

Generalized Geologic Map for Land-Use Planning: Greenup County, Kentucky

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Acknowledgments

Geology adapted from Petersen (2002), Nelson and Curt (2002a, b), Lambert and Sparks (2005), Murphy and Petersen (2005), Plauché (2006), Plauché and Petersen (2006a, b), Smith (2006a, b), Toth (2006), Toth and Petersen (2006). Thanks to Paul Howell, U.S. Department of Agriculture, Natural Resources Conservation Service, for landslide illustrations. Thanks to Kim and Kent Anness, Kentucky Division of Geographic Information, for base-map data. Thanks to Meg Smith, Kentucky Geological Survey, for editorial improvements.

Siltstone (Unit 3)



Siltstone of unit 3 is exposed along the AA Highway. Photo by Dan Carey, Kentucky Geological Survey.

EXPLANATION

School

Oil well

Gas well

Water wells

Domestic

Monitoring

Public

Industrial

Agricultural

Spring

Sinkhole

Wet area

Mine or quarry

County line

Watershed boundary

Railroad

Abandoned railroad

Landslide deposits

Mined area

Source-water protection area, zone 1

Wetlands > 1 acre (U.S. Fish and Wildlife Service, 2003)

Incorporated city boundaries

Designated flood zone* (FEMA, 2005)

Public lands

50-foot contour interval

Photo location

*Flood information is available from the Kentucky Division of Water, Flood Plain Management Branch, www.water.ky.gov/flood.

Source-Water Protection Areas

Source-water protection areas are those in which activities are likely to affect the quality of the drinking-water source. For more information, see www.kgsweb.uky.edu/download/water/swapp/swapp.htm.

Iron

As much as 15 tons of iron per day was produced in the mid- to late-1800's at the Buffalo Iron Furnace. Photo by Dan Carey, Kentucky Geological Survey.

Groundwater

About 5,500 people in Greenup County rely on private domestic wells for their water supply. Most wells in valley bottoms in the eastern half of the county are adequate for a domestic supply. In the western half of the county, groundwater becomes scarcer, but half of the wells drilled in valley bottoms are able to produce enough water for a domestic supply. Throughout the county, wells on hillsides and ridges are progressively less productive the farther they are from the valley bottoms. Quite a few high-volume wells (more than 50 gallons per minute) are found along the Ohio River alluvium in northern Greenup County. Most of the water from drilled wells is very hard to extremely hard and contains noticeable amounts of iron. Salty water is commonly found in wells drilled less than 100 feet below the level of the principal valley bottoms. A few springs supply sufficient quantities of water for domestic use. Almost all springs yield less than 5 gallons per minute. For more information on groundwater in the county, see Carey and Stockey (2005).

Oil and Gas

From 1980 to 2005, Greenup County produced 169,490 barrels of oil and 606 million cubic feet of natural gas. Photo (left) by Dan Carey, Kentucky Geological Survey.

Greenbo Lake

Beautiful Greenbo Lake reflects the surrounding hills on a quiet day. The 181-acre lake is located within Greenbo Lake State Resort Park. The 3,000-acre park provides camping, fishing (renowned for largemouth bass), boating, golf, and hiking and biking trails. Photo by Dan Carey, Kentucky Geological Survey.

Scale = 1:63,360
1 inch = 1 mile

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Ohio

Boyd County

Cartersville

Hopewell

Hunnewell

Greenup

Flatwoods

Wurtland

Worthington

Argillite

Danleyton

Belleville

Greenup

Greenup

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