches	0	3	1	0	0	----- 40%
>60 inches	0	1	1	0	0	----- 20%

Map unit: 13C Colton-Adams association, rolling
Location:

Observation	Depth	Drainage
0	39 inches	MWD
250	46 inches	WD
500	28 inches	WD
750	90 inches	WD
1000	25 inches	WD
1250	60 inches	WD
1500	30 inches	WD
1750	35 inches	SWPD
2000	60 inches	MWD
2250	70 inches	WD
2500	120 inches	MWD
2750	>140 inches	MWD
3000	30 inches	WD
3250	35 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	4	2	1	0	----- 50%
40 - 60 inches	0	1	0	0	0	----- 7%
>60 inches	0	3	3	0	0	----- 43%

Map unit: 302C Hermon-Tunbridge-Skerry association, rolling
Location: 45°29.84′ 70°34.03′ to 45°30.01′ 70°34.56′

Observation	Depth	Drainage
0	55 inches	WD
250	>140 inches	MWD
500	32 inches	WD
750	41 inches	WD
1000	35 inches	WD
1250	33 inches	MWD
1500	36 inches	WD
1750	34 inches	MWD
2000	65 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	3	2	0	0	----- 56%
40 - 60 inches	0	2	0	0	0	----- 22%
>60 inches	0	1	1	0	0	----- 22%

Map unit: 77C Telos-Chesuncook association, strongly sloping
Location: 45°30.01′ 70°34.56′ to 45°29.84′ 70°35.49′

Observation	Depth	Drainage
0	40 inches	MWD
250	80 inches	MWD
500	37 inches	MWD
750	60 inches	MWD
1000	68 inches	SWPD
1250	63 inches	MWD
1500	70 inches	SWPD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	----- 29%
40 - 60 inches	0	0	2	0	0	----- 29%
>60 inches	0	0	3	2	0	----- 42%

Map unit: 78B Telos-Monarda association, gently sloping
Location: 45°29.84′ 70°35.49′ to 45°29.82′ 70°35.97′

Observation	Depth	Drainage
0	61 inches	SWPD
250	60 inches	SWPD
500	70 inches	MWD
750	58 inches	PD
1000	58 inches	SWPD
1250	52 inches	SWPD
1500	48 inches	SWPD
1750	21 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	1	0	0	----- 12%
40 - 60 inches	0	0	0	5	1	----- 75%
>60 inches	0	0	1	0	0	----- 13%

Map unit: 76C Telos-Chesuncook-Elliottsville association, strongly sloping
Location: 45°29.82′ 70°35.97′ to

Observation	Depth	Drainage
0	50 inches	SWPD
250	60 inches	SWPD
500	66 inches	MWD
750	>140 inches	MWD
1000	>140 inches	MWD
1250	>140 inches	SWPD
1500	95 inches	MWD
1750	125 inches	MWD
2000	44 inches	MWD
2250	120 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	1	2	0	----- 30%
>60 inches	0	0	6	1	0	----- 70%

Map unit: 76C Telos-Chesuncook-Elliottsville association, strongly sloping
Location: to 45°29.73′ 70°37.18′

Observation	Depth	Drainage
2500	82 inches	MWD
2750	105 inches	MWD
3000	60 inches	MWD
3250	91 inches	MWD
3500	75 inches	MWD
3750	73 inches	SWPD
4000	67 inches	SWPD
4250	32 inches	MWD
4500	47 inches	MWD
4750	55 inches	SWPD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	0	0	0
20 - 40 inches	0	0	1	0	0 ----- 10%
40 - 60 inches	0	0	2	1	0 ----- 30%
>60 inches	0	0	4	2	0 ----- 60%

Map unit: 78B Telos-Monarda association, gently sloping
Location: 45°29.73′ 70°37.18′ to 45°29.78′ 70°37.79′

Observation	Depth	Drainage
0	132 inches	SWPD
250	81 inches	SWPD
500	45 inches	SWPD
750	69 inches	SWPD
1000	76 inches	SWPD
1250	55 inches	SWPD
1500	69 inches	SWPD
1750	59 inches	SWPD
2000	73 inches	SWPD
2250	48 inches	MWD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	0	0	0
20 - 40 inches	0	0	0	0	0
40 - 60 inches	0	0	1	3	0 ----- 40%
>60 inches	0	0	0	6	0 ----- 60%

Map unit: 78B Telos-Monarda association, gently sloping
Location: 45°29.78′ 70°37.79′ to 45°29.84′ 70°38.41′

Observation	Depth	Drainage
0	68 inches	SWPD
250	70 inches	SWPD
500	70 inches	SWPD
750	90 inches	SWPD
1000	67 inches	MWD
1250	101 inches	MWD
1500	107 inches	MWD
1750	84 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	0	0	0	
>60 inches	0	0	4	4	0	----- 100%

23 September 1992
Cupsuptic 15 Minute Topographic Quadrangle

Map unit: 31XC Danforth-Masardis-Peacham association, strongly sloping
Location: 45°11.44′ 70°58.74′ to 45°11.44′ 70°58.74′

Observation	Depth	Drainage
0	140 inches	EX
125	75 inches	EX
250	85 inches	EX
375	140 inches	EX
500	48 inches	WD
625	100 inches	WD
750	50 inches	EX
875	82 inches	EX
1000	18 inches	EX

	SOIL DRAINAGE CLASS					
DEPTH TO TILL	EX	WD	MWD	SWPD	PD	
00 - 20 inches	1	0	0	0	0	----- 11%
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	1	1	0	0	0	----- 22%
>60 inches	5	1	0	0	0	----- 67%

Map unit: 89C Elliottsville-Monson association, strongly sloping
Location: 45°11.44′ 70°58.74′ to 45°11.49′ 70°58.21′

Observation	Depth	Drainage
0	42 inches	WD
125	55 inches	WD
250	21 inches	MWD
375	42 inches	MWD
500	66 inches	WD
625	45 inches	WD
750	34 inches	WD
875	30 inches	WD
1000	41 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	2	1	0	0	----- 33%
40 - 60 inches	0	4	1	0	0	----- 56%
>60 inches	0	1	0	0	0	----- 11%

Map unit: 76C Telos-Chesuncook-Elliottsville association, strongly sloping
Location: 45°11.85′ 70°57.79′ to 45°11.83′ 70°56.87′

Observation	Depth	Drainage
0	30 inches	MWD
250	34 inches	SWPD
500	75 inches	SWPD
750	41 inches	PD
1000	124 inches	SWPD
1250	52 inches	SWPD
1500	53 inches	SWPD
1750	71 inches	MWD
2000	78 inches	MWD
2250	>140 inches	WD
2500	50 inches	SWPD
2750	59 inches	WD
3000	55 inches	WD
3250	75 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	1	1	3	1	----- 43%
40 - 60 inches	0	2	0	0	0	----- 14%
>60 inches	0	1	3	2	0	----- 43%

Map unit: 76C Telos-Chesuncook-Elliottsville association, strongly sloping
Location: 45°12.00′ 70°56.94′

Observation	Depth	Drainage
0	25 inches	WD
250	46 inches	SWPD
500	36 inches	WD
750	44 inches	WD
1000	46 inches	SWPD
1250	30 inches	MWD
1500	54 inches	SWPD
1750	58 inches	MWD
2000	48 inches	SWPD
2250	73 inches	MWD
2500	68 inches	MWD
2750	38 inches	SWPD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	2	1	1	0	----- 33%
40 - 60 inches	0	1	1	4	0	----- 50%
>60 inches	0	0	2	0	0	----- 17%

Map unit: 78B Telos-Monarda association, gently sloping
Location:

Observation	Depth	Drainage
0	34 inches	PD
250	84 inches	SWPD
500	>140 inches	PD
750	>140 inches	PD
1000	72 inches	SWPD
1250	92 inches	PD
1500	66 inches	PD
1750	80 inches	PD
2000	>140 inches	SWPD
2250	>140 inches	PD
2500	61 inches	VPD
2750	>140 inches	PD
3000	>140 inches	PD
3250	>140 inches	PD
3500	95 inches	SWPD
3750	64 inches	PD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	1	----- 6%
40 - 60 inches	0	0	0	0	0	
>60 inches	0	0	0	4	11	----- 94%

Map unit: 77C Telos-Chesuncook association, strongly sloping
Location: to 45°11.39′ 70°55.19′

Observation	Depth	Drainage
0	67 inches	SWPD
250	71 inches	SWPD
500	91 inches	MWD
750	80 inches	SWPD
1000	110 inches	MWD
1250	>140 inches	MWD
1500	92 inches	SWPD
1750	35 inches	SWPD
2000	89 inches	SWPD
2250	75 inches	MWD
2500	33 inches	PD
2750	34 inches	SWPD
3000	66 inches	mwd

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	2	1	----- 23%
40 - 60 inches	0	0	0	0	0	
>60 inches	0	0	5	5	0	----- 77%

Map unit: 77C Telos-Chesuncook association, strongly sloping
Location: 45°11.39′ 70°55.19′ to 45°11.62′ 70°57.60′

Observation	Depth	Drainage
0	45 inches	SWPD
250	60 inches	SWPD
500	59 inches	PD
750	60 inches	SWPD
1000	65 inches	SWPD
1250	58 inches	MWD
1500	53 inches	SWPD
1750	60 inches	MWD
2000	50 inches	SWPD
2250	54 inches	SWPD
2500	90 inches	SWPD
2750	65 inches	MWD
3000	77 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	1	4	1	----- 46%
>60 inches	0	0	3	4	0	----- 54%

Map unit: 77C Telos-Chesuncook association, strongly sloping
Location: 45°11.62′ 70°54.60′ to 45°11.62′ 70°53.85′

Observation	Depth	Drainage
0	62 inches	SWPD
250	57 inches	SWPD
500	72 inches	SWPD
750	58 inches	SWPD
1000	55 inches	SWPD
1250	83 inches	SWPD
1500	69 inches	PD
1750	94 inches	SWPD
2000	76 inches	SWPD
2250	56 inches	MWD
2500	61 inches	SWPD
2750	56 inches	SWPD
3000	67 inches	SWPD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	0	0	0
20 - 40 inches	0	0	0	0	0
40 - 60 inches	0	0	1	4	0 ----- 38%
>60 inches	0	0	0	7	1 ----- 62%

Map unit: 180C Chesuncook-Elliottsville-Telos association, strongly sloping

Location: 45°12.01′ 70°52.42′ to 45°12.07′ 70°51.98′

Observation	Depth	Drainage
0	71 inches	MWD
250	78 inches	WD
500	>140 inches	MWD
750	78 inches	MWD
1000	>140 inches	WD
1250	48 inches	WD
1500	52 inches	WD
1750	70 inches	MWD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	0	0	0
20 - 40 inches	0	0	0	0	0
40 - 60 inches	0	2	0	0	0 ----- 25%
>60 inches	0	2	4	0	0 ----- 75%

Map unit: 180C Chesuncook-Elliottsville-Telos association, strongly sloping
Location: 45°12.07′ 70°51.98′ to 45°12.38′ 70°52.36′

Observation	Depth	Drainage
0	68 inches	MWD
250	28 inches	SWPD
500	34 inches	MWD
750	58 inches	MWD
1000	>140 inches	SWPD
1250	50 inches	SWPD
1500	63 inches	MWD
1750	72 inches	MWD
2000	43 inches	WD
2250	60 inches	MWD
2500	38 inches	WD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	0	0	0
20 - 40 inches	0	1	1	1	0 ----- 30%
40 - 60 inches	0	1	0	1	0 ----- 20%
>60 inches	0	4	0	1	0 ----- 50%

Map unit: 68C Surplus-Bemis association, strongly sloping
Location: 45°13.46′ 70°53.28′ to 45°13.64′ 70°53.87′

Observation	Depth	Drainage
0	94 inches	MWD
250	>140 inches	MWD
500	68 inches	SWPD
750	>140 inches	SWPD
1000	>78 inches	SWPD
1250	>78 inches	SWPD
1500	>78 inches	PD
1750	>78 inches	PD
2000	82 inches	PD
2250	57 inches	PD
2500	66 inches	VPD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	0	0	0
20 - 40 inches	0	0	0	0	0
40 - 60 inches	0	0	0	0	1 ----- 9%
>60 inches	0	0	2	4	4 ----- 91%

Map unit: 69D Surplus-Sisk association, moderately steep
Location: 45°13.64′ 70°53.87′ to 45°13.73′ 70°54.10′

Observation	Depth	Drainage
0	100 inches	WD
250	90 inches	WD
500	93 inches	WD
750	95 inches	WD
1000	63 inches	MWD
1250	60 inches	SWPD
1500	30 inches	SWPD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	1	0	----- 14%
40 - 60 inches	0	0	0	0	0	
>60 inches	0	4	1	1	0	----- 86%

Map unit: 102D Saddleback-Ricker association, moderately steep
Location: 45°13.73′ 70°54.10′ to 45°13.90′ 70°54.53′

Observation	Depth	Drainage
0	25 inches	SWPD
250	21 inches	WD
500	40 inches	WD
750	36 inches	MWD
1000	59 inches	MWD
1250	77 inches	WD
1500	48 inches	WD
1750	43 inches	WD
2000	30 inches	SWPD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	1	1	2	0	----- 44%
40 - 60 inches	0	3	1	0	0	----- 44%
>60 inches	0	1	0	0	0	----- 12%

Map unit: 68C Suprlus-Bemis association, strongly sloping
Location: 45°11.26′ 70°50.83′ to 45°11.28′ 70°51.33′

Observation	Depth	Drainage
0	30 inches	MWD
250	32 inches	MWD
500	58 inches	MWD
750	54 inches	SWPD
1000	40 inches	SWPD
1250	55 inches	SWPD
1500	57 inches	PD
1750	41 inches	SWPD
2000	39 inches	MWD
2250	19 inches	PD
2500	40 inches	PD
2750	55 inches	SWPD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	1	----- 8%
20 - 40 inches	0	0	3	0	1	----- 34%
40 - 60 inches	0	0	1	5	1	----- 58%
>60 inches	0	0	0	0	0	

Map unit: 69D Surplus-Sisk association, moderately steep
Location: 45°11.28′ 70°51.33′ to

Observation	Depth	Drainage
0	52 inches	SWPD
250	38 inches	SWPD
500	60 inches	WD
750	54 inches	SWPD
1000	55 inches	MWD
1250	>140 inches	MWD
1500	61 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	1	0	----- 14%
40 - 60 inches	0	0	1	2	0	----- 43%
>60 inches	0	1	2	0	0	----- 43%

Map unit: 68C Suprlus-Bemis association, strongly sloping
Location: to 45°11.28′ 70°52.53′

Observation	Depth	Drainage
0	60 inches	SWPD
250	68 inches	SWPD
500	43 inches	PD
750	55 inches	VPD
1000	45 inches	PD
1250	61 inches	PD
1500	55 inches	SWPD
1750	44 inches	SWPD
2000	70 inches	SWPD
2250	>70 inches	SWPD
2500	>70 inches	SWPD
2750	>70 inches	MWD
3000	>70 inches	MWD
3250	52 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	1	2	3	----- 43%
>60 inches	0	0	2	5	1	----- 57%

4 September 1992
Cupsuptic 15 Minute Topographic Quadrangle

Map unit: 89D Chesuncook-Monson association, moderately steep
Location:

Observation	Depth	Drainage
0	54 inches	SWPD
250	25 inches	MWD
500	48 inches	WD
750	15 inches	WD
1000	37 inches	MWD
1250	6 inches	WD
1500	36 inches	WD
1750	14 inches	WD
2000	18 inches	WD
2250	109 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	4	0	0	0	----- 40%
20 - 40 inches	0	1	2	0	0	----- 30%
40 - 60 inches	0	1	0	1	0	----- 20%
>60 inches	0	1	0	0	0	----- 10%

Map unit: 76C Telos-Chesuncook-Elliottsville association, strongly sloping
Location:

Observation	Depth	Drainage
0	95 inches	MWD
250	72 inches	MWD
500	65 inches	SWPD
750	>140 inches	MWD
1000	>140 inches	MWD
1250	90 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	0	0	0	
>60 inches	0	1	4	1	0	----- 100%

Map unit: 89D Elliottsville-Monson association, moderately steep
Location:

Observation	Depth	Drainage
0	25 inches	MWD
250	22 inches	WD
500	35 inches	WD
750	15 inches	WD
1000	24 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	1	0	0	0	----- 20%
20 - 40 inches	0	3	1	0	0	----- 80%
40 - 60 inches	0	0	0	0	0	
>60 inches	0	0	0	0	0	

Map unit: 76C Telos-Chesuncook-Elliottsville association, strongly sloping
Location:

Observation	Depth	Drainage
0	40 inches	WD
250	29 inches	MWD
500	78 inches	SWPD
750	45 inches	SWPD
1000	35 inches	WD
1250	17 inches	WD
1500	39 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	1	0	0	0	----- 14%
20 - 40 inches	0	2	1	0	0	----- 43%
40 - 60 inches	0	1	0	1	0	----- 29%
>60 inches	0	0	0	1	0	----- 14%

Map unit: 89D Elliottsville-Monson association, moderately steep
Location:

Observation	Depth	Drainage
0	72 inches	WD
250	36 inches	WD
500	70 inches	MWD
750	44 inches	WD
1000	28 inches	MWD
1250	85 inches	WD
1500	26 inches	WD
1750	56 inches	WD
2000	60 inches	MWD
2250	28 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	3	1	0	0	----- 40%
40 - 60 inches	0	2	1	0	0	----- 30%
>60 inches	0	2	1	0	0	----- 30%

Map unit: 89D Elliottsville-Monson association, moderately steep
Location:

Observation	Depth	Drainage
0	67 inches	WD
250	38 inches	WD
500	73 inches	WD
750	44 inches	WD
1000	>140 inches	MWD
1250	24 inches	WD
1500	16 inches	MWD
1750	23 inches	SWPD
2000	24 inches	WD
2250	37 inches	PD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	1	0	0 ----- 10%
20 - 40 inches	0	3	0	1	1 ----- 50%
40 - 60 inches	0	1	0	0	0 ----- 10%
>60 inches	0	2	1	0	0 ----- 30%

Map unit: 89D Elliottsville-Monson association, moderately steep
Location:

Observation	Depth	Drainage
0	56 inches	WD
250	48 inches	WD
500	30 inches	SWPD
750	118 inches	WD
1000	62 inches	SWPD
1250	45 inches	WD
1500	104 inches	MWD
1750	26 inches	SWPD
2000	54 inches	WD
2250	33 inches	WD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	0	0	0
20 - 40 inches	0	1	0	2	0 ----- 30%
40 - 60 inches	0	4	0	0	0 ----- 40%
>60 inches	0	1	1	1	0 ----- 30%

Map unit: 77C Telos-Chesuncook association, strongly sloping
Location:

Observation	Depth	Drainage
0	140 inches	MWD
250	38 inches	MWD
500	58 inches	PD
750	48 inches	SWPD
1000	43 inches	SWPD
1250	48 inches	SWPD
1500	39 inches	SWPD
1750	42 inches	SWPD
2000	51 inches	MWD
2250	63 inches	SWPD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	1	1	0	----- 20%
40 - 60 inches	0	0	1	4	1	----- 60%
>60 inches	0	0	1	1	0	----- 20%

Map unit: 54C Colonel-Dixfield-Brayton association, strongly sloping
Location:

Observation	Depth	Drainage
0	>140 inches	SWPD
250	>140 inches	SWPD
500	78 inches	MWD
750	89 inches	MWD
1000	>140 inches	SWPD
1250	122 inches	SWPD
1500	118 inches	MWD
1750	94 inches	MWD
2000	103 inches	WD
2250	100 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	0	0	0	
>60 inches	0	2	4	4	0	----- 100%

Map unit: 54C Colonel-Dixfield-Brayton association, strongly sloping
Location:

Observation	Depth	Drainage
0	>140 inches	MWD
250	>140 inches	MWD
500	>140 inches	PD
750	>140 inches	PD
1000	>140 inches	PD
1250	>140 inches	SWPD
1500	>140 inches	SWPD
1750	>140 inches	SWPD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	0	0	0	
>60 inches	0	0	2	3	3	----- 100%

Map unit: 54B Colonel-Brayton-Dixfield association, gently sloping
Location:

Observation	Depth	Drainage
0	>140 inches	PD
250	>140 inches	PD
500	>140 inches	SWPD
750	>140 inches	SWPD
1000	>140 inches	SWPD
1250	>140 inches	SWPD
1500	>140 inches	MWD
1750	>140 inches	SWPD
2000	115 inches	MWD
2250	>140 inches	SWPD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	0	0	0	
>60 inches	0	0	2	6	2	----- 100%

Map unit: 54C Colonel-Dixfield-Brayton association, strongly sloping
Location:

Observation	Depth	Drainage
0	>140 inches	SWPD
250	>140 inches	MWD
500	110 inches	PD
750	>140 inches	SWPD
1000	>140 inches	PD
1250	>140 inches	SWPD
1500	>140 inches	SWPD
1750	>140 inches	SWPD
2000	>140 inches	SWPD
2250	>140 inches	SWPD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	0	0	0
20 - 40 inches	0	0	0	0	0
40 - 60 inches	0	0	0	0	0
>60 inches	0	0	1	7	2 ----- 100%

Map unit: 54C Colonel-Dixfield-Brayton association, strongly sloping
Location:

Observation	Depth	Drainage
0	>140 inches	SWPD
250	>140 inches	SWPD
500	>140 inches	SWPD
750	>140 inches	SWPD
1000	>140 inches	SWPD
1250	>140 inches	MWD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	0	0	0
20 - 40 inches	0	0	0	0	0
40 - 60 inches	0	0	0	0	0
>60 inches	0	0	1	5	0 ----- 100%

Map unit: 53D Marlow-Dixfield association, moderately steep
Location:

Observation	Depth	Drainage
0	81 inches	MWD
250	107 inches	WD
500	>140 inches	SWPD
750	>140 inches	MWD
1000	39 inches	MWD
1250	72 inches	WD
1500	95 inches	WD
1750	>140 inches	WD
2000	>140 inches	MWD
2250	>140 inches	WD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	0	0	0	0	0
20 - 40 inches	0	0	1	0	0 ----- 10%
40 - 60 inches	0	0	0	0	0
>60 inches	0	5	3	1	0 ----- 90%

Map unit: 34D Danforth-Elliottsville association, moderately steep
Location:

Observation	Depth	Drainage
0	75 inches	WD
250	34 inches	WD
500	15 inches	WD
750	102 inches	WD
1000	130 inches	WD
1250	15 inches	EX
1500	100 inches	WD
1750	68 inches	WD
2000	80 inches	WD
2250	73 inches	WD

	SOIL DRAINAGE CLASS				
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD
00 - 20 inches	1	1	0	0	0 ----- 20%
20 - 40 inches	0	1	0	0	0 ----- 10%
40 - 60 inches	0	0	0	0	0
>60 inches	0	7	0	0	0 ----- 70%

Map unit: 34C Danforth-Shirley-Elliottsville association, rolling
Location:

Observation	Depth	Drainage
0	77 inches	WD
250	36 inches	WD
500	125 inches	MWD
750	111 inches	MWD
1000	>140 inches	MWD
1250	>140 inches	WD
1500	>140 inches	WD
1750	>140 inches	WD
2000	112 inches	WD
2250	>140 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	1	0	0	0	----- 10%
40 - 60 inches	0	0	0	0	0	
>60 inches	0	6	3	0	0	----- 90%

Map unit: 34C Danforth-Shirley-Elliottsville association, rolling
Location:

Observation	Depth	Drainage
0	107 inches	MWD
250	76 inches	WD
500	126 inches	WD
750	>140 inches	WD
1000	60 inches	WD
1250	102 inches	WD
1500	122 inches	WD
1750	87 inches	WD
2000	>140 inches	MWD
2250	82 inches	MWD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	0	0	0	0	
40 - 60 inches	0	0	0	0	0	
>60 inches	0	7	3	0	0	----- 100%

Map unit: 34C Danforth-Shirley-Elliottsville association, rolling
Location:

Observation	Depth	Drainage
0	82 inches	WD
250	79 inches	MWD
500	75 inches	WD
750	57 inches	WD
1000	78 inches	WD
1250	>140 inches	MWD
1500	33 inches	WD
1750	60 inches	WD
2000	45 inches	SWPD
2250	34 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	0	0	0	0	
20 - 40 inches	0	2	0	0	0	----- 20%
40 - 60 inches	0	1	0	1	0	----- 20%
>60 inches	0	4	2	0	0	----- 60%

Map unit: 34C Danforth-Shirley-Elliottsville association, rolling
Location:

Observation	Depth	Drainage
0	59 inches	MWD
250	51 inches	MWD
500	19 inches	WD
750	40 inches	WD
1000	35 inches	WD
1250	43 inches	WD
1500	41 inches	WD
1750	130 inches	WD
2000	80 inches	WD
2250	>140 inches	WD

	SOIL DRAINAGE CLASS					
DEPTH TO BEDROCK	EX	WD	MWD	SWPD	PD	
00 - 20 inches	0	1	0	0	0	----- 10%
20 - 40 inches	0	1	0	0	0	----- 10%
40 - 60 inches	0	3	2	0	0	----- 50%
>60 inches	0	3	0	0	0	----- 30%