

Hickman Creek watershed (051002-05-120)

Geography. The Hickman Creek watershed covers south-central Fayette County and northeastern Jessamine County. The land is in the Bluegrass physiographic region. The watershed lies mainly in the inner subregion of the Bluegrass, characterized by undulating terrain and moderate rates of both surface runoff and groundwater drainage. Part of the watershed south of Hickman Creek in Jessamine County lies in the hills of the bluegrass subregion, characterized by hilly terrain, very rapid surface runoff, and slow groundwater drainage. Most of the watershed lies above thick layers of easily dissolved limestone that form carbonate aquifers. Groundwater flows through channels in the limestone, so caves and springs are common in regions with this geology. Other areas lie above interbedded limestones and shales (>20% limestone, allowing groundwater flow where clay content is low).

Waterways. Hickman Creek empties into the Kentucky River at Camp Nelson (near US 27). Among the creeks that feed it are East Hickman Creek, Shelby Branch, West Hickman Creek, Wymers Branch, and Marshall Branch.

Land and water use. Land in the watershed is about 75% agricultural, almost 5% rural and wooded, almost 5% commercial or industrial, and 15% residential. Surface waters of the watershed contribute to the drinking water for Kentucky-American's system, since the Lexington Reservoir and Lexington Reservoir No. 4 are located on West and East Hickman Creek, respectively. Four businesses and organizations hold permits for discharges into the creeks. See the 2000 Assessment Report for full details.

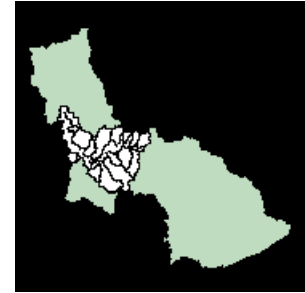
Agency data assessment. The assessed creek segments in this watershed include two that do not support all of their designated uses, based on biological and/or water-quality data. Two others only partially support uses. One is threatened. Pathogens and nutrients from urban runoff, storm sewers, and agricultural 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>			
High	High	High	High	High	II

Watershed Highlights

Watershed covers 101 square miles.
 Contains Lexington reservoirs; water supply is an issue.
 Part of source water protection zone 3 for Harrodsburg.
 Lexington discharges sewage at W. Hickman; the plant was required to remove excess phosphorus as of Aug. 2001.
 Pathogens make contact recreation unsafe in two segments of E. Hickman (6 mi. below Jacobsen Reservoir and 1.5 mi. above golf course ponds; 1st priority TMDL 2002).
 Pathogens partially impair contact recreation in W. Hickman below sewage plant (3 mi.; 2nd priority TMDL 2002).
 Aquatic life threatened in Hickman Cr. [2000 305(b)] and partially impaired by overenrichment in W. Hickman below reservoir 3 (8.4 miles; 2nd priority TMDL 2002).
 Groundwater substantially more sensitive than basin average.
 Livestock density substantially higher than basin average.
 Jessamine County is in PRIDE region. PRIDE identified 588 straight pipes or failing septic systems there.
 W. Hickman has a Watershed Watch Citizen Action Plan.



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

