

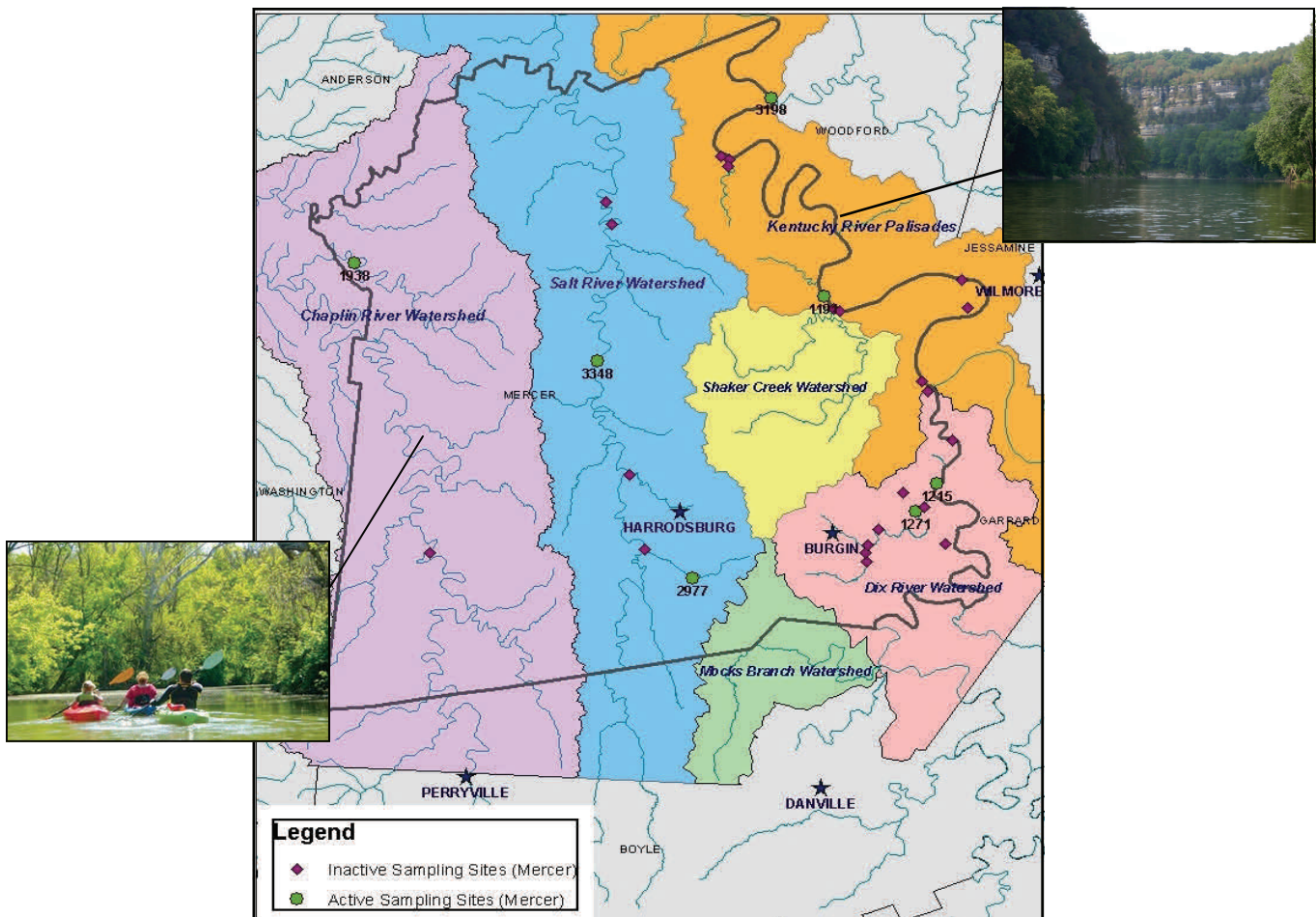


Watershed Watch in Mercer County

Prepared by Kentucky River Watershed Watch, September 2015

Volunteer Monitoring of Streams

Since 1999, Kentucky River Watershed Watch volunteers have been sampling Mercer County streams and rivers, in order to learn more about water quality in the area. There are currently 7 active sampling sites in Mercer County, 3 of which were sampled in the past year (2014/2015). These 7 active sites are located in the Kentucky River Basin on the Kentucky River, Herrington Lake, Cove Spring and Clear Creek, and in the Salt River Basin on Thompson Creek and the Salt River.



What is Watershed Watch?

Kentucky River Watershed Watch is part of a statewide organization, Watershed Watch in Kentucky. The goal of the organization is to coordinate a citizen monitoring effort to improve and protect water quality by raising community awareness and supporting the Clean Water Act goals of making our water fishable, swimmable and safe to drink. The organization hopes to encourage people to venture out into the Kentucky River Basin to see, first-hand, the condition of their local streams and rivers.

More information about Kentucky River Watershed Watch is available at www.krwww.org.

This report provides general water quality observations and is a working document, open for discussion and further interpretation. This is not a legal document.

Results of Mercer County Sampling Efforts

From 1999 to 2014, trained volunteer samplers tested water quality in Mercer County streams. These results have allowed assessments of pesticides, bacteria, nutrients, metals and aquatic chemistry in the water. *A few issues have been found with bacteria and nutrients in the streams.* Also, conductivity levels were higher than desired at a few sites, which can serve as a likely indication of these and other pollutants of concern.

Site Id	Stream	River Basin	Location	Water Quality Findings
1191	Kentucky River	Kentucky River	Cummins Ferry Road Marina	Good
1215	Herrington Lake	Kentucky River	Jewett dock at 897 Hardin Heights - south end.	Good
1271	Herrington Lake	Kentucky River	dock at 668 Mallard Cove	Good
2977	Cove Spring	Kentucky River	west side of US 127. just north of the boyle/mercer county line.	Fair - High conductivity, E. coli and Phosphorus readings
3198	Clear Creek	Kentucky River	at the mouth of Clear Creek, 1.65 miles downstream from Lock 6 at pool 5. 1.24 miles upstream from 1779 McCouns Ferry Road	Good
1938	Thompson Creek	Salt River	1/4 mile below Bethel Rd. xing. 1/2 mile east of Hwy 390 on the Mercer/Washington Co. line	Fair - High nitrogen
3348	Salt River	Salt River	Dock by samplers home at 950 Jackson Pike.	Fair - High conductivity, phosphorus

Bacteria or Pathogen levels are measured by testing for an indicator bacterium, E. coli. E. coli is commonly found in the intestines of humans and animals. The presence of this bacterium indicates fecal contamination and the potential for waterborne disease.

Sources may include failing septic systems, leaking sewer lines, livestock manure, and pet and wildlife wastes. High pathogen levels can cause excessive nutrients in the stream and human health issues.

The regulated limit of E. coli levels for safe swimming is 240 cfu/100ml.

Nitrogen and phosphorus are major nutrients used by plants. However, when they are overly abundant, they can lead to increased algae growth. As the algae dies off, crucial oxygen supplies are consumed, making it difficult for fish and other aquatic animals to survive. Possible sources of nitrogen and phosphorus in streams include sewage, feed lot runoff, animal wastes (manure), runoff from fertilized agricultural fields and lawns, and discharges from car exhausts.

The recommended nitrogen limit for healthy aquatic life is 3.0 mg/L. The recommended phosphorus limit for aquatic life is 0.3 mg/L.

Conductivity is a water quality measurement that helps assess the amount of dissolved material in water, as shown by it's ability to carry an electrical current.

High conductivity values can indicate problematic levels of a variety of pollutants from a variety of sources, including sewage, oil and gas wells and mining.

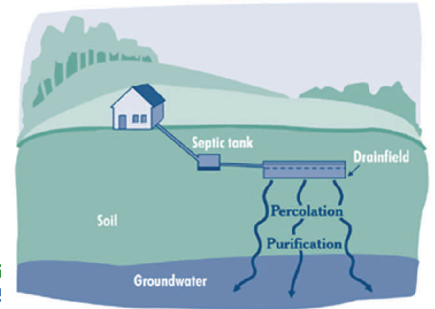
High conductivity levels can make it very difficult for aquatic plants and animals to survive, and can affect the suitability of water for industrial, agricultural and domestic uses.

Conductivity levels between 300 and 800 have been shown to have negative impacts, but there is no official water quality standard for the state of Kentucky.

GENERAL

Next Steps and/or Recommendations for Improving Water Quality:

- Focused Sampling Effort to sample water quality at additional sites in areas of high readings.
- Present results to local officials and community groups.
- Submit article or findings to local paper or radio station.
- Discuss any concerns with relevant local agencies, such as health department, sewer agency, or Natural Resources Conservation Service (NRCS).



PATHOGENS

Possible Actions to Reduce Pathogen Levels:

- Conduct outreach/education campaign about proper septic system care.
- Check for sewer system leaks and repair where possible.
- Reduce livestock access to waterways.
- Eliminate straight piping of sewage to waterways.
- Encourage residents to pick up pet waste.



NUTRIENTS

Possible Actions to Reduce Nitrogen and Phosphorus Levels:

- Reduce sewage and other animal waste contribution to waterways.
- Educate residents about responsible fertilizer usage, prevent over-application of fertilizers.



Contact Kentucky River Watershed Watch for more information.

www.krww.org

Phone: 800-928-0045

**KENTUCKY
RIVER
WATERSHED
WATCH**

Helpful Contacts in Mercer County:

Conservation District Office (agricultural assistance)

227 Morris Drive, Harrodsburg, KY 40330

Phone/E-mail: (859)734-6889 or Brandon.campbell@ky.usda.gov

Each county in Kentucky is represented by a local conservation district, consisting of seven elected supervisors. These conservation districts assist the landowners in each county with creating and implementing practices to protect the soil and water quality. The conservation districts help conserve Kentucky's resources by helping local people match their needs with technical and financial resources.

Mercer County Health Department (septic system assistance)

900 N. College Street, Harrodsburg, KY 40330

Phone/E-mail: (859)734-4522 or tonyd.white@ky.gov

Each county has a health department with a dedicated "Environmental" staff member to oversee septic system permitting and installation, as well as follow up on citizen complaints related to septic system issues. These individuals are also knowledgeable about septic system function and maintenance and can help ensure that a system is working properly.

Mercer County Sanitation District (sewage issues)

Phone/E-mail: (859)748-9654 or mike@lakevillagewater.org

Website: <http://mercercounty.ky.gov/boards-commissions/Pages/Sanitation-District.aspx>

The Mercer County Sanitation District was created by the Mercer County Fiscal Court in 2005 to provide reliable wastewater service to Mercer County residents located outside of the City of Harrodsburg Planning Area. Many areas throughout the county have problems with on-site disposal failures caused by shallow depths of rock, poorly draining soils, and small lot sizes. Improper disposal of wastewater can have adverse effects on public health and contaminates the groundwater and surface waters of Mercer County. The District was tasked with identifying areas most in need of wastewater service and evaluating the feasible options to provide reliable wastewater service at the lowest possible cost to the residents of the affected areas.

Kentucky Division of Water

Website: www.water.ky.gov

For environmental emergencies such as spills of gas, oil or other substances, contact the **Environmental Response Team** at 502-564-2380 or 1-800-928-2380. You may also contact the **Division of Water** (DOW) at 502-564-3410, or the **Frankfort Regional Office** at 502-564-3358, and inform the operator that you wish to report a concern or complaint. Please be prepared to explain the nature of the problem and give the location of the problem, including directions to the site. You do not have to give your name; however, if you wish DOW to either contact you during the investigation or provide you with the results of the investigation, you must leave your name and contact information.

The Division of Water's Water Health Portal (watermaps.ky.gov/WaterHealthPortal) is a helpful online resource for learning more about the water quality status of local waterways and learning more about what is being done to protect Kentucky's waters.