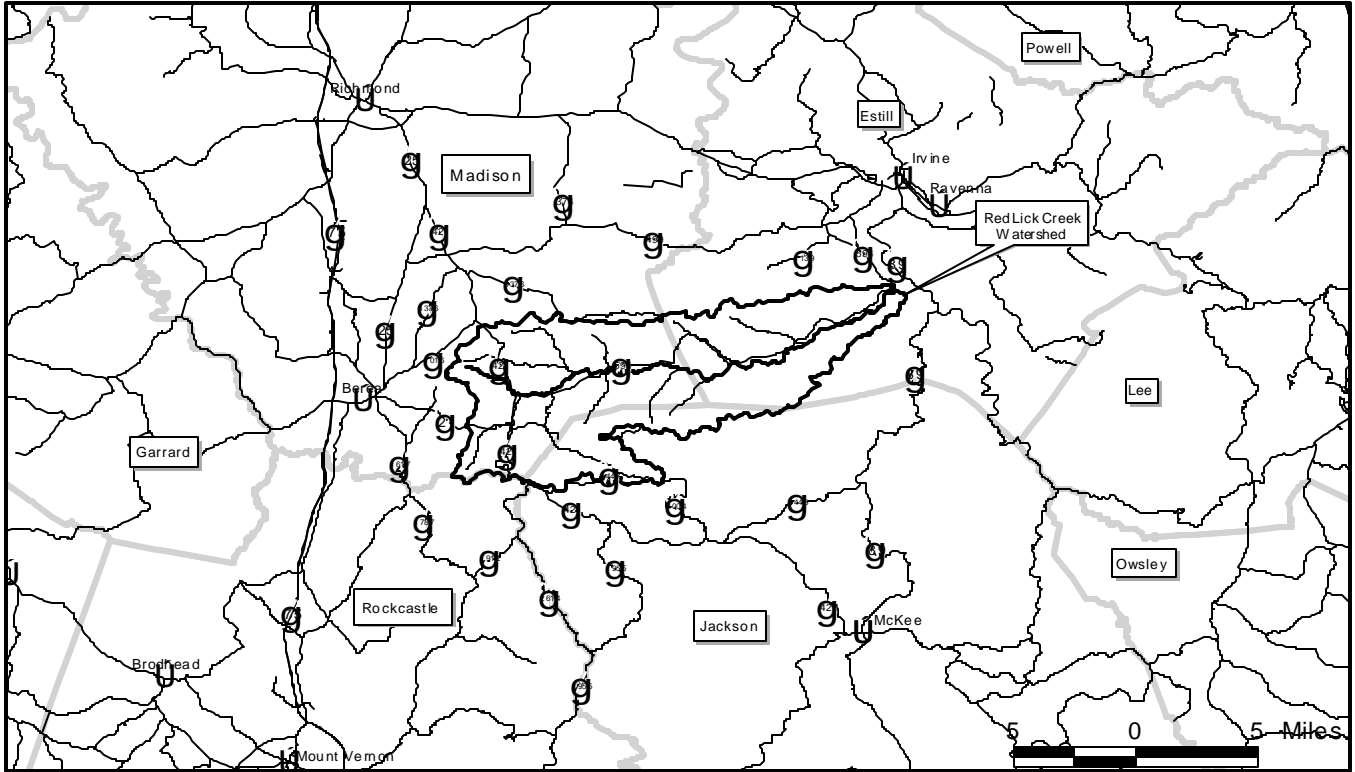


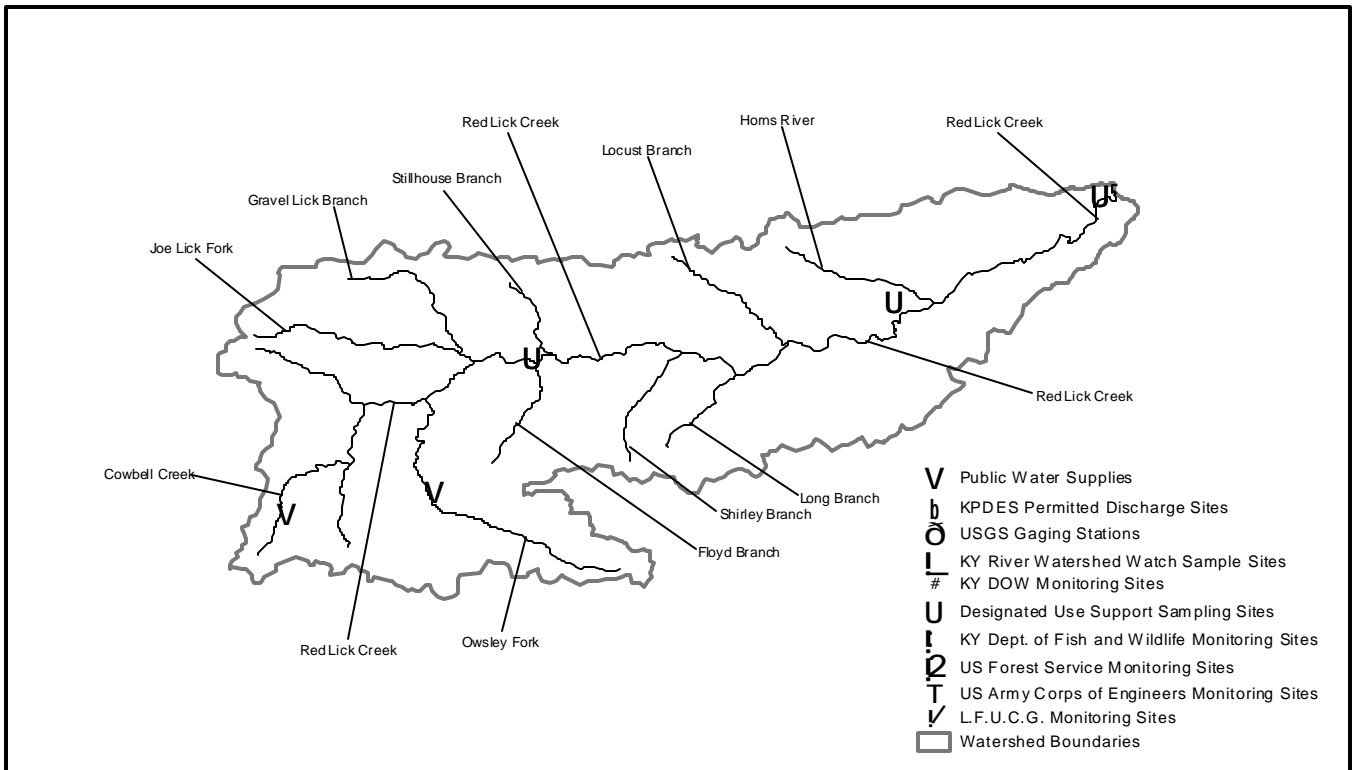
# Red Lick Creek Watershed

## Watershed Number: 05100204070

### Location Map



### Watershed Features



**Geography.** The Red Lick Creek watershed covers the southwest corner of Estill County, the southeast corner of Madison County, and the northwest corner of Jackson County. The part of the watershed south of Red Lick Creek is in the escarpment area of the Eastern Coal Field physiographic region, characterized by hilly terrain, very rapid surface runoff, and moderate rates of groundwater drainage. The part of the watershed north of the creek is in the Knobs physiographic 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 watershed is underlain by coals, sandstones, and shales: this geology is generally conducive to productive wells, although water quality may be low for wells that draw from coal layers. Parts of the watershed lie over easily weathered clay shales that store water but allow little groundwater flow. Other parts of the watershed lie above interbedded clay shales and siltstones. Other parts of the watershed lie above interbedded clay shales and siltstones.

**Waterways.** Red Lick Creek empties into Station Camp Creek northwest of Wagersville. Among the creeks that feed it are Owsley Fork, Joe Lick Fork, Cowbell Creek, Gravel Lick Branch, Stillhouse Branch, Floyd Branch, Shirley Branch, Long Branch, Horns River, and Henderson Branch.

**Land and water use.** Land in the watershed is mainly rural and wooded; about 20% is agricultural. The surface waters of the watershed supply the drinking water for Berea College's water system. No businesses or organizations hold permits for discharges into the creeks. See tables for details.

**Agency data assessment.** The assessed creek segments in this watershed fully support their designated uses, based on biological and/or water-quality data. See tables for details.

**Watershed rankings.** The ranking formula provides a preliminary ranking by synthesizing a broad spectrum of watershed characteristics, current conditions, and threats. This watershed ranks in the group with the lowest need for protection and/or restoration. This rating is for the watershed on average: particular sites and particular waters within the watershed may vary widely. See tables for details.

**Volunteer data.** No volunteer data were collected in this watershed in 1999.

This report was prepared by the Kentucky Water Research Institute as a product of the statewide Kentucky Waters Management process. Information presented in this report was collected from many sources. Reasonable attempts were made to ensure that information and figures are as accurate as possible, but no representation or guarantee is made either the correctness or suitability of information for particular purposes. All critical information should be independently verified. Please address questions or corrections to Basin Coordinator, KWRI, Rm. 233 Mining and Minerals Resource Building, University of Kentucky, Lexington, Kentucky 40506-0107.

**Summary of Basin Characteristics and Facilities**

**General Land-use Characteristics:**

Total Land Area (Acres):	<input type="text" value="44,786"/>	Acres	% of Total		
Residential Area:	<input type="text" value="562"/>		<input type="text" value="1.3"/>	Number of Mine Permits:	<input type="text" value="1"/>
Commercial Area:	<input type="text" value="46"/>		<input type="text" value="0.1"/>	Total Permitted Mining Area (Acres):	<input type="text" value="2"/>
Industrial Area:	<input type="text" value="0"/>		<input type="text" value="0.0"/>	Number of Identified Wetland Areas:	<input type="text" value="5"/>
Agricultural Area:	<input type="text" value="8,065"/>		<input type="text" value="18.0"/>	Total Wetland Area (Acres):	<input type="text" value="3"/>
Rural and Wooded Area:	<input type="text" value="35,913"/>		<input type="text" value="80.3"/>		
Other Land-use Area:	<input type="text" value="159"/>		<input type="text" value="0.4"/>		

**Withdrawal and Discharge Sites:**

Number of Public Water Supplies and Water Withdrawal Sites:	<input type="text" value="2"/>	Number of KPDES Discharge Permits:	<input type="text" value="0"/>
Surface Water Withdrawals:	<input type="text" value="2"/>		
Groundwater Withdrawals:	<input type="text" value="0"/>		
No. of Potable Water Treatment Facilities:	<input type="text" value="0"/>		

**Sampling Site Statistics:**

Number of USGS Gaging Stations:	<input type="text" value="0"/>
Number of Kentucky Division of Water Sampling Sites:	<input type="text" value="0"/>
Number of Kentucky Dept. of Fish and Wildlife Sampling Sites:	<input type="text" value="0"/>
Number of US Forest Service Sampling Sites:	<input type="text" value="0"/>
Number of US Army Corps of Engineers Sampling Sites:	<input type="text" value="0"/>
Number of Kentucky River Watershed Watch Sampling Sites:	<input type="text" value="0"/>
Number of Lexington-Fayette Urban Co. Gov. Sampling Sites:	<input type="text" value="0"/>

Watershed Name:

Red Lick Creek

11-Digit Watershed Identity Number:

05100204070

**Watershed Indicators and Ranking Categories:**

Overall Watershed Ranking:

Protection Ranking

Observed Impacts

Potential Impacts

Restoration Ranking

Medium

Low

Medium

Low

Low

**Protection Categories:**

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Wetland Areas	3	Acres	0 - 106	12
Surface Drinking Water Sources	2	No. of sources	0 - 14	2
Ground Drinking Water Sources	0	No. of sources	0 - 17	1
Groundwater Sensitivity	2.58	Score	2 - 5	3.21
KY Dept. of Fish and Wildlife Management Areas	273	Acres	0 - 2951	93
U.S. Forest Service Management Areas	7,506	Acres	0 - 155253	12,600
Kentucky State Park Areas	0	Acres	0 - 1928	42
Nature Preserves Commission Areas	0	Acres	0 - 1430	32
Nature Conservancy Areas	0	Acres	0 - 2473	28
Reference Reach Watersheds	0.00	Score	0 - 100	3.08
Outstanding Resource Watersheds	0.00	Score	0 - 0	0.00
Recognized Stream Resources	0	No. of resources	0 - 8	1
Kentucky Rivers Assessment Scores	0.53	Score	0 - 11	1.80

**Observed Impact Categories:****Human Health Impact Categories:**

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Flood Declarations	3	Number since 1970	0 - 10	4
Water Supply Inadequacy	0.00	Score	0 - 2	0.22
Observed Impacts to Surface Drinking Water	1.00	Score	1 - 1	1.00
Observed Impacts to Fish Consumption	1.00	Score	1 - 1	1.00
Observed Impacts to Primary Water Contact	1.00	Score	1 - 3	1.33
Contamination Sites Impacting Human Health	3	Number of sites	0 - 71	4

**Ecological Health Impact Categories:**

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Observed Impacts to Aquatic Life	1.00	Score	1 - 3	1.31
Contamination Sites Impacting Ecological Health	3	Number of sites	0 - 71	4

**Potential Impact Categories:**

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Potential Contamination Sites	13	Number of sites	1 - 121	12
Potential Pesticide Loading	16	Est. sales in tons	0 - 45	10
Potential Fertilizer Loading	426	Est. tons applied	0 - 2747	394
Agricultural Erosion Potential	2.77	Est. tons erosion / acre	0 - 9	3.20
Livestock Operations Potential Impact	10,457	Animal units	55 - 43826	7,021
KPDES Discharge Violations	0	Number of violations	0 - 541	39
KY Division of Water Citizen Complaints	6	Number of complaints	0 - 53	9
Toxic Release Inventory	0	Score	0 - 11547626	231,638
Population Change Projection	111	Number of persons	-149 - 11030	448
Population Not on Public Sewer Systems	1,378	Number of persons	12 - 4511	1,114
Mining Area	4	Acres	0 - 6305	355
Surface Water Runoff Potential	66.93	SCS Curve Number	60 - 79	68
KPDES Permitted Discharges	0	Number of sites	0 - 56	6

Watershed Name: Red Lick Creek

11-Digit Watershed Identity Number: 05100204070

**Stream and Waterbody Use Support Summary**

<b>Total Stream Miles:</b>						
<input type="text" value="49.68"/>	<i>Number of Segments Assessed</i>	<i>Stream Miles Assessed</i>	<i>Miles * Fully Supporting</i>	<i>Miles * Partially Supporting</i>	<i>Miles * Not Supporting</i>	<i>Miles * Threatened</i>
<i>Segments Assessed:</i>	3	17.5	17.5	0.0	0.0	0.0
<i>Designated Uses</i>						
<i>Aquatic Life:</i>	3	17.5	17.5	0.0	0.0	0.0
<i>Primary Contact:</i>						
<i>Fish Consumption:</i>						
<i>Drinking Water:</i>						

\* Blank values indicate no assessed segments for this category

<b>Assessed Stream Segments and Waterbodies</b>					
<i>Stream or Waterbody Name *</i>	<i>Starting Milepoint</i>	<i>Ending Milepoint</i>	<i>Segment Length (miles)</i>	<i>Designated Uses *</i>	<i>Overall Level of Support</i>
Red Lick Creek	10.8	17.5	6.7	AL	Fully Supporting
Red Lick Creek	2.8	10.8	8	AL	Fully Supporting
Red Lick Creek	0	2.8	2.8	AL	Fully Supporting

\*Abbreviations: AL - Aquatic Life Support, PC - Primary Contact Recreation, SC - Secondary Contact Recreation, FC - Fish Consumption, DW - Drinking Water Supply, UT - Unnamed Tributary

**Withdrawal Sites and Discharge Facilities:**

<b>Public Water Supplies and Water Withdrawal</b>			
<i>Facility</i>	<i>Origin of Source</i>	<i>Type of Facility</i>	<i>Permit ID Number</i>
BEREA COLLEGE WATER DEPARTMENT	Surface Water	Water Withdrawal Site	0760030