

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):	22,290	Acres	% of Total		
Residential Area:	920		4.1	Number of Mine Permits:	0
Commercial Area:	28		0.1	Total Permitted Mining Area (Acres):	0
Industrial Area:	0		0.0	Number of Identified Wetland Areas:	1
Agricultural Area:	10,491		47.1	Total Wetland Area (Acres):	0
Rural and Wooded Area:	10,796		48.4		
Other Land-use Area:	58		0.3		

Withdrawal and Discharge Sites:

Number of Public Water Supplies and Water Withdrawal Sites:	3	Number of KPDES Discharge Permits:	2
Surface Water Withdrawals:	3		
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:	0
Number of Kentucky Dept. of Fish and Wildlife Sampling Sites:	3
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 Name:

Severn Creek

11-Digit Watershed Identity Number:

05100205320

Watershed Indicators and Ranking Categories:

Overall Watershed Ranking:

Protection Ranking

Observed Impacts

Potential Impacts

Restoration Ranking

Low

Low

Medium

Medium

Medium

Protection Categories:

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Wetland Areas	0	Acres	0 - 106	12
Surface Drinking Water Sources	3	No. of sources	0 - 14	2
Ground Drinking Water Sources	0	No. of sources	0 - 17	1
Groundwater Sensitivity	2.78	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	0	No. of resources	0 - 8	1
Kentucky Rivers Assessment Scores	0.80	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	2	Number since 1970	0 - 10	4
Water Supply Inadequacy	1.00	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	1.00	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	1	Number of sites	1 - 121	12
Potential Pesticide Loading	10	Est. sales in tons	0 - 45	10
Potential Fertilizer Loading	179	Est. tons applied	0 - 2747	394
Agricultural Erosion Potential	5.26	Est. tons erosion / acre	0 - 9	3.20
Livestock Operations Potential Impact	3,555	Animal units	55 - 43826	7,021
KPDES Discharge Violations	0	Number of violations	0 - 541	39
KY Division of Water Citizen Complaints	2	Number of complaints	0 - 53	9
Toxic Release Inventory	0	Score	0 - 11547626	231,638
Population Change Projection	109	Number of persons	-149 - 11030	448
Population Not on Public Sewer Systems	411	Number of persons	12 - 4511	1,114
Mining Area	0	Acres	0 - 6305	355
Surface Water Runoff Potential	75.27	SCS Curve Number	60 - 79	68
KPDES Permitted Discharges	2	Number of sites	0 - 56	6

Watershed Name: Severn Creek

11-Digit Watershed Identity Number: 05100205320

Stream and Waterbody Use Support Summary

Total Stream Miles: <input type="text" value="37.2"/>	<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:	4	13.3	6.0	0.0	0.0	7.3
Designated Uses						
Aquatic Life:	4	13.3	6.0	0.0	0.0	7.3
Primary Contact:						
Fish Consumption:						
Drinking Water:	1	2.8	2.8	0	0	0

* 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>
Elmer Davis Lake	0	0	0	AL	Partially Supporting
North Severn Creek	0	3.2	3.2	AL	Fully Supporting
Severn Creek	2.8	10.1	7.3	AL	Threatened
Severn Creek	0	2.8	2.8	AL, DW	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*

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>
Elmer Davis 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			Agriculture		

**Abbreviations: 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>
OWENTON CITY WATER WORKS	Surface Water	Water Treatment Plant	0940337
OWENTON CITY WATER WORKS	Surface Water	Water Withdrawal Site	0940337

<i>KPDES Permitted Discharge Facilities</i>			<i>KPDES Site ID Number</i>
<i>Facility</i>	<i>Type of Facility</i>		
OWEN CO BD OF ED	ELEMENTARY & SECONDARY SCHOOLS		KY0101940
OWENTON WTP	WATER SUPPLY		KY0088951

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>
North Severn Creek	Upstream of North Severn Creek	Mouth	4.8	2.3	0
Severn Creek	North Severn Creek	Mouth	13.4	2.8	0
Severn Creek	Upstream of Severn Creek	North Severn Creek	13.4	10.1	2.8

<i>KY River Watershed Watch Sampling Sites</i>		
<i>Stream Name</i>	<i>KRWW Sample ID No.</i>	<i>Site Description</i>
Severn Creek	K78	.25mi below US 127