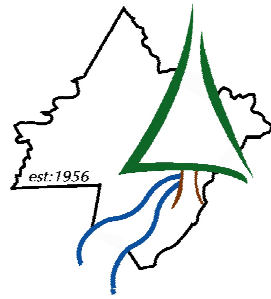


March 19, 2009



Conservation Horizons

Pike County Conservation District

Streams and Rivers

Throughout history, people have settled near waterways and Pike County is no exception. Rivers and streams are among the most important natural resources in our region. A network of waterways, from the smallest of headwater streams to the mighty Delaware River, grace the watersheds of Pike County, supporting a growing human population and a diverse array of fish and wildlife, providing scenic beauty and countless opportunities for recreation.

The Changing Character of Streams

Streams are dynamic systems, constantly changing and interacting with the landscape. The way streams look and behave depends on the geology and climate of the region. **Headwater streams**, which usually occur at the highest elevations of the watershed, tend to comprise the majority of stream miles in a watershed. Streams may also be defined by their flow characteristics. **Perennial streams** have year-round flow. **Intermittent streams** have seasonal flow which may disappear during drier periods of the year. Flow in an **ephemeral stream** generally occurs only during or immediately after rainfall events. All of these streams, regardless of whether they have year-round flow, are important to maintaining both the hydrologic and the ecological balance of our watersheds.

It is the nature of streams to change course, adjusting their channels and banks in response to natural or man-made changes. Stream beds are scoured during floods, channels move, floodplains are inundated, cross sections change, new gravel bars, riffles and pools are formed, banks erode, debris is constantly removed and redeposited. These are all natural processes associated with flowing waters.

Unfortunately, it is also the nature of people living near streams to try to stop or slow these processes. Since many Pike County stream and river shorelines are privately owned, streamside property owners have a key role to play in the health of these resources both now and in the future. Understanding the

dynamics of streams and rivers will help us to reduce the problems that may occur where land (and people) and water meet.

While streams are considered ecosystems within themselves they must also be seen as part of a landscape continuum. What happens on the land has profound effects on streams. As watershed lands are developed, flow patterns are changed, native forest vegetation is removed and more areas are covered by rooftops, parking lots, roads and other impervious surfaces. Impacts associated with these man-made changes include stream bank erosion and channel changes, increased pollutants in the streams, stream warming and reduced diversity of aquatic life.

For the next few months, the Pike County Conservation District *Conservation Horizons* articles will be providing information on the health of our streams, the important functions of our floodplains and floodways, how stream buffers protect our streams and their inhabitants, and what you can do to protect Pike County's streams and rivers.

February Question: What three characteristics define a wetland?

February Answer: Wetlands are identified by unique soils (called hydric soils), by plants adapted to life in wet environments (hydrophytic vegetation) and by the presence of water (hydrology) during the growing season.

March Question: What is the difference between a floodway and a floodplain?