

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:**

<i>Total Land Area (Acres):</i>	<input type="text" value="105,134"/>	<i>Acres</i>	<i>% of Total</i>		
<i>Residential Area:</i>	<input type="text" value="4,655"/>		<input type="text" value="4.4"/>	<i>Number of Mine Permits:</i>	<input type="text" value="1"/>
<i>Commercial Area:</i>	<input type="text" value="1,858"/>		<input type="text" value="1.8"/>	<i>Total Permitted Mining Area (Acres):</i>	<input type="text" value="2"/>
<i>Industrial Area:</i>	<input type="text" value="493"/>		<input type="text" value="0.5"/>	<i>Number of Identified Wetland Areas:</i>	<input type="text" value="83"/>
<i>Agricultural Area:</i>	<input type="text" value="71,227"/>		<input type="text" value="67.8"/>	<i>Total Wetland Area (Acres):</i>	<input type="text" value="78"/>
<i>Rural and Wooded Area:</i>	<input type="text" value="26,553"/>		<input type="text" value="25.3"/>		
<i>Other Land-use Area:</i>	<input type="text" value="331"/>		<input type="text" value="0.3"/>		

**Withdrawal and Discharge Sites:**

<i>Number of Public Water Supplies and Water Withdrawal Sites:</i>	<input type="text" value="14"/>	<i>Number of KPDES Discharge Permits:</i>	<input type="text" value="23"/>
<i>Surface Water Withdrawals:</i>	<input type="text" value="12"/>		
<i>Groundwater Withdrawals:</i>	<input type="text" value="2"/>		
<i>No. of Potable Water Treatment Facilities:</i>	<input type="text" value="4"/>		

**Sampling Site Statistics:**

<i>Number of USGS Gaging Stations:</i>	<input type="text" value="4"/>
<i>Number of Kentucky Division of Water Sampling Sites:</i>	<input type="text" value="0"/>
<i>Number of Kentucky Dept. of Fish and Wildlife Sampling Sites:</i>	<input type="text" value="0"/>
<i>Number of US Forest Service Sampling Sites:</i>	<input type="text" value="0"/>
<i>Number of US Army Corps of Engineers Sampling Sites:</i>	<input type="text" value="0"/>
<i>Number of Kentucky River Watershed Watch Sampling Sites:</i>	<input type="text" value="4"/>
<i>Number of Lexington-Fayette Urban Co. Gov. Sampling Sites:</i>	<input type="text" value="0"/>



Watershed Name:                     Kentucky River                    

11-Digit Watershed Identity Number:                     05100205140                    

**Stream and Waterbody Use Support Summary**

<i>Total Stream Miles:</i>						
<input type="text" value="145"/>	<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>	2	18.1	17.1	0.0	0.0	1.0
<i>Designated Uses</i>						
<i>Aquatic Life:</i>	2	18.1	17.1	0.0	0.0	1.0
<i>Primary Contact:</i>	1	17.1	17.1	0.0	0.0	0.0
<i>Fish Consumption:</i>	1	17.1	17.1	0.0	0.0	0.0
<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>
Cedar Run	1.8	2.8	1	AL	Threatened
Kentucky River	118.2	135.3	17.1	AL, FC, PC	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*

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**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>
AUSTIN-NICHOLS DISTILLING CO.,INC.	Surface Water	Water Withdrawal Site	WW0052
CAPITOL POWERHOUSE	Surface Water	Water Withdrawal Site	WW1319
FRANKFORT ELEC & WTR PLNT BD	Surface Water	Water Treatment Plant	0370143
FRANKFORT ELEC & WTR PLNT BD	Surface Water	Water Withdrawal Site	0370143
HARRODSBURG MUN WATER DEPT	Surface Water	Water Treatment Plant	0840180
HARRODSBURG MUN WATER DEPT	Surface Water	Water Withdrawal Site	0840180
HIGHBRIDGE SPRING WATER CO	Surface Water	Water Treatment Plant	0570495
HIGHBRIDGE SPRINGWATER	Groundwater	Water Withdrawal Site	WW1403
LAWRENCEBURG WATER/SEWER DEPT	Surface Water	Water Treatment Plant	0030239
LAWRENCEBURG WATER/SEWER DEPT	Surface Water	Water Withdrawal Site	0030239
OLD CROW DISTILLING CO.	Groundwater	Water Withdrawal Site	WW0061
VERSAILLES WATER SYSTEM	Surface Water	Water Withdrawal Site	1200439
WILMORE WATER WORKS	Surface Water	Water Withdrawal Site	0570010
WILSON LANDSCAPING & GARDEN CENTER	Surface Water	Water Withdrawal Site	WW1265

<i>KPDES Permitted Discharge Facilities</i>			<i>KPDES Site ID Number</i>
<i>Facility</i>	<i>Type of Facility</i>		
BOULEVARD DISTILLERS & IMPORTS	DIST, RECTIFIED & BLENDED LIQ	KY0001643	
CAMP NELSON #1	SPORTING & RECREATIONAL CAMPS	KY0073652	
CHEVRON SERVICE STA FRANKFORT	GASOLINE SERVICE STATIONS	KY0096369	
FC CAPITOL POWER HOUSE	STEAM & AIR-CONDITIONING SUP	KY0058424	
FOX CREEK RECC	OPER OF NONRESIDENTIAL BLDGS	KY0079766	
HARROD CONCRETE & STONE CO	CRUSHED AND BROKEN LIMESTONE	KYG840123	
HIGHBRIDGE SPRINGS WATER CO	WATER SUPPLY	KY0091383	
KTC ANDERSON CO MAINT GARAGE	BUS TERMINAL & SERVICE FACILIT	KY0099121	
KTC FRANKLIN CO MAINT GARAGE	BUS TERMINAL & SERVICE FACILIT	KY0099228	
KY STONE CO TYRONE PLT	CLAY, CERAMIC & REFRAC MAT NEC	KYG840102	
KY UTIL TYRONE GEN STA	ELECTRICAL SERVICES	KY0001899	
LAWRENCEBURG WTP	WATER SUPPLY	KY0090271	
SUBURBAN PARK	OPER OF NONRESIDENTIAL BLDGS	KY0049051	
WATER PATROL BLDG	STEAM & AIR-CONDITIONING SUP	KY0089877	

**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>
Kentucky River	USGS	USGS03287500	Flow
Kentucky River	USGS	USGS03287250	Flow
Kentucky River	US COE	USCE03287250	Flow
Kentucky River	US COE	USCE380310084495101	Flow
Gilbert Creek	USGS	USGS03287160	Flow
Kentucky River	USGS	USGS03287000	Flow
Kentucky River	US COE	USCE375532084491701	Flow
Kentucky River	US COE	USCE374945084432601	Flow

Watershed Name:                     Kentucky River                          11-Digit Watershed Identity Number:                     05100205140                    

Kentucky River	USGS	USGS03286500	Flow
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<i>KY River Watershed Watch Sampling Sites</i>		
<i>Stream Name</i>	<i>KRWW Sample ID No.</i>	<i>Site Description</i>
Craig Creek	K12	Lillards Ferry Rd. Bridge
Gilbert's Creek	K19	First Crossing of Gilbert's Creek Rd
Landing Run	K09	600" up from confluence of KY River
Sharps Branch	K18	0.75mi upstream of Mouth of Sharps

Watershed Name:

Kentucky River

11-Digit Watershed Identity Number:

05100205140

### Results from 1999 KY River Watershed Watch Sampling:

#### Conventional Parameters:

Sample ID Number: K09 Stream: Landing Run

##### Physical Data (May):

pH		Alkalinity	
Temperature		Total Hardness	
Dissolved Oxygen		Chlorides	
		Conductivity	
		Total Organic Carbon	
		Total Suspended Solids	

##### Fecal Data (July / August):

	Coliform Count	Strep Count	Coliform/Strep Ratio
July			
August			

Sample ID Number: K12 Stream: Craig Creek

##### Physical Data (May):

pH	8.3	Alkalinity	198
Temperature	16	Total Hardness	258
Dissolved Oxygen	17.14	Chlorides	24.5
		Conductivity	529
		Total Organic Carbon	11.0
		Total Suspended Solids	5

##### Fecal Data (July / August):

	Coliform Count	Strep Count	Coliform/Strep Ratio
July	130	390	0.33
August			

Sample ID Number: K18 Stream: Sharps Branch

##### Physical Data (May):

pH	0	Alkalinity	
Temperature	0	Total Hardness	
Dissolved Oxygen	0	Chlorides	
		Conductivity	
		Total Organic Carbon	
		Total Suspended Solids	

##### Fecal Data (July / August):

	Coliform Count	Strep Count	Coliform/Strep Ratio
July	180	3800	0.047
August			

Sample ID Number: K19 Stream: Gilbert's Creek

##### Physical Data (May):

pH	0	Alkalinity	
Temperature	0	Total Hardness	
Dissolved Oxygen	0	Chlorides	
		Conductivity	
		Total Organic Carbon	
		Total Suspended Solids	

##### Fecal Data (July / August):

	Coliform Count	Strep Count	Coliform/Strep Ratio
July	10	100	0.1
August			

Note: Most indicators are in milligrams per liter (mg/L) which is equivalent to parts per million (ppm). Temperature is in Celsius degrees. Alkalinity and hardness are as mg/L of calcium carbonate. Bacterial counts are in colonies per 100 milliliters. Conductivity units are micro-mhos per centimeter

#### Nutrient Parameters:

Sample ID Number: K09 Stream: Landing Run

Ammonia		Orthophosphate as Phosphate		Sulfate	
Ammonia Nitrogen		Orthophosphate as Phosphorus			
Total Kjeldahl Nitrogen as NH3		Total Recoverable Phosphorus			
Total Kjeldahl Nitrogen as N					
Nitrate					
Nitrate Nitrogen					

Note: All indicators are in milligrams per liter (mg/L) which is equivalent to parts per million (ppm).

Watershed Name:

Kentucky River

11-Digit Watershed Identity Number:

05100205140

Sample ID Number: K12 Stream: Craig Creek

Ammonia	0.33	Orthophosphate as Phosphate	1.848	Sulfate	43.4
Ammonia Nitrogen	0.27	Orthophosphate as Phosphorus	0.603		
Total Kjeldahl Nitrogen as NH3	0.39	Total Recoverable Phosphorus	0.56		
Total Kjeldahl Nitrogen as N	0.32				
Nitrate	2.6				
Nitrate Nitrogen	0.59				

Note: All indicators are in milligrams per liter (mg/L) which is equivalent to parts per million (ppm).

Sample ID Number: K18 Stream: Sharps Branch

Ammonia		Orthophosphate as Phosphate		Sulfate	
Ammonia Nitrogen		Orthophosphate as Phosphorus			
Total Kjeldahl Nitrogen as NH3		Total Recoverable Phosphorus			
Total Kjeldahl Nitrogen as N					
Nitrate					
Nitrate Nitrogen					

Note: All indicators are in milligrams per liter (mg/L) which is equivalent to parts per million (ppm).

Sample ID Number: K19 Stream: Gilbert's Creek

Ammonia		Orthophosphate as Phosphate		Sulfate	
Ammonia Nitrogen		Orthophosphate as Phosphorus			
Total Kjeldahl Nitrogen as NH3		Total Recoverable Phosphorus			
Total Kjeldahl Nitrogen as N					
Nitrate					
Nitrate Nitrogen					

Note: All indicators are in milligrams per liter (mg/L) which is equivalent to parts per million (ppm).

Metals and Mineral Parameters:

Sample ID Number: K09 Stream: Landing Run

Aluminum		Calcium		Lead		Selenium		Thallium	
Antimony		Chromium		Lithium		Silicon		Vanadium	
Barium		Cobalt		Magnesium		Sodium		Zinc	
Beryllium		Copper		Manganese		Strontium			
Boron		Iron		Potassium		Sulfur			

Note: All indicators are in milligrams per liter (mg/L) which is equivalent to parts per million (ppm).

Sample ID Number: K12 Stream: Craig Creek

Aluminum	1.85	Calcium	86.98	Lead	0.01	Selenium	0.01	Thallium	
Antimony		Chromium		Lithium		Silicon	3.82	Vanadium	
Barium	0.03	Cobalt		Magnesium	10.38	Sodium	15.12	Zinc	0.007
Beryllium		Copper		Manganese	0.43	Strontium	0.21		
Boron	0.11	Iron	0.38	Potassium	7.59	Sulfur	14.45		

Note: All indicators are in milligrams per liter (mg/L) which is equivalent to parts per million (ppm).

