LETTER(S) IN FAVOR

CONDITIONAL USE

RICHARD BERGER AND
KEITH & CHRISTINE
BRIDENHAGEN TRUST
(BIERMAN)
Hi Rich,

Thanks for reaching out the other day to discuss your plans for additional storage facilities. Our customers at the campground have been very happy with your current facilities and many of them will be pleased to finally be able to get a spot with you when you expand. Having the storage facilities across the street have been so convenient for our customers and as a business owner I appreciate the fact that our campers are better able to keep their campsites clean and organized because of your business. Thank you for being a nice and quiet neighboring business.

Josh Sweeney
Aqualand Campground
SOILS REPORT
BIERMAN CUP
July 15, 2020

Mr. Richard Bierman

Re: Soils Evaluation for Self-Storage Project near Sister Bay, WI
Parcel(s) 018-01-17312823F1, F2, F3

Mr Bierman:

An evaluation of the on-site soils was completed for your proposed project today, July 15, 2020. Five separate pits were excavated at intervals throughout the property. Generally, the soil profiles concurred with published NRCS soil survey data. Bedrock was found to be a limiting factor in the western portion of the site; being encountered at depths from 2'-4'. The eastern half of the site was found to have deep well-drained soils (7' without any limiting factors observed). The eastern half of the site will be used for storm water BMP's and in my professional opinion, there are no observed limitations impeding this use. Please see the attached soil evaluation log and NRCS Soil Survey for a more comprehensive analysis of the on-site soils.

Respectfully submitted,

Skyler Witalison, P.E.
Baudhuin Surveying & Engineering
312 N. 5th Avenue
Sturgeon Bay, WI 54235
Office: (920) 743-8211 x231
Cell: (920) 868-2382
switalison@baudhuin.com
Attachment 2:

SOIL AND SITE EVALUATION – STORM
In accordance with SPS 382.365, 385, Wis. Adm. Code, and WDNR Standard 1002

Property Owner: BIERMAN

County: DOOR
Parcel I.D.: 0180117312833F2
Reviewed by: 
Date: 

<table>
<thead>
<tr>
<th>Property Location</th>
<th>Property Location</th>
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<tbody>
<tr>
<td>Govt. Lot</td>
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<tr>
<td>Lot #</td>
<td>Block #</td>
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<table>
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<th>Zip Code</th>
<th>Phone Number</th>
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TOWN OF LIBERTY GROVE

<table>
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<tr>
<th>Drainage area</th>
<th>City</th>
<th>Village</th>
<th>Town</th>
<th>Nearest Road</th>
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<tbody>
<tr>
<td>sq ft</td>
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<table>
<thead>
<tr>
<th>Property Owner</th>
<th>Property Owner</th>
<th>Mail Address</th>
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<tbody>
<tr>
<td>BIERMAN</td>
<td></td>
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<table>
<thead>
<tr>
<th>Test site suitable for (check all that apply):</th>
<th>Site not suitable:</th>
</tr>
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<tbody>
<tr>
<td>□ Bioretention; □ Subsurface Disposal System;</td>
<td>□ Other:</td>
</tr>
<tr>
<td>□ Reuse; □ Irrigation; □ Other</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Hydraulic Application Test Method</th>
<th>Soil Moisture Date of soil borings:</th>
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</thead>
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<tr>
<td>□ Morphological Evaluation</td>
<td>USDA-NRCS WETS Value:</td>
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<tr>
<td>□ Double Ring Infiltrometer</td>
<td>□ Dry = 1;</td>
</tr>
<tr>
<td>□ Other: (specify)</td>
<td>□ Normal = 2;</td>
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<tr>
<td></td>
<td>□ Wet = 3.</td>
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1. OBS. Pit □ Boring Ground surface elevation: +1/- 651' ft Elevation of limiting factor: 2.2' ft

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<thead>
<tr>
<th>Horizon</th>
<th>Depth in.</th>
<th>Dominant Color Munsell</th>
<th>Redox Description Qu, Sz, Cont. Color</th>
<th>Texture</th>
<th>Structure Gr, Sz, Sh.</th>
<th>Consistence</th>
<th>Boundary</th>
<th>% Rock Frags.</th>
<th>% Fines</th>
<th>Hydraulic App Rate Inches/Hr</th>
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<td>TOPSOIL</td>
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<td>16-26&quot;</td>
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<tr>
<td>26&quot;+</td>
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<td>BEDROCK</td>
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</tbody>
</table>

Comments: BEDROCK AT 26". NO WATER PRESENT. NO REDOX OBSERVED.

2. OBS. Pit □ Boring Ground surface elevation: +1/- 652.5' ft Elevation of limiting factor: 2.0' ft

<table>
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<th>Texture</th>
<th>Structure Gr, Sz, Sh.</th>
<th>Consistence</th>
<th>Boundary</th>
<th>% Rock Frags.</th>
<th>% Fines</th>
<th>Hydraulic App Rate Inches/Hr</th>
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<tbody>
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<td>24&quot;+</td>
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Comments: BEDROCK AT 24". NO WATER PRESENT. NO REDOX OBSERVED.

Name (Print): SKYLER WITALISON
Signature: 
Credential Number: 
P.E.:
Address: BAUDHUIN, INC.
Date Evaluation Conducted: 2020-07-15

SBD-10793 (R01/17)
WDNR
September 2017

Please print all information

Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04(1)(m))

Attach a complete site plan on paper not less than 8½ x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent of slope, scale or dimensions, north arrow, and BM referenced to nearest road.
### Observations 3

<table>
<thead>
<tr>
<th>Horizon</th>
<th>Depth in.</th>
<th>Dominant Color Munsell</th>
<th>Redox Description Gr. Ss. Cont. Color</th>
<th>Texture</th>
<th>Structure Gr. Ss. Sh.</th>
<th>Consistence</th>
<th>Boundary</th>
<th>% Rock Frags.</th>
<th>% Fines</th>
<th>Hydraulic App Rate Inches/Hr</th>
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</table>

Comments: NO BEDROCK ENCOUNTERED. NO WATER PRESENT. NO REDOX OBSERVED.

### Observations 4

<table>
<thead>
<tr>
<th>Horizon</th>
<th>Depth in.</th>
<th>Dominant Color Munsell</th>
<th>Redox Description Gr. Ss. Cont. Color</th>
<th>Texture</th>
<th>Structure Gr. Ss. Sh.</th>
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<th>Boundary</th>
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<th>% Fines</th>
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</tbody>
</table>

Comments: NO BEDROCK ENCOUNTERED. NO WATER PRESENT. NO REDOX OBSERVED.

### Observations 5

<table>
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<tr>
<th>Horizon</th>
<th>Depth in.</th>
<th>Dominant Color Munsell</th>
<th>Redox Description Gr. Ss. Cont. Color</th>
<th>Texture</th>
<th>Structure Gr. Ss. Sh.</th>
<th>Consistence</th>
<th>Boundary</th>
<th>% Rock Frags.</th>
<th>% Fines</th>
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</table>

Comments: BEDROCK AT 48". NO WATER PRESENT. NO REDOX OBSERVED.

### Overall Site Comments:

SBD-10793 (R 7/17)

WDNR
September 2017
**MAP LEGEND**

- **Soils**
  - Soil Map Unit Polygons
  - Soil Map Unit Lines
  - Soil Map Unit Points

- **Special Point Features**
  - Blowout
  - Boron Pit
  - Clay Spot
  - Closed Depression
  - Gravel Pit
  - Gravelly Spot
  - Lavender Pit
  - Landslide
  - 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

- **Water Features**
  - Streams and Canals

- **Transportation**
  - Interstate Highways
  - US Routes
  - Major Roads
  - Local Roads

- **Background**
  - Aerial Photography

- **Special Line Features**
  - Spill Area
  - Sticky Spot
  - Very Sticky Spot
  - Wet Spot
  - Other

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:15,600.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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:** Door County, Wisconsin
- **Survey Area Data:** Version 16, Jun 8, 2020

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

Date(s) aerial images were photographed: Dec 31, 2009—Mar 30, 2017

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

<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>OmB</td>
<td>Omena sandy loam, 2 to 6 percent slopes</td>
<td>3.9</td>
<td>57.5%</td>
</tr>
<tr>
<td>SvA</td>
<td>Summerville loam, 0 to 2 percent slopes</td>
<td>1.8</td>
<td>26.3%</td>
</tr>
<tr>
<td>Wa</td>
<td>Wainola loamy fine sand</td>
<td>1.1</td>
<td>16.2%</td>
</tr>
<tr>
<td>Totals for Area of Interest</td>
<td></td>
<td>6.8</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Door County, Wisconsin

OmB—Omena sandy loam, 2 to 6 percent slopes

Map Unit Setting
National map unit symbol: g5d6
Elevation: 600 to 860 feet
Mean annual precipitation: 27 to 33 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 130 to 160 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Omena and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Omena

Setting
Landform: Ground moraines
Landform position (two-dimensional): Summit, shoulder, backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till

Typical profile
A,E,Es - 0 to 10 inches: sandy loam
Bt - 10 to 17 inches: loam
C - 17 to 60 inches: sandy loam

Properties and qualities
Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Available water storage in profile: Moderate (about 6.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Forage suitability group: Mod AWC, adequately drained
(G095AY005WI)
Hydric soil rating: No
Minor Components

Bedrock is at 40 to 60
Percent of map unit: 
Hydric soil rating: No

Emmet sandy loam
Percent of map unit: 
Hydric soil rating: No

Omena variant sandy loam
Percent of map unit: 
Hydric soil rating: No

Slope is greater than 6%
Percent of map unit: 
Hydric soil rating: No

Slope is less than 2%
Percent of map unit: 
Hydric soil rating: No

Data Source Information

Soil Survey Area: Door County, Wisconsin
Survey Area Data: Version 16, Jun 8, 2020
Door County, Wisconsin

SvA—Summerville loam, 0 to 2 percent slopes

Map Unit Setting
- National map unit symbol: g5dv
- Elevation: 600 to 860 feet
- Mean annual precipitation: 27 to 33 inches
- Mean annual air temperature: 41 to 45 degrees F
- Frost-free period: 130 to 160 days
- Farmland classification: Farmland of statewide importance

Map Unit Composition
- Summerville and similar soils: 100 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Summerville

Setting
- Landform: Ground moraines
- Landform position (two-dimensional): Summit
- Down-slope shape: Convex
- Across-slope shape: Linear
- Parent material: Loamy alluvium

Typical profile
- Ap,E - 0 to 12 inches: loam
- Bs - 12 to 15 inches: fine sandy loam
- 2R - 15 to 79 inches: bedrock

Properties and qualities
- Slope: 0 to 2 percent
- Depth to restrictive feature: 10 to 20 inches to lithic bedrock
- Natural drainage class: Well drained
- Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum in profile: 30 percent
- Available water storage in profile: Very low (about 2.8 inches)

Interpretive groups
- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 3s
- Hydrologic Soil Group: D
- Forage suitability group: Low AWC, adequately drained
  (G095AY002WI)
- Hydric soil rating: No
Minor Components

**Bedrock outcrops**
Percent of map unit:  
Hydric soil rating: No

**Namur variant loam**
Percent of map unit:  
Hydric soil rating: No

**Bonduel shallow variant**
Percent of map unit:  
Hydric soil rating: No

**Longrie loam**
Percent of map unit:  
Hydric soil rating: No

**Slope is greater than 2%**
Percent of map unit:  
Hydric soil rating: No

**Data Source Information**

Soil Survey Area: Door County, Wisconsin  
Survey Area Data: Version 16, Jun 8, 2020
Door County, Wisconsin

Wa—Wainola loamy fine sand

Map Unit Setting
- National map unit symbol: g5f2
- Elevation: 600 to 860 feet
- Mean annual precipitation: 27 to 33 inches
- Mean annual air temperature: 41 to 45 degrees F
- Frost-free period: 130 to 160 days
- Farmland classification: Farmland of statewide importance

Map Unit Composition
- Wainola and similar soils: 95 percent
- Minor components: 5 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wainola

Setting
- Landform: Drainageways
- Landform position (three-dimensional): Talf
- Down-slope shape: Linear
- Across-slope shape: Concave
- Parent material: Sandy glaciofluvial deposits

Typical profile
- A - 0 to 5 inches: loamy fine sand
- E - 5 to 13 inches: fine sand
- Bs - 13 to 30 inches: fine sand
- C - 30 to 60 inches: fine sand

Properties and qualities
- Slope: 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Natural drainage class: Somewhat poorly drained
- Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
- Depth to water table: About 0 to 24 inches
- Frequency of flooding: None
- Frequency of ponding: Occasional
- Available water storage in profile: Low (about 4.6 inches)

Interpretive groups
- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 3w
- Hydrologic Soil Group: A/D
- Forage suitability group: Low AWC, high water table (G095AY001Wf)
- Hydric soil rating: No
Minor Components

Deford
Percent of map unit: 3 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Rousseau
Percent of map unit: 2 percent
Landform: Rises
Landform position (three-dimensional): Rise, dip
Down-slope shape: Linear
Across-slope shape: Convex, concave
Hydric soil rating: No

Data Source Information

Soil Survey Area: Door County, Wisconsin
Survey Area Data: Version 16, Jun 8, 2020
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, "gravely."

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 oven dry 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:

## 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).

<table>
<thead>
<tr>
<th>Map unit symbol and soil name</th>
<th>Pct. of map unit</th>
<th>Hydrologic group</th>
<th>Depth</th>
<th>USDA texture</th>
<th>Classification</th>
<th>Pct Fragments</th>
<th>Percentage passing sieve number—</th>
<th>Liquid limit</th>
<th>Plasticity index</th>
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<tbody>
<tr>
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<tr>
<td>OmB—Omena sandy loam, 2 to 6 percent slopes</td>
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<tr>
<td>OmB</td>
<td>100</td>
<td>B</td>
<td>0-10</td>
<td>Sandy loam</td>
<td>SC-SM</td>
<td>A-4</td>
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<td>50-55-60</td>
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<tr>
<td>Summerville</td>
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<td>D</td>
<td>0-12</td>
<td>Loam</td>
<td>CL</td>
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**Unified**: L-R-H; **AASHTO**: L-R-H; **10-10**: L-R-H; **3-10**: L-R-H; **4**: L-R-H; **10**: L-R-H; **40**: L-R-H; **200**: L-R-H; **Pct Fragments**: L-R-H; **Percentage passing sieve number—**: L-R-H; **Liquid limit**: L-R-H; **Plasticity index**: L-R-H.
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<th>Depth</th>
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<th>Percentage passing sieve number</th>
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<td></td>
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<td>AASHTO</td>
<td>&gt;10 inches</td>
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<tr>
<td>Wp—Wainola loamy fine sand</td>
<td>95</td>
<td>A/O</td>
<td>0-5</td>
<td>SM</td>
<td>A-2-4</td>
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**Data Source Information**

Soil Survey Area: Door County, Wisconsin
Survey Area Data: Version 16, Jun 8, 2020