



## Newton City Council

### Committee of the Whole Agenda

**Monday, April 4, 2022**

The City Council will meet in a Committee of the Whole on Monday, April 4, 2022, at 6:45 PM

The City Council will hold this meeting as a hybrid meeting on Monday, April 4, 2022, at 6:45 pm. This meeting will be held in-person in the Chamber at City Hall. To view this meeting using Zoom use this link: <https://us02web.zoom.us/j/83073428295> or call 1-646-558-8656 and use the following Meeting ID: 830 7342 8295

#### Referred to Committee of the Whole

**#215-22 Discussion on the replacement of the water meter system**  
COMMISSIONER OF PUBLIC WORKS requesting a Committee of the Whole to brief the City Council on the replacement of the water meter system including all meters and transmitters at every residential and commercial property in Newton.

Respectfully submitted,

Susan Albright, President

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The location of this meeting is accessible and reasonable accommodations will be provided to persons with disabilities who require assistance. If you need a reasonable accommodation, please contact the City of Newton's ADA Coordinator, Jini Fairley, at least two business days in advance of the meeting: [jfairley@newtonma.gov](mailto:jfairley@newtonma.gov) or (617) 796-1253. The city's TTY/TDD direct line is: 617-796-1089. For the Telecommunications Relay Service (TRS), please dial 711.



# City Council Meeting Department of Public Works

## Water Meter System Replacement Program

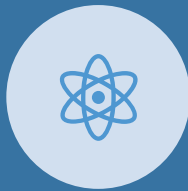
April 4, 2022



### Agenda



INTRODUCTION TO WATER  
METER TERMINOLOGY



METER HISTORY IN  
NEWTON



PROPOSED METER  
REPLACEMENT PROGRAM



QUESTION & ANSWER



# Water Meter Terminology

## Water Meter Terminology

- Water Meter
- Meter Transmission Unit (MTU)
  - Transmit readings at intervals to be read by drive-by or fixed network system
- Advanced Metering Infrastructure (AMI)
  - Real-time data and alerts for customer service
  - Billing Frequency
  - Two types: cellular and fixed network
- Data Processed & Billed



## Meters

- Moving parts subject to wearing by friction
  - Residential and commercial
  - Irrigation or fire
  - Batteries for MIUs, lifespan of 15-20 years
- Results in loss of accuracy over time
- MassDEP recommends replacement every 10 years (5/8"-1" sizes)
- AWWA Accuracy Standards
  - New 95-101%, 5 yr. warranty (5/8"-1" sizes)
  - Repaired >90%, 10 yr. warranty from purchase date
  - Shorter warranties typically on older meters and also for commercial meters (sizes 1.5" and larger)



## Meter History in Newton

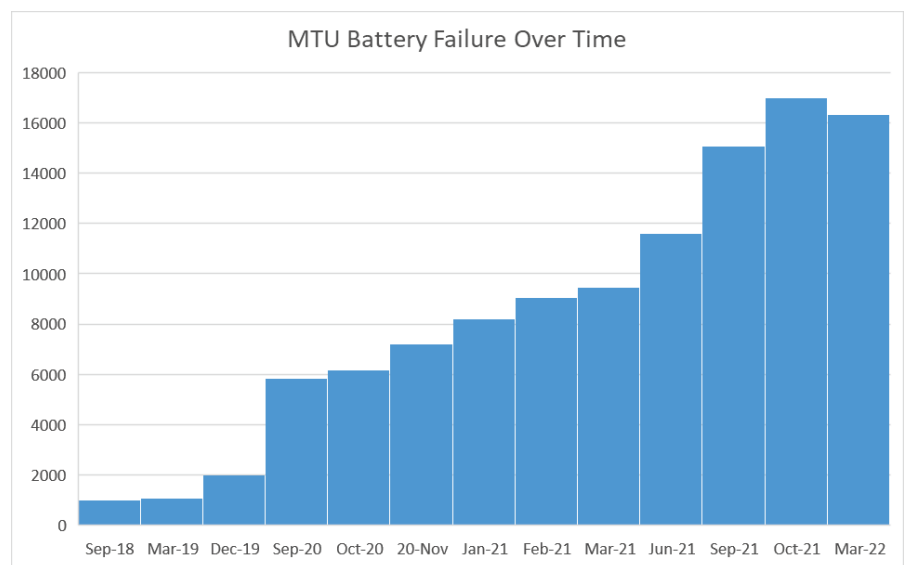
## Water Meters by Size

- Current Meters by Size – Total 28,911 meters
  - 5/8": 17,716
  - 3/4": 5,933
  - 1": 4,216
  - 1.5": 479
  - 2": 449
  - Large Meters (3"+): 118
  
- Irrigation Meters: 3,900 approx.
  
- Current Annual MWRA Assessments
  - Water: \$13.78M
  - Sewer: \$22.49M



## Water Meter History in Newton

- 2009 – Last replaced all water meters via contract installer
  
- 2012-2013 – Replaced all outside MIUs to increase range
  
- 2018 – MTU Failures Began



# Proposed Meter Replacement Program

## Benefits of a Meter Replacement Program

- Increased accuracy of new meters
  - Reduction of Unaccounted-for Water
  - Right-Size larger meters
- New Technology to Increase Reading & Billing Efficiency
- Standardization of all meters in Newton
- Installation program will locate and fix illegal/unregistered water connections.
- Customer Portal
  - Residents can track their own usage
- Backwards Compatibility



## Meter Program Timeline

- Procurement of meters, MTUs and data collectors through cooperative bid immediately
- Meter Installation Procurement
  - Bids received and processed by June-July
- Installation Program
  - Public outreach, notices and scheduling begins in July
  - Installations begin in July-August 2022
  - Program substantial completion by December 2023



## Installation Program At-a-Glance

- MGL Chapter 30, Section 39M bid package
- Includes the labor to install the meters and MTUs
  - DPW staff will assist with implementation to expedite
- Sealed bids where lowest price is chosen
- Minimum quality requirements to ensure a “responsible” bidder
- Technical specifications will identify steps and minimum criteria for a public outreach and scheduling program



## Public Outreach

- Project Kickoff
  - Newspaper advertisement
  - Webpage dedicated for the project
- How to Schedule Appointments
  - Phone line
  - Webpage
  - Mailers = 2 minimum, at least 7 days apart
  - Property postings = 2 minimum
  - Handing unresponsive customers, denial, vacant properties
- Performing the work
  - Health and safety protocols
  - Sign and review work performed
  - Collect contact information



## Records

- Database in excel format
  - Customer name, phone, email
  - Property address
  - Account number
  - Old/new meter
    - Size
    - Manufacturer
    - Serial numbers
    - Readings
  - Meter transmission units
    - Manufacturer
    - Serial numbers
  - Work performed
  - Photographs
  - Notes





## Meter Program Cost

- Meters, MTUs & Fixed Network System: \$8.85M
- Installation Program: \$6M
- Engineering: \$0.19M
- Contingency: \$1.5M
- **Total Suggested Meter Program Budget: \$16.55M**



Q&A



# THANK YOU

Ryan J. Trahan, P.E.  
President | COO

