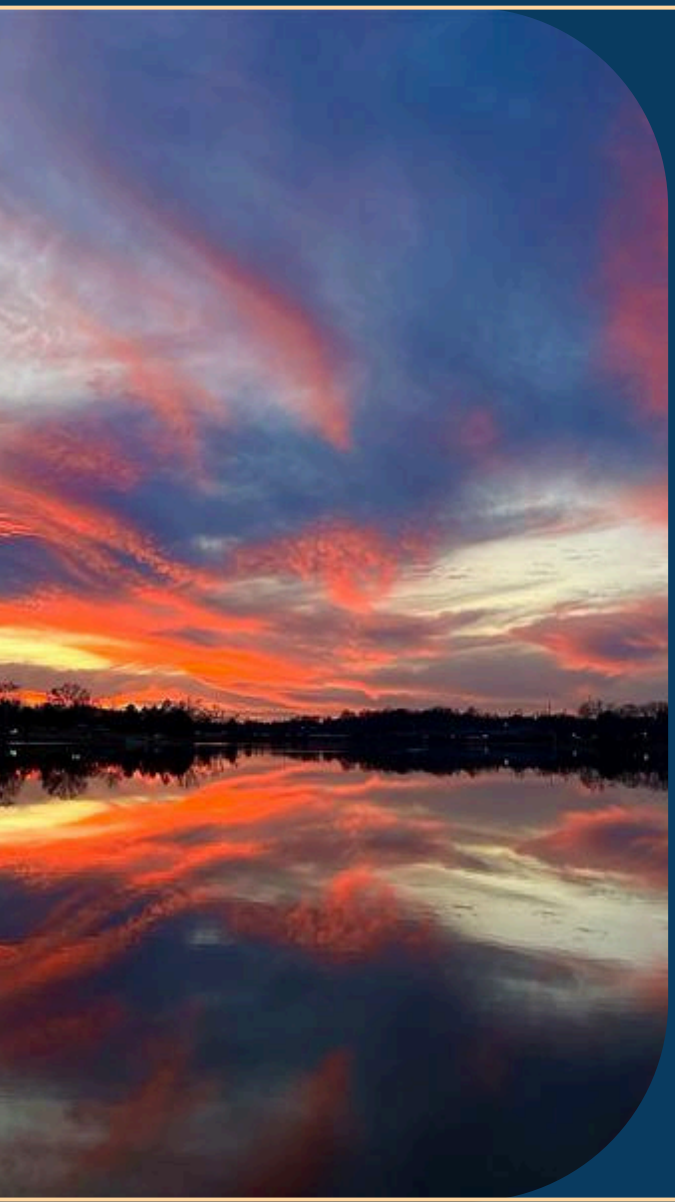
Runoff Report

TEAM KENTUCKY®
ENERGY AND ENVIRONMENT CABINET

SPRING ISSUE | APRIL 2025



SOURCE Team Brings Community and Partners Together for Watersheds!

By: Andrea Drayer, Kentucky River Basin Coordinator

The Sustaining Our United Regenerative Community Efforts (SOURCE) Team facilitated by Cowan Community Center in Whitesburg, KY is up and running at full speed! If you know Valerie Horn, the Director of the Center, you know she is a force for her community. Over this past year, Cowan Community Center has taken on a 319h grant and is a key partner for an OSG grant for the City of Whitesburg. Through these grants, Cowan hopes to reconnect their community to local waterways through green infrastructure, art, and water education. In addition, these grants assisted the Cowan Community Center in hiring a local watershed coordinator, James Stapleton, who comes to the team at Cowan with native plant and stream restoration experience! What an asset for water resources!

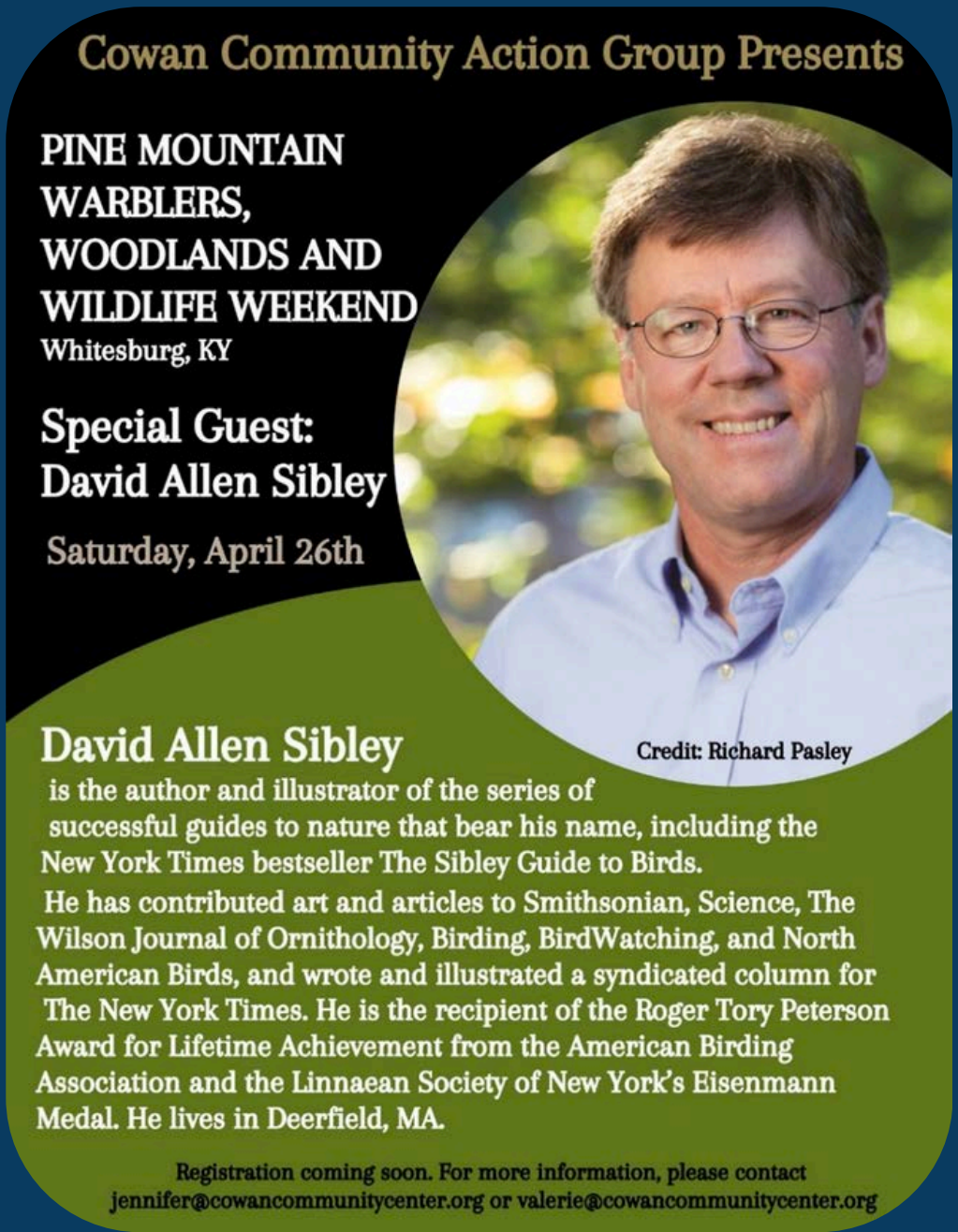
The first SOURCE Team meeting was held on February 6th and 7th and brought together a diverse group of partners including Appalachian Citizen's Law Center, University of Louisville, US Department of Agriculture - Rural Development, the KY Division of Water, KY Association of Environmental Educators, Jennifer Honeycutt – SOURCE Contributor, Cowan Elementary School, Headwaters Inc., and the UK KY Water Research Institute. The first evening, partners were treated to traditional Appalachian music by the Branchwater Belles and by Genie, a visiting Korean artist, as well as dinner by Community Agriculture and Nutritional Enterprises, Inc. (CANE) Kitchen and delicious Korean food tasting! The second day of the meeting focused on upcoming projects including the Flooding in Appalachian Streams and Headwaters (FLASH) Initiative headed by the University of Louisville, Designing the Learning Landscapes Playground for Cowan Community Center, Headwaters water quality testing initiative in Jenkins, KY, and a meeting of the Cowan Creek Interns! (continued)

A painting by local Letcher County artist, Tilda Fields. She says her "painting itch is back" after receiving the SOURCE newsletter announcing the Pine Mountain Warbler, Woodlands, and Wildlife Weekend and was inspired to paint a KY Warbler. Tilda says, "I just paint when I feel a connection."

Cowan Community Center had a big announcement to close the meeting out. The Center will host a Pine Mountain Warblers, Woodlands, and Wildlife Weekend April 24th-27th! The weekend will be jam-packed with nature activities, farmers' market, workshops, guided nature hikes, art installations, music, and a famous featured speaker!

"We are beyond pleased to welcome David Sibley as our featured speaker on Saturday, April 26th. David Allen Sibley is the author and illustrator of the series of successful guides to nature that bear his name, including the New York Times bestseller, The Sibley Guide to Birds." - Valerie Horn, Cowan Community Center

You won't want to miss it! Registration will open on March 4th. Visit Cowan Community Center's Facebook Page https://www.facebook.com/cowancommunitycenter/ and website https://cowancommunitycenter.org/ for updates and registration information.



It Doesn't Take a Long Hike to Visit Short Creek!

By: Alice Mandt, Upper Cumberland River Basin Coordinator

Spring is just around the corner, making it the perfect time to visit Short Creek in Pulaski County, Kentucky. This fascinating destination is known for its unique natural features. Geologists classify Short Creek as a karst window, a rare formation where an underground stream briefly emerges before vanishing back into a cave system. Visitors don't have to walk far—or at all—to experience it. From the parking lot, you can watch as the creek emerges from a cave, flows for about 200 feet, and then disappears underground again. The water remains cold and crystal clear year-round, averaging around 52-55 degrees, offering a rare glimpse into Kentucky's vast groundwater system.

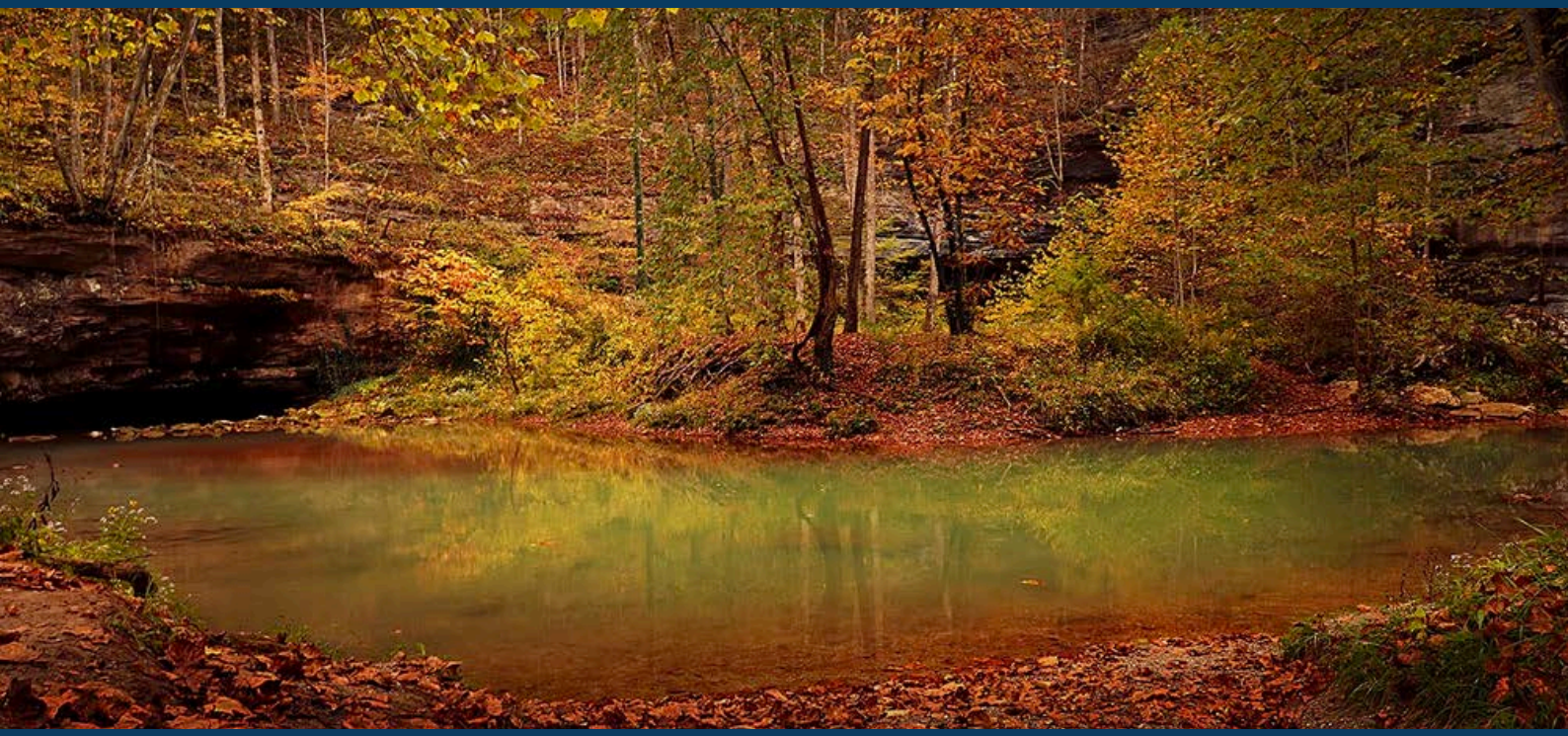
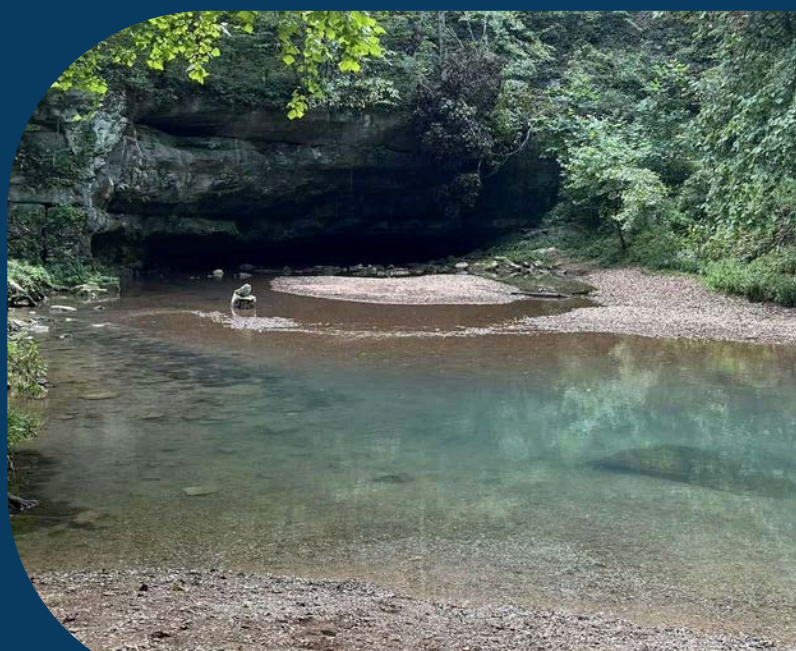


Photo by: Peggy Yaeger

Although Short Creek sits on private property, it remains a cherished spot for the local community. Over the years, it has served as a place for artistic inspiration, quiet reflection, and even baptisms. Located near the community of Stab, just outside of Somerset, it is part of the Buck Creek Watershed, a priority area for the Kentucky Division of Water. Whether you're interested in geology, nature, or simply a peaceful retreat, Short Creek is one of Kentucky's hidden gems worth exploring.



Float Parks: *An Alternative to Low-Head Dams*

By: Dr. Brian Storz, Licking River Basin Coordinator

Low-head dams are well known for their dangerous hydraulic effects that can lead to drownings (Image 1)—772 across the United States, 35 of those in Kentucky—and their negative impacts on aquatic organisms and stream health. But what if a low-head dam is necessary for drinking water, fire suppression, and/or agriculture use?

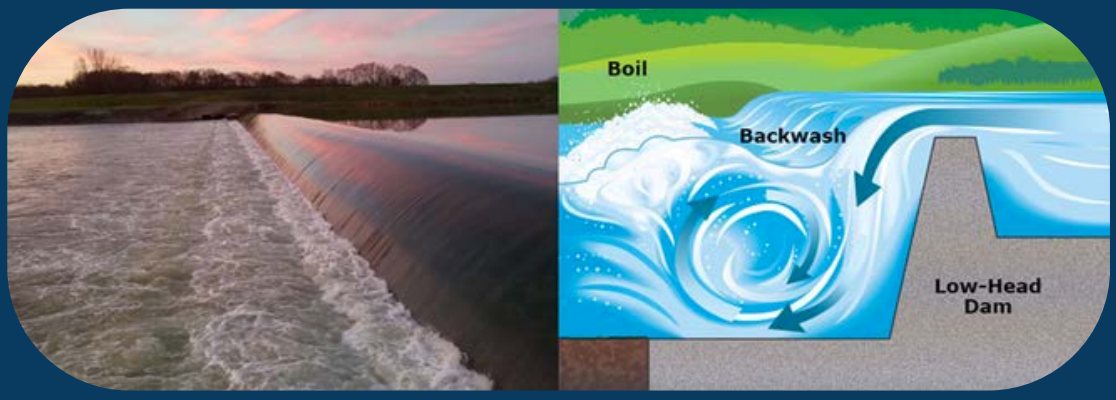


Image 1: A Low-head dam and illustration showing the backwash hydraulic affect that drowns unsuspecting swimmers and boaters. Photos: Public Domain

Float parks (Image 2) have originated as a compromise in many states when low-head dams are necessary for a community, and have become an accepted practice with some 35 float parks built across the United States (Image 3). In addition to the removal of the low-head dam drowning hydraulic effects, while maintaining a pool for drinking water, fire suppression, or agricultural use, float parks have many other benefits, both direct and indirect.

Image 2: Float Park in San Marcos, TX. Photo Kevin Rayo

Low-head Dam Wall Remnant

Direct Effects

While low-head dams disrupt the ecological connection between upstream and downstream habitats, float parks restore this connection via their chute, which is the break in the feature that allows water passage and a natural waterslide for the community. The chute not only restores the connection between the upstream and downstream habitat, allowing fish passage and migration of other aquatic organisms, but can be designed to suit the species in that area. Additionally, because this chute is angled with the gradient slope, it creates an aeration effect, which improves conditions for many downstream aquatic organisms.

Indirect Effects

In addition to the direct effects discussed above, there are numerous indirect effects, namely for water quality, public greenspace, and economic development. Along with float park planning, public officials and community members understand that water quality becomes an important resource because they should not promote this feature to their community or as a tourism destination if they do not meet proper water quality standards. Hence, public officials and communities are incentivized to improve and protect water quality of their local waterways.

Another indirect effect is the development of public greenspace, parks, and trail systems for better access and viewing area for the float parks. This will benefit the community with improved quality of life and attracts many visitors to the area. The continued vested interest in the float park and associated public greenspace will enhance community awareness of the importance of water quality, which results in a long-term investment in keeping local waterways clean.

Finally, many communities have demonstrated economic impacts from the investment of their local float parks and associated public greenspace. The establishment of a float park offers great potential for positioning a Kentucky community as a premier destination for outdoor recreation. As a growing trend in adventure tourism, creek and river features may attract visitors from across the region and beyond. Not only will the float park serve as a hub for water-loving enthusiasts, but it will also provide opportunities for other nearby tourism-related activities such as hiking, fishing, and camping. Additionally, float parks can act as a catalyst for future development of other parks and greenspaces along local waterways. The influx of visitors to the float park and associated public greenspaces can boost a community's profile and contribute to the growth of the local tourism sector, driving more foot traffic to other local businesses and attractions. Given this influx of tourism, the float park represents a unique opportunity to stimulate economic growth in Kentucky communities by generating revenue from both locals and tourists, which can be reinvested into further city improvements. By attracting tourists, businesses, and investors, the float park will create a ripple effect that enhances a community's economic vitality.

What's Shakin' in the Salt

By: Amber Hawkins, Salt River Basin Coordinator

Middle Fork Beargrass Creek

The approximately 61 miles of stream of Middle Fork Beargrass Creek is located in central Jefferson County. In 2022, the EPA approved the watershed management plan with the focus being on urban non-point source pollution runoff. Since then, the Louisville-Jefferson County Metropolitan Sewer District (MSD) has hired a full-time Watershed Coordinator who facilitates community engagement, education, and outreach.

This past spring, MSD staff helped facilitate an Earth Day Clean Sweep of Beargrass Creek in partnership with Kentucky Waterways Alliance, where 42 volunteers participated in the stream clean-up. After all the hard work had been completed, volunteers gathered around displaying their found treasures. To celebrate, MSD had a "weirdest found object" contest, the winner of which found a 1980's era Sony Walkman.

Photo by: Meredith Meyers

For Federal Fiscal Year 2024, the MSD was awarded CWA 319(h) grant funding for the development of a Best Management Practice (BMP) designed to reduce nutrients, bacteria, and sediment entering Middle Fork Beargrass Creek. The implementation of the BMP will focus on the Beals Branch tributary and will provide floodplain mitigation within Olmstead Park's Cherokee Park. MSD has formed a Beals Branch subcommittee focusing on developing the BMP that best benefits the park and the community.

Many other education and outreach events and projects are planned for 2025 through the Beals Branch Steering Committee for the Middle Fork Beargrass Creek. Scan the QR code to stay up-to-date with events happening in the Salt River Basin.

Septic Systems- What to do after the flood

Where can I find information on my septic system?

Please contact your local health department for additional advice and assistance. For more information on onsite or decentralized wastewater systems, you can visit EPA's Septic Systems Web site by scanning the QR code.

Do I pump my tank during flooded or saturated drainfield conditions?

No! At best, pumping the tank is only a temporary solution. Under worst conditions, pumping it out could cause the tank to try to float out of the ground and may damage the inlet and outlet pipes. The best solution is to plug all drains in the basement and drastically reduce water use in the house.

What if my septic system has been used to dispose wastewater from my business (either a home-based or small business)?

In addition to raw sewage, small businesses may use their septic system to dispose of wastewater containing chemicals. If your septic system that receives chemicals backs up into a basement or drain field take extra precautions to prevent skin, eye and inhalation contact. The proper clean-up depends of what chemicals are found in the wastewater. Contact your State or EPA for specific clean-up information.

What do I do with my septic system after the flood?

Once floodwaters have receded, there are several things homeowners should remember:

- Do not drink well water until it is tested. Contact your local health department.
- Do not use the septic system until water in the soil absorption field is lower than the water level around the house.
- Have your septic tank professionally inspected and serviced if you suspect damage. Signs of damage include settling or an inability to accept water. Most septic tanks are not damaged by flooding since they are below ground and completely covered. However, septic tanks and pump chambers can fill with silt and debris, and must be professionally cleaned. If the soil absorption field is clogged with silt, a new system may have to be installed.
- Only trained specialists should clean or repair septic tanks because tanks may contain dangerous gases. Contact your health department for a list of septic system contractors who work in your area.
- If sewage has backed up into the basement, clean the area and disinfect the floor. Use a chlorine solution of a half cup of chlorine bleach to each gallon of water to disinfect the area thoroughly.
- Pump the septic system as soon as possible after the flood. Be sure to pump both the tank and lift station. This will remove silt and debris that may have washed into the system. Do not pump the tank during flooded or saturated drainfield conditions.

- Do not compact the soil over the soil absorption field by driving or operating equipment in the area. Saturated soil is especially susceptible to compaction, which can reduce the soil absorption field's ability to treat wastewater and lead to system failure.
- Examine all electrical connections for damage before restoring electricity.
- Be sure the septic tank's manhole cover is secure and that inspection ports have not been blocked or damaged.
- Check the vegetation over your septic tank and soil absorption field. Repair erosion damage and sod or reseed areas as necessary to provide turf grass cover.

Remember: Whenever the water table is high or your sewage system is threatened by flooding there is a risk that sewage will back up into your home. The only way to prevent this backup is to relieve pressure on the system by using it less.

What are some suggestions offered by experts for homeowners with flooded septic systems?

- If possible, don't use the system if the soil is saturated and flooded. The wastewater will not be treated and will become a source of pollution. Conserve water (such as avoid running the dishwasher and washing machine, take short showers, etc.) as much as possible while the system restores itself and the water table fails.
- Prevent silt from entering septic systems that have pump chambers. When the pump chambers are flooded, silt has a tendency to settle in the chambers and will clog the drainfield if it is not removed.
- Do not open the septic tank for pumping while the soil is still saturated. Mud and silt may enter the tank and end up in the drainfield. Furthermore, pumping out a tank that is in saturated soil may cause it to "pop out" of the ground. (Likewise, recently installed systems may "pop out" of the ground more readily than older systems because the soil has not had enough time to settle and compact.)
- Do not dig into the tank or drainfield area while the soil is still wet or flooded. Try to avoid any work on or around the disposal field with heavy machinery while the soil is still wet. These activities will ruin the soil conductivity.
- Flooding of the septic tank will have lifted the floating crust of fats and grease in the septic tank. Some of this scum may have floated and/or partially plugged the outlet tee. If the septic system backs up into the house check the tank first for outlet blockage. Clean up any floodwater in the house without dumping it into the sink or toilet and allow enough time for the water to recede. Floodwaters from the house that are passed through or pumped through the septic tank will cause higher flows through the system. This may cause solids to transfer from the septic tank to the drainfield and will cause clogging.
- Locate any electrical or mechanical devices the system may have that could be flooded to avoid contact with them until they are dry and clean.
- Aerobic plants, upflow filters, trickling filters, and other media filters have a tendency to clog due to mud and sediment. These systems will need to be washed and raked.

https://www.epa.gov/ground-water-and-drinking-water/septic-systems-what-do-after-flood

If you would like more information or have questions, please reach out to your local health department. Scan the QR code to find the Health Department in your county.

In-Stream Litter: The Ongoing Threat

By: Nathan Alexander, Big Sandy River Basin Coordinator

Litter in our waterways is more than just an eyesore--it continues to be an environmental problem with potentially severe consequences for aquatic ecosystems, public health, local economies and community well-being. Litter is also a problem made worse by increasing flood frequency and severity, like those experienced this February in our southeastern counties.

Most litter originates on land but is transported to waterways through wind, rain, and stormwater runoff. Studies have found that stormwater flows and high-water events are the primary forces behind trash movement in watersheds. Items such as plastic bags, aluminum cans, and packaging materials accumulate in storm drains and along roadways before being carried into streams and rivers. Illegal dumping sites also contribute significantly to the problem, adding household waste, construction debris, and bulky discarded items like old appliances and, of course, tires. Residents along the Tug Fork River, which saw record high water levels from the February storms, have reported large trash items deposited in their yards by the receding waters, including old washing machines, deep freezes, and sections of above ground pools.

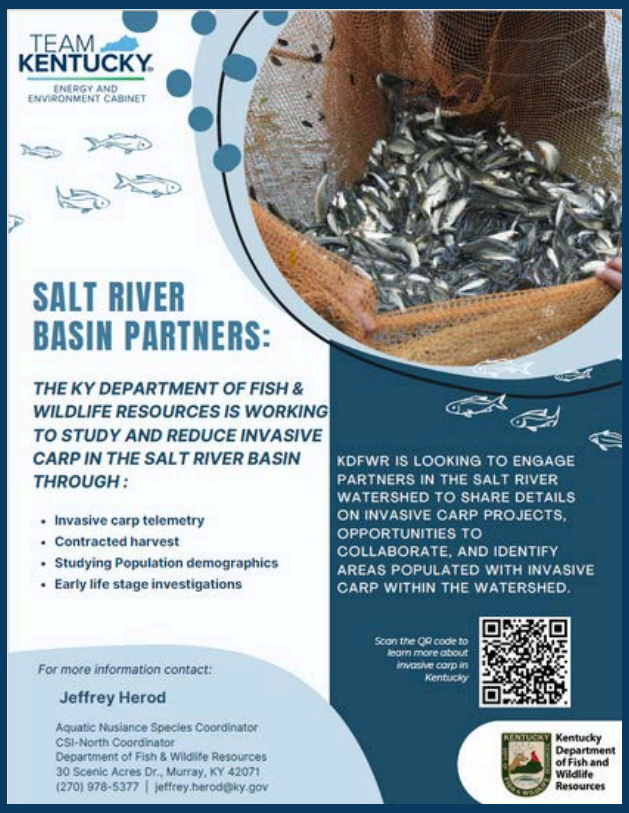
Once in the water, all trash items pose a potential threat. Small items, particularly plastic items such as single use beverage bottles can slowly breakdown into smaller "microplastics". These smaller particles can be ingested by fish and other aquatic organisms, posing risks to both wildlife and human health as they work their way up the food chain. Heavier items like old appliances can damage infrastructure or private property as they are moved through the water and often house components and/or chemicals that if leaked into the waterway would potentially be harmful.

One major challenge in addressing the state in-stream litter problem is public awareness. For most Kentuckians driving over a bridge is the closest they get to their local waterways. As such, this can be an easy problem to overlook. To help overcome this awareness gap, we in the Nonpoint Source Section are committed to continue to drive this conversation forward and help facilitate improvement. If you would like help communicating this issue within your community or are interested in organizing a stream clean-up contact your Basin Coordinator for help.

Scan the QR code below to get connected with the Basin Coordinator in your area!

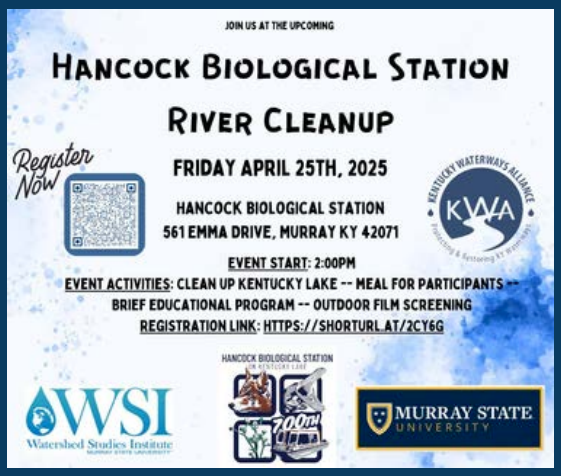
UPCOMING EVENTS:

Salt River



Kentucky River

Four Rivers



Licking River

Big Sandy

Upper Cumberland

Earth Day Celebration

Somerset Community College

April 13, 2025

2025 Wolf Creek National Fish Hatchery Events

January
- 1/11/25 2nd Saturday Fly Fishing Clinic
- 1/14/25 Friends of Wolf Creek NFH meeting 1:00 pm

February
- 2/8/25 2nd Saturday Fly Fishing Clinic
- 2/11/25 Friends of Wolf Creek NFH meeting 1:00 pm

March
- 3/1/25 2nd Saturday Fly Fishing Clinic
- 3/6/25 Mushroom Grow Bag Workshop @ RCPL 5-7 pm
  - $25 pre-registration
- 3/11/25 Friends of Wolf Creek NFH meeting 1:00 pm
- 3/22/25 Fly Fishing 101 Workshop 8-5 pm
  - $75 pre-registration; all day class
- 3/29/25 Fossil ID Workshop 9-11 am

April
- 4/3/25 Frog Hotel Workshop @ RCPL 5-7 pm
  - $10 pre-registration
- 4/8/25 Friends of Wolf Creek NFH meeting 1:00 pm
- 4/8/25 Fishing 101 for kids 9-11 am
- 4/12/25 2nd Saturday Fly fishing Clinic
- 4/19/25 Earth Day Event 9-1 pm

May
- 5/10/25 2nd Saturday Fly Fishing
- 5/13/25 Friends of Wolf Creek NFH meeting

June
- 6/7/25 Catch A Rainbow Kids Fishing Derby
- 6/10/25 Friends of Wolf Creek NFH meeting 1:00 pm
- 6/14/25 2nd Saturday Fly Fishing Clinic

July
- 7/8/25 Friends of Wolf Creek NFH meeting 1:00 pm
- 7/12/25 2nd Saturday Fly Fishing

August
- 8/9/25 2nd Saturday Fly Fishing
- 8/12/25 Friends of Wolf Creek NFH meeting 1:00 pm
- 8/23/25 Nature Photography Workshop 9-11 am
  - $10 pre-registration

September
- 9/9/25 Friends of Wolf Creek NFH meeting 1:00
- 9/10/25 Wounded Warrior Fishing Event
- 9/13/25 2nd Saturday Fly Fishing
- 9/23/25 Catch A Smile Senior Fishing Derby
- 9/24/25 Reaching For Rainbows Special Needs Fishing Derby Day 1
- 9/25/25 Reaching for Rainbows Special Needs Fishing Derby Day 2

October
- 10/11/25 2nd Saturday Fly Fishing Clinic
- 10/14/25 Friends of Wolf Creek NFH meeting 1:00 pm
- 10/15/25 Outdoor Adventure Day
- 10/24/25 Creepy Crawlies Workshop 5-7 pm

November
- 11/8/25 2nd Saturday Fly Fishing Clinic
- 11/18/25 Friends of Wolf Creek NFH meeting 1:00 pm

December
- 12/6/25 Holiday Open House 10-2 pm
- 12/9/25 Friends of Wolf Creek NFH meeting 1:00 pm
- 12/13/25 2nd Saturday Fly Fishing Clinic

Kentucky Native Plant Society

LEAD A HIKE FOR WILDFLOWER WEEKEND 2025

We are looking for knowledgable individuals to lead hikes and workshops for Wildflower Weekend, April 11-13th 2025!

TOPICS CAN INCLUDE:

- SPRING WILDFLOWERS
- WOODY PLANT ID
- LICHENS AND MOSSES
- MAKING ART IN NATURE

EMAIL RCOOK@KY.GOV TO SIGN UP BY FEB 15TH!

Apply for a KWA Watershed Seed Grant!

Deadline for Application EXTENDED

Accepting applications NOW through April 15, 2025.

TEAM KENTUCKY
ENERGY AND ENVIRONMENT CABINET

Ky Division of Water Regulatory Forum

Register Now!

Join the Kentucky Division of Water staff for a day of discussing regulatory updates, economic development, compliance, planning and funding!

APRIL 23
2025

Energy & Environment Cabinet

300 Sower Blvd. Frankfort, KY 40601