

Drennon Creek watershed (051002-05-340)

Geography. The Drennon Creek watershed occupies central Henry County. The higher, southern portion of the watershed is in the outer subregion of the Bluegrass physiographic region, which is characterized by undulating terrain, moderate to rapid surface runoff, and moderate rates of groundwater drainage. The lower, northern portion of the watershed is in the hills of the bluegrass subregion, which is 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). Unconsolidated silts, sands, and gravels occur along the flood plain of the creek.

Waterways. Drennon Creek empties into the Kentucky River east of Drennon Springs. Among the creeks that feed it are Town Creek, Rush Creek, Fivemile Creek, Flag Run, Emily Run, Martini Run, Holy Water Branch, Greens Fork, Boling Branch, and Sulphur Creek.

Land and water use. Land in the watershed is 75% agricultural, 20% rural and wooded, and less than 5% residential and commercial. 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 some or all of their designated uses, based on biological and/or water-quality data. One is classified as threatened. Siltation, organic enrichment, habitat alteration, and municipal point sources contribute to 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> | | | |
| Low | High | Low | Low | Low | IV |

Watershed Highlights

Watershed covers 97 square miles.

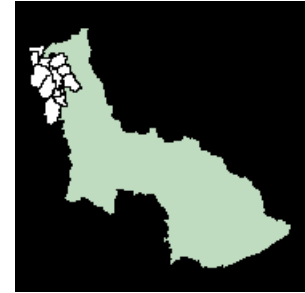
New Castle discharges treated sewage into the watershed.

Aquatic life partially impaired by sedimentation and over-enrichment in Sulphur Creek from its mouth to Greens Fork (2nd priority TMDL 2002).

Aquatic life partially impaired near the New Castle sewage plant (2nd priority TMDL 2002).

Drennon Creek from its mouth to Emily Run was classified as threatened [2000 305(b)].

Livestock density is substantially higher than the basin average.



Lower Kentucky River



See the color map of this region on p. 137.

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

