



INVESTIGATION:

As of 11/16/20, KCWA is actively investigating 225 high bill complaints out of the 9000 customers billed for the October billing. Each investigation involves two parts, a check of the meter at the location and then a full check of our historical utility billing and accounting for each account. A final report is generated and sent to the customer(Example Attached). If there is a bill discrepancy, the customer is notified, and a credit issued to the account. If the customer is not satisfied with our findings, the next step in the process is to file a formal complaint with the Division of Public Utilities and Carriers. All accounts where bills are being disputed never get shut off as a matter of policy.

RATE REDUCTION:

KCWA has reduced its rate for customers using meters sized 2" and less by 15 % effective September 1, 2020. The rates are prorated only for one month in this billing cycle of July-Aug-Sept.

METER READING

Approximately 27500 customers are read each quarter. Each month of the quarter the meter readers manually obtain readings for 9000 customers over the course of three weeks. The meter readings are uploaded into the utility billing software. It is our goal to go to monthly billing once all the new meters are installed. More frequent meter reading coupled with new reading software will allow the staff to identify problems and proactively communicate back to the customer, so the bill does not get out of hand.

Consumption Adjustment: If a meter gets changed out during the middle of a billing cycle, then the bill will show the old meter use as a consumption adjustment plus the reading from the new meter.

METER BILLING SOFTWARE

The utility billing software is the same software that has been in use for the last 25 years. KCWA is working on getting updated software to launch in early 2021. The software subtracts the previous read from the current read. There has been no change in how KCWA calculate bills. KCWA will be deploying new utility billing software at the beginning of next year that will change the look and feel of the bill to better communicate information to our customers. The new software will also allow automatic bill payments and e billing.

The meter reading software is the same software KCWA has been using for the last 15 years. KCWA will be launching new Neptune360 software in the next few months. This software will allow the meter readers to see flagged accounts that may have leaks on a map. This will allow KCWA to proactively reach out to customers if a problem is noticed. The software only flags new meters so to realize the full power of this feature all of the meters must be changed.

METER CHANGE OUT PROGRAM HISTORY

The meter change out program started in August 2019.

The program involves changing out 25,000 meters sized 2" and less. KCWA already had changed 2500 meters of the same type prior to the start of the program.

To date, KCWA has replaced just over 15,000 meters in the system. We have had no issues through multiple billing cycles on these meters outside of a few clerical manual data entry errors. There is no systemic problem with the meters or billing software.

The meters being replaced are between 20-30 years old. New meters will register use 8-10% higher accuracy than the meter they are replacing on average.

METERS:

The measuring technology is the same on the old and new meters. The measuring device does not move unless water moves through it. Neptune meters are being used in Rhode Island including Providence Water, Bristol County Water Authority, Warwick Water, East Providence, Kingston, and Suez/South Kingstown. Some notable Massachusetts utility company using Neptune are Springfield, Boston Water and Sewer, Lowell, and New Bedford.

The meters are mechanical positive displacement that utilize a nutating disk which has been in use in the water industry for over a century. KCWA chose this technology because of its high accuracy measurements. As with any mechanical device it wears out over time and needs to be replaced.

New Meter Accuracy: The meters being replaced are between 20-30 years old. New meters will register use 8-10% higher accuracy than the meter they are replacing on average. Most old meters do not accurately measure low flows. The new meters measure flows less than 1/8 gallon per minute. The new meters are all factory tested and certified and exceed AWWA standards for accuracy before each shipment. Each meter has an accuracy test tag attached to it when received. All meters being disputed where accuracy is being questioned can be independently tested and verified. KCWA has a certified test bench and a meter test can be performed and witnessed by a homeowner or their agent. This bench can be used for old and new meters if needed as part of the investigation.

Leaks: A leak that small going undetected can add up to 16,000 gallons in a billing cycle of 90 days.

Homeowner testing: The homeowner can perform a simple test to check their own meter for accuracy. This can be done with a five-gallon bucket.

1. First you have to make sure no water is running and take an initial meter reading (Please see <https://kentcountywater.org/water-meter-reading.aspx>).
2. Second, fill up the 5-gallon bucket in your tub or anywhere that can accommodate the height of the bucket.
3. Lastly, go take a final reading off the meter and subtract it from the initial reading. The meters read in cubic feet and five gallons of water should equal 0.66 cubic feet.

If a homeowner finds a discrepancy in the reading, please contact KCWA and we will arrange a site visit to look into the matter fully. We want to ensure the homeowners are confident in their meter reading device.

DATALOGGER

The main difference between the old meters and the new meters is that the new meters have a meter interface unit that collects and stores hourly usage data for 90 days. This is referred to as a datalog report. KCWA can collect this information and give it to the customer to show how water was used and when it was used.

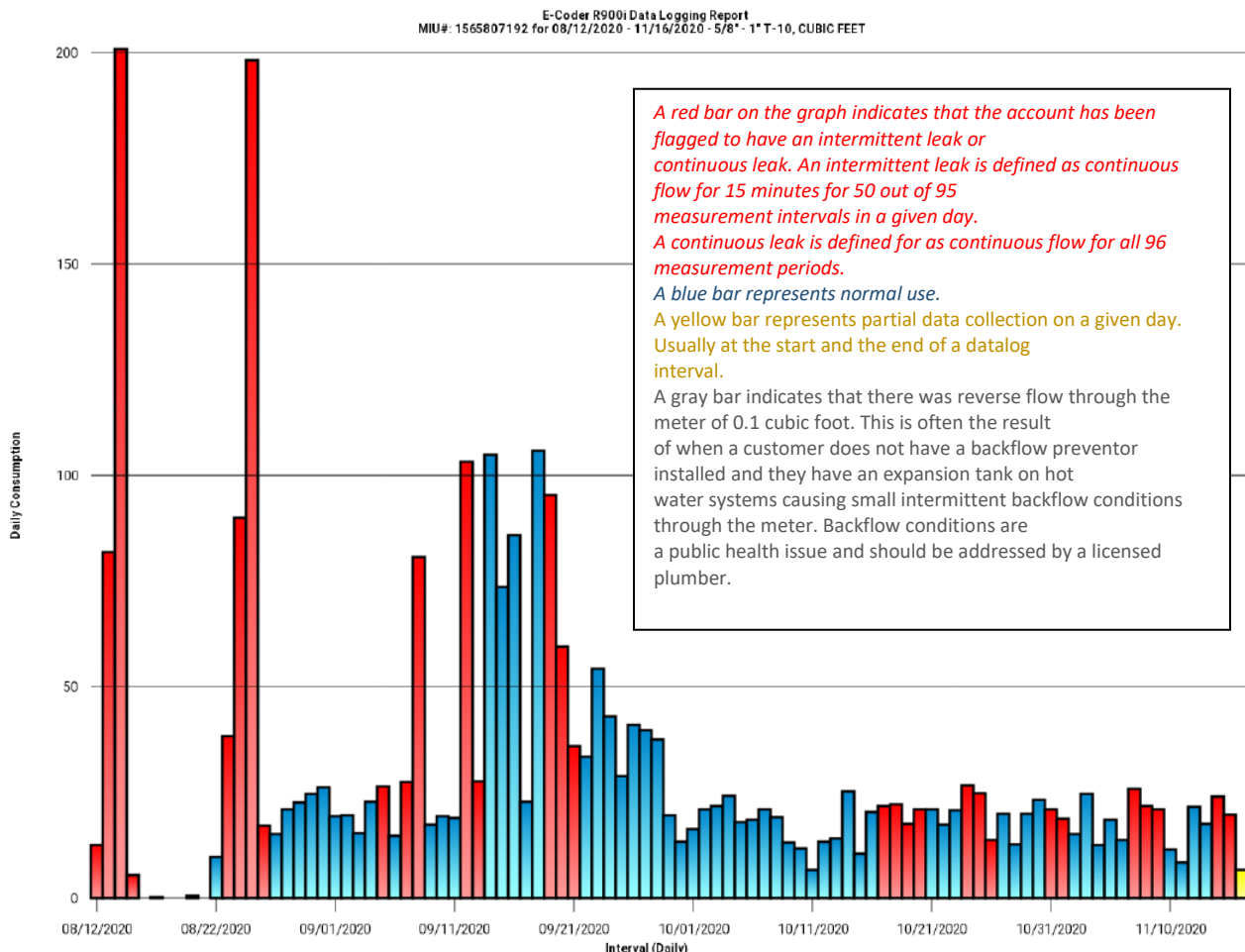
Unrepaired Leaks can be Costly

Water Loss in Gallons		
Leak this Size	Loss per Day	Loss per Month
•	120	3,600
•	360	10,800
•	693	20,790
•	1,200	36,000
•	1,920	57,600
•	3,096	92,880
•	4,296	128,880
•	6,640	199,200
•	6,984	209,520
•	8,424	252,720
•	9,888	296,640
•	11,324	339,720
•	12,720	381,600
•	14,952	448,560

The datalog is only one part of the investigation and is only available on new meters. It does give a sense of where a problem may be. KCWA has completed 110 datalog reports for the 225 complaints received and the results are attached.

To date, the datalogger reports have shown leaks on 90 of the 110 reports generated. The other 20 show normal use.

Below is an example of a datalog report. Each bar represents the daily use in cubic feet. If the bar is red, then the meter has detected a leak. If the meter measures use of 0.01 cubic feet per minute for 50 consecutive cycles in one day, it flags it as a leak. A blue bar represents normal use.



METER CHANGE OUT PROCEDURES

- KCWA contractor, Thielsch/WMS sends out 1st notices to customers asking them to schedule an appointment to have their existing meter replaced.
- Once the customer schedules an appointment, their account information is entered by Thielsch into an appointment database.
- On the day of the scheduled appointment at the customer's home, the installer from Thielsch records the serial number of the existing meter, the size of the existing meter and the current reading on the existing meter on the Work Order. The installer then removes the existing meter and takes a photograph of it.
- The Thielsch installer then installs the new meter and records the new meter serial number on the Work Order. The installer also installs the new radio (either integrated with meter or external on the outside of the house) and records the new radio serial number on the Work Order. The installer makes sure the new meter has been activated, then records the current reading on the new meter on the Work Order. Photographs are taken of the new meter with the new reading, new radio and the Work Order before the installer leaves the appointment.
- The Thielsch installer then moves on to the next appointment and repeats the above steps for the removal of the existing meter and the installation of the new meter.
- At the end of each appointment, the Thielsch installer inputs all information from the Work Orders and uploads all photographs into an app maintained by Thielsch for each separate account.
- Approximately 10 days after the 1st notice is sent out, Thielsch sends out a 2nd notice to customers that have not scheduled appointments to have their existing meter replaced after receiving the 1st notice from Thielsch.
- Approximately 10 days after the 2nd notice is sent out, Thielsch sends out a 3rd notice to customers that have not scheduled appointments to have their existing meter replaced after receiving the 2nd notice from Thielsch.
- *****NEW PROCEDURE***** Approximately 10 days after the 3rd notice is sent out, the KCWA places a 4th notice door hanger at the property of the customers that have not scheduled appointments to have their existing meter replaced after receiving the 3rd notice from Thielsch. The 4th notices from the KCWA ask the customer to schedule an appointment to have their existing meter replaced as soon as possible.
- ******NEW PROCEDURE***** Approximately 10 days after the 4th notice door hangers are hung by the KCWA, customers that still have not scheduled appointments to have their existing meter replaced after receiving the 4th notice door hangers will receive a 5th notice. At this point, the customer must schedule an appointment to replace their existing meter or be shut off for non-compliance*. An appointment must be made before their water service can be reactivated.

*All shutoffs for non-compliance and non-payment have been stopped effective starting Nov 12, 2020 until after the new year.