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LIVE INSPIRED™

Cary's AMI Journey

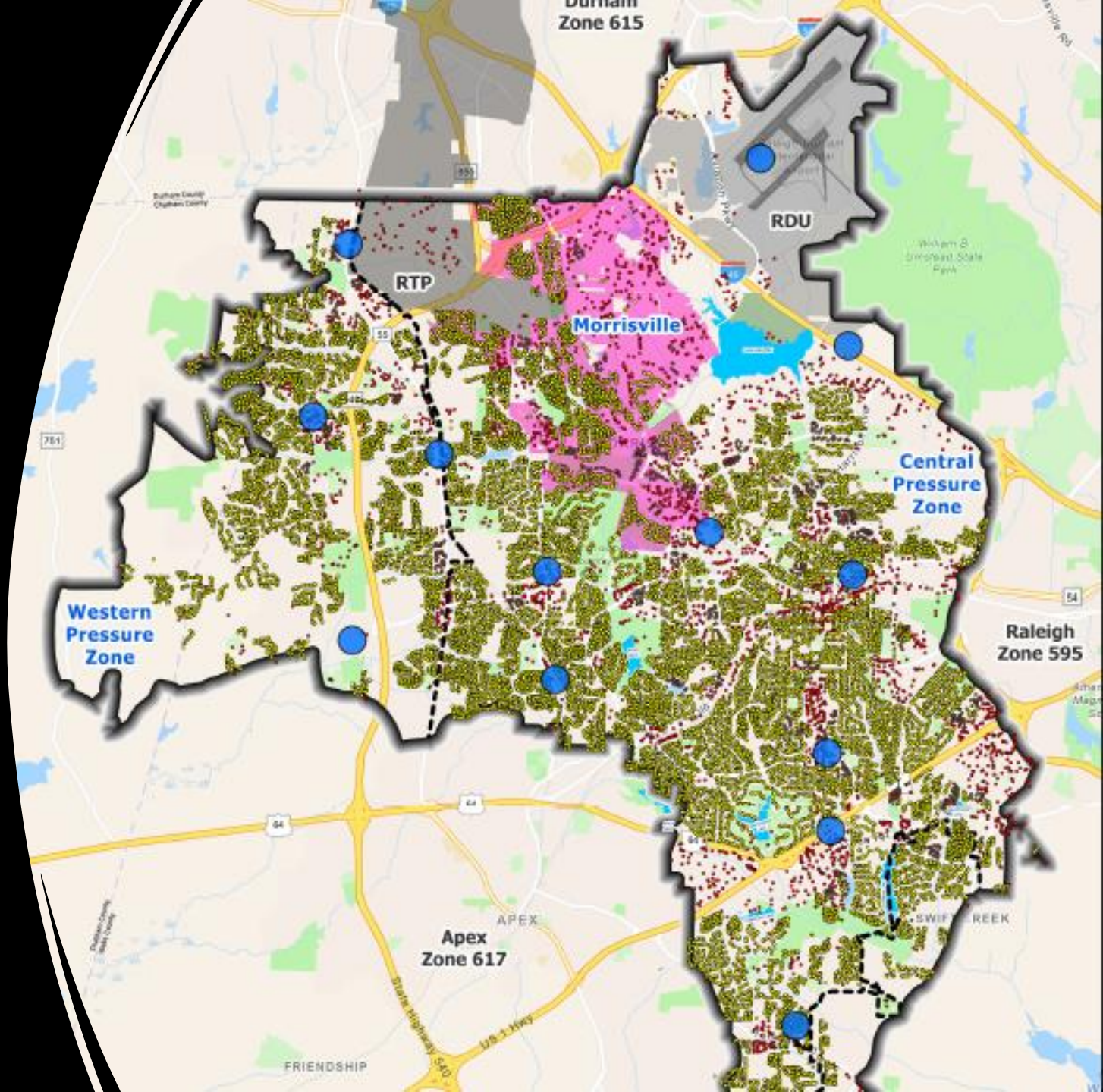
Matt Joyner – AMI Operations Manager

Key Takeaways

- Taking Ownership of Your System
- Building the Program
- Vision for the Future

Background

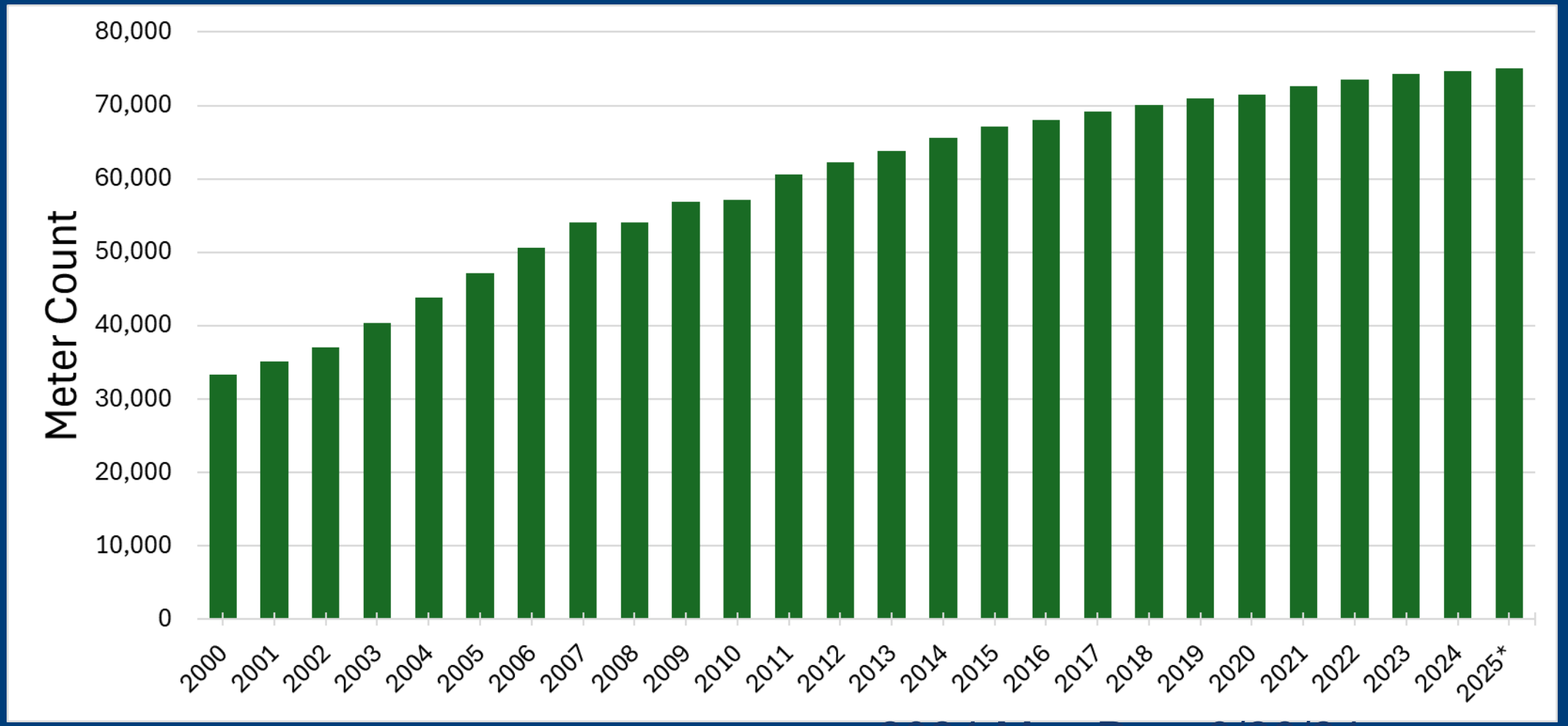
- Cary AMI System Overview
- Serving 224,000 people
- Operational since 2011
- 75,000 AMI water meters
- Approx. 80 square miles
- 14 Sensus Tower Gateway Base Stations (TGBs)
- Sole Source Contract



Taking Ownership of Your System

- Meter Program Assessment (2021)
- Division Transition from Public Works to Utilities (2022)
- Dedicated Meter Warehouse
- Capital Replacement Program

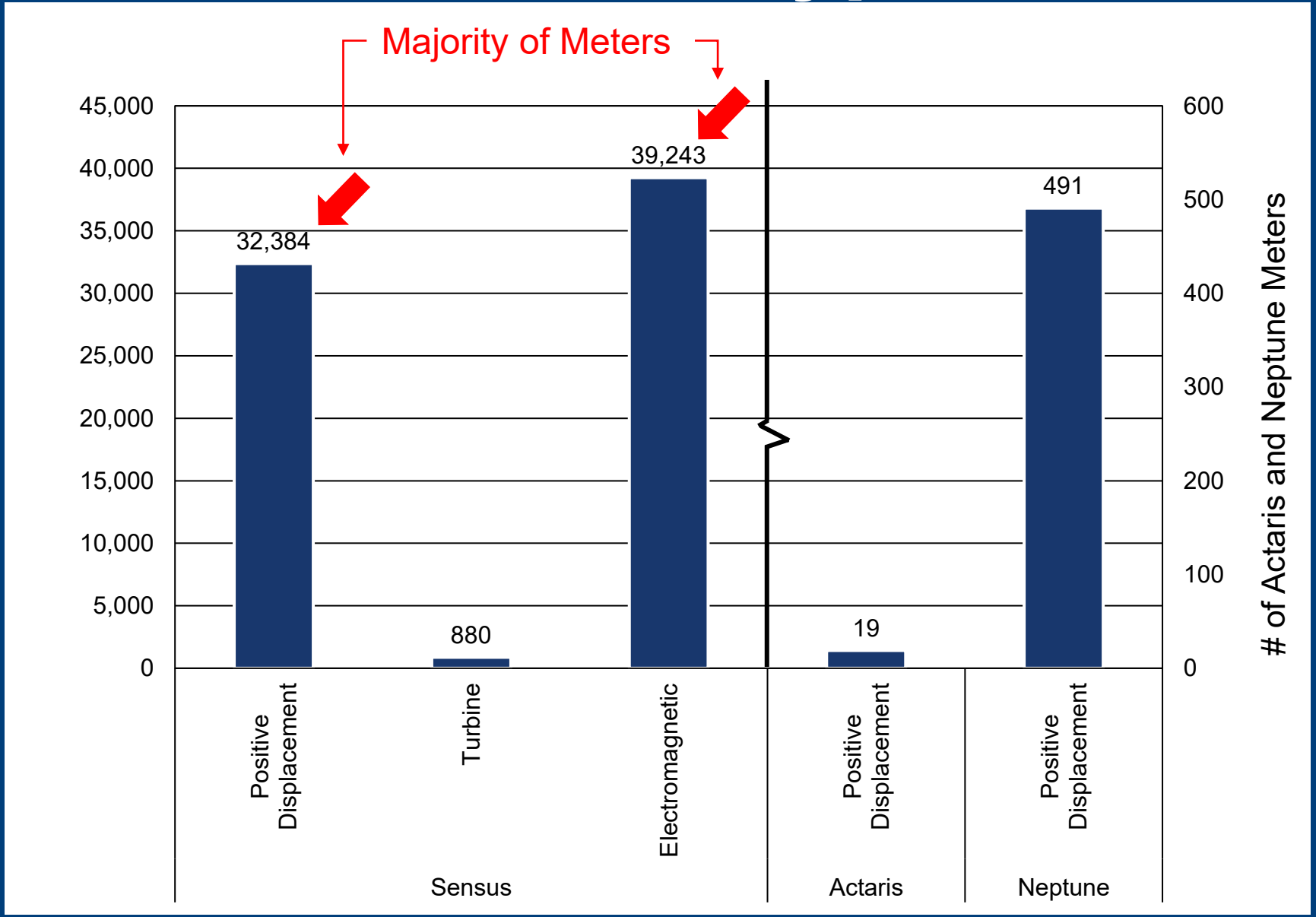
Number of Water Meters



2024 Max Day: 6/26/24

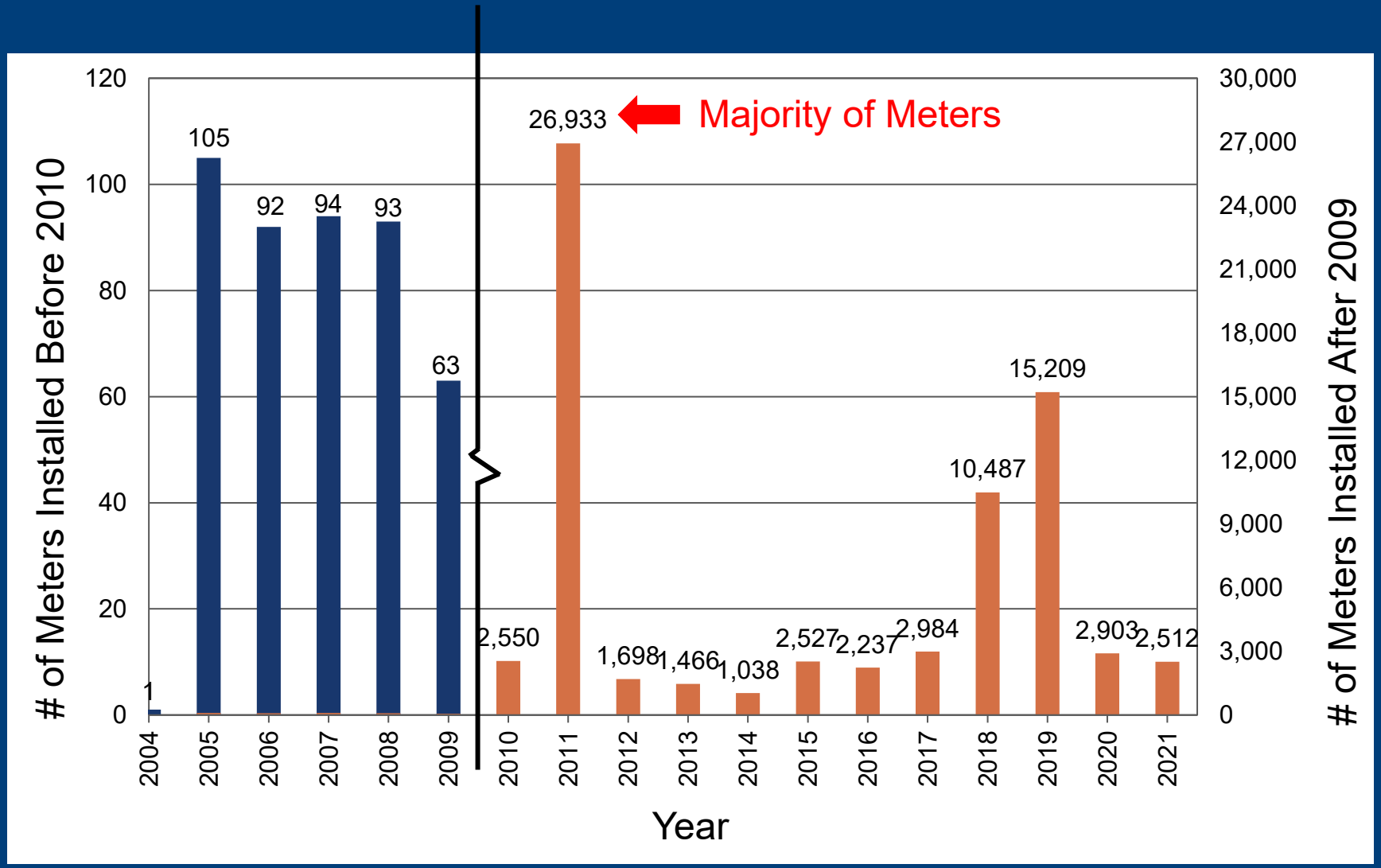
Source: Cary's Local Water Supply Plan. Note: Meter count includes all potable water meters.

Meter Manufacturer/Type Assessment



Meter data as of December 2021 Meter Program Assessment

Meter Age Assessment



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listen. think. deliver.

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Meter data as of December 2021 Meter Program Assessment

Meter Program Assessment

People & Processes

Recommendation Component

Field Staff & Training

Increase Meter Tech Ratio

Provide Training

Inventory Coordination

Coordinate process for:

- Development Review Forecast
- Return Merchandize Authorization (RMA) software/system
- Meter testing & replacement needs

Warehouse Management

Improve basic warehouse practices

Implement RMA process

Implement Firmware updates process

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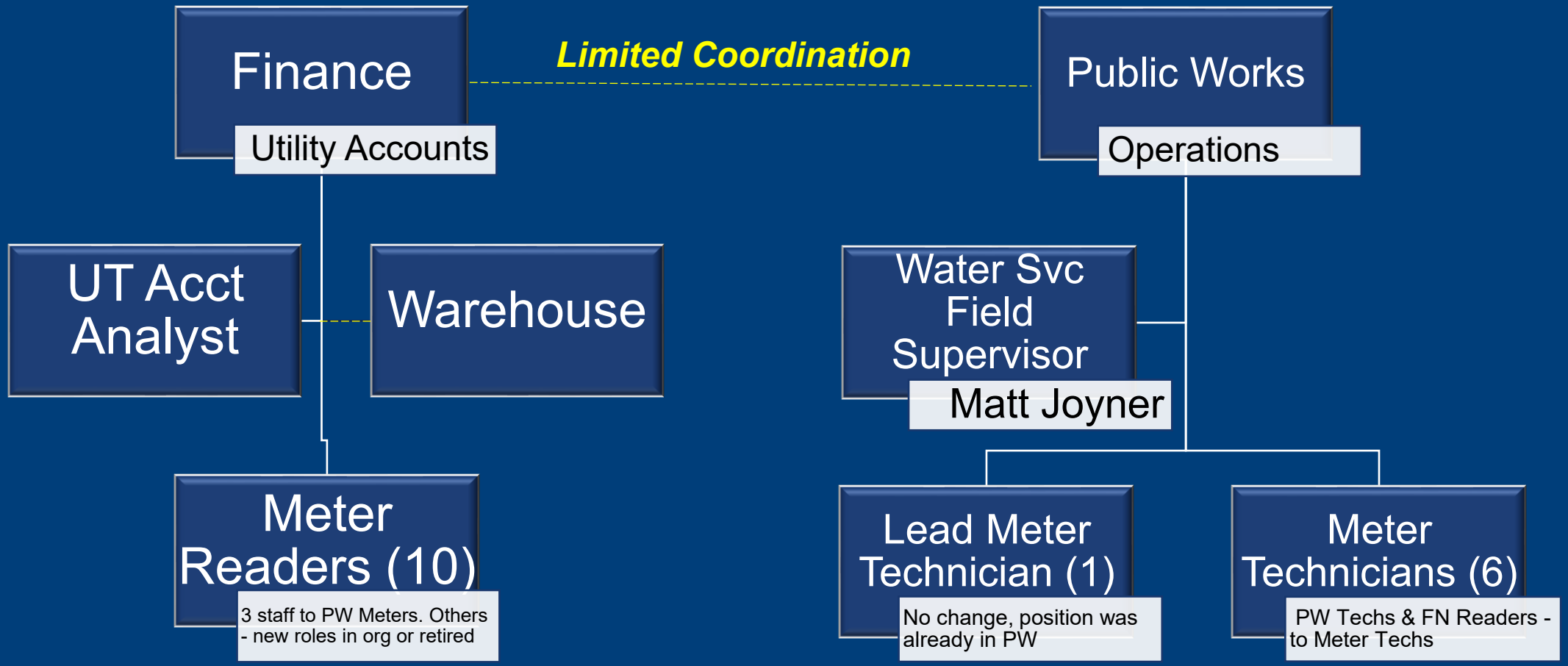
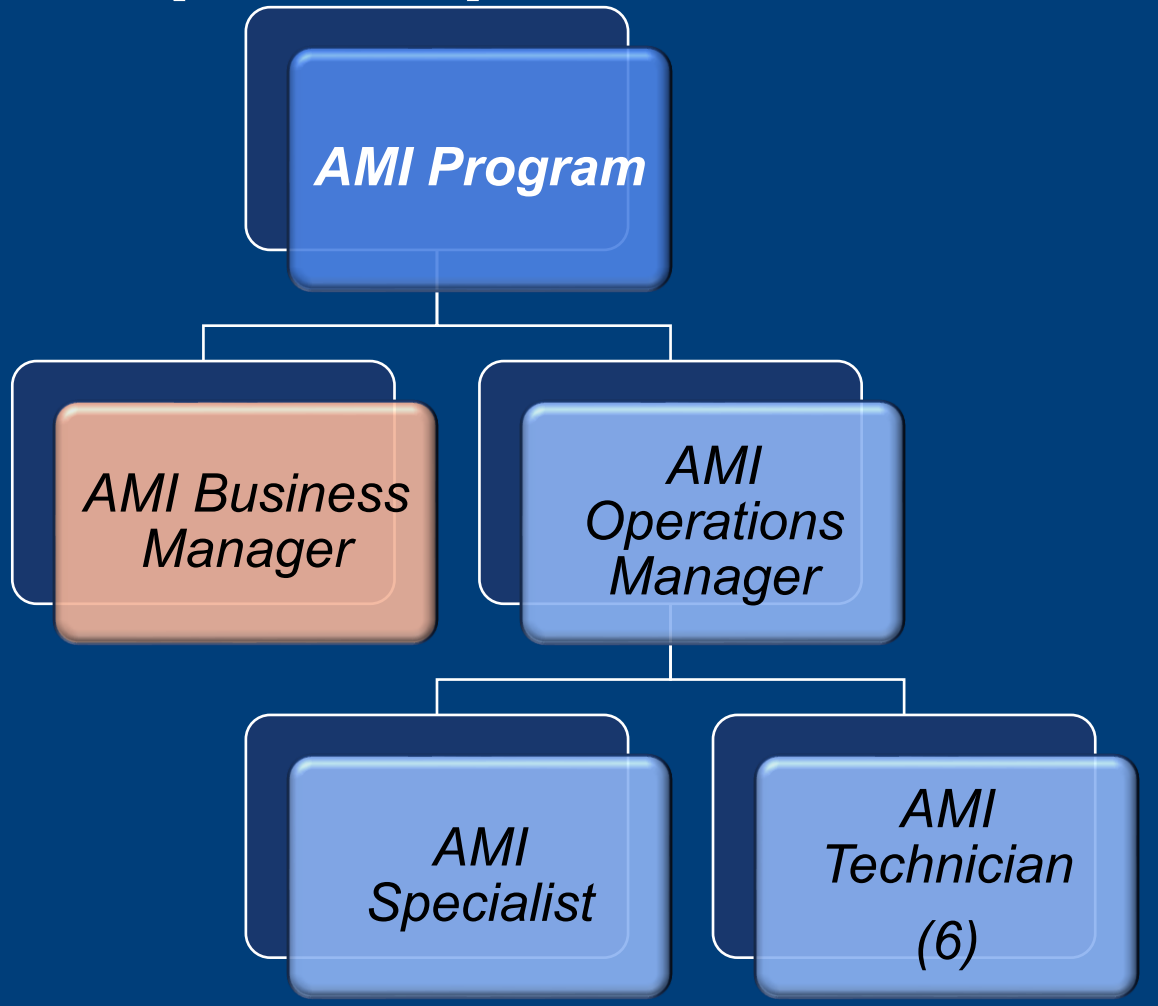
Building the Program (2011-2021)



Transition to Utilities

- Asset management and Return Merchandise Authorization program
- Technology modernization
  - Regional network interface software
  - Tower gateway base stations
  - Meter/radio updates

Building the Program (2022)



Building a Cohesive Team

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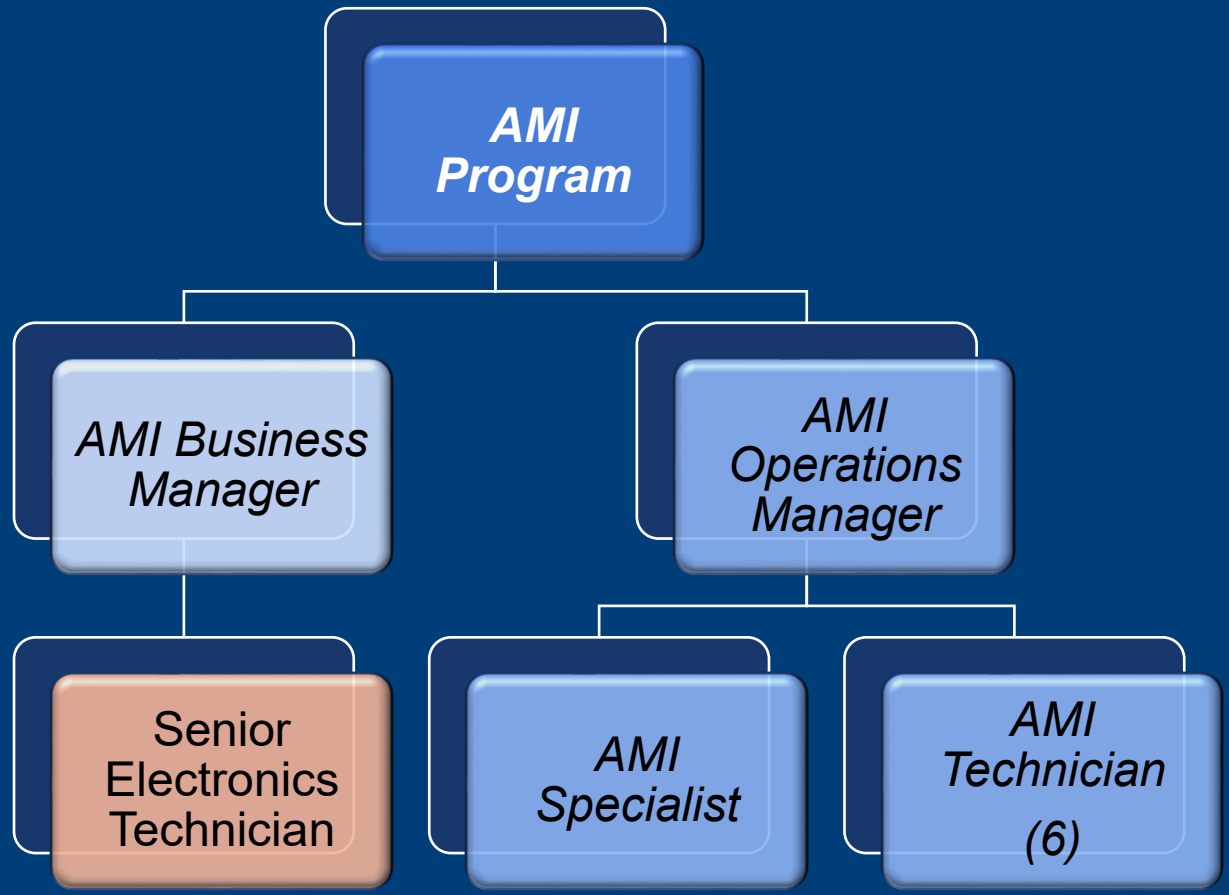
Building the Program (2023)



Building a Cohesive Team

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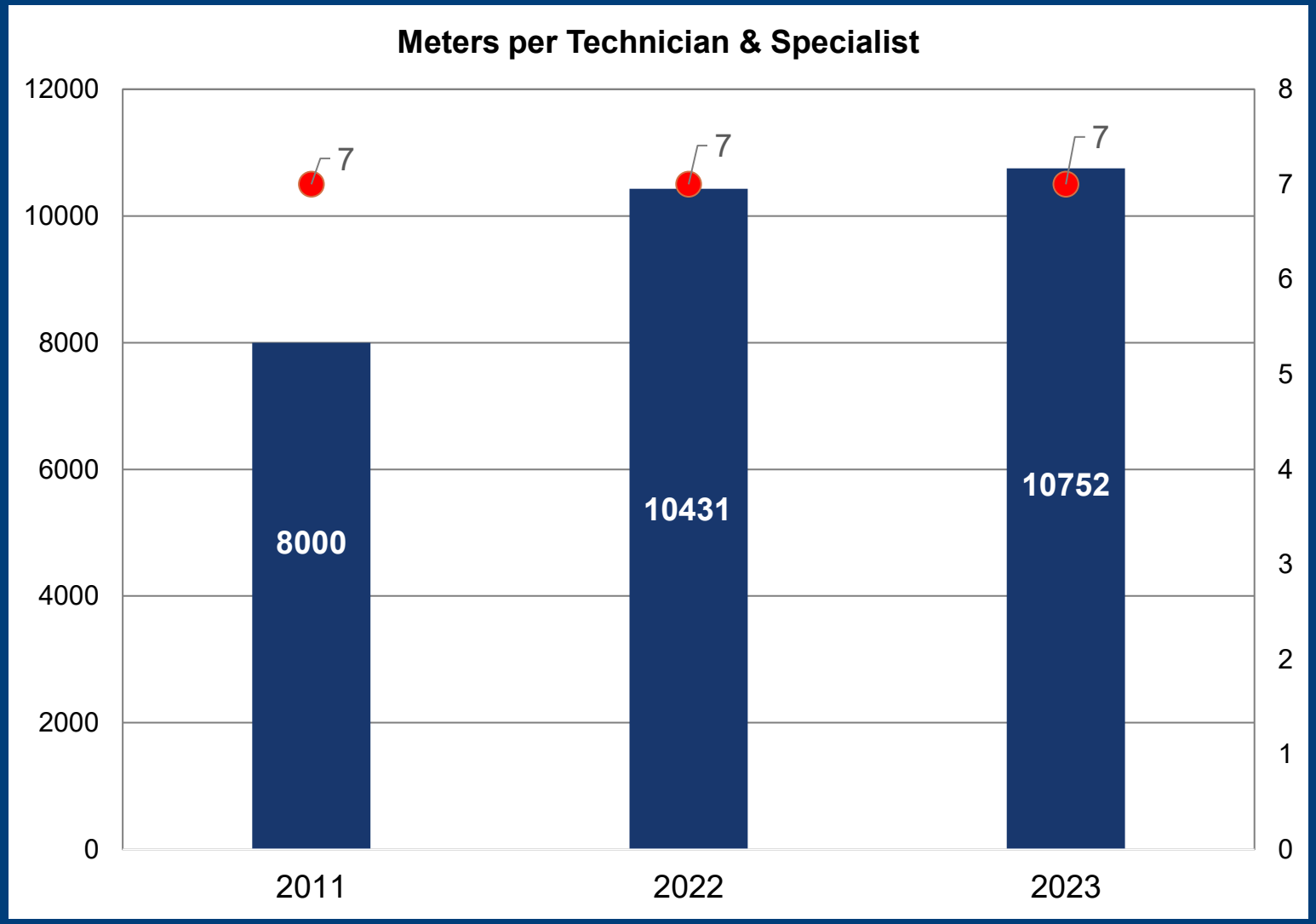
Building the Program



2011 – 56,000 Meters
2022 – 73,017 Meters
2023 – 75,267 Meters

Building the Program

- Reclassification of Meter Technicians to AMI Technicians
- Career Ladder Implementation
- New AMI Technician

Meter Technician	AMI Technician
Manually read meters	Smart Meters / Radios
Basic Mechanical	Programming / Logic
Bench Calibration (Factory)	Testing / Troubleshooting
Basic Tech Skills	Advanced Tech Skills

Meters Per Tech Summary	
Item	**Meters/Tech**
Target – 2022 Assessment	9,130
2023 Techs (7)	10,752
2024 Techs (8)	9,408

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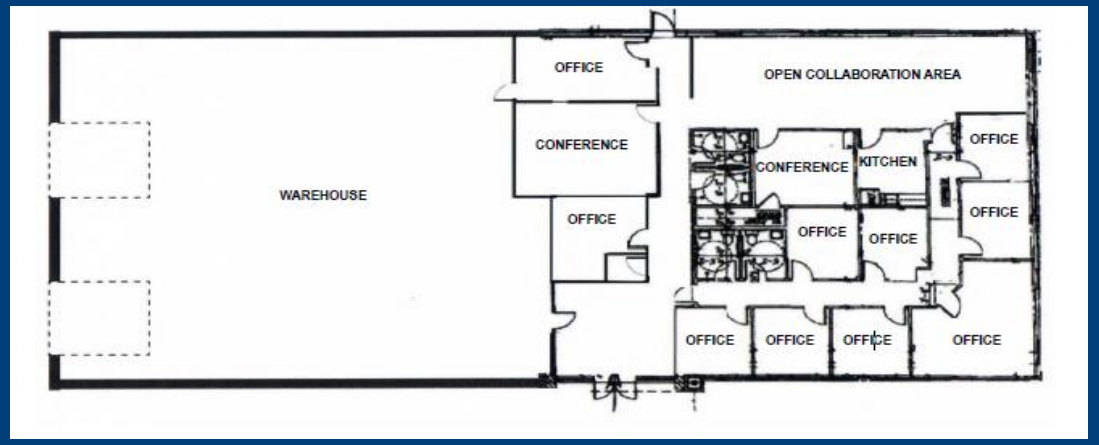
Current Program (2025)

- AMI Operations Manager
  - Senior Electronics Technician
    - (3) AMI Technicians
  - AMI Specialist
    - (4) AMI Technicians

Warehouse

- Inventory Management
  - Oldest products out the door first
  - RMA process



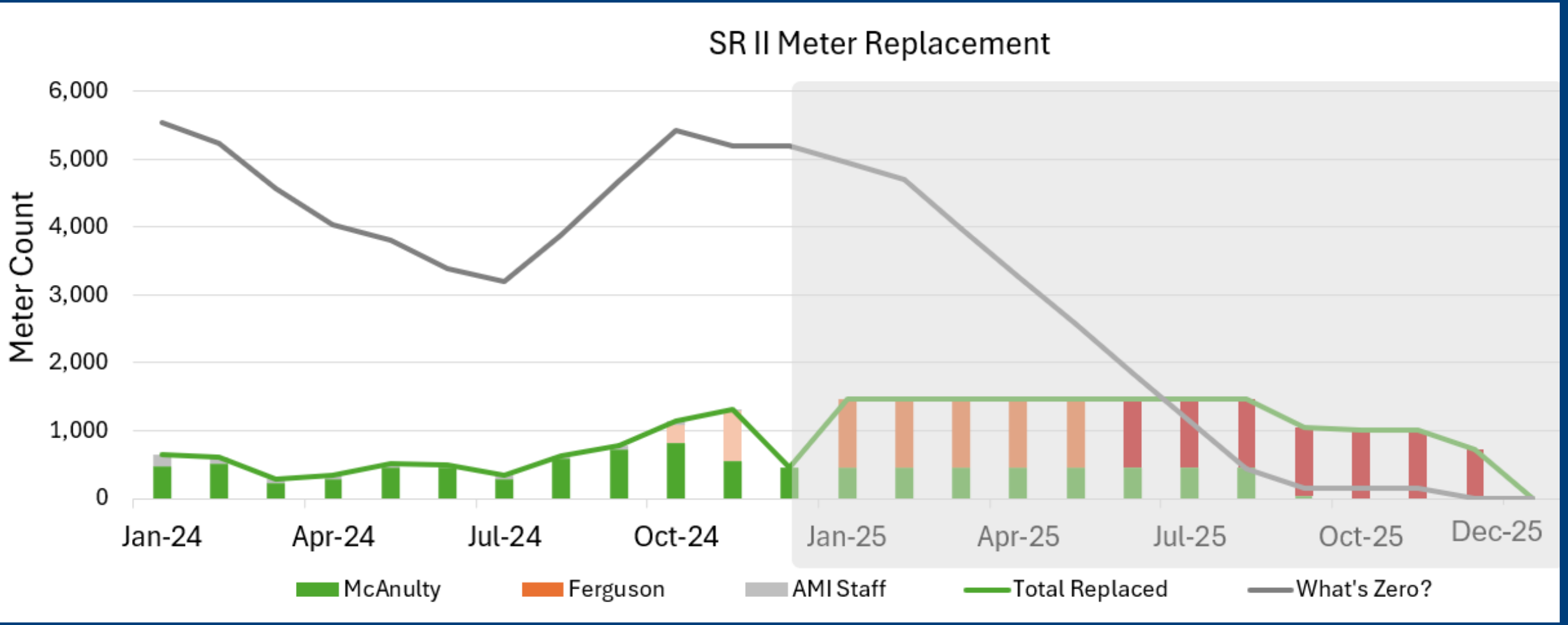
Capital Replacement Program

- Replacement Project to Upgrade Previous Generation Meters
  - Replace 1,500 Commercial Meters (1.5” – 6”)
  - Construction contract with Ferguson
    - Completed in 2024

Capital Replacement Program

- Residential Meter Replacement
  - Replace 28,000 ¾” SRII Meters
    - Beyond 10-year Warranty Period
  - Challenges:
    - Inventory
    - Staffing
    - Meter Fail Rate

Capital Replacement Program



Building the Program

- Collaboration is Most Effective with Colocation and Shared Meeting Space

- Colocation of Water Resources Engineering and Finance Billing Staff to new Office Space

Vision for the Future

- Proactive Asset Management:
  - Replace 5,000 – 7,000 meters annually
  - Stay in warranty
  - Stay up to date with system wide technology
  - Replace chambers instead of meters

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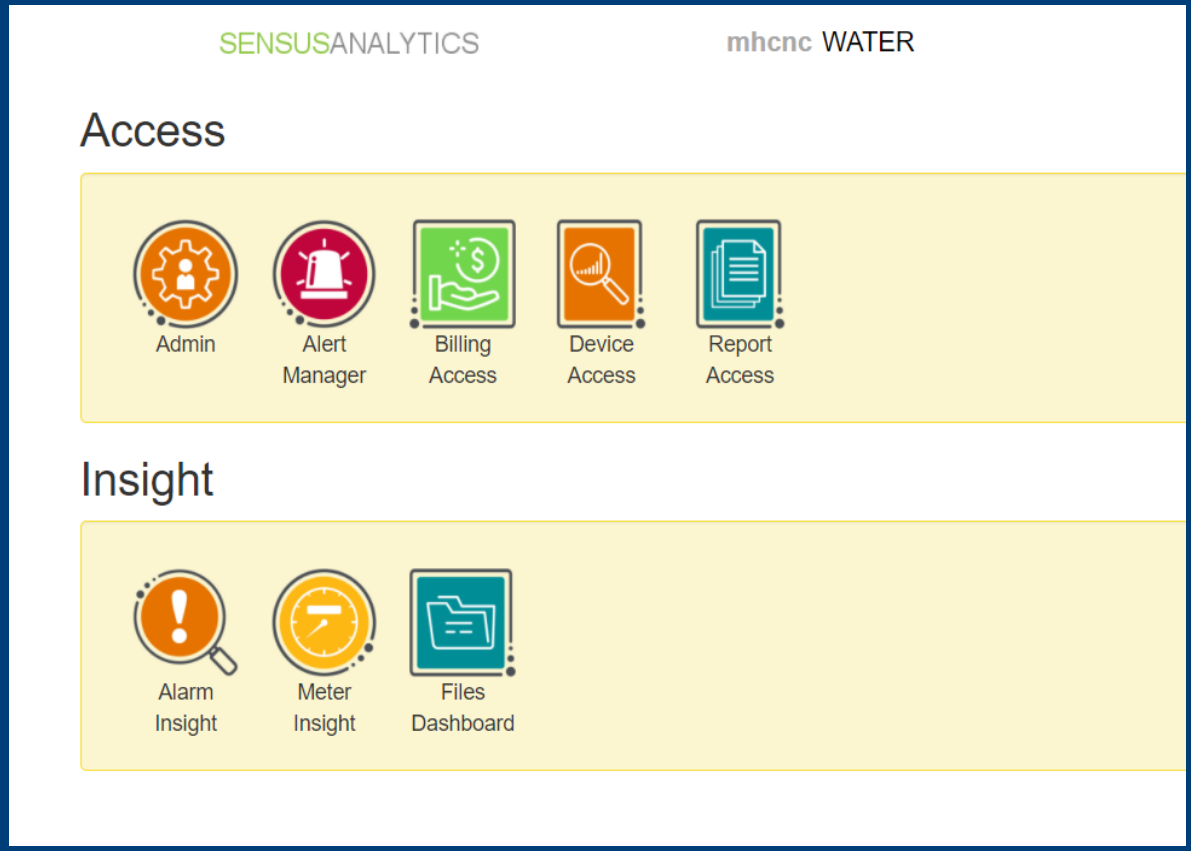
- Network changeout completed June of 2025

Vision for the Future

- Moving to Sensus Analytics from Logic



Vision for the Future

- Moving from Naviline to Oracle

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Wrap-Up & Conclusions

- Taking Ownership of our System started with a Meter Program Assessment, development of a Capital Replacement program and a dedicated meter warehouse.
- Building the Program involved changing organization structures, additional personnel and co-locating staff from other divisions and departments
- Our Vision for the Future is proactive asset management of our hardware, software and network infrastructure

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Thoughts?

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