



**City of Dallas**

# **Drafts of 2024 Five-Year Water Conservation Work Plan & 2024 Water Conservation Plan (State required)**

**Parks, Trails, Environment  
Committee**

**March 4, 2024**

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City of Dallas



# Purpose



- Provide background on the Five-Year Water Conservation Work Plan and Water Conservation Plan (State required)
- Seek support from Parks, Trails and the Environment Committee for adoption of:
  - City of Dallas 2024 Five-Year Water Conservation Work Plan
  - City of Dallas 2024 Water Conservation Plan (State required)

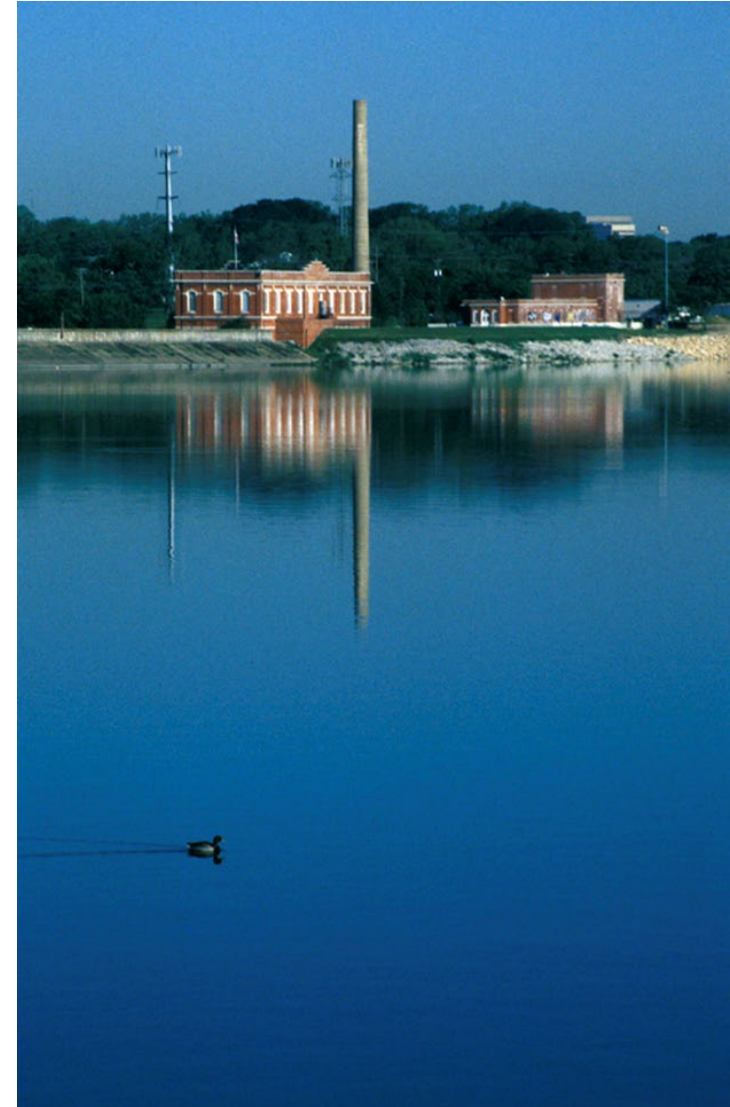




# Presentation Overview



- The Need for Water Conservation
- City of Dallas Water Conservation Efforts
  - Accomplishments
- Water Conservation Plans
  - Projected Water Savings
  - Five-Year Plan Recommended Enhancements
- Summary & Timeline
- Next Steps



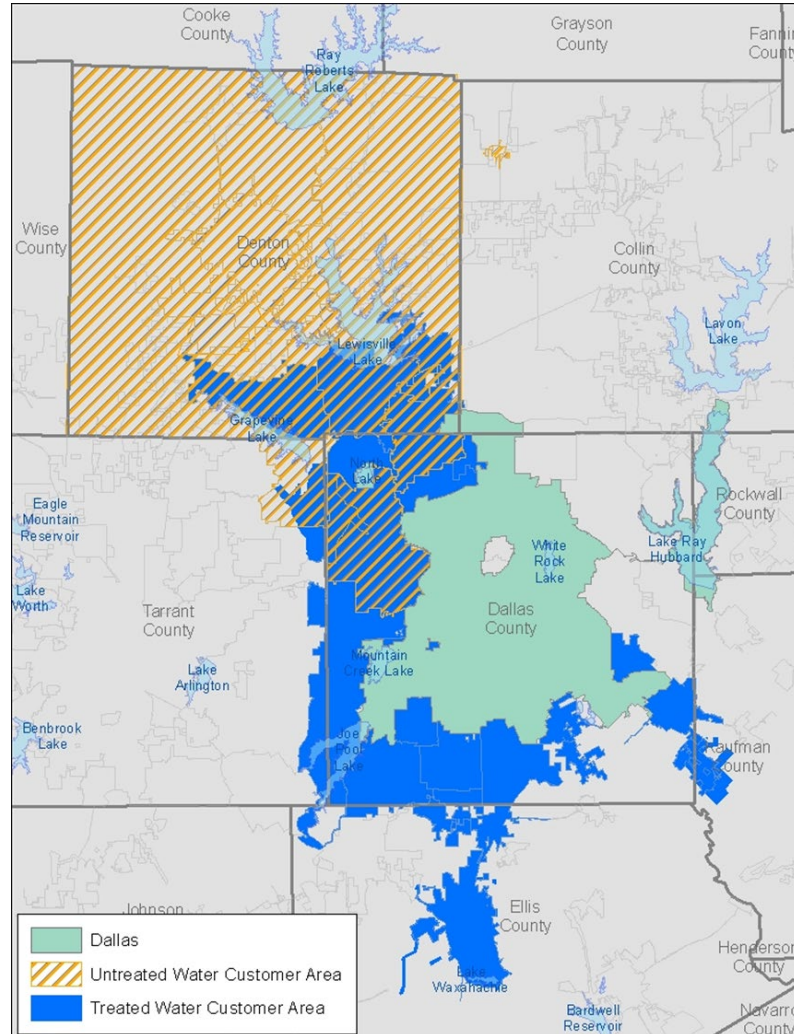




# The Need for Water Conservation



# Dallas' Service Area and Drivers of Water Use



Population served: 2.6 million

- 1.3 million in City of Dallas
- 1.3 million in 27 wholesale customer cities

Drivers of Water Use

- Population growth
- Economic conditions (jobs, new businesses, etc.)
- Household water use
- Outside watering
- System water losses
- Weather patterns

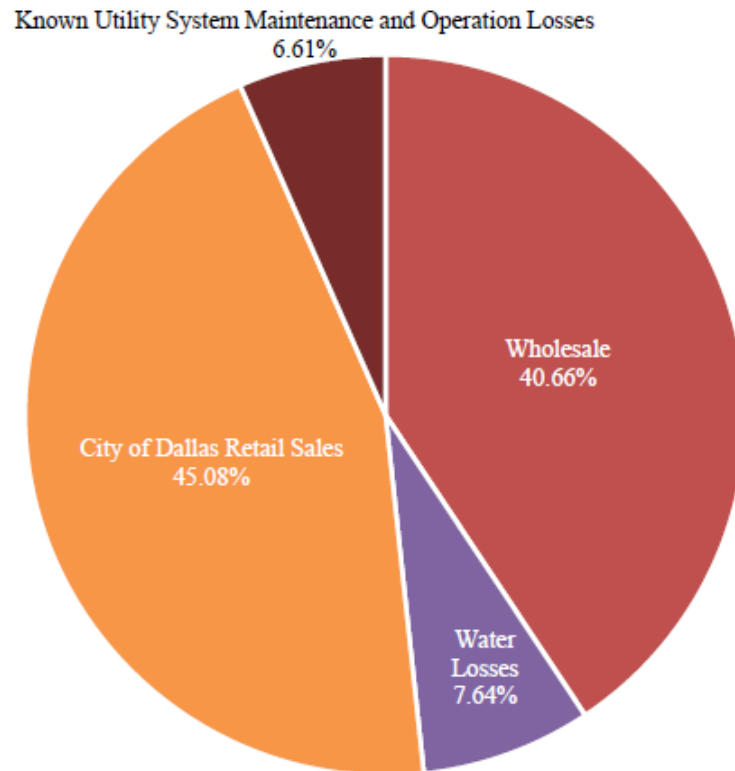




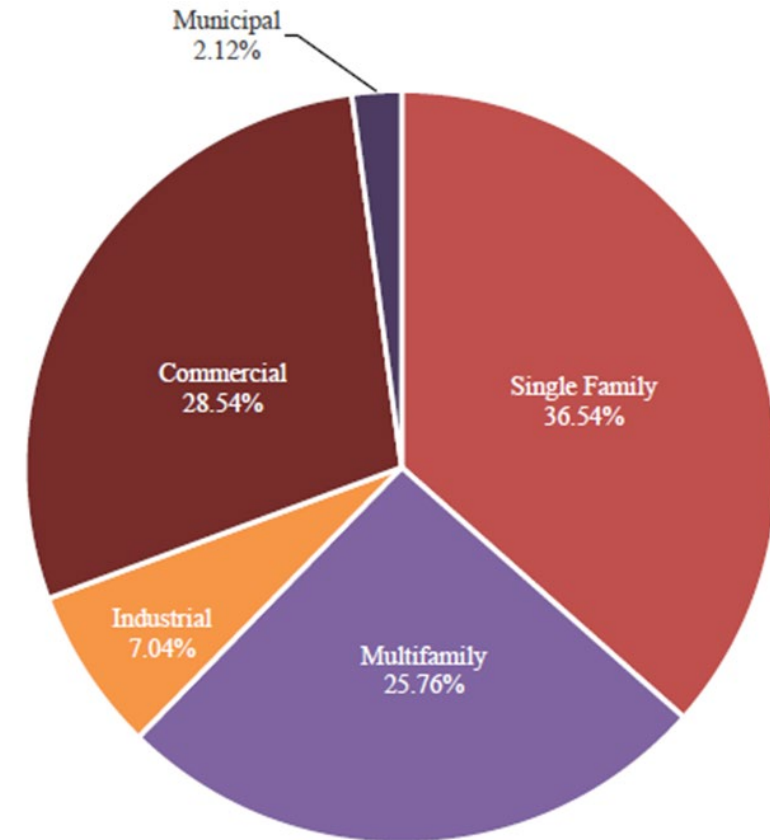
# Annual Water Production and Retail Treated Water Use



## Average Annual Treated Water Production of 139.46 BG from FY15 – FY22



## Annual Average Retail Treated Water Sales of 66.9 BG from FY15 – FY22







## City of Dallas Water Conservation Efforts



# Water Conservation



- **Conservation as a Demand Management Tool**
  - Extends the life of our existing resources
  - Delays the need for future water sources
  - Puts Dallas in compliance with the State's conservation requirements
- **Conservation Efforts are Effective**
  - Over 387 billion gallons (an average of 50 MGD) saved
    - Enough to fill Lake Ray Hubbard twice (over 2.5 years of water supply)
  - Perceptions and behaviors are changing
    - Since 2001 GPCD Reduced 32%
- **2024 Work Plan will keep the momentum going**



**Save Water.**  
**Nothing Can Replace It!**  
[www.SaveDallasWater.com](http://www.SaveDallasWater.com)



**Water Is Awesome** Use it. Enjoy it. Just don't waste it.

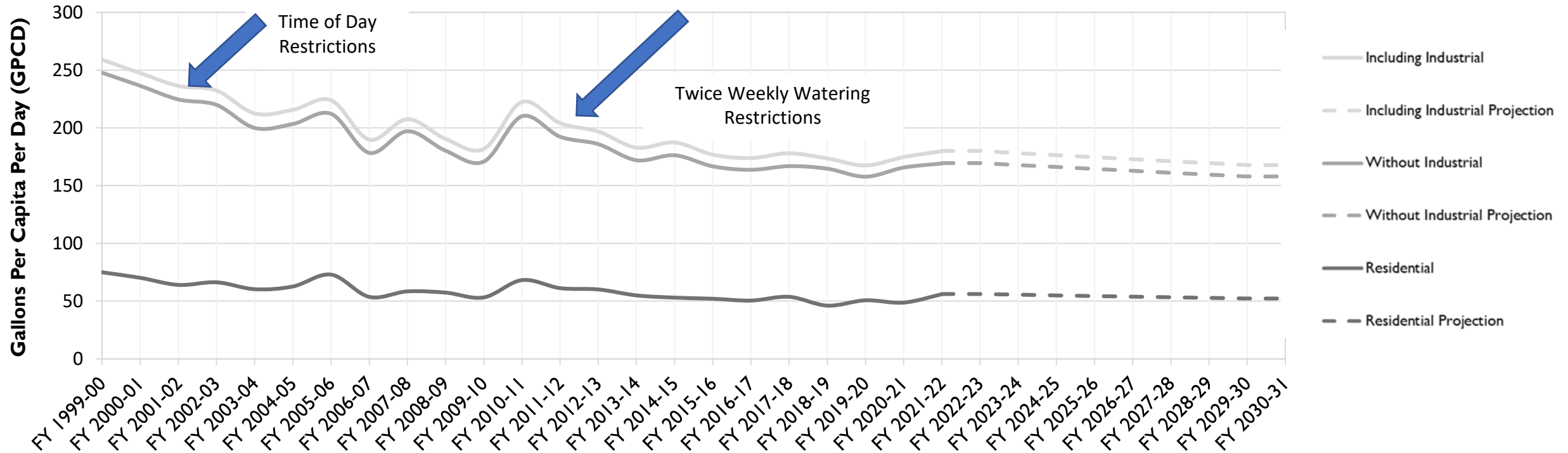




# Water Conservation Program Chronology and Trends



1980's	2001	2005	2007	2010	2012	2016	2019	2024
• Education and outreach only	• Ordinance passed prohibiting landscape water waste	• Water Conservation Five-Year Strategic Plan Adopted	• Time-of-Day watering restrictions expanded	• Five-Year Strategic Plan Updated	• Landscape irrigation limited to a maximum of twice weekly	• Five-Year Work Plan Update	• Move to OEQS*	• Five-Year Work Plan Updated



\*Fully funded by DWU







# Accomplishments



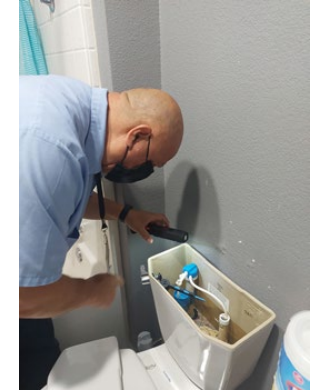
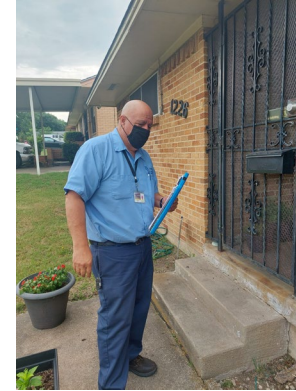


# Accomplishments



- **New Throne for Your Home (NTFYH)**

- Single Family
  - Cumulative Number of Toilets Distributed (Vouchers + Rebates): **54,633**
  - Cumulative Water Saved: **266** MG
- Multi-Family
  - Cumulative Number of Toilets Distributed: **68,605**
  - Cumulative Water Saved: **312** MG



- **Minor Plumbing Repair (MPR) Program**

- Cumulative Number of MPR Fixtures distributed: **14,188**
- Cumulative Water Saved: **40.9** MG

- **Environmental Education Initiative (EEI)**

- Reached cumulative number of
  - Students: **127,838**
  - Teachers: **8,302**
  - Residents: **128,741**
  - Schools: **309**





# Accomplishments



- **Landscape Ordinance Amendments**
  - Time of day watering restrictions
  - Mandatory maximum twice weekly watering schedule
  - Article X Revision for Landscape and Tree Preservation
- **Enhanced Enforcement**
  - Provided funding in each year for Code Compliance personnel overtime pay (2 FTEs)
  - Conduct targeted, neighborhood sweeps to enforce ordinances
- **Irrigation System Evaluations**
  - Cumulative Number of Irrigation Audits: **9,733**
  - Cumulative Potential Water Saved: **543** MG
- **Industrial, Commercial, Institutional (ICI) Water Efficiency Opportunity Surveys & Rebate Programs**
  - Cumulative Potential Water Savings from Surveys: **698** MG/Yr
  - Cumulative Water Savings from Rebates: **121** MG/Yr





# Accomplishments



- **Public awareness campaigns**

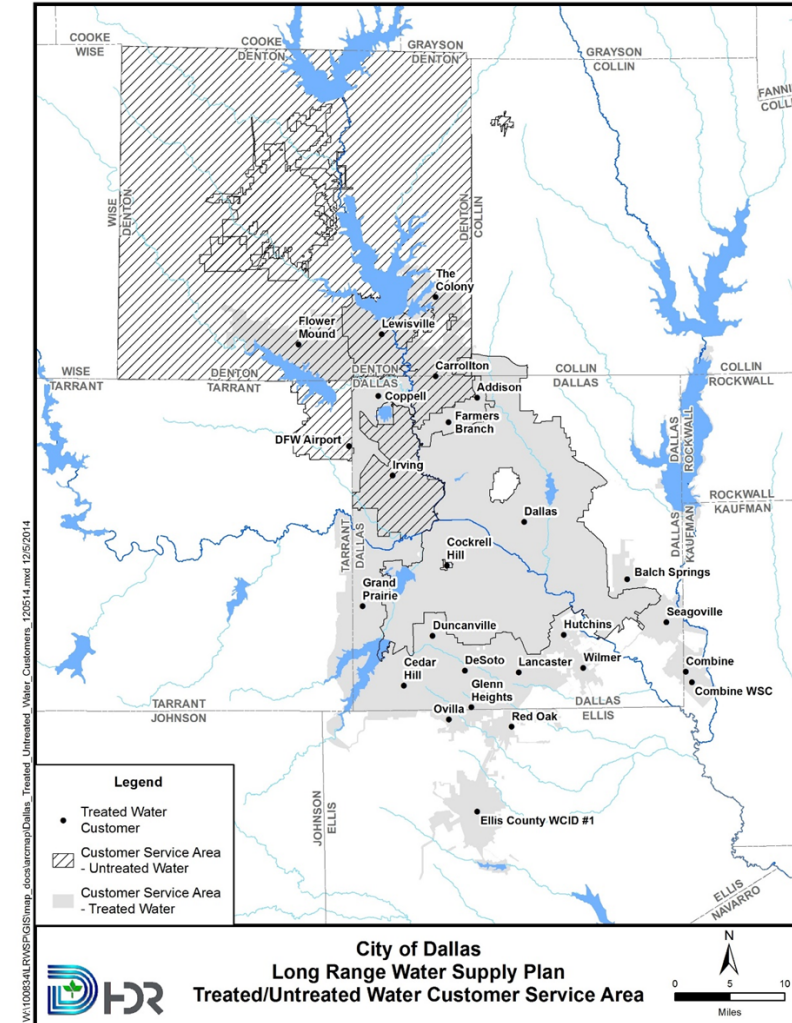
- 2018 Revamped Save Dallas Water website “Save Water. Nothing Can Replace It”
- Regional Public Awareness Campaign, “Water is Awesome” Partnership with Tarrant Regional Water District since 2009

- **City Leadership and Commitment Grant**

- \$200,000 Available to City Departments for conservation projects

- **Wholesale Customer Cities Monitoring, Measurement and Reporting of Water Conservation Programs**

- Increased adoption of outdoor watering Best Management Practices in customer cities
  - 7 cities have an Outdoor Watering Schedule
  - 16 cities have Time of Day Watering
  - 12 cities have Water Conservation Pricing





# Accomplishments



- **Water Loss Reduction**

- Proactive Leak Detection and Repair
  - Since FY 2005 estimated **5.5** BG saved
- Distribution System Main Replacement
  - Maintained **5,038** miles of pipeline in FY 2022
  - System age dropped from 48% to 46%
  - Since 2001, main breaks per mile decreased from 0.6 to 0.1
- Filter Cleaning at Water Treatment Plants
  - Optimize backwash

- **Meter Reading (Apparent Loss Reduction)**

- Developed practice to replace meters
  - FY 2016 – 2022 average meter replacement: **24,591**
- Modernization of Meter Reading Process
- Two automated network systems installed (pilot projects)
  - Advanced Metering Infrastructure (AMI) Fixed Network
  - AMR Mobile Network
  - Approximately 22,000 meters currently read using a Mobile Network







# Water Conservation Plans





# Water Conservation Plans



## Five-Year Water Conservation Work Plan

- Road map for compliance with State mandates
- Major component of Long-Range Water Supply strategies

## Water Conservation Plan (State required)

- Mandated by Texas Administrative Code, Title 30, Rule 288.2
- Required submission every five years
- **Next plan due by May 1, 2024**



City of Dallas

### **2024 Water Conservation Plan**

Adopted by Resolution of Dallas City Council on *Month, XX* 2024





# Work Plan Development Process



- Examined programs and water use, and targeted strategic areas for additional opportunities
- Strategies that will continue from previous plans include:
  - Continued Customer Engagement
  - Water System Improvements
  - Ordinance Review
- Selected strategies projected to reduce per capita consumption by an average of 0.94% per year from FY 2023 - FY 2027





# Proposed Measures by User Group



No.	Proposed Measure	User Group				Action		
		SF	MF	ICI	DWU	Ongoing	Enhance	New
1	New Throne For Your Home (Single-Family Toilet)	✓				★		
2	New Throne For Your Home (Multi-family Toilet)		✓			★		
3	Minor Plumbing Repair Program	✓				★		
4	Environmental Education Initiative K-12	✓	✓			★		
5	Irrigation System Evaluation Program	✓	✓	✓		★		
6	Residential Irrigation Incentive Program	✓						★
7	City Leadership & Commitment Grant Program			✓		★		
8	Enhanced Enforcement	✓	✓	✓		★		
9	Public Awareness Campaigns - Outreach and Engagement	✓	✓	✓	✓	★	★	
10	ICI Audit and Rebate Program			✓		★	★	
11	ICI Incentive Program for Qualifying Non-Profits			✓				★
12	Wholesale Customer Cities Program					★		
13	Real Loss Program				✓	★		
14	Real Loss Reduction; Active Leak Detection – Additional Leak Repair, Detection and Pressure Reducing Valve Crew				✓	★	★	
<i>SF = Single Family; MF = Multi-Family; ICI = Industrial, Commercial, and Institutional</i>								







# Projected Water Savings



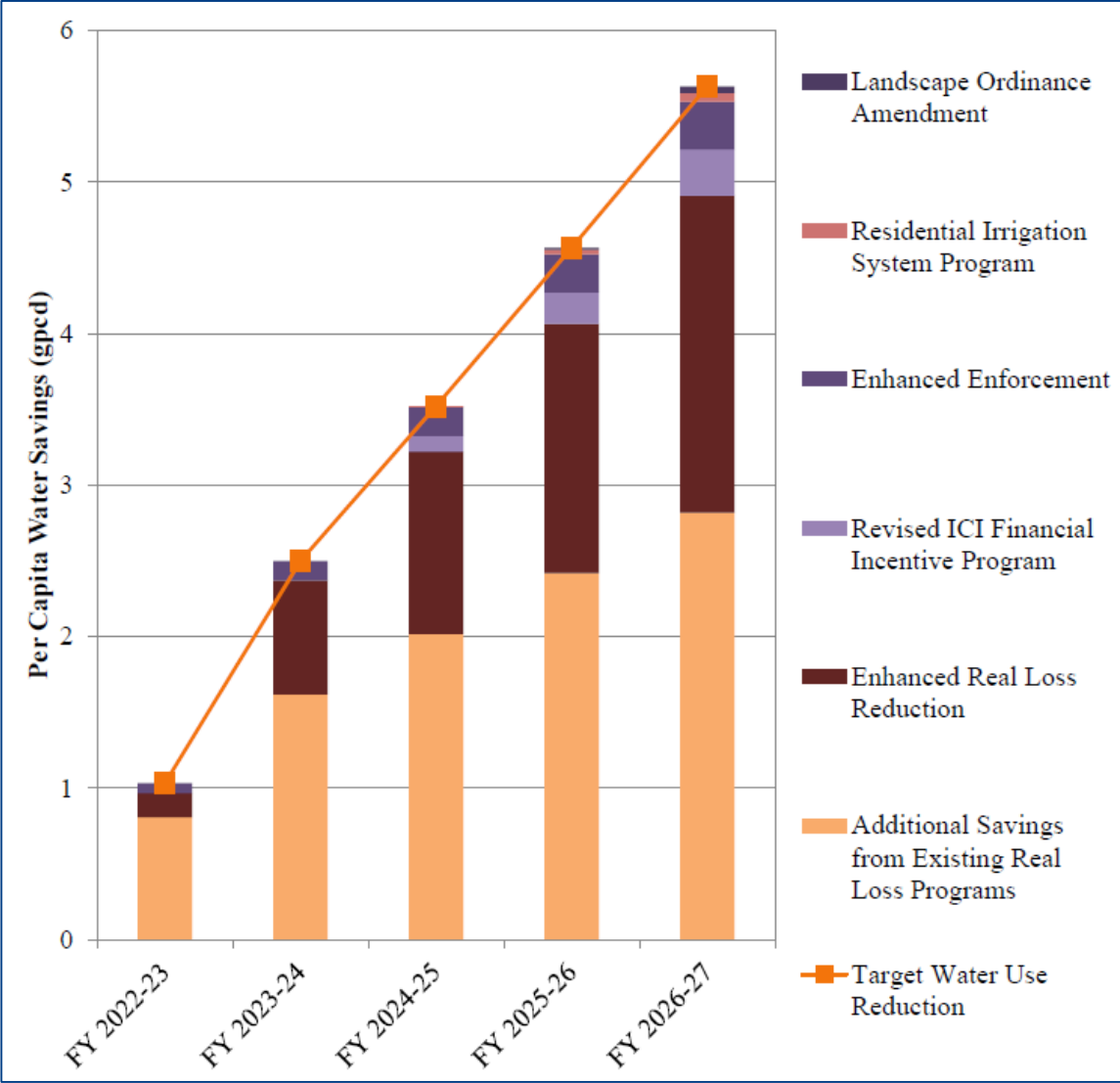


# Projected Per Capita Water Savings from Selected Strategies



Per Capita Water Consumption Goal

Water Savings	Historic 5-yr Average	5-yr Goal for Year 2029	10-yr Goal for Year 2034
Total GPCD	175	168	160







# Five-Year Plan Recommended Enhancements





# Five-Year Plan Recommended Enhancements



- **Residential Irrigation System Rebate Program**
  - **Proposed new program**
    - Incentives to complement highly successful irrigation system check-up program and water wise landscape seminars
    - Offer incentives for
      - Drip irrigation equipment
      - Spray heads with more efficient distribution patterns
      - Zone Conversion
  - **What we get**
    - Projected average water savings of **5 MG/Yr**





# Five-Year Plan Recommended Enhancements



- **Industrial, Commercial & Institutional (ICI) Financial Incentive Programs**
  - **Proposed new programs**
    - **ICI Water Efficiency Partnership (WEP) Program** for ICI facility managers and leaders that represent high water use industries.
    - **ICI Water Efficiency Training Program** for ICI facility managers and leaders with a focus on the EPA WaterSense program.
    - **ICI Qualifying Non-Profit Retrofit Program** to provide authorized plumbing retrofits for qualifying nonprofit facilities. Retrofits include high-efficiency toilets, faucet aerators and showerheads.
  - **What we get**
    - Increased program participation
    - Increased outreach to medium and small businesses
    - Projected average water savings of **46** MG/Yr





# Five-Year Plan Recommended Enhancements



- **Public Awareness Campaign Enhancement**

- Broaden digital audience reach with a permanent staff (versus temporary help) to:
  - Advance Water Conservation messaging
  - Manage Save Dallas Water Website and social media accounts
  - Create custom digital content
  - Adhere to City media guidelines

- **Ordinance Review**

- Review ordinance and regulations relating to landscaping

- **What we get**

- Increased transparency, trust and participation
- Increased awareness of outdoor water conservation programs
- Reduced outdoor water use

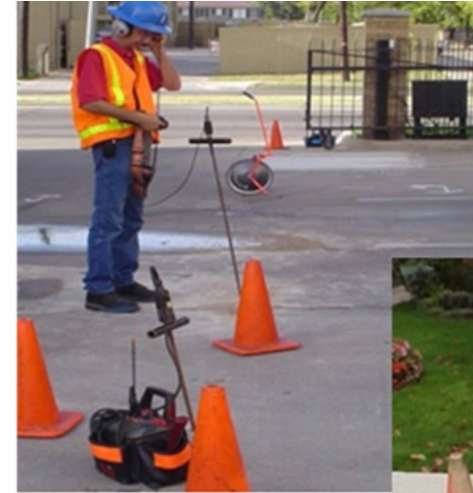




# Five-Year Plan Recommended Enhancements



- **Real Loss Reduction: Proactive Leak Detection and Repair Enhancements**
  - Expand leak detection programs:
    - Add funding for large diameter leak condition assessment
    - 2 Technicians for Leak Detection
    - 4 Technicians for Leak Repair
    - 2 Technicians for Pressure Reducing
- **What we get**
  - Lowered utility costs
  - Minimized property damage
  - Reduced customer disruptions
  - Projected average water savings of **346** MG/Yr







# Summary and Timeline





# Summary



- Five-Year Work Plan serves as a road map to comply with State's water conservation requirements
- Dallas has made great strides in reducing its per capita water demand using conservation and efficiency programs
  - A 32% decrease in per capita usage since FY 2001
  - Ongoing water conservation efforts have saved approximately **387** BG
- Proposed 2024 Water Conservation Plan goal is to reduce per capita water use by an average 0.94% percent per year over the next five years by
  - Implementing measures with higher water savings early
  - Aligning strategies that have similarities/synergies





# Timeline For Plan Adoption



- Community Survey
  - Fall 2023
- Plans finalized and posted to [www.savedallaswater.com](http://www.savedallaswater.com)
  - March 2024
- Council adopts plans subject to annual appropriations
  - April 2024
- 2024 Water Conservation Plan will be submitted to TCEQ
  - May 1, 2024





# Next Steps



- Seek support from Parks, Trails and the Environment Committee for adoption of:
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