



TECHNICAL CONSULTANT PRESENTATION

PLATEAU WATER PLANNING GROUP MEETING – APRIL 25, 2024

08

Update on Regional Water Planning Schedule

Agenda Item #8

Required Deadlines in 2024

- **May 3, 2024** – Technical Memorandum due to TWDB
- **June 5, 2024** – 2021 RWP Amendments for Infeasible WMSs due to TWDB

Material Covered at Previous Meeting: Oct. 26, 2023

- RWPG approved the list of Major Water Providers
- Reviewed surface water sources, supply analysis / hydrologic variance request, and surface water availability
- Reviewed groundwater sources, groundwater availability methodology, DFC's and groundwater availability (MAGs)
- Reviewed the process for identifying Potential Infeasible WMSs
- RWPG approved the process for identifying Potential Feasible WMSs
- Brief Summary on requirements of Tech Memo

Today's Discussion

- Report from Carollo on the Proposed Tech Memo
 - » *Public Comment*
 - » *RWPG to Approve the Tech Memo*
- Report from Carollo on the Proposed Task 5B Scope of Work and Budget for Evaluation of Potentially Feasible Water Management Strategies and Projects
 - » *RWPG to Approve*
 - » *RWPG to Authorize UGRA to Submit the Request Notice-to-Proceed on behalf of Region J*

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Report from Carollo on the Proposed Technical Memorandum

Agenda Item #9

Background

- *TAC 357.12(c) and TWDB guidelines require that a Technical Memorandum be submitted by the RWPG.*
- *Deadline is May 3, 2024*
- *Includes:*
 - ✓ *Preliminary DB27 output tables of:*
 - *Population Projections*
 - *Water Demand Projections*
 - *Water Availability*
 - *Existing Water Supply Allocations*
 - *Water Needs*
 - *2026 RWP WUG Data Comparison to 2021 RWP*
 - *2026 RWP Source Data Comparison to 2021 RWP*
 - ✓ *Documentation of:*
 - *Copy of the Hydrologic Variance Request (Approved at the Oct. 2023 RWPG Meeting)*
 - *Methodology of Groundwater Availability (Handout #1)*
 - *Process used to identify Potentially Feasible WMSs (Handout #2)*
 - *Tabular list of all Potentially Feasible WMSs (Handout #3)*
 - *Summary of Region's Interregional Coordination Efforts*

01

Plateau Region –
Groundwater Source
Availability
Methodology

Handout #1

**Plateau Region – 2026 RWP
Groundwater Source Availability Methodology**

Source Supply	County	Basin	Methodology
Austin Chalk Aquifer	Kinney	Rio Grande	0.6% (0.006) of average annual rainfall (22 in) over the aquifer outcrop (189,377 acres) as recharge. Calculated by Planning Group consultant (WSP).
		Nueces	Based on Robert Bradley's analysis of the number of wells in the TWDB Groundwater Database. GMA10
Nueces River Alluvium Aquifer	Edwards	Nueces	Recharge plus 0.1 volume of water in storage. See Plateau Region Report: Occurrence of Significant River Alluvium Aquifers in the Plateau Region (2010). www.ugra/plateau-water-planning-group
	Real	Nueces	
Frio River Alluvium Aquifer	Real	Nueces	
Ellenburger/San Saba Aquifer	Kerr	Colorado	Annual availability of 0.007 acre-feet/acre/year over 286,000 acres of prime production zone in eastern Kerr County. See Sec 3.1.8 of the 2021 Plan.
		Guadalupe	
Edwards-BFZ Aquifer	Kinney	Nueces	GMA10 MAG
		Rio Grande	
Edwards Group of the Edwards-Trinity (Plateau) Aquifer	Kerr	Colorado	GMA9 Non-Relavant, TWDB modeled run compatible with DFC, which was provided to PWPG.
		Guadalupe	
		Nueces	
		San Antonio	
	Bandera	Guadalupe	GMA9 MAG
		Nueces	
San Antonio			
Edwards-Trinity (Plateau), Pecos Valley, Trinity Aquifer	Edwards	Colorado	GMA7 MAG
		Nueces	
		Rio Grande	
	Kinney	Nueces	
		Rio Grande	
	Real	Colorado	
		Nueces	
	Val Verde	Guadalupe	
Rio Grande			
Trinity Aquifer	Bandera	Guadalupe	GMA9 MAG
		Nueces	
		San Antonio	
	Kerr	Colorado	
		Guadalupe	
		Nueces	
		San Antonio	

02

Plateau Region – Process Used to Identify Potentially Feasible WMSs

Handout #2

Needs Analysis

1. Receive a Needs Analysis Report from the TWDB, which provides a comparison of existing water supplies and projected water demands for each water user group (WUG) and wholesale water provider (WWP) in the Region. Based on this comparison, the report identifies WUGs and WWPs that are expected to experience needs for additional water supplies within the 50-year time frame of the regional water plan.

Identification and Selection Process

2. Review the potential infeasibility and implementation status identifying:
 - If strategy contemplates permitting and/or construction;
 - If strategy is near-term or necessitates significant time for implementation;
 - If the potential sponsor(s) have taken, or have indicated they will take, affirmative steps towards the strategy's implementation. Affirmative steps may include, but not be limited to:
 - a. Spending money on the strategy or project;
 - b. Voting to spend money on the strategy or project;
 - c. Applying for a federal or state permit for the strategy or project

03

Plateau Region – List of Potentially Feasible WMSs

Handout #3

List of Potentially Feasible Water Management Strategies Considered for the Development of the 2026 Plateau Water Plan

County	Water User Group	Strategy
Bandera	City of Bandera	Reuse treated wastewater effluent for irrigation of public spaces
		Promote, design & install rainwater harvesting systems on public buildings
		Additional Lower Trinity well and lay necessary pipeline ALTERNATE
		Additional Middle Trinity wells within City water infrastructure area
		Surface water acquisition, treatment and ASR
	*Bandera County FWSD #1	Public conservation education Additional groundwater well
	*Bandera County Other – Bandera River Ranch #1	Water loss audit and main-line repair for
	*Bandera County Other - Lake Medina Shores	Public conservation education Additional groundwater wells ALTERNATE
	*Bandera County Other - Medina WSC	Public conservation education Additional groundwater well
	Bandera County Other	Drought management (BCRAGD)
	Bandera County Other – Volunteer Fire Dept.	Additional groundwater wells to provide emergency supply ALTERNATE
	Bandera County Other - Enchanted River Estates	Water loss audit and main-line repair
	Bandera County Other	Drought management (BCRAGD)
	*Bandera County Irrigation	Irrigation scheduling Additional groundwater wells
	*Bandera County Livestock	Livestock conservation Additional groundwater well Livestock conservation Additional groundwater well
	Edwards	City of Rocksprings
Edwards County Other (Barksdale WSC)		Additional well in the Nueces River Alluvium Aquifer and RO wellhead treatment
*Edwards County Mining		Additional groundwater well
		Additional groundwater wells
Kerr	*City of Kerrville	Increase wastewater reuse
		Water loss audit and main-line repair
		Explore and develop new Ellenburger Aquifer well supply
		Increased water treatment and ASR capacity
	Kerr County Other - Eastern Kerr County Regional Water Supply Project	Project 1. Construction of an Ellenburger Aquifer water supply well
		Project 2. Construction of off-channel surface water storage
		Project 2. Construction of surface water treatment facilities and transmission lines
		Project 3. Construction of ASR facility
		Project 4. Construction of Trinity Aquifer wellfield for dense, rural areas
Project 4. Construction of desalination plant		

**(continued) List of Potentially Feasible Water Management Strategies Considered for the
Development of the 2026 Plateau Water Plan**

County	Water User Group	Strategy
Kerr	Kerr County Other - *Center Point	Public conservation education
		Purchase water from EKCRWSP
	Kerr County Other - *Center Point Taylor System	Public conservation education
		Purchase water from EKCRWSP
	Kerr County Other - Verde Park Estates	Water loss audit and main-line repair
	*Kerr County Other	Public conservation education
	*Kerr County Livestock	Livestock conservation
		Additional groundwater wells ALTERNATE
		Livestock conservation
		Additional groundwater wells ALTERNATE
Livestock conservation		
Additional groundwater well ALTERNATE		
*Kerr County Mining	Additional groundwater wells	
Kinney	City of Brackettville	Increase supply to Spofford with new water line
		Increase storage facility
	Fort Clark Springs MUD	Water loss audit and main-line repair
		Increase storage facility
Real	*City of Camp Wood	Public conservation education
		Additional groundwater wells
	City of Leakey	Additional groundwater well
		Develop interconnections between wells within the City
	Real County Other - Real WSC	Water loss audit and main-line repair
Real County Other - Oakmont Saddle Mountain WSC	Additional groundwater well	
Val Verde	*City of Del Rio	Water loss audit and main-line repair
		Additional groundwater well
		Water treatment plant expansion
		Develop a wastewater reuse program
	Laughlin Air Force Base	Purchase water from City of Del Rio
	Val Verde County Other - Val Verde County WCID Comstock	Water loss audit and main-line repair
	Val Verde County Other - San Pedro Canyon Upper Subdivision	Water loss audit and main-line repair
	Val Verde County Other - Tierra Del Lago	Water loss audit and main-line repair
*Val Verde County Mining	Additional groundwater wells	

Groundwater Availability Information Summarized for Technical Memorandum

- *Groundwater from*
 - ✓ *7 Major and/or Minor Aquifers*
 - ✓ *Several "Other" Aquifers*
 - ✓ *Several River Alluviums*
 - ✓ *ASR*
 - ✓ *Reuse*
- *Groundwater Availability through 2080*
 - ✓ *175,476 acre-feet in 2030 through 174,854 acre-feet in 2080*
 - ✓ *MAG values remained constant between the 2021 Plan and 2026 Plan, but some increases / decreases in "other aquifer" sources due to max. annual historical use data (2011-2021)*
- *Total Availability Calculated = MAG + Non-MAG*
- *No GCDs have expressed any interest in using a MAG Peak Factor at this time.*

Surface Water Availability Information Summarized for Technical Memorandum

TCEQ Water Availability Models (WAMs)

❖ Hydrologic Variance Request (10/27/2023)

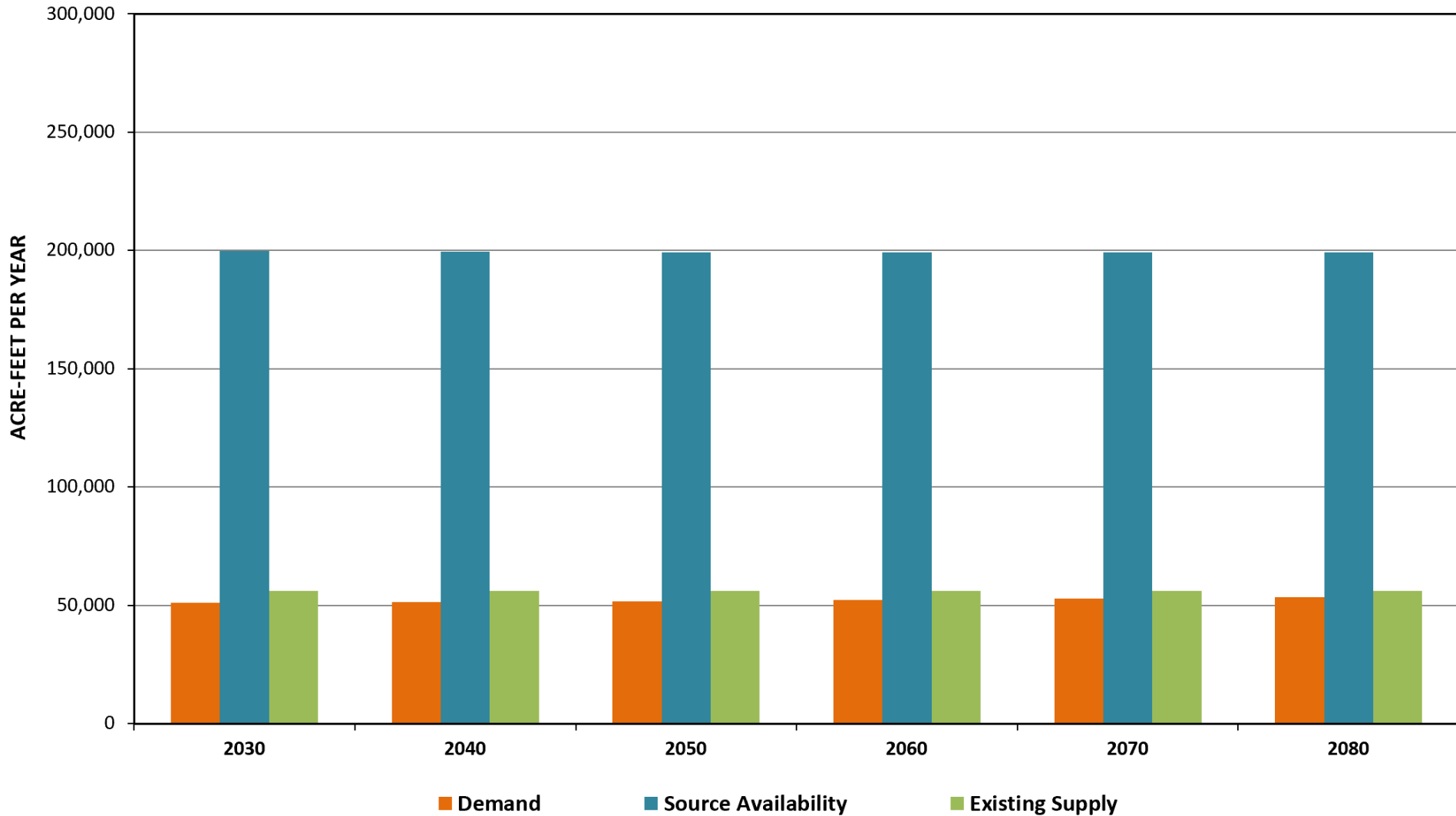
❖ TWDB Response (1/4/2024)

Source availabilities included in DB27 Reporting

Medina Reservoir FY = 0 ac-ft/yr

Folder Name	Description	Use	Version Date	Simulation Date
colo-full	Files for Colorado River Basin Region J WAM with no modifications from TCEQ Run3.	Colorado River Basin Run-of-river minimum annual diversions.	10/1/2023	3/29/2024
gsa-full	Files for Guadalupe San Antonio River Basin Region J WAM with no modifications from TCEQ Run3.	Guadalupe San Antonio River Basin Run-of-river minimum annual diversions and firm yields for municipal diversions.	10/1/2023	4/1/2024
nueces-full	Files for Nueces River Basin Region J WAM with no modifications from TCEQ Run3.	Nueces River Basin Run-of-river minimum annual diversions and firm yields for municipal diversions.	10/1/2023	4/1/2024
riogrande-full	Files for Rio Grande River Basin Region J WAM with no modifications from TCEQ Run3.	Rio Grande River Basin Run-of-river minimum annual diversions and firm yields for municipal diversions.	10/1/2023	4/1/2024

Technical Memorandum Data Snapshot (subject to change with continuing WUG/WWP engagement)



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Plateau Region – 2026 Draft Technical Memorandum

Handout #4

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Public Comment on the Proposed Technical Memorandum

Agenda Item #10

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RWPG to Approve the Technical Memorandum

Agenda Item #11

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Approve Carollo to
Coordinate with the
TWDB & Submit the
Technical Memorandum

Agenda Item #12

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Report from Carollo, Discussion & Action to Approve the Task 5B SOW & Budget

Agenda Item #13

Background

TWDB prepared the Second Amended Scope of Work, Sept. 2023:

- Task 5B – Evaluation and Recommendations of Water Management Strategies and Projects includes preparation of a separate chapter "...that identifies, evaluates, and recommends WMSs and WMPs."*
- "Performance of work associated with any 5B subtasks will be contingent upon a written notice-to-proceed in the form of a contract amendment."*
- "Scope of Work to be amended based on specific Task 5B scope of work to be developed and negotiated with TWDB."*

TWDB has allocated funds for Task 5B

Prior to evaluation of the Potentially Feasible WMSs identified, Region J must develop and submit a scope of work and associated budget and request notice-to-proceed.

Considerations

Target budget amount is \$145,222.00

Not based on identified needs, but on recommended process including broad statutory categories.

TWDB rules do not allow inclusion of WMS/WMSPs or costs associated with:

- *Maintaining existing supplies;*
- *Replacing existing infrastructure;*
- *Expanding water distribution system capacity;*
- *Delivering more water within the distribution system to address increased system growth of new retail developments; or*
- *Delivering greater volumes of water within the distribution system for existing or future fire protection*

Considerations (continued)

Available supplies will be calculated based on approved methodologies

Estimated WMS and WMP costs will be updated using the updated TWDB Unified Costing Model

Each strategy will be evaluated consistent with approved process and guidelines, including reliability, cost, environmental impacts, and other components adopted by the Region J RWPG

WMS evaluation is aligned with statutory categories (e.g., conservation, reuse, etc.)

The scope of work (details included in packet) also includes:

- Coordination with specific WUGs and WWPs as necessary*
- Database entry*
- Preparation of the associated chapter*
- Required digital TWDB-formatted workbook for all tasks*

Subtask WMS	Task Description	2021 Plan # of WMS	Subtask Budget
1	Public Conservation Awareness	8	\$4,256
2	Water Loss Audit & Main Line Repair	10	\$3,000
3	Livestock Conservation	6	\$1,800
4	Irrigation Scheduling	1	\$1,000
4	Vegetative Management	7	\$1,788
5	Drought Management	1	\$950
6	Rainwater Harvesting	1	\$950
7	Reuse	3	\$4,215
9	Groundwater Development	27	\$21,782
10	Surface Water Development	9	\$13,190
11	ASR	3	\$5,807
12	Infrastructure Development	6	\$9,200
13	Eastern Kerr County RWSP	11	29,047
14	Other Strategies		\$11,618
15	Database Entry		\$11,619
16	Chapter / Report Preparation		\$25,000
	Total		\$145,222

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2021 Plan Notice-to-
Proceed Budget

vs.

2026 Plan Notice-to-
Proceed Budget

Handout #5

06

Far West Texas Water
Planning Group –
Request to Obtain a
Notice-to-Proceed
on Task 5B

Handout #6

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RWPG to Approve Authorizing the UGRA to Submit Region J's Request Notice-to- Proceed

Agenda Item #14

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Set Next Meeting

Agenda Item #15