

## Muddy Creek watershed (051002-05-020)

**Geography.** The Muddy Creek watershed is in western Madison County. The land is in the outer subregion of the Bluegrass physiographic region, characterized by undulating terrain, moderate to rapid surface runoff, and moderate rates of ground-water drainage. The watershed lies partly above fractured shales through which groundwater can easily move but which stores very little water. Other sections of the watershed lie over easily weathered clay shales that store water but allow little groundwater flow. There are also areas of interbedded shales and limestones (these are 20% limestone; water conduction is poor because of the clay content of the shale).

**Waterways.** Muddy Creek empties into the Kentucky River north of Doylesville. Among the creeks that feed it are Viny Fork, Hickory Lick, Clear Creek, and Dunbar Branch.

**Land and water use.** Land in the watershed is about 75% rural and wooded, about 10% each commercial and wooded, and less than 5% residential. The surface waters of the watershed supply the drinking water for the Blue Grass Army Depot, through which it flows. Seven businesses and organizations hold permits for discharges into the creeks. See the 2000 Assessment Report for full details.

**Agency data assessment.** One of the two assessed segments of the creek fails to support all its designated uses, based on biological and/or water-quality data. Pathogens contribute to the impairment of the segment. 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](http://kywatersheds.org) or [www.uky.edu/WaterResources/Watersheds](http://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	Medium	High	II

## Watershed Highlights

Watershed covers 68 square miles.

Part of source water protection zones 2 and 3 for the water system of Winchester.

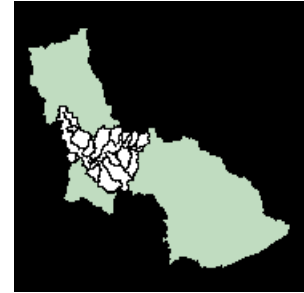
Provides drinking water for Blue Grass Army Depot.

Pathogens make contact recreation unsafe in Muddy Creek from Viny Fork to the Kentucky River (1st priority TMDL 2002).

The potential for agricultural erosion is substantially higher than the basin average.

Livestock density is substantially higher than the basin average.

This is a Watershed Watch Citizen Action Plan watershed.











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 