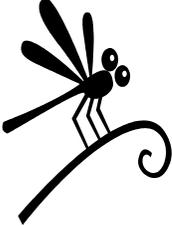


Wetland Scavenger Hunt Hydrology Indicators



Simply put, “hydrology” is the study of water. So, “wetland hydrology” is the study of how water behaves in a wetland. All wetlands must have water at or near the ground surface for a certain length of time during the growing season. But, since water may now always be visible, sometimes we need to look for other signs that water has been there. When water is present for a significant amount of time it leaves behind signs. These signs are called “wetland hydrology indicators”. Can you find any of the following indicators of wetland hydrology?

Photo	Indicator Name and Description	Check Box
	<p>Surface Water, Inundation, or Ponding – Water is present above the soil surface. Use with caution since this may also occur in non-wetland areas immediately after a rainfall event.</p>	
	<p>Saturation – Water is present within 12 inches of the soil surface. This can be determined by looking at a soil sample and squeezing it to see if water comes out or observing water glistening on the surface of the sample. Sometimes, saturation can be determined when you step on the ground and water “squishes” out.</p>	
	<p>High Water Table – Observation of water within 12 inches of the soil surface in a soil pit, auger hole, or shallow monitoring well. Sufficient time must be allowed for water to flow into a newly dug hole and for the water level to stabilize.</p>	
	<p>Drift Lines – Accumulated debris that has been deposited on the ground surface, tangled in vegetation, or caught by other fixed objects. Debris usually consists of the remains of vegetation (branches, stems, and leaves), sediment, and litter.</p>	
	<p>Water-Stained Leaves – Dead leaves on the soil surface that have decayed and turned grayish or black in color due to inundation for long periods.</p>	
	<p>Drainage Patterns – Flow patterns visible on the ground surface, eroded into the soil, or created through vegetation. Sometimes indicated by absence of leaf litter or small woody debris due to flowing water or similar evidence that water flowed across the ground surface.</p>	
	<p>Iron Deposits – A thin orange or yellow crust or gel of oxidized iron on the soil surface or on objects near the surface. Iron deposits are often oily-looking with a rainbow-like effect.</p>	

	<p>Wetland Plants –Plants growing in wetlands are capable of living in saturated soil conditions for at least part of the growing season. We call plants that almost always occur in wetlands as obligate species and those that usually occur in wetlands as Facultative Wetland Species. Sycamores and River Birch are examples of Facultative Wet tree species.</p>	
	<p>Sphagnum Moss – Also called peat moss, these are specialized group of mosses that have high moisture requirements. They are typically found along the margins of ponds and pools, in swales or roadside ditches, and in forested wetland depressions or swamps.</p>	
	<p>Aquatic Fauna – Presence of live or dead individuals or evidence of aquatic fauna such as tadpoles, aquatic snails, aquatic insects, crayfish or other crustaceans, fish, etc. This includes evidence such snail shells, dragonfly nymph exoskeletons, skins or skeletons of amphibians or fish, etc.</p>	
	<p>Crayfish Burrows – Also called crayfish chimneys, these are openings in soft ground, up to 2 inches in diameter, which are often surrounded by a mound of excavated mud. Crayfish are aquatic crustaceans that require periodic contact with water.</p>	
	<h2>Wetland Scavenger Hunt Plant Adaptations</h2>	
<p>Many wetland plants, also called hydrophytes, have developed specialized “adaptations” to help them survive in such a wet environment. “Wetland plant adaptations” are changes to the structure and/or functions of the plants, most often to help support them in wet soils. In some cases the adaptations help the plants “breathe” in the wetland environment where oxygen isn’t as abundant. Can you find any of the following wetland vegetation adaptations?</p>		
Photo	Adaptation Name and Description	Check Box
	<p>Buttressed Trunk – Some tree species, like the Bald Cypress shown here, may develop enlarged trunks in response to frequent <u>inundation</u>.</p>	
	<p>Fluted Trunk – Some wetland trees have flared bases, probably to provide support in wet, unstable soils.</p>	
	<p>Shallow Root System – When soils are <u>inundated</u> or <u>saturated</u> for long periods during the growing season, there is little oxygen available for plants and trees. To survive, trees and plants develop shallow root systems so that they can breathe. In forested wetlands, wind-thrown trees often indicate shallow root systems.</p>	