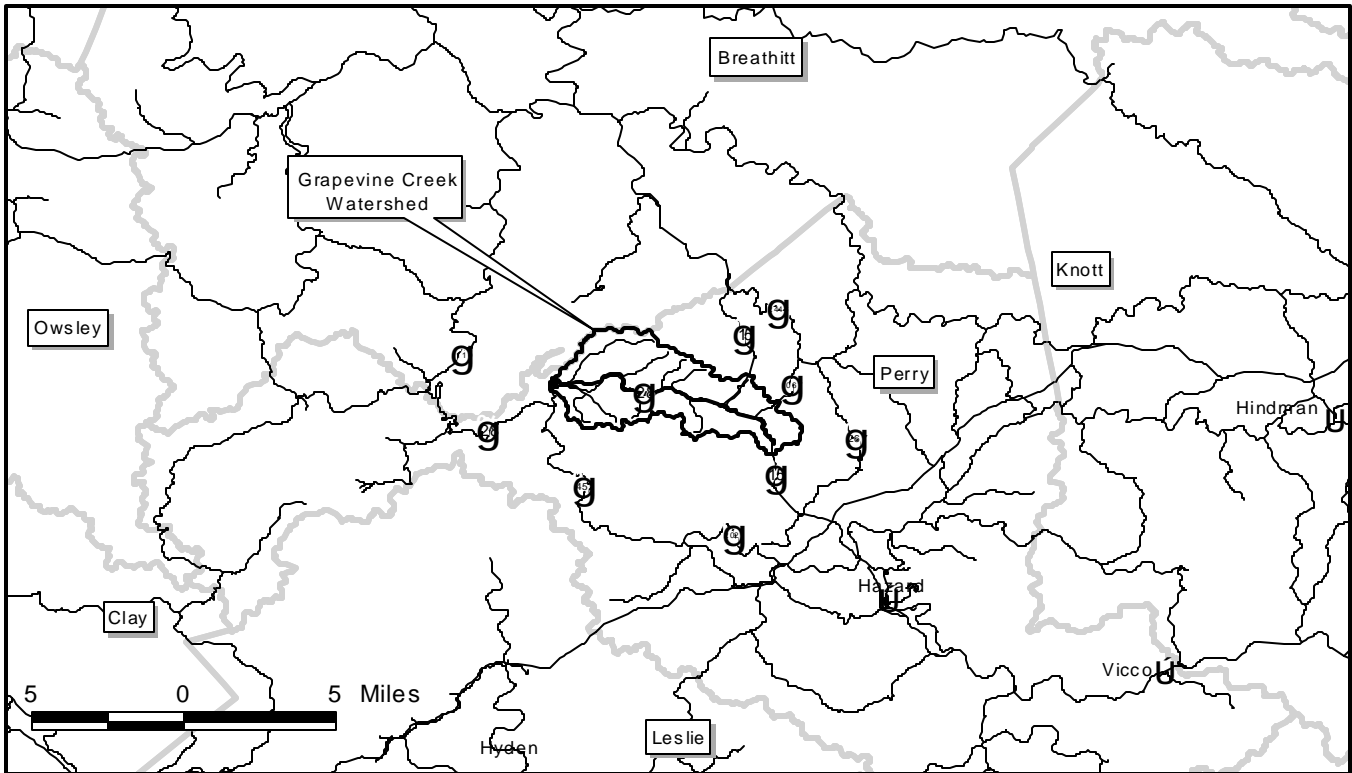


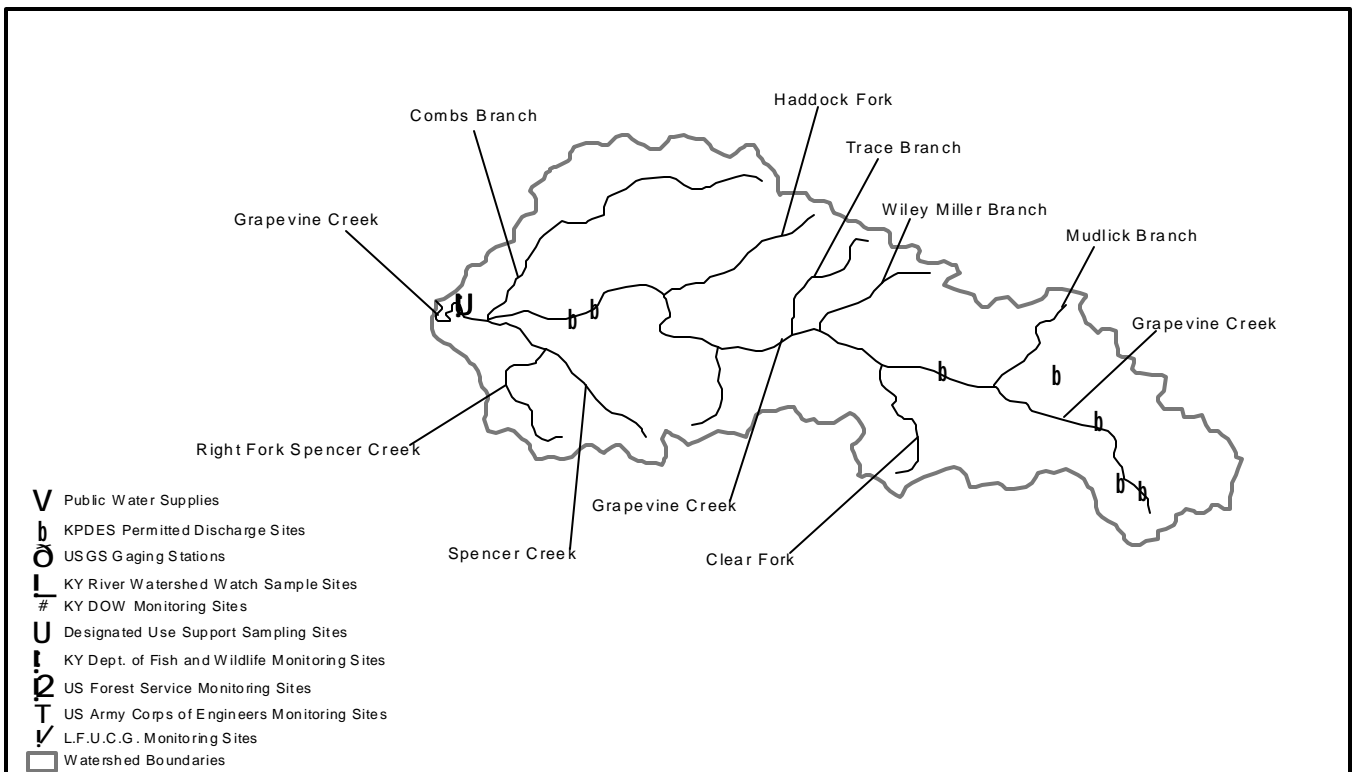
Grapevine Creek Watershed

Watershed Number: 05100201110

Location Map



Watershed Features



Geography. The Grapevine Creek watershed is in northern 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. Grapevine Creek empties into the North Fork Kentucky River north of Chavies. Among the creeks that feed it are Combs Branch, Spencer Creek, Clear Fork, Mudlick Branch, Wiley Miller Branch, Trace Branch, and Haddock Fork.

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

Agency data assessment. Grapevine Creek 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 the creek. 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):	9,077	Acres	% of Total		
Residential Area:	7	0.1		Number of Mine Permits:	10
Commercial Area:	0	0.0		Total Permitted Mining Area (Acres):	300
Industrial Area:	0	0.0		Number of Identified Wetland Areas:	0
Agricultural Area:	256	2.8		Total Wetland Area (Acres):	0
Rural and Wooded Area:	8,214	90.7			
Other Land-use Area:	581	6.4			

Withdrawal and Discharge Sites:

Number of Public Water Supplies and Water Withdrawal Sites:	0	Number of KPDES Discharge Permits:	7
Surface Water Withdrawals:	0		
Groundwater Withdrawals:	0		
No. of Potable Water Treatment Facilities:	0		

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	0	Acres	0 - 106	12
Surface Drinking Water Sources	0	No. of sources	0 - 14	2
Ground Drinking Water Sources	0	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	9,059	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	0.03	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	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	3.00	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	4	Number of sites	1 - 121	12
Potential Pesticide Loading	0	Est. sales in tons	0 - 45	10
Potential Fertilizer Loading	3	Est. tons applied	0 - 2747	394
Agricultural Erosion Potential	3.78	Est. tons erosion / acre	0 - 9	3.20
Livestock Operations Potential Impact	65	Animal units	55 - 43826	7,021
KPDES Discharge Violations	93	Number of violations	0 - 541	39
KY Division of Water Citizen Complaints	4	Number of complaints	0 - 53	9
Toxic Release Inventory	0	Score	0 - 11547626	231,638
Population Change Projection	21	Number of persons	-149 - 11030	448
Population Not on Public Sewer Systems	340	Number of persons	12 - 4511	1,114
Mining Area	300	Acres	0 - 6305	355
Surface Water Runoff Potential	61.28	SCS Curve Number	60 - 79	68
KPDES Permitted Discharges	7	Number of sites	0 - 56	6

Watershed Name: Grapevine Creek

11-Digit Watershed Identity Number: 05100201110

Stream and Waterbody Use Support Summary

Total Stream Miles: <input type="text" value="21.02"/>	Number of Seaments	Stream Miles Assessed	Miles * Fully Supportina	Miles * Partially Supportina	Miles * Not Supportina	Miles * Threatened
Segments Assessed:	1	1.1	0.0	0.0	1.1	0.0
Designated Uses						
Aquatic Life:	1	1.1	0.0	0.0	1.1	0.0
Primary Contact:						
Fish Consumption:						
Drinking Water:						

* Blank values indicate no assessed segments for this category.

Assessed Stream Segments and Waterbodies					
Stream or Waterbody Name *	Starting Milepoint	Ending Milepoint	Segment Length (miles)	Designated Uses *	Overall Level of Support
Grapevine Creek	0	1.1	1.1	AL	Not 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					
Stream or Waterbody Name *	Starting Milepoint	Ending Milepoint	Segment Length (miles)	Impaired or Threatened Designated Use	Level of Support
Grapevine Creek	0	1.1	1.1	Aquatic Life Support	Not Supporting
Possible Causes of Impairment: Flow alteration, Other habitat alterations, Siltation, Turbidity			Possible Sources For Impairment: 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		
*Abbreviations: UT - Unnamed Tributary					

Watershed Name: Grapevine Creek

11-Digit Watershed Identity Number: 05100201110

Withdrawal Sites and Discharge Facilities:

<i>KPDES Permitted Discharge Facilities</i>		
<i>Facility</i>	<i>Type of Facility</i>	<i>KPDES Site ID Number</i>
BAR WAT PARK	OPER OF RES MOBILE HOME SITES	KY0098591
CHAVIES ELEM SCHOOL	ELEMENTARY & SECONDARY SCHOOLS	KY0093581
COMBS TRAILER PARK	OPER OF RES MOBILE HOME SITES	KY0083674
GRAPEVINE PLACE APTS	OPERATORS OF APART BUILDINGS	KY0086291
KAT-A-PULT INC	SOAP/DETERG EXC SPECIAL CLEANR	KY0096997
PERRY CO LANDFILL	REFUSE SYSTEMS	KY0088871
RON'S MHP	OPER OF RES MOBILE HOME SITES	KY0082929

Gaging Stations and Sampling Sites:

<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>
Grapevine Creek		Mouth	8.3	2.3	0