

Field Indicators in the United States for Maryland's LRR T (Eastern Shore)

Indicators that Normally Occur on Wetland Boundary

ALL SOILS

A5. Stratified Layers. Several stratified layers starting within the upper 15 cm (6 inches) of the soil surface. One or more of the layers has value 3 or less with chroma 1 or less and/or it is muck, mucky peat, peat, or mucky modified mineral texture. The remaining layers have chroma 2 or less.

A11. Depleted Below Dark Surface. A layer with a depleted* or gleyed** matrix that has 60% or more chroma 2 or less starting within 30 cm (12 in) of the soil surface, and having a minimum thickness of either:

- 15 cm (6 in); or
- 5 cm (2 in) if the 5 cm (2 in) consists of fragmental soil material.

Loamy/clayey layer(s) above the depleted* or gleyed** matrix must have value 3 or less and chroma 2 or less. Sandy layer(s) above the depleted or gleyed matrix must have value 3 or less, chroma 1 or less, and at least 70% of the visible soil particles must be covered, coated, or similarly masked with organic material.

SANDY SOILS

S5. Sandy Redox. A layer starting within 15 cm (6 in) of the soil surface that is at least 10 cm (4 in) thick and has a matrix with 60% or more chroma 2 or less with 2% or more distinct or prominent redox concentrations as soft masses and/or pore linings.

S6. Stripped Matrix. A layer starting within 15 cm (6 in) of the soil surface in which iron/manganese oxides and/or organic matter have been stripped

from the matrix and the primary base color of the soil material has been exposed. The stripped areas and translocated oxides and/or organic matter form a diffuse splotchy pattern of two or more colors. The stripped zones are 10% or more of the volume; they are rounded and approximately 1 to 3 cm (0.5 to 1 in) in diameter.

S7. Dark Surface. A layer 10 cm (4 in) or more thick starting within the upper 15 cm (6 in) of the soil surface with a matrix value 3 or less and chroma 1 or less. At least 70% of the visible soil particles must be covered, coated, or similarly masked with organic material. The matrix color of the layer directly below the dark layer must have chroma 2 or less.

S8. Polyvalue Below Surface. A layer with value 3 or less and chroma 1 or less starting within 15 cm (6 in) of the soil surface and underlain by a layer(s) in which translocated organic matter unevenly covers the soil material, forming a diffuse splotchy pattern. At least 70% of the visible soil particles in the upper layer must be covered, coated, or similarly masked with organic material. Directly below this layer, the organic coating occupies 5% or more of the soil volume and has value 3 or less and chroma 1 or less. The remainder of the soil volume has value 4 or more and chroma 1 or less to a depth of 30 cm (12 in) or to the spodic horizon, whichever is less.

S9. Thin Dark Surface. A layer 5 cm (2 in) or more thick within the upper 15 cm (6 in) of the surface, with value 3 or

less and chroma 1 or less. At least 70% of the visible soil particles in this layer must be covered, coated, or masked with organic material. This layer is underlain by a layer(s) with value 4 or less and chroma 1 or less to a depth of 30 cm (12 in) or to the spodic horizon, whichever is less.

LOAMY AND CLAYEY SOILS

F3. Depleted Matrix. A layer that has a depleted* matrix with 60% or more chroma 2 or less and that has a minimum thickness of either:

- 5 cm (2 in) if the 5 cm (2 in) is entirely within the upper 15 cm (6 in) of the soil; or
- 15 cm (6 in), starting within 25 cm (10 in) of the soil surface.

F6. Redox Dark Surface. A layer at least 10 cm (4 in) thick, is entirely within the upper 30 cm (12 in) of the mineral soil, and has:

- matrix value 3 or less and chroma 1 or less and 2% or more distinct or prominent redox concentrations occurring as soft masses or pore linings; or
- matrix value 3 or less and chroma 2 or less and 5% or more distinct or prominent redox concentrations occurring as soft masses or pore linings.

F7. Depleted Dark Surface. Redox depletions, with value 5 or more and chroma 2 or less in a layer at least 10 cm (4 in) thick, is entirely within the upper 30 cm (12 in) of the mineral soil, and has:

- matrix value 3 or less and chroma 1 or less and 10% or more redox depletions; or
- matrix value 3 or less and chroma 2 or less and 20% or more redox depletions.

F8. Redox Depressions. In *closed depressions subject to ponding*, 5% or more distinct or prominent redox concentrations as soft masses or pore linings in a layer 5 cm (2 in) or more thick entirely within the upper 15 cm (6 in) of the soil surface.

F12. Iron/Manganese Masses. *On floodplains*, a layer 10 cm (4 in) or more thick with 40% or more chroma 2 or less, and 2% or more distinct or prominent redox concentrations as soft iron/manganese masses with diffuse boundaries. The layer occurs entirely within 30 cm (12 in) of the soil surface. Iron/manganese masses have value and chroma of 3 or less. Most commonly, they are black. The thickness requirement is waived if the layer is the mineral soil surface.

F20. Anomalous Bright Loamy Soils. For use in MLRA 153C and 153D of LRR T; for testing in MLRA 153B of LRR T. *Within 200 m (656 ft) of estuarine marshes or waters and within 1m (3.28 ft) of mean high water*, a mineral layer at least 10 cm (4 in) thick starting within 20 cm (8 in) of the soil surface with a matrix (60% or more of the volume) chroma less than 5 and 10% or more distinct or prominent redox concentrations as soft masses of pore linings and/or depletions.

Field Indicators of Hydric Soils in the United States for Maryland's LRR T (Eastern Shore)

Indicators of Very Wet Ecosystems

FOR APPLICATION OF ALL INDICATORS EXCEPT F8, F12, AND F20, ALL MINERAL LAYERS ABOVE THE INDICATORS HAVE DOMINANT CHROMA 2 OR LESS, OR THE LAYER(S) WITH DOMINANT CHROMA OF MORE THAN 2 IS LESS THAN 15 CM (6 IN) THICK.

ALL SOILS

A1. Histosol or Histel. Classifies as a Histosol (except Folist) or as a Histel (except Folistel).

A2. Histic Epipedon. A histic epipedon underlain by mineral soil material with chroma 2 or less.

A3. Black Histic. A layer of peat, mucky peat, or muck 20 cm (8 in) or more thick starting within the upper 15 cm (6 in) of the soil surface, has hue 10YR or yellower, value of 3 or less, and chroma of 1 or less underlain by mineral soil material with chroma 2 or less.

A4. Hydrogen Sulfide. A hydrogen sulfide odor within 30 cm (12 in) of the soil surface.

A6. Organic Bodies. Presence of 2% or more organic bodies of muck or a mucky modified mineral texture, approx. 1 to 3 cm (0.5 to 1 in) in diameter, starting within 15 cm (6 in) of the soil surface. In some soils organic bodies are smaller than 1 cm.

A7. 5 cm Mucky Mineral. A layer of mucky modified mineral soil material 5

cm (2 in) or more thick starting within 15 cm (6 in) of the soil surface.
A9. 1 cm Muck. A layer of muck 1 cm (0.5 in) or more thick with value 3 or less and chroma 1 or less and starting within 15 cm (6 in) of the soil surface.

A12. Thick Dark Surface. A layer at least 15 cm (6 in) thick with a depleted* or gleyed** matrix that has 60% or more chroma 2 or less and starting 30 cm (12 in) below the surface. The layer(s) above the depleted or gleyed** matrix must have value 2.5 or less and chroma 1 or less to a depth of 30 cm (12 in) and value 3 or less and chroma 1 or less in any remaining layers above the depleted or gleyed matrix. Any sandy material above the depleted or gleyed matrix must have at least 70% of the visible soil particles covered, coated, or similarly masked with organic material.

SANDY SOILS

S4. Sandy Gleyed Matrix. A gleyed** matrix that occupies 60% or more of a layer starting within 15 cm (6 in) of the soil surface.

LOAMY AND CLAYEY SOILS

F2. Loamy Gleyed Matrix. A gleyed** matrix that occupies 60% or more of a layer starting within 30 cm (12 in) of the soil surface.

F13. Umbric Surface. *In depressions* and other concave landforms, a layer 25 cm (10 in) or more thick starting within 15 cm (6 in) of the soil surface in which the upper 15 cm (6 in) must have value 3 or less and chroma 1 or less and in which the lower 10 cm (4 in) of

the layer must have the same colors as above or any other color that has a chroma of 2 or less.

*DEPLETED MATRIX.

1. Matrix value 5 or more and chroma 1 with or without redox concentrations as soft masses and/or pore linings; or
2. Matrix value 6 or more and chroma 2 or 1 with or without redox concentrations as soft masses and/or pore linings; or
3. Matrix value 4 or 5 and chroma 2 and has 2% or more distinct or prominent redox concentrations as soft masses and/or pore linings; or
4. Matrix value 4 and chroma 1 and has 2% or more distinct or prominent redox concentrations as soft masses and/or pore linings.

**GLEYED MATRIX.

Soils that have a gleyed matrix have the following combinations of hue, value, and chroma and the soils are not glauconitic:

1. 10Y, 5GY, 10GY, 10G, 5BG, 10BG, 5B, 10B, or 5PB with value 4 or more and chroma 1; or
2. 5G with value 4 or more and chroma 1 or 2; or
3. N with value 4 or more; or
4. (for testing only) 5Y, value 4 or more, and chroma 1.

In some places the gleyed matrix may change color upon exposure to air (reduced matrix). This phenomenon is included in the concept of gleyed matrix.

Notes

- Commonly used indicators are in green and underlined.
- Text in *brown and italics* refers to specific landscape positions.