Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
12B:	6w		Not prime farmland		Not highly erodible land
Tawas		M/4c		Yes	
Au Gres		5b		No	
13:	6w		Not prime farmland		Not highly erodible land
Tawas		M/4c		Yes	
Lupton		Mc		Yes	
15A:	4s		Not prime farmland		Not highly erodible land
Croswell		5a		No	
Au Gres		5b		No	
16B:	4s		Not prime farmland		Not highly erodible land
Graycalm		5a		No	
16D:	6s		Not prime farmland		Not highly erodible land
Graycalm		5a		No	
17B:	4s		Not prime farmland		Not highly erodible land
Croswell		5a		No	
18A:	4w		Not prime farmland		Not highly erodible land
Au Gres		5b		No	
19:	6w		Not prime farmland		Not highly erodible land
Leafriver		5c		Yes	
25B:	3e		All areas are prime farmland		Not highly erodible land
Kent		1a		No	
25C:	3e		Farmland of local importance		Not highly erodible land
Kent		1a		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
26B:	4s		Farmland of local importance		Not highly erodible land
Cublake		5/2a		No	
27A:	4w		Not prime farmland		Not highly erodible land
Tacoda		4/1b		No	
28B:	4s		Not prime farmland		Not highly erodible land
East Lake		5a		No	
39B:	3s		Farmland of local importance		Not highly erodible land
Glennie		4/2a-f		No	
39C:	3e		Farmland of local importance		Not highly erodible land
Glennie		4/2a-f		No	
40A:	2w		Prime farmland if drained		Not highly erodible land
Sprinkler		3/2b		No	
47D:	6s		Not prime farmland		Potentially highly erodible land
Graycalm		5a		No	
47F:	7s		Not prime farmland		Potentially highly erodible land
Graycalm		5a		No	
53B:	3e		All areas are prime farmland		Not highly erodible land
Negwegon		1.5a		No	
53C:	3e		Farmland of local importance		Potentially highly erodible land
Negwegon		1.5a		No	
54A:	3w		Prime farmland if drained		Not highly erodible land
Algonquin		1.5b		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
55:	3w		Prime farmland if drained		Not highly erodible land
Springport		1.5c		Yes	
56C:	3e		Farmland of local importance		Potentially highly erodible land
Nester		1.5a		No	
57B:	2e		Prime farmland if drained		Potentially highly erodible land
Kawkawlin		1.5b		No	
58A:	5w		Not prime farmland		Not highly erodible land
Wakeley		4/1c		Yes	
Allendale		4/1b		No	
59B:	3e		Prime farmland if drained		Not highly erodible land
Algonquin		1.5b		No	
Springport		1.5c		Yes	
62A:	3w		Farmland of local importance		Not highly erodible land
Allendale		4/1b		No	
70:	6w		Not prime farmland		Not highly erodible land
Lupton		Mc		Yes	
71:	6w		Not prime farmland		Not highly erodible land
Tawas		M/4c		Yes	
72:	5w		Not prime farmland		Not highly erodible land
Dorval		M/1c		Yes	
75B:	6s		Not prime farmland		Not highly erodible land
Rubicon		5.3a		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
75D:	7s		Not prime farmland		Potentially highly erodible land
Rubicon		5.3a		No	
75E:	7s		Not prime farmland		Potentially highly erodible land
Rubicon		5.3a		No	
75F:	7s		Not prime farmland		Highly erodible land
Rubicon		5.3a		No	
77:	5w		Not prime farmland		Not highly erodible land
Rollaway		3/1c		Yes	
78:	---		Not prime farmland		Not highly erodible land
Pits, Borrow		None assigned		Unranked	
81B:	6s		Not prime farmland		Not highly erodible land
Grayling		5.7a		No	
81D:	7s		Not prime farmland		Potentially highly erodible land
Grayling		5.7a		No	
81E:	7s		Not prime farmland		Potentially highly erodible land
Grayling		5.7a		No	
82C:	---		Not prime farmland		Not highly erodible land
Udorthents		None assigned		No	
82F:	---		Not prime farmland		Highly erodible land
Udorthents		None assigned		No	
83B:	---		Not prime farmland		Not highly erodible land
Udipsamments		None assigned		No	
84B:	4s		Not prime farmland		Not highly erodible land
Zimmerman		4a		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
86:	5w		Not prime farmland		Not highly erodible land
Histosols		None assigned		Yes	
Aquents		None assigned		Yes	
93B:	4w		Not prime farmland		Not highly erodible land
Tacoda		4/1b		No	
Wakeley		4/1c		Yes	
97:	5w		Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season		Not highly erodible land
Colonville		L-2c-c		No	
100D:	4e		Farmland of local importance		Highly erodible land
Curtisville		1.5a		No	
100E:	7e		Not prime farmland		Highly erodible land
Curtisville		1.5a		No	
103B:	2e		All areas are prime farmland		Not highly erodible land
Nester		1.5a		No	
103C:	3e		Farmland of local importance		Potentially highly erodible land
Nester		1.5a		No	
108B:	3e		Prime farmland if drained		Not highly erodible land
Selkirk		1c		No	
114A:	3w		Farmland of local importance		Not highly erodible land
Ingalls		4/2b		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
120B:	3s		Farmland of local importance		Not highly erodible land
Morganlake		4/2a		No	
120C:	3e		Farmland of local importance		Not highly erodible land
Morganlake		4/2a		No	
123D:	4e		Not prime farmland		Potentially highly erodible land
Klacking		4a		No	
124:	7w		Not prime farmland		Not highly erodible land
Evart		L-4c		Yes	
127:	6w		Not prime farmland		Not highly erodible land
Cathro		M/3c		Yes	
128:	7w		Not prime farmland		Not highly erodible land
Dawson		Mc-a		Yes	
130:	7w		Not prime farmland		Not highly erodible land
Grousehaven		M/mc		Yes	
159A:	4w		Not prime farmland		Not highly erodible land
Finch		5b-h		No	
182:	---		Not prime farmland		Not highly erodible land
Pits, Quarry		None assigned		Unranked	
197A:	3w		Farmland of local importance		Not highly erodible land
Gladwin		4b		No	
209B:	6s		Not prime farmland		Not highly erodible land
Grayling, calcareous substratum		5.7a		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
209C:	6s		Not prime farmland		Not highly erodible land
Grayling, calcareous substratum		5.7a		No	
209D:	7s		Not prime farmland		Potentially highly erodible land
Grayling, calcareous substratum		5.7a		No	
210B:	6s		Not prime farmland		Not highly erodible land
Grayling		5.7a		No	
210C:	7s		Not prime farmland		Potentially highly erodible land
Grayling		5.7a		No	
210D:	7s		Not prime farmland		Potentially highly erodible land
Grayling		5.7a		No	
210E:	7s		Not prime farmland		Potentially highly erodible land
Grayling		5.7a		No	
211B:	6s		Not prime farmland		Not highly erodible land
Grayling, banded substratum		5.7a		No	
212B:	6s		Not prime farmland		Not highly erodible land
Grayling, very deep water table		5.7a		No	
213B:	4s		Not prime farmland		Not highly erodible land
Graycalm		5a		No	
214B:	6s		Not prime farmland		Not highly erodible land
Typic Udipsamments, deep water table		None assigned		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
215B:	6s		Not prime farmland		Not highly erodible land
Typic Udipsamments, loamy substratum-------		None assigned		No	
216B:	6s		Not prime farmland		Not highly erodible land
Typic Udipsamments, loamy calcareous substratum----------		None assigned		No	
220B:	6s		Not prime farmland		Not highly erodible land
Typic Udipsamments------		None assigned		No	
220D:	7s		Not prime farmland		Potentially highly erodible land
Typic Udipsamments------		None assigned		No	
220E:	7s		Not prime farmland		Highly erodible land
Typic Udipsamments------		None assigned		No	
221B:	6s		Not prime farmland		Not highly erodible land
Typic Udipsamments, banded substratum------		None assigned		No	
221C:	7s		Not prime farmland		Potentially highly erodible land
Typic Udipsamments, banded substratum------		None assigned		No	
221D:	7s		Not prime farmland		Potentially highly erodible land
Typic Udipsamments, banded substratum------		None assigned		No	
221E:	7s		Not prime farmland		Highly erodible land
Typic Udipsamments, banded substratum------		None assigned		No	
222B:	6s		Not prime farmland		Not highly erodible land
Typic Udipsamments, very deep water table-------		None assigned		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
223B:	4s		Not prime farmland		Not highly erodible land
Graycalm----------		5a		No	
Grayling----------		5.7a		No	
223C:	6s		Not prime farmland		Potentially highly erodible land
Graycalm----------		5a		No	
Grayling----------		5.7a		No	
223D:	7s		Not prime farmland		Potentially highly erodible land
Graycalm----------		5a		No	
Grayling----------		5.7a		No	
223E:	7s		Not prime farmland		Highly erodible land
Graycalm----------		5a		No	
Grayling----------		5.7a		No	
224B:	4s		Not prime farmland		Not highly erodible land
Croswell----------		5a		No	
225B:	6s		Farmland of local importance		Not highly erodible land
Entic Haplorthods, Sandy, loamy substratum		None assigned		No	
225C:	7s		Farmland of local importance		Potentially highly erodible land
Entic Haplorthods, Sandy, loamy substratum		None assigned		No	
231D:	7s		Not prime farmland		Potentially highly erodible land
Entic Haplorthods, Sandy, banded substratum----------		None assigned		No	
Alfic Haplorthods, Sandy		None assigned		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
231E:	7s		Not prime farmland		Highly erodible land
Entic Haplorthods, Sandy, banded substratum		None assigned		No	
Alfic Haplorthods, Sandy		None assigned		No	
232B:	6s		Not prime farmland		Not highly erodible land
Entic Haplorthods, Sandy, very deep water table		None assigned		No	
Alfic Haplorthods, Sandy, very deep water table		None assigned		No	
233B:	3s		Not prime farmland		Not highly erodible land
Alfic Haplorthods, Sandy		None assigned		No	
Entic Haplorthods, Sandy, fine-loamy banded substratum		None assigned		No	
233C:	4e		Not prime farmland		Potentially highly erodible land
Alfic Haplorthods, Sandy		None assigned		No	
Entic Haplorthods, Sandy, fine-loamy banded substratum		None assigned		No	
233D:	7e		Not prime farmland		Potentially highly erodible land
Alfic Haplorthods, Sandy		None assigned		No	
Entic Haplorthods, Sandy, fine-loamy banded substratum		None assigned		No	
235B:	3s		Not prime farmland		Not highly erodible land
Alfic Haplorthods, Sandy Over Loamy		None assigned		No	
Alfic Haplorthods, Sandy		None assigned		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
235C:	4e		Not prime farmland		Potentially highly erodible land
Alfic Haplorthods, Sandy Over Loamy		None assigned		No	
Alfic Haplorthods, Sandy		None assigned		No	
236B:	3s		Farmland of local importance		Not highly erodible land
Arenic Eutroboralfs		None assigned		No	
237B:	---		Not prime farmland		Not highly erodible land
Eutroboralfs		None assigned		No	
237D:	---		Not prime farmland		Potentially highly erodible land
Eutroboralfs		None assigned		No	
254A:	5w		Not prime farmland		Not highly erodible land
Borosaprists, Euic		None assigned		Yes	
Fluvaquents		None assigned		Yes	
Aquic Udipsamments		None assigned		No	
262A:	4w		Not prime farmland		Not highly erodible land
Au Gres		5b		No	
263A:	---		Not prime farmland		Not highly erodible land
Argic Endoaquods		None assigned		No	
264A:	3w		Farmland of local importance		Not highly erodible land
Allendale		4/1b		No	
265B:	---		Not prime farmland		Not highly erodible land
Eutroboralfs		None assigned		No	
Allendale		4/1b		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
266A:	4w		Not prime farmland		Not highly erodible land
Typic Duraquods, Sandy--		None assigned		No	
272:	---		Not prime farmland		Not highly erodible land
Endoaquods----------		None assigned		Yes	
Fluvaquents----------		None assigned		Yes	
273:	6w		Not prime farmland		Not highly erodible land
Leafriver----------		5c		Yes	
Wakeley----------		4/1c		Yes	
274:	5w		Not prime farmland		Not highly erodible land
Typic Endoaquods--------		None assigned		Yes	
280:	6w		Not prime farmland		Not highly erodible land
Aquents----------		None assigned		Yes	
Histosols----------		None assigned		Yes	
281:	7w		Not prime farmland		Not highly erodible land
Borosaprists, Dysic-----		None assigned		Yes	
282:	5w		Not prime farmland		Not highly erodible land
Borosaprists, Euic------		None assigned		Yes	
343:	2w		All areas are prime farmland		Not highly erodible land
Sims----------		1.5c		Yes	
355E:	7s		Not prime farmland		Potentially highly erodible land
Crowell----------		5a		No	
Proper----------		5a-h		No	
356E:	6e		Not prime farmland		Potentially highly erodible land
Aquepts----------		None assigned		Yes	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
Histosols		None assigned		Yes	
Fluvaquents		None assigned		Yes	
357B:	---		Not prime farmland		Not highly erodible land
Udipsamments		None assigned		No	
Urban Land		None assigned		Unranked	
360:	5w		Not prime farmland		Not highly erodible land
Wakeley		4/1c		Yes	
367A:	3w		Not prime farmland		Not highly erodible land
Whittemore		4/1b		No	
Springport		1.5c		Yes	
368A:	4w		Not prime farmland		Not highly erodible land
Au Gres		5b		No	
Deford		4c		Yes	
369:	5w		Not prime farmland		Not highly erodible land
Deford		4c		Yes	
370A:	4w		Not prime farmland		Not highly erodible land
Mcivor		5/2b-h		No	
371:	5w		Prime farmland if drained		Not highly erodible land
Springport		1.5c		Yes	
372B:	4s		Not prime farmland		Not highly erodible land
Proper		5a-h		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
Leafriver		5c		Yes	
375:	5w		Farmland of local importance		Not highly erodible land
Kanotin		5c		Yes	
377:	5w		Not prime farmland		Not highly erodible land
Wabun		5c		Yes	
378A:	3w		Prime farmland if drained		Not highly erodible land
Algonquin		1.5b		No	
379A:	3w		Prime farmland if drained		Not highly erodible land
Algonquin		1.5b		No	
Springport		1.5c		Yes	
380:	---		Not prime farmland		Not highly erodible land
Access Denied		None assigned		Unranked	
381A:	4w		Not prime farmland		Not highly erodible land
Mcivor		5/2b-h		No	
Wakeley		4/1c		Yes	
382B:	4s		Not prime farmland		Not highly erodible land
Proper		5a-h		No	
383B:	4s		Not prime farmland		Not highly erodible land
Wurtsmith		5a		No	
392:	5w		Not prime farmland		Not highly erodible land
Caffey		4/2c		Yes	
403B:	3e		All areas are prime farmland		Not highly erodible land
Iargo		1.5a-s		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
403C:	3e		Farmland of local importance		Potentially highly erodible land
Iargo		1.5a-s		No	
404A:	2w		Farmland of local importance		Not highly erodible land
Manary		1.5b-s		No	
405B:	2w		Prime farmland if drained		Not highly erodible land
Manary		1.5b-s		No	
Iargo		1.5a-s		No	
406A:	4w		Not prime farmland		Not highly erodible land
Winterfield		L-4c		No	
407:	5w		Prime farmland if drained		Not highly erodible land
Lacota		3c		Yes	
408:	5w		Prime farmland if drained		Not highly erodible land
Sims		1.5c		Yes	
409A:	4w		Not prime farmland		Not highly erodible land
Finch		5b-h		No	
Deford		4c		Yes	
Au Gres		5b		No	
410B:	4s		Not prime farmland		Not highly erodible land
Proper		5a-h		No	
Finch		5b-h		No	
Deford		4c		Yes	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
411A:	4w		Not prime farmland		Not highly erodible land
Meehan		None assigned		No	
425D:	4e		Farmland of local importance		Highly erodible land
Hottis		1.5a		No	
426B:	3s		Farmland of local importance		Not highly erodible land
Coppler		4a		No	
426C:	3e		Farmland of local importance		Not highly erodible land
Coppler		4a		No	
427:	5w		Prime farmland if drained		Not highly erodible land
Tonkey		3c-s		Yes	
429D:	4e		Not prime farmland		Potentially highly erodible land
Menominee		4/2a		No	
430D:	4e		Farmland of local importance		Highly erodible land
Mongo		1.5a		No	
430E:	7e		Not prime farmland		Highly erodible land
Mongo		1.5a		No	
431B:	3s		Not prime farmland		Not highly erodible land
Skeel		4/2a		No	
432B:	4s		Not prime farmland		Not highly erodible land
Wurtsmith		5a		No	
Meehan		None assigned		No	
433B:	3s		Not prime farmland		Not highly erodible land
Morganlake		4/2a		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
Graycalm		5a		No	
434D:	6s		Not prime farmland		Potentially highly erodible land
Graycalm		5a		No	
Menominee		4/2a		No	
Morganlake		4/2a		No	
435B:	3s		Not prime farmland		Not highly erodible land
Skeel		4/2a		No	
Algonquin		1.5b		No	
Aquepts		None assigned		Yes	
436A:	2w		Prime farmland if drained		Not highly erodible land
Manary		1.5b-s		No	
Whittemore		4/1b		No	
Springport		1.5c		Yes	
437D:	6s		Not prime farmland		Potentially highly erodible land
Wurtsmith		5a		No	
Meehan		None assigned		No	
Deer Park		5.3a		No	
438C:	4w		Not prime farmland		Potentially highly erodible land
Meehan		None assigned		No	
Tawas		M/4c		Yes	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
Wurtsmith		5a		No	
439D:	7s		Not prime farmland		Not highly erodible land
Deer Park		5.3a		No	
440B:	2e		Prime farmland if drained		Not highly erodible land
Kawkawlin		1.5b		No	
Sims		1.5c		Yes	
441B:	3s		All areas are prime farmland		Not highly erodible land
Morganlake		4/2a		No	
Nester		1.5a		No	
441C:	3e		Farmland of local importance		Not highly erodible land
Morganlake		4/2a		No	
Nester		1.5a		No	
442D:	4e		Farmland of local importance		Not highly erodible land
Menominee		4/2a		No	
Curtisville		1.5a		No	
442E:	7e		Not prime farmland		Potentially highly erodible land
Menominee		4/2a		No	
Curtisville		1.5a		No	
443B:	2e		Not prime farmland		Not highly erodible land
Kawkawlin		1.5b		No	
Allendale		4/1b		No	

Interpretive Groups
Iosco County, Michigan

Map symbol and soil name	Land capability classification	Michigan soil management group	Prime farmland	Hydric	HEL
Aquepts		None assigned		Yes	
444B:	2e		Prime farmland if drained		Not highly erodible land
Kawkawlin		1.5b		No	
445A:	5w		Prime farmland if drained		Not highly erodible land
Corsair		3b-s		No	
446B:	4s		Not prime farmland		Not highly erodible land
Wurtsmith		5a		No	
Meehan		None assigned		No	
Urban Land		None assigned		Unranked	
447A:	3w		Not prime farmland		Not highly erodible land
Whittemore		4/1b		No	
448A:	4w		Not prime farmland		Not highly erodible land
Meehan		None assigned		No	
Tawas		M/4c		Yes	
449A:	3w		Farmland of local importance		Not highly erodible land
Kokosing		4/2b		No	
W:	---		Not prime farmland		Not highly erodible land
Water		None assigned		Unranked	

Interpretative Groups--Continued

ENDNOTE--INTERPRETATIVE GROUPS

LAND CAPABILITY CLASSIFICATION

The land capability classification system is used to show, in a general way, the suitability of soils for cropland. It is a three-category interpretative system. The two highest categories, class and subclass, give broad perspective of the suitability of map units for certain crops or pasture. These categories indicate the degree and kinds of limitations for these uses. The system evaluates soils for mechanized farming systems that produce the more common cultivated field crops, such as corn, small grains, soybeans, and hay.

Capability Class

The highest category of the system is the capability class. The capability classes are groups of soils that have the same general suitability for the broad kinds of use common on farms and ranches. There are eight classes designated by Roman numerals I through VIII.

Classes I, II, III, and IV are suitable for mechanized production of common field crops if properly managed, and for production of pasture and woodland. The degree of limitation for production of cultivated crops increases progressively for class I to class IV. Limitations may affect production as well as the risk of permanent soil deterioration, as by erosion.

Classes V, VI, and VII are generally not suited to mechanized production of common field crops without special management, but are suitable for permanent cover such as grasses and trees. The severity of the soil limitations for crops increases from class V to class VII. Areas in class VIII are generally not suitable for crops, pasture, or wood products without management that is impractical. Class VIII areas may have potential for other uses, such as recreation or wildlife habitat.

Capability Subclass

The subclass identifies the dominant kind of limitation in the class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, IIe. The letter e shows that the main limitation is risk of erosion unless a close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

There are no subclasses in class I because the soils of this class have few limitations. The soils in class V are subject to little or no erosion, but they have other limitations that restrict their use mainly to pasture, woodland, wildlife habitat, or recreation. Class V contains only the subclasses indicated by w, s, or c.

MICHIGAN SOIL MANAGEMENT GROUP

Mapping unit names in soil surveys identify the predominant soil series and their subdivisions. Soil series are similar in thickness, arrangement of horizons and other physical, chemical and biological properties. Each series is named for a town or geographical feature located near the place where the soil series was first recognized.

Soil series may be grouped according to dominant texture of the profile and natural drainage conditions. These groups are called soil management groups and are designated systematically by numbers and letters. This makes it easier to remember their significant properties--which affect various land uses.

Soil Texture

Texture refers to the proportion of sand, silt and clay present in a soil sample. It does not include the organic matter or gravel and coarser particles.

Interpretative Groups--Continued

Soils can be separated into mineral and organic soils on the basis of parent material. Mineral soils are given a number based on the dominant profile texture as follows: 0 - fine clay, more than 60% clay; 1 - clay, 40 to 60% clay; 1.5 - clay loam and silty clay loam; 2.5 - loam and silt loam; 3 - sandy loam; 4 - loamy sand; and 5 - sand. Some soil mapping units are identified as having soils with banded substrata. These soils have thin, finer textured bands or layers below 40 inches. These banded substrata are not included in the soil management unit concept but may be important for adsorption of materials and holding plant available water.

Because of significant differences in available water-holding capacities, the sands are further subdivided based on the subsoil development or organic matter, aluminum and iron accumulations in the B horizon; 5.0 for sands with strong subsoil development (Bhs horizon present), large organic matter, aluminum and iron accumulations; 5.3 for sands with medium subsoil development (Bs horizon present); and 5.7 for sands with weak or no subsoil development (Bw or Bs does not qualify for spodic horizon), little or no organic matter, aluminum and iron accumulations. Some mapping units are identified as having sandy soils with dark subsoils. These soils have more organic matter, aluminum, and iron than typical for the soil series and should be assigned to a group with more development, for example. Grattan sand, dark subsoil, would be assigned to the 5.0 group rather than the 5.3 group which Grattan is normally assigned.

The dominant profile texture is the texture of which most of the upper five feet of soil is composed. For example, a soil with the following horizons: Ap - 0 to 7 inches, loamy sand; A - 7 to 14 inches, loamy sand; Clg - 14 to 35 inches, sand; and C2g - 43 to 60 inches, sand, has a dominant profile texture of sand, 5. The soil has 46 inches of sand and only 14 inches of loamy sand.

Soils developed from uniform parent materials are represented by one number. Soils developed from two-storied parent materials or with contrasting textures in their profiles are represented by fractions. The numerator represents the texture of the upper story and the denominator the lower story. For example, 3/1 represents soils with 14-40 inches of sandy loam over clay. Several soils have been mapped with loamy to clayey substrata. These finer textured, contrasting substrata occur between 40 and 60 inches in sandy soils. Most of these soils would be assigned a 5/2 symbol, such as, Pipestone fine sand, loamy substratum, and Plainfield loamy sand, loamy substratum.

Soils which are very gravelly or stony throughout their profile are indicated by a capital G. Alluvial or lowland soils having stratified materials and subject to flooding are preceded by a capital L. Soils which are less than 20 inches to bedrock are indicated by a capital R.
Soils having 10 to 40 inches of soil material over bedrock are subdivided by characteristics of overlying materials as the numerator of a fraction (Table 2): 2/R - loam over bedrock; 3/R - sandy loam over bedrock; and 4/R - loamy sand or sand over bedrock.

Organic soils are indicated by a capital M for muck or peat. Thin (16 to 51 inches) organic soils are subdivided by characteristics of underlying mineral materials: M/1 - muck over clay; M/3 - muck over marl; and M/R - muck over bedrock. Thick (greater than 51 inches) organic soils are given only the symbol M.

Natural Drainage

Lower case (small) letters are used to indicate natural drainage conditions: (a) well and moderately well drained; (b) somewhat poorly drained and (c) poorly and very poorly drained. Natural soil drainage is related to water table depth and the length of time during the year that the water table is in contact with part of the soil profile. The letters follow the numbers or capital letters of the dominant profile texture in the soil management group symbol.

The somewhat poorly drained, poorly drained, and very poorly drained gravelly or stony soils, are combined into one soil management group, Gbc . The drainage classes of the shallow and very shallow bedrock soils are similarly combined. The somewhat poorly and poorly drained alluvial soils are also combined, but drainage is indicated by c, for example L-2c.

Well drained soils have water tables below 40 inches and commonly below 60 inches.
Moderately well drained soils have water tables between 30 and 40 inches for a relatively short time usually during spring. Somewhat poorly drained soils have water tables near the surface sometime during the year, usually in winter and spring. During summer these soils may have water tables below 60 inches. Poorly drained soils have water tables near the surface much of the year, but during the summer they usually are lower in the profile and may be below 5 feet.

Interpretative Groups--Continued

Other soil profile characteristics important to land use planning are indicated by adding a dash and a second lower case letter to the number for the dominant profile texture and lower case letter for natural drainage. The characteristics used are:

a indicates soils with very strongly acid (pH less than 4.5) subsoils
c indicates calcareous or limey conditions within 10 inches of the surface
d indicates dense or compact subsoils
f indicates the presence of a fragipan which is a dense, brittle horizon
h indicates hardened or cemented subsoils (ortstein)
s indicates stratification with fine sands and silts.

If a soil has two or more other important profile characteristics, two or more letters follow the dash. For example, the 2.5b-cs includes soils with a dominant profile texture of loam or silt loam that are somewhat poorly drained, calcareous within 10 inches of the surface, and stratified with fine sands and silts.

PRIME FARMLAND

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pastureland, forest land, or other land, but not urban built-up land or water). It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods.

In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding.

Soils that have limitations, such as a high water table or flooding, may qualify as prime farmland if these limitations are overcome by such measures as drainage or flood control.

The following are guidelines that are used to place a soil mapping unit into the Farmlands of Local Importance:

1. For prime farmland soils slopes of 6 to 18 percent are included.
2. For non-prime farmland soils slopes of 0 to 12 percent are included.
3. For Histosols (organic soils) the following are included :
   a. mesic, not frigid
   b. euic, not dysic
   c. non-alluvial
   d. non-shallow to bedrock
4. The following are criteria for shallow to bedrock mineral soils:
   a. 20 to 40 inches and not less than 20 inches
   b. 0 to 6 percent slopes
   c. only well drained
5. Skeletal families, except those with few corase fragments on the surface are excluded.
6. Very stony or extremely stoney soils are excluded.
7. Soils with fragipans at depths greater than 20 inches are included.
8. The following soils having greater than 3 inches of available water capacity to 40 inches are included:
   a. Somewhat poorly drained sands with loamy sand surfaces are included.
   b. Poorly drained sands with loamy sand surfaces and mollic or umbric epipedons are included.
   c. Gravelly sand above a depth of 40 inches having less than 3 inches of Available water capacity are excluded.
9. Alluvial soils with occasional flooding or less are included.
10. Sands with a loamy material from 40 to 60 inches are included.
11. Very fine clays are included.

Interpretative Groups--Continued

HYDRIC SOIL CLASSIFICATION

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995).
These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 1998) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 1998).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

A map unit component that is a classified a hydric soil if it meets one or more of the criteria based on saturation, flooding or ponding. The Interpretative Group Table lists whether a soil is hydric or not, but does not list the hydric soil criteria that it meets. This information is available at the NRCS Field Offices.

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

HIGHLY ERODIBLE LAND CLASSIFICATION

The basis for identifying highly erodible land is the erodibility index of a soil map unit. The erodibility index of a soil is determined by dividing the potential erodibility for each soil by the soil loss tolerance (T) value established for the soil. The T value represents the maximum annual rate of soil erosion that could take place without causing a decline in long-term productivity. A soil map unit with an erodibility index of 8 or more is a highly erodible soil map unit.

Water Erosion

Potential erodibility for sheet and rill erosion is estimated by multiplying the following factors of the Universal Soil Loss Equation (USLE)

1. rainfall and runoff factor (R)
2. susceptibility of the soil to water erosion (K)
3. combined effects of slope length and steepness (LS)

The erodibility index for sheet and rill erosion is represented by the formula RKLS/T. A soil map unit is highly erodible if the LS factor for the shortest length and minimum percent of slope is used and the RKLS/T value equals or exceeds 8.

A soil map unit is potentially highly erodible if: (1) the RKLS/T value using the minimum LS factor is less than 8 and (2) the RKLS/T value using the maximum LS factor is equal to or greater than 8.

Interpretative Groups--Continued

Wind Erosion

Potential erodibility from wind erosion is estimated by multiplying the following factors of the Wind Erosion Equation (WEQ).

1. climatic characterization of windspeed and surface soil moisture (C)
2. the susceptibility of the soil to wind erosion (I)

The erodibility index for wind erosion is represented by the formula CI/T. A soil map unit is highly erodible if the CI/T value equals or exceeds 8.