



2020 ANNUAL REPORT



Demonstrated **Resiliency** Through a **Dynamic** Year

Mission

To enhance our community through exceptional service.

Vision

To inspire social and economic improvement through intentional action.

Core Values

- **Commit to providing exceptional customer service.**
- **Consistently strive to improve the quality, safety, and reliability of our services.**
- **Collaborate with others to encourage community growth and improvement.**
- **Become a leader in our industry, improving the quality of life for our customers and inspiring others by our superior results.**
- **Methodically plan our actions in keeping with our mission.**
- **Achieve greatness through discipline and consistency, not luck.**



Table of Contents

A Message from the General Manager	4
HUB Organization	5
Management Team	6
Supervisors	7
General Statistics	8
Highlights for 2020	9
Meeting the Challenges of 2020	10
HUB Considers Investment into Solar Energy	12
Cast Iron Gas Line Replacement Project Conclusion	13
CDBG Water System Improvements	14
Riverbank Stabilization Projects at Bullard Ford Rd. and Harriman's Riverfront Park	15
HUB Achieves Major Goal at its Sewer Plant!	16
Mutual Aid – Cookeville Tornadoes	18
Home Uplift™ Program	19
HUB Partners with the City of Harriman for an Innovative “Trunk or Treat” Event	20
HUB Gives Back to the Community during the Holidays	21
Safety	22
How can HUB Serve You Better?	23

A Message from the General Manager

To the Community we serve:

When I took over as General Manager, there were many challenges I envisioned facing in the future...none compare to those we've been asked to face this year. The year 2020 will never be forgotten. It was an emotional roller coaster for all of us, filled with uncertainty, awkwardness, frustration, and sadness...my leadership skills were stretched to new levels. I kept telling myself especially in the early days, 'there is no right or wrong answer, but I must provide answers!' With the support of our Board of Directors, we adapted, we adjusted when needed, and we ultimately overcame. I was especially proud to witness the drive behind each of our employees to find innovative ways of solving problems and meeting challenges. To say I am proud of them would be a serious understatement.

During this difficult year, we've undergone major infrastructure projects and embarked on ambitious modernization programs. My staff has continued to function efficiently while working remotely, in staggered shifts, and under enhanced safety protocols to ensure we can continue to provide viable utility services. Our administrative personnel have worked tirelessly to create and implement new policies in an environment of constant change. Perhaps the most impressive accomplishment this past year (and it is difficult to pick "one") can be measured in the fact that despite all these obstacles; HUB was able to weather the economic impact of the pandemic. Thinking back to the onset of the pandemic and the subsequent "government shutdown", we were very uneasy about how we might pay salaries. I am proud of President Trump and our governing bodies for acting quickly to distribute stimulus and aid to those who needed it most.

We also managed to maintain some semblance of normalcy in the form of our community outreach programs. This year, we embarked on a partnership with TVA to provide much-needed energy efficiency upgrades to area residents via Home Uplift™. We also worked closely with municipal leadership to coordinate the third annual "Harriman Trunk or Treat" event, and provided gifts to area children through our annual Angel Tree project, a partnership with the Harriman Housing Authority.



Every one of these achievements is a testament to the quality, expertise, professionalism, and dedication of the employees serving you, the rate-payers, at HUB. I am certain that as we proceed into this new year, and whatever it may have in store for us... our team will continue to provide the service you expect, and the quality we require from ourselves.

Sincerely,

Candace Vannasdale, P.E.
General Manager

HUB Organization



Lonnie Wright - Chairman

Mr. Wright is a graduate of South Harriman High School, the Castle Heights Military Academy, and the University of Tennessee. And he retired as the Plant Utilities Operation Manager at the Y-12 facility in Oak Ridge. He has served several terms on both the Harriman City School Board, and Harriman City Council. He was initially appointed to the Harriman Utility Board from 2005-2008, and has been serving his second term since 2016.

Mr. Wright is also an active member of Trenton Street Baptist Church.

Edgar "Buddy" Bowers - Vice-Chairman

Mr. Bowers is a sixth-generation Roane County native, veteran, retired corporate counsel, and noted leader within several civic, service, and charitable organizations.

He attended Georgia Tech and Georgia State before graduating with honors from the Emory University Law School. He opened private law practices in both Rockwood and Harriman and accepted a post with the corporate legal department of the Lockheed Martin Energy Research Corporation. After retiring as Vice President and General Counsel, he continued to serve as Senior Counselor of the Tennessee Bar Association, and an emeritus member of the State Bar of Georgia.

In 2009, he was appointed to the Harriman Utility Board and is now serving his third term having been elected Chairman in 2016.



Alicia Harris Board Member

Alicia Harris is a graduate of Harriman High School and has two Associate Degrees from Roane State Community College. Alicia has been an employee with the U.S. Department of Energy since 1985 in the Environmental Management Organization.

Alicia is a member of St. Mary's Baptist Church in Harriman, TN and has served on the Harriman Housing Authority Board for over 15 years and a temporary assignment to the Harriman City Council.



Charlie Jones Board Member

Mr. Jones is a graduate of Roane County High School and enlisted in the Army National Guard in 1981. He graduated from the U.S. Army Infantry School at Fort Benning, Georgia in 1982, and continued to serve with the Guard until 1991.

Following the terrorist attacks in New York on September 11th, 2001, he once again volunteered, joining the Tennessee Air National Guard.

Charlie was appointed to the Harriman Utility Board in 2015.



Diana Knobloch Board Member

Mrs. Knobloch graduated from Robert Morris Business College in 1980. She then worked for several years in sales at the Ampex Corporation. In 1990, Diana, along with her husband, Bruce, purchased the Farnham Building and opened Farnham's Café on Roane Street.

Mrs. Knobloch served as Executive Director of the Roane County United Way from 1998-2011. She has also held positions as President and current Secretary of the Harriman Rotary Club and served as part of Leadership Roane County.

Full biographies are available at our website: hub-tn.com/board.html

Monthly Board Meetings

HUB board meetings are open to the public on the last Monday of every month. Except as posted, board meetings are held at 5:30 pm at the Main Office located at 200 N. Roane Street, Harriman, Tennessee 37748. Workshop sessions are also open to the public. Dates for these meetings are always posted on our company website, www.hub-tn.com.

Management Team



Candace Vannasdale – General Manager

Candace Vannasdale, P.E., has served as the General Manager for HUB since May 2018. Prior to this role, she served as the Manager of Gas, Water & Sewer (GWS) Administration & Engineering. Before beginning her career for HUB in 2014, she gained over 5 years of civil and environmental engineering consulting experience in Nashville and Knoxville and worked during college for both the Jackson Energy Authority in Jackson, TN and the White House Utility District in White House, TN.

Born and raised in McMinnville, TN, Candace holds a M.S. in Environmental Engineering from the University of Tennessee (2013) and a B.S. in Civil Engineering from Tennessee Technological University (2008). She is a licensed Professional Engineer in the State of Tennessee and is a certified Grade II Distribution System and Grade II Wastewater Collection System Operator in the State of Tennessee.

Dusty Fagan – Manager of Finance

Dusty Fagan graduated from the University of Tennessee at Knoxville where he earned a Bachelor of Science degree in Accounting in 2005. He subsequently received an MBA from Tennessee Tech University in 2014.

He worked for the Lenoir City Utility Board before joining HUB in May of 2017 as the Accounting Manager. Mr. Fagan then was promoted to Manager of Finance in May of 2018.

Dusty also provides leadership to the Administrative Departments of HUB, overseeing operations related to Human Resources, Accounting, Billing, Customer Service, Information Technology, and GIS/Engineering.



Heath Lewis – Manager of Electric

Heath Lewis graduated from Harriman High School and attended the University of Tennessee at Knoxville where he earned a Bachelor of Science degree in Electrical Engineering in 2004.

He worked as a Production Supervisor for General Shale, and a Process Engineer for Exedy America before joining HUB in 2010 as the Electrical Engineer. He was promoted to the Manager of Electric in 2017.

In this role, Heath is responsible for aspects of engineering, design, construction, and operation of the HUB electric system. In addition, he provides overall supervision of scheduling of the work of the Line and Right of Way crews. These functions include coordinating new service and system upgrades, as well as regular maintenance of all substations and associated equipment.

Frankie Davis – Manager of GWS

Frankie Davis serves as the Gas, Water, and Sewer (GWS) Manager for HUB. After graduating from Harriman High School with several years' experience working in his father's welding shop, Frankie gained experience in the construction industry before coming to work for HUB as a cashier in 1986. He quickly progressed within the company becoming a tree trimmer, utility man, meter reader, wastewater plant operator, welder, GWS foreman, GWS superintendent, and eventually the GWS Manager. During his time in GWS, Frankie has managed many major projects including the recovery from the TVA Coal Ash Spill Disaster, acquisitions of neighboring systems, and TDOT Utility Relocations and system extensions throughout the HUB service area. Mr. Davis was also instrumental in starting the Roane County Utility Forum, which allows all utility providers in Roane County to meet quarterly to discuss current projects and issues/concerns with one another.



Supervisors



Tommy Barnard
Director of IT



Terecia Kreis
Billing Manager



Jeremy Gibson
Director of Safety



George Melhorn
Electric Superintendent



Joshua Gillespie
Director of Communication



Jeff Mize
GWS Superintendent

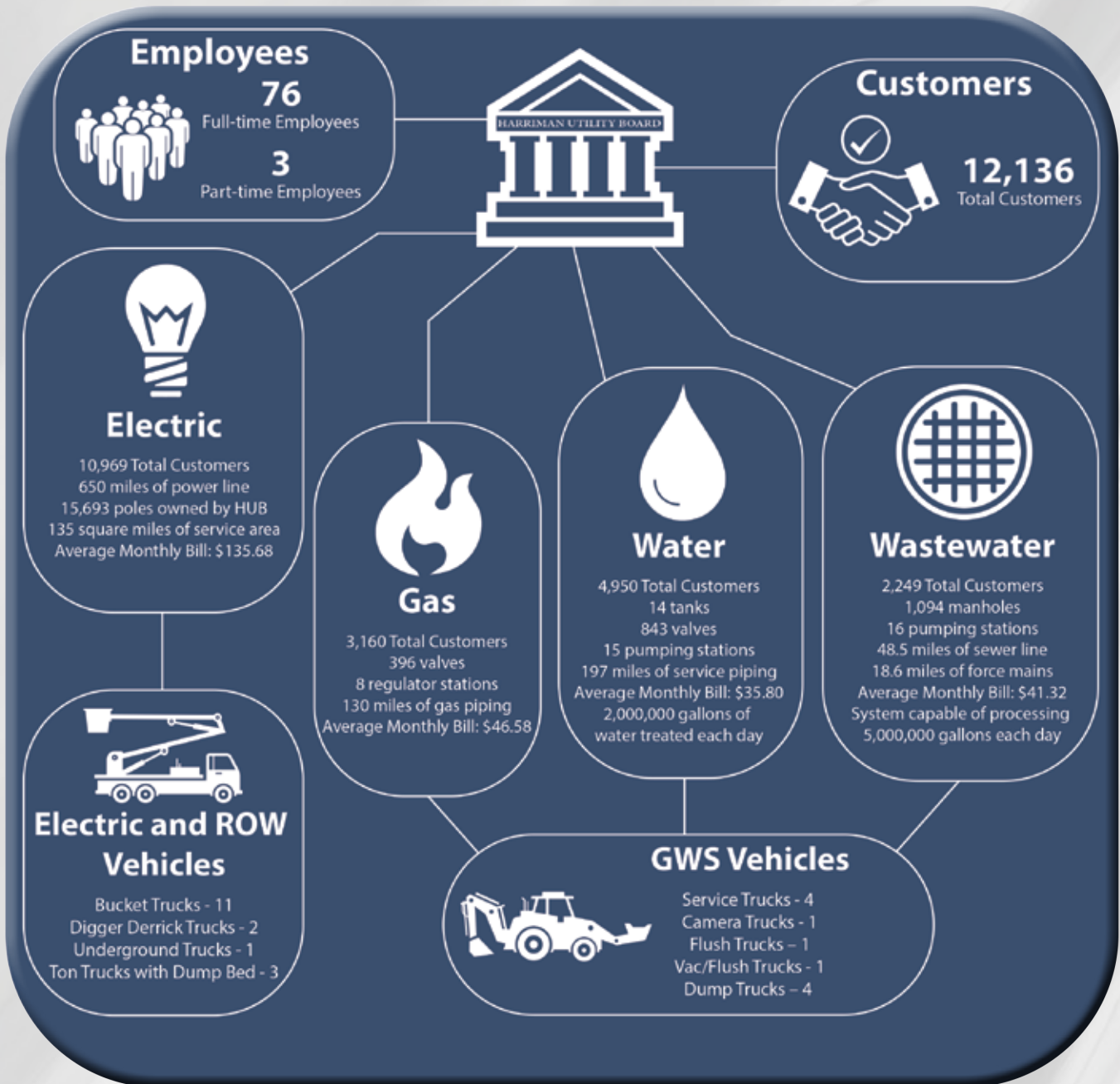


Andrew Knobloch
Customer Service Manager



Connie Voyles
Director of HR

General Statistics



As a public entity, HUB is required by the State of Tennessee Utility Management Review Board (UMRB) to conduct annual audits. The primary purpose of these audits is to ensure that gas, water, and sewer departments are self-supporting, and avoid financial deficiency. As a distributor of electric power, HUB submits to further federal oversight by the Tennessee Valley Authority (TVA).

Highlights for 2020



Reduced number of hours customers are without power due to squirrel-related outages by 70% between 2019 and 2020!



Launched Home Uplift program to assist lower income homeowners with much needed energy upgrades.

Employees partnered with TVA to support the Second Harvest Food Bank at Midtown Elementary in June.



Completed final construction project to completely eliminate cast iron gas main from our system!



Linemen provided mutual aid relief to Cookeville following devastating tornadoes Easter weekend that took the lives of 18 people.



Employees raised \$3,000 through payroll deductions in 2020 to support community outreach and events.



Replaced nearly 70% of customer water meters using grant funding!

Employees provided Christmas gifts for 30 children in our community!



Meeting the Challenges of 2020

In the early days of the pandemic when we saw the virus enter Washington, California, and New York; I think we all had a bit of wishful thinking that it would be stopped immediately. We had been conditioned through movies and television shows to believe that in our modern world driven by data, science, and technology, that our government would have the resources to stop any threat in its tracks. What we quickly came to realize is that our society is not as well organized and sophisticated as we hoped. Instead, the year 2020 felt a lot more like a real-life science fiction movie. Coupled with a tumultuous election battle, the average conspiracy theorist seemed more and more credible...or perhaps that was just us having too much free time on our hands with the cancellation of events, vacations, sports, and other social gatherings. We do not know where the virus came from exactly. And we do not know how to stop it. Even with the long-awaited vaccines, we are still unsure how long the protection will last or if the vaccines can be distributed to the entire population in time to prevent the virus from mutating into an uncontrollable number of new strains.

In a year riddled with uncertainty and fear, however, we discovered many signs of hope. We stayed home more. We cooked our own meals. We finally stocked our pantries and bathroom closets with extra food and household supplies. We learned how to make our own cleaning products when disinfecting products became scarce. And we all learned how to actually avoid the seasonal flu! We became more adaptable. We found innovative ways to stay connected to friends and family. For the first time, we were faced with a common threat that would negatively impact all our lives at the same time. And together we would fight against it.

To say that 2020 has been a year full of challenges would be an understatement. Early on, we were reminded that we at HUB provide "essential services" and therefore our employees were "essential workers". We had always known this, but we typically only felt it after major storms or damage occurred. The pandemic forced us to think differently about our business. There were days we pondered what would happen if the entire line crew got sick at once. Would we call contract crews? Would we call neighboring utilities to request mutual



aid? Would either of these even be an option? If we were all to become sick, then certainly the employees at the neighboring utilities would be as well. Would we be forced to have employees work while sick? Would we need to require employees to live on site to isolate them from catching the virus? What about the water plant and sewer plant? There are only a handful of employees trained to be operators. And what about our other crews? If too many employees were to get sick at once, who would clear downed trees, repair gas or water leaks, and unclog sewer mains? Back at the office, we felt somewhat safer because many of us have our own offices. But how good is our ventilation system? And how long will the virus live on the surfaces we all touch each day? How would we protect our skin after using disinfecting wipes and hand sanitizer all day every day?

In the early days, we did not know how to acquire masks. We did not really want to wear them at first, but when a free shipment was offered through TEMA, we took advantage of it and placed our order right away. It took a few weeks to arrive, but once it did, each of our employees were provided a 5-pack of Hanes© white, cotton masks, presumably the same fabric they use for t-shirts and underwear. I cannot describe what relief I felt when we first received that shipment! Later we learned that white is a bad color for a face mask. They were constantly looking dirty either due to make-up, chewing tobacco, dirt, or oil.

What about policies? We had all sorts of policies for emergencies and disasters on the shelf. But what we quickly learned, was that we did not have a policy in place for an event of this type. I remember being at a TVA conference at Opryland Resort March 11th and 12th of 2020 when COVID-19 had just shown up in Nashville. There was hand sanitizer everywhere and most of us at that point knew better than to shake hands with one another. But none of us had masks yet. And as I asked around, I learned that none of us knew yet, how we would adjust our business practices to meet the global threat. The general sense was that the second we got back to our respective offices; we would go quickly to work writing our own pandemic response plans. I recall being frustrated that there was not any good template available for us to use, so later on I submitted ours to anyone that needed a template. It was far from perfect, but it was a start. Our Board of Directors originally passed our Pandemic Response Plan in March 2020 and then subsequently approved updated versions in July 2020 and January 2021.



In the beginning, we focused more on surface disinfection and implemented schedules for enhanced cleaning practices. Cashiers were instructed to use hand sanitizer after every customer transaction. We even had a schedule for wiping down the drive thru tubes! On July 13th, HUB's mask policy took effect. Many of us had not truly started wearing a mask until we made it a policy.

Perhaps the most frustrating adaptation this year has been social distancing. Crews were asked to isolate from one another. At times, we had half the electric department report to a remote substation in Morgan County while the other half reported to our warehouse in Harriman. At times we had crews "dispatch from home" in effort to keep them isolated from one other. Many of our office workers were sent to work from home for the first time in HUB history. I was exceptionally proud of our IT department who helped transition workers to home offices, even though we did not have many laptop computers available. Customers could not tell a difference, but their bills for much of the year 2020 were generated by personnel working remotely. We have truly come a long way with technology, and this past year was a testament to that. Our customer lobby was closed at various points this year to further protect our employees.

Throughout all of this, HUB also kept an eye to the financial impact of COVID-19 on our local residents. HUB voluntarily suspended cutoffs for non-payment in mid-March, and only reinstated them beginning June 30th after closely studying the number of remaining accounts not current, and determining that few if any were the result of COVID-19 related closures or restrictions. We urged customers whose incomes dropped as a result of the pandemic to reach out to our partner agencies for utility payment assistance. In fact, we were able to receive two separate grants from TVA's Community Care Fund totaling \$20,000 to help these customers specifically. The only qualification was that the customer show that job or income loss due to COVID-19 was harming their ability to pay their utility bills.

All in all, we have come a long way in our acceptance and adaptability to this ever evolving situation. We are proud of our employees who have worked tirelessly to ensure that coverage and support of our rate payers has not suffered. While we still have a long way to go to overcome this global pandemic, we remain committed to enhancing our community through exceptional service, despite the obstacles.

Candace Vannasdale, P.E.
General Manager

"I am thankful that God has kept me and my family healthy and safe. Wearing a mask is a minor inconvenience when you know that there are others who have suffered dearly from the virus."

- Sharon Thorne

"I had to learn how to adjust to working with our customers under the new social distance guidelines. It was interesting to see how awkward a simple greeting would become and how quickly everything could change."

- Chris Stafford



HUB Considers Investment into Solar Energy

In August of 2019, HUB entered into a twenty-year Long-Term Service Agreement with the Tennessee Valley Authority (TVA). The most notable advantage of our long-term partnership is what's known as the "partnership credit" which directly lowers our wholesale power bill each month. Also, as part of this agreement, TVA committed to collaborating with distributors to develop enhanced power supply flexibility, for up to 5% of the Distributor's energy, by no later than October 1, 2021. TVA followed through well ahead of schedule with this commitment, and in September 2020, HUB signed a Flexibility Agreement with TVA.

"Thanks to our partnership with TVA, we now have flexibility to produce roughly 3.2 Megawatts daily of our own power. For the first time in our 80+ year history of buying power from TVA, I can tell customers that HUB is exploring the idea of building a solar farm to help lower our costs!" – Candace Vannasdale, General Manager

HUB is considering multiple options for investing in solar energy. One option is to build and "own" the solar farm. We would have to cover the initial investment but would reap a much larger benefit over the lifespan of the panels, which is about 25 years. A 3.2-Megawatt solar farm has an approximate construction cost of \$3 Million, but all the power produced would directly offset our purchased power from TVA.

Another option is "solar contracting". With this option, HUB would sign a purchased power agreement with a third party who would cover the upfront costs for the project. The agreement would define a rate by which HUB would purchase the power produced by the solar farm. It is estimated that this option would save HUB approximately \$140,000 per year on its wholesale power costs. This option may or may not provide an option to purchase the solar farm at a future date.

With whatever option we choose, perhaps the most difficult thing will be locating approximately 20 acres of relatively flat land with few trees inside our service area. In addition, this land would need to be close enough to our major electric infrastructure to economically tie the solar power to our electric distribution system. If you or someone you know has a site in mind, feel free to let us know about it!



Cast Iron Gas Line Replacement Project Conclusion

One of the most frustrating aspects of managing a utility system is the need to invest in projects to replace aging infrastructure. When your utility system is centered in a historic town (like Harriman), you can almost guarantee it is a problem. For the last decade, HUB has been pushing to eliminate its cast iron gas main, and we are proud to report we have achieved this goal as of February 2021!

In 2011, following major natural gas pipeline incidents, the United State Department of Transportation (DOT) and Pipeline and Hazardous Materials Safety Administration (PHMSA) issued a Call to Action to accelerate the repair, rehabilitation, and replacement of the highest-risk pipeline infrastructure. Among other factors, pipeline age and material are significant risk indicators. Pipelines constructed of cast and wrought iron, as well as bare steel, are among those pipelines that pose the highest risk. To illustrate the progress pipeline operators are making in the replacement of aging gas pipelines, PHMSA provides an online inventory updated annually of high-risk pipeline infrastructure by state. Since 2011, HUB has decreased the total miles of cast iron gas main from 4.0 miles to 1.8 miles. And as of 2021, that number will drop to zero!

HUB heard the call to action back in 2011 and took the issue very seriously. Soon after, HUB hired consultants Cannon & Cannon, Inc. and Magnolia River to develop a plan to eliminate all remaining cast iron gas main throughout its system. We were fortunate to get a jump start on this goal during the TDOT funded Ruritan Road widening project which started in the Fall of 2014 and ended near the end of 2016. During this project, HUB was able to eliminate the first of those last four miles of cast iron gas main. This was considered "Phase I". The best part of this project was eliminating the threat of old cast iron near the Bowers Elementary School. The remaining 3 miles or so was broken down into Phases II, III, and IV. Phase II was in the historic district of Harriman, and was prioritized based on its location in a more densely populated area of the city and history of gas leaks. Construction began in December 2016 and lasted until the end of 2017. While it may have been inconvenient to some customers to have us in their back alleys, we were able to pave those alleys to better than pre-construction conditions.

Phases III and IV were ultimately combined into one project, which was started in late 2019 and is expected to end in March 2021. Phases III & IV included parts of Crescent Ave, Margrave Dr, Henderson St, the Walnut Hill S/D, and a highway crossing at Roane St and Emory Dr. The total budget for Phases III & IV was \$1.7 Million, including construction, engineering, inspection, and pavement restoration.

Completion of these critical infrastructure projects ensures continued safety and reliability for our gas customers.

CDBG Water System Improvements

Near the end of 2019, it was announced that the City of Harriman would receive a \$525,000 grant through the Community Development Block Grant (CDBG) program administered by the TN Department of Economic Development. This grant was earmarked for the purpose of reducing water loss, and we decided to use it to replace residential water meters. HUB employees installed a total of 3,300 water meters between June 2020 and March 2021. That was enough to cover nearly 70% of our water customers!



The new meters are Sensus iPERL® smart water meters. They are known for capturing low flow accuracy with high-flow durability. With no moving parts, these lead-free meters maintain their accuracy over a 20-year lifetime. These meters will be connected to our future Advanced Metering Infrastructure (AMI) system, at which time they will provide alerts for anomalies such as water leaks and tampering. AMI will provide our customer service department with daily information about how much water is used by specific customers, which will help us resolve complaints and issues faster. It will also help us more accurately pinpoint where water loss is occurring in our large distribution system. Customers will also be able to monitor their usage daily using our mobile app.



We selected the Sensus meters for a variety of reasons. Economically, they have a lower cost over our 20-year investment. Unlike our old meters, these meters are expected to maintain accuracy for 20-years. That means that we will not have to replace them in 10 years. Second, they can be installed horizontally, vertically, or diagonally. These helps us especially for customers whose water service is on a steep incline. Third, these meters are known for being very accurate. We will improve water loss by being able to capture very low usage, such as a dripping water faucet. And lastly, unlike our old meters, these

meters are lead-free, which is important for the health of our community.

Riverbank Stabilization Projects at Bullard Ford Rd. and Harriman's Riverfront Park



Significant flooding in both February 2019 and February 2020 left behind a lot of damaged roadways, especially for Roane County. HUB was lucky not to be impacted too severely, although we did evacuate our warehouse during each event, just to be safe. The worst of our damage was actually a section of Bullard Ford Rd, which we never imagined would be our responsibility!

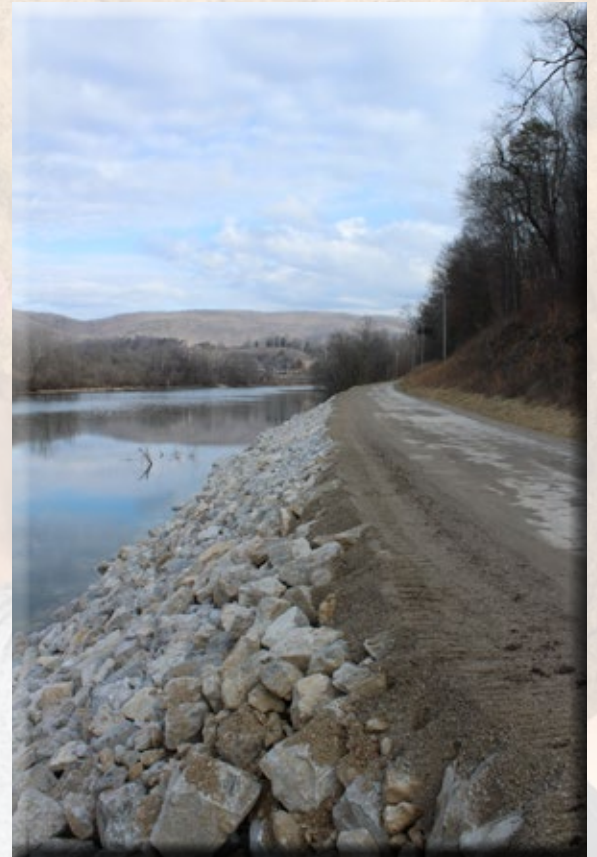
As historical documents proved...this section of roadway, which provides the sole access to our sewer treatment plant, was constructed by HUB back in the 1960's on an easement across TVA property. Because the land along the riverbank was "federal", we were not eligible for FEMA funds like we would have expected. Instead, we were recommended to apply for funding through the Natural Resources Conservation Service (NRCS), which is a department of the U.S. Dept. of Agriculture.

The City of Harriman and HUB teamed up to submit two projects: Bullard Ford Rd and the Riverfront Park in Harriman. Both were riverbank stabilization projects. And much to our relief, NRCS approved our funding request, thus agreeing to cover design, permitting, and 75% of the construction costs!

At the request of the City of Harriman, HUB's project manager, Mr. Joshua D. Gillespie, undertook administering both projects independently. As a federally-funded project, it was required that environmental impact and historical preservation surveys be completed. At Riverfront Park, possible historic traces of indigenous populations were found in the form of "Fire-Cracked Rock" or "FCR", requiring additional survey by a qualified archeologist. Mr. Howard Cyr, of GeoArch Solution was called in to perform the work, assisted in part by Mr. Gillespie, himself a trained historian. TVA would use Mr. Cyr's findings to prepare special procedures to be included in the scope of work for repairing the riverbank at Riverfront Park aimed at preserving any additional archeology on site.

After a rigorous bidding process and public bid-opening, Twin K Construction of Helenwood, TN was selected to perform the work at Bullard Ford Rd. for a low-bid cost of just over \$314,000. Similar, B&A Construction Company, Inc. of Caryville, TN was selected to perform the work at Riverfront Park for a low-bid cost of just under \$1,445,000.

Both projects are anticipated to be completed sometime in the Spring of 2021.



HUB Achieves Major Goal at its Sewer Plant!

When we think about environmental stewardship, many things come to mind. Obviously, air quality and the reduction of carbon emissions is important. But arguably equally as important might be water quality. Our government has spent many decades and passed many, many regulations to address these issues. HUB has concluded an environmental study that addressed both these issues. And in 2021 we will celebrate this major achievement!

Most people are not aware of this journey that HUB embarked on beginning many years ago. This journey was about accomplishing a major goal, one that we were not sure would ever be possible. But by the end of 2020, we received word that we would prevail!

Before becoming General Manager, Candace Vannasdale served as the Engineer for our Gas, Water & Sewer Department. One of her earlier tasks was to apply for the renewal of our 5-year NPDES permit from TDEC which allows us to discharge treated wastewater from our sewer plant into the river. The thing is that HUB, for as long as anyone can recall, has always discharged to the TN River located approximately 74 miles away via buried pipeline pumped from our wastewater treatment plant.

October 16th of 2015, Candace and our managers at the time made a trip to Nashville to plead with our permitting authority (TDEC) to consider a change for HUB to allow us to discharge to the Emory River. Our plant is located adjacent to the Emory River, just a few hundred feet uphill from its banks. We explained to TDEC that pumping our effluent to the TN River accounts for at least 1/3 of the power bill at our sewer plant each month, or approximately \$60K per year! Our 7.4-mile effluent pipe was installed in the 1960's, presumably because the quality of treated wastewater was a lot worse back then and discharging to a larger water body would help dilute the poor quality. We cannot say for sure.



We cited how in recent years we had upgraded our sewer plant, rehabilitated nearly all our pumping stations, and done extensive work in the collection system to limit rain and ground water from entering our sewers. We even purchased our own closed-circuit television (CCTV) truck and equipment as well as a combination sewer cleaning truck. We did all this while at the same time losing our largest sewer customers (the industries, the Harriman Hospital, etc.). We no longer had industrial customers paying into our sewer system. Our largest customer was the Harriman Housing Authority, followed by some hotels and restaurants. We had done all the things asked of us by TDEC, and our sewer revenues were down because

of a diminishing local economy. Whatever savings we could get at the sewer plant would allow us to continue an aggressive rehabilitation program, trying to further reduce operating and maintenance costs which would save our customers.

Much to our dismay, we found out was that TDEC would not even consider such a request without a thorough River Modeling Study. A study of this type can typically cost a sewer system upwards of \$250K. Keep in mind, HUB has a very old and thus costly sewer system. We only had about 2,250 customers paying into it. And even if getting the Emory River outfall approved could save \$40K per year in pumping costs, it was a lot of money to risk which would surely be a tough sell for our Board. What would we tell rate payers if we were not successful after spending so much revenue on the study?

We set about on a mission to find a river modeler that could work with a tight budgeted utility like ours. And boy, did we get lucky! We found a highly experienced sole proprietor who had retired from TVA and started his own business doing river modeling a couple decades prior. He had the respect of TDEC and knew exactly what needed to be done to help us. Mr. Jim



Ruane of REMI in Chattanooga and his associate Mr. Andy Sawyer agreed to take on our project in November 2015 for a fee not to exceed \$55,120. Why not \$250K? Well, as it turned out, Mr. Ruane had previously built a model for the Watts Bar reservoir for another client. And all they would have to do was add on the Emory River embayment. That probably sounds a lot easier than it was, but you get the idea.

The next few years were spent producing a model working back and forth with TDEC to find concurrence. One thing that slowed the process drastically is that TDEC rarely deals with requests of this type, so they almost had to produce protocol to follow to even

consider our request. In March 2019, we submitted our formal request for the permit modification. The request included a cover letter along with a 61-page document produced by Mr. Jim Ruane detailing the results of the full river modeling study that proved we could discharge to the Emory River when flows were greater than 200 cubic feet per second, without having any impact on the water quality of the river. During lower flow events (such as the dry summer months), we would continue pumping to the TN River. We were all very excited about the request being sent and hoped to hear a response soon. Well, unfortunately as somehow happens when dealing with governmental agencies, all we heard for a very long time was silence.

While we did not lose hope, we did find a temporary distraction that would ultimately help us gain traction. We had many friends on our side, Dr. Larry Moore of the University of Memphis, Mr. Brett Ward of MTAS, TVA, and even the EPA. All of these agencies helped us with an energy study performed just prior to us engaging in this river study. But in the summer of 2020, HUB's sewer plant was asked to participate in the TN Plant Optimization Program sponsored by TDEC and the TN Association of Utility Districts (TAUD). While the folks that were helping us were not directly from the same department as the permitting office, it certainly helped us gain influence across the organization.

It was a true honor to be selected to participate in TNPOP. HUB's Chief Operator Ray Freeman certainly deserved accolades for getting us on their radar and being their point of contact for their mission. As a participant in this program, we have received technical assistance and loaned equipment for pursuing facility optimization, significant cost-savings opportunities, reduced nutrients in effluent (which will further help our outcome when discharging to the Emory River) and strengthened relationship with our regulatory agency.

This was the second time a study was done at our sewer plant in the last decade that pointed to the fact that an absorbent amount of energy was spent pumping treated effluent. And knowing that we had submitted our request for the new outfall in March 2019, our relationships through TNPOP helped us to push this agenda along.

Upon time to submit for the renewal of our 5-year NPDES permit again in 2020, we finally received the phone call we had been waiting for from TDEC! They agreed with the results of our river modeling study and would incorporate approval of our request into our new permit. As of February 2021, HUB would be permitted to use the Emory River Outfall whenever the river flow measured in Oakdale was 200 cfs or greater. This is a huge win for our sewer rate payers! We expect to soon reduce our operating expenses in the sewer department by tens of thousands of dollars per year.

Mutual Aid – Cookeville Tornadoes



In March of 2020, HUB's line crew answered the call to aide communities impacted by the tornadoes that struck Middle Tennessee in the spring. Foreman Rod Hamby, Jake Davis, Tim Rister, Trevor James, and Luke Pelley earned the title, "The Servant's Heart Crew" and the following praise from Cookeville's Electric Superintendent, Tom Gaw, "These guys have been wonderful to work with. HUB has some of the best in the country." HUB crews also assisted Plateau Electric in restoring service after the storms.

These cooperative efforts fall under the term "Mutual Aid" and involve many utilities in our region. HUB, along with others, maintain agreements to support each other under emergency conditions. This not only fosters a greater sense of professional courtesy but allows individual local power companies to prepare for such requests.



Home Uplift™ Program

TVA approached HUB in early 2020 about a new program marketed as “Home Uplift”. As a partner to TVA, we could apply for matching funds to assist low-income households throughout our service area with no-cost-to-them weatherization services such as high-efficiency heating and air conditioning, duct repair/replacement, insulation, a heat pump water heater, high-efficiency lighting, and more.

HUB’s Board voted in July 2020 to participate in the program and committed to \$16,760 of electric revenue to receive an equal match from TVA. This would allow us to complete at least three (3) houses in our service area. In the future, we are considering building up the Home Uplift program with additional funding through our existing “Warming the Heart” program or through partnerships with other non-profits in our area.



Knowing we had very limited funding and potentially many eligible households to select from, we decided to ask for applications to be submitted by December 15th. Then on the same day, we held a raffle-style drawing to select three winners and three alternates.

After selecting the winning numbers, HUB contacted the awardees and forwarded their information to TVA who would then go through a verification process to confirm their eligibility. Once verified based on home ownership and income, the homes will be scheduled for an inspection by a qualified Energy Advisor. These surveys will identify areas where new appliances, improved insulation, or other structural improvements will lead to a direct reduction in energy inefficiency, thereby an overall reduction in total energy costs.

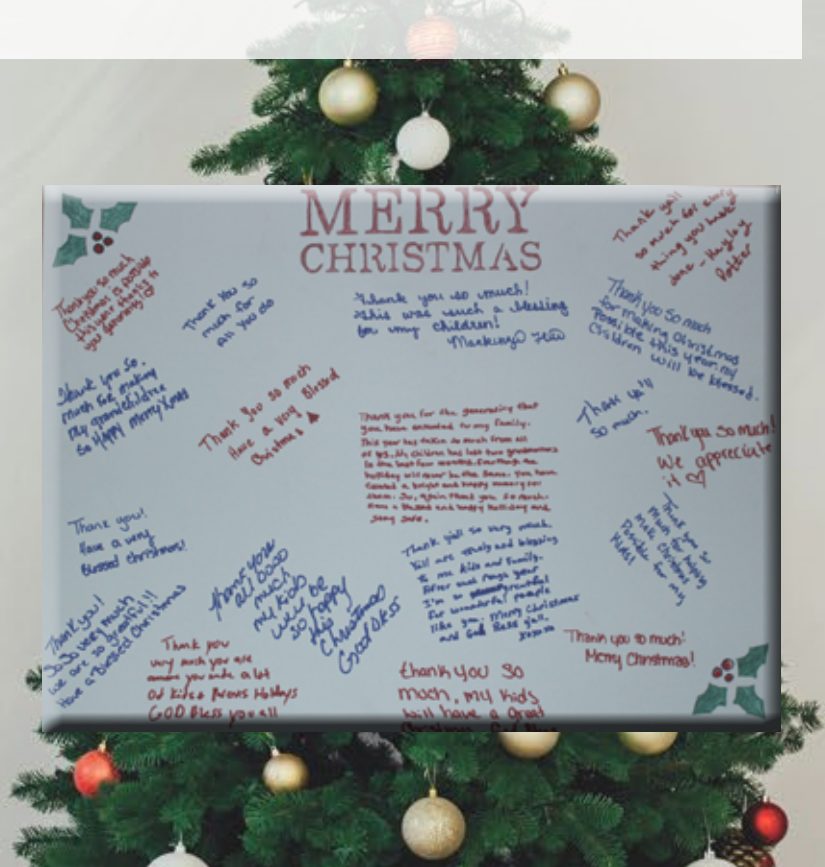
HUB Partners with the City of Harriman for an Innovative “Trunk or Treat” Event

Despite being compelled to cancel this year’s “Hooray for Harriman” event due to COVID-19, the City of Harriman committed to finding a solution for the annual “Trunk or Treat” event. Following the lead of Mayor Wayne Best; HUB, along with other municipal partners, set up “Drive Through” stations along the streets of the downtown commercial district and Cornstalk Heights. Guests came in their own vehicles, and drove through town stopping to collect treats while maintaining “Social Distancing” guidelines.



HUB Gives Back to the Community during the Holidays

With so many traditions and anticipated events being cancelled in the wake of COVID-19; HUB made it a priority to ensure that we continued to provide what joy we could this Christmas Season. This year, as in years prior, HUB employees participated in the Angel Tree. This program, which is 100% voluntary, allows employees to provide gifts to local children who may otherwise not have a gift under the tree come Christmas morning. This year, HUB employees sponsored thirty children. Each child received clothing, underwear, socks, shoes, pajamas, coats, mittens, and plenty of toys. The gifts were bagged up in a large bag and tagged with the child's "Santa Letter". The gifts were picked up by Harriman Housing and taken to each household.



Safety

Safety is a primary consideration across all HUB operations. During 2020, we have required extra vigilance towards reducing preventable incidents and injury as crews are working under new requirements for Social Distancing, experiencing manning shortages due to COVID-19, and meeting the usual challenges of annual storm seasons.

Among the many innovations HUB is adopting towards increasing safety, is Advanced Metering Infrastructure, or AMI. AMI is a network-based metering system that will allow HUB to provide more detailed information to customers about their energy usage... ultimately reducing costs due to energy inefficiency. As an added benefit, AMI will reduce the risks placed on employees supporting existing, outdated metering systems.

A few of the ways AMI will improve safety include:

- Reduction in vehicular hazards - both while operating a HUB vehicle, and also outside of the vehicle walking to and from meters
- Reduction in stresses / strains on knees and backs from not having to kneel and squat to remove lids, clean out boxes and/or meters to get reading
- Reduction in exposure to slip, trip, and fall hazards
- Reduction in exposure to aggressive animals, poisonous snakes and plants, and insects



How can HUB Serve You Better?

HUB's management team is always interested in ways we can serve our community better. Do you have suggestions or ideas for how we can improve our service? You can stay on top of recent developments, current projects, and other HUB activities on Facebook™, or contact us through our website, www.hub-tn.com. You can also visit our primary location at 200 N. Roane Street during regular business hours, 8:00 a.m. -4:30 p.m., Monday-Friday.

Thank you for being our partners in Enhancing our Community through Exceptional Service!



Connect with us!

Call, Click, or Stop by
(865) 882-3242



@harrimanutility



www.hub-tn.com

