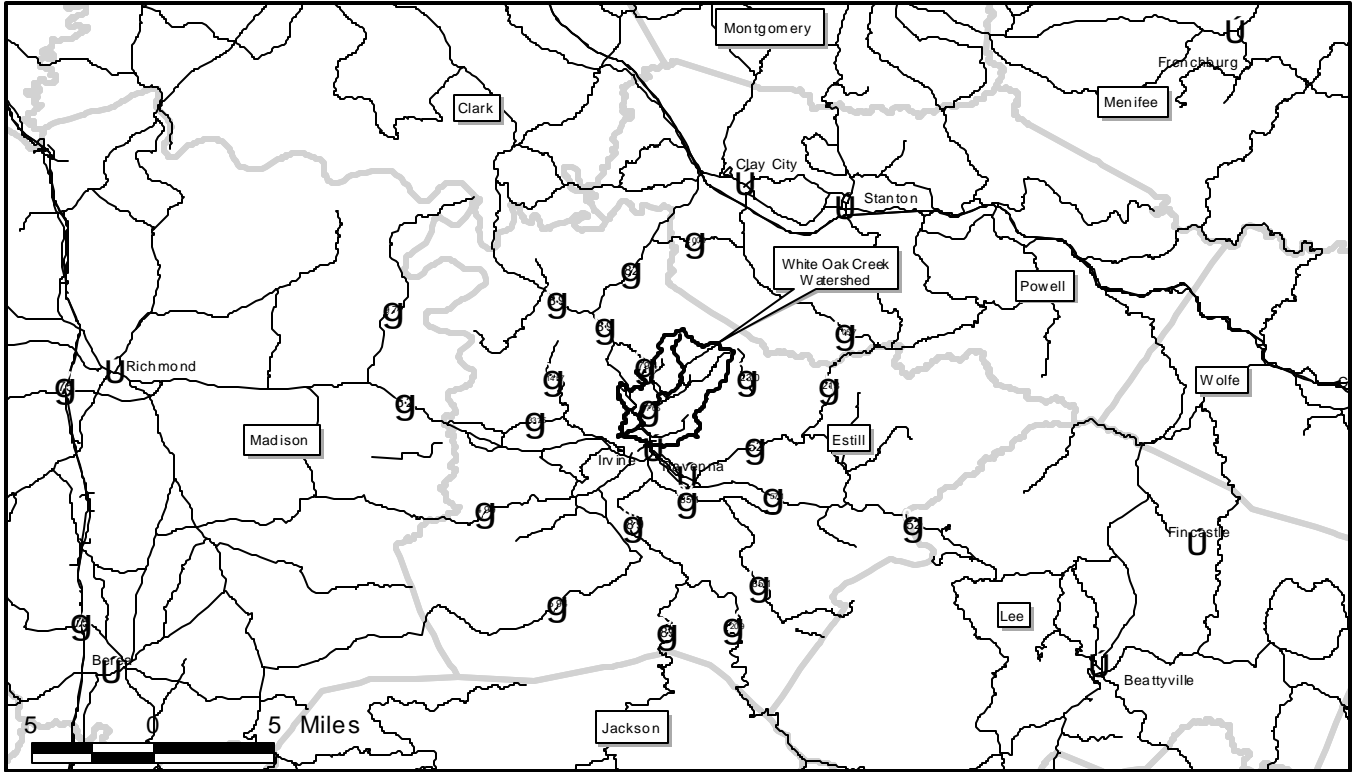


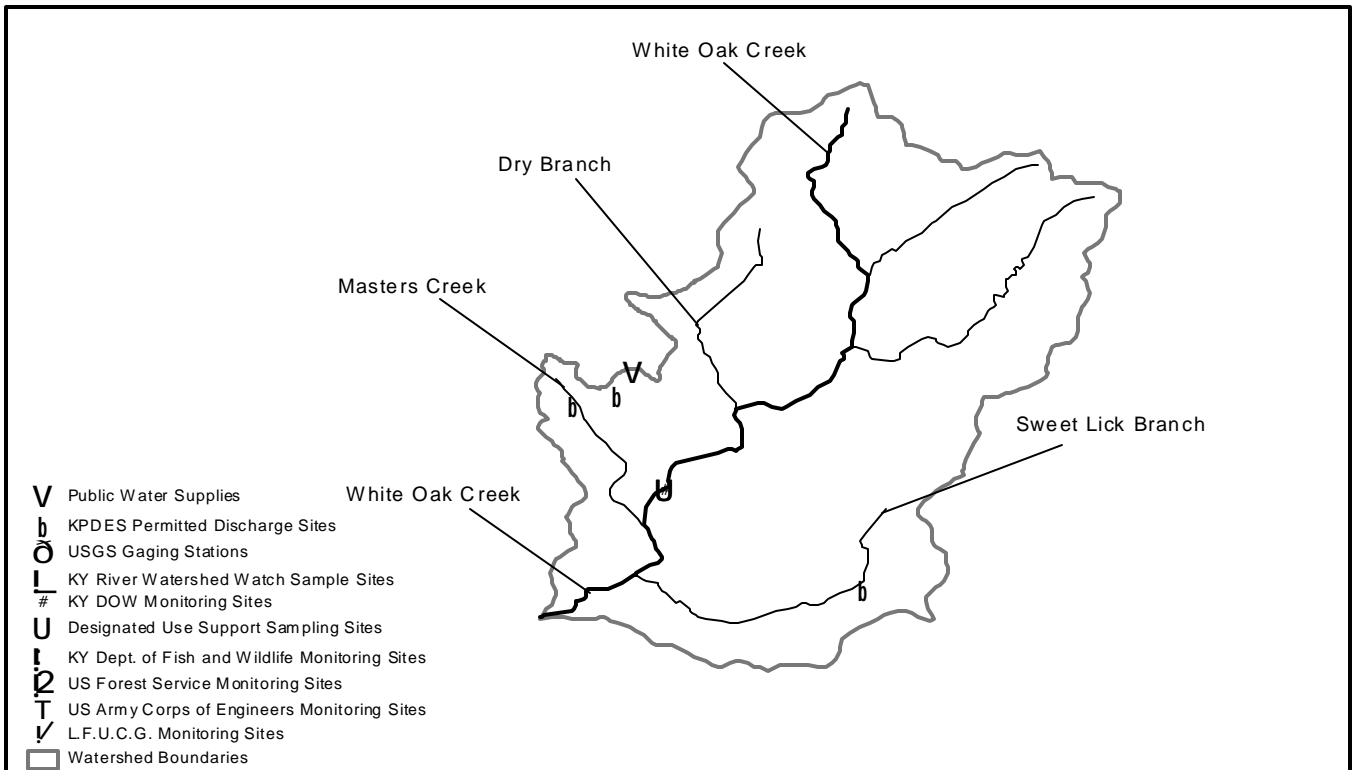
White Oak Creek Watershed

Watershed Number: 05100204090

Location Map



Watershed Features



Geography. The White Oak Creek watershed is in north-central Estill County. The land 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 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. Interbedded clay shales and siltstones make up the remainder of the area.

Waterways. White Oak Creek empties into the Kentucky River northwest of Irvine. Among the creeks that feed it are Sweet Lick Branch, Masters Creek, and Dry Branch.

Land and water use. Land in the watershed is about 70% rural and wooded and about 25% agricultural. Three businesses and 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 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):	<input type="text" value="6,738"/>	Acres	% of Total		
Residential Area:	<input type="text" value="149"/>		<input type="text" value="2.2"/>	Number of Mine Permits:	<input type="text" value="1"/>
Commercial Area:	<input type="text" value="0"/>		<input type="text" value="0.0"/>	Total Permitted Mining Area (Acres):	<input type="text" value="5"/>
Industrial Area:	<input type="text" value="18"/>		<input type="text" value="0.3"/>	Number of Identified Wetland Areas:	<input type="text" value="1"/>
Agricultural Area:	<input type="text" value="1,736"/>		<input type="text" value="25.8"/>	Total Wetland Area (Acres):	<input type="text" value="0"/>
Rural and Wooded Area:	<input type="text" value="4,826"/>		<input type="text" value="71.7"/>		
Other Land-use Area:	<input type="text" value="0"/>		<input type="text" value="0.0"/>		

Withdrawal and Discharge Sites:

Number of Public Water Supplies and Water Withdrawal Sites:	<input type="text" value="1"/>	Number of KPDES Discharge Permits:	<input type="text" value="3"/>
Surface Water Withdrawals:	<input type="text" value="0"/>		
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="1"/>
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 Indicators and Ranking Categories:				Overall Watershed Ranking:
Protection Ranking	Observed Impacts	Potential Impacts	Restoration Ranking	Low
Medium	Low	Low	Low	

Protection Categories:

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Wetland Areas	0	Acres	0 - 106	12
Surface Drinking Water Sources	0	No. of sources	0 - 14	2
Ground Drinking Water Sources	1	No. of sources	0 - 17	1
Groundwater Sensitivity	2.67	Score	2 - 5	3.21
KY Dept. of Fish and Wildlife Management Areas	0	Acres	0 - 2951	93
U.S. Forest Service Management Areas	4,007	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	0.04	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	4	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	0	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	0	Number of sites	0 - 71	4

Potential Impact Categories:

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Potential Contamination Sites	1	Number of sites	1 - 121	12
Potential Pesticide Loading	1	Est. sales in tons	0 - 45	10
Potential Fertilizer Loading	37	Est. tons applied	0 - 2747	394
Agricultural Erosion Potential	1.62	Est. tons erosion / acre	0 - 9	3.20
Livestock Operations Potential Impact	587	Animal units	55 - 43826	7,021
KPDES Discharge Violations	0	Number of violations	0 - 541	39
KY Division of Water Citizen Complaints	0	Number of complaints	0 - 53	9
Toxic Release Inventory	93,750	Score	0 - 11547626	231,638
Population Change Projection	118	Number of persons	-149 - 11030	448
Population Not on Public Sewer Systems	153	Number of persons	12 - 4511	1,114
Mining Area	5	Acres	0 - 6305	355
Surface Water Runoff Potential	66.07	SCS Curve Number	60 - 79	68
KPDES Permitted Discharges	3	Number of sites	0 - 56	6

Watershed Name: White Oak Creek

11-Digit Watershed Identity Number: 05100204090

Stream and Waterbody Use Support Summary

<i>Total Stream Miles:</i>						
<input type="text" value="14.96"/>	<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>	1	2.7	2.7	0.0	0.0	0.0
<i>Designated Uses</i>						
<i>Aquatic Life:</i>	1	2.7	2.7	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.

<i>Assessed Stream Segments and Waterbodies</i>					
<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>
White Oak Creek	0	2.7	2.7	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: White Oak Creek

11-Digit Watershed Identity Number: 05100204090

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>
WASTE MGMT OF KY/BLUE RIDGE RDF	Groundwater	Water Withdrawal Site	WW1368

<i>KPDES Permitted Discharge Facilities</i>			<i>KPDES Site ID Number</i>
<i>Facility</i>	<i>Type of Facility</i>		
BLUE RIDGE RDF	REFUSE SYSTEMS		KY0091707
ESTILL CO HIGH SCHOOL	ELEMENTARY & SECONDARY SCHOOLS		KY0074322
MCINTOSH, ARTHUR RAWLINS LEASE	CRUDE PETROLEUM & NATURAL GAS		KY0090506

Gaging Stations and Sampling Sites:

<i>KY Division of Water Sampling Sites</i>	
<i>Stream Name</i>	<i>Type of Sampling</i>
White Oak Creek	Biological Monitoring