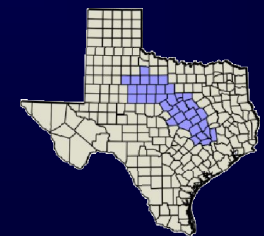


***Agenda Items 6.5 & 6.6***  
***Initial Estimates of Supplies and Needs***

**June 17, 2009**



# ***Topics for Today***

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- ✓ **Surface Water Supplies**
- ✓ **Groundwater Supplies**
- ✓ **Constraints on Supplies**
- ✓ **Needs for Municipal Water User Groups**

# Surface Water Supplies

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- ✓ **Brazos G WAM**
  - **Full WAM (1940 – 1997)**
  - **Mini-WAM (1940 – 2008) (Clear Fork watershed)**
  - **Assumptions**
    - ✓ **Full use of perpetual water rights**
    - ✓ **Return flows included**
    - ✓ **BRA contract placed at actual diversion locations**
    - ✓ **Various subordination agreements in place**
    - ✓ **Year 2000 and Year 2060 sedimentation conditions**

# **Surface Water Supplies – cont'd**

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- ✓ **Reservoir yields**
  - **Firm – below Possum Kingdom (full WAM)**
  - **1-year Safe – above Possum Kingdom (mini-WAM)**
  - **6-month Safe – Lake Palo Pinto**
- ✓ **Run-of-the-river supplies**
  - **Minimum annual diversion**
  - **75/75 reliability for irrigation**
- ✓ **Individual water rights identified with individual owners and uses, and combined on WUG and county basis**
- ✓ **Surface water supplies compiled on a WUG basis (WWP compilation is ongoing)**

# **Groundwater Supplies**

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- ✓ **Groundwater availability determined on county/aquifer/river basin basis**
- ✓ **Initial groundwater supply based on well capacity**
  - **One-half total well capacity = annual capacity (account for peaking)**
  - **95% of annual capacity = annual supply (account for maintenance)**
- ✓ **If annual supplies exceed availability, then groundwater availability prorated between users, based on well capacities**
- ✓ **Summed by WUG, by county, by river basin**

# Constraints on Supplies

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- ✓ Two types of constraints considered
  - Surface water treatment capacity (TCEQ data)
  - Projected Trinity Aquifer level declines will force wells out of service
- ✓ Constrained supply less than or equal to total supply
- ✓ Example: City of Granbury
  - Total Supply
    - 7,560 acft/yr surface water (BRA contract)
    - 763 acft/yr groundwater (Trinity wells)
    - 
    - 8,323 acft/yr total supply
  - Constrained Supply
    - 226 acft/yr surface water (treatment constraint)
    - 683 acft/yr groundwater (Trinity Aquifer levels)
    - 
    - 909 acft/yr total constrained supply

# Needs for Municipal WUGs

**Table 6. Comparison of County-wide Municipal WUG Needs, 2006 and 2011 Plans.**

County	Projected Shortages (acft/yr)			
	2006 Plan		2011 Plan	
	2030	2060	2030	2060
Bell	0	0	0	(8,887)
Bosque	(706)	(816)	0	0
Brazos	(1,064)	(9,705)	0	(7,093)
Falls	0	0	(1,327)	(1,735)
Haskell	(303)	(363)	(353)	(276)
Hill	0	(576)	0	0
Hood	0	0	(275)	(7,349)
Johnson	(8,524)	(32,296)	(2,750)	(24,385)
Knox	(364)	(488)	(480)	(464)
Lee	(137)	(771)	0	(334)
Nolan	(2,088)	(1,694)	(1,029)	(649)
Somervell	(193)	(223)	0	0
Taylor	(12,575)	(11,412)	0	0
Williamson	0	(86,662)	(31,400)	(118,500)

# Summary

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- ✓ **No action required today – these are nearly final, but will be refined during June – September**
- ✓ **Will be placed on Brazos G website for comment/clarification by interested parties**
- ✓ **Wholesale Water Provider summaries will be prepared during the summer**

# Questions/Discussion?

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