

**Objectives and Test Questions for the Presentation by Lee Daniels on  
“Ensuring Soil Quality and Function in Wetland Creation and Restoration Efforts”**

**Objective #1** - This presentation will provide an overview of the characteristics and functions of hydric soils in wetland creation and restoration projects.

**Objective #2** - Participants will also learn about common limitations in created and/or restored wetland soils.

**Objective #3** – Participants will learn about what factors to consider in determining the likelihood of establishing hydric soil function.

**Five test questions**

1. Which is the correct NRCS definition of a hydric soil?
  - A. A soil that is formed under conditions of continual surface saturation all year round.
  - B. A soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.
  - C. A soil that is sustained by groundwater during the drier months of the year sufficiently enough to develop anaerobic conditions in the lower part.
  - D. A soil that is found only in natural tidal wetlands in the southeastern region of the United States.

**Answer: B**

2. Which of the following is NOT a function of hydric soils?
  - A. Nitrogen removal.
  - B. Phosphorus removal.
  - C. Carbon sequestration.
  - D. Habitat provision for wetland flora, fauna, microbes, etc.
  - E. Storm surge protection.

**Answer: E**

3. Which are some common problems with created and/or restored wetlands soils? (select all that apply)
  - A. Compaction.
  - B. Lower soil organic material levels than natural sites/soils.
  - C. Lack of microtopography.
  - D. Degraded soil structure/permeability/rooting.
  - E. Higher soil temps when young, leading to higher carbon loss rates.

**Answer: All of the above**

4. Which of the following statements is false?
- A. Sulfidic materials are good for hydric soil health.
  - B. Hydric soils take time to develop.
  - C. It is important to understand hydric soils within the context of the landscape in which they are located.
  - D. It is valuable to have other scientific disciplines involved with site assessments.

**Answer:** A

5. Which of the following are ways to determine the presence of a hydric soil? (select all that apply)
- A. Learn how to accurately and completely describe soil morphology, particularly redox features.
  - B. Carefully describe soil morphology before any site disturbance and then immediately after final creation/restoration, being sure to quantify redox feature abundance.
  - C. Monitor and record the success of hydric plant growth on soil surfaces.
  - D. At a pre-determined interval (e.g., 1, 3 and 5 years), conduct follow-up soil descriptions in “mini-pits” excavated to 30+ cm and carefully quantify color, redox feature abundance, etc.
  - E. Detect and quantify development of lower overall chroma and increased redox concentrations, pore linings, or other features.

**Answer:** A, B, D and E