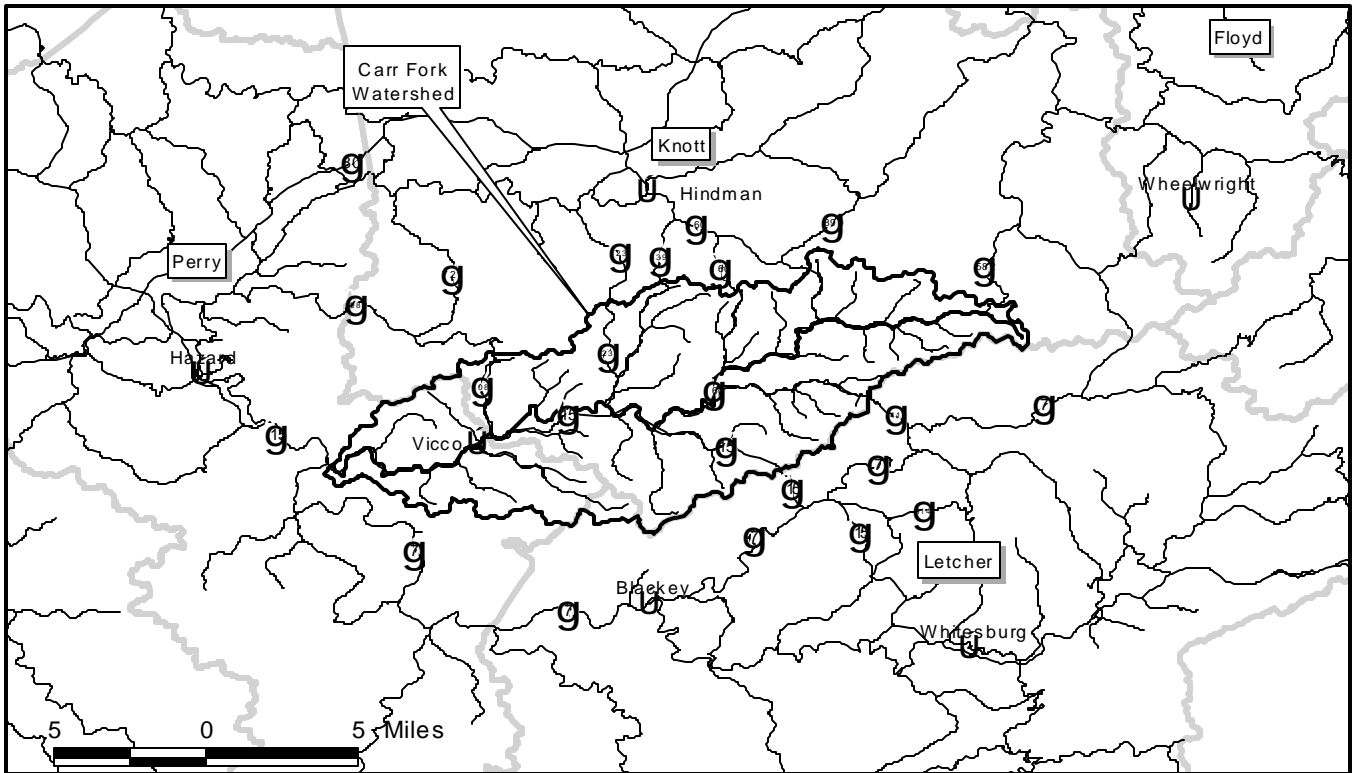


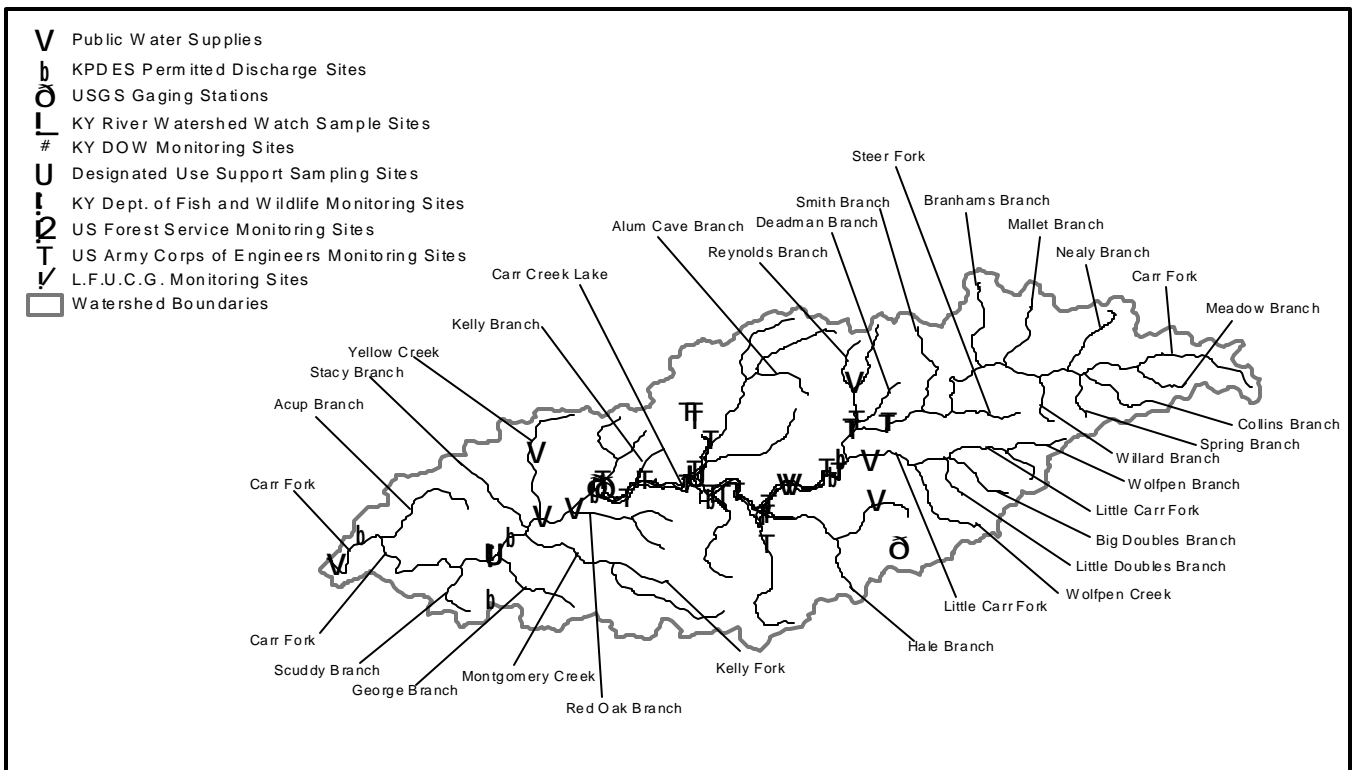
Carr Fork Watershed

Watershed Number: 05100201070

Location Map



Watershed Features



Geography. The Carr Fork watershed covers southern Knott County and east central Perry 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. Carr Fork empties into the North Fork Kentucky River south of Hazard (junction of Rte. 7 and Rte. 15). Among the creeks that feed it are Little Carr Fork, Montgomery Creek, Reynolds Branch, and Yellow Creek.

Land and water use. Land in the watershed is nearly all rural and wooded. The surface waters of the watershed supply the drinking water for Carr Creek State Resort Park. Eight businesses and organizations hold permits for discharges into the creeks. See tables for details.

Agency data assessment. The assessed waterways in this watershed include one (Carr Creek Lake) that only partially supports 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 a moderate 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. See tables for details.

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):	54,854	Acres	% of Total		
Residential Area:	0	0.0		Number of Mine Permits:	129
Commercial Area:	49	0.1		Total Permitted Mining Area (Acres):	2,927
Industrial Area:	0	0.0		Number of Identified Wetland Areas:	5
Agricultural Area:	0	0.0		Total Wetland Area (Acres):	2
Rural and Wooded Area:	52,246	95.5			
Other Land-use Area:	2,423	4.4			

Withdrawal and Discharge Sites:

Number of Public Water Supplies and Water Withdrawal Sites:	9	Number of KPDES Discharge Permits:	8
Surface Water Withdrawals:	3		
Groundwater Withdrawals:	6		
No. of Potable Water Treatment Facilities:	7		

Sampling Site Statistics:

Number of USGS Gaging Stations:	1
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:	23
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

Medium

High

Medium

Medium

Medium

Protection Categories:

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Wetland Areas	2	Acres	0 - 106	12
Surface Drinking Water Sources	3	No. of sources	0 - 14	2
Ground Drinking Water Sources	6	No. of sources	0 - 17	1
Groundwater Sensitivity	3.00	Score	2 - 5	3.21
KY Dept. of Fish and Wildlife Management Areas	2,951	Acres	0 - 2951	93
U.S. Forest Service Management Areas	11,646	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	0.16	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	8	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	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	13	Number of sites	1 - 121	12
Potential Pesticide Loading	1	Est. sales in tons	0 - 45	10
Potential Fertilizer Loading	9	Est. tons applied	0 - 2747	394
Agricultural Erosion Potential	2.47	Est. tons erosion / acre	0 - 9	3.20
Livestock Operations Potential Impact	334	Animal units	55 - 43826	7,021
KPDES Discharge Violations	0	Number of violations	0 - 541	39
KY Division of Water Citizen Complaints	14	Number of complaints	0 - 53	9
Toxic Release Inventory	0	Score	0 - 11547626	231,638
Population Change Projection	-149	Number of persons	-149 - 11030	448
Population Not on Public Sewer Systems	2,085	Number of persons	12 - 4511	1,114
Mining Area	2,929	Acres	0 - 6305	355
Surface Water Runoff Potential	60.95	SCS Curve Number	60 - 79	68
KPDES Permitted Discharges	8	Number of sites	0 - 56	6

Stream and Waterbody Use Support Summary

Total Stream Miles: <input type="text" value="108.79"/>	<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:	2	8.9	8.9	0.0	0.0	0.0
Designated Uses						
Aquatic Life:	2	8.9	8.9	0.0	0.0	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>
Carr Fork	0	8.9	8.9	AL	Fully Supporting
Carr Fork Lake	0	0	0	AL, SC	Partially Supporting

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

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>
Carr Fork Lake	0	0	0	Secondary Contact (Recr)	Partially Supporting
Carr Fork Lake	0	0	0	Aquatic Life Support	Partially Supporting
<i>Possible Causes of Impairment:</i>			<i>Possible Sources For Impairment:</i>		
Organic enrichment/Low DO, Siltation			Resource Extraction, Source Unknown		

**Abbreviations: UT - Unnamed Tributary*

Applicable Total Maximum Daily Load (TMDL) Reports:	
<i>Stream or Waterbody</i>	<i>TMDL Report Status</i>
Carr Fork	First priority - not yet started

Watershed Name:

Carr Fork

11-Digit Watershed Identity Number:

05100201070

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>
4 STAR VILLAGE APTS	Groundwater	Water Treatment Plant	0603287
CARR CREEK ELEMENTARY SCHOOL	Groundwater	Water Treatment Plant	0602284
CARR CREEK STATE RESORT PARK	Surface Water	Water Treatment Plant	0602752
CORPS OF ENGRS/DAM SITE	Groundwater	Water Treatment Plant	0602753
CORPS OF ENGRS/LITT CARR	Groundwater	Water Treatment Plant	0602811
DIAMOND MAY COAL COMPANY	Surface Water	Water Withdrawal Site	WW1109
LAKEVIEW HEADSTART	Groundwater	Water Treatment Plant	0603198
LEECO, INC.	Surface Water	Water Withdrawal Site	WW1334
ROBERTS MOBILE HOME PARK	Groundwater	Water Treatment Plant	0603305

<i>KPDES Permitted Discharge Facilities</i>		
<i>Facility</i>	<i>Type of Facility</i>	<i>KPDES Site ID Number</i>
CARR CREEK ELEM SCHOOL	ELEMENTARY & SECONDARY SCHOOLS	KY0089192
KNOTT CO BD OF ED	ELEMENTARY & SECONDARY SCHOOLS	KY0101818
KY DOP CARR CREEK STATE PARK	AMUSEMENT AND RECREATION, NEC	KY0024767
KY W VA GAS JEFF	NATURAL GAS TRANSMISSION	KY0060470
R W COMBS ELEM SCHOOL	ELEMENTARY & SECONDARY SCHOOLS	KY0093505
USCOE CARR FORK LK DAM & RES	AIR & WATER RES & SOL WSTE MGT	KY0027219
USCOE CARR FORK LK LITT CARR	AIR & WATER RES & SOL WSTE MGT	KY0027201
VICCO STP	SEWERAGE SYSTEMS	KY0060259

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>
Carr Fork	USGS	USGS03277450	Flow
Carr Fork	USGS	USGS03277446	Flow
Carr Fork	USGS	USGS03277437	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>
Carr Fork	Montgomery Kelly Fork	Mouth	20.1	6.4	0

<i>US Army Corps of Engineers Sampling Sites</i>		
<i>11-Digit HUC</i>	<i>HUC Name</i>	<i>Stream Segment</i>
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Un-named Trib. KY River - Carr Fork
05100201070	Carr Fork	Un-named Trib. KY River - Carr Fork
05100201070	Carr Fork	Un-named Trib. KY River - Carr Fork

Watershed Name: Carr Fork

11-Digit Watershed Identity Number: 05100201070

05100201070	Carr Fork	Un-named Trib. KY River - Carr Fork
05100201070	Carr Fork	Un-named Trib. KY River - Carr Fork
05100201070	Carr Fork	Un-named Trib. KY River - Carr Fork
05100201070	Carr Fork	Un-named Trib. KY River - Carr Fork
05100201070	Carr Fork	Un-named Trib. KY River - Carr Fork
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Un-named Trib. KY River - Carr Fork
05100201070	Carr Fork	Un-named Trib. KY River - Carr Fork
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Kentucky River, Carr Fork
05100201070	Carr Fork	Un-named Trib. KY River - Carr Fork