Tables

TABLE 1.--TEMPERATURE AND PRECIPITATION

(Recorded in the period 1961-90 at Newberry State Hospital)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have-- Maximum temperature higher than--	2 years in 10 will have-- Minimum temperature lower than--	Average number of growing degree days*	Average	2 years in 10 will have-- Less than--	2 years in 10 will have-- More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January-----	23.0	7.2	15.1	42	-18	0	2.16	1.37	2.87	7	29.2
February----	25.5	7.5	16.5	44	-18	0	1.62	.83	2.32	5	20.6
March-------	34.9	16.7	25.8	57	-12	0	2.12	1.05	3.05	5	15.1
April-------	48.8	28.9	38.9	74	7	17	2.17	1.32	2.94	5	5.3
May---------	62.6	38.8	50.7	85	22	122	2.80	1.65	3.83	6	.4
June--------	70.8	46.9	58.9	88	30	276	3.21	1.65	4.58	7	.0
July--------	76.7	52.9	64.8	92	36	460	2.65	1.55	3.63	5	.0
August------	73.7	52.4	63.0	88	36	405	3.70	2.20	5.05	7	.0
September---	64.8	45.2	55.0	83	27	187	3.65	2.13	5.00	7	.1
October-----	53.4	36.3	44.8	74	19	48	3.04	1.94	4.04	7	1.1
November----	39.4	26.0	32.7	62	4	1	2.68	1.54	3.70	7	13.7
December----	27.3	13.4	20.3	48	-12	0	2.54	1.85	3.18	7	27.3
Yearly:											
Average---	50.1	31.0	40.5	---	---	---	---	---	---	---	---
Extreme---	---	---	---	93	-20	---	---	---	---	---	---
Total-----	---	---	---	---	---	1,514	32.36	28.41	35.93	75	112.6

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

TABLE 2.--FREEZE DATES IN SPRING AND FALL

(Recorded in the period 1961-90 at Newberry State Hospital)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	May 17	May 30	June 14
2 years in 10 later than--	May 10	May 25	June 9
5 years in 10 later than--	Apr. 27	May 14	May 30
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 8	Sept. 25	Sept. 6
2 years in 10 earlier than--	Oct. 14	Sept. 30	Sept. 12
5 years in 10 earlier than--	Oct. 24	Oct. 10	Sept. 23

TABLE 3.--GROWING SEASON

(Recorded in the period 1961-90 at Newberry State Hospital)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	154	124	90
8 years in 10	163	132	98
5 years in 10	179	148	115
2 years in 10	195	163	131
1 year in 10	203	172	139

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	Acres	Percent
10D	Ontonagon silt loam, 6 to 15 percent slopes	351	0.1
10F	Ontonagon silt loam, 25 to 50 percent slopes	531	0.1
11A	Rudyard silty clay loam, 0 to 3 percent slopes	7,932	1.1
12	Pickford silty clay loam	17,800	2.5
13B	Alcona fine sandy loam, 0 to 6 percent slopes	1,224	0.2
13D	Alcona fine sandy loam, 6 to 15 percent slopes	237	*
16B	Graveraet fine sandy loam, 1 to 6 percent slopes	3,772	0.5
16D	Graveraet fine sandy loam, 6 to 15 percent slopes	1,007	0.1
17D	Eastport sand, 0 to 15 percent slopes	829	0.1
17E	Eastport sand, 15 to 35 percent slopes	4,313	0.6
18B	Rubicon sand, 0 to 6 percent slopes	9,792	1.4
18D	Rubicon sand, 6 to 15 percent slopes	3,305	0.5
18E	Rubicon sand, 15 to 35 percent slopes	1,981	0.3
18F	Rubicon sand, 35 to 60 percent slopes	568	0.1
19B	Kalkaska sand, 0 to 6 percent slopes	9,750	1.4
19D	Kalkaska sand, 6 to 15 percent slopes	2,932	0.4
19E	Kalkaska sand, 15 to 35 percent slopes	855	0.1
19F	Kalkaska sand, 35 to 60 percent slopes	115	*
20B	Croswell sand, 0 to 6 percent slopes	3,018	0.4
21A	Finch sand, 0 to 3 percent slopes	3,559	0.5
22	Spot muck	962	0.1
23	Leafriver mucky peat	11,284	1.6
24B	Springlake loamy coarse sand, 0 to 6 percent slopes	10,822	1.5
24D	Springlake loamy coarse sand, 6 to 15 percent slopes	2,205	0.3
24E	Springlake loamy coarse sand, 15 to 35 percent slopes	541	0.1
25B	Guardlake fine sandy loam, 0 to 6 percent slopes	14,864	2.1
25D	Guardlake fine sandy loam, 6 to 15 percent slopes	1,703	0.2
25E	Guardlake fine sandy loam, 15 to 35 percent slopes	211	*
27B	Greylock fine sandy loam, 1 to 6 percent slopes	9,292	1.3
27D	Greylock fine sandy loam, 6 to 15 percent slopes	2,188	0.3
27F	Greylock fine sandy loam, 35 to 60 percent slopes	621	0.1
28B	Longrie sandy loam, 1 to 6 percent slopes, rocky	2,421	0.3
28D	Longrie sandy loam, 6 to 15 percent slopes, rocky	163	*
29A	Solona loam, 0 to 3 percent slopes	11,639	1.7
32A	Allendale fine sand, 0 to 3 percent slopes	5,941	0.9
33	Pits, sand and gravel	1,558	0.2
34	Entisols, frequently flooded	1,965	0.3
35	Histosols and Aquents, ponded	9,314	1.3
36	Markey and Carbondale mucks	139,933	20.1
37	Dawson and Loxley peats	9,125	1.3
38E	Eastport-Leafriver complex, 0 to 35 percent slopes	9,872	1.4
39E	Finch-Dawson-Pullup complex, 0 to 35 percent slopes	6,812	1.0
40A	Rudyard-Allendale complex, 0 to 3 percent slopes	868	0.1
41D	Amadon-Rock outcrop complex, 1 to 15 percent slopes	9,975	1.4
41F	Amadon-Rock outcrop complex, 15 to 45 percent slopes	276	*
43	Angelica muck	17,404	2.5
44B	Battydoe fine sandy loam, 1 to 6 percent slopes, stony	13,209	1.9
44D	Battydoe fine sandy loam, 6 to 15 percent slopes, stony	2,332	0.3
44E	Battydoe fine sandy loam, 15 to 35 percent slopes, stony	552	0.1
46B	Adams sandy loam, 0 to 6 percent slopes	2,341	0.3
48E	Wainola-Leafriver-Pullup complex, 0 to 35 percent slopes	2,243	0.3
49A	Wainola fine sand, 0 to 3 percent slopes	1,628	0.2
52A	Ingalls fine sand, 0 to 3 percent slopes	1,094	0.2
53B	Menominee loamy sand, 0 to 6 percent slopes	2,411	0.3
53D	Menominee loamy sand, 6 to 15 percent slopes	59	*
56A	Ensign fine sandy loam, 0 to 3 percent slopes, rocky	2,098	0.3
57B	Amadon-Longrie sandy loams, 1 to 6 percent slopes, rocky	14,898	2.2
57D	Amadon-Longrie sandy loams, 6 to 15 percent slopes, rocky	1,597	0.2
61B	Paquin sand, 0 to 6 percent slopes	9,074	1.3
62A	Iosco sand, 0 to 3 percent slopes	3,122	0.4
64A	Search very fine sandy loam, 0 to 3 percent slopes	1,573	0.2
67B	Furlong sand, 0 to 6 percent slopes, rocky	1,935	0.3

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	Percent
68	Wakeley muck	7,247	1.0
69B	Satago silt loam, 1 to 6 percent slopes	6,839	1.0
70B	St. Ignace silt loam, 0 to 6 percent slopes	3,635	0.5
70D	St. Ignace silt loam, 6 to 15 percent slopes, rocky	771	0.1
70F	St. Ignace-Rock outcrop complex, 35 to 70 percent slopes	907	0.1
71B	Johnswood cobbly silt loam, 2 to 6 percent slopes	1,044	0.1
84B	Wallace-Alcona complex, 0 to 6 percent slopes	1,794	0.3
84D	Wallace-Alcona complex, 6 to 15 percent slopes	652	0.1
84F	Wallace-Alcona complex, 35 to 60 percent slopes	729	0.1
86B	Ingalls-Paquin complex, 0 to 6 percent slopes	338	*
88B	Croswell-Wainola complex, 0 to 6 percent slopes	2,655	0.4
89A	Spot-Finch complex, 0 to 3 percent slopes	14,427	2.2
92A	Engadine fine sandy loam, 0 to 3 percent slopes	1,142	0.2
93F	Ontonagon-Pickford, occasionally flooded, complex, 0 to 50 percent slopes	569	0.1
94A	Markey-Spot-Finch complex, 0 to 3 percent slopes	16,435	2.5
95A	Bowers silt loam, 0 to 3 percent slopes	1,480	0.2
98	Glawe silt loam	2,212	0.3
100B	Greylock-Adams complex, 0 to 6 percent slopes	2,725	0.4
100D	Greylock-Adams complex, 6 to 15 percent slopes	369	0.1
108D	Shelter-Alpena complex, 0 to 15 percent slopes, stony	2,598	0.4
112	Soo silty clay loam	793	0.1
113	Ruse mucky loam	396	0.1
116	Udipsamments and Udorthents, nearly level	1,205	0.2
117B	Manistee sand, 0 to 6 percent slopes	479	0.1
119	Gogomain very fine sandy loam	2,148	0.3
122	Pits, quarry	2,742	0.4
123B	Borgstrom sand, 0 to 6 percent slopes	755	0.1
124D	Alpena gravelly loam, 0 to 15 percent slopes	7,381	1.1
125B	Croswell-Markey complex, 0 to 6 percent slopes	673	0.1
132B	Superior fine sandy loam, till substratum, 1 to 6 percent slopes	1,775	0.3
132D	Superior fine sandy loam, till substratum, 6 to 15 percent slopes	225	*
132F	Superior fine sandy loam, 25 to 50 percent slopes	61	*
133	Dorval muck	961	0.1
135B	Longrie-Battydoe, stony, complex, 1 to 6 percent slopes	3,885	0.6
135D	Longrie-Battydoe, stony, complex, 6 to 15 percent slopes	1,582	0.2
143	Caffey muck	895	0.1
146A	Allendale-Wakeley complex, 0 to 3 percent slopes	2,767	0.4
147B	Shelter very cobbly loam, 0 to 6 percent slopes, stony	15,467	2.3
147D	Shelter very cobbly loam, 6 to 15 percent slopes, stony	4,704	0.7
151	Beavertail muck	6,549	0.9
160B	Esau extremely gravelly sandy loam, 0 to 3 percent slopes	2,481	0.4
161	Zela muck	1,230	0.2
163B	Esau-Zela complex, 0 to 3 percent slopes	5,362	0.8
164A	Moltke loam, 0 to 3 percent slopes	4,846	0.7
165A	Engadine-Rudyard complex, 0 to 3 percent slopes	973	0.1
166	Gogomain-Pickford complex	2,769	0.4
167B	Battydoe, stony-Wallace complex, 0 to 6 percent slopes	1,382	0.2
167D	Battydoe, stony-Wallace complex, 6 to 15 percent slopes	616	0.1
167E	Battydoe, stony-Wallace complex, 15 to 35 percent slopes	444	0.1
168B	Caffey-Ingalls-Iosco complex, 0 to 6 percent slopes	6,362	0.9
169E	Ontonagon-Fluvaquents, frequently flooded, complex, 0 to 35 percent slopes	450	0.1
170B	Pullup fine sand, 0 to 6 percent slopes	279	*
170D	Pullup fine sand, 6 to 15 percent slopes	1,443	0.2
170E	Pullup fine sand, 15 to 35 percent slopes	1,059	0.2
172B	Leafriver-Croswell-Wainola complex, 0 to 6 percent slopes	15,707	2.2
173B	Paquin-Finch sands, 0 to 6 percent slopes	5,316	0.8
174B	Croswell-Spot complex, 0 to 6 percent slopes	1,023	0.1
175D	Wallace-Spot complex, 0 to 15 percent slopes	3,527	0.5
176B	Paquin-Spot complex, 0 to 6 percent slopes	3,343	0.5
177B	Millecoquins-Superior, till substratum, complex, 1 to 6 percent slopes	610	0.1
177D	Millecoquins-Superior, till substratum, complex, 6 to 15 percent slopes	268	*
178B	Dinkey muck, 0 to 6 percent slopes	113	*

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	Percent
179B	Wallace sand, 0 to 6 percent slopes	38,393	5.5
179D	Wallace sand, 6 to 15 percent slopes	6,189	0.9
179E	Wallace sand, 15 to 35 percent slopes	1,571	0.2
179F	Wallace sand, 35 to 60 percent slopes	1,715	0.2
180B	Millecoquins very fine sandy loam, 1 to 6 percent slopes	329	*
181A	Mattix sandy loam, 0 to 3 percent slopes	1,713	0.2
182B	Heinz sandy loam, 0 to 6 percent slopes	2,089	0.3
183B	Cozy cobbly fine sandy loam, 0 to 6 percent slopes	2,714	0.4
185	Ermatinger silt loam	143	*
	Water areas less than 40 acres in size	1,847	0.3
	Water areas more than 40 acres in size	42,624	6.2
	Total	698,937	100.0

* Less than 0.1 percent.

TABLE 5.--YIELDS PER ACRE OF CROPS

(Only the soils suitable for production of crops are listed. Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Soil name and map symbol	Oats	Barley	Winter wheat	Alfalfa hay	Trefoil-grass hay
	Bu	Bu	Bu	Tons	Tons
10D---------- Ontonagon	60	60	50	2.8	2.4
11A---------- Rudyard	60	---	---	---	2.6
12---------- Pickford	60	---	---	---	2.6
13B---------- Alcona	60	---	50	3.5	---
13D---------- Alcona	60	60	45	3.2	---
24B---------- Springlake	40	---	---	2.5	---
24D---------- Springlake	---	---	---	2.0	---
25B---------- Guardlake	60	---	---	3.0	---
27B---------- Greylock	60	---	---	3.0	---
27D---------- Greylock	55	---	---	2.5	---
28B---------- Longrie	55	---	30	3.5	---
28D---------- Longrie	50	---	20	3.0	---
29A---------- Solona	60	---	---	---	---
32A---------- Allendale	60	---	40	---	2.6
40A---------- Rudyard-Allendale	60	50	40	---	2.6
44B---------- Battydoe	60	---	---	3.0	---
44D---------- Battydoe	50	---	---	2.8	---
52A---------- Ingalls	55	55	40	---	2.0
53B---------- Menominee	55	---	---	---	---
57B---------- Amadon-Longrie	55	---	---	3.3	---

TABLE 5.--YIELDS PER ACRE OF CROPS--Continued

Soil name and map symbol	Oats	Barley	Winter wheat	Alfalfa hay	Trefoil-grass hay
	Bu	Bu	Bu	Tons	Tons
62A---------- Iosco	55	---	---	---	---
69B---------- Satago	60	---	---	3.0	---
92A---------- Engadine	65	60	50	---	2.5
95A---------- Bowers	65	---	48	---	3.0
100B---------- Greylock-Adams	60	---	---	3.0	---
117B---------- Manistee	55	---	35	3.5	---
132B---------- Superior	65	---	---	3.5	---
132D---------- Superior	60	---	---	3.2	---
135B---------- Longrie-Battydoe	55	---	---	3.0	---
135D---------- Longrie-Battydoe	50	---	---	2.8	---
164A---------- Moltke	65	---	---	---	---
165A---------- Engadine-Rudyard	65	---	---	---	2.6
177B---------- Millecoquins-Superior	65	---	---	3.5	3.0
177D---------- Millecoquins-Superior	60	---	---	3.2	2.5
180B---------- Millecoquins	65	---	50	3.5	3.0

TABLE 6.--CAPABILITY CLASSES AND SUBCLASSES

(Miscellaneous areas are excluded. Absence of an entry indicates no acreage)

Class	Total acreage	Major management concerns (Subclass)		
		Erosion (e)	Wetness (w)	Soil problem (s)
		Acres	Acres	Acres
I	---	---	---	---
II	42,279	29,740	12,539	---
III	100,058	22,877	52,329	24,845
IV	102,674	14,900	35,260	52,514
V	219,124	---	219,124	---
VI	130,003	564	43,625	85,814
VII	42,196	2,989	9,730	29,477
VIII	---	---	---	---

TABLE 7.--PRIME FARMLAND

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Soil name
13B	Alcona fine sandy loam, 0 to 6 percent slopes
27B	Greylock fine sandy loam, 1 to 6 percent slopes
29A	Solona loam, 0 to 3 percent slopes (where drained)
43	Angelica muck (where drained)
52A	Ingalls fine sand, 0 to 3 percent slopes (where drained)
86B	Ingalls-Paquin complex, 0 to 6 percent slopes (where drained)
92A	Engadine fine sandy loam, 0 to 3 percent slopes (where drained
95A	Bowers silt loam, 0 to 3 percent slopes (where drained)
98	Glawe silt loam (where drained)
100B	Greylock-Adams complex, 0 to 6 percent slopes
112	Soo silty clay loam (where drained)
119	Gogomain very fine sandy loam (where drained)
132B	Superior fine sandy loam, till substratum, 1 to 6 percent slopes
164A	Moltke loam, 0 to 3 percent slopes (where drained)
165A	Engadine-Rudyard complex, 0 to 3 percent slopes (where drained)
166	Gogomain-Pickford complex (where drained)
177B	Millecoquins-Superior, till substratum, complex, 1 to 6 percent slopes
180B	Millecoquins very fine sandy loam, 1 to 6 percent slopes
185	Ermatinger silt loam (where drained)

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY

(Only the soils suitable for production of commercial trees are listed. Absence of an entry indicates that information was not available)

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
10D---------- Ontonagon	2C	Slight	Severe	Slight	Moderate	Red maple----------	55	35	White spruce, eastern white pine, tamarack.
						Eastern white pine--	45	75	
						Yellow birch--------	---	---	
						Northern whitecedar-	---	---	
						Eastern hemlock-----	---	---	
						White spruce--------	---	---	
						Balsam fir----------	---	---	
10F---------- Ontonagon	2R	Severe	Severe	Slight	Moderate	Red maple----------	55	35	White spruce, eastern white pine, tamarack.
						Eastern white pine--	45	75	
						Yellow birch--------	---	---	
						Northern whitecedar-	---	---	
						Eastern hemlock-----	---	---	
						White spruce--------	---	---	
						Balsam fir----------	---	---	
11A---------- Rudyard	6W	Slight	Severe	Moderate	Severe	White spruce--------	45	84	White spruce, eastern white pine, tamarack.
						Balsam fir----------	45	83	
						Quaking aspen-------	---	---	
						Northern whitecedar-	---	---	
						Eastern hemlock-----	---	---	
						Black ash----------	---	---	
						Red maple----------	---	---	
						American basswood---	---	---	
12---------- Pickford	6W	Slight	Severe	Severe	Severe	White spruce--------	45	84	---
						Balsam fir----------	45	83	
						Paper birch---------	---	---	
						Eastern hemlock-----	---	---	
						Quaking aspen-------	---	---	
						Northern whitecedar-	---	---	
						Black ash----------	---	---	
13B, 13D-------- Alcona	3L	Slight	Moderate	Slight	Slight	Sugar maple---------	61	38	White spruce, red pine, eastern white pine.
						Red maple----------	---	---	
						Yellow birch--------	---	---	
						American basswood---	---	---	
						American beech------	---	---	
						Eastern white pine--	---	---	
						White ash----------	---	---	
						Red pine----------	---	---	
16B, 16D-------- Graveraet	3W	Slight	Moderate	Moderate	Severe	Sugar maple---------	65	40	White spruce, eastern white pine, red pine.
						Quaking aspen-------	---	---	
						American beech------	---	---	
						Yellow birch--------	---	---	
						Balsam fir----------	---	---	
						White ash----------	---	---	
						Eastern hemlock-----	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
17D---------- Eastport	5S	Slight	Moderate	Moderate	Slight	Red pine----------	47	69	Red pine, jack pine, eastern white pine.
						Jack pine----------	---	---	
						Quaking aspen-------	---	---	
						Eastern white pine--	---	---	
						Paper birch---------	---	---	
						Red maple----------	---	---	
						Eastern hemlock-----	---	---	
						Northern red oak----	---	---	
17E---------- Eastport	5R	Moderate	Moderate	Moderate	Slight	Red pine----------	47	69	Red pine, jack pine, eastern white pine.
						Jack pine----------	---	---	
						Quaking aspen-------	---	---	
						Eastern white pine--	---	---	
						Paper birch---------	---	---	
						Red maple----------	---	---	
						Eastern hemlock-----	---	---	
						Northern red oak----	---	---	
18B, 18D-------- Rubicon	4S	Slight	Moderate	Moderate	Slight	Quaking aspen-------	60	64	Red pine, jack pine, eastern white pine.
						Jack pine----------	53	73	
						Red pine----------	53	82	
						Bigtooth aspen------	66	75	
						Red maple----------	57	36	
						Paper birch---------	---	---	
						Eastern white pine--	45	75	
18E---------- Rubicon	4R	Moderate	Moderate	Moderate	Slight	Quaking aspen-------	60	64	Red pine, jack pine, eastern white pine.
						Jack pine----------	53	73	
						Red pine----------	53	82	
						Bigtooth aspen------	66	75	
						Red maple----------	57	36	
						Paper birch---------	---	---	
						Eastern white pine--	45	75	
18F---------- Rubicon	4R	Severe	Severe	Moderate	Slight	Quaking aspen-------	60	64	Red pine, jack pine, eastern white pine.
						Jack pine----------	53	73	
						Red pine----------	53	82	
						Bigtooth aspen------	66	75	
						Red maple----------	57	36	
						Paper birch---------	---	---	
						Eastern white pine--	45	75	
19B, 19D-------- Kalkaska	3S	Slight	Moderate	Moderate	Slight	Sugar maple---------	60	38	Red pine, eastern white pine.
						Quaking aspen-------	---	---	
						Red pine----------	73	136	
						Eastern white pine--	---	---	
						American beech------	---	---	
						Paper birch---------	---	---	
						Red maple----------	---	---	
						Bigtooth aspen------	---	---	
19E---------- Kalkaska	3R	Moderate	Moderate	Moderate	Slight	Sugar maple---------	60	38	Red pine, eastern white pine.
						Quaking aspen-------	---	---	
						Red pine----------	73	136	
						Eastern white pine--	---	---	
						American beech------	---	---	
						Paper birch---------	---	---	
						Red maple----------	---	---	
						Bigtooth aspen------	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
19F---------- Kalkaska	3R	Severe	Severe	Moderate	Slight	Sugar maple---------	60	38	Red pine, eastern white pine.
						Quaking aspen-------	---	---	
						Red pine----------	73	136	
						Eastern white pine--	---	---	
						American beech------	---	---	
						Paper birch---------	---	---	
						Red maple----------	---	---	
						Bigtooth aspen------	---	---	
20B---------- Croswell	5S	Slight	Moderate	Moderate	Moderate	Quaking aspen-------	68	78	Red pine, eastern white pine, white spruce.
						Red pine----------	55	88	
						Jack pine----------	53	73	
						Eastern white pine--	---	---	
						Bigtooth aspen------	69	80	
						Red maple----------	---	---	
						Paper birch---------	54	55	
21A---------- Finch	4W	Slight	Severe	Moderate	Severe	Quaking aspen-------	56	56	Eastern white pine, white spruce, red pine, tamarack.
						Paper birch---------	54	55	
						Red maple----------	56	90	
						Eastern white pine--	53	99	
						Jack pine----------	52	71	
						Red pine----------	56	90	
22---------- Spot	2W	Slight	Severe	Severe	Severe	Quaking aspen-------	40	22	---
						Black spruce--------	---	---	
						Red maple----------	---	---	
						Paper birch---------	---	---	
						Northern whitecedar-	---	---	
						Tamarack----------	---	---	
23---------- Leafriver	2W	Slight	Severe	Severe	Severe	Quaking aspen-------	45	32	---
						Northern whitecedar-	---	---	
						Tamarack----------	---	---	
						Black spruce--------	---	---	
24B, 24D-------- Springlake	3S	Slight	Moderate	Moderate	Slight	Sugar maple---------	60	38	Red pine, eastern white pine.
						Quaking aspen-------	---	---	
						Red pine----------	71	131	
						Paper birch---------	---	---	
24E---------- Springlake	3R	Moderate	Moderate	Moderate	Slight	Sugar maple---------	60	38	Red pine, eastern white pine.
						Quaking aspen-------	---	---	
						Red pine----------	71	131	
						Paper birch---------	---	---	
25B, 25D-------- Guardlake	3A	Slight	Slight	Slight	Slight	Sugar maple---------	65	40	Red pine, eastern white pine.
						American basswood---	---	---	
						Quaking aspen-------	---	---	
						Bigtooth aspen------	---	---	
						White spruce--------	---	---	
						Eastern white pine--	---	---	
						Balsam fir----------	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
25E---------- Guardlake	3R	Moderate	Moderate	Slight	Slight	Sugar maple---------	65	40	Red pine, eastern white pine.
						American basswood---	---	---	
						Quaking aspen-------	---	---	
						Bigtooth aspen------	---	---	
						White spruce--------	---	---	
						Eastern white pine--	---	---	
						Balsam fir----------	---	---	
27B, 27D-------- Greylock	3L	Slight	Moderate	Moderate	Slight	Sugar maple---------	66	41	Red pine, white spruce, eastern white pine.
						American beech------	---	---	
						American basswood---	---	---	
						White ash----------	---	---	
						Yellow birch--------	---	---	
						Eastern hophornbeam-	---	---	
						Paper birch---------	---	---	
						Quaking aspen-------	---	---	
27F---------- Greylock	3R	Severe	Severe	Moderate	Slight	Sugar maple---------	66	41	Red pine, white spruce, eastern white pine.
						American beech------	---	---	
						American basswood---	---	---	
						White ash----------	---	---	
						Yellow birch--------	---	---	
						Eastern hophornbeam-	---	---	
						Paper birch---------	---	---	
						Quaking aspen-------	---	---	
28B, 28D-------- Longrie	3D	Slight	Moderate	Slight	Moderate	Sugar maple---------	61	41	Red pine, eastern white pine, white spruce.
						Yellow birch--------	---	---	
						American beech------	---	---	
						Quaking aspen-------	---	---	
						Red pine----------	71	131	
						American basswood---	---	---	
						Black cherry--------	---	---	
						Balsam fir----------	---	---	
29A---------- Solona	3W	Slight	Severe	Slight	Moderate	Sugar maple---------	64	40	Eastern white pine, white spruce, tamarack.
						White ash----------	---	---	
						American basswood---	---	---	
						Balsam fir----------	---	---	
						White spruce--------	---	---	
32A---------- Allendale	4W	Slight	Severe	Moderate	Moderate	Quaking aspen-------	60	64	White spruce, eastern white pine, tamarack.
						White ash----------	---	---	
						Eastern white pine--	---	---	
						White spruce--------	---	---	
						Paper birch---------	---	---	
						Balsam fir----------	---	---	
						Red maple----------	---	---	
36:									
Markey---------	2W	Slight	Severe	Severe	Severe	Balsam fir----------	52	100	---
						Northern whitecedar-	41	61	
						Tamarack----------	---	---	
						White spruce--------	---	---	
Carbondale-----	5W	Slight	Severe	Severe	Severe	Balsam fir----------	40	71	---
						Black spruce--------	15	23	
						Northern whitecedar-	---	---	
						Tamarack----------	---	---	
						Paper birch---------	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
37:									
Dawson---------	2W	Slight	Severe	Severe	Severe	Black spruce--------	15	23	---
						Tamarack----------	---	---	
Loxley---------	2W	Slight	Severe	Severe	Severe	Black spruce--------	15	23	---
						Tamarack----------	---	---	
						Balsam fir----------	---	---	
38E:									
Eastport-------	5R	Slight	Moderate	Moderate	Slight	Red pine----------	47	69	Red pine, jack pine, eastern white pine.
						Jack pine----------	---	---	
						Quaking aspen-------	---	---	
						Eastern white pine--	---	---	
						Paper birch---------	---	---	
						Red maple----------	---	---	
Leafriver------	2W	Slight	Severe	Severe	Severe	Quaking aspen-------	45	32	---
						Northern whitecedar-	---	---	
						Tamarack----------	---	---	
						Black spruce--------	---	---	
39E:									
Finch----------	4W	Slight	Severe	Moderate	Severe	Quaking aspen-------	56	56	Eastern white pine, white spruce, red pine, tamarack.
						Paper birch---------	54	55	
						Red maple----------	56	36	
						Eastern white pine--	53	99	
						Jack pine----------	52	71	
						Red pine----------	56	90	
Dawson---------	2W	Slight	Severe	Severe	Severe	Black spruce--------	15	23	---
						Tamarack----------	---	---	
Pullup---------	4R	Moderate	Moderate	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce, eastern white pine.
						Red maple----------	---	---	
						Paper birch---------	---	---	
						Quaking aspen-------	---	---	
						Eastern white pine--	58	115	
						White spruce--------	---	---	
						Balsam fir----------	---	---	
40A:									
Rudyard--------	6W	Slight	Severe	Moderate	Severe	White spruce--------	45	84	White spruce, eastern white pine, tamarack.
						Balsam fir----------	45	83	
						Quaking aspen-------	---	---	
						Northern whitecedar-	---	---	
						Eastern hemlock-----	---	---	
						Black ash----------	---	---	
						Red maple----------	---	---	
						American basswood---	---	---	
Allendale------	4W	Slight	Severe	Moderate	Moderate	Quaking aspen-------	60	64	White spruce, eastern white pine, tamarack.
						White ash----------	---	---	
						Eastern white pine--	---	---	
						White spruce--------	---	---	
						Paper birch---------	---	---	
						Balsam fir----------	---	---	
						Red maple----------	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
41D:									
Amadon---------	2D	Slight	Moderate	Moderate	Severe	Sugar maple---------	57	36	White spruce, eastern white pine, red pine.
						Paper birch---------	---	---	
						American beech------	---	---	
						Quaking aspen-------	---	---	
						Red maple----------	---	---	
						Balsam fir----------	---	---	
						Red pine----------	---	---	
						Eastern white pine--	---	---	
						Northern whitecedar-	---	---	
Rock outcrop.									
41F:									
Amadon---------	2R	Moderate	Moderate	Moderate	Severe	Sugar maple---------	57	36	White spruce, eastern white pine, red pine.
						Paper birch---------	---	---	
						American beech------	---	---	
						Quaking aspen-------	---	---	
						Red maple----------	---	---	
						Balsam fir----------	---	---	
						Red pine----------	---	---	
						Eastern white pine--	---	---	
						Northern whitecedar-	---	---	
Rock outcrop.									
43---------- Angelica	7W	Slight	Severe	Severe	Severe	Balsam fir----------	54	105	---
						Quaking aspen-------	60	64	
						Paper birch---------	---	---	
						Yellow birch--------	---	---	
						Northern whitecedar-	---	---	
						Black ash----------	---	---	
44B, 44D-------- Battydoe	3L	Slight	Moderate	Slight	Slight	Sugar maple---------	66	41	White spruce, eastern white pine, red pine.
						American beech------	---	---	
						White ash----------	---	---	
						Yellow birch--------	---	---	
						American basswood---	---	---	
						Eastern hemlock-----	---	---	
44E---------- Battydoe	3R	Moderate	Moderate	Slight	Slight	Sugar maple---------	66	41	White spruce, eastern white pine, red pine.
						American beech------	---	---	
						White ash----------	---	---	
						Yellow birch--------	---	---	
						American basswood---	---	---	
						Eastern hemlock-----	---	---	
46B---------- Adams	3S	Slight	Slight	Severe	Slight	Sugar maple---------	62	39	Eastern white pine, red pine.
						Red maple----------	---	---	
						American beech------	---	---	
						Eastern hemlock-----	---	---	
						Eastern white pine--	66	139	
						Red pine----------	78	150	
48E:									
Wainola--------	6W	Slight	Severe	Moderate	Severe	Quaking aspen-------	75	87	White spruce, eastern white pine.
						Red maple----------	---	---	
						Paper birch---------	63	70	
						Balsam fir----------	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
48E:									
Leafriver------	2W	Slight	Severe	Severe	Severe	Quaking aspen-------	45	32	---
						Northern whitecedar-	---	---	
						Tamarack----------	---	---	
						Black spruce--------	---	---	
Pullup---------	4R	Moderate	Moderate	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce, eastern white pine.
						Red maple----------	---	---	
						Paper birch---------	---	---	
						Quaking aspen-------	---	---	
						Eastern white pine--	58	115	
						White spruce--------	---	---	
						Balsam fir----------	---	---	
49A---------- Wainola	6W	Slight	Severe	Moderate	Severe	Quaking aspen-------	75	87	White spruce, eastern white pine.
						Red maple----------	---	---	
						Paper birch---------	63	70	
52A---------- Ingalls	4W	Slight	Severe	Moderate	Severe	Quaking aspen-------	60	64	Eastern white pine, white spruce, tamarack.
						Red maple----------	---	---	
						Jack pine----------	---	---	
						Northern whitecedar-	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	---	---	
						Eastern hemlock-----	---	---	
						Yellow birch--------	---	---	
						Bigtooth aspen------	---	---	
53B, 53D-------- Menominee	6A	Slight	Slight	Slight	Slight	Sugar maple---------	64	40	Red pine, eastern white pine, white spruce.
						American basswood---	---	---	
						Red maple----------	---	---	
						Quaking aspen-------	74	86	
56A---------- Ensign	3W	Slight	Severe	Moderate	Severe	Northern whitecedar-	34	49	Eastern white pine, white spruce, tamarack.
						Quaking aspen-------	---	---	
						Bigtooth aspen------	---	---	
						Balsam fir----------	---	---	
						Red pine----------	---	---	
						Paper birch---------	56	59	
57B, 57D:									
Amadon---------	2D	Slight	Moderate	Moderate	Severe	Sugar maple---------	57	36	White spruce, red pine, eastern white pine.
						Paper birch---------	---	---	
						American beech------	---	---	
						Quaking aspen-------	---	---	
						Red maple----------	---	---	
						Balsam fir----------	---	---	
						Red pine----------	---	---	
						Eastern white pine--	---	---	
						Northern whitecedar-	---	---	
Longrie--------	3D	Slight	Moderate	Slight	Moderate	Sugar maple---------	61	38	Red pine, eastern white pine, white spruce.
						Yellow birch--------	---	---	
						American beech------	---	---	
						Quaking aspen-------	---	---	
						Red pine----------	71	131	
						American basswood---	---	---	
						Black cherry--------	---	---	
						Balsam fir----------	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
61B---------- Paquin	3S	Slight	Moderate	Moderate	Slight	Sugar maple---------	58	37	Red pine, eastern white pine, white spruce.
						American beech------	---	---	
						Black cherry--------	---	---	
						Red maple----------	64	40	
						Quaking aspen-------	---	---	
						Eastern hemlock-----	---	---	
						Yellow birch--------	---	---	
						Eastern white pine--	---	---	
						Red pine----------	60	101	
62A---------- Iosco	5W	Slight	Severe	Slight	Moderate	Quaking aspen-------	65	73	Red pine, eastern white pine, white spruce, tamarack.
						Sugar maple---------	---	---	
						Red pine----------	---	---	
						Yellow birch--------	---	---	
						Paper birch---------	58	62	
						Balsam fir----------	55	107	
64A---------- Search	2W	Slight	Severe	Moderate	Severe	Red maple----------	55	36	White spruce, tamarack.
						Quaking aspen-------	---	---	
						Balsam fir----------	---	---	
						Northern whitecedar-	---	---	
						Paper birch---------	---	---	
						Sugar maple---------	---	---	
67B---------- Furlong	3D	Slight	Moderate	Moderate	Slight	Sugar maple---------	60	38	Red pine, eastern white pine.
						Quaking aspen-------	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	---	---	
						Red maple----------	---	---	
						American beech------	---	---	
68---------- Wakeley	3W	Slight	Severe	Severe	Severe	Quaking aspen-------	50	43	---
						Black spruce--------	---	---	
						Balsam fir----------	---	---	
						Northern whitecedar-	---	---	
69B---------- Satago	3A	Slight	Severe	Slight	Slight	Sugar maple---------	62	39	White spruce, eastern white pine.
						White spruce--------	---	---	
						American basswood---	---	---	
						Quaking aspen-------	---	---	
						American beech------	---	---	
						Red maple----------	---	---	
70B, 70D-------- St. Ignace	4D	Slight	Severe	Moderate	Severe	Quaking aspen-------	60	64	Eastern white pine, red pine, white spruce.
						Sugar maple---------	53	34	
						Eastern white pine--	---	---	
						Balsam fir----------	---	---	
						Northern whitecedar-	33	48	
						Jack pine----------	55	77	
						Red pine----------	---	---	
70F:									
St. Ignace-----	4R	Severe	Severe	Moderate	Severe	Quaking aspen-------	60	64	Eastern white pine, red pine, white spruce.
						Sugar maple---------	53	34	
						Eastern white pine--	---	---	
						Balsam fir----------	---	---	
						Northern whitecedar-	33	48	
						Jack pine----------	55	77	
						Red pine----------	---	---	
Rock outcrop.									

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
71B---------- Johnswood	3F	Slight	Moderate	Moderate	Severe	Sugar maple---------	65	40	Red pine, white spruce, eastern white pine.
						American beech------	---	---	
						Balsam fir----------	---	---	
						American basswood---	---	---	
						Paper birch---------	---	---	
						Northern whitecedar-	---	---	
						White ash----------	---	---	
						Eastern hemlock-----	---	---	
84B, 84D:									
Wallace--------	6D	Slight	Moderate	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce, white pine.
						Red maple----------	---	---	
						Eastern white pine--	---	---	
						Eastern hemlock-----	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	63	70	
						Quaking aspen-------	---	---	
						Sugar maple---------	---	---	
Alcona---------	3L	Slight	Moderate	Slight	Slight	Sugar maple---------	61	38	White spruce, red pine, eastern white pine.
						Red maple----------	---	---	
						Yellow birch--------	---	---	
						American basswood---	---	---	
						American beech------	---	---	
						Eastern white pine--	---	---	
						White ash----------	---	---	
						Red pine----------	---	---	
84F:									
Wallace--------	6R	Severe	Severe	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce, white pine.
						Red maple----------	---	---	
						Eastern white pine--	---	---	
						Eastern hemlock-----	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	63	70	
						Quaking aspen-------	---	---	
						Sugar maple---------	---	---	
Alcona---------	3R	Severe	Severe	Slight	Slight	Sugar maple---------	61	38	White spruce, red pine, eastern white pine.
						Red maple----------	---	---	
						Yellow birch--------	---	---	
						American basswood---	---	---	
						American beech------	---	---	
						Eastern white pine--	---	---	
						White ash----------	---	---	
						Red pine----------	---	---	
86B:									
Ingalls--------	4W	Slight	Severe	Moderate	Severe	Quaking aspen-------	60	64	Eastern white pine, white spruce, tamarack.
						Red maple----------	---	---	
						Jack pine----------	---	---	
						Northern whitecedar-	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	---	---	
						Eastern hemlock-----	---	---	
						Yellow birch--------	---	---	
						Bigtooth aspen------	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
86B:									
Paquin	3S	Slight	Moderate	Moderate	Slight	Sugar maple	58	37	Red pine, eastern white pine, white spruce.
						American beech	---	---	
						Black cherry	---	---	
						Red maple	64	40	
						Quaking aspen	---	---	
						Eastern hemlock	---	---	
						Yellow birch	---	---	
						Eastern white pine	---	---	
						Red pine	60	101	
88B:									
Croswell	5S	Slight	Moderate	Moderate	Moderate	Quaking aspen	68	78	Red pine, eastern white pine, white spruce.
						Red pine	55	88	
						Jack pine	53	73	
						Eastern white pine	---	---	
						Bigtooth aspen	69	80	
						Red maple	---	---	
						Paper birch	54	55	
Wainola	6W	Slight	Severe	Moderate	Severe	Quaking aspen	75	87	White spruce, eastern white pine.
						Red maple	72	44	
						Paper birch	63	70	
						Balsam fir	---	---	
89A:									
Spot	2W	Slight	Severe	Severe	Severe	Quaking aspen	40	22	---
						Black spruce	---	---	
						Red maple	---	---	
						Paper birch	---	---	
						Northern whitecedar	---	---	
						Tamarack	---	---	
Finch	4W	Slight	Severe	Moderate	Severe	Quaking aspen	56	56	Eastern white pine, white spruce, red pine, tamarack.
						Paper birch	54	57	
						Red maple	56	36	
						Eastern white pine	53	99	
						Jack pine	52	71	
						Red pine	56	90	
92A Engadine	2W	Slight	Severe	Moderate	Severe	Red maple	55	35	White spruce, eastern white pine, tamarack.
						Quaking aspen	---	---	
						Balsam fir	---	---	
						Paper birch	---	---	
						White spruce	---	---	
93F:									
Ontonagon	2R	Severe	Severe	Slight	Moderate	Red maple	55	35	White spruce, eastern white pine, tamarack.
						Eastern white pine	45	75	
						Yellow birch	---	---	
						Northern whitecedar	---	---	
						Eastern hemlock	---	---	
						White spruce	---	---	
						Balsam fir	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
93F:									
Pickford	6W	Slight	Severe	Severe	Severe	Balsam fir	45	83	---
						White spruce	45	84	
						Paper birch	---	---	
						Eastern hemlock	---	---	
						Quaking aspen	---	---	
						Northern whitecedar	---	---	
94A:									
Markey	2W	Slight	Severe	Severe	Severe	Quaking aspen	45	32	---
						Balsam fir	---	---	
						Black spruce	---	---	
						Tamarack	---	---	
						Black ash	---	---	
						Northern whitecedar	---	---	
						Paper birch	---	---	
						Red maple	---	---	
						White spruce	---	---	
Spot	2W	Slight	Severe	Severe	Severe	Quaking aspen	40	22	---
						Black spruce	---	---	
						Red maple	---	---	
						Paper birch	---	---	
						Northern whitecedar	---	---	
						Tamarack	---	---	
Finch	4W	Slight	Severe	Moderate	Severe	Quaking aspen	56	56	Eastern white pine, white spruce, red pine, tamarack.
						Paper birch	54	55	
						Red maple	56	36	
						Eastern white pine	53	99	
						Jack pine	52	71	
						Red pine	56	90	
95A Bowers	7W	Slight	Severe	Slight	Moderate	Balsam fir	54	105	White spruce, eastern white pine, tamarack.
						American basswood	---	---	
						White ash	---	---	
						Yellow birch	---	---	
						Quaking aspen	---	---	
98 Glawe	2W	Slight	Severe	Severe	Severe	Red maple	50	32	---
						Quaking aspen	---	---	
						Balsam fir	---	---	
						Black spruce	---	---	
						Black ash	---	---	
						White spruce	---	---	
						Northern whitecedar	---	---	
100B, 100D:									
Greylock	3L	Slight	Moderate	Moderate	Slight	Sugar maple	66	41	Red pine, white spruce, eastern white pine.
						American beech	---	---	
						American basswood	---	---	
						White ash	---	---	
						Yellow birch	---	---	
						American hornbeam	---	---	
						Paper birch	---	---	
						Quaking aspen	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
100B, 100D:									
Adams	3S	Slight	Slight	Severe	Slight	Sugar maple	62	39	Eastern white pine, red pine.
						Red maple	---	---	
						American beech	---	---	
						Eastern hemlock	---	---	
						Eastern white pine	66	139	
						Red pine	78	150	
108D:									
Shelter	4X	Slight	Severe	Moderate	Severe	Balsam fir	34	58	White spruce, tamarack.
						White spruce	---	---	
						Northern whitecedar	---	---	
						Quaking aspen	50	45	
						Black spruce	---	---	
						Paper birch	---	---	
						Balsam poplar	---	---	
						Red maple	---	---	
Alpena	3F	Slight	Slight	Moderate	Slight	Sugar maple	61	38	Red pine, eastern white pine.
						Balsam fir	---	---	
						Quaking aspen	---	---	
						Paper birch	---	---	
						White spruce	---	---	
						Northern whitecedar	---	---	
						Yellow birch	---	---	
112 Soo	6W	Slight	Severe	Severe	Severe	White spruce	45	84	---
						Balsam fir	45	83	
						Paper birch	---	---	
						Quaking aspen	---	---	
						Red maple	---	---	
113 Ruse	5W	Slight	Severe	Severe	Severe	Balsam fir	40	71	---
						Black spruce	---	---	
						Northern whitecedar	---	---	
						Paper birch	---	---	
						Quaking aspen	---	---	
117B Manistee	3S	Slight	Moderate	Moderate	Slight	Sugar maple	67	41	Red pine, eastern white pine.
						Eastern white pine	---	---	
						Red maple	---	---	
						Red pine	---	---	
						American basswood	---	---	
						Eastern hemlock	---	---	
						White ash	---	---	
						Bigtooth aspen	74	86	
119 Gogomain	4W	Slight	Severe	Severe	Severe	Quaking aspen	55	93	---
						Balsam fir	---	---	
						Northern whitecedar	---	---	
						Tamarack	---	---	
						Paper birch	---	---	
						Balsam poplar	---	---	
123B Borgstrom	3S	Slight	Moderate	Moderate	Moderate	Red maple	65	40	Red pine, white spruce, eastern white pine.
						Sugar maple	---	---	
						Yellow birch	---	---	
						American beech	---	---	
						Eastern hemlock	---	---	
						Quaking aspen	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
124D---------- Alpena	3F	Slight	Slight	Moderate	Slight	Sugar maple---------	61	38	Red pine.
						Balsam fir----------	---	---	
						Quaking aspen-------	---	---	
						Paper birch---------	---	---	
						White spruce--------	---	---	
						Northern whitecedar-	---	---	
						Yellow birch--------	---	---	
125B:									
Croswell-------	5S	Slight	Moderate	Moderate	Moderate	Quaking aspen-------	68	78	Red pine, eastern white pine, white spruce.
						Red pine----------	55	88	
						Jack pine----------	53	71	
						Eastern white pine--	---	---	
						Bigtooth aspen------	69	80	
						Red maple----------	---	---	
						Paper birch---------	54	55	
Markey---------	2W	Slight	Severe	Severe	Severe	Quaking aspen-------	45	32	---
						Balsam fir----------	---	---	
						Black spruce--------	---	---	
						Tamarack----------	---	---	
						Black ash----------	---	---	
						Northern whitecedar-	---	---	
						Paper birch---------	---	---	
						Red maple----------	---	---	
						White spruce--------	---	---	
132B, 132D------ Superior	3L	Slight	Moderate	Slight	Slight	Sugar maple---------	62	39	Red pine, white spruce, eastern white pine.
						American beech------	---	---	
						American basswood---	---	---	
						White ash----------	---	---	
						Quaking aspen-------	---	---	
						Yellow birch--------	---	---	
						Eastern hemlock-----	---	---	
132F---------- Superior	6R	Severe	Severe	Severe	Moderate	Red pine----------	54	85	Red pine, white spruce, eastern white pine.
						Quaking aspen-------	---	---	
						Paper birch---------	---	---	
						White spruce--------	---	---	
						Sugar maple---------	---	---	
133---------- Dorval	2W	Slight	Severe	Severe	Severe	Red maple----------	50	32	---
						Northern whitecedar-	---	---	
						Black spruce--------	---	---	
135B, 135D:									
Longrie--------	3D	Slight	Moderate	Slight	Moderate	Sugar maple---------	61	38	Red pine, eastern white pine, white spruce.
						Yellow birch--------	---	---	
						American beech------	---	---	
						Quaking aspen-------	---	---	
						Red pine----------	71	131	
						American basswood---	---	---	
						Black cherry--------	---	---	
						Balsam fir----------	---	---	
Battydoe-------	3L	Slight	Moderate	Slight	Slight	Sugar maple---------	66	41	White spruce, eastern white pine, red pine.
						American beech------	---	---	
						White ash----------	---	---	
						Yellow birch--------	---	---	
						American basswood---	---	---	
						Eastern hemlock-----	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
143---------- Caffey	2W	Slight	Severe	Severe	Severe	Quaking aspen-------	40	22	---
						Balsam fir----------	---	---	
						Paper birch---------	---	---	
						Red maple----------	---	---	
						Northern whitecedar-	---	---	
						Black ash----------	---	---	
						Bigtooth aspen------	---	---	
146A:									
Allendale------	4W	Slight	Severe	Moderate	Moderate	Quaking aspen-------	60	64	White spruce, eastern white pine, tamarack.
						White ash----------	---	---	
						Eastern white pine--	---	---	
						White spruce--------	---	---	
						Paper birch---------	---	---	
						Balsam fir----------	---	---	
						Red maple----------	---	---	
						American basswood---	---	---	
Wakeley--------	3W	Slight	Severe	Severe	Severe	Quaking aspen-------	50	43	---
						Black spruce--------	---	---	
						Balsam fir----------	---	---	
						Northern whitecedar-	---	---	
147B, 147D------ Shelter	4X	Slight	Severe	Moderate	Severe	Balsam fir----------	34	58	White spruce, tamarack.
						White spruce--------	---	---	
						Northern whitecedar-	---	---	
						Quaking aspen-------	50	43	
						Black spruce--------	---	---	
						Paper birch---------	---	---	
						Balsam poplar-------	---	---	
						Red maple----------	---	---	
151---------- Beavertail	3W	Slight	Severe	Severe	Severe	Northern whitecedar-	26	37	---
						Balsam fir----------	45	83	
						Quaking aspen-------	---	---	
						Black spruce--------	---	---	
						Paper birch---------	---	---	
160B---------- Esau	4W	Slight	Severe	Moderate	Severe	Quaking aspen-------	55	83	Northern whitecedar, white spruce, eastern white pine.
						Balsam fir----------	---	---	
						Northern whitecedar-	---	---	
						Red maple----------	---	---	
						Paper birch---------	---	---	
						White spruce--------	---	---	
161---------- Zela	3W	Slight	Severe	Severe	Severe	Northern whitecedar-	26	37	---
						Balsam fir----------	---	---	
						Quaking aspen-------	---	---	
						Paper birch---------	---	---	
163B:									
Esau----------	4W	Slight	Severe	Moderate	Severe	Quaking aspen-------	55	55	Northern whitecedar, white spruce, eastern white pine.
						Balsam fir----------	---	---	
						Northern whitecedar-	---	---	
						Red maple----------	---	---	
						Paper birch---------	---	---	
						White spruce--------	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
163B:									
Zela	3W	Slight	Severe	Severe	Severe	Northern whitecedar	26	37	---
						Balsam fir	---	---	
						Quaking aspen	---	---	
						Paper birch	---	---	
164A Moltke	3W	Slight	Severe	Moderate	Severe	Sugar maple	60	38	White spruce, eastern white pine, tamarack.
						Red maple	---	---	
						American beech	---	---	
						American basswood	---	---	
						White ash	---	---	
						Quaking aspen	---	---	
						Paper birch	---	---	
						Balsam fir	---	---	
						White spruce	---	---	
						Eastern hemlock	---	---	
						Yellow birch	---	---	
						Northern whitecedar	---	---	
165A:									
Engadine	2W	Slight	Severe	Moderate	Severe	Red maple	55	35	White spruce, eastern white pine, tamarack.
						Quaking aspen	---	---	
						Balsam fir	---	---	
						Paper birch	---	---	
						White spruce	---	---	
Rudyard	6W	Slight	Severe	Moderate	Severe	White spruce	45	84	White spruce, eastern white pine, tamarack.
						Balsam fir	45	83	
						Quaking aspen	---	---	
						Northern whitecedar	---	---	
						Eastern hemlock	---	---	
						Black ash	---	---	
						Red maple	---	---	
						American basswood	---	---	
166:									
Gogomain	4W	Slight	Severe	Severe	Severe	Quaking aspen	55	53	---
						Balsam fir	---	---	
						Northern whitecedar	---	---	
						Tamarack	---	---	
						Paper birch	---	---	
						Balsam poplar	---	---	
Pickford	6W	Slight	Severe	Severe	Severe	White spruce	45	84	---
						Balsam fir	45	83	
						Paper birch	---	---	
						Eastern hemlock	---	---	
						Quaking aspen	---	---	
						Northern whitecedar	---	---	
						Black ash	---	---	
167B, 167D:									
Battydoe	3L	Slight	Moderate	Slight	Slight	Sugar maple	66	41	White spruce, eastern white pine, red pine.
						American beech	---	---	
						White ash	---	---	
						Yellow birch	---	---	
						American basswood	---	---	
						Eastern hemlock	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
167B, 167D:									
Wallace--------	6D	Slight	Moderate	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce, eastern white pine.
						Red maple----------	---	---	
						Eastern white pine--	52	96	
						Eastern hemlock-----	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	63	70	
						Quaking aspen-------	---	---	
						Sugar maple---------	---	---	
167E:									
Battydoe-------	3R	Moderate	Moderate	Slight	Slight	Sugar maple---------	66	41	White spruce, eastern white pine, red pine.
						American beech------	---	---	
						White ash----------	---	---	
						Yellow birch--------	---	---	
						American basswood---	---	---	
						Eastern hemlock-----	---	---	
Wallace--------	6R	Moderate	Moderate	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce, eastern white pine.
						Red maple----------	---	---	
						Eastern white pine--	52	96	
						Eastern hemlock-----	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	63	70	
						Quaking aspen-------	---	---	
						Sugar maple---------	---	---	
168B:									
Caffey---------	2W	Slight	Severe	Severe	Severe	Quaking aspen-------	40	22	---
						Balsam fir----------	---	---	
						Paper birch---------	---	---	
						Red maple----------	---	---	
						Northern whitecedar-	---	---	
						Black ash----------	---	---	
						Bigtooth aspen------	---	---	
Ingalls--------	4W	Slight	Severe	Moderate	Severe	Quaking aspen-------	60	64	Tamarack, eastern white pine, white spruce.
						Red maple----------	---	---	
						Northern whitecedar-	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	---	---	
						Eastern hemlock-----	---	---	
						Yellow birch--------	---	---	
						Bigtooth aspen------	---	---	
Iosco----------	5W	Slight	Severe	Slight	Moderate	Quaking aspen-------	65	73	Red pine, eastern white pine, white spruce, tamarack.
						Sugar maple---------	---	---	
						Red pine----------	---	---	
						Yellow birch--------	---	---	
						Paper birch---------	58	62	
						Balsam fir----------	55	107	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
169E:									
Ontonagon------	2R	Severe	Severe	Slight	Moderate	Red maple----------	55	35	White spruce, eastern white pine, tamarack.
						Eastern white pine--	45	75	
						Yellow birch--------	---	---	
						Northern whitecedar-	---	---	
						Eastern hemlock-----	---	---	
						White spruce--------	---	---	
						Balsam fir----------	---	---	
Fluvaquents.									
170B, 170D------ Pullup	4S	Slight	Moderate	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce, eastern white pine.
						Red maple----------	---	---	
						Paper birch---------	---	---	
						Quaking aspen-------	---	---	
						Eastern white pine--	58	45	
						White spruce--------	---	---	
						Balsam fir----------	---	---	
170E---------- Pullup	4R	Moderate	Moderate	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce, eastern white pine.
						Red maple----------	---	---	
						Paper birch---------	---	---	
						Quaking aspen-------	---	---	
						Eastern white pine--	58	115	
						White spruce--------	---	---	
						Balsam fir----------	---	---	
172B:									
Leafriver------	2W	Slight	Severe	Severe	Severe	Quaking aspen-------	45	32	---
						Northern whitecedar-	---	---	
						Tamarack----------	---	---	
						Black spruce--------	---	---	
Croswell-------	5S	Slight	Moderate	Moderate	Moderate	Quaking aspen-------	68	78	Red pine, eastern white pine, white spruce.
						Red pine----------	55	88	
						Jack pine----------	53	73	
						Eastern white pine--	---	---	
						Bigtooth aspen------	69	80	
						Red maple----------	---	---	
						Paper birch---------	54	55	
Wainola--------	6W	Slight	Severe	Moderate	Severe	Quaking aspen-------	75	87	White spruce, eastern white pine.
						Red maple----------	---	---	
						Paper birch---------	63	70	
						Balsam fir----------	---	---	
173B:									
Paquin---------	3S	Slight	Moderate	Moderate	Slight	Sugar maple---------	58	37	Red pine, eastern white pine, white spruce.
						American beech------	---	---	
						Black cherry--------	---	---	
						Red maple----------	64	40	
						Quaking aspen-------	---	---	
						Eastern hemlock-----	---	---	
						Yellow birch--------	---	---	
						Eastern white pine--	---	---	
						Red pine----------	60	101	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
173B:									
Finch----------	4W	Slight	Severe	Moderate	Severe	Quaking aspen-------	56	56	Eastern white pine, white spruce, red pine, tamarack.
						Paper birch---------	54	55	
						Red maple----------	56	36	
						Eastern white pine--	53	99	
						Jack pine----------	52	71	
						Red pine----------	56	90	
174B:									
Croswell-------	5S	Slight	Moderate	Moderate	Moderate	Quaking aspen-------	68	78	Red pine, eastern white pine, white spruce.
						Red pine----------	55	88	
						Jack pine----------	53	73	
						Eastern white pine--	---	---	
						Bigtooth aspen------	69	80	
						Red maple----------	---	---	
						Paper birch---------	54	55	
Spot----------	2W	Slight	Severe	Severe	Severe	Quaking aspen-------	40	22	---
						Black spruce--------	---	---	
						Red maple----------	---	---	
						Paper birch---------	---	---	
						Northern whitecedar-	---	---	
						Tamarack----------	---	---	
175D:									
Wallace--------	6D	Slight	Moderate	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce.
						Red maple----------	---	---	
						Eastern white pine--	52	96	
						Eastern hemlock-----	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	63	70	
						Quaking aspen-------	75	87	
						Sugar maple---------	---	---	
Spot----------	2W	Slight	Severe	Severe	Severe	Quaking aspen-------	40	22	---
						Black spruce--------	---	---	
						Red maple----------	---	---	
						Paper birch---------	---	---	
						Northern whitecedar-	---	---	
						Tamarack----------	---	---	
176B:									
Paquin---------	3S	Slight	Moderate	Moderate	Slight	Sugar maple---------	58	37	Red pine, eastern white pine, white spruce.
						American beech------	---	---	
						Black cherry--------	---	---	
						Red maple----------	64	40	
						Quaking aspen-------	---	---	
						Eastern hemlock-----	---	---	
						Yellow birch--------	---	---	
						Eastern white pine--	---	---	
						Red pine----------	60	101	
Spot----------	2W	Slight	Severe	Severe	Severe	Quaking aspen-------	40	22	---
						Black spruce--------	---	---	
						Red maple----------	---	---	
						Paper birch---------	---	---	
						Northern whitecedar-	---	---	
						Tamarack----------	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
177B, 177D:									
Millecoquins---	3L	Slight	Severe	Slight	Slight	Sugar maple---------	65	40	White spruce, red pine, tamarack.
						American beech------	---	---	
						American basswood---	---	---	
						White ash----------	---	---	
Superior-------	3L	Slight	Moderate	Slight	Slight	Sugar maple---------	62	39	Red pine, white spruce, eastern white pine.
						American beech------	---	---	
						American basswood---	---	---	
						White ash----------	---	---	
						Quaking aspen-------	---	---	
						Yellow birch--------	---	---	
						Eastern hemlock-----	---	---	
179B, 179D------ Wallace	6D	Slight	Moderate	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce.
						Red maple----------	---	---	
						Eastern white pine--	52	96	
						Eastern hemlock-----	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	63	70	
						Quaking aspen-------	75	87	
						Sugar maple---------	---	---	
179E---------- Wallace	6R	Moderate	Moderate	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce.
						Red maple----------	---	---	
						Eastern white pine--	52	96	
						Eastern hemlock-----	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	63	70	
						Quaking aspen-------	75	87	
						Sugar maple---------	---	---	
179F---------- Wallace	6R	Severe	Severe	Moderate	Slight	Red pine----------	59	99	Red pine, white spruce.
						Red maple----------	---	---	
						Eastern white pine--	52	96	
						Eastern hemlock-----	---	---	
						Balsam fir----------	---	---	
						Paper birch---------	63	70	
						Quaking aspen-------	75	87	
						Sugar maple---------	---	---	
180B---------- Millecoquins	3L	Slight	Severe	Slight	Slight	Sugar maple---------	65	40	White spruce, red pine, tamarack.
						American beech------	---	---	
						American basswood---	---	---	
						White ash----------	---	---	
181A---------- Mattix	5W	Slight	Severe	Moderate	Severe	Quaking aspen-------	68	78	White spruce, tamarack.
						Paper birch---------	---	---	
						Balsam fir----------	---	---	
						Red maple----------	---	---	
						White spruce--------	---	---	
						Northern whitecedar-	---	---	
						Bigtooth aspen------	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume*	Trees to plant
182B---------- Heinz	3A	Slight	Slight	Slight	Slight	Sugar maple---------	62	39	Red pine, eastern white pine, tamarack.
						Quaking aspen-------	---	---	
						Paper birch---------	---	---	
						White spruce--------	---	---	
						Balsam fir----------	---	---	
183B---------- Cozy	3W	Slight	Severe	Moderate	Severe	Sugar maple---------	64	40	Red pine, white spruce, tamarack.
						American beech------	---	---	
						White ash----------	---	---	
						American basswood---	---	---	
						Quaking aspen-------	---	---	
						Paper birch---------	---	---	
						Balsam fir----------	---	---	
185---------- Ermatinger	2W	Slight	Severe	Severe	Severe	Red maple----------	50	32	---
						Quaking aspen-------	---	---	
						White spruce--------	---	---	
						Black ash----------	---	---	
						Balsam fir----------	---	---	
						Balsam poplar-------	---	---	
						Paper birch---------	---	---	

* Volume is the yield in cubic feet per acre per year calculated at the age of culmination of mean annual increment for fully stocked natural stands.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated)

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
10D---------- Ontonagon	Moderate: low strength.	Moderate: low strength, slope.	Moderate: low strength.	Summer, fall, winter.	Slight---------	Moderate: slope.	Slight.
10F---------- Ontonagon	Severe: slope.	Severe: slope.	Severe: slope.	Summer, fall, winter.	Severe: slope.	Severe: slope.	Severe: slope.
11A---------- Rudyard	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Moderate: too clayey.	Moderate: too clayey.
12---------- Pickford	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight---------	Moderate: too clayey.	Moderate: too clayey.
13B---------- Alcona	Moderate: low strength.	Moderate: low strength.	Moderate: low strength.	Summer, fall, winter.	Slight---------	Slight--------	Slight.
13D---------- Alcona	Moderate: low strength.	Moderate: slope, low strength.	Moderate: low strength.	Summer, fall, winter.	Slight---------	Moderate: slope.	Slight.
16B---------- Graveraet	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
16D---------- Graveraet	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Moderate: slope.	Slight.
17D---------- Eastport	Moderate: too sandy.	Moderate: too sandy, slope.	Moderate: too sandy.	Spring, fall, winter.	Slight---------	Moderate: slope.	Slight.
17E---------- Eastport	Moderate: too sandy, slope.	Severe: slope.	Moderate: too sandy, slope.	Spring, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.
18B---------- Rubicon	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight---------	Slight--------	Slight.
18D---------- Rubicon	Moderate: too sandy.	Moderate: too sandy, slope.	Moderate: too sandy.	Spring, fall, winter.	Slight---------	Moderate: slope.	Slight.
18E---------- Rubicon	Moderate: too sandy, slope.	Severe: slope.	Moderate: too sandy, slope.	Spring, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
18F---------- Rubicon	Severe: slope.	Severe: slope.	Severe: slope.	Spring, fall, winter.	Severe: slope.	Severe: slope.	Severe: slope.
19B---------- Kalkaska	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight---------	Slight--------	Slight.
19D---------- Kalkaska	Moderate: too sandy.	Moderate: too sandy, slope.	Moderate: too sandy.	Spring, fall, winter.	Slight---------	Moderate: slope.	Slight.
19E---------- Kalkaska	Moderate: too sandy, slope.	Severe: slope.	Moderate: too sandy, slope.	Spring, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.
19F---------- Kalkaska	Severe: slope.	Severe: slope.	Severe: slope.	Spring, fall, winter.	Severe: slope.	Severe: slope.	Severe: slope.
20B---------- Croswell	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight---------	Slight--------	Slight.
21A---------- Finch	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
22---------- Spot	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
23---------- Leafriver	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter---------	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
24B---------- Springlake	Slight---------	Slight--------	Slight--------	Year round-----	Slight---------	Slight--------	Slight.
24D---------- Springlake	Slight---------	Moderate: slope.	Slight--------	Year round-----	Slight---------	Moderate: slope.	Slight.
24E---------- Springlake	Moderate: slope.	Severe: slope.	Moderate: slope.	Year round-----	Moderate: slope.	Severe: slope.	Moderate: slope.
25B---------- Guardlake	Slight---------	Slight--------	Slight--------	Year round-----	Slight---------	Slight--------	Slight.
25D---------- Guardlake	Slight---------	Moderate: slope.	Slight--------	Year round-----	Slight---------	Moderate: slope.	Slight.
25E---------- Guardlake	Moderate: slope.	Severe: slope.	Moderate: slope.	Year round-----	Moderate: slope.	Severe: slope.	Moderate: slope.
27B---------- Greylock	Moderate: low strength.	Moderate: low strength.	Moderate: low strength.	Summer, fall, winter.	Slight---------	Slight--------	Slight.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
27D---------- Greylock	Moderate: low strength.	Moderate: slope, low strength.	Moderate: low strength.	Summer, fall, winter.	Slight---------	Moderate: slope.	Slight.
27F---------- Greylock	Severe: slope.	Severe: slope.	Severe: slope.	Summer, fall, winter.	Severe: slope.	Severe: slope.	Severe: slope.
28B---------- Longrie	Moderate: low strength.	Moderate: depth to rock, low strength.	Moderate: depth to rock, low strength.	Summer, fall, winter.	Slight---------	Moderate: depth to rock.	Moderate: depth to rock.
28D---------- Longrie	Moderate: low strength.	Moderate: depth to rock, slope, low strength.	Moderate: depth to rock, low strength.	Summer, fall, winter.	Slight---------	Moderate: depth to rock, slope.	Moderate: depth to rock.
29A---------- Solona	Severe: wetness, low strength.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
32A---------- Allendale	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
36A:							
Markey----------	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter---------	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
Carbondale---------	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter---------	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
37:							
Dawson----------	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter---------	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
Loxley----------	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter---------	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
38E:							
Eastport----------	Moderate: too sandy, slope.	Severe: slope.	Moderate: too sandy, slope.	Spring, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
38E:							
Leafriver	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
39E:							
Finch	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
Dawson	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
Pullup	Moderate: too sandy, slope.	Severe: slope.	Moderate: too sandy, slope.	Spring, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.
40A:							
Rudyard	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Moderate: too clayey.	Moderate: too clayey.
Allendale	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
41D:							
Amadon	Severe: rock outcrop.	Severe: rock outcrop, depth to rock.	Severe: rock outcrop, depth to rock.	Summer, fall, winter.	Severe: rock outcrop.	Severe: rock outcrop, depth to rock.	Severe: rock outcrop, depth to rock.
Rock outcrop.							
41F:							
Amadon	Severe: rock outcrop, slope.	Severe: rock outcrop, depth to rock, slope.	Severe: rock outcrop, depth to rock, slope.	Summer, fall, winter.	Severe: rock outcrop, slope.	Severe: rock outcrop, depth to rock, slope.	Severe: rock outcrop, depth to rock, slope.
Rock outcrop.							
43 Angelica	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight	Slight	Slight.
44B Battydoe	Moderate: low strength.	Moderate: low strength.	Moderate: low strength.	Summer, fall, winter.	Slight	Slight	Slight.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
44D---------- Battydoe	Moderate: low strength.	Moderate: slope, low strength.	Moderate: low strength.	Summer, fall, winter.	Slight---------	Moderate: slope.	Slight.
44E---------- Battydoe	Moderate: low strength, slope.	Severe: slope.	Moderate: slope.	Summer, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.
46B---------- Adams	Slight---------	Slight--------	Slight--------	Year round-----	Slight---------	Slight--------	Slight.
48E:							
Wainola----------	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
Leafriver----------	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter---------	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
Pullup----------	Moderate: too sandy, slope.	Severe: slope.	Moderate: too sandy, slope.	Spring, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.
49A---------- Wainola	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
52A---------- Ingalls	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
53B---------- Menominee	Slight---------	Slight--------	Slight--------	Year round-----	Slight---------	Slight--------	Slight.
53D---------- Menominee	Slight---------	Moderate: slope.	Slight--------	Year round-----	Slight---------	Moderate: slope.	Slight.
56A---------- Ensign	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight---------	Slight--------	Slight.
57B:							
Amadon----------	Moderate: low strength.	Severe: depth to rock.	Severe: depth to rock.	Summer, fall, winter.	Slight---------	Severe: depth to rock.	Severe: depth to rock.
Longrie----------	Moderate: low strength.	Moderate: depth to rock, low strength.	Moderate: depth to rock, low strength.	Summer, fall, winter.	Slight---------	Moderate: depth to rock.	Moderate: depth to rock.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
57D:							
Amadon	Moderate: low strength.	Severe: depth to rock.	Severe: depth to rock.	Summer, fall, winter.	Slight	Severe: depth to rock.	Severe: depth to rock.
Longrie	Moderate: low strength.	Moderate: depth to rock, slope, low strength.	Moderate: depth to rock, low strength.	Summer, fall, winter.	Slight	Moderate: depth to rock, slope.	Moderate: depth to rock.
61B Paquin	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Summer, fall, winter.	Slight	Slight	Slight.
62A Iosco	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
64A Search	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight	Slight	Slight.
67B Furlong	Moderate: too sandy.	Moderate: depth to rock, too sandy.	Moderate: depth to rock, too sandy.	Summer, fall, winter.	Slight	Moderate: depth to rock.	Moderate: depth to rock.
68 Wakeley	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
69B Satago	Severe: low strength.	Severe: low strength.	Severe: low strength.	Summer, fall, winter.	Slight	Slight	Slight.
70B St. Ignace	Moderate: low strength.	Severe: depth to rock.	Severe: depth to rock.	Summer, fall, winter.	Slight	Severe: depth to rock.	Severe: depth to rock.
70D St. Ignace	Moderate: low strength.	Severe: depth to rock.	Severe: depth to rock.	Summer, fall, winter.	Slight	Severe: depth to rock.	Severe: depth to rock.
70F:							
St. Ignace	Severe: rock outcrop, slope.	Severe: rock outcrop, depth to rock, slope.	Severe: rock outcrop, depth to rock, slope.	Summer, fall, winter.	Severe: rock outcrop, slope.	Severe: rock outcrop, depth to rock, slope.	Severe: rock outcrop, depth to rock, slope.
Rock outcrop.							

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
71B---------- Johnswood	Moderate: low strength.	Moderate: too cobbly, low strength.	Moderate: too cobbly, low strength.	Summer, fall, winter.	Slight---------	Moderate: too cobbly.	Moderate: too cobbly.
84B:							
Wallace----------	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight---------	Slight--------	Slight.
Alcona----------	Moderate: low strength.	Moderate: low strength.	Moderate: low strength.	Summer, fall, winter.	Slight---------	Slight--------	Slight.
84D:							
Wallace----------	Moderate: too sandy.	Moderate: too sandy, slope.	Moderate: too sandy.	Spring, fall, winter.	Slight---------	Moderate: slope.	Slight.
Alcona----------	Moderate: low strength.	Moderate: slope, low strength.	Moderate: low strength.	Summer, fall, winter.	Slight---------	Moderate: slope.	Slight.
84F:							
Wallace----------	Severe: slope.	Severe: slope.	Severe: slope.	Spring, fall, winter.	Severe: slope.	Severe: slope.	Severe: slope.
Alcona----------	Severe: slope.	Severe: slope.	Severe: slope.	Summer, fall, winter.	Severe: slope.	Severe: slope.	Severe: slope.
86B:							
Ingalls----------	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
Paquin----------	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight---------	Slight--------	Slight.
88B:							
Croswell----------	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight---------	Slight--------	Slight.
Wainola----------	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
89A:							
Spot----------	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
Finch----------	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
92A---------- Engadine	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight---------	Slight--------	Slight.
93F:							
Ontonagon----------	Severe: slope.	Severe: slope.	Severe: slope.	Summer, fall, winter.	Severe: slope.	Severe: slope.	Severe: slope.
Pickford----------	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Moderate: too clayey.	Moderate: too clayey.
94A:							
Markey----------	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter---------	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
Spot----------	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
Finch----------	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
95A---------- Bowers	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
98---------- Glawe	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight---------	Slight--------	Slight.
100B:							
Greylock----------	Moderate: low strength.	Moderate: low strength.	Moderate: low strength.	Summer, fall, winter.	Slight---------	Slight--------	Slight.
Adams----------	Slight---------	Slight--------	Slight--------	Year round-----	Slight---------	Slight--------	Slight.
100D:							
Greylock----------	Moderate: low strength.	Moderate: slope, low strength.	Moderate: low strength.	Summer, fall, winter.	Slight---------	Moderate: slope.	Slight.
Adams----------	Slight---------	Moderate: slope.	Slight--------	Year round-----	Slight---------	Moderate: slope.	Slight.
108D:							
Shelter----------	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight---------	Moderate: too cobbly, slope.	Moderate: too cobbly.
Alpena----------	Slight---------	Moderate: slope.	Slight--------	Year round-----	Slight---------	Moderate: slope.	Slight.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
112 Soo	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight	Slight	Slight.
113 Ruse	Severe: wetness, low strength.	Severe: wetness, depth to rock, low strength.	Severe: wetness, depth to rock, low strength.	Summer, winter	Slight	Severe: depth to rock.	Severe: rock outcrop.
117B Manistee	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight	Slight	Slight.
119 Gogomain	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight	Slight	Slight.
123B Borgstrom	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight	Slight	Slight.
124D Alpena	Slight	Moderate: slope.	Slight	Year round	Slight	Moderate: slope.	Slight.
125B:							
Croswell	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight	Slight	Slight.
Markey	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
132B Superior	Moderate: low strength.	Moderate: low strength.	Moderate: low strength.	Summer, fall, winter.	Slight	Slight	Slight.
132D Superior	Moderate: low strength.	Moderate: low strength, slope.	Moderate: low strength.	Summer, fall, winter.	Slight	Moderate: slope.	Slight.
132F Superior	Severe: slope.	Severe: slope.	Severe: slope.	Summer, fall, winter.	Severe: slope.	Severe: slope.	Severe: slope.
133 Dorval	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
135B:							
Longrie	Moderate: low strength.	Moderate: depth to rock, low strength.	Moderate: depth to rock, low strength.	Summer, fall, winter.	Slight	Moderate: depth to rock.	Moderate: depth to rock.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
135B:							
Battydoe	Moderate: low strength.	Slight	Slight	Summer, fall, winter.	Slight	Slight	Slight.
135D:							
Longrie	Moderate: low strength.	Moderate: depth to rock, slope, low strength.	Moderate: depth to rock, low strength.	Summer, fall, winter.	Slight	Moderate: depth to rock, slope.	Moderate: depth to rock.
Battydoe	Moderate: low strength.	Moderate: slope, low strength.	Moderate: low strength.	Summer, fall, winter.	Slight	Moderate: slope.	Slight.
143 Caffey	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
146A:							
Allendale	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
Wakeley	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
147B Shelter	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight	Moderate: too cobbly.	Moderate: too cobbly.
147D Shelter	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight	Moderate: too cobbly, slope.	Moderate: too cobbly.
151 Beavertail	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
160B Esau	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Moderate: too cobbly.	Moderate: too cobbly.
161 Zela	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
163B:							
Esau	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Moderate: too cobbly.	Moderate: too cobbly.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
163B:							
Zela	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
164A Moltke	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight	Slight	Slight.
165A:							
Engadine	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight	Slight	Slight.
Rudyard	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Moderate: too clayey.	Moderate: too clayey.
166:							
Gogomain	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight	Slight	Slight.
Pickford	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Moderate: too clayey.	Moderate: too clayey.
167B:							
Battydoe	Moderate: low strength.	Moderate: low strength.	Moderate: low strength.	Summer, fall, winter.	Slight	Slight	Slight.
Wallace	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight	Slight	Slight.
167D:							
Battydoe	Moderate: low strength.	Moderate: slope, low strength.	Moderate: low strength.	Summer, fall, winter.	Slight	Moderate: slope.	Slight.
Wallace	Moderate: too sandy.	Moderate: too sandy, slope.	Moderate: too sandy.	Spring, fall, winter.	Slight	Moderate: slope.	Slight.
167E:							
Battydoe	Moderate: low strength, slope.	Severe: slope.	Moderate: slope, low strength.	Summer, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.
Wallace	Moderate: too sandy, slope.	Severe: slope.	Moderate: too sandy, slope.	Spring, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
168B:							
Caffey	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
Ingalls	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
Iosco	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
169E:							
Ontonagon	Moderate: low strength, slope.	Severe: slope.	Moderate: slope, low strength.	Summer, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.
Fluvaquents.							
170B Pullup	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight	Slight	Slight.
170D Pullup	Moderate: too sandy.	Moderate: too sandy, slope.	Moderate: too sandy.	Spring, fall, winter.	Slight	Moderate: slope.	Slight.
170E Pullup	Moderate: too sandy, slope.	Severe: slope.	Moderate: too sandy, slope.	Spring, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.
172B:							
Leafriver	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Winter	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
Croswell	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight	Slight	Slight.
Wainola	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
173B:							
Paquin	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight	Slight	Slight.
Finch	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
174B:							
Croswell	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight	Slight	Slight.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
174B:							
Spot	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
175D:							
Wallace	Moderate: too sandy.	Moderate: too sandy, slope.	Moderate: too sandy.	Spring, fall, winter.	Slight	Moderate: slope.	Slight.
Spot	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
176B:							
Paquin	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight	Slight	Slight.
Spot	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight	Slight	Slight.
177B:							
Millecoquins	Severe: low strength.	Severe: low strength.	Severe: low strength.	Summer, fall, winter.	Slight	Slight	Slight.
Superior	Moderate: low strength.	Moderate: low strength.	Moderate: low strength.	Summer, fall, winter.	Slight	Slight	Slight.
177D:							
Millecoquins	Severe: low strength.	Severe: low strength.	Severe: low strength.	Summer, fall, winter.	Slight	Moderate: slope.	Slight.
Superior	Moderate: low strength.	Moderate: low strength, slope.	Moderate: low strength.	Summer, fall, winter.	Slight	Moderate: slope.	Slight.
178B Dinkey	Severe: low strength.	Severe: low strength.	Severe: low strength.	Winter	Moderate: low strength.	Severe: low strength.	Moderate: low strength.
179B Wallace	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Spring, fall, winter.	Slight	Slight	Slight.
179D Wallace	Moderate: too sandy.	Moderate: too sandy, slope.	Moderate: too sandy.	Spring, fall, winter.	Slight	Slight	Slight.
179E Wallace	Moderate: too sandy, slope.	Severe: slope.	Moderate: too sandy, slope.	Summer, fall, winter.	Moderate: slope.	Severe: slope.	Moderate: slope.
179F Wallace	Severe: slope.	Severe: slope.	Severe: slope.	Spring, fall, winter.	Severe: slope.	Severe: slope.	Severe: slope.

TABLE 9.--EQUIPMENT LIMITATIONS ON WOODLAND--Continued

Soil name and map symbol	Ratings for most limiting season(s)			Preferred operating season(s)	Ratings for preferred operating season(s)		
	Logging areas and skid roads	Log landings	Haul roads		Logging areas and skid roads	Log landings	Haul roads
180B---------- Millecoquins	Severe: low strength.	Severe: low strength.	Severe: low strength.	Summer, fall, winter.	Slight---------	Slight--------	Slight.
181A---------- Mattix	Severe: wetness.	Severe: wetness.	Severe: wetness.	Summer, winter	Slight---------	Slight--------	Slight.
182B---------- Heinz	Slight---------	Slight--------	Slight--------	Year round-----	Slight---------	Slight--------	Slight.
183B---------- Cozy	Moderate: wetness, low strength.	Moderate: wetness, low strength.	Moderate: wetness, low strength.	Summer, winter	Slight---------	Moderate: too cobbly.	Moderate: too cobbly.
185---------- Ermatinger	Severe: wetness, low strength.	Severe: wetness, low strength.	Severe: wetness, low strength.	Summer, winter	Slight---------	Slight--------	Slight.

TABLE 10.--RECREATIONAL DEVELOPMENT

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated)

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
10D---------- Ontonagon	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Severe: erodes easily.
10F---------- Ontonagon	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
11A---------- Rudyard	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
12---------- Pickford	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding.
13B---------- Alcona	Slight----------	Slight----------	Moderate: slope, small stones.	Slight.
13D---------- Alcona	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight.
16B---------- Graveraet	Severe: wetness, too acid.	Severe: too acid.	Severe: wetness, too acid.	Moderate: wetness.
16D---------- Graveraet	Severe: wetness, too acid.	Severe: too acid.	Severe: slope, wetness, too acid.	Moderate: wetness.
17D---------- Eastport	Severe: too sandy.	Severe: too sandy.	Severe: slope, too sandy.	Severe: too sandy.
17E---------- Eastport	Severe: slope, too sandy.	Severe: slope, too sandy.	Severe: slope, too sandy.	Severe: too sandy, slope.
18B---------- Rubicon	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.
18D---------- Rubicon	Severe: too sandy.	Severe: too sandy.	Severe: slope, too sandy.	Severe: too sandy.
18E, 18F---------- Rubicon	Severe: slope, too sandy.	Severe: slope, too sandy.	Severe: slope, too sandy.	Severe: too sandy, slope.
19B---------- Kalkaska	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.
19D---------- Kalkaska	Severe: too sandy.	Severe: too sandy.	Severe: slope, too sandy.	Severe: too sandy.
19E, 19F---------- Kalkaska	Severe: slope, too sandy.	Severe: slope, too sandy.	Severe: slope, too sandy.	Severe: too sandy, slope.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
20B Croswell	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy.
21A Finch	Severe: wetness, too sandy, cemented pan.	Severe: wetness, too sandy, too acid.	Severe: too sandy, wetness, cemented pan.	Severe: wetness, too sandy.
22 Spot	Severe: ponding, excess humus, cemented pan.	Severe: ponding, excess humus, cemented pan.	Severe: excess humus, ponding, cemented pan.	Severe: ponding, excess humus.
23 Leafriver	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
24B Springlake	Moderate: too sandy.	Moderate: too sandy.	Moderate: slope, small stones.	Moderate: too sandy.
24D Springlake	Moderate: slope, too sandy.	Moderate: slope, too sandy.	Severe: slope.	Moderate: too sandy.
24E Springlake	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
25B Guardlake	Slight	Slight	Moderate: slope, small stones.	Slight.
25D Guardlake	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight.
25E Guardlake	Severe: slope.	Severe: slope.	Severe: slope.	Slight.
27B Greylock	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, small stones, percs slowly.	Slight.
27D Greylock	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Slight.
27F Greylock	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
28B Longrie	Slight	Slight	Moderate: slope, small stones, depth to rock.	Slight.
28D Longrie	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight.
29A Solona	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
32A---------- Allendale	Severe: wetness, percs slowly, too sandy.	Severe: wetness, too sandy, percs slowly.	Severe: too sandy, wetness, percs slowly.	Severe: wetness, too sandy.
33. Pits				
34---------- Entisols	Severe: flooding, ponding.	Severe: ponding.	Severe: ponding, flooding.	Severe: ponding.
35:				
Histosols----------	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
Aquents----------	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.
36:				
Markey----------	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
Carbondale----------	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
37:				
Dawson----------	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
Loxley----------	Severe: ponding, excess humus, too acid.	Severe: ponding, excess humus, too acid.	Severe: excess humus, ponding, too acid.	Severe: ponding, excess humus.
38E:				
Eastport----------	Severe: slope, too sandy.	Severe: slope, too sandy.	Severe: slope, too sandy.	Severe: too sandy.
Leafriver----------	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
39E:				
Finch----------	Severe: wetness, too sandy, cemented pan.	Severe: wetness, too sandy, too acid.	Severe: too sandy, wetness, cemented pan.	Severe: wetness, too sandy.
Dawson----------	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
39E:				
Pullup	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: too sandy.
40A:				
Rudyard	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
Allendale	Severe: wetness, percs slowly, too sandy.	Severe: wetness, too sandy, percs slowly.	Severe: too sandy, wetness, percs slowly.	Severe: wetness, too sandy.
41D:				
Amadon	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Slight.
Rock outcrop	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Slight.
41F:				
Amadon	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope.
Rock outcrop	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope.
43 Angelica	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
44B Battydoe	Slight	Slight	Moderate: large stones, slope, small stones.	Slight.
44D Battydoe	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight.
44E Battydoe	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
46B Adams	Slight	Slight	Moderate: slope.	Slight.
48E:				
Wainola	Severe: wetness, too sandy.	Severe: wetness, too sandy.	Severe: too sandy, wetness.	Severe: wetness, too sandy.
Leafriver	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
48E:				
Pullup	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: too sandy.
49A Wainola	Severe: wetness, too sandy.	Severe: wetness, too sandy.	Severe: too sandy, wetness.	Severe: wetness, too sandy.
52A Ingalls	Severe: wetness, too sandy.	Severe: wetness, too sandy.	Severe: too sandy, wetness.	Severe: wetness, too sandy.
53B Menominee	Moderate: too sandy.	Moderate: too sandy.	Moderate: slope, too sandy.	Moderate: too sandy.
53D Menominee	Moderate: slope, too sandy.	Moderate: slope, too sandy.	Severe: slope.	Moderate: too sandy.
56A Ensign	Severe: wetness, depth to rock.	Severe: wetness, depth to rock.	Severe: wetness, depth to rock.	Severe: wetness.
57B:				
Amadon	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Slight.
Longrie	Slight	Slight	Moderate: slope, small stones, depth to rock.	Slight.
57D:				
Amadon	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Slight.
Longrie	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight.
61B Paquin	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy.
62A Iosco	Severe: wetness, too sandy.	Severe: too sandy.	Severe: too sandy, wetness.	Severe: too sandy.
64A Search	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
67B Furlong	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.
68 Wakeley	Severe: ponding, percs slowly, excess humus.	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
69B Satago	Slight	Slight	Moderate: slope.	Slight.
70B St. Ignace	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Moderate: large stones.
70D St. Ignace	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Moderate: large stones.
70F:				
St. Ignace	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope.
Rock outcrop	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope.
71B Johnswood	Severe: wetness.	Moderate: wetness, large stones.	Severe: large stones, wetness.	Moderate: large stones, wetness.
84B:				
Wallace	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy.
Alcona	Slight	Slight	Moderate: slope, small stones.	Slight.
84D:				
Wallace	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: too sandy.
Alcona	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight.
84F:				
Wallace	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: too sandy, slope.
Alcona	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
86B:				
Ingalls	Severe: wetness, too sandy.	Severe: wetness, too sandy.	Severe: too sandy, wetness.	Severe: wetness, too sandy.
Paquin	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
88B:				
Croswell	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy.
Wainola	Severe: wetness, too sandy.	Severe: wetness, too sandy.	Severe: too sandy, wetness.	Severe: wetness, too sandy.
89A:				
Spot	Severe: ponding, excess humus, cemented pan.	Severe: ponding, excess humus, cemented pan.	Severe: excess humus, ponding, cemented pan.	Severe: ponding, excess humus.
Finch	Severe: wetness, too sandy, cemented pan.	Severe: wetness, too sandy, too acid.	Severe: too sandy, wetness, cemented pan.	Severe: wetness, too sandy.
92A Engadine	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness.
93F:				
Ontonagon	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Pickford	Severe: flooding, ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding.
94A:				
Markey	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
Spot	Severe: ponding, excess humus, cemented pan.	Severe: ponding, excess humus, cemented pan.	Severe: excess humus, ponding, cemented pan.	Severe: ponding, excess humus.
Finch	Severe: wetness, too sandy, cemented pan.	Severe: wetness, too sandy, too acid.	Severe: too sandy, wetness, cemented pan.	Severe: wetness, too sandy.
95A Bowers	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.
98 Glawe	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.
100B:				
Greylock	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, small stones, percs slowly.	Slight.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
100B:				
Adams	Slight	Slight	Moderate: slope.	Slight.
100D:				
Greylock	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Slight.
Adams	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight.
108D:				
Shelter	Severe: large stones, wetness, percs slowly.	Severe: wetness, large stones, percs slowly.	Severe: large stones, slope, small stones.	Severe: wetness.
Alpena	Moderate: small stones.	Moderate: small stones.	Severe: slope, small stones.	Slight.
112 Soo	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.
113 Ruse	Severe: ponding, depth to rock.	Severe: ponding, depth to rock.	Severe: ponding, depth to rock.	Severe: ponding.
116:				
Udipsamments	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.
Udorthents	Variable	Variable	Variable	Variable.
117B Manistee	Severe: percs slowly, too sandy.	Severe: too sandy, percs slowly.	Severe: too sandy, percs slowly.	Severe: too sandy.
119 Gogomain	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding.
122. Pits				
123B Borgstrom	Severe: too sandy, cemented pan, too acid.	Severe: too sandy, too acid, cemented pan.	Severe: too sandy, cemented pan, too acid.	Severe: too sandy.
124D Alpena	Moderate: small stones.	Moderate: small stones.	Severe: slope, small stones.	Slight.
125B:				
Croswell	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
125B:				
Markey	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
132B Superior	Severe: percs slowly.	Severe: percs slowly.	Severe: percs slowly.	Slight.
132D Superior	Severe: percs slowly.	Severe: percs slowly.	Severe: slope, percs slowly.	Slight.
132F Superior	Severe: slope, percs slowly.	Severe: slope, percs slowly.	Severe: slope, percs slowly.	Severe: slope.
133 Dorval	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
135B:				
Longrie	Slight	Slight	Moderate: slope, small stones, depth to rock.	Slight.
Battydoe	Slight	Slight	Moderate: large stones, slope, small stones.	Slight.
135D:				
Longrie	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight.
Battydoe	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight.
143 Caffey	Severe: ponding, excess humus.	Severe: ponding.	Severe: ponding.	Severe: ponding.
146A:				
Allendale	Severe: wetness, percs slowly, too sandy.	Severe: wetness, too sandy, percs slowly.	Severe: too sandy, wetness, percs slowly.	Severe: wetness, too sandy.
Wakeley	Severe: ponding, percs slowly, excess humus.	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding.
147B Shelter	Severe: large stones, wetness, percs slowly.	Severe: wetness, large stones, percs slowly.	Severe: large stones, small stones.	Severe: wetness.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
147D---------- Shelter	Severe: large stones, wetness, percs slowly.	Severe: wetness, large stones, percs slowly.	Severe: large stones, slope, small stones.	Severe: wetness.
151---------- Beavertail	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
160B---------- Esau	Severe: small stones, wetness.	Severe: wetness, small stones.	Severe: small stones, wetness.	Severe: wetness, small stones.
161---------- Zela	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
163B:				
Esau----------	Severe: small stones, wetness.	Severe: wetness, small stones.	Severe: small stones, wetness.	Severe: wetness, small stones.
Zela----------	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
164A---------- Moltke	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
165A:				
Engadine----------	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness.
Rudyard----------	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
166:				
Gogomain----------	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding.
Pickford----------	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding.
167B:				
Battydoe----------	Slight----------	Slight----------	Moderate: large stones, slope, small stones.	Slight.
Wallace----------	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy.
167D:				
Battydoe----------	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
167D:				
Wallace	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: too sandy.
167E:				
Battydoe	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Wallace	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: too sandy, slope.
168B:				
Caffey	Severe: ponding, excess humus.	Severe: ponding.	Severe: ponding.	Severe: ponding.
Ingalls	Severe: wetness, too sandy.	Severe: wetness, too sandy.	Severe: too sandy, wetness.	Severe: wetness, too sandy.
Iosco	Severe: wetness, too sandy.	Severe: too sandy.	Severe: too sandy, wetness.	Severe: too sandy.
169E:				
Ontonagon	Severe: slope.	Severe: slope.	Severe: slope.	Severe: erodes easily.
Fluvaquents	Severe: flooding, ponding.	Severe: ponding.	Severe: ponding, flooding.	Severe: ponding.
170B Pullup	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy.
170D Pullup	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: too sandy.
170E Pullup	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: too sandy, slope.
172B:				
Leafriver	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.
Croswell	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
172B:				
Wainola	Severe: wetness, too sandy.	Severe: wetness, too sandy.	Severe: too sandy, wetness.	Severe: wetness, too sandy.
173B:				
Paquin	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy.
Finch	Severe: wetness, too sandy, cemented pan.	Severe: wetness, too sandy, too acid.	Severe: too sandy, wetness, cemented pan.	Severe: wetness, too sandy.
174B:				
Croswell	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy.
Spot	Severe: ponding, excess humus, cemented pan.	Severe: ponding, excess humus, cemented pan.	Severe: excess humus, ponding, cemented pan.	Severe: ponding, excess humus.
175D:				
Wallace	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: too sandy.
Spot	Severe: ponding, excess humus, cemented pan.	Severe: ponding, excess humus, cemented pan.	Severe: excess humus, ponding, cemented pan.	Severe: ponding, excess humus.
176B:				
Paquin	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy.
Spot	Severe: ponding, excess humus, cemented pan.	Severe: ponding, excess humus, cemented pan.	Severe: excess humus, ponding, cemented pan.	Severe: ponding, excess humus.
177B:				
Millecoquins	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Slight.
Superior	Severe: percs slowly.	Severe: percs slowly.	Severe: percs slowly.	Slight.
177D:				
Millecoquins	Moderate: slope, wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Severe: slope.	Slight.

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails
177D:				
Superior	Severe: percs slowly.	Severe: percs slowly.	Severe: slope, percs slowly.	Slight.
178B Dinkey	Severe: excess humus.	Severe: excess humus.	Severe: excess humus.	Severe: excess humus.
179B Wallace	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: too sandy.
179D Wallace	Severe: too sandy, cemented pan.	Severe: too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: too sandy.
179E, 179F Wallace	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: slope, too sandy, cemented pan.	Severe: too sandy, slope.
180B Millecoquins	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Slight.
181A Mattix	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
182B Heinz	Moderate: wetness.	Moderate: wetness.	Moderate: slope, small stones, wetness.	Slight.
183B Cozy	Severe: wetness, percs slowly.	Severe: percs slowly.	Severe: large stones, wetness, percs slowly.	Moderate: large stones, wetness.
185 Ermatinger	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.

TABLE 11.--WILDLIFE HABITAT

(See text for definitions of "good," "fair," "poor," and "very poor." Absence of an entry indicates that the soil was not rated)

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
10D---------- Ontonagon	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
10F---------- Ontonagon	Poor	Fair	Fair	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
11A---------- Rudyard	Fair	Good	Good	Good	Good	Good	Fair	Good	Good	Fair.
12---------- Pickford	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
13B---------- Alcona	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
13D---------- Alcona	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
16B---------- Graveraet	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
16D---------- Graveraet	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
17D, 17E---------- Eastport	Very poor.	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
18B---------- Rubicon	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
18D---------- Rubicon	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
18E, 18F---------- Rubicon	Very poor.	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
19B---------- Kalkaska	Fair	Fair	Fair	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
19D---------- Kalkaska	Poor	Fair	Fair	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
19E---------- Kalkaska	Very poor.	Poor	Fair	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
19F---------- Kalkaska	Very poor.	Very poor.	Fair	Good	Good	Very poor.	Very poor.	Poor	Fair	Very poor.
20B---------- Croswell	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
21A---------- Finch	Poor	Poor	Fair	Fair	Fair	Poor	Poor	Poor	Fair	Poor.
22---------- Spot	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.

TABLE 11.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
23---------- Leafriver	Very poor.	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
24B---------- Springlake	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
24D---------- Springlake	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
24E---------- Springlake	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
25B---------- Guardlake	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
25D---------- Guardlake	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
25E---------- Guardlake	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
27B---------- Greylock	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
27D---------- Greylock	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
27F---------- Greylock	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
28B---------- Longrie	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
28D---------- Longrie	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
29A---------- Solona	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
32A---------- Allendale	Fair	Fair	Good	Good	Good	Poor	Fair	Fair	Good	Poor.
33. Pits										
34. Entisols										
35: Histosols.										
Aquents.										
36:										
Markey----------	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
Carbondale--------	Fair	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.

TABLE 11.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
37:										
Dawson	Very poor.	Poor	Poor	Poor	Poor	Poor	Good	Poor	Poor	Fair.
Loxley	Very poor.	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
38E:										
Eastport	Very poor.	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
Leafriver	Very poor.	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
39E:										
Finch	Poor	Poor	Fair	Fair	Fair	Poor	Poor	Poor	Fair	Poor.
Dawson	Very poor.	Poor	Poor	Poor	Poor	Poor	Good	Poor	Poor	Fair.
Pullup	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
40A:										
Rudyard	Fair	Good	Good	Good	Good	Good	Fair	Good	Good	Fair.
Allendale	Fair	Fair	Good	Good	Good	Poor	Fair	Fair	Good	Poor.
41D:										
Amadon	Poor	Fair	Fair	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Rock outcrop.										
41F:										
Amadon	Very poor.	Poor	Fair	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Rock outcrop.										
43 Angelica	Good	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
44B Battydoe	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
44D Battydoe	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
44E Battydoe	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
46B Adams	Poor	Fair	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
48E:										
Wainola	Fair	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor.
Leafriver	Very poor.	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.

TABLE 11.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
48E:										
Pullup	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
49A Wainola	Fair	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor.
52A Ingalls	Fair	Fair	Good	Fair	Fair	Fair	Fair	Fair	Fair	Fair.
53B, 53D Menominee	Fair	Fair	Good	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
56A Ensign	Poor	Poor	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Poor.
57B:										
Amadon	Fair	Fair	Fair	Good	Good	Poor	Very poor.	Fair	Good	Very poor.
Longrie	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
57D:										
Amadon	Poor	Fair	Fair	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Longrie	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
61B Paquin	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
62A Iosco	Fair	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Fair.
64A Search	Fair	Good	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
67B Furlong	Poor	Poor	Fair	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
68 Wakeley	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
69B Satago	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
70B St. Ignace	Very poor.	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Poor	Very poor.	Poor.
70D St. Ignace	Very poor.	Poor	Poor	Very poor.	Very poor.	Very poor.	Very poor.	Poor	Very poor.	Very poor.
70F:										
St. Ignace	Very poor.	Poor	Poor	Very poor.	Very poor.	Very poor.	Very poor.	Poor	Very poor.	Very poor.
Rock outcrop.										

TABLE 11.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
71B---------- Johnswood	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
84B:										
Wallace----------	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
Alcona----------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
84D:										
Wallace----------	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
Alcona----------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
84F:										
Wallace----------	Very poor.	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
Alcona----------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
86B:										
Ingalls----------	Fair	Fair	Good	Fair	Fair	Fair	Fair	Fair	Fair	Fair.
Paquin----------	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
88B:										
Croswell----------	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
Wainola----------	Fair	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor.
89A:										
Spot----------	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
Finch----------	Poor	Poor	Fair	Fair	Fair	Poor	Poor	Poor	Fair	Poor.
92A---------- Engadine	Fair	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Fair.
93F:										
Ontonagon----------	Poor	Fair	Fair	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Pickford----------	Very poor.	Very poor.	Fair	Poor	Poor	Good	Good	Poor	Poor	Good.
94A:										
Markey----------	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
Spot----------	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
Finch----------	Poor	Poor	Fair	Fair	Fair	Poor	Poor	Poor	Fair	Poor.
95A---------- Bowers	Fair	Good	Good	Good	Good	Good	Fair	Good	Good	Fair.

TABLE 11.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
98 Glawe	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
100B:										
Greylock	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Adams	Poor	Fair	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
100D:										
Greylock	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Adams	Poor	Fair	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
108D:										
Shelter	Poor	Poor	Fair	Fair	Fair	Fair	Very poor.	Poor	Fair	Very poor.
Alpena	Poor	Poor	Poor	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
112 Soo	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
113 Ruse	Poor	Poor	Fair	Poor	Fair	Good	Poor	Poor	Fair	Fair.
116:										
Udipsamments.										
Udorthents.										
117B Manistee	Fair	Fair	Good	Good	Good	Poor	Very poor.	Fair	Good	Very poor.
119 Gogomain	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
122. Pits										
123B Borgstrom	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
124D Alpena	Poor	Poor	Poor	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
125B:										
Croswell	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
Markey	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
132B, 132D Superior	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.

TABLE 11.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
132F---------- Superior	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
133---------- Dorval	Very poor.	Very poor.	Very poor.	Poor	Poor	Good	Good	Very poor.	Poor	Good.
135B:										
Longrie----------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Battydoe----------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
135D:										
Longrie----------	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Battydoe----------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
143---------- Caffey	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
146A:										
Allendale---------	Fair	Fair	Good	Good	Good	Poor	Fair	Fair	Good	Poor.
Wakeley----------	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
147B, 147D--------- Shelter	Poor	Poor	Fair	Fair	Fair	Fair	Very poor.	Poor	Fair	Very poor.
151---------- Beavertail	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
160B---------- Esau	Poor	Poor	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Poor.
161---------- Zela	Poor	Poor	Fair	Fair	Good	Good	Good	Poor	Fair	Good.
163B:										
Esau----------	Poor	Poor	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Poor.
Zela----------	Poor	Poor	Fair	Fair	Good	Good	Good	Poor	Fair	Good.
164A---------- Moltke	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
165A:										
Engadine----------	Fair	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Fair.
Rudyard----------	Fair	Good	Good	Good	Good	Good	Fair	Good	Good	Fair.
166:										
Gogomain----------	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
Pickford----------	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.

TABLE 11.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
167B:										
Battydoe	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Wallace	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
167D:										
Battydoe	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Wallace	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
167E:										
Battydoe	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Wallace	Very poor.	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
168B:										
Caffey	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
Ingalls	Fair	Fair	Good	Fair	Fair	Poor	Very poor.	Fair	Fair	Very poor.
Iosco	Fair	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Fair.
169E:										
Ontonagon	Poor	Fair	Fair	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Fluvaquents.										
170B Pullup	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
170D, 170E Pullup	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
172B:										
Leafriver	Very poor.	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
Croswell	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
Wainola	Fair	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor.
173B:										
Paquin	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
Finch	Poor	Poor	Fair	Fair	Fair	Poor	Poor	Poor	Fair	Poor.
174B:										
Croswell	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.

TABLE 11.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
174B:										
Spot	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
175D:										
Wallace	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
Spot	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
176B:										
Paquin	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
Spot	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good.
177B:										
Millecoquins	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Superior	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
177D:										
Millecoquins	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Superior	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
178B Dinkey	Poor	Fair	Fair	Fair	Fair	Poor	Very poor.	Fair	Fair	Poor.
179B Wallace	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
179D Wallace	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
179E, 179F Wallace	Very poor.	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
180B Millecoquins	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
181A Mattix	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair.
182B Heinz	Fair	Fair	Good	Good	Good	Poor	Very poor.	Fair	Good	Poor.
183B Cozy	Fair	Fair	Good	Good	Good	Poor	Very poor.	Fair	Good	Very poor.
185 Ermatinger	Poor	Fair	Poor	Fair	Fair	Good	Fair	Poor	Fair	Fair.

TABLE 12.--BUILDING SITE DEVELOPMENT

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
10D---------- Ontonagon	Moderate: too clayey, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope.
10F---------- Ontonagon	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
11A---------- Rudyard	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, shrink-swell, wetness.	Severe: wetness.
12---------- Pickford	Severe: ponding.	Severe: ponding, shrink-swell.	Severe: ponding, shrink-swell.	Severe: ponding, shrink-swell.	Severe: shrink-swell, low strength, ponding.	Severe: ponding.
13B---------- Alcona	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Moderate: frost action.	Slight.
13D---------- Alcona	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: slope.
16B---------- Graveraet	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Moderate: wetness, frost action.	Severe: too acid.
16D---------- Graveraet	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, slope.	Moderate: wetness, slope, frost action.	Severe: too acid.
17D---------- Eastport	Severe: cutbanks cave.	Slight---------	Slight---------	Moderate: slope.	Slight---------	Moderate: droughty, too sandy.
17E---------- Eastport	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
18B---------- Rubicon	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Slight---------	Severe: droughty.
18D---------- Rubicon	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Severe: droughty.
18E, 18F---------- Rubicon	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: droughty, slope.
19B---------- Kalkaska	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Slight---------	Moderate: droughty, too sandy.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
19D---------- Kalkaska	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: droughty, slope, too sandy.
19E, 19F---------- Kalkaska	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
20B---------- Croswell	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.	Severe: too acid.
21A---------- Finch	Severe: cemented pan, cutbanks cave, wetness.	Severe: wetness.	Severe: wetness, cemented pan.	Severe: wetness.	Severe: wetness.	Severe: too acid, wetness, droughty.
22---------- Spot	Severe: cemented pan, cutbanks cave, ponding.	Severe: ponding.	Severe: ponding, cemented pan.	Severe: ponding.	Severe: ponding.	Severe: ponding, cemented pan, excess humus.
23---------- Leafriver	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding, excess humus.
24B---------- Springlake	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Slight---------	Severe: droughty.
24D---------- Springlake	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Severe: droughty.
24E---------- Springlake	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: droughty, slope.
25B---------- Guardlake	Severe: cutbanks cave.	Moderate: large stones.	Moderate: large stones.	Moderate: large stones.	Moderate: large stones.	Severe: droughty.
25D---------- Guardlake	Severe: cutbanks cave.	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: slope.	Moderate: slope, large stones.	Severe: droughty.
25E---------- Guardlake	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: droughty, slope.
27B---------- Greylock	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Moderate: frost action.	Moderate: large stones.
27D---------- Greylock	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: large stones, slope.
27F---------- Greylock	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
28B---------- Longrie	Severe: depth to rock.	Moderate: depth to rock.	Severe: depth to rock.	Moderate: depth to rock.	Moderate: depth to rock, frost action.	Moderate: large stones, droughty.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
28D---------- Longrie	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: depth to rock.	Severe: slope.	Moderate: depth to rock, slope, frost action.	Moderate: large stones, droughty.
29A---------- Solona	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: frost action.	Moderate: large stones, wetness.
32A---------- Allendale	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness.	Severe: wetness.	Severe: wetness.
33. Pits						
34---------- Entisols	Severe: ponding.	Severe: flooding, ponding.	Severe: flooding, ponding.	Severe: flooding, ponding.	Severe: ponding, flooding, frost action.	Severe: ponding, flooding.
35:						
Histosols--------	Severe: excess humus, ponding.	Severe: ponding, low strength.	Severe: ponding.	Severe: ponding, low strength.	Severe: ponding, frost action.	Severe: ponding, excess humus.
Aquents----------	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding.
36:						
Markey----------	Severe: cutbanks cave, excess humus, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, frost action.	Severe: ponding, excess humus.
Carbondale-------	Severe: excess humus, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, frost action.	Severe: ponding, excess humus.
37:						
Dawson----------	Severe: cutbanks cave, excess humus, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, frost action.	Severe: ponding, excess humus.
Loxley----------	Severe: excess humus, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, frost action.	Severe: too acid, ponding, excess humus.
38E:						
Eastport---------	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Leafriver--------	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding, excess humus.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
39E:						
Finch	Severe: cemented pan, cutbanks cave, wetness.	Severe: wetness.	Severe: wetness, cemented pan.	Severe: wetness.	Severe: wetness.	Severe: too acid, wetness, droughty.
Dawson	Severe: cutbanks cave, excess humus, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, frost action.	Severe: ponding, excess humus.
Pullup	Severe: cemented pan, cutbanks cave, slope.	Severe: slope.	Severe: cemented pan, slope.	Severe: slope.	Severe: slope.	Severe: slope, cemented pan.
40A:						
Rudyard	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, shrink-swell, wetness.	Severe: wetness.
Allendale	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness.	Severe: wetness.	Severe: wetness.
41D:						
Amadon	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock.	Severe: depth to rock.
Rock outcrop	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock.	Severe: depth to rock.
41F:						
Amadon	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.
Rock outcrop	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.
43 Angelica	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding, excess humus.
44B Battydoe	Slight	Slight	Slight	Slight	Moderate: frost action.	Moderate: large stones, droughty.
44D Battydoe	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: large stones, droughty, slope.
44E Battydoe	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
46B---------- Adams	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Slight---------	Severe: droughty.
48E:						
Wainola----------	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
Leafriver--------	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding, excess humus.
Pullup----------	Severe: cemented pan, cutbanks cave, slope.	Severe: slope.	Severe: cemented pan, slope.	Severe: slope.	Severe: slope.	Severe: slope, cemented pan.
49A---------- Wainola	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
52A---------- Ingalls	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
53B---------- Menominee	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Slight---------	Moderate: droughty.
53D---------- Menominee	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: droughty, slope.
56A---------- Ensign	Severe: depth to rock, wetness.	Severe: wetness, depth to rock.	Severe: wetness, depth to rock.	Severe: wetness, depth to rock.	Severe: depth to rock, wetness, frost action.	Severe: wetness, depth to rock.
57B:						
Amadon----------	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.
Longrie----------	Severe: depth to rock.	Moderate: depth to rock.	Severe: depth to rock.	Moderate: depth to rock.	Moderate: depth to rock, frost action.	Moderate: large stones, droughty.
57D:						
Amadon----------	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock.	Severe: depth to rock.
Longrie----------	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: depth to rock.	Severe: slope.	Moderate: depth to rock, slope, frost action.	Moderate: large stones, droughty.
61B---------- Paquin	Severe: cemented pan, cutbanks cave, wetness.	Moderate: wetness, cemented pan.	Severe: wetness, cemented pan.	Moderate: wetness, cemented pan.	Moderate: cemented pan, wetness.	Severe: cemented pan.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
62A---------- Iosco	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: frost action.	Moderate: wetness, droughty, too sandy.
64A---------- Search	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
67B---------- Furlong	Severe: depth to rock, cutbanks cave.	Moderate: depth to rock.	Severe: depth to rock.	Moderate: depth to rock.	Moderate: depth to rock.	Moderate: droughty, depth to rock, too sandy.
68---------- Wakeley	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding, shrink-swell.	Severe: ponding.	Severe: ponding.	Severe: ponding, excess humus.
69B---------- Satago	Slight---------	Slight---------	Slight---------	Slight---------	Severe: low strength, frost action.	Slight.
70B---------- St. Ignace	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.
70D---------- St. Ignace	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock.	Severe: depth to rock.
70F:						
St. Ignace-------	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.
Rock outcrop-----	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.
71B---------- Johnswood	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Moderate: wetness, frost action.	Severe: large stones, droughty.
84B:						
Wallace----------	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan.	Severe: cemented pan.	Moderate: cemented pan.	Moderate: cemented pan.	Severe: droughty, cemented pan.
Alcona----------	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Moderate: frost action.	Slight.
84D:						
Wallace----------	Severe: cemented pan, cutbanks cave.	Moderate: slope, cemented pan.	Severe: cemented pan.	Severe: slope.	Moderate: cemented pan, slope.	Severe: droughty, cemented pan.
Alcona----------	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: slope.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
84F:						
Wallace	Severe: cemented pan, cutbanks cave, slope.	Severe: slope.	Severe: cemented pan, slope.	Severe: slope.	Severe: slope.	Severe: droughty, slope, cemented pan.
Alcona	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
86B:						
Ingalls	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
Paquin	Severe: cemented pan, cutbanks cave, wetness.	Moderate: wetness, cemented pan.	Severe: wetness, cemented pan.	Moderate: wetness, cemented pan.	Moderate: cemented pan, wetness.	Severe: cemented pan.
88B:						
Croswell	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.	Severe: too acid.
Wainola	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
89A:						
Spot	Severe: cemented pan, cutbanks cave, ponding.	Severe: ponding.	Severe: ponding, cemented pan.	Severe: ponding.	Severe: ponding.	Severe: ponding, cemented pan, excess humus.
Finch	Severe: cemented pan, cutbanks cave, wetness.	Severe: wetness.	Severe: wetness, cemented pan.	Severe: wetness.	Severe: wetness.	Severe: too acid, wetness, droughty.
92A Engadine	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell, low strength, wetness.	Severe: wetness.
93F:						
Ontonagon	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
Pickford	Severe: ponding.	Severe: flooding, ponding, shrink-swell.	Severe: flooding, ponding, shrink-swell.	Severe: flooding, ponding, shrink-swell.	Severe: shrink-swell, low strength, ponding.	Severe: ponding.
94A:						
Markey	Severe: cutbanks cave, excess humus, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, frost action.	Severe: ponding, excess humus.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
94A:						
Spot	Severe: cemented pan, cutbanks cave, ponding.	Severe: ponding.	Severe: ponding, cemented pan.	Severe: ponding.	Severe: ponding.	Severe: ponding, cemented pan, excess humus.
Finch	Severe: cemented pan, cutbanks cave, wetness.	Severe: wetness.	Severe: wetness, cemented pan.	Severe: wetness.	Severe: wetness.	Severe: too acid, wetness, droughty.
95A Bowers	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: low strength, frost action.	Moderate: wetness.
98 Glawe	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding.
100B:						
Greylock	Severe: cutbanks cave.	Slight	Slight	Slight	Moderate: frost action.	Moderate: large stones.
Adams	Severe: cutbanks cave.	Slight	Slight	Slight	Slight	Severe: droughty.
100D:						
Greylock	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: large stones, slope.
Adams	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Severe: droughty.
108D:						
Shelter	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: large stones, wetness, droughty.
Alpena	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Slight	Severe: droughty.
112 Soo	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: low strength, ponding, frost action.	Severe: ponding.
113 Ruse	Severe: depth to rock, ponding.	Severe: ponding, depth to rock.	Severe: ponding, depth to rock.	Severe: ponding, depth to rock.	Severe: depth to rock, ponding, frost action.	Severe: ponding, depth to rock.
116:						
Udipsamments	Severe: cutbanks cave.	Slight	Slight	Slight	Slight	Moderate: droughty.
Udorthents	Variable	Variable	Variable	Variable	Variable	Variable.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
117B---------- Manistee	Severe: cutbanks cave.	Slight---------	Severe: shrink-swell.	Slight---------	Slight---------	Moderate: droughty, too sandy.
119---------- Gogomain	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding.
122. Pits						
123B---------- Borgstrom	Severe: cemented pan, cutbanks cave, wetness.	Moderate: wetness, cemented pan.	Severe: wetness, cemented pan.	Moderate: wetness, cemented pan.	Moderate: cemented pan, wetness.	Severe: too acid, cemented pan.
124D---------- Alpena	Severe: cutbanks cave.	Slight---------	Slight---------	Moderate: slope.	Slight---------	Severe: droughty.
125B:						
Croswell---------	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.	Severe: too acid.
Markey----------	Severe: cutbanks cave, excess humus, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, frost action.	Severe: ponding, excess humus.
132B---------- Superior	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Slight.
132D---------- Superior	Moderate: too clayey, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope.
132F---------- Superior	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
133---------- Dorval	Severe: excess humus, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, shrink-swell.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, frost action.	Severe: ponding, excess humus.
135B:						
Longrie----------	Severe: depth to rock.	Moderate: depth to rock.	Severe: depth to rock.	Moderate: depth to rock.	Moderate: depth to rock, frost action.	Moderate: large stones, droughty.
Battydoe---------	Slight---------	Slight---------	Slight---------	Slight---------	Moderate: frost action.	Moderate: large stones, droughty.
135D:						
Longrie----------	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: depth to rock.	Severe: slope.	Moderate: depth to rock, slope, frost action.	Moderate: large stones, droughty.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
135D:						
Battydoe	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: large stones, droughty, slope.
143 Caffey	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, excess humus.
146A:						
Allendale	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness.	Severe: wetness.	Severe: wetness.
Wakeley	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding, shrink-swell.	Severe: ponding.	Severe: ponding.	Severe: ponding, excess humus.
147B Shelter	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: large stones, wetness, droughty.
147D Shelter	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, slope.	Severe: wetness, frost action.	Severe: large stones, wetness, droughty.
151 Beavertail	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding, excess humus.
160B Esau	Severe: cutbanks cave, large stones, wetness.	Severe: wetness, large stones.	Severe: wetness, large stones.	Severe: wetness, large stones.	Severe: wetness, large stones.	Severe: small stones, wetness, droughty.
161 Zela	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, excess humus.
163B:						
Esau	Severe: cutbanks cave, large stones, wetness.	Severe: wetness, large stones.	Severe: wetness, large stones.	Severe: wetness, large stones.	Severe: wetness, large stones.	Severe: small stones, wetness, droughty.
Zela	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, excess humus.
164A Moltke	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
165A:						
Engadine	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell, low strength, wetness.	Severe: wetness.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
165A:						
Rudyard	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, shrink-swell, wetness.	Severe: wetness.
166:						
Gogomain	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding.
Pickford	Severe: ponding.	Severe: ponding, shrink-swell.	Severe: ponding, shrink-swell.	Severe: ponding, shrink-swell.	Severe: shrink-swell, low strength, ponding.	Severe: ponding.
167B:						
Battydoe	Slight	Slight	Slight	Slight	Moderate: frost action.	Moderate: large stones, droughty.
Wallace	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan.	Severe: cemented pan.	Moderate: cemented pan.	Moderate: cemented pan.	Severe: droughty, cemented pan.
167D:						
Battydoe	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: large stones, droughty, slope.
Wallace	Severe: cemented pan, cutbanks cave.	Moderate: slope, cemented pan.	Severe: cemented pan.	Severe: slope.	Moderate: cemented pan, slope.	Severe: droughty, cemented pan.
167E:						
Battydoe	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Wallace	Severe: cemented pan, cutbanks cave, slope.	Severe: slope.	Severe: cemented pan, slope.	Severe: slope.	Severe: slope.	Severe: droughty, slope, cemented pan.
168B:						
Caffey	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, excess humus.
Ingalls	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
Iosco	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: frost action.	Moderate: wetness, droughty, too sandy.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
169E:						
Ontonagon	Severe: slope.	Severe: shrink-swell, slope.	Severe: slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
Fluvaquents	Severe: ponding.	Severe: flooding, ponding.	Severe: flooding, ponding.	Severe: flooding, ponding.	Severe: ponding, flooding.	Severe: ponding, flooding.
170B Pullup	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan.	Severe: cemented pan.	Moderate: cemented pan.	Moderate: cemented pan.	Severe: cemented pan.
170D Pullup	Severe: cemented pan, cutbanks cave.	Moderate: slope, cemented pan.	Severe: cemented pan.	Severe: slope.	Moderate: cemented pan, slope.	Severe: cemented pan.
170E Pullup	Severe: cemented pan, cutbanks cave, slope.	Severe: slope.	Severe: cemented pan, slope.	Severe: slope.	Severe: slope.	Severe: slope, cemented pan.
172B:						
Leafriver	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding, excess humus.
Croswell	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.	Severe: too acid.
Wainola	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
173B:						
Paquin	Severe: cemented pan, cutbanks cave, wetness.	Moderate: wetness, cemented pan.	Severe: wetness, cemented pan.	Moderate: wetness, cemented pan.	Moderate: cemented pan, wetness.	Severe: cemented pan.
Finch	Severe: cemented pan, cutbanks cave, wetness.	Severe: wetness.	Severe: wetness, cemented pan.	Severe: wetness.	Severe: wetness.	Severe: too acid, wetness, droughty.
174B:						
Croswell	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.	Severe: too acid.
Spot	Severe: cemented pan, cutbanks cave, ponding.	Severe: ponding.	Severe: ponding, cemented pan.	Severe: ponding.	Severe: ponding.	Severe: ponding, cemented pan, excess humus.
175D:						
Wallace	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan.	Severe: cemented pan.	Moderate: slope, cemented pan.	Moderate: cemented pan.	Severe: droughty, cemented pan.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
175D:						
Spot	Severe: cemented pan, cutbanks cave, ponding.	Severe: ponding.	Severe: ponding, cemented pan.	Severe: ponding.	Severe: ponding.	Severe: ponding, cemented pan, excess humus.
176B:						
Paquin	Severe: cemented pan, cutbanks cave, wetness.	Moderate: wetness, cemented pan.	Severe: wetness, cemented pan.	Moderate: wetness, cemented pan.	Moderate: cemented pan, wetness.	Severe: cemented pan.
Spot	Severe: cemented pan, cutbanks cave, ponding.	Severe: ponding.	Severe: ponding, cemented pan.	Severe: ponding.	Severe: ponding.	Severe: ponding, cemented pan, excess humus.
177B:						
Millecoquins	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Severe: low strength, frost action.	Slight.
Superior	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Slight.
177D:						
Millecoquins	Severe: cutbanks cave, wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Severe: low strength, frost action.	Moderate: slope.
Superior	Moderate: too clayey, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope.
178B Dinkey	Severe: cutbanks cave, excess humus.	Slight	Slight	Slight	Slight	Severe: excess humus.
179B Wallace	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan.	Severe: cemented pan.	Moderate: cemented pan.	Moderate: cemented pan.	Severe: droughty, cemented pan.
179D Wallace	Severe: cemented pan, cutbanks cave.	Moderate: slope, cemented pan.	Severe: cemented pan.	Severe: slope.	Moderate: cemented pan, slope.	Severe: droughty, cemented pan.
179E, 179F Wallace	Severe: cemented pan, cutbanks cave, slope.	Severe: slope.	Severe: cemented pan, slope.	Severe: slope.	Severe: slope.	Severe: droughty, slope, cemented pan.
180B Millecoquins	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Severe: low strength, frost action.	Slight.
181A Mattix	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.

TABLE 12.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
182B---------- Heinz	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.	Moderate: large stones, droughty.
183B---------- Cozy	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Moderate: wetness, frost action, large stones.	Moderate: large stones, wetness, droughty.
185---------- Ermatinger	Severe: cutbanks cave, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding.

TABLE 13.--SANITARY FACILITIES

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "good," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
10D---------- Ontonagon	Severe: percs slowly.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.
10F---------- Ontonagon	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
11A---------- Rudyard	Severe: wetness, percs slowly.	Slight----------	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
12---------- Pickford	Severe: ponding, percs slowly.	Severe: ponding.	Severe: ponding, too clayey.	Severe: ponding.	Poor: too clayey, hard to pack, ponding.
13B---------- Alcona	Moderate: percs slowly.	Severe: seepage.	Moderate: too sandy.	Slight----------	Fair: too sandy.
13D---------- Alcona	Moderate: percs slowly, slope.	Severe: seepage, slope.	Moderate: slope, too sandy.	Moderate: slope.	Fair: too sandy, slope.
16B---------- Graveraet	Severe: wetness, percs slowly.	Moderate: seepage, slope.	Severe: wetness, too acid.	Severe: wetness.	Poor: wetness.
16D---------- Graveraet	Severe: wetness, percs slowly.	Severe: slope.	Severe: wetness, too acid.	Severe: wetness.	Poor: wetness.
17D---------- Eastport	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
17E---------- Eastport	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, slope.
18B---------- Rubicon	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
18D---------- Rubicon	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
18E, 18F---------- Rubicon	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, slope.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
19B---------- Kalkaska	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
19D---------- Kalkaska	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
19E, 19F---------- Kalkaska	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, slope.
20B---------- Croswell	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, too acid.
21A---------- Finch	Severe: cemented pan, wetness, poor filter.	Severe: seepage, cemented pan, wetness.	Severe: seepage, wetness, too sandy.	Severe: cemented pan, seepage, wetness.	Poor: cemented pan, seepage, too sandy.
22---------- Spot	Severe: cemented pan, ponding, poor filter.	Severe: seepage, cemented pan, excess humus.	Severe: seepage, ponding, too sandy.	Severe: cemented pan, seepage, ponding.	Poor: cemented pan, seepage, too sandy.
23---------- Leafriver	Severe: ponding, poor filter.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, too sandy.	Severe: seepage, ponding.	Poor: seepage, too sandy, ponding.
24B---------- Springlake	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
24D---------- Springlake	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
24E---------- Springlake	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, slope.
25B---------- Guardlake	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
25D---------- Guardlake	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
25E---------- Guardlake	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, small stones.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
27B---------- Greylock	Severe: percs slowly.	Moderate: seepage, slope.	Slight----------	Slight----------	Fair: small stones.
27D---------- Greylock	Severe: percs slowly.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: small stones, slope.
27F---------- Greylock	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
28B---------- Longrie	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
28D---------- Longrie	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
29A---------- Solona	Severe: wetness.	Moderate: seepage.	Severe: wetness.	Severe: wetness.	Poor: small stones, wetness.
32A---------- Allendale	Severe: wetness, percs slowly, poor filter.	Severe: seepage.	Severe: wetness, too clayey.	Severe: seepage, wetness.	Poor: too clayey, hard to pack, wetness.
33. Pits					
34---------- Entisols	Severe: flooding, ponding.	Severe: flooding, ponding.	Severe: flooding, ponding.	Severe: flooding, ponding.	Poor: ponding.
35:					
Histosols----------	Severe: ponding.	Severe: excess humus, ponding.	Severe: ponding, excess humus.	Severe: ponding.	Poor: ponding, excess humus.
Aquents----------	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Poor: ponding.
36:					
Markey----------	Severe: subsides, ponding, percs slowly.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, too sandy.	Severe: seepage, ponding.	Poor: seepage, too sandy, ponding.
Carbondale---------	Severe: subsides, ponding, percs slowly.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, excess humus.	Severe: seepage, ponding.	Poor: ponding, excess humus.
37:					
Dawson----------	Severe: subsides, ponding, percs slowly.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, excess humus.	Severe: seepage, ponding.	Poor: ponding, excess humus.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
37:					
Loxley	Severe: subsides, ponding, percs slowly.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, excess humus.	Severe: seepage, ponding.	Poor: ponding, excess humus, too acid.
38E:					
Eastport	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, slope.
Leafriver	Severe: ponding, poor filter.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, too sandy.	Severe: seepage, ponding.	Poor: seepage, too sandy, ponding.
39E:					
Finch	Severe: cemented pan, wetness, poor filter.	Severe: seepage, cemented pan, wetness.	Severe: seepage, wetness, too sandy.	Severe: cemented pan, seepage, wetness.	Poor: cemented pan, seepage, too sandy.
Dawson	Severe: subsides, ponding, percs slowly.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, excess humus.	Severe: seepage, ponding.	Poor: ponding, excess humus.
Pullup	Severe: cemented pan, poor filter, slope.	Severe: seepage, cemented pan, slope.	Severe: seepage, slope, too sandy.	Severe: cemented pan, seepage, slope.	Poor: cemented pan, seepage, too sandy.
40A:					
Rudyard	Severe: wetness, percs slowly.	Slight	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Allendale	Severe: wetness, percs slowly, poor filter.	Severe: seepage.	Severe: wetness, too clayey.	Severe: seepage, wetness.	Poor: too clayey, hard to pack, wetness.
41D:					
Amadon	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
Rock outcrop	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
41F:					
Amadon	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
Rock outcrop	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
43---------- Angelica	Severe: ponding, percs slowly.	Severe: excess humus, ponding.	Severe: ponding.	Severe: ponding.	Poor: small stones, ponding.
44B---------- Battydoe	Moderate: percs slowly.	Moderate: seepage, slope, large stones.	Moderate: large stones.	Slight----------	Poor: small stones.
44D---------- Battydoe	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope, large stones.	Moderate: slope.	Poor: small stones.
44E---------- Battydoe	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: small stones, slope.
46B---------- Adams	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
48E:					
Wainola----------	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: too sandy, wetness.
Leafriver----------	Severe: ponding, poor filter.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, too sandy.	Severe: seepage, ponding.	Poor: seepage, too sandy, ponding.
Pullup----------	Severe: cemented pan, poor filter, slope.	Severe: seepage, cemented pan, slope.	Severe: seepage, slope, too sandy.	Severe: cemented pan, seepage, slope.	Poor: cemented pan, seepage, too sandy.
49A---------- Wainola	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: too sandy, wetness.
52A---------- Ingalls	Severe: wetness, percs slowly, poor filter.	Severe: seepage, wetness.	Severe: wetness.	Severe: seepage, wetness.	Poor: wetness.
53B---------- Menominee	Slight----------	Severe: seepage.	Severe: too sandy.	Severe: seepage.	Poor: seepage, too sandy.
53D---------- Menominee	Moderate: slope.	Severe: seepage, slope.	Severe: too sandy.	Severe: seepage.	Poor: seepage, too sandy.
56A---------- Ensign	Severe: depth to rock, wetness.	Severe: depth to rock, wetness.	Severe: depth to rock, wetness.	Severe: depth to rock, wetness.	Poor: depth to rock, wetness.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
57B:					
Amadon	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
Longrie	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
57D:					
Amadon	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
Longrie	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
61B Paquin	Severe: cemented pan, wetness, poor filter.	Severe: seepage, cemented pan, wetness.	Severe: seepage, wetness, too sandy.	Severe: cemented pan, seepage, wetness.	Poor: cemented pan, seepage, too sandy.
62A Iosco	Severe: wetness.	Severe: seepage, wetness.	Severe: wetness.	Severe: seepage, wetness.	Poor: wetness.
64A Search	Severe: depth to rock, wetness.	Severe: depth to rock, wetness.	Severe: depth to rock, wetness.	Severe: depth to rock, wetness.	Poor: depth to rock, wetness.
67B Furlong	Severe: depth to rock.	Severe: seepage, depth to rock.	Severe: depth to rock, seepage, too sandy.	Severe: depth to rock, seepage.	Poor: depth to rock, seepage, too sandy.
68 Wakeley	Severe: ponding, percs slowly, poor filter.	Severe: seepage, excess humus, ponding.	Severe: ponding, too clayey.	Severe: seepage, ponding.	Poor: too clayey, hard to pack, ponding.
69B Satago	Moderate: depth to rock, percs slowly.	Moderate: seepage, depth to rock, slope.	Severe: depth to rock.	Moderate: depth to rock.	Fair: depth to rock, too clayey, thin layer.
70B St. Ignace	Severe: depth to rock.	Severe: seepage, depth to rock.	Severe: depth to rock, seepage.	Severe: depth to rock.	Poor: depth to rock, large stones.
70D St. Ignace	Severe: depth to rock.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage.	Severe: depth to rock.	Poor: depth to rock, large stones.
70F:					
St. Ignace	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, slope.	Poor: depth to rock, large stones, slope.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
70F:					
Rock outcrop-------	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.
71B---------- Johnswood	Severe: wetness, percs slowly.	Severe: large stones.	Severe: wetness, large stones.	Severe: wetness.	Poor: small stones, wetness.
84B:					
Wallace----------	Severe: cemented pan, poor filter.	Severe: seepage, cemented pan.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
Alcona----------	Moderate: percs slowly.	Severe: seepage.	Moderate: too sandy.	Slight----------	Fair: too sandy.
84D:					
Wallace----------	Severe: cemented pan, poor filter.	Severe: seepage, cemented pan, slope.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
Alcona----------	Moderate: percs slowly, slope.	Severe: seepage, slope.	Moderate: slope, too sandy.	Moderate: slope.	Fair: too sandy, slope.
84F:					
Wallace----------	Severe: cemented pan, poor filter, slope.	Severe: seepage, cemented pan, slope.	Severe: seepage, slope, too sandy.	Severe: cemented pan, seepage, slope.	Poor: cemented pan, seepage, too sandy.
Alcona----------	Severe: slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.
86B:					
Ingalls----------	Severe: wetness, percs slowly, poor filter.	Severe: seepage, wetness.	Severe: wetness.	Severe: seepage, wetness.	Poor: wetness.
Paquin----------	Severe: cemented pan, wetness, poor filter.	Severe: seepage, cemented pan, wetness.	Severe: seepage, wetness, too sandy.	Severe: cemented pan, seepage, wetness.	Poor: cemented pan, seepage, too sandy.
88B:					
Croswell----------	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, too acid.
Wainola----------	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: too sandy, wetness.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
89A:					
Spot	Severe: cemented pan, ponding, poor filter.	Severe: seepage, cemented pan, excess humus.	Severe: seepage, ponding, too sandy.	Severe: cemented pan, seepage, ponding.	Poor: cemented pan, seepage, too sandy.
Finch	Severe: cemented pan, wetness, poor filter.	Severe: seepage, cemented pan, wetness.	Severe: seepage, wetness, too sandy.	Severe: cemented pan, seepage, wetness.	Poor: cemented pan, seepage, too sandy.
92A Engadine	Severe: wetness, percs slowly.	Moderate: seepage.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
93F:					
Ontonagon	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
Pickford	Severe: flooding, ponding, percs slowly.	Severe: flooding, ponding.	Severe: flooding, ponding, too clayey.	Severe: flooding, ponding.	Poor: too clayey, hard to pack, ponding.
94A:					
Markey	Severe: subsides, ponding, percs slowly.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, too sandy.	Severe: seepage, ponding.	Poor: seepage, too sandy, ponding.
Spot	Severe: cemented pan, ponding, poor filter.	Severe: seepage, cemented pan, excess humus.	Severe: seepage, ponding, too sandy.	Severe: cemented pan, seepage, ponding.	Poor: cemented pan, seepage, too sandy.
Finch	Severe: cemented pan, wetness, poor filter.	Severe: seepage, cemented pan, wetness.	Severe: seepage, wetness, too sandy.	Severe: cemented pan, seepage, wetness.	Poor: cemented pan, seepage, too sandy.
95A Bowers	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
98 Glawe	Severe: ponding.	Severe: ponding.	Severe: ponding, too sandy.	Severe: ponding.	Poor: ponding.
100B:					
Greylock	Severe: percs slowly.	Moderate: seepage, slope.	Slight	Slight	Fair: small stones.
Adams	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
100D:					
Greylock	Severe: percs slowly.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: small stones, slope.
Adams	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
108D:					
Shelter	Severe: wetness, percs slowly.	Severe: slope, large stones.	Severe: wetness, large stones.	Severe: wetness.	Poor: large stones, wetness.
Alpena	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
112 Soo	Severe: ponding, percs slowly.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Poor: ponding.
113 Ruse	Severe: depth to rock, ponding.	Severe: seepage, depth to rock.	Severe: depth to rock, seepage, ponding.	Severe: depth to rock, ponding.	Poor: depth to rock, thin layer.
116:					
Udipsamments	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
Udorthents	Variable	Variable	Variable	Variable	Variable.
117B Manistee	Severe: percs slowly, poor filter.	Severe: seepage.	Severe: too clayey.	Severe: seepage.	Poor: too clayey, hard to pack.
119 Gogomain	Severe: ponding, percs slowly.	Severe: seepage, ponding.	Severe: ponding, too sandy.	Severe: seepage, ponding.	Poor: ponding, thin layer.
122. Pits					
123B Borgstrom	Severe: cemented pan, wetness, percs slowly.	Severe: seepage, cemented pan, wetness.	Severe: too sandy, too acid.	Severe: cemented pan, seepage.	Poor: cemented pan, too sandy.
124D Alpena	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
125B:					
Croswell	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, too acid.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
125B:					
Markey	Severe: subsides, ponding, percs slowly.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, too sandy.	Severe: seepage, ponding.	Poor: seepage, too sandy, ponding.
132B Superior	Severe: percs slowly.	Moderate: seepage, slope.	Severe: too clayey.	Slight	Poor: too clayey, hard to pack.
132D Superior	Severe: percs slowly.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.
132F Superior	Severe: percs slowly, slope.	Severe: seepage, slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
133 Dorval	Severe: subsides, ponding, percs slowly.	Severe: seepage, excess humus, ponding.	Severe: ponding, too clayey.	Severe: seepage, ponding.	Poor: too clayey, hard to pack, ponding.
135B:					
Longrie	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
Battydoe	Moderate: percs slowly.	Moderate: seepage, slope, large stones.	Moderate: large stones.	Slight	Poor: small stones.
135D:					
Longrie	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.
Battydoe	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope, large stones.	Moderate: slope.	Poor: small stones.
143 Caffey	Severe: ponding, percs slowly.	Severe: seepage, excess humus, ponding.	Severe: ponding.	Severe: seepage, ponding.	Poor: ponding.
146A:					
Allendale	Severe: wetness, percs slowly, poor filter.	Severe: seepage.	Severe: wetness, too clayey.	Severe: seepage, wetness.	Poor: too clayey, hard to pack, wetness.
Wakeley	Severe: ponding, percs slowly, poor filter.	Severe: seepage, excess humus, ponding.	Severe: ponding, too clayey.	Severe: seepage, ponding.	Poor: too clayey, hard to pack, ponding.
147B Shelter	Severe: wetness, percs slowly.	Severe: large stones.	Severe: wetness, large stones.	Severe: wetness.	Poor: large stones, wetness.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
147D---------- Shelter	Severe: wetness, percs slowly.	Severe: slope, large stones.	Severe: wetness, large stones.	Severe: wetness.	Poor: large stones, wetness.
151---------- Beavertail	Severe: ponding, percs slowly.	Severe: excess humus, ponding.	Severe: ponding.	Severe: ponding.	Poor: small stones, ponding.
160B---------- Esau	Severe: wetness, poor filter, large stones.	Severe: seepage, wetness, large stones.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, large stones.
161---------- Zela	Severe: ponding, poor filter.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, too sandy.	Severe: seepage, ponding.	Poor: seepage, too sandy, small stones.
163B:					
Esau----------	Severe: wetness, poor filter, large stones.	Severe: seepage, wetness, large stones.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, large stones.
Zela----------	Severe: ponding, poor filter.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, too sandy.	Severe: seepage, ponding.	Poor: seepage, too sandy, small stones.
164A---------- Moltke	Severe: wetness.	Severe: wetness.	Severe: wetness, too sandy.	Severe: wetness.	Poor: wetness.
165A:					
Engadine----------	Severe: wetness, percs slowly.	Moderate: seepage.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Rudyard----------	Severe: wetness, percs slowly.	Slight----------	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
166:					
Gogomain----------	Severe: ponding, percs slowly.	Severe: seepage, ponding.	Severe: ponding, too sandy.	Severe: seepage, ponding.	Poor: ponding, thin layer.
Pickford----------	Severe: ponding, percs slowly.	Severe: ponding.	Severe: ponding, too clayey.	Severe: ponding.	Poor: too clayey, hard to pack, ponding.
167B:					
Battydoe----------	Moderate: percs slowly.	Moderate: seepage, slope, large stones.	Moderate: large stones.	Slight----------	Poor: small stones.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
167B:					
Wallace	Severe: cemented pan, poor filter.	Severe: seepage, cemented pan.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
167D:					
Battydoe	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope, large stones.	Moderate: slope.	Poor: small stones.
Wallace	Severe: cemented pan, poor filter.	Severe: seepage, cemented pan, slope.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
167E:					
Battydoe	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: small stones, slope.
Wallace	Severe: cemented pan, poor filter, slope.	Severe: seepage, cemented pan, slope.	Severe: seepage, slope, too sandy.	Severe: cemented pan, seepage, slope.	Poor: cemented pan, seepage, too sandy.
168B:					
Caffey	Severe: ponding, percs slowly.	Severe: seepage, excess humus, ponding.	Severe: ponding.	Severe: seepage, ponding.	Poor: ponding.
Ingalls	Severe: wetness, percs slowly, poor filter.	Severe: seepage, wetness.	Severe: wetness.	Severe: seepage, wetness.	Poor: wetness.
Iosco	Severe: wetness.	Severe: seepage, wetness.	Severe: wetness.	Severe: seepage, wetness.	Poor: wetness.
169E:					
Ontonagon	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
Fluvaquents	Severe: flooding, ponding.	Severe: flooding, ponding.	Severe: flooding, ponding.	Severe: flooding, ponding.	Poor: ponding.
170B Pullup	Severe: cemented pan, poor filter.	Severe: seepage, cemented pan.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
170D Pullup	Severe: cemented pan, poor filter.	Severe: seepage, cemented pan, slope.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
170E---------- Pullup	Severe: cemented pan, poor filter, slope.	Severe: seepage, cemented pan, slope.	Severe: seepage, slope, too sandy.	Severe: cemented pan, seepage, slope.	Poor: cemented pan, seepage, too sandy.
172B:					
Leafriver----------	Severe: ponding, poor filter.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, too sandy.	Severe: seepage, ponding.	Poor: seepage, too sandy, ponding.
Croswell----------	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, too acid.
Wainola----------	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: too sandy, wetness.
173B:					
Paquin----------	Severe: cemented pan, wetness, poor filter.	Severe: seepage, cemented pan, wetness.	Severe: seepage, wetness, too sandy.	Severe: cemented pan, seepage, wetness.	Poor: cemented pan, seepage, too sandy.
Finch----------	Severe: cemented pan, wetness, poor filter.	Severe: seepage, cemented pan, wetness.	Severe: seepage, wetness, too sandy.	Severe: cemented pan, seepage, wetness.	Poor: cemented pan, seepage, too sandy.
174B:					
Croswell----------	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, too acid.
Spot----------	Severe: cemented pan, ponding, poor filter.	Severe: seepage, cemented pan, excess humus.	Severe: seepage, ponding, too sandy.	Severe: cemented pan, seepage, ponding.	Poor: cemented pan, seepage, too sandy.
175D:					
Wallace----------	Severe: cemented pan, poor filter.	Severe: seepage, cemented pan, slope.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
Spot----------	Severe: cemented pan, ponding, poor filter.	Severe: seepage, cemented pan, excess humus.	Severe: seepage, ponding, too sandy.	Severe: cemented pan, seepage, ponding.	Poor: cemented pan, seepage, too sandy.
176B:					
Paquin----------	Severe: cemented pan, wetness, poor filter.	Severe: seepage, cemented pan, wetness.	Severe: seepage, wetness, too sandy.	Severe: cemented pan, seepage, wetness.	Poor: cemented pan, seepage, too sandy.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
176B:					
Spot	Severe: cemented pan, ponding, poor filter.	Severe: seepage, cemented pan, excess humus.	Severe: seepage, ponding, too sandy.	Severe: cemented pan, seepage, ponding.	Poor: cemented pan, seepage, too sandy.
177B:					
Millecoquins	Severe: wetness, percs slowly.	Severe: wetness.	Moderate: wetness, too clayey.	Moderate: wetness.	Fair: too clayey, wetness.
Superior	Severe: percs slowly.	Moderate: seepage, slope.	Severe: too clayey.	Slight	Poor: too clayey, hard to pack.
177D:					
Millecoquins	Severe: wetness, percs slowly.	Severe: slope, wetness.	Moderate: wetness, slope, too clayey.	Moderate: wetness, slope.	Fair: too clayey, slope, wetness.
Superior	Severe: percs slowly.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.
178B Dinkey	Moderate: percs slowly.	Severe: seepage, excess humus.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
179B Wallace	Severe: cemented pan, poor filter.	Severe: seepage, cemented pan.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
179D Wallace	Severe: cemented pan, poor filter.	Severe: seepage, cemented pan, slope.	Severe: seepage, too sandy.	Severe: cemented pan, seepage.	Poor: cemented pan, seepage, too sandy.
179E, 179F Wallace	Severe: cemented pan, poor filter, slope.	Severe: seepage, cemented pan, slope.	Severe: seepage, slope, too sandy.	Severe: cemented pan, seepage, slope.	Poor: cemented pan, seepage, too sandy.
180B Millecoquins	Severe: wetness, percs slowly.	Severe: wetness.	Moderate: wetness, too clayey.	Moderate: wetness.	Fair: too clayey, wetness.
181A Mattix	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, small stones.
182B Heinz	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, small stones.

TABLE 13.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
183B---------- Cozy	Severe: wetness, percs slowly.	Moderate: seepage, slope, large stones.	Severe: wetness.	Severe: wetness.	Poor: small stones, wetness.
185---------- Ermatinger	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Poor: ponding.

TABLE 14.--CONSTRUCTION MATERIALS

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "good," "fair," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
10D Ontonagon	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
10F Ontonagon	Poor: shrink-swell, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
11A Rudyard	Poor: low strength, shrink-swell, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness, too clayey.
12 Pickford	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
13B Alcona	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, small stones.
13D Alcona	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, small stones, slope.
16B, 16D Graveraet	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, large stones.
17D Eastport	Good	Probable	Improbable: too sandy.	Poor: too sandy.
17E Eastport	Poor: slope.	Probable	Improbable: too sandy.	Poor: too sandy, slope.
18B, 18D Rubicon	Good	Probable	Improbable: too sandy.	Poor: too sandy.
18E, 18F Rubicon	Poor: slope.	Probable	Improbable: too sandy.	Poor: too sandy, slope.
19B, 19D Kalkaska	Good	Probable	Improbable: too sandy.	Poor: too sandy.
19E, 19F Kalkaska	Poor: slope.	Probable	Improbable: too sandy.	Poor: too sandy, slope.
20B Croswell	Fair: wetness.	Probable	Improbable: too sandy.	Poor: too sandy, too acid.

TABLE 14.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
21A---------- Finch	Poor: wetness.	Probable----------	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
22---------- Spot	Poor: wetness.	Probable----------	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
23---------- Leafriver	Poor: wetness.	Probable----------	Improbable: too sandy.	Poor: too sandy, wetness.
24B, 24D---------- Springlake	Good----------	Probable----------	Improbable----------	Poor: too sandy, small stones.
24E---------- Springlake	Poor: slope.	Probable----------	Improbable----------	Poor: too sandy, small stones, slope.
25B, 25D---------- Guardlake	Fair: large stones.	Probable----------	Probable----------	Poor: too sandy, small stones, area reclaim.
25E---------- Guardlake	Poor: slope.	Probable----------	Probable----------	Poor: too sandy, small stones, area reclaim.
27B, 27D---------- Greylock	Good----------	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
27F---------- Greylock	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
28B, 28D---------- Longrie	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: large stones.
29A---------- Solona	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
32A---------- Allendale	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
33. Pits				
34---------- Entisols	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.

TABLE 14.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
35:				
Histosols	Poor: wetness, low strength.	Improbable: excess humus.	Improbable: excess humus.	Poor: excess humus, wetness.
Aquents	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
36:				
Markey	Poor: wetness.	Probable	Improbable: too sandy.	Poor: excess humus, wetness.
Carbondale	Poor: wetness.	Improbable: excess humus.	Improbable: excess humus.	Poor: excess humus, wetness.
37:				
Dawson	Poor: wetness.	Probable	Improbable: too sandy.	Poor: excess humus, wetness.
Loxley	Poor: wetness, low strength.	Improbable: excess humus.	Improbable: excess humus.	Poor: excess humus, wetness, too acid.
38E:				
Eastport	Fair: slope.	Probable	Improbable: too sandy.	Poor: too sandy, slope.
Leafriver	Poor: wetness.	Probable	Improbable: too sandy.	Poor: too sandy, wetness.
39E:				
Finch	Poor: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
Dawson	Poor: wetness.	Probable	Improbable: too sandy.	Poor: excess humus, wetness.
Pullup	Fair: slope.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
40A:				
Rudyard	Poor: low strength, shrink-swell, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness, too clayey.
Allendale	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.

TABLE 14.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
41D:				
Amadon	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones.
Rock outcrop	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock.
41F:				
Amadon	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Rock outcrop	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, slope.
43 Angelica	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, wetness.
44B, 44D Battydoe	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
44E Battydoe	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
46B Adams	Good	Probable	Improbable: too sandy.	Poor: too sandy.
48E:				
Wainola	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
Leafriver	Poor: wetness.	Probable	Improbable: too sandy.	Poor: too sandy, wetness.
Pullup	Fair: slope.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
49A Wainola	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
52A Ingalls	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, wetness.
53B, 53D Menominee	Good	Improbable: thin layer.	Improbable: too sandy.	Poor: too sandy.

TABLE 14.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
56A---------- Ensign	Poor: depth to rock, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, wetness.
57B, 57D:				
Amadon----------	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones.
Longrie----------	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: large stones.
61B---------- Paquin	Fair: wetness.	Probable----------	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
62A---------- Iosco	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, small stones.
64A---------- Search	Poor: depth to rock, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, wetness.
67B---------- Furlong	Poor: depth to rock.	Improbable: thin layer.	Improbable: too sandy.	Poor: too sandy.
68---------- Wakeley	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
69B---------- Satago	Fair: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones.
70B, 70D---------- St. Ignace	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, large stones.
70F:				
St. Ignace----------	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, large stones, slope.
Rock outcrop---------	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, slope.
71B---------- Johnswood	Fair: large stones, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones.
84B:				
Wallace----------	Good----------	Probable----------	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.

TABLE 14.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
84B:				
Alcona	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, small stones.
84D:				
Wallace	Good	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
Alcona	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, small stones, slope.
84F:				
Wallace	Poor: slope.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
Alcona	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
86B:				
Ingalls	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, wetness.
Paquin	Fair: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
88B:				
Croswell	Fair: wetness.	Probable	Improbable: too sandy.	Poor: too sandy, too acid.
Wainola	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
89A:				
Spot	Poor: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
Finch	Poor: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
92A Engadine	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.

TABLE 14.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
93F:				
Ontonagon	Poor: shrink-swell, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
Pickford	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
94A:				
Markey	Poor: wetness.	Probable	Improbable: too sandy.	Poor: excess humus, wetness.
Spot	Poor: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
Finch	Poor: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
95A Bowers	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
98 Glawe	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
100B, 100D:				
Greylock	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
Adams	Good	Probable	Improbable: too sandy.	Poor: too sandy.
108D:				
Shelter	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, large stones, wetness.
Alpena	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim.
112 Soo	Poor: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
113 Ruse	Poor: depth to rock, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, wetness.

TABLE 14.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
116:				
Udipsamments	Good	Probable	Improbable: too sandy.	Poor: too sandy.
Udorthents	Variable	Variable	Variable	Variable.
117B Manistee	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy.
119 Gogomain	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
122. Pits				
123B Borgstrom	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: cemented pan, area reclaim, too sandy.
124D Alpena	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim.
125B:				
Croswell	Fair: wetness.	Probable	Improbable: too sandy.	Poor: too sandy, too acid.
Markey	Poor: wetness.	Probable	Improbable: too sandy.	Poor: excess humus, wetness.
132B, 132D Superior	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
132F Superior	Poor: shrink-swell, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
133 Dorval	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: excess humus, wetness.
135B, 135D:				
Longrie	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: large stones.
Battydoe	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
143 Caffey	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, wetness.

TABLE 14.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
146A:				
Allendale	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
Wakeley	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
147B, 147D Shelter	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, large stones, wetness.
151 Beavertail	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, wetness.
160B Esau	Poor: large stones, wetness.	Improbable: large stones.	Improbable: large stones.	Poor: too sandy, large stones, area reclaim.
161 Zela	Poor: wetness.	Probable	Probable	Poor: too sandy, small stones, area reclaim.
163B:				
Esau	Poor: large stones, wetness.	Improbable: large stones.	Improbable: large stones.	Poor: too sandy, large stones, area reclaim.
Zela	Poor: wetness.	Probable	Probable	Poor: too sandy, small stones, area reclaim.
164A Moltke	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, wetness.
165A:				
Engadine	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
Rudyard	Poor: low strength, shrink-swell, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness, too clayey.
166:				
Gogomain	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.

TABLE 14.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
166:				
Pickford	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
167B, 167D:				
Battydoe	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
Wallace	Good	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
167E:				
Battydoe	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Wallace	Poor: slope.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
168B:				
Caffey	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, wetness.
Ingalls	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, wetness.
Iosco	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, small stones.
169E:				
Ontonagon	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
Fluvaquents	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
170B, 170D Pullup	Good	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
170E Pullup	Poor: slope.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.

TABLE 14.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
172B:				
Leafriver	Poor: wetness.	Probable	Improbable: too sandy.	Poor: too sandy, wetness.
Croswell	Fair: wetness.	Probable	Improbable: too sandy.	Poor: too sandy, too acid.
Wainola	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
173B:				
Paquin	Fair: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
Finch	Poor: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
174B:				
Croswell	Fair: wetness.	Probable	Improbable: too sandy.	Poor: too sandy, too acid.
Spot	Poor: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
175D:				
Wallace	Good	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
Spot	Poor: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
176B:				
Paquin	Fair: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
Spot	Poor: wetness.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
177B:				
Millecoquins	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, too clayey.

TABLE 14.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
177B:				
Superior	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
177D:				
Millecoquins	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, too clayey, slope.
Superior	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
178B Dinkey	Good	Probable	Improbable: too sandy.	Poor: too sandy.
179B, 179D Wallace	Good	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
179E, 179F Wallace	Poor: slope.	Probable	Improbable: too sandy.	Poor: cemented pan, area reclaim, too sandy.
180B Millecoquins	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, too clayey.
181A Mattix	Poor: wetness.	Probable	Probable	Poor: too sandy, small stones, area reclaim.
182B Heinz	Fair: wetness.	Probable	Probable	Poor: too sandy, small stones, area reclaim.
183B Cozy	Fair: large stones, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones.
185 Ermatinger	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.

TABLE 15.--WATER MANAGEMENT

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not evaluated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
10D, 10F---------- Ontonagon	Severe: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope, percs slowly.	Slope, erodes easily, percs slowly.	Slope, erodes easily, percs slowly.
11A---------- Rudyard	Slight---------	Severe: wetness, hard to pack.	Severe: no water.	Percs slowly---	Wetness--------	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
12---------- Pickford	Slight---------	Severe: ponding.	Severe: no water.	Ponding, percs slowly.	Ponding--------	Erodes easily, ponding, percs slowly.	Wetness, erodes easily, percs slowly.
13B---------- Alcona	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, soil blowing.	Soil blowing---	Favorable.
13D---------- Alcona	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, soil blowing.	Slope, soil blowing.	Slope.
16B---------- Graveraet	Moderate: slope.	Severe: piping.	Severe: no water.	Percs slowly, slope, too acid.	Slope, wetness, soil blowing.	Wetness, rooting depth.	Wetness, rooting depth.
16D---------- Graveraet	Severe: slope.	Severe: piping.	Severe: no water.	Percs slowly, slope, too acid.	Slope, wetness, soil blowing.	Slope, wetness, rooting depth.	Wetness, slope, rooting depth.
17D---------- Eastport	Severe: seepage.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Too sandy, soil blowing.	Droughty.
17E---------- Eastport	Severe: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, too sandy, soil blowing.	Slope, droughty.
18B---------- Rubicon	Severe: seepage.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Too sandy, soil blowing.	Droughty.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
18D, 18E, 18F----- Rubicon	Severe: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, too sandy, soil blowing.	Slope, droughty.
19B---------- Kalkaska	Severe: seepage.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Too sandy, soil blowing.	Droughty.
19D, 19E, 19F----- Kalkaska	Severe: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, too sandy, soil blowing.	Slope, droughty.
20B---------- Croswell	Severe: seepage.	Severe: seepage, piping.	Severe: cutbanks cave.	Slope, cutbanks cave, too acid.	Slope, wetness, droughty.	Wetness, too sandy.	Droughty.
21A---------- Finch	Severe: seepage, cemented pan.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Cemented pan, cutbanks cave.	Wetness, droughty.	Cemented pan, wetness, too sandy.	Wetness, droughty, cemented pan.
22---------- Spot	Severe: seepage, cemented pan.	Severe: seepage, piping, ponding.	Severe: cutbanks cave.	Ponding, cemented pan, cutbanks cave.	Ponding, droughty, soil blowing.	Cemented pan, ponding, too sandy.	Wetness, droughty, cemented pan.
23---------- Leafriver	Severe: seepage.	Severe: seepage, piping, ponding.	Severe: cutbanks cave.	Ponding, subsides, frost action.	Ponding--------	Ponding, too sandy.	Wetness.
24B---------- Springlake	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Too sandy, soil blowing.	Droughty.
24D, 24E---------- Springlake	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, too sandy, soil blowing.	Slope, droughty.
25B---------- Guardlake	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, droughty.	Large stones, too sandy.	Large stones, droughty.
25D, 25E---------- Guardlake	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, droughty.	Slope, large stones, too sandy.	Large stones, slope, droughty.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
27B---------- Greylock	Moderate: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, soil blowing, rooting depth.	Soil blowing---	Rooting depth.
27D, 27F---------- Greylock	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, soil blowing, rooting depth.	Slope, soil blowing.	Slope, rooting depth.
28B---------- Longrie	Moderate: seepage, depth to rock, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, droughty, depth to rock.	Large stones, depth to rock.	Large stones, erodes easily.
28D---------- Longrie	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, droughty, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, erodes easily.
29A---------- Solona	Moderate: seepage.	Severe: piping, wetness.	Moderate: slow refill.	Frost action---	Wetness--------	Erodes easily, wetness.	Wetness, erodes easily.
32A---------- Allendale	Severe: seepage.	Severe: hard to pack, wetness.	Severe: no water.	Percs slowly---	Wetness, droughty.	Wetness, soil blowing, percs slowly.	Wetness, droughty, percs slowly.
33. Pits							
34---------- Entisols	Slight---------	Severe: ponding.	Slight---------	Ponding, flooding, frost action.	Ponding, flooding.	Ponding--------	Wetness.
35:							
Histosols--------	Slight---------	Severe: excess humus, ponding.	Slight---------	Ponding, frost action.	Ponding, soil blowing.	Ponding, soil blowing.	Wetness.
Aquents----------	Slight---------	Severe: ponding.	Slight---------	Ponding, frost action.	Ponding--------	Ponding--------	Wetness.
36:							
Markey----------	Severe: seepage.	Severe: seepage, piping, ponding.	Severe: slow refill, cutbanks cave.	Ponding, subsides, frost action.	Ponding, soil blowing.	Ponding, too sandy, soil blowing.	Wetness.
Carbondale-------	Severe: seepage.	Severe: excess humus, ponding.	Severe: slow refill.	Ponding, subsides, frost action.	Ponding, soil blowing.	Ponding, soil blowing.	Wetness.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
37:							
Dawson	Severe: seepage.	Severe: excess humus, ponding.	Severe: slow refill, cutbanks cave.	Ponding, subsides, frost action.	Ponding, rooting depth.	Ponding	Wetness, rooting depth.
Loxley	Severe: seepage.	Severe: excess humus, ponding.	Severe: slow refill.	Ponding, subsides, frost action.	Ponding, too acid.	Ponding	Wetness.
38E:							
Eastport	Severe: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, too sandy, soil blowing.	Slope, droughty.
Leafriver	Severe: seepage.	Severe: seepage, piping, ponding.	Severe: cutbanks cave.	Ponding, subsides, frost action.	Ponding, soil blowing.	Ponding, too sandy, soil blowing.	Wetness.
39E:							
Finch	Severe: seepage, cemented pan.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Cemented pan, cutbanks cave.	Wetness, droughty.	Cemented pan, wetness, too sandy.	Wetness, droughty, cemented pan.
Dawson	Severe: seepage.	Severe: excess humus, ponding.	Severe: slow refill, cutbanks cave.	Ponding, subsides, frost action.	Ponding, rooting depth.	Ponding	Wetness, rooting depth.
Pullup	Severe: seepage, cemented pan, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, cemented pan, too sandy.	Slope, droughty, cemented pan.
40A:							
Rudyard	Slight	Severe: wetness, hard to pack.	Severe: no water.	Percs slowly	Wetness	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Allendale	Severe: seepage.	Severe: hard to pack, wetness.	Severe: no water.	Percs slowly	Wetness, droughty.	Wetness, soil blowing, percs slowly.	Wetness, droughty, percs slowly.
41D, 41F:							
Amadon	Severe: depth to rock, slope.	Severe: thin layer.	Severe: no water.	Deep to water	Slope, soil blowing, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, depth to rock.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
41D, 41F:							
Rock outcrop-----	Severe: depth to rock, slope.	Slight---------	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, depth to rock.	Slope, depth to rock.
43---------- Angelica	Slight---------	Severe: piping, ponding.	Severe: slow refill.	Ponding, frost action.	Ponding, soil blowing, rooting depth.	Ponding, soil blowing.	Wetness, rooting depth.
44B---------- Battydoe	Moderate: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, droughty, soil blowing.	Large stones, soil blowing.	Large stones, droughty.
44D, 44E---------- Battydoe	Severe: slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, droughty, soil blowing.	Slope, large stones, soil blowing.	Large stones, slope, droughty.
46B---------- Adams	Severe: seepage.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty.	Too sandy, soil blowing.	Droughty.
48E:							
Wainola----------	Severe: seepage.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Cutbanks cave	Wetness, droughty.	Wetness, too sandy, soil blowing.	Wetness, droughty.
Leafriver--------	Severe: seepage.	Severe: seepage, piping, ponding.	Severe: cutbanks cave.	Ponding, subsides, frost action.	Ponding, soil blowing.	Ponding, too sandy, soil blowing.	Wetness.
Pullup----------	Severe: seepage, cemented pan, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, cemented pan, too sandy.	Slope, droughty, cemented pan.
49A---------- Wainola	Severe: seepage.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Cutbanks cave	Wetness, droughty.	Wetness, too sandy, soil blowing.	Wetness, droughty.
52A---------- Ingalls	Severe: seepage.	Severe: piping, wetness.	Severe: no water.	Cutbanks cave	Wetness, droughty.	Erodes easily, wetness, soil blowing.	Wetness, erodes easily, droughty.
53B---------- Menominee	Severe: seepage.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Too sandy, soil blowing.	Droughty.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
53D---------- Menominee	Severe: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, too sandy, soil blowing.	Slope, droughty.
56A---------- Ensign	Severe: depth to rock.	Severe: piping, wetness.	Severe: depth to rock.	Depth to rock, frost action.	Wetness, soil blowing.	Depth to rock, wetness, soil blowing.	Wetness, depth to rock.
57B:							
Amadon----------	Severe: depth to rock.	Severe: thin layer.	Severe: no water.	Deep to water	Slope, soil blowing, depth to rock.	Large stones, depth to rock.	Large stones, depth to rock.
Longrie----------	Moderate: seepage, depth to rock, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, droughty, depth to rock.	Large stones, depth to rock.	Large stones, erodes easily.
57D:							
Amadon----------	Severe: depth to rock, slope.	Severe: thin layer.	Severe: no water.	Deep to water	Slope, soil blowing, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, depth to rock.
Longrie----------	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, droughty, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, erodes easily.
61B---------- Paquin	Severe: seepage, cemented pan.	Severe: seepage, piping.	Severe: cutbanks cave.	Cemented pan, slope, cutbanks cave.	Slope, wetness, droughty.	Cemented pan, wetness, too sandy.	Droughty, cemented pan, rooting depth.
62A---------- Iosco	Severe: seepage.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Frost action---	Wetness, droughty, fast intake.	Wetness, soil blowing.	Wetness, droughty.
64A---------- Search	Moderate: depth to rock.	Severe: piping, wetness.	Severe: slow refill, depth to rock.	Depth to rock, frost action.	Wetness, soil blowing, depth to rock.	Depth to rock, wetness, soil blowing.	Wetness, depth to rock, rooting depth.
67B---------- Furlong	Severe: seepage.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Depth to rock, too sandy, soil blowing.	Droughty, depth to rock.
68---------- Wakeley	Severe: seepage.	Severe: ponding.	Severe: no water.	Ponding, percs slowly.	Ponding, droughty.	Ponding, soil blowing, percs slowly.	Wetness, droughty, percs slowly.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
69B---------- Satago	Moderate: seepage, depth to rock, slope.	Moderate: thin layer, piping.	Severe: no water.	Deep to water	Slope, erodes easily.	Erodes easily	Erodes easily.
70B---------- St. Ignace	Severe: depth to rock.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, large stones.	Large stones, depth to rock.	Large stones.
70D---------- St. Ignace	Severe: depth to rock, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, large stones.	Slope, large stones, depth to rock.	Large stones, slope.
70F:							
St. Ignace-------	Severe: depth to rock, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, large stones.	Slope, large stones, depth to rock.	Large stones, slope.
Rock outcrop-----	Severe: depth to rock, slope.	Slight---------	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, depth to rock.	Slope, depth to rock.
71B---------- Johnswood	Moderate: slope.	Severe: seepage, piping, large stones.	Severe: no water.	Percs slowly, large stones, slope.	Slope, large stones, wetness.	Large stones, wetness.	Large stones, wetness.
84B:							
Wallace----------	Severe: seepage, cemented pan.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Cemented pan, too sandy.	Droughty, cemented pan.
Alcona----------	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, soil blowing.	Soil blowing---	Favorable.
84D, 84F:							
Wallace----------	Severe: seepage, cemented pan, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, cemented pan, too sandy.	Slope, droughty, cemented pan.
Alcona----------	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, soil blowing.	Slope, soil blowing.	Slope.
86B:							
Ingalls----------	Severe: seepage.	Severe: piping, wetness.	Severe: no water.	Cutbanks cave	Wetness, droughty.	Erodes easily, wetness, soil blowing.	Wetness, erodes easily, droughty.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
86B:							
Paquin	Severe: seepage, cemented pan.	Severe: seepage, piping.	Severe: cutbanks cave.	Cemented pan, slope, cutbanks cave.	Slope, wetness, droughty.	Cemented pan, wetness, too sandy.	Droughty, cemented pan, rooting depth.
88B:							
Croswell	Severe: seepage.	Severe: seepage, piping.	Severe: cutbanks cave.	Slope, cutbanks cave, too acid.	Slope, wetness, droughty.	Wetness, too sandy.	Droughty.
Wainola	Severe: seepage.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Cutbanks cave	Wetness, droughty.	Wetness, too sandy, soil blowing.	Wetness, droughty.
89A:							
Spot	Severe: seepage, cemented pan.	Severe: seepage, piping, ponding.	Severe: cutbanks cave.	Ponding, cemented pan, cutbanks cave.	Ponding, droughty, soil blowing.	Cemented pan, ponding, too sandy.	Wetness, droughty, cemented pan.
Finch	Severe: seepage, cemented pan.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Cemented pan, cutbanks cave.	Wetness, droughty.	Cemented pan, wetness, too sandy.	Wetness, droughty, cemented pan.
92A Engadine	Slight	Severe: hard to pack, wetness.	Severe: no water.	Percs slowly, frost action.	Wetness, soil blowing, percs slowly.	Erodes easily, wetness, soil blowing.	Wetness, erodes easily, percs slowly.
93F:							
Ontonagon	Severe: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope, percs slowly.	Slope, erodes easily, percs slowly.	Slope, erodes easily, percs slowly.
Pickford	Slight	Severe: hard to pack, ponding.	Severe: no water.	Ponding, percs slowly, flooding.	Ponding	Erodes easily, ponding, percs slowly.	Wetness, erodes easily, percs slowly.
94A:							
Markey	Severe: seepage.	Severe: seepage, piping, ponding.	Severe: slow refill, cutbanks cave.	Ponding, subsides, frost action.	Ponding, soil blowing.	Ponding, too sandy, soil blowing.	Wetness.
Spot	Severe: seepage, cemented pan.	Severe: seepage, piping, ponding.	Severe: cutbanks cave.	Ponding, cemented pan, cutbanks cave.	Ponding, droughty, soil blowing.	Cemented pan, ponding, too sandy.	Wetness, droughty, cemented pan.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
94A:							
Finch	Severe: seepage, cemented pan.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Cemented pan, cutbanks cave.	Wetness, droughty.	Cemented pan, wetness, too sandy.	Wetness, droughty, cemented pan.
95A Bowers	Slight	Severe: wetness.	Severe: slow refill.	Percs slowly, frost action.	Wetness	Erodes easily, wetness.	Wetness, erodes easily, percs slowly.
98 Glawe	Moderate: seepage.	Severe: piping, ponding.	Severe: cutbanks cave.	Ponding, frost action, cutbanks cave.	Ponding	Ponding	Wetness.
100B:							
Greylock	Moderate: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, soil blowing, rooting depth.	Soil blowing	Rooting depth.
Adams	Severe: seepage.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty.	Too sandy, soil blowing.	Droughty.
100D:							
Greylock	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, soil blowing, rooting depth.	Slope, soil blowing.	Slope, rooting depth.
Adams	Severe: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty.	Slope, too sandy, soil blowing.	Slope, droughty.
108D:							
Shelter	Moderate: slope.	Severe: piping, large stones, wetness.	Severe: no water.	Percs slowly, large stones, frost action.	Slope, large stones, wetness.	Large stones, wetness.	Large stones, wetness.
Alpena	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Slope, droughty.	Too sandy	Droughty.
112 Soo	Slight	Severe: ponding.	Severe: no water.	Ponding, percs slowly, frost action.	Ponding, percs slowly, erodes easily.	Erodes easily, ponding, percs slowly.	Wetness, erodes easily, percs slowly.
113 Ruse	Severe: depth to rock.	Severe: piping, ponding.	Severe: depth to rock.	Ponding, depth to rock, frost action.	Ponding, depth to rock.	Depth to rock, ponding.	Wetness, depth to rock.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
116:							
Udipsamments	Severe: seepage.	Severe: seepage, piping.	Severe: no water.	Deep to water	Droughty, fast intake.	Too sandy, soil blowing.	Droughty.
Udorthents	Variable	Variable	Variable	Variable	Variable	Variable	Variable.
117B Manistee	Severe: seepage.	Moderate: hard to pack.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Soil blowing, percs slowly.	Droughty, rooting depth.
119 Gogomain	Severe: seepage.	Severe: piping, ponding.	Severe: no water.	Ponding, percs slowly, frost action.	Ponding, droughty.	Erodes easily, ponding.	Wetness, erodes easily, droughty.
122. Pits							
123B Borgstrom	Severe: seepage, cemented pan.	Severe: piping.	Severe: no water.	Cemented pan, slope, cutbanks cave.	Slope, wetness, droughty.	Cemented pan, wetness, too sandy.	Droughty, cemented pan, rooting depth.
124D Alpena	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Slope, droughty.	Too sandy	Droughty.
125B:							
Croswell	Severe: seepage.	Severe: seepage, piping.	Severe: cutbanks cave.	Slope, cutbanks cave, too acid.	Slope, wetness, droughty.	Wetness, too sandy.	Droughty.
Markey	Severe: seepage.	Severe: seepage, piping, ponding.	Severe: slow refill, cutbanks cave.	Ponding, subsides, frost action.	Ponding, soil blowing.	Ponding, too sandy, soil blowing.	Wetness.
132B Superior	Moderate: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope, soil blowing, percs slowly.	Soil blowing, percs slowly.	Percs slowly.
132D Superior	Severe: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope, soil blowing, percs slowly.	Slope, soil blowing, percs slowly.	Slope, percs slowly.
132F Superior	Severe: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope, droughty, soil blowing.	Slope, soil blowing, percs slowly.	Slope, droughty, percs slowly.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
133 Dorval	Severe: seepage.	Severe: ponding.	Severe: no water.	Ponding, percs slowly, subsides.	Ponding, soil blowing, percs slowly.	Ponding, soil blowing, percs slowly.	Wetness, percs slowly.
135B:							
Longrie	Moderate: seepage, depth to rock, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, droughty, depth to rock.	Large stones, depth to rock.	Large stones, erodes easily.
Battydoe	Moderate: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, droughty, soil blowing.	Large stones, soil blowing.	Large stones, droughty.
135D:							
Longrie	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, droughty, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, erodes easily.
Battydoe	Severe: slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, droughty, soil blowing.	Slope, large stones, soil blowing.	Large stones, slope, droughty.
143 Caffey	Severe: seepage.	Severe: piping, ponding.	Severe: slow refill, cutbanks cave.	Ponding, cutbanks cave.	Ponding	Erodes easily, ponding, soil blowing.	Wetness, erodes easily.
146A:							
Allendale	Severe: seepage.	Severe: hard to pack, wetness.	Severe: no water.	Percs slowly	Wetness, droughty.	Wetness, soil blowing, percs slowly.	Wetness, droughty, percs slowly.
Wakeley	Severe: seepage.	Severe: ponding.	Severe: no water.	Ponding, percs slowly.	Ponding, droughty.	Ponding, soil blowing, percs slowly.	Wetness, droughty, percs slowly.
147B Shelter	Moderate: slope.	Severe: piping, large stones, wetness.	Severe: no water.	Percs slowly, large stones, frost action.	Slope, large stones, wetness.	Large stones, wetness.	Large stones, wetness.
147D Shelter	Severe: slope.	Severe: piping, large stones, wetness.	Severe: no water.	Percs slowly, large stones, frost action.	Slope, large stones, wetness.	Slope, large stones, wetness.	Large stones, wetness, slope.
151 Beavertail	Slight	Severe: ponding.	Severe: no water.	Ponding, percs slowly, frost action.	Ponding, soil blowing, percs slowly.	Large stones, ponding, soil blowing.	Large stones, wetness, rooting depth.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
160B---------- Esau	Severe: seepage.	Severe: seepage, piping, large stones.	Severe: large stones, cutbanks cave.	Large stones, slope, cutbanks cave.	Slope, large stones, wetness.	Large stones, wetness, too sandy.	Large stones, wetness, droughty.
161---------- Zela	Severe: seepage.	Severe: seepage, ponding.	Severe: cutbanks cave.	Ponding, cutbanks cave.	Ponding, droughty, soil blowing.	Ponding, too sandy, soil blowing.	Wetness, droughty.
163B:							
Esau----------	Severe: seepage.	Severe: seepage, piping, large stones.	Severe: large stones, cutbanks cave.	Large stones, slope, cutbanks cave.	Slope, large stones, wetness.	Large stones, wetness, too sandy.	Large stones, wetness, droughty.
Zela----------	Severe: seepage.	Severe: seepage, ponding.	Severe: cutbanks cave.	Ponding, cutbanks cave.	Ponding, droughty, soil blowing.	Ponding, too sandy, soil blowing.	Wetness, droughty.
164A---------- Moltke	Moderate: seepage.	Severe: piping, wetness.	Severe: cutbanks cave.	Frost action, cutbanks cave.	Wetness--------	Erodes easily, wetness.	Wetness, erodes easily.
165A:							
Engadine---------	Slight---------	Severe: hard to pack, wetness.	Severe: no water.	Percs slowly, frost action.	Wetness, soil blowing, percs slowly.	Erodes easily, wetness, soil blowing.	Wetness, erodes easily, percs slowly.
Rudyard----------	Slight---------	Severe: wetness, hard to pack.	Severe: no water.	Percs slowly---	Wetness--------	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
166:							
Gogomain---------	Severe: seepage.	Severe: piping, ponding.	Severe: no water.	Ponding, percs slowly, frost action.	Ponding, droughty.	Erodes easily, ponding.	Wetness, erodes easily, droughty.
Pickford---------	Slight---------	Severe: ponding.	Severe: no water.	Ponding, percs slowly.	Ponding--------	Erodes easily, ponding, percs slowly.	Wetness, erodes easily, percs slowly.
167B:							
Battydoe---------	Moderate: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, droughty, soil blowing.	Large stones, soil blowing.	Large stones, droughty.
Wallace----------	Severe: seepage, cemented pan.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Cemented pan, too sandy.	Droughty, cemented pan.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
167D, 167E:							
Battydoe	Severe: slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, droughty, soil blowing.	Slope, large stones, soil blowing.	Large stones, slope, droughty.
Wallace	Severe: seepage, cemented pan, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, cemented pan, too sandy.	Slope, droughty, cemented pan.
168B:							
Caffey	Severe: seepage.	Severe: piping, ponding.	Severe: slow refill, cutbanks cave.	Ponding, cutbanks cave.	Ponding	Erodes easily, ponding, soil blowing.	Wetness, erodes easily.
Ingalls	Severe: seepage.	Severe: piping, wetness.	Severe: no water.	Slope, cutbanks cave.	Slope, wetness, droughty.	Erodes easily, wetness, soil blowing.	Wetness, erodes easily, droughty.
Iosco	Severe: seepage.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Frost action	Wetness, droughty, fast intake.	Wetness, soil blowing.	Wetness, droughty.
169E:							
Ontonagon	Severe: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope, percs slowly.	Slope, erodes easily, percs slowly.	Slope, erodes easily, percs slowly.
Fluvaquents	Slight	Severe: ponding.	Slight	Ponding, flooding.	Ponding, flooding.	Ponding	Wetness.
170B Pullup	Severe: seepage, cemented pan.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Cemented pan, too sandy.	Droughty, cemented pan.
170D, 170E Pullup	Severe: seepage, cemented pan, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, cemented pan, too sandy.	Slope, droughty, cemented pan.
172B:							
Leafriver	Severe: seepage.	Severe: seepage, piping, ponding.	Severe: cutbanks cave.	Ponding, subsides, frost action.	Ponding, soil blowing.	Ponding, too sandy, soil blowing.	Wetness.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
172B:							
Croswell	Severe: seepage.	Severe: seepage, piping.	Severe: cutbanks cave.	Slope, cutbanks cave, too acid.	Slope, wetness, droughty.	Wetness, too sandy.	Droughty.
Wainola	Severe: seepage.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Cutbanks cave	Wetness, droughty.	Wetness, too sandy, soil blowing.	Wetness, droughty.
173B:							
Paquin	Severe: seepage, cemented pan.	Severe: seepage, piping.	Severe: cutbanks cave.	Cemented pan, slope, cutbanks cave.	Slope, wetness, droughty.	Cemented pan, wetness, too sandy.	Droughty, cemented pan, rooting depth.
Finch	Severe: seepage, cemented pan.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Cemented pan, cutbanks cave.	Wetness, droughty.	Cemented pan, wetness, too sandy.	Wetness, droughty, cemented pan.
174B:							
Croswell	Severe: seepage.	Severe: seepage, piping.	Severe: cutbanks cave.	Slope, cutbanks cave, too acid.	Slope, wetness, droughty.	Wetness, too sandy.	Droughty.
Spot	Severe: seepage, cemented pan.	Severe: seepage, piping, ponding.	Severe: cutbanks cave.	Ponding, cemented pan, cutbanks cave.	Ponding, droughty, soil blowing.	Cemented pan, ponding, too sandy.	Wetness, droughty, cemented pan.
175D:							
Wallace	Severe: seepage, cemented pan.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Cemented pan, too sandy.	Droughty, cemented pan.
Spot	Severe: seepage, cemented pan.	Severe: seepage, piping, ponding.	Severe: cutbanks cave.	Ponding, cemented pan, cutbanks cave.	Ponding, droughty, soil blowing.	Cemented pan, ponding, too sandy.	Wetness, droughty, cemented pan.
176B:							
Paquin	Severe: seepage, cemented pan.	Severe: seepage, piping.	Severe: cutbanks cave.	Cemented pan, slope, cutbanks cave.	Slope, wetness, droughty.	Cemented pan, wetness, too sandy.	Droughty, cemented pan, rooting depth.
Spot	Severe: seepage, cemented pan.	Severe: seepage, piping, ponding.	Severe: cutbanks cave.	Ponding, cemented pan, cutbanks cave.	Ponding, droughty, soil blowing.	Cemented pan, ponding, too sandy.	Wetness, droughty, cemented pan.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
177B:							
Millecoquins-----	Moderate: slope.	Moderate: piping, wetness.	Severe: no water.	Frost action, slope, cutbanks cave.	Slope, wetness, soil blowing.	Erodes easily, wetness.	Erodes easily, rooting depth.
Superior---------	Moderate: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope, soil blowing, percs slowly.	Soil blowing, percs slowly.	Percs slowly.
177D:							
Millecoquins-----	Severe: slope.	Moderate: piping, wetness.	Severe: no water.	Frost action, slope, cutbanks cave.	Slope, wetness, soil blowing.	Slope, erodes easily, wetness.	Slope, erodes easily, rooting depth.
Superior---------	Severe: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope, soil blowing, percs slowly.	Slope, soil blowing, percs slowly.	Slope, percs slowly.
178B---------- Dinkey	Severe: seepage.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, soil blowing.	Too sandy, soil blowing.	Favorable.
179B---------- Wallace	Severe: seepage, cemented pan.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Cemented pan, too sandy.	Droughty, cemented pan.
179D, 179E, 179F-- Wallace	Severe: seepage, cemented pan, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, droughty, fast intake.	Slope, cemented pan, too sandy.	Slope, droughty, cemented pan.
180B---------- Millecoquins	Moderate: slope.	Moderate: piping, wetness.	Severe: no water.	Frost action, slope, cutbanks cave.	Slope, wetness, soil blowing.	Erodes easily, wetness.	Erodes easily, rooting depth.
181A---------- Mattix	Severe: seepage.	Severe: seepage, wetness.	Severe: cutbanks cave.	Cutbanks cave	Wetness, droughty.	Wetness, too sandy, soil blowing.	Wetness, droughty.
182B---------- Heinz	Severe: seepage.	Severe: seepage.	Severe: cutbanks cave.	Slope, cutbanks cave.	Slope, wetness, droughty.	Wetness, too sandy, soil blowing.	Droughty.
183B---------- Cozy	Moderate: slope.	Severe: seepage.	Severe: no water.	Percs slowly, large stones, slope.	Slope, large stones, wetness.	Large stones, wetness, soil blowing.	Large stones, wetness, droughty.

TABLE 15.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
185---------- Ermatinger	Moderate: seepage.	Severe: piping, ponding.	Severe: cutbanks cave.	Ponding, frost action, cutbanks cave.	Ponding--------	Erodes easily, ponding.	Wetness, erodes easily, rooting depth.

TABLE 16.--ENGINEERING INDEX PROPERTIES

(The symbol < means less than; > means more than. Absence of an entry indicates that data were not estimated)

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
10D, 10F------ Ontonagon	0-7	Silt loam-----	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	65-90	25-35	5-15
	7-10	Silty clay, clay.	CL, CH	A-6	0	0	100	100	90-100	75-95	50-70	20-40
	10-21	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
	21-80	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
11A---------- Rudyard	0-10	Silty clay loam.	CL	A-7, A-6	0	0	100	100	95-100	85-95	35-45	11-20
	10-19	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
	19-60	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
12---------- Pickford	0-6	Silty clay loam.	CL	A-7, A-6	0	0	100	100	90-100	70-95	30-50	10-25
	6-19	Clay, silty clay, silty clay loam.	CH, CL	A-7	0	0	100	100	90-100	75-95	40-70	20-40
	19-60	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	45-70	25-40
13B, 13D------ Alcona	0-3	Fine sandy loam.	SM, CL-ML	A-4	0	0	95-100	85-100	60-85	35-55	15-25	NP-7
	3-6	Fine sandy loam, very fine sandy loam, loamy very fine sand.	CL-ML, SC-SM	A-2-4, A-4	0	0	95-100	85-100	50-95	30-65	15-25	NP-7
	6-17	Fine sandy loam, very fine sandy loam, loamy very fine sand.	CL-ML, SC-SM	A-4, A-2-4	0	0	95-100	95-100	85-95	40-65	15-30	NP-10
	17-54	Loamy fine sand, very fine sandy loam, fine sandy loam.	SM, SC, ML, CL	A-2-4, A-4	0	0	95-100	95-100	85-95	40-75	15-30	NP-10
	54-80	Stratified loamy very fine sand to very fine sandy loam.	SM, SC, ML, CL	A-2-4, A-4	0	0	95-100	85-100	65-95	30-65	20-30	NP-9

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
16B, 16D------ Graveraet	0-3	Fine sandy loam.	SM, SC-SM	A-2-4, A-4, A-1-b	0	0-15	90-100	85-100	45-85	20-50	15-25	NP-7
	3-6	Sandy loam, fine sandy loam.	SM, SC-SM	A-2-4, A-4, A-1-b	0	0-15	90-100	85-100	45-85	20-50	15-25	NP-7
	6-16	Sandy loam, fine sandy loam.	SM, SC-SM	A-2-4, A-4, A-1-b	0	0-15	90-100	85-100	45-85	20-50	15-25	NP-7
	16-32	Loamy sand, sandy loam, loam.	SP-SM, SM, SC-SM, ML	A-2-4, A-4, A-1-b	0	0-15	90-100	85-100	35-95	10-60	15-25	NP-7
	32-67	Sandy loam, sandy clay loam.	SM, ML	A-4, A-2-4	0	0-15	85-100	85-95	60-80	25-55	25-35	NP-10
	67-80	Sandy loam, fine sandy loam, gravelly sandy loam.	SC-SM, SM	A-2-4, A-1, A-4	0	0-15	85-95	70-90	35-80	15-50	15-20	NP-4
17D---------- Eastport	0-3	Sand----------	SP, SM, SP-SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	35-70	0-15	---	NP
	3-38	Sand----------	SP, SM, SP-SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	35-70	0-15	---	NP
	38-60	Sand----------	SP, SM, SP-SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	35-70	0-15	---	NP
17E---------- Eastport	0-3	Sand----------	SP, SM, SP-SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	35-70	0-15	---	NP
	3-38	Sand----------	SP, SM, SP-SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	35-70	0-15	---	NP
	38-80	Sand----------	SP, SM, SP-SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	35-70	0-15	---	NP
18B, 18D, 18E, 18F---------- Rubicon	0-4	Sand----------	SM, SP-SM, SP	A-2, A-3, A-1	0	0	95-100	75-100	35-70	0-15	---	NP
	4-32	Sand----------	SM, SP-SM, SP	A-2, A-3, A-1	0	0	95-100	75-100	35-70	0-15	---	NP
	32-80	Sand----------	SP, SP-SM, SM	A-1, A-2, A-3	0	0	95-100	75-100	30-70	0-15	---	NP
19B, 19D, 19E, 19F---------- Kalkaska	0-6	Sand----------	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	95-100	85-100	45-70	5-15	---	NP
	6-18	Sand----------	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	95-100	85-100	45-75	5-30	---	NP
	18-38	Sand----------	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	95-100	85-100	45-70	5-15	---	NP
	38-80	Sand----------	SP, SP-SM, SM	A-1-b, A-2-4, A-3	0	0	95-100	85-100	45-70	0-15	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
20B---------- Croswell	0-6	Sand----------	SP-SM, SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-70	5-15	0-14	NP
	6-15	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-75	3-30	0-14	NP
	15-22	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-75	3-30	0-14	NP
	22-80	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-70	3-15	0-14	NP
21A---------- Finch	0-11	Sand----------	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
	11-42	Sand----------	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
	42-80	Sand, fine sand.	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
22---------- Spot	0-1	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	1-7	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-15	0-14	NP
	7-9	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	9-17	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	17-80	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
23---------- Leafriver	0-8	Mucky peat----	PT	A-8	0	0	---	---	---	---	---	---
	8-60	Loamy fine sand, fine sand, sand.	SM, SP-SM, SP	A-3, A-2, A-2-4, A-1	0	0	95-100	80-100	45-70	3-35	---	NP
24B, 24D, 24E- Springlake	0-6	Loamy coarse sand.	SM, SP-SM	A-2-4, A-1-b	0	0	95-100	75-100	35-75	10-30	15-20	NP-4
	6-8	Sand, loamy sand, loamy coarse sand.	SM, SP-SM	A-2-4, A-1-b, A-3	0	0	95-100	75-100	35-75	5-30	15-20	NP-4
	8-13	Sand, loamy sand, loamy coarse sand.	SM, SP-SM	A-2-4, A-3, A-1-b	0	0	95-100	75-100	35-75	5-30	15-20	NP-4
	13-22	Sand, loamy sand, loamy coarse sand.	SM, SP-SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	35-75	5-30	15-20	NP-4
	22-80	Gravelly sand, sand, gravelly coarse sand.	SP, SP-SM	A-3, A-2-4, A-1-b	0	0	70-90	50-90	30-60	0-10	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
25B, 25D, 25E- Guardlake	0-1	Fine sandy loam.	SM, SC-SM	A-4, A-2-4, A-1-b	0	0-10	85-100	75-100	45-85	20-50	15-25	NP-6
	1-12	Sandy loam, fine sandy loam, gravelly sandy loam.	SM, SC-SM	A-4, A-2-4, A-1	0	0-10	75-100	65-100	45-80	20-50	15-25	NP-6
	12-60	Very gravelly sand, very cobbly sand.	SP-SM, SP, GP	A-1, A-3, A-2-4	0	15-40	40-90	35-70	20-60	0-10	---	NP
27B, 27D, 27F- Greylock	0-6	Fine sandy loam.	SM, SC-SM	A-2, A-1-b, A-4	0	0-15	90-100	85-100	45-85	20-50	15-25	NP-6
	6-7	Sandy loam, fine sandy loam, loamy sand.	SM, SC-SM	A-2, A-1-b, A-4	0	0-15	90-100	85-100	45-85	20-50	15-25	NP-6
	7-19	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-1-b, A-4	0	0-15	90-100	85-100	45-85	20-50	15-25	NP-6
	19-34	Sandy loam, fine sandy loam, loamy sand.	SM, SC-SM, SC	A-2, A-1-b, A-4	0	0-15	90-100	85-100	45-85	20-50	15-25	NP-10
	34-80	Sandy loam, fine sandy loam, gravelly sandy loam.	SM, SC-SM	A-2, A-1-b, A-4	0	0-15	85-95	75-95	45-80	20-50	15-25	NP-6
28B, 28D------ Longrie	0-6	Sandy loam----	SM, SC-SM	A-2-4, A-4	0	0-25	95-100	85-100	50-85	25-50	<25	NP-7
	6-23	Fine sandy loam, sandy loam, silt loam.	SC-SM, CL-ML, CL, SC	A-2-4, A-4, A-1-b	0	0-25	95-100	85-100	55-95	25-80	20-30	4-10
	23-36	Sandy loam, fine sandy loam, gravelly sandy loam.	SC-SM, SC, CL, CL-ML	A-4, A-2-4, A-1-b	0	0-25	85-100	70-90	40-80	20-50	20-30	4-10
	36	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
29A---------- Solona	0-11	Loam----------	CL	A-4	0	0-13	80-100	75-100	65-100	50-90	25-30	7-11
	11-27	Fine sandy loam, sandy loam, loam.	CL, ML, SC, SM	A-2, A-4	0	0-13	80-100	75-100	45-100	25-80	20-30	3-10
	27-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, SC-SM	A-2, A-4, A-1	0	0-13	75-90	60-75	35-70	20-40	<25	NP-10
32A---------- Allendale	0-3	Fine sand-----	SM, SW-SM, SP-SM	A-2-4, A-3, A-1-b	0	0	95-100	90-100	45-80	5-35	0-14	NP
	3-29	Sand, loamy sand.	SM, SP-SM	A-2-4, A-3, A-4, A-1-b	0	0	95-100	90-100	45-80	5-40	0-14	NP
	29-80	Silty clay----	CH, MH	A-7	0	0	100	90-100	95-100	75-95	50-70	20-40

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
33. Pits												
34---------- Entisols	0-60	Variable------	---	---	---	---	---	---	---	---	---	---
35:												
Histosols----	0-51	Muck----------	PT	A-8	0	0	---	---	---	---	---	NP
	51-60	Variable------	---	---	---	---	---	---	---	---	---	---
Aquents------	0-60	Variable------	---	---	---	---	---	---	---	---	---	---
36:												
Markey-------	0-27	Muck----------	PT	A-8	---	---	---	---	---	---	---	---
	27-60	Sand, fine sand, gravelly loamy sand.	SP, SM, SP-SM	A-2, A-3, A-1	0	0	95-100	60-100	30-75	0-30	---	NP
Carbondale---	0-4	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	4-18	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	18-65	Mucky peat----	PT	A-8	0	0	---	---	---	---	---	---
37:												
Dawson-------	0-5	Peat----------	PT	A-8	0	0	---	---	---	---	---	---
	5-32	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	32-60	Sand, fine sand.	SP-SM, SP	A-2, A-3, A-1, A-4	0	0	100	100	50-90	5-30	---	NP-10
Loxley-------	0-8	Peat----------	PT	A-8	0	0	---	---	---	---	---	---
	8-60	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
38E:												
Eastport-----	0-3	Sand----------	SP, SM, SP-SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	35-70	0-15	---	NP
	3-38	Sand----------	SP, SM, SP-SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	35-70	0-15	---	NP
	38-80	Sand----------	SP, SM, SP-SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	35-70	0-15	---	NP
Leafriver----	0-8	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	8-80	Loamy fine sand, fine sand, sand.	SM, SP-SM, SP	A-3, A-2, A-2-4, A-1	0	0	95-100	80-100	45-70	3-35	---	NP
39E:												
Finch--------	0-11	Sand----------	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
	11-42	Sand----------	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
	42-80	Sand, fine sand.	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
Dawson-------	0-5	Peat----------	PT	A-8	0	0	---	---	---	---	---	---
	5-32	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	32-60	Sand, fine sand.	SP-SM, SP	A-2, A-3, A-1, A-4	0	0	100	100	50-90	5-30	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
39E:												
Pullup-------	0-8	Sand----------	SM, SP-SM	A-1, A-2-4, A-3	0	0	100	100	40-80	5-15	---	NP
	8-12	Sand, fine sand.	SM, SP-SM	A-1, A-2-4, A-3	0	0	100	100	40-80	5-30	---	NP
	12-22	Sand, fine sand.	SM, SP-SM	A-1, A-2-4, A-3	0	0	100	100	40-80	5-30	---	NP
	22-80	Sand, fine sand.	SM, SP-SM	A-1, A-2-4, A-3	0	0	100	100	40-80	5-30	---	NP
40A:												
Rudyard------	0-10	Silty clay loam.	CL	A-7, A-6	0	0	100	100	95-100	85-95	35-45	11-20
	10-19	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
	19-60	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
Allendale----	0-5	Fine sand-----	SM, SW-SM, SP-SM	A-2-4, A-3, A-1-b	0	0	95-100	90-100	45-80	5-35	0-14	NP
	5-31	Sand, loamy sand, fine sand.	SM, SP-SM	A-2-4, A-3, A-4, A-1-b	0	0	95-100	90-100	45-80	5-40	0-14	NP
	31-60	Silty clay----	CH, MH	A-7	0	0	100	90-100	95-100	75-95	50-70	20-40
41D, 41F:												
Amadon-------	0-8	Sandy loam----	SC-SM, SC	A-2-4, A-4, A-1-b	0	0-20	90-100	75-95	45-85	20-50	20-30	4-10
	8-15	Fine sandy loam, cobbly sandy loam, silt loam.	SC-SM, SC, CL	A-2-4, A-4	0	0-25	95-100	85-100	55-95	25-80	20-30	4-10
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Rock outcrop-	0-60	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
43----------	0-2	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
Angelica	2-7	Loam, sandy loam, clay loam.	SM, ML, SC, CL	A-4, A-6	0	0-10	90-100	85-100	50-90	36-90	12-40	2-20
	7-17	Sandy clay loam, loam, clay loam.	SC, CL, SC-SM, CL-ML	A-2-4, A-6, A-4	0	0-10	90-100	85-100	70-100	25-90	15-40	5-23
	17-60	Gravelly loam, loam.	ML, SM, CL, SC	A-2-4, A-4, A-6	0	0-15	85-100	60-95	40-90	30-65	20-40	NP-16

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
44B, 44D, 44E-Battydoe	0-3	Stony fine sandy loam.	SM	A-4, A-2-4	1-2	7-25	90-100	85-95	55-85	30-50	15-20	NP-4
	3-5	Loamy sand, sandy loam, fine sandy loam.	SM	A-4, A-2-4, A-1-b	0-10	7-25	90-100	85-95	40-75	15-50	15-20	NP-4
	5-11	Fine sandy loam, sandy loam.	SM	A-4, A-2-4	0-10	7-25	90-100	85-95	55-80	30-50	15-20	NP-4
	11-20	Loamy sand, sandy loam, fine sandy loam.	SM	A-4, A-2-4, A-1-b	0-10	7-25	90-100	85-95	40-75	15-50	15-20	NP-4
	20-80	Gravelly fine sandy loam, gravelly sandy loam.	SM, SC-SM	A-4, A-2-4, A-1-b	0-10	7-25	90-100	50-85	35-65	15-40	15-25	NP-7
46B----------Adams	0-4	Sandy loam----	SM, ML	A-4, A-2	0	0	100	95-100	60-95	25-60	<25	NP-10
	4-7	Loamy sand, sandy loam.	SP-SM, SM	A-2, A-4, A-1	0	0	90-100	75-100	45-75	10-40	15-20	NP-4
	7-26	Loamy sand, sand.	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	95-100	85-100	45-75	5-30	---	NP
	26-80	Sand----------	SP-SM, SM, SP	A-1-b, A-2-4, A-3	0	0	95-100	85-100	45-70	0-15	---	NP
48E:												
Wainola------	0-14	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	14-17	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	17-30	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	30-80	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
Leafriver----	0-8	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	8-80	Loamy fine sand, fine sand, sand.	SM, SP-SM, SP	A-3, A-2, A-2-4, A-1	0	0	95-100	80-100	45-70	3-35	---	NP
Pullup-------	0-8	Fine sand-----	SM	A-2-4	0	0	100	100	65-80	20-30	---	NP
	8-12	Sand, fine sand.	SM, SP-SM	A-1, A-2-4, A-3	0	0	100	100	40-80	5-30	---	NP
	12-22	Sand, fine sand.	SM, SP-SM	A-1, A-2-4, A-3	0	0	100	100	40-80	5-30	---	NP
	22-80	Sand, fine sand.	SM, SP-SM	A-1, A-2-4, A-3	0	0	100	100	40-80	5-30	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
49A---------- Wainola	0-14	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	14-17	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	17-30	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	30-80	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
52A---------- Ingalls	0-8	Fine sand-----	SM, SP-SM	A-2, A-3, A-1	0	0-8	90-100	85-100	40-80	5-35	---	NP
	8-20	Loamy sand, sand, fine sand.	SM, SP-SM	A-2, A-3, A-1	0	0-8	90-100	85-100	40-80	5-35	---	NP
	20-80	Stratified silt loam to very fine sand.	CL, ML, SC, SM	A-4	0	0	95-100	95-100	75-100	35-90	15-30	0-10
53B, 53D------ Menominee	0-7	Loamy sand----	SM	A-2, A-4	0	0	100	100	50-80	15-40	---	NP
	7-28	Loamy sand, sand.	SM, SP-SM	A-2, A-4, A-3	0	0	95-100	85-100	45-75	5-30	---	NP
	28-45	Loamy sand, sandy loam, sandy clay loam.	SC, SM, SC-SM	A-4, A-6, A-2	0	0	95-100	85-100	45-85	45-85	10-35	NP-15
	45-80	Sandy loam, loam.	SC-SM, SC	A-2-4, A-4	0	0	85-100	75-100	60-95	30-75	<30	NP-12
56A---------- Ensign	0-5	Fine sandy loam.	SC, CL, CL-ML, SC-SM	A-2-4, A-4	0	0-5	90-100	75-100	50-85	30-55	20-30	4-10
	5-15	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, SC, SC-SM	A-2, A-4, A-1-b	0	0-5	85-95	60-95	45-80	20-50	15-25	0-10
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
57B, 57D:												
Amadon-------	0-8	Sandy loam----	SC-SM, SC	A-2-4, A-4, A-1-b	0	0-20	90-100	75-95	45-85	20-50	20-30	4-10
	8-15	Fine sandy loam, cobbly sandy loam, silt loam.	SC-SM, SC, CL	A-2-4, A-4	0	0-25	95-100	85-100	55-95	25-80	20-30	4-10
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Longrie------	0-6	Sandy loam----	SM, SC-SM	A-2-4, A-4	0	0-25	95-100	85-100	50-85	25-50	<25	NP-7
	6-23	Fine sandy loam, sandy loam, silt loam.	SC-SM, CL-ML, CL, SC	A-2-4, A-4, A-1-b	0	0-25	95-100	85-100	55-95	25-80	20-30	4-10
	23-36	Sandy loam, fine sandy loam, gravelly sandy loam.	SC-SM, SC, CL, CL-ML	A-4, A-2-4, A-1-b	0	0-25	85-100	70-90	40-80	20-50	20-30	4-10
	36	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
61B---------- Paquin	0-12	Sand----------	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-70	5-15	---	NP
	12-14	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	14-27	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	27-34	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	34-80	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
62A---------- Iosco	0-9	Sand----------	SP-SM, SM	A-3, A-2, A-1	0	0-5	90-100	75-100	40-95	5-35	---	NP
	9-27	Fine sand, sand, loamy sand.	SP-SM, SM	A-3, A-2, A-4, A-1	0	0-5	90-100	75-100	35-80	5-45	---	NP
	27-38	Loam, sandy loam, gravelly sandy loam.	CL, SC, SM, ML	A-4, A-1, A-2	0	0-10	75-100	60-100	35-95	20-75	15-25	0-10
	38-60	Fine sandy loam, loam, gravelly fine sandy loam.	SC, CL, ML, SM	A-2, A-4, A-1	0	0-10	85-100	60-100	35-95	15-75	20-30	NP-10
64A---------- Search	0-10	Very fine sandy loam.	ML, CL-ML	A-4	0	0	95-100	85-100	70-95	50-65	15-25	NP-6
	10-24	Gravelly very fine sandy loam, very gravelly silt loam.	ML, SM, SC-SM, CL-ML	A-4, A-2-4	0	0	75-90	50-85	45-80	25-55	15-25	NP-6
	24	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
67B---------- Furlong	0-2	Sand----------	SP-SM, SM	A-3, A-2-4, A-1-b	0	0-2	95-100	95-100	45-70	5-15	---	NP
	2-5	Sand, loamy sand.	SP-SM, SM, SC-SM	A-3, A-2-4, A-1-b	0	0-2	95-100	95-100	45-75	5-30	15-20	NP-5
	5-19	Sand, loamy sand.	SP-SM, SM, SC-SM	A-3, A-2-4, A-1-b	0	0-2	95-100	95-100	45-75	5-30	15-20	NP-5
	19-22	Sand, loamy sand.	SP-SM, SM, SC-SM	A-3, A-2-4, A-1-b	0	0-2	95-100	95-100	45-75	5-30	15-20	NP-5
	22-25	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
68---------- Wakeley	0-4	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	4-24	Sand, fine sand.	SP-SM, SM	A-2-4, A-3	0	0-5	100	100	50-80	5-35	---	NP-4
	24-60	Clay, silty clay.	CL, CH	A-7	0	0	95-100	90-100	85-100	75-95	40-65	20-40

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
69B---------- Satago	0-4	Silt loam-----	CL-ML, ML, CL	A-4, A-6	0	0	100	95-100	85-100	50-90	15-30	3-11
	4-12	Silt loam, loam, silty clay loam.	CL	A-4, A-6	0	0	80-95	80-95	80-95	50-90	25-40	9-20
	12-46	Silt loam, loam, silty clay loam.	CL	A-4, A-6	0	0	80-95	80-95	80-95	50-90	25-40	9-20
	46	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
70B, 70D------ St. Ignace	0-5	Silt loam-----	CL-ML, CL	A-4, A-6	0	0-30	80-100	75-95	70-95	50-90	20-30	4-11
	5-15	Cobbly loam, cobbly sandy loam, gravelly silt loam.	SM, SC, CL, CL-ML	A-2-4, A-4, A-1-b	0	0-30	70-90	70-85	40-85	15-80	15-30	2-11
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
70F: St. Ignace---	0-5	Silt loam-----	CL-ML, CL	A-4, A-6	0	0-30	80-100	75-95	70-95	50-90	20-30	4-11
	5-15	Cobbly loam, cobbly sandy loam, gravelly silt loam.	SM, SC, CL, CL-ML	A-2-4, A-4, A-1-b	0	0-30	70-90	70-85	40-85	15-80	15-30	2-11
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Rock outcrop-	0-60	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
71B---------- Johnswood	0-3	Cobbly silt loam.	CL-ML, CL	A-4	0	25-50	80-100	75-90	65-90	50-85	20-30	4-10
	3-13	Cobbly loam, very cobbly silt loam, gravelly loam.	SM, CL, SC, ML	A-4, A-2, A-6, A-1	0	10-35	80-100	50-90	35-90	15-70	20-40	2-19
	13-60	Very gravelly loam, very cobbly fine sandy loam.	CL, SM, SC, ML	A-4, A-6, A-1, A-2	0	10-35	80-100	50-90	35-90	15-70	15-30	3-15
84B, 84D, 84F: Wallace------	0-11	Sand----------	SP, SP-SM	A-2-4, A-3, A-1-b	0	0	95-100	95-100	45-70	0-10	---	NP
	11-26	Sand, fine sand.	SM, SP-SM, SM	A-2-4, A-3, A-1-b	0	0	95-100	90-100	45-95	5-30	---	NP
	26-80	Sand, fine sand.	SP, SP-SM, SM	A-2-4, A-3, A-1-b	0	0	95-100	90-100	45-95	0-30	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
84B, 84D, 84F:												
Alcona-------	0-3	Fine sandy loam.	SM, CL-ML	A-4	0	0	95-100	85-100	60-85	35-55	15-25	NP-7
	3-6	Fine sandy loam, very fine sandy loam, loamy very fine sand.	CL-ML, SC-SM	A-2-4, A-4	0	0	95-100	85-100	50-95	30-65	15-25	NP-7
	6-17	Fine sandy loam, very fine sandy loam, loamy very fine sand.	CL-ML, SC-SM	A-4, A-2-4	0	0	95-100	95-100	85-95	40-65	15-30	NP-10
	17-54	Loamy fine sand, very fine sandy loam, fine sandy loam.	SM, SC, ML, CL	A-2-4, A-4	0	0	95-100	95-100	85-95	70-75	15-30	NP-10
	54-80	Stratified loamy very fine sand to very fine sandy loam.	SM, SC, ML, CL	A-2-4, A-4	0	0	95-100	85-100	65-95	30-65	20-30	NP-9
86B:												
Ingalls------	0-8	Fine sand-----	SM, SP-SM	A-2, A-3, A-1	0	0-8	90-100	85-100	40-80	5-35	---	NP
	8-20	Loamy sand, sand, fine sand.	SM, SP-SM	A-2, A-3, A-1	0	0-8	90-100	85-100	40-80	5-35	---	NP
	20-80	Stratified silt loam to very fine sand.	CL, ML, SC, SM	A-4	0	0	95-100	95-100	75-100	35-90	15-30	0-10
Paquin-------	0-12	Sand----------	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-70	5-15	---	NP
	12-14	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	14-27	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	27-34	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	34-80	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
88B:												
Croswell-----	0-6	Sand----------	SP-SM, SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-70	5-15	0-14	NP
	6-15	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-75	3-30	0-14	NP
	15-22	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-75	3-30	0-14	NP
	22-80	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-70	3-15	0-14	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
88B:												
Wainola------	0-14	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	14-17	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	17-30	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	30-80	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
89A:												
Spot---------	0-1	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	1-7	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-15	0-14	NP
	7-9	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	9-17	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	17-80	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
Finch--------	0-11	Sand----------	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
	11-42	Sand----------	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
	42-80	Sand, fine sand.	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
92A---------- Engadine	0-9	Fine sandy loam.	SC-SM, SM, ML, CL-ML	A-4, A-2-4	0	0	100	100	55-85	25-55	15-20	NP-6
	9-14	Loamy fine sand, sandy loam, very fine sandy loam.	SC-SM, SM, ML, CL-ML	A-4, A-2-4	0	0	100	100	55-85	25-55	15-20	NP-6
	14-18	Loamy fine sand, silty clay loam, silt loam.	SM, SC, CL, ML	A-4, A-2-4, A-6	0	0	100	100	55-100	20-90	15-40	NP-25
	18-25	Silty clay, clay, silty clay loam.	CH, CL	A-7	0	0	100	100	90-100	75-95	45-70	25-45
	25-80	Silty clay, clay.	CH, CL	A-7	0	0	100	100	90-100	75-95	45-70	25-45
93F:												
Ontonagon----	0-7	Silt loam-----	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	65-90	25-35	5-15
	7-10	Silty clay, clay.	CL, CH	A-6	0	0	100	100	90-100	75-95	50-70	11-40
	10-21	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
	21-80	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
Pickford-----	0-6	Silty clay loam.	CL	A-7, A-6	0	0	100	100	90-100	75-95	30-50	10-25
	6-19	Clay, silty clay, silty clay loam.	CH, CL	A-7	0	0	100	100	90-100	75-95	40-70	20-40
	19-60	Clay----------	CH, CL	A-7	0	0	100	100	90-100	75-95	65-90	40-55

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
94A:												
Markey-------	0-27	Muck----------	PT	A-8	---	---	---	---	---	---	---	---
	27-80	Sand----------	SP, SM, SP-SM	A-2, A-3, A-1	0	0	95-100	85-100	45-70	0-15	---	NP
Spot---------	0-1	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	1-7	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-15	0-14	NP
	7-9	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	9-17	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	17-80	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
Finch--------	0-11	Sand----------	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
	11-42	Sand----------	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
	42-80	Sand, fine sand.	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
95A---------- Bowers	0-8	Silt loam-----	CL	A-6, A-4	0	0	100	100	85-100	60-90	25-40	7-16
	8-11	Silt loam-----	CL	A-4, A-6	0	0	100	100	85-100	60-90	25-40	7-16
	11-14	Silty clay loam, silt loam.	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-50	10-20
	14-22	Silty clay loam.	CL	A-7	0	0	100	100	90-100	70-95	40-50	20-25
	22-80	Stratified clay loam to silty clay loam.	CL	A-6, A-7	0	0	100	100	90-100	70-95	35-50	15-25
98---------- Glawe	0-9	Silt loam-----	CL-ML, CL	A-4	0	0	100	100	90-100	70-90	20-30	4-10
	9-80	Stratified silt loam to loamy very fine sand.	SM, ML, CL, ML	A-4	0	0	100	100	75-95	35-90	15-30	NP-10

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
100B, 100D:												
Greylock-----	0-6	Fine sandy loam.	SM, SC-SM	A-2, A-1-b, A-4	0	0-15	90-100	85-100	45-85	20-50	15-25	NP-6
	6-7	Sandy loam, fine sandy loam, loamy sand.	SM, SC-SM	A-2, A-1-b, A-4	0	0-15	90-100	85-100	45-85	20-50	15-25	NP-6
	7-19	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-1-b, A-4	0	0-15	90-100	85-100	45-85	20-50	15-25	NP-6
	19-34	Sandy loam, fine sandy loam, loamy sand.	SM, SC-SM, SC	A-2, A-1-b, A-4	0	0-15	90-100	85-100	45-85	20-50	15-25	NP-10
	34-80	Sandy loam, fine sandy loam, gravelly sandy loam.	SM, SC-SM	A-2, A-1-b, A-4	0	0-15	85-95	75-95	45-80	20-50	15-25	NP-6
Adams--------	0-4	Sandy loam----	SM, ML	A-4, A-2	0	0	100	95-100	60-95	25-60	<25	NP-10
	4-7	Loamy sand, sandy loam.	SP-SM, SM	A-2, A-4, A-1	0	0	90-100	75-100	45-75	10-40	15-20	NP-4
	7-26	Loamy sand, sand.	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	95-100	85-100	45-75	5-30	---	NP
	26-80	Sand----------	SP-SM, SM, SP	A-1-b, A-2-4, A-3	0	0	95-100	85-100	45-70	0-15	---	NP
108D:												
Shelter------	0-8	Very cobbly loam.	CL, CL-ML, SC, SC-SM	A-4	0	20-50	85-100	65-90	55-90	35-85	15-30	5-10
	8-14	Very cobbly fine sandy loam, very gravelly loam, very cobbly silt loam.	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-1-b	0	20-50	75-80	50-70	30-70	10-70	15-30	5-10
	14-80	Very gravelly fine sandy loam, very cobbly loam, very cobbly silt loam.	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-1-b	0	20-50	75-80	50-70	30-70	10-70	15-30	5-10
Alpena-------	0-5	Gravelly loam	SM, SC, ML, CL	A-2-4, A-4, A-6	0	0-2	60-90	50-75	30-75	25-65	15-30	NP-11
	5-10	Very gravelly loam, very gravelly sandy loam, very cobbly sandy loam.	GM, GC, GP-GM, GM-GC	A-1, A-2-4, A-4	0	20-50	40-65	30-55	15-50	10-50	20-30	3-10
	10-60	Stratified extremely gravelly sand to sand.	SP, SP-SM, GP, GP-GM	A-1	0	0-10	35-65	10-50	5-35	0-10	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
112---------- Soo	0-7	Silty clay loam.	CL	A-7, A-6	0	0	100	95-100	85-100	75-95	35-50	15-25
	7-17	Silty clay loam.	CL	A-7, A-6	0	0	100	95-100	85-100	80-95	35-50	15-25
	17-80	Stratified silty clay loam to silt loam.	CL	A-7, A-6	0	0	100	95-100	80-100	65-95	25-50	10-25
113---------- Ruse	0-7	Mucky loam----	CL-ML, CL	A-4, A-6	0	0-15	90-100	75-100	70-95	50-90	20-30	4-11
	7-15	Sandy loam, silt loam, loam.	SC, CL, CL-ML, SC-SM	A-2-4, A-4, A-6	0	0-15	90-100	75-100	50-95	20-75	20-35	5-15
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
116:												
Udipsamments-	0-80	Sand----------	SP, SP-SM, SM	A-1, A-2, A-3	0	0	85-100	75-100	30-75	0-25	0-14	NP
Udorthents---	0-1	Sandy loam----	---	---	---	---	---	---	---	---	---	NP-15
	1-80	Variable------	---	---	---	---	---	---	---	---	---	---
117B---------- Manistee	0-10	Sand----------	SP-SM, SM	A-3, A-2-4, A-1-b	0	0	95-100	90-100	45-80	5-35	---	NP
	10-26	Sand, loamy sand, fine sand.	SP-SM, SM	A-2-4, A-1-b, A-3	0	0-2	95-100	90-100	45-80	5-50	---	NP
	26-36	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
	36-64	Clay, silty clay loam, silt loam.	CH, CL, CL-ML	A-7, A-6, A-4	0	0	95-100	90-100	75-90	55-90	25-65	7-35
119---------- Gogomain	0-10	Very fine sandy loam.	ML, CL-ML, CL	A-4	0	0	100	100	85-100	50-90	<25	NP-9
	10-18	Fine sandy loam, loamy very fine sand, very fine sandy loam.	SM, SC, ML, CL	A-2-4, A-4	0	0	100	100	60-100	25-90	<25	NP-9
	18-80	Clay, silty clay.	CH, CL	A-7	0	0	100	100	90-100	75-95	45-70	25-40
122. Pits												
123B---------- Borgstrom	0-9	Sand----------	SM, SP-SM	A-3, A-2	0	0-7	90-100	90-100	50-80	5-15	15-20	NP-4
	9-21	Sand, fine sand.	SM, SP-SM	A-3, A-2	0	0-7	90-100	90-100	50-80	5-15	15-20	NP-4
	21-29	Sand, fine sand.	SM, SP-SM	A-3, A-2	0	0-7	90-100	90-100	50-80	5-15	15-20	NP-4
	29-80	Stratified fine sand to silt loam.	SC-SM, CL-ML, CL, SC	A-2, A-4, A-6	0	0	100	100	65-95	20-85	15-40	4-20

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
124D---------- Alpena	0-5	Gravelly loam	SM, SC, ML, CL	A-2-4, A-4, A-6	0	0-2	60-90	50-75	30-75	25-65	15-30	NP-11
	5-10	Very gravelly loam, very gravelly sandy loam, very cobbly sandy loam.	GM, GC, GP-GM, GM-GC	A-1, A-2-4, A-4	0	20-50	40-65	30-55	15-50	10-50	20-30	3-10
	10-60	Stratified extremely gravelly sand to sand.	SP, SP-SM, GP, GP-GM	A-1	0	0-10	35-65	10-50	5-35	0-10	---	NP
125B: Croswell-----	0-6	Sand----------	SP-SM, SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-70	5-15	0-14	NP
	6-15	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-75	3-30	0-14	NP
	15-22	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-75	3-30	0-14	NP
	22-80	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-70	3-15	0-14	NP
Markey-------	0-27	Muck----------	PT	A-8	---	---	---	---	---	---	---	---
	27-60	Sand----------	SP, SM, SP-SM	A-2, A-3, A-1	0	0	95-100	85-100	45-70	0-15	---	NP
132B, 132D---- Superior	0-4	Fine sandy loam.	SM, SC-SM	A-4	0	0	95-100	90-95	50-80	25-55	<20	NP-4
	4-7	Fine sandy loam.	SM, SC-SM, ML	A-4	0	0	95-100	90-95	65-90	40-65	<20	NP-4
	7-16	Fine sandy loam.	SM, SC-SM, ML	A-4	0	0	95-100	90-95	65-90	40-65	<20	NP-4
	16-34	Clay, fine sandy loam.	CL-ML, CH, CL, SC-SM	A-4, A-6, A-7	0	0	100	100	70-90	50-90	25-60	7-35
	34-74	Clay----------	CH, CL	A-7	0	0	100	100	90-100	75-95	45-70	25-45
	74-80	Sandy clay loam, sandy loam.	SC, CL	A-6, A-4	0	0	85-95	80-90	65-85	35-75	28-44	9-25
132F---------- Superior	0-7	Fine sandy loam.	SM, SC-SM, ML, CL-ML	A-2, A-4	0	0	90-100	90-100	55-85	25-55	<20	2-7
	7-16	Sandy loam, fine sandy loam.	SC, SC-SM, CL, CL-ML	A-2, A-4	0	0	90-100	90-100	55-95	25-75	21-28	4-9
	16-34	Clay, loam, fine sandy loam.	CH, CL, CL-ML, SC-SM	A-7	0	0	90-100	90-100	70-90	50-90	25-60	7-35
	34-80	Clay----------	CH	A-7	0	0	90-100	90-100	80-100	70-95	50-70	25-45
133---------- Dorval	0-16	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	16-60	Silty clay, clay.	CH, CL	A-7	0	0	100	90-100	90-100	80-95	45-70	25-40

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
135B, 135D:												
Longrie------	0-6	Sandy loam----	SM, SC-SM	A-2-4, A-4	0	0-25	95-100	85-100	50-85	25-50	<25	NP-7
	6-23	Fine sandy loam, sandy loam, silt loam.	SC-SM, CL-ML, CL, SC	A-2-4, A-4, A-1-b	0	0-25	95-100	85-100	55-95	25-80	20-30	4-10
	23-36	Sandy loam, fine sandy loam, gravelly sandy loam.	SC-SM, SC, CL, CL-ML	A-4, A-2-4, A-1-b	0	0-25	85-100	70-90	40-80	20-50	20-30	4-10
	36	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Battydoe-----	0-3	Fine sandy loam.	SM	A-4, A-2-4	1-2	7-25	90-100	85-95	55-85	30-50	15-20	NP-4
	3-5	Loamy sand, sandy loam, fine sandy loam.	SM	A-4, A-2-4, A-1-b	0-10	7-25	90-100	85-95	40-75	15-50	15-20	NP-4
	5-11	Fine sandy loam, sandy loam.	SM	A-4, A-2-4	0-10	7-25	90-100	85-95	55-80	30-50	15-20	NP-4
	11-20	Loamy sand, sandy loam, fine sandy loam.	SM	A-4, A-2-4, A-1-b	0-10	7-25	90-100	85-95	40-75	15-50	15-20	NP-4
	20-80	Gravelly fine sandy loam, gravelly sandy loam.	SM, SC-SM	A-4, A-2-4, A-1-b	0-10	7-25	90-100	50-85	35-65	15-40	15-25	NP-7
143---------- Caffey	0-6	Muck----------	PT	A-8	0	0	---	---	---	---	0-14	---
	6-21	Sand, loamy sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-4	0	0	95-100	95-100	50-90	5-45	0-14	NP
	21-60	Stratified very fine sandy loam to loamy very fine sand.	SC, CL-ML, CL	A-4, A-6	0	0	95-100	95-100	65-95	40-90	20-40	4-20
146A:												
Allendale----	0-5	Fine sand-----	SM, SW-SM, SP-SM	A-2-4, A-3, A-1-b	0	0	95-100	90-100	45-80	5-35	0-14	NP
	5-31	Sand, loamy sand, fine sand.	SM, SP-SM	A-2-4, A-3, A-4, A-1-b	0	0	95-100	90-100	45-80	5-40	0-14	NP
	31-60	Silty clay----	CH, MH	A-7	0	0	100	90-100	95-100	75-95	50-70	20-40
Wakeley------	0-4	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	4-24	Sand, fine sand.	SP-SM, SM	A-2-4, A-3	0	0-5	100	100	50-80	5-25	---	NP-4
	24-60	Clay, silty clay.	CL, CH	A-7	0	0	95-100	90-100	85-100	75-95	40-65	20-40

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
147B, 147D---- Shelter	0-8	Very cobbly loam.	CL, CL-ML, SC, SC-SM	A-4	0	20-50	85-100	65-90	55-90	35-85	15-30	5-10
	8-14	Very cobbly fine sandy loam, very gravelly loam, very cobbly silt loam.	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-1-b	0	20-50	75-80	50-70	30-70	10-70	15-30	5-10
	14-60	Very gravelly fine sandy loam, very cobbly loam, very cobbly silt loam.	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-1-b	0	20-50	75-80	50-70	30-70	10-70	15-30	5-10
151---------- Beavertail	0-9	Muck----------	PT	A-8	0	0-15	---	---	---	---	---	---
	9-13	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam.	GC, SC-SM, SC, SP-SC	A-4, A-2-4, A-1	0-5	8-25	65-90	40-60	25-55	10-50	20-30	4-10
	13-28	Very gravelly fine sandy loam, very gravelly sandy loam.	GC, SC-SM, SC, SP-SC	A-4, A-2-4, A-1	0-5	8-25	65-90	40-60	25-55	10-50	20-30	4-10
	28-60	Very gravelly fine sandy loam, very gravelly sandy loam.	GC, SC-SM, SC, SP-SC	A-4, A-2-4, A-1	0-5	8-25	65-90	40-60	25-55	10-50	20-30	4-10
160B---------- Esau	0-6	Extremely gravelly sandy loam.	GM, GP-GM	A-1-a, A-1-b, A-2-4	0	5-20	25-50	20-50	10-40	5-30	15-20	NP-4
	6-10	Very gravelly sandy loam, extremely gravelly sandy loam, extremely gravelly coarse sand.	SM, GM, GW-GM, GP-GM	A-1-b, A-2-4, A-4	0	5-20	25-95	25-90	20-80	5-50	15-20	NP-4
	10-60	Very gravelly sand, extremely gravelly sand, very gravelly coarse sand.	SM, GP, SP, GM	A-1-b, A-2-4, A-3	0	5-20	25-95	25-90	20-80	0-25	15-20	NP
161---------- Zela	0-9	Muck----------	PT	A-8	0	0-15	---	---	---	---	---	---
	9-12	Very gravelly sandy loam, extremely gravelly loam.	SM, GP-GM, SP-SM, GM	A-2-4, A-1	0	0-15	35-65	10-50	5-40	5-30	15-25	NP-7
	12-60	Very gravelly sand, extremely gravelly coarse sand.	SP, GP, GP-GM, SP-SM	A-1	0	0-15	20-60	15-50	10-45	0-15	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
163B:												
Esau---------	0-6	Extremely gravelly sandy loam.	GM, GP-GM	A-1-a, A-1-b, A-2-4	0	5-20	25-50	20-50	10-40	5-30	15-20	NP-4
	6-10	Very gravelly sandy loam, extremely gravelly sandy loam, extremely gravelly coarse sand.	SM, GM, GW-GM, GP-GM	A-1-b, A-2-4, A-4	0	5-20	25-95	25-90	20-80	5-50	15-20	NP-4
	10-60	Very gravelly sand, extremely gravelly sand, very gravelly coarse sand.	SM, GP, SP, GM	A-1-b, A-2-4, A-3	0	5-20	25-95	25-90	20-80	0-25	15-20	NP
Zela---------	0-9	Muck----------	PT	A-8	0	0-15	---	---	---	---	---	---
	9-12	Very gravelly sandy loam, extremely gravelly loam.	SM, GP-GM, SP-SM, GM	A-2-4, A-1	0	0-15	35-65	10-50	5-40	5-30	15-25	NP-7
	12-60	Very gravelly sand, extremely gravelly coarse sand.	SP, GP, GP-GM, SP-SM	A-1	0	0-15	20-60	15-50	10-45	0-15	---	NP
164A---------- Moltke	0-6	Loam----------	ML, CL-ML, CL	A-4	0	0	100	100	85-100	60-90	15-30	NP-10
	6-11	Loamy very fine sand, very fine sand, silt loam.	SM, ML	A-4	0	0	100	100	75-95	35-85	---	NP
	11-25	Very fine sandy loam, silt loam.	ML, CL-ML, CL	A-4	0	0	100	100	85-100	50-90	15-30	NP-10
	25-60	Very fine sandy loam, silt loam.	ML, CL, SC, SM	A-4	0	0	100	100	85-95	50-90	15-30	NP-10
165A:												
Engadine-----	0-9	Fine sandy loam.	SC-SM, SM, ML, CL-ML	A-4, A-2-4	0	0	100	100	55-85	25-55	15-20	NP-6
	9-14	Loamy fine sand, sandy loam, fine sandy loam.	SC-SM, SM, ML, CL-ML	A-4, A-2-4	0	0	100	100	55-85	25-55	15-20	NP-6
	14-18	Loamy fine sand, silty clay loam, silt loam.	SM, SC, CL, ML	A-4, A-2-4, A-6	0	0	100	100	55-100	20-90	15-40	NP-25
	18-25	Silty clay, clay, silty clay loam.	CH, CL	A-7	0	0	100	100	90-100	75-95	45-70	25-45
	25-80	Silty clay, clay.	CH, CL	A-7	0	0	100	100	90-100	75-95	45-70	25-45

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
165A:												
Rudyard------	0-10	Silty clay loam.	CL	A-7, A-6	0	0	100	100	95-100	85-95	35-45	11-20
	10-19	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
	19-60	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
166:												
Gogomain-----	0-10	Very fine sandy loam.	ML, CL-ML, CL	A-4	0	0	100	100	85-100	50-90	<25	NP-9
	10-18	Fine sandy loam, loamy very fine sand, very fine sandy loam.	SM, SC, ML, CL	A-2-4, A-4	0	0	100	100	60-100	25-90	<25	NP-9
	18-80	Clay, silty clay.	CH, CL	A-7	0	0	100	100	90-100	75-95	45-70	25-40
Pickford-----	0-6	Silty clay loam.	CL	A-7, A-6	0	0	100	100	90-100	70-95	30-50	10-25
	6-19	Clay, silty clay, silty clay loam.	CH, CL	A-7	0	0	100	100	90-100	75-95	40-70	20-40
	19-60	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	45-70	25-40
167B, 167D, 167E:												
Battydoe----	0-3	Fine sandy loam.	SM	A-4, A-2-4	1-2	7-25	90-100	85-95	55-85	30-50	15-20	NP-4
	3-5	Loamy sand, sandy loam, fine sandy loam.	SM	A-4, A-2-4, A-1-b	0-10	7-25	90-100	85-95	40-75	15-50	15-20	NP-4
	5-11	Fine sandy loam, sandy loam.	SM	A-4, A-2-4	0-10	7-25	90-100	85-95	55-80	30-50	15-20	NP-4
	11-20	Loamy sand, sandy loam, fine sandy loam.	SM	A-4, A-2-4, A-1-b	0-10	7-25	90-100	85-95	40-75	15-50	15-20	NP-4
	20-80	Gravelly fine sandy loam, gravelly sandy loam.	SM, SC-SM	A-4, A-2-4, A-1-b	0-10	7-25	90-100	50-85	35-65	15-40	15-25	NP-7
Wallace-----	0-11	Sand----------	SP, SP-SM	A-2-4, A-3, A-1-b	0	0	95-100	95-100	45-70	0-10	---	NP
	11-26	Sand, fine sand.	SM, SP-SM, SM	A-2-4, A-3, A-1-b	0	0	95-100	90-100	45-95	5-30	---	NP
	26-80	Sand, fine sand.	SP, SP-SM, SM	A-2-4, A-3, A-1-b	0	0	95-100	90-100	45-95	0-30	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
168B:												
Caffey-------	0-6	Muck----------	PT	A-8	0	0	---	---	---	---	0-14	---
	6-21	Sand, loamy sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-4	0	0	95-100	95-100	50-90	5-45	0-14	NP
	21-60	Stratified very fine sandy loam to loamy very fine sand.	SC, CL-ML, CL	A-4, A-6	0	0	95-100	95-100	65-95	40-90	20-40	4-20
Ingalls------	0-8	Fine sand-----	SM, SP-SM	A-2, A-3, A-1	0	0-8	90-100	85-100	40-80	5-35	---	NP
	8-20	Loamy sand, sand, fine sand.	SM, SP-SM	A-2, A-3, A-1	0	0-8	90-100	85-100	40-80	5-35	---	NP
	20-60	Stratified silt loam to very fine sand.	CL, ML, SC, SM	A-4	0	0	95-100	95-100	75-100	35-90	15-30	0-10
Iosco--------	0-9	Sand----------	SP-SM, SM	A-3, A-2, A-1	0	0-5	90-100	75-100	40-95	5-35	---	NP
	9-27	Fine sand, sand, loamy sand.	SP-SM, SM	A-3, A-2, A-4, A-1	0	0-5	90-100	75-100	35-80	5-45	---	NP
	27-38	Loam, sandy loam, gravelly sandy loam.	CL, SC, SM, ML	A-4, A-1, A-2	0	0-10	75-100	60-100	35-95	20-75	15-25	0-10
	38-60	Fine sandy loam, loam, gravelly fine sandy loam.	SC, CL, ML, SM	A-2, A-4, A-1	0	0-10	85-100	60-100	35-95	15-75	20-30	NP-10
169E:												
Ontonagon----	0-7	Silt loam-----	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	65-90	25-35	5-15
	7-10	Silty clay, clay.	CL, CH	A-6	0	0	100	100	90-100	75-95	50-70	20-40
	10-21	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
	21-80	Clay----------	CH	A-7	0	0	100	100	90-100	75-95	65-90	40-55
Fluvaquents--	0-80	Variable------	---	---	---	---	---	---	---	---	---	---
170B, 170D, 170E--------- Pullup	0-8	Fine sand-----	SM	A-2-4	0	0	100	100	65-80	20-30	---	NP
	8-12	Sand, fine sand.	SM, SP-SM	A-1, A-2-4, A-3	0	0	100	100	40-80	5-30	---	NP
	12-22	Sand, fine sand.	SM, SP-SM	A-1, A-2-4, A-3	0	0	100	100	40-80	5-30	---	NP
	22-80	Sand, fine sand.	SM, SP-SM	A-1, A-2-4, A-3	0	0	100	100	40-80	5-30	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
172B:												
Leafriver----	0-8	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	8-60	Loamy fine sand, fine sand, sand.	SM, SP-SM, SP	A-3, A-2, A-2-4, A-1	0	0	95-100	80-100	45-70	3-35	---	NP
Croswell-----	0-6	Sand----------	SP-SM, SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-70	5-15	0-14	NP
	6-15	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-75	3-30	0-14	NP
	15-22	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-75	3-30	0-14	NP
	22-80	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-70	3-15	0-14	NP
Wainola------	0-14	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	14-17	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	17-30	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
	30-80	Fine sand-----	SM	A-2-4	0	0	100	90-100	60-80	15-35	---	NP
173B:												
Paquin-------	0-12	Sand----------	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-70	5-15	---	NP
	12-14	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	14-27	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	27-34	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	34-80	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
Finch--------	0-11	Sand----------	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
	11-42	Sand----------	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
	42-80	Sand, fine sand.	SP-SM, SM	A-3, A-2-4	0	0	100	100	50-70	5-15	---	NP
174B:												
Croswell-----	0-6	Sand----------	SP-SM, SM	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-70	5-15	0-14	NP
	6-15	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-75	3-30	0-14	NP
	15-22	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-75	3-30	0-14	NP
	22-80	Sand----------	SP-SM, SM, SP	A-3, A-2-4, A-1-b	0	0	90-100	75-100	40-70	3-15	0-14	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
174B:												
Spot---------	0-1	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	1-7	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-15	0-14	NP
	7-9	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	9-17	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	17-80	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
175D:												
Wallace------	0-11	Sand----------	SP, SP-SM	A-2-4, A-3, A-1-b	0	0	95-100	95-100	45-70	0-10	---	NP
	11-26	Sand, fine sand.	SM, SP-SM, SM	A-2-4, A-3, A-1-b	0	0	95-100	90-100	45-95	5-30	---	NP
	26-80	Sand, fine sand.	SP, SP-SM, SM	A-2-4, A-3, A-1-b	0	0	95-100	90-100	45-95	0-30	---	NP
Spot---------	0-1	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	1-7	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-15	0-14	NP
	7-9	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	9-17	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	17-80	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
176B:												
Paquin-------	0-12	Sand----------	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-70	5-15	---	NP
	12-14	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	14-27	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	27-34	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP
	34-80	Sand, fine sand.	SP-SM, SM	A-1, A-2, A-3	0	0	95-100	90-100	40-90	5-30	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
176B:												
Spot---------	0-1	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	1-7	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-15	0-14	NP
	7-9	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	9-17	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
	17-80	Sand, fine sand.	SP-SM, SM	A-3, A-2-4, A-1	0	0	100	90-100	40-90	5-30	0-14	NP
177B, 177D:												
Millecoquins-	0-6	Very fine sandy loam.	ML, CL-ML	A-4	0	0	100	95-100	85-90	50-65	15-25	NP-7
	6-17	Very fine sandy loam, fine sandy loam.	ML, CL-ML, SM, SC-SM	A-4	0	0	100	95-100	85-95	40-65	15-25	NP-7
	17-28	Very fine sandy loam, silty clay loam, silt loam.	CL, ML, CL-ML	A-4, A-7, A-6	0	0	100	100	85-100	50-95	25-45	7-22
	28-80	Stratified very fine sandy loam to silty clay loam.	CL	A-4, A-7, A-6	0	0	100	95-100	85-100	50-95	30-45	9-22
Superior-----	0-4	Fine sandy loam.	SM, SC-SM	A-4	0	0	95-100	90-95	50-80	25-55	<20	NP-4
	4-7	Fine sandy loam.	SM, SC-SM, ML	A-4	0	0	95-100	90-95	65-90	40-65	<20	NP-4
	7-16	Fine sandy loam.	SM, SC-SM, ML	A-4	0	0	95-100	90-95	65-90	40-65	<20	NP-4
	16-34	Clay, loam, fine sandy loam.	CL-ML, CH, CL, SC-SM	A-4, A-6, A-7	0	0	100	100	70-90	50-90	25-60	7-35
	34-74	Clay----------	CH, CL	A-7	0	0	100	100	90-100	75-95	45-70	25-45
	74-80	Sandy clay loam, sandy loam.	SC, CL	A-6, A-4	0	0	85-95	80-90	65-85	35-75	28-44	9-25
178B---------- Dinkey	0-9	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	9-28	Sand, fine sand, loamy fine sand.	SM, SP-SM, SP	A-3, A-2-4, A-1, A-4	0	0	100	100	45-95	3-45	---	NP
	28-33	Muck----------	PT	A-8	0	0	---	---	---	---	---	---
	33-80	Sand, fine sand, loamy fine sand.	SM, SP-SM, SP	A-3, A-2-4, A-1, A-4	0	0	100	100	45-95	3-45	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
179B, 179D, 179E, 179F--- Wallace	0-11	Sand----------	SP, SP-SM	A-2-4, A-3, A-1-b	0	0	95-100	95-100	45-70	0-10	---	NP
	11-26	Sand, fine sand.	SM, SP-SM, SM	A-2-4, A-3, A-1-b	0	0	95-100	90-100	45-95	5-30	---	NP
	26-80	Sand, fine sand.	SP, SP-SM, SM	A-2-4, A-3, A-1-b	0	0	95-100	90-100	45-95	0-30	---	NP
180B---------- Millecoquins	0-6	Very fine sandy loam.	ML, CL-ML	A-4	0	0	100	95-100	85-90	50-65	15-25	NP-7
	6-17	Very fine sandy loam, fine sandy loam.	ML, CL-ML, SM, SC-SM	A-4	0	0	100	95-100	85-95	40-65	15-25	NP-7
	17-28	Very fine sandy loam, silty clay loam, silt loam.	CL, ML, CL-ML	A-4, A-7, A-6	0	0	100	100	85-100	50-95	25-45	7-22
	28-80	Stratified very fine sandy loam to silty clay loam.	CL	A-4, A-7, A-6	0	0	100	95-100	85-100	50-95	30-45	9-22
181A---------- Mattix	0-5	Sandy loam----	SM	A-2-4, A-4, A-1-b	0	0-7	90-100	75-100	45-70	20-40	15-20	NP-4
	5-11	Sandy loam, loamy sand.	SM, SP-SM	A-2-4, A-4, A-1-b	0	0-7	90-100	75-100	35-70	10-40	15-20	NP-4
	11-24	Loamy sand, sand.	SP-SM, SM	A-2-4, A-3, A-1-b	0	0-7	90-100	75-100	35-70	5-30	15-20	NP-4
	24-80	Gravelly sand, very gravelly sand.	SP, SP-SM, GP, GP-GM	A-1	0	1-15	60-85	25-60	15-40	0-10	---	NP
182B---------- Heinz	0-5	Sandy loam----	SM	A-4, A-2-4, A-1-b	0	0-7	90-100	75-100	45-70	20-40	15-20	NP-4
	5-6	Sandy loam, loamy sand.	SM, SP-SM	A-4, A-2-4, A-1-b	0	0-7	90-100	75-100	35-70	10-40	15-20	NP-4
	6-8	Sandy loam, fine sandy loam.	SM	A-2-4, A-4, A-1-b	0	0-7	90-100	75-100	40-85	20-50	15-20	NP-4
	8-25	Loamy sand, sand, gravelly sand.	SM, SP-SM	A-2-4, A-3, A-1-b	0	0-7	90-100	75-100	35-70	5-30	15-20	NP-4
	25-80	Gravelly sand, very gravelly sand.	SP, SP-SM, GP, GP-GM	A-1	0	1-15	60-85	25-60	15-40	0-10	---	NP

TABLE 16.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
183B---------- Cozy	0-6	Cobbly fine sandy loam.	SM	A-4, A-2-4	0	10-30	90-100	85-95	55-85	30-50	15-20	NP-4
	6-10	Cobbly fine sandy loam, sandy loam.	SM	A-4, A-2-4	0	8-30	90-100	85-95	55-85	30-50	15-20	NP-4
	10-14	Cobbly sandy loam, fine sandy loam, loamy sand.	SM, SP-SM	A-4, A-2-4, A-1-b	0	8-30	90-100	85-95	40-85	10-50	15-20	NP-4
	14-80	Very gravelly sandy loam, very gravelly fine sandy loam, gravelly sandy loam.	SM, SC-SM, GM, GM-GC	A-4, A-2-4, A-1	0	8-30	60-85	45-60	25-55	10-40	15-25	NP-6
185---------- Ermatinger	0-8	Silt loam-----	ML, CL-ML, CL	A-4	0	0	100	100	85-100	50-90	<25	NP-10
	8-12	Silt loam, very fine sandy loam, loamy very fine sand.	ML	A-4	0	0	100	100	90-100	70-90	<35	2-10
	12-21	Very fine sandy loam, loamy very fine sand.	SM, ML, SC, CL	A-4	0	0	100	100	85-100	40-65	<30	NP-10
	21-80	Very fine sandy loam, loamy very fine sand, silt loam.	SM, ML, CL, ML	A-4, A-6	0	0	100	100	85-100	40-90	<30	NP-12

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS

(The symbol < means less than; > means more than. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated)

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodibility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
10D, 10F--------- Ontonagon	0-7	20-27	1.00-1.30	0.6-2.0	0.21-0.23	4.5-6.5	Low----------	0.43	3	6	1-3
	7-10	40-65	1.20-1.40	0.06-0.2	0.11-0.14	4.5-6.5	High---------	0.32			
	10-21	60-85	1.35-1.45	0.00-0.06	0.11-0.13	4.5-7.3	High---------	0.28			
	21-80	60-85	1.35-1.45	0.00-0.06	0.11-0.13	7.4-8.4	High---------	0.28			
11A---------- Rudyard	0-10	27-40	1.20-1.35	0.2-0.6	0.21-0.23	5.1-7.3	Moderate-----	0.37	5	4	3-4
	10-19	60-85	1.20-1.40	<0.06	0.11-0.13	5.1-7.8	High---------	0.28			
	19-60	60-80	1.35-1.45	<0.06	0.11-0.13	7.4-8.4	High---------	0.28			
12---------- Pickford	0-6	27-40	1.10-1.35	0.2-0.6	0.20-0.24	5.1-7.8	Moderate-----	0.43	5	7	3-15
	6-19	35-60	1.40-1.65	0.00-0.06	0.09-0.13	5.1-7.8	High---------	0.32			
	19-60	40-60	1.50-1.70	0.00-0.06	0.08-0.12	7.4-8.4	High---------	0.32			
13B, 13D--------- Alcona	0-3	5-15	1.30-1.60	0.6-6.0	0.15-0.18	4.5-7.3	Low----------	0.24	5	3	1-3
	3-6	2-15	1.30-1.65	0.6-6.0	0.12-0.19	4.5-6.0	Low----------	0.24			
	6-17	5-15	1.35-1.65	0.6-6.0	0.12-0.19	4.5-7.3	Low----------	0.24			
	17-54	5-18	1.40-1.70	0.6-2.0	0.10-0.19	5.1-6.5	Low----------	0.24			
	54-80	5-18	1.50-1.70	0.6-2.0	0.10-0.19	5.1-8.4	Low----------	0.24			
16B, 16D--------- Graveraet	0-3	1-15	1.30-1.65	0.6-2.0	0.13-0.18	3.5-6.0	Low----------	0.24	3	3	1-3
	3-6	1-15	1.40-1.70	0.6-2.0	0.11-0.16	3.5-6.0	Low----------	0.24			
	6-16	1-15	1.40-1.70	0.6-2.0	0.11-0.14	3.5-6.0	Low----------	0.24			
	16-32	5-18	1.80-2.00	0.01-0.06	0.11-0.14	5.1-6.5	Low----------	0.24			
	32-67	10-25	1.65-1.85	0.06-0.2	0.16-0.18	5.6-7.3	Low----------	0.24			
	67-80	2-10	1.65-1.85	0.6-2.0	0.11-0.16	7.4-8.4	Low----------	0.17			
17D---------- Eastport	0-3	0-10	1.40-1.60	6.0-20	0.07-0.09	5.1-7.3	Low----------	0.15	5	1	1-2
	3-38	0-10	1.40-1.60	6.0-20	0.06-0.08	5.1-7.8	Low----------	0.15			
	38-60	0-4	1.40-1.55	6.0-20	0.03-0.06	6.6-8.4	Low----------	0.15			
17E---------- Eastport	0-3	0-10	1.40-1.60	6.0-20	0.07-0.09	5.1-7.3	Low----------	0.15	5	1	1-2
	3-38	0-10	1.40-1.60	6.0-20	0.06-0.08	5.1-7.8	Low----------	0.15			
	38-80	0-4	1.40-1.55	6.0-20	0.03-0.06	6.6-8.4	Low----------	0.15			
18B, 18D, 18E, 18F---------- Rubicon	0-4	0-5	1.25-1.45	6.0-20	0.05-0.09	4.5-6.0	Low----------	0.10	5	1	.5-2
	4-32	0-10	1.30-1.60	6.0-20	0.04-0.08	4.5-6.0	Low----------	0.10			
	32-80	0-5	1.40-1.65	6.0-20	0.04-0.06	4.5-6.5	Low----------	0.10			
19B, 19D, 19E, 19F---------- Kalkaska	0-6	0-10	1.25-1.45	6.0-20	0.05-0.09	3.6-6.0	Low----------	0.15	5	1	1-4
	6-18	0-15	1.35-1.45	6.0-20	0.06-0.08	3.6-6.0	Low----------	0.15			
	18-38	0-10	1.35-1.45	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	38-80	0-10	1.35-1.50	6.0-20	0.04-0.06	4.5-6.5	Low----------	0.15			
20B---------- Croswell	0-6	0-10	1.30-1.55	6.0-20	0.06-0.09	3.5-6.5	Low----------	0.10	5	1	.5-2
	6-15	0-10	1.40-1.60	6.0-20	0.06-0.10	3.5-7.3	Low----------	0.10			
	15-22	0-10	1.40-1.60	6.0-20	0.06-0.09	3.5-7.3	Low----------	0.10			
	22-80	0-10	1.50-1.65	6.0-20	0.05-0.07	3.5-8.4	Low----------	0.10			
21A---------- Finch	0-11	0-8	1.20-1.50	6.0-20	0.07-0.09	3.5-6.0	Low----------	0.15	2	1	2-10
	11-42	5-10	1.75-2.05	2.0-6.0	0.02-0.04	3.5-6.5	Low----------	0.15			
	42-80	0-10	1.40-1.55	6.0-20	0.02-0.04	3.5-7.8	Low----------	0.15			

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
22---------- Spot	0-1	---	0.30-1.40	0.2-6.0	0.35-0.45	4.5-6.0	----------	----	2	2	65-85
	1-7	0-10	1.20-1.60	6.0-20	0.07-0.12	4.5-6.0	Low----------	0.15			
	7-9	0-10	1.75-2.00	0.6-6.0	0.05-0.06	4.5-6.0	Low----------	0.15			
	9-17	0-10	1.45-1.70	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	17-80	0-10	1.50-1.70	6.0-20	0.05-0.08	5.1-6.5	Low----------	0.15			
23---------- Leafriver	0-8	---	0.10-0.25	2.0-6.0	0.35-0.50	5.6-7.3	----------	----	5	5	50-90
	8-60	0-10	1.50-1.65	6.0-20	0.03-0.08	5.6-7.3	Low----------	0.17			
24B, 24D, 24E---- Springlake	0-6	0-10	1.30-1.60	6.0-20	0.09-0.12	5.1-6.0	Low----------	0.15	5	2	2-3
	6-8	3-10	1.35-1.60	6.0-20	0.05-0.11	5.1-6.0	Low----------	0.15			
	8-13	0-10	1.40-1.65	6.0-20	0.06-0.11	5.1-6.0	Low----------	0.10			
	13-22	0-10	1.40-1.65	6.0-20	0.05-0.11	5.1-7.8	Low----------	0.10			
	22-80	0-5	1.50-1.65	>20	0.02-0.04	7.4-7.8	Low----------	0.10			
25B, 25D, 25E---- Guardlake	0-1	2-15	1.30-1.60	2.0-6.0	0.13-0.18	5.1-6.0	Low----------	0.20	3	3	.5-2
	1-12	2-12	1.35-1.70	0.6-2.0	0.09-0.17	5.1-6.0	Low----------	0.20			
	12-60	0-10	1.55-1.65	>20	0.02-0.06	7.9-8.4	Low----------	0.05			
27B, 27D, 27F---- Greylock	0-6	5-12	1.30-1.60	0.6-2.0	0.13-0.18	5.1-6.0	Low----------	0.24	5	3	2-5
	6-7	2-12	1.30-1.60	0.6-2.0	0.12-0.16	5.1-6.0	Low----------	0.24			
	7-19	5-12	1.30-1.65	0.6-2.0	0.11-0.16	5.1-6.5	Low----------	0.24			
	19-34	5-15	1.45-1.80	0.2-0.6	0.11-0.16	6.1-7.3	Low----------	0.24			
	34-80	5-12	1.55-1.75	0.2-0.6	0.11-0.16	7.4-8.4	Low----------	0.24			
28B, 28D--------- Longrie	0-6	5-15	1.10-1.60	2.0-6.0	0.10-0.16	5.1-7.3	Low----------	0.20	2	3	1-3
	6-23	10-18	1.35-1.65	0.6-2.0	0.09-0.19	5.1-7.3	Low----------	0.28			
	23-36	10-18	1.35-1.65	0.6-2.0	0.09-0.18	6.6-7.8	Low----------	0.37			
	36	---	---	0.06-0.6	---	---	----------	----			
29A---------- Solona	0-11	15-20	1.35-1.55	0.6-2.0	0.16-0.24	6.1-7.8	Low----------	0.32	5	5	1-3
	11-27	12-18	1.45-1.65	0.6-2.0	0.09-0.19	6.6-7.8	Low----------	0.24			
	27-60	5-20	1.45-1.70	0.6-2.0	0.08-0.19	7.4-8.4	Low----------	0.37			
32A---------- Allendale	0-3	0-10	1.25-1.40	6.0-20	0.07-0.09	4.5-7.3	Low----------	0.15	4	1	2-4
	3-29	0-15	1.35-1.45	6.0-20	0.06-0.10	4.5-7.3	Low----------	0.17			
	29-80	40-60	1.45-1.70	0.00-0.06	0.08-0.12	6.1-8.4	High---------	0.32			
33. Pits											
34---------- Entisols	0-60	---	---	---	---	---	----------	----	5	---	---
35:											
Histosols-------	0-51	---	---	0.2-6.0	---	---	----------	----	3	2	50-70
	51-60	---	---	---	---	---	----------	----			
Aquents---------	0-60	---	---	---	---	---	----------	----	---	---	---
36:											
Markey----------	0-27	---	0.15-0.45	0.2-6.0	0.35-0.45	5.6-7.8	----------	----	2	2	55-85
	27-60	0-10	1.40-1.65	>20	0.03-0.08	5.6-8.4	Low----------	0.10			
Carbondale------	0-4	---	0.30-0.40	0.2-6.0	0.35-0.45	5.1-7.8	----------	----	3	2	50-70
	4-18	---	0.13-0.23	0.2-6.0	0.35-0.45	5.1-7.8	----------	----			
	18-65	---	0.10-0.17	0.6-6.0	0.45-0.55	5.6-7.8	----------	----			

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
37:											
Dawson----------	0-5	---	0.15-0.30	>6.0	0.55-0.65	3.6-4.4	----------	----	2	7	65-85
	5-32	---	0.15-0.40	0.2-6.0	0.35-0.45	3.6-4.4	----------	----			
	32-60	0-10	1.55-1.75	6.0-20	0.03-0.10	4.5-6.5	Low----------	0.10			
Loxley----------	0-8	---	0.30-0.40	>6.0	0.35-0.65	<4.5	----------	----	3	7	70-90
	8-60	---	0.10-0.35	0.2-6.0	0.35-0.45	<4.5	----------	----			
38E:											
Eastport--------	0-3	0-10	1.40-1.60	6.0-20	0.07-0.09	5.1-7.3	Low----------	0.15	5	1	1-2
	3-38	0-10	1.40-1.60	6.0-20	0.06-0.08	5.1-7.8	Low----------	0.15			
	38-80	0-4	1.40-1.55	6.0-20	0.03-0.06	6.6-8.4	Low----------	0.15			
Leafriver-------	0-8	---	0.10-0.25	0.6-6.0	0.35-0.50	5.6-7.3	----------	----	5	2	50-90
	8-80	0-10	1.50-1.65	6.0-20	0.03-0.08	5.6-7.3	Low----------	0.17			
39E:											
Finch----------	0-11	0-8	1.20-1.50	6.0-20	0.07-0.09	3.5-6.0	Low----------	0.15	2	1	2-10
	11-42	5-10	1.75-2.05	2.0-6.0	0.02-0.04	3.5-6.5	Low----------	0.15			
	42-80	0-10	1.40-1.55	6.0-20	0.02-0.04	3.5-7.8	Low----------	0.15			
Dawson----------	0-5	---	0.15-0.30	>6.0	0.55-0.65	3.6-4.4	----------	----	2	7	65-85
	5-32	---	0.15-0.40	0.2-6.0	0.35-0.45	3.6-4.4	----------	----			
	32-60	0-10	1.55-1.75	6.0-20	0.03-0.10	4.5-6.5	Low----------	0.10			
Pullup----------	0-8	0-10	1.30-1.45	6.0-20	0.07-0.09	4.5-6.0	Low----------	0.15	2	1	.5-1
	8-12	0-10	1.35-1.60	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	12-22	0-10	1.75-2.05	0.6-6.0	0.05-0.06	4.5-6.0	Low----------	0.15			
	22-80	0-10	1.40-1.60	6.0-20	0.05-0.07	5.6-6.5	Low----------	0.15			
40A:											
Rudyard---------	0-10	27-40	1.20-1.35	0.2-0.6	0.21-0.23	5.1-7.3	Moderate-----	0.37	5	4	3-4
	10-19	60-85	1.20-1.40	<0.06	0.11-0.13	5.1-7.8	High---------	0.28			
	19-60	60-80	1.35-1.45	<0.06	0.11-0.13	7.4-8.4	High---------	0.28			
Allendale-------	0-5	0-10	1.25-1.40	6.0-20	0.07-0.09	4.5-7.3	Low----------	0.15	4	1	2-4
	5-31	0-15	1.35-1.45	6.0-20	0.06-0.10	4.5-7.3	Low----------	0.17			
	31-60	40-60	1.45-1.70	0.00-0.06	0.08-0.12	6.1-8.4	High---------	0.32			
41D, 41F:											
Amadon----------	0-8	10-18	1.20-1.60	2.0-6.0	0.11-0.18	5.1-6.0	Low----------	0.20	1	3	1-2
	8-15	10-18	1.35-1.65	0.6-2.0	0.10-0.17	5.1-6.0	Low----------	0.20			
	15	---	---	0.06-0.6	---	---	----------	----			
Rock outcrop----	0-60	---	---	0.01-0.06	---	---	----------	----	---	---	---
43----------	0-2	---	0.20-0.30	0.2-6.0	0.25-0.35	6.1-7.3	----------	----	5	2	40-60
Angelica	2-7	18-35	1.50-1.80	0.6-2.0	0.10-0.18	6.1-7.3	Low----------	0.28			
	7-17	18-35	1.50-1.80	0.2-0.6	0.10-0.20	6.1-7.8	Moderate-----	0.28			
	17-60	5-20	1.45-1.95	0.2-0.6	0.10-0.20	7.9-8.4	Low----------	0.24			
44B, 44D, 44E----	0-3	2-10	0.90-1.25	0.6-2.0	0.13-0.18	5.1-6.0	Low----------	0.24	5	3	5-10
Battydoe	3-5	2-10	1.25-1.50	0.6-2.0	0.07-0.17	5.1-6.0	Low----------	0.24			
	5-11	2-10	0.90-1.25	0.6-2.0	0.09-0.17	5.1-6.0	Low----------	0.24			
	11-20	2-10	1.10-1.50	0.6-2.0	0.07-0.17	5.6-7.3	Low----------	0.24			
	20-80	5-15	1.45-1.75	0.6-2.0	0.07-0.16	7.4-8.4	Low----------	0.24			
46B----------	0-4	0-15	1.00-1.30	2.0-6.0	0.12-0.15	3.6-6.0	Low----------	0.24	5	3	2-6
Adams	4-7	2-15	1.00-1.30	2.0-6.0	0.08-0.16	3.6-6.0	Low----------	0.17			
	7-26	0-5	1.10-1.45	6.0-20	0.03-0.10	4.5-6.0	Low----------	0.17			
	26-80	0-5	1.20-1.50	>20	0.03-0.04	4.5-6.5	Low----------	0.17			

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
48E:											
Wainola---------	0-14	0-10	1.35-1.50	6.0-20	0.07-0.09	4.5-6.5	Low----------	0.15	5	1	2-4
	14-17	2-12	1.35-1.50	6.0-20	0.06-0.11	4.5-6.0	Low----------	0.15			
	17-30	2-12	1.35-1.45	6.0-20	0.06-0.11	4.5-6.5	Low----------	0.15			
	30-80	0-10	1.25-1.50	6.0-20	0.05-0.07	5.1-7.3	Low----------	0.15			
Leafriver-------	0-8	---	0.10-0.25	0.6-6.0	0.35-0.50	5.6-7.3	----------	----	5	2	50-90
	8-80	0-10	1.50-1.65	6.0-20	0.03-0.08	5.6-7.3	Low----------	0.17			
Pullup----------	0-8	0-10	1.30-1.45	6.0-20	0.07-0.09	4.5-6.0	Low----------	0.15	2	1	.5-1
	8-12	0-10	1.35-1.60	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	12-22	0-10	1.75-2.05	0.6-6.0	0.05-0.06	4.5-6.0	Low----------	0.15			
	22-80	0-10	1.40-1.60	6.0-20	0.05-0.07	5.6-6.5	Low----------	0.15			
49A----------	0-14	0-10	1.35-1.50	6.0-20	0.07-0.09	4.5-6.5	Low----------	0.15	5	1	2-4
Wainola	14-17	2-12	1.35-1.50	6.0-20	0.06-0.11	4.5-6.0	Low----------	0.15			
	17-30	2-12	1.35-1.45	6.0-20	0.06-0.11	4.5-6.5	Low----------	0.15			
	30-80	0-10	1.25-1.50	6.0-20	0.05-0.07	5.1-7.3	Low----------	0.15			
52A----------	0-8	0-5	1.25-1.40	6.0-20	0.05-0.10	4.5-7.3	Low----------	0.15	4	1	.5-3
Ingalls	8-20	3-15	1.35-1.45	6.0-20	0.05-0.10	4.5-7.3	Low----------	0.17			
	20-80	2-20	1.45-1.80	0.2-0.6	0.09-0.22	5.6-8.4	Low----------	0.32			
53B, 53D---------	0-7	3-7	1.15-1.60	6.0-20	0.10-0.12	4.5-6.5	Low----------	0.17	5	2	.5-1
Menominee	7-28	2-5	1.25-1.60	6.0-20	0.06-0.08	4.5-6.5	Low----------	0.17			
	28-45	5-35	1.30-1.70	0.6-2.0	0.15-0.20	5.6-8.4	Low----------	0.28			
	45-80	10-20	1.30-1.70	0.6-2.0	0.11-0.19	5.6-8.4	Low----------	0.32			
56A----------	0-5	10-18	1.30-1.50	0.6-2.0	0.13-0.15	6.1-7.8	Low----------	0.17	1	3	2-3
Ensign	5-15	10-25	1.40-1.70	0.6-2.0	0.13-0.17	6.1-8.4	Low----------	0.24			
	15	---	---	0.06-0.6	---	---	----------	----			
57B, 57D:											
Amadon----------	0-8	10-18	1.20-1.60	2.0-6.0	0.11-0.18	5.1-6.0	Low----------	0.20	1	3	1-2
	8-15	10-18	1.35-1.65	0.6-2.0	0.10-0.17	5.1-6.0	Low----------	0.20			
	15	---	---	0.06-0.6	---	---	----------	----			
Longrie---------	0-6	5-15	1.10-1.60	2.0-6.0	0.10-0.16	5.1-7.3	Low----------	0.20	2	3	1-3
	6-23	10-18	1.35-1.65	0.6-2.0	0.09-0.19	5.1-7.3	Low----------	0.28			
	23-36	10-18	1.35-1.65	0.6-2.0	0.09-0.18	6.6-7.8	Low----------	0.37			
	36	---	---	0.06-0.6	---	---	----------	----			
61B----------	0-12	0-10	1.35-1.45	6.0-20	0.06-0.10	4.5-5.5	Low----------	0.15	2	1	0-1
Paquin	12-14	0-10	1.40-1.65	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	14-27	0-10	1.75-2.00	0.6-6.0	0.05-0.06	5.1-6.0	Low----------	0.15			
	27-34	0-10	1.45-1.60	6.0-20	0.06-0.08	5.1-6.5	Low----------	0.15			
	34-80	0-10	1.50-1.70	6.0-20	0.06-0.08	5.1-6.5	Low----------	0.15			
62A----------	0-9	2-10	1.30-1.55	6.0-20	0.07-0.09	5.1-7.3	Low----------	0.10	5	1	.5-2
Iosco	9-27	2-5	1.45-1.60	6.0-20	0.06-0.11	5.1-6.5	Low----------	0.15			
	27-38	15-25	1.55-1.65	0.6-2.0	0.15-0.19	6.6-8.4	Low----------	0.24			
	38-60	8-20	1.30-1.70	0.6-2.0	0.10-0.19	7.9-8.4	Low----------	0.17			
64A----------	0-10	5-12	1.35-1.50	0.6-2.0	0.18-0.22	7.4-8.4	Low----------	0.24	3	3	2-4
Search	10-24	5-15	1.65-1.80	0.2-0.6	0.12-0.14	7.9-8.4	Low----------	0.24			
	24	---	---	---	---	---	----------	----			

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
67B---------- Furlong	0-2	2-10	1.35-1.60	6.0-20	0.07-0.09	4.5-6.5	Low----------	0.15	2	1	1-2
	2-5	5-12	1.40-1.65	6.0-20	0.06-0.11	5.1-6.5	Low----------	0.15			
	5-19	5-12	1.40-1.65	6.0-20	0.05-0.10	5.1-6.5	Low----------	0.15			
	19-22	5-12	1.55-1.70	6.0-20	0.05-0.10	7.4-8.4	Low----------	0.15			
	22-25	---	---	0.06-0.6	---	---	----------	----			
68---------- Wakeley	0-4	---	0.30-0.40	6.0-20	0.35-0.45	5.6-7.8	----------	----	4	2	40-60
	4-24	0-15	1.45-1.60	6.0-20	0.05-0.10	5.6-7.8	Low----------	0.10			
	24-60	35-60	1.50-1.70	<0.2	0.08-0.12	7.4-8.4	High---------	0.32			
69B---------- Satago	0-4	8-20	1.35-1.50	0.6-2.0	0.20-0.24	6.6-8.4	Low----------	0.37	4	4L	1-3
	4-12	18-35	1.40-1.65	0.6-2.0	0.14-0.22	7.4-8.4	Low----------	0.32			
	12-46	18-35	1.55-1.70	0.6-2.0	0.10-0.19	7.9-8.4	Low----------	0.37			
	46	---	---	0.01-0.2	---	---	----------	----			
70B, 70D--------- St. Ignace	0-5	12-20	1.25-1.60	0.6-6.0	0.20-0.24	6.1-8.4	Low----------	0.28	1	3	1-3
	5-15	5-20	1.50-1.70	0.6-6.0	0.06-0.11	7.9-8.4	Low----------	0.24			
	15	---	---	0.2-2.0	---	---	----------	----			
70F:											
St. Ignace------	0-5	12-20	1.25-1.60	0.6-6.0	0.20-0.24	6.1-8.4	Low----------	0.28	1	3	1-3
	5-15	5-20	1.50-1.70	0.6-6.0	0.06-0.11	7.9-8.4	Low----------	0.24			
	15	---	---	0.2-2.0	---	---	----------	----			
Rock outcrop----	0-60	---	---	0.01-0.06	---	---	----------	----	---	---	---
71B---------- Johnswood	0-3	8-18	1.30-1.60	2.0-6.0	0.13-0.17	6.1-7.8	Low----------	0.10	3	3	1-3
	3-13	8-30	1.35-1.70	0.6-2.0	0.04-0.12	6.1-7.8	Low----------	0.10			
	13-60	10-25	1.80-2.10	0.06-0.2	0.02-0.06	7.9-8.4	Low----------	0.10			
84B, 84D, 84F:											
Wallace---------	0-11	0-8	1.35-1.45	6.0-20	0.07-0.09	4.5-5.5	Low----------	0.15	2	1	.5-2
	11-26	2-10	1.75-2.05	0.6-6.0	0.01-0.04	4.5-6.0	Low----------	0.15			
	26-80	0-8	1.45-1.60	6.0-20	0.04-0.05	5.1-6.5	Low----------	0.15			
Alcona----------	0-3	5-15	1.30-1.60	0.6-6.0	0.15-0.18	4.5-7.3	Low----------	0.24	5	3	1-3
	3-6	2-15	1.30-1.65	0.6-6.0	0.12-0.19	4.5-6.0	Low----------	0.24			
	6-17	5-15	1.35-1.65	0.6-6.0	0.12-0.19	4.5-7.3	Low----------	0.24			
	17-54	5-18	1.40-1.70	0.6-2.0	0.10-0.19	5.1-6.5	Low----------	0.24			
	54-80	5-18	1.50-1.70	0.6-2.0	0.10-0.19	5.1-8.4	Low----------	0.24			
86B:											
Ingalls---------	0-8	0-5	1.25-1.40	6.0-20	0.05-0.10	4.5-7.3	Low----------	0.15	4	1	.5-3
	8-20	3-15	1.35-1.45	6.0-20	0.05-0.10	4.5-7.3	Low----------	0.17			
	20-80	2-20	1.45-1.80	0.2-0.6	0.09-0.22	5.6-8.4	Low----------	0.32			
Paquin----------	0-12	0-10	1.35-1.45	6.0-20	0.06-0.10	4.5-5.5	Low----------	0.15	2	1	0-1
	12-14	0-10	1.40-1.65	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	14-27	0-10	1.75-2.00	0.6-6.0	0.05-0.06	5.1-6.0	Low----------	0.15			
	27-34	0-10	1.45-1.60	6.0-20	0.06-0.08	5.1-6.5	Low----------	0.15			
	34-80	0-10	1.50-1.70	6.0-20	0.06-0.08	5.1-6.5	Low----------	0.15			
88B:											
Croswell--------	0-6	0-10	1.30-1.55	6.0-20	0.06-0.09	3.5-6.5	Low----------	0.10	5	1	.5-2
	6-15	0-10	1.40-1.60	6.0-20	0.06-0.10	3.5-7.3	Low----------	0.10			
	15-22	0-10	1.40-1.60	6.0-20	0.06-0.09	3.5-7.3	Low----------	0.10			
	22-80	0-10	1.50-1.65	6.0-20	0.05-0.07	3.5-8.4	Low----------	0.10			

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
88B:											
Wainola---------	0-14	0-10	1.35-1.50	6.0-20	0.07-0.09	4.5-6.5	Low----------	0.15	5	1	2-4
	14-17	2-12	1.35-1.50	6.0-20	0.06-0.11	4.5-6.0	Low----------	0.15			
	17-30	2-12	1.35-1.45	6.0-20	0.06-0.11	4.5-6.5	Low----------	0.15			
	30-80	0-10	1.25-1.50	6.0-20	0.05-0.07	5.1-7.3	Low----------	0.15			
89A:											
Spot----------	0-1	---	0.30-1.40	0.2-6.0	0.35-0.45	4.5-6.0	----------	----	2	2	65-85
	1-7	0-10	1.20-1.60	6.0-20	0.07-0.12	4.5-6.0	Low----------	0.15			
	7-9	0-10	1.75-2.00	0.6-6.0	0.05-0.06	4.5-6.0	Low----------	0.15			
	9-17	0-10	1.45-1.70	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	17-80	0-10	1.50-1.70	6.0-20	0.05-0.08	5.1-6.5	Low----------	0.15			
Finch----------	0-11	0-8	1.20-1.50	6.0-20	0.07-0.09	3.5-6.0	Low----------	0.15	2	1	2-10
	11-42	5-10	1.75-2.05	2.0-6.0	0.02-0.04	3.5-6.5	Low----------	0.15			
	42-80	0-10	1.40-1.55	6.0-20	0.02-0.04	3.5-7.8	Low----------	0.15			
92A----------	0-9	2-12	1.20-1.50	0.6-2.0	0.13-0.18	6.1-7.3	Low----------	0.24	5	3	2-4
Engadine	9-14	2-12	1.35-1.60	0.6-2.0	0.12-0.17	5.6-6.5	Low----------	0.24			
	14-18	20-40	1.35-1.65	0.06-0.2	0.10-0.20	6.1-7.3	Moderate-----	0.43			
	18-25	35-70	1.50-1.70	0.00-0.06	0.09-0.18	6.6-7.8	High---------	0.28			
	25-80	40-70	1.50-1.70	0.00-0.06	0.08-0.12	7.4-8.4	High---------	0.28			
93F:											
Ontonagon-------	0-7	20-27	1.00-1.30	0.6-2.0	0.21-0.23	4.5-6.5	Low----------	0.43	3	6	1-3
	7-10	40-65	1.20-1.40	0.06-0.2	0.11-0.14	4.5-6.5	High---------	0.32			
	10-21	60-85	1.35-1.45	0.00-0.06	0.11-0.13	4.5-7.3	High---------	0.28			
	21-80	60-85	1.35-1.45	0.00-0.06	0.11-0.13	7.4-8.4	High---------	0.28			
Pickford--------	0-6	27-40	1.10-1.35	0.2-0.6	0.20-0.24	5.1-7.8	Moderate-----	0.37	5	7	2-5
	6-19	35-60	1.40-1.65	0.00-0.06	0.09-0.13	5.1-7.8	High---------	0.32			
	19-60	40-60	1.50-1.70	0.00-0.06	0.08-0.12	7.4-8.4	High---------	0.32			
94A:											
Markey----------	0-27	---	0.15-0.45	0.2-6.0	0.35-0.45	5.6-7.8	----------	----	2	2	55-85
	27-80	0-10	1.40-1.65	>20	0.03-0.08	5.6-8.4	Low----------	0.10			
Spot----------	0-1	---	0.30-1.40	0.2-6.0	0.35-0.45	4.5-6.0	----------	----	2	2	65-85
	1-7	0-10	1.20-1.60	6.0-20	0.07-0.12	4.5-6.0	Low----------	0.15			
	7-9	0-10	1.75-2.00	0.6-6.0	0.05-0.06	4.5-6.0	Low----------	0.15			
	9-17	0-10	1.45-1.70	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	17-80	0-10	1.50-1.70	6.0-20	0.05-0.08	5.1-6.5	Low----------	0.15			
Finch----------	0-11	0-8	1.20-1.50	6.0-20	0.07-0.09	3.5-6.0	Low----------	0.15	2	1	2-10
	11-42	5-10	1.75-2.05	2.0-6.0	0.02-0.04	3.5-6.5	Low----------	0.15			
	42-80	0-10	1.40-1.55	6.0-20	0.02-0.04	3.5-7.8	Low----------	0.15			
95A----------	0-8	15-27	1.40-1.70	0.6-2.0	0.20-0.22	5.6-7.3	Low----------	0.32	5	6	1-3
Bowers	8-11	15-27	1.40-1.70	0.6-2.0	0.16-0.22	5.6-7.3	Low----------	0.32			
	11-14	18-35	1.45-1.60	0.2-0.6	0.12-0.17	5.6-7.8	Moderate-----	0.37			
	14-22	27-40	1.45-1.60	0.06-0.2	0.18-0.20	6.1-7.8	Moderate-----	0.43			
	22-80	30-40	1.50-1.65	0.06-0.6	0.18-0.22	7.4-7.8	Moderate-----	0.43			
98----------	0-9	12-18	0.90-1.30	0.6-2.0	0.22-0.25	7.4-8.4	Low----------	0.28	3	5	5-15
Glawe	9-80	2-18	1.35-1.65	0.6-2.0	0.10-0.22	7.4-8.4	Low----------	0.24			

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
100B, 100D:											
Greylock--------	0-6	5-12	1.30-1.60	0.6-2.0	0.13-0.18	5.1-6.0	Low----------	0.24	5	3	2-5
	6-7	2-12	1.30-1.60	0.6-2.0	0.12-0.16	5.1-6.0	Low----------	0.24			
	7-19	5-12	1.30-1.65	0.6-2.0	0.11-0.16	5.1-6.5	Low----------	0.24			
	19-34	5-15	1.45-1.80	0.2-0.6	0.11-0.16	6.1-7.3	Low----------	0.24			
	34-80	5-12	1.55-1.75	0.2-0.6	0.11-0.16	7.4-8.4	Low----------	0.24			
Adams----------	0-4	0-15	1.00-1.30	2.0-6.0	0.12-0.15	3.6-6.0	Low----------	0.24	5	3	2-6
	4-7	2-15	1.00-1.30	2.0-6.0	0.08-0.16	3.6-6.0	Low----------	0.17			
	7-26	0-5	1.10-1.45	6.0-20	0.03-0.10	4.5-6.0	Low----------	0.17			
	26-80	0-5	1.20-1.50	>20	0.03-0.04	4.5-6.5	Low----------	0.17			
108D:											
Shelter---------	0-8	4-20	1.15-1.65	0.6-2.0	0.12-0.15	6.6-8.4	Low----------	0.24	3	8	1-4
	8-14	4-20	1.30-1.70	0.2-2.0	0.06-0.10	7.9-8.4	Low----------	0.20			
	14-80	4-20	1.80-2.10	0.00-0.06	0.02-0.04	7.9-8.4	Low----------	0.20			
Alpena----------	0-5	7-20	1.25-1.45	2.0-6.0	0.13-0.19	6.6-7.8	Low----------	0.24	5	5	2-4
	5-10	8-18	1.25-1.50	0.6-2.0	0.12-0.17	7.4-8.4	Low----------	0.24			
	10-60	0-10	1.25-1.65	>20	0.02-0.04	7.4-8.4	Low----------	0.10			
112----------	0-7	27-40	1.10-1.50	0.6-2.0	0.21-0.23	6.1-7.3	Moderate-----	0.43	5	7	2-5
Soo	7-17	27-40	1.40-1.70	0.06-0.2	0.18-0.20	6.1-7.8	Moderate-----	0.43			
	17-80	18-40	1.50-1.70	0.06-0.2	0.18-0.20	7.9-8.4	Moderate-----	0.43			
113----------	0-7	10-20	1.10-1.30	0.6-6.0	0.18-0.24	6.1-7.8	Low----------	0.32	1	5	10-15
Ruse	7-15	10-25	1.50-1.70	0.6-6.0	0.10-0.20	6.1-7.8	Low----------	0.24			
	15	---	---	0.06-0.6	---	---	----------	----			
116:											
Udipsamments----	0-80	0-10	1.35-1.65	6.0-20	0.05-0.09	5.1-6.5	Low----------	0.15	5	1	.5-1
Udorthents------	0-1	2-18	1.50-1.70	0.6-2.0	0.11-0.18	---	Low----------	0.24	5	3	---
	1-80	---	---	---	---	---	----------	----			
117B----------	0-10	0-10	1.35-1.60	6.0-20	0.07-0.09	4.5-7.3	Low----------	0.15	4	1	2-4
Manistee	10-26	2-12	1.35-1.60	6.0-20	0.06-0.10	5.1-7.3	Low----------	0.17			
	26-36	40-60	1.50-1.70	<0.06	0.08-0.12	5.1-7.3	High---------	0.32			
	36-64	27-60	1.60-1.75	0.06-0.2	0.08-0.16	6.6-8.4	High---------	0.28			
119----------	0-10	10-18	1.25-1.50	2.0-6.0	0.20-0.24	5.6-7.3	Low----------	0.37	5	3	2-4
Gogomain	10-18	0-18	1.35-1.65	2.0-6.0	0.07-0.22	6.6-8.4	Low----------	0.28			
	18-80	40-70	1.40-1.50	<0.06	0.08-0.12	7.4-8.4	High---------	0.28			
122. Pits											
123B----------	0-9	0-10	1.30-1.60	6.0-20	0.07-0.09	3.5-5.0	Low----------	0.15	2	1	1-3
Borgstrom	9-21	0-10	1.75-2.00	0.6-6.0	0.03-0.05	4.5-6.0	Low----------	0.15			
	21-29	0-10	1.30-1.65	6.0-20	0.06-0.08	5.1-6.5	Low----------	0.15			
	29-80	0-27	1.50-1.80	0.2-0.6	0.05-0.20	5.6-7.8	Low----------	0.28			
124D----------	0-5	7-20	1.25-1.45	2.0-6.0	0.13-0.19	6.6-7.8	Low----------	0.24	5	5	2-4
Alpena	5-10	8-18	1.25-1.50	0.6-2.0	0.12-0.17	7.4-8.4	Low----------	0.24			
	10-60	0-10	1.25-1.65	>20	0.02-0.04	7.4-8.4	Low----------	0.10			
125B:											
Croswell--------	0-6	0-10	1.30-1.55	6.0-20	0.06-0.09	3.5-6.5	Low----------	0.10	5	1	.5-2
	6-15	0-10	1.40-1.60	6.0-20	0.06-0.10	3.5-7.3	Low----------	0.10			
	15-22	0-10	1.40-1.60	6.0-20	0.06-0.09	3.5-7.3	Low----------	0.10			
	22-80	0-10	1.50-1.65	6.0-20	0.05-0.07	3.5-8.4	Low----------	0.10			

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
125B:											
Markey----------	0-27	---	0.15-0.45	0.2-6.0	0.35-0.45	5.6-7.8	----------	----	2	2	55-85
	27-60	0-10	1.40-1.65	>20	0.03-0.08	5.6-8.4	Low----------	0.10			
132B, 132D-------	0-4	5-10	1.20-1.50	0.6-2.0	0.16-0.18	5.6-7.3	Low----------	0.24	5	3	4-8
Superior	4-7	5-10	1.20-1.50	0.6-2.0	0.15-0.18	5.6-7.3	Low----------	0.28			
	7-16	5-10	1.35-1.65	0.6-2.0	0.15-0.18	5.6-7.3	Low----------	0.28			
	16-34	18-70	1.35-1.60	0.06-0.2	0.13-0.20	6.1-7.3	High----------	0.28			
	34-74	40-80	1.50-1.65	<0.06	0.08-0.11	7.4-8.4	High----------	0.28			
	74-80	20-35	1.30-1.65	0.06-0.2	0.15-0.17	7.4-8.4	Moderate------	0.32			
132F----------	0-7	5-13	1.35-1.65	2.0-6.0	0.12-0.18	5.6-7.3	Low----------	0.28	3	3	1-3
Superior	7-16	10-18	1.55-1.65	2.0-6.0	0.11-0.19	4.5-6.0	Low----------	0.28			
	16-34	18-70	1.60-1.70	<0.2	0.08-0.13	5.1-6.5	High----------	0.28			
	34-80	40-80	1.60-1.70	<0.06	0.07-0.13	6.1-8.4	High----------	0.28			
133----------	0-16	---	0.13-0.42	0.6-6.0	0.20-0.25	5.1-7.8	----------	----	2	2	50-95
Dorval	16-60	35-60	1.40-1.65	<0.06	0.10-0.20	6.1-8.4	High----------	0.28			
135B, 135D:											
Longrie----------	0-6	5-15	1.10-1.60	2.0-6.0	0.10-0.16	5.1-7.3	Low----------	0.20	2	3	1-3
	6-23	10-18	1.35-1.65	0.6-2.0	0.09-0.19	5.1-7.3	Low----------	0.28			
	23-36	10-18	1.35-1.65	0.6-2.0	0.09-0.18	6.6-7.8	Low----------	0.37			
	36	---	---	0.06-0.6	---	---	----------	----			
Battydoe---------	0-3	2-10	0.90-1.25	0.6-2.0	0.13-0.18	5.1-6.0	Low----------	0.24	5	3	5-10
	3-5	2-10	1.25-1.50	0.6-2.0	0.07-0.17	5.1-6.0	Low----------	0.24			
	5-11	2-10	0.90-1.25	0.6-2.0	0.09-0.17	5.1-6.0	Low----------	0.24			
	11-20	2-10	1.10-1.50	0.6-2.0	0.07-0.17	5.6-7.3	Low----------	0.24			
	20-80	5-15	1.45-1.75	0.6-2.0	0.07-0.16	7.4-8.4	Low----------	0.24			
143----------	0-6	0-0	0.30-0.40	2.0-6.0	0.35-0.45	6.6-7.3	Low----------	----	5	2	30-70
Caffey	6-21	2-10	1.40-1.55	2.0-20	0.06-0.09	6.1-8.4	Low----------	0.17			
	21-60	10-27	1.50-1.80	0.2-2.0	0.10-0.20	7.4-8.4	Low----------	0.43			
146A:											
Allendale-------	0-5	0-10	1.25-1.40	6.0-20	0.07-0.09	4.5-7.3	Low----------	0.15	4	1	2-4
	5-31	0-15	1.35-1.45	6.0-20	0.06-0.10	4.5-7.3	Low----------	0.17			
	31-60	40-60	1.45-1.70	0.00-0.06	0.08-0.12	6.1-8.4	High----------	0.32			
Wakeley---------	0-4	---	0.30-0.40	6.0-20	0.35-0.45	5.6-7.8	----------	----	4	2	40-60
	4-24	0-15	1.45-1.60	6.0-20	0.05-0.10	5.6-7.8	Low----------	0.10			
	24-60	35-60	1.50-1.70	<0.2	0.08-0.12	7.4-8.4	High----------	0.32			
147B, 147D-------	0-8	4-20	1.15-1.65	0.6-2.0	0.12-0.15	6.6-8.4	Low----------	0.24	3	8	1-4
Shelter	8-14	4-20	1.30-1.70	0.2-2.0	0.06-0.10	7.9-8.4	Low----------	0.20			
	14-60	4-20	1.80-2.10	0.00-0.06	0.02-0.04	7.9-8.4	Low----------	0.20			
151----------	0-9	---	0.30-0.40	0.6-6.0	0.35-0.45	7.4-8.4	----------	----	5	2	40-75
Beavertail	9-13	10-20	1.30-1.60	0.6-2.0	0.06-0.15	7.4-8.4	Low----------	0.17			
	13-28	10-20	1.60-1.80	0.2-0.6	0.05-0.12	7.4-8.4	Low----------	0.17			
	28-60	10-20	1.80-2.10	0.06-0.2	0.01-0.04	7.4-8.4	Low----------	0.17			
160B----------	0-6	5-10	1.25-1.55	2.0-6.0	0.04-0.08	6.6-7.8	Low----------	0.10	5	8	1-3
Esau	6-10	2-10	1.25-1.55	2.0-20	0.02-0.09	7.4-8.4	Low----------	0.10			
	10-60	0-5	1.25-1.65	>20	0.02-0.03	7.9-8.4	Low----------	0.02			
161----------	0-9	---	0.30-0.40	0.6-6.0	0.35-0.45	4.5-6.5	Low----------	----	5	2	40-75
Zela	9-12	2-10	1.25-1.55	2.0-20	0.06-0.13	7.4-8.4	Low----------	0.17			
	12-60	0-5	1.25-1.65	>20	0.01-0.03	7.4-8.4	Low----------	0.10			

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
163B:											
Esau----------	0-6	5-10	1.25-1.55	2.0-6.0	0.04-0.08	6.6-7.8	Low----------	0.10	5	8	1-3
	6-10	2-10	1.25-1.55	2.0-20	0.02-0.09	7.4-8.4	Low----------	0.10			
	10-60	0-5	1.25-1.65	>20	0.02-0.03	7.9-8.4	Low----------	0.02			
Zela----------	0-9	---	0.30-0.40	0.6-6.0	0.35-0.45	4.5-6.5	Low----------	----	5	2	40-75
	9-12	2-10	1.25-1.55	2.0-20	0.06-0.13	7.4-8.4	Low----------	0.17			
	12-60	0-5	1.25-1.65	>20	0.01-0.03	7.4-8.4	Low----------	0.10			
164A---------- Moltke	0-6	7-18	1.30-1.50	0.6-2.0	0.20-0.24	5.6-7.8	Low----------	0.37	5	5	1-3
	6-11	2-10	1.40-1.65	0.6-2.0	0.10-0.14	5.6-7.8	Low----------	0.24			
	11-25	5-18	1.40-1.65	0.6-2.0	0.17-0.22	5.6-7.8	Low----------	0.43			
	25-60	2-18	1.40-1.65	0.6-2.0	0.12-0.19	7.4-8.4	Low----------	0.32			
165A:											
Engadine--------	0-9	2-12	1.20-1.50	0.6-2.0	0.13-0.18	6.1-7.3	Low----------	0.24	5	3	2-4
	9-14	2-12	1.35-1.60	0.6-2.0	0.12-0.17	5.6-6.5	Low----------	0.24			
	14-18	20-40	1.35-1.65	0.06-0.2	0.10-0.20	6.1-7.3	Moderate-----	0.43			
	18-25	35-70	1.50-1.70	0.00-0.06	0.09-0.18	6.6-7.8	High---------	0.28			
	25-80	40-70	1.50-1.70	0.00-0.06	0.08-0.12	7.4-8.4	High---------	0.28			
Rudyard---------	0-10	27-40	1.20-1.35	0.2-0.6	0.21-0.23	5.1-7.3	Moderate-----	0.37	5	4	3-4
	10-19	60-85	1.20-1.40	<0.06	0.11-0.13	5.1-7.3	High---------	0.28			
	19-60	60-80	1.35-1.45	<0.06	0.11-0.13	7.4-8.4	High---------	0.28			
166:											
Gogomain--------	0-10	10-18	1.25-1.50	2.0-6.0	0.20-0.24	5.6-7.3	Low----------	0.37	5	3	2-4
	10-18	0-18	1.35-1.65	2.0-6.0	0.07-0.22	6.6-8.4	Low----------	0.28			
	18-80	40-70	1.40-1.50	<0.06	0.08-0.12	7.4-8.4	High---------	0.28			
Pickford--------	0-6	27-40	1.10-1.35	0.2-0.6	0.20-0.24	5.1-7.8	Moderate-----	0.43	5	7	3-15
	6-19	35-60	1.40-1.65	0.00-0.06	0.09-0.13	5.1-7.8	High---------	0.32			
	19-60	40-60	1.50-1.70	0.00-0.06	0.08-0.12	7.4-8.4	High---------	0.32			
167B:											
Battydoe--------	0-3	2-10	0.90-1.25	0.6-2.0	0.13-0.18	5.1-6.0	Low----------	0.24	5	3	5-10
	3-5	2-10	1.25-1.50	0.6-2.0	0.07-0.17	5.1-6.0	Low----------	0.24			
	5-11	2-10	0.90-1.25	0.6-2.0	0.09-0.17	5.1-6.0	Low----------	0.24			
	11-20	2-10	1.10-1.50	0.6-2.0	0.07-0.17	5.6-7.3	Low----------	0.24			
	20-60	5-15	1.45-1.75	0.6-2.0	0.07-0.16	7.4-8.4	Low----------	0.24			
Wallace---------	0-11	0-8	1.35-1.45	6.0-20	0.07-0.09	4.5-5.5	Low----------	0.15	2	1	.5-2
	11-26	2-10	1.75-2.05	0.6-6.0	0.01-0.04	4.5-6.0	Low----------	0.15			
	26-80	0-8	1.45-1.60	6.0-20	0.04-0.05	5.1-6.5	Low----------	0.15			
167D, 167E:											
Battydoe--------	0-3	2-10	0.90-1.25	0.6-2.0	0.13-0.18	5.1-6.0	Low----------	0.24	5	3	5-10
	3-5	2-10	1.25-1.50	0.6-2.0	0.07-0.17	5.1-6.0	Low----------	0.24			
	5-11	2-10	0.90-1.25	0.6-2.0	0.09-0.17	5.1-6.0	Low----------	0.24			
	11-20	2-10	1.10-1.50	0.6-2.0	0.07-0.17	5.6-7.3	Low----------	0.24			
	20-80	5-15	1.45-1.75	0.6-2.0	0.07-0.16	7.4-8.4	Low----------	0.24			
Wallace---------	0-11	0-8	1.35-1.45	6.0-20	0.07-0.09	4.5-5.5	Low----------	0.15	2	1	.5-2
	11-26	2-10	1.75-2.05	0.6-6.0	0.01-0.04	4.5-6.0	Low----------	0.15			
	26-80	0-8	1.45-1.60	6.0-20	0.04-0.05	5.1-6.5	Low----------	0.15			
168B:											
Caffey----------	0-6	0-0	0.30-0.40	2.0-6.0	0.35-0.45	6.6-7.3	Low----------	----	5	2	30-70
	6-21	2-10	1.40-1.55	2.0-20	0.06-0.09	6.1-8.4	Low----------	0.17			
	21-60	10-27	1.50-1.80	0.2-2.0	0.10-0.20	7.4-8.4	Low----------	0.43			

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
168B:											
Ingalls---------	0-8	0-5	1.25-1.40	6.0-20	0.05-0.10	4.5-7.3	Low----------	0.15	4	1	.5-3
	8-20	3-15	1.35-1.45	6.0-20	0.05-0.10	4.5-7.3	Low----------	0.17			
	20-60	2-20	1.45-1.80	0.2-0.6	0.09-0.22	5.6-8.4	Low----------	0.32			
Iosco----------	0-9	2-10	1.30-1.55	6.0-20	0.07-0.09	5.1-7.3	Low----------	0.10	5	1	.5-2
	9-27	2-5	1.45-1.60	6.0-20	0.06-0.11	5.1-6.5	Low----------	0.15			
	27-38	15-25	1.55-1.65	0.6-2.0	0.15-0.19	6.6-8.4	Low----------	0.24			
	38-60	8-20	1.30-1.70	0.6-2.0	0.10-0.19	7.9-8.4	Low----------	0.17			
169E:											
Ontonagon-------	0-7	20-27	1.00-1.30	0.6-2.0	0.21-0.23	4.5-6.5	Low----------	0.43	3	6	1-3
	7-10	40-65	1.20-1.40	0.06-0.2	0.11-0.14	4.5-6.5	High---------	0.32			
	10-21	60-85	1.35-1.45	0.00-0.06	0.11-0.13	4.5-7.3	High---------	0.28			
	21-80	60-85	1.35-1.45	0.00-0.06	0.11-0.13	7.4-8.4	High---------	0.28			
Fluvaquents-----	0-80	---	---	---	---	---	----------	----	5	---	---
170B, 170D, 170E-Pullup	0-8	0-10	1.30-1.45	6.0-20	0.07-0.09	4.5-6.0	Low----------	0.15	2	1	.5-1
	8-12	0-10	1.35-1.60	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	12-22	0-10	1.75-2.05	0.6-6.0	0.05-0.06	4.5-6.0	Low----------	0.15			
	22-80	0-10	1.40-1.60	6.0-20	0.05-0.07	5.6-6.5	Low----------	0.15			
172B:											
Leafriver-------	0-8	---	0.10-0.25	0.6-6.0	0.35-0.50	5.6-7.3	----------	----	5	2	50-90
	8-60	0-10	1.50-1.65	6.0-20	0.03-0.08	5.6-7.3	Low----------	0.17			
Croswell--------	0-6	0-10	1.30-1.55	6.0-20	0.06-0.09	3.5-6.5	Low----------	0.10	5	1	.5-2
	6-15	0-10	1.40-1.60	6.0-20	0.06-0.10	3.5-7.3	Low----------	0.10			
	15-22	0-10	1.40-1.60	6.0-20	0.06-0.09	3.5-7.3	Low----------	0.10			
	22-80	0-10	1.50-1.65	6.0-20	0.05-0.07	3.5-8.4	Low----------	0.10			
Wainola---------	0-14	0-10	1.35-1.50	6.0-20	0.07-0.09	4.5-6.5	Low----------	0.15	5	1	2-4
	14-17	2-12	1.35-1.50	6.0-20	0.06-0.11	4.5-6.0	Low----------	0.15			
	17-30	2-12	1.35-1.45	6.0-20	0.06-0.11	4.5-6.5	Low----------	0.15			
	30-80	0-10	1.25-1.50	6.0-20	0.05-0.07	5.1-7.3	Low----------	0.15			
173B:											
Paquin----------	0-12	0-10	1.35-1.45	6.0-20	0.06-0.10	4.5-5.5	Low----------	0.15	2	1	0-1
	12-14	0-10	1.40-1.65	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	14-27	0-10	1.75-2.00	0.6-6.0	0.05-0.06	5.1-6.0	Low----------	0.15			
	27-34	0-10	1.45-1.60	6.0-20	0.06-0.08	5.1-6.5	Low----------	0.15			
	34-80	0-10	1.50-1.70	6.0-20	0.06-0.08	5.1-6.5	Low----------	0.15			
Finch----------	0-11	0-8	1.20-1.50	6.0-20	0.07-0.09	3.5-6.0	Low----------	0.15	2	1	2-10
	11-42	5-10	1.75-2.05	2.0-6.0	0.02-0.04	3.5-6.5	Low----------	0.15			
	42-80	0-10	1.40-1.55	6.0-20	0.02-0.04	3.5-7.8	Low----------	0.15			
174B:											
Croswell--------	0-6	0-10	1.30-1.55	6.0-20	0.06-0.09	3.5-6.5	Low----------	0.10	5	1	.5-2
	6-15	0-10	1.40-1.60	6.0-20	0.06-0.10	3.5-7.3	Low----------	0.10			
	15-22	0-10	1.40-1.60	6.0-20	0.06-0.09	3.5-7.3	Low----------	0.10			
	22-80	0-10	1.50-1.65	6.0-20	0.05-0.07	3.5-8.4	Low----------	0.10			
Spot----------	0-1	---	0.30-1.40	0.2-6.0	0.35-0.45	4.5-6.0	----------	----	2	2	65-85
	1-7	0-10	1.20-1.60	6.0-20	0.07-0.12	4.5-6.0	Low----------	0.15			
	7-9	0-10	1.75-2.00	0.6-6.0	0.05-0.06	4.5-6.0	Low----------	0.15			
	9-17	0-10	1.45-1.70	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	17-80	0-10	1.50-1.70	6.0-20	0.05-0.08	5.1-6.5	Low----------	0.15			

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
175D:											
Wallace---------	0-11	0-8	1.35-1.45	6.0-20	0.07-0.09	4.5-5.5	Low----------	0.15	2	1	.5-2
	11-26	2-10	1.75-2.05	0.6-6.0	0.01-0.04	4.5-6.0	Low----------	0.15			
	26-80	0-8	1.45-1.60	6.0-20	0.04-0.05	5.1-6.5	Low----------	0.15			
Spot----------	0-1	---	0.30-1.40	0.2-6.0	0.35-0.45	4.5-6.0	----------	----	2	2	65-85
	1-7	0-10	1.20-1.60	6.0-20	0.07-0.12	4.5-6.0	Low----------	0.15			
	7-9	0-10	1.75-2.00	0.6-6.0	0.05-0.06	4.5-6.0	Low----------	0.15			
	9-17	0-10	1.45-1.70	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	17-80	0-10	1.50-1.70	6.0-20	0.05-0.08	5.1-6.5	Low----------	0.15			
176B:											
Paquin----------	0-12	0-10	1.35-1.45	6.0-20	0.06-0.10	4.5-5.5	Low----------	0.15	2	1	0-1
	12-14	0-10	1.40-1.65	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	14-27	0-10	1.75-2.00	0.6-6.0	0.05-0.06	5.1-6.0	Low----------	0.15			
	27-34	0-10	1.45-1.60	6.0-20	0.06-0.08	5.1-6.5	Low----------	0.15			
	34-80	0-10	1.50-1.70	6.0-20	0.06-0.08	5.1-6.5	Low----------	0.15			
Spot----------	0-1	---	0.30-1.40	0.2-6.0	0.35-0.45	4.5-6.0	----------	----	2	2	65-85
	1-7	0-10	1.20-1.60	6.0-20	0.07-0.12	4.5-6.0	Low----------	0.15			
	7-9	0-10	1.75-2.00	0.6-6.0	0.05-0.06	4.5-6.0	Low----------	0.15			
	9-17	0-10	1.45-1.70	6.0-20	0.06-0.08	4.5-6.0	Low----------	0.15			
	17-80	0-10	1.50-1.70	6.0-20	0.05-0.08	5.1-6.5	Low----------	0.15			
177B, 177D:											
Millecoquins----	0-6	5-12	1.35-1.55	0.6-2.0	0.20-0.22	6.6-7.3	Low----------	0.28	5	3	2-4
	6-17	5-12	1.30-1.55	0.6-2.0	0.15-0.19	6.1-7.3	Low----------	0.43			
	17-28	18-35	1.30-1.75	0.2-0.6	0.12-0.20	6.1-7.3	Low----------	0.43			
	28-80	18-35	1.30-1.75	0.2-0.6	0.17-0.20	7.4-8.4	Low----------	0.43			
Superior--------	0-4	5-10	1.20-1.50	0.6-2.0	0.16-0.18	5.6-7.3	Low----------	0.24	5	3	4-8
	4-7	5-10	1.20-1.50	0.6-2.0	0.15-0.18	5.6-7.3	Low----------	0.28			
	7-16	5-10	1.35-1.65	0.6-2.0	0.15-0.18	5.6-7.3	Low----------	0.28			
	16-34	18-70	1.35-1.60	0.06-0.2	0.13-0.20	6.1-7.3	High----------	0.28			
	34-74	40-80	1.50-1.65	<0.06	0.08-0.11	7.4-8.4	High----------	0.28			
	74-80	20-35	1.30-1.65	0.06-0.2	0.15-0.17	7.4-8.4	Moderate-----	0.32			
178B---------- Dinkey	0-9	---	0.25-0.35	0.6-6.0	0.35-0.45	6.6-7.8	----------	----	5	2	50-90
	9-28	0-10	1.50-1.65	2.0-6.0	0.06-0.11	6.6-7.8	Low----------	0.17			
	28-33	---	0.10-0.25	0.6-6.0	0.35-0.45	6.6-7.8	----------	----			
	33-80	0-10	1.50-1.65	2.0-6.0	0.05-0.10	6.6-7.8	Low----------	0.17			
179B, 179D, 179E, 179F---------- Wallace	0-11	0-8	1.35-1.45	6.0-20	0.07-0.09	4.5-5.5	Low----------	0.15	2	1	.5-2
	11-26	2-10	1.75-2.05	0.6-6.0	0.01-0.04	4.5-6.0	Low----------	0.15			
	26-80	0-8	1.45-1.60	6.0-20	0.04-0.05	5.1-6.5	Low----------	0.15			
180B---------- Millecoquins	0-6	5-12	1.35-1.55	0.6-2.0	0.20-0.22	6.6-7.3	Low----------	0.28	5	3	2-4
	6-17	5-12	1.30-1.55	0.6-2.0	0.15-0.19	6.1-7.3	Low----------	0.43			
	17-28	18-35	1.30-1.75	0.2-0.6	0.12-0.20	6.1-7.3	Low----------	0.43			
	28-80	18-35	1.30-1.75	0.2-0.6	0.17-0.20	7.4-8.4	Low----------	0.43			
181A---------- Mattix	0-5	2-10	1.30-1.60	2.0-6.0	0.12-0.15	5.1-6.0	Low----------	0.20	4	3	1-3
	5-11	2-10	1.40-1.60	2.0-6.0	0.08-0.14	4.5-6.0	Low----------	0.20			
	11-24	2-10	1.40-1.60	2.0-6.0	0.05-0.10	5.1-6.5	Low----------	0.15			
	24-80	0-5	1.50-1.65	>20	0.02-0.04	7.4-8.4	Low----------	0.05			

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
182B---------- Heinz	0-5	2-10	1.30-1.60	2.0-6.0	0.12-0.15	5.1-6.0	Low----------	0.20	5	3	2-5
	5-6	2-10	1.30-1.60	2.0-6.0	0.08-0.14	5.1-6.0	Low----------	0.20			
	6-8	2-10	1.35-1.65	2.0-6.0	0.10-0.15	5.1-6.0	Low----------	0.20			
	8-25	2-10	1.35-1.65	2.0-6.0	0.05-0.11	5.1-6.5	Low----------	0.15			
	25-80	0-5	1.50-1.65	>20	0.02-0.04	7.4-8.4	Low----------	0.05			
183B---------- Cozy	0-6	2-10	1.30-1.60	0.6-2.0	0.12-0.18	5.1-6.0	Low----------	0.17	3	3	1-3
	6-10	2-10	1.35-1.65	0.6-2.0	0.11-0.16	5.1-6.0	Low----------	0.17			
	10-14	2-10	1.35-1.65	0.6-2.0	0.08-0.16	5.1-6.5	Low----------	0.17			
	14-80	2-12	1.80-2.10	0.00-0.06	0.02-0.04	7.4-8.4	Low----------	0.17			
185---------- Ermatinger	0-8	2-18	1.25-1.70	0.6-2.0	0.20-0.22	5.6-7.8	Low----------	0.37	5	5	4-8
	8-12	5-25	1.55-1.80	0.6-2.0	0.21-0.22	5.6-7.8	Low----------	0.37			
	12-21	2-18	1.45-1.80	0.6-2.0	0.17-0.19	7.4-8.4	Low----------	0.37			
	21-80	2-20	1.70-1.80	0.6-2.0	0.17-0.22	7.4-8.4	Low----------	0.37			

TABLE 18.--WATER FEATURES

("Flooding" and "water table" and terms such as "occasional," "brief," "apparent," and "perched" are explained in the text. The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
10D, 10F---------- Ontonagon	D	None----------	---	---	>6.0	---	---
11A---------- Rudyard	D	None----------	---	---	0.5-1.5	Perched	Nov-May
12---------- Pickford	D	None----------	---	---	+1-1.0	Perched	Nov-Jun
13B, 13D---------- Alcona	B	None----------	---	---	>6.0	---	---
16B, 16D---------- Graveraet	C	None----------	---	---	1.0-1.5	Perched	Nov-May
17D, 17E---------- Eastport	A	None----------	---	---	>6.0	---	---
18B, 18D, 18E, 18F------ Rubicon	A	None----------	---	---	>6.0	---	---
19B, 19D, 19E, 19F------ Kalkaska	A	None----------	---	---	>6.0	---	---
20B---------- Croswell	A	None----------	---	---	2.0-3.5	Apparent	Nov-May
21A---------- Finch	C	None----------	---	---	0.5-1.5	Apparent	Oct-May
22---------- Spot	A/D	None----------	---	---	+1-1.0	Apparent	Sep-Jun
23---------- Leafriver	A/D	None----------	---	---	+1-1.0	Apparent	Oct-Jun
24B, 24D, 24E---------- Springlake	A	None----------	---	---	>6.0	---	---
25B, 25D, 25E---------- Guardlake	A	None----------	---	---	>6.0	---	---
27B, 27D, 27F---------- Greylock	B	None----------	---	---	>6.0	---	---
28B, 28D---------- Longrie	B	None----------	---	---	>6.0	---	---
29A---------- Solona	C	None----------	---	---	1.0-3.0	Apparent	Nov-May
32A---------- Allendale	C	None----------	---	---	0.5-1.5	Perched	Nov-May
33. Pits							

TABLE 18.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
34 Entisols	D	Frequent	Brief	Nov-May	+3-1.5	Apparent	Oct-Jun
35:							
Histosols	D	None	---	---	+1-1.0	Apparent	Jan-Dec
Aquents	D	None	---	---	+1-1.0	Apparent	Jan-Dec
36:							
Markey	A/D	None	---	---	+1-1.0	Apparent	Nov-Jun
Carbondale	A/D	None	---	---	+1-1.0	Apparent	Sep-May
37:							
Dawson	A/D	None	---	---	+1-1.0	Apparent	Sep-Jun
Loxley	A/D	None	---	---	+1-1.0	Apparent	Oct-May
38E:							
Eastport	A	None	---	---	>6.0	---	---
Leafriver	A/D	None	---	---	+1-1.0	Apparent	Oct-Jun
39E:							
Finch	C	None	---	---	0.5-1.5	Apparent	Oct-May
Dawson	A/D	None	---	---	+1-1.0	Apparent	Sep-Jun
Pullup	A	None	---	---	>6.0	---	---
40A:							
Rudyard	D	None	---	---	0.5-1.5	Perched	Nov-May
Allendale	C	None	---	---	0.5-1.5	Perched	Oct-May
41D, 41F:							
Amadon	D	None	---	---	>6.0	---	---
Rock outcrop	---	None	---	---	>6.0	---	---
43 Angelica	B/D	None	---	---	+1-1.0	Apparent	Oct-Jun
44B, 44D, 44E Battydoe	B	None	---	---	>6.0	---	---
46B Adams	A	None	---	---	>6.0	---	---
48E:							
Wainola	B	None	---	---	0.5-1.5	Apparent	Nov-May
Leafriver	A/D	None	---	---	+1-1.0	Apparent	Nov-Jul
Pullup	A	None	---	---	>6.0	---	---
49A Wainola	B	None	---	---	0.5-1.5	Apparent	Nov-May
52A Ingalls	B	None	---	---	0.5-1.5	Perched	Oct-May

TABLE 18.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
53B, 53D---------- Menominee	A	None----------	---	---	>6.0	---	---
56A---------- Ensign	D	None----------	---	---	0.5-1.0	Apparent	Oct-May
57B, 57D:							
Amadon----------	D	None----------	---	---	>6.0	---	---
Longrie----------	B	None----------	---	---	>6.0	---	---
61B---------- Paquin	A	None----------	---	---	2.0-3.5	Apparent	Nov-May
62A---------- Iosco	B	None----------	---	---	1.0-3.0	Apparent	Nov-May
64A---------- Search	B	None----------	---	---	0.5-1.0	Apparent	Nov-May
67B---------- Furlong	A	None----------	---	---	>6.0	---	---
68---------- Wakeley	D	None----------	---	---	+1-1.0	Perched	Oct-May
69B---------- Satago	D	None----------	---	---	>6.0	---	---
70B, 70D---------- St. Ignace	D	None----------	---	---	>6.0	---	---
70F:							
St. Ignace----------	D	None----------	---	---	>6.0	---	---
Rock outcrop----------	---	None----------	---	---	>6.0	---	---
71B---------- Johnswood	B	None----------	---	---	1.0-2.0	Perched	Oct-May
84B, 84D, 84F:							
Wallace----------	B	None----------	---	---	>6.0	---	---
Alcona----------	B	None----------	---	---	>6.0	---	---
86B:							
Ingalls----------	B	None----------	---	---	0.5-1.5	Perched	Oct-May
Paquin----------	A	None----------	---	---	2.0-3.5	Apparent	Nov-May
88B:							
Croswell----------	A	None----------	---	---	2.0-3.5	Apparent	Nov-May
Wainola----------	B	None----------	---	---	0.5-1.5	Apparent	Nov-May
89A:							
Spot----------	A/D	None----------	---	---	+1-1.0	Apparent	Sep-Jun
Finch----------	C	None----------	---	---	0.5-1.5	Apparent	Oct-May

TABLE 18.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
92A Engadine	B/D	None	---	---	0.5-1.5	Perched	Nov-May
93F:							
Ontonagon	D	None	---	---	>6.0	---	---
Pickford	D	Occasional	Brief	Oct-Apr	+1-1.0	Perched	Nov-Jun
94A:							
Markey	A/D	None	---	---	+1-1.0	Apparent	Nov-Jun
Spot	A/D	None	---	---	+1-1.0	Apparent	Sep-Jun
Finch	C	None	---	---	0.5-1.5	Apparent	Oct-May
95A Bowers	C	None	---	---	1.0-2.0	Apparent	Nov-Apr
98 Glawe	B/D	None	---	---	+1-1.0	Apparent	Oct-May
100B, 100D:							
Greylock	B	None	---	---	>6.0	---	---
Adams	A	None	---	---	>6.0	---	---
108D:							
Shelter	D	None	---	---	0.5-1.0	Perched	Oct-May
Alpena	A	None	---	---	>6.0	---	---
112 Soo	C/D	None	---	---	+1-1.0	Perched	Oct-Jun
113 Ruse	D	None	---	---	+1-1.0	Apparent	Oct-May
116:							
Udipsamments	A	None	---	---	>6.0	---	---
Udorthents	---	None	---	---	>6.0	---	---
117B Manistee	A	None	---	---	>6.0	---	---
119 Gogomain	B/D	None	---	---	+1-1.0	Perched	Nov-Jun
122. Pits							
123B Borgstrom	B	None	---	---	2.0-3.5	Perched	Nov-Apr
124D Alpena	A	None	---	---	>6.0	---	---
125B:							
Croswell	A	None	---	---	2.0-3.5	Apparent	Nov-May
Markey	A/D	None	---	---	+1-1.0	Apparent	Nov-Jun

TABLE 18.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
132B, 132D, 132F-------- Superior	C	None----------	---	---	>6.0	---	---
133---------- Dorval	A/D	None----------	---	---	+1-1.0	Perched	Nov-May
135B, 135D:							
Longrie----------	B	None----------	---	---	>6.0	---	---
Battydoe----------	B	None----------	---	---	>6.0	---	---
143---------- Caffey	C	None----------	---	---	+1.-1.0	Apparent	Oct-May
146A:							
Allendale----------	C	None----------	---	---	0.5-1.5	Perched	Oct-May
Wakeley----------	D	None----------	---	---	+1-1.0	Perched	Oct-May
147B, 147D---------- Shelter	D	None----------	---	---	0.5-1.0	Perched	Oct-May
151---------- Beavertail	D	None----------	---	---	+1-1.0	Perched	Oct-Jun
160B---------- Esau	A	None----------	---	---	0.5-1.5	Apparent	Nov-May
161---------- Zela	D	None----------	---	---	+1-1.0	Apparent	Oct-Jun
163B:							
Esau----------	A	None----------	---	---	0.5-1.5	Apparent	Nov-May
Zela----------	D	None----------	---	---	+1-1.0	Apparent	Oct-Jun
164A---------- Moltke	B	None----------	---	---	0.5-1.5	Apparent	Oct-May
165A:							
Engadine----------	B/D	None----------	---	---	0.5-1.5	Perched	Nov-May
Rudyard----------	D	None----------	---	---	0.5-1.5	Perched	Nov-May
166:							
Gogomain----------	B/D	None----------	---	---	+1-1.0	Perched	Nov-Jun
Pickford----------	D	None----------	---	---	+1-1.0	Perched	Nov-Jun
167B, 167D, 167E:							
Battydoe----------	B	None----------	---	---	>6.0	---	---
Wallace----------	B	None----------	---	---	>6.0	---	---
168B:							
Caffey----------	C	None----------	---	---	+1.-1.0	Apparent	Oct-May
Ingalls----------	B	None----------	---	---	0.5-1.5	Perched	Oct-May
Iosco----------	B	None----------	---	---	1.0-3.0	Apparent	Nov-May

TABLE 18.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					Ft		
169E:							
Ontonagon	D	None	---	---	>6.0	---	---
Fluvaquents	---	Frequent	Long	Jan-Dec	+1-1.0	Apparent	Oct-Jun
170B, 170D, 170E Pullup	A	None	---	---	>6.0	---	---
172B:							
Leafriver	A/D	None	---	---	+1-1.0	Apparent	Oct-May
Croswell	A	None	---	---	2.0-3.5	Apparent	Nov-May
Wainola	B	None	---	---	0.5-1.5	Apparent	Nov-May
173B:							
Paquin	A	None	---	---	2.0-3.5	Apparent	Nov-May
Finch	C	None	---	---	0.5-1.5	Apparent	Oct-May
174B:							
Croswell	A	None	---	---	2.0-3.5	Apparent	Nov-May
Spot	A/D	None	---	---	+1-1.0	Apparent	Sep-Jun
175D:							
Wallace	B	None	---	---	>6.0	---	---
Spot	A/D	None	---	---	+1-1.0	Apparent	Sep-Jun
176B:							
Paquin	A	None	---	---	2.0-3.5	Apparent	Nov-May
Spot	A/D	None	---	---	+1-1.0	Apparent	Sep-Jun
177B, 177D:							
Millecoquins	C	None	---	---	2.0-3.5	Perched	Oct-May
Superior	C	None	---	---	>6.0	---	---
178B Dinkey	A	None	---	---	>6.0	---	---
179B, 179D, 179E, 179F Wallace	B	None	---	---	>6.0	---	---
180B Millecoquins	C	None	---	---	2.0-3.5	Perched	Oct-May
181A Mattix	B	None	---	---	0.5-1.5	Apparent	Oct-May
182B Heinz	B	None	---	---	2.0-3.5	Apparent	Oct-May
183B Cozy	C	None	---	---	1.0-2.0	Perched	Oct-May
185 Ermatinger	B/D	None	---	---	+1-1.0	Apparent	Oct-Jun

TABLE 19.--SOIL FEATURES

(The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Soil name and map symbol	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
10D, 10F---------- Ontonagon	>60	---	---	---	---	---	Moderate	High-----	Moderate.
11A---------- Rudyard	>60	---	---	---	---	---	Moderate	High-----	Low.
12---------- Pickford	>60	---	---	---	---	---	Moderate	High-----	Low.
13B, 13D---------- Alcona	>60	---	---	---	---	---	Moderate	Low------	Low.
16B, 16D---------- Graveraet	>60	---	---	---	---	---	Moderate	Moderate	Moderate.
17D, 17E---------- Eastport	>60	---	---	---	---	---	Low------	Low------	Moderate.
18B, 18D, 18E, 18F------ Rubicon	>60	---	---	---	---	---	Low------	Low------	High.
19B, 19D, 19E, 19F------ Kalkaska	>60	---	---	---	---	---	Low------	Low------	High.
20B---------- Croswell	>60	---	---	---	0-0	---	Low------	Low------	Moderate.
21A---------- Finch	>60	---	10-16	Thin	0-0	---	Moderate	High-----	Moderate.
22---------- Spot	>60	---	6-15	Thin	0-0	---	Moderate	High-----	Moderate.
23---------- Leafriver	>60	---	---	---	---	5-10	High-----	High-----	High.
24B, 24D, 24E---------- Springlake	>60	---	---	---	---	---	Low------	Low------	Moderate.
25B, 25D, 25E---------- Guardlake	>60	---	---	---	---	---	Low------	Low------	Low.
27B, 27D, 27F---------- Greylock	>80	---	---	---	---	---	Moderate	Moderate	Low.
28B, 28D---------- Longrie	20-40	Hard	---	---	---	---	Moderate	Low------	Low.
29A---------- Solona	>60	---	---	---	---	---	High-----	High-----	Low.
32A---------- Allendale	>60	---	---	---	0-0	---	Moderate	High-----	Moderate.
33. Pits									

TABLE 19.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
34---------- Entisols	>60	---	---	---	0-0	---	High-----	---	---
35:									
Histosols----------	>60	---	---	---	0-0	---	High-----	High-----	Moderate.
Aquents----------	>60	---	---	---	---	---	High-----	---	---
36:									
Markey----------	>60	---	---	---	---	25-30	High-----	High-----	Low.
Carbondale----------	>60	---	---	---	6-18	43-54	High-----	High-----	Moderate.
37:									
Dawson----------	>60	---	---	---	---	30-36	High-----	High-----	High.
Loxley----------	>60	---	---	---	6-18	50-55	High-----	High-----	High.
38E:									
Eastport----------	>60	---	---	---	---	---	Low------	Low------	Moderate.
Leafriver----------	>60	---	---	---	---	5-10	High-----	High-----	High.
39E:									
Finch----------	>60	---	10-16	Thin	0-0	---	Moderate	High-----	Moderate.
Dawson----------	>60	---	---	---	---	30-36	High-----	High-----	High.
Pullup----------	>60	---	10-20	Thin	---	---	Low------	Low------	High.
40A:									
Rudyard----------	>60	---	---	---	---	---	Moderate	High-----	Low.
Allendale----------	>60	---	---	---	0-0	---	Moderate	High-----	Moderate.
41D, 41F:									
Amadon----------	10-20	Hard	---	---	---	---	Moderate	Low------	Moderate.
Rock outcrop----------	0-4	Hard	---	---	---	---	---	---	---
43---------- Angelica	>60	---	---	---	---	---	High-----	High-----	Low.
44B, 44D, 44E---------- Battydoe	>60	---	---	---	---	---	Moderate	Low------	Low.
46B---------- Adams	>60	---	---	---	---	---	Low------	Low------	High.
48E:									
Wainola----------	>60	---	---	---	---	---	Moderate	Low------	Moderate.
Leafriver----------	>60	---	---	---	---	5-10	High-----	High-----	High.
Pullup----------	>60	---	10-20	Thin	---	---	Low------	Low------	High.
49A---------- Wainola	>60	---	---	---	---	---	Moderate	Low------	Moderate.
52A---------- Ingalls	>60	---	---	---	---	---	Moderate	Moderate	Moderate.

TABLE 19.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
53B, 53D Menominee	>60	---	---	---	---	---	Low	Low	Moderate.
56A Ensign	10-20	Hard	---	---	---	---	High	High	Low.
57B, 57D:									
Amadon	10-20	Hard	---	---	---	---	Moderate	Low	Moderate.
Longrie	20-40	Hard	---	---	---	---	Moderate	Low	Low.
61B Paquin	>60	---	10-16	Thin	---	---	Low	Low	High.
62A Iosco	>60	---	---	---	---	---	High	High	Low.
64A Search	20-40	Soft	---	---	---	---	High	High	Low.
67B Furlong	20-40	Hard	---	---	---	---	Low	Low	Moderate.
68 Wakeley	>60	---	---	---	---	---	Moderate	High	Moderate.
69B Satago	40-50	Soft	---	---	---	---	High	High	Low.
70B, 70D St. Ignace	10-20	Hard	---	---	---	---	Moderate	Low	Low.
70F:									
St. Ignace	10-20	Hard	---	---	---	---	Moderate	Low	Low.
Rock outcrop	0-4	Hard	---	---	---	---	---	---	---
71B Johnswood	>60	---	---	---	---	---	Moderate	Moderate	Low.
84B, 84D, 84F:									
Wallace	>60	---	6-15	Thin	---	---	Low	Low	High.
Alcona	>60	---	---	---	---	---	Moderate	Low	Low.
86B:									
Ingalls	>60	---	---	---	---	---	Moderate	Moderate	Moderate.
Paquin	>60	---	10-16	Thin	---	---	Low	Low	High.
88B:									
Croswell	>60	---	---	---	0-0	---	Low	Low	Moderate.
Wainola	>60	---	---	---	---	---	Moderate	Low	Moderate.
89A:									
Spot	>60	---	6-15	Thin	0-0	---	Moderate	High	Moderate.
Finch	>60	---	10-16	Thin	0-0	---	Moderate	High	Moderate.

TABLE 19.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
92A---------- Engadine	>60	---	---	---	---	---	High-----	High-----	Low.
93F:									
Ontonagon----------	>60	---	---	---	---	---	Moderate	High-----	Moderate.
Pickford----------	>60	---	---	---	---	---	Moderate	High-----	Low.
94A:									
Markey----------	>60	---	---	---	---	25-30	High-----	High-----	Low.
Spot----------	>60	---	6-15	Thin	0-0	---	Moderate	High-----	Moderate.
Finch----------	>60	---	10-16	Thin	0-0	---	Moderate	High-----	Moderate.
95A---------- Bowers	>60	---	---	---	---	---	High-----	High-----	Low.
98---------- Glawe	>60	---	---	---	---	---	High-----	High-----	Low.
100B, 100D:									
Greylock----------	>80	---	---	---	---	---	Moderate	Moderate	Low.
Adams----------	>60	---	---	---	---	---	Low------	Low------	High.
108D:									
Shelter----------	>60	---	---	---	---	---	High-----	High-----	Low.
Alpena----------	>60	---	---	---	---	---	Low------	Low------	Low.
112---------- Soo	>60	---	---	---	---	---	High-----	High-----	Low.
113---------- Ruse	10-20	Hard	---	---	---	---	High-----	High-----	Low.
116:									
Udipsamments----------	>60	---	---	---	0-0	---	Low------	Low------	Moderate.
Udorthents----------	>60	---	---	---	---	---	---	---	---
117B---------- Manistee	>60	---	---	---	---	---	Low------	High-----	Moderate.
119---------- Gogomain	>60	---	---	---	---	---	High-----	High-----	Low.
122. Pits									
123B---------- Borgstrom	>60	---	2-10	Thin	---	---	Low------	Low------	Moderate.
124D---------- Alpena	>60	---	---	---	---	---	Low------	Low------	Low.
125B:									
Croswell----------	>60	---	---	---	0-0	---	Low------	Low------	Moderate.
Markey----------	>60	---	---	---	---	25-30	High-----	High-----	Low.

TABLE 19.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
132B, 132D: Superior	>60	---	---	---	---	---	Moderate	High	Low.
132F: Superior	>60	---	---	---	---	---	Moderate	Moderate	Moderate.
133: Dorval	>60	---	---	---	4-12	25-30	High	High	Moderate.
135B, 135D:									
Longrie	20-40	Hard	---	---	---	---	Moderate	Low	Low.
Battydoe	>60	---	---	---	---	---	Moderate	Low	Low.
143: Caffey	>60	---	---	---	0-0	---	Moderate	High	Low.
146A:									
Allendale	>60	---	---	---	0-0	---	Moderate	High	Moderate.
Wakeley	>60	---	---	---	---	---	Moderate	High	Moderate.
147B, 147D: Shelter	>60	---	---	---	---	---	High	High	Low.
151: Beavertail	>60	---	---	---	---	---	High	High	Low.
160B: Esau	>60	---	---	---	---	---	Moderate	Low	Low.
161: Zela	>60	---	---	---	---	---	Moderate	High	Low.
163B:									
Esau	>60	---	---	---	---	---	Moderate	Low	Low.
Zela	>60	---	---	---	---	---	Moderate	High	Low.
164A: Moltke	>60	---	---	---	---	---	High	High	Low.
165A:									
Engadine	>60	---	---	---	---	---	High	High	Low.
Rudyard	>60	---	---	---	---	---	Moderate	High	Low.
166:									
Gogomain	>60	---	---	---	---	---	High	High	Low.
Pickford	>60	---	---	---	---	---	Moderate	High	Low.
167B, 167D, 167E:									
Battydoe	>60	---	---	---	---	---	Moderate	Low	Low.
Wallace	>60	---	6-15	Thin	---	---	Low	Low	High.
168B:									
Caffey	>60	---	---	---	0-0	---	Moderate	High	Low.
Ingalls	>60	---	---	---	---	---	Moderate	Moderate	Moderate.

TABLE 19.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
168B:									
Iosco	>60	---	---	---	---	---	High	High	Low.
169E:									
Ontonagon	>60	---	---	---	---	---	Moderate	High	Moderate.
Fluvaquents	>60	---	---	---	---	---	---	---	---
170B, 170D, 170E Pullup	>60	---	10-20	Thin	---	---	Low	Low	High.
172B:									
Leafriver	>60	---	---	---	---	5-10	High	High	High.
Croswell	>60	---	---	---	0-0	---	Low	Low	Moderate.
Wainola	>60	---	---	---	---	---	Moderate	Low	Moderate.
173B:									
Paquin	>60	---	10-16	Thin	---	---	Low	Low	High.
Finch	>60	---	10-16	Thin	0-0	---	Moderate	High	Moderate.
174B:									
Croswell	>60	---	---	---	0-0	---	Low	Low	Moderate.
Spot	>60	---	6-15	Thin	0-0	---	Moderate	High	Moderate.
175D:									
Wallace	>60	---	6-15	Thin	---	---	Low	Low	High.
Spot	>60	---	6-15	Thin	0-0	---	Moderate	High	Moderate.
176B:									
Paquin	>60	---	10-16	Thin	---	---	Low	Low	High.
Spot	>60	---	6-15	Thin	0-0	---	Moderate	High	Moderate.
177B, 177D:									
Millecoquins	>60	---	---	---	---	---	High	Moderate	Low.
Superior	>60	---	---	---	---	---	Moderate	High	Low.
178B Dinkey	>60	---	---	---	---	---	Low	High	Low.
179B, 179D, 179E, 179F Wallace	>60	---	6-15	Thin	---	---	Low	Low	High.
180B Millecoquins	>60	---	---	---	---	---	High	Moderate	Low.
181A Mattix	>60	---	---	---	---	---	Low	Low	Low.
182B Heinz	>60	---	---	---	---	---	Low	Low	Low.
183B Cozy	>60	---	---	---	---	---	Moderate	Moderate	Low.

TABLE 19.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
185---------- Ermatinger	>60	---	---	---	---	---	High-----	High-----	Low.

TABLE 20.--CLASSIFICATION OF THE SOILS

Soil name	Family or higher taxonomic class
Adams	Sandy, mixed, frigid Typic Haplorthods
Alcona	Coarse-loamy, mixed, frigid Alfic Haplorthods
Allendale	Sandy over clayey, mixed, frigid Alfic Epiaquods
Alpena	Sandy-skeletal, mixed Udorthentic Haploborolls
Amadon	Loamy, mixed, frigid Lithic Haplorthods
Angelica	Fine-loamy, mixed, nonacid, frigid Aeric Endoaquepts
Aquents	Aquents
Battydoe	Coarse-loamy, mixed, frigid Typic Haplorthods
Beavertail	Loamy-skeletal, carbonatic, frigid Histic Humaquepts
Borgstrom	Sandy over loamy, mixed, frigid, ortstein Typic Durorthods
Bowers	Fine, mixed Glossaquic Eutroboralfs
Caffey	Sandy over loamy, mixed, nonacid, frigid Aeric Endoaquents
Carbondale	Euic Hemic Borosaprists
Cozy	Loamy-skeletal, mixed, frigid Oxyaquic Haplorthods
Croswell	Sandy, mixed, frigid Oxyaquic Haplorthods
Dawson	Sandy or sandy-skeletal, mixed, dysic Terric Borosaprists
Dinkey	Sandy, mixed, frigid Typic Udifluvents
Dorval	Clayey, mixed, euic Terric Borosaprists
Eastport	Mixed, frigid Spodic Udipsamments
Engadine	Coarse-loamy over clayey, mixed, frigid Alfic Epiaquods
Ensign	Loamy, mixed, frigid Lithic Eutrochrepts
Entisols	Entisols
Ermatinger	Coarse-silty, mixed, nonacid, frigid Aeric Fluvaquents
Esau	Sandy-skeletal, mixed, frigid Aquic Udorthents
Finch	Sandy, mixed, frigid, ortstein Typic Duraquods
Fluvaquents	Fluvaquents
Furlong	Sandy, mixed, frigid Typic Haplorthods
Glawe	Coarse-silty, mixed (calcareous), frigid Typic Endoaquolls
Gogomain	Coarse-loamy over clayey, mixed, nonacid, frigid Aeric Epiaquepts
Graveraet	Coarse-loamy, mixed, frigid Oxyaquic Fragiorthods
Greylock	Coarse-loamy, mixed, frigid Alfic Haplorthods
Guardlake	Sandy-skeletal, mixed, frigid Typic Haplorthods
Heinz	Sandy, mixed, frigid Oxyaquic Haplorthods
Histosols	Histosols
Ingalls	Sandy over loamy, mixed, frigid Typic Endoaquods
Iosco	Sandy over loamy, mixed, frigid Argic Endoaquods
Johnswood	Loamy-skeletal, mixed Oxyaquic Argiborolls
Kalkaska	Sandy, mixed, frigid Typic Haplorthods
Leafriver	Sandy, mixed, frigid Histic Humaquepts
Longrie	Coarse-loamy, mixed, frigid Entic Haplorthods
Loxley	Dysic Typic Borosaprists
Manistee	Sandy over clayey, mixed, frigid Alfic Haplorthods
Markey	Sandy or sandy-skeletal, mixed, euic Terric Borosaprists
Mattix	Sandy, mixed, frigid Oxyaquic Haplorthods
Menominee	Sandy over loamy, mixed, frigid Alfic Haplorthods
Millecoquins	Fine-silty, mixed, frigid Oxyaquic Haplorthods
Moltke	Coarse-silty, mixed Glossaquic Eutroboralfs
Ontonagon	Very fine, mixed Glossic Eutroboralfs
Paquin	Sandy, mixed, frigid, ortstein Typic Durorthods
Pickford	Fine, mixed, nonacid, frigid Aeric Epiaquepts
Pullup	Sandy, mixed, frigid, ortstein Typic Durorthods
Rubicon	Sandy, mixed, frigid Entic Haplorthods
Rudyard	Very fine, mixed Aquic Eutroboralfs
Ruse	Loamy, mixed, frigid Lithic Endoaquolls
Satago	Fine-silty, carbonatic Typic Haploborolls
Search	Coarse-silty, carbonatic, frigid Typic Rendolls
Shelter	Loamy-skeletal, carbonatic, frigid Eutrochreptic Rendolls
Solona	Coarse-loamy, mixed Aquic Eutroboralfs
Soo	Fine-silty, mixed, nonacid, frigid Aeric Epiaquents
Spot	Sandy, mixed, frigid, ortstein Typic Duraquods
Springlake	Sandy, mixed, frigid Typic Haplorthods
St. Ignace	Loamy, carbonatic, frigid Lithic Rendolls
Superior	Coarse-loamy over clayey, mixed, frigid Alfic Haplorthods
Udipsamments	Udipsamments

TABLE 20.--CLASSIFICATION OF THE SOILS--Continued

Soil name	Family or higher taxonomic class
Udorthents	Udorthents
Wainola	Sandy, mixed, frigid Typic Endoaquods
Wakeley	Sandy over clayey, mixed, nonacid, frigid Aeric Epiaquents
Wallace	Sandy, mixed, frigid, ortstein Typic Durorthods
Zela	Sandy-skeletal, mixed, nonacid, frigid Histic Humaquepts

Interpretive Groups

INTERPRETIVE GROUPS

(Dashes indicate that the soil is not placed in the interpretive group)

Soil name and map symbol	Land capability	Prime farmland	Habitat type		Woodland ordination symbol	Michigan soil management group
			Primary	Secondary		
10D---------- Ontonagon	IIIe	No	---	---	2C	Oa
10F---------- Ontonagon	VIIe	No	---	---	2R	Oa
11A---------- Rudyard	IIIw	No	---	---	6W	Ob
12---------- Pickford	IIIw	No	TTP	---	6W	1c
13B---------- Alcona	IIe	Yes	ATD	---	3L	3a-s
13D---------- Alcona	IIIe	No	ATD	---	3L	3a-s
16B---------- Graveraet	IIe	No	AVO	AVO-A	3W	3a
16D---------- Graveraet	IIIe	No	AVO	AVO-A	3W	3a
17D---------- Eastport	VIs	No	AQVac	TMV	5S	5.3a
17E---------- Eastport	VIIs	No	AQVac	TMV	5R	5.3a
18B, 18D---------- Rubicon	VIs	No	AQVac	QAE	4S	5.3a
18E, 18F---------- Rubicon	VIIs	No	AQVac	QAE	4R	5.3a
19B---------- Kalkaska	IVs	No	ATD	TM	3S	5a
19D---------- Kalkaska	VIs	No	ATD	TM	3S	5a
19E, 19F---------- Kalkaska	VIIs	No	ATD	TM	3R	5a
20B---------- Croswell	IVs	No	AQVac	---	5S	5a
21A---------- Finch	IVw	No	TMC	TMC-V	4W	5b-h
22---------- Spot	Vw	No	TTS	---	2W	5c-h
23---------- Leafriver	VIw	No	FMC	---	2W	5c

INTERPRETIVE GROUPS--Continued

Soil name and map symbol	Land capability	Prime farmland	Habitat type		Woodland ordination symbol	Michigan soil management group
			Primary	Secondary		
24B---------- Springlake	IVs	No	AVO	ATD	3S	5a
24D---------- Springlake	VIs	No	AVO	ATD	3S	5a
24E---------- Springlake	VIIs	No	AVO	ATD	3R	5a
25B---------- Guardlake	IVs	No	AVO	AVO-A	3A	Ga
25D---------- Guardlake	VIs	No	AVO	AVO-A	3A	Ga
25E---------- Guardlake	VIIs	No	AVO	AVO-A	3R	Ga
27B---------- Greylock	IIe	Yes	AVO-A	---	3L	3a
27D---------- Greylock	IIIe	No	AVO-A	---	3L	3a
27F---------- Greylock	VIIe	No	AVO-A	---	3R	3a
28B---------- Longrie	IIe	No	AVO	AVO-A	3D	3/Ra
28D---------- Longrie	IIIe	No	AVO	AVO-A	3D	3/Ra
29A---------- Solona	IIw	Yes*	---	---	3W	3b
32A---------- Allendale	IIIw	No	TMC-D	---	4W	4/1b
33. Pits						
34. Entisols						
35. Histosols and Aquents						
36----------	Vw	No	TTM	TTS		
Markey----------					2W	M/4c
Carbondale----------					5W	Mc
37----------	VIIw	No	PCS	---		
Dawson----------					2W	M/4c-a
Loxley----------					2W	Mc-a
38E----------	VIIs	No	AQVac	FMC		
Eastport----------					5R	5.3a
Leafriver----------					2W	5c

See footnote at end of table.

INTERPRETIVE GROUPS--Continued

Soil name and map symbol	Land capability	Prime farmland	Habitat type		Woodland ordination symbol	Michigan soil management group
			Primary	Secondary		
39E	IVw	No	TMC	PCS		
Finch					4W	5b
Dawson					2W	M/4c-a
Pullup					4R	5.3a-h
40A	IIIs	No	---	---		
Rudyard					6W	Ob
Allendale					4W	4/1b
41D	IVe	No	TM	AVO		
Amadon					2R	Ra
Rock outcrop.						
41F	VIIe	No	TM	AVO		
Amadon					2D	Ra
Rock outcrop.						
43	Vw	Yes*	TTP	---	7W	2c
Angelica						
44B	IIIe	No	AVO	AVO-A	3L	3a
Battydoe						
44D	IVe	No	AVO	AVO-A	3L	3a
Battydoe						
44E	VIe	No	AVO	AVO-A	3R	3a
Battydoe						
46B	IIIs	No	ATD	AVO	3S	5a
Adams						
48E	IVw	No	TMC-V	FMC		
Wainola					6W	5b
Leafriver					2W	5c
Pullup					4R	5.3a-h
49A	IIIw	No	TMC-V	---	6W	5b
Wainola						
52A	IIIw	Yes*	---	---	4W	4/2b
Ingalls						
53B	IIIe	No	---	---	6A	4/2a
Menominee						
53D	IVe	No	---	---	6A	4/2a
Menominee						
56A	IIIw	No	---	---	3W	Rbc
Ensign						
57B	IIIs	No	TM	AVO		
Amadon					2D	Ra
Longrie					3D	3/Ra
57D	IVe	No	TM	AVO		
Amadon					2D	Ra
Longrie					3D	3/Ra
61B	VIs	No	ATD	---	3S	5a-h
Paquin						

See footnote at end of table.

INTERPRETIVE GROUPS--Continued

Soil name and map symbol	Land capability	Prime farmland	Habitat type		Woodland ordination symbol	Michigan soil management group
			Primary	Secondary		
62A---------- Iosco	IIIw	No	TMC	---	5W	4/2b
64A---------- Search	IIIw	No	---	---	2W	3/Rbc
67B---------- Furlong	IVs	No	ATD	---	3D	4/Ra
68---------- Wakeley	Vw	No	TTP	---	3W	4/1c
69B---------- Satago	IIe	No	AVO-A	---	3A	3/Rbc
70B, 70D---------- St. Ignace	VIIs	No	---	---	4D	Ra
70F---------- St. Ignace---------- Rock outcrop.	VIIs	No	---	---	4R	Ra
71B---------- Johnswood	IVs	No	---	---	3F	3a
84B, 84D---------- Wallace---------- Alcona----------	VIs	No	ATD	---	4D 3L	5a-h 3a-s
84F---------- Wallace---------- Alcona----------	VIIs	No	ATD	---	4R 3L	5a-h 3a-s
86B---------- Ingalls---------- Paquin----------	IIIw	Yes*	---	---	4W 3S	4/2b 5a-h
88B---------- Croswell---------- Wainola----------	IVs	No	AQVac	TMC-V	5S 6W	5a 5b
89A---------- Spot---------- Finch----------	Vw	No	TTS	TMC	2W 4W	5c-h 5b-h
92A---------- Engadine	IIIw	Yes*	---	---	2W	3/1b
93F---------- Ontonagon---------- Pickford----------	VIIe	No	---	---	2R 6W	Oa 1c
94A---------- Markey---------- Spot---------- Finch----------	Vw	No	TTM	TTS	2W 2W 4W	M/4c 5c-h 5b-h
95A---------- Bowers	IIw	Yes*	---	---	7W	1.5b
98---------- Glawe	Vw	Yes*	---	---	2W	2.5c

See footnote at end of table.

INTERPRETIVE GROUPS--Continued

Soil name and map symbol	Land capability	Prime farmland	Habitat type		Woodland ordination symbol	Michigan soil management group
			Primary	Secondary		
100B	IIe	Yes	AVO-A	ATD		
Greylock					3L	3a
Adams					3S	4a
100D	IIIe	No	AVO-A	ATD		
Greylock					3L	3a
Adams					3S	4a
108D	VIw	No	---	---		
Shelter					4X	Gbc
Alpena					3F	Ga
112 Soo	Vw	Yes*	TTP	---	6W	1.5c
113 Ruse	VIIw	No	TTM	---	5W	Rbc
116. Udipsamments						
117B Manistee	IIIs	No	---	---	3S	4/1a
119 Gogomain	Vw	Yes*	---	---	4W	3/1c
122. Pits						
123B Borgstrom	VIs	No	TMC-D	ATD	3S	5a-h
124D Alpena	VIs	No	---	---	3F	Ga
125B	IVs	No	AQVac	TTM		
Croswell					5S	5a
Markey					2W	M/4c
132B Superior	IIe	Yes	AVO-A	AVO	3L	1a
132D Superior	IIIe	No	AVO-A	AVO	3L	1a
132F Superior	VIIe	No	AVO-A	AVO	6R	1a
133 Dorval	Vw	No	---	---	2W	M/1c
135B	IIe	No	AVO	---		
Longrie					3D	3/Ra
Battydoe					3L	3a
135D	IIIe	No	AVO	---		
Longrie					3D	3/Ra
Battydoe					3L	3a

See footnote at end of table.

INTERPRETIVE GROUPS--Continued

Soil name and map symbol	Land capability	Prime farmland	Habitat type		Woodland ordination symbol	Michigan soil management group
			Primary	Secondary		
143 Caffey	Vw	No	TTM	---	2W	4/2c
146A	IIIw	No	TMC-D	TTP		
Allendale					4W	4/1b
Wakeley					3W	5/1c
147B, 147D Shelter	VIw	No	---	---	4X	Gbc
151 Beavertail	Vw	No	TTM	---	3W	Gbc
160B Esau	VIs	No	---	---	4W	Gbc
161 Zela	Vw	No	---	---	3W	Gbc
163B	VIs	No	---	---		
Esau					4W	Gbc
Zela					3W	Gbc
164A Moltke	IIw	Yes*	TMC-D	---	3W	3b-s
165A	IIIw	Yes*	---	---		
Engadine					2W	3/1b
Rudyard					6W	Ob
166	Vw	Yes*	---	---		
Gogomain					4W	3/1c
Pickford					6W	1c
167B	IIIe	No	AVO	ATD		
Battydoe					3L	3a
Wallace					6D	5a-h
167D	IVe	No	AVO	ATD		
Battydoe					3L	3a
Wallace					6D	5a-h
167E	VIIe	No	AVO	ATD		
Battydoe					3R	3a
Wallace					6R	5a-h
168B	Vw	No	TTM	---		
Caffey					2W	4/2c
Ingalls					4W	4/2b
Iosco					5W	4/2b
169E	VIIe	No	---	---		
Ontonagon Fluvaquents.					2R	Oa
170B, 170D Pullup	VIs	No	QAE	---	4S	5.3a-h
170E Pullup	VIIs	No	QAE	---	4R	5.3a-h

See footnote at end of table.

INTERPRETIVE GROUPS--Continued

Soil name and map symbol	Land capability	Prime farmland	Habitat type		Woodland ordination symbol	Michigan soil management group
			Primary	Secondary		
172B	VIw	No	FMC	AQVac		
Leafriver					2W	5c
Croswell					5S	5a
Wainola					6W	5b
173B	VIs	No	ATD	TMC		
Paquin					3S	5a-h
Finch					4W	5b-h
174B	IVs	No	AQVac	TTS		
Croswell					5S	5a
Spot					2W	5c-h
175D	VIs	No	ATD	TTS		
Wallace					6D	5a-h
Spot					2W	5c-h
176B	VIs	No	ATD	TTS		
Paquin					3S	5a-h
Spot					2W	5c-h
177B	IIe	Yes	---	---		
Millecoquins					3L	3a-s
Superior					3L	1a
177D	IIIe	No	---	---		
Millecoquins					3L	3a-s
Superior					3L	1a
178B Dinkey	IIIs	No	---	---	---	L-4a
179B, 179D Wallace	VIs	No	ATD	TM	6D	5a-h
179E, 179F Wallace	VIIs	No	ATD	TM	6R	5a-h
180B Millecoquins	IIe	Yes	---	---	3L	3a-s
181A Mattix	IVw	No	TMC	---	5W	4/Gb
182B Heinz	IVs	No	ATD	TM	3A	4/Ga
183B Cozy	IIIs	No	AVO	AVO-A	3W	Ga
185 Ermatinger	Vw	Yes*	---	---	2W	2.5c

* Where drained.

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