

2016 Region L Water Plan
Request for Substitution of
Water Management Strategies

Guadalupe-Blanco River Authority
Mid-Basin Water Supply Project

Overview

- GBRA's Substitution Request
- Texas Administrative Code/TWDB Rules
- Review of affected Water Management Strategies
- Questions

GBRA Request



- GBRA is preparing to implement one of the evaluated water management strategies from the 2016 Region L Water Plan to serve the water supply needs in Comal, Hays, and Guadalupe Counties.
- In order to qualify for SWIFT or other state-offered financing consideration, GBRA needs to amend the 2016 Region L Plan and 2017 State Water Plan by substituting an alternative strategy in place of two recommended strategies.

GBRA Request

- GBRA intends to purchase Texas Water Alliance (TWA) Carrizo groundwater assets.
- The current Mid-Basin Water Supply Project – ASR Recommended Strategy in 2016 Region L Water Plan does not include production of Carrizo groundwater.
 - Alternative Strategy incorporates all phases from the existing recommended Mid-Basin Water Supply Project, but also incorporates groundwater production volumes associated with TWA’s project.
- TWA has provided a letter supporting GBRA’s strategy substitution.

Texas Administrative Code
Title 31, Part 10, Chapter 357
RULE §357.51 Amendments to Regional Water Plans

- (e) Substitution of Alternative WMSs.
 - “...RWPGs may substitute one or more evaluated Alternative Water Management Strategies for a recommended strategy if the strategy originally recommended is no longer recommended and the substitution of the Alternative WMS is capable of meeting the same Water Need without over-allocating any source.
 - Proposed substitutions must receive written approval from the EA prior to substitution by the RWPG.”

Substitution Requirements

- Project Evaluation
 - The Alternative Mid-Basin Water Supply Project (MBWSP), Conjunctive Use with ASR, water management strategy evaluation can be found in the 2016 South Central Texas Regional Water Plan. (Vol. II, Ch. 5.2.32)
- Water User Group Needs
 - TWDB will determine if substitution is capable of supplying WUG Needs
- Over-Allocation
 - TWDB to ensure there is not an over-allocation of the water supply source
 - Substitution is needed to remove TWA Carrizo Project since GBRA's Alternative MBWSP includes Carrizo groundwater volumes

Affected Water Management Strategies

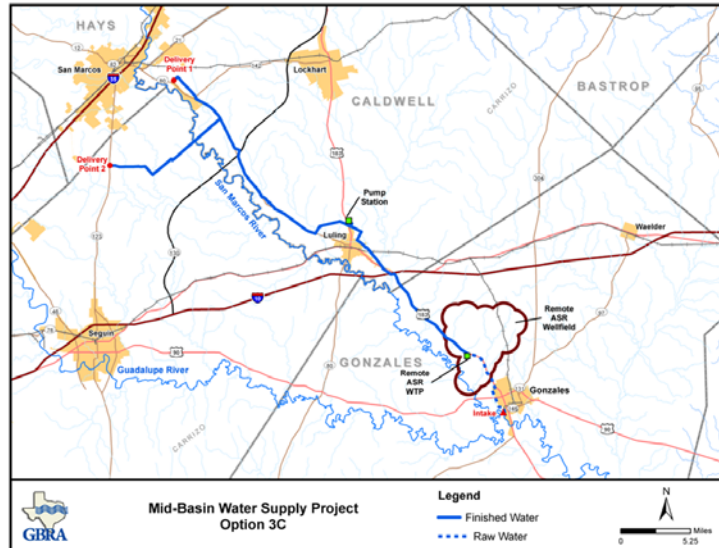
The requested substitution replaces two recommended strategies with one evaluated Alternative Water Management Strategy:

- RECOMMENDED
 1. GBRA Mid-Basin Water Supply Project (MBWSP)
 - Surface Water with ASR
 - 50,000 acft
 2. Texas Water Alliance (TWA) Carrizo Project
 - 15,000 acft (MAG-Limited)

- ALTERNATIVE
 1. Mid-Basin Water Supply Project (MBWSP)
 - Conjunctive Use with ASR
 - 42,000 acft

Recommended

GBRA Mid-Basin Water Supply Project
Surface Water with ASR



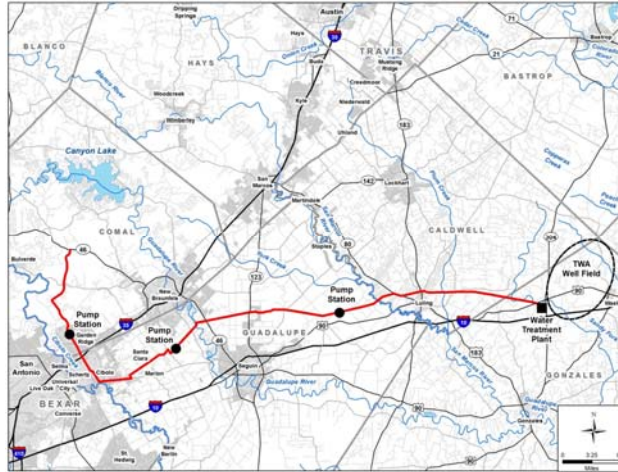
Recommended MBWSP - SURFACE WATER W/ ASR

- The MBWSP is a phased project to provide water supplies directly to participants in Comal, Caldwell, Hays, and/or Guadalupe Counties.
- The recommended water management strategy focuses on an ASR formulation which includes run-of-river diversions from the Guadalupe River near Gonzales, treatment, and transmission to participants and ASR wells in Gonzales County for storage and subsequent recovery during periods when run-of-river diversions are limited.
- The project has a firm yield of 50,000 acft/yr

Recommended MBWSP - SURFACE WATER W/ ASR NEEDS

	WUG Strategy Supply 2020	WUG Strategy Supply 2030	WUG Strategy Supply 2040	WUG Strategy Supply 2050	WUG Strategy Supply 2060	WUG Strategy Supply 2070
UNASSIGNED WATER VOLUMES	43,008	39,244	25,674	36,009	30,467	21,074
WUG NEEDS	6,992	10,756	24,326	13,991	19,533	28,926
Total	50,000	50,000	50,000	50,000	50,000	50,000

Recommended TWA Carrizo Project



Recommended TWA Carrizo Project

- The TWA has secured groundwater leases and permits in northern Gonzales County to deliver up to 15,000 acft/yr of Carrizo Aquifer groundwater to entities in Gonzales, Guadalupe, and Comal Counties.
- Due to MAG limitations, the recommended firm supply of the project is 14,680 acft/yr

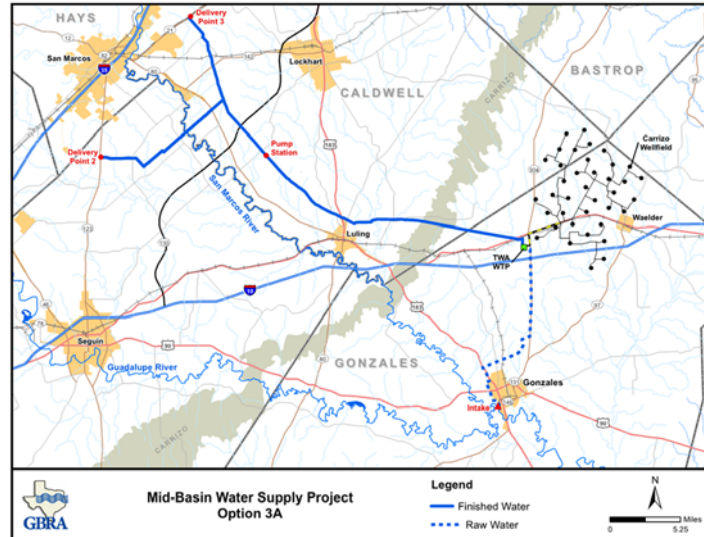
Recommended TWA Regional Carrizo Needs

	WUG Strategy Supply 2020	WUG Strategy Supply 2030	WUG Strategy Supply 2040	WUG Strategy Supply 2050	WUG Strategy Supply 2060	WUG Strategy Supply 2070
UNASSIGNED WATER VOLUMES	8,413	11,916	13,249	9,707	4,866	3,532
WUG NEEDS	0	8,413	2,573	5,464	10,699	12,056
Total	8,413	20,329	15,822	15,171	15,565	15,588

Combined WUG Needs without Unassigned Volumes

	WUG Strategy Supply 2020	WUG Strategy Supply 2030	WUG Strategy Supply 2040	WUG Strategy Supply 2050	WUG Strategy Supply 2060	WUG Strategy Supply 2070
MBWSP WUG NEEDS	6,992	10,756	24,326	13,991	19,533	28,926
TWA WUG NEEDS	0	671	2,573	5,464	10,699	12,056
Total	6,992	11,427	26,899	19,455	30,232	40,982

Alternative
Mid-Basin Water Supply Project
Conjunctive Use with ASR



Alternative
MBWSP
Conjunctive Use with ASR

- MBWSP Conjunctive Use with ASR is a phased project which incorporates surface water from the Guadalupe River with a Carrizo well field that produces groundwater and stores treated surface water.
- The strategy is configured to include an ASR well field that is co-located with the Carrizo well field on TWA leased property in Gonzales County.

Alternative MBWSP Conjunctive Use with ASR

- Using monthly water availability and daily disaggregation procedures, an accounting model was used to simulate surface water diversions to a WTP and ASR well field as well as groundwater production from which a firm supply of treated water could be delivered to project participants.
- Models indicate a firm yield of 42,000 acft/yr

Alternative MBWSP Conjunctive Use with ASR

Water User Group Name	Source Name	WUG Strategy Supply 2020	WUG Strategy Supply 2030	WUG Strategy Supply 2040	WUG Strategy Supply 2050	WUG Strategy Supply 2060	WUG Strategy Supply 2070
UNASSIGNED WATER VOLUMES	CARRIZO-WILCOX AQUIFER	21,000	21,000	21,000	21,000	21,000	21,000
UNASSIGNED WATER VOLUMES	GUADALUPE RUN-OF-RIVER	21,000	21,000	21,000	21,000	21,000	21,000
Total		42,000	42,000	42,000	42,000	42,000	42,000

WUG Needs

Combined WUG Needs from Recommended Strategies
(without Unassigned Volumes)

	WUG Strategy Supply 2020	WUG Strategy Supply 2030	WUG Strategy Supply 2040	WUG Strategy Supply 2050	WUG Strategy Supply 2060	WUG Strategy Supply 2070
MBWSP WUG NEEDS	6,992	10,756	24,326	13,991	19,533	28,926
TWA WUG NEEDS	0	671	2,573	5,464	10,699	12,056
Total	6,992	11,427	26,899	19,455	30,232	40,982

Available Supply from Alternative Strategy

Water User Group Name	Source Name	WUG Strategy Supply 2020	WUG Strategy Supply 2030	WUG Strategy Supply 2040	WUG Strategy Supply 2050	WUG Strategy Supply 2060	WUG Strategy Supply 2070
UNASSIGNED WATER VOLUMES	CARRIZO-WILCOX AQUIFER	21,000	21,000	21,000	21,000	21,000	21,000
UNASSIGNED WATER VOLUMES	GUADALUPE RUN-OF-RIVER	21,000	21,000	21,000	21,000	21,000	21,000
Total		42,000	42,000	42,000	42,000	42,000	42,000

Questions?

GBRA appreciates the assistance of the
South Central Regional Water Planning
Group and the Texas Water
Development Board.