7037.3300 CHARACTERIZATION OF NATIVE SOIL.

Subpart 1. **Organic matter concentration.** Organic matter concentration in a native soil must be determined using a method in one of the following references:

A. Recommended Chemical Soil Test Procedures for the North Central Region, Bulletin No. 499, October 1988, issued by the North Dakota State University Agricultural Experiment Station, Fargo, North Dakota.

B. Methods of Soil Analysis, Part 2–Chemical and Microbiological Properties (Second edition), edited by A.L. Page, et al., issued by the American Society of Agronomy as Agronomy Monograph Number 9, Madison, Wisconsin, 1982.

Subp. 2. **Extractable phosphorus concentration.** If the extractable phosphorus concentration of a native soil is to be determined, this must be determined as given in the references in subpart 1.

Subp. 3. **Soil permeability.** Soil permeability must be reported as one of the following ranges in units of inches per hour: more than 6, 2.0 to 6, 0.6 to 2.0, or less than 0.6. If the native soil at the land treatment site is mapped in a Natural Resources Conservation Service soil survey, the soil permeability information in the soil survey or Natural Resources Conservation Service soil interpretation records may be used. If the information is not available, then the soil permeability must be determined using one of the methods in items A to C.

A. Soil texture, as obtained or determined under subpart 4, may be used to estimate the soil permeability as given in the following table for United States Department of Agriculture textural classifications and permeabilities:

Soil texture classification	**Permeability (inches per hour)**
Gravel, sand, fine sand, loamy sand, loamy fine sand	more than 6
Sandy loam, fine sandy loam	2.0 to 6
Loam, silt loam, sandy clay loam	0.6 to 2.0
Clay loam, silty clay loam, sandy clay, silty clay, clay.	less than 0.6

B. Determination in a laboratory using undisturbed soil samples as outlined in chapter 28, Hydraulic Conductivity and Diffusivity: Laboratory Methods, in Methods of Soil Analysis, Part 1–Physical and Mineralogical Methods (Second edition), edited by Arnold Klute, issued by the American Society of Agronomy as Agronomy Monograph Number 9, Madison, Wisconsin, 1986.

C. Determination by direct measurement in the field as outlined in chapter 29, Hydraulic Conductivity of Saturated Soils: Field Methods, in Methods of Soil Analysis, Part 1–Physical and Mineralogical Methods (Second edition), edited by Arnold Klute, issued by the American Society of Agronomy as Agronomy Monograph Number 9, Madison, Wisconsin, 1986.

Subp. 4. **Soil texture.** If the native soil at the land treatment site is mapped in a Natural Resources Conservation Service soil survey, the United States Department of Agriculture soil textural information in the soil survey or Natural Resources Conservation Service soil interpretation records may be used. If such information is not available, then the soil texture must be determined using one of the following references:

A. Chapter 15, Particle-size Analysis, in Methods of Soil Analysis, Part 1–Physical and Mineralogical Methods (Second edition), edited by Arnold Klute, issued by the American Society of Agronomy as Agronomy Monograph Number 9, Madison, Wisconsin, 1986.

B. Soil Survey Laboratory Methods and Procedures for Collecting Soil Samples, issued by the Soil Conservation Service as Soil Survey Investigations Report 1 (revised), Washington, D.C., United States Government Printing Office, 1972.

Subp. 5. **Seasonal high water table.** The depth to the seasonal high water table must be obtained or determined as described in items A and B:

A. The depth to the seasonal high water table for many specific soil series in Minnesota can be found in Natural Resources Conservation Service soil surveys or Natural Resources Conservation Service soil interpretation records.

Where the depth to the seasonal high water table is given as a range, the actual depth shall be considered as the average of the range.

B. Determination of the depth at which any one of the following is present below the topsoil as the result of saturated conditions:

(1) soil having a matrix or mottles with a chroma of two or less using the Munsell color notation;

(2) olive-colored soil as indicated by matrix hues of 5Y or yellower and a chroma of three or less using the Munsell color notation; or

(3) soil with distinct or prominent mottles as indicated by a separation of matrix color from mottle color by several chroma or more than one hue.

Statutory Authority: *MS s 116.07*

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