

IN THE PIPE

NEWSLETTER

Summer/Fall 2015

No. 11

A Day in the Life of a WCSA Wastewater Plant Lab Technician

Note: The following is the third in a series of articles on a day in the life of a WCSA employee.

Most people don't give a second thought about what happens to their water when it leaves their homes or workplaces. However, how that water is treated before being released back into area waterways is one of the most important components of public health and environmental responsibility.



(From left) Tommy Dotson, wastewater department manager, and Jimmy Mullins.

Wastewater that is not properly treated can contaminate drinking water and negatively affect human health, as well as harm fish and wildlife populations, cause oxygen depletion in waterways, and bring about restrictions on recreational water use, along with fish and shellfish harvesting.

That is where a wastewater treatment plant comes in. The WCSA operates

two such facilities — the Hall Creek and Damascus wastewater treatment plants.

Part of Jimmy Mullins' responsibilities as a lab technician and licensed operator for WCSA is helping ensure that all wastewater treated at these facilities meets or exceeds state and federal standards before being discharged to the receiving streams.

"Protecting the waterways is our main purpose," Jimmy says. "We take everyone's wastewater from washing machines and dishwashers, garbage disposals, sinks, tubs and toilets, along with wastewater from area businesses and industries, and remove all the things that might harm the receiving stream. We actually enhance the quality of the water before returning it to the receiving stream."

The procedure employed by WCSA mirrors the organic waste-removal process that occurs in nature. Microorganisms play an important role in the natural decomposition of organic waste, both in nature and in the wastewater treatment process. Oxygen enables microorganisms to oxidize organic matter. Plant operators then take the process a step further with disinfection prior to discharge.



Jimmy with a red-tailed hawk, one of several wildlife species that "visit" the plant.

Non-organic waste, including paper towels, baby wipes and diapers, and personal hygiene products, should never be discarded through a public sewer or septic system, despite manufacturing labeling. Since these items do not easily dissolve, they can damage household plumbing and wastewater treatment systems, and can cause sewer overflows, which harm the environment.

Obtaining a satisfactory effluent (discharge) requires plant operators to continuously monitor, test and evaluate the operation parameters for the treatment process, which necessitates numerous careful, deliberate procedures every step of the way.

Each day, Jimmy calibrates the lab equipment to ensure accurate measurements of all water samples. He then collects samples from each of the

INSIDE

Continued on Page 4

WCSA Project Updates	2
WCSA 2014 Drinking Water Quality Report.....	3
WCSA Receives Gold Reward	3

Meet Our New Commissioners.....	3
A Day in the Life (Continued)	4
WCSA Board Meeting Schedule.....	4

WCSA Project Updates

To learn more about WCSA projects, visit www.wcsawater.com.

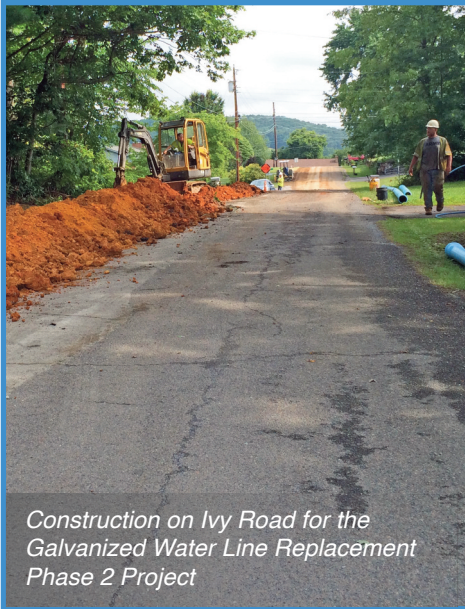
Ongoing Projects:

The **Galvanized Water Line Replacement Phase 2 Project** is the second step in a three-phase project to replace all galvanized pipe in WCSA's distribution system over the next several years. Construction began in September 2014 and is expected to continue throughout 2015.

The **Hidden Valley Phase 1 Water System Extension Project** will extend water service along Porterfield Highway to the Hidden Valley Road intersection, and northward along Hidden Valley Road to an approximate elevation of 2,500 feet (near Chestnut Grove



Construction for the Hidden Valley Phase 1 Water System Extension Project



Construction on Ivy Road for the Galvanized Water Line Replacement Phase 2 Project

Community Church). Water service will be provided beyond this location via a follow-up extension project that will require a booster pump station and water storage tank. Water for this service area will be provided by the Russell County Public Service Authority. Construction began in April 2015 and is expected to continue throughout the remainder of 2015.

Upcoming Projects:

The **Childress Hollow Road Water Line Extension Project** will extend water service along Childress Hollow Road from Spring Valley Road to Black Hollow Road. The project will consist

of an estimated 9,600 linear feet of new water line and provide water service to approximately 12 residential connections. Construction is expected to begin in the fall of 2015.

The **Route 58 Corridor Water System Improvements Project** will include improvements for the water system serving the town of Damascus, Alvarado and areas east of South Holston Lake. A major upgrade will include the installation of a new water storage tank that will stabilize water system pressure for these areas. Construction is expected to begin later this year. 💧

Did You Know?

If you have been on the Virginia Creeper Trail and noticed bubbling activity in the South Fork of the Holston River, please note that it is not the Loch Ness Monster! Instead, this is an integral part of our water treatment process to ensure that intake screens are kept clean. 💧



WCSA Publishes 2014 Drinking Water Quality Report

The WCSA recently published its Drinking Water Quality Report for calendar year 2014. This report is designed to inform WCSA customers about the quality of their drinking water and the efforts taken by WCSA to protect their water supply.

The annual Consumer Confidence Report (CCR) explains where WCSA's water comes from, what it contains, and the specific sampling and treatment performed by the water authority to prevent health risks.

The report shows that during 2014, drinking water from WCSA met or exceeded all water quality requirements, as well as all reporting and monitoring requirements, of the Virginia Department of Health and the U.S. Environmental Protection Agency (EPA).

"One of our goals is to provide exceptional water service at a reasonable cost," says Robbie Cornett, general manager of WCSA. "This report verifies that WCSA continues to deliver a safe, top-quality product for Washington County businesses and residents."

WCSA draws its water from the Middle Fork of the Holston River, the South Fork of the Holston River and several other sources. Water from most sources is treated at either the Middle Fork Drinking Water Plant or the Mill Creek Drinking Water Plant. These sources and facilities have a combined capacity to treat more than 15 million gallons of water per day. On average, WCSA performs 150 bacterial tests per month on its water treatment system.

The report may be viewed online at:

http://www.wcsawater.com/files/9914/3016/2462/2014_CCR.pdf

More information about WCSA's water distribution process, along with the technologies used for treatment, can be obtained at:

www.wcsawater.com/index.php/page-1/water-treatment-process/

WCSA Receives Gold Award from VDH Office of Drinking Water

For the fifth consecutive year, WCSA has been awarded the highest possible ranking in operations and performance excellence for water utilities by the Virginia Department of Health (VDH).

WCSA received a 2014 Excellence in Waterworks/Operations award following a 12-month analysis of data by the VDH Office of Drinking Water. Each year, the VDH recognizes drinking water plants that perform above and beyond minimum

standards, optimizing their treatment process, and running it efficiently and effectively.

WCSA's Middle Fork Drinking Water Plant was one of 22 water treatment plants in Virginia to earn a perfect score of 20 in the judging criteria. Of the 132 conventional filtration plants evaluated, WCSA was among 37 that received a gold award, while 45 received silver and bronze awards.



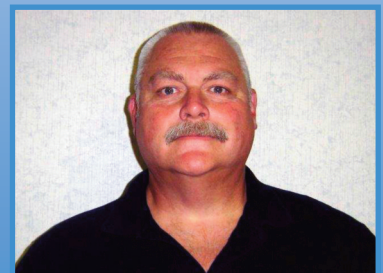
Meet Our New Commissioners



David Campbell

WCSA welcomes two new members to our board of commissioners. David Campbell and Mike White began their four-year terms on July 1.

We also express our thanks to outgoing member Frank Stephon for his years of service and contributions to our board and customers.



Mike White

A Day in the Life of a WCSA Wastewater Plant Lab Technician

Continued from Page 1

plant's treatment units, including the influent, or raw wastewater from the plant's collection system; the three basins comprising the oxidation ditch, which serves as the primary treatment for the wastewater; and the clarifier, where the solids that are separated from the water stream settle.

After spending several hours analyzing the water samples, Jimmy interprets the resulting data to determine what operational adjustments need to be made in the treatment process to ensure optimal results.



"We also run a chlorine analysis three times a day," Jimmy says. "We are required to have a 30-minute contact time with the chlorine to kill harmful pathogens, and then we add sulfur dioxide to remove chlorine residual from the water. That's one of the most important analyses we run, along with also making sure we don't alter the oxygen levels for fish and other aquatic life in the receiving stream."

"In addition, we monitor E. coli and ammonia so that we discharge as little of that as possible," Jimmy adds. "Those parameters are also 99.9 percent removed. This is done to protect not only people and the intake for the drinking water system, but also animals and aquatic life."

A resident of Bristol, Virginia, Jimmy joined WCSA in 2010 as an operator, but he eventually gravitated to the laboratory at the Hall Creek facility.

"I just took interest in the lab work and I enjoy that part of my job," he says. "It frees up my co-workers to do other important things, and it now takes up the majority of my daily duties. WCSA is a great place to

work. I couldn't do what I do each day without my manager and my co-workers."

Jimmy's supervisor, Tommy Dotson, is quick to praise the Clintwood, Virginia, native for his contributions to WCSA's operations.

"Jimmy is an important part of the wastewater department team, and he's a big reason why we have such excellent discharge results," Tommy says. "If a treatment plant wants to produce an excellent effluent, then the team has to have an excellent operational strategy and understanding of the biological treatment. Jimmy is a natural at that. He's constantly monitoring and analyzing the treatment process. We have to know what enters the plant, the environment for treatment of the wastewater, and what leaves the plant, and all week long we're monitoring all of that. Jimmy is outstanding, and he always keeps a close eye on the treatment plant's process and operations."

In his spare time, Jimmy enjoys riding dirt bikes on mountain trails or at the I-81 MotorSports Park in Greeneville, Tennessee, with his 15-year-old son, Jeremiah. He is also a member of the Kettlefoot Rod and Gun Club in Bristol and enjoys long-range target shooting.

Married with three children and one grandson, Jimmy even gets his family involved in his job on Earth Day every spring in Abingdon.

"I collect samples from our oxidation ditch that have a majority of the microorganisms in them, then let the public view those through the microscope. They are very interested in viewing those and learning how we treat the wastewater. My son seems to be able to get the younger generation interested in what we do and can answer their questions. That's a good thing because they need to know the importance of wastewater treatment, its impact on people and wildlife, and whether it's okay to fish or swim in a stream."



WCSA Calendar

WCSA offices will be closed on the following holidays:

Labor Day Sept. 7

Columbus Day Oct. 12



Board Meetings

UPCOMING BOARD MEETING DATES

Aug. 24, 2015

Sept. 28, 2015

Oct. 26, 2015

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

Actual dates may vary. Please contact our office to confirm all meeting dates.

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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