

# Water Summit at Blue Star Brewery

## Vista Ridge Pipeline Project

*San Antonio's Water Bonanza or Waterloo?*



**Beer Summit at Blue Star Brewery**

**1414 S. Alamo St. SATX**

**7:00 PM - 8:30 PM**

**Thursday, April 6, 2017**



The water gods are not happy with SAWS and the City Council.  
Come and see why.

[alamotorch.com/vista-ridge-water-summit](http://alamotorch.com/vista-ridge-water-summit)

# Mid-Basin Water Supply Alternatives to Vista Ridge

James Lee Murphy, Esq.  
Attorney at Law  
April 6, 2016



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The poster features a blue and white color scheme with a stylized water wave graphic. It includes the Blue Star Brewery logo, a small image of a beer mug, and a URL at the bottom.

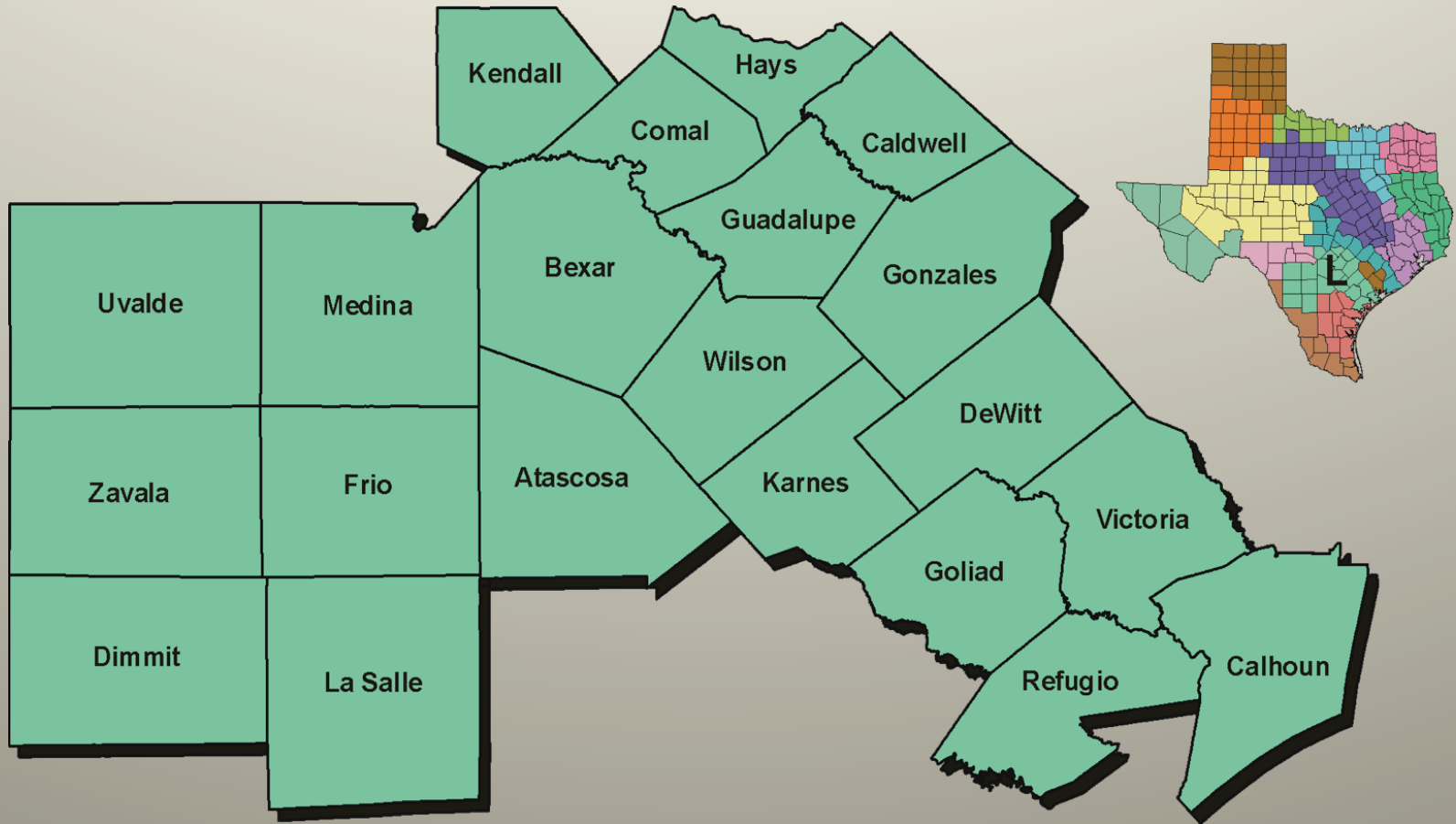


**AGENDA**  
**BOARD OF TRUSTEES**  
**WORK SESSION**

SAWS Headquarters, 2800 U.S. Hwy 281 North, San Antonio, TX 78212  
Tower I, Administrative Building, Cafeteria  
February 10, 2014, 9:00 a.m.

1. **MEETING CALLED TO ORDER.**
2. **ANNOUNCEMENT:** The San Antonio Water System Board of Trustees may during its Work Session hold an Executive Session pursuant to the Texas Open Meetings Act, Texas Government Code Chapter 551, which permits closed meetings for the purposes stated therein in connection with any of the items being considered during the meeting.
3. **President/Chief Executive Officer's Report:**
  - A. **Water Supply Options**
4. **Briefing and deliberation regarding Valuation of Water Resources (Doug Evanson)**
5. **Briefing and deliberation regarding alternative Water Supply Management and Options, including proposals received in response to the Request for Competitive Sealed Proposals (RFCSP) Regarding the Provision and Delivery of Alternative Water Supplies (Charles Ahrens)**

# South Central Texas Planning Region (Region L)



# Sources of Regional Water Supply

- Groundwater

- Edwards Aquifer
- Carrizo-Wilcox Aquifer
- Trinity Aquifer
- Gulf Coast Aquifer
- Others

- Surface Water

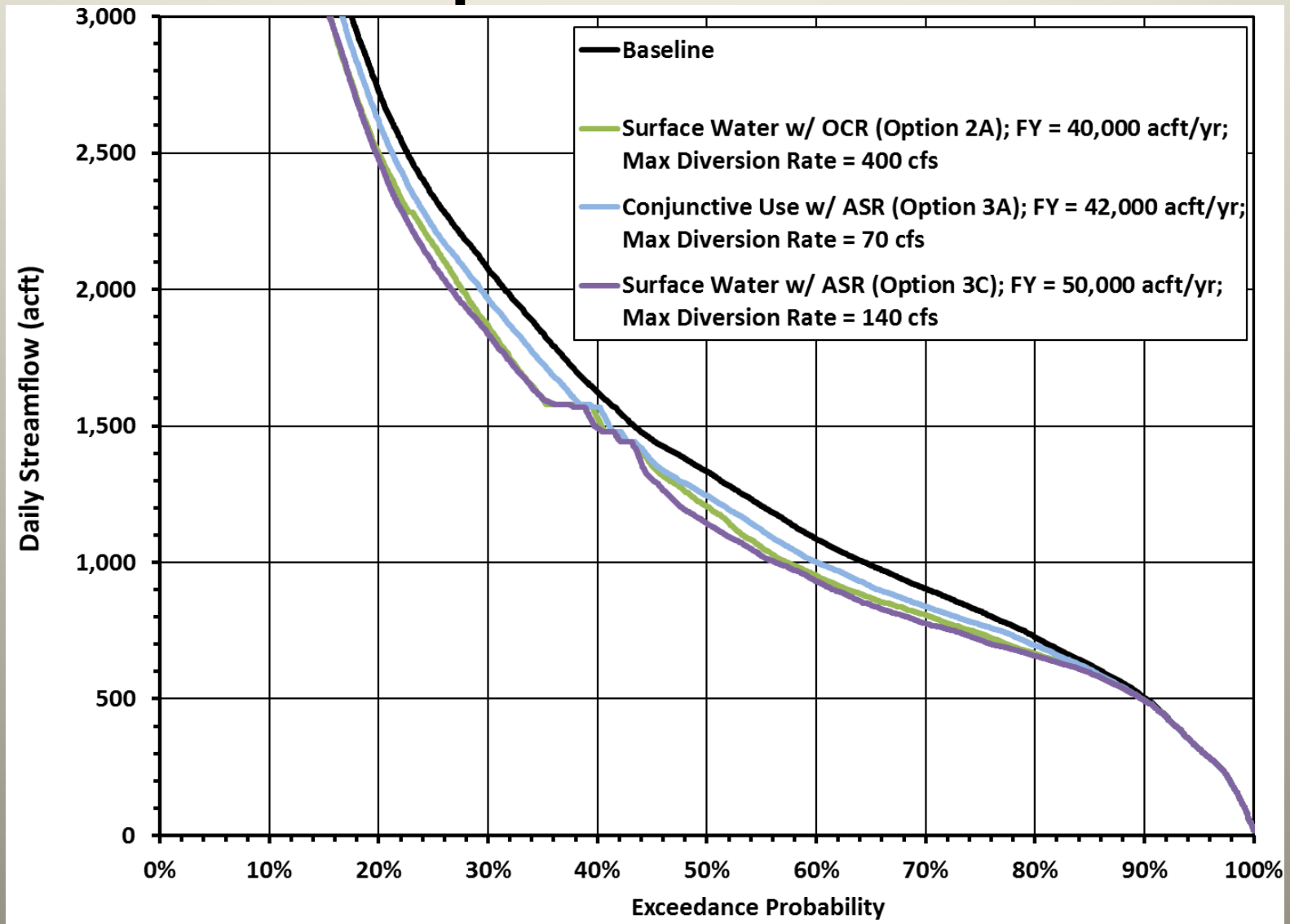
- **Canyon Reservoir**
- Power Supply Reservoirs
- Coletto Creek Reservoir
- Lake Dunlap, etc.
- Calaveras Lake
- Lake Braunig
- **Run-of-River Water Rights**

**HB 2031 in the 84<sup>th</sup> Legislature added Chapter 18 to the Water Code**— Seawater from the Gulf of Mexico is now a viable source of water supply for Region L

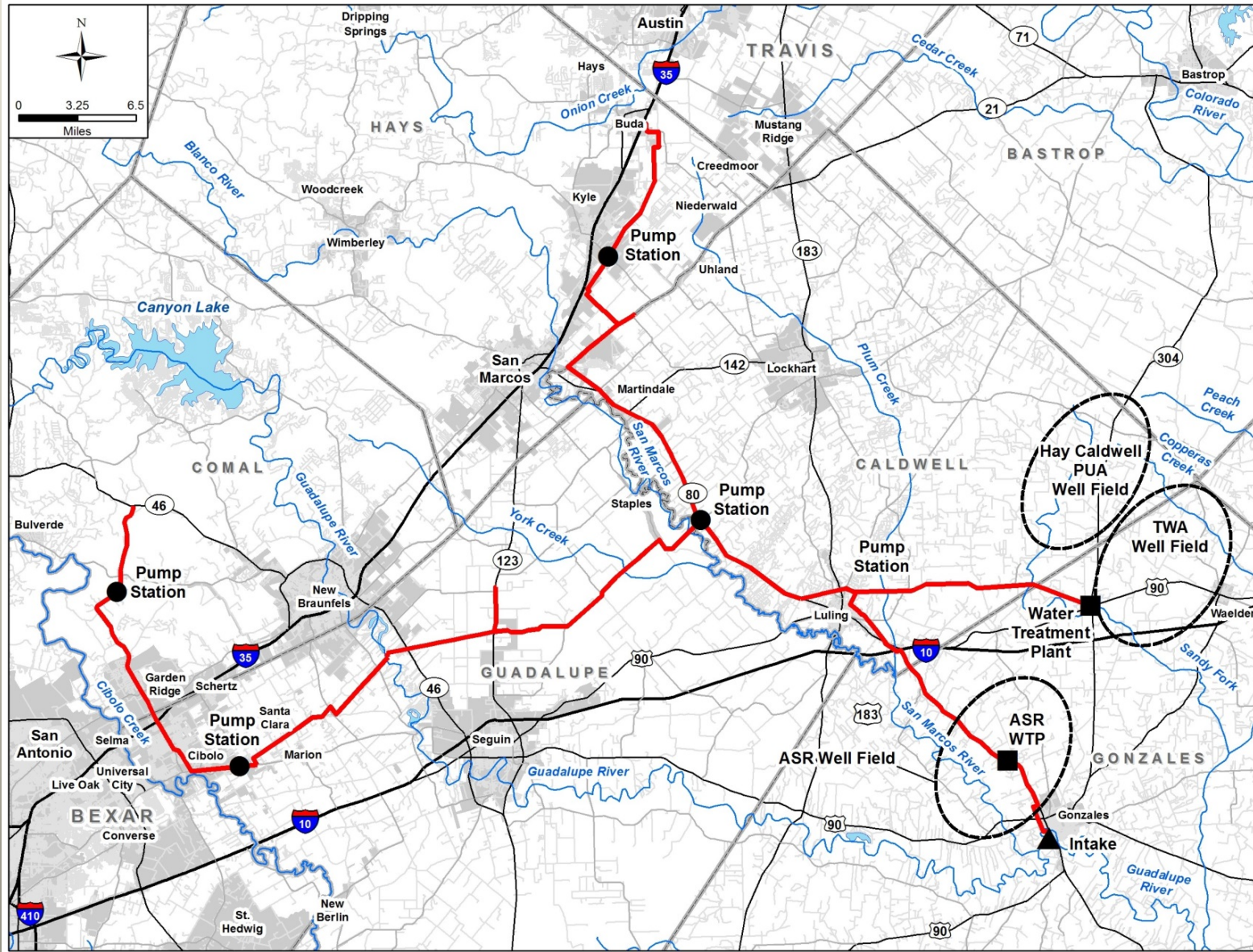
**Reuse of Municipal Wastewater is a Reallocation of Existing Water Supply and is emphatically NOT a New Source of Water for Region L**



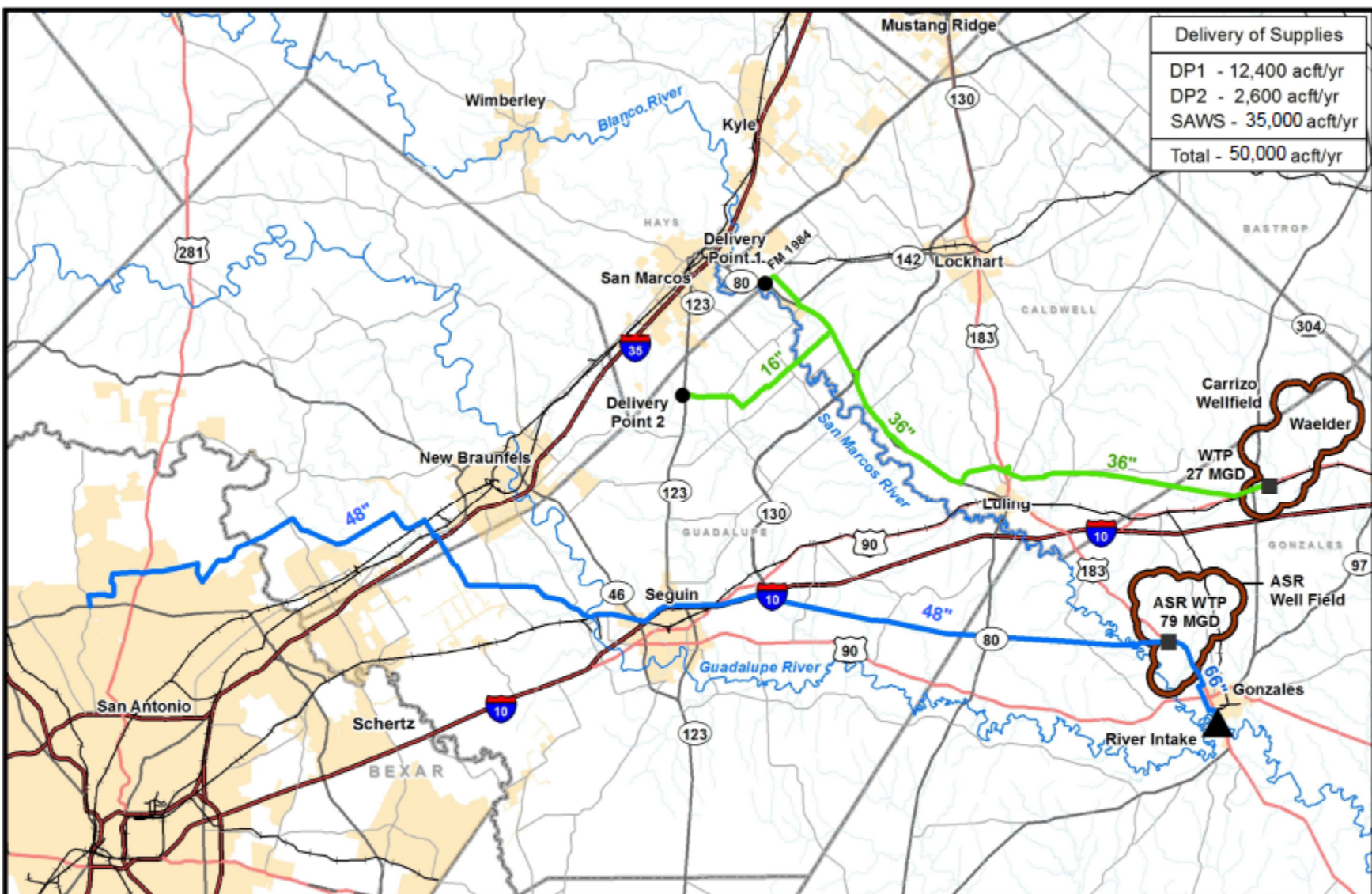
# Potential Instream Flow Changes Guadalupe River at Gonzales



# MBWSP/TWA/HCPUA Shared Facilities

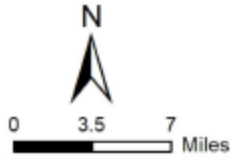






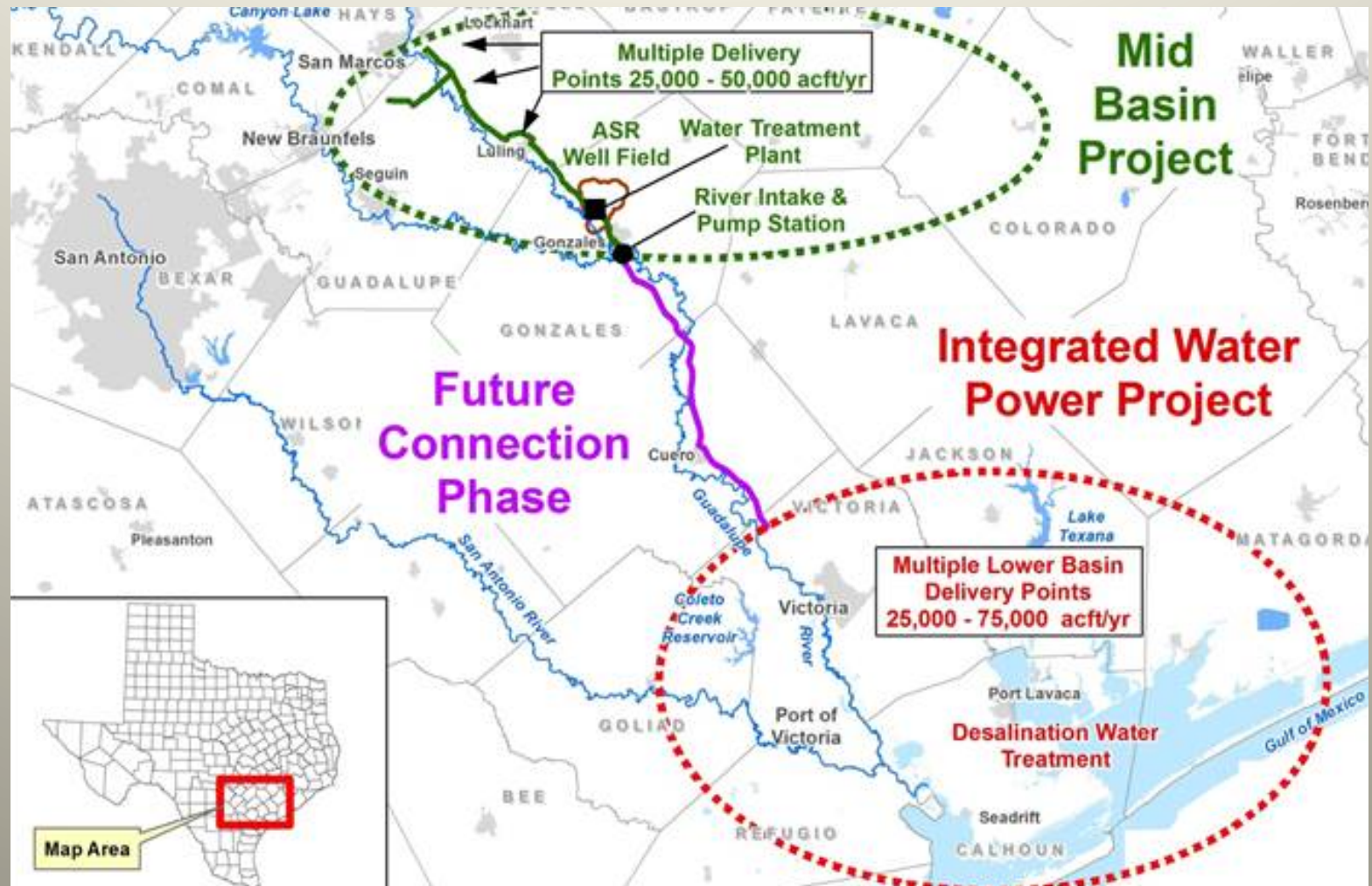
Delivery of Supplies	
DP1	12,400 acft/yr
DP2	2,600 acft/yr
SAWS	35,000 acft/yr
<b>Total</b>	<b>50,000 acft/yr</b>

**Mid-Basin Water Supply Project (MBWSP)  
Option 0 with In-Basin Delivery and Option 3C with Export to SAWS**





# Integrated Regional Mid-Basin Project



# Mid-Basin Project w/Shared Facilities

## MAG Limited

- Sources and Firm Supply (80,000 acft/yr):
  - 42,000 acft/yr firm supply from Guadalupe River and ASR in GCUWCD
    - Surface Water = 31,100 acft/yr (Average)
    - ASR = 18,900 acft/yr (Average)
  - 21,833 acft/yr firm supply from HCPUA Wellfield, Carrizo Aquifer in GCUWCD and Plum Creek
  - 14,680 acft/yr firm supply from TWA Wellfield, Carrizo Aquifer in GCUWCD
  - Does not include 30,000 acft/yr in brackish Wilcox (1500/3000 salinity)
- Operations:
  - Treated groundwater and surface water delivered to participants and ASR storage with stored surface water as back-up supply
- Facilities (1.5 peaking factor):
  - 27 production wells (1073 gpm – 2910 gpm)
  - 28 dual purpose wells (1,533 gpm peak/ 418 gpm average)
  - 140 cfs river intake
  - Groundwater Treatment Plant (48.9 MGD) & Surface WTP (67 MGD)
  - 6 mile 60-IN diameter raw water pipeline
  - 129 miles, 8-IN to 78-IN diameter finished water pipelines

**Mid-Basin Water Supply Project (MBWSP)**  
**Option 0 with In-Basin Delivery and Option 3C with Export to SAWS**  
**September 2013 Prices<sup>1</sup>**

Item	Option 0 <sup>2</sup>	Option 3C to SAWS <sup>3</sup>	Combined Total
	Estimated Costs for Facilities		
<b>Capital Costs</b>			
Intake and Pump Station (78.7 MGD)		\$18,803,000	\$18,803,000
Transmission Pipeline	\$49,693,000	\$131,676,000	\$181,369,000
Transmission Pump Station(s)	\$14,463,000	\$30,502,000	\$44,965,000
Well Fields	\$29,221,000	\$45,982,000	\$75,203,000
Water Treatment Plants	\$37,076,000	\$203,784,000	\$240,860,000
Terminal Storage Tanks	\$1,675,000	\$2,615,000	\$4,290,000
Access Roads	<u>\$1,682,000</u>	\$1,404,000	<u>\$3,086,000</u>
<b>Total Capital Cost</b>	<b>\$133,810,000</b>	<b>\$434,766,000</b>	<b>\$568,576,000</b>
Engineering, Legal Costs and Contingencies	\$45,124,000	\$145,584,000	\$190,708,000
Environmental & Archaeology Studies and Mitigation	\$356,000	\$1,123,000	\$1,479,000
Land Acquisition and Surveying	\$7,305,000	\$11,080,000	\$18,385,000
Interest During Construction [2 yrs (0) and 3 yrs(3C)]	\$13,008,000	\$62,219,000	\$75,227,000
Advance Payments for Groundwater Leases	<u>\$13,005,000</u>	\$0	<u>\$13,005,000</u>
<b>Total Project Cost</b>	<b>\$212,608,000</b>	<b>\$654,772,000</b>	<b>\$867,380,000</b>
<b>Annual Costs</b>			
Debt Service (5.5 percent, 20 years)	\$17,726,000	\$54,791,000	\$72,517,000
Operation and Maintenance			
Intake, Pipeline, Pump Station	\$1,167,000	\$3,035,000	\$4,202,000
Water Treatment Plant	\$2,863,000	\$9,750,000	\$12,613,000
Pumping Energy Costs (@ 0.09 \$/kW-hr)	\$1,443,000	\$8,542,000	\$9,985,000
Purchase of Water	\$1,680,000	\$173,000	\$1,853,000
Groundwater District Fees (@ \$8.15/acft)	<u>\$122,000</u>	<u>\$285,000</u>	<u>\$407,000</u>
<b>Total Annual Cost</b>	<b>\$25,001,000</b>	<b>\$76,576,000</b>	<b>\$101,577,000</b>
Available Project Yield (acft/yr)	15,000	35,000	50,000
Annual Cost of Water (\$ per acft) <sup>4</sup>	\$1,667	\$2,188	\$2,032
Annual Cost of Water (\$ per 1,000 gallons) <sup>4</sup>	\$5.12	\$6.71	\$6.23

**Notes:**

1 - Region L costs are based MBWSP assumptions (cost curves) for capital costs, indexed to September 2013 dollars. Debt service and energy costs are determined using the Region L 2016 costing assumptions.

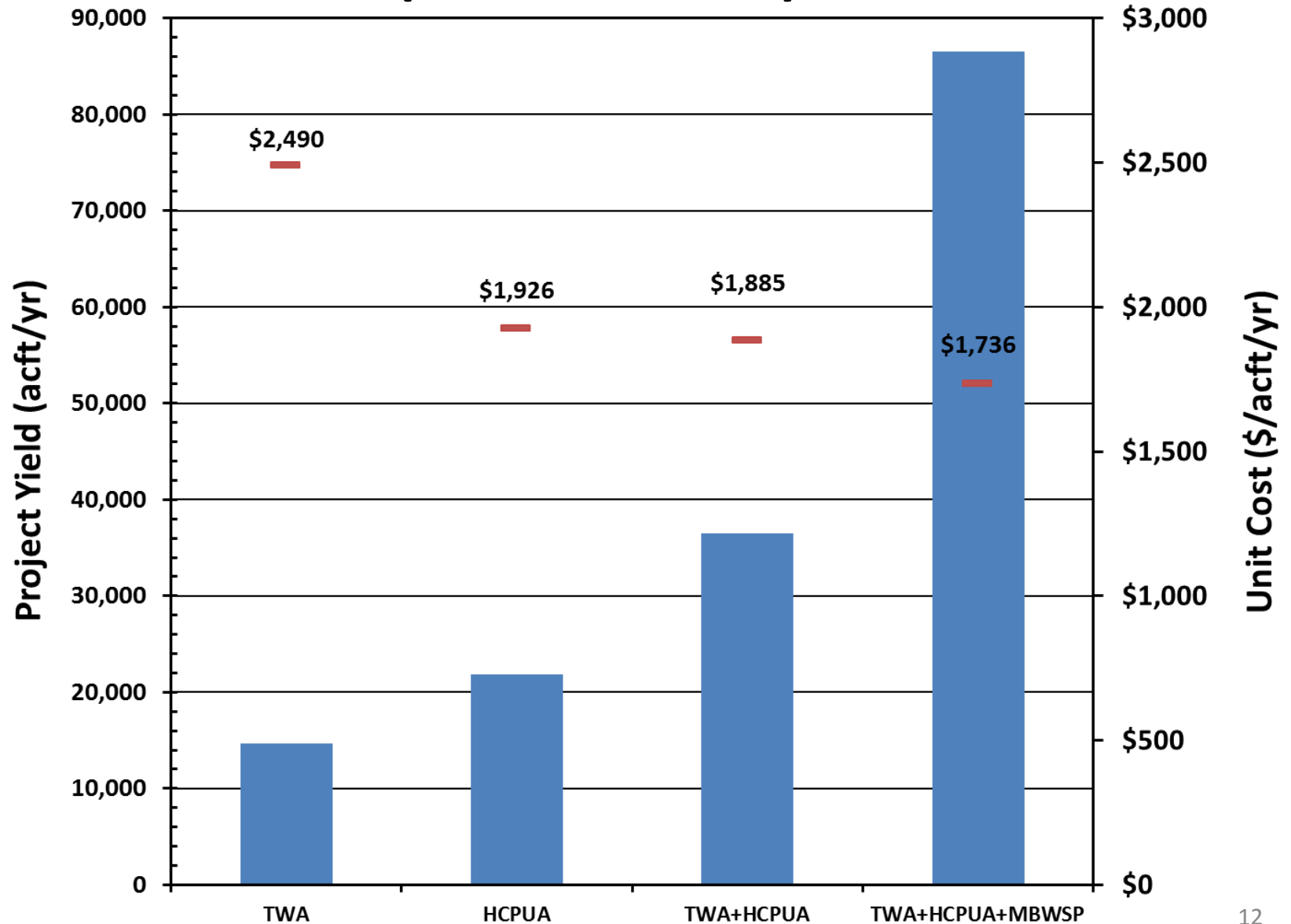
2 - Option 0 provides 15,000 acft/yr to MBWSP DP1 and DP2 at a 2.0 peaking factor

3 - Total supply from the MBWSP Option 3C is delivered to SAWS at a uniform rate (1.0 peaking factor).

4 - With delivery of firm yield during debt service period.



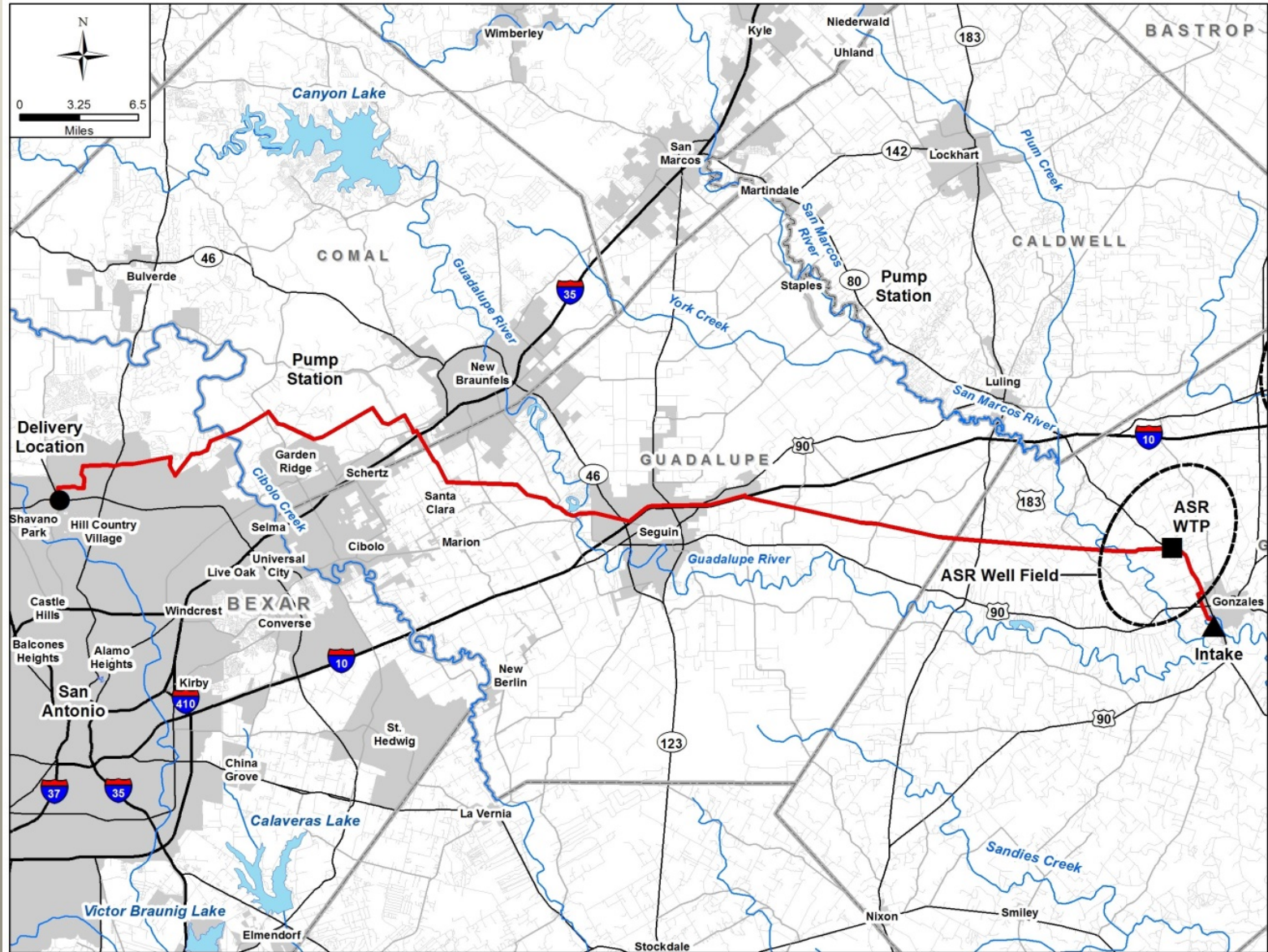
# Project Yields and Unit Costs (MAG Limited)



# Surface Water w/ ASR (Option 3C)

- Sources and Firm Supply:
  - 50,000 acft/yr from Guadalupe River and ASR in GCUWCD
  - Sources of Supply (Average): Surface Water = 31,100 acft/yr and Recovery = 18,900 acft/yr (*includes existing surface water rights in the Luling area*)
- Operations:
  - Treated surface water delivered to participants and ASR storage with stored surface water as back-up supply
  - Interim back-up supply needed in early years
- Facilities (2.0 peaking factor):
  - 40 dual purpose wells (1,533 gpm peak/ 348 gpm average)
  - 140 cfs river intake
  - Water Treatment Plant (89 MGD)
  - 6 mile 66-IN diameter raw water pipeline
  - 45 mile, 66-IN, 36-IN diameter finished water pipelines
  - Two delivery locations and potential for tie-ins along the route
- Unit Cost: \$1,467/acft/yr  
→ **\$1,637/acft/yr (2016 SCTRWP)**

# Mid-Basin Surface/ASR to SAWS

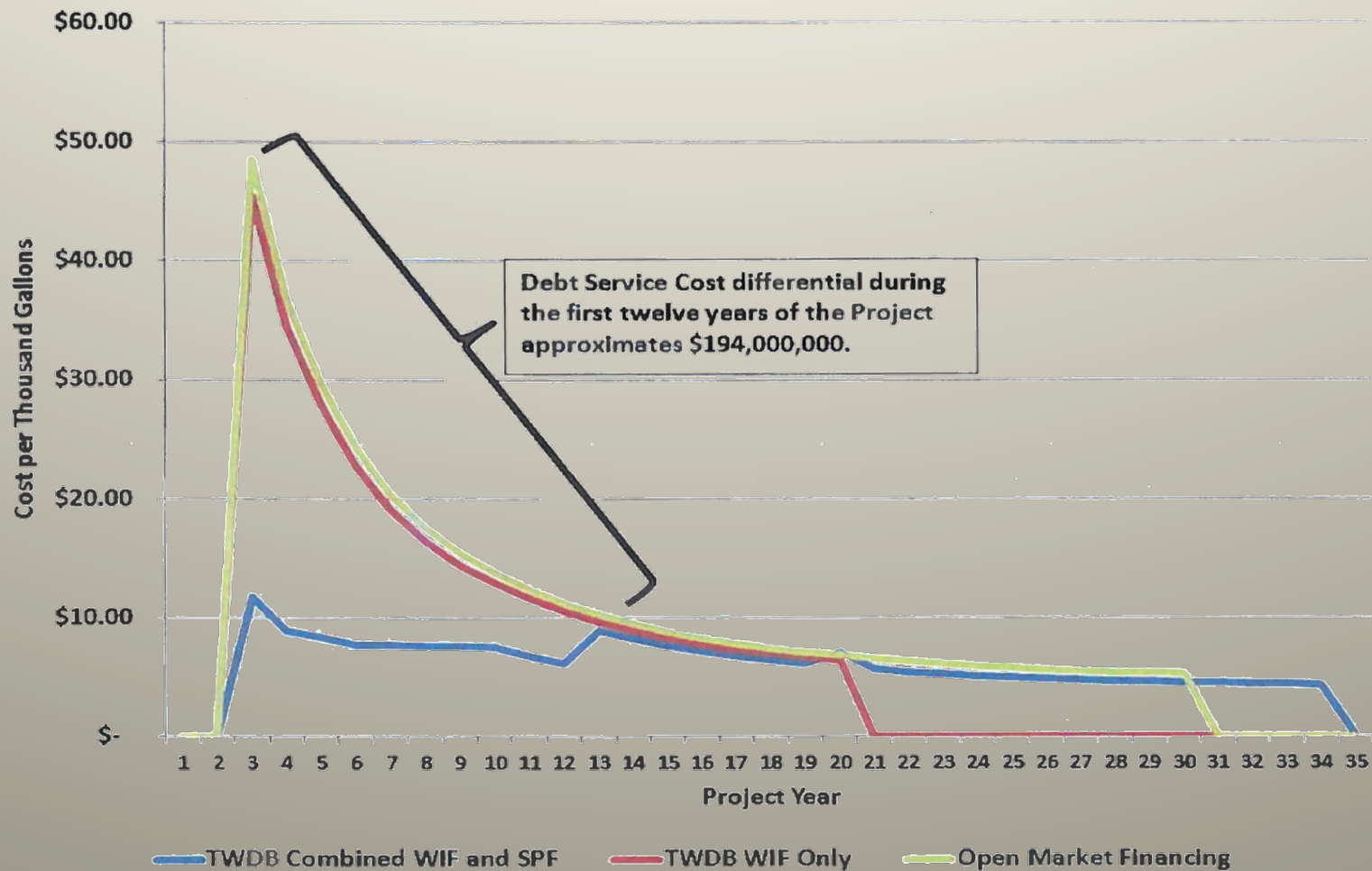




# MBWSP ASR to San Antonio

The MBWSP ASR to San Antonio option includes uniform delivery of **50,000 acre-feet/year** to the proposed San Antonio Water System (SAWS) **Vista Ridge Project** delivery location. Facilities include a pump station and 66-inch diameter pipeline to deliver raw water 6 miles from an intake on the Guadalupe River to a 79 MGD water treatment plant (WTP) prior to delivery to SAWS or aquifer storage for subsequent recovery. A **71-mile, 48-inch diameter transmission system** delivers treated supplies from the WTP or ASR to SAWS. Preliminary conceptual unit cost of water from this project is estimated at **\$1891/acre-foot**.

## Guadalupe-Blanco River Authority Mid-Basin Project Comparative Water Costs - Debt Service Only



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# Things You Can't Not Know

- There are alternatives to Vista Ridge (VR) in our Planning Region (SCTRWPG).
- SAWS didn't consider those options
- VR will cost more than local alternatives
- State Planning will suffer if VR moves forward:
  - Public Dollars will be wasted on Private Projects
  - Delayed Acceptance of Public Private Partnerships

# What the City Council Can Do

- **Support HB 3996 Subjecting SAWS to Sunset Review**
- Create an Independent Review Board to examine how VR came to be and make sure that the process is corrected.
- Replace the SAWS Board:
  - Create an Elected Board
  - Return SAWS to Direct City Council Control
- Keep SAWS as a Public Utility, however:
  - Return Water Supply Planning to the City