

City of Dallas Water Conservation: Creating A Water Efficient Future

**Environment & Sustainability
Committee**

January 6, 2020

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Overview

- DWU Water Conservation Leadership
- Program Approach
- Water Savings!
- Future Program Actions & Incentives
- Data-driven for Success

City of Dallas Water Conservation:

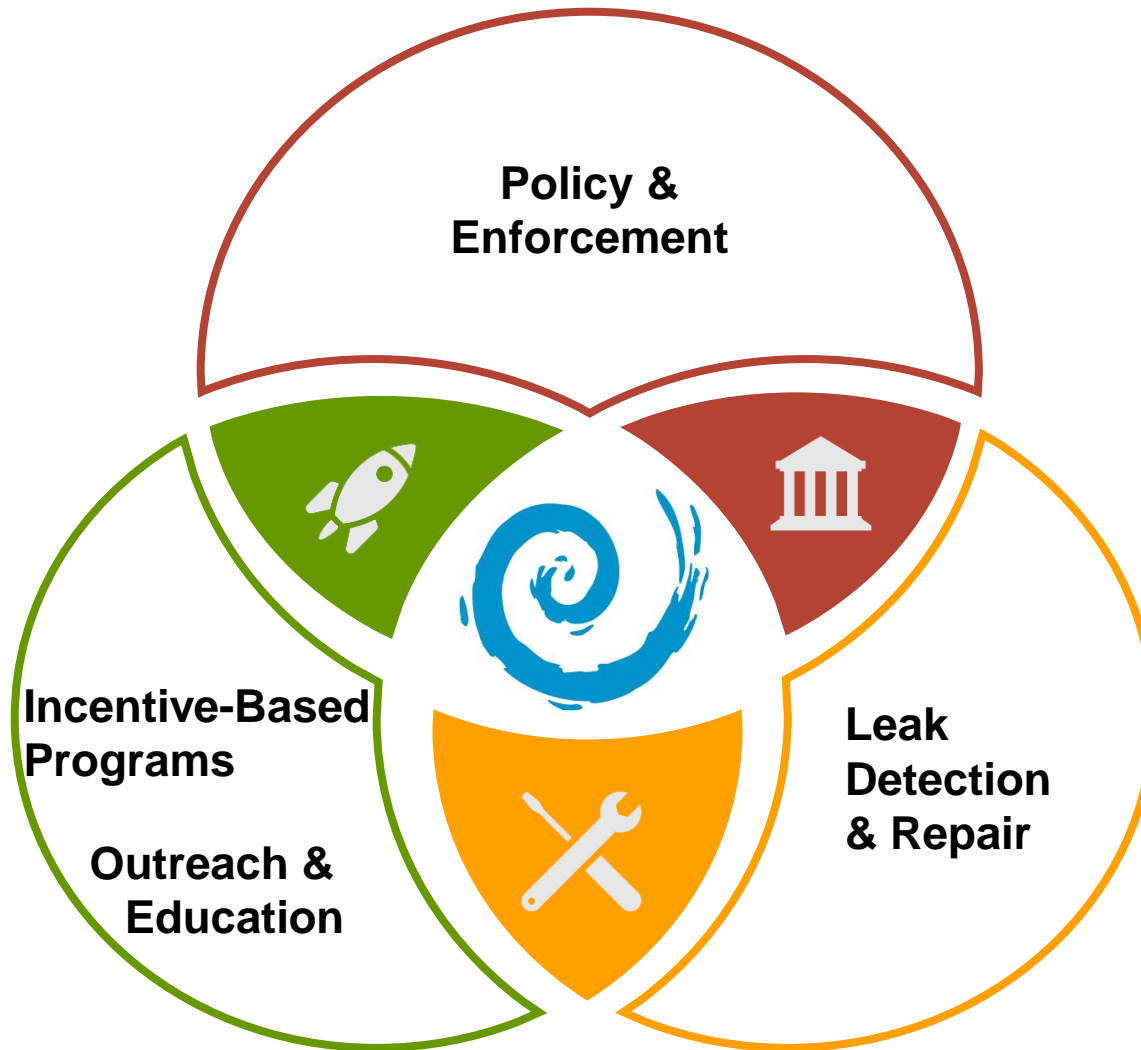
Leading the Way in North Texas

Conservation Firsts in North Texas

- **First** in Mandatory Maximum Twice Weekly Watering Year-Round
- **First** in Industrial, Commercial, Institutional Audits and Rebates
 - 1 of only 5 programs nationally
- **First** in bilingual messaging, literature and website
 - SaveDallasWater.com
- Invited to present nationally on the 'City of Dallas culture of Conservation'



A Three-Pronged Approach to Water Conservation





There has been a lot of media coverage about the severity of the drought in Texas. As of December 12, 2011, Stage 1 mandatory watering restrictions are in effect for all City of Dallas Water Utilities customers.

Dallas has done a good job of planning for future water needs. Cur-

Through their commitment to wise water use, Dallas residents and businesses have helped save 146 billion gallons of water in the last ten years. Those conservation efforts have helped mitigate the effect of the drought, but the mandatory restrictions in Stage 1 are needed to help extend the city's water supplies.

The primary impact of Stage 1 on Dallas water customers is that outside watering is allowed only twice per

Water Conservation Ordinance

- **Mandatory Maximum Twice Weekly Watering Year-Round**
- **Time of Day Watering** between 10 a.m. and 6 p.m., April 1 through October 31
- Violations can result in fines of \$250 to \$2,000 per incident





Leak Detection, Repair and Control of Unaccounted-for Water

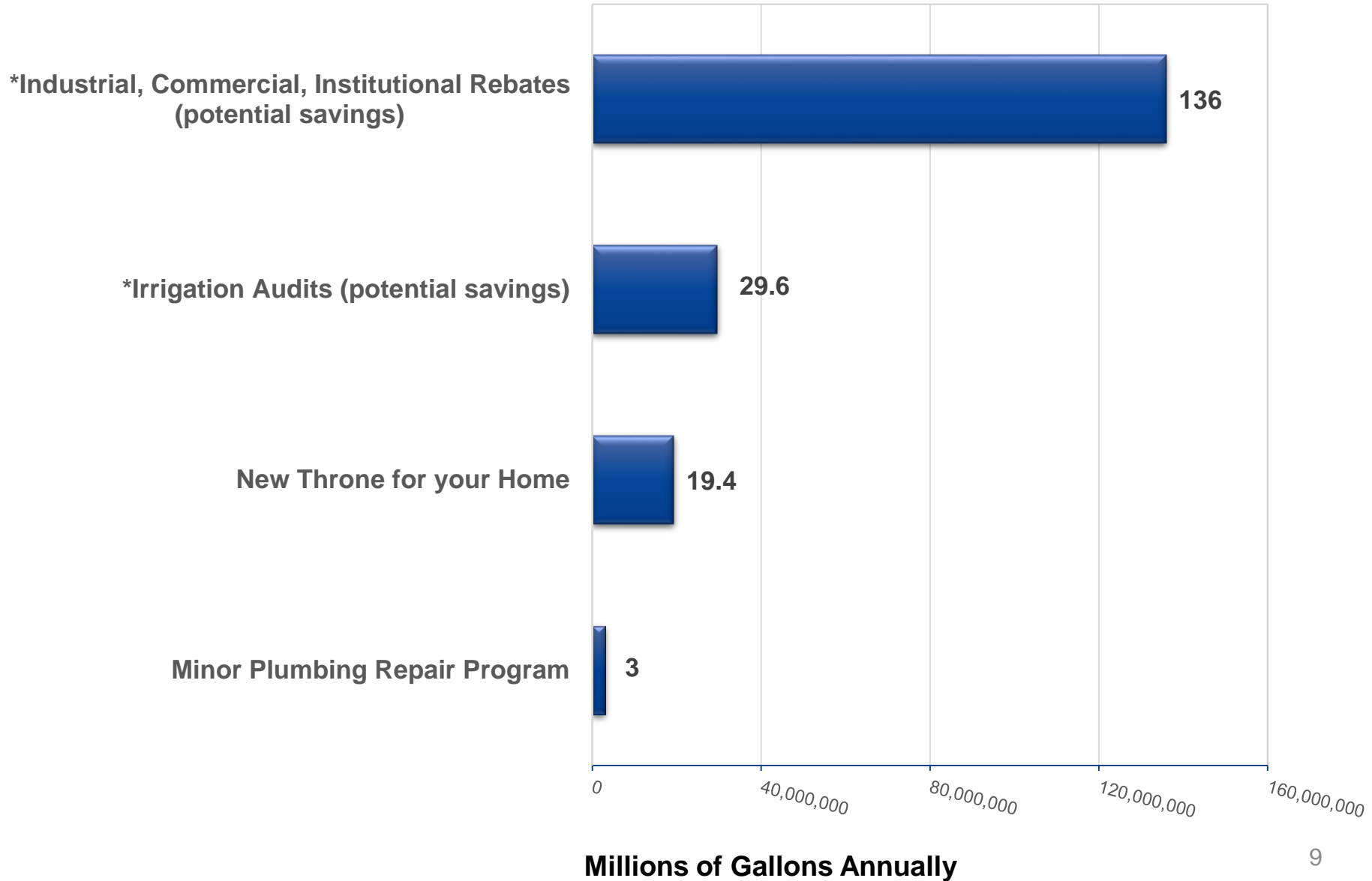
- Extensive leak detection and repair program
- \$34.9 million annual operating budget for maintenance and upkeep of the distribution system
- Annual unaccounted-for water loss averaged @ 9.9%



- Regional and Local Public Awareness Campaigns
- Environmental Education Initiative (EEI)
- New Throne for Your Home (NTFYH)
- Minor Plumbing Repair (MPR)
- Free Irrigation Evaluations
- Free Industrial, Commercial, Institutional (ICI) Water Efficiency Audits and Rebates
- Free Year-Round Water-Wise Seminars and Workshops
- 26th Water-Wise Landscaping Tour 8

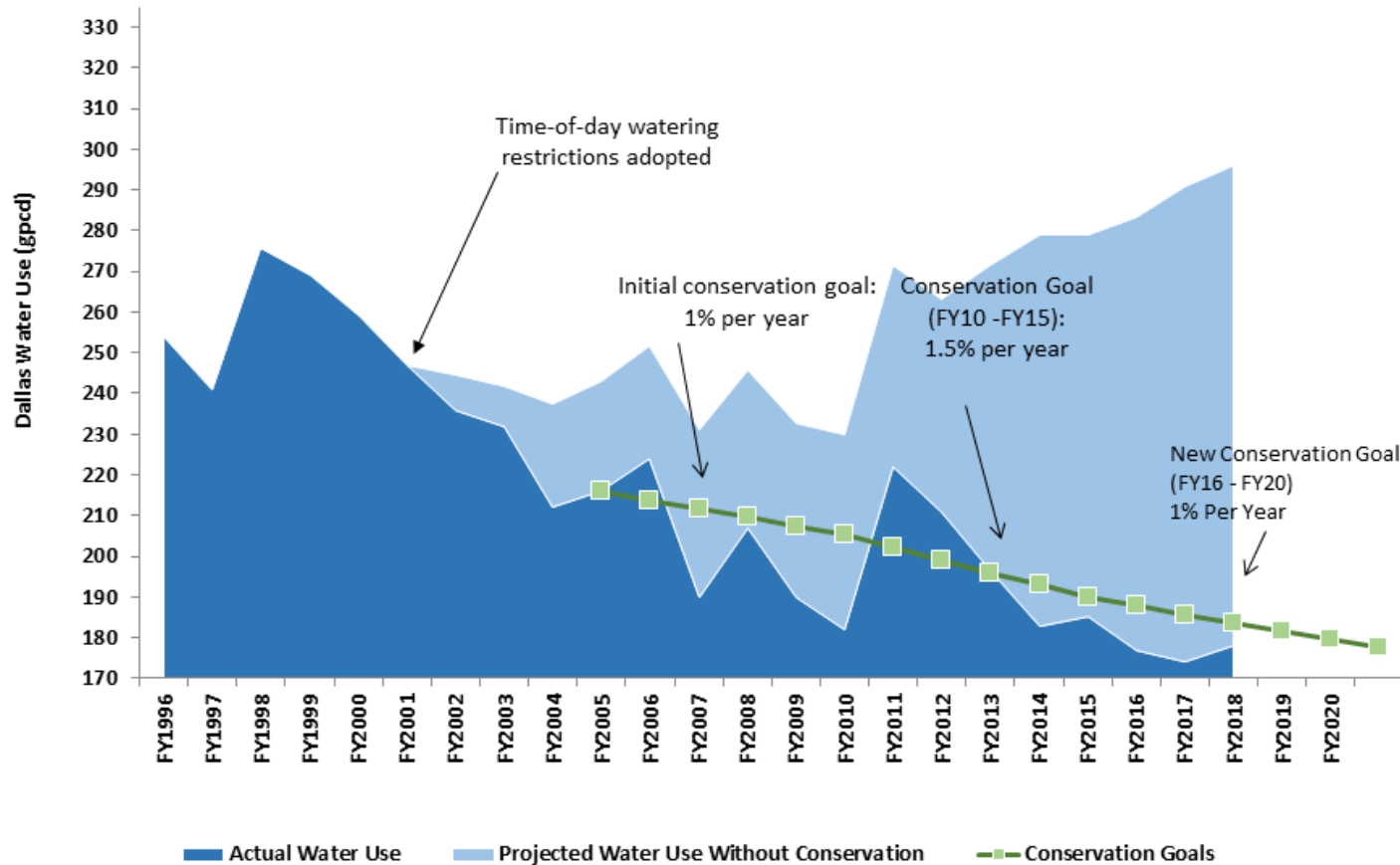
Water Savings in FY2018-19

Incentive-Based Programs



How Impactful is Water Conservation In Dallas?

Water Savings From Water Conservation Activities in Dallas Water Utilities



- Delays the need to develop expensive future water supplies and infrastructure by 2-3 years
- Extends the life of existing water supplies and infrastructure
- Reduces peak requirements
- Lowers capital and operating costs of the existing system
- Reduces energy consumption

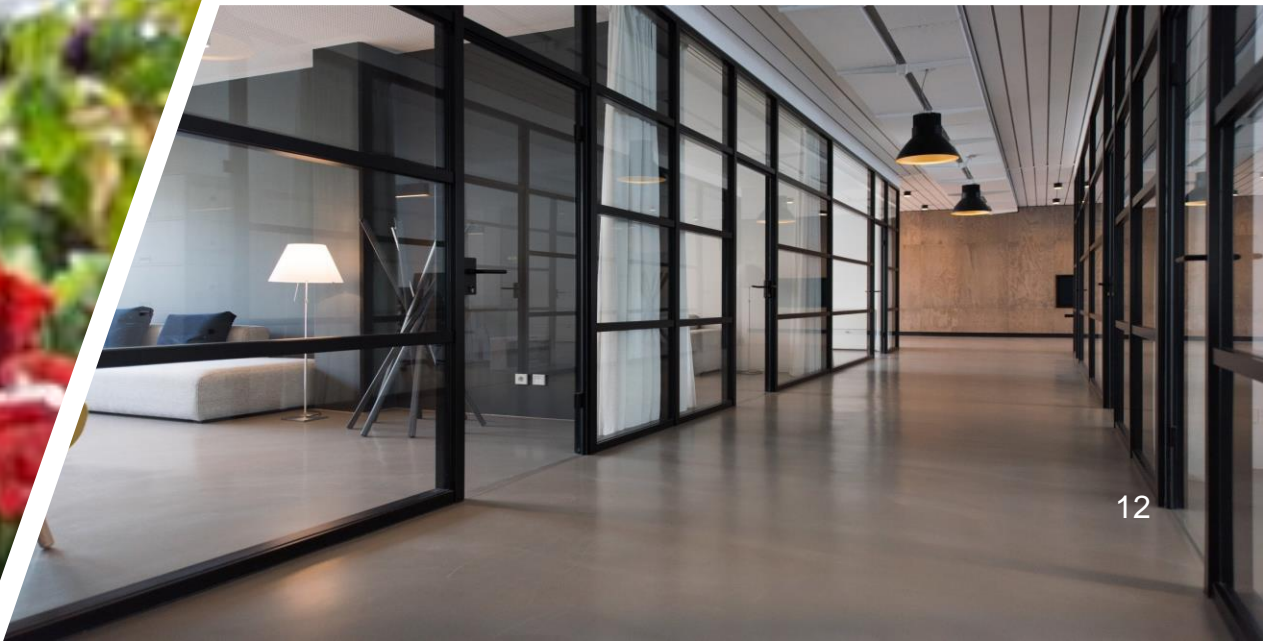
The Future of Water Conservation in Dallas

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Data has a better idea



Incentivizing Water-Wise Irrigation

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Outdoor Watering Facts

- 30-60% of total water use by single-family residences is outdoors
 - (> 9 billion gallons/day!)
- More than 50% of water used in residential irrigation is lost
- Homes with automatic irrigation systems use approximately 50% more water
- A single broken sprinkler head can waste up to 25,000 gallons of water in 6 months
- Using native plants can reduce outdoor water use by 20-50%

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Industrial, Commercial, Institutional (ICI) Rebate Program

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Helping Our Largest Water Users Become Water Efficient

- Continue growing the ICI Program in 2020
- 12 total rebates pending → water savings totaling ~76 MG annually
- Item #27 on the 1/8/20 Council Agenda

Customer	Annual Water Savings (MG)	Rebate Amount
The Muse Apartments	~11.9 MG/year	\$87,185.98
The Ashlar Apartments	~7.5 MG/year	\$32,632.98
The Versailles Apartments	~11.7 MG/year	\$52,484.90
Texas Instruments (TI)	~7.9 MG/year	\$71,326.49



Why Incentivize ICI Customers?

- ICI customers tend to invest in areas that generate revenue -water and energy are not always the highest priority
 - Incentivizing changes the game
 - TI did not take on Conservation projects until the City's ICI Rebate program began
- Securing water resource savings at the lowest cost to the City through conservation
 - \$1 now= \$7 in the future
 - This water is already pumped and treated

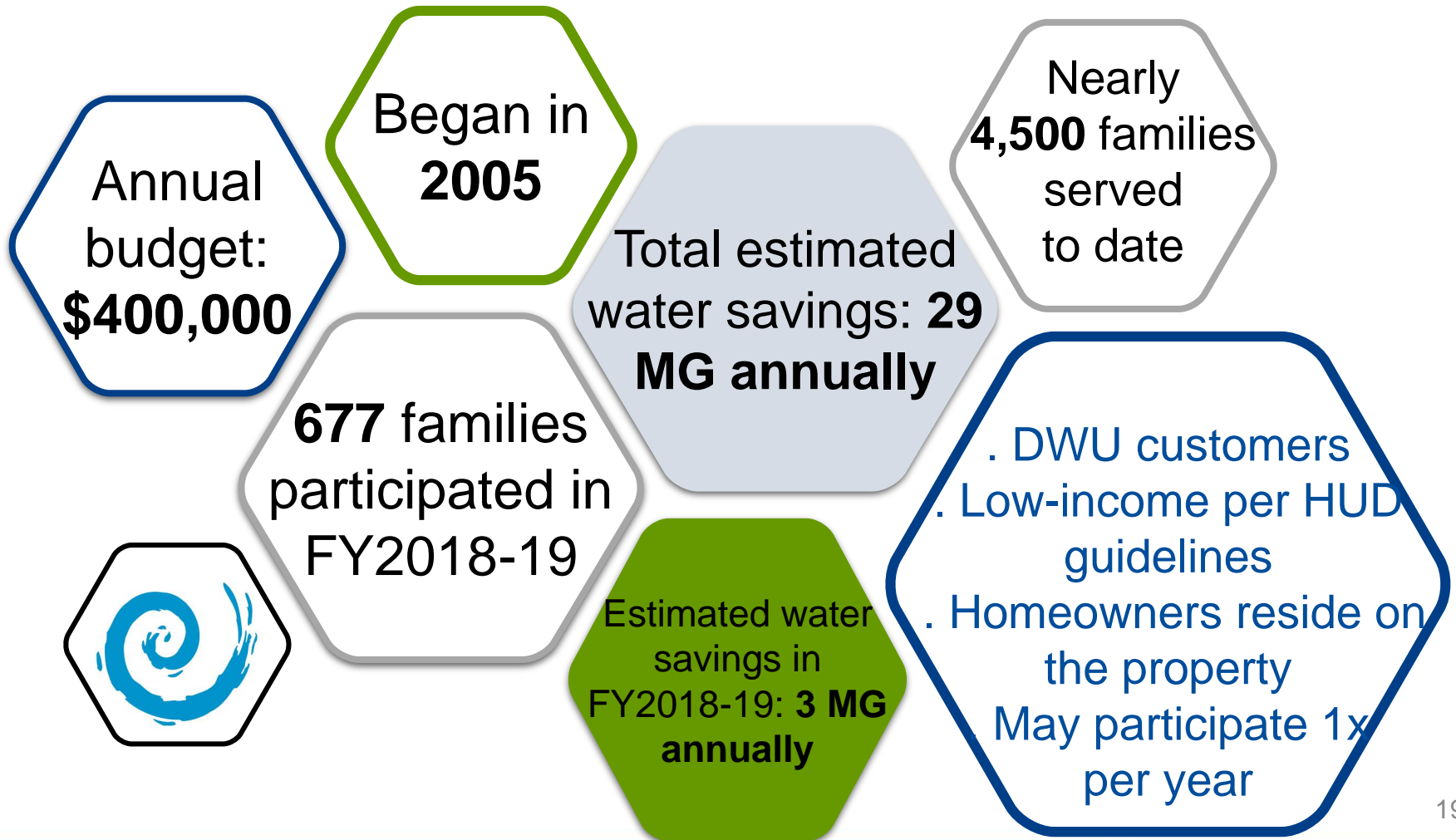
**115 Olympic-Sized
Swimming Pools
Each Year**

Data Driven: Looking at Data in a Different Way

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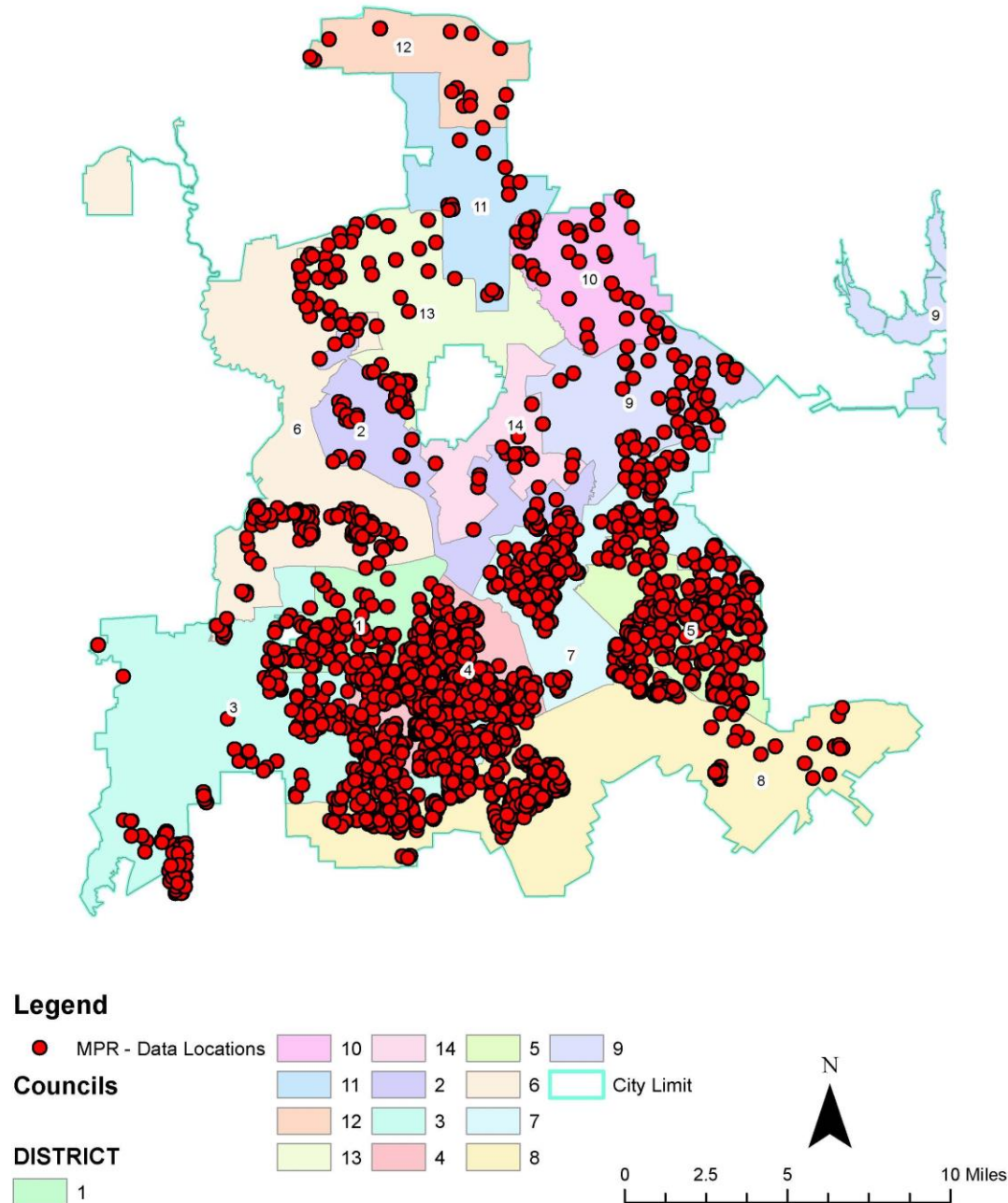


Minor Plumbing Repair (MPR) Program

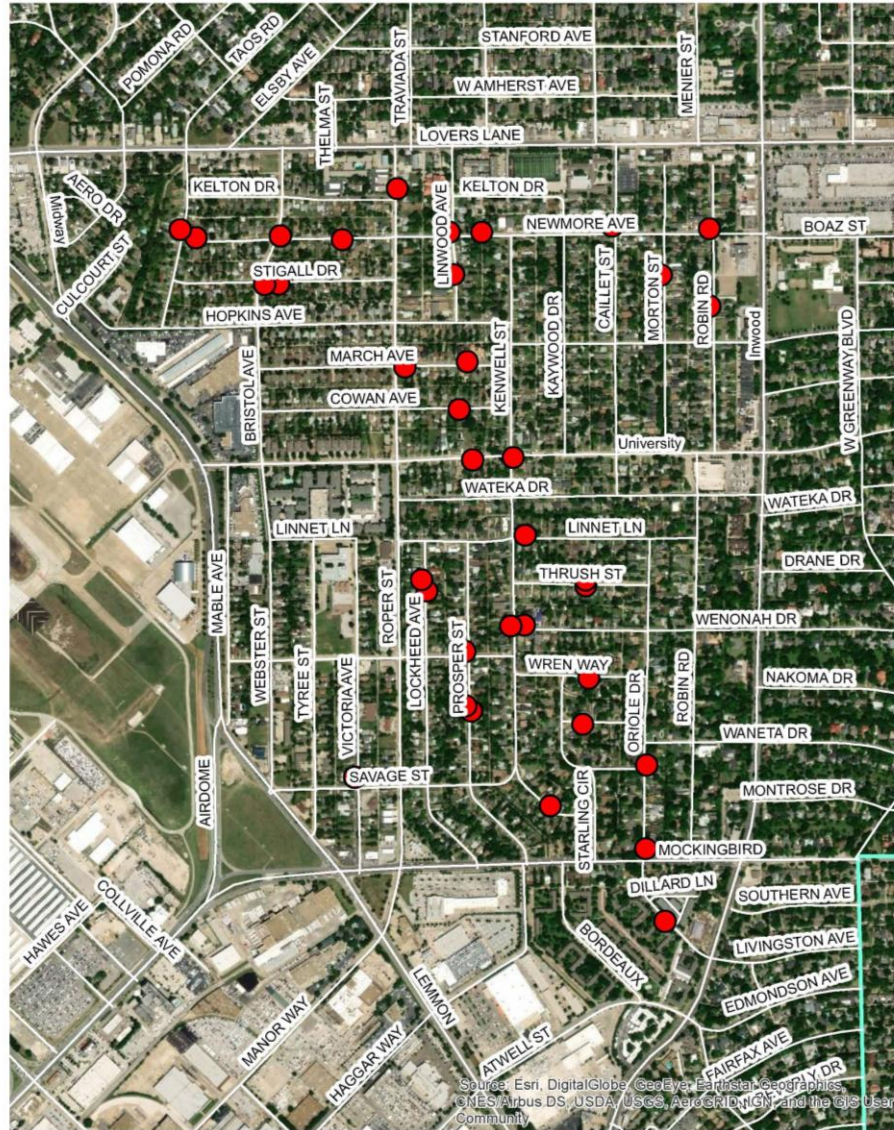


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Minor Plumbing Repair (MPR) Program Participants: 2005-2019

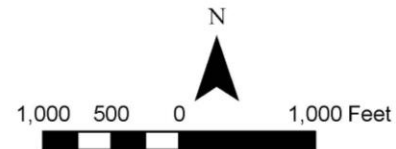


MPR Program Participants: 2005-2019



Legend

- MPR - Data Locations
- City Limit

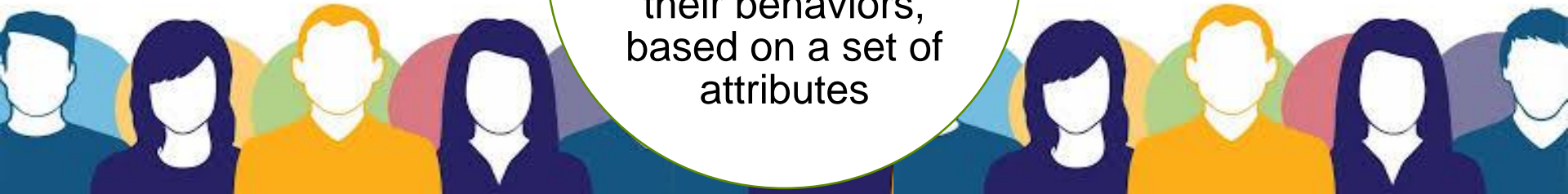
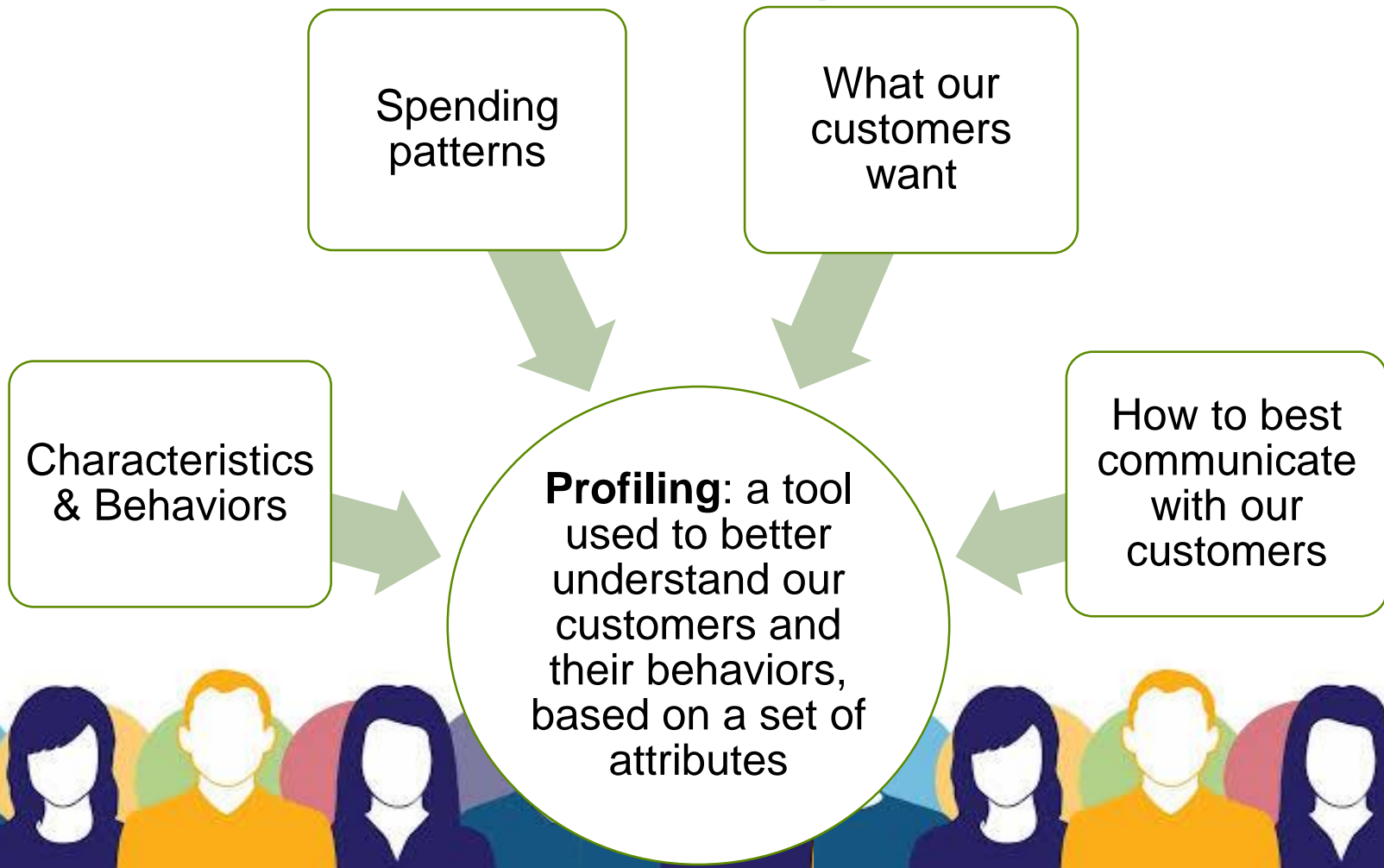


Customer Profiling & Predictive Marketing

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Customer Profiling & Predictive Marketing



Appendix



Comparison of Water Conservation and Drought Measures

- Conservation measures are used to achieve more efficient use of water resources. Examples include:
 - Water Wise landscaping
 - Repairing leaking faucets
 - **Proactive** measures in place
- Drought measures are restrictions to ensure that water is available to meet public health, welfare and safety needs during times of shortage. Examples include:
 - Restricting lawn watering
 - Prohibiting operation of ornamental fountains



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State Requirements

- The State of Texas and Texas Commission on Environmental Quality (TCEQ) require Dallas to have Council adopted water conservation and drought contingency plans and to update the plans every 5 years
- Current plans adopted by City Council on April 24, 2019



State Requirements

- Texas Administrative Code requires that water conservation plans include:
 - Utility profile and quantifiable 5 and 10 year goals for water savings
 - Information on accuracy of metering devices
 - Testing and replacement of meters
 - Leak detection
 - Reservoir operating plan
 - Control of unaccounted for water
- Minimum requirements also include:
 - Continuing public involvement/education
 - Non-promotional rate structure
 - A means for implementation and enforcement of the plan
 - Coordination with regional water planning groups



Minor Plumbing Repair Program:

Offers assistance with minor plumbing problems and fixtures that may cause water waste and higher water bills

Who Qualifies?

- Dallas Water Utilities customers
- Low-income homeowners, as defined by the U.S. Department of Housing and Urban Development income guidelines
- Homeowners who reside on the property
- ❖ May participate 1x per year

Included Repairs

- Leaking faucets (indoor/outdoor)
- Hose bib leaks (indoor/outdoor)
- Easily-accessible pipe joint leaks
- High Efficiency, Low Flow Fixture replacement

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