



MEMORANDUM

TO: Jonathan H. Hayes, City Manager

VIA: Jared Jones, ICMA-CM, Assistant City Manager
Brandy L. Waldron, Assistant City Manager

CC: Janette Smith, CPA, CMC, City Clerk-Treasurer
Kristen Kennedy, Public Affairs Manager

FR: Clint W. Murphy, J.D., Public Works Director

RE: Water Meter Status Report

DT: January 5, 2026

SUMMARY:

This is a snapshot report of the current water meter replacement situation in the City of Panama City ("the City") meter section. Based on information from our Raybern Consulting, we estimate that 1,600 (8%) of active water meters in the City are not reporting Automatic Meter Reads (AMRs) after eliminating inactive or non-existing accounts from the analysis.

BACKGROUND:

Between 2012 and 2014, the City purchased and installed approximately 17,000 Sensus IPearl water meters, manufactured before 2014. These meters have a service life of 20 years. Between 2012 and 2014, the City purchased and installed approximately 1,000 Sensus Omni meters of various sizes to use on service lines ranging in diameter from 1 1/2 inches to 8 inches. These meters have a service life of approximately 10 years, and all are now at the end of their life.

As IPearl meters began to fail prematurely in large numbers, the City focused on an effort to replace the existing backlog of failed Sensus meters. However, at the very infancy of the meter replacement effort, Hurricane Michael hit in October 2018. For almost a year, all focus was devoted to disaster recovery efforts. By mid-2019, the City again made a concentrated effort to replace the existing backlog of failed meters. Within about a year, the backlog of approximately 400 meters was replaced. While also keeping up with the newly failed meters, meter replacement crews worked six days a week to keep pace with this program.

The issue was further complicated by the fact that our remote meter reading system relies on tower receivers spaced throughout the City that pick up signals from individual transmitters installed on most of our meters, eliminating the need for manual meter readings. Several of the towers were damaged during Hurricane Michael, and the meter transmitters, known as MXU devices, were also nearing the end of their Life expectancy and began failing in large numbers. When an MXU unit failed, it became more difficult to determine if the meter was functioning, as it required going into the field and manually reading the meter.

When COVID affected the global supply chain in 2020, the meter replacement program slowed down as the City experienced significant supply chain issues. Replacing failed meters came to a halt for over a year, as they waited for new meters to become available. During this time, the meter replacement program was limited to only maintaining the demand for new tap installations. MXU units also became more difficult to purchase.

This resulted in a significant escalation in the backlog of meters needing to be replaced as they continue to fail at a rate of 50 to 100 per week. Further compounding the problem, all large Omni meters reached end-of-life status and began to fail simultaneously, creating a perfect storm scenario that necessitated the replacement of meters and MXUs.

In mid-2025, the City hired Raybern Consulting to assist with the diagnostics and troubleshooting of the entire system, including a review of our internal process flows. Raybern has identified many duplicate and ghost accounts, which made it appear that we had many more accounts relying on estimated billing. The current estimate of 1,600 (8%) of active water meters in the City not reporting Automatic Meter Reads (AMRs) was derived from Raybern Consulting after eliminating inactive or non-existent accounts from the analysis.

CURRENT STATUS (DECEMBER 2025):

1. The City currently has 19,597 active potable and irrigation water accounts. Of these, ~1,600 meters are not being read. This is down from over 3,000 meters in early 2024. Meters that are not being read are being estimated by the Utility Billing Division. Additional meters have alerts indicating they need replacement or removal from the system, and currently, on average, 100 meters per week stop functioning correctly. Of the ~1,600 meters, the most recent data analysis found 84 meters not listed as active in Sensus, 1,458 meters with mismatched IDs, and 59 meters with radios not matching between systems; site visits are needed to resolve these issues. It appears that most of the units that fail are from installations before 2012.
2. The City has a five-person meter crew and continues to be challenged in maintaining the necessary pace to keep up with the volume of meters that need to be verified and/or replaced. To assist, an outside contractor was brought in to help. Matthew Headrick, with LRIE InfraLytics, was contracted by Underground Utilities in early 2025 to diagnose and repair/replace meters/MXUs, where necessary. Approximately 2,500 meters were identified in the original list. These meters were segregated into 4 Cycles. Evaluation and repair/replacement of Cycle 2 units is complete. Cycle 4 activities are underway. Cycles 1 and 3 units are scheduled for the near future. A total of 1,497 units have been verified in the Sensus system. This means they were visually and physically evaluated. Repairs were

made, if possible; however, 1,212 required complete replacement. The replaced units were then set up in the system with new meter and MXU designations. Finally, they were verified to be working in the Sensus system.

3. Experience has found that nearly 95% of the non-working units were 1 inch or smaller meters and required complete replacement since the MXU and meter were combined units. 1 inch and smaller also comprises the largest number of meters installed. Approximately \$80,000 has been paid to date to LRIE InfraLytics for the diagnosis, repair, replacement and verification of meters since February 2025.
4. Given the high replacement volume, the process has been slowed by funding for and the availability of new units. As this is an issue, Underground Utilities requested that Raybern provide the list of units currently installed that are still within the 10-year full replacement warranty. They could concentrate on these units since replacement unit costs will be covered.
5. In addition to funding being an issue, utility billing cannot keep up with the massive data entry needed for inputting new meters into the billing system and removing replaced meters from the system.

CONCLUSION:

With our current staffing levels, even with the assistance of LRIE InfraLytics, it is a challenge to both keep pace with the replacement project and meet the demands of our everyday operation to make up the deficit in nonfunctioning meters, as the number of meters failing each week roughly matches what we can troubleshoot, remove, and install.

A proposal has been received from Core and Main, our vendor that supplies our meters, to assist in the troubleshooting, field verification, and meter replacement program to get our system up and running. This proposal is being revised with the new meter data recently supplied by Raybern Consulting. We expect to move forward within the next 4-6 weeks and will take any necessary action before the City Commission to effectuate the required repairs to our system.