

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"/> | <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: | 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 | | | | | |
|---|---------------------------|-------------------------|-------------------------------|--------------------------|---------------------------------|
| <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> |
| Grapevine Creek | 0 | 1.1 | 1.1 | AL | Not Supporting |
| <i>*Abbreviations: AL - Aquatic Life Support, PC - Primary Contact Recreation, SC - Secondary Contact Recreation, FC - Fish Consumption, DW - Drinking Water Supply, UT - Unnamed Tributary</i> | | | | | |

| 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> |
| Grapevine Creek | 0 | 1.1 | 1.1 | Aquatic Life Support | Not Supporting |
| <i>Possible Causes of Impairment:</i> Flow alteration, Other habitat alterations, Siltation, Turbidity | | | <i>Possible Sources For Impairment:</i> 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 | | |
| <i>*Abbreviations: UT - Unnamed Tributary</i> | | | | | |

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 |
| RONS 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 |