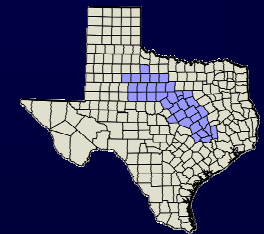


***Agenda Item 8.12
Draft Methodology for Considering
Municipal Conservation as Water
Management Strategy***

August 11-12, 2004

BRAZOS G
WATER PLANNING GROUP

HDR



Background

- ✓ TWDB SB1 Rules require any entity **with shortages** to consider water conservation strategies **first**
- ✓ Provide flexibility for WUGs to identify practical conservation strategies and document for future state funding requests

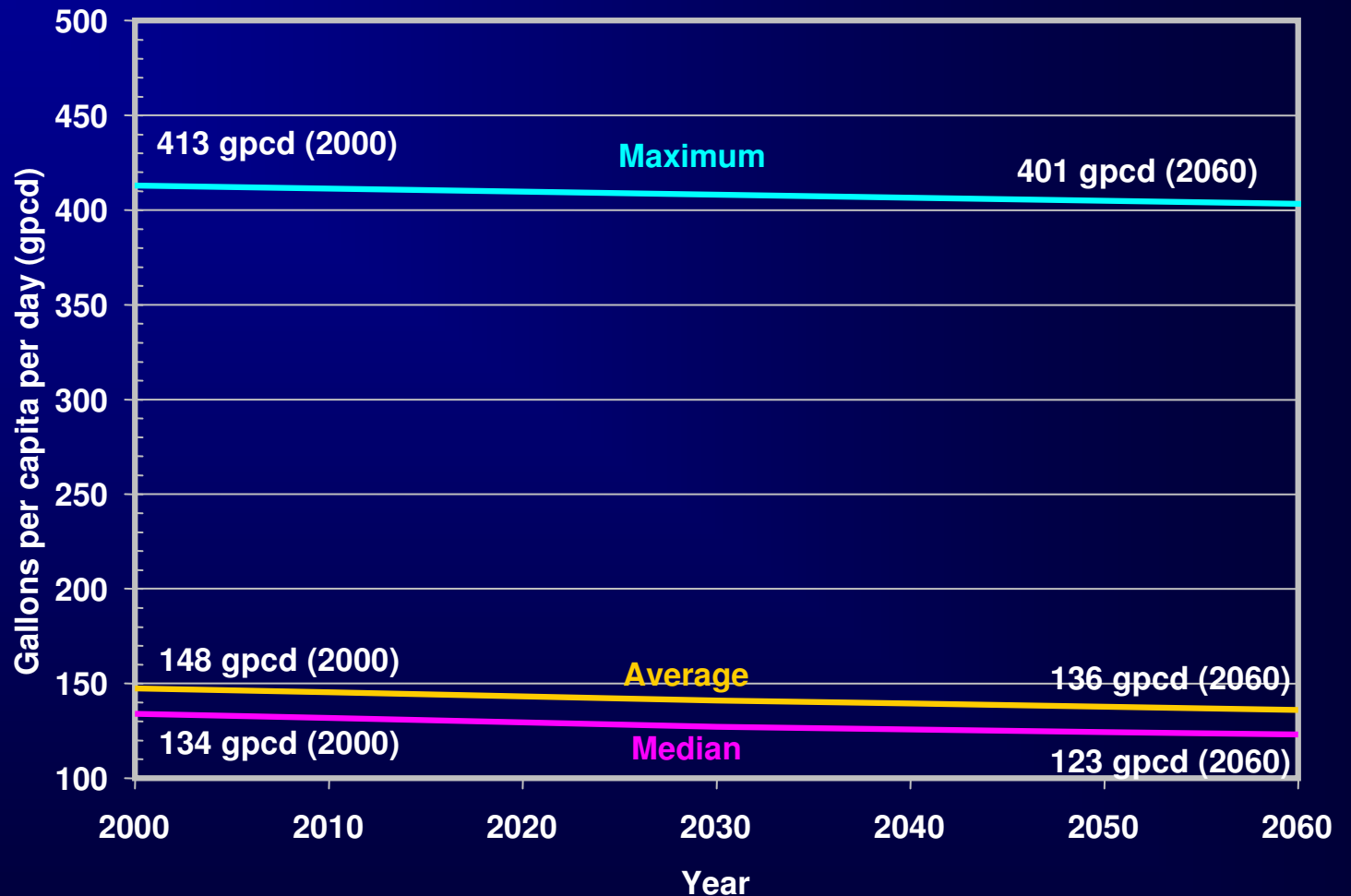
Comparison of Historic Per Capita Usage to Current Projections for Brazos G

	<i>Average GPCD</i>			
	<i>TWDB Historical (1988-1997)</i>	<i>TWDB 2000</i>	<i>TWDB 2030</i>	<i>TWDB 2060</i>
<i>Region G</i>	<i>179</i>	<i>148</i>	<i>141</i>	<i>136</i>
<i>% Decrease (from 1988-1997)</i>	<i>—</i>	<i>17%</i>	<i>21%</i>	<i>24%</i>

GPCD Projections for 2006 Brazos G Plan

**Region G — 221
Municipal Users
(including
County-Other)**

- **Most municipal users (93%) show decrease in gpcd from 2000-2060.**



Municipal Water Conservation



Challenges for Standardizing gpcd Reduction

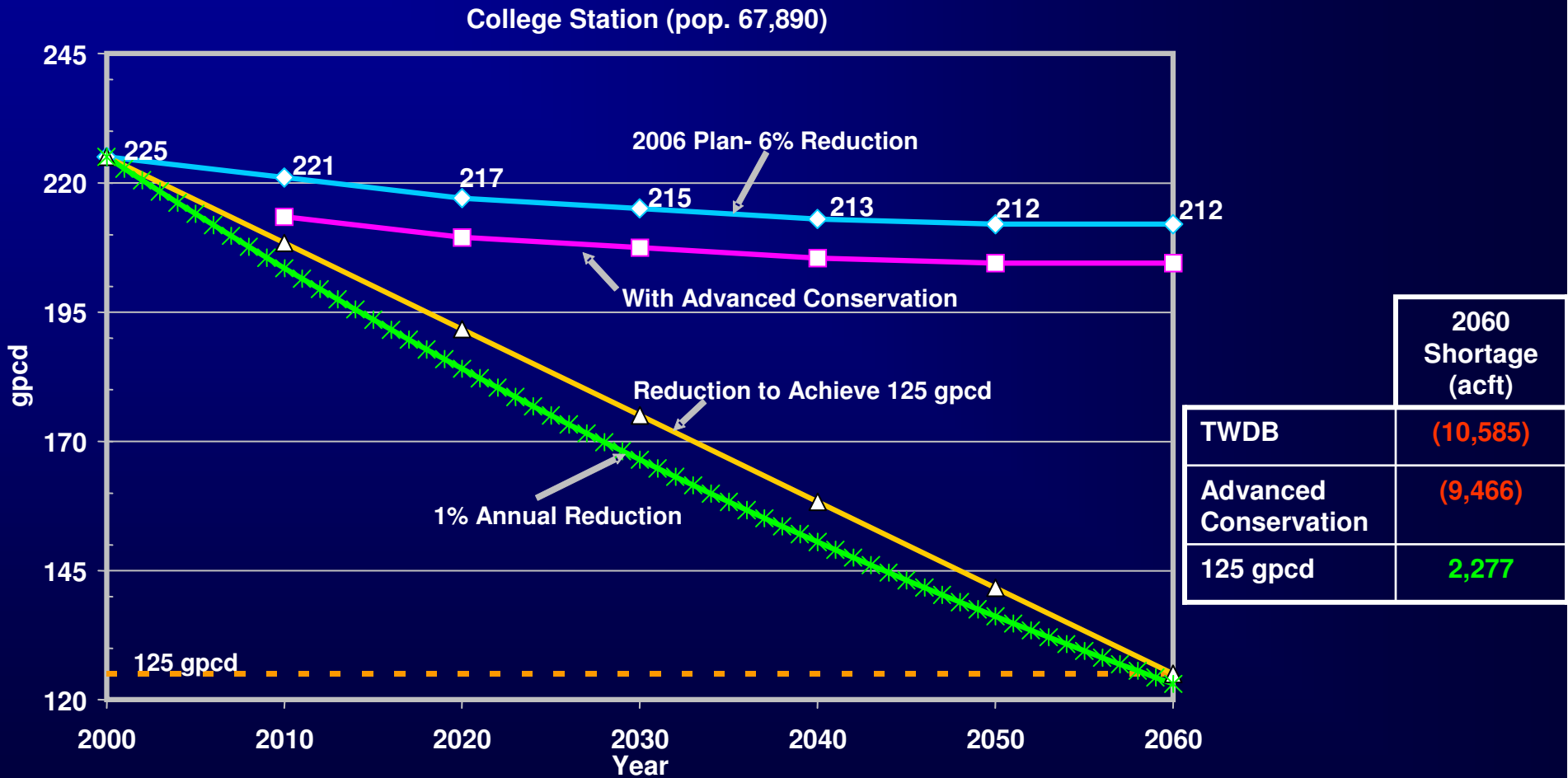
- ✓ **Diverse municipal situations (urban, rural, developing rural, level of commercial development)**
- ✓ **Conservation reduces water sales and revenues**
- ✓ **Flexibility and fairness of rates**
- ✓ **High variability in local conditions (high growth along I-35 corridor, large climatic variability in Region G)**

Methodology for Municipal Conservation

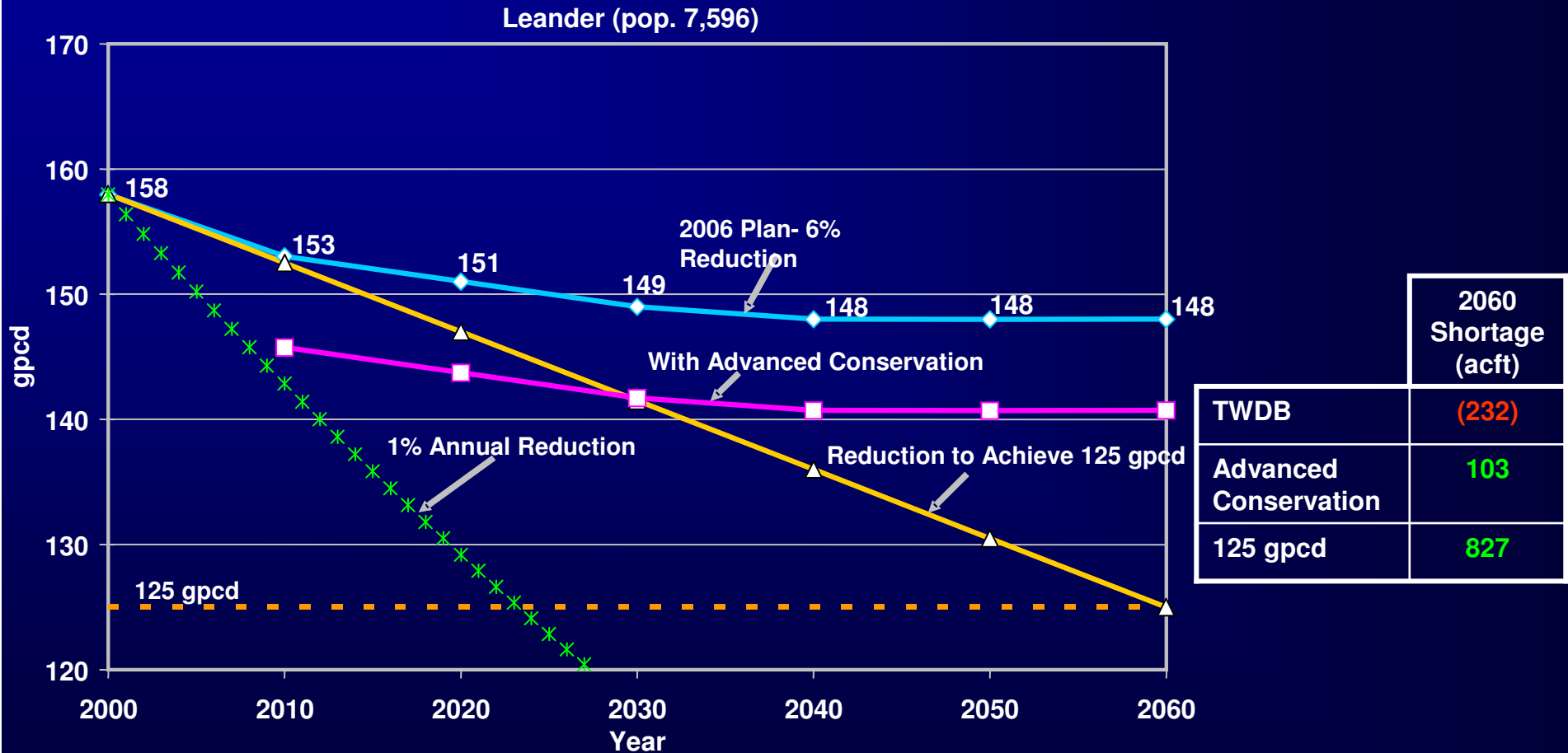
- ✓ **TWDB (2003) Municipal Conservation Guidance Document**
 - Includes costs and water saving potential on Regional basis
 - Selected most affordable strategies (<\$500 per acft water saved) hereafter referred to as *Advanced Conservation*
 - ✓ Toilet Retrofit (50% participation)
 - ✓ Showerheads/Aerators (50% participation)
 - ✓ Irrigation Audits (5% participation)
 - ✓ Determined potential water savings for each WUG with shortages

- ✓ **Task Force Recommendations for suggested per capita water use targets:**
 - Total GPCD of 125
 - Minimum annual average reduction of 1%

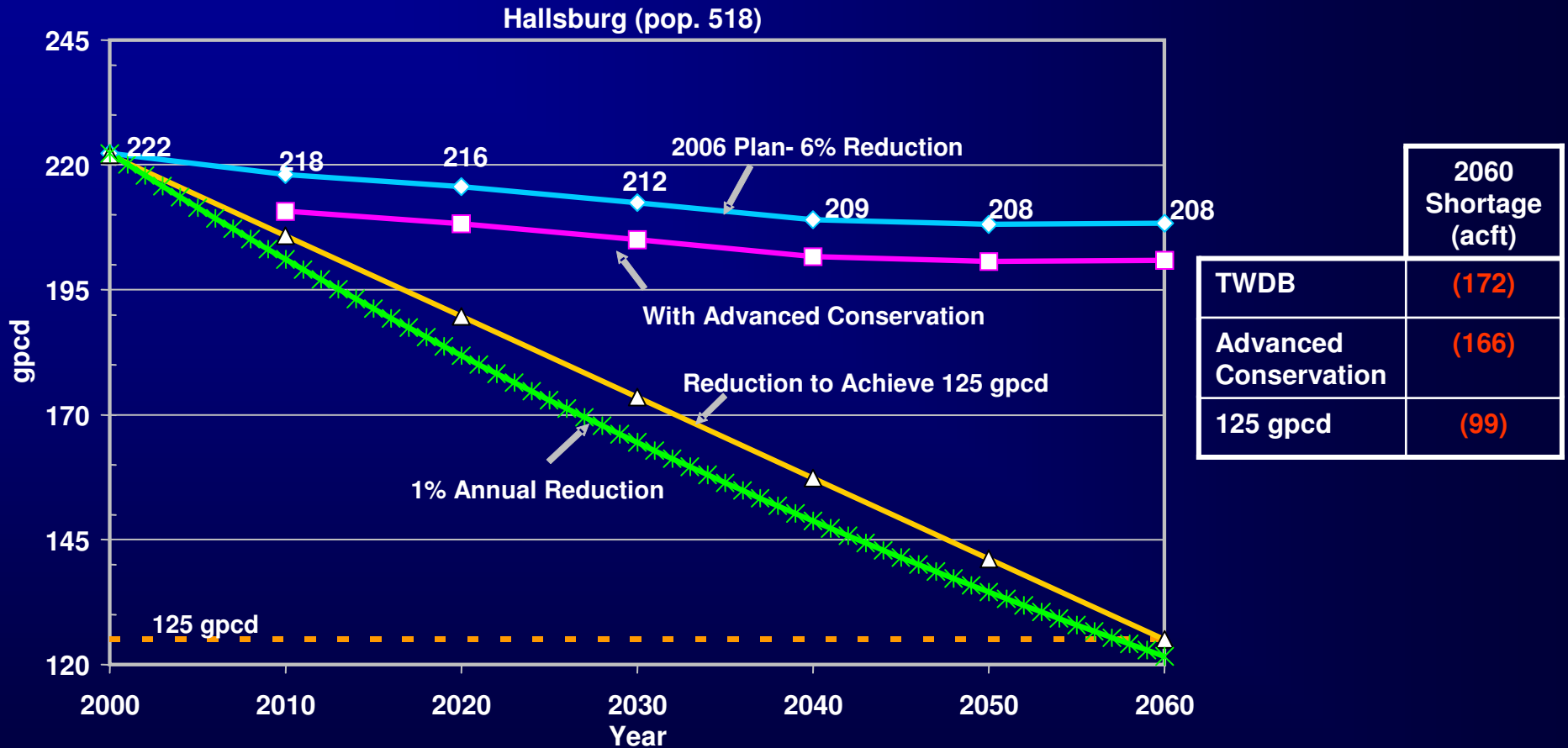
Example of Large Municipality



Example of Medium Municipality



Example of Small Municipality



Task Force recommendations to Reduce Per Capita Water Use (GPCD)

- ✓ **Retrofit plumbing fixtures**
 - **Toilet Retrofit (\$313-\$523 per acft)**
 - **Showerheads & Aerators (\$48-\$108 per acft)**
 - **Clothes Washer Rebates (\$735-\$828 per acft)**
- ✓ **High User Irrigation Audit (\$101-\$468 per acft)**
- ✓ **Leak detection**
- ✓ **Conservation landscaping**
- ✓ **Public awareness programs**
- ✓ **Rainwater harvesting (climate dependent) (\$463-\$656 acft)**



Possible Approaches for 2006 Plan

- ✓ Establish Municipal Conservation targets for municipalities **with needs** based on :
 - ***Advanced Conservation*** using TWDB Municipal Conservation Guidance (2003)
cost: \$325-\$385 per acft water saved
- Or
 - **Task Force recommendation**
 - ✓ 1% annual reduction per year
 - ✓ 125 gpcd
- Or ✓ ***Recommend Advanced Conservation*** for **all WUGs** to enable WUGs to receive state funding for water conservation programs