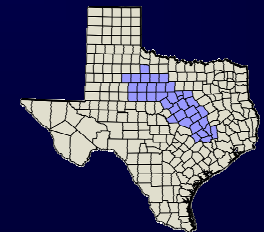


***Agenda Item 7.3
Draft Methodology for Considering
Municipal Conservation as Water
Management Strategy (Part 2)***

September 15, 2004

BRAZOS G
WATER PLANNING GROUP

HDR



Background

- ✓ **August 12, 2004 – Methodology for developing municipal water conservation strategies presented to BGRWPG**

- ✓ **Since August 12th –**
 - **Revised methodology based on new information from TWDB**
 - **Researched additional Best Management Practices (BMPs)**
 - ✓ **Included more extensive list of indoor and/or outdoor BMPs**
 - ✓ **Identified costs and water savings**

- ✓ **Today: Consider refined approach to consider municipal water conservation as water management strategy for water user groups (WUGs) with needs**

TWDB GPCD Projections (through Year 2060)

- ✓ **Current TWDB demand projections reflect 1991 State Water-Efficient Plumbing Act:**
 - **100% replacement by Year 2045 (at rate of 2% per year)**
 - **100% of new construction contains water-efficient plumbing fixtures**
- ✓ **For all 221 municipal WUGs in Brazos G Region, this translates to a “built-in” GPCD reduction of 2 to 13 gpcd (average 9 gpcd decrease) from Year 2010 to 2060**

Consideration of Additional BMPs

✓ Indoor water conservation BMPs

- Clothes washer rebate (GDS Associates)
- Rainwater harvesting (GDS Associates)
- Rain barrels (GDS Associates)
- Showerhead and Toilet Flapper Retrofit (Task Force BMP Guide)
- Water Efficient Plumbing Fixtures (TCEQ)

✓ Outdoor water conservation BMPs

- **Landscape Conservation and Irrigation (Task Force BMP Guide)**

✓ Both Indoor/Outdoor water conservation BMPs

- Unaccounted for losses (TCEQ)
- Seasonal water use reduction (TCEQ)
- **Public education programs**

Challenge: Costs and savings (when available) can be difficult to quantify and apply for regional water planning

Guidance Used to Develop Municipal Conservation as Water Management Strategy

- ✓ **Any entity with projected needs must first consider water management strategies**
- ✓ **Revised:** TWDB does not require *Advanced Conservation* for all WUGs to enable WUGs to receive state funding for water conservation programs
- ✓ **Revised:** Task Force recommendation of 125 gpcd target changed to 140 gpcd

Recommended Municipal Conservation BMPs WUGs with Needs

Conservation BMPs	Water Savings (gpcd)	Estimated Cost (\$ per acft water saved)
Advanced Conservation -Toilet Retrofit -Showerhead/Aerators -Irrigation Audit	7	\$325-385
Landscape Irrigation	11	\$400
Public Education Programs	3	N/A
Total	21	\$325- \$400

Recommended Approach for Municipal Water Conservation

- ✓ For WUGs with needs (anytime during 2000-2060) and usage less than 140 gpcd
 - Adopt current TWDB projections (assumes 100% replacement by 2045)
- ✓ For WUGs with needs (anytime during 2000-2060) and usage greater than 140 gpcd
 - Reduce 2010 TWDB projections by 21 gpcd by 2020
 - Maintain constant GPCD from 2020 through 2060
 - Includes projected conservation + additional conservation
 - Includes “accelerated” effects of 1991 Plumbing Act
- ✓ Reason: Simplify conservation approach and address both short term & long term needs