

Results of Franklin County Sampling Efforts

Sampling results from the past 10 years of water quality testing in Franklin County streams are summarized below. These results have allowed analyses of pesticides, bacteria, nutrients, metals and aquatic chemistry in the water. *Some 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.

Summary of Franklin County KRWV Sampling Results for Nutrients & Pathogens					
<i>Sample size in parentheses next to result.</i>					
Site ID#	Stream Name	Nitrogen (Avg mg/L)	Phosphorus (Avg mg/L)	E coli (Geometric mean of cfu/100 ml)	Conductivity (Average uS/cm)
Water Quality Benchmarks:		3.0 for Aquatic Life Protection	0.3 for Aquatic Life Protection	240 for Safe Swimming	500 for Aquatic Life Protection
Benson Creek Watershed					
789	Benson Creek	0.19 (4)	0.1 (4)	407 (10)	367 (4)
790	North Fork North Benson Creek	0.13 (4)	0.1 (4)	77 (10)	387 (4)
791	South Benson Creek	0.26 (4)	0.15 (4)	269 (9)	416 (4)
964	Little Benson Creek	0.78 (1)	0.25 (1)	54 (3)	541 (1)
1200	Benson Creek	0.3 (1)	0.15 (1)	128 (1)	381 (1)
3234	Benson Creek	N/A	N/A	7390 (2)	N/A
Elkhorn Creek Watershed					
818	Elkhorn Creek	N/A	N/A	143 (3)	N/A
999	Elkhorn Creek	1.83 (1)	0.45 (1)	134 (3)	448 (1)
1000	Elkhorn Creek	1.25 (1)	0.34 (1)	98 (2)	468 (1)
1014	Elkhorn Creek	5.93 (1)	0.83 (1)	75 (2)	869 (1)
1017	Elkhorn Creek	3.12 (1)	0.51 (1)	>2,420 (1)	452 (1)
1018	Penitentiary Branch	2.5 (6)	0.3 (6)	601 (17)	633 (6)
1167	Cedar Creek	0.76 (1)	0.18 (1)	45 (3)	848 (1)
1196	Elkhorn Creek	6.81 (4)	0.98 (4)	547 (7)	730 (4)
1312	Sulphur Lick Creek	0.16 (1)	0.08 (1)	302 (4)	932 (1)
1313	Unnamed Tributary	0.63 (1)	0.38 (1)	1131 (4)	588 (1)
3180	Spring	1.93 (1)	0.23 (1)	113 (3)	715 (1)
3282	Elkhorn Creek	3.93 (1)	0.59 (1)	82 (1)	467 (1)
Kentucky River Palisades					
1229	Spring	N/A	N/A	886 (2)	N/A
2962	Cold Harbor Creek	N/A	N/A	1338 (3)	N/A
2963	Cold Harbor Creek	N/A	N/A	2685 (4)	N/A

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.

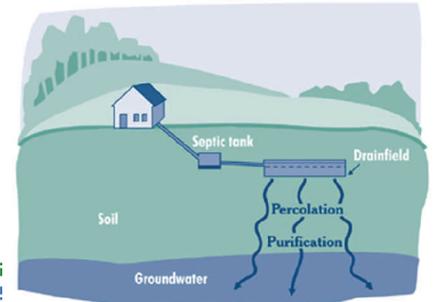
Nitrogen and phosphorus are major nutrients used by plants. However, when they are overly abundant, they can lead to increased algae growth. As the algae dies off, crucial oxygen supplies are consumed, making it difficult for fish and other aquatic animals to survive. Possible sources of nitrogen and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

Conductivity is a water quality measurement that helps assess the amount of dissolved material in water, as shown by its 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. **Once conductivity levels reach between 300 and 800 or greater, they 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).



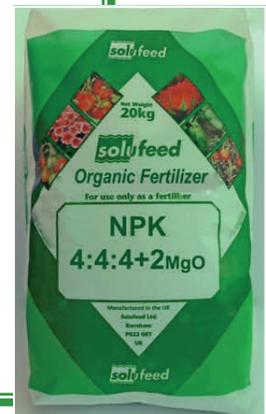
Possible Actions to Reduce Bacteria or Pathogen Levels:

- 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.



Possible Actions to Reduce Nutrient (Nitrogen and Phosphorus) Levels:

- Reduce sewage and other animal waste contributions to waterways.
- Educate residents about responsible fertilizer usage, prevent over-application of fertilizers.
- Encourage local farmers to take advantage of federal cost-share opportunities for installing nutrient reduction practices.



Contact Kentucky River Watershed Watch for more information.

www.krww.org

Phone: 800-928-0045

**KENTUCKY
RIVER
WATERSHED
WATCH**

Helpful Contacts in Franklin County:

Conservation District Office (agricultural assistance)

103 Lakeview Court, Frankfort, KY 40601

Phone/E-mail: (502)695-5203 or Jamie Ponder at Jamie.ponder@ky.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.

Franklin County Health Department (septic system assistance)

100 Glenss Creek Road, Frankfort, KY 40601

Phone/E-mail: 502) 564-7382 x 245 or Jennifer Bardroff at JenniferK.Bardroff@ky.gov

Each county has a health department with a dedicated "Environmentalist" 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.

Frankfort Plant Board (drinking water provider)

317 West Second Street, Frankfort, KY 40601

Phone/E-mail/Website: (502)352-4372 or <http://fpb.cc>

The Frankfort Plant Board provides drinking water to residents of Franklin County and monitors the quality of its drinking water source, Pool 4 of the Kentucky River, as well as the quality of its treated drinking water.

City of Frankfort Sewer Department (municipal sewage collection and treatment)

Phone/Website: (502)875-2448 or <http://frankfort.ky.gov/Departments/Sewer/sewer.html>

Frankfort Public Works Stormwater Program (stormwater runoff, flooding issues)

315 West Second Street, Frankfort KY 40601

Phone/E-mail: 502-875-8500 or Thomas Bradley at tbradley@frankfort.ky.gov .

The City of Frankfort is required to implement programs and practices to control polluted storm water runoff from entering the City's waterways. The City of Frankfort has a permit from the Kentucky Division of Water which requires six minimum controls for stormwater:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management, and Pollution Prevention
6. Good Housekeeping for Municipal Operations

Frankfort protects the surrounding waterways used for drinking and recreation. These six measures help keep pollutants such as pesticides, fertilizers, oils, sewage, salts, and other contaminants out of the water. To report an Illicit Discharge into the stormwater system or waterways, please call 502-875-8500.

Kentucky Division of Water

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.