



Beaver Water District's Historic Steele Water Treatment Plant Gets a Makeover



The recently completed Steele Water Treatment Plant Building Renovation took approximately a year and cost about \$1 million. Olsson provided design services while C.R. Crawford Construction served as the general contractor.

“Sooner or later, everything old is new again.” That quote from author Stephen King’s novel “The Colorado Kid” doesn’t always apply, but in this case it does. The Joe M. Steele Water Treatment Plant building Facilities at Beaver Water District, on the outskirts of Lowell, has undergone a makeover. Since its completion in 1966, the plant has played an important role in the delivery of clean safe water to the major cities in Northwest Arkansas.

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“Rather than scrap the Steele building, we looked at how we could renovate it to accommodate our current needs,”

said Lane Crider, P.E., CEO of Beaver Water District. “With the rapid growth of Northwest Arkansas, the District has expanded its staff and capabilities. In this case, we needed office and workspace for our Information Systems Department. We also created redundancy for BWD’s Operations System. That ensures we can continue to operate in the event of a shutdown related to our primary operations system.”

The building also houses Beaver Water District’s Pilot Plant, which is used to test drinking water treatment plant strategies that often lead to improvements in the way BWD processes the raw water from Beaver Lake to make the best drinking water for delivery to its four customer cities – Springdale, Fayetteville, Rogers and Bentonville.

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Those receiving a tour of the facility recently included incoming BWD COO Kevan Inboden and BWD CEO Lane Crider; recent Steele-Croxtton scholarship recipients and UA students Jacqueline Steinauer, Braden Wise and Jonathan Brye; UA Associate Director of Development for the UA College of Engineering John Fray; BWD board members Woody Bassett, David Short, and Mary Gardner; and Assistant Dean of the UA College of Engineering Thomas Carter.

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Dedication on plaque

These facilities are dedicated to the people of good will who have made this cooperative venture a reality.



This is the original Steele plaque dated 1962-1966. With this latest plant renovation, the plaque was cleaned up and mounted on a new monument base. The original Steele plant could treat 10 million gallons of water a day (mgd). An expansion of the plant to 25 mgd was completed in 1971, to accommodate growth in drinking water demands. By 1978, the plant was expanded to 50 mgd and it was serving all four cities. Today, Beaver Water District's Croxton Plant and its expansion, along with the Steele Plant, can produce up to 140 mgd daily.

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The upper photo shows the Steele Plant when it was under construction in the early 1960s. The lower photo shows the same aerial view of Beaver Water District today, with the Steele Plant in the lower left corner.



MESSAGE FROM THE CEO

M. Lane Crider P.E., LEED AP

A Ghost Story

Although Halloween has come and gone already, I would like to share an interesting thought. Have you ever questioned why haunted places are rarely, if ever, new? Most are old, decrepit locations that have fallen into disrepair. There are differences that make each location unique. However, be it a hotel, a family home, a hospital, or a prison, there is always one common thread. They must have a spirit. New structures, by their very nature, aren't haunted because they have no history or stories yet to tell. Here at Beaver Water District, we have one of those locations with a spirit and a past.

The original water treatment plant (WTP) was completed in 1966, and one building housed everyone and everything... from administration and operations to maintenance, chemical storage, and chemical feed processes. On Dec. 4, 1971, a dedication ceremony was held, naming the treatment plant in honor of Mr. Joe M. Steele. Mr. Steele was a driving force behind the decades-long efforts to get Beaver Dam built, assuring an adequate water supply source for Northwest Arkansas for generations to come. Mr. Steele was one of the founding members of the Board of Directors for the District, faithfully serving from 1959 to 1976.

Originally designed to treat 10 million gallons per day (MGD), the plant and building have undergone many changes and additions, expanding to 50 MGD by 1978 and, after two additional plants, Croxton (40 MGD) and Croxton Expansion (60 MGD), were added, ultimately re-rated to a current capacity of 40 MGD. After the construction of the Croxton plants, which included new facilities for operations, maintenance, chemicals, and

administration, the Steele WTP building was utilized less and less in daily operations. With the exception of the active pilot plant and controls for the Steele plant filters, the building was mainly relegated to equipment, parts, and file storage. The original dedication plaque and a portrait of Mr. Steele had been stored away for safekeeping.

Over the years, many employees heard the unexplained sound of footsteps and other strange noises throughout the District facilities. These phenomena began to be attributed to the ghost of Mr. Steele. It makes sense to me. Mr. Steele was very passionate about Beaver Water District. It has been said that among his many significant achievements as a business leader, he was most proud of seeing Beaver Lake and Beaver Water District become reality, so he was intrinsically tied to the District. Maybe, however, he just wasn't pleased that his namesake facility was no longer being utilized to its fullest extent. No matter the reason, the ghost of Mr. Steele has made his presence known!

In this edition of *The Source*, we are showcasing that the Steele WTP building has, once again, found new life. After a yearlong renovation project, the Steele building is now home to our Information Systems department, a redundant hub for operations, and new office, lab, and training spaces. It is a space that will continue to serve the needs of the District for many additional years to come and is, once again, a facility worthy of its namesake. I'm sure that Mr. Steele would be proud of the results of this latest renovation effort, and I hope that his spirit lives on at Beaver Water District!

UA Students Awarded Steele-Croxtan Memorial Scholarships



The following University of Arkansas (UA) students have received Joe M. Steele & Hardy W. Croxtan Memorial Scholarships for Fall 2021. Jacqueline Steinauer (from left) of Fayetteville is pursuing a degree in Biological Engineering. Braden Wise of Greenland is focused on a degree in Civil Engineering. Jonathan Brye of Farmington is majoring in Environmental, Soil and Water Science. Beaver Water District Board Members donate board meeting attendance fees to the scholarship fund.

These scholarships provide financial assistance to upperclassman or graduate students in the Departments of Civil Engineering, Biological and Agricultural Engineering or Crop, Soil,

and Environmental Sciences who have demonstrated interest in drinking water treatment, wastewater treatment, environmental or life sciences. The fund is managed by the University of Arkansas Foundation. Donations may be made payable to the University of Arkansas Foundation, Inc. -- with Joe M. Steele & Hardy W. Croxtan Memorial Scholarship in the memo line -- and mailed to University of Arkansas, ATTN: Gift Services, 1125 West Maple Street, Suite 210, 1 University of Arkansas, Fayetteville, AR 72701.

For more information about making a tax-deductible donation, contact John Fray, Associate Director of Development for the UA College of Engineering, at johnfrayf@uark.edu.

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

Olsson's Fayetteville Water/Wastewater Team Wins ACEC of Arkansas Award for Beaver Water District Master Plan Update



(From left) Darryl Fendley P.E., Plant Engineer, Beaver Water District; Erin Needham P.E., Project Engineer, Olsson; Chris Hall, P.E., Team Leader for the Olsson Water/Wastewater Team for Fayetteville, Springfield, and Joplin; and Lane Crider, CEO, Beaver Water District

On Aug. 26, 2021, the American Council of Engineering Companies of Arkansas awarded Olsson's Fayetteville Water/Wastewater Team with its 2021 Engineering Excellence Award in the Studies, Research, and Consulting Engineering Services Category.

Olsson project manager Chris Hall P.E. and project engineer Erin Needham P.E. were recognized for their work on the Beaver Water District Master Plan Demand & Transmission Capacity Update at the recent 2021 Engineering Excellence Awards (EEAs), which recognizes Arkansas engineering projects that demonstrate a high degree of achievement, value, and ingenuity.

Judged by a panel of industry professionals from around the state, projects were evaluated based on uniqueness, future value to the engineering profession, sustainable considerations, and successful fulfillment of the client's needs.

The awards were presented at the annual EEA celebration held at the Arkansas Governor's Mansion in Little Rock. Beaver Water District's CEO Lane Crider P.E., as well as Plant Engineer Darryl Fendley P.E. attended the event along with Hall and Needham.

Beaver Water District (BWD) is a wholesale water district serving most of Northwest Arkansas. BWD needed a clear picture of when and how to budget for expansions to the transmission system, including the planned new Western Corridor. In addition, there were concerns regarding the possible effect on water ages (and subsequent possible increases to carcinogenic disinfection byproducts) within the customer cities' distribution systems if the Western Corridor system were constructed. In short, BWD needed analyses and recommendations for facilities that would serve plenty of safe water to the major cities of Northwest Arkansas for decades.

To solve the problem, Olsson provided a comprehensive Master Plan for BWD's transmission system, including a detailed analysis of the effects of the Western Corridor. The analysis included the combination of hydraulic water models from the district's four customer cities into one large working model. This difficult combination resulted in one of, if not the, largest working water models in the State of Arkansas. The resulting study provided a clear plan and implementation schedule for facilities that will help BWD, and the major cities of Northwest Arkansas, to continue providing safe water in adequate amounts for decades to come.

WATER

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K-12 LESSONS & ACTIVITIES

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BWD Water Education Center
301 N. Primrose Road • Lowell
479.756.3651 • education@bwdh2o.org