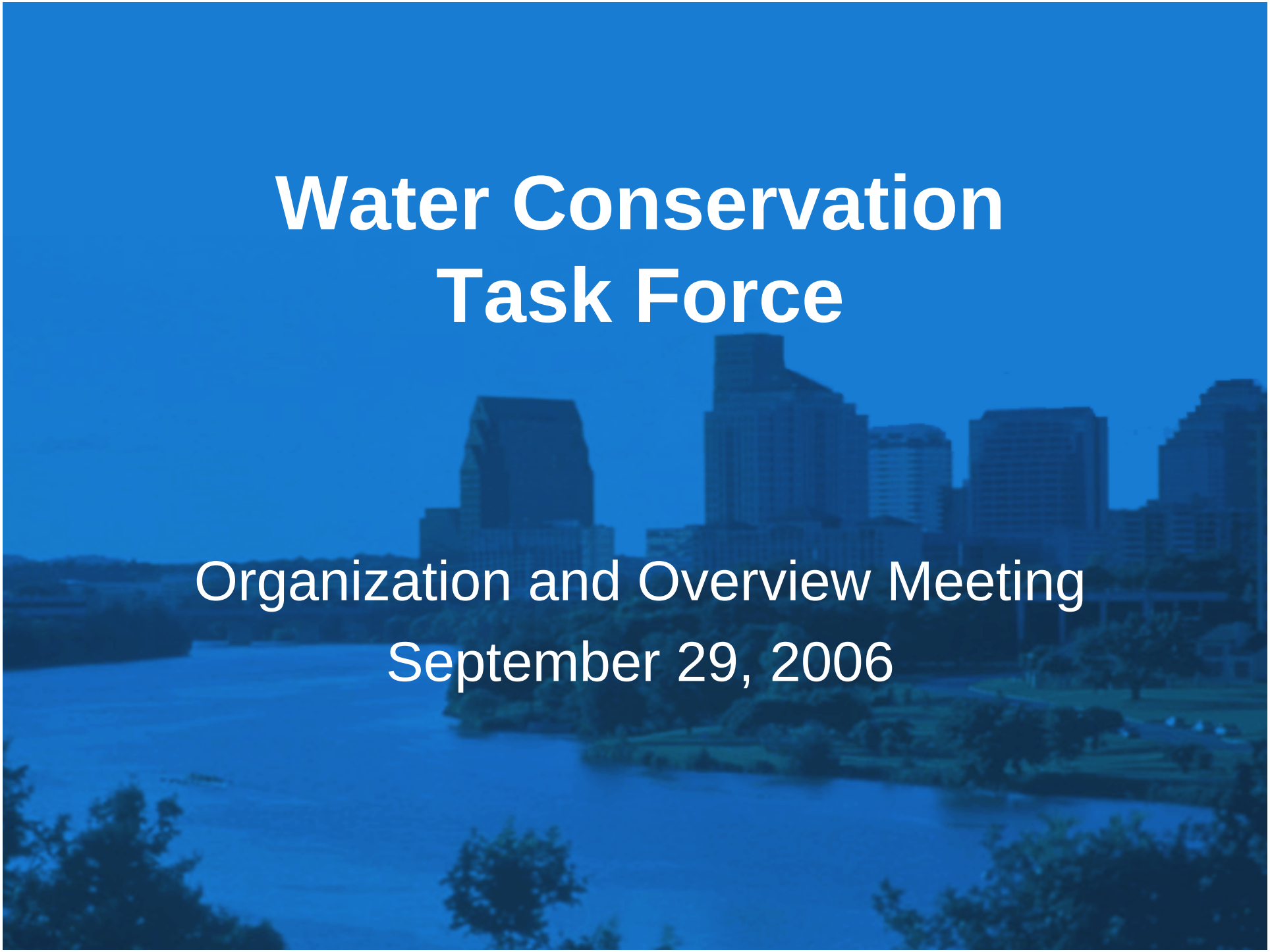

Water Conservation Task Force

Organization and Overview Meeting

September 29, 2006

Process Background

2005-2006

- Water Resources Planning Study, Phase I
  - Alan Plummer Associates Inc. (APAI)

June 22, 2006

- City Council Resolution
  - Reduce projected peak-day demand by 1% per year for 10 years

August 24, 2006

- Council Approved Water Conservation Implementation Task Force

Austin WATER CONSERVATION

Task Force Goals

- Find means to reduce the growth in peak day demand by 1% per year for 10 years beginning in 2007 ~25 MGD
- Produce a policy document for Council consideration and formal adoption
- Policy document will outline strategies to be adopted, implementation details, and will serve as the guideline for drafting necessary amendments to the city code and technical manuals and for budgetary considerations

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Water Supply

- Austin's current water supply comes from surface water (Colorado River)
- Austin has its own run-of-river water rights backed up by a firm water supply contract with LCRA for 325,000 acre-ft./year
  - 1 acre-ft is 325,860 gallons
- Projected to be a 40 to 50 year water supply (current municipal use approx. 158,000 AF/yr)
- Annual LCRA water payments are triggered at 201,000 acre-ft./year

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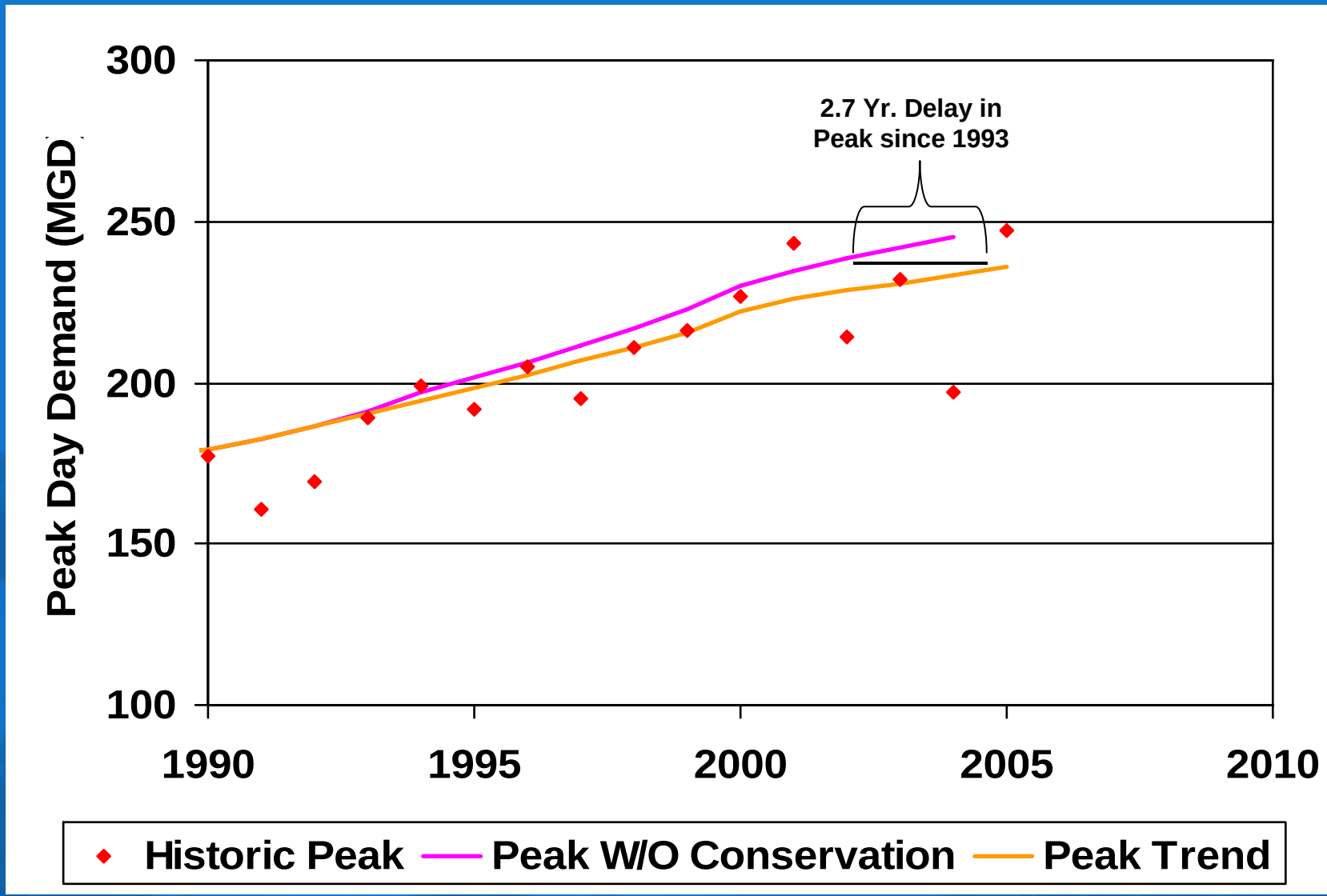
Historic Peak Demands



Water Supply, cont.

- Peak day water use is the day of highest use, normally occurring between July 1 and September 30
- Water treatment capacity is designed to meet peak day water use
- Reducing the increase in peak day demand will delay the need for additional water treatment plant capacity
- Conservation strategies will extend supply and delay reaching the LCRA payment trigger

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Current Conservation Programs

- Toilet replacement programs (rebates and distribution)
- Clothes washer rebates
- Showerhead distribution
- Irrigation system audits
- Irrigation system rebates
- Water-wise landscape rebates
- Soil depth initiative

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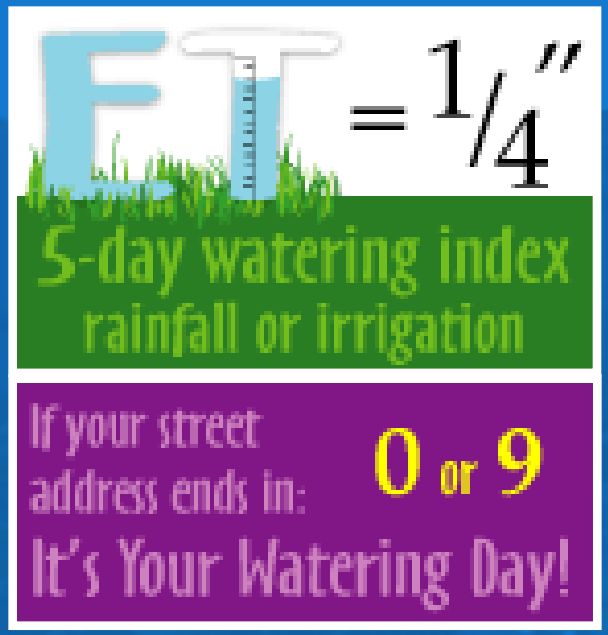
Current Programs, cont.

- Rainwater harvesting and rain barrel programs (rebates and incentives)
- Evapo-Transpiration program
- ET audit program
- Dental/medical dry vacuum rebates
- Special commercial incentives
- Water waste ordinance
- Municipal programs
- Conservation-oriented water rates
- Education Outreach



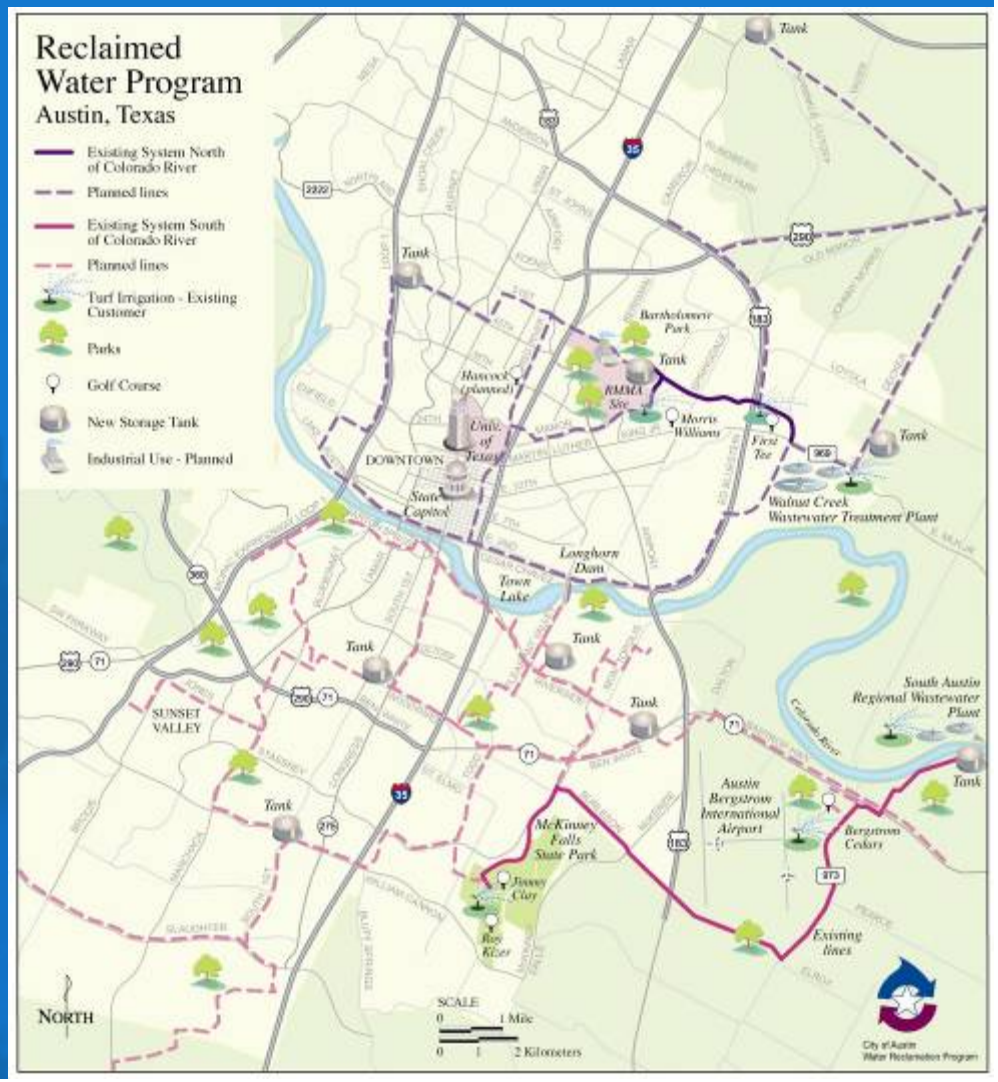
Austin WATER CONSERVATION

Water Savings Through 2005

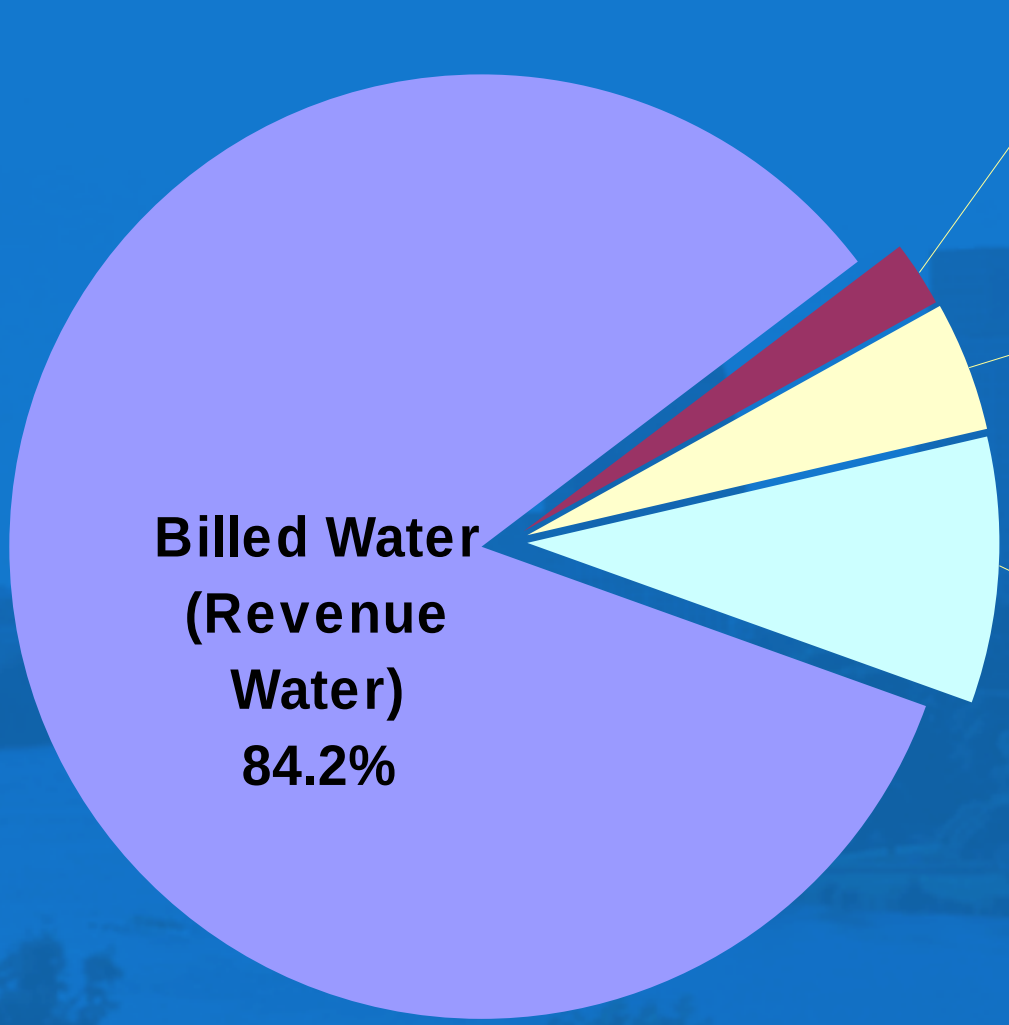
- 12.7 million GPD (peak)
  - Nearly 5% of utility-wide capacity
- 13,000 acre-feet per year reduction

Reclaimed Water Plan

- Initial master planning in 1992
- Irrigation and industrial uses city-wide
- Now using about 2 MGD
- By 2050: about 27 MGD



FY05 AWU Water Audit Results



AWWA Standard for Well-Run Utility <10% Real Loss

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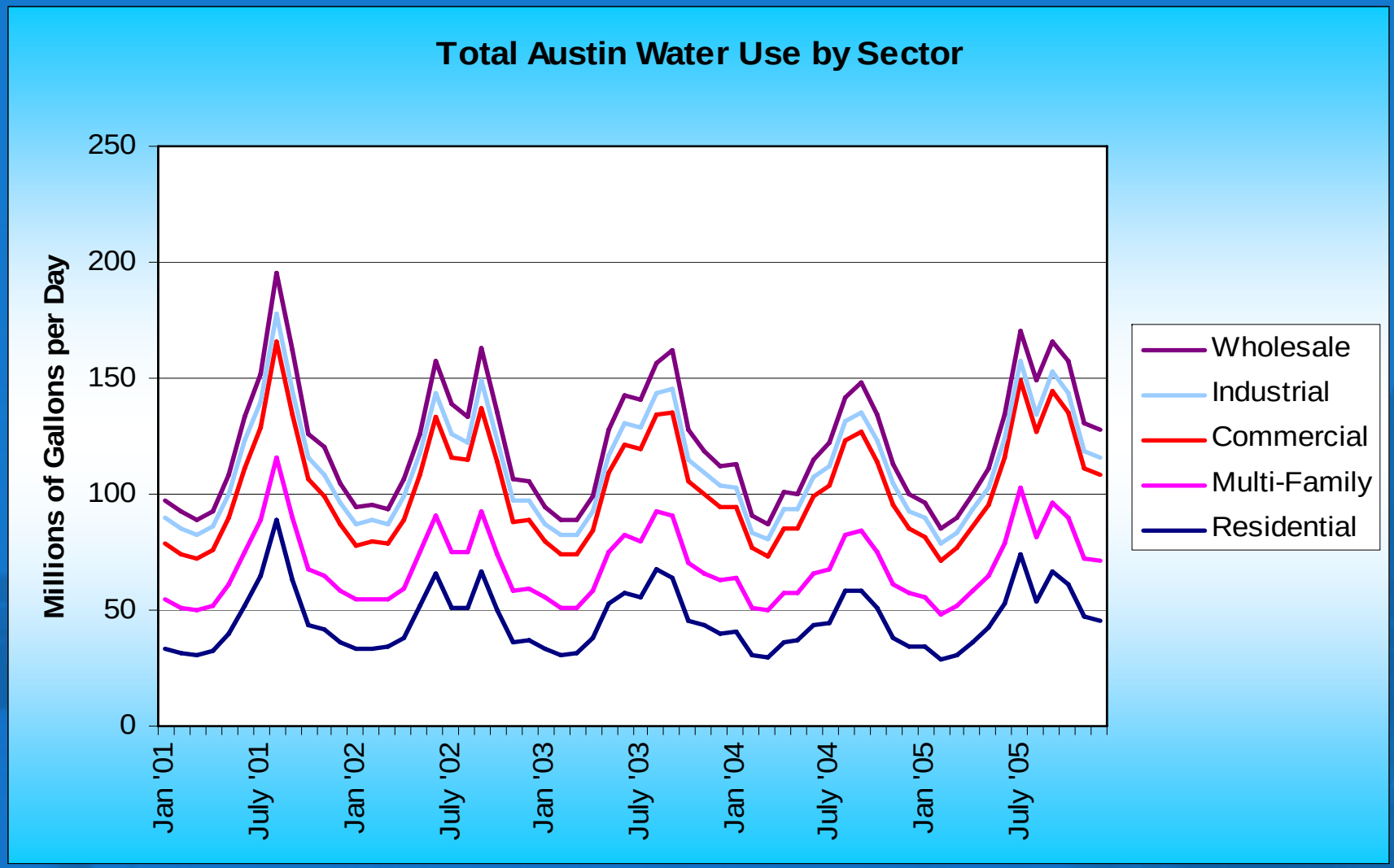

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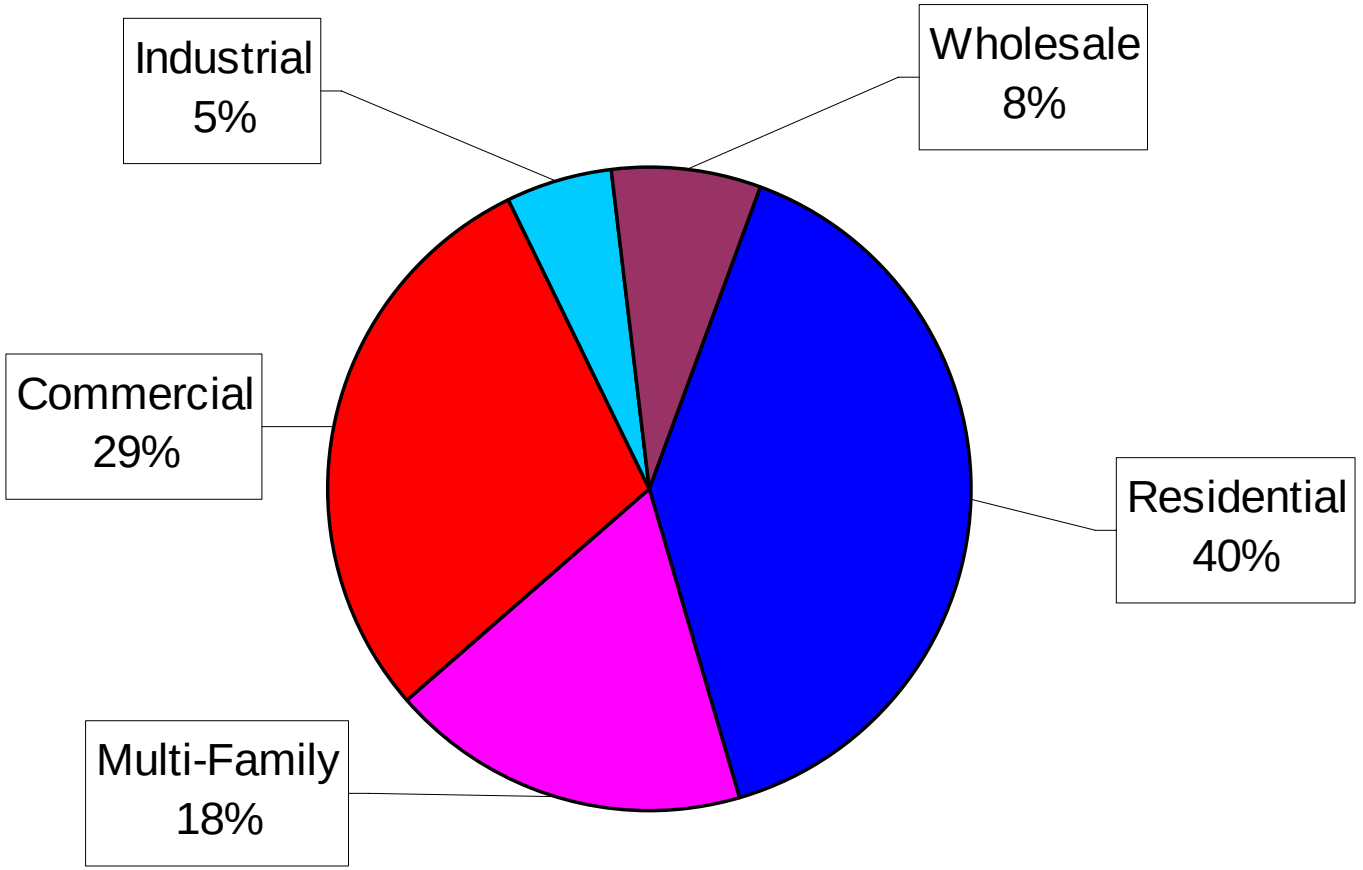
Typical Austin Summer Use



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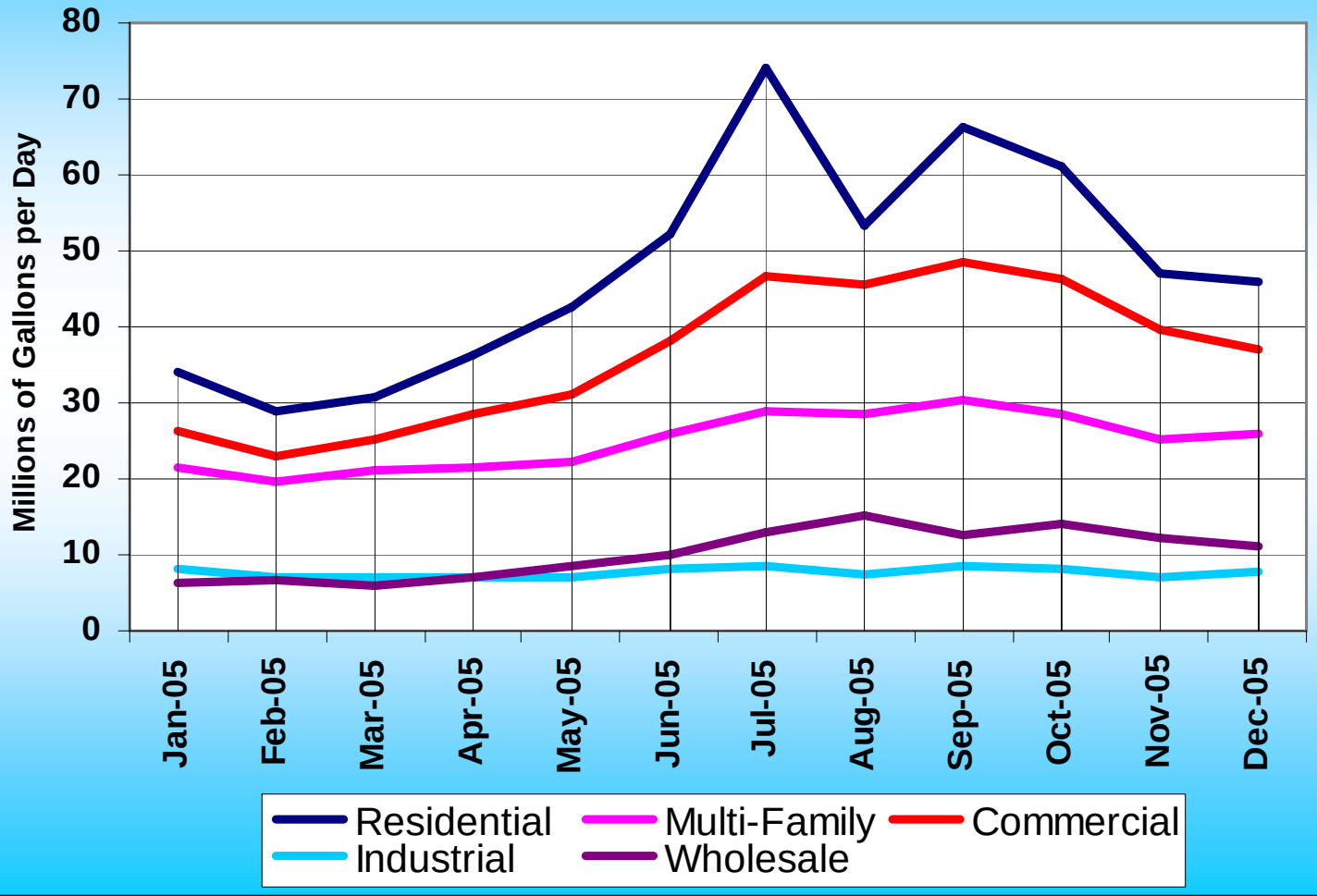
Austin Water Use in 2005



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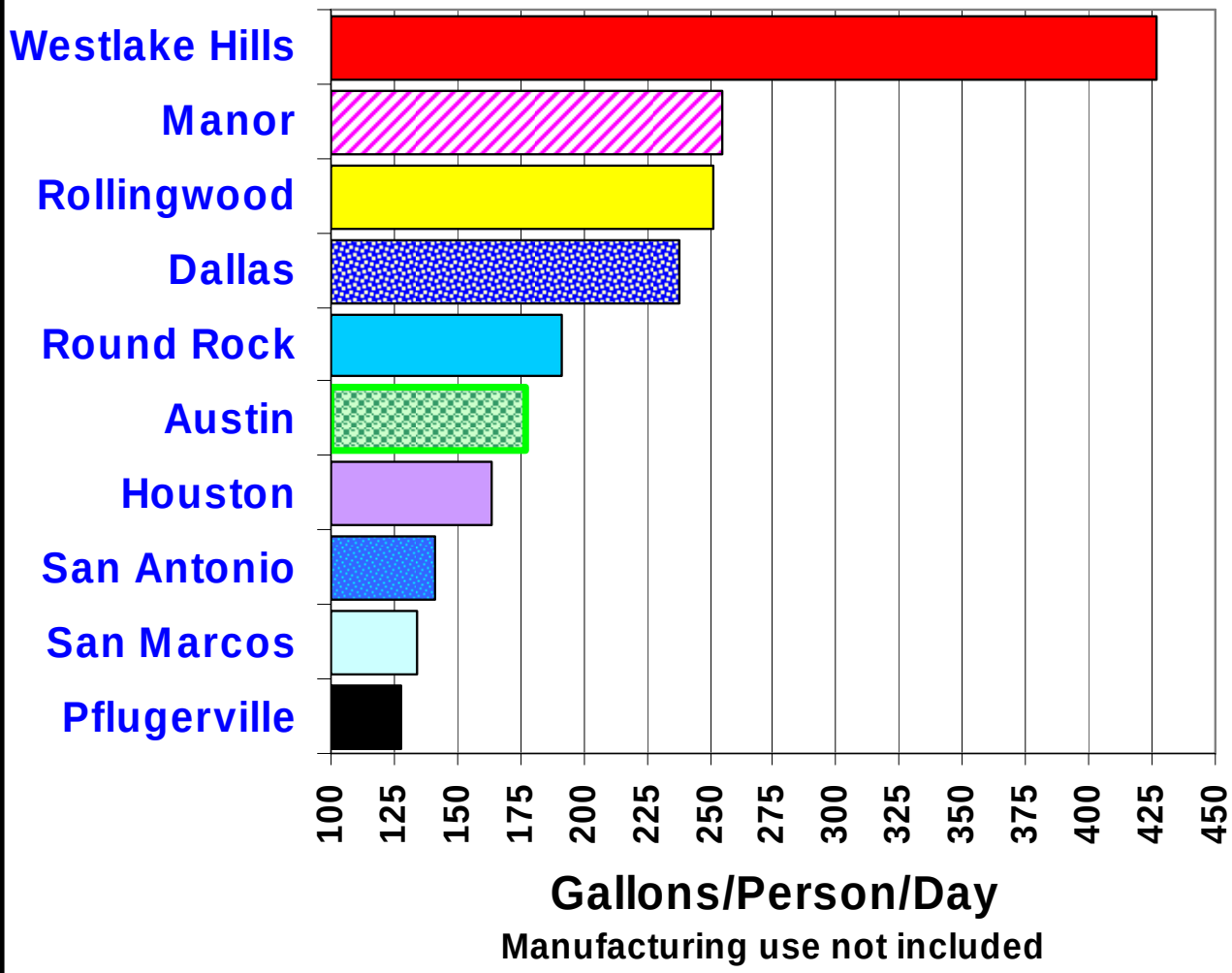
Average Per Capita Water Use

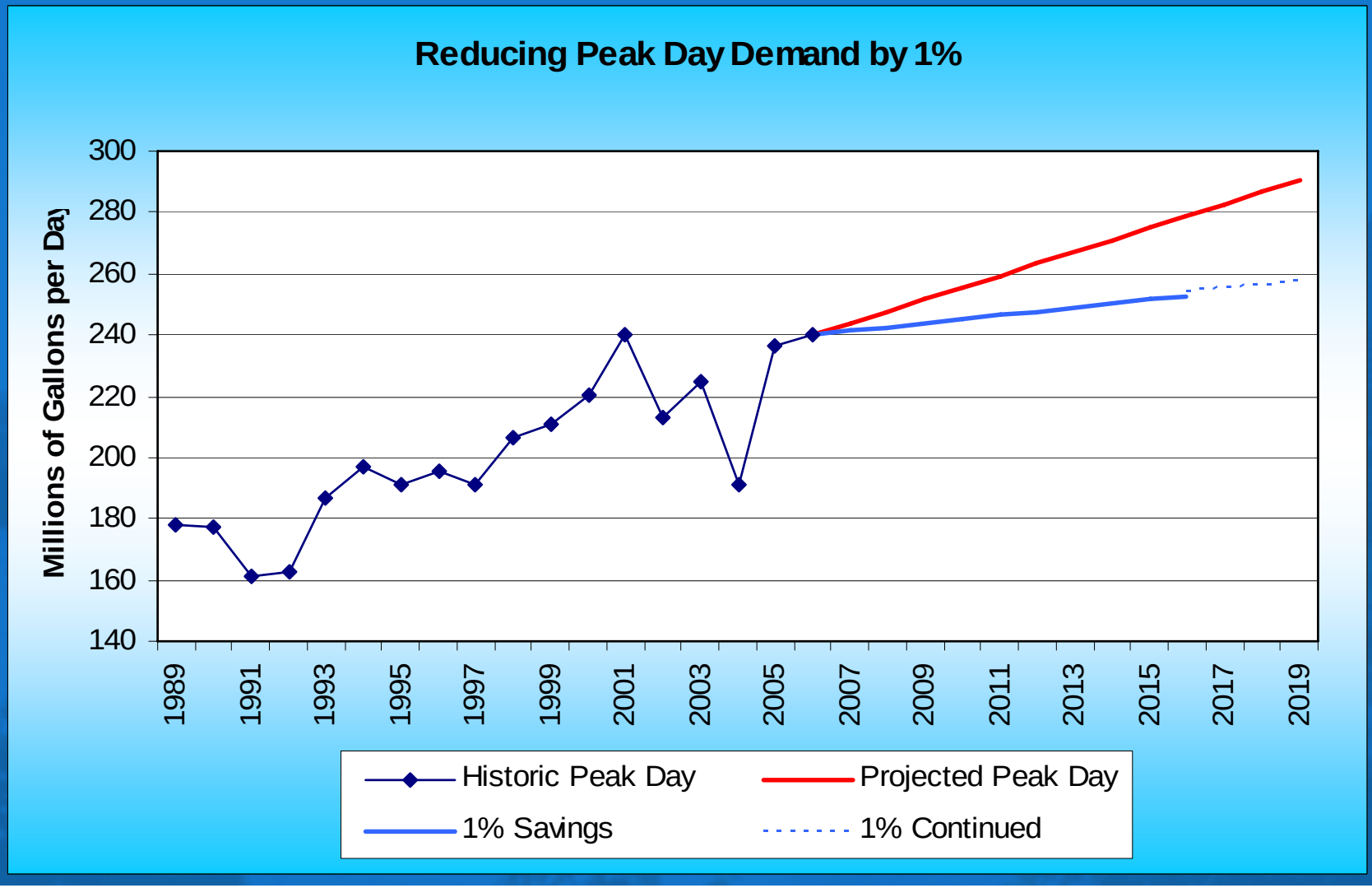
2003-2004 Based on TWDB Data



Manufacturing use not included

Peak-Day Demand Projections with Task Force Goal

1% (~2.5 MGD) Per Year Savings



Energy and Air Quality Impacts

- Reducing water consumption by 25 MGD would save 25 GWH/year
- Air Quality Impacts:

	SOX	NOX	Particulates	CO	CO2
Tons per year	76	58	6	8	25,797

- Equal to removing approximately 5,000 cars from the roads

Austin WATER CONSERVATION

Opportunities for Water Efficiency

- Irrigation and Landscape Practices That Need Attention
- Efficiency Issues for Plumbing Fixtures, Appliances and Equipment
- Issues in City Regulations and Codes that Impact Efficiency
- Reducing Utility Water Loss
- Alternative Water Sources
- Increasing Knowledge About Conservation Techniques and Practices

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Irrigation and Landscape Practices That Need Attention

- Improperly installed and maintained automatic irrigation systems
- Lack of knowledge or willingness to properly schedule irrigation
- Inadequate soil depth and quality in new construction
- Use of inappropriate grasses and plants for the Texas climate
- Many commercial customers water too frequently during summer months
- Many residential customers irrigate during the hottest part of the day
- More than 10% of irrigation water is wasted

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Efficiency Issues for Plumbing Fixtures, Appliances and Equipment

- Replacement of inefficient toilets could be accelerated
- Plumbing code does not require installation of the most efficient toilets, showerheads, faucets that are now available
- Automatic toilet/urinal flushing devices increase water use
- Cooling towers are frequently not properly managed
- More water efficient commercial kitchen, medical and dental equipment is available but not required

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Issues in City Regulations and Codes that Impact Efficiency

- Not all new apartments and condos are using installed submeters to bill tenants
- Condominium regulations allow installation of single family through fourplex units that are not individually metered by the City nor subject to the single family rate structure
- Wet ponds can require millions of gallons of potable water to survive the summer months
- Stormwater regulations are an obstacle to beneficially reusing storm water for irrigation
- Water rate structure does not provide adequate conservation price signals for all customers

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Reducing Utility Water Loss

- Water loss could be improved with substantial system benefits
- Customers are frustrated about the length of time to repair priority 3 leaks when they are being asked to conserve

Alternative Water Sources

- Additional funding needed for reclaimed water program
  - University of Texas eager to receive reclaimed water for cooling towers and irrigation
- Rainwater, stormwater, and groundwater could be captured on site and reused
- Onsite treatment and reuse of wastewater could be explored

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Increasing Knowledge About Conservation Techniques and Practices

- Challenging to keep customers' attention on water efficiency
- Many customers still lack awareness of the need and opportunities for water efficiency
- Efficient irrigation scheduling appears to be very difficult for many professionals and customers to understand

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Questions and Comments?