

The Mid-Atlantic Hydric Soil Committee, created in 1996, is made up of individuals from federal agencies including: Natural Resources Conservation Service, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, state environmental agencies, universities, not-for-profit agencies, and the private sector. The group is responsible for hydric soils research, research and establishment of test indicators, and creating the “Field Indicators of Hydric Soils in the Mid-Atlantic United States” that outlines hydric soil indicators, including graphical descriptions of each indicator. This field guide is a subset of indicators for the region developed from the National Technical Committee for Hydric Soils. The following link will allow you to download the field guide:

<http://www.epa.gov/reg3esd1/hydricsoils/book.htm>

The Committee created a scientific review of hydric soil science and an overview of wetland regulation, soil survey information, and identification of hydric soils. The textbook can be found at:

http://www.epa.gov/reg3esd1/hydricsoils/pdf/HydricSoilsMidAtlantic2_2004.pdf

A soil description form created by the Committee can be found at:

<http://www.epa.gov/reg3esd1/hydricsoils/pdf/newest%20Hydric%20Soil%20Description%20Forms2.pdf>

Another helpful text is:

Richardson, J.L. and M.J. Vepraskas. 2000. Wetland Soils: Genesis, Hydrology, Landscapes, and Classification, CRC Press, LLC, Boca Raton, FL.

The National List of Hydric Soils is found at:

<http://soils.usda.gov/use/hydric/>

Official (*and current*) soil descriptions to use to confirm map units in the field can be found at:

<http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdname.cgi>

For questions or electronic copies of this handout please contact:

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A helpful field book especially for describing soils and redox features:
 Schoenberger, P.J., Wysocki, D.A., Benham, E.C., and Broderson, W.D., 2002. Field book for describing and sampling soils. Natural Resource Conservation Service, USDA, National Soil Survey Center, Lincoln, NE. This book can be found at <http://soils.usda.gov/technical/fieldbook/>
 Excerpts are below:

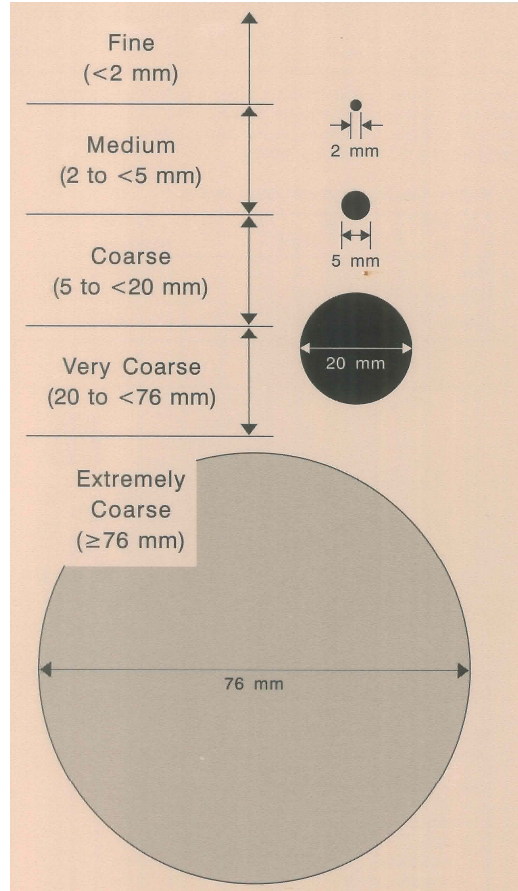
MOTTLES - Describe mottles (areas of color that differ from the matrix color). These colors are commonly lithochromic or lithomorphic (attributes retained from the geologic source rather than from pedogenesis; e.g., gray shale). Mottles exclude: Redoximorphic Features (RMF) and Ped & Void Surface Features; e.g., clay films. Record **Quantity Class** (in NASIS/PDP, estimate a numerical value "Percent of Horizon Area Covered"), **Size**, **Contrast**, **Color**, and **Moisture State** (D or M). **Shape** is an optional descriptor (use the "Concentrations - Shape Table"). A complete example is: *few, medium, distinct, reddish yellow, moist, irregular mottles* or *f, 2, d, 7.5 YR 7/8, m, z, mottles*.

Mottles - Quantity (Percent of Area Covered) -

Quantity Class	Code		Criteria: range in percent
	Conv	NASIS	
Few	f	%	<2% of surface area
Common	c	%	2 to <20% of surface area
Many	m	%	≥20% of surface area

Mottles - Size - Record mottle size class. Use length if it's greater than 2 times the width; use width if the length is less than two times the width. Length is the greater of the two dimensions. (New size classes to be consistent with the new RMF size classes.)

Size Class	Code	Criteria
Fine	1	< 2 mm
Medium	2	2 to < 5 mm
Coarse	3	5 to < 20 mm
Very Coarse	4	20 to < 76 mm
Extremely Coarse	5	≥ 76 mm



(Not to scale, roughly 2/3rds scale)

Mottles - Contrast - Record the color difference between the mottle and the dominant matrix color. Use this table or the following chart to express the difference.

Contrast Class	Code	Hue ¹	Difference in Color Between Matrix and Mottle	
			Value	Chroma
Faint ²	F	same page	0 to ≤ 2	and ≤ 1
Distinct	D	same page	> 2 to < 4	and < 4
			< 4	and > 1 to < 4
Prominent	P	1 page	≤ 2	and ≤ 1
			≥ 4	or ≥ 4
			> 2	or > 1
		≥ 2 pages	≥ 0	or ≥ 0

¹ One Munsell® Color Book page = 2.5 hue units. Table contents compiled from material in or intended by the Soil Survey Manual (Soil Survey Staff, 1993).
² *Faint* also includes mottles or RMFs that are similar in color to the matrix that have both low (e.g., <3) value and chroma, and differ by up to 2.5 units (one page) of hue.

Mottles - Color - Use standard Munsell® notation of hue, value, chroma; e.g., 5 YR 4/4 (for reddish brown).

Mottles - Moisture State - Record the moisture condition of the mottle (not to be confused with soil water state); e.g., *moist*.

Moisture State	Code
Dry	D
Moist	M

Contrast of Soil Mottles
 (For Use with Munsell Color Book)

