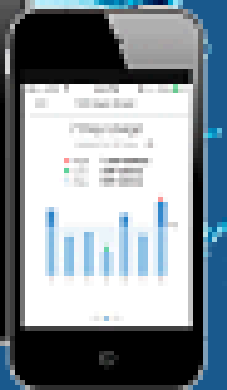


City of Hallandale Beach

AMI Remediation Project

Update on Challenges with
City Water Meters

August 7, 2024





Today's Agenda

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What is AMI?

Advanced metering infrastructure is an integrated system of water meters, communication networks and data management systems that enables two-way communication between meter endpoints and utilities. The system automatically transmits the data directly to the utility at predetermined intervals.

Meters are often viewed as the cash registers of a water utility. An AMI system simply provides a way to electronically gather that meter data.



Background

Meter Reading Problems & Impacts

On December 14, 2022, City Staff presented to City Commission, a plan to correct ongoing issues with the Utility System's AMI Meter System. A significant number of meters were not transmitting electronic reads or the electronic read is inaccurate. Additional problems were identified:

- Register Failures
- Supply Chain Issues
- System Limitations

The problems identified are having the following impacts on the City's Meter Maintenance Program, Utility Billing Process, and other dependent initiatives:

- Manual Meter Reads
- Timley Billing
- Other dependent strategic Initiatives
- Estimated Bills
- Measuring Problem
- Unaccounted for Water
- Zero Billed Consumption

Now more than ever, accurate and complete billing is necessary to ensure the success of other long-term strategic projects.

In June of 2023, City Staff provided an update to City Commission regarding progress and changes which were approved through the FY24 Budget in \$1.76M of funding.

Overview of Project

AMI Remediation Project



- Due to the extraordinary nature of this issue, its impact to the financial stability of the utility, and its impact on other key initiatives, the AMI Remediation Project Plan below was approved.
- Resources in the amount of approximately \$830,000 in FY2023 and \$1,760,000 in FY24 were allocated to this effort.

Field Audit

**Warranty
Replacements**

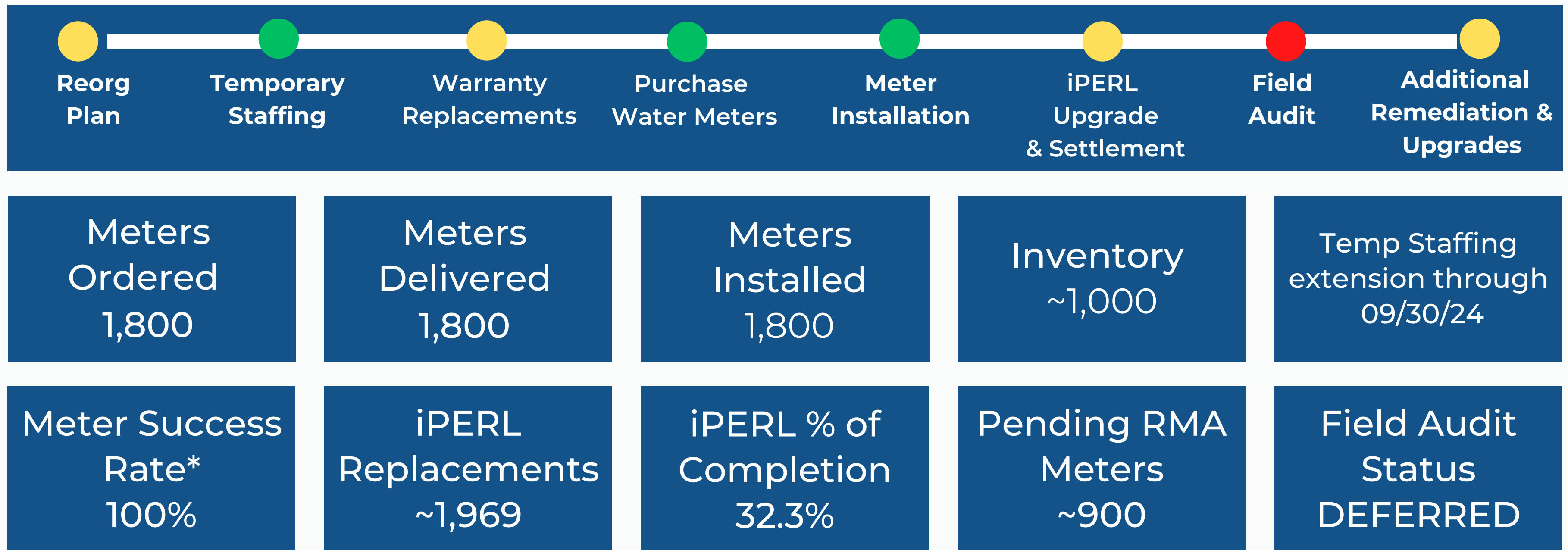
**Purchase Water
Meters**

**Reorganization
Plan**

**Temporary
Staffing**

**Additional
Remediation &
Upgrades**

Status Update



*Based on a sample

Challenges

Significant Project Delays:

- Sensus delays in receiving an agreement and in receiving updates/changes based on Staff's review.
- Substantial delays in receiving and tracking RMA meters.
- Delays in receipt of purchased meters.
- We continue to see a significant number of new register/radio/meter failures.
- Ineffectiveness of register replacement program and reliability issues of Accustream meters.
- Scope of project change to a full iPERL meter replacement program.
- Physical inspection alone, cannot identify meter issues, which was the basis of the field audit.
- Meeting goal of substantial improvement by 09/30/2024 and need for temporary staffing.

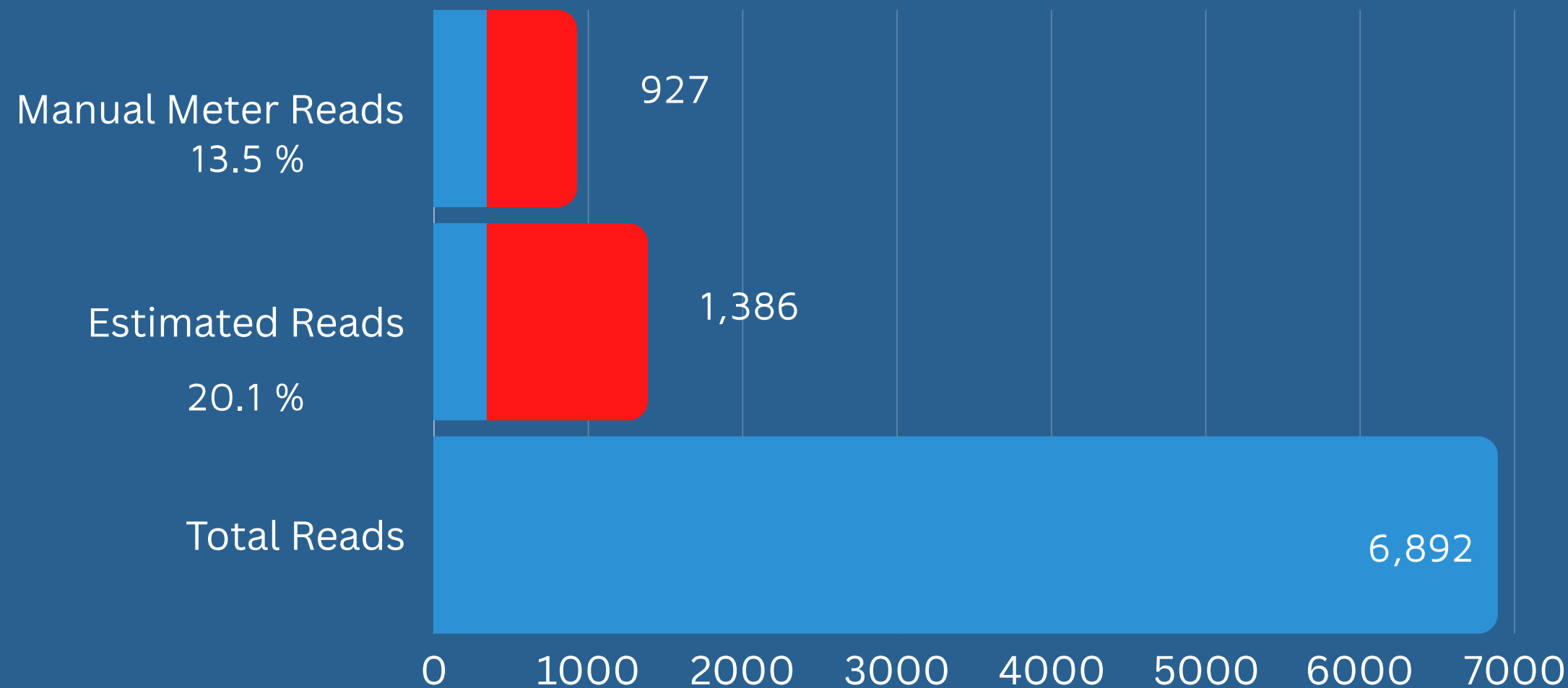
Ongoing Issues:

- Supply chain issues
- Revenue losses and resolving issue timely important to stakeholders (e.g. customers, bondholders)
- Significant administrative and work load burden on both the Meter Services and Billing teams.
- Effectiveness of Meter Maintenance Process and competing priorities.

Statistics on Meter Reads

September 2023

Meter Read Data for September 2023



Red area is amount of reads above 5% goal

Goal

5%
(345 Estimated Reads)

Meter Maintenance Impacts

Manual Meter Reads
(Change fm Sept-22)

-1.5%



UB Work Orders

~1,200

Billing Impacts

Est. Billing Reads
(Change fm Sept-22)

+17%



Zero Billed Accounts
(Change fm Sept-22)

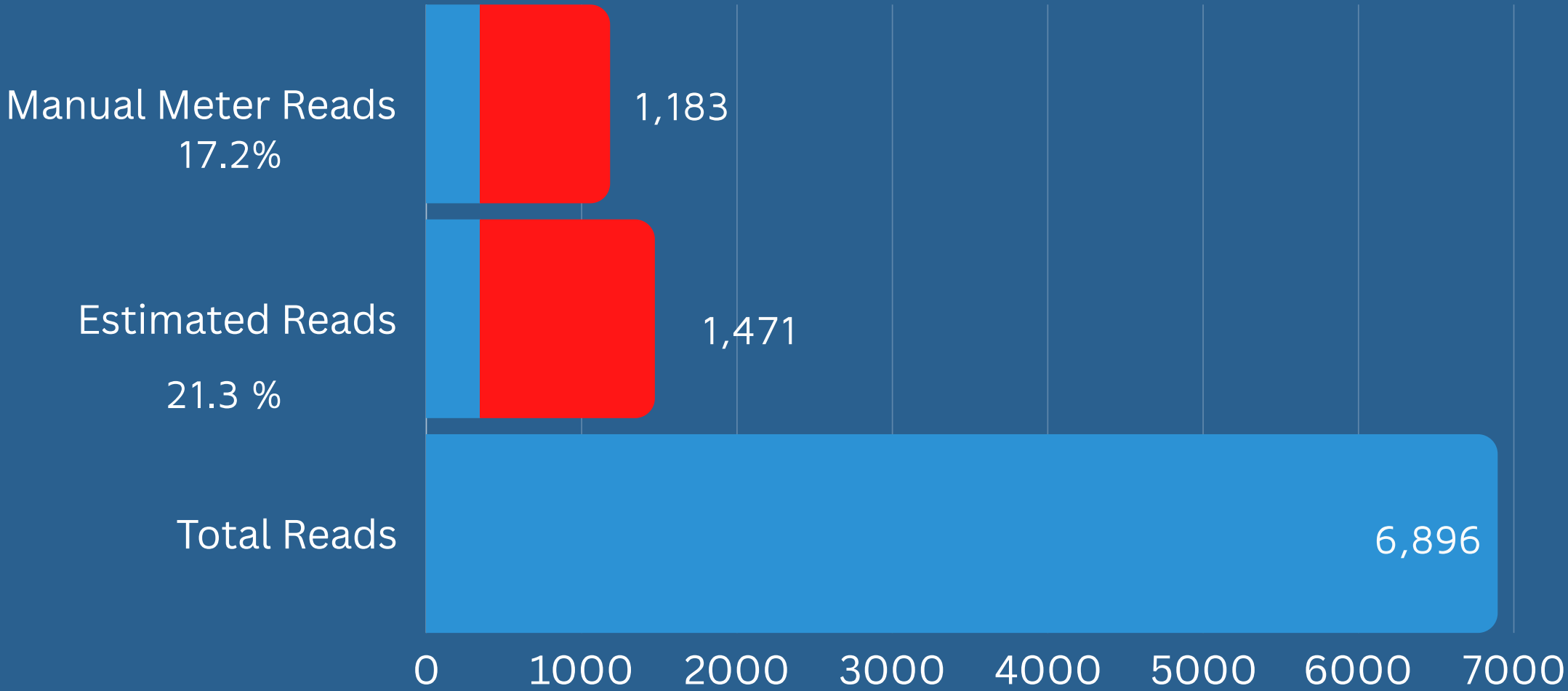
-20%



Statistics on Meter Reads

June 2024

Meter Read Data for June 2024



Red area is amount of reads above 5% goal

Goal

5%
(345 Estimated Reads)

Meter Maintenance Impacts

Manual Meter Reads
(Change fm Sept-23)

+28%



UB Work Orders

~1,800

Billing Impacts

Est. Billing Reads
(Change fm Sept-23)

+6%



Zero Billed Accounts
(Change fm Sept-23)

-29%



Unbilled Water

(Non-revenue water)



1 out of 7

Finished gallons not billed
(in billing)

May 2024 (based on a rolling 12-month average) water loss was 15.6%, a decrease of 3.6% compared May 2023 (based on a rolling 12-month average) of 19.2%

Goal

10%

Current Situation

Due to the ongoing issues, City Staff has been in discussions with Sensus to provide a more effective plan for substantial improvement of the system. City Commission approved funding for the estimated costs of \$1.6M related to a settlement agreement and other upgrades included in the FY24 budget. On May 8, 2024, Sensus submitted a revised proposal to support a full water meter upgrade. Here are some highlights:

- All pending RMA Accustream meters will be replaced with iPERL meters at no costs.
- Upgrade includes converting all smaller meters to iPERLs and purchasing discounted larger meters that have reach the end of their warranty period.
- Offered substantially discounted meter pricing for the iPERL meters purchased out of normal RMA process.
- Sensus will contract with a 3rd party to install iPERL meters purchased under the settlement agreement.
- Sensus committed to complete installations within one year of agreement execution.
- Sensus to provide a credit of \$36,000 for the 1,800 meters already purchased and installed.

Retrospective Review of Revenue Loss Estimates

Analysis below was prepared by the Finance Department comparing updated estimates of revenue losses (green) to the amounts projected in FY2022 (blue). Below is a summary of findings:

- Estimated revenue losses from FY17-24 were originally on pace for a \$7.4 million loss.
- Updated estimates for potential revenue losses from FY17-24 amount to \$6.3 million.
- Approximately \$1.1 million in potential revenue losses mitigated through FY24.
- Decrease from 15% to 11% in zero billed year-round meters.



Project Costs

Description	Budget (Revised)	Expenditures	Available
Meter/Equipment Purchases & Installations	\$ 1,373,500	\$ 330,000	\$ 1,043,500
Temporary Services	620,000	545,000	75,000
Settlement Agreement (meter purchases)	405,500	0	405,500
Reorganization (initial one-time cost)	140,000	140,000	0
Optimization/Process Review Ph 1 & 2	50,000	0	50,000
TOTAL	\$2,589,000	\$1,015,000	\$1,574,000

Next Steps

Settlement Agreement

Finalize the Sensus/Core & Main settlement agreement for Commission's review and approval. Agreement will complete conversion of Accustream meters to iPERL.

Optimization/ Process Review

Contract with 3rd party for an efficiency process review of Meter Services, Utility Billing and Customer Service in Phase I and implement recommended changes to optimize operations in Phase II. Phase I to start within a month.

RMA Meter Installations

Engage 3rd party to install the ~1,000 iPERL meters currently in inventory. Meters were primarily obtained from the Accustream RMA replacement meters at no cost to the City.

Large Meter Upgrade

Purchase and installation of registers for large meters that are currently not working, as well as meters close to, our out of their warranty period. Deliveries expected in FY25.

Updated Project Milestones



Summary

- 1,500 Advance Register Replacement: Installation completed in April 2023.
- 1,800 iPERL meters directly purchased: Installation completed.
- iPERL Meter Conversion: 32.2% complete as of June 2024.
- Field Inspections: deferred in exchange for of a full system upgrade.
- RMAs: Received over 1,000 additional iPERL meters to be installed.
- Sensus: Request from City Commission of settlement agreement in October 2024, with expectation of project completion within one year of execution.





Thank You
Questions?