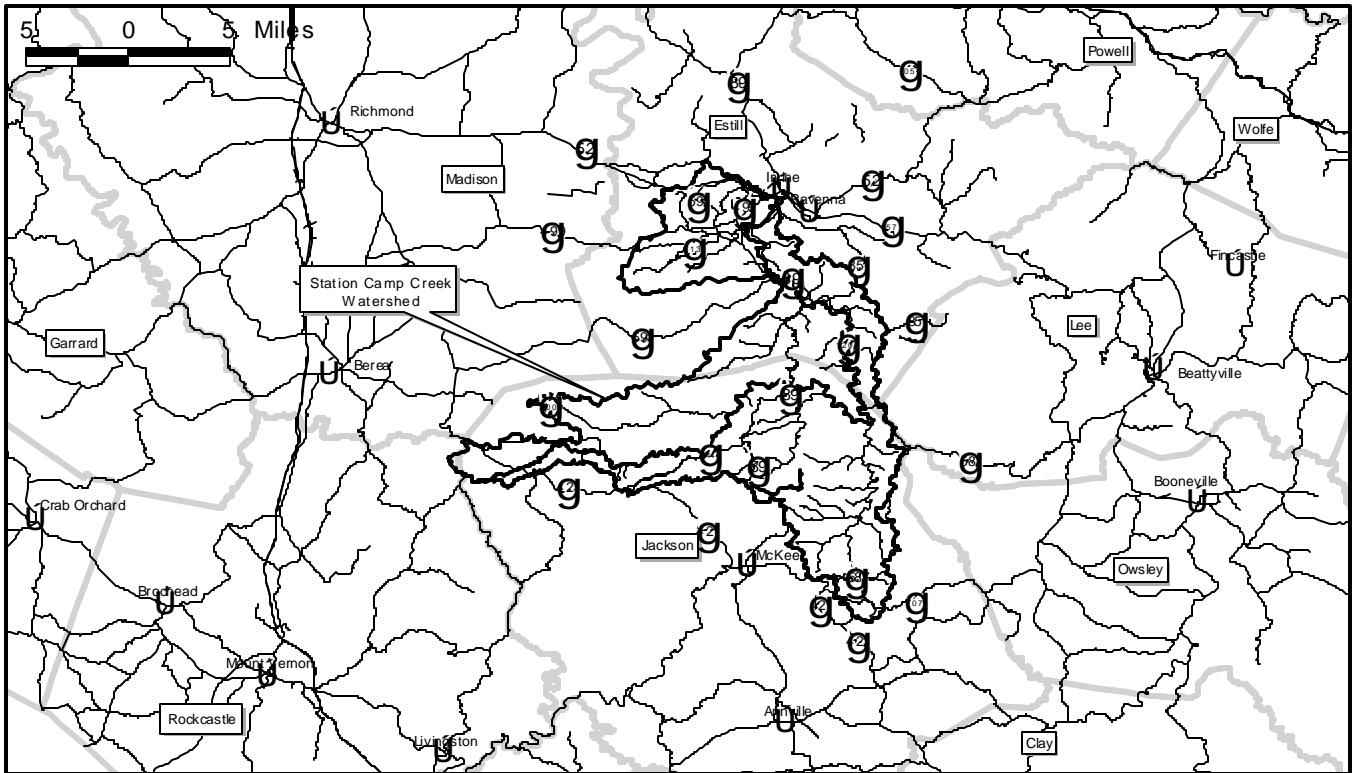


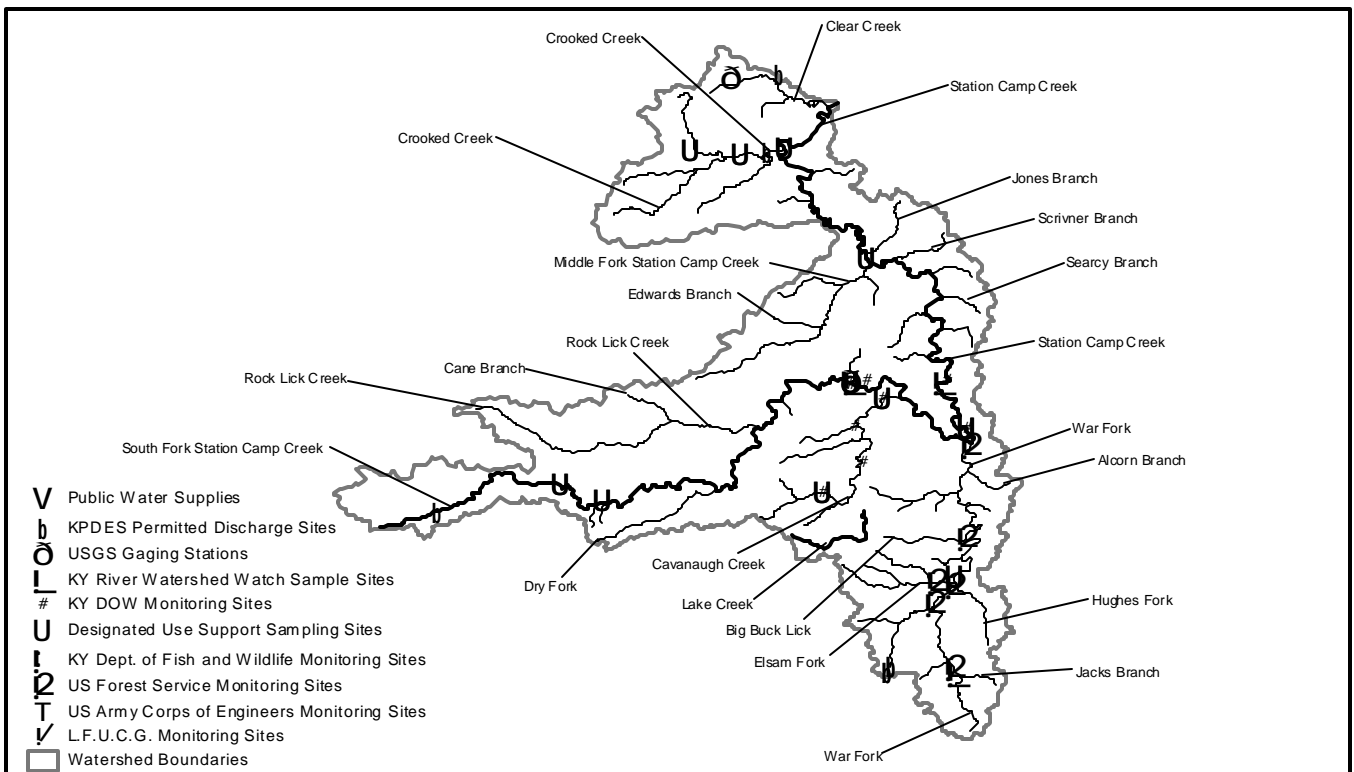
Station Camp Creek Watershed

Watershed Number: 05100204050

Location Map



Watershed Features



Geography. The Station Camp Creek watershed covers the northern section of Jackson County and part of southeastern Estill County. The higher, southern section of the watershed is in the escarpment area of the Eastern Coal Field physiographic region, characterized by hilly terrain, very rapid surface runoff, and moderate rates of groundwater drainage. The lower, northern section of the watershed is in the Knobs physiographic region, characterized by hilly terrain, very rapid surface runoff, and very slow groundwater drainage. In level parts of the Knobs, runoff and groundwater drainage are slow. 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. Some of the watershed lies over sandstone aquifers and some over easily weathered clay shales that store water but allow little groundwater flow. Other parts of the watershed lie above interbedded clay shales and siltstones.

Waterways. Station Camp Creek empties into the Kentucky River at Irvine. Among the creeks that feed it are Clear Creek, Hoys Fork, Crooked Creek, Hinton Branch, South Fork Station Camp Creek, War Creek, War Fork, and Cavanaugh Creek.

Land and water use. Land in the watershed is more than 80% rural and wooded and 15% agricultural. Six businesses and organizations hold permits for discharges into the creeks. See tables for details.

Agency data assessment. The assessed creek segments in this watershed include one that only partially supports its designated uses, based on biological and/or water-quality data. Siltation contributes to the impairment of the stream. 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. Phosphorus levels at War Fork were elevated enough to cause potential nutrient enrichment problems (> 0.1 mg/L). Another site at Station Camp Creek exhibited elevated copper levels. 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):	94,311	Acres	% of Total		
Residential Area:	862		0.9	Number of Mine Permits:	16
Commercial Area:	65		0.1	Total Permitted Mining Area (Acres):	68
Industrial Area:	0		0.0	Number of Identified Wetland Areas:	5
Agricultural Area:	14,166		15.0	Total Wetland Area (Acres):	11
Rural and Wooded Area:	78,579		83.4		
Other Land-use Area:	540		0.6		

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:	8
Number of Kentucky Dept. of Fish and Wildlife Sampling Sites:	0
Number of US Forest Service Sampling Sites:	6
Number of US Army Corps of Engineers Sampling Sites:	0
Number of Kentucky River Watershed Watch Sampling Sites:	3
Number of Lexington-Fayette Urban Co. Gov. Sampling Sites:	0

Watershed Name:

Station Camp Creek

11-Digit Watershed Identity Number:

05100204050

Watershed Indicators and Ranking Categories:

Overall Watershed Ranking:

Protection Ranking

Observed Impacts

Potential Impacts

Restoration Ranking

Medium

High

Low

Medium

Low

Protection Categories:

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Wetland Areas	11	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	3.46	Score	2 - 5	3.21
KY Dept. of Fish and Wildlife Management Areas	0	Acres	0 - 2951	93
U.S. Forest Service Management Areas	66,103	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	81.00	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	3.87	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	4	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	3	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	1.09	Score	1 - 3	1.31
Contamination Sites Impacting Ecological Health	3	Number of sites	0 - 71	4

Potential Impact Categories:

Indicator	Value	Units	Range of All Watersheds	Mean of All Watersheds
Potential Contamination Sites	16	Number of sites	1 - 121	12
Potential Pesticide Loading	3	Est. sales in tons	0 - 45	10
Potential Fertilizer Loading	516	Est. tons applied	0 - 2747	394
Agricultural Erosion Potential	1.44	Est. tons erosion / acre	0 - 9	3.20
Livestock Operations Potential Impact	8,742	Animal units	55 - 43826	7,021
KPDES Discharge Violations	0	Number of violations	0 - 541	39
KY Division of Water Citizen Complaints	6	Number of complaints	0 - 53	9
Toxic Release Inventory	0	Score	0 - 11547626	231,638
Population Change Projection	184	Number of persons	-149 - 11030	448
Population Not on Public Sewer Systems	2,081	Number of persons	12 - 4511	1,114
Mining Area	66	Acres	0 - 6305	355
Surface Water Runoff Potential	62.56	SCS Curve Number	60 - 79	68
KPDES Permitted Discharges	7	Number of sites	0 - 56	6

Watershed Name: Station Camp Creek

11-Digit Watershed Identity Number: 05100204050

Stream and Waterbody Use Support Summary

Total Stream Miles: <input type="text" value="172.63"/>	<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:	9	82.2	75.0	7.2	0.0	0.0
Designated Uses						
Aquatic Life:	9	82.2	75.0	7.2	0.0	0.0
Primary Contact:	1	11.3	11.3	0.0	0.0	0.0
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>
Cavanaugh Creek	0	8.8	8.8	AL	Fully Supporting
Crooked Creek	0	7.3	7.3	AL	Fully Supporting
Hoys Fork	0	3.8	3.8	AL	Fully Supporting
South Fork Station Camp Creek	9.6	26.3	16.7	AL	Fully Supporting
South Fork Station Camp Creek	0	9.6	9.6	AL	Fully Supporting
Station Camp Creek	11	22.3	11.3	AL, PC	Fully Supporting
Station Camp Creek	7.2	11	3.8	AL	Fully Supporting
Station Camp Creek	0	7.2	7.2	AL	Partially Supporting
War Fork	0	13.7	13.7	AL	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>
Station Camp Creek	0	7.2	7.2	Aquatic Life Support	Partially Supporting
<i>Possible Causes of Impairment:</i>			<i>Possible Sources For Impairment:</i>		
Siltation			Agriculture		

*Abbreviations: UT - Unnamed Tributary

Watershed Name: Station Camp Creek

11-Digit Watershed Identity Number: 05100204050

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>
EDDIES ENTERPRISES W IRVINE PL	OPER OF NONRESIDENTIAL BLDGS	KY0087556
JACKSON CO BD OF ED	ELEMENTARY & SECONDARY SCHOOLS	KY0101621
JACKSON CO HIGH SCHOOL	ELEMENTARY & SECONDARY SCHOOLS	KY0076309
JACKSON CO MIDDLE SCHOOL	ELEMENTARY & SECONDARY SCHOOLS	KY0093076
LAZY ACRES MHP	OPER OF RES MOBILE HOME SITES	KY0093408
M A WALKER CO INC	CRUSHED AND BROKEN LIMESTONE	KYG840186

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>
Clear Creek	USGS	USGS03282198	Flow
South Fork Station Camp Cre	USGS	USGS03282135	Flow
South Fork Station Camp Cre	USGS	USGS03282190	Flow

<i>KY Division of Water Sampling Sites</i>	
<i>Stream Name</i>	<i>Type of Sampling</i>
Station Camp Creek	Physical/Chemical Monitoring
South Fork Station Camp Creek	Physical/Chemical Monitoring
South Fork Station Camp Creek	Physical/Chemical Monitoring
Cavanaugh Creek	Physical/Chemical Monitoring

<i>US Forest Service Sampling Sites</i>		
<i>11-Digit HUC</i>	<i>HUC Name</i>	<i>US Forest Service Site ID</i>
05100204050	Station Camp Creek	0510020409006
05100204050	Station Camp Creek	0510020409001
05100204050	Station Camp Creek	0510020409002
05100204050	Station Camp Creek	0510020409003
05100204050	Station Camp Creek	0510020409004
05100204050	Station Camp Creek	0510020409005

<i>KY River Watershed Watch Sampling Sites</i>		
<i>Stream Name</i>	<i>KRWW Sample ID No.</i>	<i>Site Description</i>
Station Camp Creek	K45	Rt 1209 Bridge
Station Camp Creek	K44	Rt 89 Bridge
War Fork Creek	K87	Below bridge on Jack's Ridge (warfork Rd.)

Results from 1999 KY River Watershed Watch Sampling:

Conventional Parameters:

Sample ID Number: K44 Stream: Station Camp Creek

Physical Data (May):			
pH	7.7	Alkalinity	127
Temperature	15	Total Hardness	134
Dissolved Oxygen	9.2	Chlorides	6.6
		Conductivity	281
		Total Organic Carbon	1.5
		Total Suspended Solids	4

Fecal Data (July / August):		
Coliform Count	Strep Count	Coliform/Strep Ratio
July <10	320	<0.031
August		

Sample ID Number: K45 Stream: Station Camp Creek

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: K87 Stream: War Fork Creek

Physical Data (May):			
pH	6.8	Alkalinity	135
Temperature	19	Total Hardness	140
Dissolved Oxygen	9.1	Chlorides	8.1
		Conductivity	289
		Total Organic Carbon	4.7
		Total Suspended Solids	36

Fecal Data (July / August):		
Coliform Count	Strep Count	Coliform/Strep Ratio
July <10	900	<0.011
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: K44 Stream: Station Camp Creek

Ammonia		Orthophosphate as Phosphate	0.019	Sulfate	15.1
Ammonia Nitrogen		Orthophosphate as Phosphorus	0.006		
Total Kjeldahl Nitrogen as NH3		Total Recoverable Phosphorus	0.07		
Total Kjeldahl Nitrogen as N					
Nitrate	0.1				
Nitrate Nitrogen	0.02				

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

Sample ID Number: K45 Stream: Station Camp 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).

Watershed Name:

Station Camp Creek

11-Digit Watershed Identity Number:

05100204050

Sample ID Number: K87 Stream: War Fork Creek

Ammonia	<input type="text"/>	Orthophosphate as Phosphate	<input type="text"/>	Sulfate	<input type="text" value="8.9"/>
Ammonia Nitrogen	<input type="text"/>	Orthophosphate as Phosphorus	<input type="text"/>		
Total Kjeldahl Nitrogen as NH3	<input type="text" value="0.13"/>	Total Recoverable Phosphorus	<input type="text" value="0.15"/>		
Total Kjeldahl Nitrogen as N	<input type="text" value="0.11"/>				
Nitrate	<input type="text" value="0.2"/>				
Nitrate Nitrogen	<input type="text" value="0.04"/>				

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: K44 Stream: Station Camp Creek

Aluminum	<input type="text" value="0.98"/>	Calcium	<input type="text" value="45.05"/>	Lead	<input type="text"/>	Selenium	<input type="text"/>	Thallium	<input type="text"/>
Antimony	<input type="text"/>	Chromium	<input type="text" value="0.06"/>	Lithium	<input type="text"/>	Silicon	<input type="text" value="2.84"/>	Vanadium	<input type="text" value="0.06"/>
Barium	<input type="text" value="0.03"/>	Cobalt	<input type="text"/>	Magnesium	<input type="text" value="6.17"/>	Sodium	<input type="text" value="3.60"/>	Zinc	<input type="text" value="0.02"/>
Beryllium	<input type="text"/>	Copper	<input type="text" value="0.01"/>	Manganese	<input type="text" value="0.06"/>	Strontium	<input type="text" value="0.09"/>		
Boron	<input type="text" value="0.27"/>	Iron	<input type="text" value="0.68"/>	Potassium	<input type="text" value="1.83"/>	Sulfur	<input type="text" value="3.77"/>		

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

Sample ID Number: K45 Stream: Station Camp Creek

Aluminum	<input type="text"/>	Calcium	<input type="text"/>	Lead	<input type="text"/>	Selenium	<input type="text"/>	Thallium	<input type="text"/>
Antimony	<input type="text"/>	Chromium	<input type="text"/>	Lithium	<input type="text"/>	Silicon	<input type="text"/>	Vanadium	<input type="text"/>
Barium	<input type="text"/>	Cobalt	<input type="text"/>	Magnesium	<input type="text"/>	Sodium	<input type="text"/>	Zinc	<input type="text"/>
Beryllium	<input type="text"/>	Copper	<input type="text"/>	Manganese	<input type="text"/>	Strontium	<input type="text"/>		
Boron	<input type="text"/>	Iron	<input type="text"/>	Potassium	<input type="text"/>	Sulfur	<input type="text"/>		

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

Sample ID Number: K87 Stream: War Fork Creek

Aluminum	<input type="text" value="3.36"/>	Calcium	<input type="text" value="43.21"/>	Lead	<input type="text"/>	Selenium	<input type="text"/>	Thallium	<input type="text"/>
Antimony	<input type="text"/>	Chromium	<input type="text"/>	Lithium	<input type="text"/>	Silicon	<input type="text" value="4.12"/>	Vanadium	<input type="text"/>
Barium	<input type="text" value="0.08"/>	Cobalt	<input type="text"/>	Magnesium	<input type="text" value="6.63"/>	Sodium	<input type="text" value="3.85"/>	Zinc	<input type="text" value="0.007"/>
Beryllium	<input type="text" value="0.001"/>	Copper	<input type="text"/>	Manganese	<input type="text" value="0.10"/>	Strontium	<input type="text" value="0.12"/>		
Boron	<input type="text" value="0.10"/>	Iron	<input type="text" value="1.34"/>	Potassium	<input type="text" value="5.43"/>	Sulfur	<input type="text" value="1.99"/>		

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

Pesticide/Herbicide Parameters:

Sample ID No.	Stream	2,4-D	Chlorpyrifos	Triazines
K44	Station Camp Creek	<input type="text"/>	<input type="text"/>	<input type="text"/>
K45	Station Camp Creek	<input type="text"/>	<input type="text"/>	<input type="text"/>
K87	War Fork Creek	<input type="text"/>	<input type="text"/>	<input type="text"/>

Note: All indicators are in micrograms per liter which is equivalent to parts per billion (ppb).