

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

Ralph Rudolph,	)	
Complainant	)	
	)	
v.	)	<b><u>File No. WC-2022-0162</u></b>
	)	
Missouri-American Water Company,	)	
Respondent	)	

**STAFF REPORT AND RECOMMENDATIONS**

**COMES NOW** the Staff of the Missouri Public Service Commission (“Staff”), by and through undersigned counsel, and submits its Staff Memorandum.

**Report**

1. On December 16, 2021, Ralph Rudolph (“Mr. Rudolph”) filed a formal complaint against Missouri-American Water Company (“MAWC”).
2. On December 17, 2021, the Commission issued its Notice of Small Formal Complaint and Order Directing Complainant Response, Respondent Answer, and Staff Investigation (“Notice and Order”), which required Staff to investigate the complaint and file a report (or request for a time extension) no later than February 15, 2022. This deadline was extended to March 1.
3. Having concluded its investigation, Staff offers this Report and Recommendations together with the technical Staff’s Memorandum filed concurrently with this pleading, which memorandum is confidential pursuant to 20 CSR 4240-2.070(11), and which details Staff’s investigation and analysis.
4. There are two threshold legal points: First, the determination of witness credibility is left to the Commission, “which is free to believe none, part or all of the

testimony.”<sup>1</sup> Second, and following hard on the heels of the first, it is Staff’s position that unless there is direct test evidence that the meter was functioning properly per Rule 20 CSR 4240-13.025(1)(E) when it was recording the challenged meter readings, then a customer alleging high billing can make a *prima facie* case by “(1) showing that the disputed bill was abnormally high when compared to prior usage patterns, and (2) showing that his pattern of usage had not changed.”<sup>2</sup>

5. The Commission is an administrative body of limited jurisdiction, having only the powers expressly granted by statutes and reasonably incidental thereto. Thus, it has no authority to enter a money judgment.<sup>3</sup>

6. But the Commission may order adjustments for an overcharge.<sup>4</sup> Thus, Rule 20 CSR 4240-13.025 (1) provides:

For all billing errors, the utility will determine from all related and available information the probable period during which the condition causing the errors existed and shall make billing adjustments for that period as follows: (A) In the event of an overcharge, an adjustment shall be made for the entire period that the overcharge can be shown to have existed not to exceed sixty (60) consecutive monthly billing periods, or twenty (20) consecutive quarterly billing periods, calculated from the date of discovery, inquiry, or actual notification of the utility, whichever comes first.

7. Rule 20 CSR 4240-13.025(1)(E), however, provides that “[n]o billing adjustment shall be made if, upon test, an error in measurement is found to be within the limits prescribed commission rules. . . .” *Linda Beecham v. Missouri-American Water*

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<sup>1</sup> *In the Matter of Kansas City Power & Light Company’s Request for Authority to Implement a General Rate Increase for Electric Service and Midwest Energy Consumers’ Group v. Missouri Public Service Commission*, 509 S.W.3d 757, 763 (Mo. App. W.D. 2016).

<sup>2</sup> Cf. *Waldron v. Philadelphia Electric Co.*, 1980 WL 140964, P.2 (Pa.P.U.C. 1980).

<sup>3</sup> See, e.g., *State ex. rel. City of St. Louis v. Missouri Public Service Comm’n*, 73 S.W.2d 393, 399 (Mo. banc 1934); *State ex. rel. Kansas City Transit, Inc. v. Public Service Comm’n*, 406 S.W.2d 5, 8 (Mo. 1966); *State ex. Rel. GS Technologies Operating Co., v. PSC of Mo.*, 116 S.W.3d 680, 696 (Mo. App. 2003).

<sup>4</sup> See, e.g., *State ex. rel. City of St. Louis v. Missouri Public Service Comm’n*, 73 S.W.2d 393, 399 (Mo. banc 1934); *State ex. rel. Kansas City Transit, Inc. v. Public Service Comm’n*, 406 S.W.2d 5, 8 (Mo. 1966); *State ex. Rel. GS Technologies Operating Co., v. PSC of Mo.*, 116 S.W.3d 680, 696 (Mo. App. 2003).

*Company*, WC-2020-0181 (April 28, 2021) stated in its “Decision” that Rule 20 CSR 4240-13.025(1)(E) contemplates “that a faulty meter be the probable sole cause of a billing error and, in any event, that there be a reasonable nexus between the ‘probable period during which the condition causing the errors existed’ and the meter test.”<sup>5</sup> Based on *Beecham*, it is Staff’s position that meter tests showing that a meter was properly functioning during one period of *non-contested* usage do not, standing alone, necessarily have a sufficient nexus with another and different period of *contested* usage, i.e., the “probable period during which the condition causing the errors existed” for such tests to defeat a customer’s case. For such tests to be dispositive per Rule 20 CSR 4240-13.025(1)(E) and take the case away from the complainant, such tests must show that the meter was properly functioning during the time it was recording the challenged readings.

8. Applying the above-indited legal rubrics to the instant case, the Staff concludes that no evidence dispositively discredits Mr. Rudolph’s *prima facie* showing that he did not use the amount of water which MAWC claims he used and so the Commission is free to believe him. First, the evidence of anomalous water usage patterns reported by the meter as called out and explained in the Staff Memorandum and attachments does not support a conclusion that there was any water leak on Mr. Rudolph’s side of his meter. Second, Mr. Rudolph’s testimony that his usage was conservative is consistent with the meter’s recorded usage during the non-anomalous time periods. Water usage during those periods squares with someone who uses water

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<sup>5</sup> *Beecham*, p. 22, citing in F.N. 80 to 20 CSR 4240-13.025(1): “For all billing errors, the utility will determine from all related and available information the probable period during which the condition causing the errors existed and shall make billing adjustment for that period as follows. . . .”

conservatively. Over and against Mr. Rudolph's *prima facie* showing, (a) the company acknowledges there was no proof of a water leak; and (b) the company has no reasonably contemporaneous meter tests per Rule 20 CSR 4240-13.025(1)(E) demonstrating that when the anomalous readings occurred the meter was properly functioning within the limits prescribed by the commission rules.

9. As stated in the Staff Memorandum, Staff has seen an increase in the number of customer complaints against MAWC about temporary, unexplained high water meter readings. As noted in the Staff Memorandum it was found in response to data requests that MAWC does not currently keep track of the number of customer high bill complaints, such as this one, where after investigation no actual leak on the customer's side of the meter can be identified.

10. Staff's investigation also revealed that the Company violated Rule 1 (9) of the MAWC tariff governing billing periods, as explained in the Staff Memorandum.

#### **Staff Recommendations**

A. Staff recommends the Commission find in favor of Mr. Rudolph that Mr. Rudolph did not use the water reflected in the MAWC bills and order MAWC to provide Mr. Rudolph with a full credit for the two high bills identified in the Staff Memorandum to the extent that they exceed Mr. Rudolph's recorded ordinary water usage during non-high spike periods as demonstrated in the data provided to the Staff and described in detail in the attachments to the Staff Memorandum.

B. Staff recommends MAWC be ordered to investigate its high bill complaints for the past three years and prepare a report to the Manager of the Water, Sewer, & Steam Department ("Water Manager"), contain the following information for each

complaint: customer name, address, meter size, meter brand, meter install date, system operating pressure at that meter, daily billing information for the period of high meter readings, company determination for the cause of the leak based on evidence, and any relief given to the customer.

C. Staff recommends that going forward, MAWC be ordered to keep records of, and report annually to the Water Manager on all high bill complaints, separating into one category those involving continuous high water usage where a cause is identified, and into another category those involving continuous high water usage where no cause is identified. For each high bill complaint, MAWC should record the following data: customer name, address, meter size, meter brand, meter installation date, system operating pressure at that meter, daily billing information for the period of high meter readings, and any relief given to the customer.

D. Staff recommends the Commission find that MAWC violated its tariff Rule 1 (9) governing billing periods,

**WHEREFORE**, Staff hereby tenders this Staff Report and Recommendations for the Commission's information and consideration and requests the Commission to accept it as complying with the Commission's Notice and Order.

Respectfully Submitted,

**/s/ Paul T. Graham #30416**

Senior Staff Counsel

Missouri Public Service Commission

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**CERTIFICATE OF SERVICE**

The undersigned by his signature below certifies that the foregoing Staff Report and Recommendation was served upon all counsel of Record on this first day of March, 2022, by electronic filing in EFIS, electronic mail, hand-delivery, or U.S. postage prepaid.

**/s/ Paul T. Graham**

## **M E M O R A N D U M**

**TO:** Missouri Public Service Commission Official Case File  
File No. WC-2022-0162

**FROM:** David A. Spratt, Senior Research/Data Analyst  
Water, Sewer & Steam Department

/s/ David A. Spratt 03/01/2022  
Water, Sewer & Steam Dept. / Date

/s/ Paul T. Graham 03/01/2022  
Staff Counsel's Office / Date

**DATE:** March 1, 2022

### **INTRODUCTION AND BACKGROUND**

Mr. Ralph Rudolph (customer) filed an informal complaint on September 18, 2021, with the Missouri Public Service Commission (Commission), EFIS Complaint No. C202200204. Mr. Rudolph stated that he was billed by Missouri-American Water Company (MAWC or Company) for more than 109,000 gallons of water over thirty-one continuous days spanning two billing periods, which he did not use. Staff member David Spratt ("Staff") investigated the customer complaint. He spoke with the customer and also reviewed the meter reading and billing data received from the Company. During the period of high water meter readings disputed by the customer, Staff noticed some anomalies occurred in the data. The water meter readings trend up for a few days before trending back down. There are some very high hourly readings and some abnormally low hourly readings that appear during this time period in dispute which make a leak seem very unlikely.

According to call logs, Mr. Rudolph called the Company on August 24, August 26, and September 20, 2021 to dispute his high bills. The Company provided Staff with a copy of service order notes, which indicated that a field service representative (FSR) examined the meter on August 27 and documented on the account that no leaks were found.

The service order notes indicate the customer's meter was replaced on September 22, 2021. According to meter test results submitted by MAWC in response to Staff's DR 0009, the original meter was tested on once September 28, 2021 and again on December 2, 2021. The results of the two tests were not exactly the same, but both meter test results were within the allowable range according to Commission Rule 20 CSR 4240-10.030(37). The Company stated

that because the meter tested accurately, the customer must have a leak in his home or otherwise somewhere on his side of the meter. In a response to a Staff data request, the Company stated that it has offered to give the customer a fifty percent courtesy adjustment of the two high bills if there was a leak.

Mr. Rudolph is not satisfied with the Company's response and has refused the offer. The customer filed a formal complaint, WC-2022-0162, on December 16, 2021. The customer contends he could not have used this much water, and he insists that he does not have a leak. He believes the high bills are a result of meter error and would like to receive a full credit of the amount billed over his ordinary water bills. The billing credit would be approximately \$613.56 (\$5.629 per thousand gallons x 109).

#### **STAFF'S INVESTIGATION AND FINDINGS**

Staff called Mr. Rudolph on December 22, 2021 to discuss the complaint and arranged to meet him at his home in St. Louis. Upon Staff's arrival on December 28, 2021, Mr. Rudolph showed him around the home. Staff looked for potential leak sources and asked the customer what steps he had taken to investigate the leak. Because over four months had passed from the incident to the report of the formal complaint, Staff had to rely only upon what could be observed at the time of the investigation and information gathered from the customer and the Company.

Staff checked the water meter and water service line at the customer's home as well as the ground. The ground did not feel soft, and there was no erosion around the meter. Staff suggested to the customer that the water leak could have occurred between the meter and the house in the customer owned water service line. Mr. Rudolph told Staff he called a plumber after receiving his high water bill to check for water leaks. He said the plumber performed a soil density test on the yard to detect any water in the soil. Mr. Rudolph said his plumber told him that if there had been a water leak of over 100,000 gallons in or around the home, water should have flowed from the home down the slope of the front yard towards the street and been detected by the soil density test but nothing indicated the yard had been wet. Mr. Rudolph said that at no time during this period of purported high usage was there water pooled up in the yard or water running down the ditch.



Mr. Rudolph has a garden near his home. Staff asked if it was possible that he turned on the hose to water the garden and forgot to come back and check it. He said he waters the garden manually every two or three days when it needs it, so he did not see how it could have run for thirty-one straight days without his noticing it. The home has a faucet in the front and one in the back. If either of these hoses had been left on, Mr. Rudolph insisted that the water would have been seen running down the driveway because of the location and the slope of the yard.

Staff asked Mr. Rudolph how many bathrooms were in the home. Mr. Rudolph replied there were three. Staff asked if there is a bathroom in the basement that was used infrequently. Mr. Rudolph explained there is a bathroom in the basement, but that his wife goes downstairs almost every day and had never mentioned hearing water running. Mr. Rudolph said that after the first high water bill was received, he placed dye tablets in all of the toilets to check for leaks. Mr. Rudolph said the result was no indication of a leak. He said he and a plumber checked all of the fittings and connections to make sure there were no leaks. Mr. Rudolph stated that his home had a leaking toilet a few years ago at which time he replaced the parts in the toilet tank and stopped the leak. Mr. Rudolph also mentioned that he has done quite a bit of plumbing in his life and knows where leaks can occur and how they can be detected.

Staff explained to Mr. Rudolph that ordinarily a leaking faucet or toilet would not leave water behind to be detected because the water would drain into the sewer system and vanish. However, in this instance, that would not be the case because Mr. Rudolph has a septic tank and a drain field. If water was leaking from a faucet or toilet in the amount of 105,000 gallon over twenty days, then that water would have been visible coming out of the septic tank or pooled up on the surface of the drain field. The septic tank would not have been able to hold that much water and the drain field would have been saturated. Mr. Rudolph said he inspected this area after his first bill and neither the septic tank nor the drain field showed any signs of a water leak.

Mr. Rudolph said he checked all of his appliances and found no signs of leaks. A leak of four gpm inside the home that did not go down a sewer drain would have been immediately noticed by the customer.

The customer says the Company visited his home after the first high bill and could not determine that water was being used in excess. The Company responded in DR 0013 that a leak was not detected at the property when it visited August 27, 2021.

### **REVIEW OF DATA REQUESTS**

Staff reviewed the customer's bills provided by the Company in response to DR 0003. According to the first high bill that Mr. Rudolph received, his meter was read on July 30 and the bill was mailed Tuesday, August 3. It cannot be determined precisely when the bill was received or when it was reviewed by the customer.

Staff reviewed the daily and hourly meter readings provided by the Company in response to DR 0011. The hourly meter reading data was sorted by Staff to look for patterns and trends in the water readings from this customer. Staff has placed this data into a graph (Attachment 1) to visually depict the trend and the spikes.

Further review of the customer's meter readings provided by the Company indicate the bulk of the use, 105,114 gallons of water to be precise, occurred over twenty days (461 hours) from around noon July 21 to around 4 p.m. August 9. That amount of usage for that long would average almost four gallons of water being used per minute. During the time period of the disputed water bills, a trend was noticed which is not indicative of a leak. A graph (Attachment 2) has been created to show the meter readings and the trend of water usage during this period. The meter readings steadily increase for a week and then begin to trend back down gradually. Some anomalies occurred in the data that show some high and some low hourly readings, which should not occur in the event of a leak. It was first noticed on July 24 when the hourly data was showing average readings around 230 gallons that the 12:00 reading suddenly showed 321 gallons followed by an even higher reading of 430 gallons the next hour before returning back to the range it had been previously. On July 26 around 11 a.m., the opposite happened when the data indicated water usage had dropped from an hourly reading of 241 gallons to 89 gallons. After this one low reading the average hourly readings trended upward by an additional twenty gallons per hour. Two days later, on July 28, the hourly readings are still showing around 250 when at 6 p.m. a reading of 321 appeared before going

back down the next hour to a reading of 258. Shortly after that occurrence, the hourly reads begin to trend downward again. On August 2, as the average hourly readings were about 222, there was another dip in the water meter readings for two hours. The 9 p.m. reading showed 185 and the 10 p.m. reading indicated 163. Following those two lower readings, the meter readings began to trend downward again. The fluctuations in trends of the meter readings along with the strange dips along the way do not appear to indicate a water leak.

On August 9, the meter readings slowed down to an average of one-fourth of one gpm every hour for twelve more days before the meter reading eventually showed zero use. Beyond the period in question, the customer's meter showed almost continuous usage with rarely more than an hour or two going by without noticeable water readings occurring until the meter was replaced. Once the meter was replaced on September 22, the recorded usage was reduced drastically. One isolated incident occurred on October 30 where high readings happened between 11 p.m. until a little before 2 a.m. That spike in usage appears either to have self-corrected or to have received immediate attention. The customer does not recall what could have occurred at that time or if any action was taken to remedy a high water use event.

According to the Missouri Department of Natural Resources, the average person uses 80 gallons of water per day. Mr. and Mrs. Rudolph are the only two people who live in the home. Using the data provided by the Company in DR 0011, Staff created a graph of the daily use (Attachment 3). In 2021, prior to the meter being changed on September 22, (excluding the period in dispute), this meter only registered more than 160 gallons of water usage in a day thirteen times. Those occurrences all happened for a short period of time and are not in dispute by the customer. It can be clearly seen that these customers rarely reach the average daily use for one customer, which is generally consistent with a customer who is conservative with water use and aware of the water being used.

The customer mentioned that he sometimes allows his neighbor to use his garden hose to top off their pool when the level has gone down. This may be indicated by short periods of high water use but the excessive use shown in the customer's billing of over 100,000 gallons of water would have been more than enough to fill the pool four or five times. The water overflowing

the pool would have created a lake around the home. Mr. Rudolph said the pool has never been drained where it was required to be completely refilled.

### **CONCLUSION**

There is no indication in the customer's usage that a hose was ever left on for hours at a time or accidentally left running overnight. Based on these facts, Staff does not believe that the customer was unaware of or allowed four gallons of water a minute to run for twenty days straight.

The amount of water that the meter is indicating was used is quite substantial. According to the website [drinking-water.extension.org](http://drinking-water.extension.org), a flowing toilet uses approximately two to three gallons

per minute (gpm); a shower can range from one and a half to three gpm; a faucet in the bathroom or kitchen can use from two to three gpm; a dishwasher can use from two to three gpm; and a washing machine can range from three to five gpm.

Staff has seen an increase in the number of customer complaints against the company about temporary, unexplained high meter readings. In a recent formal complaint, WC-2021-0075, for Louis DeFeo of Jefferson City, MO, the Company provided Mr. DeFeo the full amount of his overage in the amount of \$250 for two bills. Much like the Rudolph complaint, the temporary high usage reported by the meter could not be explained. Mr. DeFeo's meter was showing average water usage over nine gpm for 73 hours straight. The Company tested the meter in place and said it tested accurately at that time. The Company and Staff found no evidence of a water leak of 43,000 gallons of water. The Company tested the meter in place and stated it appeared to be accurate. The Company stated there was also no proof of a water leak.

In another formal complaint, WC-2020-0181, Linda Beecham saw her water bills go up every billing period for a number of years without any explanation for the cause of the increase. The Company was unable to determine if there was a water leak. Staff found no evidence of a water leak in or around the home. The customer was ultimately provided a bill credit for the previous five years based on her current average water bill.

### **STAFF RECOMMENDATIONS**

Rule 20 CSR 4240-13.025(1) provides that “[f]or all billing errors, the utility will determine from all related and available information the probable period during which the condition causing the errors existed and shall make billing adjustments for that period as follows: (A) In the event of an overcharge, an adjustment shall be made for the entire period that the overcharge can be shown to have existed not to exceed sixty (60) consecutive monthly billing periods, or twenty (20) consecutive quarterly billing periods, calculated from the date of discovery, inquiry, or actual notification of the utility, whichever comes first.”

Based on the investigative work that Mr. Rudolph performed to determine if there was a leak and the fact that no sign of water was found anywhere, Staff believes this situation should be handled the same way as the DeFeo complaint by providing a full credit for the two high bills over the customer’s normal amount of water usage.

Staff believes the Company should extend the scope of the adjustment to cover the period of time when the usage is unexplained. In this instance the period of time is thirty-one days, which is the amount of time in one normal billing period. Rule 1(9) of the MAWC tariff states: “A normal usage period of not less than twenty-six (26) days or more than thirty-five (35) days for a monthly billed Customer or not less than eighty-five (85) days or more than one hundred (100) days for a quarterly billed Customer, except for initial, corrected or final bills.” While reviewing the bills submitted by MAWC, Staff identified a Company violation of the above referenced Rule 1(9), specifically the bill mailed out February 1, 2021. That bill was for the period of January 5 through January 29. This is a period of 25 days and a very clear violation of the Company’s tariff, which does not allow it to bill for less than twenty-six days.

The Company states in response to DR 0014 that it is willing to credit the customer for one billing period per MAWC’s adjustment guidelines for unexplained usage. Based on the customer’s normal pattern of usage compared to the large amount of water registered in such a short period of time, Staff believes the Company should credit the customer for the period of extremely high usage that occurred over the thirty-one day period in the amount of 109,472.90 gallons of water.

Due to the disproportionate number of high bill complaints in St. Louis County compared to the other service areas seen in the table provided by MAWC in response to DR 0014, Staff recommends the Company investigate the high bill complaints for the past three years and prepare a report to the Manager of the Water, Sewer & Steam Department including but not limited to: customer name, address, meter size, meter brand, meter install date, system pressure, daily billing information for the period of high meter readings, Company determination for the cause of the leak based on evidence and relief given to the customer.

The Company has stated in DR 0014 that it does not keep track of the number of customer complaints in which a leak is not identified. Staff recommends that the Company keep track of high bill complaints separating those with continual use and those with unidentified leaks. The Company should submit a report annually to the Manager of the Water, Sewer & Steam Department, including but not limited to customer name, address, meter size, meter brand, meter install date, system pressure, daily billing information for the period of high meter readings, and relief given to the customer.

#### **SUMMARY OF RECOMMENDATION:**

A. Staff recommends the Commission find in favor of Mr. Rudolph that there is no apparent evidence that Mr. Rudolph used the full amount of water reflected in the MAWC bills and order MAWC to provide Mr. Rudolph with a full credit for the two high bills identified in the Staff Memorandum to the extent that they exceed Mr. Rudolph's recorded ordinary water usage during non-high spike periods as demonstrated in the data provided to the Staff and described in detail in the attachments to the Staff Memorandum.

B. Staff recommends MAWC investigate its high bill complaints for the past three years and prepare a report to the Manager of the Water, Sewer, & Steam Department ("Water Manager"), contain the following information for each complaint: customer name, address, meter size, meter brand, meter install date, system operating pressure at that meter, daily billing information for the period of high meter readings, company determination for the cause of the leak based on evidence, and any relief given to the customer.

C. Staff recommends that for the next three years, MAWC be ordered to keep records of on all high bill complaints, and report annually to the Water Manager. The report should separate the complaints into a category of those involving continuous high water usage where a cause is identified, and into another category those involving continuous high water usage where no cause is identified. For each high bill complaint, MAWC should record the following data: customer name, address, meter size, meter brand, meter installation date, system operating pressure at that meter, daily billing information for the period of high meter readings, and any relief given to the customer.

D. Staff recommends the Commission find that MAWC violated its tariff Rule 1 (9) governing billing periods, in at least one instance. Staff recommends the Commission order MAWC to file a report documenting how this violation occurred, and what will be done to prevent it in the future.

**BEFORE THE PUBLIC SERVICE COMMISSION**  
**OF THE STATE OF MISSOURI**

Ralph Rudolph

Complainant,

v.

Missouri-American Water Company,

Respondent

**Case No. WC-2022-0162**

**AFFIDAVIT OF DAVID A. SPRATT**

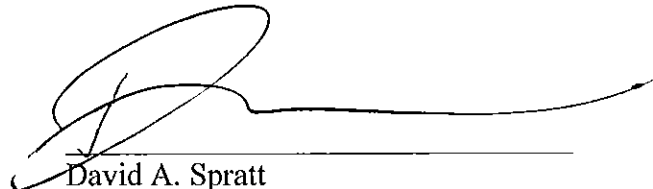
STATE OF MISSOURI

COUNTY OF COLE

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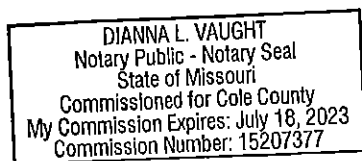
**COMES NOW** David A. Spratt, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Recommendation, in Memorandum form*; and that the same is true and correct according to his best knowledge and belief, under penalty of perjury.

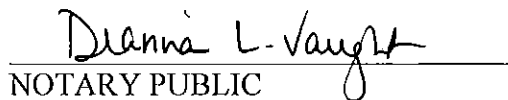
Further the Affiant sayeth not.

  
David A. Spratt

**JURAT**

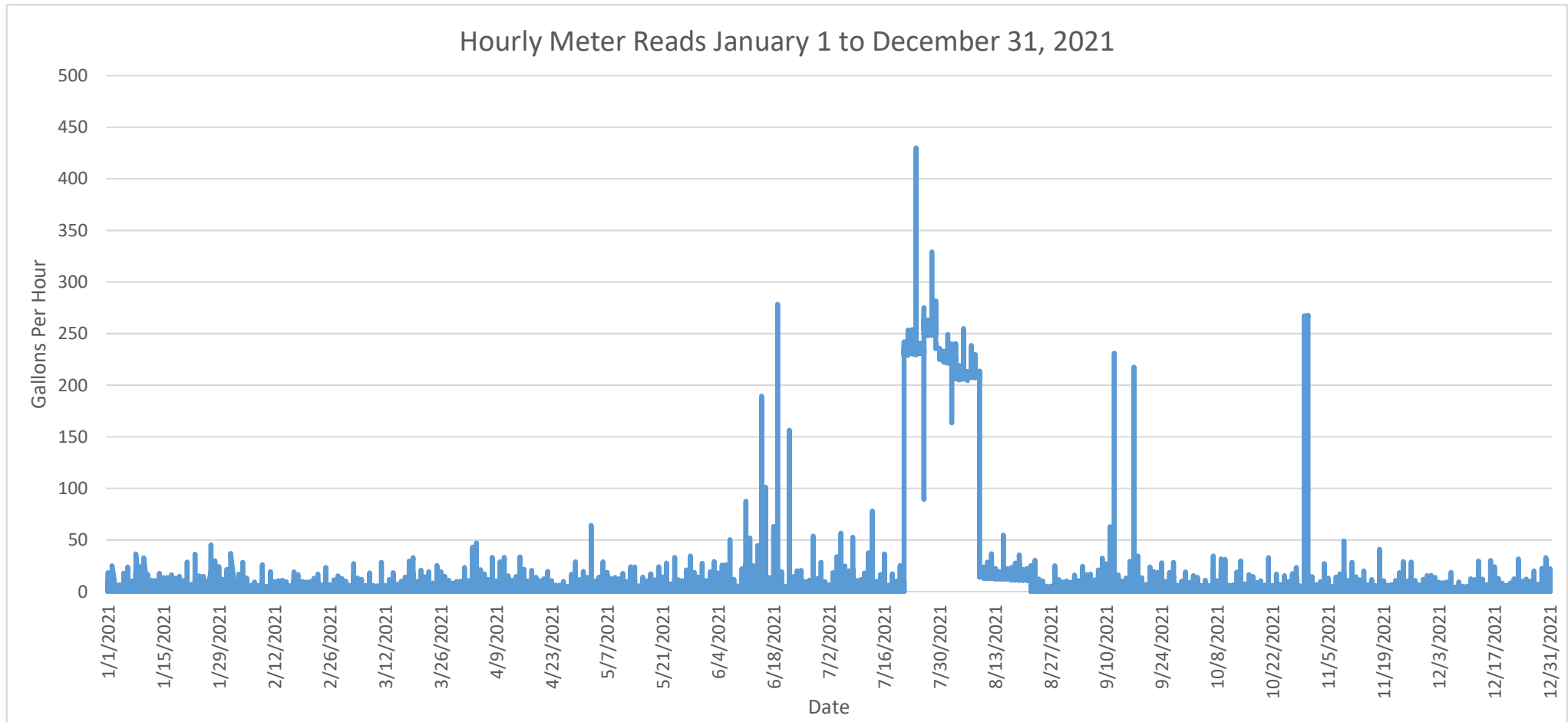
Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 15<sup>th</sup> day of February, 2022.



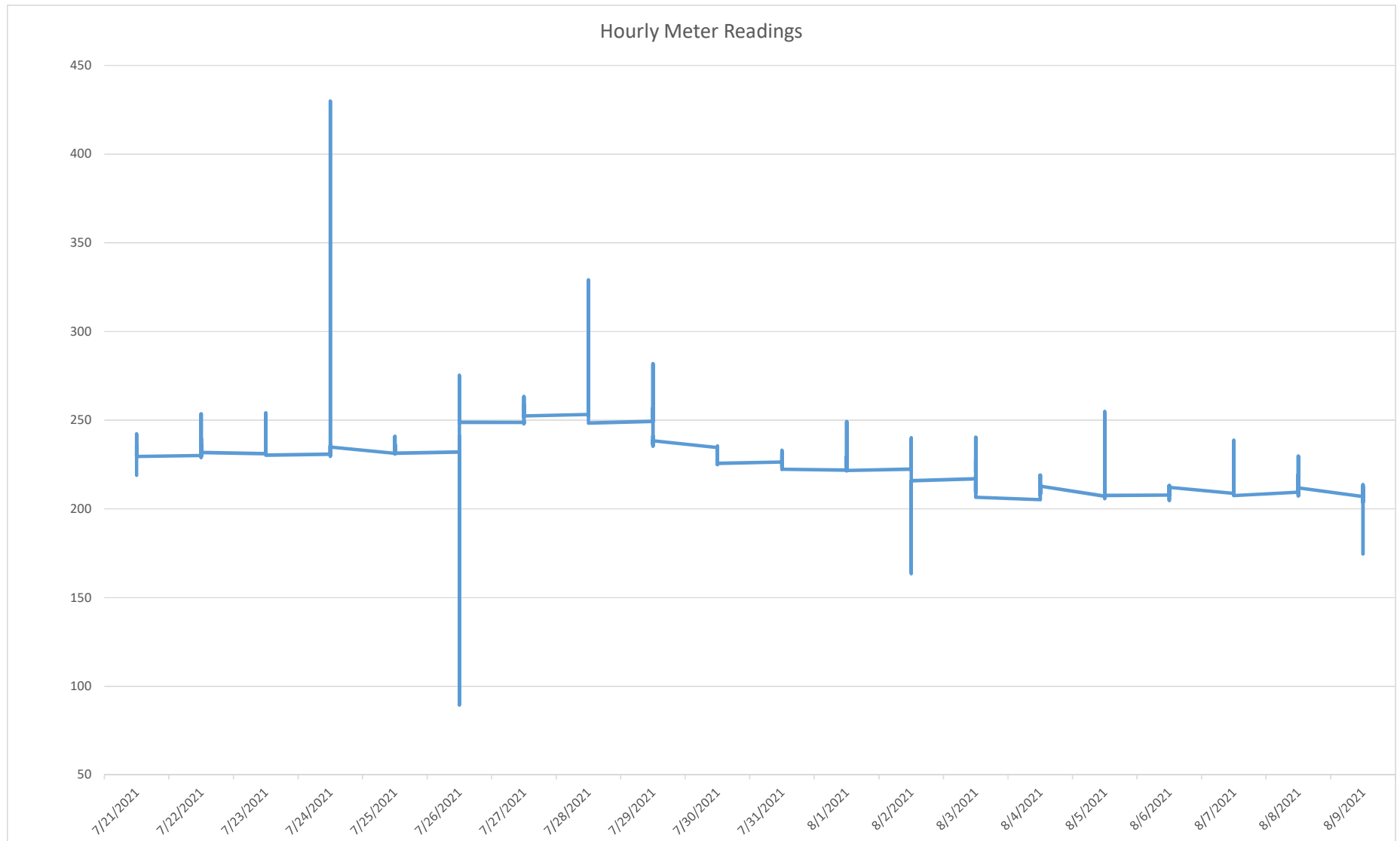
  
NOTARY PUBLIC



## DS - Exhibit 1



## Attachment 2



## Attachment 3

