

# Palm Bay Utilities Department

September 19, 2024

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Utilities Director



# Agenda

- ☐ Department Overview
- ☐ Infrastructure Overview
- ☐ Updates on Key Projects
- ☐ Key Regulatory Updates
- ☐ Critical Department Priorities

# Department Overview - Utilities Divisions

Engineering

11

Administration

8

Compliance

13

Business  
Operations

39

Distribution  
& Collections

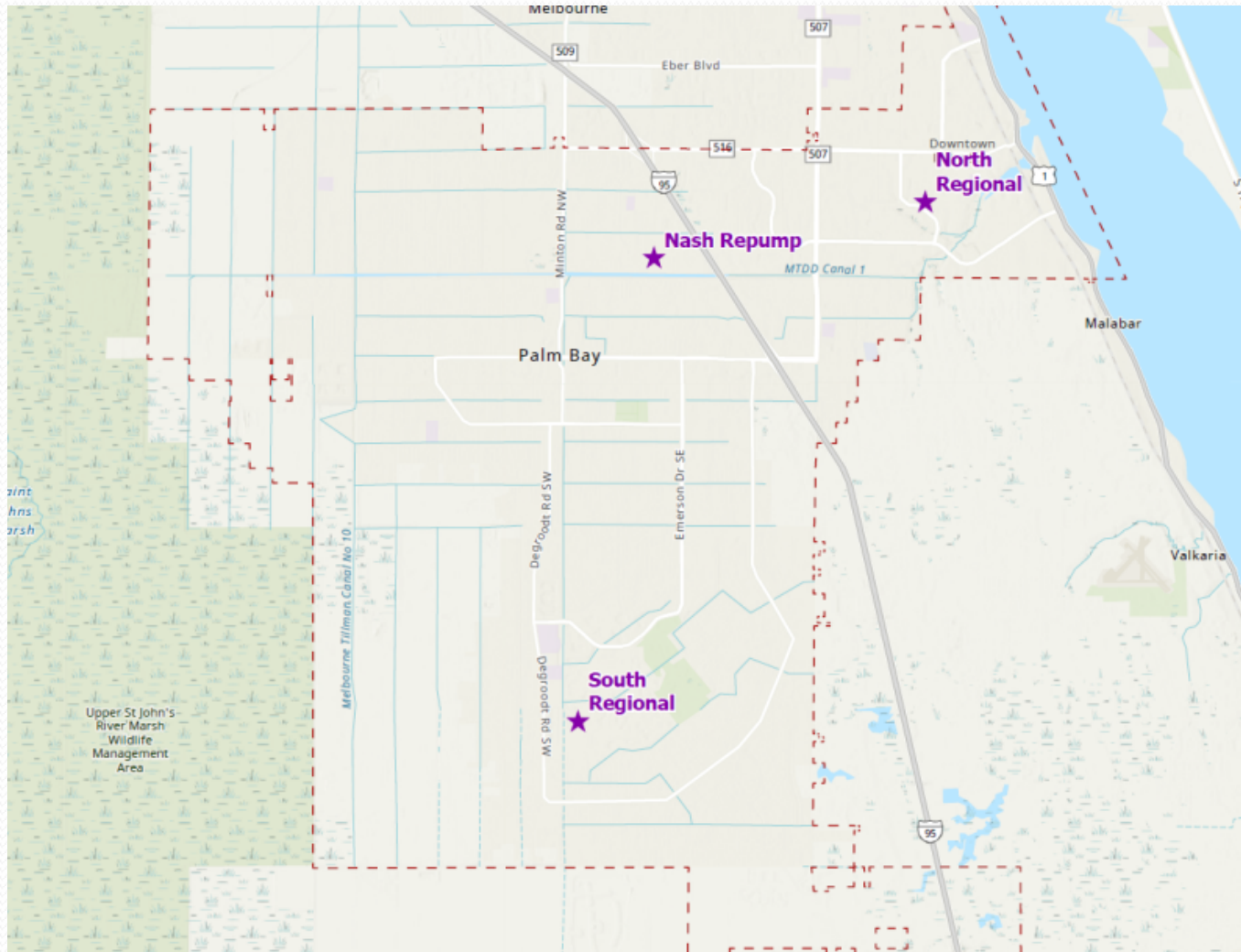
57

Plant  
Operations

58

July 1, 2023 – Water and Wastewater personnel  
Designated as Essential First Responders

# Infrastructure Overview



# Infrastructure Overview

## ☐ North Regional

- ☐ Lime Softening Water Treatment Plant
- ☐ Conventional Activated Sludge Wastewater Plant
- ☐ Wastewater Reclamation Facility (WRF)
- ☐ Elevated Storage Tank

## ☐ Nash Repump Station

- ☐ Ground Storage and repump station

## ☐ South Regional

- ☐ Reverse Osmosis (R.O.) Water Treatment Plant
- ☐ Water Reclamation Facility under construction

# Infrastructure Overview

## ☐ Water Distribution

- ☐ 686 Miles of Water Mains
- ☐ 6,762 Valves
- ☐ 3,190 Fire Hydrants

## ☐ Reclaimed System

- ☐ 11 Miles of Reclaimed Water Mains
- ☐ 114 Valves

## ☐ Wastewater Collection

- ☐ 350 Miles of Wastewater Mains
- ☐ 407 Valves
- ☐ 5,036 Manholes
- ☐ 131 Lift Stations



# Aging Infrastructure



(Lift Station Pump Housing)



(Water Main)

# Key Performance Indicators

- Hydrant Inspection

- Avg 1800 a year

- Valve Inspection

- Avg 1740 a year

- Locates

- Avg 3,200 locate tickets a month

- 2023 – 38,918

- Field Service (Meter team)

- Avg 3070 work orders a month

- 2023 – 40,975 work orders



# Key Performance Indicators

- Customer Service

- Avg 5,244 calls a month

- Lift Station inspections

- Avg 1250 a year

- Main Cleaning / CCTV inspection / SLRAT

- Avg 173,000 feet a year



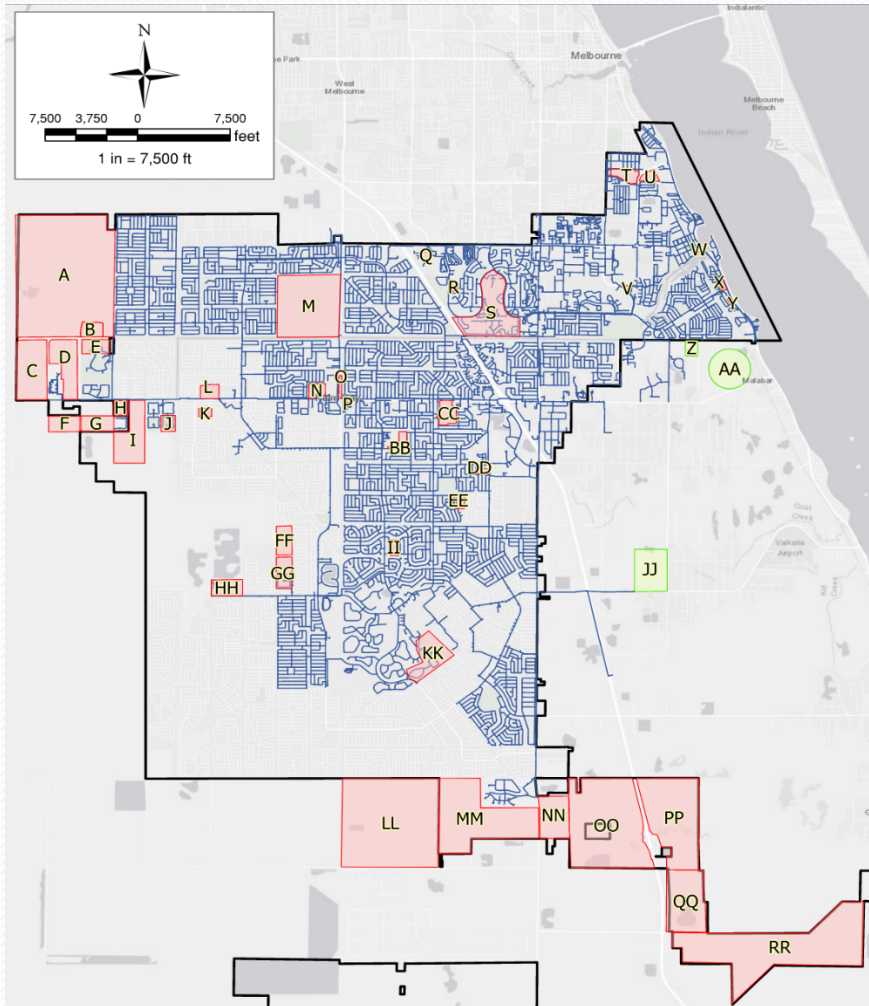
# Updates on Key projects

- ☐ Water & Sewer Master Plans

- ☐ Water Plant Expansions

- ☐ Wastewater Plant Expansions

# Water & Sewer Master Plans

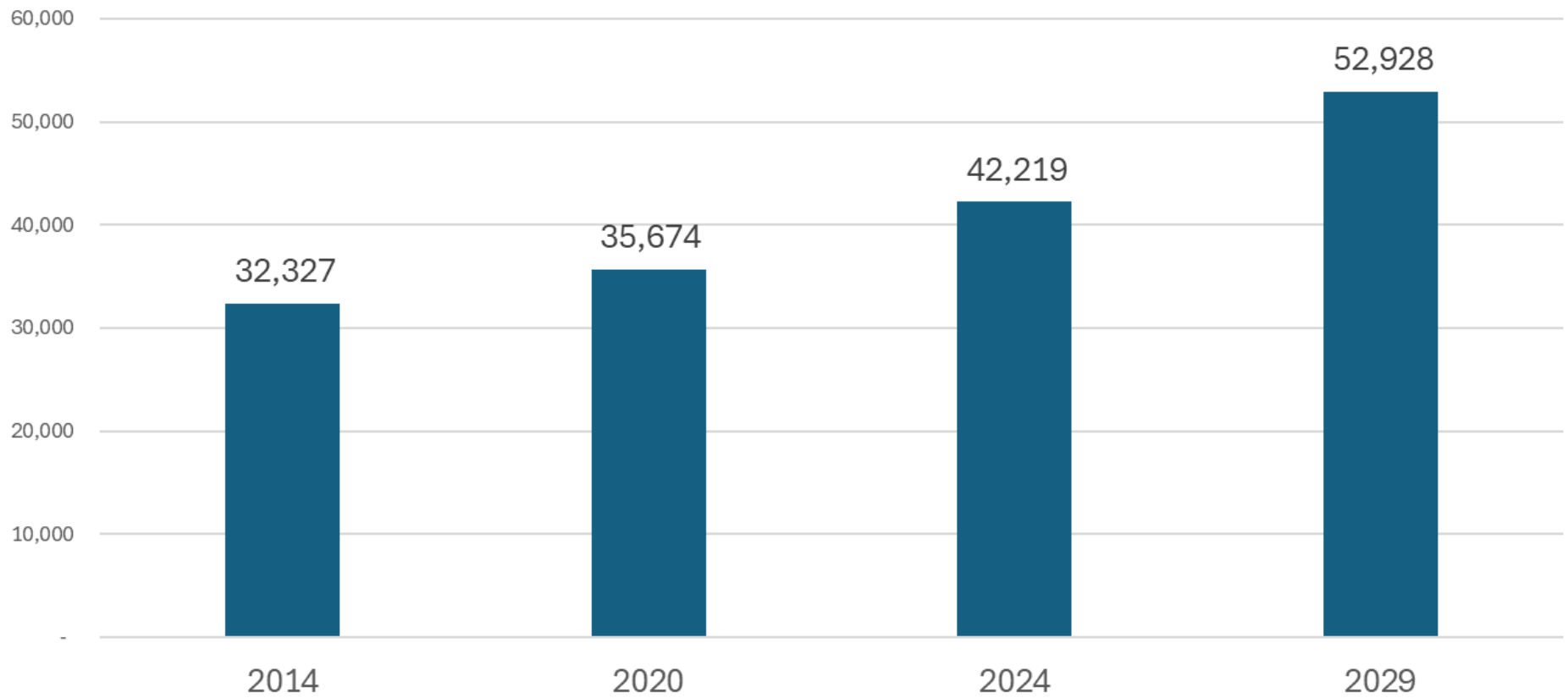


- Evaluate Existing System
- Identify Capital Projects
- Identify Future Demands
- 5, 10, 20 Year Plans
- Last MP 2017

Proposed Developments

# Customer Growth

## Water Accounts



# Current Demand (% of Supplies)

## □ 2023 AWWA Utility Benchmarking

□ 75<sup>th</sup> percentile – 36%

□ Median – 52%

□ 25<sup>th</sup> percentile – 68%

□ Palm Bay – 84%

# Water Plant Expansions

## ☐ South Water Treatment Plant

### ☐ Expansions to current R.O. Plant

- ☐ 2024 – 2 MGD was added
- ☐ 2027 – 2 MGD
- ☐ 2029 – 2 MGD

## ☐ North Water Treatment Plant – R.O. Plant

- ☐ 2028 – 3 MGD
- ☐ 2029 – 2 MGD





# Additional Measures

- ☐ Targeting Non-Revenue Water (NRW)

- ☐ North Well Field Rehab

- ☐ Replacing Out of Service Wells

- ☐ South Plant RO Plant Re-rating

# Current Demand (% of Supplies)

## □ 2023 AWWA Utility Benchmarking

□ 75<sup>th</sup> percentile – 36%

□ Median – 52%

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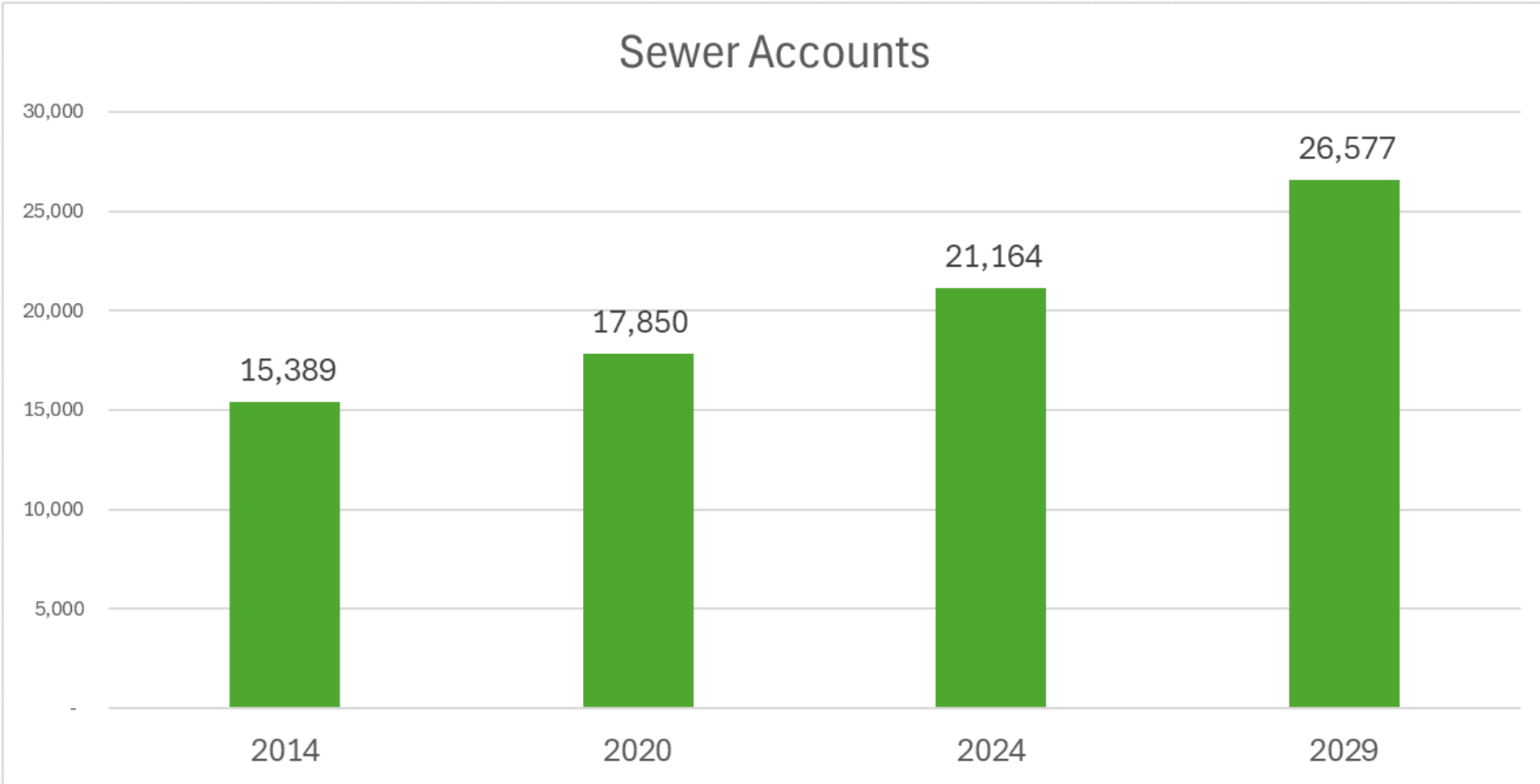
□ Palm Bay – 84%

□ 2024 – 71%

□ 2029 – 50%

# Customer Growth

## Sewer Accounts



# Wastewater Plant Expansions

## ☐ South Water Reclamation Facility

- ☐ April 2025 – 1 MGD
- ☐ 2026 – 1 MGD
- ☐ 2028 – 1 MGD

## ☐ North Wastewater Treatment Plant

- ☐ Rehabilitation Study

# South Regional Water Reclamation Facility



# Regulatory Updates

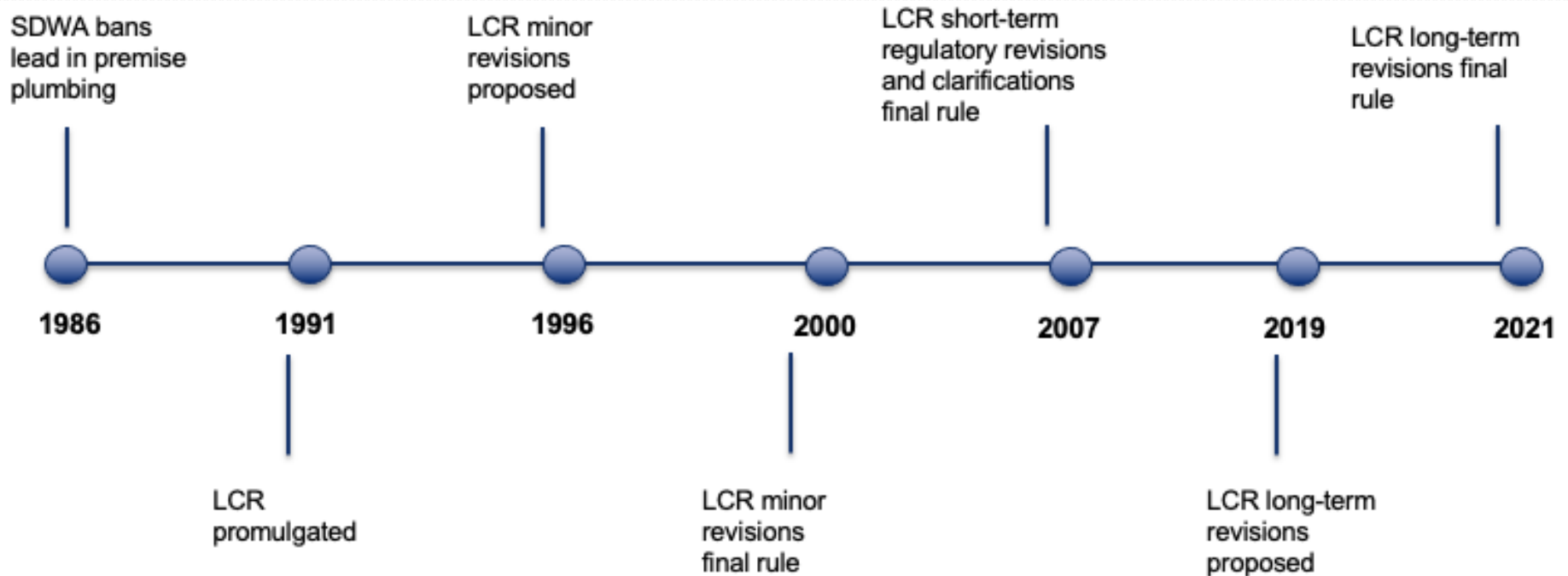
- ☐ Basin Management Action Plan (BMAP)
- ☐ Lead & Copper Rule Revision (LCRR) & Lead & Copper Rule Improvements (LCRI)
- ☐ PFAS Regulation



# Basin Management Action Plan (BMAP)

- ☐ Key points of the BMAP
  - ☐ Reduce total nitrogen and phosphorus
    - ☐ Treatment plants
    - ☐ Septic
- ☐ Impacts to Wastewater Treatment plants
  - ☐ Reuse – Total nitrogen less than 10 mg/l
  - ☐ Deep well injection – seeking clarity
- ☐ Impacts to septic
  - ☐ Mandatory connection effort
  - ☐ Septic tank upgrades
- ☐ 5 Year Collection System Action Plan

# Lead & Copper Rule Revision (LCRR) & Lead & Copper Rule Improvements (LCRI)



# Lead & Copper Rule Revision (LCRR) & Lead & Copper Rule Improvements (LCRI)

- January 2021 – EPA published the LCRR
  - October 16, 2024
    - Submit initial service line inventory
    - Publish initial service line inventory
    - Develop notification to customers with LSLs, GRRs & unknowns
- November 2023 – EPA Proposed LCRI
  - October 2027
    - Submit “baseline inventory”
    - Sampling protocol changes
    - Change to action level

# PFAS Regulation

- On April 10th, 2024, EPA announced final rule for 5 PFAS chemicals
- Public water systems must monitor for these PFAS chemicals
  - Three years to complete initial monitoring (2027)
- Public water systems have five years (2029) to implement solutions – if above the MCL

# PFAS Regulation

## □ PFAs Chemicals

Compound	Final MCLG	Final MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (ppt) (also expressed as ng/L)
PFOS	Zero	4.0 ppt
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (commonly known as GenX Chemicals)	10 ppt	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index



# Critical Department Priorities

☐ Employee Recruitment and Retention

☐ Project Delivery

☐ Regulatory Compliance



# Employee Recruitment / Retention

## ☐ Gray Wave

- ☐ 15+ with more than 20 Years
- ☐ Several employees have retired from another job

## ☐ Turnover Rate

- ☐ 86 separations – 38 < 1 year
- ☐ Dist./Collections/Plant Operations
  - ☐ 62% Less Than 5 years
  - ☐ 43% Less Than 2 Years

## ☐ Turn Down Rate

- ☐ 31 applicants have turned down a job offer
  - ☐ Dist./Collections 13
  - ☐ Plant operations 18

# Employee Recruitment / Retention

<input type="checkbox"/> Community Outreach Coordinator	30 + Days
<input type="checkbox"/> Utilities Technician	200 + Days
<input type="checkbox"/> Wastewater Plant Trainee	300 + Days
<input type="checkbox"/> Water Plant Operator	1200 + Days

# Addressing The Challenge

- Starts with Leadership

- Create a culture people don't want to leave
- Investing in leadership development

- Evaluating Organization Structure

- Creating opportunities for people to grow
- Planning pathways for advancement

- Evaluating Compensation Structure and Work Environment

- Need to be more competitive
- Modernize equipment / tools / technology / workspace



# Critical Department Priorities

☐ Employee Recruitment and Retention

☐ Project Delivery

☐ Regulatory Compliance

# Thank You!

