NOTICE OF OPEN MEETING OF THE
SOUTH CENTRAL TEXAS REGIONAL
WATER PLANNING GROUP

TAKE NOTICE that a meeting of the South-Central Texas Regional Water Planning Group (SCTRWPG) as established by the Texas Water Development Board will be held on Thursday, August 28, 2025 at 9:30 AM both in person and virtually. The in-person meeting will be held at the San Antonio Water System's Customer Service Building, Room CR-145, 2800 US Hwy 281 North, San Antonio, TX 78212. You can attend virtually on WebEx at https://saws.webex.com/saws/j.php?MTID=m7e99184c70ca35f1cfcb795e7a008923. The planning group members will consider and may take action regarding:

1. (9:30 AM) Roll-Call
2. Public Comment (Limited to 3 minutes)
3. Approval of the Minutes from the Previous Meeting of the South-Central Texas Regional Water Planning Group (SCTRWPG)
4. Status Reports and Communications by TWDB
    a. Summary of Socioeconomic Impact Analysis – Region L
5. Status Reports and Communications Related to Regional Water Planning including reports by the Chair, Regional Liaisons, Groundwater Management Area Representatives, and Members of the Planning Group
6. Consideration and Appropriate Action Regarding Presentation by Technical Consultant Regarding Schedule and Progress Update
7. Consideration and Appropriate Action to Approve Proposed Responses Regarding the Public Comments and Agency Comments Received on the Initially Prepared Plan (IPP) for the 2026 South Central Texas (Region L) Regional Water Plan
8. Discussion and Appropriate Action Regarding Proposed Update to CRWA Wells Ranch III Project as Presented in SCTRWPG 2025 IPP
9. Discussion and Appropriate Action Regarding the Establishment of Additional Subcommittees
10. Schedule and Potential Agenda Items for the Next Meeting of the SCTRWPG
11. Public Comment (Limited to 3 minutes)
12. Adjourn

Comments and submissions may be submitted through email to ccastillo@sariverauthority.org and include “Region L South Central Texas Water Planning Group Meeting Public Comment” in the subject line of the email. Any written documentation can be sent to Curt Campbell, Chair, South Central Texas Regional Water Planning Group, c/o San Antonio River Authority, Attn: Caye Castillo, 100 E. Guenther Street, San Antonio, TX 78204. Please direct any questions to Caye Castillo at (210) 302-4258, ccastillo@sariverauthority.org.

AGENDA ITEM NO.3 – APPROVAL OF THE MINUTES FROM THE PREVIOUS MEETING OF THE SOUTH-CENTRAL TEXAS REGIONAL WATER PLANNING GROUP (SCTRWPG)

Minutes of the South Central Texas Regional Water Planning Group
February 20, 2025

Chair Campbell called the hybrid meeting to order at 9:31 a.m., held both in person and through WebEx online platform.

23 of the 32 voting members, or their alternates, were present.

Voting Members Present:

Tim Andruss
Curt Campbell
Debbie Farmer
Marisa Bruno for Charlie Flatten
Steve Metzler
Michelle Shelton for Terrell Graham
Vic Hilderbran
Thomas Jungman
Aarin Teague
Jason Ammerman
Scooter Mangold
Travis Pruski
Donovon Burton for Robert Puente
Humberto Ramos
Weldon Riggs
Roland Ruiz
Darrell Brownlow
Mitchell Sowards
Jonathan Stinson
Paul Kite
Ryan Kelso
Dianne Wassenich
Adam Yablonski

Voting Members Absent:

Ryan Bayle
John Byrum
Andra Wisian
Andrew McBride
Daniel Meyer
Gary Middleton
Vanessa Puig-Williams
Darren Simmons
Dan Yoxall

Non-Voting Members Present:

Carly Rotzler, TX Department of Parks and Wildlife
Tom Hegemier, Region K Liaison
Michele Foss, Texas Water Development Board (TWDB)
Jami McCool, TX Dept. of Agriculture

Non-Voting Members Absent:

Tony Franklin, Texas Soil & Water Cons. Board
Iliana Delgado, TCEQ
Don McGhee, Region M Liaison
Charles Wiedenfeld, Region J Liaison
Carl Crull, Region N Liaison

Beginning with the February 11, 2016, meeting of the South Central Texas Regional Water Planning Group, all recordings are available for the public at www.regionltexas.org.

AGENDA ITEM NO.1: ROLL CALL

Ms. Castillo took roll call.

AGENDA ITEM NO.2: PUBLIC COMMENT (LIMITED TO 3 MINUTES)

No public comments.

AGENDA ITEM NO.3: APPROVAL OF THE MINUTES FROM THE PREVIOUS MEETING OF THE SOUTH CENTRAL TEXAS REGIONAL WATER PLANNING GROUP (SCTRWPG)

Mr. Riggs motioned to approve the minutes from the previous meeting. Mr. Mangold seconded, the motion passed by consensus.

AGENDA ITEM NO.4: DISCUSSION AND APPROPRIATE ACTION REGARDING FILLING EXISTING VACANCIES AND VACANCIES TO RESULT FROM FUTURE TERM EXPIRATIONS OR RESIGNATIONS

Chair Campbell stated that this is a standing agenda item and there are currently no vacancies on the RWPG to or terms to address at this time.

AGENDA ITEM NO.5: STATUS REPORTS AND COMMUNICATIONS BY TWDB

Ms. Foss provided an update from TWDB on SWIFT funding and the 2026 Regional Water Plan process. Her presentation covered the status of 2025 SWIFT funding applications (28 submitted statewide with 3 in Region L), upcoming deadlines for additional information due February 21, and eligibility requirements for 2026 SWIFT funding. She also outlined the Initially Prepared Plan (IPP) process and timeline, including requirements for public hearings, notice procedures, comment periods, and document availability. Key deadlines include IPP submission to TWDB by March 3, 2025, and final Regional Water Plan submission by October 20, 2025. Her presentation is available online at www.regionltexas.org.

AGENDA ITEM NO.6: STATUS REPORTS AND COMMUNICATIONS RELATED TO REGIONAL WATER PLANNING INCLUDING REPORTS BY THE CHAIR, REGIONAL LIAISONS, GROUNDWATER MANAGEMENT AREA REPRESENTATIVES AND MEMBERS OF THE PLANNING GROUP

Chair Campbell provided an update from GMA 9 stating that there were no updates.

Mr. Brownlow reported that GMA 13 will meet on April 11th in Pleasanton. Today is the final day for comments on the 2024 revised GAM as requested by TWDB.

Mr. Hilderbran provided an update from GMA 7, which met yesterday. They are working on a new GAM model for the Edwards Trinity aquifer. There was discussion on whether the new model will be ready in time, and they will probably use the old model instead.

AGENDA ITEM NO.7: CONSIDERATION AND APPROPRIATE ACTION REGARDING PRESENTATION BY TECHNICAL CONSULTANT REGARDING SCHEDULE AND PROGRESS UPDATES

Ms. Gonzalez provided an update from Black & Veatch regarding schedule progress, updates on completed and ongoing efforts, and updates on draft chapters for the 2026 Regional Water Plan. Her presentation covered the project timeline leading to the March 3, 2025 IPP deadline and October 20, 2025 final plan deadline, progress on water management strategy evaluations, cumulative effects analysis results, unmet needs justifications, implementation survey findings, and interregional coordination efforts. The presentation also included updates on Chapters 4, 5, 6, 9, and 10, with details on water needs analysis, strategy revisions, environmental impact assessments, and public participation activities. Her presentation is available online at www.regionltexas.org.

Discussion ensued as Mr. Brownlow reported that GMA 13 is evaluating a new GAM that will generate MAGs affecting the regional planning process. He noted that the Carrizo aquifer GAM used in GMA 13 was created in 2004 and has been used for four planning cycles. The 2024 GAM is under major scrutiny and GMA 13 likely will not have a new approved GAM, meaning they will continue using 20-year-old water availability data. He cautioned the group against placing too much faith in these water availability models.

Mr. Metzler asked about the percentage difference in the models. Mr. Ramos suggested this issue could be addressed through a future subcommittee since they are near the end of the current planning cycle. Mr. Burton noted that SAWS also has concerns about the model.

Mr. Ramos noted seeing private entities in the process and asked about their participation requirements. Ms. Lauren explained that everyone is allowed but not required to coordinate with the RWP process. Private utilities are typically smaller and harder to locate, often falling under the county-other threshold. They are contacted but not treated differently. Mr. Ramos suggested Region L should require certain sized private utilities to participate in the plan.

AGENDA ITEM NO.8: CONSIDERATION AND APPROVAL REGARDING THE INITIALLY PREPARED PLAN (IPP) FOR THE 2026 SOUTH CENTRAL TEXAS (REGION L) REGIONAL WATER PLAN

Ms. Gonzalez presented the next steps for the Initially Prepared Plan, including adoption of the IPP, completion of DB27 data entry and updates, preparation of deliverables for TWDB, and submittal by the March 3, 2025 deadline. She outlined the public hearing requirements and options, noting the minimum requirement of one in-person public hearing with recording and materials available online. The presentation covered possible additional outreach efforts including virtual webinars and informal meetings. She requested direction from the planning

group on how to proceed with public hearings and outreach, and presented the three action items for consideration: adopting the IPP with authorization for technical consultant updates, authorizing submittal to TWDB, and authorizing SARA to post public notices and hold public hearings. Her presentation is available online at www.regionltexas.org.

a. **CONSIDERATION AND APPROPRIATE ACTION TO ADOPT THE IPP AND AUTHORIZE THE TECHNICAL CONSULTANT TO ADDRESS DB27 UPDATES, NON-SUBSTANTIVE REVISIONS, AND PLANNING GROUP CHANGES PRIOR TO IPP SUBMITTAL**

b. **CONSIDERATION AND APPROPRIATE ACTION TO AUTHORIZE THE TECHNICAL CONSULTANT TO SUBMIT THE IPP PACKAGE TO THE TEXAS WATER DEVELOPMENT BOARD ON BEHALF OF THE SOUTH-CENTRAL TEXAS (REGION L) REGIONAL WATER PLANNING GROUP BY MARCH 3, 2025**

c. **DISCUSSION AND APPROPRIATE ACTION TO AUTHORIZE THE SAN ANTONIO RIVER AUTHORITY TO POST PUBLIC NOTICE(S) AND HOLD PUBLIC HEARING(S) ON THE IPP**

Mr. Siebert offered SAWS as a potential venue if Region L chooses to hold the required meeting there. Mr. Ramos asked about budget considerations. Ms. Gonzalez stated there are budgetary constraints. Ms. Wassenich, as a public representative, noted that given the cost of holding in-person meetings and historically slim attendance, it makes sense to hold one public meeting with liberal virtual opportunities to learn about the plan. Mr. Travis suggested one in-person hybrid meeting in the evening and one virtual meeting, plus virtual webinars.

Mr. Stinson motioned to approve all sub-points (a, b, and c) with the clarification that Region L will hold one hybrid IPP hearing in the evening in San Antonio, one virtual informal meeting, and make a recording available online. Mr. Ruiz seconded the motion. The motion passed by consensus.

AGENDA ITEM NO.9: DISCUSSION AND APPROPRIATE ACTION REGARDING THE ESTABLISHMENT OF ADDITIONAL SUBCOMMITTEES

No additional subcommittees were established.

AGENDA ITEM NO.10: SCHEDULE AND POTENTIAL AGENDA ITEMS FOR THE NEXT MEETING OF THE SCTRWPG

The next SCTRWPG meeting is scheduled for August 28, 2025, at 9:30 AM.

AGENDA ITEM NO.11: PUBLIC COMMENT (LIMITED TO 3 MINUTES)

No public comments.

AGENDA ITEM NO.12: ADJOURN

Mr. Stinson motioned to adjourn the meeting. Mr. Riggs seconded the motion. The motion passed by consensus.

The meeting adjourned at 11:29am.

AGENDA ITEM NO.4 – STATUS REPORTS AND COMMUNICATIONS BY TWDB

A. SUMMARY OF SOCIOECONOMIC IMPACT ANALYSIS – REGION L

Region L Update August 28, 2025

Regional Water Planning Area Boundaries

- TWDB is tasked with reviewing RWP boundaries at least once every 5 years
- Deadline to receive public comments was June 30, 2025
- After closing of the comment period, TWDB evaluates comments and may consider proposing boundary revisions at a regular Board meeting
  - *TWDB anticipates taking this item before the Board in October*

Region L Update August 28, 2025

RWPG Chairs Call July 28, 2025

- Presentation on the Socioeconomic Impact Analysis for 2026 RWPs
  - Meeting notes and recording on TWDB website
  - https://www.twdb.texas.gov/waterplanning/rwp/planningdocu/2026/documents.asp#Presentations
- Review of important deadlines and other matters
- TWDB distributed contract amendments for remaining committed funds for 2026 RWPs
- TWDB developing schedule for 2031 RWPs – more info to come this fall

Region L Update August 28, 2025

RWPG Chairs Call July 28, 2025 – Important Deadlines and Reminders

- Deadline for final RWPs to be submitted to TWDB is ***October 20, 2025***
- RWP data entry and data revision deadline is **September 22, 2025** – no revisions to RWP data may occur after this date
- Draft copies of DB27 data reports may ***not*** be included in the final plan to meet reporting requirements – regions must include ***final versions*** – available **September 24, 2025** in SARA
- Regions ***must provide*** proposed response to TWDB's IPP comments and plan revisions to TWDB for review ***prior*** to plan adoption

Region L Update August 28, 2025

RWPG Chairs Call July 28, 2025 – Important Deadlines and Reminders (cont.)

- RWPG discretion to address comments outside of formal IPP comment period
- RWPG meeting where final plan adopted requires 14-day notice and public comment period prior to meeting.
- Final deliverable includes all required electronic files and ***4 hard copies***

Region L Update August 28, 2025

Socioeconomic Impact Analysis (SEIA)

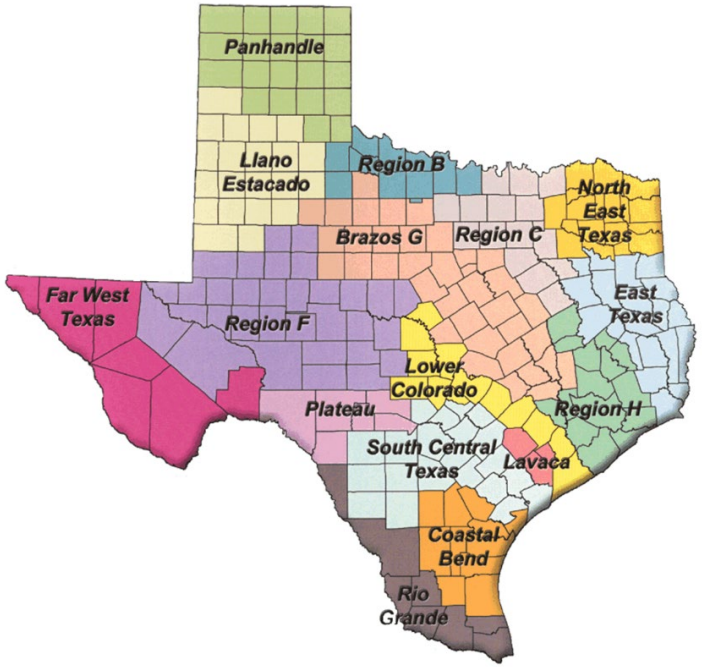
- RWPGs must evaluate the social and economic impacts of not meeting water needs (31 Texas Administrative Code §357.33 (c)).
- Due to the complexity of the analysis, TWDB's Projections & Socioeconomic Analysis department designed and conducted this analysis.
- SEIAs distributed June 26, 2025, to RWPGs. SEIA Addendum distributed August 22.
- Results represent a snapshot of socioeconomic impacts that may occur during a single year repeat of the drought of record if no mitigation strategies are implemented.
- TWDB Socioeconomic Impact Analysis website includes a dashboard that summarizes the data in the report, the methodology for the analysis, and Frequently Asked Questions

https://www.twdb.texas.gov/waterplanning/data/analysis/index.asp

Impact Planning Model (2021)

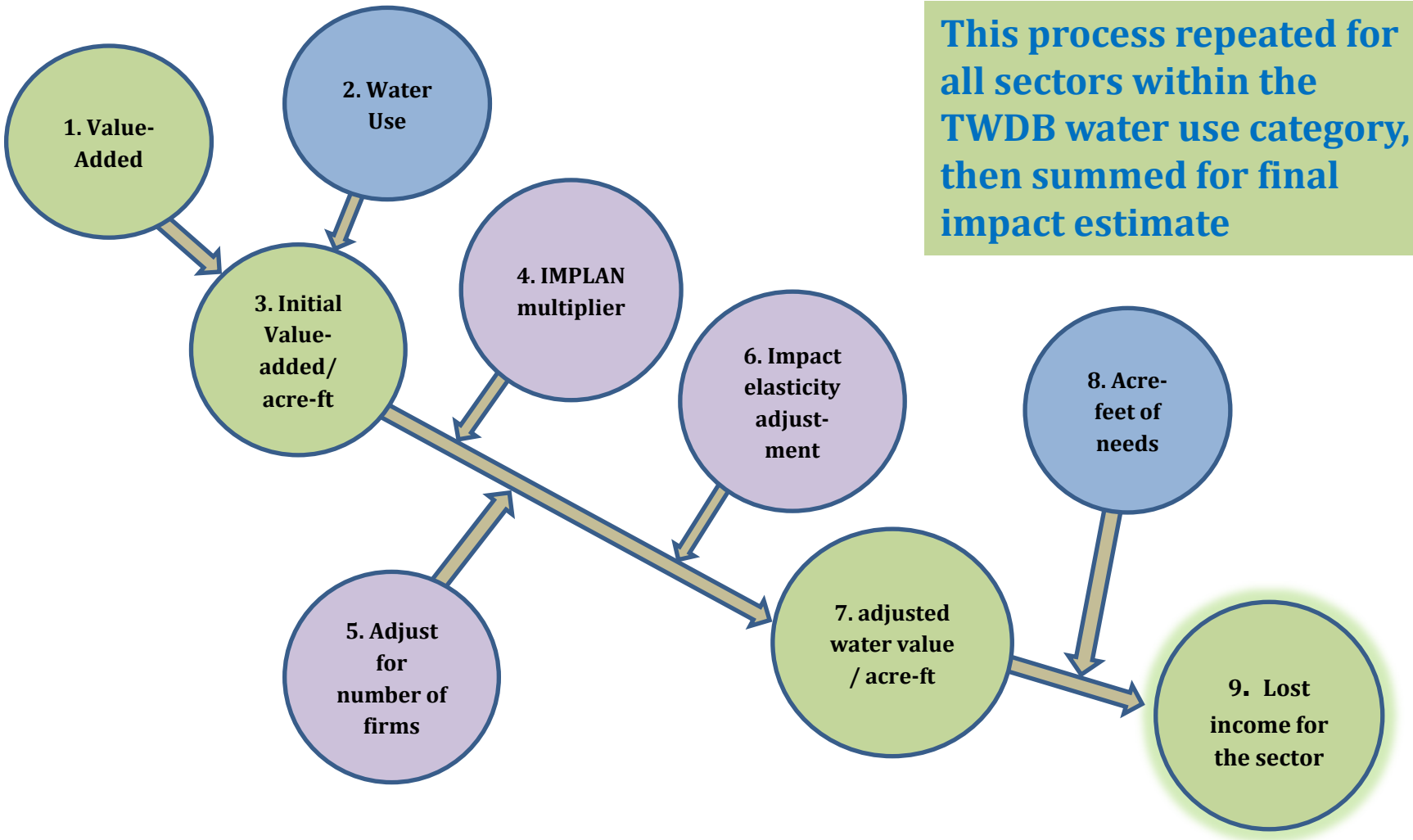
A. Input-output software designed to allow estimation of regional impacts of changes in production in 546 sectors

B. Used to estimate potential lost **income, taxes, and at-risk jobs** for the region due to water shortages



Impacts generated in 2021 dollars and then use CPI to value impacts in year 2023 dollars to match Exhibit C requirements.

Determining Lost Income



This process repeated for all sectors within the TWDB water use category, then summed for final impact estimate

(adjusted water value /acft) x (acft of needs)

= IMPACT

Methodology
Determining Lost Income

Results in impact estimates which:

- Vary by degree of shortage
- Vary by the composition of water use/economic activity by county
- Employ region specific multipliers to reflect impact on that region

Input Data Updates, Changes in Assumptions

- **Baseline structure of the economy**
  (IMPLAN model, 2021)
- **Projected water needs**
  Updates in supplies, GAMS, DFCs, and WAM runs, infrastructure
- Key parameters
  Prices (residential water, water trucking costs, electricity rates, etc.)
- Population and municipal water demand projections
  Based on 2020 U.S. Census, declining population at the county level
- Impact methodology
  Minor revisions of manufacturing, mining, and irrigation impact procedures
- Inflation
  Use of CPI to value impacts in year 2023 dollars

Regional Report Contents

- **Executive Summary**
  a) Year 2021 Primary Production Sectors
  b) Year 2021 Water Use summary by sector (six SEIA sectors)
  c) Decadal Needs Projections
- **Description of Impact Measures**
- **Methodology Description**
- **Impact Measurement Results (regional by water use sector)**
- **Appendix A - County level results by WUG (municipal and non-municipal)**

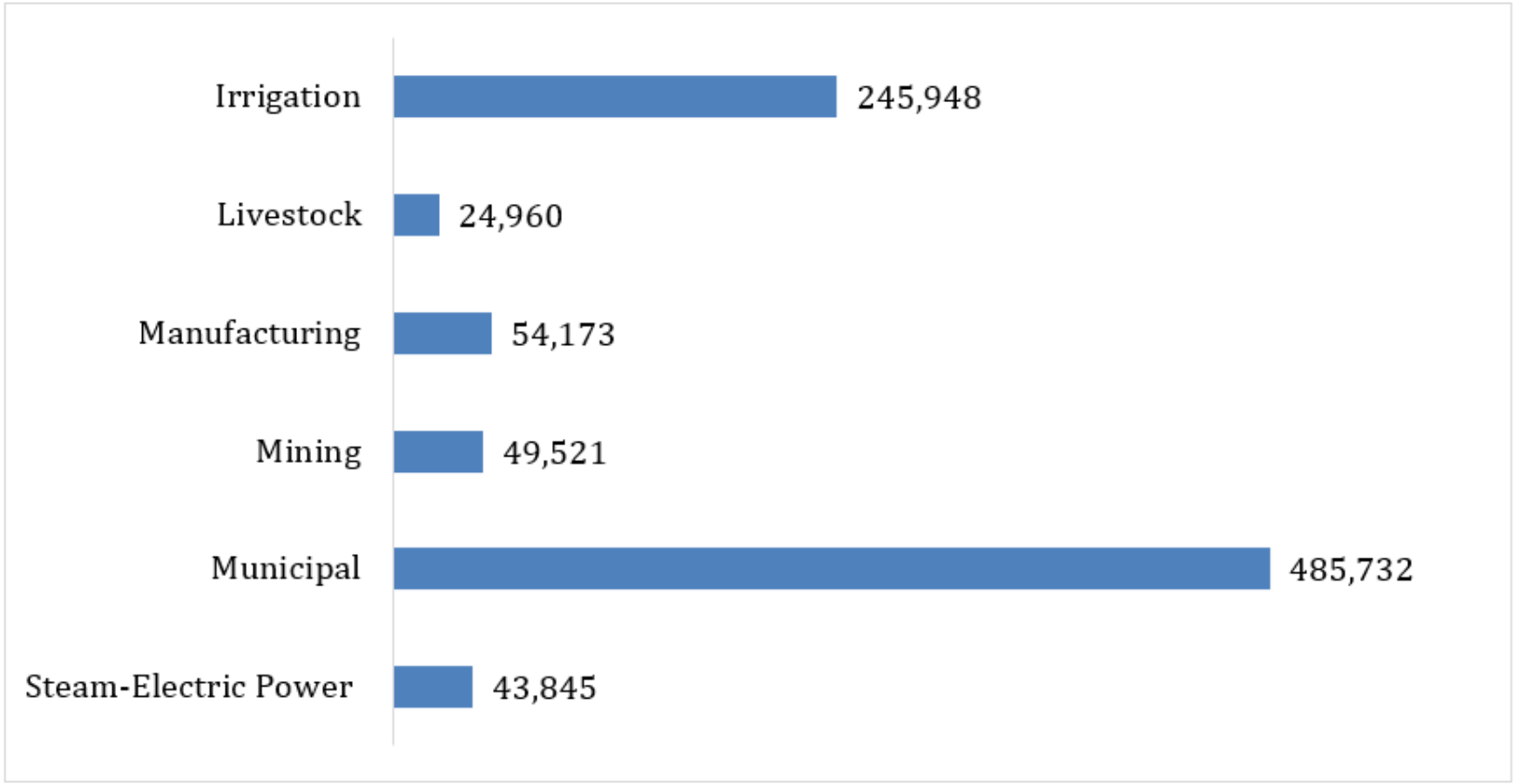
Region L Year 2021 Production Sectors

Table 1-1 Region L regional economy by economic sector*

Economic sector	Value-added ($ millions)	Tax ($ millions)	Jobs
Finance and Insurance	$19,160.31	$1,049.45	120,803
Manufacturing	$17,542.18	$259.32	72,967
Health Care and Social Assistance	$13,794.86	($418.96)	178,812
Professional, Scientific, and Technical Services	$12,463.15	$90.73	121,694
Retail Trade	$10,777.03	$2,312.27	152,183
Wholesale Trade	$10,662.76	$1,566.26	45,565
Real Estate and Rental and Leasing	$10,423.06	$1,347.49	77,040
Mining, Quarrying, and Oil and Gas Extraction	$10,022.89	$1,801.51	22,851
Accommodation and Food Services	$7,642.09	$38.86	146,446
Administrative and Support and Waste Management and Remediation Services	$7,242.88	$143.11	118,681

Region L 2021 Water Use Estimates

Figure 1-1 Region L 2021 water use estimates by water use category (in acre-feet)



Source: TWDB Annual Water Use Estimates (all values in acre-feet)

Region L Needs and Impacts - Irrigation

Table 1-2 Regional water needs summary by water use category*

Water Use Category		2030	2040	2050	2060	2070	2080
Irrigation	water needs (acre-feet per year)	71,258	71,187	71,793	71,862	71,927	71,979
	% of the category's total water demand	23%	23%	23%	23%	23%	23%

Table 4-1 Impacts of water shortages on irrigation

Impact measure	2030	2040	2050	2060	2070	2080
Income losses ($ millions)*	$35	$35	$36	$36	$36	$36
At risk job losses	1,001	1,001	1,016	1,017	1,017	1,018

* Year 2023 dollars, rounded. Entries denoted by a dash (-) indicate no estimated economic impact. Entries denoted by a zero ($0) indicate estimated income losses less than $500,000.

Region L Needs and Impacts - Manufacturing

Water Use Category		2030	2040	2050	2060	2070	2080
Manufacturing	water needs (acre-feet per year)	39,765	41,606	45,440	49,562	53,838	58,272
	% of the category's total water demand	36%	36%	38%	40%	42%	44%

Table 4-3 Impacts of water shortages on manufacturing

Impacts measure	2030	2040	2050	2060	2070	2080
Income losses ($ millions)*	$9,192	$9,568	$9,999	$10,553	$11,259	$12,102
At risk job losses	73,986	77,134	80,664	85,014	90,268	96,365
Tax losses on production and Imports ($ millions)*	$331	$344	$360	$381	$409	$444

Region L Needs - Municipal

Water Use Category		2030	2040	2050	2060	2070	2080
Municipal	water needs (acre-feet per year)	38,660	69,433	111,065	184,152	264,266	361,827
	% of the category's total water demand	7%	11%	16%	24%	31%	38%

Region L Impacts - Municipal

Table 4-5 Impacts of water shortages on municipal water users

Impacts measure	2030	2040	2050	2060	2070	2080
Income losses[1] ($ millions)*	$319	$472	$911	$1,429	$2,072	$2,798
At risk job losses [1]	4,121	6,094	11,759	18,437	26,726	36,060
Tax losses on production and imports[1] ($ millions)*	$14	$20	$39	$62	$90	$121
Trucking costs ($ millions)*	$6	$6	$6	$15	$26	$107
Utility revenue losses ($ millions)*	$154	$305	$516	$865	$1,245	$1,704
Utility tax revenue losses ($ millions)*	$2	$5	$9	$16	$23	$31

Limitations

1. Analysis focuses on sectors with adequate water use data,
2. Consideration of only 1 year of drought,
3. No consideration of impacts on the forwardly linked sectors,
4. No consideration of backward linked impacts on *other planning regions,*
5. Analysis does not consider building moratoriums due to long term water shortages,
6. Increased value of water over time is not considered.
7. Considers structure of the economy as static (year 2021)

SEIA Dashboard

Google TWDB socioeconomic

Questions Regarding SEIA?

TWDB Projections and Socioeconomic Analysis Department
EDA@twdb.texas.gov

Planning Questions?

Michele Foss
michele.foss@twdb.texas.gov

Stay connected:

Socioeconomic Impacts of Projected Water Shortages for the South Central Texas (Region L) Regional Water Planning Area

Prepared in Support of the 2026 Region L Regional Water Plan

Dr. John R. Ellis

Projections & Socioeconomic Analysis,
Water Supply Planning
Texas Water Development Board

June 2025

Table of Contents

Executive Summary

Evaluating the social and economic impacts of not meeting identified water needs is a required analysis in the regional water planning process. The Texas Water Development Board (TWDB) estimates these impacts for regional water planning groups (RWPGs) and summarizes the impacts in the state water plan. The analysis presented is for the South Central Texas Regional Water Planning Group (Region L).

Based on projected water demands and existing water supplies, Region L identified water needs (potential shortages) that could occur within its region under a repeat of the drought of record for six water use categories (irrigation, livestock, manufacturing, mining, municipal and steam-electric power). The TWDB then estimated the annual socioeconomic impacts of those needs—if they are not met—for each water use category and as an aggregate for the region.

This analysis was performed using an economic impact modeling software package, IMPLAN (Impact for Planning Analysis), as well as other economic analysis techniques, and represents a snapshot of socioeconomic impacts that may occur during a single year repeat of the drought of record with the further caveat that no mitigation strategies are implemented. Decade-specific impact estimates assume that growth occurs, and future shocks are imposed on an economy at 10-year intervals. The estimates presented are not cumulative (i.e., summing up expected impacts from today up to the decade noted), but are simply snapshots of the estimated annual socioeconomic impacts should a drought of record occur in each particular decade based on anticipated water supplies and demands for that same decade.

For regional economic impacts, income losses and jobs potentially at risk are estimated within each planning decade (2030 through 2080). The income losses represent an approximation of gross domestic product (GDP) that would be foregone if water needs are not met.

The analysis also provides estimates of financial transfer impacts, which include tax losses (state, local, and utility tax collections); water trucking costs; and utility revenue losses. In addition, social impacts are estimated, encompassing lost consumer surplus (a welfare economics measure of consumer wellbeing); as well as population and school enrollment losses.

IMPLAN data reported that Region L generated more than $152 billion in gross domestic product (GDP) (2023 dollars) and supported more than 1.48 million jobs in 2021. The Region L estimated total population was approximately 3.06 million in 2021.

It is estimated that not meeting the identified water needs in Region L would result in an annually combined lost income impact of approximately $29.8 billion in 2030, decreasing to $16.8 billion in 2080 (Table ES-1). In 2030, the region could lose approximately 148,400 jobs, and by 2080 at risk job losses would decrease (primarily due to reductions in mining demands and needs) to approximately 145,600 if anticipated needs are not mitigated.

All impact estimates are in year 2023 dollars and were calculated using a variety of data sources and tools including the use of a region-specific IMPLAN model, data from TWDB annual water use

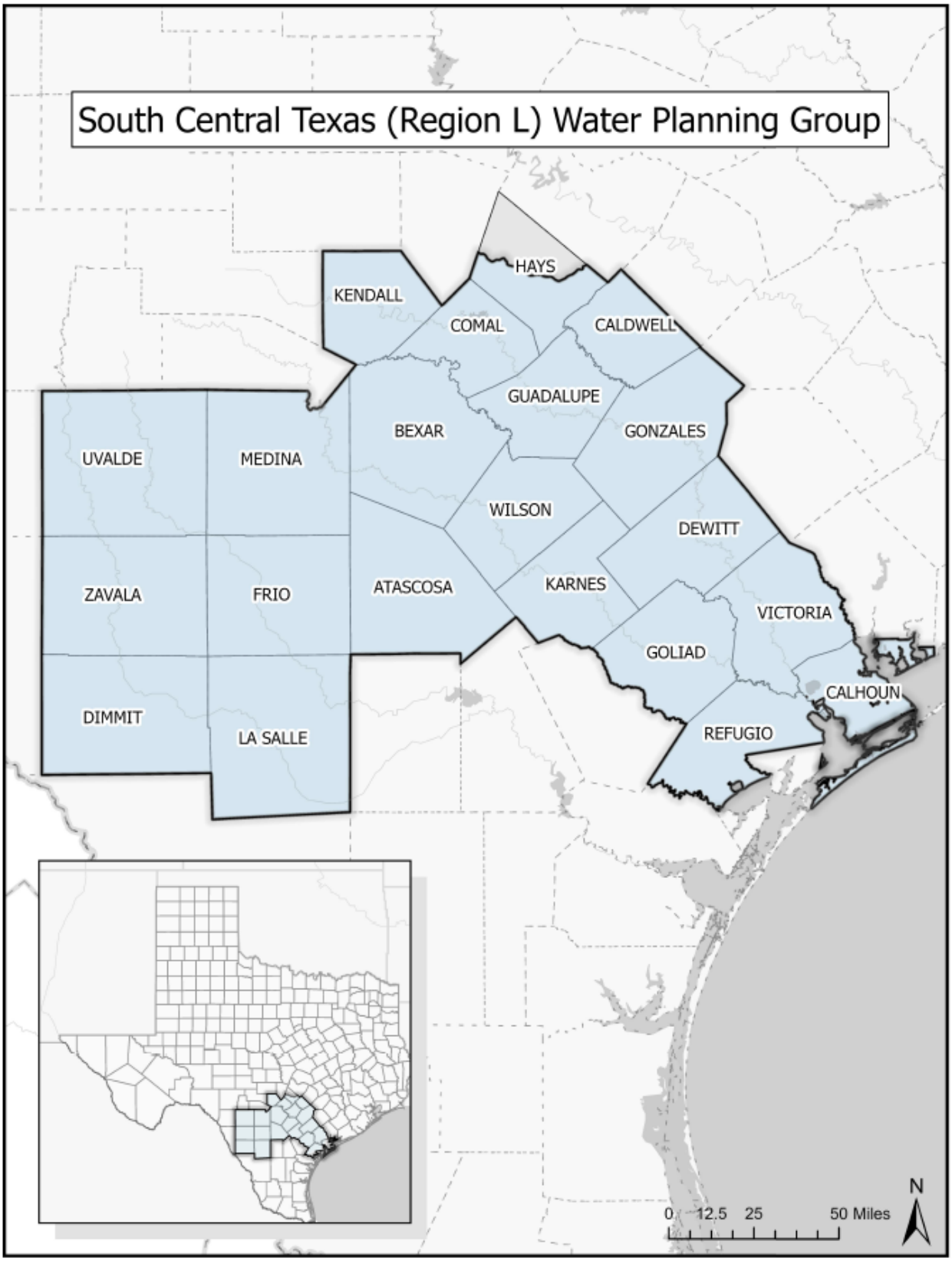
estimates, the U.S. Census Bureau, Texas Agricultural Statistics Service, and the Texas Municipal League.

Table ES-1 Region L socioeconomic impact summary

Regional Economic Impacts	2030	2040	2050	2060	2070	2080
Income losses ($ millions)*	$29,830	$30,815	$32,126	$33,578	$35,289	$16,763
At risk job losses	148,463	156,161	167,856	180,974	196,508	145,580
Financial Transfer Impacts	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Tax losses on production and imports ($ millions)*	$2,711	$2,774	$2,850	$2,929	$3,019	$712
Water trucking costs ($ millions)*	$6	$6	$6	$15	$26	$107
Utility revenue losses ($ millions)*	$154	$305	$516	$865	$1,245	$1,704
Utility tax revenue losses ($ millions)*	$2	$5	$9	$16	$23	$31
Social Impacts	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Consumer surplus losses ($ millions)*	$52	$127	$264	$611	$1,304	$2,428
At risk population out-migration	21,260	22,362	24,037	25,916	28,140	20,847
At risk school enrollment losses	3,880	4,081	4,387	4,730	5,136	3,805

* Year 2023 dollars, rounded**.** Entries denoted by a dash (-) indicate no estimated economic impact. Entries denoted by a zero ($0) indicate estimated income losses less than $500,000.

Figure ES-1 Region L Planning Area Map



1 Introduction

Water shortages during a repeat of the drought of record would likely curtail or eliminate certain economic activity in businesses and industries that rely heavily on water. Insufficient water supplies could not only have an immediate and real impact on the regional economy in the short term, but they could also adversely and chronically affect economic development in Texas. From a social perspective, water supply reliability is critical as well. Shortages could disrupt activity in homes, schools and government, and could adversely affect public health and safety. For these reasons, it is important to evaluate and understand how water supply shortages during drought could impact communities throughout the state.

As part of the regional water planning process, RWPGs must evaluate the social and economic impacts of not meeting water needs (31 Texas Administrative Code §357.33 (c)). Due to the complexity of the analysis and limited resources of the planning groups, the TWDB has historically performed this analysis for the RWPGs upon their request. Staff of the TWDB's Projections & Socioeconomic Analysis department designed and conducted this analysis in support of Region L, and those efforts for this Region as well as the other 15 regions allow consistency and a degree of comparability in the approach.

This document summarizes the results of the analysis and discusses the methodology used to generate the results. Section 1 provides a snapshot of the region's economy and summarizes the identified water needs in each water use category, which were calculated based on the RWPG's water supply and demand established during the regional water planning process. Section 2 defines each of ten impact assessment measures used in this analysis. Section 3 describes the methodology for the impact assessment and the approaches and assumptions specific to each water use category (i.e., irrigation, livestock, manufacturing, mining, municipal, and steam-electric power). Section 4 presents the impact estimates for each water use category with results summarized for the Region as a whole. Appendix A presents a further breakdown of the socioeconomic impacts by county.

1.1 Regional Economic Summary

The Region L Regional Water Planning Area generated more than $152 billion in gross domestic product (2023 dollars) and supported more than 1.48 million jobs in the year 2021, according to the IMPLAN dataset utilized in this socioeconomic analysis. This activity accounted for approximately 8 percent of the state's total gross domestic product of 1.9 trillion dollars for the year 2021 based on IMPLAN. Table 1-1 lists all economic sectors ranked by the total value-added to the economy in Region L. The finance and insurance and manufacturing sectors generated 24 percent of the region's total value-added and were also significant sources of tax revenue. The top employers in the region were in the health care and social assistance, retail trade, and accommodation and food services sectors. Region L's estimated total population was roughly 3,061,000, which comprises approximately 10.4 percent of the state's total population in 2021.

To gain deeper insights into Region L's economy, it is helpful to examine Region L's industry types. Region L consists of 222 4-digit NAICS (North American Industry Classification System) industries

in the year 2021 with an employment share of 9.6 percent total jobs in Texas and 8.5 percent of the state's total tax revenue. Trade played a pivotal role in the Region's economy, indicating connections with external markets. Major export commodities included insurance, automobiles, and natural gas & crude petroleum. Major import commodities included scientific research & development services, advertising, public relations, & related services, and pharmaceuticals.

This represents a snapshot of the regional economy as a whole, and it is important to note that not all economic sectors were included in the TWDB socioeconomic impact analysis. Data considerations prompted use of only the more water-intensive sectors within the economy because damage estimates could only be calculated for those economic sectors which had both reliable income and water use estimates.

Table 1-1 Region L regional economy by economic sector*

Economic sector	Value-added ($ millions)	Tax ($ millions)	Jobs
Finance and Insurance	$19,160.31	$1,049.45	120,803
Manufacturing	$17,542.18	$259.32	72,967
Health Care and Social Assistance	$13,794.86	($418.96)	178,812
Professional, Scientific, and Technical Services	$12,463.15	$90.73	121,694
Retail Trade	$10,777.03	$2,312.27	152,183
Wholesale Trade	$10,662.76	$1,566.26	45,565
Real Estate and Rental and Leasing	$10,423.06	$1,347.49	77,040
Mining, Quarrying, and Oil and Gas Extraction	$10,022.89	$1,801.51	22,851
Accommodation and Food Services	$7,642.09	$38.86	146,446
Administrative and Support and Waste Management and Remediation Services	$7,242.88	$143.11	118,681
Construction	$7,071.39	($254.10)	100,270
Transportation and Warehousing	$6,619.45	$81.94	82,508
Other Services (except Public Administration)	$6,491.97	$527.15	109,658
Information	$5,693.25	$1,611.11	21,884
Utilities	$1,513.27	$344.26	3,037
Educational Services	$1,380.23	$13.53	27,474
Management of Companies and Enterprises	$1,370.33	$62.04	19,706
Arts, Entertainment, and Recreation	$1,344.56	$92.97	26,322
Agriculture, Forestry, Fishing and Hunting	$896.49	($41.29)	33,313
Grand Total	**$152,112.15**	**$10,627.67**	**1,481,215**

*Source: 2021 IMPLAN for 546 sectors aggregated by 2-digit NAICS

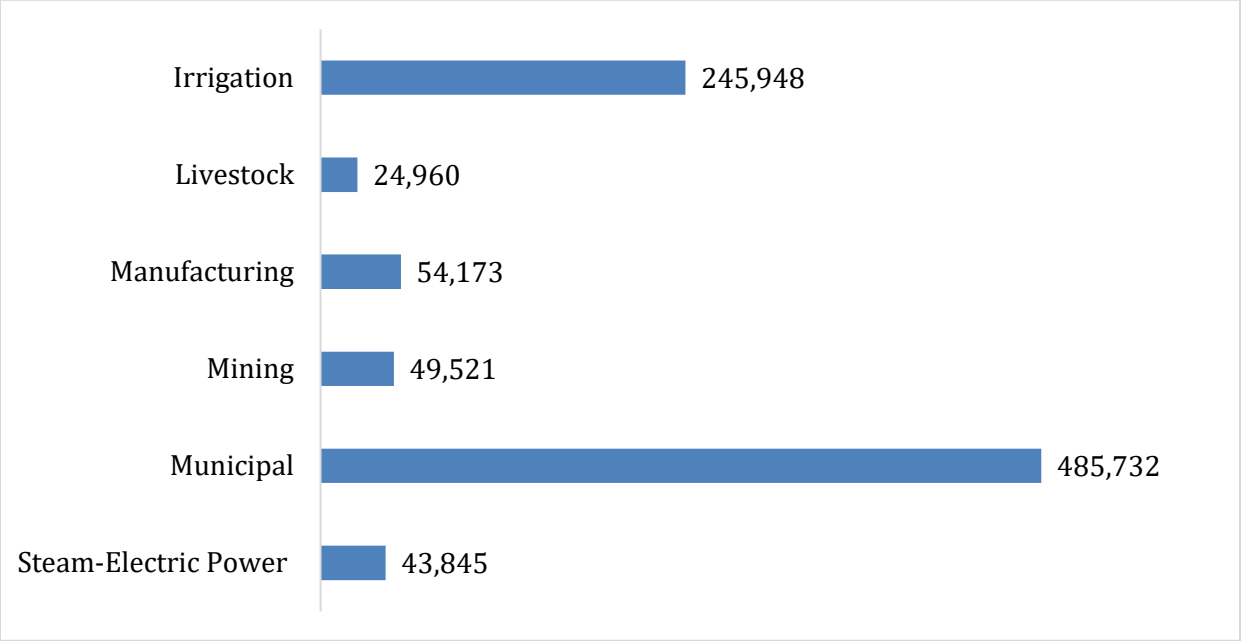
Note that for some sectors, taxes may be negative. This is due to federal subsidies in the sector and the subsequent net value in taxes collected and subsidies paid results in a negative tax payment (i.e., the subsidies paid were larger than the taxes collected for the year). Due to the Covid-19

pandemic, many sectors received more subsidies in the year 2021 than previous years, and the resulting net value for taxes is negative.

1.2 Regional Water Use Summary

While the manufacturing sector led the Region in economic output, the majority (54 percent) of water use occurred in the municipal water use category in 2021. Irrigated agriculture accounted for approximately 27 percent of Region L's water use in 2021. Figure 1-1 illustrates Region L's breakdown of the 2021 water use estimates by TWDB water use category.

Figure 1-1 Region L 2021 water use estimates by water use category (in acre-feet)



Source: TWDB Annual Water Use Estimates (all values in acre-feet)

1.3 Identified Regional Water Needs (Potential Shortages)

As part of the regional water planning process, the TWDB adopted water demand projections for water user groups (WUG) in Region L with input from the planning group. WUG-level demand projections were established for utilities that provide more than 100 acre-feet of annual water supply, combined rural areas (designated as county-other), and county-wide water demand projections for five non-municipal categories (irrigation, livestock, manufacturing, mining and steam-electric power) per (31 TAC § 357.10(43)). The RWPG then compared demands to the existing water supplies of each WUG to determine potential shortages, or needs, by decade.

Table 1-2 summarizes the region's identified water needs in the event of a repeat of the drought of record (needs identified in the Initially Prepared Plans). Demand management, such as conservation, or the development of new infrastructure to increase supplies, are water

management strategies that may be recommended by the planning group to address those needs. This analysis assumes that no strategies are implemented, and that the identified needs correspond to future water shortages. Note that projected water needs generally increase over time, primarily due to anticipated population growth, economic growth, or declining supplies. To provide a general sense of proportion, total projected needs as an overall percentage of total demand by water use category are also presented in aggregate in Table 1-2. Projected needs for individual water user groups within the aggregate can vary greatly and may reach 100% for a given WUG and water use category. A detailed summary of water needs appears in Chapter 4 of the 2026 Region L Regional Water Plan.

Table 1-2 Regional water needs summary by water use category*

Water Use Category		2030	2040	2050	2060	2070	2080
Irrigation	water needs (acre-feet per year)	71,258	71,187	71,793	71,862	71,927	71,979
	% of the category's total water demand	23%	23%	23%	23%	23%	23%
Livestock	water needs (acre-feet per year)	12	12	12	12	12	12
	% of the category's total water demand	0%	0%	0%	0%	0%	0%
Manufacturing	water needs (acre-feet per year)	39,765	41,606	45,440	49,562	53,838	58,272
	% of the category's total water demand	36%	36%	38%	40%	42%	44%
Mining	water needs (acre-feet per year)	34,771	37,867	40,936	43,930	46,782	20,956
	% of the category's total water demand	47%	49%	50%	51%	53%	43%
Municipal**	water needs (acre-feet per year)	38,660	69,433	111,065	184,152	264,266	361,827
	% of the category's total water demand	7%	11%	16%	24%	31%	38%
Steam-Electric Power	water needs (acre-feet per year)	666	666	666	666	666	666
	% of the category's total water demand	1%	1%	1%	1%	1%	1%

Total water needs (acre-feet per year)	**185,132**	**220,771**	**269,912**	**350,184**	**437,491**	**513,712**

*Entries denoted by a dash (-) indicate no identified water need for a given water use category.

**** Municipal category consists of residential and non-residential (commercial and institutional) subcategories.

2 Impact Assessment Measures

A required component of the regional and state water plans is to estimate the potential economic and social impacts of potential water shortages during a repeat of the drought of record. Consistent with previous water plans, ten impact measures were estimated and are described in Table 2-1.

Table 2-1 Socioeconomic impact analysis measures

Regional economic impacts	**Description**
Income losses - value-added	The value of output less the value of intermediate consumption; it is a measure of the contribution to gross domestic product (GDP) made by an individual producer, industry, sector, or group of sectors within a year. Value-added measures used in this report have been adjusted to include the direct, indirect, and induced monetary impacts on the region.
Income losses - electrical power purchase costs	Proxy for income loss in the form of additional costs of power as a result of impacts of water shortages.
At risk job losses	Number of part-time and full-time jobs at risk of being lost due to the shortage. These values have been adjusted to include the direct, indirect, and induced employment impacts on the region.
Financial transfer impacts	**Description**
Tax losses on production and imports	Sales and excise taxes not collected due to the shortage, in addition to customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments less subsidies. These values have been adjusted to include the direct, indirect and induced tax impacts on the region.
Water trucking costs	Estimated cost of shipping potable water.
Utility revenue losses	Foregone utility income due to not selling as much water.
Utility tax revenue losses	Foregone miscellaneous gross receipts tax collections.

Social impacts	Description
Consumer surplus losses	A welfare measure of the lost value to consumers accompanying restricted water use.
At risk population out-migration	Potential population losses accompanying potential job losses.
At risk school enrollment losses	Potential school enrollment losses (K-12) accompanying potential job losses.

2.1 Regional Economic Impacts

The two key measures used to assess regional economic impacts are income losses and at risk job losses. The income losses presented consist of the sum of value-added losses and the additional purchase costs of electrical power.

Income Losses - Value-added Losses

Value-added is the value of total output less the value of the intermediate inputs also used in the production of the final product. Value-added is similar to GDP, a familiar measure of the productivity of an economy. The loss of value-added due to water shortages is estimated by input-output analysis using the IMPLAN software package, and includes the direct, indirect, and induced monetary impacts on the region. The indirect and induced effects are measures of reduced income as well as reduced employee spending for those input sectors which provide resources to the water shortage impacted production sectors.

Income Losses - Electric Power Purchase Costs

The electrical power grid and market within the state is a complex interconnected system. The industry response to water shortages, and the resulting impact on the region, are not easily modeled using traditional input/output impact analysis and the IMPLAN model. Adverse impacts on the region will occur and are represented in this analysis by estimated additional costs associated with power purchases from other generating plants within the region or state. Consequently, the analysis employs additional power purchase costs as a proxy for the value-added impacts for the steam-electric power water use category, and these are included as a portion of the overall income impact for completeness.

For the purpose of this analysis, it is assumed that power companies with insufficient water will be forced to purchase power on the electrical market at a projected higher rate of 5.60 cents per kilowatt hour. This rate is based upon the average day-ahead market purchase price of electricity in Texas that occurred during the recent drought period in 2011. This price is assumed to be comparable to those prices which would prevail in the event of another drought of record.

At Risk Job Losses

The number of jobs at risk of being lost due to the economic impact is estimated using IMPLAN output associated with each TWDB water use category. Because of the difficulty in predicting outcomes and a lack of relevant data, at risk job loss estimates are not calculated for the steam-electric power category. Furthermore, the estimates of such job losses for the remaining water use sectors do not consider conversion to hybrid or remote employment, as IMPLAN employment estimates are based on the establishment locations.

2.2 Financial Transfer Impacts

Several impact measures evaluated in this analysis are presented to provide additional detail concerning potential impacts on a portion of the economy or government. These financial transfer impact measures include lost tax collections (on production and imports), trucking costs for imported water, declines in utility revenues, and declines in utility tax revenue collected by the state. These measures are not solely adverse, with some having both positive and negative impacts. For example, cities and residents would suffer if forced to pay large costs for trucking in potable water. Trucking firms, conversely, would benefit from the transaction. Additional detail for each of these measures follows.

Tax Losses on Production and Imports

Reduced production of goods and services accompanying water shortages adversely impacts the collection of taxes by state and local government. The regional IMPLAN model is used to estimate reduced tax collections associated with the reduced output in the economy. Impact estimates for this measure include the direct, indirect, and induced impacts for the affected sectors.

Water Trucking Costs

In instances where water shortages for a municipal water user group are estimated by RWPGs to exceed 80 percent of water demands, it is assumed that water would need to be trucked in to support basic consumption and sanitation needs. For water shortages of 80 percent or greater, a fixed, maximum of $45,500[1] per acre-foot of water applied as an economic cost. This water trucking cost was utilized for both the residential and non-residential portions of municipal water needs.

Utility Revenue Losses

Lost utility income is calculated as the price of water service multiplied by the quantity of water not sold during a drought shortage. Such estimates are obtained from utility-specific pricing data provided by the Texas Municipal League, where available, for both water and wastewater. These

[1] Based on a TWDB staff survey of year 2023 water trucking costs in the state. There are many factors and variables that would determine actual water trucking costs including distance, cost of water, and length of drought.

water rates are applied to the potential water shortage to estimate forgone utility revenue as water providers sold less water during the drought due to restricted supplies.

Utility Tax Losses

Foregone utility tax losses include estimates of forgone miscellaneous gross receipts taxes[2]. Reduced water sales reduce the amount of utility tax that would be collected by the State of Texas for water and wastewater service sales.

2.3 Social Impacts

Consumer Surplus Losses for Municipal Water Users

Consumer surplus loss is a measure of impact to the wellbeing of municipal water users when their water use is restricted. Consumer surplus is the difference between how much a consumer is willing and able to pay for a commodity (i.e., water) and how much they actually have to pay. The difference is a benefit to the consumer's wellbeing since they do not have to pay as much for the commodity as they would be willing to pay. Consumer surplus may also be viewed as an estimate of how much consumers would be willing to pay to keep the original quantity of water which they used prior to the drought. Lost consumer surplus estimates within this analysis only apply to the residential portion of municipal demand, with estimates being made for reduced outdoor and indoor residential use. Lost consumer surplus estimates varied widely by location and degree of water shortage.

At Risk Population and School Enrollment Losses

Population at risk of out-migration due to water shortages, as well as the associated decline in school enrollment, are based upon the at risk job loss estimates discussed in Section 2.1. A simplified ratio of at risk jobs and population losses are calculated for the state as a whole based on a recent study of how job layoffs impact the labor market population.[3] For every 100 jobs lost, 14 people were assumed to move out of the area. This ratio does not consider conversion to hybrid or remote employment and subsequent impacts to the labor market population. School enrollment losses are estimated as a proportion of the population at risk of out-migration based upon public school enrollment data from the Texas Education Agency concerning the age K-12 population within the state (approximately 18%).

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[2] https://comptroller.texas.gov/taxes/misc-gross-receipts/

[3] Foote, Andrew, Grosz, Michel, Stevens, Ann. "Locate Your Nearest Exit: Mass Layoffs and Local Labor Market Response." University of California, Davis. April 2015, http://paa2015.princeton.edu/papers/150194. The study utilized Bureau of Labor Statistics data regarding layoffs between 1996 and 2013, as well as Internal Revenue Service data regarding migration, to model the change in the population as the result of a job layoff event. The study found that layoffs impact both out-migration and in-migration into a region, and that a majority of those who did move following a layoff moved to another labor market rather than an adjacent county.

3 Socioeconomic Impact Assessment Methodology

This portion of the report provides a summary of the methodology used to estimate the potential economic impacts of future water shortages. The general approach employed in the analysis was to obtain estimates for at risk income and job losses on the smallest geographic level that the available data would support, tie those values to their accompanying historic water use estimate, and thereby determine a maximum impact per acre-foot of water shortage for each of the socioeconomic measures. The calculations of economic impacts are based on the overall composition of the economy divided into many underlying economic sectors. Sectors in this analysis refer to one or more of the 546 specific production sectors of the economy designated within IMPLAN, the economic impact modeling software used for this assessment. Economic impacts within this report are estimated for approximately 330 of these economic sectors, with the focus on the more water-intensive production sectors. The economic impacts for a single water use category consist of an aggregation of impacts to multiple, related IMPLAN economic sectors.

3.1 Analysis Context

The context of this socioeconomic impact analysis involves situations where there are physical shortages of groundwater or surface water due to a recurrence of drought of record conditions. Anticipated shortages for specific water users may be nonexistent in earlier decades of the planning horizon, yet population growth or greater industrial, agricultural or other sector demands in later decades may result in greater overall demand, exceeding the existing supplies. Estimated socioeconomic impacts measure what would happen if water user groups experience water shortages for a period of one year. Actual socioeconomic impacts would likely become larger as drought of record conditions persist for periods greater than a single year.

3.2 IMPLAN Model and Data

The Input-Output (I-O) model provides a framework to analyze an event like a water shortage during a one-year repeat of the drought of record that impacts interdependent economic sectors. IMPLAN cloud is used as the primary software for estimating the value-added, jobs, and tax related impact measures. IMPLAN is a widely-accepted software model that combines data and analytics to empower a greater understanding of different economic impacts utilizing the foundations of I-O modeling techniques. This analysis employed regional level models, developed utilizing Regional Water Planning Area counties, to determine key economic impacts. IMPLAN was originally developed by the U.S. Forestry Service in the 1970's to model economic activity at varying geographic levels. The model is currently maintained by the IMPLAN Group LLC (implan.com) which collects and sells county and state specific data and software.

IMPLAN currently combines information for 546 IMPLAN industry sectors. For the purpose of this socioeconomic impact analysis, all water-intensive industries are consolidated into six water user categories (irrigation, livestock, manufacturing, mining, municipal, and steam-electric power). Estimates of value-added for a water use category is obtained by summing value-added estimates across the relevant IMPLAN sectors associated with that water use category, for which there is

estimated water use in Texas. A similar approach was followed to estimate the number of at risk jobs as well as tax losses on production and imports.

IMPLAN categorizes the impact of water shortage events on value-added, jobs, and tax estimates into three components:

- ***Direct effects*** representing the initial change in the industry analyzed;
- ***Indirect effects*** that are changes in inter-industry transactions as supplying industries respond to reduced demands from the directly affected industries; and,
- ***Induced effects*** that reflect changes in local spending that result from reduced household income among employees in the directly and indirectly affected industry sectors.

3.3 Elasticity of Economic Impacts

The economic impact of a water need is based on the size of the water need relative to the total water demand for each water user group. Smaller water shortages, for example, less than 5 percent, are generally anticipated to result in no initial negative economic impact because water users are assumed to have a certain amount of flexibility in dealing with small shortages. As a water shortage intensifies, however, such flexibility lessens and results in actual and increasing economic losses, eventually reaching a representative maximum impact estimate per unit volume of water. To account for these characteristics, an elasticity adjustment function is used to estimate impacts for the income, tax and job loss measures. Figure 3-1 illustrates this general relationship for the adjustment functions. Negative impacts are assumed to begin accruing when the shortage reaches the lower bound 'b1' (5 percent in Figure 3-1), with impacts then increasing linearly up to the 100 percent impact level (per unit volume) once the upper bound reaches the 'b2' level shortage (40 percent in Figure 3-1).

To illustrate this, if the total annual value-added for manufacturing in the region was $2 million and the reported annual volume of water used in that industry is 10,000 acre-feet, the estimated economic measure of the water shortage would be $200 per acre-foot. The economic impact of the shortage would then be estimated using this value-added amount as the maximum impact estimate ($200 per acre-foot) applied to the anticipated shortage volume and then adjusted by the elasticity function. Using the sample elasticity function shown in Figure 3-1, an approximately 22 percent shortage in the manufacturing category would indicate an economic impact estimate of 50% of the original $200 per acre-foot impact value (i.e., $100 per acre-foot).

Such adjustments are not required in estimating lost consumer surplus, utility revenue losses, or utility tax losses. Estimates of lost consumer surplus rely on utility-specific demand curves with the lost consumer surplus estimate calculated based on the relative percentage of the utility's water shortage. Estimated changes in population and school enrollment are indirectly related to the elasticity of job losses.

Assumed values for the lower and upper bounds 'b1' and 'b2' vary by water use category and are presented in Table 3-1.

Figure 3-1 Example economic impact elasticity function (as applied to a single water user's shortage)

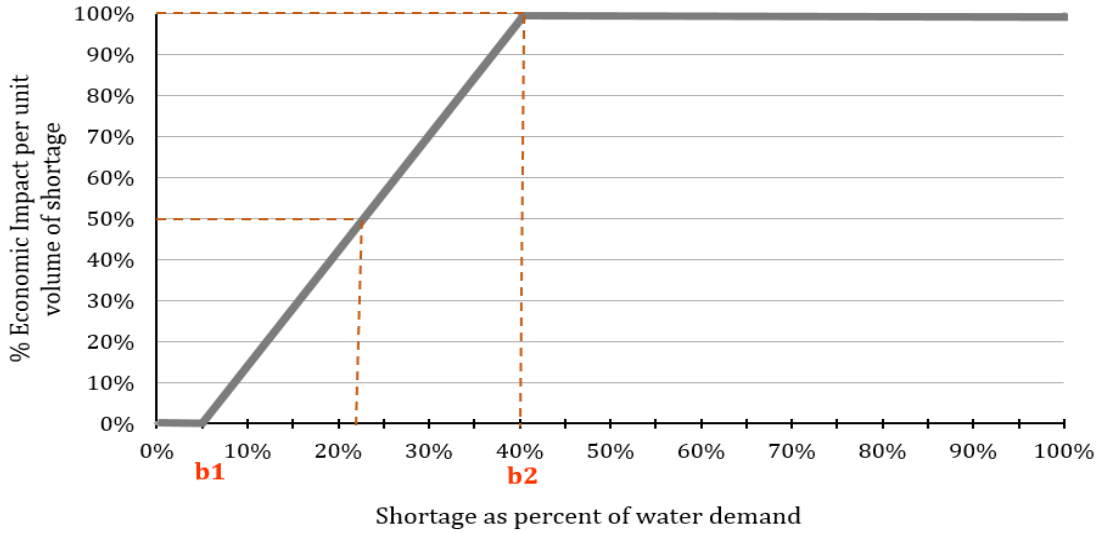

Table 3-1 Economic impact elasticity function lower and upper bounds

Water use category	Lower bound (b1)	Upper bound (b2)
Irrigation	**5%**	**40%**
Livestock	**5%**	**10%**
Manufacturing	**5%**	**40%**
Mining	**5%**	**40%**
Municipal (non-residential water intensive subcategory)	**5%**	**40%**
Steam-electric power	**N/A**	**N/A**

3.4 Analysis Assumptions and Limitations

The modeling of complex systems requires making many assumptions and acknowledging the model's uncertainty and limitations. This is particularly true when attempting to estimate a wide range of socioeconomic impacts over a large geographic area and into future decades. Some of the key assumptions and limitations of this methodology include:

1. The foundation for estimating the socioeconomic impacts of water shortages resulting from a drought are the water needs (potential shortages) that were identified by RWPGs as part of the

regional water planning process. These needs have some uncertainty associated with them but serve as a reasonable basis for evaluating the potential impacts of a drought of record event.

2. All estimated socioeconomic impacts are snapshots for years in which water needs were identified (i.e., 2030, 2040, 2050, 2060, 2070, and 2080). The estimates are independent and distinct "what if" scenarios for each particular year, and water shortages are assumed to be temporary events resulting from a single year recurrence of drought of record conditions. The evaluation assumed that no recommended water management strategies are implemented. Note that the estimates presented are not cumulative (i.e., summing up expected impacts from today up to the decade noted), but are simply snapshots of the estimated annual socioeconomic impacts should a drought of record occur in each particular decade based on anticipated water supplies and demands for that same decade.

3. Because the overarching context of this analysis is a one-year repeat drought of record, it is assumed that water-related utilities and companies would not implement mitigation measures or shock absorbers within such a short timeframe. Therefore, estimated impacts to the economy in this report may appear higher than if mitigation strategies were implemented in the short-term. If faced with drought over a longer timeframe, individual utilities and companies might alter their behavior to induce more efficient use of the limited water supplies available to them.

4. Input-output models such as IMPLAN rely on a static profile of the structure of the economy as it appears today. IMPLAN Input-output analysis is a backward-looking model, as it only reflects effects of input industries. This presumes that the relative contributions of all sectors of the economy would remain the same, regardless of changes in technology, availability of limited resources, and other structural changes to the economy that may occur in the future. Changes in water use efficiency will undoubtedly take place in the future as supplies become more stressed. Use of the static IMPLAN structure was a significant assumption and simplification considering the 50-year time period examined in this analysis. To presume an alternative future economic makeup, however, would entail positing many other major assumptions that would very likely generate as much or more error.

5. This is not a form of cost-benefit analysis. That approach to evaluating the economic feasibility of a specific policy or project employs discounting future benefits and costs to their present value dollars using some assumed discount rate. The methodology employed in this effort to estimate the economic impacts of future water shortages did not use any discounting methods to weigh future costs differently through time.

6. All monetary values originally based upon year 2021 IMPLAN and other sources are reported in constant year 2023 dollars to be consistent with the water management strategy requirements in the State Water Plan.

7. IMPLAN based loss estimates (income-value-added, jobs, and taxes on production and imports) are calculated only for those IMPLAN sectors for which the TWDB's Water Use Survey (WUS) data was available and deemed reliable. Every effort is made in the annual WUS effort to capture all relevant firms who are significant water users. Lack of response to the WUS, or omission of relevant firms, impacts the loss estimates.

8. Impacts are annual estimates. The socioeconomic analysis does not reflect the full extent of impacts that might occur as a result of persistent water shortages occurring over an extended duration. The drought of record in most regions of Texas lasted several years.

9. Loss in value-added estimates are the primary estimate of the economic impacts within this report. One may be tempted to add consumer surplus impacts to obtain an estimate of total adverse economic impacts to the region, but the consumer surplus measure represents the change to the wellbeing of households (and other water users), not an actual change in the flow of dollars through the economy. The two measures (value-added and consumer surplus) are both valid impacts but ideally should not be summed.

10. The value-added, jobs, and taxes on production and import impacts include the direct, indirect and induced effects to capture backward linkages in the economy described in Section 2.1. Population and school enrollment at risk of out-migration also indirectly include such effects as they are based on the associated losses in employment. The remaining measures (consumer surplus, utility revenue, utility taxes, additional electrical power purchase costs, and potable water trucking costs), however, do not include any induced or indirect effects.

11. The majority of impacts estimated in this analysis may be more conservative (i.e., smaller) than those that might actually occur under drought of record conditions due to not including impacts in the forward linkages in the economy. Input-output models such as IMPLAN only capture backward linkages on suppliers (including households that supply labor to directly affected industries). While this is a common limitation in this type of economic modeling effort, it is important to note that forward linkages on the industries that use the outputs of the directly affected industries can also be very important. A good example is impacts on livestock operators. Livestock producers tend to suffer substantially during droughts, not because there is not enough water for their stock, but because reductions in available pasture and higher prices for purchased hay have significant economic effects on their operations. Food processors could be in a similar situation if they cannot get the grains or other inputs that they need. These effects are not captured in IMPLAN, resulting in conservative impact estimates.

12. The model does not reflect dynamic economic responses to water shortages as they might occur, nor does the model reflect economic impacts associated with a recovery from a drought of record including:
    a. The likely significant economic rebound to some industries immediately following a drought, such as landscaping;

b. The cost and time to rebuild liquidated livestock herds (a major capital investment in that industry);
c. Direct impacts on recreational sectors (i.e., stranded docks and reduced tourism); or,
d. Impacts of negative publicity on Texas' ability to attract population and business in the event that it was not able to provide adequate water supplies for the existing economy.

13. Estimates for job losses and the associated population and school enrollment changes may exceed what would actually occur. In practice, firms may be hesitant to lay off employees, even in difficult economic times. Estimates of potential population and school enrollment changes are based on regional evaluations and therefore do not necessarily reflect what might occur on a statewide basis.

14. **The results must be interpreted carefully. It is the general and relative magnitudes of at risk impacts as well as the changes of these impacts over time that should be the focus rather than the absolute numbers.** Analyses of this type are much better at predicting relative percent differences brought about by a shock to a complex system (i.e., a water shortage) than the precise size of an impact. To illustrate, assuming that the estimated economic impacts of a drought of record on the manufacturing and mining water user categories are $2 and $1 million, respectively, one should be more confident that the economic impacts on manufacturing are twice as large as those on mining and that these impacts will likely be in the millions of dollars. But one should have less confidence that the actual total economic impact experienced would be $3 million.

15. The methodology does not capture "spillover" effects between regions – or the secondary impacts that occur outside of the region where the water shortage is projected to occur.

16. The methodology that the TWDB has developed for estimating the economic impacts of unmet water needs, and the assumptions and models used in the analysis, are specifically designed to estimate potential economic effects at the regional and county levels. Although it may be tempting to add the regional impacts together in an effort to produce a statewide result, the TWDB cautions against that approach for a number of reasons. The IMPLAN modeling (and corresponding economic multipliers) are all derived from regional models – a statewide model of Texas would produce somewhat different multipliers. As noted in point 14 within this section, the regional modeling used by TWDB does not capture spillover losses that could result in other regions from unmet needs in the Region analyzed, or potential spillover gains if decreased production in one region leads to increases in production elsewhere. The assumed drought of record may also not occur in every region of Texas at the same time, or to the same degree.

4 Analysis Results

This section presents estimates of potential economic impacts that could reasonably be expected in the event of water shortages associated with a drought of record and if no recommended water management strategies were implemented. Projected economic impacts for the six water use categories (irrigation, livestock, manufacturing, mining, municipal, and steam-electric power) are reported by decade.

4.1 Impacts for Irrigation Water Shortages

Eleven of the 21 counties in the Region are projected to experience water shortages in the irrigated agriculture water use category for one or more decades within the planning horizon. Estimated impacts to this water use category appear in Table 4-1. Note that tax collection impacts were not estimated for this water use category. IMPLAN data indicates a negative tax impact (i.e., increased tax collections) for the associated production sectors, primarily due to past subsidies from the federal government. However, it was not considered realistic to report increasing tax revenues during a drought of record.

Table 4-1 Impacts of water shortages on irrigation

Impact measure	2030	2040	2050	2060	2070	2080
Income losses ($ millions)*	$35	$35	$36	$36	$36	$36
At risk job losses	1,001	1,001	1,016	1,017	1,017	1,018

* Year 2023 dollars, rounded. Entries denoted by a dash (-) indicate no estimated economic impact. Entries denoted by a zero ($0) indicate estimated income losses less than $500,000.

4.2 Impacts for Livestock Water Shortages

One of the 21 counties in the Region are projected to experience water shortages in the livestock water use category, although it does not result in an economic or social impact. Estimated impacts to this water use category appear in Table 4-2.

Table 4-2 Impacts of water shortages on livestock

Impact measure	2030	2040	2050	2060	2070	2080
Income losses ($ millions)*	$-	$-	$-	$-	$-	$-
At risk job losses	-	-	-	-	-	-
Tax losses on production and	$-	$-	$-	$-	$-	$-

imports ($ millions)*

* Year 2023 dollars, rounded. Entries denoted by a dash (-) indicate no estimated economic impact. Entries denoted by a zero ($0) indicate estimated income losses less than $500,000.

4.3 Impacts of Manufacturing Water Shortages

Manufacturing water shortages in the Region are projected to occur in seven of the 21 counties for at least one decade of the planning horizon. Estimated impacts to this water use category appear in Table 4-3.

Table 4-3 Impacts of water shortages on manufacturing

Impacts measure	2030	2040	2050	2060	2070	2080
Income losses ($ millions)*	$9,192	$9,568	$9,999	$10,553	$11,259	$12,102
At risk job losses	73,986	77,134	80,664	85,014	90,268	96,365
Tax losses on production and Imports ($ millions)*	$331	$344	$360	$381	$409	$444

* Year 2023 dollars, rounded. Entries denoted by a dash (-) indicate no estimated economic impact. Entries denoted by a zero ($0) indicate estimated income losses less than $500,000.

4.4 Impacts of Mining Water Shortages

Twelve of the 21 counties in the Region are projected to experience water shortages in the mining water use category. Estimated impacts to this water use type appear in Table 4-4.

Table 4-4 Impacts of water shortages on mining

Impacts measure	2030	2040	2050	2060	2070	2080
Income losses ($ millions)*	$20,254	$20,709	$21,150	$21,531	$21,892	$1,796
At risk job losses	69,356	71,932	74,417	76,507	78,496	12,138
Tax losses on production and Imports ($ millions)*	$2,366	$2,409	$2,450	$2,486	$2,521	$147

* Year 2023 dollars, rounded. Entries denoted by a dash (-) indicate no estimated economic impact. Entries denoted by a zero ($0) indicate estimated income losses less than $500,000.

4.5 Impacts for Municipal Water Shortages

Fourteen of the 21 counties in the Region are projected to experience water shortages in the municipal water use category for one or more decades within the planning horizon.

Impact estimates were made for two sub-categories within municipal water use: residential and non-residential. Non-residential municipal water use includes commercial and institutional users, which are further divided into non-water-intensive and water-intensive subsectors including car wash, laundry, hospitality, health care, recreation, and education. Lost consumer surplus estimates were made only for needs in the residential portion of municipal water use. Available IMPLAN and TWDB Water Use Survey data for the non-residential, water-intensive portion of municipal demand allowed these sectors to be included in income, jobs, and tax loss impact estimate.

Trucking cost estimates, calculated for shortages exceeding 80 percent, assumed a fixed, maximum cost of $45,500 per acre-foot to transport water for municipal use. The estimated impacts to this water use category appear in Table 4-5.

Table 4-5 Impacts of water shortages on municipal water users

Impacts measure	2030	2040	2050	2060	2070	2080
Income losses[1] ($ millions)*	$319	$472	$911	$1,429	$2,072	$2,798
At risk job losses[1]	4,121	6,094	11,759	18,437	26,726	36,060
Tax losses on production and imports[1] ($ millions)*	$14	$20	$39	$62	$90	$121
Trucking costs ($ millions)*	$6	$6	$6	$15	$26	$107
Utility revenue losses ($ millions)*	$154	$305	$516	$865	$1,245	$1,704
Utility tax revenue losses ($ millions)*	$2	$5	$9	$16	$23	$31

[1] Estimates apply to the water-intensive portion of non-residential municipal water use.
* Year 2023 dollars, rounded. Entries denoted by a dash (-) indicate no estimated economic impact. Entries denoted by a zero ($0) indicate estimated income losses less than $500,000.

4.6 Impacts of Steam-Electric Power Water Shortages

One of the 21 counties in the Region are projected to experience water shortages in the steam-electric water category. Estimated impacts to this water use category appear in Table 4-6.

Note that estimated economic impacts to steam-electric power water users:

- Are reflected as an income loss proxy in the form of estimated additional purchasing costs for power from the electrical grid to replace power that could not be generated due to a shortage;
- Do not include estimates of impacts on jobs. Because of the unique conditions of power generators during drought conditions and lack of relevant data, it was assumed that the industry would retain, perhaps relocating or repurposing, their existing staff in order to manage their ongoing operations through a severe drought.
- Do not presume a decline in tax collections. Associated tax collections, in fact, would likely increase under drought conditions since, historically, the demand for electricity increases during times of drought, thereby increasing taxes collected on the additional sales of power.

Table 4-6 Impacts of water shortages on steam-electric power

Impacts measure	2030	2040	2050	2060	2070	2080
Income Losses ($ millions)*	$30	$30	$30	$30	$30	$30

* Year 2023 dollars, rounded. Entries denoted by a dash (-) indicate no estimated economic impact. Entries denoted by a zero ($0) indicate estimated income losses less than $500,000.

4.7 Regional Social Impacts

Projected changes in population, based upon several factors (household size, population, and job loss estimates), as well as the accompanying change in school enrollment, were also estimated and are summarized in Table 4-7.

Table 4-7 Region-wide social impacts of water shortages

Impacts measure	2030	2040	2050	2060	2070	2080
Consumer surplus losses ($ millions)*	$52	$127	$264	$611	$1,304	$2,428
At risk population out-migration	21,260	22,362	24,037	25,916	28,140	20,847
At risk school enrollment losses	3,880	4,081	4,387	4,730	5,136	3,805

* Year 2023 dollars, rounded. Entries denoted by a dash (-) indicate no estimated economic impact. Entries denoted by a zero ($0) indicate estimated income losses less than $500,000.

Appendix A - County Level Summary of Regional Estimated Economic Impacts

County level summary of estimated regional economic impacts of not meeting identified water needs by water use category and decade (in 2023 dollars, rounded). Values are presented only for counties with projected economic impacts for at least one decade.

(* Entries denoted by a dash (-) indicate no estimated economic impact)

		Income losses ($ millions)						At risk job losses					
County	**Water Use Category**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Atascosa	Mining	$ 1,440.27	$ 1,576.88	$ 1,710.43	$ 1,836.57	$ 1,954.41	$ -	5,242	5,739	6,226	6,685	7,114	-
Atascosa	Municipal	$ 1.72	$ 2.33	$ 2.97	$ 3.40	$ 4.02	$ 4.97	22	30	38	44	52	64
Atascosa Total		$ 1,442.00	$ 1,579.21	$ 1,713.41	$ 1,839.96	$ 1,958.43	$ 4.97	5,264	5,770	6,264	6,728	7,165	64
Bexar	Manufacturing	$ -	$ -	$ 45.34	$ 177.63	$ 383.22	$ 661.67	-	-	333	1,304	2,814	4,858
Bexar	Municipal	$ 181.80	$ 207.54	$ 225.99	$ 244.27	$ 276.93	$ 359.47	2,346	2,678	2,917	3,152	3,574	4,639
Bexar Total		$ 181.80	$ 207.54	$ 271.33	$ 421.90	$ 660.14	$ 1,021.14	2,346	2,678	3,249	4,457	6,387	9,497
Caldwell	Manufacturing	$ 5.90	$ 6.56	$ 7.22	$ 7.87	$ 8.53	$ 9.18	55	61	67	73	79	85
Caldwell	Municipal	$ 0.06	$ 0.59	$ 1.24	$ 5.24	$ 20.06	$ 39.46	1	7	16	67	239	454
Caldwell Total		$ 5.96	$ 7.14	$ 8.46	$ 13.12	$ 28.59	$ 48.64	55	68	82	139	318	539
Calhoun	Irrigation	$ 5.83	$ 5.83	$ 5.83	$ 5.83	$ 5.83	$ 5.83	314	314	314	314	314	314
Calhoun	Manufacturing	$ -	$ -	$ -	$ 28.72	$ 125.10	$ 277.09	-	-	-	130	565	1,251
Calhoun Total		$ 5.83	$ 5.83	$ 5.83	$ 34.55	$ 130.93	$ 282.92	314	314	314	444	879	1,565
Comal	Mining	$ 141.28	$ 380.75	$ 610.70	$ 790.24	$ 963.35	$ 1,122.58	962	2,592	4,158	5,380	6,558	7,642
Comal	Municipal	$ 9.29	$ 66.03	$ 257.90	$ 459.37	$ 733.30	$ 1,030.60	120	852	3,328	5,928	9,464	13,300
Comal Total		$ 150.58	$ 446.78	$ 868.60	$ 1,249.61	$ 1,696.65	$ 2,153.18	1,082	3,444	7,486	11,308	16,022	20,943
Dimmit	Irrigation	$ 3.18	$ 3.18	$ 3.18	$ 3.18	$ 3.18	$ 3.18	66	66	66	66	66	66
Dimmit	Mining	$ 4,243.36	$ 4,243.36	$ 4,243.36	$ 4,243.36	$ 4,243.36	$ -	14,024	14,024	14,024	14,024	14,024	-
Dimmit	Municipal	$ -	$ -	$ -	$ 0.01	$ 0.14	$ 0.24	-	-	-	0	2	3
Dimmit Total		$ 4,246.54	$ 4,246.54	$ 4,246.54	$ 4,246.55	$ 4,246.68	$ 3.41	14,090	14,090	14,090	14,090	14,092	69
Frio	Mining	$ 3,188.65	$ 3,189.44	$ 3,189.44	$ 3,190.23	$ 3,190.23	$ -	10,518	10,521	10,521	10,523	10,523	-
Frio	Municipal	$ 0.81	$ 3.18	$ 5.53	$ 5.97	$ 6.49	$ 7.09	10	41	71	77	84	92
Frio Total		$ 3,189.46	$ 3,192.62	$ 3,194.97	$ 3,196.20	$ 3,196.72	$ 7.09	10,528	10,562	10,592	10,600	10,607	92
Goliad	Irrigation	$ 0.00	$ -	$ -	$ -	$ -	$ -	0	-	-	-	-	-
Goliad Total		$ 0.00	$ -	$ -	$ -	$ -	$ -	0	-	-	-	-	-

		Income losses ($ millions)						At risk job losses					
County	**Water Use Category**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Gonzales	Mining	$ 2,593.36	$ 2,616.93	$ 2,644.07	$ 2,671.21	$ 2,699.07	$ -	8,671	8,750	8,840	8,931	9,024	-
Gonzales Total		$ 2,593.36	$ 2,616.93	$ 2,644.07	$ 2,671.21	$ 2,699.07	$ -	8,671	8,750	8,840	8,931	9,024	-
Guadalupe	Mining	$ 323.19	$ 323.19	$ 323.19	$ 323.19	$ 323.19	$ -	1,009	1,009	1,009	1,009	1,009	-
Guadalupe	Municipal	$ 7.77	$ 44.35	$ 124.49	$ 204.88	$ 293.96	$ 398.09	100	572	1,607	2,644	3,794	5,137
Guadalupe Total		$ 330.96	$ 367.54	$ 447.68	$ 528.07	$ 617.15	$ 398.09	1,110	1,582	2,616	3,654	4,803	5,137
Hays	Municipal	$ 29.15	$ 55.29	$ 148.78	$ 288.88	$ 448.22	$ 588.52	376	714	1,920	3,728	5,784	7,595
Hays Total		$ 29.15	$ 55.29	$ 148.78	$ 288.88	$ 448.22	$ 588.52	376	714	1,920	3,728	5,784	7,595
Karnes	Irrigation	$ 0.08	$ 0.08	$ 0.70	$ 0.70	$ 0.70	$ 0.70	2	2	15	15	15	15
Karnes	Mining	$ 1,138.29	$ 1,138.29	$ 1,138.29	$ 1,138.29	$ 1,138.29	$ -	3,755	3,755	3,755	3,755	3,755	-
Karnes Total		$ 1,138.37	$ 1,138.37	$ 1,138.99	$ 1,138.99	$ 1,138.99	$ 0.70	3,756	3,756	3,770	3,770	3,770	15
Kendall	Manufacturing	$ 3,393.70	$ 3,551.55	$ 3,709.39	$ 3,867.24	$ 4,025.09	$ 4,182.93	40,378	42,256	44,134	46,012	47,890	49,768
Kendall	Municipal	$ -	$ 2.17	$ 51.20	$ 121.00	$ 190.68	$ 268.87	-	28	661	1,562	2,461	3,470
Kendall Total		$ 3,393.70	$ 3,553.72	$ 3,760.60	$ 3,988.24	$ 4,215.77	$ 4,451.81	40,378	42,284	44,795	47,574	50,351	53,238
La Salle	Irrigation	$ 0.03	$ 0.03	$ 0.03	$ 0.03	$ 0.03	$ 0.03	1	1	1	1	1	1
La Salle	Mining	$ 3,847.50	$ 3,847.50	$ 3,847.50	$ 3,847.50	$ 3,847.50	$ -	12,691	12,691	12,691	12,691	12,691	-
La Salle Total		$ 3,847.53	$ 3,847.53	$ 3,847.53	$ 3,847.53	$ 3,847.53	$ 0.03	12,692	12,692	12,692	12,692	12,692	1
Medina	Irrigation	$ 9.87	$ 9.91	$ 9.94	$ 9.97	$ 10.00	$ 10.02	247	248	249	250	250	251
Medina	Mining	$ 257.38	$ 290.71	$ 320.07	$ 346.72	$ 370.16	$ 389.54	1,752	1,979	2,179	2,360	2,520	2,652
Medina	Municipal	$ 9.53	$ 9.96	$ 11.78	$ 14.83	$ 17.92	$ 20.39	123	129	152	191	231	263
Medina Total		$ 276.78	$ 310.58	$ 341.80	$ 371.52	$ 398.07	$ 419.95	2,123	2,356	2,580	2,802	3,002	3,166
Uvalde	Irrigation	$ 9.73	$ 9.73	$ 9.73	$ 9.73	$ 9.73	$ 9.73	207	207	207	207	207	207
Uvalde	Mining	$ 136.13	$ 154.66	$ 173.87	$ 192.15	$ 209.74	$ 226.41	927	1,053	1,184	1,308	1,428	1,541
Uvalde	Municipal	$ 3.87	$ 2.98	$ 1.99	$ 1.07	$ 0.39	$ -	50	38	26	14	5	-
Uvalde Total		$ 149.73	$ 167.37	$ 185.58	$ 202.94	$ 219.86	$ 236.14	1,184	1,299	1,417	1,529	1,640	1,749
Victoria	Manufacturing	$ 5,720.25	$ 5,934.47	$ 6,156.61	$ 6,386.98	$ 6,625.86	$ 6,873.55	32,912	34,145	35,423	36,748	38,123	39,548
Victoria	Mining	$ 47.86	$ 50.56	$ 52.96	$ 54.80	$ 56.50	$ 57.78	250	264	277	286	295	302
Victoria	Municipal	$ 74.25	$ 76.12	$ 76.62	$ 75.94	$ 75.17	$ 74.28	958	982	989	980	970	959
Victoria	Steam Electric Power	$ 29.67	$ 29.67	$ 29.67	$ 29.67	$ 29.67	$ 29.67	-	-	-	-	-	-
Victoria Total		$ 5,872.04	$ 6,090.81	$ 6,315.86	$ 6,547.39	$ 6,787.21	$ 7,035.28	34,121	35,391	36,688	38,015	39,388	40,808
Wilson	Manufacturing	$ 0.62	$ 1.68	$ 3.15	$ 4.98	$ 8.34	$ 12.37	5	13	24	37	62	92

		Income losses ($ millions)						At risk job losses					
County	**Water Use Category**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Wilson	Municipal	$ 1.07	$ 1.69	$ 2.70	$ 3.82	$ 5.16	$ 6.44	14	22	35	49	67	83
Wilson Total		$ 1.69	$ 3.37	$ 5.84	$ 8.80	$ 13.51	$ 18.81	18	34	58	87	129	176
Zavala	Irrigation	$ 6.74	$ 6.74	$ 6.74	$ 6.74	$ 6.74	$ 6.74	163	163	163	163	163	163
Zavala	Manufacturing	$ 71.52	$ 74.16	$ 76.90	$ 79.73	$ 82.66	$ 85.69	636	660	684	709	735	762
Zavala	Mining	$ 2,896.49	$ 2,896.49	$ 2,896.49	$ 2,896.49	$ 2,896.49	$ -	9,554	9,554	9,554	9,554	9,554	-
Zavala Total		$ 2,974.75	$ 2,977.39	$ 2,980.12	$ 2,982.96	$ 2,985.89	$ 92.43	10,353	10,377	10,401	10,426	10,453	925
Region L Total		**$ 29,830.23**	**$ 30,814.56**	**$ 32,125.99**	**$ 33,578.43**	**$ 35,289.40**	**$ 16,763.11**	**148,463**	**156,161**	**167,856**	**180,974**	**196,508**	**145,580**

Addendum to Socioeconomic Impact Analysis for the 2026 Regional Water Plans

After the release of the socioeconomic impact analysis regional reports, the TWDB determined that a portion of the multi-faceted socio-economic impact estimates likely include upwardly biased impact results. It appears that the baseline value-added per acre-foot, used to determine the final drought degree adjusted impact estimates, may be inflated for the manufacturing water use sector. A similar conclusion applies for the estimates for jobs at risk and tax collections within that sector since all three measures rely upon a similar calculation procedure and required datasets.

Initial estimates for the value-added per acre-foot of water use are obtained using IMPLAN data coupled with TWDB Water Use Survey data. These calculations are limited to production subsectors (4-digit NAICS codes) for which TWDB Water Use Survey data was available and deemed reliable. These value-added estimates are adjusted downward, if necessary, to better correspond to the footprint of the data collected in the Water Use Survey. This is done to better match the productivity estimate from IMPLAN with the quantitative estimate of the water used to produce that output. The adjustment process involves using the proportion of the number of firms surveyed in the Water Use Survey versus the number of firms in the U.S. Census County Business Pattern data, limited to those firms with more than 50 employees. This approach assumes that the Water Use Survey captures water use from the larger water users in the state for the manufacturing sector.

Historically, this methodology has served the socio-economic impact estimation effort well, yet several factors have combined to result in likely upwardly biased estimates during this cycle that include:

- Adherence to the usual 5-year increment to access baseline IMPLAN value-added estimates prompted use of year 2021 data, a year with significant economic impacts as well as data collection issues prompted by the COVID pandemic, and
- Increased data suppression (reduced geographic data coverage) within the U.S. Census County Business Pattern Employment Data

This addendum is to make consumers of this analysis aware of the potentially skewed results for the manufacturing sector. Factors that are at play in this likely overestimated impact include: abnormal data collection results accompanying the COVID pandemic resulting in much higher than normal impact estimates for this water use sector, and reality-check values for the value-added per acre-foot of water that are almost non-existent within the research literature. The few research-based values that do exist, however, apply for periods ten or more years ago and/or foreign countries. Neither of these sources are deemed as being reliable for determining a reasonable upper bound or reliable estimate for this unique impact measure. The net effect is believed to overstate large projected income losses, jobs at risk, and tax collections within the manufacturing sector. This likely impacts a number of the sixteen planning regions but cannot be conclusively determined prior to planning groups needing to adopt their final regional water plans.

AGENDA ITEM NO.6 – CONSIDERATION AND APPROPRIATE ACTION REGARDING PRESENTATION BY TECHNICAL CONSULTANT REGARDING SCHEDULE AND PROGRESS UPDATE

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8/28/2025

Agenda Item 6: Consideration and Appropriate Action Regarding Presentation by Technical Consultant Regarding Schedule and Progress Update

BLACK & VEATCH

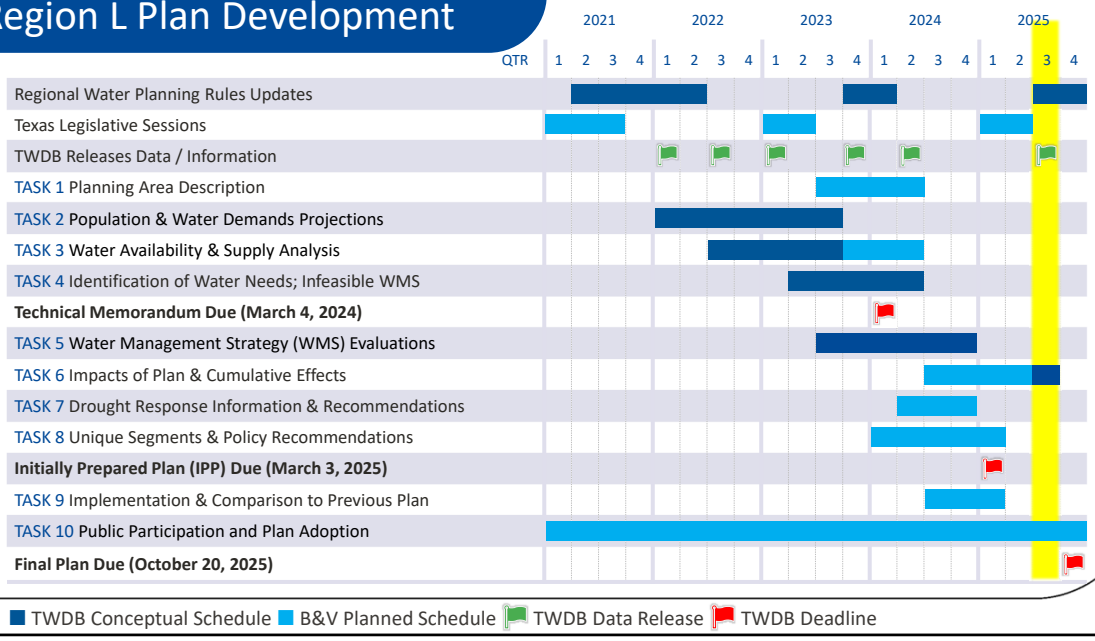
Schedule and Progress Updates – Overview

A. Schedule Progress
B. Update on Completed, New, or Ongoing Efforts

TOPIC A

- Schedule Progress

Conceptual Schedule for Region L Plan Development



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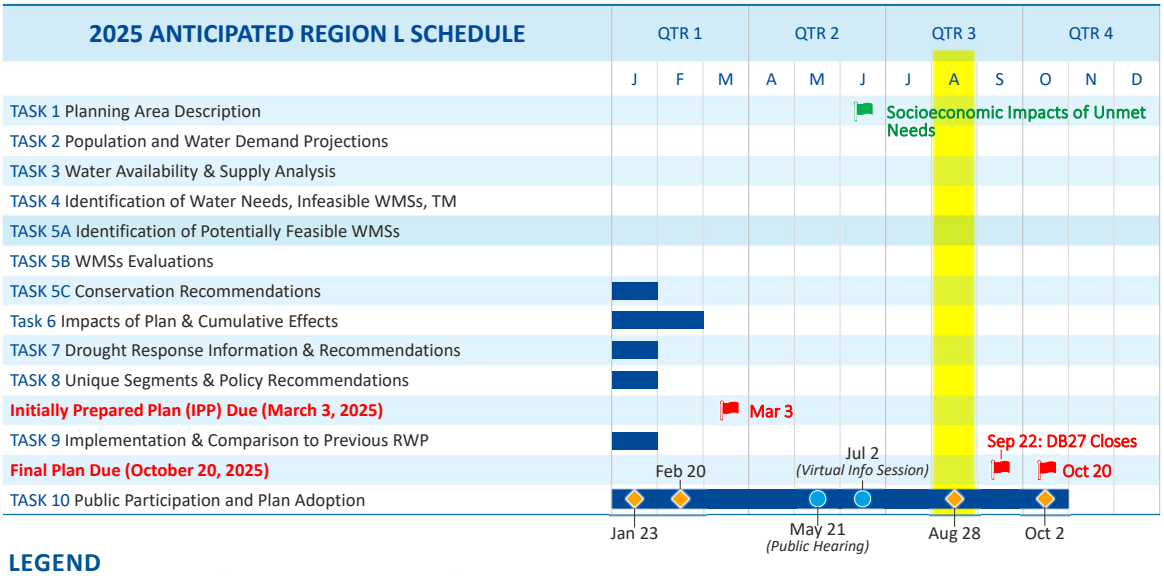
2025 ANTICIPATED REGION L SCHEDULE



LEGEND

Region L Activities | TWDB Data Release | TWDB Deadline | Region L RWPG Meeting | Meeting on IPP

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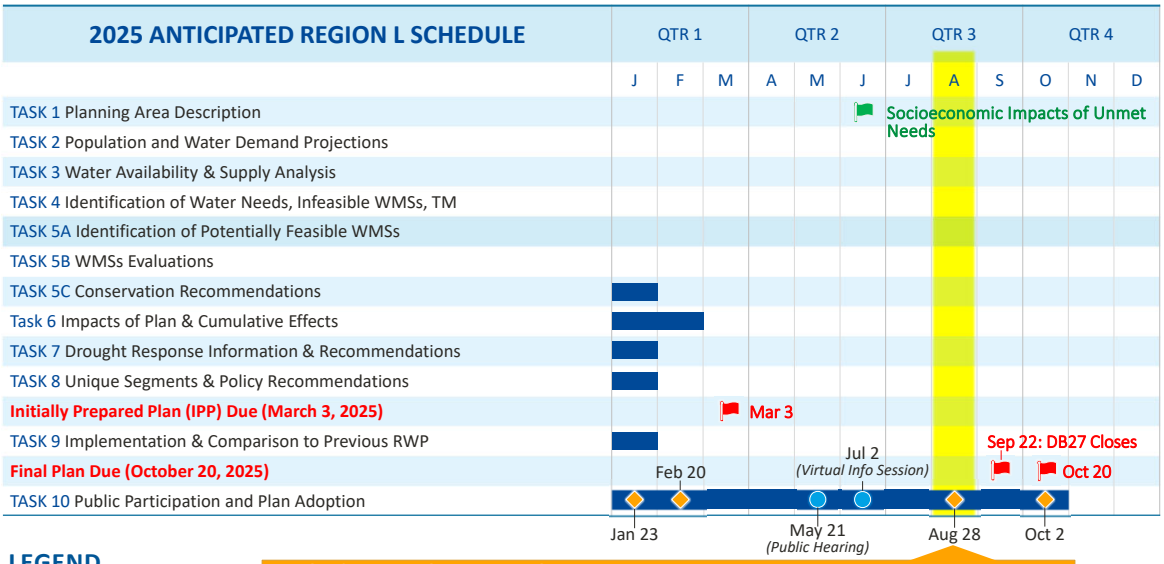
5

2025 ANTICIPATED REGION L SCHEDULE



LEGEND

Region L Activities

AUGUST RWPG MEETING:

- Overview of Comments from TWDB, the Public, and Other Agencies
- Approve Preliminary Proposed Responses to Comments and Updates to Plan

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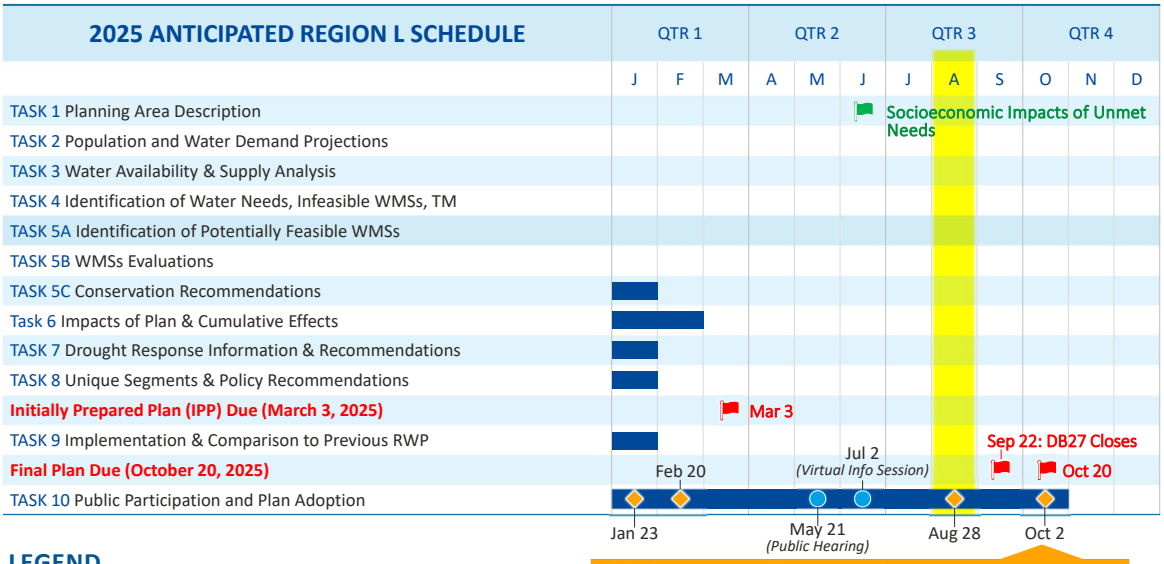
2025 ANTICIPATED REGION L SCHEDULE



LEGEND

Region L Activities | TWDB Data Release | TWDB Dea

OCTOBER RWPG MEETING:

- Updates on Chapters and Responses to Comments
- Adopt Final 2026 Region L Regional Water Plan

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TOPIC B

- Updates on Completed, New, or Ongoing Efforts

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Update on Completed, New, or Ongoing Efforts

- Submitted Region L Initially Prepared Plan (IPP) to the Texas Water Development Board (TWDB) on March 3, 2025.
  - TWDB declared IPP Administratively Complete on March 5, 2025
- Held meetings to present IPP to the public:
  - May 21, 2025: Public Hearing
  - July 2, 2025: Virtual Informational Meeting
  - All materials and meeting recordings are available online at www.RegionLTexas.org
- Received Public and Agency Comments on IPP
  - Comments accepted between March 3 and July 20, 2025
  - Preparing proposed responses and addressing comments
  - Will present additional information on comments and proposed responses in subsequent agenda item

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Update on Completed, New, or Ongoing Efforts

- TWDB released the Region L Socioeconomic Impact Analysis of Projected Water Shortages report on June 25th
  - Will be included as Appendix 6A
  - Available at the QR code to the right and at: https://www.twdb.texas.gov/waterplanning/data/analysis/doc/2026/RegionL_2026RWP_SEIA.pdf

Scan to view 2026 Region L Socioeconomic Report

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Update on Completed, New, or Ongoing Efforts

- Updating Chapter 10: Public Outreach and Interregional Coordination Efforts (Task 10) and Continuing Outreach Efforts
  - Coordinating with adjacent regions, as needed
  - Updating Chapter 10 to incorporate comment period information
  - Will present additional information in subsequent agenda item
- Continuing TWDB Database (DB27) data entry
  - DB27 is open for revisions via TWDB; direct entry by RWPGs is not available
  - Coordinating with TWDB to make edits to address comments and update information

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Discussion

AGENDA ITEM NO.7 – CONSIDERATION AND APPROPRIATE ACTION TO APPROVE PROPOSED RESPONSES REGARDING THE PUBLIC COMMENTS AND AGENCY COMMENTS RECEIVED ON THE INITIALLY PREPARED PLAN (IPP) FOR THE 2026 SOUTH CENTRAL TEXAS (REGION L) REGIONAL WATER PLAN

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8/28/2025

Agenda Item 7: Consideration and Appropriate Action to Approve Proposed Responses Regarding the Public Comments and Agency Comments Received on the Initially Prepared Plan (IPP) for the 2026 South Central Texas (Region L) Regional Water Plan

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Responses to Comments on the Initially Prepared Plan – Overview

A. Plan Updates and Path Forward
B. Comments Summary and Response Requirements
C. Texas Water Development Board (TWDB) Comments
D. Agency and Public Comments
   1. Texas Parks and Wildlife Department (TPWD)
   2. Water User Groups (WUGs) or Wholesale Water Providers (WWPs)
   3. Public Comments Related to Gonzales County
   4. Other Public Comments

TOPIC A

- Plan Updates and Path Forward

A. Plan Updates and Path Forward

- General Updates:
  - Continue DB27 updates and make necessary revisions or adjustments to the plan for consistency
  - Update Executive Summary for consistency across chapters
  - Format and perform accessibility checks
  - Compile and update tables of contents, appendices, figures, and tables
- Chapter Updates:
  - Chapter 5: Make necessary revisions to maps, costs, and add tables with customer allocations
  - Chapter 6: Include TWDB report of Socioeconomic Impacts of Not Meeting Needs; update Boerne Unmet needs to indicate they will not purchase from GBRA WaterSECURE to meet shortage
  - Chapter 10: Include information on IPP submittal, comments, responses, and adoption of Final Plan
- Updates to address IPP comments

We'll provide updates and additional information on changes to the plan at the October 2nd SCTRWPG meeting

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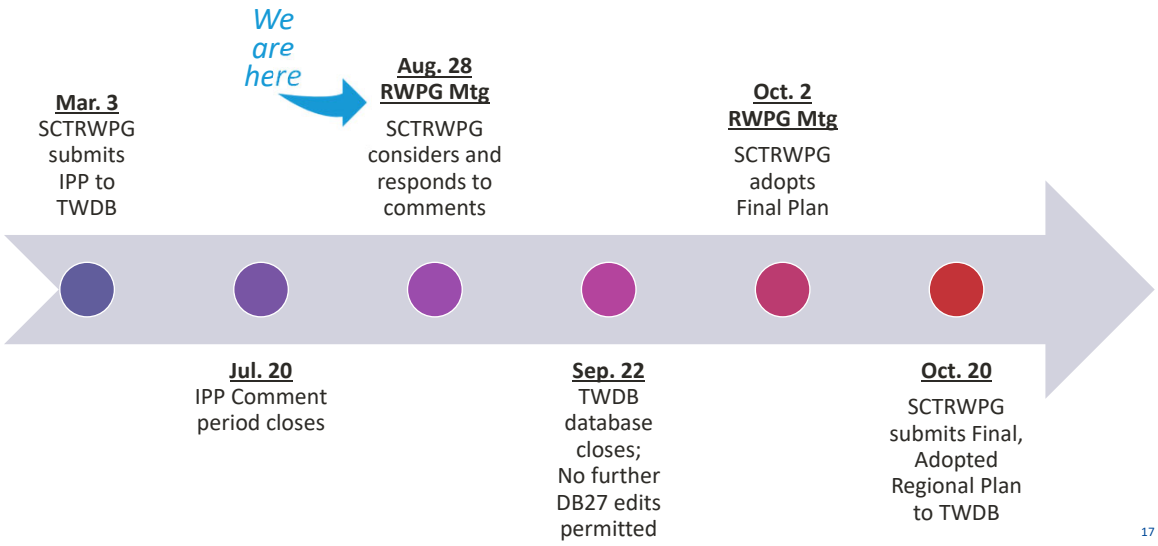
A. Plan Updates and Path Forward

See Handout A for comments summary



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TOPIC B

- Comments Summary and Response Requirements

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B. Comments Summary and Response Requirements

64 Written and **Zero** Oral Comments Received

47 TWDB Comments

17 Public and Other Agency Comments

27 Level 1

20 Level 2

1 State Agency

2 WUGs or WWPs

14 Public Stakeholders

Handout A – Summary of All Comments
Handout B – Proposed Responses to TWDB Comments
This Presentation – Proposed Responses to Public and Other Agency Comments

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B. Comments Summary and Response Requirements

TWDB requires RWPGs to consider timely agency and public comments. The final adopted plan must include the following:

TWDB Comments

- A copy of the TWDB's written comments on the IPP in their entirety
- Responses* to each TWDB comment explaining how the RWP was revised or why changes were not warranted
  - TWDB Level 1 Comments – must be sufficiently addressed for final plan
  - TWDB Level 2 Comments – can be addressed, but not required

* RWPG responses to TWDB comments need approval by TWDB and by RWPG

Agency and Public Comments

- Summarize the comment or comments as a group, if they are the same general topic
- Respond to the comment or comment grouping, indicating resulting revisions or why changes are not warranted
- Comments may be addressed but no change is required

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TOPIC C

- Texas Water Development Board (TWDB) Comments

C. Summary of TWDB Level 1 Comments by Chapter

See Attachment A in Handout A

Ch. No.	Chapter Name	No. of Comments	Comment Summary
1	Description of the Regional Water Planning Area	0	N/A – none
2	Population and Water Demand Projections	1	Correct water demand projection table
3	Water Availability and Existing Water Supplies	1	Provide clarifying information
4	Identification of Water Needs	1	Correct values inconsistent with DB27
5	Evaluation and Recommendation of Water Management Strategies	20	Corrections, clarification requests, additional information requests, implementation status
6	Impacts of the Regional Water Plan and Consistency with Protection of Resources	1	Correct values inconsistent with DB27
7	Drought Response Information, Activities, and Recommendations	0	N/A – none
8	Policy Recommendations and Unique Sites	0	N/A – none
9	Implementation and Comparison to the Previous Regional Water Plan	1	Correct values inconsistent with DB27
10	Public Participation and Plan Adoption	0	N/A – none
N/A	DB27 or Other	2	GIS, additional information requests
	Total TWDB Level 1 Comments	**27**	

C. TWDB Comments of Particular Interest (1 of 4)

Comment #11 – Advanced Metering Infrastructure Included in Water Use Reduction Strategies	
TWDB Comment	**Proposed SCTRWPG Response**
Section 5.2.1.2.2, Table 5.2.1.7, Table 5.2.1.7, and DB27. Municipal water use reduction and water loss mitigation strategies are recommended separately, however the plan states that advanced metering infrastructure (AMI) is included in water use reduction strategies. For regional water planning purposes, AMI is to be included under water loss mitigation strategies. Please revise the municipal conservation description, yields, cost information, and reconcile updates in DB27 as appropriate to correctly group AMI with water loss mitigation in the final, adopted regional water plan. [Contract Scope of Work, Task 5C; Contract Exhibit C, Section 2.5.2.5; Contract Exhibit D, Appendix 17]	The WMS Municipal Conservation - Water Loss Mitigation has been updated to include both AMI and Leak Detection and Repair. The WMS Municipal Conservation - Water Use Reduction has been updated to include non-capital cost conservation improvements. The descriptions, yields, cost information, and DB27 information has been updated to reflect these changes in Section 5.2.1.

C. TWDB Comments of Particular Interest (2 of 4)

Comment #4 – Unit Costs for Municipal Water Conservation	
TWDB Comment	**Proposed SCTRWPG Response**
Chapter 5 and DB27. Unit costs reported in DB27 appear high for the following strategies: Municipal Water Conservation - Water Use Reduction - Kendall County WCID 1 ($43,305), and Municipal Water Conservation - Water Loss Mitigation - Sunko WSC ($207,786). Please confirm that the calculated unit costs are correct in DB27, or correct as appropriate, and that costs were considered in strategy recommendations in the final, adopted regional water plan. [31 TAC § 357.34(e)(2)]	The Municipal Water Conservation – Water Use Reduction and Water Loss Mitigation strategies were revised as a result of TWDB Level 1, Comment 11, and the unit costs in DB27 have been updated accordingly. The calculated unit costs reflect full implementation of capital improvements associated with each strategy. The revised calculated unit costs for the WUGs identified in the TWDB's comment have been revised, as follows: • Water Use Reduction – Kendall County WCID 1 ($305/acft) • Water Loss Mitigation – Sunko WSC ($30,163/acft) The SCTRWPG strongly supports water conservation and considered costs when recommending strategies for the 2026 RWP. The Municipal Water Conservation WMS is a Recommended strategy for every municipal WUG in the SCTRWPA with a 2030 GPCD greater than 80. It is important to note that unit costs are calculated by dividing total strategy cost by the potential yield. Therefore, strategies with relatively low water yield and high capital costs will result in higher unit costs. This relationship was considered during the evaluation and recommendation of water management strategies.

C. TWDB Comments of Particular Interest (3 of 4)

Comment #5 – Quantitative Measure of Reliability	
TWDB Comment	**Proposed SCTRWPG Response**
Section 5.2. The plan does not appear to include a quantitative measure for assessing reliability of water supplies for water management strategy (WMS) evaluations. The matrix provided in Table 5.2-2 provides a qualitative rating of low to high. Additional reliability considerations presented in Table 5.2-3 only appear to be based on a quantified measure for the aquifer storage and recovery (ASR) strategies. Please provide a quantitative basis for reliability used in the evaluations of all water management strategies in the final, adopted regional water plan— ensuring that any recommended strategies provide a firm water supply throughout drought of record conditions. [31 TAC § 357.34(e)(3)(A)]	Section 5.2 regarding Reliability has been revised, as follows: "Reliability is an assessment of the availability of the specified water quantity to the user over time. Quantifiably, the water volumes presented in this plan for recommended strategies are firm supplies that are 100 percent reliable during Drought of Record conditions, per TWDB planning guidelines. Considering other factors that can affect long-term availability, such as potential future modeling or rule changes that are beyond the scope of this planning effort, the SCTRWPG developed additional qualified reliability reporting in the form of a reliability evaluation matrix (Table 5.2 2) that was used in conjunction with other implementation considerations to also qualify the reliability of WMSs shown in Table 5.2 3." Additionally, the qualitative reliability assessments for ASR projects in Table 5.2-3 have been revised, as follows: "Reliability is considered high. Successful ASR projects typically require extensive site-specific analyses, feasibility studies, and cycle testing prior to full implementation."

C. TWDB Comments of Particular Interest (4 of 4)

Comment #23 – Unallocated Recommended Strategy Volumes	
TWDB Comment	**Proposed SCTRWPG Response**
Sections 5.2.16, 5.2.17, 5.2.8, and 5.2.20. The plan does not appear to include explanations for the following recommended strategy volumes that remain 100% unallocated to any WUGs: Canyon Regional Water Authority (CRWA) - Expanded Brackish Carrizo-Wilcox, CRWA - Siesta Project, FE - CRWA Hays Caldwell WTP Expansion, and GBRA - Lower Basin New Appropriation. Please provide a specific explanation for why each of these strategies remaining 100% unallocated to WUGs in the final, adopted regional water plan. [Contract Exhibit C, Section 2.5.3]	Each strategy with unallocated recommended strategy volumes has been revised to add the following language in the Available Yield section: "All or a portion of yield from this WMS remains unallocated to a specific WUG because the project sponsor is a WWP and has chosen to instead have a surplus management supply. Surplus management supply is when the cumulative supply of the recommended WMSs is in excess of the amount needed to meet regional needs to allow for such things as uncertainty associated with long-term planning, problems with project implementation, changing weather conditions, flexibility of sponsors in choosing projects to implement, and changes in project viability. Rather than assigning volumes from a specific project to individual WUGs in the plan, the WWP contracts with customers from their general water supply portfolio or surplus. This approach allows for flexibility in meeting future demands and accommodating evolving customer needs. As such, the strategy volumes are included in the plan to reflect the WWP's capacity to meet regional needs, even though specific allocations to WUGs are not identified at this time."

TOPIC D

- Agencies and Public Comments
  1. Texas Parks and Wildlife Department (TPWD)
  2. Water User Groups (WUGs) and Wholesale Water Providers (WWPs)
  3. Public Comments Related to Gonzales County
  4. Other Public Comments

D.1 Texas Parks and Wildlife Department

See Attachment B in Handout A

Region L received formal comments from 1 other agency (Texas Parks and Wildlife Department [TPWD]). Comment submitted by Marty Kelly, Water Resources Program Coordinator on July 20, 2025

- Commended Region L for its strong emphasis on water conservation, reuse, and drought contingency planning, and for designating five stream segments as ecologically unique.
- Raised concerns about increased groundwater development and new surface water appropriations and their potential adverse impacts on small springs, groundwater-surface water interactions, and instream flows and freshwater inflows.
- Included recommendations to project sponsors:
  - To address concerns about declining freshwater mussel populations, coordinate with TPWD to develop plans to avoid impacts to aquatic resources or relocate aquatic resources outside of a project area.
  - To prevent the transmission of invasive species, avoid transporting water from affected water bodies or enact mitigative measures to prevent transfer of invasive species.
- Included recommendations to the SCTRWPG, shown on subsequent slides

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D.1 Texas Parks and Wildlife Department

See Attachment B in Handout A

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TPWD Comment to SCTRWPG	Proposed SCTRWPG Response
1. Update tables in Chapter 5 and Appendix 5D with the lists of federal and state listed species and Species of Greatest Conservation Need (TPWD updated the state lists in January 2025).	The evaluations of environmental factors for WMSs, as presented in Chapter 5, Appendix 5D, and Chapter 6 were conducted between June and November 2024 using the best available data at that time. As with previous planning cycles, we have maintained consistency by basing our assessments on the data current during the evaluation period. Because TPWD's updated species data was released after completion of these evaluations, the WMS evaluations and subsequent summaries in Appendix 5D and Chapter 6 have not been revised to reflect the lists updated by TPWD in January 2025. The SCTRWPG remains committed to incorporating the most current TPWD lists available for WMS evaluations in the next cycle, anticipated to start in late 2028 through 2029. It is also important to note that individual project sponsors will conduct more detailed environmental reviews during the feasibility, design, permitting, funding, and implementation phases of each project. Their reviews will incorporate the most current data and regulatory guidance available at that time.

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D.1 Texas Parks and Wildlife Department

See Attachment B in Handout A

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TPWD Comment to SCTRWPG	Proposed SCTRWPG Response
2. For any WMSs that involve the transfer of surface water, address the threat of the spread of invasive exotic species and their potential negative environmental impacts.	The 2026 RWP does not include any WMSs that involve the transfer of surface water to another water body. As such, WMS evaluations have not been revised to specifically address the threat of invasive species in that context. However, Section 6.1.4.1 of Chapter 6 includes extensive narrative on invasive species, recognizing their potential ecological and economic impacts and the importance of monitoring and mitigation.

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D.1 Texas Parks and Wildlife Department

See Attachment B in Handout A

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TPWD Comment to SCTRWPG	Proposed SCTRWPG Response
3. Include additional language regarding invasive species, such as identification of infested water bodies and inclusion of mitigation measures to prevent the spread of invasive species through water transfers.	The 2026 RWP has not been revised to include this additional language, as there is already an extensive narrative in Section 6.1.4.1 of Chapter 6. For example, the 2026 RWP includes the following: "The zebra mussel was confirmed within Lake Texoma in April 2009 and has since spread south to other parts of Texas. The species was first detected in Lake Belton in 2013 and has continued its steady progression south. TPWD indicates 21 Texas lakes are classified as infested (established, reproducing populations); including Canyon Lake in Comal County. TPWD currently identifies zebra mussel positive lakes (adults or larvae are detected) at nine locations, including Lakes Dunlap, McQueeney, and Placid in Guadalupe County. TPWD maintains a regularly updated webpage with map showing lakes with positive zebra mussel identifications and maps, located at https://tpwd.texas.gov/huntwild/wild/species/exotic/zebramusselmap.phtml."

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D.2 Water User Groups (WUGs) and Wholesale Water Providers (WWPs)

See Attachment C and Attachment D

Region L received formal comments from 2 WUGs and/or WWPs. Comment summaries and proposed responses are included on subsequent slides.

No.	WUG and/or WWP Providing Comment	Commenter Name and Title	Date Received
1	Aqua Water Supply Corporation (WSC)	Emily O'Leary, Manager of Engineering	May 21, 2025
2	Canyon Regional Water Authority (CRWA)	Chelsea Hawkins, Water Resources Manager	July 18, 2025

CRWA's comments will be presented and discussed in Agenda Item No. 8

D.2 Water User Groups (WUGs) or Wholesale Water Providers (WWPs)

See Attachment C in Handout A

Aqua WSC Comment to SCTRWPG	Proposed SCTRWPG Response
1. Polonia WSC has merged with Aqua WSC. 2. Update potential emergency interconnects table to show interconnect with Aqua Texas, not Aqua WSC. 3. Update the Potentially Feasible WMS table (Appendix 5B) to include large-scale marine seawater or brackish groundwater development.	1. The Water User Group (WUG) list for the 2026 South Central Texas Regional Water Plan was finalized at the May 5, 2022, meeting and submitted to the TWDB on July 28, 2022. This information and other WUG name revisions will be updated in the 2031 cycle. The SCTRWPG acknowledges the comment and recommends no changes to the 2026 RWP. 2. In response to your comment, Table 7B-2 in Appendix 7B has been updated to indicate that the potential emergency interconnection should be with Hays County-Other (Aqua Texas). 3. The SCTRWPG identified potentially feasible WMSs in late 2023 and early 2024, forming the basis for the Task 5B Scope of Work and associated funding. Adding a new WMS, such as large-scale marine seawater or brackish groundwater development, would require SCTRWPG approval and subsequent evaluation of the strategy for inclusion of the plan, which is not feasible at this stage of the planning process. However, in response to your comment, a note has been added to the Potentially Feasible WMS table (Appendix 5B) stating that Region K evaluated and recommended one or more brackish groundwater development strategies that benefits Aqua WSC.

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D.3 Public Comments Related to Gonzales County

Region L received 11 comments from 10 members of the public, opposing proposed groundwater projects within the Carrizo-Wilcox Aquifer in Gonzales County

No.	Commenter	Date Received
1	Ted Boriack	5/22/25
2	T Carroll	7/11/25
3	Anonymous	7/12/25
4	Lori Benes	7/15/25
5	Deidra D. Voigt	7/15/25
6	Michael Oakes	7/17/25
7	Jeanette Soefje	7/18/25
8	Mary Ann Menning	7/19/25
9	Ted Boriack	7/20/25
10	Nancy Foster	7/20/25*
11	Jim Holster	7/20/25*

*Comment received after the July 20, 2025, 5 p.m. deadline

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D.3 Public Comments Related to Gonzales County

See Section 2.4 and Attachment E in Handout A

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Summary of Public Stakeholders' Comments to SCTRWPG	Proposed SCTRWPG Response
Comments expressed concerns regarding: 1. Over-permitting of groundwater; 2. Potential water quality degradation from Aquifer Storage and Recovery (ASR) projects; and 3. The lack of direct representation from Gonzales County on the Region L Water Planning Group.	Thank you for sharing your concerns; the SCTRWPG appreciates stakeholder engagement and encourages continued involvement in regional water planning efforts. The SCTRWPG acknowledges the comments and recommends no changes to the 2026 RWP at this time. The following provides additional information and resources in response to your comments. 1. Groundwater management and permitting authority reside with local Groundwater Conservation Districts (GCDs). In Gonzales County, the Gonzales County Underground Water Conservation District (GCUWCD) regulates groundwater through permitting processes; all permitting comments may be directed to them. 2. ASR projects are subject to review and regulatory oversight by local and state agencies to ensure that stored water does not compromise the integrity of or adversely affect water quality in an aquifer. 3. Gonzales County is represented in the SCTRWPG through at-large members who serve the entire region, as well as through interest categories like the Public, Environment, Counties, and others. Specifically, Gonzales County has direct representation via its Groundwater Management Area (GMA 13), which ensures local groundwater interests are included in the planning process.

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D.4 Other Public Comments

See Section 2.4 in Handout A

Region L Received 3 written comments from 2 members of the public. Comment summaries and proposed responses are included on subsequent slides.

No.	Commenter Name	Date Received
1	Francis Comeaux	May 13, 2025
2	Francis Comeaux	May 27, 2025
3	Milan J. Michalec	July 20, 2025

D.4 Other Public Comments

See Section 2.4 in Handout A

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Francis Comeaux (May 13, 2025)	Proposed SCTRWPG Response
I would like the Executive Summary of the 2026 IPP to include columns: 1. List of affected water district(s) 2. Project Start Date, or if already started, % complete 3. Target Date for water availability, near completion date 4. Project acre-ft/year Thank you, Francis	The Executive Summary meets TWDB requirements for content and the 30-page limit, as outlined in Exhibit C, Section 1.4. Given space constraints and that the information is already included in the 2026 RWP, the SCTRWPG acknowledges the comment and recommends no changes at this time. Additionally, the TWDB's Interactive State Water Plan provides a useful resource for reviewing, compiling, and comparing WUGs, WMSs, and associated projects. The Interactive State Water Plan is available at: https://2027.texasstatewaterplan.org/.

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D.4 Other Public Comments

See Attachment F in Handout A

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Francis Comeaux (May 27, 2025)	Proposed SCTRWPG Response
1. Revisions to the Executive Summary, including adding voting member affiliations and additional data summaries; 2. Clarification as to existing supply data differences between Chapter 3 and Appendix 3A for Canyon Lake Water Service (Texas Water Company);	1. Composition of the SCTRWPG follows all applicable statutes, TWDB rules, SCTRWPG bylaws, and the group's Guiding Principles. While each county commissioners court is not individually represented on the SCTRWPG, Counties as a whole are represented through designated interest categories, and all members are responsible for considering the needs of the entire region. In response to your comment, voting member affiliations have been added to Chapter 10 for reference. 2. The differences noted for Canyon Lake Water Service (Texas Water Company) between Chapter 3 and the DB27 reports in Appendix 3A are due to the WUG's service area spanning both the Guadalupe and San Antonio basins in Comal County. The table in your letter includes only the existing supplies in the Guadalupe basin, which accounts for the discrepancy.

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D.4 Other Public Comments

See Attachment F in Handout A

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Francis Comeaux (May 27, 2025)	Proposed SCTRWPG Response
3. Clarification of volumes of water allocated to customers for the GBRA WaterSECURE WMS 4. Revisions to Table 5.1-2 regarding WMSs for WUGs 5. Revisions to Table 9-1 regarding hydrologic assumptions	3. Canyon Lake Water Service (Texas Water Company) is shown in the RWP as purchasing 12,000 acft/yr from the GBRA WaterSECURE WMS. Yield allocation volumes are provided to the SCTRWPG by project sponsors and customers, and are typically based on agreements between the seller and purchaser, reflecting factors such as demand, infrastructure capacity, and other relevant considerations. 4. Customer yield allocations have already been included in the final, adopted plan; however, Table 5.1-2 has not been modified as it is meant to refer the reader to individual WMSs for additional information. 5. In response to your comment, Table 9-1, has been updated with bold text to visually highlight changes in hydrologic assumptions between the 2021 and 2026 plans.

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D.4 Other Public Comments

See Attachment G in Handout A

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Milan J. Michalec (July 20, 2025)	Proposed SCTRWPG Response
Revise the definitive statement of "Boerne will purchase water from GBRA's WaterSECURE Project" to state "Boerne may purchase water from GBRA's WaterSECURE Project." He raised similar concerns about definitive language used for other water purchases and recommended verifying written commitments from these entities and revising the language accordingly until formal participation has been confirmed.	Boerne has separately requested removal of the water purchase from the GBRA WaterSECURE project, resulting in changes to Chapters 5 and 6. Yield allocation volumes are provided to the SCTRWPG by project sponsors and customers, and are typically based on agreements between the seller and the purchaser, reflecting factors such as demand, infrastructure capacity, and other relevant considerations. The SCTRWPG verifies the sale with the applicable customers and sellers that they wish for the purchase and sale to be shown in the RWP. Therefore, the SCTRWPG acknowledges the comment and recommends no changes at this time.

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Consideration and Appropriate Action to:

- Approve proposed SCTRWPG responses to comments that were submitted by TWDB, TPWD, Aqua WSC, and the public.
- Approve incorporation of proposed responses into the Final 2026 Region L Regional Water Plan.

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Next Steps

Revise Plan
- Update DB27 by Sept. 22
- Update Chapters

October RWPG Meeting:
- Review plan updates
- Review response updates
- Adopt Final Plan

Submit Final, Adopted Plan
- Submit plan and supporting documents to TWDB by October 20, 2025

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AGENDA ITEM NO.8 – DISCUSSION AND APPROPRIATE ACTION REGARDING PROPOSED UPDATE TO CRWA WELLS RANCH III PROJECT AS PRESENTED IN SCTRWPG 2025 IPP

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8/28/2025

Agenda Item 8: Discussion and Appropriate Action Regarding Proposed Update to CRWA Wells Ranch III Project as Presented in SCTRWPG 2025 IPP

18. CRWA Wells Ranch 3 (Phase 2) Project

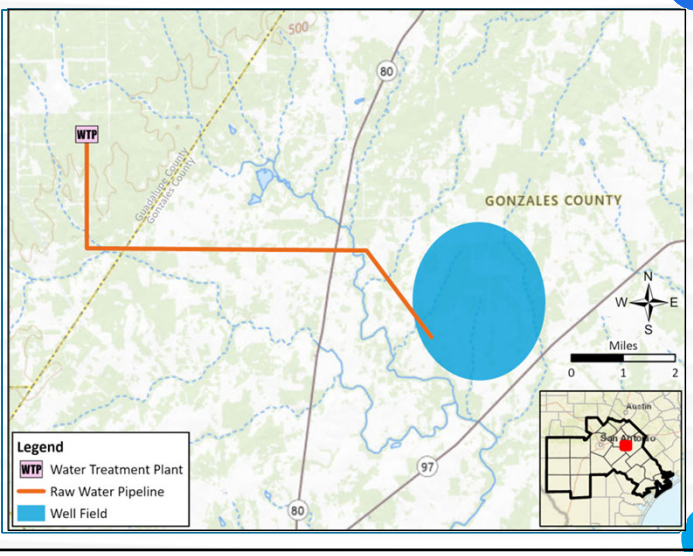
This slide was presented to the SCTRWPG on November 7, 2024.

Red text indicates change from 2021 Plan

Project Description

Expansion of existing Wells Ranch Project. Includes a new well field in the Carrizo-Wilcox Aquifer in Gonzales County.

- Project Sponsor: CRWA
- Source: Groundwater from Carrizo-Wilcox Aquifer in Gonzales County
- Yield: MAG-limited
  - Firm: 6,941 – 8,395 acft/yr
  - Requested: 14,500 acft/yr
- Implementation Decade: 2030
- Components:
  - Well field (6 wells, pumps, pipelines)
  - Pump stations
  - Transmission pipeline (10 miles)
  - Storage tanks
  - Water treatment plant expansion (13 MGD)



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CRWA Comments on IPP

See Attachment D in Handout A

- March 2025: Submitted IPP to TWDB
- May 2025: CRWA requested revisions to the Wells Ranch (Phase 3) WMS; SCTRWPG identified inconsistency between DB27 and the IPP
- July 2025: CRWA submitted a comment letter to the SCTRWPG requesting to:
  1. Correct Modeled Available Groundwater (MAG)-constrained yields in the Wells Ranch (Phase 3) WMS
  2. Update cost estimates using sponsor-supplied data for the Wells Ranch (Phase 3) WMS
  3. Revise customer allocations for the Wells Ranch (Phase 3) WMS
  4. Revise Major Water Providers (MWPs) definition and identify CRWA as a MWP
- July to August 2025: Met to discuss options and path forward
- August 2025: Executive Committee met and provided recommendations (more information on subsequent slides)

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Executive Committee Meeting – August 30, 2025

The SCTRWPG Executive Committee met and considered updates to the CRWA Wells Ranch (Phase 3) WMS.

- The Executive Committee evaluated two options to correct the inconsistency:
  - Hybrid Option: Project is in both Guadalupe and Gonzales Counties; no redistribution of MAG-constrained yields for projects in these counties
  - Gonzales-only Option: Project is in Gonzales County only; redistribution of MAG-constrained yields in Gonzales County only

Executive Committee Recommendation

The SCTRWPG Executive Committee recommended that the SCTRWPG pursue the Gonzales-only Option to address the inconsistency

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Proposed SCTRWPG Responses to CRWA Comments on IPP

Based on the Executive Committee recommendations and regional water planning processes, the following slides include *proposed* SCTRWPG responses to CRWA's comments on the IPP.

CRWA Comment to SCTRWPG	Proposed SCTRWPG Response
1. Correct Modeled Available Groundwater (MAG)-constrained yields in the Wells Ranch (Phase 3) WMS	1. In response to your comment, the 2026 RWP has been revised to update the MAG-constrained yields for the Wells Ranch (Phase 3) WMS and to ensure consistency between the RWP and DB27.

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Proposed SCTRWPG Responses to CRWA Comments on IPP

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CRWA Comment to SCTRWPG	Proposed SCTRWPG Response
2. Update cost estimates using sponsor-supplied data for the Wells Ranch (Phase 3) WMS 3. Revise customer allocations for the Wells Ranch (Phase 3) WMS a) Remove three customers: 1) Converse, 2) Marion, and 3) Martindale WSC b) Add five customers: a) County Line SUD* b) East Central SUD c) Green Valley SUD d) Maxwell SUD e) Springs Hill WSC * On 5/21/2025, CRWA updated its request to exclude County Line SUD from the customer additions.	2 and 3. The SCTRWPG required all project sponsors submit new project requests and provide project details by established deadlines to allow sufficient time for review and evaluation of WMSs. The deadline for submitting external cost estimates and customer allocation changes was September 2, 2024. Since the information was submitted after this deadline and due to time constraints at this stage of plan development, the SCTRWPG acknowledges the comment and recommends no changes to the 2026 RWP at this time.

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Proposed SCTRWPG Responses to CRWA Comments on IPP

→ *Continued from Previous Slide*

CRWA Comment to SCTRWPG	Proposed SCTRWPG Response
4. Revise Major Water Providers (MWPs) definition and identify CRWA as a MWP	4. Major Water Providers (MWPs) are defined as a WUG or WWP of particular significance to the region's water supply, as determined by the regional water planning group. The SCTRWPG reviewed and considered multiple options for defining MWPs at its August 1, 2024, meeting and voted to adopt a MWP definition as any WUG or WWP with 2080 demands greater than 30,000 acft/yr. CRWA does not meet the current criteria for MWP designation because the WWP has contract demands of ~21,000 acft/yr in 2080. The SCTRWPG recognizes the importance of CRWA's role in regional water supply and will revisit the MWP definition in the next planning cycle. Stakeholder input, including from CRWA, will be considered during that process to ensure the definition reflects evolving regional needs.

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Consideration and Appropriate Action to:

- Approve the recommendation from the Executive Committee to pursue the Gonzales-only Option for the CRWA Wells Ranch (Phase 3) Project.
- Approve proposed SCTRWPG responses to the comments submitted by CRWA.
- Approve incorporation of the proposed responses to CRWA comments into the Final 2026 Region L Regional Water Plan.

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Supplemental Information:

Options Proposed to Address Inconsistency with MAG-Constrained Yields for the CRWA Wells Ranch (Phase 3) WMS

Hybrid Option (7/11/2025)
WMS in Guadalupe & Gonzales Counties; No Redistribution

- Revise the current Canyon Regional Water Authority (CRWA) Wells Ranch (Phase 3) Project water management strategy (WMS) to include infrastructure in both Guadalupe County AND Gonzales County (instead of just Guadalupe). Due to the scope of changes required to expand the geographic footprint, updates will be limited strictly to those necessary for this purpose. Anticipated revisions to the CRWA WMS description in Section 5.2.18 include the following items:
  - Approximate project location map* (see note below for information request)
  - Narrative summary of infrastructure and locations.
  - Additional environmental and cultural impacts analyses
  - Costing model and costing summary table. Include additional infrastructure (sized for the envisioned yield) using default cost estimates (not external costs) and update MAG-Constrained Yield.
  - Available yield section:
    - Revise Table 5.2.18-1 to show the Envisioned and MAG-Constrained Yields for both Guadalupe County AND Gonzales County (see DRAFT Revised Table 5.2.18-1 below). Allocate remaining groundwater availability volumes after existing WMSs. This does not result in redistribution of pro rata reductions for existing WMSs in Gonzales County.
    - Include additional narrative to explain the alternative methodology used for this WMS to calculate the MAG-constrained yield.
- Enables CRWA to apply for TWDB funding for infrastructure in either or both Guadalupe and Gonzales Counties
- Later (around 2027-2028), if new modeled available groundwater (MAG) estimates released by the TWDB indicate availability estimates can increase, CRWA could amend the plan to substitute the alternative portion(s) of the project as

Hybrid Option (7/11/2025)
WMS in Guadalupe & Gonzales Counties; No Redistribution

Table 5.2.18-1 Envisioned and MAG-Constrained Yields for the CRWA Wells Ranch (Phase 3) Project (acft/yr)

County and Yield Type	2030	2040	2050	2060	2070	2080
Gonzales County – Envisioned Yield	13,710	13,710	13,710	13,710	13,710	13,710
Guadalupe County – Envisioned Yield	790	790	790	790	790	790
Total Envisioned Yield	**14,500**	**14,500**	**14,500**	**14,500**	**14,500**	**14,500**
Gonzales County – MAG-Constrained Yield	8,341	0	1,115	1,489	2,449	0
Guadalupe County – MAG-Constrained Yield	790	790	790	790	790	790
Total MAG-Constrained Yield	**9,131**	**790**	**1,905**	**2,279**	**3,239**	**790**

Gonzales-only Option (7/30/2025)
WMS in Gonzales County; Redistribution in Gonzales County

- Update the current CRWA Wells Ranch (Phase 3) Project WMS write-up to include the corrected MAG-Constrained yields for Gonzales County (instead of just Guadalupe County, as shown in the IPP).
  - To accommodate the additional Envisioned Yield in Gonzales County, all other projects in the County/Basin/Aquifer unit (Gonzales County/Guadalupe Basin/Carrizo-Wilcox Aquifer) will need to be redistributed in order to not exceed the MAG estimate.
  - Changes to the CRWA WMS write-up will be limited to the MAG-Constrained Yield:
    - Available Yield Section: Revise Table 5.2.18-1 to show the Envisioned and MAG-Constrained Yields for Gonzales County (see DRAFT Revised Table 5.2.18-1 below).
    - Engineering and Costing Section: Revise cost estimates (unit costs) and cost estimate summary table for CRWA
  - Because other projects in the Gonzales County/Guadalupe Basin/Carrizo-Wilcox Aquifer unit will need to be redistributed. To minimize impacts of the redistribution, yield distribution for the Gonzales & Guadalupe Brackish Partnership Project was shifted to Guadalupe County.
  - Changes to MAG-Constrained Yields for other projects requires revisions to each project's write-ups to adjust the MAG-Limited Yield and costs. A table of impacted projects is shown in subsequent slides
  - DB27 will be updated to revise the yields and cost estimates for projects in the Gonzales County/Guadalupe Basin/Carrizo-Wilcox Aquifer unit, as necessary.

Gonzales-only Option (7/30/2025)
WMS in Gonzales County; Redistribution in Gonzales County

Table 5.2.18-1 Envisioned and MAG-Constrained Yields for the CRWA Wells Ranch (Phase 3) Project (acft/yr)

County and Yield Type	2030	2040	2050	2060	2070	2080
Gonzales County – Envisioned Yield	14,500	14,500	14,500	14,500	14,500	14,500
Gonzales County – MAG-Constrained Yield	8,341	7,182	10,820	10,938	11,239	8,869

Gonzales-only Option (7/30/2025)
WMS in Gonzales County; Redistribution in Gonzales County

With this option, projects within the Gonzales County/Guadalupe Basin/Carrizo-Wilcox Aquifer unit will be revised, as follows:

WMS Name	County and Yield Type (in Gonzales County Only; does not include yields for projects that are in more than one county)	2030	2040	2050	2060	2070	2080
GBRA WaterSecure (Brackish GW Project)	Envisioned Yield	15,000	15,000	15,000	15,000	15,000	15,000
	MAG-Constrained Yield in IPP	0	10,289	15,000	15,000	15,000	12,707
	MAG-Constrained Yield with Gonzales-only Option	0	7,429	11,194	11,315	11,627	9,175
Gonzales & Guadalupe Brackish Partnership Project	Envisioned Yield	0	5,331	5,331	5,331	5,331	5,331
	MAG-Constrained Yield in IPP	0	4,571	6,664	6,664	6,664	5,647
	MAG-Constrained Yield with Gonzales-only Option	0	2,640	3,978	4,020	4,134	3,261
SSLGC Expanded Brackish Wilcox Project	Envisioned Yield	0	5,000	5,000	5,000	5,000	5,000
	MAG-Constrained Yield in IPP	0	3,430	5,000	5,000	5,000	4,236
	MAG-Constrained Yield with Gonzales-only Option	0	2,476	3,732	3,772	3,876	3,058

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Supplemental Information:

Guiding Principles of the South Central Texas Regional Water Planning Group (SCTRWPG)

Guiding Principles

- Initially established during the 2021 Regional Water Planning Cycle
- Updated during this (2026) cycle
- Includes three (3) Guiding Principles related to WMSs:
  - PRINCIPLE VII: Minimum Standards for Water Management Strategies
  - PRINCIPLE VIII: Recommended Water Management Strategies
  - PRINCIPLE IX: Management Supply

South Central Texas Regional Water Planning Group

Bylaws and Guiding Principles[1]

Region L
South Central Texas Regional Water Planning Group

[1]These Bylaws and Guiding Principles are current as of February 17, 2022

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Region L Guiding Principles

In 2015, the SCTRWPG began the 2021 Plan Enhancement Process to improve and clarify the principles that guide SCTRWPG decisions. They established 11 SCTRWPG Guiding Principles:

1. Appropriateness and adequacy of how demand and need are determined
2. Role of Regional Water Planning Groups in influencing population growth and land use
3. Conflicts of interests with respect to planning group members
4. The role of the planning group in influencing water development plans of water suppliers
5. The role of the planning group in influencing permitting entities
6. The adequacy of evaluating the plan's effects on freshwater inflows to San Antonio Bay, and the adequacy of environmental assessments of individual water management strategies (WMSs)
7. Minimum Standards for WMSs
8. Recommended WMSs
9. Management Supply
10. The role of reuse within the Regional Water Plan
11. Identifying special studies or evaluations deemed important to enhance the 2021 plan, the identification of outside funding sources, and the extent to which innovative strategies should be used.

Guiding Principles are included as Supplemental Information in the Agenda Packet

PRINCIPLE I

Appropriateness and Adequacy of How Demand and Need are Determined

The SCTRWPG generally defers to the TWDB on matters related to population and water demand projections. However, the SCTRWPG retains the duty to review TWDB projections on a case by case basis. Where the SCTRWPG finds a discrepancy in TWDB's projections, and can adequately justify its findings by verifying one or more of the "criteria for adjustment," TWDB – in consultation with TDA, TCEQ, and TPWD – may adjust population and/or water demand projections accordingly (see *generally General Guidelines for Development of the 2026 Regional Water Plan*). Consistent with Chapter 8 of the 2021 Regional Water Plan for Region L, the SCTRWPG supports greater TWDB flexibility through relaxation of current methodological assumptions holding regional and state population projection totals fixed (see Chapter 8.9.3 *Population and Water Demand Projections)*. Water demand projections used in developing the Regional Water Plan should be consensus figures arrived at by using TWDB data along with local input from the cities, counties, and groundwater districts.

PRINCIPLE II

Role of Regional Water Planning Groups in Influencing Population Growth and Land Use

Where the concepts of population growth and land use necessarily interrelate with the Regional Water Plan, the SCTRWPG shall, to the greatest extent possible, develop strategies to meet future projected demands. However, it is neither the role, nor the responsibility of the SCTRWPG to influence population growth or land use. While the SCTRWPG has a duty to remain cognizant of the sensitive relationship between the Regional Water Plan, population growth and land use, decisions concerning permitting and influencing population growth are inherently local, and remain wholly independent from the regional water planning process.

PRINCIPLE III

Conflicts of Interests with Respect to Planning Group Members

a) Active Planning Group Members

All disclosures pursuant to Article V, Section 6 of the SCTRWPG Bylaws, are the responsibility of the planning group member or designated alternate who has the potential conflict of interest. Therefore, disclosures are the responsibility of the planning group member or designated alternate. If the voting member choses to abstain from participation in deliberations, decisions, or voting, pursuant to Article V, Section 6 of the SCTRWPG Bylaws, the reason for abstention shall be noted in the minutes.

b) Nomination Process

Where the SCTRWPG is soliciting nominations to fill vacancies on the planning group, nominators shall provide information regarding the nominee's current employer, and provide a description of the nominee's experience that qualifies him/her for the position in the interest group being sought to represent.

Additionally, nominees shall agree to abide by the Code of Conduct, which is incorporated in the SCTRWPG Bylaws (see SCTRWPG Bylaws, Article V, Section 6). As per the Bylaws, the Executive Committee will conduct an interview process whereby nominees will be evaluated. Prior to the interview, nominees will be provided a copy of the Bylaws. During the interview process, nominees will be asked if they are willing to agree to the Bylaws, and specifically, if they are willing to comply with the Code of Conduct.

PRINCIPLE IV

Role of the Planning Group in Influencing Water Development Plans of Water Suppliers

The role of the SCTRWPG is to ensure water needs are met with identified potentially feasible water management strategies. It is not the role of the SCTRWPG to influence or interfere with local water planning decisions. In the absence of a planning group recommended potentially feasible water management strategy to meet an identified need, the SCTRWPG may evaluate and report, as required, the social, environmental and economic impacts of not meeting the identified need.

PRINCIPLE V

Role of the Planning Group in Influencing Permitting Entities

Decisions made at the planning group level are non-regulatory, and are intended for planning purposes only. While some decisions made by the SCTRWPG could inevitably affect some decisions made by the governing boards of permitting entities, it is neither the responsibility, nor the role of the SCTRWPG to influence or interfere with the regulatory decisions made by the governing boards of permitting entities.

PRINCIPLE VI

Adequacy of Evaluating the Plan's Effects on Freshwater Inflows to San Antonio Bay, and the Adequacy of Environmental Assessments of Individual Water Management Strategies

The SCTRWPG's evaluation of the Plan's effect on instream flows and freshwater inflows to the San Antonio Bay, and Plan's environmental assessments of individual water management strategies are currently meeting the regulations and statutes for regional water planning. The SCTRWPG believes a structural reorganization of the data presented will benefit the understanding of the Plan's environmental assessments. The SCTRWPG will:

a) Initiate environmental assessments earlier into the regional planning process;
b) Eliminate environmental assessment comparisons of current plan to past plans;
c) Consolidate threatened and endangered species information into the appendix rather than repeating in each water management strategy write-up;
d) Update baseline year data to most current for potential impacts to vegetation and terrestrial habitat;
e) Adjust distances for cultural resource sites;
f) Include current conditions and streamflow protected by environmental flow standards in updated tabular form improving the way in which the data is presented;
g) Include target flow regimes based on environmental freshwater inflow standards in updated tabular form improving the way in which the data is presented; and
h) Include high level narrative of climate variability.

The SCTRWPG believes this environmental assessment structural reorganization will reflect realistic environmental impacts of the recommended water management strategies for both the public and planning group members.

PRINCIPLE VII

Minimum Standards for Water Management Strategies

For a proposed strategy to be designated by the SCTRWPG as a water management strategy in the regional water plan, the proposed strategy must:

- supply water, reduce water demands, or otherwise satisfy one or more identified needs;
- include an evaluation and description consistent with standards used by the SCTRWPG and its technical consultants as required by TWDB Rules;
- satisfy all relevant requirements established by the TWDB, including environmental flow standards;
- identify one or more entities, with sufficient ability and willingness to implement the strategy, as being the strategy's sponsor(s);
- identify all entities, as reasonably possible, who own any existing or planned infrastructure or existing permit that could be affected by the proposed strategy as being strategy participants; and
- identify groundwater conservation districts or TCEQ with jurisdiction over the proposed strategy.

PRINCIPLE VIII

Recommended Water Management Strategies

The SCTRWPG strives to develop a regional water plan that recommends water management strategies sufficient to supply water to all identified needs projected in the planning horizon for the region.

The SCTRWPG prefers designating water management strategies as recommended or alternative using a consensus approach while respecting the strategy sponsor(s)' wishes.

Prior to designating any water management strategies as recommended, the SCTRWPG will review the water management strategies to evaluate costs and environmental sensitivity of each water management strategy per TWDB Rules.

PRINCIPLE IX

Management Supply

The cumulative supply of the recommended water management strategies may include an amount of supply in excess of the amount needed to meet regional needs as considered necessary by the SCTRWPG to allow for such things as uncertainty associated with long-term planning, problems with project implementation, changing weather conditions, flexibility of sponsors in choosing projects to implement, and changes in project viability.

Identified Needs without a Recommended Water Management Strategy

For water needs that are not satisfied by recommended water management strategies, the SCTRWPG will provide a narrative explaining why the need is not satisfied.

Alternative Strategies in the Regional Water Plan

The SCTRWPG will include alternative water management strategies that sponsors wish to have identified as alternatives to one or more of their recommended water management strategies.

Conceptual Approaches (Water Management Strategies Needing Further Study) in the Regional Water Plan

The SCTRWPG will acknowledge conceptual and innovative approaches to developing water supplies, reducing water demand, and increasing efficiency of supplying water as may be proposed by others, but need further study.

PRINCIPLE X

Role of Reuse Within the Regional Water Plan

The SCTRWPG generally defers to the TWDB rules for regional water planning as contained in the TAC on matters related to surface water supply analysis. For surface water supply analysis, the SCTRWPG will use the most current Water Availability Models from the TCEQ to evaluate supplies, as required by section 357.32 (c) of the TAC. As per section 357.32 of the TAC, the SCTRWPG will assume full utilization of existing water rights and no return flows when using Water Availability Models.

The SCTRWPG agrees that effluent will be depicted in the Regional Water Plan only in cases of direct and/ or indirect reuse water management strategies, or where a preexisting contract for the supply of reuse is in place. Additionally, the SCTRWPG will not use effluent in the estimates of cumulative effects absent a direct and/or indirect reuse water management strategy or a preexisting contract

PRINCIPLE XI

Identifying Special Studies or Evaluations Deemed Important to Enhance the 2026 Plan, the Identification of Outside Funding Sources, and the Extent to Which Innovative Strategies Should Be Used

The SCTRWPG recognizes that there are no identifiable outside funding sources for special studies or evaluations. However, the SCTRWPG remains willing to consider evaluating any proposed water management strategies and special studies allowable under section 357.34 of the TAC.

HANDOUT A

Table of Contents

LIST OF TABLES

The purpose of this Handout is to provide summaries and copies of comments received during the comment period regarding the Initially Prepared Plan (IPP) for the South Central Texas Region. The Handout summarizes comments received from agencies (Section 1.0) and from the public (Section 2.0).

1.0 Texas Water Development Board (TWDB) Comments on IPP

Texas Water Development Board (TWDB) staff completed their review of the IPP prepared by the South Central Texas (Region L) Regional Water Planning Group (SCTRWPG). TWDB's letter, dated June 23, 2025, is included in **Attachment A**. The comments can be categorized into two levels, as follows:

- Level 1: Comments, questions, and data revisions that must be satisfactorily addressed in order to meet statutory, agency rule, and/or contract requirements; and,
- Level 2: Comments and suggestions for consideration that may improve the readability and overall understanding of the regional water plan.

The TWDB's comment letter included 27 Level 1 comments and 20 Level 2 comments. The TWDB requires final adopted regional water plans (RWPs) to include a copy of the TWDB's written comments on the IPP along with responses to each comment explaining how the RWP was revised or why changes were not warranted (Contract Exhibit C, Section 2.12.2).

2.0 Agency and Public Comments on IPP

Between May 21 and July 20, 2025, Region L invited public feedback on its IPP. Written comments were accepted by San Antonio River Authority, the Region L administrative agent, via mail and email. The public comments received during this period are presented in their original form, with personal details, such as mailing and email addresses, removed to protect individual privacy.

31 Texas Administrative Code (TAC) § 357.50(f) requires the RWPG to consider timely agency and public comment. Section 357.50(g)(1)(D) requires the final adopted plan include summaries of all timely written and oral comments received, along with a response explaining any resulting revisions or why changes are not warranted.

2.1 Oral Comments

No oral comments were received at the Public Hearing dated May 21, 2025.

2.2 Agency Comments

Aside from the TWDB, the Texas Parks and Wildlife Department (TPWD) was the only agency that submitted comments on the IPP.

2.2.1 Agency Comments from the Texas Parks and Wildlife Department

Staff from TPWD participates as an ex officio member on each Regional Water Planning Group. TPWD staff reviewed the Region L 2026 IPP and provided written comments in a letter dated July 20, 2025, included in **Attachment B**. TPWD's review focused on the IPP's treatment of environmental water needs, habitat impacts, species of concern, invasive species, and consistency with applicable planning rules.

TPWD commended Region L for its strong emphasis on water conservation, reuse, and drought contingency planning, and for designating five stream segments as ecologically unique. The department raised concerns about increased groundwater development and new surface water appropriations and

their potential adverse impacts on small springs, groundwater-surface water interactions, and instream flows and freshwater inflows.

The TPWD included several recommendations to project sponsors:

- To address concerns about declining freshwater mussel populations, coordinate with TPWD to develop plans to avoid impacts to aquatic resources or relocate aquatic resources outside of a project area.
- To prevent the transmission of invasive species, avoid transporting water from affected water bodies or enact mitigative measures to prevent transfer of invasive species.

The TPWD recommended the following to the SCTRWPG regarding the IPP:

- Update tables in Chapter 5 and Appendix 5D with the most-recent lists of federal and state listed species and Species of Greatest Conservation Need (TPWD updated the state lists in January 2025).
- For any WMSs that involve the transfer of surface water, address the threat of the spread of invasive exotic species and their potential negative environmental impacts.
- Include additional language regarding invasive species, such as identification of infested water bodies and inclusion of mitigation measures to prevent the spread of invasive species through water transfers.

2.3 Public Comments from Water User Groups (WUGs) and Wholesale Water Providers (WWPs)

2.3.1 Aqua WSC | May 21, 2025

Emily O'Leary, Manager of Engineering at Aqua Water Supply Corporation (WSC) submitted a comment letter to Region L on May 21, 2025. The letter, included in **Attachment C**, informs the RWPG that Polonia WSC has merged with Aqua WSC; requests an update to the potential emergency interconnects table (Table 7B-2); and requests an update to the Potentially Feasible WMS table (Appendix 5B).

2.3.2 Canyon Regional Water Authority | July 18, 2025

Chelsea Hawkins, Water Resources Manager at Canyon Regional Water Authority (CRWA) submitted a comment letter to Region L on July 18, 2025. The letter, included in **Attachment D**, requests to:

1. Correct Modeled Available Groundwater (MAG)-constrained yields in the Wells Ranch (Phase 3) WMS

2. Update cost estimates using sponsor-supplied data for the Wells Ranch (Phase 3) WMS

3. Revise customer allocations for the Wells Ranch (Phase 3) WMS

    a. Remove three customers: Converse, Marion, and Martindale WSC

    b.

4. Revise Major Water Providers (MWPs) definition and identify CRWA as a MWP

a revision to CRWA's Wells Ranch Phase 3 Water Management Strategy (WMS), noting that the Modeled Available Groundwater (MAG)-constrained yields in the IPP reflect only Guadalupe County data, while the project includes groundwater production from both Guadalupe and Gonzales Counties. CRWA also requests updates to the WMS's cost estimates and corrections to tables listing participating entities and aquifer sources. Additionally, CRWA requests to be identified as a Major Water Provider (MWP), citing demand projections that meet the Region L RWPG's criteria.

2.4 Public Comments Related to Gonzales County

Region L received 11 comments from 10 members of the public opposing proposed groundwater projects within the Carrizo-Wilcox Aquifer in Gonzales County. They expressed concerns regarding:

1. Over-permitting of groundwater;
2. Potential water quality degradation from Aquifer Storage and Recovery (ASR) projects; and
3. The lack of direct representation from Gonzales County on the Region L Water Planning Group.

Table 2-1 provides a summary of the public comments related to Gonzales County, including the name of the commenter, date the comment was received, and a reference to the section number within this document where the comment's full text can be found.

Table 2-1 Public Comments Related to Gonzales County

Section Reference	Commenter	Date Received
2.4.1	Ted Boriack	5/22/25
2.4.2	T Carroll	7/11/25
2.4.3	Anonymous	7/12/25
2.4.4	Lori Benes	7/15/25
2.4.5	Deidra D. Voigt	7/15/25
2.4.6	Michael Oakes	7/17/25
2.4.7	Jeanette Soefje	7/18/25
2.4.8	Mary Ann Menning	7/19/25
2.4.9	Ted Boriack	7/20/25
2.4.10	Nancy Foster	7/20/25*
2.4.11	Jim Holster	7/20/25*

**Comment received after the July 20, 2025, 5 p.m. deadline.*

2.4.1 Ted Boriack | May 22, 2025

As a long time resident and landowner of Gonzales County, I and many other landowners are distressed over the TWDB's repeat groundwater projects from the boundary of the Gonzales County Underground Water Conservation District (GCUWCD) which includes most of Gonzales County and a portion of Caldwell County.

See below for a summary of the total groundwater volumes permitted by the GCUWCD

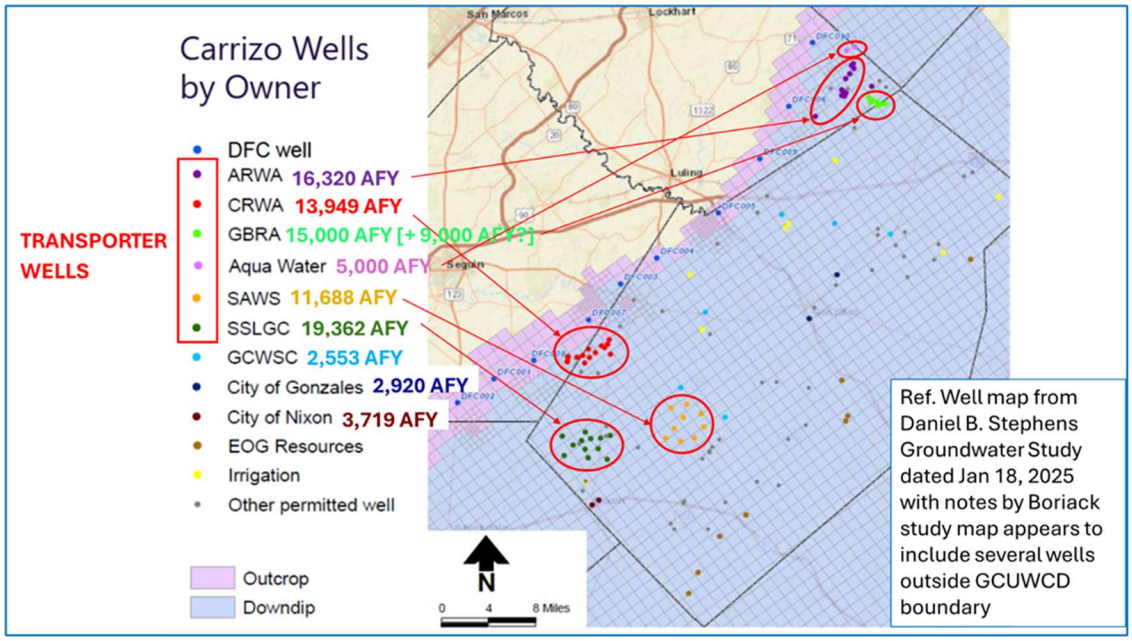
Gonzales County UWCD Permits for Carrizo Wells -- Transporters vs Local Users

	Permits Granted as of Today	
Permit Granted by GCUWCD to:	**Acre-ft/yr**	
Aqua Water Supply Corporation	5,000	5.4%
Canyon Regional Water Authority	8,320	9.0%
Guadalupe-Blanco River Authority	15,000	16.3%
San Antonio Water System	11,688	12.7%
Schertz-Sequin Local Govt Corp	19,362	21.0%
Alliance Regional Water Authority	11,620	12.6%
Transporters (take water out of GCUWCD boundary)	**70,990**	**77.0%**
Gonzales County Water Supply Corporation	2,553	2.8%
Gonzales, Nixon, Smiley public supply wells combined	7,407	8.0%
Local Irrigation and livestock	9,249	10.0%
Local Fracking	1,796	1.9%
Local Industrial	210	0.2%
Local Water Use (within GCUWCD boundary)	**21,215**	**23.0%**
Total Carrizo Permits	**92,205**	**100.0%**

The amount of groundwater permitted to exporters by the Gonzales County Underground Water Conservation District is now at the irresponsible/unsustainable level. Total groundwater permits granted by the Gonzales County conservation district for the Carizo aquifer is over 92,000 acre-ft/yr which is far above the MAG volume -- almost 80% of the permitted volumes are for exporters, leaving little for Gonzales County farms, ranches, rural township supply and local businesses.

The Regional-L plan and the state plan should never include a groundwater export project that requires a permit being granted which exceeds the MAG value and that involves an unfair or malicious taking of groundwater from a landowner -- that is irresponsible, and what has already happened in the GCUWCD.

The exporter wells in the GCUWCD are compressed into very small compact areas relative to their production volume -- this maximizes detrimental impact and drawdown on the area farms and ranches. The RegionL plan groundwater models are disconnected from the actual permitted volumes and understate the impacts of the overpermitting to exporters -- this needs to be corrected in the Region-L plan, don't just assume the MAG volumes when the permitted volumes by a GCD are actually higher. Below is a map showing the exporter well fields in the GCUWCD area -- this map was prepared as part of a groundwater modeling study by Daniel B Stephens & Associates (attached) which shows 5 of the GCUWCD monitoring wells will be below the DFC aquifer level by year 2030, 7 of the GCUWCD monitoring wells will be below the DFC aquifer level by year 2040. The Region-L plan needs to not only exclude any new groundwater export projects from GCUWCD, but also include a plan for reducing the permitted export volumes of existing export permits before any more damage is done to the Gonzales County area.



These large groundwater export projects are not presented at the local groundwater district as part of the planning process, but when the permit applications are submitted by the exporter entity, then the exporter applicants point to the region plan and say their application has to be approved because it's in the region plan. So then contested case hearings are underway to stop the projects that got into the plan without any approval by the local folks that are impacted -- this is not fair. The local family farmers and ranchers in Gonzales County should be noticed before any groundwater project is added to the state or region water plan, not get blind sided later by a team of exporter lawyers and bogus experts that will say anything for a buck.

I am still reviewing the Region-L plan for whatever new groundwater disaster projects that have been conjured up by the exporters, so I will comment on those separately, but for certain -- the Region-L plan should not include any projects to export water from the GCUWCD boundary -- export of groundwater is already way overdone and unsustainable. The burden of proof should be on the plan -- don't assume the aquifer is infinite and you can pump forever with growing MAG volume projects despite pumping faster than the aquifer recharge rate.

The Region L plan is very weak on stopping waste by the end users and should include this as a strategy to preserve aquifers and rural areas that are used as groundwater sources. For example, the GCUWCD just approved this month (May 2025) renewal of the SAWS export permit of over 11,000 acre-ft/yr, despite SAWS wasting 2.3 billion gallons of water in 2023 (5.5X the export permit volume from GCUWCD). This is just irresponsible and should be addressed in the RegionL plan -- show the waste by the end users like SAWS and show their groundwater permits being cu tback due to waste as part of the plan. It's not fair to drain family farms and ranches that haven't leased their groundwater only to waste that precious water in large urban areas through expensive state funded pipe. That's not a responsible water plan -- it's a California style disaster.

The Region-L plan needs to include a socio-economic section on the impact of groundwater pumping in the rural areas where the exporter well fields are located. I am talking about the exporters draining the family farms and ranches, and impact on rural towns that need their groundwater for survival and have no

alternative supply. That is currently missing in the Region-L plan which instead paints the usual propaganda of economic impacts due to not serving new users. There are two sides to the socio-economic impact story -- the Region-L plan needs to be honest and include the devastation now underway to the family farms, ranches and the small rural towns due to falling aquifer volumes and decreasing water quality for their livestock and irrigation.

Further, no project should be included in the plan unless it is thoroughly vetted and modeled by the TWDB -- this means:

- assess local impact of concentrated pumping by computer models using the best and most recent available software (not the 1 square model cells and averaging across the world to diminish the real impact of the pumping)
- assess subsidence by computer modeling to ensure that new production does not cause subsidence instead of spending millions on wells and pipe and then wait to see if anyone complains later
- assess by computer modeling the groundwater water quality impacts on other aquifers prior to the build, don't just build the well field then wait for the groundwater to later become unuseable
- install subsidence monitoring prior to building groundwater projects, last I heard from TWDB they didn't have funds -- but TWDB always has more public money for more pipe to waste groundwater far away

My experience with the GCUWCD and the TWDB is the TWDB points to the GCUWCD to do all the deep modeling and scientific vetting of a groundwater project, but the rural GCD has no staff of experts, and little technical expertise, most haven't even read the Water Code, nobody has ever run Modflow. It's a joke to expect a rural GCD to technically evaluate the exporter groundwater projects, they don't even know what to do, especially when getting pressured by the exporter's lawyers. So any groundwater project in the Region-L plan should have been thoroughly analyzed by experts that know all the details before it gets in the plan -- don't expect the GCUWCD to prove the Region-L projects as flawed.

There should be no ASR projects for the GCUWCD area -- there is much to write about ASR, but it is irresponsible for the state to fund projects to pump water into a precious and irreplaceable aquifer, the problems and risks of ASR are well known. The state does not own the aquifers, do not mechanically pump water into the aquifers -- there is no way the ASR projects can pencil compared to basic conservation and stopping waste. Aquifer recharge can be boosted by many other legit means. If you want a home for treated effluent to be used as public supply then build a tank and keep it separate, don't use the aquifer as a filter or a tank.

This leads into reparations being paid to the rural areas being detrimentally impacted by the state funded exporter projects. The Region-L plan should include reparations to be paid to the family farms and ranches of Gonzales County for all the groundwater taken from their land -- the state water plan is doing major damage to the Texas agriculture industry with the unsustainable groundwater pumping and export. It's hard enough to keep the family farm or ranch alive without the state taking all their groundwater, and at the same time tax the farms and ranches to fund a groundwater conservation district with conflicts of interest and proven failure to meet its mission statement.

2.4.2 T Carroll | July 11, 2025

Golden Rule: "Treat others as you would have them treat you."

I honestly ask you:

Are you doing that?

Quick sand went away in 2015 now I contend with surprise sink holes. I've fallen into holestoo deep to get out of easily. Fell into one that crippled me over a year as knee caps were busted. Foundations of my buildings are all cracked. The roofs and fenced all have had trees fall across them, and leak. My home has black mold growing on ceiling.

Forest dies, with that what I forage goes away, carbon is released, oxygen is no longer made.

My well went dirty June 2023 dry 2024. I have no means by which to replace it.

I can no longer grow a crop, or water livestock. Not even enough just to feed me much less to sell. Property taxes rise without livestock.

Are you treating me and others the way you want treated?

You have taken my lively hood and are taking my life.

You are gonna go hungry.

You are gonna suficate.

I'm going to Heaven, for all eternity you will burn in hell. Cause no Jesus is not going to save you. Matt 7:23 "get away from me, I do not know you, worker of enquiry."

Proverbs 6:30-31

Do not despise a theif

If he be found, he shall restore SEVEN FOLD, he shall give ALL THE SUBSTANCE OF HIS HOUSE."

You certainly have taken all mine. God knows who you are.

Get out of jail free card or not. It won't save you from hell. You won't live forever.

My blessing to you:

But may love often and deeply. And may you out live eveyone one & everything you ever dare love. So you know what it feels like to lose everything.

If your life gets hard, remember it's your own fault. Cause you are making ours impossible.

For what?

Worthless shiny shit?

2.4.3 Anonymous | July 12, 2025

My voice is for Gonzales County. No more water given away and nothing injected into our aquifer.

I have lived in Gonzales County for almost 11 years in Waelder and Belmont. My voice is for our water to remain as is and fix the leaking pipes that the towns have.

2.4.4 Lori Benes | July 15, 2025

I'm writing to you today because I oppose many of the projects in your plans for the Carrizo-Wilcox Aquifer as many of them will damage our only water resources for our families, farms and municipalities. I own two parcels of land in Gonzales County and am very concerned about our water resources.

The IPP's proposed projects are concerning. The IPP includes aquifer storage and recovery (ASR) project here in Gonzales County. ASR projects involve injecting treated water into the Carrizo-Wilcox Aquifer for later recovery. While promoted as a drought solution, ASR carries serious risks. Studies on ASR warn that poorly managed ASR projects can degrade water quality. Such damage could make groundwater unusable for Gonzales County residents.

The State water planners are planning for more groundwater projects in Gonzales County, in addition to the already over-permitted levels, is alarming. Long-term heavy pumping from the Carrizo-Wilcox Aquifer will lower aquifer levels and stress our local wells. Our aquifers are the sole source of water for many family farms and ranches.

The Region L Water Planning Group has 32 voting members, representing different interests and groups. However, Gonzales County has no direct voting member, leaving its residents without a direct voice in decisions impacting our groundwater.

Please take this into consideration and leave Gonzales County underground water for our county residents.

Thank you,

Lori Benes
Gonzales County Landowner

2.4.5 Deidra D. Voigt | July 15, 2025

Region L Water Planning Group:

Thank you for receiving my concerns for your upcoming meeting regarding the Region L 2026 water plan which includes Gonzales County and the Carrizo-Wilcox Aquifer.

Many of the water management strategies are most concerning, especially introducing Industrial Pretreatment Programs (IPPs) of any kind in our precious aquifer, any aquifer! It seems as these are last minute, grasping for any idea that has been up for consideration and there is no long-term information available on success or what happens when things go wrong; and one day they will. We cannot be used as an experimental lab of the unknown in our precious aquifer - it is all we have here!

Aquifer Storage and Recovery (ASR) of injecting treated water into our precious aquifer, for later recovery, comes across as one of the most horrible ideas in decades. Why would anyone conceive mixing man-made items with pure aquifer water? Sounds like mad scientist's conclusions. One bad injection could damage our precious aquifer for decades and beyond – it is all we have here! Has this already been a practice in Texas; are there any approved plans to do this in the Edwards Aquifer?

We want to protect and conserve this precious resource for our families, farms and ranches, businesses and future growth.

Studies on ASR warn that poorly managed ASR projects can degrade water quality by introducing contaminants, alter aquifer chemistry or mobilize toxins like arsenic, potentially causing long-term harm to the aquifer. Such damage could make the Carrizo-Wilcox Aquifer unusable for Gonzales County residents. It is all we have here!

The continued push by the state water planners for more groundwater projects in rural Gonzales County, in addition to the already over-permitted amounts our underground water district has so haphazardly allowed, is alarming. They have not clearly communicated to the public what to do when a well no longer is able to pump water or is and going dry. Citizens are currently addressing their poor decisions of the last decade and will be electing now board members at the next election cycle.

Over permitted and long-term heavy pumping from the Carrizo-Wilcox Aquifer will continue to lower aquifer levels and this has already stressed many local wells. The only option is more wells will go dry! It is all we have here!

The Carrizo-Wilcox Aquifer is the sole source of the majority of water for many family, farms and ranches and municipalities while the large cities have multiple sources and continue to waste massive amounts of water with leaking pipe distribution systems.

Gonzales County does not have a voting member in this group and we beg that we are not used as an experiment, only to be left DRY when these things do not work out down the road.

Please reject all water strategies concerning changes to Gonzales County and our precious Carrizo-Wilcox Aquifer.

Thank you for your kind consideration for rural Gonzales County and our precious Carrizo-Wilcox Aquifer. It is all we have here!

Best Regards,

Deidra D. Voigt

Gonzales County Resident, land owner and Carrizo-Wilcox Aquifer consumer

2.4.6 Michael Oakes | July 17, 2025

Subject: Future of Gonzales County Water Supply

Plain and simple. Better start constructing a pipeline from the Gulf to help everyone's future needs. With possible storage around the Devils Backbone area.

2.4.7 Jeanette Soefje | July 18, 2025

I moved to Gonzales County in January, 2008. After being gifted some acreage from my in-laws, my husband and I planned to build our home. Our water well was drilled in late 2009. For the first few years, our water was great. We had water filters on the water lines coming into the house and appliances. At first, the filters would need to be changed every 4-6 months. Then, the well began pumping sand, iron deposits and hydrogen sulfide. The filters became clogged with mud within a month and had to be replaced accordingly. Our only option to offset this was to install a 3000 gallon water tank, pump and additional pressure tank for our home. During this time, I learned that there were 5 large water wells producing water for export within 3.5 miles of our location. Two of the wells produce 465 GPM; two at 605 GPM; and one at 800 GPM. Due to this volume being pumped out of the Carrizo-Wilcox Aquifer in a short distance, it is no wonder why we experienced the problems we did.

After attending a few Gonzales County Underground Water Conservation District meetings where Guadalupe-Blanco River Authority was attempting to obtain a permit to export an additional amount of water in addition to their current permitted amount, I have serious concerns.

In reviewing the 2026 IPP, this does not include GBRA's Mid Basin Project, Phase 2. While this project diverts water from the Guadalupe River, it claims to "inject excess treated water", but does not state which aquifer or at what level.

Upon further research, I have learned that Alliance Regional Water Supply's Carrizo-Wilcox Project, Phase 2, once completed, will deliver 27 million gallons per day to its customers. Correct my math if I am wrong, but that amount equals to approximately 82.82 ACFT/DAY, not YEAR, which calculates to approximately 30,229 ACFT/YR.

The San Antonio Water Supply Expanded Local Carrizo Project upon completion goes from 9,000 ACFT/YR to an additional 21,000 ACFT/YR..

Seguin Schertz Local Government Corporation's expanded Brackish Wilcox Project indicates 5,000 ACFT/YR beginning in 2040. SSLGC Carrizo Project currently exports 19,362 ACFT/YR from Gonzales County and seeks to expand the southestern area of Guadalupe County with an additional 4,035 ACFT/YR from Carrizo and 1,290 ACFT/YR from Wilcox.

This area of development is extremely concerning due to the previous problems we had with our water well approximately 12 years ago. I can only imagine what the future has to hold for our household, not to mention our cattle and wildlife. Additionally, the planned increased amount of water being exported from the Carrizo-Wilcox Aquifer in Gonzales County only depletes the amount of water for our local communities, farms and ranches.

For reasons unknown to me, Gonzales County does not appear have any representation with any committee within Region L. While local and county elected officials have spoken out against GBRA and others, including the injection of "treated water", this appears to have fallen on deaf ears on Region L. The

2026 IPP projects no growth for Gonzales County, yet indicates a decline in population through 2080. It appears Region L is out of touch with Gonzales County and only includes us as a way to profit the exporters.

Sincerely,

Jeanette Soefje

Gonzales County

2.4.8 Mary Ann Menning | July 19, 2025

Our family has owned ranch land in Gonzales County for more than 75 years! The availability of water has continued to decrease. Tanks have gone dry, the Guadalupe River has gotten ankle deep, the irrigation well has had to be mitigated and deepened. Even when we have rain, the water just runs through the river because the dams are broken and GBRA will not fix them.

The GCUGWCD has already issued permits for approximately 92,000 AFY permits which exceeds the MAG for this decade! The January, 2025 Conservation Professional Report shows we are over permitted. The Exporters are pumping us dry! Gonzales County Underground Water Conservation District is not a voting member of Region L and appears to be grossly underrepresented! Please readdress your plan and do not include exporting from the GCUGWCD. We are running out of water for the next generation!

Thank you!

Mary Ann Menning

Cost, TX

2.4.9 Ted Boriack | July 20, 2025

Ted Boriack provided a letter dated July 20, 2025, included in Attachment E.

2.4.10 Nancy Foster | July 20, 2025

Ms. Castillo,

These comments are submitted past the 5:00 p.m. deadline, but I hope you will take into consideration some input from a Gonzales County resident.

Gonzales County is not represented in the South Central Texas Regional Water Planning Group. I doubt if many county residents are aware of planning by SCTRWPG.

Gonzales does have the Gonzales County Underground Water Conservation District. County residents are currently contesting additional water pumping permits requested by the GBRA; they are also unhappy with the amount of water sold to SAWS. GBRA has two failed dams in the county, which it has not repaired –

but wants to buy water! SAWS has bought water, but it wastes more than it has purchased. The two public hearings regarding GBRA have had overwhelming public participation from county officials and residents. The county's water table has dropped significantly, and residents are very upset. Please note county residents and municipalities are not the only water users, since there has been a tremendous increase in oil and gas production using huge amounts of count water for fracking. Furthermore, since the City of Gonzales is approximately halfway between San Antonio and Houston, there has been a very noticeable population growth in this region.

Please – at a minimum – consider adding Gonzales County representation to the SCTRWPG.

Nancy Foster

Gonzales, TX

2.4.11 Jim Holster | July 20, 2025

I am very concerned the projects in Gonzales County threaten a way of life in rural areas. I own property on the border of Gonzales and Dewitt County at [ADDRESS OMMITTED FOR PRIVACY]. We depend on water for the Ranch and the local community. GBRA has unfortunately not always demonstrated or represented the concerns of the rural communities .

We oppose the continued expansion of projects that remove our resources . Who will come and support us? Cities who lack basic infrastructure continue to expand without concern for their neighbors or a basic plan.

No better example is my current community, New Braunfels Texas. Growth for the sake of growth. A better regional plan is needed to save what is a dwindling resource.

Jim Holster

New Braunfels, TX

2.5 Other Public Comments

Region L received three comments from two members of the public regarding various topics.

Table 2-1 provides a summary of the public comments related to Gonzales County, including the name of the commenter, date the comment was received, and a reference to the section number within this document where the comment's full text can be found.

Table 2-2 Public Comments Related to Gonzales County

Section Reference	Commenter	Date Received
	Francis Comeaux	5/13/25
	Francis Comeaux	5/27/25
	2.5.3 Milan J. Michalec	7/20/25

2.5.1 Francis Comeaux | May 13, 2025

I would like the Executive Summary of the 2026 IPP to include columns:
1. List of affected water district(s)
2. Project Start Date, or if already started, % complete
3. Target Date for water availability, near completion date
4. Project acre-ft/year

Thank you,

Francis

2.5.2 Francis Comeaux | May 27, 2025

Francis Comeaux of New Braunfels, TX submitted a comment letter on May 27, 2025. The letter, included in Attachment F, recommends identifying voting member affiliations and adding information to the Executive Summary and Chapter 5. He also requested clarification on Canyon Lake Water Service Company supply data, GBRA WaterSECURE allocations, and the presentation of unchanged assumptions in Table 9-1.

2.5.3 Milan J. Michalec | July 20, 2025

Milan J. Michalec of Boerne, TX submitted a comment letter on July 20, 2025. The letter, included in Attachment G, addresses the GBRA WaterSECURE WMS. During the July 8, 2025 Boerne City Council meeting, council members were briefed on the project but did not take formal action to participate. He recommends revising the statement that "Boerne will purchase water from GBRA's WaterSECURE Project" to "may purchase." He raised similar concerns about definitive language used for Canyon Lake Water Service Company (Texas Water Company), County Line Special Utility District (SUD), and Goforth SUD. He recommends verifying written commitments from these entities and revising the language accordingly until formal participation has been confirmed.

Attachment A. Agency Comments from TWDB

P.O. Box 13231, 1700 N. Congress Ave.
Austin, TX 78711-3231, www.twdb.texas.gov
Phone (512) 463-7847, Fax (512) 475-2053

June 23, 2025

Curt Campbell
Region L Chair
c/o Cow Creek GCD
201 E. San Antonio Ave, Ste 100
Boerne, TX 78006

Derek E. Boese
General Manager
San Antonio River Authority
100 E. Guenther St.
San Antonio, TX 78204

Re: Texas Water Development Board Comments for the South Central Texas Regional Water Planning Group (Region L) Initially Prepared Plan, Contract No. 2148302564

Dear Mr. Campbell and Mr. Boese:

Texas Water Development Board (TWDB) staff have completed their review of the Initially Prepared Plan (IPP) submitted by March 3, 2025 on behalf of the Region L Regional Water Planning Group (RWPG). The attached comments follow this format:

- **Level 1:** Comments, questions, and data revisions that must be satisfactorily addressed in order to meet statutory, agency rule, and/or contract requirements; and,
- **Level 2:** Comments and suggestions for consideration that may improve the readability and overall understanding of the regional water plan.

Please note that 31 Texas Administrative Code (TAC) § 357.50(f) requires the RWPG to consider timely agency and public comment. Section 357.50(g)(1)(D) requires the final adopted plan include summaries of all timely written and oral comments received, along with a response explaining any resulting revisions or why changes are not warranted. Copies of TWDB's Level 1 and 2 written comments and the region's responses to each comment must be included in the final, adopted regional water plan (Contract Exhibit C, Section 2.12.2).

Standard to all planning groups is the necessity to include certain content in the final regional water plans that was not yet available at the time that IPPs were prepared and submitted. Accordingly, the final regional water plans must incorporate the following:

1. An analysis of socioeconomic impacts of not meeting the region's identified needs (31 TAC § 357.40(a)). TWDB will provide a socioeconomic impact analysis report for

each region by July 2025 for inclusion in the final regional water plan. Relevant sections in the plan must be updated accordingly.
2. Completed results from the 2021 Regional Water Plan implementation survey must be presented in the plan, as well as submitting an electronic version of the survey spreadsheet (31 TAC § 357.45(a)).
3. Documentation that comments received on the IPP, including but not limited to TWDB's, were considered in the development of the final plan (31 TAC § 357.50(f)).
4. Certification, in the form of a cover letter from the planning group Chair or Sponsor to the TWDB, that the final, regional water plan is complete and adopted by the RWPG (31 TAC § 357.50(h)(1)).

The following provisions apply to finalizing regional water planning data:

1. If the IPP included PDF copies of the State Water Planning Database (DB27) reports, a final, updated version of all these reports, as appropriate, must be included in the final plan. TWDB *anticipates* final versions of the reports will be available in the Secure Agency Reporting Application by **September 24, 2025**.
2. Continued review of DB27 data is still being performed. If issues arise during staff's ongoing data review, they will be communicated promptly to the planning group to resolve. Please anticipate the need to respond to additional comments regarding data integrity, including any source overallocations, prior to the adoption of the final regional water plans.
3. Please ensure that all numerical values presented in region developed tables throughout the final, adopted regional water plan are consistent with the data reported in DB27.
4. For the purpose of development and adoption of the 2027 State Water Plan, water management strategy and other data entered by the RWPG in DB27 will take precedence over any data discrepancies presented in the final regional water plan (Contract Exhibit C, Section 2.13.1).
5. Any remaining data revisions to DB27 must be communicated to rwpdataentry@twdb.texas.gov no later than **September 22, 2025**.

Additionally, the following final electronic files must be submitted alongside the final regional plan deliverable, including any remaining files that may not have been provided at the time of the submission of the IPP but that were used in developing the final plan (31 TAC § 357.50(g)(2)(C), Contract Exhibit C, Section 2.12.2):

1. All hydrologic model input/output or other model files used in determining water availability.
2. Geographic Information System data deliverables in accordance with Contract Exhibit D, Section 2.5.
3. All other files on which the plan is based (e.g. spreadsheets, maps, etc).

The following standard requirements that apply to recommended water management strategies must also be adhered to in all final regional water plans:

1. Regional water plans may include:
    a. the development of additional water supply sources and supply volumes,

   b. the conveyance and delivery of additional supply volumes to a point intake at a water user group,
   c. the treatment of additional supply volumes at the front end of a water user group's retail system,
   d. additional treatment and related eligible components that are directly related to additional supplies provided through direct reuse, and
   e. infrastructure costs that are associated with development of additional water supplies from new water sources or additional supplies from more efficient use of existing supplies, or volumetric increases to existing water supplies beyond the existing capacity of current facilities.
2. Regional water plan may not include:
   a. any recommended strategies, projects, or costs that are associated with replacing, rehabilitating, or maintaining water supply infrastructure that already exists, or
   b. the costs of any retail distribution lines or other distribution network infrastructure costs with the narrow exception for those strategies directly associated with replacement costs that are for the primary purpose of achieving conservation savings via water loss reduction (§ 357.34(e)(3)(A), Contract Exhibit C, Sections 2.5.2.14 and 2.5.2.15).

As a reminder, the deadline to submit the final, adopted regional water plan and associated material to the TWDB is **October 20, 2025**. It is imperative that you provide the TWDB with information on how you intend to address all TWDB comments well in advance of adoption of the final regional water plan to ensure that all the Level 1 responses are sufficiently responsive for the TWDB Executive Administrator to recommend that the TWDB Board consider approval of your plan in a timely and efficient manner. Your TWDB Regional Water Planner will review and provide feedback to ensure all IPP comments and associated plan revisions have been addressed adequately. Failure to adequately address any Level 1 comments may result in the delay of the TWDB Board approval of your final regional water plan.

Additionally, if the region includes new strategies, or makes significant revisions to its strategy evaluations based on the public comment period, please ensure those significant revisions are pointed out and provided to your TWDB Regional Water Planner to preview in advance of adopting the final regional water plan to ensure that those too will meet all requirements.

Note that the electronic copy of a final report(s) or other deliverable(s) must comply with the requirements and standards specified in 1 Texas Administrative Code (TAC) Chapters 206 and 213 (related to Accessibility and Usability of State Web Sites). Web Content Accessibility Guidelines (WCAG) 2.1 Level AA Standard – WCAG 2.1 Quick Reference can be found at: https://www.w3.org/WAI/WCAG21/quickref/.

If you have any questions regarding these comments or would like to discuss your approach to addressing any of these comments, please do not hesitate to contact Michele Foss of our Regional Water Planning staff at (512) 463-9225 or Michele.Foss@twdb.texas.gov. TWDB

staff will be available to assist you in any way possible to ensure successful completion of your final regional water plan.

Thank you for all the time and effort that the RWPG members, the Sponsor, and your consultants have put into developing your draft regional water plan and for the additional effort that will still be required to obtain TWDB Board approval. We look forward to celebrating another successful regional water planning cycle!

Sincerely,

Temple McKinnon
Temple McKinnon (Jun 23, 2025 16:06 CDT)

Matt Nelson
Deputy Executive Administrator of Planning

Attachment

c w/att.: Caye Castillo, San Antonio River Authority
Brian Mast, San Antonio River Authority
Lauren Gonzalez, Black & Veatch
Jaime Burke, Black & Veatch
Alicia Smiley, Black & Veatch
Reem Zoun, TWDB Office of Planning
Temple McKinnon, TWDB Water Supply Planning
Sarah Lee, TWDB Water Supply Planning
Kevin Smith, TWDB Water Supply Planning
Michele Foss, TWDB Water Supply Planning

Texas Water Development Board (TWDB) comments on the Initially Prepared 2026 South Central Texas (Region L) Regional Water Plan.

Level 1: Comments, questions, and data revisions that must be satisfactorily addressed to meet statutory, agency rule, and/or contract requirements.

1. Chapter 2.3.4.2, Table 2-11. The livestock water demand for the Region L/Hays County split is listed in Table 2-11 as 2,828 acre-feet/year. The TWDB Board-adopted livestock water demand for this water user group (WUG) split is 2,712 acre-feet/year. This incorrect number, in turn, affects the total water demand which should be listed as 24,641 acre-feet/year. Likewise in Table 2-12, the Board-adopted Colorado river basin splits for the livestock water demand in Region L is incorrect, causing the total in the table to be incorrect. Please revise these water demand projections presented in these tables so they are consistent with Board-adopted projections in the final, adopted regional water plan. [31 Texas Administrative Code (TAC) § 357.31(a); 31 TAC § 357.31(e)(1)]

2. Section 3.3.1.3. The plan discusses local surface water supplies used for livestock but does not specify whether the local water supplies are firm. Please acknowledge whether the local supplies are firm or not in the final, adopted regional water plan. [Contract Exhibit C, Section 2.3.6]

3. Section 4.2 and the state water planning database (DB27). Tables 4-1, 4-2, 4-3, and 4-4, Table 4-4 and 4-11 appear to present information on projected water needs that is inconsistent with data reported in DB27 for decades 2040-2080. For example, the total needs reported in Tables 4-1, 4-2, 4-3, and 4-4, are inconsistent with the total needs for the region in DB27; the municipal needs total is inconsistent in Table 4-4; and the Comal County needs total is inconsistent in Table 4-11. Please review all data in the tables and revise as necessary to present data consistent with DB27 in the final, adopted regional water plan. [31 TAC § 357.33(c)]

4. Chapter 5 and DB27. Unit costs reported in DB27 appear high for the following strategies: Municipal Water Conservation - Water Use Reduction - Kendall County WCID 1 ($43,305), and Municipal Water Conservation - Water Loss Mitigation - Sunko WSC ($207,786). Please confirm that the calculated unit costs are correct in DB27, or correct as appropriate, and that costs were considered in strategy recommendations in the final, adopted regional water plan. [31 TAC § 357.34(e)(2)]

5. Section 5.2. The plan does not appear to include a quantitative measure for assessing reliability of water supplies for water management strategy (WMS) evaluations. The matrix provided in Table 5.2-2 provides a qualitative rating of low to high. Additional reliability considerations presented in Table 5.2-3 only appear to be based on a quantified measure for the aquifer storage and recovery (ASR) strategies. Please provide a quantitative basis for reliability used in the evaluations of all water management strategies in the final, adopted regional water plan—ensuring that any recommended strategies provide a firm water supply throughout drought of record conditions. [31 TAC § 357.34(e)(3)(A)]

6. Section 5.1.5 and Appendix 5C. The plan in Appendix 5C appropriately includes the implementation status required by 31 Texas Administrative Code § 357.34(g) for the San Antonio Water System (SAWS) Regional Wilcox Project, however this project does not appear to be included in the applicable strategies listed in Section 5.1.5. Please add this strategy to the list in Section 5.1.5 in the final, adopted regional water plan. [31 TAC § 357.34(g)]

7. Section 5.2.30. It is unclear in the plan whether strategy water supply volumes represented for the Victoria ASR have been reduced to reflect the expected percent of actual water supply recovery from the aquifer. Please clearly state the expected percent of recovery for this project and, as appropriate, the lesser net volumes of the expected water supply yields for this strategy. If the strategy supply volumes do not reflect the lesser, expected percent of recovery, please modify the supply volume as appropriate in the final, adopted regional water plan and in DB27. [Contract Exhibit C, Section 2.5.2.4]

8. Section 5.2.22 and Section 5.2.23. For ASR strategies (e.g., Medina County Regional ASR Project and New Braunfels Utility (NBU) ASR Project) that plan on storage in saline aquifers, please reflect expected losses as greater than zero resulting in a percent of recovery less than 100 percent or provide an explanation for how these sites could possibly result in 100 percent recovery. For example, an ASR recovery of as low as 70 percent within saline formations would not be unexpected. [31 TAC § 357.34(e)(3)(A); Contract Exhibit C, Section 2.5.2.4]

9. Section 5.2.25. It is unclear from the evaluation of the SAWS Expanded Local Carrizo Project, whether the 12 new wells are groundwater production wells or ASR wells. If they are ASR wells, please include the anticipated recovery efficiency percentage and adjusted available supply yield, as appropriate, in the final, adopted regional water plan and DB27. [Contract Exhibit C, Section 2.5.2.4]

10. Section 5.2.1.1.1 and DB27. Based on data entered into DB27, the demand reduction volumes appear to be equivalent to over 40 percent of total demands for the following municipal water user groups in at least one planning decade: 3009 Water, Air Force Village II Inc., Alamo Heights, Aqua WSC, Carrizo Springs, Clear Water Estates Water System, Concan WSC, Cotulla, Cuero, El Oso WSC, Fair Oaks Ranch, Fort Sam Houston, Garden Ridge, Gonzales, Gonzales County WSC, Hondo, Kenedy, KT Water Development, Loma Alta Chula Vista Water System, New Braunfels, San Marcos, Shavano Park, Three Oaks WSC, Uvalde, Victoria, Ville Dalsace Water Supply, and Zavala County WCID 1. As these volumes appear high, please add discussion to support the magnitude of the demand reduction volume for these water user groups in the final, adopted regional water plan. [31 TAC § 357.34(j)(2)(B)]

11. Section 5.2.1.2.2, Table 5.2.1.7, Table 5.2.1.7, and DB27. Municipal water use reduction and water loss mitigation strategies are recommended separately, however the plan states that advanced metering infrastructure (AMI) is included in water use reduction strategies. For regional water planning purposes, AMI is to be included under water loss mitigation strategies. Please revise the municipal conservation description, yields, cost information, and reconcile updates in DB27 as appropriate to correctly group AMI with water loss mitigation in the final, adopted

regional water plan. [Contract Scope of Work, Task 5C; Contract Exhibit C, Section 2.5.2.5; Contract Exhibit D, Appendix 17]

12. Section 5.2.9 and Section 5.2.15. The plan does not appear to describe how population and water demands were used to determine the availability of supplies from the recommended reuse strategies. Please provide additional details on how the region estimated availability of future reuse—including how projected population and water demands were considered in the determination—in the final, adopted regional water plan. [Contract Exhibit C, Section 2.5.2.3]

13. Section 5.2.2.1, Table 5.2.2-1, Table 5.2.2-2, and DB27. The water savings and costs for irrigation conservation strategies are presented by irrigation WUG in Table 5.2.2-1 and 5.2.2-2, however these individual projects have been entered as one project within DB27 (WMSProjectId 5801). Projects may not be aggregated and presented as a single capital cost representing multiple projects that would be located in multiple locations and funded by separate sponsors or implemented separately. Please work with TWDB's Water Supply and Strategy Analysis team to revise the irrigation conservation project data in DB27 to present separate strategies and projects for the irrigation WUGs in the final, adopted regional water plan. [Contract Exhibit C, Section 2.5.2.12]

14. Section 5.2.21 and DB27. The capital costs for the Guadalupe-Blanco River Authority (GBRA) WaterSECURE strategy projects appear to include costs for separate projects that have been entered into DB27 as one, aggregated recommended project, including a new off-channel reservoir, ASR wellfield, and brackish groundwater wellfield. Planning groups may not, in general, aggregate multiple facilities into a single cost estimate. Additionally, for state water plan reporting purposes, the following major projects with associated facilities must at minimum be costed separately in the final, adopted regional water plan and entered in DB27 as unique projects: 1) new major reservoir infrastructure, 2) ASR facility, and 3) brackish desalination well field infrastructure. The projects will then be linked to the appropriate supply under a main GBRA WaterSECURE WMS grouping and will not impact GBRA funding options with TWDB. Please work with TWDB's Water Supply and Strategy Analysis team to address these data issues, including flagging this WMS as a conjunctive use strategy, if appropriate. [Contract Exhibit C, Section 2.5.2.12; 31 TAC § 357.34(g)]

15. Sections 5.2.20 and 5.2.21. The evaluations for the GBRA Lower Basin New Appropriation and GBRA WaterSECURE strategies do not appear to separately present the estimated mitigation land areas and associated estimates of the acquisition cost. Please provide an estimated separate acreage and cost related to land acquisition (or range) for both the reservoir footprint and mitigation within the appropriate section of the plan or costing sheet, in the final, adopted regional water plan. [Contract Exhibit C, Section 2.5.2.12]

16. Chapter 5. The plan includes water treatment plant (WTP) expansion and other strategy types that include a WTP expansion as a stated project component. Any portion of strategies or costs that are associated with replacing portions of existing supply, including WTP capacity, are prohibited from being included in the regional water plans. The types of facilities and associated capital or other costs that may be

included in a regional water plan must be directly associated with development of additional supplies from new water sources or additional supplies from more efficient use of existing supplies, or volumetric increases to existing water supplies. Please confirm that only the portion of WTP facilities (and costs) required to increase the treated water supply volume (not to replace lost capacity) are included in the final, adopted regional water plan. [Contract Exhibit C, Section 2.5.2.15]

17. Section 5.1, Section 5.2, Table 5.1-2, and DB27. Information on strategies shown in Table 5.1-2 and presented in Section 5.2 appears to be presented inconsistently between the plan and DB27. For example, municipal conservation (including water use reduction and water loss mitigation) is not included as a recommended water management strategy in DB27 for East Medina County SUD, but is listed as a recommended strategy for this WUG in Table 5.1-2. Further, Chapter 5.2.1 presents zero yield for conservation savings. Please review the recommended strategy and project information presented to ensure that strategy and project information included in DB27 are consistent with those presented in the final, adopted regional water plan. Additionally, please consider including a footnote or asterisk for Table 5.2.1-6 and Table 5.2.1-7 to clarify that yields presented as zero are not included as recommended strategies. [31 TAC § 357.35(g)(1)]

18. Section 5.1, Table 5.1-2, and Section 5.2.33. Table 5.1-2 includes several WUGs with references to Section 5.2.33 for the evaluation of “Entity Purchase to Meet Shortages” as a recommended strategy, however Section 5.2.33 does not appear to be included in the plan. Please include a copy of the evaluation for this strategy in the final, adopted regional water plan. [31 TAC § 357.34(e); Contract Scope of Work, Task 5B]

19. Chapter 5.2 and DB27. Project costing information for the following projects present total capital costs that differ from the project capital costs included in DB27: WMSProjectIds 5108, 5110, 5111, 5792, 2112, 5116, and 5764. For example, DB27 reports total capital cost of $56,315,000 for WMSProjectId 5111, Brackish Groundwater Development – County Line SUD Edwards Project. Table 5.2.6-10 on Page 5.2.6-31 lists total capital costs of $20,907,000 for the same project. Please review the costing information for these projects and revise as necessary to ensure that all project capital costs in DB27 are consistent with those presented in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]

20. Section 5.2, Table 5.2.8-1, and DB27. It is unclear whether certain project yields presented in the plan are correctly reported in DB27. For example, in Table 5.2.8-1, the yield shown for the County Line SUD SH 21 Booster Site project (WMSProjectId 5461) is “N/A” and the associated footnote states “this infrastructure project does not include available yields as the supply source is associated with the WUG's existing surplus or other WMS”; however, yields of at least 4,697 acre-feet per year are reported in DB27 for the related strategy beginning in 2030. Additionally, the SAWS Southeast Integration Pipeline project (WMSProjectId 2339) included in Table 5.2.8-1 shares the same yield designation of “NA” and corresponding footnote regarding available yields as above, however yields of 21,000 acre-feet per year are shown in DB27 for the related strategy beginning in 2030. Please confirm data reporting and

clarify which specific strategy these projects are related to in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]

21. Chapter 5.2.8, Table 5.2.8-1, and DB27. The online decade for the GBRA Western Canyon Water Treatment Plant facility expansion project (WMSProjectId 2109) appears to be reported inconsistently between the plan and DB27. For example, the online decade is 2060 in DB27, however the plan presents the online decade as 2030 in Table 5.2.8-1 and on Page 5.2.8-2. Please review the online decade for this project and revise as necessary to ensure that the online decade in DB27 is consistent with that presented in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]

22. Section 5.1, Section 5.2, Table 5.1-2, and DB27. Information on strategies shown in Table 5.1-2 and presented in Section 5.2 appears to be presented inconsistently between the plan and DB27. For example, the GBRA WaterSECURE project is shown as a recommended water management strategy in DB27 for South Buda WCID 1 and Wimberley WSC but is not listed as a recommended strategy for these WUGs in Table 5.1-2. Please review the recommended strategy and project information presented to ensure that strategy and project information included in DB27 are consistent with those presented in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]

23. Sections 5.2.16, 5.2.17, 5.2.8, and 5.2.20. The plan does not appear to include explanations for the following recommended strategy volumes that remain 100% unallocated to any WUGs: Canyon Regional Water Authority (CRWA) - Expanded Brackish Carrizo-Wilcox, CRWA - Siesta Project, FE - CRWA Hays Caldwell WTP Expansion, and GBRA - Lower Basin New Appropriation. Please provide a specific explanation for why each of these strategies remaining 100% unallocated to WUGs in the final, adopted regional water plan. [Contract Exhibit C, Section 2.5.3]

24. Section 6.3 and DB27. The unmet needs data in Table 6-15 presented for irrigation WUGs and the region total is inconsistent with unmet needs data reported in DB27. Please review this data and revise Table 6-15 as necessary to present data consistent with DB27 in the final, adopted regional water plan. [31 TAC § 357.40(c)]

25. Section 9.2. The counts of water management strategies benefitting more than one WUG provided on page 9-1 is inconsistent with strategies reported in DB22 and DB27 as benefitting more than one WUG. Please review the data reported in TWDB Secure Agency Reporting Application (SARA) Report ID 125 and either reconcile the counts presented in Section 9.2 to align with the report or clarify the difference in counts reported in the final, adopted regional water plan. [31 TAC § 357.45(b)(1)]

26. Geographic Information System (GIS) data deliverables do not include all of the required attribute fields listed in Table 1 of Exhibit D, Section 2.5.2.1. Please include the following attribute fields in all submitted WMS project GIS data: Status for polygons, and ShapeDescription for all geographies, with the final GIS files submitted. [Contract Exhibit D, Section 2.5.2.1]

27. The draft plan submittal did not include an electronic copy of existing surface water right data within the region utilizing the TWDB required template. Please ensure

water right data is provided using the TWDB provided template, with the final electronic files submitted. [Contract Exhibit C, Section 2.3.6]

Level 2: Comments and suggestions for consideration that may improve the readability and overall understanding of the regional water plan.

1. Table 3-7, page 3-22. Please consider adding "TWDB Water Use Survey" to the methodology for the San Marcos River Alluvium split in Caldwell County to be more consistent with the technical memo (p 3C-10). The citation currently provided in the main report is incorrect as Report 12 does not actually provide production values but does identify Martindale WSC as the sole pumper from SMRA. Max water use survey (WUS) intake by Martindale WSC is 261 acre-feet in 2003, making the WUS dataset the likely source for the provided availability value.

2. Table 3-7, page 3-22. Please consider adding additional detail in the report text to supplement the brief methodology description in Table 3-7 for the Edwards Aquifer Authority (EAA)-related Edwards (BFZ) Aquifer splits. Based on publicly available EAA permit data alone, it is unclear how the total 296,553 AF/yr reliable supply value was derived and how it was divided to the different counties.

3. Table 3-7, page 3-22. Please specify the published source of the pumping data cited for the Leona Gravel split in Medina County.

4. Figure 3-2, page 3-3. Please consider adding missing Trinity subcrop & outcrop designations in the map legend.

5. Figure 3-3, page 3-6. Please consider adding missing outcrop/subcrop designations for Hickory, Sparta & Yegua-Jackson in the map legend.

6. Figure 3-4, page 3-10. Please consider adding a legend as EAA/Plum Creek/BSEACD designations are difficult to see with the current labeling scheme.

7. Page 3-2. Please consider rephrasing "16 aquifers" to "16 distinct groundwater sources with different geologic and management conditions" since this number includes several aquifer splits that are technically the same aquifer (ex. Edwards BFZ in EAA vs outside of EAA) and also includes groundwater sources that TWDB does not officially consider to be "aquifers."

8. The plan uses the terms 'recycled' and 'reuse' interchangeably (e.g. Section 5.2.9). The TWDB has different definitions for each term. Please consider consistently using the terms 'recycled' (as defined in Section 3.5.3 of Exhibit D) and 'reuse' (as defined in Section 1.7.3 of Exhibit C) in the final plan.

9. Appendix 3D. Please consider revising the title of Appendix 3D and its associated table to clarify that it includes water rights for all permitted surface water supply sources assessed in the plan.

10. Chapter 3. Please consider including the sedimentation rates for major reservoirs in the final plan.

11. Chapter 4. Please consider adding a statement indicating that second-tier major water provider needs are included in Appendix 4A, as all of Region L's major water providers are also WUGs.

12. Section 5.1.5 and Appendix 5C. The region appears to have included the implementation status required by 31 TAC § 357.34(g) for certain brackish groundwater strategies that are MAG limited and therefore do not meet the threshold of 10,000 acre-feet/year, however they appear to be included in the assessment due to the envisioned yield. Please consider adding a statement to clarify this for the applicable strategies listed in Section 5.1.5.

13. Section 5.1.3. Page 5.1-19, 3rd bullet. The sentence regarding the ASR assessment for Crystal Clear appears incomplete. Please review and consider revising as necessary.

14. Section 5.1.3. Page 5.1-19, 4th bullet. If only a portion of Fort Sam Houston's needs have been met, please consider including an ASR assessment for the remainder of the needs.

15. Chapter 5.2, Table 5.2.1-2. Three of the four column headers in the table contain the same title of “Pre-1995 Average Use to the 1995 Standard”. Please review and consider revising as necessary.

16. Chapter 5.2. On Page 5.2.1-11, the second bullet point states “For municipal WUGs having year 2030 water use between 80 GPCD and 139 GPCD, the goal is to reduce per capita water use by 2.5 percent per year for the remainder of the planning period or until 80 GPCD is reached”. Please review and confirm if this goal should reflect a reduction of 2.5 percent per decade, which would be consistent with the goal stated in the first bullet point, and update if necessary.

17. Chapter 5.2. On Page 5.2-4, there is a statement indicating that ASR projects have a water loss of 90 to 95 percent. Please clarify if this statement was meant to indicate expected recovery/yield of 90 to 95 percent (5 to 10 percent water loss)?

18. Section 5.2.11. The introduction paragraph in the evaluation for Rainwater Harvesting includes a typo referring to "the Fresh Groundwater Development WMS." Please consider correcting this in the final plan.

19. Section 7.6. The emergency response analysis for the 2026 regional water plans should have been based on projected 2030 populations to align with the planning horizon. While the region included the analysis for the applicable WUGs please consider updating Table 7-3 to reflect the decade 2030 for the analysis for municipal WUG population, instead of “2020”.

20. Chapter 10. Please consider providing a list of rural entities that were not responsive to regional water planning group outreach efforts in the final plan.

Region L_2026 RWP_TWDB IPP Comment Letter

Final Audit Report 2025-06-23

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By:	Sarah Lee (sarah.lee@twdb.texas.gov)
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Attachment B. Agency Comments from TPWD

TEXAS PARKS & WILDLIFE

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T. Dan Friedkin
Chairman-Emeritus
Houston

David Yoskowitz, Ph.D.
Executive Director

July 20, 2025

Mr. Curt Campbell
c/o San Antonio River Authority
100 E Guenther St.
San Antonio, TX, 78204

Re: 2026 Region L Initially Prepared Regional Water Plan

Dear Mr. Campbell:

The Texas Parks and Wildlife Department (TPWD) has reviewed the 2026 Initially Prepared Regional Water Plan for Region L (IPP) and appreciated the opportunity to provide comments. Water impacts every aspect of TPWD's mission to manage and conserve the natural and cultural resources of Texas. TPWD is the agency with primary responsibility for protecting the state's fish and wildlife resources (Parks and Wildlife Code (PWC) Section (§) 12.0011) and serves as an ex officio member on each Regional Water Planning Group (Texas Water Code (TWC) §16.053(c)). The comments reflected in this letter are a continued reflection of TPWDs participation as an ex-officio member. TPWD offers these comments intending to help conserve state fish and wildlife resources as mandated in TWC §16.053(a).

TPWD understands that regional water planning groups are guided by the rules in Title 31 TAC Chapter 357 when preparing regional water plans. These water planning rules spell out requirements related to natural resources and environmental protection. Accordingly, TPWD staff reviewed the IPP with a focus on the following questions:

- Does the IPP include quantitative reporting of environmental factors including the effects on environmental water needs and habitat?
- Does the IPP include a description of natural resources and threats to natural resources due to water quantity or quality problems?
- Does the IPP discuss how these threats will be addressed?
- Does the IPP describe how it is consistent with long-term protection of natural resources?
- Does the IPP include water conservation as a water management strategy?
- Does the IPP include Drought Contingency Plans?
- Does the IPP recommend any stream segments be nominated as ecologically unique?
- Does the IPP address concerns raised by TPWD in connection with the 2016 Water Plan?

The population of the 20 counties that make up Region L is estimated to grow from about 3.9 million in 2030 to about 7.6 million by 2080, an increase of 93 percent.

4200 SMITH SCHOOL ROAD
AUSTIN, TEXAS 78744-3291
512.389.4800
www.tpwd.texas.gov

Within that same fifty-year period, water demands are expected to increase by 37% from about 1.1 million acre-feet per year (ac-ft/yr) in 2030 to approximately 1.5 million ac-ft/yr in 2080.

Water conservation, including demand management, and water reuse are expected to meet 52 percent of future water needs. The IPP includes the development of six brackish groundwater development projects, comprising 10 percent of future supplies. Three new Aquifer Storage and Recovery (ASR) projects are recommended in the IPP to provide approximately 3 percent of future supplies in the region. From the perspective of environmental impacts, ASR projects are generally preferred over surface reservoirs since habitat impacts can be minimized, and ASR typically has an over 90% water recovery rate. Finally, new surface water development projects such as the Gudalupe Blanco River Authority (GBRA) Lower Basin New Appropriation are expected to meet 15 percent of future needs, and groundwater wells are expected to meet 18 percent of future needs.

The IPP includes a description of natural resources as well as detailed quantitative reporting of environmental factors. A brief description of natural resources including fish and wildlife resources is provided in Chapter 1.6. Chapter 5 outlines each water management strategy (WMS) and the environmental and cultural considerations from each WMS. Chapter 6 outlines threats to environmental and natural resources due to water quantity and quality issues. Chapter 6 also addresses the cumulative environmental effects of the full implementation of the plan. The long-term cumulative effects of recommended WMSs on the Edwards Aquifer are based on the full implementation of the Edwards Aquifer Habitat Conservation Plan (EAHCP). The cumulative effects on the Carrizo-Wilcox, Gulf Coast, and Trinity Aquifers are based on simulated impacts of the full implementation of the modeled available groundwater (MAGs) consistent with the Desired Future Condition (DFC) on the respective aquifer within each Groundwater Management Area (GMA).

Potential cumulative effects of implementation of the 2026 SCTRWP on instream flows and freshwater inflows to bays and estuaries was assessed for seven locations in the Guadalupe-San Antonio (GSA) River Basin. Baseline modeled stream flow for the year 2080 is compared to stream flow with full implementation of the plan for 2080. For the seven sites assessed stream flows with full plan implementation generally stay above flow standards except at very low flows. The causes of the streams to drop below flow standards are thought to be from existing senior water rights that do not have to adhere to flow standards, decreases in the surface water-groundwater flux associated with several groundwater strategies in the Trinity, Carrizo-Wilcox, and Gulf Coast Aquifers, and implementation of the GBRA Mid Basin Project and the CRWA Siesta Project. Freshwater inflow into the GSA estuaries is expected to continue to be within the ranges specified by SB 3 environmental flow standards found at 30 TAC Section 298.380(a). Cumulative effects for stream and estuary locations in the Nueces River Basin were not

assessed, as there are no recommended WMSs in the 2026 SCTRWP expected to significantly affect flows in the Nueces River Basin or freshwater inflows to the Nueces Estuary.

State and Federal species of greatest conservation need (SGCN) including threatened and endangered species and candidates for listing as threatened or endangered species are listed and discussed in terms of the potential impacts of each WMS in Chapter 5. The IPP also lists these species by county in Appendix 5D. TPWD is particularly concerned about declining freshwater mussel populations. Six federally endangered, and one threatened, freshwater mussel species can be found in Region L. To avoid adverse impacts to aquatic resources, TPWD recommends entities coordinate with the department to develop a plan to avoid impacts to aquatic resources and, in some instances, relocate aquatic resources outside of a project area. There have been recent updates (January 15, 2025) to the list of federal and state listed species and Species of Greatest Conservation need, including species in Region L counties. We recommend that you update tables found in Chapter 5 and Appendix 5D with the latest information that is available at https://tpwd.texas.gov/gis/rtest/.

Chapter 6 briefly discusses the spread of invasive exotic species and their potential negative environmental impacts. TPWD requests this threat be addressed by any water management strategies that involve the transfer of surface water. The introduction of invasive exotic species can directly and/or indirectly negatively impact native species, their habitats and associated ecosystem functions, recreational opportunities (e.g., anglers and boaters) and the public water supply and other water infrastructure.

In particular, the zebra mussel is an invasive freshwater mollusk that could affect water management by clogging intake structures and fouling pipelines, resulting in increased maintenance needs and potentially hazardous conditions for workers. The presence of zebra mussels also raises concerns with the transfer of water from affected waterbodies that may require mitigation to prevent transfer of zebra mussels. The potential transport of zebra mussels and other invasive species via pipelines falls under Parks and Wildlife Code §66.007(n) and §66.0072(g)

To prevent the transmission of invasive species, TPWD recommends avoiding transport of water from water bodies where these species are known to occur, including rivers downstream of infested lakes. If this is unavoidable, effective mitigative measures should be considered and implemented for preventing the transfer of zebra mussels. Canyon Lake, and Medina Lake among others are known to be infested with zebra mussels. In addition, zebra mussels have been found in several lakes downstream on the Guadalupe River. Please be advised TPWD regularly updates information on the TPWD website to clearly identify lakes with zebra mussels in Texas, as it is subject to change; this information can be found at:

https://tpwd.texas.gov/huntwild/wild/species/exotic/zebramusselmap.phtml

TPWD recommends that the Region L IPP identify areas with infestations to prevent the spread of zebra mussels via water transfer and the negative impacts from invasive, exotic or nuisance species on the State's natural resources, economy, and recreation that would result from their introduction into new water bodies.

The SCTRWPG is to be commended for its strong emphasis on water conservation, reuse and drought contingency planning. The IPP includes municipal water conservation management strategies. Water conservation in the industrial and steam-electric power generation-use categories are encouraged as well. According to the IPP, per capita water use in Region L is projected to decline over the planning period from 119 gallons per capita per day (GPCD) in 2030 to 111 GPCD in 2080, bringing it well under the Texas Water Conservation Task Force goal of 125-140 gallons per person per day.

While TPWD is pleased to see that many of our earlier comments have been addressed, such as continuing to evaluate and recommend protections for ecologically significant streams identified by TPWD. However, concerns remain regarding potential impacts associated with several strategies. Increased groundwater development may impact small springs and adversely impact groundwater-surface water interactions. Although the plan states that there will not be impacts to environmental flows, new appropriations from the Guadalupe River and/or increased use of previously unused water rights from the Guadalupe River may impact instream flows and freshwater inflows to San Antonio Bay that will likely reduce long-term inflows and increase bay salinities, potentially leading to estuarine community changes. Brackish groundwater desalination can be an ecologically advantageous strategy, as long as issues such as brine disposal options are carefully considered. Recognition is deserved for drought management as a water management strategy, aquifer storage and recovery projects, use of off-channel reservoirs, use of recycled water for non-potable uses for several water user groups, and an ecological analysis of the impact of the 2026 plan. TPWD looks forward to continued coordination with project sponsors in an effort to avoid and/or minimize threats to fish and wildlife resources.

TPWD highly commends SCTRWPG's efforts that have resulted in the successful designation of five segments recommended in the IPP as ecologically unique and agrees with the statement "... designating ecologically unique stream segments raises public awareness and voluntary stewardship that can result in the preservation of the character and environmental function of these segments." In addition, TPWD appreciates the recommendations regarding funding for water quality and continuation of the ecologically significant streams studies, updates to the groundwater availability models and water availability models for the Guadalupe-San Antonio and Nueces Water Availability Models, and other water and climate data sources.

Thank you for your consideration of these comments. TPWD looks forward to continuing to work with the planning group to develop water supply strategies that not only meet the future water supply needs of the region but also preserve the ecological health of the region's aquatic resources. If you have any questions or comments, please do not hesitate to contact me by email at Marty.Kelly@TPWD.Texas.gov or by phone at (512) 389-8214.

Sincerely,

Marty Kelly

Marty Kelly
Water Resources

MK:dh

cc: Mr. Robin Riechers
Ms. Carly Rotzler, Water Resources

Attachment C. Public Comment from Aqua WSC | May 21, 2025

AQUA
WATER SUPPLY CORPORATION
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2026 Region L IPP – Aqua WSC Comments

Page No. (Region L IPP)	Content	Comment / Request to Change
1-45, 2A-2, 2A-12, 2A-13, 2B-3, 3A-18, 3A-20, 4-8, 4A-2, 4A-3, 4A-16, 4A-17, 5.1-13, 5.2.1-7, 5.2.1-13, 5.2.1-18, 5.2.1-23, 5.2.1-29, 5.2.1-34, 7B-1,	General	Polonia WSC has merged with Aqua WSC
7B-3	Table 7B-2: Potential Emergency Interconnects	Remove “Aqua WSC”, replace with “County-Other” (Aqua Texas)
5B-1	Appendix 5B	Add “development of large-scale marine seawater or brackish groundwater” as a Potential Feasible WMS.

415 Old Austin Hwy. | Drawer P | Bastrop, TX 78602 | 512-303-3943 | fax: 512-303-4881
www.aquawsc.com

Attachment D. Public Comment from CRWA | July 18, 2025

CANYON REGIONAL
water authority

July 18, 2025

Caye Castillo, Government Affairs Specialist
San Antonio River Authority
100 E. Guenther St.,
San Antonio, TX 78204
Sent via email to: ccastillo@sariverauthority.org

Re: Formal Comments on the 2026 Initially Prepared Regional Water Plan for South-Central Texas

Dear Ms. Castillo,

These comments are submitted on behalf of Canyon Regional Water Authority ("CRWA"). Thank you for the continued opportunity to review and comment on the 2026 Initially Prepared Regional Water Plan ("IPP") for the South-Central Texas Region ("Region L"). CRWA offered comments on an earlier version of the plan and submitted those on May 21, 2025, and subsequently met with Black and Veatch, the consultant charged with developing the IPP ("Consultant") on June 5, 2025, to discuss the comments. CRWA met again with the Consultant on June 27, 2025, and immediately following that meeting, was in communication with the Administrative Agent ("Agent") for the Region L Planning. CRWA now offers additional details on the previously submitted comments and new comments for consideration by the Region L Planning Group.

We trust that you, the entire Regional Water Planning Group ("RWPG"), and the Texas Water Development Board ("TWB") recognize the gravitas of CRWA's concerns set-forth herein, and that timely and comprehensive corrective action will occur prior to delivery of the Final Plan for Region L.

A. Wells Ranch Phase 3 Water Availability Values are Incorrect

1. Groundwater Availability Determination Derived from Incorrect Data Source.

CRWA is very concerned that the Modeled Available Groundwater (MAG) constrained yields, as shown in Table 5.2.18-1 *Envisioned and MAG-Constrained Yields for the CRWA Wells Ranch (Phase 3) Project (acft/yr)* are incorrect. This inaccuracy results from consideration of only MAG data pertaining to Guadalupe County even though most of the project's groundwater withdrawals are planned for Gonzales County.

In the 2021 Region L Plan, the groundwater supply for the Wells Ranch Phase 3 Project ("WR3") was identified as being located in Guadalupe County. Since the release of the 2021 Plan, the Guadalupe County portion of the WR3 groundwater supply has been developed and the project has been expanded to include water that will be produced in Gonzales County.

CRWA provided updated information to the Consultant concerning the source of WR3 supply on multiple occasions during the Region L water planning process leading up to the IPP. All of this information reflected that WR3 is on-going and that a large part of the project's source supply is in Gonzales County.

The body content and map of the IPP (on page 5.2.18-1) reflects this change. However, MAG data (on page 5.2.18-2) is inaccurate because it pertains solely to groundwater in Guadalupe County instead of reflecting CRWA's well-documented combination of groundwater from both Guadalupe County and Gonzales County.

Data used to determine groundwater availability is obtained by Consultant from TWDB. Thus, it is not the case that CRWA provided an incorrect data set on which the groundwater availability calculation was based. Instead, this data error originates wholly external to CRWA.

As a result of the incorporated data error, the IPP shows the MAG constrained yield for the project is 8,395 acft/yr in 2030 and erroneously represents a portion of the MAG value assigned to the Carrizo aquifer in Guadalupe County even though the narrative and map accurately reflect groundwater production from Gonzales County. The table as shown in the IPP is reproduced below (Table 1):

Table 1	**Envisioned and MAG-Constrained Yields for the CRWA Wells Ranch (Phase 3) Project (acft/yr) (Table 5.2.18-1 in the IPP)**					
Yield Type	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Envisioned Yield	14,500	14,500	14,500	14,500	14,500	14,500
MAG-Constrained Yield	8,395	6,941	7,629	7,159	7,198	7,010

In a June 27, 2025, meeting between CRWA and Consultant, it was determined by Consultant that if the correct source data had been used the MAG-Constrained Yields would be approximately those shown in the table below (Table 2):

Table 2	**Corrected MAG Constrained Volumes for Wells Ranch Phase 3 (acft/yr)**					
	2030	**2040**	**2050**	**2060**	**2070**	**2080**
Envisioned Yield	14,500	14,500	14,500	14,500	14,500	14,500
MAG-Constrained Yield, Gonzales County	8,341	6,663	10,040	10,149	10,429	8,229
MAG-Constrained Yield, Guadalupe County	776	469	538	491	495	476
Total	9,117	7,132	10,578	10,640	10,924	8,705

Although correcting the values would fulfill the RWPG's charge by making the IPP accurate, this correction was discouraged by the Consultant – ostensibly because of the late administrative stage of the planning process and the significant impact to the MAG constrained yield assigned to other projects in Gonzales County. CRWA contends that the reality of the situation is that accuracy is to the benefit of all entities developing water projects in both Guadalupe and Gonzales Counties, and that it is to the benefit of customers who may seek water service in either county in the future. In addition, with all due respect for the administrative processes of state water planning, CRWA posits that the efforts taken to plan for water development are inherently undermined by the knowing and willing acceptance of significant inaccuracies in the IPP, and, if the IPP is adopted as-is, the incorporation of such inaccuracies into the broader State Water Plan. To knowingly incorporate inaccurate or erroneous data would frustrate the purpose, intent and spirit of Senate Bill 2 and the development of a credible and reliable State Water Plan.

In the June 27, 2025 meeting, Consultant presented three potential courses of action: 1) pursue true correction with values like those reflected in Table 2, above, 2) leave the MAG numbers as they are currently shown in the IPP, or 3) reduce the available water for just one other non-CRWA projects that also spans both counties, essentially swapping volumes on paper. CRWA finds each of these options inadequate and feeble when corrective measures are readily available and the IPP has not been finally adopted by Region L. Option Two, in particular, is wholly unsatisfactory because it proposes to simply ignore the error. CRWA also rejects Option Three as Consultant shared the following table which approximately represents MAG constraints under this scenario (Table 3):

Table 3	**Partially Changed MAG Constrained Volumes for Wells Ranch Phase 3 (acft/yr)**					
	2030	**2040**	**2050**	**2060**	**2070**	**2080**
Envisioned Yield	14,500	14,500	14,500	14,500	14,500	14,500
MAG Constrained Gonzales Co.	1,000	1,000	1,000	1,000	1,000	1,000
MAG Constrained Guadalupe Co.	~400	~400	~400	~400	~400	~400
Total	~1,400	~1,400	~1,400	~1,400	~1,400	~1,400

Under the foregoing Table 3, which represents a change but not a correction, two projects would be impacted by incorrect data application. Additionally, under this scenario the total available groundwater to CRWA for the WR3 project would be approximately 1,400 acft/yr: significantly less than the 9,117 acft/yr that should be allocated and abysmally lower than the envisioned volume for the project's 14,500 acft annual yield.

CRWA contends that known errors in a state plan of any kind (and/or associated documents) should not be ignored when there is an opportunity to make corrections. If the administrative process does not accommodate accuracy and instead lends toward the willing and knowing approval of an inaccurate Plan, then in addition to the remainder of comments presented here, CRWA also encourages the TWDB to review and modify the administrative timeline and process for water planning to allow necessary corrections to be made such that future regional water plans can be relied on. CRWA also requests an explanation be provided, including citation to rules or TWDB policy or procedural guidelines supporting the assertion that a change cannot be made at this stage of the planning process.

Following the June 27, 2025, meeting with Consultant, CRWA contacted the Region L planning group via its Administrative Agent ("Agent"). On July 11, 2025, Agent notified CRWA that a meeting between TWDB and Consultant resulted in an additional proposed option (the "Fourth Option") for addressing the inaccuracies related to the WR3 discussion in the IPP. The Fourth Option includes several improvements such as updating the map images to more accurately reflect the approximate project location, adding additional environmental and cultural impacts analysis for the project in Gonzales County, updating the costing model and costing summary table, and updating the MAG-Constrained yield values as shown in Table 4, below.

Table 4	Envisioned and MAG-Constrained Yields for the CRWA Wells Ranch (Phase 3) Project (acft/yr) (Table 5.2.18-1 in the IPP)					
County and Yield Type	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Gonzales County-Envisioned Yield	13,710	13,710	13,710	13,710	13,710	13,710
Guadalupe County-Envisioned Yield	790	790	790	790	790	790
Total Envisioned Yield	14,500	14,500	14,500	14,500	14,500	14,500
Gonzales County – MAG-Constrained Yield	8,341	0	1,115	1,489	2,449	0
Guadalupe County – MAG-Constrained Yield	790	790	790	790	790	790
Total MAG-Constrained Yield	9,131	790	1,905	2,279	3,239	790

While the Fourth Option's proposed updates to the WR3 map, narratives, and costing tables represent improvements in the current IPP, the MAG constrained values associated with this Option remain unacceptable. The values listed in the foregoing Table 4 would continue to inaccurately portray the WR3 constrained yield to amounts ranging from about 9% to 30% of the correct/accurate values for decades beginning in 2040. As discussed in detail below, the low values proposed for the Fourth Option would significantly affect CRWA's opportunities for securing groundwater production permits and/or obtaining funding for development of the project.).

Assuming this Fourth Option is approved by the Planning Group, it is a great improvement in the descriptive and narrative pieces. CRWA appreciates that other details will be added that clarify what the project will accomplish and where, however it still believes that the MAG-constrained yield values should be made accurate for all decades shown in the IPP; this is largely because it has bearing on other projects in the region, but also because the greatly reduced and variable future values can still create challenges in securing permits, partnerships, and funding. As such, no alternative to providing accurate MAG constrained yields for WR3 is acceptable to CRWA. CRWA steadfastly maintains that that the IPP must be corrected, and that the respective Regional Plans and State Water Plan should be as accurate as possible. CRWA, again, requests to have the values presented in the IPP corrected before the IPP is approved by the RWPG in August 2025.

In light of CRWA's insistence that the MAG constrained values identified in the IPP be corrected – correction which will necessarily result in reduction of the MAG constrained yields assigned to other projects in Gonzales County -- CRWA has reached out to those entities whose projects Consultant identified as being affected to inform them of our concerns as identified herein. Those entities are:

- GBRA
- SSLGC
- BVRT
- County Line SUD
- Maxwell SUD

If, despite CRWA's protests, the Region L planning groups votes to incorporate into the Plan known errors that may significantly affect future project funding and permitting then CRWA requests the narrative around these incorrect MAG-Constrained values be transparently and straightforwardly explained. To this end, CRWA anticipates that in addition to an explanation of the methodology there is an explanation of why a different methodology was applied, context of the underlying data issue resulting in a different methodology and in these values specifically, and that the values past 2040 will need to be revisited for accuracy in future planning cycles as they are likely much lower than they would have been if there was time to make comprehensive changes. As part of a such an explanation, CRWA suggests the following clarifying language be included: *It should be noted that, due to changes in the water allocation methodology employed in later stages of the development of the IPP, the MAG constrained values for WR3 are likely significantly greater than listed in Table 5.2.18-1. It is estimated that the MAG constrained values for the project range from a minimum of about 7,100 acft/yr in 2040 to a maximum of approximately 10,900 acft/yr in 2070.* In the absence of a true correction, CRWA believes this contextual explanation will help it overcome partnership and funding challenges that would otherwise present themselves, and provide additional detail necessary in groundwater permitting process including in applications, hearing, and public outreach and education about the WR3 project and the Regional Plan generally.

2. Transparency in Data Analysis.

In addition to remedying the inaccuracy, CRWA encourages that in future rounds of planning key data and models used to determine water availability be made publicly available. The yield calculation errors described herein were not detectable by CRWA staff from the information made publicly available through the planning process; they were not errors detectable just by reading the values presented in Table 5.2.18-1. It was only after comments were returned and the Consultant reviewed them against the data used to determine groundwater availability, that the Consultant found the issue and raised the discrepancy with CRWA. CRWA appreciates that Consultant was open and forthcoming about its finding, and that it was willing to discuss the challenges posed by this issue. However, the gravity and late detection of the error raise serious concerns about the data underlying water availability determinations throughout the IPP. Future rounds of regional water planning should include opportunities not only to hear from consultants about final or summary numbers and pose high level questions but also enhanced transparency in demonstrating the manner in which key data is treated or analyzed. Notably, CRWA did request this information from Consultant both by email and during the June 27th meeting, but has never been furnished with the tools or data inputs used to calculate the MAG constrained yields assigned to projects in Gonzales and Guadalupe Counties.

3. Cost to Remedy IPP through Amendment.

In conversations about the error in underlying data, it was noted by Consultant that funding for this round of state water planning is nearly exhausted. In the event that the IPP will not be corrected before being finalized and approved this August, CRWA was informed it could pursue an amendment but that it would bear the burden of any costs associated with the amendment process; such costs were estimated by Consultant to be between $60,000 and $65,000.

In a review of information provided by CRWA to Consultant, all materials and emails state that the remainder of the WR3 project is tied to Gonzales County. CRWA maintains that any source of error results from Consultant's error and was not the result of miscommunication by CRWA or any failure on CRWA's part. Having done nothing to cause or contribute to the error, CRWA is adamant that it should not have to pay any amount required for corrective action. Notably, CRWA, TWDB, and the San Antonio River Authority

(SARA) which is supported the administrative process are all political subdivisions and publicly funded enterprises. Taxpayers and ratepayers should not bear the cost of correcting Consultant's mistake. Consultant touts itself as a leader and innovator in providing professional services for water resources and community planning. It was engaged by TWDB to perform highly specialized and critical analysis, and to develop a credible, reliable guidance document for water planning in the region for the next five years. As part of completion of its professional services engagement with the TWDB, Consultant should correct its mistake at no cost to CRWA, to TWDB, or to SARA.

4. Project Impacts of Delayed Resolution. The accuracy of the final IPP and the State Water Plan is imperative for the success of WR3.

WR3 is a groundwater project. Consultant indicated that the WR3 project should not be impacted by MAG determinations for WR3 shown in state planning documents. In support of this proposition, Consultant pointed to the following language located on page 15.2.18-2 of the IPP:

> Production and/or drilling permits for these wells may be required in accordance with specific GCD rules. For most aquifers in the region, Groundwater Conservation Districts (GCDs) have adopted desired future conditions (DFCs). In some GCDs, full use of all groundwater supplies (permitted, grandfathered and exempt) may result in non-achievement of the DFCs for an aquifer. To ensure consistency with the DFCs, TWDB requires that groundwater availability for each aquifer be limited to the MAG for the discrete geographic-aquifer unit (i.e., aquifer/county/basin unit). *In some instances, the sum of existing supplies and future supplies (as groundwater-based WMSs) are greater than the MAG or groundwater availability for a discrete geographic-aquifer unit. This has resulted, for regional water planning purposes only, in adjustments to available yields shown in this plan, and a lack of firm water available for future projects in this plan for some areas for certain time periods. This should not be construed as recommending or requiring that GCDs make these adjustments, or deny future permit applications. As described in Guiding Principle V (refer to Appendix 5A), this is not intended to influence or interfere with the regulatory decisions made by the governing boards of permitting entities. The SCTRWPG recognizes and supports the ability of permit holders to exercise their rights to groundwater use in accordance with their permits and it recognizes and supports a GCD's discretion to issue permits and grandfather historical users for amounts in excess of the MAG.* The SCTRWPG may not modify groundwater permits that GCDs have already issued or limit future permits that GCDs may issue. If MAG estimates are modified during or after this planning cycle, the SCTRWPG may amend this plan to adjust WMS supply volumes that are affected by the modified MAG estimate(s). Supplemental groundwater may be obtained under existing permits through the Groundwater Conversions WMS.[1]

While the language provides context as to TWDB's intended use (or disuse) of MAG values by groundwater conservation districts ("GCD") it is unrealistic to suggest that these values do not have bearing on a project's GCD permitting success: why would a GCD not consider the values stated in the Region L Plan? Moreover, given the increased and well-publicized tension between local, rural residents and groundwater exporters, it is incredibly difficult for GCDs to render or justify permitting decisions not supported by MAG values contained in a Regional Plan, or to defend decisions that appear inconsistent

[1] Emphasis added.

with the Regional Plan. These issues were central to the GCD's recent groundwater permitting determinations in Gonzales County, where an exporter's production and transportation permit applications were denied at least in part due to concerns over MAG exceedance and inconsistency with the Region L plan. Given this precedence, it is not a stretch to conclude that low MAG constrained yield values assigned to a project could also be grounds for a GCD to decline an otherwise proper application.

Project details as presented in official state documents pertaining to the water planning process -- like the IPP or adopted Region L plan -- not only influence the outcome of permitting processes, but also adversely impact interest in project partnerships and funding opportunities. Partnership and funding opportunities would undoubtedly be sparse for a project whose assigned MAG constrained yield is only a small fraction of the total envisioned yield.

With impacts to permitting, partnerships, and funding in mind, CRWA is also concerned about the timeline for construction of WR3 project components which may be delayed as a result of working through the other issues mentioned. Consultant estimated the timeline for an amendment process to be 3-12 months depending on whether the amendment would be considered major or minor. CRWA is dubious of this suggested timetable, and a delay of several months would disrupt the progress of the WR3 project entirely: a truly unfortunate outcome at a time where the Legislature has clearly indicated that it wants to see more water projects completed, and particularly where additional supplies are needed to provide for economic development in high growth regions. The WR3 Project is intended to supply one of the fastest growing areas in the nation, and the additional supply cannot come soon enough.

B. Opinion of Probable Project Costs

The IPP states that WR3 costs for planning, design, permitting, and acquisition is $39,061,000.00 and the construction costs are $100,076,000.00 (total project cost $139,137,000.00) (*see page* 5.2.18-7). CRWA submitted Opinions of Probable Costs developed by its own consulting engineers. These numbers indicate total costs of $165,977,000.00 for planning, design, permitting, acquisition, and $669,031,400.00[2] for construction costs, with a total project cost $835,008,400.00. The difference between the total stated in the IPP and CRWA's estimates is $695,871,400.00: a substantial sum. This increase is the result of the rising costs of materials, parts, and labor.

These cost estimates were provided to the Consultant on June 18, 2025, and reflect CRWA's current expectations for project costs. As such, CRWA requests that the IPP cost values be reviewed, and for the total values shown in Table 5.2.18-4 Cost Estimate Summary for the CRWA Wells Ranch (Phase 3) Project be updated to reflect increased costs.

C. Additional Clarifications Submitted on May 21, 2025

1. Additional Clarifications Not Yet Responded To.

To ensure as many corrections as possible are made before the IPP is finalized and adopted we have attached a copy of the May 21, 2025, comments on the IPP narrative on WR3. Also submitted with the comments on the narrative were notes about changes to several tables. CRWA restates those here.

[2] The Opinions of Probable Cost provided by CRWA to Consultant included three alternative solutions and corresponding cost proposals related to a filter component of the project. Alternative solution #2 has been selected and the cost of that project is included in the summary figures stated in section B.

a. In Table 5.1-2 Water Supply Plans for WUGs and WWPs Relying on Recommended Water Manager Strategies, the following entities are listed as participating, but are not:

- City of Converse
- City of Marion
- Martindale WSC

Additionally, the following entities are not listed as participating, but are:

- County Line SUD
- East Central SUD
- Green Valley SUD
- Maxwell SUD
- Springs Hill WSC

b. Table 6-2 Carrizo-Wilcox Aquifer should reflect that WR3 is sourced from Guadalupe and Gonzales.

D. CRWA's Characterization as a Major Water Provider

CRWA should be characterized as a Major Water Provider (MWP), as it has been in every Region L Plan since the regional water planning process was initiated. The IPP does not explain the reason for the change or include considerations made in determining which providers qualify as MWPs. It states only that:

> A major water provider (MWP) is defined as a WUG or a WWP of particular significance to the region's water supply as determined by the RWPG. This may include public or private entities that provide water for any water use category. At the August 1, 2024, RWPG meeting, the SCTRWPG defined the following entities as MWPs for the sixth cycle of regional water planning:
>
> - Canyon Lake Water Service (Texas Water Company)
> - Guadalupe-Blanco River Authority (GBRA);
> - New Braunfels;
> - San Antonio Water System (SAWS); and
> - San Marcos.

Consultant explained to CRWA staff that the Planning Committee opted to establish a new criteria setting out that MWPs are those regional entities that have demands exceeding 30,000 acft/year. CRWA requests that the change be explained so that there is transparency around this new delineation and explanation as to its implementation and why the number of MWPs is reduced. However, explanation aside, CRWA's demand projection for 2030 is approximately 50,211 acft/yr (*see* Table 6 CRWA Demand Projections at 140 GPCD), which exceeds this new criterion. Consequently, CRWA should be named as an MWP, and failure to correctly make this identification represents yet another serious inaccuracy.

First, consideration of CRWA's service area population is absent from the IPP despite the fact that the primary area of growth among its service population runs along the eastern side of the IH-35 corridor (between San Antonio and Austin) and north of IH-10: both areas known to be extreme high-growth. Table 2-5 of the IPP is recreated below with additional rows showing CRWA's service population and the impact to total population. The population values presented for CRWA are the aggregated decadal numbers for all of CRWA's members; the underlying numbers are those included in the IPP for each individual CRWA member. Notably, CRWA's service population far exceeds four of the other MWPs shown presently and again by 2080. Even if some populations are assumed to overlap between GBRA (another wholesale supplier) and CRWA by 50% such that CRWA's service population is halved, CRWA still exceeds four other MWPs now and through 2080.

Table 5	Table 2-5 Population Projections for Major Water Providers (2030 to 2080)					
Major Water Providers	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
Canyon Lake Water Service (Texas Water Company)*	94,804	129,631	151,722	166,056	219,685	278,860
GBRA	8,888	12,326	11,956	11,605	11,202	10,743
New Braunfels	140,358	199,891	275,870	368,213	473,912	594,914
SAWS	2,351,317	2,737,300	2,991,858	3,225,872	3,439,373	3,664,850
San Marcos	141,830	199,786	246,158	280,361	302,406	316,607
Total	2,737,197	3,278,934	3,677,564	4,052,107	4,446,578	4,865,974
CRWA	*320,179*	*442,601*	*549,765*	*652,765*	*753,694*	*845,123*
Total incl. CRWA Population	*3,057,376*	*3,721,535*	*4,227,329*	*4,704,872*	*5,200,272*	*5,711,097*
CRWA	*160,090*	*221,301*	*274,883*	*326,383*	*376,847*	*422,562*
Total incl. 50% CRWA Population	*2,897,287*	*3,500,235*	*3,952,447*	*4,378,490*	*4,823,425*	*5,288,536*
* Canyon Lake Water Service (Texas Water Company) is split between Region K and Region L; population projections shown above are for Region L only. Population totals are 97,872 in 2030; 132,769 in 2040; 154,911 in 2050; 169,282 in 2060; 222,938 in 2070; and 282,113 in 2080.						

Although population is not the criterion for MWP qualification, it is relevant in as much as population is requisite to calculating projected demand. If it is assumed that CRWA's municipal GPCD is 140 (*see IPP section 5.3.1.2 GPCD Goals*) then demand would be well over 30,000 acft/yr by 2080, even under a scenario in which just 50% of CRWA's service area population is considered due to members receiving water supply from other wholesale suppliers.

Table 6	CRWA Demand Projections at 140 GPCD					
Major Water Providers	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**
CRWA Population	*320,179*	*442,601*	*549,765*	*652,765*	*753,694*	*845,123*
Demand (gals/yr)	*16,361,146,900*	*22,616,911,100*	*28,092,991,500*	*33,356,291,500*	*38,513,763,400*	*43,185,785,300*
Demand (acft/yr)	*50,211*	*69,409*	*86,214*	*102,367*	*118,194*	*132,532*
CRWA at 50% Population	*160,090*	*221,301*	*274,883*	*326,383*	*376,847*	*422,562*
Demand (gals/yr)	*8,180,573,450*	*11,308,455,550*	*14,046,495,750*	*16,678,145,750*	*19,256,881,700*	*21,592,892,650*
Demand (acft/yr)	*25,105*	*34,704*	*43,107*	*51,183*	*59,097*	*66,266*

Although in its meeting with CRWA on June 27, 2025, the Consultant construed the inclusion of MWP details as a formality to comply with 31 TAC §357.10(19)) and indicated that CRWA's exclusion as a MWP should not have bearing on the success of its projects, it is important to CRWA to be accurately reflected in the Plan as a critical water supplier in the region. This also has bearing on potential for partnerships and funding opportunities.

E. Conclusion

The IPP must be corrected so that the true production potential of CRWA's WR3 Project under MAG constrained yields is reflected, and the project's development, permitting, funding, and progress are not impaired. Additionally, any costs to remedy Consultant's error as described above should be borne solely by Consultant. Looking to the future, CRWA hopes that there will be more transparency around data application underlying the Region L plan to mitigate the potential for error and inaccuracy. Finally, CRWA requests that WR3 Project costs shown in the IPP be updated based on the cost estimates provided to Consultant, and that CRWA be accurately identified as a MWP.

Water planning in Texas is a well-respected process - one that has never been more critical than it is today as demonstrated by the 89th Legislative session. It is imperative that the Region L Plan, and ultimately the State Water Plan, be accurate and above reproach, as was noted on multiple occasions in the Texas House Natural Resources Committee's special session on groundwater use in East Texas held earlier this week. The current round of planning materials will guide regional water supply development for five (5) years – enough time to make or break a project like WR3. It is the hope of CRWA's Board of Trustees, Board of Managers, Member-Entities, and staff that the Planning Committee will arrive at the same conclusions as those presented herein and incorporate the corrections and changes identified in this Comment.

Respectfully submitted,

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General Manager
Canyon Regional Water Authority

Enclosure(s):

A. May 21, 2025 CRWA Comments on the IPP

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5.2.18 CRWA Wells Ranch (Phase 3) Project

The SCTRWPG identified the CRWA Wells Ranch (Phase 3) Project as a potentially feasible strategy and designated it as a Recommended strategy in the 2026 Regional Water Plan.

5.2.18.1 Description of Water Management Strategy

CRWA is planning to expand their existing Wells Ranch Project to ~~make~~ increase production capacity from an existing well field in Guadalupe County and to develop a new well field in Gonzales County. Improvements to ~~the~~CRWA's existing wellfield in Guadalupe County ~~well field~~ include ~~enable increased~~increasing production ~~at~~from two existing Carrizo Aquifer wells, and ~~adding~~constructing a new Carrizo Aquifer well. The existing wellfield in Guadalupe County is located generally where shown on Figure 5.2.18-1, and the new well will be located at the CRWA Wells Ranch WTP. ~~. The project is designed to supply 14,500 acft/yr of treated water by the 2030 decade; however, the available yield varies because of MAG limitations.~~ The Gonzales County portion of the project includes ~~six~~ constructing five new wells in the Carrizo Aquifer ~~wells~~. The proposed wells in Gonzales County are to be constructed in a new well field ~~in Gonzales County,~~ generally situated southeast of the existing Wells Ranch WTP off HWY 80 (Figure 5.2.18-1). Raw water from the wells in both counties would be delivered to the CRWA Wells Ranch WTP, which will require expansion for treatment and disinfection before the water is delivered to the CRWA distribution system. The project is expected to be implemented in the 2030 decade. The project is designed to supply 14,500 acft/yr of treated water, however, the available yield varies because of MAG limitations.

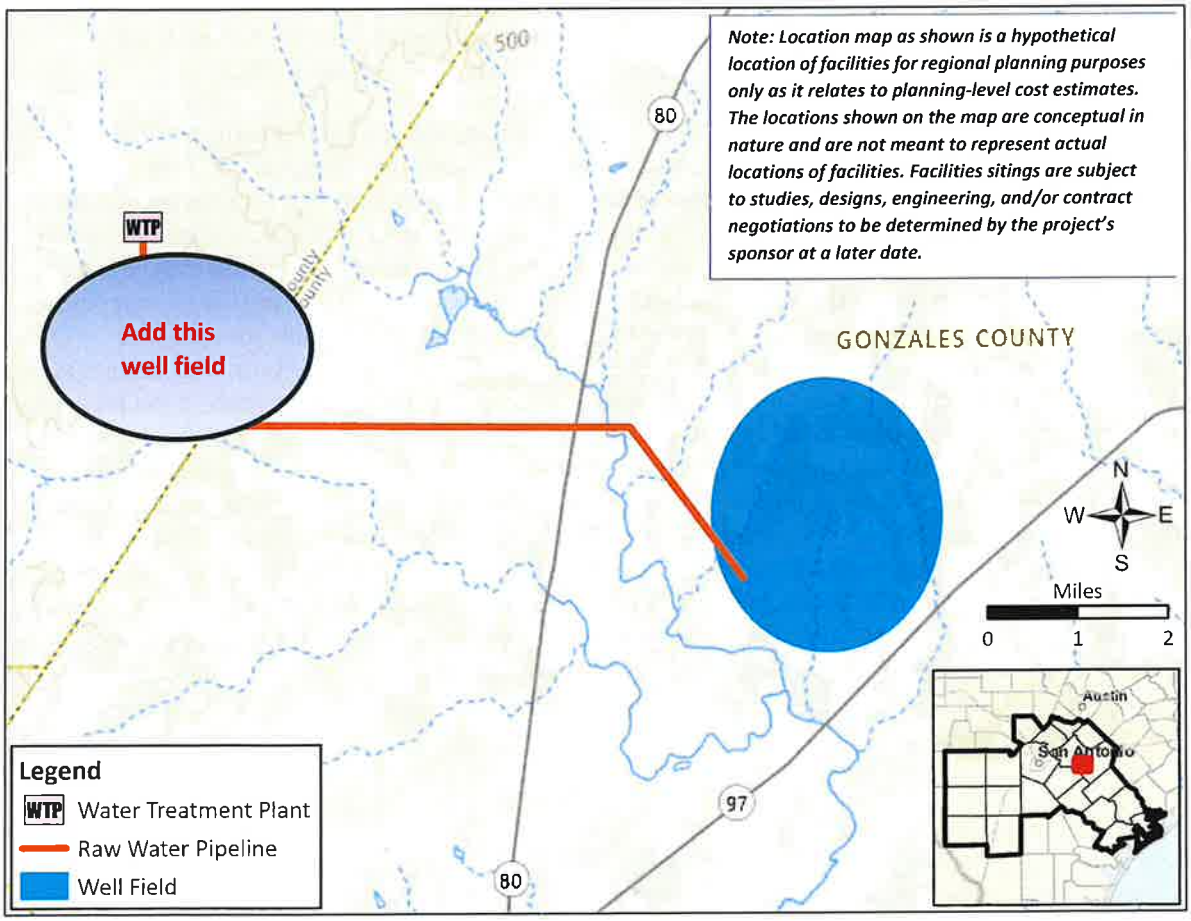


Figure 5.2.18-1 Approximate Locations of the CRWA Wells Ranch (Phase 3) Project

5.2.18.2 Available Yield

This WMS is planned for full completion by 2030 and has an available yield that varies by decade because of MAG limitations. Table 5.2.18-1 provides a summary of the yield as envisioned by the sponsor (Envisioned Yield) and the yield available considering MAG constraints (MAG-Constrained Yield) for the CRWA Wells Ranch (Phase 3) Project WMS. The MAG-Constrained Yield is the available yield included in DB27.

Table 5.2.18-1 Envisioned and MAG-Constrained Yields for the CRWA Wells Ranch (Phase 3) Project (acft/yr)

Yield Type	2030	2040	2050	2060	2070	2080
Envisioned Project Yield	14,500	14,500	14,500	14,500	14,500	14,500
MAG-Constrained Yield - Gonzales	8,395	6,941	7,629	7,159	7,198	7,010
MAG-Constrained Yield - Guadalupe						

The Guadalupe County GCD and the Gonzales County UWCD regulates groundwater production, well spacing, and other requirements in the Carrizo-Wilcox Aquifer in Guadalupe County and Gonzales County, respectively. In 2021, GMA-13 established DFCs for the Carrizo-Wilcox Aquifer [1]. On the basis of the approved DFCs, the TWDB determined that the MAG estimate for the Carrizo-Wilcox Aquifer is 41,659 for Guadalupe County in 2080 and 96,161 acft/yr for Gonzales County in 2080 [2].

Production and/or drilling permits for these wells may be required in accordance with specific GCD rules. For most aquifers in the region, GCDs have adopted DFCs. In some GCDs, full use of all groundwater supplies (permitted, grandfathered and exempt) may result in non-achievement of the DFCs for an aquifer. To ensure consistency with the DFCs, TWDB requires that groundwater availability for each aquifer be limited for planning purposes to the MAG for the discrete geographic-aquifer unit (i.e., aquifer/county/basin unit). In some instances, the sum of existing supplies and future supplies (as groundwater-based WMSs) are greater than the MAG or groundwater availability for a discrete geographic-aquifer unit. This has resulted, for regional water planning purposes only, in adjustments to available yields shown in this plan, and a lack of firm water available for future projects in this plan for some areas for certain time periods. This should not be construed as recommending or requiring that GCDs make these adjustments or deny future permit applications. As described in Guiding Principle V (refer to Appendix 5A), this is not intended to influence or interfere with the regulatory decisions made by the governing boards of permitting entities. The SCTRWPG recognizes and supports the ability of permit holders to exercise their rights to groundwater use in accordance with their permits and it recognizes and supports a GCD's discretion to issue permits and grandfather historical users for amounts in excess of the MAG. The SCTRWPG may not modify groundwater permits that GCDs have already issued or limit future permits that GCDs may issue. If MAG estimates are modified during or after this planning cycle, the SCTRWPG may amend this plan to adjust WMS supply volumes that are affected by the modified MAG estimate(s).

[1] Texas Water Development Board, Groundwater Management Area 13 – Desired Future Conditions. https://www.twdb.texas.gov/groundwater/dfc/docs/summary/GMA13_DFC_2021.pdf

[2] Wade, S.C. 2022. GAM Run 21-018 MAG: Modeled Available Groundwater for the Carrizo-Wilcox, Queen City, Sparta, and Yegua-Jackson Aquifers in GMA-13: TWDB. https://www.twdb.texas.gov/groundwater/docs/GAMruns/GR21-018_MAG.pdf

The CRWA Wells Ranch (Phase 3) Project wells in Gonzales County are designed to ~~each~~ produce approximately 1,~~550~~ 700 gpm each. The new well in Guadalupe County is designed to produce 400 gpm. Well upgrades in Guadalupe County will see one well increase production from 555 gpm to 940 gpm, and another increase production from 854 gpm to 1,000 gpm. Wells in the Carrizo Aquifer are expected to have a depth ranging from 400 to 600 feet.

The Carrizo-Wilcox Aquifer is one of four major aquifers in the ~~South Central~~South-Central Texas Water Planning Region. Overall, the water quality of the Carrizo-Wilcox Aquifer is suitable for use as a water supply, as this area is low in TDS concentrations, but often has high concentrations of iron and manganese.

5.2.18.3 Environmental Factors

The project was evaluated to determine its potential impacts on environmental factors. Table 5.2.18-2 provides ~~a~~ quantitative reporting of the project's potential effects on environmental factors. This information is further described in subsequent subsections.

Table 5.2.18-2 Summary of Potential Project Effects on Environmental Factors for the CRWA Wells Ranch (Phase 3) Project

Environmental Factor	Acreage or Impact Score
Potential Agricultural Acreage Impacts (No. Acres)	28
Potential Species Impact Score	5
Potential Habitat Impact Score	1
Potential Stream Construction Impact Score	2
Potential Stream Flow / Water Quality Impact Score	1
Potential Cultural Resources Impact Score	57

Environmental Considerations

Vegetation, Land Use, and Agricultural Resources

The project area occurs in the Post Oak Savannah ecoregion. As mapped by TPWD [3], the project area crosses a mix of grassland, shrubland, and wooded areas. The predominant vegetation communities are post oak motte and woodland, and savannah grassland. The project area also includes some mesquite shrubland, and the proposed pipelines cross several riparian vegetation zones mapped by TPWD as riparian deciduous hardwood forest, riparian deciduous shrubland, and riparian herbaceous vegetation.

Based on TPWD vegetation mapping, the project does not affect agricultural resources mapped as row crops or tame grassland that may be used for pasture. The project impact area does contain 28 acres mapped as sandyland grassland that may include pasture areas used for grazing or hay production

The proposed well pads would result in conversion of land use from undeveloped vegetation or pasture (mostly open fields) to small areas of industrial use. Project pipeline easements would require removal of woody vegetation and long-term maintenance (mowing, woody vegetation clearing) to maintain easement access. Herbaceous vegetation would be expected to quickly re-establish within pipeline easements once construction has been completed. Revegetation of easements and other disturbed areas provides the opportunity to plant native species that are beneficial to native wildlife. Revegetation

[3] Texas Parks and Wildlife Department (TPWD). 2024. Ecological Mapping Systems of Texas. https://tpwd.texas.gov/landwater/land/programs/landscape-ecology/ems/

plans are typically completed during preliminary studies and design phases of projects. It is up to the sponsors of each WMS to determine the best course of action regarding revegetation.

Aquatic Resources

The project area contains several mapped intermittent streams and their associated floodplains, including Tidwell Creek, East Fork Ecleto Creek, Ecleto Creek, multiple crossings of Sandies Creek, and several unnamed tributaries. The NWI mapping shows 63 acres of freshwater ponds and riverine wetlands in the project area.

Segment 1803B of Sandies Creek and Segment 1901F of Ecleto Creek in the project area has been designated as an impaired stream segment in the Texas Integrated Report of 303(d) listed water bodies [4]. This list identifies the water bodies or segments in Texas that do not meet assigned water quality standards. The project area does not contain ecologically significant stream segments as designated by TPWD.

The project will require an on-site delineation of streams, ponds, and wetlands. Well field facilities can typically be sited to avoid impacts to waters of the United States, including wetlands. Stream crossing for pipeline construction would result in temporary stream impacts that would require USACE permitting. Pipeline stream crossings are typically covered by USACE Nationwide Permit 58, Utility Line Activities for Water and Other Substances. A preconstruction notification to the USACE is required under certain conditions, including if there would be permanent impacts to more than 0.1 acre of waters of the United States. The USACE permit requires that there will be no change in preconstruction contours of waters of the United States. Utility crossings under streams (e.g., through horizontal directional drilling) would not require a USACE permit.

Threatened, Endangered, and Species of Concern

Appendix 5D provides a summary of threatened, endangered, and candidate species and species of concern that have potential to occur in Guadalupe County [5, 6]. Suitable habitat may occur for the proposed federally endangered tricolored bat (*Perimyotis subflavus*) and the monarch butterfly, which is a candidate for federal listing as a threatened or endangered species. The federally endangered whooping crane *(Grus americana)* has low potential to occur during migration.

Suitable habitat may occur for the state-listed threatened species: white-faced ibis (*Plegadis chihi*), Texas horned lizard (*Phrynosoma cornutum*), and Texas tortoise (*Gopherus berlandieri*).

There is potential for suitable habitat for numerous wildlife species designated by TPWD as SGCN, including American bumblebee (*Bombus pensylvanicus*), Strecker's chorus frog (*Pseudacris streckeri*), Woodhouse's toad (*Anaxyrus woodhousii*), western burrowing owl (*Athene cunicularia hypugaea*), eastern spotted skunk (*Spilogale putorius*), and plains spotted skunk (*Spilogale putorius interrupta*). In addition, SGCN bat species may utilize structures and could therefore occur in developed areas. The

[4] Texas Commission on Environmental Quality (TCEQ). 2024. *2024 Texas Integrated Report of Surface Water Quality for the Clean Water Act Section 305(b) and 303(d).* https://www.tceq.texas.gov/waterquality/assessment/2024-integrated-report/24txir.

[5] Texas Parks and Wildlife Department (TPWD). 2024. Annotated County Lists of Rare Species – Guadalupe County. Last Update: August 22, 2024. https://tpwd.texas.gov/gis/rtest/.

[6] U.S. Fish and Wildlife Service (USFWS). 2024. Information for Planning and Consultation Resource List – Guadalupe County. https://ipac.ecosphere.fws.gov/.

SGCN list also includes numerous plant species. SGCN species do not have formal protected status but are being monitored by TPWD.

Site-specific field surveys would be required to determine the quality of habitat for federally and state-listed species. Coordination with USFWS and TPWD may be required to mitigate species impacts. If TWDB funding/financing will be used for the project, formal coordination with TPWD will likely be required to obtain their recommendations on minimizing impacts to protected species and sensitive habitats. If suitable habitat occurs, TPWD may request preconstruction surveys to search for and relocate any protected species that occur in the project area.

Migratory birds may nest in the project area. The federal MBTA protects birds, nests, and eggs unless permitted by USFWS. TPWD recommendations for project due diligence typically include a recommendation to conduct preconstruction nest surveys or avoid vegetation clearing during the general bird nesting season of March 15 to September 15.

5.2.18.4 Cultural Considerations

For linear portions of the project (i.e., project alignment), a background literature review was performed for the alignment a 300-foot radius around the project alignment. For the area portion of the project (i.e., project area), a background literature review was performed of the area portion only. The background literature review determined that no previously recorded cultural resources intersect the approximate 4,027-acre project area and alignment or are immediately adjacent (i.e., within 300 feet) to the project's pipeline alignment [7, 8]. The historical map review identified 46 potential historic-age structures that intersect with the project area and alignment (Table 5.2.18-3) [9].

Table 5.2.18-3 Cultural Resources Results for the CRWA Wells Ranch (Phase 3) Project

Resource Name	Resource Type	Prehistoric / Historic	NRHP Eligibility	Location
None (N=46)	Buildings / Structures	Historic	–	Intersect
Assessment Score Total	**All**	**All**	**All**	**57.0**

A probability model was used to assess the overall potential of buried prehistoric archaeological deposits in the project area and alignment, which included low, medium, and high potential zones. The model indicated that the entirety of the project area and alignment had a low likelihood of containing significant unidentified archaeological resources. No areas were identified by the model as having a high or moderate probability. Areas with higher archaeological probability would have been located near previously known archaeological sites, historic features, and landforms adjacent to existing drainage systems.

A cultural assessment score was developed for the project area and alignment that considered the probability model of archaeological potential information, as well as the presence of previously

[7] Texas Historical Commission (THC). 2024. *Texas Archeological and Historical Sites Atlas*. Available at: https://atlas.thc.texas.gov/. Accessed July 2024.
[8] Texas Department of Transportation (TxDOT). 2024. Aggregator. Available at: https://atlas.thc.texas.gov/Map. Accessed July 2024.
[9] U.S. Geological Survey (USGS). 2024. TopoView: historical topographic map collection. Published by the U.S. Geological Survey (USGS). Available at: http://ngmdb.usgs.gov/maps/TopoView. Accessed September 2024.

recorded cultural resources and known potential historic-age structures. Using the probability model data, a mean score was first calculated for the project area and alignment. Next, the cultural resources within the project area and alignment were evaluated according to its NRHP eligibility and SAL designation. The values attributed to each resource type include: NRHP-listed or NRHP-eligible districts and properties or archaeological sites, SALs, and cemeteries which each received 5 points; NRHP undetermined archaeological sites received 2.5 points; and NRHP ineligible archaeological sites received 0.5 point. In addition, Recorded Texas Historical Landmarks, potential historic-age structures, historic-age linear features (e.g., historic trails), contributing resources to NRHP districts, and historical markers each received 1 point. The points for all cultural resources within the project area and alignment were tabulated and added to the mean score for a total cultural assessment score. Based on this methodology, the overall calculated cultural resources assessment score for this project equaled 57.

Projects controlled by or located on land owned by a political subdivision of the State of Texas must comply with the ACT. A project that is permitted, licensed, or partially funded by the federal government must also comply with Section 106 of the NHPA. According to the background review results, 46 potential historic-age structures are located within the project area and alignment; the probability model indicates a low likelihood of buried deposits; and the project assessment score is 57. Based on these results, a cultural resource assessment for the final design plan is likely necessary; however, cultural resource investigations may be required depending on whether regulatory triggers are present.

5.2.18.5 Engineering and Costing

Preliminary engineering and costing analyses were performed using the 2026 Regional Water Planning methods. Black & Veatch utilized the Uniform Costing Tool, which includes standard costing procedures and methods for calculating unit costs. The engineering and costing analysis for the CRWA Wells Ranch (Phase 3) Project includes all facilities required for a new ~~brackish~~ groundwater well field, a new desalination WTP, disposal of brine concentrate via deep well injection, and conveyance of potable water to existing integration pipelines that currently deliver water recovered from the existing local projects.

A cost estimate summary for CRWA Wells Ranch (Phase 3) Project is provided in Table 5.2.18-4. Infrastructure was sized to deliver the sponsor's Envisioned Yield, but because the project is MAG-limited, the annual unit costs were calculated using the MAG-Constrained Yield in the first decade of implementation. All cost estimates consider infrastructure and capacities necessary to deliver the sponsor's Envisioned Yield, despite the lack of groundwater availability.

Table 5.2.18-4 Cost Estimate Summary for the CRWA Wells Ranch (Phase 3) Project

Item	Estimated Costs
Pump Stations (13.6 MGD)	$10,697,000
Transmission Pipeline (30 in. dia., 9.7 miles)	$32,965,000
Well Fields (Wells, Pumps, and Piping)	$19,858,000
Storage Tanks (Other Than at Booster Pump Stations)	$1,784,000
Water Treatment Plant (12.9 MGD)	$34,355,000
Integration, Relocations, Backup Generator & Other	$417,000
TOTAL COST OF FACILITIES	**$100,076,000**

Item	Estimated Costs
Planning (3%)	$3,002,000
Design (7%)	$7,005,000
Construction Engineering (1%)	$1,001,000
Legal Assistance (2%)	$2,002,000
Fiscal Services (2%)	$2,002,000
Pipeline Contingency (15%)	$4,945,000
All Other Facilities Contingency (20%)	$13,422,000
Environmental & Archaeology Studies and Mitigation	$486,000
Land Acquisition and Surveying (196 acres)	$829,000
Interest During Construction (3.5% for 1 year with a 0.5% ROI)	$4,367,000
TOTAL COST OF PROJECT	**$139,137,000**
ANNUAL COST	
Debt Service (3.5 percent, 20 years)	$9,760,000
Operation and Maintenance	
Pipeline, Wells, and Storage Tanks (1% of Cost of Facilities)	$550,000
Intakes and Pump Stations (2.5% of Cost of Facilities)	$267,000
Water Treatment Plant	$2,405,000
Pumping Energy Costs (7,343,523 kW-hr @ 0.09 $/kW-hr)	$661,000
TOTAL ANNUAL COST	**$13,643,000**
Available Project Yield (acft/yr)	8,395
Annual Cost of Water ($ per acft)*	$1,625
Annual Cost of Water After Debt Service ($ per acft)*	$463
Annual Cost of Water ($ per 1,000 gallons)*	$4.99
Annual Cost of Water After Debt Service ($ per 1,000 gallons)*	$1.42
* Based on a peaking factor of 1.0.	

5.2.18.6 Implementation Considerations

Information presented in this WMS was provided by CRWA and previous reports and represents the current plan, which is based on the sponsor's current understanding of the system. Implementation of the CRWA Wells Ranch (Phase 3) Project includes the following considerations:

- Verification of available groundwater quantity and well productivity;

- Verification of water quality for concentrations of dissolved constituents, such as TDS, chloride, sulfate, iron, manganese, and hydrogen sulfide;
- Verification of the potential for deep well injection of concentrate;
- Potential for differing water qualities/chemical constituents in the water;
- Iron and manganese content in the water;
- Class I disposal well permit through the TCEQ for deep well injection of desalination concentrate;
- Regulations by TCEQ;
- Regulations by and securing permits from the Guadalupe GCD and Gonzales County UWCD; and
- Experience in operating and maintaining a desalination WTP.

Additional considerations may include the following:

- Impacts on the following:
  - Endangered and threatened species;
  - Water levels in the aquifer, including potential dewatering of the current artesian part of the aquifer;
  - Baseflow in streams; and
  - Wetlands.
- Competition with others in the area for groundwater in the Carrizo Aquifer, including the following:
  - Private water purveyors;
  - Public water purveyors in the area; and/or
  - Future oil and gas drilling operations.

Attachment E. Public Comment from Ted Boriack | July 20, 2025

July 20, 2025

TO: South Central Texas Regional Water Planning Group (Region L)
Caye Castillo, Administrative Agent for Region L
San Antonio River Authority
100 E Guenther St, San Antonio Texas 78204
by email: ccastillo@sariverauthority.org

Regional L officers below and members (via Caye Castillo)
Curt Campbell, Chair
Humberto Ramos, Vice Chair
Gary Middleton, Secretary
Jason Ammerman, At-Large
Steve Metzler, At-Large

FROM: Ted Boriack
Concerned Landowner, Gonzales County
Vice President, Water Protection Association
2984 FM1296
Waelder, TX 78959
tedboriack@gmail.com
361-443-2547

SUBJECT: Public Comment on Region L 2026 Initially Prepared Plan (IPP)

General Concerns About Groundwater Export Projects at Gonzales County Underground Water Conservation District (Gonzales GCD).

1. As a long-time resident and landowner of Gonzales County and vice-president of the Water Protection Association of Gonzales County, I write to express my concern over the excessive amount of groundwater export in the boundary of the Gonzales GCD. Despite the massive amount of groundwater already permitted by the Gonzales GCD to exporters, the IPP includes various sponsors with plans to export even more groundwater out of the Gonzales GCD area -- this is simply ill-conceived and not really a plan at all. The IPP lists a number of groundwater projects proposing more production of groundwater and export from the Gonzales GCD area. The IPP also includes ASR projects in the Gonzales GCD area. I am opposed to all of these projects for reasons I explain in detail below.

2. GCUWCD's Over-Permitting

   The GCUWCD has grossly over-permitted groundwater export permits, far exceeding the Modeled Available Groundwater (MAG) for the Carrizo Aquifer. This reckless over-allocation allows substantial volumes of water to be extracted from highly concentrated well fields, causing severe localized drawdown that endangers neighboring wells and the aquifer's long-term viability. The permitted production is disproportionately concentrated in small well field areas.

3. The following table shows the current permitted volumes by the Gonzales County Underground Water Conservation District for the Carrizo aquifer. This table does not include the additional 9,000 acre-ft/yr of groundwater that GBRA is now requesting and still pursuing despite a multiyear contested case hearing denial of permit request by the board. The citizens of Gonzales have strongly opposed the GBRA expansion.

Gonzales County UWCD Permits for Carrizo Wells -- Transporters vs Local Users

(based on public domain records and open records requests)

	Permits Granted as of Today	
Permit Granted by GCUWCD to:	**Acre-ft/yr**	
Aqua Water Supply Corporation	5,000	5.4%
Canyon Regional Water Authority	8,320	9.0%
Guadalupe-Blanco River Authority	15,000	16.3%
San Antonio Water System	11,688	12.7%
Schertz-Sequin Local Govt Corp	19,362	21.0%
Alliance Regional Water Authority	11,620	12.6%
Transporters (take water out of GCUWCD boundary)	**70,990**	**77.0%**
Gonzales County Water Supply Corporation	2,553	2.8%
Gonzales, Nixon, Smiley public supply wells combined	7,407	8.0%
Local Irrigation and livestock	9,249	10.0%
Local Fracking	1,796	1.9%
Local Industrial	210	0.2%
Local Water Use (within GCUWCD boundary)	**21,215**	**23.0%**
Total Carrizo Permits	**92,205**	**100.0%**

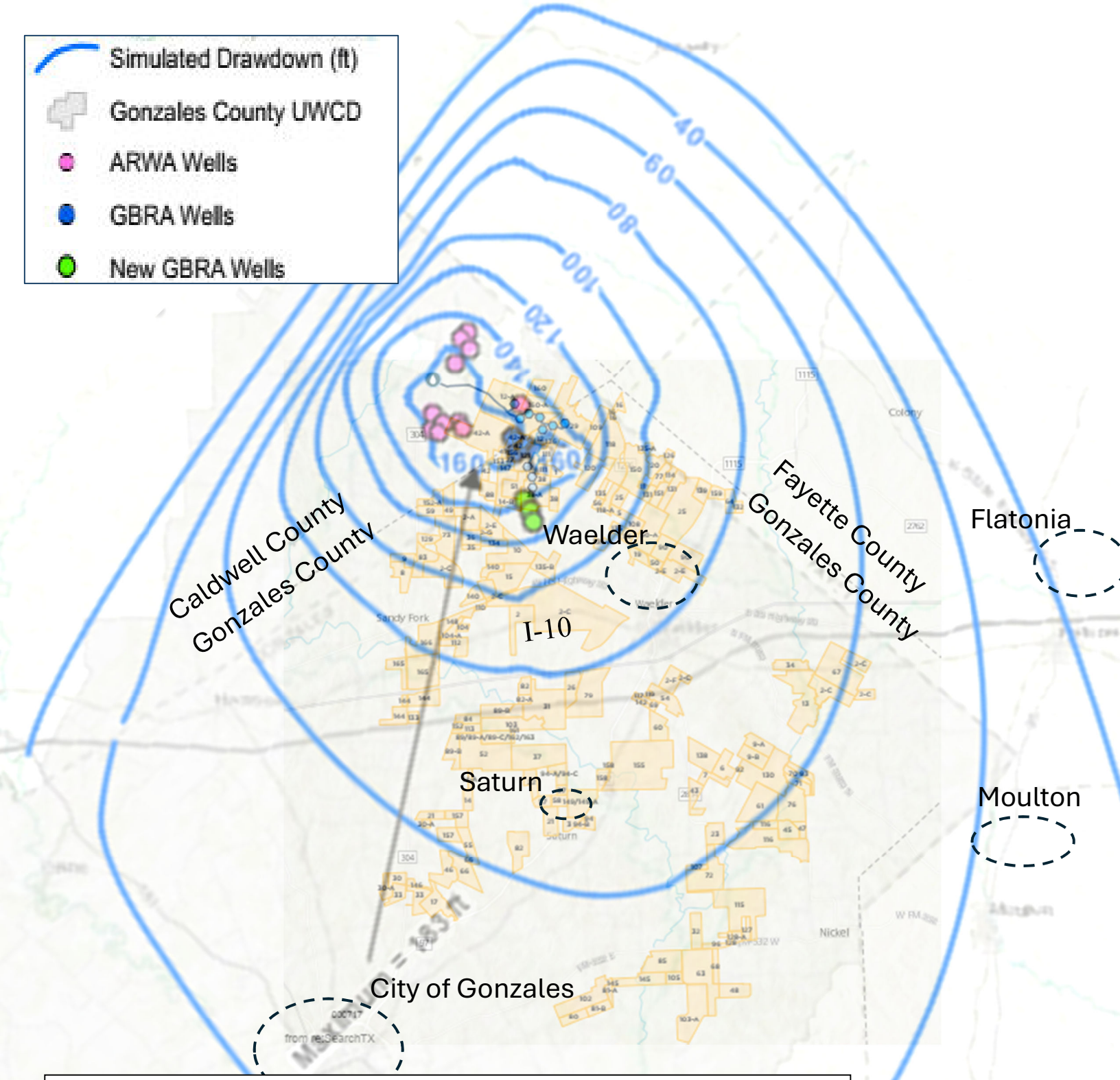
4. The GCUWCD has failed to conduct adequate computer modeling to verify (prior to investing millions of dollars) whether such concentrated pumping can be sustained without causing structural damage to the aquifer, reduction in water quality, subsidence, or mitigation of water wells of local farms and ranches.

5. Compounding this negligence, the Gonzales County UWCD voted 4-1 on May 13, 2025 to renew the SAWS export permit of 11,688 acre-ft/yr, despite SAWS reporting water losses of 2.3 billion gallons in 2023 -- over 5.5X its groundwater water permit volume by Gonzales County UWCD. SAWS has wasted massive volumes of groundwater for years. Such groundwater projects should not be in any water plan (state or region) and why state funds are used to cause so much damage to the rural areas. This permit renewal decision was made by the Gonzales County UWCD board of directors (4-1 vote, 1 board member voting no on the renewal request) despite clear evidence of substantial groundwater waste in San Antonio, where inefficient water use and inadequate conservation measures squander the Carrizo Aquifer's finite resources. SAWS's reliance on Gonzales County groundwater to fuel urban sprawl and unchecked consumption is unsustainable and prioritizes corporate interests over the rights of rural landowners. The GCUWCD's approval of this permit, without addressing the waste or verifying aquifer impacts, is a betrayal of its duty to protect local groundwater resources. Unfortunately, this example of groundwater waste is not just in San Antonio but in many Texas cities. The IPP should not fund groundwater projects that cause damage to the rural areas only to waste the water far away via expensive piping systems.
6. The IPP and TWDB's role in financing ill-conceived groundwater export projects is a an ongoing problem for the people of Gonzales County. Through low-interest State Water Implementation Fund for Texas (SWIFT) loans, the TWDB is using public funds to bankroll the infrastructure—wells, pumps, and pipelines—that drain our aquifer by the likes of GBRA and to supply distant cities like San Antonio. This is a gross misuse of public money, enabling the depletion of a critical resource while rural communities bear the consequences.
7. A January 18, 2025 groundwater computer model study prepared for the Gonzales County UWCD; *DRAFT Summary of Carrizo Aquifer Outcrop DFC Simulations Conducted for the Gonzales County UWCD* by Daniel B. Stephens & Associates - T. Neil Blandford, P.G. and Farag Botros, Ph.D., P.E. shows that the GBRA's Carrizo Groundwater Supply Project is unsustainable. The study highlights that current and planned extraction rates, including GBRA's 15,000 acre-feet per year and similar volumes by partners like the Alliance Regional Water Authority, cause simulated Carrizo aquifer levels to drop below the DFC water level at 5 monitoring wells by 2030, and at 7 monitoring wells by 2040. These aquifer water level drops far exceed the aquifer's recharge capacity and risk long-term depletion and damage to the aquifer. This study also did not show the further damage that would be done by GBRA's requested additional 9,000 acre-ft/yr of pumping in the very same well field area. Despite this evidence, the TWDB continues to irresponsibly provide approximately hundreds of millions in SWIFT loans to GBRA and its partners, funding projects that the best available science deems unsustainable. This should study should be specifically named in the IPP and used as a reference to limit any future groundwater projects in the Gonzales GCD area.

8. Recognizing the actual limits on groundwater availability is essential and necessary -- to do otherwise is irresponsible and fiscally reckless. Groundwater project revenue, intended to repay the project debt, relies on selling groundwater anda sustainable aquifer. However, the Jan 18 2025 Carrizo groundwater study indicates that the aquifer cannot support these extraction levels long-term, meaning the project will not generate the anticipated cash flows to repay the debt. By financing such projects, the TWDB is wasting millions of taxpayer dollars on infrastructure that will fail to deliver promised benefits, leaving Texans to foot the bill for a depleted aquifer and unpayable debts.

9. GBRA Computer Model Drawdown Overlay GBRA Groundwater Lease Map from its Groundwater Permit Request to Gonzales County UWCD (Increasing its present 15,000 acft/yr by 9,000 acft/yr to 24,000 acft/yr)

   Below is a computer modeled drawdown map overlaid on top of a groundwater lease map. The drawdown map and groundwater lease maps was provided by GBRA in its permit application to the Gonzales GCD to show the impact of its intended pumping. Notice the massive drawdowns across unleased properties -- farms and ranches that have not sold their water rights. The IPP should not include such projects as they unfairly impact farms and ranches, and also pump the aquifer at unsustainable rates.



GBRA Pumping Drawdown Lines Overlay on GBRA Leased Properties Map

Drawdown Map and Leased Properties Extracted from GBRA Permit Application and Prefiled Testimony with added notes

Gonzles County is a Major Supplier of Essential Food and Has No Alternative Source of Water.

10. Gonzales County ranks very high as a major agriculture producer out of the 21 counties located in the Region L:

Rank	Category	Quantity	Reference
1/21	Chickens (Layers & Pullets)	9,876,002 99.4% of Region L production	Table 1.10.3 Livestock production
1/21	Chickens (Broilers)	94,447,112 94.9% of Region L production	Table 1.10.3 Livestock production
1/21	Cattle & Calves	143,254 15.9% of Region L production	Table 1.10.3 Livestock production
4/21	Grain Sorghum	315,227 bushels	Table 1-9 Farm Production by County
6/21	Hay	39,522 tons	Table 1-9 Farm Production by County
5/21	Farm and Ranch Land Area	630,773 acres	Table 1-5 Agricultural Resources
5/21	# of Farms and Ranches	1,870	Table 1-5 Agricultural Resources

11. Gonzales County only has 7,651 acres of irrigated land (ranking 8 of 21) which is less than 4% of the total irrigated land acreage of 204,499 acres. So even as a top agricultural producer, Gonzales County farms and ranches manage to be a major agricultural producer with less than the average Region L county (average county has 9,738 acres of irrigated land).

12. It would be a humanitarian disaster to continue to taking groundwater for export from the Gonzales GCD area when the aquifers are the only source of water for this critical agriculture production that feeds so many people in Texas and beyond.

IPP Projects on Water Demand and Population by County Seem to Pick the Winners and Losers By Taking Groundwater From Gonzales County to Supply Cities

13. The IPP TABLE 2-3 projects population growth for the total Region L counties, but shows a decline in population in Gonzales County. It seems the IPP sacrificed Gonzales County by taking its groundwater to supply the cities -- not leaving it sufficient water to grow its population or even to grow food for he increasing Texas

population. These projections do not seem correct -- Gonzales County should be shown to also have an increasing population as necessary to increase agriculture production to feed the growing Texas population.

Table 2-3 Population Projections for Individual Counties (2030 to 2080)

County	2030	2040	2050	2060	2070	2080
Atascosa	53,324	57,374	61,473	64,960	68,952	73,522
Bexar	2,555,076	2,951,404	3,222,978	3,470,641	3,699,975	3,945,495
Caldwell	67,191	83,988	100,497	116,808	134,861	151,345
Calhoun	19,449	18,619	17,599	16,571	15,483	14,332
Comal	259,280	350,779	447,841	584,380	756,273	953,073
DeWitt	19,716	19,687	19,565	19,482	19,394	19,301
Dimmit	8,175	7,818	7,383	6,983	6,560	6,112
Frio	19,512	20,540	21,269	21,643	22,071	22,561
Goliad	6,803	6,648	6,559	6,454	6,334	6,197
Gonzales	19,716	19,697	19,399	19,064	18,710	18,335
Guadalupe	292,903	385,703	462,052	542,643	634,587	739,503
Hays (part)*	336,064	500,806	683,104	877,560	1,051,675	1,240,694
Karnes	15,357	16,052	16,739	17,527	18,429	19,462
Kendall	56,306	70,896	89,665	111,448	136,387	164,940
La Salle	6,723	6,766	6,690	6,529	6,359	6,179

County	2030	2040	2050	2060	2070	2080
Medina	60,936	79,204	83,631	87,079	90,594	92,654
Refugio	6,489	6,243	5,992	5,799	5,595	5,379
Uvalde	24,967	24,478	23,759	22,944	22,080	21,167
Victoria	93,954	96,082	96,608	96,168	95,664	95,087
Wilson	55,858	61,941	67,968	73,304	79,413	86,407
Zavala	9,480	9,232	8,858	8,472	8,064	7,632
Total	**3,987,279**	**4,793,957**	**5,469,629**	**6,176,459**	**6,897,460**	**7,689,377**

* Hays County is split between Region K and Region L; population projections shown above are for Region L. Hays County population totals are 431,531 in 2030; 638,523 in 2040; 876,457 in 2050; 1,146,428 in 2060; 1,406,124 in 2070; and 1,692,131 in 2080.

14. The IPP Table 2-6 shows significant total increase in water demand projections for individual counties and with Gonzales County decreasing from 22,035 acft/yr in 2030 to 16,183 by year 2080. This projection is incorrect and also alarming -- Gonzales County as a major producer of food for the state will need to increase its water consumption to produce more food for a growing population.

Table 2-6 Water Demand Projections for Individual Counties (2030 to 2080)

County	Water Demand Projections (acft/yr)					
	2030	2040	2050	2060	2070	2080
Atascosa	51,026	51,869	52,764	53,584	54,455	50,215
Bexar	396,152	428,883	451,020	468,589	483,258	503,941
Caldwell	10,019	11,820	13,646	15,439	17,439	18,967
Calhoun	67,994	69,880	71,830	73,857	75,954	78,125
Comal	58,372	76,280	96,597	124,502	157,042	193,961
DeWitt	8,151	8,140	8,125	8,118	8,108	6,412
Dimmit	12,973	12,890	12,803	12,720	12,637	6,412
Frio	81,199	81,534	81,776	81,843	81,917	76,007
Goliad	9,836	9,814	9,803	9,791	9,777	9,761
Gonzales	22,035	22,136	22,196	22,250	22,302	16,183
Guadalupe	56,349	69,418	80,346	91,858	104,977	119,161
Hays*	43,189	60,339	78,814	99,478	118,291	139,706
Karnes	7,417	7,574	7,742	7,932	8,153	6,485
Kendall	10,284	13,140	16,545	20,445	24,885	29,962

15. The IPP projects irrigation water demands in Gonzales county to stay flat over time, it should show increase in irrigation water demand to feed a growing population.

Table 2-9 Irrigation Water Demand Projections for Individual Counties (2030 to 2080)

County	Irrigation Water Demand Projections (acft/yr)					
	2030	2040	2050	2060	2070	2080
Atascosa	25,441	25,441	25,441	25,441	25,441	25,441
Bexar	11,751	11,751	11,751	11,751	11,751	11,751
Caldwell	680	680	680	680	680	680
Calhoun	10,460	10,460	10,460	10,460	10,460	10,460
Comal	591	591	591	591	591	591
DeWitt	590	590	590	590	590	590
Dimmit	4,689	4,689	4,689	4,689	4,689	4,689
Frio	70,567	70,567	70,567	70,567	70,567	70,567
Goliad	3,126	3,126	3,126	3,126	3,126	3,126
Gonzales	4,478	4,478	4,478	4,478	4,478	4,478
Guadalupe	942	942	942	942	942	942
Hays*	130	130	130	130	130	130

16. The IPP Table 2-11 shows that livestock water demand is flat between 2030 and 2080, this is not consistent with a growing population that needs more chickens, cattle and other agriculture products. The livestock water demand should increase.

South Central Texas Regional Water Planning Group | Chapter 2: Population and Water Demand Projections

County	Livestock Water Demand Projections (acft/yr)					
	2030	2040	2050	2060	2070	2080
Frio	964	964	964	964	964	964
Goliad	789	789	789	789	789	789
Gonzales	4,138	4,138	4,138	4,138	4,138	4,138
Guadalupe	1,179	1,179	1,179	1,179	1,179	1,179
Hays (part)*	2,828	2,828	2,828	2,828	2,828	2,828
Karnes	954	954	954	954	954	954
Kendall	388	388	388	388	388	388
La Salle	394	394	394	394	394	394
Medina	1,058	1,058	1,058	1,058	1,058	1,058
Refugio	461	461	461	461	461	461
Uvalde	2,049	2,049	2,049	2,049	2,049	2,049
Victoria	979	979	979	979	979	979
Wilson	1,709	1,709	1,709	1,709	1,709	1,709
Zavala	855	855	855	855	855	855
Total	**24,757**	**24,757**	**24,757**	**24,757**	**24,757**	**24,757**

* Hays County is split between Region K and Region L; water demands shown above are for Region L.

17. The IPP Table 2-21 shows large water consumption by Bexar county 52,993 acft/yr and staying flat from 2030 to 2080. This water consumption could be greatly reduced by converting the old inefficient and polluting generation plant to new gas turbine technology without steam condensing cycle. The coal fired plants should be decommissioned -- they have high air emissions and waste large amounts of water that could be used instead for population. The fuel source could be natural gas produced in Texas instead of out-of-state coal.

Table 2-21 Steam-Electric Power Water Demand Projections for Individual Counties (2030 to 2080)

County	Steam-Electric Water Demand Projections (acft/yr)					
	2030	2040	2050	2060	2070	2080
Atascosa	7,962	7,962	7,962	7,962	7,962	7,962
Bexar	52,293	52,293	52,293	52,293	52,293	52,293
Caldwell	0	0	0	0	0	0
Calhoun	37	37	37	37	37	37
Comal	0	0	0	0	0	0

18. The IPP Table 3-6 shows massive increases in groundwater availability in Gonzales County in the Carrizo-Wilcox from 2030 to 2080 -- this does not make any sense. The pumping and export in the Gonzales GCD is already showing massive amounts of well mitigation being required for Carrizo water wells. The pumping rates are in excess of the Carrizo aquifer recharge rates -- the only water groundwater availability could increase if the aquifer were to be growing or experience a major change in its recharge capability along with increased rainfall. The IPP should instead the reality of groundwater availability and not increase it simply to make room for more ill-conceived groundwater projects.

Table 3-6 Groundwater Availabilities by County and Aquifer (acft/yr)

County	Aquifer	Availability Methodology	2030	2040	2050	2060	2070	2080
Atascosa	Carrizo-Wilcox	A	54,397	55,329	56,828	58,406	59,982	59,982
Atascosa	Edwards-BFZ	E	667	667	667	667	667	667
Atascosa	Queen City	A	4,525	4,537	4,495	4,390	4,285	4,285
Atascosa	Sparta	A	1,187	1,043	998	961	932	932
Atascosa	Trinity	C	0	0	0	0	0	0
Atascosa	Yegua-Jackson	C, D	856	856	856	856	856	856
Bexar	Carrizo-Aquifer ASR	J	200,000	200,000	200,000	200,000	200,000	200,000
Bexar	Carrizo-Wilcox	A	68,451	68,928	68,739	67,653	67,849	67,849
Bexar	Edwards-BFZ	E	212,241	212,241	212,241	212,241	212,241	212,241
Bexar	Trinity	A, B, C	24,856	24,856	24,856	24,856	24,856	24,856
Caldwell	Carrizo-Wilcox	A	24,877	32,775	42,514	45,688	49,635	49,594
Caldwell	Edwards-BFZ (Saline)	A, B	1,410	1,410	1,410	1,410	1,410	1,410
Caldwell	Queen City	A	4,829	4,557	4,545	4,545	3,977	3,977
Caldwell	San Marcos River Alluvium	I	271	271	271	271	271	271
Caldwell	Trinity	A, B	10	10	10	10	10	10
Calhoun	Gulf Coast	A	7,611	7,611	7,611	7,611	7,611	7,611
Comal	Edwards-BFZ	E	13,728	13,728	13,728	13,728	13,728	13,728
Comal	Trinity	A, B	43,088	43,088	43,088	43,088	43,088	43,088
DeWitt	Carrizo-Wilcox	C	0	0	0	0	0	0
DeWitt	Gulf Coast	A	17,958	17,912	17,827	17,806	17,784	17,772
Dimmit	Carrizo-Wilcox	A	3,885	3,895	3,885	3,885	3,885	3,885
Frio	Carrizo-Wilcox	A	86,995	85,143	82,950	81,018	79,131	79,131
Frio	Edwards-BFZ	G	23,213	23,213	23,213	23,213	23,213	23,213
Frio	Queen City	A	4,533	4,380	4,231	4,066	3,927	3,927
Frio	Sparta	A	623	603	576	557	534	534
Frio	Yegua-Jackson	C, D	0	0	0	0	0	0
Goliad	Gulf Coast	A	6,254	6,436	6,615	6,791	6,972	6,972
Gonzales	Carrizo-Wilcox	A	76,265	90,788	102,373	102,747	103,707	96,161
Gonzales	Gulf Coast	C	0	0	0	0	0	0

19. IPP table 4-2 shows zeros for Gonzales County, this is confusing.

Table 4-2 Identified Water Needs for Individual Water User Groups (acft/yr)

No.	Water User Group	2030	2040	2050	2060	2070	2080
1	3009 Water	0	0	0	0	0	0

No.	Water User Group	2030	2040	2050	2060	2070	2080
27	County-Other, Calhoun	0	0	0	0	0	0
28	County-Other, Comal	79	175	1,492	8,120	12,171	17,204
29	County-Other, DeWitt	0	0	0	0	0	0
30	County-Other, Dimmit	0	0	0	0	0	0
31	County-Other, Frio	0	0	0	0	0	0
32	County-Other, Goliad	0	0	0	0	0	0
33	County-Other, Gonzales	0	0	0	0	0	0

20. IPP Section on Social and Economic Impacts of Not Meeting Identified Water needs to be expanded to include the massive social and economic damage that is now underway in the rural areas that are experiencing massive groundwater pumping and export. The damage to family farms and ranches and rural towns that have no alternative water source, and the loss of food production -- that is not shown in the IPP but should have a detailed evaluation and be included.

6.2 Social and Economic Impacts of Not Meeting Identified Water Needs

Identified water needs are potential water supply shortages based on the difference between projected water demands and existing water supplies. Identified water needs are presented in Chapter 4 of the 2026 SCTRWP. Title 31 of the TAC §357.4(a) requires that the social and economic impacts of not meeting regional identified water needs be evaluated by the SCTRWPG. The TWDB completes these analyses for RWPGs. The TWDB anticipates providing the socioeconomic impact report in August of 2025 for inclusion in the Final Regional Water Plan. The TWDB will perform the required analyses for the 2026 SCTRWP, and the estimated socioeconomic impacts of not meeting projected water shortages which will be presented in Appendix 6A.

6.3 Descriptions of Unmet Needs

Unmet needs are the portion of an identified water need that is not met by recommended WMSs. In accordance with TWDB rules in 31 TAC §357.50(j), RWPGs must provide a summary of any unmet water needs in the plan and provide adequate justification for any unmet municipal needs included in the final adopted SCTRWP.

The 2026 SCTRWP includes unmet needs for the irrigation, manufacturing, mining, municipal, and steam-electric power use sectors. The 2026 SCTRWP did not recommend WMSs to meet some needs for manufacturing, mining, and steam-electric power, as strategies to meet those needs may be cost-prohibitive or infeasible to implement. The SCTRWPG recommended conservation and drought management WMSs to meet irrigation needs. This is the first SCTRWP to include Non-Municipal Water Conservation and Irrigation Drought Management as Recommended WMSs. The WMSs arose from the SCTRWPG's collective desire to address significant unmet irrigation needs in previous regional water plans. For the 2026 SCTRWP, there are unmet municipal needs for Boerne and County-Other WUGs in Comal, Guadalupe, and Hays Counties.

Table 6-15 summarizes the needs that remain unmet in the 2026 SCTRWP after implementation of Recommended WMSs. WUG supplies and projected demands are entered for each of a WUG's region-county-basin divisions. The unmet needs shown in the WUG Unmet Needs report from the 2027 Regional and State Water Planning Database (DB27) are calculated by first deducting the WUG's split projected demand from the sum of its total existing water supply volumes and all associated Recommended WMS water volumes. If the WUG split has a greater future supply volume than projected demand in any given decade, this amount is considered a surplus volume. In order to display only unmet needs associated with the WUG split, these surplus volumes are shown as zero, and the unmet needs water volumes are shown as absolute values.

21. The IPP 9.3.3 groundwater water source availability increasing is not believable -- it's actually going down.

9.3.3 Source Water Availability

Water sources in the SCTRWPA include groundwater from 16 aquifers and surface water within nine river and coastal basins. Treated effluent from wastewater treatment plants, called reclaimed water or reuse, is also considered as a water supply source. Figure 9-4 shows that groundwater availability has increased during the 2026 planning cycle and remains relatively constant through 2080.

Surface water sources in the SCTRWPA include run-of-river, major reservoirs, and local surface water. Surface water availability accounts for about 15% of water availability in the region and is greater in each decade of the 2026 SCTRWP, compared to the 2021 SCTRWP (Figure 9-5).

The total water availability is notably higher throughout the planning period in the 2026 SCTRWP. Availability ranges from 1,628,668 acft/yr in 2030 to 1,770,607 acft/yr in 2080, averaging 1,721,402 acft/yr in the 2026 SCTRWP. Whereas the average total source availability in the 2021 SCTRWP was 1,484,230 acft/yr (Figure 9-6). Total water availability includes surface water, groundwater, and reuse availabilities. In the 2026 SCTRWP, reuse availability is approximately 100,000 acft/yr higher than in the 2021 SCTRWP, contributing to the difference in total availability between the two plans.

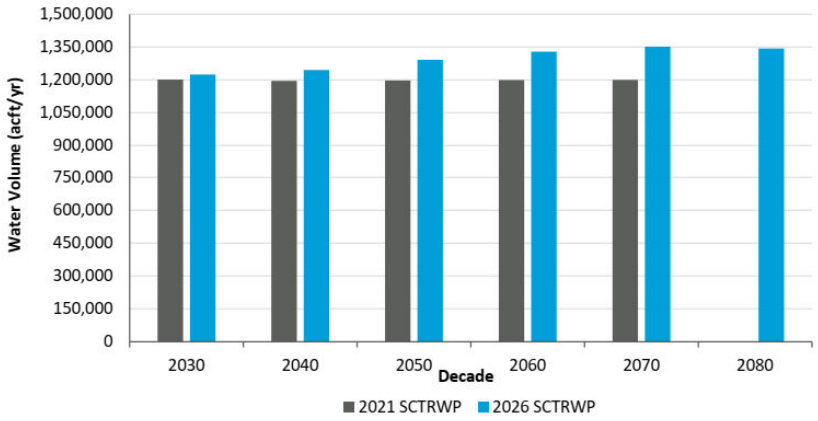


Figure 9-4 Groundwater Availability

22. Any of the groundwater management strategies that request to expand groundwater production as shown in Page 5C-1, Table 6-2 or any other part of the IPP should not be approved. The Gonzales GCD is already overpermitted and exceeding the MAG.

23. No Water Management Strategy for groundwater should be included in the IPP if MAG is already exceeded by permit volume -- this is the case in the Gonzales GCD. Remove the WMS projects that depend on future groundwater projects from the Gonzales GCD whether it be new groundwater production, brackish groundwater production or ASR.

Page 5C-1

Appendix 5C: Implementation Status of Certain WMSs

REGIONAL WATER PLAN WMS/PROJECT DATA							ANTICIPATED/ESTIMATED (OR ACTUAL) IMPLEMENTATION ACTIVITIES AND DATES																
								PERMITTING STATUS (as applicable)							PLANNING, DESIGN, AND CONSTRUCTION STATUS							TOTAL FUNDS EXPENDED TO DATE	Other significant activities completed (summary)
								STATE WATER RIGHT STATUS				FEDERAL 404 PERMIT STATUS (if applicable)		DESALINATION PERMIT STATUS		OTHER KEY PERMITS	GEOTECH/DESIGN	LAND ACQUISITION	CONSTRUCTION				
Figure No.	Water Management Strategy/Project Name	Project Sponsor	WMS Project Sponsor Region	Online Decade	Capital Cost	Anticipated Footprint Acreage (acres)	SPONSOR AUTHORIZATION	Anticipated (or actual) TCEQ application filed (date)	Anticipated (or actual) State Water Right Permit Administratively Complete (date)	Anticipated (or actual) Draft State Water Right Permit Issued (date)	Anticipated (or actual) Date Final State Water Right Permit Issued (date)	Anticipated (or actual) application for permit filed (date)	Anticipated (or actual) permit issuance (date)	Anticipated (or actual) diversion permit issued (date)	Anticipated (or actual) Discharge/ Disposal Permit issued (date)	Summary of other permits and status (summary)	Generally describe the types and amount (or %) of geotechnical/ reconnaissance/ engineering feasibility or other technical, testing, and/or design work etc. performed to date (summary)	Percent Land Acquisition Completed (%)	Anticipated land acquisition completion (date)	Anticipated start of construction (Date)	Percent construction completed (%)	Anticipated construction completion (date)	Rough approximation of the total expenditures, to date, on ALL activities related to project implementation to date (millions of $s)	
							Date(s) that the sponsor took an affirmative vote or other action to make expenditures necessary to construct or file applications for state or federal permits (date(s))																
SC-1	ARWA DPR (Phase 3) Project	Alliance Regional Water Authority (ARWA)	L	2060	$ 339,875,000	188	N/A	N/A	N/A	N/A	N/A	2035	2056	N/A	N/A	TPDES Discharge Permit Amendment for RO concentrate disposal, anticipated issuance in 2055	N/A	A Feasibility Study has been conducted, reflecting 0.5% of the effort.	0%	2056	2056	0%	2060	$0.05M	N/A - None
SC-2	Caldwell Brackish Partnership Project	BURT, County Line SUD, Maxwell SUD	L	2040	$ 292,793,000	~135 (includes pipeline ROW, storage tank(s), WTP, well(s), collection lines, and pump station(s))	Contract for feasibility report was executed on October 20, 2023	N/A	N/A	N/A	N/A	2026	2031	GCD permits anticipated by 2030	N/A	Class I Injection Well permit anticipated by 2030	Feasibility report with preliminary hydrogeology has been completed.	0%	Groundwater leases anticipated by 2027; ROW anticipated by 2031	2030	0%	2033	$0.25M split between the three utilities	Presentations to key stakeholders
SC-3	CRWA Expanded Brackish Carrizo-Wilcox Project	Canyon Regional Water Authority (CRWA)	L	2060	$ 256,310,000	360	No board action has been taken	N/A	N/A	N/A	N/A	2036	2057	N/A	2053	Building, Environmental Assessment, Transportation	Geotechnical=5%; feasibility=2%; design=0%	0%	2056	2058	0%	2060	$0M	As of January 2025, CRWA is pursuing a feasibility study for this project
SC-4	GBRA Lower Basin New Appropriation Project	Guadalupe-Blanco River Authority (GBRA)	L	2040	$ 249,523,000	2,017	No board action has been taken	8/5/2009	10/18/2017	2026	2030	2033	2037	N/A	N/A	N/A	Water rights feasibility study in 2008	0%	2035	2037	0%	2039	$1M	N/A - None
SC-5	GBRA Water2SCURE	Guadalupe-Blanco River Authority (GBRA)	L	2040	$ 6,093,657,000	12,000	No board action has been taken	Vertex - Eight Wells obtained between 1940 to 2000	Vertex - Eight Wells obtained between 1940 to 2000	Vertex - Eight Wells obtained between 1940 to 2000	Vertex - Eight Wells obtained between 1940 to 2000	2027	2030	N/A	N/A	Class I Injection Well permit anticipated by 2028	Finishing the feasibility study in Spring 2025	0%	2028	2028	0%	2033	$1M	N/A - None
SC-6	Gonzales & Guadalupe Brackish Partnership Project	BURT, County Line SUD, Maxwell SUD	L	2040	$ 421,443,000	~125 (includes pipeline ROW, storage tank(s), WTP, well(s), collection lines, and pump station(s))	Contract for feasibility report was executed on October 20, 2023	N/A	N/A	N/A	N/A	2028	2031	GCD permits anticipated by 2030	N/A	Class I Injection Well permit anticipated by 2030	Feasibility report with preliminary hydrogeology has been completed.	0%	Groundwater leases anticipated by 2027; ROW anticipated by 2031	2030	0%	2033	$0.25M split between the three utilities	Presentations to key stakeholders
SC-7	Medina County Regional ASR Project	East Medina County SUD and Yancey WSC	L	2040	$ 318,445,000	85	Medina County took action on Interlocal Agreement and authorized preliminary funding of $32,000 for the Medina County Regional Water Alliance. Funds covered administrative, legal, and technical assistance to complete a pre-feasibility study for ASR.	N/A	N/A	N/A	N/A	2026	2027	N/A	N/A	Class V Injection Well permit anticipated by 2027; Transfer of Edwards Aquifer Authority Permits anticipated in 2030	Feasibility report with preliminary hydrogeology has been completed.	0%	2028	2033	0%	2040	$0.002M	Pre-feasibility report for ASR completed. Monthly meetings underway.
SC-8	NBU Potable Reuse Project	New Braunfels	L	2040	$ 38,220,000	73	N/A - Anticipated in 2030	2030	N/A	N/A	N/A	N/A	N/A	N/A	N/A	TPDES Discharge Permit Amendment for RO concentrate disposal, anticipated issuance in 2030	N/A	Project has been identified in NBU's 2024 WSP	100%	1957	2033	0%	2038	$0M	Project has been identified in NBU's 2024 WSP
SC-9	SAWS Expanded Brackish Groundwater Project	San Antonio Water System (SAWS)	L	2040	$ 510,181,000	361	2014	N/A	N/A	N/A	N/A	To Be Determined (TBD)	TBD	N/A	N/A	Various=Five Class I Injection Well permits obtained between 2006 and 2016	3%. Concept study was completed end of 2018 prepared by B&V which included pipeline routing, requirements, well construction and well locations and integration consequence	0%	2035	2035	0%	2040	$20M	N/A - None
SC-10	SAWS Regional Wilcox Project	San Antonio Water System (SAWS)	L	2055	$ 1,287,722,000	1,587	No action has been taken.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0%	2045	2045	0%	2050	$0M	N/A - None

FOOTNOTE 1: ANY DATE ENTERED THAT IS PRIOR TO ADOPTION OF THE REGIONAL WATER PLAN IS ASSUMED TO BE AN "ACTUAL" DATE

Table 6-2 Carrizo-Wilcox Water Management Strategies

Water Management Strategy	Source County/Counties
Nine (9) Fresh Groundwater Development	Various
Three (3) Brackish Groundwater Development	Various
ARWA Project (Phase 2)	Caldwell
CRWA Brackish Carrizo-Wilcox Project	Guadalupe and Wilson
CRWA Wells Ranch (Phase 3)	Guadalupe
CVLGC Carrizo Project	Wilson
GBRA WaterSECURE	Gonzales
SAWS Expanded Local Carrizo Project	Bexar
SAWS Expanded Brackish Wilcox Project	Wilson
SAWS Regional Wilcox Project	Wilson
SSLGC Expanded Brackish Wilcox Project	Gonzales
SSLGC Expanded Carrizo Project	Guadalupe

No.	Water Management Strategy	Potential Habitat Impact Score
14	ARWA Carrizo-Wilcox Project (Phase 2)	2
15	ARWA DPR Project (Phase 3)	2
16	CRWA Expanded Brackish Carrizo-Wilcox Project	2
17	CRWA Siesta Project	1
18	CRWA Wells Ranch (Phase 3) Project	1
19	CVLGC Carrizo Project	2
20	GBRA Lower Basin New Appropriation	2
21	GBRA WaterSECURE	2
22	Medina County Regional ASR	2
23	NBU ASR	2
24	NBU Trinity Well Field Expansion	2
25	SAWS Expanded Local Carrizo Project	1
26	SAWS Expanded Brackish Groundwater Project	1
27	SAWS Regional Wilcox Project	2
28	SSLGC Expanded Brackish Wilcox Project	2
29	SSLGC Expanded Carrizo Project	2
30	Victoria ASR	1
31	Victoria Groundwater-Surface Water Exchange	1
32	Weather Modification	N/A

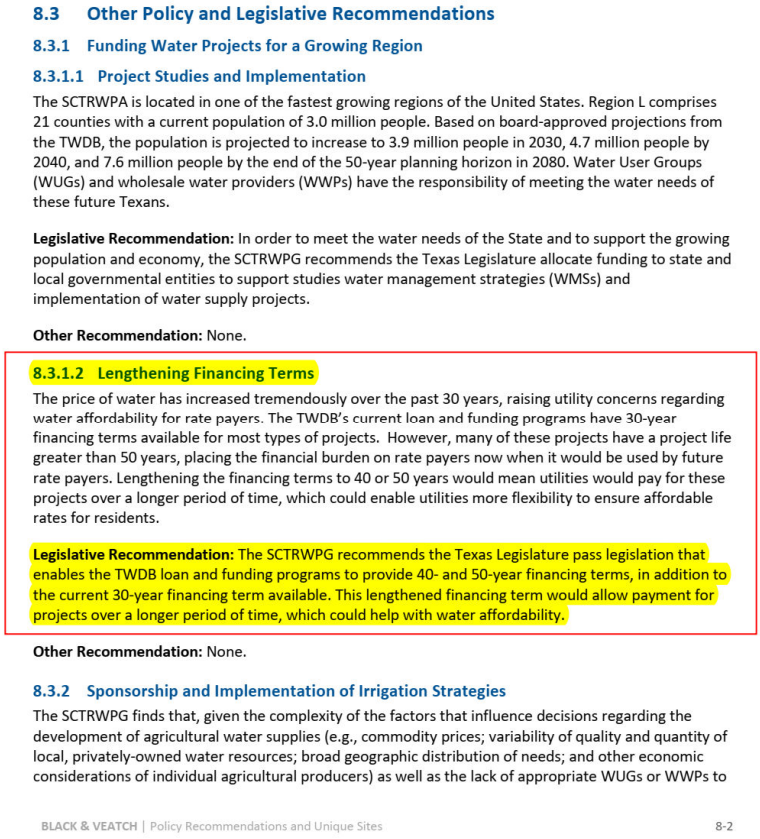
6.1.4.2.3 Water Quality and Aquatic Habitats

Potential impacts to water quality and aquatic habitats were assessed in two ways: (1) direct impacts to streams during construction of pipeline crossings and/or intake or outfall structures; and (2) potential impacts to stream flow regimes.

For construction impacts, the general level of potential project impacts, both temporary and permanent, was assigned a rating as follows:

- 0 - No stream impacts;
- 1 - Low to moderate impacts; or
- 2 - Moderate to high impacts.

Longer finance terms can't work with heavier groundwater pumping due to aquifer volumes declining faster, making repayment impossible at some stage during the term.



8.3 Other Policy and Legislative Recommendations

8.3.1 Funding Water Projects for a Growing Region

8.3.1.1 Project Studies and Implementation

The SCTRWPA is located in one of the fastest growing regions of the United States. Region L comprises 21 counties with a current population of 3.0 million people. Based on board-approved projections from the TWDB, the population is projected to increase to 3.9 million people in 2030, 4.7 million people by 2040, and 7.6 million people by the end of the 50-year planning horizon in 2080. Water User Groups (WUGs) and wholesale water providers (WWPs) have the responsibility of meeting the water needs of these future Texans.

Legislative Recommendation: In order to meet the water needs of the State and to support the growing population and economy, the SCTRWPG recommends the Texas Legislature allocate funding to state and local governmental entities to support studies water management strategies (WMSs) and implementation of water supply projects.

Other Recommendation: None.

8.3.1.2 Lengthening Financing Terms

The price of water has increased tremendously over the past 30 years, raising utility concerns regarding water affordability for rate payers. The TWDB's current loan and funding programs have 30-year financing terms available for most types of projects. However, many of these projects have a project life greater than 50 years, placing the financial burden on rate payers now when it would be used by future rate payers. Lengthening the financing terms to 40 or 50 years would mean utilities would pay for these projects over a longer period of time, which could enable utilities more flexibility to ensure affordable rates for residents.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature pass legislation that enables the TWDB loan and funding programs to provide 40- and 50-year financing terms, in addition to the current 30-year financing term available. This lengthened financing term would allow payment for projects over a longer period of time, which could help with water affordability.

Other Recommendation: None.

8.3.2 Sponsorship and Implementation of Irrigation Strategies

The SCTRWPG finds that, given the complexity of the factors that influence decisions regarding the development of agricultural water supplies (e.g., commodity prices; variability of quality and quantity of local, privately-owned water resources; broad geographic distribution of needs; and other economic considerations of individual agricultural producers) as well as the lack of appropriate WUGs or WWPs to

BLACK & VEATCH | Policy Recommendations and Unique Sites 8-2

24. I oppose the proposed aquifer storage and recovery (ASR) projects in the Carrizo Aquifer, which the TWDB has supported through studies like the 2017 Carrizo-Wilcox Aquifer Characterization for Eastern Gonzales and parts of Caldwell and Guadalupe Counties. This project, part of GBRA's Mid-Basin Water Supply Project (MBWSP), aims to inject water into the Carrizo Aquifer for later recovery. This experimental scheme poses significant risks to the aquifer's integrity and water quality.

25. The IPP fails to fully address the potential for injected water to alter the aquifer's chemistry or mobilize contaminants and the risks of aquifer damage from ASR. Introducing surface water into a confined aquifer could render groundwater unusable for local landowners. Moreover, the project's reliance on excess river flows assumes availability that may not exist during droughts, rendering it unreliable. The TWDB's funding of this study and potential future financing of the ASR project represent another misuse of public funds, prioritizing speculative ventures over proven conservation and sustainable management.

26. <u>The IPP and TWDB must take immediate action to address these critical issues:</u>

    a. Suspend Financing for Unsustainable Projects: Halt SWIFT loans for groundwater export projects within the Gonzales County UWCD boundary -- including the GBRA Carrizo Groundwater Supply Project and the proposed GBRA ASR project.

    b. Require Robust Aquifer Modeling: Mandate that TWDB and GCUWCD conduct comprehensive computer modeling to assess the impacts of concentrated pumping, incorporating findings from the January 18, 2025, study. Deny renewal requests of export permits and new export permit applications for off takers that waste groundwater.

    c. Protect Property Rights: Cease funding projects that result in the unconstitutional and malicious taking of groundwater from non-leasing landowners, and require compensation for affected property owners.

    d. Enhance Science and Transparency: Base funding decisions on the best available science, and enhance public input processes to address landowner concerns.

    e. Hold TWDB Personnel and Consultants Accountable: TWDB personnel and consultants who enable the implementation of groundwater projects that prove unsustainable, damage the aquifer, cause subsidence, reduce water quality, or result in the malicious taking of groundwater from family farms and ranches without compensation must be held responsible. The state of Texas and its water-related entities should pay reparations to the impacted family farms and ranches, and rural communities in Gonzales County for the economic and environmental damages caused by their negligence or complicity.

f. The Carrizo Aquifer is not an infinite resource -- the current path of over-extraction, wasteful urban use, malicious unconstitutional takings, and unaccountable decision-making is unsustainable and unjust. As a landowner whose property is directly impacted by aquifer drawdown—potentially 100 feet or more beneath my land—I demand that the TWDB stop financing these corrupt projects, hold its personnel and consultants accountable, and protect our groundwater for all Texans, not just wasteful urban centers. The people's money should not be used to destroy our aquifer, violate our property rights, or harm our communities without consequence.

Thank you for considering this comment. I request a written response outlining how the TWDB will address these concerns, halt unconstitutional and malicious takings, ensure accountability for damages, and promote responsible stewardship of the Carrizo Aquifer.

Attachment F. Public Comment from Francis Comeaux | May 27, 2025

The following comments are presented regarding the 2026 Region L Draft Initially Prepared Plan.

1. Executive Summary – List of Voting Members. I recommend Region L
    a. Identify the entities these voting members represent.
    b. Identify why each County Commissioners court is not represented.
2. Executive Summary – Add a summary table as follows:

Region L (all in ac-ft/yr)	Table ES-2 Total Water Demand	Table ES-3 Total Water Available	Total ES-4 Total Water Needs	**Math = ES-3 Available minus ES-2 Demand i.e. SURPLUS**	Table ES-6 Drought Management
2030	1,134,971	1,628,668	185,132	**493,697**	39,542
2040	1,228,646	1,673,189	220,629	**444,543**	46,302

3. Executive Summary – Following up on the above new summary table, since Available water (Table ES-3) is greater than Water Demand (Table ES-2) the Region has a SURPLUS, i.e., more water than demanded in the Region as a whole. This indicates that the region has enough. Since many users are on water restrictions this indicates that the Region L distribution does not choose to or is not capable to distribute the excess to the needy areas.
    a. I recommend that Region L, which does add piping systems, include piping and interconnections among the areas of excess to the areas of need.
4. Chapter 3 – Water Supplies for Canyon Lake Water Service (Texas Water Company)
    a. Table 3-9 (p. 3-25) shows existing water supplies
    b. Draft Appendix 3A (p.3A-22) presents Water User Group (WUG) existing water supplies

CLWSC (TWC)	**2030**	**2040**
Table 3-9 (p. 3-25)	15,493	15,664
Appendix 3A (p.3A-22)	12,721	12,856

    c. For Reference, here is a summary of App. 3A (p. 3A-22)

CLWS (TWC)	2030	2040
Canyon Lake Reservoir	6,239	6,238
Direct Reuse	78	215
Trinity Aquifer (Comal Co.)	6,404	6,404
TOTAL	**12,721**	**12,856**

    d. Please explain the difference in these numbers and why there is a difference.

5. GBRA WaterSECURE is a project in development expected to Support Canyon Lake Waster Services (Texas Water Company) per Table 5.1-2, page 5.1-5.
    a. It is the only new source of water to Canyon Lake Water Services (Texas Water Company).
    b. It is expected to produce 120,000 ac-ft/yr, have 258 miles of pipeline, and per Table 5.2.21-1 has a target date of 2040.
    c. Please identify how many ac-ft/yr of this GBRA WaterSecure project is allocated to Canyon Lake Waster Services (Texas Water Company) and how these allotments are governed.
6. Chapter 5 - Table 5.1-2 provides information on the User Groups / Providers, Water Management Strategies, and relevant strategy sections.
    a. I recommend a column titled ac-ft/yr to present how much water each particular strategy provides to each User Group / Provider.
    b. For example, GBRAWaterSecure will provide @ 120,000 ac-ft/yr to various entities. How much will GBRAWaterSecure provide to entity 15, Canyon Lake Water Service (Texas Water Company).
7. Recommended Table 9-1 enhancement (this enhancement may be helpful elsewhere in the report).
    a. Table 9-1 Compares Assumptions in the 2021 SCTRWP and the 2026 SCTRWP with three (3) columns with heading titles as follows: Assumption Category, 2021 SCTRWP Assumptions, and 2026 SCTRWP Assumptions.
    b. There are 17 rows of assumptions.
    c. I recommend replacing the narratives in the 2026 SCTRWP column for rows 2, 4, 5, 6, 7. 9, 10, 11, & 14 with the simple “no change” as the narratives are identical between the assumptions in 2021 and in 2026. In other words, 9 of 17 are unchanged but visually it looks like all have changed.
    d. I recommend additional assumptions be reviewed for clarifying the 2026 narratives, such as in Row 1 explain not only that the models changed but also why and the significance of the changes in the 2026 models from the 2021 models.

Thank you for considering these comments and recommendations.

(Mr.) Francis Comeaux
1191 Diretto Drive
New Braunfels, Tx 78132
(979) 240-8586

Attachment G. Public Comment from Milan J. Michalec | July 20, 2025

DATE: July 20, 2025

TO: Administrative Agent for Region L, Attn: Caye Castillo
San Antonio River Authority
100 E Guenther St
San Antonio, Texas
78204

SUBJECT: Public Comments on Region L 2026 Initially Prepared Plan (IPP)

Dear Ms. Castillo,

My comments are as follows:

Ref: South Central Texas Regional Water Planning Group | Subchapter 5.1: Potentially Feasible Water Management Strategies, 5.1.3 Potential for Aquifer Storage and Recovery Projects to Meet Significant Identified Needs, Subparagraph 1, States: "Boerne: The 2026 SCTRWP includes the GBRA WaterSECURE Project, which includes an ASR component. Boerne will purchase water from GBRA's WaterSECURE Project. An evaluation of the GBRA WaterSECURE Project can be found in Section 5.2.21."

Comment 1: At the City of Boerne, City Council Meeting on July 8, 2025, Council members were given a briefing on the GBRA WaterSECURE Project but did not take any action to formally participate in the project. Recommendation: As this is a policy decision that clearly has not been made I recommend the statement: "Boerne will purchase water from GBRA's WaterSECURE Project" be changed from "will purchase" to "may purchase".

Comment 2: Three subsequent subparagraphs on the next page (5.1-19) include a similar statement of commitment on behalf of Canyon Lake Water Service Company (Texas Water Company), County Line SUD and Goforth SUD. Recommendation: Review correspondence from these entities that would include a written statement of participation by the appropriate level of authority. Similar to Comment 1, until the written decisions to purchase water from GBRA's WaterSECURE Project for Canyon Lake Water Service Company (Texas Water Company), County Line SUD and Goforth SUD are obtained I recommend the language be changed from "will purchase" to "may purchase".

Respectfully,

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HANDOUT B

South Central Texas Regional Water Planning Group
August 28, 2025, Meeting
HANDOUT B: Proposed SCTRWPG Responses to TWDB Comments

TWDB Comment Level	TWDB Comment No.	TWDB Comment	Proposed SCTRWPG Response	Status of Response Approval
1	1	Chapter 2.3.4.2, Table 2-11. The livestock water demand for the Region L/Hays County split is listed in Table 2-11 as 2,828 acre-feet/year. The TWDB Board- adopted livestock water demand for this water user group (WUG) split is 2,712 acre- feet/year. This incorrect number, in turn, affects the total water demand which should be listed as 24,641 acre-feet/year. Likewise in Table 2-12, the Board-adopted Colorado river basin splits for the livestock water demand in Region L is incorrect, causing the total in the table to be incorrect. Please revise these water demand projections presented in these tables so they are consistent with Board-adopted projections in the final, adopted regional water plan. [31 Texas Administrative Code (TAC) § 357.31(a); 31 TAC § 357.31(e)(1)]	The livestock water demands in Table 2-12 have been corrected.	Approved by TWDB
1	2	Section 3.3.1.3. The plan discusses local surface water supplies used for livestock but does not specify whether the local water supplies are firm. Please acknowledge whether the local supplies are firm or not in the final, adopted regional water plan. [Contract Exhibit C, Section 2.3.6]	Section 3.3.1.3, regarding the firm yield of local surface water supplies, has been revised as follows: "Local surface water supplies used for livestock are considered firm, based on historical reliability and the assumption that ranchers will manage livestock populations in accordance with the availability of these dependable sources."	Approved by TWDB
1	3	Section 4.2 and the state water planning database (DB27). Tables 4-1, 4-2, 4-3, and 4-4, Table 4-4 and 4-11 appear to present information on projected water needs that is inconsistent with data reported in DB27 for decades 2040-2080. For example, the total needs reported in Tables 4-1, 4-2, 4-3, and 4-4, are inconsistent with the total needs for the region in DB27; the municipal needs total is inconsistent in Table 4-4; and the Comal County needs total is inconsistent in Table 4-11. Please review all data in the tables and revise as necessary to present data consistent with DB27 in the final, adopted regional water plan. [31 TAC § 357.33(c)]	Tables in Chapter 4 have been revised to be consistent with data reported in DB27 for Canyon Lake Water Service (Texas Water Compan) in Comal County. Revised tables include Tables 4-1, 4-2, 4-3, 4-4, 4-11, 4-13, and 4-14. Associated figures have also been updated.	Approved by TWDB

TWDB Comment Level	TWDB Comment No.	TWDB Comment	Proposed SCTRWPG Response	Status of Response Approval
1	4	Chapter 5 and DB27. Unit costs reported in DB27 appear high for the following strategies: Municipal Water Conservation - Water Use Reduction - Kendall County WCID 1 ($43,305), and Municipal Water Conservation - Water Loss Mitigation - Sunko WSC ($207,786). Please confirm that the calculated unit costs are correct in DB27, or correct as appropriate, and that costs were considered in strategy recommendations in the final, adopted regional water plan. [31 TAC § 357.34(e)(2)]	The Municipal Water Conservation – Water Use Reduction and Water Loss Mitigation strategies were revised as a result of TWDB Level 1, Comment 11, the unit costs in DB27 have been updated accordingly. The calculated unit costs reflect full implementation of capital improvements associated with each strategy. The revised calculated unit costs for the WUGs identified in the TWDB's comment have been revised, as follows: Municipal Water Conservation – Water Use Reduction – Kendall County WCID 1 ($305/acft) Municipal Water Conservation – Water Loss Mitigation – Sunko WSC ($30,163/acft) The SCTRWPG strongly supports water conservation and the considered costs when recommending strategies for the 2026 RWP. The Municipal Water Conservation WMS is a Recommended strategy for every municipal WUG in the SCTRWPA with a 2030 GPCD greater than 80. It is important to note that unit costs are calculated by dividing total strategy cost by the potential yield. Therefore, strategies with relatively low water yield and high capital costs will result in higher unit costs. This relationship was considered during the evaluation and recommendation of water management strategies.	Approved by TWDB
1	5	Section 5.2. The plan does not appear to include a quantitative measure for assessing reliability of water supplies for water management strategy (WMS) evaluations. The matrix provided in Table 5.2-2 provides a qualitative rating of low to high. Additional reliability considerations presented in Table 5.2-3 only appear to be based on a quantified measure for the aquifer storage and recovery (ASR) strategies. Please provide a quantitative basis for reliability used in the evaluations of all water management strategies in the final, adopted regional water plan— ensuring that any recommended strategies provide a firm water supply throughout drought of record conditions. [31 TAC § 357.34(e)(3)(A)]	Section 5.2 regarding Reliability has been revised, as follows: "Reliability is an assessment of the availability of the specified water quantity to the user over time. Quantifiably, the water volumes presented in this plan for recommended strategies are firm supplies that are 100 percent reliable during Drought of Record conditions, per TWDB planning guidelines. Considering other factors that can affect long-term availability, such as potential future modeling or rule changes that are beyond the scope of this planning effort, the SCTRWPG developed additional qualified reliability reporting in the form of a reliability evaluation matrix (Table 5.2 2) that was used in conjunction with other implementation considerations to also qualify the reliability of WMSs shown in Table 5.2 3." Additionally, the qualitative reliability assessments for ASR projects in Table 5.2-3 have been revised, as follows: "Reliability is considered high. Successful ASR projects typically require extensive site-specific analyses, feasibility studies, and cycle testing prior to full implementation."	Approved by TWDB

South Central Texas Regional Water Planning Group
August 28, 2025, Meeting
HANDOUT B: Proposed SCTRWPG Responses to TWDB Comments

TWDB Comment Level	TWDB Comment No.	TWDB Comment	Proposed SCTRWPG Response	Status of Response Approval
1	6	Section 5.1.5 and Appendix 5C. The plan in Appendix 5C appropriately includes the implementation status required by 31 Texas Administrative Code § 357.34(g) for the San Antonio Water System (SAWS) Regional Wilcox Project, however this project does not appear to be included in the applicable strategies listed in Section 5.1.5. Please add this strategy to the list in Section 5.1.5 in the final, adopted regional water plan. [31 TAC § 357.34(g)]	Section 5.1.5 regarding the implementation status of certain WMSs has been updated to be consistent with Appendix 5C, which includes the SAWS Regional Wilcox Project.	Approved by TWDB
1	7	Section 5.2.30. It is unclear in the plan whether strategy water supply volumes represented for the Victoria ASR have been reduced to reflect the expected percent of actual water supply recovery from the aquifer. Please clearly state the expected percent of recovery for this project and, as appropriate, the lesser net volumes of the expected water supply yields for this strategy. If the strategy supply volumes do not reflect the lesser, expected percent of recovery, please modify the supply volume as appropriate in the final, adopted regional water plan and in DB27. [Contract Exhibit C, Section 2.5.2.4]	TBD	TBD - In Progress
1	8	Section 5.2.22 and Section 5.2.23. For ASR strategies (e.g., Medina County Regional ASR Project and New Braunfels Utility (NBU) ASR Project) that plan on storage in saline aquifers, please reflect expected losses as greater than zero resulting in a percent of recovery less than 100 percent or provide an explanation for how these sites could possibly result in 100 percent recovery. For example, an ASR recovery of as low as 70 percent within saline formations would not be unexpected. [31 TAC § 357.34(e)(3)(A); Contract Exhibit C, Section 2.5.2.4]	TBD	TBD - In Progress
1	9	Section 5.2.25. It is unclear from the evaluation of the SAWS Expanded Local Carrizo Project, whether the 12 new wells are groundwater production wells or ASR wells. If they are ASR wells, please include the anticipated recovery efficiency percentage and adjusted available supply yield, as appropriate, in the final, adopted regional water plan and DB27. [Contract Exhibit C, Section 2.5.2.4]	Section 5.2.25 regarding the SAWS Expanded Local Carrizo Project has been revised to clarify that the 12 new wells will primarily be used for groundwater production, as follows: <u>5.2.25.1 Description of Water Management Strategy</u> SAWS currently produces approximately 9,900 acft/yr of groundwater from the Carrizo Aquifer from wells located at the SAWS H2Oaks Center in southern Bexar County. This WMS includes expansion of the current well field to produce an additional 21,000 acft/yr of water from 12 new wells in the Carrizo-Wilcox Aquifer in Bexar County (Figure 5.2.25-1). The well fields would be located northeast of the H2Oaks Center, where the groundwater will be treated for delivery through SAWS' distribution system. The project will be constructed in three phases, all of which are anticipated to be implemented by 2030. The wells will primarily be used for production of native groundwater from the Carrizo-Wilcox Aquifer. Given the proximity of the Expanded Local Carrizo Project's well field to the existing SAWS ASR system, SAWS is exploring the feasibility of having the wells serve a secondary function to perform recharge and recovery of ASR water.	Approved by TWDB

TWDB Comment Level	TWDB Comment No.	TWDB Comment	Proposed SCTRWPG Response	Status of Response Approval
1	10	Section 5.2.1.1.1 and DB27. Based on data entered into DB27, the demand reduction volumes appear to be equivalent to over 40 percent of total demands for the following municipal water user groups in at least one planning decade: 3009 Water, Air Force Village II Inc., Alamo Heights, Aqua WSC, Carrizo Springs, Clear Water Estates Water System, Concan WSC, Cotulla, Cuero, El Oso WSC, Fair Oaks Ranch, Fort Sam Houston, Garden Ridge, Gonzales, Gonzales County WSC, Hondo, Kenedy, KT Water Development, Loma Alta Chula Vista Water System, New Braunfels, San Marcos, Shavano Park, Three Oaks WSC, Uvalde, Victoria, Ville Dalsace Water Supply, and Zavala County WCID 1. As these volumes appear high, please add discussion to support the magnitude of the demand reduction volume for these water user groups in the final, adopted regional water plan. [31 TAC § 357.34(j)(2)(B)]	Section 5.2.1 has been revised to add discussion to support the magnitude of the demand reduction volumes for the WUGs referenced in TWDB Comment No. 10, as follows: "Many WUGs have high baseline GPCDs (220+). Because the municipal conservation strategy applies a higher reduction for WUGs with GPCD above 140, and because these entities remain above that threshold throughout most of or all of the planning horizon, the cumulative savings are proportionally higher. Furthermore, a separate Drought Management WMS (Refer to Section 5.2.3) applies additional demand reduction volumes associated with temporary demand reductions during drought conditions. While these demand reductions represent a significant decrease from current usage levels, they are considered achievable and are aligned with state water planning goals."	Approved by TWDB
1	11	Section 5.2.1.2.2, Table 5.2.1.7, Table 5.2.1.7, and DB27. Municipal water use reduction and water loss mitigation strategies are recommended separately, however the plan states that advanced metering infrastructure (AMI) is included in water use reduction strategies. For regional water planning purposes, AMI is to be included under water loss mitigation strategies. Please revise the municipal conservation description, yields, cost information, and reconcile updates in DB27 as appropriate to correctly group AMI with water loss mitigation in the final, adopted regional water plan. [Contract Scope of Work, Task 5C; Contract Exhibit C, Section 2.5.2.5; Contract Exhibit D, Appendix 17]	The WMS Municipal Conservation - Water Loss Mitigation has been updated to include both AMI and Leak Detection and Repair. The WMS Municipal Conservation - Water Use Reduction has been updated to include non-capital cost conservation improvements. The descriptions, yields, cost information, and DB27 information has been updated to reflect these changes in Section 5.2.1.	Approved by TWDB
1	12	Section 5.2.9 and Section 5.2.15. The plan does not appear to describe how population and water demands were used to determine the availability of supplies from the recommended reuse strategies. Please provide additional details on how the region estimated availability of future reuse—including how projected population and water demands were considered in the determination—in the final, adopted regional water plan. [Contract Exhibit C, Section 2.5.2.3]	Section 5.2.9.2, regarding the evaluation of submitted water reuse strategies, has been revised to include additional language: "Population and demand projections show increase over time for all WUGs requesting reuse strategies, so this amount of water should continue to be available." Section 5.2.15.2, regarding the available yield for ARWA DPR Project (Phase 3), has been revised to include additional language: "Population and demand projections show increase over time for ARWA customers, so this amount of water should continue to be available."	Approved by TWDB
1	13	Section 5.2.2.1, Table 5.2.2-1, Table 5.2.2-2, and DB27. The water savings and costs for irrigation conservation strategies are presented by irrigation WUG in Table 5.2.2-1 and 5.2.2-2, however these individual projects have been entered as one project within DB27 (WMSProjectId 5801). Projects may not be aggregated and presented as a single capital cost representing multiple projects that would be located in multiple locations and funded by separate sponsors or implemented separately. Please work with TWDB's Water Supply and Strategy Analysis team to revise the irrigation conservation project data in DB27 to present separate strategies and projects for the irrigation WUGs in the final, adopted regional water plan. [Contract Exhibit C, Section 2.5.2.12]	The SCTRWPG coordinated with TWDB to revise DB27 in order to separate the irrigation conservation strategies into individual projects for each Irrigation WUG. No change has been made to the final plan report.	Approved by TWDB

TWDB Comment Level	TWDB Comment No.	TWDB Comment	Proposed SCTRWPG Response	Status of Response Approval
1	14	Section 5.2.21 and DB27. The capital costs for the Guadalupe-Blanco River Authority (GBRA) WaterSECURE strategy projects appear to include costs for separate projects that have been entered into DB27 as one, aggregated recommended project, including a new off-channel reservoir, ASR wellfield, and brackish groundwater wellfield. Planning groups may not, in general, aggregate multiple facilities into a single cost estimate. Additionally, for state water plan reporting purposes, the following major projects with associated facilities must at minimum be costed separately in the final, adopted regional water plan and entered in DB27 as unique projects: 1) new major reservoir infrastructure, 2) ASR facility, and 3) brackish desalination well field infrastructure. The projects will then be linked to the appropriate supply under a main GBRA WaterSECURE WMS grouping and will not impact GBRA funding options with TWDB. Please work with TWDB's Water Supply and Strategy Analysis team to address these data issues, including flagging this WMS as a conjunctive use strategy, if appropriate. [Contract Exhibit C, Section 2.5.2.12; 31 TAC § 357.34(g)]	As indicated in Section 5.2.21, the WaterSECURE WMS is a unified program that is anticipated to be implemented and funded at the same time and not in phases. The SCTRWPG coordinated with TWDB to show the major components separately within DB27 to be consistent with the TWDB reporting practices; however, this change is for reporting purposes only and the total costs have not changed.	TBD - In Progress
1	15	Sections 5.2.20 and 5.2.21. The evaluations for the GBRA Lower Basin New Appropriation and GBRA WaterSECURE strategies do not appear to separately present the estimated mitigation land areas and associated estimates of the acquisition cost. Please provide an estimated separate acreage and cost related to land acquisition (or range) for both the reservoir footprint and mitigation within the appropriate section of the plan or costing sheet, in the final, adopted regional water plan. [Contract Exhibit C, Section 2.5.2.12]	Sections 5.2.20 and 5.2.21 for the GBRA Lower Basin New Appropriation WMS and GBRA Water Secure WMS, respectively, have been revised to include additional language that includes land areas and associated acquisition costs, as follows: • GBRA Lower Basin New Appropriation WMS Land acquisition includes 2,000 acres for the reservoir footprint at an assumed cost of $11 million. Pipeline and pump station land acquisition assumes 37.2 acres will be needed at a cost of $204,000. • GBRA Water Secure WMS The costs developed for GBRA WaterSECURE are based on external costs provided by GBRA. Land acquisition includes 2,562 acres for the reservoir footprint at an assumed cost of $13.0 million, and an additional 438 acres of mitigation area surrounding the reservoir at an assumed cost of $2.2 million. Pipeline and other facilities land acquisition assumes 5,217 acres will be needed at a cost of $186.7 million.	TBD - In Progress

TWDB Comment Level	TWDB Comment No.	TWDB Comment	Proposed SCTRWPG Response	Status of Response Approval
1	16	Chapter 5. The plan includes water treatment plant (WTP) expansion and other strategy types that include a WTP expansion as a stated project component. Any portion of strategies or costs that are associated with replacing portions of existing supply, including WTP capacity, are prohibited from being included in the regional water plans. The types of facilities and associated capital or other costs that may be included in a regional water plan must be directly associated with development of additional supplies from new water sources or additional supplies from more efficient use of existing supplies, or volumetric increases to existing water supplies. Please confirm that only the portion of WTP facilities (and costs) required to increase the treated water supply volume (not to replace lost capacity) are included in the final, adopted regional water plan. [Contract Exhibit C, Section 2.5.2.15]	The SCTRWPG confirms that all WMSs that include a WTP expansion as a project component are directly associated with development of additional supplies from new water sources or additional supplies from more efficient use of existing supplies, or volumetric increases to existing water supplies. WMSs with WTP expansions have been revised to include clarifying language, as follows: "Only the portion of WTP facilities and associated costs that are directly required to increase the treated water supply volume—excluding any components related to replacement of existing capacity—are included in this regional water plan."	Approved by TWDB
1	17	Section 5.1, Section 5.2, Table 5.1-2, and DB27. Information on strategies shown in Table 5.1-2 and presented in Section 5.2 appears to be presented inconsistently between the plan and DB27. For example, municipal conservation (including water use reduction and water loss mitigation) is not included as a recommended water management strategy in DB27 for East Medina County SUD, but is listed as a recommended strategy for this WUG in Table 5.1-2. Further, Chapter 5.2.1 presents zero yield for conservation savings. Please review the recommended strategy and project information presented to ensure that strategy and project information included in DB27 are consistent with those presented in the final, adopted regional water plan. Additionally, please consider including a footnote or asterisk for Table 5.2.1-6 and Table 5.2.1-7 to clarify that yields presented as zero are not included as recommended strategies. [31 TAC § 357.35(g)(1)]	Table 5.1-2 summarizing recommended water managment strategies by WUG has been revised to show municipal water conservation is not recommended for Randolph Air Force Base, Port Oconnor Improvement District, County Line SUD, and East Medina County SUD, as these WUGs have a 2030 water use below the threshold of 80 GPCD and do not qualify for the WMS. Tables 5.2.1-6 and 5.2.1-7 have been revised to add a clarifying statement with an asterisk, as follows: "WUGs with zero yields in every decade are shown in this table for consistency with other tables in this section; however, if a WMS does not demonstrate a firm yield under drought of record conditions, it is not considered a Recommended strategy."	Approved by TWDB
1	18	Section 5.1, Table 5.1-2, and Section 5.2.33. Table 5.1-2 includes several WUGs with references to Section 5.2.33 for the evaluation of “Entity Purchase to Meet Shortages” as a recommended strategy, however Section 5.2.33 does not appear to be included in the plan. Please include a copy of the evaluation for this strategy in the final, adopted regional water plan. [31 TAC § 357.34(e); Contract Scope of Work, Task 5B]	All references to Section 5.2.33 have been removed and replaced with "N/A".	Approved by TWDB
1	19	Chapter 5.2 and DB27. Project costing information for the following projects present total capital costs that differ from the project capital costs included in DB27: WMSProjectIds 5108, 5110, 5111, 5792, 2112, 5116, and 5764. For example, DB27 reports total capital cost of $56,315,000 for WMSProjectId 5111, Brackish Groundwater Development – County Line SUD Edwards Project. Table 5.2.6-10 on Page 5.2.6-31 lists total capital costs of $20,907,000 for the same project. Please review the costing information for these projects and revise as necessary to ensure that all project capital costs in DB27 are consistent with those presented in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	The SCTRWPG coordinated with TWDB to update DB27 costs to be consistent with costs in the final, adopted regional water plan.	Approved by TWDB

TWDB Comment Level	TWDB Comment No.	TWDB Comment	Proposed SCTRWPG Response	Status of Response Approval
1	20	Section 5.2, Table 5.2.8-1, and DB27. It is unclear whether certain project yields presented in the plan are correctly reported in DB27. For example, in Table 5.2.8-1, the yield shown for the County Line SUD SH 21 Booster Site project (WMSProjectId 5461) is "N/A" and the associated footnote states "this infrastructure project does not include available yields as the supply source is associated with the WUG's existing surplus or other WMS"; however, yields of at least 4,697 acre-feet per year are reported in DB27 for the related strategy beginning in 2030. Additionally, the SAWS Southeast Integration Pipeline project (WMSProjectId 2339) included in Table 5.2.8- 1 shares the same yield designation of "NA" and corresponding footnote regarding available yields as above, however yields of 21,000 acre-feet per year are shown in DB27 for the related strategy beginning in 2030. Please confirm data reporting and clarify which specific strategy these projects are related to in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	The SCTRWPG confirms that all project yields presented in Section 5.2.8 are consistent with those reported in DB27. To improve clarity, Section 5.2.8 was revised to better illustrate the relationship between each project and its corresponding strategy. Specifically, Table 5.2.8-1 was divided into two separate tables: one for the Facilities Expansion WMSs that include a yield and project; and another for the Water Management Strategy Projects (WMSPs) that do not have a standalone yield but are instead related to another WMS with an associated yield.	Approved by TWDB
1	21	Chapter 5.2.8, Table 5.2.8-1, and DB27. The online decade for the GBRA Western Canyon Water Treatment Plant facility expansion project (WMSProjectId 2109) appears to be reported inconsistently between the plan and DB27. For example, the online decade is 2060 in DB27, however the plan presents the online decade as 2030 in Table 5.2.8-1 and on Page 5.2.8-2. Please review the online decade for this project and revise as necessary to ensure that the online decade in DB27 is consistent with that presented in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	The SCTRWPG coordinated with TWDB to revise DB27 to be consistent with the online decade reported in the final, adopted regional water plan for the GBRA Western Canyon Water Treatment Plant facility expansion project (2030).	Approved by TWDB
1	22	Section 5.1, Section 5.2, Table 5.1-2, and DB27. Information on strategies shown in Table 5.1-2 and presented in Section 5.2 appears to be presented inconsistently between the plan and DB27. For example, the GBRA WaterSECURE project is shown as a recommended water management strategy in DB27 for South Buda WCID 1 and Wimberley WSC but is not listed as a recommended strategy for these WUGs in Table 5.1-2. Please review the recommended strategy and project information presented to ensure that strategy and project information included in DB27 are consistent with those presented in the final, adopted regional water plan. [31 TAC § 357.35(g)(1)]	The SCTRWPG coordinated with TWDB to update DB27 to show South Buda WCID 1 and Wimberley WSC purchasing water directly from GBRA's surplus supplies. For consistency with DB27 and other sections of the plan, Table 5.1-2 will continue to show the strategy as "Entity Purchase to Meet Shortage".	Approved by TWDB

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1	23	Sections 5.2.16, 5.2.17, 5.2.8, and 5.2.20. The plan does not appear to include explanations for the following recommended strategy volumes that remain 100% unallocated to any WUGs: Canyon Regional Water Authority (CRWA) - Expanded Brackish Carrizo-Wilcox, CRWA - Siesta Project, FE - CRWA Hays Caldwell WTP Expansion, and GBRA - Lower Basin New Appropriation. Please provide a specific explanation for why each of these strategies remaining 100% unallocated to WUGs in the final, adopted regional water plan. [Contract Exhibit C, Section 2.5.3]	Each strategy with unallocated recommended strategy volumes have been revised to add the following language in the Available Yield section: "All or a portion of yield from this WMS remains unallocated to a specific WUG because the project sponsor is a WWP and has chosen to instead have a surplus management supply. Surplus management supply is when the cumulative supply of the Recommended WMSs is in excess of the amount needed to meet regional needs to allow for such things as uncertainty associated with long-term planning, problems with project implementation, changing weather conditions, flexibility of sponsors in choosing projects to implement, and changes in project viability. Rather than assigning volumes from a specific project to individual WUGs in the plan, the WWP contracts with customers from their general water supply portfolio or surplus. This approach allows for flexibility in meeting future demands and accommodating evolving customer needs. As such, the strategy volumes are included in the plan to reflect the WWP's capacity to meet regional needs, even though specific allocations to WUGs are not identified at this time."	Approved by TWDB
1	24	Section 6.3 and DB27. The unmet needs data in Table 6-15 presented for irrigation WUGs and the region total is inconsistent with unmet needs data reported in DB27. Please review this data and revise Table 6-15 as necessary to present data consistent with DB27 in the final, adopted regional water plan. [31 TAC § 357.40(c)]	Table 6-15 has been revised for consistenty with data reported in DB27 for irrigation WUGs.	Approved by TWDB
1	25	Section 9.2. The counts of water management strategies benefitting more than one WUG provided on page 9-1 is inconsistent with strategies reported in DB22 and DB27 as benefitting more than one WUG. Please review the data reported in TWDB Secure Agency Reporting Application (SARA) Report ID 125 and either reconcile the counts presented in Section 9.2 to align with the report or clarify the difference in counts reported in the final, adopted regional water plan. [31 TAC § 357.45(b)(1)]	The data associated with the number of WMSs that benefit more than one WUG in the 2021 and 2026 SCTRWP have been revised to be consistent with data included in DB27.	Approved by TWDB
1	26	Geographic Information System (GIS) data deliverables do not include all of the required attribute fields listed in Table 1 of Exhibit D, Section 2.5.2.1. Please include the following attribute fields in all submitted WMS project GIS data: Status for polygons, and ShapeDescription for all geographies, with the final GIS files submitted. [Contract Exhibit D, Section 2.5.2.1]	The GIS data deliverables have been revised to include the following as attribute fields: Status for polygons and ShapeDescription.	Approved by TWDB
1	27	The draft plan submittal did not include an electronic copy of existing surface water right data within the region utilizing the TWDB required template. Please ensure water right data is provided using the TWDB provided template, with the final electronic files submitted. [Contract Exhibit C, Section 2.3.6]	An electronic copy of existing surface water right data on the required TWDB template has been included in the electronic files submitted with the final, adopted regional water plan.	Approved by TWDB

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2	1	Table 3-7, page 3-22. Please consider adding "TWDB Water Use Survey" to the methodology for the San Marcos River Alluvium split in Caldwell County to be more consistent with the technical memo (p 3C-10). The citation currently provided in the main report is incorrect as Report 12 does not actually provide production values but does identify Martindale WSC as the sole pumper from SMRA. Max water use survey (WUS) intake by Martindale WSC is 261 acre-feet in 2003, making the WUS dataset the likely source for the provided availability value.	The description for availability methodology footnote "i" was revised in Table 3-7, as follows: "I = Published Reports/Data: TWDB "Report 12, Groundwater Resources of Caldwell County, Texas" (1966). Maximum Historic TWDB Water Use Survey Detailed Groundwater Pumpage by County (1980-2021). The maximum historic annual production from "Other Aquifers" under the Entity "Non-Surveyed Estimate" in Caldwell County was 813 acft in 1990. Based on this historic data, and the assumption that one-third of this is from the San Marcos Alluvium, the minimum supply from the San Marcos Alluvium is 271 acft/yr."	Approved by TWDB
2	2	Table 3-7, page 3-22. Please consider adding additional detail in the report text to supplement the brief methodology description in Table 3-7 for the Edwards Aquifer Authority (EAA)-related Edwards (BFZ) Aquifer splits. Based on publicly available EAA permit data alone, it is unclear how the total 296,553 AF/yr reliable supply value was derived and how it was divided to the different counties.	The last paragraph of Section 3.3.2.2, RWPG-Estimated Groundwater Availabilities, has been revised to include the identification of counties as follows: "For portions of the Edwards-BFZ Aquifer that are regulated by EAA, the groundwater availabilities and existing supplies are based on the drought year reliable supply of EAA-issued permits. The EAA Act limits permitted withdrawals to 572,000 acre-feet per year (acft/yr); however, during a drought year, the reliable supply of these permits is reduced by 41% to 73%, depending on the pool (county of permitted use) and permitted use type. Therefore, the total reliable supply or total groundwater availabilities for the EAA-regulated portions of the Edwards-BFZ Aquifer is 296,553 acft/yr, including estimated exempt federal and domestic and livestock production."	Approved by TWDB
2	3	Table 3-7, page 3-22. Please specify the published source of the pumping data cited for the Leona Gravel split in Medina County.	This information came from Medina County GCD directly. Availability footnote was revised in Table 3-7, as follows: "Published Reports/Data: Average Historic Leona Gravel Aquifer Groundwater Pumpage (2010-2019) provided by Medina County GCD."	Approved by TWDB
2	4	Figure 3-2, page 3-3. Please consider adding missing Trinity subcrop & outcrop designations in the map legend.	Figure 3-2 was revised to add the missing designations in the map legend.	Approved by TWDB
2	5	Figure 3-3, page 3-6. Please consider adding missing outcrop/subcrop designations for Hickory, Sparta & Yegua-Jackson in the map legend.	Figure 3-3 was revised to add the missing designations in the map legend.	Approved by TWDB
2	6	Figure 3-4, page 3-10. Please consider adding a legend as EAA/Plum Creek/BSEACD designations are difficult to see with the current labeling scheme.	Figure 3-4 was revised to improve the visibility of the designations in the map.	Approved by TWDB
2	7	Page 3-2. Please consider rephrasing "16 aquifers" to "16 distinct groundwater sources with different geologic and management conditions" since this number includes several aquifer splits that are technically the same aquifer (ex. Edwards BFZ in EAA vs outside of EAA) and also includes groundwater sources that TWDB does not officially consider to be "aquifers."	The language in Section 3-2 was revised to clarify that the groundwater sources are "16 distinct groundwater sources with different geologic and management conditions." For consistency, Section 3.2.2 was also revised to clarify that the groundwater sources include major aquifers, minor aquifers, and "other groundwater sources the TWDB does not officially consider to be 'aquifers'."	Approved by TWDB
2	8	The plan uses the terms 'recycled' and 'reuse' interchangeably (e.g. Section 5.2.9). The TWDB has different definitions for each term. Please consider consistently using the terms 'recycled' (as defined in Section 3.5.3 of Exhibit D) and 'reuse' (as defined in Section 1.7.3 of Exhibit C) in the final plan.	Section 5.2.9 and other sections within the Final plan have been revised to use the term "reuse," where appropriate.	Approved by TWDB

TWDB Comment Level	TWDB Comment No.	TWDB Comment	Proposed SCTRWPG Response	Status of Response Approval
2	9	Appendix 3D. Please consider revising the title of Appendix 3D and its associated table to clarify that it includes water rights for all permitted surface water supply sources assessed in the plan.	The title of Appendix 3D has been revised to "Permitted Surface Water Rights and Reliability Assessment."	Approved by TWDB
2	10	Chapter 3. Please consider including the sedimentation rates for major reservoirs in the final plan.	Section 3.3.1.2, regarding Sedimentation Methodology, has been revised to include the sedimentation rates for major reservoirs, as follows: "Sedimentation rates used for major reservoirs in the applicable WAMs included: • Calaveras Lake: 29.05 acft/yr; • Canyon Reservoir: 114.98 acft/yr; • Coleto Creek Reservoir: 55.76 acft/yr; and • Victor Braunig Lake: 4.23 acft/yr. "	Approved by TWDB
2	11	Chapter 4. Please consider adding a statement indicating that second-tier major water provider needs are included in Appendix 4A, as all of Region L's major water providers are also WUGs.	Section 4.2.4 has been revised to include a reference to the second-tier major water provider needs in Appendix 4A, as follows: "Water needs for MWPs are summarized by use type in Table 4-14. Second-tier major water provider needs are included in Appendix 4A."	Approved by TWDB
2	12	Section 5.1.5 and Appendix 5C. The region appears to have included the implementation status required by 31 TAC § 357.34(g) for certain brackish groundwater strategies that are MAG limited and therefore do not meet the threshold of 10,000 acre-feet/year, however they appear to be included in the assessment due to the envisioned yield. Please consider adding a statement to clarify this for the applicable strategies listed in Section 5.1.5.	Section 5.1.5 has been revised to include a footnote, as follows: "This brackish groundwater strategy is subject to Modeled Available Groundwater (MAG) limitations and does not meet the 10,000 acft/yr threshold; however, it has been included in the implementation status assessment due to the strategy's envisioned yield being greater than 10,000 acft/yr."	Approved by TWDB
2	13	Section 5.1.3. Page 5.1-19, 3rd bullet. The sentence regarding the ASR assessment for Crystal Clear appears incomplete. Please review and consider revising as necessary.	The third bullet on page 5.1-19 in Section 5.1.3 has been revised to include the full statement, as follows: "A full strategy evaluation of the potential for ASR projects to meet Crystal Clear SUD's significant identified water needs <u>was not conducted</u> because implementation of ASR may be considered cost-prohibitive compared to the cost of surface water and/or groundwater projects. <u>Their needs have been met through a variety of cost-effective WMSs, which are listed in Table 5.1-2</u>."	Approved by TWDB
2	14	Section 5.1.3. Page 5.1-19, 4th bullet. If only a portion of Fort Sam Houston's needs have been met, please consider including an ASR assessment for the remainder of the needs.	The fourth bullet on page 5.1-19 in Section 5.1.3 has been revised, as follows: "A full strategy evaluation of the potential for ASR projects to meet Fort Sam Houston's significant identified water needs was not conducted because their needs have been met through a variety of cost-effective WMSs, which are listed in Table 5.1-2."	Approved by TWDB
2	15	Chapter 5.2, Table 5.2.1-2. Three of the four column headers in the table contain the same title of "Pre-1995 Average Use to the 1995 Standard". Please review and consider revising as necessary.	The column headers in Table 5.2.1-2 have been revised to the following: "Pre-1995 Average Use to 2014 Standard" and "1995 Average Use to 2014 Standard."	Approved by TWDB
2	16	Chapter 5.2. On Page 5.2.1-11, the second bullet point states "For municipal WUGs having year 2030 water use between 80 GPCD and 139 GPCD, the goal is to reduce per capita water use by 2.5 percent per year for the remainder of the planning period or until 80 GPCD is reached". Please review and confirm if this goal should reflect a reduction of 2.5 percent per decade, which would be consistent with the goal stated in the first bullet point, and update if necessary.	The second bullet in Section 5.2.1.2.1 has been revised to reflect a per capita water use reduction of 2.5% per decade, as follows: "For municipal WUGs having year 2030 water use between 80 GPCD and 139 GPCD, the goal is to reduce per capita water use by 2.5% per <u>decade f</u>or the remainder of the planning period or until 80 GPCD is reached".	Approved by TWDB

South Central Texas Regional Water Planning Group
August 28, 2025, Meeting
HANDOUT B: Proposed SCTRWPG Responses to TWDB Comments

TWDB Comment Level	TWDB Comment No.	TWDB Comment	Proposed SCTRWPG Response	Status of Response Approval
2	17	Chapter 5.2. On Page 5.2-4, there is a statement indicating that ASR projects have a water loss of 90 to 95 percent. Please clarify if this statement was meant to indicate expected recovery/yield of 90 to 95 percent (5 to 10 percent water loss)?	Chapter 5.2 relating to the water loss of ASR has been revised, as follows: WMS evaluations are assumed to have an estimated recovery efficiency between 90-95 percent (%), resulting in losses between 5-10%.	TBD - In Progress
2	18	Section 5.2.11. The introduction paragraph in the evaluation for Rainwater Harvesting includes a typo referring to "the Fresh Groundwater Development WMS." Please consider correcting this in the final plan.	The introductory paragraph of Section 5.2.11 has been revised from "Fresh Groundwater Development" to "Rainwater Harvesting."	Approved by TWDB
2	19	Section 7.6. The emergency response analysis for the 2026 regional water plans should have been based on projected 2030 populations to align with the planning horizon. While the region included the analysis for the applicable WUGs please consider updating Table 7-3 to reflect the decade 2030 for the analysis for municipal WUG population, instead of “2020”.	Table 7-3 has been revised to use population data from the 2030 decade for the emergency response analysis. Additionally, with the updated population data, there were additional WUGs that were added to the evaluation, including Karnes City, Kendall County WCID 1, Kenedy, Randolph Air Force Base, The Oaks WSC, Universal City, Ville Dalsace Water Supply, and Yancey WSC.	Approved by TWDB
2	20	Chapter 10. Please consider providing a list of rural entities that were not responsive to regional water planning group outreach efforts in the final plan.	A new table, Table 10-1, has been added to identify the level of engagement of rural entities during the SCTRWPG's outreach efforts.	Approved by TWDB