

**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

|                             |   |          |
|-----------------------------|---|----------|
| ELECTRONIC SOUTHERN WATER & | ) |          |
| SEWER DISTRICT’S METER      | ) | CASE NO. |
| REPLACEMENT SURCHARGE       | ) | 2020-121 |
| MONITORING                  | ) |          |

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**ANNUAL REPORT  
PERIOD FROM APRIL 2022 TO APRIL 2023**

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**Surcharge Billing, Collections and Deposits**

As the PSC is aware, the Commission approved a monthly meter replacement surcharge of Five Dollars and Twenty-Five Cents (\$5.25) effective November 7, 2019 in Case 2019-131. This surcharge’s initial purpose was to fund the replacement of customer water meters, a large number of which were zero read meters. *See Nov. 7, 2019 Order in 2019-328.* Subsequently, the Commission granted Southern’s (herein referred to as “Southern”) motion to amend the purpose of the meter replacement surcharge to additionally include the purchase and installation of Ten Master Meters.

At the start of this reporting period, April 1, 2022, One-Hundred Forty-Five Thousand, Seven Hundred Forty-Nine Dollars and Forty-Six Cents (\$145,749.46) remained in the Surcharge Bank Account. During the month of April 2022, Southern collected and deposited an additional Twelve Thousand Eight Hundred Ninety-Seven Dollars and Forty-Two Cents (\$12,897.42) into

said bank account. At the close of April 2022, the Surcharge Bank Account totaled One Hundred Fifty-Eight Thousand Six Hundred Forty-Six Dollars and Eighty-Eight Cents (\$158,646.88).

During the Month of May of 2022, Southern collected and deposited an additional Fifty-Three Thousand Three Hundred Forty-Two Dollars and Ninety-Four Cents (\$53,342.94). A stop payment fee of Thirty-Five Dollars (\$35) was subtracted from this bank account on May 9, 2022. This stop payment fee is related to the check to service the April payment to Co-Bank that was lost in the mail. Relatedly, a charge of Forty-Nine Thousand Dollars and Four Hundred Ninety-Nine Dollars and Seventy-Nine Cents (\$49,499.79) was subtracted from the bank account on May 18, 2022. This charge represented both the April 2022 and May 2022 loan payment to Co-Bank for the New Meter Loan.

At the start of June 2022, the Surcharge Bank Account totaled One Hundred Sixty-Two Thousand Four Hundred Fifty-Five Dollars and Three Cents (\$162,455.03). During this month, an additional Twenty-Six Thousand Five Hundred Sixty-Five Dollars and Ninety-Six Cents (\$26,565.96) was added to the surcharge bank account. On June 15, 2022, Twenty-Four Thousand Seven Hundred Sixty Dollars and Sixty-Eight Cents (\$24,760.68) was deducted from the Surcharge Bank Account to service the Co-Bank Debt.

One Hundred Sixty-Four Thousand Two Hundred Sixty Dollars and Thirty-One Cents (\$164,260.31) remained in the Surcharge Bank Account as of July 1, 2022. During this month an additional Fifty-Five Thousand Three Hundred Seventy-Seven Dollars and Seventeen Cents (\$55,377.17) was added to this account. On July 18, 2022, Southern paid Twenty-Four Thousand

Seven Hundred Thirty-Three Dollars and Thirty-Nine Cents (\$24,733.39) to Co-Bank to service the new meter loan.

On August 1, 2022, the Surcharge Bank Account totaled One Hundred Ninety-Four Thousand Nine Hundred Four Dollars and Nine Cents (\$194,904.09). During this month an additional Twenty-Eight Thousand Five Hundred Forty-Six Dollars and Ninety-Six Cents (\$28,546.96) was collected from the surcharge and deposited into the bank account. On August 16, 2022, Southern paid Twenty-Four Thousand Seven Hundred Thirty-Seven Dollars and Eight-One Cents (\$24,737.81) to Co-Bank to service the loan.

Southern had One Hundred Ninety-Eight Thousand Seven Hundred Thirteen Dollars and Twenty-Four Cents (\$198,713.24) in the surcharge account as of September 1, 2022. An additional Twenty-Seven Thousand Four Hundred Forty-Nine Dollars and Fifty-Seven Cents (\$27,449.57) was collected from the surcharge and deposited into the Surcharge Bank Account. On September 20, 2022, Southern paid Co-Bank Twenty-Four Thousand Seven Hundred Thirty-Four Dollars and Ninety-One Cents (\$24,734.91).

On October 1, 2022, the surcharge account totaled Two Hundred One Thousand Four Hundred Twenty-Seven Dollars and Ninety Cents (\$201,427.90). An additional Twenty Thousand Five Hundred Forty-Three Dollars and Eighty-Eight Cents (\$20,543.88) was added to this account during October of 2022. On October 18, 2022, Southern's check to Co-Bank in the amount of Twenty-Four Thousand Seven Hundred Forty Dollars and Seventy-Five Cents (\$24,740.75) cleared the bank account.

At the start of November 2022, the Surcharge Bank Account totaled One Hundred Ninety-Seven Thousand Two Hundred Thirty-One Dollars and Three Cents (\$197,231.03). Fifty-Two Thousand Three Hundred Forty-Two Dollars and Twenty Cents (\$52,342.20) was collected from the surcharge and deposited into the bank account in the month of November 2022. On November 25, 2022, Southern paid Co-Bank Twenty-Four Thousand Seven Hundred Thirty-Seven Dollars and Ninety-Six Cents (\$24,737.96) to service the New Meter Loan. Additionally, on November 30, 2022, Peoples Bank deducted Seven Hundred and Twenty Dollars (\$720.00) from the Surcharge Bank Account as a “service charge”. After contacting the bank, it was discovered that this charge resulted from Southern’s Surcharge Bank Account going over their deposit limit per month.

On December 1, 2022, the surcharge account totaled Two Hundred Twenty-Four Thousand One Hundred Fifteen Dollars and Twenty-Seven Cents (\$224,115.27). During the Month of December, an additional Nineteen Thousand Two Hundred Forty-Five Dollars and Four Cents (\$19,245.04) was added to the Surcharge Bank Account. On December 20, 2022, Southern paid Twenty-Four Thousand Seven Hundred Forty-Eight Dollars and Twelve Cents (24,748.12) to Co-Bank.

At the beginning of 2023, the Surcharge Bank Account totaled Two Hundred Eighteen Thousand Six Hundred Twelve Dollars and Nineteen Cents (\$218,612.19). During the month of January of 2023, Twenty-Eight Thousand One Hundred Sixty-Six Dollars and Eighty-Eight Cents (\$28,166.88) was added to the bank account. On January 11, 2023, One Hundred Six Dollars and

Eighty Three Cents (\$106.83) was charged as fees by Peoples Bank for an “Analysis Results Charge.” Southern serviced the Co-Bank Debt on January 18, 2023, with a payment of Twenty-Four Thousand Seven Hundred Forty Dollars and Ninety-Seven Cents (\$24,740.97).

On February 1, 2023, the Surcharge Bank Account totaled Two Hundred Twenty-One Thousand Nine Hundred Thirty One Dollars and Twenty Seven Cents (\$221,931.27). During February of 2023 Eighteen Thousand Four Hundred Four Dollars and Sixty One Cents (\$18,404.61) was collected for the surcharge and deposited into the bank account. Twenty-Four Thousand Seven Hundred Thirty-Eight Dollars and Four Cents (\$24,738.04) was paid to Co-Bank on February 21, 2023. Finally on February 13, 2023, Two Hundred Ninety-Eight Dollars and Sixty-Two Cents (\$298.62) was charged to this account by Peoples Bank for an “Analysis Results Charge”.

The Surcharge Bank Account totaled Two Hundred Fifteen Thousand Two Hundred Ninety-Nine Dollars and Twenty-Two Cents (\$215,299.22) on March 1, 2023. During this month, Southern Collected and deposited Twenty-Seven Thousand Seven Hundred Two Dollars and Nine Cents (\$27,702.09) into the Surcharge Bank Account. An Analysis Charge Fee of Three Hundred Two Dollars and Seventy-Six Cents (\$302.76) was charged by Peoples Bank on March 13, 2023. Southern serviced the Co-Bank loan on March 20, 2023 with a payment of Twenty-Four Thousand Seven Hundred Forty-Two Dollars and Forty-Eight Cents (\$24,742.48). Southern ordered new checks for this bank account on March 21, 2023 which resulted in a deduction of One Hundred Two Dollars and Fifty-Nine Cents (\$102.59) from the Surcharge Bank Account.

At the end of the reporting period, the surcharge bank account totaled Two Hundred Seventeen Thousand Eight Hundred Fifty Three Dollars and Forty Eight Cents (\$217,853.48). *See attached bank statement.*

The undersigned counsel investigated the “analysis activity” and “service charge” fees assessed by Peoples Bank. The Bank explained that the analysis fees are the total of any transaction fees that have accumulated during each month. It is assessed on the last day of the month. The undersigned counsel has requested that Southern’s office manager consult with Peoples Bank to ensure that we do not incur unnecessary fees associated with this surcharge bank account as well as all of Southern’s other bank accounts with Peoples Bank.

At the close of this reporting period, April 1, 2023, the Surcharge Bank Account totaled Two Hundred Seventeen Thousand Eight Hundred Fifty-Three Dollars and Forty-Eight Cents (\$217,853.48). The average monthly loan obligation to Co-Bank was around Twenty-Four Thousand Seven Hundred Forty-Two Dollars and Ninety Cents (\$24,742.90). The average amount of the surcharge collected and deposited into the Surcharge Bank Account each month over this reporting period is Thirty Thousand Eight Hundred Eighty-Two Dollars and Six Cents (\$30,882.06). Thus, it appears that the Surcharge Bank Account clears on average approximately Six Thousand One Hundred Thirty-Nine Dollars and Sixteen Cents (\$6,139.16) every month after collecting and depositing the surcharge monthly proceeds and subtracting all withdrawals.

**A.M.R. WATER METERS**

Although Southern has successfully replaced all of their customer water meters, these new water meters have not met Southern's expectations. Around September 2022, Southern started noticing a sizeable portion of the AMR meters malfunctioning and being zero read. It appeared as though the meters' batteries would go dead. Although these zero read meters are under warranty, Southern is responsible for the shipping cost of sending these meters back to the manufacturer so that they can be fixed. Additionally, Southern must find replacement meters to use while the faulty meters are being repaired. On average, it takes around four to six weeks for the meters to be fixed and mailed back to Southern. When Southern notices that a meter is dead, we must average the customer's bill and charge an average amount instead of the customer's actual usage. Southern feels as though this situation usually benefits the customer and short changes Southern.

Currently Southern averages pulling around fifty of these new water meters each month to be repaired. Southern has reached out to a couple of other water utilities in the area and has been informed that other water utilities that have used the RG3 AMR meters are suffering from the same issues.

Southern has reached out to RG3, the manufacturer of these meters to inquire about a resolution to this problem. RG3 has stated that this should be a short-term problem as the issue relates to a "bad run of solders" on the batteries. RG3 thinks that once the bad solder water meters are repaired then the problem should cease to exist.

### **WATER LOSS**

During the reporting period, Southern averaged approximately 57.33% unaccounted for water loss each month. Southern recognizes this problem and has taken several measures to attempt to reduce this percentage.

Southern's unaccounted for water loss results from two significant issues; leaks/infrastructure problems and water theft.

Southern averages catching around one to three water thefts per month. Once a theft is discovered, Southern ensures that any device(s) used to assist in the illegal tapping into our water lines is removed and or destroyed and that the base is plugged and locked off. Southern reports this theft to the appropriate authorities and continues to monitor the theft location for additional future losses.

Southern has attempted to educate their customers about water theft and the negative ramifications it has on their water bills. Southern has created an email address ([theft@southernwatersewerdistrict.com](mailto:theft@southernwatersewerdistrict.com)) so that anyone can anonymously report theft of water. Additionally, Southern regularly posts about this email address and the issues associated with water theft on its facebook page.

In order to address leaks, Southern is continuously working to repair leaks to our system. Southern recently purchased a new listening device that is used to detect leaks. Additionally, Southern monitors run times, tank drops and pressure changes in an effort to locate leaks. Southern has been hampered with their leak detection due to a high number of employee turnover as well as incurring at least two natural disasters per year.



Southern has recently replaced old, leaky water lines from Wayland to Lackey. This project is approximately 80% complete. Although this project will replace aged and inefficient water lines with newer and more efficient transmission lines, it will also increase the pressure on transmission lines down stream which may cause additional leaks. Southern anticipates findings several leaks in the Wayland area after this project is complete. This project was funded by American Mine Lands Economic Revitalization.

### **MASTER METERS**

As the PSC is aware, Southern's unaccounted water loss remains high and Southern has placed great importance on reducing this rate in order to operate more efficiently while reducing operating costs. Southern uses a two-prong approach in order to meet its goal of reducing unaccounted for water loss. First, the installation of new Automatic Meter Reading ("AMR") meters to replace Southern's aged and malfunctioning water meters; and second, by purchasing and installing Master Meters in discrete zones. Southern has successfully completed the first prong of this strategy, replacing outdated water meters with more technologically advanced and accurate AMR water meters.

Master Meters enable water utilities to address unaccounted-for water loss by providing the utility with accurate information regarding the location of said water loss. Southern intends on dividing the water system into ten smaller sub-systems or zones. Each of these sub-systems or zones will be served by one specific Master Meter. These Master Meter zones enable the utility to identify leaking infrastructure with specificity using real time data to determine any imbalance

of the water flow into a discrete zone measured by comparing the zone master meter water consumption with actual consumer water consumption data measured by the new AMR water meters in each zone. By comparing the data from the zone master meter with the consumption data in these zones, Southern will be able to determine the general location of water leaks and/or water loss/theft. These Master Meters can also assist utilities by providing instantaneous measures of water flow. Southern intends on reducing unaccounted for water loss by using this data provided by the Master Meters to locate and correct any leaks and or theft of water. These Master Meters will be instrumental in our efforts to reduce unaccounted for water loss by providing Southern with accurate information regarding where their water is going. This will ensure that Southern can account for all of the water they produce to ensure that none of said water is wasted and/or stolen. Southern will use the information gleaned from Master Meters in conjunction with the new AMR meters to identify any infrastructure problems and or theft. Once it is determined where the problem with infrastructure or leak is located, Southern can attempt to address said problem in order to reduce unaccounted for water loss.

Southern Water and Sewer District has decided to install 10 Master Meters in order to achieve their goal of dividing their customers into ten discrete sections or zones. Although Southern Water & Sewer District had previously intended to install all of the proposed 10 master meters in house, Southern has since revised this decision. Southern has now decided to employ a contractor to install these Master Meters. This decision to contract out this work was based upon several reasons and promotes the efficient use of Southern's time and resources. Southern

has had issues recruiting and retaining a sufficient workforce to install these Master Meters while still efficiently operating and maintaining the water utility. Several extreme weather events, specifically including the devastating summer of 2022 flood, have significantly increased Southern's workload and made it difficult for Southern to take on additional projects, like the Master Meter installation project. In order to expedite the Master Meter Project, Southern has decided to contract out the installation of the Master Meters to a third party.

Southern has selected to use Clamp On Ultra-Sonic Master Meters instead of Mechanical Master Meters. These meters are less expensive, require less appurtenances, and are easier to install than the Mechanical Master Meters. Also, these types of Master Meters provide Southern with greater flexibility because they can be easily moved from one location to another and can be programmed to service different sizes of water lines. Clamp On Ultra Sonic Master Meters have a useful life of around 10 years. Southern is confident that Ultra Sonic Master Meters will better serve their needs than the Mechanical Master Meters.

Southern has chosen the locations that each of the ten master meters should be located: Turkey Creek of Right Beaver; Mouth of 850; Route 122 at Spewing Camp; Route 122 after Route 979 on Left Beaver; The "Y" at Martin; Route 979 at Clear Creek; Route 680; Route 979 on Mudd Creek; Left of the Branham's Creek "Y"; and Right of the Branham's Creek "Y." Southern feels as though locating the Master Meters at these specific locations will enable the utility to break up their entire system into distinct zones in order to identify and subsequently correct any irregularities with the water transmission throughout each zone.

Only one contractor, Albon Meade & Sons Construction, responded to Southern's advertisements/requests for proposals to install the Master Meters. *attached.* Albon Meade & Sons Construction's (Hereinafter "Albon Meade") proposal totaled Six Thousand Eight Hundred and Fifty Dollars (\$6,850.00) for each Master Meter to be installed. This proposal included the labor to install said meters as well as providing the vault and lid required for these Master Meters.

In addition to the labor, lid and vault, additional costs will be incurred to accomplish the Master Meter project. The Clamp-on Ultra Sonic Master Meter must also be purchased. Southern advertised to solicit bids for these types of Master Meters and selected the type of Master Meter based upon American Water Wastewater Association Standards, the flow detection resolution of meters and compatibility with our telemetry input/output signals. Southern has selected to use "TEKTROL Tek Clamp 1200A" Flow Meters as the best suited Master Meters to install into our system. This Master Meter will cost Four-Thousand Two Hundred and Fourteen Dollars \$4,214. *See attached.*

Also, Southern decided to use "HTT 1100" Telemetry unit for the Master Meter project. The cost of this telemetry unit is Four Thousand Four Hundred and Thirty Dollars (\$4,430.00). This equipment is crucial to the project as this allows for the Master Meter to provide Southern information gleaned from the Master Meter(s) to Southern's Office and employees. Southern's employees can access this information directly from their cell phones.

The Master Meter project will require the use of assorted electrical parts. These parts are necessary to complete the installation of Master Meters. Southern expects these assorted electrical parts to cost around Two Hundred Dollars (\$200.00).

Although the majority of the installation of the Master Meters will be performed by Albon Meade, Southern anticipates that their employees will be needed to assist in the installation process. Southern estimates that their employees will work for about four hours on each of the Master Meters at a cost of approximately Eighty Dollars (\$80.00). This estimate includes the cost of four hours of labor along with the fringe benefits that Southern employees enjoy. The majority of the work that Southern employees will perform will include electrical work on the Master Meters in order to get them ready to install by the contractor.

To date, Four Master Meters have been installed during the period from April 2022 until April 2023. The first Master Meter installation was performed in house by Southern around January of 2023. The contractor, Albon Meade, observed this Master Meter installation performed by Southern to ensure that Albon Meade was capable of installing the master meters according to Southern's specifications. The Master Meter that Southern installed is located at Turkey Creek of Right Beaver. Although Albon Meade did review the installation of this Master Meter, Southern did not pay Albon Meade for the labor on this installation as Southern did the project in house. Albon Meade will be responsible for the installation of the remaining nine Master Meters to be installed into Southern's water system.

During this reporting period, Albon Meade has installed an additional three master meters. Although these master meters are installed, they are not operational yet. These master meters are located at Hi Hatt, Ligon, and the Y at Melvin. Thus, Southern currently has four Master Meters installed. Southern expects that all ten of the master meters should be fully integrated into our system by July of 2023.

As of April 10, 2023, Southern has yet to receive an invoice for the four Master Meters that have been ordered, delivered and installed. Southern anticipates receiving said invoices any day. Southern intends on using the Surcharge Bank Account to pay for these meters as well as to pay Albon Meade for the labor involved in installing nine master meters.

The estimated total cost of the Master Meter Project will be around \$157,740. This figure includes \$4,214 for the Flow Meter, \$4,430 for the Telemetry Unit, \$6,850 for the contract labor to install, \$200 in assorted electrical parts and \$80 of Southern Labor. Thus, each master meter to be installed would cost around \$15,774. This estimated expense is less than what Southern had anticipated. The cost savings mainly result from Southern's decision to use Ultra Sonic instead of Mechanical Master Meters.

### **CONCLUSION**

Southern does not feel as though any changes need to be made to the meter replacement surcharge. The money generated from this surcharge is earmarked to service the debt related to the replacement of Southern's water meters as well as integrating Ten Master Meters into Southern's water infrastructure.

**CERTIFICATION**

These responses are true and accurate to the best of preparer's knowledge,  
information and belief formed after reasonable inquiry.

Respectfully Submitted on April 10, 2023 by;

/s/ Steven Bailey

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