



# Wetlands

What is a wetland? It's not easy to describe – and it can be difficult to determine if an area is a wetland. In general terms, a wetland is an area where the level of the water is at or near the surface of the land. In the regulatory arena, a wetland is defined as “an area that is saturated or inundated with surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”<sup>1</sup> While there are differing definitions, wetlands share three basic criteria.<sup>2</sup>

- 1) They are distinguished by the presence of water at some time.
- 2) Wetlands have unique water associated soils (hydric soils) that differ from the adjacent upland soils.
- 3) They support unique plant life (hydrophytes) that are adapted to wet conditions.

While they are typically found between a body of water and dry land, wetlands are also located in flat, vegetated areas and in depressions in the land. They exist as natural areas, but some have been man made. Many wetlands are not covered with water 100% of the time. Sometimes the area may be mud, or it may appear completely dry for a period of time. The plants and animals that live in wetlands have become naturalized to the area and are rarely found outside their environment. Migrating birds depend upon these areas for water and food on their long seasonal journeys.

Six percent of the earth's surface is made up of wetlands. They are located on all continents except Antarctica. Practically every county in the United States is home to at least one wetland area.

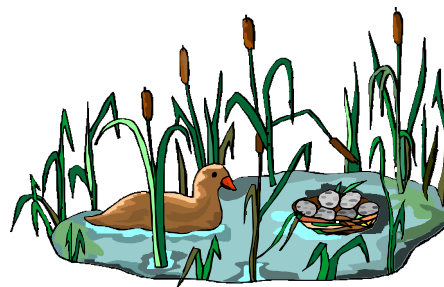
In the 1600s, more than 220 million acres of wetlands are thought to have existed in the lower 48 states. By the mid-1980's, the number of wetland acres had dropped to an estimate of 103 million, indicating more than a 50% loss. Kentucky is one of seven states that has experienced an even more dramatic loss in wetlands – losing more than 80% of our wetland acres.<sup>3</sup>

## Wetland Types

Across the United States, and here in Kentucky, many different types of wetlands are found. Two of the more common wetland types are:

- ▶ *Swamps* - wetlands dominated by trees and shrubs. River swamps are known as bottomland hardwood swamps or forests. Tupelo (black gum) and cypress are the trees most commonly found in Kentucky swamps.
- ▶ *Marshes* - areas frequently or continually flooded. They are characterized by emergent herbaceous vegetation adapted to saturated soil conditions.

Bogs, fens, sloughs and prairie potholes are just a few of the other wetland types found in the United States.



## Wetland Benefits

Wetlands serve many functions and provide us with numerous benefits. These include:

- ▶ Clean Water - Wetlands filter surface water, retaining excess nutrients and some pollutants, and reducing sediment.
- ▶ Flood Control - Wetlands act much like a sponge. They absorb large volumes of water, protecting cities and towns from flooding.
- ▶ Streambank / Shoreline Stabilization - Vegetated wetlands along the edges of streams help control erosion caused by stream currents and flooding. They also protect lake shores from wind generated waves, and coastlines from storm surges.
- ▶ Recreation and Aesthetics - Wetlands are home to a wide diversity of animals, but also to humans with diverse hobbies. Hikers, photographers, bird watchers, hunters and those with an appreciation of nature love to visit wetlands.
- ▶ Habitat for Fish and Wildlife - More than one-third of the United States' threatened and endangered species live only in wetlands, and nearly half use wetlands at some point in their lives.<sup>4</sup> Wetlands are a crucial part of the food chain, and many other animals and plants depend on them for survival.
- ▶ Scientific and Educational Value - Wetlands provide a unique outdoor laboratory for scientists. They can also serve as outdoor classrooms where teachers can explore many concepts related to nature.
- ▶ Natural Products - People use a variety of products that come from wetland areas. Food products include wildlife, fish, shellfish, blueberries, cranberries and wild rice. Wetlands also provide timber for wood products and firewood, dried plants for flower arrangements, and animal pelts used in clothing.
- ▶ Groundwater Recharge – Wetland areas are often connected to a groundwater system and may provide a site for water to infiltrate the soil and recharge an underlying aquifer. This can be a very important function for individuals or drinking water systems that rely upon wells for water supply.

Wetlands are an important and valuable natural resource we all have a part to play in wetlands protection. Take the time to find out where wetlands exist near your home and learn about them. Lend a helping hand by supporting wetlands and watershed protection programs in your area.

### **References Cited:**

1. Kentucky Division of Water. 1997. "Guidelines for Stream and Wetland Protection in Kentucky." Natural Resources and Environmental Protection Cabinet, Frankfort, KY.
2. Boebinger, Art. "Wetland Ecology and Value." Chapter 8 in Private Lands Wildlife Management: A Technical Guidance Manual & Correspondence Course, T. Barnes (ed.), 345 pp., University of Kentucky Cooperative Extension Service.
3. U.S. Environmental Protection Agency. 1995. "America's Wetlands: Our Vital Link Between Land and Water." Office of Wetlands, Oceans and Watersheds. Washington, DC.
4. Ibid.

Written by Gwenda Adkins, Elliott County Extension Agent for Family & Consumer Sciences, and Kimberly Henken, Extension Associate for Environmental and Natural Resource Issues.

Technical review by Dr. Tom Barnes, Extension Wildlife Specialist, University of Kentucky Department of Forestry; Jennifer Lynn, Extension Associate for 4-H / Youth Development Education; and Jennifer Cocanougher, Extension Associate for Environmental and Natural Resource Issues.