SOIL STANDARDS MANUAL

FOR

ON-SITE WASTEWATER DISPOSAL SYSTEMS

Adopted by McHenry County Board on February 1, 2003

COUNTY OF McHENRY, ILLINOIS

DEPARTMENT OF PUBLIC HEALTH

DIVISION OF ENVIRONMENTAL HEALTH

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THE SOIL STANDARDS MANUAL FOR ON-SITE WASTEWATER DISPOSAL SYSTEMS

Title
This manual shall be known and may be cited as "The Soils Standards Manual for On-Site Wastewater Disposal Systems".

Purpose
To provide general guidance as to the potential suitability of soils to support private sewage disposal systems based upon the following factors:

- Frequent or continuous waterlogging
- Periodic surface inundation by stormwater runoff
- Prevention of groundwater pollution
- Susceptibility to erosion
- Slowly or excessively rapid internal water movement (permeability)
- Depth to bedrock deposit
- High organic materials content

Definitions

"AEROBIC TREATMENT UNIT" means a sewage treatment unit which incorporates a means of introducing air into sewage so as to provide aerobic biochemical stabilization during a detention period.

"COUNTY" means the County of McHenry, Illinois.

'DEPARTMENT" means the McHenry County Department of Health.

"DOMESTIC SEWAGE" means wastewater derived principally from plumbing fixture drains in dwellings, business or office buildings, institutions, food service establishments, and similar facilities. It shall not include industrial or commercial processing waste.

'EFFLUENT" means the outflow from a tank or other treatment unit.

"FLOOD ELEVATION, BASE" (base flood elevation) means the regulatory elevations established by the methods adopted by the McHenry County Floodplain Ordinance and which establish the limit of intrusion or retainment of a "100 year flood event" or that flood having a one percent probability of occurring in any given year.

"FLOOD HAZARD AREA" means any area composed of flood plain land.

"FLOODPLAIN" That land typically adjacent to a body of water with ground surface elevations at or below the base flood elevation or the 100 year frequency flood elevation. Floodplains may also include detached Special Flood Hazard Areas, ponding areas, etc. The floodplain is also known as the Special Flood Hazard Area (SFHA).

"GRAVELLESS SEEPAGE SYSTEM" means the use of approved perforated 8 inch or 10 inch diameter, filter wrapped, plastic pipe, or chamber systems as approved by the Illinois Department of Public Health, in lieu of 4 inch pipe and gravel, in subsurface fields and serial distribution systems.

"MADE LANDS" Areas in which the natural soil profile has been worked or disturbed to such an extent that the soil cannot be classified in accordance with the standards established for soil classification by the National Cooperative Soil Survey. This may include excessive filling or removal of the naturally occurring material with or without replacement of that material.

"NON-CRITICAL SOILS" are those undisturbed soil materials that can support a conventional private sewage disposal system, where at least the lower portion (six inches minimum) of the soil absorption part of the system can be installed in original, uncompacted (undisturbed) soil.

"ORIGINAL SOIL SURFACE" means the natural or native soil surface exclusive of fill material.

"PERMEABILITY" means the ease with which liquids move through a soil.

"PLANNING & DEVELOPMENT DEPT." means the McHenry County Department of Planning and Development.

"PRIMARY USE DISTRICT" - "USE, PRINCIPAL" The primary purpose for which a land area, building or structure is used, as distinguished from an accessory use.

"PRIVATE SEWAGE DISPOSAL SYSTEM" means any sewage handling or treatment facility receiving domestic sewage for disposal on the property where it was generated, or on property where the same owner has legal access, and having no ground surface discharge there or on any parcel, lot or property. Private Sewage Disposal System shall also mean septic system.

"PRIVATE SEWAGE DISPOSAL SYSTEM PUMPING CONTRACTOR" means any person who cleans or pumps waste from a private sewage disposal system or hauls or disposes of wastes removed therefrom.

"SEPTIC FILTER FIELD USE RATING" Slight indicates that the limitations, if any, are easy to overcome; Moderate indicates that there are some limitations, but they can usually be overcome or modified with correct planning and design; Severe indicates limitations that are more significant and may require specific engineering for successful use of the soil for subsurface seepage fields. Very Severe indicates limitations that may preclude development without sanitary sewer system. In all cases site specific soil boring data is required to determine if the soils meet Ordinance requirements to support a private sewage disposal system.

"SOIL BORING" means an observation pit, dug by hand or backhoe, or an undisturbed soil core taken intact and undisturbed by a probe.

"SOIL CHARACTERISTICS, LIMITING" means those soil characteristics which preclude the installation of a standard system.

"SOIL CLASSIFIER" means the following: A certified soil classifier of the Illinois Soil Classifiers Association (ISCA) or a certified soil classifier with the Federation of Certifying Boards of Agriculture, Biology, Earth and Environmental Sciences (ARCPACS).

"SOIL MOTTLING" means low chroma equal to or less than 2 and a value of 4 or more (Munsell-Color Chart.)

"WATER TABLE" means the upper limit of the portion of the soil which is completely saturated with water. The seasonal high water table is the highest level to which the soil is saturated, as may be indicated by mottling (soil color patterns.)

"ZONING ORDINANCE" means the current McHenry County Zoning Ordinance as amended from time to time.

Introduction

The recommendations contained in this manual are supplemental to the requirements in the McHenry County Public Health Ordinance, the McHenry County Subdivision Ordinance and the McHenry County Zoning Ordinance.

Septic systems are private sewage disposal systems that use the soil to treat domestic sewage from individual homes, small businesses, etc. There are many types of septic systems in use today. While all septic systems are individually designed for each site, most septic systems are based upon the same principles.

A typical septic system consists of a septic tank or aerobic treatment unit, a distribution network and soil absorption area (i.e. seepage trenches, seepage bed, gravelless seepage system, etc.) Primary treatment of the wastewater takes place in the septic tank where heavier solids and lighter scum separate from the wastewater. The solids stored in the tank are decomposed by bacteria and periodically removed by a private sewage disposal system pumping contractor.

The partially treated wastewater (effluent) leaves the septic tank or aeration device and flows through a distribution network into the soil absorption system. The effluent seeps into the subsurface soil where it is further treated and purified. This is considered secondary treatment of the wastewater. A properly sited and functioning septic system does not pollute groundwater.

Determination of soil characteristics on sites proposed for development with private sewage disposal systems is based upon site specific soil boring data collected by a soil classifier. There shall be a minimum of three (3) suitable borings per soil absorption system site. More soil borings may be necessary for accurate and appropriate evaluation of a site where there is concern regarding the consistency

of the soil materials. Borings shall extend at least five (5) feet below the natural ground surface, or greater as needed, and shall be located to sufficiently characterize the proposed seepage area.

Site characteristics to be described include zones of seasonal and permanent water saturation, depth to bedrock, USDA/NRCS soil texture, USDA/NRCS soil structural features of note, slope, compaction and depth, soil coloration, depth of soil mottling, permeability range, and other limiting soil characteristics that may reduce permeability.

On-site sewage disposal systems may be utilized where lots or parcels are in compliance with the applicable County Ordinances in effect on the date of permit application and all of the criteria for site consideration in Table I are satisfied. Table I (reprinted from Article X of the McHenry County Public Health Ordinance) outlines the specific minimum soil criteria for siting a private sewage disposal system and the allowable types and sizes of systems based upon the depth to limiting layers, soil permeability and slope considerations.

Tables II and III and Soil Overlay Districts provide general information to assist in determining if site specific soil information will be pursued. It should be noted that soil maps are limited for site specific decision making, where development with private sewage disposal systems is considered. In such instances intensive mapping of soil characteristics in a manner specified in Article X of the McHenry County Public Health Ordinance is required.

Soil Map Limitations

All maps of any kind represent a synthesis of information and no map is "accurate" beyond limitations imposed by portraying information clearly in the space available. It should be understood that the Official Soil Maps for the County have certain inherent limitations; the following limitations should be considered in using them for making evaluations of the soils.

- There may be "inclusions" of related but different soil types. Such inclusions may be as great as two (2) acres in extent within larger mapped areas.
- The lines of demarcation between mapped soil types are not as sharply defined in nature as they appear to be on soil maps.
- Conformity of soil mapped areas is generally in agreement with available topographic maps but not always. Soil map interpretation is enhanced by slight adjustments to specific topographic information.

Flood Prone Property

Properties prone to flooding or located in flood hazard areas, are subject to additional restrictions for use as outlined in the McHenry County Zoning Ordinance, McHenry County Floodplain Ordinance and the McHenry County Public Health Ordinance.

SOIL SUITABILITY FOR ON-SITE WASTE WATER DISPOSAL

TABLE I (See Also Corresponding Notes and Illustration 1)

Depth to Limiting Layer from Natural Soil Surface	Permeability Range In/Hr / Required Separation [1]	System Type	Associated USDA Soil Textures	Size of System: Maximum Allowable Slope %	Assigned Soil (Basal) Loading Rate (gpd/ft^2) Type 4 & 5 Systems	Assigned Linear Loading rate (gpd/lf) Type 4 & 5 Systems	Residential Square Foot Per Bedroom	Non-Residential Gallons Per Day Per Square Foot	Percolation Rate for Sizing Mantle for Illinois Raised Filter Bed
>66	Very Rapid [2] Greater than 20, 2 foot [4] to 4 foot separation	1,2,3,4,5	Sand and Gravel, Coarse Sand	25 [2]	N/A [2]	N/A [2]	N/A [2]	N/A [2]	10 min/in
60-65		2,3,4,5							
54-59		3,4,5							
24-53		4,5							
12-23		5							
>66	Rapid 6 to 20, 2 foot [4] to 4 foot separation	1,2,3,4,5	Loamy Coarse Sand, Sand	25	0.8	10	200	1.00	10 min/in
60-65		2,3,4,5							
54-59		3,4,5							
24-53		4,5							
12-23		5							
>54	Mod Rapid 2 to 6, 2 foot [4] to 3 foot separation	1,2,3,4,5	Fine Sand, Gravelly Loam, Gravelly Sandy Loam, Sandy Loam, Loamy Fine Sand	20	0.6	8	275	0.80	30 min/in
48-53		2,3,4,5							
42-47		3,4,5							
24-41		4,5							
12-23		5							
≥ 42	Upper Moderate 1.0 to 2.0 18 inch [3] to 2 foot separation	1,2,3,4,5	Very Fine Sandy Loam, Loam Very Fine Sand, Silt Loam, Loam, Sandy Clay Loam, Silty Clay Loam, Clay Loam	15	0.4	6	350	0.70	60 min/in
36-41		2,3,4,5							
30-35		3,4,5							
18-29		4,5							
12-17		5							
≥ 42	Lower Moderate .6 to 1.0 18 inch [3] to 2 foot separation	1,2,3,4,5	Clay Loam, Silty Clay Loam, Silt Loam	15	0.4	4	480	0.50	100 min/in
36-41		2,3,4,5							
30-35		3,4,5							
18-29		4,5							
12-17		5							
≥ 42	Mod Slow [5] .2 to .6 18 inch [3] to 2 foot separation	1,2,3,4,5	Silty Clay Loam, Clay Loam, Silty Clay, Clay (Dense Loam Tills)	10	0.2	3	700	0.30	125 min/in
36-41		2,3,4,5							
30-35		3,4,5							
18-29		4,5							
12-17		5							

NOTES CORRESPONDING TO TABLE 1

1. Required separation is measured from the bottom of trench. When a less permeable soil layer is located less than 24 inches in moderate soils, less than 36 inches in moderately rapid soils, or less than 48 inches in rapid soils, from the bottom of trench; the seepage system shall be sized at the more limiting permeability.

2. Not suitable for development. A variance will be considered when demonstrated that treatment will reduce the groundwater Nitrate levels to less than ten (10) milligrams per liter leaving the property, or the denisty of domestic wastewater disposal is less than or equal to 1 per 1.5 acres, and the effluent meets the requirements of NSF Standard 40.

3. The required separation from bottom of trench to the limiting layer (i.e. seasonal high groundwater, bedrock) can be reduced to 18 inches in moderate soils when a type 4 system is used, and when the limiting layer is 18-23 inches from the natural soil surface. Refer to columns 1 and 3 in Table I.

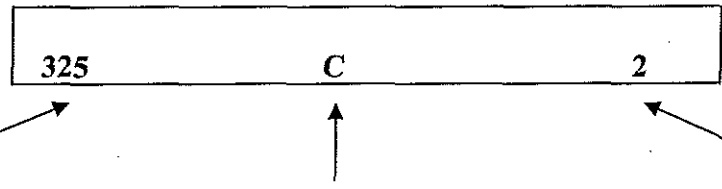
4. The required separation from bottom of trench to the limiting layer (i.e. seasonal high groundwater, bedrock) can be reduced to 24 inches when a type 4 or type 5 system is used and when the limiting layer is 24 - 53 inches into grade, and with treatment capacity to reduce groundwater Nitrate levels to less than ten (10) milligrams per liter leaving the property.

5. Systems must be pressurized utilizing duplex pumps alternating to each half of the seepage field.

TABLE II
LIST OF SOIL MAPPING UNITS IN McHENRY COUNTY

The following list show the soil numbers and names of the soil mapping units shown on the Official McHenry County Soil Maps.

For general information, the following example is noted:



SOIL TYPE

SLOPE FACTOR:

A	Nearly level
B	Gently sloping
C	Moderately sloping
D	Strongly sloping
E	Moderately steep
F	Steep

EROSION FACTOR:

No number: 75% - 100% of the original topsoil remains.

2 – Moderate Erosion: 50% - 75% of the original topsoil remains.

3 – Severe Erosion: <50% of the original topsoil remains.

TABLE III
McHENRY COUNTY SUBSET
NUMERICAL LEGEND

SYMBOL	MAP UNIT NAME	ORGANIC SOILS	WET SOILS	CLAYEY SOILS	SHALLOW TO BEDROCK	SHALLOW TO LOAM TILL & SILT LOAM	STEEP SOIL	SAND OR SAND & GRAVEL	NON-CRITICAL SOIL
W	Water								
59A	Lisbon silt loam, 0 to 2 % slopes		X			X			
59B	Lisbon silt loam, 2 to 4% slopes		X			X			
60C2	La Rose loam, 5 to 10% slopes, eroded					X			
62A	Herbert silt loam, 0 to 2% slopes		X			X			
67A	Harpster silty clay loam, 0 to 2% slopes		X						
87A	Dickinson sandy loam, 0 to 2% slopes							X	
87B	Dickinson sandy loam, 2 to 5% slopes							X	
87B2	Dickinson sandy loam, 2 to 5% slopes, eroded							X	
100A	Palms muck, 0 to 2% slopes	X	X						
103A	Houghton muck, 0 to 2% slopes	X	X						
104A	Virgil silt loam, 0 to 2% slopes		X						
134A	Camden silt loam, 0 to 2% slopes								X
134B	Camden silt loam, 2 to 5%								X
146A	Elliott silt loam, 0 to 2% slopes		X	X					
146B	Elliott silt loam, 2 to 4% slopes		X	X					
148A	Proctor silt loam, 0 to 2% slopes								X
148B	Proctor silt loam, 2 to 5% slopes								X
149A	Brenton silt loam, 0 to 2% slopes		X						
152A	Drummer silty clay loam, 0 to 2% slopes		X						
153A	Pella silty clay loam, 0 to 2% slopes		X						
153A+	Pella silt loam, 0 to 2% slopes, overwash		X						
172A	Hoopeston sandy loam, 0 to 2% slopes		X					X	
189A	Martinton silt loam, 0 to 2% slopes		X	X					
197A	Troxel silt loam, 0 to 2% slopes								X
198A	Elburn silt loam, 0 to 2% slopes		X						
206A	Thorp silt loam, 0 to 2% slopes		X						
210A	Lena muck, 0 to 2% slopes	X	X						
219A	Millbrook silt loam, 0 to 2% slopes		X						
221B	Parr silt loam, 2 to 5% slopes					X			
221C2	Parr silt loam, 5 to 10% slopes, eroded					X			
223B	Varna silt loam, 2 to 4% slopes			X					
223C2	Varna silt loam, 4 to 6% slopes, eroded			X					
223D2	Varna silt loam, 6 to 12% slopes, eroded			X					
228B	Nappanee silt loam, 2 to 4% slopes		X	X					

SYMBOL	MAP UNIT NAME	ORGANIC SOILS	WET SOILS	CLAYEY SOILS	SHALLOW TO BEDROCK	SHALLOW TO LOAM TIL & SILT LOAM	STEEP SOIL	SAND OR SAND & GRAVEL	NON-CRITICAL SOIL
232A	Ashkum silty clay loam, 0 to 2% slopes		X	X					
290A	Warsaw loam, 0 to 2% slopes							X	
290B	Warsaw loam, 2 to 4% slopes							X	
290C2	Warsaw loam, 4 to 6% slopes, eroded							X	
297A	Ringwood silt loam, 0 to 2% slopes								X
297B	Ringwood silt loam, 2 to 4% slopes								X
298B	Beecher silt loam, 2 to 4% slopes		X	X					
310B	McHenry silt loam, 2 to 4% slopes								X
318A	Lorenzo loam, 0 to 2% slopes							X	
318B	Lorenzo loam, 2 to 4% slopes							X	
318C2	Lorenzo loam, 4 to 6% slopes, eroded							X	
318D2	Lorenzo loam, 6 to 12%, eroded							X	
323B	Casco loam, 2 to 4% slopes							X	
323C2	Casco loam, 4 to 6% slopes, eroded							X	
323C3	Casco clay loam, 4 to 6% slopes, severely eroded							X	
323D2	Casco loam, 6 to 12% slopes, eroded							X	
323D3	Casco clay loam, 6 to 12% slopes, severely eroded							X	
325A	Dresden silt loam, 0 to 2% slopes							X	
325B	Dresden silt loam, 2 to 4% slopes							X	
327A	Fox silt loam, 0 to 2% slopes							X	
327B	Fox silt loam, 2 to 4% slopes							X	
327C2	Fox silt loam, 4 to 6% slopes, eroded							X	
327D2	Fox loam, 6 to 12% slopes, eroded							X	
329A	Will loam, 0 to 2% slopes		X					X	
330A	Peotone silty clay loam, 0 to 2% slopes		X	X					
343A	Kane silt loam, 0 to 2% slopes		X					X	
344A	Harvard silt loam, 0 to 2% slopes								X
344B	Harvard silt loam, 2 to 5% slopes								X
361B	Kidder loam, 2 to 4% slopes								X
361C	Kidder loam, 4 to 6% slopes								X
361C2	Kidder loam, 4 to 6% slopes, eroded								X
361C3	Kidder clay loam, 4 to 6%, severely eroded								X
361D2	Kidder loam, 6 to 12% slopes, eroded								X
361D3	Kidder clay loam, 6 to 12% slopes, severely eroded								X
361E	Kidder loam, 12 to 20% slopes						X		
361E2	Kidder loam, 12 to 20% slopes, eroded						X		
361F	Kidder silt loam, 20 to 30% slopes						X		
363B	Griswold loam, 2 to 4% slopes								X
363C2	Griswold loam, 4 to 6% slopes, eroded								X
363D2	Griswold loam, 6 to 12% slopes, eroded								X
369A	Waupecan silt loam, 0 to 2% slopes							X	

SYMBOL	MAP UNIT NAME	ORGANIC SOILS	WET SOILS	CLAYEY SOILS	SHALLOW TO BEDROCK	SHALLOW TO LOAM TILL & SILT LOAM	STEEP SOIL	SAND OR SAND & GRAVEL	NON-CRITICAL SOIL
369B	Waupecan silt loam, 2 to 4% slopes							X	
379A	Dakota loam, 0 to 2% slopes							X	
379B	Dakota loam, 2 to 4% slopes							X	
488A	Hooppole loam, 0 to 2% slopes		X					X	
503B	Rockton silt loam, 2 to 6% slopes				X				
512A	Danabrook silt loam, 0 to 2% slopes					X			
512B	Danabrook silt loam, 2 to 5% slopes					X			
523A	Dunham silty clay loam, 0 to 2% slopes		X					X	
526A	Grundelein silt loam, 2 to 4% slopes		X					X	
527B	Kidami silt loam, 2 to 4% slopes					X			
527C	Kidami silt loam, 4 to 6% slopes					X			
527C2	Kidami loam, 4 to 6% slopes, eroded					X			
527D	Kidami silt loam, 6 to 12% slopes					X			
527D2	Kidami loam, 6 to 12% slopes, eroded					X			
527D3	Kidami clay loam, 6 to 12% slopes, severely eroded					X			
528A	Lahoguess loam, 0 to 2% slopes		X					X	
529A	Selmass loam, 0 to 2% slopes		X					X	
530B	Ozaukee silt loam, 2 to 4% slopes			X					
530C2	Ozaukee silt loam, 4 to 6% slopes, eroded			X					
530C3	Ozaukee silty clay loam, 4 to 6%, slopes severely eroded			X					
530D2	Ozaukee silt loam, 6 to 12% slopes, eroded			X					
530D3	Ozaukee silty clay loam, 6 to 12% slopes, severely eroded			X					
530E	Ozaukee silt loam, 12 to 20% slopes			X			X		
543B	Piscasaw silt loam, 2 to 4% slopes								X
544A	Torox silt loam, 0 to 2% slopes		X						
545A	Windere silt loam, 0 to 2% slopes								X
545B	Windere silt loam, 2 to 4% slopes								X
557A	Millstream silt loam, 0 to 2% slopes		X					X	
570A	Martinsville silt loam, 0 to 2% slopes								X
570B	Martinsville silt loam, 2 to 4% slopes								X
570C2	Martinsville silt loam, 4 to 6% slopes, eroded								X
618E	Senachwine silt loam, 12 to 20% slopes					X	X		
618F	Senachwine silt loam, 20 to 30% slopes					X	X		
624B	Caprell silt loam, 2 to 4% slopes								X
624C2	Caprell silt loam, 4 to 6% slopes, eroded								X
624D2	Caprell silt loam, 6 to 12% slopes, eroded								X
624E	Caprell silt loam, 12 to 20% slopes						X		
625A	Geryune silt loam, 0 to 2% slopes								X
625B	Geryune silt loam, 2 to 5% slopes								X

SYMBOL	MAP UNIT NAME	ORGANIC SOILS	WET SOILS	CLAYEY SOILS	SHALLOW TO BEDROCK	SHALLOW TO LOAM TILL & SILT LOAM	STEEP SOIL	SAND OR SAND & GRAVEL	NON-CRITICAL SOIL
626A	Kish loam, 0 to 2% slopes		X						
635A	Lismod silt loam, 0 to 2% slopes		X						
635B	Lismod silt loam, 2 to 4% slopes		X						
636B	Parmod silt loam, 2 to 5% slopes								X
656B	Octagon silt loam, 2 to 4% slopes					X			
656C2	Octogon silt loam, 4 to 6% slopes, eroded					X			
791A	Rush silt loam, 0 to 2% slopes							X	
791B	Rush silt loam, 2 to 4% slopes							X	
791C2	Rush silt loam, 4 to 6% slopes, eroded							X	
792A	Bowes silt loam, 0 to 2% slopes							X	
792B	Bowes silt loam, 2 to 4% slopes							X	
865	Pits, gravel							X	
969E2	Casco-Rodman complex, 12 to 20% slopes, eroded						X	X	
969F	Casco-Rodman complex, 20 to 30% slopes						X	X	
1067A	Harpster silt loam, 0 to 2% slopes, undrained		X						
1082A	*Millington silt loam, 0 to 2% slopes, undrained, occasionally flooded*		X						
1100A	Palms muck, 0 to 2% slopes, undrained	X	X						
1103A	Houghton muck, 0 to 2% slopes, undrained	X	X						
1153A	*Pella silty clay loam, 0 to 2% slopes, undrained*		X						
1206A	Thorp silt loam, 0 to 2% slopes, undrained		X						
1210A	Lena muck, 0 to 2% slopes, undrained	X	X						
1330A	Peotone silty clay loam, 0 to 2% slopes, undrained		X	X					
1488A	Hooppole loam, 0 to 2% slopes, undrained		X					X	
1529A	Selmass loam, 0 to 2% slopes, undrained		X					X	
1626A	Kish loam, 0 to 2% slopes, undrained		X						
1776A	Comfrey loam, 0 to 2% slopes, undrained occasionally flooded		X						
4103A	Houghton muck, 0 to 2% slopes, ponded	X	X						
8082A	Millington silt loam, 0 to 2% slopes, occasionally flooded		X						
8776A	Comfrey loam, 0 to 2% slopes, occasionally flooded		X						

SOIL OVERLAY DISTRICTS

NON-CRITICAL SOIL OVERLAY DISTRICT

A) Description

This district includes all lands designated on the official McHenry County Soil maps by the mapping symbols:

134A	Camden Silt Loam, 0 to 2% slopes
134B	Camden Silt Loam, 2 to 5% slopes
148A	Proctor Silt Loam, 0 to 2% slopes
148B	Proctor Silt Loam, 2 to 5% slopes
197A	Troxel Silt Loam, 0 to 2% slopes
297A	Ringwood Silt Loam, 0 to 2% slopes
297B	Ringwood Silt Loam, 2 to 4% slopes
310B	McHenry Silt Loam, 2 to 4% slopes
344A	Harvard Silt Loam, 0 to 2% slopes
344B	Harvard Silt Loam, 2 to 5% slopes
361B	Kidder Loam, 2 to 4% slopes
361C	Kidder Loam, 4 to 6% slopes
361C2	Kidder Loam, 4 to 6% slopes, eroded
361C3	Kidder Clay Loam, 4 to 6% slopes, severely eroded
361D2	Kidder Loam, 6 to 12% slopes,eroded
361D3	Kidder Clay Loam, 6 to 12% slopes, severely eroded
363B	Griswold Loam, 2 to 4% slopes
363C2	Griswold Loam, 4 to 6% slopes, eroded
363D2	Griswold Loam, 6 to 12% slopes, eroded
543B	Piscasaw Silt Loam, 2 to 4% slopes
545A	Windere Silt Loam, 0 to 2% slopes
545B	Windere Silt Loam, 2 to 4% slopes
570A	Martinsville Silt Loam,0 to 2% slopes
570B	Martinsville Silt Loam,2 to 4% slopes
570C2	Martinsville Silt Loam, 4 to 6% slopes, eroded
624B	Caprell Silt Loam, 2 to 4% slopes
624C2	Caprell Silt Loam, 4 to 6%slopes, eroded
624D2	Caprell Silt Loam, 6 to 12% slopes, eroded
625A	Geryune Silt Loam, 0 to 2% slopes
625B	Geryune Silt Loam, 2 to 5% slopes
636B	Parmod Silt Loam, 2 to5% slopes

All soils designated by the preceding symbols have varying suitability characteristics. Because of the nature of these physical and chemical properties and their position in the landscape they are not likely to have any adverse effects on most land uses. Their porosity, depth to water table, and supporting capabilities are such that they can be utilized with a minimum of problems or risks without requiring special planning and design.

B) Permitted Uses

Any use permitted by the Primary Use District, provided that the requirements of Article X of the McHenry County Public Health Ordinance and the McHenry County Zoning Ordinance are met. If the proposed use is located in a flood hazard area as described in Section 409 of the McHenry County Zoning Ordinance, then the requirements of the McHenry County Floodplain Ordinance will apply.

C) Septic Filter Field Use Rating

The following table lists the typical depth to seasonal high groundwater and estimated septic filter field rating for the Non-Critical Soil Overlay District.

NON-CRITICAL SOIL OVERLAY DISTRICT

MAP SYMBOL & SOIL NAME	SEPTIC FILTER FIELD USE RATING	DEPTH TO HIGH SEASONAL WATER TABLE
134A – Camden Silt Loam	Slight	More than 5 feet
134B - Camden Silt Loam	Slight	More than 5 feet
148A - Proctor Silt Loam	Slight	More than 5 feet
148B - Proctor Silt Loam	Slight	More than 5 feet
197A – Troxel Silt Loam	Moderate	More than 5 feet
297A – Ringwood Silt Loam	Slight	More than 5 feet
297B – Ringwood Silt Loam	Slight	More than 5 feet
310B – McHenry Silt Loam	Slight	More than 5 feet
344A – Harvard Silt Loam	Slight	More than 5 feet
344B – Harvard Silt Loam	Slight	More than 5 feet
361B – Kidder Loam	Slight	More than 5 feet
361C – Kidder Loam	Slight	More than 5 feet
361C2 – Kidder Loam	Slight	More than 5 feet
361C3 – Kidder Clay Loam	Slight	More than 5 feet
361D2 – Kidder Loam	Moderate	More than 5 feet
361D3 – Kidder Clay Loam	Moderate	More than 5 feet
363B – Griswold Loam	Slight	More than 5 feet
363C2 – Griswold Loam	Slight	More than 5 feet
363D2 – Griswold Loam	Slight	More than 5 feet
543B – Piscasaw Silt Loam	Slight	More than 5 feet
545A – Windere Silt Loam	Severe	2 to 3 ½ feet
545B – Windere Silt Loam	Severe	2 to 3 ½ feet
570A – Martinsville Silt Loam	Slight	More than 5 feet
570B – Martinsville Silt Loam	Slight	More than 5 feet
570C2 – Martinsville Silt Loam	Slight	More than 5 feet
624B – Caprell Silt Loam	Moderate	More than 5 feet
624C2 – Caprell Silt Loam	Moderate	More than 5 feet
624D2 – Caprell Silt Loam	Slight	More than 5 feet
625A – Geryune Silt Loam	Severe	2 to 3 ½ feet
625B – Geryune Silt Loam	Severe	2 to 3 ½ feet
636B – Parmod Silt Loam	Moderate	More than 5 feet

SANDY OR GRAVELLY SOIL OVERLAY DISTRICT

A) Description

This district includes all lands designated on the official McHenry County Soil maps by the mapping symbols:

87A	Dickinson Sandy Loam, 0 to 2% slopes
87B	Dickinson Sandy Loam, 2 to 5% slopes
87B2	Dickinson Sandy Loam, 2 to 5% slopes eroded
172A	Hoopeston Sandy Loam, 0 to 2% slopes
290A	Warsaw Loam, 0 to 2% slopes
290B	Warsaw Loam, 2 to 4% slopes
290C2	Warsaw Loam, 4 to 6% slopes, eroded
318A	Lorenzo Loam, 0 to 2% slopes
318B	Lorenzo Loam, 2 to 4% slopes
318C2	Lorenzo Loam, 4 to 6% slopes eroded
318D2	Lorenzo Loam, 6 to 12% slopes, eroded
323B	Casco Loam, 2 to 4% slopes
323C2	Casco Loam, 4 to 6% slopes, eroded
323C3	Casco Clay Loam, 4 to 6% slopes, severely eroded
323D2	Casco Loam, 6 to 12% slopes, eroded
323D3	Casco Clay Loam, 6 to 12% slopes, severely eroded
325A	Dresden Silt Loam, 0 to 2% slopes
325B	Dresden Silt Loam, 2 to 4% slopes
327A	Fox Silt Loam, 0 to 2% slopes
327B	Fox Silt Loam, 2 to 4% slopes
327C2	Fox Silt Loam, 4 to 6% slopes, eroded
327D2	Fox Loam, 6 to 12% slopes, eroded
329A	Will Loam, 0 to 2% slopes
343A	Kane Silt Loam, 0 to 2% slopes
369A	Waupecan Silt Loam, 0 to 2% slopes
369B	Waupecan Silt Loam, 2 to 4% slopes
379A	Dakota Loam, 0 to 2% slopes
379B	Dakota Loam, 2 to 4% slopes
488A	Hooppole Loam, 0 to 2% slopes
523A	Dunham Silty Clay Loam, 0 to 2% slopes
526A	Grundelein Silt Loam, 2 to 4% slopes
528A	Lahoguess Loam, 0 to 2% slopes
529A	Selmass Loam, 0 to 2% slopes
557A	Millstream Silt Loam, 0 to 2% slopes
791A	Rush Silt Loam, 0 to 2% slopes
791B	Rush Silt Loam, 2 to 4% slopes
791C2	Rush Silt Loam, 4 to 6% slopes, eroded
792A	Bowes Silt Loam, 0 to 2% slopes
792B	Bowes Silt Loam, 2 to 4% slopes
865	Pits, Gravel
969E2	Casco-Rodman Complex, 12 to 20% slopes, eroded
969F	Casco-Rodman Complex, 20 to 30% slopes
1488A	Hooppole Loam, 0 to 2% slopes, undrained
1529A	Selmass Loam, 0 to 2% slopes, undrained

All soils designated by these symbols have developed in sandy or sandy and gravelly materials. Water moves very rapidly through these materials and if contaminated may cause pollution of the groundwater. Because of their very rapid and rapid permeability these soils tend to be droughty and to dry out quickly at the surface.

B) Permitted Uses

Any use permitted by the Primary Use District, provided that the requirements of Article X of the McHenry County Public Health Ordinance and the McHenry County Zoning Ordinance are met. If the proposed use is located in a flood hazard area as described in Section 409 of the McHenry County Zoning Ordinance, then the requirements of the McHenry County Floodplain Ordinance will apply.

C) Septic Filter Field Use Rating

All soils designated as being in the Sandy or Gravelly Soil Overlay District when used for subsurface wastewater disposal systems have the potential for pollution of the County's groundwater. A site-specific engineering design which shows how this limitation can be overcome is required prior to approval by the County.

Soil materials with rapid to very rapid permeability, particularly coarse sand and gravels, represent severe limitations because of the potential for groundwater contamination, where numerous systems are developed along the same groundwater flow path(s). Reduced density or additional wastewater treatment of on-site systems in such situations is the common control technique. Special consideration shall be given to the hydrogeology of the area under consideration and the existing as well as potential future density of development in the area.

SANDY OR GRAVELLY SOIL OVERLAY DISTRICT

MAP SYMBOL & SOIL NAME	SEPTIC FILTER FIELD USE RATING	GROUNDWATER POLLUTION POTENTIAL	DEPTH TO HIGH SEASONAL WATER TABLE
87A – Dickinson Sandy Loam	Slight	Moderate	More than 5 feet
87B – Dickinson Sandy Loam	Slight	Moderate	More than 5 feet
87B2 – Dickinson Sandy Loam	Slight	Moderate	More than 5 feet
172A – Hoopeston Sandy Loam	Severe/Very Severe	Moderate	1 to 2 ½ feet
290A – Warsaw Loam	Slight	High	More than 5 feet
290B – Warsaw Loam	Slight	High	More than 5 feet
290C2 – Warsaw Loam	Slight	High	More than 5 feet
318A – Lorenzo Loam	Slight	Very High	More than 5 feet
318B – Lorenzo Loam	Slight	Very High	More than 5 feet
318C2 – Lorenzo Loam	Slight	Very High	More than 5 feet
318D2 – Lorenzo Loam	Slight	Very High	More than 5 feet
323B – Casco Loam	Slight	Very High	More than 5 feet
323C2 – Casco Loam	Slight	Very High	More than 5 feet
323C3 – Casco Clay Loam	Slight	Very High	More than 5 feet
323D2 – Casco Loam	Moderate	Very High	More than 5 feet
323D3 – Casco Clay Loam	Moderate	Very High	More than 5 feet
325A – Dresden Silt Loam	Slight	High	More than 5 feet
325B – Dresden Silt Loam	Slight	High	More than 5 feet
327A – Fox Silt Loam	Slight	High	More than 5 feet
327B – Fox Silt Loam	Slight	High	More than 5 feet
327C2 – Fox Silt Loam	Slight	High	More than 5 feet
327D2 – Fox Loam	Moderate	High	More than 5 feet
329A - Will Loam	Very Severe	Very High	Less than 1 ½ feet
343A – Kane Silt Loam	Severe/Very Severe	Very High	1 to 2 ½ feet
369A – Waupecan Silt Loam	Slight	High	More than 5 feet
369B – Waupecan Silt Loam	Slight	High	More than 5 feet
379A – Dakota Loam	Slight	Moderate	More than 5 feet
379B – Dakota Loam	Slight	Moderate	More than 5 feet
488A – Hooppole Loam	Very Severe	Moderate	Less than 1 foot
523A – Dunham Silty Clay Loam	Severe/Very Severe	High	1 to 1 ½ feet
526A – Grundelein Silt Loam	Severe/Very Severe	High	Less than 2 ½ feet
528A – Lahoguess Loam	Severe/Very Severe	Moderate	1 to 2 ½ feet
529A – Selmass Loam	Severe/Very Severe	Moderate	Less than 1 ½ feet
557A – Millstream Silt Loam	Severe/Very Severe	High	1 to 2 ½ feet
791A – Rush Silt Loam	Moderate	High	More than 5 feet
791B – Rush Silt Loam	Moderate	High	More than 5 feet
791C2 – Rush Silt Loam	Moderate	High	More than 5 feet

MAP SYMBOL & SOIL NAME	SEPTIC FILTER FIELD USE RATING	GROUNDWATER POLLUTION POTENTIAL	DEPTH TO HIGH SEASONAL WATER TABLE
792A – Bowes Silt Loam	Moderate	High	More than 5 feet
792B – Bowes Silt Loam	Moderate	High	More than 5 feet
865 – Pits, Gravel	Very Severe	Very High	Varies
969E2 – Casco-Rodman Complex	Moderate	Very High	More than 5 feet
969F – Casco-Rodman Complex	Moderate	Very High	More than 5 feet
1488A – Hooppole Loam	Very Severe	High	Less than 1 foot
1529A – Selmass Loam	Very Severe	High	Less than 1 foot

STEEP SOIL OVERLY DISTRICT

A) Description

This district includes all lands designated on the official McHenry County Soil maps by the mapping symbols:

361E	Kidder Loam, 12 to 20% slopes
361E2	Kidder Loam, 12 to 20% slopes, eroded
361F	Kidder Silt Loam, 20 to 30% slopes
530E	Ozaukee Silt Loam, 12 to 20% slopes
618E	Senachwine Silt Loam, 12 to 20%
618F	Senachwine Silt Loam, 20 to 30% slopes
624E	Caprell Silt Loam, 12 to 20% slopes slopes
969E2	Casco-Rodman Complex, 12 to 20% slopes, eroded
969F	Casco-Rodman Complex, 20 to 30% slopes

B) Permitted Uses

Any use permitted by the Primary Use District, provided that the requirements of Article X of the McHenry County Public Health Ordinance and the McHenry County Zoning Ordinance are met. If the proposed use is located in a flood hazard area as described in Section 409 of the McHenry County Zoning Ordinance, then the requirements of the McHenry County Floodplain Ordinance will apply.

C) Septic Filter Field Use Rating

All soils designated as being in the Steep Soil Overlay District when used for subsurface waste disposal systems shall have a site – specific engineering design which takes into consideration the slopes and the soil permeability. Slopes of more than 25% will not be acceptable for seepage field sites and the seepage area shall not be located closer than 20 feet to the crest of the slope.

Critical slopes are those areas where the land slope, expressed in percentages, is too steep to permit soil absorption system construction and permits down-slope surfacing of the effluent. The critical slope percentage is dependent on the permeability range of the soil because where rates are faster, more effluent travels vertically and allowable slopes can be steeper.

PERMEABILITY RANGE INCHES PER HOUR	CRITICAL SLOPE
Greater than 6 inches	Over 25%
2 inches – 6 inches	Over 20%
Less than 2 inches	Over 15%

The following table lists the typical depth to seasonal high groundwater and the estimated septic filter field use rating and groundwater pollution potential for soils in the Steep Soil Overlay District.

STEEP SOIL OVERLAY DISTRICT

MAP SYMBOL & SOIL NAME	SEPTIC FILTER FIELD USE RATING	DEPTH TO HIGH SEASONAL WATER TABLE
361E – Kidder Loam	Moderate/Severe	More than 5 feet
361E2 – Kidder Loam	Moderate/Severe	More than 5 feet
361F – Kidder Silt Loam	Moderate/Severe	More than 5 feet
530E – Ozaukee Silt Loam	Severe	2 to 3 ½ feet
618E – Senachwine Silt Loam	Moderate/Severe	More than 5 feet
618F – Senachwine Silt Loam	Moderate/Severe	More than 5 feet
624E – Caprell Silt Loam	Moderate/Severe	More than 5 feet
969E2 – Casco-Rodman Complex	Moderate/Severe	More than 5 feet
969F – Casco-Rodman Complex	Moderate/Severe	More than 5 feet

NOTE: Depending on soil permeability, slopes ranging from 15% to 25% or greater are unsuitable for septic systems. In general, E slopes are severe – F slopes are very severe.

SHALLOW OR MODERATELY DEEP TO LOAM AND SILT LOAM TILL SOIL OVERLAY DISTRICT

A) Description

This District includes all lands designated on the official McHenry County Soil Maps by the mapping symbols:

59A	Lisbon Silt Loam, 0 to 2% slopes
59B	Lisbon Silt Loam, 2 to 4% slopes
60C2	La Rose Loam, 5 to 10% slopes, eroded
62A	Herbert Silt Loam, 0 to 2% slopes
221B	Parr Silt Loam, 2 to 5% slopes
221C2	Parr Silt Loam, 5 to 10% slopes, eroded
512A	Danabrook Silt Loam, 0 to 2% slopes
512B	Danabrook Silt Loam, 2 to 5% slopes
527B	Kidami Silt Loam, 2 to 4% slopes
527C	Kidami Silt Loam, 4 to 6% slopes
527C2	Kidami Loam, 4 to 6% slopes, eroded
527D	Kidami Silt Loam, 6 to 12% slopes
527D2	Kidami Loam, 6 to 12% slopes, eroded
527D3	Kidami Clay Loam, 6 to 12% slopes, severely eroded
618E	Senachwine Silt Loam, 12 to 20% slopes
618F	Senachwine Silt Loam, 20 to 30% slopes
656B	Octagon Silt Loam, 2 to 4% slopes
656C2	Octagon Silt Loam, 4 to 6% slopes, eroded

All soils designated by the above symbols have varying suitability characteristics. These soils may have high seasonable water table and/or moderately slow to slow permeability. This is because of their relation to the slowly permeable till. Site specific designs using shallow trenches or elevated fields may be necessary. In some situations these soils may be unsuitable for on-site wastewater disposal systems.

B) Permitted Uses

Any use permitted by the Primary Use District, provided that the requirements of Article X of the McHenry County Public Health Ordinance and the McHenry County Zoning Ordinance are met. If the proposed use is located in a flood hazard area as described in Section 409 of the McHenry County Zoning Ordinance, then the requirements of the McHenry County Floodplain Ordinance will apply.

C) Septic Filter Field Use Rating

Some soils designated as being in the shallow to till soil overlay district could be unsuitable. Site-specific soil borings will show the limitations of the property. Site-specific engineering would be

necessary if the limitations can be overcome. In some situations these limitations cannot be overcome.

The following soils have been classified based on their textural profile and permeability. There may be other limiting factors such as shallow seasonal groundwater, bedrock or till that will change the septic filter rating to severe or very severe.

The following table lists the estimated depth of seasonal high groundwater and estimated septic filter field use rating for soil in the Shallow or Moderately Deep to Loam and Silt Loam Till Soil Overly District.

SHALLOW OR MODERATELY DEEP TO LOAM AND SILT LOAM TILL SOIL OVERLAY DISTRICT

MAP SYMBOL & SOIL NAME	SEPTIC FILTER FIELD USE RATING	DEPTH TO HIGH SEASONAL WATER TABLE
59A – Lisbon Silt Loam	Severe/Very Severe	1 to 2 ½ feet
59B – Lisbon Silt Loam	Severe/Very Severe	1 to 2 ½ feet
60C2 – La Rose Loam	Moderate/Severe	More than 5 feet
62A – Herbert Silt Loam	Severe/Very Severe	1 to 2 ½ feet
221B – Parr Silt Loam	Severe	2 to 3 ½ feet
221C2 – Parr Silt Loam	Moderate/Severe	2 to 3 ½ feet
512A - Danabrook Silt Loam	Moderate/Severe	2 to 3 ½ feet
512B – Danabrook Silt Loam	Moderate/Severe	2 to 3 ½ feet
527B – Kidami Silt Loam	Moderate/Severe	2 to 3 ½ feet
527C – Kidami Silt Loam	Moderate/Severe	2 to 3 ½ feet
527C2 – Kidami Loam	Moderate/Severe	2 to 3 ½ feet
527D – Kidami Silt Loam	Moderate/Severe	2 to 3 ½ feet
527D2 – Kidami Loam	Moderate/Severe	2 to 3 ½ feet
527D3 – Kidami Clay Loam	Moderate/Severe	2 to 3 ½ feet
618E – Senachwine Silt Loam	Moderate/Severe	More than 5 feet
618F – Senachwine Silt Loam	Moderate/Severe	More than 5 feet
656B – Octagon Silt Loam	Moderate/Severe	2 to 3 ½ feet
656C2 – Octagon Silt Loam	Moderate/Severe	2 to 3 ½ feet

MODERATELY DEEP TO BEDROCK SOIL OVERLAY DISTRICT

A) Description

This district includes all land designated on the official McHenry County Soil maps by the mapping symbols:

503B Rockton Silt Loam, 2 to 6% slopes

All soils designated by these symbols have developed over limestone bedrock and consist of a relatively thin layer of soil material.

B) Permitted Uses

Any use permitted by the Primary Use District, provided that the requirements of Article X of the McHenry County Public Health Ordinance and the McHenry County Zoning Ordinance are met. If the proposed use is located in a flood hazard area as described in Section 409 of the McHenry County Zoning Ordinance, then the requirements of the McHenry County Floodplain Ordinance will apply.

C) Septic Filter Field Use Rating

All soils designated as being in the Moderately Deep to Bedrock Overlay District, due to the creviced Nature of the bedrock formation located under the shallow soils, create a great potential for pollution of the County's groundwater if seepage fields are constructed on them without site-specific modification of the seepage field area. Prior to installation of any septic system in these soils, a site-specific engineering design must be submitted and approved.

The following table lists the estimated depth to seasonal high groundwater and the estimated septic filter field us rating in the Moderately Deep to Bedrock Soil Overly District.

MODERATELY DEEP TO BEDROCK SOIL OVERLAY DISTRICT

MAP SYMBOL & SOIL NAME	SEPTIC FILTER FIELD USE RATING	DEPTH TO HIGH SEASONAL WATER TABLE
503B – Rockton Silt Loam	Severe	More than 5 feet

NOTE: Depending on depth to bedrock, these soils can be unsuitable for septic systems.

CLAYEY SOIL OVERLAY DISTRICT

A) Description

This District includes all lands designated on the official McHenry County Soil maps by the mapping symbols:

146A Elliott Silt Loam, 0 to 2% slopes
146B Elliott Silt Loam, 2 to 4% slopes
189A Martinton Silt Loam, 0 to 2% slopes
223B Varna Silt Loam, 2 to 4% slopes
223C2 Varna Silt Loam, 4 to 6% slopes, eroded
223D2 Varna Silt Loam, 6 to 12% slopes, eroded
228B Nappanee Silt Loam, 2 to 4% slopes
232A Ashkum Silty Clay Loam, 0 to 2% slopes
298B Beecher Silt Loam, 2 to 4 % slopes
330A Peotone Silty Clay Loam, 0 to 2% slopes
530B Ozaukee Silt Loam, 2 to 4% slopes
530C2 Ozaukee Silt Loam, 4 to 6% slopes, eroded
530C3 Ozaukee Silty Clay Loam, 4 to 6%, severely eroded
530D2 Ozaukee Silt Loam, 6 to 12% slopes, eroded
530D3 Ozaukee Silty Clay Loam, 6 to 12% slopes, severely eroded
530E Ozaukee Silt Loam, 12 to 20% slopes
1330A Peotone Silty Clay Loam, 0 to 2% slopes, undrained

All soils designated by these symbols have very high clay content which tends to impede the horizontal or vertical movement of water through them. These soils are slowly or very slowly permeable, are highly susceptible to erosion and are slow to dry out in the spring.

B) Permitted Uses

Any use permitted by the Primary Use District, provided that the requirements of Article X of the McHenry County Public Health Ordinance and the McHenry County Zoning Ordinance are met. If the proposed use is located in a flood hazard area as described in Section 409 of the McHenry County Zoning Ordinance, then the requirements of the McHenry County Floodplain Ordinance will apply.

C) Septic Filter Field Use Rating

All soils designated as clayey have severe or very severe subsurface seepage field limitations. The design and construction should provide for diversion of the maximum amount of surface water run-off away from the seepage field area. These soils are

highly susceptible to erosion and should therefore have provisions made for controlling this problem.

The following table lists the estimated depth to seasonal high groundwater and estimated septic filter field use rating for soils in the Clayey Soil Overlay District.

CLAYEY SOIL OVERLAY DISTRICT

MAP SYMBOL & SOIL NAME	SEPTIC FILTER FIELD USE RATING	DEPTH TO HIGH SEASONAL WATER TABLE
146A – Elliott Silt Loam	Severe/Very Severe	1 to 2 ½ feet
146B – Elliott Silt Loam	Severe/Very Severe	1 to 2 ½ feet
189A – Martinton Silt Loam	Severe/Very Severe	1 to 2 ½ feet
223B – Varna Silt Loam	Severe	2 to 3 ½ feet
223C2 – Varna Silt Loam	Moderate/Severe	2 to 3 ½ feet
223D2 – Varna Silt Loam	Moderate/Severe	2 to 3 ½ feet
228B – Nappanee Silt Loam	Very Severe	1 to 2 feet
232A – Ashkum Silty Clay Loam	Very Severe	Less than 1 foot
298B – Beecher Silt Loam	Severe/Very Severe	1 to 2 ½ feet
330A – Peotone Silty Clay Loam	Very Severe	Less than 1 foot
530B – Ozaukee Silt Loam	Moderate/Severe	2 to 3 ½ feet
530C2 – Ozaukee Silt Loam	Moderate/Severe	2 to 3 ½ feet
530C3 – Ozaukee Silty Clay Loam	Moderate/Severe	2 to 3 ½ feet
530D2 – Ozaukee Silt Loam	Moderate/Severe	2 to 3 ½ feet
530D3 – Ozaukee Silty Clay Loam	Moderate/Severe	2 to 3 ½ feet
530E – Ozaukee Silt Loam	Moderate/Severe	2 to 3 ½ feet
1330A – Peotone Silty Clay Loam	Very Severe	Less than ½ foot

WET SOIL OVERLAY DISTRICT

A) Description

This district includes all lands designated on the official McHenry County Soil maps by the mapping symbols:

59A Lisbon Silt Loam, 0 to 2% slopes
59B Lisbon Silt Loam, 2 to 4% slopes
62A Herbert Silt Loam, 0 to 2% slopes
67A Harpster Silty Clay Loam, 0 to 2% slopes
100A Palms Muck, 0 to 2% slopes
103A Houghton Muck, 0 to 2% slopes
104A Virgil Silt Loam, 0 to 2% slopes
146A Elliott Silt Loam, 0 to 2% slopes
146B Elliott Silt Loam, 2 to 4% slopes
149A Brenton Silt Loam, 0 to 2% slopes
152A Drummer Silty Clay Loam, 0 to 2 slopes
153A Pella Silty Clay Loam, 0 to 2% slopes
153A+ Pella Silt Loam, 0 to 2% slopes, overwash
172A Hoopeston Sandy Loam, 0 to 2% slopes
189A Martinon Silt Loam, 0 to2% slopes
198A Elburn Silt Loam, 0 to 2% slopes
206A Thorp Silt Loam, 0 to 2% slopes
210A Lena Muck, 0 to 2% slopes
219A Millbrook Silt Loam, 0 to 2% slopes
228B Nappanee Silt Loam, 2 to 4% slopes
232A Ashkum Silty Clay Loam, 0 to2% slopes
298B Beecher Silt Loam, 2 to 4% slopes
329A Will Loam, 0 to 2% slopes
330A Peotone Silty Clay Loam, 0 to 2% slopes

343A	Kane Silt Loam, 0 to 2% slopes
488A	Hooppole Loam, 0 to 2% slopes
523A	Dunham Silty Clay Loam, 0 to 2% slopes
526A	Grundelein Silt Loam, 0 to 2% slopes
528A	Lahoguess Loam, 0 to 2% slopes
529A	Selmass Loam, 0 to 2% slopes
544A	Torox Silt Loam, 0 to 2% slopes
557A	Millstream Silt Loam, 0 to 2% slopes
626A	Kish Loam, 0 to 2% slopes
635A	Lismod Silt Loam, 0 to 2% slopes
635B	Lismod Silt Loam, 2 to 4% slopes
1067A	Harpster Silt Loam, 0 to 2% slopes, undrained
1082A	Millington Silt Loam, 0 to 2% slopes, undrained, occasionally flooded
1100A	Palms Muck, 0 to 2% slopes
1103A	Houghton Muck, 0 to 2% slopes, undrained
1153A	Pella Silty Clay Loam, 0 to 2% slopes, undrained
1206A	Thorp Silt Loam, 0 to 2% slopes, undrained
1210A	Lena Muck, 0 to 2% slopes
1330A	Peotone Silty Clay Loam, 0 to 2% slopes, undrained
1488A	Hooppole Loam, 0 to 2% slopes, undrained
1529A	Selmass Loam, 0 to 2% slopes, undrained
1626A	Kish Loam, 0 to 2% slopes, undrained
1776A	Comfrey Loam, 0 to 2% slopes, undrained, occasionally flooded
4103A	Houghton Muck, 0 to 2% slopes, ponded
8082A	Millington Silt Loam, 0 to 2% slopes, occasionally flooded
8776A	Comfrey Loam, 0 to 2% slopes, occasionally flooded

All soils designated by these symbols are seasonally, frequently or continuously waterlogged and can have subsurface water conditions which will produce excessive or abnormal hydrostatic pressure on building foundations or other structures and appurtenances constructed on or within the soil. The prevailing water conditions tend to impair the continuous functioning of subsurface wastewater disposal systems unless site specific engineered wastewater disposal systems are used. These soils may also be subject to periodic surface inundation by stormwater run-off. Some sites may have conditions that are so severe that on-site wastewater systems can not be utilized.

C) Permitted Uses

Any use permitted by the Primary Use District, provided that the requirements of Article X of the McHenry County Public Health Ordinance and the McHenry County Zoning Ordinance are met. If the proposed use is located in a flood hazard area as described in Section 409 of the McHenry County Zoning Ordinance, then the requirements of the McHenry County Floodplain Ordinance will apply.

D) Septic Filter Field Use Rating

The following table lists the estimated depth to seasonal high groundwater and the estimated septic filter field use rating for soils in the Wet Soil Overlay District.

WET SOIL OVERLAY DISTRICT

MAP SYMBOL & SOIL NAME	SEPTIC FILTER FIELD USE RATING	DEPTH TO HIGH SEASONAL WATER TABLE
59A – Lisbon Silt Loam	Severe/Very Severe	1 to 2 ½ feet
59B – Lisbon Silt Loam	Severe/Very Severe	1 to 2 ½ feet
62A – Herbert Silt Loam	Severe/Very Severe	1 to 2 ½ feet
67A – Harpster Silty Clay Loam	Very Severe	Less than 1 ½ feet

MAP SYMBOL & SOIL NAME	SEPTIC FILTER FIELD USE RATING	DEPTH TO HIGH SEASONAL WATER TABLE
100A – Palms Muck	Very Severe	Less than 1 foot
103A – Houghton Muck	Very Severe	Less than 1 foot
104A – Virgil Silt Loam	Severe/Very Severe	1 to 2 feet
146A – Elliott Silt Loam	Severe/Very Severe	1 to 2 ½ feet
146B – Elliott Silt Loam	Severe/Very Severe	1 to 2 ½ feet
149A – Brenton Silt Loam	Severe/Very Severe	1 to 2 ½ feet
152A – Drummer Silty Clay Loam	Very Severe	Less than 1 ½ feet
153A – Pella Silty Clay Loam	Very Severe	Less than 1 ½ feet
153A+ - Pella Silt Loam	Very Severe	Less than 1 ½ feet
172A – Hoopeston Sandy Loam	Severe/Very Severe	1 to 2 ½ feet
189A – Martinton Silt Loam	Severe/Very Severe	1 to 2 ½ feet
198A – Elburn Silt Loam	Severe/Very Severe	1 to 2 ½ feet
206A – Thorp Silt Loam	Very Severe	Less than 1 foot
210A – Lena Muck	Very Severe	Less than 1 foot
219A – Millbrook Silt Loam	Severe/Very Severe	1 to 2 ½ feet
228B – Nappanee Silt Loam	Severe/Very Severe	1 to 2 feet
232A – Ashkum Silty Clay Loam	Very Severe	Less than 1 foot
298B – Beecher Silt Loam	Severe/Very Severe	1 to 2 ½ feet
329A – Will Loam	Very Severe	Less than 1 ½ feet
330A – Peotone Silty Clay Loam	Very Severe	Less than 1 foot
343A – Kane Silt Loam	Severe/Very Severe	1 to 2 ½ feet
488A – Hooppole Loam	Very Severe	Less than 1 foot
523A – Dunham Silty Clay Loam	Very Severe	Less than 1 ½ feet
526A – Grundelein Silt Loam	Severe/Very Severe	1 to 2 ½ feet
528A – Lahoguess Loam	Severe/Very Severe	1 to 2 ½ feet
529A – Selmass Loam	Very Severe	Less than 1 ½ feet
544A – Torox Silt Loam	Severe/Very Severe	1 to 2 ½ feet
557A – Millstream Silt Loam	Severe/Very Severe	1 to 2 ½ feet
626A – Kish Loam	Very Severe	Less than 1 ½ feet
635A – Lismod Silt Loam	Severe/Very Severe	1 to 2 ½ feet
635B – Lismod Silt Loam	Severe/Very Severe	1 to 2 ½ feet
1067A – Harpster Silt Loam	Very Severe	Less than 1 foot
1082A – Millington Silt Loam	Very Severe	Less than 1 ½ feet
1100A – Palms Muck	Very Severe	Less than 1 foot
1103A – Houghton Muck	Very Severe	Less than 1 foot
1153A – Pella Silty Clay Loam	Very Severe	Less than 1 ½ feet
1206A – Thorp Silt Loam	Very Severe	Less than 1 ½ feet
1210A – Lena Muck	Very Severe	Less than 1 foot
1330A – Peotone Silty Clay Loam	Very Severe	Less than ½ foot
1488A – Hooppole Loam	Very Severe	Less than 1 foot

MAP SYMBOL & SOIL NAME	SEPTIC FILTER FIELD USE RATING	DEPTH TO HIGH SEASONAL WATER TABLE
1529A – Selmass Loam	Very Severe	Less than 1 foot
1626A – Kish Loam	Very Severe	Less than 1 ½ feet
1776A – Comfrey Loam	Very Severe	Less than 1 ½ feet
4103A – Houghton Muck	Very Severe	Less than ½ foot
8082A – Millington Silt Loam	Very Severe	Less than 1 ½ feet
8776A – Comfrey Loam	Very Severe	Less than 1 ½ feet

Note: Some of these soils will be unsuitable for septic systems depending on degree of wetness.

ORGANIC SOIL OVERLAY

A) Description

This district includes all lands designated on the official McHenry County Soil maps by the mapping symbol.

100A Palms muck, 0 to 2% slopes
103A *Houghton muck, 0 to 2% slopes*
210A Lena muck, 0 to 2% slopes
1100A Palms Muck, 0 to 2% slopes, undrained
1103A Houghton Muck, 0 to 2% slopes, undrained
1210A Lena Muck, 0 o 2% slopes undrained
4103A Houghton Muck, 0 to 2% slopes, ponded

All soils designated by these symbols have been developed from organic material that is highly compressable, subject to subsidence, subject to fire hazard, have very poor structural stability, are frequently or continuously waterlogged, are subject to flooding or having water standing above the ground surface and are areas where under some conditions there is a potential for the polluting of the County's groundwater.

B) Permitted Uses

Any use permitted by the Primary Use District, provided that the requirements of Article X of the McHenry County Public Health Ordinance and the McHenry County Zoning Ordinance are met. If the proposed use is located in a flood hazard area as described in Section 409 of the McHenry County Zoning Ordinance, then the requirements of the McHenry County Floodplain Ordinance will apply.

C) Septic Filter Field Use Rating

The following table lists the estimated seasonal high groundwater and estimated septic filter field use rating for soils in the Organic Soil Overlay District.

ORGANIC SOIL OVERLAY DISTRICT

MAP SYMBOL & SOIL NAME	SEPTIC FILTER FIELD USE RATING	DEPTH TO HIGH SEASONAL WATER TABLE
100A – Palms Muck	Very Severe	Less than 1 foot
103A – Houghton Muck	Very Severe	Less than 1 foot
210A – Lena Muck	Very Severe	Less than 1 foot
1100A – Palms Muck	Very Severe	Less than 1 foot
1103A - Houghton Muck	Very Severe	Less than 1 foot
1210A – Lena Muck	Very Severe	Less than 1 foot
4103A – Houghton Muck	Very Severe	Less than ½ foot

NOTE: Typically unsuitable for on-site sewage disposal systems.