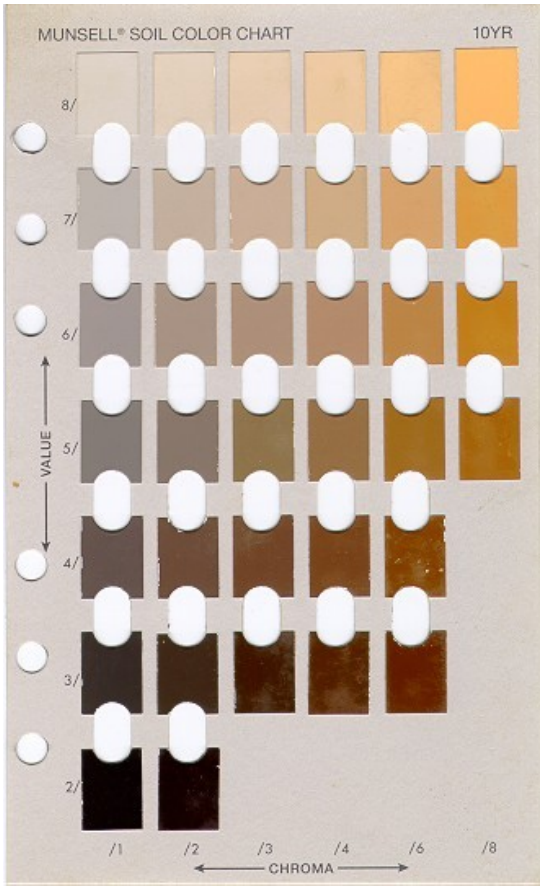
Munsell Soil Color Chart

Soil color is easily determined and typically represents significant soil properties, such as seasonal water saturation and soil drainage characteristics. The Munsell Soil Color Chart is the standard for determining soil color and is used to objectively record soil colors.



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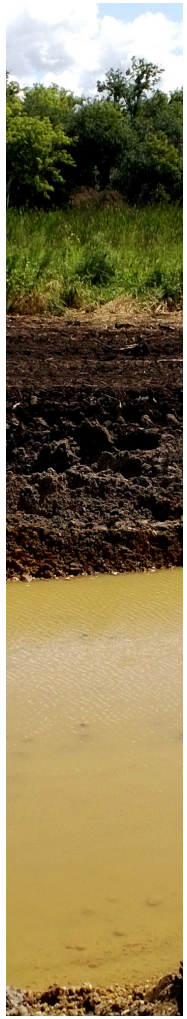
Post-Construction BMPs

DUPAGE COUNTY

Stormwater Management



www.dupageco.org/swm

Estimated Seasonal High Water Table

What is the ESHWT?

The estimated seasonal high water table (ESHWT) is the highest level at which the soil is saturated with water, known as subsurface drainage. Subsurface drainage is often quite different from surface drainage and usually deals with a soil's high water table characteristics. Saturated soils often have decreased strength for building structures, may slough during excavation, may keep basements wet or sump pumps running continuously, cause septic system to fail, and are not suitable for infiltration practices.

Why do I Need to Know This?

Per Section 15-63.B of the DuPage County Countywide Stormwater and Flood Plain Ordinance, developments with a ESHWT indication within 2 feet of the surface are prohibited from providing onsite infiltration for stormwater necessary to comply with post-construction best management practices (BMP). Where these conditions are present, other options must be considered to meet the BMP requirement.

How is the ESHWT Determined?

In order to determine if high water tables may affect your project, a soil scientist can conduct test holes or borings for site-specific water table conditions, similar to what's required for septic systems or wetland delineations. If your property requires a septic system or you have a wetland onsite, the same professional may be able to perform this service. A list of soil scientists is available at www.dupageco.org/EDP/Stormwater_Management/1447/. This process entails the use of a hand probe to pull up a small core of soil to complete a standard soil profile description. During this process, the soil scientist focuses on color patterns in the soil that indicate the soil drainage and depth to the ESHWT, as well as soil texture and matrix color.

The ESHWT is generally indicated by mottling (discoloration) and may be determined with a soil investigation conducted in the following manner:

- Determination of the ESHWT shall be based on data collected by hand probe or boring. Observation and determination of soil characteristics may also be also acquired from a pit dug by a shovel, backhoe or other excavating equipment.
- There shall be a minimum of two (2) data points per BMP site where soil descriptions are taken. The proposed BMP shall be located within the area where the data points were located. One of the points shall be made at the lowest elevation of the proposed BMP area.

What Documentation is Needed?

The soil description should be documented by a soil scientist on a soil profile description worksheet and include depth of soil mottling as follows:

- Identification of soil mottling and reduction of iron (iron depletions) as expressed by soil color patterns.
- Specifically, this is determined where the soil has two percent or more of a Munsell color value of four or more and a chroma of two or less occurring as iron depletions.
- Where soil layers have a value of three or less and chroma of two or less, organic matter may mask the iron depletions.
- Where organic matter is masking the iron depletions, two percent or more of distinct or prominent concentrations of iron (value four or more and chroma of three or more) and/or the taxonomic classification of the soil may be used as additional evidence to determine the estimated depth to the ESHWT.

For More Information….

www.dupageco.org/swm