

IN THE PIPE



NEWSLETTER

Winter/Spring 2014

No. 5

Applying the Proper Treatment: WCSA's Methods for Cleaning Water

In the Fall/Winter 2013 issue of *In the Pipe*, we concluded a three-part series about who the Washington County Service Authority (WCSA) serves, how we serve, and some of what is involved in providing these services. To view the series, please visit our website at www.wcsawater.com. In this issue, we are introducing the first of a three-part series about our water and wastewater treatment processes.



Middle Fork Water Treatment Plant

Water Treatment General



Middle Fork Filtration Building

Typically, there are three water treatment processes in our industry, and WCSA employs all three. First, if there is a groundwater source that is not under

the influence of surface water, generally, all the utility must do is add chlorine for disinfection. Second, if there is a groundwater source that is under the influence of surface water, the utility must do more than add chlorine. However, most groundwater sources are too pure (clean) for conventional water treatment to be effective. For that reason, membrane (filtration) technology is employed. Third, if there is a groundwater source that

is under the influence of surface water and not very clean, or if the water source is surface water, conventional water treatment is typically the most effective.

Reservation Spring

This groundwater source is an artesian (groundwater under positive pressure) spring that flows by gravity from the community of Taylors Valley. Chlorine and fluoride are the only treatment required to meet or exceed water quality standards. From this location, this water is used to serve Taylor's Valley, while the remainder flows by gravity along the Virginia Creeper Trail to nearby Damascus, Alvarado, Bethel, and other areas along the Route 58 J.E.B. Stuart Highway corridor, from Damascus to the Middle Fork Drinking Water Plant. From this location, any excess water can be



Membrane Filter

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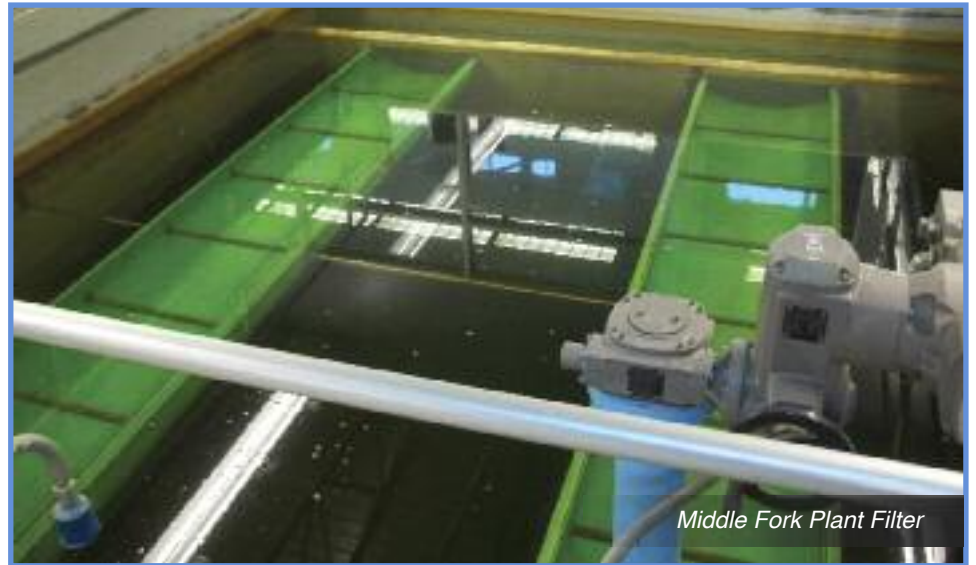
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WCSA Project Updates

To learn more about WCSA Projects, visit our website at www.wcsawater.com, highlight "Capital Projects" and select "Project Current Status" on the menu bar at the left of the page. This will direct you to our Capital Improvement Projects Report, which includes a comprehensive overview of WCSA's water and wastewater projects.

Ongoing Projects:

The **Middle Fork Water Treatment Plant Expansion, South Fork Intake and Raw Water Line Project** will expand the water production capacity of the Middle Fork Water Treatment Plant from 6.6 million to 12 million gallons per day (MGD). A second new raw water intake, expected to be operational by late March 2014, is being constructed on the South Fork of the Holston River, where raw water will be pumped to the treatment plant via a new raw water line.



tial, commercial and industrial connections along Lee Highway, and six existing industrial connections in the Oak Park Center for Business and Industry. Completed in December, this project will provide 500,000 gallons-per-day sewer capacity for new or expanding industry.

rely on private water sources. Construction began in January.

The **Rich Valley Road/Whites Mill Road Water Project** will extend water service along Rich Valley Road from Greendale Elementary School to the intersection of Whites Mill Road, and along Whites Mill Road toward the town of Abingdon. The project will serve 34 homes that currently rely on private water sources. WCSA has contracted with Tipton Construction of Bristol, Tenn., to construct this project. Construction began in January.

The **Tumbling Creek South Water Project and North Fork River Road at Tumbling Creek South Water Project** will extend water service along the remaining southern portion of Tumbling Creek Road, and also approximately 1,400 feet along North Fork River Road from its intersection with Tumbling Creek Road. These projects will provide water service to eight homes that currently rely on private water sources and have signed up for water service. Construction is expected to begin in February or March. 💧



Construction upgrades at the water treatment plant are complete, with a few exceptions that will be finalized once the new South Fork Intake is placed into service. The treatment plant is currently capable of treating 12 MGD.

The **Oak Park Wastewater Expansion Project** features construction of a sewer system to serve 21 new residen-

Upcoming Projects:

The **Nordyke Road Water Project** will replace an older, 2-inch water line along Nordyke Road, located between Benhams Road and Rich Valley Road, with new water line to improve service for 16 existing customers. In addition, a new water line will be extended in this area to serve 18 homes that currently



Mill Creek Plant Filtration System

pumped toward Glade Spring, the Town of Abingdon or the Bristol area. It is believed that this source was developed in the 1930s under the Works Progress/Projects Administration. For redundancy, this area, except for Taylor's Valley, can also be served by the Middle Fork Drinking Water Plant.

Mill Creek Water Treatment Plant

The Mill Creek Water Treatment Plant is a membrane filtration plant that is jointly owned by WCSA and the Town of Chilhowie. The plant has a capacity of 2.5 million gallons per day.

Water is supplied to the treatment plant from three springs, or groundwater that was deemed to be under the influence of

surface water. These sources are too pure for conventional treatment to be effective. Water travels from the three springs into a water storage tank for mixing and is then pumped into the treatment plant. Water travels through a prefiltration process before it is again pumped into the headworks of the membrane filtration.

Once water travels through the membrane filters, chlorine and fluoride are added, and the water is piped to two parallel water storage tanks located beside the water treatment plant. Water remains in the tanks until it has met the required disinfection time. Water is then pumped into the Town of Chilhowie's and the WCSA's distribution systems.

The Mill Creek Drinking Water Plant primarily serves Wideners Valley, Friendship, Glade Spring, Meadowview, and Emory, as well as the Town of Chilhowie. 💧

Welcome New Employees



We would like to welcome **Dave Cheek** as our operations manager. Dave joined WCSA Nov. 4. In his new role, Dave provides technical assistance to WCSA's operations departments in the areas of planning, efficiency, budget development and human resources management. His additional responsibilities include regulatory compliance management and safety program implementation. Dave comes to WCSA from Gerdau S.A. in Petersburg, Va., where

he served as Rolling Mill superintendent since 2008. His additional experience includes a variety of positions with Gerdau S.A., Chaparral Steel and ChemFirst Corp., which was acquired by Dupont. Dave and his wife, Kathy, live on a cattle farm in Russell County, Va.



Curtis Rowe joined the WCSA team on Sept. 16 as a crew worker in our maintenance department. Curtis is skilled in the operation of heavy equipment,

including a backhoe, bobcat, loader and dump truck. He and his family live in Bristol, Tenn.

Water Trivia

- There are approximately 1 million miles of water pipeline and aqueducts in the United States and Canada, enough to circle the Earth 40 times.
- If all the water vapor in the Earth's atmosphere fell at once, distributed evenly, it would only cover the Earth with about 1 inch of water.



Congratulations!

Please join us in congratulating Don Holmes for 50 years of service to WCSA! He was recently honored at a WCSA Board of Commissioners meeting, where he was presented certificates commending his service by State Sen. Bill Carrico, Del. Joe Johnson and Del. Israel O'Quinn. Don holds the record for the longest period of service at WCSA.



Although Don "officially" retired from full-time employment with WCSA in 1999, he has continued to work one week each month ever since. Don currently tests water samples at the Middle Fork Water Treatment Plant.

"I like working a week each month because it gets me out, it's good for my health, and it gets me out of the 'honey do's' here at home," quips Don.

He came to WCSA at age 25, laying concrete pipe by hand to supply water to Greendale Elementary School. Don has also installed residential water

connections, worked as a meter reader, and headed up the maintenance crew before being assigned to the water treatment plant.

Don says the variation in his career has been a good experience, and he expects to continue working with WCSA as long as circumstances allow. This is welcome news to his co-workers, who look forward to his monthly workweeks. 💧



State Sen. Bill Carrico congratulates Don Holmes for his half-century of service to WCSA.

Customer Testimonials

I just wanted to tell you how well you have done concerning your website. It's very easy to scan over and read information concerning your account, and the list goes on. Much improved and a great job.

– Ronald J.

I would like to express my sincere appreciation to the WCSA. About the first week of November, I visited your office with concerns about my declining water pressure. I spoke with customer service representative Nancy White and she was very understanding of my

dilemma. She assured me that I would be contacted by an engineer. April Helbert, manager of engineering services, contacted me and we discussed my issues. She was well prepared and said they would follow up. Within the next week, crew chief J.L. Lunsford and his professional staff repaired a major break, which has restored my water pressure. Many thanks for the cooperation at all levels by the WCSA — from the office, maintenance and engineering. They are all deserving of recognition.

– William D.



WCSA Calendar

Presidents' Day Feb. 17

Good Friday Apr. 18

Memorial Day May 26



Board Meetings

AMENDED 2014 FISCAL YEAR BOARD MEETING DATES

Feb. 26, 2014 Mar. 26, 2014

Apr. 23, 2014 May 28, 2014

June 25, 2014 July 23, 2014

Board meetings are held at WCSA in the E.W. Potts Board Room at 6 p.m. The public is welcome to attend.

REMINDER

AVOID THE TIME AND EXPENSE OF MAILING AND POSTAGE WITH WCSA'S AUTO-DRAFT, ONLINE BILLPAY, OR 24/7 PAY BY PHONE.

CALL OUR CUSTOMER SERVICE DEPARTMENT AT 276-628-7151 FOR DETAILS.

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