

1. Gabriel Bowden, Utilities Director – update on status of projects and initiatives within the Utilities Department.

Palm Bay Utilities Department

September 19, 2024

Gabriel Bowden
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

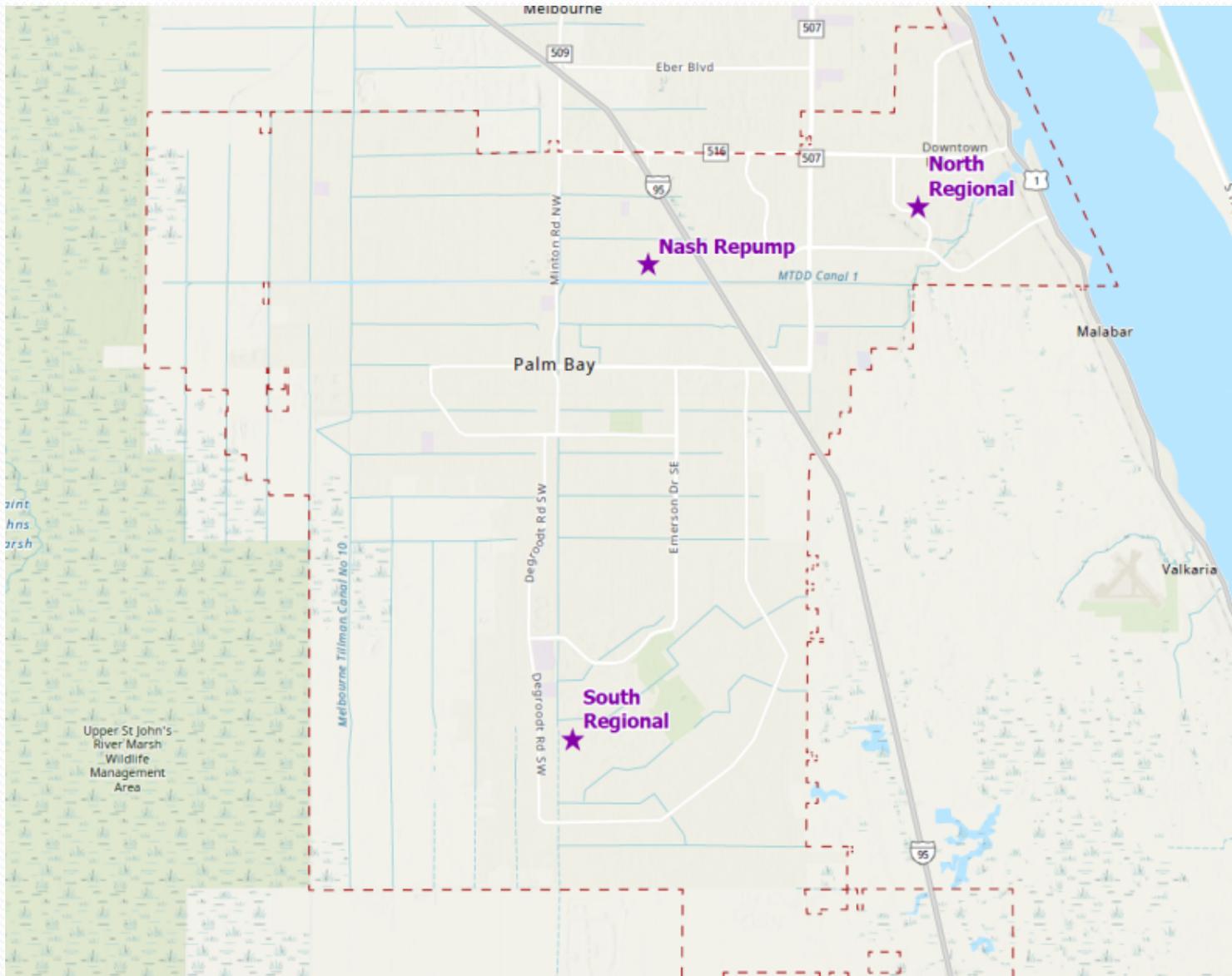
57

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

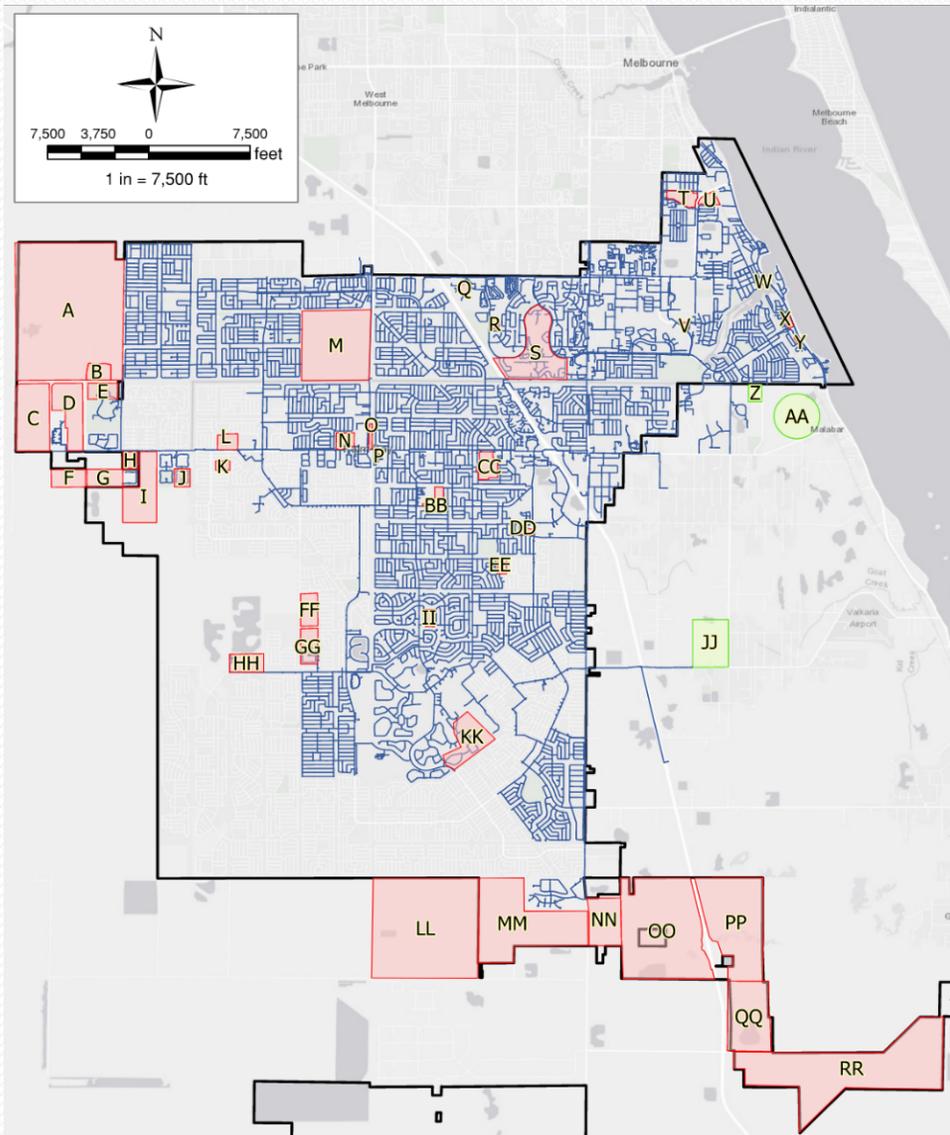
Updates on Key projects

Water & Sewer Master Plans

Water Plant Expansions

Wastewater Plant Expansions

Water & Sewer Master Plans

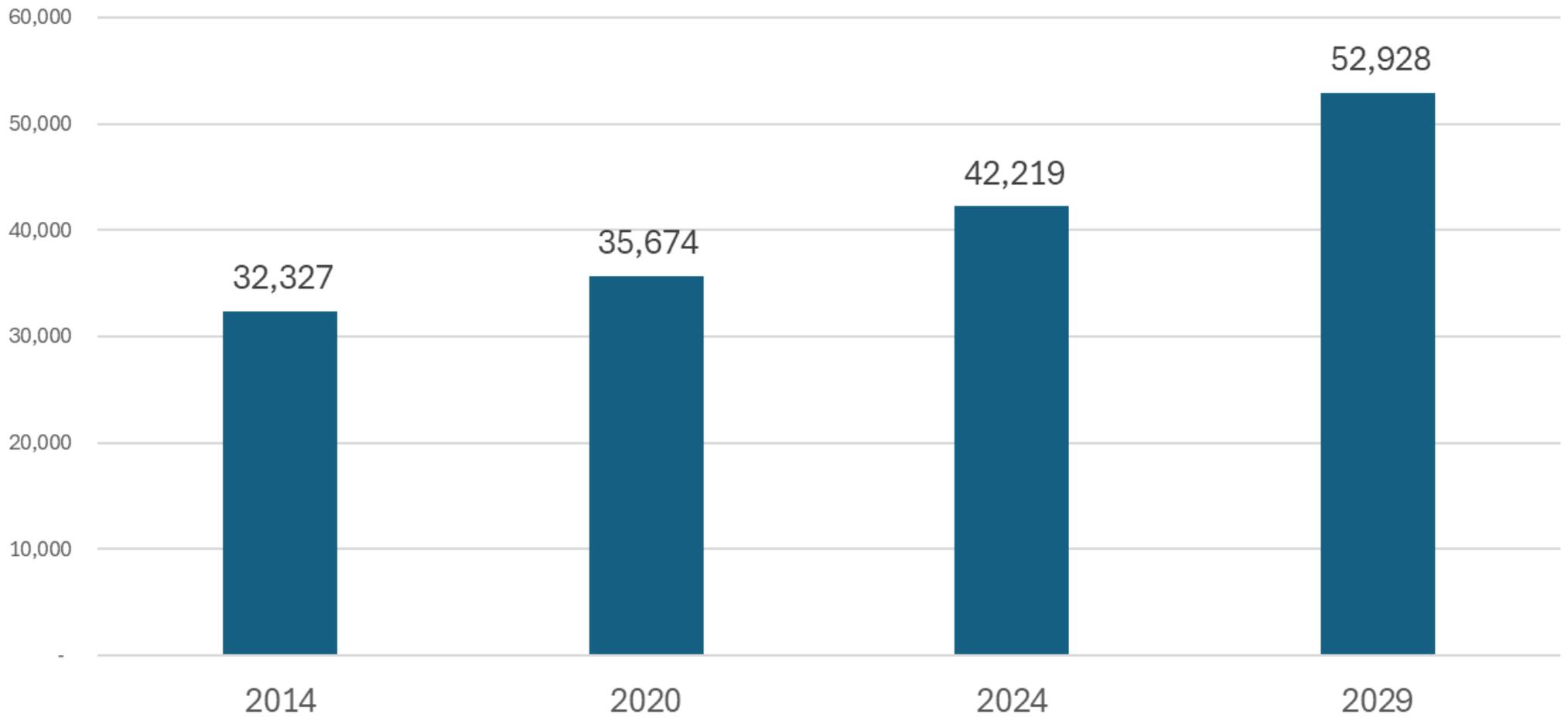


- Evaluate Existing System
- Identify Capital Projects
- Identify Future Demands
- 5, 10, 20 Year Plans
- Last MP 2017

■ Proposed Developments

Customer Growth

Water Accounts



Current Demand (% of Supplies)

□ 2023 AWWA Utility Benchmarking

□ 75th percentile – 36%

□ Median – 52%

□ 25th 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)

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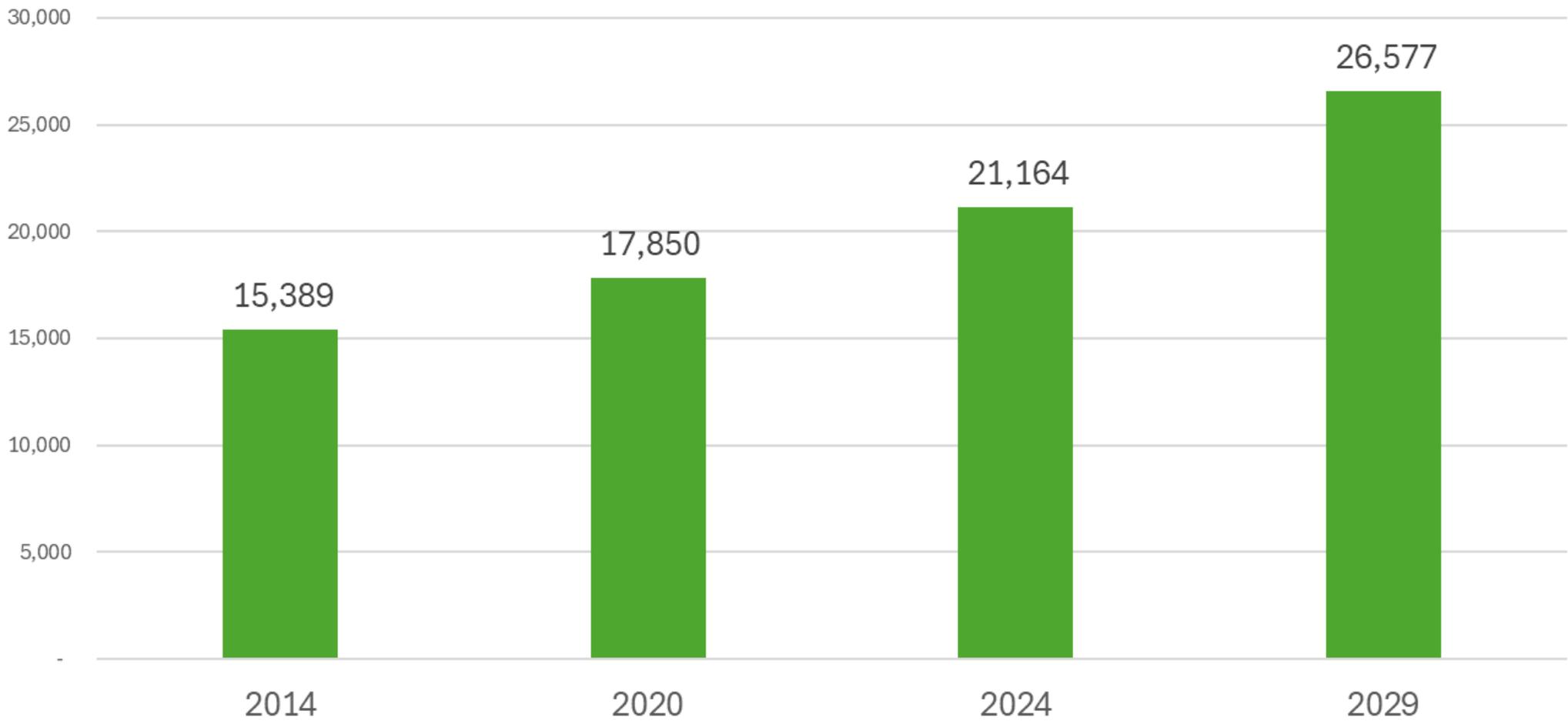
□ Palm Bay – 84%

□ 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)

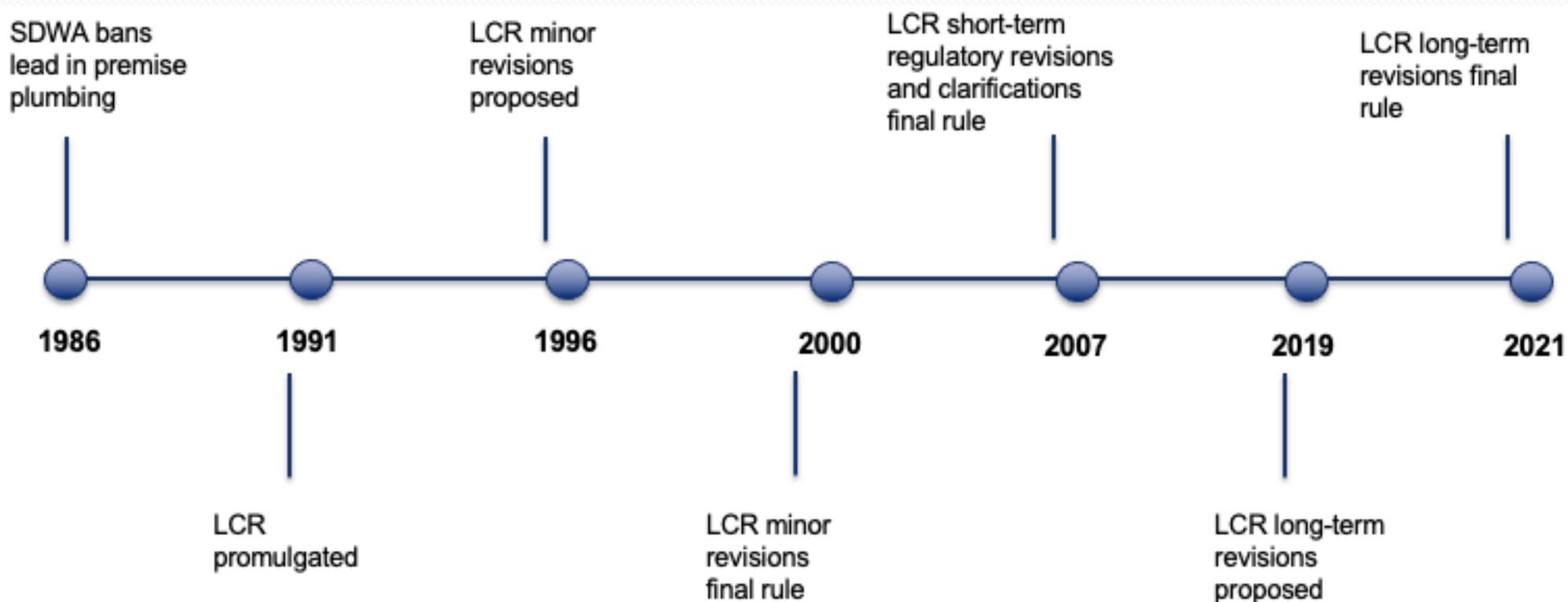
- Key points of the BMAP
 - Reduce total nitrogen and phosphorus
 - Treatment plants
 - Septic

- 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!

