

## Logan Creek watershed (051002-05-160)

**Geography.** The Logan Creek watershed lies in central Lincoln 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) and areas of interbedded limestones and shales (>20% limestone, allowing groundwater flow where the clay content is low enough). Interbedded clay shales and siltstones underlie the rest of the area.

**Waterways.** Logan Creek empties into the Dix River northeast of Stanford, near Logantown. Among the creeks that feed it are Saint Asaph Creek and Neals Creek.

**Land and water use.** Land in the watershed is about 70% agricultural, 20% rural and wooded, and 10% residential or commercial. The surface waters of the watershed supply the drinking water for the municipal system in Stanford. Two 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 Stanford Lake, which only partially supports its use as a drinking water supply, based on biological and/or water-quality data. Excess nutrient enrichment contributes to impairment of the lake. 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>			
Low	Medium	Low	Low	Low	IV

## Watershed Highlights

Watershed covers 25 square miles.

Contains Stanford reservoir, which only partially supports use as a drinking water supply because of excessive nutrients [2000 305(b), 2nd priority TMDL 1996].

Stanford discharges treated sewage into the watershed.

Livestock density is substantially higher than the basin average.

Watershed is in PRIDE service region. PRIDE identified 36 straight pipes or failing septic systems in the watershed.



Dix River Region



See the color map of this region on p. 131.

### 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

