Water Conservation Program FY 06-07 Activities

Quality of Life Committee

April 9, 2007

SAVE WATER
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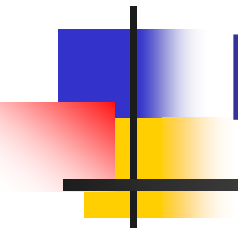
Dallas Water Utilities

ECONOMIC DEVELOPMENT
ED
NATURAL RESOURCES

Briefing Purpose

- Provide water conservation program update
  - Highlight 2006 activities
  - Highlight 2007 planned activities



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

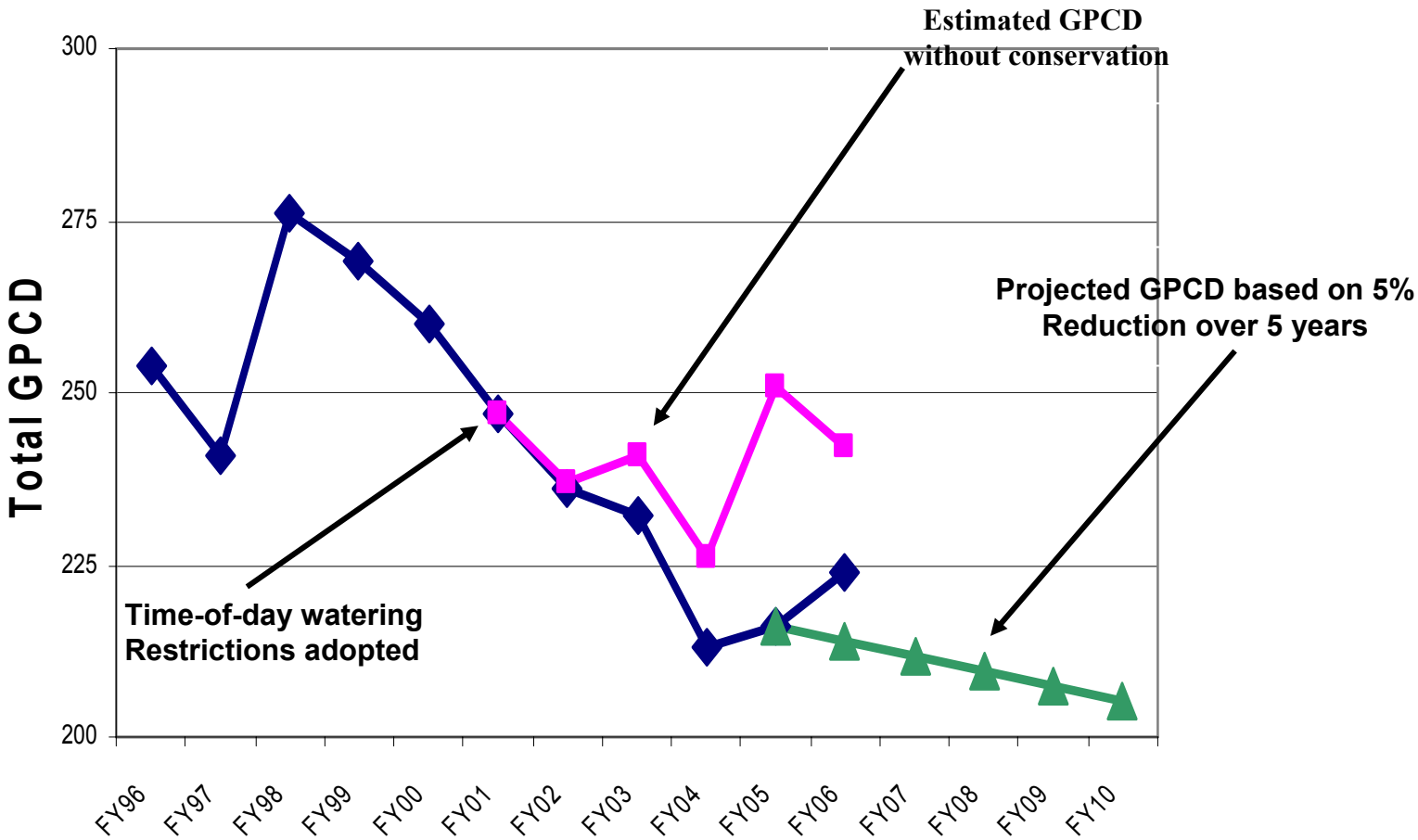
- City Leadership & Commitment
  - "Lead by example" by reducing the amount of water consumed by City operations
- Enhanced Education & Outreach
  - Impact customer attitudes and behaviors through public education efforts
- Rebate & Incentive Programs
  - Motivate customers to replace and/or retrofit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

How Success is Measured

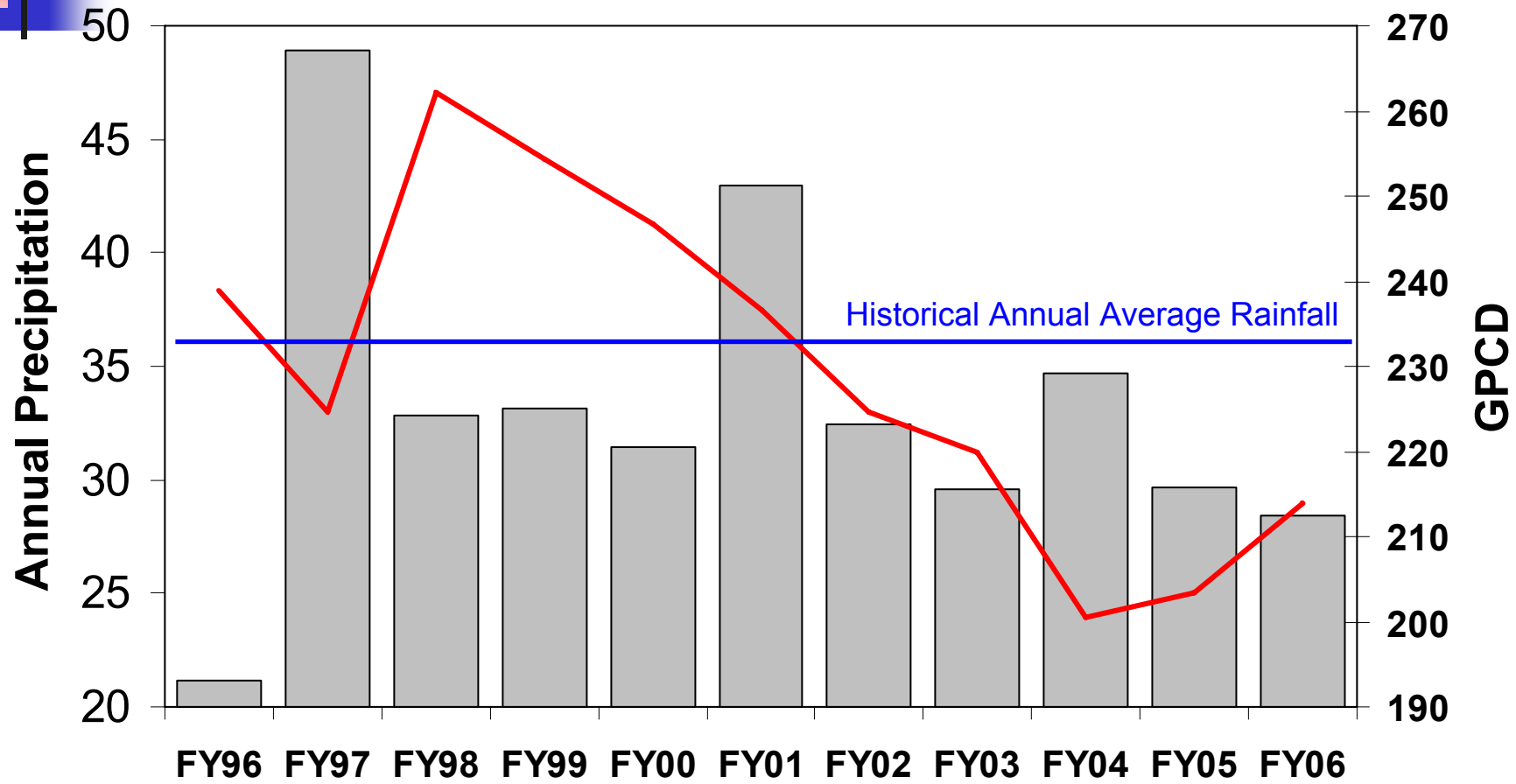
- Total gallons saved based on system-wide measures and direct programs and services
- Gallons per capita (GPCD) trends compared to annual rainfall
- Positive changes in public attitudes and behaviors based on annual surveys

How We're Doing

Gallons Per Capita Trends



City of Dallas
Consumption (GPCD) vs Annual Precipitation



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)

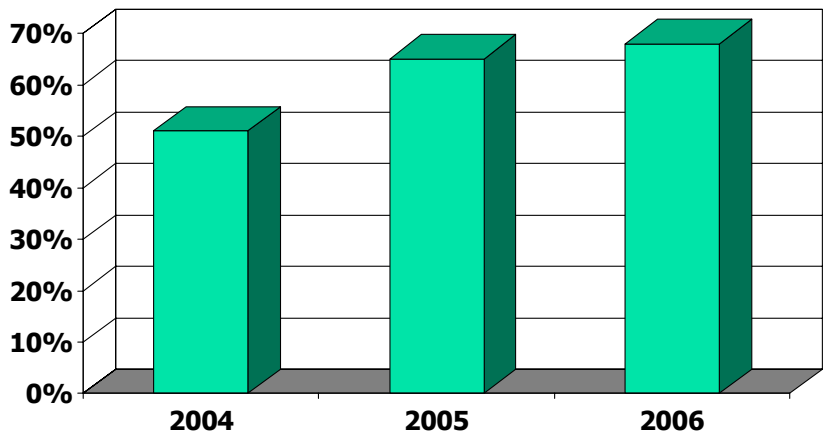
City Leadership & Commitment
Indoor Plumbing/Fixture Replacement Strategies

- 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 A-1 and A-2

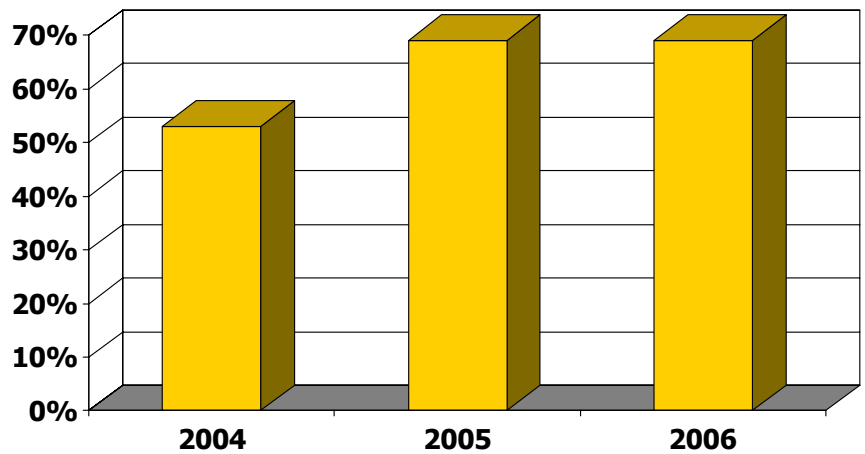
Enhanced Education & Outreach

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

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HAY QUE AHORRAR AGUA
¡NADA PUEDE REEMPLAZARLA!℠
Servicio de Agua y Saneamiento de Dallas

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 A-3

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

*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

Rebates & Incentives Single/Multi Family 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 A-4
  - Landscape architect developing design plans for May installation

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
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 completed as of March 2007

Enhanced Education & Outreach
ICI Educational Strategies

- 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 A-5
      - Sample voucher on page A-6

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 A-7 and A-8

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 1995
  - 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 A-9

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
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
Total	$145.50	$290,250	$1,306,250

Cost includes administration, installation and materials.

Agenda Item Scheduled for April 25th

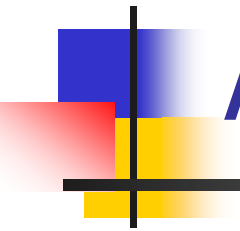
- One agenda item for three actions
  - Toilet Voucher Program
    - Services Contract for program administration
    - Authorize vouchers for toilet replacements
  - Commercial Food Services Program
    - Services Contract for program administration, installation and training

Summary

- Water Conservation program plays an integral role in city's long range water supply strategy
- 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 committee input and support for agenda items for furtherance of conservation efforts

Next Steps

- Receive committee feedback
- Council briefing scheduled for April 18th
- Council action scheduled for April 25th



APPENDIX