

Appendix C –
Web Soil Survey Soil Reports

Soil Map—Dane County, Wisconsin



Map Scale: 1:20 700 if printed on A Landscale (11" x 8 5") sheet

Man nomenclature: Welsh Marmot. Corner coordinates: WGS84 Eddic Hoc! I TM

Meters
300

Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)		Spoil Area
		Stony Spot
Soils		Very Stony Spot
		Wet Spot
		Other
Soil Map Unit Polygons		
Soil Map Unit Lines		
Soil Map Unit Points		
Special Point Features		Special Line Features
Blowout		Water Features
Borrow Pit		Streams and Canals
Clay Spot		Transportation
Closed Depression		Rails
Gravel Pit		Interstate Highways
Gravelly Spot		US Routes
Landfill		Major Roads
Lava Flow		Local Roads
Background		Aerial Photography
Marsh or swamp		
Mine or Quarry		
Miscellaneous Water		
Perennial Water		
Rock Outcrop		
Saline Spot		
Sandy Spot		
Severely Eroded Spot		
Sinkhole		
Slide or Slip		
Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dane County, Wisconsin
Survey Area Data: Version 17, Sep 11, 2018

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

Date(s) aerial images were photographed: Apr 29, 2011—Sep 10, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1180C2	Newglarus-Dunbarton silt loams, 6 to 12 percent slopes, moderately eroded	6.6	0.5%
DnB	Dodge silt loam, 2 to 6 percent slopes	110.8	8.8%
DnC2	Dodge silt loam, 6 to 12 percent slopes, eroded	14.8	1.2%
EdB2	Edmund silt loam, 2 to 6 percent slopes, eroded	6.2	0.5%
Edd2	Edmund silt loam, 12 to 20 percent slopes, eroded	7.5	0.6%
EfB	Elburn silt loam, 0 to 3 percent slopes	116.4	9.3%
GP	Gravel pit	0.0	0.0%
GwB	Griswold loam, 2 to 6 percent slopes	9.2	0.7%
GwC	Griswold loam, 6 to 12 percent slopes	5.7	0.5%
HaA	Hayfield silt loam, 0 to 3 percent slopes	1.6	0.1%
KdC2	Kidder loam, 6 to 12 percent slopes, eroded	3.1	0.2%
KdD2	Kidder loam, 12 to 20 percent slopes, eroded	9.9	0.8%
KrE2	Kidder soils, 20 to 35 percent slopes, eroded	15.5	1.2%
MdB	McHenry silt loam, 2 to 6 percent slopes	15.0	1.2%
MdC2	McHenry silt loam, 6 to 12 percent slopes, eroded	34.7	2.8%
MdD2	McHenry silt loam, 12 to 20 percent slopes, eroded	12.5	1.0%
Os	Orion silt loam, wet	26.4	2.1%
Pa	Palms muck, 0 to 2 percent slopes	2.8	0.2%
PnA	Plano silt loam, till substratum, 0 to 2 percent slopes	13.3	1.1%
PnB	Plano silt loam, till substratum, 2 to 6 percent slopes	163.7	13.0%
PnC2	Plano silt loam, till substratum, 6 to 12 percent slopes, eroded	0.9	0.1%
RaA	Radford silt loam, 0 to 3 percent slopes	27.6	2.2%



Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
RnB	Ringwood silt loam, 2 to 6 percent slopes	47.5	3.8%
RoB	Rockton silt loam, 2 to 6 percent slopes	7.0	0.6%
SaA	Sable silty clay loam, 0 to 2 percent slopes	384.8	30.6%
ScA	St. Charles silt loam, 0 to 2 percent slopes	21.9	1.7%
ScB	St. Charles silt loam, 2 to 6 percent slopes	79.3	6.3%
ScC2	St. Charles silt loam, 6 to 12 percent slopes, eroded	7.0	0.6%
VrB	Virgil silt loam, 1 to 4 percent slopes	89.8	7.1%
WxB	Whalan silt loam, 2 to 6 percent slopes	4.0	0.3%
WxC2	Whalan silt loam, 6 to 12 percent slopes, eroded	11.1	0.9%
Totals for Area of Interest		1,256.4	100.0%

Engineering Properties

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba>). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Depth to the upper and lower boundaries of each layer is indicated.



Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Percentage of rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Report—Engineering Properties

Absence of an entry indicates that the data were not estimated. The asterisk (*) denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007 (<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba>). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Engineering Properties—Dane County, Wisconsin

Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Engineering Properties—Dane County, Wisconsin							
					Unified	AASHTO	>10 inches	3-10 inches	Pct Fragments	Percentage passing sieve number—	Liquid limit	Plasticity index
1180C2—Newglarus-Dunbarton silt loams, 6 to 12 percent slopes, moderately eroded		Ih							L-R-H	L-R-H	L-R-H	L-R-H
Newglarus	60 C	0-7	Silt loam	CL	A-7, A-6	0-0 0	0-0 0	100-100 -100	100-100 -100	94-100- 00	85-94-1 00	25-35 -43
		7-20	Silty clay loam, silt loam	CL	A-7, A-6	0-0 0	0-0 0	100-100 -100	100-100 -100	94-99-1 00	88-95-1 00	30-38 -47
		20-34	Silty clay, clay	CH	A-7-6	0-0 0	0-5-11 00	84-92-1 00	68-82-1 00	53-79-1 00	48-74-1 00	49-69 -91
		34-44	Bedrock	—	—	—	—	—	—	—	—	—
Dunbarton	28 D	0-7	Silt loam	CL	A-4, A-6	0-0 0	0-2-4 00	80-88-1 00	79-87-1 00	73-87-1 00	68-81- 98	27-36 -43
		7-9	Silty clay loam, silt loam	CL	A-7-6, A-6	0-0 0	0-3-4 00	80-87-1 00	79-86-1 00	73-86-1 00	69-82-1 00	28-36 -42
		9-12	Silty clay loam, gravelly silty clay, gravelly silty clay loam	CL, CH	A-6, A-7-6	0-0 0	0-3-4 00	66-83-1 00	64-82-1 00	59-81-1 00	56-77-1 00	36-44 -54
		12-18	Clay, silty clay, channery clay, gravelly silty clay	CH	A-7-6	0-0 0	0-5-9 00	55-80-1 00	54-79-1 00	42-78-1 00	38-72-1 00	48-70 -87
		18-28	Bedrock	—	—	—	—	—	—	—	—	—

Engineering Properties—Dane County, Wisconsin

Engineering Properties—Dane County, Wisconsin											
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Percentage passing sieve number—			Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4		
DnB—Dodge silt loam, 2 to 6 percent slopes			In				L-R-H	L-R-H	L-R-H	L-R-H	L-R-H
Dodge	85 C	0-6	Silt loam	CL	A-4	0-0-0	0-0-0	93-98-1 00	86-96-1 00	76-89- 99	25-30- 43
		6-9	Silt loam	CL	A-6	0-0-0	0-0-0	93-96-1 00	87-95-1 00	81-90- 96	36-38- 40
		9-29	Silty clay loam	CL	A-6	0-0-0	0-0-0	88-91- 98	83-90- 98	78-86- 98	37-39- 51
		29-40	Clay loam	CL	A-7-6	0-0-0	0-0-0	80-85- 95	79-84- 94	49-60- 77	37-41- 52
		40-79	Gravelly sandy loam, sandy loam	SC	A-2-4	0-0-0	0-1-2	56-72- 84	54-70- 84	36-55- 84	19-21-2 9
DnC2—Dodge silt loam, 6 to 12 percent slopes, eroded									17-30- 49	18-26- 49	3-10-13 -31
Dodge, eroded	85 C	0-6	Silt loam	CL	A-4	0-0-0	0-0-0	100-100 -100	100-100 -100	93-98-1 00	25-30- 43
		6-27	Silty clay loam	CL	A-6	0-0-0	0-0-0	100-100 -100	95-99-1 00	89-95-1 00	19-20-2 9
		27-33	Silty clay loam	CL	A-6	0-0-0	0-0-0	81-95- 98	76-94- 98	71-90- 98	36-39- 51
		33-79	Sandy loam, gravelly sandy loam, loam, gravelly loam	SC-SM	A-2-4	0-0-0	0-0-0	69-74-1 00	43-55- 91	21-30- 61	19-22- 38

Engineering Properties—Dane County, Wisconsin

Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture		Classification		Pct. Fragments		Percentage passing sieve number—		Liquid limit	Plasticity index
				Unified	AASHTO inches	>10 inches		3-10 inches		4		L-R-H	L-R-H
						L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H		
EdB2—Edmund silt loam, 2 to 6 percent slopes, eroded			In										
Edmund	100 D	0-8	Silt loam	CL	A-4, A-6	0-0-0	0-4-7	85-93-1 00	80-90-1 00	75-88-1 00	55-78-1 00	25-33- 40	7-12-16
		8-14	Loam, silt loam, silty clay loam	GC, CL, SC	A-6, A-7	0-0-0	0-4-7	70-85-1 00	65-83-1 00	45-73-1 00	35-40- 45	15-20-2 5	
		14-18	Clay, silty clay	CH, CL	A-7	0-1-1	0-4-7	70-85-1 00	70-85-1 00	70-85-1 00	70-83- 95	45-68- 90	25-43-6 0
		18-22	Unweathered bedrock, weathered bedrock		—	—	—	0-0-0	—	—	—	—	—
EdD2—Edmund silt loam, 12 to 20 percent slopes, eroded													
Edmund	100 D	0-8	Silt loam	CL	A-4, A-6	0-0-0	0-4-7	85-93-1 00	80-90-1 00	75-88-1 00	55-78-1 00	25-33- 40	7-12-16
		8-14	Loam, silt loam, silty clay loam	GC, SC, CL	A-6, A-7	0-0-0	0-4-7	70-85-1 00	65-83-1 00	45-73-1 00	35-40- 45	15-20-2 5	
		14-18	Clay, silty clay	CH, CL	A-7	0-1-1	0-4-7	70-85-1 00	70-85-1 00	70-85-1 00	70-83- 95	45-68- 90	25-43-6 0
		18-22	Unweathered bedrock, weathered bedrock		—	—	—	0-0-0	—	—	—	—	—

Engineering Properties—Dane County, Wisconsin

Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture			Classification		Pct Fragments			Percentage passing sieve number—			Liquid limit	Plasticity index
				Unified	AASHTO	>10 inches	3-10 inches		4	10		40	200			
							L-R-H	L-R-H		L-R-H	L-R-H		L-R-H	L-R-H	L-R-H	
EFB—Elburn silt loam, 0 to 3 percent slopes			In													
Elburn	90 C	0-16	Silt loam	ML	A-7-6	0-0-0	0-0-0	100-100- -100	100-100- -100	97-100- 100	92-94- 97	41-44- 48	15-16-1 8			
		16-40	Silty clay loam, silt loam	CL	A-7-6	0-0-0	0-0-0	86-100- 100	86-100- 100	81-99-1 00	77-95-1 00	35-42- 49	16-20-2 5			
		40-79	Loam	CL	A-6	0-0-0	0-0-0	78-85-1 00	77-85-1 00	73-84-1 00	57-67- 84	24-29- -35	7-12-17			
GP—Gravel pit																
Pits, gravel	99	0-10	Stratified extremely gravelly coarse sand to very gravelly sand	—	—	0-0-0	0-0-0	0-0-0	0-0-0	0-0-0	0-0-0	—	—			
GwB—Griswold loam, 2 to 6 percent slopes																
Griswold	95 B	0-11	Loam	CL	A-6	0-0-0	0-0-0	90-96-1 00	89-96-1 00	75-86- 94	50-59- 67	26-31- -36	7-11-15			
		11-29	Clay loam	CL	A-6	0-0-0	0-0-0	83-91- 98	82-91- 98	72-82- 98	54-63- 78	38-39- -49	18-19-3 0			
		29-79	Sandy loam, gravelly sandy loam, fine sandy loam	SC-SM	A-2-4	0-0-0	0-0-0	78-85- 92	55-69- 84	40-54- 70	20-29- 39	0-21- 39	-21	NP-5-5		

Engineering Properties—Dane County, Wisconsin

Engineering Properties—Dane County, Wisconsin														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture		Classification		Pct Fragments		Percentage passing sieve number—			Plasticity index	
				Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200			
GwC—Griswold loam, 6 to 12 percent slopes			In					L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	
Griswold	95 B	0-14	Loam	CL	A-6	0-0-0	0-0-0	90-96-1 00	89-96-1 00	75-86- 94	50-59- 67	26-31 -36	7-11-15	
			14-37	Clay loam	CL	A-6	0-0-0	0-0-0	83-91- 98	82-91- 98	72-82- 98	54-63- 78	38-39 -49	18-19-3 0
			37-79	Sandy loam, gravelly sandy loam, fine sandy loam	SC-SM	A-2-4	0-0-0	0-0-0	78-85- 92	55-69- 84	38-54- 76	18-29- 43	16-21 -26	2-6-9
HaA—Hayfield silt loam, 0 to 3 percent slopes														
Hayfield	100 B	0-11	Silt loam	CL	A-4	0-0-0	0-0-0	100-100 -100	100-100 -100	90-94- 98	70-80- 90	25-33 -40	6-11-15	
			11-29	Clay loam, silt loam, loam	CL	A-4	0-0-0	0-0-0	95-98-1 00	90-95-1 00	70-80- 90	65-73- 80	25-33 -40	6-11-15
			29-60	Sand, gravelly coarse sand, coarse sand	SP-SM	A-1-b	—	0-2-3	85-93-1 00	50-74- 98	25-38- 50	0-8-15	0-0-19	NP-0-2
KdC2—Kidder loam, 6 to 12 percent slopes, eroded														
Kidder, eroded	95 B	0-8	Loam	CL	A-4	0-0-0	0-0-0	78-88-1 00	77-88-1 00	64-79- 95	42-54- 68	23-38 -33	6-8-11	
			8-31	Sandy clay loam, loam	SC	A-2, A-6	0-0-0	0-3-3	82-82-1 00	81-81-1 00	63-71- 93	34-40- 56	30-35 -40	13-17-2 1
			31-79	Gravelly sandy loam, sandy loam, fine sandy loam	GC-GM	A-1, A-4, A-1-b	0-0-0	2-2-2	57-61- 95	38-46- 80	18-24- 45	17-21 -26	3-6-9	

Engineering Properties—Dane County, Wisconsin

Engineering Properties—Dane County, Wisconsin													
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification	Pct. Fragments	Percentage passing sieve number—			Liquid limit	Plasticity index		
						Unified	AASHTO	>10 inches	3-10 inches				
KdD2—Kidder loam, 12 to 20 percent slopes, eroded			In			L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H		
Kidder, eroded	95 B	0-8	Loam	CL	A-4	0-0-0	0-0-0	78-88-1 00	77-88-1 00	64-79- 95	42-54- 68	23-28 -33	6-8-11
		8-31	Sandy clay loam, loam	SC	A-2, A-6	0-0-0	0-3-3	82-82-1 00	81-81-1 00	63-71- 93	34-40- 56	30-35 -40	13-17-2 1
		31-79	Gravelly sandy loam, sandy loam, fine sandy loam	GC-GM	A-1, A-4, A-1-b	0-0-0	2-2-2	57-61- 95	55-60- 95	38-46- 80	18-24- 45	17-21 -26	3-6-9
KfE2—Kidder soils, 20 to 35 percent slopes, eroded													
Kidder, loam	60 B	0-9	Loam	CL-ML	A-4	0-0-0	0-0-0	75-88-1 00	75-88-1 00	70-85-1 00	45-68- 90	20-25 -30	3-7-10
		9-30	Loam, sandy clay loam, clay loam	CL	A-6	—	0-3-5	75-88-1 00	75-88-1 00	55-75- 95	25-53- 80	20-30 -40	8-17-25
		30-60	Fine sandy loam, sandy loam	SC-SM	A-2-4	—	3-7-10	50-70- 90	50-70- 90	30-55- 80	15-33- 50	17-22 -27	3-6-10
Kidder, sandy loam	30 B	0-9	Sandy loam	SC-SM	A-4	0-0-0	0-3-5	75-88-1 00	75-88-1 00	50-68- 85	20-38- 55	15-20 -25	2-5-7
		9-30	Loam, sandy clay loam, clay loam	CL	A-6	—	0-3-5	75-88-1 00	75-88-1 00	55-75- 95	25-53- 80	20-30 -40	8-17-25
		30-60	Fine sandy loam, sandy loam	SC-SM	A-2-4	—	3-7-10	50-70- 90	50-70- 90	30-55- 80	15-33- 50	17-22 -27	3-6-10 -27

Engineering Properties—Dane County, Wisconsin

Engineering Properties—Dane County, Wisconsin											
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification	Percentage passing sieve number—			Liquid limit	Plasticity index	
						Unified	AASHTO	>10 inches	3-10 inches	4	
			In			L-R-H	L-R-H	L-R-H	L-R-H	40	200
MdB—McHenry silt loam, 2 to 6 percent slopes											
McHenry	90 B	0-5	Silt loam	ML, CL-ML, CL	A-6, A-4	0-0-0	0-0-0	95-97-1 00	95-96-1 00	83-91-1 00	72-79-88
	5-10	Silt loam		CL-ML, CL	A-6, A-4	0-0-0	0-0-0	95-97-1 00	84-91-1 00	72-79-88	23-31-39
	10-22	Silty clay loam, silt loam		CL	A-6, A-7-6	0-0-0	0-0-0	95-97-1 00	83-93-1 00	74-83-91	6-10-15
	22-32	Sandy clay loam, clay loam, loam		CL	A-7-6, A-6	0-0-0	0-1-1	86-92-95	85-92-95	69-80-88	22-28-35
	32-37	Loam, fine sandy loam, sandy loam		SC, SC-SM	A-6, A-4	0-0-0	0-3-4	83-89-95	83-89-95	68-75-88	33-41-47
	37-79	Sandy loam, gravelly sandy loam, fine sandy loam		SC, SM, SC-SM	A-4, A-2-4	0-0-0	0-6-9	59-78-88	46-64-88	23-34-77	16-21-43

Engineering Properties—Dane County, Wisconsin														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments			Percentage passing sieve number—			Liquid limit	Plasticity index
					Unified	AASHTO	>0 inches	3-10 inches	4	10	40	200		
MdC2—McHenry silt loam, 6 to 12 percent slopes, eroded			In											
McHenry, eroded	90 B	0-6	Silt loam	CL, ML, CL-ML	A-4, A-6	0-0-0	0-0-0	95-97-1	95-96-1	85-92-1	72-79-00	23-31-88	6-10-15-39	
		6-22	Silty clay loam, silt loam	CL	A-6, A-7-6	0-0-0	0-0-0	95-97-1	95-96-1	84-93-1	75-84-00	33-41-92	15-21-2-47	
	22-31	Sandy clay loam, clay loam, loam	CL	A-6, A-7-6	0-0-0	0-1-1	86-92-95	85-92-95	71-83-91	47-57-64	29-36-64	12-17-2-42		
	31-36	Sandy loam, loam, fine sandy loam	SC, SC-SM	A-4, A-6	0-0-0	0-3-4	83-89-95	83-89-95	71-78-91	42-47-58	19-21-58	4-6-12-29		
	36-79	Sandy loam, gravelly sandy loam, fine sandy loam	SC, SC-SM, SM	A-4	0-0-0	0-6-9	59-78-88	59-78-88	42-59-71	24-36-45	16-21-45	2-6-9-26		
MdD2—McHenry silt loam, 12 to 20 percent slopes, eroded														
McHenry, eroded	90 B	0-6	Silt loam	CL, ML, CL-ML	A-4, A-6	0-0-0	0-0-0	95-97-1	95-96-1	85-92-1	72-79-00	23-31-88	6-10-15-39	
		6-22	Silty clay loam, silt loam	CL	A-6, A-7-6	0-0-0	0-0-0	95-97-1	95-96-1	84-93-1	75-84-00	33-41-92	15-21-2-47	
	22-31	Sandy clay loam, clay loam, loam	CL	A-6, A-7-6	0-0-0	0-1-1	86-92-95	85-92-95	71-83-91	47-57-64	29-36-64	12-17-2-42		
	31-36	Sandy loam, loam, fine sandy loam	SC, SC-SM	A-4, A-6	0-0-0	0-3-4	83-89-95	83-89-95	71-78-91	42-47-58	19-21-58	4-6-12-29		
	36-79	Sandy loam, gravelly sandy loam, fine sandy loam	SC, SC-SM, SM	A-4	0-0-0	0-6-9	59-78-88	59-78-88	42-59-71	24-36-45	16-21-45	2-6-9-26		

Engineering Properties—Dane County, Wisconsin

Engineering Properties—Dane County, Wisconsin												
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification	Percentage passing sieve number—					Plasticity index	
						Unified	AASHTO	>10 inches	3-10 inches	4		
Os—Orion silt loam, wet			In					L-R-H	L-R-H	L-R-H	L-R-H	
Orion variant, wet	100	B/D	0-4	Silt loam	CL	A-6	0-0-0	0-0-0	100-100 -100	95-98-1 00	90-95-1 00	25-35 -45
			4-44	Silty clay loam, loam, silt loam	CL	A-6	0-0-0	0-0-0	100-100 -100	95-98-1 00	90-95-1 00	30-38 -45
			44-60	Silty clay loam, sandy loam, silt loam	CL	A-6	0-0-0	0-0-0	90-95-1 00	80-90-1 00	55-75- 95	45-65- 85
Pa—Palms muck, 0 to 2 percent slopes												
Palms, muck	87	B/D	0-13	Muck	PT	A-8	0-0-0	0-0-0	100-100 -100	100-100 -100	100-100 -100	— —
			13-30	Muck	PT	A-8	0-0-0	0-0-0	100-100 -100	100-100 -100	100-100 -100	— —
			30-79	Gravelly silty clay loam, silty clay loam	CL	A-6, A-7, A-7-6	0-0-0	0-0-0	100-100 -100	100-100 -100	100-100 -100	88-88-1 00
PnA—Plano silt loam, till substratum, 0 to 2 percent slopes												
Plano, till substratum	90	B	0-11	Silt loam	CL, ML	A-6, A-7-6	0-0-0	0-0-0	100-100 -100	100-100 -100	96-99-1 00	35-41 -48
			11-41	Silty clay loam, silt loam	CL	A-6, A-7-6	0-0-0	0-0-0	100-100 -100	100-100 -100	96-99-1 00	35-41 -47
			41-46	Clay loam, loam, sandy loam, sandy clay loam	CL, SC	A-4, A-6, A-7-6	0-0-0	0-0-0	100-100 -100	78-91-1 00	46-60- 75	25-33 -43
			46-79	Sandy loam, gravelly loam	CL, CL-Ml, SC-SM	A-4	0-0-0	0-0-0	70-85- 91	68-85- 80	46-64- 53	19-22 -31

Engineering Properties—Dane County, Wisconsin

Engineering Properties—Dane County, Wisconsin												
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct. Fragments	Percentage passing sieve number—			Liquid limit	Plasticity index
					Unified	AASHTO		>10 inches	3-10 inches	4		
			In				L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H
PnB—Plano silt loam, till substratum, 2 to 6 percent slopes												
Plano, till substratum	85 B	0-11	Silt loam	CL, ML	A-6, A-7-6	0-0-0	0-0-0	100-100 -100	100-100 -100	96-99-1 00	88-93-1 00	35-41 -48
		11-41	Silty clay loam, silt loam	CL	A-6, A-7-6	0-0-0	0-0-0	100-100 -100	100-100 -100	96-99-1 00	90-95-1 00	35-41 -47
		41-46	Clay loam, loam, sandy loam, sandy clay loam	CL, SC	A-4, A-6, A-7-6	0-0-0	0-0-0	100-100 -100	100-100 -100	78-91-1 00	46-60- 75	25-33 -43
		46-79	Sandy loam, gravelly loam	CL, SC-SM, CL-ML	A-4	0-0-0	0-0-0	70-85- 91	68-85- 91	46-64- 80	26-36- 53	19-22 -31
PnC2—Plano silt loam, till substratum, 6 to 12 percent slopes, eroded												
Plano, till substratum	90 B	0-9	Silt loam	CL, ML	A-6, A-7-6	0-0-0	0-0-0	100-100 -100	100-100 -100	96-99-1 00	88-93-1 00	35-41 -48
		9-41	Silty clay loam, silt loam	CL	A-6, A-7-6	0-0-0	0-0-0	100-100 -100	100-100 -100	96-99-1 00	90-95-1 00	35-41 -47
		41-46	Clay loam, loam, sandy loam, sandy clay loam	CL, SC	A-4, A-6, A-7-6	0-0-0	0-0-0	100-100 -100	100-100 -100	78-91-1 00	46-60- 75	25-33 -43
		46-79	Gravelly loam, sandy loam	CL, SC-SM, CL-ML	A-4	0-0-0	0-0-0	70-85- 91	68-85- 91	46-64- 80	26-36- 53	19-22 -31

Engineering Properties—Dane County, Wisconsin

Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments			Percentage passing sieve number—			Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
Engineering Properties—Dane County, Wisconsin														
RaA— Radford silt loam, 0 to 3 percent slopes			In						L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H
Radford	90	B/D	0-9	Silt loam	ML	A-4	0-0-0	0-0-0	100-100 -100	100-100 -100	94-100- 100	78-89- 96	18-19- -29	2-2-7
			9-23	Silt loam	CL	A-6	0-0-0	0-0-0	100-100 -100	100-100 -100	95-100- 100	85-93-1 00	30-31- -41	10-11-1 8
			23-36	Silt loam	CL	A-6	0-0-0	0-0-0	100-100 -100	100-100 -100	96-100- 100	89-95- 99	36-37- -40	16-16-1 7
			36-56	Silty clay loam, silt loam	CL	A-6	0-0-0	0-0-0	100-100 -100	100-100 -100	91-100- 100	79-93-1 00	18-36- -52	2-16-29
			56-79	Silt loam	CL-ML	A-4	0-0-0	0-0-0	100-100 -100	100-100 -100	99-100- 100	92-93-1 00	21-33- -38	6-7-18
RnB—Ringwood silt loam, 2 to 6 percent slopes														
Ringwood	90	B	0-12	Silt loam	ML	A-7-6	0-0-0	0-0-0	100-100 -100	100-100 -100	87-94-1 00	70-81- 91	35-41- -48	12-15-1 8
			12-22	Silty clay loam, silt loam	CL	A-6	0-0-0	0-0-0	100-100 -100	100-100 -100	94-99-1 00	80-87- 98	33-40- -47	15-20-2 5
			22-36	Sandy clay loam	SC	A-6	0-0-0	0-0-0	84-95-1 00	68-83- 93	36-47- 55	29-36- -42	12-17-2 1	
			36-79	Sandy loam, gravelly sandy loam	SC	A-2-4	0-0-0	0-0-0	66-77- 85	64-76- 84	47-59- 69	23-30- 38	18-25- -29	2-8-12

Engineering Properties—Dane County, Wisconsin													
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Percentage passing sieve number—				Liquid limit	Plasticity index	
					Unified	AASHTO	>10 inches	3-10 inches	4	10			
RoB—Rockton silt loam, 2 to 6 percent slopes			In				L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	
Rockton	100	C	0-18	Silt loam	CL, ML, CL-ML	A-4	0-0-0	0-0-0	90-95-1 00	85-90- 95	50-63- 75	25-30 -35	
			18-32	Loam, sandy clay loam, clay loam	SC, CL	A-6, A-7	0-0-0	0-0-0	90-95-1 00	75-83- 90	45-58- 70	30-38 -45	10-15-2 0
			32-36	Weathered bedrock	—	—	—	—	0-0-0	—	—	—	
SaA—Sable silty clay loam, 0 to 2 percent slopes													
Sable	85	B/D	0-23	Silty clay loam	MH, ML	A-7-5, A-7-6	0-0-0	0-0-0	100-100 -100	97-100- 100	95-99-1 00	46-51 -57	18-22-2 4
			23-38	Silty clay loam	CL	A-7-6, A-6	0-0-0	0-0-0	100-100 -100	97-99-1 00	94-98-1 00	38-42 -48	19-22-2 5
			38-47	Silt loam, silty clay loam	CL	A-6	0-0-0	0-0-0	100-100 -100	98-100- 100	96-98-1 00	34-37 -38	16-18-1 9
			47-60	Silt loam	CL	A-6	0-0-0	0-0-0	100-100 -100	98-100- 100	96-99-1 00	30-33 -38	13-16-1 9

Engineering Properties—Dane County, Wisconsin													
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Percentage passing sieve number—			Liquid limit			Plasticity index
					Unified	AASHTO inches	>10 inches	3-10 inches	4	10	40	200	
ScA—St. Charles silt loam, 0 to 2 percent slopes			In				L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H
St. charles	90 B	0-12	Silt loam	CL	A-6	0-0-0	0-0-0	100-100 -100	100-100 -100	95-98-1 00	88-93- 99	30-39 -48	12-15-1 8
	12-48	Silt loam		CL	A-6	0-0-0	0-0-0	100-100 -100	100-100 -100	94-98-1 00	88-93- 98	29-35 -41	12-16-1 9
	48-54	Loam, sandy loam		SC	A-6	0-0-0	0-0-0	92-95-1 00	92-95-1 00	62-74- 90	37-48- 62	0-24-41 62	NP-13-2 2
	54-79	Sandy loam, gravelly sandy loam, loam, gravelly loam		SC-SM	A-2-4	0-0-0	0-0-0	68-74-1 00	68-74-1 00	47-53- 90	26-30- 58	19-22 -38	3-6-19
ScB—St. Charles silt loam, 2 to 6 percent slopes													
St. charles	85 B	0-9	Silt loam	CL	A-6	0-0-0	0-0-0	100-100 -100	100-100 -100	95-98-1 00	88-93-1 00	30-37 -43	12-15-1 9
	9-48	Silt loam		CL	A-6	0-0-0	0-0-0	100-100 -100	100-100 -100	94-98-1 00	88-93- 99	29-35 -41	12-15-1 9
	48-54	Loam, sandy loam		SC	A-6	0-0-0	0-0-0	92-95-1 00	92-95-1 00	62-74- 90	37-48- 62	0-24-41 62	NP-13-2 2
	54-79	Sandy loam, gravelly sandy loam, loam, gravelly loam		SC-SM	A-2-4	0-0-0	0-0-0	68-74-1 00	68-74-1 00	47-53- 90	26-30- 58	19-22 -38	3-6-19

Engineering Properties--Dane County, Wisconsin

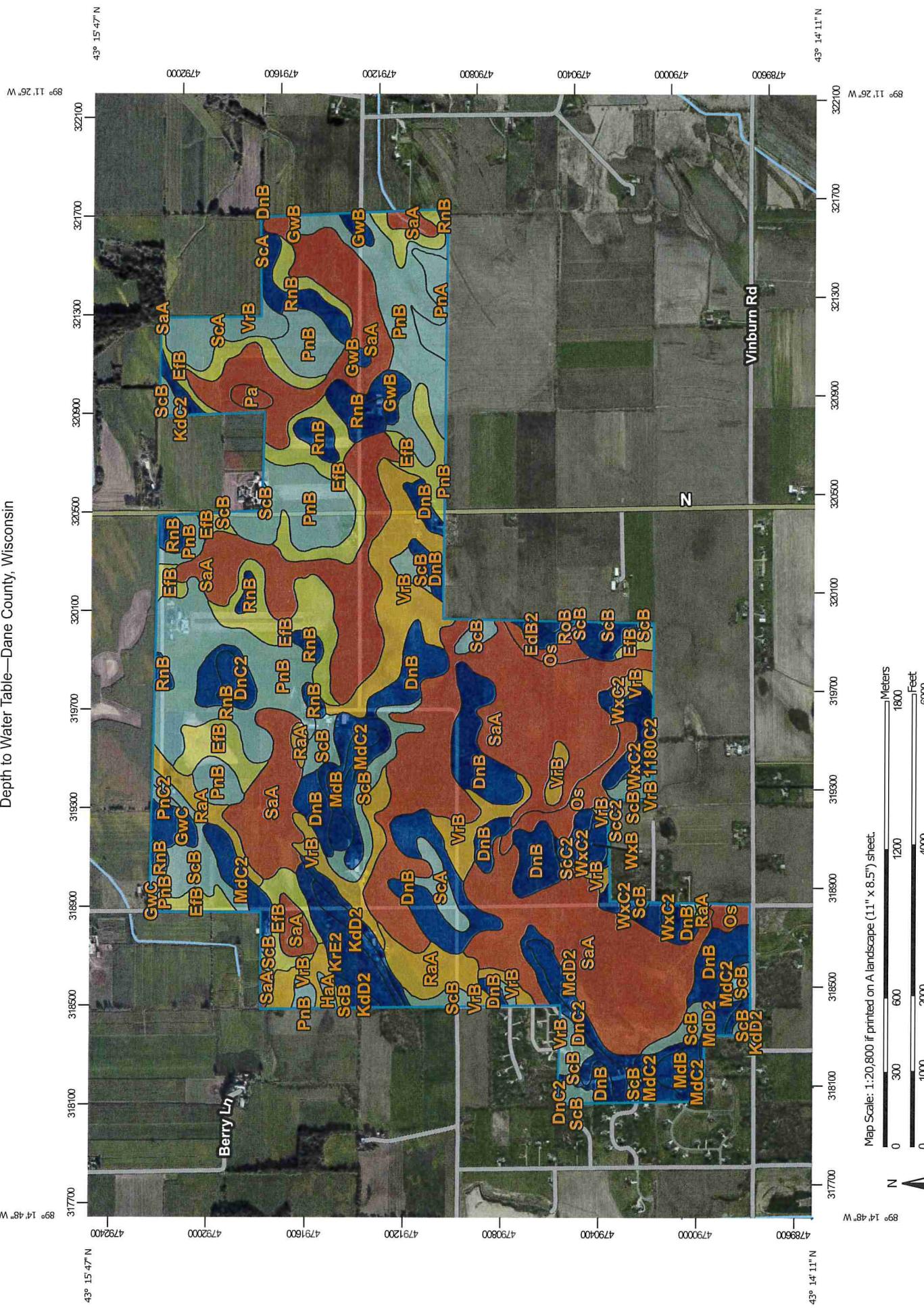
Engineering Properties--Dane County, Wisconsin														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments			Percentage passing sieve number—			Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
ScC2—St. Charles silt loam, 6 to 12 percent slopes, eroded		In					L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H
St. charles, eroded	90 B	0-6	Silt loam	CL	A-6	0-0-0	0-0-0	100-100	100-100	95-98-1	88-93-1	30-37	12-15-1	
		6-41	Silty clay loam	CL	A-7-6	0-0-0	0-0-0	100-100	100-100	96-99-1	90-95-1	37-41	19-21-2	
		41-50	Loam, silt loam	CL	A-6	0-0-0	0-0-0	100-100	100-100	83-91-1	52-60-69	25-33	10-16-1	
		50-79	Sandy loam, gravelly sandy loam	SC-SM	A-4	0-0-0	0-0-0	100-100	100-100	76-78-93	41-43-58	19-22-31	3-6-13	
VrB—Virgil silt loam, 1 to 4 percent slopes														
Virgil	90 B/D	0-15	Silt loam	CL	A-6	0-0-0	0-0-0	100-100	100-100	94-99-1	84-92-1	30-38	9-14-18	
		15-51	Silty clay loam	CL	A-7-6	0-0-0	0-0-0	100-100	100-100	96-99-1	90-95-1	37-42	19-22-2	
		51-79	Sandy loam	SC	A-6	0-0-0	0-3-4	90-95-1	76-87-1	59-72-85	33-42-51	23-28	7-11-13	
WxB—Whalan silt loam, 2 to 6 percent slopes														
Whalan	100 C	0-10	Silt loam	ML	A-4	0-0-0	0-0-0	100-100	95-98-1	85-90-95	60-75-90	30-35	5-8-10	
		10-27	Sandy clay loam, loam	CL	A-6	0-0-0	0-0-0	95-98-1	95-98-1	80-88-95	70-80-90	30-35	10-13-1	
		27-31	Weathtered bedrock	—	—	—	—	0-0-0	0-0-0	—	—	—	—	

Engineering Properties—Dane County, Wisconsin											
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Percentage passing sieve number—			Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4		
WxC2—Whalan silt loam, 6 to 12 percent slopes, eroded			In				L-R-H	L-R-H	L-R-H	L-R-H	L-R-H
Whalan	100	C	0-10	Silt loam	ML	A-4	0-0-0	0-0-0	100-100	95-98-1	85-90-1
			10-27	Sandy clay loam, loam	CL	A-6	0-0-0	0-0-0	-100	00	95
			27-31	Weathtered bedrock	—	—	—	—	0-0-0	0-0-0	—

Data Source Information

Soil Survey Area: Dane County, Wisconsin
 Survey Area Data: Version 17, Sep 11, 2018

Depth to Water Table—Dane County, Wisconsin



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

MAP INFORMATION

Area of Interest (AOI)		Area of Interest (AOI)	
Soils		Water Features	
<input type="checkbox"/>	Streams and Canals	<input type="checkbox"/>	Not rated or not available
<input checked="" type="checkbox"/>	Soil Rating Polygons	<input type="checkbox"/>	Transportation
	0 - 25		Rails
	25 - 50		Interstate Highways
	50 - 100		US Routes
	100 - 150		Major Roads
	150 - 200		Local Roads
	> 200	<input type="checkbox"/>	Background
<input type="checkbox"/>	Not rated or not available		Aerial Photography
<input type="checkbox"/>	Soil Rating Lines	<input type="checkbox"/>	Not rated or not available
	0 - 25		Soil Rating Points
	25 - 50		0 - 25
	50 - 100		25 - 50
	100 - 150		50 - 100
	150 - 200		100 - 150
	> 200		150 - 200
<input type="checkbox"/>	Not rated or not available	<input type="checkbox"/>	> 200

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey [URL]: <http://websoilsurvey.sc.egov.usda.gov/>

Maps from the Web Soil Survey can be found on the [Web Soil Survey](#).

projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the

Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dane County, Wisconsin
Survey Area Data: Version 17 Sep 11 2018

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

Date(s) aerial images were photographed: Apr 29, 2011—3

compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
1180C2	Newglarus-Dunbarton silt loams, 6 to 12 percent slopes, moderately eroded	>200	6.7	0.5%
DnB	Dodge silt loam, 2 to 6 percent slopes	>200	108.3	8.8%
DnC2	Dodge silt loam, 6 to 12 percent slopes, eroded	>200	14.5	1.2%
EdB2	Edmund silt loam, 2 to 6 percent slopes, eroded	>200	3.3	0.3%
EdD2	Edmund silt loam, 12 to 20 percent slopes, eroded	>200	7.0	0.6%
EfB	Elburn silt loam, 0 to 3 percent slopes	61	119.4	9.7%
GwB	Griswold loam, 2 to 6 percent slopes	>200	9.2	0.7%
GwC	Griswold loam, 6 to 12 percent slopes	>200	6.7	0.5%
HaA	Hayfield silt loam, 0 to 3 percent slopes	114	1.5	0.1%
KdC2	Kidder loam, 6 to 12 percent slopes, eroded	>200	3.1	0.3%
KdD2	Kidder loam, 12 to 20 percent slopes, eroded	>200	9.2	0.7%
KrE2	Kidder soils, 20 to 35 percent slopes, eroded	>200	15.3	1.2%
MdB	McHenry silt loam, 2 to 6 percent slopes	>200	15.0	1.2%
MdC2	McHenry silt loam, 6 to 12 percent slopes, eroded	>200	35.7	2.9%
MdD2	McHenry silt loam, 12 to 20 percent slopes, eroded	>200	11.7	1.0%
Os	Orion silt loam, wet	0	23.8	1.9%
Pa	Palms muck, 0 to 2 percent slopes	0	3.2	0.3%

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
PnA	Plano silt loam, till substratum, 0 to 2 percent slopes	104	9.2	0.7%
PnB	Plano silt loam, till substratum, 2 to 6 percent slopes	104	159.7	13.0%
PnC2	Plano silt loam, till substratum, 6 to 12 percent slopes, eroded	104	1.2	0.1%
RaA	Radford silt loam, 0 to 3 percent slopes	50	28.1	2.3%
RnB	Ringwood silt loam, 2 to 6 percent slopes	>200	48.3	3.9%
RoB	Rockton silt loam, 2 to 6 percent slopes	>200	1.0	0.1%
SaA	Sable silty clay loam, 0 to 2 percent slopes	15	383.7	31.1%
ScA	St. Charles silt loam, 0 to 2 percent slopes	122	24.2	2.0%
ScB	St. Charles silt loam, 2 to 6 percent slopes	122	72.6	5.9%
ScC2	St. Charles silt loam, 6 to 12 percent slopes, eroded	>200	7.4	0.6%
VrB	Virgil silt loam, 1 to 4 percent slopes	38	86.5	7.0%
WxB	Whalan silt loam, 2 to 6 percent slopes	>200	4.9	0.4%
WxC2	Whalan silt loam, 6 to 12 percent slopes, eroded	>200	12.6	1.0%
Totals for Area of Interest			1,233.2	100.0%

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December