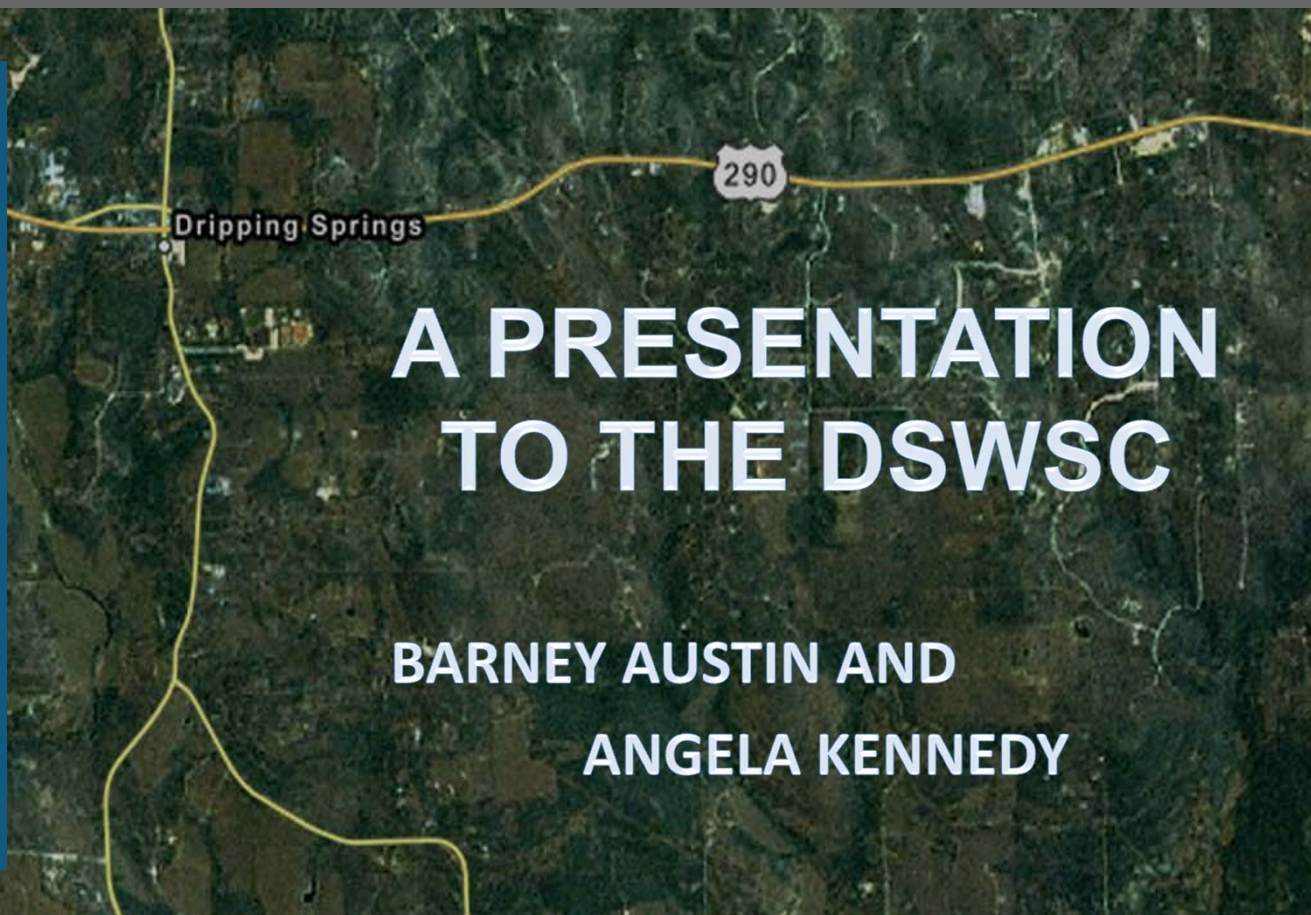
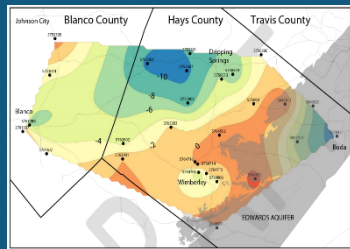


# Forecasts of Water Supply, Demand and Needs for the Dripping Springs Water Supply Corporation



## A PRESENTATION TO THE DSWSC

BARNEY AUSTIN AND  
ANGELA KENNEDY

Table 1. Summary of water available for delivery in 2016 and beyond.\*

<b>Source</b>	<b>Normal Conditions (acft/yr)</b>	<b>Critical Drought Conditions (acft/yr)</b>
Trinity Aquifer	600	420
WTCPUA	1,075	860
<b>Total</b>	<b>1,675</b>	<b>1,280</b>

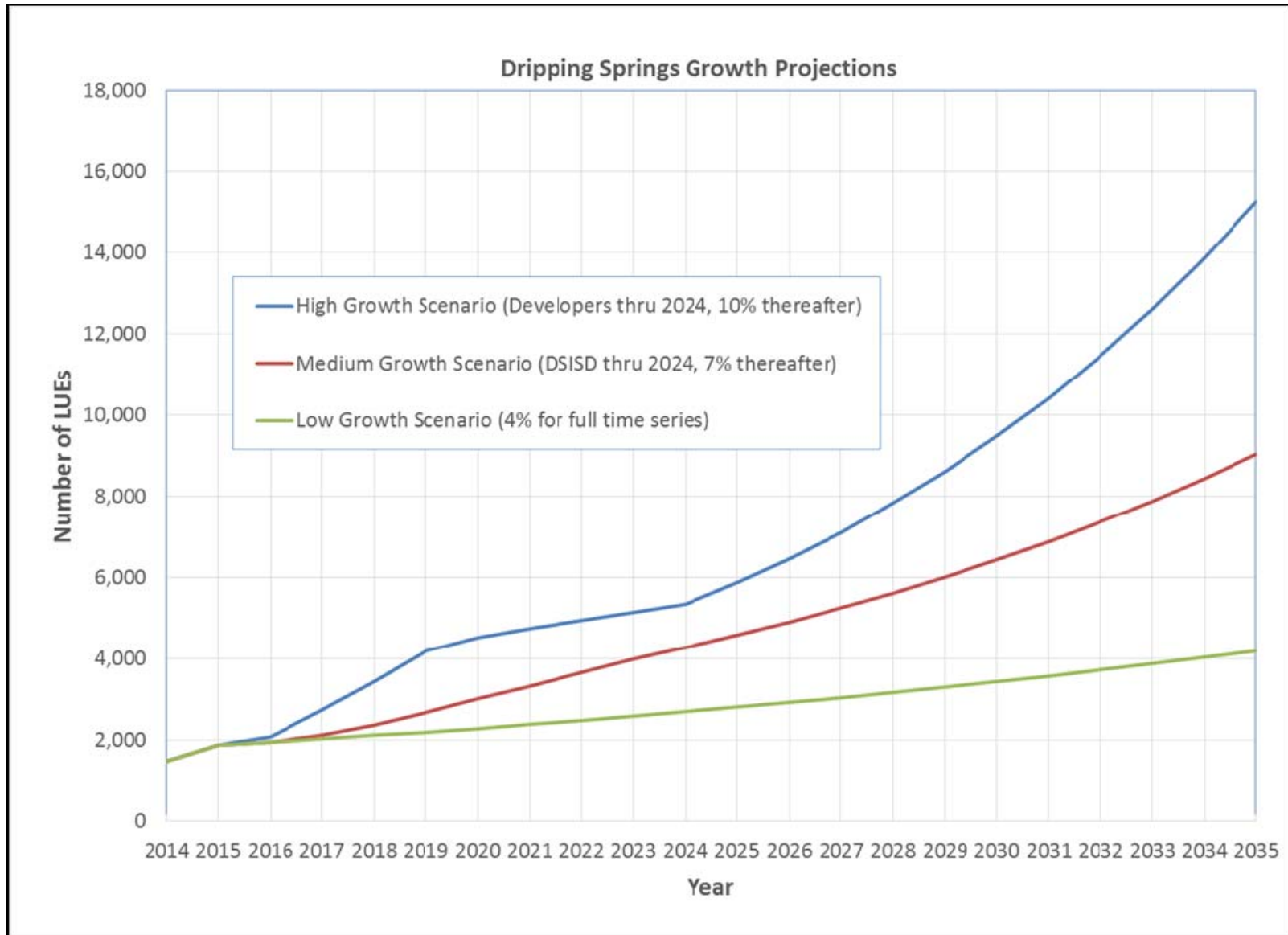
\*Including 4 percent water loss.

Table 2. Developers contacted for growth rate estimates.

<b>Housing Development</b>	<b>Company</b>	<b>Contact</b>
Caliterra & Carter Tract	Siepiela Interests	Kevin Kendrick
Founder Ridge	Taylor Morrison	Michael Slack
Texas Heritage Village	Pape Dawson Engineers	Salvador Baeza
Scenic Greens	Argent Management	Russ Allison
Legacy Trails	Ryland Homes	Adib Khoury
Heritage	Stratford	Greg Gitcho
Arrowhead Ranch	Forestar	Darlene Louk

Table 3. Annual LUE growth rate assumptions.

<b>Growth Scenario</b>	<b>Years 2015 -2024</b>	<b>Years 2025-2035</b>	<b>Total LUEs In 2035</b>
<b>Low</b>	4%	4%	4,200
<b>Medium</b>	PASA/DSISD Estimate	7%	9,030
<b>High</b>	Developer Estimates	10%	15,259

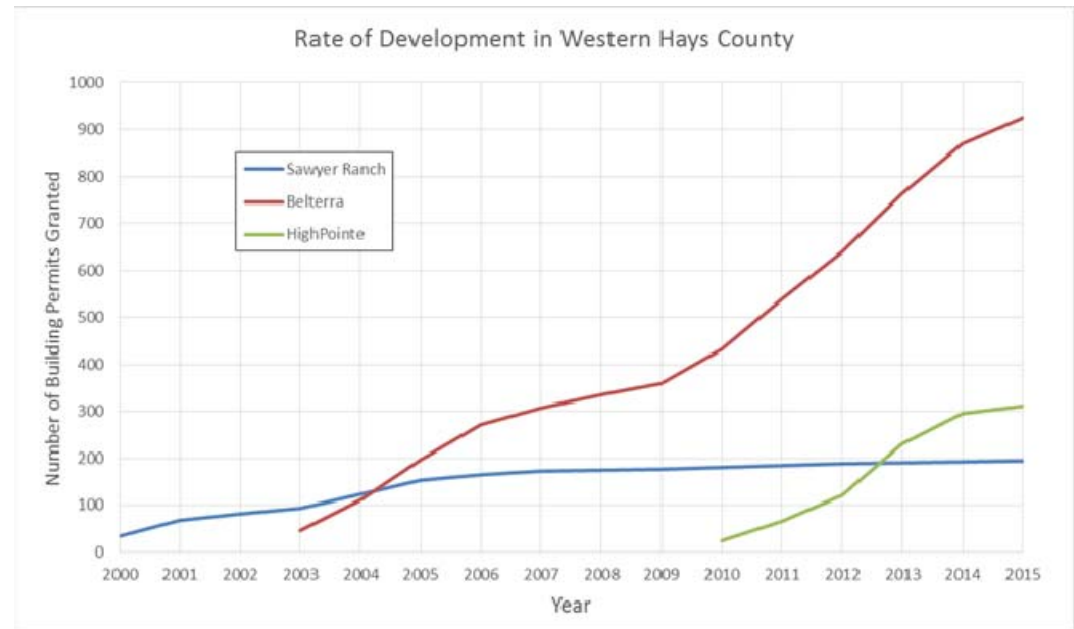


# Growth nearby and other developments

## Central Texas

Table 4. City of Buda growth projections.

Year	Total Connections	Average Connections (LUEs) Added per Year	Annual Growth Rate
2010	2,325	157	7.2%
2011	2,611	286	12.3%
2012	2,821	210	8.0%
2013	3,345	524	18.6%
2014	3,660	315	9.4%
2015	4,080	420	11.5%
2016	4,500	420	10.3%
2017	4,920	420	9.3%
2018	5,340	420	8.5%
2019	5,760	420	7.9%
2020	6,145	385	6.7%
2025	8,045	360	6.2%
2030	9,789	170	5.3%
2040	11,305	121	1.5%
2050	12,085	66	0.7%
2060	12,490	12	0.3%



Source: City of Buda Water Supply Projections, Technical Memorandum May 17, 2015 by LAN.

Case 1: Water use rates during dry conditions, with full supply available; and

Case 2: Water use rates with drought restrictions in place and water supplies curtailed as expected in critical drought conditions.

$$\text{Case 1 Total Annual Water Demand} = 775 \frac{\text{acft}}{\text{yr}} + (0.53 \frac{\text{acft}}{\text{yr}} \text{ per LUE} \times \# \text{ LUEs})$$

$$\text{Case 2 Total Annual Water Demand} = 697 \frac{\text{acft}}{\text{yr}} + (0.40 \frac{\text{acft}}{\text{yr}} \text{ per LUE} \times \# \text{ LUEs})$$

Murfee Engineering Company, Inc. 0.50 acft/LUE/Year

Case 1 (Dry year, no restrictions): 0.53 acft/LUE/Year

Case 2 (Drought year, restrictions): 0.40 acft/LUE/Year

Table 6. Belterra Average Annual Household Water Use

Year	Water Use (acft/LUE/Year)
2011	0.64
2012	0.55
2013	0.51
2014	0.41
<b>Average</b>	<b>0.53</b>



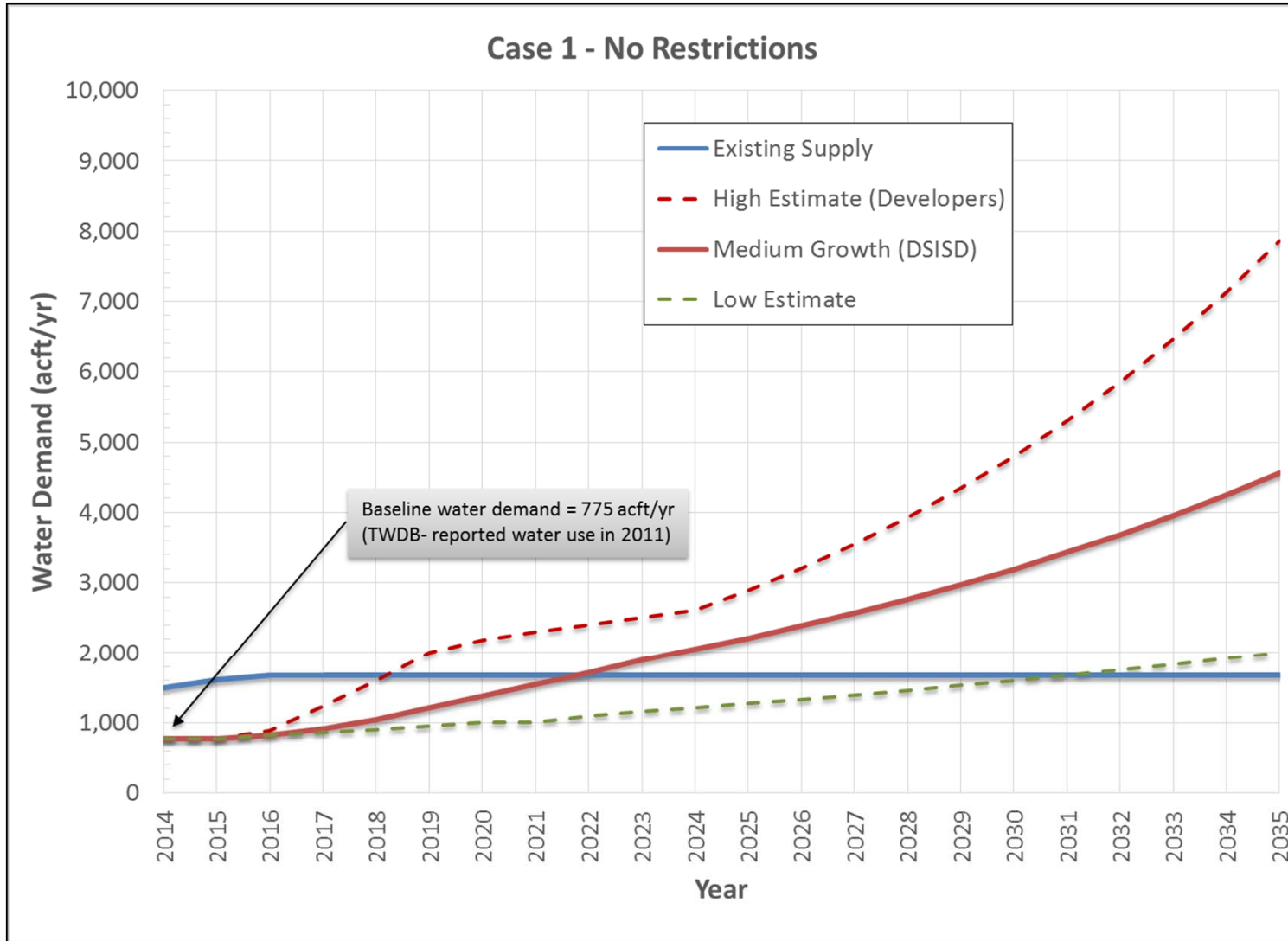


Figure 5. Projected water demand during drought conditions with no water use restrictions



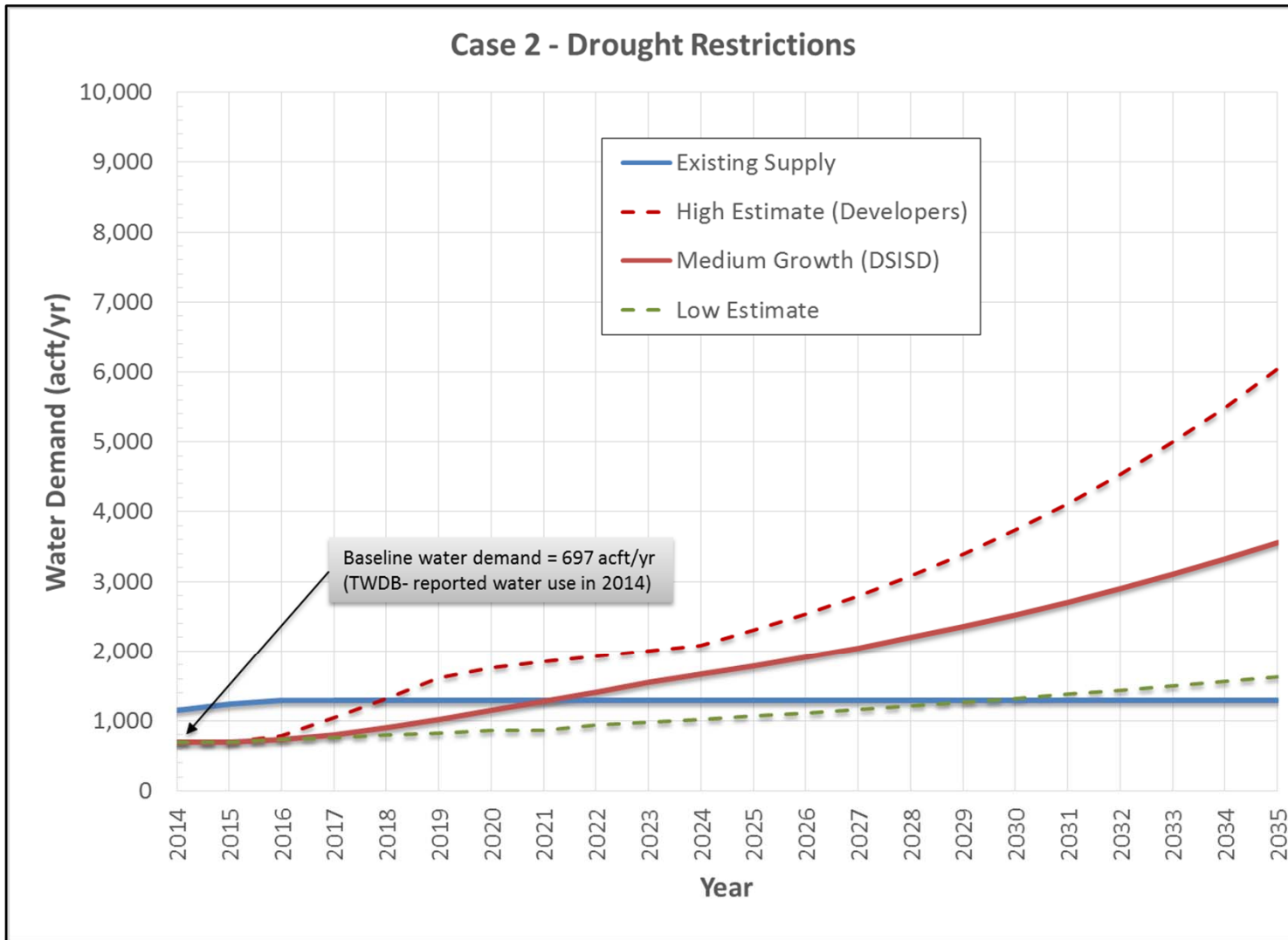


Figure 6. Projected water demand during drought conditions with water use restrictions in place

**Water could be needed within three years.**

**Under medium growth rates, water will be needed within six or seven years.**

**Obtain permit from HTGCD to pump more groundwater as soon as possible.**

**DSWSC should find additional source of water for longer term solution.**



**Questions?**

**Or Comments!**

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**Tel: (512) 826-2604**

**AquaStrategies**

# Other potential sources

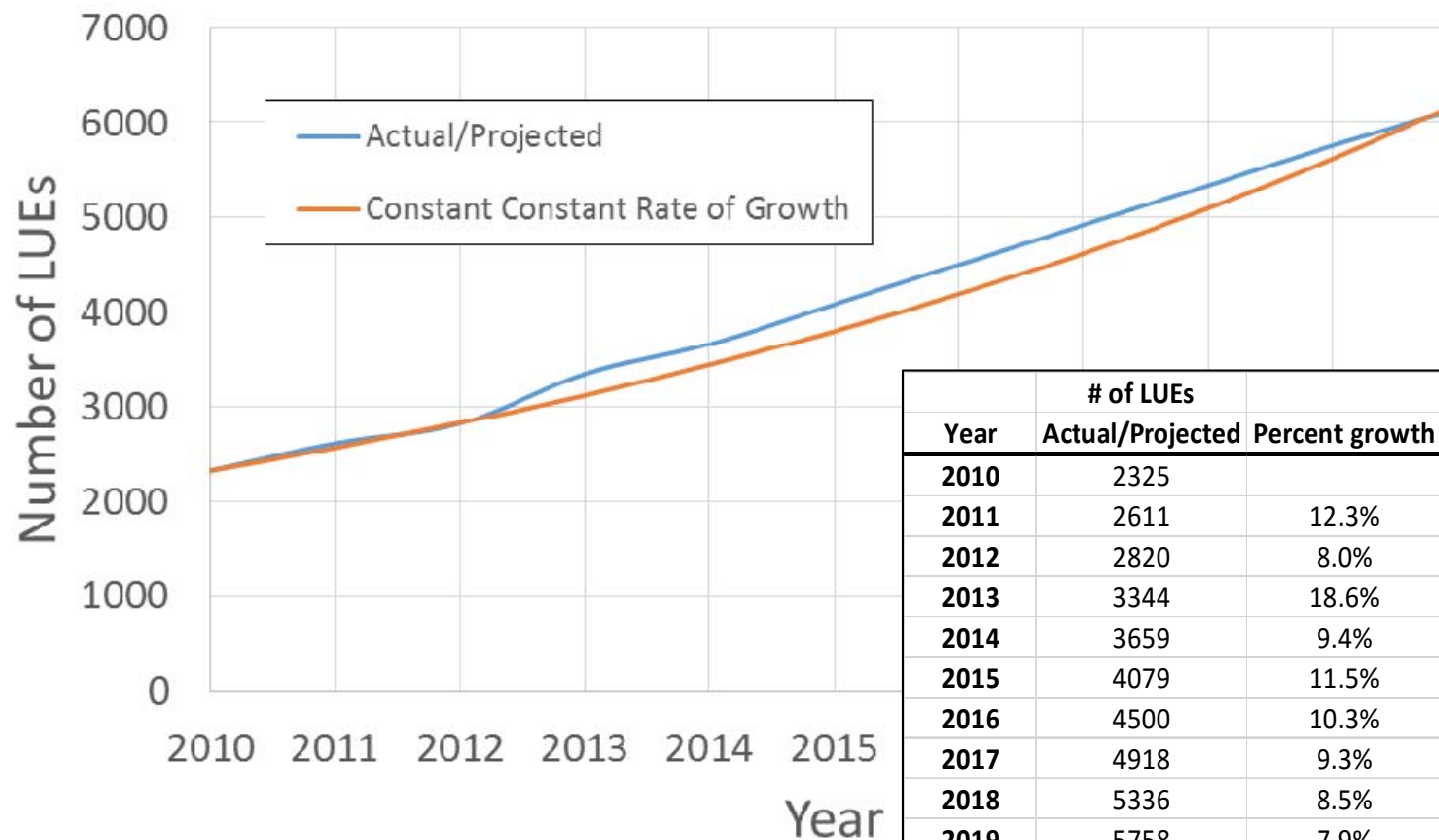
For DSWSC

- Additional local groundwater from the Trinity Aquifer and permitted through HTGCD
- Hays Caldwell Public Utility Agency Water Project
- Electro-Purification well field in Western Hays County
- SAWS Vista Ridge Pipeline
- Additional Supply from LCRA
- Various options through San Jose Water (and its subsidiary, the Texas Water Alliance)
- Forestar Water Supply from the Simsboro Aquifer (leased land in Bastrop and Lee Counties)
- Aquifer Storage and Recovery
- Brackish Groundwater
- Direct Potable Reuse
- Conservation, xeriscaping or leak detection and repair.

# Variable vs. Constant Growth

Buda

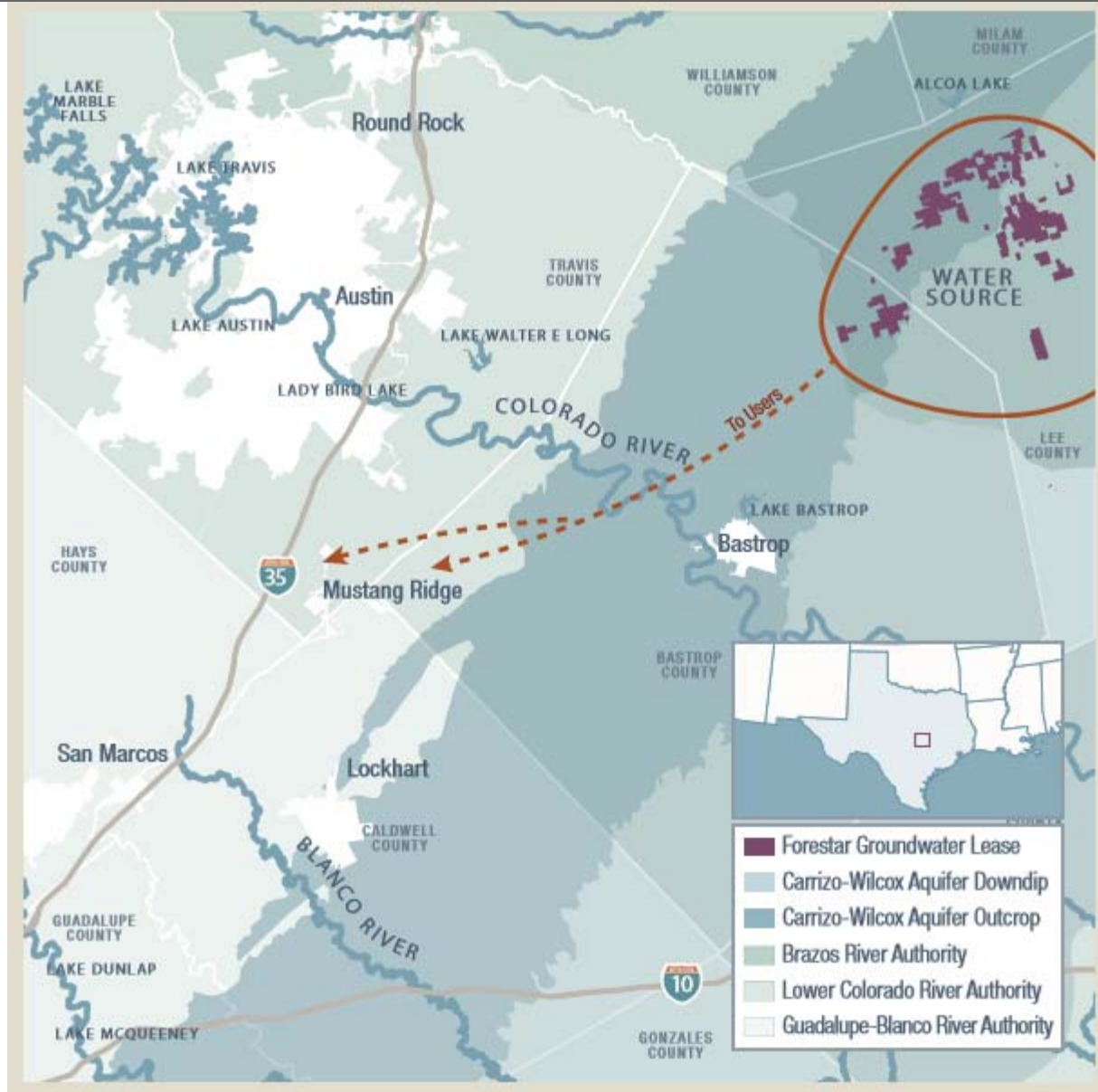
## Buda Rate of Growth



Year	# of LUEs		# of LUEs	
	Actual/Projected	Percent growth	Constant Rate	Percent growth
2010	2325		2325	
2011	2611	12.3%	2564	10.3%
2012	2820	8.0%	2829	10.3%
2013	3344	18.6%	3120	10.3%
2014	3659	9.4%	3441	10.3%
2015	4079	11.5%	3796	10.3%
2016	4500	10.3%	4187	10.3%
2017	4918	9.3%	4618	10.3%
2018	5336	8.5%	5094	10.3%
2019	5758	7.9%	5618	10.3%
2020	6143	6.7%	6197	10.3%
	<b>Average:</b>	<b>10.3%</b>		

# Forestar water source

From Web





# Dripping Springs area development

City web site

