

HYDROLOGY DETERMINATION METHODS

There are three steps to determine wetland hydrology. The first two steps can only be used to confirm the presence of hydrology. For a list of Midwest counties, see the bottom of page two. All other counties are considered Great Plains counties.

Step 1. Wetland hydrology is met if **one** of the following Primary Indicators is present:

PRIMARY INDICATORS

- | | |
|---|--|
| (A1) Surface Water | (B14) True Aquatic Plants – Midwest counties only |
| (A2) High Water Table | (C1) Hydrogen Sulfide Odor |
| (A3) Saturation | (C2) Dry-season water table – Great Plains counties only - <u>Do not use if altered (subsurface irrigation structure)</u> |
| (B1) Water Marks | (C3) Oxidized Rhizospheres on Living Roots – Midwest counties; plus untilled in GP counties |
| (B2) Sediment Deposits | (C4) Presence of Reduced Iron |
| (B3) Drift Deposits | (C6) Recent Iron Reduction in Tilled Soils – Midwest counties only |
| (B4) Algal Mat or Crust | (C7) Thin Muck Surface |
| (B5) Iron Deposits | (D9) Gauge or well data – Midwest counties only |
| (B7) Inundation visible on aerial imagery* | |
| (B9) Water-stained Leaves | |
| (B11) Salt Crust – Great Plains counties only | |
| (B13) Aquatic Fauna/invertebrates | |
| (B8) Sparsely vegetated concave surface – Midwest counties only | |

If Primary Indicators are not met, move to Step 2.

Step 2. Wetland hydrology is met if **two** of the following Secondary Indicators are present:

SECONDARY INDICATORS:

- | | |
|---|---|
| (B6) Surface Soil Cracks – <u>Do not use if altered (ponding removed in potholes; any alteration in nonpotholes)</u> | (C8) Crayfish Burrows |
| (B8) Sparsely vegetated concave surface – Great Plains counties only | (C9) Saturation Visible on Aerial Imagery* |
| (B10) Drainage Patterns | (D1) Stunted /Stressed Plants – Midwest counties only |
| (C2) Dry-Season Water Table – Midwest counties only - <u>Do not use if altered (subsurface irrigation structure)</u> | (D2) Geomorphic Position – <u>Do not use if altered (ponding removed in potholes; any alteration in nonpotholes)</u> |
| (C3) Oxidized Rhizospheres on Living Roots – Great Plains counties where tilled | (D5) FAC Neutral Test – May be used on altered sites only with on-site vegetation |
| | (D7) Frost-heave Hummocks – Great Plains counties |

If neither the Primary nor the Secondary Indicators are met in the field, move to Step 3.

Step 3. Any Engineering Field Handbook (EFH), Chapter 19 tools would provide a wetland hydrology determination assuring that the preponderance of evidence requirement of the National Food Security Act Manual, 513.11c is met. Currently this is Procedure 2 as denoted in 650.1903 of Chapter 19 of the EFH (see SD-LTP-33 for methodology). Tools can be used to confirm the presence or absence of hydrology.

Step 3 shall be documented following the procedures outlined on form SD-LTP-33, Using FSA Compliance Slides as a Method to Evaluate Hydrology. The results of the SD-LTP-33 procedure must be documented correctly on form SD-LTP-28, Wetland Determination Record Remotely Sensed Data Summary).

NOTE: The tools cannot override the presence of field indicators in Steps 1 or 2 of SD-LTP-31 (without clear documentation and explanation as to how the preponderance of evidence negates the onsite indicator(s) found (e.g., timing, duration, recorded data).

*Hydrology Step 3 is not replaced by hydrology indicators B7 and C9. Hydrology Step 3 procedures may still be used when dealing with “Difficult Wetland Situations” (e.g. Wetlands that periodically lack indicators of wetland hydrology) as is allowed in through EFH Chapter 19 tools.

*If both indicator B7 and C9 (inundation and saturation) are apparent on imagery then use indicator C9. Users must follow Step 3 procedures if they wish to use B7 or C9.

Midwest counties are:

Brookings	Lake
Clay	Lincoln
Codington	Minnehaha
Deuel	Moody
Grant	Roberts
Hamlin	Union