

2020-2021 Annual Report



CONSOLIDATED UTILITY DISTRICT
Rutherford County, Tennessee





ROGER GOODSON
General Manager

As the new General Manager of Consolidated Utility District (CUD), I understand how critical safe, reliable drinking water is to the growth of Rutherford County. As a public utility and an essential service, our work touches every home and workplace. With that in mind, I'm working toward the following:

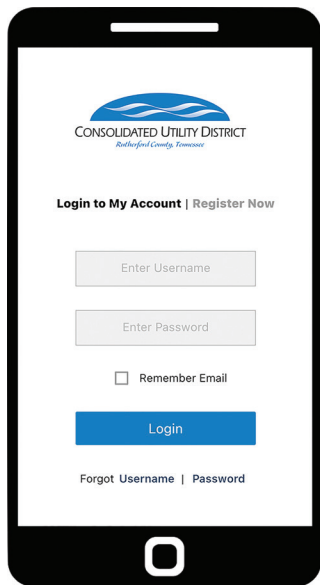
The highest possible standards of workplace safety. I know from personal experience that safe, healthy employees and staff members produce their best work. We're also taking proactive and appropriate measures to safeguard our workforce during the pandemic.

Transparency and accountability. Numbers tell the story. The science of water and the data generated by our various departments will be our guide for continuous improvement while openly sharing this information with our ratepayers.

COVID COUNTERMEASURES

Because CUD provides an essential service, we have taken a number of steps to protect the water supply, our workforce, and our ratepayers.

- The county's water supply was never at risk, and COVID-19 has not been detected in drinking water. CUD uses chlorine in its daily treatment processes. Chlorine is highly effective in removing viruses that are even more resistant than COVID-19.
- CUD employed a company to provide daily cleaning to the interiors of buildings on our campus.
- Employees in customer-facing roles wore masks unless a solid barrier, such as glass, offered protection.
- CUD complied with all local, state, and federal mandates with regard to social distancing and wearing of masks.
- Remote work environments were set up for employees as needed.
- Employees were instructed not to report to work if running a fever.
- All employees practiced social distancing, and meetings were held remotely when possible.



CUD Has An App!

As of June, myCUD had more than 4,000 downloads among our ratepayers. As a reminder, myCUD is available for iPhone and Android on the iPhone App Store and the Google Play Store.

myCUD provides a number of customer-friendly functions including:

- 24/7 access to your account
- Your billing history
- One-click contact with Customer Service or CUD's Facebook page

Future upgrades are expected to include links to career opportunities and water service alerts.



You can scan the code above with your smartphone to view our brief video that carries the highlights of our 2020 Water Quality Report.

2020 Water Quality Report

Consumer Confidence Report

In June and July, CUD published its annual Water Quality Report at cudrc.com/water-quality/water-quality-reports/ and mailed copies in our printed billing statements. Highlights include:

- Per state and federal law, CUD tests hundreds of water samples at our water treatment plant and in the distribution system. [Tap water is analyzed even more than bottled water.](#)
- For 14 different kinds of contaminants – including lead – CUD had zero violations. Your water has a clean bill of health, according to the Environmental Protection Agency and the Tennessee Department of Environment and Conservation.
- CUD uses chlorine at a rate of 2 to 2.5 parts per million in its daily treatment process. Chlorination is the most popular method of water disinfection worldwide, and it is required by Tennessee state law. [Chlorine is also considered effective in eliminating COVID-19.](#)

CAPITAL IMPROVEMENT PLAN 2020-2021

During our fiscal year, CUD spent just over \$26.3 million to operate the water distribution system. That number includes the operation of our water treatment plant, consumables, and the costs of equipment. The following two tables describe our top 10 capital improvement projects (from most to least expensive) and the benefit each project offers our ratepayers.

South Almadale Loop - Shores Road	\$3,389,000	Replaces outdated, undersized water mains with new lines for better flow and pressure with lower maintenance costs
Highway 231 North Water Main Replacement	\$2,363,072	Replaces outdated, undersized water mains with new lines for better flow and pressure with lower maintenance costs
U.S. Army Corps of Engineers Storage Fee	\$2,083,090	Provides additional water supply capacity to the water treatment plant to support customer growth
Rocky Fork Road to Tank	\$1,925,590	Installs larger, longer-lasting pipes for better flow and pressure with lower maintenance costs

Walnut Grove Water Main	\$1,767,808	Installs larger, longer-lasting pipes for better flow and pressure with lower maintenance costs
Rocky Fork Pump Station	\$1,611,500	Replaces a pump station for better pressure zone efficiencies in conjunction with water main replacements
DMA Stations	\$830,000	Improves monitoring of flows in the water distribution system to locate leaks before they become major problems
Asbury Lane and Burnt Knob Road	\$716,842	Installs larger, longer-lasting pipes that deliver better flow and pressure with lower maintenance costs
East Lyons Road and Valley View Road Water Main Extensions	\$613,129	Extends water mains in areas where water service was not available and replaces valves that are not functioning properly
Triple Crown Farms Service Line Replacements	\$230,685	Installs new pipes and adds check valves to fire hydrants for better protection from reverse flow that could contaminate water mains

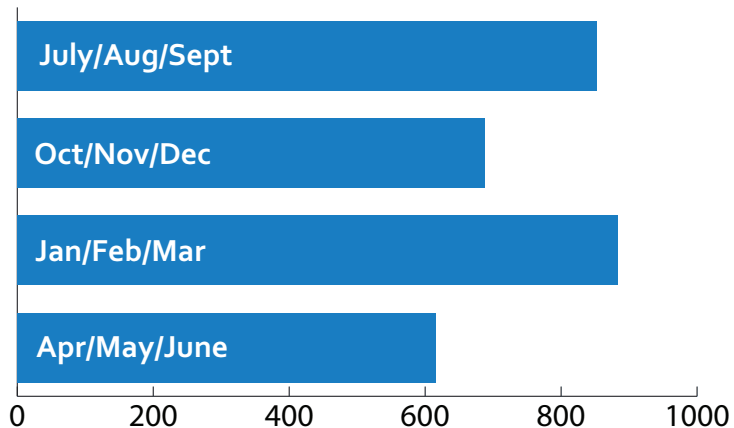
ESSENTIAL TRUTHS ABOUT CUD

- We exist to serve our ratepayers.
- We are funded by tap fees and monthly bills. We receive no tax dollars.
- CUD is nonprofit and considered part of county government.
- State law allowed for the creation of CUD.
- CUD is subject to all Tennessee state government meeting laws.
- We operate by EPA and state conservation regulations.
- Any and all profits CUD makes are re-invested into capital improvements and debt reduction.





New Taps Installed - Fiscal Year 2020-2021



Also in Fiscal Year 2020-2021 ...

614

total water leaks repaired

total yards repaired

798

437,131

gallons flushed

meter boxes replaced

155

178

meter yokes replaced

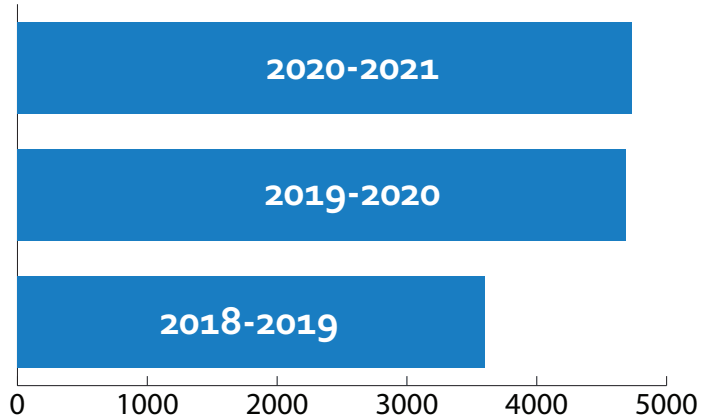
WATER TREATMENT PLANT



- To support the continuing growth of Rutherford County, the K. Thomas Hutchinson Water Treatment Plant completed a \$15.5 million expansion in 2020. The upgrade enables the plant to deliver up to 30 million gallons of water per day.
- The plant operates at a zero discharge. The facility sends no materials back to Stones River or any wastewater plant in the area.
- In 2020, the plant deployed a machine called the FlowCam Cyano to screen for bacteria which can potentially become toxic. The FlowCam uses a red laser and image recognition software to separate cyanobacteria from other algae in sample water. This helps CUD to eliminate bacteria and preserve water quality.



Gallons Pumped (in Millions) by Water Treatment Plant



In Fiscal Year 2020-2021, the plant averaged
a daily flow of 12.9 million gallons.

The highest monthly total for production in
Fiscal Year 2020-2021 was June 2021.

The plant produced
460.441 million gallons of water.

ENGINEERING



For several years, CUD has provided engineering consulting services to developers without any adjustments to our rates. After an analysis to our fee structure, we learned that those rates required an increase to correspond to the value of the services CUD provides.

In 2021, CUD informed area developers of these adjustments and defined exactly which services would incur higher rates. Ultimately, development must pay for itself.



1,161

STEP tank installations –
total number tested



442

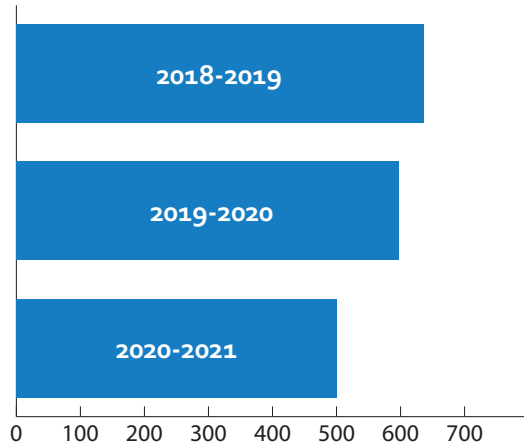
flow tests
conducted



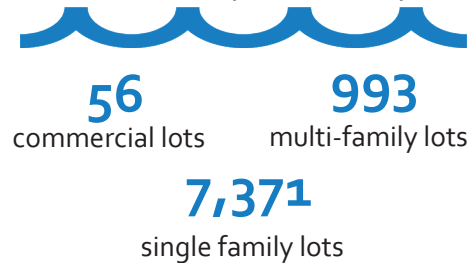
268

building code
reviews

Bacteriological Samples Tested For New Water Mains and Repairs



Water Availability Service Requests



1,122 

plans reviewed and
plats signed

355 

service orders
completed



There were approximately 250,000 attempts to breach CUD's defenses last year. None succeeded. CUD averages 25,000 attempts at our firewalls monthly, and CUD averages 171 daily phishing/malware attempts via email.

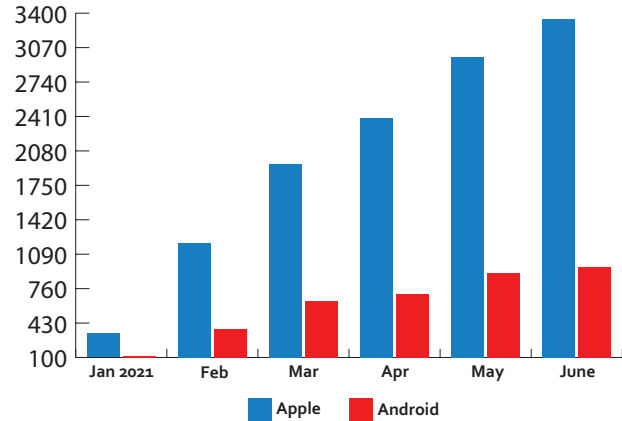
CUD uses a layered cybersecurity approach. Before data can be brought into CUD's network, it must travel through two layers of protection. Once data is inside CUD's protected network, we have additional security through our email provider, as well as our end points (servers, desktops, laptops, and mobile devices). This approach has numerous monitoring triggers so CUD is aware of any risk at any point.



Common sense steps to protect yourself online ...

- Don't open email from strangers.
- Make sure your device updates are current and don't forget to back up your data.
- Use strong passwords (passphrases) – longer than eight characters, preferably longer than 12, with symbols, numbers, and upper and lowercase letters.
- Use two-factor authentication on your devices (1. Something you know – like a password 2. Something specific to you – like a thumbprint or a text verification to a cell phone).
- Never click on strange links sent to you.
- Don't give out your personal or financial information online.

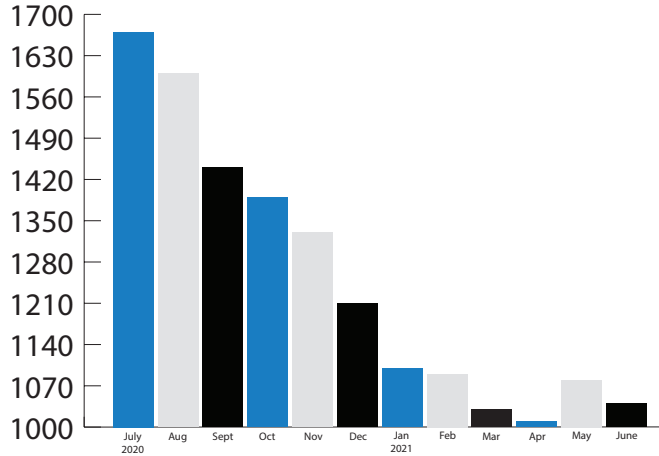
Downloads of myCUD App:
The First Six Months



LEAK DETECTION



Water Loss in Gallons Per Minute

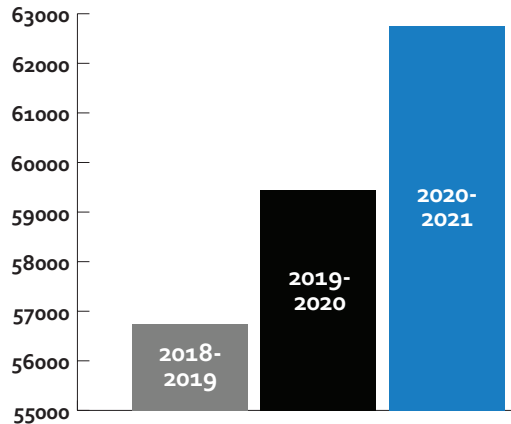


Some context for this chart ...

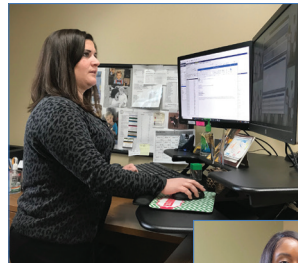
- Leak detection is an ongoing effort. Our crew must first learn that a leak has occurred, then start the process of deduction that will lead them to the exact site.
- While CUD strives to account for every gallon of water, it is worth noting that our treatment plant produces more than 400 million gallons of water each month.
- Since 2008, CUD has used automated meter reading as a method of leak detection. We also place automated calls to customers when their meters indicate 24-hour consumption.

CUSTOMER SERVICE

Three-Year Growth
in Number of Customer Accounts



During a typical month, our Customer Service team manages 650 to 750 online service orders, along with roughly 200 new tap purchases.



SAFETY

- All employees completed required trainings for Hazardous Communications, Bloodborne Pathogens, Emergency Action Plans, 811- Call Before You Dig, Drug Free Workplace, Defensive Driving, Environmental Hazards, and Workplace Harassment.
- Groups of employees have completed the following trainings:
 - >> First Aid/CPR/AED
 - >> Excavations and trenching
 - >> Forklift training
 - >> OSHA 10/General Industry
 - >> Aerial lift training
 - >> OSHA 10/Construction
- Year over year improvements: CUD had two OSHA recordables (four occurred in 2019) and no Lost Time Work Incidents since November 2018.
- CUD enacted nine new workplace safety policies covering topics from heavy equipment to inclement weather to protocols for working near roadways.

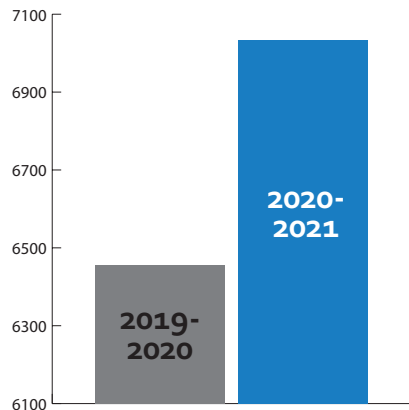


CUD employees drove 878,972 miles for Fiscal Year 2020-2021. For comparison, there are just over 940 miles in the County Road Book.

WASTEWATER



Two-Year Growth of STEP Systems in Rutherford County (Number of Tanks in Service)



- Because of the limestone in Rutherford County soils, water does not drain easily. However, CUD can place a STEP (Septic Tank Effluent Pump) field on those soils, which provides the foundation for water service and allows establishment of many of the homes and subdivisions in Rutherford County.
- Beginning in March 2021, CUD began repair and replacement of STEP riser lids throughout the county. By the end of the Fiscal Year, CUD had completed this work in seven subdivisions. This project is ongoing.
- Oldest STEP systems in use: Riverwalk and Crescent Glen - both entered service in October 2000
- Newest STEP system: Pembroke Farms - active in February 2020

CERTIFICATIONS EARNED BY EMPLOYEES AND STAFF

- A member of our Valve Operation Team earned his Associate of Science degree from Motlow State.



- Three members of our water treatment plant completed the following certifications: Grade 4 Water Treatment, Grade 2 Distribution, and Grade 3 Water Treatment Plant Operator.



- Our Safety Director completed the necessary coursework and exam to become a Certified Safety Professional.



- Our Land Manager earned Tennessee Right Of Way Herbicide Application Certification.



All three members of our GIS Team (Geographic Information Systems) have earned drone flight certification through the Federal Aviation Administration. With that certification, our GIS Team members manage drone flights that monitor the integrity of our water storage tanks and provide exact locations for underground assets throughout the county.

FACTS ABOUT OUR SERVICE AREA

The geographic boundaries of our footprint are as follows: CUD serves water from the Cannon County line on the East to the Williamson County line on the West, and from the Wilson County line on the North to the Bedford County line on the South.

CUD's largest customers in terms of water usage include:

- Murfreesboro's largest hotel property
- Student residences at Middle Tennessee State University
- Apartment communities throughout the county
- Neighboring utilities
- Fire departments



**CUD serves approximately
170,000 people**

DID YOU KNOW



- Consolidated Utility District was established in 1968 when the utility districts of Double Springs, Stones River, Florence, and Rockvale merged together.
- In 1978, CUD's Board of Commissioners authorized development of the K. Thomas Hutchinson Water Treatment Plant, which began operating in 1981 with the capacity to produce four million gallons per day. The plant has undergone a number of upgrades and expansions to better serve the growth of the county. The latest plant expansion was completed in 2020, increasing the maximum output to 30 million gallons of water per day.
- CUD typically spends \$10-\$12 million each year to upgrade and expand water infrastructure.
- CUD has installed more than 1,400 miles of pipe in Rutherford County. That's greater than the distance from Murfreesboro to Albuquerque, New Mexico.
- CUD has received requests for advice from as far away as Canada, Guam, the United Kingdom, and Israel.

BOARD OF COMMISSIONERS

Our Board consists of five members,
all of whom are CUD ratepayers.

Our commissioners serve
four-year terms.



John L. Batey, Jr.
President



Carter Woodruff
Vice President



Craig Lynch
Secretary/Treasurer



Dr. Rosemary Owens
Commissioner



Lynnissee Roehrich-Patrick
Commissioner



Chip Pinion
Advisor



Hassel Smith, III
Advisor



Allen Swader
Advisor

HOW CUDRC COMMUNICATES



website: cudrc.com
payment portal:
connect.cudrc.com



Facebook: CUDRC
LinkedIn: Consolidated Utility District
of Rutherford County



myCUD app
Available for iPhone
and Android



Newsletter sign-up:
cudrc.com/newsletter/



Customer Service: (615) 893-7225
Monday - Friday, 8:00 a.m. - 4:30 p.m.
cudcustomerservice@cudrc.com