KENTUCKY DIVISION OF WATER

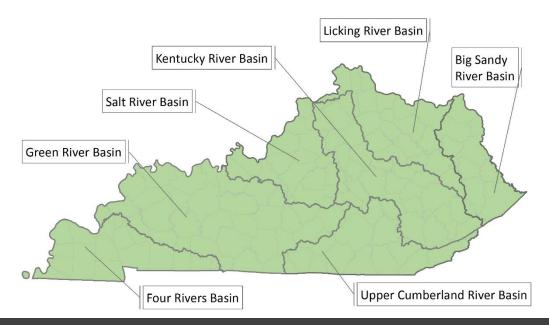
Basin Team Priority Watersheds

An explanation of the priority watershed selection process.



What is a basin team?

- Each of Kentucky's major river basins are supported by Basin Teams, community members and partners working to address water quality issues.
- The Basin Team model provides an opportunity for networking, information sharing, and leveraging funding with other resources.
- Priority Watersheds are selected in collaboration with Basin Teams to help the Division of Water focus our collective efforts.



What is a priority watershed?

- A priority watershed is tool used to help COORDINATE and TARGET watershed resources for improved water quality.
- They incorporate both information about known PROBLEMS and area CAPACITY (community interest, known active groups, potential partners).
- Targeting implementation and watershed plan development in this way allows us to maximize the delivery of our conservation efforts and achieve greater improvements to water quality.
- They are NOT the only places Division of Water focuses its conservation efforts and they are not the Division's only priorities.
- Ideally, priority watersheds are selected and revised at least every five years with the help of the Basin Teams.

How is a priority watershed used?

- Priority watersheds are used to direct resources and target focused implementation efforts through coordination of Division resources.
- Priority watersheds improve tracking of progress through data sharing and success monitoring.
- Priority watersheds focus and coordinate messaging to raise awareness and improve capacity in local communities.
- Priority watersheds improve direction of state and federal funding dollars through the Clean Water State Revolving Fund and § 319(h) funding.

Balance of 2 major factors.

- Where is work being done? → emphasis on capacity, active and developing watershed plans, areas with higher chances for implementation.
- Where is work needed? → emphasis on known issues and communities in need of additional resources to address water quality issues.

Where is work being done?

- Basin Teams were asked to give feedback on current and planned activities.
 - Identify watersheds with current projects underway.
 - Identify watersheds on organization's radar. What areas are you working in to develop projects?
 - Identify watersheds you would like to see become active in the next 1-3 years.

Where is work needed?

- Basin Teams were asked to identify critical water quality issues including communities in need of additional resources.
 - Provide local knowledge to identify emergent issues and communities interested in pursuing clean water policies.
 - Provide data on watershed plans, source water protection areas, known impairments, outstanding state resource waters, high nutrient yield watersheds, and demographics.

Scaling the answers.

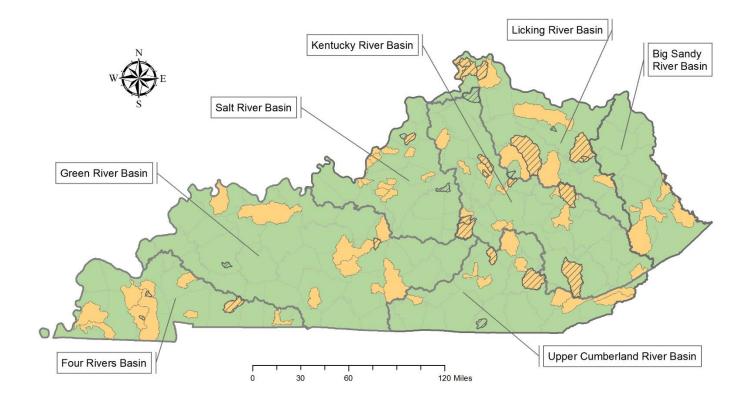
- While ideally watershed planning occurs on a HUC 12 scale, our partners often think more at a city, county, or regional scale.
- Restricting the size and number of watersheds to a certain number of HUC 12s was inhibiting to the conversation, so instead we collected all feedback regardless of size.

Narrowing it down.

When large areas were suggested, an effort was made to capture the HUC12s that contained stream concerns paired with agency data to refine the selection. Specific data considered:

- Nutrient reduction priority areas
- SWAPP 1 Zone
- Impaired Streams
- Outstanding State
 Resource Water
- High quality streams segments

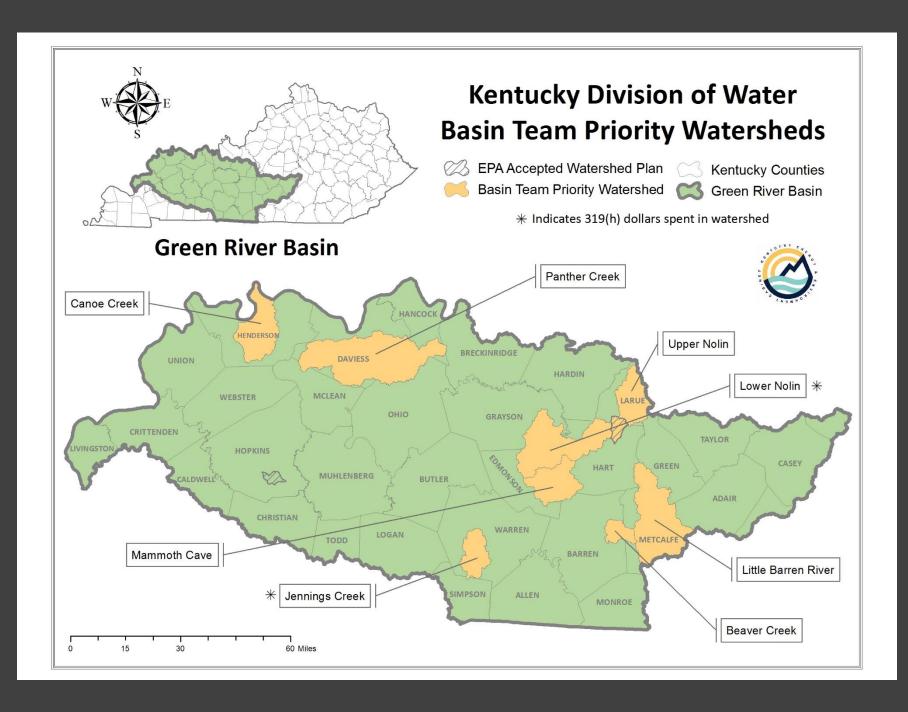
- Existing TMDL
- Population Low Income (EPA EJ layer)
- Minority Population (EPA EJ layer)
- Watershed plan in place or in development



Basin Team Priority Watershed Results

- ❖ LaRue County Conservation District Mark Howell
- Kentucky Division of Water
- ❖ The Nature Conservancy Zack Luttrell & Shelly Morris
- ❖ LaRue County Judge Executive Blake Durrett
- ❖ WKU Crawford Hydrology Lab Lee Ann Bledsoe & Jason Polk
- ❖ Warren County Stormwater Andrea Strange & Nikki Koller
- Kentucky Association for Environmental Education Ashley Hoffman
- USACE of Nolin Lake Deryck Rodgers
- DOW Madisonville Lesley Sneed
- USFWS Green River National Wildlife Refuge Stacey Hayden
- Division of Conservation Jay Nelson
- ❖ NRCS Buck Hulsey
- ❖ Mammoth Cave National Park Rick Toomey

Green River Basin Team



Upper ad Lower Nolin:

- **Upper Nolin** LaRue County is interested in a watershed plan, specifically in protecting drinking water and improving agricultural lands. Heavily karst area.
- **Nolin Lake** -USACE concerned about potential septic issues from houses around the lake.
- Bacon Creek Community interest Upper Bacon LaRue County CD has successful 319(h) Ag. BMP implementation projects. NRCS interested in Lower Bacon Creek focus conservation project.
- **Beaver Creek** Current NRCS focus conservation projects .
- **Jennings Creek** Multiple partner projects in the region, including WKU 319(h) Watershed Plan project. Currently building momentum in the community.
- Mammoth Cave Priority for a protection area. Active local groups.
- Panther Creek (Owensboro)
 - Panther Creek Soil Health Partnership and TNC working with multiple farms in the area. UK conducting a study related to farmer BMP knowledge.
 - TNC is interested in the Owensboro area for wetland restoration
 - High Nutrient Yield Watershed

Canoe Creek (Henderson)

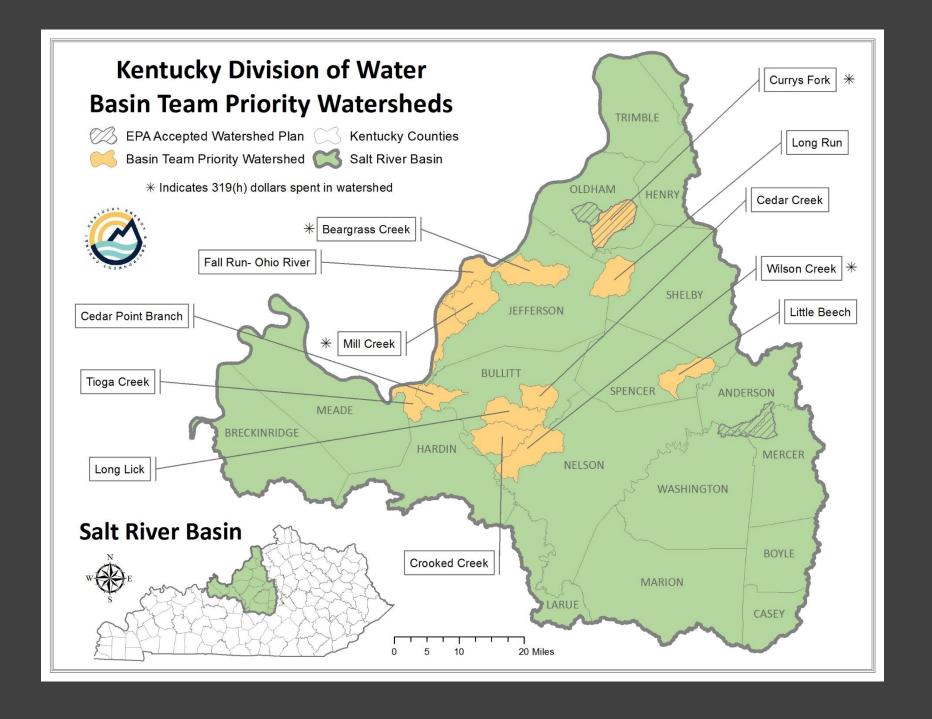
- Canoe Creek Homeowners could use support getting put on sewer (and off failing septic systems). This is an underserved part of Henderson. Could involve the County Cooperative Extension to help reach landowners.
- Contains Green River National Wildlife Refuge.
- TNC also interested in Henderson for wetland restoration.
- Henderson is a good candidate for state cost share.
- NRCS NWQI project in FY23.

Watershed area	Nutrient reduction priority area	SWAPP 1 Zone	Impaired Segments in Watershed	OSRW	Supporting Segments in Watershed	TMDL	Low Income	Minority Population	Watershed plan in place or in development
Canoe Creek	X	Х	х		Х		Х	Х	
Panther Creek	х		Х		Х	Х	Х	Х	
Lower Nolin		Х	Х	X	Х	Х	X	X	Х
Upper Nolin	х	Х	Х		Х		Х	Х	
Little Barren River			х	Х	х	х	х		
Jennings Creek							х	х	Х
Beaver Creek					х				
Mammoth Cave				Х	Х		Х		

- ❖ Bernheim Forest:
 - Kurt Mason, president of the Bernheim Board
 - Andrew Berry, director of conservation
 - Susan Hamilton, trustee
- ❖ Wilderness Louisville: Bennett Knox, executive director
- Bellarmine College: Martha Carlson Mazur, chair and associate professor of Environmental Studies at Bellarmine
- ❖ Kentucky Land Trusts Coalition: Don Dott, president
- Windrow Land Resources, LLC: Susan Hamilton, managing member
- Jefferson County Soil & Water Conservation District/Currys Fork Watershed Coordinator: Becca Trueman, district supervisor
- Sisters of Charity of Nazareth: Carolyn Cromer, director of ecological sustainability
- Kentucky Waterways Alliance: Ward Wilson, executive director

- ❖ River City Paddle Sports: David Wicks, board chair
- Office of Kentucky Nature Preserves: Zeb Weese, executive director
- ❖ MSD: Erin Wagoner, environmental partner liaison
- Louisville Metro: John Swintosky, senior landscape architect
- Bluegrass Land Conservancy: Jessie Wilder, executive director
- ❖ Kentucky Division of Water NPS team:
 - Dale Booth, Josiah Frey, Alice Mandt, Michaela Lambert, Mahtaab Bagherzadeh, Madeline Pruszenski
- ❖ Also consulted:
 - Friends of Floyds Fork: Jeff Frank
 - DOW TMDL Section: Lara Panayotoff, TMDL Section Supervisor
 - Community Members of West Point, KY

Salt River Basin Team



Floyds Fork

- Currys Fork: Headwaters; Active watershed plan.
- Long Run: Focus of Army Corps of Engineers stream/wetlands restoration project.

Beargrass Creek

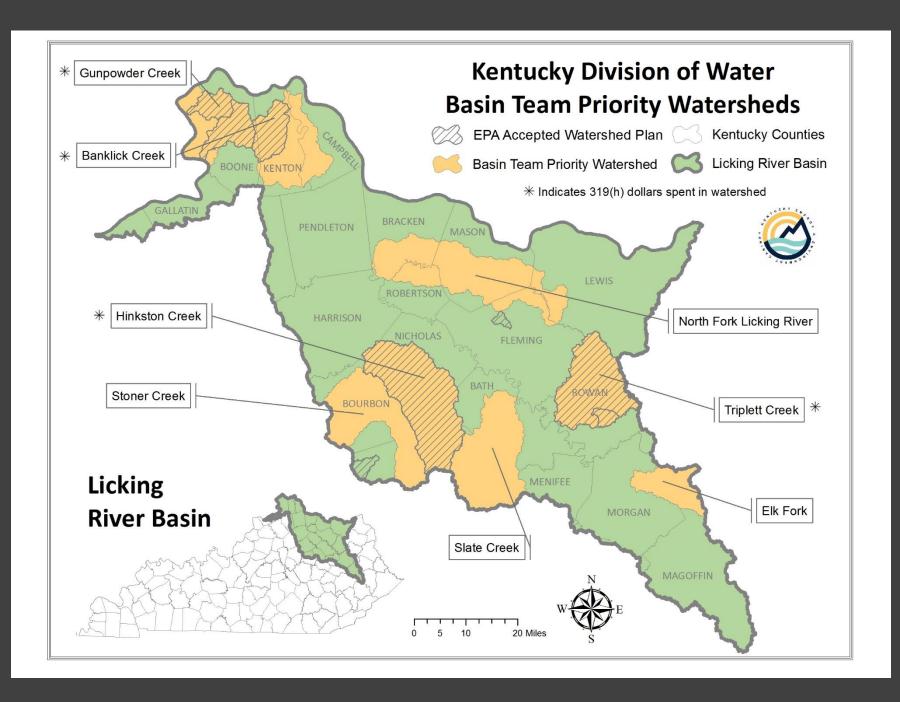
- Middle Fork has active watershed planning process and nearly complete plan.
- South Fork has been the focus of Bellarmine's water quality studies and volunteer service projects.
- Mill Creek: Active watershed planning process, Environmental justice concerns, Louisville.
- West Louisville: Environmental Justice focus.
- Bernheim region: Largely for conservation focus on high quality waters.
 - Wilson Creek: Former 319 demo project here.
 - Crooked Creek
 - Cedar Creek
 - Long Lick
- Beech Creek: Taylorsville lake watershed, possible NRCS Focus Project.
- Other areas of note:
 - Central KY Wildlife Refuge
 - Knobs State Forest
 - NRCS Focus Project in Louisville- invasive species
 - Cedar Grove Wildlife Area
 - Therman Tract Wetland Mitigation Project

Watershed area	Nutrient reduction priority area	SWAPP 1 Zone	Impaired Segments in Watershed	OSRW	Supporting Segments in Watershed	TMDL	Low Income	Minority Population	Watershed plan in place or in development
Beargrass Creek			Х		X	Х		X	x
Cedar Creek				Х	Х				
Cedar Point Branch								Х	
Crooked Creek			Х				Х		
Currys Fork	Х		Х		Х	Х			Х
Fall Run-Ohio River			Х		Х			Х	
Little Beech									
Long Lick			Х						
Long Run	Х		Х		Х	Х		Х	
Mill Creek			Х		Х		Х	Х	х
Tioga Creek			Х						
Wilson Creek				Х					

- Campbell County Planning and Zoning-Emily Woodward
- Friends of Doe Run Lake-Tom Kruer
- ❖ KY DOW Florence Regional Office-Matthew Gross
- Ohio River Foundation-Rich Cogen
- Banklick Watershed Council-Nicole Clements
- SD1, Environmental Compliance Manager-Brooke Shireman
- NKU Scripps Howard Center for Civic Engagement-Mark Neikirk
- Campbell Co Conservation District-Amy Winkler
- Thomas More University-Sabine Zacate
- Northern Kentucky University-Kristy Hopfensperger
- Banklick Watershed Council-Larry Zembrodt
- ❖ SD1-Mindy Scott
- OKI Regional Council of Governments-David Rutter
- Kenton County Fiscal Court-John Stanton

- Sustainable Streams LLC-Bob Hawley
- Banklick Watershed Council-Anna Kirschner
- ❖ BGADD-Karyn Leverenz
- Mason County High School-Yvonne Garrison
- Bluegrass Greensource-Lindsie Nicholas
- Kentucky Woodland Owners Association-Jack Rentz
- UK Cooperative Extension Service-Amanda Gumbert
- Licking River Watershed Watch-Barry Tonning
- Licking River Watershed Watch-Robert Moran
- Bracken County Conservation District-Meghanne McClanahan
- Private citizen-Bill Alverson
- Private citizen-Doug McLaren
- Kentucky Waterways Alliance-Ward Wilson
- Morgan County Water District-Shannon Elam
- Morehead Utility Plant Board-Phil Adkins
- Morehead Utility Plant Board-Joanna Lowder

Licking River Basin Team

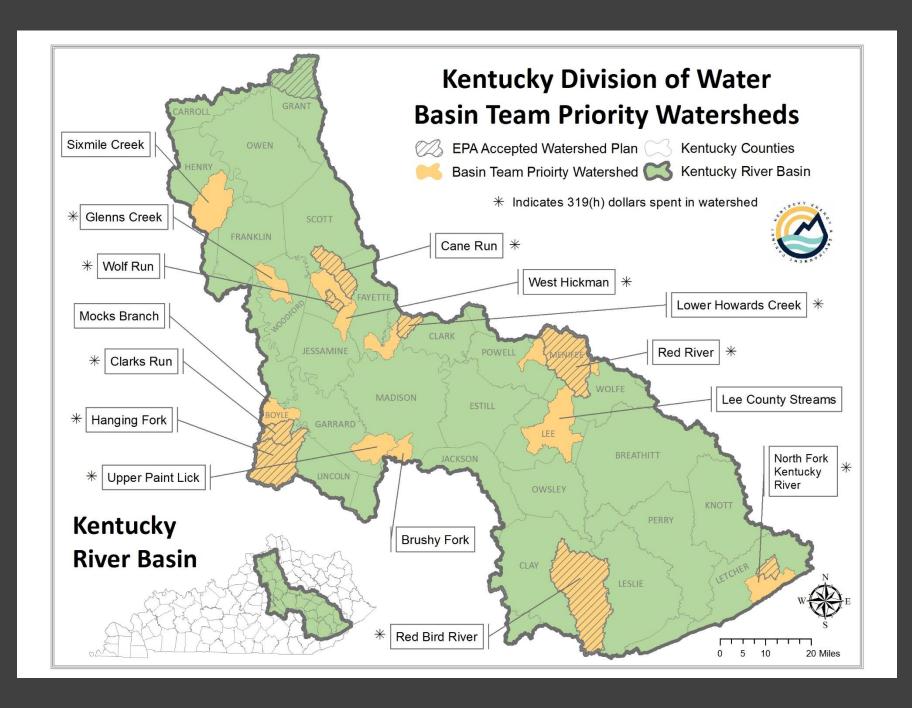


- **Gunpowder Creek-** Active EPA-approved watershed plan and the state's only TMDL Alternative Plan. There is significant Kentucky Department of Fish and Wildlife Fee In-Lieu Of conservation dollars on the ground. Along with an active watershed coordinator, there is high community capacity in the area.
- **Banklick Creek-**Active EPA-approved watershed plan and active Banklick Watershed Council with a hired watershed coordinator who facilitates several local partnerships, including the cities within the drainage area. Local concern regarding increasing development, climate change, and erosion due to mismanaged growth.
- **North Fork Licking River-**Existing community capacity cultivated through Licking River Watershed Watch, a nonprofit supporting volunteer water quality samplers. Active Conservation District with EQIP project and talks of developing a watershed plan.
- **Stoner Creek-**Contains an active watershed group, Friends of Stoner Creek, who actively pursues watershed engagement through volunteer sampling, water-focused school art competitions, watershed festivals, and other environmental education efforts.
- **Hinkston Creek-** Active EPA-approved watershed plan and active watershed coordinator through local nonprofit, Bluegrass Greensource. Selected as a priority watershed for Kentucky's Nutrient Reduction Strategy. Active stakeholder group and partners through Conservation Districts and NRCS.
- Slate Creek- Local health department is concerned about failing septic systems in watershed; there is significant interest in an SRF project. Local partners interested in projection actions around Outstanding Water Resource in Slate Creek area. Also identified as a Mississippi River Basin Initiative watershed for NRCS (planning will begin in FFY 2022).
- Triplett Creek- EPA-approved watershed plan. Two high-level resource documents have been produced by U.S. Army
 Corps of Engineers, including an Initial Watershed Assessment (2019) and a Planning Assistance to States Study
 Flood Risk Reduction on Triplett Creek (2018). Significant local interest from City of Morehead Floodplain
 Coordinator and Morehead Plant Utility Board regarding stormwater management and flash flooding impacting
 water treatment plants and wells.
- **Elk Fork**-Local water district is interested in engaging in more watershed-focused conservation efforts, particularly surrounding septic and straight pipe issues. Local health department has expressed interest as well.

Watershed area	Nutrient reduction priority area	SWAPP 1 Zone	Impaired Segments in Watershed	OSRW	Supporting Segments in Watershed	TMDL	Low Income	Minority Population	Watershed plan in place or in development
Gunpowder Creek		x	х	x		x		х	х
Banklick Creek		х	х	х	х			х	х
North Fork Licking River		х	х	х	х		х	х	
Stoner Creek	х	х	х					Х	
Hinkston Creek	х	x	х		х		х	х	х
Slate Creek		х	х	х	х		х		
Triplett Creek		х	х				х		х
Elk Fork			х				х		

- ❖ Stephanie Blain-Palmer Engineering on Behalf of LFUCG DES
- ❖ Preston Miles-Clarks Run Environmental and Education Corporation
- Claudia Cotton-USDA Forest Service Daniel Boone National Forest
- Laura Gregory-Kentucky Waterways Alliance
- Ken Cooke-Friends of Wolf Run
- Chuck Franklin Caudill-Lee County Fiscal Court
- Jean-Luc Dobson-City of Berea
- Ed Wilcox-Kentucky State University
- Pamla Wood-KWA, KRWW
- Alex Beer-Headwaters Inc
- Alex Allen-Headwaters Inc.
- Kelly Taylor-Hickman Creek Conservancy
- Malissa McAlister-Kentucky Water Resources Research Institute

Kentucky River Basin Team

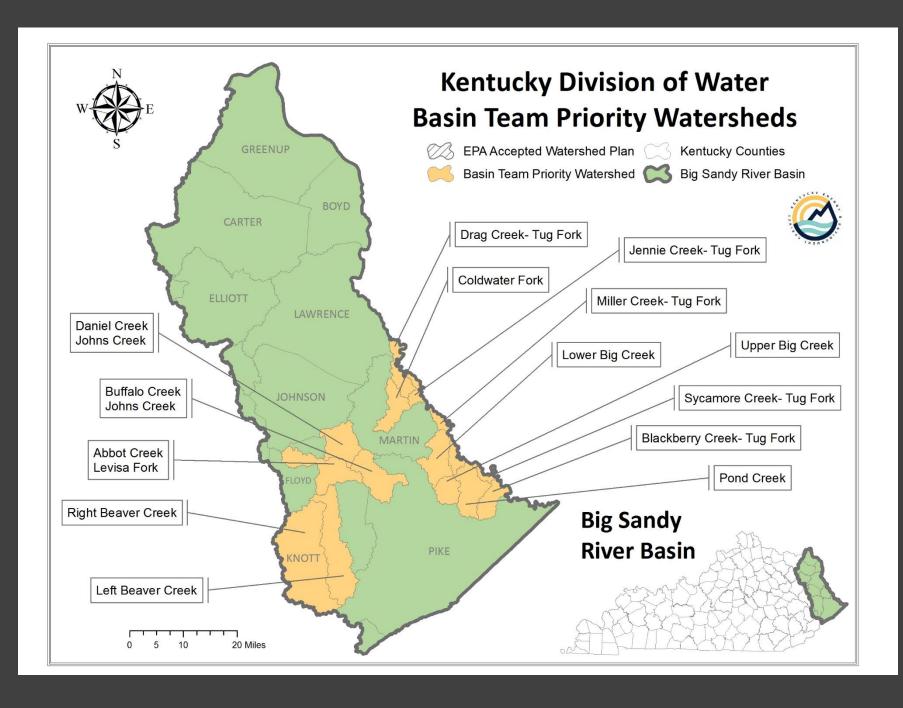


- **Brushy Fork**-City of Berea monitoring E.coli; concerned about levels; actively working with ag to reduce fertilizer and manure runoff.
- Cane Run-Active watershed plan, large implementation project in Georgetown.
- Clarks Run-Active watershed plan and watershed group, high nutrients and E.coli identified as issues, drinking water impacts for Lake Herrington.
- Glenns Creek-Watershed plan in development, local support from bourbon industry, WWKY.
- Hanging Fork-Active watershed plan.
- Lee County Streams-Fiscal court working to address issues related to stream erosion that is impacting roads, identified issues with flooding and stormwater runoff. Area highlighted include Blaine's Branch, Contrary Creek, Crystal Creek, Middle Fork Kentucky River, North Fork Kentucky River, Silver Creek, South Fork Kentucky River, Sturgeon Creek.
- Lower Howards Creek-Active watershed plan.
- Mocks Branch-Identified as priority for Clarks Run Environmental Education Co.; stream flashiness and associated NPS issues noted.
- **North Fork KY River**-Active watershed plan, Headwaters Inc doing basic education and outreach in the region, septic, straight pipe and coal mine runoff identified as concerns.
- Red Bird River-Active watershed plan, active capacity in watershed.
- Red River-Red River Watershed Plan, KWA and USFS active, identified septic, trash, and sediment issues.
- **Sixmile Creek-**KSU is actively sampling basic water chemistry and WWKY parameters; most involvement at the KSU environmental research center in Henry co.; OSRW.
- **Upper Paint Lick-**Watershed plan in development.
- West Hickman-Watershed plan in development, recent WQB sampling, active education and outreach work, elements of concern include urban stormwater runoff contributing to contamination from herbicides/pesticides/nutrients, sediment, and SSOs; at least 2 active citizen groups.
- Wolf Run-Wolf Run Watershed Plan, active Friends of group actively working on several branches in the watershed.

Watershed area	Nutrient reduction priority area	SWAPP 1 Zone	Impaired Segments in Watershed	OSRW	Supporting Segments in Watershed	TMDL	Low Income	Minority Population	Watershed plan in place or in development
Brushy Fork			Х				Х		
Cane Run	Х	Х	Х			Х	Х	х	Х
Clarks Run			Х		Х		Х	х	Х
Glenns Creek		Х	Х	Х	Х		Х	х	Х
Hanging Fork			Х		Х		Х	х	Х
Lee County Streams		Х	Х	Х	Х	Х	Х	Х	
Lower Howards Creek		Х	Х	Х	Х		Х	Х	Х
Mocks Branch		Х	Х				х	Х	
North Fork KY River		Х	Х				Х		х
Red Bird River			Х	Х	Х		Х		Х
Red River		Х	Х	Х	Х		Х		Х
Sixmile Creek			Х	Х	Х				
Upper Paint Lick			Х				Х		Х
West Hickman			х				Х	X	Х
Wolf Run	Х	Х	Х		х	Х	Х	Х	Х

- Friends of Tug Fork
- Big Sandy Watershed Watch
- City of Prestonsburg
- Kentucky Division of Water
- Kentucky Energy and Environment Cabinet
- West Virginia Department of Environmental Protection: Rehabilitation Environmental Action Plan program

Big Sandy River Basin Team



- **Tug Fork River** active friends group working in collaboration with West Virginia Department of Environmental Protection- Rehabilitation Environmental Action Plan program.
 - Alburn Hollow at McCarr
 - Pond Creek at South Williamson
 - Big Creek near Nolan WV
 - Blackberry Creek at McCarr
 - Specific interest in tire cleanups around Williamson and Warfield sections of the Tug Fork.

Floyd County, near Stephens Branch Road

- Concern about abandoned strip mine and slate dump.
- Observed red acid mine water.

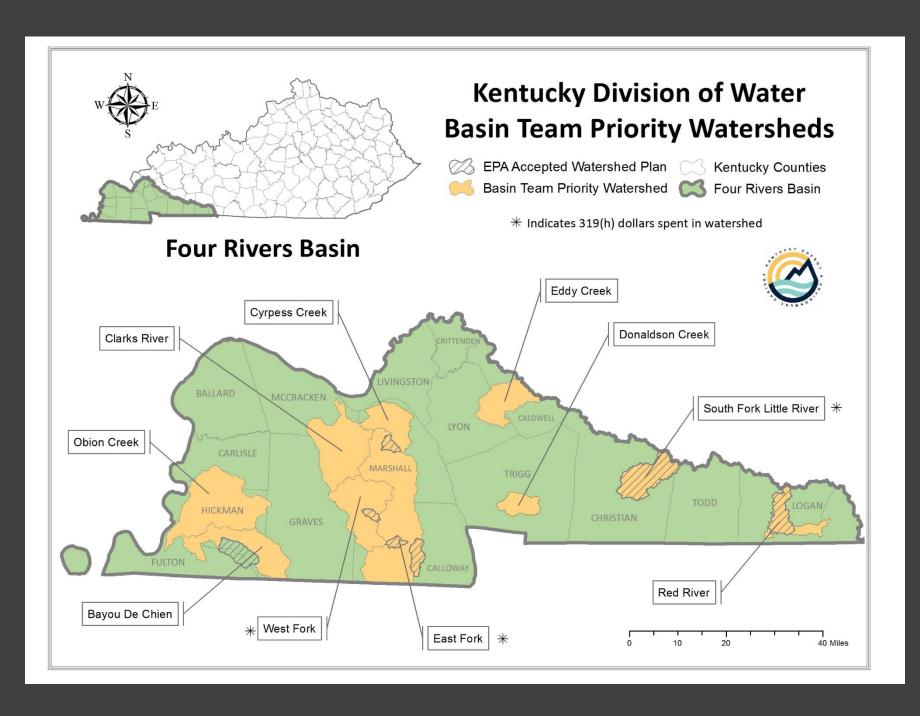
Beaver Creek

- The HUC 10 containing Beaver Creek has established TMDLs and impact down stream recreational areas and drinking water sources. Mainly bacteria based.
- Upper reaches of Beaver creek have substantial data and known bacteria issues.
- Abbot Creek, Daniel Creek and Buffalo Creek are all in regions where the Big Sandy Basin Coordinator has been actively in conversation with the mayor of Prestonsburg about watershed planning.
 - Big Sandy Basin Coordinator has been working actively around Prestonsburg and Dewey Lake.

	Nutrient reduction priority area	SWAPP 1 Zone	Impaired Segments in Watershed	OSRW	Supporting Segments in Watershed	TMDL	Low Income	Minority Population
Miller Creek-Tug Fork*					Х		Х	
Blackberry Creek-Tug Fork*			Х		Х		х	
Pond Creek			х				х	
Upper Big Creek			х				х	
Lower Big Creek			Х				х	
Sycamore Creek-Tug Fork *							х	
Jennie Creek-Tug Fork*		х					х	
Drag Creek- Tug Fork*		х					х	
Upper Right Fork Beaver Creek			Х		Х	Х	х	
Upper Left Fork Beaver Creek			Х			Х	х	Х
Lower Left Beaver Creek			Х		Х	Х	Х	
Middle Right Beaver Creek			х			Х	х	
Lower Right Fork Beaver Creek			Х		Х	Х	х	
Daniel Creek Johns Creek			Х	Х			Х	
Abbot Creek Levisa Fork		х	Х				х	
Buffalo Creek Johns Creek			Х				х	
Coldwater Fork		х	Х				х	

- The Nature Conservancy
- Murray State University
- Watershed Watch in Kentucky
- Kentucky Division of Water
- Jackson Purchase Foundation
- **❖** Natural Resources Conservation Service
- Four Rivers Watershed Watch
- Friends of Clarks River NWR

Four Rivers Basin Team

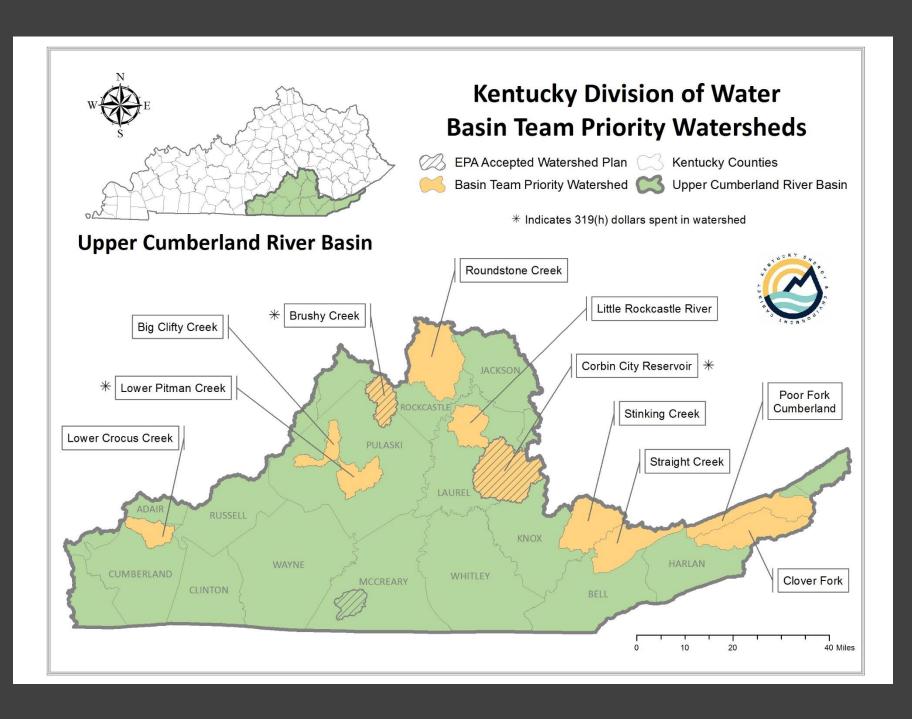


- Clarks River- The Basin Team has an interest in projects throughout the larger Clarks River watershed. A TMDL is existing here.
- East Fork Clarks River- Chestnut Creek is an EPA approved watershed planning area.
- West Fork Clarks River- Damon Creek is an EPA approved watershed planning area.
- **Eddy Creek** The Natural Resources Conservation Service has an active focused conservation project in the area.
- Obion Creek- The Nature Conservancy has a strong interest in protection and wetland conservation.
- Bayou de Chien- The Nature Conservancy has a strong interest in protection and wetland conservation.
- Cypress Creek Active discussions of TMDL-Alt Plans with TMDL section and Four Rivers Basin Coordinator.
- **Donaldson Creek** –The Natural Resources Conservation Service is proposing a focused conservation project in the area.
- **Red River** This area has had previously identified capacity for community interest in water quality improvement projects.
- South Fork Little River- The South Fork Little River is an active watershed planning area.

	Nutrient reduction priority area	SWAPP 1 Zone	Impaired Segments in Watershed	OSRW	Supporting Segments in Watershed	TMDL	Low Income	Minority Population
Cane Creek Obion Creek			х				х	х
Donaldson Creek			Х	Х	х			
Hurricane Creek Obion Creek			х				х	х
Lower Clarks River			x		X	×	X	
Lower Cypress Creek	Х		Х		Х			
Lower Eddy Creek	Х	Х	Х				Х	
Lower West Fork Clarks River	х		Х	Х	Х	Х		
Middle Bayou De Chien	х		x		x	x	x	х
Red River	х		х		х			Х
Russells Creek-Obion Creek			х	х	х		х	х
South Fork Little River	Х		x			x	X	Х
Upper Bayou De Chien	x		x		x	х	х	
Upper Clarks River			х		Х	Х	Х	Х
Upper Cypress Creek			Х					
Upper Eddy Creek	х		х				Х	Х
Upper West Fork Clarks River	х		Х	Х	х	х		

- City of Somerset
- **❖** Bell Engineering
- Private citizens
- Lend-A-Hand Center
- University of Kentucky
- Kentucky Division of Water
- Natural Resources Conservation Service
- Rockcastle River Conservation Initiative
- Pulaski County Conservation District
- US Fish and Wildlife Service
- Private consulting firms
- ❖ Wood Creek Lake community

Upper Cumberland River Basin Team



- Big Clifty Creek- Fishing Creek
 - A recent fish kill was reported by citizens in Big Clifty Creek.
- Brushy Creek
 - An active watershed plan is underway.
- Corbin City Reservoir
 - The EPA has approved both a TMDL and watershed plan for the area.
- Little Rockcastle River
 - · A citizen group has requested a Volunteer Lake Monitoring Program.
- Lower Crocus Creek
 - A PCR impairment might be a restoration project.
- Lower Pitman
 - A watershed plan is in development. Water quality monitoring and a groundwater study are underway.
- Poor Fork Cumberland
 - Citizens have expressed concerns about water quality and straight pipes in the area.
- Roundstone Creek
 - NRCS has an active focused conservation project in the watershed. Potential for watershed development.
- Stinking Creek
 - A citizen group has requested assistance in well water education and water quality.
- Straight Creek Cumberland River
 - Citizens have expressed concerns about water quality and straight pipes in the area.

Watershed area	Nutrient reduction priority area	SWAPP 1 Zone	Impaired Segments in Watershed	OSRW	Supporting Segments in Watershed	TMDL	Low Income	Minority Population	Watershed plan in place or in development
Big Clifty Creek- Fishing Creek			х		х		х		
Brushy Creek			х	х	х		х		х
Corbin City Reservoir	х	х	х		х	х	х		х
Little Rockcastle River		х	Х		х		х		
Lower Crocus Creek			х		х		х		
Lower Pitman			х		х		х	х	х
Poor Fork Cumberland River		х	х	х	х	х	х	х	
Roundstone Creek		х	Х	х	х	х	х		
Stinking Creek			х		х		х		
Straight Creek – Cumberland River			х		х	х	х		