Hydrologic Indicators

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## HYDROLOGY

### Wetland Hydrology Indicators:

<table>
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<th>Primary Indicators (minimum of one is required; check all that apply)</th>
<th>Secondary Indicators (minimum of two required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Surface Soil Cracks (B6)</td>
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<tr>
<td>High Water Table (A2)</td>
<td>Sparserly Vegetated Concave Surface (B8)</td>
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<td>Saturation (A3)</td>
<td>Drainage Patterns (B10)</td>
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<td>Water Marks (B1)</td>
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<td>Iron Deposits (B5)</td>
<td>Geomorphic Position (D2)</td>
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<td>Inundation Visible on Aerial Imagery (B7)</td>
<td>Shallow Aquitard (D3)</td>
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<td>Water-Stained Leaves (B9)</td>
<td>FAC-Neutral Test (D5)</td>
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### Field Observations:

- **Surface Water Present?**
  - Yes ☐
  - No ☐
  - Depth (inches): __________

- **Water Table Present?**
  - Yes ☐
  - No ☐
  - Depth (inches): __________

- **Saturation Present?**
  - Yes ☐
  - No ☐
  - Depth (inches): __________
  (includes capillary fringe)

### Wetland Hydrology Present?
- Yes ☐
- No ☐

### Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

### Remarks:
Some Factors that Influence the Wetness of a Site

- Climate
- Landscape / geomorphic setting
- Stratigraphy
- Soil texture and drainage
- Plant cover
- Normal rainfall
Wetland Hydrology Indicators

A1 – Surface water

A2 – High water table

Water table is 12 inches or less from the surface
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A3 – Saturation

Condition in which all pores between soil particles are temporarily or permanently filled with water.

- Indicated by water glistening on ped faces and interiors within 12 inches of the surface.
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B1 – Water marks
Wetland Hydrology Indicators

B2 – Sediment deposits

• Thin coatings of silt or organic material
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B3 – Drift deposits

- Rafted debris or litter
Wetland Hydrology Indicators

B4 – Algal mat or crust
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B5 – Iron deposits

• Reduced iron emerges with groundwater and oxidizes on the surface
Wetland Hydrology Indicators

B6 – Surface soil cracks
• Does not include deep cracks in clay soils (e.g., Vertisols)

B7 – Inundation visible on aerial imagery
B8 – Sparsely vegetated concave surface

- <5% ground cover
- A woody overstory may or may not be present
Wetland Hydrology Indicators

B9 – Water-stained leaves
Wetland Hydrology Indicators

B10 – Drainage patterns
Wetland Hydrology Indicators

B13 – Aquatic invertebrates (or fauna)
Wetland Hydrology Indicators

B15 – Marl deposits

B16 – Moss trim lines
Wetland Hydrology Indicators

C1 – Hydrogen sulfide odor

- Rotten egg odor
- Observed within 12 inches of the surface
- Also indicates hydric soil
Wetland Hydrology Indicators

C2 – Dry-season water table

- Water table is 12-24 inches from the surface
- Observed during the dry season or in a dry year
Wetland Hydrology Indicators

C3 – Oxidized rhizospheres along living roots

- Result of oxygen leakage in anoxic soils
- Within 12 inches of the surface
- Occupy 2% or more of the layer’s volume
Wetland Hydrology Indicators

C4 – Presence of reduced iron

- Ferrous iron test or color change upon exposure to air
- Within 12 inches of the surface
Wetland Hydrology Indicators

C6 – Recent iron reduction in tilled soils

C8 – Crayfish burrows
Wetland Hydrology Indicators

C7- Thin Muck Surface
Wetland Hydrology Indicators

C9 – Saturation visible on aerial imagery

- Signatures must correspond to field-verified hydric soils, depressions or drainage patterns, or other evidence of a seasonal high water table
Wetland Hydrology Indicators

D2 – Geomorphic position

Examples:
- Localized depression
- Drainageway
- Concave position on a floodplain
- Toe of slope
- Fringe of water body
- Discharge zone (seep)
Wetland Hydrology Indicators

D3 – Shallow aquitard

- Capable of perching water within 12 inches of the surface
- Examples:
  - Permafrost
  - Dense glacial till
  - Clay layer
  - Bedrock
Wetland Hydrology Indicators

D5 – FAC-neutral test

\[(\text{OBL} + \text{FACW}) > (\text{FACU} + \text{UPL})\]

- List the dominant species across all strata
- Drop any species that is FAC, FAC-, or FAC+
- More than 50% of the remaining dominants must be OBL and/or FACW
Wetland Hydrology Indicators

D8- Sphagnum moss
The Problem

- Lack of an indicator does not necessarily mean that wetland hydrology is absent

  - Additional information may be needed to determine if wetland hydrology is present when indicators appear to be absent

- Problem areas:

  - Wetlands in which indicators of one or more parameters may *periodically* be lacking due to *normal* seasonal or annual variability.
DON’T FORGET!

- Use the remarks section!

- Tell us about any recorded data (wells, photos, site visits, history)

- Ditches
Evaluating Normal Rainfall

WETS Tables

### 30 Year Range of Normal for area in question:

- **Average Precipitation:** 54.57
- **Minimum Precipitation:** 44.04
- **Maximum Precipitation:** 53.26
Georgia Automated Environmental Monitoring Network
www.GeorgiaWeather.net

WARNING:

WARNING: The AEMN and this website are currently scheduled to be shutdown in late Summer 2011 due to a shortfall in funding. Unless substantial blocks of dedicated funding are committed by early July 2011, we will begin the process of decommissioning weather stations at that time. Once a weather station is decommissioned, current data will no longer be available. For more information click here.

- Georgia Weather Net is under threat
- UGA seeks funds to keep weather monitors online
- UGA seeks funds to keep weather monitors online
- Georgia weather network struggles to survive
- Ending weather reports worries Ga. farmers
- K-12 Weather School for Georgia educators
- Recent new stations: Ducker... more news
- To print a "printer-friendly" web page, simply select "File" and then "Print" or Click

For current weather conditions, historical weather data and applications, please select a site on the map:

http://www.georgiaweather.net/
Change the dates to look at the past 12 months of rainfall data.

Our 30 year range of normal is: 44.04” - 53.26”
The sum for the past 12 months is: 39.85”
Therefore: 44.04” - 39.85” = We are 4.19” below the range of normal for the past 12 months.