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, November 7, 2024 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=mba4e1663b439b9675a5cb0423b6f0832. 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. Discussion and Appropriate Action Regarding Filling Existing Vacancies and Vacancies to Result from Future Term Expirations or Resignations
5. Status Reports and Communications by TWDB
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
7. Consideration and Appropriate Action Regarding Presentation by Technical Consultant Regarding Schedule and Progress Update
8. Consideration and Appropriate Action to Designate Water Management Strategies (WMS) as Recommended, Alternative, or Considered
9. Discussion and Appropriate Action Regarding the Establishment of Additional Subcommittees
10. Schedule and Potential Agenda Items for the Next Meeting of the SCTRWPG
    - Region L 2025 Schedule:
        - Q1 meeting: January 23rd
        - Q2 meeting: February 20th
        - Q3 meeting: August 28th
        - Q4 meeting: October 2nd
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 Tim Andruss, 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
August 1, 2024

Chair Andruss called the hybrid meeting to order at 9:30 a.m., held both in person and through WebEx online platform.

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

Voting Members Present:
Tim Andruss
John Byrum
Curt Campbell
Andra Wisian
Debbie Farmer
Erin Cavasos for Steve Metzler
Terrell Graham
Vic Hilderbran
Thomas Jungman
Aarin Teague
Jason Ammerman
Scooter Mangold
Andrew McBride
Daniel Meyer
Gary Middleton
Travis Pruski
Donovon Burton for Robert Puente
Humberto Ramos
Weldon Riggs
Roland Ruiz
Darrell Brownlow
Mitchell Sowards
Jonathan Stinson
Thomas Taggart
Mike Short for Ryan Kelso
Dianne Wassenich
Adam Yablonski

Voting Members Absent:
Ryan Bayle
Vanessa Puig-Williams
Charlie Flatten
Darren Simmons
Dan Yoxall

Non-Voting Members Present:
Carly Rotzler, TX Department of Parks and Wildlife
Tony Franklin, Texas Soil & Water Cons. Board
Tom Hegemier, Region K Liaison
Michele Foss, Texas Water Development Board (TWDB)
Jami McCool, TX Dept. of Agriculture

Non-Voting Members Absent:
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. Andruss motioned to approve the minutes from the previous meeting. Mr. Brownlow seconded, the motion passed by consensus.

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

Ms. Foss provided an update from TWDB on 2024 SWIFT Funding for Region L Projects, a reminder on the data that can be found on TWDB's Conservation Dashboard (GPCD Statistics, GPCD Trends and Targets, and BMPs and Projects), as well as an overview on the Texas Water Fund (TWF) Implementation Plan. Her presentation is available online at www.regionltexas.org.

AGENDA ITEM NO.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

Mr. Brownlow provided an update on GMA 13 stating that they met on June 14, 2024 and discussed status reports on groundwater availability model updates and recalibrations, action occurring on requests to the TWDB to update the GAM for southern portions of the CWQCS aquifers based on model revisions, and discussion on timeline for 4th round of DFCs.

AGENDA ITEM NO.6: CONSIDERATION AND APPROPRIATE ACTION REGARDING BRIEFINGS ON WORKGROUP ACTIVITIES:

A. CHAPTER 8 POLICY AND LEGISLATIVE RECOMMENDATIONS WORKGROUP

Ms. Gonzalez provided an overview of the work the Chapter 8 Policy and Legislative Recommendations Workgroup accomplished during the year of 2024 thus far. Ms. Gonzalez stated that the workgroup has met to discuss new or proposed recommendations to consider including in Chapter 8, as well as reviewing and revising Chapter 8 language.

She included that the workgroup would finalize a draft Chapter 8 for consideration at the November 7 RWPG meeting.

B. RURAL COMMUNITY OUTREACH WORKGROUP

Ms. Gonzalez provided an overview of the work the Rural Community Outreach Workgroup has accomplished during the year of 2024. The workgroup held meetings in-person and virtually since the May RWPG meeting: June 5th and July 10th. During these meetings, the work group identified and developed water management strategies (WMSs) that could benefit rural entities. They also developed and finalized methodologies for consideration by RWPG for the following WMSs: Irrigation Conservation, Irrigation Drought Management, and Rainwater Harvesting. No additional meetings are currently scheduled.

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

Ms. Gonzales provided a conceptual schedule for Region L plan development, update on completed, new, and ongoing efforts, and updates on Drought Contingency Plans. Ms. Gonzalez also provided information for consideration and appropriate action on significant identified needs definition, major water provider designations, and water management strategies. Her presentation is available online at www.regionltexas.org.

Regarding the RWPG defining Significant Identified Needs, Ms. Gonzalez reviewed the TWDB requirement to provide a specific assessment in the plan for the potential for aquifer storage and recovery (ASR) projects to meet "significant identified needs" as defined by the RWPG. She reviewed the definition and identified WUGs used in SCTRWPG 2021 Plan. Discussion ensued by the planning group regarding the significance of being identified as well as the impact of identification. Additionally, the RWPG discussed agricultural references and how any of the options affect the work of the technical consultant. Ms. Wassenich motioned to select Option 2 without the inclusion of County-Other to be Region L's threshold for Significant Identified Needs. Mr. Ramos seconded, the motion passed by consensus.

Regarding the options the technical consultants provided to Designate Major Water Providers (MWP), Ms. Gonzalez provided background information to the RWPG on what a Major Water Provider is defined as, as per 31 TAC §357.10(19). She also stated that the RWPG's designation of MWPs will not change the role of the entity in the RWP. Information about the MWPs will be summarized in 'snapshots' in the RWP. Additionally, she provided the planning group with the 2021 RWP's definition. Discussion ensued by the planning group on the purpose of the RWPG to designate water providers, what options were used in the previous plan, and if this designation will affect funding. Once discussion came to an end, Ms. Wassenich motioned to select Option 3

as the representation of water providers (5 entities) Region L selects to be the Major Water Providers. Mr. Andruss seconded, the motion passed by consensus.

Regarding the Water Management Strategies (WMS) that the technical consultant presented to the RWPG, Ms. Gonzalez provided a timeline for how the WMS would be presented. The timeline and process in terms of presentation would be broken up into two blocks: Block 1 WMSs presented in the August meeting and Block 2 WMSs presented in the November meeting. In the Block 1 WMSs presentation, Ms. Gonzalez requested input from the planning group members under the Drought Management: Municipal Costing Tool WMS. Ms. Gonzalez requested that the RWPG consider four scenarios included in her presentation regarding Drought Management Municipal Yields based on percentage use reduction scenarios. Mr. Taggart motioned to select the 10% use reduction scenario. Mr. Byrum seconded, the motion passed by consensus.

AGENDA ITEM NO.8: CONSIDERATION AND APPROPRIATE ACTION FOR THE TECHNICAL CONSULTANT TO EVALUATE WEATHER MODIFICATION AS A NEW WATER MANAGEMENT STRATEGY

Mr. Riggs introduced Mr. Raabe to explain Weather Modification as a WMS to the planning group. Mr. Raabe, a board member of the South Texas Weather Modification Association (STWMA), shared with the planning group that the STWMA was formed in 1996 and its members are groundwater conservation districts and county governments that fund the STWMA through a per acre assessment. Mr. Raabe included that Region L has historically determined in the 2001, 2006, 2011, 2016 and 2021 regional water plans that there were no feasible water management strategies to meet unmet irrigation needs. He stated that weather modification is a strategy that can help meet unmet irrigation needs and provide irrigation water conservation savings to reduce irrigation water demands through precipitation enhancement.
Mr. Raabe requested that the RWPG identify weather modification as a potential water management strategy and authorize the evaluation of weather modification to meet unmet irrigation needs and that weather modification be included in the Advanced Water Conservation strategy for agricultural irrigation.

Discussion ensued by the planning group regarding confirmation that this item is not approval of the strategy, but rather a request for evaluation and more details would be provided during the November 2024 meeting where the members would determine if the strategy is recommended or alternative.

Mr. Byrum motioned to approve the Technical Consultant to use Scope 5B funds to evaluate the Weather Modification Project as a New Water Management Strategy. Mr. Hilderbran seconded, the motion passed by consensus.

AGENDA ITEM NO.9: CONSIDERATION AND APPROPRIATE ACTION REGARDING DESIGNATION OF THE NUECES RIVER AUTHORITY AS A

WHOLESALE WATER PROVIDER (WWP) AS DEFINED IN 31 TAC §357.10(44) FOR REGIONAL WATER PLANNING PURPOSES

Ms. Gonzales provided background on the agenda item, stating that during the Rural Community outreach Work Group meetings, they found that there were many WMS associated with benefitting rural community and there weren't established sponsors that would be able to implement them. As the Nueces River Authority is not currently listed as a wholesale water provider, they are not able to apply for funding to implement these strategies for rural communities.

Mr. Andruss motioned to approve the Designation of the Nueces River Authority as a Wholesale Water Provider (WWP) for Regional Water Planning Purposes. Mr. Burton seconded, the motion passed by consensus.

AGENDA ITEM NO.10: DISCUSSION AND APPROPRIATE ACTION REGARDING THE ESTABLISHMENT OF ADDITIONAL SUBCOMMITTEES

No additional subcommittees were established.

AGENDA ITEM NO.11: SCHEDULE AND POTENTIAL AGENDA ITEMS FOR THE NEXT MEETING OF THE SCTRWPG

The next SCTRWPG meeting is scheduled for November 7, 2024, at 9:30 AM.

AGENDA ITEM NO.14: PUBLIC COMMENT (LIMITED TO 3 MINUTES)

Ms. Cywinski provided public comment to state that in 2015, several "water captains" and herself appeared before the SCTRWPG as volunteers of Texas Interfaith Center for Public Policy, also known as Interfaith Environmental Network. They presented a white paper response to the 2016 draft plan and each read sections of the Region L IPP whitepaper during one of the meetings. Ms. Cywinski stated that she appreciates that the conservation strategies for which they advocated for are now being included in the 2026 plan. She thanked the planning group for their openness to constituent recommendation.

Ms. Cywinski also provided comment on Agenda Item 8 (Consideration and Appropriate Action for the Technical Consultant to Evaluate Weather Modification as a New Water Management Strategy). Ms. Cywinski stated that she would like to draw attention to the Edwards Aquifer Authority's News Drop article on EAA's Precipitation Enhancement Program (pages 6-7). She stated that weather modification with silver iodide by humans is a poor remedy for ceasing to modify the hydrology by our continued compaction of soil and expansion of impervious surfaces. She asked that members think beyond recent conventional thinking of water supply to solving problems by decreasing the problems created.

AGENDA ITEM NO.15: ADJOURN

Mr. Campbell moved to adjourn as there was no further matters left to address.

The meeting adjourned at 12:09am.

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

Region L Update November 7, 2024

- **New Executive Administrator – Bryan McMath**
- **New Board Member – Tonya R. Miller**

- **IPPs are due to TWDB on *March 3, 2025***

- **Draft 2026 Regional Water Plan Water Supply Needs/Surplus Map**
  - Linked under TWDB 6th Planning Cycle Info/TWDB Communications/Task 4A
  - "Draft" as represented data is being updated by RWPG consultants
  - Brackish Aquifer Sample Area Layer – water quality of 1,000-9,999 mg/L TDS

- **REMINDER: The following data can be found in the Conservation Dashboard!**
  - GPCD Statistics
  - GPCD Trends and Targets
  - BMPs and Projects

Texas Water Fund (TWF) Implementation

- **Statewide Water Public Awareness Campaign**

- **Proposed Rule Publication/Proposed Rule Adoption**
  - Creation of new subchapter of 31 TAC 363 for New Water Supply Fund for Texas
  - On November 6, 2024, TWDB Board Meeting Agenda for draft rule publication
  - Final rule adoption anticipated February or March 2025

- Anticipate application process open early Fall 2025

- Receive future updates by signing up for TWDB's Financial Assistance email list: https://www.twdb.texas.gov/newsmedia/signup.asp

Questions?

Michele Foss
michele.foss@twdb.texas.gov

Stay connected:

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

BLACK & VEATCH

11/7/2024

Agenda Item 7: Consideration and Appropriate Action Regarding Presentation by Technical Consultant Regarding Schedule and Progress Updates

BLACK & VEATCH

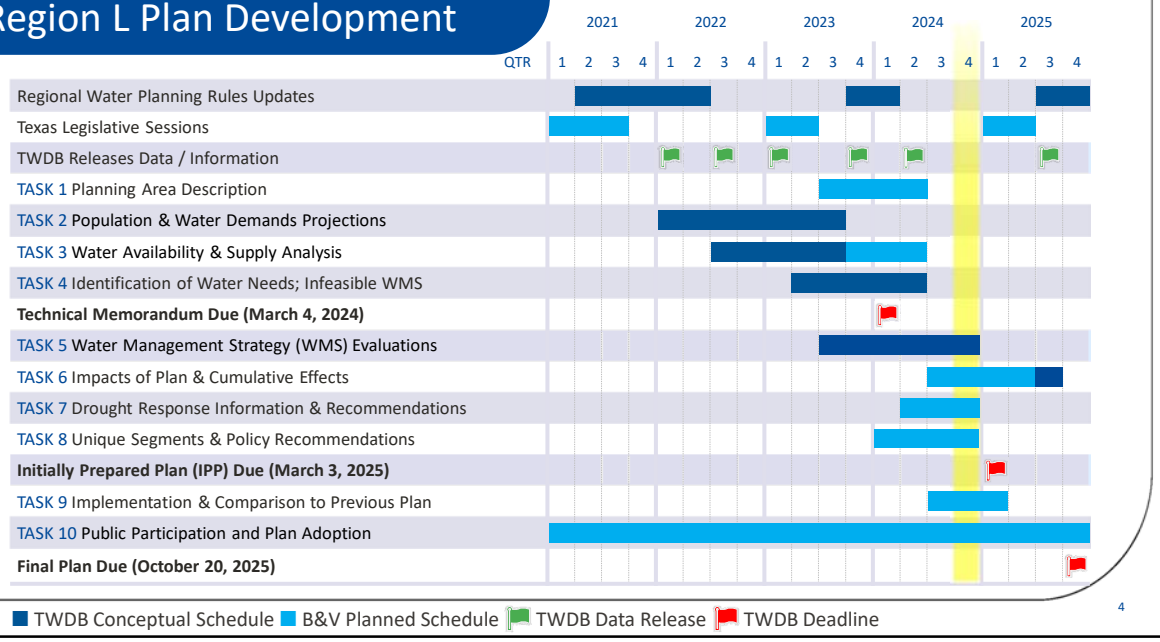
Schedule and Progress Updates – Overview

A. Schedule Progress
B. Update on Completed Efforts
C. Update on New or Ongoing Efforts
D. Chapter Updates
E. Water Management Strategy (WMS) Updates

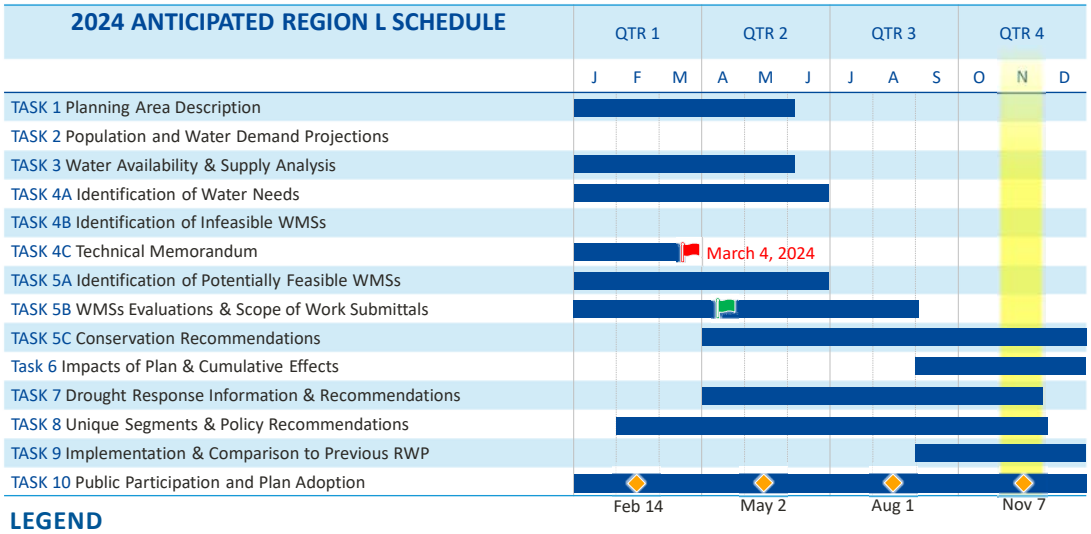
TOPIC A

Schedule Progress

Conceptual Schedule for Region L Plan Development



2024 ANTICIPATED REGION L SCHEDULE



LEGEND

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

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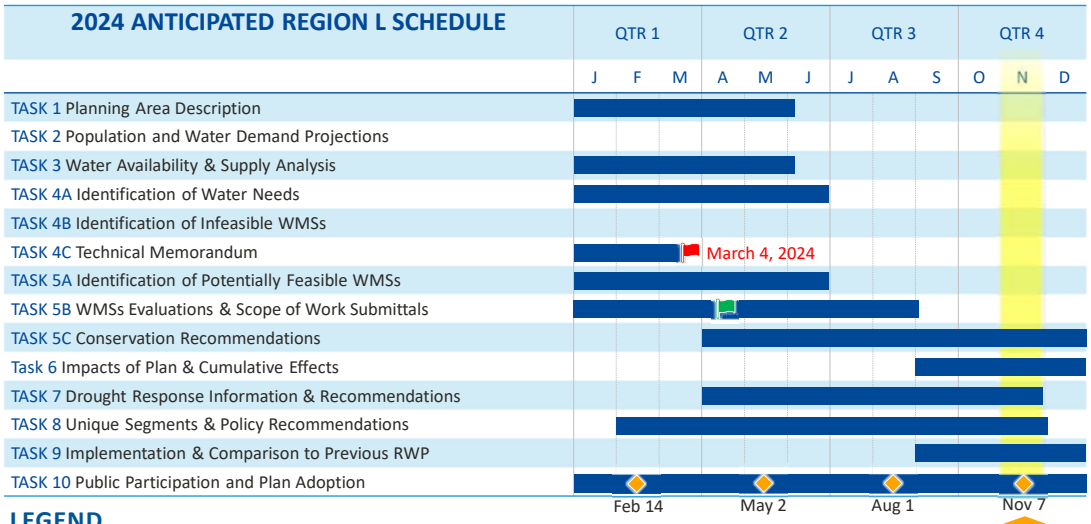
2024 ANTICIPATED REGION L SCHEDULE



LEGEND

Region L A

NOVEMBER RWPG MEETING TOPICS:

- Updates on Chapters, WMSs, and others
- RWPG Consider and Recommend WMSs

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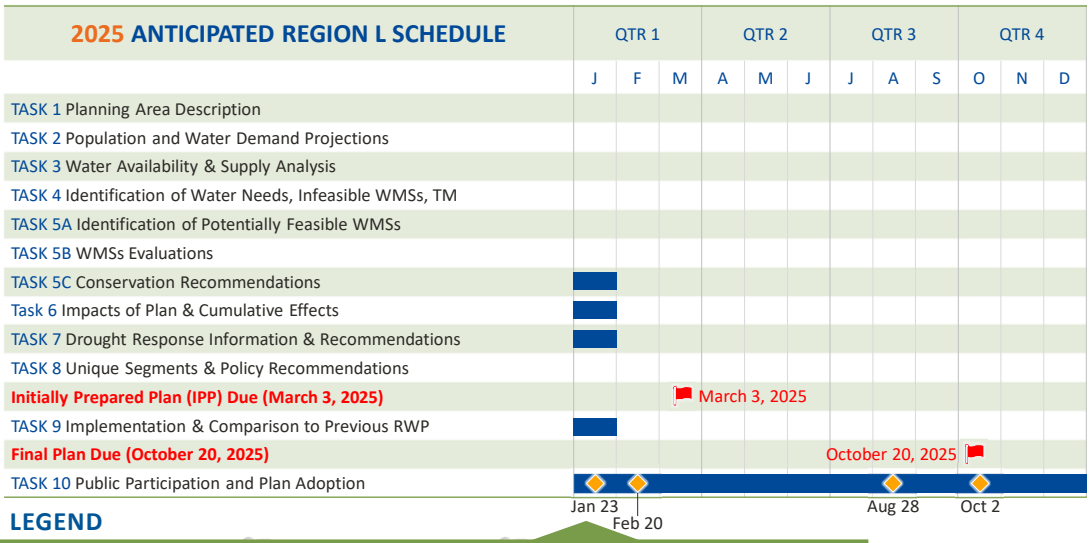
2025 ANTICIPATED REGION L SCHEDULE



LEGEND

JANUARY RWPG MEETING TOPICS:

- Ch. 6 Cumulative Effects Analysis
- Ch. 9 Implementation/Comparison to Prev. RWP
- Updates on any remaining chapters

VPG Meeting

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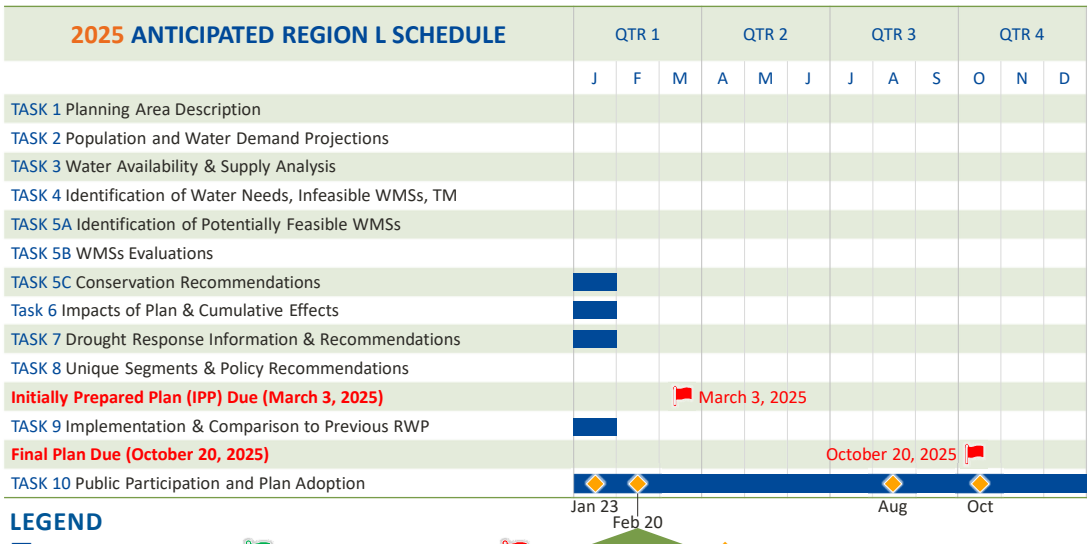
2025 ANTICIPATED REGION L SCHEDULE



LEGEND

Region L Activit

Meeting

FEBRUARY RWPG MEETING TOPICS:

- Adopt IPP

8

TOPIC B

Update on Completed Efforts

Update on Completed Efforts

- Completed development of draft Minor Amendment to the 2021 Regional Water Plan to update the Guadalupe-Blanco River Authority (GBRA) Lower Basin Storage Project
  - Submitted Draft Minor Amendment with a Request for Minor Amendment Determination to TWDB on March 11th
  - TWDB determined amendment to be Minor on April 17th
  - Minor Amendment submitted to TWDB on May 17th
  - TWDB Board approved Minor Amendment at August 15th Board Meeting
- Completed Drafting Chapter 8: Recommendations Regarding Unique Stream Segments and/or Reservoir Sites and Legislative & Regional Policy Issues (Task 8)
  - Workgroup held 5 meetings in 2024 and drafted an updated Chapter 8
  - Additional information and Workgroup recommendation will be presented in subsequent slides

TOPIC C

Update on New or Ongoing Efforts

Update on New or Ongoing Efforts

- Will Provide Draft Chapters for RWPG review and comment (Tasks 1, 2, 3, and 4)
  - Additional information will be forthcoming via email to RWPG members
- Continuing Evaluations of WMSs (Task 5)
  - Sent emails to sponsors of WMSs in 2021 RWP to request any updates to schedule, approach (yield, infrastructure components, etc.), and others
  - Conducted outreach for submitting new and additional projects
  - Developed and evaluated Block 1 strategies
  - Developed and evaluated Block 2 strategies
  - Additional information will be presented in subsequent slides

Update on New or Ongoing Efforts

- Continuing Drafting Chapter 7: Drought Response Information, Activities, and Recommendations (Task 7)
  - Gathered and reviewed Drought Contingency Plans (DCPs)
  - Preparing language for chapter
  - Additional information will be presented in subsequent slides
- Continuing Public Outreach and Interregional Coordination Efforts (Task 10)
  - Regular calls with Region K consultant team
  - Connecting with Regions G, N, and P, as needed

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TOPIC D

Chapter Updates

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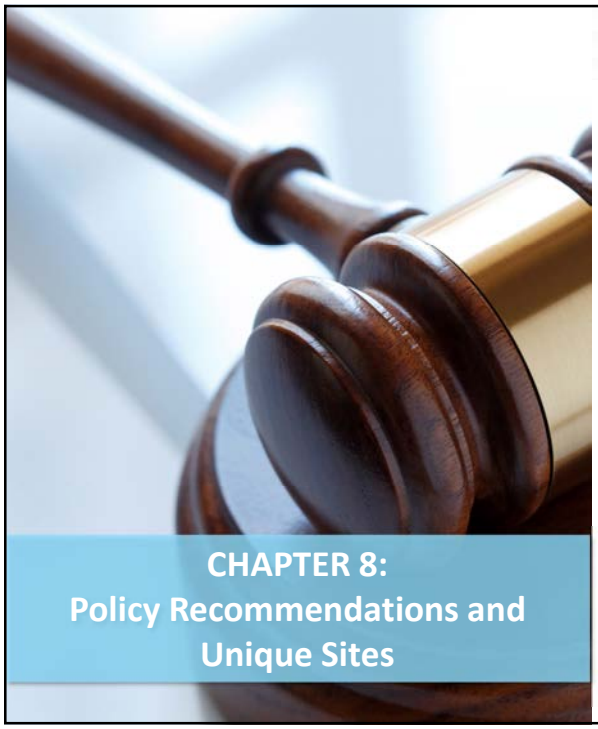

CHAPTER 8:
Policy Recommendations and Unique Sites

CHAPTER 8

31 TAC §357.43 specifies that the regional water plans must include recommendations on regulatory, administrative, or legislative issues, such as:

1. Ecologically Unique River and Stream Segments
2. Unique Sites for Reservoir Construction
3. Other Recommendations

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1. Ecologically Unique River & Stream Segments

RWPGs may make recommendations for designating river and stream segments of unique ecological value and unique sites for reservoir construction; however, the Texas Legislature is responsible for making the official designations of these sites.

RWPGs may recommend all or parts of a water body as having "unique ecological values," based on the following:

1. Biological function
2. Hydrologic function
3. Riparian conservation areas
4. High water quality, exceptional aquatic life, and high aesthetic value
5. Threatened or endangered species and unique communities

If the legislature designates or if a RWPG recommends designation of a stream or river segment as unique, then the RWPG must quantitatively assess impacts of the plan on flows to unique water bodies.

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2. Unique Reservoir Sites

RWPGs may recommend sites for reservoir construction that have "unique value" based on the following:

- Site specific reservoir development is recommended as a specific water management strategy or as a unique reservoir site in a final adopted RWP; or
- Factors such as location, hydrologic, geologic, topographic, water availability, water quality, environmental, cultural, and current development characteristics make a site uniquely suited for either reservoir development to Provide water supply for:
  - The current planning period, or
  - Where it might be reasonably needed to meet water needs beyond the 50-year planning period.
- The adopted RWPs must also include a description of the site, reasons for the unique designation, and expected beneficiaries of water supplies developed at a given site.

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3. Other Recommendations

RWPGs may include any additional regulatory, administrative, or legislative recommendations to achieve the stated goals of state and regional water planning, including but not limited to the following:

1. To facilitate the orderly development, management, and conservation of water resources in Texas and to prepare for and respond to drought conditions
2. Ways the RWPG believes the state and regional planning process would be improved
3. Information regarding the potential impacts of recommendations enacted into law once proposed changes are in effect
4. Facilitate more voluntary water transfers in the region

In the development of other recommendations, the RWPGs should consider TWDB feedback on the implementation of the planning group's legislative, administrative, and regulatory recommendations, as applicable to the TWDB, in the previous RWP. The RWPGs should also consider recommendations from the Interregional Planning Council as directed to the planning groups.

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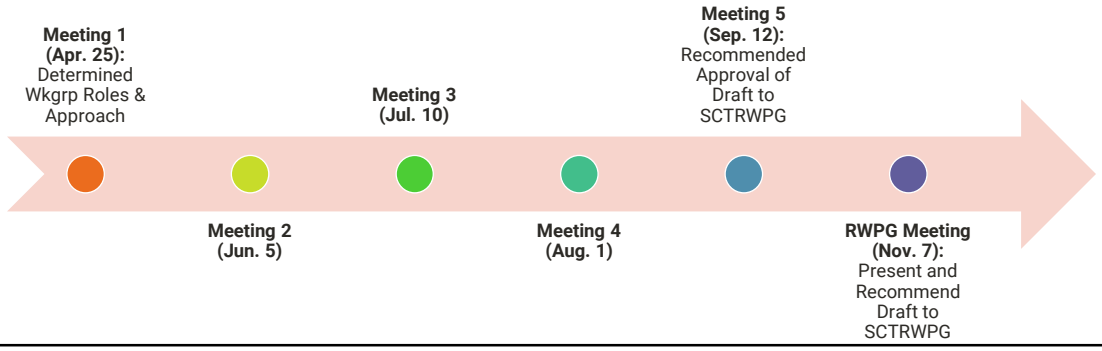
2026 Region L Policy and Legislative Recommendations Workgroup

- Established by the South Central Texas (Region L) Regional Water Planning Group (SCTRWPG) at the February 14, 2024, RWPG Meeting
- Collaboratively prepared an update to Chapter 8: Policy Recommendations and Unique Sites
- Held five meetings to establish the Workgroup's roles and approach, update chapter language, and prepare a recommendation to the SCTRWPG



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2026 Region L Policy and Legislative Recommendations Workgroup

Workgroup Roles

- Chair: Tim Andruss
- Vice-Chair: Robert Puente / Steven Siebert
- Secretary: Jonathon Stinson

Approach

- Consider new recommendations for inclusion.
- Consider TWDB feedback on implementation of recommendations in the previous plan.
- Consider recommendations from the Interregional Planning Council.
- Remove recommendations that are no longer relevant.

See Handout A for Summary of Revisions and Deletions

Workgroup Draft Chapter 8

- Updated and clarified previous recommendations.
- Reorganized and streamlined chapter.

See Handout B for Workgroup's Draft Chapter 8

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Summary of RWPG Comments on Workgroup Draft Chapter 8

- The Workgroup's Draft Chapter 8 was distributed to RWPG members for review and comment on September 27th.
- The Workgroup received one comment regarding substantive changes:
  - Timothy Fousse, City of Cibolo
  - "Can we consider asking the legislature to look at the current water reserve capacity formula (.60 gals/minute/year or 315,360 gallons per connection)? It would seem that with large advances in the water systems in our state and the somewhat substantial reduction in operating water losses, lowering the reserve capacity requirement would have a great impact on the total water needs of the state and reduce the costs associated with developing water reserves that will likely never be used."

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Proposed Revision to Workgroup Draft Chapter 8

- To address Mr. Fousse's comment, the following language is proposed as a new Section, likely Section 8.3.6 (between the Conservation and Innovative Strategies Sections)

Proposed Language:

Rules in 30 TAC Chapter 290.45 include requirements for minimum water system capacity. Currently, the rules require a minimum of 0.6 gallons per minute (gpm) per connection for the total public water system capacity, as well as capacities for individual water treatment plants, groundwater wells, ground storage tanks, raw water pump stations, transfer pump stations, and others. The 0.6 gpm requirement converts to 315,360 gallons per year per connection, or 0.97 acft/yr per connection. This represents a substantial cost to develop reserve capacities that are unlikely to be used.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TCEQ reassess the water system capacity requirements in 30 TAC §290.45 to consider decreasing the minimum water system capacity requirement of 0.6 gpm per connection.

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Consider Action to:

- Approve the Workgroup's Draft Chapter 8 for inclusion in the 2026 Region L Regional Water Plan
- Approve the addition of language in the Workgroup's Draft Chapter 8 to address Mr. Fousse's comment

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CHAPTER 7:
Drought Response Information, Activities, and Recommendations

CHAPTER 7

Includes the following information:

1. Drought of record
2. Uncertainty and droughts worse than the drought of record
3. Current preparations for drought
4. Drought response triggers and actions
5. Existing and potential emergency interconnects
6. Drought management WMSs
7. Emergency responses to drought or loss of municipal supply
8. Other drought-related considerations and recommendations
9. Development of region-specific model DCPs

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2. Uncertainty and Droughts Worse Than the Drought of Record (1 of 5)

Background:

While RWPs must address water supply needs during a repeat of the drought of record (DOR), RWPGs may choose to consider scenarios and/or qualitatively address uncertainty and a drought worse than the drought of record (DWDOR) in their region.

Requirement:

Include a separate subsection addressing the three items listed in subsequent slides regarding planning for uncertainty and droughts worse than drought of record (DWDOR).

Proposed Direction for 2026 Region L Regional Water Plan

Include a new subsection that summarizes the three items and responses to each, as summarized in the subsequent slides.

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1. Summarize how the region incorporated planning for uncertainty in its RWP and the region's basis, or policy, for inclusion. If the RWP does not include any measures to address uncertainty, this subsection must include a statement to that effect

2. Uncertainty and Droughts Worse Than the Drought of Record (2 of 5)

Proposed Language for Chapter 7:

For the 2026 RWP, the SCTRWPG incorporated planning for uncertainty and DWDOR by including data derived from water providers who used climate forecasting and variability tools to plan for DWDOR. For example, the 2026 RWP includes data consistent with SAWS' 2024 Draft Water Management Plan, which applied a Hybrid Synthetic Drought (HSD) to estimate supplies, demands, and WMS firm yields. The HSD merged the drought of record conditions with the intensity of the 2011-2014 drought and is a reasonable approximation of climate-enhanced drought for the near-term since it already represents such an extreme condition.

The SCTRWPG recognizes that there is known, unquantified uncertainty associated with estimating population, water demands, hydrologic conditions, and WMS firm yields. On a region-wide basis, the SCTRWPG considered planning for uncertainty and DWDOR, such as incorporation of forecasting tools and climate models to evaluate supplies or application of a safety factor. However, the SCTRWPG chose not to plan for uncertainty or DWDOR on a regional scale at this time because forecasting tools have not been able to provide the resolution needed for water planning on a regional basis.

Instead, the SCTRWPG included a Legislative and Other Recommendation in Chapter 8 that recognizes that down-scaling of climate models is becoming more sophisticated, and the results are being considered in other planning efforts and models, such as water availability models (WAMs). In Chapter 8, the SCTRWPG recommends that 1) the Texas Legislature fund relevant studies and down-scaled regional models to incorporate available climate variability into the Regional Water Planning process; and 2) the TWDB to reassess available climate models and consider incorporating them into Regional Water Planning.

Black & Veatch 26

2. Summarize the key assumptions, analyses, strategies, and projects that are already included in the 2026 RWP calculations and recommendations that go beyond just meeting identified water needs anticipated under a DOR. If the RWP does not include any planning measures to address a DWDOR, this subsection must include a statement to that effect.

2. Uncertainty and Droughts Worse Than the Drought of Record (3 of 5)

Proposed Language for Chapter 7:

For the 2026 RWP, the SCTRWPG considered incorporating planning measures that could address a DWDOR, such as a management supply (safety) factor to develop supplies in excess of projected needs. However, the SCTRWPG recognizes that supplies are understood best by the water suppliers and suggests that WUGs consider their demand projections, along with water supply volumes and reliability, to determine whether a safety factor or other planning measure would be appropriate to incorporate as a WUG-specific planning measure. Therefore, the SCTRWPG chose not to incorporate region-wide planning measures to address a DWDOR at this time.

3. Provide a high-level summary of potential measures and responses that would likely be available to WUGs in the event of near-term onset of a DWDOR to provide additional, potential capacity to withstand a DWDOR. RWPGs are not expected to identify conditions constituting a DWDOR or provide details on potential capacities needed to plan for a DWDOR.

2. Uncertainty and Droughts Worse Than the Drought of Record (4 of 5)

Proposed Language for Chapter 7:

In the event of a near-term onset of a DWDOR, WUGs and WWPs without adequate management supplies could potentially implement various measures and responses that would likely be available and capable of providing additional demand reductions or additional water supply capacities to withstand the DWDOR.

(Continued on subsequent slide →)

3. Provide a high-level summary of potential measures and responses that would likely be available to WUGs in the event of near-term onset of a DWDOR to provide additional, potential capacity to withstand a DWDOR. RWPGs are not expected to identify conditions constituting a DWDOR or provide details on potential capacities needed to plan for a DWDOR.

2. Uncertainty and Droughts Worse Than the Drought of Record (5 of 5)

Proposed Language for Chapter 7 (*Continued from previous slide*):

The following provides examples of demand management and water supply measures that could be implemented during a DWDOR:

- Demand Management Measures:
  - For WUGs and WWPs that do not already have the Drought Management WMS included as a Recommended strategy in the RWP: Implement Drought Management reductions associated with outdoor watering restrictions, conversion of irrigated crops to dry farming, or temporary suspension of water use.
  - For WUGs and WWPs with the Drought Management WMS included as a Recommended strategy in the RWP: Implement additional drought management measures beyond those in the plan.
- Water Supply Measures:
  - Pursue new direct potable reuse to extend existing supplies
  - Pursue new groundwater well
  - Pursue new brackish groundwater well with desalination
  - Pursue new plan to blend brackish groundwater with existing water supply without additional desalination
  - Implement new or existing emergency interconnects with other water providers
  - Purchase hauled water via trucked water systems

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3. Current Preparations for Drought in the Region Including Unnecessary or Counterproductive Drought Response

Requirement:

- Describe current preparations for drought, including a summary of drought response efforts that the region has identified as unnecessary or counterproductive
- Review and summarize, at a minimum, efforts for neighboring communities that may confuse the public or impede drought response efforts, such as differences in the implementation of outdoor watering restrictions.

Proposed Direction for 2026 Region L Regional Water Plan is to Carry Forward Same Language/Approach from 2021 Plan

The SCTRWPG recognizes that each entity develops drought response measures and tailors them to their own unique circumstances and goals. In an effort to ensure that local water managers can continue to manage their local water supplies, the SCTRWPG chose to deem no variations in drought response strategies as unnecessary or counterproductive.

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8. Other Drought-Related Considerations and Recommendations (1 of 4)

Requirement:

- The RWPG must consider any relevant recommendations from the Drought Preparedness Council (DPC).
- The DPC provided a letter to Region L on February 8, 2024, that included three recommendations that is summarized in subsequent slides.

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8. Other Drought-Related Considerations and Recommendations (2 of 4)

Proposed Chapter 7 Language to Address Recommendations from the DPC:

No.	DPC Recommendation	Proposed Chapter 7 Response to DPC Recommendation
1	The regional water plans and state water plan shall serve as water supply plans under drought of record conditions. The DPC encourages regional water planning groups to consider planning for drought conditions worse than the drought of record, including scenarios that reflect greater rainfall deficits and/or higher surface temperatures.	For the 2026 RWP, the SCTRWPG considered planning for a DWDOR; however, the SCTRWPG chose not to incorporate it at this time because forecasting tools have not been able to provide the resolution needed for water planning on a regional basis. Instead, the SCTRWPG included a Legislative and Other Recommendation in Chapter 8 that recognizes that down-scaling of climate models is becoming more sophisticated, and the results are being considered in other planning efforts and models, such as water availability models (WAMs). In Chapter 8, the SCTRWPG recommends that 1) the Texas Legislature fund relevant studies and down-scaled regional models to incorporate available climate variability into the Regional Water Planning process; and 2) the TWDB to reassess available climate models and consider incorporating them into Regional Water Planning.

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8. Other Drought-Related Considerations and Recommendations (3 of 4)

Proposed Chapter 7 Language to Address Recommendations from the DPC:

No.	DPC Recommendation	Proposed Chapter 7 Response to DPC Recommendation
2	The Drought Preparedness Council encourages regional water planning groups to incorporate projected future reservoir evaporation rates in their assessments of future surface water availability.	Historical reservoir evaporation rates are incorporated into WAMs that the SCTRWPG uses to determine surface water availability. However, projected future reservoir evaporation rates would require development of climate models with resolution needed for water planning on a regional basis. As described previously, the SCTRWPG understands that incorporation of down scaled climate models is being considered for inclusion in WAMs, which would incorporate projected future reservoir evaporation rates. In Chapter 8, the SCTRWPG recommends incorporating these models into Regional Water Planning efforts.

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8. Other Drought-Related Considerations and Recommendations (4 of 4)

Proposed Chapter 7 Language to Address Recommendations from the DPC:

No.	DPC Recommendation	Proposed Chapter 7 Response to DPC Recommendation
3	The Drought Preparedness Council encourages regional water planning groups to identify in their plans utilities within their boundaries that reported having less than 180 days of available water supply to the Texas Commission on Environmental Quality during the current or preceding planning cycle. For systems that appeared on the 180-day list, RWPGs should perform the evaluation required by Texas Administrative Code Section 357.42(g), if it has not already been completed for that system.	Chapter 7 of the RWP includes a summary of WUGs who reported having less than 180 days of available water supply to the TCEQ. Additionally, the RWP includes the evaluation required in 31 TAC §357.42(g), which identifies potential alternative water sources for temporary emergency use by WUGs and WWPs in the event of water supplies becoming temporarily unavailable.

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9. Development of Region-Specific Model DCPs

Requirement:

- Develop at least two region-specific model drought contingency plans (DCPs). It is at the discretion of the RWPG on the type of DCPs developed but is recommended that RWPGs develop plans that would be of use to the types of water users within the regional water planning area (RWPA).

Proposed Direction for 2026 Region L Regional Water Plan

- **For WUGs Relying on Purchased Water:** The SCTRWPG recognizes that supplies are understood best by the operators and suggests that WUGs review DCPs that their water provider(s) have adopted.
- **For WUGs Relying on Self-Supplied Water:** The SCTRWPG suggests reviewing drought responses and recommendations used by similar entities in the region. DCPs from GBRA and SAWS were selected as examples for surface water and groundwater sources, respectively. The EAA Critical Period/Drought Management Plan is included because it applies to municipal, industrial, and irrigation users.

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TOPIC E

Water Management Strategy (WMS) Updates

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Timeline and Process for WMS Evaluations

August RWPG Meeting

- Presentation of Block 1 WMSs
- SCTRWPG provides input on methodology for certain WMSs

November RWPG Meeting

- Presentation of Block 2 WMSs
- SCTRWPG considers which WMSs to add as Recommended or Alternative WMSs

January RWPG Meeting

- Presentation of Cumulative Effects Analysis

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Presentation of WMSs in Two Blocks

1. Advanced Water Conservation
2. Non-municipal Water Conservation
3. Drought Management
4. Edwards Transfers
5. Fresh Groundwater Development
6. Brackish Groundwater Development
7. Groundwater Conversions
8. Facilities Expansion
9. Recycled Water
10. Brush Management
11. Rainwater Harvesting
12. Surface Water Rights
13. Balancing Storage
14. ARWA Expanded Carrizo-Wilcox Project (Phase 2)
15. ARWA DPR Project (Phase 3)
16. CRWA Expanded Brackish Carrizo-Wilcox Project
17. CRWA Siesta Project
18. CRWA Wells Ranch 3 (Phase 2) Project
19. CVLGC Carrizo Project
20. GBRA Lower Basin New Appropriation
21. GBRA WaterSECURE
22. Medina County Regional ASR Project
23. NBU ASR Project
24. NBU Trinity Well Field Expansion
25. SAWS Expanded Local Carrizo Project
26. SAWS Expanded Brackish Groundwater Project
27. SAWS Regional Wilcox Project
28. SSLGC Expanded Brackish Wilcox Project
29. SSLGC Expanded Carrizo Project
30. Victoria ASR Project
31. Victoria Groundwater-Surface Water Exchange
32. Weather Modification

Legend

Block 1: August RWPG Meeting Presentation

Block 2: November RWPG Meeting Presentation

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Presentation of Block 2 WMS Evaluations

Important Disclaimers and Notes:

- All WMSs are evaluated uniformly and consistent with TWDB requirements.
- In accordance with Region L Guiding Principle V, evaluations are for planning purposes only; they are not meant to influence or interfere with regulatory decisions made by governing boards of permitting entities.
- All summaries of WMSs are in DRAFT form and are subject to change.
- Location maps include hypothetical locations of facilities for regional planning purposes only as it relates to planning-level cost estimates. The locations shown on the maps are conceptual in nature and are not meant to represent actual locations of facilities. Facilities sitings are subject to studies, designs, engineering, and/or contract negotiations to be determined by the project's sponsor at a later date.
- Several strategies are new and are indicated as such.
- Several strategies are carried forward from 2021 Region L Regional Water Plan. WMS changes or updates are indicated in red text within each WMS evaluation summary.
- Status of state and federally listed species and proposed listings.

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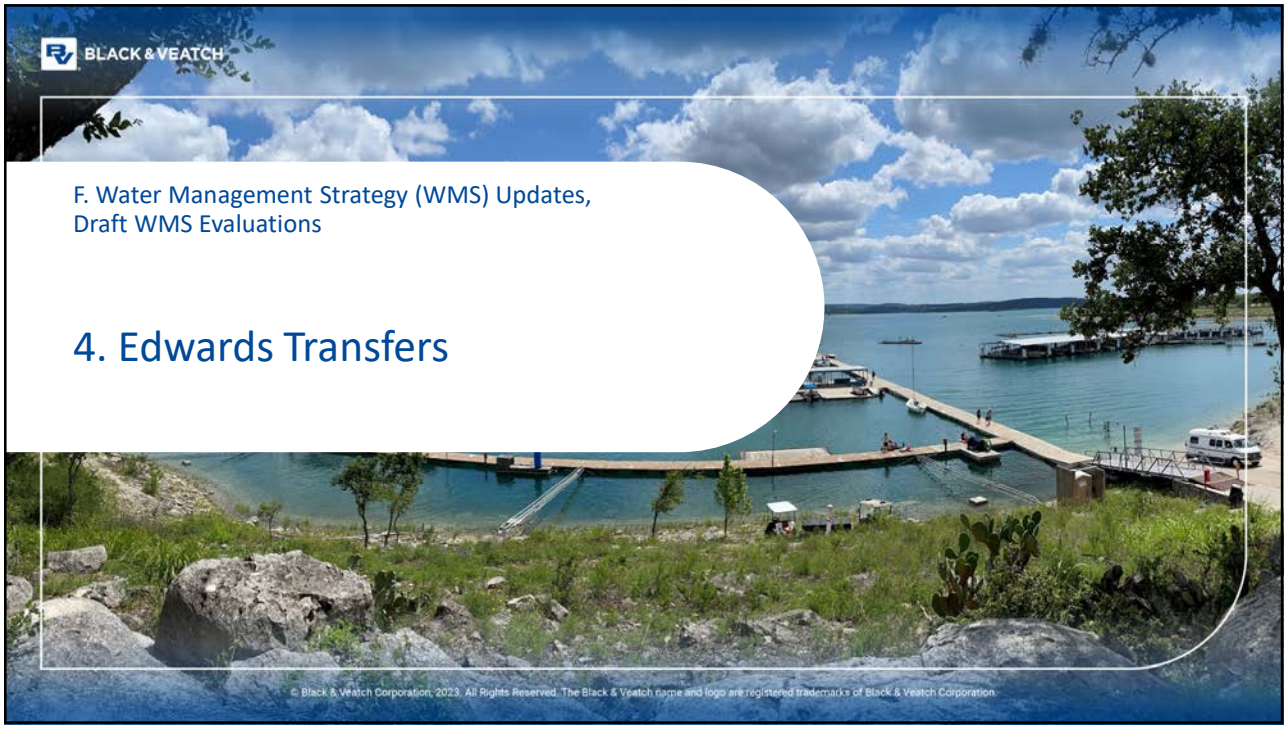

4. Edwards Transfers

Project Description

Transfer of Edwards Aquifer Authority (EAA) groundwater permits between willing sellers and willing buyers. Permits with "Irrigation" use type would be transferred to WUGs that already rely on Edwards-BFZ Aquifer for Municipal, Manufacturing, Mining, or Steam-Electric uses. Transfer potential is limited to unrestricted EAA permit volumes and is subject to EAA rules, Edwards Aquifer Habitat Conservation Plan, Critical Period Management Plan, and any other EAA forbearance programs.

- Project Sponsor(s): Varies, see table to the right
- Source: Edwards-BFZ Aquifer
- Yield: 15,212 acft/yr
- Implementation Decade: 2030
- Components:
  - Conversion and transfer of irrigation permits for other uses
  - Integration components

No.	Sponsor	No.	Sponsor
1	Air Force Village II Inc	12	Kirby
2	Alamo Heights	13	Leon Valley
3-4	Atascosa Rural WSC	14	Live Oak
5	Bexar County WCID 10	15	Lytle
6	Castroville	16	Schertz
7	Converse	17	Selma
8	East Medina County SUD	18	Uvalde
9	Fort Sam Houston	19	Ville Dalsace Water Supply
10	Green Valley SUD	20	Yancey WSC
11	Hondo		

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Strategy Yield by WUG (1 of 2)

4. Edwards Transfers

			Yield (acft/yr)					
No.	Sponsor	Source County	2030	2040	2050	2060	2070	2080
1	Air Force Village II Inc	Bexar	30	30	30	30	30	30
2	Alamo Heights	Bexar	200	200	200	200	200	200
3	Atascosa Rural WSC	Atascosa	335	335	335	335	335	335
4	Atascosa Rural WSC	Bexar	1,550	1,550	1,550	1,550	1,550	1,550
5	Bexar County WCID 10	Bexar	400	400	400	400	400	400
6	Castroville	Medina	950	950	950	950	950	950
7	Converse	Bexar	200	200	200	200	200	200
8	East Medina County SUD	Medina	350	350	350	350	350	350
9	Fort Sam Houston	Bexar	1,617	1,617	1,617	1,617	1,617	1,617
10	Green Valley SUD	Comal	20	20	20	20	20	20
REGION L TOTAL			15,212	15,212	15,212	15,212	15,212	15,212

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Strategy Yield by WUG (2 of 2)

4. Edwards Transfers

			Yield (acft/yr)					
No.	Sponsor	Source County	2030	2040	2050	2060	2070	2080
11	Hondo	Medina	350	350	350	350	350	350
12	Kirby	Bexar	150	150	150	150	150	150
13	Leon Valley	Bexar	860	860	860	860	860	860
14	Live Oak	Bexar	10	10	10	10	10	10
15	Lytle	Medina	200	200	200	200	200	200
16	Schertz	Medina	5,000	5,000	5,000	5,000	5,000	5,000
17	Selma	Medina	2,500	2,500	2,500	2,500	2,500	2,500
18	Uvalde	Uvalde	350	350	350	350	350	350
19	Ville Dalsace Water Supply	Medina	80	80	80	80	80	80
20	Yancey WSC	Medina	60	60	60	60	60	60
REGION L TOTAL			15,212	15,212	15,212	15,212	15,212	15,212

Environmental & Cultural Considerations

4. Edwards Transfers

Vegetation, Land Use, & Agricultural Resources 1

- Transfer of irrigation may result in conversions to dryland crops or grassland
- Vegetation changes may be beneficial to native wildlife

Aquatic Resources 0

- Locations of groundwater withdrawals would change but permitted amounts would remain the same

Threatened, Endangered, & Species of Concern 0

- No impacts anticipated

Cultural Considerations 0

- No impacts anticipated

ASSESSMENT RATING LEGEND

0 N/A

1 Minimal concerns; precautions recommended

2 Additional studies recommended

Strategy Yield by WUG (1 of 2)

4. Edwards Transfers

		Annual Costs $/acft per year					
No.	Sponsor	2030	2040	2050	2060	2070	2080
1	Air Force Village II Inc	$67,088	$67,088	$67,088	$67,088	$67,088	$67,088
2	Alamo Heights	$447,254	$447,254	$447,254	$447,254	$447,254	$447,254
3	Atascosa Rural WSC (via Atascosa County)	$749,151	$749,151	$749,151	$749,151	$749,151	$749,151
4	Atascosa Rural WSC (via Bexar County)	$3,466,221	$3,466,221	$3,466,221	$3,466,221	$3,466,221	$3,466,221
5	Bexar County WCID 10	$894,509	$894,509	$894,509	$894,509	$894,509	$894,509
6	Castroville	$2,124,458	$2,124,458	$2,124,458	$2,124,458	$2,124,458	$2,124,458
7	Converse	$447,254	$447,254	$447,254	$447,254	$447,254	$447,254
8	East Medina County SUD	$782,695	$782,695	$782,695	$782,695	$782,695	$782,695
9	Fort Sam Houston	$3,616,051	$3,616,051	$3,616,051	$3,616,051	$3,616,051	$3,616,051
10	Green Valley SUD	$44,725	$44,725	$44,725	$44,725	$44,725	$44,725
REGION L TOTAL		$34,018,163	$34,018,163	$34,018,163	$34,018,163	$34,018,163	$34,018,163

Notes:
- September 2023 dollars
- Annual costs developed using average unit costs of $3,160, which includes integration costs for facility upgrades

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Strategy Yield by WUG (2 of 2)

4. Edwards Transfers

		Annual Costs $/acft per year					
No.	Sponsor	2030	2040	2050	2060	2070	2080
11	Hondo	$782,695	$782,695	$782,695	$782,695	$782,695	$782,695
12	Kirby	$335,441	$335,441	$335,441	$335,441	$335,441	$335,441
13	Leon Valley	$1,923,194	$1,923,194	$1,923,194	$1,923,194	$1,923,194	$1,923,194
14	Live Oak	$22,363	$22,363	$22,363	$22,363	$22,363	$22,363
15	Lytle	$447,254	$447,254	$447,254	$447,254	$447,254	$447,254
16	Schertz	$11,181,358	$11,181,358	$11,181,358	$11,181,358	$11,181,358	$11,181,358
17	Selma	$5,590,679	$5,590,679	$5,590,679	$5,590,679	$5,590,679	$5,590,679
18	Uvalde	$782,695	$782,695	$782,695	$782,695	$782,695	$782,695
19	Ville Dalsace Water Supply	$178,902	$178,902	$178,902	$178,902	$178,902	$178,902
20	Yancey WSC	$134,176	$134,176	$134,176	$134,176	$134,176	$134,176
REGION L TOTAL		$34,018,163	$34,018,163	$34,018,163	$34,018,163	$34,018,163	$34,018,163

Notes:
- September 2023 dollars
- Annual costs developed using average unit costs of $3,160, which includes integration costs for facility upgrades

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5. Fresh Groundwater Development

New in 2026 Plan

Project Description

Fresh groundwater projects for WUGs who rely on groundwater and/or requested inclusion of a groundwater project. Includes two categories: Expand Groundwater Use and Develop New Wells.

- Project Sponsor(s): Varies, see table to the right
- Source: Varies
- Yield: Varies
- Implementation Decade: Varies
- Components:
  - Varies, examples include:
    - Well field, pump, and piping
    - Storage tank
    - Water treatment plant

No.	Sponsor	No.	Sponsor
1	Atascosa Rural WSC	9	Martindale WSC
2	Benton City WSC	10	Mining, Uvalde
3	Clear Water Estates Water System	11	Oak Hills WSC
4	Crystal Clear SUD	12	Pearsall
5	Crystal Clear SUD	13	Picosa WSC
6	Garden Ridge	14	Springs Hill WSC
7	Kendall West Utility	15	Springs Hill WSC
8	KT Water Development	16	Wingert Water Systems

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Strategy Yield by WUG (1 of 3)

5. Fresh Groundwater Development – Expand Groundwater Use*

New in 2026 Plan

* No project costs are associated with strategy.

				Expand Groundwater Use, Yield (acft/yr)					
No.	Sponsor	Aquifer	Source County	2030	2040	2050	2060	2070	2080
1	Benton City WSC	Carrizo-Wilcox	Atascosa	0	0	200	300	400	500
2	Kendall West Utility	Trinity	Kendall	0	0	400	400	400	400
3	Oak Hills WSC	Carrizo-Wilcox	Wilson	373	475	588	714	857	1,015
4	Pearsall	Carrizo-Wilcox	Frio	100	100	100	100	100	100
5	Picosa WSC	Carrizo-Wilcox	Wilson	0	38	84	122	169	221
REGION L TOTAL				473	613	1,372	1,636	1,926	2,236

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Strategy Yield by WUG (2 of 3)

5. Fresh Groundwater Development – Develop New Wells*

New in 2026 Plan

*Some strategies have firm yields that are MAG-limited, meaning they are lower than the requested amount (red text)

					Develop New Wells, Yield (acft/yr)					
No.	Sponsor	Aquifer	Source County	Yield Type	2030	2040	2050	2060	2070	2080
1	Atascosa Rural WSC	Carrizo-Wilcox	Atascosa	Firm	1,200	1,400	1,600	1,800	2,000	2,200
				Requested	1,200	1,400	1,600	1,800	2,000	2,200
2	Clear Water Estates Water System	Trinity	Comal	Firm	918	1,165	1,454	1,771	1,989	1,973
				Requested	918	1,165	1,454	1,771	2,069	2,351
3	Crystal Clear SUD	Trinity	Comal	Firm	1,988	1,988	1,988	1,988	1,911	1,668
				Requested	1,988	1,988	1,988	1,988	1,988	1,988
4	Crystal Clear SUD	Carrizo-Wilcox	Guadalupe	Firm	443	367	403	378	380	370
				Requested	766	766	766	766	766	766
5	Garden Ridge	Trinity	Comal	Firm	1,163	1,635	2,111	2,659	3,182	3,425
				Requested	1,163	1,635	2,111	2,659	3,310	4,081
6	KT Water Development	Trinity	Comal	Firm	486	973	1,624	2,448	3,260	3,752
				Requested	486	973	1,624	2,448	3,391	4,471
REGION L TOTAL				Firm	8,051	9,606	11,318	13,963	15,642	16,301
				Requested	9,516	11,162	12,778	14,667	16,759	19,092

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Strategy Yield by WUG (3 of 3)

5. Fresh Groundwater Development – Develop New Wells*

New in 2026 Plan

*Some strategies have firm yields that are MAG-limited, meaning they are lower than the requested amount (red text)

					Develop New Wells, Yield (acft/yr)					
No.	Sponsor	Aquifer	Source County	Yield Type	2030	2040	2050	2060	2070	2080
7	Martindale WSC	San Marcos River Alluvium	Caldwell	Firm	0	240	240	240	240	240
				Requested	0	240	240	240	240	240
8	Mining, Uvalde	Leona Gravel	Uvalde	Firm	1,400	1,400	1,400	1,400	1,400	1,400
				Requested	1,400	1,400	1,400	1,400	1,400	1,400
9	Springs Hill WSC	Carrizo-Wilcox	Guadalupe	Firm	324	268	295	277	278	271
				Requested	560	560	560	560	560	560
10	Springs Hill WSC	Carrizo-Wilcox	Wilson	Firm	94	164	201	1,000	1,000	1,000
				Requested	1,000	1,000	1,000	1,000	1,000	1,000
11	Wingert Water Systems	Trinity	Hays	Firm	35	6	2	2	2	2
				Requested	35	35	35	35	35	35
REGION L TOTAL				Firm	8,051	9,606	11,318	13,963	15,642	16,301
				Requested	9,516	11,162	12,778	14,667	16,759	19,092

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Environmental & Cultural Considerations

5. Fresh Groundwater Development

Vegetation, Land Use, & Agricultural Resources — 1

- Permanent conversion of woody vegetation to pipeline easements and well fields
- Opportunity to plant native herbaceous species which are beneficial to native wildlife

Aquatic Resources — 2

- New projects will require on-site delineation of streams and wetlands

Threatened, Endangered, & Species of Concern — 2

- New development may affect suitable habitat for federally endangered whooping crane, proposed endangered tricolored bat, monarch butterfly, and state listed threatened species
- Site-specific assessments for federal and state-listed species will be required

Cultural Considerations — 2

- Structured cultural resources survey of the final design plan may be required for new project development, depending on extent of soil disturbance

ASSESSMENT RATING LEGEND

- 0 — N/A
- 1 — Minimal concerns; precautions recommended
- 2 — Additional studies recommended

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Project Cost Estimate Summary

5. Fresh Groundwater Development

New in 2026 Plan

No.	Sponsor	Project Costs	Annual Costs*	First Decade Firm Yield (acft/yr)	Unit Costs* ($/acft/yr)
1	Atascosa Rural WSC	$9,484,000	$1,315,000	1,200	$1,096
2	Clear Water Estates Water System	$6,653,000	$1,120,000	918	$1,220
3	Crystal Clear SUD (Comal County)	$18,231,000	$1,441,000	1,988	$725
4	Crystal Clear SUD (Guadalupe County)	$27,384,000	$2,482,000	443	$5,603
5	Garden Ridge	$11,505,000	$1,731,000	1,163	$1,488
6	KT Water Development	$11,362,000	$1,720,000	486	$3,539
7	Martindale WSC	$1,514,000	$128,000	240	$533
8	Mining, Uvalde	$1,731,000	$137,000	1,400	$98
9	Springs Hill WSC (Mesa Trail)	$1,364,000	$105,000	324	$324
10	Springs Hill WSC (Wilson County)	$6,870,000	$1,116,000	94	$11,872
11	Wingert Water Systems	$1,252,000	$208,000	35	$5,943
	REGION L TOTALS	**$97,350,000**	**$11,503,000**	**8,291**	**$2,957**

Notes:
* Includes debt service amortization at 3.5% for 20 years, O&M, and power costs. Unit costs are based on the first decade firm yield, which is MAG-limited in some instances

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) methodology from TWDB
- Includes capital costs, annual debt service, operation and maintenance, and environmental mitigation

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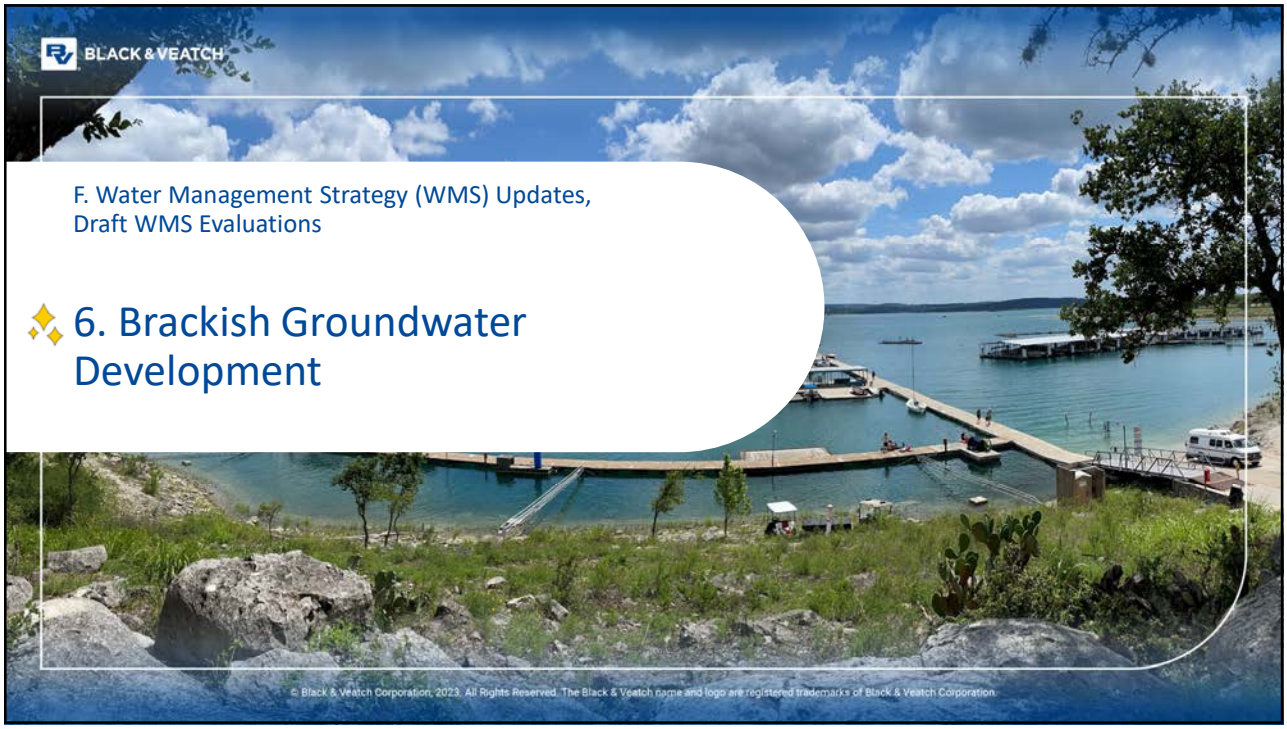

6. Brackish Groundwater Development

New in 2026 Plan

Project Description

Brackish groundwater projects for WUGs who requested inclusion of a brackish groundwater project. Includes projects with source water having concentrations of total dissolved solids (TDS) ≥ 1,000 mg/L.

- Project Sponsor(s): Varies, see table to the right
- Source: Carrizo-Wilcox Aquifer, Trinity Aquifer, Edwards-BFZ Aquifer
- Yield: Varies
- Implementation Decade: Varies
- Components:
  - Varies, examples include:
    - Well field, pump, and piping
    - Storage tank
    - Brackish desalination water treatment plant
    - Injection wells

No.	Project Name	Sponsor(s)
1	Caldwell Brackish Partnership Project	Caldwell County-Other, County Line SUD, Maxwell SUD
2	Gonzales & Guadalupe Brackish Partnership Project	Caldwell County-Other, County Line SUD, Maxwell SUD
3	County Line SUD – Trinity Project	County Line SUD
4	County Line SUD - Brackish Edwards Project	County Line SUD
5	Maxwell WSC – Trinity Project	Maxwell WSC
6	S S WSC - Brackish Carrizo-Wilcox Project	S S WSC

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Strategy Yield by WUG

6. Brackish Groundwater Development*

New in 2026 Plan

*Some strategies have firm yields that are MAG-limited, meaning they are lower than the requested amount (red text)

No.	Project	Aquifer	Source County	Yield Type	Yield (acft/yr) 2030	2040	2050	2060	2070	2080
1	Caldwell Brackish Partnership Project	Carrizo-Wilcox	Caldwell	Firm	0	1,176	4,137	5,103	6,303	6,291
				Requested	0	10,305	10,305	10,305	10,305	10,305
2	Gonzales & Guadalupe Brackish Partnership Project	Carrizo-Wilcox	Gonzales & Guadalupe	Firm	0	6,894	9,525	9,384	9,594	7,998
				Requested	0	13,329	13,329	13,329	13,329	13,329
3	County Line SUD – Trinity Project	Trinity	Hays	Firm	0	0	30	34	34	34
				Requested	0	0	500	740	740	740
4	County Line SUD - Brackish Edwards Project	Edwards-BFZ (Saline)	Hays	Firm	0	0	500	1,000	1,366	1,366
				Requested	0	0	500	1,000	1,500	1,500
5	Maxwell WSC – Trinity Project	Trinity	Hays	Firm	0	41	14	11	11	11
				Requested	0	230	230	230	230	230
6	S S WSC - Brackish Carrizo-Wilcox Project	Carrizo-Wilcox	Wilson	Firm	0	0	0	722	937	935
				Requested	0	0	0	1,120	1,120	1,120
REGION L TOTAL				**Firm**	**0**	**8,111**	**14,206**	**16,254**	**18,245**	**16,635**
				Requested	**0**	**23,864**	**24,864**	**26,724**	**27,224**	**27,224**

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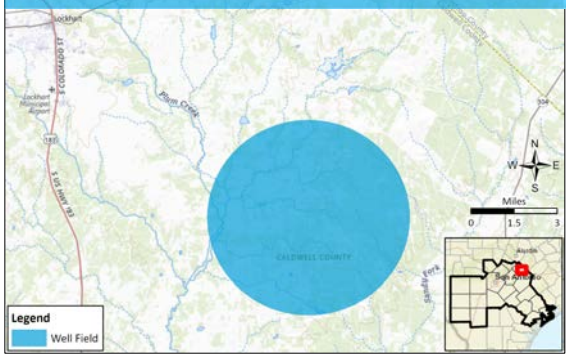
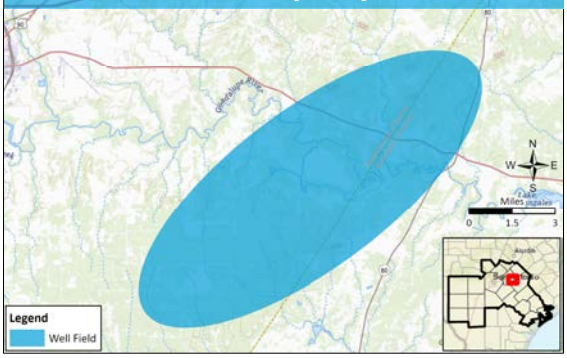
6. Brackish Groundwater Development

New in 2026 Plan

Caldwell Brackish Partnership Project



Gonzales & Guadalupe Brackish Partnership Project



Sponsors: Caldwell County-Other, County Line SUD, Maxwell SUD
Components: Well field, pump, and piping, storage tank, brackish desalination water treatment plant, injection wells, 30-inch diameter transmission pipeline

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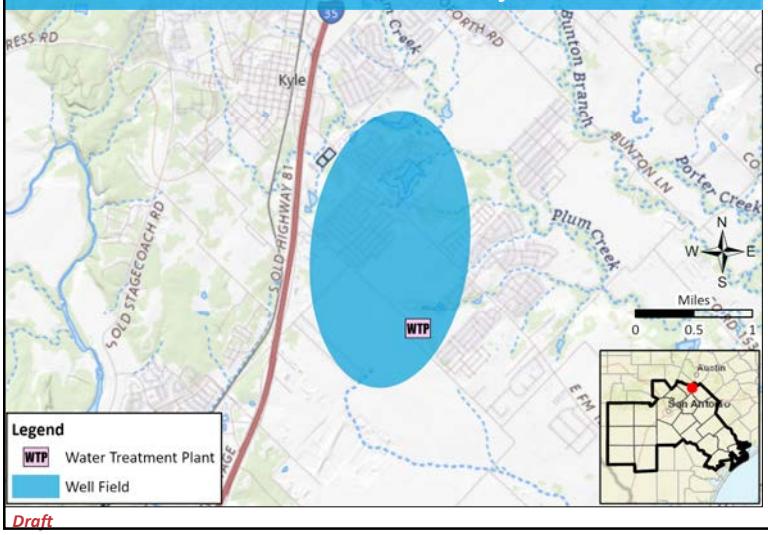
6. Brackish Groundwater Development

County Line SUD – Trinity Project & Brackish Edwards Project



County Line SUD – Trinity Project & Brackish Edwards Project*

Sponsor: County Line SUD
Components: Well field, brackish desalination water treatment plant, injection wells

*Both WMSs utilize the same facilities and is within the same area. However, cost of treatment is split between both projects.

Draft

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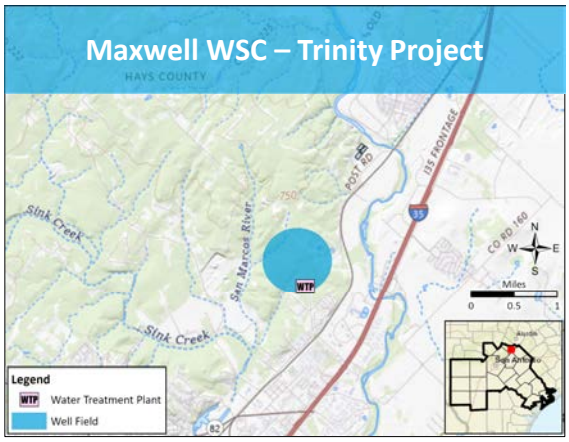
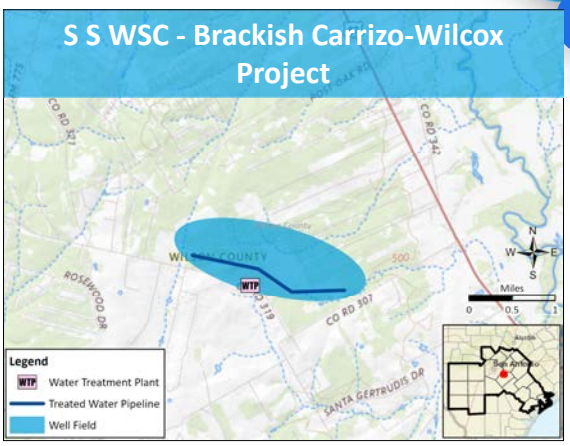
6. Brackish Groundwater Development

Maxwell WSC – Trinity Project



Sponsor: Maxwell SUD
Components: Well, storage tank, brackish desalination water treatment plant, injection well, 16-inch diameter transmission pipeline

S S WSC - Brackish Carrizo-Wilcox Project



Sponsor: S S WSC
Components: Well field and 12-inch diameter piping, storage tank, brackish desalination water treatment plant, injection well

Draft

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Environmental & Cultural Considerations

6. Brackish Groundwater Development

Vegetation, Land Use, & Agricultural Resources — 1
- Permanent conversion of woody vegetation to pipeline easement and well field
- Opportunity to plant native herbaceous species which are beneficial to native wildlife

Aquatic Resources — 2
- Pipeline crosses multiple stream segments and floodplains, including an impaired stream segment
- Project will require on-site delineation of streams; additional studies recommended

Threatened, Endangered, & Species of Concern — 2
- New well development may affect suitable habitat for federally proposed endangered tricolored bat, freshwater mussels, monarch butterfly, and state listed threatened species
- Site-specific assessments for federal and state-listed species will be required

Cultural Considerations — 2
- The likelihood of encountering unidentified archaeological resources varies by landforms
- For new project development, structured cultural resources survey of the final design plan is recommended

ASSESSMENT RATING LEGEND

0 N/A

1 Minimal concerns; precautions recommended

2 Additional studies recommended

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Project Cost Estimate Summary

6. Brackish Groundwater Development

New in 2026 Plan

No.	Project	Project Costs	Annual Costs*	First Decade Firm Yield (acft/yr)	Unit Costs* ($/acft/yr)
1	Caldwell Brackish Partnership Project	$292,793,000	$40,970,000	1,176	$34,838
2	Gonzales & Guadalupe Brackish Partnership Project	$421,443,000	$56,005,000	6,894	$8,124
3	County Line SUD - Trinity Project	$56,315,000	$9,979,000	30	$332,633
4	County Line SUD - Brackish Edwards Project	$20,907,000	$7,492,000	500	$14,984
5	Maxwell WSC - Trinity Project	$18,050,000	$2,674,000	41	$65,220
6	S S WSC - Brackish Carrizo-Wilcox Project	$52,902,000	$ 8,815,000	722	$12,209
	REGION L TOTALS	**$862,410,000**	**$125,869,000**	**9,363**	**$77,992**

Notes:
* Includes debt service amortization at 3.5% for 20 years, O&M, and power costs. Unit costs are based on the first decade firm yield, which is MAG-limited in some instances

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) methodology from TWDB
- Includes capital costs, annual debt service, operation and maintenance, and environmental mitigation

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7. Groundwater Conversions

Project Description

WMS is intended to be used by WUGs where the Fresh or Brackish Groundwater WMSs would be the primary recommended strategy to meet their needs but there is no groundwater availability because of limited permits and/or MAG estimates. This strategy includes purchasing and/or leasing existing irrigation or mining groundwater permits, and changing the type of use to municipal use.

- Project Sponsor(s): Varies, depending on needs balance after WMSs
- Source: Varies
- Yield: Varies
- Implementation Decade: Varies
- Components: Limited to permit transfers and negotiations between willing sellers and willing buyers.
- Costs: Annual unit cost of $3,160, which includes integration costs for facility upgrades.

Draft

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Environmental & Cultural Considerations

7. Groundwater Conversions

Vegetation, Land Use, & Agricultural Resources 1

- Transfer of irrigation permits may result in conversions to dry land crops or grassland
- Conversion to native herbaceous species may be beneficial to native wildlife

Aquatic Resources 2

- New projects will require on-site delineation of streams and wetlands

Threatened, Endangered, & Species of Concern 2

- New project development may affect suitable habitat for proposed federally endangered tricolored bat, monarch butterfly, and state listed threatened species
- Site-specific assessments for federal and state-listed species will be required

Cultural Considerations 2

- For new project development, structured cultural resources survey of the final design plan is recommended

ASSESSMENT RATING LEGEND

0 N/A

1 Minimal concerns; precautions recommended

2 Additional studies recommended

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8. Facilities Expansion

Project Description

WMS is intended to be used by WUGs who plan expansions to water-related infrastructure, such as expanded water treatment plants, pump stations, and pipelines.

- Project Sponsor(s): Varies, see table to the right
- Source: Varies
- Yield: Varies
- Implementation Decade: Varies, see table to the right
- Costs: Varies

No.	Sponsor	Project Name	Implementation Decade
1	CRWA	Lake Dunlap WTP Expansion (2 MGD)	2030
2	CRWA	Hays Caldwell WTP Expansion (2 MGD)	2030
3	County Line SUD	SH 21 Booster Site	2040
4	County Line SUD	High Road Booster Site	2030
5	County Line SUD	Bobwhite Booster Site	2040
6	GBRA	Western Canyon WTP Expansion (5 MGD)	2060
7	New Braunfels	South WTP Expansion (8 MGD)	2030
8	New Braunfels	Seguin Interconnect	2030
9	SAWS	Southeast Integration Pipeline	2040
10	SAWS	Expanded ASR Treatment Plant (30 MGD)	2030
11	Springs Hill WSC	Zone 2 Transmission Main	2030
12	Springs Hill WSC	Gamecock WTP (4 MGD)	2040
13	Steam-Electric, Bexar	CPS Energy Direct Recycle Pipeline	2030

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Environmental & Cultural Considerations

8. Facilities Expansion

Vegetation, Land Use, & Agricultural Resources — 1

- Impacts will vary for expansion of existing facilities; may be minimal
- Expansion of pipelines would result in conversions to land use and vegetation communities

Aquatic Resources — 2

- Projects will require on-site delineation of streams and wetlands

Threatened, Endangered, & Species of Concern — 2

- Major expansion projects may include suitable habitat proposed federally endangered tricolored bat, monarch butterfly, and state listed threatened species
- Site-specific habitat assessments for federal and state-listed species may be required

Cultural Considerations — 1

- Cultural resources survey may be required, depending on extent of soil disturbance

ASSESSMENT RATING LEGEND

0 N/A

1 Minimal concerns; precautions recommended

2 Additional studies recommended

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Strategy Yield by WUG and Cost Estimate Summary (1 of 2)

8. Facilities Expansion

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) methodology from TWDB

No.	Sponsor	Project Name	Implementation Decade	Capacity of Expansion* (acft/yr)	Cost of Facilities	Cost of Project**	Annual Cost**
1	CRWA	Lake Dunlap WTP Expansion (2 MGD)	2030	2,300	$9.88M	$13.78M	$1.86M
2	CRWA	Hays Caldwell WTP Expansion (2 MGD)	2030	2,300	$9.88M	$13.78M	$1.86M
3	County Line SUD	SH 21 Booster Site	2040	N/A	$1.5M	$2.1M	$0.22M
4	County Line SUD	High Road Booster Site	2030	N/A	$1M	$1.4M	$0.14M
5	County Line SUD	Bobwhite Booster Site	2040	N/A	$2M	$2.8M	$0.31M
6	GBRA	Western Canyon WTP Expansion (5 MGD)	2060	5,600	$16.98M	$23.73M	$2.98M
7	New Braunfels	South WTP Expansion (8 MGD)	2030	9,000	$24.08M	$33.65M	$4.1M

* Capacity of expansion for certain conveyance projects is not included because project is infrastructure only; supply is related or tied to an existing surplus or other WMS.
** Includes debt service amortization at 3.5% for 20 years, O&M, and power costs

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Strategy Yield by WUG and Cost Estimate Summary (2 of 2)

8. Facilities Expansion

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) methodology from TWDB

No.	Sponsor	Project Name	Implementation Decade	Capacity of Expansion* (acft/yr)	Cost of Facilities	Cost of Project**	Annual Cost**
8	New Braunfels	Seguin Interconnect	2030	2,500	$2.58M	$4.2M	$0.68M
9	SAWS	Southeast Integration Pipeline	2040	N/A	$56.41M	$76.99M	$6.58M
10	SAWS	Expanded ASR Treatment Plant (30 MGD)	2040	33,600	$66.42M	$92.59M	$11.16M
11	Springs Hill WSC	Zone 2 Transmission Main	2030	2,240	$42.03M	$58.54M	$4.61M
12	Springs Hill WSC	Gamecock WTP (4 MGD)	2040	2,200	$45.9M	$64.33M	$7.89M
13	Steam-Electric, Bexar	CPS Energy Direct Recycle Pipeline	2030	50,000***	$62.2M	$85.2M	$7.49M

* Capacity of expansion for certain conveyance projects is not included because project is infrastructure only; supply is related or tied to an existing surplus or other WMS.
** Includes debt service amortization at 3.5% for 20 years, O&M, and power costs
*** Pipeline capacity is 50,000 acft/yr; firm yield is 2,500 acft/yr.

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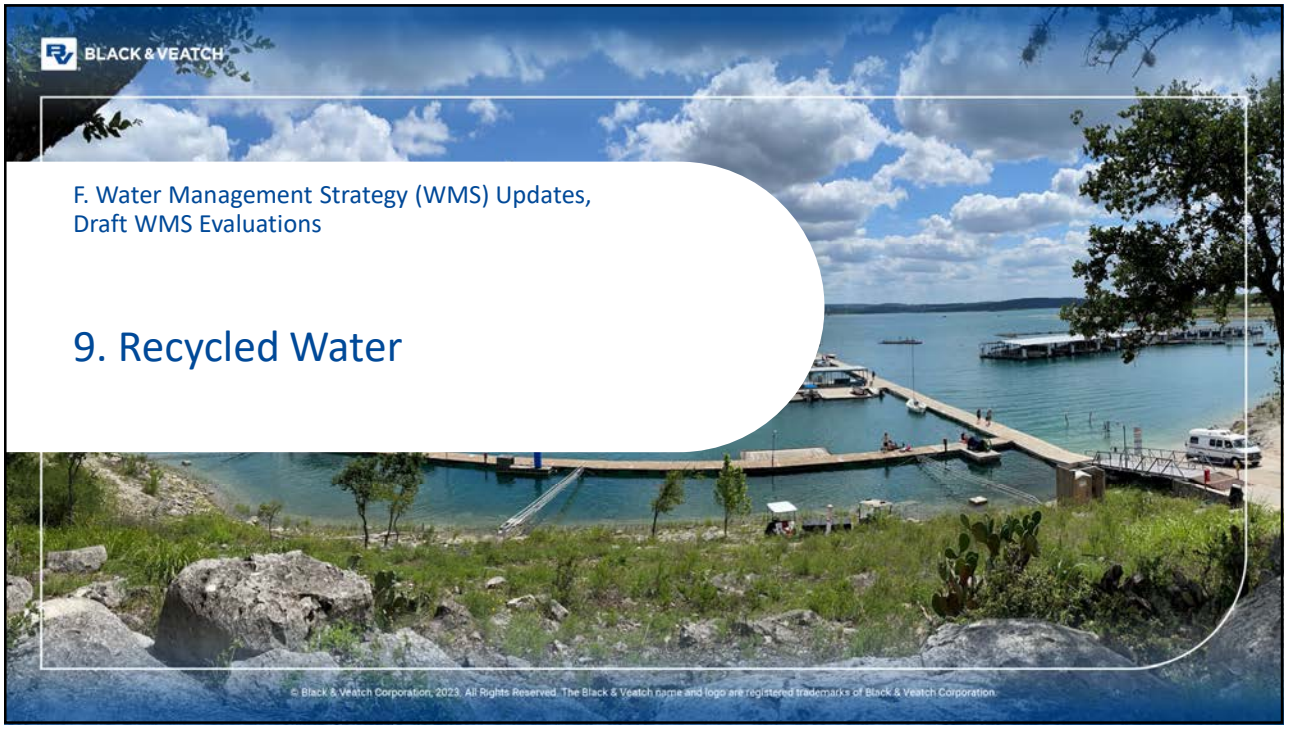

9. Recycled Water

Project Description

Reuse of wastewater treatment plant (WWTP) effluent through direct or indirect means and for potable and non-potable purposes.

- Project Sponsor(s): Varies, see table to the right
- Source: WWTP Effluent
- Yield: Varies
- Implementation Decade: Varies, see table to the right
- Components: Varies, examples include:
  - Transmission pipeline
  - Pump station
  - Storage tank
  - Additional water treatment
  - Advanced water treatment, such as reverse osmosis
  - Injection wells

No.	Sponsor	Reuse Type	Implementation Decade
1	Boerne	Direct, Non-Potable	2030
2	County Line SUD	Direct, Non-Potable	2040
3	East Central SUD	Direct, Non-Potable (SARA)	2030
4	Fair Oaks Ranch	Direct, Non-Potable	2030
5	GBRA	Direct, Non-Potable	2030
6	Kyle	Direct, Non-Potable	2030
7	Live Oak	Direct, Non-Potable (SARA)	2030
8	New Braunfels	Direct, Non-Potable	2050
9	SAWS	Direct, Non-Potable	2030
10	SAWS	Direct, Potable	2060
11	San Marcos	Direct, Potable	2050
12	San Marcos	Direct, Non-Potable	2030
13	Universal City	Direct, Non-Potable (SARA)	2030

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Strategy Yield by WUG

9. Recycled Water

			Yield (acft/yr)					
No.	Sponsor	Reuse Type	2030	2040	2050	2060	2070	2080
1	Boerne	Direct, Non-Potable	1,500	1,500	1,785	2,000	2,250	2,250
2	County Line SUD	Direct, Non-Potable	0	560	3,360	3,360	3,360	3,360
3	East Central SUD	Direct, Non-Potable (SARA)	2,250	4,167	6,067	7,033	8,000	8,000
4	Fair Oaks Ranch	Direct, Non-Potable	425	500	525	525	525	525
5	GBRA	Direct, Non-Potable	1,064	6,778	10,587	10,587	10,587	10,587
6	Kyle	Direct, Non-Potable	3,105	4,786	4,786	4,786	4,786	4,786
7	Live Oak	Direct, Non-Potable (SARA)	2,250	4,167	6,067	7,033	8,000	8,000
8	New Braunfels	Direct, Non-Potable	0	0	7,800	12,600	14,200	15,800
9	SAWS	Indirect, Non-Potable	5,000	5,000	15,000	25,000	40,000	40,000
10	SAWS*	Direct, Potable	0	0	0	25,000	25,000	25,000
11	San Marcos	Direct, Potable	0	0	4,705	4,705	4,705	4,705
12	San Marcos	Direct, Non-Potable	1,971	1,971	1,971	1,971	1,971	1,971
13	Universal City	Direct, Non-Potable (SARA)	2,250	4,167	6,067	7,033	8,000	8,000
REGION L TOTAL			19,815	33,596	68,720	111,633	131,384	132,984

* SAWS requested inclusion of WMS as an Alternative strategy

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Environmental & Cultural Considerations

9. Recycled Water

Vegetation, Land Use, & Agricultural Resources — 2

- Permanent conversion of woody vegetation to pipeline easement and facilities
- Opportunity to plant native herbaceous species which are beneficial to native wildlife

Aquatic Resources — 2

- Project will require on-site delineation of streams and wetlands

Threatened, Endangered, & Species of Concern — 2

- Suitable habitat may occur for proposed federally endangered tricolored bat, monarch butterfly, and other federal or state-listed threatened species
- Site-specific assessments for federal and state-listed species will be required

Cultural Considerations — 2

- Cultural resources surveys may be required for new project development, depending on extent of soil disturbance.

ASSESSMENT RATING LEGEND

0 N/A

1 Minimal concerns; precautions recommended

2 Additional studies recommended

Project Cost Estimate Summary

9. Recycled Water

No.	Sponsor	Project Cost	Annual Costs*	First Decade Project Yield (acft/yr)	Unit Costs* ($/acft/yr)
1	Boerne	$ 9,790,000	$ 786,000	1,500	$ 524
2	County Line SUD	$ 52,736,000	$ 6,640,000	560	$ 11,857
3	East Central SUD	$ 47,369,000	$ 3,673,000	2,250	$ 544
4	Fair Oaks Ranch	$ 3,746,000	$ 308,000	425	$ 725
5	GBRA	$ 41,535,000	$ 3,968,000	1,064	$ 3,729
6	Kyle	$ 23,657,000	$ 2,057,000	3,105	$ 662
7	Live Oak	$ 47,369,000	$ 3,673,000	2,250	$ 544
8	New Braunfels	$ 33,252,000	$ 2,823,000	7,800	$ 362
9	SAWS (Non-Potable)	$ 396,046,000	$ 55,437,000	5,000	$ 11,087
10	SAWS* (Potable)	$ 348,862,000	$ 46,321,000	25,000	$ 873
11	San Marcos (Potable)	$122,317,000	$8,671,000	4,705	$1,843
12	San Marcos (Non-Potable)	$9,933,000	$972,000	1,971	$493
13	Universal City	$ 47,369,000	$ 3,673,000	2,250	$ 544
	REGION L TOTALS	**$1,183,981,000**	**$139,002,000**	**57,880**	**$2,674**

Notes:
* Includes debt service amortization at 3.5% for 20 years, O&M, and power costs. Unit costs are based on firm yield, which is MAG-limited in some instances

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) methodology from TWDB
- Includes capital costs, annual debt service, operation and maintenance, and environmental mitigation

10. Brush Management

New in 2026 Plan

- **Description:** Targeted control of brush species that are detrimental to water conservation (e.g., juniper, mesquite, saltcedar) to increase available surface and ground water supplies.
- **Methodology:** Outreach and research evaluation of existing brush control studies, including coordination with Texas State Soil and Water Conservation Board (TSSWCB), EAA, Evergreen Underground Water Conservation District (EUWCD), and Nueces River Authority

TSSWCB Brush Control Planning, Assessment, and Feasibility Studies in Region L	Publication Date	Counties Studied
Brush Control Planning, Assessment, and Feasibility Study - Frio River Watershed	2000	Uvalde, Medina, Zavala, Frio, Dimmit, La Salle
Brush Control Planning, Assessment, and Feasibility Study - Nueces River Watershed	2000	Uvalde, Zavala, Dimmit, La Salle
Application of the EDYS Decision Tool For Modeling Of Target Sites [in Gonzales County] for Water Yield Enhancement through Brush Control	2012	Gonzales
Simulation of Streamflow and the Effects of Brush Management on Water Yields in the Upper Guadalupe River Watershed, South-Central Texas, 1995–2010	2012	Kendall, Comal
Brush Management in Gonzales County as a Water Management Strategy	2015	Guadalupe, Caldwell, Gonzales
Effects of Huisache Removal on Rangeland Evapotranspiration in Victoria County, South-Central Texas, 2015–18	2020	Victoria

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10. Brush Management

"It is understood that the water supply 'yields' described [in the study] do not represent firm yield or dependable water supply continuously available in

TSSWCB Brush Control Planning, Assessment, and Feasibility Studies in Region L	Publication Date	Counties Studied
Brush Control Planning, Assessment, and Feasibility Study - Frio River Watershed	2000	Uvalde, Medina, Zavala, Frio, Dimmit, La Salle
Brush Control Planning, Assessment, and Feasibility Study - Nueces River Watershed	2000	Uvalde, Zavala, Dimmit, La Salle

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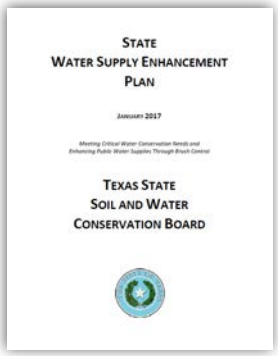
10. Brush Management

- TSSWCB manages the Water Supply Enhancement Program (WSEP), established by HB1808 in 2012. WSEP is described in the January 2017 State Water Supply Enhancement Plan.
  - In watersheds where WSEP funds have been allocated, the TSSWCB works through SWCDs to deliver technical assistance to landowners to implement brush control activities for water supply enhancement.
  - Implemented projects within Region L improved ~2,448 acres of land for a yield of ~383 acft/yr.



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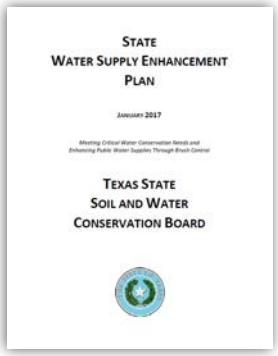
10. Brush Management

- TSSWCB manages the Water Supply Enhancement Program (WSEP), established by HB1808 in 2012. WSEP is described in the January 2017 State Water Supply Enhancement Plan.
  - In watersheds where WSEP funds have been allocated, the TSSWCB works through SWCDs to deliver technical assistance to landowners to implement brush control activities for water supply enhancement.
  - Implemented projects within Region L improved ~2,448 acres of land for a yield of ~383 acft/yr.


STATE
WATER SUPPLY ENHANCEMENT
PLAN

TEXAS STATE
SOIL AND WATER
CONSERVATION BOARD

Q: Is this yield firm/did these projects provide a dependable, continuously available water supply in a drought of record?

A: No, 18" of rain is required to realize reported yields.

Q: Does TSSWCB plan to implement additional brush control or management programs in the Region L area?

A: WSEP still exists in statute but has not received funding since 2019. Therefore, there's currently no statewide TSSWCB initiative for brush control or brush management implementation. TSSWCB funding is available via the Water Quality Management Plan (WQMP) program for conservation practices.

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Environmental & Cultural Considerations

10. Brush Management

Vegetation, Land Use, & Agricultural Resources — 0

- Conversion of woody to herbaceous vegetation can improve sites for grazing and for wildlife species dependent on grasslands
- Can be part of a strategy to increase edge habitat for species such as white-tailed deer

Aquatic Resources — 1

- May improve springflows
- Best management practices should be implemented to minimize erosion/stream sedimentation during brush removal and until herbaceous vegetation has established

Threatened, Endangered, & Species of Concern — 1

- Will remove suitable habitat for woodland species, including bats and migratory birds, while creating habitat for grassland species
- Site-specific evaluations and actions should be taken to avoid/minimize impacts to protected species

Cultural Considerations — 0

- Significant impacts not anticipated

ASSESSMENT RATING LEGEND

0 N/A

1 Minimal concerns; precautions recommended

2 Additional studies recommended

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10. Brush Management

Because there is no demonstrated firm yield during a repeat of the DOR, Brush Management cannot be included as a *recommended WMS* in the 2026 Region L Plan.

However, we can include the following in the 2026 Plan:

- Chapter 5: The WMS evaluation will include:
  - Statement expressing the SCTRWPG's support for practice
  - Description of methodology and resources reviewed
  - List of entities who have expressed interest in the practice, including Nueces River Authority, EAA, and Poteet
- Chapter 8: Includes a policy recommendation entitled, "Assistance for Alternative Rangeland Management", which recommends the legislature increase funding to the TSSWCB to study the effectiveness of proven rangeland management practices.

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11. Rainwater Harvesting

New in 2026 Plan

Project Description

Rainwater harvesting involves collection of run-off from a structure or other impervious surface to store for later use. Non-potable (WUGs) and potable (County-Other) rainwater harvesting would be implemented by individual homeowners.

- Project Sponsor(s): Boerne, Kirby, Kyle, Leon Valley, Port Lavaca, and Poteet, and County-Other WUGs for Caldwell, Comal, Guadalupe, and Hays Counties
- Implementation Decade: 2040
- Source: Demand reduction
- Yield: Varies based on WUG
- Components: Rainwater harvesting system

Image Source: TWDB

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Demand Reduction (Yield) by WUG

11. Rainwater Harvesting – Non-potable

New in 2026 Plan

Yield Assumptions:

- 10% of households (one catchment area per household) will implement small-scale rainwater harvesting starting in 2040
- A catchment area of 2,000 square feet yields about 1,000 gallons for 1 inch of rainfall
- Storage capacity limitation of 2,000 gallons/household for small-scale

WUG	County	Basin	Non-potable, Yield (acft/yr)					
			2030	2040	2050	2060	2070	2080
Boerne	Kendall	San Antonio	-	51	69	90	114	141
Kirby	Bexar	San Antonio	-	16	16	16	16	16
Kyle	Hays	Guadalupe	-	132	180	201	208	214
Leon Valley	Bexar	San Antonio	-	28	28	28	28	28
Port Lavaca	Calhoun	Lavaca-Guadalupe	-	17	17	17	17	17
Poteet	Atascosa	Nueces	-	3	3	3	3	3
REGION L TOTAL (WUG-specific)			**-**	**247**	**313**	**355**	**386**	**419**

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Demand Reduction (Yield) by WUG

11. Rainwater Harvesting – Potable

New in 2026 Plan

Yield Assumptions:

- 10% of households (one catchment area per household) will implement large-scale rainwater harvesting starting in 2040
- A catchment area of 2,000 square feet yields about 1,000 gallons for 1 inch of rainfall
- Storage capacity limitation of 15,000 gallons/household for large-scale

WUG	County	Basin	Potable, Yield (acft/yr)					
			2030	2040	2050	2060	2070	2080
County-Other	Caldwell	Colorado/Guadalupe	-	1	3	2	3	5
County-Other	Comal	Guadalupe/San Antonio	-	37	52	114	152	199
County-Other	Guadalupe	Guadalupe/San Antonio	-	4	7	9	12	15
County-Other	Hays	Guadalupe	-	27	44	118	199	329
REGION L TOTAL (County-Other)			-	69	106	243	366	548

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Environmental & Cultural Considerations

11. Rainwater Harvesting

Vegetation, Land Use, & Agricultural Resources 0

- Small footprint of infrastructure; no significant environmental or energy consumption impacts

Aquatic Resources 0

- Reduces runoff, which may improve stormwater water quality and flood impacts during significant storm events
- Conserves and reduces use of surface water or groundwater for residential irrigation

Threatened, Endangered, & Species of Concern 0

- No impacts anticipated

Cultural Considerations 1

- Agency review may be required for installation on a historic structure

ASSESSMENT RATING LEGEND

0 N/A

1 Minimal concerns; precautions recommended

2 Additional studies recommended

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Project Cost Estimate Summary

11. Rainwater Harvesting

- Non-potable Household System = $8,000
- Potable Household System = $21,000

New in 2026 Plan

Sponsor	Cost of Facilities	Annual Costs*	2080 Project Yield (acft/yr)	Unit Costs* ($/acft/yr)
Boerne	$29,856,000	$3,590,000	141	$25,461
Kirby	$3,144,000	$378,000	16	$23,625
Kyle	$41,760,000	$5,021,000	214	$23,463
Leon Valley	$5,480,000	$659,000	28	$23,536
Port Lavaca	$3,296,000	$396,000	17	$23,294
Poteet	$632,000	$76,000	3	$25,333
Caldwell C-O	$2,205,000	$265,000	5	$53,000
Comal C-O	$90,678,000	$10,903,000	199	$54,789
Guadalupe C-O	$6,720,000	$808,000	15	$53,867
Hays C-O	$150,024,000	$18,039,000	329	$54,830
TOTAL	**$333,795,000**	**$40,135,000**	**967**	**$36,120**

* Includes debt service amortization at 3.5% for 10 years

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) methodology from TWDB
- Includes capital costs and annual debt service

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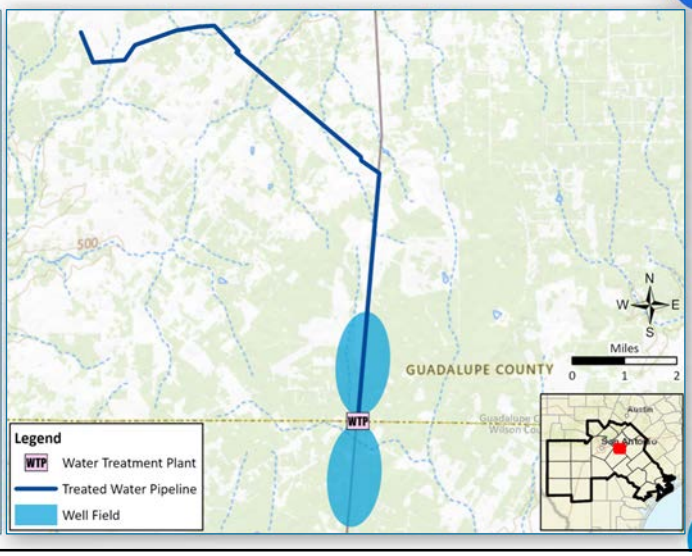
16. CRWA Expanded Brackish Carrizo-Wilcox Project

Project Description

New brackish groundwater well fields in the Carrizo-Wilcox Aquifer in Guadalupe and Wilson Counties.

- Project Sponsor(s): CRWA
- Source: Brackish groundwater from the Carrizo-Wilcox Aquifer in Guadalupe and Wilson Counties
- Yield: MAG-limited
  - Firm: 6,514 – 11,405 acft/yr
  - Requested: 14,700 acft/yr
- Implementation Decade: 2040
- Components:
  - Two well fields (17 wells, pumps, pipelines)
  - Brackish desalination water treatment plant (17 MGD)
  - Injection wells for concentrate disposal
  - Transmission pipeline (12 miles)
  - Pump stations
  - Ground storage tank



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Environmental & Cultural Considerations

16. CRWA Expanded Brackish Carrizo-Wilcox Project

Vegetation, Land Use, & Agricultural Resources — 1

- Vegetation would be expected to quickly re-establish once construction is complete
- Opportunity to plant native species which are beneficial to native wildlife

Aquatic Resources — 2

- Project area includes Ecleto Creek, an impaired segment in the Texas 303(d) List
- Project will require on-site delineation of streams; additional studies recommended

Threatened, Endangered, & Species of Concern — 2

- Suitable habitat may occur for the proposed federally endangered tricolored bat, federal candidate monarch butterfly, whooping crane (during migration), and several state listed threatened species
- Pre-construction surveys for active bird nests are recommended

Cultural Considerations — 2

- Encountering unidentified archaeological resources is more likely in some landforms than others; the landforms crossed in this project range from 95% of the area having low likelihood to 4% of the area having moderate likelihood
- Structured cultural resources survey of the final design plan is recommended

ASSESSMENT RATING LEGEND

- 0 N/A
- 1 Minimal concerns; precautions recommended
- 2 Additional studies recommended

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Project Cost Estimate Summary

16. CRWA Expanded Brackish Carrizo-Wilcox Project

WMS Cost Summary	
Cost of Facilities	$236,210,000
Total Project Cost	$332,516,000
Project Yield (acft/yr)	14,700
Total Annual Cost*	$46,455,000
Annual Unit Cost ($/acft)*	$3,160
Annual Unit Cost, After Debt Service ($/acft)	$1,570

* Includes debt service amortization at 3.5% for 20 years, O&M, and power costs Based on a peaking factor of 1.3.

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) from TWDB
- Includes capital costs, annual debt service, operation and maintenance, power, land acquisition, and environmental mitigation

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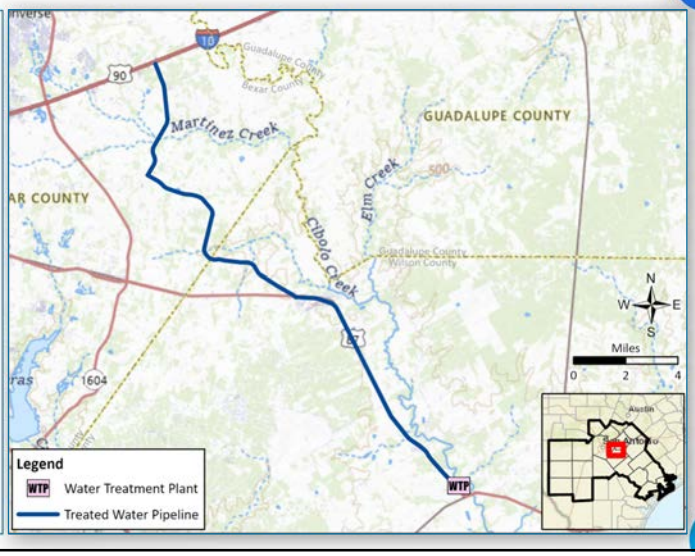
17. CRWA Siesta Project

Project Description

Diversion of surface water from Cibolo Creek in Wilson County and transmission to an existing elevated storage tank (EST). Surface water supplied by existing and amended water rights, along with treated effluent from multiple WWTPs.

- Project Sponsor(s): CRWA
- Source: Cibolo Creek in Wilson County
- Yield: 5,042 acft/yr
- Implementation Decade: 2060
- Components:
  - Channel dam
  - Intake
  - Pump stations
  - Transmission pipeline (23 miles)
  - Water treatment plant (6.8 MGD)



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Environmental & Cultural Considerations

17. CRWA Siesta Project

Vegetation, Land Use, & Agricultural Resources — 1

- Vegetation would be expected to quickly re-establish once construction is complete

Aquatic Resources — 2

- Project will require an on-site delineation of streams, ponds and wetlands
- Impaired segment of Martinez Creek occurs in project area

Threatened, Endangered, & Species of Concern — 2

- Project area may contain suitable habitat for monarch butterfly, whooping crane (during migration), and several state-threatened species
- Site-specific field surveys would be required to determine the quality of habitat and potential for impacts to federal and state-listed species
- Pre-construction surveys for active bird nests are recommended

Cultural Considerations — 2

- Likelihood of encountering significant unidentified archaeological resources ranges from 23% of the area having low likelihood to 26% having high likelihood
- The design should avoid the cemeteries in the area
- Structured cultural resources survey of the final design plan is recommended

ASSESSMENT RATING LEGEND

- 0 — N/A
- 1 — Minimal concerns; precautions recommended
- 2 — Additional studies recommended

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Project Cost Estimate Summary

17. CRWA Siesta Project

WMS Cost Summary	
Cost of Facilities	$145,560,000
Total Project Cost	$202,995,000
Project Yield (acft/yr)	5,042
Total Annual Cost*	$20,259,000
Annual Unit Cost ($/acft)*	$4,018
Annual Unit Cost, After Debt Service ($/acft)	$1,190

* Includes debt service amortization at 3.5% for 20 years, O&M, and power costs Based on a peaking factor of 1.5.

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) from TWDB
- Includes capital costs, annual debt service, operation and maintenance, power, land acquisition, purchase of water, and environmental mitigation

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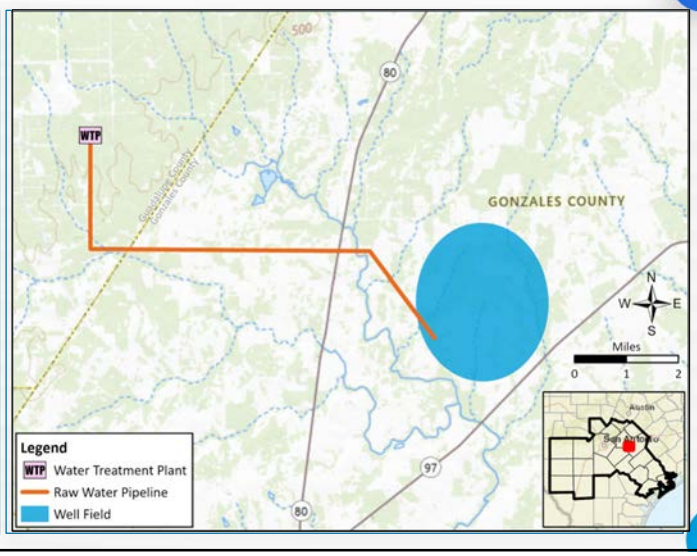
18. CRWA Wells Ranch 3 (Phase 2) Project

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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Environmental & Cultural Considerations

18. CRWA Wells Ranch 3 (Phase 2) Project

Vegetation, Land Use, & Agricultural Resources — 1

- Permanent conversion of native vegetation (mostly open fields) to pipeline easement and well field
- Opportunity to re-vegetate with native herbaceous species which are beneficial to native wildlife

Aquatic Resources — 2

- Project area contains five named creeks and unnamed tributaries
- Project will require on-site delineation of streams; additional studies recommended

Threatened, Endangered, & Species of Concern — 2

- Suitable habitat may occur for proposed federally endangered tricolored bat, monarch butterfly, whooping crane (during migration), and several state listed threatened species
- Site-specific assessments for tricolored bat and state-listed species will be required

Cultural Considerations — 2

- Low likelihood of encountering significant unidentified archaeological resources
- Over 40 potential historic-age structures occur in the project area

ASSESSMENT RATING LEGEND

- 0 — N/A
- 1 — Minimal concerns; precautions recommended
- 2 — Additional studies recommended

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Project Cost Estimate Summary

18. CRWA Wells Ranch 3 (Phase 2) Project

WMS Cost Summary	
Cost of Facilities	$100,076,000
Total Project Cost	$139,137,000
Project Yield (acft/yr)	14,500
Total Annual Cost*	$13,643,000
Annual Unit Cost ($/acft)*	$941
Annual Unit Cost, After Debt Service ($/acft)	$268

* Includes debt service amortization at 3.5% for 20 years, O&M, and power costs Based on a peaking factor of 1.0.

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) from TWDB
- Includes capital costs, annual debt service, operation and maintenance, power, land acquisition, and environmental mitigation

Draft

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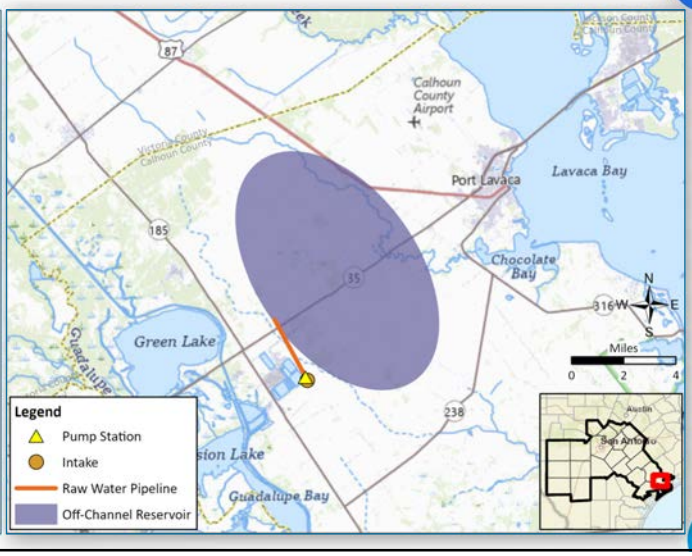
20. GBRA Lower Basin New Appropriation

Project Description

Diversion of surface water from the Guadalupe River in Calhoun County and storage in a new off-channel reservoir (OCR).

- Project Sponsor: GBRA
- Source: Guadalupe River in Calhoun County
- Storage: 50,000 acft OCR
- Yield: 26,500 acft/yr
- Implementation Decade: 2040
- Components:
  - Off-Channel Reservoir (50,000 acft, 2,000 acres)
  - Intake and pump station
  - Transmission pipeline



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Environmental & Cultural Considerations

20. GBRA Lower Basin New Appropriation

Vegetation, Land Use, & Agricultural Resources — 2

- Permanent conversion of terrestrial vegetation to reservoir use
- Opportunity to plant native species which are beneficial to native wildlife

Aquatic Resources — 2

- Project will require on-site delineation of streams and wetlands

Threatened, Endangered, & Species of Concern — 2

- Suitable habitat may occur for federally endangered whooping crane, federal threatened black rail, and several state listed threatened species
- Site-specific assessments for federal and state-listed species will be required

Cultural Considerations — 2

- Encountering unidentified archaeological resources is more likely in some landforms than others; the landforms crossed in this project range from 72% of the area having low likelihood to 2% of the area having high likelihood
- Structured cultural resources survey of the final design plan is recommended

ASSESSMENT RATING LEGEND

- 0 — N/A
- 1 — Minimal concerns; precautions recommended
- 2 — Additional studies recommended

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Project Cost Estimate Summary

20. GBRA Lower Basin New Appropriation

WMS Cost Summary	
Cost of Facilities	$163,412,000
Total Project Cost	$249,823,000
Project Yield (acft/yr)	26,500
Total Annual Cost*	$19,461,000
Annual Unit Cost ($/acft)*	$734
Annual Unit Cost, After Debt Service ($/acft)	$140

* Includes debt service amortization at 3.5% for 20 years, O&M, and power costs Based on a peaking factor of 1.0.

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) from TWDB
- Includes capital costs, annual debt service, operation and maintenance, power, land acquisition, and environmental mitigation

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21. GBRA WaterSECURE

New in 2026 Plan

Project Description (1 of 3)

Combination of two strategies from the 2021 RWP: GBRA Mid-Basin (Phase 2) Project and GBRA Lower Basin Storage Project. Includes surface water diversions, aquifer storage and recovery (ASR), and brackish groundwater sources. The project spans the lower and middle portions of the Guadalupe River Basin.

- Project Sponsor: GBRA
- Sources:
  - Lower basin diversion from Guadalupe River in Calhoun County;
  - Mid-basin diversion from Guadalupe River in Gonzales County;
  - Brackish groundwater from Carrizo-Wilcox Aquifer in Gonzales County;
- Storage:
  - 60,000 acft OCR in Calhoun County
  - 194,000 acft ASR well field in Gonzales County
- Yield: MAG-limited
  - Firm: 113,189 – 125,000 acft/yr
  - Requested: 125,000 acft/yr
- Implementation Decade: 2030
- Components: See subsequent slides for maps and more information.

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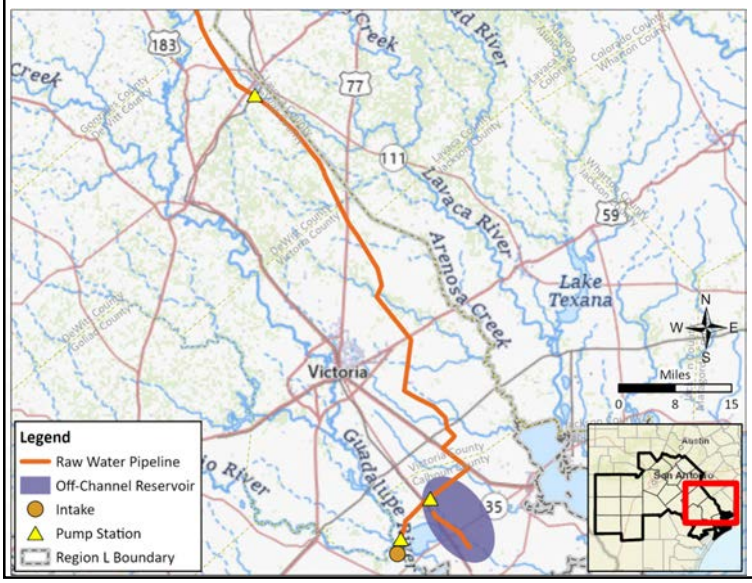
21. GBRA WaterSECURE

New in 2026 Plan

Project Description, continued (2 of 3)



LOWER BASIN

Components:

- Off-channel reservoir (60,000 acft; 2,562 acres)
- Intake and pump station
- Transmission pipelines (100 miles)
- Transmission pump stations

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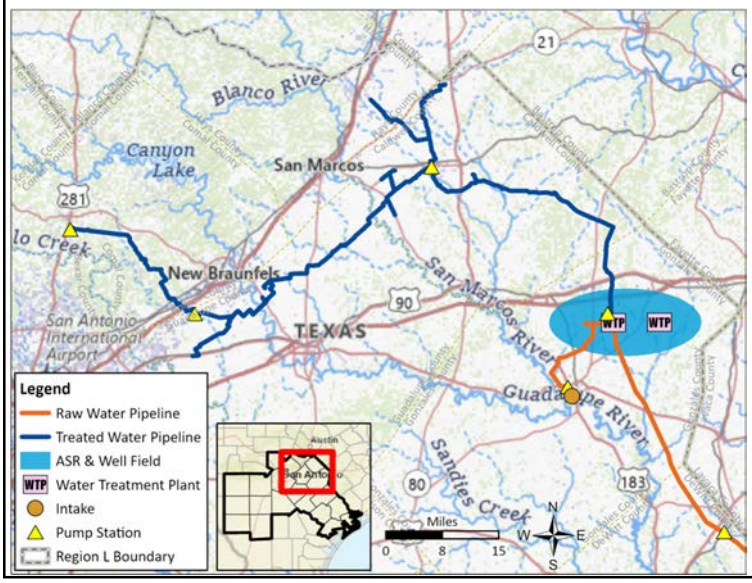
21. GBRA WaterSECURE

New in 2026 Plan

Project Description, continued (3 of 3)



MID-BASIN

Components:

- Intake and pump station
- Transmission pipelines (150 miles)
- Transmission pump stations
- ASR Well field in the Carrizo-Wilcox (24 ASR wells, pumps, pipelines)
- Brackish Well field in the Carrizo-Wilcox (12 withdrawal wells; 6 injection wells, pumps, pipelines)
- Two water treatment plants
  - 140 MGD conventional
  - 14 MGD brackish desalination

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Environmental & Cultural Considerations

21. GBRA WaterSECURE

Vegetation, Land Use, & Agricultural Resources 2

- Permanent conversion of terrestrial vegetation to reservoir use
- Opportunity to plant native species which are beneficial to native wildlife

Aquatic Resources 2

- Pipeline crosses one river and multiple stream segments, including three ecologically significant stream segments designated by TPWD
- Project will require on-site delineation of streams; additional studies recommended

Threatened, Endangered, & Species of Concern 2

- Suitable habitat may occur for federally endangered whooping crane, proposed federally endangered tricolored bat, federally endangered Attwater's greater prairie-chicken, and several state listed threatened species
- Site-specific assessments for federal and state-listed species will be required

Cultural Considerations 2

- The likelihood of encountering unidentified archaeological resources varies by landforms; the landforms crossed in this project range from 63% of the area having low likelihood to 14% of the area having high likelihood
- Structured cultural resources survey of the final design plan is recommended

ASSESSMENT RATING LEGEND

0 N/A

1 Minimal concerns; precautions recommended

2 Additional studies recommended

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Project Cost Estimate Summary

21. GBRA WaterSECURE

WMS Cost Summary	
Cost of Facilities	$3,778,218,000
Total Project Cost	$6,093,657,000
Project Yield (acft/yr)	125,000
Total Annual Cost*	$595,573,000
Annual Unit Cost ($/acft)*	$4,765
Annual Unit Cost, After Debt Service ($/acft)	$1,381

* Includes debt service amortization at 3.5% for 20 years, O&M, and power costs Based on a peaking factor of 1.0.

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) from TWDB
- Includes capital costs, annual debt service, operation and maintenance, power, land acquisition, and environmental mitigation

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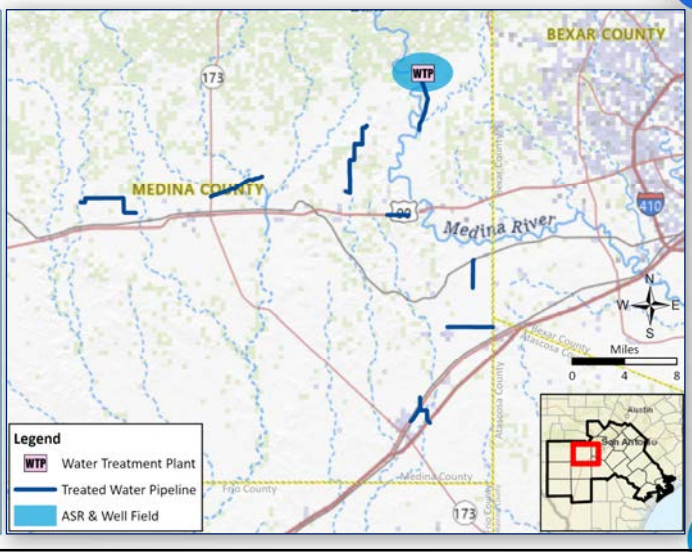
22. Medina County Regional ASR Project

New in 2026 Plan

Project Description

New regional water supply project that includes a new ASR well field in northeast Medina County and interconnecting pipelines among various WUGs/customers.

- Project Sponsors: Yancey WSC & East Medina County SUD
- Source:
  - Ph 1: Edwards-BFZ Aquifer
  - Ph 2: Edwards-BFZ Aquifer & Medina Lake
- Storage: 50,000 acft ASR in the Brackish Trinity Aquifer
- Yield: 12,500 acft/yr total (6,250 acft/yr in each of two phases)
- Implementation Decade:
  - Ph 1: 2040
  - Ph 2: 2080
- Components:
  - Well field, pumps, and pipelines:
    - Ph 1: 10 ASR wells
    - Ph 2: 9 ASR wells
  - Water treatment plant (Conventional)
    - Ph 1: New 18 MGD;
    - Ph 2: Expansion of 18 MGD
  - Transmission pipeline (4 miles) and interconnects (21 miles)
  - Pump stations



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Strategy Yield by WUG

22. Medina County Regional ASR Project

New in 2026 Plan

No.	Water User Group (WUG)	WMS Yield (acft/yr)					
		2030	2040	2050	2060	2070	2080
1	Yancey WSC*	0	1,193	1,193	1,193	1,193	2,386
2	East Medina County SUD*	0	870	870	870	870	1,740
3	Hondo	0	915	915	915	915	1,830
4	Castroville	0	268	268	268	268	536
5	Devine	0	439	439	439	439	878
6	Lytle	0	403	403	403	403	806
7	LaCoste	0	123	123	123	123	246
8	West Medina WSC	0	121	121	121	121	242
9	Natalia	0	151	151	151	151	302
10	Benton City WSC	0	1,767	1,767	1,767	1,767	3,534
Totals		**0**	**6,250**	**6,250**	**6,250**	**6,250**	**12,500**

* For Regional Water Planning purposes, Yancey WSC and East Medina County SUD are the WMS sponsors and the other WUGs are considered customers.

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Environmental & Cultural Considerations

22. Medina County Regional ASR

Vegetation, Land Use, & Agricultural Resources — 1

- Permanent conversion of croplands and pastures to pipeline easements and well field
- Opportunity to plant native herbaceous species which are beneficial to native wildlife

Aquatic Resources — 2

- Project area includes Medina River, Hondo Creek, and tributaries and floodplains in the Medina River basin
- Project will require on-site delineation of streams; additional studies recommended

Threatened, Endangered, & Species of Concern — 2

- Suitable habitat may occur for federally endangered golden-cheeked warbler, monarch butterfly, black lace cactus, and several state listed threatened species
- Site-specific assessments for federal and state-listed species will be required

Cultural Considerations — 2

- The likelihood of encountering unidentified archaeological resources varies by landforms, ranging from 16% of the area having low likelihood to 22% of the area having high likelihood
- Structured cultural resources survey of the final design plan is recommended

ASSESSMENT RATING LEGEND

- 0 — N/A
- 1 — Minimal concerns; precautions recommended
- 2 — Additional studies recommended

Draft

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Project Cost Estimate Summary

22. Medina County Regional ASR Project

New in 2026 Plan

WMS Cost Summary	
Cost of Facilities	$347,308,000
Total Project Cost	$480,734,000
Project Yield (acft/yr)	12,500
Total Annual Cost*	$49,206,000
Annual Unit Cost ($/acft)*	$3,936
Annual Unit Cost, After Debt Service ($/acft)	$1,230

* Includes debt service amortization at 3.5% for 20 years, O&M, and power costs Based on a peaking factor of 1.8.

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) from TWDB
- Includes capital costs, annual debt service, operation and maintenance, power, land acquisition, and environmental mitigation

Draft

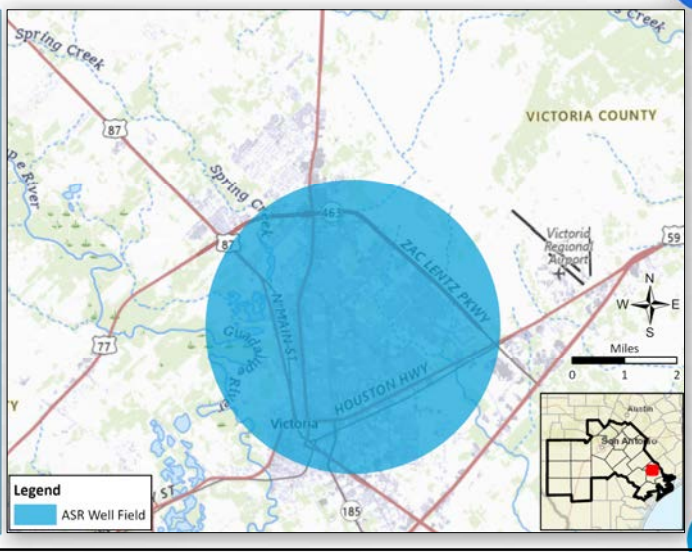
Black & Veatch 114

30. Victoria ASR Project

Project Description

New ASR well field in the City of Victoria.

- Project Sponsor(s): Victoria
- Source: Surface water rights from Guadalupe River during wet/average years
- Storage: 165,000 acft ASR in the Gulf Coast Aquifer
- Yield: 7,900 acft/yr
- Implementation Decade: 2030
- Components:
  - Well field (15 ASR wells, pumps, pipelines)
  - Transmission pipelines
  - Pump station



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Environmental & Cultural Considerations

30. Victoria ASR Project

Vegetation, Land Use, & Agricultural Resources — 0

- Much of the area would be expected to contain maintained lawns and landscape species

Aquatic Resources — 1

- Does not contain ecologically significant stream segments as designated by TPWD
- Well facilities can typically be sited to avoid impacts to waters of the U.S.

Threatened, Endangered, & Species of Concern — 1

- Suitable habitat does not occur for any of the federally listed threatened or endangered species
- Suitable habitat is not expected to occur for most state listed species
- Pre-construction surveys for active bird nests are recommended

Cultural Considerations — 2

- Further information about specific well locations is necessary before determining cultural considerations
- Structured cultural resources survey of the final design plan is recommended

ASSESSMENT RATING LEGEND

- 0 — N/A
- 1 — Minimal concerns; precautions recommended
- 2 — Additional studies recommended

Draft Black & Veatch 117

Project Cost Estimate Summary

30. Victoria ASR

WMS Cost Summary	
Cost of Facilities	$40,634,000
Total Project Cost	$58,504,000
Project Yield (acft/yr)	7,900
Total Annual Cost*	$4,116,000
Annual Unit Cost ($/acft)*	$687
Annual Unit Cost, After Debt Service ($/acft)	$166

* Includes debt service amortization at 3.5% for 20 years, O&M, and power costs Based on a peaking factor of 1.0.

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) from TWDB
- Includes capital costs, annual debt service, operation and maintenance, power, land acquisition, and environmental mitigation

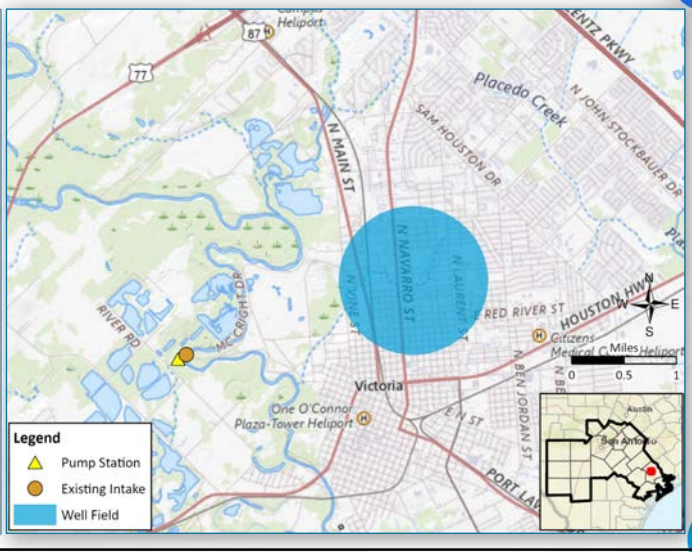
Draft Black & Veatch 118

31. Victoria Groundwater-Surface Water Exchange

Project Description

Amendment to existing surface water rights to authorize diversion of additional surface water from the Guadalupe River, which would be offset by withdrawing and discharging groundwater into the Guadalupe River.

- Project Sponsor(s): Victoria
- Source: Guadalupe River, offset by Gulf Coast Aquifer groundwater in Victoria County
- Yield: 8,544 acft/yr
- Implementation Decade: 2040
- Components:
  - Amendment of existing surface water rights to authorize groundwater offset
  - No new facilities



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Environmental & Cultural Considerations

31. Victoria Groundwater-Surface Water Exchange

Vegetation, Land Use, & Agricultural Resources — 0

- The project proposes to utilize existing facilities and infrastructure; therefore, environmental vegetation and land use impacts from construction are expected to be minimal

Aquatic Resources — 1

- Since the project will utilize existing facilities, no stream/wetland delineations or Corps of Engineers permitting would be required

Threatened, Endangered, & Species of Concern — 1

- Suitable habitat may occur for:
  - State listed threatened species
  - Federal candidate/state-threatened freshwater mussel species

Cultural Considerations — 0

- Land disturbance is not expected due to use of existing infrastructure.

ASSESSMENT RATING LEGEND

- 0 — N/A
- 1 — Minimal concerns; precautions recommended
- 2 — Additional studies recommended

Project Cost Estimate Summary

31. Victoria Groundwater-Surface Water Exchange

WMS Cost Summary	
Cost of Facilities	$0
Total Project Cost	$3,494,000
Project Yield (acft/yr)	8,544
Total Annual Cost*	$78
Annual Unit Cost ($/acft)*	$78
Annual Unit Cost, After Debt Service ($/acft)	$78

* There are no Facilities costs; therefore, debt service is not included Based on a peaking factor of 1.0.

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) from TWDB
- Includes power and operation and maintenance costs
- Does not include capital infrastructure costs, annual debt service, land acquisition, or environmental mitigation

32. Weather Modification

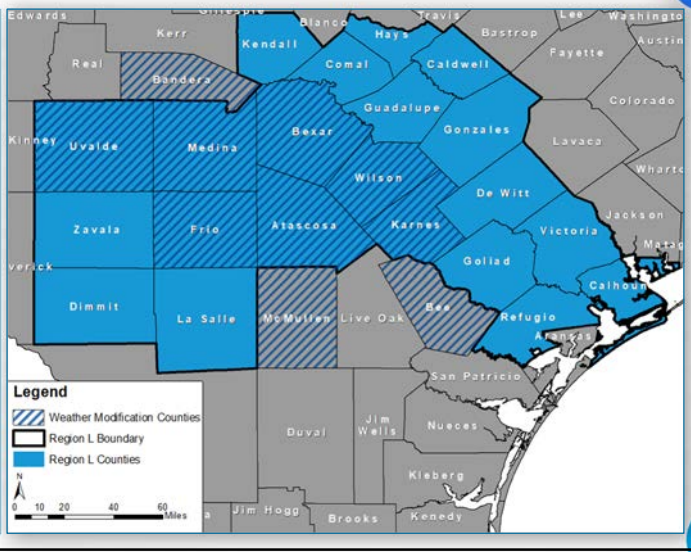
New in 2026 Plan

Project Description

Cloud seeding with sodium chloride (NaCl) or calcium chloride (CaCl) prior to a desired rain event to increase precipitation and suppress hail formation.

Project Sponsor(s): Irrigation WUGs in Atascosa, Bexar, Frio, Karnes, Medina, Uvalde, and Wilson Counties.
Source: Atmosphere
Yield: 99,700 acft/yr
Implementation Decade: 2030
Components:

- Airplanes and associated infrastructure and operating expenses



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Strategy Yield by WUG

32. Weather Modification

New in 2026 Plan

No.	Sponsor	WMS Yield (acft/yr)					
		2030	2040	2050	2060	2070	2080
1	Atascosa, Irrigation	23,200	23,200	23,200	23,200	23,200	23,200
2	Bexar, Irrigation	9,500	9,500	9,500	9,500	9,500	9,500
3	Frio, Irrigation	15,500	15,500	15,500	15,500	15,500	15,500
4	Karnes, Irrigation	13,500	13,500	13,500	13,500	13,500	13,500
5	Medina, Irrigation	18,300	18,300	18,300	18,300	18,300	18,300
6	Uvalde, Irrigation	5,500	5,500	5,500	5,500	5,500	5,500
7	Wilson, Irrigation	14,200	14,200	14,200	14,200	14,200	14,200
REGION L TOTAL		99,700	99,700	99,700	99,700	99,700	99,700

Environmental & Cultural Considerations

32. Weather Modification

Vegetation, Land Use, & Agricultural Resources 1

- Potential positive vegetation impacts; potential negative impacts from cloud-seeding chemicals

Aquatic Resources 1

- Potential positive aquatic resource impacts; potential negative impacts from cloud-seeding chemicals

Threatened, Endangered, & Species of Concern 1

- Potential adverse impacts on aquatic species

Cultural Considerations 0

- No adverse impacts anticipated

ASSESSMENT RATING LEGEND

0 N/A

1 Minimal concerns; precautions recommended

2 Additional studies recommended

Project Cost Estimate Summary

32. Weather Modification

WMS Cost Summary	
Cost of Facilities	$905,000
Total Project Cost	$1,234,000
Project Yield (acft/yr)	99,700
Total Annual Cost*	$329,000
Annual Unit Cost ($/acft)*	$3

- September 2023 dollars
- Developed using Uniform Costing Model (UCM) from TWDB
- Includes capital costs and operation and maintenance

AGENDA ITEM NO.8 – CONSIDERATION AND APPROPRIATE ACTION TO DESIGNATE WATER MANAGEMENT STRATEGIES (WMS) AS RECOMMENDED, ALTERNATIVE, OR CONSIDERED

BLACK & VEATCH

11/7/2024

Agenda Item 8: Consideration and Appropriate Action to Designate Water Management Strategies as Recommended, Alternative, or Considered

Make Initial Determination on which Strategies are Recommended, Alternative, or Neither

Input Needed from RWPG

Designate each strategy as Recommended, Alternative, or Considered But Not Recommended

- Asking RWPG to make initial determination on whether each strategy is Recommended, Alternative, or Considered But Not Recommended.
  - Determination can change before IPP is submitted, or up until final plan adoption.
- A strategy may need to be "Alternative", based on its sources and yields.
- Some WUGs/MWPs may have multiple strategies to meet a need, and one strategy can be Recommended, while another is "Alternative".
  - Plan amendment would be needed to move an "Alternative" strategy to "Recommended" for a WUG to be eligible for SWIFT funding
- The Cumulative Effects Analysis in Chapter 6 will evaluate the impact of all Recommended strategies on agricultural and natural resources

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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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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 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.

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Designate WMSs as Recommended, Alternative, or Considered (1 of 4)

See Handout C for WMS Snapshot

- Snapshot/Heat Map of WMSs with their yields, costs, and environmental assessment ratings

WMS No.	WMS Name	WMS Sponsor	Designation in Previous Plan (or New)	Suggestion for 2026 Plan
1	Municipal Water Conservation	All Municipal WUGs (except County-Other) with ≥ 80 GPCD	Recommended	Recommended
2	Non-municipal Water Conservation	Irrigation WUGs with Needs	New	Recommended
3	Drought Management	Varies	Recommended	Recommended
4	Edwards Transfers	Varies	Recommended	Recommended
5	Fresh Groundwater Development	Varies	New	Recommended
6	Brackish Groundwater Development	Varies	New	Recommended
7	Groundwater Conversions	Varies	Recommended	Recommended
8	Facilities Expansion	Varies	Recommended	Recommended
9	Recycled Water	Varies	Recommended	Recommended; SAWS' Direct Reuse as Alternative

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Designate WMSs as Recommended, Alternative, or Considered (2 of 4)

See Handout C for WMS Snapshot

- Snapshot/Heat Map of WMSs with their yields, costs, and environmental assessment ratings

WMS No.	WMS Name	WMS Sponsor	Designation in Previous Plan (or New)	Suggestion for 2026 Plan
10	Brush Management	N/A - None	New	Considered but not Recommended
11	Rainwater Harvesting	Varies	New	Recommended
12	Surface Water Rights	N/A - None	Recommended	Recommended
13	Balancing Storage	N/A - None	Recommended	Recommended
14	ARWA Expanded Carrizo-Wilcox Project (Phase 2)	ARWA	Recommended	Recommended
15	ARWA DPR Project (Phase 3)	ARWA	Recommended	Recommended
16	CRWA Expanded Brackish Carrizo-Wilcox Project	CRWA	Recommended	Recommended
17	CRWA Siesta Project	CRWA	Recommended	Recommended
18	CRWA Wells Ranch 3 (Phase 2) Project	CRWA	Recommended	Recommended
19	CVLGC Carrizo Project	CVLGC	Recommended	Recommended

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Designate WMSs as Recommended, Alternative, or Considered (3 of 4)

See Handout C for WMS Snapshot

- Snapshot/Heat Map of WMSs with their yields, costs, and environmental assessment ratings

WMS No.	WMS Name	WMS Sponsor	Designation in Previous Plan (or New)	Suggestion for 2026 Plan
20	GBRA Lower Basin New Appropriation	GBRA	Recommended	Recommended
21	GBRA WaterSECURE	GBRA	New	Recommended
22	Medina County Regional ASR	Yancey WSC and East Medina County SUD	New	Recommended
23	NBU ASR	NBU	Recommended	Recommended
24	NBU Trinity Well Field Expansion	NBU	Recommended	Recommended
25	SAWS Expanded Local Carrizo Project	SAWS	Recommended	Recommended
26	SAWS Expanded Brackish Groundwater Project	SAWS	Recommended	Recommended
27	SAWS Regional Wilcox Project	SAWS	New	Recommended
28	SSLGC Expanded Brackish Wilcox Project	SSLGC	Recommended	Recommended
29	SSLGC Expanded Carrizo Project	SSLGC	Recommended	Recommended

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Designate WMSs as Recommended, Alternative, or Considered (4 of 4)

See Handout C for WMS Snapshot

- Snapshot/Heat Map of WMSs with their yields, costs, and environmental assessment ratings

WMS No.	WMS Name	WMS Sponsor	Designation in Previous Plan (or New)	Suggestion for 2026 Plan
30	Victoria ASR	City of Victoria	Recommended	Recommended
31	Victoria Groundwater-Surface Water Exchange	City of Victoria	Recommended	Recommended
32	Weather Modification	Certain Irrigation WUGs	New	Recommended

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Consider Action to:

Designate Water Management Strategies as:

- Recommended;
- Alternative; or
- Considered But Not Recommended.

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Discussion

HANDOUT A

South Central Texas (Region L) Regional Water Planning Group
Policy and Legislative Recommendations Workgroup
Workgroup Meeting August 1, 2024 at 1:30 PM

Meeting Notes and Summary of Sections Revised or Removed

The South Central Texas (Region L) Regional Water Planning Group's (SCTRWPG) Legislative and Policy Workgroup (Workgroup) met on August 1st to discuss revisions and updates to Chapter 8: Policy Recommendations and Unique Sites. The approach of the meeting was to review each section / recommendation beginning where the July 10th Workgroup meeting left off (Section 8.3.6 Innovative Strategies, Subsection 8.3.6.2 Drought Management) to determine by consensus whether each section and recommendation should be retained, revised, or removed. For sections and recommendations needing to be revised, interested Workgroup members volunteered to be responsible for collaborating with other volunteers (as applicable) to propose revisions to the Workgroup at a September Workgroup meeting.

This document summarizes the following:

At the August 1st Workgroup meeting, the Workgroup reviewed and made modifications to the July 10th, 2024, version of the Chapter 8 document that was distributed to the Workgroup by email. A new version (August 16th, 2024) reflects the collective edits made by the Workgroup during the August 1st, 2024, meeting, along with editorial changes.

I. Next Steps and Action Items

1. **Sections and Recommendations Revisions.** Volunteers responsible for proposing revisions to sections and recommendations will:
   a. Collaborate with other volunteers (as applicable) to develop proposed language.
   b. Once finalized, volunteers will transmit proposed language to Tim Andruss, Caye Castillo and Lauren Gonzalez via email.
   c. If possible, please provide revisions in a Word document as tracked changes (volunteers may consider editing this document, if preferred).
   d. Volunteers are asked to provide revisions to their sections by **September 3, 2024.**
2. **Next Meeting in September.**
   a. Caye Castillo will send a Doodle poll to Workgroup members to identify a meeting date during the week of September 9th.

b. The September meeting is anticipated to be the last Workgroup meeting for this cycle, unless the need for an additional meeting is identified.
c. At the September Workgroup meeting, the Workgroup will take action to make a recommendation to the SCTRWPG to approve the proposed and updated Chapter 8.
d. The Workgroup will present the updated Chapter 8 to the SCTRWPG at the November 7th meeting for their consideration and possible approval.

II. Sections and Recommendations Identified for Revision, Including Associated Volunteers

The following summarizes the sections and recommendations that were identified by the Workgroup as being retained but requiring revisions. Table 1 provides a summary of the sections needing revision.

Table 1. Summary of Revision Volunteers and Associated Sections

No.	Date Revision was Identified	Section and Number to be Revised	Revision Volunteers
A.	July 10th Workgroup Meeting	8.3.1.1 Funding Water Projects for a Growing Region: Project Studies and Implementation *(Was Section 8.0 in 7/9/24 Version)*	Steven Siebert Jonathan Stinson Dianne Wassenich
B.	August 1st Workgroup Meeting	8.3.1.2 Lengthening Financing Terms (New Section)	Gary Middleton
C.	July 10th Workgroup Meeting	8.3.3.1 Groundwater Management *(Was Section 8.3.1 in 7/9/24 Version)*	Tim Andruss Michele Foss Steven Siebert
D.	July 10th Workgroup Meeting	8.3.4.1 Surface Water Availability Model Updates *(Was Section 8.4.2 in 7/9/24 Version).* Note: On August 1, Jonathan Stinson reported to the Workgroup that upon further review, he does not recommend any revisions to this subsection. Therefore, this item is complete.	Jonathan Stinson
E.	July 10th Workgroup Meeting	8.3.5.1 Implementation of Water Conservation Advisory Committee Recommendations *(Was Section 8.5.1 in 7/9/24 Version)*; and 8.3.5.2 Water Loss and Non-Revenue Water *(New Section)*	Michele Foss Lauren Gonzalez Steven Siebert Jonathan Stinson Dianne Wassenich

F.	July 10th Workgroup Meeting	8.3.6.1	Assistance for Alternative Rangeland Management *(Was Section 8.6.3 in 7/9/24 Version)*	Dianne Wassenich
G.	August 1st Workgroup Meeting	8.3.7	Water Quality *(Was Section 8.3.7.5 in 7/10/24 Version)*	Lauren Gonzalez Jonathan Stinson Aarin Teague Dianne Wassenich
H.	August 1st Workgroup Meeting	8.3.8	Water Data Collection *(Was Section 8.3.9.1 in 7/10/24 Version)*	Michele Foss
I.	August 1st Workgroup Meeting	8.3.9	Consideration of Climate Variability *(Was Section 8.3.9.4 in 7/10/24 Version)*	Erin Cavazos Michele Foss Steven Siebert

A. Revision Volunteers: Steven Siebert, Jonathan Stinson, and Dianne Wassenich

8.3.1 Funding Water Projects for a Growing Region

8.3.1.1 Project Studies and Implementation *(Was Section 8.0 in 7/9/24 Version)*

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 Texas Water Development Board (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 of innovative water management strategies (WMSs) and implementation of water supply projects.

Other Recommendation: None.

B. Revision Volunteers: Gary Middleton

8.3.1.2 Lengthening Financing Terms *(New Section)*

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. 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.

C. Revision Volunteers: Tim Andruss, Michele Foss, and Steven Siebert

8.3.3 Groundwater

8.3.3.1 Groundwater Management *(Was Section 8.3.1 in 7/9/24 Version)*

The SCTRWPG respects the rules and regulations of groundwater conservation districts (GCDs), as it does those of all other subdivisions of the state and state agencies. The SCTRWPG respects the decision of the Texas Supreme Court that groundwater is a private property right (Chapter 36 of the Texas Water Code [TWC]). The SCTRWPG believes that all rules adopted by GCDs pursuant to administrative procedures established under Chapter 36 of the TWC should be based on standards of rationality, equity, and scientific evidence to support the achievement of desired future conditions (DFCs) established by a groundwater management area (GMA). The SCTRWPG supports the use of aquifer monitoring programs implemented by GCDs within a GMA to evaluate achievement of and compliance with DFCs.

The SCTRWPG recognizes that the development of brackish groundwater resources is an important water supply strategy in meeting the state's projected water demands.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature support the development of brackish groundwater resources as an important water supply strategy by funding additional studies and research, providing financial assistance for specific projects, as well as promoting efficient permitting by regulatory agencies.

D. Revision Volunteer: Jonathan Stinson

Update on 8/1/2024: Upon further review, Jonathan Stinson reported back to the Workgroup that he does not recommend any revisions to this subsection. Therefore, this item is complete.

8.3.4.1 Surface Water Availability Model Updates *(Was Section 8.4.2 in 7/9/24 Version)*

Although a new drought of record has not occurred for the Guadalupe-San Antonio Basin since the 1950s, appropriate updates to the related water availability models would increase the simulation period by at least 50 percent and facilitate development of improved estimates of channel losses and missing streamflow records (especially those during the drought of record)

throughout the watersheds. Furthermore, an extension of the Guadalupe-San Antonio WAM naturalized flow set would enhance the permitting process by providing additional hydrologic data used in the determination of the attainment frequencies associated with freshwater inflow regimes.

Legislative Recommendation: Periodic updates to the Guadalupe-San Antonio and Nueces WAMs should be performed at least every 10 years so that hydrologic data included in the models is within 10 years of the current date. The SCTRWPG recommends the Texas Legislature fund the TCEQ to update the Water Availability Models (WAMs) for the Guadalupe-San Antonio River Basin and Nueces River Basin to include the most-recent available hydrologic data, and continue allocating funding to update the WAMs on a 10-year basis.

E. Revision Volunteers: Michele Foss, Lauren Gonzalez, Steven Siebert, Jonathan Stinson, and Dianne Wassenich

8.3.5 Conservation and Water Loss (Was Section 8.5 in 7/9/24 Version)

8.3.5.1 Implementation of Water Conservation Advisory Committee Recommendations *(Was Section 8.5.1 in 7/9/24 Version)*

Legislative and Other Recommendations: The SCTRWPG recommends the Texas Legislature provide adequate funding to implement the HB 4 (2007) Water Conservation Advisory Committee's recommendations, particularly the statewide public education programs, further definition of gallons per capita per day objectives, and the development of regional conservation data that can be used by the SCTRWPG members to optimize future conservation efforts.

8.3.5.2 Water Loss and Non-Revenue Water *(New Section)*

Legislative Recommendation: TBD

Other Recommendation: TBD

F. Revision Volunteer: Dianne Wassenich

8.3.6.1 Assistance for Alternative Rangeland Management *(Was Section 8.6.3 in 7/9/24 Version)*

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature increase funding to the Texas State Soil and Water Conservation Board for the purpose of studying the effectiveness of proven rangeland management practices.

Other Recommendation: None.

G. Revision Volunteers: Lauren Gonzalez, Jonathan Stinson, Aarin Teague, and Dianne Wassenich

8.3.7 Water Quality *(Was Section 8.3.7.5 in 7/10/24 Version)*

The primary focus of the regional water planning process is to ensure that water supplies are identified in sufficient quantity to meet future water demands; however, the SCTRWPG recognizes that the quality of those water supplies is also important to protect. Protecting groundwater and surface water supplies from contamination not only helps to reduce the cost to treat water to public drinking water standards, but also reduces pollutants that may harm the ecological health of the basin.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TCEQ and local governments promote practices and/or regulations to avoid or mitigate threats to water quality in surface water and groundwater sources.

H. Revision Volunteer: Michele Foss

8.3.8 Water Data Collection *(Was Section 8.3.9.1 in 7/10/24 Version)*

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature fully fund the cooperative, federal-state-local program of basic water data collection, including (1) stream gages-quantity and quality; (2) groundwater monitoring-water levels and quality; (3) hydrographic surveys and sediment accumulation in reservoirs; (4) water surface evaporation rates; (5) water use data for all WUGs; (6) population projections; and (7) Clean Rivers Program.

Other Recommendation: None.

I. Revision Volunteers: Erin Cavazos, Michele Foss, and Steven Siebert

8.3.9 Consideration of Climate Variability *(Was Section 8.3.9.4 in 7/10/24 Version)*

Regional Water Plans are based on drought of record conditions using historical hydrologic data. Historically, the TWDB has not used climate models to predict impacts to future water resources in Texas because forecasting tools have not been able to provide the resolution needed for water planning. The SCTRWPG recognizes that more sophisticated models are continuously being developed for use on global and regional levels. Furthermore, Texas utilities are increasingly incorporating climate change impacts into water availability models (WAMs) and other models to determine water demands, supplies, and availability for use in long-range water resource studies.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature fund relevant studies and regional models to incorporate available climate variability data into the Regional Water Planning process.

Other Recommendation: The SCTRWPG recommends the TWDB to reassess available climate models and consider the appropriateness of incorporating them into regional water planning.

III. Sections and Recommendations Identified for Removal

The following summarizes the sections and recommendations that were identified for removal during Workgroup Meetings on July 10th and August 1st. This section is divided into two subsections based on which Workgroup meeting the sections were identified for removal.

A. Sections Removed During July 10th Workgroup Meeting

The following sections were identified for removal during the July 10th Workgroup Meeting. Language and numbering in this subsection reflect the July 9, 2024, version that was updated by Tim Andruss and Steven Siebert.

8.1.1 Irrigation Water Needs (Partial Removal)

Other Recommendation: The SCTRWPG recommends the TWDB, in cooperation with the agriculture industry agencies and trade groups in Texas, undertake studies of the factors that influence decisions regarding development of irrigation water supplies for the purpose of developing the best approach to (1) project future irrigation water needs and (2) identify the instances in which regional water planning efforts would be the most appropriate mechanism for developing strategies to meet future needs.

8.1.2 Water Use Information

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TWDB develop the necessary programs and processes to accurately estimate annual water use for irrigation, including water use associated with agricultural activities unrelated to federal or state funding programs, and livestock watering categories.

8.2 Collaboration Between Regional Planning Areas

The SCTRWPG supports Charge 1 of the Interregional Planning Council to improve coordination among the Regional Water Planning Groups, and between each regional water planning group and the Board, in meeting the goals of the State Water Planning Process and the water needs of the State as a whole.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TWDB continue to fund and support the interregional planning group's recommendations.

8.3.2 Groundwater Sustainability

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends WMS sponsors implementing any WMS within this Regional Water Plan relying on groundwater resources incorporate groundwater monitoring of both quantity and quality, recharge protection and enhancement, conservation methods and related practices, as determined to be appropriate by the associated GCDs. Where no district exists, the WMS sponsor should monitor impacts and, when appropriate, take corrective action consistent with the goal of groundwater sustainability.

Other Recommendation: The SCTRWPG recommends GCDs manage groundwater resources toward the goal of long-term sustainability and recommends WMSs that support achievement of this goal. This recommendation is intended to help protect all users of aquifers, to help preserve the long-term integrity of aquifers, and to build awareness of the effects of groundwater production and development on those aquifers.

8.3.3 Shared Groundwater Resources Among Planning Regions

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends water user groups (WUGs), relying upon on a WMS with a groundwater source to meet the WUG's demand during the planning period and the WMS is anticipated to have a significant impact on a groundwater resource located in two or more planning region(s), provide notice to those region(s) of the proposed date of implementation and anticipated acre-feet per year demand on the shared groundwater resource.

8.3.4 Reliance on Groundwater and Surface Water for Future Needs

The SCTRWPG recognizes a need to rely on groundwater and surface water resources to develop a practical and reasonable plan to address water needs within the region for the future.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TWDB provide incentives to develop conjunctive use projects that more efficiently utilize groundwater and surface water.

8.3.5 Land Stewardship

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TWDB provide incentives for implementing or enhancing land stewardship management practices that are shown to augment the quality and quantity of surface water and groundwater resources.

8.4.1 Surface Water Rights Monitoring and Administration

The SCTRWPG reaffirms its commitment to safeguarding the integrity of water rights.

Legislative Recommendation: The SCTRWP recommends the Texas Legislature provide adequate funding for the Texas Commission on Environmental Quality (TCEQ) to ensure the legal and appropriate use of permitted surface water rights through comprehensive monitoring and administrative programs, such as the Watermaster program.

Other Recommendation: None.

8.6.1 Assistance for Alternative Water Supply Strategies

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature increase funding to assist water planning regions and local water entities in developing demonstration projects for alternative water supply strategies and technologies, such as, but not limited to, seawater desalination and direct potable reuse.

Other Recommendation: None.

8.6.2 Seawater Desalination

The SCTRWPG supports the funding of state and/or federal programs for research and potential incentives to make seawater desalination more affordable.

Legislative Recommendation: None.

Other Recommendation: None.

8.6.4 Rainwater Harvesting and Other Systems

The SCTRWPG encourages the study of the effectiveness of rainwater harvesting systems in both commercial and residential new development.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TWDB develop programs to educate the public and building industry on the potential benefits of rainwater harvesting, water reuse, and gray water systems.

8.6.5 Weather Modification

Weather modification could potentially support water supplies in general.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature continue to support the existing Weather Modification Program and the development of innovative technology.

Other Recommendation: None.

B. Sections Removed During August 1st Workgroup Meeting

The following sections were identified for removal during the August 1st Workgroup Meeting. Language and numbering in this subsection reflect the July 10, 2024, version of the document.

8.3.6.2 Drought Management

The SCTRWPG used the TWDB Drought Management Costing Tool for the 2026 South Central Texas Regional Water Plan to estimate economic impacts associated with implementation of drought management as a WMS. Application of this methodology for regional water planning purposes has facilitated comparison of drought management to other potentially feasible WMSs on a unit cost basis. The SCTRWPG has found, and the San Antonio Water System (SAWS) has demonstrated, that WUGs having sufficient flexibility to focus on discretionary outdoor water use first and avoid water use reductions in the commercial and manufacturing use sectors may find some degrees of drought management to be economically viable and cost-competitive with other WMSs. The SCTRWPG recognizes that implementation of appropriate WMSs is a matter of local choice.

Legislative Recommendation: None.

Other Recommendation: Recognizing that implementation of appropriate WMSs is a matter of local choice, the SCTRWPG recommends WUGs give consideration of economically viable drought management as an interim strategy to meet near-term needs through demand reduction until such time as economically viable long-term water supplies can be developed.

8.3.6.3 Potable Water Reuse

The SCTRWPG recognizes the potential to augment water supply by reuse of treated municipal wastewater, agricultural return flows, and industrial process water with direct potable reuse (DPR) and Indirect potable reuse. The SCTRWPG has recommended multiple WMSs that enable utilities and industries to extend use of their existing water resources through treatment and reuse of water.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature amend the TWC to add a new chapter to include reuse in the state's administration of water rights.

Other Recommendation: The SCTRWPG recommends the TWDB and TCEQ (1) financially support research for determining appropriate technology and risk mitigation approaches necessary to significantly expand water reuse with appropriate protections for the public, environment, and worker health; and (2) assist the funding and development of incentive programs to advance water reuse projects.

8.3.7.1 Support of Habitat Conservation Plans

The SCTRWPG supports the state's use of habitat conservation plans as approved by the United States Fish and Wildlife Service (USFWS), resulting in the issuance of an incidental take permit that allow for protection of endangered species and the development of adequate water supplies for the region.

Legislative Recommendation: None.

Other Recommendation: None.

8.3.7.2 Ecosystem Health, Quality of Life, and Growth Management for Texas

The rapid growth occurring in South Central Texas has the potential to negatively impact quality of life. Human demands for water and infrastructure development may outstrip the ability of the region's resources to respond and to be sustainable. State water policies should address these issues and evaluate land use and the health of its ecosystem to prepare for the future and support a sustainable quality of life for all Texans.

Legislative Recommendation: None.

Other Recommendation: None

8.3.7.3 Instream Flows and Bays and Estuaries

The SCTRWPG is appreciative of legislative action in the form of Senate Bill 3 (SB 3, 80th Texas Legislature) that established and funded an environmental flows process integrating best-available science and diverse regional stakeholder input into the process for selecting appropriate instream flow and freshwater inflow goals on a stream-by-stream and estuary-by-estuary basis. The appropriate balance of environmental and human needs during severe drought has significant effects on the firm yield and associated cost of potential water supply projects. The 2016 Regional Water Plans were the first to be prepared using environmental flow standards adopted pursuant to the SB 3 process. The RWPG is equally appreciative of SB 2 (77th Texas Legislature) and supports continuation of the studies within the South Central Texas Regional Water Planning Area.

Legislative Recommendation: The SCTRWPG recommends that the Texas Legislature provide definitive direction on continued stakeholder involvement and scientific review of the process for evaluating potential changes to the adopted environmental flow standards.

Other Recommendation: The SCTRWPG recommends the TCEQ, TPWD, and TWDB complete the Texas Instream Flow Studies Program and improvement of the state's bays and estuaries freshwater inflow studies.

8.3.7.4 Environmental Studies

The SCTRWPG recognizes that significant needs exist in Bexar and the surrounding counties and that new supplies need to be developed in the Guadalupe River and San Antonio River watersheds. There are issues related to environmental impacts that need further study to determine feasibility of a range of recommended surface water, groundwater, reuse, and conjunctive use WMSs.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TCEQ, GBRA, and SARA undertake additional environmental studies to evaluate the effects of new water supply WMSs proposed within the Guadalupe River and San Antonio River watersheds on the ecosystems that rely on inflow to San Antonio Bay and flows of the Guadalupe River and San Antonio River watersheds.

8.3.8.1 Funding

The SCTRWPG believes that state funding should be provided as a key incentive for partnership in funding from local, regional, and federal governmental agencies.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TCEQ and TWDB actively support solicitation of federal funding for development of new water supply sources, especially when the need for which is based in part upon federal requirements, such as the Endangered Species Act.

8.3.8.2 Continuation of Regional Water Planning

The SB 1 Regional Water Planning Process is an important program.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature adequately fund the work of RWPGs.

Other Recommendation: None.

8.3.8.3 Guiding Principles of the 2026 Regional Water Plan

In response to comments raised by members of the SCTRWPG and the public during the review of the initially prepared 2016 Regional Water Plan, the SCTRWPG categorized strategic topics for discussion to enable the group to improve its development of the 2021 Regional Water Plan. The process was referred to as the 2021 Plan Enhancement Process. The SCTRWPG discussed each topic area and over the course of several SCTRWPG meetings in 2016 and 2017 and developed the SCTRWPG Guiding Principles. The Guiding Principles were subsequently updated for development of the 2026 Regional Water Plan (Refer to Appendix 8-A). The following provides a list of the Guiding Principles established by the SCTRWPG:

- Appropriateness and adequacy of how demand and need are determined;
- Role of Regional Water Planning Groups in influencing population growth and land use;
- Conflicts of interests with respect to planning group members;
- The role of the planning group in influencing water development plans of water suppliers;
- The role of the planning group in influencing permitting entities;
- 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;
- Minimum Standards for Water Management Strategies;
- Recommended Water Management Strategies;
- Management Supply;
- The Role of Reuse within the Regional Water Plan; and
- 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.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends RWPGs complete a process to discuss strategic topics to improve future RWPs.

8.3.8.4 Notification of Counties with Proposed Water Management Strategies in Regional Water Plans

The SCTRWPG recognizes the importance of local stakeholder involvement during development of water supply projects. The first step in achieving local stakeholder involvement is notification of planned water projects. While the TWDB has notification requirements associated with the public hearings and publication of the Initially Prepared Plan and Final Regional Water Plan, there are no requirements to notify a county of water supply projects or WMSs that are planned to be located within their respective county.

Legislative Recommendation: None.

Other Recommendation: None.

8.3.8.5 Role of the TWDB with Other State and Federal Agencies

Frequently, intergovernmental cooperation and engagement among agencies is necessary for the planning and implementation of water-related projects. In instances where state representation is warranted, the TWDB should be the agency to coordinate and engage with federal agencies during permitting and decision-making processes.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TWDB be responsible for facilitating the funding and permitting of projects in the State Water Plan by other state and federal agencies.

8.3.9.2 Access to State Water Data

The SCTRWPG recognizes the significant efforts that the TWDB has undertaken to make regional water planning and state water planning data available to and usable by the public.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature adequate fund the critical roles of TWDB, TCEQ, and TPWD in facilitating access to water data essential for local and regional planning and plan implementation purposes.

Other Recommendation: None.

8.3.9.3 Population and Water Demand Projections

The SCTRWPG recognizes that the TWDB bases its water demand projections on patterns of population and economic growth while also permitting revisions of state data to incorporate additional information developed by the planning regions. The SCTRWPG appreciates that the TWDB has facilitated more active involvement of the RWPGs in refining water demand projections for use in the 2026 Regional Water Plans. Nevertheless, some groups believe that the methodology puts an unfair limitation on access to water for future growth, particularly in areas that may experience more rapid change than they have in the past. The SCTRWPG recognizes the significant progress made by the TWDB in refining the methodology for population and water demand projections, specifically with the transition from city-based projections to utility-based projections. However, the SCTRWPG has continued to experience challenges with the lack of flexibility within the methodology to address rapidly growing municipal water demands. 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.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TWDB provide greater flexibility through relaxation of current methodological assumptions holding county, regional, and state population projection totals fixed.

8.3.10.1 Water Management Strategies

Inclusion of a WMS in this plan, as either a recommended or alternative WMS, is not an endorsement by this planning group of that WMS for permitting, financing, or for any reason other than as a water supply that has met TWDB standards for being considered as a potential water supply for regional planning purposes.

Legislative Recommendation: None.

Other Recommendation: None.

8.3.10.2 Planning for System Management Water Supplies

As mentioned in Section 8.3.8.3, Guiding Principles of the 2026 Regional Water Plan, the SCTRWPG first developed Guiding Principles to enhance the development of the 2021 SCTRWP, and subsequently updated them for guiding development of the 2026 SCTRWP. Guiding Principle No. IX, Management Supply, establishes the following (also refer to Appendix 8-A for the complete Guiding Principles document):

> 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.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends RWPGs develop and implement processes and policies similar to the Guiding Principles established by the SCTRWPG, in particular, considering a similar policy to Guiding Principle No. IX regarding management water supplies.

8.3.10.3 Public Education on Water

The SCTRWPG recognizes and appreciates that the Texas Legislature established the Water IQ Program in 2007. The Water IQ Program is a statewide public awareness program that complements existing local and regional conservation efforts while also communicating to communities that may not have financial resources to develop a program of their own.

In the South Central Texas Region, several entities have active public education, outreach, and public awareness programs that are focused on water resources, water use, conservation, and resource protection.

The SCTRWPG encourages partnerships with local and regional utilities who have active education programs, and who may have the ability to offer students opportunities for field trips to water supply, treatment, and other facilities. The SCTRWPG also encourages partnership with the Texas American Water Works Association Education Division.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature fund a statewide program to educate the general public about water in coordination with the Agricultural Extension Service offices by producing water-related materials with special components adapted for each water planning region and should also include a component comparable to the "Major Rivers" program that would be available to the public schools through the Regional Education Service Centers and by other means.

Other Recommendation: The SCTRWPG recommends the TCEQ and TWDB provide adequate funding to support implementation of the Water Conservation Task Force recommendations, particularly the statewide public education programs, such as Water IQ.

8.3.10.4 Planning Requirements

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends the TWDB avoid changes in the regional water planning process or additional planning requirements, except through the formal rule-making procedure.

HANDOUT B

WORKGROUP DRAFT

CHAPTER 8: POLICY RECOMMENDATIONS AND UNIQUE SITES

South Central Texas Regional Water Plan

B&V PROJECT NO. 192335

PREPARED FOR

South Central Texas Regional Water Planning Group

27 SEPTEMBER 2024

BLACK & VEATCH

Table of Contents

List of Abbreviations

DFC	Desired Future Condition
GAM	Groundwater Availability Model
GCD	Groundwater Conservation District
GMA	Groundwater Management Area
HB	House Bill
MAG	Modeled Available Groundwater
Region L	South Central Texas Region
RWPG	Regional Water Planning Group
SCTRWPA	South Central Texas Regional Water Planning Area
SCTRWPG	South Central Texas Regional Water Planning Group
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TPWD	Texas Parks and Wildlife Department
TWC	Texas Water Code
TWDB	Texas Water Development Board
WAM	Water Availability Model
WMS	Water Management Strategy
WUG	Water User Group
WWP	Wholesale Water Provider

8.0 Policy Recommendations and Unique Sites

Chapter 31, Section 357.43 of the Texas Administrative Code (TAC) specifies that Regional Water Plans shall include recommendations on regulatory, administrative, or legislative issues. The South Central Texas (Region L) Regional Water Planning Group (SCTRWPG) establishes these recommendations to facilitate the orderly development, management, and conservation of water resources.

The following chapter provides recommendations for designation of ecologically unique river and stream segments, unique sites for reservoir construction, and any other recommendations that the SCTRWPG believes are needed and desirable to achieve the stated goals of state and regional water planning.

8.1 Ecologically Unique River and Stream Segments

Regional Water Planning Groups (RWPGs) may choose to adopt recommendations in Regional Water Plans for all or parts of river and stream segments as being of unique ecological value, based on criteria defined in 31 TAC §358.2(6). The following subsections provide information regarding unique stream segments recommendations by the SCTRWPG.

8.1.1 Legislative Designation of Five Unique Stream Segments

In the 2011 and 2016 Region L Regional Water Plans, the SCTRWPG recommended five stream segments as having unique ecological value for designation by the Texas Legislature. In 2015, House Bill 1016 (HB 1016, 84th Texas Legislature) designated five river or stream segments as being of unique ecological value. The SCTRWPG is appreciative of legislative action in the form of HB 1016.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature adequately fund the Texas Commission on Environmental Quality (TCEQ) and other entities in monitoring the water quality of the five river and stream segments designated as being of unique ecological value within the South Central Texas Regional Water Planning Area (SCTRWPA).

Other Recommendation: None.

8.1.2 Recognition of Potential Additional Stream Segments of Unique Ecological Value

The SCTRWPG believes that 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. The SCTRWPG recognizes the ecologically significant stream segments designated by Texas Parks and Wildlife Department (TPWD) in July 2005. The SCTRWPG shall consider these stream segments as a guide for recommending additional stream segments of unique ecological value for future legislative designation.

Legislative Recommendation: The SCTRWPG recommends increased Texas Water Development Board (TWDB) funding to be allocated for future planning cycles to conduct analyses necessary for designation of additional stream segments as segments of unique ecological value.

Other Recommendation: None.

8.2 Unique Sites for Reservoir Construction

Regional Water Plans may include RWPG recommendations to designate sites of unique value for construction of reservoirs based on criteria defined in 31 TAC §358.2(7). At this time, the SCTRWPG does not recommend any unique reservoir sites for inclusion in the 2026 Region L Regional Water Plan.

Legislative Recommendation: None.

Other Recommendation: None.

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 serve as sponsors of WMSs meant to address irrigation needs, it is not practical for the SCTRWPG to develop WMSs designed to develop new water supplies or infrastructure for agricultural water users for projected irrigation water shortages and substantially limits the SCTRWPG's ability to conceive of and evaluate discrete strategies to supply water for future water needs in many cases.

The SCTRWPG recognizes one of the obstacles encountered by RWPGs and irrigation water users in developing WMSs to supply water for irrigation needs is the lack of an eligible sponsor for potential WMSs.

Legislative Recommendation: None.

Other Recommendation: The SCTRWPG recommends that the TWDB evaluate revisions to the regional water planning rules and guidance to allow entities other than WUGs and WWPs to serve as sponsors of WMSs related solely to irrigation and to receive funding to implement WMSs designed to address irrigation water needs.

8.3.3 Groundwater

8.3.3.1 Groundwater Management

The SCTRWPG respects the rules and regulations of groundwater conservation districts (GCDs), as it does those of all other subdivisions of the state and state agencies. The SCTRWPG respects the decision of the Texas Supreme Court that groundwater is a private property right (Chapter 36 of the Texas Water Code [TWC]). The SCTRWPG believes that all rules adopted by GCDs pursuant to administrative procedures established under Chapter 36 of the TWC should be based on standards of rationality, equity, and scientific evidence to support the achievement of desired future conditions (DFCs) established by a groundwater management area (GMA). The SCTRWPG supports the use of aquifer monitoring programs implemented by GCDs within a GMA to evaluate achievement of and compliance with DFCs.

The SCTRWPG recognizes that the development of brackish groundwater resources is an important water supply strategy in meeting the state's projected water demands.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature support the development of brackish groundwater resources as an important water supply strategy by funding additional studies and research to assess the quality, quantity, and treatability of potential supplies, providing financial assistance for brackish groundwater supply projects, and promoting efficient permitting of these projects by regulatory agencies.

Other Recommendation: The SCTRWPG recommends the TWDB included the following explanatory note in the state water plan and database at appropriate locations:

"For each groundwater management area (GMA) within the region, the representatives of the member groundwater conservation district (GCDs) have adopted desired future conditions (DFCs) for the relevant aquifers. To ensure consistency with the DFCs, TWDB limits groundwater availability for each aquifer to the associated modeled available groundwater (MAG) for planning purposes. This water planning limitation has resulted in reductions to the yield of existing groundwater supplies and future groundwater supplies (as water management strategies [WMSs]) in this plan. This result should not be misconstrued as a recommendation of the SCTRWPG to the associated GCDs to make any adjustments to the associated DFC or to TWDB to make any adjustment to the associated MAG. The SCTRWPG recognizes and supports the ability of permit holders to exercise their rights to groundwater in accordance with their permits. The SCTRWPG recognizes and supports the authority and responsibility of GCDs to manage groundwater resources to achieve DFCs."

8.3.3.2 Notice of Groundwater Projects

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature develop a process requiring WMS sponsors to provide public notice to county officials describing the WMSs with a groundwater source within the county where the potential WMS is located.

Other Recommendation: None.

8.3.3.3 Groundwater Availability Model Updates

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature provide adequate funding to the TWDB to revise and improve, at a minimum, on a 10-year basis, the groundwater availability models (GAMs) used to develop DFCs and determine modeled available groundwater (MAG) estimates.

Other Recommendation: The SCTRWPG recommends the TWDB initiate a program that provides the necessary information, technical expertise, and experience to update and improve the GAMs on a 10-year basis to support the permitting efforts of GCDs, the joint planning efforts of GMAs, and the regional water planning efforts of the RWPGs.

8.3.4 Surface Water

8.3.4.1 Surface Water Availability Model Updates

Although a new drought of record has not occurred for the Guadalupe-San Antonio Basin since the 1950s, appropriate updates to the related Water Availability Models (WAMs) would increase the simulation period by at least 50 percent and facilitate development of improved estimates of channel losses and missing streamflow records (especially those during the drought of record) throughout the watersheds. Furthermore, an extension of the Guadalupe-San Antonio WAM naturalized flow set would enhance the permitting process by providing additional hydrologic data used in the determination of the attainment frequencies associated with freshwater inflow regimes.

Legislative Recommendation: Periodic updates to the Guadalupe-San Antonio and Nueces WAMs should be performed at least every 10 years so that hydrologic data included in the models is within 10 years of the current date. The SCTRWPG recommends the Texas Legislature fund the TCEQ to update the WAMs for the Guadalupe-San Antonio River Basin and Nueces River Basin to include the most-

recent available hydrologic data, and continue allocating funding to update the WAMs on a 10-year basis.

Other Recommendation: The SCTRWPG recommends the TCEQ design and implement a systematic process for WAM updates, which would document any changes and associate those changes with official numbered versions of each of the WAMs.

8.3.5 Conservation

The SCTRWPG appreciates and supports recently passed legislation (Senate Bill 28, Senate Joint Resolution 75, and Senate Bill 30) by the 88th Texas Legislature to establish and fund a statewide water public awareness program. These actions will further general mainstream municipal conservation efforts. The SCTRWPG also recognizes that additional steps need to be taken to promote sustainable landscapes, thereby substantially reducing the quantities of water used (and potentially wasted) for municipal landscape irrigation.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature provide adequate funding to promote sustainable landscaping practices that conserve water with the statewide public education programs.

Other Recommendation: The SCTRWPG encourages and recommends communities within Region L to adopt and/or incentivize efforts to promote sustainable landscaping practices and conserve water, where feasible.

8.3.6 Innovative Strategies

8.3.6.1 Assistance for Alternative Rangeland Management

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature increase funding to the Texas State Soil and Water Conservation Board Water Supply Enhancement Program for the purpose of implementing brush control and rangeland management practices.

Other Recommendation: None.

8.3.6.2 One Water

In recent years, municipalities have begun to view water resources from a holistic, systemwide approach, known as One Water. One Water is a decentralized concept that views all water resources as valuable. The majority of laws and regulations in Texas are not structured in such a way as to encourage or incentivize One Water approaches. In December 2019, the Meadows Center for Water and the Environment published a report entitled, *Regulatory Impediments to Implementing One Water in Texas*. According to the 2019 Meadows Center Report:

One Water projects are still not the norm. This is, in part, due to the current regulatory framework's inability to accommodate more innovative water reuse strategies, where the risk to public health is significant or not well understood. For example, federal drinking water regulations are necessary to protect public drinking water supplies, but they create onerous regulatory hurdles for smaller, onsite systems that may seek to use alternative sources, such as rainwater. Additionally, although onsite non-potable reuse of blackwater is a hallmark of the One Water approach, existing regulations in Texas make

it extremely difficult for developers to construct onsite blackwater reuse systems. Finally, the lack of regulations that govern water reuse in Texas could actually stymie the development of One Water projects as developers often prefer clear regulatory and permitting paths over case-by-case decision making by regulators.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature review existing state laws regarding rainwater, non-potable on-site reuse, direct potable reuse, and blackwater reuse systems to enable and incentivize implementation of One Water Projects.

Other Recommendation: The SCTRWPG recommends the TWDB and TCEQ (1) financially support research for determining appropriate technology and risk mitigation approaches necessary to significantly expand One Water with appropriate protections for the public, environment, and worker health, in consideration of and with respect to impacts on existing water rights; and (2) assist the funding and development of incentive programs to advance One Water in Texas.

8.3.7 Water Quality and Data Collection

The primary focus of the regional water planning process is to ensure that water supplies are identified in sufficient quantity to meet future water demands; however, the SCTRWPG recognizes that the quality of those water supplies is also important to protect. Protecting groundwater and surface water supplies from contamination not only helps to reduce the cost to treat water to public drinking water standards, but also reduces pollutants that may harm the ecological health of the basin.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature fully fund the cooperative, federal-state-local program of basic water data collection, including (1) stream gages-quantity and quality; (2) groundwater monitoring-water levels and quality; (3) hydrographic surveys and sediment accumulation in reservoirs; (4) water surface evaporation rates; (5) water use data for all WUGs; (6) population projections; and (7) Clean Rivers Program.

Other Recommendation: The SCTRWPG recommends the TCEQ and local governments promote practices and/or regulations to avoid or mitigate threats to water quality in surface water and groundwater sources.

8.3.8 Consideration of Climate Variability in Regional Water Planning

Regional Water Plans are based on drought of record conditions using historical data; however, climate models indicate the potential for an increase in the number of dry days with increased evaporation along with more intense rainfall events, which impacts water supply and demand. Historically, the TWDB has not used climate models to predict impacts to future water resources in Texas because forecasting tools have not been able to provide the resolution needed for water planning. The SCTRWPG recognizes that down-scaling of climate models is becoming more sophisticated, and the results are being considered in other planning efforts and models (including WAMs). Similar incorporation into future regional water plans is needed to ensure meeting customer demand under climate enhanced drought conditions.

Legislative Recommendation: The SCTRWPG recommends the Texas Legislature fund relevant studies and down-scaled regional models to incorporate available climate variability into the Regional Water Planning process.

Other Recommendation: The SCTRWPG recommends the TWDB to reassess available climate models and consider incorporating them into regional water planning.

HANDOUT C

2026 South Central Texas (Region L) Regional Water Plan
Snapshot of Water Management Strategies
November 7, 2024, RWPG Meeting

WMS No.	WMS Name	WMS Sponsor	2024 Month Presented to RWPG Mtg	Implementation Decade	Final Decade Firm Yield (acft/yr)	Total Cost of Project	Annual Unit Cost With Debt Service ($/acft)	Environmental/ Cultural Assessment Ratings				Designation in 2021 RWP	Suggested Designation for 2026 RWP
								Vegetation, Land Use, Agricultural Resources	Aquatic Resources	Threatened, Endangered, & Species of Concern	Cultural Considerations		
1	Municipal Water Conservation*†	All Municipal WUGs (except County-Other) with ≥ 80 GPCD	Aug	2030	170,789	$ 4,596,774,195	$ 9,856	0	0	0	0	Recommended	Recommended
2	Non-municipal Water Conservation*†	Irrigation WUGs with Needs	Aug	2030	15,471	$ 40,758,000	$ 336	0	0	0	0	New	Recommended
3	Drought Management*	Varies	Aug	2030	74,072	N/A	N/A	0	0	0	0	Recommended	Recommended
4	Edwards Transfers*	Varies	Nov	2030	15,212	N/A	$ 3,160	1	0	0	0	Recommended	Recommended
5	Fresh Groundwater Development*†	Varies	Nov	2030	18,537	$ 97,350,000	$ 2,957	1	2	2	2	New	Recommended
6	Brackish Groundwater Development*†	Varies	Nov	2030	9,363	$ 862,410,000	$ 77,992	1	2	2	2	New	Recommended
7	Groundwater Conversions	Varies	Nov	2030	N/A	N/A	N/A	1	2	2	2	Recommended	Recommended
8	Facilities Expansion*†	Varies	Nov	2030	N/A	N/A	N/A	1	2	2	1	Recommended	Recommended
9	Recycled Water*†	Varies	Nov	2030	57,880	$ 1,183,981,000	$ 2,674	2	2	2	2	Recommended	Recommended; SAWS' Direct Potable Reuse as Alternative
10	Brush Management*†	N/A - None	Nov	N/A	N/A	N/A	N/A	0	1	1	0	New	Considered but not Recommended
11	Rainwater Harvesting*†	Varies	Aug & Nov	2040	967	$ 333,795,000	$ 36,120	0	0	0	1	New	Recommended
12	Surface Water Rights	N/A - None	Aug	N/A	N/A	N/A	N/A	0	0	0	0	Recommended	Recommended
13	Balancing Storage	N/A - None	Aug	N/A	N/A	N/A	N/A	0	0	0	0	Recommended	Recommended
14	ARWA Expanded Carrizo-Wilcox Project (Phase 2)	ARWA	Aug	2030	21,000	$ 259,879,000	$ 1,579	2	2	2	2	Recommended	Recommended
15	ARWA DPR Project (Phase 3)	ARWA	Aug	2060	5,494	$ 117,658,000	$ 2,722	2	2	2	2	Recommended	Recommended
16	CRWA Expanded Brackish Carrizo-Wilcox Project	CRWA	Nov	2040	14,700	$ 332,516,000	$ 3,160	1	2	2	2	Recommended	Recommended
17	CRWA Siesta Project	CRWA	Nov	2060	5,042	$ 202,995,000	$ 4,018	1	2	2	2	Recommended	Recommended
18	CRWA Wells Ranch 3 (Phase 2) Project	CRWA	Nov	2030	14,500	$ 139,137,000	$ 941	1	2	2	2	Recommended	Recommended
19	CVLGC Carrizo Project	CVLGC	Aug	2030	11,802	$ 262,492,000	$ 2,062	2	2	2	2	Recommended	Recommended
20	GBRA Lower Basin New Appropriation	GBRA	Nov	2040	26,500	$ 249,823,000	$ 734	2	2	2	2	Recommended	Recommended
21	GBRA WaterSECURE	GBRA	Nov	2030	125,000	$ 6,093,657,000	$ 4,765	2	2	2	2	New	Recommended
22	Medina County Regional ASR	Yancey WSC and East Medina County SUD	Nov	2040	12,500	$ 480,734,000	$ 3,936	1	2	2	2	New	Recommended
23	NBU ASR	NBU	Aug	2030	7,000	$ 36,622,000	$ 617	2	1	2	2	Recommended	Recommended
24	NBU Trinity Well Field Expansion	NBU	Aug	2030	3,900	$ 48,627,000	$ 2,046	1	1	2	2	Recommended	Recommended
25	SAWS Expanded Local Carrizo Project	SAWS	Aug	2030	21,000	$ 37,095,000	$ 185	2	2	2	2	Recommended	Recommended
26	SAWS Expanded Brackish Groundwater Project	SAWS	Aug	2040	22,400	$ 319,181,000	$ 1,803	2	2	2	2	Recommended	Recommended
27	SAWS Regional Wilcox Project	SAWS	Aug	2040	50,000	$ 1,267,722,000	$ 2,897	2	2	2	2	New	Recommended
28	SSLGC Expanded Brackish Wilcox Project	SSLGC	Aug	2040	5,000	$ 46,966,000	$ 1,503	2	2	2	2	Recommended	Recommended
29	SSLGC Expanded Carrizo Project	SSLGC	Aug	2030	6,000	$ 327,709,000	$ 4,741	2	2	2	2	Recommended	Recommended
30	Victoria ASR	City of Victoria	Nov	2030	7,900	$ 58,504,000	$ 687	0	1	1	2	Recommended	Recommended

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Snapshot of Water Management Strategies
November 7, 2024, RWPG Meeting

WMS No.	WMS Name	WMS Sponsor	2024 Month Presented to RWPG Mtg	Implementation Decade	Final Decade Firm Yield (acft/yr)	Total Cost of Project	Annual Unit Cost With Debt Service ($/acft)	Environmental/ Cultural Assessment Ratings				Designation in 2021 RWP	Suggested Designation for 2026 RWP
								Vegetation, Land Use, Agricultural Resources	Aquatic Resources	Threatened, Endangered, & Species of Concern	Cultural Considerations		
31	Victoria Groundwater-Surface Water Exchange	City of Victoria	Nov	2040	8,544	$ 3,494,000	$ 78	0	1	1	0	Recommended	Recommended
32	Weather Modification	Certain Irrigation WUGs	Nov	2030	99,700	$ 1,234,000	$ 3	1	1	1	0	New	Recommended

Note

*** Indicates volume summed due to multiple WUGs**

† Indicates unit cost averaged due to multiple WUGs

Legend

Environmental/Cultural Assessment Rating

0	N/A
1	Minimal concerns; precautions recommended
2	Additional studies recommended