

## **2024 Kentucky River Water Watch Report**

Prepared by: Steven Evans and Andrea Drayer  
UK Kentucky Water Research Institute

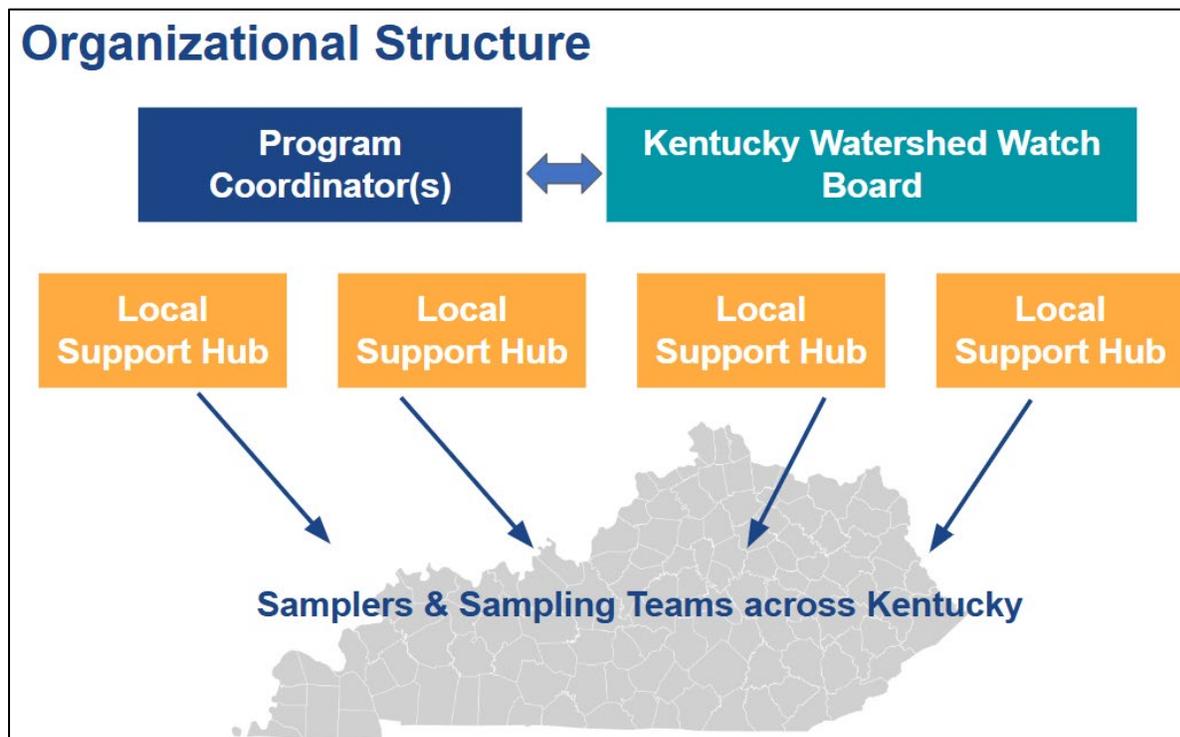
## Kentucky Watershed Watch Statewide Structure

Kentucky Watershed Watch is currently led by a **statewide board** and a coordinator. The Kentucky Division of Water supports the **Volunteer Coordinator**.

The Watershed Watch Board members meet regularly to provide guidance and assist with organizational activities as needed. If you are interested in serving on the board or one of its working committees, you are encouraged to contact a Coordinator or the Board Chair (see email addresses below).

In 2024, KYWW began creating **Support Hubs** across Kentucky to help provide more localized support for **Sampling Teams**. These Hubs will assist the organization by hosting and loaning out water sampling equipment and supplies and providing meeting space. In some cases, Hub representatives will also be able to provide guidance for sampling locations, feedback on sampling results, and assistance with community water projects.

And, most importantly, KYWW **Samplers** are the people who collect the monitoring data from streams, enter their results, and discuss findings with their Sampling Teams. Where there is interest, they are also encouraged to pursue targeted sampling and water quality improvement initiatives.



**Figure 1.** Kentucky Watershed Watch Organizational Structure.



## Kentucky Watershed Watch Statewide Board

**Table 1.** Kentucky Watershed Watch Statewide Board Members, their roles, committee representation, and river basin.

Term	Name	email	Committee	Officer Role	Basin
2024-2025	Pamla Wood	<a href="mailto:pamlaw@iglou.com">pamlaw@iglou.com</a>	Financial	Treasurer	Kentucky
2024-2025	Barry Tinning	<a href="mailto:btinning@bellsouth.net">btinning@bellsouth.net</a>	Financial		Licking
2024-2025	Becca Trueman	<a href="mailto:beccatruemanky@gmail.com">beccatruemanky@gmail.com</a>	Sampler Support		Salt
2024-2025	Tricia Coakley	<a href="mailto:tricia.coakley@kywater.org">tricia.coakley@kywater.org</a>	All, ad hoc	Chair	Kentucky
2024-2025	Kelly Johnson	<a href="mailto:kelly.johnson@kctcs.edu">kelly.johnson@kctcs.edu</a>	Organizational Operations		Upper Cumberland
2024-2027	Steve Evans	<a href="mailto:steve.evans@uky.edu">steve.evans@uky.edu</a>	Science Advisory		Kentucky
2024-2027	Laura Gregory	<a href="mailto:laura@kwalliance.org">laura@kwalliance.org</a>	Sampler Support	Secretary	All
2024-2027	JoAnn Palmer	<a href="mailto:joann.palmer@ky.gov">joann.palmer@ky.gov</a>	Sampler Support	State Volunteer Coordinator	All
2025-2026	Malissa McAlister	<a href="mailto:malissa.mcalister@kywater.org">malissa.mcalister@kywater.org</a>	All, ad hoc		Kentucky
2025-2026	Jack Glisson	<a href="mailto:jackglisson@wk.net">jackglisson@wk.net</a>	Science, Sampler Support		Four Rivers
2025-2026	Annie Holt	<a href="mailto:annie@hiddenrivercave.com">annie@hiddenrivercave.com</a>	Sampler Support, Science		Green
2025-2026	Madison Mooney	<a href="mailto:mmooney@likenknowledge.org">mmooney@likenknowledge.org</a>	Fundraising, Organizational Operations		Big Sandy
2025-2026	Susan Brown	<a href="mailto:susanbrown@bccdky.org">susanbrown@bccdky.org</a>	Fundraising, Science, Outreach		Licking
2025-2026	Chloe Brantley	<a href="mailto:c.brantley@krwa.org">c.brantley@krwa.org</a>	Fundraising, Science		All
2025-2026	Beverly James	<a href="mailto:bjames@floracliff.org">bjames@floracliff.org</a>	Organizational Operations, Fundraising, Outreach		Kentucky
Emeritus	Mary Miller	<a href="mailto:jomar9983@windstream.net">jomar9983@windstream.net</a>	Outreach, Sampler Support		Kentucky
Emeritus	Hank Graddy	<a href="mailto:hank.graddy@gmail.com">hank.graddy@gmail.com</a>	Outreach		Kentucky



## Kentucky River Basin Board

Kentucky River Watershed Watch (KRWW) is directed by a Board (Table 2), which meets throughout the year via face-to-face meetings or video call. The committee is open to any volunteer who expresses an interest in participating. In 2024, the following KRWW volunteers participated on the Board. Their contributions are gratefully acknowledged.

**Table 2.** 2024 Kentucky River Watershed Watch Board

Member Name	Email	Role
Alice Jones	rosebarnalice@gmail.com	Chair and Representative to WWKY
Steve Evans	Steve.evans@uky.edu	Vice-Chair and Science Advisory Committee Co-Chair
JoAnn Palmer	Joann.Palmer@ky.gov	Secretary/Volunteer Coordinator
Mary Miller	Jomar9983@windstream.net	Member
Malissa McAlister	malissa.mcalister@kywater.org	Data Manager, WWKY Chair
Hank Graddy	Hank.graddy@gmail.com	Alternative WWKY Representative
Pamla Wood	pamlaw@iglou.com	Co-Chair of WWKY Finance Committee, WWKY Treasurer
Jerry Weisenfluh	jerryweisenfluh@gmail.com	Science Advisory Committee Co-Chair
Doug Curl	doug@uky.edu	Member, Science Advisory Comm. member
John Delfino	jdelfino@midway.edu	Member
Adam Garner	Adam.garner15@gmail.com	Member
Ian Ries	ian.ries@kysu.edu	Member
Brett Werner	brett.werner@centre.edu	Member
Maggie Schommer	maggie.schommer06@gmail.com	Member
Andrea Drayer	Andrea.drayer@uky.edu	Member, Science Advisory Committee
Mary Rossano	Mary.rossano@uky.edu	Member
Don Dampier	djpadampier@gmail.com	Emeritus Board Member

More information about the KRWW Board is available at [www.krww.org](http://www.krww.org) on the About/Contacts page. Elections are held each year during the Annual Conference, typically in February.

## New Procedures and Preparing for 2025 Sampling

Over the past year, Kentucky Watershed Watch has been in an exciting transition! To view a summary of the new elements of the program, please read the [Fall 2023 newsletter](#). Key features of the new Kentucky Watershed Watch program rolled out this past year are the development of new outreach and training materials including [online training modules](#), new and improved [data sheets](#), a new data portal (complete with a personal dashboard, sampling site and HUB interactive maps, and online data entry forms), establishment of 10 Support HUB’s in the KY River Basin (in Boyle, Fayette (2), Franklin, Henry, Jessamine, Letcher, Madison, Mercer, and Scott counties), and an [interpretive map of pre-2024 sampling data](#).



## **Steps to prepare for 2025 sampling:**

**1) Complete online training** - Five training modules with videos and quizzes are posted on the KWW website at <https://www.kywater.org/get-involved/stream-monitoring/sampler-training-modules>. These modules need to be completed before attending in-person training.

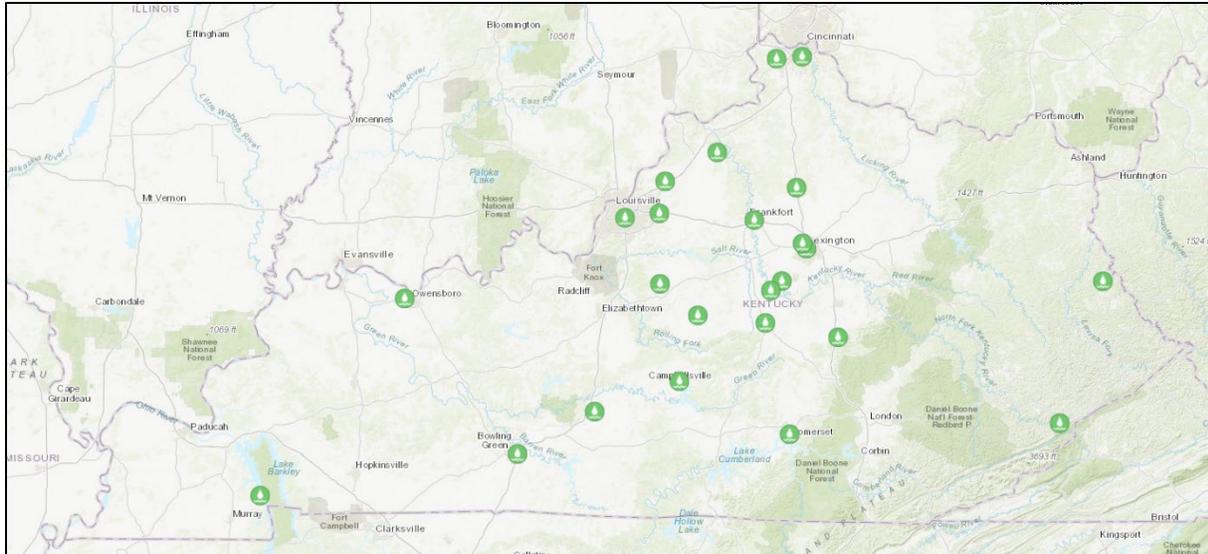
\*If you have already attended an in-person training session in 2024, you will still need to complete the online modules 1 through 5 to be considered fully trained for 2025 sampling.

\*If you are a past sampler, trained before 2024, and did not complete the new training modules and attend an in-person training in 2024, you will need to do all 5 training modules and attend an in-person training before sampling in 2025. The procedures have changed slightly, and we would like everyone to be on the same page going into 2025!

**2) Complete in-person training** - These training sessions review content from the online modules and enable practice of the sampling methods at a stream location. Check out training dates and locations on the KY Watershed Watch events page at: <https://www.kywater.org/about-us/event-calendar> and register for in-person training [here](#).

**3) Follow steps to create data portal account** - Module 5 on Data Portal Use (available here: <https://www.kywater.org/get-involved/stream-monitoring/sampler-training-modules>) outlines the steps to gain entry to the data portal, which is needed to enter and view sampling results.

**4) Determine availability of nearby Support Hub for accessing sampling supplies OR prepare to use your own sampling kits.** - Support Hubs will be used as regional locations for loaning and distributing sampling supplies, assisting with R-card incubation for E. coli analysis, and other important sampling functions. Hubs are continuing to be established across the state, so if there is not one conveniently located near you, you should notify KWW ([contact@kww.org](mailto:contact@kww.org)) and suggest a potential location. Current Hubs are listed on the KWW website at <https://www.kywater.org/get-involved/support-hubs> (Figure 2).



**Figure 2.** Support HUB locations across the state as of 2-17-24. To view current support HUB locations, please visit <https://www.kywater.org/get-involved/support-hubs>.

**5) Consider and explore team sampling opportunities with others in your area.** - KWW is encouraging team-oriented sampling (2 or more people) to foster collaboration and potential action toward protecting or improving waterways. The Data Portal includes a map and contact info for other samplers so that you can reach out to others in your area.

**6) Plan to sample during the months of May, July, and September.** - KWW will continue to encourage sampling three times each year. Volunteers can monitor their sites and submit the data at any time during the months of May, July, and September. If supplies are available, volunteer samplers are also welcome to sample and submit data at any other time throughout the year. More data can be informative in better understanding water quality!

## Annual Conference

The 2023 Kentucky River Watershed Watch Annual Conference was held on March 9, 2024. The agenda for the conference included:

- Welcome and Updates about Kentucky River Basin Activities
- Watershed Watch Changes for 2024
- R-Card Training for *E. coli* Analysis and Practice Session
- Roundtable Discussion Groups by shared area
- Volunteer Recognition and 2024 Board Election

\*The annual data report is available on the Kentucky River Basin page of the KRWW Website at <https://www.kywater.org/about-us/river-basin-info/kentucky-river-basin>.

**20+ Years of Sampling!**

Ken Cooke  
Pamla Wood  
Bea Stringer  
John Delfino  
Henry Duncan  
Hank Graddy  
Mary Beth Robson  
Jack Stickney  
Alice Jones  
Tricia Coakley  
Malissa McAlister  
Preston Miles

**2+ Years of Sampling!**

Steve Evans  
Jerry Davis  
Jerry Weisenfluh  
Deb Bramlage  
Laura Gregory  
Mark Ryan  
Alice Mandt  
Rachel Patton  
Phyllis Hasbrouck  
Maggie Schommer  
Brett Werner  
Mary Miller  
Mary Rossano  
Jane Vanhook

And, the award for the  
*David Gabbard Volunteer of the Year* goes to...

*Pamla Wood, Mercer County*



- *Sampler since 1999!!!*
- *5 sites Estill and Mercer Counties*
- *KY Watershed Watch Board - 2014*
- *KY Watershed Watch Treasurer - 2022*

We applaud the efforts of all the KY River Basin dedicated samplers over the years, especially our David Gabbard Volunteer of the Year for 2024 – Pamla Wood!



## Training

In 2024, KRWW created five new training modules and paired them with in-person training.

Five New Introductory Training Modules:

Module 1: Overview of KYWW

Module 2: Completion of the New Data Form

Module 3: Water Chemistry Analysis

Module 4: Using the R-Card Procedure for Bacteriological (E. coli) Assessment

Module 5: Using the New Database through KRWW’s website.

Overall, in the Kentucky River Basin in 2024, 64 samplers completed in-person training, and of those, 37 samplers also completed the online training modules and are considered fully trained.

\*If you were one of the 27 samplers that completed an in-person training, but did not complete your online training please complete your online training by accessing them on the Stream Monitoring tab under the [introductory online training](#) link so you can be considered fully trained.

## Volunteer Monitoring

Because of the transition to new sampling methods, requiring updated training, the number of samplers across the state decreased compared to previous years. In addition, the new data portal was not in operation during 2024, so samplers submitted their results through a data collection link. Kentucky Watershed Watch has entered all the data from across the state in 2024 into a spreadsheet, however, the data is not in a form in which we can make deductions based on basin. Below are the statewide sampling statistics.

Table 3. Kentucky Water Watch Statewide Sampling Efforts by Month for 2024.

Month	# Sites Sampled	# of Adult Samplers	# Youth Samplers	Volunteer Time (h)
May	26	37	5	37.70
July	37	56	5	56.58
Sept	30	49	0	45.47

## 2023 Sites of Concern & Data-To-Action

In 2024, the Science Committee for Kentucky Watershed Watch presented the statewide 2023 Sites of Concern to the KY Division of Water (KY DOW). The KY River Basin had ten sites presented including: for *E. coli* issues, Town Creek, Jessamine Co., McKecknie Creek, Garrard Co., Balls Branch, Boyle Co., Shannon Run, Woodford Co., and St. Asaph’s Creek, Lincoln, Co.; for high conductivity, Elk Lick Creek, Fayette Co., Horse Branch, Kenton Co., and Moser’s Branch, Kenton Co.; and for dissolved oxygen, Cardinal Run, Fayette Co.. This dialogue with KY Division of Water highlights a piece of the new Data-to-Action process (Figure 3) for KY Watershed Watch. This new process empowers the sampler and team members to take action in their local communities and, if necessary, present their sampling site issues to the KY Division of Water for consideration.

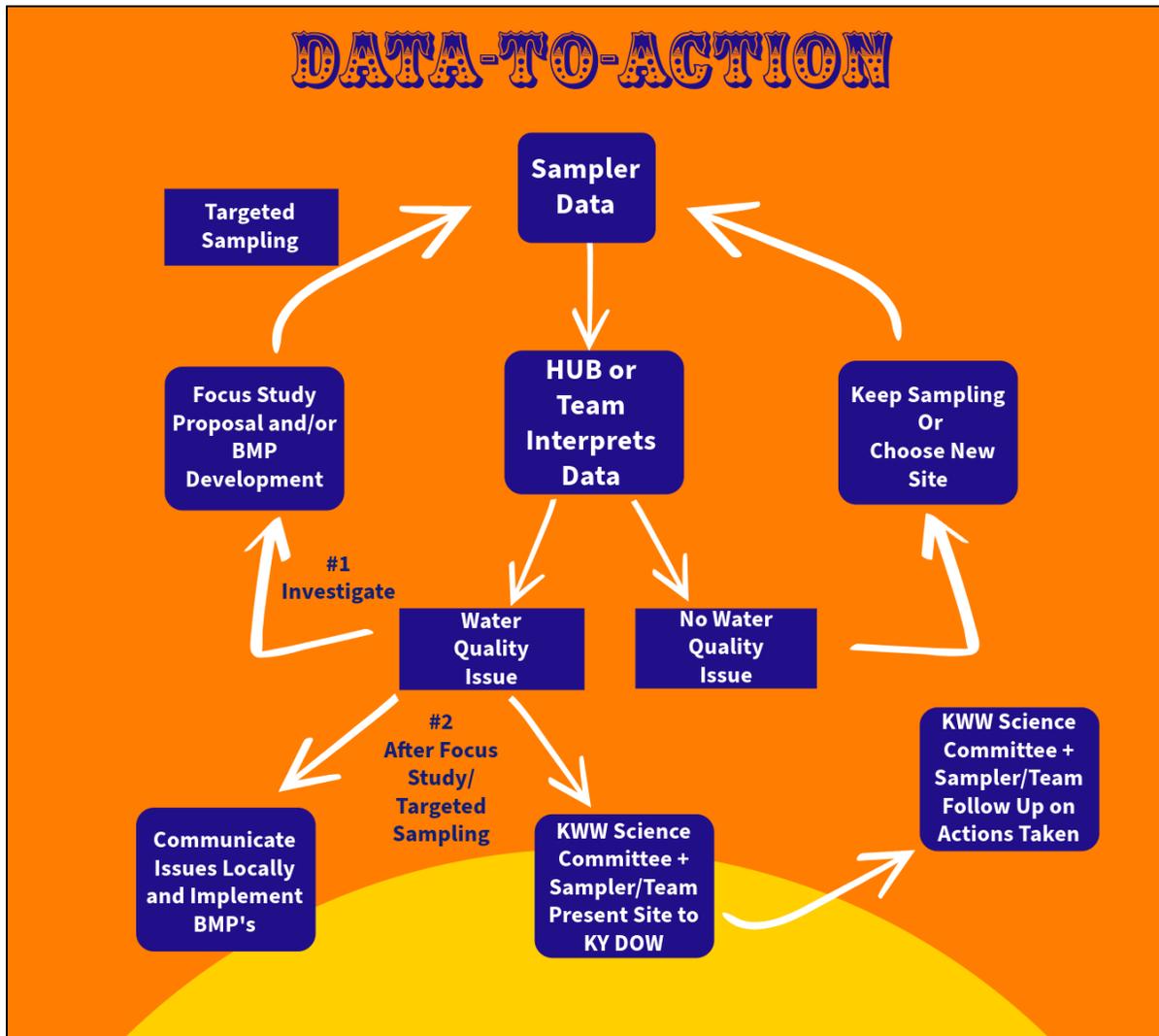


Figure 3. A flow chart depicting Kentucky Watershed Watch’s new Data-to-Action process.



## **Steps to the Data-to-Action Process:**

**1) Sampler Data** – Sampler or sampling team collects water quality data.

**2) HUB or Team Interprets Data** – The HUB or Team uses new data interpretation tools on KY Watershed Watch website (in progress), aerial photos, and local knowledge to interpret sampling data.

**3) Water Quality Issue/No Water Quality Issue** – The HUB or Team determines if the site has water quality issues.

3a) If the site does not have water quality issues, the sampler can **Keep Sampling** that site or **Choose a New Site** with guidance from the HUB, sampling team, or the KWW Science Committee.

3b) If the site has water quality issues and they have remained consistent over time (at least a whole year or over multiple years), your first course of action is to investigate the issue with your local HUB and sampling team.

**4) Focus Study Proposal and/or Best Management Practice Development** – The Hub or sampling team develops a proposal for a focus study based on the investigation of the site; Or the HUB or sampling team develops plan for BEST Management Practices (BMP's) to be implemented in the sampling site watershed. BMP's are a set of strategies that help reduce pollution and flooding by managing stormwater runoff. The KWW Science Committee and partner organizations can assist with this step.

4a) Target sampling sites to pinpoint where the issue is occurring and outline this in the Focus Study proposal.

4b) Develop a plan of BMP strategies to address the issue and prioritize implementation of these strategies.

**5) After Focus Study with Targeted Sampling or BMP Prioritization** – Reassess the site and impacts with new sampling data and identify potential pollution sources.

5a) Reach out to stakeholders locally to address the identified issue. Implement the prioritized BMP's as time and funding allows.

5b) If the pollution issue is complex and needs addressed by KY Division of Water (KY DOW), KWW Science Committee and Sampler/Team present the site to the KY DOW at the annual KWW-KDOW Sites of Concern meeting.

**6) KWW Science Committee and Sampler/Team follow-up on Actions Taken.** The KWW Science Committee and Sampler/Team follow-up with KDOW, this may be through email or an official meeting, depending on the situation.

**Data-to-Action Example:**

Alice Jones presented her Data-to-Action example at last year’s conference. Alice, through Watershed Watch sampling, identified an *E.coli* issue at sampling site 939 County on Tate’s Creek in Madison County. Alice met with and developed a plan with her city sewer and water utilities to address the issue. She then planned targeted KRWW sampling upstream of site 939 to figure out where the pollution was entering the stream. In addition to Alice’s KRWW targeted sampling, the utilities used remote camera tracing and their own testing to find suspected breaks in the sewer/water lines. The utilities identified several issues and replaced 60 ft of 6” sewer lines and two lateral lines in the Rosedale neighborhood (Figure 4). This collaboration was a success for pollution at site 939. Reducing the average *E.coli* colonies from 15,531 to 76 at that site! While some of the issues were addressed upstream, site 4030, still appears to have some *E. coli* issues that need to be worked out (Figure 5). Fortunately, Alice now has a working relationship with the utilities and can help address the continuing issue. This is an excellent example of how the new Data-to-Action approach with KRWW can make a real, impactful change in local watershed health!

**June 9: Discussed preliminary results**

- crew dispatched to confirm
  - Similar *E.coli* + fluoride

**July 6: RU crew findings**

- Leaking water main
- Leaking sewer main
- Plans remote camera trace

**July 10/11: KRWW Focus Sampling**

**October-December:**

- RU crew camera traces

**Feb 8:**

- RU crew reports *E.coli* at Million Park entrance
- Suspect “illegal” sewer connection

**Feb 27:**

- Rehab crew replace 60 ft 6” sewer line + 2 lateral lines in Rosedale neighborhood
- *E.coli* test planned shortly

**Tates Creek, Madison Co., KY River Basin  
2 sites (939, 4030)**

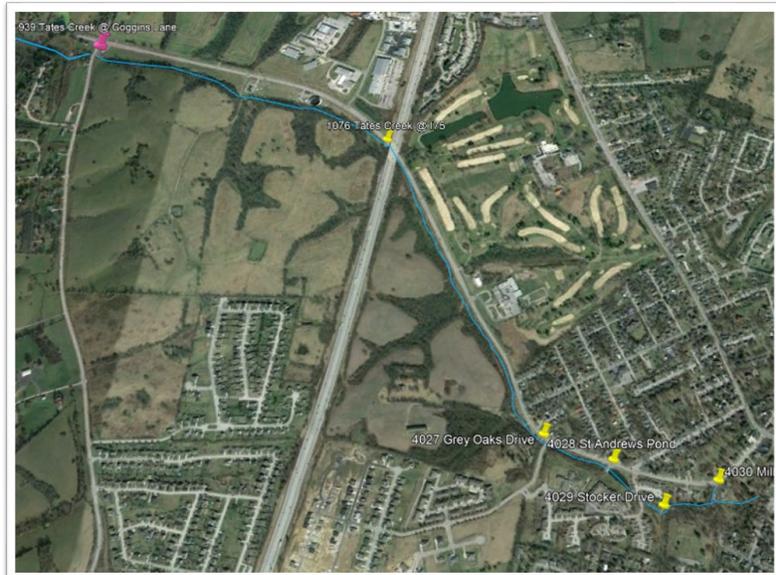
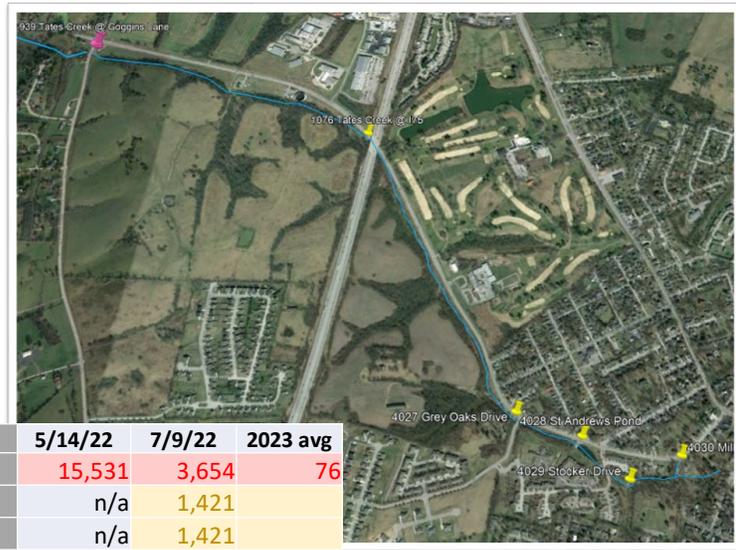


Figure 4. A summary slide of Alice Jone’s Data-to-Action targeted sampling depicting her sampling sites and the timeline of events.

**2023 E. coli avg**  
 939 - 76 MPN  
 4030 – 13,976

**5-year E. coli avg**  
 939 – 3,498  
 4030 – 13, 731



Site No	Site Description	5/14/22	7/9/22	2023 avg
939	Tates Creek @ Goggins Lane	15,531	3,654	76
1076	Tates Creek @ I75	n/a	1,421	
1076	Tates Creek@ I75	n/a	1,421	
4027	Tates Creek @ Grey Oaks Dr	n/a	546	
4028	Tates Creek @ St Andrews Pond	n/a	161	
4029	Tates Creek @Stocker Dr	n/a	249	
4030	Tates Creek @ Million Park Entrance	n/a	> 24,196	13,731

Figure 5. A summary slide of Alice Jone’s Data-to-Action targeted sampling depicting her sampling sites and *E. coli* colony level change over time after sewer line improvements.

## Education and Outreach Activities

KRWW board members and sampling volunteers provide information about the organization and water quality education at various festivals and educational events throughout the year. If you would like to be part of the outreach efforts, please contact the KRWW board and let them know!

### **Education and Outreach Events during 2024 included:**

- Reforest the Bluegrass at West 6<sup>th</sup> Farm
- Earth Day Festival - CREEC
- Red Riverfest
- Water Week – Kids in the Creek
- Kentucky Geological Society Science Night
- Big Bone Lick State Park Salt Festival





## Coming Soon!

The Kentucky Geological Society and Kentucky Water Research Institute along with Kentucky Watershed Watch's Science Committee are developing interactive data interpretation tools. These tools will help you see the data you collect in a new way! These tools will be hosted in the data portal when completed and training modules will be developed to help guide you through the process of using the new interpretive tools.