**Objectives and Test Questions for the Presentation by Lenore Vasilas on "Soil, Landscape, Hydrology Relationships"**

**Objective #1** – Understand how soil, landscape and hydrology relate to your mitigation design.

**Objective #2 -** Understand how soil, landscape and hydrology affect the functions of your mitigation site.

**Objective #3 –** Understand how to assess if you have achieved soil hydrology targets.

**Five test questions**

1. Which of the following statements is false?
   A. Water held by suction forces has a pressure less than atmospheric pressure.
   B. Saturated soil has a pressure greater than atmospheric pressure.
   C. A horizon is saturated when the soil water pressure is zero or positive.
   D. The strength of suction force is related to soil pore diameter.
   E. Unsaturated soils have suction forces that allow water to move freely.

   ***Answer:*** *E*

2. Which of the following is NOT a soil characteristic that affects hydrologic function?
   A. Slope.
   B. Drainage class/hydroperiod.
   C. Permeability.
   D. Conductivity.
   E. Microtopography.

   ***Answer:*** *D*

3. What are some tools for assessing whether you have achieved wetland hydrology?
   A. Piezometer.
   B. Shallow well.
   C. Soil temperature gauge.
   D. IRIS tube.
   E. Physical evidence.

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

4. Which of the following statements is false?
   A. Wetlands that have a high hydraulic gradient have fast moving water flows.
   B. Soil color should not be used an indicator of soil type.
   C. Different types of wetlands provide different wetland functions.
   D. Perched water tables with small hydraulic gradients often lead to gleyed colors.
   E. Different hydroperiods produce different soils that provide different functions.

***Answer:*** *B*

**5.** Which of the following statements are true? (select all that apply)

A. Wetlands remove 70-90% of nitrogen from water.
B. Uplands do not remove nitrogen from water.
C. Wetlands retain about 45% of phosphorous from water.
D. If soils were hydric before restoration, then they will be hydric after restoration.
E. Wetland functions are the biological, chemical and physical processes that occur in wetlands.

***Answer:*** *A, C and E*