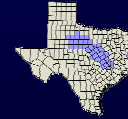


## **Agenda Item 6.5**

### **Study No. 5 Refine Water Management Strategies for McLennan County**

October 29, 2008



## **Introduction**

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- ✓ **Issue**
  - 2006 Brazos G Plan identified the City of Waco as being the Primary Regional Water Provider to meet future shortages in McLennan County
  - City of Waco's water supplies would be nearly fully utilized in 2060
  
- ✓ **Purpose of Study**
  - Identify potential water management strategies other than the City of Waco and Trinity Aquifer for Water User Groups (WUGs)



## Introduction

- ✓ Approach
  - Compile
    - ✓ Estimated and projected water demands for each WUG
    - ✓ Primary and secondary water supply information for each WUG
    - ✓ Trinity well information
  - Estimate pumpage from Trinity Aquifer
  - Interview a representative for each WUG
  - Review updates to groundwater availability from the Trinity Aquifer
  - Identify and discuss potential new water management strategies.

## Water Use and Projected Demands

Water User Categories	Maximum Annual Water Use (TWDB) acft/yr	Annual Demand (acft/yr) (Brazos G Table 4A-20)			
		2001-2005	2010	2020	2040
Water User Groups other than City of Waco (Total)	14,642	16,702	18,757	22,555	24,172
County-Other Public Water Suppliers (source: TWDB)	3,510				
County-Other (source: Brazos G)		6,635	6,904	7,399	7,881
<b>TOTAL</b>	18,152	23,337	25,661	29,954	32,053

## Current, Primary Water Supplies

Water Supply	Water Utilities
City of Waco	Beverly Hills and Lacy-Lakeview
Trinity Aquifer Only	Bellmead, Bruceville-Eddy, Chalk Bluff WSC, Gholson WSC, Hewitt, Lorena, Moody, North Bosque WSC, Riesel, West, Western Hills WS, and Woodway
Trinity Aquifer and Surface Water	Mart, McGregor, Robinson

## Supplemental or Backup Water Supplies

Water Supply	Water Utilities
City of Waco	Bellmead, Hewitt, McGregor, West and Woodway
Bluebonnet WSC (Lake Belton),	Bruceville-Eddy, Moody and Woodway
Tri-County SUD	Riesel
Surface Water (Run of River, Brazos River)	Crawford, Gholson WSC, Lorena and Robinson
Interconnects (other than City of Waco and Bluebonnet WSC)	Lorena, McGregor, Riesel and West

## Trinity Wells in Use by WUGs

	Total	Cumulated Rated Capacity (acft/yr)
Wells	55	27,300
Statistics	Well Depth (ft)	Well Yield (gpm)
Minimum	965	50
Average	1,740	290
Maximum	3,180	1,120

## Pumpage from Trinity Aquifer

Water User Group	Max Year Demands (2001-2005) from Groundwater (acft)
WUGs	10,101
Small Public Water Suppliers	2,400
Rural Domestic	2,000
Manufacturing	938
Steam Electric	1,708
Livestock	495
<b>TOTAL</b>	<b>17,642</b>

## **Potential Strategies for Additional Water Supplies**

- ✓ **Trinity Aquifer**
  - Groundwater Management Area 12 officials are planning to set the “Managed Available Groundwater” to about 20,700 acft/yr
  - Previous estimate of groundwater availability was about 1,700 acft/yr
  - Would allow a cumulative drawdown of over 1,200 feet from historic levels (approx. 500 feet additional drawdown)
  - Would cause a major increase in power cost, probably lowering all pumping and smaller well would probably have to be replaced
- ✓ **City of Waco**
  - Several utilities expressing interest in water agreements

## **Potential Strategies for Additional Water Supplies**

- ✓ **Bluebonnet WSC**
  - Water supply is from Lake Belton and appears to have additional capacity
- ✓ **Brazos River Alluvium**
  - Little used
  - Advance Water Treatment would be required
  - Most favorable areas are north of Lake Waco and downstream of Waco
- ✓ **Reuse**
  - Irrigation and other nonpotable water supplies
- ✓ **FHLM WSC**
  - Organization of water utilities in Falls, Hill, Limestone and McLennan Counties
- ✓ **Tri-County SUD**
  - Large water utility east of McLennan County

## **Summary**

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- ✓ New potential supplies have been identified
- ✓ New potential supplies will be further evaluated and quantified as 2011 Brazos G Plan is developed
- ✓ Managed Available Groundwater from GMA 12 will likely be substantially greater than used in 2006 Brazos G Plan
- ✓ Report in second draft and will be submitted to RWPG about November 10, 2008

## **Questions/Discussion**

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