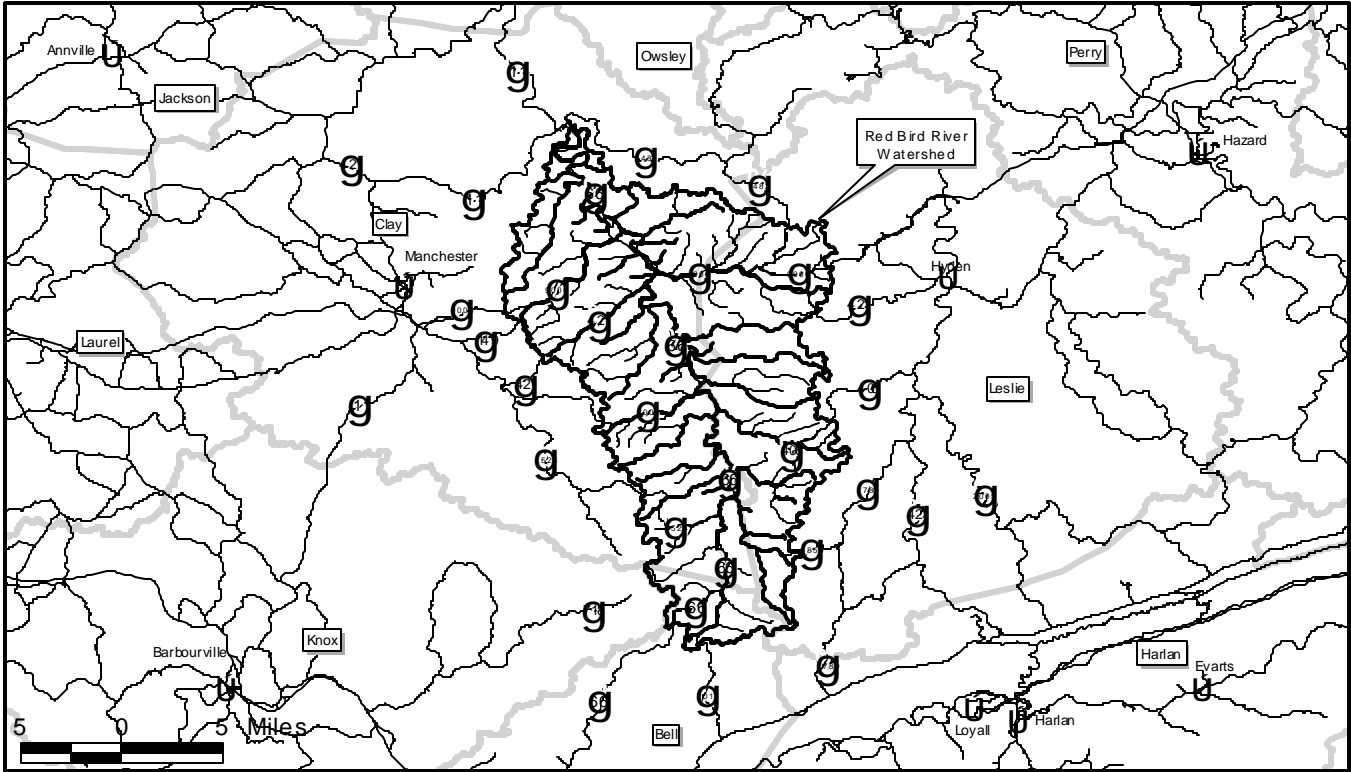


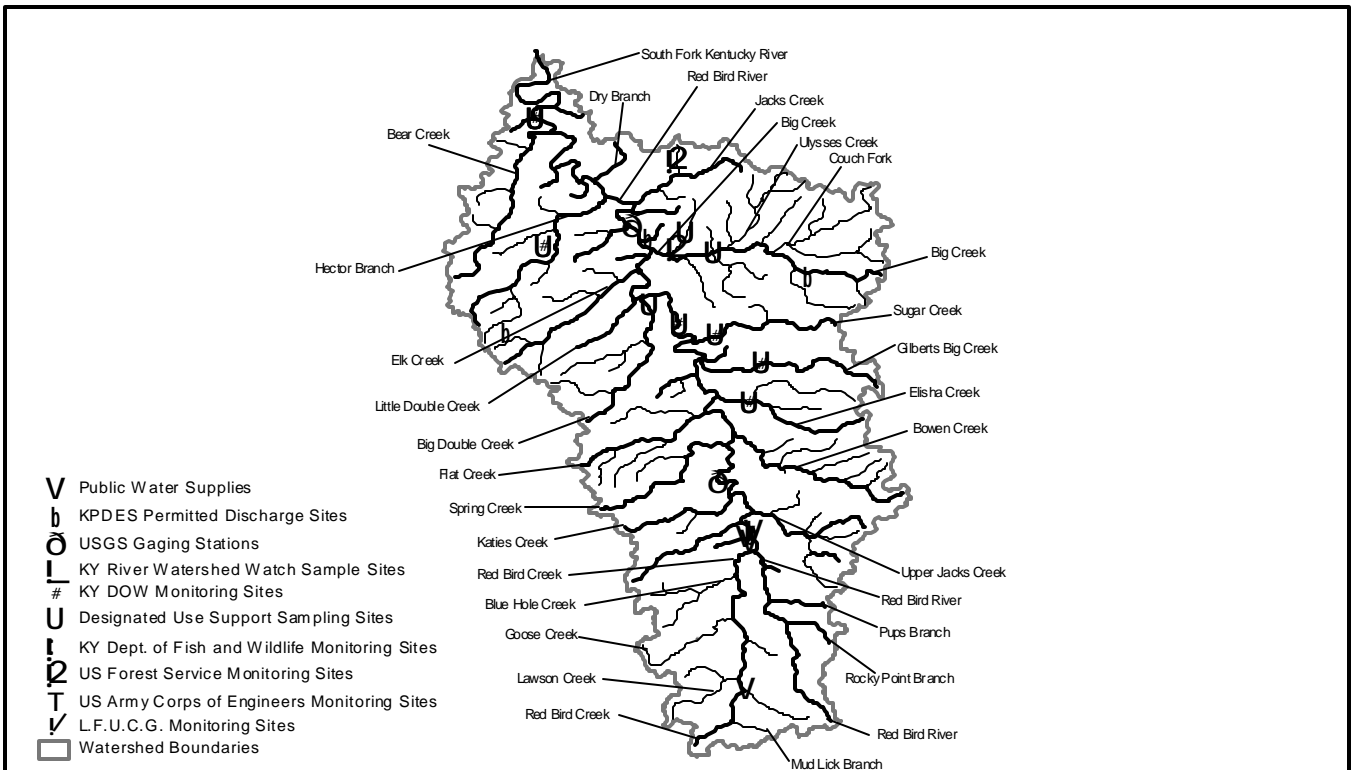
# Red Bird River Watershed

## Watershed Number: 05100203010

### Location Map



### Watershed Features



**Geography.** The Red Bird River watershed covers eastern Clay County, western Leslie County, and the northeast corner of Bell County. The land is in the Eastern Kentucky Coal Field physiographic region, characterized by mountainous terrain, rapid surface runoff, and moderate rates of groundwater drainage. 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.

**Waterways.** The Red Bird River joins Bullskin Creek and Goose Creek near Oneida to form the South Fork Kentucky River. Among the creeks that feed it are Red Bird Creek, Phillips Fork, Upper Jacks Creek, Bowen Creek, Flat Creek, Big Creek, Elk Creek, Ulysses Creek, Hector Branch, Jacks Creek, and Bear Creek.

**Land and water use.** Land in the watershed is mainly rural and wooded. Five businesses and organizations hold permits for discharges into the creeks. See tables for details.

**Agency data assessment.** The assessed creek segments in this watershed include one segment of the Red Bird River that does not support some or all of its 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 highest 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 Watershed 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 as to 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 Resources Building, University of Kentucky, Lexington, Kentucky 40506-0107.

**Summary of Basin Characteristics and Facilities**

**General Land-use Characteristics:**

Total Land Area (Acres):	125,353	Acres	% of Total		
Residential Area:	41		0.0	Number of Mine Permits:	43
Commercial Area:	11		0.0	Total Permitted Mining Area (Acres):	1,162
Industrial Area:	0		0.0	Number of Identified Wetland Areas:	11
Agricultural Area:	3,324		2.7	Total Wetland Area (Acres):	7
Rural and Wooded Area:	120,539		96.3		
Other Land-use Area:	1,236		1.0		

**Withdrawal and Discharge Sites:**

Number of Public Water Supplies and Water Withdrawal Sites:	4	Number of KPDES Discharge Permits:	5
Surface Water Withdrawals:	0		
Groundwater Withdrawals:	0		
No. of Potable Water Treatment Facilities:	4		

**Sampling Site Statistics:**

Number of USGS Gaging Stations:	0
Number of Kentucky Division of Water Sampling Sites:	6
Number of Kentucky Dept. of Fish and Wildlife Sampling Sites:	0
Number of US Forest Service Sampling Sites:	3
Number of US Army Corps of Engineers Sampling Sites:	0
Number of Kentucky River Watershed Watch Sampling Sites:	0
Number of Lexington-Fayette Urban Co. Gov. Sampling Sites:	0

**Watershed Indicators and Ranking Categories:**

Overall Watershed Ranking:

Protection Ranking

Observed Impacts

Potential Impacts

Restoration Ranking

High

High

High

Medium

High

**Protection Categories:**

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Wetland Areas	7	Acres	0 - 106	12
Surface Drinking Water Sources	0	No. of sources	0 - 14	2
Ground Drinking Water Sources	4	No. of sources	0 - 17	1
Groundwater Sensitivity	3.00	Score	2 - 5	3.21
KY Dept. of Fish and Wildlife Management Areas	0	Acres	0 - 2951	93
U.S. Forest Service Management Areas	125,115	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	0.64	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	6	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	3.00	Score	1 - 3	1.33
Contamination Sites Impacting Human Health	1	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	1	Number of sites	0 - 71	4

**Potential Impact Categories:**

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Potential Contamination Sites	14	Number of sites	1 - 121	12
Potential Pesticide Loading	2	Est. sales in tons	0 - 45	10
Potential Fertilizer Loading	242	Est. tons applied	0 - 2747	394
Agricultural Erosion Potential	5.38	Est. tons erosion / acre	0 - 9	3.20
Livestock Operations Potential Impact	1,582	Animal units	55 - 43826	7,021
KPDES Discharge Violations	11	Number of violations	0 - 541	39
KY Division of Water Citizen Complaints	11	Number of complaints	0 - 53	9
Toxic Release Inventory	0	Score	0 - 11547626	231,638
Population Change Projection	12	Number of persons	-149 - 11030	448
Population Not on Public Sewer Systems	2,309	Number of persons	12 - 4511	1,114
Mining Area	1,166	Acres	0 - 6305	355
Surface Water Runoff Potential	60.27	SCS Curve Number	60 - 79	68
KPDES Permitted Discharges	5	Number of sites	0 - 56	6

Watershed Name: Red Bird River

11-Digit Watershed Identity Number: 05100203010

### Stream and Waterbody Use Support Summary

<b>Total Stream Miles:</b>						
<input type="text" value="269.26"/>	<i>Number of Segments</i>	<i>Stream Miles Assessed</i>	<i>Miles * Fully Supportina</i>	<i>Miles * Partially Supportina</i>	<i>Miles * Not Supportina</i>	<i>Miles * Threatened</i>
<i>Segments Assessed:</i>	9	65.0	50.0	0.0	15.0	0.0
<i>Designated Uses</i>						
<i>Aquatic Life:</i>	9	65.0	65.0	0.0	0.0	0.0
<i>Primary Contact:</i>	1	15.0	0.0	0.0	15.0	0.0
<i>Fish Consumption:</i>	1	15.0	15.0	0.0	0.0	0.0
<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>
Big Creek	0	4.3	4.3	AL	Fully Supporting
Big Double Creek	0	9.5	9.5	AL	Fully Supporting
Elisha Creek	0	3.3	3.3	AL	Fully Supporting
Gilberts Big Creek	0	5.1	5.1	AL	Fully Supporting
Granny's Branch	0	2.3	2.3	AL	Fully Supporting
Long Fork	0	2	2	AL	Fully Supporting
Red Bird River	15	34.1	19.1	AL	Fully Supporting
Red Bird River	0	15	15	AL, FC, PC	Not Supporting
Sugar Creek	0	4.4	4.4	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

Watershed Name: Red Bird River

11-Digit Watershed Identity Number: 05100203010

**Withdrawal Sites and Discharge Facilities:**

<i>Public Water Supplies and Water Withdrawal</i>			
<i>Facility</i>	<i>Origin of Source</i>	<i>Type of Facility</i>	<i>Permit ID Number</i>
QUEENDALE COMMUNITY	Groundwater	Water Treatment Plant	0260492
RED BIRD MTN MEDICAL CENTER	Groundwater	Water Treatment Plant	0260739
RED BIRD SCHOOL	Groundwater	Water Treatment Plant	0262109
REDBIRD MISSION/BEVERLY	Groundwater	Water Treatment Plant	0070459

<i>KPDES Permitted Discharge Facilities</i>			<i>KPDES Site ID Number</i>
<i>Facility</i>	<i>Type of Facility</i>		
CLAY CO BD OF ED	ELEMENTARY & SECONDARY SCHOOLS	KY0100978	
HYDEN SHOPPING CENTER	OPER OF NONRESIDENTIAL BLDGS	KY0082872	
KY VENEER & PLYWOOD CORP	HARDWOOD VENEER AND PLYWOOD	KY0100846	
RED BIRD MISSION HIGH & ELEM	ELEMENTARY & SECONDARY SCHOOLS	KY0088587	
RED BIRD MISSION HOSPITAL	GEN. MEDICAL/SURGICAL HOSPITAL	KY0026000	

**Gaging Stations and Sampling Sites:**

<i>US Geological Survey and US Army Corps of Engineers Stream Gaging Stations</i>			
<i>Stream Location</i>	<i>Agency</i>	<i>Station ID Number</i>	<i>Sampling Parameter</i>
Red Bird River	USGS	USGS03281040	Flow
Red Bird River	USGS	USGS03281016	Flow

<i>KY Division of Water Sampling Sites</i>	
<i>Stream Name</i>	<i>Type of Sampling</i>
Sugar Creek	Physical/Chemical Monitoring
Elisha Creek	Physical/Chemical Monitoring
Red Bird River	Biological Monitoring
Long Fork	Physical/Chemical Monitoring
Red Bird River	Physical/Chemical Monitoring
Gilberts Big Creek	Physical/Chemical Monitoring

<i>US Forest Service Sampling Sites</i>		
<i>11-Digit HUC</i>	<i>HUC Name</i>	<i>US Forest Service Site ID</i>
05100203010	Red Bird River	0510020327001
05100203010	Red Bird River	0510020327003
05100203010	Red Bird River	0510020327002