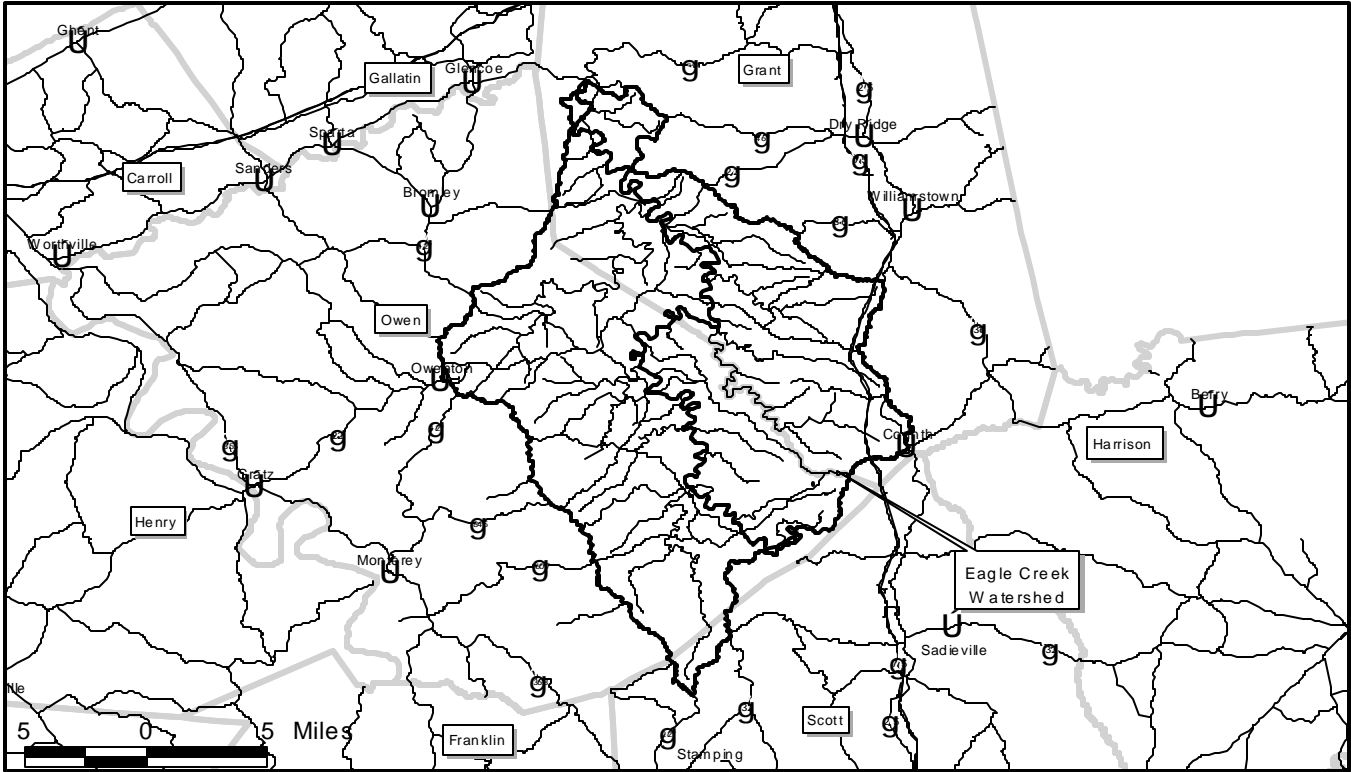


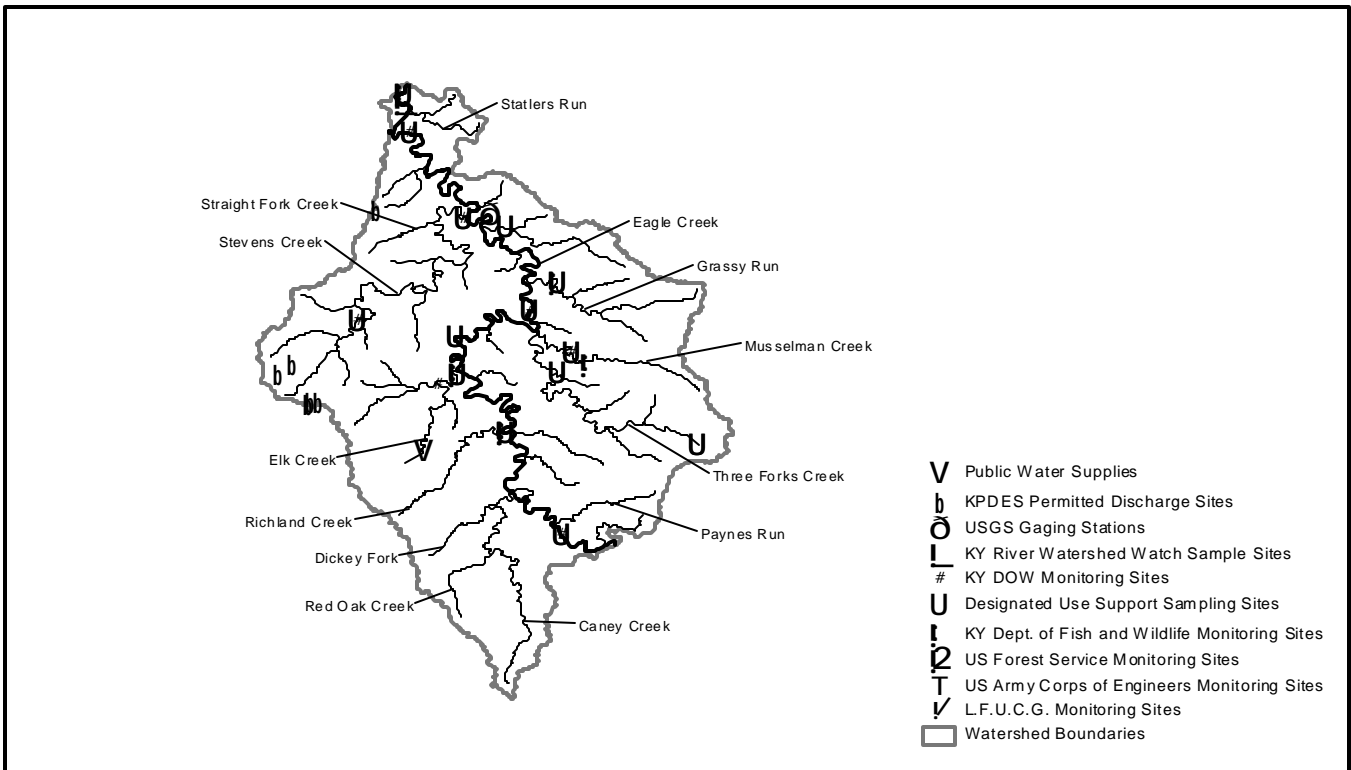
# Eagle Creek Watershed

## Watershed Number: 05100205370

### Location Map



### Watershed Features



**Geography.** The Eagle Creek (upper) watershed covers western Grant County and eastern Owen County. The land is in the hills of the bluegrass subregion of the Bluegrass physiographic region, characterized by hilly terrain, very rapid surface runoff, and slow groundwater drainage. The watershed lies above interbedded limestones and shales (>20% limestone, allowing groundwater flow where the clay content is low enough).

**Waterways.** This watershed includes the section of Eagle Creek between the mouth of Lytles Fork (just over the Scott County line in Owen County) and the mouth of Tenmile Creek near Folsom in Grant County. Among the creeks that feed it are Caney Creek, Red Oak Creek, Dickey Fork, Paynes Run, Elk Creek, Three Forks Creek, Musselman Creek, Grassy Run, Straight Fork Creek, and Statlers Run. The watershed also receives the water from the Lytles Fork & Eagle Creek, Clarks Creek, and Brush Creek watersheds.

**Land and water use.** Land in the watershed is more than 50% agricultural and more than 40% rural and wooded; residential areas make up 3%. Six businesses and organizations hold permits for discharges into the creeks. See tables for details.

**Agency data assessment.** The fourteen assessed creek segments in this watershed include one that does not support its designated uses, based on biological and/or water-quality data. Seven others only partly support their uses. Siltation, nutrient and organic enrichment, and habitat modifications contribute to the impairment of these streams. 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):	119,751	Acres	% of Total		
Residential Area:	3,559	3.0		Number of Mine Permits:	0
Commercial Area:	735	0.6		Total Permitted Mining Area (Acres):	0
Industrial Area:	22	0.0		Number of Identified Wetland Areas:	19
Agricultural Area:	64,269	53.7		Total Wetland Area (Acres):	26
Rural and Wooded Area:	50,977	42.6			
Other Land-use Area:	204	0.2			

**Withdrawal and Discharge Sites:**

Number of Public Water Supplies and Water Withdrawal Sites:	1	Number of KPDES Discharge Permits:	6
Surface Water Withdrawals:	1		
Groundwater Withdrawals:	0		
No. of Potable Water Treatment Facilities:	1		

**Sampling Site Statistics:**

Number of USGS Gaging Stations:	0
Number of Kentucky Division of Water Sampling Sites:	7
Number of Kentucky Dept. of Fish and Wildlife Sampling Sites:	6
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:	1
Number of Lexington-Fayette Urban Co. Gov. Sampling Sites:	0

**Watershed Indicators and Ranking Categories:**

Overall Watershed Ranking:

Protection Ranking  
Low

Observed Impacts  
Low

Potential Impacts  
High

Restoration Ranking  
Low

Low

**Protection Categories:**

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Wetland Areas	26	Acres	0 - 106	12
Surface Drinking Water Sources	1	No. of sources	0 - 14	2
Ground Drinking Water Sources	0	No. of sources	0 - 17	1
Groundwater Sensitivity	2.16	Score	2 - 5	3.21
KY Dept. of Fish and Wildlife Management Areas	0	Acres	0 - 2951	93
U.S. Forest Service Management Areas	0	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	2	No. of resources	0 - 8	1
Kentucky Rivers Assessment Scores	2.42	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	1	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	6	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	1.50	Score	1 - 3	1.31
Contamination Sites Impacting Ecological Health	6	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	9	Est. sales in tons	0 - 45	10
Potential Fertilizer Loading	947	Est. tons applied	0 - 2747	394
Agricultural Erosion Potential	5.16	Est. tons erosion / acre	0 - 9	3.20
Livestock Operations Potential Impact	21,281	Animal units	55 - 43826	7,021
KPDES Discharge Violations	0	Number of violations	0 - 541	39
KY Division of Water Citizen Complaints	16	Number of complaints	0 - 53	9
Toxic Release Inventory	0	Score	0 - 11547626	231,638
Population Change Projection	854	Number of persons	-149 - 11030	448
Population Not on Public Sewer Systems	2,344	Number of persons	12 - 4511	1,114
Mining Area	0	Acres	0 - 6305	355
Surface Water Runoff Potential	75.01	SCS Curve Number	60 - 79	68
KPDES Permitted Discharges	6	Number of sites	0 - 56	6

**Stream and Waterbody Use Support Summary**

<b>Total Stream Miles:</b> <input type="text" value="212.69"/>	<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>
<b>Segments Assessed:</b>	14	66.6	34.4	31.0	1.2	0.0
<b>Designated Uses</b>						
<b>Aquatic Life:</b>	14	66.6	34.4	31.0	1.2	0.0
<b>Primary Contact:</b>						
<b>Fish Consumption:</b>						
<b>Drinking Water:</b>						

\* Blank values indicate no assessed segments for this category.

<b>Assessed Stream Segments and Waterbodies</b>					
<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>
Corinth Lake	0	0	0	AL	Fully Supporting
Eagle Creek	66.3	72.3	6	AL	Fully Supporting
Eagle Creek	48.6	55.9	7.3	AL	Partially Supporting
Eagle Creek	45.6	48.6	3	AL	Fully Supporting
Eagle Creek	29.9	34.5	4.6	AL	Partially Supporting
Eagle Creek	27.3	29.9	2.6	AL	Fully Supporting
Elk Creek	0	1.6	1.6	AL	Partially Supporting
Grassy Run	0	6.4	6.4	AL	Partially Supporting
Musselman Creek	0	8.4	8.4	AL	Fully Supporting
Rattlesnake Creek	0	1.2	1.2	AL	Not Supporting
Richland Creek	0	0.8	0.8	AL	Partially Supporting
Stevens Creek	14.4	17.1	2.7	AL	Partially Supporting
Stevens Creek	0	14.4	14.4	AL	Fully Supporting
Three Forks Creek	0	7.6	7.6	AL	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

<b>Causes for Nonsupport or Impairment of Designated Uses</b>					
<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>
Eagle Creek	29.9	34.5	4.6	Aquatic Life Support	Partially Supporting
<b>Possible Causes of Impairment:</b>			<b>Possible Sources For Impairment:</b>		
Nutrients, Siltation			Agriculture, Crop-related Sources, Grazing related Sources		
Eagle Creek	48.6	55.9	7.3	Aquatic Life Support	Partially Supporting

Watershed Name: Eagle Creek

11-Digit Watershed Identity Number: 05100205370

<i>Possible Causes of Impairment:</i> Nutrients, Siltation		<i>Possible Sources For Impairment:</i> Agriculture, Crop-related Sources, Grazing related Sources			
Elk Creek	0	1.6	1.6	Aquatic Life Support	Partially Supporting
<i>Possible Causes of Impairment:</i> Other habitat alterations		<i>Possible Sources For Impairment:</i> Habitat Modification (other than Hydromodification), Removal of Riparian Vegetation			
Grassy Run	0	6.4	6.4	Aquatic Life Support	Partially Supporting
<i>Possible Causes of Impairment:</i> Salinity/TDS/chlorides		<i>Possible Sources For Impairment:</i> Source Unknown			
Richland Creek	0	0.8	0.8	Aquatic Life Support	Partially Supporting
<i>Possible Causes of Impairment:</i> Siltation, Flow alteration		<i>Possible Sources For Impairment:</i> Agriculture, Crop-related Sources, Specialty Crop Production			
Stevens Creek	14.4	17.1	2.7	Aquatic Life Support	Partially Supporting
<i>Possible Causes of Impairment:</i> Organic enrichment/Low DO, Siltation		<i>Possible Sources For Impairment:</i> Agriculture, Grazing related Sources, Pasture grazing - Riparian and/or Upland			
Three Forks Creek	0	7.6	7.6	Aquatic Life Support	Partially Supporting
<i>Possible Causes of Impairment:</i> Siltation		<i>Possible Sources For Impairment:</i> Source Unknown			
<i>*Abbreviations: UT - Unnamed Tributary</i>					

Watershed Name: Eagle Creek 11-Digit Watershed Identity Number: 05100205370

**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>
ELK LAKE WATER CO	Surface Water	Water Treatment Plant	0940119

<i>KPDES Permitted Discharge Facilities</i>			<i>KPDES Site ID Number</i>
<i>Facility</i>	<i>Type of Facility</i>		
JONESVILLE REST HOME	INTERMEDIATE CARE FACILITIES	KY0081621	
K & L INN	HOTELS AND MOTELS	KY0089273	
KTC OWEN CO MAINT GARAGE	BUS TERMINAL & SERVICE FACILIT	KY0098949	
OWEN CO BD OF ED	ELEMENTARY & SECONDARY SCHOOLS	KY0101940	
OWENTON STP	SEWERAGE SYSTEMS	KY0028312	
SMITH HOUSE RESTAURANT	EATING PLACES	KY0037788	

**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>
Eagle Creek	USGS	USGS03291270	Flow

<i>KY Division of Water Sampling Sites</i>	
<i>Stream Name</i>	<i>Type of Sampling</i>
Musselman Creek	Physical/Chemical Monitoring
Stevens Creek	Physical/Chemical Monitoring
Eagle Creek	Physical/Chemical Monitoring
Stevens Creek	Physical/Chemical Monitoring

<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>
Eagle Creek 17 (Three Forks Creek)	Upstream of Three Forks Creeks	Mouth	13.2	7.6	0
Eagle Creek 21 (Richland Creek)	Upstream of Richland Creek	Mouth	7.5	0.8	0
Eagle Creek 31 (Grassy Run)	Upstream of Grassy Run	Mouth	8.6	6.4	0
Eagle Creek 22	Brush Creek	Tenmile Creek	102	29.9	27.3
Eagle Creek 30 (Rattlesnake Creek)	Upstream of Rattlesnake Creek	Mouth	6	1.2	0
Elk Creek	Buck Elk Creek	Mouth	9.1	1.6	0

<i>KY River Watershed Watch Sampling Sites</i>		
<i>Stream Name</i>	<i>KRWW Sample ID No.</i>	<i>Site Description</i>
Eagle Creek	K11	Just up from Mouth of Ten Mile Creek