



The Long Run

By James McCarty, PhD
Environmental Quality Manager

Beaver Water District (BWD) cares a lot about the water that flows into Beaver Lake because that water will eventually become drinking water for one in six Arkansans. I remember learning about the water cycle in grade school, and it could not be more important to our source water quality. It all starts with rainfall on the landscape. Some of that rainfall will evaporate, some will infiltrate into the ground to

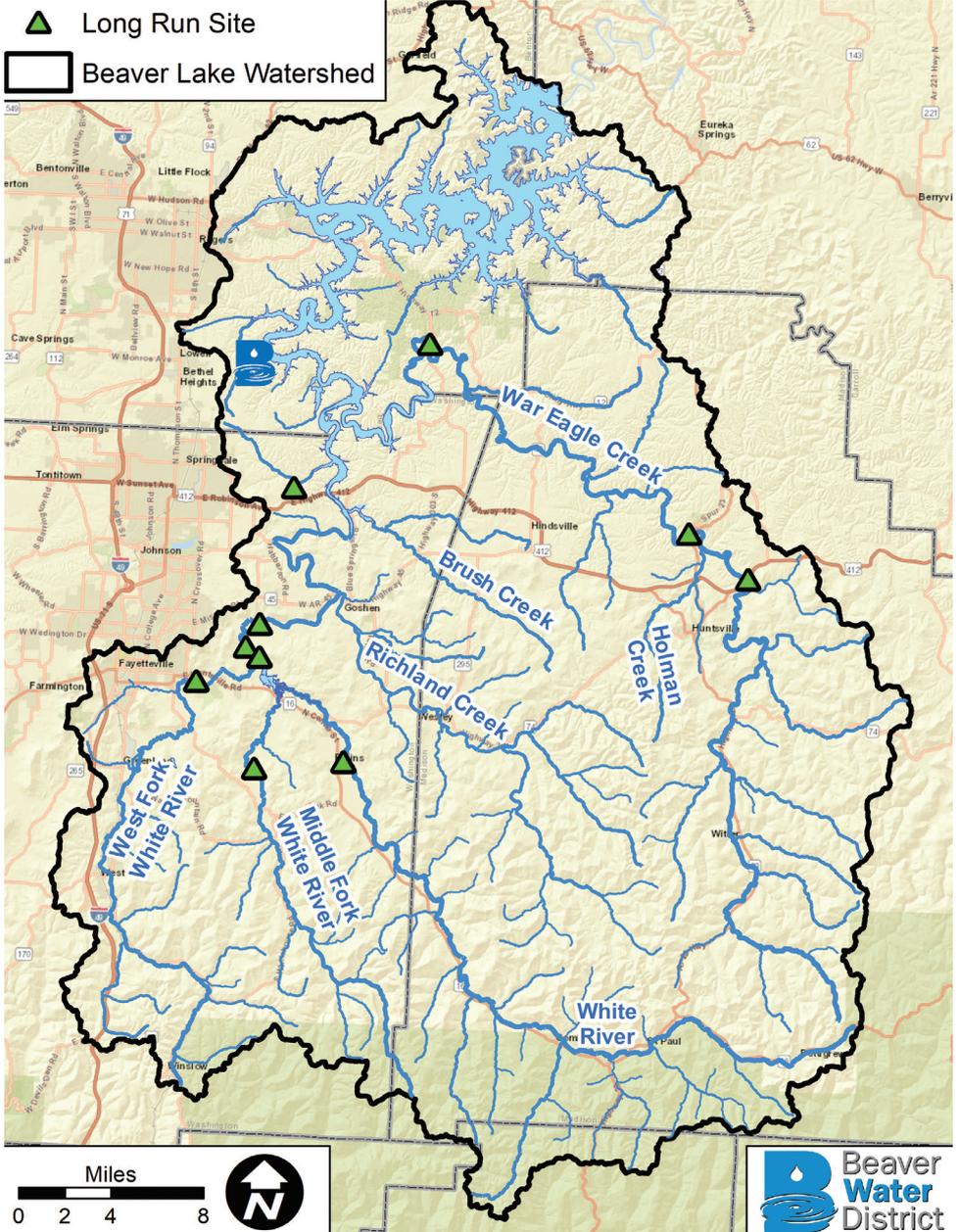
give life to plants and other living creatures, and some will flow over land accumulating first in small rivulets, flowing into creeks, then into streams, and finally into rivers. This water that flows over the land is impacted by what we do with that land. The water takes on some of the characteristics of that land use. For example, runoff from parking lots can have oil and other hydrocarbon residues, runoff from residential areas may contain pet wastes and lawn chemicals, runoff from agricultural lands may contain nutrients and animal wastes, and runoff from forests and fields may add organic carbon and sediment particles.

Beaver Water District recognized a long time ago that to understand the water quality of Beaver Lake, we needed to understand the water that flowed into it. So, in 1993 BWD started a water monitoring program to keep tabs on those streams and rivers. We call that program “the long run” because it is a long drive across most of the watershed to sample the major tributaries of Beaver Lake. In my mind, the name has taken on a double meaning as this is our longest running sampling program and has been going for almost 30 years. BWD staff has come and gone during the last three decades, but the long run remains. To be sure, we have other sampling programs that are just as important, but none of them has the longevity of the long run.



Matthew Rich, BWD Environmental Specialist, collects temperature, dissolved oxygen, and pH readings on the White River using a multi-parameter handheld meter.

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Our environmental and lab specialists at BWD tend to enjoy the long run as they get to spend the day driving through some of the most scenic areas

of Northwest Arkansas. They take water quality samples in Ozark mountain streams, then grab a delicious sandwich and stock up on bulk *Continued on page 3*

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goods at the Huntsville Pantry. They also get to avoid seeing their boss for a full day. 😊

Among the 10 stops on the long run are the old wooden bridge at the War Eagle Mill, the Wyman Road bridge over the White River, and the old Highway 412 bridge over the War Eagle. Some sites have been added and some removed during the last 30 years due to circumstances such as road and bridge changes and new water quality threats that we feel are important to follow. These may include business and residential developments or wastewater treatment plants. While on the long run, environmental specialists conduct several analyses on site, including pH, temperature, dissolved oxygen, turbidity, and conductivity. A sample also is collected and returned to the District's Water Quality Lab. The lab analyzes the samples for alkalinity, chloride, E.coli, coliforms, hardness, iron, manganese, nitrogen, phosphorus, sulfates, dissolved solids, and organic carbon.

The District uses the data we collect to establish long-term trends in the quality of the water that flows to the lake but also to assess real-time changes in water quality that may impact water treatment operations. Our long-term trends have revealed a decline in phosphorus in the White River below

the Noland Wastewater plant in the late 1990s and early 2000s due to more restrictive regulations and partnerships with the city of Fayetteville to help reduce phosphorus concentrations in their effluent. More recently, we have seen larger spikes of sediment and turbidity as the region faces recurring heavy rainfall and flood events. With water quality in the lake adequate for our treatment needs, the best thing we can observe over the long-term is stability in the data.

On a short-term basis, we can gauge the severity of a flood event and how it might impact lake turbidity, and we can look for spikes or outliers in concentrations of nutrients or other contaminants that might indicate a potential spill. While we have yet to identify anything that alarming, the District maintains its persistent watch because we realize the weight of our responsibility to the citizens of Northwest Arkansas to provide clean, safe drinking water. So, if you see someone out there in an orange vest dropping strange sampling contraptions off the bridges in the Beaver Lake Watershed, slow down, give a friendly wave and a wide berth. It is likely a Beaver Water District scientist keeping an eye on things.



Taking "long run" samples at Lake Sequoyah.



MESSAGE FROM THE CEO

M. Lane Crider P.E., LEED AP

In the Long Run

As a kid, I heard the phrase "... in the long run ..." many times. It was usually preceded or followed by something like "I know you don't want to go to school, but..." or "you'll be a better (fill in the blank)." I recall that as a child, the advice was usually unwelcome or disappointing! However, as an adult the advice is accurate and true, especially as I deliver it to one of my children!

As CEO of the Beaver Water District, the Mission of which is to sustainably provide our customers with safe, economical drinking water, the phrase "in the long run" holds significantly more meaning. Our Vision Statement is that Beaver Water District will support the quality of life and economic growth of Northwest Arkansas by preserving the quality of our drinking water source, Beaver Lake. We will promote public confidence through education and outreach, and we will cultivate an environment of integrity, excellence, trust, and respect for our employees and customers. Our updated Mission and Vision statements, and the five strategic initiatives which support them, were adopted by our Board of Directors last September and published in the Fall 2020 edition of this newsletter. However, I am reminded that previous Board members and citizen and business leaders, since the inception of the District, have had the same Mission and Vision for Beaver Lake and this organization, and I wonder how many times the phrase "in the long run" was used.

For more than a decade, in the 1940s and 1950s, the Beaver Dam Association members lobbied Congress and the U.S. Army Corps of Engineers for the construction of Beaver Dam and the creation of the

Beaver Reservoir. Numerous setbacks and obstacles must have prompted many to assure others that "In the long run, this will all be worth it" or "The construction of Beaver Dam to assure a long-term supply of water for our communities and industries is critical, in the long run, for the future of Northwest Arkansas." Over the last 60-plus years, how many directors, managers, and employees of Beaver Water District must have said something like "Preparing now for future growth will be beneficial to the District and our Customers in the long run." Or "The costs and efforts necessary to protect the water quality in Beaver Lake are worth it in the long run." Obviously, I could go on like this for pages and pages, but I hope you get where I am headed.

In my last example, past and present efforts to protect the water quality in Beaver Lake are critically important for the future of Northwest Arkansas. How development is planned and how land use and watershed protections are implemented within the Beaver Lake watershed will either provide benefits or detriments to water quality and the future cost of water. It's our choice, as it has been since the dam was completed and the reservoir filled. Generations of leaders in Northwest Arkansas have recognized this choice and have been willing to make short-term sacrifices for long-term benefits.

As business leaders, elected officials, and citizens of Northwest Arkansas, we all need to be aware of the impact of current decisions on future generations, especially when it comes to protecting our most valuable natural resource. It will be worth it ... in the long run.

Water Quality: Something You Can Count On

By Nikki Holloway
Laboratory Supervisor

In a normal year, having a clean, safe, and reliable supply of drinking water is an aspect of life that many don't think about. Typically, if you're not thinking about your water supply, we are doing our job correctly. The year 2020 was anything but a normal year and many of the things that we hold to be constants were no longer constant.

The ability to run to the store for your necessities such as an adequate food supply, household goods, or personal care products was limited as store shelves were often stripped clean. You could no longer count on your children going to school or your workplace being open. You couldn't even count on taking normal measures to stay healthy. Thankfully, something that did stay constant was the access to safe and clean water with the simple turn of a handle in your home. That, at least, was something those in our area could count on. This is something that we here at Beaver Water District hold a great amount of pride in.

Through this roller coaster ride of 2020, and now 2021, the District has worked non-stop, not only to produce drinking water but also to sample and test the water leaving our facility to make sure it meets every safety and quality guideline in place. Beaver Water District adheres to the drinking water standards set forth by the U.S. Environmental Protection Agency (USEPA). Each year Beaver Water District creates a summary of the past year's water quality through analytical results collected by the Arkansas

Department of Health Laboratory as well as our in-house Water Quality Laboratory.

In hopes to better serve those in Northwest Arkansas, we also supply our customers with a more frequently updated water quality summary titled "Finished Water Quality Results." This summary contains the results from the parameters we are asked about most frequently.

Both reports can be found on our website at the following link: <https://www.bwdh2o.org/about/regulatory-compliance/>.

Finished Water Quality Results — April 8, 2021

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| <i>Alkalinity, Bicarbonate (as CaCO₃)</i> | 44 mg/L |
| <i>Alkalinity, Carbonate (as CaCO₃)</i> | 2 mg/L |
| <i>Alkalinity, Total (as CaCO₃)</i> | 46 mg/L |
| <i>Calcium (as CaCO₃)</i> | 64 mg/L |
| <i>Calcium (as Ca)</i> | 25.6 mg/L |
| <i>Chloride</i> | 6.2 mg/L |
| <i>Chlorine, Total</i> | 1.45 mg/L |
| <i>Conductivity</i> | 180 µS/cm |
| <i>Hardness (as CaCO₃)</i> | 71 mg/L |
| <i>Iron</i> | <0.01 mg/L |
| <i>Magnesium (Mg)</i> | 1.7 mg/L |
| <i>pH</i> | 8.81 |
| <i>Sulfate</i> | 25.2 mg/L |
| <i>Total Dissolved Solids (TDS)</i> | 103 mg/L |
| <i>Total Organic Carbon (TOC)</i> | 0.96 mg/L |
| <i>Turbidity</i> | 0.06 NTU |

Korenda Allen

Named Human Resources Director for BWD



Beaver Water District has hired Korenda Allen, PHR, of Centerton as Human Resources Director. Allen replaces Pat Bates of Bentonville, who is retiring after more than 12 years of dedicated service. Allen's duties include supporting the leadership team in matters related to general human resource management

and state and federal regulatory compliance. Her responsibilities encompass compensation and benefits administration, training and development, development of policies and procedures, implementation of human resources programs, recruiting and staffing, and performance management systems.

Allen has practiced Human Resources (HR) for the past eight years, advancing her career from a recruiter to an HR generalist, and most recently in a regional role as an HR Business Partner with AseraCare Hospice. She is a member of the Society for Human Resources Management and holds the Professional Human Resources (PHR) certification. Additionally, she has been active in the Western Arkansas Human Resource Association, where she has served on the Board as Workforce Development Chair. Allen is a graduate of Arkansas State University with a Bachelor of Science in Business Administration and Economics. She serves on the American Water Works Association's Workforce Strategies Committee.

Mission

To sustainably provide our customers with safe, economical drinking water.

Visit Beaver Water District's Water Education Resources at bwdh2o.org.

B Beaver Water District
LAND-USE-LAND-CHANGE GAMES
 Learn while you play all 3 games online at bwdh2o.org

WATER QUALITY
 Create City-Scapes

WATER RESOURCES
 Build Dams & Lakes

WATERSHED DYNAMICS
 Plan Uses for Land

- Explore the **LAND-WATER CONNECTION**
- Practice Engineering, Map-Making, & More
- Grow healthy cities with habitat protection
- See how dams make "Fake Lakes" that are all actually real "Reservoirs"

It's Time For Your DRINKING WATER PLANT TOUR
 Beaver Water District

Have You Ever Seen How Water Gets Cleaned So It's Safe to Drink?
 There's a **VIDEO** to View & Lots to Do **ONLINE ANYTIME** at bwdh2o.org

Step 1: **SEDIMENTATION BASIN**
 Step 2: **FLASH MIX**
 Step 3: **FLOCCULATION**
 Step 4: **FILTER DECK**



Jordan Forbis (from left) and Sandi Formica of the Water Conservation Resource Center (WCRC) and Dot Neely of Beaver Water District take a break from planting native flowers, grasses, shrubs and trees on a restored bank of West Fork White River. The purpose is to slow bank erosion which means less sediment flowing into Beaver Lake, the source of most of the drinking water for Northwest Arkansas. To volunteer with WCRC, email linn@watershedconservation.org.

Congratulations to Brina Smith, Laboratory Analyst with Beaver Water District, who recently was recognized at the 2021 Agricultural Awards, U of A Division of Agriculture-Research and Extension, in the Outstanding Team Award division.



Join us for the 16th Annual

WEST FORK WHITE RIVER CLEANUP

SATURDAY, MAY 15 9 A.M.- NOON

HELP CLEAN UP STREAMSIDE AREAS IN SOUTH FAYETTEVILLE, GREENLAND, WEST FORK, AND WINSLOW!



COVID-19 PLAN FOR CHECK-IN

REGISTRATION IS REQUIRED for check-in location and clean up assignment



- 10 person maximum for each volunteer cleanup team
 - Masks and cleanup supplies will be provided
- Wear closed-toe shoes & weather appropriate clothing
 - Water and small snacks will be provided



Kayak from Bass Pro Shop to be raffled off during event!



TO RSVP:

Call BWA at 479-750-8007 or email



kayla@beaverwatershedalliance.org

