

**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	)	

---

**ANNUAL REPORT  
PERIOD FROM APRIL 2021 TO APRIL 2022**

---

1. Number of Master Meters installed in the reporting period

No master meters were installed during the period from April 2021 until April 2022. The District incurred several delays due to COVID and weather related issues. Many of the Master Meter Vendors were operating with reduced staffing due to the national staffing shortages which in turn caused information gathering delays for the District. In addition, weather events during the reporting period caused disruptions to the District's work load and schedule (FEMA 4630-DR-KY and FEMA 4643-DR-KY). Finally, the staffing issues related to Covid also negatively impacted the District's staffing levels and the District's field operations.

2. DESCRIPTION OF EACH MASTER METER INSTALLED

As stated above, no master meters have been installed during this reporting period.

The District has decided to utilize Ultra-Sonic master meters instead of the Mechanical type master meters that were previously contemplated by the District. Recently, the Ultra

Sonic type of Master Meters have improved their technology which in turn increased their accuracy to rates that are comparable or better than that of the Mechanical type of Master Meters. This new technological breakthrough has influenced the District to re-evaluate their decision to use mechanical master meters.

The Ultra-Sonic type of meters have several advantages over their mechanical meter competition. Ultra-Sonic master meters are cheaper to purchase than mechanical meters. Additionally, Ultra-Sonic meters require substantially less appurtenances and are much easier to install. These Ultra-Sonic meters can be strapped on to existing water lines and do not require an extensive installation process. The installation of these type of meters does not require the cutting of water lines and thus would cause limited to no customer service interruption to install and/or fix. Ultra-Sonic meters can be easily moved from one location to another thus providing the District with flexibility to move the meter to the most efficient location. Finally, Ultra-Sonic meters, unlike mechanical type meters, are more versatile. These meters can be programmed to service different water line sizes. Mechanical meters must be purchased to service specific line sizes and cannot be used to service water lines of different sizes.

See attached Exhibit 1.

### **3. ESTIMATED AND ACTUAL TOTAL COST TO PURCHASE AND INSTALL ALL MASTER METERS PURCHASED & INSTALLED DURING REPORTING PERIOD**

During this reporting period, the District has ordered one strap/clamp on ultrasonic

flow meter at a cost of \$4,214 and the related high tide telemetry box that is solar powered at a cost of \$4,430. The District has yet to receive an invoice for these purchases and will pay said invoice once it is received.

Southern issued a request for proposals pursuant to our procurement policy to seek bids for this project. The District has accepted the attached bids from “Wascon” dated March 28, 2022. The District has confirmed with “Wascon” that these quotes will be effective for one year from the date of said bid. Thus, Southern is confident that the estimated cost of the Ultra-Sonic Master Meters and associated telemetry will be the same as the actual cost. The other estimates for related equipment are about a year old and may have increased in price.

Southern estimates that the cost associated with the purchase and installation of the 10 Master Meters will be:

1. Strap/Clamp on Ultrasonic Flow Meters	\$4,214
2. High Tide Telemetry (solar powered)	\$4,430
3. 30 inch Vault	\$125
4. Lid	\$100
5. 30 inch ring for lid to sit upon	\$320
6. Mounting post	\$30
7. Post cap	\$5
8. Miscellaneous	\$25

The estimated total cost for the purchase of the products and materials for each Ultra-Sonic Master Meter is \$9,234. Southern intends to utilize their own employees to install these meters. Thus, the total cost of purchasing and installing 10 master meters will be \$92,340.

4. ESTIMATED AND ACTUAL COST ASSOCIATED WITH THE PURCHASE & INSTALLATION OF ALL MASTER METERS PURCHASED AND INSTALLED DURING THE REPORTING PERIOD.

During this reporting period, the District has purchased one Ultra-Sonic Master Meter at a cost of \$4,214 and the related telemetry equipment at a cost of \$4,430. Southern ordered said meter and related telemetry equipment on March 28, 2022. The vendor informed the District to anticipate delivery by the middle of April of 2022. The estimated and actual cost of the purchase of these two items was \$8,644. Although the District has placed the order for the meter and telemetry equipment, no monies have been paid for those products yet. The vendor will invoice Southern for said products in the near future.

See attached Exhibit 1.

5. A STATEMENT INDICATING WHETHER THE ACTUAL COST TO PURCHASE AND INSTALL THE MASTER METERS IS OVER OR UNDER THE ESTIMATED \$25,000 PER METER ESTIMATE CONTAINED IN SOUTHERN'S PREVIOUS FILINGS

Southern anticipates that the actual cost to purchase and install master meters may be less than previously estimated due to the District's decision to use ultra-sonic master meters instead of mechanical master meters. Mechanical Master Meters require a permanent location as many appurtenances are required to install said meter. Ultra-Sonic Master Meters are much easier to move as they require substantially less appurtenances to install and these types of master meters can easily be moved to different locations depending upon the optimal location to serve Southern's system. Additionally, ultra-sonic master meters are less expensive to purchase than

mechanical master meters. Finally, due to the fact that Ultra-Sonic Master Meters strap on to existing water lines and require substantially less appurtenances and labor to install, the District feels as though the actual cost to purchase the master meters will be significantly lower than the estimated \$25,000 per meter cost. Due to the District's decision to install these meters in house, the labor expense will remain the same.

6. EXPLANATION FOR THE ACTUAL COSTS EXCEEDING OR FALLING BELOW THE ESTMIATED COSTS.

As discussed in the preceding paragraphs, Southern anticipates that the actual cost of purchasing the proposed master meters will be less than the estimated cost due to the District's decision to utilize the less expensive ultra-sonic type of master meters.

7. STATEMENT INDICATING WHETHER THE PROJECT PROGRESSED WITH INSTALLING ONE MASTER METER PER MONTH AS PROJECTED, OR IF THE PROGRESS WAS FASTER OR SLOWER THAN ANTICIPATED.

As explained previously, the District incurred several obstacles in starting this project. The District has selected the model, brand, and type of master meter to be used in this project and has placed its first meter order. As long as the first master meter arrives within the next two weeks as stated by the vendor, the District is hopeful to have the first master meter installed by the end of April. The District anticipates that it can satisfy its goal of installing one meter per month.

See Answer to Numerical 1.

8. EXPLANATION FOR ANY DELAY IN PROGRESS OR FOR GREATER THAN ANTICIPATED PROGRESS IN INSTALLING MASTER METERS.

The project has progressed slower than projected due to the issues explained in response #1. (ie) COVID staffing, delay from vendors, staffing issues at SWSD due to COVID and environmental impacts from weather (FEMA Declarations).

See Answer to Numerical 1.

9. EXPLANATION FOR PLACEMENT OF ANY MASTER METER PLACED AT A LOCATION OTHER THAN THOSE LOCATIONS LISTED IN THE CONSTRUCTION PLAN.

The District has yet to install any master meters. Southern intends on placing the master meters in the same locations as previously planned.

See attached Exhibit 2.

10. NUMBER OF MASTER METERS REMAINING TO BE INSTALLED AT THE CLOSE OF REPORTING PERIOD.

The District has yet to install any master meters. Ten (10) master meters remain to be installed

11. PROJECTION OF COSTS ASSOCIATED WITH PURCHASING AND INSTALLING THE MASTER METERS REMAINING TO BE INSTALLED AT END OF REPORTING PERIOD.

See Answer to Numerical 3.

12. BALANCE IN SURCHARGE BANK ACCOUNT AT THE END OF THE REPORTING PERIOD, SUPPORTED BY A BANK STATEMENT.

As of the most recent bank statement (March 31, 2022), there remains \$145,749.46 in the surcharge bank account. Please see attached Exhibit 3.

13. INVOICES SUPPORTING EACH EXPENDITURE LISTED IN THE REPORT.

ANSWER: See Exhibit 1.

14. WATER LOSS DATA, INCLUDING SOUTHERN'S MONTHLY WATER LOSS REPORTS FOR THE MONTHS INCLUDED IN THE REPORTING PERIOD, AS WELL AS A NARRATIVE EXPLAINING ANY UNUSUAL FACTORS CONTRIBUTING TO WATER LOSS OCCURRING DURING THE REPORTING PERIOD AND IDENTIFYING ANY ACTIONS OTHER THAN THE INSTALLATION OF MASTER METERS THAT SOUTHERN USED TO ADDRESS WATER LOSS DURING THE REPORTING PERIOD.

Please find the attached Water Loss Reports for the months of April 2021 until February 2022 (See Exhibit 4). Southern is still working on completing the report for March 2022 and will file said report into the record of this case as soon as said report is completed.

Southern detected several major leaks in the Estill Bottom area of our system. These leaks forced Southern to purchase significant quantities of water from Knott County. The District sought and was awarded an emergency grant to re-locate water lines in the Estill Bottom area. This project was completed in September of 2021 and resulted in Southern only purchasing water from Knott County in emergency situations. Southern anticipates purchasing very little water from Knott County in the future which will eliminate the purchase of approximately two million gallons of water per month from Knott County Water at a rate of around \$7,000 per month.

In 2021, Southern became aware of several leaks in the Toler Creek area. After investigating the system at Toler Creek, Southern determined that the main line pressure was excessively raised in order to extend the water line to service a new community that was at a higher elevation. The District added a booster pump station to supply this new community with adequate pressure and allowing Southern to drop the main line pressure to an acceptable level and thus reducing leaks that were caused by the excessive main line water pressure.

Southern places great importance on reducing water loss and has instituted several programs aimed at reducing water loss. U.M.G. along with Employees of Southern have been trained on leak detection and Southern has purchased leak detection equipment. The District has calibrated and/or replaced equipment at their water tanks which prevent water loss due to tank overflows and has replaced an old and under-performing tank at Mink Branch. Additionally, Southern has identified and repaired multiple leaks and identified areas of excessive high pressure and worked to reduce the pressure in an effort to avoid leaks. Finally, the District has recently completed a water line relocation at Estill Bottom which bypassed old water lines that had significant leaks.

The District has started a public relations campaign to educate our customers and community on the detrimental effect of water theft on their water bills. The District suspects that some of the unaccounted for water loss has resulted from theft of water via fire hydrants and/or un-metered access to our water line system. Southern has created an email address ([theft@southernwatersewerdistrict.com](mailto:theft@southernwatersewerdistrict.com)) so that our community members can report any suspicion that an individual is stealing water from the District. The District has utilized social media to inform the community that theft of our water is not a victimless crime as this theft causes an increase in the rates billed to legitimate water customers and encourages everyone to report any theft of Southern's water.

Most Respectfully Submitted,

/s/ Steven Bailey

**STEVEN P. BAILEY, J.D./M.B.A.**  
BAILEY LAW OFFICE, PSC  
Counsel for Southern Water & Sewer  
181 East Court Street  
Prestonsburg, KY 41653  
Phone: (606) 263-4913  
Fax: (606) 263-4914