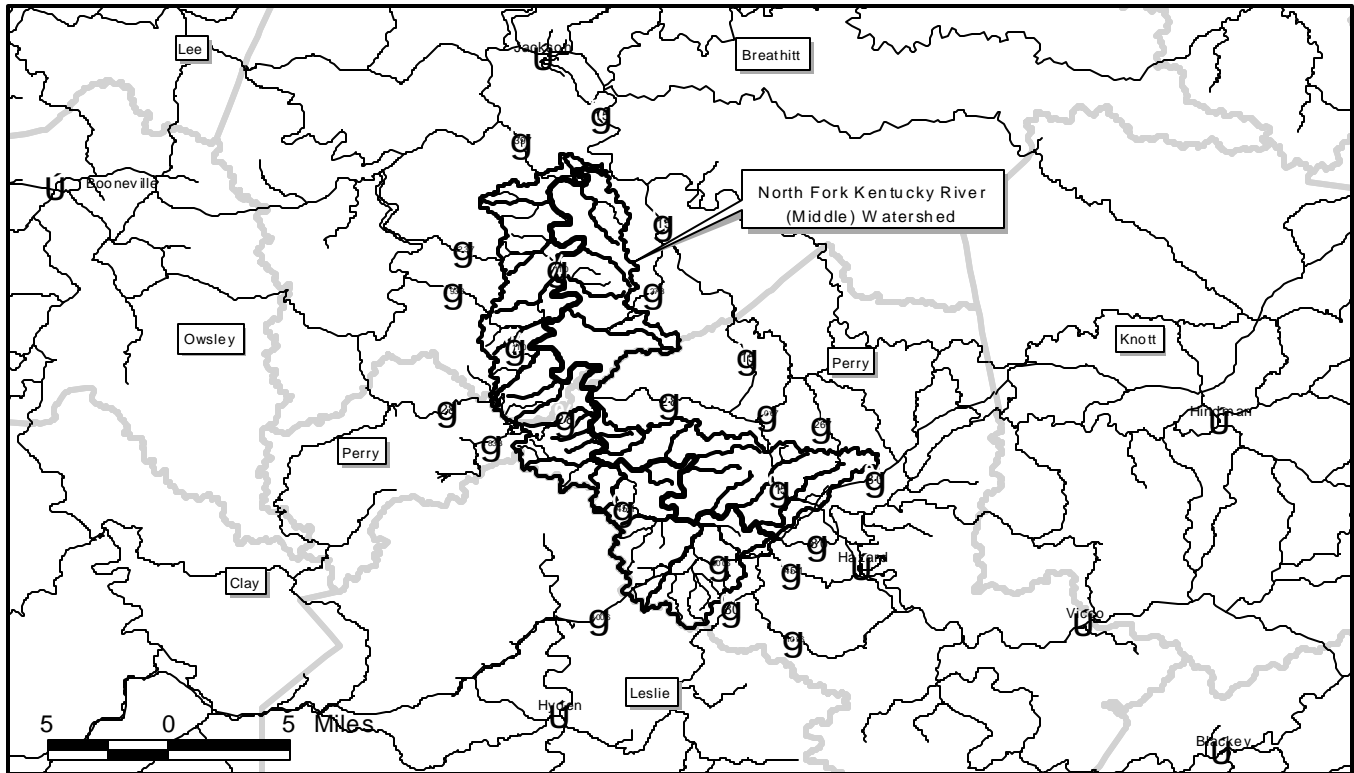


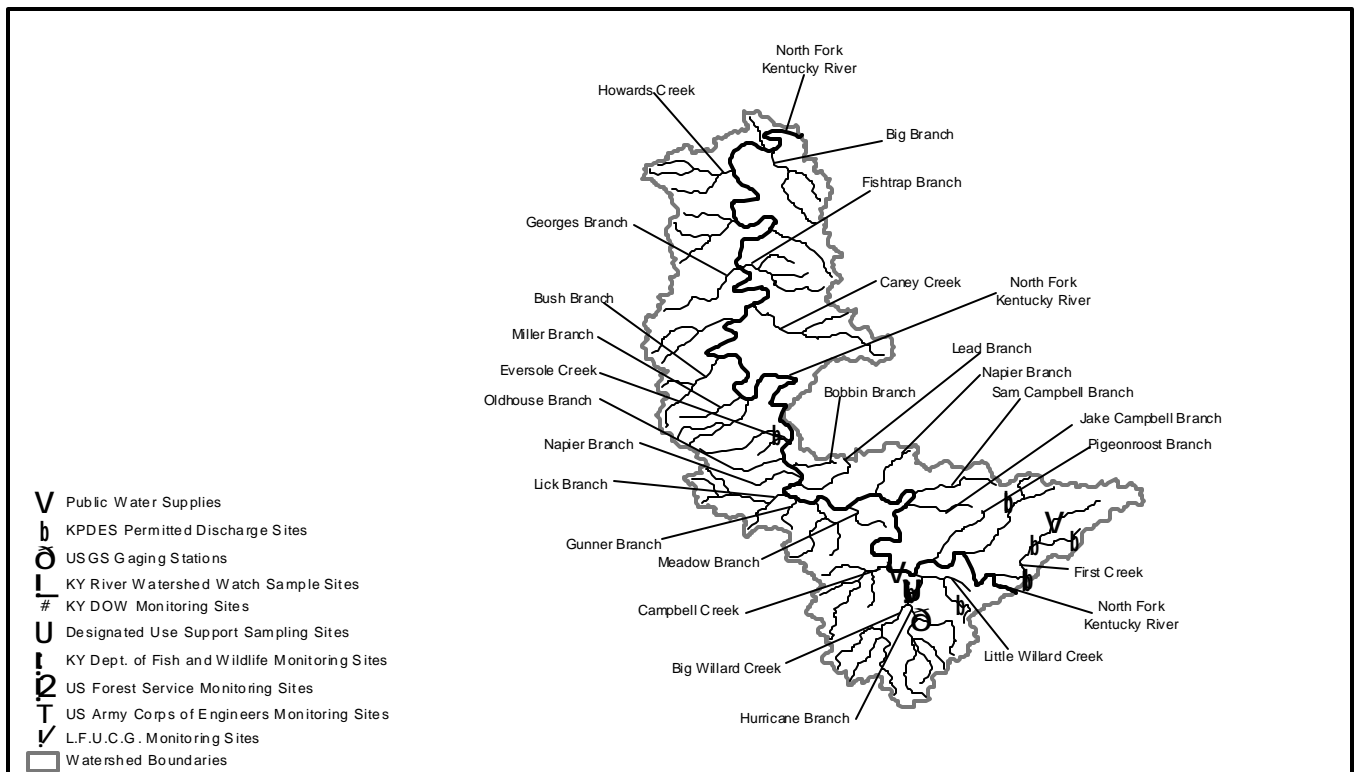
North Fork Kentucky River (Middle) Watershed

Watershed Number: 05100201100

Location Map



Watershed Features



Geography. The North Fork Kentucky River (middle) watershed covers parts of northern Perry County and southern Breathitt 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. This watershed includes the section of the North Fork between the mouth of Big Creek (between Combs and Typo at the Daniel Boone Parkway) and the mouth of Troublesome Creek at Haddix. Among many creeks that feed it within this watershed are Big Willard Creek, Hurricane Branch, First Creek, Campbell Creek, Caney Creek, and Georges Branch. Water also flows into this watershed from the North Fork (upper), Big Creek, and Grapevine Creek watersheds.

Land and water use. Land in the watershed is nearly all rural and wooded. Nine businesses and organizations hold permits for discharges into the creeks. See tables for details.

Agency data assessment. The assessed creek segment in this watershed does not support some or all of its designated uses, based on biological and/or water-quality data. A variety of activities contribute to the impairment of this stream. 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):	60,039	Acres	% of Total		
Residential Area:	0	0.0		Number of Mine Permits:	57
Commercial Area:	80	0.1		Total Permitted Mining Area (Acres):	1,083
Industrial Area:	0	0.0		Number of Identified Wetland Areas:	2
Agricultural Area:	141	0.2		Total Wetland Area (Acres):	1
Rural and Wooded Area:	56,669	94.6			
Other Land-use Area:	3,033	5.1			

Withdrawal and Discharge Sites:

Number of Public Water Supplies and Water Withdrawal Sites:	3	Number of KPDES Discharge Permits:	9
Surface Water Withdrawals:	1		
Groundwater Withdrawals:	2		
No. of Potable Water Treatment Facilities:	2		

Sampling Site Statistics:

Number of USGS Gaging Stations:	0
Number of Kentucky Division of Water Sampling Sites:	0
Number of Kentucky Dept. of Fish and Wildlife Sampling Sites:	1
Number of US Forest Service Sampling Sites:	0
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

Medium

High

Medium

High

Protection Categories:

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Wetland Areas	1	Acres	0 - 106	12
Surface Drinking Water Sources	1	No. of sources	0 - 14	2
Ground Drinking Water Sources	2	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	33,226	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	3.05	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	9	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	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	3.00	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	18	Number of sites	1 - 121	12
Potential Pesticide Loading	1	Est. sales in tons	0 - 45	10
Potential Fertilizer Loading	42	Est. tons applied	0 - 2747	394
Agricultural Erosion Potential	2.70	Est. tons erosion / acre	0 - 9	3.20
Livestock Operations Potential Impact	395	Animal units	55 - 43826	7,021
KPDES Discharge Violations	30	Number of violations	0 - 541	39
KY Division of Water Citizen Complaints	17	Number of complaints	0 - 53	9
Toxic Release Inventory	0	Score	0 - 11547626	231,638
Population Change Projection	39	Number of persons	-149 - 11030	448
Population Not on Public Sewer Systems	2,020	Number of persons	12 - 4511	1,114
Mining Area	1,081	Acres	0 - 6305	355
Surface Water Runoff Potential	60.84	SCS Curve Number	60 - 79	68
KPDES Permitted Discharges	9	Number of sites	0 - 56	6

Watershed Name: North Fork Kentucky River

11-Digit Watershed Identity Number: 05100201100

Stream and Waterbody Use Support Summary

Total Stream Miles: <input type="text" value="154.23"/>	<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>
Segments Assessed:	1	4.5	0.0	0.0	4.5	0.0
Designated Uses						
Aquatic Life:	1	4.5	0.0	0.0	4.5	0.0
Primary Contact:						
Fish Consumption:						
Drinking Water:						

* Blank values indicate no assessed segments for this category.

Assessed Stream Segments and Waterbodies					
<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 Willard Creek	0	4.5	4.5	AL	Not Supporting
<i>*Abbreviations: AL - Aquatic Life Support, PC - Primary Contact Recreation, SC - Secondary Contact Recreation, FC - Fish Consumption, DW - Drinking Water Supply, UT - Unnamed Tributary</i>					

Causes for Nonsupport or Impairment of Designated Uses					
<i>Stream or Waterbody Name *</i>	<i>Starting Milepoint</i>	<i>Ending Milepoint</i>	<i>Segment Length (miles)</i>	<i>Impaired or Threatened Designated Use</i>	<i>Level of Support</i>
Big Willard Creek	0	4.5	4.5	Aquatic Life Support	Not Supporting
<i>Possible Causes of Impairment:</i> Flow alteration, Other habitat alterations, Siltation, Turbidity			<i>Possible Sources For Impairment:</i> Abandoned mining, Bank or Shoreline Modification/Destabilization, Habitat Modification (other than Hydromodification), Harvesting, Restoration, Residue Management, Inactive mining, Removal of Riparian Vegetation, Resource Extraction, Silviculture, Mining		
<i>*Abbreviations: UT - Unnamed Tributary</i>					

Applicable Total Maximum Daily Load (TMDL) Reports:	
<i>Stream or Waterbody</i>	<i>TMDL Report Status</i>
North Fork Kentucky River	Complete

Watershed Name: North Fork Kentucky River

11-Digit Watershed Identity Number: 05100201100

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>
COCKRELL'S FORK MINING COMPANY	Surface Water	Water Withdrawal Site	WW1097
LITTLE FOLKS SHOP HEADSTART	Groundwater	Water Treatment Plant	0972920
WILLARD ELEMENTARY SCHOOL	Groundwater	Water Treatment Plant	0972314

<i>KPDES Permitted Discharge Facilities</i>			<i>KPDES Site ID Number</i>
<i>Facility</i>	<i>Type of Facility</i>		
AAA MINE SERVICE INC	REPAIR SHOPS & RELATED SERVICE	KY0090689	
APPLE RIDGE SUBD	LAND SUBDIVIDERS & DEV, EX CEM	KY0101371	
CHAVIES CTR APPALACHIA SRV PRO	SPORTING & RECREATIONAL CAMPS	KY0094161	
FUGATES WATER PARK	MUSEUMS AND ART GALLERIES	KY0092932	
KTC PERRY CO MAINT LOT	BUS TERMINAL & SERVICE FACILIT	KYG500043	
MIDDLE RIDGE SUBD COOP	LAND SUBDIVIDERS & DEV, EX CEM	KY0087025	
P & C RADIATOR INC	REPAIR SHOPS & RELATED SERVICE	KY0097250	
WILLARD ELEM SCHOOL	ELEMENTARY & SECONDARY SCHOOLS	KY0093564	

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>
Briar Fork	USGS	USGS03277630	Flow

<i>KY Dept of Fish and Wildlife Sampling / Assessment Sites</i>					
<i>Stream Segment</i>	<i>Upstream Description</i>	<i>Downstream Description</i>	<i>Total Length of Segment</i>	<i>Upstream Mile Point</i>	<i>Downstream Mile Point</i>
North Fork KY River - Big Willard Creek	Willard School	Mouth	4.5	0.8	0