

Silver Creek watershed (051002-05-090)

Geography. The Silver Creek watershed covers much of southern Madison County. Most of the upper reaches of the watershed lie in the outer subregion of the Bluegrass physiographic region, characterized by undulating terrain, moderate to rapid surface runoff, and moderate rates of groundwater drainage. The southernmost section (around Berea) is part of the Knobs region, characterized by hilly terrain, very rapid surface runoff, and very slow groundwater drainage. In level parts of the Knobs, runoff and groundwater drainage are slow. The lower part of the watershed is in the hills of the bluegrass subregion of the Bluegrass physiographic region, characterized by hilly terrain, very rapid surface runoff, and slow groundwater drainage. Parts of the watershed lie over interbedded shales and limestones (these are 20% limestone; water conduction is poor because of the clay content of the shale). Other areas are underlain by interbedded limestones and shales (>20% limestone, allowing groundwater flow where the clay content is low enough).

Waterways. Silver Creek empties into the Kentucky River at the western corner of Madison County. Creeks that feed it are Terrill Branch, Brushy Fork, Hays Fork, Harts Fork, Elk Garden Branch, Taylor Fork, Bogie Branch, and Jackson Branch.

Land and water use. Land in the watershed is more than 75% agricultural, about 15% rural and wooded, and about 7% residential or commercial. The surface waters of the watershed supply drinking water for the Berea College system. Thirteen businesses and organizations hold permits for discharges into the creeks. See the 2000 Assessment Report for full details.

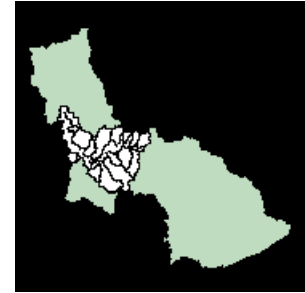
Agency data assessment. The assessed waters in this watershed include four that do not support some or all of their designated uses, based on biological and/or water-quality data. One is designated threatened. Pathogens and siltation from agricultural activities, septic tanks, and municipal point sources contribute to the impairment of these streams. See the 2000 Assessment Report or 2000 305(b) list and the 2002 303(d) list of impaired streams for full details.

Kentucky River Basin Management Plan, 2002. Information is from the first basin cycle (1997-2002), including the 1998-1999 monitoring effort and the 2000 Assessment Report. See kywatersheds.org or www.uky.edu/WaterResources/Watersheds for the complete Assessment Report and Management Plan.

Watershed Restoration Ranking			Watershed Protection Rank	Overall Watershed Rank	Framework Mobilization Category
<i>Observed Impacts</i>	<i>Potential Impacts</i>	<i>Combined Rank</i>			
Medium	High	Medium	Medium	Medium	III

Watershed Highlights

Watershed covers 126 square miles.
 Provides some water for the Berea College water system.
 Part of Lancaster source water protection zones 2 and 3.
 Berea discharges treated sewage into the watershed.
 Pathogens partially impair contact recreation in Silver Cr. below Taylor Fk. (2nd priority TMDL 2002).
 Aquatic life and secondary contact recreation (boating) are partially impaired in Wilgreen Lk. by overenrichment [1998 303(d) and 2000 305(b)].
 Aquatic life partially impaired by sedimentation in Silver Cr. between Taylor Fk. and Harts and Hay Fks. (2nd priority TMDL 2002) and by industrial point sources in Harts Fk. at Ajax Magnathermic [2000 305(b)].
 Aquatic life threatened in Hays Fk. [2000 305(b)].
 Water supply is an issue.
 Groundwater substantially more sensitive than basin average.
 Livestock density, potential for agricultural erosion, and unsewered population substantially above basin average.











Palisades Region



See the color map of this region on p. 133.

LEGEND

- Area of this watershed 
- Sewage plants 
- Public water supplies 
- Other water withdrawals 
- Locks & dams 
- Cities and towns 
- Rivers and larger streams 
- Smaller streams 
- County borders 