

## Friends of the North Fork and White Rivers Member News



VOLUME 2, ISSUE 4

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### WELCOME NEW MEMBERS

Matthew Buell  
Mountain Home

Lisa Arnold  
Mountain Home

Roger Pyzocha  
Flippin, AR

### PRESIDENT'S MESSAGE

#### STREAMS: WHY SHOULD WE CARE?



We all, in our busy lives cross or pass by streams without ever noticing. There are countless streams that impact our lives without us understanding how or why. This is a satellite picture of streams and their connection to river systems.

This could be a picture of the root system of a tree or perhaps the circulatory system on the human heart.

Without a healthy root system the tree will die and likewise humans cannot live without a healthy circulatory system. This also is the importance of streams to healthy water and ecosystems.



I have become more aware and respectful of streams as I grow older. I notice old cemeteries next to or on hill sides looking over streams. Are the departed given solace by the peacefulness and perhaps murmurings of the stream? Or perhaps the peacefulness and murmurings are for us, visitors to those cemeteries. Many communities, including Mountain Home, have grown up on the banks of creeks and streams.

I notice city streams straightened and concreted to allow for rapid and contained flows of storm water in an attempt to prevent flooding of homes, apartments and businesses located near the streams.

I notice trash washed into the streams and carried along as if our streams were intended to be waste disposal systems.

I am aware of the threats our streams face from nutrient run off from lawn fertilizers sediment, agricultural activities and hydrocarbons from asphalt roads, streets and parking lots.

When we look at our streams do they make us happy or sad and do we care?

Why should we care about these creeks? What have they contributed to our lives individually and as a community? Have they become merely a part of our waste disposal system or a nuisance if we get too much rain and flooding occurs? Why should we care if they become full of liter or polluted to the point the water doesn't sustain life?

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*“Most people are on the world, not in it -- have no conscious sympathy or relationship to anything about them -- undiffused, separate, and rigidly alone like marbles of polished stone, touching but separate.”*

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- [\*John of the Mountains: The Unpublished Journals of John Muir\*](#), (1938), page 320.

This newsletter describes the relationship between some streams in our water shed, the quality of the water and perhaps our lives and hopefully will demonstrate why we all should care about the health and well being of our streams.

Please join Friends of the North Fork and White Rivers in our efforts through education, cooperation, contribution and service to protect and preserve our streams, rivers and watersheds for future generations.

Thank you.

Steve Blumreich, President

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## MOUNTAIN HOME ARKANSAS CREEKS: BIG, DODD AND HICKS

Big, Dodd and Hicks Creeks flow generally from north to south through the city of Mountain Home, and you can't travel in or out, or around the city without crossing one or more of them. [Click here for google map data.](#)

These three creeks converge south of Mountain Home and, collectively called Big Creek, flow into the White River about a mile downriver from Shipp's Ferry Landing.

The creeks and their tributaries have had a profound impact on the history of Mountain Home. The Casey House, built in 1858 and located on Wade Street, was the first Baxter County Courthouse and is less than 100 yards from Dodd Creek. The Mountain Home Cemetery, and the first site of Mountain Home's school, (now known as Guy Berry Intermediate School) are just north of the Casey House and overlook Dodd Creek to the West and Hicks Creek to the East. One hundred and sixty years ago Dodd Creek contributed to the vitality of the city; however, today the creek appears to be almost forgotten except as a drainage ditch for ridding the city of storm water.

Today these three creeks drain approximately 90% of the city's storm water. Because of excessive development near the creeks flooding has become a problem. To reduce flooding and allow for rapid evacuation of storm water from the City, sections of Dodd and Hicks Creeks, within the city of Mountain Home, have been straightened and concreted.

While reducing flooding this accelerates water velocities and, subsequently, increases the amount of stream bank erosion and sediment in the creeks. Along with the sediment there is pollution in the form of trash, fertilizer from agriculture and lawns, and petroleum hydrocarbons from asphalt parking lots and roads.



In spite of the pollution, there is a mix of minnows, bream, small bass, crayfish and macro invertebrates that manage to persevere and call these creeks home.

Mike Tipton, president of North Arkansas Fly Fishers has a special appreciation for Dodd Creek. Mike has found some pools at the lower end of the ASU MH campus that hold some beautiful blue gill, sunfish, and small bass and enjoys using a lightweight tenkara rod to fish them.



## Dodd Creek Stream Team

Friends of the North Fork and White Rivers, (Friends) has adopted a section of Dodd Creek on the ASU Mountain Home Campus near the east gate entrance for its Stream Team activities. Friends Stream Team together with the ASU MH Hellbenders Stream Team and Stream Team members from Mountain Home High School conduct quarterly water quality testing, record creek inhabitant inventories, take stream bank measurements and conduct clean ups. The latest quarterly Stream Team event was in early November 2017.



Mike Jirka and Pam Phillips conduct the water chemistry analysis with participation of MHHS Stream Team members.

The team monitors water in two main ways which reinforce each other. They are the water chemistry tests and the macro invertebrate assay.

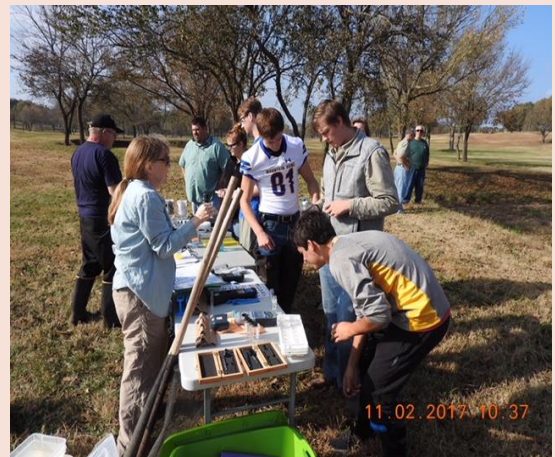
## Water Chemistry Tests

Hydrogen ion concentration, commonly called "PH", is measured because as organic matter in water ferments in low oxygen conditions, the water sours and the PH drops towards the acidic side.

Oxygen dissolved in water or DO is tested because it is important for creek life such as minnows, crayfish and macro invertebrates. Low levels of DO result in loss of aquatic creek life.

A chemistry test for fertilizer can predict future problems in the stream. Excess phosphates ( $PO_4$ ) and nitrates ( $NO_3$ ) will increase the biomass living in the stream by feeding photosynthetic organisms like cyanobacteria and algae. Too much algae can produce kill zones from toxins produced as they die. The temperature and color of the water are predictive of how fast the algae are growing (or have the potential to grow). Warmer streams hold less oxygen, which scares away fish but encourages algal growth. The algae can make their own oxygen through photosynthesis.

Hardness chemicals keep the water alkaline so a test for alkalinity and hardness is reassuring because fewer heavy metals like lead and arsenic dissolve in alkaline water.



## Macro Invertebrate and Minnow Inventory

The water chemistry tests prove the quality of the stream as tested however there may be other chemicals in the creek which are not being tested. The macro invertebrate assay proves that the stream has a healthy diversity of organisms which would die off if there were pollutants in the water not tested for by the Stream Team. A healthy stream supports a diversity of life.

Tom Emerick and Randy Roth with Friends along with MHHS Stream Team members collected water samples for chemical testing and used a kick net to gather macro invertebrates, minnows and crayfish to determine the health of the water and ecosystem. Their inventory included crayfish, darter minnows, water pennies, hellgrammites, riffle beetles, and left and right facing snails.

Tim Burnley Trout Habitat Manager with Arkansas Game and Fish led MHHS Stream Team students along the creek bank. Tim explained the problems of stream bank erosion, sediment pollution and the importance of maintaining protective riparian areas along the banks to help slow and filter storm water runoff to reduce erosion and sediment. Due to the loss of effectively sized riparian areas, increased water velocity during storm events from poor storm water management, and excessive loss of its historic flood plain due to development, Dodd Creek experiences severe bank erosion during flood events. This also results in trees being undercut and washed away which allows more erosion because the root systems holding soil in place are lost.

We are thankful to those that participated in the November Stream Team event including: Tom Ethridge – MHHS Biology instructor and his 20+ MHHS Stream Team members, Steve Blumreich, Ron Burk, Tim, Burnley, Bruce Burr, Jane Darr, Tom Emerick, Mike Jirka, Joe Horsley, Pam Phillips, Randy Roth and a special thanks to Tommy Hagan for taking pictures.

Dodd Creek water quality and ecosystem is important not only because of the aquatic life in the creek but also because the water in Dodd, Hicks and Big Creeks combine south of Mountain Home and flow into the White River about a mile from Shipps Ferry impacting the water quality of the White River. We can all do our part to protect these creeks for ourselves and future generations.

What can we do to protect these small creeks and their inhabitants?

Increase our awareness of our small creeks. Stop and walk or just observe the creek.

Don't litter, pick up litter, reduce the amount of fertilizer on our lawns, be sure septic systems are working properly and not leaking, understand what happens to storm water run off, be aware of how agricultural nutrients impact water quality and ecosystems, encourage cities and towns to develop storm water retention ponds rather than concrete canals, understand the importance of and protect riparian areas along the banks.

Consider joining and supporting environmental groups like Master Naturalists and Friends of the North Fork and White Rivers and participating in Stream Team events.

We need more people interested in learning about our streams and how to protect them to join our Stream Team activities.

## BUFFALO RIVER HOG FARM UPDATE

# PERMIT DENIED, BUT IT'S NOT OVER!

There has been a significant development regarding the C&H Hog CAFO located in the Middle Big Creek watershed near the Buffalo River.

The pictures below are from summer and fall 2017 and there continue to be reports of algae blooms in the Buffalo River below Middle Big Creek in January.



The following information was provided by Buffalo River Watershed Alliance (BRWA) and more information can be seen on their website at [buffaloriveralliance.org](http://buffaloriveralliance.org)

January 10 - The Arkansas Department of Environmental Quality (ADEQ) denies the permit application by C&H Hog Farm, Inc. A large Concentrated Animal Feeding Operation (CAFO)

January 17 - At a special meeting of the Arkansas Pollution Control and Ecology Commission a "stay" is granted. This means the CAFO can continue to operate and pollute until an appeal by C&H is filed and the ensuing legal process is completed. This can take many months or even years.

January 20 - C&H filed an appeal for a hearing with the Arkansas Pollution Control and Ecology Commission.

### SO WHAT DO YOU DO NOW?

It is very likely public comments will be needed in the very near future. ADEQ listed over 420 pages of public comments submitted with the great majority pleading for the denial of the Reg 5 permit.

### These public comments matter!

The permit denial and the subsequent legal moves have happened over a short period of time. This is a rapidly developing situation and we think it is prudent to wait for a bit for more clarity.

Please remain ready to respond.

Friends of the North Fork and White Rivers will continue to help achieve an equitable solution to this very significant problem.

In the meantime here are some suggestions:

- Encourage others to join Friends of the North Fork and White Rivers or BRWA's supporter list. The more voices speaking up for the river the harder it becomes for us to be ignored. You can subscribe as a [BRWA Supporter here](#). Or use this short url to join <http://tinyurl.com/y9br858b>
- This struggle is not over. Help make this fact clear to your circle of friends and acquaintances. People may be quick to think the CAFO problem is solved but it's not over!
- Take advantage of the temporary warm-up to visit the river - refresh your soul and remind yourself what we are working to protect.

## 2017 ENVIRONMENTAL POLICY SUMMIT

The second annual Environmental Policy Summit was held October 27 at the Clinton Presidential Center in Little Rock. With 200 in attendance, the successful summit offered morning and afternoon breakout sessions. Attendees could choose from a variety of panel discussions covering current environmental issues affecting Arkansas.

“The morning breakout sessions included “Changes in National Environmental Regulations and Policies: What They Mean for Arkansas”. A panel of leaders from state agencies, environmental organizations, and businesses analyzed recent national policy and regulation changes that affect Arkansas. And “Leading the Way at the Local level” panelists highlighted work being done in municipalities, watersheds and electric cooperatives around the state that enhance and protect our natural resources.

Al Armendariz, a former EPA Region 6 Administrator and now Senior Campaign Representative for Sierra Club’s beyond Coal Campaign, spoke at the noon plenary hour giving an engaging overview of global warming and its largest contributors nationwide and in Arkansas.



*Sam Cooke, immediate past president of Friends of the North Fork and White Rivers served as moderator for the Animal Feeding Operations break out session.*

Three afternoon sessions required a difficult choice. “When the Well Runs Dry: The Depletion of Aquifers in Arkansas, The Consequences and Alternatives” was the topic discussed by a panel comprised of a geologist, a drilling engineer and a farmer. “Animal Feeding Operations: What Do They Mean for Arkansas?” was the next choice. The effect of hog and poultry CAFOs and the policy changes need to protect public and environmental health was discussed by a qualified panel. And in “Solar in the Natural State” a panel of Arkansas energy executives presented solar projects and policy changes underway in the Natural State.

A final afternoon session capped the summit. “Climate Change: A Local Perspective” was moderated by attorney Richard Mays. Panel members included Mike Borengasser (State Climatologist for the Arkansas Natural Resource Commission), Dr. Allen Burton (Arkansas native, Professor, University of Michigan School for Environment and Sustainability), Robert McAfee (Climatologist), and Malik Saafir (President, Janus Institute for Justice).

This second annual summit proved to be worth the effort to attend (and the ten dollar cost). It was jointly sponsored by the Arkansas Public Policy Panel, Arkansas Environmental Defense Alliance, Audobon Society and the Sierra Club.

Sam Cooke

## ANNUAL COLLEGE SCHOLARSHIPS

Through the generous donations from Friends of the Rivers members we are pleased to announce the awarding of two \$1,000 scholarships for the 2017-2018 academic year.

### Lyon College – Batesville,

Samantha Westcott, a Batesville native, is a senior at Lyon College, majoring in Biology, Chemistry, and French. She is currently applying to graduate PhD programs where she can pursue her interests in environmental research. Samantha is interested in studying the white nose bat syndrome which unfortunately afflicts many of the bats in Arkansas.



*Sam Cooke, Immediate Past President Friends of the Rivers; Samantha Westcott – Scholarship Recipient; Gina Garret, CFRE Executive Director of Advancement Lyon College*

### Arkansas State University - Mountain Home

Anna Lang, a Mountain Home resident is a freshman attending ASU MH, working toward an Associate Degree in Agriculture and Natural Resource Science. Anna is active in the ASU MH Hellbenders Stream Team and has also been a member of the Arkansas Master Naturalists Stream Team.



*From Left to Right: Steve Blumreich – Friends of the Rivers President; Dr. Eddie Dry - Assistant Professor of Biology ASU MH and Friends Board Member; Anna Lang – Scholarship Recipient; Sam Cooke – Immediate Past President and Board Member; Mike Jirka – Friends Stream Team Leader and Board Member*



## MEET JESSIE GREEN

Jessie Green is the founder, executive director, and waterkeeper of [White River Waterkeeper](#). She holds a B.S. in biology, emphasis in environmental biology, from Arkansas State University, and M.S. in biology, emphasis in aquatic ecology, from University of Central Arkansas. In February 2017 she left her job as a senior ecologist in the Water Quality Planning Branch at Arkansas Department of Environmental Quality to start White River Waterkeeper (WRW), a 501(c)(3) nonprofit organization, which is under the umbrella of the international organization, [Waterkeeper Alliance](#).

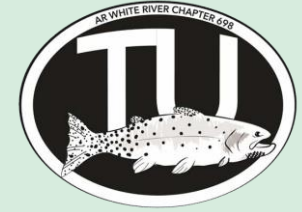


The mission of WRW is “protecting the public health and natural resources through advocacy, education, and research.” As it is essential that scientifically defensible data and research inform advocacy and education objectives, getting research and monitoring projects off the ground is the initial first step. That’s the reason Friends of the North Fork and White Rivers have partnered with WRW and provided a matching grant of \$5,000 to launch the White River Swim Guide program. The 2018 goals of this project will focus on collecting weekly *E. coli* samples from 15 sites throughout the Buffalo River watershed.

Data collected from this Swim Guide program can be utilized to inform people about the safety of the waters in which they plan to play and will be made available to the public through [Swim Guide](#), a website and smartphone app for iPhone® and Android. It helps to easily find the closest beaches and know at a glance which ones are safe for swimming. As swimming holes on river and streams are often ignored by monitoring efforts of state agencies, an emphasis will be put on data collection in these areas. These data will provide a public service while informing where additional monitoring

## FRIENDS ON THE RIVER: WHITE RIVER TROUT UNLIMITED CHAPTER 698

[Trout Unlimited](#) is a national organization with about 300,000 members and supporters organized into over 400 chapters and councils from Maine to Montana to Alaska. This dedicated grassroots army is matched by a respected staff of lawyers, policy experts and scientists, who work out of more than 30 offices nationwide. Their mission is simple: conserve, protect and restore North America's coldwater fisheries and their watersheds



The White River TU Chapter sponsors [Trout in the Classroom](#) programs in most area schools. Four in Baxter County (Mtn Home and Norfolk, and one at Dally's Fly Shop); three in Marion County (Flippin and Yellville); two in Izard County (Calico Rock). The chapter provides fish tanks, eggs and volunteers to assist teachers with set-up and maintenance of fish tanks.

Chapter 698 also conducts an annual two-day youth camp at Dry Run Creek. Children between the ages of 10 - 16 are invited to learn about trout, trout habitat, entomology, fly tying and fishing. It's always a toss-up whether the kids or the volunteers have more fun at camp.

Since there are no native trout to "restore" to the White, the TU Chapter decided to introduce a strain of fish with hopes to start a naturally spawning trout in the White and North Fork Rivers. The Bonneville Cutthroat egg planting program was planned as a five-year project. They have yet to plant eggs five times in either river, primarily because the spring planting schedule interferes with Mother Nature and



her own plans. BUT, they have planted four times in the North Fork and there are plenty of pictures and stories that prove the Bonnies are growing.

efforts are needed to identify and address the source of contamination.

Citizen volunteers are needed to assist with sample collection. Volunteers will be trained in reliable collection and reporting of data. If you have any interest in volunteering, please contact Jessie at [jessie@whiteriverwaterkeeper.org](mailto:jessie@whiteriverwaterkeeper.org).

Funding is needed for signage at monitoring locations, to support a student intern to assist volunteers with collection, sample analysis, reporting, and to further grow the scope of this program throughout the White River watershed. To invest in the health and safety of your family and friends when swimming at some of our favorite locations throughout our watershed, donate to the White River Swim Guide program today by visiting [www.whiteriverwaterkeeper.org/swim-guide](http://www.whiteriverwaterkeeper.org/swim-guide).

Another project taken on is vegetation management at Dry Run Creek. Chapter members and other volunteers conduct spring and fall workdays. The chapter has improved river walk-in access at Rim Shoals, done road clean-ups and share the TU message at events such as Sow-Bug, Cotter Trout Fest, Gregg's Wildlife Expo and the Fly Fishing Fair.

TU chapters are responsible for raising their own program funds. Chapter 698 conducts an [annual banquet/auction](#), which is scheduled for Saturday, February 10, 2018. Visit [whiterivertu.weebly.com](http://whiterivertu.weebly.com) for more information.

