

Memorandum



CITY OF DALLAS

DATE April 13, 2007

TO Honorable Mayor and Members of the City Council

SUBJECT The Path to 2060: Water Conservation Program Update

Attached is a briefing that will be presented to the Council on Wednesday, April 18, 2007, which will provide a progress report and planned activities for the Water Conservation Program.

Please let me know if you have any questions or need additional information.

A handwritten signature in black ink, appearing to read 'R. Miguez'.

Ramon F. Miguez, P.E.
Assistant City Manager

Attachment

c: Mary K. Suhm, City Manager
Deborah Watkins, City Secretary
Thomas Perkins, City Attorney
Craig D. Kinton, City Auditor
Judge Jay Robinson
David K. Cook, Chief Financial Officer
Ryan S. Evans, First Assistant City Manager
Charles W. Daniels, Assistant City Manager
Jill A. Jordan, P.E., Assistant City Manager
A.C. Gonzales, Assistant City Manager
Jo M. Puckett, P.E., Director, Dallas Water Utilities



The Path to 2060: Water Conservation Program Update

Presented to the Dallas City Council
April 18, 2007





Briefing Purpose

- Provide background on water conservation program
- Provide progress report on program activities and milestones
- Provide information on regional Customer Cities conservation efforts
- Seek council support for items scheduled on April 25th agenda



Background



The Need for Aggressive Water Conservation

- Integral part of Dallas' long-range water supply strategy
 - Operational tool used to reduce peak requirements
 - Delays the need to develop expensive future water supplies
 - Lowers capital and operating costs of existing system
 - Required by state law
 - Required to protect current water rights and to secure future water rights



Five Year Strategic Plan Goal

- **Goal to achieve an average 1% per year reduction in overall water consumption over five years by:**
 - Reducing seasonal peak demands;
 - Reducing water loss and waste;
 - Decreasing gallons per capital per day;
- **While:**
 - Maintaining quality of life; and
 - Allowing for continued growth and economic development



Five-year Strategic Plan Approach

- City Leadership & Commitment
 - “Lead by example” by reducing the amount of water consumed by City operations
- Enhanced Education & Outreach
 - Impact customer attitudes and behaviors through public education efforts
- Rebate & Incentive Programs
 - Motivate customers to replace and/or retrofit high water use fixtures and devices



How Success is Measured

- Total gallons saved based on system-wide measures and direct programs and services
- Gallons per capita (GPCD) trends compared to annual rainfall
- Positive changes in public attitudes and behaviors based on annual surveys

Background:

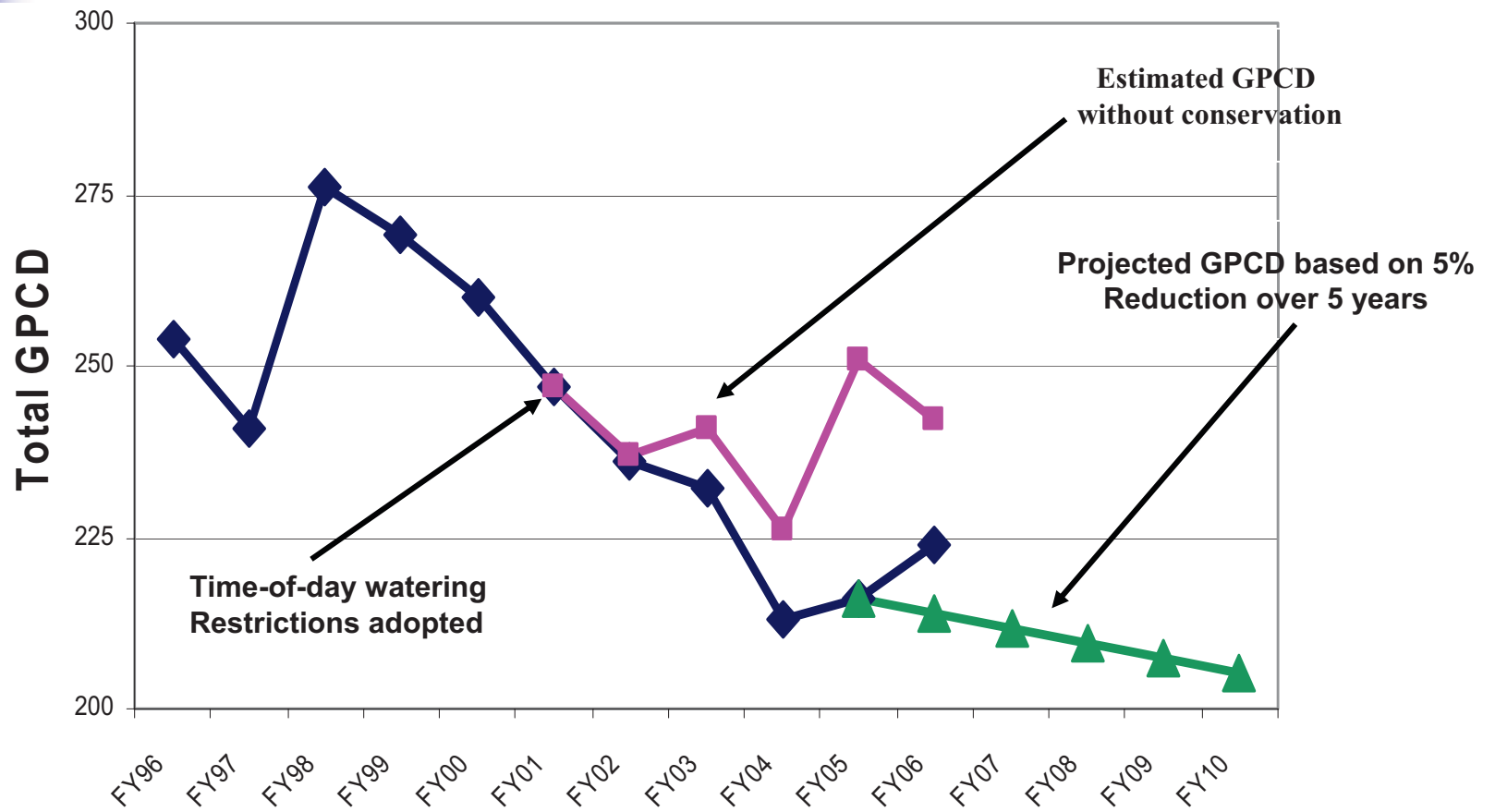
Gallons per Capita per Day

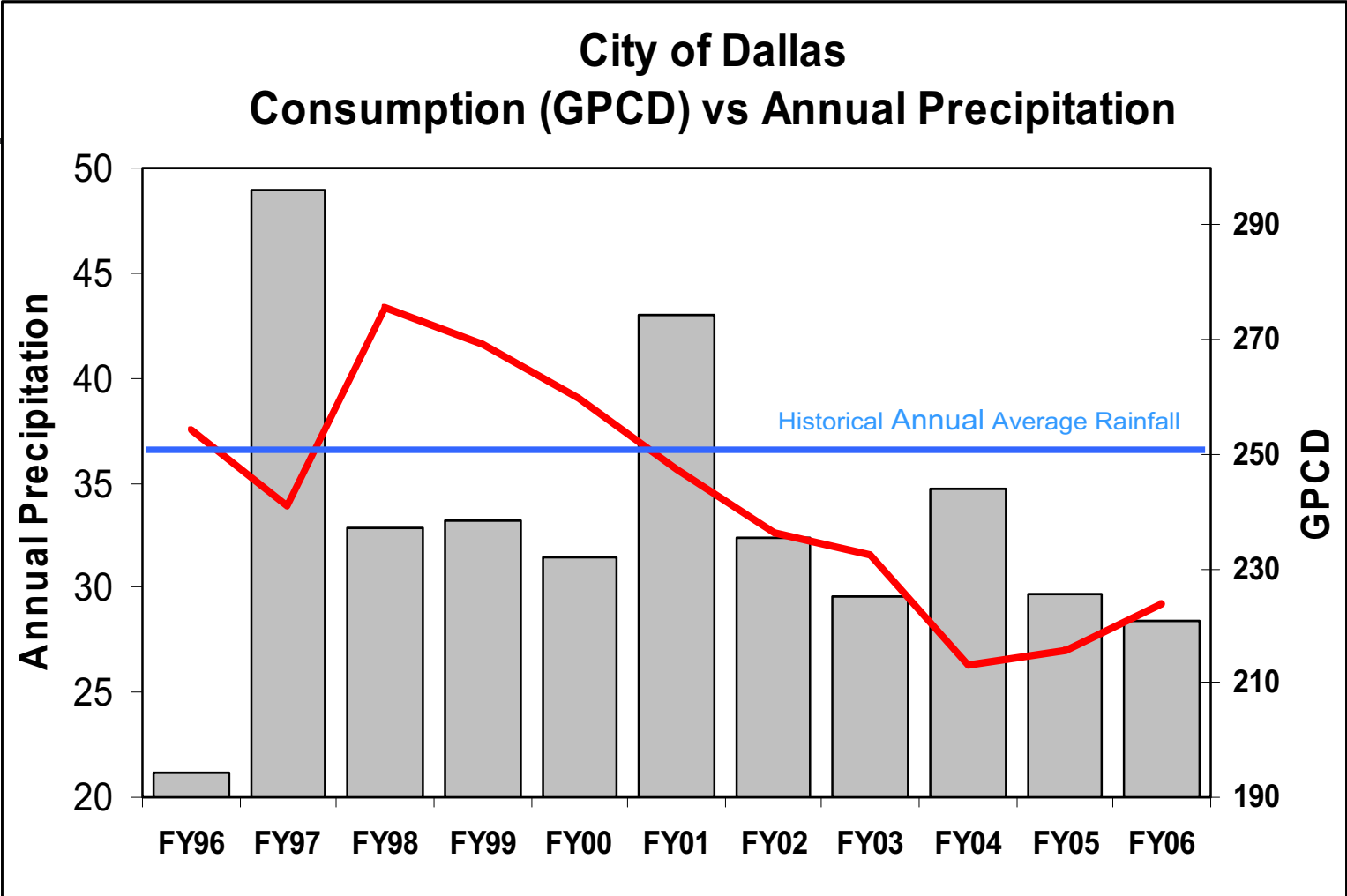
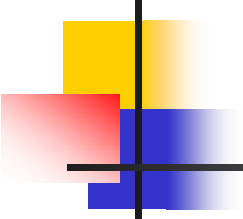
- GPCD is intended to establish water-use benchmarks and to evaluate the effectiveness of conservation measures once implemented
- Factors that impact gallons per capita:
 - concentrations of commercial and institutional activity
 - variations in regional climates population and density
 - regional economic conditions and quality of water supplies
 - the extent and effectiveness of local water conservation programs
 - rates of unaccounted for water in a given distribution system
- TWDB emphasizes that per capita estimates are not intended for making direct comparisons between cities



How We're Doing

Gallons Per Capita Trends







How We Compare



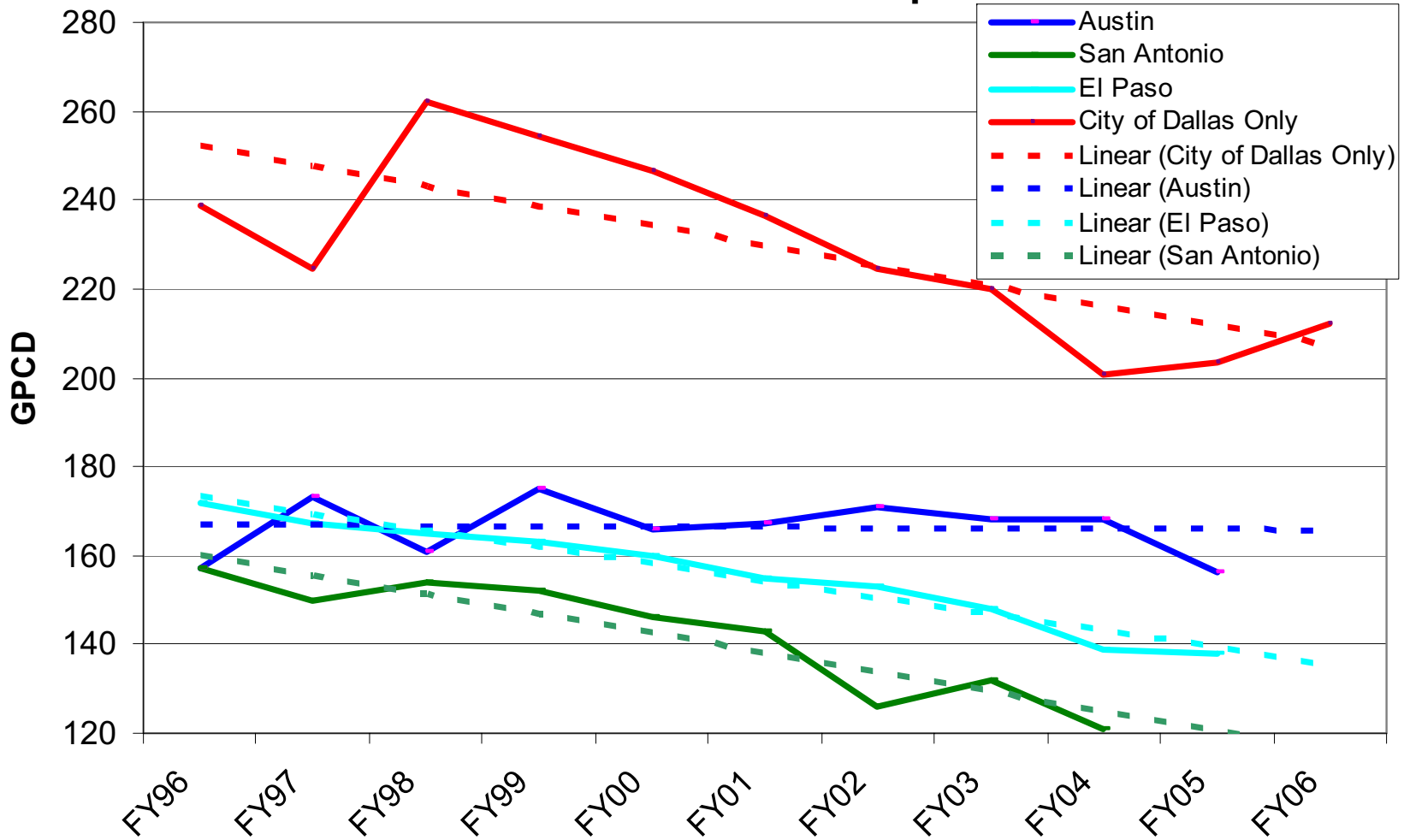
Texas City Comparisons

- Per Capita Investment in Conservation (2006)
 - San Antonio Water Systems (SAWS) has an average 4.5 dollars per capita spent on conservation
 - Austin Water Utilities (AWU) 4.9 dollars per capita served
 - El Paso Water Utilities (EPWU) 6.6 dollars per capita served
 - Dallas Water Utilities (DWU) 3.0 dollars per capita served

Annual Budget Comparisons

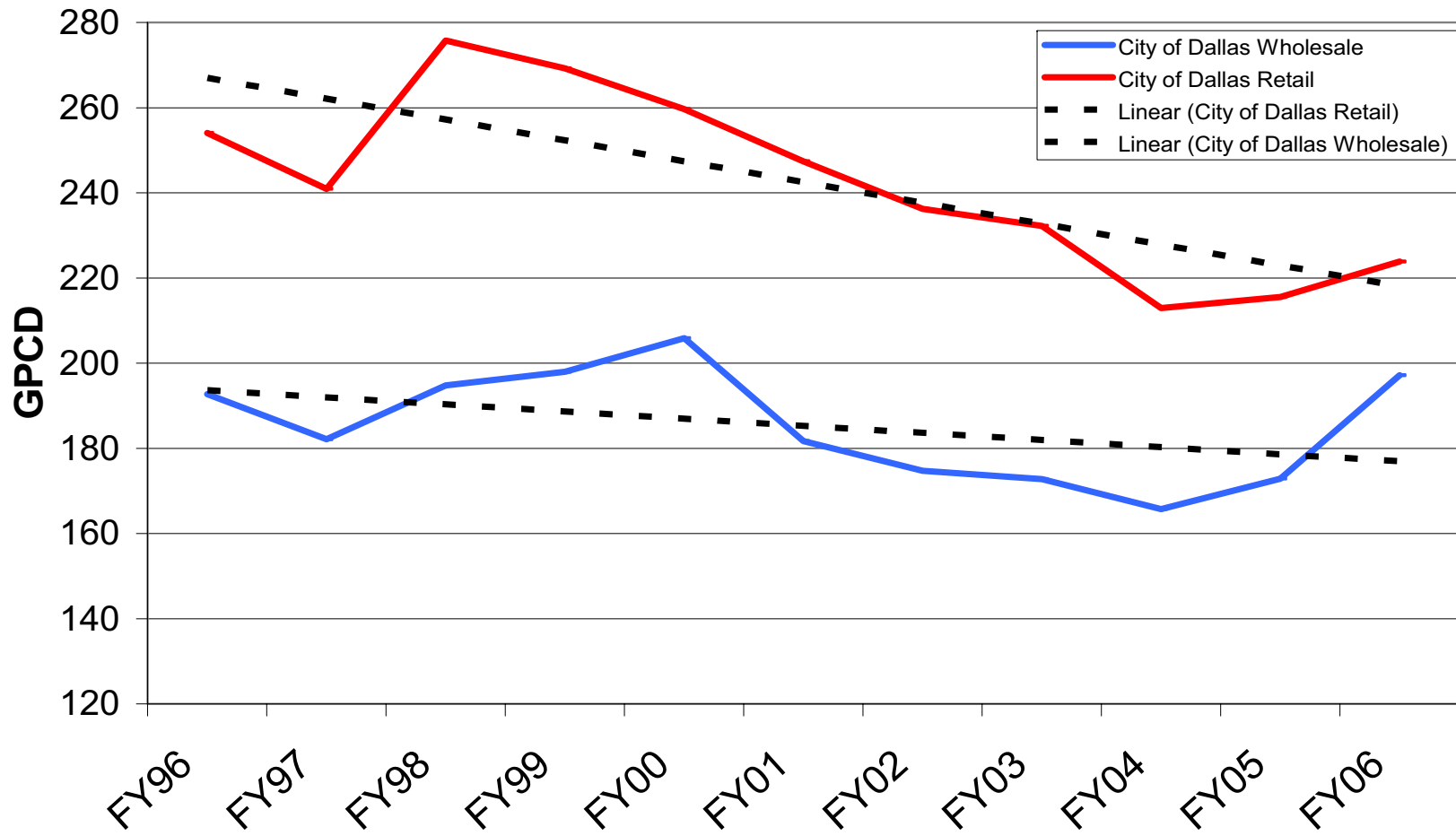
| | FY2002 | FY2003 | FY2004 | FY2005 | FY2006 |
|------|--------|---------|--------|---------|---------|
| SAWS | \$4.6M | \$5.18M | \$6.16 | \$4.89M | \$5.38M |
| AWU | \$3.4M | \$3.1M | \$2.7M | \$2.8M | \$4.6M |
| EPWU | \$1.5M | \$2.82 | \$5.4M | \$4.09M | \$3.88M |
| DWU | \$2.2M | \$2.2 | \$2.4M | \$2.4M | \$3.7M |

Texas Cities GPCD Comparison



Note: Comparison does not include Industrial Customers

GPCD Comparison DWU Retail and Wholesale



Note: Comparison includes Residential/Industrial/Commercial/Institutional Customers



Regional Customer Cities Efforts

- Subject to same restrictions on curtailment during drought conditions
- Rates structured to encourage conservation and reduce demand
- Charge a surcharge for high water usage during peak watering season
 - Carrollton
 - Flower Mound
 - Coppell
 - Irving



Regional Customer Cities Efforts continued

- Enforce time-of-day watering restrictions
- Mandate sprinkler system repair and maintenance
- Require rain and freeze sensing devices
- Maintain Xeriscape demonstration gardens



Regional Customer Cities Efforts continued

- Partner with City of Dallas on education and outreach
- Offer free promotional devices to encourage water conservation
- Offer water-wise brochures and educational materials
- Maintain website links devoted solely to water conservation education



Activities Completed in FY 05/06

City Leadership & Commitment

Landscape Irrigation Maintenance & Design Strategies

- Performed detailed irrigation system audits on 3 high traffic city facilities
 - Skyline Branch Library
 - Fire Station #10
 - Kiest Park
 - Landscape upgrade installations for Skyline Library and Kiest Park targeted for Spring 2007
 - Facility upgrades for Fire Station #10 coordinated with capital bond programs (Project scheduled to commence in late Fall 2007)



City Leadership & Commitment

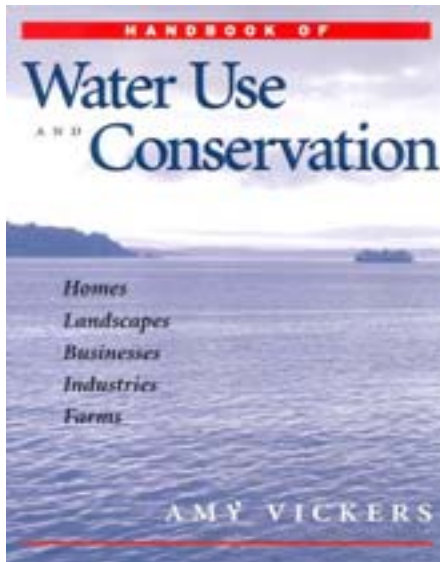
Indoor Plumbing/Fixture Replacement Strategies

- Surveyed indoor plumbing fixtures at 25 city facilities
 - A total of 152 plumbing fixtures replaced yielding an estimated annual water savings of 2.7 MG
 - Details on pages 64 and 65



City Leadership & Commitment

Local, Regional & State Support

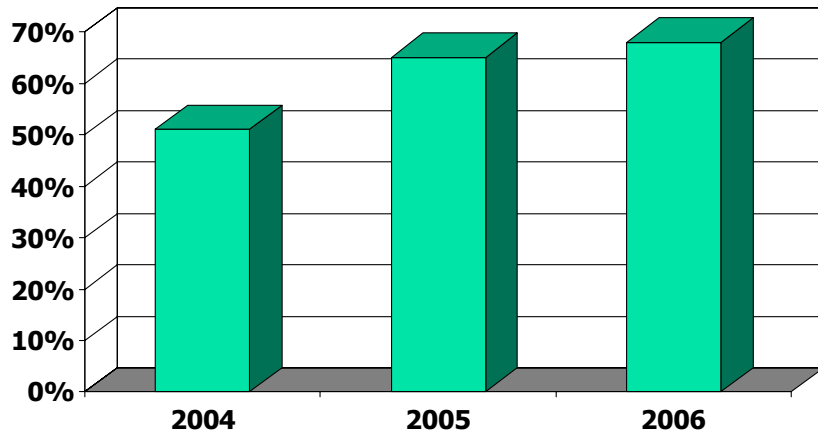


- Increased exposure of program at state and national levels
 - Program highlighted on American Water Works website in August 2005
 - Hosted Water Conservation forum for customer cities featuring nationally recognized conservation authority, Amy Vickers in August 2005
 - Hosted statewide forum on Water Conservation in January 2006

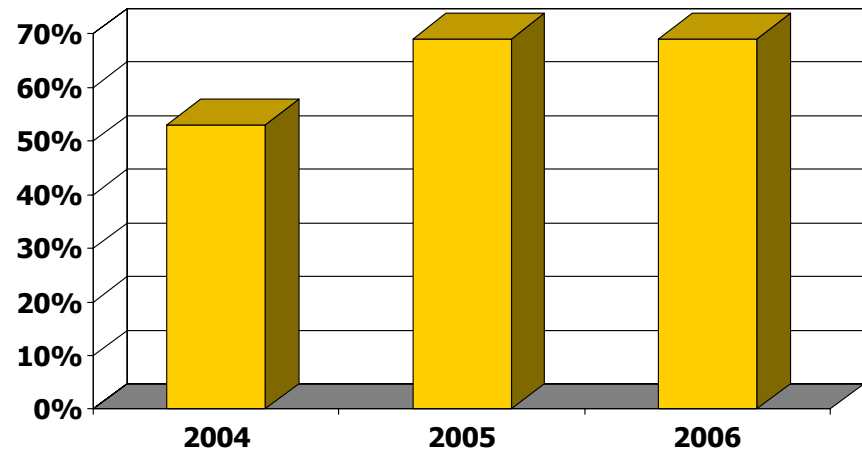
Enhanced Education & Outreach

Public Education Strategies

- 2006 Public Awareness Campaign Highlights
 - Momentum remains high



***Citizen Recall of Advertising About Water Conservation Ordinance**



***Self Reported Change in Behavior After Exposure to Advertising**

*Source: Random survey conducted by Hill Research Consultants

Enhanced Education & Outreach

Public Education Strategies continued



**Too Good to
Throw Away**

**Demasiado
Bueno Para
Tirar**

- Developed Environmental Educational Initiative (EEI) in collaboration with Department of Sanitation
 - Hamline University and University of North Texas hired to assist staff in program development and administration
 - Over 1,300 children participated in program in 2006
 - Details on page 66

Enhanced Education & Outreach

Public Education Strategies continued

- EEI program augments city's relationship with Dallas and Richardson ISDs
 - Water Conservation component of program to receive *Water Mark Award for Communications Excellence in April 2007



RICHARDSON ISD



*Water Mark Award issued by Texas American Water Works Association & Water Environment Association of Texas

Enhanced Education & Outreach

Public Education Strategies continued

- Other School Activities
 - “Dew” elected as water conservation mascot by local school children
 - Mascot program received Water Mark Award in April 2006





Enhanced Education & Outreach Grass Roots Efforts

- Annual Water-wise Garden Tour (formerly Xeriscape Tour) held June 2006
 - An estimated 1,480 citizens participated
 - 2 Customer Cities participated as Tour headquarters
 - Addison
 - Duncanville
 - 2 Customer Cities' demonstration gardens featured on tour
 - Desoto
 - Coppell



Enhanced Education & Outreach

Grass Roots Efforts continued

- Semi-annual Water-wise Seminars
 - Held March 11 and September 9, 2006
 - An estimated 475 citizens attended
- In FY 05-06 staff attended 34 trade fairs and special events reaching an estimated 5,960 residents
- In FY 05-06 staff conducted 27 speaking engagements reaching an estimated 20,413 customers



Rebates & Incentives Residential Strategies

- Phase I
 - Launched Minor Repair Fixture Replacement Program (formerly VIP)
 - Program designed to serve low income and elderly customers
 - 834 fixtures installed or replaced
 - 116 leaks repaired
 - 454 households served
 - 335 toilets replaced
 - 286 faucets repaired/replaced
 - 203 showerheads replaced
 - 10 water heaters replaced
 - **An estimated 3.1 MG saved annually**



FY 06-07 Planned Activities



City Leadership & Commitment

Landscape Irrigation Maintenance & Design and Indoor Plumbing/Fixture Replacements

- Continue landscape audit program
 - 3 additional designs planned in 2007
- Continue and expand plumbing fixture replacements
- Current Progress
 - 24 new facilities selected and scheduled for audits
 - Details on page 67
 - Landscape architect developing design plans for May installation
- Development code review related to water conservation

City Leadership & Commitment

Local, Regional & State Support

- Support and encourage state and regional water conservation education campaigns
 - Currently in negotiations with Tarrant Regional Water District to license "Save Water" brand for use in their service area



City Leadership & Commitment

Local, Regional & State Support continued

- Water IQ Program
 - Introduced as Texas Water Development Board's Water Conservation Public Awareness campaign in 2005
 - Currently used by North Texas Regional Water District
 - Under consideration as option for state funded water conservation education campaign



City Leadership & Commitment

Local, Regional & State Support continued

- Promote *Water IQ as water education umbrella for all Dallas water issues
 - Water Shed Education
 - Water Quality
 - Grease Abatement
 - Storm Water Management
 - Use Dallas' "Save Water" brand under Water IQ umbrella in support of Texas Water Development Board public education program



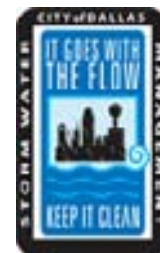
Water Quality



Grease Abatement



Water Conservation



Storm Water Management

Enhanced Education & Outreach

Public Education Strategies

- Expand EEI program to include grades 6-8
 - Increase participation in teacher training component of program
- Current Progress
 - Middle school program unveiled at press event on March 13, 2007





Enhanced Education & Outreach

Public Education Strategies continued

- Media campaign started earlier in 06/07
 - Media placements began in February 2007 due to drought and expanded time of day watering restrictions
 - Campaign historically begins June 1 each year
 - Campaign will end earlier (July 2007) due to increased spending to expand media buys
 - Agenda item to extend campaign and services contract with Burson-Marsteller scheduled for April 25th



Enhanced Education & Outreach

Grass Roots Outreach Strategies

- **Landscape Irrigation Audit Program**
 - Provide on-site consultation for ornamental horticulture and irrigation needs for single family and multi family Dallas water customers
 - Conduct site inspection to determine condition of each zone
 - Measure zones to determine precipitation rates, distribution and uniformity and determine estimate of irrigation efficiency
 - Provide detailed results of audit and recommendations
 - Estimated annual costs of \$101,512 (in current budget)
- **Current Progress**
 - Two internal positions for landscape auditors targeted to be filled by Summer 2007



Enhanced Education & Outreach Industrial, Commercial & Institutional (ICI) Educational Strategies

- Commercial Cooling Tower Audit Program
 - Purpose
 - Increase cooling tower efficiency
 - Reduce water consumption
 - Lower water/wastewater bills
 - Increase customer involvement in conservation
 - Process
 - Inspect cooling tower system
 - Inspect other equipment to improve water savings
 - Collect water samples
 - Complete lab analysis on samples collected
 - Provide findings and recommendations to customer
 - Estimated Costs & Water Savings
 - 2006/2007
 - \$22,860 for approximately 25 audits (in current budget)
 - SAWS estimated annual savings of 12.5 MG per audit
 - Current Progress
 - Three audits performed as of March 2007



Enhanced Education & Outreach

ICI Educational Strategies continued

- Expand outreach for ICI customers by developing and implementing a comprehensive water audit program using Austin and San Antonio models. For example:
 - Lawn conversion rebate programs
 - Rainwater harvesting/ condensate reuse
 - Commercial laundries rebate programs



Rebates & Incentives Residential Strategies

- Phase I (Implemented in Fall 2005)
 - Initiation of Minor Plumbing Repair Program for senior and low-income customers (formerly the VIP program)
 - Previously mentioned on slide 18
- Phase II (April 25th agenda item)
 - Toilet Voucher Program
 - Single and multi family customers
 - Qualified customers will redeem a voucher for up to \$90 of the cost of a low-flow toilet at identified retailers
 - Goal to distribute 4,253 toilets per year (21,265 toilets over five years)
 - Sample approved toilet list on page 68
 - Sample voucher on page 69



Rebates & Incentives

ICI Strategies

- Commercial Food Services Program (April 25th agenda item)
 - Provide free low-volume pre-rinse spray nozzle and faucet aerator installations to commercial food establishments including schools and hospitals
 - Goal to install 2,000 spray nozzles and 500 faucet aerators per year for first four years and 1,000 nozzles and 500 aerators for fifth year (9,000 nozzles and 2,500 aerators over five years)
 - Samples of existing pre-rinse spray nozzle programs on pages 70 and 71



Rebates & Incentives

Residential & ICI Programs

- Overview
 - Both programs adopted in Water Conservation Five-year Strategic Plan
 - Both programs recommended in Texas Water Development Board's Best Management Practices Guide for Water Conservation
 - Both programs to be administered by outside contractor
 - Estimated water savings for both programs at end of five years is 600MG per year



Rebates & Incentives

Residential & ICI Programs continued

- Toilet Voucher Program
 - Customer will have choice of pre-approved toilets
 - Customer will be responsible for installation
 - Customer will be responsible for any costs that exceed face amount of voucher
- Commercial Food Services Program
 - Supplies, installation and training will be provided to customer

Rebates & Incentives

Residential & ICI Programs

Customer Qualifications

■ Toilet Voucher Program

- Customer of DWU
- Residence must have been built before 1992
- Will not replace existing low flow toilets
- SF residence can receive maximum of two toilets
- Owners/managers of multifamily residential units may apply for up to 200 toilets per year

■ Commercial Food Services Program

- Food service providers that are DWU customers
- Established for two years or more and do not have existing high efficiency spray nozzles
- Focus on establishments that use tableware



Rebates & Incentives

Residential & ICI Programs

Contractor Services

- Request for Proposals

- Bids submitted by:

- WaterWise Consulting, Inc. – Pasadena, CA
 - Proposal for Toilet Voucher Program
- SBW Consulting, Inc. – Bellevue, WA
 - Proposal for Commercial Food Services Program
- Niagara Conservation – Cedar Knolls, NJ
 - Proposal for both Toilet Voucher and Commercial Food Services Program

Contractors Bid to perform these tasks

| Contractor Responsibility | Toilet Voucher Program | Commercial Food Services Program |
|--|-------------------------------|---|
| Develop Database | ✓ | ✓ |
| Create Marketing/Outreach Strategy | ✓ | ✓ |
| Establish Relationship with Retailers | ✓ | N/A |
| Issue Voucher that customer can redeem | ✓ | N/A |
| Maintain bilingual customer service call center | ✓ | ✓ |
| Make appointments with customer through call center and field canvassing | N/A | ✓ |
| Install fixtures | N/A | ✓ |
| Train facility staff on proper use of nozzle | N/A | ✓ |
| Audit facility for additional water saving opportunities | N/A | ✓ |
| Conduct quality control inspections | ✓ * | ✓ |
| Respond to customer complaints by phone/site visit | ✓ | ✓ |
| Monthly and annual reports including program overview, production report, program funding, accomplishments | ✓ | ✓ |

*City staff will handle this process

Rebates & Incentives

Residential & ICI Programs

Contractor Selection

- Niagara offered the best proposal including the lowest price for both programs
 - Established in 1977 to manufacture products that save natural resources
 - Provide audits, installation services and program management services to water and electric utility industry
 - Have 20+ years of experience administering conservation programs
 - Recommend two-year contracts with three optional one-year renewal terms
 - Client list on page 72



Toilet Voucher Program Costs

| | Unit | Annual | 5 year |
|---------------|----------|-----------|-------------|
| Program Admin | \$39.50 | \$168,000 | \$840,000 |
| Voucher Cost | \$90.00 | \$382,770 | \$1,913,850 |
| <hr/> | | | |
| Total | \$129.00 | \$550,770 | \$2,753,850 |



Commercial Food Services Program Costs

| | Unit | Annual | 5 year |
|----------------|----------|-----------|-------------|
| Spray Nozzle | \$145.00 | \$290,000 | \$1,305,000 |
| Faucet Aerator | \$.50 | \$250 | \$1,250 |
| <hr/> | | | |
| Total | \$145.50 | \$290,250 | \$1,306,250 |

Cost includes administration, installation and materials.



Agenda Items Scheduled for April 25th

- One agenda item for three actions
 - Toilet Voucher Program
 - Services Contract for program administration
 - Authorize vouchers for toilet replacements
 - Commercial Food Services Program
 - Services Contract for program administration, installation and training
- Agenda item to extend media campaign and services contract



Summary

- Water Conservation program plays an integral role in city's long range water supply strategy
 - For example: Development code review related to water conservation
- Conservation strategies have helped to reduce GPCD and peak demand since 2001
 - 34BG saved since 2001
- **Conservation efforts are not a "quick fix"**
 - **We use long-term trends to project long-term savings and water supply needs**
- Seeking council support for agenda items for furtherance of conservation efforts



Next Steps

- Recommend approval of April 25th agenda items
 - Toilet vouchers, program administration, pre-rinse spray nozzle program
 - Niagara Conservation
 - Contract extension for advertising campaign
 - Burson-Marsteller



APPENDIX



Council Actions Taken To Address Need for Aggressive Water Conservation (2001-2006)

- 2001
 - Amended Water Ordinance to include mandatory watering requirements
 - Added conservation tier to rate structure to encourage water conservation
- 2002
 - Authorized public relations firm to help develop and implement aggressive multi-media public education campaign
- 2004
 - Approved hiring of technical consultant to help develop five-year strategic plan on water conservation
 - Authorized the implementation of a temporary rain/freeze sensor rebate program
- 2005
 - Adopted updates to 1999 Water Conservation & Drought Contingency Plans
 - Adopted Five-year Strategic Plan on Water Conservation
 - Authorized a thirty-six month contract with Burson-Marsteller for continuance of Public Awareness campaign



Council Actions Taken To Address Need for Water Conservation continued

■ 2006

- Authorized minor plumbing repair and fixture replacement program for low-income and senior citizens
- Authorized contract to hire educational consultant
- Amended Water Ordinance to prohibit watering from April 1 through October 31
 - Formerly, watering prohibited from June 1 through September 30
- Authorized an extension of Stage 1 of Drought Contingency Plan

Authorized Program Spending

- 2002-2003
 - \$2.2M
- 2003-2004
 - \$2.2M
- 2004-2005
 - \$2.4M
- 2005-2006
 - \$2.4M
- 2006-2007
 - \$3.7M



DOES GPCD REPORTING BY TEXAS WATER DEVELOPMENT BOARD ACCURATELY REFLECT PER-PERSON WATER USAGE?

The Texas Water Development Board (TWDB) is the state's lead water planning and financing agency and is responsible for preparing and adopting the state water plan. The state water plan is updated regularly (every five years) to reflect and respond to changes in population, water availability, technological improvements, information, and policy.¹ The goal of the water plan is to ensure adequate water supplies to meet the future demands of a rapidly growing population.

The population of Texas is booming. The latest population projections predict the number of people residing in Texas to more than double between the years 2000 and 2060, growing from about 21 million to nearly 46 million within that time span.² TWDB predicts water demands to increase by 27 percent from almost 17 million acre-feet in 2000 to 21.6 million-acre feet in 2060.³

To meet customer demands, the state water plan identifies key water management strategies to increase water supply or maximize existing supply. Primary strategies include water conservation (municipal and agricultural), new reservoir construction, more groundwater wells, a dramatic increase in water reuse, and desalination plants, among others. The state is divided into 16 planning regions. Each region is charged with assessing its water needs and developing measures that will stretch existing supplies and reduce water use.

Part of the water planning process requires measurement of existing water use, and projection of future use. One way to measure water use is gallons per capita per day (gpcd). Total per capita water use is defined as the total amount of water diverted and/or pumped for potable use divided by the total population.⁴ Residential gpcd is defined as single-family plus multi-family consumption divided by the total population.⁵ TWDB uses the gpcd method to establish conservation goals, which include a minimum annual reduction of one percent in total gpcd, based on a five-year rolling average, until total gpcd of 140 or less is met.

Application of the gpcd methodology is intended to establish water-use benchmarks for tracking purposes and to evaluate the effectiveness of conservation measures once they are implemented.⁶ The gpcd is not designed as a way to judge which cities are conserving water, rather it's a tool for cities to use in measuring and tracking their own consumption over time.

In calculating total per capita water use, TWDB combines residential, commercial (restaurants/retail establishments) and institutional users (hospitals, schools, airports), as well as process-related and system water losses.⁷ There is a wide range of per capita water use among all of the municipal water users in the state. For instance, communities with relatively high concentrations of commercial and institutional activity may have higher per capita use estimates in contrast to areas with less commercial activity and

institutional water users.⁸ A variety of other factors may also influence per capita use, including climate, population and building density and regional economic conditions.

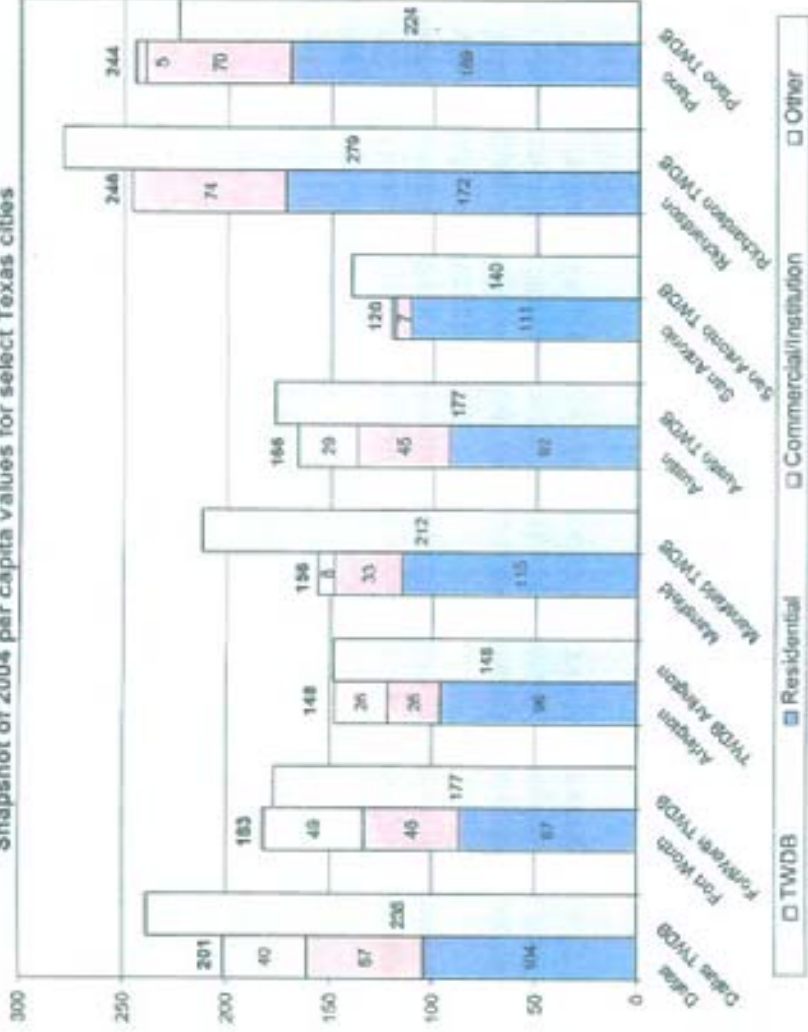
The development of a standardized methodology for reporting and using per-capita water use data would minimize the potential for inappropriate comparisons among regions and municipal water-supply providers.⁹ However, there are still a number of variations in how water consumption is accounted for by water utilities that could lead to differences in gpcd values reported by municipalities and TWDB. For example, TWDB does not include a city's water sales to retail customers who live outside of the city limits in its gpcd calculations, while a water utility may base its gpcd estimates on water sales to all of its retail customers (residential, manufacturing, and wholesale), regardless of whether they are within the city limits or not.¹⁰ Other differences may be attributed to how water use is categorized or accounted for within the utility itself. Unfortunately, many people do not realize the various reasons that contribute to differences in water use and why per capita water use of one city may be higher or lower than that of another.¹¹

One of the regional planning areas covering North Central Texas, known as Region C, has received criticism for its excessive water use when compared to other regions of the state. Region C encompasses 16 counties in the Upper Trinity Watershed. Major water suppliers within the planning area include Tarrant Regional Water District (TRWD), North Texas Municipal Water District (NTMWD) and Dallas Water Utilities (DWU). TRWD serves an estimated 1.6 million; NTMWD has a service population of 1.5 million; and DWU has a customer base of 2.3 million, including wholesale. Together they serve more than 90 percent of an estimated population of 5.8 million or close to one-quarter of the state's total population.

Criticism of water use in Region C is based on municipal gpcd totals reported by TWDB, which reflect higher rates of per capita consumption among North Texas cities than those of some other cities across the state. The chart below represents an effort to compare gpcd values provided by some select cities across Texas. It is a snapshot of per capita use in 2004, which is the latest year of statewide gpcd values as reported by TWDB. There are two columns for each city – the first is a breakdown of gpcd values provided by each city for residential (single and multi-family residences), commercial/institutional, with all other water uses (city irrigation, water loss, etc.) categorized as "other." Industrial use is not included in order to compare municipal gpcd with the TWDB estimates for 2004 shown in the second column. Data for the City of Richardson does not include water losses.

(See chart on following page)

Snapshot of 2004 per capita values for select Texas cities



Here are some of the highlights illustrated by the chart:

- Residential use within most of the select cities is similar. It should be noted that multi-family residential water use in Mansfield is classified as commercial. However, residential water use, especially in Dallas and Fort Worth, falls right in line with that of San Antonio and Austin, two of the state leaders in implementing community-based water conservation initiatives.
- Admittedly, there are some cities within the region that are reporting high gpcd values, but as was stated earlier a good portion of that water use volume can be attributed to a relatively high commercial and institutional customer base. Commercial consumption in Dallas, Richardson, Plano and Austin is similar and represents approximately 28 to 30 percent of all water use within each city. In contrast, commercial water use in San Antonio represents less than 6 percent of its total municipal water use. In addition, Plano reports a commuter influx during the work week of more than 100,000 workers per day; Richardson’s daily population increases by one-third as 30,000 people enter the city to work; and Dallas’ daytime population jumps by more than 225,000.
- Although TWDB does a good job of estimating municipal gpcd, there are cases in which it overestimates municipal water use when compared to city values. For instance, in 2004 TWDB reported gpcd figures for Dallas and Mansfield at 238 and 212, respectively. The actual gpcd totals calculated by each city (excluding industrial use) were 201 and 156 – a difference of 37 gpcd for Dallas and 56 gpcd for Mansfield.

- Much of the criticism received by Region C was directed at its lack of conservation efforts. However, that is changing and each water supplier is making strides towards increasing public awareness about good water use habits and promoting proactive measures to curb water waste. Some of the important developments include:
- Implementation of time-of-day outdoor watering restrictions among major cities, including Dallas, Fort Worth and Arlington.
 - TRWD launched an aggressive public outreach campaign as the regulations took effect in Fort Worth and Arlington. TRWD officials reported an 11 percent reduction in projected water demands while the restrictions were in effect during the summer of 2006.
 - NTMWD was the first agency in Texas to initiate the Water IQ water awareness and media campaign, at a cost of two million dollars per year. The campaign is scheduled to run through 2008.
 - DWU has spent millions to date in its highly touted and successful “Save Dallas Water” campaign. The campaign is producing results, illustrated by a decline in Dallas water use from a high of 262 gpcd in FY1998 to an average of 205 gpcd from FY2004-06.
 - Indirect and/or direct reuse are now a major part of future water supply plans for Region C. TRWD has taken a lead role in water reuse and will soon start recycling downstream flows in the Trinity River through a wetland project and back into one of its reservoirs to supplement drinking water supplies; NTMWD is creating a similar wetland water reuse project on the East Fork of the Trinity River scheduled for completion in 2008; DWU has also incorporated a significant amount of reuse (direct and indirect) into its future water supply plans. These indirect-reuse diversion volumes will be credited against total diversion volumes for the purpose of calculating gpcd for targets and goals.¹²
 - The entire region has embraced Texas Smartscape principles, which encourage homeowners and developers to choose native and adapted plants for their landscapes, which require less water and maintenance.

Water providers in North Texas understand that there is more to be done when it comes to water conservation – and more will be done. Efforts are underway to regionalize the conservation effort and to unify the messages delivered to the public. Dallas-Fort Worth is the largest metropolitan area in Texas and the fifth largest in the United States. The metroplex has one of the highest concentrations of corporate headquarters in the nation and is the largest base for the information technology industry in the state. The future of the North Texas economy depends on a reliable, plentiful supply of clean water for use in homes and businesses. And as decision-makers and policy leaders we have the responsibility to make the right choices to ensure that we’re using our water resources efficiently to meet the needs of future generations.

References:

- (1) Texas Water Development Board (TWDB): *Water for Texas 2007, Volume 1*, p. 3, Austin, November 2006.
- (2) Texas Water Development Board (TWDB): *Water for Texas 2007, Volume 1*, p. 4, Austin, November 2006.
- (3) Texas Water Development Board (TWDB): *Water for Texas 2007, Volume 2*, p. 121, Austin, November 2006.
- (4) Texas Water Development Board (TWDB): *Water Conservation Implementation Task Force Report to the 79th Legislature*, p. 31, November 2004.
- (5) Texas Water Development Board (TWDB): *Water Conservation Implementation Task Force Report to the 79th Legislature*, p. 31, November 2004.
- (6) Texas Water Development Board (TWDB): *Water Conservation Implementation Task Force Report to the 79th Legislature*, p. 31, November 2004.
- (7) Texas Water Development Board (TWDB), [Online], Available URL: <http://www.twdb.state.tx.us/data/popwaterdemand/2003Projections/HistoricalWaterUse/faq.htm>, Accessed December 2006.
- (8) Texas Water Development Board (TWDB), [Online], Available URL: <http://www.twdb.state.tx.us/data/popwaterdemand/2003Projections/HistoricalWaterUse/faq.htm>, Accessed December 2006.
- (9) Texas Water Development Board (TWDB): *Water Conservation Implementation Task Force Report to the 79th Legislature*, p. 31, November 2004.
- (10) Texas Water Development Board (TWDB), [Online], Available URL: <http://www.twdb.state.tx.us/data/popwaterdemand/2003Projections/HistoricalWaterUse/faq.htm>, Accessed December 2006.
- (11) Texas Water Development Board (TWDB): *Water for Texas 2007, Volume 2*, p. 126, Austin, November 2006.
- (12) Texas Water Development Board (TWDB): *Water Conservation Implementation Task Force Report to the 79th Legislature*, p. 31, November 2004.

Municipal Contacts:

City of Dallas:

Brett Wilkinson
Director, Intergovernmental Services
214-670-5797
brett.wilkinson@dallascityhall.com

City of Fort Worth:

Mary Gugliuzza,
Public Education Coordinator, Fort Worth Water Department
817-392-8253
mary.gugliuzza@fortworthgov.org

City of Arlington:

Travis Andrews
Assistant Director, Arlington Water Utilities
817-459-6601
andrewst@ci.arlington.tx.us

City of Mansfield:

Bud Ervin
Director, Mansfield Utility Operations
817-477-2248
bud.ervin@ci.mansfield.tx.us

City of Austin:

Michael Castillo
Financial Manager, Austin Water Utility
512-972-0332
michael.castillo@ci.austin.tx.us

City of San Antonio:

Brian Tegeler
Corporate Initiatives – Benchmarking, San Antonio Water System
210-233-3497
brian.tegeler@saws.org

City of Richardson:

Jerry Ortega
Director of Public Services
972-744-4220
jerry.ortega@cor.gov

City of Plano:

Jimmy Foster
Director of Public Works
972-769-4128
jimmyf@plano.gov

Additional Contacts:

Tarrant Regional Water District:

Linda Christie
Director of Community and Government Relations
817-335-2491
lchristie@trwd.com

North Texas Municipal Water Dist.: Denise Hickey

Public Relations Coordinator
972-442-5405
dhickey@ntmwd.com

Table of GPCD values as reported by select Texas Cities including residential, commercial/institutional, and industrial estimates.

| 2004 GPCD values for select Texas Cities | | | | | | | | | |
|--|--------|------------|-----------|-----------|--------|-------------|------------|-------|--|
| | Dallas | Fort Worth | Arlington | Mansfield | Austin | San Antonio | Richardson | Plano | |
| Residential – single family | 60.4 | | | | 59.7 | 109.6 | | | |
| Residential – multi-family | 43.8 | | | | 31.9 | 1.3 | | | |
| Residential - Total | 104.2 | 87.4 | 96.1 | 114.8 | 91.6 | 110.9 | 172.0 | 169.0 | |
| Commercial / institutional | 56.6 | 46.0 | 25.7 | 33.3 | 45.0 | 6.7 | 74.0 | 70.0 | |
| Other | 39.8 | 49.3 | 26.1 | 8.2 | 29.0 | 1.8 | | 5.0 | |
| Industrial | 12.3 | 16.1 | 5.3 | 11.8 | 10.4 | 0.1 | 0.0 | 0.0 | |
| Total | 212.9 | 198.8 | 153.1 | 168.1 | 176.0 | 119.5 | 246.0 | 244.0 | |

Dallas Water Utilities City Leadership and Commitment Initiative
EBS Indoor Plumbing Facility Upgrades

For facilities listed and fixtures identified with flow amounts greater than recommended, fixtures being replaced include:

- 46 Toilets**
- 14 Urinals**
- 27 Faucets**
- 52 Showerheads**

Estimated cost for these upgrades is \$10,200 for labor and \$11,200 for materials.

| Facility Name | Total Toilets | Toilets >1.6 gpf | Total Urinals | Urinals >1.0 gpf | Total Faucets | Faucets >2.0 gpm | Total Showerheads | Showerheads >2.5 gpm |
|----------------------------|---------------|------------------|---------------|------------------|---------------|------------------|-------------------|----------------------|
| MLK Community Center | 47 | 23 | 14 | 6 | 53 | 0 | 2 | 2 |
| Skyline Library | 5 | 0 | 1 | 0 | 4 | 2 | 0 | 0 |
| Dallas Central Library | 73 | 0 | 21 | 0 | 78 | 0 | 7 | 7 |
| SE Police Operations | 12 | 0 | 5 | 0 | 13 | 0 | 6 | 6 |
| Fire Station No. 10 | 3 | 3 | 0 | 0 | 4 | 0 | 2 | 2 |
| Fire Station No. 18 | 7 | 0 | 2 | 0 | 8 | 7 | 5 | 5 |
| Fire Station No. 28 | 5 | 0 | 2 | 0 | 7 | 0 | 2 | 2 |
| Fire Station No. 30 | 3 | 0 | 2 | 0 | 5 | 0 | 3 | 3 |
| Dallas City Hall | 78 | 21 | 27 | 8 | 61 | 0 | 0 | 0 |
| Walnut Hill Rec Center | 14 | 0 | 4 | 0 | 9 | 5 | 2 | 2 |
| Thurgood Marshall Rec Cntr | 7 | 0 | 4 | 0 | 10 | 10 | 2 | 0 |
| Marcus Rec Center | 7 | 0 | 2 | 0 | 8 | 0 | 2 | 2 |
| Dallas Theater Center | 25 | 0 | 7 | 0 | 18 | 0 | 6 | 6 |
| Stores Warehouse | 9 | 0 | 2 | 0 | 7 | 0 | 2 | 2 |
| NE Water Building | 12 | 0 | 10 | 0 | 16 | 1 | 7 | 7 |
| A.G.Strauss Family Gateway | 4 | 0 | 1 | 0 | 4 | 0 | 6 | 6 |
| M.H.Meyerson Symphony | 134 | 0 | 45 | 0 | 140 | 2 | 0 | 0 |
| Dallas Museum of Arts | 51 | 2 | 14 | 0 | 30 | 0 | 0 | 0 |
| Total | 496 | 46 | 163 | 14 | 475 | 27 | 54 | 52 |

Water Conservation Program EBS Proposed Work Schedule

| | Sept. 2006 | Oct. 2006 | Nov. 2006 | Dec. 2006 | Jan. 2006 | Feb. 2006 | Mar. 2006 |
|--|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Fire Stations 10,18, 28, 30 (completed 10-3-06) | → | | | | | | |
| Police : Southeast, (completed 9-26-06) | → | | | | | | |
| Libraries : (completed 12-22-06) Skyline, Lakewood, Central | | → | | | | | |
| Park Dept. - Dallas Zoo | | | | → | | | |
| Recreation Centers: Marcus, M.L.K., Craft, Walnut Hill, T.Marshall, Jaycee Zaragosa | → | | | | | | |
| CBD; (completed 01-01-07) OCMC, City Hall, Family Gateway, | | | → | | | | |
| OCA; (In-progress) Meyerson, Mus. Nat. History, Dallas Theater ctr, D.M.A. | | | → | | | | |
| Water Dept. (completed 10-12-06) Stores Warehouse, N.E. Water Bldg., | | → | | | | | |
| Dallas Convention Center (Undergoing LEEDS certification that includes plumbing upgrades). | | | | | | | |



Dallas Environmental Education Initiative

City of Dallas

2005/2006 Scheduling Calendar

Grade Level Statistics

| Grade | Number of Lessons | Number of Students | Water Lessons | Recycling Lessons |
|---------------|-------------------|--------------------|---------------|-------------------|
| Kindergarten | 12 | 261 | 10 | 2 |
| First Grade | 20 | 388 | 11 | 9 |
| Second Grade | 13 | 348 | 5 | 8 |
| Third Grade | 2 | 27 | 2 | 0 |
| Fourth Grade | 11 | 192 | 5 | 6 |
| Fifth Grade | 6 | 165 | 3 | 3 |
| Totals | 64 | 1381 | 36 | 28 |

**Water Conservation City Leadership Initiative
Indoor Plumbing Audits
Year Two**

Proposed Facilities:

| | |
|---|-----------------------------------|
| Executive Airport | 5303 Challenger |
| Love Field | 8008 Cedar Springs Houston St. |
| Union Station | 3111 Dawson Rd |
| Central Garage | 2828 Fish Trap Rd |
| West Dallas Multipurpose Center | 5000 Dolphin Rd |
| Fire Training Admin Bldg | 9365 Garland Rd |
| Fire Station Number 31 | 4901 S. Hampton Rd |
| Fire Station Number 49 | 6238 Bonnie View Rd |
| Fire Station Number 54 | 10355 Ferguson Rd |
| Casa View Library | 6990 Beltline Rd |
| Fretz Park Library | 6102 Mountain Creek Pkwy |
| Mountain Creek Library | 7151 Library Ln |
| Polk Wisdom Library | 6400 Frankford Rd |
| Renner-Frankford Library | 3112 Canton |
| Central Headquarters | 1620 First Ave |
| Science Place 2/Planetarium | 1318 Second Ave |
| Science Place 1/Omni | 8525 Garland Rd |
| Trammel Crow Visitor Education Pavilion | 950 E. Lawther Dr |
| Winfrey Point Club | 8740 Elam Rd |
| Park and Recreation Service Center | 2750 Bachman |
| Bachman Recreation Center | 16600 Park Hill Dr |
| Campbell Green Recreation Center | 8701 Greenmound Ave |
| Pleasant Oak Recreation Center | 1909 Crouch |
| Singing Hills Recreation Center | |

Additional Facilities may be added as budget permits.

Approved Toilet Sample List

| Make | Model | Model Number (B = Bowl, T = Tank) | Map Flush Performance (HIGHER IS BETTER) |
|-------------------|--|---|--|
| American Standard | Cadet 3 | 3011 B 4021 T | 1000 |
| American Standard | Cadet | 2333: 3099/B, 4098/T | 750 |
| American Standard | Cadet 3 RF (10" rough-in) | 2384.010: 3011/B, 4019/T | 1000 |
| American Standard | Cadet 3 EL (12" rough-in) | 2383.012: 3014/B, 4021/T (unlined) | 1000 |
| American Standard | Cadet 3 RF (14" rough-in) | 2384.014: 3011/B, 4027/T | 1000 |
| American Standard | Cadet 3 EL (14" rough-in) | 2384.014: 3014/B, 4027/T | 1000 |
| American Standard | Cadet 3 EL (10" rough-in) | 2384.010: 3014/B, 4019/T | 800 |
| American Standard | Cadet 3 RF (12" rough-in) | 2384.012: 3011/B, 4021/T | 1000 |
| American Standard | Cadet 3 Right Height RF (12" rough-in) | 2386.012: 3016/B, 4021/T (unlined) | 1000 |
| American Standard | Cadet 3 Right Height EL (14" rough-in) | 2386.014: 3016/B, 4027/T | 1000 |
| American Standard | Cadet 3 Right Height EL (10" rough-in) | 2386.010: 3011/B, 4019/T | 800 |
| American Standard | Cadet 3 RF (12" rough-in) | 3011/B, 4021.500/T (lined) | 1000 |
| American Standard | Cadet 3 EL (12" rough-in) | 3014/B, 4021.500/T (lined) | 800 |
| American Standard | Cadet 3 Right Height EL (12" rough-in) | 3016/B, 4021.500/T (lined) | 1000 |
| American Standard | Champion Right Height | 2002: 3225/B, 4260/T | 1000* |
| American Standard | Champion Round Front | 2023: 3110/B, 4260/T | 800 |
| American Standard | Skyline Champion RF | 3110/B, 4077/T | 1,000* |
| American Standard | Skyline Champion EL | 3225/B, 4077/T | 1,000* |
| Eljen | Titan | 091-0777: 131-0777/B, 141-0777/T | 900 |
| Jacuzzi | Perfecta | Kil: 211146 BN31959/B, BN30-BN31/T | 350 |
| Kohler | Cimarron Comfort Height | K-3489 | 800 |
| Kohler | Bancroft Comfort Height | K-3487: 4281/B, 4633/T | 800 |
| Kohler | Cimarron | K-3496: 4286-0/B, 4634-0/T | 800 |
| Kohler | Cimarron | K11465 (PB TTG) | 600 |
| Kohler | Memoirs | K-3451 (Classic tank lid) | 800 |
| Kohler | Memoirs | K-3453 (Stately tank lid) | 800 |
| Kohler | Santa Rosa | K-3323 | 500 |
| Kohler | Wellworth | 4277/B, 4620/T | 300 |

TOILET MUST MATCH MODEL NUMBERS EXACTLY * Tested 1,000 or better



Orange County Utilities Water Division
Ultra-Low-Flow Toilet Replacement Voucher Program
 9150 Curry Ford Road, Orlando, Florida 32825
 Telephone: 407-254-9843 • 407-254-9850

TOILET VOUCHER

Participant: _____

Location: _____

Area Code/Telephone No.: _____

TIME-SENSITIVE MATERIAL

Application No.: _____

Voucher No.: _____

Expiration Date: _____

Post-Verification Deadline: _____

I understand that by signing this voucher, I assume full responsibility for the new toilet. I understand that any damage that occurs, such as dropping the toilet or over-tightening the floor and tank bolts is my responsibility and that I furthermore understand that the voucher funds are for porcelain only and not to be used toward Florida Sales Tax or other materials needed, and that I am responsible to pay the cost differential of the toilet to the vendor the applicable sales tax, the cost of other materials and any installation cost incurred by using a licensed plumber.

Owner's Signature _____

Printed Owner's Name _____

Date _____

To be Completed by Vendor:

Person Picking Up Toilet: _____

Photo I.D.: _____

Voucher Value: _____

Toilet Make and Model: _____

Customer Cost: _____

Circle Fixtures / Type:

Elongated Round ADA

Toilet Cost: _____

Flapperless

GPF:

1.6

1.28

1.1

Dual Flush

(Vendor must attach receipt to voucher)

RETAILERS: Use only approved list, don't mix & match fixtures and bowls.
 Only acceptable variance is color difference

To be Completed by the Inspector:

I have verified that the replacement toilet meets the Orange County Utilities Ultra-Low-Flow Toilet Replacement Voucher Incentive Program criteria. I also verified the customer's identity by requesting and examining a picture I.D.

Signature _____

Printed Name _____

Date _____

Voucher is not to exceed: \$100 maximum for 1.6 gpf toilet or \$150 maximum for approved High Efficiency Toilet. See attached list of approved toilets. This voucher is not valid unless the appropriate seal embossment can be felt and seen.

(seal)

TOWARD THE PURCHASE OF ONE TOILET (TANKS AND FLUSH) ONLY



[Free CCWD Conservation Programs](#)

[Commercial Water Use Survey](#)

[Visit Our Demo Garden](#)

[Landscape Videos](#)

[Speakers' Bureau](#)

[Helpful Links](#)



Restaurant Owners!

Let CCWD help your restaurant save up to \$1,000 per year in energy and water costs.

CCWD, in conjunction with a California Public Utility Commission grant, is offering FREE Pre-rinse spray valves and FREE installation for restaurants

These spray nozzles have a high velocity spray pattern, which increases their ability to remove food from dishes.

The devices use 1.6 gallons per minute compared to the standard nozzles which use up to 6 gpm. The solid bronze handle won't soften, bend or break. The solid brass fitting means there is no 'O' ring to break.

Program Summary

The program is administered by a Honeywell Demand Management Company through December of 2006.

Call the number below and a representative will schedule a time to visit your site and install a free nozzle. It's as simple as that!

Call today: (800) 423-9896 or visit the [California Urban Water Conservation Council Web Site](#).



IN THIS SECTION:

Main

Certified WaterSaver
Restaurants

HOME | CONSERVATION | COMMERCIAL | RESTAURANTS | MAIN



Restaurant Certified WaterSaver Program

Stop rinsing money down the drain with FREE water-saving upgrades

Is your restaurant rinsing money down the drain?

Retrofitting your business with water-conserving products can lower your operating costs, as well as helping conserve one of San Antonio's most precious natural resources...water. As a Certified WaterSaver, your restaurant will notice measurable cost savings, as well as enhanced performance.

Three simple requirements:

- All pre-rinse spray valves must be 1.6 gallons per minute.
- All toilets must be 1.6 gallons per flush.
- All ice machines must be air-cooled.

If you require upgrades in order to become a Certified WaterSaver and want to realize measurable savings NOW, we are offering these benefits **AT NO CHARGE TO YOU!** Enroll now, start saving today!

Certified WaterSaver Program Benefits:

- As a Certified WaterSaver, your restaurant will gain **FREE PUBLICITY** for its efforts in water conservation
- **FREE Pre-Rinse Kitchen Spray Valve & FREE INSTALLATION**
High velocity spray pattern increases performance and efficiency over older, inefficient models. The new stainless steel valve uses less hot water - only 1.6 gallons of water per minute, compared to 2 - 6 gallons per minute with standard valves and comes with a five-year warranty. **Water and waste-water savings estimated at 100 - 300 gallons of HOT water per day.**
- **FREE Ultra-Low Flow Toilets & FREE INSTALLATION**
If you still have old toilets, using 3.5 to 7 gallons of water per flush, you are wasting as much as 80 gallons of water per toilet, per day! Replace your water-guzzling toilets with 1.6 gallon toilets and save on water and sewage costs. **Water savings estimated at 80 gallons of water per toilet, per day.**
- **UPGRADE to an air-cooled ICE MACHINE and receive a REBATE of up to 50% of the purchase cost**
Water-cooled ice machines use nearly 150 gallons of condenser water to produce 100 pounds of ice, plus 20 gallons of water to make the ice. Air-cooled ice machines use only the 20 gallons necessary to make 100 pounds of ice. **Water savings estimated at 150 gallons per every 100 pounds of ice produced daily.**



Download and Send Us Your Application:

Restaurant Certified WaterSaver Program Application [147 KB](#)
Adobe Acrobat PDF

Complete the simple application and send it to:

SAWS Conservation Certified WaterSaver Restaurant Program
P. O. Box 2449,



Niagara Conservation Corp. Client List

Water Utilities

City of Austin
San Antonio Water System
City of El Paso
Los Angeles Department of Water and Power
New York City DEP
City of Sacramento
San Francisco Public Utilities Commission
American Water
United Water*
Miami-Dade Water & Sewer
City of Tampa
Orange County Utilities Water Division*
Golden State Water*
City of Toronto*

Energy Utilities

PSE&G*
Duke Energy*
Tennessee Valley Authority (TVA)*
Baltimore Gas & Electric*
Reliant Energy
TXU
Energy
CLECO
Florida Power and Light
Progress Energy
Alagasco
CenterPoint Energy*
PacifiCorp

State/Provincial Governments

State of Colorado*
State of Kansas
North Carolina Cooperative Extension
State of Illinois
State of Indiana
Province of Nova Scotia, Canada

National Governments

Kingdom of Saudi Arabia*

*Niagara Conservation provides program administration for these utilities.

Water Conservation Strategies Recommended by TWDB

| Item | Water Conservation Strategy Recommended by TWDB | Dallas | San Antonio |
|------|--|--------|-------------|
| 1 | System Water Audit and Water Loss (Water System) | ✓ | ✓ |
| 2 | Water Conservation Pricing | ✓ | ✓ |
| 3 | Water Waste Prohibition (Ordinances) | ✓ | ✓ |
| 4 | Public Information Programs | ✓ | ✓ |
| | - Landscape Design Seminars | | |
| | - Water Wise Household Use | | |
| | - Demonstration Gardens | | |
| | - Brochures for Distribution at Community Events | | |
| | - Advertisements/Service Announcements/Websites | | |
| 5 | School Education | ✓ | ✓ |
| | - Teacher Training | | |
| | - Programs on Wise Water Use, Retrofitting, and Native Vegetation | | |
| | - Visiting Speakers | | |
| | - ET Controller [Rebate Program] | | |
| | - Irrigation Clock (digital multi-program controller) [Rebate Program] | | |
| 6 | Showerhead Aerator Plumbing and Toilet Flappers Retrofit | ✓ | ✓ |
| 7 | Residential Toilet (water efficient) Replacement Programs [Rebate Program] | ✓ | ✓ |
| 8 | Residential Clothes Washer [Rebate Program] | ✓* | ✓ |
| 9 | Hot Water On Demand | | ✓ |
| 10 | Residential Swimming Pools (ordinances and covers) | | ✓ |
| 11 | Landscape Irrigation Systems Conservation Programs and Incentives | ✓* | ✓ |
| | - Ordinance for Licensed Installer of New Irrigation Systems | | |
| | - Rain Sensors (or Rain/Freeze) [Rebate Program] | | |
| | - ET Controller [Rebate Program] | | |
| | - Irrigation Clock (digital multi-program controller) [Rebate Program] | | |
| 12 | Water Wise Landscape Design and Conversion Programs | ✓ | ✓ |
| | - Native/Drought Tolerant Vegetation [Seminars and Public Education] | | |
| | - Xeriscape Landscape demonstration sites | | |
| | - Lawn Conversion to Drought Tolerant Vegetation [Rebate Program] | | |
| | - Ordinance for New Construction to have Conservation Design | | |
| 13 | Athletic Field Conservation | | ✓ |
| 14 | Golf Course Conservation | | ✓ |
| 15 | Water Reuse | ✓ | ✓ |
| 16 | Rainwater Harvesting/Condensate Reuse | | ✓ |
| 17 | Rain Barrels | | ✓ |
| 18 | Park Conservation (Parks and Greenbelts) | ✓ | ✓ |
| 19 | Industrial Water Audit and Water Loss | ✓* | ✓ |
| 20 | Industrial Water Waste Reduction | | ✓ |
| 21 | Industrial Landscape | | ✓ |
| 22 | Cleaning/Sanitization (ex. car washes) | | ✓ |
| 23 | Rinsing/Cleaning (ex. Commercial Kitchens) | ✓* | ✓ |
| 24 | Commercial Laundries and Laundromats | ✓* | ✓ |
| 25 | Water Fountains (prohibitions or water efficient systems) | | ✓ |
| 26 | Cooling Towers | ✓* | ✓ |
| 27 | Cooling Systems (other than Cooling Towers) | | ✓ |
| 28 | Industrial Alternative Sources and Reuse of Process Water | | ✓ |
| 29 | Industrial Water Treatment | | ✓ |
| 30 | Boiler and Steam Systems | | ✓ |
| 31 | Refrigeration (including Chilled Water) | | ✓ |
| 32 | Once Through Cooling (Prohibition on Single-Pass Water Use) | | ✓ |

* Proposed in Five Year Strategic Plan

