How is a Bh horizon separated from a Bhs horizon in the field or based on lab data?

By definition (Soil Survey Staff, 2010):

only “h” is used “if the sesquioxide component is dominated by aluminum but is present in only very small quantities”

“the symbol h is also used in combination with s (Bhs) if the amount of sesquioxide component is significant”.

One of the issues: Al does not actually form into a sesquioxide mineral (by definition)in spodic horizons

Oxalate extractable Fe and Al

Horizon	Al (%)	Fe (%)
Carver Pond		
A	0.48	0.18
AE	0.36	0.28
Bhs1	2.16	0.13
Bhs2	2.06	0.13
EP		
E	0.01	0.04
Bhsm1	0.67	0.08
Bhsm2	0.85	0.1
AQ		
E	0.15	0.18
Bhs	0.71	0.16
Bhsm	0.73	0.35
SC-2		
E	0.12	0.03
Bhs1	0.66	0.1
Bhs2	0.63	0.14

Horizon	Al (%)	Fe (%)
Alton Jones		
E	0.11	0.04
Bhs1	1.54	0.11
Bhs2	1.54	0.12
Great Swamp		
EA	0.28	0.04
Bhs1	1.98	0.16
Bhs2	1.8	0.15
SB-4		
E1	0.26	0.04
E2	0.36	0.02
Bhs	0.65	0.06
Bhsm1	0.81	0.06
Bhsm2	0.26	0.02
PK		
Ap1	1.16	1.59
Ap2	0.9	1.28
Bw1	0.3	0.76
Bw2	0.83	0.96
BC	0.65	0.62

Pedon	horizon	Hue (YR)	Value	Chroma	AOx Al	AOx Fe
EP	Bhsm1	6.37	1.7	1.0	0.67	0.08
EP	Bhsm2	5.50	1.6	1.7	0.85	0.10
SB	Bhs1	5.10	1.5	1.3	0.66	0.10
SB	Bhs2	4.43	1.5	1.9	0.63	0.14
AQ	Bhs	5.83	1.5	1.5	0.71	0.16
AQ	Bhsm	5.33	1.3	1.0	0.73	0.35
AJ	Bhs1	4.70	1.5	0.8	1.54	0.11
AJ	Bhs1	4.93	1.4	0.9	1.54	0.12
CP	Bhs1	5.40	1.1	0.7	2.16	0.13
CP	Bhs2	5.70	1.4	1.3	2.06	0.13
GS	Bhs1	4.97	1.3	1.0	1.98	0.16
GS	Bhs2	5.27	1.5	1.2	1.80	0.15
NE Mean		5.29*	1.44*	1.20*	1.28*	0.14

Pedon	horizon	Hue (YR)	Value	Chroma	AOx Al	AOx Fe
1,1	Bh	7.27	2.3	1.1	0.10	0.24
1,1	Bhs	7.63	2.2	2.1	0.28	0.16
1,3	Bhsm1	5.33	1.7	1.8	0.24	0.00
1,3	Bhsm2	5.93	1.7	1.0	0.21	0.00
1,3	Bhs	5.37	1.9	1.7	0.08	0.00
1,5	Bhsm	5.53	2.0	1.8	0.55	0.02
1,5	Bh2	5.77	1.9	1.0	0.08	0.00
1,5	Bhs	5.80	2.1	2.1	0.05	0.00
2,3	Bh	6.97	2.1	1.3	0.26	0.37
2,3	Bhs	8.47	2.7	2.4	0.43	0.14
2,5	Bh	6.20	1.8	1.3	0.59	0.02
2,5	Bhs	7.5	2.9	2.7	0.30	0.02
MD mean		6.48	2.11	1.70	0.26	0.08


20
40
60
80

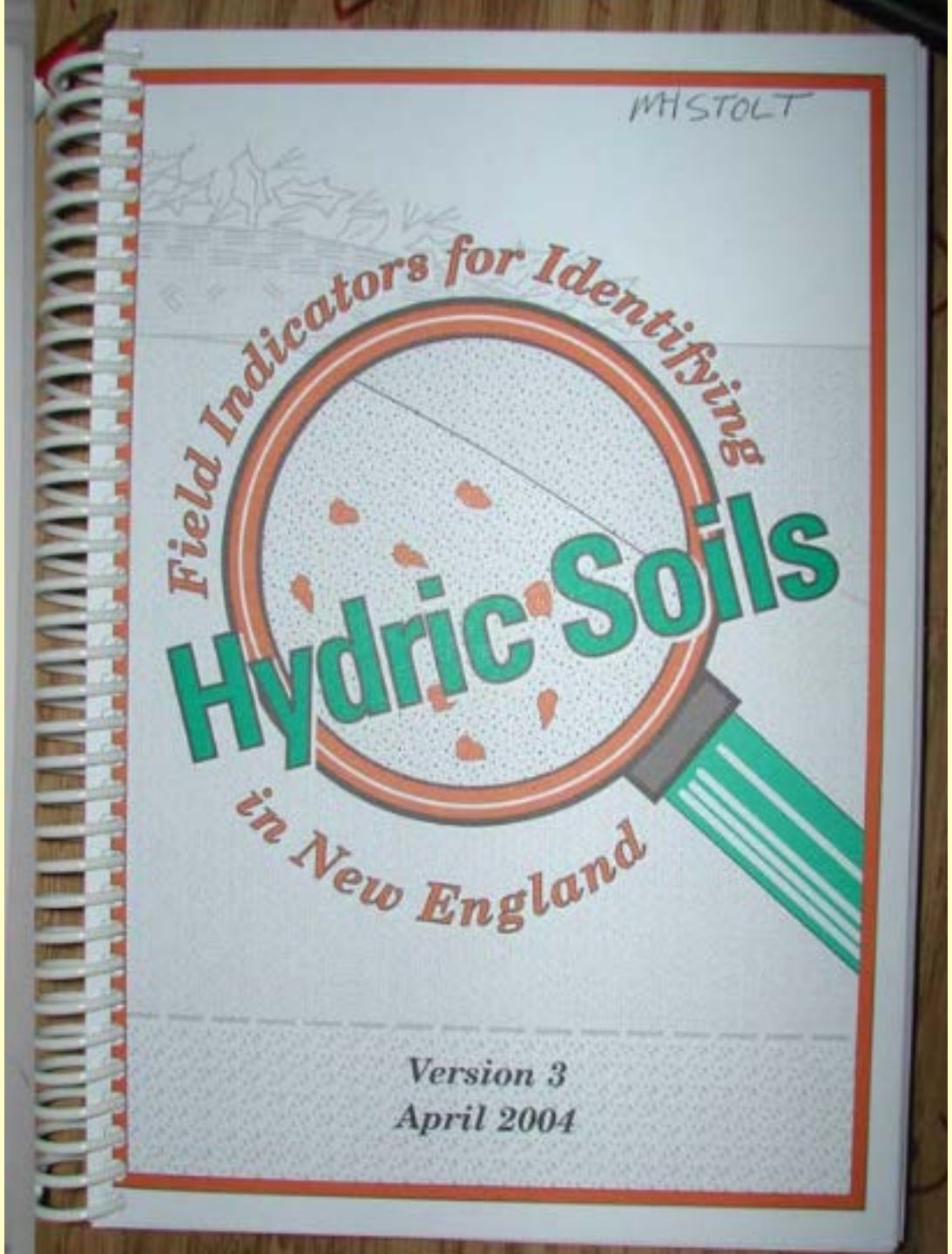
USDA United States Department of Agriculture

In cooperation with the National Technical Committee for Hydric Soils

NRCS Natural Resources Conservation Service

Field Indicators of Hydric Soils in the United States

A Guide for Identifying and Delineating Hydric Soils, Version 7.0, 2010



Soil Use

- Hydric Soils
- Urban Soils
- Maps
- World Soil Resources

NTCHS Functions

- Provide continuing technical leadership in the formulation, evaluation, and application of hydric soil definition, criteria, indicators, and the glossary.
- Annually update and distribute a national list of hydric soils, as necessary.
- Refine and maintain the Field Indicators of Hydric Soils in the United States. Changes to the Field Indicators will be recommended by the sub-committee to the entire NTCHS, and must be reviewed and approved before adopting.
- Communicate and respond to public comment regarding suggested changes in hydric soil definition, criteria, lists and field indicators.
- Determine soil, hydrologic, and climatic data necessary to more accurately define and determine hydric soils (technical methodology and standards).

NTCHS Operating Procedures

Committee shall consist of at least 15 permanent members as follows:

- Chairperson is an NRCS soil scientist with national responsibilities. The chair will be appointed by the Director of the Soil Science Division.
- Four NRCS State Soil Scientists, MO Leaders or designees.
- One member each from the Environmental Protection Agency, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Forest Service, and the Bureau of Land Management.
- At least five representatives from universities to include scientists doing research in hydric soils.
- Others representatives may be selected as deemed appropriate.

Members will retain membership as determined by the agency they represent, or they may resign by submitting a letter of resignation to the chairperson, NTCHS.

Membership representation from universities is voluntary and vacancies are open to persons nominated by the university representatives and who have a proven research record on hydric soils. Nominations come forward for NTCHS vote from the university representative subcommittee. Vacant positions will be announced and qualifications and references will be submitted to the NTCHS. These members will be chosen by the NTCHS.

Minutes of the meeting will be circulated to the committee and maintained by the chairperson. Minutes shall be available to the public via the soils.usda.gov website.

The NRCS shall be responsible for notification of changes to the definition, criteria and the National List of Hydric Soils by publishing changes in the Federal Register.

Changes in the NTCHS committee membership, hydric soils glossary, operating procedures, etc. shall be distributed via the Hydric Soils Homepage, National Soil Data Access Facility.

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