Subaqueous Soil revisions of the 12th Keys to Soil Taxonomy

(Proposal by T. Villars, J. Turenne, and M. Stolt)

12th Keys to Soil Taxonomy

CHAPTER 4 Identification of the Taxonomic Class of a Soil, Pg. 40

K. Other soils that do not have a positive water potential at the soil surface for more than 21 hours each day in all years and that have either:
   1. One or more of the following: . . . . . . . . . .

Inceptisols, p. 173

CHAPTER 8 Entisols, Pg. 135

Key to Suborders
LA. Entisols that have a field observable water table 2 cm or more above the soil surface for more than 21 hours of each day in all years.

Wassents, p. 154

(The proposal above affects Wassents, having come about through the proposal on calcareous fens – Wysocki, et al).

Wassents
Key to Great Groups
LAA. Wassents that have, in all horizons within 100 cm of the mineral soil surface, an electrical conductivity of less than 0.6 dS/m in a 1:5 (soil: water), by volume, supernatant (not extract).

Frasiwassents, Pgs. 154-155

Key to Subgroups
LAAA. Frasiwassents that have both:
   1. A color value, moist, of 3 or less and a color value, dry, of 5 or less (crushed and smoothed sample) either throughout the upper 18 cm of the mineral soil (unmixed), or between the mineral soil surface and a depth of 18 cm after mixing; and
   2. In all horizons at a depth between 20 and 50 cm below the mineral soil surface, both an n value of more than 0.7 and 8 percent or more clay in the fine-earth fraction.

Humic Fluic Frasiwassents

LAAB. Frasiwassents that have a color value, moist, of 3 or less and a color value, dry, of 5 or less (crushed and smoothed sample) either throughout the upper 18 cm of the mineral soil (unmixed), or between the mineral soil surface and a depth of 18 cm after mixing.

Humic Frasiwassents

LAAC. Frasiwassents that have, in all horizons at a depth between 20 and 50 cm below the mineral soil surface, both an n value of more than 0.7 and 8 percent or more clay in the fine earth fraction.

Fluic Frasiwassents

Renumber remaining Frasiwassents...
LAAC. LAAD. LAAE. LAAF. LAAG. LLAH.

Key to Suborders
BA. Histosols that are saturated with water for less than 30 cumulative days during normal years (and are not artificially drained).  
Folists, p. 168

BB. Other Histosols that have a field observable water table 2 cm or more above the soil surface for more than 21 hours of each day in all years.  
Wassists, p. 171

Frasiwassists
Key to Subgroups
BBAA. Frasiwassists that have a layer of mineral soil material 30 cm or more thick that has its upper boundary within the control section, below the surface tier.  
Terric Frasiwassists

BBAB. (Continue unchanged)
BBAC.
BBAD.

Haplowassists
Key to Subgroups
BBCA. Haplowassists that have a horizon or horizons, with a combined thickness of 15 cm within 100 cm of the soil surface, that contain sulfidic materials  
Sulfic Haplowassists

BBCB. Other Haplowassists that have a layer of mineral soil material 30 cm or more thick that has its upper boundary within the control section, below the surface tier.  
Terric Haplowassists

BBCC. (Continue unchanged)
BBCD.
BBCE.

Sulfiwassists
Key to Subgroups
BBBA. Sulfiwassists that have a layer of mineral soil material 30 cm or more thick that has its upper boundary within the control section, below the surface tier.  
Terric Sulfiwassists

BBBB. (Continue unchanged)
BBBC.
BBBD.
Chapter 17, Pg. 319, Change to Family PSC for Wassents

E. For other soils that have an argillic or natric horizon that has its lower boundary at a depth of less than 25 cm from the mineral soil surface: Between the upper boundary of the argillic or natric horizon and a depth of 100 cm below the mineral soil surface or a root-limiting layer, whichever is shallower; or

F. For Wassents, between the mineral soil surface and the shallower of the following: (a) a depth of 100 cm below the mineral soil surface or (b) a root-limiting layer.

G. All other mineral soils: Between the lower boundary of an Ap horizon or a depth of 25 cm below the mineral soil surface, whichever is deeper, and the shallower of the following: (a) a depth of 100 cm below the mineral soil surface or (b) a root-limiting layer.

Control Section for Calcareous and Reaction Classes, Pg. 329

The control section for the calcareous class is one of the following:

1. All Gelisols (except for Histels) and all Gelic suborders and Gelic great groups and Wassents suborder: The layer from the mineral soil surface to a depth of 25 cm or to a root-limiting layer, whichever is shallower.