CITY OF EUREKA CALIFORNIA

AGENDA SUMMARY
EUREKA CITY COUNCIL

TITLE: Automated Meter Reading (AMR) Project Update

DEPARTMENT: Public Works

PREPARED BY: Brian Issa

PRESENTED FOR: ☐Action ☒Information only ☐Discussion

RECOMMENDATION
Receive report; no action necessary.

FISCAL IMPACT

☐No Fiscal Impact ☒Included in Budget ☐Additional Appropriation

COUNCIL GOALS/STRATEGIC VISION

- Financially Sound City Providing Effective Services

DISCUSSION

This presentation is offered to Council as an update on the progress of the Automated Meter Reading(AMR) project started in 2023. The project includes the complete changeover of water metering equipment Citywide from the radio-read system that was installed in 2006-07, to cellular based meter technology.

Dead Meters and Estimated Billing

Beginning in 2020, we started to see equipment dropping out due to battery failure as they neared the end of their 20-year projected life span. At first, we were seeing just a couple of meters dying per month. However, this number began to climb drastically in 2022 to where we were losing 250, or 2%, of our meter population each read cycle with the rate increasing logarithmically. Without acting, we were on track to read a full 25% of our system manually each month by June of 2023. We went from one person reading meters for eight hours a month, to four people reading meters full time.

In response, starting in March of 2023, finance staff switched to billing every other month with interim bills based on an average use. This move freed up staff from manually reading meters so we could focus on replacing dead equipment. It also caused significant headaches for billing staff as well as customers when the “true-up” occurred following the replacement.

Project Coordination and Automation

Given the following points, we decided to explore the idea of completing the project with the Water Distribution crew as opposed to hiring a contractor.

- Meter bodies only replaced as needed
- No widespread meter box replacement
- Significantly reduced labor costs (even assuming significant overtime and temp employee costs)
- Our crew will provide the greatest standard of care and the closest communication and coordination with Incode, the City's finance department, and the various equipment vendors to provide an end product that is both cost effective and free from errors
- Improvements in GIS and mobile technology allow us to perform functions previously limited to specialty contractors

To this end, we developed a way to largely automate the equipment swap process to reduce points where errors could be introduced. We purchased iPads and bar code scanners and working with a data gathering tool developed by our GIS specialist, gathered all of the information directly from the tags on the equipment in a way that allows quality control. This bulk data is then fed into the billing system periodically.

Current Status

As of March 1, 2025, the project is 95% complete. The remaining 600 meters are largely composed of those that require complete replacement of the meter boxes which is ongoing.

Project Costs

The estimated cost of having a contractor perform the work was $6M-$7M if the cost of replacing meter boxes was included. At the March 2023 Council meeting staff presented an estimated project cost of $4.5M to perform the work in-house.

To date, the City has spent approximately $3.1M. If we continue to replace meter boxes in house, the projected cost of the completed project will be around $3.5M which also included replacement of all of the compound meter bodies (older meters which cause numerous billing issues) with new ultrasonic meters.

Timeline

The bulk of the project will be complete by July of 2025. The rate at which the crew can replace meter boxes is the primary factor driving schedule from this point forward. We may bring on additional temporary help to complete this task this summer.

Cellular Advantages

The move to a real-time read system has several advantages. These include:

- A customer side portal that allows users to see their water use in near real-time. This allows customers to manage their water use and their bill with much more control and transparency than the current monthly read system. Through the portal called EyeOnWater, customers can set customized leak parameters and be notified by text or email if leaks occur. They can also compare usage over

time down to the minute. This will lead to greater water conservation (a current state priority), less staff time spent answering billing questions and handling leak adjustments, and ultimately a more efficient and cost-effective system.

- Reduced staff time dedicated to reading meters, performing re-reads when errors occur, and pulling data from meters for leaks.
- No need for a dedicated vehicle. A “meter reader” vehicle becomes unnecessary reducing fleet lease and fuel costs
- Reduced emissions. Less driving means less fuel use and emissions.
- Easier for billing staff to respond to questions as they will have the data in front of them and the customer will be able to see it as the same time.
- Tracking meters and usage outside of the billing software. Incode is less than stellar at providing access to water usage and meter data. This information is increasingly required for state reporting. Beacon provides a much more user-friendly way to access this data.

<u>Upcoming Tasks</u>

1. Complete meter box replacements
2. Rollout EyeOnWater customer portal